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WATER RESOURCES OF CALIFORNIA

PART III

STREAM MEASUREMENTS IN THE GREAT BASIN
AND PACIFIC COAST RIVER BASINS

PREPARED UNDER THE DIRECTION OF JOHN C. HOYT

BY

H. D. McGLASHAN AND H. J. DEAN

In cooperation with the State Water Commission and the Conservation
Commission of the State of California



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WATER RESOURCES OF CALIFORNIA.

PART III. STREAM MEASUREMENTS IN THE GREAT BASIN AND PACIFIC COAST RIVER BASINS.

By H. D. MCGLASHAN and H. J. DEAN.

INTRODUCTION.

The water resources of California have played an important part in the development of the State.

Repairs to a mill race near Georgetown, Eldorado County, in 1848, led to the discovery of gold, and the development of the gold-mining industry was due largely to the location of the deposits near the water necessary for hydraulicking.

The water available for irrigation and domestic supply has been the chief factor in the development of southern California, which now has a population of more than 1,000,000 people.

The growth of irrigation systems in the great interior valley is bringing about its subdivision into small ranches devoted to the intensive farming which affords almost limitless opportunities to the agriculturist.

An increased water supply for the city of San Francisco is one of its greatest necessities, and more water for Los Angeles is to be brought from Owens Valley—a distance of more than 200 miles—at a cost of \$23,000,000.

The many mountain streams of California afford abundant hydro-electric power, the utilization of which in manufacturing enterprises and in transportation has been made possible by the progress of electric-power transmission during the last decade. To-day California probably leads the country in the number and length of her power transmission lines.

Information concerning the quantity of water carried by the streams has been and will continue to be an important factor in the development of these resources, for the fundamental importance of stream-flow data is now so thoroughly recognized that it is almost impossible to finance any project depending on stream flow without presenting authentic records of flow covering a period of years.

The measurements of the flow of streams in California was begun by the California State engineer in 1878, in accordance with the law requiring him "to investigate the problems of the irrigation of the plains, the condition and capacity of the great drainage lines of the State, and the improvement of the navigation of rivers." The work was restricted to a few localities in the Sacramento and San Joaquin River basins, the principal station being on the Sacramento at Collinsville.

The State engineer's office was discontinued in 1884, and practically no further stream studies were made until 1894, when engineers of the United States Geological Survey were sent into California and made a few measurements of streams in the semiarid parts of the State. In the following year the Survey established a station on Sacramento River at Red Bluff and since that time has gradually extended the work until it now has available records of flow at 340 stations on California streams. Many records have also been collected by private parties. The first stations were located only on streams whose waters were to be used for irrigation, but records are now available on streams adapted to all uses, including navigation, domestic water supply, and power.

To make the information available six reports are being prepared. The reports are to be published as water-supply papers and will bear the following titles:

295. Gazetteer of surface waters of California, Part I, Sacramento River basin.
296. Gazetteer of surface waters of California, Part II, San Joaquin River basin.
297. Gazetteer of surface waters of California, Part III, Great Basin and Pacific coast streams.
298. Water resources of California, Part I, Stream measurements in Sacramento River basin.
299. Water resources of California, Part II, Stream measurements in San Joaquin River basin.
300. Water resources of California, Part II, Stream measurements in Great Basin and Pacific coast river basins.

The gazetteers embrace descriptions of all the streams named on the best available maps; the stream-measurement reports describe the streams that have been measured and the stations at which the work has been carried on and present the results of the studies of stream flow.

The investigations of the quantity of water in the streams have been supplemented by studies of the climatic and other factors affecting stream flow, and a mass of valuable information has thus been collected affording data for all phases of hydraulic work.

Owing to the limited time and funds available for the preparation of this report, no attempt could be made to revise the estimates which had already been published. The base data, however, have been given so that those who desire such a revision can make it.

COOPERATION AND ACKNOWLEDGMENTS.

Cooperation in stream measurements between the United States Geological Survey and State of California was first provided for by the State legislature in an act approved March 16, 1903. This act covered the period from July 3, 1903, to June 30, 1905, and was in substance as follows:

The State board of examiners are hereby empowered to enter into contracts with the Director of the United States Geological Survey for the purpose of making topographic maps to the extent of twenty thousand dollars; also for the purpose of gaging streams; surveying reservoir sites and canal locations, for the conservation and utilization of the flood and storm waters of the State, to the extent of fifteen thousand dollars. * * *

Similar acts, approved March 20, 1905, and March 11, 1907, provided for the continuation of the work until June 30, 1909, with an increased biennial appropriation of \$30,000 for topography and \$20,000 for hydrography. The act of March 11, 1907, named the Department of Engineering of the State of California as the cooperating party.

An act placing cooperation between the State of California and the United States Geological Survey on a permanent basis was approved April 22, 1909, and provided as follows:

The Department of Engineering is hereby empowered to carry on topographic surveys and investigations into matters pertaining to the water resources of the State along the lines of hydrography, hydro-economics and the use and distribution of water for agricultural purposes, and to that end, where possible and to the best interest of the State, shall enter into contracts for cooperation with the different departments of the Federal Government in such amounts as may be an equitable and necessary division of the work. The State engineer, with the consent of the governor, may maintain and continue such investigations where there is available money not covered by cooperation contract. For the permanent maintenance of said surveys and investigations there is hereby continuously appropriated out of the general fund of the State treasury for each and every fiscal year, commencing with the date upon which this act becomes effective, the sum of thirty thousand dollars.

Of this sum \$9,000 is allotted annually to investigations of water resources.

In 1911 the California Legislature provided for a State Board of Control (Water Powers) to pass on matters pertaining to the appropriation of water for power development, and for a Conservation Commission to investigate and collect information concerning forestry, water, and other natural resources and their use, for the purpose of revising the laws of the State relating thereto. The legislature of 1912 transferred the duties of the State Board of Control (Water Powers) to the State water commission.

In present work the State of California is represented by the Department of Engineering, State of California, W. F. McClure, State engineer; by the Conservation Commission, George C. Pardee

(chairman), Francis Cuttle, and J. P. Baumgarten; and by the State Water Commission, Hiram W. Johnson, governor; Charles D. Marx, chairman; S. C. Graham, Harold T. Power, and W. F. McClure. Louis R. Glavis is secretary of both commissions.

The earliest stream gaging work in the State, beginning in 1878, was carried on under the direction of Wm. Ham. Hall, State engineer, by A. Boschke and other assistant engineers, among whom was C. E. Grunsky, who continued in charge of office computation and frequently acted as hydrographer until the State engineer's department was abolished. Work by the United States Geological Survey was begun in 1894, under the direction of F. H. Newell, chief hydrographer, by Arthur P. Davis, and Joseph B. Lippincott. On the establishment of the United States Reclamation Service in 1902, Mr. Lippincott became supervising engineer for California, and the field work was continued under his direction by William B. Clapp and Samuel G. Bennett, until the separation of the Reclamation Service from the Geological Survey in 1906, when Mr. Clapp became district engineer. On Mr. Clapp's death in December, 1911, H. D. McGlashan was appointed district engineer.

Many assistants have participated in the field work, and as their names appear in connection with the measurements which have been made they will not be given here. Special acknowledgment should, however, be made to W. F. Martin, who was Mr. Clapp's principal assistant from June, 1906, to November, 1909, when he was transferred to work in Hawaii. Many records have been collected in cooperation with private individuals, to whom credit is given in connection with the published data.

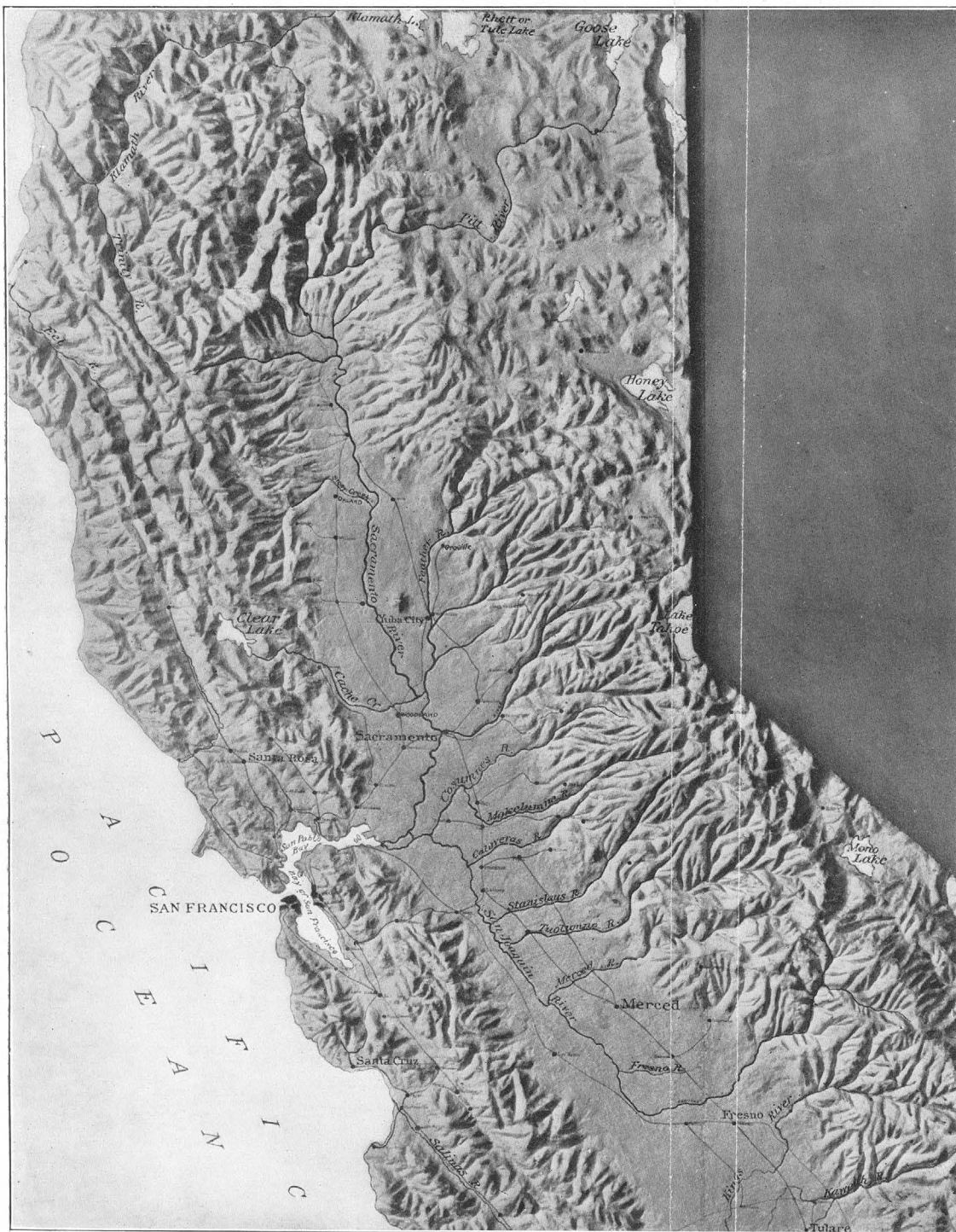
THE GREAT BASIN.

GENERAL FEATURES.

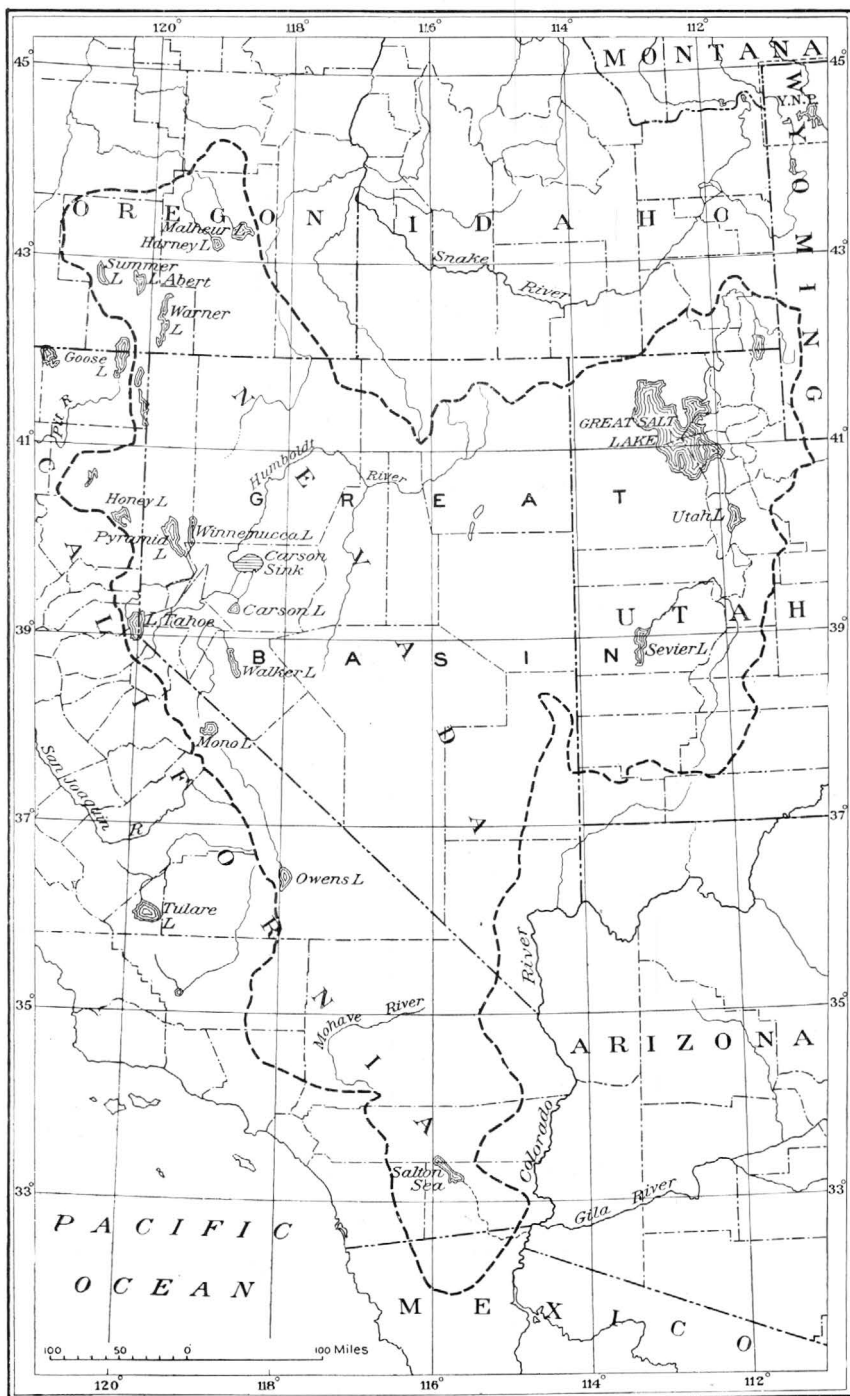
The following description of the Great Basin forms part of the introduction to a report on Lake Bonneville, by G. K. Gilbert:¹

The major part of the North American continent is drained by streams flowing to the ocean, but there are a few restricted areas having no outward drainage. The largest of these was called by Fremont, who first achieved an adequate conception of its character and extent, the "Great Basin," and is still universally known by that name. It is not, as the title might suggest, a single cup-shaped depression gathering its waters at a common center, but a broad area of varied surface, naturally divided into a large number of independent drainage districts. It lies near the western margin of the continent and is embraced by rivers tributary to the Pacific Ocean. On the north it is bounded by the drainage basin of the Columbia, on the east by that of the Colorado of the West, and on the west by the basins of the San Joaquin, the Sacramento, and numerous minor streams. The central portion of the western water parting is the crest of the Sierra Nevada, one of the greatest mountain masses

¹ Gilbert, G. K., *Lake Bonneville*: Mon. U. S. Geol. Survey, vol. 1, 1890, pp. 2-12; Pl. II. This report is now out of print, but it may be consulted in the libraries of most of the larger cities.



From Bulletin 207, Office of Experiment Stations, U. S. Department of Agriculture.



SKETCH MAP OF THE GREAT BASIN.

of the United States, and farther south high mountains constitute much of the boundary. The northern half of the eastern boundary is likewise high, winding through the region of the High Plateaus. The remainder of the boundary does not follow any continuous line of upland, but crosses mountain ranges and the intervening valleys without being itself marked by any conspicuous elevations. It is defined only through a study of the drainage. The general form of the area [Pl. II] is rudely triangular, with the most acute angle southward. The extreme length in a direction somewhat west of north and east of south is about 880 miles, the extreme breadth from east to west, in latitude $40^{\circ} 30'$, is 572 miles, and the total area is approximately 210,000 square miles. Of political divisions it includes nearly the whole of Nevada, the western half of Utah, a strip along the eastern border of California and a large area in the southern part of the State, another large area in southeastern Oregon, and smaller portions of southeastern Idaho and southwestern Wyoming. The southern apex extends into the territory of Mexico at the head of the peninsula of Lower California.

The region is occupied by a number of mountain ridges which betray system by their parallelism and by their agreement in a peculiar structure. Their general trend is northerly, inclining eastward in the northern part of the basin and westward at the south. The individual ridges are usually not of great length, and they are so disposed en échelon that the traveler winding among them may traverse the basin from east to west without crossing a mountain pass. The type of structure is that of the faulted monocline, in which the mountain ridge is produced by the uptilting of an orogenic block from one side of a line of fracture, and it has been named (from the region) the Basin Range type. Its distribution, however, does not coincide perfectly with the district of interior drainage. On the one hand the Great Basin includes along its eastern margin a portion of the Plateau province, with its peculiar structural type, and on the other the Basin Range province extends southward through Arizona to New Mexico and Mexico.

Between the ranges are smooth valleys, whose alluvial slopes and floors are built of the débris washed through many ages from the mountains. In general they are troughlike, but in places they coalesce and assume the character of plains. The plains occupy in general the less elevated regions, where an exceptional amount of detritus has been accumulated. In local terminology they are called deserts. The largest are the Great Salt Lake and Carson deserts at the north and the Mojave and Colorado deserts at the south. The Escalante, the Sevier, the Amargosa, and the Ralston are of subordinate importance.

Where the basin is broadest, the general elevation of its lowlands is about 5,000 feet, but they are somewhat higher midway between the eastern and western margins, so as to separate two areas of relative depression, the eastern marked by the Great Salt Lake and Sevier deserts, and the western by the Carson Desert. Southward there is a gradual and irregular descent to about sea level, and limited areas in Death Valley and Coahuila Valley lie lower than the surface of the ocean.

The aridity of the region is shown instrumentally by the records of rainfall and atmospheric humidity. On the broad plain bounded east and west by the Appalachian Mountains and the Mississippi River, 43 inches of rain fall in a year. On the lowlands of the Great Basin there fall but 7 inches. In the former region the average moisture content of the air is 69 per cent of that necessary for saturation; in the lowlands of the Great Basin it is 45 per cent.¹ From the surface of Lake Michigan evaporation removes each year a layer of water 22 inches deep.² The writer has estimated that

¹ These figures and those in the preceding sentences are based on data compiled by the United States Signal Service. Through the courtesy of Gen. A. W. Greely, Chief Signal Officer, the writer has had access to manuscript as well as printed data.

² D. Farrand Henry, in a report on the meteorology of the Laurentian lakes (Rept. Chief Eng. for 1868, Washington, 1869, p. 980).

80 inches are yearly thus removed from Great Salt Lake,¹ and Mr. Thomas Russell has computed from annual means of temperature, vapor tension, and wind velocity that in the lowlands of the Great Basin the annual rate of evaporation from water surfaces ranges from 60 inches at the north to 150 inches at the south.²

The variation with latitude exhibited by the evaporation is found also, inversely, in the rainfall, but it is not clearly apparent in the humidity. In the southern third of the Basin the lowland rainfall ranges from 2 to 5 inches. On the line of the Central Pacific Railroad, between the fortieth and forty-second parallels, it averages 7 inches; on the Oregonian arm at the north, 15 inches. The average lowland precipitation for the whole area is between 6 and 7 inches. With the relative humidity approximately constant, the evaporation rate varies directly and the rainfall inversely with the temperature, and both latitude and altitude here make the lowland temperature fall toward the north. The sympathy of rainfall with temperature is likewise shown in the greater precipitation of the mountains as compared with adjacent valleys. Mountain stations proper are wanting, but rain-gage records on the flanks and in the passes of mountains show a marked advantage over those in neighboring lowlands. An estimate based on these, on the records at high points in the Sierra Nevada, and on approximate knowledge of the heights and areas of the mountains and plateaus of the Great Basin places the average precipitation for the whole district at 10 inches.

The story of climate is more eloquently told by the hydrography and the vegetation. In the valleys of the northwestern arm of the basin there are numerous lakes, drainless and of varying extent, but fed by streams from mountain ranges of moderate size. In the middle region the only perennial lakes are associated with mountain masses of the first rank. The great Sierra forming the western wall of the Basin receives each winter a heavy coating of snow—the greater part on the side of the great California valley, but enough east of the water parting to maintain a line of lakes in the marginal valleys of the Great Basin. The Wasatch Range and its associated plateaus, overlooking the Basin from the east, are less favored than the Sierra, but still receive an important precipitation, and by gathering the drainage from a large area support Great Salt Lake, the largest of the Basin's water sheets. The East Humboldt Range, standing midway, and one of the largest mountain masses within the Basin area, catches enough moisture to feed at one base two small lakes and at the other the Humboldt River. The neighboring and smaller mountains are whitened every winter by snow, a large share of which either evaporates without melting, or if melted is absorbed by the soil, to be returned to the thirsty air without gathering in drainage ways. Many of them are without perennial streams; some even lack springs; and of the mountain creeks few are strong enough to reach the valleys before succumbing to the ravenous desert air. The Humboldt itself, though fairly entitled to the name of river, dwindles as it goes, so that its remnant after a course of 200 miles is able to sustain an evaporation lake barely 25 square miles in extent. Most of the small closed basins are without permanent creek or lake, containing at the lowest point a playa or "alkali flat"—a bare, level floor of fine saline earth, or perhaps of salt, over which a few inches of water gather in times of storm.

In the southern half of the basin there are no lakes dependent for their water on the interior ranges. At the east the most southerly lake is Sevier, in latitude 39°; the last of the lakes sustained by the Sierra is Owens, between the thirty-sixth and thirty-seventh parallels. Then for 300 miles evaporation is supreme. Playas abound, streams are almost unknown, and springs are rare. Death Valley, with its floor of salt spread lower than the surface of the ocean, is overlooked on either side by mountains from 5,000 to 10,000 feet high, but they yield it no flowing stream, and more than one traveler has perished from thirst while endeavoring to pass from spring to spring. The Mojave "river" is 100 miles long, but it preserves its life only by concealment,

¹ Report on the lands of the arid region, * * * J. W. Powell, 2d ed., Washington, 1879, p. 73.

² Manuscript report to the Chief Signal Officer,

creeping through the gravel of the desert and betraying its existence only where ledges of rock athwart its course force it to the surface.

As in other desert regions, precipitations here result only from cyclonic disturbance, either broad or local, is extremely irregular, and is often violent. Sooner or later the "cloud-burst" visits every tract, and when it comes the local drainage way discharges in a few hours more water than is yielded to it by ordinary precipitation for many years. The deluge scours out a channel which is far too deep and broad for ordinary needs and which centuries may not suffice to efface. The abundance of these trenches, in various stages of obliteration but all manifestly unsuited to the every-day conditions of the country, has naturally led many to believe that an age of excessive rainfall has but just ceased—an opinion not rarely advanced by travelers in other arid regions. So far as may be judged from the size of the channels draining small catchment basins, the rare, brief, paroxysmal precipitation of the desert is at least equal while it lasts to the rainfall of the fertile plain.

A line of cottonwoods marks the course of each living stream, but otherwise the lowlands are treeless. So are most of the alluvial foot slopes and some of the smaller mountains, especially at the south. Except on the high plateau in central Utah there is little that may be called forest. The greater mountains have much timber in their recesses, but are not clothed with trees. The growth is so irregular and interrupted that the idea of a tree limit could not have originated here, but it may be said that only the straggling bushlike cedar passes below 6,000 feet at the north or 7,000 feet at the south. Only conifers are of such size and abundance as to have economic importance. Oak and maple grow commonly as bushes, forming low thickets, but occasionally rank as small trees, along with the rarer box elder, ash, locust, and hack berry. The characteristic covering of the lowlands is a sparse growth of low bushes, between which the earth is bare, excepting scattered tufts of grass. Toward the north, and especially on the higher plains, the grass is naturally more abundant and the bushes occupy less space, but the introduction of domestic herds favors the ascendancy of the bushes. At the south the bushes are partly of different species, and they are partially replaced by cactuses and other thorny plants. The playas are bare of all vegetation and are usually margined by a growth of salt-loving shrubs and grasses. A single southern bush bears leaves of deep green, but with this exception the desert plants are gray, like the desert soil. These, and the persistent haze whose gray veil deadens all the landscape, weary the eye with their monotony, so that the vivid green marking the distant spring is welcome for its own as well as for the promise of refreshment to the thirsty traveler.

The causes of this arid climate lie in the general circulation of the atmosphere, in the currents of the Pacific Ocean, and in the configuration of the land. There is a slow aerial drift from west to east, so that the air coming to the basin has previously traversed a portion of the Pacific, to which its temperature and humidity have become adjusted. Off the west coast of the United States there is a southward current believed to be the chief branch of the Kuro Siwa. Prof. George Davidson¹ estimates its width at about 300 miles, and finds that its temperature rises with southward advance only 1° F. for each degree of latitude. Being derived from a north-moving current, it reaches our coast with a temperature higher than that normal to the latitude, while at the south its temperature is below the normal. As pointed out by Dutton,² the air passing from it to the land at the north is cooled by the land and precipitates moisture, while the similar air current at the south is warmed by the land and converted to a drying wind. The Great Basin falls within the influence of the drying wind, its southern part being more affected than its northern. At the extreme south and the extreme north the mountains between the ocean and the basin do not greatly inter-

¹ Letter to the writer.

² Dutton, C. E., Cause of the arid climate of the western portion of the United States; *Am. Jour. Sci.*, 3d ser., vol. 22, p. 249.

fere with the eastward flow of air, but between latitudes 35° and 41° the Sierra Nevada forms a continuous wall rarely less than 10,000 feet high. In rising to pass this obstruction the air loses much of its stored moisture, especially in winter, and it descends to the basin with diminished humidity. The basin is further influenced by deviations of the air currents from the eastward direction, and its southern part falls in summer within the zone of calms theoretically due to a descending current at the margin of the northern trade wind; but observational data are too meager for the discussion of these factors.

GREAT BASIN LAKES IN CALIFORNIA AND NEVADA.

HONEY LAKE BASIN.¹

Honey Lake occupies a shallow depression in the eastern part of Lassen County. It is supplied principally from Susan River, which enters it from the northwest, but it receives some tribute during the rainy season from Long Valley and also from springs along its northern border. The area of the lake varies with the seasons as well as from year to year, and in times of unusual aridity it becomes completely desiccated. Its shores are, as a rule, low and marshy and in places form broad tule swamps. Its waters are strongly alkaline, unfit for human use, and always of a greenish-yellow color from the impalpable mud they hold in suspension.

A considerable area of land is irrigated from the waters of Susan River, and several projects for irrigating other extensive areas by storage of its waters both above and below the town of Susanville have been under consideration.

The principal tributary of Susan River, Willow Creek, flows from springs directly under Eagle Lake, presumably seepage from Eagle Lake, which has no surface outlet. It flows southward, joining Susan River about 12 miles below Susanville. Its only important tributary is Petes Creek, which drains a large area in the eastern portion of the basin. The drainage area of the main stream has good timber covering, while that tributary to Petes Creek is barren of timber. The entire basin is composed of lava rock with a light covering of soil and contains large stretches of barren table-lands with scattered peaks of volcanic origin. There is a large area of cultivated land along Willow Creek above the gaging station at Standish, and considerable water is diverted for irrigating lands adjoining the stream.

PYRAMID AND WINNEMUCCA LAKE BASINS.²

GENERAL FEATURES.

Pyramid and Winnemucca lakes occupy two long, narrow basins in Washoe and Humboldt counties, Nev., and receive the waters of Truckee River, which sends a stream to each lake. The first pub-

¹ Abstracted from Russell, I. C., Geological history of Lake Lahontan; Mon. U. S. Geol. Survey, vol. 11, 1885, pp. 55-56.

² Abstracted from Russell, I. C., *idem*, pp. 56-66.

lished account of the bifurcation of Truckee River so as to supply two lakes is given by King,¹ who says:

At the time of our first visit to this region, in 1867, the river bifurcated; one half flowed into Pyramid Lake, and the other through a river 4 or 5 miles long into Winnemucca Lake. At that time the level of Pyramid Lake was 3,890 feet above the sea, and of Winnemucca about 80 feet lower. Later, owing to the disturbance of the balance between influx and evaporation already alluded to as expressing itself in Utah by the rise and expansion of Great Salt Lake, the basin of Pyramid Lake was filled up, and a backwater overflowed the former region of bifurcation, so that now the surplus waters go down the channel into Winnemucca Lake, and that basin is rapidly filling.

Between 1867, the time of my first visit, and 1871, the time of my last visit, the area of Winnemucca Lake had nearly doubled, and it has risen from its old altitude about 22 feet, Pyramid Lake in the same time having been raised about 9 feet. The outlines as given upon our topographical maps are according to the survey of 1867, and form interesting data for future comparison.

The differences in elevation between Pyramid and Winnemucca lakes as reported by King and determined by Russell in 1882 are as follows: In 1867 Pyramid was 80 feet higher than Winnemucca; in 1872 Pyramid was 67 feet higher than Winnemucca; in 1882 Pyramid was 12 feet higher than Winnemucca, as determined by engineer's level; in 1890, when the region was surveyed by the topographers of the United States Geological Survey, Pyramid was but 5 feet higher than Winnemucca. The waters of both lakes are alkaline and brackish. Their shores, like those of all the lakes in the lower portion of the Great Basin, are clothed only with scanty growths of desert vegetation.

In the southern part of Pyramid Lake the water is slightly discolored by multitudes of shining particles that are rendered visible when a ray of light is passed through it. The lack of transparency is apparently due to the suspended silt brought down by Truckee River. In the northern part of the lake the water is wonderfully clear, and at some distance from the land is deep blue in color.

The largest islands in Pyramid Lake are Pyramid and Anaho, which rise in its southern part near the eastern shore. Anaho Island rises 520 feet above the water level of 1890, and is surrounded by water 150 to 300 feet deep. Pyramid Island rises 320 feet above the water level of 1890 and the water near its base is 150 to 175 feet deep.

TRUCKEE RIVER BASIN.

The Truckee River system comprises the main river and several minor tributaries, all having as their chief sources of supply small mountain lakes. Truckee River itself is the natural outlet of Lake Tahoe, a beautiful mountain lake, 193 square miles in area, lying at an elevation of more than 6,000 feet above sea, and noted as the largest body of fresh water in the United States at so high an altitude. Nearly three-fourths of the lake is in California and the rest is in Nevada.

¹U. S. Geol. Expl. 40th Par., vol. 1, 1878, pp. 505-506.

Issuing from the northwest side of Lake Tahoe the Truckee flows almost due north to the town of Truckee, Cal., where it turns to the east. At Wadsworth, Nev., the river again turns north and discharges into Pyramid and Winnemucca lakes. From Lake Tahoe to Verdi, Nev., a distance of 35 miles, the country is heavily timbered with fir and pine; below Verdi barren wastes alternate with small and fertile valleys—the Verdi Valley, the Reno or Truckee Valley, and the Wadsworth Valley—all of which have a rich, productive soil. The total length of the Truckee is about 110 miles and its total fall is about 2,350 feet.

Donner Creek, the natural outlet of Donner Lake, is the first important tributary of the Truckee, which it enters at the town of Truckee. Prosser Creek, the second tributary, and the natural outlet of several small lakes, enters about 5 miles northeast of Truckee, and Little Truckee River, the natural outlet of Webber and Independence lakes, comes in at Boca, Cal., about 2 miles farther along. Each of these tributaries rises at an elevation of 6,000 feet above sea level, and each flows from a lake whose capacity can be enlarged by building a dam across its outlet. The region about the lakes is thickly forested and receives during the winter months very heavy snowfall. During the season of thaw this snow affords an immense run-off, almost all of which could be stored by enlarging the natural lakes.

Three power plants have been installed on the Truckee—the Farad (Mystic), Fleish, and Washoe plants—with an emergency plant near Reno, Nev. The plants have an average capacity of about 2,500 horsepower each and they supply practically all the power used by the towns of Verdi, Reno, Carson City, Yerington, Gardnerville, Sparks, and Virginia City, Nev. There are many falls on the headwaters of the small tributaries.

Only data pertaining to that part of the stream which lies in California are published in this paper.

CARSON SINK.

Carson Sink lies in Churchill County, Nev., in the northern part of Carson Desert. During the winter and spring it receives a considerable supply of water from both Humboldt and Carson rivers and becomes a shallow, playa lake from 20 to 25 miles long and 14 miles broad. In arid summers the water supply fails and the lake evaporates to dryness, and as desiccation becomes more intense the salts impregnating the lake beds are brought to the surface and form an efflorescence several inches thick. In October, 1881, the sink was a broad mud-colored plain, covered in places with a white alkaline crust that looked like patches of snow. In 1908 Carson Sink was mapped by the topographers of the United States Geological Survey as a permanent water body, 12 miles long by 12 miles broad, receiving

Carson River on the south. The drainage line from Humboldt Lake to the sink was marked as an intermittent river.

Carson River is formed by its East ¹ and West forks, which rise in the extreme eastern part of California and flow northeastward to their union near the town of Gardnerville, Nev. From this point the river flows northward to Empire, Nev., where it turns to the east and finally disappears into Carson Sink. It is about 160 miles long to the head of the East Fork, and its total fall is about 6,400 feet. The fall of the East Fork above the junction is 5,500 feet, and the fall of the main stream in the 108 miles below the junction is about 900 feet. Between Empire and Dayton the river occupies a deep, rugged canyon.

The principal tributaries of the East Carson are Silver King, Wolf, Silver, Markleeville, and Leviathan creeks. These streams drain a rough, mountainous country, ranging in altitude from 5,000 to 11,000 feet above sea level. Good storage sites exist on all the important tributaries. The reservoir sites in Pleasant Valley and on Silver Creek have been partly developed.

The area drained by the West Carson is not so large as that of the East Carson and its altitudes are, in general, lower. By constructing a reservoir at Hope Valley a large amount of power may be developed in the West Carson Canyon.

The soil throughout the Carson and Dayton valleys is very porous and its irrigation requires a large amount of water. The low-water flow is sufficient to reclaim only a small portion of the land. The irrigated acreage may, however, be greatly increased by constructing reservoirs on the headwaters to store the spring floods.

WALKER LAKE BASIN.

Walker Lake, which next to Pyramid Lake is the most picturesque and attractive of the desert lakes of Nevada, lies in the northern part of Esmeralda County. It is supplied entirely by Walker River, which enters at its north end.

As one of the lakes of the region occupied by glacial Lake Lahontan, it was described by Russell ² as follows:

The lake is 25.6 miles in its longer, or north and south axis, and has an average width of between 4.5 and 5 miles. Its area is 95 square miles. * * * Over a large area in the central and western portions it has a remarkably uniform depth of 224 feet; but as a rule the depth increases as one approaches the western shore, which is overshadowed by rugged mountains. The bottom throughout the central portions is composed of fine tenacious mud, which in many places is black in color and has the odor of hydrogen sulphide. Coarser deposits, consisting of sand and gravel, mingled with the empty shells of *Pyrgula* and *Pompholyx*, etc., were found only in the immediate neighborhood of the shore. * * *

¹ Called East Carson River above mouth of Markleeville Creek.

² Russell, I. C., Geological history of Lake Lahontan, a Quaternary lake of northwestern Nevada: Mon. U. S. Geol. Survey, vol. 11, 1885, pp. 69-70.

As in the case of the other lakes in the Great Basin situated at an elevation of less than 5,000 feet, the shores of Walker Lake are totally lacking in arboreal vegetation except at the river mouth and are clothed only with desert shrubs. At the northern end, and following the immediate shores of Walker River for many miles, are luxuriant cottonwood groves, together with willow banks and meadow lands. * * *

The waters at a distance from the river mouth are of a clear deep blue, changing to a bright green tint near the shore, as in Pyramid Lake. They are charged with saline matter to such an extent that carbonate of lime is now being deposited.

Walker River, the inflowing stream, rises on the eastern slope of the Sierra Nevada in two main branches whose basins are separated by a group of mountains known as the Sweetwater Range. The East Fork of Walker River receives the drainage from the eastern slope of the Sweetwater Range and from the western slope of the Walker River Range; the West Fork flows at the base of the main range of the Sierra Nevada. From the union of the forks, near Mason, the river flows sluggishly northward, passing through the fertile Yerington Valley (Mason Valley) to a point east of Wabuska, where it turns to the east and southeast, and 50 miles beyond the forks enters Walker Lake. The length of the river, from Walker Lake to the junction of Virginia and Green creeks, which form the East Walker, is about 120 miles, in which distance its fall is about 2,400 feet. In the 50 miles below the junction of the East and West Walker the fall is about 400 feet.

The basin contains but three important valleys—Antelope Valley on the West Fork; Smith Valley, a fertile table-land presenting ample opportunity for reclamation, also on the West Fork; and Mason Valley, which takes its water from the two forks. Only recently have the water rights in this last-named valley been adjusted. The minimum flow is not sufficient to supply the demand during the summer, although excellent reservoir sites near the headwaters of the forks are available for storing the flood waters for use during the dry season. The snowfall is very heavy, giving assurance of an ample water supply for reservoirs.

A line of levels run by the Reclamation Service from a point above Yerington to Carson River near Towle's ranch shows that water can be easily diverted by gravitation from the Walker River to the Carson River. The opportunities for power development afforded by both forks are as yet undeveloped by private companies because of the small demand for power near the rivers. Power development from the main stream is not feasible.

MONO LAKE BASIN.¹

Mono Lake lies at the eastern base of the Sierra Nevada in east-central California, within a few miles of the California-Nevada boundary. The western rim of its drainage area, formed by the crest line of

¹ Abstracted from Russell, I. C., Quaternary history of Mono Valley, Cal.: Eighth Ann. Rept. U. S. Geol. Survey, pt. 1, 1889, pp. 269-270, 287-288.

the Sierra, coincides for 36 miles with the western margin of the Great Basin.

The lake is 6,412 feet above the sea.¹ The lowest pass in the serrate mountain crest along its western border is 3,000 feet above its surface. The highest peaks that overshadow it rise more than 6,000 feet above the level of the lake. The eastern portion of the basin partakes of the character of the arid interior region, and includes valleys covered with sagebrush and rugged mountain slopes, but scantily clothed with cedar and piñon. Over this portion no running water can be found during the greater part of the year. That it is not really a desert is shown by the fact that among the clumps of sagebrush it produces nutritious bunch grass in sufficient abundance to afford pasturage for a few cattle and horses.

The southwestern border of the basin includes magnificent mountains that are clothed in favored places with forests of pine. The highest peaks reach far above the timber line and bear a varied and beautiful alpine flora.

The lake derives its principal water supply from the creeks that descend the eastern slope of the Sierra and empty into it from the south and west. The surface drainage is supplemented by a number of springs, some of which are of considerable size.

The creeks tributary to Lake Mono are clear and flow through channels excavated for the most part in granite and metamorphosed sediments, but near their mouths they have eroded small gorges through material deposited during previous high-water stages of the lake. No chemical analyses of these waters have been made, but they undoubtedly hold a small percentage of mineral matter in solution, which is left when evaporation takes place.

Most of the springs of the basin are either in the bottom of the lake or near its shores, and they are most numerous near the base of the mountains, which lie close to the western shore. Only three of those that rise on the land have a temperature noticeably above the normal. The character of most of those rising in the bottom of the lake is uncertain. Some of them reveal their presence in cold weather by vapor, seen on the lake surface above them, and are thus known to be thermal. None of the springs of the basin are highly charged with mineral matter; on the contrary, some of the more copious are remarkable for their purity.

OWENS LAKE BASIN.

Owens Lake is a body of saline water in the central part of Inyo County, covering about 75 square miles. Like Mono Lake, which lies 125 miles farther north and about 3,000 feet higher, it derives its water from the vicinity of Mount Lyell.

¹ Mount Lyell sheet, Topog. Atlas U. S., U. S. Geol. Survey; edition of May, 1901; reprinted February, 1910, with additions.

The lake is fed by Owens River, which rises among the high peaks of the Sierra east of Mount Lyell and directly opposite the headwaters of the San Joaquin, at an altitude of nearly 12,000 feet above sea level. It flows eastward into Long Valley, thence southeastward through Owens River canyon into Owens Valley, thence eastward and southward through the trough of the valley to Owens Lake, about 20 miles southeast of Mount Whitney. The total length of the river is about 125 miles—45 miles above the lower end of the canyon and 80 miles in Owens Valley.

The basin is long and comparatively narrow and its topography is varied. It comprises a rough east-side mountain slope 5 or 6 miles wide, a valley floor about 6 miles wide, and a west-side slope ranging from 6 to 10 miles or more in width. The west-side area is made up of a very rugged and precipitous mountain slope 4 or 5 miles wide, and a sloping alluvial plain composed of delta-fan surfaces, ranging in width from 1 to 5 miles and lying at the foot of the mountains and west of the western margin of the valley. Owens Valley is smooth and ranges in altitude from 3,600 feet at the south end to about 4,100 feet at the north end. The crest of the east-side range of mountains averages about 6,000 feet higher than the valley floor. The west-side plain consists of a porous granitic alluvium of considerable depth, and ranges in altitude from about 4,000 feet at the western valley margin to about 6,000 feet at the foot of the mountains. It has a fairly uniform slope of 400 to 600 feet to the mile. The eastern slope of the Sierra is very steep and rugged, and ranges in altitude from about 6,000 feet at the foot to 13,000 or 14,000 feet at the crest. The geologic formation is granitic.

The basin is rather poorly forested. The eastern slope is practically barren of vegetation, except in places where there is a scanty desert growth. The western slope has a very slight soil covering and only a sparse timber growth, found chiefly along the watercourses. All the western slope, a large part of the eastern slope, and the central part of Owens Valley are included in national forests.

The only precipitation records available indicate that the mean annual precipitation in the valley is about 5 inches. On the Sierra slope precipitation probably increases northward, and certainly increases with increase in altitude. On the higher slopes it may be 40 inches or more and occurs almost entirely as snow.

Owens River has many tributaries. More than 40 lateral streams, many of them, however, comparatively small, drain a part of the eastern slope of the Sierra and enter the main stream from the west. The principal tributaries, from north to south, are as follows: Rock, Pine, Horton, McGee, Birch, and Bishop creeks, opposite the San Joaquin basin; Coyote, Baker, Big Pine, Birch, Tinemaha, Taboose, Goodale, Division, Sawmill (Eightmile), Thibaut, Oak, Pine, and

Symmes creeks, opposite Kings River basin; and Shepard, Bairs (Moffett), George, Hogback, Lone Pine, Tuttle, Richter, Cottonwood, and Ash creeks, opposite Kern River basin. No drainage enters Owens River from the east except during the rare, exceptionally heavy rainstorms.

Nearly all the streams rise in glacial lakelets and marshes, which lie near the crest of the Sierra and serve to a certain extent as storage reservoirs in regulating the flow.

The streams emerge from the mouths of their canyons upon the porous alluvial plain at the base of the Sierra, which is 1 to 5 miles in width and several hundred feet deep, and across which they flow to the Owens River channel in the trough of the valley. This belt of *débris* is the source of a large and important loss, part of which appears in numerous springs throughout the valley. Perhaps stronger evidence of the great loss by seepage is afforded by the broad belt of wet and somewhat boggy land which extends over a large part of the trough of the basin. Undoubtedly large quantities of water can be obtained by sinking wells within this area. Several artesian wells which have been sunk in the vicinity of Independence yield a strong flow and give convincing evidence of an artesian belt in the valley. With a view to the greatest ultimate utilization of the valley's water supply, the city of Los Angeles is conducting special investigations to determine the depth to and fluctuations in the ground-water plane and the rate of evaporation from free water surface and saturated gravels near Independence;¹ also to determine the amount of precipitation on the alluvial plain at the base of the Sierra between the 4,000 and 6,000 foot contours and the seepage losses of creeks crossing it.

Owens Valley is extensively cultivated and particularly adapted to stock raising. Numerous diversions are made for irrigation at different points on Owens River and tributaries, particularly in the upper part of the valley. Considerable water is also used for irrigating meadow lands in Long Valley north of Owens River canyon, but it is returned to the river above the head of Owens Valley.

The basin affords many opportunities for power development. The fall of the stream is so great and its minimum flow is so large and so reliably constant that it would develop many thousands of horsepower.

MOHAVE RIVER BASIN.

Mohave River rises in San Bernardino County, Cal., on the northern slope of the Sierra Madre, its headwaters flowing from elevations 5,000 to 8,000 feet above sea level. It takes a circuitous course, winding successively to the west, north, and east, decreases in volume

¹ See Water-Supply Paper U. S. Geol. Survey No. 294, 1912.

as it passes onto the plains, and finally disappears in the sandy bed a short distance below Barstow, at an elevation 1,900 feet above sea level. As measured by planimeter on the San Bernardino County map, the basin comprises 1,470 square miles, of which 251 square miles may be classed as mountains, 219 square miles as foothills, and 1,000 square miles as plains and desert buttes.¹

Many of the mountains to the west drain toward Mohave Desert, but the streams are few and small and the water disappears as soon as it reaches the hot sands. The general slope of the valley from the west is toward Mohave River at the rate of 2 feet to the mile, but the rainfall is so light—about 3 inches a year—and the summer heat is so great that the run-off is not visible on the surface. In the mountains of the basin heavy rains are frequent, and, falling on slopes that are both rugged and steep, they make floods which pour out of the hills far beyond the limit of the surface flow into the desert, fill the porous sand and gravel of the river beds, and then disappear as rapidly as they come.

South of Victorville, at a point known as The Narrows, the river has cut through a low range of hills. The gorge is narrow and its bounding walls are abrupt granite cliffs.

ANTELOPE VALLEY.²

Antelope Valley is in the southwestern part of the Mohave Desert, between the rugged mass of the San Gabriel Range and the northwest end of the San Bernardino Range on the south and the Tehachapi Range on the west.

The lowest part of this depression, lying at an elevation of about 2,300 feet, is occupied by Rosamond, Buckhorn, and Rogers dry lakes, and the surface of the valley slopes toward this area with a grade that decreases with distance from the mountains. The margin of the valley lands ranges in elevation from 2,600 feet along the south foot of the Rosamond Buttes to more than 4,000 feet on the Tehachapi flanks. The valley is an undulating brush-covered plain, except for barren steep-sided buttes and ridges which rise island-like above the level land and which are typified by the Sand Hills, just southwest of Cottonwood Creek, Wash.; Antelope Buttes, near Fairmont; Little Buttes, about halfway across the valley between Del Sur and Willow Springs; Quartz Hill, about 5 miles southwest of Lancaster; a butte at the northwest end of Buckhorn Dry Lake; and, in the eastern part of the valley, many sand dunes.

Although in its general features Antelope Valley resembles the Mohave Desert, its position at the immediate base of the Tehachapi Range and Sierra Madre modifies favorably the amount and quality

¹ Nineteenth Ann. Rept. U. S. Geol. Survey, pt. 4, 1898, pp. 14-16.

² From Johnson, H. R., Water resources of Antelope Valley, Cal.: Water-Supply Paper U. S. Geol. Survey No. 278, 1911, to which the reader is referred for more detailed information.

of the waters which reach the lowlands. Some of the streams flowing from these higher ranges are perennial and all supply better water than the smaller streams that flow from the buttes of the desert proper. The two ranges are so high that their snow cover often remains until midsummer and maintains a continuous though gradually diminishing flow of water. On the other hand, the region is prevented by its position on the landward side of the ranges from receiving the benefit of the heavy winter precipitation and consequent heavy run-off of the more favored southern and western slopes.

In general the streams of Antelope Valley flow at right angles to the trend of the mountains in which they originate; most of these streams converge toward Oban, and thence, though their channels are less clearly defined, sweep toward the northeast and empty into Rosamond Dry Lake, or its extensions, Buckhorn and Rogers dry lakes.

None of the streams in the valley are large, and only a few are worthy of mention. Those of the northern slope of the San Gabriel Range and the southeast slope of the Tehachapi are all short, with the exception of a few which have worked their way back far enough into the ranges to become important as water carriers. Of these, Rock, Little Rock, and Amargosa creeks are the more important.

The main fork of Rock Creek rises in the rugged region north of North Baldy, at an elevation of 6,500 feet above sea level, and the uppermost tributaries of its south branch, which drains the region immediately north of Mount Islop, head at an elevation of fully 8,000 feet. The creek flows northwestward past Shoemaker's ranch to the northwest corner of T. 4 N., R. 9 W., where it turns northward to the gravelly margin of Antelope Valley. Here it breaks into several distributaries which diverge from the apex of the alluvial fan built up by the stream itself. The more or less constant flow of Rock Creek is utilized by irrigation canals that extend for some distance east and west from the mouth of the canyon.

Little Rock Creek, which rises in the high granitic mountain country in T. 3 N., R. 10 W., flows northwestward and enters Antelope Valley near Little Rock, in the northeast quarter of T. 5 N., R. 11 W. The channel of this creek in Antelope Valley is better preserved than that of any of the other streams, and it is traceable almost to the vicinity of C. N. Reid's ranch, nearly 7 miles east of Lancaster. Here, however, the channel begins to lose its character and is not easily followed farther toward Rosamond Dry Lake. The waters of this stream are used to irrigate lands adjacent to the settlement of Little Rock.

Amargosa Creek, which enters Antelope Valley about 3 miles west of Palmdale, is the only stream with even moderate flow between Little Rock Creek and the extreme west end of Antelope Valley.

A number of streams which, though draining rather small areas, carry considerable water, rise at the west end of Antelope Valley, between

the junction of the Tehachapi and San Gabriel ranges. These streams are fed by copious springs which are particularly numerous at the southwest end of the Tehachapi Range near the foot of the steep slopes. The largest of these creeks is called Little Cottonwood. No accurate measurements of any of these springs or creeks are available, but the large spring at Liebre ranch is said to flow 1,500 gallons per hour.

Between Little Cottonwood and Cottonwood creeks are Fish, Livsey, Tierra Seca, and Little Oak creeks, each less than 5 miles long, but a source of considerable water even in the summer time. It is stated that the drainage basins of these streams contain large springs which furnish much of the stream water that eventually finds its way into the gravels in this part of the Antelope Valley.

Cottonwood Creek, the most important stream flowing into Antelope Valley from the Tehachapi Range, rises at an elevation of over 6,000 feet above sea level at a point some 8 miles west of Knecht's ranch, which is practically at the apex of the great alluvial fan built by this stream below the mouth of its canyon. Since this fan was deposited the erosional ability of the creek has been changed, either through uplift or climatic oscillations, so that it has carved a sharply defined gulch in its own fan.

Lakes and ponds, most of them intermittent in character, exist at a number of points in and near Antelope Valley.

The most permanent—Hughes and Elizabeth lakes—lie in depressions in an alluvial trough coinciding with the San Andreas fault zone. Elizabeth Lake receives the drainage of a small area in the surrounding hills and may be fed by springs. Its waters remain fairly fresh, however, for at the northwest end it overflows occasionally through a meandering channel into the smaller Hughes Lake, which in turn feeds the headwaters of a southward-flowing stream that is a part of the Santa Clara drainage.

Intermittent lakes of another type are formed in the lowest portions of the broader alluvial basins by the addition of such flood waters from the surrounding drainage area as have not been absorbed en route by the gravels of the basin. In this arid region such waters, combined with those due to upward leakage, usually hold in solution considerable saline material, and on their evaporation leave the salts as an incrustation within and about the margin of the dry lakes. These lake or "playa" deposits are nearly level and form a smooth, hard surface which, as in Rogers Dry Lake, extends for many miles. Except during the hardest storms the lakes rarely contain water, unless where the ground-water plane approaches sufficiently near the surface to produce small scattered pools and damp spots of alkali-charged waters. Several such lakes of minor importance occur southeast of Antelope Valley.

SALTON SINK.

Salton Sea originally formed a part of the Colorado Desert, which has an area of nearly 2,000 square miles and extends in a northwesterly direction almost 100 miles from the California-Mexico boundary line. It comprises two fertile valleys, one to the northwest of the sink, in Riverside County, known as the Coachella Valley, and the other to the southeast of the sink, in Imperial County, called the Imperial Valley. Salton Sea, which now partly fills the sink, lies between the two valleys and is partly in Riverside County and partly in Imperial County. The longest diameter of the sea has a northwest-southeast direction. On December 31, 1908, its surface was 206 feet below mean sea level, and it had a length of nearly 45 miles, a maximum width of about 15 miles, a minimum width of 9.5 miles, a maximum depth of 67.5 feet, and a superficial area of about 443 square miles. It is about 160 miles southeast of Los Angeles, 90 miles northwest of Yuma, and 50 miles north of Calexico.

A few thousand years ago, according to geologic evidence, what is now Salton Sea was a part of the Gulf of California, which then extended about 200 miles farther northwest than at present. It is probable that the gulf waters then swept inland to the base, or nearly to the base, of San Jacinto Peak, although all evidence which would enable their exact limits to be fixed has been obliterated by still more recent geologic events. At that time the mouth of Colorado River was in the vicinity of Yuma, 60 miles in an air line north of its present location. Presumably, then, as now, it was discharging annually enough silt to cover 1 square mile to a depth of 53 feet with dry earth, equivalent to 1 cubic mile each century, cut from the great canyons in the upper Colorado and the Gila Valley and carried to the Gulf. Running water will carry in suspension matter that quickly settles in still water, the settling process in this case being aided by the clarifying effect of the salt water.

As a result of these processes the Colorado delta was gradually extended southwestward toward the Cocopa Mountains, and when it reached them it had separated the old gulf into the present gulf and an inland sea. Delta growth, however, did not cease with the separation of the water body into two parts. Silt continued to be brought down the stream and to be deposited in its bed, along its banks, and in the still waters at its mouth. A stream, by this process of deposition along its channel, eventually builds the channel up until it is higher than the lands adjacent on either side. It is then in a condition of unstable equilibrium, and at some favorable time, as during an exceptional flood, it will break out of its immediate banks and establish itself in some more favorable course. By

this process, oft repeated, it comes eventually to flow over all parts of its delta, building up each part in succession. By such a process the Colorado must have discharged alternately into the gulf and into the depression now known as the Salton Sink, meanwhile building up the delta dam that separates them until it reached a height of about 40 feet above sea level. During this process it is highly probable that water filled the Salton depression and evaporated from it many times, for it must have quickly disappeared whenever the erratic river changed its course to the gulf, for the run-off from the mountains that surround the sink is too slight to maintain a permanent water body in this region of intense evaporation. Meanwhile the original body of salt water that occupied the sink had been displaced by the volumes of fresh water poured into it from the river, and in the intermediate stages of the lake's existence, at least, its water was fresh or nearly fresh. A clear and definite indication of the last occupancy of this depression by a lake, presumably just before the river had shifted its course that it now follows to the gulf, may be seen in the remarkably well preserved old water line that rims the desert from Indio to the Cerro Prieto at a height of 40 feet above sea level. On the rocky points that projected into the lake it is marked by a thick deposit of calcium carbonate, by slightly cut sea cliffs, and by a change in the profile of the rocky spurs at the water line. Where alluvial cones and the sandy floor of the desert formed the shore line beaches have been developed, and although of soft sand and easily eroded, they are even now well preserved, thus testifying to the recency of the action that produced them. Over the floor of the desert and along the sandy beaches are myriads of shells of fresh or brackish water mollusks¹ that lived in the lake.

There are some reasons for thinking that the lake at this latest stage was not perfectly fresh, that its waters were at least distinctly "hard." Its area when it stood at 40 feet above sea level was somewhat in excess of 2,100 square miles. The average flow of the Colorado has been determined as about 11,000,000 acre-feet per annum. The evaporation from a surface of the area of the old lake, under the conditions that prevail here, has never been determined, but is undoubtedly high. If it is as high as 8 feet per annum, it would nearly equal the average annual inflow from the Colorado; if it is but 7 feet per annum, the average inflow would exceed the evaporation by 2,000 second-feet, or somewhat less than 14 per cent of the inflow. In either event, the waters of the lake would be markedly more alkaline after a term of years than those of the Colorado. The calcium carbonate incrustations on the rocky points about the shores of the old lake are best explained by supposing that the lake

¹ Stearns, R. E. C., Remarks on fossil shells from the Colorado Desert: *Am. Naturalist*, vol. 13, pp. 141-154.

waters contained large quantities of this salt, so that wherever they broke in spray and evaporated more rapidly than usual, the carbonate was deposited. This necessary excess of inflow over outflow at the period of maximum area of the lake, taken in connection with the thick calcium carbonate incrustations on the shores, indicates distinctly hard water. It may be assumed that other salts than calcium carbonate were also present in large amount, for the conditions that would lead to the abundance of one salt would also lead to an abundance of the others. The shells so thickly distributed over the desert floor, however, are not salt-water forms, but are indetical with those now found living in the springs and occasional permanent streams about the desert borders. Many of these springs and streams are somewhat brackish, and the creatures flourish in them. It seems probable, then, that the lake waters also were rather alkaline, perhaps even brackish, at the time the lake attained its maximum area.

The period at which this lake disappeared can not be precisely fixed. The time units of geology are too large and too indefinite to translate satisfactorily into years, so that when we say that the disappearance of the lake is the most recent of geologic events we still leave the mind groping for a definite human standard of time. The sandy beaches which mark the borders of the ancient lake are cut away, to be sure, where washes cross them from the mountains, but in sheltered places they are still perfect. Where they stretch across an embayment from one rocky point to another they are mere embankments of sand, old barrier beaches, with depressions behind them once occupied by shallow lagoons. In other areas, where they contour the alluvial cones, they are gullied and cut away where streams have flowed across them, but in other places are preserved unscarred. At one locality noted a low sea cliff that had been cut in alluvial-fan material was still preserved, although the loose sand and boulders would slump in a few heavy storms.

In a region of abundant rainfall such ephemeral forms as these would be more nearly obliterated within fifty years after the lake had disappeared than they are now in the desert. In such a region the precipitation is twenty times that of the desert. It is the crudest of estimates—merely a guess, in fact—to state that, reasoning from geologic evidence alone, it may be a thousand years since the lake disappeared, yet it puts in concrete form such a guess as the geologist is able to make, and this guess may be correct within a margin of error of 50 per cent.

When human records are studied some evidence on this point is found, but it is almost as uncertain as to time as that furnished by the physical features. The Indians in the Coachella Valley have distinct legends to the effect that at some time in the past the valley was occupied by a large body of water. Prof. Blake records that

they told him of a time when a great body of water existed in which were many fish, and of the manner in which that water disappeared "poco á poco" (little by little) until the lake became dry.

The Indians now living in the desert put this event as far back as the lives of four or five very old men, say, four or five centuries ago at the most. There are, of course, no records and there is no known check on this assertion. Statements by Indians as to time, beyond the limits spanned by their own memories, are notoriously inaccurate. Furthermore, we do not know the means used to procure this statement. The native races are usually very prone to follow the suggestions contained in leading questions, and so to give the answer desired by the questioner. To obtain an entirely independent and unguided answer is one of the most delicate of tasks. Yet their statement has some value, and combining the evidence of the physical conditions and the Indian legends it may be said that it is probable that the lake disappeared and left the desert, as we have known it in historical time, from five hundred to one thousand years ago.

During the summer of 1891 the high water in the Colorado overflowed into Salton Sink to such an extent as to endanger the Southern Pacific Railroad line at its lowest point. In the summer of 1905, after a succession of winter and spring floods in Gila River, followed by an exceptionally heavy summer flow in the Colorado, there was a repetition of flood conditions in the sink on a much larger scale.

The gravity of the situation on this latter date, however, was greatly augmented by the interference of man. For several years preceding a small quantity of water had been diverted from the Colorado below Yuma, Ariz., to be used by the settlers of the Imperial Valley for irrigation and domestic purposes. The first water was diverted in the United States and conveyed to the Imperial Valley, after passing through Mexican territory, by means of an old river channel which had been one of the Colorado's distributaries during the formation of its delta, and is now known as Alamo River. The increased demand for water and the silting up of the original canal heading above the boundary line necessitated the cutting of an additional channel from the river below the boundary to connect with the canal. It likewise silted up, and to supply the urgent need for water a canal was cut 4 miles below the original heading to connect Colorado and Alamo rivers. This canal was not provided with protective headworks and had a gradient much greater than that of the river, so that with the unusual and prolonged summer flood in 1905, it began cutting, until in July it was carrying 87 per cent of the total flow of the river. This large quantity of water flooded several hundred square miles about Calexico, in the southern part of the Imperial Valley, and caused serious loss both in the United States and in Mexico. These waters ultimately reached the Salton Sea, but in so doing they

deepened and widened Alamo River into a great gorge and developed another drainage channel to the west through Imperial Valley in a second gorge now called New River. Notwithstanding all attempts to control it the Colorado continued to pour its waters through Alamo and New rivers into Salton Sea until the early fall of 1906, when it was finally shut off by the Southern Pacific Co. It broke again, however, on December 7, but was closed about two months later. This closure proved not to be permanent, and the railroad and United States Government engineers have since been endeavoring to prevent further access of the Colorado to Salton Sink. Accounts of these operations have been published in the Transactions of the American Society of Civil Engineers, the Engineering News, and other engineering publications. In addition to the damage done to the railroad the sea has completely submerged the plant of the New Liverpool Salt Co. below Mecca and also a few ranches in the vicinity of Mecca.

There is some uncertainty as to the elevation of the lowest point of Salton Sink, and it is now believed that the depth below sea level has been overestimated in the past. From the record of the depth of the water as it filled the lowest portion of the basin, as kept by the New Liverpool Salt Co., it appears that the maximum depth of water was 17 feet on October 4, 1905 (according to the gage and as checked by soundings later), when on the same date the water surface just covered the United States Geological Survey bench mark a few feet from the old Salton railway station. As this bench mark is 256.5 feet below mean sea level, it would appear that the lowest point of the sink is 273.5 feet below mean sea level instead of 287 feet, which has been accepted heretofore. In 1891 Southern Pacific engineers reported the lowest point in the sink as -280.2, which corresponds to -273.4, United States Geological Survey.

Practically all the water that enters Salton Sea discharges through Alamo and New rivers, chiefly through the former. These rivers run through Imperial Valley and are the drainage channels for all the excess and waste water from the irrigation system and from the power plants.

LOWER COLORADO RIVER BASIN.

Colorado River is formed in the southeastern part of Utah by the junction of Grand and Green rivers. From this junction it flows in general southwestward, passes across the northwestern corner of Arizona, then turns to the south and for the remainder of its course forms a part of the southeastern boundary of Nevada and California and the western boundary of Arizona. It discharges into the Gulf of

California about 60 miles below Yuma. The river receives few tributaries from California.

The Imperial Canal diverts water from the Colorado at a point about 10 miles by river below Yuma to irrigate land in the Imperial Valley.¹

SOUTH PACIFIC COAST DRAINAGE BASINS.

GENERAL FEATURES.

The south Pacific Ocean drainage basins include all streams south of San Francisco Bay that drain the western slope of the Coast Range and enter the Pacific either directly or indirectly. The average width of the basins thus drained is nearly 50 miles and the total area is 23,000 square miles. The low-water flow of the streams of this area is very small and in many of them all the water disappears in the sand and gravel beds below the canyons. In the winter, however, the streams are torrential and discharge large volumes of water. North of Santa Barbara the general course of the streams is northwestward; south of Santa Barbara, however, which is approximately opposite the intersection of the Coast Range by the Tehachapi Range, the general direction is southwestward.

TIA JUANA RIVER BASIN.

Tia Juana River discharges into the Pacific Ocean below San Diego Bay near the Mexican boundary. Its principal tributary, Cottonwood Creek, rises in the Laguna Mountains of the Coast Range, and flows south and west for about 20 miles, where it is joined by Pine Valley Creek from the north; it then flows southwestward 12 miles to its junction with Tia Juana River at the Mexican boundary, about 22 miles east of the coast line. The total drainage area of Cottonwood Creek above its junction with Tia Juana River is approximately 340 square miles. It lies south of the Sweetwater and Otay River basins, and is the most southerly stream in San Diego County. Pine Valley Creek is its only important tributary.

The basin of Cottonwood Creek is rough throughout, although it contains some valley areas at elevations exceeding 3,000 feet; below this elevation the creek flows through a deep, narrow canyon, broken only by a short stretch of open country with comparatively light grade at the junction of Pine Valley Creek. Altitudes range from 600 feet above sea level, where the creek empties into Tia Juana River, to 5,000 feet on the Laguna Mountains.

The Cottonwood basin is very poorly forested. The timber consists of scattered oaks, cottonwoods, and alders, which are confined almost entirely to the small valleys along the stream and to the higher elevations. The mountain slopes are fairly well covered with brush.

¹ See also Salton Sink, p. 29.

The mean annual rainfall ranges from 8 to 10 inches along the foothills and from 20 to 30 inches in the mountains.

The basin affords several good reservoir sites. The Barrett reservoir, located at the junction of Pine Valley Creek at an elevation of 1,500 feet; the Morena reservoir on Cottonwood Creek, at the lower end of Morena Valley, 8 miles above the Barrett reservoir; and Pine Valley reservoir on Pine Valley Creek, at the west end of Pine Valley. The Morena and Pine Valley reservoirs are at an elevation of 3,100 feet. All of these sites have been surveyed. The Morena dam is now constructed and considerable preliminary work has been done at the Barrett dam, including the building of a low concrete dam to a height of about 20 feet above the bed of the stream. A conduit has been constructed to divert water from Cottonwood and Pine Valley creeks from above the Barrett dam to the lower Otay reservoir in the Otay River basin. This conduit has a capacity of about 60 second-feet, and will divert all the water from these creeks when their combined discharge does not exceed that amount. The city of San Diego receives its water supply from the lower Otay reservoir.

SWEETWATER RIVER BASIN.

Sweetwater River rises in the south and east slope of the Cuyamaca Mountains of the Coast Range, flows nearly due south for a distance of 15 miles, then turns to the west and southwest and discharges into San Diego Bay south of National City. Its length is 45 miles and its area comprises approximately 215 square miles, the greater part of which is in mountainous country. The basin is extremely narrow. It lies directly south of San Diego River and north of the Otay and Cottonwood Creek basins.

The topography is not so rough as that of San Diego River basin, although the mountains and foothills extend within 3 or 4 miles of the shore line of San Diego Bay, and the valley and mesa lands are not so extensive as along San Diego River. The basin is poorly forested. The timber is confined almost entirely to the immediate valleys of the streams and to the higher mountain areas. The mountain slopes have a fairly good covering of brush, but the lower foothills are almost bare, supporting only a sparse growth of low brush.

The mean annual rainfall ranges from 10 to 15 inches along the foothill belt and from 20 to 40 inches in the mountains.

A considerable area lying between San Diego Bay and the foothills south from National City to the Mexican boundary is under a high state of cultivation. The greater part of this land is irrigated by water taken from Sweetwater River.

The celebrated Sweetwater dam is located on Sweetwater River about 8 miles above its mouth at an elevation of 145 feet. There are two other reservoir sites on Sweetwater River, one a short distance

above the Dehesa post office and another 1 mile below Descanso, at an elevation of 3,340 feet above sea level.

During the extremely dry period from 1898 to 1904 there were years when no water from Sweetwater River reached the reservoir. From 1899 to 1904 the reservoir was dry, and to tide over this period of drought pumping was resorted to. Wells were sunk in the reservoir site, and pumps installed, by means of which water was delivered to the distribution system. Pumping operations were also extensively carried on in the valley along the river below the reservoir. It is probable that the construction of additional storage reservoirs on the upper reaches of the river would serve to tide over an extended dry period.

SAN DIEGO RIVER BASIN.

San Diego River rises in the Cuyamaca Mountains, on the western slope of the Coast Range, and flows in a southwesterly direction, discharging into Pacific Ocean through False Bay, at the northern boundary of San Diego City. Its length is about 50 miles, half of which lies in the mountains above the town of Lakeside. The San Diego basin lies directly south of the Santa Ysabel basin and north of Sweetwater River basin.

The San Diego has several small tributaries, the most important being Coleman, Cedar, Boulder, South Fork, and Chocolate creeks, all of which enter from the east and south above Lakeside. San Vicente Creek, the only important tributary from the north, enters the river at Lakeside.

The upper part of the basin, above Lakeside, is extremely rough and rugged, but below Lakeside numerous valleys and high mesa lands extend to the coast. Elevations throughout the basin range from 50 to 600 feet in the foothills and from 600 to 6,000 feet in the mountains. Cuyamaca Peak, the highest point in the basin, is 6,028 feet above sea level.

The San Diego basin is very poorly forested. The timber is confined almost entirely to the valley along the streams and to the higher mountain areas. The mountain slopes have a fairly good covering of brush, but the lower foothills are almost entirely bare, having only a scattering growth of low brush.

The mean annual rainfall ranges from 10 to 15 inches along the foothill belt, and from 20 to 40 inches in the mountains.

Irrigation is carried on extensively in the valleys and on the mesa lands between Lakeside and San Diego, and additional areas might be irrigated if an adequate supply of water could be assured. Two storage reservoirs have been constructed: The Cuyamaca reservoir is situated on Boulder Creek, at an elevation of 4,600 feet above sea level, and has a capacity of 11,400 acre-feet with a 41½-foot earthen

dam. La Mesa reservoir is located in the foothills about 2 miles northwest of the town of La Mesa, at an elevation of 435 feet. The dam is of earth and rock, is 66 feet high, and has a storage capacity of about 1,500 acre-feet. La Mesa reservoir is filled by water diverted from San Diego River during the winter.

SAN DIEGUITO RIVER BASIN.¹

San Dieguito River, or Santa Ysabel Creek, as it is known from its source to the San Pasqual Valley, rises in the Volcan Mountains on the western slope of the Coast Range and flows westward through San Pasqual Valley, below which it takes its true name, and empties into the Pacific Ocean midway between Oceanside and San Diego. Its length is 50 miles, and the maximum width of the drainage basin is about 15 miles. The total drainage area is approximately 340 square miles. It lies south of San Luis Rey River and north of the San Diego River basin.

Numerous small tributaries enter Santa Ysabel Creek between its source and San Pasqual Valley, the most important being Black Canyon and Temescal creeks from the north and Santa Maria Creek from the south. Above San Pasqual Valley the creek maintains a light flow throughout the year, but below that point the channel is dry during the summer months.

The upper part of the basin is rough, the surface being cut by many canyons. The lower part in the foothills is more rolling, with large areas of valley and high mesa land. The formation is a loose granite. The basin has very little timber, the principal cover being brush, grass, and a few scattered oaks.

The mean annual rainfall ranges from 10 to 15 inches along the foothills and from 20 to 40 inches in the mountains.

No important amount of irrigation is carried on in this basin. A diversion is made in San Pasqual Valley to irrigate a small area along the river. A good storage reservoir site exists on the main stream at Pamo Valley, below the junction of Temescal Creek with the Santa Ysabel.

No great amount of water power can be developed in this basin.

SAN LUIS REY RIVER BASIN.

San Luis Rey River drains an area of about 575 square miles, lying wholly in the northern part of San Diego County and extending from the crest of the Coast Range to the Pacific Ocean, a distance of 65 miles, with a maximum width of about 16 miles.

The river is formed by many small streams, which have their sources in the higher elevations of the Coast Range and come together at the lower or west end of what is known as Warner's Valley. Below

¹ Called Bernardo River in Water-Supply Paper 271 and previous reports.

this point the river flows for 10 miles through a deep, narrow canyon with a heavy grade, then over a sandy and gravelly bed with light grade for some 40 miles, finally discharging into the Pacific Ocean at Oceanside.

Altitudes within this basin range from 50 to 500 feet in the foothills in the vicinity of Oceanside and from 500 to 6,000 feet on the mountains. Palomar Mountain, the highest peak in the basin, has an elevation of 6,126 feet above sea level. The upper portion of the basin is more or less rolling, and several of the valleys are under cultivation and are used extensively for stock raising; the middle part, occupied by the river in its canyon, is rough; on the lower reaches the surface becomes less rugged, merging into the foothills, which extend to the coast. The rocks are granitic.

The basin is poorly forested. Some fairly good timber is found on the higher elevations, but the greater part of the cover is brush and grass with a scattered growth of oaks.

The mean annual precipitation in this basin probably ranges from 10 to 40 inches, gradually increasing with altitude. It occurs almost entirely as rain, snow appearing only occasionally on the high elevations.

Small areas are irrigated along the river, and water is diverted and used for irrigation and municipal supply at Escondido and vicinity. At the head of the rough canyon at the lower end of Warner's Valley is a good reservoir site. A dam constructed at this point would probably store the entire normal flow of the river.

The stream affords little opportunity for power development.

SANTA MARGARITA RIVER BASIN.

Temecula Creek, as Santa Margarita River is known at its beginning, rises on the western slope of the San Jacinto Mountains in the northwestern part of San Diego County just north of the San Luis Rey drainage basin, flows north into Riverside County, then west about 15 miles to Temecula, where it flows southwest through Temecula Canyon into San Diego County and empties into the Pacific Ocean as Santa Margarita River. The highest elevation in the basin is about 5,500 feet on the divide between Temecula and San Luis Rey. Temecula Creek has few tributaries, and the topography is rather broken, though there are several small valleys in the upper reaches. The rock formation through which it flows is a loose granite with good soil covering, and there is considerable growth of small, scrubby timber. The annual precipitation ranges from 10 to 30 inches and occurs almost entirely as rain. The discharge is heavy in the spring during the flood season, but is small during the rest of the year.

SANTA ANA RIVER BASIN.

Of the three important streams—Santa Ana, San Gabriel, and Los Angeles rivers—that traverse the valley of southern California, the Santa Ana is the largest. Its drainage basin, lying south of the San Bernardino Mountains and the Sierra Madre and taking waters from their southern slopes, is the most eastern and comprises by far the largest area, including the northern part of Orange County, the northwestern part of Riverside County, and the southwestern part of San Bernardino County. Of the total drainage area, comprising between 1,800 and 1,900 square miles, about two-thirds are in the valley, but only a few hundred yield much run-off.

The Santa Ana rises in the heart of the San Bernardino Mountains, about 30 miles east of Highland, and flows westward for about 25 miles to the mouth of its upper canyon; thence southwestward across San Bernardino Valley, through the lower canyon in the Santa Ana Mountains, and across the Coastal Plain to the Pacific Ocean at Newport Beach. Although the course of the stream measures about 100 miles, there is continuous surface flow from mountain to sea only during winter floods.

Many small streams from the southern slope of the San Bernardino Mountains and a few from the Sierra Madre west of the Cajon Pass flow toward the Santa Ana, but some of these discharge water to the main stream only in the flood seasons, the ordinary flow either being diverted or sinking into the sand and gravel of San Bernardino Valley. The principal tributaries are Bear, Alder, Mill, Lytle, and Chino creeks.

Altitudes in the Santa Ana drainage area range from a few feet above sea level on the Coastal Plain to 2,000 or 3,000 feet on the Santa Ana Mountains, 500 to 1,200 feet in the San Bernardino basin, and 2,000 to 11,000 feet on the southern slope of the San Bernardino Mountains. The more elevated regions are rough and rugged, and the mountain sides are incised by many canyons which are the result of active stream erosion. The rocks are granitic. The mesa and valley lands at the base of the mountains are composed of granitic gravel and sand of great depth. The higher mountain slopes support considerable timber; the lower slopes are as a rule covered with brush and grass.

The mean annual precipitation varies considerably in different parts of the Santa Ana basin. On the Coastal Plain west of the Santa Ana Range it averages 10 inches or more; eastward, in the San Bernardino Valley, it amounts to 10 to 16 inches. On the mountain slopes it ranges from 20 inches at the base to 40 inches or more near the crest, and in Bear Valley north of the highest peaks, such as San Bernardino and San Gorgonio, it may be even 50 inches. Considerable snow falls in the region of these high peaks in winter

and remains well into the summer, especially on the northern slopes, from which the headwaters of the Santa Ana come.

Irrigation in the valleys of the Santa Ana basin has attained a very high state of development. Probably no other stream of its size in the United States is made to serve greater or more varied uses. To begin with, a portion of the flow is regulated by artificial storage in the upper part of the basin, and the water passes successively through three hydroelectric plants before reaching the mouth of the canyon. On leaving the lower plant it is turned into high-level canals and used for municipal supply and irrigation about Redlands and Highland. The irrigation water that escapes through seepage to the body of ground water is recovered from springs and flowing wells, and from pumped wells, and is used for irrigation around San Bernardino and Riverside, the power for pumping being generated on the upper reaches of the stream. Bedrock obstructions at Riverside Narrows, below the city of Riverside, force to the surface a part of the water in the gravel bed of the stream above this point, and this water, after being diverted for power development, is returned to the river above Corona. Only a few miles below it is again diverted and used for irrigation on the Coastal Plain in the vicinity of Santa Ana and Anaheim. The seepage water from irrigation is once more recovered by numerous pumping plants and flowing wells on the lower Coastal Plain west of Santa Ana. It is thus evident that the same water, in passing from mountain to sea, a distance of not more than 100 miles, may be used at least eight times for power and irrigation. In like manner the water in many of the tributaries may be used several times before reaching the main stream.

SAN GABRIEL RIVER BASIN.

San Gabriel River is one of the three most important streams traversing the valley of southern California. Its drainage basin lies wholly in Los Angeles County west of the Santa Ana basin and east of the Los Angeles basin, and stretches from the crest of the Sierra Madre to the Pacific, a distance of about 50 miles. Its total drainage area is approximately 700 square miles, about one-third of which consists of mountain slopes, which contribute practically all of the run-off except in heavy storms. The remaining two-thirds is embraced in the San Gabriel Valley at the base of the mountains and in the Coastal Plain southeast of the city of Los Angeles.

The mountainous part of the basin is somewhat rectangular in shape. Its length east and west is about 25 miles and its width about 10 miles. It lies on the southern slope of the Sierra Madre, opposite the basins of Big and Little Rock creeks, at the north and on the southern slope of the San Gabriel Range, through which the river breaks near Azusa and enters the San Gabriel Valley.

The main stream is formed by the junction of two principal forks, one from the north and east and the other from the west. Each of the branches receives many tributaries from the crests of the surrounding ranges. The headwaters come from the western slope of San Antonio Peak (Old Baldy), altitude 10,080 feet, and from the southern slope of other high peaks at the north, such as North Baldy and Islip mountains. The west fork drains the northern slope of Mount Wilson, the eastern and northern slopes of San Gabriel Peak, and a portion of the southern slopes of the main range to the north. It joins the main stream about 8 miles above the mouth of the canyon. The general course of the stream is southwestward. After leaving the mountains it traverses San Gabriel Valley in a wide wash of sand, gravel, and bowlders, then breaks through the range of foothills separating San Gabriel Valley from the Coastal Plain at a point called The Narrows, about 5 miles northwest of Whittier, and enters the Coastal Plain, across which it flows to its mouth in Alamitos Bay, a few miles east of Long Beach. The total length of the stream is about 65 or 70 miles.

The principal tributaries of San Gabriel River are Fish Fork and Cattle Creek from the east and Iron and West forks from the west.

Altitudes in San Gabriel basin range from 20 to 200 feet on the Coastal Plain, from 200 to 900 feet in San Gabriel Valley, and from 1,000 to 10,000 feet in the mountains. The range of foothills near Whittier has an altitude of about 1,250 feet. The topography is rough and rugged in the mountains, especially in the upper part, where deep and narrow canyons exist. The geologic formation is granitic, with a light soil covering. The San Gabriel Valley is more or less rolling and is composed of granitic wash from the mountains.

The basin is rather poorly forested, having a sparse timber growth on the higher slopes and brush and some scattering timber on the middle and lower elevations.

The mean annual precipitation in this basin varies from 15 to 20 inches in the valley area and from 20 to 40 inches in the mountains. It occurs almost entirely as rain except on the higher peaks, where snow falls during the winter. On the northern slopes snow remains for several months.

The total summer flow of the stream is used for irrigation, and the same water may be put to use several times in its journey from mountain to sea. About 5 miles above the mouth of the canyon a power canal, with a capacity of 80 second-feet, takes water from the left bank of the stream and delivers it to irrigation canals below the wheels near the mouth of the canyon for irrigation in San Gabriel Valley. Some other small diversions are made in the spring months at and below the mouth of the canyon for the same purpose. Most of the excess water issuing from the canyon sinks into the sands and

gravels of San Gabriel Valley to augment the underground basins, which are drawn upon for irrigating the lower part of the valley.

Above The Narrows at the lower end of the valley the underground flow is forced to the surface by a bedrock obstruction, and this water, with additional water developed from many wells, is diverted through ditches for irrigating the higher parts of the Coastal Plain. The seepage loss from irrigation joins the body of underground water and is recovered from pumped and flowing wells in the lower Coastal Plain. Storage sites are practically lacking in this basin and opportunities for power development are not great. Probably not more than one-fifth as much power could be obtained in this basin as in the basin of the Santa Ana.

Run-off records in this basin extend back to 1896. The wettest year since that time was 1907 and the driest was 1899. The total flow during the wettest year was nearly 33 times that during the driest.

LOS ANGELES RIVER BASIN.

Los Angeles River is formed by Tujunga, Pacoima, and other small creeks, whose sources lie in the Sierra Madre northeast of the city of Los Angeles. These streams leave the mountains at a point about 25 miles above the city and enter the comparatively flat country of the San Fernando Valley, where, except at times of excessive flood, the waters disappear in the sand and gravel washes. At the lower end of this valley is a secondary range of hills, extending from east to west, and bedrock obstruction forces the waters to the surface to form what is known as Los Angeles River. Below this point the river flows through the flat country of the Los Angeles Valley and enters the Pacific near the town of Long Beach.

During the summer months the entire flow of Los Angeles River is diverted at a point about 5 miles above Los Angeles for the supply of the city, only a small amount of water passing this point except during flood periods.

At the city of Los Angeles it is joined by Arroyo Seco, which drains an area comprising 21 square miles of the Sierra Madre. This stream issues from the mountains on the west side of Pasadena Mesa, and passes through an opening in a granite spur known as Devils Gate. Between the point where it leaves the mountain and Devils Gate lies a broad river bottom 2 miles long, composed of coarse material. In passing over this the water sinks rapidly, diminishing in volume of flood water from the mouth of the canyon to Devils Gate.

MALIBU CREEK BASIN.

Malibu Creek rises in the Santa Monica Mountains and enters the Pacific Ocean about 15 miles above the town of Santa Monica. This stream is formed by Triunfo and Las Virgenes creeks, which drain the

northern portion of the Santa Monica Range and the lower foothill country to the north. The rocks throughout this basin are shale, sandstone, and conglomerate, with good soil covering. A sparse growth of timber covers the higher elevations, but the greater part of this area has a covering of brush and grass, which is used extensively for pasturage, with small areas of cultivated land for raising grain. A reservoir has been constructed on the upper reaches of Triunfo Creek and the waters are used for irrigation within the basin during the summer. This reservoir covers an area of about 300 acres when filled.

The mean precipitation in this basin amounts to about 25 inches annually and falls wholly in the form of rain.

SANTA CLARA RIVER BASIN.

Santa Clara River rises in the northwest end of the Sierra Madre, in Los Angeles County, Cal., and flows westward through what are known locally as the Piru, Sespe, and Santa Clara valleys. The stream is augmented by five tributaries, which enter it from the north. They are the San Francisquito, the Castac, the Piru, the Sespe, and the Ojai. The river passes through Ventura County and empties into the Pacific Ocean about 6 miles south of Ventura.

A remarkable feature is the small run-off from this large drainage basin. The flood stages of the stream are almost wholly in the winter months, and at most points on the drainage line the channel is dry during the summer.

The valley through which the river flows is of a high order agriculturally, growing all the citrous fruits common to California.

VENTURA RIVER BASIN.

Ventura River drains a small area lying almost wholly in Ventura County. The river rises in the eastern part of Santa Barbara County and flows in general southeastward to Matilija, where it turns and takes a course more nearly south to its entrance to the Pacific at Ventura.

SANTA YNEZ RIVER BASIN.

Santa Ynez River is the only important stream lying wholly in Santa Barbara County. Its drainage basin lies north of the Santa Ynez Mountains, extending for a distance of about 80 miles parallel to the coast line, and comprising approximately 900 square miles. Four-fifths of this area is mountainous, including the north slope of the Santa Ynez and the south slope of the San Rafael Mountains, and furnishes practically all of the run-off.

Santa Ynez River rises near the boundary line between Ventura and Santa Barbara counties, where the Santa Ynez and San Rafael mountain ranges merge, flows nearly due west, and enters the Pacific

Ocean at Surf, about 8 miles north of Point Arguello lighthouse, where the coast line makes a sharp turn to the north.

Small tributaries are numerous, but the only important one is Mono Creek, which drains 120 square miles of the southern slope of the San Rafael Mountains and joins the Santa Ynez River about 13 miles below its source.

Elevations in the Santa Ynez Mountains range from 3,000 to 4,000 feet; in the San Rafael Mountains they range from 4,000 to 6,000 feet, with a few high peaks, such as Mount Pinos, extending 8,826 feet above sea level. The rocks throughout the entire basin consist of shale, sandstone, and conglomerate.

The greater part of the drainage basin is included in a national forest and is sparsely covered with brush and small trees, only small areas on the higher elevations having any considerable growth of timber.

The mean annual precipitation in the area ranges from 20 to 30 inches, the increase being gradual from the lower to the higher altitudes, and is almost entirely rain, there being only a light snowfall on the higher elevations during the winter.

Some small diversions for irrigation are made above Lompoc, and present water rights exceed the low-stage flow of the stream. The basin affords good storage sites. Several reservoirs have already been surveyed and their combined capacity far exceeds the mean annual run-off.

No important water-power development is possible in the Santa Ynez basin.

SANTA MARIA RIVER BASIN.

Santa Maria River drains the northern slope of the San Rafael Mountains and a smaller area of foothill country north of this range. It flows westward, finally discharging its waters into the Pacific Ocean at Guadalupe, about 25 miles south of San Luis Obispo. Its flow is torrential; it is subject to floods of short duration during the rainy period, but is practically dry during the summer. It has numerous tributaries, the most important of which is the Sisquoc, which enters it about 12 miles above the town of Santa Maria. The country in this basin consists of rolling foothills, except the higher elevations of the San Rafael Mountains, which reach elevations of 6,000 to 8,000 feet. The river breaks from the foothills at a point where it is joined by the Sisquoc and flows through the flat country of the Santa Maria Valley for about 25 miles until it joins the Pacific Ocean. The rocks in this basin consist of shale, sandstone, and conglomerate, which are covered by a heavy clay soil. There is a considerable growth of timber on the higher parts of the San Rafael Mountains, but over most of the area the growth of timber is light,

and large areas are covered with brush and grass. Pasturage is carried on extensively throughout the basin. There are no diversions along this stream for irrigation, although tunnel work has been attempted above Santa Maria for developing underground water, with poor results. Numerous wells in the vicinity of Santa Maria produce considerable water for irrigating land in that locality, the soil being very deep and exceptionally good, susceptible of the highest cultivation. The mean precipitation in this basin is probably about 25 inches. The greatest rainfall occurs on the lower elevations near the coast. The higher elevations receive some snowfall, which melts early in the spring and does not tend to keep up the flow of the streams through the summer.

SALINAS RIVER BASIN.

The Salinas River basin lies almost wholly in Monterey and San Luis Obispo counties, and comprises about 4,780 square miles, having a length of 150 miles northwest-southeast and a maximum width of about 45 miles.

The Salinas rises on the east slope of the Santa Lucia Range, near the south end of the basin and flows northwestward, parallel to the coast, to its mouth, about 4 miles southwest of Castroville.

Topographically the Salinas basin is a long, narrow valley, walled in by steep mountain slopes, which have been greatly eroded and dissected by streams. At the north end of the basin are the Gabilan Range and the Sierra de Salinas, separating it from the San Benito basin at the east and from Carmel River at the west; for the rest of its length it is flanked by parallel ridges on the west and by a broad mesa or elevated plain along the southeast, back of which are the crests of the Santa Lucia and Mount Diablo ranges, respectively. The crest of the encircling mountains ranges in altitude from 2,500 to 4,000 feet above sea level. The rocks are sedimentary and rest on a basement complex of granite.

The forest cover in this basin is light and irregularly distributed. The valley contains a few scattered trees and the eastern slopes are covered by grass, brush, and scrubby timber. On the higher elevations of the western slope there is considerable timber, most of which is included in a national forest reserve.

The mean annual precipitation is about 10 inches in the Salinas Valley, and increases with increase of altitude on the slopes. It is undoubtedly greatest on the west slope of the basin, where it probably ranges from 30 to 50 inches on the higher elevations and occurs almost entirely as rainfall.

The river has many tributaries, the most important of which, from north to south, are Arroyo Seco, San Antonio River, and Nacimiento River from the west and San Lorenzo and Estrella creeks from the

east. The tributaries from the west are peculiar in that they lie west of secondary ranges parallel to the main range and flow south-eastward for the greater part of their length, parallel but in a course directly opposite to the general course of Salinas River.

The streams of this basin are torrential and erratic, particularly the Salinas itself, which has a very heavy discharge in winter and ordinarily no surface run-off in summer except below Soledad. Some irrigation is carried on in the Salinas Valley, the water being obtained from flowing streams and by pumping, but further development is feasible and very much needed.

There are several storage reservoir sites of more or less value on the tributaries of the Salinas River, some of which have already been surveyed.

Very little power could be developed continuously in the Salinas basin without storage.

NORTH PACIFIC COAST DRAINAGE BASINS.

The principal streams that enter the Pacific Ocean in California north of the Bay of San Francisco are Russian, Eel, Mad, Klamath, and Smith rivers.

RUSSIAN RIVER BASIN.

Russian River rises in the eastern part of Mendocino County, on the west slope of the Coast Range, and flows southeastward to its junction with Santa Rosa Creek in Sonoma County, where it turns westward and enters the canyon through which it flows to the Pacific Ocean. The total length of the main river is about 100 miles.

The principal tributaries of Russian River are East Fork, Big Sulphur Creek, Dry Creek, Santa Rosa Creek, and Austin Creek—all very small, except during the rainy season.

The Russian River valley, in Sonoma County, is fertile and well-cultivated. The climate is very equable throughout the year and fruit-raising is the important industry. As the climate and soil are especially favorable for the growing of grapes, this valley has become one of the most important wine-producing districts of California.

EEL RIVER BASIN.

Eel River rises on the west slope of the Coast Range, in the California National Forest, and drains parts of Lake, Trinity, Mendocino, and Humboldt counties. From its junction with the Middle Eel at Two Rivers, it flows northwestward to the Pacific Ocean, a distance of about 110 miles. The principal tributaries below Two Rivers are the North Fork, South Fork, and Van Duzen River.

The lower portion of the drainage area, below the mouth of the South Fork, is in the redwood belt. The remainder of the area is semiopen and contains very little merchantable timber except on a small tract near Grizzly Mountain. The lowlands are very fertile and well cultivated. The rolling and hills land are covered with grass and are used only for grazing.

The precipitation throughout the drainage area is very heavy during the winter.

MAD RIVER BASIN.

Mad River rises in the southern part of Trinity County and flows northwestward across Humboldt County to the Pacific Ocean. Its total length is about 90 miles.

The basin is very narrow and tributaries are unimportant. The upper and lower parts contain good agricultural land; the middle part is suitable only for grazing.

During the rainy season the river is turbulent. In the upper part of its course its channel is practically dry during the summer, the water standing in pools; farther down flow continues throughout the year, but is insufficient to irrigate all the land that is improved.

The lower course of the river is through the famous redwood belt. The remainder of the basin has only a fair forest cover consisting of grass and scrubby timber without much brush.

The gaging station, which is located in sec. 14, T. 6 N., R. 1 E., at the Oregon & Eureka Railroad bridge, 5 miles northeast of Arcata and 1 mile below Warren Creek, was established December 28, 1910.

The gage is a vertical staff in two sections on the right bank at the railroad bridge.

Discharge measurements are made from a highway bridge just above the railroad bridge.

KLAMATH RIVER BASIN.

Klamath River drains a territory lying east of the Cascade Range in south-central Oregon and south of the Siskiyou Mountains in California. The river rises in Upper Klamath Lake, flows generally southward, and reaches the Pacific Ocean at Requa, on the coast of northern California. Only that part of the basin lying in Oregon has been studied in detail. The drainage from this portion of the area is collected in large lakes whose margins are wide shallow marsh lands covered with tules and aquatic plants. From Upper Klamath Lake, which stands 4,141 feet above sea level, flows Link River, a stream 1½ miles long, discharging into Lake Ewauna at an elevation of 4,080 feet. Klamath Falls, the principal city of this section, is located on Link River. From Lake Ewauna to the town of Keno, Klamath River flows through a flat, marshy country a distance of 20 miles. About 5

miles above Keno the river is connected with Lower Klamath Lake by a channel known as Klamath Straits. During high stages water flows from Klamath River into Lower Klamath Lake, and during low water the direction of the flow is reversed. About half a mile below Keno the river breaks over a rocky ledge, and here begins its precipitous fall of 100 to 200 feet per mile to its mouth. The drainage area above Keno, exclusive of Lower Klamath Lake, is 3,150 square miles. The streams draining into Upper Klamath Lake head about 6,000 feet above sea level. The elevation of Klamath Falls is 4,100 feet.

The principal tributaries of Klamath River are Sprague River, which drains the southwestern rim of the Great Basin divide in Oregon, and Anna River, which heads in a large spring supposed to be fed by the waters of Crater Lake. Williamson River, which drains the northern part of the Klamath Indian Reservation, is tributary to Sprague River. Lost River, although not a tributary of the Klamath, is usually considered with it, as a slough connects the two. Water formerly flowed either way, the direction depending on the heights of the streams, but the flow is now stopped by an artificial dike.

The mean annual rainfall at Klamath Falls, about 12 inches, is fairly representative for this section of the drainage area. A large part of this precipitation occurs as snow. As nearly all the streams are spring fed and therefore rarely freeze, records of stream flow are little affected by ice.

Irrigation is practiced extensively in the upper part of the area, although dry farming has been fairly successful. The agricultural products consist chiefly of forage crops for stock and cattle, the country being well adapted to stock raising. Grains, alfalfa, and the hardier vegetables and fruits are grown with some success, but the climate is too rigorous for the intensive agriculture that is possible at lower altitudes.

Within the period covered by stream-flow records the lowest run-off was in 1905 and the highest in 1907.

Gage records have been obtained since 1904 on Upper Klamath Lake, Lower Klamath Lake, and Tule Lake, and during 1907 and 1908 three gages in Klamath River between Upper and Lower Klamath lakes were observed. Since 1905 records of evaporation have been kept at Keno.

SMITH RIVER BASIN.

Smith River is formed in Del Norte County, Cal., in the western part of T. 17 N., R. 2 E., Humboldt base and meridian, by the junction of its Middle and North forks. The Middle Fork, which drains the larger area and is therefore considered the continuation of the main stream, rises on the western slope of the Siskiyou Mountains

in the central part of T. 17 N., R. 5 E., flows northwestward 5 miles, then in general southwestward to the point at which it receives the North Fork. Below these forks the main river flows in general southwestward to the north-central part of T. 16 N., R. 1 E., where it turns abruptly to the west and northwest, in which direction it continues to flow to the point at which it enters the Pacific in western T. 18 N., R. 1 W. The length from the mouth to the head of the Middle Fork is about 45 miles; the principal tributaries of the Middle Fork are Preston and Patrick creeks.

The North Fork Smith rises in the extreme southwestern part of Josephine County, Oreg., and flows in general somewhat west of south into Del Norte County, Cal.; its length, including major windings, is about 20 miles; the principal tributary is Stony Creek.

The South Fork, the principal tributary below the junction of the North and Middle forks, rises on the western slope of Siskiyou Mountains, in the northern part of T. 16 N., R. 4 E., Humboldt base and meridian; flows in general southwestward about 12 miles, then northwesterly to its junction with Smith River in the northern part of T. 16 N., R. 1 E. Including its major windings, this fork is 32 miles long. Its principal tributaries are Quartz, Jones, Hurdy Gurdy, Gorton, and Coon creeks from the north and Goose and Rock creeks from the south.

STREAM FLOW.

FIELD METHODS.

The stream-flow data which make up the greater part of this report comprise (1) records of measurements of flow and of the fluctuation of stage (or gage height) at selected points or gaging stations, and (2) estimates of daily and monthly flow computed from these records.

Gaging stations are in general located at points where development is likely to take place. At most stations the relation between the water surface and points on a vertical or inclined staff or chain gage are recorded by local observers, but at some stations variation in stage is recorded by an automatic gage. The measurements of flow are made by the engineers of the Geological Survey by means of a current meter (Pl. III), which is operated from a bridge, a car suspended on a cable, or a boat, or by wading, the method adopted depending on the location of the station (Pl. IV).

By plotting the results of measurements, the discharges and corresponding gage heights being used as coordinates, rating curves are drawn from which a rating table giving the flow for any gage height can be prepared. From these rating tables and the daily gage heights daily estimates of flow are computed.

More detailed description of the methods used in collecting and preparing these data for publication may be found in the introductory

sections of Water-Supply Paper 271, "Surface water supply of California, 1909."¹

DEFINITION OF TERMS.

The volume of water flowing in a stream—the "run-off" or "discharge"—is expressed in various terms, each of which has become associated with a certain class of work. These terms may be divided into two groups: (1) Those which represent a rate of flow, as second-feet, gallons a minute, miner's inches, and run-off in second-feet per square mile, and (2) those which represent the actual quantity of water, as run-off in depth in inches and acre-feet. The units used in this series of reports are second-feet, second-feet per square mile, and run-off in inches and acre-feet. They may be defined as follows:

"Second-foot" is an abbreviation for cubic foot per second and is the unit for the rate of discharge of water flowing in a stream 1 foot wide, 1 foot deep, at a rate of 1 foot per second. It is generally used as a fundamental unit from which others are computed by the use of the factors given in the table of equivalents on page 54.

"Second-feet per square mile" is the average number of cubic feet of water flowing per second from each square mile of area drained, on the assumption that the run-off is distributed uniformly both as regards time and area.

"Miner's inch" represents a rate of flow and varies in different States, as noted in the table of convenient equivalents (p. 54). In California it was legalized by an act approved March 23, 1901, as one-fortieth of a second-foot. Prior to the passage of this act the common usage was one-fiftieth of a second-foot. The act reads as follows:

SECTION 1. The standard miner's inch of water shall be equivalent or equal to $1\frac{1}{2}$ cubic feet of water per minute, measured through any aperture or orifice.

SEC. 2. All acts or parts of acts inconsistent with the provisions of this act are hereby repealed.

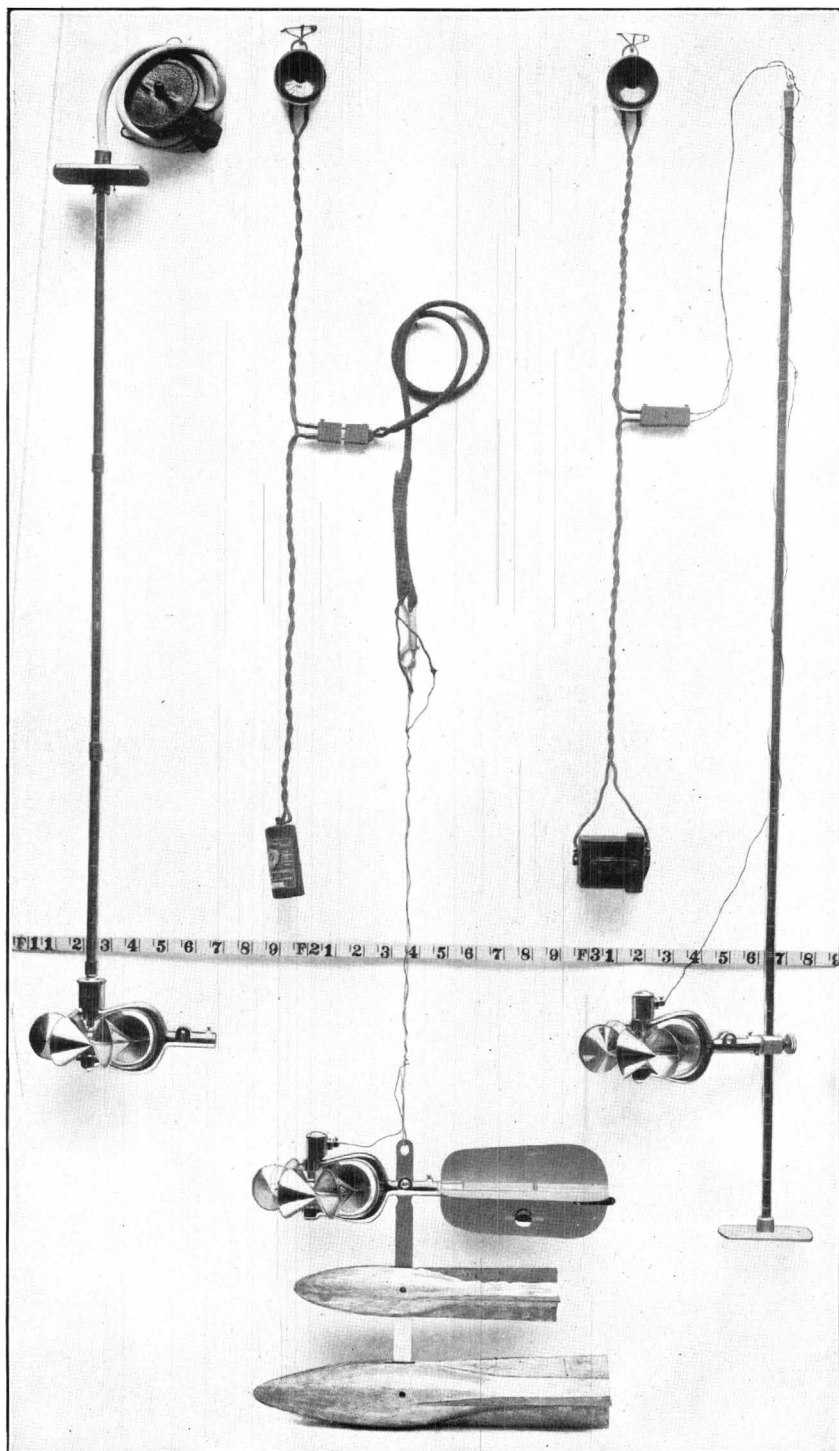
SEC. 3. This act shall be in effect and force sixty days from and after its passage.

One-fiftieth of a second-foot is still used in southern California.

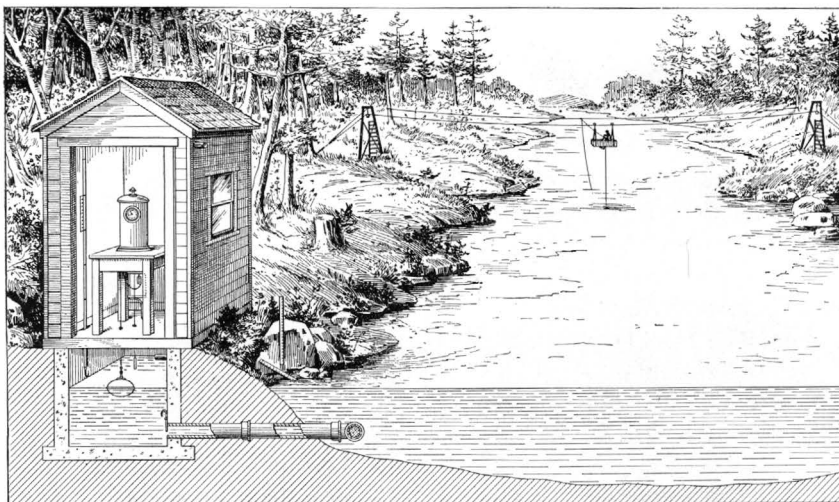
"Run-off depth in inches," is the depth to which the drainage area would be covered if all the water flowing from it in a given period were conserved and uniformly distributed on the surface. The term is used for comparing run-off with rainfall, which is usually expressed in depth in inches.

An "acre-foot" is equivalent to 43,560 cubic feet, and is the quantity required to cover an acre to the depth of 1 foot. The term is commonly used in discussions of storage for irrigation work.

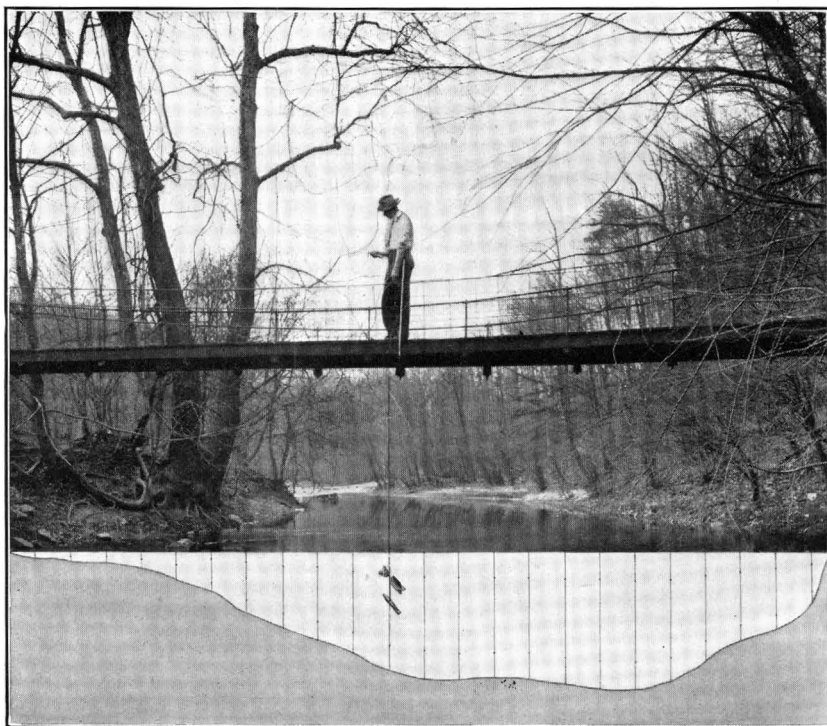
¹ See also Hoyt, J. C., and others, Use and care of current meter as practiced by the United States Geological Survey: Trans. Am. Soc. Civil Eng., vol. 66, 1910, p. 70.



SMALL PRICE CURRENT METERS.



A. CABLE STATION, SHOWING AUTOMATIC GAGE.



B. FOR BRIDGE MEASUREMENT.
TYPICAL GAGING STATIONS.

EXPLANATION OF DATA.

The stations discussed in this paper are considered in order downstream. Records for all stations on the main river, from its source to its mouth, are presented first, and records for its tributaries in regular order, from source to mouth, follow, all records for each tributary drainage basin being given before those of the next basin below.

For each drainage basin there is given a brief general description covering such items as area, source, tributaries, topography, geology, forestation, rainfall, irrigation, storage, power, and other interesting or important facts.

For each regular current-meter gaging station the following data, so far as available, are given: Description of station, list of discharge measurements, table of daily gage heights, table of daily discharge, table of monthly and yearly discharge and run-off. For stations located at weirs or dams the gage-height table is omitted.

In addition to statements regarding the location and installation of current-meter stations, the descriptions give information in regard to any conditions which may affect the constancy of the relation of gage height to discharge, covering such things as ice, logging, shifting channels, and backwater; also information regarding diversions which decrease the total flow at the measuring section. Statements are also made regarding the accuracy and reliability of the data.

The discharge-measurement table gives the results of the discharge measurements made during the year, including the date, name of hydrographer, gage height in feet, and discharge in second-feet.

The table of daily gage heights records the daily fluctuations of the surface of the river as found from the mean of the gage readings taken each day. At most stations the gage is read in the morning and in the evening. The gage height given in the table represents the elevation of the surface of the water above the zero of the gage. All gage heights affected by the presence of ice in the streams, or by backwater from obstructions, are published as recorded, with suitable footnotes. The rating table is not applicable for such periods unless the proper corrections to the gage heights are known and applied. Attention is called to the fact that the zero of the gage is placed at an arbitrary datum and has no relation to zero flow or the bottom of the river. In general, the zero is located somewhat below the lowest known flow, so that the readings shall not be of negative values.

The discharge measurements and gage heights are the base data from which rating tables, daily-discharge tables, and monthly-discharge tables are computed.

The rating table gives, either directly or by interpolation, the discharge in second-feet corresponding to every stage of the river recorded during the period for which it is applicable. In general,

rating tables are published only for stations maintained prior to 1909. Rating tables for later years can be made from the daily gage heights and daily discharge for the purpose of verifying the published results as follows:

First plot the discharge measurements for the current and earlier years on cross-section paper with gage heights in feet as ordinates and discharge in second-feet as abscissas. Then tabulate a number of gage heights taken from the daily gage-height table for the complete range of stage given and the corresponding discharge for the days selected from the daily discharge table, and plot the values on cross-section paper. The last points plotted will define the rating curve used and will lie among the plotted discharge measurements. After drawing the rating curve, a table can be developed by scaling off the discharge in second-feet for each tenth foot of gage height. These values should be so adjusted that the first differences shall always be increasing or constant, except for known conditions of backwater.

The table of daily discharge gives the discharge in second-feet corresponding to the observed gage heights as determined from the rating tables.

In the table of monthly discharge the column headed "Maximum" gives the mean flow, as determined from the rating table, for the day when the mean gage height was highest. As the gage height is the assumed mean for the day, it does not indicate correctly the stage when the water surface was at crest height and the corresponding discharge was consequently larger than given in the maximum column. Likewise, in the column headed "Minimum" the quantity given is the mean flow for the day when the mean gage height was lowest. The column headed "Mean" is the average flow in cubic feet for each second during the month. On this the computations for the remaining columns are based.

ACCURACY AND RELIABILITY OF FIELD DATA AND COMPARATIVE RESULTS.

The accuracy of stream-flow data depends primarily on the natural conditions at the gaging station and on the methods and care with which the data are collected. Errors of the first group depend on the degree of permanency of channel and of permanency of the relation between discharge and stage.

Errors of the second class are due, first, to errors in observation of stage; second, to errors in measurements of flow; and third, to errors due to misinterpretation of stage and flow data.

In order to give engineers and others information regarding the probable accuracy of the computed results, footnotes are added to the daily discharge tables, stating the probable accuracy of the rating tables used, and an accuracy column is inserted in the monthly dis-

charge table. For the rating tables "well defined" indicates, in general, that the rating is probably accurate within 5 per cent; "fairly well defined" within 10 per cent; "poorly defined" or "approximate" within 15 to 25 per cent. These notes are very general and are based on the plotting of the individual measurements with reference to the mean rating curve.

The accuracy column in the monthly discharge table does not apply to the maximum or minimum nor to any individual day, but to the monthly mean. It is based on the accuracy of the rating, the probable reliability of the observer, and knowledge of local conditions. In this column A indicates that the mean monthly flow is probably accurate within 5 per cent; B, within 10 per cent; C, within 15 per cent; D, within 25 per cent. Special conditions are covered by footnotes.

Even though the monthly means for any station may represent with a high degree of accuracy the quantity of water flowing past the gage, the figures showing discharge per square mile and depth of run-off in inches may be subject to gross errors, which result from including in the measured drainage area large noncontributing districts or omitting estimates of water diverted for irrigation or other use, and they should, therefore, be considered as only approximate, particularly for periods of irrigation or of low water. For these errors it is as a rule not feasible to make adequate correction.

In general, the base data collected each year by the Survey's engineers are published not only to comply with the law but also to afford any engineer the means of examining and adjusting to his own needs the results of the computations. The table of monthly discharge is so arranged as to give only a general idea of the flow at the station and should not be used for other than preliminary estimates. The determinations of daily discharge allow more detailed studies of the variation in flow by which the period of deficiency may be determined.

It should be borne in mind that the observations in each succeeding year may be expected to throw new light on data already collected and published, and the engineer who makes use of the figures presented in these papers should verify all ratings and make such adjustments for earlier years as may seem necessary.

CONVENIENT EQUIVALENTS.

The following is a list of convenient equivalents for use in hydraulic computations:

Table for converting discharge in second-feet per square mile into run-off in depth in inches over the area.

Dis- charge, second- feet per square mile.	Run-off, depth in inches.				
	1 day.	28 days.	29 days.	30 days.	31 days.
1	0.03719	1.041	1.079	1.116	1.153
2	.07438	2.083	2.157	2.231	2.306
3	.11157	3.124	3.236	3.347	3.459
4	.14876	4.165	4.314	4.463	4.612
5	.18595	5.207	5.393	5.578	5.764
6	.22314	6.248	6.471	6.694	6.917
7	.26033	7.289	7.550	7.810	8.070
8	.29752	8.331	8.628	8.926	9.223
9	.33471	9.372	9.707	10.041	10.376

NOTE.—For partial month multiply the values for one day by the number of days.

Table for converting discharge in second-feet into run-off in acre-feet.

Dis- charge, second- feet.	Run-off, acre-feet.				
	1 day.	28 days.	29 days.	30 days.	31 days.
1	1.983	55.54	57.52	59.50	61.49
2	3.967	111.1	115.0	119.0	123.0
3	5.950	166.6	172.6	178.5	184.5
4	7.934	222.1	230.1	238.0	246.0
5	9.917	277.7	287.6	297.5	307.4
6	11.90	333.2	345.1	357.0	368.9
7	13.88	388.8	402.6	416.5	430.4
8	15.87	444.3	460.2	476.0	491.9
9	17.85	499.8	517.7	535.5	553.4

NOTE.—For partial month multiply values for one day by the number of days.

1 second-foot equals 40 California miner's inches (law of March 23, 1901).

1 second-foot equals 38.4 Colorado miner's inches.

1 second-foot equals 40 Arizona miner's inches.

1 second-foot equals 7.48 United States gallons per second; equals 448.8 gallons per minute; equals 646,317 gallons for one day.

1 second-foot for one year covers 1 square mile 1.131 feet or 13.572 inches deep.

1 second-foot for one year equals 31,536,000 cubic feet.

1 second-foot equals about 1 acre-inch per hour.

1 second-foot for one day equals 86,400 cubic feet.

1,000,000,000 (one United States billion) cubic feet equals 11,570 second-feet for 1 day.

1,000,000,000 cubic feet equals 414 second-feet for one 28-day month.

1,000,000,000 cubic feet equals 399 second-feet for one 29-day month.

1,000,000,000 cubic feet equals 386 second-feet for one 30-day month.

1,000,000,000 cubic feet equals 373 second-feet for one 31-day month.

100 California miner's inches equals 18.7 United States gallons per second.

100 California miner's inches for one day equals 4.96 acre-feet.

100 Colorado miner's inches equals 2.60 second-feet.

100 Colorado miner's inches equals 19.5 United States gallons per second.

- 100 Colorado miner's inches for one day equal 5.17 acre-feet.
- 100 United States gallons per minute equals 0.223 second-foot.
- 100 United States gallons per minute for one day equals 0.442 acre-foot.
- 1,000,000 United States gallons per day equals 1.55 second-feet.
- 1,000,000 United States gallons equals 3.07 acre-feet.
- 1,000,000 cubic feet equals 22.95 acre-foot.
- 1 acre-foot equals 325,850 gallons.
- 1 inch deep on one square mile equals 2,323,200 cubic feet.
- 1 inch deep on 1 square mile equals 0.0737 second-foot per year.
- 1 foot equals 0.3048 meter.
- 1 mile equals 1.60935 kilometers.
- 1 mile equals 5,280 feet.
- 1 acre equals 0.4047 hectare.
- 1 acre equals 43,560 square feet.
- 1 acre equals 209 feet square, nearly.
- 1 square mile equals 2.59 square kilometers.
- 1 cubic foot equals 0.0283 cubic meter.
- 1 cubic foot of water weighs 62.5 pounds.
- 1 cubic meter per minute equals 0.5886 second-foot.
- 1 horsepower equals 550 foot-pounds per second.
- 1 horsepower equals 76.0 kilogram-meters per second.
- 1 horsepower equals 746 watts.
- 1 horsepower equals 1 second-foot falling 8.80 feet.
- $1\frac{1}{2}$ horsepower equals about 1 kilowatt.

To calculate water power quickly: $\frac{\text{Sec.-ft.} \times \text{fall in feet}}{11} = \text{net horsepower on water wheel realizing 80 per cent of theoretical power.}$

GAGING STATIONS.

The following list comprises the gaging stations maintained in the Great Basin and Pacific coast drainage basins in California from 1891 to July 1, 1912. It includes all the stations that have been maintained in California, exclusive of those in the Sacramento and San Joaquin drainage basins. The stations are arranged in downstream order, tributaries being indicated by indentation. A dash following the date implies that the station was being maintained July 1, 1912.

GREAT BASIN.

Honey Lake basin:

- Susan River near Susanville, 1900-1905.
- Willow Creek at Merrillville, 1904-5.
- Willow Creek near Standish, 1900-1905.

Truckee River basin:

- Lake Tahoe at Tahoe, 1900-
- Truckee River at Tahoe, 1895-96, 1900-
- Truckee River near Nevada-California State line, 1899-
- Donner Creek near Truckee, 1902-
- Prosser Creek near Truckee, 1903-4, 1907-
- Prosser Creek near Boca, 1902-3.
- Little Truckee River at Starr, 1903-1910.
- Little Truckee River at Boca, 1911-
- Independence Creek below Independence, 1902-1907.

Carson Sink basin.

- West Fork of Carson River at Woodfords, 1900-
- East Fork of Carson River at Silver King Valley, 1910-

Carson Sink basin—Continued.

- East Fork of Carson River near Markleeville, 1910—
- Silver Creek near Markleeville, 1910—
- Markleeville Creek near Markleeville, 1911—
- Markleeville Creek at Markleeville, 1910—
- Pleasant Valley Creek at Markleeville, 1910—

Walker Lake basin:

- West Walker River near Coleville, 1902–1908.
- East Walker River near Bridgeport, 1911—
- Robinson Creek near Bridgeport, 1910—
- Buckeye Creek near Bridgeport, 1910—
- Swager Creek near Bridgeport, 1911—

Mono Lake basin:

- Rush Creek near Mono Lake, 1910—
- Leevining Creek near Mono Lake, 1910—

Owens Lake basin:

- Owens Lake near Olancho, 1908—
- Owens River near Round Valley, 1903—
- Owens River near Tinemaha, 1906—
- Owens River near Lone Pine, 1908—
- Owens River near Citrus, 1903–1906.
- Rock Creek near Round Valley, 1903—
- Pine Creek near Round Valley, 1903—
- Bishop Creek near Bishop, 1903–1911.
- Baker Creek near Big Pine, 1907–1910.
- Big Pine Creek near Big Pine, 1903–1911.
- Tinemaha Creek near Big Pine (Tinemaha) 1906–1911.
- Birch Creek near Big Pine (Tinemaha) 1905–1911.
- Taboose Creek near Aberdeen, 1906–1911.
- Goodale Creek near Aberdeen, 1906–1911.
- Division Creek near Independence, 1906–1911.
- Sawmill Creek near Independence, 1906–1910.
- Thibaut Creek near Independence, 1907–1909.
- Oak Creek near Independence, 1905–1911.
- Little Pine Creek near Independence, 1905–1911.
- Shepard Creek near Thebe, 1906–1909.
- Bairs Creek near Thebe, 1906–1909.
- George Creek near Thebe, 1906–1911.
- Lone Pine Creek near Lone Pine, 1906–1911.
- Tuttle Creek near Lone Pine, 1906–1911.

Cottonwood Creek near Olancho, 1906–1911.

Ash Creek near Lone Pine, 1906–1909.

Owens River canals:

- Owens River canal near Bishop, 1903–1905.
- Bishop Creek canal near Bishop, 1903–1905.
- Farmers canal near Bishop, 1903–1905.
- McNalley canal near Bishop, 1903–1905.
- George Collins's canal near Bishop, 1903–1905.
- Rawson canal near Bishop, 1903–1905.
- A. O. Collins's canal near Bishop, 1903–1905.
- Dell canal near Bishop, 1903–1905.
- Big Pine and Owens River canal near Bishop, 1903–1905.
- Sanger canal at Alvord, 1903–1905.
- East Side canal near Citrus, 1903–1905.
- Stevens canal near Citrus, 1903–1905.

Owens Lake basin—Continued.

Owens River canals—Continued.

Powers canal near Bishop, 1903-1905.

South Hillside canal near Bishop, 1903-1905.

North Hillside canal near Bishop, 1903-1905.

Mohave River at Victorville, 1899-1906.

Antelope Valley:

Little Rock Creek near Palmdale, 1896-1899.

Salton Sea near Salton, 1904-

Alamo River near Brawley, 1908-1912.

New River near Brawley, 1908-1910.

Colorado River basin:

Colorado River at Hardyville, Ariz., 1905-1907.

Colorado River near Mohave, Ariz., 1902-3.

Colorado River at Yuma, Ariz., 1891-

Imperial Valley canals:

Imperial canal near Yuma, Ariz., 1903-5.

Imperial canal near Calexico, 1904-5.

Holt canal near Calexico, 1904-5.

Hemlock canal near Calexico, 1904-5.

Alamitos canal near Calexico, 1904-5.

Boundary canal near Calexico, 1904-5.

Wisteria canal near Calexico, 1905.

SOUTH PACIFIC COAST DRAINAGE BASINS.

Tia Juana River.

Cottonwood Creek and Dulzura conduit near Jamul, 1905-

Pine Valley Creek near Jamul, 1906-1908.

Sweetwater River near Descanso, 1905-

San Diego River and canal near Lakeside, 1905-

San Dieguito River basin:

Santa Ysabel Creek near Escondido, 1905-

Santa Ysabel Creek near Ramona, 1912-

San Dieguito River at Bernardo, 1911-

San Luis Rey River at diversion flume, 1894-1899.

San Luis Rey River near Mesa Grande, 1911-

San Luis Rey River near Pala, 1903-

San Luis Rey River at Bonsall, 1912-

Santa Margarita River basin:

Temecula Creek near Temecula, 1905-6.

Santa Ana River and power canal near Mentone, 1896-

Waterman Canyon Creek near San Bernardino, 1911-

Devil Canyon Creek near San Bernardino, 1911-

San Gabriel River and power canal near Azusa, 1895-

Los Angeles River basin:

Arroyo Seco near Pasadena, 1910-

Malibu Creek near Calabasas, 1903-1906.

Triunfo Creek near Calabasas, 1903-1906.

Santa Clara River at Fillmore, 1911-

Piru Creek near Piru, 1911-

Sespe Creek near Sespe, 1911-

Santa Paula Creek near Santa Paula, 1911-

Ventura River near Nordhoff, 1911-

Ventura River near Ventura, 1911-

Santa Ynez River basin:

Santa Ynez River near Santa Barbara, 1903-

Santa Ynez River near Lompoc, 1906-

Mono Creek at Mono dam site, 1902-1904.

Santa Maria River near Santa Maria, 1903-1906.

Salinas River near Salinas, 1900-1901.

Nacimiento Creek near Bryson, 1901.

San Antonio River near Jolon, 1900-1901.

San Lorenzo Creek near King City, 1900-1903, 1912.

Arroyo Seco near Soledad, 1900-

Pajaro River at Watsonville, 1911-

NORTH PACIFIC COAST DRAINAGE BASINS.

Russian River basin:

Russian River at Ukiah, 1911-

Russian River at Geyserville, 1910-

East Fork of Russian River near Ukiah, 1911-

Mattole River near Petrolia, 1911.

Eel River basin:

South Eel River at Hearst, 1910-

Eel River near Laytonville, 1911-

Eel River at Scotia, 1910-

Middle Eel River near Covelo, 1911-

South Fork of Eel River at Garberville, 1911-

Van Duzen River at Bridgeville, 1911-

Yager Creek at Carlotta, 1911-

Mad River near Arcata, 1910-

Redwood Creek near Korb, 1911-

Redwood Creek at Orick, 1911-

Klamath River basin:

Klamath River near Happy Camp, 1911-

Klamath River near Requa, 1910-

Lost River near Clear Lake, 1904-1909.

Shasta River near Montague, 1911-

East Fork of Scott River near Callahan, 1910-

Scott River near Scott Bar, 1911-

Indian Creek near Happy Camp, 1911-

Reeve Davis Consolidated Mining Co.'s ditch near Happy Camp, 1911-

Salmon River near Somesbar, 1911-

Trinity River near Trinity Center, 1910-

Trinity River at Lewiston, 1910-

Trinity River near China Flat, 1911-

Trinity River at Hoopa, 1911-

Coffee Creek at Coffee, 1910-

East Fork of Trinity River near Trinity Center, 1910-

Swift Creek near Trinity Center, 1910-

North Fork of Trinity River at Helena, 1911-

South Fork of Trinity River near China Flat, 1911-

Smith River basin:

Middle Fork of Smith River near Crescent City, 1911-

North Fork of Smith River near Crescent City, 1911-

South Fork of Smith River near Crescent City, 1911-

THE GREAT BASIN.

HONEY LAKE BASIN.

SUSAN RIVER NEAR SUSANVILLE, CAL.

This station, which was located about three-fourths of a mile southwest of Susanville at the electric-light plant, was established June 3, 1900, and was discontinued December 31, 1905.

The temporary staff gage established in 1900 was replaced by a permanent staff gage installed December 20, 1903, and the datum of the gage was lowered 2 feet.

The bed of the stream is composed of gravel and cobblestones and is permanent. The channel is straight for 100 feet above and 250 feet below the station. The right bank is high, is composed of clay, and is covered with vegetation. It is not liable to overflow. The left bank is low, is covered with a sparse growth of willows, and is likely to overflow. The current is swift. There is a riffle immediately above the cable.

High-water measurements were made by means of a car and cable. At low and ordinary stages measurements were made by wading.

A short distance above the station a small irrigating ditch, known as the Masten ditch, is taken out on the right bank. A gage is also placed in the flume near the head of the ditch. On July 5, 1900, the Masten ditch was discharging 7 second-feet and on July 9, 1903, it was discharging 7.1 second-feet.

Discharge measurements of Susan River near Susansville, Cal., in 1900-1905.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
		<i>Feet.</i>	<i>Sec.-ft.</i>			<i>Feet.</i>	<i>Sec.-ft.</i>
1900.				1904.			
June 30	L. H. Taylor	3.20	40	Mar. 29	James Branham	7.55	716
July 5	.....do	2.60	8	June 16	Bennett and Evans	5.60	180
				29	James Branham	4.95	96
1901.				July 31	.....do	4.20	27
Mar. 16	.....do	4.30	274	Aug. 10	.....do	4.50	43
Apr. 5	.....do	4.00	178	Sept. 11	.....do	3.85	11
May 20	.....do	4.50	351	Oct. 25	Clapp and Toler	4.10	23
June 7	.....do	3.60	84				
				1905.			
1903.				Mar. 21	James Branham	6.60	441
July 9	G. B. Lorenz	1.90	7.6	May 12	.....do	5.40	157
Dec. 20	H. E. Green	4.45	24	June 12	.....do	4.70	72
				25	.....do	4.20	30
1904.				July 23	.....do	3.85	12.8
Feb. 21	James Branham	5.30	106	Aug. 29	.....do	3.75	6.9
28	.....do	6.40	298	Sept. 26	.....do	4.00	15.4

Daily gage height, in feet, of Susan River near Susanville, Cal., for 1900-1905.

Day.	June.	July.	Aug.	Sept.	Day.	June.	July.	Aug.	Sept.
1900.									
1.		2.7	2.45	2.4	16.	3.15	2.4	2.4	2.35
2.		2.65	2.4	2.4	17.	3.1	2.4	2.45	2.35
3.		2.65	2.4	2.4	18.	3.05	2.4	2.45	2.35
4.		3.2	2.6	2.4	19.	3.05	2.4	2.45	2.35
5.		3.15	2.6	2.35	20.	3.05	2.4	2.4	2.35
6.		3.1	2.6	2.35	21.	3.05	2.4	2.4	2.35
7.		3.1	2.55	2.4	22.	3.0	2.4	2.4	2.35
8.		3.05	2.55	2.45	23.	3.0	2.4	2.4	2.35
9.		3.0	2.55	2.4	24.	3.0	2.45	2.4	2.35
10.		3.0	2.5	2.4	25.	2.95	2.45	2.35	2.4
11.		3.0	2.45	2.4	26.	2.9	2.45	2.4	2.4
12.		2.95	2.4	2.4	27.	2.75	2.45	2.4	2.4
13.		3.1	2.4	2.4	28.	2.8	2.45	2.45	2.4
14.		3.1	2.4	2.4	29.	2.7	2.45	2.4	2.4
15.		3.1	2.4	2.4	30.	2.6	2.45	2.4	2.4
					31.		2.45	2.4	

Daily gage height, in feet, of Susan River near Susanville, Cal., for 1900-1905—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1900-1901.												
1.....	2.40	2.65	3.00	3.20	3.10	5.55	4.10	4.90	3.92	2.65	2.25	2.25
2.....	2.40	2.65	3.00	3.20	3.10	5.45	4.15	4.88	3.90	2.75	2.25	2.25
3.....	2.70	2.65	3.00	3.20	3.10	5.05	4.07	4.87	3.85	2.80	2.20	2.20
4.....	2.60	2.65	2.95	3.20	3.10	4.95	4.00	4.85	3.80	2.75	2.20	2.20
5.....	2.60	2.65	2.95	3.20	3.10	4.90	4.00	4.85	3.72	2.70	2.20	2.20
6.....	2.60	2.60	2.90	3.30	3.10	4.90	4.00	4.93	3.65	2.70	2.15	2.15
7.....	2.60	2.70	2.90	3.30	3.10	5.09	3.90	4.95	3.63	2.60	2.15	2.15
8.....	2.65	2.70	2.90	3.30	3.10	4.75	3.85	5.00	3.55	2.50	2.15	2.15
9.....	2.65	2.70	2.90	3.25	3.10	4.75	3.80	5.00	3.50	2.55	2.15	2.15
10.....	2.50	2.70	2.90	3.25	3.10	4.55	3.80	5.05	3.40	2.83	2.10	2.15
11.....	2.50	2.70	2.90	3.25	3.10	4.50	3.90	5.08	3.30	2.85	2.30	2.10
12.....	2.50	2.70	2.90	3.25	3.10	4.45	4.13	5.07	3.25	2.85	2.50	2.10
13.....	2.50	2.70	2.90	3.20	3.10	4.20	4.35	5.10	3.20	2.83	2.50	2.10
14.....	2.55	2.70	2.90	3.20	3.20	4.25	4.60	5.10	3.15	2.80	2.50	2.10
15.....	2.60	2.70	2.90	3.20	3.30	4.30	4.75	5.00	3.15	2.80	2.50	2.10
16.....	2.60	2.90	2.90	3.20	3.70	4.20	4.70	4.95	3.10	2.80	2.45	2.15
17.....	2.60	2.90	3.00	3.20	4.85	4.20	4.75	4.90	3.10	2.80	2.50	2.05
18.....	2.60	2.90	3.00	3.20	4.15	4.15	4.80	4.83	3.10	2.80	2.45	2.05
19.....	2.90	2.90	3.10	3.20	4.05	4.15	4.97	4.72	3.05	2.78	2.45	2.05
20.....	3.10	2.90	4.80	3.20	5.95	4.15	5.05	4.58	3.00	2.75	2.40	2.05
21.....	2.90	4.60	4.40	3.20	5.10	4.22	5.05	4.45	2.95	2.70	2.40	2.05
22.....	2.80	3.80	3.80	3.15	4.80	4.30	5.05	4.20	2.90	2.70	2.40	2.15
23.....	2.80	3.50	3.50	3.15	6.30	4.23	4.95	4.25	2.85	2.70	2.40	2.25
24.....	2.80	3.30	3.40	3.10	5.85	4.25	4.90	4.20	2.80	2.70	2.40	2.30
25.....	2.75	3.80	3.30	3.10	5.65	4.55	5.00	4.25	2.80	2.68	2.35	2.25
26.....	2.60	3.40	3.20	3.10	5.20	4.50	4.95	4.13	2.75	2.63	2.40	2.20
27.....	2.60	3.30	3.20	3.10	5.60	4.45	4.87	4.10	2.70	2.53	2.35	2.20
28.....	2.65	3.30	3.20	3.10	5.70	4.40	4.78	4.05	2.70	2.43	2.30	2.20
29.....	2.65	3.20	3.10	3.10	.....	4.25	5.45	4.05	2.65	2.40	2.30	2.20
30.....	2.70	3.10	3.10	3.10	.....	4.18	4.97	4.00	2.60	2.35	2.30	2.20
31.....	2.65	.....	3.10	3.10	.....	4.05	.....	3.95	.....	2.30	2.30	.....
1901-2.												
1.....	2.20	2.40	3.05	2.40	2.40	3.80	3.80	4.42	4.02	2.80	1.90	1.75
2.....	2.45	2.35	3.50	2.40	2.45	3.70	3.75	4.40	3.92	2.98	1.90	1.75
3.....	2.40	2.35	3.76	2.40	2.50	3.70	3.80	4.32	3.85	2.88	1.85	1.75
4.....	2.30	2.35	4.05	2.40	2.55	3.65	3.95	4.30	3.75	2.80	1.85	1.75
5.....	2.30	2.35	4.80	2.40	2.60	3.60	4.15	4.30	3.65	2.80	1.85	1.75
6.....	2.30	2.35	4.25	2.40	2.65	3.40	4.32	4.45	3.55	2.75	1.85	1.70
7.....	2.30	2.35	3.85	2.40	2.70	3.40	5.80	4.65	3.52	2.70	1.85	1.70
8.....	2.30	2.35	3.72	2.40	2.80	3.35	4.95	4.78	3.48	2.50	1.85	1.70
9.....	2.30	2.35	3.50	2.40	3.30	3.30	4.68	4.75	3.42	2.38	1.80	1.70
10.....	2.30	2.35	3.37	2.40	3.50	3.35	4.58	4.75	3.40	2.35	1.80	1.70
11.....	2.30	2.35	3.00	2.40	3.60	3.35	4.50	4.70	3.62	2.32	1.80	1.70
12.....	2.30	2.40	2.92	2.40	3.50	3.40	4.50	4.65	3.30	2.30	1.80	1.70
13.....	2.30	2.40	2.85	2.40	3.20	3.45	4.65	4.60	3.48	2.30	1.80	1.70
14.....	2.30	2.40	2.80	2.40	3.10	3.55	4.72	4.60	3.65	2.30	1.80	1.75
15.....	2.30	2.40	2.75	2.40	4.10	3.55	4.90	4.55	3.62	2.25	1.80	1.75
16.....	2.30	2.40	2.75	2.40	3.90	3.55	5.08	4.48	3.52	2.20	1.85	1.75
17.....	2.30	2.40	2.70	2.40	4.40	3.85	5.10	4.40	3.40	2.20	1.90	1.75
18.....	2.30	2.40	2.70	2.40	4.20	3.60	5.25	4.32	3.32	1.95	1.90	1.75
19.....	2.30	2.40	2.65	2.40	4.10	3.75	5.60	4.32	3.28	1.95	1.90	1.75
20.....	2.30	2.40	2.60	2.40	3.90	3.75	5.50	4.20	3.22	1.95	1.90	1.75
21.....	2.30	2.45	2.60	2.40	4.10	3.70	5.25	4.08	3.20	1.90	1.85	1.80
22.....	2.30	2.45	2.55	2.40	4.00	3.60	5.05	3.98	3.12	1.90	1.85	1.80
23.....	2.30	2.50	2.55	2.40	3.90	3.60	4.85	3.92	3.07	1.90	1.85	1.85
24.....	2.35	2.55	2.50	2.40	4.20	3.50	4.85	3.90	3.00	1.90	1.85	1.85
25.....	2.35	2.60	2.50	2.40	4.10	3.35	4.65	3.90	2.95	1.90	1.80	1.85
26.....	2.40	2.80	2.50	2.40	3.90	3.30	4.55	3.92	2.90	1.90	1.80	1.90
27.....	2.40	2.70	2.45	2.40	4.10	3.35	4.50	4.05	2.90	1.90	1.80	1.90
28.....	2.65	3.60	2.45	2.40	3.90	3.45	4.42	4.02	2.82	1.90	1.75	1.90
29.....	2.50	3.65	2.40	2.40	.....	3.50	4.45	4.05	2.80	1.90	1.75	1.90
30.....	2.50	3.25	2.40	2.40	.....	3.50	4.50	4.05	2.80	1.90	1.75	1.90
31.....	2.50	.....	2.40	2.40	.....	3.65	.....	4.05	.....	1.90	1.75	.....
1902-3.												
1.....	1.90	2.10	2.20	3.70	(a)	2.40	5.30	4.75	3.20	2.10	1.60	1.70
2.....	1.90	2.10	2.20	3.55	.....	2.40	4.75	4.75	3.20	2.05	1.60	1.70
3.....	1.90	2.10	2.20	3.50	.....	2.40	4.50	4.75	3.15	2.05	1.60	1.70
4.....	1.90	2.10	2.22	3.40	.....	2.40	4.45	4.75	3.15	2.00	1.60	1.75
5.....	2.20	2.15	2.30	3.30	.....	2.40	4.30	4.67	3.10	2.00	1.60	1.75

a River frozen over during February, 1903, and observer read the elevation of the top of ice.

Daily gage height, in feet, of Susan River near Susanville, Cal., for 1900-1905—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1902-3.												
6.....	2.20	2.15	2.35	3.30	.....	2.40	4.15	4.65	3.10	1.95	1.65	1.75
7.....	2.20	2.20	2.45	3.30	.....	2.40	4.15	4.55	3.05	1.95	1.65	1.75
8.....	2.20	2.20	2.55	2.90	.....	2.40	4.30	4.47	3.05	1.90	1.65	1.75
9.....	2.20	2.20	2.55	2.80	.....	2.45	4.45	4.00	3.00	1.90	1.65	1.80
10.....	2.20	2.65	3.60	2.70	.....	2.45	4.60	4.17	3.00	1.85	1.65	1.80
11.....	2.20	2.40	3.50	2.60	.....	2.60	4.45	4.35	2.95	1.85	1.65	1.80
12.....	1.95	2.30	3.10	2.60	.....	3.00	4.35	4.30	2.95	1.85	1.65	1.80
13.....	1.95	2.28	3.00	2.50	.....	3.15	4.35	4.27	2.87	1.85	1.65	1.85
14.....	1.95	2.22	2.85	2.50	.....	3.25	4.25	4.20	2.80	1.75	1.65	1.85
15.....	1.95	2.20	2.55	2.40	.....	3.20	4.22	4.12	2.72	1.75	1.65	1.85
16.....	1.95	2.28	2.60	2.40	.....	3.15	4.20	4.08	2.62	1.75	1.65	1.85
17.....	1.95	2.32	2.40	2.40	.....	3.07	4.20	3.97	2.52	1.75	1.65	1.85
18.....	1.95	2.42	2.40	2.40	.....	2.92	4.20	3.92	2.48	1.75	1.65	1.85
19.....	2.00	2.40	2.30	2.40	.....	2.87	4.20	3.87	2.45	1.75	1.65	1.85
20.....	2.00	2.40	2.30	2.40	.....	2.90	4.30	3.77	2.42	1.70	1.65	1.85
21.....	2.00	2.35	2.40	2.45	.....	3.10	4.32	3.80	2.40	1.70	1.65	1.85
22.....	2.10	2.33	2.40	2.52	.....	3.20	4.50	3.65	2.35	1.65	1.65	1.85
23.....	2.15	2.30	2.45	2.85	.....	3.60	4.62	3.57	2.30	1.65	1.65	1.85
24.....	2.15	2.30	2.50	3.95	.....	3.50	4.72	3.52	2.25	1.65	1.65	1.85
25.....	2.20	2.25	2.50	4.55	.....	4.00	4.80	3.45	2.25	1.65	1.70	1.85
26.....	2.20	2.22	5.05	3.65	.....	4.18	4.95	3.40	2.20	1.65	1.70	1.85
27.....	2.20	2.20	4.75	3.05	.....	4.10	4.77	3.35	2.15	1.65	1.70	1.85
28.....	2.20	2.20	4.60	2.80	.....	4.65	4.70	3.32	2.15	1.65	1.70	1.85
29.....	2.15	2.20	4.45	2.70	.....	5.00	4.67	3.30	2.15	1.65	1.70	1.85
30.....	2.15	2.20	4.20	2.60	.....	8.00	4.67	3.25	2.10	1.60	1.70	1.85
31.....	2.10	.....	3.95	2.50	.....	6.00	.....	3.25	.....	1.60	1.70	.....
1903-4.												
1.....	1.85	2.05	3.02	4.3	4.2	6.2	6.85	6.25	6.05	4.9	4.1	3.9
2.....	1.85	2.05	2.92	4.25	4.2	6.8	6.9	6.15	6.0	5.2	4.1	3.85
3.....	1.9	2.05	2.82	4.25	4.2	7.0	6.9	6.15	5.95	5.2	4.05	3.8
4.....	1.9	2.4	2.72	4.25	4.2	7.55	7.05	6.2	5.9	5.2	4.2	3.8
5.....	1.9	2.4	2.62	4.2	4.25	7.2	7.0	6.3	5.9	5.1	4.5	3.8
6.....	1.9	2.2	2.5	4.2	4.25	7.45	7.15	6.85	5.8	5.15	4.5	3.8
7.....	1.95	2.1	2.45	4.2	4.25	7.8	7.15	7.3	5.8	5.1	4.5	3.8
8.....	1.95	2.1	2.45	4.2	4.25	8.7	7.3	7.35	5.75	4.65	4.5	3.8
9.....	2.0	2.1	2.42	4.2	4.25	7.75	7.45	7.5	5.7	4.5	4.5	3.8
10.....	2.05	2.1	2.4	4.25	4.25	7.5	7.8	7.55	5.7	4.5	4.5	3.8
11.....	2.05	2.1	2.38	4.3	4.25	7.0	8.05	7.8	5.6	4.4	4.4	3.9
12.....	2.05	3.55	2.32	4.3	4.3	6.7	8.25	7.95	5.5	4.4	4.4	3.95
13.....	2.05	3.1	2.35	4.3	4.3	6.45	8.6	8.15	5.5	4.35	4.4	3.95
14.....	2.05	5.6	2.35	4.3	4.3	6.55	8.8	8.2	5.5	4.3	4.4	3.95
15.....	2.05	3.3	2.35	4.25	5.6	6.7	8.95	8.1	5.45	4.3	4.4	3.95
16.....	2.05	2.9	2.6	4.25	9.0	6.35	8.5	8.05	5.5	4.3	4.4	3.95
17.....	2.05	2.58	2.65	4.25	6.7	7.85	8.25	7.9	5.5	4.3	4.4	3.95
18.....	2.05	2.55	2.55	4.25	6.2	8.8	8.25	7.85	5.4	4.3	4.4	3.95
19.....	2.05	2.5	2.5	4.25	5.65	9.0	8.3	7.55	5.4	4.3	4.4	4.0
20.....	2.05	4.1	2.45	4.3	5.35	8.45	7.75	7.4	5.35	4.3	4.4	4.0
21.....	2.05	4.95	2.45	4.3	5.85	7.75	7.45	7.4	5.3	4.25	4.4	4.0
22.....	2.05	4.35	2.45	4.3	9.9	7.45	7.25	7.3	5.3	4.2	4.4	4.2
23.....	2.05	4.25	2.4	4.3	7.85	7.1	7.05	7.3	5.3	4.2	4.4	4.4
24.....	2.05	3.95	2.4	4.3	9.65	6.8	6.9	7.3	5.3	4.3	4.4	4.4
25.....	2.05	3.75	2.35	4.3	8.2	6.7	6.85	7.2	5.2	4.6	4.4	4.3
26.....	2.05	3.55	2.35	4.3	7.5	6.65	6.8	7.05	5.1	4.55	4.25	4.2
27.....	2.05	3.35	2.35	4.25	6.95	6.7	6.75	6.8	5.0	4.5	4.0	4.1
28.....	2.05	3.3	2.35	4.2	6.4	7.85	6.65	6.7	5.0	4.45	3.95	4.05
29.....	2.05	3.22	2.3	4.2	6.2	7.55	6.65	6.5	4.9	4.45	3.95	4.05
30.....	2.05	3.12	2.3	4.2	.....	7.3	6.25	6.4	4.9	4.4	3.9	4.05
31.....	2.05	.....	2.3	4.2	.....	6.95	.....	6.25	.....	4.25	3.9	.....
1904-5.												
1.....	4.0	4.1	4.3	4.95	5.2	5.25	6.15	5.95	5.15	4.1	4.1	3.8
2.....	4.0	4.2	4.3	4.8	5.2	5.25	5.95	5.9	5.1	4.1	4.1	3.8
3.....	4.0	4.1	4.2	4.75	5.2	5.25	5.95	5.8	5.05	4.45	4.1	3.8
4.....	4.0	4.1	4.1	4.7	5.2	5.25	5.9	5.8	5.05	4.8	4.1	3.8
5.....	4.0	4.1	4.1	4.65	5.15	5.25	5.9	5.65	5.0	4.6	4.1	3.85
6.....	4.0	4.1	4.1	4.6	5.05	5.25	6.0	5.55	5.0	4.4	4.1	3.85
7.....	4.1	4.1	4.1	4.6	4.85	5.25	6.1	5.5	5.0	4.25	4.1	3.85
8.....	4.1	4.1	4.1	4.55	4.85	5.25	6.1	5.5	4.9	4.1	4.0	3.85
9.....	4.1	4.1	4.1	4.55	4.75	5.2	6.1	5.5	4.85	4.1	3.9	3.85
10.....	4.2	4.1	4.1	4.55	4.8	5.2	6.2	5.45	4.75	4.0	3.8	3.85

a New gage installed on this date with datum 2 feet below that of the old gage.

Daily gage height, in feet, of Susan River near Susanville, Cal., for 1900-1905—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1904-5.												
11.....	4.55	4.1	4.05	4.55	4.7	5.2	6.1	5.4	4.7	4.0	3.8	3.9
12.....	4.4	4.1	4.05	4.6	4.65	5.4	6.1	5.4	4.7	4.0	3.8	3.9
13.....	4.3	4.1	4.1	4.65	4.55	5.9	6.1	5.35	4.65	3.95	3.8	3.9
14.....	4.3	4.1	4.1	4.7	4.5	5.9	6.1	5.3	4.65	4.2	3.8	3.85
15.....	4.2	4.1	4.1	4.7	4.45	6.05	6.1	5.3	4.6	4.2	3.75	3.85
16.....	4.25	4.2	4.1	4.7	4.45	6.1	6.1	5.4	4.5	4.2	3.75	3.8
17.....	4.25	4.2	4.05	4.7	4.5	6.05	6.05	5.4	4.5	4.0	3.75	3.8
18.....	4.2	4.15	4.05	4.65	4.55	6.0	6.05	5.4	4.4	4.0	3.75	3.8
19.....	4.2	4.15	4.0	4.65	5.05	6.6	6.05	5.4	4.4	4.1	3.75	3.9
20.....	4.15	4.15	4.0	4.65	5.35	6.25	5.95	5.4	4.4	4.05	3.75	3.9
21.....	4.15	4.1	4.0	4.65	5.35	6.45	5.8	5.4	4.3	3.9	3.8	3.95
22.....	4.1	4.1	4.0	4.8	5.25	6.15	5.8	5.4	4.3	3.9	3.8	3.95
23.....	4.1	4.1	4.05	5.5	5.1	6.1	5.8	5.35	4.25	3.85	3.8	3.95
24.....	4.1	4.1	4.05	5.4	5.1	6.05	5.85	5.35	4.2	3.85	3.75	3.95
25.....	4.1	4.1	4.05	5.2	5.2	5.85	5.9	5.3	4.2	3.85	3.75	3.95
26.....	4.1	4.1	4.1	4.95	5.2	6.9	6.0	5.3	4.2	3.85	3.75	4.0
27.....	4.1	4.25	4.1	4.9	5.25	6.3	6.0	5.3	4.2	3.8	3.75	3.9
28.....	4.1	4.2	4.1	4.9	5.25	6.1	6.0	5.25	4.2	3.8	3.75	4.0
29.....	4.1	4.2	4.1	4.85	.....	6.0	6.0	5.25	4.15	3.75	3.8	3.95
30.....	4.1	4.2	7.6	4.8	.....	6.1	6.0	5.2	4.15	3.75	3.8	3.9
31.....	4.1	.....	5.45	4.8	.....	6.0	.....	5.2	.....	4.1	3.8	.....

Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.
1905.				1905.			
1.....	3.8	4.0	4.0	16.....	3.9	4.0	4.0
2.....	3.8	4.0	4.0	17.....	4.0	4.0	4.0
3.....	3.9	4.0	4.0	18.....	4.05	4.0	4.0
4.....	3.95	4.0	4.0	19.....	4.0	4.0	4.0
5.....	3.95	4.0	4.0	20.....	4.0	4.0	4.0
6.....	3.95	4.0	4.0	21.....	4.0	4.0	4.0
7.....	4.0	4.0	4.0	22.....	4.0	4.0	4.0
8.....	3.95	4.0	4.0	23.....	4.0	4.05	4.0
9.....	3.9	4.0	4.0	24.....	4.0	4.05	4.0
10.....	3.9	4.0	4.0	25.....	4.0	4.1	4.0
11.....	3.9	4.0	4.0	26.....	4.0	4.1	4.0
12.....	3.9	4.0	4.0	27.....	4.0	4.1	4.0
13.....	3.9	4.0	4.0	28.....	4.0	4.05	4.0
14.....	3.9	4.0	4.0	29.....	4.0	4.05	4.0
15.....	3.9	4.0	4.0	30.....	4.0	4.0	4.0
				31.....	4.0	.....	4.0

Rating tables for Susan River near Susanville, Cal.

January 1, 1901, to December 31, 1901.

Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.
<i>Feet.</i>	<i>Sec.-ft.</i>	<i>Feet.</i>	<i>Sec.-ft.</i>	<i>Feet.</i>	<i>Sec.-ft.</i>	<i>Feet.</i>	<i>Sec.-ft.</i>
2.40	11	3.60	90	4.80	470	6.00	950
2.60	15	3.80	134	5.00	550	6.20	1,030
2.80	22	4.00	180	5.20	630	6.40	1,110
3.00	30	4.20	248	5.40	710	6.60	1,190
3.20	44	4.40	316	5.60	790	6.80	1,270
3.40	60	4.60	390	5.80	870	7.00	1,350

Rating tables for Susan River near Susanville, Cal.—Contd.

January 1, 1903, to December 31, 1904.

Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.
<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>
3.60	6	5.00	92	6.40	350	7.80	800
3.70	8	5.10	104	6.50	375	7.90	840
3.80	10	5.20	116	6.60	400	8.00	880
3.90	13	5.30	128	6.70	430	8.20	960
4.00	16	5.40	142	6.80	460	8.40	1,040
4.10	20	5.50	156	6.90	490	8.60	1,120
4.20	24	5.60	172	7.00	520	8.80	1,200
4.30	30	5.70	190	7.10	550	9.00	1,300
4.40	36	5.80	210	7.20	585	9.20	1,400
4.50	42	5.90	230	7.30	620	9.40	1,500
4.60	50	6.00	250	7.40	655	9.60	1,600
4.70	60	6.10	275	7.50	690	9.80	1,700
4.80	70	6.20	300	7.60	725		
4.90	80	6.30	325	7.70	760		

NOTE.—The above table is applicable only to open channel. It is based on 6 discharge measurements made during 1903 and 1904. It is fairly well defined between gage heights 4 feet and 7.50 feet. To make this table applicable to 1903, 2 feet should be added to each observed gage height.

January 1 to December 31, 1905.

3.75	7	4.60	59	5.50	168	6.40	356
3.80	9	4.70	68	5.60	185	6.50	382
3.90	13	4.80	77	5.70	203	6.60	410
4.00	18	4.90	87	5.80	222	6.70	440
4.10	24	5.00	98	5.90	242	6.80	470
4.20	30	5.10	110	6.00	262	6.90	500
4.30	37	5.20	123	6.10	284		
4.40	44	5.30	137	6.20	307		
4.50	51	5.40	152	6.30	331		

NOTE.—The above table is applicable only to open channel. It is based on 11 discharge measurements made during 1904-5 and is well defined.

Daily gage height, in feet, of Masten ditch near Susanville, Cal., for 1900-1901.

Day.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1900.							
1.....		0.75	0.5	0.55	0.75	0.6	0.6
2.....		.75	.5	.5	.8	.6	.5
3.....		.75	.5	.6	1.0	.6	.5
4.....		.75	.5	.6	.85	.6	.45
5.....		.75	.45	.6	.9	.6	.45
6.....		.7	.55	.6	.85	.6	.4
7.....		.65	.55	.6	.8	.55	.4
8.....		.6	.5	.65	.75	.55	.4
9.....		.6	.5	.65	.75	.55	.4
10.....		.65	.5	.65	.7	.55	.4
11.....		.65	.5	.7	.7	.55	.4
12.....		.65	.5	.7	.7	.55	.4
13.....		.65	.5	.8	.7	.5	.4
14.....		.65	.5	.8	.65	.5	.4
15.....		.65	.5	.75	.6	.5	.4
16.....		.65	.5	.75	.6	.6	.4
17.....		.65	.45	.75	.6	.6	.5
18.....		.65	.45	.75	.6	.6	.5
19.....		.65	.45	.75	.8	.6	.6
20.....		.65	.6	.75	.9	.6	.9
21.....		.65	.6	.75	.7	.9	.9
22.....		.6	.55	.75	.0	.7	.8
23.....		.6	.55	.8	.0	.7	.6
24.....		.55	.55	.8	.0	.6	.6
25.....	0.3	.55	.55	.85	.0	.7	.6
26.....	.65	.55	.5	.85	.7	.6	.6
27.....	.85	.55	.5	.75	.7	.6	.4
28.....	.85	.55	.5	.75	.65	.6	
29.....	.85	.55	.5	.75	.65	.6	
30.....	.8	.55	.5	.75	.65	.6	
31.....		.55	.55		.6		

Daily gage height, in feet, of Masten ditch near Susanville, Cal., for 1900-1901—Contd.

Day.	July.	Aug.	Sept.	Oct.	Nov.	Day.	July.	Aug.	Sept.	Oct.	Nov.
1901.						1901.					
1.....		0.8	0.8	0.90	0.8	16.....		1.1	0.9	0.8	0.8
2.....		.8	.75	1.05	.8	17.....		1.1	.9	.8	.8
3.....		.8	.85	1.0	.8	18.....		1.1	.9	.8	.8
4.....		.8	.85	.8	.7	19.....		1.1	.9	.8	.8
5.....		.8	.8	.8	.7	20.....		1.1	.9	.8	.8
6.....		.9	.8	.8	.7	21.....		1.1	.9	.8	.8
7.....		.9	.8	.8	.7	22.....		.8	1.0	.8	.9
8.....		.9	.8	.8	.7	23.....		.8	.95	.8	.9
9.....		.8	.85	.8	.7	24.....		.8	.95	.8	.9
10.....		.7	.85	.8	.7	25.....		.8	.95	.8	.9
11.....		1.1	.9	.8	.8	26.....	1.1	.8	.9	.8	1.0
12.....		1.1	.9	.8	.8	27.....	.8	.8	.9	.8	
13.....		1.1	.9	.8	.8	28.....	.6	.8	.9	.9	
14.....		1.1	.9	.8	.8	29.....	.4	.8	.9	.9	
15.....		1.1	.85	.8	.8	30.....	.4	.8	.9	.8	
						31.....	.4	.8		.8	

Monthly discharge of Susan River near Susanville, Cal., for 1900-1901 and 1903-1905.

[Drainage area, 256 square miles.]

Month.	Discharge in second-feet.				Run-off.	
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.	Total in acre-feet.
1900.						
June.....			31	0.121	0.14	1,669
July.....	18	11	13	.051	.06	799
August.....	12	10	11	.043	.05	676
September.....	11	10	11	.043	.05	655
1900-1901.						
October.....	36	11	17	.066	.08	1,045
November.....	390	15	47	.184	.21	2,797
December.....	470	26	60	.234	.25	3,689
January.....	52	36	43	.168	.19	2,644
February.....	1,070	36	308	1.20	1.25	17,105
March.....	770	197	363	1.42	1.64	22,320
April.....	730	134	371	1.45	1.62	22,076
May.....	590	168	420	1.64	1.89	25,825
June.....	156	15	56	.219	.24	3,332
July.....	24	9	18	.070	.08	1,107
August.....	13	5	10	.049	.06	615
September.....	9	4	6	.023	.03	369
The year.....	1,070	4	143	.559	7.54	103,000
1901.						
October.....	16	7	10	.049	.06	615
November.....	101	10	19	.074	.08	1,131
December.....	470	11	61	.024	.03	1,783
1903.						
January.....	388	36	90	.35	.40	5,534
March.....	1,800	36	205	.80	.92	12,605
April.....	620	288	372	1.45	1.62	22,130
May.....	445	122	266	1.04	1.20	16,356
June.....	116	20	63	.25	.28	3,749
July.....	20	6	11	.04	.05	676
August.....	8	6	7	.03	.03	430
September.....	12	8	11	.04	.05	655
The period.....						62,100

Monthly discharge of Susan River near Susanville, Cal., for 1900-1901 and 1903-1905—Continued.

Month.	Discharge in second-feet.				Run-off.	
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.	Total in acre-feet.
1903-4.						
October.....	18	12	17	.07	.08	1,045
November.....	725	18	137	.54	.60	8,152
December.....	92	30	42	.16	.18	2,582
January.....	30	24	27	.11	.13	1,660
February.....	1,750	24	349	1.36	1.47	20,075
March.....	1,300	300	629	2.46	2.84	38,676
April.....	1,275	312	695	2.71	3.02	41,855
May.....	960	288	600	2.34	2.70	36,893
June.....	262	80	160	.62	.69	9,521
July.....	116	27	51	.20	.23	3,136
August.....	42	13	31	.12	.14	1,906
September.....	36	10	16	.06	.07	952
The year.....	1,750	10	230	.90	12.15	166,000
1904-5.						
October.....	46	16	22	.09	.10	1,353
November.....	27	20	21	.08	.09	1,250
December.....	725	16	47	.18	.21	2,890
January.....	168	55	76.9	.300	.35	4,728
February.....	144	48	96.9	.379	.40	5,382
March.....	500	123	234	.914	1.05	14,390
April.....	307	222	264	1.03	1.15	15,710
May.....	252	123	160	.625	.72	9,838
June.....	116	27	61.3	.239	.27	3,648
July.....	77	7	23.4	.091	.10	1,439
August.....	24	7	12.1	.047	.05	744
September.....	18	9	12.3	.048	.05	732
The year.....	500	7	85.9	.335	4.54	62,100
1905.						
October.....	21	9	15.7	.061	.070	965
November.....	24	18	19.0	.074	.083	1,131
December.....	18	18	18.0	.070	.081	1,107

WILLOW CREEK AT MERRILLVILLE, CAL.

The gaging station at Merrillville was located near the head of the creek, at the old bridge 100 feet above the present wagon bridge, on the road from Merrillville to Eagle Lake. It was established June 18, 1904, and was discontinued December 31, 1905.

The gage was a vertical staff fastened to the left end of the bridge.

The channel is straight above and below the bridge for a distance of 100 feet. The banks are low, but as there is very little fluctuation in the discharge of the creek, they are not subject to overflow. The bed of the stream is composed of gravel and is comparatively permanent.

Discharge measurements were made from the bridge.

60055°—WSP 300—13—5

Discharge measurements of Willow Creek at Merrillville, Cal., in 1904.

Date.	Hydrographer.	Gage height.	Discharge.
		<i>Feet.</i>	<i>Sec.-feet.</i>
June 18	S. G. Bennett.....	1.00	19.0
July 17	James Branham.....	.95	14.9
Aug. 29	.....do.....	1.05	17.9
Oct. 25	Toler and Clapp.....	1.07	19.3

Daily gage height, in feet, of Willow Creek at Merrillville, Cal., for 1904-5.

Day.	July.	Aug.	Sept.	Day.	July.	Aug.	Sept.
1904.				1904.			
1.....	1.0	1.0	1.0	16.....	1.1	1.0	1.05
2.....	1.0	1.0	1.1	17.....	1.0	1.05	1.05
3.....	1.0	1.05	1.1	18.....	1.0	1.0	1.05
4.....	1.0	1.0	1.05	19.....	1.0	1.0	1.0
5.....	1.0	1.0	1.05	20.....	1.0	1.0	1.0
6.....	1.05	1.0	1.05	21.....	1.05	1.0	1.05
7.....	1.0	.95	1.1	22.....	1.0	1.0	1.05
8.....	1.0	1.05	1.05	23.....	1.0	1.0	1.1
9.....	1.0	1.05	1.05	24.....	1.0	1.0	1.1
10.....	.95	1.0	1.1	25.....	1.0	1.05	1.1
11.....	1.1	1.0	1.05	26.....	1.0	1.0	1.05
12.....	1.15	1.0	1.0	27.....	1.0	1.0	1.05
13.....	1.2	1.0	1.0	28.....	1.0	1.0	1.05
14.....	1.1	1.0	1.05	29.....	1.05	1.0	1.05
15.....	1.1	1.0	1.05	30.....	1.0	1.05	1.0
				31.....	1.0	1.0	.....

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1904-5.												
1.....	1.05	1.1	1.1	1.1	1.1	0.95	1.1	0.9	0.95	0.9	0.95	1.0
2.....	1.05	1.1	1.1	1.05	1.1	1.0	1.05	.9	.95	.9	.95	1.0
3.....	1.05	1.1	1.05	1.0	1.1	1.0	1.0	.95	.95	.9	.95	1.0
4.....	1.05	1.1	1.05	1.0	1.05	1.0	1.0	.95	.95	.9	.95	1.0
5.....	1.05	1.1	1.05	1.0	1.1	.95	1.0	.95	.95	.9	.95	1.0
6.....	1.1	1.05	1.05	1.0	1.05	.95	1.0	.95	.95	.9	.95	1.0
7.....	1.1	1.1	1.05	1.0	1.0	1.0	1.0	.95	.95	.9	.95	1.0
8.....	1.05	1.05	1.05	1.0	1.0	1.05	1.0	.95	1.0	.9	.95	1.0
9.....	1.1	1.1	1.1	1.0	1.0	1.0	1.0	.95	1.0	.9	1.0	1.0
10.....	1.1	1.1	1.05	1.0	1.0	1.0	.95	1.0	.95	.95	1.0	1.0
11.....	1.05	1.1	1.05	1.0	1.0	1.0	.95	1.05	.95	.95	1.0	1.0
12.....	1.05	1.1	1.05	1.0	1.0	1.0	.95	1.1	.95	1.05	1.0	1.0
13.....	1.05	1.1	1.1	1.0	1.0	1.05	1.0	1.05	.95	1.05	1.0	1.0
14.....	1.1	1.1	1.1	1.05	1.0	.95	1.0	1.0	.95	1.0	1.0	1.0
15.....	1.2	1.1	1.05	1.05	.95	1.05	1.0	.95	.95	1.0	1.0	1.0
16.....	1.1	1.1	1.05	1.05	1.0	1.1	1.0	.9	.95	1.0	1.0	1.0
17.....	1.05	1.05	1.05	1.05	1.0	1.1	1.0	.9	.95	.95	1.0	1.05
18.....	1.05	1.1	1.05	1.05	1.0	1.05	1.0	.9	.95	.95	1.0	1.05
19.....	1.05	1.1	1.05	1.05	1.25	1.1	1.0	.9	.95	.95	1.0	1.05
20.....	1.05	1.1	1.05	1.0	1.15	1.05	1.0	.9	.95	.95	1.0	1.05
21.....	1.05	1.1	1.05	1.05	1.05	1.05	1.0	.9	.95	.95	1.0	1.05
22.....	1.05	1.1	1.05	1.1	1.05	1.05	1.0	.95	.95	.95	1.0	1.05
23.....	1.05	1.05	1.1	1.1	1.05	1.05	.9	.95	.95	.95	1.0	1.05
24.....	1.05	1.05	1.1	1.1	1.0	1.0	.9	.95	.95	.95	1.0	1.05
25.....	1.05	1.05	1.05	1.05	1.0	1.0	.95	.95	.95	.95	1.0	1.05
26.....	1.05	1.05	1.0	1.0	1.05	1.1	.95	1.0	.95	.95	1.0	1.05
27.....	1.1	1.1	1.05	1.0	1.0	1.1	.95	1.0	.95	.95	1.0	1.1
28.....	1.05	1.1	1.05	1.0	1.0	1.0	.95	1.0	.95	.95	1.0	1.15
29.....	1.1	1.1	1.2	1.0	.....	1.1	.9	.95	.95	.95	1.0	1.2
30.....	1.1	1.1	1.7	1.0	.....	1.05	.9	.95	.9	.95	1.0	1.1
31.....	1.1	.....	1.2	1.0	.....	1.05	.....	.95	.....	.95	1.0	.....

Daily gage height, in feet, of Willow Creek at Merrillville, Cal., for 1904-5—Continued.

Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.
1905.				1905.			
1.....	1.1	1.3	1.25	16.....	1.2	1.2	1.3
2.....	1.1	1.25	1.3	17.....	1.2	1.2	1.3
3.....	1.1	1.2	1.3	18.....	1.2	1.2	1.3
4.....	1.1	1.2	1.3	19.....	1.2	1.2	1.3
5.....	1.1	1.2	1.3	20.....	1.2	1.2	1.3
6.....	1.2	1.2	1.3	21.....	1.2	1.2	1.3
7.....	1.3	1.2	1.3	22.....	1.25	1.2	1.3
8.....	1.2	1.2	1.3	23.....	1.25	1.2	1.3
9.....	1.2	1.2	1.3	24.....	1.25	1.2	1.3
10.....	1.2	1.2	1.3	25.....	1.25	1.2	1.3
11.....	1.2	1.2	1.3	26.....	1.2	1.2	1.3
12.....	1.2	1.2	1.3	27.....	1.2	1.2	1.3
13.....	1.2	1.2	1.3	28.....	1.2	1.25	1.3
14.....	1.2	1.2	1.3	29.....	1.2	1.25	1.3
15.....	1.2	1.2	1.3	30.....	1.2	1.25	1.3
				31.....	1.25	.....	1.3

Rating table for Willow Creek at Merrillville, Cal., from July 1, 1904, to December 31, 1905.

Gage height.	Discharge.	Gage height.	Discharge.	Gage height.	Discharge.	Gage height.	Discharge.
Feet.	Second-feet.	Feet.	Second-feet.	Feet.	Second-feet.	Feet.	Second-feet.
0.90	16	1.10	20	1.20	22	1.30	24
1.00	18						

NOTE.—The above table is applicable only to open channel. It is based on four discharge measurements made during 1904. It is fairly well defined.

Monthly discharge of Willow Creek at Merrillville, Cal., for 1904-5.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).
	Maximum.	Minimum.	Mean.	
1904.				
July.....	22	17	19	1,168
August.....	19	17	18	1,107
September.....	20	18	19	1,131
1904-5.				
October.....	22	19	19	1,168
November.....	20	19	20	1,190
December.....	50	19	20	1,230
January.....	20	18	18.5	1,138
February.....	23	17	18.8	1,044
March.....	20	17	18.6	1,144
April.....	20	16	17.6	1,047
May.....	20	16	17.1	1,051
June.....	18	16	17.0	1,012
July.....	19	16	16.9	1,039
August.....	18	17	17.7	1,088
September.....	22	18	18.7	1,113
The year.....	50	16	18.3	13,300
1905.				
October.....	24	20	21.9	1,347
November.....	24	22	22.2	1,321
December.....	24	23	24.0	1,476

WILLOW CREEK NEAR STANDISH, CAL.

This station, which was located at the bridge on the road from Susanville to Hot Springs, about $1\frac{1}{2}$ miles above the junction of the creek with Susan River and about 4 miles west of north from Standish, was originally established June 4, 1900, discontinued December 31, 1901, reestablished January 1, 1905, and again discontinued December 31, 1905.

The gage was a staff fastened vertically to the left abutment of the bridge.

The channel is straight for 300 feet above and 250 feet below the station. The right bank is rather low and is subject to overflow at extreme high water; the left bank is high and not liable to overflow. The stream bed is sandy and liable to shift somewhat.

Discharge measurements were made from the bridge.

Discharge measurements of Willow Creek near Standish, Cal., in 1900 and 1905.

Date.	Hydrographer.	Gage height.	Discharge.	Date.	Hydrographer.	Gage height.	Discharge.
1900.		<i>Feet.</i>	<i>Sec.-ft.</i>	1905.		<i>Feet.</i>	<i>Sec.-ft.</i>
June 4	L. H. Taylor.....	2.60	16	Jan. 24	James Branham.....	6.15	94
July 30	.....do.....	2.85	26	.....do.....	.....do.....	5.35	69
Oct. 10	.....do.....	2.80	20	Feb. 26	.....do.....	5.75	83
				Apr. 23	.....do.....	4.00	20
				Nov. 19	.....do.....	4.80	34

Daily gage height, in feet, of Willow Creek near Standish, Cal., for 1900-1901 and 1905.

Day.	June.	July.	Aug.	Sept.	Day.	June.	July.	Aug.	Sept.
1900.					1900.				
1.....		2.7	3.1	2.9	16.....	2.8	2.7	2.9	3.0
2.....		2.7	3.2	2.9	17.....	2.8	2.7	2.9	3.0

Daily gage height, in feet, of Willow Creek near Standish, Cal., for 1900-1901 and 1905—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1905.												
21.....	6.0	7.8	5.2	4.0	4.1	4.0	6.0	4.5	4.8	4.5	4.8	4.0
22.....	7.6	7.8	5.2	4.0	4.1	4.0	5.0	4.6	4.8	4.5	4.6	5.0
23.....	7.8	7.0	5.0	4.0	4.0	4.0	5.0	4.2	4.8	5.0	4.6	5.0
24.....	6.0	6.2	4.8	4.0	4.0	4.0	4.8	4.0	4.6	5.1	4.5	5.2
25.....	6.0	6.0	4.6	4.0	4.0	4.0	4.1	4.0	4.5	5.2	4.4	5.0
26.....	5.8	6.3	5.3	4.0	4.0	6.2	4.0	4.2	5.0	5.2	4.8	5.2
27.....	5.6	5.0	5.0	4.0	4.0	5.0	4.0	4.2	6.0	5.1	4.8	5.3
28.....	5.6	5.0	5.0	4.0	3.8	4.0	4.0	4.2	5.8	5.5	5.0	5.3
29.....	5.7	.....	5.0	4.0	3.8	4.0	4.0	4.2	5.8	5.2	5.0	5.3
30.....	5.0	.....	5.0	4.0	3.8	3.6	4.0	4.3	5.0	5.0	5.0	5.3
31.....	5.6	.....	5.5	.....	.....	.....	4.0	4.2	.....	5.0	.....	5.3

Rating table for Willow Creek near Standish, Cal., from Jan. 1 to Dec. 31, 1905.

Gage height.	Discharge.	Gage height.	Discharge.	Gage height.	Discharge.	Gage height.	Discharge.

Daily gage height, in feet, of Willow Creek near Standish, Cal., for 1900-1901 and 1905—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1900-1901.												
11.....	3.9	3.6	3.7	3.9	3.8	6.8	4.0	3.9	3.6	3.7	3.55	3.8
12.....	3.3	3.6	3.7	3.9	3.8	6.6	4.0	3.9	3.6	3.7	3.55	3.8
13.....	3.2	3.6	3.75	4.2	3.8	6.6	4.0	3.9	3.6	3.7	3.55	3.8
14.....	3.3	3.7	4.9	4.4	3.9	6.6	4.0	3.9	3.6	3.7	3.55	3.8
15.....	3.3	3.7	5.5	4.6	3.9	6.6	4.0	3.8	3.6	3.7	3.55	3.8
16.....	3.3	3.8	5.5	4.9	3.9	6.6	4.0	3.8	3.6	3.7	3.55	3.8
17.....	3.3	3.8	5.5	4.6	5.8	5.4	4.0	3.8	3.6	3.7	3.55	3.8
18.....	3.3	3.8	5.5	4.6	5.8	5.4	4.0	3.8	3.6	3.7	3.55	3.8
19.....	3.3	3.8	8.0	4.6	8.0	5.2	4.0	3.8	3.65	3.7	3.55	3.8
20.....	3.3	3.85	8.0	4.6	8.0	5.2	4.0	3.7	3.65	3.7	3.55	3.8
21.....	3.3	3.95	8.6	4.6	8.4	4.8	4.0	3.7	3.65	3.7	3.55	3.8
22.....	3.3	4.0	8.5	4.9	8.4	4.8	4.0	3.6	3.65	3.7	3.55	3.8
23.....	3.3	4.1	8.2	5.0	8.2	4.8	4.0	3.6	3.65	3.7	3.55	3.9
24.....	3.4	4.1	7.9	5.2	8.2	4.8	3.0	3.85	3.65	3.7	3.55	3.9
25.....	3.4	4.2	7.6	4.9	8.0	4.6	3.4	3.85	3.65	3.7	3.55	3.9
26.....	3.4	4.2	7.5	4.65	7.9	4.6	3.6	3.7	3.65	3.8	3.55	3.9
27.....	3.4	4.1	7.2	4.6	7.8	4.6	3.9	3.7	3.65	3.8	3.5	3.9
28.....	3.4	4.0	6.7	4.6	7.6	4.5	4.25	3.7	4.6	3.8	3.5	4.0
29.....	3.4	3.9	6.5	4.5	.....	4.5	4.25	3.7	3.9	3.8	3.5	4.0
30.....	3.4	3.8	5.8	4.4	.....	4.5	4.0	3.7	3.9	3.0	3.5	4.0
31.....	3.4	.....	4.6	4.4	.....	4.5	.....	3.7	.....	3.4	3.5	.....

Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.
1901.				1901.			
1.....	4.3	4.35	5.6	16.....	4.35	4.35	5.6
2.....	4.3	4.35	5.6	17.....	4.35	4.7	5.6
3.....	4.3	4.35	5.6	18.....	4.35	4.7	5.6
4.....	4.2	4.35	5.7	19.....	4.35	4.7	5.6
5.....	4.2	4.35	5.8	20.....	4.35	4.7	5.0
6.....	4.2	4.35	6.0	21.....	4.35	4.7	5.0
7.....	4.3	4.35	6.0	22.....	4.35	4.7	5.0
8.....	4.3	4.35	6.0	23.....	4.7	4.75	5.0
9.....	4.3	4.35	6.0	24.....	4.7	4.75	5.0
10.....	4.3	4.35	5.7	25.....	5.0	4.75	4.0
11.....	4.3	4.35	5.7	26.....	5.0	4.75	4.0
12.....	4.3	4.35	5.6	27.....	5.0	5.0	4.0
13.....	4.3	4.35	5.6	28.....	4.9	5.6	4.0
14.....	4.3	4.35	5.6	29.....	4.9	5.6	4.0
15.....	4.3	4.35	5.6	30.....	4.7	5.6	4.0
				31.....	4.35	.....	4.0

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1905.												
1.....	6.6	6.8	5.0	5.5	4.0	4.0	3.0	4.0	4.2	5.0	5.0	5.0
2.....	6.6	6.7	4.8	5.3	4.0	4.0	3.0	4.0	4.5	4.8	5.1	5.3
3.....	5.0	5.9	4.0	5.0	4.0	4.0	3.0	4.0	4.4	4.6	5.0	5.2
4.....	5.0	.....	4.0	5.0	4.0	4.0	6.0	4.0	4.4	4.3	5.0	5.0
5.....	4.6	5.8	4.0	4.8	4.0	4.0	5.8	4.0	4.4	4.0	5.0	5.1
6.....	4.6	6.0	4.4	4.5	4.0	4.0	4.8	4.0	4.4	4.0	5.1	5.0
7.....	4.6	6.0	4.4	4.0	4.0	4.0	4.0	4.0	4.4	4.0	5.2	5.2
8.....	4.6	5.8	4.4	4.0	4.0	4.2	4.0	4.0	4.4	4.2	5.0	4.1
9.....	4.6	5.6	4.0	4.0	4.0	4.1	4.0	4.0	4.4	4.2	5.0	4.1
10.....	4.6	5.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.1	5.2	4.4
11.....	4.6	5.0	4.4	4.0	4.2	4.0	4.0	4.2	4.0	4.1	5.1	4.4
12.....	4.7	5.0	4.0	3.8	4.2	4.0	6.0	4.0	4.0	4.0	4.6	4.4
13.....	4.7	5.0	4.0	4.0	4.0	4.0	6.0	4.0	4.0	4.0	4.4	4.3
14.....	4.7	5.0	4.0	4.0	4.0	4.0	5.8	4.0	6.0	4.0	4.4	4.5
15.....	5.8	4.6	4.4	4.0	4.0	4.0	5.0	4.0	5.8	4.0	4.4	4.1
16.....	5.8	4.7	4.4	4.0	4.0	4.0	5.8	4.0	5.0	4.1	4.6	4.1
17.....	6.0	4.7	4.4	4.0	4.0	4.0	5.8	4.0	5.0	4.5	4.8	4.3
18.....	6.0	4.7	4.4	4.0	4.0	4.0	5.8	4.2	5.0	4.5	4.8	4.3
19.....	6.4	5.1	5.0	4.0	4.0	4.0	6.0	4.2	5.0	4.5	5.0	4.3
20.....	6.35	6.0	5.0	4.0	4.0	4.0	6.0	4.6	5.0	4.5	5.0	4.3

Daily gage height, in feet, of Willow Creek near Standish, Cal., for 1900-1901 and 1905—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1905.												
21.....	6.0	7.8	5.2	4.0	4.1	4.0	6.0	4.5	4.8	4.5	4.8	4.0
22.....	7.6	7.8	5.2	4.0	4.1	4.0	5.0	4.6	4.8	4.5	4.6	5.0
23.....	7.8	7.0	5.0	4.0	4.0	4.0	5.0	4.2	4.8	5.0	4.6	5.0
24.....	6.0	6.2	4.8	4.0	4.0	4.0	4.8	4.0	4.6	5.1	4.5	5.2
25.....	6.0	6.0	4.6	4.0	4.0	4.0	4.1	4.0	4.5	5.2	4.4	5.0
26.....	5.8	6.3	5.3	4.0	4.0	6.2	4.0	4.2	5.0	5.2	4.8	5.2
27.....	5.6	5.0	5.0	4.0	4.0	5.0	4.0	4.2	6.0	5.1	4.8	5.3
28.....	5.6	5.0	5.0	4.0	3.8	4.0	4.0	4.2	5.8	5.5	5.0	5.3
29.....	5.7	.....	5.0	4.0	3.8	4.0	4.0	4.2	5.8	5.2	5.0	5.3
30.....	5.0	.....	5.0	4.0	3.8	3.6	4.0	4.3	5.0	5.0	5.0	5.3
31.....	5.6	.....	5.5	.....	.....	.....	4.0	4.2	.....	5.0	.....	5.3

Rating table for Willow Creek near Standish, Cal., from Jan. 1 to Dec. 31, 1905.

Gage height.	Discharge.	Gage height.	Discharge.	Gage height.	Discharge.	Gage height.	Discharge.
<i>Feet.</i>	<i>Second-feet.</i>	<i>Feet.</i>	<i>Second-feet.</i>	<i>Feet.</i>	<i>Second-feet.</i>	<i>Feet.</i>	<i>Second-feet.</i>
3.60	10	4.60	31	5.60	74	6.60	141
3.70	11	4.70	34	5.70	80	6.70	149
3.80	13	4.80	37	5.80	86	6.80	157
3.90	15	4.90	41	5.90	92	6.90	165
4.00	17	5.00	45	6.00	98	7.00	173
4.10	19	5.10	49	6.10	105	7.20	189
4.20	21	5.20	54	6.20	112	7.40	205
4.30	23	5.30	59	6.30	119	7.60	221
4.40	25	5.40	64	6.40	126	7.80	238
4.50	28	5.50	69	6.50	133		

NOTE.—Table is based on five discharge measurements made during 1905 and is not well defined.

Monthly discharge of Willow Creek near Standish, Cal., for 1905.

Month.	Discharge in second-feet.			Run-off (total in acre-feet.)
	Maximum.	Minimum.	Mean.	
January.....	238	31	80.4	4,944
February.....	238	31	89.4	4,965
March.....	69	17	33.5	2,060
April.....	69	17	22.9	1,363
May.....	21	13	17.0	1,045
June.....	112	10	21.1	1,256
July.....	98	0	46.2	2,841
August.....	31	17	19.6	1,205
September.....	98	17	41.0	2,440
The period.....				22,100
October.....	69	17	31.8	1,955
November.....	54	25	39.6	2,356
December.....	59	17	38.7	2,380

Miscellaneous measurements in Susan River drainage basin.

Date.	Stream.	Hydrographer.	Locality.	Dis-charge.
Apr. 18, 1899	Susan River.....	Albert Halen.....	At dam near mouth of Willow Creek.	Sec.-ft. 139
Apr. 23, 1899	.....do.....	.....do.....	.....do.....	115
June 4, 1899	.....do.....	.....do.....	.....do.....	37
June 11, 1899	.....do.....	.....do.....	.....do.....	33
Do.....	.....do.....	.....do.....	Below dam.....	34
Apr. 18, 1899	.....do.....	W. D. Minckler.....	.....do.....	14.5
Apr. 23, 1899	.....do.....	.....do.....	.....do.....	41
June 11, 1899	.....do.....	.....do.....	Below Colony dam.....	34
Do.....	.....do.....	.....do.....	.....do.....	23
Apr. 4, 1899	Susan River, North Branch	.....do.....	At Otis Johnson's.....	11
June 4, 1899	.....do.....	.....do.....	.....do.....	7
Apr. 24, 1899	Susan River, South Branch	.....do.....	.....do.....	31
June 4, 1899	.....do.....	.....do.....	.....do.....	30
June 11, 1899	Susan River, North and South branches.	.....do.....	Above Colony dam.....	33
Apr. 18, 1899	Willow Creek.....	Albert Halen.....	At mouth.....	25
Do.....	.....do.....	W. D. Minckler.....	.....do.....	25
Apr. 23, 1899	.....do.....	Albert Halen.....	.....do.....	28
June 4, 1899	.....do.....	.....do.....	.....do.....	25
Apr. 24, 1899	.....do.....	W. D. Minckler.....	Near Ravencrofts.....	28
June 4, 1899	.....do.....	.....do.....	.....do.....	24
June 11, 1899	.....do.....	.....do.....	.....do.....	21
Do.....	.....do.....	Albert Halen.....	.....do.....	21
Jan. 7, 1904	.....do.....	J. S. Evans.....	Near Susanville.....	11.6
May 12, 1904	.....do.....	James Branham.....	.....do.....	9.0
Aug. 16, 1904	.....do.....	Bennett & Toler.....	.....do.....	5.4
Nov. 11, 1904	.....do.....	James Branham.....	Near Standish.....	52
Apr. 18, 1899	Tanners Slough.....	W. D. Minckler.....	.....do.....	30
Apr. 23, 1899	.....do.....	.....do.....	.....do.....	27
June 4, 1899	.....do.....	.....do.....	.....do.....	15
June 11, 1899	.....do.....	.....do.....	.....do.....	18

PYRAMID AND WINNEMUCCA LAKE BASINS.

LAKE TAHOE AT TAHOE, CAL.

Records of the height of Lake Tahoe have been kept since 1900 to determine the amount of water drawn from storage and the possibility of further regulating the outflow. All gage heights recorded in the following table have been referred to a datum 6,220 feet above sea level, the gage now in use being set at that datum. The gage heights for 1907 and 1908 as given in Water-Supply Paper 250, page 102, refer to a datum 6,225.5 feet above sea level.

From 1889 until early in 1904 the floor of the outlet gates of the dam had a mean elevation of 6,223.3 feet, and the crest of the spillway at its highest point was 6,229.3 feet. Since 1904 the mean elevation of the floor of the gates has been 6,223.08, that of the lowest gate 6.223.04 and that of the lowest part of the spillway has been 6,229.50.

The following table summarizes the fluctuations of the lake for the last 24 years as far as they have been recorded:

Table showing fluctuation of Lake Tahoe from 1888 to 1911.

Year.	High water.		Low water.		Fluctuation.
	Gage height.	Date.	Gage height.	Date.	
	Feet.		Feet.		Feet.
1888.....	4.90	Sept. 8			
1889.....	4.60	Spring.	3.05	October.	1.55.
1890.....	8.55±				
1895.....	9.02	July 7	7.55	^a Dec. 17	1.47
1900.....	7.00	June 17	5.87	^b Oct. 17	1.17
1901.....	8.43	July 27	6.10	Jan. 1	2.33
1902.....	9.02	June 22	6.97	Dec. 5	2.05
1903.....	8.90	July 5	6.80	Jan. 21	2.10
1904.....	10.40	June 22	7.10	Feb. 5	3.30
1905.....	8.70	June 18	6.20	Dec. 23	2.50
1906.....	9.87	July 21	6.16	Jan. 5	3.71
1907.....	11.26	July 14	7.80	Jan. 19	3.46
1908.....	8.40	Jan. 1	6.10	Dec. 31	2.28
1909.....	8.88	July 11	6.10	Jan. 1	2.78
1910.....	8.48	June 2-11	5.80	Dec. 1-2	2.68
1911.....	9.21	July 19-21	5.74	Jan. 8-9	3.47

^a The lake was also low in January.

^b Lower earlier in year, no record.

NOTE.—Records for 1888 to 1890 were reported by W. H. Hall.

Daily gage height, in feet, of Lake Tahoe at Tahoe, Cal., for 1900-1912.

Day.	Apr.	May.	June.	July.	Aug.	Sept.	Day.	Apr.	May.	June.	July.	Aug.	Sept.
1900.							1900.						
1.....		6.39	6.84	7.00	6.69	6.19	16.....		6.64	6.99	6.86	6.45	6.07
2.....		6.40	6.85	6.99	6.68	6.18	17.....		6.66	7.00	6.85	6.43	6.06
3.....		6.41	6.86	6.97	6.66	6.17	18.....		6.67	7.00	6.84	6.41	6.05
4.....		6.45	6.87	6.97	6.64	6.20	19.....		6.69	7.00	6.83	6.40	6.04
5.....		6.46	6.88	6.96	6.63	6.20	20.....		6.70	7.00	6.82	6.38	6.03
6.....		6.47	6.89	6.95	6.62	6.19	21.....		6.71	7.00	6.81	6.37	6.02
7.....		6.48	6.90	6.94	6.60	6.18	22.....		6.73	7.00	6.80	6.35	6.01
8.....		6.49	6.91	6.93	6.58	6.17	23.....		6.74	7.00	6.79	6.33	5.99
9.....		6.50	6.92	6.91	6.57	6.16	24.....		6.75	7.00	6.78	6.32	5.98
10.....		6.52	6.93	6.90	6.55	6.14	25.....		6.76	7.00	6.77	6.30	5.97
11.....		6.54	6.94	6.89	6.54	6.13	26.....		6.77	7.00	6.76	6.28	5.97
12.....		6.56	6.95	6.88	6.52	6.12	27.....		6.78	7.00	6.75	6.26	5.96
13.....		6.58	6.96	6.89	6.50	6.11	28.....	6.35	6.79	7.00	6.74	6.24	5.95
14.....		6.60	6.98	6.88	6.49	6.10	29.....	6.36	6.81	7.00	6.73	6.23	5.94
15.....		6.62	6.99	6.87	6.47	6.08	30.....	6.37	6.82	7.00	6.72	6.21	5.93
							31.....		6.83		6.71	6.20	

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1900-1901.												
1.....	5.93	5.91		^a 6.10	6.18						8.43	8.11
2.....	5.92	5.91									8.43	8.09
3.....	5.92	5.91			6.18						8.43	8.06
4.....	5.93	5.90								8.35	8.43	8.04
5.....	5.94	5.90				7.00					8.42	8.01
6.....	5.95	5.90					7.20				8.42	7.98
7.....	5.94	5.89					7.20				8.42	7.99
8.....	5.94	5.94									8.42	7.93
9.....	5.93	5.94			6.37						8.42	7.91
10.....	5.92	5.95									8.42	7.89
11.....	5.91	5.95									8.42	7.86
12.....	5.90	5.95									8.42	7.88
13.....	5.90	5.95					7.20				8.42	7.83
14.....	5.89	5.94									8.41	7.81
15.....	5.88	5.94									8.41	7.81

^a Estimated.

Daily gage height, in feet, of Lake Tahoe at Tahoe, Cal., for 1900-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1900-1901.												
16.....	5.88	5.94									8.41	7.81
17.....	5.87	5.99				7.10					8.41	7.81
18.....	5.87	6.00									8.40	7.80
19.....	5.93	5.99			6.77						8.40	7.79
20.....	5.93	6.00		6.18							8.39	7.77
21.....	5.93	6.02									8.37	7.76
22.....	5.92	6.03									8.35	7.75
23.....	5.91	6.03				7.10					8.32	7.74
24.....	5.91	6.02									8.29	7.79
25.....	5.90	6.01									8.26	7.78
26.....	5.89	6.02							8.31		8.23	7.77
27.....	5.89	6.02		6.18						8.43	8.21	7.76
28.....	5.92	6.01			6.95					8.43	8.19	7.75
29.....	5.92	6.01								8.43	8.17	7.74
30.....	5.91	6.00				7.10	7.40		^a 8.33	8.43	8.15	7.73
31.....	5.91		^a 6.10					7.92		8.43	8.13	.....
1901-2.												
1.....				7.30	7.08		^a 8.24			9.02	8.77	8.36
2.....										9.02	8.77	8.35
3.....										9.02	8.76	8.34
4.....									8.77	9.02	8.76	8.34
5.....					7.05				8.79	9.02	8.75	8.33
6.....			7.36						8.81	9.02	8.74	8.32
7.....			7.35	7.25					8.83	9.01	8.74	8.31
8.....									8.84		8.73	8.30
9.....			7.33						8.85		8.72	8.28
10.....			7.32						8.87		8.71	8.27
11.....											8.70	8.26
12.....		7.34								8.97	8.69	8.25
13.....			7.30								8.68	8.24
14.....		7.33							8.97		8.66	8.22
15.....			7.28	7.20					8.95		8.64	8.20
16.....						8.15			8.95	8.90	8.62	8.18
17.....									8.95		8.60	8.16
18.....		7.28			7.28				8.97	8.89	8.57	8.12
19.....					7.28				8.98	8.90	8.55	8.09
20.....									8.99	8.90	8.52	8.06
21.....									9.01	8.90	8.50	8.03
22.....					7.25				9.02	8.90	8.48	8.01
23.....									9.02	8.90	8.46	.....
24.....										8.90	8.44	.....
25.....								8.59		8.90	8.43	.....
26.....								8.60		8.88	8.42	.....
27.....								8.61		8.86	8.41	7.90
28.....					7.50			8.63		8.84	8.40	7.88
29.....									9.02	8.82	8.39	7.85
30.....		7.16					^a 8.42	8.68		8.81	8.38	7.83
31.....	7.50		7.28	7.08						8.79	8.37	.....
1902-3.												
1.....	7.80	7.37	7.06	^a 7.04	^a 6.91			7.87		^a 8.88	8.70	8.25
2.....	7.78	7.35	7.03				7.52	7.89			8.70	8.25
3.....	7.77	7.32	7.01				7.54	7.91			8.68	8.20
4.....	7.75	7.30	6.99				7.56	7.93	8.48		8.66	8.20
5.....	7.75	7.29	6.97				7.60	7.96		8.90	8.65	8.20
6.....	7.73	7.27				7.30	7.63	7.99	8.53	8.90	8.64	8.20
7.....	7.71	7.26				7.30	7.65	8.01	8.55	8.90	8.62	8.10
8.....	7.69	7.25						8.03	8.57	8.90	8.60	.....
9.....	7.67	7.24				7.32		8.05	8.62	8.90	8.60	.....
10.....	7.65	7.24				7.30				8.90	.....	.....
11.....	7.64	7.24					7.71		8.68		8.90	.....
12.....	7.62		7.20				7.73			8.90	8.58	.....
13.....	7.60		7.20				7.73	8.17	8.72	8.90	8.57	.....
14.....	7.58	7.23		6.88						8.90	8.55	.....
15.....	7.56			6.87				8.23		8.90	8.52	.....
16.....	7.55			6.85							8.50	7.90
17.....	7.53			6.85						8.85	.....	7.90
18.....	7.51			6.83		7.30			8.76	8.85	.....	7.90
19.....	7.49			6.82		7.28			8.77	8.80	.....	7.90
20.....	7.47			6.81		7.25			8.77	8.80	8.45	.....

^a Estimated.

Daily gage height, in feet, of Lake Tahoe at Tahoe, Cal., for 1900-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1902-3.												
21				6.80		7.23	7.77			8.80		
22	7.48	7.27				7.22	7.78	8.30	8.79	8.80	8.40	7.80
23						7.21			8.80		8.38	7.80
24						7.20	7.80	8.30	8.82	8.77	8.35	7.80
25	7.50							8.30	8.82	8.76		7.80
26	7.47	7.19				7.23				8.75	8.30	7.80
27	7.45	7.16				7.28			8.86	8.73	8.30	7.75
28	7.44	7.14			a 7.24					8.72	8.30	7.75
29	7.42	7.11					7.85	8.35			8.25	7.75
30	7.41	7.08					7.86	8.39			8.25	
31	7.39			a 6.91		7.45		8.44		8.70	8.25	
1903-4.												
1	a 7.74		7.55	7.25	7.10			9.55		10.38		
2		7.27		7.30	7.10		9.30	9.55	10.17	10.38		
3		7.25		7.25	7.10	8.30		9.55		10.36	9.52	
4						8.30		9.55		10.36	9.90	9.27
5			7.50		7.10	8.30		9.55		10.35		9.25
6				7.25				9.55	10.20	10.35	9.88	9.24
7								9.55	10.20	10.55	9.86	9.22
8				7.25				9.55	10.22		9.85	9.20
9				7.25				9.58	10.24	10.32	9.83	9.18
10			7.40	7.25			9.25	9.60	10.26	10.30		9.15
11			7.40	7.20			9.25	9.63	10.30		9.80	9.13
12			7.40	7.20			9.30	9.66	10.30			9.13
13	7.50		7.40	7.25			9.30	9.70	10.32	10.25	9.76	9.10
14	7.50		7.40	7.20				9.73	10.34		9.73	9.08
15	7.50	7.40	7.50	7.20				9.77			9.70	9.07
16	7.45	7.40		7.20	7.60		9.35	9.80	10.35			
17	7.45	7.40	7.50	7.20	7.60		9.40		10.36	10.18		9.04
18	7.40	7.40	7.40	7.20	7.60		9.40		10.38	10.15	9.68	9.00
19	7.40	7.40	7.40	7.20	7.60		9.45		10.38			8.98
20	7.40	7.40	7.35		7.60		9.50			10.10		8.95
21	7.40	7.40	7.35	7.20			9.50					
22	7.40		7.35				9.55	9.90	10.40			
23	7.40	7.55		7.15			9.55	9.95				
24	7.35	7.60	7.30	7.15			9.60			10.09	9.50	
25	7.35	7.60	7.30				9.60		10.40	10.08		
26	7.35	7.60	7.30	7.15			9.60		10.36			8.85
27	7.35	7.60	7.30	7.15			9.55	10.03	10.38			
28	7.32	7.55	7.30	7.15			9.55	10.08				
29	7.32	7.60	7.30	7.10			9.55					
30	7.30	7.55	7.35	7.10		9.25	9.55		10.38	9.95	9.37	8.76
31	7.30			7.10		9.25					9.33	
1904-5.												
1				7.80		7.75	7.90		8.50	8.65	8.35	7.85
2	8.75			7.75		7.75	7.90		8.50	8.65	8.35	7.85
3	8.70	8.40		7.75		7.75	7.90		8.55	8.60	8.30	7.85
4	8.72			7.75	7.70	7.70	7.90		8.55	8.60	8.30	7.80
5	8.70			7.75	7.70	7.70	7.90		8.55	8.60	8.30	7.80
6			7.80	7.75		7.70	7.90		8.55	8.60	8.30	7.80
7		8.30		7.75			7.90		8.55	8.60	8.30	7.75
8							7.90		8.55	8.60	8.30	7.75
9						7.70			8.60	8.60	8.25	7.70
10			7.68			7.65			8.60	8.60	8.20	7.70
11		8.20	7.68	7.70		7.65			8.60	8.60	8.20	7.65
12	8.80			7.70				8.30	8.60	8.60	8.20	7.65
13	8.80		7.70					8.30	8.60	8.60	8.20	7.65
14	8.80			7.70			7.95	8.30	8.65	8.55	8.20	
15	8.78			7.65	7.75		7.95	8.30	8.65	8.55	8.20	
16		8.15		7.65			7.95	8.30	8.65	8.55	8.15	
17	8.70		7.68					8.30	8.65	8.50	8.15	7.57
18	8.65		7.68	7.60	7.75			8.30	8.70	8.50	8.10	
19		8.10					8.00	8.40	8.70	8.50	8.10	7.50
20							8.00	8.40	8.70	8.50	8.10	7.50
21	8.60						8.00	8.40	8.70	8.45	8.05	7.50
22	8.60	8.05					8.00	8.40	8.70	8.45	8.05	7.45
23	8.60	8.05		7.70		7.70	8.00	8.45	8.70	8.40	8.00	7.45
24	8.55	8.00		7.70			8.00	8.45	8.70	8.40	8.00	
25	8.50	8.00	7.60	7.70			8.00	8.45	8.70	8.40	8.00	

a Estimated.

Daily gage height, in feet, of Lake Tahoe at Tahoe, Cal., for 1900-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1904-5.												
26.	8.50	7.95		7.70	7.75		8.10	8.45	8.70	8.40	7.95	
27.	8.50			7.65	7.75	7.85	8.15	8.45	8.70	8.40	7.95	
28.	8.50			7.65	7.75		8.15	8.50	8.65	8.40	7.95	
29.	8.50							8.50	8.65	8.40	7.90	
30.	8.45	a 7.88				7.90	a 8.18	8.50	8.65	8.40	7.90	
31.			7.80			7.90		8.50		8.40	7.90	
1905-6.												
1.	7.30	6.70		a 6.20		7.20		7.90	8.70	9.55	9.80	9.30
2.	7.30	6.70						7.90	8.75	9.55	9.80	9.30
3.	7.30	6.70	6.40		7.04			7.90		9.60	9.80	9.30
4.	7.30	6.70	6.40		7.04			7.95		9.60	9.75	9.30
5.				6.16	7.04	7.30		7.95		9.60	9.75	9.20
6.				6.16	7.02	7.30		8.00		9.70	9.75	9.20
7.					7.02	7.30		8.05		9.70	9.75	9.20
8.		6.55			7.02	7.30		8.10		9.75	9.75	
9.		6.55			7.02	7.30		8.10		9.75	9.70	
10.		6.50			7.02	7.30				9.80	9.70	
11.		6.50			7.02					9.80	9.70	9.10
12.		6.50	6.30				7.70			9.80	9.70	9.10
13.	7.05	6.50	6.30				7.70			9.80	9.70	9.05
14.		6.40	6.30				7.70			9.85	9.70	9.05
15.		6.40	6.30				7.70			9.85	9.65	9.05
16.		6.40	6.30		7.06					9.85	9.65	9.05
17.		6.40					7.70	8.30	9.10	9.85	9.65	
18.		6.40					7.70	8.30	9.15	9.85	9.60	
19.		6.40			7.00	7.50	7.70	8.30	9.20	9.85	9.60	8.90
20.	6.90	6.40		7.06	7.00		7.70	8.30	9.25	9.85	9.60	a 8.88
21.		6.40		7.06			7.70	8.40	9.25	9.87	9.60	
22.		6.40		7.06				8.40	9.30	9.87	9.60	
23.	6.80	6.40	6.20	7.10					9.30	9.87	9.60	
24.	6.80			7.10					9.35	9.87	9.50	8.75
25.	6.80			7.10			7.75		9.35	9.87	9.50	8.75
26.	6.75			7.10			7.75		9.40	9.87	9.40	8.75
27.	6.75			7.10					9.45	9.87	9.40	8.75
28.	6.75			7.10					9.45	9.85	9.40	8.70
29.	6.70			7.10		7.55			9.45	9.85	9.40	8.70
30.	6.70	a 6.40						8.70	9.50	9.85	9.40	8.70
31.	6.70		a 6.20					8.70		9.85	9.30	
1906-7.												
1.	8.70			7.85		8.00			10.45		11.17	
2.	8.70							9.30	10.50	11.15		10.38
3.										11.20	11.15	
4.										11.20	11.13	
5.					8.00					11.20	11.10	
6.	8.58						9.35			11.20		10.30
7.	8.56		7.45				9.35			11.20		10.28
8.	8.54						9.40	9.92		11.20		10.25
9.							9.40		10.68	11.22		10.23
10.				7.85			9.40			11.24		10.21
11.		7.95					9.38			11.23	10.92	
12.	8.40									11.23		
13.	8.40									11.25	10.90	
14.	8.40						9.45	10.10		11.26	10.87	
15.	8.40		7.80	7.82			9.50	10.08	10.90	11.26	10.85	
16.	8.40		7.80			8.00		10.08	10.90	11.25	10.83	
17.	8.40						9.55	10.10	10.90	11.26	10.82	
18.	8.35						9.60	10.14	10.92	11.26	10.80	9.90
19.			7.83	7.80		9.00			10.92		10.76	
20.			7.80					10.20	10.92		10.75	
21.			7.76				9.60	10.22	10.93	11.23	10.74	9.83
22.							9.63			11.22	10.70	9.80
23.			7.70				9.63	10.26	11.00	11.22	10.66	9.80
24.	8.12						9.67	10.27	11.00	11.21	10.65	
25.	8.12						9.70	10.30	11.02	11.22	10.60	
26.	8.12						9.70		11.03	11.21	10.60	9.73
27.	8.10						9.74		11.05	11.20	10.58	9.70
28.	8.10									11.20		
29.	8.05		7.85					10.35		11.19		
30.	8.00	a 7.50					9.80	10.38		11.19		9.60
31.	8.00			a 8.00		a 9.35		10.40		11.19		

a Estimated.

Daily gage height, in feet, of Lake Tahoe at Tahoe, Cal., for 1900-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1907-8.												
1			8.30	8.40						8.10	7.90	7.33
2		8.94	8.28							8.10	7.90	7.30
3		8.92	8.26						7.90	8.10	7.90	7.30
4		8.90								8.10	7.90	7.30
5	9.40	8.88						7.58	7.90	8.10	7.88	7.29
6		8.86		8.36		7.75		7.58	7.90	8.10	7.86	7.28
7						7.75	7.40		7.95	8.10	7.87	-----
8						7.75	7.40		7.95	8.10	7.85	-----
9				8.32		7.70		7.66	7.95	8.10	7.84	7.20
10	9.35	8.80		8.32		7.65			7.95	8.10	7.82	7.23
11	9.33	8.78	8.40	8.30		7.65			7.95	8.10	7.80	7.20
12	9.32	8.75	8.40	8.30		7.60	7.40		7.95	8.10	7.77	7.20
13	9.30	8.72	8.40			7.60	7.40		7.95	8.10		7.20
14	9.30	8.70	8.40		7.98	7.60			7.95	8.10		7.20
15	9.28				7.95	7.60	7.45	7.70	7.95	8.10		-----
16	9.26			8.22		7.60	7.45		7.95	8.10		-----
17	9.24		8.38	8.20		7.60	7.45			8.10	7.65	7.10
18	9.20		8.38			7.60	7.50			8.08	7.65	-----
19	9.18	8.55				7.60	7.50		7.95		7.60	-----
20	9.16	8.50	8.40			7.60	7.50		7.95		7.60	-----
21	9.14						7.50	7.80			7.60	7.07
22		8.47	8.38			7.55			8.05		7.58	7.06
23			8.36	8.20		7.55			8.05		7.55	-----
24	9.12	8.40			7.75				8.05		7.53	-----
25					7.74		7.50		8.08		7.51	-----
26					7.70				8.08		7.50	7.00
27								7.85	8.08			6.95
28	9.04					7.40			8.08			6.95
29		8.33	8.38		7.72				8.08			6.90
30	9.00	8.30					7.54		8.08			6.90
31				8.12		7.40		7.88			7.33	-----
1908-9.												
1	6.89	6.60	6.40	6.10		7.90	7.65	7.80	8.32	8.92	8.64	-----
2		6.60				7.90	7.65	7.81	8.35	8.92	8.62	8.15
3		6.60				7.90	7.65	7.83	8.40	8.93	8.60	8.13
4	6.81	6.60				7.90	7.65	7.85		8.93		8.12
5	6.80	6.60	6.40		7.70	7.90	7.65	7.88	8.48	8.93		8.10
6	6.78	6.60	6.40			7.90	7.65	7.90	8.52			8.10
7	6.77	6.60	6.35			7.90	7.65	7.92	8.55	8.88	8.57	8.08
8	6.76	6.56				7.90	7.65	7.95	8.57	8.87	8.53	8.05
9	6.75	6.52					7.60	7.97	8.60	8.86	8.51	8.02
10	6.75	6.50							8.63	8.86	8.50	-----
11	6.73	6.50	6.30	6.45			7.60		8.66	8.88	8.50	-----
12	6.70	6.50	6.30		7.80		7.60		8.68	8.85	8.50	-----
13	6.69	6.50	6.30		7.80		7.60	8.00	8.70	8.84	8.45	7.90
14		6.50				7.80	7.60	8.02	8.70	8.84	8.45	7.88
15		6.50			7.90	7.80	7.60			8.84	8.42	7.87
16	6.75	6.45	6.30	7.30	7.90	7.75	7.60			8.84	8.41	7.85
17		6.42				7.75	7.60			8.84	8.40	7.88
18		6.42		7.35		7.75	7.65	8.09	8.80		8.40	-----
19		6.40			7.85	7.75	7.65	8.10	8.83		8.40	-----
20			6.20		7.85	7.75	7.65	8.13	8.82			-----
21			6.20		7.85	7.80			8.82	8.80		-----
22						7.80	7.68		8.83	8.80		7.70
23	6.65			7.70		7.80	7.68		8.85	8.79		7.70
24		6.50	6.15		7.90	7.75		8.20	8.87	8.78	8.28	7.66
25			6.12			7.75	7.68	8.20	8.89		8.25	-----
26	6.70					7.75	7.68	8.20			8.22	7.60
27	6.70		6.12	7.78		7.75	7.68				8.20	-----
28	6.70	6.40		7.80		7.75	7.72			8.70	8.20	-----
29		6.40		7.80			7.75	8.25	8.90	8.69	8.18	-----
30	6.65	6.40				7.70	7.78	8.28	8.90	8.66		-----
31	6.62		6.10			7.70		8.29		8.66		-----
1909-10.												
1	7.50	7.20			7.65	7.46	7.58		8.46	8.30	7.87	-----
2		7.20	7.50	7.70	7.63	7.47	7.58		8.48	8.30	7.84	-----
3		7.10	7.50	7.72	7.60	7.45	7.58		8.48	8.26	7.80	7.10
4		7.16	7.50	7.72	7.59	7.45	7.58	8.06	8.48	8.23	7.78	-----
5		7.16	7.50	7.69	7.58	7.45	7.58	8.06	8.48	8.20	7.76	-----

a Estimated.

Daily gage height, in feet, of Lake Tahoe at Tahoe, Cal., for 1900-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909-10.												
6.....	7.52	7.14	7.25	7.65	7.56	7.42	7.60	8.06	8.48	8.20	7.76	.....
7.....	7.52	7.14	.....	7.68	7.53	7.41	7.60	8.10	8.48	8.20	7.74	.....
8.....	7.50	7.12	.....	7.67	7.52	7.41	7.62	8.10	8.48	8.18	7.70	.....
9.....	7.50	7.12	7.65	7.65	7.52	7.40	7.64	.....	8.48	8.16	7.68	6.96
10.....	7.45	7.12	7.68	7.60	7.51	7.39	7.65	.....	8.48	8.16	7.67	.....
11.....	7.45	7.12	7.70	7.60	7.50	7.38	7.65	.....	8.48	8.16	7.63	.....
12.....	7.45	7.10	7.72	7.58	7.50	7.38	7.67	8.20	.....	8.15	7.60	.....
13.....	7.41	7.10	7.74	.....	.....	7.38	7.67	8.17	.....	.....	7.60	.....
14.....	7.40	7.10	.....	.....	.....	7.42	.....	.....	.....	.....	7.58	6.85
15.....	7.40	7.10	.....	.....	7.50	7.40	.....	.....	.....	.....	7.56	6.85
16.....	7.38	7.10	.....	7.50	7.50	7.40	7.73	.....	8.38	8.09	7.54	.....
17.....	7.36	7.10	.....	7.50	7.50	7.40	7.78	8.25	8.38	8.06	7.50	.....
18.....	7.36	7.10	.....	7.50	.....	7.40	7.78	8.25	8.38	8.04	7.49	.....
19.....	7.35	.....	7.70	7.50	.....	.....	7.82	8.28	8.38	8.04	7.42	.....
20.....	7.34	.....	.....	7.48	.....	.....	7.88	8.30	8.38	8.04	7.40	6.70
21.....	7.34	.....	.....	7.48	.....	7.48	7.88	8.30	8.38	8.04	7.40	6.70
22.....	7.32	.....	7.50	7.48	.....	.....	7.88	8.30	8.38	8.04	7.39	6.70
23.....	7.32	.....	7.50	7.50	.....	7.56	7.89	8.30	8.38	8.02	7.39	6.65
24.....	7.30	7.34	7.49	.....	7.45	.....	7.89	8.30	8.38	8.00	7.39	6.62
25.....	7.30	7.36	7.49	.....	7.45	7.58	.....	8.33	8.38	8.00	7.37	6.60
26.....	7.30	7.38	7.48	7.70	7.45	.....	.....	8.35	8.38	7.96	7.35	6.60
27.....	7.28	.....	7.49	7.70	7.45	7.58	.....	8.36	.....	7.94	7.33	6.58
28.....	7.26	.....	7.49	7.70	7.45	7.58	.....	8.38	.....	7.92	7.30	.....
29.....	.....	.....	7.49	7.70	.....	7.58	8.00	8.40	.....	7.90	.....	6.58
30.....	.....	.....	7.48	7.70	.....	7.58	.....	8.40	.....	7.88	7.20	6.58
31.....	7.20	.....	.....	7.67	.....	7.58	.....	8.42	.....	7.88	.....	.....
1910-11.												
1.....	6.58	6.08	.....	5.80	.....	.....	7.14	7.37	8.10	.....	9.05	8.56
2.....	.....	6.08	5.80	5.80	7.10	.....	7.16	7.40	8.12	9.10	9.05	8.55
3.....	6.50	6.08	5.88	5.80	7.10	.....	7.18	.....	8.14	9.10	9.05	8.52
4.....	6.50	6.06	5.94	5.79	7.10	7.00	7.18	7.48	8.18	9.10	8.98	8.50
5.....	.....	6.06	5.98	5.79	7.10	.....	.....	.....	8.22	9.10	8.98	.....
6.....	6.45	6.05	.....	5.78	7.10	.....	7.30	7.60	8.22	9.10	8.95	.....
7.....	6.45	6.05	.....	5.76	7.10	.....	7.30	7.60	.....	.....	8.95	.....
8.....	6.45	6.05	6.00	5.74	7.10	7.15	.....	7.60	8.32	.....	8.93	8.40
9.....	.....	.....	6.00	5.74	7.10	7.32	.....	7.60	8.41	9.15	8.90	.....
10.....	.....	.....	6.02	5.79	7.11	7.32	.....	7.60	8.45	9.16	8.90	.....
11.....	.....	6.04	.....	5.90	7.12	7.30	.....	7.65	8.48	9.16	8.90	.....
12.....	6.35	6.06	.....	.....	7.13	.....	.....	.....	8.54	9.18	8.90	.....
13.....	.....	6.04	5.98	.....	.....	.....	.....	.....	8.60	9.18	8.90	.....
14.....	.....	6.04	5.98	.....	.....	.....	.....	.....	8.66	9.18	.....	8.34
15.....	.....	6.02	5.98	6.30	7.14	7.20	7.32	.....	8.70	9.19	.....	8.32
16.....	6.20	6.02	5.98	6.30	7.15	7.20	7.32	.....	8.73	9.20	8.80	8.30
17.....	6.20	6.02	5.98	6.30	7.15	7.20	7.30	.....	8.78	9.20	8.80	.....
18.....	.....	6.00	.....	6.33	7.15	7.20	.....	.....	8.83	9.20	8.78	.....
19.....	.....	6.00	.....	.....	.....	7.20	7.30	.....	8.88	9.21	8.76	.....
20.....	6.20	5.90	5.88	.....	7.14	7.20	7.26	7.73	8.93	9.21	8.75	8.10
21.....	6.18	5.90	5.89	6.45	7.14	7.20	7.26	7.76	.....	9.21	8.73	.....
22.....	6.18	5.88	5.87	6.45	7.13	7.20	7.27	7.80	8.96	9.20	8.72	.....
23.....	6.15	5.88	5.86	6.45	7.12	7.20	7.28	.....	.....	9.18	8.70	.....
24.....	6.15	5.85	5.84	.....	7.11	7.20	7.28	.....	8.98	9.15	8.67	.....
25.....	6.15	5.85	5.85	.....	7.10	7.20	7.30	.....	9.00	9.15	8.65	.....
26.....	6.15	5.85	5.85	6.50	7.10	7.20	7.31	.....	9.00	9.08	8.65	.....
27.....	6.12	5.85	5.88	6.50	.....	7.17	7.31	7.90	.....	9.08	8.64	.....
28.....	6.12	5.85	5.85	6.60	.....	7.15	7.31	7.93	9.06	9.08	8.62	7.95
29.....	6.11	5.83	5.82	6.70	.....	7.14	7.33	7.93	.....	9.08	8.60	.....
30.....	6.10	5.80	5.81	6.84	.....	7.14	7.33	7.97	9.10	9.08	8.58	.....
31.....	6.08	.....	5.81	.....	.....	7.14	.....	8.04	.....	9.08	8.58	.....

Daily gage height, in feet, of Lake Tahoe, at Tahoe, Cal., for 1900-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.									
1.....			7.29		6.90	6.70	6.65		7.30
2.....			7.28	6.98	6.90		6.65	6.80	7.31
3.....			7.27	6.98	6.90	6.69		6.85	7.32
4.....		7.48	7.26	6.96	6.84	6.68	6.62	6.85	7.38
5.....			7.26	6.96	6.87		6.62	6.88	7.39
6.....	7.80		7.26	6.95	6.88		6.62		7.40
7.....		7.48			6.88	6.75			7.41
8.....					6.87	6.75		6.88	7.47
9.....			7.28		6.86			6.90	7.52
10.....			7.27		6.85			6.92	7.53
11.....	7.76		7.26	7.02	6.83		6.65	6.92	7.53
12.....				7.02	6.83				
13.....			7.26	6.98				6.98	
14.....			7.23	6.95		6.70	6.65	6.99	
15.....			7.22	6.90			6.65	6.99	
16.....			7.21		6.82			7.00	
17.....	7.70	7.38		6.95			6.66	7.00	7.58
18.....	7.68	7.38			6.82	6.73	6.66	7.02	7.60
19.....	7.66	7.37	7.18			6.72	6.65	7.03	7.60
20.....	7.66	7.37		6.92	6.82				
21.....	7.64	7.37			6.80				
22.....	7.64	7.37	7.15		6.80	6.68			
23.....	7.64	7.37	7.15			6.67			
24.....	7.62	7.37				6.66		7.14	7.65
25.....	7.60	7.36	7.05			6.64			7.65
26.....		7.35	7.00		6.75				
27.....		7.34		6.95	6.74	6.64	6.65	7.20	7.65
28.....	7.57	7.32		6.95	6.73	6.64		7.20	7.65
29.....	7.53	7.30	7.00	6.90	6.72	6.64			7.65
30.....	7.50	7.29	7.00	6.90				7.30	7.62
31.....				6.90		6.65		7.30	

EVAPORATION AT LAKE TAHOE, CAL.

The following tables showing evaporation at Lake Tahoe have been taken from studies made by Edwin Duryea, jr.,¹ of Duryea, Haehl & Gilman, San Francisco, Cal.

The first table (Table 1, p. 79) records actual observations, estimated monthly and yearly totals, and the ratios of the evaporation in each month to the yearly total, expressed in percentage. The estimated monthly total was obtained by filling in the gaps of the record. This was done by taking into consideration the records immediately preceding and following and the climatologic conditions during the period. The estimates are believed to be conservative, in that they give a greater evaporation than actually occurred.

The second table (Table 2, p. 80) summarizes the data presented in the first and gives a maximum, minimum, and mean value for the period for each month and also percentage values for comparative purposes.

The yearly mean evaporation for the period is found to be 30.59 inches and Mr. Duryea has assumed a safe yearly evaporation of 36 inches.

A climatologic year beginning with September and ending with August has been used in the tabulation.

¹ See Eng. News, Feb. 29, 1912.

TABLE 1.—*Monthly and yearly evaporation at Lake Tahoe (elevation 6,225 feet), 1899–1906.*

[As estimated from daily observations of the United States Geological Survey and the United States Reclamation Service.]

Month.	1899–1900 ^a		1900–1901 ^a		1901–2				1902–3			
					Observed evaporation.		Estimated monthly total.		Observed evaporation.		Estimated monthly total.	
	Inches.	Per cent of total for year.	Inches.	Per cent of total for year.	Days.	Inches.	Inches.	Per cent of total for year.	Days.	Inches.	Inches.	Per cent of total for year.
September.....			3.10	11	.....	.....	4.12	16	24	2.80	3.40	10
October.....			2.15	7	.....	.....	2.65	10	0	.....	^b 3.09	9
November.....			1.38	5	.....	.....	2.09	8	0	.....	^b 2.15	6
December.....			1.33	5	.....	.....	1.44	6	4	.25	.85	3
January.....			.84	3	9	0.35	1.02	4	7	.35	.70	2
February.....			.70	2	4	.15	.87	4	0	.....	.84	3
March.....			.77	3	0	.....	^b 1.24	5	13	1.15	1.88	6
April.....			1.25	4	0	.....	^b 1.85	7	15	1.50	2.75	8
May.....	^{b c} 2.44		2.42	9	5	.30	1.08	4	28	3.05	3.20	10
June.....	3.80		3.35	12	21	1.90	2.45	10	24	3.40	3.90	12
July.....	4.00		^b 4.42	16	29	3.20	3.40	13	10	1.42	5.62	17
August.....	5.15		6.50	23	26	3.20	3.45	13	29	4.36	4.66	14
Year.....			28.21	100	.....	.....	25.66	100	.....	.....	33.04	100
Per cent of yearly mean, 1900–1901 to 1905–6.....			92				84				108	

Month.	1903–4				1904–5			
	Observed evaporation.		Estimated monthly total.		Observed evaporation.		Estimated monthly total.	
	Days.	Inches.	Inches.	Per cent of total for year.	Days.	Inches.	Inches.	Per cent of total for year.
September.....	25	3.88	4.27	14	21	2.56	3.27	10
October.....	24	2.78	3.33	11	15	1.62	2.86	8
November.....	9	.64	2.53	8	16	1.62	2.77	8
December.....	23	1.18	1.44	5	18	1.06	1.59	5
January.....	18	.72	1.17	4	20	1.33	1.81	5
February.....	7	.20	.47	1	17	.95	1.30	4
March.....	1	.10	.56	2	12	.98	1.78	5
April.....	21	.94	1.38	4	22	2.08	2.46	7
May.....	24	2.70	3.19	10	15	1.64	2.50	7
June.....	26	3.24	3.80	12	23	3.12	3.57	11
July.....	31	4.42	4.42	14	31	4.76	4.76	14
August.....	25	3.82	4.73	15	26	4.60	5.27	16
Year.....	.....	.....	31.29	100	.....	.....	33.94	100
Per cent of yearly mean, 1900–1901 to 1905–6.....			102				111	

^a Values for 1899–1901 taken from Water Supply Paper 68, U. S. Geol. Survey.^b Filled in by using mean of all Octobers, Novembers, etc.^c Observed May 17–31, 14 days=1.83 inches.

TABLE 1.—*Monthly and yearly evaporation at Lake Tahoe (elevation 6,225 feet), 1899–1906—Continued.*

Month.	1905-6				1906			
	Observed evaporation.		Estimated monthly total.		Observed evaporation.		Estimated monthly total.	
	Days.	Inches.	Inches.	Per cent of total for year.	Days.	Inches.	Inches.	Per cent of total for year.
September.....	26	4.38	4.74	15	25	3.52	3.94	.....
October.....	29	3.66	3.82	12	29	3.44	3.70	.....
November.....	17	1.78	2.78	9	5	.42	1.35	.....
December.....	22	1.58	1.85	6	0	.....	.62	.....
January.....	10	.50	1.12	4	.....	.....	.....	.....
February.....	3	.18	.98	3	.....	.....	.....	.....
March.....	11	.64	1.20	4	.....	.....	.....	.....
April.....	14	.83	1.42	4	.....	.....	.....	.....
May.....	17	1.64	2.26	7	.....	.....	.....	.....
June.....	13	1.49	2.39	8	.....	.....	.....	.....
July.....	31	4.30	4.30	14	.....	.....	.....	.....
August.....	25	3.80	4.55	14	.....	.....	.....	.....
Year.....	.....	.....	31.41	100	.....	.....	.....	100
Per cent of yearly mean, 1900–1901 to 1905–6.....	103				.....		

TABLE 2.—*Maximum, minimum, and mean evaporation at Lake Tahoe in each month from September, 1900, to August, 1906.*

Month.	Maximum value for period.			Minimum value for period.			Mean value for period.		Mean of all per cents 1900–1901 to 1905–6.
	Inches.	Per cent of year.	Per cent of mean value for period.	Inches.	Per cent of year.	Per cent of mean value for period.	Inches.	Per cent of year.	
September.....	4.74	12	124	3.10	15	81	3.83	13	13
October.....	3.82	9	124	2.15	10	70	3.09	10	9
November.....	2.78	7	129	1.35	7	63	2.15	7	7
December.....	1.85	5	142	.62	3	48	1.30	4	5
January.....	1.81	4	163	.70	4	63	1.11	4	4
February.....	1.30	3	151	.47	2	55	.86	3	3
March.....	1.88	5	152	.56	3	45	1.24	4	4
April.....	2.75	7	149	1.25	6	68	1.85	6	6
May.....	3.20	8	131	1.08	5	44	2.44	8	8
June.....	3.90	10	117	2.39	11	72	3.32	11	11
July.....	5.62	14	127	3.40	17	77	4.42	14	14
August.....	6.50	16	133	3.45	17	70	4.90	16	16
Year.....	40.15	100	132	20.52	100	67	30.51	100	100

Yearly mean for period, 30.59 inches.

TRUCKEE RIVER AT TAHOE, CAL.

This station, which is located at Tahoe, Cal., about one-fourth mile below the outlet of Lake Tahoe, in the NW. $\frac{1}{4}$ sec. 7, T. 15 N., R. 17 E., was established July 3, 1895, discontinued February 29, 1896, and reestablished June 17, 1900, to obtain information needed by the United States Reclamation Service in connection with the Truckee-Carson project.

A timber dam across the river about 500 feet from the lake completely regulates the flow of the river, sometimes causing sudden fluctuations and often cutting down the outflow to 15 or 20 second-feet, or the amount of leakage through the dam.

The station is equipped with a vertical staff gage and a cable and car, from which discharge measurements are made.

The channel is liable to shift only in a slight degree and records are reliable. The datum of the gage has not been changed. The flow is practically unaffected by ice.

The 1910 discharge measurements made by the Stone & Webster Engineering Corporation have been furnished to the United States Geological Survey for publication. This station has been maintained in cooperation with the United States Reclamation Service.

Discharge measurements of Truckee River at Tahoe, Cal., in 1900-1911.

Date.	Hydrographer.	Gage height.	Discharge.	Date.	Hydrographer.	Gage height.	Discharge.
		<i>Feet.</i>	<i>Sec.-ft.</i>			<i>Feet.</i>	<i>Sec.-ft.</i>
1900.				1905.			
June 18	L. H. Taylor.....	0.75	92	July 26	W. A. Wolf.....	1.80	328
30	.....do.....	1.45	240				
July 12	.....do.....	1.60	277	1906.			
Sept. 7	.....do.....	1.40	225	July 2	M. B. Kennedy.....	2.90	785
Oct. 23	.....do.....	.40	52	Aug. 4	.....do.....	2.50	552
23	.....do.....	.95	130				
23	.....do.....	1.15	158	1907.			
1901.				May 22	Nicholas and Porter....	3.50	879
Sept. 5	C. V. Taylor.....	1.94	386	June 27	E. A. Porter.....	4.10	1,250
12	.....do.....	1.85	356				
Nov. 11	.....do.....	1.57	296	1908.			
11	.....do.....	1.23	187	June 17	E. A. Porter.....	.60	19
11	.....do.....	1.00	141	July 8	M. B. Kennedy.....	1.90	328
1902.							
Oct. 22	E. C. Murphy.....	1.67	320	1909.			
1903.				May 18	L. J. Towne.....	1.40	134
June 20	G. B. Lorenz.....	.10	13	1910.			
26	.....do.....	.79	116	Feb. 3	Stone & Webster Eng. Corp.....	.75	59
July 20	.....do.....	1.50	235	4	.....do.....	2.77	637
30	.....do.....	1.90	412	4	.....do.....	3.05	758
1904.				4	.....do.....	2.92	725
June 20	W. A. Wolf.....	3.50	899	5	.....do.....	3.16	815
July 2	.....do.....	3.35	875	Mar. 13	Williamson and Bum- stedt.....	1.10	102
14	.....do.....	3.35	879	17	Stone & Webster Eng. Corp.....	1.10	110
22	.....do.....	3.35	856	17	.....do.....	1.55	225
Aug. 14	.....do.....	3.20	818	18	.....do.....	1.99	350
30	.....do.....	2.85	674	18	.....do.....	2.23	439
Nov. 15	.....do.....	2.90	711	18	.....do.....	2.43	493
1905.				19	.....do.....	2.56	555
Apr. 14	W. A. Wolf.....	.30	15.4	19	.....do.....	2.67	588
May 24	.....do.....	1.27	203	Sept. 19	T. W. Norcross.....	2.23	469
June 13	.....do.....	1.30	211	1911.			
19	.....do.....	1.30	205	June 6	J. E. Stewart.....	1.32	156
				Sept. 27	F. C. Ebert.....	2.04	347

Daily gage height, in feet, of Truckee River at Tahoe, Cal., for 1895, and 1900-1912.

Day.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Day.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1895.							1895.						
1	5.52	5.03	4.62	4.14	3.92		16	5.50	5.43	4.84	4.42	3.88	3.83
2	5.50	5.01	4.61	4.11	3.91		17	5.49	5.42	4.82	4.40	3.86	3.82
3	5.50	4.99	4.61	4.09	3.90		18	5.48	5.39	4.81	4.39	3.85	3.84
4	5.50	4.98	4.60	4.07	3.89		19	5.45	5.38	4.80	4.37	3.85	3.86
5	5.50	4.96	4.58	4.06	3.88		20	5.42	5.37	4.79	4.30	3.84	3.89
6	5.50	4.93	4.57	4.04	3.88		21	5.40	5.36	4.79	4.29	3.83	3.91
7	5.52	4.90	4.55	4.03	3.88		22	5.62	5.35	4.76	4.28	3.82	3.91
8	5.52	4.88	4.54	4.01	3.87		23	5.61	5.35	4.71	4.26	3.82	3.92
9	5.52	4.86	4.52	4.00	3.86		24	5.60	5.34	4.67	4.25	3.81	3.91
10	5.52	4.82	4.52	3.98	3.86		25	5.60	5.27	4.66	4.24	3.80	3.91
11	5.50	4.86	4.51	3.97	3.86		26	5.64	5.20	4.65	4.22	3.79	3.90
12	5.50	4.85	4.50	3.95	3.86		27	5.62	5.14	4.65	4.21	3.77	3.89
13	5.50	4.85	4.49	3.94	3.85		28	5.60	5.11	4.64	4.20	3.76	3.88
14	5.50	4.84	4.47	3.92	3.85		29	5.58	5.09	4.64	4.19	3.74	3.87
15	5.50	5.43	4.85	4.43	3.90	3.84	30	5.56	5.05	4.63	4.17	3.72	3.86
							31	5.54	5.03		4.16		3.85

Day.	June.	July.	Aug.	Sept.	Day.	June.	July.	Aug.	Sept.
1900.					1900.				
1			1.55	1.35	16		1.5	1.45	1.25
2		1.45	1.55	1.35	17	0.75	1.45	1.45	1.2
3		1.45	1.55	1.3	18	.75	1.5	1.45	1.35
4			1.5	1.3	19	.75	1.45	1.4	1.3
5		1.45	1.55	1.3	20	.75	1.5	1.45	1.35
6		1.45	1.5	1.3	21		1.5	1.4	1.3
7		1.45	1.5	1.4	22	.8	1.5	1.4	1.3
8			1.5	1.35	23		1.5	1.4	1.2
9		1.45	1.45	1.35	24		1.5	1.4	1.2
10		1.45	1.45	1.35	25	1.1	1.5	1.4	1.2
11		1.45	1.45	1.3	26		1.5	1.4	1.2
12		1.45	1.45	1.3	27	1.45	1.45	1.4	1.2
13		1.45	1.45	1.3	28	1.45	1.45	1.4	1.2
14		1.45	1.45	1.3	29	1.45	1.5	1.4	1.2
15		.75	1.45	1.3	30	1.45	1.5	1.35	1.2
					31		1.55	1.35	

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	June.	July.	Aug.	Sept.
1900-1901.											
1	1.2	1.1		0.7	0.8	0.1	0.1		1.2	1.65	1.95
2	1.15	1.1	0.8	.7	.8	.1	.1		1.2	1.65	1.95
3	1.15	1.1	.8	.7	.8	.1	.1		1.2	1.65	1.95
4	1.15	1.1	.6	.8	.8	.1	.1		1.2	1.65	1.95
5	1.2	1.1	.6	.8	.8	.1	.1		1.2	1.8	1.95
6	1.2	1.1	.8	.8	.8	.1	.1		1.2	1.8	1.9
7	1.15	1.1	.8	.8	.9	.1	-.2		1.2	2.0	1.9
8	1.15	1.1	.8	.8	.9	.1	-.2		1.1	2.0	1.9
9	1.15	1.1	.8	.8	.9	.1	-.2		1.1	2.0	1.9
10	1.1	1.1	.8	.9	.8	.1	-.2		1.2	2.3	1.9
11	1.1	1.1	.8	.9	.8	.1	-.2		1.2	2.35	1.9
12	1.1	1.1	.8	.9	.9	.1	-.2		1.25	2.35	1.7
13	1.1	1.1	.8	.9	.9	.1	-.2		1.25	2.35	1.47
14	1.1	1.1	.8	.9	.9	.1			1.25	2.35	.65
15	1.1	1.1	.8	.9	.9	.1			1.25	2.35	1.55
16	1.1	1.1	.8	.8	.9	.1			1.25	2.35	1.7
17	1.1	1.1	.6	.8	.9	.1			1.25	2.35	1.7
18	1.1	1.1	.6	.8	.9	.1			1.25	2.35	1.7
19	1.1	1.1	.6	.8	.1	.1			1.6	1.95	1.7
20	1.1	1.1	.6	.8	.1	.1			1.6	1.95	1.7
21	1.1	1.2	.6	.8	.1	.1			1.6	1.95	1.7
22	1.1	1.3	.6	.8	.1	.1			1.6	1.55	1.7
23	1.1	.9	.6	.8	.1	.1			1.6	1.95	1.7
24	1.1	.9	.6	.8	.1	.1			1.6	1.95	1.7
25	1.1	.9	.6	.8	.1	.1			1.65	1.95	1.7
26	1.1	.9	.6	.8	.1	.1		1.2	1.65	1.95	1.7
27	1.1	.9	.6	.8	.1	.1		1.2	1.65	1.95	1.7
28	1.1		.6	.8	.1	.1		1.2	1.65	1.95	1.7
29	1.1		.6	.8		.1		1.2	1.65	1.95	1.65
30	1.1		.6	.8		.1		1.2	1.65	1.95	1.65
31	1.1		.6	.8		.1			1.65	1.95	

Daily gage height, in feet, of Tahoe River at Truckee, Cal., for 1895 and 1900-1912—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June.	July.	Aug.	Sept.
1901-2.												
1.....	1.65	1.65	1.25	0.8	0.95	0.4	0.4	0.35	0.8	0.8	1.9	2.0
2.....	1.65	1.6	.95	.8	.35	.35	.4	.35	.8	.8	1.9	2.0
3.....	1.65	1.6	.95	.9	.35	.35	.4	.35	.8	.8	1.9	2.0
4.....	1.65	1.6	.95	.9	.35	.35	.4	.35	.8	.8	1.9	2.0
5.....	1.65	1.6	.95	.9	.35	.35	.4	.9	.8	.8	1.	2.0
6.....	1.65	1.6	.95	.9	.35	.35	.4	.9	.8	.8	1.9	2.0
7.....	1.6	1.6	.95	.9	.35	.35	.4	.9	.8	.95	1.9	1.8
8.....	1.5	1.6	.95	.9	.35	.35	.35	.9	.8	.95	1.9	1.8
9.....	1.7	1.6	.95	.9	.9	.35	.35	.9	.8	.95	1.9	1.8
10.....	1.7	1.6	.95	.9	.9	.35	.35	.9	.8	.95	1.9	1.8
11.....	1.65	1.6	.95	.9	.9	.35	.35	.85	.8	.95	1.9	1.8
12.....	.....	1.6	.8	.9	.....	.35	.35	.85	.8	.95	1.9	1.8
13.....	1.65	1.6	.8	.9	.....	.35	.35	.8	.8	.95	1.9	1.8
14.....	1.65	1.6	.8	.9	.95	.35	.35	.8	.8	1.2	2.1	1.8
15.....	1.65	1.6	.8	.9	.95	.35	.35	.8	.7	1.2	2.1	1.8
16.....	1.6	1.6	.8	1.0	.95	.35	.35	.8	.7	1.2	2.1	1.8
17.....	1.6	1.6	.8	1.0	.95	.35	.35	.8	.7	1.2	2.1	1.8
18.....	1.6	1.6	.8	1.0	.9	.35	.35	.8	.7	1.2	2.1	1.8
19.....	1.6	1.6	.8	1.0	.9	.35	.35	.8	.7	1.2	2.1	1.8
20.....	1.6	1.25	.8	1.0	.4	.35	.35	.8	.7	1.2	2.1	1.8
21.....	1.6	1.25	.8	1.0	.4	.35	.35	.8	.75	1.2	2.1	1.75
22.....	1.6	1.25	.8	1.0	.4	.35	.35	.8	.8	1.2	2.1	1.8
23.....	1.7	1.25	.8	1.0	.4	.35	.35	.8	.8	1.9	2.1	1.8
24.....	1.7	1.25	.8	1.0	.4	.35	.35	.8	.8	1.9	2.1	1.8
25.....	1.7	1.25	.8	.95	.4	.35	.35	.8	.8	1.9	2.0	1.8
26.....	1.7	1.25	.8	.95	.4	.35	.35	.8	.8	1.9	2.0	1.75
27.....	1.65	1.25	.8	.95	.4	.3	.35	.8	.8	1.9	2.0	1.75
28.....	1.65	1.25	.8	.95	.4	.8	.35	.8	.8	1.6	2.0	1.75
29.....	1.65	1.25	.8	1.05	.....	.8	.35	.8	.8	1.9	2.0	1.75
30.....	1.65	1.25	.8	.95	.....	.8	.35	.8	.8	1.9	2.0	1.75
31.....	1.65	.....	.8	1.05	.....	.4	.....	.8	.....	1.9	2.0	.....
1902-3.												
1.....	1.75	1.8	1.93	1.65	0.8	1.35	0.1	0.1	0.1	0.7	1.7	1.95
2.....	1.75	1.8	1.9	1.65	.8	1.35	.1	.1	.1	.7	1.7	1.95
3.....	1.75	1.87	1.9	1.65	.4	1.35	.1	.1	.1	.7	1.7	2.05
4.....	1.75	1.87	1.9	1.65	.4	1.35	.1	.1	.1	.7	1.7	2.05
5.....	1.75	1.87	1.9	1.65	.8	1.35	.1	.1	.1	.7	1.7	2.05
6.....	1.7	1.87	1.9	1.65	.8	1.4	.1	.1	.1	.7	1.7	2.05
7.....	1.7	1.87	1.8	1.65	.8	1.4	.1	.1	.1	.7	1.7	2.05
8.....	1.75	1.87	1.8	1.65	.4	1.4	.1	.1	.1	.9	1.7	2.05
9.....	1.8	1.7	1.8	1.65	.4	1.4	.1	.1	.1	1.0	1.7	2.05
10.....	1.8	1.7	1.75	1.65	.4	1.4	.1	.....	.1	1.2	1.7	2.05
11.....	1.8	1.7	1.75	1.65	.4	1.4	.1	.....	.1	1.2	1.7	2.05
12.....	1.8	1.7	1.75	1.65	.4	1.4	.1	.1	.1	1.2	1.7	2.05
13.....	1.8	1.7	1.75	1.65	.4	1.4	.1	.1	.1	1.4	1.7	2.05
14.....	1.8	1.7	1.75	1.6	.4	1.4	.1	.1	.1	1.5	1.7	2.05
15.....	1.75	1.7	1.75	1.6	.9	1.4	.1	.1	.1	1.4	1.8	2.05
16.....	1.75	1.7	1.75	1.6	.9	1.4	.1	.1	.1	1.5	1.8	1.95
17.....	1.75	1.7	1.7	1.6	.9	1.4	.1	.1	.1	1.5	1.8	1.95
18.....	1.75	1.7	1.7	1.57	.9	1.4	.1	.1	.1	1.5	1.8	1.95
19.....	1.75	1.92	1.7	1.56	.9	1.4	.1	.1	.1	1.5	1.8	1.95
20.....	1.75	1.92	1.7	1.55	.9	1.4	.1	.1	.48	1.5	1.95	.....
21.....	1.7	1.92	1.7	1.54	.9	1.4	.1	.1	.48	1.5	1.95	.....
22.....	1.7	1.92	1.7	.....	.9	1.4	.1	.1	.48	1.5	1.95	1.9
23.....	1.7	1.92	1.7	1.56	.9	1.4	.1	.1	.48	1.5	1.95	1.9
24.....	1.7	1.92	1.7	1.58	.9	1.4	.1	.1	.7	1.5	1.95	1.9
25.....	1.7	1.92	1.7	1.58	.9	1.4	.1	1	.7	1.5	1.95	1.9
26.....	1.7	1.92	1.7	1.58	1.0	.35	.1	.1	.7	1.5	1.95	1.9
27.....	1.7	1.92	1.7	1.58	1.0	1.1	.1	.1	.7	1.5	1.95	1.9
28.....	1.8	1.92	1.65	1.58	1.35	.7	.1	.1	.7	1.6	1.95	1.9
29.....	1.8	1.92	1.65	1.58	.....	.1	.1	.1	.7	1.6	1.95	1.85
30.....	1.8	1.93	1.65	.35	.....	.1	.1	.1	.7	1.7	1.95	1.85
31.....	1.8	.....	1.65	.35	.....	.1	.....	.1	.....	1.7	1.95	.....
1903-4.												
1.....	1.85	1.9	1.2	1.9	1.4	0.1	2.5	3.1	3.55	3.5	3.3	2.85
2.....	1.85	2.1	1.2	1.9	1.4	.1	2.5	3.1	3.45	3.4	3.3	2.85
3.....	1.8	2.1	1.2	1.9	1.4	.1	2.5	3.1	3.35	3.4	3.3	2.95
4.....	1.8	2.1	1.2	1.9	1.4	.1	2.5	3.1	3.3	3.4	3.3	3.45
5.....	1.8	1.9	1.2	1.9	1.4	.1	2.5	3.1	3.4	3.4	3.3	2.85

Daily gage height, in feet, of Truckee River at Tahoe, Cal., for 1895, and 1900-1912—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1903-4.												
6.....	1.8	1.9	1.6	1.9	1.4	1.3	2.5	3.1	3.4	3.4	3.25	3.0
7.....	1.8	1.9	1.6	1.9	.4	1.3	2.5	3.1	3.4	3.4	3.25	3.0
8.....	1.8	1.9	1.6	1.9	.4	1.3	2.5	3.1	3.4	3.4	3.25	3.15
9.....	1.8	1.9	1.6	1.9	.4	1.3	2.5	3.1	3.4	3.4	3.25	3.15
10.....	1.8	1.9	1.6	1.4	.4	1.9	2.5	3.1	3.4	3.3	3.25	3.15
11.....	1.8	1.9	1.6	1.4	.4	1.9	2.5	3.1	3.4	3.3	3.25	3.15
12.....	1.8	.....	1.6	1.7	.9	1.9	2.5	3.1	3.4	3.3	3.25	3.15
13.....	2.0	.....	1.6	1.6	1.5	1.9	2.5	3.1	3.4	3.3	3.25	3.15
14.....	2.0	.....	1.6	1.6	.6	1.9	2.5	3.1	3.4	3.4	3.2	3.15
15.....	2.0	.....	1.6	1.6	.6	2.5	2.5	3.1	3.5	3.4	3.3	3.1
16.....	2.0	.....	1.6	1.6	1.01	2.5	2.5	3.1	3.5	3.4	3.3	3.1
17.....	2.0	.....	1.6	1.6	1.01	2.5	2.6	3.15	3.55	3.5	3.3	3.1
18.....	1.95	.95	1.6	1.6	1.01	2.5	2.6	3.15	3.5	3.5	3.3	3.0
19.....	1.95	.95	1.6	1.4	.9	2.5	2.6	3.15	3.55	3.45	3.2	3.1
20.....	1.95	.....	1.5	1.4	.9	2.5	2.6	3.15	3.55	3.45	3.2	3.1
21.....	1.95	.....	1.5	1.4	.1	2.5	2.6	3.15	3.55	3.4	3.2	3.1
22.....	1.95	.....	1.5	1.4	.1	2.5	2.6	3.15	3.55	3.4	2.9	3.1
23.....	1.95	.9	1.5	1.4	.1	2.5	2.6	3.15	3.55	3.4	2.9	3.1
24.....	1.95	.9	1.5	1.4	.1	2.5	2.7	3.3	3.5	3.4	2.9	3.1
25.....	1.95	.9	1.5	1.4	.1	2.5	2.8	3.3	3.5	3.4	2.9	3.0
26.....	1.95	.9	1.5	1.4	.1	2.5	2.8	3.3	3.4	3.35	2.9	3.0
27.....	1.95	.9	1.5	1.4	.1	2.3	2.8	3.25	3.5	3.35	2.9	3.0
28.....	1.95	1.2	1.5	1.4	.1	2.3	2.8	3.25	3.5	3.35	2.9	3.0
29.....	1.95	1.2	1.5	1.4	.1	2.3	3.1	3.25	3.5	3.35	2.85	3.0
30.....	1.95	1.2	1.9	1.4	.....	2.4	3.1	3.55	3.5	3.35	2.85	3.0
31.....	1.95	.....	1.9	1.4	.....	2.4	.....	3.55	.....	3.35	2.85	.....
1904-5.												
1.....	3.0	3.0	2.8	2.7	1.6	2.55	0.4	0.3	1.3	1.45	1.9	2.0
2.....	3.1	3.0	2.75	2.7	1.6	2.55	.4	.3	1.3	1.45	2.0	2.0
3.....	3.1	3.0	2.75	2.7	1.65	2.55	.4	.3	1.3	1.45	2.0	2.0
4.....	3.1	3.0	2.75	2.7	1.65	2.5	.4	.7	1.3	1.5	2.0	2.0
5.....	3.1	3.0	2.7	2.7	1.65	2.5	.4	1.0	1.3	1.5	2.0	2.0
6.....	2.2	3.0	2.7	2.6	1.65	2.5	.4	1.0	1.3	1.5	2.0	2.0
7.....	2.2	3.0	2.65	2.6	2.0	2.5	.4	1.25	1.3	1.5	2.0	2.0
8.....	2.2	3.0	2.65	2.6	2.0	2.5	.4	1.25	1.3	1.5	2.0	2.0
9.....	2.2	3.0	2.65	2.6	2.0	2.5	.4	1.25	1.3	1.5	1.95	2.0
10.....	2.2	3.0	2.6	2.6	2.0	2.5	.4	1.25	1.3	1.5	2.0	2.0
11.....	2.2	3.0	2.6	1.6	2.0	2.5	.4	1.25	1.3	1.5	2.0	1.9
12.....	2.5	3.0	2.6	1.6	2.0	2.5	.3	1.25	1.3	1.5	2.0	1.9
13.....	2.5	3.0	2.6	1.6	2.0	2.5	.3	1.25	1.3	1.6	2.0	1.9
14.....	3.1	3.0	2.6	1.6	2.0	2.5	.3	1.25	1.3	1.6	2.0	1.9
15.....	3.1	3.0	2.6	1.6	2.0	1.6	.3	1.25	1.3	1.6	2.0	1.9
16.....	3.1	2.9	2.6	1.6	2.0	1.6	.3	1.25	1.3	1.6	2.0	1.9
17.....	3.1	2.9	2.55	1.6	2.0	1.6	.3	1.25	1.3	1.6	2.0	1.9
18.....	3.0	2.85	2.55	1.6	2.0	1.6	.3	1.25	1.3	1.6	2.0	2.0
19.....	3.0	2.85	2.55	2.5	2.55	1.6	.3	1.25	1.3	1.9	2.0	2.0
20.....	3.15	2.85	2.55	2.5	2.55	1.15	.3	1.25	1.3	1.9	2.0	2.0
21.....	3.15	2.85	2.55	2.5	2.55	1.15	.3	1.25	1.3	1.9	2.0	2.0
22.....	2.4	2.85	2.55	1.6	2.55	1.15	.3	1.25	1.3	1.9	2.0	2.0
23.....	2.4	2.85	2.55	1.6	2.55	.4	.3	1.3	1.3	1.9	2.0	2.0
24.....	2.4	2.8	2.55	1.6	2.55	.4	.3	1.3	1.35	1.9	2.0	2.0
25.....	2.8	2.8	2.6	1.6	2.55	.4	.3	1.3	1.35	1.9	2.0	2.0
26.....	2.8	2.8	2.6	1.6	2.55	.4	.3	1.3	1.45	1.9	2.0	2.0
27.....	3.1	2.8	2.6	1.6	2.55	.4	.3	1.3	1.45	1.9	2.0	2.0
28.....	3.1	2.8	2.6	1.6	2.55	.4	.3	1.3	1.45	1.9	2.0	2.0
29.....	3.1	2.8	2.6	1.6	.....	.4	.3	1.3	1.45	1.9	2.0	2.0
30.....	3.1	2.8	2.65	1.6	.....	.4	.3	1.3	1.45	1.9	2.0	2.0
31.....	3.1	.....	2.7	1.6	.....	.4	.....	1.3	.....	1.9	2.0	.....
1905-6.												
1.....	2.0	1.8	1.7	1.4	2.0	2.1	2.25	2.4	2.45	2.9	3.0	3.2
2.....	2.0	1.8	1.7	1.4	2.0	2.1	2.25	2.4	2.45	2.9	3.0	3.2
3.....	2.0	1.8	1.7	1.4	2.0	2.1	2.25	2.4	2.45	2.9	3.0	3.2
4.....	2.1	1.8	1.7	1.4	2.0	2.1	2.25	2.4	2.45	2.9	.....	3.2
5.....	2.1	1.7	1.7	1.4	2.0	2.1	2.3	2.4	2.45	2.9	2.55	3.2
6.....	2.1	1.7	1.7	1.4	2.0	2.1	2.3	2.4	2.45	2.9	2.55	3.2
7.....	2.1	1.7	1.7	1.4	2.0	2.1	2.3	2.5	2.45	2.9	2.55	3.2
8.....	2.1	1.7	1.7	1.4	2.0	2.1	2.3	2.28	2.45	2.9	2.55	3.2
9.....	2.1	1.7	1.6	1.4	1.95	2.1	2.3	2.28	2.85	2.9	2.55	3.2
10.....	2.1	1.7	1.6	1.4	1.95	2.1	2.3	2.6	2.85	3.0	3.1	3.2

Daily gage height, in feet, of Truckee River at Tahoe, Cal., for 1895, and 1900-1912—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1905-6.												
11.....	2.1	1.7	1.6	1.4	1.95	2.1	2.3	2.6	2.45	3.0	3.1	3.2
12.....	2.1	1.7	1.6	1.4	1.95	2.2	2.3	2.6	2.7	3.0	3.1	3.2
13.....	2.0	1.7	1.6	1.5	1.95	2.2	2.3	2.6	2.7	3.0	3.1	3.2
14.....	2.0	1.7	1.6	1.5	1.95	2.2	2.3	2.6	2.6	3.0	3.1	3.2
15.....	2.0	1.7	1.6	1.6	2.0	2.2	2.3	2.65	2.6	3.0	3.1	2.95
16.....	2.0	1.7	1.6	1.6	2.0	2.2	2.3	2.65	2.6	3.0	3.1	2.95
17.....	2.0	1.7	1.5	1.7	2.0	2.2	2.3	2.7	2.6	3.0	3.1	2.95
18.....	2.0	1.7	1.5	1.8	2.0	2.2	2.3	2.7	2.6	3.0	3.25	2.95
19.....	2.0	1.7	1.5	1.8	2.0	2.2	2.3	2.7	2.6	3.0	3.25	2.95
20.....	2.0	1.7	1.5	1.9	2.0	2.2	2.3	2.7	2.6	3.0	3.25	2.95
21.....	2.0	1.7	1.5	1.9	2.0	2.2	2.3	2.7	2.6	3.0	3.25	2.95
22.....	1.9	1.7	1.5	2.0	2.1	2.2	2.35	2.75	2.6	3.0	3.25	2.95
23.....	1.9	1.7	1.5	2.0	2.1	2.2	2.35	2.75	2.6	3.0	3.2	2.95
24.....	1.9	1.7	1.5	2.0	2.1	2.2	2.35	2.75	2.6	3.0	3.2	2.9
25.....	1.9	1.7	1.5	2.0	2.1	2.2	2.35	2.4	2.6	3.0	3.2	2.9
26.....	1.9	1.6	1.5	2.0	2.1	2.2	2.35	2.15	2.6	3.0	3.2	2.9
27.....	1.9	1.6	1.5	2.0	2.1	2.2	2.35	2.0	2.9	3.0	3.2	2.9
28.....	1.9	1.6	1.5	2.0	2.1	2.2	2.35	2.0	2.9	3.0	3.2	2.9
29.....	1.9	1.6	1.4	2.0	.....	2.2	2.35	2.0	2.9	3.0	3.18	2.9
30.....	1.9	1.6	1.4	2.0	.....	2.2	2.35	2.0	2.9	3.0	3.18	2.9
31.....	1.8	.....	1.4	2.0	.....	2.25	.....	2.45	.....	3.0	3.18	.....
1906-7.												
1.....	2.0	2.95	2.7	2.9	2.9	3.0	3.2	3.3	3.6	4.1	4.25	4.05
2.....	2.8	2.95	2.7	2.9	2.9	3.0	3.2	3.3	3.65	4.1	4.25	4.1
3.....	2.7	2.95	2.7	2.9	2.9	3.0	3.2	3.3	3.65	4.1	4.25	4.1
4.....	2.7	2.95	2.7	2.9	3.0	3.0	3.2	3.3	3.65	4.1	4.25	4.1
5.....	2.7	2.95	2.7	2.9	3.0	3.0	3.2	3.3	3.65	4.1	4.25	4.1
6.....	2.7	2.95	2.7	2.9	3.0	3.0	3.2	3.3	3.65	4.1	4.25	4.1
7.....	2.8	2.95	2.6	2.9	3.0	3.0	3.2	3.3	3.65	4.2	4.25	4.05
8.....	2.8	2.95	2.6	2.9	3.0	3.0	3.2	3.35	3.65	4.2	4.25	4.05
9.....	2.8	2.95	2.6	2.9	3.0	3.0	3.2	3.35	3.7	4.2	4.25	4.05
10.....	3.2	2.95	2.7	2.9	3.0	3.0	3.2	3.35	3.8	4.2	4.25	4.1
11.....	3.2	2.95	2.7	2.9	3.0	3.0	3.2	3.35	3.9	4.2	4.1	4.1
12.....	3.2	2.95	2.7	2.9	3.0	3.0	3.2	3.4	3.95	4.2	4.1	4.1
13.....	3.2	2.95	2.7	2.9	3.0	3.0	3.2	3.4	4.0	4.3	4.0	4.05
14.....	3.2	2.95	2.7	2.9	3.0	3.0	2.65	3.45	4.0	4.3	4.1	4.05
15.....	3.2	2.95	2.9	2.9	3.0	3.0	2.9	3.45	4.0	4.3	4.1	4.0
16.....	3.2	2.95	2.9	2.9	3.0	3.0	3.2	3.45	3.95	4.3	4.1	4.0
17.....	3.2	2.9	2.9	2.9	3.0	3.0	3.2	3.45	3.95	4.3	4.05	3.9
18.....	3.2	2.9	2.9	2.9	3.0	3.0	3.2	3.45	3.95	4.3	4.05	3.95
19.....	3.2	2.9	2.9	2.9	3.0	3.0	3.2	3.45	4.0	4.3	4.1	4.0
20.....	3.1	2.9	2.8	2.9	3.0	3.0	3.2	3.5	4.0	4.3	4.1	4.0
21.....	3.1	2.85	2.8	2.9	3.0	3.2	3.2	3.5	4.0	4.25	4.1	4.0
22.....	3.1	2.85	2.8	2.9	3.0	3.2	3.2	3.5	4.0	4.25	4.05	4.0
23.....	3.1	2.85	2.8	2.9	3.0	3.2	3.2	3.6	4.0	4.25	4.1	4.0
24.....	2.95	2.85	2.8	2.9	3.0	3.2	3.2	3.5	4.0	4.25	4.1	4.1
25.....	2.95	2.85	2.8	2.9	3.0	3.2	3.2	3.5	4.0	4.25	4.05	4.1
26.....	2.95	2.85	2.8	2.9	3.0	3.2	3.2	3.6	4.0	4.25	4.05	4.1
27.....	2.95	2.75	2.8	2.9	3.0	3.2	3.2	3.6	4.1	4.25	4.05	4.1
28.....	2.95	2.75	2.8	2.9	3.0	3.2	3.2	3.6	4.1	4.25	4.1	4.1
29.....	2.95	2.75	2.85	2.9	.....	3.2	3.3	3.6	4.1	4.25	4.1	4.05
30.....	2.95	2.7	2.85	2.9	.....	3.2	3.3	3.6	4.1	4.25	4.1	4.05
31.....	2.95	.....	2.9	2.9	.....	3.2	.....	3.6	.....	4.25	4.1	.....
1907-8.												
1.....	4.05	3.7	3.2	3.1	3.0	2.75	2.25	1.0	0.75	0.95	2.35	2.15
2.....	4.0	3.7	3.2	3.1	3.0	2.75	2.25	1.0	1.0	.95	2.35	2.15
3.....	2.2	3.7	3.2	3.1	3.0	2.75	2.25	1.0	1.0	.95	2.1	2.15
4.....	3.75	3.65	3.2	3.1	2.95	2.75	2.25	1.0	1.0	.95	2.1	2.0
5.....	4.0	3.65	3.2	3.1	2.95	2.75	2.25	1.0	1.0	.95	2.1	2.0
6.....	4.0	3.6	3.2	3.1	2.95	2.75	2.25	1.0	1.0	.95	2.35	2.15
7.....	4.0	.....	3.2	3.1	2.95	2.75	2.25	1.0	1.0	1.8	2.35	2.15
8.....	4.0	3.5	3.2	3.1	2.9	2.75	1.7	1.0	1.0	1.8	2.35	2.15
9.....	4.0	3.5	3.3	3.1	2.9	2.75	1.7	1.1	1.0	1.2	2.35	2.1
10.....	4.0	3.5	3.3	3.1	2.85	2.7	1.7	1.1	.6	1.7	2.35	2.1
11.....	3.65	3.5	3.3	3.1	2.85	2.7	1.7	1.1	.6	1.7	2.35	2.1
12.....	4.0	3.5	3.3	3.1	2.85	2.7	1.7	.65	.6	1.7	2.35	2.1
13.....	4.0	3.5	3.3	3.05	2.85	2.7	1.3	.65	.6	1.7	2.35	2.1
14.....	3.95	3.5	3.3	3.05	2.85	2.7	1.3	.65	.6	1.7	2.35	2.1
15.....	3.95	3.5	3.3	3.05	2.8	2.7	1.3	.7	.6	1.7	2.35	2.1

Daily gage height, in feet, of Truckee River at Tahoe, Cal., for 1895, and 1900-1912—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1907-8.												
16.....	3.95	3.45	3.3	3.05	2.8	2.7	1.3	0.7	0.6	1.7	2.35	2.1
17.....	3.9	3.45	3.2	3.0	2.8	2.7	1.3	.7	.6	1.9	2.3	2.1
18.....	3.85	3.45	3.2	3.0	2.8	2.7	1.0	.7	.6	1.9	2.3	2.1
19.....	3.85	3.4	3.2	3.0	2.8	2.7	1.0	.7	.6	1.9	2.3	2.1
20.....	3.85	3.4	3.2	3.0	2.8	2.7	1.0	.7	.6	1.9	2.25	2.1
21.....	3.8	3.35	3.2	3.0	2.75	2.7	1.0	.75	.6	2.35	2.25	2.1
22.....	3.8	3.35	3.2	3.0	2.75	2.65	1.0	.75	.6	2.35	2.25	2.1
23.....	3.8	3.3	3.2	3.0	2.75	2.65	1.0	.75	.95	2.35	2.25	2.05
24.....	3.8	3.3	3.2	3.0	2.75	2.65	1.0	.75	.95	2.35	2.25	2.05
25.....	3.75	3.3	3.2	3.0	2.7	2.65	1.0	.75	.95	2.35	2.25	2.05
26.....	3.75	3.3	3.2	3.0	2.7	2.65	1.0	.75	.95	2.35	2.25	2.05
27.....	3.75	3.25	3.2	3.0	2.7	2.6	1.0	.75	.95	2.35	2.2	2.05
28.....	3.75	3.25	3.1	3.0	2.7	2.6	1.0	.75	.95	2.35	2.2	2.05
29.....	3.75	3.2	3.1	3.0	2.7	2.25	1.0	.75	.95	2.35	2.2	2.05
30.....	3.7	3.2	3.1	3.0	.....	2.25	1.0	.75	.95	2.35	2.2	2.05
31.....	3.7	.....	3.1	3.0	.....	2.25	.....	.75	.....	2.35	2.15	.....
1908-9.												
1.....	2.0	1.85	1.85	1.7	2.7	2.75	2.75	1.78	1.43	3.3	2.6	2.56
2.....	2.0	1.85	1.85	1.7	2.7	2.75	2.75	1.55	1.45	3.3	2.6	2.56
3.....	2.0	1.85	1.85	1.7	2.65	2.75	2.75	2.3	1.47	3.3	2.6	2.56
4.....	2.0	1.85	1.85	1.7	2.65	2.75	2.75	1.9	1.47	1.9	2.6	2.55
5.....	2.0	1.85	1.85	1.5	2.65	2.75	2.75	2.85	1.47	3.3	2.55	2.28
6.....	2.0	1.85	1.8	1.5	2.6	2.75	2.75	2.85	1.47	3.3	2.55	2.28
7.....	2.1	1.85	1.8	1.55	2.7	2.75	2.75	2.85	1.48	3.3	2.55	2.27
8.....	2.1	1.85	1.8	1.6	2.75	2.75	2.75	1.75	1.5	3.3	2.55	2.26
9.....	2.1	1.8	1.7	1.65	2.75	2.75	2.75	1.75	1.5	2.6	2.55	2.25
10.....	2.1	1.8	1.75	1.65	2.75	2.6	2.7	2.9	2.05	2.6	2.58	2.25
11.....	2.1	1.8	1.75	2.0	2.75	2.9	2.7	2.9	2.45	2.2	2.25	2.24
12.....	2.05	1.8	1.7	1.65	2.8	2.9	2.7	2.5	2.45	2.2	2.2	2.23
13.....	2.05	1.8	1.7	1.45	2.8	2.9	2.7	2.5	2.8	2.2	2.2	2.22
14.....	2.05	1.8	1.7	.....	2.8	2.9	2.7	2.5	2.8	1.85	2.33	2.21
15.....	1.95	1.8	1.7	.....	2.75	2.9	2.7	1.4	2.8	1.85	2.33	2.2
16.....	2.0	1.8	1.7	.....	2.75	2.85	2.7	1.4	2.8	1.85	2.33	2.2
17.....	2.0	1.8	1.7	.....	2.75	2.85	2.7	1.4	2.8	2.05	.9	2.19
18.....	2.0	1.8	1.75	.....	2.75	2.85	2.75	1.4	2.8	1.5	2.38	2.17
19.....	1.95	1.8	1.75	.....	2.75	2.85	2.75	1.4	2.85	2.05	2.38	2.16
20.....	1.95	1.8	1.75	.....	2.75	2.8	.6	1.4	3.3	2.05	2.38	2.16
21.....	1.95	1.8	1.75	.....	2.75	2.8	2.78	1.4	3.3	2.05	2.67	2.15
22.....	1.95	1.8	1.7	1.0	2.75	2.8	2.78	1.4	3.3	2.05	2.67	2.25
23.....	1.9	1.8	1.7	1.0	2.75	2.8	2.78	1.4	3.3	2.7	2.65	2.25
24.....	1.9	1.8	1.7	1.0	2.75	2.8	2.78	1.4	2.6	2.7	2.65	2.25
25.....	1.9	1.8	1.7	1.0	2.75	2.8	2.78	1.4	3.3	2.7	2.63	2.3
26.....	1.9	1.8	1.7	2.45	2.75	2.8	1.69	1.4	3.3	2.7	2.61	2.25
27.....	1.9	1.8	1.7	2.45	2.75	2.8	2.29	1.4	3.3	2.7	2.6	2.25
28.....	1.9	1.8	1.7	2.5	2.75	2.8	2.8	1.4	3.3	2.65	2.59	2.35
29.....	1.9	1.8	1.65	2.5	.....	2.8	2.8	1.45	3.3	2.65	2.58	2.35
30.....	1.9	1.8	1.65	2.5	.....	2.8	1.62	1.45	3.3	2.65	2.58	2.35
31.....	1.85	.....	1.65	2.5	.....	2.8	.....	1.45	.....	2.6	2.58	.....
1909-10.												
1.....	2.30	2.25	1.70	3.35	1.66	3.18	1.10	1.90	1.20	2.09	2.90	2.50
2.....	2.30	2.30	1.80	3.37	2.46	3.18	1.10	1.90	1.20	2.20	2.90	2.50
3.....	2.28	2.20	2.00	3.37	3.08	3.18	1.10	1.74	1.20	3.10	2.85	2.50
4.....	2.28	2.05	2.00	3.37	3.20	3.18	1.10	1.30	1.20	2.95	2.85	2.40
5.....	2.28	2.05	2.00	3.37	3.20	3.18	1.10	1.30	1.20	2.95	2.85	2.40
6.....	2.28	2.05	2.05	3.37	3.20	3.18	1.10	1.30	1.20	2.95	2.85	2.40
7.....	2.27	2.05	2.05	3.37	3.20	3.18	1.10	1.30	1.53	2.95	2.85	2.38
8.....	2.25	2.05	2.22	3.37	3.20	3.16	1.10	1.30	1.65	2.95	2.85	2.37
9.....	2.20	2.05	2.40	3.37	3.20	3.15	1.10	1.30	2.04	2.95	2.80	2.35
10.....	2.18	2.05	2.40	3.37	3.20	3.14	1.10	1.30	1.89	2.76	2.78	2.35
11.....	2.19	2.05	2.40	3.37	3.20	3.13	1.10	1.30	1.89	2.76	2.20	2.35
12.....	2.19	2.05	2.40	3.37	3.20	3.12	1.10	1.21	2.50	2.76	2.78	2.30
13.....	2.18	2.05	2.47	3.35	3.20	1.07	1.10	1.10	1.90	2.76	2.78	2.30
14.....	2.20	2.05	2.55	3.35	3.20	1.10	1.10	1.10	1.87	2.76	2.78	2.25
15.....	2.20	2.05	2.62	3.35	3.20	1.10	1.10	1.10	2.44	2.76	2.78	2.25
16.....	2.20	2.05	2.70	3.34	3.20	1.10	1.10	1.10	1.92	3.00	2.76	2.25
17.....	2.20	2.04	2.75	3.34	3.20	1.66	1.10	1.10	2.09	3.00	2.74	2.25
18.....	2.19	2.04	2.80	3.32	3.20	2.22	1.10	1.10	1.98	3.00	2.72	2.25
19.....	1.70	2.05	2.80	3.32	3.20	1.10	1.10	1.10	1.98	3.00	2.70	2.25
20.....	1.70	2.05	2.80	3.31	3.19	1.10	1.10	1.10	1.98	2.15	2.70	2.00
21.....	2.18	2.05	2.80	3.30	3.18	1.10	1.10	1.10	1.98	2.30	2.70	2.04
22.....	2.17	2.05	2.79	3.30	3.18	1.10	1.10	1.15	1.98	2.30	2.68	2.02
23.....	2.16	2.05	2.79	3.30	3.18	1.10	1.10	1.15	2.23	2.87	2.68	1.96
24.....	2.15	2.05	2.78	3.30	3.18	1.10	1.10	1.15	2.16	2.90	2.68	1.96
25.....	2.13	2.05	2.78	3.30	3.18	1.10	1.10	1.15	2.16	2.90	2.66	2.15

Daily gage height, in feet, of Truckee River at Tahoe, Cal., for 1895, and 1900-1912—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909-10.												
26.....	2.11	2.05	2.78	3.30	3.18	1.10	1.52	1.15	3.00	2.90	2.65	2.12
27.....	2.10	2.05	2.77	3.30	3.18	1.10	2.40	1.15	2.25	2.90	2.65	2.10
28.....	2.20	2.05	2.75	3.30	3.18	1.10	2.40	1.15	2.25	2.90	2.65	2.10
29.....	2.28	2.05	3.13	3.30	.....	1.10	1.52	1.15	2.09	2.90	2.63	2.10
30.....	2.35	2.05	3.13	3.30	.....	1.10	1.90	1.20	2.09	2.90	2.55	2.10
31.....	2.10	.....	3.35	3.28	.....	1.10	.....	1.20	.....	2.90	2.50	.....
1910-11.												
1.....	2.08	1.78	1.85	1.64	1.73	2.84	2.78	1.25	1.31	3.25	2.00	2.28
2.....	2.08	1.78	1.85	1.62	1.73	2.80	2.79	1.25	1.31	3.25	1.50	2.28
3.....	2.07	1.78	1.85	1.70	1.74	2.78	2.80	1.25	1.31	3.25	2.05	2.27
4.....	2.07	1.78	1.73	1.71	1.50	2.75	2.80	1.27	1.31	3.25	2.05	2.25
5.....	2.07	1.78	1.70	1.70	2.40	2.74	2.80	1.27	1.31	3.25	2.05	2.25
6.....	2.07	1.77	1.77	1.73	2.40	2.73	2.90	1.27	1.31	3.25	2.05	2.23
7.....	2.05	1.77	1.78	1.30	2.40	2.75	2.91	1.28	1.31	3.25	2.05	2.16
8.....	2.04	1.78	1.78	1.30	2.80	2.87	2.91	1.28	1.31	3.25	2.05	2.10
9.....	2.02	1.78	1.78	1.60	2.80	2.92	2.91	1.28	1.31	3.25	2.05	2.10
10.....	2.00	1.78	1.80	1.80	2.80	2.92	2.91	1.28	1.32	3.25	2.05	2.08
11.....	2.00	1.78	1.80	1.80	2.80	2.92	2.91	1.28	1.32	3.25	2.05	2.08
12.....	2.00	1.78	1.80	.....	2.81	2.91	2.91	1.28	1.34	3.25	2.15	2.08
13.....	2.00	1.76	1.80	.....	2.81	2.91	2.92	1.28	1.36	3.26	2.15	2.06
14.....	1.98	1.76	1.70	.....	2.81	2.90	2.92	1.28	1.37	3.26	2.15	2.04
15.....	1.98	1.76	1.69	2.10	2.81	2.84	2.92	1.29	1.37	3.27	2.12	2.03
16.....	1.98	1.76	1.69	2.10	2.82	2.84	2.92	1.29	1.69	3.27	2.10	2.03
17.....	1.97	1.76	1.69	2.10	2.82	2.84	2.91	1.29	2.35	3.27	2.10	2.02
18.....	1.97	1.75	1.69	2.11	2.82	2.83	2.91	1.29	2.74	3.27	2.25	2.02
19.....	1.95	1.75	1.62	2.11	2.82	2.83	2.76	1.29	2.98	3.27	2.32	2.00
20.....	1.93	1.70	1.62	2.12	2.84	2.83	2.62	1.29	3.00	3.28	2.35	2.00
21.....	1.90	1.70	1.62	2.15	2.84	2.83	2.62	1.29	3.00	3.28	2.35	2.00
22.....	1.90	1.70	1.62	2.15	2.84	2.83	2.62	1.30	3.00	3.28	2.35	2.00
23.....	1.90	1.85	1.61	2.15	2.84	2.83	2.62	1.30	3.22	3.28	2.33	2.00
24.....	1.88	1.85	1.60	2.15	2.84	2.83	2.62	1.30	3.22	3.27	2.32	2.00
25.....	1.88	1.85	1.60	1.82	2.84	2.83	2.62	1.30	3.10	3.27	2.32	2.00
26.....	1.88	1.85	1.60	1.82	2.84	2.83	2.62	1.30	3.18	2.30	2.30	2.00
27.....	1.88	1.85	1.58	1.82	2.84	2.80	1.25	1.30	3.25	2.30	2.30	2.00
28.....	1.88	1.85	1.76	1.84	2.84	2.79	1.25	1.30	3.25	2.30	2.30	2.00
29.....	1.86	1.81	1.75	1.70	.....	2.78	1.25	1.30	3.25	2.15	2.30	2.00
30.....	1.84	1.78	1.73	1.70	.....	2.78	1.25	1.31	3.25	2.15	2.28	2.00
31.....	1.80	.....	1.68	1.70	.....	2.78	.....	1.31	.....	2.15	2.28	.....
Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.			
1911-12.												
1.....	2.00	2.07	1.99	2.7	1.8	1.6	1.15	0.64	0.43			
2.....	2.00	2.07	1.99	2.6	1.8	1.6	1.15	.64	.43			
3.....	1.98	2.07	1.99	2.6	1.7	1.6	1.2	.65	.43			
4.....	1.98	2.07	1.99	2.6	1.8	1.6	1.0	.68	.43			
5.....	1.98	2.07	1.99	2.6	1.8	1.7	1.0	.67	.43			
6.....	1.98	2.07	1.99	2.6	1.8	1.7	1.0	.67	.43			
7.....	1.98	2.07	1.99	2.6	1.8	1.7	.84	.47	.43			
8.....	1.98	2.07	1.98	2.6	1.8	1.7	.84	.41	.43			
9.....	1.98	2.07	1.98	2.6	1.8	1.7	.84	.42	.43			
10.....	2.05	2.07	1.97	2.6	1.8	1.7	.84	.42	.43			
11.....	2.05	2.07	1.97	2.6	1.7	1.7	.84	.42	.43			
12.....	2.05	2.07	1.97	2.6	1.7	1.7	.95	.42	.48			
13.....	2.05	2.07	1.97	2.6	1.7	1.7	.78	.42	.48			
14.....	2.05	2.06	1.96	2.6	1.7	1.7	.78	.42	.49			
15.....	2.05	2.05	1.94	2.6	1.7	1.7	.78	.42	.51			
1.....	2.05	2.05	1.93	2.0	1.7	1.7	.78	.42	.51			
17.....	2.05	2.04	1.94	2.0	1.7	1.7	.78	.43	.51			
18.....	2.05	2.04	1.95	1.7	1.65	1.7	.78	.43	.51			
19.....	2.03	2.04	1.90	1.7	1.7	1.6	.78	.43	.51			
20.....	2.03	2.04	1.90	1.7	1.7	1.6	.78	.43	.51			
21.....	2.03	2.03	1.95	1.7	1.7	1.6	.78	.43	.49			
22.....	2.02	2.02	1.90	1.7	1.7	1.55	.78	.43	.47			
23.....	2.00	2.01	1.88	1.7	1.7	1.55	.89	.43	.47			
24.....	2.00	2.01	2.26	1.7	1.7	1.55	.68	.43	.47			
25.....	2.00	2.00	2.65	1.7	1.65	1.55	.68	.43	.47			
26.....	2.07	2.00	2.65	1.7	1.65	1.55	.60	.43	.48			
27.....	2.07	2.00	2.65	1.75	1.65	1.45	.60	.43	.48			
28.....	2.07	2.00	2.65	1.75	1.6	1.45	.60	.43	.48			
29.....	2.07	1.99	2.70	1.8	1.4	1.28	.60	.43	.48			
30.....	2.07	1.99	2.70	1.8	.....	1.15	.62	.43	.47			
31.....	2.07	.....	2.70	1.8	.....	1.15	.....	.43	.....		

NOTE.—Gage heights are affected by the raising and lowering of the gates at the regulating dam.

Rating tables for Truckee River at Tahoe, Cal.

June 17 to December 31, 1900.

Gage height.	Dis-charge.	Gage height.	Dis-charge.
<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>
0.30	45	1.10	155
0.40	52	1.20	177
0.50	61	1.30	200
0.60	72	1.40	224
0.70	85	1.50	248
0.80	99	1.60	272
0.90	116	1.70	297
1.00	135		

January 1, 1901, to December 31, 1902.

Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.
<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>
-0.20	15	0.50	61	1.20	178	1.90	372
-0.10	20	0.60	72	1.30	201	2.00	407
0.00	25	0.70	85	1.40	225	2.10	445
0.10	30	0.80	100	1.50	251	2.20	486
0.20	36	0.90	117	1.60	279	2.30	531
0.30	43	1.00	136	1.70	308	2.40	580
0.40	51	1.10	156	1.80	339		

January 1 to December 31, 1903.

Gage height.	Dis-charge.	Gage height.	Dis-charge.
<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>
0.10	13	0.70	93
0.20	25	0.80	109
0.30	38	0.90	125
0.40	51	1.00	142
0.50	64	1.10	160
0.60	78	1.20	179

NOTE.—Above a gage height of 1.20 feet this table is the same as the 1901-2 table.

January 1 to December 31, 1904.

Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.
<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>
0.10	13	1.10	181	2.10	450	3.10	773
0.20	24	1.20	204	2.20	480	3.20	807
0.30	37	1.30	228	2.30	510	3.30	841
0.40	51	1.40	253	2.40	542	3.40	877
0.50	66	1.50	279	2.50	574	3.50	913
0.60	82	1.60	305	2.60	606	3.60	949
0.70	100	1.70	333	2.70	638	3.70	985
0.80	119	1.80	361	2.80	671	3.80	1,021
0.90	139	1.90	390	2.90	705	3.90	1,057
1.00	159	2.00	420	3.00	739		

NOTE.—Table is applicable only to open channel. It is based upon 12 discharge measurements made during 1902 to 1904, inclusive. It is well defined between gage heights 0.10 foot and 3.50 feet.

Rating tables for Truckee River at Tahoe, Cal—Continued.

January 1, 1905, to December 31, 1907.

Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.
<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>
0.30	15	1.40	229	2.50	552	3.60	991
0.40	31	1.50	253	2.60	586	3.70	1,037
0.50	47	1.60	279	2.70	622	3.80	1,084
0.60	64	1.70	306	2.80	659	3.90	1,132
0.70	82	1.80	334	2.90	697	4.00	1,182
0.80	100	1.90	363	3.00	736	4.10	1,234
0.90	119	2.00	392	3.10	776	4.20	1,288
1.00	139	2.10	422	3.20	817	4.30	1,344
1.10	160	2.20	453	3.30	859		
1.20	182	2.30	485	3.40	902		
1.30	205	2.40	518	3.50	946		

NOTE.—Applicable only to open channel. Based on 12 discharge measurements made during 1905 to 1907, and is fairly well defined.

January 1 to December 31, 1908.

0.30	0	1.10	110	1.90	327	2.70	612
0.40	3	1.20	133	2.00	360	2.80	652
0.50	9	1.30	157	2.10	393	2.90	692
0.60	19	1.40	182	2.20	427	3.00	733
0.70	33	1.50	209	2.30	462	3.10	775
0.80	49	1.60	237	2.40	498	3.20	817
0.90	67	1.70	266	2.50	535	3.30	859
1.00	88	1.80	296	2.60	573		

NOTE.—Applicable only to open channel. Based on 2 discharge measurements made during 1908 and earlier measurements at high stages, and is not well defined.

Daily discharge, in second-feet, of Truckee River at Tahoe, Cal., for 1909–1912.

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909.									
1.....	258	617	638	638	281	186	869	575	559
2.....	258	617	638	638	217	192	869	575	559
3.....	258	596	638	638	456	196	869	575	559
4.....	258	596	638	638	318	196	818	575	554
5.....	204	596	638	638	680	196	869	554	449
6.....	204	575	638	638	680	196	869	554	449
7.....	217	617	638	638	680	199	869	554	445
8.....	230	638	638	638	272	204	869	554	441
9.....	244	638	638	638	272	204	575	554	438
10.....	244	638	575	617	701	367	575	567	438
11.....	350	638	701	617	701	514	419	438	434
12.....	244	659	701	617	534	514	419	419	430
13.....	192	659	701	617	534	659	419	419	426
14.....	15	659	701	617	534	659	302	467	423
15.....	15	638	701	617	179	659	302	467	419
16.....	15	638	680	617	179	659	302	467	419
17.....	15	638	680	617	179	659	367	77	416
18.....	15	638	680	638	179	659	204	486	408
19.....	15	638	680	638	179	680	367	486	405
20.....	15	638	659	35	179	869	367	486	405
21.....	15	638	659	651	179	869	367	604	402
22.....	95	638	659	651	179	869	367	604	438
23.....	95	638	659	651	179	869	617	596	449
24.....	95	638	659	651	179	575	617	596	438
25.....	95	638	659	651	179	869	617	588	456
26.....	514	638	659	255	179	869	617	579	438
27.....	514	638	659	452	179	869	617	575	438
28.....	534	638	659	659	179	869	596	571	475
29.....	534	.....	659	659	192	869	596	567	475
30.....	534	.....	659	236	192	869	596	567	475
31.....	534	.....	659	.....	192	.....	575	567	.....

Daily discharge, in second-feet, of Truckee River at Tahoe, Cal., for 1909-1912—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909-10.												
1.	450	438	258	890	247	819	114	318	134	381	701	534
2.	456	456	287	898	518	819	114	318	134	419	701	534
3.	449	419	350	898	777	819	114	270	134	785	680	534
4.	449	367	350	898	827	819	114	156	134	722	680	494
5.	449	367	350	898	827	819	114	156	134	722	680	494
6.	449	367	367	898	827	819	114	156	134	722	680	494
7.	445	367	367	898	827	819	114	156	212	722	680	486
8.	438	367	426	898	827	810	114	156	244	722	680	483
9.	419	367	404	898	827	806	114	156	364	722	659	475
10.	412	367	494	898	827	802	114	156	315	642	651	475
11.	416	367	494	898	827	798	114	156	315	642	419	475
12.	416	367	494	898	827	793	114	136	534	642	651	456
13.	412	367	522	890	827	108	114	114	318	642	651	456
14.	419	367	554	890	827	114	114	114	309	642	651	438
15.	419	367	583	890	827	114	114	114	510	642	651	438
16.	419	367	617	886	827	114	114	114	324	743	642	438
17.	419	364	638	886	827	247	114	114	381	743	634	438
18.	416	364	659	877	827	426	114	114	344	743	625	438
19.	258	364	659	877	827	114	114	114	344	743	617	438
20.	258	367	659	873	823	114	114	114	344	402	617	350
21.	412	367	659	869	819	114	114	114	344	456	617	364
22.	408	367	655	869	819	114	114	124	344	456	609	357
23.	405	367	655	869	819	114	114	124	430	688	609	337
24.	402	367	651	869	819	114	114	124	405	701	609	337
25.	394	367	651	869	819	114	114	124	405	701	600	402
26.	388	367	651	869	819	114	209	124	743	701	596	391
27.	364	367	646	869	814	114	494	124	438	701	596	384
28.	419	367	638	869	819	114	494	124	438	701	596	384
29.	449	367	798	869	.....	114	209	124	381	701	588	384
30.	475	367	798	869	.....	114	318	134	381	701	554	384
31.	384	.....	890	861	.....	114	.....	134	.....	701	534	.....
1910-11.												
1.	377	281	302	241	267	676	651	145	158	848	350	449
2.	377	281	302	236	267	659	655	145	158	848	204	449
3.	374	281	302	258	270	651	659	145	158	848	367	445
4.	374	281	267	261	204	638	659	149	158	848	367	438
5.	374	281	258	258	494	634	659	149	158	848	367	438
6.	370	278	278	267	494	630	701	149	158	848	367	430
7.	367	278	281	156	494	638	705	152	158	848	367	405
8.	364	281	281	156	659	688	705	152	158	848	367	384
9.	357	281	281	230	659	709	705	152	158	848	367	384
10.	350	281	287	287	659	709	705	152	161	848	367	377
11.	350	281	287	287	659	709	705	152	161	848	367	377
12.	350	281	287	311	663	705	705	152	165	848	402	377
13.	350	275	287	335	663	705	709	152	170	852	402	370
14.	344	275	258	360	663	701	709	152	172	852	402	364
15.	344	275	255	384	663	676	709	154	172	859	391	360
16.	344	275	255	384	667	676	709	154	255	859	384	360
17.	340	275	255	384	667	672	705	154	475	859	384	357
18.	340	272	255	388	667	672	705	154	634	859	438	357
19.	334	272	236	388	667	672	642	154	735	859	404	350
20.	328	258	236	391	676	672	583	154	743	861	475	350
21.	318	258	236	402	676	672	583	154	743	861	475	350
22.	318	258	236	402	676	672	583	156	743	861	475	350
23.	318	302	233	402	676	672	583	156	835	861	407	350
24.	312	302	230	402	676	672	583	156	835	856	404	350
25.	312	302	230	293	676	672	583	156	785	856	404	350
26.	312	302	230	293	676	672	583	156	819	456	456	350
27.	312	302	225	293	676	659	145	156	848	456	456	350
28.	312	302	275	299	676	655	145	156	848	456	456	350
29.	306	290	272	258	.....	651	145	156	848	402	456	350
30.	299	281	267	258	.....	651	145	158	848	402	449	350
31.	287	.....	252	258	.....	651	.....	158	.....	402	449	.....

Daily discharge, in second-feet, of Truckee River at Tahoe, Cal., for 1909-1912—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.									
1.....	350	374	347	617	287	230	124	40	19
2.....	350	374	347	575	287	230	124	40	19
3.....	344	374	347	575	258	230	134	41	19
4.....	344	374	347	575	287	230	95	45	19
5.....	344	374	347	575	287	258	95	43	19
6.....	344	374	347	575	287	258	95	43	19
7.....	344	374	347	575	287	258	67	23	19
8.....	344	374	344	575	287	258	67	18	19
9.....	344	374	344	575	287	258	67	19	19
10.....	367	374	340	575	287	258	67	19	19
11.....	367	374	340	575	258	258	67	19	19
12.....	367	374	340	575	258	258	86	19	19
13.....	367	374	340	575	258	258	58	19	23
14.....	367	370	337	575	258	258	58	19	24
15.....	367	367	331	575	258	258	58	19	26
16.....	367	367	328	350	258	258	58	19	26
17.....	367	364	331	350	258	258	58	19	26
18.....	367	364	334	258	244	258	58	19	26
19.....	360	364	318	258	258	230	58	19	26
20.....	360	364	318	258	258	230	58	19	26
21.....	360	360	334	258	258	230	58	19	24
22.....	357	357	318	258	258	217	58	19	23
23.....	350	353	312	258	258	217	75	19	23
24.....	350	353	441	258	258	217	45	19	23
25.....	350	350	596	258	244	217	45	19	23
26.....	374	350	596	258	244	217	35	19	23
27.....	374	350	596	272	244	192	35	19	23
28.....	374	350	596	272	230	192	35	19	23
29.....	374	347	617	287	179	152	35	19	23
30.....	374	347	617	287	.....	124	37	19	23
31.....	374	.....	617	287	.....	124	.....	19	.....

NOTE.—Daily discharge determined from a well-defined rating curve. Discharge Jan. 1-14, 1909, estimated.

Monthly discharge of Truckee River at Tahoe, Cal., for 1895-96 and 1900-1912.

[Drainage area, 519 square miles.]

Month.	Discharge in second-feet.				Run-off.		Accu- racy.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.	Total in acre-feet.	
1895.							
July.....	1,185	442	914	1.76	1.90	56,200	
August.....	441	393	425	.82	.94	26,111	
September.....	392	357	374	.72	.80	22,244	
1895-96.							
October.....	496	344	415	.80	.92	25,538	
November.....	471	408	437	.84	.94	26,002	
December.....	253	246	250	.48	.56	15,388	
January.....	293	244	262	.50	.58	16,102	
February.....	292	288	290	.56	.60	16,677	
1900.							
March.....			0	0	0	0	
April.....			0	0	0	0	
May.....			0	0	0	0	
June.....	236	0	52	.10	.11	3,106	
July.....	260	0	214	.41	.47	13,131	
August.....	260	211	232	.45	.53	14,261	
September.....	224	177	196	.38	.43	11,667	

Monthly discharge of Truckee River at Tahoe, Cal., for 1895-96 and 1900-1912—Contd.

Month.	Discharge in second-feet.				Run-off.		Accu- racy.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.	Total in acre-feet.	
1900-1901.							
October.....	177	155	159	0.31	0.36	9,781	
November.....	200	0	135	.26	.29	8,047	
December.....	99	0	81	.16	.18	4,981	
January.....	117	85	102	.196	.23	6,262	
February.....	117	30	81	.156	.16	4,502	
March.....	30	30	30	.058	.07	1,845	
April.....	30	9	9	.018	.02	565	
May.....	0	0	0	.000	.00	0	
June.....	178	0	30	.058	.06	1,765	
July.....	293	156	225	.433	.50	13,809	
August.....	555	293	419	.803	.93	25,760	
September.....	390	117	326	.628	.70	19,395	
The year.....	555	0	133	.256	3.50	96,700	
1901-2.							
October.....	308	251	282	.542	.62	17,308	
November.....	293	189	247	.475	.53	14,678	
December.....	189	100	111	.214	.25	6,841	
January.....	146	100	125	.24	.28	7,686	
February.....	126	25	73	.14	.15	4,054	
March.....	100	43	52	.10	.12	3,197	
April.....	51	47	48	.10	.11	2,856	
May.....	117	47	97	.19	.22	5,964	
June.....	100	40	95	.18	.20	5,653	
July.....	372	100	204	.39	.45	12,543	
August.....	445	372	406	.78	.90	24,964	
September.....	407	324	350	.67	.75	20,826	
The year.....	445	25	174	.335	4.58	127,000	
1902-3.							
October.....	339	308	324	.62	.71	19,922	
November.....	407	308	346	.67	.75	20,588	
December.....	407	293	326	.63	.73	20,045	
January.....	293	44	266	.51	.59	16,356	
February.....	213	51	103	.20	.21	5,720	
March.....	225	13	190	.37	.43	11,683	
April.....	13	13	13	.03	.03	774	
May.....	13	13	13	.03	.03	799	
June.....	93	13	38	.07	.08	2,261	
July.....	308	93	205	.39	.45	12,605	
August.....	389	308	344	.66	.76	21,152	
September.....	426	355	398	.77	.86	23,683	
The year.....	426	13	214	.412	5.63	156,000	
1903-4.							
October.....	407	339	374	.72	.83	22,996	
November.....	445	125	255	.49	.55	15,174	
December.....	372	179	260	.50	.58	15,987	
January.....	390	253	305	.588	.68	18,750	
February.....	253	13	111	.214	.23	6,385	
March.....	574	13	401	.773	.89	24,660	
April.....	773	574	610	1.18	1.32	36,300	
May.....	931	773	799	1.54	1.78	49,130	
June.....	931	841	899	1.73	1.93	53,490	
July.....	913	841	873	1.68	1.94	53,680	
August.....	841	688	787	1.52	1.75	48,390	
September.....	895	688	761	1.47	1.64	45,280	
The year.....	931	13	536	1.03	14.12	390,000	
1904-5.							
October.....	790	480	672	1.29	1.49	41,320	
November.....	739	671	711	1.37	1.53	42,310	
December.....	671	590	614	1.18	1.36	37,750	
January.....	622	279	410	.790	.91	25,210	
February.....	569	279	433	.834	.87	24,050	
March.....	569	31	321	.618	.71	19,740	
April.....	31	15	20.9	.040	.04	1,244	
May.....	205	15	173	.333	.38	10,640	
June.....	241	205	212	.408	.46	12,620	
July.....	363	241	303	.584	.67	18,630	
August.....	392	363	391	.753	.87	24,040	
September.....	392	363	385	.742	.83	22,910	
The year.....	790	15	387	.745	10.12	280,000	

Monthly discharge of Truckee River at Tahoe, Cal., for 1895-96, and 1900-1912—Contd.

Month.	Discharge in second-feet.				Run-off.		Accu- racy.	
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.	Total in acre-feet.		
1905-6.								
October.....	422	334	390	0.751	0.87	23,980	B. B. A. A. A. A. A. A. A. A. A. A. A. A.	
November.....	334	279	305	.588	.66	18,150		
December.....	306	229	271	.522	.60	16,660		
January.....	392	229	304	.586	.68	18,700		
February.....	422	378	396	.763	.79	22,000		
March.....	469	422	443	.854	.98	27,200		
April.....	502	469	488	.940	1.05	29,000		
May.....	640	392	543	1.05	1.21	33,400		
June.....	697	535	594	1.14	1.27	35,300		
July.....	736	697	725	1.40	1.61	44,600		
August.....	838	552	753	1.45	1.67	46,300		
September.....	817	697	759	1.46	1.63	45,200		
The year.....	838	229	498	.960	13.02	360,000		
1906-7.								
October.....	817	392	726	1.40	1.61	44,600		A. A. B. B. B. A. A. A. A. A. A. A. A. A.
November.....	716	622	695	1.34	1.50	41,400		
December.....	697	586	647	1.25	1.44	39,800		
January.....	697	697	697	1.34	1.54	42,900		
February.....	736	697	732	1.41	1.47	40,700		
March.....	817	736	765	1.47	1.70	47,000		
April.....	859	604	806	1.55	1.73	48,000		
May.....	991	859	919	1.77	2.04	56,500		
June.....	1,230	991	1,130	2.18	2.43	67,200		
July.....	1,340	1,230	1,300	2.50	2.88	79,900		
August.....	1,320	1,180	1,250	2.41	2.78	76,900		
September.....	1,230	1,130	1,210	2.33	2.60	72,000		
The year.....	1,340	392	906	1.74	23.72	657,000		
1907-8.								
October.....	1,210	453	1,100	2.14	2.47	67,600	A. A. B. B. B. A. A. A. A. A. A. A. A. A.	
November.....	1,040	817	925	1.78	1.99	55,000		
December.....	859	776	823	1.59	1.83	50,600		
January.....	775	733	752	1.45	1.67	46,200		
February.....	733	612	666	1.28	1.38	38,300		
March.....	632	444	596	1.15	1.33	36,600		
April.....	444	88	212	.408	.46	12,600		
May.....	110	26	56.8	.109	.13	3,490		
June.....	88	19	53.9	.104	.12	3,210		
July.....	480	78	311	.599	.69	19,100		
August.....	480	393	453	.873	1.01	27,900		
September.....	410	360	390	.751	.84	23,200		
The year.....	1,210	19	528	1.02	13.92	384,000		
1908-9.								
October.....	393	312	354	.682	.79	21,800		A. A. B. B. A. A. A. A. A. A. A. A. A. A.
November.....	312	296	300	.578	.64	17,900		
December.....	312	252	278	.536	.62	17,100		
January.....	534	.....	220	.424	.49	13,500	
February.....	659	575	630	1.21	1.26	35,000		
March.....	701	575	660	1.27	1.46	40,600		
April.....	659	35	584	1.13	1.26	34,800		
May.....	680	179	321	.618	.71	19,700		
June.....	869	186	569	1.10	1.23	33,900		
July.....	869	204	555	1.07	1.23	34,100		
August.....	604	77	525	1.01	1.16	32,300		
September.....	559	402	452	.871	.97	26,900		
The year.....	869	36	454	.875	11.82	328,000		
1909-10.								
October.....	475	258	413	.796	.92	25,400	A. A. A. B. B. A. A. A. A. A. A. A. A. A.	
November.....	456	364	374	.721	.80	22,300		
December.....	890	258	559	1.08	1.24	34,400		
January.....	898	861	883	1.70	1.96	54,300		
February.....	827	247	791	1.52	1.58	43,900		
March.....	819	108	982	.767	.88	24,500		
April.....	494	114	315	.293	.33	9,040		
May.....	318	114	148	.285	.33	9,100		
June.....	743	134	332	.640	.71	19,800		
July.....	785	381	656	1.26	1.45	40,300		
August.....	701	419	628	1.21	1.40	38,600		
September.....	534	337	436	.840	.94	25,900		
The year.....	898	108	481	.926	12.54	348,000		

Monthly discharge of Truckee River at Tahoe, Cal., for 1895-96 and 1900-1912—Contd.

Month.	Discharge in second-feet.				Run-off.		Accu- racy.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.	Total in acre-feet.	
1910-11.							
October.....	377	287	339	0.653	0.75	20,800	A.
November.....	302	258	281	.542	.60	16,700	A.
December.....	302	225	262	.505	.58	16,100	B.
January.....	402	156	307	.592	.68	18,900	A.
February.....	676	204	590	1.14	1.19	32,800	A.
March.....	709	630	671	1.29	1.49	41,300	A.
April.....	709	145	592	1.14	1.27	35,200	A.
May.....	158	145	153	.295	.34	9,410	B.
June.....	848	158	447	.861	.96	26,600	A.
July.....	861	402	771	1.49	1.72	47,400	A.
August.....	475	204	409	.788	.91	25,100	A.
September.....	449	350	377	.726	.81	22,400	A.
The year.....	861	145	433	.835	11.30	313,000	
1911-12.							
October.....	374	344	359	.692	.80	22,100	A.
November.....	374	347	365	.703	.78	21,700	A.
December.....	617	312	400	.771	.89	24,600	A.
January.....	617	258	422	.813	.94	25,900	A.
February.....	287	179	261	.503	.54	15,000	A.
March.....	258	124	229	.441	.51	14,100	A.
April.....	134	35	67.0	.129	.14	3,990	B.
May.....	45	18	23.5	.045	.05	1,440	C.
June.....	26	19	22.1	.043	.05	1,320	C.
The period.....						130,000	

NOTE.—Values for winter periods may be somewhat in error on account of ice.

Monthly discharge of Truckee River at Boca, Cal., for 1890.

Month.	Mean discharge in second-feet.	Run-off (total in acre-feet).	Month.	Mean discharge in second-feet.	Run-off (total in acre-feet).
March.....	637	39,200	August.....	736	45,300
April.....	2,751	164,000	September.....	513	30,500
May.....	5,275	325,000	October.....	555	34,100
June.....	4,291	255,000	The period.....		1,010,000
July.....	1,870	115,000			

TRUCKEE RIVER NEAR NEVADA-CALIFORNIA STATE LINE.

This station, which is located at Calvada, 1 mile upstream from the California State line, 17 miles west of Reno, Nev., was established September 7, 1899, at Farad, 2½ miles farther upstream, and was moved to its present site June 14, 1909.

The station is below all tributaries which head in the Sierra Nevada and is above all diversions.

The station is equipped with an inclined staff gage and a cable and car, 50 feet upstream from the gage.

Flood measurements are made with difficulty owing to the high velocities of the current.

The flow is but little affected by ice. The channel shifts somewhat at each high-water period so that additional measurements must be made to define the low-water curve.

Records are fairly reliable.

Discharge measurements made by the Stone & Webster Engineering Corporation in 1910-1912 have been furnished to the United States Geological Survey for publication.

This station has been maintained in cooperation with the United States Reclamation Service.

Discharge measurements of Truckee River near Nevada-California State line in 1899-1912.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
		Feet.	Sec.-ft.			Feet.	Sec.-ft.
1899. Sept. 7	L. H. Taylor.....	2.0	303	1906. July 30	M. B. Kennedy.....	4.95	2,710
1900. Apr. 10	L. H. Taylor.....	2.9	753	.....do.....		3.10	1,000
May 15	.....do.....	4.1	1,493	1907. May 25	E. A. Porter.....	5.30	3,860
22	.....do.....	4.3	1,629	June 1	.....do.....	6.10	5,910
June 1	.....do.....	3.7	1,112	July 16	.....do.....	4.40	2,420
15	.....do.....	3.2	901	Aug. 11	.....do.....	3.60	1,630
July 1	.....do.....	2.5	534	Sept. 29	.....do.....	3.10	1,210
14	.....do.....	2.5	551	1908. Mar. 11	E. A. Porter.....	2.70	874
Sept. 6	.....do.....	2.3	447	Apr. 3	.....do.....	2.90	924
Oct. 2	.....do.....	1.9	318	24	La Rue and Porter.....	3.00	1,120
1901. Feb. 13	C. V. Taylor.....	1.5	298	June 3	E. A. Porter.....	2.80	915
27	.....do.....	4.5	2,474	July 10	M. B. Kennedy.....	2.30	438
Mar. 11	.....do.....	3.4	1,262	22	E. A. Porter.....	2.40	604
June 9	.....do.....	3.9	1,741	Oct. 7	.....do.....	2.10	404
July 13	.....do.....	2.6	811	1909. May 24	L. J. Towne.....	3.82	1,670
Aug. 16	.....do.....	2.1	528	24	.....do.....	3.92	1,850
Sept. 3	.....do.....	2.2	570	June 11	.....do.....	4.60	2,690
14	.....do.....	2.0	478	July 1	.....do.....	4.40	2,590
Nov. 9	.....do.....	1.95	437	10	.....do.....	3.38	1,300
Dec. 14	.....do.....	1.75	353	22	.....do.....	2.80	708
1902. Apr. 10	C. V. Taylor.....	3.6	1,492	24	.....do.....	3.15	1,030
May 10	.....do.....	4.5	2,384	Sept. 14	F. C. Schafer.....	2.40	573
1903. May 1	H. B. Jameson.....	3.95	1,915	Oct. 19	.....do.....	2.35	546
26	.....do.....	3.00	945	Dec. 4	.....do.....	3.30	1,310
June 25	.....do.....	2.90	1,070	1910. Mar. 25	F. C. Schafer.....	3.40	1,280
July 18	.....do.....	2.10	457	Apr. 9	Stone & Webster Eng. Corp.	4.11	2,020
Aug. 27	.....do.....	2.10	477	May 7	.....do.....	3.30	1,200
1904. Apr. 6	W. A. Wolf.....	4.40	2,518	July 1	.....do.....	2.92	815
23	.....do.....	4.20	2,279	30	.....do.....	2.95	828
May 11	.....do.....	5.75	3,892	Aug. 29	.....do.....	2.47	479
31	.....do.....	4.10	2,179	30	F. C. Schafer.....	2.70	683
June 14	.....do.....	4.80	2,977	Oct. 16	H. D. McGlashan.....	2.36	454
18	.....do.....	4.60	2,927	Nov. 13	Stone & Webster Eng. Corp.	2.35	420
July 1	O. F. Heizer.....	3.95	1,972	25	.....do.....	2.54	540
14	.....do.....	3.35	1,461	Dec. 16	D. S. Stuver.....	2.44	505
Aug. 4	.....do.....	2.95	1,109	1911. Feb. 26	H. D. McGlashan.....	2.96	831
18	.....do.....	2.85	1,053	Apr. 6	Stone & Webster Eng. Corp.	4.62	2,860
31	W. A. Wolf.....	2.70	839	8	J. E. Stewart.....	4.60	2,830
Nov. 19	.....do.....	2.70	658	May 25	Stone & Webster Eng. Corp.	5.09	3,600
1905. Apr. 17	W. A. Wolf.....	2.85	949	June 5	.....do.....	5.76	4,620
May 13	.....do.....	2.95	1,078	8	J. E. Stewart.....	5.30	4,050
26	.....do.....	3.65	1,761	July 15	Stone & Webster Eng. Corp.	4.17	2,140
June 6	.....do.....	3.08	1,170	Aug. 4	.....do.....	2.84	733
21	.....do.....	2.80	905	Oct. 30	J. E. Stewart.....	2.56	470
July 10	.....do.....	2.25	580	1912. Mar. 19	Stone & Webster Eng. Corp.	2.48	419
18	.....do.....	2.15	544	June 25	H. J. Tompkins.....	2.51	470
25	.....do.....	2.12	539				
Sept. 13	.....do.....	1.97	416				
1906. Jan. 24	C. L. Smith.....	2.50	759				
May 23	M. B. Kennedy.....	4.60	2,480				
June 21	.....do.....	5.30	3,140				

NOTE.—After May 24, 1909, gage heights refer to new gage at cable.

Daily gage height, in feet, of Truckee River near Nevada-California State line, for 1899-1912.

Day.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1899-1900.													
1.....		1.9	2.1	1.9	1.9	1.9	2.0	3.4	4.0	3.7	2.5	2.1	2.4
2.....		1.9	2.1	1.9	2.0	1.9	1.9	3.2	4.0	3.7	2.5	2.1	2.0
3.....		1.9	2.0	1.9	2.8	1.9	1.9	3.0	3.8	3.6	2.5	2.1	1.8
4.....		1.9	2.0	1.9	3.2	1.9	2.0	3.0	4.0	3.6	2.4	2.1	2.4
5.....		1.9	2.0	1.9	2.8	1.9	2.0	3.2	4.3	3.5	2.4	2.1	2.2
6.....		1.9	2.6	1.8	2.7	1.8	2.0	3.2	4.0	3.7	2.4	2.1	2.3
7.....	2.0	1.9	2.8	1.8	2.3	1.8	2.3	3.2	4.1	3.7	2.4	2.1	2.2
8.....	2.0	1.9	3.2	1.8	2.1	1.8	2.4	3.2	4.3	4.0	2.4	2.1	2.1
9.....	1.9	1.9	3.8	1.9	2.0	1.8	2.6	3.2	4.4	4.0	2.4	2.1	2.1
10.....	1.9	1.9	4.0	1.9	2.0	1.8	2.6	3.2	4.6	3.7	2.4	2.1	2.1
11.....	1.9	1.9	4.2	1.9	2.0	1.8	2.6	3.1	4.6	3.7	2.4	2.1	2.1
12.....	1.9	2.0	3.5	1.9	2.0	1.9	2.9	3.0	4.0	3.6	2.4	2.1	2.2
13.....	1.9	2.0	3.0	2.0	2.1	2.0	3.0	2.9	3.8	4.0	2.4	2.1	2.2
14.....	1.9	2.0	2.7	2.0	2.3	2.0	3.4	2.9	3.8	3.7	2.4	2.1	2.3
15.....	1.9	1.9	2.9	2.0	2.2	2.0	3.6	2.9	4.3	3.2	2.4	2.1	2.3
16.....	2.1	1.9	2.7	1.9	2.2	2.0	3.4	2.9	4.4	3.2	2.4	2.1	2.3
17.....	2.0	1.9	2.7	1.9	2.2	2.0	3.4	3.0	4.4	3.2	2.3	2.1	2.3
18.....	1.9	1.9	2.5	1.9	2.2	2.0	3.2	3.0	4.5	3.2	2.2	2.1	2.3
19.....	1.9	1.9	2.5	1.9	2.2	2.0	3.4	3.4	4.5	3.1	2.2	2.2	2.3
20.....	1.9	2.4	2.3	1.9	2.2	2.1	3.4	3.6	4.6	3.0	2.3	2.2	2.3
21.....	1.9	2.5	2.2	1.9	2.0	2.1	3.6	3.6	4.4	3.0	2.3	2.2	2.1
22.....	1.9	2.7	2.1	1.9	2.0	2.1	3.5	3.5	4.5	2.9	2.3	2.4	2.0
23.....	1.9	2.5	2.0	1.9	1.9	2.1	3.4	3.1	4.4	3.0	2.3	2.4	2.0
24.....	2.0	2.4	2.0	1.9	1.9	2.1	3.4	3.0	4.0	2.0	2.3	2.4	1.6
25.....	1.9	2.3	2.0	1.9	1.9	2.1	3.4	3.3	4.0	2.7	2.3	2.4	1.6
26.....	1.9	2.2	2.0	1.9	1.9	2.1	3.6	3.5	4.0	2.7	2.2	2.0	1.6
27.....	1.9	2.1	2.0	1.9	1.9	2.1	3.6	3.1	3.8	2.6	2.2	2.2	2.0
28.....	1.9	2.0	2.0	1.9	1.9	2.1	3.4	3.0	3.8	2.6	2.2	2.2	1.7
29.....	1.9	2.0	1.9	1.9	1.9	.....	3.4	3.4	3.8	2.6	2.2	2.4	1.9
30.....	1.9	2.1	1.9	1.9	1.9	.....	3.4	4.0	3.7	2.6	2.2	2.4	2.1
31.....	.....	2.1	.....	1.9	1.9	.....	3.4	.....	3.7	.....	2.2	2.4	.....
Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	
1900-1901.													
1.....	2.3	2.3	1.6	1.5	1.3	4.2	2.7	4.0	4.3	3.2	2.0	2.0	
2.....	2.0	2.0	1.6	1.5	1.3	4.4	3.1	3.7	4.5	3.2	2.1	2.1	
3.....	2.1	2.0	1.6	1.5	1.4	3.9	2.8	3.6	4.6	3.1	1.9	2.1	
4.....	2.1	2.4	1.8	1.8	1.4	3.9	2.5	3.7	4.5	2.8	1.8	2.1	
5.....	2.2	2.4	1.8	1.9	1.3	3.9	2.9	3.9	4.3	2.5	1.7	2.2	
6.....	2.2	2.4	1.8	2.2	1.4	3.9	2.5	4.3	4.2	2.5	2.0	2.1	
7.....	2.3	2.7	2.0	1.3	1.5	4.0	2.5	4.7	4.3	2.5	2.1	2.1	
8.....	2.2	2.5	2.2	1.7	1.5	3.7	2.5	4.7	4.3	2.4	2.1	1.8	
9.....	2.2	2.4	2.2	1.6	1.4	3.8	2.5	4.8	4.0	2.4	1.9	1.8	
10.....	2.1	2.4	2.2	1.6	1.3	3.5	2.3	4.5	3.7	2.5	2.0	2.1	
11.....	2.0	2.4	2.2	1.6	1.4	3.4	2.5	4.7	3.5	2.4	1.9	2.1	
12.....	2.0	2.4	2.2	1.8	1.3	3.2	3.1	5.8	3.4	2.4	1.9	2.1	
13.....	2.0	2.4	2.2	1.5	1.5	3.0	2.3	5.7	3.3	2.5	1.9	2.2	
14.....	2.0	2.3	2.0	1.4	1.5	2.7	3.5	5.7	3.1	2.4	1.9	1.9	
15.....	2.0	2.2	2.0	1.5	1.6	2.9	3.8	5.5	3.3	2.4	1.9	1.3	
16.....	2.3	2.2	2.0	1.5	1.6	2.9	3.8	5.5	3.4	2.3	1.8	1.7	
17.....	1.7	2.2	2.0	1.4	2.9	2.9	3.7	5.6	3.3	2.4	2.5	2.0	
18.....	2.0	2.2	2.2	1.4	3.2	2.5	4.0	5.7	3.5	2.3	2.6	2.0	
19.....	2.3	2.2	2.4	1.5	3.2	2.8	4.1	5.0	3.6	2.2	2.6	2.0	
20.....	3.2	2.2	3.6	1.4	5.0	2.9	4.3	4.6	3.6	2.3	2.1	2.1	
21.....	3.1	2.5	3.0	1.6	5.3	2.9	4.3	4.2	3.6	2.1	2.1	2.0	
22.....	3.0	3.2	3.0	1.6	4.1	3.3	4.3	3.9	3.6	2.3	1.8	2.0	
23.....	2.9	3.0	2.9	1.5	4.7	3.2	4.1	3.8	3.6	2.3	1.9	2.0	
24.....	2.9	2.8	2.0	1.5	4.5	3.1	4.1	3.8	3.4	2.3	2.0	2.1	
25.....	2.8	2.5	2.2	1.6	4.3	3.1	4.6	3.8	3.1	2.3	2.1	2.2	
26.....	2.8	2.5	2.2	1.5	4.4	3.2	4.4	3.8	3.0	2.3	2.0	2.0	
27.....	2.7	2.3	2.0	1.5	4.5	3.1	4.1	3.7	2.9	2.2	2.1	2.0	
28.....	2.7	2.0	2.0	1.6	4.4	3.0	4.2	3.9	3.2	2.0	2.2	2.0	
29.....	2.4	2.0	2.0	1.7	.....	2.7	4.3	3.8	3.3	2.3	2.0	2.0	
30.....	2.0	2.0	2.2	1.4	.....	2.6	4.1	4.0	3.4	2.1	2.0	2.1	
31.....	2.4	.....	2.0	2.2	.....	2.7	.....	4.1	.....	1.9	2.1	.....

Daily gage height, in feet, of Truckee River near Nevada-California State line, for 1899-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1901-2.												
1.....	2.0	2.2	2.3	1.5	1.4	2.1	2.2	3.4	3.7	2.4	2.1	2.2
2.....	2.0	2.1	2.3	1.9	1.6	2.1	2.1	3.3	3.7	2.2	2.1	2.2
3.....	2.1	1.8	3.0	1.8	1.6	1.9	2.2	3.2	3.5	2.2	2.1	2.2
4.....	2.1	1.9	5.2	1.6	1.6	2.0	2.2	3.2	3.5	3.0	2.1	2.2
5.....	2.1	2.0	2.6	1.5	1.7	2.1	2.5	3.3	3.4	2.1	2.0	2.2
6.....	2.0	2.1	2.7	1.6	1.6	2.4	3.2	3.9	3.5	2.1	2.0	2.1
7.....	2.0	2.0	2.3	1.5	1.7	1.9	5.0	4.4	3.9	2.1	2.0	2.2
8.....	2.0	2.0	2.1	1.5	1.8	1.9	4.0	4.8	3.9	2.1	2.0	2.1
9.....	2.1	2.0	2.1	1.6	1.8	1.8	4.1	4.8	4.0	1.7	2.0	2.0
10.....	2.2	1.9	2.0	1.5	2.1	1.5	3.7	4.7	4.1	2.0	1.8	2.0
11.....	2.2	2.0	1.7	1.4	2.1	1.6	3.4	4.8	4.0	2.1	2.1	2.0
12.....	2.0	2.0	1.5	1.5	1.8	1.6	3.5	4.7	3.9	2.0	2.1	2.0
13.....	1.3	2.1	1.4	1.6	1.5	2.0	3.6	4.5	3.9	1.9	2.0	2.2
14.....	2.0	2.0	1.8	1.7	1.8	1.7	4.1	4.0	3.9	1.9	2.1	2.1
15.....	2.0	2.0	1.6	1.5	2.4	1.6	4.3	4.0	3.5	2.0	2.2	2.0
16.....	2.0	2.0	1.5	1.6	2.5	1.5	4.2	4.0	3.3	2.0	2.2	1.9
17.....	1.9	1.9	1.5	1.6	3.2	1.6	4.5	4.1	3.3	1.9	2.1	1.9
18.....	1.9	2.0	1.5	1.8	2.5	1.7	5.0	4.0	3.2	1.9	2.1	2.0
19.....	2.0	2.0	1.6	1.5	2.3	1.8	5.4	3.8	3.2	1.9	2.1	2.0
20.....	1.5	2.0	1.5	1.5	2.3	1.8	5.0	3.5	3.2	1.9	2.1	1.9
21.....	1.9	2.0	1.4	1.5	2.2	1.9	4.3	3.4	3.2	1.8	2.1	2.0
22.....	1.9	1.9	1.7	1.5	2.0	1.7	3.8	3.3	3.2	1.9	2.0	2.0
23.....	1.9	1.9	1.8	1.5	2.0	1.7	3.8	3.4	3.0	1.8	2.1	2.0
24.....	1.9	1.9	1.8	1.7	2.9	1.5	3.4	3.5	3.1	2.1	2.1	2.0
25.....	2.0	2.0	1.6	1.6	2.4	1.7	3.4	4.0	3.1	2.2	2.1	1.9
26.....	2.0	2.1	1.3	1.4	2.0	1.7	3.3	4.2	2.8	2.2	2.1	1.9
27.....	2.2	2.0	1.5	1.7	2.0	1.7	3.2	4.6	2.8	2.2	2.2	1.9
28.....	2.2	2.0	1.5	1.8	2.0	2.0	3.2	4.3	2.6	2.2	2.2	2.0
29.....	2.2	2.2	1.5	1.8	-----	2.0	3.4	4.7	2.5	1.9	2.2	2.0
30.....	2.2	2.3	1.7	1.7	-----	2.0	3.5	4.4	2.5	2.1	2.2	2.0
31.....	2.2	-----	1.5	1.7	-----	2.1	-----	4.2	-----	2.2	2.2	-----
1902-3.												
1.....	1.9	1.9	1.9	2.10	1.57	1.65	4.10	4.00	3.95	2.68	2.05	2.15
2.....	2.0	1.8	2.0	2.00	2.25	1.80	3.10	4.10	3.90	2.60	2.02	2.02
3.....	1.9	1.9	2.0	1.95	2.00	1.80	3.10	4.00	3.62	2.40	2.08	1.98
4.....	1.9	1.8	2.1	2.05	2.20	1.90	3.10	4.10	3.55	2.22	2.00	2.15
5.....	1.9	1.9	2.1	2.25	2.10	2.00	2.80	4.22	3.55	2.15	2.00	2.08
6.....	1.8	1.9	2.1	2.25	1.90	1.80	2.80	4.50	3.50	2.15	2.02	2.10
7.....	1.9	1.8	2.2	2.15	2.00	1.80	2.75	4.35	3.47	2.10	2.00	2.10
8.....	2.1	1.9	2.1	2.25	2.05	2.10	3.30	4.17	3.52	2.00	2.00	2.15
9.....	1.9	1.9	2.2	2.25	2.25	1.90	3.52	4.25	3.47	2.00	2.00	2.10
10.....	1.9	2.2	2.4	2.00	1.80	2.00	3.80	4.15	3.52	2.20	2.00	2.12
11.....	2.0	2.5	2.2	2.10	1.95	2.00	3.30	4.15	3.50	2.08	2.00	2.12
12.....	2.0	1.9	2.3	1.90	2.10	2.00	3.25	4.30	3.37	2.00	2.00	2.08
13.....	2.0	1.9	2.0	1.90	2.25	1.85	3.00	4.40	3.37	2.00	2.00	2.10
14.....	2.0	1.9	1.8	1.90	2.20	2.00	3.00	4.22	3.20	2.10	2.00	2.10
15.....	1.9	2.1	1.8	1.60	2.05	2.00	3.25	4.07	2.88	2.00	2.00	2.20
16.....	1.9	1.9	2.0	1.85	2.00	1.95	3.05	4.12	2.75	2.00	2.00	2.08
17.....	1.9	2.1	1.8	1.90	2.20	1.95	3.00	3.72	2.72	2.00	2.00	2.20
18.....	1.9	1.9	1.9	1.50	2.20	1.95	3.00	3.50	2.75	2.05	2.00	2.05
19.....	1.9	1.8	1.8	1.75	2.00	1.90	3.00	3.00	2.80	1.98	2.00	2.00
20.....	1.9	1.9	2.0	1.95	2.00	2.00	3.00	3.10	2.70	2.00	2.10	2.00
21.....	1.9	2.1	2.1	1.90	2.10	2.10	3.20	3.12	2.72	2.02	2.08	2.05
22.....	1.9	1.7	2.1	1.95	2.10	2.10	3.30	3.15	2.82	2.25	2.10	2.00
23.....	1.9	1.7	2.1	1.87	2.00	2.15	3.50	3.05	2.70	2.00	2.10	2.00
24.....	2.2	1.5	2.1	2.55	1.75	2.10	3.80	2.87	2.48	2.00	2.10	2.02
25.....	2.2	1.7	2.1	2.90	1.55	2.15	4.10	2.87	2.78	2.00	2.02	2.00
26.....	2.2	1.7	1.9	2.50	1.45	2.15	4.00	2.97	2.55	2.00	2.02	1.90
27.....	2.1	1.6	1.9	2.65	1.65	2.30	3.67	3.00	2.82	2.00	2.15	1.90
28.....	2.1	1.6	1.9	2.20	1.70	3.05	3.47	3.05	2.60	2.00	2.30	1.90
29.....	2.0	1.8	1.9	2.55	-----	4.05	3.42	3.30	2.80	2.00	2.20	2.00
30.....	1.9	1.8	2.1	2.25	-----	5.15	3.80	3.62	2.75	2.00	2.15	2.00
31.....	1.9	-----	2.1	1.90	-----	4.75	-----	3.97	-----	2.00	2.25	-----

Daily gage height, in feet, of Truckee River near Nevada-California State line, for 1899-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1903-4.												
1.....	1.95	2.20	2.00	2.05	1.90	3.15	4.22	4.15	4.85	3.95	3.00	2.65
2.....	2.00	2.10	1.95	2.00	2.00	3.25	4.10	4.15	5.30	3.80	.....	2.65
3.....	2.10	1.90	2.00	2.00	1.95	4.25	4.15	4.15	5.35	3.70	3.00	2.65
4.....	2.12	2.15	.....	2.50	1.90	4.20	4.15	4.40	5.22	3.80	2.95	.....
5.....	2.10	2.30	1.50	2.30	1.85	4.00	4.20	4.68	.....	3.80	3.15	2.95
6.....	1.95	2.20	1.50	2.30	1.90	3.88	4.60	4.95	5.25	3.72	3.00	2.65
7.....	2.00	2.00	1.60	2.15	2.00	4.77	4.40	5.35	5.00	3.58	2.85	2.70
8.....	1.95	2.00	1.90	2.12	2.00	5.00	.....	5.35	4.85	3.60	2.92	2.70
9.....	1.95	1.90	2.02	2.15	2.00	4.30	4.65	5.35	4.85	3.55	.....	2.72
10.....	2.05	1.95	1.90	2.15	2.00	4.20	5.05	5.08	4.85	3.50	2.90	2.70
11.....	2.15	2.20	1.90	1.95	1.90	4.00	5.45	5.75	4.82	3.45	2.90	2.72
12.....	2.05	3.10	1.80	1.92	2.05	3.85	5.75	5.95	4.78	3.40	2.90	2.70
13.....	2.05	4.10	2.05	1.90	1.90	3.85	6.20	6.12	4.75	3.20	2.85	.....
14.....	2.10	4.05	1.90	2.00	2.05	3.55	6.48	6.50	4.75	3.40	.....	2.80
15.....	2.12	3.65	1.90	2.05	2.05	3.50	6.25	6.08	4.75	3.38	2.90	2.70
16.....	2.15	2.40	2.00	2.10	3.80	3.65	5.70	6.02	4.72	3.30	2.90	2.70
17.....	2.05	2.00	1.95	2.05	3.60	3.90	5.42	6.02	4.65	3.35	2.85	2.75
18.....	2.20	1.95	2.02	2.00	2.85	5.15	5.42	5.72	4.60	3.35	2.90	2.70
19.....	2.30	2.10	1.95	1.95	2.80	6.20	5.45	5.30	4.40	3.25	2.90	2.80
20.....	2.17	2.95	1.95	1.80	2.60	6.50	4.85	5.28	4.30	3.30	2.90	2.80
21.....	2.10	4.80	2.00	2.00	2.50	4.92	4.58	5.40	4.30	3.30	3.15	2.75
22.....	2.00	3.80	1.80	2.00	4.95	4.90	4.40	6.10	4.47	3.30	2.85	2.75
23.....	2.18	3.30	1.80	1.90	6.30	4.50	4.22	6.15	4.35	3.25	2.75	2.75
24.....	2.25	3.15	1.75	1.95	8.00	4.05	4.15	6.20	4.35	3.25	2.75	2.70
25.....	2.22	2.55	1.80	1.90	5.50	3.90	4.15	6.42	4.15	3.25	2.75	2.85
26.....	2.18	2.30	1.70	2.00	5.00	3.90	3.95	5.95	.....	3.25	2.75	.....
27.....	2.10	2.30	1.70	1.80	4.00	3.85	4.10	5.12	4.08	.....	2.70	2.65
28.....	2.00	2.30	1.60	1.85	3.50	5.10	4.02	5.28	4.10	3.15	2.70	.....
29.....	2.05	2.10	1.60	1.60	3.15	5.35	4.05	5.30	4.10	3.15	2.70	2.75
30.....	2.15	2.00	1.70	1.75	.....	5.12	4.02	5.40	4.05	3.00	2.70	2.75
31.....	2.10	.....	1.95	1.90	.....	4.28	.....	5.25	.....	2.95	2.65	.....
1904-5.												
1.....	2.95	2.85	2.75	.....	2.30	3.30	2.40	3.45	3.30	2.30	2.00	2.05
2.....	2.80	2.95	2.75	2.80	2.30	3.30	.....	3.35	3.25	2.35	2.07	2.10
3.....	2.75	2.85	2.74	2.80	2.30	3.30	2.60	3.25	3.25	2.35	2.10	2.05
4.....	2.75	2.80	.....	2.80	2.30	3.30	2.60	3.20	3.08	2.32	2.07	2.10
5.....	2.78	2.80	2.75	2.70	2.28	3.30	2.70	3.15	3.05	2.35	2.50	2.10
6.....	2.80	2.80	2.75	2.70	2.30	3.30	2.85	3.08	3.25	2.32	2.15	2.05
7.....	2.52	2.80	2.70	2.70	2.30	3.30	2.90	3.30	3.05	2.30	2.10	2.10
8.....	2.55	2.78	2.60	.....	2.30	3.30	2.88	3.05	3.05	2.30	2.10	2.10
9.....	2.60	2.80	2.65	2.65	2.30	3.30	.....	3.00	3.05	2.25	2.10	2.10
10.....	.....	.....	2.65	2.70	2.35	3.20	3.25	2.95	3.35	2.20	2.10	2.10
11.....	3.75	2.85	2.60	2.60	2.30	3.20	2.85	2.95	3.30	2.20	2.10	2.05
12.....	3.40	2.68	2.60	2.60	2.35	3.20	2.80	2.90	3.30	2.10	2.18	2.05
13.....	3.10	2.65	2.60	2.60	2.25	3.20	2.80	2.90	3.25	2.10	2.15	2.05
14.....	2.95	2.60	2.60	2.20	2.25	3.25	2.80	2.98	3.17	2.25	2.10	2.05
15.....	3.05	2.60	2.60	2.40	2.30	3.25	2.85	3.45	3.20	2.25	2.10	2.02
16.....	3.10	2.65	2.60	2.40	2.35	2.70	2.85	3.65	.....	2.25	2.12	2.00
17.....	3.10	2.65	2.50	2.20	2.40	2.70	2.85	3.95	3.22	2.18	2.10	2.05
18.....	3.00	.....	2.50	2.20	2.47	2.75	2.85	3.70	3.08	2.15	2.15	2.05
19.....	.....	2.70	2.50	2.20	2.40	2.75	2.82	3.75	3.05	2.15	2.10	2.15
20.....	2.85	.....	2.60	2.20	2.65	2.78	.....	3.75	3.00	2.02	2.10	2.10
21.....	2.90	2.70	2.60	2.60	2.45	2.80	2.65	3.70	2.80	2.15	2.15	2.05
22.....	2.90	2.70	2.55	2.70	2.85	2.80	2.65	3.70	2.80	2.15	2.15	2.05
23.....	2.62	2.65	2.55	2.50	2.62	2.60	2.70	3.65	2.75	2.15	2.12	2.05
24.....	2.60	2.62	2.55	2.50	3.02	2.45	2.90	3.65	2.60	2.15	2.10	2.05
25.....	2.55	2.60	2.55	2.32	3.02	2.40	3.10	3.50	2.60	2.10	2.10	2.05
26.....	2.55	2.60	2.55	2.32	3.08	2.95	4.02	3.40	2.50	2.10	2.02	2.05
27.....	2.55	2.70	2.55	2.30	3.12	2.95	3.80	3.30	2.45	2.10	2.05	2.05
28.....	2.90	2.75	2.55	2.50	3.05	2.50	3.80	3.35	2.40	2.10	2.10	2.05
29.....	2.90	2.70	2.55	.....	.....	2.30	3.72	3.38	2.38	2.10	2.05	2.05
30.....	2.90	2.65	3.30	2.40	.....	2.40	.....	3.40	2.35	2.10	2.10	2.05
31.....	2.90	.....	2.85	2.30	.....	2.40	.....	3.30	.....	2.00	2.02	.....
1905-6.												
1.....	2.02	2.02	1.95	1.80	2.30	2.70	3.58	5.02	4.00	4.85	2.85	2.75
2.....	2.02	1.90	1.90	1.80	2.28	2.65	3.48	6.85	4.25	4.98	2.90	2.75
3.....	2.05	1.95	1.87	1.80	2.30	2.62	3.22	6.85	4.65	5.00	2.90	2.62
4.....	2.05	2.00	1.90	1.72	2.28	2.58	3.08	6.82	5.08	4.90	2.85	2.60
5.....	2.05	1.95	1.80	1.72	2.25	2.52	3.00	7.15	5.05	4.95	2.65	2.65

Daily gage height, in feet, of Truckee River near Nevada-California State line, for 1899-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1905-6.												
6.....	2.15	1.97	1.80	1.75	2.35	2.50	3.35	7.08	4.65	4.98	2.60	2.68
7.....	2.10	1.85	1.90	1.75	2.35	2.50	3.50	7.18	4.45	4.60	2.65	2.65
8.....	2.05	1.90	1.90	1.85	2.30	2.55	3.90	7.15	4.30	4.68	2.60	2.65
9.....	2.10	1.95	1.90	1.95	2.30	2.60	4.20	7.18	4.88	4.50	2.65	2.65
10.....	2.10	1.95	1.90	2.00	2.30	2.72	4.22	6.85	5.25	4.25	2.70	2.65
11.....	2.20	1.95	1.90	1.95	2.30	2.85	3.98	6.98	6.25	4.20	2.80	2.65
12.....	2.15	1.87	1.85	1.98	2.48	3.72	4.00	6.60	5.90	4.20	2.85	2.65
13.....	2.10	1.95	1.92	2.00	2.40	3.05	4.10	6.35	5.20	4.22	2.90	2.65
14.....	2.10	1.70	1.87	1.98	2.38	2.78	4.28	6.40	5.05	4.20	2.80	2.65
15.....	2.05	1.70	1.97	2.05	2.52	2.82	4.55	6.25	5.10	4.00	2.80	2.65
16.....	2.05	1.85	1.87	2.18	2.52	2.80	6.95	5.88	5.55	3.88	2.80	2.68
17.....	2.05	1.98	1.90	2.22	2.52	2.80	6.00	5.68	5.55	3.70	2.70	2.65
18.....	2.05	1.97	1.77	2.90	2.55	2.78	5.98	5.25	5.02	3.42	2.80	2.65
19.....	2.05	1.80	1.80	3.18	2.85	2.82	6.08	4.80	5.22	3.60	2.75	2.62
20.....	2.05	1.95	1.80	2.80	2.90	2.78	6.05	4.88	5.32	3.50	2.85	2.65
21.....	2.10	1.97	1.70	2.68	2.70	2.85	6.60	4.70	5.50	3.45	2.80	2.62
22.....	2.05	2.00	1.70	2.68	2.72	3.15	6.80	4.78	5.35	3.40	2.85	2.60
23.....	2.05	1.97	1.80	2.62	2.70	3.25	6.75	4.62	5.20	3.40	2.78	2.65
24.....	2.20	2.00	1.80	2.58	2.70	3.45	5.90	4.40	5.20	3.35	2.78	2.65
25.....	2.00	1.95	1.80	2.52	2.68	3.52	5.70	4.40	5.02	3.35	2.75	2.65
26.....	2.02	1.90	1.82	2.50	2.68	3.50	5.88	4.82	4.92	3.68	2.75	2.62
27.....	2.00	1.85	1.82	2.50	2.68	3.40	5.82	4.55	4.90	3.30	2.75	2.62
28.....	2.02	1.90	1.80	2.48	2.70	3.48	4.70	4.20	4.45	3.30	2.80	2.62
29.....	2.02	1.95	1.82	2.42	.....	3.40	4.35	4.02	4.28	3.15	2.80	2.60
30.....	2.00	1.95	1.78	2.35	.....	3.45	4.80	3.92	4.20	3.05	2.80	2.60
31.....	2.50	.....	1.75	2.20	.....	3.90	.....	3.80	.....	3.00	2.75	.....
1906-7.												
1.....	2.35	2.75	2.50	2.65	2.9	3.1	4.2	5.6	6.15	5.25	4.05	3.4
2.....	2.38	2.65	2.48	2.65	3.7	3.1	4.3	5.7	6.15	5.1	3.95	3.4
3.....	2.50	2.65	2.48	2.7	3.8	3.1	4.3	5.7	6.05	5.25	3.95	3.4
4.....	2.50	2.98	2.52	2.7	3.95	3.1	4.2	5.55	6.05	5.4	3.85	3.45
5.....	2.48	2.78	2.50	2.7	4.05	3.15	4.2	5.15	5.9	5.05	3.85	3.4
6.....	2.48	2.70	2.45	2.7	3.8	3.15	4.0	5.1	5.75	5.0	3.8	3.4
7.....	2.50	2.68	2.45	2.6	3.7	3.1	4.1	5.2	5.55	4.95	3.8	3.4
8.....	2.50	2.65	2.48	2.65	3.4	3.1	4.2	5.15	5.25	4.8	3.75	3.4
9.....	2.50	2.68	2.45	2.65	3.35	3.1	4.3	5.3	5.25	4.8	3.7	3.4
10.....	2.58	2.68	2.68	2.7	3.3	3.1	4.9	5.6	5.25	4.75	3.65	3.4
11.....	2.75	2.70	2.60	2.7	3.25	3.0	5.2	6.0	5.45	4.75	3.6	3.4
12.....	2.65	2.65	2.62	2.65	3.25	3.1	5.5	5.7	5.5	4.75	3.6	3.4
13.....	2.72	2.70	2.65	2.7	3.25	3.05	6.15	5.15	4.95	4.55	3.55	3.4
14.....	2.75	2.68	2.65	2.7	3.25	3.0	7.0	5.0	4.8	4.5	3.5	3.35
15.....	2.68	2.70	2.65	2.7	3.25	3.05	5.9	5.2	4.65	4.5	3.6	3.3
16.....	2.65	2.70	2.60	2.7	3.25	3.1	5.5	5.45	4.5	4.45	3.6	3.3
17.....	2.65	2.65	2.58	2.65	3.2	5.35	5.65	5.65	4.45	4.4	3.55	3.3
18.....	2.65	2.65	2.60	2.65	3.2	11.5	5.8	5.9	4.55	4.4	3.5	3.3
19.....	2.65	2.60	2.60	2.6	3.2	8.1	6.0	6.3	4.7	4.4	3.5	3.3
20.....	2.62	2.55	2.60	2.65	3.15	7.3	6.0	6.15	5.0	4.4	3.5	3.3
21.....	2.65	2.60	2.60	2.6	3.2	4.25	5.8	5.75	5.0	4.25	3.5	3.3
22.....	2.52	2.60	2.60	2.65	3.3	5.85	5.85	5.55	5.2	4.15	3.5	3.3
23.....	2.52	2.58	2.60	2.65	3.25	4.75	6.15	5.2	5.15	4.2	3.45	3.3
24.....	2.60	2.50	2.62	2.6	3.25	4.3	6.3	5.2	4.9	4.15	3.4	3.3
25.....	2.60	2.50	2.68	2.6	3.25	4.25	6.2	5.2	4.75	4.1	3.4	3.3
26.....	2.62	2.55	2.98	2.6	3.2	4.2	6.15	5.2	4.8	4.1	3.4	3.3
27.....	2.70	2.50	2.92	2.7	3.2	4.05	6.1	5.3	5.0	4.2	3.65	3.3
28.....	2.45	2.45	2.85	2.9	3.2	4.0	6.0	5.45	5.25	4.2	3.4	3.25
29.....	2.42	2.52	2.80	2.85	.....	4.0	5.85	5.6	5.15	4.2	3.4	3.2
30.....	2.55	2.52	2.78	2.85	.....	4.0	5.65	5.75	5.15	4.15	3.4	3.2
31.....	2.62	.....	2.75	2.85	.....	4.1	.....	6.05	.....	4.1	3.4	.....
1907-8.												
1.....	3.2	3.1	2.8	2.8	2.9	2.8	2.9	3.4	2.85	2.4	2.4	2.2
2.....	3.3	3.1	2.8	2.8	2.8	2.8	2.9	3.45	2.8	2.3	2.4	2.2
3.....	3.2	3.1	2.8	2.8	3.0	2.8	2.9	3.1	2.7	2.25	2.6	2.2
4.....	2.45	3.1	2.8	2.8	2.8	2.8	3.05	2.95	2.65	2.2	2.2	2.15
5.....	3.2	3.0	2.9	2.8	2.8	2.8	3.15	2.9	2.75	2.3	2.2	2.1
6.....	2.4	3.0	3.0	2.8	2.8	2.75	3.25	3.0	2.8	2.2	2.2	2.0
7.....	2.4	2.75	3.0	2.8	2.8	2.7	3.05	3.2	2.9	2.2	2.4	2.2
8.....	2.4	2.7	2.9	2.8	2.8	2.7	2.8	2.95	3.05	2.3	2.4	2.2
9.....	3.1	2.9	2.9	2.85	2.8	2.8	2.95	2.8	3.05	2.35	2.4	2.2
10.....	3.25	3.0	2.9	2.85	2.8	2.8	3.1	2.8	3.1	2.3	2.4	2.15

Daily gage height, in feet, of Truckee River near Nevada-California State line, for 1899-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1907-8.												
11.....	3.0	3.0	3.0	2.9	2.8	2.7	3.35	2.8	3.05	2.35	2.35	2.2
12.....	3.2	3.0	3.0	2.9	2.8	2.7	3.55	2.8	2.95	2.4	2.4	2.2
13.....	3.2	3.0	3.0	2.85	2.75	2.8	3.05	2.65	3.1	2.35	2.4	2.2
14.....	3.2	3.0	3.0	3.0	2.7	2.9	3.7	2.65	3.15	2.3	2.3	2.2
15.....	3.2	2.95	3.0	2.9	2.7	3.0	3.6	2.7	2.95	2.25	2.4	2.2
16.....	3.2	3.0	2.9	2.9	2.7	3.1	3.45	2.65	2.9	2.15	2.4	2.25
17.....	3.2	3.0	2.9	2.9	2.8	3.15	3.2	2.65	2.85	2.2	2.35	2.2
18.....	3.15	2.9	2.9	2.9	2.7	3.25	3.25	2.6	2.75	2.2	2.3	2.25
19.....	3.15	2.8	2.8	2.9	2.7	3.2	3.4	2.75	2.6	2.15	2.3	2.2
20.....	3.15	2.8	2.8	2.9	2.7	3.25	3.6	2.65	2.6	2.25	2.3	2.15
21.....	3.15	2.9	2.8	3.0	2.7	3.35	3.8	2.65	2.7	2.15	2.3	2.15
22.....	3.15	2.9	2.75	2.9	2.7	3.2	3.45	2.7	2.45	2.45	2.3	2.1
23.....	3.15	2.9	2.7	2.9	2.7	3.2	3.25	2.75	2.4	2.45	2.25	2.1
24.....	3.2	2.9	2.8	2.9	2.7	3.35	3.05	2.9	2.55	2.4	2.3	2.15
25.....	3.2	2.9	2.8	2.9	2.7	3.5	3.05	3.05	2.6	2.4	2.3	2.1
26.....	3.15	2.9	2.9	2.9	2.75	3.3	3.05	3.1	2.6	2.45	2.3	2.1
27.....	3.25	2.9	3.25	2.9	2.8	3.25	3.15	2.95	2.5	2.4	2.2	2.1
28.....	3.2	2.9	3.1	2.9	2.8	3.15	3.25	2.9	2.4	2.4	2.15	2.1
29.....	3.15	2.9	2.8	2.9	2.8	3.0	3.85	3.1	2.4	2.45	2.15	2.2
30.....	3.1	2.85	2.8	2.9	-----	3.1	3.4	3.05	2.45	2.4	2.25	2.15
31.....	3.1	-----	2.75	2.9	-----	2.95	-----	3.0	-----	2.65	-----	-----
1908-9.												
1.....	2.15	2.05	2.05	2.05	3.05	3.05	-----	5.35	5.0	4.5	3.0	2.7
2.....	2.1	2.1	2.05	2.1	3.2	3.0	-----	5.35	5.25	4.5	3.0	2.7
3.....	2.1	2.1	2.1	2.1	3.15	3.1	-----	5.4	5.25	4.4	3.0	2.7
4.....	2.2	2.0	2.1	2.35	3.15	3.2	3.85	5.55	5.25	4.3	3.0	2.8
5.....	2.05	2.0	2.1	2.8	3.1	3.1	3.8	5.9	5.25	4.2	2.9	2.7
6.....	2.05	2.0	2.1	3.0	3.1	3.1	3.7	5.85	5.0	4.1	2.9	2.7
7.....	2.1	2.05	2.05	2.55	3.0	3.1	3.8	5.9	4.8	3.8	2.8	2.6
8.....	2.2	2.1	2.1	2.25	3.0	3.05	3.9	5.7	4.8	3.7	2.8	2.6
9.....	2.2	2.1	2.0	2.1	3.0	3.0	4.0	5.6	4.65	3.5	2.7	2.6
10.....	2.2	2.1	1.9	2.05	3.1	3.0	4.3	5.7	4.6	3.3	2.6	2.5
11.....	2.15	2.1	1.95	2.2	3.2	3.0	4.2	5.35	4.6	3.3	2.6	2.5
12.....	2.15	2.05	1.95	2.4	3.2	3.05	4.3	5.1	4.65	3.3	2.5	2.5
13.....	2.2	2.0	2.05	2.9	3.2	3.0	4.6	4.75	4.75	3.1	2.5	2.4
14.....	2.2	2.0	2.1	5.5	3.15	3.1	5.0	4.55	4.7	3.1	2.5	2.4
15.....	2.5	2.05	1.95	7.45	3.2	3.2	5.25	4.85	4.75	3.0	2.5	2.4
16.....	2.45	2.0	2.0	7.9	3.15	3.2	4.9	4.4	4.65	3.0	2.5	2.4
17.....	2.3	2.05	2.0	6.15	3.2	3.4	5.55	4.3	4.65	2.9	2.6	2.4
18.....	2.25	2.0	2.0	5.65	3.35	3.5	5.8	4.25	4.6	2.8	2.7	2.5
19.....	2.2	2.0	2.0	4.75	3.3	3.4	5.75	4.3	4.45	2.7	2.7	2.5
20.....	2.15	2.1	2.0	4.65	3.3	3.4	4.85	4.45	4.3	2.7	2.7	2.5
21.....	2.15	2.15	2.0	5.15	3.2	3.35	4.9	4.55	4.4	2.7	2.7	2.5
22.....	2.1	2.2	2.0	4.1	3.1	3.3	4.75	4.15	4.65	2.7	2.7	2.4
23.....	2.1	2.2	2.0	3.7	3.15	3.25	4.9	3.95	4.8	2.8	2.7	2.4
24.....	2.05	2.1	1.95	3.6	3.2	3.2	4.95	3.85	4.65	3.1	2.8	2.5
25.....	2.1	2.1	1.95	3.55	3.05	3.2	5.1	3.85	4.75	3.1	2.8	2.5
26.....	2.05	2.05	2.0	3.5	3.0	3.15	4.75	4.15	4.65	3.1	2.8	2.5
27.....	2.05	2.05	2.0	3.5	3.0	3.15	5.45	4.3	4.65	3.1	2.8	2.5
28.....	2.15	2.05	2.05	3.4	3.05	3.15	5.55	4.5	4.6	3.0	2.8	2.5
29.....	2.05	2.05	2.0	3.3	-----	3.15	5.5	4.1	4.5	3.0	2.7	2.6
30.....	1.95	2.1	2.05	3.2	-----	3.1	5.5	4.0	4.6	3.0	2.7	2.6
31.....	2.1	-----	2.1	3.1	-----	3.15	-----	4.25	-----	3.0	2.7	-----
1909-10.												
1.....	2.6	2.4	3.8	2.7	3.4	3.3	3.2	4.1	3.4	2.8	2.9	2.6
2.....	2.6	2.4	4.5	3.6	3.4	3.3	3.3	4.0	3.3	2.8	2.9	2.6
3.....	2.6	2.4	3.8	3.5	2.7	3.5	3.4	3.7	3.2	2.8	2.8	2.6
4.....	2.7	2.5	3.2	3.4	3.1	3.6	3.6	3.6	3.2	2.8	2.8	2.6
5.....	2.6	2.4	3.1	3.4	3.1	3.7	3.8	3.5	3.1	2.9	2.8	2.6
6.....	2.6	2.4	3.2	3.4	3.2	3.8	3.8	3.5	2.9	2.8	2.8	2.6
7.....	2.6	2.4	3.1	3.3	3.3	3.8	3.9	3.5	2.9	2.8	2.8	2.6
8.....	2.6	2.4	3.2	3.3	3.3	3.8	4.0	3.5	3.0	2.7	2.8	2.6
9.....	2.5	2.4	3.5	3.3	3.3	3.8	4.0	3.5	3.0	2.7	2.8	2.5
10.....	2.5	2.5	3.3	3.2	3.3	4.0	4.1	3.6	3.4	2.8	2.8	2.5
11.....	2.5	2.5	3.2	3.2	3.3	4.0	4.2	3.6	3.3	2.8	2.8	2.5
12.....	2.4	2.5	3.2	3.3	3.3	4.1	3.9	3.6	3.3	2.8	2.8	2.5
13.....	2.4	2.4	3.1	3.3	3.3	4.1	3.9	3.5	3.2	2.9	2.8	2.5
14.....	2.5	2.5	3.1	3.2	3.3	3.9	3.9	3.6	3.2	3.0	2.8	2.5
15.....	2.4	2.5	3.1	3.3	3.4	3.6	3.9	3.7	3.1	3.0	2.8	2.6

Daily gage height, in feet, of Truckee River near Nevada-California State Line for 1899-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909-10.												
16.....	2.5	2.6	3.1	3.4	3.3	3.6	4.0	3.6	3.0	3.0	2.8	2.5
17.....	2.4	2.7	3.1	3.3	3.3	3.8	4.1	3.6	3.0	3.0	2.8	2.5
18.....	2.4	3.0	3.1	3.3	3.3	4.3	4.2	3.6	3.0	3.0	2.8	2.5
19.....	2.4	3.5	3.0	3.3	3.2	5.4	4.2	3.5	3.0	2.9	2.7	2.5
20.....	2.5	4.1	3.0	3.3	3.3	4.9	4.2	3.5	2.8	2.9	2.7	2.4
21.....	2.5	4.1	3.0	3.3	3.3	4.3	4.1	3.4	2.8	2.6	2.7	2.4
22.....	2.4	4.1	3.0	3.4	3.3	4.0	4.2	3.4	2.8	2.6	2.7	2.4
23.....	2.3	3.7	3.0	3.5	3.2	3.8	4.3	3.5	2.8	2.6	2.7	2.2
24.....	2.3	4.1	2.9	3.4	3.2	3.5	4.3	3.5	3.0	3.1	2.7	2.3
25.....	2.4	4.0	2.3	3.4	3.3	3.3	4.3	3.4	3.1	3.0	2.7	2.3
26.....	2.4	3.7	2.9	3.4	3.3	3.1	4.4	3.5	3.2	3.0	2.7	2.3
27.....	2.4	3.2	2.9	3.4	3.3	3.1	4.5	3.5	3.2	2.9	2.7	2.5
28.....	2.4	3.2	2.9	3.4	3.3	3.1	4.7	3.5	3.1	2.9	2.6	2.4
29.....	2.5	3.1	2.9	3.4	.....	3.0	4.4	3.5	2.8	2.9	2.6	2.3
30.....	2.5	3.1	3.2	3.4	.....	3.2	4.4	3.4	3.0	2.9	2.6	2.4
31.....	2.5	.....	3.2	3.4	.....	3.2	.....	3.4	.....	2.9	2.6	.....
1910-11.												
1.....	2.4	2.3	2.3	2.2	3.6	3.05	4.4	5.2	5.0	4.6	3.0	2.7
2.....	2.4	2.2	2.3	2.2	3.4	3.0	4.6	4.8	5.2	4.5	2.9	2.7
3.....	2.4	2.2	2.4	2.3	3.4	3.0	4.9	5.2	5.5	4.6	2.7	2.7
4.....	2.5	2.2	2.5	2.3	3.3	3.0	4.9	5.6	5.7	4.6	2.85	2.7
5.....	2.5	2.2	2.5	2.3	3.0	3.0	4.6	6.2	5.9	4.5	2.85	2.7
6.....	2.3	2.2	2.5	2.2	3.0	3.0	4.7	5.3	5.9	4.5	2.85	2.7
7.....	2.5	2.2	2.5	2.3	3.0	3.0	4.8	5.1	5.5	4.5	2.8	2.7
8.....	2.4	2.2	2.5	2.3	3.0	2.9	4.7	5.5	5.5	4.5	2.8	2.65
9.....	2.4	2.3	2.5	2.3	3.0	3.05	4.8	5.2	5.6	4.4	2.75	2.65
10.....	2.4	2.3	2.6	2.3	3.0	3.05	4.5	4.8	5.5	4.3	2.8	2.7
11.....	2.5	2.3	2.7	2.3	3.0	3.1	4.3	5.0	5.5	4.3	2.7	2.6
12.....	2.4	2.5	2.7	2.4	3.0	3.1	4.3	5.3	5.5	4.1	2.7	2.6
13.....	2.3	2.4	2.6	2.6	3.1	3.1	4.0	5.1	5.9	4.1	2.6	2.6
14.....	2.3	2.4	2.5	2.7	3.1	3.15	4.1	4.9	5.5	4.1	2.8	2.6
15.....	2.3	2.3	2.5	2.8	3.1	3.1	4.0	4.6	5.8	4.3	2.75	2.6
16.....	2.3	2.3	2.4	2.8	3.1	3.1	4.1	4.8	5.5	4.2	2.7	2.6
17.....	2.2	2.2	2.5	2.9	3.1	3.15	4.4	4.5	5.7	4.2	2.7	2.6
18.....	2.2	2.2	2.5	3.0	3.1	3.15	4.6	4.3	5.7	4.1	2.7	2.6
19.....	2.2	2.2	2.5	3.1	3.1	3.15	5.0	4.5	5.9	4.2	2.7	2.6
20.....	2.2	2.3	2.4	3.0	3.1	3.3	4.6	4.6	5.9	4.1	2.7	2.6
21.....	2.2	2.3	2.4	3.1	3.1	3.3	4.8	4.8	5.9	4.0	2.8	2.6
22.....	2.2	2.3	2.4	3.0	3.0	3.4	5.0	5.2	5.5	3.8	2.8	2.6
23.....	2.2	2.3	2.3	2.9	3.0	3.55	5.3	5.6	5.2	3.75	2.8	2.6
24.....	2.2	2.4	2.3	2.9	3.0	3.65	5.8	5.8	5.0	3.75	2.75	2.6
25.....	2.2	2.4	2.3	2.8	3.0	3.7	6.2	5.1	4.8	3.75	2.75	2.6
26.....	2.3	2.4	2.3	2.8	3.0	3.7	6.4	5.0	4.6	3.65	2.75	2.6
27.....	2.3	2.4	2.2	2.8	3.1	3.8	6.2	5.0	5.0	3.6	2.7	2.6
28.....	2.2	2.3	2.2	2.6	3.1	3.85	5.3	4.9	5.2	3.2	2.7	2.6
29.....	2.3	2.3	2.2	2.8	.....	4.0	5.1	5.1	4.8	3.2	2.7	2.5
30.....	2.3	2.3	2.2	3.4	.....	4.1	5.0	5.2	4.6	3.15	2.7	2.5
31.....	2.3	.....	2.3	3.6	.....	4.2	.....	5.0	.....	3.05	2.7	.....

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.									
1.....	2.6	2.6	2.6	3.0	2.4	2.35	2.5	2.8	3.8
2.....	2.6	2.6	2.6	3.0	2.4	2.3	2.55	2.8	3.9
3.....	2.6	2.6	2.6	3.0	2.4	2.3	2.7	2.8	4.0
4.....	2.6	2.6	2.6	3.0	2.3	2.3	2.6	2.8	4.2
5.....	2.6	2.6	2.6	3.0	2.4	2.4	2.6	2.9	4.1
6.....	2.6	2.65	2.6	3.0	2.4	2.45	2.6	2.9	3.9
7.....	2.6	2.65	2.6	3.05	2.4	2.4	2.7	2.95	3.9
8.....	2.6	2.65	2.6	3.1	2.4	2.4	2.8	3.15	3.8
9.....	2.6	2.65	2.6	3.1	2.4	2.35	2.8	3.3	3.5
10.....	2.6	2.7	2.6	3.0	2.4	2.5	2.75	3.4	3.3
11.....	2.55	2.65	2.7	3.0	2.4	2.5	2.6	3.8	3.4
12.....	2.55	2.65	2.65	3.0	2.4	2.4	2.55	3.8	3.4
13.....	2.55	2.65	2.6	3.0	2.4	2.4	2.45	4.0	3.7
14.....	2.55	2.6	2.5	2.9	2.4	2.5	2.35	4.0	3.4
15.....	2.55	2.6	2.55	2.9	2.4	2.4	2.4	4.0	3.2

Daily gage height, in feet, of Truckee River near Nevada-California State line, for 1899-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.									
16.	2.55	2.65	2.6	2.9	2.4	2.4	2.35	4.2	3.0
17.	2.6	2.65	2.55	2.65	2.4	2.5	2.5	4.0	3.0
18.	2.6	2.65	2.5	2.6	2.45	2.5	2.6	4.1	3.0
19.	2.6	2.65	2.55	2.35	2.5	2.5	2.6	4.1	2.9
20.	2.6	2.65	2.5	2.4	2.45	2.55	2.45	3.7	2.9
21.	2.6	2.65	2.6	2.4	2.45	2.4	2.3	3.6	2.8
22.	2.55	2.65	2.5	2.4	2.4	2.4	2.45	3.3	2.8
23.	2.55	2.6	2.6	2.4	2.45	2.4	2.35	3.2	2.6
24.	2.55	2.65	2.6	2.35	2.4	2.3	2.45	3.1	2.7
25.	2.55	2.6	2.9	2.4	2.45	2.5	2.5	3.1	2.6
26.	2.55	2.6	2.9	2.4	2.4	2.55	2.5	3.1	2.5
27.	2.6	2.6	2.9	2.4	2.4	2.6	2.5	3.1	2.5
28.	2.6	2.65	2.9	2.3	2.4	2.6	2.6	3.3	2.5
29.	2.6	2.6	2.9	2.45	2.4	2.7	2.7	3.05	2.5
30.	2.6	2.65	2.9	2.4	.....	2.6	2.8	3.9	2.4
31.	2.6	.....	2.85	2.4	.....	2.3	.....	3.75	.....

NOTE.—Beginning July 1, 1909, gage heights refer to new gage. No relation determined between the new and old gage.

Rating tables for Truckee River at Nevada-California State line.

September 7, 1899, to December 31, 1900.

Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.
Feet.	Sec.-ft.	Feet.	Sec.-ft.	Feet.	Sec.-ft.	Feet.	Sec.-ft.
1.60	205	2.40	486	3.20	897	4.00	1,409
1.80	204	2.60	552	3.40	1,010	4.20	1,566
2.00	328	2.80	683	3.60	1,131	4.40	1,725
2.20	401	3.00	788	3.80	1,264	4.60	1,885

January 1, 1901, to December 31, 1903.

1.30	247	2.30	613	3.30	1,268	4.30	2,173
1.40	268	2.40	671	3.40	1,345	4.40	2,280
1.50	292	2.50	732	3.50	1,425	4.50	2,391
1.60	319	2.60	795	3.60	1,508	4.60	2,505
1.70	349	2.70	859	3.70	1,594	4.80	2,745
1.80	383	2.80	924	3.80	1,683	5.00	3,002
1.90	421	2.90	989	3.90	1,775	5.20	3,283
2.00	463	3.00	1,055	4.00	1,870	5.40	3,596
2.10	509	3.10	1,123	4.10	1,968	5.60	3,953
2.20	559	3.20	1,194	4.20	2,069	5.80	4,370

January 1 to December 31, 1904.

1.60	230	2.80	956	4.00	2,070	5.20	3,370
1.70	271	2.90	1,040	4.10	2,170	5.30	3,490
1.80	314	3.00	1,126	4.20	2,270	5.40	3,610
1.90	361	3.10	1,213	4.30	2,370	5.50	3,730
2.00	412	3.20	1,302	4.40	2,470	5.60	3,850
2.10	467	3.30	1,393	4.50	2,580	5.70	3,970
2.20	526	3.40	1,486	4.60	2,690	5.80	4,090
2.30	589	3.50	1,580	4.70	2,800	5.90	4,210
2.40	656	3.60	1,676	4.80	2,910	6.00	4,330
2.50	725	3.70	1,772	4.90	3,020	6.20	4,570
2.60	798	3.80	1,870	5.00	3,130	6.40	4,810
2.70	875	3.90	1,970	5.10	3,250		

NOTE.—Table applicable only to open channel. It is based upon 15 discharge measurements made during 1903 and 1904 and is well defined between gage heights 2.10 feet and 5.75 feet.

*Rating tables for Truckee River at Nevada-California State line—Continued.***January 1, 1905, to April 15, 1906.**

Gage height.	Discharge.	Gage height.	Discharge.	Gage height.	Discharge.	Gage height.	Discharge.
<i>Feet.</i>	<i>Sec.-ft.</i>	<i>Feet.</i>	<i>Sec.-ft.</i>	<i>Feet.</i>	<i>Sec.-ft.</i>	<i>Feet.</i>	<i>Sec.-ft.</i>
1.70	300	2.10	496	2.50	740	2.90	1,042
1.80	346	2.20	551	2.60	810	3.00	1,126
1.90	394	2.30	610	2.75	884		
2.00	444	2.40	673	2.80	961		

NOTE.—Table applicable only to open channel. It is based on discharge measurement made during 1903-1906 and is well defined. Above gage height 3.00 feet it is the same as the 1904 table.

April 16, 1906, to March 16, 1907.

2.30	460	3.30	1,155	4.30	2,100	5.60	3,480
2.40	520	3.40	1,240	4.40	2,200	5.80	3,710
2.50	580	3.50	1,325	4.50	2,300	6.00	3,950
2.60	645	3.60	1,415	4.60	2,400	6.20	4,190
2.70	710	3.70	1,510	4.70	2,500	6.40	4,430
2.80	780	3.80	1,605	4.80	2,600	6.60	4,670
2.90	850	3.90	1,700	4.90	2,710	6.80	4,920
3.00	920	4.00	1,800	5.00	2,820	7.00	5,180
3.10	995	4.10	1,900	5.20	3,040	7.20	5,440
3.20	1,075	4.20	2,000	5.40	3,260		

NOTE.—Table applicable only to open channel. It is based on 4 discharge measurements made during 1906 and the form of the previous curve, and is fairly well defined above gage heights 3 feet.

March 17, 1907, to May 31, 1908.

1.70	300	3.10	1,213	4.50	2,620	6.80	6,060
1.80	346	3.20	1,302	4.60	2,740	7.00	6,420
1.90	394	3.30	1,393	4.70	2,860	7.20	6,780
2.00	444	3.40	1,486	4.80	2,990	7.40	7,160
2.10	496	3.50	1,580	4.90	3,120	7.60	7,540
2.20	551	3.60	1,676	5.00	3,250	7.80	7,920
2.30	610	3.70	1,772	5.20	3,530	8.00	8,300
2.40	673	3.80	1,870	5.40	3,810	9.00	10,300
2.50	740	3.90	1,970	5.60	4,100	10.00	12,300
2.60	810	4.00	2,070	5.80	4,400	11.00	14,300
2.70	884	4.10	2,180	6.00	4,720	12.00	16,300
2.80	961	4.20	2,290	6.20	5,040		
2.90	1,042	4.30	2,400	6.40	5,380		
3.00	1,126	4.40	2,510	6.60	5,720		

NOTE.—Table applicable only to open channel. It is based on discharge measurements made during 1903 to 1908, and is well defined between gage heights 1.9 feet and 5.0 feet. Above gage height 5.0 feet the rating table is only approximate.

June 1 to December 31, 1908.

1.90	310	2.20	470	2.50	670	2.80	920
2.00	360	2.30	530	2.60	750	2.90	1,020
2.10	410	2.40	600	2.70	830	3.00	1,126

NOTE.—Table applicable only to open channel. It is based on 3 discharge measurements made during the period and on earlier high-water measurements, and is fairly well defined above gage height 2.1 feet. Above gage height 3.0 feet it is the same as the previous table.

Daily discharge, in second-feet, of Truckee River at Nevada-California State line for 1909-1912—Continued.

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.			
1909.												
1.....	385	1,070	1,070	1,470	3,700	3,190	2,620	950	735			
2.....	410	1,200	1,030	1,560	3,700	3,540	2,620	950	735			
3.....	410	1,160	1,110	1,660	3,770	3,540	2,480	950	735			
4.....	550	1,160	1,200	1,810	4,000	3,540	2,350	950	800			
5.....	870	1,110	1,110	1,760	4,540	3,540	2,220	870	735			
6.....	1,030	1,110	1,110	1,660	4,460	3,190	2,090	870	735			
7.....	685	1,030	1,110	1,760	4,540	2,920	1,730	800	675			
8.....	490	1,030	1,070	1,860	4,220	2,920	1,620	800	675			
9.....	410	1,030	1,030	1,960	4,070	2,720	1,410	735	675			
10.....	385	1,110	1,030	2,300	4,220	2,660	1,210	675	620			
11.....	460	1,200	1,030	2,180	3,700	2,660	1,210	675	620			
12.....	580	1,200	1,070	2,300	3,330	2,720	1,210	620	620			
13.....	950	1,200	1,030	2,660	2,860	2,860	1,030	620	565			
14.....	3,920	1,160	1,110	3,190	2,600	2,790	1,030	620	565			
15.....	7,260	1,200	1,200	3,540	2,980	2,860	950	620	565			
16.....	8,110	1,160	1,200	3,050	2,420	2,720	950	620	565			
17.....	4,960	1,200	1,380	4,000	2,300	2,720	870	675	565			
18.....	4,140	1,340	1,470	4,380	2,240	2,660	800	735	620			
19.....	2,860	1,290	1,380	4,300	2,300	2,480	735	735	620			
20.....	2,720	1,290	1,380	2,980	2,480	2,300	735	735	620			
21.....	3,400	1,200	1,340	3,050	2,600	2,420	735	735	620			
22.....	2,070	1,110	1,290	2,860	2,120	2,720	735	735	565			
23.....	1,660	1,160	1,240	3,050	1,910	2,920	800	735	565			
24.....	1,560	1,200	1,200	3,120	1,810	2,720	1,030	800	620			
25.....	1,620	1,070	1,200	3,330	1,810	2,860	1,030	800	620			
26.....	1,470	1,030	1,160	2,860	2,120	2,720	1,030	800	620			
27.....	1,470	1,030	1,160	3,840	2,300	2,720	1,030	800	620			
28.....	1,380	1,070	1,160	4,000	2,540	2,660	950	800	620			
29.....	1,290	.....	1,160	3,920	2,070	2,540	950	735	675			
30.....	1,200	.....	1,110	3,920	1,960	2,660	950	735	675			
31.....	1,110	.....	1,160	.....	2,240	.....	950	735	.....		
Day.	Oct.	Nov.	Dec.	Jan.	Feb	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909-10.												
1.....	675	565	1,730	735	1,310	1,210	1,060	2,040	1,260	703	786	562
2.....	675	565	2,620	1,510	1,310	1,210	1,160	1,920	1,160	703	786	562
3.....	675	565	1,730	1,410	1,735	1,410	1,260	1,580	1,060	703	703	562
4.....	735	620	1,120	1,310	1,030	1,510	1,470	1,470	1,060	703	703	562
5.....	675	565	1,030	1,310	1,030	1,620	1,690	1,360	964	786	703	562
6.....	675	565	1,120	1,310	1,120	1,730	1,690	1,360	786	703	703	562
7.....	675	565	1,030	1,210	1,210	1,730	1,800	1,360	786	703	703	562
8.....	675	565	1,120	1,210	1,210	1,730	1,920	1,360	873	628	703	562
9.....	620	565	1,410	1,210	1,210	1,730	1,920	1,360	873	628	703	504
10.....	620	620	1,210	1,120	1,210	1,970	2,040	1,470	1,260	703	703	504
11.....	620	620	1,120	1,120	1,210	1,970	2,160	1,470	1,160	703	703	504
12.....	565	620	1,120	1,210	1,210	2,090	1,800	1,470	1,160	703	703	504
13.....	565	565	1,030	1,210	1,210	2,090	1,800	1,360	1,060	786	703	504
14.....	620	620	1,030	1,120	1,210	1,850	1,800	1,470	1,060	873	703	504
15.....	565	620	1,030	1,210	1,310	1,510	1,800	1,580	964	873	703	562
16.....	620	675	1,030	1,310	1,210	1,510	1,920	1,470	873	873	703	504
17.....	565	735	1,030	1,210	1,210	1,730	2,040	1,470	873	873	703	504
18.....	565	950	1,030	1,210	1,210	2,350	2,160	1,470	873	873	703	504
19.....	565	1,410	950	1,210	1,120	3,890	2,160	1,360	873	786	628	504
20.....	620	2,090	950	1,210	1,210	3,080	2,160	1,360	703	786	628	457
21.....	620	2,090	950	1,210	1,210	2,290	2,040	1,260	703	562	628	457
22.....	565	2,090	950	1,310	1,210	1,920	2,160	1,260	703	562	628	457
23.....	515	1,620	950	1,410	1,120	1,690	2,290	1,360	703	562	628	385
24.....	515	2,090	870	1,310	1,120	1,360	2,290	1,360	873	964	628	418
25.....	565	1,970	515	1,310	1,210	1,160	2,290	1,260	964	873	628	418
26.....	565	1,620	870	1,310	1,210	964	2,420	1,360	1,060	873	628	418
27.....	565	1,120	870	1,310	1,210	964	2,550	1,360	1,060	786	628	504
28.....	565	1,120	870	1,310	1,210	964	2,810	1,360	964	786	562	457
29.....	620	1,030	870	1,310	.....	873	2,420	1,360	703	786	562	418
30.....	620	1,030	1,120	1,310	.....	1,060	2,420	1,260	873	786	562	457
31.....	620	.....	1,120	1,310	.....	1,060	.....	1,260	.....	786	562	.....

Daily discharge, in second-feet, of Truckee River at Nevada-California State line for 1909-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.												
1.....	457	418	418	385	1,480	918	2,530	3,780	3,460	2,830	873	628
2.....	457	385	418	385	1,260	873	2,830	3,140	3,780	2,680	786	628
3.....	457	385	457	418	1,260	873	3,300	3,780	4,280	2,830	628	628
4.....	504	385	504	418	1,160	873	3,300	4,450	4,620	2,830	744	628
5.....	504	385	504	418	873	873	2,830	5,470	4,960	2,680	744	628
6.....	418	385	504	385	873	873	2,980	3,940	4,960	2,680	744	628
7.....	504	385	504	418	873	873	3,140	3,620	4,280	2,680	703	628
8.....	457	385	504	418	873	786	2,980	4,280	4,280	2,680	703	595
9.....	457	418	504	418	873	918	3,140	3,780	4,450	2,530	666	595
10.....	457	418	562	418	873	918	2,680	3,140	4,280	2,360	703	628
11.....	504	418	628	418	873	964	2,380	3,460	4,280	2,380	628	562
12.....	457	504	628	457	873	964	2,380	3,940	4,280	2,100	628	562
13.....	418	457	562	562	964	964	1,970	3,620	4,960	2,100	562	562
14.....	418	457	504	628	964	1,010	2,100	3,300	4,280	2,100	703	562
15.....	418	418	504	703	964	964	1,970	2,830	4,790	2,380	666	562
16.....	418	418	457	703	964	964	2,100	3,140	4,280	2,230	628	498
17.....	385	385	504	786	964	1,010	2,530	2,680	4,620	2,230	628	498
18.....	385	385	504	873	964	1,010	2,830	2,380	4,620	2,100	628	498
19.....	385	385	504	964	964	1,010	3,460	2,680	4,960	2,230	628	498
20.....	385	418	457	873	964	1,160	2,830	2,830	4,960	2,100	628	498
21.....	385	418	457	964	964	1,160	3,140	3,140	4,960	1,970	703	498
22.....	385	418	457	873	873	1,260	3,460	3,780	4,280	1,710	703	498
23.....	385	418	418	786	873	1,420	3,940	4,450	3,780	1,650	703	498
24.....	385	457	418	786	873	1,540	4,790	4,790	3,460	1,650	666	498
25.....	385	457	418	703	873	1,590	5,470	3,620	3,140	1,650	666	498
26.....	418	457	418	703	873	1,590	5,830	3,460	2,830	1,540	666	498
27.....	418	457	385	703	964	1,710	5,470	3,460	3,460	1,480	628	498
28.....	385	418	385	562	964	1,780	3,940	3,300	3,780	1,060	628	498
29.....	418	418	385	703	-----	1,970	3,620	3,620	3,140	1,060	628	432
30.....	418	418	385	1,260	-----	2,100	3,460	3,780	2,830	1,010	628	432
31.....	418	-----	418	1,480	-----	2,230	-----	3,460	-----	918	628	-----
Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.			
1911-12.												
1.....		498	498	498	815	376	353	432	645	1,710		
2.....		498	498	498	815	376	330	465	645	1,840		
3.....		498	498	498	815	376	330	570	645	1,970		
4.....		498	498	498	815	330	330	498	645	2,230		
5.....		498	498	498	815	376	376	498	730	2,100		
6.....		498	534	498	815	376	404	498	730	1,840		
7.....		498	534	498	862	376	376	570	772	1,840		
8.....		498	534	498	910	376	376	645	960	1,710		
9.....		498	534	498	910	376	353	645	1,110	1,330		
10.....		498	570	498	815	376	432	608	1,220	1,110		
11.....		465	534	570	815	376	432	498	1,710	1,220		
12.....		465	534	534	815	376	376	465	1,710	1,220		
13.....		465	534	498	815	376	376	464	1,970	1,580		
14.....		465	498	432	730	376	432	353	1,970	1,220		
15.....		465	498	465	730	376	376	376	1,970	1,010		
16.....		465	534	498	730	376	376	353	2,230	815		
17.....		498	534	465	534	376	432	432	1,970	815		
18.....		498	534	432	498	404	432	498	2,100	815		
19.....		498	534	465	353	432	432	498	2,100	730		
20.....		498	534	432	376	404	465	404	1,580	730		
21.....		498	534	498	376	404	376	330	1,450	645		
22.....		465	534	432	376	376	376	404	1,110	645		
23.....		465	498	498	376	404	376	353	1,010	498		
24.....		465	534	498	353	376	330	404	910	570		
25.....		465	498	730	376	404	432	432	910	498		
26.....		465	498	730	376	376	465	432	910	432		
27.....		498	498	730	376	376	498	432	910	432		
28.....		498	534	730	330	376	498	498	1,110	432		
29.....		498	498	730	404	376	570	570	1,520	432		
30.....		498	534	730	376	-----	498	645	1,840	376		
31.....		498	-----	688	376	-----	330	-----	1,640	-----		

NOTE.—Daily discharge determined from rating curves applicable as follows: Jan. 1 to June 30, 1909, fairly well defined between 360 and 3,190 second-feet; July 1 to Dec. 31, 1909, fairly well defined between 515 and 2,760 second-feet; Jan. 1, 1910, to June 30, 1912, well defined above 700 second-feet.

Monthly discharge of Truckee River near Nevada-California State line, for 1899-1912.

[Drainage area, 955 square miles.]

Month.	Discharge in second-feet.				Run-off.		Accu- racy.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.	Total in acre-feet	
1899.							
September 17-30.....	363	295	303	0.32	0.36	18,030	
1899-1900.							
October.....	632	295	354	.37	.43	21,767	
November.....	1,566	295	581	.61	.68	34,572	
December.....	328	264	295	.31	.36	18,139	
January.....	897	295	392	.41	.47	24,103	
February.....	363	264	318	.33	.34	17,661	
March.....	1,131	295	797	.83	.96	49,006	
April.....	1,409	735	902	.94	1.05	53,673	
May.....	1,885	1,196	1,528	1.60	1.84	93,953	
June.....	1,409	328	950	.99	1.10	56,529	
July.....	533	401	459	.48	.55	28,223	
August.....	486	328	396	.41	.47	24,349	
September.....	486	205	367	.38	.42	21,838	
The year.....	1,885	205	612	.641	8.67	444,000	
1900-1901.							
October.....	897	234	481	.50	.58	29,575	
November.....	897	328	480	.50	.56	28,562	
December.....	1,131	205	407	.43	.50	25,025	
January.....	559	230	314	.329	.38	19,308	
February.....	3,435	247	1,082	1.133	1.18	60,092	
March.....	2,280	732	1,280	1.340	1.54	78,708	
April.....	2,505	613	1,476	1.545	1.73	87,829	
May.....	4,370	1,508	2,478	2.595	2.99	152,370	
June.....	2,505	989	1,595	1.670	1.86	94,910	
July.....	1,194	421	686	.718	.83	42,181	
August.....	795	349	486	.509	.59	29,884	
September.....	559	247	472	.494	.55	28,086	
The year.....	4,370	205	936	.980	13.29	677,000	
1901-2.							
October.....	559	247	470	.492	.57	28,900	
November.....	613	383	469	.491	.55	27,908	
December.....	1,194	247	445	.466	.54	27,347	
January.....	421	268	322	.337	.39	19,799	
February.....	1,194	268	506	.530	.55	28,102	
March.....	671	292	402	.421	.49	24,718	
April.....	3,596	509	1,656	1.734	1.93	98,539	
May.....	2,745	1,194	1,927	2.018	2.33	118,487	
June.....	1,968	732	1,358	1.422	1.59	80,807	
July.....	1,055	349	501	.525	.61	30,805	
August.....	559	383	506	.530	.61	31,113	
September.....	559	421	482	.505	.56	28,681	
The year.....	3,596	247	754	.789	10.72	545,000	
1902-3.							
October.....	559	383	450	.471	.54	27,669	
November.....	732	292	416	.436	.49	24,754	
December.....	671	383	482	.505	.58	29,637	
January.....	989	292	522	.55	.63	32,097	
February.....	586	280	463	.49	.51	25,714	
March.....	3,211	334	686	.72	.83	42,180	
April.....	1,968	891	1,301	1.36	1.52	77,415	
May.....	2,391	969	1,658	1.74	2.01	101,946	
June.....	1,822	720	1,148	1.20	1.34	68,311	
July.....	846	455	513	.54	.62	31,543	
August.....	613	463	490	.51	.59	30,129	
September.....	559	421	489	.51	.57	29,098	
The year.....	3,211	280	718	.752	10.23	520,000	

Monthly discharge of Truckee River near Nevada-California State line, for 1899-1912—
Continued.

Month.	Discharge in second-feet.				Run-off.		Accu- racy.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.	Total in acre-feet.	
1903-4.							
October.....	613	442	507	0.53	0.61	31,174	
November.....	2,745	421	855	.90	1.00	50,876	
December.....	486	292	403	.42	.48	24,780	
January.....	725	230	419	.439	.51	25,760	
February.....	6,730	337	1,351	1.41	1.52	77,710	
March.....	4,930	1,257	2,469	2.59	2.99	151,800	
April.....	4,906	2,020	2,897	3.03	3.38	172,400	
May.....	4,930	2,220	3,706	3.73	4.47	227,900	
June.....	3,550	2,120	2,751	2.88	3.21	163,700	
July.....	2,020	1,083	1,497	1.57	1.81	92,050	
August.....	1,257	836	1,017	1.06	1.22	62,530	
September.....	1,083	836	903	.946	1.06	53,750	
The year.....	6,730	230	1,560	1.64	22.26	1,130,000	
1904-5.							
October.....	1,821	739	1,029	1.08	1.24	63,270	
November.....	1,083	798	893	.935	1.04	53,140	
December.....	1,393	725	834	.873	1.01	51,280	
January.....	961	551	755	.791	.91	46,420	
February.....	1,228	580	754	.789	.82	41,880	
March.....	1,393	610	1,096	1.15	1.33	67,360	
April.....	2,090	673	1,114	1.17	1.30	66,260	
May.....	2,020	1,042	1,453	1.52	1.75	89,340	
June.....	1,439	642	1,115	1.17	1.30	66,350	
July.....	642	444	548	.574	.66	33,700	
August.....	540	444	503	.527	.61	30,930	
September.....	524	444	477	.499	.56	28,380	
The year.....	2,090	444	881	.923	12.53	638,000	
1905-6.							
October.....	551	444	487	.510	.59	29,940	
November.....	454	300	405	.424	.47	24,100	
December.....	429	300	366	.333	.44	22,500	
January.....	1,290	309	592	.620	.71	36,400	
February.....	1,040	580	746	.781	.81	41,400	
March.....	1,970	740	1,130	1.18	1.36	69,500	
April.....	5,120	1,130	2,850	2.98	3.32	170,000	
May.....	5,410	1,600	3,650	3.82	4.40	224,000	
June.....	4,250	1,800	2,830	2.96	3.30	168,000	
July.....	2,820	920	1,800	1.88	2.17	111,000	
August.....	850	645	763	.799	.92	46,900	
September.....	745	645	675	.707	.79	40,200	
The year.....	5,410	300	1,360	1.42	19.28	984,000	
1906-7.							
October.....	745	490	629	.659	.76	38,700	
November.....	906	550	670	.702	.78	39,900	
December.....	976	550	662	.693	.80	40,700	
January.....	80	645	702	.735	.85	43,200	B.
February.....	1,850	850	1,220	1.28	1.33	67,800	B.
March.....	15,300	920	2,590	2.71	3.12	159,000	C.
April.....	6,420	2,070	3,880	4.06	4.53	231,000	B.
May.....	5,210	3,250	3,980	4.17	4.81	245,000	B.
June.....	4,960	2,560	3,570	3.74	4.17	212,000	A.
July.....	3,810	2,180	2,720	2.85	3.29	167,000	A.
August.....	2,120	1,490	1,680	1.76	2.03	103,000	A.
September.....	1,530	1,300	1,430	1.50	1.67	85,100	A.
The year.....	15,300	490	1,980	2.07	28.14	1,430,000	
1907-8.							
October.....	1,390	673	1,200	1.26	1.45	73,800	A.
November.....	1,210	884	1,080	1.13	1.26	64,300	A.
December.....	1,350	884	1,040	1.09	1.26	64,000	B.
January.....	1,130	961	1,020	1.07	1.23	62,700	B.
February.....	1,130	884	938	.982	1.06	54,000	B.
March.....	1,580	884	1,140	1.19	1.37	70,100	B.
April.....	1,870	961	1,360	1.42	1.58	80,900	B.
May.....	1,530	810	1,040	1.09	1.26	64,000	B.
June.....	1,260	600	893	.935	1.04	53,100	B.
July.....	790	440	550	.576	.66	33,800	B.
August.....	750	440	544	.570	.66	33,400	B.
September.....	500	360	448	.469	.52	26,700	B.
The year.....	1,870	360	938	.982	13.35	681,000	

Monthly discharge of Truckee River near Nevada-California State line, for 1899-1912—
Continued.

Month.	Discharge in second-feet.				Run-off.		Accu- racy.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.	Total in acre-feet.	
1908-9.							
October.....	670	335	445	0.466	0.54	27,400	B.
November.....	470	360	394	.413	.46	23,400	B.
December.....	410	310	370	.387	.45	22,800	B.
January.....	8,110	385	1,930	2.02	2.33	119,000	B.
February.....	1,340	1,030	1,150	1.20	1.25	63,900	A.
March.....	1,470	1,030	1,170	1.23	1.42	71,900	A.
April.....	4,380	1,470	2,810	2.94	3.28	167,000	B.
May.....	4,540	1,810	2,960	3.10	3.57	182,000	B.
June.....	3,540	2,300	2,850	2.98	3.32	170,000	B.
July.....	2,620	735	1,320	1.38	1.59	81,200	A.
August.....	950	620	762	.798	.92	46,900	A.
September.....	800	565	642	.672	.75	38,200	A.
The year.....	8,110	310	1,400	1.47	19.88	1,010,000	
1909-10.							
October.....	735	515	610	.639	.74	37,500	A.
November.....	2,090	565	1,010	1.06	1.17	60,100	A.
December.....	2,620	515	1,110	1.16	1.34	68,200	A.
January.....	1,510	735	1,250	1.31	1.51	76,900	B.
February.....	1,310	735	1,180	1.24	1.29	65,500	B.
March.....	3,890	873	1,680	1.76	2.03	103,000	B.
April.....	2,810	1,060	1,980	2.07	2.31	118,000	A.
May.....	2,040	1,260	1,430	1.50	1.73	87,900	B.
June.....	1,260	703	943	.988	1.10	56,100	B.
July.....	964	562	755	.791	.91	46,400	B.
August.....	786	562	668	.699	.81	41,100	B.
September.....	562	385	498	.521	.58	29,600	B.
The year.....	3,890	385	1,090	1.14	15.52	790,000	
1910-11.							
October.....	504	385	427	.447	.52	26,300	C.
November.....	504	385	418	.438	.49	24,900	C.
December.....	628	385	473	.495	.57	29,100	B.
January.....	1,480	385	664	.695	.80	40,800	B.
February.....	1,480	873	968	1.01	1.05	53,800	B.
March.....	2,230	786	1,200	1.26	1.45	73,800	B.
April.....	5,830	1,970	3,250	3.40	3.79	193,000	A.
May.....	5,470	2,380	3,580	3.75	4.32	220,000	A.
June.....	4,960	2,380	4,170	4.37	4.88	248,000	A.
July.....	2,830	918	2,080	2.18	2.51	128,000	A.
August.....	873	562	673	.705	.81	41,400	B.
September.....	628	432	545	.571	.64	32,400	B.
The year.....	5,830	385	1,540	1.61	21.83	1,110,000	
1911-12.							
October.....	498	465	486	.509	.59	29,900	B.
November.....	570	498	521	.546	.61	31,000	B.
December.....	730	432	541	.566	.65	33,300	B.
January.....	910	330	609	.638	.74	37,400	B.
February.....	432	330	381	.399	.43	21,900	B.
March.....	570	330	404	.423	.49	24,800	B.
April.....	645	330	474	.496	.55	28,200	B.
May.....	2,230	645	1,310	1.37	1.58	80,600	B.
June.....	2,230	376	1,090	1.14	1.27	64,900	B.
The period.....						352,000	

NOTE.—Values for winter periods may be somewhat in error on account of ice.

DONNER CREEK AT DONNER LAKE, NEAR TRUCKEE, CAL.

This station is located at the outlet of Donner Lake, in the SW. $\frac{1}{4}$ NW. $\frac{1}{4}$ sec. 17, T. 17 N., R. 16 E., about half a mile above the mouth of Cold Creek and 3 miles west of Truckee.

The gage is a vertical staff at the footbridge from which discharge measurements are made. The drainage area above the station is about 13.6 square miles. During the winter season the flow is somewhat affected by ice. Otherwise the results are excellent.

The following records for daily discharge were furnished by the Stone & Webster Engineering Corporation:

Daily discharge, in second-feet, of Donner Creek at Donner Lake, near Truckee, Cal., for 1909-10.

Day.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.
1909-10.										
1.....	1	113	17	7	7	73	104	65	9	1
2.....	1	113	14	7	5	73	104	65	7	1
3.....	1	113	14	7	7	73	100	60	7	1
4.....	1	113	11	7	9	78	100	60	7	1
5.....	1	113	11	7	43	78	100	56	7	1
6.....	1	113	11	7	43	78	100	17	7	1
7.....	1	113	11	7	43	78	95	17	5	1
8.....	1	108	11	7	52	82	95	17	5	1
9.....	1	108	11	7	52	82	95	17	5	1
10.....	1	104	11	5	56	87	95	17	5	1
11.....	2	95	11	5	60	91	100	17	5	1
12.....	2	91	11	21	60	95	100	17	5	1
13.....	2	91	11	21	60	100	95	14	5	1
14.....	2	87	11	21	60	100	95	14	5	1
15.....	2	78	11	17	60	100	95	14	4	1
16.....	2	60	11	17	60	100	95	14	4	1
17.....	2	14	9	17	60	100	87	14	4	1
18.....	2	14	9	17	65	104	87	14	4	1
19.....	3	14	9	17	65	104	87	11	4	1
20.....	4	14	9	14	65	104	82	11	3	1
21.....	14	4	9	14	65	104	82	11	3	1
22.....	43	4	11	11	65	100	82	11	3	1
23.....	56	4	11	11	69	100	78	11	2	1
24.....	113	4	11	9	69	100	78	11	2	1
25.....	121	7	9	9	69	104	78	11	1	1
26.....	113	14	9	7	73	104	78	9	1	1
27.....	104	14	9	7	78	104	78	9	1	1
28.....	104	14	9	7	82	104	73	9	1	1
29.....	104	14	9	-----	78	104	73	9	1	1
30.....	104	14	9	-----	78	104	69	9	1	1
31.....	-----	17	9	-----	73	-----	69	-----	1	1

Monthly discharge of Donner Creek at Donner Lake, near Truckee, Cal., for 1909-10.

[Drainage area, 13.6 square miles.]

Month.	Discharge in second-feet.				Run-off.	
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.	Total in acre-feet.
November.....	121	1	30.3	2.23	2.49	1,800
December.....	113	4	57.4	4.22	4.86	3,530
January.....	17	9	10.6	.779	.90	652
February.....	21	5	11.1	.816	.85	616
March.....	82	5	55.8	4.10	4.73	3,430
April.....	104	73	93.6	6.88	7.68	5,570
May.....	104	69	88.7	6.52	7.52	5,450
June.....	65	9	21.0	1.54	1.72	1,250
July.....	9	1	4.0	.294	.34	246
August.....	1	1	1.0	.074	.09	61
The period.....	-----	-----	-----	-----	-----	22,600

NOTE.—Monthly values computed by engineers of the United States Geological Survey.

DONNER CREEK NEAR TRUCKEE, CAL.

This station, which is located 150 feet below the dam of the Donner Creek Ice Co., $1\frac{1}{2}$ miles west of Truckee, Cal., in NE. $\frac{1}{4}$ sec. 17, T. 17 N., R. 16 E., and below the mouth of Cold Creek, the principal tributary, was established October 23, 1902, to determine the amount of water available for storage in Donner Lake for use on the Truckee-Carson project.

Four different gages were used during 1909. Previous to June 1, 1909, all gage heights are referred to the datum of the old gage. Beginning June 1, 1909, they refer to a permanent inclined gage installed September 12, 1909, about 40 feet downstream from the old gage.

Discharge measurements are made from a cable and car.

The relation between gage height and discharge is probably not greatly affected by ice, but it is affected by the raising and lowering of the gates of the storage dam at the outlet of Donner Lake.

This station has been maintained in cooperation with the United States Reclamation Service.

The record is considered reliable.

Discharge measurements of Donner Creek near Truckee, Cal., in 1902-1911.

Date.	Hydrographer.	Gage height.	Discharge.	Date.	Hydrographer.	Gage height.	Discharge.
		<i>Feet.</i>	<i>Sec.-feet.</i>			<i>Feet.</i>	<i>Sec.-feet.</i>
1902.				1907.			
Oct. 22	E. C. Murphy.....	1.80	3.25	May 22	Nicholas and Porter....	3.90	384
1903.				June 28	E. A. Porter.....	3.25	218
June 21	G. B. Lorenz.....	2.80	106	July 26	.....do.....	2.40	84
July 20	.....do.....	1.80	11	Aug. 13	.....do.....	2.00	30
July 31	.....do.....	1.60	5	1908.			
Aug. 31	.....do.....	1.40	1	May 12	E. A. Porter.....	2.70	138
1904.				July 7	M. B. Kennedy.....	2.15	58
May 13	W. A. Wolf.....	4.60	559	Oct. 16	E. A. Porter.....	1.20	a 3.4
May 26	.....do.....	4.55	536	1909.			
June 11	.....do.....	3.80	334	Mar. 2	E. A. Porter.....	2.10	52
July 17	A. E. Chandler.....	3.53	264	May 19	L. J. Towne.....	2.40	314
July 13	W. A. Wolf.....	2.25	46	June 10	.....do.....	2.50	350
July 23	.....do.....	2.20	43	July 2	.....do.....	1.85	166
Aug. 13	.....do.....	1.55	11	July 23	.....do.....	.90	32
Aug. 29	.....do.....	1.35	4	1910.			
Nov. 16	.....do.....	1.60	12	Mar. 21	F. C. Shafer.....	1.60	228
1905.				Aug. 26	.....do.....	.00	4.5
Apr. 15	W. A. Wolf.....	3.06	157	Sept. 20	T. W. Norcross.....	.13	2.6
May 12	.....do.....	3.01	156	Dec. 14	D. S. Stuver.....	.42	20
May 23	.....do.....	3.42	224	1911.			
June 26	.....do.....	2.12	37	Apr. 15	J. E. Stewart.....	1.13	133
July 6	.....do.....	1.74	16.0	June 5	.....do.....	2.39	556
July 27	.....do.....	1.15	1.0	Aug. 5	G. T. Peekema.....	.08	24
Aug. 2	.....do.....	.90	.2	Sept. 26	F. C. Ebert.....	— .25	4.6
Sept. 9	.....do.....	1.00	.5				
1906.							
May 31	M. B. Kennedy.....	3.40	323				
June 29	.....do.....	3.60	330				
Aug. 1	.....do.....	1.65	35				

a Discharge estimated.

NOTE.—Beginning May 19, 1909, gage heights refer to new gage installed Sept. 12, 1909.

Daily gage height, in feet, of Donner Creek near Truckee, Cal., for 1902-1912.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1902-3.												
1	-----	1.6	1.8	2.3	2.5	2.4	3.35	3.65	4.0	2.4	1.65	1.45
2	-----	1.6	1.8	2.35	2.5	2.4	3.3	3.75	3.8	2.4	1.65	1.45
3	-----	1.6	1.9	2.3	2.5	2.4	3.1	3.8	3.7	2.4	1.6	1.4
4	-----	1.6	1.9	2.3	2.5	2.4	3.1	4.05	3.6	2.4	1.6	1.4
5	-----	1.6	1.9	2.3	2.5	2.4	3.15	4.0	3.5	2.4	1.55	1.4
6	-----	1.6	2.0	2.3	2.5	2.4	3.0	4.15	3.5	2.3	1.55	1.4
7	-----	1.6	1.9	2.3	2.5	2.4	3.05	4.05	3.5	2.3	1.6	1.4
8	-----	1.6	1.9	2.3	2.5	2.4	3.1	4.05	3.4	2.3	1.6	1.4
9	-----	1.6	2.0	2.3	2.5	2.4	3.3	4.2	3.4	2.15	1.6	1.4
10	-----	2.05	2.0	2.4	2.5	2.4	3.3	4.2	3.35	2.1	1.6	1.4
11	-----	2.05	2.0	2.4	2.4	2.4	3.2	4.15	3.35	2.1	1.5	1.4
12	-----	1.85	1.95	2.35	2.4	2.4	3.05	4.3	3.3	1.9	1.9	1.4
13	-----	1.85	1.8	2.35	2.4	2.4	3.0	4.35	3.3	1.9	1.8	1.4
14	-----	2.2	1.9	2.3	2.4	2.4	3.1	3.95	3.1	1.9	1.8	1.4
15	-----	1.85	1.9	2.25	2.4	2.4	3.0	3.6	2.95	1.9	1.4	1.4
16	-----	2.0	1.9	2.25	2.4	2.4	2.9	4.1	3.15	1.9	1.4	1.4
17	-----	1.9	1.95	2.2	2.4	2.4	2.9	3.95	2.9	1.9	1.4	1.4
18	-----	2.2	1.9	2.2	2.4	2.4	2.9	3.8	3.0	1.85	1.4	1.4
19	-----	1.9	1.8	2.15	2.4	2.4	2.9	3.4	2.85	1.8	1.4	1.4
20	-----	1.8	1.8	2.2	2.4	2.4	2.9	3.35	2.9	1.8	1.3	1.4
21	-----	1.9	1.8	2.25	2.4	2.5	3.0	3.4	2.9	1.8	1.3	1.4
22	-----	1.9	1.8	2.2	2.4	2.8	3.15	3.7	2.8	1.8	1.3	1.4
23	-----	1.8	1.9	2.3	2.4	2.8	3.2	3.45	2.7	1.8	1.3	1.4
24	-----	1.82	1.9	1.85	2.7	2.4	2.8	3.35	3.5	2.75	1.7	1.35
25	-----	1.72	1.9	1.9	2.8	2.4	2.75	3.6	3.5	2.95	1.7	1.35
26	-----	1.6	1.9	1.8	2.5	2.4	2.75	3.6	3.5	2.75	1.65	1.4
27	-----	1.6	1.9	1.8	2.5	2.4	2.4	3.5	3.45	2.6	1.65	1.4
28	-----	1.6	1.9	1.75	2.7	2.4	3.0	3.5	3.45	2.45	1.65	1.4
29	-----	1.65	1.9	1.85	2.7	-----	3.0	3.6	3.65	2.45	1.65	1.4
30	-----	1.7	1.8	2.25	2.6	-----	4.1	3.6	3.85	2.4	1.65	1.4
31	-----	1.6	-----	2.35	2.5	-----	3.55	-----	4.05	-----	1.7	1.4
1903-4.												
1	1.4	1.45	2.45	1.6	2.0	3.3	3.65	3.35	4.2	3.15	1.8	1.35
2	1.4	1.45	2.45	1.6	2.0	3.85	3.6	3.3	4.4	3.05	1.7	1.35
3	2.1	1.45	2.45	1.8	2.0	4.3	3.6	3.35	4.35	2.85	1.7	1.3
4	1.65	1.48	2.4	2.05	2.0	4.8	3.5	3.4	4.35	2.75	1.7	1.3
5	1.45	1.5	1.9	1.85	1.9	4.35	3.5	3.55	4.25	2.7	1.7	1.3
6	1.4	1.4	1.75	2.0	1.9	4.1	3.5	3.75	4.3	2.7	1.7	1.3
7	1.4	1.58	1.9	2.0	1.9	4.2	3.5	3.95	4.3	2.7	1.7	1.3
8	1.4	2.1	1.9	2.0	2.0	4.4	3.55	4.15	4.25	2.57	1.6	1.3
9	1.45	2.1	1.9	2.0	2.0	4.05	3.6	4.3	4.15	2.45	1.6	1.3
10	1.5	2.0	1.9	2.0	2.0	4.0	3.6	4.4	3.9	2.4	1.55	1.3
11	1.5	2.0	1.8	2.0	2.0	3.85	3.8	4.35	3.9	2.45	1.55	1.3
12	1.45	2.9	1.8	2.0	2.0	3.75	4.0	4.5	3.75	2.3	1.55	1.3
13	1.45	3.2	1.8	2.0	2.0	3.65	4.25	4.6	3.7	2.2	1.5	1.55
14	1.45	3.1	1.8	2.0	2.0	3.6	4.25	4.65	3.7	2.1	1.5	2.6
15	1.5	2.9	1.8	2.0	2.15	3.5	4.25	4.65	3.7	2.1	1.45	2.55
16	1.5	2.7	1.8	2.05	2.8	3.5	4.05	4.75	3.6	1.7	1.45	2.5
17	1.5	2.75	1.8	2.0	2.75	3.45	3.95	4.75	3.5	1.6	1.45	2.4
18	1.5	2.9	1.7	2.0	2.5	4.1	4.0	4.55	3.5	2.15	1.5	2.3
19	1.5	2.8	1.7	2.5	2.5	4.45	4.0	4.35	3.5	2.25	1.5	2.25
20	1.5	3.0	1.7	2.5	2.4	4.05	3.9	4.3	3.55	2.2	1.45	2.2
21	1.45	3.9	1.7	2.0	2.55	4.05	3.8	4.65	3.55	2.1	1.4	2.15
22	1.45	3.55	1.7	2.0	4.3	4.6	3.65	5.1	3.6	2.1	1.4	2.1
23	1.45	3.45	1.7	2.0	4.9	4.45	3.6	5.1	3.5	2.1	1.4	2.1
24	1.45	3.25	1.7	2.0	5.05	4.2	3.5	4.7	3.35	2.1	1.4	2.3
25	1.52	3.05	1.7	2.0	3.95	4.05	3.5	4.75	3.3	2.1	1.45	2.3
26	1.45	3.0	1.7	2.0	3.7	3.9	3.45	4.55	3.3	2.1	1.45	2.3
27	1.45	2.9	1.7	2.0	3.6	3.9	3.4	4.5	3.3	2.0	1.45	2.35
28	1.45	2.85	1.7	2.0	3.5	4.2	3.4	4.6	3.3	1.95	1.4	2.05
29	1.45	2.25	1.7	2.0	3.4	4.05	3.4	4.55	3.3	1.9	1.4	2.0
30	1.45	2.7	1.7	2.0	-----	3.9	3.4	4.5	3.2	1.9	1.4	2.0
31	1.45	-----	1.7	2.0	-----	3.8	-----	4.35	-----	1.9	1.35	-----
1904-5.												
1	2.25	1.9	1.7	1.9	1.7	3.0	2.7	3.6	3.3	1.9	1.1	1.0
2	2.0	1.9	1.7	1.9	1.8	3.0	2.6	3.5	3.2	1.9	.95	2.25
3	1.85	1.9	1.7	1.9	1.8	3.0	2.6	3.45	3.15	1.9	.9	2.2
4	1.8	1.9	1.7	1.7	1.8	3.0	2.65	3.4	3.05	1.85	.9	1.1
5	1.8	1.6	1.4	1.7	1.8	3.05	2.75	3.35	3.0	1.8	1.0	1.2

Daily gage height, in feet, of Donner Creek near Truckee, Cal., for 1902-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1904-5.												
6.	1.85	1.35	1.4	1.7	1.8	3.1	2.8	3.3	3.0	1.75	1.05	1.15
7.	2.05	1.4	1.4	1.7	1.8	3.1	2.8	3.3	3.0	1.7	1.0	1.0
8.	2.05	1.6	1.4	1.7	1.7	3.0	2.9	3.3	3.0	1.7	1.0	1.0
9.	2.05	1.8	1.45	1.7	1.7	3.0	3.0	3.25	3.0	1.65	1.0	1.0
10.	2.6	1.8	1.5	1.6	1.7	3.0	3.1	3.15	3.0	1.6	1.0	1.0
11.	3.25	1.8	1.4	1.6	1.7	3.0	3.0	3.1	3.0	1.55	1.0	1.0
12.	2.85	1.8	1.4	1.6	1.9	3.0	3.1	3.05	3.0	1.55	1.0	1.0
13.	2.6	1.8	1.4	1.6	2.2	3.0	3.1	3.0	2.95	1.5	1.0	1.0
14.	2.55	1.8	1.4	1.9	2.2	2.9	3.1	3.1	2.95	1.45	1.0	1.0
15.	2.5	1.8	1.4	1.9	2.2	2.9	3.1	3.25	2.9	1.5	1.0	1.0
16.	2.45	1.6	1.4	1.9	2.2	2.8	3.1	3.5	2.85	1.4	1.0	1.0
17.	2.4	1.6	1.4	1.9	2.2	2.8	3.1	3.55	2.85	1.35	1.0	1.0
18.	2.3	1.45	1.4	1.8	2.2	2.8	3.05	3.6	2.85	1.3	1.0	1.0
19.	2.3	1.25	1.4	1.8	2.25	2.8	3.0	3.6	2.8	1.3	1.0	1.0
20.	2.3	1.2	1.4	1.7	2.5	2.8	3.0	3.5	2.8	1.25	1.0	1.0
21.	2.2	1.2	1.4	1.7	2.4	2.8	3.0	3.5	2.7	1.2	1.0	1.0
22.	2.2	1.2	1.4	1.9	2.3	2.8	3.0	3.5	2.55	1.15	1.0	1.0
23.	2.2	1.2	1.4	1.8	2.35	2.8	3.05	3.4	2.35	1.1	1.0	1.0
24.	2.1	1.2	1.4	1.8	2.35	2.8	3.1	3.4	2.25	1.2	1.0	1.0
25.	2.1	1.2	1.7	1.8	3.2	2.8	3.1	3.4	2.2	1.15	1.0	1.0
26.	2.0	1.65	1.64	1.7	3.15	2.8	3.5	3.4	2.15	1.15	1.0	1.0
27.	2.0	1.7	1.4	1.7	3.05	2.8	3.7	3.35	2.1	1.15	1.0	1.0
28.	2.0	1.7	1.4	1.8	3.0	2.8	3.6	3.3	2.1	1.15	1.0	1.0
29.	2.0	1.7	1.3	1.8	2.7	2.8	3.65	3.3	2.0	1.15	1.0	1.0
30.	2.0	1.7	1.8	1.7	2.7	2.7	3.6	3.3	2.0	1.15	1.0	1.0
31.	1.95	.....	2.35	1.7	.....	2.7	.....	3.3	.....	1.12	1.0	.....
1905-6.												
1.	1.0	0.65	2.2	1.9	1.9	2.05	2.6	3.55	3.55	3.95	1.75	1.2
2.	1.0	.75	.0	1.9	1.9	2.0	2.6	3.65	3.65	4.0	1.65	1.2
3.	.95	.8	.0	1.9	1.9	2.0	2.65	3.8	3.85	4.0	1.6	1.1
4.	.95	.8	.0	1.9	1.9	2.0	2.7	4.25	4.1	4.0	1.55	1.1
5.	.95	.8	.0	1.9	1.9	2.05	2.7	4.55	4.1	3.85	1.5	1.1
6.	.5	.85	.9	1.9	1.9	2.1	2.75	4.6	4.0	3.8	1.5	1.1
7.	.45	.9	.9	1.9	1.9	2.1	2.8	4.6	4.0	3.7	1.5	1.1
8.	1.0	.9	.9	1.9	1.9	2.1	2.8	4.6	4.05	3.7	1.5	1.1
9.	1.5	.9	.9	1.9	1.9	2.1	2.8	4.55	4.15	3.6	1.5	1.1
10.	1.6	.9	.9	2.0	1.9	2.2	2.8	4.3	4.2	3.45	1.45	1.1
11.	1.75	.9	.9	2.0	1.9	2.2	2.85	4.2	4.5	3.3	1.4	1.1
12.	1.6	.9	.9	2.0	1.9	2.3	2.9	4.1	4.7	3.4	1.4	1.1
13.	1.8	.9	.9	3.75	1.9	2.3	2.95	4.15	4.5	3.45	1.4	1.1
14.	1.8	.9	.9	2.0	1.9	2.3	3.0	4.15	4.1	3.3	1.4	1.1
15.	1.55	.9	.9	1.95	1.95	2.3	3.05	4.0	4.1	3.3	1.35	1.1
16.	1.35	1.2	.9	1.8	2.0	2.3	3.1	3.9	4.4	3.3	1.3	1.1
17.	1.15	1.15	.9	1.95	2.0	2.3	3.15	3.8	4.25	3.3	1.3	1.1
18.	1.05	.95	.9	2.05	2.1	2.3	3.25	3.95	4.05	3.3	1.25	1.15
19.	1.05	.9	.9	2.2	2.35	2.35	3.3	4.2	4.05	3.3	1.2	1.2
20.	1.0	.9	.9	2.2	2.25	2.4	3.35	4.5	4.25	3.2	1.2	1.2
21.	1.0	.9	.9	2.2	2.2	2.45	3.55	4.75	4.3	3.2	1.2	1.2
22.	1.0	.9	.9	2.15	2.2	2.5	3.6	4.65	4.2	3.1	1.2	1.2
23.	1.45	.9	.9	2.05	2.2	2.5	3.55	4.55	4.25	2.95	1.2	1.2
24.	1.8	.9	.9	2.05	2.2	2.5	3.4	4.3	4.2	2.7	1.2	1.2
25.	1.0	.9	.9	2.05	2.2	2.5	3.25	4.05	4.15	2.45	1.2	1.2
26.	.0	.9	.95	2.1	2.2	2.5	3.2	4.05	3.95	2.25	1.2	1.2
27.	.0	.9	1.0	2.1	2.2	2.5	3.2	3.85	3.8	2.15	1.2	1.2
28.	.0	.9	1.0	2.05	2.1	2.5	3.2	3.75	3.85	2.05	1.2	1.2
29.	.15	.9	1.0	2.0	2.1	2.55	3.2	3.7	3.9	2.0	1.2	1.2
30.	.45	.9	1.0	2.0	2.1	2.6	3.2	3.7	3.95	1.9	1.2	1.2
31.	.55	.....	1.0	2.0	2.1	2.6	.....	3.55	.....	1.85	1.2	.....
1906-7.												
1.	1.2	1.0	1.1	1.3	1.75	2.05	3.55	3.75	4.4	3.8	2.25	2.2
2.	1.2	1.0	1.1	1.3	2.5	2.3	3.5	3.8	4.6	3.75	2.2	2.2
3.	1.2	1.0	1.1	1.3	2.85	2.1	3.6	3.8	4.55	3.8	2.2	2.15
4.	1.2	1.45	1.1	1.25	2.75	2.1	3.6	3.65	4.6	3.7	2.15	2.1
5.	1.2	1.45	1.1	1.2	2.7	2.1	3.4	3.6	4.3	3.55	2.15	2.1
6.	1.2	1.35	1.1	1.2	2.6	2.2	3.25	3.55	4.25	3.45	2.1	2.1
7.	1.2	1.25	1.15	1.2	2.45	2.5	3.2	3.6	4.1	3.25	2.1	2.1
8.	1.2	1.2	1.25	1.25	2.4	2.4	3.15	3.6	3.9	3.25	2.1	2.1
9.	1.2	1.2	1.35	1.35	2.3	2.3	3.15	3.7	3.85	3.1	2.05	2.0
10.	1.2	1.2	1.5	1.4	2.25	2.5	3.25	3.95	4.0	3.1	2.0	2.0

Daily gage height, in feet, of Donner Creek near Truckee, Cal., for 1902-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1906-7.												
11.....	1.2	1.2	1.55	1.45	2.2	2.4	3.3	4.05	4.25	3.15	2.0	2.0
12.....	1.2	1.2	1.5	1.5	2.1	2.2	3.4	3.9	3.85	2.95	2.0	2.0
13.....	1.2	1.2	1.4	1.6	2.1	2.0	3.55	3.75	3.65	2.8	2.0	2.0
14.....	1.2	1.2	1.4	1.65	2.1	1.85	3.7	3.65	3.55	2.75	2.0	2.0
15.....	1.2	1.35	1.4	1.75	2.1	2.05	3.65	3.65	3.45	2.7	2.0	2.0
16.....	1.2	1.55	1.3	1.7	2.1	2.1	3.5	3.75	3.3	2.7	2.0	1.9
17.....	1.2	1.4	1.3	1.75	2.1	3.25	3.55	3.8	3.2	2.75	2.0	1.85
18.....	1.2	1.3	1.3	1.75	2.1	5.5	3.6	4.95	3.3	2.75	2.1	1.8
19.....		1.3	1.2	1.7	2.1	4.8	3.6	4.5	3.4	2.65	2.1	1.8
20.....		1.25	1.2	1.7	2.1	4.6	3.7	4.35	3.45	2.65	2.1	1.8
21.....		1.2	1.2	1.7	2.15	4.2	3.65	4.0	3.4	2.55	2.1	1.7
22.....		1.2	1.2	1.6	2.2	3.95	3.7	4.15	3.5	2.45	2.1	1.7
23.....		1.2	1.35	1.6	2.1	3.75	3.8	3.75	3.4	2.4	2.05	1.7
24.....		1.2	1.45	1.6	2.1	3.35	3.8	3.85	3.35	2.4	2.0	1.7
25.....	1.0	1.2	1.55	1.65	2.2	3.55	3.85	3.85	3.2	2.45	2.0	1.7
26.....	1.0	1.2	1.75	1.65	2.2	3.55	3.85	3.75	3.1	2.35	2.0	1.7
27.....	1.0	1.2	1.55	1.6	2.1	3.2	3.85	3.8	3.15	2.35	2.0	1.7
28.....	1.0	1.1	1.4	1.75	2.1	3.15	3.8	4.0	3.4	2.4	2.0	1.7
29.....	1.0	1.1	1.3	1.75		3.4	3.8	4.1	3.65	2.4	2.0	1.7
30.....	1.0	1.1	1.3	1.65		3.8	3.75	4.15	3.8	2.35	2.15	1.7
31.....	1.0		1.3	1.6		3.95		4.3		2.3	2.2	
1907-8.												
1.....	1.7	1.4	1.2	1.45	1.95	1.8	2.3	3.15	2.8	2.3	1.6	1.3
2.....	1.6	1.4	1.2	1.4	1.9	1.9	2.3	3.05	2.75	2.3	1.6	1.3
3.....	1.6	1.4	1.2	1.45	2.0	1.85	2.3	2.95	2.65	2.3	1.6	1.7
4.....	1.6	1.4	1.25	1.35	1.95	1.9	2.3	3.05	2.7	2.3	1.55	1.65
5.....	1.6	1.9	1.3	1.5	2.0	1.9	2.4	2.9	2.7	2.3	1.5	1.35
6.....	1.6	1.8	1.35	1.45	1.95	1.9	2.4	2.8	2.7	2.2	1.5	1.3
7.....	1.6	1.7	1.45	1.7	2.0	1.85	2.5	2.75	2.7	2.15	1.5	1.3
8.....	1.6	1.45	1.5	1.7	1.95	1.8	2.5	3.05	2.85	2.1	1.5	1.3
9.....	1.6	1.3	1.5	1.6	1.9	1.85	2.55	2.85	2.85	2.1	1.5	1.3
10.....	1.6	1.3	1.7	1.6	1.85	1.9	2.6	2.85	2.85	2.1	1.45	1.3
11.....	1.6	1.3	1.2	2.0	1.9	1.9	2.8	2.65	2.8	2.05	1.4	1.3
12.....	1.6	1.55	1.2	2.0	1.75	1.9	2.8	2.75	2.8	2.05	1.4	1.3
13.....	1.6	1.7	1.6	1.95	1.85	1.9	3.1	2.65	2.9	2.0	1.4	1.3
14.....	1.6	1.5	1.5	1.9	1.9	1.9	3.0	2.7	2.85	2.0	1.4	1.3
15.....	1.6	1.4	1.5	1.85	1.8	2.0	3.0	2.7	2.8	2.0	1.4	1.3
16.....	1.6	1.4	1.5	1.7	1.75	2.0	2.95	2.65	2.75	1.9	1.3	1.3
17.....	1.6	1.4	1.45	1.75	1.75	2.15	2.9	2.6	2.7	1.9	1.3	1.3
18.....	1.6	1.3	1.45	1.8	1.85	2.2	2.9	2.7	2.65	1.9	1.3	1.3
19.....	1.6	1.35	1.4	1.6	1.8	2.2	2.9	2.7	2.6	1.85	1.3	1.3
20.....	1.6	1.35	1.3	1.6	1.8	2.2	3.25	2.65	2.55	1.8	1.3	1.3
21.....	1.6	1.3	1.35	1.75	1.7	2.25	3.2	2.6	2.65	1.8	1.3	1.3
22.....	1.3	1.35	1.5	1.8	1.75	2.25	3.0	2.65	2.35	1.75	1.4	1.3
23.....	1.3	1.6	1.5	1.9	1.85	2.25	2.95	2.8	2.45	1.7	1.3	1.3
24.....	1.3	1.6	1.45	1.75	1.8	2.3	2.9	2.9	2.55	1.7	1.3	1.3
25.....	1.3	1.6	1.45	1.8	1.8	2.3	2.85	3.05	2.55	1.6	1.3	1.3
26.....	1.3	1.2	1.9	1.85	1.8	2.3	2.9	2.95	2.5	1.65	1.3	1.3
27.....	1.3	1.2	1.9	1.95	1.7	2.3	3.0	3.0	2.4	1.65	1.3	1.3
28.....	1.3	1.2	1.8	2.05	1.8	2.3	3.05	2.9	2.35	1.65	1.3	1.3
29.....	1.4	1.2	1.75	2.0	1.85	2.3	3.1	3.0	2.35	1.65	1.3	1.3
30.....	1.4	1.2	1.55	2.05		2.3	3.15	2.9	2.3	1.65	1.3	1.3
31.....	1.4		1.35	2.1		2.3		2.8		1.6	1.3	
1908-9.												
1.....	1.3	1.2	1.3	1.4	1.9	2.0	2.1	3.4	2.2	1.9	0.75	0.5
2.....	1.3	1.2	1.4	1.5	1.9	2.1	2.15	3.4	2.2	1.8	.7	.5
3.....	1.3	1.2	1.4	1.45	1.9	2.1	2.25	3.5	2.2	1.8	.7	.5
4.....	1.3	1.2	1.3	1.45	1.9	2.1	2.3	3.55	2.3	1.75	.7	.5
5.....	1.3	1.2	1.4	2.25	1.9	2.1	2.3	3.65	2.3	1.65	.65	.5
6.....	1.3	1.2	1.4	2.4	1.9	2.1	2.3	3.7	2.15	1.3	.6	.5
7.....	1.2	1.2	1.3	1.9	1.9	2.1	2.3	3.75	2.15	1.4	.65	.5
8.....	1.1	1.2	1.3	1.9	1.85	2.1	2.3	3.8	2.1	1.5	.65	.5
9.....	1.1	1.2	1.4	1.8	1.9	2.1	2.45	3.9	2.1	1.45	.6	.5
10.....	1.1	1.2	1.3	1.8	1.9	2.1	2.5	3.75	2.15	1.4	.6	.5
11.....	1.1	1.2	1.35	1.8	2.0	2.1	2.5	3.55	2.15	1.4	.6	.5
12.....	1.1	1.2	1.35	2.1	2.0	2.0	2.6	3.4	2.15	1.4	.6	.5
13.....	1.1	1.2	1.3	2.3	2.0	2.0	2.6	3.25	2.15	1.4	.6	.4
14.....	1.1	1.2	1.3	3.6	2.0	2.0	2.7	3.1	2.15	1.3	.6	.4
15.....	1.15	1.2	1.3	4.6	2.0	2.0	2.85	3.2	2.05	1.25	.6	.4

Daily gage height, in feet, of Donner Creek near Truckee, Cal., for 1902-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1908-9.												
16.	1.2	1.2	1.3	5.0	2.0	2.0	2.95	3.1	2.0	1.15	0.6	0.4
17.	1.15	1.2	1.3	4.85	2.0	2.05	3.05	3.1	1.9	1.0	.6	.4
18.	1.1	1.2	1.55	4.85	2.0	2.15	3.2	3.1	1.8	1.0	.6	.4
19.	1.1	1.2	1.8	4.6	1.9	2.2	3.2	3.15	1.4	.95	.6	.4
20.	1.1	1.2	1.7	4.5	1.9	2.2	3.0	3.2	1.4	.9	.6	.4
21.	1.1	1.3	1.7	4.4	1.9	2.2	3.0	3.2	1.4	.9	.6	.4
22.	1.1	1.5	1.7	3.9	1.95	2.2	2.95	3.1	1.5	.9	.6	.4
23.	1.1	1.6	1.7	3.45	1.9	2.15	3.0	3.05	1.55	.9	.6	.4
24.	1.1	1.6	1.7	2.0	2.0	2.1	3.0	3.05	1.45	.85	.6	.4
25.	1.1	1.5	1.7	2.0	2.0	2.1	3.0	3.05	1.4	.8	.6	.4
26.	1.1	1.3	1.7	2.0	2.0	2.1	3.1	3.2	1.35	.8	.6	.4
27.	1.1	1.3	1.7	2.0	2.0	2.1	3.2	3.35	1.3	.8	.6	.4
28.	1.1	1.3	1.7	2.0	2.0	2.1	3.35	3.25	1.25	.8	.6	.3
29.	1.1	1.3	1.7	2.0	-----	2.05	3.3	3.1	1.2	.8	.6	.2
30.	1.1	1.3	1.45	1.9	-----	2.0	3.4	3.15	1.15	.8	.5	.2
31.	1.1	-----	1.4	1.9	-----	2.0	-----	3.35	-----	.8	.5	-----
1909-10.												
1.	.2	.4	3.25	.9	.85	.85	1.3	1.8	1.3	.4	.1	.0
2.	.3	.4	2.7	.9	.85	.85	1.3	1.6	1.3	.4	.1	.0
3.	.4	.4	2.2	.8	.85	.9	1.3	1.5	1.2	.4	.1	.0
4.	.4	.4	2.2	.8	.85	1.05	1.3	1.45	1.1	.4	.0	.0
5.	.5	.4	1.9	.8	.85	1.0	1.35	1.4	1.05	.4	.1	.0
6.	.5	.4	1.9	.8	.85	1.05	1.4	1.4	.85	.4	.0	.0
7.	.5	.4	1.85	.7	.85	1.1	1.4	1.5	.85	.4	.0	.0
8.	.5	.4	1.8	.8	.85	1.1	1.4	1.5	.8	.3	.0	.0
9.	.5	.4	1.75	.8	.85	1.1	1.55	1.5	.8	.3	.0	.0
10.	.4	.4	1.7	.8	1.0	1.15	1.6	1.6	.8	.3	.0	.0
11.	.4	.4	1.55	.8	1.0	1.2	1.6	1.7	.8	.3	.0	.0
12.	.4	.4	1.5	.8	1.4	1.25	1.5	1.7	.75	.3	.05	.0
13.	.4	.4	1.5	.8	1.15	1.3	1.6	1.7	.75	.3	.05	.0
14.	.35	.4	1.45	.8	1.0	1.3	1.6	1.7	.7	.3	.0	.0
15.	.3	.4	1.4	.8	.95	1.3	1.6	1.5	.7	.2	.0	.1
16.	.3	.4	1.3	.8	.9	1.3	1.65	1.5	.7	.2	.0	.1
17.	.3	.4	1.25	.8	.85	1.3	1.7	1.5	.7	.2	.0	.1
18.	.3	.4	1.2	.8	.85	1.35	1.7	1.55	.7	.15	.0	.1
19.	.3	1.5	1.0	.8	.85	1.7	1.7	1.6	.7	.2	.0	.1
20.	.3	2.1	1.0	.8	.8	1.75	1.8	1.6	.7	.15	.0	.1
21.	.3	2.2	1.0	.9	.8	1.65	1.7	1.5	.65	.2	.0	.1
22.	.3	2.4	.85	1.1	.8	1.6	1.9	1.5	.6	.15	.0	.1
23.	.3	2.5	.7	1.1	.8	1.5	1.9	1.55	.55	.2	.0	.1
24.	.3	2.3	.7	1.05	.75	1.4	1.9	1.55	.5	.1	.0	.1
25.	.3	2.2	.7	1.0	.75	1.35	2.0	1.5	.5	.1	.0	.1
26.	.3	2.0	.7	.9	.75	1.3	2.0	1.45	.5	.1	.0	.1
27.	.3	1.8	.7	.9	.75	1.3	2.0	1.4	.5	.1	.0	.1
28.	.3	1.8	.7	.9	.8	1.3	2.0	1.4	.5	.1	.0	.1
29.	.4	1.9	.7	.9	-----	1.2	2.0	1.4	.4	.5	.0	.1
30.	.4	2.7	.7	.9	-----	1.2	1.9	1.4	.4	.45	.0	.1
31.	.4	-----	.8	.9	-----	1.25	-----	1.4	-----	.1	.0	-----
1910-11.												
1.	.1	.05	.4	.4	1.6	.6	1.35	1.8	2.1	1.45	.15	-.2
2.	.1	.0	.3	.4	1.5	.5	1.45	1.8	2.2	1.45	.1	-.2
3.	.1	.0	.3	.4	1.4	.5	1.45	1.9	2.35	1.5	.1	-.2
4.	.1	.0	.3	.3	1.3	.5	1.45	2.0	2.45	1.45	.1	-.2
5.	.1	.0	.3	.3	1.3	.5	1.5	1.95	2.5	1.4	.1	-.2
6.	.1	.0	.3	.3	1.3	.5	1.5	1.8	2.45	1.35	.1	-.2
7.	.1	.0	.4	.4	1.2	.5	1.5	1.9	2.45	1.3	.1	-.2
8.	.1	.0	.4	.4	1.2	.5	1.5	1.9	2.45	1.25	.1	-.2
9.	.1	.3	.5	.4	1.0	.5	1.5	1.9	2.4	1.2	.0	-.2
10.	.1	.2	.7	.5	1.0	.55	1.4	1.8	2.45	1.1	.0	-.2
11.	.1	.2	.7	.6	.9	.6	1.3	1.85	2.45	1.1	.0	-.2
12.	.1	.1	.6	.6	.9	.6	1.3	1.9	2.5	1.0	.0	-.2
13.	.1	.0	.55	.6	.9	.55	1.2	1.9	2.5	1.0	.0	-.2
14.	.1	.0	.45	.6	1.0	.55	1.15	1.9	2.4	1.0	.0	-.2
15.	.1	.1	.4	.6	1.0	.6	1.1	1.8	2.4	1.0	.0	-.2
16.	.1	.1	.4	.6	1.0	.6	1.1	1.8	2.35	.95	-.1	-.2
17.	.1	.1	.4	.7	1.0	.6	1.15	1.8	2.4	.9	-.1	-.08
18.	.1	.15	.4	.7	1.1	.6	1.25	1.8	2.4	.85	-.1	-.04
19.	.1	.2	.4	.7	1.1	.6	1.3	1.7	2.3	.8	-.1	-.07
20.	.1	.2	.4	.7	1.1	.6	1.2	1.75	2.25	.75	-.1	-.2

Daily gage height, in feet, of Donner Creek near Truckee, Cal., for 1902-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.												
21.....	0.1	0.2	0.4	0.7	1.0	0.6	1.3	1.8	2.2	0.7	-0.1	-0.2
22.....	.1	.2	.4	.7	.95	.7	1.45	2.0	2.0	.65	-.15	-.2
23.....	.1	.2	.4	.7	.8	.7	1.65	2.25	1.85	.6	-.15	-.2
24.....	.1	.5	.4	.8	.7	.7	1.75	2.25	1.75	.55	-.15	-.2
25.....	.1	.45	.4	.8	.6	.85	1.85	2.1	1.65	.5	-.2	-.25
26.....	.1	.4	.4	.8	.6	.9	2.0	2.0	1.7	.45	-.2	-.25
27.....	.1	.4	.4	.9	.6	.9	1.9	2.0	1.8	.4	-.2	-.25
28.....	.1	.5	.4	.9	.55	1.05	1.8	2.05	1.7	.3	-.2	-.25
29.....	.1	.4	.4	1.6	.....	1.1	1.75	2.1	1.65	.2	-.2	-.25
30.....	.1	.4	.4	1.6	.....	1.1	1.8	2.1	1.55	.2	-.2	-.25
31.....	.1	.....	.4	1.6	.....	1.2	.....	2.1	.....	.2	-.2	.....
Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.			
1911-12.												
1.....	.....	-0.25	-0.2	0.0	0.7	-0.1	-0.1	0.2	0.4	1.5	.....	.....
2.....	.....	-.25	-.2	-.1	1.0	0	-.1	.2	.5	1.7	.....	.....
3.....	.....	-.25	-.2	0	.8	0	-.1	.2	.5	1.7	.....	.....
4.....	.....	-.25	-.2	-.1	.8	0	-.1	.2	.5	1.7	.....	.....
5.....	.....	-.25	-.2	-.1	.9	0	-.1	.2	.5	1.5	.....	.....
6.....	.....	-.25	-.2	-.1	.9	0	-.1	.2	.5	1.5	.....	.....
7.....	.....	-.25	-.2	-.1	0	0	-.1	.2	.7	1.5	.....	.....
8.....	.....	-.25	-.4	-.1	-.1	0	-.1	.2	.7	1.2	.....	.....
9.....	.....	-.25	-.3	-.1	0	-.1	-.1	.2	1.0	1.0	.....	.....
10.....	.....	-.25	-.2	0	-.1	-.1	-.1	.2	1.2	1.0	.....	.....
11.....	.....	-.25	-.2	0	-.1	-.1	-.1	.2	1.2	1.0	.....	.....
12.....	.....	-.25	-.2	0	0	-.1	-.1	.2	1.3	1.0	.....	.....
13.....	.....	-.2	-.2	0	-.1	-.1	-.1	.2	1.6	1.0	.....	.....
14.....	.....	-.2	-.2	0	-.1	-.1	-.1	.2	1.6	1.0	.....	.....
15.....	.....	-.2	-.2	0	-.1	-.1	-.1	.2	1.6	1.0	.....	.....
16.....	.....	-.2	-.2	0	-.1	-.1	-.1	.2	1.6	1.0	.....	.....
17.....	.....	-.2	-.2	0	-.1	-.1	-.2	.2	1.5	1.0	.....	.....
18.....	.....	-.2	-.1	-.1	-.1	-.1	-.2	.2	1.5	1.0	.....	.....
19.....	.....	-.2	-.1	-.2	-.1	-.1	-.2	.2	1.5	.8	.....	.....
20.....	.....	-.2	0	-.2	-.1	-.1	-.2	.2	1.5	.7	.....	.....
21.....	.....	-.2	0	-.3	-.1	-.1	-.2	.2	1.4	.6	.....	.....
22.....	.....	-.2	0	-.2	-.1	-.1	-.2	.2	1.1	.6	.....	.....
23.....	.....	-.2	0	-.2	-.1	-.1	-.2	.2	.75	.5	.....	.....
24.....	.....	-.2	0	-.2	-.1	-.1	-.2	.2	.6	.4	.....	.....
25.....	.....	-.2	0	-.3	-.05	-.1	-.2	.2	.7	.4	.....	.....
26.....	.....	-.2	0	-.2	.65	-.1	-.2	.2	.7	.3	.....	.....
27.....	.....	-.2	0	-.2	.8	-.1	-.2	.2	1.0	.3	.....	.....
28.....	.....	-.2	0	-.2	.7	-.1	-.2	.2	1.0	.3	.....	.....
29.....	.....	-.2	0	-.2	.6	-.1	-.2	.2	1.0	.3	.....	.....
30.....	.....	-.2	0	-.3	.4	.....	-.2	.2	1.5	.2	.....	.....
31.....	.....	-.2	.....	-.2	0	.....	-.2	.....	1.5	.....	.....	.....

NOTE.—Practically no flow Oct. 19-24, 1906, as ice ponds were being filled. Gage heights after June 1, 1909, refer to a new gage at a different datum.

Rating tables for Donner Creek near Truckee, Cal.

October 23, 1902, to December 31, 1903.

Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.
Feet.	Sec.-feet.	Feet.	Sec.-feet.	Feet.	Sec.-feet.	Feet.	Sec.-feet.
1.3	1	2.1	28	2.9	120	3.7	248
1.4	1	2.2	36	3.0	136	3.8	264
1.5	3	2.3	46	3.1	152	3.9	280
1.6	5	2.4	56	3.2	168	4.0	296
1.7	7	2.5	67	3.3	184	4.1	312
1.8	11	2.6	79	3.4	200	4.2	328
1.9	16	2.7	92	3.5	216	4.3	344
2.0	22	2.8	106	3.6	232	4.4	360

NOTE.—Table not well defined.

Rating tables for Donner Creek near Truckee, Cal.—Continued.

January 1 to December 31, 1904.

Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.
<i>Feet.</i>	<i>Sec.-ft.</i>	<i>Feet.</i>	<i>Sec.-ft.</i>	<i>Feet.</i>	<i>Sec.-ft.</i>	<i>Feet.</i>	<i>Sec.-ft.</i>
1.40	5.5	1.95	25	3.00	156	4.10	411
1.45	6.5	2.00	28	3.10	176	4.20	438
1.50	8	2.10	35	3.20	196	4.30	466
1.55	9.5	2.20	43	3.30	216	4.40	494
1.60	11	2.30	52	3.40	238	4.50	523
1.65	12.5	2.40	63	3.50	260	4.60	553
1.70	14	2.50	76	3.60	284	4.70	583
1.75	16	2.60	90	3.70	308	4.80	613
1.80	18	2.70	105	3.80	333	4.90	645
1.85	20	2.80	121	3.90	359	5.00	677
1.90	22	2.90	138	4.00	385	5.10	709

NOTE.—Table is applicable only to open channel. It is based upon 9 discharge measurements made during 1904 and is well defined between gage heights 1.35 feet and 4.60 feet.

January 1, 1905, to April 30, 1906.

0.70	0.0	1.50	8.3	2.30	52	3.10	166
.80	.1	1.60	11.5	2.40	62	3.20	185
.90	.2	1.70	15	2.50	73	3.30	206
1.00	.5	1.80	19	2.60	86	3.40	227
1.10	1.1	1.90	24	2.70	100	3.50	248
1.20	2.0	2.00	29	2.80	115	3.60	269
1.30	3.5	2.10	35	2.90	131	3.70	290
1.40	5.7	2.20	43	3.00	148		

NOTE.—Table is applicable only to open channel. It is based on discharge measurements made during 1904-5, and is well defined.

May 1, 1906, to March 17, 1907.

1.20	15	1.80	45	2.40	111	3.00	217
1.30	19	1.90	53	2.50	126	3.10	239
1.40	23	2.00	62	2.60	142	3.20	261
1.50	27	2.10	72	2.70	159	3.30	284
1.60	32	2.20	84	2.80	177		
1.70	38	2.30	97	2.90	196		

NOTE.—Table applicable only to open channel. It is based on 3 discharge measurements made during 1906 and the form of the previous curve and is not well defined.

March 18 to December 31, 1907.

1.20	5	2.30	64	3.40	252	4.50	588
1.30	7	2.40	76	3.50	276	4.60	626
1.40	9	2.50	90	3.60	302	4.70	664
1.50	11	2.60	104	3.70	328	4.80	702
1.60	14	2.70	118	3.80	356	4.90	740
1.70	18	2.80	134	3.90	384	5.00	780
1.80	22	2.90	150	4.00	414	5.20	860
1.90	28	3.00	168	4.10	444	5.40	940
2.00	34	3.10	186	4.20	478	5.60	1,020
2.10	42	3.20	206	4.30	512		
2.20	52	3.30	228	4.40	550		

NOTE.—Table applicable only to open channel. It is based on 4 discharge measurements made during 1907 and is not well defined.

January 1 to December 31, 1908.

1.10	2	1.70	26	2.30	75	2.90	157
1.20	4	1.80	32	2.40	86	3.00	175
1.30	7	1.90	39	2.50	98	3.10	194
1.40	11	2.00	47	2.60	111	3.20	214
1.50	15	2.10	56	2.70	126	3.30	235
1.60	20	2.20	65	2.80	141		

NOTE.—Table applicable only to open channel. It is based on 6 discharge measurements made during 1907-8 and is fairly well defined between gage heights 1.2 feet and 4.0 feet.

Daily discharge, in second-feet, of Donner Creek near Truckee, Cal., for 1909-1912.

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909.									
1	8	34	43	52	276	255	180	20	7
2	12	34	52	37	276	255	160	16	7
3	10	34	52	68	300	255	160	16	7
4	10	34	52	73	313	285	150	16	7
5	68	34	52	73	340	285	131	14	7
6	86	34	52	73	354	242	76	11	7
7	34	34	52	73	368	242	90	14	7
8	34	30	52	73	382	230	106	14	7
9	27	34	52	92	410	230	98	11	7
10	27	34	52	99	368	242	90	11	7
11	27	43	52	99	313	242	90	11	7
12	52	43	43	113	276	242	90	11	7
13	73	43	43	113	242	242	90	11	4
14	326	43	43	128	207	242	76	11	4
15	652	43	43	154	230	218	70	11	4
16	812	43	43	174	207	205	58	11	4
17	752	43	48	196	207	180	41	11	4
18	752	43	57	230	207	160	41	11	4
19	652	34	62	230	218	90	36	11	4
20	612	34	62	185	230	90	31	11	4
21	574	34	62	185	230	90	31	11	4
22	410	38	62	175	207	106	31	11	4
23	288	34	57	185	196	114	31	11	4
24	43	43	52	185	196	98	27	11	4
25	43	43	52	185	196	90	23	11	4
26	43	43	52	207	230	83	23	11	4
27	43	43	52	230	264	76	23	11	4
28	43	43	52	264	242	70	23	11	2
29	43	.....	48	253	207	63	23	11	1
30	34	.....	43	276	218	58	23	7	1
31	34	.....	43	.....	264	.....	23	7	.....

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909-10.												
1	1	4	862	77	70	70	153	290	153	18	2.5	1.2
2	2	4	674	77	70	70	153	228	153	18	2.5	1.2
3	4	4	447	63	70	77	153	202	131	18	2.5	1.2
4	4	4	447	63	70	102	153	190	111	18	1.2	1.2
5	7	4	326	63	70	93	165	177	102	18	2.5	1.2
6	7	4	326	63	70	102	177	177	70	18	1.2	1.2
7	7	4	308	50	70	111	177	202	70	18	1.2	1.2
8	7	4	290	63	70	111	177	202	63	11	1.2	1.2
9	7	4	274	63	70	111	215	202	63	11	1.2	1.2
10	4	4	257	63	93	121	228	228	63	11	1.2	1.2
11	4	4	215	63	93	131	228	257	63	11	1.2	1.2
12	4	4	202	63	177	142	202	257	56	11	1.8	1.2
13	4	4	202	63	121	153	228	257	56	11	1.8	1.2
14	3	4	190	63	93	153	228	257	50	11	1.2	1.2
15	2	4	177	63	85	153	228	202	50	5.5	1.2	2.5
16	2	4	153	63	77	153	242	202	50	5.5	1.2	2.5
17	2	4	142	63	70	153	257	202	50	5.5	1.2	2.5
18	2	4	131	63	70	165	257	215	50	4.0	1.2	2.5
19	2	106	93	63	70	257	257	228	50	5.5	1.2	2.5
20	2	230	93	63	63	274	290	228	50	4.0	1.2	2.5
21	2	255	93	77	63	242	257	202	44	5.5	1.2	2.5
22	2	315	70	111	63	228	326	202	38	4.0	1.2	2.5
23	2	345	50	111	63	202	326	215	32	5.5	1.2	2.5
24	2	489	50	102	56	177	326	215	27	2.5	1.2	2.5
25	2	447	50	93	56	165	365	202	27	2.5	1.2	2.5
26	2	365	50	77	56	153	365	190	27	2.5	1.2	2.5
27	2	290	50	77	56	153	365	177	27	2.5	1.2	2.5
28	2	290	50	77	63	153	365	177	27	2.5	1.2	2.5
29	4	326	50	77	.....	131	365	177	18	27	1.2	2.5
30	4	674	50	77	.....	131	326	177	18	22	1.2	2.5
31	4	.....	63	77	.....	142	.....	177	.....	2.5	1.2	.....

Daily discharge, in second-feet, of Donner Creek near Truckee, Cal., for 1909-1912—Con.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.												
1.....	2.5	1.8	18	18	242	38	174	306	422	232	30	7
2.....	2.5	1.2	11	18	212	27	200	306	466	232	26	7
3.....	2.5	1.2	11	18	187	27	200	342	538	245	26	7
4.....	2.5	1.2	11	11	162	27	200	380	587	232	26	7
5.....	2.5	1.2	11	11	162	27	212	361	612	220	26	7
6.....	2.5	1.2	11	11	162	27	212	306	587	208	26	7
7.....	2.5	1.2	18	18	140	27	212	342	587	197	26	7
8.....	2.5	1.2	18	18	140	27	212	342	587	186	18	7
9.....	2.5	11	27	18	100	27	212	342	562	175	18	7
10.....	2.5	5.5	50	27	100	32	187	306	587	155	18	7
11.....	2.5	5.5	50	38	82	38	162	324	587	155	18	7
12.....	2.5	2.5	38	38	82	38	162	342	612	136	18	7
13.....	2.5	1.2	32	38	82	32	140	342	612	136	18	7
14.....	2.5	1.2	22	38	100	32	130	342	562	136	18	7
15.....	2.5	2.5	18	38	100	38	120	306	562	136	18	7
16.....	2.5	2.5	18	38	100	38	120	306	538	128	12	7
17.....	2.5	2.5	18	51	100	38	130	306	562	120	12	13
18.....	2.5	4.0	18	51	120	38	151	306	562	112	12	16
19.....	2.5	5.5	18	51	120	38	162	272	515	104	12	14
20.....	2.5	5.5	18	51	120	38	140	289	494	97	12	7
21.....	2.5	5.5	18	51	100	38	162	306	472	90	12	7
22.....	2.5	5.5	18	51	91	51	200	380	395	83	10	7
23.....	2.5	5.5	18	51	66	51	257	490	345	76	10	7
24.....	2.5	27	18	66	51	51	289	490	315	70	10	7
25.....	2.5	22	18	66	38	74	324	422	285	64	7	5
26.....	2.5	18	18	66	38	82	380	380	300	58	7	5
27.....	2.5	18	18	82	38	82	342	380	330	53	7	5
28.....	2.5	27	18	82	32	110	306	401	300	43	7	5
29.....	2.5	18	18	242	.....	120	289	422	285	34	7	5
30.....	2.5	18	18	242	.....	120	306	422	258	34	7	5
31.....	2.5	.....	18	242	.....	140	.....	422	.....	34	7	.....

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.									
1.....	5	7	18	90	12	12	34	53	245
2.....	5	7	12	136	18	12	34	64	300
3.....	5	7	18	104	18	12	34	64	300
4.....	5	7	12	104	18	12	34	64	300
5.....	5	7	12	120	18	12	34	64	245
6.....	5	7	12	120	18	12	34	64	245
7.....	5	7	12	18	18	12	34	90	245
8.....	5	1	12	12	18	12	34	90	175
9.....	5	3	12	18	12	12	34	136	136
10.....	5	7	18	12	12	12	34	175	136
11.....	5	7	18	12	12	12	34	175	136
12.....	5	7	18	18	12	12	34	197	136
13.....	7	7	18	12	12	12	34	270	136
14.....	7	7	18	12	12	12	34	270	136
15.....	7	7	18	12	12	12	34	270	136
16.....	7	7	18	12	12	12	34	270	136
17.....	7	7	18	12	12	7	34	245	136
18.....	7	12	12	12	12	7	34	245	136
19.....	7	12	7	12	12	7	34	245	104
20.....	7	18	7	12	12	7	34	245	90
21.....	7	18	3	12	12	7	34	220	76
22.....	7	18	7	12	12	7	34	155	76
23.....	7	18	7	12	12	7	34	97	64
24.....	7	18	7	12	12	7	34	76	53
25.....	7	18	3	15	12	7	34	90	53
26.....	7	18	7	83	12	7	34	90	43
27.....	7	18	7	104	12	7	34	136	43
28.....	7	18	7	90	12	7	34	136	43
29.....	7	18	7	76	12	7	34	136	43
30.....	7	18	3	53	.....	7	34	245	34
31.....	7	.....	7	18	.....	7	.....	245	.....

NOTE.—Daily discharge determined from rating curves applicable as follows: Jan. 1, 1909, to May 31, 1909, well defined. June 1, 1909, to Nov. 23, 1909, well defined between 31 and 345 second-feet. Nov. 24, 1909, to Dec. 31, 1910, Jan. 1, 1911, to June 13, 1911, and June 14, 1911, to June 30, 1912, fairly well defined.

Monthly discharge of Donner Creek near Truckee, Cal., for 1902-1912.

[Drainage area, 30 square miles.]

Month.	Discharge in second-feet.				Run-off.		Accu- racy.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.	Total in acre-feet.	
1902-3.							
October 23-31.....	11	5	7	0.23	0.08	125	
November.....	36	5	14	.47	.52	833	
December.....	51	9	17	.57	.66	1,045	
January.....	106	32	54	1.80	2.08	3,320	
February.....	67	56	60	2.00	2.08	3,332	
March.....	312	56	83	2.77	3.19	5,103	
April.....	232	120	166	5.53	6.17	9,878	
May.....	352	192	267	8.90	10.26	16,417	
June.....	296	56	156	5.20	5.80	9,283	
July.....	56	6	23	.77	.89	1,414	
August.....	16	1	3	.10	.12	184	
September.....	2	1	1	.03	.03	60	
The period.....						51,000	
1903-4.							
October.....	28	1	3	.10	.12	184	
November.....	280	1	92	3.07	3.43	5,474	
December.....	61	7	16	.53	.61	984	
January.....	76	11	29.6	.987	1.14	1,820	
February.....	693	22	145	4.83	5.21	8,341	
March.....	613	216	391	13.03	15.02	24,040	
April.....	452	238	312	10.40	11.60	18,560	
May.....	709	216	482	16.07	18.53	29,640	
June.....	494	196	326	10.87	12.13	19,400	
July.....	186	11	59.4	1.98	2.28	3,652	
August.....	18	4.5	11.4	.380	.44	701	
September.....	90	3.5	30.6	1.02	1.14	1,821	
The year.....	709	1	158	5.27	71.65	115,000	
1904-5.							
October.....	206	18	50.6	1.69	1.95	3,111	
November.....	22	2.5	12.0	.400	.45	714	
December.....	57	3.5	9.2	.307	.35	566	
January.....	24	11.5	17.8	.593	.68	1,094	
February.....	185	15	53.1	1.77	1.84	2,949	
March.....	166	100	130	4.33	4.99	7,993	
April.....	290	86	163	5.43	6.06	9,699	
May.....	269	148	218	7.27	8.38	13,400	
June.....	206	29	114	3.80	4.24	6,783	
July.....	24	1.1	8.6	.287	.33	529	
August.....	1.1	.2	.51	.017	.02	31	
September.....	48	.5	3.6	.120	.13	214	
The year.....	290	.2	65.0	2.17	29.42	47,100	
1905-6.							
October.....	19	0	4.4	.147	.17	270	
November.....	2	0	.29	.0097	.01	17	
December.....	43	0	1.6	.053	.06	98	
January.....	300	19	38.3	1.28	1.48	2,360	
February.....	57	24	32	1.07	1.11	1,780	
March.....	86	29	54.5	1.82	2.10	3,350	
April.....	269	86	161	5.37	5.99	9,580	
May.....	698	342	506	16.87	19.45	31,100	
June.....	680	342	493	16.43	18.33	29,300	
July.....	460	49	269	8.97	10.34	16,500	
August.....	42	15	21.4	.713	.82	1,320	
September.....	15	12	13.5	.450	.50	803	
The year.....	698	0	133	4.43	60.36	96,500	
1906-7.							
October.....	15	0	11.1	.370	.43	682	
November.....	30	9	16.3	.543	.61	970	
December.....	42	12	20.0	.667	.77	1,230	
January.....	42	15	29.9	.997	1.15	1,840	
February.....	186	42	92.5	3.08	3.21	5,140	
March.....	980	49	239	7.97	9.19	14,700	
April.....	370	196	296	9.87	11.01	17,600	
May.....	760	289	392	13.1	15.10	24,100	
June.....	626	186	349	11.6	12.94	20,800	
July.....	356	64	158	5.27	6.08	9,720	
August.....	58	34	40.1	1.34	1.54	2,470	
September.....	52	18	29.9	.997	1.11	1,780	
The year.....	980	0	139	4.65	63.14	101,000	

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Monthly discharge of Donner Creek near Truckee, Cal., for 1902-1912—Continued.

Month.	Discharge in second-feet.				Run-off.		Accuracy.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.	Total in acre-feet.	
1907-8.							
October.....	18	7	12.1	0.403	0.46	744	C.
November.....	28	5	10.3	.343	.38	613	C.
December.....	28	5	11.2	.373	.43	689	C.
January.....	56	9	30.7	1.02	1.18	1,890	C.
February.....	47	26	35.9	1.20	1.29	2,060	C.
March.....	75	32	54.3	1.81	2.09	3,340	B.
April.....	224	75	145	4.83	5.39	8,630	A.
May.....	204	111	147	4.90	5.65	9,040	A.
June.....	157	75	120	4.00	4.46	7,140	A.
July.....	75	20	44.0	1.47	1.70	2,700	A.
August.....	20	7	10.9	.363	.42	670	B.
September.....	26	7	8.1	.270	.30	482	B.
The year.....	224	5	52.5	1.75	23.75	38,000	
1908-9.							
October.....	7	2	3.2	.107	.12	197	C.
November.....	20	4	6.4	.213	.24	381	C.
December.....	32	7	15.4	.513	.59	947	C.
January.....	812	8	214	7.13	8.22	13,200	B.
February.....	43	30	38.2	1.27	1.32	2,120	B.
March.....	62	43	51.0	1.70	1.96	3,140	A.
April.....	276	52	150	5.00	5.58	8,930	A.
May.....	410	196	264	8.80	10.14	16,200	B.
June.....	285	58	176	5.87	6.55	10,500	B.
July.....	180	23	69.2	2.31	2.66	4,250	A.
August.....	20	7	11.8	.393	.45	726	D.
September.....	7	1	4.9	.163	.18	292	D.
The year.....	812	1	83.7	2.79	38.01	60,900	
1909-10.							
October.....	7	1	3.4	.113	.13	209	D.
November.....	674	4	140	4.67	4.10	8,330	C.
December.....	862	50	208	6.93	7.99	12,800	B.
January.....	111	50	72.0	2.40	2.77	4,430	C.
February.....	177	56	75.6	2.52	2.62	4,200	C.
March.....	274	70	148	4.93	5.69	9,100	B.
April.....	365	153	252	8.40	9.37	15,000	B.
May.....	290	177	210	7.00	8.07	12,900	B.
June.....	153	18	59.6	1.99	2.22	3,550	B.
July.....	27	2.5	10.1	.337	.39	621	C.
August.....	2.5	1.2	1.41	.047	.05	86.7	D.
September.....	2.5	1.2	1.89	.063	.07	112	D.
The year.....	862	1	98.5	3.28	43.47	71,300	D.
1910-11.							
October.....	2.5	2.5	2.50	.083	.10	154	D.
November.....	27	1.2	7.47	.249	.28	444	D.
December.....	50	11	20.5	.683	.79	1,260	C.
January.....	242	11	59.4	1.98	2.28	3,650	C.
February.....	242	32	110	3.67	3.82	6,110	B.
March.....	140	27	50.7	1.69	1.95	3,120	B.
April.....	380	120	210	7.00	7.81	12,500	B.
May.....	490	272	354	11.8	13.60	21,800	A.
June.....	612	258	481	16.0	17.85	28,600	A.
July.....	245	34	128	4.26	4.91	7,870	B.
August.....	30	7	15.5	.517	.60	953	C.
September.....	16	5	7.3	.243	.27	434	C.
The year.....	612	1.2	120	4.00	54.26	86,900	
1911-12.							
October.....	7	5	6.2	.207	.24	381	C.
November.....	18	1	11.0	.367	.41	655	C.
December.....	18	3	11.5	.383	.44	707	C.
January.....	136	12	43.5	1.45	1.67	2,670	C.
February.....	18	12	13.4	.447	.48	771	C.
March.....	12	7	9.6	.320	.37	590	C.
April.....	34	34	34.0	1.13	1.26	2,020	B.
May.....	270	53	159	5.30	6.11	9,780	B.
June.....	300	34	138	4.60	5.13	8,210	B.
The period.....						25,800	

NOTE.—Discharges during winter period probably too large on account of ice.

PROSSER CREEK NEAR TRUCKEE, CAL.

Prosser Creek, a stream about 14 miles long, enters Truckee River from the west about 2 miles southwest of Boca.

The gaging station, which is located just below Alder Creek, about 2 miles above the mouth of Prosser Creek, 4 miles north of Truckee and 3 miles below Hobart Mills, Cal., was established June 27, 1903, discontinued October 15, 1904, and reestablished September 23, 1907, some miscellaneous measurements having been made at this point in the meantime.

Several gages at different datums have been in use at this station. Since 1910 there have been two gages—one, the United States Reclamation Service gage, was installed on the bridge pier January 15, 1909, and repaired June 1, 1911; the other is the property of the Stone & Webster Engineering Corporation and is 150 feet downstream from the bridge.

Discharge measurements are made from a wagon bridge or by means of a car and cable.

The section is subject to change between floods, and the relation between gage height and discharge is at times affected by ice.

Gage heights are furnished by the United States Reclamation Service.

The 1911 discharge measurements made by the Stone & Webster Engineering Corporation have been furnished the United States Geological Survey for publication.

Discharge measurements of Prosser Creek near Truckee, Cal., in 1903-1911.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
		<i>Feet.</i>	<i>Sec.-ft.</i>			<i>Feet.</i>	<i>Sec.-ft.</i>
1903.				1909.			
July 18	G. B. Lorenz.....	2.50	41	Jan. 29	E. A. Porter.....	3.20	157
31	do.....	2.30	28	Apr. 19	L. J. Towne.....	4.15	348
Aug. 6	do.....	2.30	20	June 10	do.....	4.15	305
14	do.....	2.18	15	July 2	do.....	3.75	222
27	do.....	2.10	10	Aug. 2	do.....	2.68	52
1904.				Sept. 12	F. C. Schafer.....	2.20	15
Apr. 28	W. A. Wolf.....	3.00	217	Oct. 16	do.....	2.30	17
May 31	do.....	3.95	590				
26	do.....	3.50	414	1910.			
June 11	do.....	3.35	346	Mar. 21	F. C. Schafer.....	4.00	308
16	A. E. Chandler.....	3.20	334	Aug. 26	do.....	2.10	10
July 1	W. A. Wolf.....	2.92	201	Sept. 21	T. W. Norcross.....	2.89	17
13	do.....	2.70	130	Dec. 15	D. S. Stuver.....	2.62	34
23	do.....	2.65	121				
Aug. 13	do.....	2.30	40	1911.			
29	do.....	2.15	26	Apr. 15	J. E. Stewart.....	3.32	163
Nov. 16	do.....	2.20	31	May 31	Stone & Webster Engineering Corporation..	4.35	454
1905.				June 5	J. E. Stewart.....	4.78	608
May 12	W. A. Wolf.....	2.05	129	July 18	Stone & Webster Engineering Corporation..	3.55	194
23	do.....	2.30	179	Aug. 5	G. T. Peekema.....	2.76	57
June 12	do.....	2.25	165	9	Stone & Webster Engineering Corporation..	2.67	56
26	do.....	2.00	120	Sept. 26	F. C. Ebert.....	2.27	19
July 7	do.....	1.90	101				
27	do.....	1.25	11				
1908.							
May 12	E. A. Porter.....	3.52	114				
June 16	do.....	3.70	138				
July 7	M. B. Kennedy.....	3.30	74				
Oct. 16	E. A. Porter.....	3.10	47				

^a Gage height refers to Stone & Webster gage.

NOTE.—The datum of the gage read in 1904 was 0.29 foot above that read in 1903. Datum of the gage installed Jan. 15, 1909, was about 0.6 foot above that read in 1908.

Daily gage height, in feet, of Prosser Creek near Truckee, Cal., for 1903-4.

Day.	June.	July.	Aug.	Sept.	Day.	June.	July.	Aug.	Sept.
1903.					1903.				
1.....		2.75	2.35	2.15	16.....		2.48	2.22	2.12
2.....		2.72	2.35	2.12	17.....		2.50	2.18	2.12
3.....		2.72	2.30	2.12	18.....		2.48	2.18	2.12
4.....		2.62	2.30	2.12	19.....		2.42	2.18	2.12
5.....		2.65	2.30	2.12	20.....		2.45	2.18	2.18
6.....		2.55	2.30	2.12	21.....		2.45	2.18	2.18
7.....		2.55	2.30	2.12	22.....		2.42	2.18	2.18
8.....		2.55	2.27	2.12	23.....		2.40	2.18	2.18
9.....		2.50	2.25	2.12	24.....		2.38	2.20	2.18
10.....		2.48	2.25	2.12	25.....		2.38	2.18	2.18
11.....		2.50	2.25	2.12	26.....		2.35	2.18	2.18
12.....		2.55	2.22	2.12	27.....	2.75	2.35	2.18	2.12
13.....		2.48	2.22	2.12	28.....	2.75	2.35	2.18	2.12
14.....		2.45	2.22	2.12	29.....	2.95	2.32	2.18	2.12
15.....		2.48	2.22	2.12	30.....	2.78	2.32	2.18	2.12
					31.....		2.35	2.18	.....

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.
1903-4.													
1.....	2.15	.....	2.65	2.35	2.50	3.05	3.15	3.10	3.45	2.95	2.45	2.15	2.45
2.....	2.15	.....	2.65	2.30	2.60	3.20	3.25	3.05	3.45	2.95	2.55	2.15	2.35
3.....	2.18	.....	2.55	2.55	2.65	3.25	3.30	3.05	3.50	2.95	2.45	2.15	2.35
4.....	2.18	.....	2.75	2.60	2.55	3.15	3.20	3.20	3.45	2.85	2.45	2.15	2.25
5.....	2.18	.....	2.95	2.65	2.75	3.05	3.10	3.20	3.40	2.85	2.45	2.15	2.20
6.....	2.15	.....	2.85	2.70	2.90	3.15	3.20	3.25	3.45	2.85	2.45	2.15	2.35
7.....	2.15	.....	2.80	2.75	2.80	3.45	3.30	3.35	3.45	2.85	2.45	2.15	2.45
8.....	2.15	.....	2.65	2.70	2.90	3.65	3.50	3.55	3.35	2.85	2.45	2.15	2.40
9.....	2.18	.....	2.60	2.65	2.80	3.45	3.60	3.65	3.25	2.75	2.40	2.15	2.45
10.....	2.30	.....	2.75	2.65	2.85	3.65	3.70	3.80	3.25	2.75	2.35	2.15	2.60
11.....	.....	.....	2.65	2.55	2.95	3.45	3.75	3.80	3.25	2.75	2.35	2.15	3.40
12.....	.....	3.40	2.70	2.50	3.00	3.15	3.85	3.80	3.25	2.75	2.35	2.15	3.00
13.....	.....	3.65	2.55	2.70	3.25	3.10	4.05	3.80	3.20	2.75	2.35	2.10	2.80
14.....	.....	3.70	2.75	2.55	3.55	3.05	4.10	3.75	3.25	2.70	2.35	2.10	2.70
15.....	.....	3.45	2.65	2.55	4.05	3.00	4.00	3.80	3.25	2.65	2.35	2.10	3.00
16.....	.....	3.20	2.55	2.45	4.25	3.00	3.85	3.75	3.25	2.65	2.35	2.15	.....
17.....	.....	2.60	2.60	2.55	4.20	3.15	3.70	3.75	3.15	2.60	2.35	2.15	.....
18.....	.....	2.50	2.55	2.55	3.85	3.35	3.65	3.75	3.15	2.60	2.25	2.10	.....
19.....	.....	2.55	2.55	2.65	3.15	4.25	3.55	3.70	3.05	2.60	2.25	2.10	.....
20.....	.....	2.95	2.55	2.70	2.55	4.00	3.55	3.70	3.05	2.60	2.25	2.10	.....
21.....	.....	3.85	2.65	2.75	2.90	3.50	3.35	3.70	3.05	2.60	2.25	2.10	.....
22.....	.....	3.65	2.70	2.55	3.70	3.25	3.30	3.65	3.05	2.60	2.15	2.20	.....
23.....	.....	3.30	2.90	2.60	4.50	3.20	3.10	3.65	3.05	2.60	2.15	2.25	.....
24.....	.....	2.90	3.00	2.55	4.70	3.05	3.10	3.65	3.05	2.55	2.20	2.25	.....
25.....	.....	2.75	2.90	2.45	4.60	3.00	3.10	3.60	3.05	2.55	2.15	2.20	.....
26.....	.....	2.70	2.85	2.55	4.15	3.00	3.05	3.55	3.00	2.55	2.15	2.20	.....
27.....	.....	2.60	2.85	2.65	3.95	3.05	3.05	3.55	2.95	2.55	2.15	2.15	.....
28.....	.....	2.65	2.80	2.65	3.15	3.30	3.05	3.55	3.00	2.50	2.20	2.15	.....
29.....	.....	2.65	2.75	2.55	2.50	3.55	3.05	3.55	3.05	2.50	2.20	2.15	.....
30.....	.....	2.70	2.95	2.60	.....	3.25	3.00	3.45	3.05	2.60	2.15	2.20	.....
31.....	.....	.....	2.90	2.70	.....	3.15	.....	3.45	.....	2.45	2.15	.....	.....

NOTE.—Gage heights for 1904 refer to new datum, 0.29 foot above the former datum.

Daily gage height, in feet, of Prosser Creek near Truckee, Cal., for 1907-1911.

Day.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1907-8.													
1.....		3.0	3.0	3.0	3.7	3.4	.....	3.8	3.95	3.9	3.45	2.6	2.55
2.....		3.1	3.0	3.0	3.7	.....	2.9	3.8	3.85	3.8	3.45	2.6	2.65
3.....		3.0	.....	3.0	3.7	3.0	2.9	3.8	3.85	3.85	3.55	2.55	2.65
4.....		3.0	3.0	3.1	2.9	3.0	2.9	4.0	3.8	3.9	3.55	2.55	2.6
5.....		3.0	3.0	3.1	.....	3.0	2.9	.....	3.75	4.0	3.45	2.6	2.7
6.....		.....	3.0	3.1	3.6	3.0	2.8	3.9	3.9	4.0	3.45	2.55	2.65
7.....		3.0	3.0	.....	3.5	2.9	2.8	3.8	3.9	4.0	3.35	2.55	2.65
8.....		3.0	3.0	.....	3.7	2.9	.....	3.8	3.9	3.95	3.35	2.45	2.6
9.....		3.0	3.0	3.1	3.7	.....	3.0	3.9	3.85	4.0	3.25	2.45	2.7
10.....		3.0	.....	3.1	3.1	3.0	3.5	3.9	3.85	3.9	3.35	2.45	2.7
11.....		3.0	3.0	3.1	3.9	3.2	3.3	3.9	3.95	3.95	3.35	2.45	2.8
12.....		3.0	3.0	3.1	.....	3.0	3.2	.....	3.9	4.1	3.55	2.4	2.8
13.....		.....	3.0	3.1	3.9	3.0	3.0	3.9	3.75	4.05	3.35	2.45	2.85
14.....		3.0	3.0	3.1	3.9	3.0	3.0	3.9	3.7	4.0	3.25	2.5	2.85
15.....		3.0	3.0	.....	3.7	3.0	.....	4.0	3.8	3.8	3.15	2.45	2.9
16.....		3.0	3.0	3.1	3.6	.....	3.8	4.0	3.75	3.75	3.05	2.55	2.9
17.....		3.0	.....	3.1	3.0	2.8	3.9	4.0	3.9	3.75	2.95	2.55	2.9
18.....		3.0	3.0	3.1	3.0	2.9	4.0	3.9	3.8	3.75	2.9	2.65	2.9
19.....		3.0	3.0	3.1	.....	3.0	3.9	.....	3.95	3.6	2.85	2.55	2.9
20.....		.....	3.0	3.1	3.0	2.9	3.9	4.0	3.85	3.75	2.95	2.55	2.85
21.....		3.0	3.0	3.1	3.0	2.9	3.8	4.0	3.85	3.85	2.9	2.55	2.8
22.....		3.0	2.9	.....	3.1	3.0	.....	4.0	3.95	3.75	2.85	2.6	2.8
23.....	3.0	3.0	2.9	3.1	3.1	.....	3.7	4.0	3.9	3.65	2.9	2.55	2.85
24.....	3.0	3.1	.....	3.1	3.3	2.9	3.8	4.0	3.95	3.65	2.85	2.55	2.9
25.....	3.0	3.1	2.9	3.1	3.3	2.9	3.8	3.7	4.0	3.5	2.75	2.55	2.9
26.....	3.0	3.1	2.9	3.2	.....	2.9	3.8	.....	3.9	3.55	2.85	2.6	2.8
27.....	3.0	.....	2.9	3.2	3.0	2.9	4.0	3.8	3.95	3.55	2.85	2.55	2.85
28.....	2.9	3.0	2.9	3.1	2.9	2.9	4.0	3.8	4.0	3.5	2.8	2.6	2.9
29.....	.....	3.0	2.9	.....	3.3	2.7	.....	3.7	3.9	3.5	2.75	2.6	2.8
30.....	2.9	3.0	2.9	3.5	3.4	.....	3.7	3.8	3.75	3.5	2.7	2.6	2.9
31.....	.....	3.0	.....	3.7	3.4	.....	3.7	.....	3.85	.....	2.65	2.55	.....
Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	
1908-9.													
1.....	2.9	2.8	3.05	3.2	3.0	3.1	3.15	4.9	4.65	3.75	2.9	2.0	
2.....	2.8	2.8	3.0	3.25	2.9	3.05	3.25	4.85	4.85	3.6	2.75	2.0	
3.....	2.85	2.85	2.95	3.25	3.0	3.05	3.35	4.95	4.75	3.6	2.7	2.0	
4.....	2.9	2.8	2.9	3.25	3.0	3.1	3.35	4.95	4.65	3.55	2.65	2.1	
5.....	2.85	2.8	2.9	3.25	2.85	3.1	3.35	4.85	4.75	3.5	2.65	2.2	
6.....	2.9	2.8	3.0	3.55	2.75	3.05	3.35	4.85	4.65	3.5	2.65	2.2	
7.....	2.9	2.8	3.05	3.5	2.7	3.0	3.35	4.85	4.65	3.45	2.55	2.15	
8.....	2.9	2.8	3.2	3.45	2.65	3.05	3.35	4.75	4.65	3.45	2.5	2.15	
9.....	2.85	2.8	3.1	3.4	2.6	3.15	3.45	4.65	4.7	3.45	2.45	2.15	
10.....	2.9	2.8	3.0	3.55	2.6	3.15	3.65	4.65	4.35	3.35	2.45	2.2	
11.....	2.9	2.85	3.0	3.6	2.55	3.15	3.85	4.55	4.3	3.45	2.35	2.2	
12.....	2.9	2.85	3.05	3.7	2.55	3.15	4.2	4.5	4.4	3.45	2.35	2.2	
13.....	2.9	2.8	3.0	4.05	2.5	3.25	4.4	4.45	4.4	3.4	2.35	2.2	
14.....	3.05	2.8	3.0	4.65	2.5	3.25	4.45	4.45	4.4	3.45	2.35	2.2	
15.....	3.9	2.85	3.05	5.1	2.75	3.2	4.5	4.45	4.35	3.4	2.25	2.2	
16.....	3.25	2.85	3.05	5.7	3.0	3.25	4.6	4.35	4.3	3.45	2.25	2.2	
17.....	3.0	2.85	3.0	4.9	3.15	3.2	4.65	4.35	4.15	3.4	2.2	2.3	
18.....	2.95	2.8	3.0	4.5	3.2	3.15	4.9	4.25	4.05	3.35	2.2	2.3	
19.....	2.9	2.8	3.0	4.1	3.15	3.25	4.85	4.25	4.05	3.35	2.1	2.3	
20.....	2.9	2.8	3.0	4.1	3.1	3.25	4.5	4.2	4.05	3.3	2.1	2.3	
21.....	2.85	3.05	3.0	4.3	3.25	3.2	4.25	4.15	4.15	3.3	2.1	2.3	
22.....	2.85	3.1	3.0	3.95	3.3	3.2	4.25	4.05	4.15	3.3	2.1	2.3	
23.....	2.9	3.1	3.0	3.8	3.45	3.15	4.35	4.05	4.15	3.3	2.1	2.25	
24.....	2.9	3.05	3.1	3.75	3.45	3.05	4.25	3.95	4.15	3.15	2.1	2.25	
25.....	2.85	3.0	3.15	3.6	3.4	3.0	4.25	4.05	4.05	3.15	2.0	2.3	
26.....	2.85	3.0	3.05	3.6	3.3	3.0	4.35	4.15	4.05	3.1	2.0	2.3	
27.....	2.9	3.0	3.05	3.45	3.25	3.0	4.6	4.15	4.05	3.0	2.0	2.35	
28.....	2.85	3.0	3.15	3.35	3.2	3.05	4.85	4.2	3.9	3.0	2.0	2.35	
29.....	2.8	3.15	3.15	3.1	.....	3.1	4.85	4.25	3.85	3.05	2.0	2.35	
30.....	2.8	3.1	3.05	3.0	.....	3.1	4.9	4.35	3.8	3.05	2.0	2.35	
31.....	2.8	.....	3.05	3.0	.....	3.05	.....	4.55	.....	3.0	2.0	.....

Daily gage height, in feet, of Prosser Creek near Truckee, Cal., for 1907-1911—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909-10.												
1.....	2.3	2.8	4.5	3.9	3.75	3.5	3.65	3.9	3.8	2.85	2.1	2.1
2.....	2.35	2.8	4.3	3.8	3.85	3.35	3.7	3.85	3.8	2.8	2.1	2.1
3.....	2.45	2.8	4.0	3.8	3.85	3.25	3.8	3.8	3.7	2.7	2.1	2.1
4.....	2.45	2.8	3.85	3.85	3.8	3.25	3.75	3.75	3.75	2.7	2.1	2.1
5.....	2.45	2.9	3.7	3.8	3.8	3.4	3.75	3.55	3.7	2.7	2.1	2.1
6.....	2.55	2.9	3.6	3.9	3.8	3.45	3.75	3.5	3.7	2.7	2.1	2.1
7.....	2.55	2.8	3.6	3.9	3.8	3.45	3.95	3.5	3.65	2.7	2.1	2.1
8.....	2.55	2.8	3.5	3.8	3.8	3.4	4.05	3.6	3.6	2.7	2.1	2.1
9.....	2.55	2.8	3.5	3.8	3.7	3.4	4.05	3.75	3.6	2.6	2.1	2.1
10.....	2.55	2.8	3.4	3.8	3.7	3.4	4.05	3.8	3.6	2.6	2.1	2.1
11.....	2.55	2.8	3.4	3.8	3.7	3.55	4.05	3.85	3.6	2.6	2.1	2.1
12.....	2.65	2.8	3.3	3.75	3.75	3.6	4.05	3.8	3.55	2.5	2.1	2.1
13.....	2.65	2.8	3.35	3.75	3.75	3.75	3.95	3.75	3.55	2.5	2.1	2.1
14.....	2.65	2.8	3.3	3.7	3.75	3.8	3.95	3.65	3.5	2.4	2.1	2.1
15.....	2.65	2.7	3.3	3.7	3.7	3.75	3.95	3.65	3.5	2.4	2.1	2.1
16.....	2.65	2.7	3.3	3.6	3.8	3.75	3.8	3.7	3.5	2.4	2.1	2.1
17.....	2.65	2.7	3.4	3.6	3.8	3.95	3.85	3.7	3.45	2.4	2.1	2.1
18.....	2.65	2.7	3.4	3.6	3.8	4.0	4.05	3.7	3.4	2.4	2.1	2.1
19.....	2.65	2.8	3.4	3.6	3.8	4.4	4.05	3.6	3.35	2.4	2.1	2.1
20.....	2.65	3.6	3.4	3.6	3.8	4.25	4.15	3.6	3.3	2.4	2.1	2.1
21.....	2.65	5.3	3.35	3.7	3.8	4.0	4.15	3.6	3.3	2.4	2.1	2.1
22.....	2.65	4.3	3.3	3.7	3.8	3.8	4.05	3.6	3.3	2.4	2.1	2.1
23.....	2.65	4.0	3.3	3.7	3.8	3.8	4.05	3.7	3.3	2.4	2.1	2.1
24.....	2.7	4.0	3.2	3.75	3.8	3.75	4.05	3.65	3.3	2.2	2.1	2.1
25.....	2.7	3.85	3.2	3.8	3.8	3.45	4.05	3.65	3.3	2.2	2.1	2.1
26.....	2.7	3.8	3.2	3.8	3.8	3.45	4.05	3.7	3.3	2.2	2.1	2.1
27.....	2.7	3.65	3.2	3.6	3.7	3.45	4.05	3.7	3.2	2.1	2.1	2.1
28.....	2.8	3.45	3.2	3.65	3.6	3.4	4.15	3.7	3.1	2.1	2.1	2.1
29.....	2.85	3.4	3.3	3.6	.....	3.4	4.05	3.7	3.0	2.0	2.1	2.1
30.....	2.85	3.4	3.4	3.7	.....	3.4	4.0	3.7	2.9	2.0	2.1	2.1
31.....	2.9	.....	4.0	3.65	.....	3.4	.....	3.7	.....	2.0	2.1	.....
1910-11.												
1.....	2.1	2.1	2.3	2.4	.....	1.2	.....	1.9	4.4	3.95	2.9	2.35
2.....	2.1	2.2	2.3	2.4	.....	1.2	.....	1.9	4.6	3.85	2.9	2.35
3.....	2.1	2.2	2.5	2.4	.....	1.2	.....	1.9	4.7	3.85	2.78	2.32
4.....	2.1	2.2	2.6	2.4	.....	1.3	.....	2.2	4.8	3.85	2.8	2.3
5.....	2.1	2.2	2.5	2.4	.....	1.3	.....	2.3	4.9	3.75	2.8	2.3
6.....	2.1	2.2	2.4	2.4	.....	1.3	.....	2.2	4.85	3.7	2.8	2.3
7.....	2.1	2.2	2.4	2.4	.....	1.3	.....	2.1	4.7	3.75	2.8	2.3
8.....	2.1	2.2	2.3	2.4	.....	1.3	.....	2.2	4.65	3.7	2.8	2.3
9.....	2.1	2.25	2.4	2.4	.....	1.1	.....	2.1	4.6	3.7	2.65	2.3
10.....	2.1	2.3	2.5	2.5	.....	1.1	.....	2.1	4.6	3.6	2.58	2.3
11.....	2.1	2.3	2.7	2.6	.....	1.1	.....	2.1	4.7	3.6	2.6	2.3
12.....	2.1	2.4	2.5	2.6	.....	1.15	.....	2.1	4.8	3.6	2.6	2.3
13.....	2.1	2.3	2.5	2.6	.....	1.2	.....	1.9	4.7	3.65	2.6	2.3
14.....	2.2	2.2	2.3	2.6	.....	1.2	.....	4.6	4.6	3.55	2.6	2.3
15.....	2.2	2.2	2.4	3.1	.....	1.2	3.32	4.6	4.7	3.5	2.6	2.25
16.....	2.2	2.2	2.4	3.1	.....	1.3	1.8	4.6	4.7	3.6	2.6	2.25
17.....	2.2	2.2	2.4	3.2	.....	1.3	1.8	4.6	4.65	3.6	2.6	2.25
18.....	2.2	2.3	2.6	3.2	.....	1.4	1.9	4.5	4.6	3.45	2.6	2.20
19.....	2.2	2.3	2.5	3.3	.....	1.2	1.9	4.5	4.65	3.48	2.5	2.20
20.....	2.2	2.3	2.5	3.4	.....	1.0	1.8	4.4	4.75	3.48	2.5	2.25
21.....	2.2	2.3	2.5	3.4	.....	1.1	1.8	4.4	4.6	3.25	2.5	2.25
22.....	2.2	2.3	2.4	3.4	.....	1.1	1.9	4.6	4.4	3.18	2.5	2.25
23.....	2.1	2.4	2.4	3.4	.....	1.3	1.9	4.85	4.2	3.15	2.5	2.25
24.....	2.1	2.5	2.3	3.5	.....	1.2	2.1	4.8	4.1	3.15	2.48	2.25
25.....	2.1	2.4	2.3	3.4	.....	1.1	2.2	4.6	3.9	3.15	2.42	2.25
26.....	2.1	2.4	2.3	3.6	.....	1.2	2.3	4.5	4.1	3.10	2.45	2.25
27.....	2.1	2.4	2.3	3.7	.....	1.4	2.2	4.5	4.25	3.02	2.4	2.25
28.....	2.1	2.4	2.3	3.8	.....	1.3	1.9	4.5	4.2	3.0	2.4	2.25
29.....	2.1	2.4	2.4	.....	.....	1.3	1.9	4.6	4.1	2.9	2.4	2.25
30.....	2.1	2.3	2.4	.....	.....	1.3	1.9	4.6	3.85	2.9	2.4	2.25
31.....	2.1	.....	2.4	.....	.....	1.3	.....	4.6	.....	2.85	2.35	.....

Daily gage height, in feet, of Prosser Creek near Truckee, Cal., for 1907-1911—Continued.

Day.	Oct.	Nov.	Day.	Oct.	Nov.	Day.	Oct.	Nov.
1911.			1911.			1911.		
1.....	2.22	2.4	11.....		2.5	21.....		2.3
2.....	2.22	2.4	12.....		2.2	22.....		2.4
3.....	2.22	2.4	13.....		2.3	23.....		2.4
4.....	2.3	2.4	14.....		2.6	24.....		2.4
5.....	2.3	2.4	15.....		2.3	25.....		2.4
6.....	2.3	2.4	16.....		2.4	26.....		2.4
7.....	2.3	2.4	17.....		2.2	27.....		2.4
8.....		2.4	18.....		2.4	28.....		2.3
9.....		2.4	19.....		2.2	29.....		2.2
10.....		2.5	20.....		2.5	30.....		2.1
						31.....		

NOTE.—Gage heights Jan. 15, 1909, to Jan. 31, 1911, Apr. 15, 1911, and after May 14, 1911, refer to the United States Reclamation Service gage painted on the bridge pier; datum differs from that of the gage used prior to Jan. 15, 1909. Gage heights Mar. 1-31 and Apr. 16 to May 13, 1911, refer to Stone and Webster Engineering Corporation gage. No record February, Apr. 1-14, and Oct. 8-31, 1911. Gage heights for December, 1911, discarded as unreliable. There was ice in the creek Dec. 1, 1907, to Feb. 15, 1908, Dec. 24-31, 1908, and during other periods.

Gage heights for 1912 withheld on account of the unreliability of the datum.

Rating table for Prosser Creek near Truckee, Cal., from June 27, 1903, to December 31, 1904.

Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.
Feet.	Sec.-ft.	Feet.	Sec.-ft.	Feet.	Sec.-ft.	Feet.	Sec.-ft.
2.10	23	2.90	190	3.70	490	4.50	836
2.20	30	3.00	221	3.80	532	4.60	880
2.30	42	3.10	256	3.90	574	4.70	924
2.40	59	3.20	293	4.00	616	4.80	968
2.50	80	3.30	331	4.10	660	4.90	1,012
2.60	103	3.40	370	4.20	704	5.00	1,056
2.70	130	3.50	410	4.30	748	5.10	1,100
2.80	160	3.60	450	4.40	792		

NOTE.—Table is applicable only to open channel. It is based upon 15 discharge measurements made during 1903 and 1904. It is well defined between gage heights 1.80 feet and 3.50 feet. To make this table applicable for 1903, gage heights for 1903 should be reduced 0.3 foot.

Daily discharge, in second-feet, of Prosser Creek near Truckee, Cal., for 1907-1911.

Day.	Sept.	Oct.	Nov.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1907-8.											
1.....		38	38	29	22	159	190	179	96	11	9
2.....		48	38	29	29	159	169	159	96	11	14
3.....		38	38	29	29	159	169	169	114	9	14
4.....		38	38	29	29	200	159	179	114	9	11
5.....		38	38	29	29	190	150	200	96	11	16
6.....		38	38	29	22	179	179	200	96	9	14
7.....		38	38	29	22	159	179	200	81	9	14
8.....		38	38	29	30	159	179	190	81	6	11
9.....		38	38	29	38	179	169	200	67	6	16
10.....		38	38	29	105	179	169	179	81	6	16
11.....		38	38	29	74	179	190	190	81	6	22
12.....		38	38	29	60	179	179	221	114	4	22
13.....		38	38	29	38	179	150	210	81	6	26
14.....		38	38	29	38	179	140	200	67	7	26
15.....		38	38	29	88	200	159	159	54	6	29
16.....		38	38	29	159	200	150	150	43	9	29
17.....		38	38	22	179	200	179	150	34	9	29
18.....		38	38	29	200	179	159	150	29	14	29
19.....		38	38	38	179	190	190	122	26	9	29
20.....		38	38	29	179	200	169	150	34	9	26

Daily discharge, in second-feet, of Prosser Creek near Truckee, Cal., for 1907-1911—Con.

Day.	Sept.	Oct.	Nov.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	
1907-8.												
21.....		38	38	29	159	200	169	169	29	9	22	
22.....		38	29	38	150	200	190	150	26	11	22	
23.....	38	38	29	34	140	200	179	131	29	9	26	
24.....	38	48	29	29	159	200	190	131	26	9	29	
25.....	38	48	29	29	159	140	200	105	19	9	29	
26.....	38	48	29	29	159	150	179	114	26	11	22	
27.....	38	43	29	29	200	159	190	114	26	9	26	
28.....	29	38	29	29	200	159	200	105	22	11	29	
29.....	29	38	29	16	170	140	179	105	19	11	22	
30.....	29	38	29		140	159	150	105	16	11	29	
31.....		38			140		169		14	9		
Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1908-9.												
1.....	29	22	43	60	89	105	114	665	483	224	76	7
2.....	22	22	38	67	76	97	132	640	568	188	58	7
3.....	26	26	34	67	89	97	151	692	524	188	52	7
4.....	29	22	29	67	89	105	151	692	483	178	47	10
5.....	26	22	29	67	70	105	151	640	524	168	47	14
6.....	29	22	38	114	58	97	151	640	483	168	47	14
7.....	29	22	43	105	52	89	151	640	483	158	38	12
8.....	29	22	60	96	47	97	151	581	483	158	34	12
9.....	26	22	48	88	42	114	172	545	503	158	30	12
10.....	29	22	38	114	42	114	216	545	369	139	30	14
11.....	29	26	38	122	38	114	264	502	352	158	24	14
12.....	29	26	43	140	38	114	370	480	386	158	24	14
13.....	29	22	38	210	34	132	440	460	386	148	24	14
14.....	43	22	38	347	34	132	460	460	386	158	24	14
15.....	179	26	43	879	58	123	480	460	369	148	17	14
16.....	67	26	43	1,290	89	132	523	422	352	158	17	14
17.....	38	26	38	764	114	123	545	422	305	148	14	20
18.....	34	22	38	560	123	114	665	386	276	139	14	20
19.....	29	22	38	393	114	132	640	386	276	139	10	20
20.....	29	22	38	393	105	132	480	370	276	129	10	20
21.....	26	43	38	470	132	123	386	353	330	129	10	20
22.....	26	48	38	344	141	123	386	321	330	129	10	20
23.....	29	48	38	298	172	114	422	321	330	129	10	17
24.....	29	43	48	284	172	97	386	291	330	114	10	17
25.....	26	38	54	246	161	89	386	276	300	114	7	20
26.....	26	38	43	246	141	89	422	305	300	105	7	20
27.....	29	38	43	210	132	89	523	305	300	89	7	24
28.....	26	38	54	186	123	97	640	320	260	89	7	24
29.....	22	54	54	136		105	640	336	248	97	7	24
30.....	22	48	43	118		105	665	369	236	97	7	24
31.....	22		43	118		97		443		89	7	
1909-10.												
1.....	20	63	480	277	240	182	216	277	252	70	10	10
2.....	24	63	403	252	264	151	227	264	252	63	10	10
3.....	30	63	305	252	264	132	252	252	227	52	10	10
4.....	30	63	264	264	252	132	240	240	240	52	10	10
5.....	30	76	227	252	252	161	240	193	227	52	10	10
6.....	38	76	204	277	252	172	240	182	227	52	10	10
7.....	38	63	204	277	252	172	291	182	216	52	10	10
8.....	38	63	182	252	252	161	321	204	204	52	10	10
9.....	38	63	182	252	227	161	321	240	204	42	10	10
10.....	38	63	161	252	227	161	321	252	204	42	10	10
11.....	38	63	161	252	227	193	321	264	204	42	10	10
12.....	47	63	161	240	240	204	321	252	193	34	10	10
13.....	47	63	151	240	240	240	291	240	193	34	10	10
14.....	47	63	141	227	240	252	291	216	182	27	10	10
15.....	47	52	141	227	227	240	291	216	182	27	10	10
16.....	47	52	141	204	252	240	252	227	182	27	10	20
17.....	47	52	161	204	252	291	264	227	172	27	10	20
18.....	47	52	161	204	252	305	321	227	161	27	10	10
19.....	47	63	161	204	252	440	321	204	151	27	10	10
20.....	47	204	161	204	252	386	354	204	141	27	10	10

Daily discharge, in second-feet, of Prosser Creek near Truckee, Cal., for 1907-1911—
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909-10.												
21.....	47	900	151	227	252	305	354	204	141	27	10	10
22.....	47	403	141	227	252	252	321	204	141	27	10	10
23.....	47	305	141	227	252	252	321	227	141	27	10	10
24.....	52	305	123	240	252	240	321	216	141	14	10	10
25.....	52	264	123	252	252	172	321	216	141	14	10	10
26.....	52	252	123	252	252	172	321	227	141	14	10	10
27.....	52	216	123	204	227	172	321	227	123	10	10	10
28.....	63	172	123	216	204	161	354	227	105	10	10	10
29.....	70	161	141	204		161	321	227	89	7	10	10
30.....	70	161	161	227		161	305	227	76	7	10	10
31.....	76		305	216		161		227		7	10	
1910-11.												
1.....	10	10	20	28	320	85	153	318	463	302	79	24
2.....	10	14	20	28	250	85	221	318	544	272	79	24
3.....	10	14	34	28	180	85	290	318	586	272	65	22
4.....	10	14	42	28	110	107	265	492	630	272	67	21
5.....	10	14	34	28	110	107	240	562	675	244	67	21
6.....	10	14	27	28	110	107	250	492	652	230	67	21
7.....	10	14	27	28	120	107	260	428	586	244	67	21
8.....	10	14	20	28	100	107	260	492	565	230	67	21
9.....	10	17	27	28	80	65	260	428	544	230	50	21
10.....	10	20	34	36	90	65	260	428	544	205	43	21
11.....	10	20	52	45	70	65	237	428	586	205	45	21
12.....	10	27	34	45	80	75	214	428	630	205	45	21
13.....	10	20	34	45	90	85	190	318	586	218	45	21
14.....	14	14	20	45	80	85	167	544	544	194	45	21
15.....	14	14	27	107	70	85	144	544	586	182	45	18
16.....	14	14	27	107	75	107	270	544	586	205	45	18
17.....	14	14	27	123	80	107	270	544	565	205	45	18
18.....	14	20	42	123	80	132	318	503	544	171	45	15
19.....	14	20	34	140	80	85	318	503	565	178	36	15
20.....	14	20	34	160	80	47	270	463	608	178	36	18
21.....	14	20	34	160	80	65	270	463	544	132	36	18
22.....	14	20	27	160	90	65	318	544	463	120	36	18
23.....	10	27	27	160	85	107	318	652	388	115	36	18
24.....	10	34	20	182	85	85	428	630	352	115	34	18
25.....	10	27	20	160	85	65	492	544	286	115	30	18
26.....	10	27	20	205	85	85	562	503	352	107	32	18
27.....	10	27	20	230	85	132	492	503	406	95	28	18
28.....	10	27	20	258	85	107	318	503	388	92	28	18
29.....	10	27	27	289		107	318	544	352	79	28	18
30.....	10	20	27	320		107	318	544	272	79	28	18
31.....	10		27	320		107		544		73	24	
Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.	
1911.												
1.....	16	28	20	11.....	21	36	13	21.....	24	21	10	
2.....	16	28	14	12.....	21	15	13	22.....	22	28	12	
3.....	16	28	7	13.....	22	21	12	23.....	24	28	10	
4.....	21	28	21	14.....	22	45	10	24.....	25	28	8	
5.....	21	28	14	15.....	22	21	8	25.....	23	28	7	
6.....	21	28	15	16.....	21	28	6	26.....	23	28	6	
7.....	21	28	13	17.....	21	15	6	27.....	23	28	5	
8.....	21	28	11	18.....	22	28	6	28.....	24	21	7	
9.....	21	28	12	19.....	24	15	6	29.....	25	15	9	
10.....	21	36	13	20.....	26	36	8	30.....	26	10	7	
								31.....	27		8	

NOTE.—Daily discharge determined from rating curves applicable as follows: Sept. 23, 1907, to Jan. 14, 1909, well defined between discharges of 38 and 200 second-feet. Discharge Dec. 1, 1907, to Feb. 16, 1908, estimated on account of ice. Jan. 15 to July 23, 1909, indirect method for shifting channels used. July 24, 1909, to Dec. 31, 1910, well defined. Jan. 1 to Dec. 31, 1911, two fairly well defined curves, one for the United States Reclamation Service gage and one for the Stone & Webster gage. Discharge interpolated or estimated for days on which gage was not read.

Monthly discharge of Prosser Creek near Truckee, Cal., for 1903-4 and 1907-1911.

[Drainage area, 48 square miles.]

Month.	Discharge in second-feet.				Run-off.		Accu- racy.	
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.	Total in acre-feet.		
1903.								
July.....	69	18	31.3	0.652	0.75	1,925	B.	
August.....	20	12	16.8	.350	.40	1,033		
September.....	12	10	10.5	.219	.24	625		
1903-4.								
October (10 days).....	184	17	12.0	.250	.09	238		
November (19 days).....	370	30	16.3	3.40	2.40	6,142		
December.....	130	42	75.0	1.56	1.80	4,612		
January.....	145	42	102	2.12	2.44	6,272		
February.....	924	80	363	7.56	8.15	20,880		
March.....	726	221	329	6.85	7.90	20,230		
April.....	660	221	380	7.75	8.84	22,610		
May.....	532	238	433	9.02	10.40	26,620		
June.....	410	205	296	6.17	6.88	17,610		
July.....	205	69	128	2.67	3.08	7,870		
August.....	97	26	45.8	.954	1.10	2,816		
September.....	35	23	26.4	.550	.61	1,571		
The period.....						137,000		
1904.								
October 1-15.....	370	30	112	2.33	1.30	3,332		
1907.								
September 23-30.....	38	29	34.6	.721	.21	549		
1907-8.								
October.....	48	38	39.5	.823	.95	2,480		
November.....	38	29	35.3	.735	.82	2,100		
December.....			a 29.0	.604	.70	1,780		
January.....			a 29.0	.604	.70	1,780		
February.....		16	a 29.1	.606	.65	1,670		
March.....	200	22	107	2.23	2.57	6,580		
April.....	200	140	177	3.69	4.12	10,500		
May.....	200	140	173	3.60	4.15	10,600		
June.....	221	105	160	3.33	3.72	9,520		
July.....	114	14	56.0	1.17	1.35	3,440		
August.....	14	4	8.9	.185	.21	547		
September.....	29	9	21.9	.456	.51	1,300		
The year.....	221	4	72.1	1.50	20.45	52,200		
1908-9.								
October.....	179	22	34.3	.715	.82	2,110		
November.....	54	22	30.0	.625	.70	1,790		
December.....	60	29	41.6	.867	1.00	2,560		
January.....	1,290	60	277	5.77	6.65	17,000		
February.....	172	34	92.0	1.92	2.00	5,110		
March.....	132	89	110	2.29	2.64	6,760		
April.....	665	114	375	7.81	8.71	22,300		
May.....	692	276	460	9.58	11.04	28,300		
June.....	568	236	374	7.79	8.69	22,300		
July.....	224	89	142	2.96	3.41	8,730		
August.....	76	7	23.4	.488	.56	1,440		
September.....	24	7	16.1	.335	.37	958		
The year.....	1,290	7	165	3.43	46.59	119,000		
1909-10.								
October.....	76	20	45.6	.950	1.10	2,800		
November.....	900	52	151	3.15	3.51	8,980		
December.....	480	123	187	3.90	4.50	11,500		
January.....	277	204	236	4.92	5.67	14,500		
February.....	264	204	245	5.10	5.31	13,600		
March.....	440	132	212	4.42	5.10	13,000		
April.....	354	216	299	6.23	6.95	17,800		
May.....	277	182	226	4.71	5.43	13,900		
June.....	252	76	175	3.65	4.07	10,400		
July.....	42	7	32.0	.667	.69	1,970		
August.....	10	10	10.0	.208	.24	615		
September.....	20	10	10.7	.223	.25	637		
The year.....	900	7	152	3.18	42.82	110,000		

a Estimated on account of ice.

Monthly discharge of Prosser Creek near Truckee, Cal., for 1903-4 and 1907-1911—Contd.

Month.	Discharge in second-feet.				Run-off.		Accu- racy.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.	Total in acre-feet.	
1910-11.							
October.....	14	10	11.2	0.233	0.27	689	C.
November.....	34	10	19.5	.406	.45	1,160	B.
December.....	52	20	27.7	.577	.66	1,700	B.
January.....	320	28	118	2.46	2.84	7,260	C.
February.....	320	70	105	2.19	2.28	5,830	D.
March.....	132	47	91.1	1.90	2.19	5,600	C.
April.....	562	144	290	6.04	6.74	17,300	C.
May.....	652	318	486	10.1	11.64	29,900	A.
June.....	675	272	513	10.7	11.94	30,500	A.
July.....	302	73	179	3.73	4.30	11,000	B.
August.....	79	24	45.9	.956	1.10	2,820	B.
September.....	24	18	19.4	.404	.45	1,150	C.
The year.....	675	10	159	3.31	44.86	115,000	
1911.							
October.....	27	16	22.0	.458	.53	1,503	D.
November.....	45	10	26.1	.543	.62	6,217	C.
December.....	21	5	10.2	.212	.14	550	D.

PROSSER CREEK NEAR BOCA, CAL.

This station, which was located about 2 miles from Boca, Cal., 500 feet below the dam of the Prosser Creek Ice Co. and about one-eighth of a mile above the mouth of the creek, at the footbridge between two ice houses, was established October 23, 1902, and was discontinued June 27, 1903, when the station near Hobart Mills was established.

The gage, which was a vertical staff graduated to feet and tenths, was located about 10 feet below the bridge.

The channel is straight both above and below the station. The banks are high. The bed of the stream is permanent and is composed of sandy gravel and stone.

A discharge measurement was made by E. C. Murphy, as follows:

October 23, 1902: Gage height, 0.85 foot; discharge, 21 second-feet.

Daily gage height, in feet, of Prosser Creek near Boca, Cal., for 1902-3.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Apr.	May.	June.
1.....		0.75	0.80	0.55	0.65	.....	2.32	2.28
2.....		.80	.80	.60	.50	.....	2.35	1.98
3.....		.75	.45	.65	.55	.....	2.35	1.78
4.....		.80	.65	.55	.55	.....	2.35	1.89
5.....		.80	.85	.47	.50	.....	2.40	1.92
6.....		.75	1.05	.72	.55	.....	2.55	1.95
7.....		.80	.95	.95	.55	.....	2.62	.....
8.....		.70	1.00	.82	.60	.....	2.62	.....
9.....		.70	1.10	.75	.60	.....	2.62	.....
10.....		1.05	1.30	.87	.55	.....	2.50	.....
11.....		1.00	.65	.....	.55	.....	2.60	.....
12.....		.80	.65	.....	.....	.....	2.58	.....
13.....		.85	.70	.....	.....	.....	2.50	.....
14.....		.85	.65	.55	.....	.....	2.55	.....
15.....		.85	.60	.55	.....	.....	2.42	.....

Daily gage height, in feet, of Prosser Creek near Boca, Cal., for 1902-3—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Apr.	May.	June.
16.....		0.80	0.55	0.65			2.40	
17.....		.85	.65	.50			1.40	
18.....		.85	.85	.60			1.20	
19.....		.80	.95	.65			1.18	
20.....		.80	.75	.65			1.18	
21.....		.85	.75	.75		1.80	1.15	
22.....		.80	.55	.80		1.90	1.10	
23.....	0.85	.85	.45	1.65		2.07	1.10	
24.....	.95	.80	.35	2.15		2.25	1.10	
25.....	.85	.80	.45	2.15		2.30	1.10	
26.....	.85	.80	.35	1.10		2.35	1.18	
27.....	.85	.80	.55	1.05		2.05	1.10	
28.....	.90	.85	.35	.90		2.04	1.15	
29.....	.85	.80	.45	.85		2.07	1.20	
30.....	.85	.75	.40	.80		2.11	2.15	
31.....	.80		.45	.85			2.30	

Monthly discharge of Prosser Creek at Boca, Cal., for 1889-90.

Month.	Mean discharge in second-feet.	Run-off (total in acre-feet).
1889.		
April.....	^a 100	5,950
May.....	259	15,900
June.....	110	6,540
July.....	17	1,050
August.....	3	184
September.....	2	119
The period.....		29,700
1890.		
April.....	340	20,200
May.....	817	50,200
June.....	580	34,500
July.....	382	23,500
August.....	102	6,270
September.....	57	3,390
The period.....		138,000
October.....	42	2,580
November.....	38	2,260

^a Estimated.

SOUTH FORK OF PROSSER CREEK NEAR TRUCKEE, CAL.

This station is located at the bridge at Evers Valley, in the SW. $\frac{1}{4}$ sec. 25, T. 18 N., R. 15 E., about 2 miles above the junction with the North Fork of Prosser Creek, and 6 miles northwest of Truckee.

The drainage area above the station is about 5.8 square miles.

The gage is a vertical staff at bridge from which discharge measurements are made.

The channel is composed of sand and gravel and is somewhat shifting.

The results are excellent, except during the winter season, when the flow is affected by ice.

The following records of daily discharge were furnished by the Stone & Webster Engineering Corporation:

Daily discharge, in second-feet, of South Fork of Prosser Creek near Truckee, Cal., for 1909-10.

Day.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.
1.....	7	175	26	21	21	26	65	65	13	α 4
2.....	7	118	17	17	22	30	76	61	13	α 4
3.....	7	69	10	19	23	32	65	56	13	α 4
4.....	7	56	7	28	22	43	63	58	10	4
5.....	8	34	7	26	21	34	67	39	10	4
6.....	10	26	10	30	21	30	56	34	10	4
7.....	12	10	10	28	23	26	65	34	10	4
8.....	10	34	13	26	23	32	78	30	10	4
9.....	10	65	17	26	26	43	83	26	10	4
10.....	7	74	21	30	26	50	100	26	10	4
11.....	6	43	24	28	27	56	102	26	10	4
12.....	4	34	26	21	26	65	96	24	10	4
13.....	7	26	24	19	28	65	83	α 25	7	4
14.....	10	34	24	17	30	72	74	26	7	4
15.....	7	30	19	17	28	74	67	28	4	4
16.....	7	39	17	13	28	76	65	26	4	4
17.....	56	30	13	13	30	78	56	21	4	4
18.....	78	21	13	13	32	85	47	21	4	4
19.....	100	26	21	10	45	96	56	21	4	4
20.....	153	17	21	10	34	87	54	21	4	4
21.....	144	10	24	10	28	83	56	24	4	4
22.....	162	10	26	17	26	80	52	21	4	4
23.....	166	21	28	13	26	91	56	21	4	4
24.....	158	17	26	13	24	96	56	19	4	4
25.....	164	17	21	17	21	113	47	17	4	4
26.....	144	26	19	18	19	109	58	17	4	4
27.....	104	26	21	17	21	100	56	17	4	4
28.....	52	30	24	19	26	78	61	17	4	4
29.....	30	39	28	.....	23	74	65	17	4	4
30.....	52	34	30	.....	26	47	58	13	4	4
31.....	.....	30	24	.....	28	.....	56	.....	4	4

α Interpolated by engineers of the United States Geological Survey.

Monthly discharge of South Fork of Prosser Creek near Truckee, Cal., for 1909-10.

[Drainage area, 5.8 square miles.]

Month.	Discharge in second-feet.				Run-off.	
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.	Total in acre-feet.
November.....	166	4	56.3	9.71	10.83	3,350
December.....	175	10	39.4	6.79	7.83	2,420
January.....	30	7	19.7	3.40	3.92	1,210
February.....	30	10	19.1	3.29	3.43	1,060
March.....	45	19	25.9	4.47	5.15	1,590
April.....	113	26	65.7	11.30	12.61	3,910
May.....	102	47	65.8	11.30	13.03	4,050
June.....	65	13	28.4	4.90	5.47	1,690
July.....	13	4	6.8	1.17	1.35	418
August.....	4	4	4.0	.690	.80	246
The period.....	.....	.....	.....	.....	.....	19,900

NOTE.—Monthly value computed by engineers of the United States Geological Survey.

LITTLE TRUCKEE RIVER NEAR TRUCKEE, CAL.

This station is located at the trail crossing in the SW. $\frac{1}{4}$ sec. 26, T. 14 N., R. 14 E., about 4 miles above the mouth of Independence Creek, and 14 miles northwest of Truckee.

The gage is a vertical staff near the car and cable from which discharge measurements are made. The channel is compact gravel and fairly permanent. The drainage area above the station is about 33.2 square miles.

Results are excellent, except during the winter season, when the flow is affected by ice.

The following records of daily discharge were furnished by the Stone & Webster Engineering Corporation.

Daily discharge, in second-feet, of Little Truckee River near Truckee, Cal., for 1909-10.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.
1.....		18	319	74	47	74	205	342	287	67	3
2.....		18	319	74	47	74	205	296	287	60	2
3.....		18	251	74	47	74	205	319	237	67	2
4.....		12	183	60	47	74	205	319	237	75	2
5.....		18	137	47	47	83	205	342	237	67	2
6.....		18	114	47	47	83	205	342	237	24	4
7.....		18	92	63	53	84	205	365	212	24	3
8.....		114	74	47	53	92	228	365	137	32	2
9.....		74	60	47	53	92	228	362	162	32	2
10.....		47	60	47	53	92	251	387	162	28	2
11.....		36	46	36	60	114	228	387	113	32	2
12.....		26	47	36	60	114	228	362	113	32	2
13.....		31	47	36	60	114	228	362	113	32	2
14.....		26	47	36	60	114	237	362	113	28	2
15.....		26	36	36	52	97	251	337	92	24	2
16.....		26	36	36	60	137	274	312	92	24	2
17.....		26	36	36	60	183	296	262	113	24	1
18.....		22	36	36	60	319	319	262	113	24	1
19.....		36	36	36	60	410	342	287	92	24	1
20.....	12	235	36	36	57	365	365	212	113	24	1
21.....	12	410	26	36	60	342	376	387	113	20	1
22.....	12	319	26	30	60	314	410	387	92	24	1
23.....	12	251	26	36	60	296	410	387	92	24	1
24.....	7	296	26	47	60	274	432	337	92	24	1
25.....	3	387	26	47	74	251	432	362	75	24	1
26.....	8	183	31	60	60	251	455	312	75	15	0
27.....	7	114	36	60	60	205	478	337	75	12	0
28.....	7	103	36	60	68	183	478	312	60	12	0
29.....	7	92	36	47	-----	160	410	299	67	10	0
30.....	7	92	36	47	-----	137	387	287	67	10	0
31.....	7	-----	a 55	45	-----	132	-----	287	-----	8	0

a Interpolated by engineers of the United States Geological Survey.

Monthly discharge of Little Truckee River near Truckee, Cal., for 1909-10.

[Drainage area, 33.2 square miles.]

Month.	Discharge in second-feet.				Run-off.	
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.	Total in acre-feet.
October 20-31.....	12	3	8.4	0.253	0.11	200
November.....	410	12	103	3.10	3.46	6,130
December.....	319	26	76.5	2.31	2.66	4,700
January.....	74	30	46.9	1.41	1.63	2,880
February.....	74	47	56.6	1.71	1.78	3,140
March.....	410	74	172	5.18	5.97	10,600
April.....	478	205	306	9.22	10.29	18,200
May.....	387	212	332	10.00	11.53	20,400
June.....	287	60	136	4.10	4.57	8,090
July.....	75	8	29.9	.901	1.04	1,840
August.....	4	0	1.5	.045	.05	92
The period.....						76,300

NOTE.—Monthly values computed by engineers of the United States Geological Survey.

LITTLE TRUCKEE RIVER AT STARR, CAL.

This station, which is located at Starr, Cal., about 5 miles north of Boca, the nearest post office, was established June 25, 1903, at Bruhn's mill, or Pine station, on the Boca & Loyaltan Railroad, 2 miles below Starr, was removed to its present site on January 1, 1908, and was discontinued October 22, 1910. The flow is practically the same at both places.

The station is below all tributaries except Dry Creek.

A new inclined gage was established August 3, 1909, with a datum 1 foot lower than that of the original gage. The creek freezes during parts of the winter.

Discharge measurements are made from a cable and car.

Discharge measurements of Little Truckee River at Pine station, Cal., in 1903-1907.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1903.		<i>Feet.</i>	<i>Sec.-feet.</i>	1905.		<i>Feet.</i>	<i>Sec.-feet.</i>
July 17	G. B. Lorenz.....	1.20	50	May 27	W. A. Wolf.....	2.05	366
Aug. 30	.....do.....	1.00	29	June 7	.....do.....	2.00	343
Aug. 14	.....do.....	.84	19	June 23	.....do.....	1.36	138
Oct. 9	.....do.....	.80	20	July 8	.....do.....	1.12	98
				July 24	.....do.....	1.03	81
1904.				1906.			
May 27	W. A. Wolf.....	3.10	971	May 30	M. B. Kennedy.....	2.35	545
June 12	.....do.....	2.90	757	June 18	.....do.....	2.90	822
June 21	.....do.....	2.50	617	July 7	.....do.....	2.80	888
July 5	.....do.....	1.88	321	Aug. 2	.....do.....	1.30	153
July 16	.....do.....	1.60	185				
Aug. 12	.....do.....	.85	48	1907.			
Sept. 1	.....do.....	.75	42	June 3	E. A. Porter.....	3.20	1,010
1905.				July 5	.....do.....	2.30	789
Apr. 16	W. A. Wolf.....	1.85	289	July 27	.....do.....	1.70	306
May 11	.....do.....	1.80	274	Aug. 21	.....do.....	.95	125

Discharge measurements of Little Truckee River at Starr, Cal., in 1908-1910.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1908.		<i>Feet.</i>	<i>Sec-feet.</i>	1909.		<i>Feet.</i>	<i>Sec-feet.</i>
June 18	E. A. Porter.....	1.80	292	Sept. 13	F. C. Schafer.....	0.85	22
July 9	M. B. Kennedy.....	1.20	126				
Oct. 17	E. A. Porter.....	.80	56	1910.			
1909.				Mar. 24	F. C. Schafer.....	2.60	519
May 20	L. J. Towne.....	3.20	856	Aug. 27	.....do.....	.70	13
July 9	.....do.....	2.05	254	Sept. 22	T. W. Norcross.....	.77	20
Aug. 3	.....do.....	1.28	63	Dec. 15	D. S. Stuver.....	1.33	81.8

NOTE.—Beginning May 20, 1909, gage heights refer to a new gage installed Aug. 3, 1909.

Daily gage height, in feet, of Little Truckee River at Pine station, Cal., for 1903-1907.

Day.	June.	July.	Aug.	Sept.	Day.	June.	July.	Aug.	Sept.
1903.					1903.				
1.....		2.15	1.00	0.79	16.....		1.38	0.84	0.82
2.....		2.15	.99	.79	17.....		1.25	.82	.81
3.....		2.10	.95	.76	18.....		1.25	.79	.80
4.....		2.10	.95	.76	19.....		1.18	.79	.80
5.....		2.10	.95	.74	20.....		1.15	.81	.80
6.....		2.10	.95	.76	21.....		1.05	.81	.....
7.....		2.00	.95	.78	22.....		1.05	.82	.....
8.....		1.60	.94	.79	23.....		1.05	.79	.....
9.....		1.59	.89	.78	24.....		1.10	.79	.....
10.....		1.55	.94	.79	25.....	2.05	1.05	.81	.....
11.....		1.48	.91	.79	26.....	2.05	1.09	.79	.....
12.....		1.42	.91	.79	27.....	2.15	1.08	.79	.....
13.....		1.45	.92	.76	28.....	2.10	1.02	.81	.....
14.....		1.42	.91	.82	29.....	2.10	1.04	.79	.....
15.....		1.41	.85	.86	30.....	2.10	1.02	.79	.....
					31.....		1.02	.81	.....

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1903-4.												
1.....		0.93	1.49	1.12	1.44	2.50	2.69	2.46	2.94	2.16	1.04	0.65
2.....		.93	1.46	1.12	1.40	2.80	2.70	2.48	2.92	2.08	1.06	.65
3.....		.93	1.40	1.25	1.40	2.82	2.66	2.55	3.06	2.04	1.03	.63
4.....		.96	1.32	1.30	1.45	2.85	2.72	2.76	2.98	1.96	1.02	.63
5.....		1.06	1.32	1.40	1.37	2.72	2.82	2.94	2.99	1.88	1.00	.63
6.....		1.03	1.32	1.38	1.42	2.75	2.92	3.16	3.06	1.90	.99	.63
7.....		1.03	1.30	1.40	1.45	2.90	3.09	3.20	3.05	1.92	.98	.62
8.....		1.03	1.30	1.50	1.53	3.10	3.23	3.30	2.86	1.88	.95	.60
9.....		.94	1.35	1.45	1.60	2.82	3.49	3.32	2.85	1.80	.93	.60
10.....		1.00	1.30	1.18	1.60	2.75	3.64	3.46	2.84	1.76	.92	.60
11.....		1.00	1.31	1.28	1.60	2.45	3.84	3.44	2.85	1.64	.85	.60
12.....		1.42	1.37	1.30	1.50	2.32	4.07	3.60	2.78	1.60	.83	.60
13.....		2.18	1.30	1.25	1.40	2.29	4.48	3.75	2.80	1.56	.82	.60
14.....		2.75	1.28	1.32	1.54	2.28	4.56	3.64	2.84	1.59	.80	.60
15.....		2.25	1.26	1.48	1.90	2.25	4.32	3.64	2.75	1.56	.83	.62
16.....		1.82	1.28	1.42	2.42	2.18	3.95	3.60	2.72	1.62	.80	.63
17.....		1.69	1.27	1.42	2.58	2.35	3.74	3.56	2.65	1.56	.80	.63
18.....		1.56	1.25	1.36	2.54	2.95	3.86	3.38	2.60	1.52	.80	.66
19.....		1.60	1.18	1.40	2.56	3.55	3.72	3.12	2.50	1.48	.78	.63
20.....		1.86	1.25	1.52	2.28	3.65	3.15	3.08	2.44	1.42	.76	.63
21.....		2.54	1.22	1.48	2.18	3.35	2.95	3.22	2.45	1.39	.73	.60
22.....		2.58	1.16	1.56	2.75	3.06	2.80	3.48	2.46	1.38	.70	.68
23.....		2.45	1.16	1.48	3.25	2.82	2.60	3.62	2.48	1.32	.70	.82
24.....		2.25	1.22	1.48	3.75	2.60	2.55	3.73	2.39	1.32	.79	1.08
25.....	1.20	1.99	1.26	1.42	3.65	2.49	2.59	3.82	2.29	1.33	.84	.95
26.....	1.20	1.82	1.28	1.39	3.35	2.45	2.58	3.32	2.20	1.26	.80	.89
27.....	1.18	1.68	1.28	1.40	2.90	2.50	2.44	3.08	2.22	1.22	.74	.84
28.....	1.12	1.64	1.30	1.39	2.62	3.08	2.34	3.02	2.26	1.18	.72	.80
29.....	1.00	1.56	1.26	1.38	2.60	3.14	2.35	3.06	2.26	1.13	.69	.80
30.....	.98	1.52	1.29	1.40	.....	2.89	2.45	3.10	2.22	1.10	.68	.82
31.....	.95	.....	1.25	1.38	.....	2.76	.....	3.04	.....	1.06	.66	.....

Daily gage height, in feet, of Little Truckee River at Pine station, Cal., for 1903-1907—
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1904-5.												
1.....	1.02	1.00	1.26	1.28	1.13	1.36	1.53	2.49	2.26	1.28	0.75	0.58
2.....	.94	1.00	1.22	1.25	1.19	1.44	1.60	2.50	2.22	1.40	.75	.60
3.....	.82	1.00	1.13	1.24	1.09	1.43	1.64	2.59	2.14	1.40	.73	.58
4.....	.80	.98	1.10	1.00	1.04	1.46	1.65	2.43	2.09	1.38	.73	.60
5.....	.78	.95	1.07	.99	1.00	1.54	1.75	2.29	1.99	1.32	.72	.60
6.....	.80	.94	1.12	1.14	1.00	1.59	1.76	2.22	1.97	1.22	.70	.60
7.....	.95	.92	1.10	1.16	1.00	1.60	1.83	2.24	1.96	1.18	.70	.60
8.....	.99	.90	1.14	1.14	.82	1.62	1.84	2.15	2.04	1.18	.70	.60
9.....	1.04	.90	1.00	1.06	.86	1.60	1.85	2.12	2.12	1.14	.68	.60
10.....	1.28	.89	.90	1.12	.94	1.59	1.84	1.99	2.16	1.12	.68	.61
11.....	2.34	.88	.75	1.10	1.02	1.60	1.78	1.95	2.21	1.10	.68	.60
12.....	2.16	.88	.76	1.06	.94	1.56	1.94	1.90	2.30	1.04	.70	.61
13.....	1.80	.86	.78	1.01	1.00	1.68	1.74	1.99	2.26	1.04	.70	.61
14.....	1.58	.85	.76	1.08	1.00	1.58	1.76	2.12	2.19	1.10	.70	.61
15.....	1.36	.90	.75	1.25	1.02	1.53	1.85	2.10	2.16	1.10	.68	.60
16.....	1.28	.86	.68	1.25	1.06	1.55	1.80	2.35	2.14	1.06	.65	.60
17.....	1.20	.88	.85	1.25	1.04	1.56	1.72	2.62	2.16	.98	.65	.62
18.....	1.12	.92	.86	1.19	1.02	1.50	1.82	2.58	2.03	.93	.65	.63
19.....	1.10	.86	.78	1.12	1.10	1.52	1.70	2.50	1.99	.90	.64	.63
20.....	1.06	.89	.78	1.13	1.18	1.56	1.63	2.50	1.98	.90	.63	.63
21.....	1.05	.86	.76	1.06	1.05	1.56	1.62	2.52	1.93	.90	.66	.63
22.....	1.04	.88	.73	1.11	1.05	1.48	1.62	2.44	1.80	.86	.70	.63
23.....	1.04	.84	.68	1.26	1.06	1.51	1.69	2.25	1.76	.85	.70	.63
24.....	1.03	.85	.54	1.29	1.14	1.58	1.80	2.29	1.72	1.02	.65	.64
25.....	1.03	.85	.60	1.23	1.24	1.56	2.46	2.26	1.66	.90	.65	.65
26.....	1.03	.86	.78	1.30	1.28	1.82	2.74	2.36	1.65	.88	.63	.65
27.....	1.03	.95	1.14	1.26	1.32	1.62	2.69	2.12	1.66	.82	.62	.65
28.....	1.00	1.05	1.24	1.14	1.38	1.54	2.72	2.24	1.34	.80	.60	.69
29.....	1.00	.99	1.15	1.13	.....	1.43	2.85	2.20	1.30	.80	.60	.70
30.....	1.00	1.14	1.50	1.06	.....	1.52	2.59	2.22	1.28	.80	.60	.73
31.....	1.00	.....	1.14	1.14	.....	1.49	.....	2.20	.....	.75	.58	.....
1905-6.												
1.....	.70	.71	1.12	1.30	1.68	1.05	1.92	3.06	2.45	2.74	1.32	.78
2.....	.70	.71	1.20	1.23	1.55	1.10	1.82	3.62	2.50	2.78	1.28	.75
3.....	.70	.70	1.13	1.28	1.60	1.12	1.73	3.55	2.64	2.85	1.22	.73
4.....	.70	.71	1.10	1.30	1.48	1.10	1.68	3.59	3.04	2.86	1.18	.73
5.....	.68	.66	1.15	1.28	1.43	1.05	1.70	3.64	3.15	2.88	1.12	.78
6.....	.68	.65	1.18	1.28	1.45	1.05	1.85	3.64	2.92	2.82	1.10	.73
7.....	.68	.71	1.20	1.23	1.43	1.06	2.09	3.66	2.72	2.78	1.05	.73
8.....	.70	.69	1.13	1.18	1.40	1.12	2.30	3.62	2.82	2.75	1.04	.72
9.....	.70	.67	1.15	1.30	1.50	1.15	2.52	3.59	3.19	2.65	1.03	.70
10.....	.70	.67	1.13	1.30	1.43	1.22	2.49	3.56	3.49	2.50	1.12	.70
11.....	.68	.71	1.26	1.30	1.48	1.30	2.39	3.69	3.44	2.26	1.06	.72
12.....	.68	.82	1.23	1.30	1.40	1.40	2.40	3.42	3.60	2.26	1.02	.72
13.....	.68	.80	1.30	1.38	1.33	2.39	2.49	3.25	3.36	2.34	.99	.72
14.....	.68	.81	1.30	1.50	1.30	1.20	2.60	3.21	3.19	2.32	.99	.74
15.....	.68	.79	1.30	1.60	1.20	1.18	2.90	3.09	3.09	2.18	.98	.75
16.....	.69	.83	1.25	1.83	1.39	1.30	3.02	2.80	3.45	2.19	.95	.74
17.....	.67	.83	1.18	2.10	1.35	1.30	3.02	2.66	3.36	2.00	.93	.73
18.....	.70	.81	1.23	2.98	1.28	1.30	3.14	2.74	3.01	1.94	.90	.70
19.....	.69	.79	1.20	3.33	1.20	1.30	3.29	2.89	3.31	1.86	.89	.70
20.....	.69	.81	1.20	3.20	1.33	1.19	3.42	2.94	3.21	1.80	.90	.70
21.....	.69	.83	1.00	3.03	1.40	1.28	3.55	2.84	3.23	1.74	.90	.69
22.....	.69	.90	1.20	2.83	1.38	1.48	3.62	2.81	3.25	1.55	.85	.68
23.....	.69	.87	1.15	2.75	1.20	1.53	3.42	2.64	3.21	1.56	.83	.68
24.....	.69	.79	1.20	2.60	1.14	1.66	3.10	2.59	3.01	1.68	.82	.68
25.....	.70	.74	1.25	2.58	1.10	1.79	2.98	2.70	3.08	1.75	.80	.68
26.....	.70	.73	1.30	2.38	1.10	1.80	2.96	2.84	2.95	1.72	.80	.68
27.....	.70	.83	1.25	2.15	1.10	1.79	2.90	2.78	2.87	1.55	.79	.70
28.....	.70	1.00	1.12	1.98	1.16	1.79	2.76	2.58	2.59	1.44	.78	.70
29.....	.70	1.20	1.15	1.90	.....	1.79	2.92	2.42	2.44	1.38	.78	.70
30.....	.70	1.12	.....	1.83	.....	2.02	3.10	2.34	2.54	1.32	.80	.68
31.....	.70	.....	1.23	1.80	.....	2.06	.....	2.43	.....	1.30	.80	.....
1906-7.												
1.....	.70	.82	.90	1.05	1.45	1.35	2.1	3.3	3.35	2.6	1.5	.8
2.....	.70	.79	.94	1.05	1.8	1.4	2.15	3.25	3.35	2.45	1.45	.8
3.....	.68	.90	.92	1.05	1.75	1.35	2.1	3.15	3.3	2.5	1.4	.8
4.....	.68	1.32	.83	.9	1.8	1.35	2.1	3.05	3.3	2.6	1.3	.8
5.....	.66	1.08	.78	1.0	1.85	1.35	2.05	2.85	3.2	2.45	1.3	.85

Daily gage height, in feet, of Little Truckee River at Pine station, Cal., for 1903-1907—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1906-7.												
6.....	0.68	0.96	0.92	1.25	1.8	1.35	2.05	2.85	3.1	2.4	1.25	0.85
7.....	.68	.92	.92	1.4	1.8	1.3	2.15	2.8	3.05	2.35	1.3	.9
8.....	.68	.90	.88	1.25	1.7	1.3	2.3	2.8	2.75	2.3	1.25	.9
9.....	.65	.88	.92	1.55	1.6	1.3	2.5	2.9	2.7	2.25	1.25	.8
10.....	.65	.89	.98	1.5	1.5	1.25	2.9	3.15	2.75	2.15	1.2	.8
11.....	.65	.89	.68	1.5	1.55	1.25	3.1	3.3	3.25	2.05	1.15	.8
12.....	.66	.88	.90	1.4	1.55	1.2	3.25	3.1	2.85	2.1	1.1	.75
13.....	.65	.88	1.29	1.5	1.5	1.35	3.4	2.8	2.6	2.05	1.1	.75
14.....	.65	.88	1.32	1.65	1.5	1.2	3.7	2.7	2.3	2.15	1.05	.7
15.....	.65	.88	1.26	1.65	1.5	1.25	3.55	2.8	2.2	2.05	1.05	.7
16.....	.65	.90	1.24	1.8	1.5	1.3	3.3	2.95	2.1	2.0	1.0	.7
17.....	.65	.89	1.38	1.9	1.45	2.35	3.35	3.05	2.1	1.95	1.0	.7
18.....	.65	.88	1.24	1.8	1.45	4.05	3.5	3.15	2.2	1.9	1.0	.7
19.....	.66	.75	1.16	1.75	1.45	3.65	3.6	3.4	2.25	1.95	.95	.7
20.....	.66	.88	1.05	1.75	1.5	3.4	3.5	3.3	2.35	1.9	.9	.7
21.....	.92	.82	1.10	1.7	1.5	2.95	3.4	3.0	2.5	1.85	.9	.7
22.....	.96	.83	1.12	1.6	1.55	2.7	3.5	2.95	2.7	1.65	.9	.7
23.....	1.00	.85	1.05	1.55	1.5	2.35	3.65	2.75	2.6	1.65	.9	.65
24.....	.95	.85	1.03	1.6	1.5	2.3	3.65	2.7	2.5	1.65	.9	.65
25.....	.94	.86	1.16	1.55	1.55	2.35	3.65	2.75	2.25	1.85	.85	.65
26.....	.90	.83	1.40	1.45	1.5	2.25	3.6	2.75	2.3	1.7	.85	.65
27.....	.86	.88	1.25	1.4	1.35	2.15	3.55	2.75	2.4	1.75	.85	.65
28.....	.82	.84	1.18	1.5	1.35	2.1	3.45	2.85	2.65	1.8	.85	.65
29.....	.78	.90	1.02	1.45	.....	1.95	3.35	2.9	2.55	1.85	.85	.7
30.....	.78	.89	.99	1.4	.....	1.95	3.3	3.05	2.55	1.75	.8	.7
31.....	.79	.....	1.21	1.4	.....	2.0	.....	3.15	.....	1.6	.8	.....

Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.
1907.				1907.			
1.....	0.7	0.95	0.7	16.....	0.7	0.7	1.0
2.....	.7	.9	.75	17.....	.7	.....	.9
3.....	.7	.9	.75	18.....	.7	.....	.95
4.....	.7	.9	.7	19.....	.7	.....	1.0
5.....	.7	.85	.7	20.....	.75	.....	1.05
6.....	.65	.85	.75	21.....	.75	.....	.9
7.....	.8	.85	.85	22.....	.75	.....	.85
8.....	.8	.8	.95	23.....	.7	.....	.9
9.....	.75	.8	1.0	24.....	.8	.....	.95
10.....	.75	.75	1.0	25.....	.8	.....	.8
11.....	.75	.7	.95	26.....	.8	.....	1.0
12.....	.7	.7	1.0	27.....	.9	.....	1.5
13.....	.7	.7	.9	28.....	.85	.....	1.1
14.....	.7	.7	.8	29.....	.8	.....	.85
15.....	.7	.7	1.0	30.....	.9	.....	.95
				31.....	1.0	.....	.9

Daily gage height, in feet, of Little Truckee River at Starr, Cal., for 1908-1910.

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1908.									
1.....	1.2	0.9	0.8	1.5	2.1	1.9	1.45	0.6	0.45
2.....	1.2	1.0	.9	1.6	2.4	1.9	1.35	.65	.45
3.....	1.15	.9	.9	1.6	2.0	1.8	1.35	.65	.4
4.....	1.05	1.0	1.0	1.85	1.85	1.7	1.3	.6	.4
5.....	1.0	1.0	.95	1.95	1.8	1.75	1.3	.6	.4
6.....	1.0	.95	1.0	1.8	1.95	1.85	1.25	.6	.45
7.....	1.0	.9	1.0	1.7	2.1	1.95	1.2	.55	.45
8.....	1.05	.95	.95	1.85	2.0	2.0	1.2	.55	.5
9.....	1.0	.9	1.0	1.9	1.85	2.0	1.2	.6	.45
10.....	1.15	.9	1.0	2.0	1.8	2.05	1.05	.55	.45
11.....	1.3	.85	1.0	2.05	1.75	2.05	1.0	.55	.45
12.....	1.3	.75	1.0	2.15	1.8	2.0	1.1	.6	.5
13.....	1.3	.75	1.0	2.25	1.7	2.2	1.0	.7	.5
14.....	1.3	.8	1.0	2.35	1.75	2.1	.95	.7	.5
15.....	1.25	.8	1.2	2.35	1.7	2.0	.9	.7	.5

Daily gage height, in feet, of Little Truckee River at Starr, Cal., for 1908-1910—
Continued.

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.			
1908.												
16.....	1.15	1.0	1.2	2.25	1.8	1.95	0.9	0.6	0.5			
17.....	1.15	.9	1.45	2.05	1.7	1.9	.85	.55	.55			
18.....	1.2	.8	1.55	2.1	1.6	1.75	.8	.5	.55			
19.....	1.1	.9	1.6	2.2	1.75	1.75	.8	.5	.55			
20.....	1.2	.9	1.6	2.4	1.6	1.75	.8	.5	.55			
21.....	.9	.9	1.65	2.4	1.65	1.7	.75	.45	.5			
22.....	.9	.8	1.65	2.3	1.7	1.6	.7	.45	.5			
23.....	.9	.8	1.7	2.1	1.8	1.5	.7	.45	.5			
24.....	.9	.85	1.8	2.0	1.95	1.5	.7	.45	.6			
25.....	1.05	.85	1.85	1.9	2.1	1.65	.65	.45	.55			
26.....	1.05	.9	1.8	1.95	2.2	1.6	.65	.45	.55			
27.....	.9	.9	1.7	2.0	2.0	1.5	.65	.4	.55			
28.....	.85	.9	1.7	2.05	2.0	1.45	.65	.45	.55			
29.....	.8	.8	1.8	2.1	2.05	1.4	.6	.45	.55			
30.....	.9	-----	1.6	2.1	2.05	1.55	.6	.45	.55			
31.....	.95	-----	1.6	-----	1.95	-----	.6	.45	-----			
Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1908-9.												
1.....	0.55	0.7	0.75	2.	1.95	1.6	1.8	3.95	3.4	2.8	1.4	0.9
2.....	.55	.7	.8	2.35	1.95	1.55	1.95	3.7	3.75	2.75	1.3	.85
3.....	.55	.7	.75	2.35	1.8	1.6	2.1	3.4	3.85	2.7	1.3	.9
4.....	.6	.7	.7	2.3	1.75	1.6	2.2	3.75	3.9	2.6	1.25	.9
5.....	.55	.7	.65	2.85	1.7	1.6	2.15	3.85	3.9	2.4	1.2	1.0
6.....	.55	.7	.65	3.05	1.7	1.6	2.15	3.9	3.7	2.25	1.15	.95
7.....	.55	.7	.55	2.8	1.6	1.6	2.2	4.0	3.6	2.15	1.1	.9
8.....	.55	.65	.7	2.35	1.6	1.6	2.25	3.95	3.5	2.1	2.3	.9
9.....	.55	.65	.7	2.6	1.7	1.6	2.4	3.75	3.4	2.05	2.15	.85
10.....	.55	.7	.55	3.1	1.7	1.6	2.55	3.6	3.3	2.05	1.8	.85
11.....	.55	.65	.75	4.0	1.7	1.6	2.5	3.6	3.3	2.05	1.8	.8
12.....	.55	.65	.8	4.1	1.75	1.55	2.6	3.15	3.3	2.05	1.8	.85
13.....	.55	.65	.75	4.0	1.7	1.5	2.8	3.2	3.3	2.15	1.5	.85
14.....	.55	.65	.65	4.8	1.7	1.5	3.2	3.15	3.1	2.1	1.4	.85
15.....	1.25	.6	.70	4.8	1.65	1.6	3.3	3.3	3.2	2.0	1.5	.85
16.....	1.0	.6	.85	4.8	1.65	1.65	3.45	3.15	3.15	2.0	1.0	.85
17.....	.8	.55	.9	4.35	1.8	1.8	4.0	3.15	3.15	1.95	1.0	.85
18.....	.7	.55	.9	4.0	1.75	1.85	3.8	3.15	3.2	1.8	1.0	.85
19.....	.7	.55	.95	3.2	1.8	1.8	3.85	3.2	3.05	1.65	.95	.85
20.....	.7	.6	.95	2.9	1.75	1.85	3.5	3.3	2.8	1.55	1.0	.85
21.....	.75	.75	.95	2.8	1.7	1.8	3.5	3.3	2.8	1.55	.95	.85
22.....	.7	.75	1.0	2.45	1.65	1.8	3.5	3.0	2.9	1.5	.95	.85
23.....	.75	.75	1.05	2.2	1.75	1.75	3.3	2.85	3.05	1.5	1.1	.85
24.....	.75	.6	1.05	2.2	1.65	1.75	3.35	2.7	3.2	1.55	.95	.85
25.....	.75	.75	.9	2.15	1.65	1.7	3.35	2.75	3.1	1.65	.9	.85
26.....	.7	.7	.95	2.1	1.65	1.7	3.55	2.95	2.95	1.5	.9	.85
27.....	.8	.85	.9	2.8	1.65	1.7	4.1	3.1	2.95	1.4	.9	.9
28.....	.7	.85	.9	1.95	1.6	1.7	3.95	3.3	2.9	1.4	.9	.9
29.....	.7	.85	.85	2.0	-----	1.7	3.8	2.95	2.9	1.35	.85	.95
30.....	.7	.8	1.05	1.9	-----	1.7	3.75	2.85	2.8	1.35	.85	.95
31.....	.7	-----	1.05	1.9	-----	1.7	-----	3.05	-----	1.3	.9	-----
1909-10.												
1.....	.95	1.05	2.2	2.25	2.45	1.9	2.85	2.85	2.5	1.3	.7	.65
2.....	1.0	1.1	2.2	2.2	2.35	1.85	2.95	2.75	2.55	1.2	.75	.65
3.....	1.05	1.05	1.6	2.1	2.5	1.95	2.9	2.75	2.45	1.2	.7	.7
4.....	1.05	1.0	2.1	2.1	2.65	2.0	2.8	2.6	2.4	1.2	.75	.7
5.....	1.0	1.0	2.9	2.05	2.95	2.1	2.75	2.45	2.2	1.15	.7	.7
6.....	.95	1.05	2.4	2.3	3.1	2.1	2.95	2.45	2.05	1.05	.7	.7
7.....	.95	1.1	1.9	2.2	3.2	2.2	2.95	2.55	2.0	1.05	.7	.65
8.....	.95	1.15	1.9	2.1	2.95	2.3	3.05	2.75	1.95	1.0	.7	.7
9.....	.9	1.55	1.9	1.95	3.1	2.3	3.1	2.9	1.85	1.0	.7	.7
10.....	.9	1.4	2.05	1.95	2.75	2.4	3.15	3.0	1.85	1.0	.7	.7
11.....	.9	1.5	1.95	1.95	2.65	2.5	3.05	3.0	1.9	1.0	.75	.65
12.....	.95	1.15	1.85	1.95	2.7	2.55	2.95	3.0	1.8	.95	.75	.7
13.....	.9	1.15	1.8	2.05	2.55	2.6	3.0	2.95	1.65	.95	.7	.7
14.....	.9	1.15	1.75	2.05	2.5	2.7	2.9	2.9	1.7	.95	.7	.75
15.....	.9	1.1	1.7	2.0	2.1	2.6	2.95	2.75	1.7	.95	.7	.8

Daily gage height, in feet, of Little Truckee River at Starr, Cal., for 1908-1910—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909-10.												
16.....	1.05	1.05	1.6	2.1	2.4	2.55	2.95	2.75	1.7	0.9	0.7	1.05
17.....	1.1	1.2	1.65	2.25	2.75	2.65	3.0	2.7	1.65	.9	.7	.9
18.....	.9	1.1	1.55	2.3	2.65	2.9	3.1	2.7	1.65	1.0	.7	.8
19.....	1.0	1.25	1.45	2.4	2.45	3.75	3.25	2.7	1.6	1.0	.7	.8
20.....	1.1	2.3	1.5	2.3	2.7	3.6	3.35	2.55	1.55	1.0	.7	.8
21.....	1.0	3.3	1.6	2.4	2.85	3.05	3.2	2.55	1.55	.85	.7	.8
22.....	1.2	2.65	1.6	2.4	2.8	2.85	3.2	2.65	1.5	.85	.7	.8
23.....	1.0	2.7	1.55	2.4	2.55	2.7	3.2	2.65	1.55	.85	.65	.8
24.....	1.0	2.9	1.4	2.5	2.5	2.5	3.25	2.7	1.45	.85	.65	.8
25.....	1.0	2.75	1.6	2.4	2.5	2.35	3.3	2.65	1.4	.8	.65	.8
26.....	.9	2.45	1.6	2.8	2.0	2.55	3.35	2.55	1.45	.85	.65	.8
27.....	.9	2.15	1.35	2.7	2.5	2.4	3.35	2.5	1.4	.8	.65	.8
28.....	1.0	1.95	1.3	2.7	2.2	2.35	3.45	2.6	1.25	.8	.65	.8
29.....	1.05	1.9	1.65	2.65	.....	2.35	3.1	2.35	1.30	.75	.65	.8
30.....	1.05	1.85	1.75	2.7	.....	2.6	3.05	2.35	1.30	.8	.7	.8
31.....	1.05	.....	2.2	2.65	.....	2.7	.....	2.5	.....	.75	.7	.....

Day.	Oct.	Day.	Oct.	Day.	Oct.
1910.					
1.....	0.8	11.....	0.85	21.....	0.8
2.....	.8	12.....	.9	22.....	.8
3.....	.8	13.....	.9	23.....	.....
4.....	.8	14.....	.8	24.....	.....
5.....	.8	15.....	.85	25.....	.....
6.....	.8	16.....	.85	26.....	.....
7.....	.8	17.....	.85	27.....	.....
8.....	.8	18.....	.85	28.....	.....
9.....	.8	19.....	.8	29.....	.....
10.....	.8	20.....	.8	30.....	.....
				31.....	.....

NOTE.—Beginning Jan. 1, 1909, gage heights refer to new gage installed Aug. 3, 1909.

Rating tables for Little Truckee River at Pine station, Cal.

June 25 to December 31, 1903.

Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.
<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>
0.7	14	1.3	64	1.9	160	2.5	256
.8	18	1.4	80	2.0	176	2.6	272
.9	23	1.5	96	2.1	192	2.7	288
1.0	29	1.6	112	2.2	208	2.8	304
1.1	38	1.7	128	2.3	224		
1.2	50	1.8	144	2.4	240		

NOTE.—Table only approximate beyond 1.20 feet gage height and not well defined below 1 foot gage height.

January 1 to December 31, 1904.

0.60	31	1.70	240	2.80	761	3.90	1,385
.70	37	1.80	278	2.90	815	4.00	1,445
.80	45	1.90	318	3.00	869	4.10	1,510
.90	53	2.00	361	3.10	923	4.20	1,575
1.00	64	2.10	407	3.20	978	4.30	1,640
1.10	79	2.20	455	3.30	1,034	4.40	1,705
1.20	98	2.30	504	3.40	1,090	4.50	1,770
1.30	120	2.40	554	3.50	1,146	4.60	1,835
1.40	145	2.50	604	3.60	1,205		
1.50	174	2.60	656	3.70	1,265		
1.60	205	2.70	708	3.80	1,325		

NOTE.—Table applicable only for periods of open channel. It is based upon 7 discharge measurements made during 1904 and is well defined between gage heights 0.75 foot and 3.10 feet.

Rating tables for Little Truckee River at Pine station, Cal.—Continued.

January 1 to December 31, 1905.

Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.
<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>
0.60	35	1.20	107	1.80	270	2.40	531
.70	45	1.30	126	1.90	307	2.50	580
.80	55	1.40	143	2.00	347	2.60	630
.90	66	1.50	174	2.10	390	2.70	681
1.00	78	1.60	203	2.20	436	2.80	733
1.10	91	1.70	235	2.30	483	2.90	786

NOTE.—Table is applicable only for periods of open channel. It is based on discharge measurements made during 1904-5, and is well defined between gage heights 1 foot and 2.1 feet.

January 1, 1905, to April 14, 1906.

1.00	78	1.50	174	2.00	347	2.50	580
1.10	91	1.60	203	2.10	390	2.60	630
1.20	107	1.70	235	2.20	436		
1.30	126	1.80	270	2.30	483		
1.40	148	1.90	307	2.40	531		

NOTE.—Table is applicable only to open channel. It is based on discharge measurements made during 1904-5 and is well defined below gage height 2.1 feet. The table has been extended beyond these limits.

April 15, 1906, to June 19, 1907.

0.70	55	1.60	237	2.50	640	3.40	1,160
.80	67	1.70	271	2.60	695	3.50	1,225
.90	80	1.80	309	2.70	750	3.60	1,290
1.00	94	1.90	351	2.80	805	3.70	1,355
1.10	110	2.00	395	2.90	860		
1.20	129	2.10	440	3.00	920		
1.30	152	2.20	490	3.10	980		
1.40	178	2.30	540	3.20	1,040		
1.50	206	2.40	590	3.30	1,100		

NOTE.—Table applicable only to open channel. It is based on 4 discharge measurements made during 1906 and the form of the 1905 curve, and is not well defined.

June 20 to December 31, 1907.

0.60	78	1.50	247	2.40	635	3.30	1,195
.70	90	1.60	276	2.50	695	3.40	1,260
.80	103	1.70	306	2.60	755	3.50	1,325
.90	117	1.80	340	2.70	815	3.60	1,390
1.00	133	1.90	385	2.80	875	3.70	1,455
1.10	151	2.00	430	2.90	935	3.80	1,520
1.20	172	2.10	475	3.00	1,000	3.90	1,585
1.30	195	2.20	525	3.10	1,065	4.00	1,650
1.40	220	2.30	580	3.20	1,130		

NOTE.—Table applicable only to open channel. It is based on 2 discharge measurements made during 1907 and the form of previous curves, and is well defined below gage height 2 feet.

January 1 to December 31, 1908.

0.40	14	1.00	83	1.60	221	2.20	473
.50	22	1.10	100	1.70	255	2.30	523
.60	31	1.20	120	1.80	292	2.40	573
.70	42	1.30	141	1.90	331	2.50	625
.80	55	1.40	165	2.00	376		
.90	68	1.50	192	2.10	423		

NOTE.—Table applicable only to open channel. It is based on 3 discharge measurements made during 1908, and is well defined between gage heights 0.8 foot and 1.8 feet.

Daily discharge, in second-feet, of Little Truckee River at Starr, Cal., for 1909-10.

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909.									
1.....	80	215	128	174	1,410	980	620	90	25
2.....	90	215	118	215	1,160	1,190	590	74	20
3.....	90	174	128	264	980	1,250	560	74	25
4.....	90	162	128	302	1,190	1,380	500	67	25
5.....	120	150	128	283	1,250	1,380	390	60	36
6.....	140	150	128	283	1,380	1,160	323	54	30
7.....	120	128	128	302	1,440	1,100	283	48	25
8.....	90	128	128	323	1,410	1,040	264	344	25
9.....	120	150	128	390	1,190	980	247	283	20
10.....	200	150	128	468	1,100	920	247	174	20
11.....	250	150	128	440	1,100	920	247	174	15
12.....	300	162	118	500	830	920	247	174	20
13.....	925	150	108	620	860	920	283	108	20
14.....	1,400	150	118	860	830	800	264	90	20
15.....	1,920	139	128	920	920	860	230	108	20
16.....	1,920	139	139	1,010	830	830	230	36	20
17.....	1,640	174	174	1,440	830	830	215	36	20
18.....	1,440	162	187	1,220	830	860	174	36	20
19.....	860	174	174	1,250	860	770	139	30	20
20.....	680	162	187	1,040	920	620	118	36	20
21.....	620	150	174	1,040	920	620	118	30	20
22.....	415	139	174	1,040	740	680	108	30	20
23.....	302	162	162	920	650	770	108	48	20
24.....	302	139	162	950	560	860	118	30	20
25.....	283	139	150	950	590	800	139	25	20
26.....	264	139	150	1,070	710	710	108	25	20
27.....	620	139	150	1,500	800	710	90	25	25
28.....	215	128	150	1,410	920	680	90	25	25
29.....	230	.....	150	1,220	710	680	82	20	30
30.....	200	.....	150	1,190	650	620	82	20	30
31.....	200	.....	150	.....	770	.....	74	25	.....

NOTE.—Daily discharge Jan. 1 to 14 estimated because of probable presence of ice. Discharges for the remainder of the year determined from a rating curve well defined between 230 and 1,040 second-feet.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.
1909-10.													
1.....	30	42	302	342	433	211	641	641	457	72	13	11	19
2.....	36	48	302	321	386	196	698	586	482	58	16	11	19
3.....	42	42	128	281	457	228	669	586	433	58	13	13	19
4.....	42	36	264	281	533	244	613	507	409	58	16	13	19
5.....	36	36	680	262	698	281	586	433	321	52	13	13	19
6.....	30	42	390	364	790	281	698	433	262	41	13	13	19
7.....	30	48	200	321	855	321	698	482	244	41	13	11	19
8.....	30	54	200	281	698	364	759	586	228	36	13	13	19
9.....	25	118	200	228	790	364	790	669	196	36	13	13	19
10.....	25	90	247	228	586	409	822	728	196	36	13	13	19
11.....	25	108	215	228	533	457	759	728	211	36	16	11	23
12.....	30	54	187	228	559	482	698	728	180	32	16	13	27
13.....	25	54	174	262	482	507	728	698	140	32	13	13	27
14.....	25	54	162	262	457	559	669	669	152	32	13	16	19
15.....	25	48	150	244	281	507	698	586	152	32	13	19	23
16.....	42	42	128	281	409	482	698	586	152	27	13	41	23
17.....	48	60	139	342	586	533	728	559	140	27	13	27	23
18.....	25	48	118	364	533	669	790	559	140	36	13	19	23
19.....	36	67	99	409	433	1,240	888	559	128	36	13	19	19
20.....	48	344	108	364	559	1,130	956	482	118	36	13	19	19
21.....	36	920	128	409	641	759	855	482	118	23	13	19	19
22.....	60	530	128	409	613	641	855	533	107	23	13	19	19
23.....	36	560	118	409	482	559	855	533	118	23	11	19	.....
24.....	36	680	90	457	457	457	888	559	98	23	11	19	.....
25.....	36	590	128	409	457	386	922	533	88	19	11	19	.....
26.....	25	415	128	613	244	482	956	482	98	23	11	19	.....
27.....	25	283	82	559	457	409	956	457	88	19	11	19	.....
28.....	36	215	74	559	321	386	1,030	507	65	19	11	19	.....
29.....	42	200	139	533	.....	386	790	386	72	16	11	19	.....
30.....	42	187	162	559	.....	507	759	386	72	19	13	19	.....
31.....	42	.....	302	533	.....	559	.....	457	.....	16	13	.....	.....

NOTE.—Daily discharge determined from rating curves applicable as follows: Jan. 15 to Dec. 31, 1909, well defined between 230 and 1,040 second-feet; Jan. 1 to Oct. 22, 1910, fairly well defined. Discharge estimated on account of ice Jan. 1-14, 1909.

Monthly discharge of Little Truckee River at Pine station, Cal., for 1903-1907.

[Drainage area, 166 square miles.]

Month.	Discharge in second-feet.				Run-off.		Accu- racy.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.	Total in acre-feet.	
1903.							
June 25-30.....	200	184	191	1.15	0.26	2,273	
July.....	200	31	89	.54	.62	5,472	
August.....	29	18	22	.13	.15	1,353	
September 1-20.....			18	.11	.08	714	
1903-4.							
October 25-31.....			39	.23	.06	541	
November.....	296	25	117	.70	.78	6,962	
December.....	91	45	63	.38	.44	3,874	
January.....	192	83	140	.843	.97	8,608	
February.....	1,295	137	467	2.81	3.03	26,860	
March.....	1,235	445	742	4.47	5.15	45,620	
April.....	1,809	524	981	5.91	6.59	58,370	
May.....	1,337	584	1,013	6.10	7.03	62,290	
June.....	901	455	688	4.14	4.62	40,940	
July.....	436	73	209	1.26	1.45	12,850	
August.....	73	35	49.3	.297	.34	3,031	
September.....	76	31	37.8	.228	.25	2,249	
The period.....						272,000	
1904-5.							
October.....	536	43	115	.693	.80	7,071	
November.....	86	48	55.6	.335	.37	3,308	
December.....	174	28	64.6	.389	.45	3,972	
January.....	126	77	101	.608	.70	6,210	
February.....	144	57	89	.586	.56	4,943	
March.....	277	139	188	1.13	1.30	11,560	
April.....	760	183	334	2.01	2.24	19,870	
May.....	640	307	477	2.87	3.31	29,330	
June.....	483	122	337	2.03	2.26	20,050	
July.....	148	50	86.3	.520	.60	5,306	
August.....	50	33	42.1	.254	.29	2,589	
September.....	48	33	37.4	.225	.25	2,226	
The year.....	760	28	161	.970	13.13	116,000	
1905-6.							
October.....	45	42	44.2	.266	.31	2,718	
November.....	107	40	55.4	.334	.37	3,296	
December.....	126	78	106	.637	.73	6,518	
January.....	1,020	104	359	2.16	2.49	22,100	
February.....	229	91	141	.849	.88	7,830	
March.....	373	84	159	.958	1.10	9,780	
April.....	1,300	229	729	4.39	4.90	43,400	
May.....	1,350	560	972	5.86	6.76	59,800	
June.....	1,350	610	950	5.72	6.38	56,500	
July.....	849	152	478	2.88	3.32	29,400	
August.....	157	65	91.9	.554	.64	5,650	
September.....	65	53	56.7	.342	.38	3,370	
The year.....	1,350	40	345	2.08	28.26	250,000	
1906-7.							
October.....	94	50	60.9	.367	.42	3,740	
November.....	157	66	79.7	.480	.54	4,740	
December.....	178	65	103	.608	.71	6,330	
January.....	351	80	204	1.23	1.42	12,500	C.
February.....	330	165	229	1.38	1.44	12,700	C.
March.....	1,560	129	417	2.51	2.89	25,600	B.
April.....	1,360	418	974	5.87	6.55	58,000	B.
May.....	1,160	750	908	5.47	6.31	55,800	B.
June.....	1,130	440	761	4.58	5.11	45,300	B.
July.....	755	276	461	2.78	3.20	28,300	B.
August.....	247	103	149	.898	1.04	9,160	B.
September.....	117	84	95.4	.575	.64	5,680	B.
The year.....	1,560	50	370	2.23	30.27	268,000	
1907.							
October.....	133	84	97.3	.586	.68	5,980	B.
November.....	125	90	96.9	.584	.65	5,770	C.
December.....	247	90	122	.735	.85	7,500	C.

NOTE.—Values during the winter periods may be in error on account of ice. Discharge estimated Nov. 17-30, 1907.

Monthly discharge of Little Truckee River at Starr, Cal., for 1908-1910.

[Drainage area, 166 square miles.]

Month.	Discharge in second-feet.				Run-off.		Accuracy.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.	Total in acre-feet.	
1908.							
January.....			67.6	0.407	0.47	4,160	C.
February.....	83	48	65.9	.397	.43	3,790	C.
March.....	312	55	162	.976	1.13	9,960	A.
April.....	573	192	316	1.90	2.12	23,600	A.
May.....	573	221	332	2.00	2.31	20,400	A.
June.....	473	165	297	1.79	2.00	17,700	A.
July.....	178	31	79.5	.479	.55	4,890	B.
August.....	42	14	26.0	.157	.18	1,600	B.
September.....	31	14	21.9	.132	.15	1,300	C.
The period.....						87,400	
1908-9.							
October.....	130	26	40.7	.245	.28	2,500	B.
November.....	62	26	41.0	.247	.28	2,440	B.
December.....			38.7	.233	.27	2,380	C.
January.....	1,920	80	520	3.13	3.61	32,000	C.
February.....	215	128	154	.928	.97	8,550	B.
March.....	187	108	144	.867	1.00	8,850	B.
April.....	1,500	174	786	4.73	5.28	46,800	A.
May.....	1,440	560	946	5.70	6.57	58,200	A.
June.....	1,380	620	895	5.39	6.01	53,300	A.
July.....	620	74	235	1.42	1.64	14,400	B.
August.....	344	20	77.7	.468	.54	4,780	B.
September.....	36	15	22.5	.136	.15	1,340	B.
The year.....	1,920	15	325	1.96	26.60	236,000	
1909-10.							
October.....	60	25	34.5	.208	.24	2,120	B.
November.....	920	36	200	1.20	1.34	11,900	B.
December.....	680	74	189	1.14	1.31	11,600	B.
January.....	613	228	366	2.20	2.54	22,500	D.
February.....	855	244	526	3.17	3.30	29,200	D.
March.....	1,240	196	484	2.92	3.37	29,800	B.
April.....	1,030	586	782	4.71	5.26	46,500	B.
May.....	728	386	552	3.33	3.84	33,900	B.
June.....	482	65	189	1.14	1.27	11,200	B.
July.....	72	16	33.5	.202	.23	2,060	A.
August.....	16	11	12.9	.078	.09	793	B.
September.....	41	11	17.0	.102	.11	1,010	B.
The year.....	1,240	11	282	1.70	22.90	203,000	
1910.							
October 1-22.....			19.7	.119	.10	898	B.

NOTE.—Daily discharge estimated on account of ice Jan. 1-20, 25, and 26, and Dec. 15-31, 1908.

LITTLE TRUCKEE RIVER AT BOCA, CAL.

This station, which is located 150 feet above the mouth of the stream and 500 feet below the ice-pond dam, was established January 1, 1911. The station on this river was originally established in 1903 at a point about 3 miles north of Boca at Pine station. It was removed to Starr, about 5 miles north of Boca, January 1, 1908, and observations at that point were discontinued October 23, 1910.

The gage is an inclined staff on the left bank 100 feet above the railroad bridge.

The bed of the stream is composed of gravel and appears permanent.

Discharge measurements are made from a car and cable at the gage.

The relation between gage height and discharge during the winter months is affected by ice.

The flow of the stream is regulated by the dam; water passing through the small power plant, which is operated only during the night, does not pass the gage. For these reasons the gage height record is not very satisfactory. The discharge rating curve is well defined.

Gage heights are furnished by the United States Reclamation Service.

Discharge measurements made by the Stone & Webster Engineering Corporation have been furnished to the United States Geological Survey for publication.

Discharge measurements of Little Truckee River at Boca, Cal., in 1911.

Date.	Hydrographer.	Gage height.	Discharge.
1911.		<i>Feet.</i>	<i>Sec.-ft.</i>
Apr. 14	J. E. Stewart.....	2.49	608
May 9	Stone & Webster Engineering Corporation.....	3.70	1,320
June 7	J. E. Stewart.....	3.87	1,500
July 18	Stone & Webster Engineering Corporation.....	2.30	444
Aug. 5	G. T. Peekema.....	1.30	86
Sept. 12	Stone & Webster Engineering Corporation.....	1.13	60
Sept. 26	F. C. Ebert.....	.89	35

Daily gage height, in feet, of Little Truckee River at Boca, Cal., for 1911-12.

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1911.									
1.....	1.05	1.8	1.25	2.7	3.7	3.35	2.75	1.6	0.85
2.....	1.05	1.9	1.25	2.95	3.8	3.4	2.65	1.5	.8
3.....	1.0	1.75	1.3	3.2	4.1	3.6	2.65	1.5	.8
4.....	1.0	1.5	1.6	3.15	4.7	3.7	2.6	1.4	.8
5.....	1.05	1.5	1.3	3.05	4.5	3.8	2.6	1.35	.75
6.....	1.05	1.45	1.3	3.1	4.0	3.9	2.6	1.3	.85
7.....	1.1	1.55	1.55	3.1	3.8	3.7	2.6	1.3	.85
8.....	1.1	1.4	1.4	3.1	4.0	3.7	2.55	1.25	.8
9.....	.9	1.4	1.2	3.05	3.7	3.6	2.45	1.2	.85
10.....	.75	1.45	1.4	2.8	3.55	3.65	2.4	1.15	.85
11.....	.5	1.3	1.4	2.65	3.7	3.8	2.4	1.15	.8
12.....	.8	1.4	1.45	2.6	3.7	3.95	2.35	1.15	.85
13.....	.5	1.45	1.45	2.6	3.65	3.8	2.35	1.15	.95
14.....	.4	1.35	1.40	2.55	3.4	3.8	2.4	1.1	.9
15.....	.45	1.35	1.4	2.6	3.2	3.75	2.3	1.1	.85
16.....	1.4	1.3	1.35	2.75	3.2	3.7	2.35	1.05	.85
17.....	1.4	1.2	1.4	2.9	3.05	3.65	2.35	1.05	.85
18.....	1.4	1.25	1.4	3.3	3.05	3.65	2.3	1.55	.85
19.....	1.25	1.2	1.5	3.3	3.05	3.7	2.2	1.0	.85
20.....	1.3	1.2	1.6	3.2	3.2	3.7	2.2	1.0	.85
21.....	1.05	1.15	1.65	3.4	3.3	3.65	1.95	.95	.9
22.....	1.1	1.25	1.7	3.7	3.45	3.5	1.8	.95	.85
23.....	1.1	1.2	1.85	4.0	3.7	3.2	1.8	.9	.9
24.....	1.2	1.2	1.9	4.3	3.8	3.05	1.8	.95	.85
25.....	1.15	1.15	2.0	4.7	3.4	2.85	1.75	.95	.85
26.....	1.15	1.15	2.1	4.9	3.25	2.7	1.7	.9	.....
27.....	1.15	1.2	2.1	4.35	3.25	3.0	1.65	.9	.....
28.....	1.1	1.2	2.15	4.1	3.3	3.1	1.9	.9	.....
29.....	1.2	.....	2.2	4.1	3.3	2.9	1.7	.9	.....
30.....	1.5	.....	2.35	4.0	3.3	2.9	1.6	.9	.....
31.....	1.75	.....	2.5	.....	3.3	.....	1.6	.85	.....

Daily gage height, in feet, of Little Truckee River at Boca, Cal., for 1911-12—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.									
1.....		0.85	1.05	0.6	0.75	0.85	1.25	1.9	2.4
2.....		.8	.9	.7	.75	.85	1.3	1.8	2.4
3.....		.75	.75	.65	.7	.7	1.45	1.7	2.45
4.....		.75	1.1	.7	.75	.85	1.4	1.85	2.6
5.....		.8	.9	.65	.7	1.0	1.35	1.8	2.6
6.....	0.8	.75	.95	.75	.7	.9	1.4	1.75	2.55
7.....	.75	.8	.9	.7	.6	.85	1.5	1.8	2.5
8.....	.75	.8	.75	.75	.8	.8	1.55	1.85	2.35
9.....	.75	.85	.8	1.05	.8	.8	1.6	2.0	2.2
10.....		1.0	.8	.8	.8	.95	1.5	2.05	2.1
11.....	.75	.75	.85	.75	.8	.9	1.35	2.2	2.05
12.....	.75	.85	.75	.8	.75	.9	1.3	2.3	2.2
13.....	.8	.9	.7	.95	.75	.9	1.3	2.4	2.1
14.....	.8	.9	.75	1.0	.8	.95	1.3	2.45	2.1
15.....	.75	.95	.65	1.0	.8	.85	1.3	2.45	1.95
16.....	.75	.95	.6	1.1	.85	.9	1.35	2.5	1.95
17.....	.75	.9	.6	1.0	1.1	.9	1.6	2.5	1.85
18.....	.8	.8	.55	.9	1.05	1.1	1.65	2.5	1.8
19.....	.8	.85	.5	.9	.95	1.7	1.35	2.5	1.7
20.....	.9	.85	.55	.8	.9	1.4	1.25	2.35	1.7
21.....	.85	.85	.55	.7	.85	1.35	1.2	2.25	1.8
22.....	.75	.8	.6	.8	.85	1.3	1.2	2.1	1.65
23.....	.8	.85	.8	.8	.85	1.0	1.2	2.1	1.6
24.....	.85	.9	.7	.8	.7	1.05	1.35	2.0	1.55
25.....	.8	.9	.55	.85	.7	1.1	1.4	1.9	1.45
26.....	.8	1.0	.55	.75	.7	1.25	1.3	1.9	1.4
27.....	.8	.95	.4	.7	.8	1.3	1.3	1.85	1.4
28.....	.85	.8	.65	.65	.8	1.35	1.35	1.9	1.35
29.....	.8	.85	.7	.8	.8	1.35	1.5	2.2	1.25
30.....	.85	.85	.6	.85		1.15	1.55	2.2	1.2
31.....	.85		.65	.8		1.1		2.25	

Daily discharge, in second-feet, of Little Truckee River at Boca, Cal., for 1911-12.

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1911.									
1.....	50	235	78	695	1,350	1,110	725	162	32
2.....	50	275	78	848	1,420	1,140	665	131	28
3.....	45	216	86	1,010	1,630	1,280	665	131	28
4.....	45	131	162	978	2,180	1,350	635	107	28
5.....	50	131	86	912	1,940	1,420	635	96	24
6.....	50	119	86	945	1,500	1,490	635	86	32
7.....	56	146	146	945	1,420	1,350	635	86	32
8.....	56	107	107	945	1,500	1,350	608	78	28
9.....	36	107	70	912	1,350	1,280	552	70	32
10.....	24	119	107	755	1,240	1,320	525	63	32
11.....	10	86	107	665	1,350	1,420	525	63	28
12.....	28	119	119	635	1,350	1,520	498	63	100
13.....	10	119	119	635	1,320	1,420	498	63	40
14.....	6	96	107	608	1,140	1,420	525	56	36
15.....	8	96	107	635	1,010	1,380	470	56	32
16.....	107	86	96	725	1,010	1,350	498	50	32
17.....	107	70	107	815	912	1,320	498	50	32
18.....	107	78	107	1,080	912	1,320	470	146	32
19.....	78	70	131	1,080	912	1,350	415	45	32
20.....	86	70	162	1,010	1,010	1,350	415	45	32
21.....	50	63	180	1,140	1,080	1,320	298	40	36
22.....	56	78	197	1,350	1,180	1,210	235	40	32
23.....	56	70	255	1,560	1,350	1,010	235	36	36
24.....	70	70	275	1,780	1,420	912	235	40	32
25.....	63	63	320	2,100	1,140	785	216	40	32
26.....	63	63	365	2,260	1,040	695	197	36	
27.....	63	70	365	1,820	1,040	880	180	36	
28.....	56	70	390	1,630	1,080	945	275	36	
29.....	70		415	1,630	1,080	815	197	36	
30.....	131		498	1,560	1,080	815	162	36	
31.....	216		580		1,080		162	32	

Daily discharge, in second-feet, of Little Truckee River at Boca, Cal., for 1911-12—Con.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.									
1.....	0	32	50	15	24	32	78	275	525
2.....	0	28	36	21	24	32	86	235	525
3.....	0	24	24	18	21	21	119	197	552
4.....	0	24	56	21	24	32	107	255	635
5.....	0	28	36	18	21	45	96	235	635
6.....	28	24	40	24	21	36	107	216	608
7.....	24	28	36	21	15	32	131	235	580
8.....	24	28	24	24	28	28	146	255	498
9.....	24	32	28	50	28	28	162	320	415
10.....	0	45	28	28	28	40	131	342	365
11.....	24	24	32	24	28	36	96	415	342
12.....	24	32	24	28	24	36	86	470	415
13.....	28	36	21	40	24	36	86	525	365
14.....	28	36	24	45	28	40	86	552	365
15.....	24	40	18	45	28	32	86	552	298
16.....	24	40	15	56	32	36	96	580	298
17.....	24	36	15	45	56	36	162	580	255
18.....	28	28	12	36	50	56	180	580	235
19.....	28	32	10	36	40	197	96	580	197
20.....	36	32	12	28	36	107	78	498	197
21.....	32	32	12	21	32	96	70	442	235
22.....	24	28	15	28	32	86	70	365	180
23.....	28	32	28	28	32	45	70	365	162
24.....	32	36	21	28	21	50	96	320	140
25.....	28	36	12	32	21	56	107	275	119
26.....	28	45	12	24	21	78	86	275	107
27.....	28	40	6	21	28	86	86	255	107
28.....	32	28	18	18	28	96	96	275	96
29.....	28	32	21	28	28	96	131	415	78
30.....	32	32	15	32	.....	63	146	415	70
31.....	32	.....	18	28	.....	56	.....	442	.....

NOTE.—Daily discharge determined from rating curves applicable as follows: Jan. 1, 1911, to June 30, 1912, well defined.

Monthly discharge of Little Truckee River at Boca, Cal., for 1890.

Month.	Mean discharge in second-feet.	Run-off (total in acre-feet).
April.....	958	57,000
May.....	1,998	123,000
June.....	1,491	88,700
July.....	749	46,100
August.....	200	12,300
September.....	97	5,570
October.....	86	5,290
The period.....	.....	338,000

Monthly discharge of Little Truckee River at Boca, Cal., for 1911-12.

[Drainage area, 186 square miles.]

Month.	Discharge in second-feet.				Run-off.		Accu- racy.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.	Total in acre-feet.	
1911.							
January.....	216	6	61.4	0.331	0.38	3,780	B.
February.....	275	63	108	.581	.60	6,000	B.
March.....	580	70	194	1.04	1.20	11,900	A.
April.....	2,260	608	1,120	6.02	6.72	66,600	A.
May.....	2,100	912	1,260	6.77	7.80	77,500	A.
June.....	1,520	695	1,210	6.51	7.26	72,000	A.
July.....	725	162	435	2.34	2.70	26,700	B.
August.....	162	32	66.3	.356	.41	4,080	B.
September.....		0	28.7	.154	.17	1,710	B.
The period.....						270,000	
1911-12.							
October.....	36	0	22.3	.120	.14	1,370	B.
November.....	45	24	32.3	.174	.19	1,920	B.
December.....	56	6	23.2	.125	.14	1,430	B.
January.....	56	15	29.4	.158	.18	1,810	B.
February.....	56	15	28.4	.153	.16	1,630	B.
March.....	197	21	56.3	.303	.35	3,460	B.
April.....	180	70	106	.570	.64	6,310	A.
May.....	580	197	379	2.04	2.35	23,300	A.
June.....	635	70	320	1.72	1.92	19,000	A.
The period.....						60,200	

WEBBER CREEK NEAR TRUCKEE, CAL.

This station is located at the outlet of Webber Lake, in the SE. $\frac{1}{4}$ NE. $\frac{1}{4}$ sec. 28, T. 19 N., R. 14 E., about $1\frac{1}{2}$ miles above the junction with Little Truckee River, and 16 miles northwest of Truckee.

The drainage area above the station is about 14 square miles.

The gage is a vertical staff at the footbridge from which discharge measurements are made.

The channel is compact gravel and is fairly permanent.

Results are excellent, except during the winter season, when flow is affected by ice.

The following records of daily discharge were furnished by the Stone & Webster Engineering Corporation:

Daily discharge, in second-feet, of Webber Creek near Truckee, Cal., for 1909-10.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.
1.....		1	181	47	26	22	57	151	116	14	1
2.....		1	197	45	25	23	62	138	101	12	1
3.....		2	119	43	24	26	67	117	94	11	1
4.....		3	88	38	23	28	65	104	78	10	1
5.....		3	57	33	23	30	64	113	54	1	1
6.....		3	53	30	22	33	67	119	33	1	1
7.....		3	47	28	22	35	69	125	33	1	1
8.....		122	48	26	21	36	82	144	34	1	1
9.....		65	49	24	21	39	95	169	20	1	1
10.....		41	40	24	21	41	108	183	20	1	1
11.....		21	33	22	21	43	103	172	21	1	1
12.....		15	27	22	21	49	98	164	21	1	1
13.....		13	21	23	21	51	104	183	21	1	1
14.....		12	16	26	21	54	113	169	21	1	1
15.....		10	16	28	21	57	118	158	22	1	1
16.....		8	21	30	21	59	127	144	22	1	1
17.....		7	27	27	21	62	143	132	21	1	1
18.....		6	24	24	20	69	158	117	21	1	1
19.....	1	11	24	21	20	90	183	127	21	1	1
20.....	1	57	24	19	20	114	207	143	21	1	1
21.....	1	249	24	16	21	97	217	160	21	1	1
22.....	1	187	23	19	21	78	207	138	21	1	1
23.....	1	151	21	24	21	69	205	132	21	1	1
24.....	1	197	21	26	22	65	213	135	21	1	1
25.....	1	398	19	28	22	60	223	128	16	1	1
26.....	1	104	19	32	21	57	240	120	16	1	1
27.....	1	69	19	33	19	56	244	104	16	1	1
28.....	1	53	18	31	21	54	249	101	16	1	1
29.....	1	46	21	29	.....	53	207	70	16	1	1
30.....	1	42	33	28	.....	51	197	78	16	1	1
31.....	1	.....	49	27	.....	53	.....	85	.....	1	1

Monthly discharge of Webber Creek near Truckee, Cal., for 1909-10.

[Drainage area, 14 square miles.]

Month.	Discharge in second-feet.				Run-off.	
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.	Total in acre-feet.
October 19-31.....	1	1	1.0	0.071	0.03	26
November.....	398	1	63.3	4.52	5.04	3,770
December.....	197	16	42.2	3.01	3.48	2,590
January.....	47	16	28.2	2.01	2.32	1,730
February.....	26	19	21.5	1.54	1.60	1,190
March.....	114	22	53.4	3.81	4.39	3,280
April.....	249	57	143	10.21	11.38	8,510
May.....	183	70	133	9.50	10.95	8,180
June.....	116	16	32.5	2.32	2.59	1,930
July.....	14	1	2.4	.171	.20	148
August.....	1	1	1.0	.071	.08	61
The period.....	.....	.....	.....	.....	.....	31,400

NOTE.—Monthly values computed by engineers of the United States Geological Survey.

INDEPENDENCE CREEK NEAR TRUCKEE, CAL.

This station is located at the outlet of Independence Lake, in the SW. $\frac{1}{4}$ NW. $\frac{1}{4}$ sec. 35, T. 19 N., R. 15 E., about $4\frac{1}{2}$ miles above the junction with Little Truckee River and 10 miles northwest of Truckee.

The drainage area above the station is about 8.4 square miles.

The gage is a vertical staff near the car and cable from which discharge measurements are made.

The channel, which is composed of gravel, is fairly permanent.

Results are excellent except during the winter season, when the flow is affected by ice.

The following records of daily discharge were furnished by the Stone & Webster Engineering Corporation:

Daily discharge, in second-feet, of Independence Creek near Truckee, Cal., for 1909-10.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.
1		4	70	10	9	24	62	86	54	21
2		5	78	10	6	24	62	70	173	21
3		5	78	7	7	24	62	62	106	21
4		4	78	6	7	24	54	42	106	21
5		4	62	9	7	18	51	30	62	21
6		5	62	7	6	18	51	36	62	21
7		42	62	9	9	18	48	42	54	18
8		13	78	6	7	18	48	42	54	18
9		4	70	7	7	18	48	86	48	13
10		13	70	7	7	18	48	131	48	13
11		4	78	6	9	13	48	131	48	11
12		4	78	3	7	13	48	118	30	11
13		9	62	5	7	13	48	131	30	11
14		13	62	5	7	18	48	95	24	11
15		13	62	6	5	18	48	70	24	9
16		13	48	5	6	24	51	95	24	9
17		9	42	6	7	24	51	95	24	5
18		9	42	5	9	24	54	95	24	5
19		62	42	6	7	187	54	95	24	5
20		78	42	6	6	187	106	95	24	
21	4	173	42	10	6	4	100	78	24	
22	4	173	42	7	7	6	118	36	24	
23	4	173	36	9	7	9	106	30	24	
24	18	173	36	9	7	13	86	18	22	
25	3	187	36	7	9	13	118	48	22	
26	4	145	30	9	6	13	118	48	22	
27	4	118	13	9	7	13	118	13	22	
28	4	66	9	9	13	13	131	13	22	
29	6	62	6	10		86	106	18	22	
30	4	54	9	7		95	95	54	22	
31	4		13	9		95		54		

Monthly discharge of Independence Creek near Truckee, Cal., for 1909-10.

[Drainage area, 8.4 square miles.]

Month.	Discharge in second-feet.				Run-off.	
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.	Total in acre-feet.
October 21-31	18	3	5.4	0.643	0.26	118
November	187	4	54.6	6.50	7.25	3,250
December	78	6	49.6	5.90	6.80	3,050
January	10	3	7.3	.869	1.00	449
February	13	5	7.3	.869	.90	405
March	187	4	35.0	4.17	4.81	2,150
April	131	48	72.9	8.68	9.68	4,340
May	131	13	66.4	7.90	9.11	4,080
June	173	22	42.3	5.04	5.62	2,520
July 1-19	21	5	14.0	1.67	1.18	528
The period						20,900

NOTE.—Monthly values computed by engineers of the United States Geological Survey.

INDEPENDENCE CREEK BELOW INDEPENDENCE LAKE, CAL.

This station, which is located about one-eighth of a mile below the lake, was established October 24, 1902, and was discontinued June 30, 1907.

Discharge measurements were made from a cable and car or by wading.

A vertical staff gage, 200 feet upstream from the cable, was used until July 1, 1904, when a new vertical staff gage was installed about 75 feet below the lake outlet, both gages reading the same.

The stream bed shifted somewhat, but the records as a whole are good, except those for 1906 and 1907, which were rendered uncertain by lack of sufficient measurements.

The discharge is controlled by the dam at the lower end of the lake. The monthly discharge for the entire period of records, as here published, has been recomputed.

Discharge measurements of Independence Creek below Independence Lake, Cal., in 1902-1906.

Date.	Hydrographer.	Gage height.	Discharge.	Date.	Hydrographer.	Gage height.	Discharge.
1902.		<i>Feet.</i>	<i>Sec.-ft.</i>	1904.		<i>Feet.</i>	<i>Sec.-ft.</i>
Oct. 24	E. C. Murphy	1.23	0.3	Aug. 29	W. A. Wolf	1.80	3.0
1903.				Nov. 16	do	2.05	5.0
June 21	G. B. Lorenz	1.90	15.2	1905.			
July 19	do	1.60	7.3	June 12	W. A. Wolf	3.25	77
Aug. 6	do	1.50	4.7	Aug. 26	do	1.80	3.0
27	do	1.40	1.0	July 7	do	2.30	15
1904.				Aug. 3	do	2.00	4.4
June 17	A. E. Chandler	3.15	123	Sept. 11	do	1.70	6.5
July 1	W. A. Wolf	3.08	97	1906.			
13	do	2.75	47	July 31	M. B. Kennedy	2.65	25.3
23	do	2.30	13				

a Estimated.

Daily gage height, in feet, of Independence Creek below Independence Lake, Cal., for 1902-1907.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1902-3.												
1.....		1.33	2.20	1.70	2.45	2.00	2.00	2.80	.....	2.98	.....	.....
2.....		1.33	2.20	1.70	2.50	2.00	2.00	2.80	.....	2.88	1.51	.....
3.....		1.33	2.00	1.75	2.50	2.00	2.00	2.80	.....	2.75	1.51	.....
4.....		1.23	1.95	1.85	2.50	2.00	2.00	2.80	.....	2.56	1.50	.....
5.....		1.23	1.90	1.90	2.50	2.10	2.00	2.80	.....	2.45	1.50	.....
6.....		1.13	1.90	1.95	2.50	2.10	2.00	2.95	.....	2.25	1.50	.....
7.....		1.23	1.80	2.00	2.50	2.10	2.00	3.00	.....	2.00	1.50	.....
8.....		1.33	1.80	2.10	2.50	2.10	2.00	3.00	.....	1.75	1.50	.....
9.....		1.18	1.80	2.20	2.50	2.10	1.90	3.00	.....	1.58	1.50	.....
10.....		1.93	1.60	2.20	2.50	2.10	1.90	3.00	.....	1.50	1.50	.....
11.....		1.93	1.60	2.20	2.50	2.10	1.90	3.00	.....	1.50	1.50	.....
12.....		1.93	1.60	1.95	2.50	2.10	1.90	3.00	.....	1.50	1.50	1.35
13.....		1.73	1.60	1.80	2.50	2.10	1.90	3.10	.....	1.50	1.50	1.35
14.....			1.60	1.60	2.50	2.20	1.90	3.05	.....	1.50	1.50	1.34
15.....			1.50	1.60	2.40	2.20	2.00	3.05	3.08	1.51	1.50	1.34
16.....		1.93	1.50	1.65	2.30	2.20	2.00	3.05	2.85	1.56	1.50	1.34
17.....		1.93	1.50	1.75	2.25	2.10	2.00	2.85	2.70	1.60	1.45	1.34
18.....		1.93	1.50	1.80	2.20	2.10	2.10	2.80	1.90	1.60	1.45	1.33
19.....		1.93	1.50	1.80	2.20	2.00	2.10	2.75	1.70	1.60	1.45	1.32
20.....		1.93	1.50	1.90	2.20	2.00	2.10	2.75	1.78	1.60	1.45	1.31
21.....		1.93	1.50	1.90	2.10	2.00	2.10	2.65	1.90	1.60	1.45	1.35
22.....		1.93	1.60	1.90	2.10	2.00	2.10	2.60	1.92	1.54	1.42	1.39
23.....		1.93	1.60	1.90	2.10	2.00	2.10	2.60	2.01	1.50	.....	1.39
24.....	1.23	1.93	1.55	2.15	2.10	2.00	2.15	2.50	2.12	1.50	.....	1.39
25.....	1.23	1.93	1.55	2.20	2.10	2.00	2.25	2.50	2.18	.....	.....	1.39
26.....	1.23	1.93	1.50	2.20	2.00	2.00	2.35	2.55	2.29	.....	.....	1.39
27.....	1.13	1.93	1.50	2.20	2.00	2.00	2.45	2.50	2.38	.....	.....	1.39
28.....	1.23	1.93	1.75	2.30	2.00	2.00	2.70	2.50	2.40	.....	.....	1.39
29.....	1.23	1.93	1.85	2.35	.....	2.00	2.80	2.50	2.48	.....	.....	1.39
30.....	1.23	1.90	1.90	2.40	.....	2.00	2.80	2.50	2.95	.....	.....	1.39
31.....	1.33	.....	1.90	2.40	.....	2.00	.....	.....	.....	.....	.....	.....
1903-4.												
1.....	1.38	1.44	1.90	1.52	1.69	2.69	2.13	2.12	3.15	3.10	2.25	1.80
2.....	1.38	1.43	1.90	1.55	1.69	2.47	2.12	2.14	3.12	3.02	2.25	1.80
3.....	1.37	1.42	1.90	1.52	1.70	2.26	2.11	2.14	3.10	3.00	2.25	1.80
4.....	1.35	1.50	1.89	1.60	1.70	2.30	2.10	2.18	3.14	2.95	2.25	1.80
5.....	1.40	1.50	1.89	1.59	1.72	2.30	2.10	2.18	3.15	2.88	2.25	1.80
6.....	1.39	1.50	1.89	1.59	.....	2.30	2.10	2.39	3.20	2.85	2.25	1.80
7.....	1.39	1.50	1.88	1.59	.....	2.30	2.10	2.66	3.31	2.85	2.25	1.80
8.....	1.39	1.49	1.88	1.59	.....	2.56	2.10	3.08	3.34	2.85	2.25	1.80
9.....	1.38	1.48	1.86	1.59	.....	2.78	2.10	3.05	3.31	2.85	2.25	1.80
10.....	1.38	1.48	1.85	1.59	1.98	.....	2.10	3.05	3.25	2.82	1.95	1.80
11.....	1.37	1.48	1.85	1.60	1.98	.....	2.11	3.08	3.29	2.82	1.95	1.80
12.....	1.39	1.63	1.84	.....	.....	2.80	2.17	3.26	3.24	2.80	1.95	1.80
13.....	1.41	2.96	1.83	1.90	.....	2.72	2.86	3.39	3.26	2.80	1.95	1.80
14.....	1.41	.....	1.82	1.90	.....	2.66	3.20	3.34	3.25	2.80	1.95	1.75
15.....	1.41	2.91	1.82	1.90	.....	2.60	3.12	3.30	3.18	2.80	1.95	1.75
16.....	1.41	2.50	1.85	1.90	.....	2.20	2.81	3.30	3.16	2.70	1.95	1.75
17.....	1.46	2.21	1.85	1.90	2.80	2.22	2.52	3.30	3.16	2.65	1.85	1.75
18.....	1.50	2.12	1.85	1.90	2.70	2.58	2.52	3.26	3.10	2.55	1.92	1.75
19.....	1.50	1.98	1.85	1.90	2.40	2.60	2.58	3.18	3.05	2.34	2.00	1.75
20.....	1.50	2.25	1.84	1.90	2.06	2.70	2.60	3.10	2.90	2.25	1.98	1.75
21.....	1.50	2.65	1.83	1.90	1.94	2.84	2.60	3.10	2.85	2.25	1.92	1.75
22.....	1.50	2.70	1.82	1.90	2.48	2.84	2.65	3.25	2.90	2.25	1.90	1.75
23.....	1.50	2.80	1.57	1.90	2.95	2.84	2.51	3.32	3.00	2.28	1.90	1.75
24.....	1.50	2.85	1.50	1.89	.....	.....	2.48	3.38	3.10	2.30	1.90	1.75
25.....	2.25	2.42	1.50	1.70	.....	2.94	2.45	3.42	3.05	2.50	1.85	1.75
26.....	2.20	2.26	1.50	1.70	.....	2.94	2.42	3.42	3.00	2.50	1.85	1.75
27.....	1.89	2.10	1.50	1.70	.....	2.48	2.28	3.30	3.00	2.50	1.85	1.75
28.....	1.60	1.95	1.50	1.69	2.80	2.55	2.14	3.30	3.00	2.50	1.85	1.80
29.....	1.52	1.90	1.50	1.69	2.75	2.70	2.14	3.29	3.00	2.50	1.80	1.80
30.....	1.45	1.90	1.50	1.69	.....	2.49	2.12	3.30	3.05	2.38	1.80	1.80
31.....	1.45	.....	1.50	1.69	.....	2.14	.....	3.20	.....	2.38	1.80	.....

Daily gage height, in feet, of Independence Creek below Independence Lake, Cal., for 1902-1907—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1904-5.												
1.....	1.80	2.15	3.20	2.1	2.7	2.5	2.7	3.28	3.2	1.88	2.0	1.65
2.....	1.80	2.10	3.10	2.1	2.58	2.5	2.7	3.5	3.2	2.0	2.0	1.65
3.....	1.80	2.10	3.10	2.15	2.4	2.5	2.45	3.5	3.1	2.1	2.0	1.65
4.....	1.80	2.10	3.10	2.15	2.3	2.5	2.25	3.5	3.1	2.2	2.0	1.65
5.....	1.85	2.10	2.90	2.15	2.2	2.5	2.25	3.5	3.1	2.25	2.0	1.65
6.....	1.90	2.10	2.85	2.18	2.2	2.5	2.25	3.35	3.1	2.3	2.0	1.65
7.....	1.98	2.10	2.85	2.2	2.2	2.5	2.25	3.15	3.05	2.3	1.95	1.65
8.....	2.00	2.00	2.80	2.2	2.2	2.5	2.28	3.1	3.08	2.3	1.95	1.65
9.....	2.35	2.00	2.80	2.2	2.2	2.5	2.3	3.05	3.1	2.3	1.95	1.65
10.....	2.45	2.00	2.62	2.2	2.2	2.5	2.3	3.15	3.15	2.25	1.95	1.65
11.....	2.80	2.00	2.15	2.22	2.2	2.5	2.3	2.7	3.18	2.25	1.9	1.65
12.....	2.70	2.00	2.10	2.25	2.2	2.5	2.3	2.7	3.2	2.25	1.9	1.6
13.....	3.30	2.00	2.10	2.32	2.2	2.5	2.3	2.7	3.2	2.2	1.9	1.6
14.....	3.05	2.00	2.10	2.52	2.22	2.5	2.3	2.7	3.2	2.18	1.9	1.6
15.....	2.60	2.00	2.10	2.6	2.25	2.5	2.3	2.7	3.22	2.1	1.9	1.6
16.....	2.40	2.00	2.10	2.6	2.25	2.5	2.3	2.7	3.22	2.1	1.85	1.6
17.....	2.20	2.00	2.10	2.6	2.25	2.5	2.3	2.88	3.2	2.1	1.85	1.55
18.....	2.15	2.00	2.10	2.62	2.25	2.5	2.65	3.08	3.2	2.05	1.85	1.55
19.....	2.15	2.00	2.00	2.65	2.38	2.5	3.05	3.08	3.2	2.05	1.85	1.55
20.....	2.15	2.00	1.95	2.68	2.48	2.6	3.05	3.28	3.2	2.05	1.85	1.55
21.....	2.15	2.00	1.95	2.88	2.5	2.7	3.05	3.45	3.15	2.08	1.85	1.55
22.....	2.15	2.00	1.95	2.98	2.5	2.7	3.2	3.45	3.15	2.1	1.85	1.55
23.....	2.20	2.00	1.90	2.98	2.5	2.7	3.1	3.45	3.15	2.15	1.85	1.55
24.....	2.20	2.00	1.90	3.02	2.5	2.7	3.1	3.0	3.1	2.2	1.8	1.55
25.....	2.20	2.00	1.98	3.12	2.5	2.8	3.1	2.55	3.08	2.2	1.75	1.55
26.....	2.20	2.00	2.08	3.25	2.5	2.72	3.1	2.55	2.4	2.15	1.75	1.55
27.....	2.20	2.00	2.10	3.25	2.5	2.75	3.1	2.55	1.8	2.1	1.7	1.55
28.....	2.20	2.00	2.10	3.08	2.5	2.75	3.1	3.05	1.8	2.1	1.7	1.5
29.....	2.15	2.00	2.10	2.85	-----	2.75	3.1	3.08	1.82	2.05	1.68	1.5
30.....	2.15	2.60	2.10	2.85	-----	2.75	3.1	3.18	1.88	2.05	1.65	1.5
31.....	2.15	-----	2.10	2.85	-----	2.75	-----	3.2	-----	2.05	1.65	-----
1905-6.												
1.....	1.5	1.5	2.18	1.98	1.95	2.58	2.58	2.80	1.52	3.45	2.62	2.25
2.....	1.5	1.5	2.15	1.95	1.90	2.50	2.52	2.92	1.95	3.52	2.60	2.25
3.....	1.5	1.45	2.12	1.90	1.90	2.50	2.48	3.00	2.20	3.62	2.62	2.20
4.....	1.5	1.45	2.1	1.90	1.90	2.50	2.40	3.50	2.80	3.62	2.58	2.20
5.....	1.5	1.45	2.3	1.90	1.90	2.48	2.38	3.12	3.40	3.72	2.68	2.20
6.....	1.5	1.45	2.5	1.90	1.90	2.40	2.32	3.18	3.48	3.68	2.65	2.20
7.....	1.5	1.45	2.25	1.88	1.90	2.38	2.30	3.22	3.42	3.75	2.62	2.20
8.....	1.5	1.45	2.0	1.85	1.90	2.35	2.30	3.00	3.50	3.80	2.50	2.18
9.....	1.5	1.45	2.0	1.90	1.90	2.32	2.30	3.50	3.50	3.72	2.62	2.10
10.....	1.5	1.38	1.98	1.85	1.85	2.30	2.38	3.50	3.45	3.50	2.60	2.10
11.....	1.5	2.35	1.95	1.85	1.85	2.25	2.40	3.50	3.58	3.40	2.65	2.10
12.....	1.5	2.3	1.95	1.92	1.85	2.60	2.38	3.42	3.60	3.42	2.50	2.10
13.....	1.5	2.25	1.92	2.48	1.85	2.72	2.35	3.40	3.60	3.48	2.48	2.10
14.....	1.5	2.2	1.9	2.78	1.88	2.75	2.35	3.40	3.60	3.50	2.48	2.05
15.....	1.5	2.2	1.88	2.88	2.25	2.80	2.35	3.35	3.60	3.48	2.42	2.05
16.....	1.5	2.15	1.88	2.98	2.25	2.78	2.40	3.30	3.60	3.45	2.42	2.05
17.....	1.5	2.15	1.85	3.08	2.00	2.70	2.45	3.25	3.30	3.42	2.45	2.05
18.....	1.5	2.1	1.85	3.35	2.35	2.62	2.50	3.18	3.45	3.45	2.42	2.05
19.....	1.5	2.1	1.9	3.30	2.10	2.52	2.58	3.15	3.62	3.42	2.40	2.05
20.....	1.5	2.15	1.9	3.20	2.15	2.50	2.60	3.15	3.50	3.28	2.45	2.02
21.....	1.5	2.1	1.9	3.08	2.40	2.50	2.72	3.15	3.60	2.68	2.42	2.00
22.....	1.5	2.1	1.85	2.98	2.65	2.50	2.82	3.15	3.68	2.75	2.42	2.00
23.....	1.5	2.1	1.85	2.82	2.70	2.52	2.88	3.15	3.75	3.22	2.32	2.00
24.....	1.5	2.5	1.82	2.78	2.62	2.52	2.90	3.12	3.82	3.52	2.30	2.00
25.....	1.5	2.5	1.84	2.60	2.58	2.55	2.85	3.18	3.85	3.48	2.30	2.00
26.....	1.5	2.25	1.8	2.58	2.50	2.52	2.80	3.20	3.78	2.90	2.30	2.00
27.....	1.5	2.12	1.85	2.52	2.52	2.48	2.80	3.28	3.75	2.91	2.30	2.00
28.....	1.5	2.15	1.85	2.42	2.60	2.42	2.80	3.25	3.72	2.60	2.25	2.00
29.....	1.5	2.2	1.9	2.32	-----	2.38	2.75	3.18	3.60	2.58	2.25	2.00
30.....	1.5	2.2	1.9	2.12	-----	2.38	2.75	2.15	3.48	2.68	2.25	1.95
31.....	1.5	-----	1.98	1.95	-----	2.52	-----	2.15	-----	2.65	2.25	-----

Daily gage height, in feet, of Independence Creek below Independence Lake, Cal., for 1902-1907—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1906-7.									
1.....	1.95	2.20	2.28	2.8	2.8	2.7	2.55	3.25	3.7
2.....	1.95	2.22	2.25	2.5	2.9	2.7	2.6	3.3	3.7
3.....	1.95	2.30	2.25	2.5	2.9	2.7	2.6	3.25	3.75
4.....	1.95	2.40	2.25	2.6	2.9	2.7	2.6	3.25	3.75
5.....	1.95	2.45	2.25	2.7	2.9	2.7	2.6	3.25	3.75
6.....	1.95	2.42	2.25	2.8	2.9	2.7	2.65	3.2	3.75
7.....	1.95	2.42	2.25	2.8	2.8	2.7	2.65	3.2	3.7
8.....	1.95	2.40	2.30	2.9	2.85	2.7	2.65	3.2	3.7
9.....	1.92	2.40	2.35	2.9	2.85	2.65	2.6	3.2	3.45
10.....	1.90	2.40	2.42	3.0	2.8	2.7	2.65	3.3	3.35
11.....	1.90	2.40	2.40	2.95	2.8	2.8	2.7	3.35	3.4
12.....	1.90	2.40	3.80	3.0	2.75	2.8	2.7	3.4	3.5
13.....	1.90	2.38	3.50	3.0	2.75	2.75	2.8	3.35	3.3
14.....	1.90	2.55	2.95	3.0	2.75	2.7	3.1	3.35	3.15
15.....	1.90	2.38	2.90	3.0	2.75	2.7	3.35	3.3	3.15
16.....	1.90	2.42	2.85	2.95	2.7	2.7	3.3	3.3	3.15
17.....	1.85	2.38	2.80	3.0	2.7	2.9	3.2	3.4	3.2
18.....	1.85	2.35	2.52	2.9	2.65	3.35	3.2	3.4	3.2
19.....	1.85	2.35	2.30	2.9	2.65	3.55	3.2	3.5	3.3
20.....	2.48	2.35	2.30	2.8	2.6	3.5	3.2	3.55	3.4
21.....	3.50	2.35	2.30	2.75	2.6	3.5	3.2	3.55	3.45
22.....	2.98	2.35	2.30	2.7	2.65	3.4	3.2	3.5	3.75
23.....	2.92	2.35	2.35	2.7	2.6	3.4	3.2	3.5	3.9
24.....	2.82	2.32	2.38	2.7	2.6	3.4	3.2	3.4	3.4
25.....	2.75	2.30	2.40	2.7	2.65	3.4	3.3	3.4	3.3
26.....	2.72	2.30	2.45	2.7	2.65	3.35	3.3	3.4	3.2
27.....	2.62	2.30	2.50	2.65	2.65	3.2	3.3	3.4	3.45
28.....	2.15	2.30	2.50	2.7	2.65	3.1	3.3	3.4	3.6
29.....	2.20	2.30	2.50	2.7	.....	3.05	3.3	3.5	3.55
30.....	2.20	2.30	2.40	2.7	.....	2.6	3.3	3.55	3.55
31.....	2.20	.....	2.18	2.7	.....	2.55	.....	3.6	.....

Monthly discharge of Independence Creek below Independence Lake, Cal., for 1902-1907.

[Drainage area, 8.5 square miles.]

Month.	Discharge in second-feet.				Run-off.		Accu- racy.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.	Total in acre-feet.	
1902-3.							
October 24-31.....	1.1	0.2	0.46	0.054	0.02	7	B.
November.....	14	.2	9.50	1.12	1.25	565	B.
December.....	27	2.8	8.01	.942	1.09	493	B.
January.....	41	4.4	17.9	2.11	2.43	1,100	B.
February.....	50	17	37.2	4.38	4.56	2,070	B.
March.....	27	17	19.7	2.32	2.68	1,210	A.
April.....	88	13	26.1	3.07	3.42	1,550	A.
May.....	154	52	92.6	10.9	12.57	5,690	A.
June.....	149	9.2	73.2	8.61	9.61	4,360	C.
July.....	124	4.7	19.3	2.27	2.62	1,190	C.
August.....	4.9	.9	3.56	.419	.48	219	C.
September.....	.9	.4	.73	.086	.10	43	C.
The period.....						18,500	

Monthly discharge of Independence Creek below Independence Lake, Cal., for 1902-1907—
Continued.

[Drainage area, 8.5 square miles.]

Month.	Discharge in second-feet.				Run-off.		Accu- racy.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.	Total in acre-feet.	
1903-4.							
October.....	27	.6	3.22	.379	.44	198	A.
November.....	99	1.2	28.0	3.29	3.67	1,670	A.
December.....	10	2.0	6.88	.809	.93	423	B.
January.....	10	2.3	6.24	.734	.85	384	B.
February.....	98	4.8	39.7	4.67	5.04	2,280	B.
March.....	96	21	56.5	6.65	7.67	3,470	A.
April.....	145	19	41.4	4.87	5.43	2,460	B.
May.....	203	20	128	15.1	17.41	7,870	B.
June.....	176	60	114	13.4	14.95	6,780	B.
July.....	105	12	43.7	5.14	5.93	2,690	A.
August.....	12	2.6	5.97	.702	.81	367	A.
September.....	2.6	2.2	2.41	.284	.32	143	A.
The year	203	.6	39.8	4.68	63.45	28,700	
1904-5.							
October.....	162	2.6	19.6	2.31	2.66	1,210	A.
November.....	35	4.6	6.13	.721	.80	365	A.
December.....	130	3.4	29.0	3.41	3.93	1,780	B.
January.....	146	6.6	44.3	5.21	6.01	2,720	B.
February.....	44	9.6	18.4	2.16	2.25	1,020	B.
March.....	54	27	34.5	4.06	4.68	2,120	A.
April.....	130	12	53.0	6.24	6.96	3,150	A.
May.....	232	31	118	13.9	16.03	7,260	B.
June.....	136	2.6	99.9	11.8	13.17	5,940	A.
July.....	14	3.2	8.41	.989	1.14	517	A.
August.....	4.4	.4	2.42	.285	.33	149	B.
September.....	.4	.0	.22	.026	.03	13	C.
The year	232	.0	36.2	4.26	57.99	26,200	
1905-6.							
October.....	.0	.0	.0	.00	.00	0	D.
November.....	17	.0	4.90	.576	.64	292	C.
December.....	17	1.1	3.37	.396	.46	207	B.
January.....	117	1.6	27.2	3.20	3.69	1,670	B.
February.....	29	1.6	8.33	.980	1.02	463	B.
March.....	37	8.0	18.6	2.19	2.52	1,140	A.
April.....	46	9.3	21.8	2.56	2.86	1,300	A.
May.....	154	5.6	89.7	10.6	12.22	5,520	B.
June.....	268	.0	159	18.7	20.86	9,460	B.
July.....	250	21	141	16.6	19.14	8,670	B.
August.....	28	8.0	16.0	1.88	2.17	984	A.
September.....	8	2.6	4.55	.535	.60	271	A.
The year	268	.0	41.2	4.85	66.18	30,000	
1906-7.							
October.....	154	1.6	15.0	1.76	2.03	922	A.
November.....	15	6.6	11.5	1.35	1.51	684	A.
December.....	250	6.2	27.8	3.27	3.77	1,710	B.
January.....	56	17	37.9	4.46	5.14	2,330	B.
February.....	46	22	32.9	3.87	4.03	1,830	B.
March.....	169	20	64.9	7.64	8.81	3,990	B.
April.....	117	20	65.1	7.66	8.55	3,870	A.
May.....	184	87	124	14.6	16.83	7,620	B.
June.....	286	78	158	18.6	20.75	9,400	B.
July.....	.....	.....	α 64	7.53	8.68	3,940	D.
August.....	.....	.....	α 21	2.47	2.85	1,290	D.
September.....	.....	.....	α 13	1.53	1.71	774	D.
The year	286	.....	52.9	6.22	84.66	38,400	

α Estimated as 14 per cent of discharge of Little Truckee River at Starr, this being a mean ratio derived by comparison of records; results are approximate.

NOTE.—Discharge determined from rating curves applicable as follows: Oct. 24, 1902, to May 15, 1903; May 16 to Aug. 22, 1903; Aug. 27, 1903, to May 25, 1904; May 26, 1904, to July 8, 1905; July 9 to Sept. 30, 1905; and Oct. 1, 1905, to June 30, 1907. All are fairly well defined between 0.5 and 130 second-feet except the last, which is not well defined for 1907.

MISCELLANEOUS MEASUREMENTS.

The following miscellaneous measurements have been made on streams in the Truckee River basin:

Miscellaneous measurements in Truckee River basin.

Streams flowing into Lake Tahoe.

Stream.	Discharge.	Stream.	Discharge.
<i>Made by L. H. Taylor, May 5-10, 1900.</i>			
	<i>Sec.-feet.</i>		<i>Sec.-feet.</i>
Ward Creek.....	147	Unnamed creek (at Glenbrook).....	0.6
Blackwood Creek.....	140	Unnamed creek.....	Trace.
Threasmall streams between Idyllwild and McKinney Creek.....	a 12	Do.....	1.2
McKinney Creek.....	150	Unnamed creek (at breakwater).....	.5
General Creek.....	100	Unnamed creek (south of Incline).....	.5
Meeks Creek.....	130	Incline Creek.....	1.3
Five small streams between Meeks Creek and Emerald Bay.....	a 12	Unnamed creek (west of Incline).....	1.8
Emerald Bay Creek.....	60	Do.....	.9
Cascade Creek.....	30	Do.....	1.0
Taylor Creek.....	180	Do.....	1.0
Upper Truckee River.....	350	Unnamed creek (west of Brockway).....	.8
Ten small streams between Bijou and Glen Brook, in Nevada.....	a 15	Unnamed creek (east of Woodward).....	Trace.
<i>Made by G. B. Lorenz, Aug. 1-5, 1903.</i>		<i>Made by Cox and Jorgensen, June 25- 27, 1909.</i>	
Ward Creek.....	5.8	Ward Creek.....	136
Blackwood Creek.....	7.3	Blackwood Creek.....	193
Madden Creek.....	.3	Madden Creek.....	38
Unnamed creek.....	Trace.	Three small streams between Madden and McKinney creeks.....	19
McKinney Creek.....	.4	McKinney Creek.....	29
General Creek.....	1.2	General Creek.....	44
Meeks Creek.....	2.7	Meeks Creek.....	a 50
Lonely Gulch Creek.....	1.0	Three small streams between Meeks and Eagle creeks.....	a 35
Frosts Creek.....	2.3	Eagle Creek.....	128
Unnamed creek.....	.9	Cascade Creek.....	69
Do.....	1.0	Taylor Creek.....	200
Emerald Bay Creek.....	8.4	Upper Truckee River.....	350
Cascade Creek.....	4.3	Trout Creek.....	172
Trout Creek.....	29	Stream between Trout Creek and Glenbrook Bay.....	a 5
Little Truckee River.....	43	Two streams flowing into Glenbrook Bay.....	5
Zephyr Cove.....	Trace.	Streams between Glenbrook Bay and Tahoe outlet.....	a 40
Unnamed creek.....	1.0		
Unnamed creek (south of Cave Rock).....	.1		
Unnamed creek (north of Glenbrook).....	1.1		

a Estimated.

*Miscellaneous measurements in Truckee River basin—Continued.***Truckee River and tributaries.**

Date.	Stream.	Locality.	Discharge.
			<i>Sec.-feet.</i>
July 9, 1889	Truckee River.....	Outlet of Lake Tahoe.....	136
Aug. 8, 1889	do.....	do.....	75
Aug. 14, 1889	do.....	do.....	56
Aug. 18, 1889	do.....	do.....	49
June 3, 1900	do.....	½ mile below Truckee.....	364
June 12, 1900	do.....	do.....	264
May 19, 1900	Little Truckee River.....	Boca.....	a 600
June 6, 1900	do.....	do.....	492
Aug. 16, 1900	do.....	do.....	8.9
Sept. 15, 1900	do.....	do.....	27.1
Sept. 21, 1910	Adler Creek.....	Near mouth.....	3.5
Aug. 5, 1911	do.....	do.....	6.7
Sept. 26, 1911	do.....	do.....	4.0
May 31, 1889	do.....	Floriston.....	42
May 19, 1900	do.....	do.....	b 30
July 25, 1900	do.....	do.....	12.6
Sept. 10, 1900	do.....	do.....	10.3
June 28, 1889	Cold Creek.....	½ mile below Donner Lake.....	11
July 3, 1889	do.....	do.....	10
July 6, 1889	do.....	do.....	5
July 11, 1889	do.....	do.....	1
Aug. 7, 1889	do.....	do.....	1
Aug. 10, 1889	do.....	do.....	1
Aug. 17, 1889	do.....	do.....	.7
June 16, 1900	Deer Creek.....	Placer County.....	25.2
May 22, 1889	Dog Creek.....	Verdi.....	7.0
July 26, 1900	do.....	do.....	.4
Sept. 10, 1900	do.....	do.....	.8
Oct. 7, 1902	do.....	do.....	7.1
July 3, 1889	Donner Creek.....	do.....	8.0
July 6, 1889	do.....	do.....	5.0
July 11, 1889	do.....	do.....	2.0
July 16, 1889	do.....	do.....	1.0
Aug. 7, 1889	do.....	do.....	.9
Aug. 10, 1889	do.....	do.....	.2
Aug. 17, 1889	do.....	do.....	.3
May 16, 1900	do.....	Near Donner Lake.....	128
May 29, 1900	do.....	do.....	73.4
July 13, 1900	do.....	do.....	1.1
Aug. 20, 1900	do.....	do.....	69.0
Sept. 13, 1900	do.....	do.....	19.2
May 21, 1900	do.....	Near Truckee River.....	324
June 3, 1900	do.....	do.....	127
June 12, 1900	do.....	do.....	98.9
July 13, 1900	do.....	do.....	14.7
Sept. 20, 1910	do.....	Outlet of lake.....	.5
June 7, 1910	Hunter Creek.....	do.....	40.7
Sept. 12, 1910	do.....	do.....	5.9
Oct. 24, 1902	Independence Creek.....	Independence Lake.....	.3
May 31, 1889	Joe Gray Creek.....	Iceland.....	88.0
May 19, 1900	do.....	do.....	30.0
July 28, 1900	do.....	do.....	20.3
Sept. 15, 1900	do.....	do.....	12.3
May 30, 1889	Juniper Creek.....	Clinton.....	22.0
June 6, 1900	do.....	do.....	b 30.0
Sept. 15, 1900	do.....	do.....	1.3
June 1, 1889	Martis Creek.....	do.....	19.0
June 22, 1889	do.....	do.....	7.0
May 21, 1900	do.....	do.....	24.5
June 4, 1900	do.....	do.....	17.5
Sept. 14, 1900	do.....	do.....	8.5
June 4, 1900	Prosser Creek.....	Mouth.....	145
July 27, 1900	do.....	do.....	25.0
Sept. 9, 1900	do.....	do.....	9.5
Oct. 23, 1902	do.....	Prosser.....	21.2
Sept. 27, 1910	Prosser Creek (South).....	Evers Valley.....	.9
June 3, 1889	Squaw Creek.....	Halfway between Lake Tahoe and Truckee.....	92.0
June 22, 1889	do.....	do.....	15.0
June 5, 1900	do.....	Placer County.....	81.4
June 16, 1900	do.....	do.....	46.0
Sept. 14, 1900	do.....	do.....	2.8
Sept. 19, 1910	do.....	Near mouth.....	1.3
June 3, 1889	Creek near Tahoe Tollgate.....	do.....	74.0
Sept. 21, 1910	Trout Creek.....	Near mouth.....	b.5

a Approximate.

b Estimated.

CARSON SINK BASIN.

WEST FORK OF CARSON RIVER AT WOODFORDS, CAL.

This station was originally established October 18, 1900, about half a mile above the post office at Woodfords and 200 feet from the main road between Woodfords and Blue Lake. Measurements were also made near this point in 1890, 1891, and 1892. On May 18, 1907, the gage and bench mark were washed out. On June 8, 1907, the gage was reestablished near the highway bridge at Woodfords, one-half mile below the first location in the SE. $\frac{1}{4}$ sec. 34, T. 11 N., R. 19 E., at a different datum. No change in location or datum has since been made. This is known as the bridge station.

No tributaries enter below the station. The records corrected for diversions show the amount of water available for storage in Hope Valley. As the stream is very swift at the bridge, the relation between gage height and discharge is probably not affected by ice. The present gage is a vertical staff on the left bank just above the highway bridge. Three canals divert water between the cable and the bridge during irrigation season.

In order to obtain the total discharge of the river the Stone & Webster Engineering Corporation installed a gage a quarter of a mile above the cable and furnished records to the Survey during portions of 1910-11.

Discharge measurements are made from a car and cable about one-half mile above the gage.

Discharge measurements of West Fork of Carson River above Woodfords, Cal., in 1901-1909.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1901.		<i>Feet.</i>	<i>Sec.-feet.</i>	1904.		<i>Feet.</i>	<i>Sec.-feet.</i>
Mar. 8	L. H. Taylor.....	3.30	1.53	July 3	J. T. Shaw.....	3.95	249
Apr. 28	.....do.....	3.95	a 3.21	15	.....do.....	3.61	174
May 26	.....do.....	3.80	2.85	18	.....do.....	3.55	157
31	.....do.....	4.05	a 3.50	29	.....do.....	3.20	107
June 13	.....do.....	3.75	2.74	Aug. 1	.....do.....	3.12	99
Sept. 21	.....do.....	2.35	.31	12	.....do.....	2.83	83
Nov. 6	.....do.....	2.60	.68	15	.....do.....	2.68	70
1902.				Sept. 6	.....do.....	2.55	64
Apr. 22	D. W. Hays.....	3.65	182	23	.....do.....	2.52	49
May 13	C. V. Taylor.....	4.70	422	Oct. 13	.....do.....	3.15	106
July 3	D. W. Hays.....	3.40	158	1905.			
30	.....do.....	2.50	47	Apr. 1	W. A. Wolf.....	2.85	88
Aug. 6	C. V. Taylor.....	2.45	53	20	.....do.....	3.55	186
Sept. 9	L. L. Richards.....	2.21	40	May 2	J. L. Brambila.....	3.95	328
1903.				12	.....do.....	3.50	210
Apr. 7	D. W. Hays.....	3.06	97	16	.....do.....	4.40	398
22	A. H. Schadler.....	3.80	183	25	.....do.....	4.15	305
June 24	.....do.....	4.20	247	30	.....do.....	4.00	298
July 10	.....do.....	3.30	128	June 7	.....do.....	3.75	223
17	.....do.....	3.05	107	12	.....do.....	4.10	288
Aug. 4	W. B. Harrington.....	2.60	48	22	.....do.....	3.60	188
Sept. 9	.....do.....	2.20	37	28	.....do.....	3.20	119
1904.				July 2	.....do.....	2.90	104
May 3	R. A. Craig.....	3.75	203	22	.....do.....	2.50	72
				30	.....do.....	2.35	44
				Aug. 29	W. A. Wolf.....	2.10	25

a Estimated.

*Discharge measurements of West Fork of Carson River above Woodfords, Cal., in
1901-1909—Continued.*

Date.	Hydrographer.	Gage height.	Dis-charge	Date.	Hydrographer.	Gage height.	Dis-charge.
		<i>Feet.</i>	<i>Sec.-feet.</i>			<i>Feet.</i>	<i>Sec.-feet.</i>
1906.				1908.			
May 9	M. B. Kennedy.....	6.70	1,520	June 26	E. A. Porter.....	2.07	137
18	.....do.....	5.10	695	July 25	.....do.....	1.00	55
June 5	.....do.....	5.20	764	Aug. 31	M. B. Kennedy.....	a 1.40	46
16	.....do.....	5.60	899	Oct. 12	E. A. Porter.....	.90	31
July 17	.....do.....	4.10	373				
Aug. 16	.....do.....	3.05	108	1909.			
				June 16	L. J. Towne.....	3.75	467
1907.				July 8	.....do.....	2.45	203
June 8	E. A. Porter.....	4.30	684	Aug. 10	.....do.....	1.52	60
July 9	.....do.....	4.00	578	Sept. 10	F. C. Schafer.....	.85	31
Aug. 3	.....do.....	2.90	229	Oct. 28	.....do.....	.85	28

a Estimated.

NOTE.—Gage heights 1907-1909 refer to new gage at Woodfords.

Discharge measurements of West Fork of Carson River at Woodfords, Cal., in 1910-1912.

Date.	Hydrographer.	Gage height.		Discharge.
		U. S. Reclamation Service gage at bridge.	Stone & Webster gage above cable.	
		<i>Feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>
1910.				
Mar. 30	F. C. Schafer.....	2.25	.....	132
July 27	Stone & Webster Engineering Corporation.....	.....	1.20	47
Aug. 10	.....do.....	.....	.80	28
25	.....do.....	.....	.70	24
Oct. 11	H. D. McGlashan.....	.42	.78	33
Dec. 10	Stone & Webster Engineering Corporation.....	.....	1.00	49
12	D. S. Stuver.....	1.08	.....	46
1911.				
Mar. 28	Stone & Webster Engineering Corporation.....	.....	1.50	95
Apr. 10	J. E. Stewart.....	2.40	1.85	149
June 9	Stone & Webster Engineering Corporation.....	.....	4.00	802
22	J. E. Stewart.....	4.43	3.86	797
July 20	Stone & Webster Engineering Corporation.....	.....	2.65	289
28	.....do.....	.....	2.15	175
28	G. T. Peekema.....	2.35	2.10	192
Sept. —	Stone & Webster Engineering Corporation.....	.....	.81	43
Oct. 10	.....do.....	.....	.60	26
Nov. 6	J. E. Stewart.....	.....	.68	30
1912.				
June 23	H. J. Tompkins.....	2.03	2.00	119

Discharge measurements of canal diversions between the cable and bridge at Woodfords, Cal., in 1910-11.

Date.	Upper canal.	Middle canal.	Lower canal.	Total diversion.
	<i>Sec.-feet.</i>	<i>Sec.-feet.</i>	<i>Sec.-feet.</i>	<i>Sec.-feet.</i>
1910.				
July 27.....	8.7	0.0	13.5	22.2
Aug. 10.....	9.9	.95	8.6	19.45
13.....	8.8	.0	9.0	17.8
25.....	6.3	1.6	10.8	18.7
Sept. 8.....	10.4	.4	7.8	18.6
1911.				
July 28.....	12.5	13.4	9.8	35.7

Daily gage height, in feet, of West Fork of Carson River at Woodfords, Cal., for 1900-1912.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1900-1901.												
1.....		2.55	2.55	2.65	2.45	3.7	3.05	3.9	4.1	3.4	3.0	2.5
2.....		2.5	2.5	2.65	2.5	3.7	3.1	3.9	4.2	3.3	2.9	2.5
3.....		2.45	2.5	2.5	2.45	3.65	3.1	3.9	4.1	3.2	2.9	2.5
4.....		2.4	2.45	2.55	2.45	3.6	3.1	3.9	4.1	3.0	2.9	2.5
5.....		2.4	2.4	2.5	2.4	3.6	3.05	3.9	4.2	3.1	3.0	2.4
6.....		2.4	2.5	2.5	2.4	3.5	3.05	4.05	4.1	3.1	3.3	2.4
7.....		2.5	2.35	2.55	2.4	3.5	3.05	4.45	4.1	3.2	2.9	2.4
8.....		2.6	2.4	2.6	2.4	3.4	3.05	4.6	4.1	3.2	2.9	2.4
9.....		2.6	2.5	2.6	2.4	3.4	3.05	4.75	3.8	3.1	2.9	2.4
10.....		2.55	2.45	2.55	2.4	3.35	3.15	5.05	3.8	3.2	2.8	2.4
11.....		2.5	2.5	2.5	2.45	3.3	3.15	5.3	3.8	3.2	2.8	2.4
12.....		2.45	2.5	2.5	2.4	3.3	3.2	5.4	3.8	3.2	2.7	2.4
13.....		2.4	2.45	2.55	2.45	3.3	3.3	5.35	3.7	3.2	2.7	2.4
14.....		2.4	2.5	2.55	2.55	3.25	3.4	5.15	3.7	3.1	2.6	2.4
15.....		2.45	2.48	2.6	2.6	3.25	3.45	4.85	3.7	3.2	2.7	2.4
16.....		2.5	2.35	2.6	2.7	3.3	3.5	4.7	3.7	2.2	2.7	2.4
17.....		2.4	2.4	2.55	3.1	3.25	3.65	4.6	3.7	3.3	2.7	2.4
18.....	2.4	2.45	2.35	2.5	3.2	3.2	3.7	4.45	3.7	3.2	2.9	2.4
19.....	2.5	2.5	2.4	2.5	3.3	3.2	3.7	4.7	3.8	3.2	2.8	2.4
20.....	2.7	2.5	2.5	2.45	3.3	3.2	3.75	4.55	3.9	3.0	2.7	2.4
21.....	2.7	2.55	2.7	2.4	3.4	3.2	3.8	4.35	3.8	3.0	2.6	2.4
22.....	2.5	2.4	2.6	2.4	3.4	3.2	4.05	4.1	3.8	3.1	2.5	2.4
23.....	2.4	2.35	2.65	2.4	3.4	3.15	4.05	4.1	3.8	3.3	2.5	2.4
24.....	2.4	2.45	2.7	2.45	3.6	3.15	4.05	4.0	3.9	3.2	2.5	2.4
25.....	2.3	2.6	2.67	2.45	3.6	3.15	4.25	4.0	3.6	3.1	2.5	2.4
26.....	2.3	2.5	2.65	2.4	3.6	3.15	4.25	3.95	3.5	3.0	2.5	2.4
27.....	2.2	2.5	2.7	2.4	3.65	3.15	4.25	3.9	3.4	3.0	2.5	2.4
28.....	2.2	2.45	2.65	2.45	3.7	3.15	4.25	3.9	3.4	3.0	2.5	2.4
29.....	2.35	2.5	2.6	2.45	3.7	3.1	4.1	3.85	3.7	3.0	2.8	2.5
30.....	2.4	2.55	2.6	2.4	3.7	3.1	4.05	3.95	3.5	2.9	2.6	2.5
31.....	2.5		2.6	2.45	3.7	3.05		4.05		2.9	2.5	
1901-2.												
1.....	2.5	2.6	2.7	3.0	3.7	4.4	3.1	3.9	4.6	4.2	2.5	2.3
2.....	2.5	2.6	2.7	2.9	3.9	4.6	3.2	3.9	4.5	3.9	2.4	2.3
3.....	2.5	2.5	2.7	2.9	3.8	4.2	3.4	3.8	4.5	3.8	2.4	2.2
4.....	2.5	2.5	2.7	2.9	3.9	3.9	3.4	3.7	4.4	3.8	2.4	2.2
5.....	2.5	2.5	2.6	2.9	4.0	3.6	3.5	3.7	4.4	3.8	2.4	2.2
6.....	2.5	2.5	2.6	2.8	4.0	3.6	3.8	3.7	4.4	3.6	2.4	2.2
7.....	2.5	2.5	2.7	2.9	4.0	3.5	3.9	3.6	4.4	3.6	2.4	2.2
8.....	2.5	2.5	2.7	3.0	3.5	3.5	3.9	3.6	4.6	3.5	2.4	2.2
9.....	2.5	2.5	2.7	3.0	3.9	3.6	3.8	3.7	4.5	3.4	2.6	2.2
10.....	2.5	2.6	2.7	3.0	3.9	3.6	3.8	3.8	4.5	3.4	2.4	2.2
11.....	2.4	2.5	2.7	2.9	3.8	3.6	3.9	4.0	4.4	3.4	2.3	2.2
12.....	2.5	2.5	2.7	2.9	3.8	3.4	3.9	4.0	4.4	3.2	2.3	2.2
13.....	2.5	2.6	2.8	2.8	3.9	3.5	3.9	4.0	4.4	3.2	2.3	2.3
14.....	2.5	2.6	2.8	2.9	3.8	3.6	3.9	4.1	4.4	3.0	2.4	2.3
15.....	2.5	2.6	2.8	2.9	3.8	3.4	3.8	4.2	4.0	3.0	2.4	2.3
16.....	2.5	2.5	2.8	2.9	3.9	3.3	3.8	4.4	4.2	2.9	2.3	2.3
17.....	2.5	2.5	2.8	3.0	4.0	3.2	3.6	3.8	4.1	2.9	2.3	2.3
18.....	2.4	2.5	2.8	2.9	3.9	3.0	3.5	3.8	4.1	2.9	2.3	2.3
19.....	2.4	2.6	2.8	2.9	3.8	2.8	3.4	3.8	4.1	2.8	2.3	2.3
20.....	2.4	2.6	2.8	3.0	3.9	2.7	3.3	3.9	4.1	2.9	2.3	2.3
21.....	2.4	2.6	2.8	3.2	3.8	2.7	3.3	4.2	4.1	2.9	2.3	2.2
22.....	2.4	2.6	2.8	3.1	3.9	2.8	3.3	4.3	4.2	2.8	2.3	2.2
23.....	2.5	2.6	2.8	3.2	3.9	2.6	3.4	4.4	4.2	2.9	2.3	2.2
24.....	2.5	2.6	2.9	3.2	4.0	2.6	3.4	4.6	4.3	2.9	2.4	2.2
25.....	2.5	2.6	2.9	3.3	4.2	2.6	3.3	4.6	4.2	2.8	2.5	2.2
26.....	2.5	2.6	3.0	3.2	4.2	2.6	3.4	4.8	4.1	2.7	2.4	2.2
27.....	2.5	2.6	2.9	3.4	4.3	2.6	3.3	4.8	4.1	2.7	2.3	2.2
28.....	2.6	2.6	2.9	3.5	4.3	2.6	3.5	4.8	4.2	2.6	2.3	2.2
29.....	2.6	2.6	2.9	3.6		2.6	3.5	4.7	4.3	2.6	2.3	2.2
30.....	2.6	2.6	2.9	3.6		2.6	3.6	4.7	4.3	2.6	2.3	2.2
31.....	2.6		3.0	3.7		2.8		4.7		2.6	2.3	

Daily gage height, in feet, of West Fork of Carson River at Woodfords, Cal., for 1900-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1902-3.												
1.....	2.2	2.4	2.5	2.4	2.9	2.7	3.4	4.9	4.9	3.7	2.7	2.2
2.....	2.2	2.4	2.5	2.4	2.8	2.7	3.5	4.9	4.9	3.6	2.7	2.2
3.....	2.2	2.4	2.5	2.4	2.8	2.7	3.4	5.0	5.0	3.5	2.6	2.2
4.....	2.2	2.4	2.5	2.4	2.8	2.7	3.3	5.0	5.2	3.5	.....	2.2
5.....	2.2	2.3	2.5	2.4	2.7	2.8	3.2	5.1	5.3	3.5	2.5	2.2
6.....	2.2	2.3	2.5	2.3	2.5	2.9	3.0	5.2	5.3	3.5	2.5	2.2
7.....	2.2	2.4	2.5	2.3	2.5	2.9	2.9	5.3	5.3	3.5	2.5	2.2
8.....	2.2	2.3	2.5	2.3	2.6	2.9	2.9	5.5	5.3	.....	.....	2.2
9.....	2.2	2.4	2.5	2.3	2.7	2.8	3.1	5.5	5.2	.....	2.5	2.2
10.....	2.2	2.4	2.5	2.4	2.7	2.7	3.2	5.6	5.1	3.3	2.4	2.2
11.....	2.2	2.5	2.5	2.4	2.7	2.6	3.2	5.6	5.1	3.2	2.4	2.2
12.....	2.2	2.5	2.7	2.4	2.8	2.6	3.3	5.6	5.1	3.2	2.4	2.2
13.....	2.3	2.5	2.6	2.3	2.6	2.5	3.4	5.6	5.0	3.2	2.4	2.1
14.....	2.2	2.6	2.5	2.3	2.5	2.5	3.5	5.5	5.0	3.1	.....	2.15
15.....	2.3	2.5	2.5	2.3	2.5	2.4	3.4	5.3	4.9	3.0	2.4	2.15
16.....	2.3	2.4	2.6	2.3	2.5	2.4	3.4	5.0	4.8	3.0	2.4	2.15
17.....	2.2	2.4	2.6	2.3	2.5	2.5	3.3	5.0	4.8	3.0	2.3	2.2
18.....	2.2	2.4	2.6	2.3	2.6	2.6	3.3	4.8	4.8	2.9	.....	2.2
19.....	2.3	2.4	2.6	2.3	2.6	2.6	3.3	4.7	4.8	.....	2.3	2.2
20.....	2.3	2.4	2.6	2.3	2.7	2.6	3.5	4.5	4.7	2.9	2.4	2.2
21.....	2.3	2.5	2.7	2.3	2.7	2.6	3.6	4.4	4.6	.....	2.3	2.2
22.....	2.3	2.5	2.7	2.3	2.7	2.6	3.8	4.4	4.5	2.9	2.3	2.2
23.....	2.3	2.5	2.8	2.4	2.8	2.6	4.1	4.4	4.4	.....	2.3	2.2
24.....	2.3	2.5	2.8	2.5	2.7	2.6	4.3	4.4	4.4	.....	2.3	2.25
25.....	2.4	2.5	2.8	2.6	2.7	2.6	4.5	4.5	4.3	2.9	2.3	2.25
26.....	2.3	2.6	2.8	2.7	2.7	2.6	4.6	4.6	4.2	2.8	2.3	2.25
27.....	2.2	2.6	2.8	3.0	2.7	2.6	4.5	4.7	4.2	.....	2.3	2.25
28.....	2.3	2.5	2.8	3.0	2.7	2.7	4.6	4.7	4.1	2.8	2.3	2.25
29.....	2.4	2.5	2.6	3.0	.....	2.8	4.6	4.8	4.0	2.8	2.2	2.25
30.....	2.4	2.5	2.6	2.9	.....	3.0	4.7	4.8	3.9	2.7	2.2	2.25
31.....	2.4	.....	2.5	3.0	.....	3.2	.....	4.8	.....	.....	2.2	.....
1903-4.												
1.....	2.2	2.25	2.7	2.43	.....	3.82	3.60	3.71	4.84	3.82	3.09	2.55
2.....	2.2	2.25	2.65	2.43	.....	3.66	3.50	3.66	4.95	3.80	3.14	2.55
3.....	2.25	2.25	2.6	2.43	.....	3.60	3.55	4.12	4.95	3.77	3.09	2.55
4.....	2.25	2.3	2.6	2.38	.....	3.60	3.50	4.43	5.20	3.77	3.09	2.60
5.....	2.25	2.25	2.6	2.38	.....	3.66	3.45	4.90	5.20	3.82	2.99	2.55
6.....	2.25	2.3	2.7	2.38	.....	3.71	3.55	5.52	5.09	3.77	3.04	2.50
7.....	2.3	2.25	2.75	2.48	2.48	3.71	3.66	5.78	5.04	3.72	2.88	2.55
8.....	2.3	2.2	2.75	2.48	2.53	3.71	3.87	5.78	4.88	3.67	2.88	2.44
9.....	2.25	2.2	2.8	2.58	2.53	3.66	4.12	5.98	4.78	3.67	2.88	2.39
10.....	2.3	2.2	2.8	2.58	2.48	3.60	4.38	6.14	4.68	3.67	2.78	2.39
11.....	2.2	2.35	2.8	2.58	2.48	3.50	4.68	6.40	4.68	3.62	2.78	2.39
12.....	2.2	2.5	2.8	2.58	2.53	3.45	4.95	6.45	4.73	3.57	2.83	2.44
13.....	2.2	2.9	2.75	2.58	2.58	3.40	5.68	6.19	4.78	3.62	2.78	2.34
14.....	2.2	3.05	2.75	2.58	2.63	3.45	5.37	6.19	4.88	3.65	2.73	2.78
15.....	2.2	3.05	2.75	2.63	2.68	3.45	5.10	6.14	4.83	3.67	2.68	2.99
16.....	2.2	3.0	2.75	2.58	2.78	3.35	4.95	5.98	4.73	3.62	2.68	3.09
17.....	2.2	3.0	2.75	2.58	2.83	3.30	4.95	5.98	4.68	3.57	2.63	2.88
18.....	2.2	3.0	2.75	2.58	2.83	3.30	4.90	5.52	4.68	3.57	2.68	3.76
19.....	2.2	2.95	2.75	2.53	2.88	3.87	4.84	5.57	4.68	3.52	2.63	2.68
20.....	2.2	2.95	2.8	2.53	2.99	3.76	4.79	5.73	4.68	3.47	2.58	2.63
21.....	2.2	2.9	2.85	2.53	3.14	3.71	4.79	5.73	4.47	3.57	2.48	2.63
22.....	2.2	2.9	2.85	2.53	3.66	3.60	4.22	5.47	4.37	3.57	2.48	2.58
23.....	2.2	2.9	2.75	2.53	3.92	3.60	4.22	5.57	4.22	3.24	2.53	2.53
24.....	2.2	2.8	2.75	2.48	4.43	3.55	4.27	5.47	4.17	3.24	2.63	2.68
25.....	2.2	2.8	2.7	2.48	4.48	3.50	4.38	5.47	4.07	3.24	2.58	2.68
26.....	2.2	2.8	2.65	2.43	4.32	3.55	4.07	5.21	4.02	3.09	2.48	2.68
27.....	2.15	2.8	2.65	2.43	4.27	3.66	2.88	4.84	4.02	3.19	2.75	2.68
28.....	2.2	2.75	2.65	2.43	4.02	3.87	3.71	4.84	4.02	3.14	2.70	2.63
29.....	2.2	2.7	2.5	2.38	3.97	3.76	3.82	4.84	3.97	3.14	2.70	2.68
30.....	2.25	2.7	2.45	2.38	.....	3.71	3.76	4.79	4.07	3.09	2.65	2.73
31.....	2.25	.....	2.45	.....	.....	3.66	.....	4.84	.....	3.09	2.60	.....

Daily gage height, in feet, of West Fork of Carson River at Woodfords, Cal., for 1900-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1904-5.												
1.....	2.88	2.68	2.58	.....	2.97	3.05	2.93	4.16	3.85	3.1	2.3	2.0
2.....	2.73	2.68	2.58	.....	3.01	3.18	2.93	4.2	3.8	3.05	2.35	2.0
3.....	2.73	2.68	2.58	.....	3.01	3.05	2.97	3.9	3.75	3.05	2.2	2.0
4.....	2.68	2.68	2.58	.....	2.97	3.05	2.89	3.85	3.55	2.97	2.3	2.0
5.....	2.78	2.63	2.53	.....	2.93	3.05	2.89	3.7	3.5	2.8	2.25	2.05
6.....	2.88	2.58	2.58	.....	3.01	2.97	2.97	3.7	3.55	2.89	2.25	2.0
7.....	2.88	2.58	2.53	.....	3.05	3.01	3.05	3.65	3.7	2.89	2.25	2.0
8.....	2.83	2.58	2.53	2.77	3.05	3.14	3.6	3.65	3.75	2.75	2.15	2.0
9.....	2.88	2.58	2.58	2.81	3.05	3.23	3.23	3.6	3.6	2.89	2.15	2.0
10.....	3.04	2.63	2.58	2.81	3.14	3.23	3.41	3.65	3.7	3.14	2.25	2.0
11.....	3.09	2.63	2.58	2.85	3.05	3.14	3.41	3.6	3.75	3.05	2.2	2.0
12.....	2.99	2.68	2.58	2.89	3.05	3.05	3.36	3.65	3.8	3.05	2.2	2.0
13.....	2.88	2.68	2.48	2.85	2.97	3.05	3.36	3.8	3.75	2.85	2.15	2.0
14.....	2.83	2.68	2.53	2.85	3.01	3.14	3.36	3.9	3.75	2.75	2.1	2.0
15.....	2.88	2.68	2.53	2.89	2.89	3.23	3.81	4.12	3.75	2.65	2.1	2.0
16.....	2.88	2.63	2.38	2.81	2.89	3.18	3.85	4.08	3.6	2.65	2.1	2.0
17.....	2.78	2.58	2.53	2.81	2.85	3.5	3.75	4.24	3.65	2.55	2.0	2.0
18.....	2.88	2.68	2.58	2.85	2.83	3.41	3.7	4.4	3.65	2.6	2.1	2.05
19.....	2.88	2.63	2.63	2.85	2.81	3.28	3.6	4.36	3.6	2.55	2.1	2.05
20.....	2.88	2.63	2.58	2.85	2.81	3.23	3.5	4.36	3.5	2.5	2.1	2.1
21.....	2.88	2.58	2.58	2.81	2.85	3.14	3.85	4.36	3.5	2.5	2.1	2.1
22.....	2.83	2.63	2.58	2.89	2.89	3.14	3.85	4.36	3.41	2.45	2.15	2.1
23.....	2.78	2.68	2.68	2.93	2.89	3.23	3.95	4.12	3.36	2.45	2.1	2.1
24.....	2.78	2.63	2.63	3.05	2.85	3.14	4.12	4.16	3.32	2.5	2.1	2.1
25.....	2.73	2.78	2.68	2.97	2.89	3.14	4.16	4.16	3.32	2.45	2.1	2.1
26.....	2.68	2.78	2.68	2.93	2.97	3.23	4.16	4.16	3.28	2.4	2.05	2.2
27.....	2.68	2.68	2.73	2.85	2.97	3.28	4.24	4.0	3.23	2.45	2.0	2.2
28.....	2.68	2.68	2.83	2.81	3.05	3.14	4.32	3.9	3.23	2.4	2.0	2.2
29.....	2.63	2.63	3.09	2.81	.....	3.05	4.32	3.8	3.14	2.5	2.0	2.2
30.....	2.63	2.63	3.24	2.85	.....	2.89	4.28	3.85	3.18	2.35	2.0	2.2
31.....	2.63	.....	2.99	2.89	.....	2.89	.....	3.9	.....	2.3	2.0	.....
1905-6.												
1.....	2.2	2.2	2.3	2.4	2.85	2.5	2.85	5.7	4.4	4.6	3.4	.....
2.....	2.15	2.2	2.3	2.5	2.8	2.55	2.8	5.85	4.6	4.7	3.3	2.9
3.....	2.1	2.2	2.3	2.55	2.75	2.55	2.8	6.0	4.8	4.8	3.3	2.9
4.....	2.1	2.2	2.3	2.55	2.6	2.5	2.75	6.1	5.0	4.7	3.3	2.85
5.....	2.1	2.2	2.4	2.4	2.6	2.55	2.6	6.4	5.0	4.7	3.25	2.8
6.....	2.15	2.2	2.4	2.4	2.6	2.6	2.55	6.45	4.7	4.7	3.3	2.7
7.....	2.15	2.2	2.5	2.4	2.6	2.65	2.5	6.5	4.9	4.7	3.3	2.6
8.....	2.2	2.2	2.4	2.3	2.55	2.7	2.6	6.7	4.8	4.6	3.25	2.55
9.....	2.2	2.2	2.5	2.35	2.5	2.75	2.6	6.8	4.8	4.5	3.9	2.5
10.....	2.2	2.2	2.5	2.5	2.4	2.6	2.7	6.8	5.2	4.4	3.5	2.5
11.....	2.2	2.2	2.5	2.6	2.5	2.55	2.7	6.4	5.5	4.3	3.4	2.4
12.....	2.2	2.2	2.5	2.75	2.55	2.5	2.75	6.35	5.8	4.2	3.4	2.4
13.....	2.2	2.2	2.6	2.85	2.6	2.45	2.8	.....	5.7	4.2	3.4	2.3
14.....	2.2	2.2	2.55	2.9	2.7	2.4	2.9	.....	5.8	4.1	3.35	2.4
15.....	2.15	2.2	2.6	2.9	2.75	2.4	2.95	.....	5.8	4.0	.....	2.2
16.....	2.15	2.2	2.55	3.0	2.75	2.45	3.0	.....	5.7	4.0	.....	2.2
17.....	2.1	2.2	2.6	3.1	2.8	2.5	3.25	5.1	5.6	3.8	.....	2.2
18.....	2.15	2.2	2.6	3.2	2.8	2.5	3.3	.....	5.5	3.7	3.4	2.2
19.....	2.15	2.2	2.6	3.1	2.85	2.55	3.5	5.0	5.3	3.65	3.4	2.3
20.....	2.15	2.2	2.55	3.0	2.8	2.6	3.7	4.9	5.0	3.5	3.3	2.2
21.....	2.2	2.2	2.55	3.0	2.8	2.65	3.85	4.9	5.0	3.4	3.35	2.2
22.....	2.2	2.2	2.55	2.9	2.75	2.7	4.1	4.95	5.0	3.3	3.4	2.3
23.....	2.2	2.2	2.65	2.65	2.7	2.8	4.2	5.0	4.9	3.35	3.35	2.4
24.....	2.2	2.2	2.65	2.4	2.6	2.8	4.3	5.1	4.9	3.2	3.35	2.5
25.....	2.2	2.2	2.55	2.5	2.55	2.8	4.4	4.95	4.8	3.2	3.3	2.5
26.....	2.2	2.2	2.55	2.6	2.5	2.9	4.6	4.9	4.7	4.3	3.3	2.4
27.....	2.2	2.2	2.55	2.75	2.5	2.95	4.85	.....	4.8	3.6	3.3	2.35
28.....	2.2	2.4	2.5	2.8	2.5	2.95	5.1	.....	4.8	3.55	3.25	2.35
29.....	2.2	2.45	2.5	2.8	.....	3.0	5.3	.....	4.7	3.4	3.2	2.30
30.....	2.2	2.3	2.5	2.85	.....	3.0	5.5	.....	4.8	3.3	3.2	2.35
31.....	2.2	.....	2.5	2.85	.....	2.9	.....	.....	.....	3.3	.....	.....

Daily gage height, in feet, of West Fork of Carson River at Woodfords, Cal., for 1900-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1906-7.												
1.	2.4	2.7	2.0	.....	2.85	3.2	3.45	4.9	.....	.....	3.1	2.2
2.	2.4	2.7	2.1	.....	3.3	3.15	3.5	4.8	.....	.....	3.2	2.2
3.	2.4	2.95	2.1	.....	3.3	3.1	3.55	4.8	.....	.....	3.2	2.1
4.	2.4	3.1	2.15	.....	3.35	3.2	3.55	4.9	.....	.....	3.2	2.1
5.	2.4	3.7	2.1	.....	3.4	3.2	3.6	4.9	.....	.....	3.0	2.1
6.	2.55	3.0	2.1	.....	3.5	3.2	3.7	5.0	.....	.....	3.0	2.0
7.	2.6	2.9	2.0	.....	3.45	3.2	3.75	5.0	.....	.....	3.0	2.0
8.	2.55	2.9	2.5	.....	3.3	3.2	3.75	4.9	4.1	.....	3.0	2.0
9.	2.5	2.85	2.6	2.9	3.2	3.2	3.85	4.95	4.2	3.9	2.9	2.0
10.	2.5	2.8	2.7	2.8	3.2	.....	3.95	5.0	4.4	3.7	2.9	2.0
11.	2.45	2.9	2.7	2.8	3.3	.....	4.3	5.0	4.0	3.9	2.8	2.0
12.	2.4	2.9	2.6	2.85	3.35	3.15	4.6	5.0	3.9	3.8	2.8	.....
13.	2.4	3.1	2.7	2.8	3.35	3.1	4.8	5.0	4.1	3.6	2.8	.....
14.	2.45	3.2	2.65	2.8	3.3	3.1	5.0	5.2	4.0	3.5	2.8	.....
15.	2.4	3.0	2.6	2.8	3.3	3.0	4.85	5.6	3.9	3.4	2.7	.....
16.	2.4	3.0	2.6	2.75	3.3	3.05	5.0	5.8	3.8	3.4	2.75	.....
17.	2.45	2.9	2.55	2.7	3.3	4.0	4.9	6.6	3.9	3.4	2.6	.....
18.	2.4	2.8	2.5	2.7	3.2	4.75	4.8	(a)	4.0	3.5	2.6	.....
19.	2.5	2.6	2.55	2.7	3.15	4.7	5.2	.....	4.2	3.6	2.5	.....
20.	2.5	2.6	2.6	2.75	3.1	4.4	5.1	.....	4.1	3.6	2.4	.....
21.	2.6	2.55	2.65	2.75	3.2	4.2	4.9	.....	4.0	3.8	2.4	.....
22.	2.6	2.55	2.7	2.75	3.25	4.1	5.0	.....	3.9	3.9	2.4	.....
23.	2.6	2.55	2.7	2.7	3.2	.....	5.1	.....	4.0	3.7	2.3	.....
24.	2.65	2.5	2.7	2.7	3.2	.....	5.35	.....	4.2	3.6	2.3	.....
25.	2.65	2.45	2.75	2.7	3.25	3.8	5.6	.....	4.3	3.6	2.2	.....
26.	2.6	2.4	2.8	2.75	3.2	3.8	5.2	.....	4.4	3.4	2.1	.....
27.	2.65	2.4	2.8	2.85	3.2	3.7	5.0	.....	4.5	3.3	2.1	.....
28.	2.6	2.3	2.85	2.85	3.2	3.65	4.9	.....	5.0	3.5	2.1	.....
29.	2.55	2.2	2.9	2.8	.....	3.5	5.0	.....	5.2	3.4	2.1	.....
30.	2.6	2.15	2.85	2.75	.....	3.5	4.9	.....	5.1	3.2	2.0	.....
31.	2.65	.....	2.85	2.75	.....	3.45	.....	.....	.....	3.0	2.0	.....
1907-8.												
1.	.....	1.55	1.25	1.8	1.5	1.5	2.1	3.0	2.5	.....	4.2	1.0
2.	.....	1.5	1.2	1.7	1.5	1.45	2.1	3.0	2.5	1.9	3.5	1.0
3.	.....	1.5	1.2	1.75	1.45	1.4	2.2	3.05	2.55	1.9	1.5	1.0
4.	.....	1.5	1.3	1.45	1.45	1.4	2.2	3.0	2.6	1.8	1.3	.95
5.	1.5	1.5	1.35	1.5	1.45	1.4	2.2	2.9	2.5	1.8	1.3	.95
6.	1.5	1.5	1.5	1.5	1.5	1.45	2.25	2.9	2.5	1.8	1.2	1.0
7.	1.5	1.5	1.65	1.45	1.45	1.45	2.2	2.8	2.5	1.7	1.2	.9
8.	1.5	1.6	1.6	1.45	1.4	1.5	2.25	2.9	2.5	1.65	1.2	.9
9.	1.5	1.55	1.7	1.5	1.4	1.55	2.3	2.8	2.45	1.5	1.25	.95
10.	1.5	1.55	1.8	1.45	1.4	1.55	2.35	2.8	2.5	1.5	1.2	1.0
11.	1.45	1.5	1.75	1.45	1.4	1.5	2.35	2.7	2.5	1.4	1.15	1.1
12.	1.5	1.55	1.7	1.5	1.4	1.55	2.4	2.75	2.5	1.35	1.1	1.1
13.	1.5	1.55	1.6	1.4	1.4	1.55	2.45	2.65	2.5	1.4	1.1	1.1
14.	1.5	1.55	1.5	1.4	1.4	1.6	2.4	2.65	2.45	1.35	1.1	.95
15.	1.5	1.5	1.5	1.4	1.45	1.7	2.45	2.65	2.4	1.3	1.0	1.0
16.	1.55	1.5	1.55	1.4	1.4	1.8	2.5	2.6	2.35	1.2	1.0	1.0
17.	1.55	1.45	1.5	1.4	1.4	1.8	2.5	2.6	2.3	1.0	1.15	1.0
18.	1.5	1.4	1.5	1.4	1.35	1.8	2.5	2.55	2.3	1.0	1.1	1.0
19.	1.55	1.4	.....	1.4	1.35	1.8	2.55	2.5	2.35	.9	1.1	1.05
20.	1.6	1.3	.....	1.45	1.4	1.9	2.6	2.5	2.35	.....	1.1	1.05
21.	1.6	1.25	.....	1.4	1.45	1.9	2.6	2.55	2.3	.....	1.0	1.0
22.	1.55	1.3	1.55	1.45	1.45	1.95	2.6	2.5	2.3	.....	1.1	.95
23.	1.5	1.4	1.5	1.45	1.5	1.9	2.7	2.6	2.2	.....	1.1	.95
24.	1.7	1.4	1.55	1.4	1.5	1.95	2.8	2.55	2.1	.95	1.15	.9
25.	1.75	1.5	1.6	1.4	1.5	1.95	2.7	2.5	2.0	1.0	1.15	.9
26.	1.8	1.5	1.6	1.4	1.5	1.95	2.65	2.5	1.95	1.0	1.1	.9
27.	1.75	1.4	1.9	1.45	1.6	2.0	2.7	2.5	1.9	1.1	1.1	.95
28.	1.6	1.3	1.85	1.5	1.65	2.0	2.8	2.5	1.9	1.2	1.1	.9
29.	1.6	1.2	1.85	1.5	1.6	2.0	2.9	2.55	1.85	1.2	1.1	.95
30.	1.55	1.2	1.8	1.5	.....	2.0	3.0	2.6	1.9	1.1	1.05	.95
31.	1.55	.....	1.8	1.5	.....	2.0	.....	2.5	.....	1.1	1.0	.....

^aThe gage was washed out May 18, 1907, and replaced at a different datum June 8, at Woodfords.

Daily gage height, in feet, of West Fork of Carson River at Woodfords, Cal., for 1900-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1908-9.												
1.....	1.0	1.15	1.0	1.0	2.1	1.65	1.8	4.7	4.8	3.0	1.95	.7
2.....	1.0	1.2	1.0	1.0	1.9	1.7	1.8	5.0	5.0	3.0	1.9	.8
3.....	.95	1.1	1.0	.95	1.95	1.7	1.85	5.2	5.0	2.9	1.8	.8
4.....	1.0	1.1	1.1	1.2	1.8	1.8	1.85	5.6	4.7	2.8	1.8	.8
5.....	1.0	1.1	1.0	1.8	1.9	1.8	1.95	5.7	5.0	2.0	1.9	.85
6.....	1.1	1.0	1.1	1.6	2.0	1.8	1.9	5.5	4.8	2.2	1.8	.8
7.....	1.0	1.0	1.1	1.1	2.0	1.8	2.0	5.1	4.55	2.4	1.8	.7
8.....	1.05	1.0	1.05	1.0	1.9	1.8	2.1	4.9	4.3	2.4	1.7	.8
9.....	1.05	1.1	1.0	1.0	1.8	1.9	2.2	4.1	4.0	2.45	1.75	.7
10.....	1.1	1.0	1.0	1.1	1.8	1.95	2.45	3.8	3.8	2.5	1.7	.7
11.....		.95	1.0	1.55	1.9	1.8	2.65	3.7	4.0	2.45	1.65	.65
12.....	1.15	.9	1.1	1.95	1.9	1.8	2.7	3.5	4.2	2.4	1.6	.6
13.....	1.2	.9	1.1	2.3	2.0	1.8	2.8	3.4	4.3	2.4	1.6	.65
14.....	1.2	1.0	1.05	2.7	1.95	1.75	3.0	3.55	4.2	2.4	1.6	.7
15.....	1.3	1.0	1.0	3.1	1.8	1.7	3.1	3.2	4.2	2.35	1.55	.7
16.....	1.9	.95	.95	3.2	1.95	1.7	3.1	3.3	4.0	2.3	1.55	.75
17.....	1.5	.9	.95	3.0	1.9	1.7	3.2	3.4	4.0	2.3	1.5	.8
18.....	1.25	.9	1.0	3.05	2.0	1.75	3.4	3.4	3.8	2.3	1.4	.8
19.....	1.25	.9	.95	3.0	1.9	1.8	3.4	3.5	3.7	2.3	1.45	.8
20.....	1.2	.95	1.8	3.0	1.7	1.85	3.5	3.55	3.6	2.3	1.4	.75
21.....	1.25	1.0	1.7	2.9	1.6	1.9	3.6	3.65	3.6	2.2	1.35	.8
22.....	1.25	1.0	1.0	2.8	1.65	1.8	3.65	3.6	3.8	2.15	1.3	.85
23.....	1.25	1.1	1.0	2.7	1.7	1.8	3.7	3.55	3.9	2.1	1.2	.9
24.....	1.2	1.0	1.1	2.6	1.7	1.7	3.6	3.7	4.0	2.1	1.1	.9
25.....	1.2	.95	1.15	2.65	1.8	1.7	3.55	3.8	4.0	1.9	1.1	.9
26.....	1.2	.8	1.15	2.5	1.75	1.65	3.9	3.9	4.0	1.9	1.0	.9
27.....	1.1	.8	1.1	2.6	1.7	1.6	4.2	4.2	3.85	1.85	.9	.85
28.....	1.1	.9	1.0	2.7	1.6	1.65	4.6	4.2	3.8	1.8	.85	.85
29.....	1.15	.9	1.0	2.5		1.6	4.8	3.9	3.7	1.8	.8	.9
30.....	1.2	.95	1.0	2.4		1.6	4.4	3.9	3.6	2.0	.8	1.0
31.....	1.15		1.1	2.2		1.75		4.2		2.1	.7	
1909-10.												
1.....	1.2	1.3	4.7	1.6	1.6	1.9	3.1	3.65	2.8	1.6	.9	.9
2.....	1.3	1.35	2.4	1.4	1.4	1.8	3.1	3.6	2.7	1.6		
3.....	1.25	1.4	2.1	1.2	1.2	1.8	3.1	3.55	2.6	1.4	.85	
4.....	1.2	1.3	2.0	1.0	1.0	1.7	2.9	3.55	2.6	1.3		.85
5.....	1.2	1.25	2.6	1.0	1.0	1.6	2.95	3.5	2.5	1.35	.8	.2
6.....	1.25	1.25	2.8	1.0	1.2	1.5	2.95	3.4	2.5	1.35		
7.....	1.3	1.2	2.7	.98	1.1	1.4	3.0	3.2	2.55	1.4		.0
8.....	1.35	1.2	2.4	.98	1.0	1.3	3.15	3.5	2.35	1.4	.4	
9.....	1.35	1.2	2.2	.99	1.0	1.3	3.4	3.6	2.25	1.4		
10.....	1.3	1.2	2.0	1.0	1.0	1.3	3.55	3.6	2.2	1.3		
11.....	1.3	1.1	1.8	.9	1.0	1.3	3.6	3.7	2.2	1.2	.3	
12.....	1.3	1.1	1.8	.96	1.2	1.4	3.6	3.8	2.3	1.2		.9
13.....	1.25	1.1	1.6	.9	1.2	1.45	3.65	3.9	2.3	1.3	.4	
14.....	1.2	1.15	1.2	1.1	1.4	1.5	3.7	3.8	2.4	1.4	.6	1.1
15.....	1.2	1.2	1.0	1.1	1.6	1.5	3.7	3.7	2.4	1.6		1.3
16.....	1.2	1.1	1.2	1.6	1.7	1.55	3.7	3.6	2.45	1.8		1.2
17.....	1.2	2.0	1.3	1.8	1.8	1.55	3.75	3.4	2.3	1.9	.7	
18.....	1.2	2.0	1.2	1.2	1.8	1.6	3.75	3.2	2.3	2.0		1.1
19.....	1.25	4.0	1.2	1.0	1.8	1.8	3.8	3.1	2.3	2.3		
20.....	1.3	3.7	1.2	1.0	1.8	2.3	3.8	3.1	2.4	2.3	.8	.0
21.....	1.3	3.2	1.3	1.0	1.9	2.9	3.9	3.0	2.45	2.0		
22.....	1.4	3.0	1.3	1.0	1.9	3.3	3.9	2.9	2.4	1.8	.6	
23.....	1.35	3.0	1.3	1.0	1.9	3.1	4.0	2.9	2.3	1.4		
24.....	1.3	2.8	1.4	1.0	1.95	2.8	3.95	2.95	2.3	1.3	.5	
25.....	1.35	2.5	1.6	.95	1.95	2.9	3.9	2.8	2.2	1.2	.3	
26.....	1.35	2.2	1.4	.95	1.9	2.9	3.9	2.8	2.1	1.2	.2	.8
27.....	1.35	2.0	1.9	1.0	1.8	3.0	3.8	2.8	2.1	1.0		
28.....	1.3	1.9	1.8	1.0	1.8	3.0	3.75	2.7	1.95	1.1	.1	.7
29.....	1.25	1.9	1.8	1.2		3.0	3.7	2.7	1.8	1.0	.9	
30.....	1.2	2.7	1.7	1.4		3.0	3.7	2.8	1.8	.9		.8
31.....	1.2		1.75	1.5		3.1		2.95		.9	.8	

Daily gage height, in feet, of West Fork of Carson River at Woodfords, Cal., for 1900-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.												
1.....	.8	.9	.....	.55	.95	.9	2.2	2.7	3.9	3.3	1.9	1.25
2.....9	1.8	.55	.9	.9	2.4	2.75	4.1	3.2	1.9	1.25
3.....	.0	.9	1.6	.55	.85	.9	2.4	3.1	4.4	3.3	.....	.....
4.....9	1.1	.65	1.0	.85	2.35	3.4	4.4	3.4	.....	.....
5.....85	1.1	.65	1.0	.8	2.15	3.5	4.5	3.4	.....	1.2
6.....85	1.2	.7	1.2	.85	2.05	2.9	4.2	3.4	1.7	1.2
7.....7	1.3	.7	1.25	.85	2.0	2.85	4.3	3.3	1.6	1.2
8.....7	1.3	.65	1.2	.8	2.05	3.1	4.1	3.3	.....	.....
9.....7	1.3	.95	1.2	.8	2.0	3.0	4.3	3.3	1.5	.....
10.....	.3	.7	1.3	.55	1.2	.75	1.8	3.2	4.5	2.9	1.5	1.25
11.....	.4	.9	1.3	.5	1.15	.75	1.75	3.1	4.7	3.0	.....	1.25
12.....	.52	.9	1.4	.45	1.1	.75	.....	3.3	4.4	2.9	.....	1.2
13.....	.65	1.0	1.4	.45	1.05	.8	1.7	3.3	4.8	3.0	1.4	.....
14.....	1.0	1.2	.5	1.0	.8	1.65	3.0	4.7	3.0	.....	.....
15.....9	1.0	.55	1.0	.8	1.6	2.85	4.7	2.9	1.4	1.2
16.....85	1.0	.6	1.0	.85	1.6	2.9	4.7	3.0	1.4	1.2
17.....	.0	.85	.95	.55	1.0	.9	1.75	2.8	4.7	2.9	.....	.....
18.....8	.9	.55	1.0	.9	2.0	3.3	4.5	.....	.....	1.2
19.....8	.95	.5	.95	.95	2.2	3.4	4.5	2.65	1.3	1.2
20.....7	.8	.8	.95	1.0	2.2	3.7	4.5	2.65	1.3	.....
21.....7	.8	.65	.95	1.0	2.2	3.8	4.2	2.58	.....	1.1
22.....75	.9	.65	1.0	1.1	2.5	4.3	4.2	2.5	1.2	1.1
23.....8	.9	.65	.....	1.2	2.7	4.9	3.6	.....	1.2	1.1
24.....8	1.0	.7	.....	1.2	2.85	4.2	3.4	.....	.....	1.1
25.....8	1.0	.65	.....	1.2	3.0	3.8	3.3	.....	.....	1.1
26.....8	.95	.65	.....	1.25	3.0	3.8	3.4	.....	1.2	.....
27.....8	.9	.65	.....	1.35	2.9	4.0	3.7	2.15	1.2	.....
28.....95	.8	.6	.....	1.5	2.7	3.9	3.9	2.15	.....	1.2
29.....95	.8	1.0	.....	1.6	2.5	4.0	3.6	.....	.....	1.2
30.....9	.8	1.25	.....	1.75	2.6	3.8	3.4	.....	1.0	.....
31.....8	1.1	.....	1.9	.....	3.5	.....	2.05	.....	.....
Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.			
1911-12.												
1.....	1.2	1.1	1.6	.....	1.3	1.3	1.65	1.5	3.7	.....	.....
2.....	1.2	.....	1.6	.....	1.3	1.3	1.7	.....	.....	.....	.....
3.....	1.2	1.1	1.55	1.2	1.3	1.2	.....	1.6	.....	.....	.....
4.....	1.2	1.1	1.5	1.2	.....	1.1	.....	1.7	3.4	.....	.....
5.....	1.2	1.1	1.5	1.2	1.3	1.0	1.8	1.8	3.4	.....	.....
6.....	1.15	1.1	1.4	1.25	1.3	.9	1.9	1.95	3.3	.....	.....
7.....	1.1	1.15	1.4	1.3	1.3	.....	2.0	2.1	3.4	.....	.....
8.....	1.1	1.2	1.4	.....	.....	1.0	2.2	2.6	3.3	.....	.....
9.....	1.1	1.2	1.4	1.3	.....	1.2	2.3	3.0	3.2	.....	.....
10.....	1.1	1.2	1.35	1.3	1.3	1.3	2.2	3.6	3.1	.....	.....
11.....	1.1	1.2	1.3	1.3	1.3	1.4	2.0	3.8	3.0	.....	.....
12.....	1.1	1.2	1.3	1.3	1.3	.....	1.9	3.9	.....	.....	.....
13.....	1.1	1.2	1.3	.....	.....	1.4	.....	4.0	.....	.....	.....
14.....	1.1	1.3	1.3	.....	1.3	1.4	1.8	4.2	2.9	.....	.....
15.....	1.1	1.3	1.2	1.3	1.3	1.3	1.7	4.4	2.8	.....	.....
16.....	1.1	1.3	1.2	1.3	1.3	1.35	1.7	4.0	2.7	.....	.....
17.....	1.1	1.3	1.2	.....	1.3	1.3	.....	4.3	2.6	.....	.....
18.....	1.1	1.35	1.2	1.3	.....	.....	.....	4.0	.....	.....	.....
19.....	1.1	1.38	1.2	1.3	1.4	1.3	1.6	4.0	.....	.....	.....
20.....	1.1	1.4	1.2	1.25	1.5	.....	1.6	3.8	2.7	.....	.....
21.....	1.1	1.4	1.2	1.2	1.5	1.35	1.5	.....	2.8	.....	.....
22.....	1.1	1.4	1.1	1.2	.....	1.4	1.5	3.6	2.9	.....	.....
23.....	1.1	1.45	1.1	.....	1.4	1.4	.....	3.4	.....	.....	.....
24.....	1.1	1.5	1.1	1.3	1.35	1.45	1.55	3.0	.....	.....	.....
25.....	1.1	1.55	1.1	1.35	1.35	1.45	.....	3.0	2.7	.....	.....
26.....	1.1	1.58	1.1	1.3	1.3	.....	1.4	3.2	2.5	.....	.....
27.....	1.1	1.6	1.1	.....	1.35	.....	1.4	3.4	.....	.....	.....
28.....	1.1	1.6	1.1	1.3	1.3	1.5	1.4	3.6	.....	.....	.....
29.....	1.1	1.6	1.1	1.25	.....	1.5	.....	3.7	2.2	.....	.....
30.....	1.1	1.65	1.1	1.25	.....	1.6	1.4	3.8	2.1	.....	.....
31.....	1.1	.....	1.15	.....	.....	.....	.....	3.8	.....	.....	.....

NOTE.—Gage washed out May 18, 1907. New gage installed at new datum June 8, 1907. Gage heights January to August, 1911, refer to Stone & Webster Engineering Corporation's gage, located one-fourth mile above the cable.

WATER RESOURCES OF CALIFORNIA, PART III.

*Rating tables for West Fork of Carson River at Woodfords, Cal.***October 18, 1900, to December 31, 1901.**

Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.
<i>Feet.</i>	<i>Sec.-ft.</i>	<i>Feet.</i>	<i>Sec.-ft.</i>	<i>Feet.</i>	<i>Sec.-ft.</i>	<i>Feet.</i>	<i>Sec.-ft.</i>
2.00	15	3.00	112	4.00	336	5.00	700
2.20	26	3.20	147	4.20	396	5.20	794
2.40	41	3.40	187	4.40	461	5.40	896
2.60	60	3.60	232	4.60	533		
2.80	83	3.80	281	4.80	613		

January 1 to December 31, 1902.

1.4	2	2.4	42	3.4	147	4.4	342
1.6	6	2.6	57	3.6	178	4.6	393
1.8	12	2.8	75	3.8	213	4.8	448
2.0	20	3.0	96	4.0	252	5.0	508
2.2	30	3.2	120	4.2	295		

January 1, to December 31, 1903.

2.7	65	3.5	149	4.3	268	5.1	412
2.8	74	3.6	161	4.4	286	5.2	430
2.9	83	3.7	174	4.5	304	5.3	448
3.0	93	3.8	188	4.6	322	5.4	466
3.1	103	3.9	202	4.7	340	5.5	484
3.2	114	4.0	217	4.8	358		
3.3	125	4.1	233	4.9	376		
3.4	137	4.2	250	5.0	394		

NOTE.—Table well defined below gage height 4.20 feet; below gage height 2.70 feet it is the same as the 1902 table.

January 1 to December 31, 1904.

2.20	36	3.30	128	4.40	304	5.50	657
2.30	42	3.40	140	4.50	327	5.60	697
2.40	48	3.50	154	4.60	352	5.70	737
2.50	54	3.60	168	4.70	379	5.80	779
2.60	61	3.70	182	4.80	408	5.90	823
2.70	69	3.80	197	4.90	439	6.00	869
2.80	77	3.90	213	5.00	472	6.10	916
2.90	86	4.00	229	5.10	507	6.20	964
3.00	96	4.10	246	5.20	543	6.30	1,012
3.10	106	4.20	264	5.30	580	6.40	1,060
3.20	116	4.30	283	5.40	618	6.50	1,110

NOTE.—Table applicable only to open channel. It is based upon discharge measurements made during 1902 to 1904, inclusive, and poorly defined.

January 1 to December 31, 1905.

2.00	20	2.70	74	3.30	146	3.90	251
2.10	26	2.80	84	3.40	161	4.00	272
2.20	33	2.90	95	3.50	177	4.10	294
2.30	40	3.00	107	3.60	194	4.20	318
2.40	48	3.10	119	3.70	212	4.30	343
2.50	56	3.20	132	3.80	231	4.40	370
2.60	65						

NOTE.—Table is applicable only to open channel. It is based on 15 discharge measurements made during 1905, and fairly well defined.

January 1, 1906, to May 17, 1907.

2.70	69	3.70	226	4.70	535	5.70	960
2.80	79	3.80	251	4.80	570	5.80	1,010
2.90	90	3.90	277	4.90	610	5.90	1,060
3.00	102	4.00	305	5.00	650	6.00	1,110
3.10	115	4.10	335	5.10	690	6.10	1,165
3.20	129	4.20	365	5.20	730	6.20	1,220
3.30	145	4.30	395	5.30	775	6.30	1,275
3.40	163	4.40	430	5.40	820	6.40	1,330
3.50	182	4.50	465	5.50	865	6.50	1,390
3.60	203	4.60	500	5.60	910	6.60	1,450

NOTE.—Table applicable only to open channel. It is based on discharge measurements made during 1902 to 1906, and is well defined.

Daily discharge, in second-feet, of West Fork of Carson River at Woodfords, Cal., for 1907-1911.

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1907.									
1.....	84	84	129	172	610	740	920	321	145
2.....	84	145	122	182	570	720	865	347	145
3.....	84	145	115	192	570	700	815	347	130
4.....	84	154	129	192	610	680	765	347	130
5.....	90	163	129	203	610	660	720	296	130
6.....	90	182	129	226	650	640	675	296	117
7.....	90	172	129	238	650	620	630	296	117
8.....	90	145	129	238	610	611	590	296	117
9.....	90	129	129	264	630	643	549	273	117
10.....	79	129	127	291	650	710	489	273	117
11.....	79	145	125	395	650	580	549	250	117
12.....	84	154	122	500	650	549	519	250	107
13.....	79	154	115	570	650	611	460	250	107
14.....	79	145	115	650	730	580	431	250	107
15.....	79	145	102	590	910	549	403	230	107
16.....	74	145	108	650	1,010	519	403	240	107
17.....	69	145	305	610	1,450	549	403	210	107
18.....	69	129	552	570	1,400	580	431	210	97
19.....	69	122	535	730	1,300	643	460	192	97
20.....	74	115	430	690	1,200	611	460	175	97
21.....	74	129	365	610	1,100	580	519	175	97
22.....	74	137	335	650	1,050	549	549	175	97
23.....	69	129	293	690	1,000	580	489	160	97
24.....	69	129	293	798	960	643	460	160	88
25.....	69	137	251	910	920	676	460	145	88
26.....	74	129	251	730	890	710	403	130	88
27.....	84	129	226	650	860	745	375	130	88
28.....	84	129	214	610	830	935	431	130	88
29.....	79	.....	182	650	800	1,020	403	130	88
30.....	74	.....	182	610	780	975	347	117	79
31.....	74	.....	172	.....	760	.....	296	117	.....

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1907-8.												
1.....	79	74	50	97	70	70	130	296	192	107	643	36
2.....	79	70	47	88	70	66	130	296	192	107	431	36
3.....	79	70	47	92	66	62	145	308	201	107	70	36
4.....	79	70	54	66	66	62	145	296	210	97	54	34
5.....	70	70	58	70	66	62	145	273	192	97	54	34
6.....	70	70	70	70	70	66	152	273	192	97	47	36
7.....	70	70	84	66	66	66	145	250	192	88	47	31
8.....	70	79	79	66	62	70	152	273	192	84	47	31
9.....	70	74	88	70	62	74	160	250	184	70	50	34
10.....	70	74	97	66	62	74	168	250	192	70	47	36
11.....	66	70	92	66	62	70	168	230	192	62	44	41
12.....	70	74	88	70	62	74	175	240	192	58	41	41
13.....	70	74	79	62	62	74	184	220	192	62	41	41
14.....	70	74	70	62	62	79	175	220	184	58	41	34
15.....	70	70	70	62	66	88	184	220	175	54	36	36
16.....	74	70	74	62	62	97	192	210	168	47	36	36
17.....	74	66	70	62	62	97	192	210	160	36	44	36
18.....	70	62	70	62	58	97	192	201	160	36	41	36
19.....	74	62	70	62	58	97	201	192	168	31	41	38
20.....	79	54	70	66	62	107	210	192	168	26	41	38
21.....	79	50	74	62	66	107	210	201	160	26	36	36
22.....	74	54	74	66	66	112	210	192	160	26	41	34
23.....	70	62	70	66	70	107	230	210	145	31	41	34
24.....	88	62	74	62	70	112	250	201	130	34	44	31
25.....	92	70	79	62	70	112	230	192	117	36	44	31
26.....	97	70	79	62	70	112	220	192	112	36	41	31
27.....	92	62	107	66	79	117	230	192	107	41	41	34
28.....	79	54	102	70	84	117	250	192	107	47	41	31
29.....	79	47	102	70	79	117	273	201	102	47	41	34
30.....	74	47	97	70	.....	117	296	210	107	41	38	34
31.....	74	.....	97	70	.....	117	.....	192	.....	41	36	.....

Daily discharge, in second-feet, of West Fork of Carson River at Woodfords, Cal., for 1907-1911—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1908-9.												
1.....	36	44	36	36	130	84	97	818	856	296	112	21
2.....	36	47	36	36	107	88	97	935	935	296	107	26
3.....	34	41	36	34	112	88	102	1,020	935	273	97	26
4.....	36	41	41	47	97	97	102	1,180	818	250	97	26
5.....	36	41	36	97	107	97	112	1,230	935	117	107	28
6.....	41	36	41	79	117	97	107	1,140	856	145	97	26
7.....	36	36	41	41	117	97	117	975	763	175	97	21
8.....	38	36	38	36	107	97	130	895	676	175	88	26
9.....	38	41	36	36	97	107	145	611	580	184	92	21
10.....	41	36	36	41	97	112	184	519	519	192	88	21
11.....	41	34	36	74	107	97	220	489	580	184	83	19
12.....	44	31	41	112	107	97	230	431	643	175	79	17
13.....	47	31	41	160	117	97	250	403	676	175	79	19
14.....	47	36	38	230	112	92	296	446	643	175	79	21
15.....	54	36	36	321	97	88	321	347	643	168	74	21
16.....	107	34	34	347	112	88	321	375	580	160	74	24
17.....	70	31	34	296	107	88	347	403	580	160	70	26
18.....	50	31	36	308	117	92	403	403	519	160	62	26
19.....	50	31	34	296	107	97	403	431	489	160	66	26
20.....	47	34	34	296	88	102	431	446	460	160	62	24
21.....	50	36	36	273	79	107	460	474	460	145	58	26
22.....	50	36	36	250	84	97	474	460	519	138	54	28
23.....	50	41	36	230	88	97	489	446	549	130	47	31
24.....	47	36	41	210	88	88	460	489	580	130	41	31
25.....	47	34	44	220	97	88	446	519	580	107	41	31
26.....	47	26	44	192	92	84	549	549	580	107	36	31
27.....	41	26	41	210	88	79	643	643	534	102	31	28
28.....	41	31	36	230	79	84	781	643	519	97	28	28
29.....	44	31	36	192	.....	79	856	549	489	97	26	31
30.....	47	34	36	175	.....	79	710	549	460	117	26	36
31.....	44	.....	41	145	.....	92	.....	643	.....	130	21	.....
1909-10.												
1.....	47	54	818	79	79	107	321	474	250	79	31	31
2.....	54	58	175	62	62	97	321	460	230	79	30	30
3.....	50	62	130	47	47	97	321	446	210	62	28	29
4.....	47	54	117	36	36	88	273	446	210	54	27	28
5.....	47	50	210	36	36	79	284	431	192	58	26	5
6.....	50	50	250	36	47	70	284	403	192	58	26	4
7.....	54	47	230	35	41	62	296	347	201	62	26	2
8.....	58	47	175	35	36	54	334	431	168	62	10	2
9.....	58	47	145	36	36	54	403	460	152	62	9	2
10.....	54	47	117	36	36	54	446	460	145	54	8	2
11.....	54	41	97	31	36	54	460	489	145	47	7	2
12.....	54	41	97	34	47	62	460	519	160	47	8	31
13.....	50	41	79	31	47	66	474	549	160	54	10	36
14.....	47	44	47	41	62	70	489	519	175	62	17	41
15.....	47	47	36	41	79	70	489	489	175	79	18	54
16.....	47	41	47	79	88	74	489	460	184	97	20	47
17.....	47	117	54	97	97	74	504	403	160	107	21	44
18.....	47	117	47	47	97	79	504	347	160	117	23	41
19.....	50	580	47	36	97	97	519	321	160	160	24	35
20.....	54	489	47	36	97	160	519	321	175	160	26	2
21.....	54	347	54	36	107	273	549	296	184	117	28	2
22.....	62	296	54	36	107	375	549	273	175	97	17	2
23.....	58	296	54	36	107	321	580	273	160	62	15	2
24.....	54	250	62	36	112	250	564	284	160	54	13	2
25.....	58	192	79	34	112	273	549	250	145	47	7	2
26.....	58	145	62	34	109	273	549	250	130	47	5	26
27.....	58	117	107	36	97	296	519	250	130	36	4	24
28.....	54	107	97	36	97	296	504	230	112	41	3	21
29.....	50	107	97	47	.....	296	489	230	97	36	31	24
30.....	47	230	88	62	.....	296	489	250	97	31	28	24
31.....	47	.....	92	70	.....	321	.....	284	.....	31	26	.....

Daily discharge, in second-feet, of West Fork of Carson River at Woodfords, Cal., for 1907-1911—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.												
1.....	26	31	76	24	48	45	200	318	785	520	148	50
2.....	26	31	97	24	45	45	240	332	885	482	148	50
3.....	2	31	79	24	42	45	240	445	1,040	520	140	49
4.....	2	31	41	30	52	42	230	560	1,040	560	134	48
5.....	3	28	41	30	52	39	190	600	1,080	560	127	47
6.....	4	28	47	33	68	42	172	378	935	560	120	47
7.....	5	21	54	33	72	42	164	362	985	520	106	47
8.....	6	21	54	30	68	39	172	445	885	520	100	48
9.....	7	21	54	48	68	39	164	410	985	520	95	49
10.....	7	21	54	24	68	36	134	482	1,080	378	95	50
11.....	10	31	54	22	64	36	127	445	1,190	410	92	50
12.....	14	31	62	20	60	36	124	520	1,040	378	89	47
13.....	19	36	62	20	56	39	120	520	1,240	410	85	47
14.....	20	36	47	22	52	39	113	410	1,190	410	85	47
15.....	20	31	36	24	52	39	106	362	1,190	378	85	47
16.....	20	28	36	27	52	42	106	378	1,190	410	85	47
17.....	2	28	34	24	52	45	127	346	1,190	378	82	47
18.....	2	26	31	24	52	45	164	520	1,080	341	79	47
19.....	2	26	34	22	48	48	200	560	1,080	304	76	47
20.....	2	21	26	39	48	52	200	690	1,080	304	76	44
21.....	2	21	26	30	48	52	200	735	935	285	72	41
22.....	2	24	31	30	52	60	264	985	935	264	68	41
23.....	2	26	31	30	51	68	318	1,300	645	248	68	41
24.....	2	26	36	33	50	68	362	935	560	234	68	41
25.....	2	26	36	30	49	68	410	735	520	220	68	41
26.....	2	26	34	30	48	72	410	735	560	205	68	43
27.....	2	26	31	30	47	80	378	835	690	190	68	45
28.....	2	34	26	27	46	95	318	785	785	190	62	47
29.....	2	34	26	52	-----	106	264	835	645	184	57	47
30.....	2	55	26	72	-----	127	290	735	560	178	52	47
31.....	31	-----	26	60	-----	148	-----	600	-----	172	51	-----
Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.	
1911.												
1.....	47	41	79	11.....	41	47	54	21.....	41	62	47	
2.....	47	41	79	12.....	41	47	54	22.....	41	62	41	
3.....	47	41	74	13.....	41	47	54	23.....	41	66	41	
4.....	47	41	70	14.....	41	54	54	24.....	41	70	41	
5.....	47	41	70	15.....	41	54	47	25.....	41	74	41	
6.....	44	41	62	16.....	41	54	47	26.....	41	77	41	
7.....	41	44	62	17.....	41	54	47	27.....	41	79	41	
8.....	41	47	62	18.....	41	58	47	28.....	41	79	41	
9.....	41	47	62	19.....	41	60	47	29.....	41	79	41	
10.....	41	47	58	20.....	41	62	47	30.....	41	84	41	
								31.....	41	-----	44	

NOTE.—Daily discharge determined from fairly well defined rating curves applicable as follows: Jan. 1 to June 17, 1907; June 18, 1911, to Dec. 31, 1910, and Sept. 1 to Dec. 31, 1911; Jan. 1 to Aug. 31, 1911. Discharge interpolated or estimated for days on which gage was not read. Discharge during August, September, and October, 1910, are for the station at the bridge. Water was being diverted between the cable and the bridge during these months. Discharge for 1912 withheld awaiting data in regard to the diversions.

Monthly discharge of West Fork of Carson River at Woodfords, Cal., for 1890-1892.

[Drainage area, 70 square miles.]

Month.	Discharge in second-feet.		Run-off.	
	Mean.	Per square mile.	Depth in inches on drainage area.	Total in acre-feet.
1890.				
April.....	284	4.06	4.53	16,900
May.....	657	9.53	10.99	40,400
June.....	614	8.77	9.78	36,500
July.....	380	5.43	6.26	23,400
August.....	135	1.94	2.24	8,300
September.....	75	1.07	1.19	4,400
The period.....				130,000
1890-91.				
October.....	67	.957	1.10	4,120
November.....	49	.700	.78	2,916
December.....	53	.757	.87	3,259
May.....	534	7.63	8.80	32,834
June.....	338	4.83	5.39	20,112
July.....	130	1.86	2.14	11,437
August.....	65	.929	1.07	3,997
September.....	41	.586	.65	2,440
1891-92.				
October.....	48	.686	.79	2,950
November.....	43	.614	.68	2,560
December.....	47	.671	.77	2,890
January.....	45	.643	.74	2,770
February.....	46	.657	.68	2,650
March.....	65	.929	1.07	4,000
The period.....				17,800

Monthly discharge of West Fork of Carson River at Woodfords, Cal., for 1900-1911.

[Drainage area, 70 square miles.]

Month.	Discharge in second-feet.				Run-off.		Accu- racy.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.	Total in acre-feet.	
1900-1901.							
October 18-31.....			44	0.63	0.33	1,222	
November.....	60	37	48	.69	.77	2,856	
December.....	71	37	53	.76	.87	3,259	
January.....	66	41	51	.73	.84	3,136	
February.....	256	41	111	1.59	1.65	6,165	
March.....	256	121	170	2.43	2.80	10,453	
April.....	412	121	234	3.34	3.73	13,924	
May.....	896	295	476	6.80	7.84	29,268	
June.....	396	187	289	4.13	4.61	17,197	
July.....	187	97	136	1.94	2.24	8,363	
August.....	166	50	77	1.10	1.27	4,735	
September.....	50	41	43	.61	.69	2,559	
The period.....						103,000	
1901-2.							
October.....	60	41	49	.70	.81	3,013	
November.....	60	50	56	.80	.89	3,332	
December.....	112	60	82	1.17	1.35	5,042	
January.....	195	75	107	1.53	1.76	6,579	
February.....	318	162	238	3.40	3.54	13,218	
March.....	393	57	138	1.97	2.27	8,485	
April.....	232	108	175	2.50	2.79	10,413	
May.....	448	178	287	4.10	4.73	17,647	
June.....	393	252	319	4.56	5.09	18,982	
July.....	295	57	121	1.73	1.99	7,440	
August.....	57	36	40	.57	.66	2,460	
September.....	36	30	32	.46	.51	1,904	
The year.....	448	30	137	1.96	26.39	98,500	

Monthly discharge of West Fork of Carson River at Woodfords, Cal., for 1900-1911—
Continued.

Month.	Discharge in second-feet.				Run-off.		Accuracy.	
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.	Total in acre-feet.		
1902-3.								
October.....	42	30	34	.49	.56	2,091		
November.....	57	36	46	.66	.74	2,737		
December.....	75	49	58	.83	.96	3,566		
January.....	93	36	49	.70	.81	3,013		
February.....	83	49	63	.90	.94	3,499		
March.....	114	42	64	.91	1.05	3,935		
April.....	340	83	174	2.49	2.78	10,354		
May.....	502	286	389	5.56	6.41	23,919		
June.....	448	202	353	5.04	5.62	21,005		
July.....	174	65	106	1.51	1.74	6,518		
August.....	65	30	42	.60	.69	2,582		
September.....	33	25	30	.43	.48	1,785		
The year.....	502	25	117	1.68	22.78	85,000		
1903-4.								
October.....	36	27	31	.44	.51	1,906		
November.....	98	30	63	.90	1.00	3,749		
December.....	78	45	66	.94	1.08	4,058		
January 1-30.....	63	47	53.8	.769	.86	3,201		
February 7-29.....	322	53	134	1.63	1.91	6,113		
March.....	208	128	169	2.41	2.78	10,390		
April.....	729	84	305	4.36	4.86	18,150		
May.....	1,085	176	651	9.30	10.72	40,030		
June.....	543	224	368	5.26	5.87	21,900		
July.....	200	105	158	2.26	2.61	9,715		
August.....	110	53	74.4	1.06	1.22	4,575		
September.....	191	44	67.1	.959	1.07	3,993		
1904-5.								
October.....	105	63	78.4	1.12	1.29	4,821		
November.....	75	59	64.6	.923	1.03	3,844		
December.....	121	47	64.5	.921	1.06	3,966		
January 8-31.....	113	81	91.0	1.30	1.16	4,332		
February.....	124	85	102	1.46	1.52	5,665		
March.....	177	94	125	1.79	2.06	7,686		
April.....	348	94	202	2.89	3.22	12,020		
May.....	370	194	271	3.87	4.46	16,660		
June.....	241	124	187	2.67	2.98	11,130		
July.....	124	40	75.8	1.08	1.24	4,661		
August.....	44	20	28.7	.410	.47	1,765		
September.....	33	20	23.7	.339	.38	1,410		
1905-6.								
October.....	33	26	31.3	.447	.52	1,925		
November.....	52	33	34.4	.491	.55	2,047		
December.....	70	40	56.5	.807	.93	3,474		
January.....	129	37	72.3	1.03	1.19	4,450		
February.....	84	44	65.3	.933	.97	3,630		
March.....	102	44	66.5	.950	1.10	4,090		
April.....	865	52	236	3.37	3.76	14,000		
May.....	1,570	460	925	13.20	15.22	56,900		
June.....	1,010	430	690	9.86	11.00	41,100		
July.....	570	129	324	4.63	5.34	19,900		
August.....	277	116	154	2.20	2.54	9,470		
September.....	103	31	50.4	.720	.80	3,000		
The year.....	1,570	26	225	3.22	43.92	164,000		
1906-7.								
October.....	65	44	52.8	.754	.87	3,250		
November.....	145	28	76.9	1.10	1.23	4,580		
December.....	90	22	58.4	.834	.96	3,590		
January.....	90	69	78.8	1.13	1.30	4,850		
February.....	182	84	139	1.99	2.07	7,720		
March.....	552	102	211	3.01	3.47	13,000		
April.....	910	172	502	7.17	8.00	29,900		
May.....	1,450	570	841	12.0	13.83	51,700		
June.....	1,020	519	664	9.49	10.59	39,500		
July.....	920	296	525	7.50	8.65	32,300		
August.....	347	117	223	3.19	3.68	13,700		
September.....	145	79	107	1.53	1.71	6,370		
The year.....	1,450	22	290	4.14	56.36	210,000		

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Monthly discharge of West Fork of Carson River at Woodfords, Cal., for 1900-1911—
Continued.

Month.	Discharge in second-feet.				Run-off.		
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.	Total in acre-feet.	Accu- racy.
1907-8.							
October.....	97	66	75.8	1.08	1.24	4,660	C.
November.....	79	47	65.8	.940	1.05	3,920	A.
December.....	107	47	76.8	1.10	1.27	4,720	B.
January.....	97	62	68.2	.974	1.12	4,190	C.
February.....	84	58	66.6	.951	1.03	3,830	C.
March.....	117	62	90.3	1.29	1.49	5,550	B.
April.....	296	130	191	2.73	3.05	11,400	A.
May.....	308	192	228	3.26	3.76	14,000	A.
June.....	210	102	165	2.36	2.63	9,820	A.
July.....	107	26	58.1	.830	.96	3,570	A.
August.....	643	36	75.5	1.08	1.24	4,640	A.
September.....	41	31	35.0	.500	.56	2,080	A.
The year.....	643	26	99.7	1.42	19.40	72,400	
1908-9.							
October.....	107	34	46.4	.663	.76	2,850	A.
November.....	47	26	35.3	.504	.56	2,100	A.
December.....	44	34	37.7	.539	.62	2,320	B.
January.....	347	34	169	2.41	2.78	10,400	C.
February.....	130	79	102	1.46	1.52	5,660	C.
March.....	112	79	92.8	1.33	1.53	5,710	B.
April.....	856	97	343	4.90	5.47	20,400	A.
May.....	1,230	347	628	8.97	10.34	38,600	B.
June.....	935	460	632	9.03	10.08	37,600	B.
July.....	296	97	164	2.34	2.70	10,100	A.
August.....	112	21	68.4	.977	1.13	4,210	A.
September.....	36	17	25.5	.364	.41	1,520	B.
The year.....	1,230	17	195	2.79	37.90	141,000	
1909-10.							
October.....	62	47	52.1	.744	.86	3,200	A.
November.....	580	41	139	1.99	2.22	8,270	A.
December.....	818	36	123	1.76	2.03	7,560	B.
January.....	97	31	44.3	.633	.73	2,720	B.
February.....	112	36	73.2	1.05	1.09	4,070	B.
March.....	375	54	156	2.23	2.57	9,590	B.
April.....	580	273	451	6.44	7.18	26,800	A.
May.....	549	230	376	5.37	6.19	23,100	A.
June.....	250	97	166	2.37	2.64	9,880	B.
July.....	160	31	69.6	.994	1.15	4,280	C.
August.....	36	20	27.1	.387	.45	1,670	C.
September.....	47	24	27.2	.389	.43	1,620	C.
The year.....	818	20	142	2.03	27.54	103,000	
1910-11.							
October.....	26	22	24.5	.350	.40	1,510	B.
November.....	55	21	28.5	.407	.45	1,700	B.
December.....	97	26	43.5	.621	.72	2,670	B.
January.....	72	20	31	.443	.51	1,910	B.
February.....	72	42	54	.771	.80	3,000	B.
March.....	148	36	57	.814	.94	3,500	B.
April.....	410	106	217	3.10	3.46	12,900	A.
May.....	1,300	346	590	8.43	9.72	36,300	A.
June.....	1,240	520	934	13.3	14.84	55,600	A.
July.....	560	172	362	5.17	5.96	22,300	A.
August.....	148	51	89	1.27	1.46	5,470	A.
September.....	50	41	46	.657	.73	2,740	A.
The year.....	1,300	20	206	2.94	39.99	150,000	
1911.							
October.....	47	41	42	.600	.69	2,580	B.
November.....	84	41	57	.814	.91	3,390	B.
December.....	79	41	53	.757	.87	3,260	B.

NOTE.—No correction made for possible effects of ice. Discharge interpolated or estimated for days on which the gage was not read. Monthly values for August, September, and October, 1910, are for the gage above the cable and are furnished by the Stone & Webster Engineering Corporation.

EAST FORK OF CARSON RIVER AT SILVER KING VALLEY, NEAR MARKLEEVILLE, CAL.

This station, which is located at the lower end of Silver King Valley, in the NE. $\frac{1}{4}$ sec. 2, T. 8 N., R. 21 E., in the Mono National Forest, 300 feet above the mouth of Bagley Creek and about 12 miles southeast of Markleeville, was established in November, 1910. The records for 1911 are fragmentary.

The gage is a vertical staff installed March 30, 1911; it is fastened to a tamarack tree on the left bank near the dam site. Previous to this date the gage was located a short distance above the present site. The original datum has not been maintained. The bed of the stream is composed of gravel and appears permanent.

Discharge measurements are made from car and cable 600 feet above the gage.

The relation between gage height and discharge during the winter months is affected by ice.

Discharge measurements made by the Stone & Webster Engineering Corporation have been furnished the United States Geological Survey for publication.

This station is maintained in cooperation with the United States Forest Service.

Discharge measurements of East Fork of Carson River at Silver King Valley, near Markleeville, Cal., in 1911-12.

Date.	Hydrographer.	Gage height.	Discharge.
1911.		<i>Feet.</i>	<i>Sec.-ft.</i>
Mar. 30	Stone & Webster Engineering Corporation	2.45	184
July 29	Peekema and Murphy.....	2.60	278
1912.			
June 22	H. J. Tompkins.....	2.45	212

Daily gage height, in feet, of East Fork of Carson River at Silver King Valley, near Markleeville, Cal., for 1911-12.

Day.	Apr.	May.	June.	July.	Aug.	Sept.	Day.	Apr.	May.	June.	July.	Aug.	Sept.
1911.							1911.						
1.							16.						
2.							17.						
3.							18.						
4.							19.						
5.							20.		3.0				1.05
6.							21.						
7.	2.5						22.	2.55					1.85
8.							23.			3.85			
9.							24.						
10.							25.						
11.							26.				3.8		
12.							27.		3.35				
13.		2.55					28.						
14.	2.4				2.1		29.	2.4		3.2	2.6		
15.							30.						
							31.						

Daily gage height, in feet, of East Fork of Carson River at Silver King Valley, near Markleeville, Cal., for 1911-12—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Mar.	June.	Day.	Oct.	Nov.	Dec.	Jan.	Mar.	June.
1911-12.							1911-12.						
1.					1.7		16.					1.6	
2.							17.						
3.				3.1			18.						
4.							19.						
5.							20.						
6.							21.		1.7				
7.							22.						2.45
8.							23.						
9.							24.						
10.							25.						
11.						2.85	26.						
12.							27.						
13.						2.85	28.						
14.			2.2				29.						
15.				2.05			30.	1.79					
							31.						

NOTE.—New gage installed Mar. 30, 1911.

EAST FORK OF CARSON RIVER NEAR MARKLEEVILLE, CAL.

This station, which is located at Hangman's Bridge, 2 miles east of Markleeville, in the NE. $\frac{1}{4}$ sec. 27, T. 10 N., R. 20 E., was established November 13, 1910.

Indian Creek enters 100 feet above and Markleeville Creek $1\frac{1}{4}$ miles below the station. All water diverted above Hangman's Bridge is used for power development. The discharge, as measured at this station, represents the natural run-off, except that the low-water flow during the irrigation season is augmented by a small amount of water stored on Silver Creek. Practically the entire low-water flow of the East and West forks of the Carson is used for the irrigation of Carson Valley.

The gage is a vertical staff bolted to the solid rock on the right bank 75 feet below the bridge.

At low and medium stages discharge measurements are made by wading; high-stage measurements are made from a car and cable about 3 miles above the gage.

The channel is composed of gravel and small boulders and appears permanent. Both banks are high and will not overflow.

This station is maintained in cooperation with the United States Forest Service.

Discharge measurements of East Fork of Carson River near Markleeville, Cal., in 1910-1912.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1910.		<i>Feet.</i>	<i>Sec.feet.</i>	1911.		<i>Feet.</i>	<i>Sec.feet.</i>
Oct. 11	H. D. McGlashan.....	2.59	59	July 28	G. T. Peekema	4.85	517
				Nov. 7	J. E. Stewart.....	2.87	78
1911.				1912.			
Apr. 11	J. E. Stewart.....	4.28	423				
June 12	.....do.....	7.50	2,020	June 21	H. J. Tompkins.....	4.32	419
23	.....do.....	6.50	1,640				

Daily gage height, in feet, of East Fork of Carson River near Markleeville, Cal., for 1910-1912.

Day.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.											
1		2.55	2.30	4.30	3.00	4.9	5.2	5.35			
2		2.58	2.69	3.85			5.1	6.5			3.25
3		3.18	2.75	3.87	2.90	5.25	5.4		6.15		
4		2.60	2.76	3.55	2.90	5.0	5.55				
5		2.50	2.78			5.1	6.0	6.5		4.1	3.2
6			2.70	2.72	3.35	2.90	5.3				
7		2.72	2.81	3.12		4.7	5.2		6.15		
8		2.74	2.80	3.20		4.6	5.2				
9		2.75	2.70	3.10	2.85	4.7	5.45		6.0		3.18
10		2.86	2.72	3.30	2.90	4.45	5.4	6.78			
11			2.90	2.56	3.15	2.90	5.55		5.98		
12		2.80	2.40			4.15	5.6	7.50		3.7	
13	2.60	2.70	2.38	3.00	2.90	4.05	5.55		5.98		
14	2.62	2.51	2.70	2.85	2.90	4.0	5.5				
15	2.60	2.50		3.00	3.00	3.95	5.2	7.1		3.5	
16	2.58	2.45		2.90	3.08	4.0	5.0		5.9		
17	2.58	2.51	2.88	2.80	3.20	4.1	4.95	7.7	6.6	3.58	
18	2.61	2.47	3.02		3.50	4.28	4.95	7.05	6.5		
19	2.30	2.60	2.84	3.00		4.7	5.3		5.6		
20	2.42	2.82		3.00	3.55	4.53	5.5	7.02	5.6		3.0
21	2.60	2.51	3.30	2.70	3.53	4.55	5.95			3.45	
22	2.60	2.56		2.85	3.75	5.0	6.0		5.4		3.05
23	2.61	2.60	2.80	3.00	3.95	5.01	6.42	6.4			
24	2.67	2.64	3.38	2.95	4.05	5.4	6.55		5.1		
25	2.62		3.08	2.98	4.08	5.6	6.0				
26	2.40	2.47	2.90	2.80	4.20	5.95	5.9	6.0	4.6		
27	2.55	2.60	2.90		4.00	5.55	5.8	6.2		3.3	
28	2.53	2.40		3.05	4.15	5.2			4.85	3.35	
29	2.55	2.40	2.90		4.35	5.0	5.9				
30	2.50	2.30	5.50			5.0		6.35	4.5		3.05
31		2.30	5.30		4.80		5.55			3.3	

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	June.
1911-12.								
1					2.75	2.8	2.91	
2				3.8	2.7		3.0	
3				3.7	2.75		3.0	
4	3.1	2.8		3.6		2.8		
5					2.8			
6				3.6	2.8		3.0	
7	3.17	2.87			2.8	2.8		
8				3.3	2.85			
9				3.5	2.8			
10		2.8		3.6	2.8			
11	3.2	2.4		3.3	2.8	2.8	2.9	
12				3.3	2.78		3.0	
13				3.25	2.8	2.8		4.9
14			2.4		2.8			
15				3.15	2.7	2.7		
16				3.15	2.75	2.8		
17				2.9	2.8			4.5
18	2.9	2.8		2.9		2.8		
19				2.9	2.82	2.8		4.7
20				2.84		2.82		
21	2.9	2.85			2.82	2.75		
22				2.8		2.6		3.9
23			3.65	2.8				
24				2.8				
25		2.75		2.75				4.0
26				2.8		2.9		
27				2.75	2.85	2.85		
28						2.85		
29				2.95	2.75			
30	2.9			2.7				
31			3.75	2.75				

Daily discharge, in second-feet, of East Fork of Carson River near Markleeville, Cal., for 1910-11.

Day.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.											
1.....		54	32	429	120	641	762	829	1,430	376	136
2.....		58	72	302	112	712	720	1,420	1,380	358	132
3.....		153	80	306	103	784	852	1,420	1,340	341	130
4.....		60	81	231	103	680	924	1,420	1,320	324	127
5.....		48	84	210	103	720	1,140	1,420	1,290	304	124
6.....		73	76	188	103	584	806	1,480	1,260	292	123
7.....		76	89	142	100	566	762	1,400	1,240	278	122
8.....		79	87	157	98	530	762	1,460	1,220	264	121
9.....		80	73	138	95	566	876	1,530	1,190	252	121
10.....		97	76	177	103	478	852	1,590	1,180	240	118
11.....		103	55	148	103	429	924	1,810	1,160	227	116
12.....		87	38	134	103	383	948	2,030	1,150	214	114
13.....	60	73	37	120	103	354	924	1,800	1,140	201	112
14.....	63	49	73	95	103	340	900	1,680	1,120	288	109
15.....	60	48	82	120	120	327	762	1,780	1,090	175	106
16.....	58	43	91	103	134	340	680	1,960	1,070	182	104
17.....	58	49	100	87	157	368	660	2,150	1,440	190	102
18.....	61	45	124	104	220	423	660	1,790	1,370	184	100
19.....	32	60	93	120	226	566	806	1,820	900	178	98
20.....	40	90	135	120	231	506	900	1,840	890	172	95
21.....	60	49	177	73	227	512	1,120	1,750	838	166	98
22.....	60	55	132	95	277	680	1,140	1,670	785	162	102
23.....	61	60	87	120	327	684	1,380	1,580	712	158	102
24.....	69	65	194	112	354	852	1,450	1,490	640	153	102
25.....	63	55	134	117	362	948	1,140	1,400	545	149	102
26.....	38	45	103	87	398	1,120	1,100	1,310	450	144	102
27.....	54	60	103	108	340	924	1,040	1,430	485	140	102
28.....	52	38	103	129	383	762	1,070	1,480	520	148	102
29.....	54	38	103	.....	445	680	1,100	1,540	465	145	102
30.....	48	32	900	.....	524	680	1,010	1,480	410	142	102
31.....	.....	32	806	.....	603	.....	924	.....	393	140	.....

Day.	Oct.	Nov.	Day.	Oct.	Nov.	Day.	Oct.	Nov.
1911.								
1.....	104	70	11.....	124	26	21.....	71	.....
2.....	106	70	12.....	116	.....	22.....	71	.....
3.....	108	68	13.....	109	.....	23.....	71	.....
4.....	109	68	14.....	102	.....	24.....	71	.....
5.....	112	72	15.....	94	.....	25.....	71	.....
6.....	116	75	16.....	87	.....	26.....	71	.....
7.....	120	77	17.....	79	.....	27.....	71	.....
8.....	121	75	18.....	71	.....	28.....	71	.....
9.....	122	72	19.....	71	.....	29.....	71	.....
10.....	123	68	20.....	71	.....	30.....	71	.....
						31.....	71	.....

NOTE.—Daily discharge determined from rating curves applicable as follows: Nov. 13, 1910, to June 16, 1911, fairly well defined; June 17 to July 28, 1911, indirect method for shifting channels used. July 29 to Dec. 31, 1911, fairly well defined. Discharge estimated or interpolated for days on which gage height was not recorded. Discharge estimated at 26 second-feet Nov. 12 to Dec. 31, 1911, on account of ice. Ice at the station Jan. 2-20, 1912. Discharge for 1912 withheld awaiting development of a rating curve.

Monthly discharge of East Fork of Carson River near Markleeville, Cal., for 1910-11.

Month.	Discharge in second-feet.			Run-off (in acre- feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1910-11.					
November 13-30	69	32	55.1	1,970	B.
December	153	32	63.0	3,870	B.
January	900	32	143	8,790	B.
February	429	73	153	8,500	B.
March	603	95	219	13,500	B.
April	1,120	327	605	36,000	A.
May	1,450	660	939	57,700	A.
June	2,150	829	1,590	94,600	B.
July	1,440	393	981	60,300	B.
August	376	140	216	13,300	A.
September	136	95	111	6,600	A.
The period				305,000	
1911.					
October	124	71	91.8	5,640	B.
November	77		41.2	2,450	C.
December			26.0	1,600	C.

EAST FORK OF CARSON RIVER NEAR GARDNERVILLE, NEV.

This station, which was located at a place called Horseshoe Bend, in the NW. $\frac{1}{4}$ sec. 13, T. 11 N., R. 20 E., about 9 miles south of Gardnerville, Nev., was established October 17, 1900, at Rodenbah's ranch, about 5 miles southeast of Gardnerville, removed to Horseshoe Bend (3 miles above the old station) on March 27, 1908, and was abandoned December 26, 1910. It was below all tributaries and above all diversion ditches.

The relation between gage height and discharge was not materially affected by ice.

The section is permanent, conditions are favorable, and results are good.

Discharge measurements made by the Stone & Webster Engineering Corporation have been furnished to the United States Geological Survey for publication.

Several gages at different datums were used.

Discharge measurements were made from a cable and car.

This station is maintained in cooperation with the United States Reclamation Service.

Discharge measurements of East Fork of Carson River near Gardnerville, Nev., in 1901-1910.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
		<i>Feet.</i>	<i>Sec.-ft.</i>			<i>Feet.</i>	<i>Sec.-ft.</i>
1901.				1905.			
Mar. 10	L. H. Taylor.....	4.00	459	May 11	J. L. Brambila.....	4.15	444
Apr. 30	.....do.....	4.55	^a 864	16	.....do.....	5.00	968
June 4	.....do.....	5.85	1,868	25	.....do.....	5.22	1,205
9	.....do.....	5.40	1,356	30	.....do.....	4.85	877
Sept. 29	.....do.....	3.70	^a 127	June 7	.....do.....	4.90	929
Nov. 7	.....do.....	3.70	^a 117	13	.....do.....	5.22	1,186
Dec. 19	.....do.....	3.40	156	21	.....do.....	4.85	879
1902.				28	.....do.....	4.25	482
Apr. 21	D. W. Hays.....	4.50	514	July 9	.....do.....	4.00	304
May 13	C. V. Taylor.....	5.12	1,138	24	.....do.....	3.90	161
July 2	D. W. Hays.....	4.25	486	30	.....do.....	3.90	105
19	.....do.....	3.80	192	Aug. 7	W. A. Wolf.....	3.65	90
29	.....do.....	3.70	139	9	.....do.....	3.93	111
Aug. 5	C. V. Taylor.....	3.50	100	31	.....do.....	3.20	60
Sept. 9	L. L. Richards.....	3.00	60	Nov. 2	John Smith.....	2.10	71
Oct. 3	E. C. Murphy.....	3.20	66	4	.....do.....	2.10	68
1903.				1906.			
Apr. 8	D. W. Hays.....	4.25	386	May 10	M. B. Kennedy.....	^c 5.60	2,820
22	A. H. Schadler.....	4.45	484	17	.....do.....	^c 4.75	1,610
May 2	.....do.....	5.12	1,024	June 6	.....do.....	^c 4.60	1,470
13	.....do.....	6.15	1,999	15	.....do.....	^d 6.45	2,400
June 29	.....do.....	5.00	925	July 18	.....do.....	^d 5.65	1,650
July 15	.....do.....	4.05	380	Aug. 17	.....do.....	^d 4.05	415
Aug. 4	W. B. Harrington.....	3.55	146	Sept. 6	C. L. Smith.....	^d 3.90	182
10	.....do.....	3.40	120	1908.			
19	.....do.....	3.60	80	Mar. 27	E. A. Porter.....	2.90	259
Sept. 30	W. A. Wolf.....	3.20	82	Apr. 16	.....do.....	3.50	517
1904.				May 15	.....do.....	3.28	410
Mar. 12	L. A. Woolley.....	4.08	453	June 21	.....do.....	3.50	517
May 3	R. A. Craig.....	4.22	546	July 24	.....do.....	2.53	130
12	.....do.....	6.15	2,071	Aug. 4	M. B. Kennedy.....	2.50	139
July 4	J. T. Shaw.....	5.01	1,023	1909.			
14	.....do.....	4.50	613	Jan. 25	E. A. Porter.....	3.25	402
19	.....do.....	4.59	697	June 15	L. J. Towne.....	5.25	1,760
28	.....do.....	4.30	477	July 7	.....do.....	3.95	728
Aug. 28	.....do.....	4.46	495	Aug. 9	.....do.....	2.75	190
11 ^b	.....do.....	4.03	279	1910.			
16 ^b	.....do.....	4.04	252	Mar. 29	F. C. Shafer.....	3.20	385
25 ^b	.....do.....	4.16	207	Apr. 26	Stone & Webster Engi- neering Corporation.	4.93	1,460
Sept. 7 ^b	.....do.....	3.50	119	June 2	.....do.....	3.92	850
22 ^b	.....do.....	4.05	147	21	.....do.....	3.31	504
Oct. 15	.....do.....	4.20	366	July 19	.....do.....	3.10	370
1905.				26	.....do.....	2.71	184
Apr. 2	W. A. Wolf.....	3.80	206	Sept. 28	.....do.....	2.50	89
21	.....do.....	4.15	389	Dec. 12	D. S. Stuver.....	2.68	154
May 2	J. L. Brambila.....	4.65	767				

^a Approximate.

^b Temporary dam in stream below station affected measurements.

^c At new gage established Oct. 8, 1905.

^d At old gage used prior to Oct. 8, 1905.

Daily gage height, in feet, of East Fork of Carson River near Gardnerville, Nev., for 1900-1906.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1900-1901.												
1.....		2.4	2.4	2.4	2.0	4.7	3.8	4.6	5.7	5.5	3.7	3.4
2.....		2.4	2.4	2.4	2.1	4.7	3.7	4.6	5.8	5.4	3.7	3.5
3.....		2.4	2.4	2.4	2.1	4.7	3.7	4.7	6.1	5.3	4.1	3.5
4.....		2.3	2.4	2.5	2.1	4.6	3.7	4.7	5.9	5.3	4.1	3.5
5.....		2.3	2.4	2.8	2.1	4.6	3.6	4.7	5.8	5.1	4.2	3.5
6.....		2.3	2.4	3.0	2.0	4.5	3.6	4.9	5.8	5.0	4.3	3.6
7.....		2.3	2.3	2.9	2.0	4.4	3.7	5.1	5.7	4.9	4.4	3.8
8.....		2.6	2.3	2.8	2.0	4.4	3.8	5.4	5.6	4.8	4.3	3.8
9.....		2.5	2.3	2.6	1.9	4.2	3.8	5.7	5.6	4.7	4.2	3.8
10.....		2.5	2.3	2.5	1.9	4.0	3.8	5.9	5.5	4.6	4.1	3.9

Daily gage height, in feet, of East Fork of Carson River near Gardnerville, Nev., for 1900-1906—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1900-1901.												
11.....		2.4	2.3	2.5	1.9	4.0	3.9	6.7	5.4	4.5	3.9	3.9
12.....		2.4	2.3	2.5	2.0	3.9	4.1	7.0	5.2	4.4	3.9	3.8
13.....		2.4	2.4	2.5	2.0	3.7	4.2	7.1	5.0	4.3	3.8	3.8
14.....		2.4	2.4	2.4	2.0	3.6	4.3	7.2	5.0	4.2	3.7	3.7
15.....		2.4	2.4	2.4	2.6	3.6	4.4	7.3	5.1	4.1	3.5	3.7
16.....		2.3	2.4	2.3	5.5	3.8	4.4	7.3	5.1	4.1	3.5	3.7
17.....	2.3	2.4	2.4	2.3	6.4	4.0	4.4	7.4	5.3	4.0	3.6	3.7
18.....	2.3	2.4	2.4	2.3	6.0	4.0	4.4	7.2	5.3	4.1	4.5	3.6
19.....	2.3	2.5	2.4	2.4	6.0	3.9	4.6	7.1	5.4	4.1	4.3	3.5
20.....	2.5	2.5	2.4	1.9	5.7	3.9	4.7	5.9	5.5	4.2	4.3	3.5
21.....	2.6	2.9	2.4	2.0	5.5	3.8	4.6	5.8	5.5	4.2	4.1	3.4
22.....	2.6	2.9	2.4	2.0	5.0	3.9	4.6	5.7	5.4	4.2	3.9	3.4
23.....	2.6	2.7	2.4	2.0	5.0	3.8	4.5	5.6	5.3	4.6	3.8	3.4
24.....	2.5	2.7	2.4	2.0	5.0	3.8	4.5	5.5	5.3	4.3	3.7	3.4
25.....	2.5	2.7	2.4	2.0	4.9	3.8	4.5	5.3	5.2	4.1	3.5	3.8
26.....	2.5	2.6	2.4	2.1	4.9	3.8	4.5	5.3	5.3	4.0	3.5	3.8
27.....	2.4	2.4	2.4	2.1	4.8	3.7	4.5	5.3	5.4	4.0	3.4	3.7
28.....	2.4	2.4	2.4	2.1	4.7	3.6	4.5	5.4	5.5	3.9	3.4	3.7
29.....	2.3	2.4	2.4	2.1	.....	3.6	4.5	5.4	5.6	3.9	3.4	3.7
30.....	2.4	2.4	2.4	2.0	.....	3.7	4.5	5.5	5.7	3.8	3.4	3.7
31.....	2.4	.....	2.4	1.9	.....	3.8	.....	5.6	.....	3.7	3.6	.....
1901-2.												
1.....	3.9	4.0	3.8	3.3	3.1	3.1	3.8	4.4	4.9	3.8	3.5	3.35
2.....	3.9	4.0	3.8	3.3	3.1	3.2	3.8	4.4	5.0	4.0	3.6	3.3
3.....	3.8	4.0	3.8	3.3	3.2	3.1	3.8	4.5	5.2	3.9	3.4	3.1
4.....	3.7	4.1	5.1	3.3	3.2	3.2	3.8	4.5	5.3	3.9	3.25	3.1
5.....	3.7	4.1	4.7	3.3	3.2	3.1	3.9	4.6	5.4	3.9	3.4	3.05
6.....	3.7	4.1	4.3	3.4	3.2	3.1	3.9	4.8	5.5	4.0	3.5	3.0
7.....	3.6	3.9	4.1	3.3	3.1	3.2	4.9	5.0	5.7	3.8	3.4	3.1
8.....	3.6	3.7	3.8	3.4	3.2	3.2	4.8	5.2	6.0	3.7	3.6	3.15
9.....	3.5	3.7	3.8	3.4	3.4	3.4	4.7	5.5	5.4	3.8	3.7	3.05
10.....	3.5	4.0	3.8	3.3	3.3	3.4	4.4	5.8	5.3	3.9	3.95	3.2
11.....	3.5	3.9	3.7	3.6	3.2	3.4	4.3	5.2	5.3	3.8	3.75	3.1
12.....	3.5	3.9	3.7	3.5	3.3	3.4	4.4	5.4	5.4	3.9	3.8	3.05
13.....	3.5	3.8	3.7	3.5	3.3	3.4	4.4	5.5	5.5	3.8	3.9	3.0
14.....	3.5	3.7	3.7	3.5	3.3	3.4	4.5	5.5	5.4	3.8	3.85	3.2
15.....	3.5	3.7	3.7	3.4	3.5	3.5	4.6	5.4	5.5	3.7	3.7	3.15
16.....	3.5	3.7	3.7	3.5	3.7	3.6	4.6	5.4	5.0	3.8	3.7	3.15
17.....	3.5	3.6	3.6	3.5	3.6	3.6	4.8	5.5	4.6	3.9	3.75	3.2
18.....	3.5	3.6	3.4	3.5	3.5	3.6	4.9	4.9	4.7	3.8	3.65	3.0
19.....	3.5	3.7	3.4	3.4	3.5	3.6	4.7	5.0	4.8	3.8	3.7	2.9
20.....	3.5	3.7	3.4	3.5	3.5	3.6	4.7	5.2	4.5	3.8	3.7	2.9
21.....	3.5	3.7	3.4	3.4	3.4	3.7	4.5	5.2	4.6	3.7	3.8	2.85
22.....	3.5	3.7	3.4	3.5	3.4	3.7	4.3	5.3	4.7	3.7	3.8	2.8
23.....	3.5	3.7	3.3	3.5	3.3	3.7	4.5	5.6	4.3	3.8	3.65	2.8
24.....	3.5	3.7	3.4	3.4	3.3	3.6	4.3	5.3	4.2	3.7	3.65	2.75
25.....	3.6	3.6	3.4	3.1	3.3	3.5	4.6	5.5	4.2	3.6	3.5	2.8
26.....	3.6	3.6	3.3	2.9	3.3	3.5	4.5	5.4	4.1	3.7	3.5	2.85
27.....	3.7	3.7	3.4	3.0	3.2	3.6	4.5	5.3	4.0	3.6	3.45	2.9
28.....	3.7	3.7	3.4	3.1	3.1	3.6	4.3	6.0	4.0	3.5	3.5	3.05
29.....	3.9	4.1	3.3	.....	.....	3.7	4.4	5.5	3.9	3.7	3.45	3.0
30.....	4.0	3.9	3.4	3.2	.....	3.8	4.3	5.4	3.8	3.6	3.45	3.0
31.....	4.0	.....	3.3	3.2	.....	3.8	.....	5.2	.....	3.6	3.4	.....
1902-3.												
1.....	3.05	2.95	3.40	2.50	2.65	2.70	4.35	5.80	6.65	4.90	3.45	3.52
2.....	2.95	3.00	3.35	2.45	2.60	2.75	4.40	5.90	6.75	4.75	3.55	3.52
3.....	3.15	2.90	3.30	2.50	2.50	2.80	4.50	5.90	6.50	4.75	3.65	3.42
4.....	3.10	2.90	3.40	2.55	2.50	2.75	4.55	5.85	5.85	4.65	3.55	3.42
5.....	3.05	3.00	3.30	2.55	2.55	2.75	4.65	5.80	6.10	4.55	3.45	3.38
6.....	2.95	3.00	3.30	2.60	2.50	2.80	4.75	5.85	6.45	4.50	3.50	3.25
7.....	3.10	2.90	3.35	2.60	2.60	2.80	4.85	5.95	6.45	4.45	3.45	3.15
8.....	3.05	2.90	3.30	2.60	2.50	2.85	4.85	6.00	6.35	4.40	3.45	3.05
9.....	3.00	3.55	3.30	2.50	2.50	2.90	4.95	6.10	6.25	4.45	3.45	3.00
10.....	3.10	4.00	3.35	2.55	2.40	2.90	4.95	6.35	6.15	4.45	3.40	3.00
11.....	3.10	3.75	3.25	2.40	2.40	2.95	4.85	6.45	6.25	4.35	3.35	3.00
12.....	3.00	3.70	3.30	2.45	2.20	2.95	4.70	6.70	6.15	4.30	3.45	3.00
13.....	3.10	3.55	3.25	2.45	2.20	2.95	4.70	6.95	6.05	4.28	3.48	3.05
14.....	2.95	3.50	2.90	2.40	2.25	3.00	4.75	7.05	5.70	4.05	3.35	3.05
15.....	2.90	3.45	2.90	2.40	2.35	3.15	4.75	6.95	5.35	4.00	3.30	3.05

Daily gage height, in feet, of East Fork of Carson River, near Gardnerville, Nev., for 1900-1906—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1902-3.												
16.....	2.95	3.40	2.80	2.40	2.40	3.20	4.70	6.85	5.20	3.90	3.35	3.00
17.....	3.00	3.25	2.80	2.40	2.40	3.35	4.65	6.75	5.20	3.90	3.60	3.00
18.....	2.90	3.35	2.80	2.40	2.35	3.40	4.75	6.35	5.25	3.85	3.65	3.00
19.....	2.90	3.40	2.85	2.40	2.35	3.45	4.75	6.10	5.35	3.90	3.45	3.00
20.....	2.95	3.35	2.80	2.40	2.40	3.5	4.85	5.85	5.45	3.80	3.35	2.95
21.....	3.00	3.30	2.75	2.30	2.30	3.55	4.95	5.70	5.75	3.80	3.60	2.90
22.....	3.20	3.30	2.70	2.40	2.40	3.60	5.05	5.25	5.95	3.90	3.85	2.90
23.....	3.05	3.40	2.65	2.40	2.40	3.70	5.15	4.90	6.00	3.80	3.65	2.90
24.....	3.05	3.35	2.60	2.30	2.45	3.80	5.25	4.50	5.90	3.80	3.65	2.85
25.....	2.95	3.40	2.60	2.45	2.45	3.75	5.35	4.60	5.75	3.70	3.65	2.85
26.....	2.90	3.40	2.50	2.45	2.50	3.65	5.45	4.65	5.65	3.60	3.65	2.85
27.....	2.90	3.25	2.60	2.50	2.55	3.85	5.55	4.80	5.50	3.55	3.72	2.85
28.....	2.85	3.35	2.50	2.55	2.60	4.05	5.60	5.20	5.45	3.50	3.68	2.90
29.....	2.90	3.35	2.50	2.60	.....	4.15	5.65	5.80	5.15	3.45	3.62	2.80
30.....	3.00	3.40	2.50	2.60	.....	4.25	5.75	6.20	4.95	3.50	3.62	2.80
31.....	2.95	.....	2.45	2.50	.....	4.30	.....	6.50	.....	3.42	3.60	.....
1903-4.												
1.....	2.80	3.20	3.40	2.40	2.80	4.50	4.22	4.28	6.20	4.28	4.34	3.10
2.....	2.80	3.20	3.40	2.40	2.90	4.65	4.20	4.24	6.24	4.18	4.74	3.00
3.....	2.80	3.20	3.35	2.40	2.98	4.75	4.25	4.24	6.35	4.32	4.74	2.98
4.....	2.90	3.25	3.35	2.45	3.00	4.75	4.35	4.28	6.42	5.04	4.65	3.30
5.....	3.05	3.35	3.25	2.50	2.90	4.40	4.35	4.62	6.48	4.97	5.09	3.50
6.....	3.10	3.30	3.20	2.50	2.90	4.15	4.42	5.10	5.42	4.88	4.88	3.60
7.....	3.20	3.20	3.10	2.50	2.90	4.20	4.48	5.30	5.52	4.94	4.60	3.75
8.....	3.20	3.20	3.10	2.48	3.00	4.35	4.52	5.48	5.52	4.97	4.44	3.85
9.....	3.25	3.30	3.05	2.48	3.15	4.70	4.56	5.62	5.48	4.70	4.60	3.94
10.....	3.35	3.35	3.00	2.80	3.25	4.60	4.58	5.85	5.25	4.65	4.55	3.98
11.....	3.40	3.45	2.62	2.80	3.35	4.62	5.08	6.10	4.95	4.72	4.35	4.00
12.....	3.40	3.85	3.00	2.78	3.45	4.62	5.40	6.38	4.90	4.62	4.00	4.00
13.....	3.35	4.50	3.00	2.75	3.80	4.50	5.65	6.60	4.42	4.58	3.85	4.12
14.....	3.30	4.75	2.90	2.80	3.85	4.05	5.62	6.95	3.98	4.55	3.88	4.25
15.....	3.32	4.50	2.90	2.78	3.85	4.12	5.48	6.75	3.58	4.48	3.94	4.60
16.....	3.35	4.35	2.85	2.75	5.80	4.18	5.38	6.55	3.38	4.42	3.97	4.60
17.....	3.35	4.30	2.85	2.70	5.20	4.40	5.32	6.45	3.29	4.48	4.22	4.58
18.....	3.38	4.15	2.85	2.68	4.82	4.75	5.25	6.25	3.08	4.52	4.21	4.63
19.....	3.40	4.05	2.80	2.65	4.68	5.00	5.20	6.18	4.50	4.58	4.24	4.62
20.....	3.40	3.95	2.65	2.62	4.55	4.95	5.12	5.90	5.05	4.68	4.19	4.62
21.....	3.40	3.90	2.60	2.62	4.85	4.80	4.90	6.90	5.58	4.75	4.10	4.61
22.....	3.40	3.90	2.50	2.60	4.95	4.68	4.65	7.05	5.65	4.85	4.00	4.60
23.....	3.40	3.85	2.50	2.60	5.40	4.38	4.45	7.12	5.38	4.88	3.90	4.62
24.....	3.40	3.80	2.45	2.70	7.30	4.32	4.50	7.02	5.05	4.65	3.92	4.64
25.....	3.38	3.80	2.45	2.65	4.95	4.10	4.52	6.70	4.40	4.48	3.83	4.60
26.....	3.35	3.80	2.40	2.65	4.80	4.05	4.48	6.40	4.18	4.40	3.78	4.51
27.....	3.35	3.75	2.35	2.68	5.05	4.22	4.42	6.36	4.22	4.31	3.52	4.42
28.....	3.20	3.75	2.35	2.68	4.30	4.68	4.37	6.50	4.29	4.28	3.41	4.34
29.....	3.20	3.55	2.40	2.70	4.40	4.80	4.45	6.35	4.28	4.22	3.37	4.25
30.....	3.20	3.50	2.40	2.70	.....	4.50	4.38	6.32	4.28	4.20	3.34	4.30
31.....	3.20	.....	2.40	2.85	.....	4.28	.....	6.28	.....	4.14	3.31	.....
1904-5.												
1.....	4.35	3.65	2.55	2.30	3.58	5.19	3.85	4.50	4.71	4.37	3.79	3.40
2.....	4.45	3.60	2.55	2.32	3.58	5.19	4.30	5.10	4.68	4.25	3.80	3.39
3.....	4.28	3.60	2.55	2.34	3.58	5.20	4.25	5.50	4.30	4.20	3.80	3.39
4.....	4.26	3.60	2.00	2.25	3.60	5.20	4.10	5.20	4.35	4.20	3.82	3.38
5.....	4.22	3.58	2.00	2.24	3.58	4.88	4.15	4.95	4.45	4.19	3.78	3.37
6.....	4.16	3.52	2.00	2.24	3.54	4.80	4.20	4.60	4.56	4.15	3.78	3.37
7.....	4.07	3.35	2.00	2.24	3.54	4.78	4.12	4.15	4.66	4.12	3.72	3.37
8.....	4.00	3.30	2.00	2.65	3.55	4.68	4.12	4.00	4.69	4.12	3.66	3.36
9.....	4.15	3.27	2.00	2.80	3.56	4.62	4.10	3.90	4.75	4.11	3.66	3.36
10.....	4.23	3.22	2.00	2.88	3.58	4.60	3.90	3.80	4.75	4.10	3.95	3.33
11.....	4.35	3.12	2.10	2.98	3.58	4.60	3.85	4.08	4.80	4.05	4.23	3.32
12.....	4.71	3.10	2.10	3.20	4.00	4.45	3.85	3.95	4.90	4.00	.....	3.22
13.....	4.58	3.05	2.05	3.38	4.00	4.50	3.90	4.11	4.95	3.88	4.18	3.21
14.....	4.46	3.05	2.12	3.60	4.12	4.28	3.90	4.65	4.88	3.83	3.65	3.20
15.....	4.37	2.95	2.12	3.65	4.12	4.21	3.92	5.40	4.88	3.78	3.78	3.19
16.....	4.32	2.95	2.10	3.60	4.13	4.19	3.91	6.00	4.85	3.74	3.78	3.19
17.....	4.31	2.85	2.10	3.60	4.14	4.18	3.90	5.75	4.85	3.90	3.78	3.19
18.....	4.30	2.80	2.10	3.62	4.14	4.14	3.89	5.85	4.90	3.85	3.78	3.19
19.....	4.28	2.80	2.00	3.60	4.14	4.05	3.89	5.40	4.93	3.74	3.68	3.19
20.....	4.28	2.78	2.00	3.62	4.59	4.00	3.90	5.49	4.92	3.70	3.64	3.19

NOTE.—Beginning Aug. 1, 1904, the gage heights were affected by temporary dam below the station.

Daily gage height, in feet, of East Fork of Carson River, near Gardnerville, Nev., for 1900-1906—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
19045.												
21.....	4.27	2.75	2.00	3.63	5.00	3.90	3.92	5.42	4.83	3.71	3.62	3.18
22.....	4.26	2.75	2.00	3.64	5.10	3.95	3.95	5.25	4.80	3.70	3.59	3.18
23.....	4.24	2.72	2.00	3.66	5.14	3.95	3.98	5.15	4.68	3.72	3.59	3.17
24.....	4.20	2.70	2.05	3.65	5.16	3.92	4.00	5.18	4.60	3.72	3.52	3.16
25.....	4.10	2.70	2.10	3.64	5.19	3.95	4.18	5.13	4.53	3.76	3.50	3.15
26.....	3.95	2.70	2.20	3.60	5.12	3.95	4.20	4.97	4.53	3.79	3.50	3.16
27.....	3.85	2.70	2.25	3.60	5.12	3.85	4.21	4.85	4.49	3.84	3.50	3.20
28.....	3.75	2.80	2.30	3.60	5.12	3.80	4.22	4.83	4.41	3.85	3.47	3.30
29.....	3.68	2.75	2.28	3.60	.....	3.80	4.28	4.85	4.39	3.85	3.41	3.40
30.....	3.62	2.65	2.29	3.60	.....	3.80	4.30	4.85	4.38	3.86	3.40	3.33
31.....	3.65	.....	2.34	3.60	.....	3.85	.....	4.83	.....	3.86	3.40	.....
1905-6.												
1.....	3.33	3.30	3.10	1.98	2.75	2.72	3.10	4.20	4.60	5.40	4.00	2.75
2.....	3.33	3.25	3.10	1.98	2.72	2.72	3.10	4.40	4.70	5.80	3.90	2.75
3.....	3.32	3.20	3.10	1.98	2.72	2.71	3.20	4.70	4.70	5.50	3.80	2.75
4.....	3.33	3.20	3.05	1.98	2.72	2.71	3.25	5.00	4.70	5.30	3.70	2.75
5.....	3.40	3.30	3.04	1.98	2.72	2.70	3.28	5.10	4.75	5.20	3.65	2.70
6.....	3.40	3.25	3.04	1.98	2.72	2.70	3.30	5.90	4.80	5.00	3.60	2.70
7.....	3.40	3.20	3.04	1.99	2.72	2.70	3.30	5.80	4.80	5.00	3.50	2.70
8.....	3.30	3.20	3.04	2.00	2.72	2.70	3.30	5.80	4.80	4.80	3.50	2.70
9.....	3.30	3.20	3.03	2.00	2.72	2.71	3.40	5.80	4.90	4.60	3.45	2.60
10.....	3.30	3.20	3.04	2.05	2.72	2.73	3.45	6.00	5.00	4.60	3.45	2.60
11.....	3.32	3.20	3.05	2.05	2.74	2.73	3.46	6.00	5.00	4.50	3.44	2.60
12.....	3.30	3.20	3.05	2.05	2.74	2.74	3.47	5.90	5.40	4.80	3.44	2.60
13.....	3.30	3.15	3.05	2.05	2.74	2.75	3.48	5.80	5.50	5.10	3.43	2.60
14.....	3.30	3.15	3.05	.....	2.73	2.75	3.49	5.60	5.80	4.70	3.43	2.59
15.....	3.30	3.15	3.07	.....	2.73	2.74	4.00	5.50	5.90	4.60	3.43	2.59
16.....	3.32	3.15	3.09	.....	2.73	2.74	4.00	5.50	5.90	4.60	3.42	2.58
17.....	3.30	3.15	3.10	.....	2.74	2.72	4.10	5.40	6.00	4.50	3.15	2.58
18.....	3.30	3.15	3.10	.....	2.74	2.75	4.20	5.40	6.10	4.50	3.15	2.58
19.....	3.30	3.10	3.10	.....	2.74	2.75	4.20	5.30	6.40	4.40	3.00	2.58
20.....	3.30	3.10	3.12	.....	2.74	2.77	4.40	4.80	6.40	4.40	3.00	2.56
21.....	3.30	3.10	3.12	2.82	2.74	2.77	4.50	4.80	6.00	4.37	2.90	2.56
22.....	3.30	3.10	3.12	2.80	2.73	2.79	4.60	4.60	6.20	4.35	2.90	2.56
23.....	3.20	3.10	3.13	2.70	2.73	2.80	4.40	4.60	6.10	4.35	2.90	2.54
24.....	3.20	3.10	3.13	2.70	2.74	2.81	4.30	4.40	5.50	4.43	2.90	2.54
25.....	3.20	3.10	3.13	2.80	2.73	2.81	4.25	4.30	6.00	4.60	2.80	2.54
26.....	3.20	3.10	3.14	2.80	2.72	2.80	4.15	4.30	5.60	4.90	2.80	2.53
27.....	3.20	3.10	3.15	2.80	2.72	2.80	3.98	4.40	5.50	4.80	2.80	2.53
28.....	3.30	3.10	3.15	2.75	2.72	2.80	3.96	4.50	5.20	4.70	2.70	2.51
29.....	3.30	3.10	3.16	2.75	.....	2.79	3.94	4.50	5.20	4.60	2.70	2.50
30.....	3.30	3.10	3.16	2.75	.....	2.79	4.00	4.55	5.40	4.30	2.70	2.50
31.....	3.30	.....	3.15	2.75	.....	2.78	.....	4.58	.....	4.00	2.70	.....

NOTE.—Oct. 8 to Dec. 31, 1905, readings made on new gage and reduced to same datum as gage used during the first part of the year.

Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.
1906.				1906.			
1.....	2.50	3.58	2.54	16.....	3.00	2.56	2.54
2.....	2.50	3.57	2.54	17.....	3.10	2.56	2.54
3.....	2.50	3.55	2.54	18.....	3.20	2.56	2.53
4.....	2.50	3.54	2.54	19.....	3.40	2.56	2.53
5.....	2.50	3.59	2.54	20.....	3.50	2.55	2.53
6.....	2.50	3.60	2.54	21.....	3.50	2.55	2.53
7.....	2.55	3.58	2.54	22.....	3.70	2.55	2.53
8.....	2.58	3.56	2.54	23.....	3.70	2.55	2.53
9.....	2.60	3.53	2.54	24.....	3.70	2.55	2.53
10.....	2.60	3.50	2.54	25.....	3.70	2.54	2.53
11.....	2.61	3.50	2.54	26.....	3.65	2.54	2.53
12.....	2.63	3.58	2.54	27.....	3.64	2.54	2.53
13.....	2.65	2.58	2.55	28.....	3.63	2.54	2.53
14.....	2.67	2.58	2.56	29.....	3.62	2.54	2.54
15.....	2.69	2.57	2.56	30.....	3.61	2.54	2.54
				31.....	3.59	.....	2.54

Daily gage height, in feet, of East Fork of Carson River, near Gardnerville, Nev., for 1908-1910.

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1908.									
1.....	3.9	2.6	2.5	2.9	3.9	3.5	3.2	2.5	2.5
2.....	3.9	2.5	2.4	2.8	3.7	3.4	3.1	2.6	2.5
3.....	3.9	2.6	2.4	2.8	3.6	3.4	3.1	2.7	2.5
4.....	3.9	2.5	2.5	2.9	3.5	3.4	3.1	2.6	2.5
5.....	4.1	2.6	2.6	3.0	3.7	3.5	3.1	2.5	2.5
6.....	3.7	2.6	2.5	3.0	3.8	3.6	3.1	2.5	2.5
7.....	3.6	2.7	2.4	3.0	3.9	3.7	3.1	2.5	2.5
8.....	3.6	2.6	2.5	2.9	3.5	3.7	3.0	2.5	2.5
9.....	3.7	2.7	2.6	2.9	3.4	3.8	3.0	2.5	2.5
10.....	3.7	2.6	2.6	3.0	3.3	4.1	2.9	2.5	2.5
11.....	3.5	2.6	2.6	3.3	3.5	4.0	2.9	2.5	2.5
12.....	3.1	2.7	2.7	3.4	3.5	3.8	3.0	2.5	2.5
13.....	3.0	2.6	2.7	3.6	3.5	4.2	2.9	2.5	2.5
14.....	2.8	2.6	2.7	3.8	3.4	3.7	2.9	2.5	2.5
15.....	2.8	2.7	2.7	3.5	3.3	3.6	2.8	2.5	2.5
16.....	2.7	2.7	2.7	3.5	3.2	3.6	2.8	2.5	2.5
17.....	2.7	2.6	2.8	3.4	3.2	3.6	2.7	2.5	2.5
18.....	2.7	2.5	2.7	3.6	3.3	3.5	2.7	2.5	2.5
19.....	2.8	2.6	2.7	3.8	3.3	3.5	2.7	2.5	2.5
20.....	2.8	2.6	2.8	3.9	3.4	3.5	2.6	2.5	2.5
21.....	2.7	2.5	2.8	3.9	3.4	3.4	2.6	2.5	2.5
22.....	2.7	2.5	2.8	3.7	3.5	3.4	2.6	2.5	2.5
23.....	2.7	2.5	2.7	3.5	3.5	3.4	2.6	2.5	2.5
24.....	2.8	2.6	2.8	3.3	3.6	3.2	2.5	2.5	2.5
25.....	2.9	2.5	2.7	3.2	3.7	3.2	2.5	2.5	2.5
26.....	2.8	2.6	3.0	3.5	3.8	3.2	2.5	2.5	2.5
27.....	2.8	2.4	2.9	3.6	3.7	3.3	2.5	2.5	2.5
28.....	2.9	2.5	2.9	3.8	3.8	3.2	2.5	2.5	2.5
29.....	2.7	2.4	2.9	3.9	3.9	3.2	2.5	2.5	2.5
30.....	2.7	.....	2.9	3.9	3.9	3.2	2.5	2.5	2.5
31.....	2.6	.....	2.9	.....	3.8	.....	2.5	2.5	.....

NOTE.—Gage heights for Jan. 1 to Mar. 26, 1908, were observed at the old station at Rodenbah's ranch and have been reduced to readings at the new station by the approximate relation determined by simultaneous observations. Ice conditions Dec. 18 to 31, 1908.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1908-9.												
1.....	2.5	2.4	2.4	2.4	2.8	2.7	2.9	5.0	6.0	5.0	3.0	2.6
2.....	2.5	2.4	2.4	2.4	2.7	2.7	3.1	4.85	6.25	4.8	3.0	2.6
3.....	2.5	2.4	2.4	2.4	2.7	2.7	3.4	5.0	6.45	4.7	3.0	2.6
4.....	2.5	2.4	2.4	2.4	2.7	2.7	3.4	5.3	6.85	4.5	2.9	2.6
5.....	2.5	2.4	2.4	2.9	2.7	2.7	3.3	5.3	6.8	4.4	2.9	2.6
6.....	2.5	2.4	2.4	3.2	2.7	2.7	3.2	5.4	6.05	4.2	2.9	2.6
7.....	2.5	2.4	2.4	2.5	2.7	2.7	3.1	5.4	5.6	4.2	2.9	2.6
8.....	2.5	2.4	2.4	2.6	2.7	2.7	3.1	5.3	5.35	4.2	2.8	2.6
9.....	2.5	2.4	2.4	2.4	2.7	2.7	3.2	5.3	5.35	4.0	2.8	2.6
10.....	2.5	2.4	2.4	2.4	2.7	2.7	3.3	5.1	5.35	4.0	2.7	2.6
11.....	2.4	2.4	2.4	2.4	2.7	2.7	3.4	4.8	5.35	4.0	2.7	2.6
12.....	2.4	2.4	2.4	2.7	2.7	2.7	3.5	4.6	5.6	4.0	2.7	2.6
13.....	2.4	2.4	2.4	3.3	2.7	2.7	3.7	4.3	5.6	3.9	2.7	2.6
14.....	2.4	2.4	2.5	5.85	2.7	2.7	3.85	4.45	5.4	3.8	2.7	2.6
15.....	2.7	2.4	2.5	5.8	2.7	2.8	4.15	4.45	5.7	3.8	2.7	2.6
16.....	2.5	2.4	2.4	5.2	2.9	2.8	4.3	4.45	5.4	3.7	2.7	2.6
17.....	2.5	2.4	2.4	4.0	3.4	2.8	4.65	4.5	4.9	3.7	2.6	2.6
18.....	2.4	2.4	2.4	3.65	3.0	2.8	4.7	4.6	4.9	3.6	2.6	2.6
19.....	2.4	2.4	2.3	3.45	2.9	2.8	4.65	4.8	4.8	3.5	2.6	2.6
20.....	2.4	2.4	2.4	4.1	2.8	2.8	4.3	4.9	4.7	3.4	2.6	2.6
21.....	2.4	2.4	2.5	4.8	2.7	2.8	4.05	5.1	5.0	3.2	2.6	2.6
22.....	2.4	2.4	2.5	3.5	2.7	2.8	3.9	4.7	5.2	3.2	2.6	2.6
23.....	2.4	2.4	2.4	3.2	2.7	2.8	3.9	4.4	5.3	3.2	2.6	2.6
24.....	2.4	2.4	2.5	3.2	2.6	2.8	4.05	4.2	5.4	3.1	2.6	2.6
25.....	2.4	2.4	2.5	3.1	2.6	2.8	4.05	4.4	5.4	3.1	2.6	2.6
26.....	2.4	2.5	2.5	3.0	2.6	2.8	4.35	4.7	5.4	3.0	2.6	2.6
27.....	2.4	2.5	2.5	3.0	2.7	2.8	4.55	4.9	5.4	3.0	2.6	2.6
28.....	2.4	2.4	2.5	2.9	2.7	2.8	4.6	4.8	5.4	3.0	2.6	2.6
29.....	2.4	2.4	2.5	2.9	.....	2.8	4.7	4.7	5.2	3.0	2.6	2.6
30.....	2.4	2.4	2.4	2.9	.....	2.8	4.8	4.7	5.2	3.0	2.6	2.6
31.....	2.4	.....	2.4	2.8	.....	2.8	.....	4.7	.....	3.0	2.6	.....

Daily gage height, in feet, of East Fork of Carson River near Gardnerville, Nev., for 1908-1910—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909-10.												
1.....	2.7	2.6	4.8	3.0	2.8	3.2	3.3	4.1	5.1	3.2	2.6	2.5
2.....	2.7	2.6	3.2	3.0	2.8	3.2	3.3	4.1	4.9	3.1	2.55	2.5
3.....	2.6	2.6	3.2	2.8	2.8	3.2	3.3	4.0	4.6	3.1	2.5	2.5
4.....	2.6	2.6	3.0	2.7	2.8	3.2	3.4	4.0	4.4	3.1	2.5	2.5
5.....	2.6	2.6	3.0	2.7	2.8	3.5	4.0	3.7	4.1	3.1	2.5	2.5
6.....	2.6	2.6	3.0	2.7	2.8	3.4	4.3	3.9	4.3	3.1	2.45	2.5
7.....	2.6	2.6	3.0	2.7	2.8	3.4	4.4	4.3	4.0	3.0	2.45	2.5
8.....	2.6	2.6	3.0	2.7	2.8	3.4	4.5	4.6	3.9	3.0	2.45	2.5
9.....	2.6	2.6	3.0	2.7	2.8	3.4	4.2	5.0	3.9	3.0	2.45	2.5
10.....	2.6	2.6	3.0	2.7	2.8	3.4	4.0	5.5	3.7	2.9	2.45	2.5
11.....	2.6	2.6	3.0	2.7	2.9	3.4	4.1	4.8	3.8	2.9	2.45	2.5
12.....	2.6	2.6	3.0	2.7	2.9	3.4	3.7	4.6	3.9	2.9	2.45	2.5
13.....	2.6	2.6	3.0	2.7	2.7	3.4	3.9	4.5	3.8	2.8	2.45	2.5
14.....	2.6	2.6	3.0	2.7	2.7	3.6	4.1	4.5	3.8	2.8	2.45	2.55
15.....	2.6	2.6	3.0	2.7	2.7	3.4	4.0	4.7	3.7	2.7	2.45	2.6
16.....	2.6	2.6	3.0	2.7	2.7	3.4	4.0	4.6	3.6	2.7	2.45	2.6
17.....	2.6	2.6	2.7	2.7	2.7	3.4	4.5	3.9	3.6	2.7	2.45	2.55
18.....	2.6	2.6	2.7	2.7	2.7	4.3	4.7	4.5	3.5	3.25	2.45	2.55
19.....	2.6	2.6	2.7	2.7	2.7	4.5	4.8	4.5	3.5	3.0	2.45	2.55
20.....	2.6	2.6	2.7	2.7	2.8	4.2	5.0	4.5	3.4	3.25	2.45	2.5
21.....	2.6	5.6	2.7	2.7	2.8	3.9	4.6	4.6	3.3	3.0	2.45	2.5
22.....	2.6	3.5	2.7	3.5	2.8	3.8	4.7	4.8	3.3	2.9	2.45	2.5
23.....	2.6	3.3	2.7	3.7	2.8	3.5	4.7	4.9	3.3	2.9	2.45	2.5
24.....	2.6	3.3	2.7	2.8	2.8	3.3	4.9	5.6	3.3	2.9	2.45	2.5
25.....	2.6	3.3	2.7	2.7	2.8	3.2	5.0	4.5	3.3	2.8	2.5	2.5
26.....	2.6	3.3	2.7	2.7	2.8	3.2	5.1	4.6	3.3	2.75	2.5	2.5
27.....	2.6	3.3	2.7	2.7	2.8	3.2	5.2	4.9	3.3	2.7	2.5	2.5
28.....	2.6	3.3	2.7	2.7	3.5	3.2	5.1	4.9	3.3	2.7	2.5	2.5
29.....	2.6	3.3	2.7	2.7	.....	3.2	4.5	4.9	3.2	2.7	2.5	2.5
30.....	2.6	3.3	2.7	2.8	.....	3.2	4.3	5.0	3.2	2.6	2.5	2.5
31.....	2.6	.....	4.7	2.8	.....	3.3	.....	5.1	.....	2.6	.....	.....
<hr/>												
Day.	Oct.	Nov.	Dec.	Day.				Oct.	Nov.	Dec.		
1910.				1910.								
1.....	2.5	2.5	2.55	16.....	2.5	2.5	2.6	2.5	2.5	2.6		
2.....	2.5	2.5	2.55	17.....	2.5	2.5	2.6	2.5	2.5	2.6		
3.....	2.5	2.5	2.9	18.....	2.5	2.5	2.6	2.5	2.5	2.6		
4.....	2.5	2.5	2.9	19.....	2.5	2.5	2.6	2.5	2.5	2.6		
5.....	2.5	2.5	2.8	20.....	2.5	2.5	2.6	2.5	2.5	2.6		
6.....	2.5	2.5	2.7	21.....	2.5	2.5	2.6	2.5	2.5	2.6		
7.....	2.5	2.5	2.7	22.....	2.5	2.5	2.6	2.5	2.5	2.6		
8.....	2.5	2.5	2.6	23.....	2.5	2.5	2.55	2.5	2.5	2.55		
9.....	2.5	2.5	2.6	24.....	2.5	2.5	2.55	2.5	2.5	2.55		
10.....	2.5	2.5	2.6	25.....	2.5	2.5	2.55	2.5	2.5	2.55		
11.....	2.5	2.5	2.6	26.....	2.5	2.5	2.55	2.5	2.5	2.55		
12.....	2.5	2.5	2.6	27.....	2.5	2.55	.....	2.5	2.55	.....	
13.....	2.5	2.5	2.6	28.....	2.5	2.55	.....	2.5	2.55	.....	
14.....	2.5	2.5	2.6	29.....	2.5	2.55	.....	2.5	2.55	.....	
15.....	2.5	2.5	2.6	30.....	2.5	2.55	.....	2.5	2.55	.....	
				31.....	2.5	.....	.....	2.5	.....	.....

Rating tables for East Fork of Carson River near Gardnerville, Nev.

October 17, 1900, to August 2, 1901; December 5 to December 31, 1901.

Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.
<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>
1.80	11	3.40	157	5.00	1,141	6.60	2,442
2.00	17	3.60	219	5.20	1,286	6.80	2,619
2.20	25	3.80	313	5.40	1,455	7.00	2,798
2.40	35	4.00	438	5.60	1,590	7.20	2,979
2.60	48	4.20	575	5.80	1,752	7.40	3,162
2.80	65	4.40	715	6.00	1,922		
3.00	86	4.60	856	6.20	2,094		
3.20	115	4.80	998	6.40	2,267		

Rating tables for East Fork of Carson River near Gardnerville, Nev.—Continued.

August 3 to December 4, 1901.

Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.
<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>
3.00	35	3.40	85	3.80	179	4.20	401
3.20	57	3.60	122	4.00	271	4.40	550

January 1 to December 31, 1902.

2.5	30	3.4	85	4.3	519	5.2	1,200
2.6	34	3.5	98	4.4	598	5.3	1,275
2.7	38	3.6	115	4.5	675	5.4	1,350
2.8	42	3.7	140	4.6	750	5.5	1,425
2.9	46	3.8	180	4.7	825	5.6	1,500
3.0	51	3.9	233	4.8	900	5.7	1,575
3.1	57	4.0	297	4.9	975	5.8	1,650
3.2	65	4.1	368	5.0	1,050	5.9	1,725
3.3	74	4.2	441	5.1	1,125	6.0	1,800

January 1 to December 31, 1903.

2.2	21	3.2	82	4.2	375	5.4	1,285
2.3	25	3.3	97	4.3	430	5.6	1,475
2.4	29	3.4	115	4.4	485	5.8	1,665
2.5	34	3.5	135	4.5	550	6.0	1,855
2.6	39	3.6	155	4.6	620	6.2	2,045
2.7	45	3.7	180	4.7	690	6.4	2,235
2.8	51	3.8	210	4.8	760	6.6	2,425
2.9	58	3.9	240	4.9	840	6.8	2,615
3.0	65	4.0	280	5.0	920	7.0	2,805
3.1	72	4.1	325	5.2	1,100		

January 1 to July 31, 1904.

2.00	8	3.40	114	4.80	833	6.20	2,130
2.10	9	3.50	134	4.90	915	6.30	2,230
2.20	11	3.60	158	5.00	1,000	6.40	2,330
2.30	14	3.70	186	5.10	1,085	6.50	2,430
2.40	18	3.80	218	5.20	1,175	6.60	2,540
2.50	23	3.90	254	5.30	1,265	6.70	2,650
2.60	29	4.00	295	5.40	1,355	6.80	2,760
2.70	36	4.10	342	5.50	1,450	6.90	2,870
2.80	43	4.20	397	5.60	1,545	7.00	2,980
2.90	51	4.30	459	5.70	1,640	7.20	3,200
3.00	60	4.40	527	5.80	1,735	7.40	3,420
3.10	71	4.50	600	5.90	1,830		
3.20	83	4.60	675	6.00	1,930		
3.30	97	4.70	753	6.10	2,030		

NOTE.—Table applicable only to open channel. It is based upon 5 discharge measurements made during first part of 1904 and several low-water measurements of 1903. It is well defined between gage heights 3 feet and 5 feet. Owing to back water from temporary dam the table is not applicable after July 31, 1904.

January 1 to July 15, 1905.

2.00	8	2.80	43	3.60	158	4.40	527
2.10	9	2.90	51	3.70	186	4.50	600
2.20	11	3.00	60	3.80	218	4.60	675
2.30	14	3.10	71	3.90	254	4.70	753
2.40	18	3.20	83	4.00	295	4.80	833
2.50	23	3.30	97	4.10	342	4.90	915
2.60	29	3.40	114	4.20	397	5.00	1,000
2.70	36	3.50	134	4.30	459		

NOTE.—Table is applicable only to open channel. It is based on discharge measurements made during first half of 1904 and 1905, and several low-water measurements of 1903. It is well defined between gage heights 3 feet and 5 feet. Above 5 feet the curve depends on 1 measurement at gage height 6.15 feet.

January 1 to December 31, 1908.

2.30	82	2.80	213	3.30	420	3.80	675
2.40	104	2.90	250	3.40	470	3.90	730
2.50	128	3.00	290	3.50	520	4.00	790
2.60	154	3.10	330	3.60	570	4.10	860
2.70	182	3.20	375	3.70	620	4.20	940

NOTE.—Table applicable only to open channel. It is based on 6 discharge measurements made during 1908, and is well defined between gage heights 2.5 feet and 3.5 feet.

Daily discharge, in second-feet, of East Fork of Carson River near Gardnerville, Nev., for 1909-10.

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909.									
1.....	104	213	182	250	1,520	2,480	1,520	290	154
2.....	104	182	182	330	1,400	2,760	1,360	290	154
3.....	104	182	182	470	1,520	2,980	1,280	290	154
4.....	104	182	182	470	1,790	3,430	1,120	250	154
5.....	250	182	182	420	1,790	3,370	1,050	250	154
6.....	375	182	182	375	1,880	2,540	910	250	154
7.....	128	182	182	330	1,880	2,070	910	250	154
8.....	154	182	182	330	1,790	1,840	910	213	154
9.....	104	182	182	375	1,790	1,840	790	213	154
10.....	104	182	182	420	1,610	1,840	790	182	154
11.....	104	182	182	470	1,360	1,840	790	182	154
12.....	182	182	182	520	1,200	2,070	790	182	154
13.....	420	182	182	620	980	2,070	730	182	154
14.....	2,320	182	182	702	1,080	1,880	675	182	154
15.....	2,270	182	213	880	1,080	2,170	675	182	154
16.....	1,700	250	213	980	1,080	1,880	620	182	154
17.....	790	470	213	1,240	1,120	1,440	620	154	154
18.....	595	290	213	1,280	1,200	1,440	570	154	154
19.....	495	250	213	1,240	1,360	1,360	520	154	154
20.....	850	213	213	980	1,440	1,280	470	154	154
21.....	1,360	182	213	820	1,610	1,520	375	154	154
22.....	520	182	213	730	1,280	1,700	375	154	154
23.....	375	182	213	730	1,050	1,790	375	154	154
24.....	375	154	213	820	910	1,880	330	154	154
25.....	330	154	213	820	1,050	1,880	330	154	154
26.....	290	154	213	1,020	1,280	1,880	290	154	154
27.....	290	182	213	1,160	1,440	1,880	290	154	154
28.....	250	182	213	1,200	1,360	1,880	290	154	154
29.....	250	.....	213	1,280	1,280	1,790	290	154	154
30.....	250	.....	213	1,360	1,280	1,700	290	154	154
31.....	213	.....	213	.....	1,280	.....	290	154	.....

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909-10.												
1.....	182	154	1,360	290	200	390	440	900	1,620	390	123	90
2.....	182	154	375	290	200	390	440	900	1,460	340	106	90
3.....	154	154	375	200	200	390	440	840	1,240	340	90	90
4.....	154	154	290	160	200	390	493	840	1,100	340	90	90
5.....	154	154	290	160	200	546	840	660	900	340	90	90
6.....	154	154	290	160	200	493	1,030	780	1,030	340	75	90
7.....	154	154	290	160	200	493	1,100	1,030	840	290	75	90
8.....	154	154	290	160	200	493	1,170	1,240	780	290	75	90
9.....	154	154	290	160	200	493	960	1,540	780	290	75	90
10.....	154	154	290	160	200	493	840	1,940	660	245	75	90
11.....	154	154	290	100	245	493	900	1,380	720	245	75	90
12.....	154	154	290	160	245	493	660	1,240	780	245	75	90
13.....	154	154	290	160	160	493	780	1,170	720	200	75	90
14.....	154	154	290	160	160	600	900	1,170	720	200	75	106
15.....	154	154	290	160	160	493	840	1,310	660	160	75	123
16.....	154	154	290	160	160	493	840	1,240	600	160	75	123
17.....	154	154	182	160	160	493	1,170	780	600	160	75	106
18.....	154	154	182	160	160	1,030	1,310	1,170	546	415	75	106
19.....	154	154	182	160	160	1,170	1,380	1,170	546	290	75	106
20.....	154	154	182	160	200	960	1,540	1,170	493	415	75	90
21.....	154	2,070	182	160	200	780	1,240	1,240	440	290	75	90
22.....	154	520	182	546	200	720	1,310	1,380	440	245	75	90
23.....	154	420	182	660	200	546	1,310	1,460	440	245	75	90
24.....	154	420	182	200	200	440	1,460	2,020	440	245	75	90
25.....	154	420	182	160	200	390	1,540	1,170	440	200	90	90
26.....	154	420	182	160	200	390	1,620	1,240	440	180	90	90
27.....	154	420	182	160	200	390	1,700	1,460	440	160	90	90
28.....	154	420	182	160	546	390	1,620	1,460	440	160	90	90
29.....	154	420	182	160	.....	390	1,170	1,460	390	160	90	90
30.....	154	420	182	200	.....	390	1,030	1,540	390	123	90	90
31.....	154	.....	1,280	200	.....	440	.....	1,620	.....	123	90	.....

Daily discharge, in second-feet, of East Fork of Carson River near Gardnerville, Nev., for 1909-10—Continued.

Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.
1910.				1910.			
1.....	90	90	106	16.....	90	90	123
2.....	90	90	106	17.....	90	90	123
3.....	90	90	245	18.....	90	90	123
4.....	90	90	245	19.....	90	90	123
5.....	90	90	200	20.....	90	90	123
6.....	90	90	160	21.....	90	90	123
7.....	90	90	160	22.....	90	90	123
8.....	90	90	123	23.....	90	90	106
9.....	90	90	123	24.....	90	90	106
10.....	90	90	123	25.....	90	90	106
11.....	90	90	123	26.....	90	90	106
12.....	90	90	123	27.....	90	106	106
13.....	90	90	123	28.....	90	106	106
14.....	90	90	123	29.....	90	106	90
15.....	90	90	123	30.....	90	106	90
				31.....	90		90

NOTE.—Daily discharge determined from rating curves applicable as follows:
 Jan. 1 to Dec. 31, 1909, well defined between discharges of 128 and 1,790 second-feet.
 Jan. 1 to Dec. 31, 1910, fairly well defined. Discharge estimated Dec. 27-31, 1910.

Monthly discharge of East Fork of Carson River near Gardnerville, Nev., for 1890-1892.

Month.	Mean discharge in second-feet.	Run-off (total in acre-feet).	Month.	Mean discharge in second-feet.	Run-off (total in acre-feet).
1890.			1891-92.		
April.....	1,026	61,300	October.....	385	23,700
May.....	2,654	163,000	November.....	385	22,900
June.....	2,430	145,000	December.....	438	26,900
July.....	1,789	110,000	January.....	390	24,000
August.....	597	36,700	February.....	388	22,300
September.....	415	24,700	March.....	422	25,900
The period.....		541,000	April.....	478	28,400
1890-91.			May.....	1,226	75,600
October.....	386	23,700	June.....	1,158	69,000
November.....	384	22,900	July.....	506	31,100
December.....	379	23,300	August.....	413	25,400
January.....	388	23,900	September.....	414	24,600
February.....	402	22,300	The year.....	550	400,000
March.....	783	48,100	1892.		
April..c.....	452	26,900	October.....	416	25,600
May.....	1,445	88,800	November.....	414	24,600
June.....	1,328	79,100	December.....	1,097	67,600
July.....	618	38,000			
August.....	408	25,100			
September.....	388	23,100			
The year.....	613	445,000			

Monthly discharge of East Fork of Carson River near Gardnerville, Nev., for 1900-1905.

[Drainage area, 381 square miles.]

Month.	Discharge in second-feet.				Run-off.	
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.	Total in acre-feet.
1900-1901.						
October 17-31			38	0.100	0.06	1,130
November	75	30	41	.108	.12	2,440
December	35	30	34	.089	.10	2,091
January	86	14	34	.089	.10	2,091
February	2,267	14	664	1.743	1.82	36,877
March	927	219	464	1.218	1.26	28,531
April	927	261	582	1.527	1.70	34,632
May	3,162	856	1,822	4.782	5.51	112,033
June	2,008	1,141	1,492	3.916	4.37	88,780
July	1,512	313	741	1.945	2.24	45,562
August	626	85	259	.680	.79	16,026
September	220	85	139	.365	.41	8,271
The per od.						378,000
1901-92.						
October	271	102	137	.360	.42	8,424
November	332	122	196	.514	.57	11,663
December	1,213	134	280	.735	.85	17,217
January	115	46	81	.213	.25	4,980
February	140	57	78	.205	.21	4,332
March	180	57	101	.265	.31	6,210
April	975	180	601	1.577	1.76	35,762
May	1,800	598	1,205	3.163	3.64	74,093
June	1,800	180	955	2.507	2.80	56,826
July	297	98	178	.467	.54	10,945
August	265	70	131	.344	.40	8,055
September	80	40	54	.142	.16	3,213
The year	1,800	40	333	.874	11.91	242,000
1902-3.						
October	65	44	51	.134	.15	3,136
November	297	46	86	.226	.25	5,117
December	85	28	54	.142	.16	3,320
January	39	25	32	.08	.10	1,968
February	42	21	31	.08	.08	1,722
March	430	45	135	.36	.42	8,301
April	1,617	457	890	2.34	2.61	52,959
May	2,852	550	1,794	4.71	5.43	110,309
June	2,567	880	1,714	4.50	5.02	101,990
July	840	115	356	.93	1.07	21,889
August	225	97	143	.38	.44	8,793
September	135	51	73	.19	.21	4,344
The year	2,852	21	447	1.17	15.94	324,000
1903-4.						
October	115	51	93	.24	.28	5,718
November	725	82	229	.60	.67	13,626
December	115	27	57	.15	.17	3,505
January	47	18	31.9	.084	.10	1,962
February	3,310	43	585	1.54	1.66	33,650
March	1,000	318	602	1.58	1.82	37,020
April	1,592	397	816	2.14	2.39	48,560
May	3,112	422	1,984	5.21	6.01	122,100
June	2,410	69	1,041	2.74	3.03	61,940
July	1,034	364	663	1.74	2.01	40,770
The period						369,000
1905.						
January	175	12	110	.289	.33	6,763
February	1,166	144	496	1.30	1.35	27,550
March	1,175	218	533	1.40	1.61	32,770
April	459	236	322	.845	.94	19,160
May	1,930	218	949	2.49	2.87	58,350
June	958	459	742	1.95	2.18	44,150
July 1-15	507	212	346	.908	.51	10,290
The period						199,000

NOTE.—Values for the winter periods may be in error on account of ice.

Monthly discharge of East Fork of Carson River near Gardnerville, Nev., for 1908-1910.

[Drainage area, 361 square miles.]

Month.	Discharge in second-feet.				Run-off.		Accu- racy.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.	Total in acre-feet.	
1908.							
January.....	860	154	372	1.03	1.19	22,900	C.
February.....	182	104	148	.410	.44	8,510	C.
March.....	290	104	183	.507	.58	11,300	C.
April.....	730	213	470	1.30	1.45	28,000	A.
May.....	730	375	555	1.54	1.78	34,100	A.
June.....	860	375	539	1.50	1.67	32,100	A.
July.....	375	128	221	.612	.71	13,600	A.
August.....	182	128	131	.363	.42	8,060	A.
September.....	128	128	128	.355	.40	7,620	A.
The period.....						166,000	
1908-9.							
October.....	182	104	116	.321	.37	7,130	A.
November.....	128	104	106	.294	.33	6,310	A.
December.....	128	82	111	.308	.36	6,820	C.
January.....	2,320	104	508	1.41	1.63	31,200	C.
February.....	470	154	200	.554	.58	11,100	C.
March.....	213	182	199	.551	.64	12,200	B.
April.....	1,360	250	754	2.09	2.33	44,900	A.
May.....	1,880	910	1,380	3.82	4.40	84,800	A.
June.....	3,430	1,280	2,020	5.60	6.25	120,000	B.
July.....	1,520	290	665	1.84	2.12	40,900	A.
August.....	290	154	190	.526	.61	11,700	A.
September.....	154	154	154	.427	.48	9,160	A.
The year.....	3,430	82	534	1.48	19.10	386,000	
1909-10.							
October.....	182	154	156	.432	.50	9,590	A.
November.....	2,070	154	301	.834	.93	17,900	B.
December.....	1,360	182	313	.867	1.00	19,200	C.
January.....	660	160	202	.560	.65	12,400	B.
February.....	546	160	206	.571	.59	11,400	B.
March.....	1,170	390	534	1.48	1.71	32,800	A.
April.....	1,700	440	1,070	2.96	3.30	63,700	A.
May.....	2,020	660	1,240	3.43	3.95	76,200	A.
June.....	1,620	390	703	1.95	2.18	41,800	A.
July.....	415	123	252	.698	.80	15,500	A.
August.....	123	75	82.4	.228	.26	5,070	B.
September.....	123	90	94.3	.261	.29	5,610	B.
The year.....	2,070	75	430	1.19	16.16	311,000	
1910.							
October.....	90	90	90	.249	.29	5,530	B.
November.....	106	90	92.1	.255	.28	5,480	B.
December.....	245	90	128	.355	.41	7,870	B.

NOTE.—Values during winter periods may be in error on account of ice.

SILVER CREEK NEAR MARKLEEVILLE, CAL.

Silver Creek is tributary to East Fork of Carson River.

The gaging station, which is located in the SE. $\frac{1}{4}$ sec. 14, T. 9 N., R. 20 E., in the Mono National Forest, at Silver Creek (an abandoned post office), 10 miles above Markleeville and $1\frac{3}{4}$ miles above the mouth of the river, was established November 12, 1910.

No water is diverted from this stream. Storage has been developed at the Upper and Lower Kinney lakes and Kinney Meadows by the Alpine Land & Reservoir Co.

The gage is a vertical staff fastened to a juniper tree on the right bank.

Discharge measurements are made from the footbridge 75 feet above the gage.

The channel at the gage contains large bowlders and appears permanent. Both banks are high and will not overflow.

This station is maintained in cooperation with the United States Forest Service.

Discharge measurements of Silver Creek near Markleeville, Cal., in 1910-1912.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1910. Nov. 12	H. D. McGlashan.....	<i>Feet.</i> 2.59	<i>Sec.-ft.</i> 7	1911. July 30 Nov. 7	G. T. Peekema..... J. E. Stewart.....	<i>Feet.</i> 4.01 2.77	<i>Sec.-ft.</i> 93 5.7
1911. Apr. 11 June 23	J. E. Stewart..... .....do.....	3.72 5.06	64 233	1912. June 22	H. J. Tompkins.....	4.00	94

Daily gage height, in feet, of Silver Creek near Markleeville, Cal., for 1910-1912.

Day.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.										
1.										
2.						4.20				
3.		2.90	5.00	3.00						
4.					4.20					
5.						4.50				
6.		2.81								
7.	2.85		3.30	3.00	3.90					
8.										
9.	2.87					4.32				
10.		2.75	3.15	3.00			5.10			
11.										
12.						4.45				
13.	2.81							4.06		
14.			3.05	2.92	3.50					
15.										
16.	2.95					4.20			3.40	
17.	2.80	2.80	3.05	3.40					3.40	
18.		2.75			3.95					
19.						4.35	5.95			
20.	2.88	4.00								
21.			3.00	3.90	3.95					
22.										
23.	2.80					4.95	5.05			
24.		3.50	3.00	3.50						
25.					4.35					
26.						4.55				
27.	2.03	2.80							3.05	
28.			3.00	3.90	4.20			4.00		2.90
29.									3.00	2.90
30.	2.01							4.00		
31.		6.00		4.00						

Daily gage height, in feet, of Silver Creek near Markleeville, Cal., for 1910-1912—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.									
1		2.80							
2		2.20		3.5					
3						3.0			
4					3.0	3.0	3.0	3.4	5.0
5		2.00							
6		2.00		3.5		3.0			
7									
8					3.0			3.5	
9							3.3		
10				3.5		3.0			
11	3.10				3.0				
12								4.0	
13				3.0		3.0	3.0		4.4
14									
15					3.0			5.0	
16				3.0		3.0			
17					3.0		3.0		
18									
19					3.0			4.5	
20									
21				3.0		3.0	3.0		
22									4.0
23				3.0					
24							3.3		
25					3.0	3.0		4.0	
26									
27				3.0	3.0	2.98			
28									
29				2.9			3.4	4.3	
30	2.80					2.9			
31	3.00		3.00						

NOTE.—Ice existed at the station during portions of January and February, 1912, but it is believed that only records for Jan. 1-11, 1912, were affected thereby.

Daily discharge, in second-feet, of Silver Creek near Markleeville, Cal., for 1910-1912.

Day.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.										
1	14	16	533	19	108	120	180	106	88	14
2	14	16	412	19	124	120	222	114	85	14
3	14	16	202	19	140	137	264	122	81	12
4	14	15	227	19	120	155	306	130	78	12
5	14	14	163	19	108	172	348	125	74	12
6	14	13	98	19	95	158	390	120	71	12
7	14	13	33	19	82	144	373	115	67	12
8	14	12	30	19	70	130	356	110	64	12
9	15	12	28	19	80	138	339	105	60	12
10	15	12	25	19	90	130	322	100	57	12
11	14	12	24	19	79	146	350	95	53	12
12	13	12	23	18	68	162	377	98	50	12
13	13	12	22	17	57	151	405	100	46	11
14	15	12	21	17	46	141	432	105	43	11
15	16	12	21	24	56	131	460	110	40	11
16	18	13	21	32	67	120	504	108	36	11
17	13	13	21	39	77	128	547	106	36	11
18	14	12	20	50	88	136	590	104	34	11
19	14	52	20	61	99	144	633	102	32	11
20	15	93	19	72	110	178	551	101	30	11
21	14	56	19	82	88	211	470	100	28	11
22	14	20	19	70	102	245	388	99	26	11
23	13	33	19	58	116	278	307	98	24	10
24	10	46	19	46	130	246	271	96	22	10
25	7	35	19	55	144	214	235	95	20	10
26	4	24	19	64	170	182	198	94	18	10
27	1	13	19	73	145	181	162	93	16	10
28	1	15	19	82	120	180	126	92	15	10
29	1	228	.....	86	120	185	90	92	14	10
30	1	440	.....	90	120	190	98	92	14	10
31	8	653	.....	93	.....	185	.....	92	14	.....

Daily discharge, in second-feet, of Silver Creek near Markleeville, Cal., for 1910-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.									
1.....	10	7		14	14	14	11	36	213
2.....	10	1		14	14	14	12	36	240
3.....	12			14	14	14	13	36	266
4.....	12			14	14	14	14	36	292
5.....	12	1		14	14	14	17	38	275
6.....	12	1		14	14	14	20	40	260
7.....	14			14	14	14	23	42	245
8.....	14			14	14	14	26	43	230
9.....	16			14	14	14	30	55	215
10.....	18			14	14	14	26	67	200
11.....	19			14	14	14	22	79	184
12.....	18			14	14	14	18	92	168
13.....	17			14	14	14	14	157	152
14.....	16			14	14	14	14	222	145
15.....	14			14	14	14	14	292	138
16.....	12			14	14	14	14	268	131
17.....	10			14	14	14	14	244	124
18.....	10			14	14	14	14	220	117
19.....	10			14	14	14	14	196	110
20.....	8			14	14	14	14	172	104
21.....	8			14	14	14	14	156	98
22.....	8			14	14	14	19	140	92
23.....	8			14	14	14	25	124	90
24.....	8			14	14	14	30	108	90
25.....	8			14	14	14	31	92	90
26.....	7			14	14	13	32	102	90
27.....	7			14	14	12	33	112	90
28.....	7			12	14	11	34	122	90
29.....	7			10	14	10	36	135	90
30.....	7			11		10	36	161	90
31.....	14		14	12		11		187	

NOTE.—Daily discharge determined from rating curves, fairly well defined between 70 and 350 second-feet, applicable as follows: Nov. 12, 1910, to June 19, 1911, June 20, 1911, to June 30, 1912. Discharge interpolated or estimated from run-off of neighboring streams for days on which the gage was not read. Discharge estimated Jan. 1-11, 1912, on account of ice.

Monthly discharge of Silver Creek near Markleeville, Cal., for 1910-1912.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1910-11.					
December	18	1	11.7	719	C.
January	653	12	62.7	3,860	C.
February	533	19	78.8	4,380	C.
March	93	17	43.2	2,660	B.
April	170	46	101	6,010	B.
May	278	120	166	10,200	B.
June	633	90	343	20,400	B.
July	130	92	104	6,400	C.
August	88	14	43.1	2,650	C.
September	14	10	11.3	672	D.
The period				58,000	
1911-12.					
October	19	7	11.4	701	D.
November			10.0	595	D.
December			8.0	492	D.
January	14	10	13.6	836	C.
February	14	14	14.0	805	C.
March	14	10	13.5	830	C.
April	36	11	21.1	1,260	C.
May	292	36	123	7,560	B.
June	292	90	157	9,340	B.
The period				22,400	

NOTE.—Values for November and December, 1911, are estimated.

MARKLEEVILLE CREEK¹ NEAR MARKLEEVILLE, CAL.

This station, which is located at the highway bridge above the mouth of Pleasant Valley Creek and three-fourths of a mile above Markleeville, was established November 7, 1911.

The gage is a vertical staff fastened to the left abutment of the bridge.

The bed of the stream is composed of gravel and small boulders.

At high stages discharge measurements are made from the bridge; low-stage measurements are made by wading.

Ice is present in the stream during the winter months.

Town ditch, which heads above the gage, furnishes water for irrigation and domestic use at Markleeville and in addition a small ditch diverts water for irrigation on the Hot Springs ranch.

The gage heights are furnished by the United States Forest Service.

Discharge measurements of Markleeville Creek near Markleeville, Cal., in 1911-12.

Date.	Hydrographer.	Gage height.	Discharge.
1911. Nov. 7	J. E. Stewart.....	<i>Feet.</i> 5.60	<i>Sec.-ft.</i> 2.6
1912. June 21	H. J. Tompkins.....	6.30	34

Daily gage height, in feet, of Markleeville Creek near Markleeville, Cal., for 1911-12.

Day.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1.....						5.85		
2.....			5.88	5.85	5.78	5.88		
3.....				5.8		5.9	6.0	
4.....					5.8		6.0	
5.....				5.9	5.8	5.9		
6.....				5.8				
7.....	5.6			5.8	5.8	6.05	6.2	
8.....				5.81	5.8			
9.....				5.8	5.8		6.7	
10.....				5.82			6.6	
11.....				5.81	5.8	6.1	6.4	
12.....		6.0	5.9	5.9		6.1		
13.....			5.88	5.82	5.8	6.0	6.68	
14.....				5.82	5.88		6.8	
15.....		5.2		5.89		6.08	6.9	6.68
16.....			5.8	5.89	5.82	6.02	7.0	
17.....			5.75	5.89		6.0	7.0	
18.....	5.8		5.78	5.9	5.85			6.18
19.....			5.8	5.84	5.82			
20.....			5.8	5.88	5.85			
21.....					5.9			
22.....			5.8	5.9	5.86			
23.....			5.8	5.82	5.85			
24.....		5.8	5.8	5.82				
25.....	6.0		5.8	5.9	5.83			
26.....			5.85	5.85				
27.....			6.0		5.82			
28.....				5.85				
29.....			6.0	5.8				6.42
30.....					5.85			
31.....			5.85					

NOTE.—Ice existed at this station most of January, 1912.

¹ Known locally as Hot Springs Creek.

MARKLEEVILLE CREEK AT MARKLEEVILLE, CAL.

This gaging station, which is located at the highway bridge at Markleeville, below the mouth of Pleasant Valley Creek, in the SE. $\frac{1}{4}$ sec. 21, T. 10 N., R. 20 E., was established November 11, 1910.

Two ditches divert water from this creek. The upper one, which is small, irrigates the Hot Springs ranch; the lower, known as the Town ditch, was built in the early days to furnish water for domestic use at Markleeville, then a large mining camp. Later this ditch was rebuilt and extended so as to irrigate land below the town.

The gage is a vertical staff on the left abutment of the highway bridge.

Discharge measurements are made from the bridge.

The channel is composed of gravel and boulders. The banks are high and not subject to overflow.

This station is maintained in cooperation with the United States Forest Service.

Discharge measurements of Markleeville Creek at Markleeville, Cal., in 1910-1912.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1910. Oct. 11	H. D. McGlashan.....	<i>Feet.</i> 1.64	<i>Sec.-ft.</i> 5.3	1911. July 30 Nov. 6	G. T. Peekema..... J. E. Stewart.....	<i>Feet.</i> 2.80 1.88	<i>Sec.-ft.</i> 65 9.4
1911. Apr. 11 June 22	J. E. Stewart..... do.....	3.50 5.05	186 761	1912. June 21	H. J. Tompkins.....	3.00	96

Daily gage height, in feet, of Markleeville Creek at Markleeville, Cal., for 1910-1912.

Day.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.											
1.....		1.81	2.20	3.50	2.50	3.75	4.0	4.2			
2.....		1.83	2.11	3.30			4.0				1.95
3.....		2.70	2.08	3.28	2.50	4.02	4.1		4.2		
4.....		2.10	2.18	3.05	2.50	3.90	4.4				
5.....		1.91	2.02			4.15	4.6	5.1		2.7	1.88
6.....		1.97	2.02	2.95	2.48	3.85	4.2				
7.....		2.03	2.01	2.90		3.75	4.1		4.05		
8.....		2.06	1.95	2.80		3.7	4.0				
9.....		2.11	1.99	2.85	2.48	3.8	4.2				2.25
10.....		2.22	2.30	2.80	2.48	3.65	4.1	5.15			
11.....	1.64	2.41	2.20	2.78	2.48	3.5	4.2		3.88		
12.....	1.70	2.28	2.35			3.4	4.35			2.4	
13.....	1.70	2.21	2.70	2.68	2.53	3.9	4.3			2.3	2.05
14.....	1.70	2.06	3.00	2.75	2.50	3.3	4.3				1.9
15.....	1.70	2.20		2.75	2.53	3.28	3.95	5.3	3.85		2.4
16.....	1.66	2.09		2.95	2.55	3.3	3.9				
17.....	1.63	1.98	3.15	2.80	2.70	3.35	3.8	5.2			2.32
18.....	1.68	2.25	3.00		2.80	3.5	3.7				
19.....	1.62	2.33	2.80	2.58		3.7	4.05		3.4		2.3
20.....	1.60	2.01		2.56	2.80	3.6	4.2	5.1			
21.....	1.59	2.02	3.25	2.60	2.85	3.6	4.3			2.15	2.18
22.....	1.62	2.07	2.65	2.78	2.90	3.95	4.7		3.2	2.0	2.18
23.....	1.63	2.14	3.00	2.58	3.10	4.0	5.0	4.7			
24.....	1.86	1.99	2.65	2.55	3.18	4.05	5.2		3.15		
25.....	1.86		2.50	2.58	3.30	4.2	4.55				1.98
26.....	1.65	2.05		2.30		4.5	4.45	4.35	2.9	1.98	
27.....	1.93	2.32	2.44		3.18	4.35	4.4	4.85	3.01		1.92
28.....	1.83	2.30		2.60	3.28	4.05					
29.....	1.81	2.35	2.75		3.40	3.9	4.55				1.92
30.....	1.81	2.01	4.80			3.95		4.3	2.8		
31.....		2.10	4.20		4.12					1.9	

Daily gage height, in feet, of Markleeville Creek at Markleeville, Cal., for 1910-1912—Con.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.									
1.			2 1	2 35	2 05	2 0	2 12		
2.				2 05	2 1	1 98	2 22		
3.				2 2	2 1	2 0	2 28	2 5	
4.	1 9	1 9		2 48	2 1	2 0	2 3	2 5	
5.				2 4	2 0	2 0	2 32	2 55	
6.				2 1	2 0	2 1	2 3	2 55	
7.	1 92			2 0	2 0	2 0	2 3	2 7	
8.				2 0	2 02	2 0		3 0	
9.				2 0	2 02	2 0		3 3	
10.				2 05	2 03	2 0		3 4	
11.		2 0		2 0	2 08	2 0	2 5	3 4	
12.			2 2	2 0	2 0	2 0	2 4		
13.				2 0	2 0	2 0	2 4	3 6	
14.				2 0	2 05	2 05	2 4	3 7	
15.			2 0	2 0	2 03	2 0	2 4	3 95	3 15
16.				2 02	2 02	2 0	2 42	4 0	
17.				1 98	2 05	2 02	2 41	4 1	
18.	1 78	1 8		1 97	2 1	2 02		4 1	
19.				1 96	2 02	2 02			
20.				1 98	2 1	2 05			
21.				2 0	2 04	2 0			
22.	1 98		2 2	2 0	2 05	2 02			
23.				2 0	2 0	2 02			2 75
24.				2 0	2 0	2 06			
25.		1 95		2 0	2 05	2 04			
26.				2 1	2 1	2 1			
27.				2 1	2 0	2 04			
28.				2 1	2 0	2 1			
29.				2 1	2 0	2 12			2 86
30.		1 97		2 1		2 12			
31.	1 92		2 4	2 08		2 12			

NOTE.—Ice existed at this station during January, 1912, but it is believed that records for Jan. 1-6, 1912 only were affected thereby.

Daily discharge, in second-feet, of Markleeville Creek at Markleeville, Cal., for 1910-1912.

Day.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.											
1.		9 3	25	178	44	235	305	372	386	68	13
2.		9 9	20	140	44	274	305	478	360	66	14
3.		10	19	137	44	312	338	583	372	64	13
4.		20	24	102	44	275	452	689	381	62	12
5.		12	17	95	44	355	540	795	390	60	11
6.		15	17	88	43	262	372	770	351	57	15
7.		17	16	82	43	235	338	780	322	54	20
8.		18	14	70	43	222	305	750	302	50	24
9.		20	16	76	43	248	372	786	281	47	28
10.		26	31	70	43	211	338	822	280	44	26
11.	5 8	38	25	68	43	178	372	840	270	40	23
12.	7	30	34	63	44	158	432	858	250	37	21
13.	7	26	60	58	46	275	412	877	260	31	18
14.	7	18	95	65	44	140	412	896	270	30	12
15.	7	25	102	65	46	137	290	915	262	29	37
16.	6 2	20	109	88	48	140	275	888	236	28	34
17.	5 6	15	116	70	60	149	248	860	210	26	32
18.	6 6	28	95	60	70	178	222	838	184	25	32
19.	5 4	33	70	50	70	222	322	816	158	24	31
20.	5	16	101	49	70	200	372	795	146	23	28
21.	4 9	17	132	52	76	200	412	725	134	22	24
22.	5 4	19	56	68	82	290	585	655	123	16	24
23.	5 6	22	95	50	108	305	740	585	120	16	21
24.	11	16	56	48	120	322	860	534	116	16	18
25.	11	17	44	50	140	372	518	483	99	15	15
26.	6	18	42	31	130	495	474	432	82	15	14
27.	13	32	40	42	120	432	452	660	96	15	13
28.	9 9	31	52	52	137	322	485	578	88	14	13
29.	9 3	34	65		158	275	518	495	79	14	13
30.	9 3	16	635		252	290	470	412	70	13	13
31.		20	372		345		421		70	12	

Daily discharge, in second-feet, of Markleeville Creek at Markleeville, Cal., for 1910-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12. *									
1.....	13	13	20	15	18	16	21	.....	.....
2.....	12	12	20	15	20	15	26	.....	.....
3.....	12	12	20	15	20	16	30	44	.....
4.....	12	12	22	15	20	16	31	44	.....
5.....	12	12	22	15	16	16	32	48	.....
6.....	13	13	22	15	16	20	31	48	.....
7.....	13	13	22	16	16	16	31	60	.....
8.....	13	14	24	16	17	16	34	95	.....
9.....	12	15	24	16	17	16	37	140	.....
10.....	12	16	24	18	17	16	40	158	.....
11.....	10	16	25	16	19	16	44	158	.....
12.....	10	15	25	16	16	16	37	179	.....
13.....	9	14	22	16	16	16	37	200	.....
14.....	9	13	21	16	18	18	37	222	.....
15.....	9	12	20	16	17	16	37	290	116
16.....	9	11	15	17	17	16	38	305	110
17.....	9	10	15	15	18	17	38	338	103
18.....	8.6	9	15	15	20	17	.....	338	97
19.....	9	9	15	14	17	17	.....	.....	91
20.....	12	10	15	15	20	18	.....	.....	84
21.....	14	10	15	16	18	16	.....	.....	77
22.....	15	11	15	16	18	17	.....	.....	71
23.....	15	12	15	16	16	17	.....	.....	65
24.....	15	13	15	16	16	18	.....	.....	67
25.....	15	14	15	16	18	18	.....	.....	69
26.....	14	14	15	20	20	20	.....	.....	71
27.....	14	14	15	20	16	18	.....	.....	73
28.....	14	14	15	20	16	20	.....	.....	75
29.....	13	15	15	20	16	21	.....	.....	77
30.....	13	15	15	20	.....	21	.....	.....	75
31.....	13	.....	15	19	.....	21	.....	.....	.....

NOTE.—Daily discharge determined from rating curves applicable as follows: Nov. 10, 1910, to June 30, 1912, fairly well defined. Discharge interpolated or estimated from run-off of adjacent streams for days on which the gage was not read. Discharge estimated Dec. 16, 1911, to Jan. 6, 1912, on account of ice.

Monthly discharge of Markleeville Creek at Markleeville, Cal., for 1910-1912.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1910-11.					
November 11-30.....	13	4.9	7.4	294	C.
December.....	60	9.3	22.5	1,380	C.
January.....	635	14	33.7	5,150	C.
February.....	178	31	73.8	4,100	C.
March.....	345	43	85.3	5,240	B.
April.....	495	137	257	15,300	A.
May.....	860	222	418	25,700	A.
June.....	915	372	699	41,600	A.
July.....	390	70	217	13,300	B.
August.....	68	12	33.3	2,050	B.
September.....	37	11	20.4	1,210	B.
The period .....	.....	.....	.....	115,000	
1911-12.					
October.....	15	8.6	12.1	744	C.
November.....	16	9	12.8	762	C.
December.....	25	.....	18.5	1,140	C.
January.....	20	14	16.5	1,010	B.
February.....	20	16	17.6	1,010	B.
March.....	21	15	17.3	1,060	B.
April 1-17.....	44	21	34.2	1,150	B.
May 3-18.....	338	44	167	5,300	B.
June 15-30.....	116	65	82.6	2,620	B.

PLEASANT VALLEY CREEK AT MARKLEEVILLE, CAL.

Pleasant Valley Creek, a tributary of Markleeville Creek, rises in Alpine County, Cal., on the east slope of the Sierra Nevada, near the summit of the divide separating Carson River waters from those of the Sacramento.

The gaging station, which is located at a footbridge 600 feet above the mouth of the creek, and about three-fourths of a mile southwest of Markleeville, in the NW. $\frac{1}{4}$ sec. 28, T. 10 N., R. 20 E., was established November 11, 1910, and discontinued January 11, 1912.

Three irrigation ditches divert water from this stream. Two of these ditches irrigate about 300 acres of land and the return water enters the creek above the gage; the third heads about half a mile above the mouth and was originally constructed for use in placer mining along the East Carson River below Hangman's Bridge but is now used for irrigation near the mouth of Markleeville Creek.

Storage reservoirs are partly developed by the Alpine Land & Reservoir Co. at Upper and Lower Sunset lakes, Tamarack Lake, Summit Lake, Raymond Lake, and Wet Meadows.

The gage is a vertical staff fastened to a cottonwood tree on the left bank, 25 feet above the footbridge.

At low and medium stages discharge measurements are made by wading; high-stage measurements are made from the footbridge.

A riffle, composed of large bowlders, is just below the gage and acts as a permanent control. The stream is rapid and the bed is rough.

This station is maintained in cooperation with the United States Forest Service.

Discharge measurements of Pleasant Valley Creek at Markleeville, Cal., in 1910-1912.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1910. Nov. 11	H. D. McGlashan.....	<i>Feet.</i> 2.91	<i>Sec.-ft.</i> 4.5	1911. July 30 Nov. 6	G. T. Peekema..... J. E. Stewart.....	<i>Feet.</i> 3.51 2.92	<i>Sec.-ft.</i> 40 4.8
1911. Apr. 12 June 22	J. E. Stewart..... .....do.....	3.94 5.04	92 331	1912. June 21	.....do.....	3.60	45

Daily gage height, in feet, of Pleasant Valley Creek at Markleeville, Cal., for 1910-1912.

Day.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.											
1.....		3.04	3.10	4.20	3.40	4.20	4.40	4.55			
2.....		3.04	2.90	4.05			4.40				2.80
3.....		3.20	3.01	4.04	3.40	4.40	4.45		4.40		
4.....		3.10	3.00	3.90	3.40	4.30	4.95				
5.....		2.98	3.03			4.30	5.30	5.30		3.40	2.75
6.....		3.07	3.08	3.75	3.40	4.10	4.60				
7.....		3.10	3.05	3.75		4.12	4.50		4.35		
8.....		3.12	3.50	3.78		4.10	4.50				
9.....		3.04	3.50	3.75	3.40	4.20	4.55				3.20
10.....		3.18	3.10	3.65	3.40	4.00	4.50	5.40			
11.....	2.91	3.30	3.07	3.65	3.40	4.00	4.60		4.20		
12.....	2.91	3.23	2.30			3.95	4.80			3.20	
13.....		3.19		3.65	3.40	3.90	4.60	5.45			
14.....	2.93	3.10	2.70	3.60	3.40	3.90	4.60			3.00	2.85
15.....		3.11		3.53	3.37	3.90	4.40		4.25		3.30
16.....	2.93	3.12		3.65	3.39	3.95	4.20				
17.....	2.92	3.10	3.30	3.55	3.41	3.95	4.25	5.50			3.30
18.....	2.94	3.08	3.00		3.45	4.00	4.20				
19.....	2.92	3.10	3.20	3.50		4.28	4.52		4.00		3.28
20.....	2.90	3.10		3.48	3.50	4.00	4.60	5.35			
21.....	2.90	3.12	3.30	3.50	3.50	4.05	5.01				
22.....	2.91	3.10		3.50	3.53	4.05	5.40		3.35	3.00	3.15
23.....	2.92	3.07	3.27	3.45	3.70	4.35	5.35				
24.....	3.00	3.10	3.43	3.40	3.78	4.55	5.45		3.80		
25.....	2.97		3.30	3.40	3.80	4.80	5.00		3.60		3.00
26.....	2.93	3.05	3.25	3.70		5.00	4.95	4.50		2.98	
27.....	2.91	3.08	3.20		3.80	4.70					2.92
28.....	3.04	3.02		3.40	3.85	4.50					
29.....	3.04	3.01			3.90	4.20	4.95				2.91
30.....	3.04	3.01				4.20		4.10	3.50		
31.....		3.01			4.12		4.65			2.85	

Day.	Oct.	Nov.	Dec.	Jan.	Day.	Oct.	Nov.	Dec.	Jan.
1911-12.					1911-12.				
1.....					16.....				
2.....					17.....				
3.....					18.....	2.90			
4.....	2.45	2.60			19.....				
5.....				3.02	20.....				
6.....				3.00	21.....	2.80			
7.....	2.50	2.92			22.....				
8.....				2.94	23.....				
9.....				2.98	24.....				
10.....				3.00	25.....				
11.....		2.95		3.00	26.....				
12.....					27.....				
13.....					28.....				
14.....					29.....				
15.....					30.....				
					31.....	2.75			

Daily discharge, in second-feet, of Pleasant Valley Creek at Markleeville, Cal., for 1910-11.

Day.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.											
1.....		12	15	126	34	126	164	195	128	39	4.5
2.....		12	6.0	103	34	145	164	255	146	38	4.0
3.....		20	10	102	34	164	174	315	164	36	4.0
4.....		15	10	84	34	144	306	375	162	35	3.5
5.....		9.2	12	75	34	144	435	435	159	34	3.5
6.....		14	14	66	34	110	206	450	156	32	8.0
7.....		15	12	66	34	113	184	435	154	30	12
8.....		16	42	70	34	110	184	420	147	28	16
9.....		12	42	66	34	126	195	450	140	26	20
10.....		19	15	55	34	96	184	480	133	24	17
11.....	6.4	26	14	55	34	96	206	487	126	22	14
12.....	6.4	22	0.5	55	34	90	260	495	128	20	11
13.....	6.8	20	1.8	55	34	84	206	502	130	15	8.0
14.....	7.2	15	3.0	50	34	84	206	518	132	10	5.0
15.....	7.2	16	10	44	32	84	164	534	135	10	26
16.....	7.2	16	18	55	33	90	126	550	126	10	26
17.....	6.8	15	26	46	35	90	135	525	116	10	26
18.....	7.6	14	10	44	38	96	126	502	106	10	26
19.....	6.8	15	20	42	40	141	188	480	96	10	25
20.....	6.0	15	35	40	42	96	206	458	74	10	22
21.....	6.0	16	26	42	42	103	326	413	52	10	20
22.....	6.4	15	25	42	44	103	480	368	30	10	18
23.....	6.8	14	24	38	60	154	458	322	51	10	15
24.....	10	15	36	34	70	195	502	276	72	10	12
25.....	8.8	14	26	34	72	260	322	230	50	10	10
26.....	7.2	12	23	60	72	322	306	184	48	9.2	8.4
27.....	6.4	14	20	47	72	232	333	165	46	9.0	6.8
28.....	12	11	86	34	78	184	360	147	44	8.0	6.6
29.....	12	10	154	.....	84	126	306	128	43	7.0	6.4
30.....	12	10	220	.....	98	126	262	110	42	6.0	6.0
31.....	.....	10	173	.....	113	.....	219	.....	40	5.0	.....

Day.	Oct.	Nov.	Day.	Oct.	Nov.	Day.	Oct.	Nov.
1911.								
1.....	5.0	3.1	11.....	3.1	8.0	21.....	4.0	.....
2.....	4.0	2.8	12.....	3.5	.....	22.....	4.0	.....
3.....	3.0	2.4	13.....	3.9	.....	23.....	4.0	.....
4.....	1.2	2.0	14.....	4.3	.....	24.....	4.0	.....
5.....	1.3	3.6	15.....	4.7	.....	25.....	4.0	.....
6.....	1.4	5.2	16.....	5.1	.....	26.....	4.0	.....
7.....	1.5	6.8	17.....	5.6	.....	27.....	3.5	.....
8.....	1.9	7.1	18.....	6.0	.....	28.....	3.5	.....
9.....	2.3	7.4	19.....	5.0	.....	29.....	3.5	.....
10.....	2.7	7.7	20.....	5.0	.....	30.....	3.5	.....
						31.....	3.5	.....

NOTE.—Daily discharge determined from a fairly well defined rating curve. Discharge interpolated or estimated from run-off of neighboring streams for days on which the gage was not read.

Monthly discharge of Pleasant Valley Creek at Markleeville, Cal., for 1910-11.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1910-11.					
November 11-30.....	12	6.0	7.80	309	C.
December.....	26	9.2	14.8	910	C.
January.....	220	.5	36.4	2,240	C.
February.....	126	34	58.2	3,230	C.
March.....	113	32	48.4	2,980	B.
April.....	322	84	134	7,970	B.
May.....	502	126	255	15,700	A.
June.....	550	110	373	22,200	A.
July.....	164	40	102	6,270	B.
August.....	39	5.0	17.5	1,080	C.
September.....	26	3.5	13.0	774	C.
The period.....				63,700	
1911.					
October.....	6.0	1.2	3.61	222	C.
November 1-11.....	8.0	2.0	5.10	111	C.

MISCELLANEOUS MEASUREMENTS.

The following miscellaneous measurements have been made on creeks and ditches in the Carson River basin:

Miscellaneous measurements of creeks in Carson River drainage basin in California.

Date.	Stream.	Hydrographer.	Locality.	Discharge.
				<i>Sec.-ft.</i>
Aug. 6, 1902	Bruns Creek.....	C. V. Taylor.....	Mouth of canyon.....	2.84
Sept. 9, 1902	.....do.....	L. L. Richard.....	.....do.....	3.48
Apr. 28, 1903	Fairview Creek.....	A. H. Schadler.....	Above all diversions.....	2.8
May 20, 1903	.....do.....	.....do.....	.....do.....	4.2
July 9, 1903	.....do.....	.....do.....	.....do.....	3.3
July 24, 1903	.....do.....	W. B. Harrington.....	.....do.....	3.3
Aug. 5, 1903	.....do.....	.....do.....	.....do.....	2.2
Sept. 9, 1903	.....do.....	.....do.....	.....do.....	3.1
Aug. 6, 1903	Fredericksburg Creek.....	.....do.....	.....do.....	4.2
Sept. 9, 1903	.....do.....	.....do.....	.....do.....	2.9
Apr. 29, 1903	Harveys Creek.....	A. H. Schadler.....	.....do.....	2.4
May 21, 1903	.....do.....	.....do.....	.....do.....	2.2
June 24, 1903	.....do.....	.....do.....	.....do.....	2.8
July 18, 1903	.....do.....	.....do.....	.....do.....	.2
July 23, 1903	.....do.....	W. B. Harrington.....	.....do.....	1.3
Aug. 5, 1903	.....do.....	.....do.....	.....do.....	1.8
Sept. 9, 1903	.....do.....	.....do.....	.....do.....	.4
Aug. 6, 1902	Hawkins Creek.....	C. V. Taylor.....	$\frac{1}{2}$ mile above Hawkins's house.....	1.18
Sept. 9, 1902	.....do.....	L. L. Richard.....	.....do.....	1.10
July 23, 1903	.....do.....	W. B. Harrington.....	Above all diversions.....	.8
Aug. 5, 1903	.....do.....	.....do.....	.....do.....	1.0
Sept. 9, 1903	.....do.....	.....do.....	.....do.....	.9
Aug. 6, 1902	Indian Creek.....	C. V. Taylor.....	Head Cohn and Harvey ditch.....	.72
Aug. 5, 1902	Long Valley Creek.....	.....do.....	Diamond Valley.....	4.12
Aug. 6, 1902	Petersons Creek.....	.....do.....	Near old sawmill.....	1.27
Sept. 9, 1902	.....do.....	L. L. Richard.....	Above Cohn's meadow.....	.41
June 24, 1903	Creek above Markleeville.....	A. H. Schadler.....	.....do.....	.4

Miscellaneous measurements of Carson River ditches in California, in 1903, by A. H. Schadler.

Date.	Ditch.	Discharge.	Date.	Ditch.	Discharge.
<i>East Fork of Carson ditches.</i>					
		<i>Sec.-ft.</i>			<i>Sec.-ft.</i>
June 24	Grover Hot Springs.....	3.0	Apr. 30	Heimsoth, Old.....	4.1
24	Markleeville.....	7.1	May 22	do.....	2.3
25	Mayo.....	2.9	June 24	do.....	3.0
			July 11	do.....	2.9
<i>West Fork of Carson ditches.</i>			Apr. 30	Stuart No. 1.....	.5
			May 22	do.....	.3
Apr. 23	Clogston, Dudley, Harvey, and Trimmer.....	Trace.	June 24	do.....	1.1
29	do.....	.0	July 11	do.....	.7
May 22	do.....	4.3	Apr. 30	Stuart No. 2.....	1.6
June 24	do.....	9.4	May 22	do.....	.5
July 10	do.....	10.8	June 26	do.....	1.9
Apr. 29	Woodfords.....	.0	July 11	do.....	.7
May 1	do.....	.0	Apr. 30	Stuart flume.....	.6
July 10	do.....	.5	May 22	do.....	.0
Apr. 23	Millich and Gallenor.....	1.8	June 24	do.....	2.8
29	do.....	4.5	July 11	do.....	2.5
May 21	do.....	7.4	Apr. 30	J. Scossa.....	4.6
June 24	do.....	6.7	May 22	do.....	.0
July 10	do.....	4.8	June 24	do.....	6.3
Apr. 23	Dudley and Ellis.....	.0	July 14	do.....	8.9
29	do.....	1.4	Apr. 23	Fredericksburg.....	20.0
May 21	do.....	8.7	30	do.....	27.0
June 24	do.....	8.8	May 22	do.....	2.5
July 10	do.....	9.5	June 26	do.....	29.0
Apr. 29	Cary.....	5.0	July 11	do.....	14.0
May 21	do.....	.0	Apr. 23	Chambers.....	5.8
July 10	do.....	.9	30	do.....	7.5
Apr. 23	Vallem, Scossa, Johns, and Barber.....	Trace.	May 22	do.....	1.2
29	do.....	2.4	June 24	do.....	6.1
May 22	do.....	.7	July 11	do.....	6.0
June 24	do.....	7.3	Apr. 30	Jarvis No. 1.....	3.0
July 10	do.....	4.9	May 22	do.....	1.3
Apr. 23	Henningson, South.....	1.4	June 26	do.....	1.7
29	do.....	.6	July 11	do.....	.9
May 22	do.....	.6	Apr. 30	Jarvis No. 2.....	2.5
Apr. 23	Henningson, North.....	1.3	May 22	do.....	.0
29	do.....	3.7	June 26	do.....	.8
May 22	do.....	2.3	July 11	do.....	.4
June 24	do.....	6.9	May 1	Deluchi No. 1.....	10.4
July 11	do.....	4.5	23	do.....	9.7
Apr. 30	Heimsoth, New.....	1.5	June 24	do.....	11.1
May 22	do.....	.6	July 11	do.....	8.0
June 24	do.....	1.9	May 1	Faith and Tillman.....	15.2
July 11	do.....	1.4	23	do.....	8.0
			June 24	do.....	21.0
			July 11	do.....	9.3

WALKER LAKE BASIN.

WEST WALKER RIVER NEAR COLEVILLE, CAL. (UPPER STATION).

This station, which was established October 5, 1902, to determine the total flow of the river above all diversions and to obtain for the Reclamation Service reliable data concerning storage and irrigation opportunities, was discontinued July 31, 1908. The data were also used by the Nevada State engineer in adjusting water rights in Smith and Antelope valleys.

The cable was located about 1 mile east of the point where the main road from Topaz to Bridgeport crosses Lost Canyon Creek and is 600 feet from the road. The gage was about half a mile above the cable.

The gage datum remained unchanged during the continuance of the station. The channel is permanent, the flow is apparently unaffected by ice or artificial control, and the record is good.

Discharge measurements of West Walker River near Coleville, Cal., in 1902-1908.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1902.		<i>Feet.</i>	<i>Sec.-ft.</i>	1905.		<i>Feet.</i>	<i>Sec.-ft.</i>
July 25	L. H. Taylor.....		331	May 3	J. L. Brambila.....	2.50	349
Sept. 23	D. W. Hays.....		32	11	do.....	2.15	232
Oct. 4	do.....		70	24	do.....	3.45	846
1903.				June 6	do.....	3.10	657
Apr. 8	D. W. Hays.....	2.00	225	29	do.....	3.20	694
30	I. W. Huffaker.....	2.65	476	July 8	do.....	3.10	645
June 8	do.....	4.00	1,887	24	do.....	2.00	202
July 14	do.....	2.70	451	25	do.....	2.30	333
28	do.....	2.20	260	Aug. 30	W. A. Wolf.....	1.30	81
Aug. 7	do.....	1.85	184	1906.			
Sept. 29	W. A. Wolf.....	1.08	65	May 11	M. B. Kennedy.....	4.10	1,790
1904.				16	do.....	3.50	1,220
Mar. 23	L. A. Wolley.....	1.80	163	June 8	do.....	3.30	960
May 4	R. A. Craig.....	2.32	345	13	do.....	4.70	2,150
July 5	J. T. Shaw.....	3.82	1,022	July 19	do.....	4.15	1,890
13	do.....	3.29	705	Aug. 19	do.....	3.00	627
20	do.....	3.38	847	1907.			
27	do.....	3.18	707	June 11	E. A. Porter.....	4.20	1,570
Aug. 3	do.....	2.79	526	July 10	do.....	4.75	1,980
10	do.....	2.62	459	Aug. 4	do.....	3.65	1,000
17	do.....	2.62	480	25	do.....	2.80	440
24	do.....	2.21	267	1908.			
Sept. 8	do.....	1.65	145	Mar. 28	E. A. Porter.....	1.80	170
Oct. 17	do.....	2.05	237	Apr. 17	do.....	2.60	359

Daily gage height, in feet, of West Walker River near Coleville, Cal., for 1902-1908.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1902-3.												
1.....		1.3	1.3	1.2	1.4	1.2	1.6	2.7	4.1	3.5	2.0	1.3
2.....		1.2	1.2	1.4	1.3	1.3	1.7	2.8	4.0	3.3	2.0	1.3
3.....		1.2	1.2	1.2	1.2	1.3	1.7	3.0	3.9	3.0	1.9	1.3
4.....		1.2	1.3	1.1	1.1	1.2	1.6	3.1	3.8	3.1	1.9	1.3
5.....	1.1	1.2	1.4	1.3	1.0	1.2	1.5	3.2	3.9	3.0	1.8	1.3
6.....	1.1	1.2	1.3	1.3	1.2	1.3	1.5	3.2	4.0	3.0	1.8	1.3
7.....	1.1	1.2	1.3	1.2	1.3	1.1	1.7	3.4	3.9	2.9	1.7	1.2
8.....	1.1	1.2	1.3	1.1	1.4	1.2	1.9	3.4	4.0	2.5	1.7	1.2
9.....	1.0	1.2	1.3	1.0	1.3	1.2	2.2	3.3	4.1	2.5	1.9	1.2
10.....	1.0	1.5	1.3	1.0	1.2	1.3	2.3	3.5	4.0	2.5	1.8	1.2
11.....	1.0	1.5	1.2	1.0	1.2	1.1	2.3	3.7	3.9	2.5	1.8	1.2
12.....	1.0	1.5	1.1	1.0	1.3	1.1	1.9	3.8	3.8	2.4	1.8	1.2
13.....	1.0	1.2	1.0	1.0	1.2	1.2	2.0	4.0	3.9	2.3	1.7	1.2
14.....	1.0	1.2	1.3	1.0	1.3	1.3	1.6	3.6	3.8	2.3	1.7	1.2
15.....	1.0	1.2	1.2	1.0	1.3	1.3	1.7	3.5	3.7	2.2	1.7	1.2
16.....	1.0	1.3	1.3	1.0	1.2	1.4	1.8	3.4	3.7	2.3	1.6	1.2
17.....	1.0	1.2	1.1	1.1	1.3	1.3	1.8	3.3	3.3	2.3	1.6	1.2
18.....	1.0	1.3	1.0	1.0	1.3	1.3	1.9	3.1	3.2	2.3	1.6	1.2
19.....	1.0	1.2	1.0	1.0	1.2	1.2	1.8	2.9	3.5	2.2	1.6	1.2
20.....	1.0	1.3	1.0	1.1	1.2	1.3	1.8	2.8	3.6	2.3	1.6	1.2
21.....	1.0	1.4	1.2	1.0	1.1	1.4	1.9	2.5	3.6	2.4	1.6	1.2
22.....	1.0	1.4	1.2	1.0	1.2	1.3	2.1	2.5	3.6	2.4	1.6	1.2
23.....	1.0	1.3	1.2	1.2	1.2	1.3	2.5	2.5	3.5	2.4	1.6	1.1
24.....	1.2	1.2	1.0	1.0	1.3	1.3	2.7	2.4	3.6	2.2	1.5	1.1
25.....	1.2	1.2	1.3	1.1	1.3	1.4	2.5	2.4	3.7	2.1	1.5	1.1
26.....	1.2	1.3	1.3	1.2	1.2	1.6	2.7	2.4	3.7	2.1	1.4	1.1
27.....	1.2	1.3	1.1	1.4	1.2	1.6	2.5	2.9	3.7	2.1	1.4	1.2
28.....	1.3	1.1	1.0	1.1	1.3	2.3	2.6	3.2	3.6	2.1	1.4	1.1
29.....	1.3	1.3	1.1	1.0	.....	2.2	2.7	3.4	3.6	2.1	1.4	1.1
30.....	1.3	1.3	1.2	1.0	.....	2.1	2.5	3.9	3.5	2.0	1.4	1.1
31.....	1.3	.....	1.2	1.3	.....	1.7	.....	4.0	.....	1.9	1.3	.....
1903-4.												
1.....	1.1	1.1	1.2	1.1	1.0	1.7	2.0	2.0	3.7	3.7	2.7	1.9
2.....	1.1	1.1	1.1	1.1	1.0	1.7	2.0	2.1	3.4	3.7	2.5	1.8
3.....	1.1	1.1	1.1	1.1	1.0	1.7	2.0	2.2	3.7	3.5	2.5	1.8
4.....	1.1	1.1	1.1	1.1	1.0	1.7	1.9	2.2	4.0	3.5	2.5	1.8
5.....	1.1	1.1	1.1	1.1	1.0	1.7	1.8	2.3	4.0	3.5	2.6	1.8
6.....	1.1	1.1	1.1	1.1	1.0	1.7	1.9	2.5	4.3	3.5	2.7	1.8
7.....	1.1	1.1	1.1	1.1	1.0	1.8	2.0	3.0	4.2	3.6	2.6	1.8
8.....	1.1	1.1	1.1	1.1	1.0	2.0	2.6	3.3	4.0	3.5	2.5	1.7
9.....	1.2	1.1	1.1	1.1	1.0	2.0	2.6	3.4	3.9	3.6	2.5	1.7
10.....	1.1	1.1	1.1	1.1	1.0	1.8	2.7	3.5	3.8	3.7	2.5	1.7
11.....	1.1	1.1	1.1	1.1	1.1	1.9	2.8	3.5	3.9	3.7	2.5	1.7
12.....	1.1	1.1	1.2	1.1	1.2	1.8	3.1	3.5	4.1	3.7	2.4	1.6
13.....	1.1	1.2	1.1	1.0	1.2	1.9	3.1	3.9	4.1	3.4	2.5	1.5
14.....	1.1	1.4	1.1	1.0	1.2	1.7	3.0	3.6	4.0	3.1	2.6	1.7
15.....	1.1	1.2	1.1	1.0	1.3	1.8	3.0	3.7	4.2	3.1	2.6	1.8
16.....	1.1	1.2	1.1	1.0	1.7	1.8	2.7	3.7	4.1	3.1	2.6	1.8
17.....	1.1	1.1	1.1	1.0	1.3	1.7	2.6	3.6	4.0	3.1	2.4	1.8
18.....	1.1	1.2	1.1	1.0	1.3	1.8	2.7	3.6	4.0	3.1	2.2	1.8
19.....	1.1	1.2	1.1	1.0	1.3	2.0	2.7	3.9	4.1	3.1	2.2	1.7
20.....	1.1	1.2	1.1	1.0	1.3	2.1	2.6	3.7	4.1	3.1	2.2	1.7
21.....	1.1	1.2	1.1	1.0	1.5	2.1	2.5	3.6	4.1	3.3	2.1	1.7
22.....	1.1	1.2	1.1	1.0	2.0	1.9	2.5	3.7	4.0	3.5	2.0	1.6
23.....	1.1	1.3	1.1	1.0	2.7	1.8	2.5	4.0	3.9	3.4	2.0	1.7
24.....	1.1	1.4	1.1	1.0	2.7	1.7	2.6	4.4	3.8	3.4	2.1	1.8
25.....	1.1	1.4	1.1	1.0	2.4	1.8	2.7	4.9	3.7	3.3	2.2	2.0
26.....	1.1	1.4	1.1	1.0	2.0	1.8	2.6	3.8	3.7	3.2	2.1	1.9
27.....	1.1	1.4	1.1	1.0	1.8	1.9	2.2	3.7	3.7	3.2	2.1	1.9
28.....	1.1	1.4	1.1	1.0	1.8	2.0	2.2	3.8	3.8	3.0	2.1	1.9
29.....	1.1	1.3	1.1	1.0	1.8	2.3	2.1	3.9	3.8	2.9	2.1	2.0
30.....	1.1	1.3	1.1	1.0	.....	2.1	2.0	4.0	3.7	2.7	2.0	2.4
31.....	1.1	.....	1.1	1.0	.....	2.0	.....	4.0	.....	2.6	1.9	.....

Daily gage height, in feet, of West Walker River near Coleville, Cal., for 1902-1908—
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1904-5.												
1.....	2.8	1.8	1.4	1.3	1.4	1.5	1.7	2.9	3.1	2.9	1.9	1.2
2.....	2.8	1.7	1.4	1.3	1.4	1.5	1.7	2.7	3.1	2.9	1.9	1.1
3.....	2.8	1.7	1.3	1.2	1.4	1.5	1.8	2.7	3.0	2.8	1.8	1.2
4.....	2.8	1.7	1.3	1.2	1.4	1.6	1.8	2.6	3.1	2.7	1.8	1.2
5.....	2.8	1.7	1.3	1.2	1.3	1.7	2.0	2.1	3.1	2.6	1.8	1.2
6.....	2.7	1.7	1.3	1.2	1.3	1.7	2.1	2.3	3.0	2.7	1.7	1.2
7.....	2.8	1.6	1.2	1.2	1.4	1.7	2.1	2.3	2.9	2.7	1.6	1.2
8.....	2.7	1.6	1.2	1.2	1.4	1.7	2.1	2.2	3.0	2.8	1.6	1.2
9.....	1.6	1.6	1.3	1.2	1.4	1.7	2.2	2.2	3.1	2.8	1.6	1.2
10.....	2.0	1.6	1.4	1.2	1.3	1.7	2.1	2.1	3.2	2.7	1.6	1.1
11.....	2.6	1.6	1.6	1.2	1.3	1.7	2.1	2.1	3.5	2.7	1.5	1.1
12.....	2.3	1.6	1.4	1.2	1.3	1.7	2.1	2.2	3.7	2.6	1.5	1.1
13.....	2.5	1.5	1.4	1.2	1.3	1.7	2.1	2.3	3.9	2.5	1.5	1.1
14.....	2.3	1.5	1.4	1.2	1.3	1.7	2.1	2.9	3.9	2.5	1.5	1.1
15.....	2.2	1.5	1.4	1.2	1.3	1.7	2.0	3.4	3.8	2.4	1.5	1.1
16.....	2.1	1.54	1.4	1.2	1.4	1.7	2.1	3.5	3.6	2.4	1.5	1.1
17.....	2.0	1.5	1.3	1.2	1.4	1.7	2.1	3.5	3.6	2.3	1.4	1.1
18.....	2.0	1.5	1.3	1.2	1.3	1.8	2.2	3.6	3.7	2.2	1.4	1.1
19.....	2.0	1.5	1.2	1.2	1.3	1.8	2.2	3.5	3.8	2.1	1.4	1.1
20.....	2.0	1.5	1.2	1.3	1.3	1.8	2.1	3.5	3.9	2.1	1.4	1.05
21.....	2.0	1.5	1.3	1.3	1.3	1.7	2.0	3.4	3.8	2.2	1.4	1.05
22.....	2.0	1.5	1.3	1.3	1.3	1.7	2.1	3.3	3.7	2.2	1.4	1.05
23.....	1.9	1.5	1.2	1.3	1.3	1.6	2.2	3.2	3.5	2.2	1.4	1.05
24.....	1.9	1.5	1.1	1.4	1.3	1.6	2.2	3.3	3.3	2.2	1.4	1.05
25.....	1.9	1.5	1.1	1.4	1.4	1.6	2.4	3.3	3.1	2.2	1.3	1.05
26.....	1.9	1.5	1.1	1.3	1.4	1.6	2.5	3.2	3.0	2.1	1.3	1.05
27.....	1.8	1.5	1.1	1.3	1.4	1.6	2.4	3.0	2.9	2.1	1.2	1.05
28.....	1.8	1.5	1.1	1.3	1.5	1.6	2.9	2.9	2.8	2.1	1.2	1.2
29.....	1.8	1.5	1.3	1.3	-----	1.6	3.1	2.8	2.8	2.0	1.2	1.2
30.....	1.8	1.5	1.4	1.3	-----	1.8	3.1	3.0	2.9	2.0	1.2	1.2
31.....	1.8	-----	1.3	1.3	-----	1.7	-----	3.1	-----	2.0	1.2	-----
1905-6.												
1.....	1.2	1.1	.9	1.1	1.3	1.4	1.6	2.9	3.0	5.1	3.3	2.2
2.....	1.2	1.1	.9	1.1	1.3	1.6	1.6	3.1	3.2	5.3	3.25	2.1
3.....	1.2	1.1	1.1	.9	1.3	1.4	1.6	3.1	3.4	5.45	3.1	2.1
4.....	1.2	1.9	1.1	1.1	1.3	1.3	1.6	3.5	3.6	5.45	3.0	2.1
5.....	1.2	1.1	1.1	1.1	1.3	1.3	1.6	3.8	3.7	5.4	3.0	2.0
6.....	1.05	1.1	1.1	1.1	1.3	1.3	1.5	3.9	3.5	5.35	3.0	2.0
7.....	1.1	1.1	1.1	1.1	1.3	1.3	1.5	4.0	3.3	5.25	3.1	2.1
8.....	1.1	1.1	1.1	1.1	1.2	1.3	1.6	4.0	3.5	5.35	3.0	2.1
9.....	1.05	1.1	1.2	1.1	1.2	1.3	1.7	4.1	3.5	4.9	3.0	2.0
10.....	1.05	1.1	1.2	1.1	1.2	1.3	2.0	4.1	4.35	4.6	2.9	2.0
11.....	1.05	1.1	1.1	1.1	1.2	1.4	1.9	4.1	4.8	4.7	2.9	2.0
12.....	1.05	.9	1.1	1.1	1.2	1.5	1.9	3.9	5.2	4.45	2.9	2.0
13.....	1.05	.9	1.1	1.2	1.2	1.4	2.0	3.9	5.2	4.45	2.9	2.0
14.....	1.05	.8	1.1	1.2	1.2	1.4	2.1	3.9	4.55	5.0	2.9	2.0
15.....	1.05	.8	1.2	1.2	1.2	1.3	2.2	3.7	4.8	4.6	2.8	2.2
16.....	1.0	.8	1.2	1.2	1.2	1.4	2.3	3.6	5.35	4.3	2.7	2.1
17.....	1.0	.9	1.1	1.2	1.2	1.4	2.5	3.5	4.9	4.45	2.6	2.0
18.....	1.0	.9	1.1	1.5	1.2	1.4	2.6	3.6	4.75	4.15	2.6	1.9
19.....	1.0	.9	1.1	1.5	1.2	1.4	2.7	3.8	5.15	4.0	3.0	1.8
20.....	1.0	.9	1.1	1.4	1.2	1.4	2.9	3.8	5.25	4.15	2.8	1.7
21.....	1.0	.9	1.1	1.3	1.2	1.5	2.9	3.8	5.15	4.1	2.6	1.7
22.....	1.0	.8	1.1	1.3	1.3	1.5	3.2	3.7	5.15	4.15	2.5	1.7
23.....	1.0	.9	1.1	1.3	1.3	1.5	3.1	3.5	4.9	4.4	2.4	1.7
24.....	1.0	.9	1.2	1.3	1.2	1.6	3.1	3.5	4.75	4.35	2.4	1.6
25.....	1.0	.8	1.2	1.2	1.3	1.6	3.0	3.5	5.15	4.35	2.2	1.5
26.....	1.0	.9	1.2	1.2	1.3	1.6	2.8	3.3	4.95	4.3	2.2	1.5
27.....	1.0	.9	1.1	1.2	1.3	1.5	2.9	3.3	4.45	4.25	2.2	1.5
28.....	1.0	.9	1.1	1.2	1.3	1.6	2.9	3.2	4.25	3.85	2.2	1.5
29.....	1.0	1.1	.9	1.3	-----	1.6	2.9	3.1	4.2	3.6	2.2	1.5
30.....	1.0	1.1	.9	1.3	-----	1.7	2.7	3.0	4.25	3.55	2.2	1.5
31.....	1.0	-----	.9	1.3	-----	1.7	-----	3.0	-----	3.4	2.1	-----

Daily gage height, in feet, of West Walker River near Coleville, Cal., for 1902-1908—
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1906-7.												
1.....	1.5	1.5	1.3	1.4	1.4	1.6	2.2	3.3	4.95	5.85	3.8	2.4
2.....	1.5	1.4	1.3	1.3	1.4	1.5	2.1	3.3	5.1	5.85	3.7	2.4
3.....	1.5	1.4	1.3	1.3	1.5	1.5	2.0	3.3	5.4	5.9	3.6	2.4
4.....	1.4	1.4	1.3	1.3	1.6	1.6	2.0	3.4	5.45	5.85	3.4	2.4
5.....	1.4	1.5	1.3	1.3	1.8	1.6	2.0	3.5	5.3	5.8	3.4	2.4
6.....	1.4	1.5	1.3	1.3	1.8	1.6	2.0	3.4	5.3	5.75	3.4	2.4
7.....	1.4	1.5	1.4	1.3	1.8	1.6	2.0	3.2	4.9	5.6	3.3	2.4
8.....	1.4	1.4	1.4	1.4	1.7	1.6	2.0	3.1	4.5	5.3	3.2	2.4
9.....	1.4	1.4	1.4	1.4	1.7	1.6	2.1	3.2	4.35	4.8	3.1	2.4
10.....	1.4	1.4	1.4	1.4	1.6	1.6	2.2	3.3	4.3	4.75	3.1	2.4
11.....	1.4	1.4	1.4	1.4	1.6	1.6	2.4	3.5	4.4	4.75	3.0	2.4
12.....	1.4	1.4	1.4	1.4	1.6	1.7	2.3	3.5	4.1	4.65	3.0	2.4
13.....	1.4	1.4	1.4	1.4	1.6	1.7	2.7	3.5	4.05	4.65	3.1	2.4
14.....	1.4	1.4	1.4	1.3	1.6	1.8	3.2	3.5	3.45	4.6	3.2	2.3
15.....	1.4	1.4	1.4	1.3	1.6	1.8	3.2	3.5	3.4	4.45	3.3	2.3
16.....	1.4	1.4	1.4	1.3	1.6	1.8	3.2	3.6	3.2	4.45	3.4	2.3
17.....	1.4	1.4	1.4	1.3	1.6	2.9	3.1	3.7	2.85	4.4	3.4	2.2
18.....	1.4	1.4	1.4	1.3	1.5	3.8	3.1	3.9	2.9	4.35	3.4	2.1
19.....	1.4	1.3	1.3	1.3	1.5	4.1	3.0	4.1	3.1	4.35	3.3	2.1
20.....	1.4	1.3	1.3	1.4	1.5	3.9	3.1	4.0	3.2	4.2	3.2	2.0
21.....	1.4	1.3	1.3	1.4	1.6	3.7	3.2	4.0	3.35	4.2	3.1	2.0
22.....	1.3	1.3	1.3	1.4	1.6	3.5	3.2	4.0	3.45	4.25	2.9	2.0
23.....	1.4	1.3	1.3	1.4	1.6	3.1	3.2	4.0	4.05	4.25	2.8	2.0
24.....	1.4	1.3	1.3	1.4	1.5	2.4	3.2	3.9	3.95	4.4	2.7	2.0
25.....	1.4	1.4	1.4	1.4	1.5	2.0	3.3	3.9	4.2	4.35	2.7	1.9
26.....	1.4	1.3	1.4	1.4	1.6	2.0	3.3	3.9	4.35	4.35	2.6	1.9
27.....	1.4	1.3	1.5	1.4	1.6	2.1	3.3	3.9	4.7	4.35	2.6	1.9
28.....	1.4	1.3	1.5	1.5	1.6	2.1	3.3	3.9	5.2	4.45	2.6	1.9
29.....	1.3	1.3	1.4	1.5	.....	2.2	3.3	3.9	5.6	4.2	2.5	1.8
30.....	1.4	1.3	1.4	1.5	.....	2.3	3.3	4.1	5.5	4.0	2.5	1.8
31.....	1.4	.....	1.4	1.4	.....	2.2	.....	4.6	.....	3.9	2.5	.....
Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.		
1907-8.												
1.....	1.9	1.8	1.4	1.5	1.4	1.3	2.0	3.3	2.9	3.0	3.0	3.1
2.....	1.8	1.7	1.4	1.5	1.4	1.3	2.0	3.2	3.0	3.1	3.0	3.1
3.....	1.8	1.7	1.5	1.5	1.4	1.3	2.0	3.0	2.9	3.1	3.0	3.1
4.....	1.8	1.7	1.5	1.5	1.4	1.3	2.1	2.8	2.8	3.1	3.0	3.1
5.....	1.8	1.7	1.5	1.5	1.4	1.3	2.2	2.7	2.9	3.1	3.0	3.1
6.....	1.8	1.7	1.5	1.5	1.3	1.3	2.2	2.9	3.0	3.1	3.0	3.1
7.....	1.8	1.7	1.5	1.5	1.3	1.3	2.0	3.1	3.2	3.0	3.0	3.1
8.....	1.8	1.7	1.5	1.5	1.3	1.3	2.0	2.9	3.4	3.1	3.0	3.1
9.....	1.8	1.7	1.5	1.5	1.3	1.4	2.0	2.7	3.4	3.0	3.0	3.1
10.....	1.8	1.7	1.5	1.6	1.3	1.5	2.1	2.7	3.4	2.9	3.0	3.1
11.....	1.8	1.7	1.6	1.6	1.3	1.5	2.2	2.6	3.5	2.9	3.0	3.1
12.....	1.8	1.7	1.6	1.6	1.3	1.6	2.5	2.6	3.5	2.8	3.0	3.1
13.....	1.8	1.7	1.6	1.5	1.3	1.7	2.7	2.6	3.6	2.8	3.0	3.1
14.....	1.7	1.6	1.5	1.5	1.4	1.7	2.8	2.6	3.5	2.7	3.0	3.1
15.....	1.7	1.6	1.5	1.5	1.5	1.8	2.7	2.9	3.3	2.6	3.0	3.1
16.....	1.7	1.6	1.5	1.5	1.5	1.8	2.7	2.6	3.2	2.5	3.0	3.1
17.....	1.7	1.6	1.5	1.5	1.6	1.9	2.6	2.5	3.2	2.5	3.0	3.1
18.....	1.7	1.8	1.5	1.5	1.7	2.0	2.6	2.5	3.1	2.5	3.0	3.1
19.....	1.7	1.7	1.5	1.5	1.6	2.0	2.4	2.6	3.1	2.5	3.0	3.1
20.....	1.7	1.6	1.5	1.5	1.5	2.0	2.1	2.6	2.9	2.5	3.0	3.1
21.....	1.7	1.6	1.6	1.5	1.5	2.1	2.0	2.6	2.8	2.4	3.0	3.1
22.....	1.7	1.6	1.6	1.5	1.4	2.1	1.8	2.7	2.8	2.4	3.0	3.1
23.....	1.7	1.6	1.5	1.4	1.4	2.1	1.7	2.9	2.9	2.4	3.0	3.1
24.....	1.7	1.6	1.5	1.4	1.4	2.2	2.0	3.0	3.0	2.4	3.0	3.1
25.....	1.7	1.6	1.5	1.5	1.4	2.2	2.5	3.2	3.1	2.4	3.0	3.1
26.....	1.8	1.5	1.5	1.5	1.4	2.1	2.6	3.2	3.1	2.5	3.0	3.1
27.....	1.9	1.5	1.5	1.5	1.4	2.0	2.8	3.2	3.2	2.5	3.0	3.1
28.....	1.9	1.5	1.6	1.5	1.4	2.0	3.0	3.1	3.2	2.5	3.0	3.1
29.....	1.8	1.5	1.6	1.5	1.3	1.9	3.1	3.4	3.1	2.4	3.0	3.1
30.....	1.8	1.4	1.5	1.4	.....	2.0	3.2	3.4	3.0	2.5	3.0	3.1
31.....	1.8	.....	1.5	1.4	.....	2.0	.....	3.1	.....	2.4	3.0	3.1

Rating tables for West Walker River near Coleville, Cal.

October 4, 1902, to December 31, 1903.

Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.
<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>
1.0	60	1.8	170	2.6	426	3.4	1,025
1.1	67	1.9	192	2.7	476	3.5	1,160
1.2	75	2.0	215	2.8	530	3.6	1,305
1.3	85	2.1	240	2.9	590	3.7	1,450
1.4	98	2.2	269	3.0	655	3.8	1,595
1.5	113	2.3	302	3.1	730	3.9	1,740
1.6	130	2.4	340	3.2	815	4.0	1,885
1.7	149	2.5	381	3.3	910	4.1	2,030

NOTE.—Curve is not very well determined above 3 feet gage height.

January 1 to December 31, 1904.

1.00	60	2.00	220	3.00	605	4.00	1,240
1.10	67	2.10	248	3.10	655	4.10	1,320
1.20	75	2.20	278	3.20	708	4.20	1,405
1.30	85	2.30	311	3.30	764	4.30	1,495
1.40	98	2.40	347	3.40	823	4.40	1,585
1.50	113	2.50	385	3.50	885	4.50	1,680
1.60	130	2.60	425	3.60	950	4.60	1,780
1.70	149	2.70	467	3.70	1,015	4.70	1,885
1.80	170	2.80	511	3.80	1,085	4.80	1,990
1.90	194	2.90	557	3.90	1,160	4.90	2,100

NOTE.—Table applicable only to open channel. It is based upon 13 discharge measurements made during 1903 and 1904. It is well defined between gage heights 1.00 foot and 3.70 feet.

January 1 to December 31, 1905.

0.80	44	1.60	121	2.40	317	3.20	702
.90	50	1.70	138	2.50	353	3.30	762
1.00	56	1.80	157	2.60	393	3.40	823
1.10	62	1.90	178	2.70	436	3.50	886
1.20	70	2.00	201	2.80	483	3.60	952
1.30	80	2.10	226	2.90	534	3.70	1,020
1.40	92	2.20	254	3.00	588	3.80	1,090
1.50	106	2.30	284	3.10	644	3.90	1,160

NOTE.—Table applicable only to open channel. It is based on 11 discharge measurements made during 1905. It is well defined between gage heights 1.2 feet and 3.5 feet.

January 1 to December 31, 1906.

0.90	50	1.90	190	2.90	580	3.90	1,430
1.00	58	2.00	220	3.00	645	4.00	1,540
1.10	67	2.10	250	3.10	715	4.20	1,760
1.20	77	2.20	280	3.20	790	4.40	1,990
1.30	87	2.30	315	3.30	870	4.60	2,230
1.40	98	2.40	350	3.40	955	4.80	2,470
1.50	110	2.50	385	3.50	1,040	5.00	2,710
1.60	125	2.60	425	3.60	1,130	5.20	2,970
1.70	145	2.70	470	3.70	1,220	5.40	3,230
1.80	165	2.80	520	3.80	1,320		

NOTE.—Table applicable only to open channel. It is based on discharge measurements made during 1903-1906 and is fairly well defined.

January 1, 1907, to July 31, 1908.

1.30	85	2.40	330	3.50	960	4.60	2,240
1.40	100	2.50	365	3.60	1,050	4.70	2,380
1.50	116	2.60	405	3.70	1,140	4.80	2,520
1.60	133	2.70	445	3.80	1,240	4.90	2,670
1.70	151	2.80	490	3.90	1,350	5.00	2,820
1.80	170	2.90	540	4.00	1,470	5.20	3,120
1.90	190	3.00	600	4.10	1,590	5.40	3,420
2.00	210	3.10	660	4.20	1,710	5.60	3,720
2.10	235	3.20	720	4.30	1,840	5.80	4,020
2.20	265	3.30	790	4.40	1,970	6.00	4,320
2.30	295	3.40	870	4.50	2,100		

NOTE.—Table applicable only to open channel. It is based on 40 discharge measurements made during 1903 to 1908. It is well defined below gage height 2.2 feet and fairly well above.

Monthly discharge of West Walker River near Coleville, Cal., for 1902-1908.[Drainage area, 306 square miles.^a]

Month.	Discharge in second-feet.				Run-off.	
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.	Total in acre-feet.
1902-3.						
October 5-31.....	85	60	67	0.22	0.22	3,588
November.....	113	67	83	.27	.30	4,939
December.....	98	60	75	.25	.29	4,612
January.....	98	60	69	.23	.27	4,243
February.....	98	60	79	.26	.27	4,387
March.....	302	67	105	.34	.39	6,456
April.....	476	113	246	.80	.89	14,638
May.....	1,885	340	888	2.90	3.34	54,601
June.....	2,030	815	1,512	4.94	5.51	89,970
July.....	1,160	192	402	1.31	1.51	24,718
August.....	215	85	143	.47	.54	8,793
September.....	85	67	75	.25	.28	4,463
The period.....						225,000
1903-4.						
October.....	75	67	67	.22	.25	4,120
November.....	98	67	77	.25	.28	4,580
December.....	75	67	67	.22	.25	4,120
January.....	67	60	62.7	.205	.24	3,855
February.....	467	60	131	.428	.46	7,535
March.....	311	149	187	.611	.70	11,500
April.....	655	170	384	1.25	1.40	22,850
May.....	2,100	220	919	3.00	3.46	56,510
June.....	1,495	823	1,188	3.88	4.33	70,690
July.....	1,015	425	785	2.57	2.96	48,270
August.....	467	194	332	1.08	1.24	20,410
September.....	347	113	172	.56	.63	10,240
The year.....	2,100	60	364	1.19	16.20	265,000
1904-5.						
October.....	511	130	299	.977	1.13	18,380
November.....	170	113	125	.408	.46	7,438
December.....	130	67	85.7	.280	.32	5,269
January.....	92	70	75.3	.246	.28	4,630
February.....	106	80	86.1	.281	.29	4,782
March.....	157	106	133	.435	.50	8,178
April.....	644	138	266	.869	.97	15,830
May.....	952	226	558	1.82	2.10	34,310
June.....	1,160	483	791	2.58	2.88	47,070
July.....	534	201	334	1.09	1.26	20,540
August.....	178	70	107	.350	.40	6,579
September.....	70	59	64.1	.209	.23	3,814
The year.....	1,160	59	244	.795	10.82	176,000
1905-6.						
October.....	70	56	59.4	.194	.22	3,652
November.....	178	44	58.1	.190	.21	3,457
December.....	70	50	61.9	.202	.23	3,806
January.....	110	50	77.6	.254	.29	4,770
February.....	87	77	81.6	.267	.28	4,530
March.....	145	87	105	.343	.40	6,460
April.....	790	110	360	1.18	1.32	21,400
May.....	1,650	580	1,140	3.73	4.30	70,100
June.....	3,160	645	2,050	6.70	7.48	122,000
July.....	3,300	955	2,180	7.12	8.21	134,000
August.....	870	250	506	1.65	1.90	31,100
September.....	280	110	192	.627	.70	11,400
The year.....	3,300	44	573	1.87	25.54	417,000
1906-7.						
October.....	110	87	98.5	.322	.37	6,060
November.....	110	87	95.6	.312	.35	5,690
December.....	110	87	94.5	.309	.36	5,810
January.....	116	85	95.7	.313	.36	5,880
February.....	170	100	132	.431	.45	7,330
March.....	1,590	116	380	1.24	1.43	23,400
April.....	790	210	523	1.71	1.91	31,100
May.....	2,240	660	1,150	3.76	4.34	70,700

^a The drainage area determined from later maps is 248 square miles.

Monthly discharge of West Walker River near Coleville, Cal., for 1902-1908.—Continued.

Month.	Discharge in second-feet				Run-off.	
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.	Total in acre-feet.
1906-7.						
June.....	3,720	515	1,960	6.41	7.15	117,000
July.....	4,170	1,350	2,480	8.11	9.35	152,000
August.....	1,240	365	685	2.24	2.58	42,100
September.....	330	170	269	.879	.98	16,000
The year.....	4,170	85	664	2.17	29.63	483,000
1907-8.						
October.....	190	151	165	.539	.62	10,100
November.....	170	100	140	.458	.51	8,330
December.....	133	100	119	.389	.45	7,320
January.....	133	100	116	.379	.44	7,130
February.....	151	85	102	.333	.36	5,870
March.....	265	85	165	.539	.62	10,100
April.....	720	151	336	1.10	1.23	20,000
May.....	870	365	548	1.79	2.06	33,700
June.....	1,050	490	693	2.26	2.52	41,200
July.....	660	330	460	1.50	1.73	28,300
The period.....						172,000

NOTE.—Values for winter months are liable to error on account of ice.

WEST WALKER RIVER NEAR COLEVILLE, CAL. (LOWER STATION).

This station is located at the head of Antelope Valley, in the NE. $\frac{1}{4}$ sec. 28, T. 8 N., R. 23 E., about half a mile below the mouth of Ross Canyon Creek, 5 miles southeast of Coleville, and is about one-half mile below the site of the station maintained by the Survey during 1902 to 1908.

The gage is a vertical staff. Discharge measurements are made either from the car and cable or the bridge. The channel is composed of compact gravel and cobblestones and is slightly shifting. The drainage area above the station is about 248 square miles. Results are excellent.

The following records of daily discharge were furnished by the Stone & Webster Engineering Corporation:

Daily discharge, in second-feet, of West Walker River near Coleville, Cal., for 1909-1910.

Day.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Day.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909.								1909.							
1.....	70	92	680	1,500	1,500	315	120	16.....	85	380	680	1,500	920	195	90
2.....	70	110	840	1,950	1,590	335	110	17.....	85	425	680	1,320	720	195	77
3.....	85	150	920	2,040	1,860	335	120	18.....	85	475	720	1,240	680	195	77
4.....	85	150	1,000	2,225	1,860	315	120	19.....	85	510	760	1,000	680	210	77
5.....	60	135	1,000	2,225	1,240	315	110	20.....	85	510	920	1,000	540	210	77
6.....	85	120	1,080	2,130	920	300	110	21.....	77	380	1,160	1,160	540	210	70
7.....	70	135	1,120	1,590	760	300	160	22.....	77	335	920	1,410	610	225	70
8.....	70	150	1,160	1,590	760	300	100	23.....	85	335	680	1,950	610	210	70
9.....	70	180	1,080	1,410	840	300	100	24.....	77	335	610	1,860	540	180	70
10.....	60	210	1,000	1,410	840	285	90	25.....	85	380	645	1,860	540	150	70
11.....	60	180	880	1,590	920	285	90	26.....	85	475	920	1,590	475	150	70
12.....	55	195	680	1,770	1,080	285	90	27.....	77	610	1,080	1,500	335	150	77
13.....	60	240	575	1,590	1,080	270	90	28.....	77	610	1,080	1,590	335	135	70
14.....	70	330	540	1,590	1,000	225	90	29.....	85	610	840	1,500	335	135	70
15.....	85	335	645	2,040	920	195	90	30.....	60	610	840	1,680	335	135	70
								31.....	85		1,320		355	150	.....

Daily discharge, in second-feet, of West Walker River near Coleville, Cal., for 1909-1910—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909-10.												
1.....	70	70	210	150	85	150	150	920	1,680	425	270	.....
2.....	85	70	210	85	60	150	210	680	1,500	335	335	.....
3.....	77	70	150	60	60	210	210	680	1,500	270	270	.....
4.....	85	70	70	50	85	210	270	540	1,320	210	210	.....
5.....	92	70	85	50	85	210	270	540	1,160	270	210	.....
6.....	92	70	70	60	60	210	335	425	1,160	425	210	.....
7.....	92	60	150	50	85	240	335	540	1,320	335	150	.....
8.....	92	70	540	70	85	270	380	540	1,160	425	150	.....
9.....	85	85	210	85	100	270	540	680	1,160	540	150	.....
10.....	77	70	150	70	85	270	425	540	1,320	425	120	.....
11.....	77	70	100	60	100	300	680	680	1,320	335	120	.....
12.....	77	70	120	60	85	300	540	840	1,160	270	120	.....
13.....	77	60	120	60	85	270	540	680	1,160	270	100	.....
14.....	77	70	100	50	85	300	540	540	1,080	270	85	.....
15.....	77	70	85	50	85	270	540	680	1,160	300	70	.....
16.....	77	50	70	50	60	270	425	540	1,160	300	70	.....
17.....	77	70	60	50	60	270	540	1,320	1,160	300	85	.....
18.....	70	70	60	60	85	300	680	1,320	1,080	1,240	85	.....
19.....	70	85	60	60	85	300	540	1,500	1,000	425	70	.....
20.....	70	150	50	50	100	335	840	1,320	1,000	475	70	.....
21.....	65	540	50	85	150	335	760	1,500	840	425	85	.....
22.....	65	270	50	100	85	270	840	1,500	475	425	85	.....
23.....	65	240	50	150	85	270	840	1,500	540	335	85	.....
24.....	65	210	60	150	85	210	1,000	1,500	425	475	85	.....
25.....	65	240	60	150	85	210	1,000	1,680	380	425	70	.....
26.....	65	150	50	100	85	210	1,000	1,320	475	335	70	.....
27.....	65	150	50	85	100	210	1,160	1,500	425	335	70	.....
28.....	65	100	60	150	85	150	1,320	1,500	380	335	70	.....
29.....	60	120	50	150	.....	210	1,320	1,500	680	335	70	.....
30.....	60	150	60	150	.....	150	840	1,500	540	270	70	.....
31.....	65	.....	210	150	.....	210	.....	1,500	.....	270	.....	.....

Monthly discharge of West Walker River near Coleville, Cal., for 1909-10.

[Drainage area, 248 square miles.]

Month.	Discharge in second-feet.				Run-off.	
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.	Total in acre-feet.
1909.						
March.....	85	55	75.8	0.306	0.35	4,660
April.....	610	92	323	1.30	1.45	19,200
May.....	1,320	540	873	3.52	4.06	53,700
June.....	2,220	1,000	1,630	6.57	7.33	97,000
July.....	1,860	335	830	3.35	3.86	51,000
August.....	335	135	232	.936	1.08	14,300
September.....	120	70	87.8	.354	.40	5,220
The period.....	.....	.....	.....	.....	.....	245,000
1909-10.						
October.....	92	60	74.2	.299	.34	4,560
November.....	540	50	121	.488	.54	7,200
December.....	540	50	110	.444	.51	6,760
January.....	150	50	87.1	.351	.40	5,360
February.....	150	60	85.0	.343	.36	4,720
March.....	335	150	243	.980	1.13	14,900
April.....	1,320	150	636	2.57	2.87	37,800
May.....	1,680	425	1,030	4.15	4.78	63,300
June.....	1,680	380	991	4.00	4.46	59,000
July.....	1,240	210	381	1.54	1.78	23,400
August.....	335	70	122	.492	.57	7,500
The period.....	.....	.....	.....	.....	.....	234,000

* The difference between these figures and those published for the station formerly maintained by the Survey is due to the difference in maps used in determining the area. This value is believed to be more nearly correct.

NOTE.—Monthly values computed by engineers of the United States Geological Survey.

EAST FORK OF WEST WALKER RIVER NEAR BRIDGEPORT, CAL.

This station is located at Blackburn's,¹ about 100 yards below the mouth of Hot Creek, in the NE. $\frac{1}{4}$ sec. 28, T. 6 N., R. 23 E., about 3 miles above the junction with West Walker River, and 14 miles northwest of Bridgeport.

The gage is a vertical staff at the footbridge from which discharge measurements are made. The channel, which is composed of compact gravel and cobblestones, is fairly permanent. Results are considered excellent.

The following records of daily discharge were furnished by the Stone & Webster Engineering Corporation.

Daily discharge, in second-feet, of East Fork of West Walker River near Bridgeport, Cal., for 1910.

Day.	Apr.	May.	June.	July.	Aug.	Day.	Apr.	May.	June.	July.	Aug.
1910.						1910.					
1.....		112	325	112	49	16.....		208	180	58	35
2.....		90	325	112	49	17.....		180	180	71	35
3.....		112	301	112	49	18.....		180	180	160	30
4.....		112	278	90	49	19.....		208	160	90	30
5.....		90	278	90	41	20.....		208	160	112	30
6.....		90	254	90	41	21.....	112	208	160	112	30
7.....		90	254	90	41	22.....	112	231	136	90	30
8.....		112	208	90	41	23.....	112	254	136	71	30
9.....		160	208	90	35	24.....	112	301	136	71	30
10.....		160	254	90	35	25.....	136	254	136	58	30
11.....		160	254	90	35	26.....	136	254	136	58	30
12.....		160	231	71	35	27.....	160	278	136	58	30
13.....		180	231	71	35	28.....	180	301	112	58	30
14.....		180	231	71	35	29.....	136	301	112	58	26
15.....		208	208	71	35	30.....	112	325	112	49	26
						31.....		325		49	26

Monthly discharge of East Fork of West Walker River near Bridgeport, Cal., for 1910.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).
	Maximum.	Minimum.	Mean.	
April 21-30.....	180	112	131	2,600
May.....	325	90	195	12,000
June.....	325	112	200	11,900
July.....	160	49	82.7	5,080
August.....	49	26	34.9	2,150

NOTE.—Monthly values computed by engineers of the United States Geological Survey.

EAST WALKER RIVER NEAR BRIDGEPORT, CAL.

This station, which is located in the SW. $\frac{1}{4}$ SE. $\frac{1}{4}$ sec. 34, T. 6 N., R. 25 E., in the Mono National Forest, about 4 $\frac{1}{4}$ miles north of Bridgeport, was established July 29, 1911.

The gage is a vertical staff located on the left bank. The channel is composed of gravel. Winter flow is affected by ice.

¹ Hardy station, Bridgeport quadrangle, United States Geological Survey.

This station is maintained in cooperation with the United States Forest Service.

Estimates of discharge are withheld until additional data have been obtained.

The following discharge measurement was made by H. J. Tompkins:

June 16, 1912: Gage height, 0.85 foot; discharge, 270 second-feet.

Daily gage height, in feet, of East Walker River near Bridgeport, Cal., for 1911-12.

Day.	July.	Aug.	Sept.	Day.	July.	Aug.	Sept.
1911.				1911.			
1.....			0.79	16.....			
2.....		1.91		17.....			
3.....				18.....			
4.....				19.....		1.01	
5.....				20.....			
6.....		1.90		21.....			
7.....				22.....		.90	0.56
8.....		1.11		23.....			
9.....				24.....			
10.....				25.....			
11.....				26.....		.88	.52
12.....				27.....			
13.....		1.09	.51	28.....			
14.....				29.....	2.15	.83	
15.....				30.....			.54
				31.....			

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.									
1.....		0.41							
2.....	0.48		0.88						
3.....					1.0	0.02			
4.....		.40							
5.....									
6.....							-0.1		
7.....	.45								
8.....									
9.....			1.12						
10.....	.40				.2	.16			
11.....									
12.....									
13.....		.45							
14.....	.41								
15.....									
16.....			1.20			.02			0.85
17.....					.49				
18.....		.00							
19.....									
20.....	.36								
21.....									
22.....									
23.....						-.02			
24.....	.39				.15				
25.....		.99							
26.....									
27.....				1.5					
28.....	.42								
29.....									
30.....	.40								
31.....						.00			

NOTE.—Water below bottom of gage during part of April and May, 1912.

ROBINSON CREEK NEAR BRIDGEPORT, CAL.

Robinson Creek rises on the eastern slope of the Sierra in Mono County, Cal., and flows northeastward, passing through Twin Lakes to its junction with the East Walker River 2 miles north of Bridgeport.

This station, which is located at the mouth of the canyon, $5\frac{1}{2}$ miles southwest of Bridgeport, in the SW. $\frac{1}{4}$ NW. $\frac{1}{4}$ sec. 15, T. 4 N., R. 24 E., in the Mono National Forest, was established November 18, 1910.

Lower Twin Lake is about 3 miles above the station, and the junction with Buckeye Creek is 5 miles below. No water is diverted above the gage. The low-water flow is entirely used for irrigation in Bridgeport Valley. Twin Lakes is an excellent reservoir site. At the present time this storage is only partly developed.

The gage is a vertical staff fastened to a pine tree on the left bank near the site of an old sawmill.

Discharge measurements are made by wading near the gage.

Both banks are high and will not overflow. The channel is composed of gravel and small bowlders.

The station is maintained in cooperation with the United States Forest Service.

Discharge measurements of Robinson Creek near Bridgeport, Cal., in 1910-1912.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1910. Nov. 18	H. D. McGlashan.....	<i>Fect.</i> 2.28	<i>Sec.-ft.</i> 6.1	1911. July 25	G. T. Peekema.....	<i>Fect.</i> 4.50	<i>Sec.-ft.</i> 387
1911. June 17	J. E. Stewart.....	5.00	578	1912. June 12	H. J. Tompkins.....	3.92	217

Daily gage height, in feet, of Robinson Creek near Bridgeport, Cal., for 1910-1912.

Day.	Nov.	Dec.	Jan.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.										
1.								4.45		3.45
2.						3.11			4.20	
3.		2.33					3.78	4.43		
4.			2.29							
5.									4.38	
6.							3.90	4.50		
7.		2.28	2.31							
8.					2.99				3.49	
9.						2.90				
10.		2.30					4.05			
11.			2.30							
12.					3.00		4.20	4.50	3.67	
13.						3.45				3.12
14.		2.29								
15.					2.95					3.10
16.						3.35		4.80		
17.		2.25					5.00			
18.	2.28		2.55							3.10
19.					2.98				3.55	
20.						3.25		5.00		
21.		2.20					5.20			3.10
22.					3.00				3.52	
23.	2.25					3.45				3.00
24.					3.02		4.70	4.50		
25.										
26.	2.31								3.51	3.52
27.						3.75	4.40			
28.				2.72						
29.								4.25	3.48	
30.	2.25			2.80	3.10					3.10
31.		2.25				3.70				
Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June.	
1911-12.										
1.		3.00								3.7
2.	2.99		2.39			2.7				
3.					2.9					
4.		2.95						2.65		
5.										
6.				2.1			2.65			
7.	2.99									
8.										3.5
9.			2.40			2.69				
10.	2.95				2.69					
11.								2.72		
12.										
13.				2.4			2.62			
14.	3.04	2.36								
15.										
16.			2.35			2.81				
17.					2.69					
18.		2.37								
19.										
20.	3.02			2.05			2.6			
21.										
22.										3.6
23.			2.30			2.7				
24.	2.95				2.65					
25.		2.35						2.6		
26.										
27.				2.95			2.65			
28.	3.01									
29.										3.45
30.			2.00			2.72				
31.										

NOTE.—Ice existed at this station to some extent during the winter months, but the relation of gage heights to discharge is not believed to be seriously affected thereby. Observer was unable to reach the gage on account of snow during part of January, February, and March, 1911.

Daily discharge, in second-feet, of Robinson Creek near Bridgeport, Cal., for 1910-1912.

Day.	Nov.	Dec.	Jan.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.										
1.....		6.3	6.2	.....	40	70	176	370	295	123
2.....		7.1	6.4	.....	42	71	182	367	291	120
3.....		7.9	6.6	.....	44	68	188	363	306	116
4.....		7.6	6.8	.....	47	64	196	371	324	112
5.....		7.3	7.0	.....	50	60	205	379	347	107
6.....		6.9	7.2	.....	52	55	214	387	307	102
7.....		6.6	7.3	.....	55	51	223	387	232	96
8.....		6.8	7.2	.....	57	48	232	387	130	90
9.....		6.9	7.2	.....	57	47	241	387	136	85
10.....		7.0	7.1	.....	58	63	250	387	145	81
11.....		7.0	7.0	.....	58	83	270	387	154	78
12.....		6.9	8.0	.....	58	103	291	387	164	75
13.....		6.8	9.0	.....	56	123	321	415	160	73
14.....		6.8	10	.....	54	117	364	443	156	72
15.....		6.5	12	.....	52	111	421	471	153	70
16.....		6.2	14	.....	53	106	493	499	150	70
17.....		6.0	16	.....	54	102	578	518	147	70
18.....	6.6	5.8	17	.....	55	98	620	538	144	70
19.....	6.5	5.5	.....	.....	56	94	640	558	141	70
20.....	6.4	5.2	.....	.....	57	91	652	578	139	70
21.....	6.3	5.0	.....	.....	58	101	660	528	138	70
22.....	6.1	5.1	.....	.....	58	112	600	478	136	64
23.....	6.0	5.2	.....	.....	59	123	530	428	136	58
24.....	6.4	5.3	.....	.....	60	136	461	387	135	76
25.....	6.8	5.4	.....	.....	61	150	411	364	134	102
26.....	7.3	5.5	.....	.....	62	165	373	349	134	136
27.....	6.8	5.6	.....	.....	64	181	353	334	132	114
28.....	6.3	5.7	.....	30	66	179	356	320	130	95
29.....	5.8	5.8	.....	34	68	176	360	306	128	80
30.....	5.4	5.9	.....	37	70	173	365	303	126	70
31.....	.....	6.0	.....	38	.....	170	.....	299	124	.....
Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	
1911-12.										
1.....	64	58	9.4	2.9	49	27	29	24	170	
2.....	57	56	9.7	3.0	48	28	28	24	165	
3.....	57	54	9.7	3.2	47	28	27	24	159	
4.....	57	52	9.7	3.4	44	28	26	24	152	
5.....	57	49	9.8	3.6	41	28	25	25	146	
6.....	57	44	9.8	3.8	38	27	24	26	141	
7.....	57	39	9.9	4.7	34	27	24	27	136	
8.....	56	34	10	5.6	31	27	24	28	132	
9.....	54	29	10	6.5	29	27	24	29	132	
10.....	52	24	9.8	7.4	27	28	23	30	133	
11.....	53	19	9.5	8.3	27	30	23	30	134	
12.....	56	14	9.3	9.2	27	32	22	30	135	
13.....	59	10	9.1	10	27	34	22	29	137	
14.....	63	8.8	8.9	9.0	27	36	22	28	139	
15.....	63	8.8	8.7	8.0	27	37	22	28	141	
16.....	62	8.9	8.5	7.0	27	38	22	27	142	
17.....	62	9.0	8.2	6.0	27	36	21	27	143	
18.....	61	9.1	8.0	5.0	27	35	21	26	144	
19.....	60	9.0	7.8	4.0	26	34	20	26	145	
20.....	60	9.0	7.6	3.3	26	33	20	25	147	
21.....	58	8.9	7.4	5.0	26	31	20	24	149	
22.....	56	8.8	7.2	8.0	25	30	20	22	150	
23.....	54	8.7	7.0	11	25	28	21	22	147	
24.....	52	8.6	6.5	17	24	28	22	20	143	
25.....	54	8.5	6.0	26	24	28	22	20	140	
26.....	56	8.6	5.5	38	24	28	23	25	136	
27.....	58	8.7	5.0	52	25	29	24	35	132	
28.....	59	8.8	4.3	52	25	29	24	55	128	
29.....	59	9.0	3.6	51	26	30	24	80	123	
30.....	58	9.2	2.8	50	.....	30	24	115	120	
31.....	58	.....	2.8	50	.....	30	.....	155	.....

NOTE.—Daily discharge determined from a rating curve well defined above 150 second-feet. Discharge interpolated for days on which gage was not read except Jan. 19 to Mar. 27, 1911.

Monthly discharge of Robinson Creek near Bridgeport, Cal., for 1910-1912.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1910-11.					
November 18-30	7.3	5.4	6.36	164	C.
December	7.9	5	6.24	384	C.
January 1-18	17	6.2	9	322	C.
April	70	40	56	3,330	C.
May	181	47	106	6,520	B.
June	660	176	374	22,300	B.
July	578	299	409	25,100	B.
August	347	124	177	10,900	B.
September	136	58	87.2	5,190	B.
1911-12.					
October	64	52	57.7	3,550	C.
November	58	8.5	21.1	1,260	C.
December	10	2.8	7.79	479	C.
January	52	2.9	15.3	941	C.
February	49	24	30.3	1,740	C.
March	38	27	30.4	1,870	C.
April	29	20	23.1	1,370	C.
May	155	20	35.8	2,200	C.
June	170	120	141	8,390	B.
The period				21,800	

BUCKEYE CREEK NEAR BRIDGEPORT, CAL.

This station, which is located at the mouth of the canyon, one-half mile below Hot Springs, $4\frac{1}{2}$ miles southwest of Bridgeport, in the SE. $\frac{1}{4}$ NW. $\frac{1}{4}$ sec. 3, T. 4 N., R. 24 E., in the Mono National Forest, was established November 18, 1910.

Eagle Creek enters about 1 mile above the station. Buckeye Creek is largely used for irrigation, but no water is diverted above the station.

The gage is a vertical staff fastened to a large cottonwood tree on the left bank about one-half mile above the mouth of the canyon.

Discharge measurements are made by wading near the gage.

The right bank is high, but the river overflows the left bank for a short distance at flood stages. The channel, which is composed of gravel and bowlders, is rough. The current is swift at medium and high stages.

This station is maintained in cooperation with the United States Forest Service.

Discharge measurements of Buckeye Creek near Bridgeport, Cal., in 1910-1912.

Date.	Hydrographer.	Gage height.	Dis- charge.	Date.	Hydrographer.	Gage height.	Dis- charge.
1910.		<i>Feet.</i>	<i>Sec.-ft.</i>	1911.		<i>Feet.</i>	<i>Sec.-ft.</i>
Nov. 18	H. D. McGlashan	2.79	27	July 25	G. T. Peekema	3.95	238
1911.				1912.			
June 17	J. E. Stewart	4.45	527	June 12	H. J. Tompkins	3.87	170

Daily gage height, in feet, of Buckeye Creek near Bridgeport, Cal., for 1910-1912.

Day.	Nov.	Dec.	Jan.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.										
1.								4.40		3.38
2.						3.31			3.80	
3.		2.88					3.75	4.40		
4.			2.79							
5.									3.75	
6.							4.00	4.45		
7.		2.80	2.79							
8.					2.99				3.68	
9.						3.40				
10.		2.90					4.10			
11.			2.63							
12.					2.93		4.30	4.30	3.60	
13.						3.39				3.18
14.		2.60								
15.					2.90		4.20			3.12
16.						3.30		4.35		
17.		2.72					4.45			
18.	2.79		2.80							3.11
19.					3.06				3.50	
20.						3.46		4.35		
21.		2.82	2.85				4.80			3.10
22.					3.12				3.43	
23.	2.82					3.80				3.10
24.							4.40	3.95		
25.					3.40					
26.	2.85								3.38	3.50
27.						3.55	4.50			
28.				2.82						
29.					3.25			4.05	3.40	
30.	2.71			2.95						3.20
31.		2.90				3.50				
Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	
1911-12.										
1.		3.00								3.8
2.		3.05		2.86			2.65			
3.					2.95					
4.			2.95						2.82	
5.										
6.										
7.		3.04			2.3			2.7		
8.										3.9
9.				2.85			2.72			
10.		2.90				2.72				
11.									3.1	
12.										
13.										
14.		3.00	2.93					2.6		
15.										
16.				2.85						
17.						2.78				
18.			2.92							
19.										
20.		2.90			2.8			2.55		
21.										
22.										3.75
23.				2.85			2.68			
24.		2.95				2.62				
25.			2.85						2.95	
26.										
27.					2.85			2.8		
28.		2.97								
29.										
30.				2.80			2.75			3.5
31.										

NOTE.—Ice existed at this station during the winter months but the relation of gage height to discharge is not believed to be seriously affected thereby.

Daily discharge, in second-feet, of Buckeye Creek near Bridgeport, Cal., for 1910-1912.

Day.	Nov.	Dec.	Jan.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.										
1.....		27	34	.....	38	71	118	490	197	82
2.....		30	32	.....	38	73	136	490	167	80
3.....		34	30	.....	39	75	154	490	162	78
4.....		33	28	.....	39	76	182	504	158	76
5.....		32	28	.....	40	78	210	520	154	74
6.....		30	28	.....	40	80	240	530	148	72
7.....		29	28	.....	41	80	250	510	142	70
8.....		31	26	.....	41	83	260	492	136	68
9.....		33	24	.....	40	85	275	474	132	66
10.....		35	22	.....	39	85	290	456	126	64
11.....		31	20	.....	38	84	355	438	122	62
12.....		27	22	.....	37	84	420	420	118	60
13.....		23	23	.....	36	84	400	429	115	58
14.....		19	24	.....	36	80	375	438	115	55
15.....		21	25	.....	35	76	350	447	112	52
16.....		23	26	.....	39	72	440	455	109	52
17.....		25	28	.....	43	77	530	455	106	51
18.....	28	26	29	.....	47	82	610	455	103	51
19.....	28	27	30	.....	47	88	690	455	100	51
20.....	29	29	31	.....	50	94	770	455	96	50
21.....	29	30	32	.....	50	118	860	400	93	50
22.....	30	30	.....	.....	52	142	740	340	90	50
23.....	30	31	.....	.....	62	167	610	280	88	50
24.....	31	31	.....	.....	72	154	490	220	86	65
25.....	31	32	.....	.....	85	139	515	229	84	80
26.....	32	32	.....	.....	80	124	540	238	82	100
27.....	30	33	.....	.....	75	109	570	247	83	90
28.....	28	33	.....	30	70	106	550	256	84	80
29.....	26	34	.....	34	66	104	530	265	85	70
30.....	24	34	.....	38	69	102	510	250	84	60
31.....		35	.....	.....	.....	100	.....	232	83	.....
Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	
1911-12.										
1.....	53	42	33	25	36	22	25	30	167	
2.....	46	41	33	22	37	22	25	30	172	
3.....	45	39	33	19	38	22	25	30	175	
4.....	45	38	33	16	38	22	25	30	180	
5.....	45	38	32	13	36	23	24	33	185	
6.....	45	38	32	10	34	23	24	36	190	
7.....	45	38	32	12	32	24	23	39	195	
8.....	42	38	32	14	30	24	23	42	200	
9.....	38	37	32	16	27	25	23	45	196	
10.....	35	37	32	18	25	25	22	48	192	
11.....	36	37	32	20	25	25	22	50	189	
12.....	38	37	32	25	26	26	20	50	186	
13.....	40	37	32	29	26	26	19	49	182	
14.....	42	37	32	29	27	27	19	48	179	
15.....	40	37	32	29	27	28	19	47	176	
16.....	39	36	32	29	28	29	19	46	173	
17.....	38	36	32	29	28	28	18	45	170	
18.....	37	36	32	29	27	27	18	44	167	
19.....	36	36	32	29	25	26	18	43	164	
20.....	35	35	32	29	24	25	18	42	160	
21.....	35	34	32	29	23	24	18	41	157	
22.....	36	34	32	30	22	23	20	40	154	
23.....	37	33	32	30	21	23	22	39	146	
24.....	38	32	32	31	20	23	24	38	138	
25.....	38	32	32	31	20	23	26	38	130	
26.....	39	32	32	32	20	24	28	48	123	
27.....	39	32	31	32	20	24	29	60	115	
28.....	40	32	31	32	21	25	29	75	108	
29.....	41	32	30	33	21	25	29	93	100	
30.....	41	33	29	34	.....	26	29	114	100	
31.....	41	.....	29	35	.....	26	.....	139	.....

NOTE.—Daily discharge determined from a fairly well-defined rating curve. Discharge interpolated for days on which gage was not read except Jan. 22 to Mar. 27, 1911.

Monthly discharge of Buckeye Creek near Bridgeport, Cal., for 1910-1912.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1910-11.					
November 18-30	32	24	29.0	748	C.
December	35	19	30.0	1,840	C.
January 1-21	34	20	27.1	1,130	C.
April	85	35	49.5	2,950	C.
May	167	71	95.9	5,900	C.
June	860	118	432	25,700	C.
July	530	220	399	24,500	C.
August	197	82	115	7,070	C.
September	100	50	65.6	3,900	C.
1911-12.					
October	53	35	40.2	2,470	C.
November	42	32	35.9	2,140	C.
December	33	29	31.8	1,960	C.
January	35	10	25.5	1,570	C.
February	38	20	27.0	1,550	C.
March	29	22	24.7	1,520	C.
April	29	18	22.8	1,360	C.
May	139	30	50.1	3,080	C.
June	200	100	162	9,640	C.
The period				25,300	

SWAGER CREEK NEAR BRIDGEPORT, CAL.

This station, which is located at the highway bridge three-fourths of a mile northwest of the Mono ranger station, in the NW. $\frac{1}{4}$ NW. $\frac{1}{4}$ sec. 23, T. 5 N., R. 24 E., $4\frac{1}{2}$ miles northwest of Bridgeport, was established June 1, 1911.

The gage is a vertical staff on the right bank 20 feet above the bridge.

The bed of the stream is composed of gravel and boulders.

Discharge measurements are made from the highway bridge.

The relation between gage height and discharge during the winter months is affected by ice.

Gage-height record is furnished by the United States Forest Service.

Discharge measurements of Swager Creek near Bridgeport, Cal., in 1911-12.

Date.	Hydrographer.	Gage height.	dis- charge.
1911.		<i>Feet.</i>	<i>Sec.-feet.</i>
June 17	J. E. Stewart.....	4.02	140
July 25	G. T. Peekema.....	2.88	31
1912.			
June 12	H. J. Tompkins.....	2.42	11

Daily gage height, in feet, of Swager Creek near Bridgeport, Cal., for 1911-12.

Day.	June.	July.	Aug.	Sept.	Day.	June.	July.	Aug.	Sept.
1911.					1911.				
1.....	3.60	3.38	.....	2.52	16.....	4.10	3.20	.....	.....
2.....	.....	.....	.....	.....	17.....	4.02	.....	.....	.....
3.....	.....	3.26	2.76	.....	18.....	.....	.....	.....	2.50
4.....	.....	.....	.....	.....	19.....	4.05	.....	2.60	2.45
5.....	3.90	.....	.....	.....	20.....	4.04	3.07	.....	.....
6.....	.....	3.30	2.60	.....	21.....	.....	.....	.....	.....
7.....	.....	3.15	.....	.....	22.....	3.90	.....	2.58	.....
8.....	3.90	.....	2.68	.....	23.....	.....	.....	.....	2.45
9.....	.....	.....	.....	.....	24.....	.....	2.88	.....	.....
10.....	.....	.....	.....	.....	25.....	3.66	.....	2.50	2.52
11.....	.....	.....	.....	.....	26.....	3.60	.....	.....	.....
12.....	4.00	3.15	.....	.....	27.....	.....	.....	.....	.....
13.....	.....	.....	2.69	2.51	28.....	.....	.....	.....	.....
14.....	.....	.....	.....	.....	29.....	.....	2.90	2.55	.....
15.....	.....	.....	.....	.....	30.....	.....	.....	.....	2.59
					31.....	.....	.....	.....	.....
Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.									
1.....	2.52	2.52	.....	.....	.....	.....	.....	.....	2.5
2.....	.....	.....	2.53	.....	.....	2.53	.....	.....	.....
3.....	.....	.....	.....	.....	2.52	.....	.....	.....	.....
4.....	.....	2.50	.....	.....	.....	.....	.....	2.52	.....
5.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
6.....	.....	2.52	.....	2.2	.....	.....	2.5	.....	.....
7.....	2.07	.....	.....	.....	.....	.....	.....	.....	.....
8.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
9.....	.....	.....	2.35	.....	.....	2.5	.....	.....	.....
10.....	2.05	.....	.....	.....	2.51	.....	.....	.....	.....
11.....	.....	.....	.....	.....	.....	.....	.....	2.7	.....
12.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
13.....	.....	2.38	.....	2.0	.....	.....	2.2	.....	.....
14.....	2.55	.....	.....	.....	.....	.....	.....	.....	.....
15.....	.....	.....	.....	.....	.....	.....	.....	2.65	.....
16.....	2.52	.....	2.40	.....	.....	2.57	.....	.....	.....
17.....	.....	.....	.....	.....	2.51	.....	.....	.....	.....
18.....	.....	2.38	.....	.....	.....	.....	.....	2.8	.....
19.....	2.52	.....	.....	.....	.....	.....	.....	.....	.....
20.....	.....	.....	.....	2.0	.....	.....	1.45	.....	.....
21.....	2.55	.....	.....	.....	.....	.....	.....	.....	.....
22.....	.....	.....	.....	.....	.....	.....	.....	.....	2.38
23.....	.....	.....	2.45	.....	.....	2.59	.....	.....	.....
24.....	2.55	.....	.....	.....	2.32	.....	.....	.....	.....
25.....	.....	2.38	.....	.....	.....	.....	.....	2.6	.....
26.....	2.56	.....	.....	.....	.....	.....	.....	.....	.....
27.....	.....	.....	.....	2.41	.....	.....	2.5	.....	.....
28.....	2.52	.....	.....	.....	.....	.....	.....	.....	.....
29.....	.....	.....	.....	.....	.....	.....	.....	.....	2.23
30.....	.....	.....	2.35	.....	.....	2.45	.....	.....	.....
31.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Daily discharge, in second-feet, of Swager Creek near Bridgeport, Cal., for 1911-12.

Day.	June.	July.	Aug.	Sept.	Day.	June.	July.	Aug.	Sept.
1911.					1911.				
1.....	87	66	27	15	16.....	151	51	20	14
2.....	96	61	26	15	17.....	139	48	20	14
3.....	105	56	25	15	18.....	142	46	19	14
4.....	114	57	22	15	19.....	144	44	18	12
5.....	122	58	20	15	20.....	142	42	18	12
6.....	122	59	18	15	21.....	132	39	17	12
7.....	122	48	20	14	22.....	122	35	17	12
8.....	122	48	21	14	23.....	112	33	16	12
9.....	125	48	21	14	24.....	103	31	15	13
10.....	129	48	21	14	25.....	94	31	14	15
11.....	132	48	22	14	26.....	87	31	14	15
12.....	136	48	22	14	27.....	82	32	15	16
13.....	140	48	22	14	28.....	78	32	15	16
14.....	144	49	21	14	29.....	74	32	16	17
15.....	148	50	21	14	30.....	70	30	16	18
					31.....	.....	28	15	.....

Daily discharge, in second-feet, of Swager Creek near Bridgeport, Cal., for 1911-12—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.									
1.....	15	15	14	8.5	13	15	13	15	14
2.....	13	15	15	8.0	14	15	13	15	14
3.....	11	15	14	7.5	15	15	13	15	14
4.....	9	14	13	7.0	15	15	14	15	14
5.....	7	14	12	6.5	15	15	14	16	14
6.....	5	15	11	6.0	15	15	14	17	13
7.....	3.7	14	10	6.0	14	14	14	18	13
8.....	3.6	13	10	5.5	14	14	14	19	13
9.....	3.6	12	9.5	5.0	14	14	13	20	13
10.....	3.5	11	10	4.5	14	14	12	21	13
11.....	6	10	10	4.0	14	14	10	22	12
12.....	10	10	10	3.5	14	15	9	22	12
13.....	13	10	10	3.0	14	15	6	21	12
14.....	16	10	11	3.0	14	16	6	21	12
15.....	16	10	11	3.0	14	16	5	20	12
16.....	15	10	11	3.0	14	17	4	22	11
17.....	15	10	11	3.0	14	17	3	24	11
18.....	15	10	11	3.0	13	17	2	27	11
19.....	15	10	11	3.0	12	17	1	26	10
20.....	15	10	12	3.0	11	18	0	24	10
21.....	16	10	12	4.0	10	18	2	22	10
22.....	16	10	12	5.0	10	18	4	21	10
23.....	16	10	12	6.0	9	18	6	20	9
24.....	16	10	12	7.0	8.6	17	8	19	8
25.....	16	10	12	8.0	9	16	10	18	8
26.....	16	10	11	9.0	10	15	12	17	7
27.....	16	10	11	11	11	14	14	17	7
28.....	15	11	10	11	12	13	14	16	7.0
29.....	15	12	10	12	13	12	14	15	6.6
30.....	15	13	9.5	12	.....	12	14	14	6.0
31.....	15	.....	9	12	.....	12	.....	14	.....

NOTE.—Daily discharge determined from a rating curve well defined above 8 second-feet. Discharge interpolated for days on which gage was not read. Low discharge during April, 1912, due to use of water or irrigation.

Monthly discharge of Swager Creek near Bridgeport, Cal., for 1911-12.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1911.					
June.....	151	70	117	6,960	B.
July.....	66	28	44.7	2,750	B.
August.....	27	14	19.2	1,180	B.
September.....	18	12	14.3	851	B.
1911-12.					
October.....	16	3.5	12.3	756	C.
November.....	15	10	11.5	684	B.
December.....	15	9	11.2	689	C.
January.....	12	3.0	6.23	383	C.
February.....	15	8.6	12.7	730	B.
March.....	18	12	15.3	941	B.
April.....	14	0.0	9.27	552	C.
May.....	27	14	19.1	1,170	B.
June.....	14	6	10.9	649	C.
The period.....				6,550	

MISCELLANEOUS MEASUREMENTS.

The following miscellaneous measurements have been made on creeks and ditches in the Walker River basin:

Miscellaneous measurements in Walker River drainage basin in California.

Date.	Stream.	Hydrographer.	Locality.	Discharge.
				<i>Sec.-ft.</i>
Oct. 18, 1896	Walker River.....	J. B. Lippincott..	Leavitt, Mono County, Cal.....	45.0
July 23, 1902	East Walker River.....	L. H. Taylor.....	10 miles below Bridgeport, Cal.....	196
Aug. 27, 1902	do.....	D. W. Hays.....	5 miles below Bridgeport, Cal.....	80.0
Oct. 6, 1902	do.....	do.....	do.....	58.0
June 5, 1903	do.....	I. W. Huffaker.....	Lower end Big Meadow.....	294
July 9, 1903	do.....	do.....	do.....	179
Aug. 5, 1903	do.....	do.....	do.....	56.0
July 22, 1902	West Walker River.....	F. H. Olmsted.....	3 miles above Larsens, Cal.....	417
July 23, 1902	do.....	do.....	Leavitt, Mono County, Cal.....	71.5
July 24, 1902	do.....	do.....	At Middle Fork, Cal.....	95.0
July 25, 1902	do.....	L. H. Taylor.....	Upper end Antelope Valley, Cal.....	331
Aug. 23, 1902	do.....	D. W. Hays.....	do.....	69.7
Oct. 4, 1902	do.....	do.....	do.....	69.8
Aug. 8, 1902	do.....	do.....	County bridge above Tollhouse, Cal.....	222
July 25, 1903	do.....	I. W. Huffaker.....	Lower end Antelope Valley, Cal.....	134
July 29, 1903	do.....	do.....	Below Swager ditch.....	66.0
Aug. 8, 1903	do.....	do.....	do.....	0
July 29, 1903	do.....	do.....	Topaz.....	71.0
Aug. 6, 1903	do.....	do.....	Above Little Walker.....	108
Oct. 17, 1896	Little Walker River.....	J. B. Lippincott..	Hardys, Mono County, Cal.....	39.0
July 24, 1902	do.....	F. H. Olmsted.....	Blackburns Junction.....	102.0
Aug. 7, 1903	do.....	I. W. Huffaker.....	do.....	44.0
Aug. 21, 1902	Buckeye Creek.....	D. W. Hays.....	Above all diversions, Cal.....	43.2
Oct. 4, 1902	do.....	do.....	do.....	20.0
Apr. 28, 1903	do.....	I. W. Huffaker.....	do.....	60.0
May 29, 1903	do.....	do.....	do.....	143
July 8, 1903	do.....	do.....	do.....	120
Aug. 4, 1903	do.....	do.....	do.....	49
Oct. 7, 1902	Dogtown or Virginia Creek.....	D. W. Hays.....	do.....	7.1
Apr. 29, 1903	do.....	I. W. Huffaker.....	do.....	13.3
May 30, 1903	do.....	do.....	do.....	19.3
July 7, 1903	do.....	do.....	do.....	14.9
Aug. 3, 1903	do.....	do.....	do.....	25.0
Oct. 7, 1902	Green Creek.....	D. W. Hays.....	Above all diversions.....	7.1
Apr. 29, 1903	do.....	I. W. Huffaker.....	do.....	28.0
May 30, 1903	do.....	do.....	do.....	78.0
July 7, 1903	do.....	do.....	do.....	63.0
Aug. 3, 1903	do.....	do.....	do.....	29.0
June 3, 1903	do.....	do.....	Bridgeport, Cal.....	95.0
May 6, 1903	Desert Creek.....	do.....	Above diversions.....	15.1
June 23, 1903	do.....	do.....	do.....	30.0
July 27, 1903	do.....	do.....	do.....	7.6
May 27, 1903	Fryingpan Creek.....	do.....	do.....	2.8
May 1, 1903	Fort Canyon Creek.....	do.....	do.....	23.0
May 2, 1903	do.....	do.....	Below sawmill bridge.....	16.3
June 9, 1903	do.....	do.....	Below Little Antelope ditches.....	23.0
July 14, 1903	do.....	do.....	do.....	2.5
July 23, 1902	Quinton Creek.....	F. H. Olmsted.....	do.....	10.5
Aug. 21, 1902	Robinson Creek.....	D. W. Hays.....	Below Twin Lakes, Cal.....	75.7
Oct. 6, 1902	do.....	do.....	do.....	24.0
July 11, 1903	do.....	I. W. Huffaker.....	do.....	128
Aug. 4, 1903	do.....	do.....	do.....	53.0
May 28, 1903	do.....	do.....	Above Twin Lakes, Cal.....	60.0
June 6, 1903	do.....	do.....	do.....	164
July 6, 1903	do.....	do.....	do.....	96.0
Aug. 2, 1903	do.....	do.....	do.....	60.0
July 22, 1902	Silver Creek.....	F. H. Olmsted.....	do.....	15.5
Oct. 7, 1902	Somers Creek.....	D. W. Hays.....	Above all diversions, Cal.....	4.2
Apr. 29, 1903	do.....	I. W. Huffaker.....	do.....	8.7
May 30, 1903	do.....	do.....	do.....	11.2
July 7, 1903	do.....	do.....	do.....	9.2
Aug. 3, 1903	do.....	do.....	Lower end of meadow.....	.9
Oct. 5, 1902	Swager Creek.....	D. W. Hays.....	Bridge above Huntoon ranch, Cal.....	5.7
Apr. 30, 1903	do.....	I. W. Huffaker.....	Worthy cabin.....	21.0
June 7, 1903	do.....	do.....	do.....	17.3
July 13, 1903	do.....	do.....	do.....	5.6
Aug. 6, 1903	do.....	do.....	do.....	2.6

Miscellaneous measurements of Buckeye Creek ditches, East Walker River drainage basin in California, in 1903.

[By I. W. Huffaker.]

Date.	Ditch.	Discharge.	Date.	Ditch.	Discharge.
		<i>Second-feet.</i>		<i>Upper North Channel—Con.</i>	<i>Second-feet.</i>
Apr. 28	Reason Barnes.....	1.8			
May 29	do.....	20.0	June 2	Elliot 3.....	1.6
July 8	do.....	13.7	2	Elliot 4.....	11.6
Apr. 28	Rickey.....	16.4			
May 29	do.....	35.0		<i>Lower North Channel.</i>	
July 8	do.....	22.0			
Apr. 28	Severe.....	7.0	June 2	Elliot 1.....	.9
May 2	do.....	34.0	2	Elliot 2.....	9.4
July 8	do.....	28.0	2	Elliot 3.....	2.9
June 2	Elliot.....	11.6	2	Day and Simpson.....	2.2
July 9	do.....	7.2			
June 2	Elliot, Day, and Simpson.....	4.8		<i>Lower South Channel.</i>	
2	Whitney Day.....	5.6	June 2	Elliot, Day, and Simpson.....	10.1
	<i>Upper North Channel.</i>		July 9	do.....	4.2
June 2	Elliot 1.....	5.1			
2	Elliot 2.....	.7			

Miscellaneous measurements of Green Creek ditches, East Walker River drainage basin in California, in 1903.

[By I. W. Huffaker.]

Date.	Ditch.	Discharge.	Date.	Ditch.	Discharge.
		<i>Second-feet.</i>			<i>Second-feet.</i>
June 3	Dynamo.....	0.0	June 3	Green Creek No. 2.....	38.0
July 7	do.....	5.3	July 7	do.....	.0
June 3	Shell.....	29.0	June 4	Lower Green Creek.....	22.0
July 7	do.....	.0	July 11	do.....	12.4
June 3	Green Creek No. 1.....	13.8	11	do.....	17.2
July 7	do.....	.0			

Miscellaneous measurements of Dogtown Creek ditches, East Walker River drainage basin in California, in 1903.

[By I. W. Huffaker.]

Date.	Ditch.	Discharge.	Date.	Ditch.	Discharge.
		<i>Second-feet.</i>			<i>Second-feet.</i>
July 7	Osborne and Kinney.....	3.8	June 3	Dogtown No. 1.....	24.0
June 3	Bryant.....	.0	July 7	do.....	.0
July 11	do.....	9.5	June 3	Dogtown No. 2.....	.0

Miscellaneous measurements of Antelope Valley ditches, West Walker River drainage basin in California, in 1903.

[By I. W. Huffaker.]

Date.	Ditch.	Discharge.	Date.	Ditch.	Discharge.
		<i>Second-feet.</i>			<i>Second-feet.</i>
May 1	Taylor	23	May 4	Kirman and Rickey	53.0
June 8	do	25	June 11	do	42.0
May 1	Hardy	3.3	July 15	do	34.0
June 9	do .....	.0	May 4	Larsen .....	.0
July 16	do .....	.0	June 11	do	23.0
May 1	West Goodnow	6.8	July 15	do	22.0
June 9	do	18.0	May 4	Gullickson .....	.0
July 16	do	8.7	June 11	do	11.1
May 1	Chichester No. 1	3.3	July 5	do .....	.4
June 9	do	1.8	May 4	W. W. Co. or slough	34.0
July 16	do .....	.0	June 11	do	75.0
May 1	Chichester No. 2 .....	.0	July 15	do	60.0
June 9	do .....	.0	May 4	Eggleston .....	.0
July 16	do .....	.0	July 16	do .....	.0
May 1	Coleville No. 2	4.9	May 4	Powell .....	.0
June 9	do	4.2	June 11	do	9.7
July 16	do	2.9	July 16	do	4.1
May 1	Tunnel and Alkali	6.8	May 4	Goodnow No. 1 .....	.0
June 9	do	30.0	June 11	do	7.2
July 16	do	25.0	July 16	do .....	.0
May 1	Swauger	11.3	May 4	Goodnow No. 2 .....	.0
June 9	do	50.0	June 11	do	12.6
July 16	do	53.0	July 16	do .....	.0
May 2	Wiley	15.2	May 2	Lancaster .....	.0
June 9	do	34.0	June 11	do	15.8
May 4	Carney .....	.0	May 11	Pitts and Radley	7.7
June 11	do	7.2	July 17	do .....	.0
July 15	do	6.3			

Miscellaneous measurements of Lost Canyon Creek ditches, West Walker River drainage basin in California, in 1903.

[By I. W. Huffaker.]

Date.	Ditch.	Discharge.	Date.	Ditch.	Discharge.
		<i>Second-feet.</i>			<i>Second-feet.</i>
May 2	Allard and Rickey .....	.0	July 14	McKay and Rickey	3.2
July 14	do	5.1	June 9	Shields	2.2
May 2	McKay and Rickey	1.5			

MONO LAKE BASIN.

RUSH CREEK NEAR MONO LAKE, CAL.

This station, which is located in the NE. $\frac{1}{4}$ sec. 13, T. 1 N., R. 26 E., at the highway bridge 8 miles southeast of Mono Lake post office, one-fourth mile above the mouth of the creek, was established November 16, 1910.

The gage was a vertical staff fastened to a cottonwood tree on the right bank 3 feet above the bridge from which discharge measurements are made. It was washed out June 24, 1911, and reset at a new location and arbitrary datum. On September 15, 1911, the gage was reset with its datum 0.9 foot above that of July 6, 1911.

The channel is composed of sand and gravel and may shift at high stages.

The station is maintained in cooperation with the United States Forest Service.

Discharge measurements of Rush Creek near Mono Lake, Cal., in 1910-1912.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1910. Nov. 16	H. D. McGlashan.....	Feet. 2.82	Sec.-ft. 41	1911. July 22	G. T. Peekema.....	Feet. 4.80	Sec.-ft. 697
1911. June 18	J. E. Stewart.....	8.45	1,190	1912. June 14	H. J. Tompkins.....	4.20	323

Daily gage height, in feet, of Rush Creek near Mono Lake, Cal., for 1910-1912.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.												
1							3.40					2.6
2									6.32			
3				2.73	3.68	3.50					3.7	
4												
5												
6			2.90					6.36		5.5		
7												
8			2.90				4.10					
9												
10			2.85						6.95			
11				2.82	2.83							
12			2.92							5.35	3.35	
13								6.30				2.35
14			2.95									
15							5.35					2.38
16		2.82	3.00									
17			3.00						7.80			
18					2.91	2.75						
19			2.90									
20								6.12				
21				3.00						5.2	2.95	
22							5.69					
23			2.80									
24												
25			2.75		3.40	3.23						2.45
26												
27			2.75					6.74				
28				2.99								
29			2.75				6.10			4.1		
30												
31			2.80									
1911-12.												
1												
2	2.38					2.06						
3					2.01							
4		2.26										
5									5.32			
6												
7	2.31			2.4								
8												
9						2.08						
10					2.04				4.53			
11		2.28	2.08									
12	2.30											
13				2.12								
14									4.2			
15	2.25											
16			2.08									
17					2.05							
18												
19		2.20							4.0			
20				2.08								

Daily gage height, in feet, of Rush Creek near Mono Lake, Cal., for 1910-1912—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1911-12.												
21.....	2.25											
22.....												
23.....			2.12									
24.....					1.95							
25.....												
26.....									3.18			
27.....				2.02								
28.....												
29.....												
30.....			2.50						3.2			
31.....												

NOTE.—Beginning July 6, 1911, gage heights refer to a new gage at an arbitrary datum. On Sept. 11, 1911, the datum was raised 0.9 foot.

Some ice existed at this station during January, 1912. Observer was absent Mar. 13 to June 4, 1912.

LEEVINING CREEK NEAR MONO LAKE, CAL.

This station, which is located 4 miles south of Mono Lake post office, at the forest ranger station in the SE. $\frac{1}{4}$ SE. $\frac{1}{4}$ sec. 17, T. 1 N., R. 26 E., in the Mono Lake National Forest, was established November 17, 1910.

Warren Creek, the most important tributary, enters about $5\frac{1}{2}$ miles above the station and $8\frac{1}{2}$ miles above Mono Lake. Less than 100 acres are irrigated in the small valley above the ranger's camp. Practically the entire low-water flow is used for irrigation near the mouth of the creek.

The gage is a vertical staff fastened to a cottonwood tree on the left bank, 250 feet below the ranger's camp.

Discharge measurements are made by wading.

The channel is composed of gravel and small boulders. Both banks are high and will not overflow.

This station is maintained in cooperation with the United States Forest Service.

Discharge measurements of Leevining Creek near Mono Lake, Cal., in 1910-1912.

Date.	Hydrographer.	Gage height.	Discharge.
1910.		<i>Feet.</i>	<i>Sec.-ft.</i>
Nov. 17	H. D. McGlashan	2.16	22
1911.			
June 18	J. E. Stewart	4.55	590
July 21	G. T. Peekema	3.93	323
1912.			
June 14	H. J. Tompkins	3.15	153

Daily gage height, in feet, of Leevining Creek near Mono Lake, Cal., for 1910-1912.

Day.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.											
1.....		2.13	3.10	2.25	2.45	2.35	2.60	2.90	4.10	.....	2.68
2.....		2.12	2.79	2.37	2.50	2.36	2.60	3.00	4.15	.....	2.65
3.....		2.11	2.15	2.41	2.19	2.38	2.62	3.24	4.30	3.30	2.60
4.....		2.12	2.25	2.48	2.15	2.37	2.66	3.45	4.30	.....	2.58
5.....		2.22	2.21	2.47	2.14	2.35	2.63	3.55	4.50	3.15	.....
6.....		2.20	2.08	2.48	2.15	2.38	2.72	3.80	4.70	3.10	.....
7.....		2.20	2.08	2.83	2.21	2.39	2.74	3.60	4.75	3.00	.....
8.....		2.19	2.07	2.85	2.35	2.41	2.72	3.50	.....	3.05	.....
9.....		2.18	2.10	2.35	2.51	2.40	2.71	3.55	.....	3.00	.....
10.....		2.21	2.16	2.31	2.52	2.38	2.69	3.85	.....	3.10	.....
11.....		2.22	2.99	2.25	2.20	2.38	2.69	4.00	.....	.....	.....
12.....		2.21	2.85	2.27	2.28	2.35	2.71	4.15	4.25	3.00	2.38
13.....		2.15	3.10	2.34	2.38	2.34	2.74	4.40	4.35	2.90	2.35
14.....		2.20	3.60	2.71	2.29	2.32	2.72	4.30	4.60	2.85	2.35
15.....		2.18	2.11	2.71	2.18	2.30	2.70	4.40	4.80	2.80	2.35
16.....		2.15	2.23	2.75	2.13	2.31	2.68	4.70	4.40	2.85	2.35
17.....	2.16	2.11	2.94	3.11	2.18	2.31	2.66	4.75	4.40	2.85	2.35
18.....	2.16	2.15	3.41	3.31	2.17	2.33	2.63	4.85	4.50	2.80	2.35
19.....	2.11	2.21	3.01	2.25	2.19	2.32	2.64	4.90	4.25	2.75	2.35
20.....	2.13	2.11	2.35	2.41	2.17	2.35	2.71	4.85	4.20	2.73	.....
21.....	2.16	2.15	2.31	2.71	2.16	2.37	2.82	4.80	4.00	2.80	.....
22.....	2.12	2.16	2.41	2.16	2.16	2.41	2.90	4.40	.....	2.75	.....
23.....	2.15	2.16	2.26	2.17	2.17	2.42	3.11	4.20	.....	2.70	2.38
24.....	-----	2.15	2.28	2.15	2.19	2.50	3.18	3.90	.....	2.70	2.35
25.....	2.11	2.13	2.23	2.18	2.21	2.54	3.30	3.75	3.40	.....	2.38
26.....	2.15	2.15	2.25	2.91	2.22	2.57	3.05	4.00	3.40	.....	-----
27.....	2.15	2.61	2.31	2.21	2.20	2.60	2.98	4.35	3.40	.....	-----
28.....	2.12	2.90	2.37	2.72	2.21	2.59	3.01	4.65	3.45	.....	-----
29.....	2.13	2.70	2.32	-----	2.25	2.58	3.03	4.45	3.40	.....	-----
30.....	2.13	2.11	2.45	-----	2.31	2.58	3.00	4.20	3.45	.....	2.35
31.....	-----	2.60	2.34	-----	2.30	-----	2.95	-----	3.40	2.65	-----
Day.				Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	June.	
1911-12.											
1.....				2.33	-----	-----	-----	2.1	2.05	-----	-----
2.....				2.32	2.18	-----	-----	2.09	2.04	-----	-----
3.....				2.30	2.19	-----	-----	2.09	2.1	-----	3.8
4.....				2.32	2.19	-----	-----	2.09	-----	-----	3.92
5.....				2.30	2.19	-----	-----	2.08	2.14	-----	3.95
6.....				2.30	2.19	-----	2.5	2.08	2.06	-----	4.0
7.....				2.28	2.17	-----	2.1	2.08	2.06	-----	4.1
8.....				2.27	2.15	-----	2.08	2.08	2.06	-----	3.7
9.....				2.25	2.14	-----	2.08	2.08	2.06	-----	3.52
10.....				2.25	2.17	2.13	2.1	2.08	2.06	-----	3.42
11.....				2.25	2.35	2.13	2.1	2.08	2.06	-----	3.45
12.....				2.25	2.50	2.11	2.1	2.08	2.06	-----	3.28
13.....				2.25	2.20	2.10	2.1	2.06	-----	-----	3.3
14.....				-----	2.22	2.09	2.1	2.06	-----	-----	3.18
15.....				2.23	2.20	2.09	2.1	2.06	-----	-----	3.18
16.....				2.22	2.19	2.08	2.1	2.08	-----	-----	3.15
17.....				2.20	2.18	2.15	2.1	2.08	-----	-----	3.12
18.....				2.21	2.18	2.20	2.09	2.08	-----	-----	3.18
19.....				2.20	2.18	2.30	2.09	2.07	-----	-----	3.28
20.....				2.21	2.18	2.38	2.08	2.08	-----	-----	3.32
21.....				2.20	2.17	2.55	2.08	2.07	-----	-----	3.13
22.....				-----	-----	2.77	2.08	2.06	-----	-----	3.02
23.....				2.20	-----	2.75	2.08	2.05	-----	-----	2.86
24.....				2.19	-----	3.00	2.08	2.05	-----	-----	2.74
25.....				2.18	-----	3.00	2.07	2.05	-----	-----	2.72
26.....				2.18	-----	3.00	2.07	2.05	-----	-----	2.76
27.....				2.19	-----	3.00	2.07	2.06	-----	-----	2.79
28.....				2.20	-----	3.00	2.09	2.06	-----	-----	2.85
29.....				-----	-----	3.00	2.09	2.06	-----	-----	2.84
30.....				2.20	-----	3.48	2.09	-----	-----	-----	2.86
31.....				2.20	-----	3.48	2.1	-----	-----	-----	-----

NOTE.—Relation of gage height to discharge affected by ice during the winter months. No record obtained Mar. 13 to June 2, 1912.

Daily discharge, in second-feet, of Leevining Creek near Mono Lake, Cal., for 1910-1912.

Day.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.											
1.....		22	20	29	25	38	65	108	390	193	76
2.....		21	20	40	24	39	65	123	408	186	72
3.....		20	20	44	24	41	68	168	465	180	65
4.....		21	20	51	22	40	73	210	465	165	63
5.....		27	20	50	22	38	69	232	550	150	60
6.....		25	20	51	22	41	82	298	648	140	57
7.....		25	20	46	26	42	85	245	673	123	54
8.....		24	20	42	26	44	82	220	627	132	51
9.....		24	20	38	26	43	80	232	581	123	48
10.....		26	20	34	25	41	78	312	536	140	45
11.....		27	20	29	25	41	78	356	491	132	43
12.....		26	20	31	31	38	80	408	446	123	41
13.....		22	20	37	41	37	85	507	486	108	38
14.....		25	20	35	32	35	82	465	598	100	38
15.....		24	20	32	24	33	79	507	698	93	38
16.....		22	20	31	22	34	76	648	507	100	38
17.....	23	20	20	30	24	34	73	673	507	100	38
18.....	23	22	20	29	24	36	69	724	550	93	38
19.....	20	21	20	29	24	35	71	750	446	86	38
20.....	22	20	38	27	24	38	80	724	426	83	38
21.....	23	22	34	25	23	40	96	698	356	93	39
22.....	21	23	44	23	23	44	108	507	317	86	40
23.....	22	23	30	24	24	45	142	426	278	79	41
24.....	21	22	31	22	24	53	156	326	239	79	38
25.....	20	22	27	24	26	58	180	284	200	78	41
26.....	22	22	29	25	27	61	132	356	200	77	41
27.....	22	21	34	26	25	65	120	486	200	76	40
28.....	21	21	40	25	26	64	125	623	210	75	39
29.....	22	20	35	.....	29	63	128	528	200	74	38
30.....	22	20	48	.....	34	63	123	426	210	73	38
31.....	.....	20	37	.....	33	.....	116	.....	200	72	.....
Day.					Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	June.
1911-12.											
1.....					36	24	23	20	20	18	.....
2.....					35	24	23	20	20	17	.....
3.....					33	24	23	20	20	20	298
4.....					35	24	23	20	20	21	332
5.....					33	24	23	20	19	22	341
6.....					33	24	23	20	19	18	356
7.....					31	24	23	20	19	18	391
8.....					31	22	23	19	19	18	270
9.....					29	22	23	19	19	18	225
10.....					29	24	22	20	19	18	204
11.....					29	38	22	20	19	18	210
12.....					29	53	20	20	19	18	176
13.....					29	25	20	20	18	.....	180
14.....					28	27	20	20	18	.....	156
15.....					27	25	20	20	18	.....	156
16.....					27	24	19	20	19	.....	150
17.....					25	24	20	20	19	.....	142
18.....					26	24	20	20	19	.....	156
19.....					25	24	20	20	18	.....	176
20.....					26	24	20	19	19	.....	184
21.....					25	24	20	19	18	.....	146
22.....					25	24	20	19	18	.....	126
23.....					25	24	20	19	18	.....	102
24.....					24	24	20	19	18	.....	85
25.....					24	24	20	18	18	.....	82
26.....					24	24	20	18	18	.....	87
27.....					24	24	20	18	18	.....	92
28.....					25	24	20	20	18	.....	100
29.....					25	24	20	20	18	.....	99
30.....					25	24	20	20	.....	.....	102
31.....					25	.....	20	20	.....	.....	.....

NOTE.—Daily discharge determined from a fairly well defined rating curve. Discharge estimated Dec. 19, 27-29, and 31, 1910; Feb. 7, 8, 14-18, 20, 21, 26, and 28, Mar. 1, 2, and 8-10, 1911; and Jan. 1 to 6, 1912. Discharge interpolated for days on which gage was not read except Mar. 13 to June 2, 1912.

Monthly discharge of Leevining Creek near Mono Lake, Cal., for 1910-1912.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1910-11.					
November 17-30.....	23	20	21.7	603	B.
December.....	27	20	22.6	1,390	B.
January.....	48	26.0	26.0	1,600	C.
February.....	51	22	33.2	1,840	C.
March.....	41	22	26.0	1,600	B.
April.....	65	33	44.1	2,620	B.
May.....	180	65	95.0	5,840	B.
June.....	750	108	419	24,900	B.
July.....	698	200	423	26,000	B.
August.....	193	72	110	6,760	B.
September.....	76	38	45.8	2,730	C.
The period.....				75,900	
1911-12.					
October.....	36	24	28.0	1,720	B.
November.....	53	22	25.5	1,520	C.
December.....			21.0	1,290	D.
January.....			19.6	1,210	C.
February.....	20	18	18.7	1,080	B.
March 1-12.....	22	17	18.7	445	B.
June 3-30.....	391	82	183	10,200	B.

MISCELLANEOUS MEASUREMENTS.

The following measurements have been made on creeks and ditches in the Mono Lake basin.

Miscellaneous measurements in Mono Lake drainage basin.

Date.	Stream.	Locality.	Discharge.
			<i>Sec.-ft.</i>
July 29, 1902	Mill Creek.....	Below Lundy Lake, above all diversions.....	46.7
July 22, 1911	do.....	1½ miles above Lundy Lake.....	146
June 16, 1912	do.....	At Lundy.....	65
July 22, 1911	Lake Canyon Creek.....	Mouth, at Lundy.....	2.8
July 30, 1902	Leevining Creek.....	Above Rhinedollar Lake.....	89
July 22, 1907	do.....	Road crossing near lake.....	248
Aug. 1, 1902	Rush Creek.....	Above Silver Lake.....	62.4
July 22, 1907	do.....	Road crossing near lake.....	430
July 22, 1911	do.....	Above Parker and Walker creeks.....	641
Aug. 1, 1902	Parker Creek.....		21.6
July 22, 1911	do.....	½ mile south of Farrington.....	45
Aug. 1, 1902	Walker Creek.....	East of Bloody Canyon.....	26.4
July 23, 1911	do.....	Farrington.....	11

OWENS LAKE BASIN.

SPECIAL COOPERATION.

In the fall of 1903 stations were established on five or six of the principal streams in Owens Valley and on numerous diversion canals used for irrigation. After the city of Los Angeles had acquired its extensive holdings in the valley and had taken active steps to utilize the flow of Owens River and tributaries for a municipal water supply, many other stations were established at the request of and in cooperation with the city. Since that time all stations in Owens Valley have been maintained in cooperation with the city of Los Angeles.

All stations in Owens Valley except those on Owens River are near the western margin of the valley, and most of them are below the delta fans, which extend eastward from the mouths of the canyons and are above all diversions. Nearly all measurements are made from footbridges or by wading. The current is swift at almost every station, and the channel is subject to more or less change.

OWENS LAKE NEAR OLANCHA, CAL.

This station was first established in March, 1908, near the old Smith ranch. The gage, which was a 2-inch by 6-inch pine board, was submerged in the early part of July, 1911, and a new gage set at the same location. During September, 1911, the gage was washed out and the station was moved to a point 1 mile north of Brier, where a gage was installed November 1, 1911. Gage heights represent elevation of water surface above sea level.

Elevation of Owens Lake near Olancha, Cal., 1908-1911.

Date.	Elevation of water surface.	Date.	Elevation of water surface.
1908.	<i>Feet.</i>	1911.	<i>Feet.</i>
Mar. 4.....	3,575.95	Jan. 5.....	3,575.29
29.....	3,575.73	Feb. 8.....	3,576.11
Apr. 19.....	3,575.78	July 12.....	3,577.35
26.....	3,575.90	28.....	3,578.03
May 28.....	3,575.60	Nov. 1.....	3,577.35
June 4.....	3,575.40	5.....	3,577.50
		Dec. 3.....	3,577.60
1910.			
July 22.....	3,575.98		
Sept. 21.....	3,574.95		
Oct. 28.....	3,574.71		
Dec. 1.....	3,574.89		

OWENS RIVER NEAR ROUND VALLEY, CAL.

This station, which is now located 600 feet above the junction of Owens River and Rock Creek, in sec. 10, T. 6 S., R. 31 E., was established August 3, 1903, at a footbridge 100 feet above the present site, to which it was removed May 27, 1907, as the original station had been destroyed on March 19 of that year.

No important streams enter above and Rock Creek is the first tributary below the station. No ditches take water above the gage, but several divert from the main river and its tributaries below the station, the first one being the Owens River canal, which heads 3 miles below the mouth of Rock Creek. The drainage area above the station is approximately 450 square miles.

The gage, which is a vertical staff on the left bank, was not referred to the datum of the original gage.

Discharge measurements are made from a car and cable at the gage.

The channel is composed of rock and lava boulders and changes little.

Discharge measurements of Owens River near Round Valley, Cal., in 1903-1912.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1903.		<i>Feet.</i>	<i>Sec.-ft.</i>	1908.		<i>Feet.</i>	<i>Sec.-ft.</i>
Aug. 3	R. S. Hawley	1.80	161	Feb. 22	R. B. Post	2.20	228
9	do	1.85	160	Mar. 29	do	2.15	236
18	do	1.75	159	May 12	do	2.2	222
22	do	1.75	160	June 18	do	2.35	256
Sept. 1	do	1.74	159	July 15	W. A. Lamb	2.38	267
12	do	1.80	175	Aug. 4	do	2.45	311
Oct. 8	do	1.85	185	25	do	2.15	240
25	do	1.82	173	Sept. 17	do	2.1	220
Nov. 24	do	1.88	196	Oct. 8	do	1.95	198
Dec. 29	do	1.70	151	23	Barrows and Lamb	2.00	200
				Nov. 7	do	2.00	187
1904.				1909.			
Jan. 25	R. S. Hawley	1.80	184	Jan. 22	Haines and Lee	2.34	284
Mar. 2	do	2.20	270	Feb. 11	R. E. Haines	2.14	211
28	do	2.85	458	27	do	2.02	187
Apr. 8	Murphy, Bennett, and Hawley	1.87	186	Mar. 18	do	2.10	218
27	R. S. Hawley	1.82	190	Apr. 8	do	2.48	282
June 2	do	2.57	383	29	do	2.20	224
15	do	3.10	564	May 19	do	2.38	294
July 13	Clausen and Barnes	2.55	380	June 10	do	3.15	574
Aug. 3	L. M. Barnes	2.40	324	30	do	3.48	710
Sept. 9	R. S. Hawley	2.01	232	July 23	do	2.75	420
Oct. 13	Hawley, Clapp, and Taylor	2.25	269	Aug. 11	do	2.40	295
Nov. 12	R. J. Taylor	2.00	218	Sept. 1	do	2.30	256
Dec. 6	do	1.85	155	22	do	2.11	209
				Oct. 13	do	2.09	201
1905.				Nov. 3	do	2.00	193
Jan. 16	R. J. Taylor	1.97	184	24	do	2.16	216
Feb. 9	do	1.95	175	1910.			
Apr. 4	J. S. Evans	2.00	179	Mar. 9	R. E. Haines	2.56	352
May 22	do	2.39	306	30	do	2.12	218
June 27	do	2.58	382	Apr. 21	do	2.20	242
July 25	do	2.15	207	May 11	do	2.40	300
Aug. 15	do	1.90	154	June 24	C. H. Lee	2.53	348
Sept. 8	do	2.00	177	July 11	do	2.43	312
27	do	1.90	155	Aug. 2	do	2.32	288
Nov. 2	F. R. S. Buttemer	1.80	164	24	F. G. Wood	2.07	201
24	do	1.85	180	Sept. 17	G. T. Peekema	2.02	175
Dec. 10	do	1.73	151	Oct. 22	do	2.02	183
				Nov. 18	do	2.03	189
1906.				Dec. 21	do	1.98	164
Jan. 8	F. R. S. Buttemer	1.75	161	1911.			
14	do	1.92	196	Jan. 25	G. T. Peekema	2.15	206
14	do	1.83	191	Mar. 12	C. H. Lee	2.20	220
Aug. 23	Hawley and Shuey	2.85	465	May 5	do	2.45	288
Nov. 3	G. R. Shuey	2.14	261	June 26	do	3.40	757
30	do	2.00	214	July 7	do	3.82	919
1907.				Aug. 3	J. E. Jones	2.92	466
Jan. 25	G. R. Shuey	2.15	261	24	do	2.50	342
Feb. 12	do	2.17	254	Sept. 20	do	2.30	232
Mar. 12	do	2.06	232	Oct. 24	do	2.25	250
May 14	do	2.30	350	Nov. 22	do	2.18	223
Aug. 4 ^a	Shuey and Post	3.25	709	Dec. 13	do	2.10	201
8	R. B. Post	3.00	566	1912.			
24	do	2.61	369	Jan. 17	J. E. Jones	2.15	218
Sept. 7	do	2.52	300	Feb. 21	do	2.10	199
23	do	2.40	260	Mar. 20	do	2.12	212
Oct. 5	do	2.35	251	Apr. 16	do	2.20	227
28	do	2.50	278	May 9	do	2.08	192
Nov. 17	do	2.28	233	22	do	2.12	225
Dec. 8	do	2.26	243	June 12	do	2.46	307

^a Beginning Aug. 4, 1907, the gage heights refer to the new gage established May 29, 1907.

Daily gage height, in feet, of Owens River near Round Valley, Cal., for 1903-1912.

Day.	Aug.	Sept.	Day.	Aug.	Sept.	Day.	Aug.	Sept.
1903.			1903.			1903.		
1.....		1.75	11.....	1.8	1.8	21.....	1.68	1.8
2.....		1.75	12.....	1.9	1.8	22.....	1.72	1.8
3.....		1.75	13.....	1.9	1.8	23.....	1.8	1.8
4.....	1.8	1.73	14.....	1.9	1.8	24.....	1.75	1.78
5.....	1.8	1.7	15.....	1.8	1.8	25.....	1.8	1.77
6.....	1.8	1.72	16.....	1.8	1.8	26.....	1.8	1.8
7.....	1.8	1.73	17.....	1.8	1.7	27.....	1.78	1.8
8.....	1.8	1.75	18.....	1.75	1.8	28.....	1.72	1.8
9.....	1.85	1.77	19.....	1.75	1.8	29.....	1.7	1.8
10.....	1.8	1.8	20.....	1.75	1.8	30.....	1.7	1.78
						31.....	1.7	.....

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1903-4.												
1.....	1.77	1.8	1.8	1.7	1.85	2.2	2.0	1.8	2.6	3.0	2.7	2.3
2.....	1.8	1.8	1.8	1.7	1.85	2.2	2.0	1.8	2.6	2.9	2.6	2.25
3.....	1.8	1.8	1.8	1.7	1.8	2.2	2.0	1.8	2.8	3.0	2.5	2.2
4.....	1.83	1.8	1.7	1.7	1.85	2.2	1.9	1.8	2.9	3.0	2.5	2.2
5.....	1.8	1.8	1.7	1.7	1.85	2.2	1.9	1.85	2.9	3.0	2.45	2.1
6.....	1.8	1.75	1.7	1.7	1.8	2.2	1.9	1.9	3.0	3.0	2.4	2.1
7.....	1.8	1.7	1.7	1.7	1.8	2.1	1.9	1.95	3.0	2.9	2.5	2.2
8.....	1.82	1.7	1.7	1.7	1.8	2.1	1.9	2.0	2.9	2.9	2.6	2.2
9.....	1.8	1.7	1.7	1.7	1.85	1.9	1.9	2.0	2.9	2.9	2.7	2.15
10.....	1.83	1.7	1.7	1.7	1.85	2.0	1.9	2.1	3.0	2.9	2.7	2.15
11.....	1.8	1.7	1.7	1.7	1.9	2.0	1.9	2.1	3.0	2.85	2.6	2.15
12.....	1.8	1.7	1.7	1.7	1.9	1.9	1.9	2.2	3.0	2.85	2.6	2.1
13.....	1.8	1.7	1.7	1.7	1.9	1.9	2.0	2.2	3.0	2.9	2.6	2.0
14.....	1.82	1.7	1.7	1.7	2.0	1.9	2.1	2.2	3.0	2.8	2.6	2.0
15.....	1.8	1.7	1.7	1.7	1.95	2.2	2.0	2.4	3.1	2.6	2.45	2.1
16.....	1.8	1.7	1.8	1.7	2.5	2.2	2.0	2.5	3.4	2.6	2.55	2.1
17.....	1.8	1.7	1.8	1.7	2.25	2.2	1.9	2.5	3.4	2.55	2.5	2.1
18.....	1.8	1.7	1.8	1.7	1.95	2.2	1.9	2.5	3.3	2.55	2.45	2.1
19.....	1.8	1.7	1.8	1.7	1.9	2.2	2.0	2.5	3.3	2.5	2.4	2.0
20.....	1.8	1.7	1.8	1.7	2.0	2.2	1.9	2.4	3.4	2.5	2.25	2.0
21.....	1.8	1.7	1.8	1.7	1.95	2.2	1.9	2.4	3.3	2.5	2.3	2.0
22.....	1.8	1.7	1.8	1.7	2.0	2.2	1.9	2.4	3.3	2.65	2.25	2.0
23.....	1.8	1.8	1.8	1.7	2.3	2.2	1.9	2.4	3.2	2.7	2.25	2.1
24.....	1.8	1.9	1.8	1.75	2.3	2.1	1.85	2.5	3.3	2.6	2.3	2.9
25.....	1.8	1.9	1.8	1.8	2.3	2.1	1.85	2.7	3.2	2.55	2.3	2.95
26.....	1.8	1.8	1.8	1.8	2.3	2.1	1.9	2.8	3.1	2.55	2.3	2.6
27.....	1.8	1.8	1.7	1.7	2.2	2.1	1.9	2.8	3.2	2.7	2.3	2.55
28.....	1.8	1.8	1.7	1.8	2.0	2.85	1.9	2.8	3.2	2.7	2.3	2.45
29.....	1.8	1.8	1.7	1.8	2.0	2.6	1.85	2.6	3.1	2.65	2.3	2.4
30.....	1.8	1.8	1.7	1.8	.....	2.0	1.8	2.6	3.1	2.7	2.3	2.4
31.....	1.7	.....	1.7	1.85	.....	1.95	.....	2.55	.....	2.8	2.25	.....
1904-5.												
1.....	2.3	2.15	2.1	2.15	2.2	2.2	1.9	2.1	2.3	2.5	2.1	1.9
2.....	2.3	2.15	2.1	2.1	2.15	2.25	1.95	2.1	2.3	2.5	2.05	1.9
3.....	2.2	2.15	2.1	2.1	2.1	2.2	2.0	2.1	2.3	2.6	2.05	1.9
4.....	2.2	2.2	2.1	2.0	2.1	2.2	2.0	2.1	2.3	2.6	2.0	1.9
5.....	2.15	2.3	2.1	2.0	2.1	2.2	2.0	2.1	2.3	2.6	2.0	1.95
6.....	2.10	2.2	2.1	2.0	2.0	2.25	2.0	2.05	2.3	2.6	1.95	2.0
7.....	2.15	2.1	2.0	2.0	2.1	2.25	2.0	2.0	2.35	2.5	1.95	2.0
8.....	2.2	2.1	2.0	2.0	2.1	2.2	2.0	2.0	2.35	2.5	2.0	2.0
9.....	2.2	2.1	2.0	2.0	2.1	2.1	2.1	2.0	2.4	2.5	2.0	2.0
10.....	2.25	2.1	2.0	2.0	2.1	2.1	2.1	2.0	2.4	2.5	2.0	2.0
11.....	2.3	2.1	2.0	2.0	2.1	2.0	2.0	2.0	2.4	2.5	1.9	2.0
12.....	2.3	2.1	2.0	1.95	2.0	2.0	2.0	2.0	2.55	2.45	1.9	2.0
13.....	2.25	2.1	2.0	1.95	2.0	2.5	2.0	2.0	2.7	2.4	1.9	2.0
14.....	2.25	2.1	2.0	1.9	2.0	2.15	1.95	2.0	2.75	2.4	2.0	2.0
15.....	2.2	2.1	2.05	1.9	2.0	2.15	1.9	2.0	2.75	2.4	2.0	2.0
16.....	2.2	2.1	2.05	1.9	2.0	2.15	1.9	2.0	2.75	2.3	2.0	2.0
17.....	2.1	2.1	2.05	1.95	2.0	2.1	1.95	2.2	3.0	2.2	1.9	2.0
18.....	2.0	2.1	2.05	1.95	2.1	2.1	1.95	2.35	3.0	2.2	1.9	2.0
19.....	2.15	2.1	2.0	2.0	2.2	2.05	1.95	2.35	3.0	2.2	1.9	2.0
20.....	2.15	2.1	2.0	2.0	2.1	2.05	1.95	2.4	3.0	2.2	1.85	2.0

Daily gage height, in feet, of Owens River near Round Valley, Cal., for 1903-1912—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1904-5.												
21.....	2.2	2.1	1.95	2.1	2.0	2.1	1.9	2.4	3.0	2.15	1.85	2.0
22.....	2.15	2.1	1.9	2.1	1.95	2.1	1.9	2.4	3.0	2.1	1.9	2.0
23.....	2.15	2.1	1.85	2.0	1.95	2.1	1.9	2.4	3.0	2.1	1.9	2.0
24.....	2.15	2.1	1.8	2.0	1.9	2.0	1.95	2.4	2.95	2.1	1.9	2.0
25.....	2.15	2.0	1.8	2.1	1.85	2.0	1.95	2.4	2.8	2.1	1.9	2.0
26.....	2.15	2.0	1.8	2.1	1.85	2.0	1.95	2.4	2.7	2.0	1.9	2.0
27.....	2.15	2.0	1.9	2.1	2.0	2.0	1.95	2.45	2.6	2.0	1.9	2.0
28.....	2.15	2.0	1.95	2.1	2.1	1.95	2.0	2.55	2.6	2.0	1.9	2.0
29.....	2.1	2.0	1.9	2.1	.....	1.9	2.05	2.5	2.55	2.0	1.9	2.0
30.....	2.1	2.0	2.0	2.2	.....	1.9	2.05	2.4	2.5	2.0	1.9	2.0
31.....	2.1	.....	2.0	2.2	.....	1.9	.....	2.3	.....	2.0	1.9	.....
1905-6.												
1.....	2.0	1.8	1.9	1.8	1.85	1.95	2.45	2.25	2.4	3.5	3.5	2.6
2.....	2.0	1.8	1.9	1.8	1.9	1.95	2.4	2.3	2.45	3.55	3.5	2.6
3.....	2.0	1.75	1.95	1.8	1.9	1.95	2.4	2.35	2.4	3.5	3.45	2.6
4.....	1.95	1.75	1.95	1.8	1.9	1.95	2.4	2.3	2.45	3.45	3.45	2.6
5.....	1.95	1.8	1.95	1.8	1.9	1.95	2.25	2.3	2.5	(a)	3.4	2.6
6.....	1.9	1.8	2.0	1.8	1.9	1.95	2.1	2.25	2.6	.....	3.3	2.55
7.....	1.9	1.85	2.0	1.75	1.9	2.0	2.15	2.2	2.7	.....	3.3	2.5
8.....	1.9	1.85	2.0	1.75	1.9	2.0	2.3	2.25	2.9	.....	3.3	2.5
9.....	1.9	1.9	1.95	1.75	1.95	2.0	2.5	2.2	3.9	.....	3.25	2.45
10.....	1.95	1.9	1.9	1.75	1.95	2.0	2.6	2.25	3.95	.....	3.25	2.45
11.....	1.95	1.9	1.9	1.8	1.95	2.1	2.7	2.35	3.0	.....	3.2	2.45
12.....	2.0	1.9	1.9	1.8	1.95	2.3	2.7	2.5	3.25	.....	3.1	2.45
13.....	2.0	1.9	1.9	1.9	1.95	2.25	2.75	2.45	3.3	.....	3.1	2.45
14.....	2.0	1.95	1.85	1.9	1.95	2.2	2.7	2.4	3.4	.....	3.1	2.4
15.....	2.0	2.0	1.85	1.9	1.95	2.2	2.65	2.4	3.4	.....	3.05	2.4
16.....	2.0	2.0	1.85	1.9	1.95	2.25	2.7	2.4	3.45	.....	3.0	2.4
17.....	1.95	2.0	1.8	1.95	1.95	2.25	2.7	2.4	3.45	.....	2.95	2.4
18.....	1.95	2.0	1.8	2.15	1.95	2.25	2.7	2.45	3.5	.....	2.95	2.4
19.....	1.9	2.0	1.8	2.1	1.95	2.3	2.7	2.6	3.55	.....	3.1	2.35
20.....	1.85	2.0	1.75	2.0	1.95	2.3	2.7	2.65	3.6	.....	3.2	2.35
21.....	1.85	2.0	1.75	2.0	2.0	2.35	2.6	2.6	3.7	.....	3.2	2.3
22.....	1.85	2.0	1.75	2.1	2.0	2.35	2.6	2.55	3.75	.....	3.1	2.3
23.....	1.85	2.0	1.75	2.1	2.0	2.35	2.5	2.5	3.85	.....	2.85	2.25
24.....	1.85	2.0	1.75	2.1	2.0	2.4	2.35	2.5	3.9	.....	2.85	2.25
25.....	1.8	2.0	1.75	2.1	2.0	2.35	2.25	2.5	3.9	.....	2.85	2.25
26.....	1.8	2.0	1.8	2.05	2.0	2.4	2.2	2.5	3.9	.....	2.7	2.3
27.....	1.75	2.0	1.8	2.0	1.95	2.35	2.15	2.5	3.7	.....	2.6	2.3
28.....	1.75	1.95	1.8	2.0	1.95	2.3	2.15	2.45	3.65	.....	2.6	2.3
29.....	1.75	1.9	1.8	1.95	.....	2.3	2.2	2.4	3.5	3.65	2.6	2.3
30.....	1.75	1.9	1.8	1.9	.....	2.35	2.2	2.45	3.6	3.6	2.6	2.3
31.....	1.75	.....	1.8	1.9	.....	2.5	.....	2.4	.....	3.6	2.6	.....
1906-7.												
1.....	2.3	2.15	2.0	2.15	2.2	2.25	.....	.....	3.0	3.6	3.45	2.5
2.....	2.3	2.15	2.0	2.1	2.2	2.3	.....	.....	3.2	3.6	3.45	2.5
3.....	2.3	2.15	2.05	2.0	2.25	2.3	.....	.....	3.4	3.6	3.45	2.5
4.....	2.35	2.15	2.1	1.95	2.3	2.35	.....	.....	3.4	3.6	3.4	2.5
5.....	2.35	2.15	2.1	1.85	2.3	2.4	.....	.....	3.35	3.6	3.3	2.5
6.....	2.35	2.15	2.1	1.9	2.35	2.4	.....	.....	3.2	3.6	3.2	2.5
7.....	2.3	2.15	2.1	1.9	2.35	2.35	.....	.....	3.1	3.6	3.2	2.5
8.....	2.3	2.1	2.1	1.95	2.3	2.3	.....	.....	3.1	3.6	3.1	2.5
9.....	2.3	2.1	2.15	2.0	2.2	2.25	.....	.....	3.05	3.6	3.0	2.5
10.....	2.3	2.1	2.15	2.1	2.2	2.25	.....	.....	3.0	3.6	2.9	2.5
11.....	2.25	2.1	2.2	2.15	2.2	2.2	.....	.....	3.0	3.6	2.9	2.5
12.....	2.2	2.1	2.2	2.15	2.2	2.05	.....	.....	3.0	3.6	2.9	2.55
13.....	2.2	2.1	2.2	2.15	2.2	2.25	.....	.....	2.9	3.6	2.85	2.55
14.....	2.2	2.1	2.2	2.15	2.2	2.3	.....	.....	2.8	3.55	2.85	2.55
15.....	2.2	2.05	2.2	2.15	2.2	2.3	.....	.....	2.8	3.5	2.85	2.5
16.....	2.2	2.05	2.2	2.15	2.3	2.25	.....	.....	2.8	3.45	2.85	2.5
17.....	2.2	2.0	2.2	2.15	2.25	2.5	.....	.....	3.0	3.4	2.8	2.55
18.....	2.2	2.0	2.2	2.15	2.2	4.2	.....	.....	3.1	3.4	2.8	2.55
19.....	2.2	2.0	2.15	2.15	2.2	3.0	.....	.....	2.8	3.4	2.75	2.6
20.....	2.15	2.0	2.15	2.15	2.25	2.5	.....	.....	2.7	3.4	2.75	2.6
21.....	2.15	2.0	2.1	2.2	2.25	2.7	.....	.....	3.0	3.4	2.7	2.55
22.....	2.15	2.0	2.1	2.2	2.3	2.5	.....	.....	3.0	3.35	2.7	2.5
23.....	2.1	2.0	2.15	2.2	2.35	2.5	.....	.....	3.1	3.3	2.65	2.4
24.....	2.1	2.0	2.15	2.15	2.25	2.4	.....	.....	3.0	3.25	2.6	2.4
25.....	2.1	2.05	2.15	2.15	2.2	2.4	.....	.....	3.0	3.3	2.6	2.4

a Station discontinued; operations resumed July 29.

Daily gage height, in feet, of Owens River near Round Valley, Cal., for 1903-1912—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1906-7.												
26.....	2.1	2.1	2.15	2.15	2.15	2.4	.....	.....	3.1	3.35	2.6	2.4
27.....	2.1	2.1	2.2	2.15	2.15	2.4	.....	.....	3.25	3.4	2.55	2.4
28.....	2.1	2.1	2.2	2.2	2.2	2.4	.....	.....	3.3	3.4	2.55	2.4
29.....	2.1	2.1	2.2	2.2	.....	2.4	.....	2.8	3.35	3.4	2.5	2.4
30.....	2.15	2.1	2.2	2.25	.....	2.4	.....	2.9	4.0	3.4	2.5	2.4
31.....	2.15	.....	2.2	2.2	.....	2.4	.....	3.0	.....	3.45	2.5	.....
1907-8.												
1.....	2.35	2.35	2.3	2.2	2.2	2.2	2.15	2.3	2.4	2.4	2.5	2.2
2.....	2.35	2.35	2.3	2.2	2.2	2.2	2.15	2.4	2.4	2.4	2.5	.....
3.....	2.35	2.35	2.25	2.2	2.2	2.15	2.15	2.6	2.4	.....	2.6	2.2
4.....	2.35	2.3	2.25	2.2	2.2	2.15	2.15	2.5	2.5	2.5	2.5	.....
5.....	2.35	2.3	2.2	2.15	2.15	2.15	2.15	2.3	2.4	2.6	2.5	2.2
6.....	2.35	2.3	2.3	2.15	2.15	2.1	2.15	2.5	2.6	2.4	2.5	2.2
7.....	2.4	2.3	2.4	2.15	2.1	2.1	2.15	2.4	2.65	2.4	2.6	.....
8.....	2.4	2.3	2.4	2.15	2.1	2.1	2.1	2.4	2.7	2.45	2.6	2.2
9.....	2.4	2.3	2.35	2.15	2.1	2.1	2.1	2.4	2.6	2.4	2.4	2.2
10.....	2.4	2.3	2.3	2.15	2.1	2.1	2.1	2.3	2.4	2.5	2.35	.....
11.....	2.4	2.3	2.35	2.2	2.1	2.2	2.1	2.3	2.4	2.5	2.3	2.3
12.....	2.4	2.3	2.4	2.2	2.1	2.3	.....	2.3	2.5	2.6	2.3	2.3
13.....	2.4	2.3	2.4	2.15	2.1	2.7	.....	2.3	2.5	2.5	2.35	2.2
14.....	2.4	2.3	2.4	2.15	2.1	2.75	2.2	2.4	2.5	2.6	2.3	.....
15.....	2.4	2.3	2.35	2.1	2.1	2.8	2.3	2.3	.....	2.5	2.35	2.2
16.....	2.4	2.3	2.3	2.1	2.1	2.8	.....	2.3	.....	2.5	2.4	2.15
17.....	2.4	2.3	2.25	2.1	2.1	2.75	2.3	2.4	2.6	2.4	2.3	2.1
18.....	2.4	2.3	2.2	2.1	2.15	2.7	2.3	2.3	2.6	2.4	2.2	2.25
19.....	2.4	2.3	2.15	2.15	2.15	2.7	2.4	2.3	2.4	2.4	2.3	2.2
20.....	2.4	2.25	2.15	2.15	2.2	2.7	2.6	2.3	2.35	2.3	2.25	.....
21.....	2.45	2.25	2.15	2.15	2.2	2.6	2.3	2.3	2.5	2.3	2.2	2.25
22.....	2.5	2.25	2.15	2.2	2.2	2.5	2.3	2.4	2.55	2.4	2.2	.....
23.....	2.55	2.25	2.15	2.2	2.2	2.4	2.3	2.5	2.4	2.3	2.2	.....
24.....	2.5	2.25	2.15	2.25	2.2	2.3	2.3	2.4	2.45	2.3	2.2	2.0
25.....	2.5	2.25	2.15	2.3	2.2	2.2	2.3	2.4	2.6	2.3	.....	2.0
26.....	2.5	2.25	2.15	2.3	2.2	2.2	2.2	2.5	2.65	2.4	.....	.....
27.....	2.5	2.3	2.2	2.25	2.25	2.2	2.4	2.5	2.6	.....	2.2	2.0
28.....	2.5	2.3	2.3	2.25	2.25	2.15	2.4	2.4	2.5	2.4	2.2	.....
29.....	2.5	2.3	2.25	2.2	2.25	2.15	2.3	2.3	2.5	2.5	2.2	2.0
30.....	2.45	2.3	2.2	2.2	.....	2.15	2.4	2.4	2.55	2.4	2.2	.....
31.....	2.4	.....	2.2	2.2	.....	2.15	.....	2.4	.....	2.5	2.2	.....
1908-9.												
1.....	2.0	.....	.....	.....	1.7	1.7	2.6	2.3	.....	3.5	2.6	2.3
2.....	2.1	2.0	1.95	1.9	.....	.....	.....	.....	2.9	3.6	2.5	.....
3.....	.....	.....	.....	.....	1.7	1.85	3.0	2.35	3.2	3.8	2.5	2.2
4.....	2.1	2.0	2.0	1.95	.....	.....	.....	.....	.....	.....	2.5	.....
5.....	.....	.....	.....	.....	1.9	1.9	2.6	2.4	3.3	3.7	2.4	2.2
6.....	2.1	1.95	2.0	2.2	.....	.....	.....	.....	.....	3.4	2.4	.....
7.....	.....	.....	.....	.....	1.95	1.95	2.5	2.4	3.4	3.3	.....	2.15
8.....	1.95	1.95	2.0	1.95	.....	.....	2.5	2.5	3.4	.....	2.4	.....
9.....	1.95	.....	.....	.....	2.0	2.0	2.5	.....	3.35	3.2	2.4	2.1
10.....	2.0	1.95	1.95	1.9	.....	.....	.....	2.5	3.15	.....	.....	.....
11.....	2.0	.....	.....	.....	.....	2.1	2.7	.....	3.2	3.1	2.35	2.0
12.....	.....	1.95	1.95	1.95	2.3	.....	.....	2.5	.....	.....	.....	.....
13.....	2.0	.....	.....	.....	.....	2.0	2.9	.....	3.2	3.0	2.4	2.1
14.....	.....	2.0	1.9	2.6	2.25	.....	.....	2.5	.....	.....	2.4	.....
15.....	2.0	.....	.....	.....	.....	2.1	2.9	.....	3.2	3.0	.....	2.0
16.....	.....	1.95	1.95	2.3	2.1	.....	.....	2.5	.....	3.0	2.4	.....
17.....	2.0	.....	.....	.....	.....	2.0	2.9	.....	3.2	.....	2.5	2.1
18.....	.....	1.95	1.9	2.3	2.0	2.1	.....	2.5	3.25	2.9	.....	2.1
19.....	2.0	.....	.....	.....	.....	1.9	2.8	2.4	.....	2.9	2.5	2.15
20.....	.....	1.95	1.9	2.3	1.9	.....	2.7	2.55	3.3	.....	2.55	2.1
21.....	2.0	.....	.....	.....	.....	1.8	.....	.....	3.4	2.8	2.6	2.2
22.....	.....	1.95	1.95	2.35	1.9	.....	2.6	2.5	.....	2.85	.....	2.1
23.....	2.0	.....	.....	.....	.....	1.7	.....	.....	3.4	2.8	2.5	.....
24.....	.....	1.95	1.95	2.4	1.8	.....	2.5	2.5	3.4	.....	2.45	2.15
25.....	1.95	.....	.....	.....	.....	2.0	.....	.....	.....	2.7	.....	.....
26.....	.....	1.95	1.95	2.35	1.95	.....	2.35	2.45	3.5	.....	2.4	2.1
27.....	2.0	.....	.....	.....	.....	2.0	.....	2.5	3.6	2.7	2.35	.....
28.....	.....	1.95	1.95	2.4	2.0	.....	2.3	.....	.....	.....	2.3	2.2
29.....	1.95	.....	.....	.....	.....	2.0	2.3	2.7	3.5	2.6	.....	.....
30.....	.....	1.95	1.95	2.4	.....	.....	.....	.....	3.5	.....	2.3	2.1
31.....	2.0	.....	1.95	.....	.....	2.0	.....	2.7	.....	2.6	2.25	.....

Daily gage height, in feet, of Owens River near Round Valley, Cal., for 1903-1912—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909-10.												
1			2.3	2.6		2.15	2.1	2.4	3.2	2.5		2.0
2	2.1	2.1			2.1						2.35	
3	2.0	2.0	2.2	2.5		2.2	2.15	2.35	3.3	2.4		2.15
4	2.0	2.0	2.25		2.0	2.2			3.4		2.3	2.1
5				2.4	2.1		2.1	2.4	3.2	2.45	2.3	
6	1.9	2.1	2.2			2.2	2.15		3.25	2.4		2.1
7	2.0			2.3	2.0	2.2		2.4			2.2	
8		2.0				2.25	2.1	2.45	3.2	2.45		2.0
9	1.9	2.25		2.1	2.1						2.1	
10	1.9					2.2	2.15	2.5	3.3	2.4		2.05
11		2.2		2.0	2.0	2.25	2.2	2.55			2.1	2.0
12	1.95	2.2							3.15	2.4	2.0	
13	2.0		2.3	2.0	2.1	2.2	2.15	2.5				2.0
14		2.1							3.2	2.4	2.2	
15	1.95		2.4	2.0	2.1	2.2	2.2	2.6				2.0
16		2.2					2.1	2.6	3.1	2.45	2.15	
17	2.1		2.3	2.0	2.1	2.2	2.2	2.6	3.15	2.4		2.05
18		2.15			2.1			2.6	3.0		2.1	
19	2.0		2.3	2.0		2.2	2.15		3.0	2.45		2.0
20		2.25			2.1		2.2	2.7			2.0	
21	2.1	2.2	2.3	2.1	2.1	2.1			2.9	2.4		2.05
22							2.15	2.7	2.9		2.1	
23	2.0	2.2	2.3	2.1	2.1	2.15			2.7	2.45		2.0
24	2.1	2.15	2.3				2.3	2.8	2.6		2.0	
25		2.2		2.1	2.15	2.1	2.3			2.4		2.05
26	2.0		2.3				2.4	2.8	2.55		2.1	
27		2.3		2.1	2.1	2.1	2.35	2.85	2.5	2.5		2.0
28	2.1		2.3		2.1		2.4		2.6	2.0		
29		2.15	2.3	2.1		2.1		2.8	2.5			1.9
30	2.0						2.35			2.5	2.1	1.85
31	2.1		2.3	2.0		2.1		3.0		2.35		
1910-11.												
1	1.95	2.0	1.9	1.95	2.6	2.15	2.6	2.53	2.75		3.4	2.5
2										3.45		
3	1.95	2.1	1.9	1.95	2.4	2.1	2.65	2.4	2.85	3.45	3.45	2.4
4			2.0								2.92	2.4
5	2.0	2.0		2.0	2.4	2.15	2.7	2.45	2.9	3.75	3.35	
6		2.05	1.9							3.8		2.35
7	2.0			1.95	2.35	2.2	2.6	2.4	2.85	3.8	3.4	
8		2.0	1.95					2.4	2.9	3.83		2.35
9	2.1				2.25	2.6	2.5				3.2	
10		2.05	1.85	2.1		2.2		2.4	2.9	3.75		2.3
11	2.05		1.85		2.2		2.3	2.4	2.95		3.23	
12		2.0		2.0		2.2				3.8		2.35
13	2.1		1.9		2.2		2.25	2.45	2.95	3.73	2.9	
14	2.1	2.05		2.1		2.23		2.4	3.0			2.35
15			1.95	2.0	2.25		2.3			4.0	3.0	
16	2.15	1.95				2.15		2.45	3.2	3.93		2.35
17		1.9	1.95	2.1	2.15		2.35	2.45	3.4		2.85	
18	2.05		2.0			2.15			3.7	3.95	2.9	2.35
19		1.85		2.05	2.2		2.4	2.55	3.77			
20	2.1		2.0			2.25				3.65	2.75	2.3
21	2.0	1.9		2.1	2.1		2.45	2.5	3.95			
22			2.0	2.0		2.3		2.6		3.7	2.8	2.3
23	2.0	1.8			2.1	2.4	2.5		3.8			
24			1.95	2.1		2.4		2.7	3.8	3.55	2.7	2.3
25	2.05	1.85		2.15	2.1		2.55					
26	2.1		2.0	2.0	2.15	2.5		2.7	3.6	3.5	2.6	2.3
27	2.1			2.1			2.53					
28		1.8	1.95		2.1	2.5		2.75	3.55	3.5	2.5	2.33
29	2.1	1.85	1.95				2.55				2.55	
30	2.0			2.6		2.6	2.5	2.7	3.4	3.53		2.3
31	2.1		2.0			2.55					2.45	

Daily gage height, in feet, of Owens River near Round Valley, Cal., for 1903-1912—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.									
1.....	2.3			2.0	2.0	2.1		2.0	2.9
2.....		2.25	2.18				2.2		
3.....	2.3			1.95	2.0			2.1	2.85
4.....			2.1			2.15	2.25		
5.....	2.33	2.3		1.95	1.98			1.8	2.75
6.....	2.3		2.15			2.15	2.2		
7.....	2.25	2.25		1.97	2.0			1.75	2.7
8.....	2.3		2.1			2.2	2.15		
9.....		2.25		1.93	1.95			2.1	2.55
10.....	2.23		2.13			2.2	2.1		
11.....		2.25		2.0	2.0			1.95	2.5
12.....	2.3		2.1			2.15	2.05		2.45
13.....		2.3	2.1	1.98	2.0			1.9	2.45
14.....	2.3		2.13			2.1	2.0		2.45
15.....	2.3	2.15		2.05	2.0			2.0	
16.....	2.3		2.1			2.15	2.2		2.4
17.....	2.3	2.19	2.1	2.0	2.1			2.0	2.45
18.....				1.98		2.1	2.1	2.05	
19.....	2.3	2.2	2.13	1.98	2.1	2.15			2.4
20.....							2.2	2.0	2.35
21.....	2.3	2.15	2.1	2.0	2.1	2.15			2.3
22.....		2.18					2.15	2.1	
23.....	2.25		2.1	2.0	2.1	2.1		2.2	2.4
24.....		2.1	2.13				2.1		2.35
25.....	2.3			2.0	2.15	2.15		2.35	
26.....		2.15					2.0		2.4
27.....	2.2		2.1	1.93	2.1	2.2		2.45	2.3
28.....		2.2	2.13				2.05		2.3
29.....	2.25			2.0	2.1	2.2		2.75	
30.....		2.15	2.1	1.98			1.9		
31.....	2.2					2.2		2.8	

NOTE.—Gage destroyed Mar. 19, 1907. Gage heights Mar. 20-31, 1907, estimated by comparison with Rock and Pine creeks. New gage installed May 29, 1907, about 100 feet below original location.

Rating tables for Owens River near Round Valley, Cal.

August 4, 1903, to December 31, 1904.

Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.
<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>
1.60	132	2.20	272	2.70	412	3.20	568
1.70	152	2.30	298	2.80	442	3.30	601
1.80	172	2.40	325	2.90	473	3.40	636
1.90	196	2.50	353	3.00	504	3.50	675
2.00	221	2.60	382	3.10	536	3.60	715
2.10	246						

January 1 to October 10, 1905.

1.80	134	2.20	240	2.60	377	3.00	533
1.90	158	2.30	271	2.70	415		
2.00	184	2.40	304	2.80	453		
2.10	211	2.50	339	2.90	493		

NOTE.—Table based on 12 discharge measurements made during 1904-5. It is fairly well defined between gage heights 1.9 feet and 3.1 feet.

October 11 to December 31, 1905.

1.70	141	1.80	165	1.90	191	2.00	219
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NOTE.—Table is based on three discharge measurements made during the latter part of 1905 and is fairly well defined.

Rating tables for Owens River near Round Valley, Cal.—Continued.

January 1, 1906, to March 31, 1907.

Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.
<i>Fect.</i>	<i>Sec.-feet.</i>	<i>Fect.</i>	<i>Sec.-feet.</i>	<i>Fect.</i>	<i>Sec.-feet.</i>	<i>Fect.</i>	<i>Sec.-feet.</i>
1.60	132	2.30	297	3.00	512	3.70	750
1.70	152	2.40	326	3.10	545	3.80	785
1.80	172	2.50	355	3.20	578	3.90	821
1.90	194	2.60	385	3.30	612	4.00	857
2.00	218	2.70	416	3.40	646	4.10	893
2.10	244	2.80	448	3.50	680	4.20	930
2.20	270	2.90	480	3.60	715		

NOTE.—Table applicable only to open channel. It is based on discharge measurements made during 1903 to 1907, and is well defined between gage heights 1.7 feet and 2.8 feet.

May 29, 1907, to December 31, 1908.

1.90	174	2.50	307	3.10	617	3.60	932
2.00	191	2.60	342	3.20	679	3.70	997
2.10	210	2.70	386	3.30	741	3.80	1,062
2.20	231	2.80	441	3.40	804	3.90	1,127
2.30	253	2.90	498	3.50	868	4.00	1,192
2.40	278	3.00	557				

NOTE.—Table applicable only to open channel. It is based on 21 discharge measurements made from August, 1907, to Dec. 31, 1908. It is fairly well defined between gage heights 1.9 feet and 3.3 feet.

Daily discharge, in second-feet, of Owens River near Round Valley, Cal., for 1909–1912.

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909.									
1.	170	149	149	358	253	436	716	358	253
2.	170	149	158	436	253	476	756	320	239
3.	177	149	164	516	269	596	836	320	226
4.	177	158	170	436	285	616	816	320	226
5.	203	170	170	358	285	636	796	285	226
6.	226	170	170	339	285	656	676	285	226
7.	203	177	177	320	285	676	636	285	214
8.	177	185	185	320	320	676	616	285	203
9.	170	185	185	320	320	656	596	285	203
10.	170	203	194	358	320	576	576	285	214
11.	170	214	203	396	320	596	556	269	185
12.	177	253	194	436	320	596	536	285	194
13.	253	253	185	476	320	596	516	285	203
14.	358	239	194	476	320	596	516	285	194
15.	302	226	203	476	320	596	516	285	185
16.	253	203	194	476	320	596	516	285	194
17.	253	214	185	476	320	596	496	320	203
18.	253	185	203	456	320	616	476	320	203
19.	253	177	170	436	285	636	476	320	214
20.	253	170	164	396	339	636	456	339	203
21.	253	170	158	377	320	676	436	358	226
22.	269	170	153	358	320	676	456	339	203
23.	269	164	149	339	320	676	436	320	203
24.	285	158	164	320	320	676	416	302	214
25.	269	170	185	285	320	696	396	285	203
26.	269	177	185	269	302	716	396	285	203
27.	269	185	185	253	320	756	396	269	214
28.	285	185	185	253	358	736	377	253	226
29.	285	.....	185	253	396	716	358	253	214
30.	285	.....	185	253	396	716	358	253	203
31.	194	.....	185	.....	396	.....	358	239	.....

Daily discharge, in second-feet, of Owens River near Round Valley, Cal., for 1909-1912—
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909-10.												
1.....	203	203	253	370	192	221	206	301	596	335	284	177
2.....	203	203	239	352	206	228	214	292	616	318	284	199
3.....	185	185	226	335	192	236	221	284	636	301	276	221
4.....	185	185	239	318	177	236	214	292	676	310	268	206
5.....	177	194	226	301	206	236	206	301	596	318	268	206
6.....	170	203	226	284	192	236	221	301	616	301	252	206
7.....	185	194	226	268	177	236	214	301	606	310	236	192
8.....	177	185	226	247	192	252	206	318	596	318	221	177
9.....	170	239	226	206	206	244	214	326	616	310	206	184
10.....	170	226	253	192	192	236	221	335	636	301	206	192
11.....	170	226	253	177	177	252	236	352	606	301	206	177
12.....	177	226	253	177	192	244	228	344	576	301	177	177
13.....	185	214	253	177	206	236	221	335	586	301	206	177
14.....	185	203	269	177	206	236	228	352	596	301	236	177
15.....	177	214	285	177	206	236	236	370	576	310	228	177
16.....	185	226	269	177	206	236	206	370	556	318	221	184
17.....	203	226	253	177	206	236	236	370	576	301	214	192
18.....	214	214	253	177	206	236	228	370	517	310	206	184
19.....	185	226	253	177	206	236	221	388	517	318	192	177
20.....	194	239	253	192	206	221	236	405	498	310	177	184
21.....	203	226	253	206	206	206	228	405	478	301	192	192
22.....	194	226	253	206	206	214	221	405	478	310	206	184
23.....	185	226	253	206	206	221	244	423	405	318	192	177
24.....	203	214	253	206	214	214	268	441	370	310	177	184
25.....	194	226	253	206	221	206	268	441	361	301	192	192
26.....	185	239	253	206	214	206	301	441	352	318	206	184
27.....	194	253	253	206	206	206	284	460	335	335	192	177
28.....	203	226	253	206	206	206	301	450	335	370	177	164
29.....	194	214	253	206	.....	206	292	441	335	352	192	151
30.....	185	226	253	192	.....	206	284	478	335	335	206	139
31.....	203	.....	253	177	.....	206	.....	517	.....	284	192	.....
1910-11.												
1.....	164	177	151	164	355	213	355	328	418	742	730	317
2.....	164	192	151	164	319	206	365	356	440	755	742	300
3.....	164	206	151	164	283	200	375	283	462	765	755	283
4.....	170	192	177	170	283	206	385	292	474	834	494	283
5.....	177	177	164	176	283	213	395	300	485	912	705	276
6.....	177	192	151	170	276	220	375	292	474	940	718	268
7.....	177	184	158	164	268	226	355	283	462	940	730	268
8.....	192	177	164	176	254	290	336	283	485	956	680	268
9.....	206	184	151	188	240	355	317	283	485	934	630	260
10.....	199	192	139	200	233	226	285	283	485	912	638	253
11.....	192	184	139	188	226	226	253	283	508	1,020	645	260
12.....	199	177	145	176	226	226	246	292	508	940	565	268
13.....	206	184	151	188	226	230	240	300	508	902	485	268
14.....	206	192	158	200	233	234	246	283	530	976	508	268
15.....	214	177	164	176	240	224	253	292	580	1,050	530	268
16.....	221	164	164	188	226	213	260	300	630	1,010	496	268
17.....	206	151	164	200	213	226	268	300	730	1,020	462	268
18.....	192	145	177	194	220	213	276	318	885	1,020	485	268
19.....	199	139	177	188	226	226	283	336	924	939	452	260
20.....	206	145	177	194	213	240	292	326	972	858	418	253
21.....	177	151	177	200	200	246	300	317	1,020	872	429	253
22.....	177	139	177	176	200	253	308	355	1,080	885	440	253
23.....	177	127	170	188	200	283	317	375	940	845	418	253
24.....	184	133	164	200	200	283	326	395	940	805	395	253
25.....	192	139	170	213	200	300	336	395	885	792	375	253
26.....	206	135	177	176	213	317	332	395	830	780	355	253
27.....	206	131	170	200	206	317	328	406	780	780	336	258
28.....	206	127	164	240	200	317	332	418	805	780	317	262
29.....	206	139	164	300	.....	336	336	406	768	788	336	258
30.....	177	145	170	355	.....	355	317	395	730	795	318	253
31.....	206	.....	177	420	.....	336	.....	406	.....	762	300	.....

Daily discharge, in second-feet, of Owens River near Round Valley, Cal., for 1909-1912—
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.									
1.....	253	233	217	176	176	200	228	176	485
2.....	253	240	221	170	176	205	228	188	474
3.....	253	244	210	164	176	205	236	200	462
4.....	258	248	200	164	174	214	243	165	440
5.....	262	253	206	164	171	214	236	130	418
6.....	253	246	213	166	174	214	228	126	406
7.....	240	240	206	169	176	221	221	121	395
8.....	253	240	200	164	170	228	214	160	368
9.....	244	240	204	159	164	228	207	200	340
10.....	234	240	208	167	170	228	200	182	331
11.....	244	240	204	176	176	221	194	164	322
12.....	253	246	200	174	176	214	188	158	306
13.....	253	253	200	171	176	207	182	152	306
14.....	253	233	208	180	176	200	176	164	306
15.....	253	213	204	188	176	207	200	176	298
16.....	253	218	200	182	188	214	228	176	290
17.....	253	223	200	176	200	207	214	176	306
18.....	253	224	204	171	200	200	200	188	298
19.....	253	226	208	171	200	214	214	182	290
20.....	253	220	204	174	200	214	228	176	274
21.....	253	213	200	176	200	214	221	188	258
22.....	246	221	200	176	200	207	214	200	274
23.....	240	210	200	176	200	200	207	228	290
24.....	246	200	208	176	207	207	200	251	274
25.....	253	206	206	176	214	214	188	274	282
26.....	240	213	204	168	207	221	176	290	290
27.....	226	220	200	159	200	228	182	306	258
28.....	233	226	208	168	200	228	188	362	258
29.....	240	220	204	176	200	228	170	418	258
30.....	233	213	200	171	.....	228	152	429	258
31.....	226	.....	200	174	.....	228	.....	440	.....

NOTE.—Daily discharge determined from fairly well defined rating curves applicable as follows: Jan. 1 to Dec. 31, 1909, Jan. 1 to Dec. 31, 1910, Jan. 1 to Dec. 31, 1911, Jan. 1 to June 30, 1912. Discharge interpolated or estimated for days on which gage was not read.

Monthly discharge of Owens River near Round Valley, Cal., for 1903-1912.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1903.					
August 4-31.....	196	148	169	9,386	
September.....	172	152	167	9,937	
1903-4.					
October.....	179	152	172	10,576	
November.....	196	152	163	9,699	
December.....	172	152	161	9,900	
January.....	184	152	156.6	9,629	
February.....	353	172	220.9	12,706	
March.....	458	196	259.7	15,968	
April.....	246	172	201.5	11,990	
May.....	442	172	299.5	18,416	
June.....	635	382	532	31,656	
July.....	504	353	428	26,317	
August.....	412	285	336	20,660	
September.....	489	221	281	16,721	
The year.....	635	152	268	184,000	
1904-5.					
October.....	298	221	266	16,356	
November.....	298	221	246	14,638	
December.....	246	172	218	13,404	
January.....	240	158	193	11,870	
February.....	240	146	196	10,880	
March.....	339	158	213	13,100	

Monthly discharge of Owens River near Round Valley, Cal., for 1903-1912—Continued.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1904-5.					
April.....	211	158	177	10,530	
May.....	358	184	246	15,130	
June.....	533	271	392	23,330	
July.....	377	184	275	16,910	
August.....	211	146	169	10,390	
September.....	184	158	180	10,710	
The year.....	533	146	231	167,000	
1905-6.					
October.....	219	153	180	11,070	
November.....	219	153	197	11,720	
December.....	219	153	179	11,010	
January.....	257	162	199	12,200	
February.....	218	183	205	11,400	
March.....	355	206	270	16,600	
April.....	432	244	345	20,500	
May.....	409	270	328	20,200	
June.....	839	326	624	37,100	
July.....	732	663	696	42,800	
August.....	680	385	535	32,900	
September.....	385	284	330	19,600	
The year.....	839	153	341	247,000	
1906-7.					
October.....	312	244	273	16,800	
November.....	257	218	239	14,200	
December.....	270	218	256	15,700	
January.....	284	183	247	15,200	
February.....	312	257	281	15,600	A.
March.....	929	231	341	21,000	A.
April.....			270	16,100	B.
May.....			438	26,900	D.
June.....	1,190	387	616	36,700	B.
July.....	932	710	856	52,600	B.
August.....	836	307	432	26,600	B.
September.....	342	278	305	18,100	B.
The year.....	1,190	183	380	276,000	
1907-8.					
October.....	324	266	285	17,500	B.
November.....	266	242	252	15,000	B.
December.....	278	220	245	15,100	B.
January.....	253	210	227	14,000	B.
February.....	242	210	223	12,800	B.
March.....	441	210	279	17,200	B.
April.....	342	210	242	14,400	B.
May.....	342	253	274	16,800	B.
June.....	386	266	313	18,600	B.
July.....	342	253	289	17,800	B.
August.....	342	231	264	16,200	B.
September.....	253	191	222	13,200	B.
The year.....	441	191	260	189,000	
1908-9.					
October.....	210	182	192	11,800	B.
November.....	191	182	184	10,900	B.
December.....	191	174	182	11,200	B.
January.....	358	170	235	14,400	B.
February.....	253	149	186	10,300	C.
March.....	203	149	179	11,000	C.
April.....	516	253	374	22,300	B.
May.....	396	253	317	19,400	B.
June.....	756	436	637	37,900	A.
July.....	836	358	531	32,600	A.
August.....	358	239	296	18,200	B.
September.....	253	185	211	12,600	B.
The year.....	836	149	294	213,000	
1909-10.					
October.....	214	170	188	11,600	B.
November.....	253	185	217	12,900	B.
December.....	285	226	249	15,300	B.
January.....	370	177	222	13,600	B.
February.....	221	177	201	11,200	B.

Monthly discharge of Owens River near Round Valley, Cal., for 1903-1912—Continued.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1909-10.					
March.....	252	206	227	14,000	A.
April.....	301	206	237	14,100	A.
May.....	517	284	374	23,000	A.
June.....	676	335	519	30,900	A.
July.....	370	284	314	19,300	A.
August.....	284	177	216	13,300	A.
September.....	221	139	184	10,900	B.
The year.....	676	139	262	190,000	
1910-11.					
October.....	221	164	192	11,800	B.
November.....	206	127	163	9,700	B.
December.....	177	139	163	10,000	B.
January.....	420	164	203	12,500	B.
February.....	355	200	238	13,200	B.
March.....	355	200	257	15,800	B.
April.....	395	240	313	18,600	B.
May.....	418	283	331	20,400	B.
June.....	1,080	418	674	40,100	A.
July.....	1,050	742	881	54,200	A.
August.....	755	300	512	31,500	A.
September.....	317	253	257	15,300	B.
The year.....	1,080	127	349	253,000	
1911-12.					
October.....	262	226	247	15,200	B.
November.....	253	200	229	13,600	B.
December.....	221	200	205	12,600	B.
January.....	188	159	172	10,600	B.
February.....	214	164	187	10,800	B.
March.....	228	200	215	13,200	A.
April.....	243	152	205	12,200	A.
May.....	440	121	218	13,400	A.
June.....	485	258	327	19,500	A.
The period.....				121,000	

NOTE.—Monthly mean estimated for April and May, 1907. Discharge interpolated for days on which gage was not read.

OWENS RIVER NEAR TINEMAHA, CAL.

This station, which is located at a basaltic knoll known as Charlies Butte, in the floor of the valley about 7 miles south of Tinemaha, in sec. 2, T. 11 S., R. 34 E., was regularly established September 20, 1906, but the city of Los Angeles had made frequent measurements since the beginning of 1906.

Tinemaha Creek is the first tributary above and Taboose the next below the station. There are diversions for irrigation above the station.

The gage is a vertical staff on the left bank; its datum has not been changed since the station was established.

Discharge measurements are made from a car and cable at the gage. When the discharge exceeds 1,800 second-feet, the river overflows the left bank and the station is inaccessible. At such times measurements are made from the county bridge near Citrus.

The channel is composed of sand and gravel and is somewhat shifting.

The record may be considered good.

The gage was washed out March 22, 1907, and a new one installed at the same datum on March 30, 1907.

Discharge measurements of Owens River near Tinemaha, Cal., in 1906-1912.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1906.		<i>Feet.</i>	<i>Sec.-ft.</i>	1908.		<i>Feet.</i>	<i>Sec.-ft.</i>
Jan. 3	G. R. Shuey	1.60	284	Sept. 20	W. A. Lamb	1.35	224
10	do.	1.80	319	28	do.	1.60	270
18	do.	2.65	467	Oct. 9	do.	1.52	256
24	do.		555	24	Barrows and Lamb	2.13	436
Feb. 6	do.	2.11	377	Nov. 5	A. T. Barrows	2.27	397
14	do.	2.04	347	15	do.	2.24	392
21	do.	1.93	350	27	C. H. Lee	2.18	370
26	do.	1.80	314				
Mar. 8	do.	1.70	277	1909.			
20	do.	2.92	523	Jan. 23	Haines and Lee	4.28	815
27	do.	2.67	478	Feb. 13	R. E. Haines	3.79	721
Apr. 6	do.	2.37	462	Mar. 1	do.	2.55	418
12	do.	2.72	506	20	do.	2.10	322
25	do.		262	Apr. 10	do.	2.20	364
May 3	do.	1.10	186	May 1	do.	.60	102
8	do.	.90	162	21	do.	.58	110
24	do.	1.16	201	June 12	do.	3.92	740
June 5	do.	1.30	224	July 3	do.	6.34	1,590
18	do.	3.93	786	do.	do.	3.40	664
Oct. 8	do.	1.40	293	Aug. 14	do.	1.60	244
18	do.	1.57	360	Sept. 4	do.	1.71	286
Nov. 1	do.	1.80	418	do.	do.	1.14	189
Dec. 8	do.	2.62	532	Oct. 25	do.	1.85	315
17	do.	2.60	515	Nov. 6	do.	2.12	359
				27	do.	2.70	494
1907.				1910.			
Jan. 21	G. R. Shuey	2.62	497	Mar. 11	R. E. Haines	3.10	620
Feb. 7	do.	2.72	544	Apr. 2	do.	1.99	313
20	do.	2.55	505	do.	do.	.62	99
Mar. 6	do.	3.47	704	May 13	do.	.93	152
30	do.	2.85	536	June 26	C. H. Lee	1.58	265
Apr. 12	do.	1.85	345	July 14	do.	1.09	185
20	do.	1.33	221	do.	do.	1.21	168
May 3	do.	.80	169	Aug. 4	do.	.63	94
17	do.	1.38	253	Sept. 19	F. G. Wood	.68	107
June 12	do.	3.60	694	Oct. 24	G. T. Peekema	2.16	347
29	do.	3.71	745	Nov. 20	do.	2.38	379
July 7	do.	7.25	1,690	Dec. 23	do.	2.64	448
11	do.		1,360				
Aug. 2	do.	4.90	1,060	1911.			
11	R. B. Post	3.79	748	Jan. 27	G. T. Peekema	2.82	495
15	do.	3.29	649	Feb. 2	C. H. Lee	6.50	1,530
31	do.	2.25	381	Mar. 11	do.	5.79	1,280
Sept. 12	do.	1.82	327	15	do.	3.60	640
25	do.	1.55	264	May 4	do.	1.05	144
Oct. 21	do.	2.56	463	June 10	do.	3.04	573
30	do.	3.50	652	22	do.	6.58	1,520
Nov. 12	do.	2.92	476	July 9	do.	7.01	1,700
25	do.	2.72	481	Aug. 5	do.	3.98	777
Dec. 4	do.	2.69	439	25	J. E. Jones	2.11	318
				Sept. 22	do.	1.43	231
1908.				Oct. 26	do.	2.64	432
Feb. 7	R. B. Post	3.27	677	Nov. 24	do.	2.88	473
7	do.	3.27	675	Dec. 14	do.	2.78	477
Mar. 17	do.	3.26	657				
25	do.	2.35	410	1912.			
Apr. 8	do.	1.13	181	Jan. 18	J. E. Jones	3.05	514
20	do.	.70	115	30	do.	2.82	452
29	do.	.32	62	Feb. 10	do.	2.78	428
May 2	do.	.24	52	24	do.	2.30	345
16	do.	.22	56	Mar. 6	do.	2.10	301
22	do.	.20	58	19	do.	2.27	352
June 2	do.	.36	71	Apr. 3	do.	1.83	260
12	do.	.06	54	18	do.	1.95	276
26	do.	.20	60	30	do.	.97	137
July 8	do.	1.40	209	May 11	do.	1.36	194
17	W. A. Lamb	1.65	275	21	do.	1.13	177
29	do.	.90	168	June 10	do.	3.00	495
Aug. 5	do.	2.52	467	14	do.	2.41	358
14	do.	1.77	286				
28	do.	.80	131				

Daily gage height, in feet, of Owens River near Tinemaha, Cal., for 1906-1912.

Day.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1906-7.													
1.		1.45	1.8	2.15	2.7	3.05	2.3	2.9	0.9	2.0	4.5	5.0	2.2
2.		1.52	1.85	2.2	2.65	3.0	2.25	2.9	.85	2.5	5.0	4.9	2.1
3.		1.45	1.9	2.3	2.6	3.0	2.3	2.85	.8	2.9	5.6	4.8	2.05
4.		1.4	1.9	2.45	2.5	2.95	2.35	2.7	.75	3.1	6.05	4.75	2.0
5.		1.4	1.95	2.6	2.45	2.9	2.85	2.6	.85	3.6	6.5	4.8	1.95
6.		1.38	2.0	2.7	2.5	2.95	3.45	2.5	1.0	3.9	6.9	4.85	1.9
7.		1.4	2.0	2.65	2.55	3.0	3.3	2.4	1.15	3.95	7.25	4.65	1.85
8.		1.4	2.05	2.6	2.6	3.0	3.05	2.2	1.25	3.9	7.35	4.45	1.8
9.		1.38	2.05	2.55	2.7	3.0	2.8	2.1	1.3	3.8	7.3	4.2	1.75
10.		1.36	2.05	2.5	2.8	2.9	2.65	2.0	1.3	3.7	7.2	4.0	1.75
11.		1.35	2.0	2.45	2.85	2.8	2.5	1.9	1.35	3.6	6.75	3.75	1.8
12.		1.35	2.0	2.5	2.95	2.7	2.4	1.8	1.3	3.6	6.65	3.7	1.8
13.		1.3	2.0	2.7	3.0	2.6	2.35	1.7	1.3	3.55	6.6	3.5	1.85
14.		1.35	2.0	2.8	2.95	2.5	2.35	1.6	1.3	3.55	5.9	3.4	1.9
15.		1.38	2.05	2.7	2.9	2.4	2.4	1.7	1.3	3.5	5.8	3.3	1.8
16.		1.45	2.1	2.7	2.85	2.3	2.35	1.75	1.25	3.5	5.7	3.25	1.7
17.		1.55	2.05	2.6	2.8	2.4	2.45	1.65	1.4	3.4	5.6	3.2	1.65
18.		1.57	2.05	2.55	2.75	2.55	3.0	1.55	1.45	3.3	5.5	3.25	1.6
19.		1.58	2.05	2.5	2.7	2.45	4.0	1.4	1.55	3.3	5.4	3.3	1.6
20.	1.85	1.6	2.0	2.45	2.7	2.55	4.9	1.3	1.7	3.1	5.2	3.2	1.6
21.	1.82	1.55	2.0	2.4	2.7	2.6	6.0	1.25	1.8	3.05	5.0	3.1	1.6
22.	1.8	1.57	2.0	2.35	2.6	2.6	.65	1.2	1.85	3.0	4.9	3.0	1.6
23.	1.75	1.6	2.0	2.35	2.5	2.65	.52	1.15	1.9	3.0	4.8	2.9	1.6
24.	1.72	1.7	2.0	2.4	2.5	2.6	.44	1.1	1.9	3.15	4.75	2.85	1.55
25.	1.6	1.82	2.1	2.45	2.55	2.55	.44	1.0	1.85	3.3	4.9	2.7	1.55
26.	1.5	1.85	2.05	2.5	2.6	2.5	.41	.9	1.85	3.5	5.1	2.6	1.55
27.	1.45	1.87	2.1	2.55	2.7	2.45	.48	.8	1.85	3.65	5.3	2.55	1.55
28.	1.4	1.85	2.2	2.6	2.8	2.4	.35	.85	1.85	3.8	5.25	2.5	1.55
29.	1.35	1.9	2.3	2.65	2.9	.....	.31	.9	1.9	3.9	5.2	2.4	1.55
30.	1.38	1.8	2.2	2.7	3.0	.....	2.85	.9	1.95	4.0	5.15	2.3	1.55
31.	1.8	.....	.....	2.75	3.1	.....	2.9	.....	2.0	.....	5.1	2.25	.....

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1907-8.												
1.	1.6	3.3	2.7	2.75	2.95	2.8	1.55	0.25	0.3	0.5	1.4	0.6
2.	1.65	3.2	2.7	2.7	3.1	2.75	1.45	.25	.25	.55	1.5	.6
3.	1.7	3.15	2.7	2.7	3.3	2.7	1.35	.2	.25	.6	1.6	.55
4.	1.75	3.1	2.7	2.7	3.45	2.6	1.3	.2	.3	.7	2.2	.5
5.	1.8	3.05	2.75	2.7	3.55	2.6	1.25	.25	.25	.85	2.6	.45
6.	1.9	3.0	2.8	2.7	3.4	2.6	1.2	.3	.2	1.0	3.0	.4
7.	2.05	3.0	2.9	2.7	3.25	2.55	1.15	.2	.2	1.35	3.05	.5
8.	2.1	3.0	3.1	2.7	3.1	2.55	1.15	.2	.2	1.4	2.8	.55
9.	2.2	3.0	3.05	2.65	3.05	2.55	1.15	.2	.1	1.3	2.6	.6
10.	2.25	3.0	3.05	2.65	3.1	2.55	1.2	.2	.1	1.4	2.45	.9
11.	2.2	2.95	3.2	2.7	3.05	2.55	1.25	.2	.05	1.6	2.4	1.1
12.	2.15	2.9	3.15	2.7	3.0	2.55	1.15	.2	.0	1.6	2.15	1.0
13.	2.1	2.9	3.0	2.75	2.9	2.6	1.1	.2	.05	1.7	2.0	1.1
14.	2.15	2.9	3.0	2.8	2.8	2.6	1.05	.2	.05	1.7	1.8	1.1
15.	2.2	2.85	2.9	2.8	2.7	2.8	1.0	.25	.05	1.75	1.65	1.15
16.	2.3	2.8	2.85	2.8	2.7	3.0	.9	.25	.05	1.8	1.55	1.2
17.	2.4	2.8	2.8	2.75	2.7	3.25	.75	.2	.4	1.65	1.5	1.2
18.	2.5	2.8	2.8	2.7	2.7	3.4	.75	.25	.5	1.4	1.35	1.25
19.	2.6	2.8	2.8	2.7	2.7	3.4	.7	.25	.4	1.25	1.2	1.3
20.	2.6	2.8	2.75	2.7	2.7	3.15	.8	.2	.3	1.1	1.05	1.35
21.	2.6	2.8	2.75	2.7	2.7	2.9	.65	.2	.2	1.1	.9	1.35
22.	2.7	2.8	2.75	2.7	2.8	2.7	.5	.2	.2	1.05	.9	1.3
23.	2.85	2.75	2.7	2.8	3.2	2.5	.5	.2	.15	1.0	.85	1.3
24.	3.05	2.75	2.7	3.0	3.1	2.4	.45	.2	.15	.9	.8	1.35
25.	3.3	2.75	2.7	3.0	2.9	2.3	.4	.25	.2	.9	.75	1.4
26.	3.15	2.75	2.75	3.0	2.85	2.2	.4	.3	.2	.8	.75	1.5
27.	3.4	2.75	2.75	3.05	2.8	2.1	.35	.2	.2	.7	.8	1.6
28.	3.7	2.75	3.0	3.1	2.75	1.95	.35	.2	.3	.75	.8	1.5
29.	3.6	2.75	2.95	3.05	2.75	1.85	.3	.2	.3	.9	.7	1.5
30.	3.5	2.75	2.85	3.0	.....	1.75	.3	.2	.4	1.1	.7	1.55
31.	3.4	.....	2.75	3.0	.....	1.65	.....	.25	.....	1.25	.6	.....

a Estimated.

Daily gage height, in feet, of Owens River near Tinemaha, Cal., for 1906-1912—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1908-9.												
1.....	1.55	2.25	2.25	2.35	2.75	2.55	2.25	0.6	1.7	6.4	2.5	1.75
2.....	1.55	2.25	2.3	2.35	2.7	2.55	2.25	.55	1.7	6.35	2.35	1.9
3.....	1.4	2.25	2.4	2.4	2.6	2.55	2.25	.5	2.05	6.3	2.2	1.75
4.....	1.5	2.3	2.5	2.5	2.6	2.5	2.3	.5	2.5	6.5	2.1	1.5
5.....	1.55	2.25	2.55	2.6	2.65	2.4	2.35	.5	3.1	6.7	2.05	1.4
6.....	1.6	2.25	2.5	2.8	2.8	2.4	2.45	.5	3.7	6.9	2.0	1.4
7.....	1.6	2.25	2.45	3.0	2.9	2.4	2.3	.45	4.3	6.4	1.9	1.4
8.....	1.55	2.2	2.45	3.1	3.1	2.4	2.15	.4	4.7	5.85	1.8	1.35
9.....	1.55	2.25	2.4	3.3	3.15	2.35	2.05	.5	4.5	5.2	1.75	1.3
10.....	1.5	2.25	2.4	3.35	3.25	2.25	2.2	.6	4.4	4.5	1.7	1.25
11.....	1.5	2.2	2.35	3.2	3.3	2.2	2.2	.7	4.1	4.0	1.7	1.25
12.....	1.5	2.2	2.3	3.1	3.4	2.2	2.15	.85	3.9	4.2	1.7	1.2
13.....	1.55	2.25	2.3	3.2	3.8	2.15	2.2	1.0	4.0	4.4	1.7	1.2
14.....	1.6	2.25	2.25	3.5	3.1	2.15	2.25	1.3	4.2	4.6	1.65	1.2
15.....	1.6	2.25	2.25	3.55	3.25	2.15	2.2	1.15	4.4	4.55	1.6	1.2
16.....	1.65	2.25	2.2	3.8	3.3	2.15	2.15	1.0	4.55	4.5	1.6	1.2
17.....	1.7	2.25	2.2	3.6	3.2	2.2	2.05	1.0	4.65	4.45	1.55	1.2
18.....	1.7	2.2	2.15	3.45	3.1	2.15	1.9	.95	4.7	4.4	1.5	1.2
19.....	1.7	2.2	2.1	3.3	3.05	2.1	1.9	.8	4.8	4.2	1.5	1.2
20.....	1.8	2.2	2.0	3.2	3.0	2.1	1.9	.7	4.45	4.0	1.5	1.2
21.....	1.9	2.2	2.05	4.0	2.9	2.15	1.75	.55	4.35	3.8	1.55	1.2
22.....	2.0	2.25	2.1	4.4	2.8	2.2	1.6	.5	4.3	3.5	1.6	1.2
23.....	2.05	2.25	2.2	4.4	2.7	2.25	1.45	.6	4.4	3.35	1.7	1.2
24.....	2.1	2.25	2.2	3.9	2.7	2.25	1.35	.75	4.65	3.35	1.8	1.2
25.....	2.1	2.2	2.2	3.6	2.7	2.3	1.2	.95	5.0	3.4	1.8	1.2
26.....	2.1	2.2	2.2	3.3	2.6	2.35	1.0	1.15	5.5	3.4	1.6	1.2
27.....	2.1	2.2	2.25	3.15	2.6	2.4	.85	1.25	5.95	3.35	1.45	1.25
28.....	2.1	2.2	2.25	3.0	2.55	2.35	.75	1.35	6.2	3.2	1.4	1.3
29.....	2.15	2.25	2.3	2.9	.....	2.3	.80	1.4	6.35	3.0	1.35	1.35
30.....	2.2	2.25	2.3	2.8	.....	2.25	.70	1.5	6.4	2.9	1.45	1.35
31.....	2.2	.....	2.3	2.8	.....	2.25	.....	1.65	.....	2.7	1.6	.....
1909-10.												
1.....	1.3	2.1	2.65	4.4	2.9	2.75	1.95	.8	3.0	1.5	1.55	.65
2.....	1.3	2.1	2.6	5.1	2.75	2.8	1.9	.8	3.3	1.5	1.45	.65
3.....	1.4	2.1	2.6	5.75	2.7	2.85	1.8	.75	3.3	1.4	1.35	.65
4.....	1.6	2.1	2.55	4.5	2.6	2.85	1.7	.75	3.3	1.3	1.25	.65
5.....	1.75	2.1	2.5	3.55	2.75	2.8	1.6	.7	3.35	1.25	1.15	.65
6.....	1.8	2.1	2.45	3.5	2.9	2.85	1.45	.7	3.0	1.25	1.1	.6
7.....	1.9	2.2	2.4	3.55	2.9	2.9	1.3	.7	3.0	1.25	1.1	.6
8.....	1.9	2.3	2.4	3.4	2.9	2.95	1.15	.8	2.9	1.2	1.05	.6
9.....	1.9	2.4	2.5	3.35	2.9	3.0	1.0	.95	2.75	1.15	1.0	.6
10.....	1.9	2.4	2.55	3.25	2.85	3.0	.95	1.0	2.65	1.0	.95	.6
11.....	1.9	2.45	2.65	3.2	2.85	3.1	.9	1.0	2.55	1.0	.9	.55
12.....	1.85	2.5	2.75	3.2	2.9	3.2	1.0	.95	2.45	1.05	.85	.55
13.....	1.8	2.5	2.85	3.15	2.85	3.2	1.1	1.0	2.45	1.05	.8	.55
14.....	1.85	2.5	2.95	3.1	2.8	3.2	1.0	1.0	2.5	1.1	.75	.55
15.....	1.85	2.5	3.0	3.15	2.75	3.15	.9	1.1	2.5	1.05	.75	.75
16.....	1.9	2.5	3.0	3.2	2.7	3.1	.75	1.25	2.55	1.0	.75	.65
17.....	1.9	2.55	2.95	3.2	2.65	3.15	.7	1.6	2.65	1.0	.75	.6
18.....	1.9	2.55	2.9	3.2	2.7	3.2	.65	1.9	2.5	1.35	.7	.7
19.....	1.9	2.55	2.9	3.15	2.7	3.25	.6	2.0	2.4	1.85	.7	.7
20.....	1.9	2.6	2.95	3.1	2.7	3.2	.7	1.9	2.3	2.25	.7	.7
21.....	1.9	2.7	3.0	3.05	2.7	2.9	.7	2.0	2.2	2.45	.65	.7
22.....	1.9	3.0	3.0	3.0	2.7	2.6	.7	1.95	2.0	2.3	.55	.75
23.....	1.9	3.0	3.0	3.05	2.7	2.5	.75	1.95	1.85	2.8	.5	.75
24.....	2.1	2.75	3.05	3.1	2.7	2.45	.7	2.0	1.75	2.85	.55	.75
25.....	2.1	2.7	3.0	3.1	2.7	2.4	.65	2.2	1.65	2.5	.65	.8
26.....	2.1	2.7	3.0	3.05	2.7	2.35	.7	2.4	1.5	2.25	1.2	.8
27.....	2.1	2.7	3.0	3.0	2.7	2.35	.75	2.3	1.5	2.1	1.0	.75
28.....	2.1	2.6	3.0	3.0	2.7	2.4	.75	2.3	1.5	2.0	.75	.75
29.....	2.1	2.6	3.25	3.0	.....	2.25	.7	2.5	1.5	2.1	.7	.75
30.....	2.1	2.65	3.5	3.0	.....	2.1	.7	2.65	1.5	1.9	.7	.8
31.....	2.1	.....	4.0	3.0	.....	2.0	.....	2.8	.....	1.7	.65	.....

Daily gage height, in feet, of Owens River near Tinemaha, Cal., for 1906-1912—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.												
1.....	0.8	2.25	2.55	2.5	6.2	2.9	3.3	1.15	2.2	6.0	4.85	1.95
2.....	.85	2.25	2.55	2.45	6.55	3.0	3.45	1.18	2.2	6.1	4.6	1.9
3.....	1.0	2.25	2.6	2.48	5.1	3.2	3.55	1.1	2.1	6.1	4.4	1.8
4.....	1.1	2.25	2.65	2.5	4.8	3.35	3.8	1.05	2.2	6.15	4.2	1.75
5.....	1.15	2.3	2.7	2.5	4.55	3.55	4.1	1.05	2.45	6.2	3.98	1.65
6.....	1.2	2.3	2.7	2.5	4.2	3.4	4.0	1.1	2.7	6.35	3.85	1.6
7.....	1.25	2.3	2.7	2.5	3.9	3.2	3.98	1.1	2.8	6.5	3.8	1.55
8.....	1.3	2.35	2.7	2.5	3.6	3.8	4.00	1.1	3.0	6.75	3.7	1.5
9.....	1.35	2.4	2.7	2.5	3.48	4.9	3.95	1.05	3.0	7.0	3.5	1.48
10.....	1.35	2.4	2.7	3.1	3.4	5.25	3.9	1.02	3.04	7.15	3.4	1.6
11.....	1.35	2.4	2.7	3.55	3.3	5.72	3.8	1.0	3.3	7.25	3.35	1.6
12.....	1.3	2.4	2.7	3.1	3.2	4.65	3.6	1.0	3.5	7.1	3.3	1.6
13.....	1.5	2.4	2.75	3.05	3.1	4.2	3.3	1.0	3.7	6.88	3.2	1.6
14.....	1.6	2.5	2.7	2.9	3.1	4.0	3.05	1.1	4.25	6.95	3.15	1.6
15.....	1.9	2.5	2.65	2.95	3.05	3.6	3.0	1.15	4.5	7.05	3.1	1.6
16.....	2.05	2.5	2.55	2.9	3.0	3.4	3.0	1.25	4.85	7.25	3.05	1.6
17.....	2.15	2.45	2.55	2.8	2.98	3.3	2.95	1.35	5.3	7.45	3.0	1.58
18.....	2.2	2.45	2.55	2.7	3.0	3.2	2.95	1.25	5.5	7.65	2.9	1.55
19.....	2.1	2.45	2.6	2.68	3.0	3.1	2.75	1.15	5.85	7.8	2.8	1.58
20.....	2.05	2.4	2.6	2.7	3.0	3.0	2.55	1.1	6.25	7.85	2.8	1.55
21.....	2.1	2.4	2.65	2.7	3.0	3.0	2.3	1.15	6.5	7.8	2.7	1.48
22.....	2.15	2.4	2.7	2.75	2.95	2.95	2.1	1.2	6.6	7.7	2.5	1.43
23.....	2.2	2.45	2.65	2.85	2.95	2.95	2.05	1.25	6.5	7.5	2.4	1.5
24.....	2.2	2.45	2.6	2.8	2.95	3.0	2.0	1.3	6.38	7.1	2.35	1.6
25.....	2.15	2.5	2.6	2.85	2.9	2.98	1.9	1.65	6.0	7.0	2.1	1.6
26.....	2.15	2.5	2.6	2.8	2.85	2.95	1.8	2.0	5.7	6.7	2.05	1.63
27.....	2.2	2.45	2.55	2.8	2.75	3.0	1.65	1.95	5.5	6.4	2.03	1.65
28.....	2.2	2.4	2.6	2.8	2.8	3.05	1.55	1.85	5.6	6.1	2.0	1.65
29.....	2.25	2.4	2.5	3.3	.....	3.1	1.4	1.75	5.7	5.9	2.0	2.0
30.....	2.25	2.5	2.55	4.1	.....	3.1	1.2	1.4	5.9	5.5	2.0	2.25
31.....	2.25	.....	2.5	5.2	.....	3.15	.....	2.0	.....	5.2	1.98	.....

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.									
1.....	2.5	2.82	2.9	2.7	2.8	2.3	1.85	0.95	1.9
2.....	2.6	2.85	2.9	2.8	2.8	2.2	1.85	.85	2.2
3.....	2.6	2.88	2.9	2.8	2.8	2.1	1.85	.75	2.5
4.....	2.6	2.88	2.88	2.7	2.8	2.0	1.85	.7	2.8
5.....	2.6	2.86	2.88	2.7	2.8	2.0	1.85	.65	3.1
6.....	2.58	2.85	2.88	2.7	2.8	2.1	1.9	.6	3.0
7.....	2.55	2.82	2.88	2.8	2.8	2.2	1.9	.7	3.0
8.....	2.55	2.85	2.88	2.9	2.8	2.1	1.95	1.0	3.0
9.....	2.55	2.85	2.88	3.0	2.8	2.1	2.0	1.4	3.0
10.....	2.5	2.82	2.85	3.0	2.8	2.1	2.1	1.4	3.0
11.....	2.53	2.8	2.85	3.0	2.8	2.2	2.2	1.35	2.9
12.....	2.6	2.8	2.8	3.0	2.8	2.2	2.2	1.35	2.6
13.....	2.6	2.82	2.75	3.0	2.7	2.3	2.2	1.3	2.4
14.....	2.6	2.85	2.75	3.0	2.6	2.2	2.1	1.3	2.4
15.....	2.6	2.95	2.78	3.1	2.6	2.2	2.0	1.2	2.3
16.....	2.58	3.0	2.8	3.1	2.5	2.3	2.0	1.15	2.1
17.....	2.55	3.0	2.75	3.1	2.6	2.3	1.95	1.15	1.9
18.....	2.55	2.98	2.7	3.0	2.6	2.2	1.95	1.15	1.85
19.....	2.55	2.93	2.68	3.0	2.7	2.3	1.9	1.3	1.8
20.....	2.56	2.9	2.75	3.0	2.6	2.3	1.8	1.2	1.8
21.....	2.5	2.9	2.7	3.0	2.4	2.2	1.8	1.1	1.8
22.....	2.5	2.9	2.6	2.9	2.3	2.2	1.7	1.0	1.7
23.....	2.55	2.88	2.65	2.9	2.3	2.1	1.65	1.0	1.65
24.....	2.6	2.88	2.65	2.9	2.3	2.0	1.5	.95	1.7
25.....	2.65	2.88	2.65	2.9	2.2	2.0	1.25	.95	1.7
26.....	2.63	2.9	2.63	2.9	2.2	2.0	1.15	1.0	1.6
27.....	2.6	2.95	2.68	2.9	2.2	2.0	1.05	1.25	1.5
28.....	2.7	2.9	2.70	2.9	2.3	1.95	1.0	1.4	1.4
29.....	2.8	2.88	2.72	2.8	2.3	1.9	1.0	1.4	1.3
30.....	2.8	2.88	2.75	2.8	.....	1.9	.95	1.5	1.25
31.....	2.8	.....	2.7	2.8	.....	1.9	.....	1.6	.....

Rating tables for Owens River near Tinemaha, Cal.

October 19 to December 31, 1906.

Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.
<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>
1.00	278	1.60	357	2.10	434	2.60	524
1.10	290	1.70	372	2.20	452	2.70	542
1.20	302	1.80	387	2.30	470	2.80	560
1.30	314	1.90	402	2.40	488	2.90	580
1.40	327	2.00	418	2.50	506	3.00	600
1.50	342						

NOTE.—Table based on 5 discharge measurements made during 1906 and is fairly well defined.

January 1 to December 31, 1907.

0.70	159	2.00	355	3.30	631	5.20	1,131
.80	170	2.10	373	3.40	655	5.40	1,185
.90	181	2.20	391	3.50	680	5.60	1,239
1.00	194	2.30	410	3.60	705	5.80	1,293
1.10	208	2.40	430	3.70	731	6.00	1,347
1.20	222	2.50	451	3.80	757	6.20	1,401
1.30	238	2.60	472	3.90	783	6.40	1,455
1.40	254	2.70	494	4.00	809	6.60	1,509
1.50	270	2.80	516	4.20	861	6.80	1,563
1.60	286	2.90	538	4.40	915	7.00	1,617
1.70	302	3.00	561	4.60	969	7.20	1,672
1.80	319	3.10	584	4.80	1,023	7.40	1,728
1.90	337	3.20	607	5.00	1,077		

NOTE.—Table applicable only to open channel. It is based on 24 discharge measurements made during 1907 and is fairly well defined.

January 1 to December 31, 1908.

0.00	40	1.00	159	2.00	346	3.00	592
.10	47	1.10	175	2.10	367	3.10	619
.20	56	1.20	191	2.20	390	3.20	646
.30	66	1.30	209	2.30	413	3.30	674
.40	77	1.40	227	2.40	437	3.40	702
.50	89	1.50	245	2.50	462	3.50	730
.60	102	1.60	264	2.60	487	3.60	758
.70	115	1.70	284	2.70	513		
.80	129	1.80	304	2.80	539		
.90	143	1.90	325	2.90	565		

NOTE.—Table applicable only to open channel. It is based on 26 discharge measurements made during 1908 and is well defined.

Daily discharge, in second-feet, of Owens River near Tinemaha, Cal., for 1909–1912.

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909.									
1.....	408	495	451	388	107	279	1,520	440	288
2.....	408	484	451	388	100	279	1,500	408	315
3.....	419	462	451	388	94	346	1,490	377	288
4.....	440	462	440	398	94	440	1,550	356	243
5.....	462	473	419	408	94	574	1,610	346	227
6.....	506	506	419	430	94	722	1,680	335	227
7.....	550	528	419	398	88	884	1,520	315	227
8.....	574	574	419	366	83	1,000	1,340	297	219
9.....	622	586	408	346	94	940	1,150	288	211
10.....	634	610	388	377	107	912	940	279	203
11.....	598	622	377	377	121	828	800	279	203
12.....	574	646	377	366	142	774	856	279	195
13.....	598	748	366	377	163	800	912	279	195
14.....	670	574	366	388	211	856	970	270	195
15.....	683	610	366	377	187	912	955	261	195
16.....	748	622	366	366	163	955	940	261	195
17.....	696	598	377	346	163	985	926	252	195
18.....	658	574	366	315	156	1,000	912	243	195
19.....	622	562	356	315	135	1,030	856	243	195
20.....	598	550	356	315	121	926	800	243	195
21.....	800	528	366	288	100	898	748	252	195
22.....	912	506	377	261	94	884	670	261	195
23.....	912	484	388	235	107	912	634	279	195
24.....	774	484	388	219	128	985	634	297	195
25.....	696	484	398	195	156	1,090	646	297	195
26.....	622	462	408	163	187	1,240	646	261	195
27.....	586	462	419	142	203	1,380	634	235	203
28.....	550	451	408	128	219	1,450	598	227	211
29.....	528	.....	398	135	227	1,500	550	219	219
30.....	506	.....	388	121	243	1,520	528	235	219
31.....	506	.....	388	.....	270	.....	484	261	.....

Daily discharge, in second-feet, of Owens River near Tinemaha, Cal., for 1909-1912—Con.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909-10.												
1.....	211	356	473	910	524	491	324	125	547	241	250	102
2.....	211	356	462	1,120	491	502	315	125	618	241	232	102
3.....	227	356	462	1,320	480	513	296	118	618	223	214	102
4.....	261	356	451	939	458	513	277	118	618	205	196	102
5.....	288	356	440	679	491	502	259	110	630	196	180	102
6.....	297	356	430	666	524	513	232	110	547	196	171	95
7.....	315	377	419	679	524	524	205	110	547	196	171	95
8.....	315	398	419	642	524	536	180	125	524	188	163	95
9.....	315	419	440	630	524	547	155	148	491	180	155	95
10.....	315	419	451	606	513	547	148	155	469	155	148	95
11.....	315	430	473	594	513	570	140	155	447	155	140	88
12.....	306	440	495	594	524	594	155	148	426	163	132	88
13.....	297	440	517	582	513	594	171	155	426	163	125	88
14.....	306	440	539	570	502	594	155	155	436	171	118	88
15.....	306	440	550	582	491	582	140	171	436	163	118	118
16.....	315	440	550	594	480	570	118	196	447	155	118	102
17.....	315	451	539	594	469	582	110	259	469	155	118	95
18.....	315	451	528	594	480	594	102	315	436	214	110	110
19.....	315	451	528	582	480	606	95	334	415	306	110	110
20.....	315	462	539	570	480	594	110	315	394	384	110	110
21.....	315	484	550	558	480	524	110	334	373	426	102	110
22.....	315	550	550	547	480	458	110	324	334	394	88	118
23.....	315	550	550	558	480	436	118	324	306	502	82	118
24.....	356	495	562	570	480	426	110	334	286	513	88	118
25.....	356	484	550	570	480	415	102	373	268	436	102	363
26.....	356	484	550	558	480	396	110	415	241	384	188	125
27.....	356	484	550	547	480	396	118	394	241	353	155	118
28.....	356	462	550	547	480	415	118	394	241	334	118	118
29.....	356	462	610	547	.....	384	110	436	241	353	110	118
30.....	356	473	670	547	.....	353	110	469	241	315	110	125
31.....	356	.....	800	547	.....	334	.....	502	.....	277	102	.....
1910-11.												
1.....	125	384	447	410	1,420	490	585	172	353	1,350	995	306
2.....	132	384	447	410	1,540	510	622	176	353	1,380	920	296
3.....	155	384	458	406	1,040	560	648	165	334	1,380	860	278
4.....	171	384	469	410	980	598	710	158	353	1,400	810	270
5.....	180	394	480	410	905	648	785	158	400	1,420	755	252
6.....	188	394	480	410	810	610	760	165	450	1,480	722	244
7.....	196	394	480	410	735	560	755	165	470	1,520	710	236
8.....	205	404	480	410	660	710	760	165	510	1,610	685	227
9.....	214	415	480	410	630	1,010	748	158	510	1,700	635	224
10.....	214	415	480	535	610	1,120	735	155	520	1,750	610	244
11.....	214	415	480	648	585	1,260	710	152	585	1,790	598	244
12.....	205	415	480	535	560	935	660	152	635	1,740	585	244
13.....	241	415	491	522	535	810	585	152	685	1,660	560	244
14.....	259	436	480	490	535	760	522	165	822	1,680	548	244
15.....	315	436	468	500	522	660	510	172	890	1,720	535	244
16.....	344	436	447	490	510	610	510	186	995	1,790	522	244
17.....	363	426	447	470	506	585	500	202	1,130	1,860	510	241
18.....	373	426	447	450	510	560	500	186	1,190	1,930	490	236
19.....	353	426	458	446	510	535	460	172	1,300	1,980	470	241
20.....	344	415	458	450	510	510	420	165	1,440	2,000	470	236
21.....	353	415	469	450	510	510	372	172	1,520	1,980	450	224
22.....	363	415	480	460	500	500	334	179	1,560	1,940	410	215
23.....	373	426	469	480	500	500	324	186	1,520	1,880	391	227
24.....	373	426	458	470	500	510	315	194	1,480	1,740	382	244
25.....	363	436	458	480	490	506	296	252	1,350	1,700	334	244
26.....	363	436	458	470	480	500	278	315	1,250	1,600	324	249
27.....	373	426	447	470	460	510	252	306	1,190	1,490	321	252
28.....	373	415	458	470	470	522	236	287	1,220	1,380	315	252
29.....	384	415	436	585	.....	535	210	270	1,250	1,320	315	315
30.....	384	436	447	785	.....	535	179	210	1,320	1,190	315	362
31.....	384	.....	436	1,100	.....	548	.....	315	.....	1,100	311	.....

Daily discharge, in second-feet, of Owens River near Tinemaha, Cal., for 1909-12—Con.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.									
1.....	410	474	490	428	450	347	268	137	277
2.....	430	480	490	450	450	329	268	125	329
3.....	430	486	490	450	450	311	268	114	386
4.....	430	486	486	428	450	294	268	108	450
5.....	430	482	486	428	450	294	268	103	517
6.....	426	480	486	428	450	311	277	98	494
7.....	420	474	486	450	450	329	277	108	494
8.....	420	480	486	472	450	311	286	143	494
9.....	420	480	486	494	450	311	294	197	494
10.....	410	474	480	494	450	311	311	197	494
11.....	416	470	480	494	450	329	329	190	472
12.....	430	470	470	494	450	329	329	190	406
13.....	430	474	460	494	428	347	329	183	366
14.....	430	480	460	494	406	329	311	183	366
15.....	430	500	466	517	406	329	294	169	347
16.....	426	510	470	517	386	347	294	162	311
17.....	420	510	460	517	406	347	286	162	277
18.....	420	506	450	494	406	329	286	162	268
19.....	420	496	446	494	428	347	277	183	260
20.....	422	490	460	494	406	347	260	169	260
21.....	410	490	450	494	366	329	260	156	260
22.....	410	490	430	472	347	329	244	143	244
23.....	420	486	440	472	347	311	236	143	236
24.....	430	486	440	472	347	294	212	137	244
25.....	440	486	440	472	329	294	176	137	244
26.....	436	490	436	472	329	294	162	143	228
27.....	430	500	446	472	329	294	150	176	212
28.....	450	490	450	472	347	286	143	197	197
29.....	470	486	454	450	347	277	143	197	183
30.....	470	486	460	450	.....	277	137	212	176
31.....	470	.....	450	450	.....	277	.....	228	.....

NOTE.—Daily discharge determined from fairly well-defined rating curves applicable as follows: Jan. 1 to Dec. 31, 1909; Jan. 1 to Dec. 31, 1910; Jan. 1 to Dec. 31, 1911; Jan. 1 to June 30, 1912.

Monthly discharge of Owens River near Tinemaha, Cal., for 1906-1912.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1906.					
January.....	635	270	436	26,800	
February.....	443	308	358	19,900	
March.....	680	277	438	26,900	
April.....	530	213	388	23,100	
May.....	285	162	200	12,300	
June.....	1,540	224	729	43,400	
July.....	2,610	1,520	2,230	137,000	
August.....	2,220	730	1,210	74,400	
September.....	700	352	448	26,700	
The period.....				390,000	
1906-7.					
October.....	401	270	339	20,800	
November.....	470	387	423	25,200	
December.....	560	443	510	31,400	
January.....	584	440	500	30,700	B.
February.....	572	410	493	27,400	B.
March.....	1,350	400	646	39,700	B.
April.....	538	170	315	18,700	B.
May.....	355	164	264	16,200	B.
June.....	809	355	660	39,300	B.
July.....	1,710	942	1,280	78,600	B.
August.....	1,080	400	698	42,900	B.
September.....	391	278	310	18,400	B.
The year.....	1,710	164	536	389,000	

Monthly discharge of Owens River near Tinemaha, Cal., for 1906-1912—Continued.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1907-8.					
October.....	731	286	460	28,300	B.
November.....	631	505	538	32,000	B.
December.....	607	494	527	32,400	B.
January.....	619	500	539	33,100	B.
February.....	744	513	584	33,600	B.
March.....	702	274	485	29,800	C.
April.....	255	66	145	8,630	B.
May.....	66	56	58.1	3,570	B.
June.....	89	36	56.9	3,390	B.
July.....	304	89	188	11,600	B.
August.....	605	102	274	16,800	B.
September.....	264	77	173	10,300	B.
The year.....	744	36	336	243,000	
1908-9.					
October.....	390	227	298	18,300	B.
November.....	413	390	397	23,600	B.
December.....	474	346	409	25,100	B.
January.....	912	408	608	37,400	B.
February.....	748	451	541	30,000	B.
March.....	451	356	396	24,300	B.
April.....	430	121	311	18,500	B.
May.....	270	83	144	8,850	B.
June.....	1,520	279	910	54,100	A.
July.....	1,680	484	968	59,500	A.
August.....	440	219	286	17,600	B.
September.....	315	195	214	12,700	B.
The year.....	1,680	83	457	330,000	
1909-10.					
October.....	356	211	311	19,100	B.
November.....	550	356	437	26,000	A.
December.....	800	419	522	32,100	A.
January.....	1,320	547	650	40,000	B.
February.....	524	458	494	27,400	B.
March.....	606	334	503	30,900	B.
April.....	324	95	160	9,520	B.
May.....	502	110	250	15,400	B.
June.....	630	241	424	25,200	B.
July.....	513	155	269	16,500	B.
August.....	250	82	139	8,550	B.
September.....	125	88	106	6,310	B.
The year.....	1,320	82	355	257,000	
1910-11.					
October.....	384	125	286	17,600	B.
November.....	436	384	415	24,700	B.
December.....	491	436	464	28,500	B.
January.....	1,100	400	498	30,600	B.
February.....	1,540	460	661	36,700	A.
March.....	1,260	490	636	39,100	A.
April.....	785	179	509	30,300	A.
May.....	315	152	194	11,900	B.
June.....	1,560	334	920	54,700	A.
July.....	2,000	1,100	1,630	100,000	A.
August.....	995	311	544	33,400	A.
September.....	362	215	253	15,100	B.
The year.....	2,000	125	584	423,000	
1911-12.					
October.....	470	410	429	26,400	B.
November.....	510	470	486	28,900	B.
December.....	490	436	464	28,500	B.
January.....	517	428	474	29,100	A.
February.....	450	329	406	23,400	A.
March.....	347	277	316	19,400	A.
April.....	329	137	255	15,200	A.
May.....	228	98	160	9,840	A.
June.....	517	176	333	19,800	A.
The period.....				201,000	

NOTE.—Estimates of monthly discharge for 1906 are only approximate. Part of the year the station was inaccessible, and daily discharge was determined by interpolating between measurements made at the station and at Citrus. After September the discharge was determined from the rating table.

OWENS RIVER NEAR LONE PINE, CAL.

This station, which is located at the highway bridge on the road from Lone Pine to the Mount Whitney station on the Nevada & California Railroad, $2\frac{1}{2}$ miles northeast of Lone Pine, in sec. 23, T. 15 S., R. 36 E., was established June 12, 1908.

Water is diverted for irrigation above the station. No important tributaries enter the stream for some distance above the bridge.

The gage is a vertical staff attached to the bridge; its datum has not been changed since the station was established.

Discharge measurements were made from the bridge prior to January 3, 1911, when a car and cable were installed about 1,000 feet below the bridge.

Both banks are low and overflow at flood stages. The channel is sandy but fairly permanent. The record may be considered good.

Discharge measurements of Owens River near Lone Pine, Cal., in 1908-1912.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1908.		<i>Feet.</i>	<i>Sec.-ft.</i>	1910.		<i>Feet.</i>	<i>Sec.-ft.</i>
May 18	R. B. Post.....	53		Aug. 16	F. G. Wood.....	3.68	87
May 27	do.....	54		Aug. 26	G. T. Peekema.....	3.53	76
June 3	do.....	49		Sept. 3	F. G. Wood.....	3.69	85
July 23	W. A. Lamb.....	4.0	146	Sept. 22	G. T. Peekema.....	3.70	91
Aug. 7	do.....	5.7	436	Oct. 27	do.....	5.25	325
Aug. 9	do.....	5.95	483	Nov. 30	do.....	5.70	392
Aug. 18	do.....	4.45	220				
Sept. 10	do.....	3.52	80	1911.			
Sept. 25	do.....	4.26	180	Jan. 3	G. T. Peekema.....	5.75	421
Oct. 18	do.....	4.75	255	Feb. 2	do.....	8.92	1,080
Oct. 28	A. T. Barrows.....	5.3	355	3	do.....	9.80	1,380
Nov. 21	do.....	5.5	381	5	do.....	9.28	1,150
				5	do.....	9.15	1,100
1909.				6	do.....	8.80	1,030
Jan. 27	R. E. Haines.....	7.23	752	7	do.....	8.48	937
Feb. 17	do.....	7.38	761	9	do.....	7.78	779
Mar. 4	do.....	6.00	482	10	do.....	7.48	709
Mar. 24	do.....	5.60	393	11	do.....	7.27	686
Apr. 14	do.....	5.35	366	12	do.....	7.07	618
May 5	do.....	3.73	88.4	13	do.....	6.98	618
May 24	do.....	3.74	101	Mar. 20	C. H. Lee.....	6.63	580
June 16	do.....	8.20	964	May 15	do.....	4.07	136
July 7	do.....	10.55	2,000	June 30	do.....	9.62	1,190
July 28	do.....	7.10	752	Aug. 28	J. E. Jones.....	5.02	320
Aug. 17	do.....	4.65	249	Sept. 25	do.....	4.55	239
Sept. 13	do.....	4.50	213	Oct. 30	do.....	6.00	478
Oct. 6	do.....	4.80	262	Nov. 27	do.....	6.44	543
Oct. 22	do.....	5.20	325	Dec. 17	do.....	6.25	489
Nov. 10	do.....	5.80	450				
1910.				1912.			
Mar. 2	R. E. Haines.....	6.35	608	Jan. 20	J. E. Jones.....	6.45	519
Mar. 22	do.....	6.50	637	Feb. 27	do.....	5.54	382
Apr. 12	do.....	4.25	175	Mar. 15	do.....	5.57	376
May 5	do.....	3.90	129	Apr. 1	do.....	5.10	307
May 24	do.....	4.85	306	May 20	do.....	5.08	296
June 28	C. H. Lee.....	4.53	217	May 13	do.....	4.22	162
July 21	do.....	4.92	285	May 20	do.....	4.12	146
				June 15	do.....	5.37	333

Daily gage height, in feet, of Owens River near Lone Pine, Cal., for 1909-1912.

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.			
1909.												
1.....	5.7	6.45	6.1	5.65	3.9	4.8	10.2	6.15	5.0			
2.....	5.8	6.3	6.05	5.6	3.8	4.8	10.25	5.9	4.95			
3.....	5.8	6.3	6.0	5.55	3.75	4.85	10.35	5.7	5.0			
4.....	5.8	6.25	6.0	5.55	3.7	5.25	10.35	5.55	4.9			
5.....	5.8	6.2	5.95	5.55	3.7	5.85	10.4	5.45	4.8			
6.....	5.85	6.2	6.0	5.5	3.7	5.9	10.45	5.35	4.65			
7.....	5.9	6.2	6.0	5.7	3.65	6.95	10.6	5.2	4.65			
8.....	5.95	6.4	5.95	5.6	3.6	7.4	10.55	5.1	4.6			
9.....	6.0	6.9	5.95	5.45	3.6	7.9	10.1	5.0	4.65			
10.....	6.3	7.4	5.95	5.45	3.6	8.2	9.5	4.95	4.7			
11.....	6.4	7.4	5.95	5.45	3.6	8.35	9.35	4.9	4.6			
12.....	6.45	7.6	5.8	5.45	3.65	8.25	8.8	4.85	4.6			
13.....	6.5	7.6	5.7	5.5	3.9	8.1	8.35	4.8	4.5			
14.....	6.45	7.7	5.7	5.4	4.0	7.9	8.3	4.75	4.45			
15.....	6.6	7.9	5.7	5.3	4.0	8.0	8.4	4.7	4.4			
16.....	6.7	7.3	5.65	5.4	4.0	8.2	8.6	4.7	4.3			
17.....	6.75	7.2	5.65	5.3	4.05	8.35	8.85	4.65	4.35			
18.....	7.5	7.2	5.6	5.3	4.05	8.5	8.65	4.75	4.4			
19.....	7.3	7.1	5.55	5.2	4.2	8.7	8.5	4.65	4.4			
20.....	6.95	7.0	5.55	5.1	4.1	8.8	8.4	4.55	4.4			
21.....	6.95	6.8	5.55	5.0	3.9	8.9	8.15	4.5	4.4			
22.....	7.0	6.7	5.55	4.9	3.9	8.5	8.2	4.5	4.35			
23.....	7.7	6.5	5.5	4.8	3.8	8.35	7.45	4.55	4.3			
24.....	8.2	6.4	5.5	4.7	3.8	8.35	7.2	4.7	4.3			
25.....	8.35	6.4	5.6	4.6	3.9	8.5	7.1	5.0	4.3			
26.....	7.6	6.35	5.65	4.5	4.0	8.9	7.0	4.85	4.25			
27.....	6.95	6.3	5.7	4.3	4.1	9.3	6.9	4.75	4.3			
28.....	6.9	6.2	5.8	4.2	4.2	9.5	7.0	4.75	4.35			
29.....	6.8	.....	5.85	4.1	4.4	9.95	7.0	4.7	4.4			
30.....	6.7	.....	5.75	4.1	4.55	10.2	6.8	4.65	4.4			
31.....	6.55	.....	5.7	.....	4.7	.....	6.45	4.7	.....		
Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909-10.												
1.....	4.4	5.6	6.3	7.5	6.1	5.95	5.1	3.9	5.5	4.45	4.4	3.7
2.....	4.35	5.6	6.2	7.7	5.9	6.0	5.0	3.9	5.8	4.45	4.35	3.7
3.....	4.4	5.6	6.2	8.5	6.0	6.0	5.0	3.85	6.0	4.45	4.35	3.75
4.....	4.55	5.6	6.1	9.1	6.2	6.1	5.1	3.8	6.1	4.5	4.4	3.7
5.....	4.7	5.65	6.1	10.2	6.3	6.15	5.0	3.85	6.2	4.5	4.35	3.7
6.....	4.8	5.65	6.0	8.7	6.4	6.2	5.0	3.95	6.5	4.5	4.1	3.7
7.....	5.0	5.65	6.0	8.2	6.5	6.2	4.9	3.95	6.4	4.55	4.1	3.7
8.....	5.1	5.7	6.1	8.1	6.5	6.3	4.8	4.0	6.2	4.5	4.0	3.7
9.....	5.2	5.7	6.2	7.3	6.4	6.35	4.7	4.0	6.0	4.45	3.9	3.65
10.....	5.2	5.75	6.4	7.3	6.1	6.4	4.5	4.85	5.4	4.45	3.95	3.7
11.....	5.1	5.8	4.5	7.3	6.0	6.45	4.5	4.1	5.6	4.4	3.8	3.7
12.....	5.1	6.0	4.5	7.2	6.1	6.45	4.3	4.05	5.5	4.4	3.85	3.65
13.....	5.1	6.1	4.55	7.1	6.1	6.45	4.1	4.0	5.45	4.2	3.55	3.6
14.....	5.15	6.15	4.6	7.0	6.2	6.5	4.1	4.0	5.4	4.1	3.6	3.65
15.....	5.2	6.1	4.6	7.0	6.3	6.5	4.1	4.0	5.4	4.0	3.65	3.75
16.....	5.3	6.1	4.6	7.0	6.5	6.5	4.05	3.95	5.4	4.0	3.6	3.65
17.....	5.3	6.05	4.5	7.05	6.5	6.5	4.05	4.0	5.5	4.0	3.6	3.65
18.....	5.3	6.0	4.5	7.1	6.5	6.55	4.0	4.1	5.5	3.95	3.55	3.6
19.....	5.35	6.0	4.4	7.05	6.4	6.5	4.0	4.2	5.4	4.1	3.6	3.65
20.....	5.35	6.1	4.4	7.0	6.3	6.5	4.0	4.6	5.4	4.2	3.65	3.7
21.....	5.35	6.1	4.4	7.0	6.2	6.5	4.0	4.9	5.6	4.5	3.6	3.75
22.....	5.4	6.1	4.35	7.0	6.1	6.5	4.0	4.9	5.2	4.9	3.65	3.7
23.....	5.4	6.2	4.3	6.95	6.1	6.2	3.9	4.95	5.0	5.0	3.6	3.75
24.....	5.45	6.3	4.3	6.9	6.1	5.0	3.9	4.9	4.8	5.2	3.55	3.75
25.....	5.5	6.5	4.3	6.9	6.05	5.9	3.9	5.0	4.7	5.4	3.55	3.75
26.....	5.55	6.5	4.2	6.85	6.0	5.8	3.9	5.0	4.5	5.6	3.6	3.8
27.....	5.6	6.4	4.1	6.85	6.0	5.8	3.9	5.1	4.5	5.0	3.6	3.8
28.....	5.6	6.4	4.3	6.8	6.0	5.8	3.9	5.1	4.45	5.0	3.6	3.8
29.....	5.6	6.3	5.0	6.8	.....	5.8	3.9	5.2	4.4	4.9	3.6	3.75
30.....	5.6	6.3	5.0	6.7	.....	5.6	3.9	5.3	4.4	4.5	3.65	3.8
31.....	5.6	.....	5.7	6.7	.....	5.4	.....	5.4	.....	4.45	3.7	.....

Daily gage height, in feet, of Owens River near Lone Pine, Cal., for 1909-1912—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.												
1.....	3.8	5.35	5.7	5.85	7.3	6.3	6.5	4.3	4.9	9.7	9.7	4.85
2.....	3.8	5.35	5.7	5.85	7.7	6.3	6.55	4.3	5.0	9.8	8.9	4.7
3.....	3.85	5.35	5.75	5.8	9.1	6.5	6.55	4.2	5.2	9.9	8.6	4.7
4.....	3.8	5.4	5.85	5.7	9.9	6.8	6.55	4.1	5.3	10.0	8.0	4.6
5.....	3.85	5.4	5.9	5.7	10.0	6.9	6.85	4.1	5.1	10.1	7.8	4.5
6.....	4.0	5.45	5.95	5.7	8.8	7.0	7.3	4.0	5.3	10.1	7.5	4.45
7.....	4.05	5.5	6.0	5.7	8.4	7.0	7.5	4.0	5.4	10.1	7.0	4.45
8.....	4.2	5.55	6.0	5.75	8.0	7.1	7.7	3.9	5.6	10.15	7.0	4.45
9.....	4.25	5.6	6.0	5.8	7.9	7.2	7.55	3.9	5.9	10.25	6.6	4.45
10.....	4.3	5.6	6.0	5.9	7.4	7.5	7.35	3.85	5.95	10.45	6.8	4.4
11.....	4.35	5.65	6.0	6.1	7.3	7.8	7.2	3.8	6.1	10.65	6.4	4.4
12.....	4.4	5.65	6.0	6.6	7.2	8.2	7.0	3.8	6.5	10.75	6.0	4.4
13.....	4.45	5.7	6.0	6.8	7.0	9.6	6.9	3.8	6.7	10.85	5.9	4.4
14.....	4.5	5.7	6.0	6.55	6.95	8.2	6.8	3.75	7.0	10.7	5.9	4.4
15.....	4.5	5.75	6.0	6.4	6.6	7.1	6.75	3.8	7.3	10.6	5.9	4.4
16.....	4.9	5.75	6.0	6.2	6.5	7.5	6.6	3.8	7.5	10.7	5.85	4.4
17.....	5.05	5.7	6.0	6.2	6.4	7.2	6.3	3.8	8.0	10.8	5.8	4.4
18.....	5.1	5.7	5.95	6.05	6.3	7.0	6.1	3.85	8.5	10.85	5.8	4.4
19.....	5.2	5.7	5.95	6.0	6.3	6.9	6.0	3.9	8.8	10.9	5.75	4.4
20.....	5.3	5.7	5.95	6.0	6.4	6.7	5.9	3.9	9.2	10.95	5.75	4.4
21.....	5.35	5.7	5.95	6.0	6.5	6.6	5.6	4.0	9.6	11.0	5.6	4.4
22.....	5.4	5.7	6.0	6.0	6.5	6.5	5.5	4.0	9.95	11.05	5.55	4.4
23.....	5.35	5.7	6.05	6.0	6.4	6.35	5.3	4.0	10.2	10.65	5.5	4.4
24.....	5.3	5.7	6.05	6.2	6.4	6.4	5.1	4.05	10.35	10.45	5.4	4.4
25.....	5.3	5.7	6.05	6.2	6.35	6.4	5.0	4.15	10.3	10.3	5.3	4.45
26.....	5.3	5.7	6.05	6.2	6.35	6.45	5.0	4.2	10.2	10.2	5.3	4.5
27.....	5.25	5.7	6.0	6.2	6.3	6.5	4.9	4.2	9.9	10.1	5.25	4.6
28.....	5.3	5.7	6.0	6.3	6.3	6.4	4.7	4.5	9.7	10.0	5.2	4.65
29.....	5.35	5.7	5.95	6.5	.....	6.4	4.5	4.6	9.6	9.9	4.95	4.75
30.....	5.35	5.7	5.95	6.9	.....	6.45	4.4	4.8	9.65	9.95	4.9	4.8
31.....	5.35	.....	5.9	7.1	.....	6.5	.....	4.9	.....	9.8	4.9	.....
Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.			
1911-12.												
1.....	4.9	6.05	6.4	6.0	6.2	5.2	5.0	4.2	4.2	4.2	4.2	4.2
2.....	5.5	6.15	6.4	6.0	6.1	5.3	5.0	4.2	4.4	4.4	4.4	4.4
3.....	5.6	6.15	6.4	6.0	6.1	5.4	5.0	4.1	4.8	4.8	4.8	4.8
4.....	5.65	6.2	6.4	6.0	6.1	5.4	5.0	4.0	5.2	5.2	5.2	5.2
5.....	5.7	6.2	6.4	6.0	6.2	5.4	4.9	4.0	5.0	5.0	5.0	5.0
6.....	5.75	6.25	6.4	6.0	6.2	5.3	4.9	4.0	5.7	5.7	5.7	5.7
7.....	5.75	6.3	6.4	6.0	6.1	5.3	4.9	4.0	6.0	6.0	6.0	6.0
8.....	5.75	6.3	6.4	6.0	6.0	5.2	5.0	4.0	5.9	5.9	5.9	5.9
9.....	5.7	6.3	6.4	6.2	6.0	5.3	5.2	3.8	6.0	6.0	6.0	6.0
10.....	5.7	6.3	6.4	6.4	6.0	5.4	5.2	4.0	6.0	6.0	6.0	6.0
11.....	5.7	6.25	6.35	6.4	6.0	5.4	5.4	4.2	6.0	6.0	6.0	6.0
12.....	5.7	6.25	6.35	6.4	6.0	5.4	5.4	4.3	6.3	6.3	6.3	6.3
13.....	5.75	6.2	6.35	6.4	6.0	5.5	5.4	4.2	5.8	5.8	5.8	5.8
14.....	5.8	6.25	6.35	6.4	6.0	5.3	5.4	4.2	5.5	5.5	5.5	5.5
15.....	5.85	6.3	6.3	6.4	6.0	5.5	5.3	4.1	5.4	5.4	5.4	5.4
16.....	5.9	6.4	6.3	6.5	5.5	5.5	5.2	4.0	5.1	5.1	5.1	5.1
17.....	5.9	6.4	6.3	6.6	5.4	5.5	5.2	4.0	5.0	5.0	5.0	5.0
18.....	5.9	6.45	6.3	6.6	5.3	5.4	5.2	4.0	4.8	4.8	4.8	4.8
19.....	5.85	6.45	6.25	6.6	5.5	.....	5.2	4.1	4.8	4.8	4.8	4.8
20.....	5.85	6.5	6.25	6.6	5.5	.....	5.1	4.1	4.7	4.7	4.7	4.7
21.....	5.85	6.45	6.2	6.5	5.5	.....	5.0	4.2	4.5	4.5	4.5	4.5
22.....	5.8	6.4	6.2	6.4	5.4	5.3	5.0	4.2	4.5	4.5	4.5	4.5
23.....	5.85	6.4	6.2	6.4	5.4	.....	5.0	4.1	4.5	4.5	4.5	4.5
24.....	5.85	6.4	6.15	6.4	5.4	5.3	4.8	4.0	4.5	4.5	4.5	4.5
25.....	5.85	6.4	6.15	6.4	5.4	5.4	4.8	4.0	4.4	4.4	4.4	4.4
26.....	5.9	6.4	6.15	6.3	5.4	5.4	4.6	4.0	4.4	4.4	4.4	4.4
27.....	5.95	6.4	6.1	6.3	5.4	5.3	4.5	4.0	4.4	4.4	4.4	4.4
28.....	5.9	6.4	6.1	6.3	5.3	5.3	4.4	4.0	4.3	4.3	4.3	4.3
29.....	5.9	6.4	6.05	6.3	5.2	5.3	4.4	4.1	4.3	4.3	4.3	4.3
30.....	5.95	6.4	6.0	6.2	.....	5.4	4.2	4.2	4.3	4.3	4.3	4.3
31.....	6.0	.....	6.0	6.2	.....	5.4	.....	4.2	.....	4.2	.....	.....

Daily discharge, in second-feet, of Owens River near Lone Pine, Cal., for 1909-1912.

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909.									
1.....	422	574	502	412	117	260	1,770	512	295
2.....	442	542	492	403	103	260	1,800	462	286
3.....	442	542	482	394	96	268	1,870	422	295
4.....	442	532	482	394	89	340	1,870	394	277
5.....	442	522	472	394	89	452	1,900	376	260
6.....	452	522	482	385	89	462	1,940	358	236
7.....	462	522	482	422	82	684	2,050	331	236
8.....	472	563	472	403	75	789	2,010	313	228
9.....	482	672	472	376	75	913	1,720	295	236
10.....	542	789	472	376	75	993	1,420	286	244
11.....	562	789	472	376	75	1,030	1,360	277	228
12.....	574	838	442	376	82	1,010	1,160	268	228
13.....	584	838	422	385	117	966	1,030	260	212
14.....	574	863	422	367	132	913	1,020	252	204
15.....	605	913	422	349	132	939	1,050	244	196
16.....	627	765	412	367	132	993	1,100	244	180
17.....	638	741	412	349	140	1,030	1,180	236	188
18.....	813	741	403	349	140	1,080	1,180	252	196
19.....	765	718	394	331	164	1,130	1,080	236	196
20.....	684	695	394	313	148	1,160	1,050	220	196
21.....	684	649	394	295	117	1,200	980	212	196
22.....	695	627	394	277	117	1,080	993	212	188
23.....	863	584	385	260	103	1,030	801	220	180
24.....	993	563	385	244	103	1,030	741	244	180
25.....	1,030	563	403	228	117	1,080	718	295	180
26.....	838	552	412	212	132	1,200	695	268	172
27.....	684	542	422	180	148	1,340	672	252	180
28.....	672	522	442	164	164	1,420	695	252	188
29.....	649	.....	452	148	196	1,630	695	244	196
30.....	627	.....	432	148	220	1,770	649	236	196
31.....	595	.....	422	.....	244	.....	574	244	.....

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909-10.												
1.....	196	403	542	812	500	472	314	121	386	205	197	93
2.....	188	403	522	861	462	481	297	121	443	205	188	93
3.....	196	403	522	1,070	481	481	297	114	481	205	188	100
4.....	220	403	502	1,260	520	500	314	107	500	213	197	93
5.....	244	412	502	1,770	540	510	297	114	520	213	188	93
6.....	260	412	482	1,130	561	520	297	128	582	213	150	93
7.....	295	412	482	989	582	520	280	128	561	221	150	93
8.....	313	422	502	963	582	540	263	135	520	213	135	93
9.....	331	422	522	764	561	550	246	135	481	205	121	86
10.....	331	432	563	764	500	561	213	172	368	205	128	93
11.....	313	442	212	764	481	572	213	150	405	197	107	93
12.....	313	482	212	741	500	572	181	142	386	197	114	86
13.....	313	502	220	718	500	572	150	135	377	165	74	80
14.....	322	512	228	695	520	582	150	135	368	150	80	86
15.....	331	502	228	695	540	582	150	135	368	135	86	100
16.....	349	502	228	695	582	582	142	128	368	135	80	86
17.....	349	492	212	706	582	582	142	135	386	135	80	86
18.....	349	482	212	718	582	593	135	150	386	128	74	80
19.....	358	482	196	706	561	582	135	165	368	150	80	86
20.....	358	502	196	695	540	582	135	229	368	165	86	93
21.....	358	502	196	695	520	582	135	280	405	213	80	100
22.....	367	502	188	695	500	582	135	280	332	280	86	93
23.....	367	522	180	684	500	520	121	288	297	297	80	100
24.....	376	542	180	672	500	297	121	280	263	332	74	100
25.....	385	584	180	672	490	462	121	297	246	368	74	100
26.....	394	584	164	660	481	443	121	297	213	405	80	107
27.....	403	563	148	660	481	443	121	314	213	297	80	107
28.....	403	563	180	649	481	443	121	314	205	297	80	107
29.....	403	542	295	649	.....	443	121	332	197	280	80	100
30.....	403	542	295	626	.....	405	121	350	197	213	86	107
31.....	403	.....	422	626	.....	368	.....	368	.....	205	93	.....

Daily discharge, in second-feet, of Owens River near Lone Pine, Cal., for 1909-1912—Con.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.												
1.....	107	359	424	402	690	490	530	170	260	1,250	1,280	288
2.....	107	359	424	402	770	490	540	170	275	1,380	1,080	265
3.....	114	359	434	395	1,100	530	540	155	305	1,310	1,010	265
4.....	107	368	452	380	1,310	590	540	140	320	1,340	860	250
5.....	114	368	462	380	1,340	610	600	140	290	1,370	820	235
6.....	135	377	472	380	1,020	630	690	125	320	1,370	760	228
7.....	142	386	481	380	920	630	730	125	335	1,370	660	228
8.....	165	396	481	388	830	650	770	115	365	1,380	660	228
9.....	173	405	481	395	810	670	740	115	410	1,420	580	228
10.....	181	405	481	410	710	730	700	110	420	1,480	620	220
11.....	189	414	481	450	690	790	670	105	450	1,540	540	220
12.....	197	414	481	550	670	870	630	105	530	1,560	460	220
13.....	205	424	481	590	630	1,220	610	105	570	1,600	445	220
14.....	213	424	481	540	620	870	590	100	630	1,550	445	220
15.....	213	434	481	510	550	650	580	105	690	1,520	445	220
16.....	280	434	481	470	530	730	550	105	730	1,550	438	220
17.....	306	424	481	470	510	670	490	105	830	1,580	430	220
18.....	314	424	472	440	490	630	450	110	945	1,600	430	220
19.....	332	424	472	430	490	610	430	115	1,020	1,610	422	220
20.....	350	424	472	430	510	570	410	115	1,120	1,620	422	220
21.....	359	424	472	430	530	550	365	125	1,220	1,640	400	220
22.....	368	424	481	430	530	530	350	125	1,320	1,660	392	220
23.....	359	424	490	430	510	500	320	125	1,400	1,540	385	220
24.....	350	424	490	470	510	510	290	132	1,440	1,480	370	220
25.....	350	424	490	470	500	510	275	148	1,430	1,440	355	228
26.....	350	424	490	470	500	520	275	155	1,400	1,410	355	235
27.....	341	424	481	470	490	530	260	155	1,310	1,380	348	250
28.....	350	424	481	490	490	510	230	200	1,250	1,360	340	258
29.....	359	424	472	530	.....	510	200	215	1,220	1,340	302	272
30.....	359	424	472	610	.....	520	185	245	1,240	1,350	295	280
31.....	359	.....	462	650	.....	530	.....	260	.....	1,310	295	.....

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.									
1.....	295	470	540	455	491	317	284	159	159
2.....	385	490	540	455	473	334	284	159	189
3.....	400	490	540	455	473	351	284	144	252
4.....	408	500	540	455	473	351	284	130	317
5.....	415	500	540	455	491	351	268	130	284
6.....	422	510	540	455	491	334	268	130	402
7.....	422	520	540	455	473	334	268	130	455
8.....	422	520	540	455	455	317	284	130	437
9.....	415	520	540	491	455	334	317	103	455
10.....	415	520	540	527	455	351	317	130	455
11.....	415	510	530	527	455	351	351	159	455
12.....	415	510	530	527	455	351	351	174	509
13.....	422	500	530	527	455	368	351	159	419
14.....	430	510	530	527	455	388	351	159	368
15.....	438	520	520	527	455	368	334	144	351
16.....	445	540	520	545	368	368	317	130	300
17.....	445	540	520	564	351	368	317	130	284
18.....	445	550	520	564	334	351	317	130	252
19.....	438	550	510	564	368	347	317	144	252
20.....	438	560	510	564	368	342	300	144	236
21.....	438	550	500	545	368	338	284	159	204
22.....	430	540	500	527	351	334	284	159	204
23.....	438	540	500	527	351	334	284	144	204
24.....	438	540	490	527	351	334	252	130	204
25.....	438	540	490	527	351	351	252	130	189
26.....	445	540	490	509	351	351	220	130	189
27.....	452	540	480	509	351	334	204	130	189
28.....	445	540	480	509	334	334	189	130	174
29.....	445	540	470	509	317	334	189	144	174
30.....	452	540	460	491	.....	351	159	159	174
31.....	460	.....	460	491	.....	351	.....	159	.....

NOTE.—Daily discharge determined from rating curves applicable as follows: Jan. 1, 1909, to Dec. 31, 1909, well defined between 90 and 940 second-feet; Jan. 1, 1910, to Dec. 31, 1910, fairly well defined; Jan. 1, 1911, to July 21, 1911, fairly well defined; July 22, 1911, to Dec. 31, 1911, fairly well defined; Jan. 1, 1912, to June 30, 1912, well defined.

Monthly discharge of Owens River near Lone Pine, Cal., for 1909-1912.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1909.					
January.....	1,030	422	625	38,400	A.
February.....	913	522	653	36,300	A.
March.....	502	385	437	26,900	A.
April.....	422	148	323	19,200	A.
May.....	244	75	123	7,560	B.
June.....	1,770	260	948	56,400	A.
July.....	2,050	574	1,220	75,000	B.
August.....	512	212	288	17,700	A.
September.....	295	172	216	12,900	A.
The period.....				290,000	
1909-10.					
October.....	403	188	329	20,200	A.
November.....	584	403	482	28,700	A.
December.....	542	148	313	19,200	A.
January.....	1,770	626	800	49,200	A.
February.....	582	462	522	29,000	A.
March.....	593	297	514	31,600	B.
April.....	314	121	186	11,100	A.
May.....	368	107	199	12,200	B.
June.....	582	197	373	22,200	A.
July.....	405	128	221	13,600	A.
August.....	197	74	110	6,760	A.
September.....	107	80	94.2	5,610	A.
The year.....	1,770	74	345	249,000	
1910-11.					
October.....	368	107	253	15,600	A.
November.....	434	359	409	24,300	A.
December.....	490	424	473	29,100	B.
January.....	650	380	459	28,200	B.
February.....	1,340	490	688	38,200	A.
March.....	1,220	490	624	38,400	A.
April.....	770	185	485	28,900	A.
May.....	260	100	139	8,550	B.
June.....	1,440	260	802	47,700	A.
July.....	1,660	1,250	1,460	89,800	A.
August.....	1,280	295	537	33,000	A.
September.....	288	220	235	14,000	B.
The year.....	1,660	100	547	396,000	
1911-12.					
October.....	460	295	426	26,200	B.
November.....	560	470	525	31,200	A.
December.....	540	460	514	31,600	A.
January.....	564	455	509	31,300	A.
February.....	491	317	411	23,600	A.
March.....	368	317	345	21,200	A.
April.....	351	159	283	16,800	A.
May.....	174	103	142	8,730	A.
June.....	509	159	291	17,300	A.
The period.....				208,000	

OWENS RIVER NEAR CITRUS, CAL.

This station was established October 30, 1903, by R. S. Hawley. It was located at the county bridge, 4 miles east of Independence, Cal., and 1 mile from the Southern Pacific Railroad station at Citrus, Cal. The station at this point shows the amount of waste water which is discharged into Owens Lake. The gage was a vertical staff nailed to a pile on the upstream side of the middle pier of the bridge.

Discharge measurements were made from the county bridge at which the gage is located. The channel is straight for 200 feet above and for 300 feet below the station. Both banks are high and are not liable to overflow. The bed of the stream is sandy and is liable to shift.

Discharge measurements of Owens River near Citrus, Cal., in 1903-1906.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1903.		<i>Feet.</i>	<i>Sec.-ft.</i>	1905.		<i>Feet.</i>	<i>Sec.-ft.</i>
June 27	J. C. Clausen.....		534	Sept. 20	J. S. Evans.....	3.15	12
Aug. 28	R. S. Hawley.....	2.7	8.6	Nov. 8	F. R. S. Buttemer....	4.65	180
Oct. 30	.....do.....	4.4	105	Dec. 3	.....do.....	5.20	290
Dec. 4	.....do.....	5.0	215	15	.....do.....	5.30	282
1904.				1906.			
Jan. 27	R. S. Hawley.....	5.45	303	Jan. 3	F. R. S. Buttemer....		283
Apr. 6	.....do.....	5.30	298	19	.....do.....		440
May 3	.....do.....	3.65	25	21	.....do.....		505
June 9	.....do.....	6.65	569	June 4	G. R. Shuey.....		214
24	.....do.....	7.20	733	16	.....do.....		586
July 22	L. M. Barnes.....	4.80	176	26	.....do.....		1,370
Sept. 12	R. S. Hawley.....	4.10	59	July 1	.....do.....		1,520
Oct. 9	Hawley and Taylor....	6.30	456	8	.....do.....		2,080
Nov. 4	R. J. Taylor.....	5.90	410	13	.....do.....		2,210
Dec. 2	.....do.....	5.80	351	21	.....do.....		2,460
1905.				29	.....do.....		2,610
Feb. 2	R. J. Taylor.....	6.00	389	Aug. 9	.....do.....		1,160
May 29	J. S. Evans.....	3.60	61	17	.....do.....		1,160
July 21	.....do.....	4.30	125	Sept. 10	.....do.....		432
Aug. 23	.....do.....	3.00	12.1	Oct. 7	.....do.....		321

Daily gage height, in feet, of Owens River near Citrus, Cal., for 1903-1905.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1903-4.												
1.		4.48	4.95	5.35	5.35	5.45	6.15	3.55	5.25	6.6	5.1	4.6
2.		4.45	5.0	5.4	5.3	5.35	5.7	3.6	5.2	6.5	5.4	4.6
3.		4.65	4.95		5.25	5.15	5.55	3.65	5.1	6.45	5.5	4.55
4.		4.7	5.0	5.35	5.25	5.3	5.35	3.6	5.0	6.4	5.55	4.6
5.		4.75	5.0	5.4	5.05	5.35	5.25	3.6	5.3	6.35	5.8	4.65
6.		4.7	5.0	5.4	5.05	5.25	5.3	3.55	5.8	6.3	5.7	4.5
7.		4.6	5.0	5.4	5.0	5.15	4.9	3.55	6.2	6.2	5.7	
8.		4.65	5.03	5.4	5.0	5.05	4.8	3.5	6.4	6.15	5.6	4.3
9.		4.7	5.03	5.4	5.0	5.05	4.75	3.5	6.5	6.2	5.85	4.25
10.		4.77	5.01	5.45	5.0	4.9	5.5	3.45	6.6	6.2	6.0	4.15
11.		4.8	5.0	5.45	5.0	4.95	5.55	3.5	6.5	6.1	6.3	4.05
12.		4.83	5.01	5.4	4.9	5.0	5.4	3.4	6.4	6.1	6.2	4.05
13.		4.85	5.01	5.4	4.85	5.3	5.35	3.45	6.4	6.0	5.9	4.05
14.		4.85	5.2	5.4	4.9	5.1	5.3	3.45	6.4	5.8	5.9	4.1
15.		4.87	5.2	5.4	4.85	5.0	5.2	3.45	6.5	5.65	5.6	4.1
16.		4.85	5.0	5.4	4.9	5.0	5.15	3.4	6.8	5.55	5.65	4.1
17.		4.85	5.2	5.4	5.45	5.2	4.15	3.4	6.8	5.4	5.6	4.1
18.		4.85	5.2	5.4	5.4	5.25	3.9	3.4	6.8	5.2	5.5	4.1
19.		4.85	5.2	5.45	5.7	5.2	3.95	3.8	7.0	5.0	5.55	4.1
20.		4.88	5.2	5.4	5.7	5.15	3.9	4.1	7.3	5.0	5.6	4.1
21.		4.95	5.25	5.4	5.6	5.2	3.7	4.1	7.3	4.9	5.35	3.85
22.		4.97	5.3	5.35	5.45	5.2	3.75	4.1	7.3	4.8	5.2	3.75
23.		4.9	5.3	5.4	5.5	5.15	3.6	4.5	7.3	4.8	5.15	3.75
24.		4.95	5.2	5.4	5.55	5.4	3.55	4.05	7.3	4.7		3.75
25.		5.0	5.15	5.45	5.5	6.0	3.5	4.1	7.2	4.8		3.8
26.		5.0	5.15	5.4	5.75	5.95	3.45	4.8	7.2	5.0		4.2
27.		5.0	5.2	5.45	5.5	5.6	3.4	4.9	7.0	4.8		5.6
28.		5.0	5.2	5.4	5.7	5.8	3.4	5.5	6.8	5.2		5.7
29.		5.0	5.35	5.4	5.5	5.95	3.45	5.8	6.8	5.2		5.75
30.	4.4	5.0	5.35	5.35		6.4	3.4	5.45	6.7	5.3		5.8
31.	4.47		5.35	5.4		6.6		5.35		5.1		
1904-5.												
1.	5.75	5.8	5.8			5.85				5.6		
2.	5.8	5.7	5.85		6.0					5.35		
3.	5.7	5.9			6.8					5.0		
4.	6.0	5.9	5.9		6.8	5.8				5.0		
5.	6.0	5.9	5.9							5.0		
6.	6.0	5.85	5.8	5.7	6.9	5.8	5.0			5.0		
7.	6.0	5.85	5.85	5.65	6.8					5.0		
8.	6.5	5.9	5.8	5.65	6.85	5.75				5.5		
9.	6.4	5.9	5.85		6.8	5.45				5.1		
10.		5.85	5.85		6.85	5.4				5.1		

Daily gage height, in feet, of Owens River near Citrus, Cal., for 1903-1905—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1904-5.												
11.....	5.9	5.85	5.8	.....	6.9	5.45	.....	.....	.....	5.2	.....	.....
12.....	6.1	5.85	5.8	.....	6.9	5.4	.....	.....	.....	5.25	.....	.....
13.....	6.2	5.8	5.8	.....	.....	5.7	.....	.....	.....	5.3	.....	.....
14.....	6.5	5.8	5.8	5.7	7.1	.....	4.5	.....	.....	5.3	.....	.....
15.....	6.5	5.8	5.8	5.8	7.15	5.8	.....	.....	.....	5.3	.....	.....
16.....	6.3	5.85	.....	.....	7.2	6.3	.....	.....	.....	5.3	.....	.....
17.....	6.4	5.8	.....	.....	7.2	6.4	.....	.....	.....	5.0	.....	3.1
18.....	6.3	5.75	.....	.....	.....	.....	.....	.....	.....	4.8	.....	3.1
19.....	6.1	5.8	.....	5.8	.....	.....	.....	.....	.....	4.75	.....	3.2
20.....	6.0	5.75	.....	5.9	.....	.....	.....	.....	.....	4.6	.....	3.3
21.....	.....	5.8	.....	5.85	5.8	.....	.....	.....	.....	4.4	.....	3.3
22.....	6.0	5.8	.....	.....	5.8	.....	.....	.....	.....	4.1	.....	3.3
23.....	6.0	5.8	.....	6.0	5.8	.....	.....	.....	6.0	3.5	.....	3.3
24.....	6.0	5.8	.....	.....	.....	.....	.....	.....	6.1	3.2	.....	3.2
25.....	6.1	5.85	5.7	.....	.....	.....	.....	.....	6.3	3.0	.....	3.25
26.....	5.9	5.85	5.6	6.0	5.8	.....	.....	.....	6.4	2.8	.....	3.3
27.....	5.8	5.8	5.65	6.0	.....	.....	.....	.....	6.35	2.75	.....	3.35
28.....	5.9	5.85	.....	.....	.....	.....	.....	.....	6.0	2.6	.....	3.4
29.....	5.9	5.8	.....	.....	.....	.....	.....	.....	5.6	2.5	.....	3.4
30.....	5.9	5.8	.....	5.8	.....	.....	.....	.....	5.6	.....	.....	3.45
31.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.
1905.				1905.				1905.			
1.....	3.5	4.6	5.15	11.....	3.9	4.9	5.4	21.....	4.4	5.0	5.4
2.....	3.45	4.65	5.2	12.....	3.9	4.9	5.35	22.....	4.4	5.0	5.45
3.....	3.45	4.7	5.3	13.....	4.0	4.9	5.4	23.....	4.5	5.0	5.5
4.....	3.5	4.75	5.35	14.....	4.1	4.95	5.4	24.....	4.5	5.0	5.5
5.....	3.55	4.8	5.35	15.....	4.15	4.95	5.4	25.....	4.4	5.0	5.45
6.....	3.5	4.8	5.4	16.....	4.15	5.0	5.4	26.....	4.45	5.0	5.45
7.....	3.5	4.8	5.4	17.....	4.2	5.0	5.5	27.....	4.5	5.0	5.4
8.....	3.6	4.85	5.35	18.....	4.25	5.0	5.45	28.....	4.5	5.0	5.5
9.....	3.8	4.85	5.4	19.....	4.3	5.0	5.4	29.....	4.5	5.0	5.4
10.....	3.85	4.9	5.4	20.....	4.3	5.0	5.5	30.....	4.55	5.0	5.45
								31.....	4.6	.....	.....

Rating tables for Owens River near Citrus, Cal.

January 1 to December 31, 1904.

Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.
<i>Feet.</i>	<i>Sec.-ft.</i>	<i>Feet.</i>	<i>Sec.-ft.</i>	<i>Feet.</i>	<i>Sec.-ft.</i>	<i>Feet.</i>	<i>Sec.-ft.</i>
3.60	20	4.60	150	5.60	335	6.60	585
3.70	30	4.70	165	5.70	360	6.70	610
3.80	40	4.80	180	5.80	385	6.80	640
3.90	50	4.90	195	5.90	410	6.90	670
4.00	60	5.00	210	6.00	435	7.00	700
4.10	75	5.10	230	6.10	460	7.10	730
4.20	90	5.20	250	6.20	485	7.20	760
4.30	105	5.30	270	6.30	510	7.30	790
4.40	120	5.40	290	6.40	535	7.40	820
4.50	135	5.50	310	6.50	560		

January 1 to December 31, 1905.

2.50	0	3.70	63	4.90	217	6.10	440
2.60	1	3.80	73	5.00	233	6.20	462
2.70	3	3.90	83	5.10	249	6.30	485
2.80	5	4.00	94	5.20	266	6.40	508
2.90	8	4.10	105	5.30	283	6.50	532
3.00	12	4.20	117	5.40	301	6.60	556
3.10	18	4.30	130	5.50	319	6.70	581
3.20	24	4.40	144	5.60	337	6.80	607
3.30	31	4.50	158	5.70	356	6.90	634
3.40	38	4.60	172	5.80	376	7.00	662
3.50	46	4.70	187	5.90	397	7.10	690
3.60	54	4.80	202	6.00	418	7.20	720

NOTE.—Table based on 11 discharge measurements made during 1904-5; fairly well defined between gage heights 3 feet and 7 feet.

Monthly discharge of Owens River near Citrus, Cal., for 1904-5.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).
	Maximum.	Minimum.	Mean.	
1904.				
January.....	300	280	290.3	17,851
February.....	372	187	267.5	15,387
March.....	585	195	289.9	17,823
April.....	472	2	160.5	9,552
May.....	385	2	76.8	4,720
June.....	790	210	572.5	34,064
July.....	585	165	350	21,521
August.....	510	230	318	19,553
September.....	385	35	125	7,438
The period.....				144,000
1904-5.				
October.....	560	360	451	27,731
November.....	410	360	388	23,088
December.....	410	335	378	23,242
January.....	418	283	369	22,690
February.....	720	376	540	29,990
March 1-17.....	508	301	372	12,540
June 23-30.....	508	337	430	6,823
July.....	337	0	175	10,760
September 17-30.....	42	18	29.9	830
1905.				
October.....	172	42	107	6,579
November.....	233	172	219	13,030
December.....	319	292	301	18,510

NOTE.—Daily discharge interpolated for days on which the gage was not read.

ROCK CREEK NEAR ROUND VALLEY, CAL.

This station, which is located at a footbridge on the Bishop and Long Valley road about two-thirds of a mile above the mouth of Pine Creek and 2 miles northwest of Round Valley, in sec. 9, T. 6 S., R. 31 E., was established August 3, 1903, at the wagon bridge 400 feet farther upstream, and was removed to the present site in July, 1906.

Pine Creek, the principal tributary of Rock Creek, enters below the station. A number of small ditches divert water above the station. The drainage area above the mouth of Rock Creek canyon is approximately 46 square miles.

The gage is a vertical staff on the left bank.

Discharge measurements are made from the footbridge.

The channel is composed of sand and bowlders and shifts somewhat.

Discharge measurements of Rock Creek near Round Valley, Cal., in 1903-1912.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
		<i>Feet.</i>	<i>Sec.-ft.</i>			<i>Feet.</i>	<i>Sec.-ft.</i>
1903.				1908.			
Aug. 3	R. S. Hawley	1.55	20.0	Feb. 22	R. B. Post	2.15	70
Aug. 8	do.	1.62	21.0	Mar. 29	do.	1.19	23
18	do.	1.55	19.5	May 12	do.	1.15	22
Sept. 1	do.	1.42	16.8	June 18	do.	1.25	25
10	do.	1.49	17.5	July 15	W. A. Lamb	1.43	40
Nov. 24	do.	1.51	18.3	Aug. 4	do.	2.00	73
Dec. 29	do.	1.45	18.1	Aug. 26	do.	1.25	33
				Sept. 17	do.	1.46	33
1904.				Oct. 7	do.	1.39	29
Mar. 4	R. S. Hawley	1.20	14.3	22	A. T. Barrows	1.35	31
28	do.	1.40	26	Nov. 6	do.	1.23	16
Apr. 8	Murphy, Bennett, and Hawley	1.28	22	26	Barrows and Lee	1.30	25
27	R. S. Hawley	1.10	15.3	1909.			
June 2	do.	2.40	64	Jan. 22	Haines and Lee	1.61	47.2
15	do.	2.76	98	Feb. 11	R. E. Haines	1.46	36.6
July 13	Clausen and Barnes	2.00	54	27	do.	1.35	33.4
Aug. 3	L. M. Barnes	2.30	72	Mar. 18	do.	1.08	20.9
Sept. 9	R. S. Hawley	1.30	22	Apr. 8	do.	1.00	19.5
Oct. 13	Clapp, Taylor, and Hawley	1.90	50	29	do.	1.09	23.3
Nov. 12	R. J. Taylor	1.68	37	May 19	do.	1.34	33.6
Dec. 6	do.	1.39	24	June 10	do.	2.88	129
				30	do.	3.15	147
1905.				July 23	do.	2.0	76.5
Jan. 16	R. J. Taylor	1.52	28	Aug. 11	do.	1.29	34.0
Feb. 9	do.	1.30	20	Sept. 1	do.	1.6	49.2
Apr. 4	J. S. Evans	1.40	19.9	22	do.	1.18	28.0
25	do.	1.15	18.6	Oct. 13	do.	1.30	31.0
May 24	do.	1.80	39	Nov. 3	do.	1.23	31.1
June 27	do.	2.00	51	24	do.	1.42	37.4
July 25	do.	1.30	24	1910.			
Aug. 15	do.	1.20	19.6	Mar. 9	R. E. Haines	1.27	31
Sept. 8	do.	1.18	18.6	30	do.	1.08	23
27	do.	1.20	18.2	Apr. 21	do.	1.18	28
Nov. 2	F. R. S. Buttemer	1.35	21	May 11	do.	1.69	52
24	do.	1.46	23	June 25	C. H. Lee	1.80	58
Dec. 10	do.	1.60	27	July 11	do.	1.78	56
				Aug. 3	do.	1.60	43
1906.				24	F. G. Wood	1.42	37
Jan. 8	F. R. S. Buttemer	1.58	23	Sept. 18	G. T. Peekema	1.13	25
14	do.	1.93	41	Oct. 22	do.	1.52	35
Aug. 27	R. S. Hawley	1.75	51	Nov. 18	do.	1.38	29
Nov. 3	G. R. Shuey	1.55	37	Dec. 31	do.	1.33	30
30	do.	1.70	47				
1907.				1911.			
Jan. 24	G. R. Shuey	1.75	44	Jan. 25	G. T. Peekema	1.50	36
Feb. 11	do.	1.50	36	Mar. 12	C. H. Lee	1.33	33
Mar. 12	do.	1.23	23	May 6	do.	1.28	32
Apr. 26	do.	1.60	42	June 24	do.	2.79	128
May 15	do.	1.85	54	July 7	do.	3.19	162
30	do.	2.40	84	8	do.	3.38	164
July 3	do.	3.10	132	Aug. 2	J. E. Jones	2.15	86
24	do.	2.90	122	23	do.	1.55	49
Aug. 4	Shuey and Post	2.80	107	Sept. 20	do.	1.33	36
8	R. B. Post	2.40	85	Oct. 24	do.	1.44	38
24	do.	1.95	59	Nov. 22	do.	1.39	35
Sept. 7	do.	1.75	47	Dec. 12	do.	1.40	37
23	do.	1.50	33	1912.			
Oct. 5	do.	1.55	35	Jan. 16	J. E. Jones	1.45	39
28	do.	1.85	54	Feb. 21	do.	1.22	30
Nov. 17	do.	1.65	39	Mar. 21	do.	1.03	22
Dec. 8	do.	1.50	33	Apr. 16	do.	1.05	24
				May 9	do.	1.05	23
				22	do.	1.10	24
				June 12	do.	1.77	59

Daily gage height, in feet, of Rock Creek near Round Valley, Cal., for 1903-1912.

Day.	Aug.	Sept.	Day.			Aug.	Sept.	Day.			Aug.	Sept.
1903.			1903.			1903.						
1.....		1.4	11.....		1.6	1.55	21.....		1.45		1.5	
2.....		1.45	12.....		1.7	1.6	22.....		1.5		1.55	
3.....		1.4	13.....		1.7	1.6	23.....		1.6		1.5	
4.....	a 1.55	1.4	14.....		1.6	1.55	24.....		1.6		1.5	
5.....	1.5	1.4	15.....		1.5	1.5	25.....		1.5		1.55	
6.....	1.6	1.45	16.....		1.6	1.4	26.....		1.5		1.5	
7.....	1.6	1.4	17.....		1.6	a 1.5	27.....		1.5		1.5	
8.....	1.6	1.45	18.....		1.55	1.5	28.....		1.45		1.4	
9.....	1.55	1.45	19.....		1.5	1.5	29.....		1.4		1.3	
10.....	1.6	1.5	20.....		1.5	1.5	30.....		1.4		1.3	
							31.....		1.4			

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1903-4.												
1.....	1.35	1.4	1.5	1.55	1.5	1.3	1.3	1.2	2.4	2.4	2.25	1.4
2.....	1.3	1.4	1.5	1.55	1.5	1.25	1.3	1.2	2.4	2.4	2.35	1.4
3.....	1.3	1.4	1.5	1.55	1.5	1.3	1.35	1.2	2.7	2.3	2.3	1.35
4.....	1.3	1.4	1.5	1.55	1.5	1.3	1.3	1.2	2.6	2.5	2.25	1.4
5.....	1.35	1.4	1.5	1.55	1.5	1.3	1.3	1.25	2.6	2.6	2.25	1.4
6.....	1.3	1.45	1.55	1.55	1.3	1.3	1.3	1.25	2.7	2.5	2.2	1.35
7.....	1.3	1.5	1.55	1.55	1.35	1.2	1.3	1.2	2.7	2.5	2.2	1.3
8.....	1.3	1.5	1.55	1.4	1.35	1.25	1.3	1.2	2.4	2.5	2.15	1.2
9.....	1.3	1.5	1.55	1.4	1.5	1.25	1.3	1.25	2.4	2.5	2.1	1.2
10.....	1.35	1.4	1.55	1.5	1.5	1.25	1.2	1.25	2.6	2.4	2.3	1.2
11.....	1.3	1.4	1.6	1.5	1.5	1.3	1.3	1.9	2.6	2.2	2.4	1.2
12.....	1.3	1.4	1.6	1.5	1.5	1.2	1.3	1.9	2.7	2.0	2.2	1.2
13.....	1.3	1.4	1.6	1.5	1.5	1.3	1.2	2.0	2.8	1.95	2.2	1.2
14.....	1.3	1.4	1.6	1.5	1.5	1.3	1.2	2.0	2.7	1.8	2.15	1.2
15.....	1.3	1.4	1.6	1.45	1.5	1.3	1.2	2.05	2.75	1.7	2.1	1.3
16.....	1.3	1.45	1.6	1.45	2.1	1.2	1.2	2.1	2.9	1.6	2.15	1.35
17.....	1.3	1.5	1.6	1.4	1.35	1.25	1.3	2.2	2.9	1.75	2.0	1.3
18.....	1.3	1.5	1.6	1.4	1.3	1.3	1.3	2.1	2.8	1.75	2.25	1.3
19.....	1.3	1.5	1.6	1.4	1.3	1.3	1.3	2.1	2.8	1.7	2.1	1.35
20.....	1.3	1.5	1.6	1.4	1.35	1.5	1.3	2.1	2.75	1.7	1.8	1.4
21.....	1.3	1.5	1.6	1.35	1.3	1.4	1.3	2.2	2.75	2.0	1.8	1.3
22.....	1.3	1.5	1.5	1.3	1.3	1.5	1.3	2.1	2.8	2.2	1.8	1.3
23.....	1.3	1.5	1.5	1.3	1.3	1.6	1.3	2.0	2.8	2.3	1.9	1.35
24.....	1.3	1.5	1.55	1.3	1.3	1.4	1.3	2.4	2.7	2.2	2.35	2.0
25.....	1.3	1.5	1.5	1.3	1.3	1.4	1.25	2.8	2.6	2.15	2.2	2.3
26.....	1.3	1.5	1.5	1.3	1.3	1.4	1.3	2.4	2.5	2.1	2.1	2.0
27.....	1.3	1.5	1.45	1.45	1.3	1.4	1.3	2.4	2.5	2.1	2.1	1.9
28.....	1.3	1.5	1.45	1.5	1.4	1.4	1.3	2.45	2.6	2.15	1.9	1.9
29.....	1.3	1.5	1.45	1.5	1.3	1.55	1.2	2.4	2.6	2.0	1.9	1.9
30.....	1.4	1.5	1.45	1.5		1.4	1.2	2.4	2.5	2.0	1.8	1.9
31.....	1.4		1.45	1.5		1.4		2.4		2.2	1.8	
1904-5.												
1.....	1.9	1.75	1.45	1.7	2.1	1.4	1.4	1.3	1.7	1.8	1.35	1.2
2.....	1.9	1.7	1.45	1.6	1.6	1.4	1.4	1.4	1.65	1.8	1.35	1.2
3.....	1.9	1.7	1.4	1.6	1.6	1.4	1.4	1.35	1.65	1.75	1.35	1.2
4.....	1.8	1.75	1.4	1.5	1.5	1.4	1.4	1.3	1.6	1.75	1.3	1.2
5.....	1.8	1.75	1.45	1.5	1.5	1.35	1.4	1.3	1.6	1.8	1.3	1.2
6.....	1.8	1.75	1.45	1.5	1.5	1.3	1.4	1.2	1.6	1.8	1.25	1.2
7.....	1.9	1.7	1.5	1.5	1.4	1.2	1.4	1.2	1.5	1.9	1.3	1.2
8.....	1.9	1.7	1.5	1.5	1.35	1.2	1.4	1.2	1.6	2.0	1.3	1.2
9.....	1.9	1.7	1.55	1.4	1.3	1.1	1.3	1.25	1.7	2.0	1.4	1.2
10.....	2.0	1.7	1.55	1.3	1.3	1.1	1.3	1.25	1.7	2.0	1.4	1.2
11.....	2.3	1.75	1.55	1.3	1.3	1.2	1.25	1.25	1.8	2.0	1.3	1.2
12.....	2.2	1.7	1.55	1.3	1.4	1.2	1.25	1.3	2.1	2.0	1.25	1.2
13.....	2.0	1.7	1.5	1.3	1.4	1.5	1.25	1.3	2.1	2.0	1.25	1.2
14.....	1.95	1.7	1.4	1.3	1.4	1.35	1.2	1.3	2.15	2.0	1.2	1.15
15.....	1.9	1.7	1.4	1.3	1.4	1.35	1.2	1.3	2.3	2.0	1.2	1.1
16.....	1.8	1.7	1.35	1.35	1.45	1.4	1.2	1.3	2.3	1.9	1.15	1.1
17.....	1.8	1.65	1.35	1.4	1.5	1.45	1.15	1.7	2.35	1.8	1.15	1.15
18.....	1.8	1.6	1.35	1.4	1.4	1.45	1.1	1.9	2.4	1.7	1.15	1.15
19.....	1.9	1.6	1.4	1.45	1.4	1.4	1.1	1.9	2.5	1.6	1.15	1.2
20.....	1.9	1.6	1.4	1.45	1.4	1.4	1.0	1.9	2.45	1.6	1.15	1.2

^a Estimated.

Daily gage height, in feet, of Rock Creek near Round Valley, Cal., for 1903-1912—Con.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1904-5.												
21.....	1.9	1.65	1.45	1.7	1.4	1.35	1.0	1.8	2.4	1.6	1.15	1.25
22.....	1.8	1.7	1.45	1.7	1.4	1.35	1.0	1.8	2.3	1.55	1.15	1.3
23.....	1.8	1.7	1.4	1.6	1.4	1.3	1.0	1.75	2.3	1.55	1.15	1.3
24.....	1.8	1.6	1.35	1.6	1.45	1.35	1.1	1.75	2.2	1.5	1.1	1.3
25.....	1.8	1.5	1.35	1.5	1.45	1.4	1.15	1.7	2.2	1.5	1.1	1.3
26.....	1.8	1.5	1.35	1.4	1.45	1.4	1.15	1.7	2.1	1.4	1.1	1.25
27.....	1.8	1.5	1.4	1.4	1.4	1.4	1.15	1.75	2.0	1.4	1.1	1.2
28.....	1.8	1.5	1.4	1.4	1.4	1.4	1.2	1.9	1.9	1.3	1.1	1.2
29.....	1.8	1.5	1.4	1.4	1.4	1.4	1.2	1.8	1.85	1.25	1.1	1.2
30.....	1.75	1.5	1.5	1.3	1.4	1.4	1.25	1.8	1.8	1.25	1.15	1.2
31.....	1.75	1.75	1.3	1.3	1.4	1.4	1.75	1.4	1.4	1.15	1.15	1.2
1905-6.												
1.....	1.2	1.3	1.6	1.5	1.55	1.35	1.5	1.2	1.8	3.15	2.75	1.9
2.....	1.2	1.3	1.6	1.45	1.55	1.35	1.5	1.2	1.75	3.25	2.75	1.9
3.....	1.2	1.3	1.65	1.5	1.55	1.35	1.55	1.2	1.8	3.2	2.75	1.9
4.....	1.25	1.3	1.65	1.5	1.5	1.35	1.5	1.25	1.8	3.2	2.75	1.95
5.....	1.25	1.3	1.65	1.6	1.5	1.35	1.5	1.25	1.8	(a)	2.7	1.9
6.....	1.25	1.3	1.65	1.7	1.45	1.35	1.45	1.25	1.85	2.7	1.9	1.9
7.....	1.25	1.3	1.65	1.65	1.4	1.3	1.5	1.3	1.9	2.65	1.85	1.85
8.....	1.25	1.25	1.65	1.6	1.4	1.3	1.4	1.3	2.15	2.6	1.8	1.8
9.....	1.25	1.25	1.65	1.6	1.45	1.3	1.3	1.3	2.35	2.6	1.75	1.75
10.....	1.25	1.25	1.6	1.65	1.45	1.35	1.3	1.35	2.5	2.65	1.75	1.75
11.....	1.2	1.2	1.6	1.75	1.45	1.4	1.4	1.45	2.8	2.7	1.75	1.75
12.....	1.2	1.2	1.6	1.8	1.45	1.8	1.4	1.75	2.95	2.65	1.75	1.75
13.....	1.2	1.25	1.6	1.9	1.45	2.0	1.45	1.8	3.2	2.7	1.75	1.75
14.....	1.2	1.3	1.6	1.9	1.45	2.2	1.4	1.95	3.35	2.7	1.7	1.7
15.....	1.25	1.3	1.6	2.0	1.4	2.4	1.3	1.95	3.4	2.65	1.7	1.7
16.....	1.25	1.3	1.6	2.1	1.4	2.3	1.3	1.9	3.4	2.6	1.7	1.7
17.....	1.3	1.3	1.6	2.1	1.4	2.2	1.3	1.9	3.4	2.55	1.7	1.7
18.....	1.3	1.3	1.6	2.1	1.4	2.2	1.25	2.2	3.45	2.55	1.7	1.7
19.....	1.3	1.3	1.6	4.2	1.4	2.1	1.25	2.3	3.5	2.6	1.65	1.65
20.....	1.3	1.3	1.6	1.4	1.4	2.1	1.2	2.4	3.5	2.65	1.65	1.65
21.....	1.3	1.35	1.55	1.5	1.4	1.95	1.2	2.4	3.55	2.6	1.6	1.6
22.....	1.3	1.3	1.55	1.6	1.4	1.8	1.2	2.3	3.6	2.5	1.55	1.55
23.....	1.3	1.4	1.55	1.7	1.4	1.7	1.2	2.3	3.7	2.45	1.5	1.5
24.....	1.3	1.45	1.5	1.7	1.4	1.6	1.2	2.25	3.7	2.45	1.5	1.5
25.....	1.3	1.5	1.5	1.6	1.35	1.55	1.15	2.1	3.8	2.45	1.5	1.5
26.....	1.3	1.5	1.55	1.55	1.35	1.6	1.15	2.15	3.8	2.0	1.55	1.55
27.....	1.25	1.55	1.6	1.5	1.35	1.5	1.15	2.0	3.6	2.0	1.55	1.55
28.....	1.25	1.6	1.6	1.5	1.35	1.4	1.15	1.85	3.55	1.95	1.6	1.6
29.....	1.25	1.6	1.6	1.55	1.4	1.2	1.8	3.4	2.85	1.9	1.6	1.6
30.....	1.25	1.55	1.6	1.55	1.4	1.2	1.8	3.5	2.85	1.9	1.55	1.55
31.....	1.25	1.55	1.55	1.55	1.5	1.5	1.8	2.8	2.8	1.9	1.55	1.55
1906-7.												
1.....	1.55	1.6	1.7	1.6	1.6	1.45	1.55	1.65	3.0	3.9	2.8	1.7
2.....	1.55	1.6	1.7	1.6	1.6	1.5	1.5	1.65	3.2	3.8	2.8	1.7
3.....	1.55	1.6	1.75	1.55	1.6	1.5	1.5	1.7	3.2	3.8	2.8	1.7
4.....	1.55	1.6	1.75	1.55	1.55	1.8	1.5	1.7	3.2	3.8	2.7	1.75
5.....	1.55	1.65	1.8	1.5	1.55	2.1	1.45	1.75	3.1	3.8	2.6	1.75
6.....	1.55	1.65	1.8	1.5	1.55	2.0	1.4	1.75	3.0	3.8	2.6	1.75
7.....	1.55	1.65	1.8	1.55	1.55	1.6	1.35	1.8	2.9	3.85	2.6	1.75
8.....	1.55	1.65	1.8	1.6	1.6	1.55	1.3	1.85	2.8	3.85	2.55	1.75
9.....	1.55	1.65	1.8	1.65	1.6	1.5	1.35	1.9	2.6	3.85	2.5	1.75
10.....	1.55	1.65	1.75	1.65	1.65	1.5	1.4	1.9	2.5	3.9	2.4	1.7
11.....	1.5	1.65	1.7	1.7	1.65	1.5	1.4	1.9	2.5	3.9	2.35	1.7
12.....	1.5	1.65	1.65	1.7	1.6	1.2	1.45	1.95	2.5	3.9	2.3	1.7
13.....	1.5	1.65	1.6	1.7	1.6	1.2	1.45	2.0	2.3	3.9	2.25	1.65
14.....	1.55	1.65	1.55	1.7	1.6	1.25	1.5	2.1	2.2	3.9	2.25	1.65
15.....	1.55	1.65	1.5	1.7	1.6	1.4	1.5	2.1	2.0	3.85	2.3	1.6
16.....	1.55	1.65	1.5	1.7	1.6	1.4	1.5	2.1	2.0	3.8	2.3	1.6
17.....	1.55	1.65	1.55	1.7	1.55	1.8	1.5	2.15	1.9	3.8	2.4	1.65
18.....	1.55	1.65	1.6	1.75	1.55	2.1	1.5	2.2	1.8	3.8	2.35	1.65
19.....	1.55	1.65	1.6	1.75	1.5	1.9	1.5	2.2	2.0	3.6	2.3	1.7
20.....	1.6	1.65	1.6	1.7	1.5	1.8	1.5	2.3	2.0	3.4	2.25	1.7
21.....	1.6	1.6	1.6	1.65	1.5	1.9	1.5	2.3	2.5	3.2	2.2	1.65
22.....	1.6	1.5	1.6	1.65	1.5	1.7	1.5	2.35	2.5	3.0	2.2	1.6
23.....	1.55	1.45	1.6	1.65	1.5	1.7	1.5	2.4	2.6	2.8	2.15	1.5
24.....	1.5	1.45	1.6	1.65	1.45	1.65	1.5	2.45	2.6	2.6	2.1	1.5
25.....	1.5	1.5	1.6	1.65	1.4	1.65	1.5	2.5	2.4	2.6	2.0	1.5

a Station discontinued; operations resumed July 29.

Daily gage height, in feet, of Rock Creek near Round Valley, Cal., for 1903-1912—Con.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1906-7.												
26.....	1.45	1.6	1.6	1.65	1.35	1.65	1.55	2.6	2.5	2.7	1.9	1.5
27.....	1.45	1.7	1.6	1.65	1.35	1.6	1.6	2.7	2.6	2.8	1.8	1.5
28.....	1.45	1.75	1.6	1.65	1.4	1.6	1.6	2.8	2.9	2.9	1.75	1.5
29.....	1.45	1.8	1.6	1.6	.....	1.6	1.6	2.9	3.6	2.9	1.7	1.5
30.....	1.5	1.8	1.6	1.6	.....	1.6	1.6	3.0	4.0	2.85	1.6	1.5
31.....	1.55	.....	1.6	1.6	.....	1.55	.....	3.0	.....	2.85	1.6	.....
1907-8.												
1.....	1.55	1.75	1.5	1.5	1.5	1.4	1.2	1.5	1.3	1.8	1.7	1.2
2.....	1.55	1.75	1.5	1.45	1.5	1.4	1.2	1.4	1.3	1.7	2.0	.....
3.....	1.55	1.7	1.4	1.45	1.45	1.4	1.2	1.3	1.2	.....	2.0	1.2
4.....	1.55	1.7	1.45	1.45	1.4	1.4	1.2	1.4	1.2	1.75	1.9	.....
5.....	1.55	1.7	1.4	1.45	1.35	1.4	1.2	1.15	1.3	1.8	1.9	1.25
6.....	1.55	1.65	1.7	1.5	1.3	1.4	1.2	1.5	1.4	1.7	2.0	1.2
7.....	1.5	1.65	1.8	1.5	1.3	1.4	1.2	1.0	1.4	1.8	2.0	.....
8.....	1.5	1.6	1.75	1.5	1.25	1.4	1.15	1.3	1.4	1.9	1.9	1.2
9.....	1.5	1.6	1.7	1.5	1.25	1.4	1.15	1.2	1.4	1.85	2.0	1.2
10.....	1.4	1.65	1.65	1.5	1.3	1.4	1.15	1.3	1.4	2.0	2.0	.....
11.....	1.4	1.65	1.65	1.5	1.3	1.4	1.2	1.1	1.4	1.85	2.0	1.1
12.....	1.35	1.6	1.6	1.4	1.3	1.4	.....	1.1	1.3	2.0	1.9	1.15
13.....	1.35	1.6	1.6	1.35	1.35	1.4	.....	1.2	1.5	1.9	2.1	1.2
14.....	1.4	1.6	1.6	1.2	1.4	1.35	1.0	1.1	1.3	2.0	2.0	.....
15.....	1.5	1.65	1.5	1.2	1.4	1.35	1.0	1.3	1.4	1.8	1.8	1.35
16.....	1.7	1.65	1.45	1.15	1.4	1.35	1.0	1.2	1.45	1.7	1.9	.....
17.....	1.7	1.65	1.4	1.15	1.4	1.4	1.0	1.3	1.5	1.7	1.8	.....
18.....	1.65	1.65	1.4	1.15	1.4	1.4	1.0	1.2	1.4	1.6	1.5	1.4
19.....	1.6	1.65	1.35	1.2	1.4	1.4	1.1	1.2	1.4	1.6	1.4	1.45
20.....	1.7	1.7	1.35	1.2	1.35	1.35	1.1	1.3	1.4	1.5	1.3	.....
21.....	2.2	1.7	1.35	1.2	1.35	1.3	1.1	1.3	1.5	1.4	1.2	1.5
22.....	2.25	1.7	1.3	1.3	1.7	1.25	1.0	1.3	1.5	1.4	1.2	.....
23.....	2.3	1.7	1.3	1.3	1.45	1.25	1.1	1.3	1.35	1.3	1.2	1.6
24.....	2.25	1.7	1.3	1.3	1.45	1.2	1.2	1.4	1.4	1.2	.....	1.7
25.....	2.0	1.7	1.3	1.35	1.4	1.15	1.2	1.3	1.5	1.3	.....	1.7
26.....	1.85	1.7	1.35	1.4	1.4	1.1	1.2	1.3	1.5	1.3	.....	.....
27.....	1.85	1.65	1.4	1.4	1.4	1.05	1.3	1.3	1.45	.....	1.2	1.6
28.....	1.85	1.6	1.4	1.4	1.4	1.2	1.3	1.3	1.4	1.4	1.3	.....
29.....	1.85	1.55	1.4	1.4	1.4	1.2	1.3	1.2	1.4	1.5	1.3	1.5
30.....	1.8	1.5	1.45	1.45	.....	1.2	1.4	1.3	1.45	1.7	.....	.....
31.....	1.8	.....	1.5	1.5	.....	1.2	.....	1.3	.....	1.7	1.2	.....
1908-9.												
1.....	1.4	.....	.....	.....	1.3	1.3	1.1	1.2	.....	3.2	1.7	1.4
2.....	1.4	1.2	1.2	1.3	.....	.....	.....	.....	2.5	3.4	1.6	.....
3.....	.....	.....	.....	.....	1.4	1.3	1.1	1.3	2.6	3.5	1.5	1.4
4.....	1.35	1.15	1.3	1.3	.....	.....	.....	.....	.....	.....	1.5	.....
5.....	.....	.....	.....	.....	1.6	1.3	.9	1.35	2.6	3.3	1.4	1.4
6.....	1.4	1.2	1.3	1.8	.....	.....	.....	.....	.....	3.1	1.4	.....
7.....	.....	.....	.....	.....	1.55	1.2	.9	1.4	2.5	3.0	.....	1.45
8.....	1.4	1.2	1.25	1.7	.....	.....	1.0	1.5	2.55	.....	1.4	.....
9.....	.....	.....	.....	.....	1.6	1.2	1.0	.....	2.6	2.7	1.4	1.45
10.....	.....	1.2	1.3	1.6	.....	.....	.....	1.5	2.9	.....	.....	.....
11.....	1.3	.....	.....	.....	1.45	1.1	1.0	.....	2.6	2.5	1.35	1.5
12.....	.....	1.2	1.3	1.7	1.6	.....	.....	1.4	.....	.....	.....	.....
13.....	1.0	.....	.....	.....	.....	1.1	1.0	.....	2.5	2.35	1.40	1.5
14.....	.....	1.2	1.3	1.7	1.4	.....	.....	1.4	.....	.....	.....	.....
15.....	1.0	.....	.....	.....	.....	1.1	1.0	.....	2.55	2.3	1.40	1.4
16.....	.....	1.15	1.25	1.5	1.4	.....	.....	1.4	.....	2.3	1.40	.....
17.....	1.3	.....	.....	.....	.....	1.1	1.0	.....	2.4	.....	1.50	1.45
18.....	.....	1.2	1.3	1.6	1.35	1.1	.....	1.4	2.45	2.2	.....	1.4
19.....	1.1	.....	.....	.....	.....	1.1	1.2	1.35	.....	2.3	1.45	1.4
20.....	.....	1.2	1.3	1.6	1.4	.....	1.2	1.45	2.5	.....	1.40	1.35
21.....	1.2	.....	.....	.....	.....	1.0	.....	.....	2.6	2.1	1.40	1.4
22.....	.....	1.15	1.3	1.5	1.4	.....	1.15	1.4	.....	2.0	.....	1.4
23.....	.....	.....	.....	.....	.....	.9	.....	.....	2.7	2.0	1.45	.....
24.....	.....	1.15	1.3	1.4	1.4	.....	1.1	1.4	2.8	.....	1.40	1.4
25.....	1.25	.....	.....	.....	.....	1.1	.....	.....	.....	1.9	.....	.....
26.....	.....	1.1	1.3	1.3	1.4	.....	1.25	1.4	2.85	.....	1.4	1.3
27.....	1.2	.....	.....	1.6	1.35	1.1	.....	1.9	3.0	1.9	1.4	.....
28.....	.....	1.15	1.3	1.3	1.4	.....	1.15	.....	.....	.....	1.4	1.35
29.....	1.1	.....	.....	.....	.....	1.1	1.1	2.0	3.0	1.8	.....	.....
30.....	.....	1.2	1.3	1.3	.....	.....	1.1	.....	3.15	1.9	1.4	1.3
31.....	1.2	.....	1.3	.....	.....	1.1	.....	2.1	.....	.....	1.4	.....

Daily gage height, in feet, of Rock Creek near Round Valley, Cal., for 1903-1912—Con.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909-10.												
1.			1.6	1.9		1.35	1.1	1.3	2.2	2.3		1.35
2.	1.35	1.2			1.65						1.55	
3.	1.3	1.25	1.6	1.9		1.4	1.15	1.3	2.3	2.1		1.35
4.	1.3	1.15	1.65		1.6	1.4			2.4		1.5	1.25
5.				1.8	1.65		1.1	1.35	2.3	2.15	1.5	
6.	1.3	1.2	1.6			1.35	1.15		2.2	2.0		1.2
7.	1.35			1.6	1.7	1.3		1.35			1.4	
8.		1.1	1.6			1.3	1.1	1.4	2.2	2.0		1.1
9.	1.3	1.35		1.5	1.7						1.35	
10.	1.3		1.7			1.25	1.15	1.35	2.2	1.8		1.15
11.		1.3		1.4	1.65	1.2	1.15	1.45			1.4	1.1
12.	1.3	1.3	1.7	1.4	1.6	1.2	1.1	1.4	2.15	1.75	1.4	
13.	1.3		1.7									1.15
14.		1.2							2.1	1.65	1.3	
15.	1.25		1.7	1.4	1.5	1.25	1.15	1.5				1.15
16.		1.3					1.1	1.5	2.0	1.65	1.3	
17.	1.25		1.7	1.4	1.4	1.2	1.2	1.55	2.1	1.65		1.15
18.		1.25			1.4				1.9		1.4	
19.	1.2		1.7	1.5		1.2	1.2	1.5	1.9	1.65		1.1
20.		1.35			1.3			1.6			1.4	
21.	1.25	1.3	1.7	1.5	1.3	1.2	1.25		1.7	1.6		1.1
22.							1.2	1.6	1.7		1.4	
23.	1.2	1.4		1.55	1.3	1.2			1.5	1.65		1.0
24.	1.15	1.4	1.7				1.3	1.7	1.4		1.5	
25.		1.45		1.6	1.3	1.2	1.35			1.6		1.05
26.	1.1		1.7				1.4	1.7	1.4		1.4	
27.		1.55		1.55	1.3	1.2	1.35	1.8	1.45	1.65		1.0
28.	1.2		1.7		1.35		1.35			1.6	1.35	
29.		1.6		1.6		1.2		1.8	1.4			1.1
30.	1.1	1.6	1.7				1.3			1.65	1.35	1.1
31.	1.2		1.7	1.65		1.2		1.9		1.5		
1910-11.												
1.	1.15	1.4	1.35	1.35	2.1	1.35	1.5	1.3	1.8		2.75	1.65
2.										3.3	2.15	
3.	1.2	1.45	1.35	1.35	1.55	1.3	1.45	1.23	1.95		2.7	1.6
4.			1.4							3.25		1.5
5.	1.2	1.4		1.4	1.5	1.35	1.65	1.25	2.1	3.25	2.63	
6.		1.4	1.4					1.28		3.2		1.45
7.	1.2			1.3	1.5	1.3	1.7	1.3	2.2	3.18	2.5	
8.		1.35	1.45					1.35	2.4	3.25		1.45
9.	1.2				1.45	2.8	1.5				2.43	
10.		1.4	1.4	1.45		2.2		1.4	2.5	3.23		1.35
11.	1.2		1.45		1.45		1.35	1.45	2.65		2.45	
12.		1.45		1.45		1.33				3.45		1.35
13.	1.3		1.4		1.5		1.3	1.5	2.7	3.4	2.2	
14.	1.4	1.4		1.5		1.35		1.55	3.2			1.3
15.			1.4	1.45	1.5		1.35			3.7	2.25	
16.	1.5	1.35				1.32		1.65	3.5	3.5		1.35
17.		1.35	1.35	1.5	1.45	1.35	1.4	1.6	3.65		2.1	
18.	1.45		1.35			1.3			3.7	3.3	2.15	1.3
19.		1.3		1.45	1.4		1.35	1.75	3.7			
20.	1.5		1.3			1.32				3.15	2.0	1.33
21.	1.4	1.35		1.5	1.35		1.4	1.85	3.8			
22.			1.35	1.35		1.25		1.9		3.1	2.5	1.3
23.	1.45	1.3			1.35	1.3	1.35		3.65		1.55	
24.			1.35	1.45		1.35		2.0	3.6	3.0	1.85	1.3
25.	1.45	1.35		1.50	1.3		1.43					
26.	1.5		1.4	1.5	1.35	1.4		1.9	3.4	2.95	1.8	1.3
27.	1.5			1.5			1.35					
28.		1.3	1.35		1.3	1.45		1.85	3.45	2.9	1.73	1.33
29.	1.5	1.35	1.35				1.4				1.75	
30.	1.5			3.4		1.5	1.35	1.8	3.4	2.9		1.25
31.	1.5		1.4			1.45					1.6	

Daily gage height, in feet, of Rock Creek near Round Valley, Cal., for 1903-1912—Con.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.									
1.	1.3			1.35	1.35			0.9	1.75
3.		1.5	1.4			1.35	1.25		
3.	1.25			1.4	1.4			.9	1.7
4.			1.4			1.33	1.25		
5.	1.25	1.45		1.33	1.4			1.0	1.65
6.	1.2		1.4			1.35	1.2		
7.	1.2	1.45		1.38	1.4			1.0	1.7
8.	1.3		1.43			1.3	1.28	1.0	
9.		1.5		1.35	1.4			1.05	1.75
10.	1.35		1.4			1.35	1.13		
11.		1.45		1.4	1.4			1.03	1.85
12.	1.4		1.4			1.3	1.1		1.77
13.		1.5		1.45	1.4			1.15	
14.	1.5		1.38	1.45		1.25	1.0		1.7
15.	1.5	1.45		1.43	1.4		1.03	1.23	
16.	1.4		1.4	1.45		1.2	1.05		1.65
17.	1.4	1.45	1.35	1.45	1.33			1.35	1.65
18.				1.43		1.15	1.0	1.45	
19.	1.4	1.4	1.3	1.45	1.3	1.17			1.53
20.							1.0	1.3	1.5
21.	1.45	1.4	1.33	1.4	1.22	1.03			1.5
22.		1.39					1.03	1.1	
23.	1.45		1.3	1.4	1.3	1.1		1.3	1.53
24.	1.44	1.38	1.35				1.05		1.5
25.	1.5			1.43	1.3	1.15		1.37	
26.		1.39					1.0		1.4
27.	1.45		1.3	1.4	1.3	1.2		1.45	1.5
28.		1.4	1.35				1.0		1.5
29.	1.5			1.4	1.3	1.2		1.45	
30.		1.4	1.4	1.4			1.0		
31.	1.45					1.2		1.58	

Rating tables for Rock Creek near Round Valley, Cal.

August 4, 1903, to February 16, 1904.

Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.
<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>
1.30	15	1.60	22	1.90	32	2.10	40
1.40	17	1.70	25	2.00	35	2.20	44
1.50	19	1.80	28				

February 17 to December 31, 1904.

1.00	12	1.60	34	2.10	58	2.60	88
1.10	15	1.70	38	2.20	63	2.70	95
1.20	18	1.80	43	2.30	69	2.80	102
1.30	22	1.90	48	2.40	75	2.90	109
1.40	26	2.00	53	2.50	81	3.00	116
1.50	30						

January 1, 1905, to January 19, 1906.

The daily discharges were obtained by the indirect method for shifting channels.

January 20 to December 31, 1906.

1.00	12	1.80	54	2.50	107	3.20	163
1.10	15	1.90	61	2.60	115	3.30	171
1.20	19	2.00	68	2.70	123	3.40	179
1.30	23	2.10	75	2.80	131	3.50	188
1.40	28	2.20	83	2.90	139	3.60	197
1.50	34	2.30	91	3.00	147	3.70	206
1.60	40	2.40	99	3.10	155	3.80	215
1.70	47						

NOTE.—Table is based on 3 discharge measurements made during 1906 and is not well defined. The table used Jan. 1 to 19 gives a much smaller discharge at the same gage height.

Rating tables for Rock Creek near Round Valley, Cal.—Continued.

January 1 to December 31, 1907.

Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.
<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>
1.20	22	2.00	61	2.80	111	3.60	167
1.30	26	2.10	67	2.90	118	3.70	174
1.40	30	2.20	73	3.00	125	3.80	181
1.50	34	2.30	79	3.10	132	3.90	188
1.60	39	2.40	85	3.20	139	4.00	195
1.70	44	2.50	91	3.30	146		
1.80	49	2.60	97	3.40	153		
1.90	55	2.70	104	3.50	160		

NOTE.—Table applicable only to open channel. It is based on 17 discharge measurements made during 1907. It is fairly well defined between gage heights 1.2 feet and 3.1 feet. Above gage height 2.6 feet the rating curve is a tangent, the difference being 7 per tenth.

Daily discharge, in second-feet, of Rock Creek near Round Valley, Cal., for 1905 and 1909-1912.

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1905. ^a												
1.....	34	56	23	23	20	34	42	24	19	19	20	27
2.....	30	30	23	23	23	32	42	24	19	19	20	27
3.....	30	30	23	23	21	32	40	24	19	19	20	28
4.....	26	26	23	23	20	30	40	23	19	19	20	28
5.....	26	26	21	23	20	30	42	23	19	19	20	28
6.....	26	26	20	23	18	30	42	21	19	19	20	28
7.....	26	23	18	23	18	26	46	23	19	19	20	28
8.....	26	21	18	23	18	30	51	23	19	19	19	28
9.....	23	20	16	20	19	34	51	26	19	19	19	28
10.....	20	20	16	20	19	34	51	26	19	19	19	27
11.....	20	20	18	19	19	39	51	23	19	19	19	27
12.....	20	23	18	19	20	56	51	21	19	19	19	27
13.....	20	23	26	19	20	56	51	21	19	19	19	27
14.....	20	23	21	18	20	59	51	20	18	19	20	27
15.....	20	23	21	18	20	68	51	20	18	19	20	27
16.....	21	24	23	18	20	68	46	18	18	19	20	27
17.....	23	26	24	17	34	71	42	18	18	20	20	27
18.....	23	23	24	16	44	74	38	18	18	20	20	27
19.....	24	23	23	16	44	81	33	18	19	20	20	27
20.....	24	23	23	14	44	78	33	18	19	20	20	27
21.....	34	23	21	14	39	74	33	18	19	20	20	26
22.....	34	23	21	14	39	68	31	18	20	20	21	26
23.....	30	23	20	14	36	68	31	18	20	20	22	26
24.....	30	24	21	16	36	62	30	17	20	20	23	24
25.....	26	24	23	17	34	62	30	17	20	20	24	24
26.....	23	24	23	17	34	56	26	17	19	20	24	26
27.....	23	23	23	17	36	50	26	17	19	19	26	27
28.....	23	23	23	18	44	46	23	17	19	19	27	27
29.....	23	.....	23	18	39	44	21	17	19	19	27	27
30.....	20	.....	23	19	39	42	21	18	19	19	26	27
31.....	20	.....	23	.....	36	.....	26	18	.....	19	.....	26

^a Owing to shifting conditions the daily discharge has been computed from several curves, each covering a short period of time.

Daily discharge, in second-feet, of Rock Creek near Round Valley, Cal., for 1905 and 1909-1912—Continued.

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909.									
1.....	32	32	32	23	27	87	150	51	36
2.....	32	34	32	23	29	100	164	46	36
3.....	32	36	32	23	32	107	172	41	36
4.....	32	41	32	19	32	107	164	41	36
5.....	43	46	32	18	34	107	157	36	36
6.....	57	46	29	18	36	104	143	36	36
7.....	54	43	27	18	36	100	135	36	38
8.....	51	46	27	19	41	104	125	36	38
9.....	49	46	27	19	41	107	114	36	38
10.....	46	41	25	19	41	128	107	36	41
11.....	49	38	23	19	38	107	100	34	41
12.....	51	46	23	19	36	104	94	36	41
13.....	51	41	23	19	36	100	90	36	41
14.....	51	36	23	19	36	100	87	36	38
15.....	46	36	23	19	36	104	87	36	36
16.....	41	36	23	19	36	100	87	36	36
17.....	43	36	23	19	36	94	84	41	38
18.....	46	34	23	23	36	97	81	41	36
19.....	46	36	23	27	34	100	87	38	36
20.....	46	36	21	27	38	100	81	36	34
21.....	43	36	19	27	36	107	74	36	36
22.....	41	36	18	25	36	110	68	36	36
23.....	38	36	16	23	36	114	68	38	36
24.....	36	36	19	23	36	121	66	36	36
25.....	34	36	23	27	36	121	63	36	34
26.....	32	36	23	29	36	125	63	36	32
27.....	46	34	23	27	63	135	63	36	32
28.....	32	36	23	25	66	135	60	36	34
29.....	32	.....	23	23	68	135	57	36	32
30.....	32	.....	23	23	72	146	60	36	32
31.....	32	.....	23	.....	74	.....	63	36	.....

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909-10.												
1.....	32	27	46	63	49	34	23	32	81	87	42	34
2.....	34	27	46	63	49	35	24	32	84	80	43	34
3.....	32	29	46	63	47	36	25	32	87	74	42	34
4.....	32	25	49	60	46	36	24	33	94	76	41	39
5.....	32	27	46	57	49	35	23	34	87	78	41	28
6.....	32	27	46	52	50	34	25	34	81	68	38	27
7.....	34	25	46	46	51	32	24	34	81	68	36	25
8.....	32	23	46	44	51	32	23	36	81	68	35	23
9.....	32	34	49	41	51	30	24	35	81	62	34	24
10.....	32	32	51	38	50	29	25	34	81	57	35	25
11.....	32	32	51	36	49	27	25	38	80	56	36	23
12.....	32	32	51	36	48	27	24	37	78	54	36	24
13.....	32	29	51	36	46	27	23	36	76	52	34	25
14.....	32	27	51	36	44	28	24	38	74	49	32	25
15.....	29	29	51	36	41	29	25	41	71	49	32	25
16.....	29	32	51	36	38	28	23	41	68	49	32	25
17.....	29	32	51	36	36	27	27	43	74	49	34	25
18.....	27	29	51	38	36	27	27	42	63	49	36	24
19.....	27	32	51	41	34	27	27	41	63	49	36	23
20.....	27	34	51	41	32	27	28	46	57	47	36	23
21.....	29	32	51	41	32	27	29	46	51	46	36	23
22.....	27	34	51	42	32	27	27	46	51	48	36	21
23.....	27	36	51	43	32	27	30	48	41	49	38	19
24.....	25	36	51	44	32	27	32	51	36	47	41	20
25.....	23	38	51	46	32	27	34	51	36	46	39	21
26.....	23	41	51	45	32	27	36	51	36	48	36	20
27.....	25	43	51	43	32	27	34	57	38	49	35	19
28.....	27	46	51	44	34	27	34	57	37	46	34	21
29.....	25	46	51	46	.....	27	33	57	36	47	34	23
30.....	23	46	51	48	.....	27	32	60	62	49	34	23
31.....	27	.....	51	49	.....	27	.....	63	.....	41	34	.....

Daily discharge, in second-feet, of Rock Creek near Round Valley, Cal., for 1905 and 1909-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.												
1.....	25	30	29	30	76	34	41	31	58	170	126	53
2.....	26	31	29	30	60	32	40	30	62	166	86	52
3.....	27	32	29	30	44	31	38	28	67	164	122	50
4.....	27	31	31	31	42	32	44	28	72	162	120	45
5.....	27	30	31	32	41	34	49	29	76	162	117	44
6.....	27	30	31	30	41	32	50	32	80	158	112	42
7.....	27	29	32	28	41	31	52	31	83	156	108	42
8.....	27	28	34	30	40	78	46	34	97	162	106	42
9.....	27	29	33	32	38	125	41	35	100	161	103	40
10.....	27	30	32	34	38	83	38	36	104	160	104	38
11.....	27	31	34	34	38	58	34	38	114	190	104	38
12.....	30	32	33	34	40	32	32	40	116	178	96	38
13.....	32	31	32	35	41	33	31	41	118	174	87	36
14.....	36	30	32	36	41	34	32	44	157	186	88	35
15.....	38	29	32	34	41	33	34	46	169	198	90	36
16.....	40	28	31	35	40	32	35	49	181	182	85	38
17.....	37	28	30	36	38	34	36	46	193	174	80	36
18.....	35	29	30	35	37	31	35	50	197	166	84	35
19.....	36	26	29	34	36	32	34	55	197	160	79	36
20.....	36	27	28	35	35	32	35	58	201	154	74	36
21.....	30	28	29	36	34	30	36	61	205	152	91	36
22.....	35	27	30	30	34	29	35	64	225	150	108	35
23.....	32	26	30	32	34	31	34	67	194	146	49	35
24.....	32	27	30	34	32	34	36	70	190	143	65	35
25.....	32	28	32	36	31	35	38	67	182	142	64	35
26.....	34	27	33	36	34	36	36	64	174	140	62	35
27.....	34	27	32	36	32	37	34	62	170	138	60	36
28.....	34	26	31	80	31	38	35	61	178	136	58	36
29.....	34	28	31	125	.....	40	36	60	176	136	59	34
30.....	34	28	32	166	.....	41	34	58	174	136	54	32
31.....	34	.....	33	121	.....	38	.....	58	.....	131	50	.....

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.									
1.....	35	40	36	34	36	35	30	17	58
2.....	34	41	36	35	38	36	32	17	56
3.....	32	40	36	36	39	36	32	17	55
4.....	32	39	36	34	39	36	32	19	54
5.....	32	38	36	32	39	36	30	21	52
6.....	27	38	36	34	39	36	29	21	54
7.....	27	38	37	35	39	35	31	21	55
8.....	31	40	38	34	39	34	33	21	56
9.....	32	41	37	34	39	35	30	23	58
10.....	34	40	36	35	39	36	26	22	61
11.....	35	38	36	36	39	35	26	22	64
12.....	36	40	36	37	39	34	25	24	59
13.....	38	41	36	38	39	33	23	27	57
14.....	41	40	35	38	39	32	21	28	55
15.....	41	38	36	37	39	30	22	30	54
16.....	36	38	36	38	38	29	23	33	52
17.....	36	38	34	38	36	28	22	36	52
18.....	36	37	32	40	35	27	21	42	49
19.....	36	36	31	42	34	28	21	38	46
20.....	37	36	32	40	32	25	21	34	44
21.....	38	36	32	39	30	22	22	30	44
22.....	38	36	32	39	32	24	22	25	45
23.....	38	36	31	39	34	25	22	34	40
24.....	38	35	34	40	34	26	23	36	44
25.....	41	36	33	40	34	27	22	38	42
26.....	40	36	32	40	34	28	21	40	39
27.....	38	36	31	39	34	29	21	42	44
28.....	40	36	34	39	34	29	21	42	44
29.....	41	36	35	39	34	29	21	42	45
30.....	40	36	36	39	.....	29	21	45	45
31.....	38	.....	36	38	.....	29	.....	48	.....

NOTE.—Daily discharge determined from rating curves applicable as follows: Jan. 1, 1909, to Oct. 14, 1910, well defined; Oct. 15, 1910, to Dec. 31, 1910, indirect method for shifting channels used; Jan. 1 to 30, 1911, Jan. 31 to June 21, 1911, June 22 to Oct. 5, 1911, Oct. 6, 1911, to Jan. 17, 1912, Jan. 18, 1912, to June 30, 1912. Discharge interpolated for days on which gage was not read.

Monthly discharge of Rock Creek near Round Valley, Cal., for 1903-1912.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1903.					
August 4-31.....	25	17	20	1,111	
September.....	22	15	18	1,071	
1903-4.					
October.....	17	15	15	922	
November.....	19	17	18	1,071	
December.....	22	18	20	1,230	
January.....	20	15	17.4	1,070	
February.....	40	15	20.5	1,179	
March.....	34	18	23.6	1,451	
April.....	22	18	21	1,250	
May.....	102	18	50	3,074	
June.....	109	75	91.7	5,456	
July.....	88	34	60.5	3,720	
August.....	75	43	59	3,628	
September.....	69	18	29	1,726	
The year.....	109	15	35.5	25,800	
1904-5.					
October.....	69	41	47	2,890	
November.....	41	30	36	2,142	
December.....	40	24	27.7	1,703	
January.....	34	20	24.8	1,525	
February.....	56	20	24.9	1,383	
March.....	26	16	21.5	1,322	
April.....	23	14	18.7	1,113	
May.....	44	18	28.8	1,771	
June.....	81	26	51.1	3,041	
July.....	51	21	38.5	2,367	
August.....	26	17	20.1	1,236	
September.....	20	18	19.0	1,131	
The year.....	81	14	29.8	21,600	
1905-6.					
October.....	20	19	19.3	1,187	
November.....	27	19	21.1	1,256	
December.....	28	24	26.9	1,654	
January.....	200	17	38.8	2,390	
February.....	37	25	29.7	1,650	
March.....	99	23	45.7	2,810	
April.....	37	17	24.6	1,460	
May.....	99	19	54.2	3,330	
June.....	215	50	145	8,630	
July.....	167	131	a 150	9,220	
August.....	127	61	107	6,580	
September.....	64	34	47.4	2,820	
The year.....	215	17	59.1	43,000	
1906-7.					
October.....	40	31	35.9	2,210	
November.....	54	31	42.6	2,530	
December.....	54	34	43.5	2,680	
January.....	46	34	41.1	2,530	
February.....	42	28	36.0	2,000	
March.....	67	22	40.7	2,500	
April.....	39	26	33.5	1,990	
May.....	125	42	72.6	4,460	
June.....	195	49	101	6,010	
July.....	188	97	157	9,650	
August.....	111	39	77.6	4,770	
September.....	46	34	40.9	2,430	
The year.....	195	22	60.2	43,800	
1907-8.					
October.....	79	28	44.6	2,740	C.
November.....	46	34	41.9	2,490	C.
December.....	49	26	33.6	2,070	C.
January.....	35	22	29	1,780	D.
February.....	45	24	30	1,730	D.
March.....	30	18	27	1,660	D.
April.....	30	17	22	1,310	D.

a Mean for 7 days taken as mean for the month.

Monthly discharge of Rock Creek near Round Valley, Cal., for 1903-1912—Continued.

Month.	Discharge in second-feet.			Run-off (total in acre- feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
May.....	35	17	25	1,540	D.
June.....	35	23	30	1,790	D.
July.....	73	31	52	3,200	D.
August.....	80	31	53	3,260	D.
September.....	49	28	36	2,140	D.
The year.....	80	17	35.3	25,700	
1908-9.					
October.....	31	17	25	1,540	D.
November.....	23	21	22	1,310	D.
December.....	26	23	26	1,600	D.
January.....	57	32	41.8	2,570	B.
February.....	46	34	38.3	2,130	B.
March.....	32	16	24.4	1,500	B.
April.....	29	18	22.0	1,310	B.
May.....	74	27	41.0	2,520	B.
June.....	146	87	110	6,540	A.
July.....	172	57	97.2	5,980	A.
August.....	51	36	37.5	2,310	B.
September.....	41	32	36.3	2,160	B.
The year.....	172	16	43.5	31,500	
1909-10.					
October.....	34	23	29.1	1,790	B.
November.....	46	23	32.7	1,950	B.
December.....	51	46	49.7	3,060	B.
January.....	63	36	44.8	2,750	B.
February.....	51	32	41.2	2,290	B.
March.....	36	27	29.2	1,800	B.
April.....	36	23	27.1	1,610	B.
May.....	63	32	42.8	2,630	B.
June.....	94	36	65.5	3,900	B.
July.....	87	41	56.0	3,440	B.
August.....	43	32	36.4	2,240	B.
September.....	34	19	25.3	1,510	B.
The year.....	94	19	40.0	29,000	
1910-11.					
October.....	40	25	31.6	1,940	B.
November.....	32	26	28.8	1,710	C.
December.....	34	28	31.1	1,910	C.
January.....	166	28	44.7	2,750	B.
February.....	76	31	39.6	2,200	B.
March.....	125	29	40.4	2,480	B.
April.....	52	31	37.7	2,240	B.
May.....	70	28	47.5	2,920	B.
June.....	225	58	144	8,570	B.
July.....	198	131	159	9,780	B.
August.....	126	50	86.8	5,340	B.
September.....	53	32	38.7	2,300	B.
The year.....	225	25	60.8	44,100	
1911-12.					
October.....	41	27	36.1	2,220	B.
November.....	41	35	37.9	2,260	B.
December.....	38	31	34.6	2,130	B.
January.....	42	32	37.4	2,300	B.
February.....	39	30	36.4	2,090	A.
March.....	36	22	30.7	1,890	A.
April.....	33	21	24.9	1,480	A.
May.....	48	17	30.2	1,860	A.
June.....	64	39	51.0	3,040	A.
The period.....				19,300	

NOTE.—Discharge for 1908 obtained by the indirect method for shifting channels.

PINE CREEK NEAR ROUND VALLEY, CAL.

This station, which is located at a footbridge about 300 feet above the highway bridge on the road from Bishop to Long Valley, in sec. 9, T. 6 S., R. 31 E., was originally established August 3, 1903, at a point about 100 feet above its junction with Rock Creek and 150 feet below the bridge, and was reestablished at the new site May 13, 1908.

Considerable water is diverted from the creek above the gaging station, and the water which passes the station is that which flows directly into Rock Creek. The drainage area above the mouth of the canyon is approximately 32 square miles.

The present gage is a vertical staff on the left bank 300 feet above the bridge. The original gage datum has not been maintained.

Discharge measurements are made from the footbridge. The daily variation in stage of this creek during high water is large, owing to the effect of warm days and cool nights on the snow in the headwater region, but an attempt was made to record gage heights representing the mean for the day.

The channel is composed of lava rock and sand and is fairly permanent.

Discharge measurements of Pine Creek near Round Valley, Cal., in 1903-1912.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1903.		<i>Feet.</i>	<i>Sec.-ft.</i>	1907.		<i>Feet.</i>	<i>Sec.-ft.</i>
Aug. 3	R. S. Hawley.....	1.90	15	Feb. 13	G. R. Shuey.....	2.95	11
8	.....do.....	1.87	10.4	Mar. 12	.....do.....	2.95	9.1
18	.....do.....	1.73	5.7	Apr. 26	.....do.....	3.00	13
Sept. 1	.....do.....	1.71	5.9	May 15	.....do.....	3.05	13
10	.....do.....	1.71	6.3	30	.....do.....	3.60	53
Nov. 24	.....do.....	1.89	10.1	July 3	.....do.....	4.70	213
				24	.....do.....	4.20	182
1904.				Aug. 4	Shuey and Post.....	4.00	138
Apr. 27	R. S. Hawley.....	1.70	4.2	24	R. B. Post.....	3.48	52
June 2	.....do.....	2.80	67	Sept. 7	.....do.....	3.30	41
15	.....do.....	3.70	185	23	.....do.....	3.05	22
July 13	Clausen and Barnes.....	2.95	84	Oct. 5	.....do.....	2.98	18
Aug. 3	L. M. Barnes.....	2.70	58	Nov. 17	.....do.....	2.89	13
Sept. 9	R. S. Hawley.....	1.87	10.7				
Oct. 13	Hawley, Clapp, and Taylor.....	2.30	31	1908.			
Nov. 12	R. J. Taylor.....	2.07	21	Feb. 22	R. B. Post.....	3.02	17
Dec. 6	.....do.....	1.90	16	Mar. 29	.....do.....	2.69	5.9
				May 13	.....do.....	3.48	4.4
1905.				June 18	.....do.....	3.87	20
Jan. 16	R. J. Taylor.....	1.91	13.3	July 15	Post and Lamb.....	4.19	50
Feb. 9	.....do.....	1.86	10.2	3	W. A. Lamb.....	4.32	67
Apr. 4	J. S. Evans.....	1.80	2	Aug. 25	.....do.....	3.38	3.8
25	.....do.....	1.70	5.8	Sept. 16	.....do.....	3.60	10
June 27	.....do.....	2.90	73	Oct. 7	.....do.....	3.60	9.7
July 25	.....do.....	2.05	23	22	A. T. Barrows.....	3.51	6.6
Aug. 15	.....do.....	1.80	7.2	Nov. 6	.....do.....	3.49	5.6
Sept. 8	.....do.....	1.75	6.7	26	Barrows and Lee.....	3.45	4.9
27	.....do.....	1.78	6.2				
Nov. 2	F. R. S. Buttemer.....	1.83	8.7	1909.			
24	.....do.....	1.85	7.7	Jan. 22	R. E. Haines.....	3.58	9
Dec. 10	.....do.....	1.82	7.6	Feb. 11	.....do.....	3.51	7.4
				27	.....do.....	3.47	5.5
1906.				Mar. 18	.....do.....	3.40	4
Jan. 8	F. R. S. Buttemer.....	1.80	7	Apr. 8	.....do.....	3.40	3.9
14	.....do.....	2.13	22	29	.....do.....	3.38	3.3
Aug. 23	Shuey and Hawley.....	3.85	90	May 19	.....do.....	3.82	19
27	R. S. Hawley.....	3.75	92	June 10	.....do.....	4.86	117
Nov. 3	G. R. Shuey.....	2.95	9	30	.....do.....	5.65	248
30	.....do.....	3.00	9.2	July 23	.....do.....	4.99	126
				Aug. 11	.....do.....	4.08	31.2

Discharge measurements of Pine Creek near Round Valley, Cal., in 1903-1912—Contd.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1909.		<i>Feet.</i>	<i>Sec.-ft.</i>	1911.		<i>Feet.</i>	<i>Sec.-ft.</i>
Sept. 1	R. E. Haines	4.17	36.8	May 6	C. H. Lee	3.68	6.4
Sept. 22	do	3.70	8.9	June 24	do	5.28	145
Oct. 13	do	3.70	11.3	July 8	do	6.35	297
Nov. 3	do	3.70	8.3	Aug. 2	J. E. Jones	4.80	92
Nov. 24	do	3.63	5.6	Sept. 23	do	4.12	32
1910.				Sept. 20	do	3.75	11
Mar. 9	R. E. Haines	3.58	4.3	Oct. 24	do	3.72	10
Mar. 30	do	3.60	4.9	Nov. 22	do	3.65	8
Apr. 21	do	3.81	13	Dec. 12	do	3.60	7.3
May 11	do	3.72	9.2	1912.			
June 25	C. H. Lee	4.50	65	Jan. 16	J. E. Jones	3.58	6.2
July 11	do	4.20	42	Feb. 21	do	3.50	4
Aug. 3	do	3.95	20	Mar. 21	do	3.43	2.6
Aug. 24	F. G. Wood	3.80	11	Apr. 16	do	3.43	2.2
Sept. 18	G. T. Peekema	3.60	4.9	Apr. 16	do	3.45	2.4
Oct. 22	do	3.60	4.9	May 9	do	3.45	1.8
Nov. 18	do	3.63	5.4	May 9	do	3.45	2
Dec. 21	do	3.60	4.7	May 22	do	3.45	3
1911.				June 12	do	3.30	4
Jan. 25	G. T. Peekema	3.61	5.5			4.58	74
Mar. 12	C. H. Lee	3.68	6.5				

NOTE.—Beginning May 13, 1908, the gage heights refer to a new gage at a different datum.

Daily gage height, in feet, of Pine Creek near Round Valley, Cal., for 1903-1912.

Day.	Aug.	Sept.	Day.	Aug.	Sept.	Day.	Aug.	Sept.
1903.			1903.			1903.		
1.....		1.75	11.....	1.8	1.7	21.....	1.7	1.7
2.....		1.75	12.....	1.9	1.7	22.....	1.72	1.7
3.....		1.72	13.....	1.9	1.7	23.....	1.8	1.73
4.....	1.9	1.7	14.....	1.8	1.7	24.....	1.75	1.72
5.....	1.9	1.7	15.....	1.8	1.7	25.....	1.8	1.7
6.....	1.9	1.72	16.....	1.8	1.7	26.....	1.8	1.7
7.....	1.9	1.73	17.....	1.8	1.7	27.....	1.75	1.7
8.....	1.9	1.7	18.....	1.73	1.7	28.....	1.73	1.75
9.....	1.8	1.72	19.....	1.7	1.7	29.....	1.7	1.8
10.....	1.8	1.75	20.....	1.7	1.7	30.....	1.7	1.8
						31.....	1.7	

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1903-4.												
1.....	1.8	1.9	1.85	1.9	1.9	1.9	1.9	1.8	2.6	3.1	2.9	2.2
2.....	1.83	1.9	1.85	1.9	1.9	1.9	1.9	1.75	2.8	3.0	2.85	2.1
3.....	1.8	1.9	1.85	1.9	1.9	1.9	1.9	1.75	3.85	3.0	2.8	1.95
4.....	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.75	3.6	3.1	2.7	1.9
5.....	1.8	1.9	1.9	1.9	1.9	1.9	1.85	1.75	3.6	3.2	2.6	1.85
6.....	1.8	1.85	1.95	1.9	1.85	1.9	1.85	1.8	3.5	3.2	2.55	1.8
7.....	1.8	1.8	1.95	1.9	1.85	1.8	1.9	1.8	3.5	3.1	2.55	1.8
8.....	1.82	1.9	1.95	1.9	1.85	1.8	1.9	1.8	3.2	3.1	2.5	1.8
9.....	1.8	1.9	1.95	1.9	1.9	1.8	1.9	1.8	3.1	3.1	2.5	1.8
10.....	1.8	1.9	1.95	1.9	1.9	1.9	1.8	1.85	3.5	3.1	2.45	1.8
11.....	1.83	1.9	1.9	1.9	1.9	1.9	1.8	1.8	3.5	3.0	2.5	1.8
12.....	1.8	1.9	1.9	1.9	1.9	1.8	1.8	1.8	3.6	3.0	2.45	1.8
13.....	1.8	1.9	1.9	1.9	1.9	1.9	1.8	1.8	3.6	2.95	2.45	1.8
14.....	1.82	1.9	1.9	1.9	1.9	1.9	1.7	1.8	3.5	2.7	2.45	1.8
15.....	1.9	1.9	1.9	1.9	1.9	1.9	1.7	1.8	3.7	2.5	2.5	1.8
16.....	1.8	1.9	1.9	1.9	2.1	1.85	1.7	1.8	3.8	2.5	2.55	1.85
17.....	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.85	3.8	2.45	2.4	1.8
18.....	1.9	1.9	1.9	1.9	1.85	1.9	1.8	1.8	3.7	2.4	2.45	1.8
19.....	1.93	1.9	1.9	1.9	1.9	1.9	1.8	1.8	3.6	2.4	2.4	1.8
20.....	1.92	1.9	1.9	1.9	1.9	1.9	1.8	1.9	3.5	2.4	2.4	1.8
21.....	1.9	1.8	1.9	1.9	1.9	1.9	1.8	1.9	3.4	2.4	2.4	1.8
22.....	1.9	1.8	1.85	1.9	1.9	2.0	1.8	1.9	3.4	2.6	2.35	1.8
23.....	1.9	1.85	1.85	1.9	1.85	2.1	1.8	1.8	3.3	2.65	2.35	1.8
24.....	1.9	1.9	1.8	1.9	1.85	2.0	1.8	2.5	3.5	2.65	2.4	2.0
25.....	1.9	1.9	1.85	1.9	1.9	1.9	1.8	3.0	3.4	2.7	2.4	2.2

Daily gage height, in feet, of Pine Creek near Round Valley, Cal., for 1903-1912—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1903-4.												
26.	1.9	1.9	1.85	1.9	1.9	1.9	1.8	2.8	3.2	2.8	2.4	1.95
27.	1.9	1.85	1.9	1.9	1.8	1.9	1.8	2.7	3.3	2.9	2.4	1.95
28.	1.9	1.85	1.9	1.9	1.9	1.9	1.8	2.6	3.3	2.8	2.25	1.9
29.	1.9	1.85	1.9	1.9	1.9	1.9	1.8	2.7	3.4	2.65	2.25	1.9
30.	1.9	1.8	1.9	1.9	1.9	1.9	1.8	2.7	3.2	2.7	2.2	1.9
31.	1.9	.....	1.9	1.9	.....	1.9	.....	2.6	.....	2.85	2.2	.....
1904-5.												
1.	2.0	2.3	2.0	2.2	2.2	1.8	1.8	1.8	1.9	2.9	1.8	1.7
2.	2.0	2.25	2.0	2.15	2.0	1.8	1.8	1.8	1.9	2.9	1.7	1.7
3.	2.0	2.25	2.0	2.1	2.0	1.8	1.8	1.75	1.9	2.85	1.7	1.7
4.	2.0	2.25	2.0	1.95	1.9	1.8	1.8	1.75	1.9	2.8	1.7	1.7
5.	2.0	2.25	2.0	1.95	1.9	1.8	1.8	1.75	1.95	2.8	1.7	1.7
6.	2.0	2.15	2.0	1.95	1.8	1.8	1.8	1.7	1.95	2.8	1.7	1.7
7.	2.1	2.1	2.0	1.9	1.8	1.8	1.75	1.7	2.05	2.9	1.7	1.7
8.	2.3	2.15	2.0	1.9	1.85	1.8	1.75	1.7	2.1	2.95	1.7	1.65
9.	2.3	2.15	2.0	1.9	1.85	1.8	1.75	1.7	2.45	3.0	1.8	1.6
10.	2.3	2.2	2.0	1.8	1.85	1.75	1.75	1.7	2.7	3.0	1.8	1.65
11.	2.5	2.2	2.0	1.8	1.85	1.75	1.8	1.75	2.6	2.9	1.75	1.65
12.	2.4	2.2	2.0	1.8	1.85	1.8	1.8	1.8	2.8	2.85	1.7	1.65
13.	2.25	2.2	2.0	1.75	1.85	1.8	1.8	1.8	3.3	2.8	1.7	1.65
14.	2.35	2.2	2.0	1.75	1.85	1.8	1.8	1.8	3.3	2.7	1.7	1.65
15.	2.25	2.15	2.0	1.75	1.85	1.8	1.8	1.75	3.3	2.6	1.7	1.6
16.	2.25	2.15	2.0	1.8	1.8	1.85	1.8	1.75	3.3	2.5	1.7	1.6
17.	2.1	2.1	2.0	1.8	1.8	1.95	1.8	1.75	3.25	2.4	1.7	1.65
18.	2.1	2.1	2.0	1.8	1.85	1.85	1.75	1.75	3.2	2.45	1.75	1.65
19.	2.1	2.1	2.0	1.8	1.85	1.8	1.75	1.75	3.2	2.5	1.75	1.7
20.	2.1	2.1	2.0	1.85	1.8	1.8	1.75	1.8	3.1	2.5	1.75	1.7
21.	2.2	2.1	2.0	2.0	1.8	1.8	1.75	1.9	3.1	2.1	1.75	1.75
22.	2.2	2.0	1.95	2.0	1.8	1.8	1.7	1.9	3.1	1.95	1.75	1.8
23.	2.2	2.0	1.9	1.9	1.8	1.8	1.7	1.9	3.0	1.95	1.75	1.8
24.	2.2	2.1	1.9	1.9	1.8	1.8	1.7	2.0	2.9	2.0	1.7	1.8
25.	2.2	2.1	1.9	1.9	1.85	1.8	1.7	2.0	2.9	2.0	1.7	1.8
26.	2.2	2.1	1.9	1.9	1.85	1.8	1.7	2.0	2.9	2.0	1.7	1.8
27.	2.2	2.1	1.9	1.9	1.8	1.8	1.7	2.0	2.9	2.05	1.7	1.8
28.	2.25	2.1	1.95	1.9	1.8	1.75	1.75	1.95	2.9	2.05	1.7	1.8
29.	2.25	2.0	2.0	1.9	.....	1.75	1.75	1.9	2.9	2.0	1.7	1.8
30.	2.3	2.0	2.0	1.85	.....	1.75	1.75	1.8	2.9	2.0	1.7	1.8
31.	2.3	.....	2.3	1.85	.....	1.8	.....	1.85	.....	1.9	1.7	.....
1905-6.												
1.	1.8	1.8	1.85	1.8	1.85	1.8	1.85	1.8	2.05	.....	.....	3.65
2.	1.8	1.8	1.85	1.8	1.85	1.8	1.8	1.8	2.0	.....	.....	3.65
3.	1.8	1.8	1.9	1.8	1.85	1.8	1.8	1.8	2.0	.....	.....	3.6
4.	1.85	1.8	1.9	1.8	1.85	1.8	1.8	1.85	2.0	.....	.....	3.6
5.	1.85	1.85	1.9	1.8	1.8	1.8	1.8	1.85	2.2	.....	.....	3.6
6.	1.85	1.85	1.9	1.8	1.8	1.8	1.9	1.8	2.4	.....	.....	3.6
7.	1.85	1.85	1.9	1.8	1.8	1.75	1.9	1.8	2.55	.....	.....	3.6
8.	1.85	1.85	1.9	1.8	1.8	1.75	1.8	1.8	2.6	.....	.....	3.6
9.	1.85	1.8	1.9	1.8	1.8	1.75	1.85	1.8	2.75	.....	.....	3.6
10.	1.8	1.8	1.85	1.85	1.8	1.75	1.8	1.8	2.9	.....	.....	3.6
11.	1.8	1.8	1.85	1.9	1.8	1.8	1.8	1.85	3.2	.....	.....	3.55
12.	1.7	1.8	1.85	1.9	1.85	2.0	1.85	1.85	3.25	.....	.....	3.55
13.	1.75	1.8	1.8	2.0	1.85	2.1	1.8	1.85	3.45	.....	.....	3.5
14.	1.75	1.8	1.8	2.25	1.85	2.2	1.8	1.85	3.5	.....	.....	3.45
15.	1.8	1.8	1.8	2.25	1.85	2.3	1.85	1.85	.....	.....	.....	3.4
16.	1.8	1.8	1.8	2.25	1.85	2.2	1.85	1.85	.....	.....	.....	3.4
17.	1.8	1.8	1.8	2.15	1.8	2.1	1.8	1.9	.....	.....	.....	3.35
18.	1.85	1.8	1.8	2.1	1.8	2.1	1.8	1.95	.....	.....	.....	3.35
19.	1.85	1.8	1.8	2.0	1.8	2.1	1.8	2.2	.....	.....	.....	3.35
20.	1.85	1.8	1.8	1.95	1.8	2.1	1.8	2.1	.....	.....	.....	3.35
21.	1.85	1.8	1.8	1.95	1.8	2.0	1.8	1.85	.....	.....	.....	3.3
22.	1.85	1.8	1.8	1.95	1.8	1.95	1.8	1.85	.....	.....	.....	3.25
23.	1.85	1.8	1.8	1.9	1.8	1.95	1.8	2.15	.....	3.85	.....	3.25
24.	1.85	1.85	1.8	1.9	1.8	1.9	1.8	2.3	.....	3.85	.....	3.25
25.	1.85	1.85	1.8	1.9	1.8	2.0	1.8	2.3	.....	3.8	.....	3.25
26.	1.85	1.85	1.8	1.85	1.8	1.95	1.8	2.3	.....	3.8	.....	3.25
27.	1.8	1.85	1.8	1.85	1.8	1.9	1.8	2.2	.....	3.8	.....	3.25
28.	1.8	1.8	1.8	1.85	1.8	1.85	1.8	2.2	.....	3.8	.....	3.25
29.	1.8	1.8	1.8	1.85	.....	1.8	1.8	2.15	.....	3.8	.....	3.25
30.	1.8	1.8	1.8	1.85	.....	1.8	1.85	2.15	.....	3.75	.....	3.25
31.	1.8	.....	1.8	1.85	.....	1.9	.....	2.1	.....	8.7	.....	.....

Daily gage height, in feet, of Pine Creek near Round Valley, Cal., for 1903-1912—Cont'd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1906-7.												
1.....	3.25	3.0	3.0	2.95	3.0	2.95	2.95	3.0	4.0	4.8	4.3	3.4
2.....	3.25	3.0	3.0	2.95	3.0	2.95	2.95	3.0	4.1	4.7	4.3	3.4
3.....	3.25	3.0	3.0	2.95	3.0	2.95	3.0	3.0	4.2	4.7	4.3	3.4
4.....	3.25	3.0	3.0	2.95	3.0	3.1	3.0	3.0	4.3	4.65	4.2	3.35
5.....	3.25	3.0	3.0	2.95	3.0	3.3	3.0	3.0	4.3	4.65	4.1	3.35
6.....	3.2	3.0	3.0	2.95	3.0	3.2	2.95	3.0	4.2	4.6	4.0	3.3
7.....	3.2	3.0	3.0	2.95	3.0	3.1	2.95	3.0	4.1	4.6	4.0	3.3
8.....	3.15	2.9	3.0	2.95	3.0	3.1	2.95	2.95	4.05	4.5	3.9	3.3
9.....	3.15	2.9	3.0	2.9	3.0	3.0	3.0	2.9	4.0	4.4	3.9	3.3
10.....	3.15	2.9	3.0	2.9	3.0	3.1	3.0	2.9	4.0	4.4	3.8	3.25
11.....	3.1	2.9	2.95	2.9	3.0	3.2	3.0	2.9	3.9	4.3	3.75	3.2
12.....	3.05	2.9	2.95	2.9	3.0	2.95	3.0	3.0	3.8	4.3	3.7	3.2
13.....	3.05	2.9	2.9	2.9	3.0	2.9	3.0	3.1	3.8	4.3	3.75	3.2
14.....	3.05	2.9	2.9	2.9	3.0	2.9	3.0	3.2	3.7	4.4	3.75	3.2
15.....	3.05	2.9	2.9	2.9	3.0	2.85	3.0	3.25	3.5	4.35	3.8	3.2
16.....	3.05	2.9	2.9	2.9	3.0	2.95	3.0	3.3	3.2	4.3	3.8	3.2
17.....	3.0	2.9	2.9	2.9	3.0	2.9	3.0	3.3	3.0	4.2	3.8	3.2
18.....	3.0	2.9	2.9	2.95	3.0	3.1	3.0	3.4	3.0	4.2	3.8	3.2
19.....	3.0	2.9	2.9	2.95	3.0	3.1	3.0	3.4	3.7	4.2	3.8	3.15
20.....	3.0	2.9	2.95	2.95	3.0	3.1	3.0	3.4	3.65	4.25	3.75	3.1
21.....	3.0	2.9	2.95	3.0	3.0	3.1	3.0	3.35	4.0	4.25	3.7	3.1
22.....	3.0	2.95	2.95	3.0	3.0	3.0	3.0	3.35	4.0	4.3	3.7	3.05
23.....	3.0	3.0	2.95	3.0	3.0	3.0	3.0	3.3	4.1	4.3	3.6	3.05
24.....	3.0	3.0	2.95	3.0	2.95	3.0	3.0	3.3	4.0	4.3	3.5	3.05
25.....	3.0	3.0	2.95	3.0	2.95	3.0	3.0	3.3	4.0	4.2	3.5	3.1
26.....	3.0	3.0	2.95	3.0	2.9	3.0	3.0	3.4	4.1	4.15	3.45	3.1
27.....	3.0	3.0	2.95	3.0	2.9	3.0	3.0	3.5	4.45	4.1	3.4	3.05
28.....	3.0	3.0	2.95	3.0	2.95	3.0	3.0	3.6	4.7	4.1	3.4	3.0
29.....	3.0	3.0	2.95	3.0	.....	3.0	3.0	3.7	4.9	4.2	3.4	3.0
30.....	3.0	3.0	2.95	3.0	.....	3.0	3.0	3.8	5.0	4.2	3.4	3.0
31.....	3.0	.....	2.95	3.0	.....	3.0	.....	4.0	.....	4.25	3.4	.....
1907-8.												
1.....	3.0	3.0	2.9	2.9	2.75	2.7	2.8	2.3	3.4	3.9	4.4	3.4
2.....	3.0	3.0	2.9	2.9	2.75	2.7	2.75	2.4	3.4	3.95	4.4	.....
3.....	3.0	3.0	2.9	2.9	2.75	2.7	2.7	2.4	3.4	4.0	4.4	3.4
4.....	3.0	3.0	2.9	2.9	2.75	2.75	2.7	2.4	3.5	4.0	4.4	.....
5.....	3.0	2.9	2.9	2.9	2.75	2.75	2.7	2.4	3.4	4.2	4.3	3.4
6.....	3.0	2.85	2.95	2.9	2.75	2.7	2.7	2.4	3.6	4.3	4.3	3.4
7.....	3.0	2.85	2.95	2.85	2.7	2.7	2.7	2.4	3.6	4.3	4.4	.....
8.....	3.0	2.8	2.95	2.85	2.7	2.7	2.7	2.3	3.7	4.3	4.5	3.4
9.....	3.0	2.8	2.9	2.8	2.7	2.7	2.65	2.3	3.6	4.3	4.45	3.4
10.....	3.0	2.85	2.9	2.8	2.7	2.7	2.65	2.3	3.8	4.4	4.4	.....
11.....	3.0	2.9	2.9	2.8	2.7	2.7	2.6	2.3	3.8	4.45	4.5	3.4
12.....	3.0	3.0	2.9	2.8	2.7	2.7	2.5	2.3	3.75	4.5	4.3	3.4
13.....	3.0	3.0	2.85	2.8	2.7	2.7	2.35	3.2	3.8	4.6	4.4	3.4
14.....	3.0	2.9	2.85	2.8	2.7	2.7	2.2	3.4	3.7	4.6	4.4	.....
15.....	3.0	2.9	2.85	2.8	2.7	2.65	2.2	3.4	3.8	4.5	4.1	3.5
16.....	3.0	2.9	2.85	2.8	2.7	2.65	2.1	3.3	3.85	4.6	4.0	3.6
17.....	3.0	2.9	2.85	2.85	2.7	2.65	2.1	3.2	3.9	4.5	3.9	.....
18.....	3.0	2.9	2.85	2.85	2.75	2.65	2.5	3.1	3.8	4.4	3.8	3.5
19.....	3.0	2.9	2.85	2.85	2.8	2.65	2.6	3.2	3.9	4.4	3.75	3.5
20.....	3.0	2.9	2.85	2.85	2.8	2.65	2.3	3.4	3.9	4.3	3.7	.....
21.....	3.05	2.9	2.85	2.8	2.85	2.65	2.3	3.6	3.95	4.1	3.7	3.6
22.....	3.05	2.9	2.9	2.85	3.05	2.7	2.3	3.3	3.9	4.2	3.7	.....
23.....	3.1	2.9	2.9	2.85	3.0	2.75	2.3	3.4	3.8	4.15	3.7	3.7
24.....	3.05	2.9	2.9	2.9	3.0	2.75	2.5	3.3	3.9	4.0	3.65	3.7
25.....	3.0	2.9	2.9	2.9	2.9	2.7	2.5	3.4	3.95	4.0	3.4	3.7
26.....	3.0	2.9	2.9	2.9	2.85	2.75	2.5	3.3	4.0	4.2	3.45	.....
27.....	2.95	2.9	2.9	2.9	2.8	2.75	2.6	3.3	3.9	4.2	3.5	3.7
28.....	2.95	2.9	2.9	2.85	2.75	2.8	2.5	3.4	3.9	4.2	3.5	.....
29.....	3.0	2.9	2.85	2.85	2.7	2.8	2.5	3.4	3.9	4.3	3.45	3.7
30.....	3.0	2.9	2.85	2.8	.....	2.8	2.5	3.3	3.9	4.3	3.4	.....
31.....	3.0	.....	2.85	2.8	.....	2.8	.....	3.4	.....	4.4	3.4	.....

a Estimated.

Daily gage height, in feet, of Pine Creek near Round Valley, Cal., for 1903-1912—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1908-9.												
1.....	3.7				3.5	3.4	3.4	3.4	.....	5.7	4.4	4.2
2.....	3.7	3.5	3.4	3.4	3.5	3.4	3.4	3.4	4.8	5.9	4.45	.....
3.....									5.4	6.0	4.4	4.15
4.....	3.65	3.45	3.4	3.4					.....	.....	4.3	.....
5.....					3.5	3.45	3.4	3.4	5.5	5.8	4.3	4.1
6.....	3.5	3.45	3.4	3.6					.....	5.6	4.2	.....
7.....					3.5	3.4	3.4	3.5	5.6	5.6	.....	4.0
8.....	3.5	3.45	3.4	3.4				3.55	5.7	.....	4.2	.....
9.....					3.5	3.4	3.4		5.6	5.5	4.15	4.0
10.....		3.45	3.4	3.4				3.6	.....	.....	.....	.....
11.....	3.5				3.5	3.35	3.4		5.6	5.5	4.2	4.0
12.....		3.45	3.4	3.5	3.5			3.7	5.45	5.4	4.25	4.0
13.....	3.5					3.4	3.4		5.5	.....	.....	.....
14.....		3.5	3.4	3.6	3.5		3.4	3.7	.....	5.3	4.2	3.9
15.....	3.5					3.4			.....	.....	.....	.....
16.....		3.45	3.4	3.4	3.5		3.4	3.8	.....	5.3	4.2	.....
17.....	3.6					3.4			5.4	.....	4.25	3.95
18.....		3.4	3.4	3.5	3.5	3.4		3.7	5.35	4.9	.....	3.8
19.....	3.5					3.3	3.4	3.8	.....	4.8	4.3	3.85
20.....		3.45	3.4	3.4	3.5		3.4	3.75	5.4	.....	4.3	3.7
21.....	3.65					3.3			5.5	4.85	4.3	3.75
22.....		3.45	3.4	3.45	3.5		3.35	3.7	.....	4.9	.....	3.7
23.....						3.35			5.6	4.9	4.3	.....
24.....		3.45	3.4	3.4	3.5		3.35	3.75	5.6	.....	4.25	3.8
25.....	3.5					3.4			.....	4.8	.....	.....
26.....		3.45	3.4	3.4	3.4		3.35	3.7	5.7	.....	4.3	3.7
27.....	3.55				3.5	3.4		3.9	5.6	4.7	4.25	.....
28.....		3.4	3.45	3.4	3.4		3.3		.....	.....	4.3	3.8
29.....	3.5					3.4	3.4	4.0	5.6	4.6	.....	.....
30.....		3.4	3.4	3.4			3.3		5.65	.....	4.25	3.7
31.....	3.5					3.4		4.5	.....	4.6	4.2	.....
1909-10.												
1.....			3.7	3.9		3.6	3.4	3.75	5.6	4.4	.....	3.7
2.....	3.7	3.5			3.6				.....	.....	3.95	.....
3.....	3.65		3.6	3.9		3.65	3.45	3.75	5.7	4.2	.....	3.65
4.....	3.7	3.4	3.65		3.6	3.6			5.8	.....	3.9	3.6
5.....			3.7	3.65			3.4	3.85	5.7	4.3	3.8	.....
6.....	3.7	3.5	3.7			3.6	3.4		5.6	4.15	.....	3.6
7.....	3.8			3.7	3.7	3.55		3.85	.....	.....	3.6	.....
8.....		3.4	3.7			3.6	3.4	3.9	5.5	4.15	.....	3.6
9.....	3.8	3.6		3.7	3.7	3.58			.....	.....	3.55	.....
10.....	3.8		3.7			3.55	3.45	4.0	5.6	4.1	.....	3.65
11.....		3.5		3.7	3.7	3.55	3.55	4.2	.....	4.2	3.65	3.6
12.....	3.8	3.5	3.7						5.5	4.1	3.7	.....
13.....	3.8		3.7	3.7	3.7	3.55	3.5	4.3	.....	.....	.....	3.6
14.....		3.4							5.7	4.1	3.7	.....
15.....	3.75		3.7	3.7	3.7	3.6	3.55	4.4	.....	.....	3.5	.....
16.....		3.55					3.7	4.4	5.6	4.15	3.65	.....
17.....	3.75		3.7	3.7	3.6	3.5	3.8	4.5	5.7	4.15	.....	3.5
18.....		3.5			3.6				5.4	.....	3.6	.....
19.....	3.7		3.7	3.6		3.55	3.7	4.45	5.4	4.15	.....	3.45
20.....		3.6			3.6		3.8	4.6	.....	.....	3.6	.....
21.....	3.75	3.6	3.7	3.65	3.65	3.5	3.81		5.2	4.15	.....	3.45
22.....							3.65	4.7	5.2	.....	3.65	.....
23.....	3.7	3.65	3.7	3.6	3.6	3.55			5.0	4.2	.....	3.4
24.....	3.75	3.6	3.7				3.7	4.8	4.8	.....	3.7	.....
25.....		3.7		3.7	3.6	3.5	3.75		4.5	4.2	.....	3.45
26.....	3.7								.....	.....	.....	.....
27.....		3.7	3.7	3.7	3.6	3.5	3.9	4.9	4.7	4.25	3.7	3.4
28.....	3.7				3.6				.....	4.2	3.65	.....
29.....	3.6	3.7		3.65		3.4	4.0		4.6	.....	.....	3.45
30.....	3.6		3.7			3.6	3.8		.....	3.95	3.7	3.4
31.....		3.7	3.7	3.7		3.4		5.3	.....	3.9	.....	.....

Daily gage height, in feet, of Pine Creek near Round Valley, Cal., for 1903-1912—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.												
1.....	3.45	3.5	3.6	3.6	4.1	3.55	3.5	3.5	3.9	.....	5.1	3.95
2.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6.25	.....	.....
3.....	3.4	3.5	3.65	3.6	3.6	3.6	3.5	3.5	4.1	.....	5.15	3.9
4.....	.....	.....	3.65	.....	.....	.....	.....	.....	.....	6.2	.....	3.9
5.....	3.5	3.4	.....	3.6	3.6	3.6	3.5	3.45	4.3	6.25	4.9	.....
6.....	.....	3.4	3.55	.....	.....	.....	.....	.....	.....	6.2	.....	3.85
7.....	3.45	.....	.....	3.55	3.6	3.6	3.55	3.5	4.5	6.25	4.85	.....
8.....	.....	3.35	3.6	.....	.....	.....	.....	3.5	4.7	6.3	.....	3.85
9.....	3.5	.....	.....	.....	3.55	4.0	3.5	.....	.....	.....	4.55	.....
10.....	.....	3.45	3.55	3.65	.....	3.8	.....	3.5	4.75	6.15	.....	3.75
11.....	3.45	.....	3.65	.....	3.55	.....	3.5	3.5	4.8	.....	4.55	.....
12.....	.....	3.4	.....	3.6	.....	3.68	.....	.....	.....	6.2	.....	3.7
13.....	3.55	.....	3.55	.....	3.6	.....	3.5	3.55	4.8	6.15	4.3	.....
14.....	3.5	3.5	.....	3.6	.....	3.65	.....	3.6	4.9	.....	.....	3.65
15.....	.....	.....	3.6	3.55	3.6	.....	3.5	.....	.....	6.5	4.3	.....
16.....	3.55	3.55	.....	.....	.....	3.6	.....	3.6	5.4	6.3	.....	3.65
17.....	.....	3.6	3.55	3.6	3.55	3.65	3.55	3.9	5.8	.....	4.3	.....
18.....	3.55	.....	3.6	.....	.....	3.6	.....	.....	6.0	6.25	4.33	3.7
19.....	.....	3.55	.....	3.55	3.6	.....	3.5	4.2	6.4	.....	.....	.....
20.....	3.6	.....	3.55	.....	.....	3.63	.....	.....	.....	6.1	4.25	3.75
21.....	3.55	3.6	.....	3.6	3.5	.....	3.53	4.25	6.6	.....	.....	.....
22.....	.....	.....	3.6	3.6	.....	3.6	.....	4.3	.....	6.15	4.3	3.65
23.....	3.55	3.6	.....	.....	3.5	3.65	3.5	.....	6.7	.....	.....	.....
24.....	.....	.....	3.6	3.6	.....	3.6	.....	4.4	6.6	5.9	4.1	3.55
25.....	3.6	3.6	.....	.....	3.5	.....	3.5	.....	.....	.....	.....	.....
26.....	3.65	.....	3.6	3.6	3.5	3.65	.....	4.2	6.2	5.9	4.15	3.5
27.....	3.6	.....	.....	3.65	.....	.....	3.5	.....	.....	.....	.....	.....
28.....	.....	.....	3.6	.....	3.5	3.6	.....	4.0	6.25	5.5	4.0	3.55
29.....	3.6	3.55	3.6	.....	.....	.....	3.5	.....	.....	.....	4.1	.....
30.....	3.55	3.6	.....	4.5	.....	3.65	3.5	3.9	6.2	5.5	.....	3.5
31.....	3.6	.....	3.6	.....	.....	3.6	.....	.....	.....	.....	4.0	.....

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	
1911-12.										
1.....	4.3	.....	.....	.....	3.5	3.5	3.2	3.4	3.0	5.0
2.....	3.7	3.65	.....	.....	.....	.....	.....	.....	.....
3.....	4.0	.....	.....	.....	3.5	3.55	.....	.....	3.1	4.9
4.....	3.6	.....	.....	.....	3.25	3.35	.....	.....
5.....	3.9	3.7	.....	.....	3.5	3.5	.....	.....	3.35	4.95
6.....	3.75	.....	3.65	.....	.....	3.35	3.3	.....	.....
7.....	3.75	3.63	.....	3.55	3.5	.....	.....	3.45	4.8
8.....	3.7	.....	3.53	.....	.....	3.4	3.35	3.4	.....
9.....	3.7	.....	3.5	3.53	.....	.....	3.45	4.7
10.....	3.7	.....	3.6	.....	.....	3.4	3.3	.....	.....
11.....	3.65	.....	3.6	3.5	.....	.....	3.4	4.65
12.....	3.65	.....	3.6	.....	.....	3.45	3.35	.....	4.55
13.....	3.7	.....	3.55	3.53	.....	.....	3.45	.....
14.....	3.63	.....	3.6	.....	.....	3.45	3.4	.....	4.5
15.....	3.7	3.65	.....	3.6	3.5	.....	3.35	3.5	.....
16.....	3.65	.....	3.6	.....	.....	3.5	3.45	3.45	4.5
17.....	3.75	3.65	3.55	3.65	3.5	.....	.....	3.45	4.55
18.....	3.6	3.6	.....	3.45	3.4	.....	.....
19.....	3.7	3.65	3.6	3.65	3.5	3.5	.....	3.4	4.55
20.....	3.45	.....	4.6
21.....	3.7	3.65	3.6	3.6	3.5	3.43	.....	3.2	4.5
22.....	3.65	.....	.....	.....	.....	3.4	3.3	.....
23.....	3.65	.....	3.6	3.55	3.5	3.45	.....	.....	4.15
24.....	3.7	3.6	.....	.....	.....	3.45	3.34	4.0
25.....	3.7	.....	.....	3.53	3.3	3.5	.....	.....	.....
26.....	3.65	.....	.....	.....	.....	3.35	4.5	4.0
27.....	3.65	.....	3.53	3.5	3.2	3.48	.....	.....	4.0
28.....	3.7	3.6	.....	.....	.....	3.4	4.75	4.0
29.....	3.7	.....	.....	3.5	3.25	3.48	.....	.....	.....
30.....	3.65	3.55	3.5	.....	.....	3.4	4.9	.....
31.....	3.6	.....	.....	.....	.....	3.45	.....	.....	.....

Rating tables for Pine Creek near Round Valley, Cal.

August 4, 1903, to June 14, 1906.

Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.
<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>
1.60	1	2.10	23	2.60	52	3.10	95
1.70	4	2.20	28	2.70	59	3.20	106
1.80	8	2.30	33	2.80	67	3.30	119
1.90	13	2.40	39	2.90	75	3.40	133
2.00	18	2.50	45	3.00	85	3.50	149

NOTE.—Table is based on discharge measurements made during 1903–1906. It is well defined between gage heights 1.7 feet and 3 feet.

August 23 to December 31, 1906.

2.90	5	3.20	24	3.50	53	3.80	89
3.00	10	3.30	33	3.60	64	3.90	103
3.10	16	3.40	42	3.70	76		

NOTE.—Table is based on 4 discharge measurements made during 1906 and is not well defined. Discharge Jan. 1, 1907, to Dec. 31, 1908, determined from rating curves covering short periods of time.

Daily discharge, in second-feet, of Pine Creek near Round Valley, Cal., for 1909–1912.

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909.									
1.....	3.8	6.3	3.8	3.8	3.8	102	258	58	40
2.....	3.8	6.3	3.8	3.8	3.8	121	298	63	38
3.....	3.8	6.3	3.8	3.8	3.8	210	318	58	36
4.....	3.8	6.3	4.4	3.8	3.8	218	298	49	34
5.....	6.6	6.3	5.0	3.8	3.8	226	278	49	32
6.....	9.5	6.3	4.4	3.8	5.0	234	238	40	28
7.....	6.6	6.3	3.8	3.8	6.3	242	238	40	25
8.....	3.8	6.3	3.8	3.8	7.9	258	228	40	25
9.....	3.8	6.3	3.8	3.8	8.7	242	218	36	25
10.....	3.8	6.3	3.3	3.8	9.5	242	218	38	25
11.....	5.0	6.3	2.8	3.8	11.5	242	218	40	25
12.....	6.3	6.3	3.3	3.8	13.5	230	209	42	25
13.....	7.9	6.3	3.8	3.8	13.5	218	200	44	25
14.....	9.5	6.3	3.8	3.8	13.5	226	191	42	22
15.....	6.6	6.3	3.8	3.8	16.0	221	182	40	18.8
16.....	3.8	6.3	3.8	3.8	18.5	215	182	40	20
17.....	5.0	6.3	3.8	3.8	16.0	210	150	44	22
18.....	6.3	6.3	3.8	3.8	13.5	202	119	46	13.4
19.....	5.0	6.3	1.8	3.8	18.5	206	105	49	16.1
20.....	3.8	6.3	1.8	3.8	16.0	210	108	49	9.0
21.....	4.4	6.3	1.8	3.3	13.5	226	112	49	11.2
22.....	5.0	6.3	2.3	2.8	13.5	234	119	49	9.0
23.....	4.4	6.3	2.8	2.8	14.8	242	119	49	11.2
24.....	3.8	6.3	3.3	2.8	16.0	242	112	44	13.4
25.....	3.8	5.0	3.8	2.8	14.8	250	105	46	11.2
26.....	3.8	3.8	3.8	2.8	13.5	258	98	49	9.0
27.....	3.8	6.3	3.8	2.3	25	242	92	44	11.2
28.....	3.8	3.8	3.8	1.8	29	242	86	49	13.4
29.....	3.8	.....	3.8	3.8	32	242	80	46	11.2
30.....	3.8	.....	3.8	1.8	58	250	74	44	9.0
31.....	5.0	.....	3.8	.....	83	.....	68	40	.....

Daily discharge, in second-feet, of Pine Creek near Round Valley, Cal., for 1909-1912—Con.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909-10.												
1.....	9.0	4.2	9.0	17	6.4	4.8	1.5	10	239	57	18	8
2.....	9.0	3.4	7.4	17	4.8	5.6	1.8	10	248	47	20	7.2
3.....	7.4	9.0	5.8	17	4.8	6.4	2.2	10	258	39	18	6.4
4.....	9.0	1.5	7.4	12	4.8	4.8	1.8	12	277	43	17	4.8
5.....	9.0	2.4	8.2	8	6.4	4.8	1.5	14	258	47	12	4.8
6.....	9.0	3.4	9.0	8	7.2	4.8	1.5	14	239	35	8	4.8
7.....	13.4	2.4	9.0	8	8	3.8	1.5	14	230	35	4.8	4.8
8.....	13.4	1.5	9.0	8	8	4.8	1.5	17	220	35	4.3	4.8
9.....	13.4	5.8	9.0	8	8	4.4	1.8	20	230	33	3.8	5.6
10.....	13.4	4.6	9.0	8	8	3.8	2.2	24	239	31	4.8	6.4
11.....	13.4	3.4	9.0	8	8	3.8	3.8	39	230	39	6.4	4.8
12.....	13.4	3.4	9.0	8	8	3.8	3.3	43	220	31	8	4.8
13.....	13.4	2.4	9.0	8	8	3.8	2.8	47	239	31	8	4.8
14.....	12.3	1.5	9.0	8	8	4.3	3.3	52	258	31	8	3.8
15.....	11.2	3.0	9.0	8	8	4.8	3.8	57	248	33	7.2	2.8
16.....	11.2	4.6	9.0	8	6.4	3.8	8	57	239	35	6.4	2.8
17.....	11.2	4.0	9.0	8	4.8	2.8	12	68	258	35	5.6	2.8
18.....	10.1	3.4	9.0	6.4	4.8	3.3	10	65	201	35	4.8	2.5
19.....	9.0	4.6	9.0	4.8	4.8	3.8	8	62	201	35	4.8	2.2
20.....	10.1	5.8	9.0	5.6	4.8	3.3	12	80	182	35	4.8	2.2
21.....	11.2	5.8	9.0	6.4	6.4	2.8	12	86	164	35	5.6	2.2
22.....	10.1	6.6	9.0	5.6	5.6	3.3	6.4	92	164	37	6.4	1.8
23.....	9.0	7.4	9.0	4.8	4.8	3.8	7.2	98	132	39	7.2	1.5
24.....	11.2	5.8	9.0	6.4	4.8	3.3	8	105	105	39	8	1.8
25.....	10.1	9.0	9.0	8	4.8	2.8	10	105	68	39	8	2.2
26.....	9.0	9.0	9.0	8	4.8	2.8	12	105	92	41	8	1.8
27.....	9.0	9.0	9.0	8	4.8	2.8	17	118	92	43	7.2	1.5
28.....	9.0	9.0	9.0	7.2	4.8	2.2	24	125	86	39	6.4	1.8
29.....	5.8	9.0	9.0	6.4	.....	1.5	17	132	80	30	7.2	2.2
30.....	5.8	9.0	9.0	7.2	.....	4.8	12	156	68	20	8	1.5
31.....	5.0	.....	9.0	8	.....	1.5	.....	182	.....	17	8	.....
1910-11.												
1.....	2.2	2.8	4.8	5	30	4	3	3	17.2	278	124	20.5
2.....	1.8	2.8	5.6	5	18	4	3	3	24	282	127	19
3.....	1.5	2.8	6.4	5	5	5	3	3	30	278	130	18
4.....	2.2	2.2	6.4	5	5	5	3	2.6	38	274	116	18
5.....	2.8	1.5	4.8	5	5	5	3	2.3	45	282	102	16.7
6.....	2.5	1.5	3.8	5	5	5	3	2.6	54	274	99	15.5
7.....	2.2	1.4	4.3	4	5	5	4	3	62	282	96	15.5
8.....	2.5	1.2	4.8	4	5	14	4	3	81	290	81	15.5
9.....	2.8	1.5	4.3	5	4	23.5	3	3	84	278	66	13.4
10.....	2.5	2.2	3.8	6.5	4	12	3	3	86	266	66	11.2
11.....	2.2	1.8	6.4	6	4	9	3	3	91	280	66	10.4
12.....	2.8	1.5	4.8	5	4	7.4	3	3.5	91	274	56	9.5
13.....	3.8	2.2	3.8	5	5	7.0	3	4	91	266	45	8.8
14.....	2.8	2.8	4.3	5	5	6.5	3	5	102	294	45	8.2
15.....	3.3	3.3	4.8	4	5	5.8	3	5	131	322	45	8.2
16.....	3.8	3.8	4.3	4	5	5	3	5	160	290	45	8.2
17.....	3.8	4.8	3.8	5	4	6.5	4	17.2	214	286	45	8.8
18.....	3.8	4.3	4.8	5	4	5	4	27	244	282	47	9.5
19.....	4.3	3.8	4.3	4	5	5.4	3	37.5	306	270	44	10.4
20.....	4.8	4.3	3.8	4	4	5.9	3.3	39	322	259	41	11.2
21.....	3.8	4.8	4.3	5	3	5.4	3.6	41	339	262	43	9.7
22.....	3.8	4.8	4.8	5	3	5	3.3	45	370	266	45	8.2
23.....	3.8	4.8	4.8	5	3	6.5	3	49	356	248	38	7.0
24.....	4.3	4.8	4.8	5	3	5	3	53	339	229	30	5.9
25.....	4.8	4.8	4.8	5	3	5.8	3	45	306	229	32	5.4
26.....	6.4	5.0	4.8	5	3	6.5	3	37.5	274	229	34	5
27.....	4.8	5.3	4.8	6.5	3	5.8	3	30	260	201	29	5.4
28.....	4.8	5.5	4.8	25	3	5	3	23.5	282	173	23.5	5.9
29.....	4.8	3.8	4.8	45	.....	5.8	3	20	278	173	30	5.4
30.....	3.8	4.8	4.8	62	.....	6.5	3	17.2	274	173	27	5
31.....	4.8	.....	4.8	46	.....	5	.....	17.2	.....	148	23.5	.....

Daily discharge, in second-feet, of Pine Creek near Round Valley, Cal., for 1909-1912—Con.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.									
1.....	45	8.2	8.2	3.6	3.6	0	1.6	0	113
2.....	34	9.5	8.2	3.6	4.2	0	1.4	0	108
3.....	23.5	9.5	7.5	3.6	4.8	.1	1.2	0	102
4.....	21	9.5	6.8	3.6	4.2	.2	1.0	.5	105
5.....	18	9.5	7.5	3.6	3.6	.6	.7	1.0	108
6.....	11.2	8.6	8.2	4.2	3.6	1.0	.4	1.8	100
7.....	11.2	7.6	6.8	4.8	3.6	1.3	.7	2.6	91
8.....	9.5	8.6	5.5	4.2	4.0	1.6	1.0	1.6	86
9.....	9.5	9.5	6.2	3.6	4.3	1.6	.7	2.6	81
10.....	9.5	8.8	6.8	4.8	4.0	1.6	.4	2.1	78
11.....	8.8	8.2	6.8	6.0	3.6	2.1	.7	1.6	76
12.....	8.2	8.8	6.8	5.4	4.0	2.6	1.0	2.1	66
13.....	7.9	9.5	6.8	4.8	4.3	2.6	1.3	2.6	64
14.....	7.6	8.8	6.8	5.4	4.0	2.6	1.6	3.1	62
15.....	9.5	8.2	6.8	6.0	3.6	3.1	1.0	3.6	62
16.....	8.2	8.2	6.8	6.8	3.6	3.6	2.6	2.6	62
17.....	11.2	8.2	5.9	7.6	3.6	3.1	2.1	2.6	66
18.....	10.4	8.2	6.4	6.0	3.6	2.6	1.6	2.1	66
19.....	9.5	8.2	6.8	7.6	3.6	3.6	2.1	1.6	66
20.....	9.5	8.2	6.8	6.8	3.6	2.9	2.6	.8	71
21.....	9.5	8.2	6.8	6.0	3.6	2.2	2.1	0	62
22.....	8.8	8.2	6.8	5.4	3.6	2.4	1.6	.4	48
23.....	8.2	8.8	6.8	4.8	3.6	2.6	2.1	.6	34
24.....	8.8	9.5	6.8	4.6	2.0	3.1	2.6	.9	24
25.....	9.5	8.8	6.4	4.3	.4	3.6	1.8	32	24
26.....	8.8	8.2	6.0	4.0	.2	3.4	1.0	62	24
27.....	8.2	8.8	5.5	3.6	0	3.2	1.3	74	24
28.....	8.8	9.5	6.8	3.6	.1	3.2	1.6	86	24
29.....	9.5	8.8	6.4	3.6	.2	3.2	1.6	94	24
30.....	8.2	8.2	5.9	3.6	.....	2.9	1.6	102	24
31.....	6.8	.....	6.0	3.6	.....	2.6	.....	108	.....

NOTE.—Daily discharge determined from rating curves applicable as follows: Jan. 1 to June 30, 1909, fairly well defined; July 1 to Dec. 31, 1909, fairly well defined; Jan. 1 to Dec. 31, 1910, well defined between discharges of 5 and 240 second-feet; Jan. 1 to June 23, 1911, fairly well defined; June 24 to Dec. 31, 1911, fairly well defined; Jan. 1 to June 30, 1912, fairly well defined. Discharge interpolated for days on which gage was not read.

Monthly discharge of Pine Creek near Round Valley, Cal., for 1903-1912.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1903.					
August 4-31	13	4	7.9	439	
September	8	4	4.7	280	
1903-4.					
October	14	8	10.8	664	
November	13	8	11.8	702	
December	16	8	12.6	775	
January	13	13	13	799	
February	23	8	12.4	713	
March	23	8	12.9	793	
April	13	5	9	536	
May	85	6	21.7	1,334	
June	213	52	142	8,450	
July	106	39	70	4,304	
August	75	28	44	2,705	
September	28	8	12	714	
The year	213	5	31.0	22,500	
1904-5.					
October	45	18	28	1,722	
November	33	18	25	1,488	
December	33	13	17.5	1,076	
January	28	6	12.7	781	

Monthly discharge of Pine Creek near Round Valley, Cal., for 1903-1912—Continued.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1904-5.					
February.....	28	8	10.6	589	
March.....	10	6	7.9	486	
April.....	8	4	6.5	387	
May.....	18	4	9.0	553	
June.....	119	13	68.1	4,052	
July.....	85	13	47.9	2,945	
August.....	8	4	4.8	285	
September.....	8	1	4.6	274	
The year.....	119	1	20.2	14,600	
1905-6.					
October.....	10	4	8.7	535	
November.....	10	8	8.5	506	
December.....	13	8	9.5	584	
January.....	30	8	13.7	842	
February.....	10	8	8.6	478	
March.....	33	6	14.5	892	
April.....	13	8	8.7	518	
May.....	33	8	16.0	984	
June.....			130	7,740	
July.....			160	9,840	
August.....			105	6,460	
September.....	70	28	46.2	2,750	
The year.....		4	44.1	32,100	
1906-7.					
October.....	28	10	15.5	953	
November.....	10	5	7.6	452	
December.....	10	5	7.5	461	
January.....	12	9	10.4	640	C.
February.....	12	9	11.6	644	C.
March.....	27	8	13.4	824	C.
April.....	12	10	11.7	696	C.
May.....	105	9	28.3	1,740	C.
June.....	262	12	111	6,600	C.
July.....	230	159	193	11,900	C.
August.....	206	46	101	6,210	C.
September.....	46	19	30.8	1,830	C.
The year.....	262	5	45.2	33,000	
1907-8					
October.....	24	19	19.3	1,190	C.
November.....	19	11	15.3	910	C.
December.....	17	13	14.4	885	C.
January.....	12	8.4	10.1	621	C.
February.....	20	5.8	8.2	472	C.
March.....	8.4	4.9	6.2	381	C.
April.....	8.4	1.0	3.6	214	C.
May.....	9	1.0	2.8	172	C.
June.....	31	4.0	17.5	1,040	C.
July.....	104	24	62.0	3,810	C.
August.....	90	4.0	42.0	2,580	C.
September.....	13	4.0	7.5	446	C.
The year.....	104	1.0	17.4	12,700	
1908-9.					
October.....	13	6.0	7.7	474	C.
November.....	6	4.0	4.7	280	C.
December.....	5	4.0	4.0	246	C.
January.....	9.5	3.8	4.96	305	C.
February.....	6.3	3.8	6.08	338	C.
March.....	5.0	1.8	3.52	216	C.
April.....	3.8	1.8	3.43	204	C.
May.....	83	3.8	16.8	1,030	B.
June.....	258	102	208	12,400	B.
July.....	318	68	172	10,600	B.
August.....	63	36	45.7	2,810	B.
September.....	40	9.0	20.5	1,220	B.
The year.....	318	1.8	41.4	30,100	

Monthly discharge of Pine Creek near Round Valley, Cal., for 1903-1912—Continued.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1909-10.					
October.....	13.4	5.0	10.2	627	C.
November.....	9.0	1.5	5.13	305	C.
December.....	9.0	5.8	8.77	539	C.
January.....	17	4.8	8.38	515	C.
February.....	8	4.8	6.17	343	C.
March.....	6.4	1.5	3.78	232	C.
April.....	24	1.5	7	417	C.
May.....	182	10	65.1	4,000	C.
June.....	277	68	192	11,400	C.
July.....	57	17	36.2	2,230	C.
August.....	20	3.8	8.22	505	C.
September.....	8	1.5	3.65	217	C.
The year.....	277	1.5	29.6	21,300	
1910-11.					
October.....	6.4	1.5	3.49	215	C.
November.....	5.5	1.2	3.36	200	C.
December.....	6.4	3.8	4.72	290	C.
January.....	62	4	10.0	615	C.
February.....	30	3	5.54	308	B.
March.....	23.5	4	6.72	413	B.
April.....	4	3	3.17	189	B.
May.....	53	2.3	17.8	1,090	B.
June.....	370	17.2	178	10,600	B.
July.....	322	148	256	15,700	B.
August.....	130	23.5	59.4	3,650	B.
September.....	20.5	5	10.6	631	B.
The year.....	370	1.2	46.6	33,900	
1911-12.					
October.....	45	6.8	12.2	750	B.
November.....	9.5	7.6	8.69	517	B.
December.....	8.2	5.5	6.73	414	B.
January.....	7.6	3.6	4.81	296	B.
February.....	4.8	.0	3.14	181	C.
March.....	3.6	.0	2.23	137	C.
April.....	2.6	.4	1.43	85	C.
May.....	108	.0	19.2	1,180	C.
June.....	113	24	64.8	3,860	B.
The period.....				7,420	

NOTE.—Monthly means for June, July, and August, 1906, have been estimated and are only approximate.

OWENS RIVER CANAL NEAR BISHOP, CAL.

This station was established August 5, 1903. It was located at the footbridge near the quarter-section line which divides the N. $\frac{1}{2}$ sec. 27, T. 6 S., R. 32 E.

The channel is straight for 300 feet above and 100 feet below the station. The current is sluggish. The right bank is high and rocky and will not overflow. The left bank is low and will overflow. The bed of the stream is composed of gravel and is permanent.

Discharge measurements were made from the footbridge.

The gage was a vertical rod nailed to the bridge. No regular observer could be obtained, but the ditch tender read the rod when passing the station.

Discharge measurements of Owens River canal near Bishop, Cal., in 1903-1905.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1903.		<i>Feet.</i>	<i>Sec.-ft.</i>	1904.		<i>Feet.</i>	<i>Sec.-ft.</i>
July 30	R. S. Hawley	2.50	39.0	Nov. 1	R. J. Taylor.....	1.60	4.6
Aug. 5	do.	2.69	21.8				
15	do.	2.82	28.6	1905.			
26	do.	2.89	36.5	Jan. 10	R. J. Taylor.....	1.55	4.5
Sept. 7	do.	2.89	33.1	Feb. 4	do.	1.49	3.3
15	do.	3.02	39.5	Apr. 6	J. S. Evans.....	2.40	28
Oct. 23	do.	2.57	23.2	24	do.	2.77	42
				May 12	do.	2.78	43
1904.				June 1	do.	2.62	38
Feb. 3	R. S. Hawley	1.60	7.4	July 7	do.	2.30	32
Mar. 4	do.	2.90	44	Aug. 4	do.	2.15	43
21	do.	2.60	34	Sept. 11	do.	2.60	34
Apr. 21	do.	2.90	46	Oct. 24	F. R. S. Buttemer.....	2.38	28
July 11	J. C. Clausen and L. M. Barnes.....	2.65	31	Nov. 22	do.	1.50	5.3
Aug. 10	L. M. Barnes	2.80	40	Dec. 13	do.	1.63	7.7
Sept. 5	R. S. Hawley	2.90	40				
Oct. 14	R. S. Hawley, W. B. Clapp, and R. J. Taylor.....	1.65	6.1				

Daily gage height, in feet, of Owens River canal near Bishop, Cal., for 1903-1905.

Day.	Aug.	Sept.	Day.	Aug.	Sept.	Day.	Aug.	Sept.
1903.			1903.			1903.		
1.....		2.9	11.....		3.0	21.....		
2.....		2.9	12.....	2.8	3.0	22.....	2.85	3.0
3.....		2.9	13.....	2.8	3.05	23.....	2.85	3.0
4.....		2.95	14.....	2.8	3.05	24.....	2.85	3.0
5.....	a 2.5	2.95	15.....		3.05	25.....	2.8	3.0
6.....	2.5		16.....		3.05	26.....	2.8	3.05
7.....	2.5	2.95	17.....	2.75	3.05	27.....	2.85	3.05
8.....		2.9	18.....	2.8	3.05	28.....	2.85	3.05
9.....	2.7	2.9	19.....		3.1	29.....	2.9	
10.....	2.75	2.95	20.....	2.8	3.1	30.....	2.9	3.1
						31.....	2.9	

Day.	Oct.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1903-4.									
1.....	3.1								
2.....	3.1	1.6			2.9				2.75
3.....	3.1	1.6		2.6	2.9				
4.....	3.1		2.9		2.9			2.65	
5.....	3.1				2.9	2.7	2.6		2.8
6.....	3.1		2.7		2.9			2.8	2.95
7.....	3.1				2.9	2.7	2.6		2.9
8.....	3.1			2.7		2.6			3.0
9.....	3.1				2.9				3.0
10.....	2.7				2.9				
11.....					2.9		2.65	2.7	
12.....				2.75					
13.....				2.80	2.9	2.6			3.0
14.....				2.85					
15.....				2.85		2.4		2.7	
16.....					2.9				
17.....				2.85	2.9				3.05
18.....					2.9				
19.....				2.85					
20.....				2.80	2.9			2.8	3.05
21.....			2.6	2.9	2.9				
22.....				2.9		2.6			
23.....					2.9				
24.....				2.9	2.9				
25.....					2.9			2.8	

aLowest water known in 24 years.

NOTE.—From Oct. 10 no daily record was kept, but beginning Oct. 11 the gage read about 1.60 until Oct. 24; the water was then all turned out.

Daily gage height, in feet, of Owens River canal near Bishop, Cal., for 1903-1905—Con.

Day.	Oct.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1903-4.									
26.....				2.9			2.7		
27.....				2.9		2.5	2.75		
28.....									
29.....			2.7	2.9	2.7				
30.....							2.6		
31.....			2.6						

Day.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.
1905.							
1.....			2.7	2.55	2.8	2.55	2.8
2.....			2.7	2.55	2.75	2.55	2.8
3.....			2.7	2.55	2.8	2.55	2.8
4.....		2.4	2.55	2.75	2.55	2.8	2.8
5.....		2.7	2.65	2.55	2.8	2.55	2.8
6.....		2.7	2.65	2.55	2.85	2.75	2.75
7.....		2.7	2.6	2.55	2.9	2.8	2.75
8.....		2.65	2.6	2.55	2.85	2.8	2.8
9.....		2.7	2.55	2.55	2.85	2.8	2.8
10.....		2.5		2.55	2.9	2.8	2.8
11.....		2.7	2.65	2.55	2.9	2.75	2.7
12.....		2.8	2.7	2.55	2.5	2.8	2.7
13.....		2.8	2.65	2.55	2.5	2.8	2.7
14.....			2.7	2.55	2.5	2.8	2.75
15.....		2.75	2.55	2.55	2.5	2.75	
16.....		2.8	2.55	2.55	2.5	2.8	
17.....		2.75	2.55	2.5	.0	2.75	
18.....		2.75	2.55	2.65	.0	2.6	
19.....		2.7	2.5	2.7	.0	2.6	
20.....		2.75	2.5	2.7	2.6	2.6	
21.....		2.75	2.5	2.65	2.6	2.6	
22.....		2.7	2.55	2.65	.0	2.6	
23.....		2.65	2.55	2.7	.0	2.6	
24.....		2.65	2.55	2.7	2.6	2.6	
25.....		2.7	2.55	2.7	2.6	2.65	
26.....	2.8	2.7	2.55	2.7	2.8	2.65	
27.....	2.8	2.75	2.55	2.7	2.85	2.7	
28.....			2.55	2.75	2.85	2.65	
29.....			2.55	2.7	2.9	2.5	
30.....	2.65	2.7	2.55	2.8	2.95	2.8	
31.....		2.7		2.75	2.55		

NOTE.—Canal was dry from Oct. 24, 1903, to Feb. 1, 1904, Feb. 16 to Mar. 3, 1904, Sept. 21 to Dec. 31, 1904, and May 1-3, 1905. No record for other days for which no gage height is given.

Rating tables for Owens River canal near Bishop, Cal.

January 1 to June 30, 1904.

Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.
<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>
1.60	7	2.00	15	2.40	27	2.80	42
1.70	9	2.10	18	2.50	31	2.90	46
1.80	11	2.20	20	2.60	34	3.00	50
1.90	13	2.30	23	2.70	38	3.10	54

July 1 to December 31, 1904.

1.60	5	2.00	13	2.40	24	2.80	37
1.70	6	2.10	16	2.50	27	2.90	41
1.80	8	2.20	18	2.60	30	3.00	45
1.90	11	2.30	21	2.70	34		

Monthly discharge of Owens River canal near Bishop, Cal., for 1904.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).
	Maximum.	Minimum.	Mean.	
February.....	7	0	3.4	196
March.....	46	0	33	2,029
April.....	46	34	41.4	2,464
May.....	46	38	45	2,767
June.....	38	31	33.5	1,993
July.....	37	27	33	2,029
August.....	37	32	35	2,152
September 1-20.....	47	35	43	1,706
The period.....				15,336

NOTE.—Discharge interpolated for missing days.

BISHOP CREEK CANAL NEAR BISHOP, CAL.

This station was established August 5, 1903. It was located at the footbridge below the waste gate near the house of A. Fitzgerald, $3\frac{1}{2}$ miles northwest of Bishop.

The channel is straight for 50 feet above and 100 feet below this station. The current is swift. The right bank is high and the left bank is low. Neither bank is liable to overflow. The bed of the stream is composed of sand and gravel and is fairly permanent.

Discharge measurements were made from the footbridge.

The gage was a vertical rod fastened to the bridge anchor.

Discharge measurements of Bishop Creek canal near Bishop, Cal., in 1903-1905.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1903.		<i>Feet.</i>	<i>Sec.-ft.</i>	1904.		<i>Feet.</i>	<i>Sec.-ft.</i>
July 30	R. S. Hawley.....		101	Aug. 10	L. M. Barnes.....	2.00	26
Aug. 5	.....do.....	3.0	72	Sept. 5	R. S. Hawley.....	4.10	118
15	.....do.....	2.89	61	1905.			
26	.....do.....	3.25	84	Mar. 17	R. J. Taylor.....	1.40	8.5
Sept. 5	.....do.....	3.17	81	Apr. 6	J. S. Evans.....	2.80	62
15	.....do.....	3.31	82	24	.....do.....	3.81	105
Oct. 23	.....do.....	1.97	27	May 12	.....do.....	3.95	108
1904.				June 1	.....do.....	4.00	105
Feb. 11	R. S. Hawley.....	2.43	54	July 7	.....do.....	3.70	77
Mar. 21	.....do.....	1.75	22	Aug. 4	.....do.....	4.10	122
Apr. 13	.....do.....	3.69	116	Sept. 11	.....do.....	3.85	97
21	.....do.....	3.62	113	Oct. 24	F. R. S. Buttemer.....	1.92	29
May 14	.....do.....	3.55	109	Nov. 22	.....do.....	1.05	1.8
June 16	.....do.....	1.90	30	Dec. 13	.....do.....	1.06	1.6
11	Clausen and Barnes.....	3.20	94	21	.....do.....	1.21	12.4

Daily gage height, in feet, of Bishop Creek canal near Bishop, Cal., for 1903-1905.

Day.	Aug.	Sept.	Day.	Aug.	Sept.	Day.	Aug.	Sept.
1903.			1903.			1903.		
1.....			11.....	3.1		21.....		3.3
2.....		3.15	12.....			22.....	3.1	3.3
3.....		3.15	13.....			23.....		3.3
4.....			14.....	3.1		24.....		3.4
5.....	3.0	3.15	15.....	2.9	3.3	25.....		3.4
6.....	3.1		16.....		3.3	26.....	3.25	3.4
7.....			17.....		3.25	27.....		3.4
8.....	3.1	3.3	18.....	3.1	3.25	28.....		3.4
9.....			19.....	3.0	3.3	29.....		
10.....	3.1	3.3	20.....		3.3	30.....		
						31.....		

Daily gage height, in feet, of Bishop Creek canal near Bishop, Cal., for 1903-1905—Con.

Day.	Oct.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1903-4.									
1.....						3.5	2.6	3.8	.....
2.....						3.5	2.6	3.0	.....
3.....					3.3	3.5	2.6	3.0	.....
4.....				1.7	3.3	3.7		3.0	.....
5.....					3.2	2.0	3.2	3.0	4.0
6.....	2.0			1.7	3.2	2.0	3.2	2.0	3.9
7.....				2.7	3.2	2.0	3.3	2.0	3.9
8.....				2.7	3.3	2.2	3.3	2.0	4.05
9.....					3.3	2.2	3.3	2.0	4.0
10.....		2.45		2.7	3.3			2.0	4.0
11.....				2.7	3.3			2.1	.....
12.....				3.7		1.7	3.2	2.1	4.05
13.....		2.45		3.7	3.8	1.7	3.2		.....
14.....					3.8	1.7	3.1	2.0	4.1
15.....				3.7	3.8	1.7	3.1	3.3	.....
16.....		2.45		3.5	3.7	1.7	3.1	3.3	4.05
17.....						1.7	3.6	3.3	4.05
18.....				3.5	3.8	1.7	3.6	3.4	.....
19.....		2.45		3.6	3.7		3.6	3.35	4.1
20.....					3.7	1.8	3.6	3.35	3.4
21.....			1.75		3.7	1.8	3.6		3.4
22.....				3.6	3.7	1.8	3.6	3.7	3.4
23.....		2.45		3.3	3.7	1.8	3.6	3.7	3.4
24.....					3.3	1.8		3.7	3.45
25.....				3.3	3.3	1.8	3.7		.....
26.....				3.3	3.3		3.7		.....
27.....				3.3	3.3	2.6	3.7		.....
28.....				3.6	3.2	2.6	3.7		.....
29.....				3.6	3.2	2.6	3.7		.....
30.....				3.6	3.2	2.6	3.8		3.9
31.....							3.8		.....

Day.	Aug.	Sept.	Day.	Aug.	Sept.	Day.	Aug.	Sept.
1905.			1905.			1905.		
1.....			11.....	3.5	3.5	21.....		2.9
2.....			12.....	3.5	3.5	22.....	3.5	2.9
3.....		4.0	13.....	3.5	3.5	23.....		2.9
4.....		4.0	14.....	3.5	3.5	24.....	3.5	.....
5.....		4.0	15.....	3.5	3.5	25.....	4.0	.....
6.....	3.9	3.5	16.....	3.5	3.5	26.....	4.0	.....
7.....	3.9	3.5	17.....	3.5	2.9	27.....		.....
8.....	3.9	3.5	18.....	3.5	2.9	28.....		.....
9.....	3.9	3.5	19.....	3.5	2.9	29.....		.....
10.....	3.5	3.5	20.....	3.5	2.9	30.....		.....
						31.....		.....

NOTE.—Canal dry from Oct. 30, 1903, to Feb. 9, 1904, Feb. 24 to Mar. 20, 1904, and Oct. 1 to Dec. 31, 1904. No record for days which gage heights are not given but the flow was fairly constant at a gage height of 3.4 feet from Sept. 29 to Oct. 5, 1903, and at a height of 2.0 feet from Oct. 6 to Oct. 29, 1903.

Rating table for Bishop Creek canal near Bishop, Cal., from Feb. 1 to Oct. 1, 1904.

Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.
<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>
1.60	15	2.30	48	3.00	81	3.70	116
1.70	20	2.40	53	3.10	86	3.80	121
1.80	24	2.50	57	3.20	91	3.90	126
1.90	28	2.60	62	3.30	96	4.00	131
2.00	33	2.70	67	3.40	101	4.10	136
2.10	38	2.80	72	3.50	106	4.20	141
2.20	43	2.90	76	3.60	111		

Monthly discharge of Bishop Creek canal near Bishop, Cal., for 1904.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).
	Maximum.	Minimum.	Mean.	
February.....	55	0	26.5	1,524
March.....	22	0	7.8	480
April.....	116	20	83.1	4,945
May.....	121	91	103.4	6,359
June.....	106	20	42.1	2,505
July.....	121	62	99	6,087
August.....	126	33	85	5,226
September.....	136	101	123	7,319
The period.....				34,445

NOTE.—Discharge interpolated for days on which the gage was not read.

FARMERS CANAL NEAR BISHOP, CAL.

This station was established August 6, 1903. It was located at the footbridge near the house of Robert Love and 3 miles north of Bishop, Cal.

The channel is straight for 300 feet above and 50 feet below the station. The current is sluggish. Both banks are low and are liable to overflow. The bed of the stream is sandy and shifting.

Discharge measurements were made from the footbridge, to which the gage is attached.

The gage was a vertical rod fastened to the bridge pier.

Discharge measurements of Farmers canal near Bishop, Cal., in 1903-1905.

Date.	Hydrographer.	Gage height.	Dis- charge.	Date.	Hydrographer.	Gage height.	Dis- charge.
1903.		<i>Feet.</i>	<i>Sec.-ft.</i>	1904.		<i>Feet.</i>	<i>Sec.-ft.</i>
July 31	R. S. Hawley.....	2.4	13.9	Oct. 14	Hawley, Clapp, and Taylor.....	2.41	8.1
Aug. 6	.....do.....	2.7	7.0	Nov. 1	R. J. Taylor.....	2.40	8.1
17	.....do.....	2.5	14.2	Dec. 1	.....do.....	2.30	7.2
25	.....do.....	2.42	9.7	1905.			
Sept. 3	.....do.....	2.58	10.4	Jan. 10	R. J. Taylor.....	2.20	6.2
14	.....do.....	2.55	16.2	Feb. 4	.....do.....	2.16	7.0
Oct. 23	.....do.....	2.54	16.0	Mar. 7	.....do.....	2.90	30
Nov. 27	.....do.....	2.55		Apr. 6	J. S. Evans.....	2.55	18.8
1904.				24	.....do.....	2.30	5.4
Feb. 3	R. S. Hawley.....	2.35	15.5	May 12	.....do.....	2.60	14.9
Apr. 2	.....do.....	2.60	11.3	June 1	.....do.....	2.60	20
20	.....do.....	2.83	17.0	July 7	.....do.....	2.75	24
May 14	.....do.....	3.02	27.0	Aug. 4	.....do.....	2.00	4.8
June 16	.....do.....	2.55	22.0	Sept. 11	.....do.....	2.55	16.4
July 11	Clausen and Barnes.....	3.05	15.0	Nov. 22	F. R. S. Buttemer.....	2.35	7.6
30	L. M. Barnes.....	3.05	24.0	Dec. 13	.....do.....	2.36	6.4
Aug. 25	.....do.....	3.05	26.0				
Sept. 6	R. S. Hawley.....	2.80	21.0				

Daily gage height, in feet, of Farmers canal near Bishop, Cal., for 1903-1905.

Day.	Aug.	Sept.	Day.	Aug.	Sept.	Day.	Aug.	Sept.
1903.			1903.			1903.		
1.....		2.40	11.....	2.60	21.....	2.85		
2.....		2.40	12.....	2.67	22.....	2.50	2.83	
3.....		2.43	13.....	2.75	23.....	2.50		
4.....		2.40	14.....		24.....	2.55	2.87	
5.....		2.45	15.....		25.....	2.50		
6.....		2.45	16.....	2.70	26.....	2.50	2.90	
7.....	2.40	2.50	17.....	2.70	27.....	2.55	2.93	
8.....	2.33	2.58	18.....	2.68	28.....	2.50	2.90	
9.....	2.40	2.67	19.....		29.....			
10.....	2.60	2.65	20.....	2.50	30.....	2.45	2.92	
					31.....			

Daily gage height, in feet, of *Farmers canal near Bishop, Cal.*, for 1903-1905—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1903-4.												
1	2.95	2.55	2.50		2.55	2.3			2.65	2.65	3.00	3.00
2	2.95			2.5			2.35	2.3				3.10
3	2.95	2.55	2.50		2.55		2.5	2.1	2.75	2.60	3.05	3.05
4	3.00			2.5						2.60		
5	3.03	2.55	2.50					2.4	2.75		3.10	
6				2.5	2.55			2.5		2.55		2.80
7	3.05	2.55	2.50		2.5		2.3				3.05	2.80
8		2.55								2.55		2.75
9	2.82	2.55	2.50	2.5							3.10	
10							2.3		3.05			2.70
11	2.80		2.50	2.5				2.6		2.60	3.05	
12							2.3					2.70
13	2.80		2.50	2.5				2.6	3.10	2.55	3.10	2.75
14		2.55										
15		2.55	2.48				2.3	2.65		2.50	3.10	2.70
16	2.90			2.55				2.85				
17	2.50		2.50						3.1	2.70	3.10	2.75
18				2.5				2.95				2.80
19	2.60		2.45				2.3				3.05	
20	2.50						2.6	2.75	3.0			2.90
21	2.50	2.55	2.50	2.5								2.95
22	2.50	2.55					2.9				3.10	
23	2.55		2.48	2.55				2.65			3.15	3.00
24												
25			2.50				2.0	2.6			3.05	
26	2.53			2.55								3.10
27			2.50				1.9					2.70
28		2.55					0	2.65				2.60
29	2.55		2.50	2.55			0		2.6			
30							0	2.70	2.9	3.05	3.10	2.60
31			2.50								3.10	
1904-5.												
1	2.50	2.40	2.30								2.5	
2								2.8	2.7			
3	2.45	2.35		2.2	2.15	3.0				2.6		
4					2.16		2.65				2.5	
5	2.50					2.9		2.8				
6			2.30	2.2			2.55		2.7			
7	2.55					2.9				2.75		
8		2.30									2.6	
9	2.45		2.30	2.2		2.9		2.6	2.75			
10				2.2								
11	2.45	2.30			2.15		1.8				2.6	
12								2.6		2.7		
13	2.40		2.25					2.6	2.9			
14				2.2	2.15	3.0	1.7			2.65		
15	2.40	2.30									2.65	
16			2.25					2.65	2.95			
17				2.15		2.9						
18	2.40	2.25					1.1			2.6	2.55	
19								2.95				
20			2.30	2.15					2.8			
21	2.35									2.6	2.2	
22		2.30					1.2					
23			2.30			2.75		2.95	2.7			
24							2.3					
25	2.40	2.30		2.15			2.3			2.6	2.65	
26								2.9			2.65	
27			2.20						2.7			
28	2.40			2.15		2.75	2.7			2.55		
29												
30								2.9	2.6			
31			2.15	2.15		2.75						

a Rock dam below gage rod was partly removed.

Rating tables for Farmers canal near Bishop, Cal.

January 1 to May 31, 1904.

Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.
<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>
2.00	4	2.30	10	2.60	18	2.90	30
2.10	6	2.40	12	2.70	21	3.00	35
2.20	8	2.50	15	2.80	25	3.10	40

June 1 to December 31, 1904.

2.10	3	2.40	8	2.70	15	3.00	23
2.20	5	2.50	10	2.80	18	3.10	26
2.30	6	2.60	13	2.90	21	3.20	29

Monthly discharge of Farmers canal near Bishop, Cal., for 1904.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).
	Maximum.	Minimum.	Mean.	
January.....	16	15	15.3	941
February.....	16	15	15.2	874
March.....	10	10	10	615
April.....	30	0	10.2	607
May.....	32	6	18.8	1,156
June.....	26	13	21	1,250
July.....	25	10	16	984
August.....	28	23	26	1,599
September....	26	13	19	1,131
October.....	12	7	9	553
November.....	8	6	6	357
December.....	6	4	5.7	350
The year.....	32	0	14.4	10,417

NOTE.—Discharge interpolated on days for which no gage height is given.

McNALLY CANAL NEAR BISHOP, CAL.

This station was established July 31, 1903. It was located at the head of the canal, $3\frac{3}{4}$ miles north of Bishop, Cal.

The channel is straight for 50 feet below the gage. The current is swift. Both banks are high and will not overflow. The bed of the stream is rocky and permanent.

Discharge measurements were made from a footbridge.

The gage was a vertical board fastened to the headworks of the canal. No regular gage reader could be obtained for this station.

Discharge measurements of McNally canal near Bishop, Cal., in 1903-1905.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1903.		<i>Feet.</i>	<i>Sec.-ft.</i>	1904.		<i>Feet.</i>	<i>Sec.-ft.</i>
July 31	R. S. Hawley.....	1.40	66	Aug. 25	L. M. Barnes.....	1.70	50
Aug. 6	do.....	1.40	66	Sept. 5	R. S. Hawley.....	1.75	46
17	do.....	1.36	63				
25	do.....	1.25	54	1905.			
Sept. 4	do.....	1.25	52	Mar. 17	R. J. Taylor.....	.50	11.9
14	do.....	1.26	52	Apr. 6	J. S. Evans.....	.70	25
21	do.....	1.10	40	Apr. 24	do.....	1.00	38
				May 12	do.....	1.05	43
1904.				June 1	do.....	1.10	56
Apr. 2	R. S. Hawley.....	.80	29	July 7	do.....	1.30	86
20	do.....	1.37	68	Aug. 4	do.....	1.50	53
May 14	do.....	1.52	83	Sept. 11	do.....	1.10	50
July 11	Clausen and Barnes....	1.55	81	Nov. 22	F. R. S. Buttemer....	.70	20
30	L. M. Barnes.....	1.90	81	Dec. 13a	do.....	.10	0

a Headgate shut down; no water flowing in canal.

Daily gage height, in feet, of McNally canal near Bishop, Cal., for 1904.

Day.	Apr.	May.	June.	July.	Day.	Apr.	May.	June.	July.
1.			1.50	1.60	16.				1.90
2.	0.80				17.				2.00
3.			1.80		18.				2.10
4.					19.				
5.					20.	1.35			
6.			1.70		21.				
7.			1.50		22.				
8.	.90				23.				
9.			1.70		24.				
10.					25.				
11.			1.30	1.55	26.			1.40	
12.			1.50		27.				
13.				1.90	28.				
14.		1.52	1.60		29.				
15.			1.50	1.80	30.				1.90
					31.				

NOTE.—Canal was dry during January, February, March, October, November, and December, 1904. No record during August and September, 1904.

Rating tables for McNally canal near Bishop, Cal.

April 1 to July 31, 1904.

Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.
<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>
0.70	22	1.10	50	1.50	78	1.90	106
.80	29	1.20	57	1.60	85	2.00	113
.90	36	1.30	64	1.70	92	2.10	120
1.00	43	1.40	71	1.80	99		

August 1 to December 31, 1904.

Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.
<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>
1.40	10	1.60	30	1.80	62
1.50	20	1.70	45	1.90	82

Monthly discharge of McNally canal near Bishop, Cal., for 1904.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).
	Maximum.	Minimum.	Mean.	
April.....	68	29	50.6	3,007
May.....			80	4,919
June.....	99	64	80	4,760
July.....	120	83	100	6,148
The period.....				18,834

NOTE.—Discharge interpolated for days on which gage was not read.

GEORGE COLLINS'S CANAL NEAR BISHOP, CAL.

This station was established August 17, 1903. It was located at the footbridge 3 miles east and half a mile north of Bishop.

The channel is straight for 75 feet above and for 50 feet below the station. The current is sluggish. The right bank is low and the left bank is high. Neither bank is liable to overflow. The bed of the stream is composed of sand and is fairly permanent.

Discharge measurements were made from the bridge.

The gage was a vertical rod fastened to the bridge near the house of Arthur Wines.

Discharge measurements of George Collins's canal near Bishop, Cal., in 1903-1905.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1903.		<i>Feet.</i>	<i>Sec.-ft.</i>	1904.		<i>Feet.</i>	<i>Sec.-ft.</i>
July 31	R. S. Hawley .....	.....	4.9	Oct. 10	Hawley and Taylor....	1.03	1.8
Aug. 11	do. ....	.....	5.6	Nov. 1	R. J. Taylor.....	.80	.7
17	do.	1.00	6.3				
27	do.	1.01	6.0	1905.			
Sept. 7	do. ....	.94	5.5	May 2	J. S. Evans.....	1.10	12.1
14	do. ....	.98	5.5	25	do.	1.35	14
Oct. 23	do. ....	.60	2.8	June 28	do.	1.00	5.2
				July 26	do.	1.00	5.9
1904.				Aug. 9	do. ....	.60	4.0
Feb. 4	R. S. Hawley .....	.30	1.5	Sept. 5	do. ....	.60	4.8
Apr. 2	do.	1.20	11.1	14	do. ....	.50	5.2
14	do. ....	.70	4.2	Oct. 3	do. ....	.65	8.8
June 8	do.	1.58	14.0	25	F. R. S. Buttemer....	.78	3.4
July 12	Clausen and Barnes....	1.50	9.6	Nov. 23	do. ....	.82	3.4
Aug. 6	L. M. Barnes.....	1.60	9.7	Dec. 11	do. ....	.80	2.5
20	do.	1.55	9.3				

Daily gage height, in feet, of George Collins's canal near Bishop, Cal., for 1903-1905.

Day.	Aug.	Sept.	Day.	Aug.	Sept.	Day.	Aug.	Sept.
1903.			1903.			1903.		
1.....		1.03	11.....		0.95	21.....	0.70	1.35
2.....		.98	12.....		.92	22.....	.73	1.35
3.....		.97	13.....		.93	23.....	.70	1.35
4.....		.98	14.....		.95	24.....	.90	1.35
5.....		.97	15.....		.95	25.....	.90	1.35
6.....		.98	16.....	1.00	.95	26.....	.90	1.35
7.....		.97	17.....	.98	.95	27.....	.97	1.35
8.....		.95	18.....	.92	.97	28.....	1.03	1.20
9.....		.95	19.....	.93	.95	29.....	1.02	1.20
10.....		.95	20.....	.92	1.35	30.....	1.03	1.20
						31.....	1.04	.....

Day.	Oct.	Nov.	Dec.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1903-4.											
1.....	0.95	0.75	0.75	.....	0.2	1.3	0.6	1.5	1.3	1.5	1.55
2.....	.95	.75	.75	.....	.2	1.3	.6	1.5	1.3	.....	.....
3.....	.95	.75	.75	.....	.2	1.3	.6	1.5	1.3	1.5	1.49
4.....	.95	.75	.75	.....	.2	1.2	.6	1.6	.....	.....	1.1
5.....	.95	.75	.70	.....	.2	1.2	.6	.....	1.3	.....	.....
6.....	.95	.70	.65	.....	.2	1.2	.7	.....	.....	1.5	.5
7.....	.95	.70	.65	.....	.....	1.2	.7	.....	1.4	.....	.....
8.....	.95	.70	.65	.....	.....	1.2	.6	1.6	1.4	1.3	1.0
9.....	.95	.70	.65	.....	.....	.9	.6	.....	1.4	.....	1.4
10.....	.95	.70	.65	.....	.....	.9	.8	1.6	.....	1.5	.....
11.....	.95	.75	.65	0.2	.....	.9	.8	1.6	1.4	.....	1.5
12.....	.80	.75	.65	.2	.....	.9	1.1	1.5	.....	1.5	.....
13.....	.80	.75	.63	.2	.....	.7	1.3	1.6	1.35	.....	1.5
14.....	.80	.75	.62	.2	.....	.7	1.3	.....	.....	1.5	.....
15.....	.80	.75	.63	.2	.....	.7	1.6	1.5	1.3	.....	1.3
16.....	.80	.75	.62	.3	.....	.7	1.6	.....	.....	1.5	1.1
17.....	.80	.50	.63	.6	.2	.8	1.6	1.6	1.3	.....	1.1
18.....	.80	.50	.60	.3	.3	.8	1.6	.....	.....	1.6	1.4
19.....	.80	.50	.60	.2	.2	.9	1.6	1.5	1.2	.....	.....
20.....	.80	.50	.60	.2	.2	1.0	1.6	.....	.....	1.5	1.4
21.....	.85	.55	.....	.2	.....	1.0	1.6	1.6	.8	.....	1.4
22.....	.85	.65	.....	.3	.....	1.0	1.5	.....	.....	1.5	.....
23.....	.75	.55	.....	.3	.5	1.1	1.4	1.5	1.2	.....	1.5
24.....	.75	.55	.....	.6	.3	1.1	1.5	.....	.....	1.55	.....
25.....	.75	.55	.....	.5	.3	1.2	1.5	1.5	1.5	.....	.....
26.....	.75	.55	.....	.5	1.4	1.1	1.5	1.5	.....	1.5	.....
27.....	.75	.62	.....	.3	1.43	1.1	1.6	1.5	1.5	.....	.....
28.....	.75	.70	.....	.4	1.4	1.0	1.6	1.4	.....	.....	.....
29.....	.75	.70	.....	.4	1.4	.8	1.6	1.4	1.55	1.5	.....
30.....	.75	.85	.....	.....	1.4	.6	1.6	1.3	1.5	.....	1.2
31.....	.75	.....	.....	.....	1.3	.....	1.6	.....	1.5	1.55	.....

Daily gage height, in feet, of George Collins's canal near Bishop, Cal., for 1903-1905—
Continued.

Day.	Oct.	May.	June.	July.	Aug.	Sept.	Oct.	Day.	Oct.	May.	June.	July.	Aug.	Sept.	Oct.
1904-5.								1904-5.							
1.....	1.0		0.9	.....	0.8	.....	1.0	16.....	1.0	1.0	1.4	1.2	.....	.....	.....
2.....		0.9	1.0	.....	.8	0.8	.9	17.....	.9	1.0	1.4	1.2	0.9	.....	.....
3.....	1.3		1.0	0.8	.....	.8	.....	18.....	.6	1.0	1.5	.....	.9	1.2	.....
4.....	1.3	.9	.....	.....	.....	.....	.9	19.....	.....	1.0	1.4	.....	.....	.....	.....
5.....			1.0	.....	.5	.8	.....	20.....	.....	1.0	.....	1.0	.....	1.2	.....
6.....	1.6		1.0	.8	.....	.....	.9	21.....	.....	.....	1.0	.....	.9	1.1	.....
7.....		1.0	1.2	.9	.5	.9	.....	22.....	.....	1.0	1.0	1.0	.....	.....	.....
8.....			1.5	.....	.....	.....	.....	23.....	.....	.....	.....	.....	.8	1.1	.....
9.....		.8	1.5	1.4	.5	1.2	.....	24.....	.....	1.0	.9	.....	.8	1.1	.....
10.....			1.4	.....	.5	.....	.....	25.....	.....	.....	.9	.....	.....	.....	.....
11.....	.7	.8	.8	1.4	.....	1.2	.....	26.....	.....	.....	1.0	.9	.....	1.0	.....
12.....			1.5	1.4	.....	1.2	.....	27.....	.....	.6	.....	.....	.9	.....	.....
13.....	.6		1.6	.....	.8	.....	.....	28.....	.....	.5	.....	.....	.....	1.0	.....
14.....		.8	1.6	1.4	.9	.....	.....	29.....	.....	.5	.8	.9	.9	.....	.....
15.....	1.0		1.4	.....	.....	1.2	.....	30.....	.....	.6	.8	.....	.9	.....	.....
								31.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—Canal was dry from Dec. 21, 1903, to Feb. 10, 1904; Mar. 7-16, 21-22, 1904; Oct. 17 to Dec. 31, 1904, and Oct. 6 to Dec. 31, 1905. No record for other days for which gage heights are not given.

Rating tables for George Collins's canal near Bishop, Cal.

January 1 to June 30, 1904.

Gage height.	Discharge.	Gage height.	Discharge.	Gage height.	Discharge.	Gage height.	Discharge.
<i>Feet.</i>	<i>Sec.-ft.</i>	<i>Feet.</i>	<i>Sec.-ft.</i>	<i>Feet.</i>	<i>Sec.-ft.</i>	<i>Feet.</i>	<i>Sec.-ft.</i>
0.30	1	0.70	5	1.10	9	1.40	12
.40	2	.80	6	1.20	10	1.50	13
.50	3	.90	7	1.30	11	1.60	15
.60	4	1.00	8				

July 1 to December 31, 1904.

0.80	0	1.10	3	1.30	6	1.50	9
.90	1	1.20	4	1.40	7	1.60	11
1.00	2						

Monthly discharge of George Collins's canal near Bishop, Cal., for 1904.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).
	Maximum.	Minimum.	Mean.	
February.....	4	0	1.1	63
March.....	12	0	2.7	166
April.....	11	4	7.9	470
May.....	15	4	10.5	646
June.....	15	12	13.7	815
July.....	10	0	6	369
August.....	11	6	9	553
September.....	13	0	6	357
October 1-20.....	11	0	3.	119
The period.....				3,558

NOTE.—Discharge interpolated on days for which there is no record.

BISHOP CREEK NEAR BISHOP, CAL.

This station, which was located at the wagon bridge on the Bishop road, about 4 miles southeast of Bishop and 2 miles below the mouth of Bishop Creek canyon, in sec. 9, T. 7 S., R. 32 E., was established August 9, 1903, and discontinued February 28, 1911.

The North Hillside, South Hillside, and Power canals head above the station. The amount of water in these canals is independent of the stage of the creek and depends on gate regulation. No record has been made of the amount diverted by the canals. The drainage area above the mouth of Bishop Creek canyon is approximately 63 square miles.

The gage is a vertical staff on the right bank at the bridge.

Discharge measurements were made from the bridge at the gage.

From May to August, 1907, daily flow was determined from readings on a 30-foot weir located 3 miles above the mouth of the canyon and above all diversions.

On June 25, 1909, the Nevada-California Power Co.'s equalizing dam at intake No. 2 went out and the bridge was carried away. The gage was left intact, but it was removed August 15, 1909, in building a new bridge. The bridge was completed August 23, and a new gage put in August 31 at approximately the original datum.

During the intervening time readings were taken from a temporary gage the datum of which was approximately the same as that of the old gage.

Both banks of the stream are high and the current is swift. The channel is rocky and is fairly permanent.

Discharge measurements of Bishop Creek near Bishop, Cal., in 1903-1906.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1903.		<i>Feet.</i>	<i>Sec.-ft.</i>	1905.		<i>Feet.</i>	<i>Sec.-ft.</i>
Aug. 9	R. S. Hawley	2.45	121	Jan. 11	R. J. Taylor	1.40	26
19	do.	2.17	95	Feb. 8	do.	1.55	30
25	do.	2.20	96	Mar. 4	do.	1.55	31
Sept. 3	do.	1.99	67	Apr. 3	J. S. Evans	1.65	42
7	do.	1.80	52	18	do.	1.57	33
15	do.	1.65	40	May 5	do.	2.30	94
21	do.	1.60	38	June 21	do.	3.80	391
Oct. 24	do.	1.39	27	July 10	do.	3.60	338
Nov. 20	do.	1.41	26	27	do.	2.75	178
Dec. 26	do.	1.35	25	Aug. 10	do.	2.50	124
1904.				Sept. 7	do.	2.00	58
Jan. 23	R. S. Hawley	1.40	30	22	do.	1.80	46
Feb. 20	do.	1.50	33	Oct. 25	F. R. S. Buttemer	1.35	21
Mar. 14	do.	1.65	42	Nov. 23	do.	1.52	24
Apr. 8	Murphy, Bennett, and Hawley	1.60	34	Dec. 11	do.	1.67	23
25	R. S. Hawley	2.05	75	21	do.	1.21	12.4
30	do.	2.00	67	1906.			
May 17	do.	2.95	180	Jan. 1 ^a	F. R. S. Buttemer	1.95	20
June 8	do.	3.65	342	16	do.	1.76	32
July 12	Clausen and Barnes	3.00	197	24	do.	1.83	38
Aug. 8	L. M. Barnes	3.30	240	Aug. 24	Shuey and Hawley	3.10	241
Sept. 7	R. S. Hawley	2.10	74	Nov. 5	G. R. Shuey	1.71	35
Oct. 15	Hawley, Clapp, and Taylor	2.30	95	Dec. 3	do.	1.90	52
Nov. 9	R. J. Taylor	1.75	49				
Dec. 5	do.	1.39	20				

^a Channel obstructed by rocks at time of measurement.

Discharge measurements of Bishop Creek and diversion canals near Bishop, Cal., in 1907-1911.

Date.	Hydrographer.	Gage height.	Discharge.		
			Creek.	Canals.	Total.
1907.		<i>Feet.</i>	<i>Sec.-ft.</i>	<i>Sec.-ft.</i>	<i>Sec.-ft.</i>
Jan. 25	G. R. Shuey.....	1.95	53	0	53
Feb. 14	.....do.....	1.90	57	1.3	58
Mar. 9	.....do.....	1.80	45	1.2	46
Mar. 18	.....do.....	2.05	70	0	70
Apr. 5	.....do.....	1.90	50	1.4	51
Apr. 24	.....do.....	2.40	112	23	135
Apr. 29	.....do.....	2.55	135	19	154
Sept. 6	R. B. Post.....	2.30	89	16	105
Sept. 22	.....do.....	2.10	56	16	72
Oct. 4	.....do.....	1.87	43	28	71
Oct. 28	.....do.....	1.90	44	11	55
Nov. 16	.....do.....	1.95	49	6	55
Dec. 9	.....do.....	1.58	37	10	47
1908.					
Feb. 23	R. B. Post.....	2.00	73	0	73
Mar. 26	.....do.....	2.10	70	10	80
Mar. 13	.....do.....	2.10	72	12	84
June 19	.....do.....	2.30	97	9	106
July 15	Lamb and Post.....	2.95	184	36	220
Aug. 3	W. A. Lamb.....	3.50	319	31	350
Aug. 25	.....do.....	1.96	60	16	76
Sept. 16	.....do.....	2.00	60	19	79
Nct. 7	.....do.....	2.05	64	17	81
O 22	Lamb and Barrows.....	1.94	54	10	64
ov. 6	A. T. Barrows.....	2.09	72	3	75
25	Barrows and Lee.....	1.92	56	12	68
1909.					
Jan. 21	Haines and Lee.....	1.86	56.6	2.78	59.4
Feb. 10	R. E. Haines.....	2.00	60.6	1.79	62.4
Feb. 26	.....do.....	1.93	53.4	3.09	56.5
Mar. 16	.....do.....	1.91	52.6	7.46	60.1
Apr. 7	.....do.....	1.95	55.1	17.5	75.6
Apr. 28	.....do.....	2.32	120	30.6	151
May 18	.....do.....	2.40	115	42.6	158
June 9	.....do.....	3.25	267	52.8	320
July 21	.....do.....	2.75	261	(a)	.....
Aug. 10	.....do.....	2.05	108	36.6	145
Aug. 31	.....do.....	2.22	111	51.1	162
Sept. 21	.....do.....	1.85	69.7	19.1	88.8
Oct. 12	.....do.....	1.82	63.0	18.0	81.0
Nov. 2	.....do.....	1.80	58.2	12.7	70.9
Nov. 23	.....do.....	1.87	68.4	6.16	74.6
1910.					
Mar. 8	R. E. Haines.....	2.22	118	2.9	121
Mar. 29	.....do.....	1.74	56	11	67
Apr. 20	.....do.....	2.30	130	4	134
May 10	.....do.....	2.55	168	13	181
June 24	C. H. Lee.....	2.10	97	32	129
July 11	.....do.....	2.30	112	51	163
Aug. 2	Lee and Wood.....	1.98	86	46	132
Aug. 23	F. G. Wood.....	2.00	88	33	121
Sept. 17	G. T. Peekema.....	1.60	43	22	65
Oct. 21	.....do.....	2.00	90	13	103
Nov. 17	.....do.....	1.72	58	9.5	68
Dec. 20	.....do.....	1.72	47	14	61
1911.					
Jan. 24	G. T. Peekema.....	1.85	67	(a)	.....

^a Canals not measured.

NOTE.—Gage heights refer to the river discharge only as the canals are dependent on gate regulation.

Daily gage height, in feet, of Bishop Creek near Bishop, Cal., for 1903-1911.

Day.	Aug.	Sept.	Day.	Aug.	Sept.	Day.	Aug.	Sept.				
1903.			1903.			1903.						
1.....		2.0	11.....	2.5	1.8	21.....	2.2	1.6				
2.....		1.95	12.....	2.5	1.75	22.....	2.2	1.7				
3.....		1.9	13.....	2.5	1.75	23.....	2.25	1.6				
4.....		2.0	14.....	2.4	1.7	24.....	2.2	1.6				
5.....		2.0	15.....	2.3	1.7	25.....	2.15	1.6				
6.....		2.0	16.....	2.3	1.65	26.....	2.15	1.65				
7.....		2.0	17.....	2.3	1.6	27.....	2.1	1.6				
8.....		1.9	18.....	2.2	1.6	28.....	2.05	1.6				
9.....		1.9	19.....	2.2	1.6	29.....	2.05	1.7				
10.....		1.8	20.....	2.5	1.6	30.....	2.05	1.65				
						31.....	2.0	.....			
Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1903-4.												
1.....	1.6	1.45	1.3	1.4	1.4	1.6	1.6	2.0	3.2	3.3	3.7	2.1
2.....	1.6	1.45	1.3	1.4	1.4	1.6	1.6	2.0	3.3	3.3	3.6	2.1
3.....	1.7	1.45	1.3	1.4	1.4	1.6	1.6	2.0	3.7	3.1	3.5	2.1
4.....	1.7	1.45	1.35	1.4	1.4	1.6	1.6	2.0	3.8	3.1	3.5	2.1
5.....	1.7	1.45	1.35	1.4	1.5	1.6	1.6	2.0	3.9	3.2	3.5	2.1
6.....	1.7	1.45	1.35	1.4	1.5	1.6	1.6	2.0	3.8	3.2	3.6	2.0
7.....	1.7	1.45	1.4	1.4	1.5	1.6	1.5	2.1	3.7	3.15	3.7	1.95
8.....	1.7	1.45	1.4	1.4	1.5	1.6	1.6	2.1	3.6	3.1	3.8	1.95
9.....	1.7	1.45	1.4	1.4	1.5	1.6	1.7	2.1	3.6	3.1	3.7	1.9
10.....	1.7	1.45	1.4	1.4	1.5	1.6	1.7	2.2	3.6	3.1	3.7	1.9
11.....	1.7	1.45	1.4	1.4	1.5	1.7	1.7	2.4	3.7	3.0	3.6	1.85
12.....	1.7	1.45	1.4	1.4	1.5	1.7	1.7	2.5	3.7	2.9	3.2	1.85
13.....	1.7	1.45	1.4	1.4	1.5	1.7	1.7	2.6	3.8	2.9	3.0	1.85
14.....	1.7	1.45	1.4	1.4	1.5	1.7	1.7	2.8	3.9	2.9	2.9	1.85
15.....	1.65	1.45	1.4	1.4	1.5	1.7	1.8	2.8	4.0	2.8	2.9	1.8
16.....	1.65	1.45	1.45	1.4	1.5	1.7	1.8	2.8	4.1	2.8	2.8	1.8
17.....	1.7	1.4	1.45	1.4	1.5	1.6	1.8	2.9	4.1	2.8	2.7	1.8
18.....	1.65	1.4	1.45	1.4	1.5	1.6	1.8	2.9	4.1	2.8	2.7	1.8
19.....	1.5	1.4	1.45	1.4	1.5	1.6	1.8	2.8	4.1	2.8	2.6	1.8
20.....	1.5	1.4	1.45	1.4	1.5	1.6	1.7	2.8	4.0	3.0	2.6	1.8
21.....	1.45	1.4	1.45	1.4	1.5	1.5	1.6	2.9	4.0	3.2	2.6	1.85
22.....	1.45	1.4	1.45	1.4	1.5	1.5	1.8	2.9	3.9	3.2	2.7	1.85
23.....	1.45	1.4	1.45	1.4	1.5	1.6	2.1	2.9	3.9	3.1	2.7	1.9
24.....	1.45	1.4	1.45	1.4	1.5	1.6	2.4	3.0	3.7	3.2	2.6	1.9
25.....	1.45	1.4	1.45	1.4	1.5	1.9	2.3	3.0	3.7	3.5	2.5	2.0
26.....	1.45	1.4	1.45	1.4	1.5	1.8	2.3	3.2	3.7	3.5	2.4	1.9
27.....	1.45	1.4	1.4	1.4	1.5	1.7	2.2	3.1	3.5	3.5	2.5	1.85
28.....	1.45	1.4	1.4	1.4	1.6	1.8	2.1	3.1	3.4	3.5	2.5	1.9
29.....	1.45	1.4	1.4	1.4	1.6	1.7	2.0	3.1	3.4	3.5	2.3	2.0
30.....	1.45	1.4	1.4	1.4	.....	1.6	2.0	3.1	3.4	3.6	2.1	2.1
31.....	1.45	.....	1.4	1.4	.....	1.6	.....	3.2	.....	3.7	2.1	.....
1904-5.												
1.....	2.1	1.9	1.5	1.4	1.5	1.55	1.8	2.5	2.9	3.4	2.5	2.1
2.....	2.2	1.9	1.5	1.4	1.5	1.55	1.8	2.5	2.9	3.3	2.3	2.1
3.....	2.4	1.8	1.5	1.4	1.45	1.5	1.75	2.5	2.9	3.2	2.3	2.1
4.....	2.4	1.8	1.45	1.4	1.5	1.6	1.75	2.3	2.9	3.3	2.3	2.0
5.....	2.4	1.8	1.45	1.4	1.5	1.6	1.75	2.3	3.0	3.3	2.2	2.0
6.....	2.3	1.85	1.4	1.4	1.5	1.6	1.8	2.1	3.1	3.3	2.2	1.9
7.....	2.2	1.8	1.4	1.45	1.5	1.6	1.8	2.1	3.3	3.4	2.2	1.8
8.....	2.2	1.75	1.45	1.45	1.5	1.6	1.8	2.1	3.4	3.4	2.3	1.9
9.....	2.2	1.7	1.45	1.4	1.5	1.6	1.75	2.0	3.3	3.5	2.4	1.9
10.....	2.15	1.65	1.5	1.4	1.55	1.6	1.75	2.0	3.4	3.6	2.5	1.9
11.....	2.15	1.65	1.5	1.4	1.5	1.6	1.7	2.0	3.5	3.7	2.6	1.8
12.....	2.1	1.6	1.45	1.4	1.5	1.65	1.7	2.1	3.6	3.7	2.5	1.7
13.....	2.1	1.6	1.45	1.4	1.45	1.65	1.7	2.1	3.6	3.6	2.4	1.8
14.....	2.05	1.6	1.45	1.4	1.45	1.7	1.75	2.1	3.6	3.2	2.35	1.8
15.....	2.0	1.6	1.45	1.45	1.45	1.7	1.75	2.2	3.7	3.0	2.3	1.7
16.....	2.0	1.55	1.5	1.45	1.4	1.7	1.75	2.2	3.8	2.8	2.2	1.7
17.....	2.0	1.55	1.5	1.45	1.4	1.65	1.75	2.5	3.8	2.7	2.2	1.9
18.....	1.95	1.5	1.45	1.5	1.4	1.65	1.7	2.5	3.8	2.6	2.2	1.8
19.....	1.95	1.5	1.4	1.5	1.4	1.7	1.7	2.6	3.8	2.6	2.2	1.9
20.....	1.95	1.5	1.4	1.45	1.4	1.7	1.7	2.7	3.8	2.5	2.2	1.8

Daily gage height, in feet, of Bishop Creek near Bishop, Cal., for 1903-1911—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1904-5.												
21.....	1.9	1.5	1.4	1.45	1.4	1.7	1.7	2.5	3.8	2.5	2.3	1.9
22.....	1.9	1.5	1.4	1.4	1.4	1.7	1.7	2.5	3.8	2.5	2.2	1.8
23.....	1.95	1.5	1.4	1.4	1.5	1.7	1.8	2.5	3.7	2.6	2.2	1.8
24.....	1.95	1.5	1.4	1.4	1.5	1.7	1.8	2.6	3.6	2.6	2.2	1.9
25.....	2.0	1.5	1.4	1.4	1.5	1.75	2.0	2.6	3.3	2.7	2.2	1.9
26.....	2.0	1.5	1.35	1.4	1.5	1.75	2.4	2.6	3.3	2.7	2.2	1.9
27.....	2.0	1.5	1.35	1.4	1.5	1.8	2.4	2.7	3.2	2.8	2.2	1.9
28.....	1.9	1.5	1.4	1.4	1.5	1.8	2.5	2.8	3.2	2.8	2.1	1.8
29.....	1.85	1.5	1.4	1.45	.....	1.8	2.5	2.8	3.2	2.7	2.1	1.8
30.....	1.95	1.5	1.4	1.45	.....	1.8	2.5	2.8	3.3	2.6	2.1	1.7
31.....	1.9	.....	1.4	1.45	.....	1.8	.....	2.8	.....	2.5	2.0	.....
1905-6.												
1.....	1.9	1.4	1.5	1.95	1.6	1.6	1.8	2.5	2.45	4.75	4.0	2.8
2.....	1.9	1.4	1.4	1.85	1.65	1.65	1.7	2.4	2.4	4.9	3.9	2.75
3.....	1.8	1.4	1.5	1.85	1.6	1.6	1.8	2.45	2.45	5.2	3.8	2.7
4.....	1.9	1.4	1.4	1.6	1.65	1.65	1.8	2.5	2.5	5.5	3.7	2.7
5.....	1.8	1.4	1.4	1.6	1.6	1.6	1.8	2.55	2.55	5.3	3.75	2.65
6.....	1.8	1.4	1.5	1.6	1.65	1.65	1.9	2.6	2.5	5.6	3.75	2.6
7.....	1.8	1.4	1.5	1.5	1.6	1.65	1.95	2.65	2.6	.....	3.8	2.65
8.....	1.8	1.5	1.5	1.5	1.6	1.7	1.9	2.75	2.75	.....	3.7	2.65
9.....	1.8	1.5	1.5	1.5	1.6	1.7	1.9	2.9	2.9	.....	3.65	2.6
10.....	1.8	1.4	1.4	1.55	1.55	1.7	1.9	2.95	3.7	.....	3.75	2.65
11.....	1.8	1.4	1.4	1.65	1.6	1.7	1.75	2.85	3.9	.....	3.8	2.6
12.....	1.7	1.5	1.5	1.6	1.55	1.8	1.75	2.75	3.75	.....	3.7	2.6
13.....	1.7	1.5	1.5	1.5	1.6	1.5	1.7	2.9	3.65	.....	3.65	2.5
14.....	1.7	1.4	1.5	1.5	1.6	2.0	1.6	2.85	3.6	.....	3.65	2.5
15.....	1.7	1.5	1.5	1.75	1.6	2.0	1.7	2.8	3.7	5.45	3.7	2.4
16.....	1.6	1.4	1.5	1.8	1.6	2.2	1.8	2.8	3.85	5.4	3.7	2.45
17.....	1.6	1.5	1.4	1.9	1.6	2.2	1.8	2.85	3.8	5.5	3.75	2.4
18.....	1.6	1.5	1.4	2.0	1.6	2.2	1.85	2.9	3.9	5.4	3.7	2.4
19.....	1.6	1.6	1.5	2.1	1.6	2.1	1.85	2.95	3.9	5.3	3.7	2.35
20.....	1.5	1.6	1.5	2.1	1.6	2.1	1.9	3.0	4.2	5.1	3.65	2.4
21.....	1.5	1.5	1.4	2.3	1.65	2.0	1.95	2.95	4.5	5.0	3.6	2.3
22.....	1.5	1.5	1.5	2.15	1.7	2.0	2.0	2.8	4.7	5.0	3.7	2.25
23.....	1.5	1.5	1.4	2.0	1.6	2.0	2.0	2.85	4.75	5.3	3.65	2.2
24.....	1.4	1.5	1.5	1.9	1.65	1.9	1.9	2.75	4.8	5.0	3.65	2.3
25.....	1.4	1.5	1.4	1.85	1.85	1.9	2.0	2.8	4.9	5.4	3.6	2.2
26.....	1.4	1.5	1.4	1.8	1.6	1.95	1.95	2.75	4.95	5.1	3.55	2.2
27.....	1.4	1.5	1.5	1.7	1.65	1.9	2.55	2.7	4.5	5.1	3.4	2.2
28.....	1.4	1.5	1.5	1.75	1.65	1.9	2.55	2.65	4.35	5.3	3.35	2.25
29.....	1.4	1.6	1.6	1.65	.....	1.85	2.55	2.6	4.2	4.4	2.8	2.2
30.....	1.4	1.6	1.7	1.6	.....	1.9	2.5	2.5	4.4	4.4	2.85	2.2
31.....	1.4	.....	1.6	1.65	.....	1.85	.....	2.6	.....	4.3	2.85	.....
1906-7.												
1.....	2.2	1.5	1.85	1.9	1.95	1.9	2.0	.....	.....	.....	.....	.....
2.....	2.2	1.45	1.85	1.85	2.0	2.0	2.0	.....	.....	.....	.....	.....
3.....	2.15	1.35	1.9	1.9	2.0	1.95	2.0	.....	.....	.....	.....	.....
4.....	2.2	1.4	1.95	1.9	1.95	1.95	2.0	.....	.....	.....	.....	.....
5.....	2.2	1.4	1.95	1.95	1.95	1.9	2.0	.....	.....	.....	.....	.....
6.....	2.1	1.45	1.9	1.9	1.9	1.95	1.9	.....	.....	.....	.....	2.3
7.....	2.15	1.45	1.85	1.95	2.0	1.85	2.0	.....	.....	.....	.....	.....
8.....	2.2	1.4	1.9	1.9	1.9	1.9	2.0	.....	.....	.....	.....	2.15
9.....	2.1	1.45	1.85	2.0	1.95	1.9	2.0	.....	.....	.....	.....	2.05
10.....	2.0	1.4	1.9	2.0	1.95	1.95	2.0	.....	.....	.....	.....	2.2
11.....	2.0	1.5	2.0	2.0	1.9	1.9	2.0	.....	.....	.....	.....	2.15
12.....	1.95	1.65	1.95	2.0	1.95	1.95	2.1	.....	.....	.....	.....	2.25
13.....	1.9	1.65	2.0	2.0	1.95	1.9	2.15	.....	.....	.....	.....	2.25
14.....	1.9	1.7	2.0	2.0	2.0	1.95	2.0	.....	.....	.....	.....	2.02
15.....	1.8	1.7	1.95	2.0	1.9	1.9	2.0	.....	.....	.....	.....	2.01
16.....	1.75	1.65	2.0	2.1	1.9	1.95	2.0	.....	.....	.....	.....	2.05
17.....	1.75	1.65	1.95	2.2	1.9	1.9	2.0	.....	.....	.....	.....	2.01
18.....	1.7	1.65	2.0	2.0	1.95	1.95	2.0	.....	.....	.....	.....	1.95
19.....	1.7	1.7	1.9	2.1	1.95	1.95	2.0	.....	.....	.....	.....	2.0
20.....	1.75	1.65	1.95	2.0	1.95	2.0	2.0	.....	.....	.....	.....	2.0
21.....	1.75	1.65	1.9	2.05	2.0	2.0	2.0	.....	.....	.....	.....	2.05
22.....	1.75	1.6	1.95	2.0	1.95	2.0	2.05	.....	.....	.....	.....	2.0
23.....	1.75	1.6	1.9	2.05	1.9	2.1	2.05	.....	.....	.....	.....	1.95
24.....	1.8	1.65	1.9	2.05	1.95	2.0	2.05	.....	.....	.....	.....	1.9
25.....	1.75	1.65	1.9	1.95	1.9	2.0	2.05	.....	.....	.....	.....	1.85

Daily gage height, in feet, of Bishop Creek near Bishop, Cal., for 1903-1911—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1906-7.												
26.....	1.7	1.7	1.95	1.95	1.95	2.0	2.05	.....	.....	.....	.....	1.9
27.....	1.7	1.85	2.0	2.0	1.9	2.0	2.5	.....	.....	.....	.....	1.85
28.....	1.65	1.8	2.0	1.95	2.0	2.0	.....	.....	.....	.....	.....	1.8
29.....	1.6	1.8	1.95	1.95	.....	1.95	2.55	.....	.....	.....	.....	1.85
30.....	1.55	1.8	1.95	1.95	.....	2.0	.....	.....	.....	.....	.....	1.8
31.....	1.55	.....	2.0	1.95	.....	2.0	.....	.....	.....	.....	.....	.....
1907-8.												
1.....	1.85	1.8	1.75	2.1	2.0	1.95	2.0	2.2	2.3	2.8	2.7	2.25
2.....	2.0	1.8	1.7	2.15	1.95	1.95	2.0	2.4	2.25	2.5	3.5	2.2
3.....	1.95	1.8	1.7	2.3	2.0	1.85	1.95	2.5	2.15	2.55	3.6	2.0
4.....	1.8	1.9	1.6	2.1	2.0	2.1	1.9	2.3	1.9	2.6	3.7	2.15
5.....	2.0	1.8	1.75	1.95	1.9	1.9	1.95	2.4	1.9	2.8	3.7	2.1
6.....	2.0	1.8	1.7	1.95	1.9	1.95	2.1	2.3	1.95	2.8	3.5	2.1
7.....	2.0	1.8	1.75	1.85	1.9	2.2	2.0	2.2	2.1	3.1	2.9	2.1
8.....	2.0	1.8	1.75	1.8	1.8	2.4	1.9	2.3	2.0	3.1	2.9	2.3
9.....	2.0	1.8	1.75	1.9	2.0	2.3	1.9	2.35	2.1	3.1	2.9	2.3
10.....	1.9	1.8	1.8	1.7	1.9	2.1	2.0	2.1	2.1	2.85	3.1	2.2
11.....	1.8	1.8	1.7	1.95	1.9	2.0	1.95	2.0	2.2	2.9	2.8	2.3
12.....	1.8	1.8	1.75	1.9	1.85	2.3	1.9	2.0	2.2	3.0	2.8	2.1
13.....	1.8	1.8	1.75	1.95	1.8	2.1	1.95	2.0	2.4	3.1	2.2	2.2
14.....	1.8	1.8	1.7	1.85	1.9	2.0	1.9	2.1	2.4	3.1	2.1	1.9
15.....	1.8	1.8	1.7	2.0	2.3	2.0	1.95	2.0	2.4	2.95	2.2	2.3
16.....	1.9	1.8	1.7	1.7	1.85	2.0	1.9	1.9	2.2	2.3	2.3	2.0
17.....	2.0	1.9	1.8	1.85	1.8	2.0	2.0	1.9	2.3	2.4	2.2	2.1
18.....	2.0	1.9	2.0	1.85	1.85	1.9	1.85	2.1	2.15	2.3	2.3	2.15
19.....	1.9	1.85	1.8	1.85	2.0	1.85	1.95	2.0	2.25	2.5	2.3	2.2
20.....	1.9	1.8	1.75	1.85	2.0	1.95	2.1	2.0	2.2	2.5	2.1	2.1
21.....	2.0	1.9	1.9	1.75	2.1	1.9	2.1	2.1	2.25	2.5	2.1	2.1
22.....	2.0	1.8	1.95	1.9	2.0	2.0	2.0	2.15	2.3	2.5	2.2	1.95
23.....	2.1	1.8	1.85	1.8	2.0	1.95	2.0	1.9	2.5	2.8	2.2	2.15
24.....	1.9	1.8	1.85	1.85	1.9	1.95	1.9	2.1	2.4	2.7	2.3	2.25
25.....	1.9	1.85	1.9	2.0	2.2	2.0	1.95	2.0	2.6	2.6	2.0	2.2
26.....	1.8	1.8	1.75	1.85	1.95	2.0	1.85	2.1	2.5	2.5	2.3	2.0
27.....	2.1	1.8	1.8	1.9	1.85	2.1	1.9	2.15	2.8	2.5	2.2	2.0
28.....	2.0	1.8	1.85	2.15	1.9	1.9	1.85	2.1	2.7	2.8	2.2	2.0
29.....	1.9	1.8	1.95	1.95	1.8	1.9	2.1	2.3	2.7	2.7	2.0	2.0
30.....	1.8	1.65	1.85	2.0	.....	1.9	2.2	2.3	2.7	2.6	2.1	1.9
31.....	1.8	.....	2.3	2.3	.....	2.0	.....	2.2	.....	2.7	2.1	.....
1908-9.												
1.....	2.05	1.95	1.8	1.9	1.85	1.85	1.85	2.2	3.0	3.7	2.5	2.4
2.....	2.0	1.95	1.85	1.85	1.9	1.8	1.85	2.25	3.3	4.0	2.45	2.45
3.....	2.05	1.95	1.8	1.8	1.9	1.8	1.9	2.2	3.6	4.3	2.55	2.3
4.....	2.0	1.85	1.75	1.75	1.85	1.8	1.9	2.35	3.7	4.2	2.4	2.25
5.....	2.05	1.95	1.8	1.85	1.8	1.8	1.9	2.4	3.75	3.8	2.4	2.15
6.....	2.0	2.0	1.7	1.8	1.9	1.85	1.8	2.4	3.7	3.8	2.4	2.15
7.....	2.1	1.95	1.9	1.8	1.85	1.8	1.8	2.45	3.5	3.3	2.4	2.1
8.....	1.95	1.9	1.85	1.8	1.9	1.85	1.85	2.6	3.4	3.2	2.2	2.0
9.....	2.1	1.9	1.8	1.9	1.8	1.95	1.9	2.45	3.3	3.0	2.2	2.1
10.....	1.95	2.0	1.8	1.9	1.9	1.80	1.8	2.5	3.0	2.9	2.1	2.1
11.....	1.8	1.95	1.8	1.85	1.9	1.8	1.8	2.4	3.1	2.8	2.0	1.95
12.....	1.9	1.95	1.8	1.8	1.9	1.85	1.85	2.2	3.1	3.0	2.1	1.8
13.....	1.9	1.9	1.7	1.85	1.9	1.8	1.85	2.2	3.4	3.1	2.0	1.75
14.....	2.0	1.95	1.85	1.9	1.9	1.8	1.9	2.2	3.4	3.3	2.0	1.8
15.....	2.0	1.85	1.75	2.1	1.9	1.85	1.95	2.2	3.75	3.2	2.0	1.8
16.....	1.9	1.9	1.7	2.0	1.85	1.9	2.0	2.25	3.9	3.2	2.1	1.8
17.....	2.0	1.9	1.8	1.9	1.8	1.95	2.1	2.3	3.8	3.2	2.0	1.8
18.....	2.0	1.95	1.85	1.9	1.9	1.8	2.1	2.3	3.65	3.1	1.95	1.9
19.....	1.95	1.9	1.8	1.9	1.95	1.95	2.0	2.3	3.35	2.9	2.0	1.85
20.....	2.0	1.95	1.8	1.85	1.9	1.8	2.0	2.35	3.75	2.8	1.95	1.9
21.....	1.9	1.8	1.8	1.95	1.85	1.9	2.0	2.7	3.75	2.8	1.95	1.75
22.....	1.9	1.8	1.8	1.9	1.85	1.95	1.95	2.45	3.9	2.8	2.4	1.8
23.....	2.0	2.2	1.75	1.85	1.8	1.95	2.0	2.55	4.2	2.9	2.6	1.8
24.....	1.95	1.95	1.85	1.85	1.8	1.9	2.1	2.65	4.3	3.0	2.5	1.9
25.....	1.9	1.9	1.7	1.8	1.8	1.9	2.0	2.65	4.2	3.0	2.55	1.8
26.....	2.0	1.8	1.8	1.9	1.9	1.8	2.05	2.8	4.4	3.0	2.35	1.8
27.....	2.0	1.8	1.9	1.85	1.8	1.85	2.2	2.75	3.7	2.8	2.3	1.7
28.....	1.95	1.7	1.95	1.9	1.85	1.8	2.3	2.75	3.7	2.7	2.3	1.8
29.....	2.0	1.8	1.85	1.85	.....	1.95	2.2	2.7	3.9	2.6	2.25	1.8
30.....	1.95	1.8	1.9	1.8	.....	1.95	2.2	2.7	3.8	2.6	2.4	1.75
31.....	2.0	.....	1.7	1.8	.....	1.9	.....	2.8	.....	2.5	2.35	.....

Daily gage height, in feet, of Bishop Creek near Bishop, Cal., for 1903-1911—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909-10.												
1.....	1.8	1.8	2.0	2.1	1.9	2.25	1.9	2.4	2.75	2.4	2.1	2.0
2.....	1.8	1.8	1.9	2.05	1.85	2.1	2.0	2.3	2.65	2.4	2.0	1.4
3.....	1.85	1.9	1.95	2.1	1.9	2.3	1.8	2.2	2.65	2.6	2.0	1.2
4.....	1.85	1.85	1.9	2.1	2.0	2.3	1.85	2.0	2.4	2.65	2.0	1.8
5.....	1.7	1.85	1.9	2.2	2.0	2.2	1.6	1.8	2.5	2.35	2.0	1.7
6.....	1.85	1.8	1.95	2.15	1.9	2.3	1.85	2.1	2.5	2.1	2.1	1.8
7.....	1.8	1.8	2.0	2.05	1.95	2.3	1.75	2.15	2.5	2.2	2.0	1.75
8.....	1.9	1.8	1.9	2.1	1.75	2.3	1.85	2.1	2.2	2.2	1.9	2.0
9.....	1.8	2.0	2.0	2.0	1.95	2.3	1.8	2.3	2.55	2.25	1.7	2.0
10.....	1.85	1.8	1.95	2.1	1.9	2.2	1.95	2.5	2.5	2.25	1.9	1.6
11.....	1.8	1.85	2.0	2.0	1.95	2.5	1.9	2.3	2.2	2.3	2.25	1.5
12.....	1.85	1.85	1.95	2.0	1.85	2.25	1.75	2.55	2.4	2.2	2.1	1.4
13.....	1.75	1.95	2.0	2.0	1.9	2.4	1.55	2.0	2.2	2.2	2.0	1.75
14.....	1.8	1.85	2.1	2.05	1.8	2.3	1.85	2.3	2.0	2.05	2.15	1.5
15.....	1.8	1.9	2.0	1.95	2.0	2.5	1.8	3.5	2.3	2.15	2.0	1.7
16.....	1.8	1.8	2.1	1.9	1.85	2.4	1.8	3.2	1.8	2.0	1.8	1.7
17.....	1.85	1.9	2.1	1.9	1.9	2.5	1.85	2.9	2.1	2.1	1.95	1.2
18.....	1.8	1.85	2.1	1.9	1.85	2.4	2.15	3.25	2.1	2.0	1.95	1.8
19.....	1.75	2.0	2.0	1.95	2.0	2.5	1.95	3.5	1.95	2.2	1.95	1.7
20.....	1.85	1.85	2.1	2.0	1.9	2.4	2.05	3.3	2.1	2.2	2.0	1.5
21.....	1.75	2.0	2.0	1.9	2.0	2.4	2.1	2.6	2.25	2.7	2.0	1.4
22.....	1.8	1.85	2.2	2.0	1.9	2.3	2.35	3.25	1.85	4.0	2.0	1.55
23.....	1.75	1.95	2.0	1.9	2.1	2.4	2.5	3.2	2.0	3.9	2.0	1.6
24.....	1.8	1.85	2.15	1.9	1.9	2.3	2.25	3.0	2.1	2.2	3.9	1.5
25.....	1.75	2.0	2.0	1.9	2.0	2.35	1.95	3.1	2.2	2.1	2.2	1.6
26.....	1.8	1.85	2.1	1.9	2.1	2.3	2.55	2.5	2.2	1.95	2.2	1.4
27.....	1.75	1.9	2.0	1.9	2.1	2.3	2.5	2.4	2.45	1.8	1.8	1.65
28.....	1.85	1.9	2.1	1.9	2.0	2.1	2.35	2.7	2.4	2.2	2.0	1.4
29.....	1.75	1.9	2.0	1.9	2.0	2.0	1.8	2.6	2.5	2.1	2.0	1.75
30.....	1.85	1.95	2.1	1.9	1.9	1.9	2.25	2.8	2.4	1.9	1.95	1.75
31.....	1.85	.....	2.1	1.9	.....	2.0	.....	2.6	.....	1.8	2.1	.....

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Day.	Oct.	Nov.	Dec.	Jan.	Feb.
1910-11.						1910-11.					
1.....	1.55	1.7	1.75	1.65	1.8	16.....	1.75	1.65	1.8	1.9	2.0
2.....	1.35	1.6	1.8	1.85	1.95	17.....	1.55	1.75	1.6	1.85	2.2
3.....	1.4	1.8	1.8	1.55	1.95	18.....	1.7	1.6	1.85	1.85	2.4
4.....	1.8	1.7	1.45	1.9	2.0	19.....	1.65	1.8	1.6	1.85	2.5
5.....	1.45	1.7	1.8	1.6	1.8	20.....	1.7	1.6	1.9	1.85	2.35
6.....	1.85	1.4	1.8	1.85	1.8	21.....	1.75	1.8	1.8	1.7	2.5
7.....	1.7	1.7	1.8	1.65	1.85	22.....	1.85	1.6	1.9	1.8	2.5
8.....	1.75	1.55	1.8	1.75	1.8	23.....	1.65	1.8	1.85	1.85	2.4
9.....	1.8	1.75	1.75	1.55	1.9	24.....	1.7	1.5	1.5	1.95	2.2
10.....	1.8	1.6	1.45	1.85	2.1	25.....	1.65	1.8	1.6	1.5	1.9
11.....	1.7	1.95	1.8	1.15	1.9	26.....	1.7	1.65	1.75	1.9	1.8
12.....	1.7	1.8	1.6	1.85	1.85	27.....	1.75	1.8	1.3	1.85	1.9
13.....	1.35	1.75	1.75	2.0	1.8	28.....	1.85	1.75	1.8	1.95	1.8
14.....	1.6	1.8	1.8	1.85	1.75	29.....	1.7	1.8	1.75	2.2	.....
15.....	1.65	1.75	1.85	1.65	1.9	30.....	1.7	1.55	1.8	1.9	.....
						31.....	1.65	.....	1.6	1.95	.....

NOTE.—Gage heights interpolated Feb. 17-19, 1905. No record July 7-14, 1906. No gage heights recorded May 1 to Sept. 5, 1907. Record of daily discharge obtained from a weir. Gage heights Aug. 15-30, 1909, read on a temporary gage at approximately the same datum.

*Rating tables for Bishop Creek near Bishop, Cal.***January 1 to December 31, 1904.**

Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.
<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>
1.30	22	2.10	80	2.90	183	3.70	355
1.40	27	2.20	90	3.00	200	3.80	386
1.50	32	2.30	101	3.10	218	3.90	417
1.60	39	2.40	113	3.20	237	4.00	448
1.70	46	2.50	125	3.30	257	4.10	479
1.80	54	2.60	138	3.40	279	4.20	510
1.90	62	2.70	152	3.50	302		
2.00	71	2.80	167	3.60	327		

January 1 to December 11, 1905.

1.40	21	2.10	74	2.80	170	3.50	314
1.50	27	2.20	84	2.90	188	3.60	339
1.60	33	2.30	95	3.00	206	3.70	365
1.70	40	2.40	108	3.10	225	3.80	391
1.80	48	2.50	122	3.20	245		
1.90	56	2.60	137	3.30	267		
2.00	65	2.70	153	3.40	290		

NOTE.—Table is based on 14 discharge measurements made during 1905 and some older measurements. It is not very well defined. Not applicable after Dec. 11, as conditions were changed at the station.

January 1 to December 31, 1906.

1.40	7	2.40	114	3.40	303	4.40	534
1.50	10	2.50	130	3.50	325	4.50	558
1.60	14	2.60	147	3.60	347	4.60	582
1.70	24	2.70	164	3.70	370	4.70	606
1.80	35	2.80	182	3.80	393	4.80	630
1.90	46	2.90	201	3.90	416	4.90	654
2.00	58	3.00	220	4.00	439	5.00	678
2.10	70	3.10	240	4.10	462	5.20	726
2.20	84	3.20	261	4.20	486	5.40	774
2.30	98	3.30	282	4.30	510	5.60	822

NOTE.—Table is based on 6 discharge measurements made during 1906, and is not well defined.

May 1 to August 31, 1907.

Discharge determined from weirs.

January 1 to December 31, 1908.

1.60	40	2.20	81	2.80	163	3.40	288
1.70	44	2.30	92	2.90	180	3.50	314
1.80	49	2.40	104	3.00	198	3.70	370
1.90	55	2.50	117	3.10	218	3.80	400
2.00	62	2.60	131	3.20	240		
2.10	71	2.70	146	3.30	263		

NOTE.—Table applicable only to open channel. It is based on 12 discharge measurements made during 1908. It is fairly well defined between gage heights 1.9 feet and 3.5 feet.

Daily discharge, in second-feet, of Bishop Creek near Bishop, Cal., for 1909-1911.

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909.									
1.....	51	46	46	46	87	218	508	203	139
2.....	46	51	40	46	94	277	593	192	147
3.....	40	51	40	51	87	342	683	214	123
4.....	36	46	40	51	107	364	653	181	115
5.....	46	40	40	51	114	375	536	181	101
6.....	40	51	46	40	114	364	536	181	101
7.....	40	46	40	40	122	320	399	181	95
8.....	40	51	46	46	146	298	373	138	83
9.....	51	40	56	51	122	277	321	138	95
10.....	51	51	40	40	130	218	297	118	95
11.....	46	51	40	40	114	237	273	98	77
12.....	40	51	46	46	87	237	321	118	61
13.....	46	51	40	46	87	298	347	98	56
14.....	51	51	40	51	87	298	399	98	61
15.....	74	51	46	56	87	375	373	100	61
16.....	62	46	51	62	94	408	373	108	61
17.....	51	40	56	74	100	386	373	100	61
18.....	51	51	40	74	100	353	347	96	71
19.....	51	56	56	62	100	287	297	100	66
20.....	46	51	40	62	107	375	273	96	71
21.....	56	46	51	62	162	375	273	96	56
22.....	51	46	56	56	122	408	273	130	61
23.....	46	40	56	62	138	480	297	145	61
24.....	46	40	51	74	154	504	321	138	71
25.....	40	40	51	62	154	480	321	142	61
26.....	51	51	40	68	180	713	321	126	61
27.....	46	40	46	87	172	508	273	122	51
28.....	51	46	40	100	172	508	249	122	61
29.....	46	-----	56	87	162	564	225	118	61
30.....	40	-----	56	87	162	536	225	130	56
31.....	40	-----	51	-----	180	-----	203	131	-----

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909-10.												
1.....	61	61	83	97	73	117	73	138	198	138	97	85
2.....	61	61	71	91	68	97	85	124	180	138	85	28
3.....	66	71	77	97	73	124	62	110	180	171	85	17
4.....	66	66	71	97	85	124	68	85	138	180	85	62
5.....	51	66	71	110	85	110	43	62	154	131	85	52
6.....	66	61	77	117	73	124	68	97	154	97	97	62
7.....	61	61	83	91	79	124	57	104	154	110	85	57
8.....	71	61	71	97	57	124	68	97	110	110	73	85
9.....	61	83	83	85	79	124	62	124	162	117	52	85
10.....	66	61	77	97	73	110	79	154	154	117	73	43
11.....	61	66	83	85	79	154	73	124	110	124	117	35
12.....	66	66	77	85	68	117	57	162	138	110	97	28
13.....	56	77	83	85	73	138	39	85	110	110	85	57
14.....	61	66	95	91	62	124	68	124	85	91	104	35
15.....	61	71	83	79	85	154	62	359	124	104	85	52
16.....	61	61	95	73	68	138	62	291	62	85	62	52
17.....	66	71	95	73	73	154	68	228	97	97	79	17
18.....	61	66	95	73	68	138	104	302	97	85	79	62
19.....	56	83	83	79	85	154	79	359	79	110	79	52
20.....	66	66	95	85	73	138	91	313	97	110	85	35
21.....	56	83	83	73	85	138	97	171	117	189	85	28
22.....	61	66	108	85	73	124	131	302	68	477	85	39
23.....	56	77	83	73	97	138	154	291	85	453	85	43
24.....	61	66	101	73	73	124	117	248	97	110	453	35
25.....	56	83	83	73	85	131	79	269	110	97	110	43
26.....	61	66	95	73	97	124	162	154	110	79	110	28
27.....	56	71	83	73	97	124	154	138	144	62	62	48
28.....	66	71	95	73	85	97	131	189	138	110	85	28
29.....	56	71	83	73	-----	85	62	171	154	97	85	57
30.....	66	77	95	73	-----	73	117	208	138	73	79	57
31.....	66	-----	95	73	-----	85	-----	171	-----	62	97	-----

Daily discharge, in second-feet, of Bishop Creek near Bishop, Cal., for 1909-1911—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Day.	Oct.	Nov.	Dec.	Jan.	Feb.
1910-11.						1910-11.					
1.....	39	52	57	48	62	16.....	57	48	62	73	85
2.....	25	43	62	68	79	17.....	39	57	43	68	110
3.....	28	62	62	39	79	18.....	52	43	68	68	138
4.....	62	52	32	73	85	19.....	48	62	43	68	154
5.....	32	52	62	43	62	20.....	52	43	73	68	131
6.....	68	28	62	68	62	21.....	57	62	62	52	154
7.....	52	52	62	48	68	22.....	68	43	73	62	154
8.....	57	39	62	57	62	23.....	48	62	68	68	138
9.....	62	57	57	39	73	24.....	52	35	35	79	110
10.....	62	43	32	68	97	25.....	48	62	43	35	73
11.....	52	79	62	15	73	26.....	52	48	57	73	62
12.....	52	62	43	68	68	27.....	57	62	22	68	73
13.....	25	57	57	85	68	28.....	68	57	62	79	62
14.....	43	62	62	68	57	29.....	52	62	57	110	-----
15.....	48	57	68	48	73	30.....	52	39	62	73	-----
						31.....	48	-----	43	79	-----

NOTE.—Daily discharge determined from rating curves applicable as follows: Jan. 1 to 24, 1909, fairly well defined below 200 second-feet. June 25 to Aug. 15, 1909, not well defined. Aug. 31 to Dec. 31, 1909, not well defined. Jan. 1, 1910, to Feb. 28, 1911, fairly well defined between 40 and 170 second-feet, not well defined above 200 second-feet. Aug. 15 to 30, 1909, estimated from gage height obtained from temporary gage.

Monthly discharge of Bishop Creek near Bishop, Cal., for 1903-1911.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1903.					
August 11-31.....	125	71	95.8	3,990	
September.....	71	39	50.5	3,005	
1903-4.					
October.....	46	30	38.6	2,373	
November.....	30	27	28.6	1,702	
December.....	30	22	27.3	1,679	
January.....	27	27	27.0	1,660	
February.....	39	27	31.8	1,829	
March.....	62	32	42.0	2,582	
April.....	113	32	56.6	3,366	
May.....	237	71	149.3	9,180	
June.....	479	237	372.8	22,183	
July.....	355	167	233	14,327	
August.....	386	80	212	13,035	
September.....	80	54	64	3,808	
The year.....	479	22	107	77,700	
1904-5.					
October.....	113	58	78	4,796	
November.....	62	32	41	2,440	
December.....	32	24	29	1,783	
January.....	27	21	22.5	1,384	
February.....	30	21	25.2	1,400	
March.....	48	27	38.2	2,349	
April.....	122	40	56.6	3,368	
May.....	170	65	113	6,948	
June.....	391	188	299	17,790	
July.....	365	122	215	13,220	
August.....	137	65	92.1	5,663	
September.....	74	40	53.6	3,189	
The year.....	365	21	88.6	64,300	
1905-6.					
October.....	56	21	36.1	2,220	
November.....	33	21	25.6	1,523	
December.....	27	21	24.3	530	
January.....	98	10	33.4	2,050	
February.....	40	12	16.4	911	
March.....	84	10	42.0	2,580	
April.....	138	14	52.8	3,140	
May.....	220	114	172	10,600	
June.....	666	114	382	22,700	

Monthly discharge of Bishop Creek near Bishop, Cal., for 1903-1911—Continued.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1905-6.					
July.....	822	510	a 706	43,400	
August.....	439	182	350	21,500	
September.....	182	84	124	7,380	
The year.....	822	10	164	119,000	
1906-7.					
October.....	84	12	45.3	2,780	
November.....	40	6	17.5	1,040	
December.....	58	35	50.0	3,070	
January.....	76	48	56.4	3,470	C.
February.....	58	49	54.0	3,000	C.
March.....	66	49	55.4	3,410	C.
April.....	148	58	75.8	4,510	C.
May.....	195	101	131	8,060	B.
June.....	442	226	297	17,700	D.
July.....	418	302	354	21,800	D.
August.....	300	190	231	14,200	B.
September.....	160	41	83.7	4,980	B.
The year.....	442	6	121	88,000	
1907-8.					
October.....	58	41	66.0	4,060	B.
November.....	42	38	49.4	2,940	B.
December.....	88	38	52.5	3,230	B.
January.....	92	44	58.8	3,620	B.
February.....	92	49	58.6	3,370	B.
March.....	104	52	64.3	3,950	B.
April.....	71	52	59.7	3,550	B.
May.....	117	55	76.6	4,710	B.
June.....	163	55	94.5	5,620	B.
July.....	218	92	150	9,220	B.
August.....	370	62	143	8,790	B.
September.....	92	55	73.7	4,390	B.
The year.....	370	38	78.9	57,400	
1908-9.					
October.....	71	49	60.4	3,710	B.
November.....	81	44	55.7	3,310	B.
December.....	58	44	49.4	3,040	B.
January.....	74	36	47.5	2,920	A.
February.....	56	40	47.2	2,620	A.
March.....	56	40	46.6	2,870	A.
April.....	100	40	59.3	3,530	A.
May.....	180	87	124	7,620	A.
June.....	713	218	379	22,600	B.
July.....	683	203	363	22,300	B.
August.....	214	96	134	8,240	C.
September.....	147	51	78.0	4,640	B.
The year.....	713	36	120	87,400	
1909-10.					
October.....	71	51	61.4	3,780	B.
November.....	83	61	69.2	4,120	B.
December.....	108	71	85.5	5,260	B.
January.....	117	73	83.9	5,160	B.
February.....	97	57	77.5	4,300	B.
March.....	154	73	124	7,620	B.
April.....	162	39	85.7	5,100	B.
May.....	359	62	186	11,400	C.
June.....	198	62	125	7,440	B.
July.....	477	62	134	8,240	C.
August.....	453	52	97.6	6,000	C.
September.....	85	17	46.9	2,790	B.
The year.....	477	17	98.1	71,200	
1910-11.					
October.....	68	25	50.2	3,090	B.
November.....	79	28	52.7	3,140	B.
December.....	73	22	55.3	3,400	B.
January.....	110	15	63.2	3,890	
February.....	154	57	89.5	4,970	

a Mean for 23 days taken as mean for the month.

NOTE.—Monthly estimates for 1907 include diversions above the station. During May–August, 1907, estimates were obtained from a 30-foot weir located about 3 miles above the mouth of the canyon above all diversions.

RAWSON CANAL NEAR BISHOP, CAL.

This station was established August 7, 1903, by R. S. Hawley. It was located at the county bridge, $2\frac{1}{2}$ miles east of Bishop.

The channel is straight for 100 feet above and below the station, and the current is swift. The right bank is high and the left bank is low. Neither bank is liable to overflow. The bed of the stream is composed of gravel and is permanent.

Discharge measurements were made from the bridge.

The gage was a vertical rod fastened to the bridge.

Discharge measurements of Rawson canal near Bishop, Cal., in 1903-1905.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1903.		<i>Feet.</i>	<i>Sec.-ft.</i>	1905.		<i>Feet.</i>	<i>Sec.-ft.</i>
July 31	R. S. Hawley.....	1.70	17.0	Mar. 14	R. J. Taylor.....	1.75	22
Aug. 7	.....do.....	1.70	17.6	Apr. 1	J. S. Evans.....	1.85	26
11	.....do.....	1.62	13.6	17	.....do.....	1.60	16.9
17	.....do.....	1.85	20.3	May 2	.....do.....	1.90	28
27	.....do.....	1.73	17.1	25	.....do.....	1.90	27
Sept. 7	.....do.....	1.77	18.2	June 28	.....do.....	1.70	18.1
14	.....do.....	1.81	17.1	July 26	.....do.....	1.30	2.1
Oct. 24	.....do.....	1.73	15.4	Aug. 9	.....do.....	1.55	14.6
Nov. 27	.....do.....	1.60	13.0	Sept. 5	.....do.....	1.45	7.0
1904.				14	.....do.....	1.50	10.6
Feb. 4	R. S. Hawley.....	1.66	16.6	Oct. 3	.....do.....	1.90	17.8
11	.....do.....	2.01	35	25	F. R. S. Buttemer.....	1.05	1.2
Apr. 2	.....do.....	1.50	9.4	Nov. 23	.....do.....	1.15	1.1
14	.....do.....	1.87	27	Dec. 11	.....do.....	1.08	1.3
June 8	.....do.....	1.96	24				
July 12	Clausen and Barnes.....	1.75	18.8				
Aug. 6	L. M. Barnes.....	1.80	21				
20	.....do.....	2.23	31				

Daily gage height, in feet, of Rawson canal near Bishop, Cal., for 1903-1905.

Day.	Aug.	Sept.	Day.	Aug.	Sept.	Day.	Aug.	Sept.			
1903.			1903.			1903.					
1.....		1.74	11.....	1.60	1.77	21.....	1.84	2.10			
2.....		1.72	12.....	1.80	1.85	22.....	1.82	1.94			
3.....		1.76	13.....	1.90	1.90	23.....	1.81	1.92			
4.....		1.73	14.....	1.90	1.72	24.....	1.80	1.93			
5.....		1.74	15.....	1.85	1.80	25.....	1.75	1.94			
6.....		1.80	16.....	1.80	1.85	26.....	1.74	2.04			
7.....		1.79	17.....	1.85	1.93	27.....	1.74	2.00			
8.....		1.80	18.....	1.82	1.94	28.....	1.76	2.00			
9.....		1.76	19.....	1.81	1.99	29.....	1.73	2.01			
10.....		1.78	20.....	1.86	2.10	30.....	1.74	2.00			
						31.....	1.72	.....		
Day.	Oct.	Nov.	Dec.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1903-4.											
1.....	2.00	1.59	1.65	.....	1.7	1.5	1.9	2.1	1.9	1.8	2.25
2.....	2.00	1.63	1.64	.....	1.7	1.5	1.9	1.9	1.9	1.8	2.2
3.....	1.96	1.60	1.70	1.65	1.7	1.5	1.85	1.9	1.8	1.8	2.1
4.....	1.93	1.60	1.71	1.65	1.7	1.5	1.85	1.9	1.8	1.8	2.1
5.....	1.93	1.60	1.70	1.8	1.7	1.5	1.85	.....	1.8	1.8	2.0
6.....	1.94	1.63	1.35	1.9	1.7	1.5	1.9	.....	1.8	1.8	2.1
7.....	1.91	1.63	1.35	1.9	1.7	1.5	1.9	.....	1.8	1.8	2.1
8.....	1.92	1.63	1.43	1.9	1.7	1.5	1.9	2.0	1.8	1.8	2.1
9.....	2.01	1.65	1.35	1.9	1.7	1.8	1.9	1.9	1.8	1.75	2.0
10.....	2.01	1.66	1.30	1.9	1.67	1.8	1.85	1.9	1.8	1.75	2.0
11.....	1.80	1.65	1.30	2.0	1.75	1.9	1.9	1.9	1.75	1.75	2.0
12.....	1.75	1.61	1.30	2.0	1.75	2.0	1.9	2.0	1.7	1.7	2.0
13.....	1.75	1.63	1.39	2.1	1.7	2.0	1.9	2.0	1.7	1.7	2.1
14.....	1.70	1.60	1.30	2.4	1.73	1.9	1.9	2.0	1.65	1.7	2.2
15.....	1.70	1.70	1.42	2.4	1.7	1.9	2.0	2.0	1.65	1.7	2.1

Daily gage height, in feet, of Rawson canal near Bishop, Cal., for 1903-1905—Con.

Day.	Oct.	Nov.	Dec.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1803-4.											
16.....	1.70	1.80	1.44	1.85	1.7	1.9	2.0	2.0	1.8	1.75	2.1
17.....	1.65	1.92	1.45	1.8	1.7	1.65	2.0	2.0	1.8	1.7	2.1
18.....	1.65	1.92	1.1	1.75	1.7	1.65	2.0	2.0	1.9	1.65	2.2
19.....	1.80	1.93	1.1	1.75	1.7	1.65	2.0	2.0	1.9	1.9	2.2
20.....	1.75	1.90	1.1	1.7	1.75	1.85	1.95	2.0	1.9	1.9	2.3
21.....	1.70	1.90	1.1	1.7	1.7	1.9	2.0	2.0	1.95	2.2	2.3
22.....	1.65	1.90	1.2	1.8	1.65	1.9	1.9	2.0	1.95	2.2	2.3
23.....	1.70	1.91	1.1	1.75	1.65	1.9	1.9	2.0	2.2	2.25	2.3
24.....	1.73	1.90	1.1	1.75	1.7	1.9	1.9	1.9	1.4	2.25	2.3
25.....	1.75	1.90	1.1	1.7	1.7	1.9	1.9	1.9	1.4	2.3	2.3
26.....	1.76	1.90	1.3	1.75	1.55	1.85	1.9	1.9	.....	2.3	2.3
27.....	1.77	1.53	1.3	1.7	1.5	1.9	1.9	1.9	.....	2.3	2.4
28.....	1.63	1.50	1.3	1.7	1.5	1.9	1.9	1.9	1.95	2.3	.....
29.....	1.59	1.51	1.3	1.7	1.55	1.9	1.9	1.9	1.95	2.3	.....
30.....	1.59	1.65	1.3	.....	1.55	1.9	1.9	1.9	1.85	2.25	.....
31.....	1.59	.....	1.3	.....	1.5	.....	2.0	.....	1.8	2.3	.....

Day.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.
1905.								
1.....	.....	1.8	1.7	1.8	0.8	0.9	1.3	1.8
2.....	.....	.....	1.7	1.8	.9	.9	.....	1.8
3.....	.....	1.8	1.7	1.8	.9	.8	1.3	1.8
4.....	.....	1.8	1.9	1.8	.9	.8	1.5	1.8
5.....	.....	1.8	.....	1.7	.9	.8	1.5	1.8
6.....	1.4	.....	1.9	1.9	.8	.8	1.5	1.8
7.....	1.4	1.7	1.9	1.9	.8	.8	1.7	1.6
8.....	1.5	1.7	1.8	1.9	.8	.8	1.7	1.4
9.....	1.5	.....	1.8	1.8	.8	.8	1.7	1.4
10.....	1.6	1.7	1.8	1.8	.8	.8	1.7	1.4
11.....	1.6	1.7	1.8	1.9	.7	.8	1.7	1.4
12.....	1.6	1.7	1.8	1.8	.7	.8	1.7	1.6
13.....	1.8	.....	1.8	1.8	.7	.9	1.6	1.6
14.....	1.8	1.7	1.8	1.7	.8	.9	1.6	.....
15.....	.....	1.6	1.9	1.0	.8	.0	1.6	.....
16.....	.....	1.6	1.9	.9	.8	.....	1.6	.....
17.....	.....	1.6	1.9	1.4	.8	.9	1.6	.....
18.....	.....	1.6	1.9	1.4	.8	.9	1.6	.....
19.....	.....	1.6	1.9	.....	.8	.9	1.6	.....
20.....	.....	1.7	1.9	.....	.8	.....	1.6	.....
21.....	.....	1.7	1.8	.....	.8	.7	1.7	.....
22.....	.....	1.7	1.9	.6	.7	.7	1.7	.....
23.....	.....	.....	1.9	.8	.7	.7	.....	.....
24.....	.....	1.7	1.8	.9	.7	.7	1.7	.....
25.....	.....	1.7	1.8	.9	.7	.7	1.7	.....
26.....	.....	1.7	1.8	.9	.....	1.3	1.7	.....
27.....	.....	1.7	1.8	.8	.....	1.3	1.7	.....
28.....	.....	1.7	1.8	.8	.....	1.3	1.7	.....
29.....	.....	1.7	1.7	.8	.9	.....	1.7	.....
30.....	1.8	1.7	1.7	.8	.9	1.3	.....	.....
31.....	1.8	.....	1.7	.....	.9	.....	.....	.....

NOTE.—Canal dry from Jan. 1 to Feb. 2, 1904, June 5-7, 1904, July 26-27, 1904, Sept. 28, 1904, to Mar. 5, 1905, and Oct. 14 to Dec. 31, 1905.

Rating tables for Rawson canal near Bishop, Cal.

January 1 to May 31, 1904.

Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.
<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>
1.30	1	1.60	14	1.90	29	2.20	48
1.40	5	1.70	18	2.00	35	2.30	55
1.50	9	1.80	23	2.10	41		

June 1 to September 30, 1904.

1.40	5	1.70	16	2.00	26	2.30	37
1.50	9	1.80	19	2.10	30	2.40	40
1.60	12	1.90	23	2.20	33		

Monthly discharge of Rawson canal near Bishop, Cal., for 1904.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).
	Maximum.	Minimum.	Mean.	
February.....	59	0	26.2	1,403
March.....	20	9	16.6	1,018
April.....	35	9	22.1	1,319
May.....	35	26	30	1,845
June.....	27	0	23.1	1,374
July.....	25	0	20	1,230
August.....	37	16	26	1,599
September.....	40	0	29	1,726
The period.....				11,514

A. O. COLLINS'S CANAL NEAR BISHOP, CAL.

This station was established August 7, 1903. It was located at the county bridge 3 miles east of Bishop.

The channel is straight for 100 feet above and 50 feet below the station. The current is sluggish. Both banks are high and are not liable to overflow. The bed of the stream is sandy and shifting.

The gage was a vertical rod fastened to the right bank just above the bridge, from which discharge measurements were made.

Discharge measurements of A. O. Collins's canal near Bishop, Cal., in 1903-1905.

Date.	Hydrographer.	Gage height.	Discharge.	Date.	Hydrographer.	Gage height.	Discharge.
1903.		<i>Feet.</i>	<i>Sec.-ft.</i>	1904.		<i>Feet.</i>	<i>Sec.-ft.</i>
July 31	R. S. Hawley.....		12.1	Oct. 14	Clapp, Hawley, and Taylor.	2.58	2.8
Aug. 7	do.....	2.2	8.3	Nov. 1	R. J. Taylor.....	2.50	2.1
11	do.....	2.0	3.9	Dec. 1	do.....	2.48	1.8
17	do.....	1.82	2.6				
27	do.....	2.1	8.8	1905.			
Sept. 7	do.....	2.1	7.9	Mar. 14	R. J. Taylor.....	2.90	25
14	do.....	2.1	7.6	Apr. 1	J. S. Evans.....	2.00	2.1
Oct. 23	do.....	1.65	1.2	May 2	do.....	3.00	25
1904.				June 28	do.....	2.75	18.4
Feb. 4	R. S. Hawley.....	1.80	5.2	July 26	do.....	2.90	18.4
Apr. 14	do.....	1.95	7.8	Aug. 9	do.....	2.65	14.0
June 8	do.....	3.67	40	Sept. 5	do.....	2.38	7.3
12	Clausen and Barnes.....	3.80	28	14	do.....	2.33	6.5
Aug. 6	L. M. Barnes.....	3.45	19.8	Oct. 3	do.....	2.80	15.3
20	do.....	3.35	14.3	25	F. R. S. Buttemer.....		0
Sept. 6	R. S. Hawley.....	3.29	17.1	Nov. 23	do.....	2.25	4.9
Oct. 10	Hawley and Taylor.....	2.73	4.4	Dec. 11	do.....	1.92	1.7

Daily gage height, in feet, of A. O. Collins's canal near Bishop, Cal., for 1903-1905.

Day.	Aug.	Sept.	Day.	Aug.	Sept.	Day.	Aug.	Sept.
1903.			1903.			1903.		
1.....		2.06	11.....	2.00	2.02	21.....	2.10	2.07
2.....		2.10	12.....	1.80	2.03	22.....	2.04	2.20
3.....		2.10	13.....	1.80	2.07	23.....	2.10	2.30
4.....		2.10	14.....	1.80	2.02	24.....	2.10	2.40
5.....		2.01	15.....	1.80	2.03	25.....	2.03	2.50
6.....		2.01	16.....	1.70	2.04	26.....	2.03	2.40
7.....		2.01	17.....	1.82	2.14	27.....	2.10	2.70
8.....		2.01	18.....	1.74	2.10	28.....	2.01	2.40
9.....		2.01	19.....	2.20	2.07	29.....	2.10	2.04
10.....		2.02	20.....	2.12	2.09	30.....	2.00	2.40
						31.....	2.04	

Daily gage height, in feet, of A. O. Collins's canal near Bishop, Cal., for 1903-1905—Con.

Day.	Oct.	Nov.	Dec.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1903-4.											
1.	2.40	1.99	1.60	.....	1.8	1.7	1.9	2.2	3.9	3.5	3.25
2.	2.00	1.99	1.52	.....	1.8	1.65	1.9	3.0	4.0	3.55	3.2
3.	1.65	2.00	1.60	.....	1.8	1.65	1.85	3.2	4.0	3.55	3.1
4.	1.65	2.00	1.65	.....	1.8	2.0	1.8	3.4	4.0	3.5	3.1
5.	2.10	2.00	1.60	.....	1.85	2.0	1.8	3.5	4.0	3.5	3.3
6.	2.30	2.40	1.90	.....	1.8	2.0	1.8	3.5	4.0	3.45	3.3
7.	2.40	2.00	1.85	.....	1.78	2.0	1.8	3.5	3.9	3.45	3.3
8.	2.40	2.10	1.90	.....	2.0	2.0	1.8	3.6	3.9	3.5	3.3
9.	2.00	2.00	1.90	.....	2.0	2.0	1.8	3.6	3.9	3.5	3.3
10.	1.65	2.20	1.82	.....	2.1	2.0	1.75	3.7	3.9	3.45	3.25
11.	1.65	2.10	1.80	2.0	2.0	1.8	1.75	3.7	3.9	3.4	3.2
12.	1.65	2.40	1.80	2.6	2.1	2.0	1.8	3.8	3.85	3.4	3.2
13.	1.65	2.30	1.60	2.6	2.0	1.9	1.95	3.8	3.8	3.35	3.3
14.	1.65	1.50	1.72	2.5	2.0	1.9	1.95	3.9	3.8	3.45	3.3
15.	1.65	1.50	1.72	2.5	2.0	1.9	3.1	4.0	3.75	3.5	3.2
16.	1.65	1.66	1.90	2.6	2.0	1.9	3.1	4.0	3.7	3.45	3.2
17.	1.65	1.80	1.70	2.6	2.1	2.1	3.1	4.0	3.7	3.4	3.2
18.	1.65	1.81	2.10	2.7	2.0	2.0	3.1	4.0	3.6	3.4	3.3
19.	1.65	1.82	1.70	2.5	1.7	2.0	3.2	4.0	3.6	3.35	3.3
20.	1.65	1.80	1.72	2.6	1.7	2.2	3.2	4.0	3.6	3.3	3.3
21.	1.65	1.80	1.70	2.25	1.7	2.4	3.2	4.0	3.6	3.3	3.3
22.	1.65	1.83	1.73	2.2	1.7	2.4	3.1	4.0	3.6	3.35	3.3
23.	1.65	1.60	1.70	2.1	1.7	2.4	3.2	4.1	3.7	3.3	3.3
24.	1.65	1.62	1.72	1.9	1.7	2.4	3.2	4.1	3.65	3.3	3.3
25.	2.40	1.53	1.70	1.8	1.7	2.4	1.8	4.1	3.7	3.3	4.0
26.	2.50	1.51	1.70	1.85	1.7	2.1	1.8	4.0	3.7	3.3	3.9
27.	2.40	1.50	1.70	1.8	1.9	2.4	1.8	4.0	3.7	3.3	3.9
28.	2.40	1.65	1.70	1.8	1.9	2.0	1.8	.....	3.65	3.3	3.0
29.	2.40	1.51	1.70	1.8	1.9	2.1	1.7	4.0	3.5	3.3	3.1
30.	2.06	1.65	1.70	.....	1.9	2.0	1.7	4.0	3.5	3.3	.....
31.	2.09	.....	1.70	.....	1.7	.....	1.6	.....	3.5	3.3	.....

Day.	Oct.	Nov.	Dec.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.
1904-5.												
1.	2.9	2.5	2.5	.....	.....	.....	2.6	1.8	2.5	2.5	2.4	2.5
2.	2.9	2.5	.....	.....	.....	.....	2.6	1.8	2.5	2.0	.....	2.5
3.	2.9	.....	.....	.....	.....	.....	2.8	1.6	2.7	.....	.....	2.5
4.	3.0	.....	.....	.....	.....	.....	3.0	1.9	2.7	.....	.....	2.2
5.	3.0	.....	.....	.....	.....	.....	.....	1.9	2.8	.....	.....	2.2
6.	3.1	2.5	.....	.....	.....	.....	3.0	1.7	2.8	.....	.....	2.2
7.	3.2	2.5	.....	.....	.....	.....	3.0	1.7	2.8	.....	.....	2.2
8.	3.0	.....	.....	.....	.....	.....	2.4	1.8	2.9	.....	.....	2.2
9.	2.8	.....	.....	.....	.....	.....	2.3	1.9	2.9	.....	.....	2.2
10.	2.8	2.5	.....	.....	2.4	.....	2.3	1.9	3.0	2.3	2.0	2.2
11.	.....	2.5	.....	.....	2.4	.....	2.3	1.9	3.0	2.3	2.0	2.3
12.	2.8	2.5	.....	.....	2.4	.....	2.3	1.9	3.0	2.3	2.0	2.3
13.	2.9	.....	.....	.....	2.8	.....	2.3	2.2	3.0	2.3	2.3	2.3
14.	2.9	2.5	.....	.....	2.8	.....	2.3	2.3	2.9	2.3	2.3	.....
15.	2.9	2.5	.....	.....	2.8	.....	2.3	2.3	2.9	.....	.....	.....
16.	.....	2.5	.....	.....	2.8	.....	.....	2.4	2.9	.....	2.3	.....
17.	2.8	2.5	.....	.....	2.8	.....	.....	.....	2.9	2.3	2.9	.....
18.	2.8	2.5	.....	.....	2.8	.....	.....	.....	2.9	2.1	2.9	.....
19.	.....	2.5	.....	.....	2.8	2.6	.....	.....	2.8	2.1	2.9	.....
20.	.....	.....	.....	.....	2.8	2.6	.....	.....	2.8	.....	2.9	.....
21.	.....	.....	.....	.....	2.8	2.6	.....	.....	2.8	2.1	2.9	.....
22.	.....	.....	.....	2.3	3.0	2.6	.....	2.3	2.8	2.1	2.7	.....
23.	.....	.....	.....	.....	3.0	.....	.....	2.3	2.7	2.0	.....	.....
24.	.....	.....	.....	.....	3.0	2.5	.....	2.3	2.7	2.0	2.7	.....
25.	.....	.....	2.4	.....	2.7	2.5	.....	2.6	2.7	2.0	2.7	.....
26.	2.5	.....	.....	2.3	.....	2.5	.....	2.6	2.7	2.0	2.7	.....
27.	2.5	2.5	.....	.....	.....	2.5	.....	2.6	.....	2.0	2.5	.....
28.	.....	.....	2.3	.....	.....	2.6	.....	2.6	.....	2.4	2.5	.....
29.	2.5	2.5	.....	.....	.....	2.6	.....	2.6	2.7	.....	2.5	.....
30.	2.5	2.5	.....	.....	.....	2.6	.....	2.5	2.7	2.4	.....	.....
31.	2.5	.....	2.2	.....	.....	.....	1.7	.....	2.5	.....	.....	.....

NOTE.—Canal dry on days for which no gage heights are given except during November and December, 1904, during which time the record is incomplete.

Rating tables for A. O. Collins's canal near Bishop, Cal.

January 1 to June 30, 1904.

Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.
<i>Feet.</i>	<i>Sec.-ft.</i>	<i>Feet.</i>	<i>Sec.-ft.</i>	<i>Feet.</i>	<i>Sec.-ft.</i>	<i>Feet.</i>	<i>Sec.-ft.</i>
1.50	1	2.20	12	2.90	26	3.50	38
1.60	2	2.30	14	3.00	28	3.60	40
1.70	3	2.40	16	3.10	30	3.70	42
1.80	4	2.50	18	3.20	32	3.80	44
1.90	6	2.60	20	3.30	34	3.90	46
2.00	8	2.70	22	3.40	36	4.00	48
2.10	10	2.80	24				

July 1 to December 31, 1904.

2.40	1	2.90	8	3.30	16	3.70	24
2.50	2	3.00	10	3.40	18	3.80	27
2.60	3	3.10	12	3.50	20	3.90	30
2.70	4	3.20	14	3.60	22	4.00	33
2.80	6						

Monthly discharge of A. O. Collins's canal near Bishop, Cal., for 1904.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).
	Maximum.	Minimum.	Mean.	
February.....	22	0	12.9	486
March.....	10	3	5.6	344
April.....	16	2	9	536
May.....	32	2	12.8	787
June.....	50	12	43.1	2,565
July.....	33	20	26	1,599
August.....	21	16	18	1,107
September.....	33	10	16	952
October.....	14	0	5	307
November.....	2	2	2	119
December.....	2	0	a 2	123
The period.....				8,925

a Estimated.

DELL CANAL NEAR BISHOP, CAL.

This station was established August 24, 1903, by R. S. Hawley. It was located at a flume 3 miles from the head gate at a point where the canal crosses a slough in Sanders's field.

The channel is straight for 150 feet above and for 200 feet below the station. The current is sluggish at all times.

Discharge measurements were made from a bridge across the flume.

The gage was a vertical rod fastened to the flume.

Discharge measurements of Dell canal near Bishop, Cal., in 1903-1905.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1903.		<i>Feet.</i>	<i>Sec.-ft.</i>	1904.		<i>Feet.</i>	<i>Sec.-ft.</i>
Aug. 11	R. S. Hawley	.....	24.2	Nov. 17	R. J. Taylor	1.05	12.0
20	do.	.....	11.0	Dec. 12	do.	1.10	11.0
24	do.	.....	10.0				
24	do.	0.85	8.0	1905.			
Sept. 4	do.	.78	7.0	Mar. 10	R. J. Taylor	1.40	24.0
22	do.	1.47	19.6	Apr. 14	J. S. Evans	1.20	16.4
Oct. 7	do.	1.52	19.0	28	do.	1.35	23.0
				May 11	do.	1.48	26.0
1904.				June 26	do.	1.60	22.0
Mar. 16	R. S. Hawley	1.40	22.0	July 6	do.	1.70	24.0
Apr. 15	do.	1.31	17.9	Aug. 2	do.	1.30	17.2
May 28	do.	1.60	19.0	Sept. 6	do.	1.31	16.8
June 20	do.	1.80	23.0	28	do.	1.12	11.6
July 14	Clausen and Barnes	1.80	16.9	Oct. 30	F. R. S. Buttemer	1.22	13.7
Aug. 11	L. M. Barnes	1.90	22.0	Nov. 18	do.	1.35	16.6
Sept. 8	R. S. Hawley	1.39	14.5	Dec. 5	do.	.62	3.0

Daily gage height, in feet, of Dell canal near Bishop, Cal., for 1903-1905.

Day.	Aug.	Sept.	Day.	Aug.	Sept.	Day.	Aug.	Sept.
1903.			1903.			1903.		
1.		0.79	11.		0.80	21.		0.79
2.		.80	12.		.80	22.		.80
3.		.80	13.		.80	23.	0.85	.81
4.		.79	14.		.79	24.	.85	.81
5.		.79	15.		.79	25.	.86	.80
6.			16.		.80	26.	.86	.81
7.		.78	17.		.80	27.		
8.		.78	18.		.78	28.	.85	.78
9.		.79	19.		.78	29.	.85	.78
10.		.80	20.			30.		.79
						31.		

Day.	Oct.	Nov.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1903-4.									
1.	0.80	0.90	1.40		1.30	1.60	1.80	1.80	1.90
2.	.80	.90						1.80	
3.	.81	.90			1.30	1.60	1.80		1.90
4.		.91				1.60		1.80	
5.	.80	.91			1.40		1.80		1.90
6.	.80	.92		1.30		1.60		1.80	
7.	.81	.92			1.30		1.80		1.90
8.	.81			1.30		1.60		1.80	
9.	.80	.95			1.40		1.70		1.90
10.	.80	.94		1.40		1.60		1.90	
11.		.95		1.40	1.50		1.70		
12.	.82	.95				1.60		1.90	1.90
13.	.82	1.01		1.30	1.60		1.80		
14.	.83	1.02				1.70		1.90	1.90
15.	.83			1.30	1.60				
16.	.83	1.06	1.40			1.80	1.70	1.90	1.90
17.	.84	1.08		1.30	1.60				
18.		1.11				1.80	1.70	1.90	1.90
19.	.84	1.12		1.40	1.60				
20.	.85	1.14				1.80		1.90	1.90
21.	.86	1.13			1.60		1.80	1.90	
22.	.86	1.12	1.40	1.40		1.80			1.90
23.	.86	1.11			1.70		1.80	1.90	
24.	.87	1.12		1.40		1.80			1.90
25.	.88	1.15			1.70		1.80	1.90	
26.	.88	1.16		1.30		1.80			1.90
27.	.89	1.12			1.70		1.80	1.90	
28.	.81	(a)		1.30	1.60	1.80		1.90	1.90
29.	.89								
30.	.89			1.30	1.60	1.80	1.80	1.90	1.90
31.	.89								

^a No record obtained from Nov. 27 to Dec. 31, 1903, when the water was turned out.

Daily gage height, in feet, of Dell canal near Bishop, Cal., in 1903-1905—Continued.

Day.	Feb.	Mar.	Apr.	Nov.	Dec.	Day.	Feb.	Mar.	Apr.	Nov.	Dec.
1905.						1905.					
1.....			1.3			16.....		1.4			0.8
2.....		1.4			0.9	17.....					
3.....						18.....		1.4		1.35	
4.....		1.4			.8	19.....					
5.....						20.....		1.4		1.3	
6.....		1.4			.6	21.....					
7.....						22.....		1.4		1.3	
8.....		1.4			.6	23.....					
9.....						24.....		1.2		1.3	
10.....		1.4			.6	25.....					
11.....						26.....	1.4	1.2		1.3	
12.....		1.4			.8	27.....					
13.....						28.....	1.4	1.2		1.4	
14.....		1.4			.8	29.....					
15.....						30.....		1.2		1.35	
						31.....					

NOTE.—Canal dry from Jan. 1 to Feb. 29 and Mar. 23 to Apr. 5, 1904. No record for other days for which gage heights are not given.

Monthly discharge of Dell canal near Bishop, Cal., for 1904.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).
	Maximum.	Minimum.	Mean.	
March.....	21	0	15	922
April.....	21	0	16	952
May.....	21	9	15.7	970
June.....	24	18	21.2	1,304
July.....	18	15	16.1	984
August.....	22	18	21	1,291
September.....	22	22	22	1,309
The period.....				7,732

NOTE.—Discharge interpolated for days on which gage was not read. The discharge has been obtained indirectly from measurements.

BIG PINE & OWENS RIVER CANAL NEAR BISHOP, CAL.

This station was established August 4, 1903. It was located at a footbridge near the house of William Oliver, the observer. It is $7\frac{1}{2}$ miles south and 3 miles east of Bishop.

The channel is straight for 600 feet above and 300 feet below the station. The current is sluggish. Both banks are high and are not liable to overflow. The bed of the stream is sandy and somewhat shifting.

Discharge measurements were made from the footbridge.

The gage was a vertical rod securely nailed to the footbridge.

Discharge measurements of Big Pine & Owens River canal near Bishop, Cal., in 1903-1905.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1903.		<i>Feet.</i>	<i>Sec.-ft.</i>	1905.		<i>Feet.</i>	<i>Sec.-ft.</i>
Aug. 4	R. S. Hawley.....	1.60	19.0	Jan. 25	R. J. Taylor.....	1.30	9.5
11	.....do.....	1.55	16.3	Feb. 13	.....do.....	1.15	6.7
20	.....do.....	1.50	17.3	Apr. 28	J. S. Evans.....	1.30	10.7
Sept. 14	.....do.....	.90	1.3	May 11	.....do.....	1.50	17.7
22	.....do.....	1.15	4.3	June 26	.....do.....	1.90	30
Oct. 27	.....do.....	2.29	46.4	July 6	.....do.....	1.75	19.6
1904.				Aug. 2	.....do.....	1.20	6.3
Mar. 16	R. S. Hawley.....	2.42	59	Sept. 6	.....do.....	1.17	5.9
May 28	.....do.....	2.90	58	Oct. 28	.....do.....	1.10	2.6
June 20	.....do.....	3.31	91	Oct. 30	F. R. S. Buttemer.....	2.53	41
July 14	Clausen and Barnes.....	2.40	32	Nov. 18	.....do.....	1.42	15
Aug. 11	L. M. Barnes.....	2.60	29	Dec. 5	.....do.....	1.45	16.2
Sept. 8	R. S. Hawley.....	1.51	10.6				

Daily gage height, in feet, of Big Pine & Owens River canal near Bishop, Cal., for 1903-1905.

Day.	Aug.	Sept.	Day.	Aug.	Sept.	Day.	Aug.	Sept.
1903.			1903.			1903.		
1.....		0.90	11.....	1.53	0.98	21.....	1.40	1.12
2.....		.90	12.....	1.55	1.00	22.....	1.40	1.10
3.....		.90	13.....	1.40	1.00	23.....	1.40	1.10
4.....		.90	14.....	1.40	1.05	24.....	1.40	1.10
5.....	1.55	.90	15.....	1.40	1.05	25.....	1.35	1.10
6.....	1.50	.90	16.....	1.60	1.05	26.....	1.35	1.10
7.....	1.63	.90	17.....	1.60	1.05	27.....	1.75	1.12
8.....	1.62	.90	18.....	1.60	1.10	28.....	1.75	1.15
9.....	1.80	.90	19.....	1.60	1.15	29.....	1.75	1.18
10.....	1.70	.97	20.....	1.60	1.15	30.....	1.30	1.22
						31.....	.90	

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1903-4.												
1.....	1.20	2.53	2.35	.....	1.95	2.5	1.6	1.7	2.6	2.7	2.6	2.12
2.....	1.25	2.58	2.40	.....	1.95	2.5	1.45	1.6	2.6	2.7	2.6	2.12
3.....	1.35	2.53	2.40	1.45	1.96	2.55	1.4	1.6	2.6	2.7	2.6	2.06
4.....	1.35	2.53	2.40	1.45	1.87	2.55	1.45	1.6	2.9	2.6	2.65	1.8
5.....	1.50	2.53	2.30	1.45	2.1	2.45	1.0	1.55	3.1	2.6	2.63	1.8
6.....	1.80	2.53	2.30	1.43	2.0	2.35	1.0	1.5	3.1	2.6	2.55	1.6
7.....	1.90	2.53	2.30	1.43	2.05	2.35	1.0	1.4	3.1	2.6	2.55	1.55
8.....	1.95	2.57	2.30	1.43	1.92	2.35	.....	1.4	3.2	2.6	2.55	1.5
9.....	1.95	2.57	2.35	1.45	1.83	2.4	.....	1.4	3.1	2.6	2.6	1.5
10.....	2.03	2.57	2.35	1.45	1.72	2.4	.....	1.4	3.0	2.6	2.65	1.5
11.....	2.22	2.62	2.35	1.43	1.73	2.75	.....	1.4	3.0	2.5	2.6	1.5
12.....	2.25	2.57	2.35	1.43	1.86	2.7	.....	1.4	3.0	2.5	2.42	1.45
13.....	2.25	2.57	1.50	2.0	1.95	2.3	.....	1.45	3.1	2.4	2.42	1.45
14.....	2.27	2.60	1.50	1.82	2.03	2.3	.....	1.45	3.3	2.4	2.33	1.5
15.....	2.40	2.60	1.50	1.83	2.03	2.35	1.65	1.55	3.3	2.3	2.3	1.4
16.....	2.42	2.55	1.50	1.86	2.5	2.5	1.65	1.95	3.4	2.2	2.3	1.45
17.....	2.45	2.55	1.50	1.87	2.6	2.4	1.6	2.25	3.5	1.6	2.3	1.45
18.....	2.42	2.50	1.52	1.86	2.03	2.4	1.6	1.7	3.5	1.4	2.3	1.55
19.....	2.43	2.50	1.58	1.87	1.8	2.4	1.8	2.2	3.4	2.2	2.2	1.6
20.....	2.45	2.50	1.47	1.8	1.72	2.4	1.8	2.35	3.4	2.2	2.2	1.6
21.....	2.47	2.53	1.48	1.95	2.33	2.5	1.9	2.2	3.3	2.1	2.2	1.7
22.....	2.46	2.53	1.53	2.0	2.3	2.3	1.85	2.2	3.3	2.2	2.1	1.7
23.....	2.30	2.53	1.53	2.0	2.5	2.2	2.05	2.23	3.2	2.3	2.16	1.75
24.....	2.30	2.43	1.47	2.0	2.7	2.2	1.95	2.5	3.2	2.4	2.16	1.85
25.....	2.33	2.41	1.47	2.0	2.65	1.8	1.9	2.85	3.1	2.5	2.16	2.75
26.....	2.32	2.35	1.50	1.9	2.6	1.6	1.9	3.0	3.1	2.5	2.1	3.25
27.....	2.28	2.35	1.50	1.9	2.66	1.7	1.8	3.0	3.0	2.5	2.16	2.8
28.....	2.27	2.35	1.50	1.9	2.67	2.0	1.8	2.9	2.9	2.5	2.15	2.7
29.....	2.25	2.38	1.50	1.9	2.5	2.1	1.8	2.8	2.8	2.5	2.06	2.55
30.....	2.45	2.40	1.50	1.9	.....	1.9	1.7	2.75	2.8	2.4	2.0	2.75
31.....	2.45	.....	1.50	1.9	.....	1.6	.....	2.75	.....	2.4	2.0	.....

Daily gage height, in feet, of Big Pine & Owens River canal near Bishop, Cal., for 1900-1905—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1904-5.												
1.....	2.7	1.45	1.4	1.2	1.4	1.2	1.15	1.4	2.0	1.8	1.1	1.2
2.....	2.65	1.4	1.4	1.2	1.4	1.2	1.15	1.8	1.85	1.8	1.1	1.1
3.....	2.6	1.4	1.3	1.2	1.4	1.15	1.15	1.8	1.8	1.8	1.1	1.2
4.....	2.65	1.4	1.4	1.2	1.3	1.15	1.15	1.9	1.8	1.8	1.1	1.2
5.....	2.65	1.4	1.4	1.2	1.25	1.15	1.15	1.7	1.8	1.8	1.0	1.2
6.....	1.65	1.4	1.4	1.25	1.25	1.15	1.15	1.7	1.7	1.7	1.1	1.2
7.....	1.7	1.35	1.3	1.3	1.25	1.15	1.1	1.5	1.7	1.7	1.1	1.2
8.....	1.6	1.35	1.25	1.3	1.15	1.15	1.1	1.5	1.7	2.0	1.1	1.2
9.....	1.6	1.35	1.2	1.25	1.15	1.1	.....	1.6	1.95	2.05	1.2	1.2
10.....	1.55	1.35	1.2	1.25	1.2	1.1	.....	1.55	2.15	2.2	1.2	1.2
11.....	1.55	1.35	1.25	1.25	1.2	1.1	.....	1.55	2.1	2.25	1.2	1.3
12.....	2.0	1.35	1.2	1.25	1.2	1.15	.....	1.5	2.3	2.35	1.2	1.3
13.....	1.65	1.35	1.2	1.25	1.2	1.5	.....	1.5	2.45	2.4	1.2	1.2
14.....	1.55	1.35	1.2	1.25	1.15	1.75	1.35	1.5	2.65	2.4	1.2	1.2
15.....	1.55	1.35	1.2	1.3	1.15	1.55	1.4	1.5	2.7	2.25	1.2	1.3
16.....	1.5	1.35	1.2	1.4	1.2	1.55	1.35	1.5	2.8	2.1	1.2	1.3
17.....	1.5	1.35	1.2	1.4	1.2	1.4	1.35	1.55	1.8	2.05	1.2	1.3
18.....	1.5	1.35	1.2	1.35	1.2	1.4	1.45	1.6	1.8	1.8	1.2	1.3
19.....	1.45	1.35	1.2	1.35	1.2	1.35	1.3	1.8	1.85	1.7	1.1	1.1
20.....	1.45	1.35	1.2	1.4	1.2	1.35	1.3	2.1	1.7	1.6	1.1	1.15
21.....	1.45	1.4	1.2	1.4	1.15	1.35	1.15	2.15	1.65	2.0	1.0	1.15
22.....	1.45	1.4	1.2	1.35	1.15	1.35	1.15	2.25	1.7	1.9	1.0	1.1
23.....	1.45	1.35	1.25	1.35	1.15	1.1	1.1	2.2	1.8	2.0	1.5	1.1
24.....	1.5	1.35	1.25	1.35	1.25	1.1	1.1	2.25	2.2	1.6	1.6	1.1
25.....	1.5	1.35	1.25	1.35	1.25	1.1	1.1	2.0	2.2	1.4	1.5	1.2
26.....	1.5	1.35	1.25	1.35	1.25	1.1	1.45	1.8	1.9	1.3	1.4	1.2
27.....	1.5	1.35	1.2	1.3	1.3	1.2	1.4	2.25	1.8	1.3	1.4	1.15
28.....	1.5	1.4	1.2	1.3	1.2	1.2	1.4	2.25	1.6	1.2	1.4	1.15
29.....	1.5	1.4	1.2	1.3	.....	1.2	1.4	2.45	1.5	1.1	1.2	1.15
30.....	1.5	1.4	1.2	1.25	.....	1.1	1.4	2.4	1.8	1.1	1.3	1.15
31.....	1.45	.....	1.3	1.25	.....	1.1	.....	2.1	.....	1.1	1.3	.....

Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.
1905.				1905.				1905.			
1.....	1.4	2.55	1.4	11.....	2.15	1.2	1.4	21.....	2.35	1.3	1.35
2.....	1.3	2.55	1.45	12.....	2.2	1.2	1.4	22.....	2.35	1.25	1.35
3.....	1.4	2.55	1.5	13.....	2.2	1.2	1.4	23.....	2.35	1.25	1.35
4.....	1.5	2.5	1.5	14.....	2.1	1.2	1.4	24.....	2.35	1.25	1.3
5.....	1.65	2.5	1.45	15.....	2.15	1.2	1.4	25.....	2.35	1.3	1.3
6.....	1.9	2.25	1.45	16.....	2.15	1.2	1.4	26.....	2.35	1.3	1.4
7.....	1.9	2.3	1.45	17.....	2.3	1.3	1.4	27.....	2.35	1.4	1.4
8.....	1.8	2.3	1.45	18.....	2.3	1.4	1.4	28.....	2.45	1.4	1.4
9.....	2.0	2.3	1.45	19.....	2.35	1.4	1.4	29.....	2.45	1.4	1.3
10.....	2.1	2.55	1.4	20.....	2.35	1.35	1.4	30.....	2.5	1.4	1.3
								31.....	2.55	.....	1.3

NOTE.—Canal dry Jan. 1-2, 1904; Apr. 8-14, 1904, and Apr. 9-13, 1905.

Rating table for Big Pine & Owens River canal near Bishop, Cal., from January 1 to December 31, 1904.

Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.
<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>
1.20	5	1.80	16	2.40	30	3.00	68
1.30	6	1.90	18	2.50	33	3.10	76
1.40	8	2.00	20	2.60	38	3.20	85
1.50	10	2.10	22	2.70	43	3.30	94
1.60	12	2.20	24	2.80	50	3.40	103
1.70	14	2.30	27	2.90	59		

Monthly discharge of Big Pine & Owens River canal near Bishop, Cal., for 1904.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).
	Maximum.	Minimum.	Mean.	
January.....	20	0	14	861
February.....	43	14	24.7	1,421
March.....	46	12	28	1,722
April.....	21	3	10	595
May.....	64	8	23.8	1,466
June.....	114	38	75.2	4,474
July.....	43	8	31.2	1,918
August.....	41	20	29	1,783
September.....	90	8	21	1,250
October ^a	43	9	16	984
November.....	9	7	7	416
December.....	8	5	5.8	357
The year.....	114	0	23.8	17,247

^a Headgate shut down Oct. 6. Water flowing after that date is leakage.

SANGER CANAL AT ALVORD, CAL.

This station was established August 4, 1903. It was located at the county road bridge, one-fourth mile east of the Southern Pacific Railroad station at Alvord.

The channel is straight for 300 feet above and for 100 feet below the station. The current is sluggish. Both banks are low and liable to overflow. The bed of the stream is shifting.

Discharge measurements were made from the bridge.

The gage was a vertical rod fastened to the bridge.

Discharge measurements of Sanger canal at Alvord, Cal., in 1903-1905.

Date.	Hydrographer.	Gage height.	Dis- charge.	Date.	Hydrographer.	Gage height.	Dis- charge.
1903.		<i>Feet.</i>	<i>Sec.-ft.</i>	1904.		<i>Feet.</i>	<i>Sec.-ft.</i>
Aug. 4	R. S. Hawley.....	2.00	3.1	Nov. 17	R. J. Taylor.....	2.52	15.3
13	do.....	2.60	10.0	Dec. 9	do.....	2.30	11.0
Sept. 8	do.....	2.45	11.3				
22	do.....	2.26	10.1	1905.			
Oct. 27	do.....	2.70	14.5	Jan. 7	R. J. Taylor.....	2.38	13.6
Dec. 4	do.....	2.30	13.4	Feb. 18	do.....	2.32	13.9
				Apr. 14	J. S. Evans.....	2.80	9.9
1904.				26	do.....	2.88	8.8
Jan. 27	R. S. Hawley.....	1.90	6.6	May 19	do.....	3.05	5.6
Apr. 6	do.....	2.00	9.7	June 9	do.....	2.80	4.7
July 14	Clausen and Barnes.....	3.05	10.3	Aug. 17	do.....	2.10	4.0
Aug. 11	L. M. Barnes.....	3.20	15.4	Sept. 13	do.....	2.10	2.8
Sept. 8	R. S. Hawley.....	2.80	7.3	Oct. 30	F. R. S. Buttemer.....	2.82	13.2
Oct. 9	Hawley and Taylor.....	2.75	14.4	Nov. 18	do.....	2.60	10.2

Daily gage height, in feet, of Sanger canal at Alford, Cal., for 1903-1905.

Day.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1903-4.													
1.....		2.5	2.6	2.4	2.3	1.9	1.9	1.9	2.7	3.0	3.2	3.4	3.1
2.....			2.6		2.3		1.9	1.9		3.0	3.2	3.4	3.0
3.....		2.5	2.6	2.4	2.3	2.5	1.9	1.9	2.7	3.0	3.2	3.4	2.9
4.....		2.5	2.55				1.9	1.9		3.0	3.2	3.4	2.8
5.....			2.5	2.4	1.9	2.5	1.9	1.9	2.7	3.0	3.2	3.4	2.7
6.....		2.5	2.5	2.4		2.5		2.3		3.0	3.2	3.4	2.7
7.....			2.5		1.9	2.5	1.9		2.7	3.0	3.2	3.4	2.7
8.....		2.5	2.4	2.3				2.3	2.7	3.2	3.2	3.4	2.7
9.....			2.4		1.9	1.9	1.9	2.3	2.7	3.2	3.2	3.4	2.7
10.....		2.5	4.4	2.3	1.9			2.3	2.7	3.2	3.1	3.4	2.7
11.....		2.2	2.4			1.9	1.9	2.3	2.8	3.2	3.0	3.4	2.7
12.....			2.4	2.3	1.9		1.9		2.8	3.2	3.0	3.4	2.7
13.....		2.5	2.3	2.3	1.9	1.9		2.5	2.8	3.2	2.9	3.4	2.7
14.....			2.3		1.9	1.9	1.9		2.9	3.2	2.9	3.4	2.7
15.....		2.5	2.3	2.3				2.5	2.9	3.2	2.9	3.4	2.7
16.....					1.9	1.9	1.9	2.5	2.9	3.2	2.9	3.4	2.7
17.....		2.5	2.3	2.3	1.9	1.9	2.1	2.5	2.9	3.2	2.9	3.4	2.7
18.....		2.6							2.9	3.2	3.0	3.4	2.7
19.....		2.6	2.4	2.3	1.9	1.9	2.1	2.5	2.9	3.2	3.0	3.4	2.7
20.....		2.6		2.3		1.9	2.1		3.0	3.2	3.0	3.4	2.7
21.....			2.5		1.9	1.9		2.5	3.0	3.2	3.2	3.4	2.7
22.....		2.6	2.5	2.3			2.1		3.0	3.2	3.2	3.4	2.7
23.....					1.9	1.9		2.5	3.0	3.2	3.2	3.4	2.7
24.....		2.6	2.5	2.3	1.9		2.1	2.5		3.2	3.3	3.4	2.7
25.....		2.6			1.9	1.9			3.0	3.2	3.3	3.4	2.7
26.....			2.5	2.3			2.1	2.7	3.0	3.2	3.3	3.4	2.7
27.....	2.6	2.5		2.3	1.9	1.9			3.0	3.2	3.3	3.4	2.7
28.....			2.5	2.3		1.9		2.7	3.0	3.2	3.3	3.4	2.6
29.....	2.6	2.5	2.4	2.3	1.9	1.9	1.9		3.0	3.2	3.4	3.4	2.6
30.....	2.5		2.4	2.3	1.9		1.9	2.7	3.0	3.2	3.4	3.4	2.6
31.....		2.4		2.3			1.9		3.0		3.4	3.4	

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.
1904-5.								
1.....	2.5	2.6	2.5	2.2			1.2	2.9
2.....	2.5	2.6	2.5		1.7		1.2	2.9
3.....	2.5	2.6	2.5	2.1				
4.....	2.5	2.6			1.6		1.2	2.9
5.....	2.4	2.6		2.1	1.6		1.2	
6.....	2.4	2.6						3.0
7.....	2.4	2.6		2.1	1.5		1.2	3.0
8.....	2.35	2.6		2.1				
9.....	2.35	2.6			1.5		1.8	3.1
10.....	2.4	2.6		2.0				
11.....	2.5	2.6			1.4		2.0	3.3
12.....	2.6	2.6		2.0	1.4		2.1	
13.....	2.6	2.6						3.4
14.....	2.6	2.6		1.9	1.3		2.1	3.4
15.....	2.7	2.6		1.9				2.8
16.....	2.7	2.6			1.3		2.2	
17.....	2.7	2.6		1.9			2.2	3.4
18.....	2.7	2.6			1.3		2.2	
19.....	2.7	2.6		1.8	1.3		2.2	3.5
20.....	2.7	2.6						3.5
21.....	2.7	2.6			1.8	1.3	2.4	
22.....	2.7	2.6		1.8				
23.....	2.7	2.6			1.3		2.4	2.8
24.....	2.7	2.6		1.8				2.8
25.....	2.7	2.6			1.3		2.4	
26.....	2.7	2.6						
27.....	2.7	2.6		1.8	1.3		2.4	2.8
28.....	2.7	2.6						
29.....	2.7	2.6		1.7	1.2		2.6	2.8
30.....	2.6	2.6		1.7				2.8
31.....	2.6			1.7			2.7	

EAST SIDE CANAL NEAR CITRUS, CAL.

This station was established August 27, 1903. It was located at the head gate of the canal.

At low stages measurements were made by wading at a point below the head gate. High-stage measurements were made from the Southern Pacific Railroad bridge, half a mile below the head gate.

The gage was a vertical rod fastened to the head gate.

Discharge measurements of East Side canal near Citrus, Cal., in 1903-1905.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1903.		<i>Feet.</i>	<i>Sec.-ft.</i>	1904.		<i>Feet.</i>	<i>Sec.-ft.</i>
Aug. 13	R. S. Hawley.....	1.95	32	Sept. 12	R. S. Hawley.....	2.60	42
Aug. 27	do.....	2.00	44	Oct. 9	Hawley and Taylor.....	2.60	45
Sept. 16	do.....	1.98	36	Nov. 4	R. J. Taylor.....	2.30	30
Oct. 30	do.....	2.95	80	Dec. 2	do.....	2.25	27
Dec. 4	do.....	3.23	96				
1904.				1905.			
Feb. 24	R. S. Hawley.....	1.55	35	Feb. 2	R. J. Taylor.....	2.30	31
Apr. 6	do.....	1.70	28	May 29	J. S. Evans.....	2.60	32
May 3	do.....	1.60	24	Aug. 23	do.....	3.10	22
June 9	do.....	2.50	50	Sept. 20	do.....	3.00	14
July 22	L. M. Barnes.....	2.50	40	Nov. 8	F. R. S. Buttemer.....	2.63	18
				Dec. 3	do.....	1.90	4.8

Daily gage height, in feet, of East Side canal near Citrus, Cal., for 1903-1905.

Day.	Aug.	Sept.	Day.	Aug.	Sept.	Day.	Aug.	Sept.
1903.			1903.			1903.		
1.....			11.....		2.0	21.....		2.0
2.....		2.0	12.....			22.....		
3.....			13.....			23.....		2.0
4.....		2.0	14.....		1.9	24.....		
5.....			15.....			25.....		2.0
6.....			16.....		2.0	26.....		
7.....		2.0	17.....			27.....	2.0	
8.....			18.....		2.0	28.....	2.0	2.1
9.....		2.0	19.....			29.....		
10.....			20.....			30.....		2.1
						31.....	2.0	

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1903-4.												
1.....					1.7		1.9			2.6	2.6	2.6
2.....	2.0	3.0	3.2					1.9				
3.....						1.8		1.6	2.4			
4.....		3.0	3.2	1.4			1.8			2.5		
5.....	2.2										2.6	2.5
6.....		3.0		1.4					2.4			
7.....	2.3					1.8						
8.....					1.6					2.8	2.6	
9.....	2.3	3.0	2.35					1.6				2.6
10.....									2.5			
11.....		3.0	2.4	1.1		1.7	1.85			2.8		
12.....	2.4				1.5							2.6
13.....		3.0						1.8	2.6			
14.....	2.5		2.4	1.4		1.7						
15.....					1.5		1.8			2.6		
16.....		3.0	2.4					1.9				2.6
17.....	2.6								2.6			
18.....		3.0	2.0	1.4	1.8	1.8	1.9			2.8		2.6
19.....	2.7											
20.....		3.0		1.4					2.6			

Daily gage height, in feet, of East Side canal near Citrus, Cal., in 1903-1905—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1903-4.												
21.	2.7		2.0			1.8				2.5		
22.					1.6							
23.	3.1		2.4					2.0				2.6
24.									2.5			
25.		3.05	2.4	1.5		2.1	1.9			2.9		
26.					1.6							2.7
27.	3.1	3.15						2.4	2.6			
28.	3.0		1.8			1.8					2.0	
29.				1.6	1.5					2.8	2.4	
30.	2.0	3.15						2.2				2.6
31.												
1904-5.												
1.								2.5				3.0
2.			2.4						2.4			
3.	2.5				2.3	2.3	2.5			3.4		
4.		2.6									3.3	3.1
5.			2.1					2.5	2.6			
6.				2.3	2.0	2.3						
7.	2.4	2.5					2.5			3.3	3.3	
8.								2.5				3.1
9.				2.4					3.0			
10.	2.6				2.0	2.4	2.5			3.3		
11.		2.6									3.1	3.1
12.								2.5	3.2			
13.				2.2	2.0	2.6						
14.	2.8	2.5					2.6			3.3	3.1	
15.								2.6				3.1
16.				2.3					3.2			
17.	2.3				2.1	2.5	2.6			3.2		
18.		2.5									3.1	3.1
19.								2.6	3.2			
20.				2.3	2.2	2.1						
21.	2.4	2.4					2.6			3.1	3.1	
22.								2.5				3.1
23.				2.2					3.2			
24.	2.4				2.2	2.2	2.6			3.2		
25.		2.5									3.2	3.0
26.								2.5	3.2			
27.				2.3	2.2	2.5						
28.	2.4	2.4					2.5			3.2	3.1	
29.								2.6				3.1
30.				2.3					2.3			
31.	2.5					2.5				3.2		
Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.	
1905.				1905.				1905.				
1.			2.0	11.			2.1	21.				
2.	3.1			12.				22.			2.1	
3.		3.0		13.	3.1	2.8		23.	3.2			
4.			2.1	14.				24.		2.6		
5.				15.			2.1	25.			2.0	
6.	3.1	2.9		16.	3.1			26.				
7.				17.		2.8		27.	3.2	2.6		
8.			2.1	18.			2.1	28.				
9.	3.1			19.				29.			1.9	
10.		2.9		20.	3.2	2.7		30.	3.0			
								31.				

NOTE.—Canal dry Dec. 6-8, 1903, Aug. 9-27, 1904, and Dec. 6-31, 1904.

Rating table for East Side canal near Citrus, Cal., from July 1 to December 31, 1904.

Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.
<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>
1.50	3	1.90	18	2.30	32	2.70	48
1.60	7	2.00	21	2.40	36	2.80	52
1.70	11	2.10	25	2.50	40	2.90	55
1.80	14	2.20	28	2.60	44	3.00	59

Monthly discharge of East Side canal near Citrus, Cal., for 1904.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).
	Maximum.	Minimum.	Mean.	
January.....	24	10	18.7	1,150
February.....	30	21	24.4	1,406
March.....	39	27	30.3	1,863
April.....	33	30	31.8	1,892
May.....	48	24	34	2,091
June.....	54	48	51.8	3,082
July.....	55	28	47	2,890
August 1-8, 27-31.....	44	21	40	1,031
September.....	48	40	44	2,618
October.....	52	32	39	2,398
November.....	44	36	40	2,380

NOTE.—Discharge interpolated for missing days. From Jan. 1 to June 30 no rating table was made, but discharge was based on measurements indirectly.

STEVENS CANAL NEAR CITRUS, CAL.

This station was established August 27, 1903. It was located at the waste gate of the canal, $3\frac{1}{2}$ miles north of Citrus.

The channel is straight for 300 feet above and 200 feet below the station. The current is sluggish. Both banks are high and are not liable to overflow. The bed of the stream is composed of gravel and earth and is fairly permanent.

Discharge measurements were made by wading.

The gage was a vertical rod fastened to the waste gate.

Discharge measurements of Stevens canal near Citrus, Cal., in 1903-1905.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1903.		<i>Feet.</i>	<i>Sec.-ft.</i>	1904.		<i>Feet.</i>	<i>Sec.-ft.</i>
Aug. 13	R. S. Hawley.....	.....	17.7	July 22	L. M. Barnes.....	3.20	22.0
27	.....do.....	2.30	23.0	Sept. 12	R. S. Hawley.....	1.70	3.5
Sept. 16	.....do.....	2.40	21.3				
1904.				1905.			
Feb. 24	R. S. Hawley.....	2.40	24.0	May 29	J. S. Evans.....	2.70	37.0
Apr. 6	.....do.....	.....	10.7	Aug. 23	.....do.....	2.50	18.5
May 3	.....do.....	2.20	32.0	Sept. 20	.....do.....	2.55	23.0
June 9	.....do.....	3.30	38.0	Nov. 8	F. R. S. Buttemer.....	1.80	10.7
24	.....do.....	3.87	54.0	Dec. 3	.....do.....	1.65	7.3

Daily gage height, in feet, of Stevens canal near Citrus, Cal., for 1903-1905.

Day.	Aug.	Sept.	Day.	Aug.	Sept.	Day.	Aug.	Sept.
1903.			1903.			1903.		
1			11		2.30	21		2.40
2		2.30	12			22		
3			13			23		2.00
4		2.30	14		2.60	24		
5			15			25		2.00
6			16		2.40	26		
7		2.35	17			27	2.30	
8			18		2.00	28	2.30	2.30
9		2.35	19			29		
10			20			30		2.35
						31	2.30	

Day.	Oct.	Feb.	Mar.	Apr.	May.	Sept.	Day.	Oct.	Feb.	Mar.	Apr.	May.	Sept.
1903-4.							1903-4.						
1		1.9					16						
2	2.5				2.2		17				2.2		
3							18			2.6			
4			2.4				19						
5	2.5						20						
6					2.2		21						2.6
7	2.5		2.2				22		2.6				
8		1.8					23					2.3	2.6
9					2.0		24						
10							25			2.9	2.2		
11			2.0				26		2.5				2.7
12		1.7					27						
13					2.2		28						2.5
14			2.1				29		2.4				
15		1.7					30						2.5
							31						

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1904-5.												
1					1.6	1.9		2.1				2.3
2		1.6		1.6					2.8		2.5	
3	2.5				1.6	1.8	1.5	2.2		2.8		
4		1.5		1.6							2.5	2.4
5	2.5		1.5				1.5	2.3	2.8	2.9		
6				1.5	1.5	1.9						2.4
7	2.6	1.6	1.5				1.5		2.8	2.8	2.5	
8					1.5	2.3		2.2				2.4
9		1.5	1.5	1.5					2.8		2.5	
10	2.5				1.5	2.3	1.5	2.2		2.9		
11		1.5		1.5							2.5	2.5
12	2.5		1.5				1.6	2.2	2.8	2.9		
13				1.5	1.5	2.4						2.5
14	2.7	1.6	1.5				1.6		2.8	2.9	2.7	
15					1.5	2.5		2.2				2.5
16		1.6	1.5	1.5					2.9		2.7	
17	2.3				1.5	2.6	1.6	2.2		2.8		
18		1.6		1.6							2.6	2.6
19	2.4		1.5				1.6	2.2	2.9	2.7		
20				1.5	1.6	2.4						2.6
21	2.3	1.6	1.5				1.6		2.9	2.7	2.5	
22					1.6	2.0		2.5				2.6
23		1.6	1.5	1.5					2.9		2.5	
24	1.6				2.0	1.5	1.6			2.7		
25		1.6		1.5							2.5	2.6
26	1.5		1.5				1.5	2.6	2.9	2.8		
27				1.5	1.9	1.5						2.6
28	1.5	1.6	1.5				2.1		2.7	2.8	2.4	
29						1.5		2.7				2.5
30		1.6	1.5	1.5					2.8		2.4	
31	1.6					1.5		2.8		2.5		

Daily gage height, in feet, of Stevens canal near Citrus, Cal., for 1903-1905—Continued.

Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.
1905.				1905.				1905.			
1.....		2.8	2.5	11.....	2.7	.....	1.7	21.....	.....	2.6	1.7
2.....	2.6	.....		12.....	.....	.....	.....	22.....	.....	.....	.....
3.....	.....	2.8	.....	13.....	2.7	2.8	1.7	23.....	2.9	.....	.....
4.....	2.6	.....	1.8	14.....	.....	.....	.....	24.....	.....	2.5	.....
5.....	.....	.....	.....	15.....	.....	2.8	1.7	25.....	2.9	.....	1.7
6.....	2.6	2.8	1.8	16.....	2.8	.....	.....	26.....	.....	.....	.....
7.....	.....	.....	.....	17.....	.....	2.8	.....	27.....	2.9	2.5	1.7
8.....	.....	2.8	1.8	18.....	2.8	.....	1.7	28.....	.....	.....	.....
9.....	2.7	.....	.....	19.....	.....	.....	.....	29.....	.....	2.5	1.7
10.....	.....	2.8	.....	20.....	2.8	2.6	1.7	30.....	2.8	.....	.....
								31.....	.....	.....	.....

NOTE.—Water turned out of the canal from Oct. 8, 1903, to Jan. 29, 1904.

Rating tables for Stevens canal near Citrus, Cal.

January 1 to June 30, 1904.

Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.
<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>
1.40	14	1.70	17	2.00	20	2.30	23
1.50	15	1.80	18	2.10	21	2.40	24
1.60	16	1.90	19	2.20	22		

July 1 to December 31, 1904.

1.50	3.0	1.80	4.0	2.10	6	2.40	9
1.60	3.2	1.90	4.5	2.20	7	2.50	10
1.70	3.5	2.00	5.0	2.30	8		

Monthly discharge of Stevens canal near Citrus, Cal., for 1904.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).
	Maximum.	Minimum.	Mean.	
February.....	26	17	20.1	1,156
March.....	24	20	21.3	1,310
April.....	22	22	22	1,309
May.....	23	22	22	1,353
September 21-30.....	12	10	11	218
October.....	12	3	8	492
November.....	3	2	3	178
December.....	3	3	3	184

NOTE.—Discharge interpolated for days for which there is no gage reading.

POWERS CANAL NEAR BISHOP, CAL.

This station was established August 19, 1903. It was located one-half mile above a mill on Bishop Creek, and 4½ miles west of Bishop.

The canal is straight for 20 feet above and 50 feet below the station. The bed of the canal is composed of gravel and is not subject to change.

Discharge measurements were made by wading.

The gage was a rod on the left bank of the canal.

Discharge measurements of Powers canal near Bishop, Cal., in 1903-1905.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1903.		<i>Feet.</i>	<i>Sec.-ft.</i>	1905.		<i>Feet.</i>	<i>Sec.-ft.</i>
Aug. 10	R. S. Hawley	6.2	6.2	Apr. 3	J. S. Evans	1.10	0.7
19	do	1.50	6.8	June 21	do	1.90	17.0
25	do	1.48	6.8	July 27	do	1.68	11.8
Sept. 3	do	1.33	2.8	Aug. 10	do	1.30	1.4
9	do	1.41	4.9	Sept. 7	do	1.40	2.8
15	do	1.38	3.5	Nov. 23	F. R. S. Buttemer	1.25	1.1
21	do	1.36	3.6	Dec. 11	do	1.58	3.2
				21	do	1.16	1.0
1904.							
Apr. 16	R. S. Hawley	1.40	4.4				
May 17	do	1.50	6.1				
July 12	Clausen and Barnes	1.75	16.6				
Aug. 6	L. M. Barnes	1.75	15.8				
Oct. 24	R. J. Taylor	1.40	3.9				

Daily gage height, in feet, of Powers canal near Bishop, Cal., for 1904.

Day.	Mar.	Apr.	May.	June.	July.	Aug.	Day.	Mar.	Apr.	May.	June.	July.	Aug.
1	1.3	1.4		1.5			16		1.4		1.7		
2							17			1.5	1.8		
3			1.4				18		1.4			1.7	1.85
4				1.5			19	1.3		1.5	1.8		
5			1.4			1.8	20						
6							21				1.8		
7			1.5				22			1.5		1.7	
8		1.4			1.8		23				1.8		
9			1.5				24						
10							25		1.4	1.5	1.8		
11			1.5		1.8		26						1.85
12				1.6			27			1.5	1.75	1.7	
13			1.5				28						
14	1.3			1.6			29				1.8		
15					1.8		30						
							31	1.3					

NOTE.—No record January, February, September, October, November, December.

Rating table for Powers canal near Bishop, Cal., from January 1 to December 31, 1904.

Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.
<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>
1.20	0	1.50	7	1.70	14	1.90	23
1.30	2	1.60	10	1.80	18	2.00	29
1.40	4						

Monthly discharge of Powers canal near Bishop, Cal., for 1904.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).
	Maximum.	Minimum.	Mean.	
March			2	123
April			4	238
May	7	4	6.4	394
June	18	7	12.8	762
July	18	14	16	984
August	20	18	19	1,168
The period				3,669

SOUTH HILLSIDE CANAL NEAR BISHOP, CAL.

This station was established August 26, 1903. It was located just below the west gate at the head of the canal 5 miles west of Bishop.

Discharge measurements were made by wading.

The gage was a rod on the left bank of the canal.

Discharge measurements of South Hillside canal near Bishop, Cal., in 1903-1905.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1903.		<i>Feet.</i>	<i>Sec.-ft.</i>	1905.		<i>Feet.</i>	<i>Sec.-feet.</i>
Aug. 26	R. S. Hawley	1.8	3.9	Jan. 21	R. J. Taylor.....	1.60	1.0
Sept. 3	....do.....	1.8	4.2	Feb. 8	....do.....	1.60	1.0
Sept. 9	....do.....	1.8	4.2	Mar. 4	....do.....	1.66	1.9
1904.				Apr. 18	J. S. Evans.....	1.70	3.0
Feb. 20	R. S. Hawley	1.60	1.0	May 5	....do.....	2.00	8.5
Apr. 25	....do.....	2.00	7.0	July 27	....do.....	1.98	7.9
June 8	....do.....	2.20	10.0	Aug. 10	....do.....	2.00	8.9
Aug. 27	L. M. Barnes.....	1.90	5.1	Sept. 22	....do.....	2.00	8.8
Sept. 7	R. S. Hawley.....	2.15	10.5	Oct. 25	F. R. S. Buttemer....	1.75	3.5
Oct. 15	Hawley, Clapp, and Taylor.....	1.65	1.0	Nov. 23	....do.....	1.58	.9
Nov. 9	R. J. Taylor.....	1.63	1.1	Dec. 11	....do.....	1.50	.3
Dec. 5	....do.....	1.50	.4				

Daily gage height, in feet, of South Hillside canal near Bishop, Cal., for 1904.

Day.	Jan.	Feb.	May.	June.	July.	Aug.	Day.	Jan.	Feb.	May.	June.	July.	Aug.
1							16				1.7		
2				1.5			17			2.0	1.8		
3			2.0				18					1.9	2.0
4				1.5			19			2.0	1.8		
5			2.0			2.1	20		1.6			2.0	
6							21				1.8		
7			2.0				22			2.0			
8							23	1.65			1.8		
9			2.0				24						
10							25			2.0	1.8		
11			2.0		1.9		26						2.0
12				1.6			27			2.0	1.75	2.0	
13			2.0				28						
14				1.6			29				1.8		
15					1.9		30						
							31						

NOTE.—Water turned out of canal Mar. 12 to Apr. 22, 1904.

Rating table for South Hillside canal near Bishop, Cal., from January 1 to December 31, 1904.

Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.
<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>
1.50	0	1.70	2.5	1.90	5.5	2.10	8.5
1.60	1	1.80	4	2.00	7	2.20	10

Monthly discharge of South Hillside canal near Bishop, Cal., for 1904.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).
	Maximum.	Minimum.	Mean.	
April 24-30.....	7	7	7	97
May.....	7	7	7	430
June.....	4	0	2	119
July.....	7	4	5.7	350
August.....	9	7	8	492
The period.....				1,488

NOTE.—Discharge interpolated for days on which gage was not read.

NORTH HILLSIDE CANAL NEAR BISHOP, CAL.

This station was established September 3, 1903. It was located at the head gate of the canal, 5 miles west of Bishop.

Discharge measurements were made from a crosspiece of the flume.

The gage was a vertical rod fastened to the right side of flume or head gate.

Discharge measurements of North Hillside canal near Bishop, Cal., in 1903-1905.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1903.		<i>Feet.</i>	<i>Sec.-ft.</i>	1904.		<i>Feet.</i>	<i>Sec.-ft.</i>
Aug. 19	R. S. Hawley.....		10.6	Nov. 9	R. J. Taylor.....	1.70	3.8
25	do.....		9.5	Dec. 5	do.....	1.55	1.7
Sept. 3	do.....	1.99	11.2				
9	do.....	1.95	11.1	1905.			
Oct. 26	do.....	1.77	4.3	Mar. 4	R. J. Taylor.....	1.51	1.5
1904.				Apr. 18	J. S. Evans.....	1.70	4.9
Apr. 16	R. S. Hawley.....	1.76	4.6	May 5	do.....	2.00	12.0
25	do.....	1.95	10.3	June 21	do.....	2.10	23.0
May 17	do.....	2.00	13.0	July 27	do.....	2.05	18.8
June 20	do.....		13.5	Aug. 10	do.....	2.08	19.4
July 12	Clausen and Barnes.....	2.00	13.8	Sept. 17	do.....	1.98	11.8
Aug. 8	L. M. Barnes.....	2.00	15.6	Oct. 22	do.....	2.00	13.0
Sept. 7	R. S. Hawley.....	1.90	9.3	Oct. 23	do.....	1.70	3.9
Oct. 15	Hawley, Clapp, and Taylor.	1.70	4.4	Nov. 23	do.....	1.70	2.9
				Dec. 11	do.....	1.52	.7
				21	F. R. S. Buttemer.....	1.45	.6

Daily gage height, in feet, of North Hillside canal near Bishop, Cal., for 1904.

Day.	Apr.	May.	June.	July.	Aug.	Day.	Apr.	May.	June.	July.	Aug.
1.....						16.....	1.76		2.02		
2.....			2.05			17.....		2.05			
3.....		2.05				18.....				2.1	2.2
4.....			2.05			19.....		2.05	2.0		
5.....		2.05			2.2	20.....					
6.....						21.....			1.95		
7.....		2.05				22.....		2.04		2.1	
8.....				1.9	2.0	23.....	1.95		1.9		
9.....		2.05				24.....		2.05			
10.....						25.....	1.95		1.9		
11.....		2.05		1.9		26.....					2.2
12.....			2.02			27.....		2.05	1.9	2.1	
13.....		2.05				28.....					
14.....						29.....			1.9		
15.....				2.0		30.....		2.03			
						31.....					

NOTE.—Canal dry from Jan. 1, to Apr. 15, 1904.

Rating table for North Hillside canal near Bishop, Cal., from April 1 to December 31, 1904.

Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.
<i>Feet.</i>	<i>Sec.-ft.</i>	<i>Feet.</i>	<i>Sec.-ft.</i>	<i>Feet.</i>	<i>Sec.-ft.</i>	<i>Feet.</i>	<i>Sec.-ft.</i>
1.60	3	1.80	6	2.00	11	2.20	21
1.70	4	1.90	8	2.10	15		

Monthly discharge of North Hillside canal near Bishop, Cal., for 1904.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).
	Maximum.	Minimum.	Mean.	
April.....	10	0	3.8	226
May.....	13	13	13	799
June.....	13	9	11.2	666
July.....	15	9	12.1	744
August.....	21	11	19	1,168
The period.....				3,603

NOTE.—Discharge interpolated on days for which no gage height is given.

BAKER CREEK NEAR BIG PINE, CAL.

This station, which was located at a point about 150 feet below the bridge on Millpond road and about 3 miles west of the town of Big Pine, was established February 20, 1908.

No observations of gage heights were made except during 1909.

The staff gage is at the footbridge, from which the following discharge measurements were made:

Discharge measurements of Baker Creek near Big Pine, Cal., in 1907-1910.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
		<i>Feet.</i>	<i>Sec.-ft.</i>			<i>Feet.</i>	<i>Sec.-ft.</i>
1907.				1909.			
Apr. 9	G. R. Shuey.....		16	Feb. 25	R. E. Haines.....	0.10	10.6
May 2	.....do.....		28	Mar. 16	.....do.....	.14	10.6
May 25	.....do.....		41	Apr. 16	.....do.....	.16	11.6
June 10	.....do.....		37	May 27	.....do.....	.40	18.2
July 6	.....do.....		24	May 20	.....do.....	.70	27.9
Dec. 9	R. B. Post.....		14	June 8	.....do.....	.45	22.0
				July 2	.....do.....	.65	27.6
1908.				Aug. 20	.....do.....	.35	15.4
Feb. 20	R. B. Post.....	0.3	11	Aug. 13	.....do.....	.23	13.4
Mar. 19	.....do.....	.41	14	Sept. 3	.....do.....	.15	12.0
May 14	.....do.....	.52	18	Sept. 24	.....do.....	.10	11.9
June 10	.....do.....	.00	10	Oct. 15	.....do.....	.03	9.3
July 17	W. A. Lamb.....	— .10	5.3	Nov. 5	.....do.....	.12	11.6
Aug. 1	.....do.....	.00	8.6	Nov. 26	.....do.....	.12	10.6
Aug. 13	.....do.....	— .17	5.5				
Aug. 27	.....do.....	— .02	7.5	1910.			
Sept. 15	.....do.....	— .02	8.2	Mar. 10	R. E. Haines.....	.05	11.0
Oct. 6	.....do.....	— .05	6.5	Apr. 1	.....do.....	.00	9.1
Oct. 23	A. T. Barrows.....	.30	15	Apr. 22	.....do.....	.60	2.5
Nov. 8	.....do.....	— .10	7.2	May 12	.....do.....	.00	9.9
Nov. 24	Barrows and Lee.....	— .05	8.1	June 25 ^a	C. H. Lee.....		7.9
				Aug. 3 ^a	Lee and Wood.....		2.9
1909.							
Jan. 23	Haines and Lee.....	.08	9.3				
Feb. 29	R. E. Haines.....	.12	9.8				

^a Made at road crossing above diversion.

Daily gage height, in feet, of Baker Creek near Big Pine, Cal., for 1909.

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1.....	0.0	0.1	0.1	0.15	0.55	0.7	0.5	0.15	0.15
2.....	.0	.1	.1	.2	.60	.8	.5	.15	.15
3.....	.0	.1	.15	.2	.95	.85	.5	.15	.15
4.....	.0	.1	.15	.2	1.05	.8	.6	.25	.1
5.....	.0	.1	.2	.2	1.10	.65	.5	.25	.25
6.....	.0	.1	.2	.2	1.20	.5	.5	.25	.25
7.....	.15	.1	.1	.2	1.25	.55	.45	.25	.25
8.....	.1	.1	.1	.2	1.25	.5	.35	.25	.15
9.....	.1	.1	.1	.25	1.20	.5	.3	.25	.15
10.....	.1	.1	.1	.2	.75	.5	.3	.25	.1
11.....	.0	.15	.1	.2	.55	.5	.3	.25	.05
12.....	.0	.1	.1	.25	.45	.5	.3	.25	.0
13.....	.0	.1	.1	.25	.40	.5	.35	.25	.1
14.....	.15	.1	.1	.3	.55	.5	.4	.2	.05
15.....	.1	.1	.1	.25	.55	.5	.4	.2	.1
16.....	.1	.1	.1	.3	.65	.45	.4	.2	.1
17.....	.1	.1	.1	.45	.85	.4	.4	.15	.1
18.....	.1	.1	.1	.5	.8	.5	.4	.1	.1
19.....	.1	.1	.1	.4	.8	.35	.4	.1	.1
20.....	.1	.1	.1	.35	.95	.35	.4	.1	.1
21.....	.25	.1	.1	.3	.9	.35	.4	.1	.1
22.....	.2	.1	.1	.25	.75	.35	.4	.1	.1
23.....	.1	.1	.1	.25	.55	.35	.4	.15	.1
24.....	.1	.1	.1	.3	.65	.35	.35	.15	.1
25.....	.1	.1	.1	.35	.8	.40	.35	.15	.1
26.....	.1	.1	.1	.45	.85	.50	.35	.15	.1
27.....	.1	.1	.1	.45	.8	.50	.25	.15	.1
28.....	.1	.1	.1	.45	.45	.45	.25	.15	.1
29.....	.1	.....	.1	.55	.5	.50	.25	.2	.1
30.....	.1	.....	.1	.55	.7	.50	.15	.25	.1
31.....	.1	.....	.1	.....	.8	.....	.15	.25	.....

Daily discharge, in second-feet, of Baker Creek near Big Pine, Cal., for 1909.

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1.....	9	10	10	11	23	29	21	11	11
2.....	9	10	10	12	25	35	21	11	11
3.....	9	10	11	12	43	37	21	11	11
4.....	9	10	11	12	50	35	21	13	10
5.....	9	10	12	12	53	27	21	13	13
6.....	9	10	12	12	60	21	21	13	13
7.....	11	10	10	12	63	23	19	13	13
8.....	10	10	10	12	63	21	16	13	11
9.....	10	10	10	13	60	21	14	13	11
10.....	10	10	10	12	32	21	14	13	10
11.....	9	11	10	12	23	21	14	13	10
12.....	9	10	10	13	19	21	14	13	9
13.....	9	10	10	13	17	21	16	13	10
14.....	11	10	10	14	23	21	17	12	10
15.....	10	10	10	13	23	21	17	12	10
16.....	10	10	10	14	27	19	17	12	10
17.....	10	10	10	19	37	17	17	11	10
18.....	10	10	10	21	35	21	17	10	10
19.....	10	10	10	17	35	16	17	10	10
20.....	10	10	10	16	43	16	17	10	10
21.....	13	10	10	14	40	16	17	10	10
22.....	12	10	10	13	32	16	17	10	10
23.....	10	10	10	13	23	16	17	11	10
24.....	10	10	10	14	27	16	16	11	10
25.....	10	10	10	16	35	17	16	11	10
26.....	10	10	10	19	37	21	16	11	10
27.....	10	10	10	19	35	21	13	11	10
28.....	10	10	10	19	19	19	13	11	10
29.....	10	10	10	23	21	21	13	12	10
30.....	10	.....	10	23	29	21	11	13	10
31.....	10	.....	10	.....	35	.....	11	13	.....

NOTE.—Daily discharge determined from a rating curve fairly well defined below a discharge of 30 second-feet.

Monthly discharge of Baker Creek near Big Pine, Cal., for 1909.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
January.....	13	9	9.94	611	C.
February.....	11	10	10.0	555	C.
March.....	12	10	10.2	627	C.
April.....	23	11	14.5	863	B.
May.....	63	17	35.1	2,160	B.
June.....	37	16	21.6	1,290	C.
July.....	25	11	16.6	1,020	B.
August.....	13	10	11.7	719	C.
September.....	13	9	10.4	619	C.
The period.....				8,460	

BIG PINE CREEK NEAR BIG PINE, CAL.

This station, which was located at a footbridge about 2 miles southwest of Big Pine, in sec. 26, T. 9 S., R. 33 E., was originally established December 5, 1903, at a point about 3 miles southwest of Big Pine, where the creek issues from the foothills, and was moved to the later site about half a mile farther east on October 29, 1907. No record of gage heights was kept from January 1, 1906, to May 22, 1908.

Water is diverted both above and below the station for irrigation. The drainage area above the mouth of the canyon is about 27 square miles.

The gage was a vertical staff on the right bank.

Discharge measurements were made from the footbridge near the gage.

The channel, which is composed of gravel and boulders, is somewhat shifting.

Station was discontinued February 27, 1911.

Discharge measurements of Big Pine Creek near Big Pine, Cal., in 1903-1911.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1903.		<i>Feet.</i>	<i>Sec.-ft.</i>	1905.		<i>Feet.</i>	<i>Sec.-ft.</i>
Aug. 14	R. S. Hawley.....	112	112	Aug. 17	J. S. Evans.....	2.60	88
Oct. 12	do.....	16.4	16.4	Sept. 13	do.....	2.30	41
Dec. 5	do.....	1.8	8.5	Nov. 16	F. R. S. Buttemer.....	1.85	10.6
1904.				Dec. 1	do.....	2.00	14.3
Jan. 28	R. S. Hawley.....	1.80	11.1	16	do.....	2.20	10.5
Feb. 10	do.....	1.82	16.5	16	do.....	2.20	12.2
Apr. 22	do.....	2.00	22.0	1906.			
June 4	Hawley and Clausen.....	2.95	105	Jan. 2	F. R. S. Buttemer.....	2.25	11
Sept. 10	R. S. Hawley.....	2.45	58	17	do.....	2.32	13
Oct. 10	Hawley and Taylor.....	2.00	31	24	do.....	1.98	13
Nov. 18	R. J. Taylor.....	1.90	21	Aug. 24	Hawley and Shuey.....	(c)	112
Dec. 9	do.....	1.90	20	Nov. 1	G. R. Shuey.....		24
1905.				Dec. 6	do.....		20
Jan. 18	R. J. Taylor.....	1.95	25	16	do.....		20
Feb. 18	do.....	1.85	23	1907.			
Apr. 26	J. S. Evans.....	2.20	30	Jan. 27	G. R. Shuey.....		18
May 19	do.....	2.38	51	Feb. 18	do.....		20
June 9	do.....	2.48	61	Mar. 7	do.....		20
July 16	do.....	2.85	120	28	do.....		21

^a Gage out.

Discharge measurements of Big Pine Creek near Big Pine, Cal., in 1903-1911—Cont'd.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
		<i>Feet.</i>	<i>Sec.-ft.</i>			<i>Feet.</i>	<i>Sec.-ft.</i>
1907.				1909.			
Apr. 8	G. R. Shuey		23	Jan. 23	Haines and Lee	2.70	22.3
21	do.		51	Feb. 9	R. E. Haines	2.76	21.3
May 2	do.		47	do.	do.	2.54	16.8
17	do.		54	Mar. 16	do.	2.52	16.0
June 11	do.		83	Apr. 6	do.	2.55	16.2
July 6	do.		202	27	do.	3.12	49.8
27	do.		208	May 20	do.	3.14	47.3
Aug. 16	R. B. Post		120	June 8	do.	3.8	118.0
26	do.		98	July 2	do.	4.6	241.0
Sept. 8	do.		55	20 ^a	do.	3.84	127.0
24	do.		31	Aug. 13 ^a	do.	3.59	93.1
Oct. 29	do.		30	Sept. 3 ^a	do.	3.44	73.3
Nov. 15	do.		24	24 ^a	do.	3.1	40.7
Dec. 9	do.		20	Oct. 15	do.	2.75	22.6
1908.				Nov. 5	do.	2.67	19.0
Feb. 19	R. B. Post	2.65	20	26	do.	2.59	16.8
Mar. 18	do.	2.75	23	1910.			
May 11	do.	2.80	23	Mar. 10	R. E. Haines	2.72	20
22	do.	2.76	22	Apr. 1	do.	2.67	18
June 10	do.	3.07	47	22	do.	2.98	33
17	do.	3.16	47	May 12	do.	3.23	50
July 7	do.	3.79	116	June 23	C. H. Lee	3.42	69
14	Post and Lamb	3.70	113	July 13	do.	3.82	106
Aug. 1	W. A. Lamb	4.10	166	Aug. 1	Wood and Lee	3.77	100
13	do.	3.72	112	22	F. G. Wood	3.50	73
27	do.	3.33	67	Sept. 16	G. T. Peekema	3.03	41
Sept. 15	do.	3.05	46	Oct. 21	do.	2.80	25
Oct. 6	do.	2.70	21	Nov. 19	do.	2.63	16
24	Lamb and Barrows	2.51	13	Dec. 22	do.	2.50	12
Nov. 8	A. T. Barrows	2.48	12	1911.			
24	Barrows and Lee	2.48	12	Jan. 24	G. T. Peekema	2.60	16

^a Made from temporary footbridge.*Daily gage height, in feet, of Big Pine Creek near Big Pine, Cal., for 1904-5, 1908-1911.*

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1904.									
1	1.8	1.8	1.9	1.9	1.9	2.9	3.1	3.0	2.5
2	1.8	1.8	1.9	1.9	1.9	3.0	3.1	2.8	2.6
3	1.8	1.8	1.9	1.9	1.9	3.1	3.0	2.8	2.6
4	1.8	1.8	1.9	1.9	2.0	3.0	3.0	2.8	2.5
5	1.8	1.8	1.9	1.9	2.0	3.0	3.0	2.8	2.4
6	1.8	1.8	1.9	1.9	2.1	3.2	3.0	3.0	2.4
7	1.8	1.85	1.9	1.9	2.45	3.1	3.2	3.0	2.5
8	1.8	1.8	1.9	1.95	2.7	3.0	3.2	3.1	2.6
9	1.8	1.8	1.9	1.95	2.7	3.0	3.0	3.5	2.5
10	1.8	1.8	1.8	1.95	2.7	3.1	2.9	3.2	2.5
11	1.8	1.8	1.9	2.0	2.7	3.2	2.9	3.0	2.5
12	1.8	1.8	1.95	2.0	2.8	3.5	2.9	2.9	2.5
13	1.8	1.8	1.9	2.05	2.8	3.5	2.9	2.9	2.5
14	1.8	1.8	1.9	2.1	2.8	3.5	2.9	2.9	2.5
15	1.8	1.8	1.9	2.0	2.8	3.8	2.8	2.9	2.4
16	1.8	2.0	1.9	2.05	2.9	3.8	2.8	2.9	2.4
17	1.8	1.85	1.9	2.0	2.8	3.7	2.8	3.2	2.4
18	1.8	1.8	1.9	2.0	2.9	3.5	2.8	3.0	2.4
19	1.8	1.8	1.9	2.0	2.8	3.5	3.1	3.0	2.3
20	1.8	1.8	1.85	2.0	2.7	3.5	3.3	2.8	2.2
21	1.8	1.8	1.9	2.0	2.6	3.1	3.2	2.8	2.2
22	1.8	1.85	1.9	2.0	2.6	3.0	3.4	2.8	2.2
23	1.8	1.85	1.85	2.0	2.7	3.1	3.5	2.7	2.1
24	1.8	1.85	1.95	2.0	2.9	3.2	3.5	2.7	2.3
25	1.8	1.85	2.0	2.0	3.0	3.1	3.2	2.7	2.2
26	1.8	1.85	1.9	2.0	3.0	3.1	4.0	2.6	2.0
27	1.8	1.85	2.0	2.0	2.8	3.1	3.5	2.6	2.0
28	1.8	1.85	2.0	2.0	2.8	3.1	3.1	2.6	2.0
29	1.8	1.8	2.0	1.9	2.9	3.1	3.0	2.6	2.0
30	1.8	.....	2.0	2.0	2.9	3.1	3.0	2.6	2.0
31	1.8	.....	1.9	.....	2.9	.....	3.0	2.5	.....

Daily gage height, in feet, of Big Pine Creek near Big Pine, Cal., for 1904-5, 1908-1911—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1904-5.												
1.....	2.0	2.0	2.0	1.85	1.9	1.85	1.8	2.5	2.4	2.95	2.9	2.7
2.....	2.0	2.0	1.9	1.85	1.9	1.9	1.9	2.5	2.4	3.0	2.9	2.6
3.....	2.1	2.0	1.9	1.85	1.9	1.9	1.85	2.5	2.4	3.0	2.9	2.5
4.....	2.0	2.0	1.9	1.85	2.0	1.9	1.9	2.5	2.4	3.0	2.9	2.4
5.....	2.1	2.0	1.9	1.85	2.0	1.9	1.9	2.4	2.4	3.0	2.9	2.4
6.....	2.2	2.0	2.0	1.85	2.0	1.9	1.85	2.4	2.45	3.0	2.9	2.35
7.....	2.1	2.0	1.95	1.85	1.95	1.9	1.85	2.4	2.45	3.0	2.8	2.25
8.....	2.1	2.0	1.95	1.85	1.95	1.9	1.9	2.3	2.5	3.0	2.8	2.25
9.....	2.1	2.0	1.9	1.9	1.9	1.9	1.95	2.0	2.5	3.2	2.9	2.2
10.....	2.0	2.0	1.9	1.9	1.9	1.85	1.95	2.0	2.5	3.5	3.0	2.3
11.....	2.0	1.9	1.9	1.85	1.9	1.85	1.95	2.0	2.7	3.5	3.0	2.4
12.....	2.0	2.0	1.9	1.8	1.9	1.9	1.95	2.0	2.8	3.5	3.0	2.4
13.....	2.0	2.0	1.85	1.8	1.9	1.9	1.95	2.1	2.9	3.3	2.9	2.45
14.....	2.0	2.0	1.85	1.8	1.9	1.9	1.95	2.2	2.9	3.3	2.9	2.45
15.....	2.0	2.0	1.85	1.8	1.85	1.9	1.95	2.3	2.9	3.3	2.9	2.45
16.....	2.0	2.0	1.85	1.85	1.85	1.9	1.95	2.3	2.9	3.05	2.9	2.45
17.....	1.9	2.0	1.85	1.85	1.85	1.9	1.95	2.3	2.95	3.2	2.9	2.35
18.....	1.9	1.9	1.85	1.85	1.85	1.9	1.95	2.4	3.0	3.1	2.8	2.4
19.....	2.0	1.9	1.85	1.85	1.85	1.9	1.95	2.4	3.0	3.0	2.8	2.45
20.....	2.0	2.0	1.85	1.85	1.85	1.9	1.95	2.4	3.0	3.0	2.9	2.45
21.....	2.0	2.0	1.85	1.85	1.85	1.9	1.95	2.5	3.2	3.0	2.8	2.4
22.....	2.0	1.9	1.85	1.8	1.85	1.9	1.95	2.5	3.3	3.0	2.8	2.4
23.....	2.1	2.0	1.85	1.85	1.85	1.9	2.0	2.4	3.4	3.1	2.7	2.4
24.....	2.1	2.0	1.85	1.85	1.85	1.9	2.0	2.4	3.2	3.2	2.7	2.35
25.....	2.0	2.0	1.85	1.85	1.85	1.9	2.0	2.4	2.8	3.3	2.7	2.3
26.....	2.0	2.0	1.8	1.85	1.85	1.9	2.2	2.4	2.8	3.4	2.7	2.3
27.....	2.0	2.0	1.8	1.85	1.85	1.9	2.3	2.4	2.8	3.3	2.7	2.3
28.....	2.0	2.0	1.8	1.85	1.85	1.8	2.3	2.4	2.9	3.2	2.7	2.3
29.....	2.1	2.0	1.8	1.85	.....	1.8	2.4	2.4	2.9	3.1	2.7	2.3
30.....	2.0	2.0	1.85	1.85	.....	1.8	2.5	2.4	2.9	3.1	2.7	2.3
31.....	2.0	.....	1.9	1.85	.....	1.8	.....	2.4	.....	3.0	2.7	.....

Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.
1905.				1905.				1905.			
1.....	2.25	1.8	.....	11.....	2.0	1.85	2.0	21.....	1.8	.....	.....
2.....	2.15	.....	1.9	12.....	2.0	.....	.....	22.....	1.8	.....	.....
3.....	2.15	.....	.....	13.....	2.0	.....	.....	23.....	1.8	1.85	2.15
4.....	2.15	.....	1.9	14.....	2.0	.....	.....	24.....	1.8	.....	.....
5.....	2.1	.....	.....	15.....	1.85	1.85	2.0	25.....	1.8	.....	.....
6.....	2.0	.....	.....	16.....	1.85	.....	.....	26.....	1.8	.....	2.3
7.....	2.0	.....	.....	17.....	1.8	.....	.....	27.....	1.8	.....	.....
8.....	2.0	1.8	.....	18.....	1.8	1.8	.....	28.....	1.8	1.85	.....
9.....	2.0	.....	1.9	19.....	1.8	.....	.....	29.....	1.8	.....	.....
10.....	2.0	.....	.....	20.....	1.8	.....	2.2	30.....	1.8	.....	.....
								31.....	1.8	.....	.....

Day.	May.	June.	July.	Aug.	Sept.	Day.	May.	June.	July.	Aug.	Sept.
1908.						1908.					
1.....	16.....	.....	.....	.....	.....	2.9
2.....	2.95	.....	.....	3.4	17.....	.....	2.65	3.85	3.5	.....
3.....	2.90	.....	.....	.....	18.....	.....	.....	.....	.....	2.9
4.....	3.4	19.....	.....	2.7	3.9	3.4	.....
5.....	2.8	3.8	.....	.....	20.....	.....	.....	.....	.....	.....
6.....	3.8	.....	21.....	.....	2.8	3.85	3.4	2.9
7.....	2.85	3.8	.....	3.3	22.....	2.75	.....	.....	.....	.....
8.....	3.9	.....	23.....	.....	2.85	.....	.....	2.9
9.....	3.05	3.85	.....	3.4	24.....	2.85	.....	.....	3.3	.....
10.....	4.0	.....	25.....	.....	3.05	.....	.....	2.9
11.....	3.15	3.8	.....	3.5	26.....	2.95	.....	.....	3.3	.....
12.....	3.7	.....	27.....	.....	3.25	.....	.....	.....
13.....	3.25	3.85	.....	.....	28.....	2.95	.....	.....	3.2	2.9
14.....	3.1	29.....	.....	3.05	.....	.....	.....
15.....	4.0	.....	.....	30.....	3.00	3.00	.....	.....	2.8
						31.....	.....	.....	.....	3.3	.....

Daily gage height, in feet, of Big Pine Creek, near Big Pine, Cal., for 1904-5, 1908-1911—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1908-9.												
1.			2.5	2.5	2.6	2.5	2.5		3.3	4.2		
2.	2.7	2.6							4.6		3.6	3.5
3.			2.5	2.5	2.6	2.5	2.5	3.1	3.5	3.9		3.45
4.		2.6									3.7	3.4
5.	2.7		2.5	2.5	2.6	2.5	2.5	3.2	3.8	3.9		
6.		2.6					2.55				3.8	
7.	2.7			2.5			2.6	3.3		3.9		3.3
8.			2.5		2.7	2.5			4.0			
9.	2.7	2.5			2.75		2.6		3.9		3.7	3.2
10.			2.5		2.7	2.5		3.4	4.3			
11.		2.5		2.6							3.6	3.1
12.	2.6		2.6		2.7	2.4	2.7	3.4	4.5	4.3		
13.		2.5		2.6							3.5	
14.	2.6						2.7	3.3		4.5		3.0
15.			2.6	2.6	2.7	2.4			4.6			
16.	2.6	2.4				2.5	2.7			4.2	3.3	2.9
17.			2.6		2.8	2.5		3.1	4.7			
18.		2.4		2.6								2.7
19.	2.6		2.6		2.8	2.5	2.8	3.2	4.7	3.9	4.0	
20.		2.4		2.6				3.15		3.85		
21.	2.6						2.8	3.2		4.0	3.7	3.1
22.			2.6	2.7	2.6	2.5			4.6			
23.	2.6			2.7			2.8			4.2	3.6	3.1
24.		2.5	2.6		2.5	2.5		3.1	4.6			3.1
25.				2.7	2.55						3.7	3.1
26.	2.6	2.5	2.6		2.5	2.5	2.8	3.1	4.4	4.2		
27.				2.7			3.1					
28.	2.6	2.5					2.9	3.1		4.1	3.8	3.0
29.			2.5	2.6		2.5			4.0			
30.	2.6						3.0		4.1	3.7		3.0
31.			2.5			2.5					3.7	
1909-10.												
1.					2.7	2.6			3.9		3.7	
2.	3.0	2.7					2.7	3.1		3.7		3.25
3.			2.6		2.7	2.6			4.2		3.7	
4.		2.7		3.0				3.1				3.2
5.	3.0		2.6		2.6	2.7	2.7			3.4	3.8	
6.		2.7		3.0				3.1	3.6			3.1
7.	3.0				2.6		2.7			3.6	3.7	
8.				3.0		2.7		3.1	3.6			3.1
9.	3.0	2.7			2.6		2.7			3.8		
10.				3.0		2.7		3.2	3.8		3.7	3.1
11.		2.6			2.6							
12.	2.9			3.0		2.7	2.8	3.2		3.8	3.6	3.1
13.		2.6							4.0			
14.	2.9				2.7		2.8	3.2		3.9	3.5	3.05
15.				2.7		2.7			3.7			
16.	2.9	2.6			2.7		2.8	3.2		3.7		3.05
17.						2.7		3.4	3.4		3.5	
18.		2.6		2.7	2.7							2.9
19.	2.9					2.7	2.9	3.4		4.8	3.3	
20.		2.6		2.7								2.8
21.	3.0				2.7		2.9	3.4	3.4	3.9	3.6	
22.				2.6		2.7						2.9
23.	3.0	2.6			2.7		3.0	4.0	3.6	3.8	3.6	
24.						2.7						2.95
25.		2.6		2.7	2.6			4.0	3.6		3.6	
26.	2.8					2.7	3.2			4.2		3.0
27.		2.6		2.7					3.4		3.5	
28.	2.8				2.6	2.7	3.2	4.0		3.9		2.9
29.				2.7					3.6		3.4	
30.		2.6				2.7	3.3	4.0		3.8		2.9
31.											3.3	

Daily gage height, in feet, of Big Pine Creek near Big Pine, Cal., for 1904-5, 1908-1911—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Day.	Oct.	Nov.	Dec.	Jan.	Feb.
1910-11.						1910-11.					
1.....		2.7	2.5	2.55	2.95	16.....					
2.....	2.9					17.....	2.85	2.65	2.4	2.5	2.6
3.....		2.6	2.6	2.5	2.85	18.....					
4.....	2.9					19.....	2.8	2.6	2.5	2.5	2.55
5.....		2.65	2.5	2.5	2.8	20.....					
6.....	2.9					21.....	2.85	2.55	2.45	2.55	2.55
7.....		2.6	2.5	2.5	2.7	22.....					
8.....	2.9					23.....	2.85	2.5	2.5	2.6	2.6
9.....	2.9	2.6	2.5	2.45	2.65	24.....					
10.....						25.....	2.8	2.5	2.5	2.6	2.6
11.....	2.85	2.65	2.5	2.45	2.6	26.....					
12.....						27.....	2.7	2.5	2.5	2.6	2.65
13.....	2.9	2.6	2.45	2.5	2.6	28.....					
14.....						29.....	2.75	2.5	2.5	2.75	
15.....	2.9	2.7	2.5	2.5	2.55	30.....					
						31.....			2.55	3.0	

Rating tables for Big Pine Creek near Big Pine, Cal.

January 1 to December 31, 1904.

Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.
<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>
1.80	11	2.30	45	2.80	90	3.30	136
1.90	16	2.40	53	2.90	100	3.40	145
2.00	22	2.50	62	3.00	109	3.50	154
2.10	29	2.60	71	3.10	118		
2.20	36	2.70	81	3.20	127		

March 21 to December 15, 1905.

1.80	9	2.30	40	2.80	115	3.30	220
1.90	11	2.40	52	2.90	134	3.40	244
2.00	15	2.50	66	3.00	154	3.50	268
2.10	21	2.60	81	3.10	175		
2.20	30	2.70	97	3.20	197		

NOTE.—Table is based on eight discharge measurements made during 1905. It is fairly well defined between gage heights 2 feet and 2.8 feet.

January 1 to December 31, 1908.

2.40	10	3.00	39	3.60	97	4.20	181
2.50	13	3.10	47	3.70	110	4.30	196
2.60	17	3.20	55	3.80	123	4.40	211
2.70	21	3.30	64	3.90	137		
2.80	26	3.40	74	4.00	151		
2.90	32	3.50	85	4.10	166		

NOTE.—Table applicable only to open-channel conditions. It is based on discharge measurements made during November, 1907, to December, 1908, and is well defined between gage heights 2.4 feet and 4.1 feet.

Daily discharge, in second-feet, of Big Pine Creek near Big Pine, Cal., for 1909-1911.

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909.									
1.....	14	17	14	14	40	63	175	98	94
2.....	14	17	14	14	43	73	240	94	83
3.....	14	17	14	14	45	83	131	100	78
4.....	14	17	14	14	49	100	131	106	73
5.....	14	17	14	14	53	118	131	112	70
6.....	14	18	14	16	58	127	131	118	66
7.....	14	20	14	17	63	136	131	114	63
8.....	15	21	14	17	66	145	131	110	58
9.....	16	23	14	17	70	168	131	106	53
10.....	17	21	14	19	73	191	151	100	49
11.....	17	21	13	20	73	207	171	94	45
12.....	17	21	12	21	73	223	191	88	43
13.....	17	21	12	21	68	228	207	83	40
14.....	17	21	12	21	63	234	223	76	37
15.....	17	21	12	21	57	240	194	69	34
16.....	17	23	14	21	51	249	175	63	30
17.....	17	25	14	22	45	258	160	91	25
18.....	17	25	14	24	49	258	146	118	21
19.....	17	25	14	25	53	258	131	145	29
20.....	17	23	14	25	49	252	124	126	37
21.....	19	20	14	25	58	246	145	106	45
22.....	21	17	14	25	50	240	160	100	45
23.....	21	15	14	25	48	240	175	94	45
24.....	21	14	14	25	45	240	175	100	45
25.....	21	16	14	25	45	224	175	106	45
26.....	21	14	14	25	45	207	175	110	42
27.....	21	14	14	45	45	187	168	114	40
28.....	19	14	14	30	45	166	160	118	37
29.....	17	.....	14	34	50	145	133	114	37
30.....	17	.....	14	37	54	160	106	110	37
31.....	17	.....	14	.....	58	.....	102	106	.....

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909-10.												
1.....	37	22	17	35	20	16	20	49	115	91	94	55
2.....	37	21	17	35	20	16	20	42	134	94	94	53
3.....	37	21	17	35	20	16	20	42	154	84	94	51
4.....	37	21	17	35	18	18	20	42	131	75	99	49
5.....	37	21	17	35	16	20	20	42	107	66	104	46
6.....	37	21	17	35	16	20	20	42	84	75	99	42
7.....	37	21	17	35	16	20	20	42	84	84	94	42
8.....	37	21	17	35	16	20	20	42	84	94	94	42
9.....	37	21	17	35	16	20	20	46	94	104	94	42
10.....	34	19	17	35	16	20	21	49	104	104	94	42
11.....	32	17	17	35	16	20	23	49	112	104	89	42
12.....	30	17	17	35	17	20	24	49	120	104	84	42
13.....	30	17	17	30	19	20	24	49	127	110	88	40
14.....	30	17	17	25	20	20	24	49	110	115	75	38
15.....	30	17	17	20	20	20	24	49	94	104	75	38
16.....	30	17	17	20	20	20	24	49	80	94	75	38
17.....	30	17	17	20	20	20	26	66	66	147	75	34
18.....	30	17	17	20	20	20	27	66	66	199	66	29
19.....	30	17	17	20	20	20	29	66	66	252	57	26
20.....	34	17	17	20	20	20	29	66	66	184	70	24
21.....	37	17	17	18	20	20	29	66	66	115	84	26
22.....	37	17	17	16	20	20	32	96	75	110	84	29
23.....	37	17	17	17	20	20	35	127	84	104	84	30
24.....	33	17	17	19	18	20	40	127	84	120	84	32
25.....	29	17	17	20	16	20	44	127	84	138	84	34
26.....	25	17	17	20	16	20	49	127	75	154	80	35
27.....	25	17	17	20	16	20	49	127	66	134	75	32
28.....	25	17	17	20	16	20	49	127	75	115	70	29
29.....	24	17	17	20	.....	20	53	127	84	110	66	29
30.....	23	17	17	20	.....	20	57	127	87	104	62	29
31.....	22	.....	17	20	.....	20	.....	121	.....	99	57	.....

Daily discharge, in second-feet, of Big Pine Creek near Big Pine, Cal., for 1909-1911—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Day.	Oct.	Nov.	Dec.	Jan.	Feb.
1910-11.						1910-11.					
1.....	29	20	13	14	32	16.....	28	19	11	13	15
2.....	29	18	14	14	28	17.....	26	18	10	13	16
3.....	29	16	16	13	26	18.....	25	17	11	13	15
4.....	29	17	14	13	30	19.....	24	16	13	13	14
5.....	29	18	13	13	24	20.....	25	15	12	14	14
6.....	29	17	13	13	22	21.....	26	14	11	14	14
7.....	29	16	13	13	20	22.....	26	14	12	15	15
8.....	29	16	13	12	19	23.....	26	13	13	16	16
9.....	29	16	13	12	18	24.....	25	13	13	16	16
10.....	28	17	13	12	17	25.....	24	13	13	16	16
11.....	26	18	13	12	16	26.....	22	13	13	16	17
12.....	28	17	12	12	16	27.....	20	13	13	16	18
13.....	29	16	11	13	16	28.....	21	13	13	18	18
14.....	29	18	12	13	15	29.....	22	13	13	22	.....
15.....	29	20	13	13	14	30.....	21	13	14	40	.....
						31.....	20	.....	14	35	.....

NOTE.—Discharge determined from well-defined rating curves applicable as follows: Jan. 1 to Dec. 31, 1909, and Jan. 1, 1910 to Feb. 28, 1911. Discharge interpolated for days on which the gage was not read except Jan. 30 and Feb. 4, 1911, which were estimated.

Monthly discharge of Big Pine Creek near Big Pine, Cal., 1904-5 and 1907-1911.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1904.					
January.....	12	11	11	676	
February.....	22	11	12	690	
March.....	22	11	16.8	1,033	
April.....	29	16	20.5	1,220	
May.....	109	16	72.7	4,469	
June.....	188	100	132	7,855	
July.....	208	90	119	7,317	
August.....	154	62	95.8	5,593	
September.....	71	22	49	2,916	
The period.....				31,800	
1904-5.					
October.....	36	16	24	1,476	
November.....	22	16	21	1,250	
December.....	22	11	15	922	
January.....	24	19	21.7	1,334	
February.....	30	22	23.9	1,327	
March.....	24	9	18.9	1,162	
April.....	66	9	17.9	1,065	
May.....	66	15	46.7	2,872	
June.....	244	52	118	7,021	
July.....	268	144	187	11,500	
August.....	154	97	122	7,501	
September.....	97	30	51.1	3,041	
The year.....	268	9	55.6	40,500	
1905.					
October.....	35	9	13.7	842	
November.....	10	9	9.6	571	
December.....	15	11	12.5	372	
1907.					
January.....			18	1,110	D.
February.....			20	1,110	D.
March.....			20	1,230	D.
April.....			38	2,260	D.
May.....			56	3,440	D.
June.....			110	6,540	D.
July.....			202	12,400	D.
August.....			118	7,260	D.
September.....			46	2,740	D.
The period.....				38,100	

Monthly discharge of Big Pine Creek near Big Pine, Cal., 1904-5 and 1907-1911—Continued.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1907-8.					
October.....			30	1,840	D.
November.....			24	1,430	D.
December.....			20	1,230	D.
January.....			20	1,230	D.
February.....			20	1,150	D.
March.....			23	1,410	D.
April.....			25	1,490	D.
May.....	39	23	28	1,720	C.
June.....	64	21	39	2,320	B.
July.....	166	55	131	8,060	B.
August.....	166	55	100	6,150	B.
September.....	85	26	50	2,980	B.
The year.....			42.5	31,000	
1908-9.					
October.....	21	17	18.0	1,110	B.
November.....	17	10	13.0	774	B.
December.....	17	13	15.0	922	B.
January.....	21	14	17.1	1,050	C.
February.....	25	14	19.2	1,070	C.
March.....	14	12	13.7	842	C.
April.....	45	14	22.4	1,330	C.
May.....	73	40	54.2	3,330	C.
June.....	258	63	189	11,200	B.
July.....	240	102	157	9,650	B.
August.....	145	63	103	6,330	B.
September.....	94	21	48.2	2,870	B.
The year.....	258	10	55.9	40,500	
1909-10.					
October.....	37	22	31.9	1,960	C.
November.....	22	17	18.3	1,090	C.
December.....	17	17	17.0	1,050	B.
January.....	35	16	26.0	1,600	B.
February.....	20	16	18.1	1,010	B.
March.....	20	16	19.5	1,200	B.
April.....	57	20	29.7	1,770	A.
May.....	127	42	74.0	4,550	A.
June.....	154	66	92.6	5,510	A.
July.....	252	66	116.0	7,130	B.
August.....	104	57	82.1	5,050	A.
September.....	55	24	37.3	2,220	B.
The year.....	252	16	46.9	34,100	
1910-11.					
October.....	29	20	26.2	1,610	B.
November.....	20	13	15.9	946	B.
December.....	16	10	12.7	781	B.
January.....	40	12	15.5	953	B.
February.....	32	14	18.5	1,030	B.

NOTE.—Daily discharge interpolated between discharge measurements Jan. 1 to Mar. 20, 1905, and during 1907. Monthly means January-April, 1908, are estimated. Daily discharge interpolated for days on which the gage was not read during November-December, 1905.

TINEMAHA CREEK NEAR BIG PINE, CAL.¹

This station, which is located at a point near Peterson's ranch house, about 1 mile west of Fish Springs schoolhouse and 7 miles south of Big Pine, in sec. 21, T. 10 S., R. 34 E., was established December 7, 1906, and discontinued February 28, 1911.

¹Formerly described as near Tinemaha.

No water is diverted above or near the station. The drainage area above the mouth of the canyon is approximately 5.2 square miles.

The gage was washed out June 28, 1909, and a new gage installed July 19, 1909. The new gage was a vertical staff on the right bank. The gage was also changed February 18, 1908.

Discharge measurements are made from the footbridge at the gage. The channel is composed of gravel and shifts somewhat. The record may be considered fair.

Discharge measurements of Tinemaha Creek near Big Pine, Cal., in 1906-1911.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1906.		<i>Feet.</i>	<i>Sec.-ft.</i>	1909.		<i>Feet.</i>	<i>Sec.-ft.</i>
Dec. 7	G. R. Shuey.....	0.50	5.9	Jan. 20	Haines and Lee.....	0.50	4.4
1907.				Feb. 8	R. E. Haines.....	.58	7.1
Jan. 27	G. R. Shuey.....	.50	4.7	Feb. 24	do.....	.52	5.5
Feb. 26	do.....	.43	3.4	Mar. 15	do.....	.46	3.7
Mar. 29	do.....	.45	4	Apr. 5	do.....	.47	3.6
Apr. 10	do.....	.45	4.2	26	do.....	.50	4.6
15	do.....	.60	7.6	May 17	do.....	.70	10.3
May 6	do.....	.63	9.4	June 7	do.....	1.40	33.6
17	do.....	.60	7.9	28	do.....		61.0
June 12	do.....	.85	19	July 19	do.....	1.5	34.8
July 11	do.....	1.40	40	Aug. 9	do.....	1.14	20.7
Aug. 15	R. B. Post.....	1.05	29	30	do.....	1.28	26.2
27	do.....	.80	20	Sept. 20	do.....	.87	10.0
Sept. 9	do.....	.40	6.4	Oct. 11	do.....	.77	7.4
30	do.....	.38	6.5	Nov. 1	do.....	.72	6.7
Oct. 30	do.....	.45	7.6	22	do.....	.74	6.8
Nov. 12	do.....	.38	6.4				
25	do.....	.32	4.9	1910.			
1908.				Mar. 7	R. E. Haines.....	.75	6.1
Feb. 18	R. B. Post.....	.61	6.3	28	do.....	.72	4.8
Mar. 9	do.....	.52	3.3	Apr. 23	do.....	.72	4.4
25	do.....	.52	4	May 9	do.....	.86	8.5
Apr. 7	do.....	.53	4.1	June 23	do.....	1.10	18
May 2	do.....	.59	6	July 13	C. H. Lee.....	1.20	24
21	do.....	.51	4.2	Aug. 1	do.....	1.18	19
June 10	do.....	.55	6.0	22	F. G. Wood.....	1.03	13
29	do.....	.93	20	Sept. 16	G. T. Peekema.....	.84	7.9
July 7	do.....	1.09	27	Oct. 20	do.....	.73	5.4
14	Post and Lamb.....	1.10	29	Nov. 16	do.....	.68	5.0
31	W. A. Lamb.....	1.02	24	Dec. 19	do.....	.70	4.5
Aug. 12	do.....	.91	20				
24	do.....	.76	12	1911.			
Sept. 14	do.....	.80	14	Jan. 23	G. T. Peekema.....	.71	5.1
Oct. 5	do.....	.60	6.2				
21	Barrows and Lamb.....	.54	5				
Nov. 8	A. T. Barrows.....	.55	4.9				
24	do.....	.51	5.1				

NOTE.—Beginning July 19, 1909, gage heights refer to a new gage. Gage also changed Feb. 18, 1908.

Daily gage height, in feet, of Tinemaha Creek near Big Pine, Cal., for 1906-1911.

Day.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1906-7.										
1.....		0.4	0.5	0.4	0.35	0.65	0.8	1.15	1.1	0.5
2.....		.4	.5	.3	.35	.65	.85	1.3	1.2	.5
3.....		.5	.5	.4	.35	.65	.85	1.6	1.2	.5
4.....		.45	.5	.6	.35	.7	.9	1.9	1.1	.5
5.....		.5	.45	.5	.35	.5	.95	1.8	1.1	.5
6.....		.5	.5	.45	.35	.6	.85	1.6	1.1	.4
7.....	0.5	.5	.45	.45	.35	.6	.9	1.6	1.0	.4
8.....	.5	.5	.45	.45	.35	.6	.85	1.5	1.0	.4
9.....	.5	.5	.5	.4	.35	.6	.8	1.5	1.0	.4
10.....	.5	.5	.5	.4	.35	.6	.8	1.4	.9	.4
11.....	.5	.5	.5	.4	.4	.6	.8	1.3	.9	.4
12.....	.5	.45	.5	.45	.4	.6	.8	1.3	.8	.4
13.....	.5	.5	.5	.5	.4	.6	.8	1.3	.8	.45
14.....	.5	.5	.45	.45	.5	.65	.8	1.4	.8	.45
15.....	.5	.5	.45	.4	.5	.65	.75	1.3	.8	.3
16.....	.45	.5	.4	.4	.5	.6	.75	1.2	.85	.4
17.....	.45	.5	.45	.5	.55	.6	.7	1.1	.9	.4
18.....	.4	.5	.45	.45	.55	.6	.7	1.2	1.0	.4
19.....	.4	.5	.45	.55	.55	.65	.7	1.2	1.0	.4
20.....	.4	.5	.45	.5	.55	.6	.75	1.2	.9	.4
21.....	.4	.5	.5	.5	.55	.65	.8	1.2	.8	.4
22.....	.5	.5	.5	.45	.6	.8	.8	1.2	.8	.4
23.....	.5	.45	.5	.5	.6	.75	.8	1.2	.75	.4
24.....	.5	.5	.45	.45	.6	.8	.8	1.2	.7	.4
25.....	.5	.5	.45	.45	.6	.75	.85	1.3	.7	.4
26.....	.55	.5	.45	.45	.6	.8	.9	1.3	.65	.35
27.....	.5	.5	.45	.45	.6	.75	1.1	1.3	.6	.35
28.....	.5	.6	.45	.45	.65	.8	1.1	1.25	.6	.35
29.....	.5	.55		.4	.65	.8	1.15	1.2	.6	.35
30.....	.5	.5		.4	.65	.8	1.15	1.2	.55	.35
31.....	.5	.5		.4		.8		1.2	.5	

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1907-8.												
1.....	0.35	0.35	0.35	0.4	0.4	0.55	0.55	0.55	0.55	0.95	1.2	0.6
2.....	.35	.35	.35	.3	.4	.55	.55	.6	.45	.95	1.15	.65
3.....	.35	.35	.35	.3	.35	.55	.55	.55	.45	.95	1.5	.7
4.....	.35	.35	.35	.35	.35	.5	.55	.55	.55	1.0	1.1	.75
5.....	.3	.35	.35	.35	.4	.5	.55	.55	.55	1.0	1.15	.75
6.....	.3	.35	.35	.35	.4	.5	.55	.6	.55	1.0	1.1	.7
7.....	.3	.35	.35	.35	.35	.5	.55	.55	.55	1.1	1.2	.8
8.....	.3	.35	.35	.35	.35	.5	.5	.55	.55	1.1	1.15	.8
9.....	.3	.35	.35	.35	.35	.55	.55	.55	.55	1.1	1.2	.8
10.....	.3	.35	.45	.35	.35	.5	.55	.6	.5	1.55	1.1	.8
11.....	.3	.35	.35	.35	.35	.5	.5	.55	.5	1.2	1.0	.75
12.....	.3	.35	.35	.35	.35	.5	.5	.55	.5	1.2	1.5	.75
13.....	.3	.35	.4	.35	.35	.5	.5	.55	.5	1.2	.95	.8
14.....	.3	.35	.4	.35	.35	.5	.55	.45	.55	1.3	.9	.75
15.....	.3	.35	.35	.35	.35	.55	.55	.45	.55	1.35	.9	.7
16.....	.4	.35	.35	.35	.35	.55	.5	.55	.55	1.3	.85	.65
17.....	.4	.35	.35	.35	.35	.5	.5	.45	.6	1.35	.8	.65
18.....	.4	.35	.35	.35	.6	.55	.5	.45	.6	1.4	.8	.7
19.....	.35	.35	.35	.4	.6	.55	.5	.45	.65	1.4	.8	.75
20.....	.35	.35	.35	.4	.6	.55	.5	.55	.7	1.0	.8	.6
21.....	.35	.35	.35	.35	.6	.55	.5	.55	.7	1.1	.8	.7
22.....	.35	.35	.3	.4	.6	.55	.55	.45	.75	1.15	.85	.75
23.....	.4	.35	.35	.4	.6	.55	.5	.45	.75	1.1	.85	.7
24.....	.4	.35	.35	.4	.6	.55	.5	.55	.8	1.1	.8	.65
25.....	.4	.35	.3	.4	.6	.55	.55	.55	.8	1.15	.75	.65
26.....	.4	.35	.35	.5	.6	.55	.5	.55	.85	1.1	.75	.65
27.....	.4	.35	.4	.45	.6	.55	.55	.55	.85	1.1	.7	.6
28.....	.35	.35	.4	.45	.55	.55	.55	.45	.9	1.2	.7	.65
29.....	.35	.35	.4	.4	.55	.55	.55	.55	1.0	1.5	.65	.7
30.....	.35	.35	.4	.4		.55	.55	.55	.95	1.1	.6	.7
31.....	.35		.4	.4		.55		.55		1.0	.6	

Daily gage height, in feet, of Tinemaha Creek near Big Pine, Cal., for 1906-1911—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1908-9.												
1.	0.65	0.55	0.5	0.5	0.5	0.7	0.5	0.45	1.1	.....	1.4	1.0
2.	.6	.55	.45	.5	.5	.6	.5	.5	1.1	.....	1.35	1.0
3.	.65	.55	.45	.5	.55	.6	.5	.5	1.2	.....	1.35	1.0
4.	.6	.5	.5	.5	.55	.6	.5	.5	1.25	.....	1.25	1.0
5.	.6	.5	.5	.5	.6	.6	.45	.55	1.3	.....	1.2	1.0
6.	.6	.5	.5	.5	.6	.6	.45	.55	1.3	.....	1.15	1.0
7.	.6	.5	.5	.5	.55	.6	.4	.5	1.4	.....	1.2	1.0
8.	.6	.5	.5	.5	.55	.6	.4	.55	1.4	.....	1.3	.9
9.	.55	.5	.5	.5	.55	.6	.4	.65	1.45	.....	1.25	.85
10.	.5	.5	.5	.6	.6	.6	.4	.7	1.45	.....	1.1	.9
11.	.5	.5	.5	.55	.6	.6	.4	.6	1.5	.....	1.15	1.0
12.	.5	.5	.5	.5	.6	.6	.4	.65	1.55	.....	1.15	1.0
13.	.55	.6	.5	.5	.7	.6	.4	.65	1.6	.....	1.15	1.0
14.	.5	.5	.5	.5	.7	.55	.4	.7	1.7	.....	1.2	.95
15.	.5	.5	.5	.5	.7	.55	.4	.7	1.85	.....	1.25	.95
16.	.6	.5	.55	.5	.7	.55	.4	.7	1.9	.....	1.3	1.0
17.	.5	.5	.55	.5	.7	.55	.45	.7	1.95	.....	1.3	.95
18.	.5	.5	.55	.5	.8	.5	.45	.7	2.0	.....	1.25	1.0
19.	.45	.45	.55	.5	.8	.5	.45	.75	1.8	1.5	1.25	1.0
20.	.45	.45	.55	.5	.8	.5	.45	.75	1.9	1.5	1.25	1.0
21.	.5	.45	.6	.5	.8	.5	.5	.75	2.0	1.55	1.3	.95
22.	.5	.45	.6	.5	.8	.5	.5	.8	2.1	1.6	1.3	.9
23.	.55	.5	.6	.5	.8	.5	.5	.8	2.2	1.6	1.3	.9
24.	.55	.5	.6	.55	.8	.5	.45	.8	2.25	1.6	1.3	.85
25.	.55	.5	.6	.5	.8	.5	.45	.8	2.3	1.75	1.3	.85
26.	.55	.5	.6	.5	.7	.5	.45	.8	2.2	1.7	1.2	.9
27.	.55	.5	.6	.5	.7	.5	.45	.8	2.1	1.65	1.2	.85
28.	.55	.5	.55	.5	.7	.5	.45	.8	.....	1.6	1.2	.8
29.	.55	.5	.55	.5	.....	.5	.45	.8	.....	1.5	1.1	.8
30.	.55	.5	.55	.5	.....	.5	.45	.75	.....	1.45	1.1	.8
31.	.55	.5	.5	.5	.....	.5	.....	.8	.....	1.4	1.1	.....
1909-10.												
1.	.9	.8	.75	1.2	.8	.9	.....	.9	1.7	1.3	1.2	1.05
2.	.85	.75	.75	1.0	.9	.8	.....	.8	1.7	1.2	1.2	1.0
3.	.85	.75	.8	.9	1.0	.9	.7	.8	1.6	1.2	1.2	1.05
4.	.85	.75	.8	.8	.9	.9	.7	.8	1.6	1.1	1.3	.85
5.	.8	.75	.8	.8	.9	.8	.7	.8	1.5	1.1	1.1	1.0
6.	.8	.75	.9	.8	.8	.8	.8	.8	1.4	1.0	1.2	.9
7.	.8	.75	.9	.8	.8	.8	.8	.8	1.3	1.1	1.1	1.05
8.	.8	.75	.9	.8	.9	.8	.7	.9	1.3	1.1	1.1	.85
9.	.8	.75	.9	.9	.8	.9	.8	.9	1.3	1.2	1.1	1.0
10.	.8	.75	.9	.8	.8	.8	.8	1.0	1.4	1.1	1.1	1.0
11.	.8	.8	.9	.9	.8	.8	.9	1.0	1.5	1.2	1.1	.9
12.	.8	.8	.9	.9	.9	.8	1.0	1.0	1.5	1.2	1.1	.8
13.	.75	.75	.9	.9	.8	.8	.9	1.0	1.4	1.3	1.1	.85
14.	.7	.7	.9	.9	.8	.8	.8	1.0	1.3	1.2	1.1	.8
15.	.75	.7	.8	1.0	.8	.7	.8	1.0	1.3	1.2	1.1	.9
16.	.8	.75	.8	.9	.9	.7	.7	1.0	1.2	1.2	1.1	.9
17.	.8	.75	.8	1.0	.9	.8	.8	1.0	1.2	1.2	1.1	.95
18.	.8	.75	.8	.9	.8	.9	.9	1.0	1.2	1.75	1.1	.85
19.	.75	.75	.8	.9	.9	.8	.8	1.0	1.2	1.7	1.1	.8
20.	.75	.75	.8	.8	.8	.8	.9	1.0	1.2	1.5	1.1	.8
21.	.8	.75	.8	.9	.8	.8	.8	1.0	1.1	1.7	1.0	.8
22.	.8	.75	.8	.9	.8	.8	.9	1.0	1.1	1.4	1.1	.8
23.	.8	.75	.9	.8	.8	.8	.8	1.1	1.1	1.4	1.05	.8
24.	.8	.7	.9	.9	.9	.9	.8	1.2	1.1	1.3	1.11	.8
25.	.85	.7	.8	.9	.8	.8	.9	1.2	1.2	1.4	1.0	.8
26.	.85	.7	.8	.8	.9	.8	.8	1.2	1.2	1.2	1.1	.8
27.	.85	.7	.8	.9	.8	.8	.8	1.2	1.3	1.3	1.15	.8
28.	.85	.7	.8	.9	.9	.8	.7	1.3	1.2	1.2	1.2	.8
29.	.85	.7	.9	.8	.....	.7	.8	1.4	1.3	1.3	1.0	.8
30.	.85	.7	.9	.9	.....	.7	.8	1.5	1.2	1.2	1.05	.8
31.	.85	.....	.....	.9	.....	.7	.....	1.7	.....	1.3	1.05	.....

Daily gage height, in feet, of Tinemaha Creek near Big Pine, Cal., for 1906-1911—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Day.	Oct.	Nov.	Dec.	Jan.	Feb.
1910-11.						1910-11.					
1.....	0.8	0.7	0.7	0.85	0.9	16.....	0.8	0.7	0.65	0.7	0.7
2.....	.8	.7	.7	.8	.85	17.....	.75	.7	.65	.7	.8
3.....	.75	.7	.7	.78	.8	18.....	.7	.7	.65	.7	.8
4.....	.8	.7	.75	.8	1.0	19.....	.7	.7	.65	.71	.8
5.....	.8	.65	.75	.8	.85	20.....	.7	.7	.65	.7	.8
6.....	.75	.7	.7	.8	.82	21.....	.7	.7	.65	.7	.8
7.....	.8	.65	.7	.8	.8	22.....	.75	.7	.65	.7	.8
8.....	.75	.7	.7	.8	.8	23.....	.7	.7	.65	.68	.8
9.....	.8	.7	.7	.8	.78	24.....	.7	.7	.65	.71	.8
10.....	.75	.7	.7	.85	.78	25.....	.7	.7	.8	.7	.8
11.....	.7	.7	.7	.8	.78	26.....	.75	.7	.75	.68	.8
12.....	.8	.7	.7	.8	.78	27.....	.7	.7	.8	.68	.75
13.....	.8	.7	.7	.8	.78	28.....	.7	.7	.8	.85	.8
14.....	.7	.7	.65	.75	.78	29.....	.7	.7	.85	1.2	.....
15.....	.85	.7	.65	.7	.72	30.....	.75	.7	.9	1.21	.....
						31.....	.7	.....	.85	1.0	.....

NOTE.—Gage changed Feb. 18, 1908. Gage washed out June 28, 1909. New gage installed July 19, 1909.

Daily discharge, in second-feet, of Tinemaha Creek near Big Pine, Cal., for 1909-1911.

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909.									
1.....	4.5	4.5	10	4.5	3.1	23	65	30	15
2.....	4.5	4.5	7.4	4.5	4.5	23	65	29	15
3.....	4.5	5.9	7.4	4.5	4.5	27	65	29	15
4.....	4.5	5.9	7.4	4.5	4.5	28	65	25	15
5.....	4.5	7.4	7.4	3.1	5.9	30	65	23	15
6.....	4.5	7.4	7.4	3.1	5.9	30	55	21	15
7.....	4.5	5.9	7.4	1.8	4.5	34	55	23	15
8.....	4.5	5.9	7.4	1.8	5.9	34	55	27	12
9.....	4.5	5.9	7.4	1.8	8.9	35	55	25	9.6
10.....	7.4	7.4	7.4	1.8	10	35	55	19	12
11.....	5.9	7.4	7.4	1.8	7.4	37	45	21	15
12.....	4.5	7.4	7.4	1.8	8.9	39	45	21	15
13.....	4.5	10	7.4	1.8	8.9	41	45	21	15
14.....	4.5	10	5.9	1.8	10	44	45	23	13
15.....	4.5	10	5.9	1.8	10	50	45	25	13
16.....	4.5	10	5.9	1.8	10	52	35	27	15
17.....	4.5	10	5.9	3.1	10	53	35	27	13
18.....	4.5	14	4.5	3.1	10	55	35	25	15
19.....	4.5	14	4.5	3.1	12	48	35	25	15
20.....	4.5	14	4.5	3.1	12	52	35	25	15
21.....	4.5	14	4.5	4.5	12	55	37	27	13
22.....	4.5	14	4.5	4.5	14	59	39	27	12
23.....	4.5	14	4.5	4.5	14	62	39	27	12
24.....	5.9	14	4.5	3.1	14	64	39	27	9.6
25.....	4.5	14	4.5	3.1	14	66	45	27	9.6
26.....	4.5	10	4.5	3.1	14	62	43	23	12
27.....	4.5	10	4.5	3.1	14	59	41	23	9.6
28.....	4.5	10	4.5	3.1	14	60	39	23	8.1
29.....	4.5	.....	4.5	3.1	14	60	35	19	8.1
30.....	4.5	.....	4.5	3.1	12	60	33	19	8.1
31.....	4.5	.....	4.5	3.1	14	.....	31	19	.....

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909-10.												
1.....	12	8.1	7.0	22.4	7.6	10.9	4.3	9.7	45	27.8	19.8	14.4
2.....	9.6	7.0	7.0	14.5	10.9	7.6	4.2	6.6	45	23.2	19.8	12.5
3.....	9.6	7.0	8.1	10.9	14.5	10.9	4.2	6.6	39.4	23.2	19.8	14.5
4.....	9.6	7.0	8.1	7.6	10.9	10.9	4.2	6.6	39.4	18.8	24.0	7.7
5.....	8.1	7.0	8.1	7.6	10.9	7.6	4.2	6.7	34.8	19.0	15.7	12.8
6.....	8.1	7.0	12	7.6	7.6	7.6	6.8	6.7	30.3	15.0	19.8	9.4
7.....	8.1	7.0	8.1	10.9	7.6	7.6	4.2	6.7	25.8	19.2	15.7	14.7
8.....	8.1	7.0	12	7.6	10.9	7.6	4.2	9.8	25.8	19.3	15.7	7.8
9.....	8.1	7.0	8.1	10.9	7.6	10.8	6.8	9.8	25.8	23.6	15.7	13.0
10.....	8.1	7.0	12	7.6	7.6	7.6	6.8	13.3	30.5	19.6	15.7	13.0

Daily discharge, in second-feet, of Tinemaha Creek near Big Pine, Cal., for 1909-1911—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909-10.												
11.....	8.1	8.1	12	10.9	7.6	7.6	9.8	13.3	35.2	23.8	15.7	9.6
12.....	8.1	8.1	12	10.9	10.9	7.4	13.3	13.3	35.2	24.0	15.7	6.5
13.....	7.0	7.0	12	10.9	7.6	7.4	9.8	13.4	30.6	28.4	15.7	8.0
14.....	6.2	6.2	12	10.9	7.6	7.4	6.7	13.4	26.2	23.7	15.7	6.7
15.....	7.0	6.2	8.1	14.5	7.6	4.6	6.7	13.4	26.2	23.6	15.7	9.8
16.....	8.1	7.0	8.1	10.9	10.9	4.6	4.1	13.5	22.0	23.4	15.7	9.8
17.....	8.1	7.0	8.1	14.5	10.9	7.4	6.7	13.5	22.0	23.2	15.7	9.8
18.....	8.1	7.0	8.1	10.9	7.6	10.6	9.8	13.5	22.0	48.6	15.7	8.3
19.....	7.0	7.0	8.1	10.9	10.9	7.2	6.6	13.5	22.0	46.4	15.7	6.8
20.....	7.0	7.0	8.1	7.6	7.6	7.2	9.7	13.6	22.0	35.6	15.7	6.8
21.....	8.1	7.0	8.1	10.9	7.6	7.2	6.6	13.6	18.0	45.0	12.0	6.8
22.....	8.1	7.0	8.1	10.9	7.6	7.2	9.6	13.6	18.0	30.3	15.7	6.9
23.....	8.1	7.0	12	7.6	7.6	7.2	6.5	17.5	18.0	29.8	13.7	6.9
24.....	8.1	6.2	12	10.9	10.9	10.4	6.5	21.6	18.0	25.2	15.7	6.9
25.....	9.6	6.2	8.1	10.9	7.6	7.0	9.7	21.6	22.2	29.5	12.1	6.9
26.....	9.6	6.2	8.1	7.6	10.9	7.0	6.5	21.6	22.2	20.7	15.8	7.0
27.....	9.6	6.2	8.1	10.9	7.6	7.0	6.5	21.6	27.0	24.8	17.9	7.0
28.....	9.6	6.2	8.1	10.9	10.9	7.0	4.0	25.8	22.4	20.4	20.0	7.0
29.....	9.6	6.2	12	7.6	.....	4.3	6.6	30.3	27.4	24.6	12.3	7.0
30.....	9.6	6.2	12	10.9	.....	4.3	6.6	34.8	22.8	20.2	14.3	7.0
31.....	9.6	.....	31	10.9	.....	4.3	.....	45	.....	24.4	14.3	.....

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Day.	Oct.	Nov.	Dec.	Jan.	Feb.
1910-11.						1910-11.					
1.....	7.0	5.1	5.0	8.6	10	16.....	7.3	5.5	3.5	4.6	4.6
2.....	7.0	5.1	5.0	7.2	8.6	17.....	5.9	5.5	3.4	4.6	7.2
3.....	5.6	5.2	5.0	6.7	7.2	18.....	4.6	5.5	3.4	4.6	7.2
4.....	7.0	5.2	6.3	7.2	14	19.....	4.7	5.4	3.4	4.9	7.2
5.....	7.0	3.9	6.3	7.2	8.6	20.....	4.7	5.4	3.4	4.6	7.2
6.....	5.6	5.2	4.9	7.2	7.8	21.....	4.7	5.3	3.4	4.6	7.2
7.....	7.0	3.9	4.9	7.2	7.2	22.....	6.1	5.3	3.4	4.6	7.2
8.....	5.6	5.3	4.9	7.2	7.2	23.....	4.7	5.3	3.4	4.2	7.2
9.....	7.0	5.3	4.9	7.2	6.7	24.....	4.8	5.2	3.4	4.9	7.2
10.....	5.7	5.3	4.8	8.6	6.7	25.....	4.8	5.2	7.0	4.6	7.2
11.....	4.4	5.4	4.8	7.2	6.7	26.....	6.2	5.2	5.6	4.2	7.2
12.....	7.1	5.4	4.8	7.2	6.7	27.....	4.9	5.2	7.0	4.2	5.9
13.....	7.1	5.4	4.8	7.2	6.7	28.....	4.9	5.1	7.0	8.6	7.2
14.....	4.5	5.5	3.5	5.9	6.7	29.....	5.0	5.1	8.6	.....	.....
15.....	8.2	5.5	3.5	4.6	5.1	30.....	6.4	5.1	10.2	22	.....
						31.....	5.0	.....	8.6	14	.....

NOTE.—Daily discharge determined from rating curves applicable as follows: Jan. 1 to June 21, 1909, well defined below a discharge of 35 second-feet; June 22 to July 13, 1909, estimated by comparison with Birch Creek; July 19 to Dec. 31, 1909, well defined below a discharge of 35 second-feet; Jan. 1 to Dec. 31, 1910, indirect method for shifting channels; Jan. 1 to Feb. 28, 1911, fairly well defined.

Monthly discharge of Tinemaha Creek near Big Pine, Cal., for 1907-1911.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1907.					
January	8	3	4.9	301	C.
February	5	4	4.4	244	C.
March	8	2	4.0	246	C.
April	10	2.5	5.3	315	C.
May	16	5	11.0	676	C.
June	30	12	18.0	1,070	C.
July	66	29	39.0	2,400	C.
August	33	9	20.0	1,230	C.
September	7.8	5	6.1	363	C.
The period				6,840	

Monthly discharge of Tinemaha Creek near Big Pine, Cal., for 1907-1911—Continued.

Month.	Discharge in second-feet.			Run-off (total in acre-feet.)	Accu- racy.
	Maximum.	Minimum.	Mean.		
1907-8.					
October.....	6.5	4.5	5.4	332	C.
November.....	5.5	5.5	5.5	327	C.
December.....	7.8	4.5	5.7	350	C.
January.....	9.0	4.5	6.0	369	C.
February.....	6.5	4.8	5.8	334	C.
March.....	4.8	3.6	4.4	270	C.
April.....	4.8	3.6	4.3	256	C.
May.....	6.1	2.8	4.4	270	C.
June.....	24	2.8	8.5	506	C.
July.....	52	22	32	1,970	C.
August.....	49	6.1	21	1,290	C.
September.....	14	6.1	9.8	583	C.
The year.....	52	2.8	9.40	6,860	
1908-9.					
October.....	7.5	5.	5.5	338	C.
November.....	5.5	4.5	5.0	298	C.
December.....	6	4.5	5.3	326	C.
January.....	7.4	4.5	4.68	288	B.
February.....	14	4.5	9.55	530	A.
March.....	10	4.5	5.98	368	B.
April.....	4.5	1.8	2.99	178	C.
May.....	14	3.1	9.90	609	A.
June.....	66	23	45.9	2,730	B.
July.....	65	31	45.8	2,820	C.
August.....	30	19	24.3	1,490	A.
September.....	15	8.1	12.8	762	A.
The year.....	66	1.8	14.8	10,700	
1909-10.					
October.....	12	6.2	8.49	522	B.
November.....	8.1	6.2	6.87	409	B.
December.....	31	7.0	10.2	627	A.
January.....	22.4	7.6	10.7	658	C.
February.....	14.5	7.6	9.14	508	C.
March.....	10.9	4.3	7.53	463	C.
April.....	13.3	4.0	6.74	401	C.
May.....	45	6.6	15.6	959	B.
June.....	45	18	27.4	1,630	B.
July.....	48.6	15	25.9	1,590	B.
August.....	24.0	12	16.2	996	B.
September.....	14.7	6.5	9.04	538	C.
The year.....	48.6	4.0	12.8	9,300	
1910-11.					
October.....	8.2	4.4	5.82	358	C.
November.....	5.5	3.9	5.20	309	C.
December.....	10.2	3.4	5.10	314	C.
January.....	22	4.2	7.3	449	C.
February.....	14	4.6	7.3	405	C.

NOTE.—Discharge for 1907-8 determined from rating curves covering short period of time and by the indirect method for shifting channels.

BIRCH CREEK NEAR BIG PINE, CAL.¹

This station, which was located at a point near Peterson's ranch house, about 1 mile west of Fish Springs schoolhouse and about 7 miles south of Big Pine, in sec. 16, T. 10 S., R. 34 E., was established June 14, 1905, discontinued December 9, 1905, reestablished December 7, 1906, and again discontinued February 28, 1911.

No water is diverted above or near the station. The drainage area above the mouth of the canyon is approximately 7 square miles.

The gage was a vertical staff on the left bank.

¹ Formerly described as near Tinemaha.

Discharge measurements were made from the footbridge at the gage.

The bed of the stream consists of coarse gravel and sand and shifts somewhat. Both banks are low, but not subject to overflow. The current is swift at all stages.

Discharge measurements of Birch Creek near Big Pine Cal., in 1905-1911.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1905.		<i>Feet.</i>	<i>Sec.-ft.</i>	1908.		<i>Feet.</i>	<i>Sec.-ft.</i>
June 14	J. S. Evans.....	1.00	21	Sept. 14	W. A. Lamb.....	0.35	6.2
July 17	.....do.....	.71	10.8	18	.....do.....	.....	7.1
Aug. 24	.....do.....	.58	7.6	Oct. 5	.....do.....	.25	5.1
Nov. 17	F. R. S. Buttemer.....	.55	2.2	7	.....do.....	.....	5.1
Dec. 2	.....do.....	.55	2.5	21	Barrows and Lamb.....	.19	2.9
1906.				Nov. 9	A. T. Barrows.....	.20	3.1
Jan. 11	G. R. Shuey.....	.52	3.1	24	.....do.....	.21	2.9
29	.....do.....	.....	3.1	1909.			
Mar. 8	.....do.....	.....	3.2	Jan. 20	Haines and Lee.....	.22	4.0
Dec. 7	.....do.....	.35	6.0	Feb. 8	R. E. Haines.....	.30	7.3
1907.				24	.....do.....	.26	4.8
Jan. 27	G. R. Shuey.....	.40	4.7	Mar. 15	.....do.....	.26	4.8
Feb. 26	.....do.....	.40	5.9	Apr. 5	.....do.....	.30	6.2
Mar. 29	.....do.....	.33	7.3	26	.....do.....	.33	7.9
Apr. 10	.....do.....	.40	5.4	May 17	.....do.....	.36	10.9
15	.....do.....	.50	8.2	June 7	.....do.....	.70	25.8
May 17	.....do.....	.57	13	28	.....do.....	.85	36.2
June 12	.....do.....	.70	22	July 19	.....do.....	.58	21.4
July 11	.....do.....	.85	29	Aug. 9	.....do.....	.37	9.4
Aug. 15	R. B. Post.....	.69	18	30	.....do.....	.42	13.4
27	.....do.....	.60	16	Sept. 20	.....do.....	.30	7.3
Sept. 9	.....do.....	.40	10	Oct. 11	.....do.....	.28	6.1
30	.....do.....	.28	4.4	Nov. 11	.....do.....	.14	1.0
Oct. 30	.....do.....	.27	4.4	22	.....do.....	.31	7.1
Nov. 12	.....do.....	.25	5.0	1910.			
25	.....do.....	.25	4.8	Mar. 7	R. E. Haines.....	.28	5.3
1908.				28	.....do.....	.27	4.9
Feb. 18	R. B. Post.....	.23	4.7	Apr. 23	.....do.....	.36	8.4
Mar. 9	.....do.....	.25	4.4	May 9	.....do.....	.33	6.9
25	.....do.....	.29	5.4	June 23	C. H. Lee.....	.46	12
Apr. 7	.....do.....	.28	4.8	July 13	.....do.....	.62	21
May 2	.....do.....	.35	8.0	Aug. 1	Lee and Wood.....	.58	19
21	.....do.....	.28	4.8	22	F. G. Wood.....	.52	13
June 10	.....do.....	.34	7.5	Sept. 16	G. T. Peekema.....	.36	5.7
29	.....do.....	.53	13	Oct. 20	.....do.....	.30	3.4
July 7	.....do.....	.60	15	Nov. 16	.....do.....	.30	3.4
14	Post and Lamb.....	.60	16	Dec. 19	.....do.....	.33	3.7
31	W. A. Lamb.....	.60	18	1911.			
Aug. 12	.....do.....	.60	15	Jan. 23	G. T. Peekema.....	.31	3.4
25	.....do.....	.....	6.8				

NOTE.—Beginning Dec. 7, 1906, gage heights refer to a new gage.

Daily gage height, in feet, of Birch Creek near Big Pine, Cal., for 1905.

Day.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Day.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1.....		0.8	0.65	0.6	0.5	0.35	0.8	16.....		0.7	0.55	0.4	0.35	0.5	
2.....		.75	.65	.55	.4	.35	.55	17.....		.7	.55	.4	.35	.5	
3.....		.75	.65	.6	.4	.35	.55	18.....	.9	.7	.55	.4	.35	.5	
4.....		.8	.65	.55	.35	.45	.55	19.....	.9	.65	.5	.4	.35	.5	
5.....		.8	.6	.55	.35	.5		20.....	.9	.65	.6	.4	.35	.5	
6.....		.8	.55	.5	.3	.5	.5	21.....	.8	.65	.65	.4	.35	.5	
7.....		.85	.6	.5	.3	.5	.5	22.....	1.0	.65	.65	.4	.35	.5	
8.....		.9	.65	.45	.3	.5	.5	23.....	.8	.7	.55	.4	.35	.5	
9.....		.9	.75	.45	.35	.5	.5	24.....	.9	.7	.55	.4	.35	.5	
10.....		.85	.8	.5	.35	.5		25.....	.75	.75	.55	.4	.35	.5	
11.....		.9	.65	.5	.35	.5		26.....	.75	.8	.55	.4	.35	.5	
12.....		.9	.6	.5	.35	.5		27.....	.75	.8	.6	.4	.35	.5	
13.....		.85	.6	.45	.35	.5		28.....	.75	.75	.6	.4	.35	.65	
14.....	1.0	.75	.6	.45	.35	.5		29.....	.8	.7	.65	.45	.35	.7	
15.....		.7	.6	.45	.35	.5		30.....	.85	.65	.65	.45	.35	.6	
								31.....		.65	.65		.35		

Daily gage height, in feet, of Birch Creek near Big Pine, Cal., for 1906-1911.

Day.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.		
1906-7.												
1.....		0.5	0.4	0.35	0.35	0.55	0.8	0.8	0.9	0.4		
2.....		.8	.4	.35	.35	.55	.8	.8	.95	.4		
3.....		.75	.4	.35	.35	.55	.8	1.0	.9	.4		
4.....		.4	.4	.45	.35	.55	.8	1.1	.8	.4		
5.....		.35	.4	.5	.35	.55	.8	1.0	.75	.4		
6.....		.35	.4	.4	.35	.5	.8	1.0	.75	.4		
7.....	0.35	.35	.4	.4	.4	.5	.75	.9	.75	.35		
8.....	.35	.35	.45	.4	.4	.5	.7	.9	.75	.35		
9.....	.3	.35	.4	.4	.4	.55	.6	.85	.75	.35		
10.....	.4	.4	.4	.4	.4	.55	.7	.9	.7	.35		
11.....	.4	.4	.4	.45	.45	.55	.7	.9	.7	.35		
12.....	.4	.4	.4	.45	.5	.5	.6	.9	.65	.4		
13.....	.4	.45	.4	.45	.5	.5	.55	.9	.6	.4		
14.....	.4	.4	.4	.4	.5	.55	.6	.9	.7	.35		
15.....	.35	.4	.4	.4	.45	.55	.55	.9	.7	.3		
16.....	.3	.45	.4	.4	.45	.6	.55	.85	.7	.3		
17.....	.3	.4	.4	.5	.45	.6	.55	.85	.7	.3		
18.....	.3	.45	.4	.45	.5	.6	.55	.85	.8	.3		
19.....	.3	.45	.4	.55	.5	.65	.6	.85	.8	.3		
20.....	.3	.45	.4	.5	.5	.65	.7	.85	.7	.3		
21.....	.3	.4	.5	.5	.5	.65	.7	.8	.7	.25		
22.....	.3	.4	.4	.5	.5	.6	.6	.8	.7	.25		
23.....	.3	.4	.4	.45	.5	.6	.6	.8	.6	.25		
24.....	.3	.4	.4	.45	.55	.55	.6	.9	.6	.25		
25.....	.35	.4	.4	.45	.55	.55	.6	.9	.6	.25		
26.....	.45	.4	.4	.45	.55	.55	.7	.9	.55	.25		
27.....	.4	.4	.4	.45	.5	.55	.8	.85	.5	.25		
28.....	.4	.4	.4	.35	.55	.6	.9	.8	.5	.25		
29.....	.35	.45		.35	.55	.6	1.0	.8	.45	.25		
30.....	.35	.45		.3	.55	.7	.9	.8	.4	.25		
31.....	.35	.4		.3		.7		.8	.4			
Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June.	July.	Aug.	Sept.
1907-8.												
1.....	0.25	0.25	0.2	0.25	0.25	0.3	0.25	0.4	0.3	0.55	0.5	0.35
2.....	.25	.25	.25	.25	.25	.35	.25	.35	.3	.6	.55	.35
3.....	.25	.3	.25	.25	.3	.3	.25	.35	.3	.6	.6	.4
4.....	.25	.25	.2	.25	.3	.3	.25	.3	.3	.6	.7	.4
5.....	.3	.25	.2	.25	.3	.3	.25	.3	.3	.6	.7	.4
6.....	.3	.25	.3	.25	.3	.3	.25	.3	.3	.6	.7	.4
7.....	.3	.25	.3	.25	.3	.3	.25	.3	.3	.6	.6	.4
8.....	.3	.25	.3	.25	.25	.25	.3	.3	.3	.6	.6	.4
9.....	.25	.25	.3	.25	.25	.25	.3	.3	.3	.6	.6	.4
10.....	.25	.25	.3	.25	.25	.25	.3	.3	.35	.6	.6	.4
11.....	.25	.25	.25	.25	.25	.25	.25	.25	.4	.6	.6	.4
12.....	.25	.25	.25	.25	.25	.25	.25	.25	.45	.6	.6	.3
13.....	.25	.25	.25	.25	.35	.25	.3	.25	.55	.6	.55	.3
14.....	.25	.25	.25	.25	.3	.3	.3	.25	.55	.55	.5	.3
15.....	.3	.25	.25	.25	.3	.3	.3	.25	.45	.55	.5	.3
16.....	.4	.25	.25	.25	.3	.3	.3	.25	.45	.5	.45	.3
17.....	.4	.25	.25	.25	.25	.3	.3	.25	.45	.5	.45	.3
18.....	.35	.25	.2	.25	.25	.3	.3	.25	.4	.5	.45	.3
19.....	.3	.25	.2	.25	.25	.3	.35	.25	.4	.5	.45	.3
20.....	.3	.25	.2	.25	.25	.3	.3	.25	.4	.5	.45	.25
21.....	.3	.25	.25	.25	.25	.3	.3	.25	.45	.5	.4	.25
22.....	.35	.25	.25	.25	.25	.3	.3	.25	.4	.5	.4	.25
23.....	.4	.25	.2	.3	.25	.3	.3	.25	.5	.5	.4	.25
24.....	.3	.25	.25	.3	.25	.3	.3	.25	.5	.6	.4	.25
25.....	.3	.2	.2	.35	.25	.3	.25	.25	.55	.6	.4	.25
26.....	.3	.2	.25	.35	.3	.3	.3	.3	.55	.5	.35	.3
27.....	.25	.2	.25	.3	.3	.25	.35	.3	.55	.6	.35	.3
28.....	.25	.2	.25	.3	.3	.25	.35	.35	.55	.6	.3	.3
29.....	.25	.2	.25	.3	.3	.25	.35	.35	.55	.6	.3	.3
30.....	.25	.2	.25	.3		.25	.3	.4	.55	.5	.3	.3
31.....	.25		.25	.3		.25		.35		.5	.35	

Daily gage height, in feet, of Birch Creek near Big Pine, Cal., for 1906-1911—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1908-9.												
1.	0.2	0.2	0.2	0.2	0.25	0.25	0.35	0.35	0.6	1.2	0.4	0.35
2.	.2	.2	.2	.2	.25	.2	.35	.35	.7	1.3	.4	.35
3.	.2	.2	.2	.2	.25	.2	.35	.35	.9	1.4	.5	.3
4.	.25	.2	.2	.2	.25	.2	.35	.35	1.1	1.3	.4	.3
5.	.25	.2	.2	.2	.25	.2	.35	.35	1.0	1.2	.4	.3
6.	.25	.2	.2	.2	.25	.2	.35	.4	.75	1.1	.4	.3
7.	.3	.2	.2	.2	.25	.2	.30	.4	.7	.9	.45	.25
8.	.3	.2	.2	.2	.30	.2	.3	.4	.7	.8	.45	.25
9.	.2	.2	.2	.2	.30	.2	.3	.4	.7	.8	.45	.3
10.	.2	.2	.2	.4	.30	.2	.3	.4	.8	.8	.45	.3
11.	.2	.2	.2	.35	.3	.2	.3	.4	.8	.85	.45	.3
12.	.2	.2	.2	.3	.3	.2	.3	.4	.8	.9	.45	.3
13.	.15	.2	.2	.25	.3	.2	.3	.4	.8	.95	.45	.3
14.	.2	.2	.2	.2	.3	.2	.3	.4	.8	1.0	.45	.3
15.	.3	.2	.2	.2	.3	.2	.3	.4	.8	.9	.45	.3
16.	.3	.2	.2	.2	.3	.2	.3	.4	.8	.9	.45	.3
17.	.3	.2	.2	.2	.3	.2	.35	.4	.8	.85	.45	.3
18.	.3	.2	.2	.2	.3	.2	.35	.4	.8	.85	.45	.3
19.	.3	.2	.2	.2	.3	.25	.35	.4	.6	.6	.45	.3
20.	.3	.2	.2	.3	.3	.25	.35	.4	.7	.85	.45	.3
21.	.3	.2	.2	.3	.3	.25	.3	.4	.8	.9	.5	.3
22.	.25	.2	.2	.3	.3	.25	.3	.4	.8	.9	.5	.3
23.	.25	.2	.2	.3	.3	.25	.3	.4	.8	.9	.5	.3
24.	.25	.2	.2	.3	.3	.25	.3	.4	1.0	.9	.5	.3
25.	.25	.2	.2	.3	.3	.25	.3	.5	1.2	.9	.5	.3
26.	.25	.2	.2	.25	.3	.25	.3	.5	1.1	.9	.45	.3
27.	.2	.2	.2	.25	.3	.25	.3	.5	1.0	.85	.45	.3
28.	.2	.2	.2	.2	.3	.30	.35	.55	1.05	.8	.4	.3
29.	.2	.2	.2	.2	.....	.30	.35	.55	1.1	.7	.4	.3
30.	.2	.2	.2	.2	.....	.35	.35	.55	1.1	.7	.4	.3
31.	.2	.....	.2	.2	.....	.35	.....	.6	.....	.5	.4	.....
1909-10.												
1.	.3	.....	.3	.8	.4	.4	.....	.4	.8	.6	.6	.44
2.	.3	.....	.3	.7	.4	.3	.....	.4	.8	.5	.6	.45
3.	.3	.....	.8	.7	.5	.4	.3	.4	.8	.6	.6	.45
4.	.3	.....	.8	.4	.4	.4	.3	.4	.7	.5	.6	.35
5.	.3	.....	.8	.4	.4	.4	.3	.3	.7	.5	.6	.40
6.	.3	.....	.6	.4	.5	.3	.4	.4	.6	.5	.6	.37
7.	.3	.....	.6	.6	.4	.3	.3	.4	.6	.6	.6	.41
8.	.3	.....	.4	.4	.3	.3	.3	.4	.6	.5	.6	.34
9.	.3	.....	.4	.4	.3	.4	.4	.4	.6	.6	.6	.38
10.	.25	.....	.6	.3	.3	.3	.4	.4	.7	.5	.6	.32
11.	.25	.25	.6	.4	.3	.3	.5	.4	.7	.6	.6	.30
12.	.25	.3	.7	.4	.4	.3	.5	.4	.7	.6	.6	.30
13.	.25	.3	.6	.4	.4	.3	.4	.5	.6	.7	.6	.35
14.	.25	.3	.4	.5	.3	.4	.4	.5	.6	.6	.5	.30
15.	.25	.3	.4	.5	.3	.3	.3	.5	.6	.6	.5	.40
16.	.25	.3	.4	.5	.4	.3	.3	.5	.6	.6	.5	.40
17.	.25	.3	.4	.5	.4	.4	.4	.4	.6	.6	.5	.40
18.	.25	.3	.4	.5	.3	.4	.3	.4	.6	1.05	.3	.30
19.	.25	.3	.4	.4	.4	.3	.4	.4	.6	1.1	.5	.30
20.	.25	.3	.4	.4	.3	.3	.4	.4	.6	.8	.5	.31
21.	.2	.3	.4	.5	.3	.3	.5	.4	.5	1.0	.5	.30
22.	.2	.3	.4	.4	.3	.3	.4	.5	.5	.6	.5	.10
23.	.2	.3	.4	.5	.3	.4	.4	.5	.5	.7	.51	.30
24.	.....	.3	.4	.4	.3	.4	.4	.5	.5	.6	.65	.30
25.	.....	.3	.4	.4	.4	.3	.4	.5	.6	.7	.54	.30
26.	.....	.3	.4	.3	.4	.3	.3	.5	.5	.6	.50	.10
27.	.....	.3	.4	.4	.3	.3	.4	.5	.6	.7	.50	.30
28.	.....	.3	.4	.4	.4	.3	.3	.6	.6	.6	.60	.11
29.	.....	.3	.4	.3	.....	.....	.4	.7	.7	.7	.55	.25
30.	.....	.3	.5	.4	.....	.3	.4	.8	.6	.6	.45	.30
31.	.....	.....	1.0	.4	.....	.3	.....	.9	.....	.6	.45	.....

Daily gage height, in feet, of Birch Creek near Big Pine, Cal., for 1906-1911—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Day.	Oct.	Nov.	Dec.	Jan.	Feb.
1910-11.						1910-11.					
1.....	0.3	0.4	0.3	0.32	0.7	16.....	0.4	0.3	0.3	0.35	0.45
2.....	.3	.3	.3	.31	.55	17.....	.3	.3	.3	.32	.4
3.....	.3	.3	.3	.3	.4	18.....	.3	.3	.35	.3	.3
4.....	.3	.3	.4	.3	.41	19.....	.3	.3	.3	.3	.3
5.....	.3	.3	.4	.3	.4	20.....	.3	.3	.3	.3	.3
6.....	.3	.3	.3	.3	.4	21.....	.3	.3	.3	.3	.3
7.....	.3	.3	.3	.3	.35	22.....	.3	.3	.3	.32	.3
8.....	.3	.3	.3	.3	.32	23.....	.3	.3	.3	.3	.3
9.....	.3	.3	.3	.3	.3	24.....	.3	.3	.3	.35	.3
10.....	.3	.3	.3	.4	.3	25.....	.3	.3	.4	.38	.3
11.....	.3	.3	.35	.35	.3	26.....	.3	.3	.35	.35	.3
12.....	.3	.3	.3	.32	.3	27.....	.3	.3	.3	.3	.3
13.....	.3	.3	.3	.32	.3	28.....	.3	.3	.3	.35	.3
14.....	.3	.3	.3	.35	.3	29.....	.3	.3	.3	.55	.....
15.....	.45	.3	.3	.35	.4	30.....	.3	.3	.35	1.1	.....
						31.....	.3	.....	.3	.9	.....

Daily discharge, in second-feet, of Birch Creek near Big Pine, Cal., for 1909-1911.

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909.									
1.....	3.3	5.0	5.0	8.8	8.8	21	62	11	8.8
2.....	3.3	5.0	3.3	8.8	8.8	27	69	11	8.8
3.....	3.3	5.0	3.3	8.8	8.8	40	77	16	6.8
4.....	3.3	5.0	3.3	8.8	8.8	54	69	11	6.8
5.....	3.3	5.0	3.3	8.8	8.8	47	62	11	6.8
6.....	3.3	5.0	3.3	8.8	11	30	54	11	6.8
7.....	3.3	5.0	3.3	6.8	11	27	40	13	5.0
8.....	3.3	6.8	3.3	6.8	11	27	33	13	5.0
9.....	3.3	6.8	3.3	6.8	11	27	33	13	6.8
10.....	11	6.8	3.3	6.8	11	33	33	13	6.8
11.....	8.8	6.8	3.3	6.8	11	33	36	13	6.8
12.....	6.8	6.8	3.3	6.8	11	33	40	13	6.8
13.....	5.0	6.8	3.3	6.8	11	33	43	13	6.8
14.....	3.3	6.8	3.3	6.8	11	33	47	13	6.8
15.....	3.3	6.8	3.3	6.8	11	33	40	13	6.8
16.....	3.3	6.8	3.3	6.8	11	33	40	13	6.8
17.....	3.3	6.8	3.3	8.8	11	33	36	13	6.8
18.....	3.3	6.8	3.3	8.8	11	33	36	13	6.8
19.....	3.3	6.8	5.0	8.8	11	21	21	13	6.8
20.....	6.8	6.8	5.0	8.8	11	27	36	13	6.8
21.....	6.8	6.8	5.0	6.8	11	33	40	16	6.8
22.....	6.8	6.8	5.0	6.8	11	33	40	16	6.8
23.....	6.8	6.8	5.0	6.8	11	33	40	16	6.8
24.....	6.8	6.8	5.0	6.8	11	47	40	16	6.8
25.....	6.8	6.8	5.0	6.8	16	62	40	16	6.8
26.....	5.0	6.8	5.0	6.8	16	54	40	13	6.8
27.....	5.0	6.8	5.0	6.8	16	47	36	13	6.8
28.....	3.3	6.8	6.8	8.8	18	50	33	11	6.8
29.....	3.3	.....	6.8	8.8	18	54	27	11	6.8
30.....	3.3	.....	8.8	8.8	18	54	27	11	6.8
31.....	3.3	.....	8.8	.....	21	.....	16	11	.....

Daily discharge, in second-feet, of Birch Creek near Big Pine, Cal., for 1909-1911—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909-10.												
1.....	6.8	1.0	6.8	33	9.5	9.5	6	9.5	33	20	19	9
2.....	6.8	1.0	6.8	26	9.5	6	6	9.5	33	14	19	9.5
3.....	6.8	1.0	33	26	14	9.5	6	9.5	33	20	19	9.5
4.....	6.8	1.0	33	9.5	9.5	9.5	6	9.5	26	14	19	5.2
5.....	6.8	1.0	33	9.5	9.5	9.5	6	6	26	14	19	7
6.....	6.8	1.0	21	9.5	14	6	9.5	9.5	20	14	18	5.9
7.....	6.8	1.0	21	20	9.5	6	6	9.5	20	20	18	7.5
8.....	6.8	1.0	11	9.5	6	6	6	9.5	20	14	18	4.9
9.....	6.8	1.0	11	9.5	6	9.5	9.5	9.5	20	20	18	6.3
10.....	5.0	3.0	21	6	6	6	9.5	9.5	26	14	18	4.2
11.....	5.0	5.0	21	9.5	6	6	14	9.5	26	20	17	3.5
12.....	5.0	6.8	27	9.5	9.5	6	14	9.5	26	20	17	3.5
13.....	5.0	6.8	21	9.5	9.5	6	9.5	14	20	26	17	5.2
14.....	5.0	6.8	11	14	6	9.5	9.5	14	20	20	14	3.5
15.....	5.0	6.8	11	14	6	6	6	14	20	20	14	7
16.....	5.0	6.8	11	14	9.5	6	6	14	20	20	14	7
17.....	5.0	6.8	11	14	9.5	9.5	9.5	9.5	20	20	14	7
18.....	5.0	6.8	11	14	6	9.5	6	9.5	20	50	5	3.5
19.....	5.0	6.8	11	9.5	9.5	6	9.5	9.5	20	54	13	3.5
20.....	5.0	6.8	11	9.5	6	6	9.5	9.5	20	33	13	3.8
21.....	3.3	6.8	11	14	6	6	14	9.5	14	47	13	3.5
22.....	3.3	6.8	11	9.5	6	6	9.5	14	14	20	13	5
23.....	3.3	6.8	11	14	6	9.5	9.5	14	14	26	13	3.5
24.....	1.0	6.8	11	9.5	6	9.5	9.5	14	14	20	21	3.5
25.....	1.0	6.8	11	9.5	9.5	6	9.5	14	20	26	14	3.5
26.....	1.0	6.8	11	6	9.5	6	6	14	14	20	12	5
27.....	1.0	6.8	11	9.5	6	6	9.5	14	20	26	12	3.5
28.....	1.0	6.8	11	9.5	9.5	6	6	20	20	20	18	6
29.....	1.0	6.8	11	6	.....	9.5	9.5	26	26	26	15	2.5
30.....	1.0	6.8	16	9.5	.....	6	9.5	33	20	20	9.5	3.5
31.....	1.0	.....	47	9.5	.....	6	.....	40	.....	20	9.5	.....

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Day.	Oct.	Nov.	Dec.	Jan.	Feb.
1910-11.						1910-11.					
1.....	3.5	7.0	3.5	4.2	24	16.....	7.0	3.5	3.5	5.2	9.5
2.....	3.5	3.5	3.5	3.9	15	17.....	3.5	3.5	3.5	4.2	7.0
3.....	3.5	3.5	3.5	3.5	7.0	18.....	3.5	3.5	5.2	3.5	3.5
4.....	3.5	3.5	7.0	3.5	7.5	19.....	3.5	3.5	3.5	3.5	3.5
5.....	3.5	3.5	7.0	3.5	7.0	20.....	3.5	3.5	3.5	3.5	3.5
6.....	3.5	3.5	3.5	3.5	7.0	21.....	3.5	3.5	3.5	3.5	3.5
7.....	3.5	3.5	3.5	3.5	5.2	22.....	3.5	3.5	3.5	4.2	3.5
8.....	3.5	3.5	3.5	3.5	4.2	23.....	3.5	3.5	3.5	3.5	3.5
9.....	3.5	3.5	3.5	3.5	3.5	24.....	3.5	3.5	3.5	5.2	3.5
10.....	3.5	3.5	3.5	7.0	3.5	25.....	3.5	3.5	7.0	6.3	3.5
11.....	3.5	3.5	5.2	5.2	3.5	26.....	3.5	3.5	5.2	5.2	3.5
12.....	3.5	3.5	3.5	4.2	3.5	27.....	3.5	3.5	3.5	3.5	3.5
13.....	3.5	3.5	3.5	4.2	3.5	28.....	3.5	3.5	3.5	5.2	3.5
14.....	3.5	3.5	3.5	5.2	3.5	29.....	3.5	3.5	3.5	15	.....
15.....	9.5	3.5	3.5	5.2	7.0	30.....	3.5	3.5	5.2	52	.....
						31.....	3.5	.....	3.5	38	.....

NOTE.—Daily discharge determined from rating curves applicable as follows: Jan. 1 to Dec. 31, 1909, well defined below 40 second-feet; Jan. 1 to Aug. 1, 1910, well defined below 45 second-feet; Aug. 2-21, 1911, by the indirect method for shifting channels used; Aug. 22, 1910, to Feb. 28, 1911, fairly well defined between 3 and 17 second-feet. Oct. 24 to Nov. 9, 1909, was estimated from measurement made during the period.

Monthly discharge of Birch Creek near Big Pine, Cal., 1907-1911.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1907.					
January.....	26	5.2	7.6	467	C.
February.....	8.9	6	6.2	344	C.
March.....	11	4.6	8.2	504	C.
April.....	11	5.2	8.0	476	C.
May.....	20	8.9	12.5	769	C.
June.....	42	11	20.0	1,190	C.
July.....	50	26	32.0	1,970	C.
August.....	38	6	19.3	1,190	C.
September.....	6	4.3	5.0	298	C.
The period.....				7,210	
1907-8.					
October.....	6	4.3	4.6	283	C.
November.....	4.6	4.2	4.3	256	C.
December.....	4.6	4.2	4.3	264	C.
January.....	7.1	4.8	5.2	320	C.
February.....	5.8	4.8	5.2	299	C.
March.....	7.1	3.9	5.5	338	C.
April.....	7.1	4.8	5.6	333	C.
May.....	8.4	4.8	5.7	350	C.
June.....	14	5.8	9.6	571	C.
July.....	16	12	14.3	879	C.
August.....	21	5.8	11.9	732	C.
September.....	8.4	4.8	6.5	387	C.
The year.....	21	3.9	6.89	5,010	
1908-9.					
October.....	5.6	3.0	4.1	252	C.
November.....	3.0	3.0	3.0	179	C.
December.....	3.0	3.0	3.0	184	C.
January.....	11	3.3	4.68	288	C.
February.....	6.8	5.0	6.35	353	C.
March.....	8.8	3.3	4.42	272	C.
April.....	8.8	6.8	7.67	456	C.
May.....	21	8.8	12.1	744	C.
June.....	62	21	37.0	2,200	B.
July.....	77	16	41.5	2,550	B.
August.....	16	11	13.0	799	C.
September.....	8.8	5.0	6.81	405	C.
The year.....	77	3	12.0	8,680	
1909-10.					
October.....	6.8	1.0	4.32	266	D.
November.....	6.8	1.0	4.87	290	D.
December.....	47	6.8	16.3	1,000	B.
January.....	33	6	12.3	756	B.
February.....	14	6	8.20	455	B.
March.....	9.5	6	7.24	445	B.
April.....	14	6	8.55	509	B.
May.....	40	6	13.5	530	B.
June.....	33	14	21.5	1,280	B.
July.....	54	14	23.2	1,430	B.
August.....	21	5	15.3	941	B.
September.....	9.5	.5	4.72	281	C.
The year.....	54	.5	11.7	8,480	
1910-11.					
October.....	9.5	3.5	3.81	234	C.
November.....	7	3.5	3.62	215	C.
December.....	7	3.5	4.06	250	C.
January.....	52	3.5	7.26	446	B.
February.....	24	3.5	5.71	317	C.

TABOOSE CREEK NEAR ABERDEEN,¹ CAL.

This station, which was located at a point on the crossing of the upper main highway about 4 miles northwest of Aberdeen, in sec. 16, T. 11 S., R. 34 E., was established August 20, 1906, about half a mile

¹ Formerly known as Tibbetts.

west of the point of crossing of the lower main highway 2 miles northwest of Aberdeen railway station and about 15 miles north of Independence. It was removed to the present site on February 25, 1907. Discharge measurements had been made at the original site from the first of 1906.

No water is diverted above or near the station. The drainage area above the mouth of the canyon is about 7 square miles.

The gage is a vertical staff on the left bank. On March 7, 1910, its datum was lowered 1 foot. All gage heights for 1910-11 are referred to the new datum.

The channel is composed of shifting sand.

The record may be considered fair.

The station was discontinued February 28, 1911.

Discharge measurements of Taboose Creek near Aberdeen, Cal., in 1906-1911.

Date.	Hydrographer.	Gage height.	Discharge.	Date.	Hydrographer.	Gage height.	Discharge.
		<i>Fect.</i>	<i>Sec.ft.</i>			<i>Fect.</i>	<i>Sec.ft.</i>
1906.				1908.			
Jan. 18	G. R. Shuey.....	.....	3.6	May 21	R. B. Post.....	.20	3.1
Feb. 21	.....do.....	.....	2.7	June 17	.....do.....	.47	6.9
Mar. 20	.....do.....	.....	3.6	26	.....do.....	.48	7.0
27	.....do.....	.....	3.5	July 8	.....do.....	.63	12
Apr. 6	.....do.....	.....	3.4	14	Lamb and Post.....	.63	12
12	.....do.....	.....	4.2	31	W. A. Lamb.....	.59	11
19	.....do.....	.....	8.0	Aug. 12	.....do.....	.50	9.7
24	.....do.....	.....	8.4	24	.....do.....	.40	5.2
May 2	.....do.....	.....	6.8	Sept. 4	.....do.....	.36	4.3
8	.....do.....	.....	12	14	.....do.....	.39	5.2
16	.....do.....	.....	12	Oct. 5	.....do.....	.30	4.3
23	.....do.....	.....	11	21	Barrows and Lamb.....	.31	4.5
June 1	.....do.....	.....	8.9	Nov. 9	A. T. Barrows.....	.28	3.8
11	.....do.....	.....	22				
July 2	.....do.....	.....	29	1909.			
7	.....do.....	.....	46	Jan. 20	Haines and Lee.....	.26	3.2
14	.....do.....	.....	56	Feb. 8	R. E. Haines.....	.26	3.5
27	.....do.....	.....	45	24	.....do.....	.21	3.0
Aug. 2	.....do.....	2.35	23	Mar. 15	.....do.....	.22	2.8
Oct. 8	.....do.....	1.80	3.4	Apr. 5	.....do.....	.24	3.3
Dec. 8	.....do.....	1.65	3.6	26	.....do.....	.34	5.3
				May 17	.....do.....	.37	6.4
1907.				June 7	.....do.....	.70	23.1
Feb. 4	G. R. Shuey.....	1.50	1.3	28	.....do.....	.95	31.6
25	.....do.....	.20	2.1	July 19	.....do.....	.58	18.4
Mar. 29	.....do.....	.20	3.2	Aug. 9	.....do.....	.30	10.3
Apr. 10	.....do.....	.20	4.8	30	.....do.....	.27	10.0
15	.....do.....	.25	8.1	Sept. 20	.....do.....	.06	4.3
May 6	.....do.....	.24	7.0	Oct. 11	.....do.....	.03	4.3
June 13	.....do.....	.60	12	Nov. 1	.....do.....	.00	4.2
29	.....do.....	.65	19	22	.....do.....	.03	3.9
July 11	.....do.....	.60	22				
Aug. 2	Shuey and Post.....	.60	26	1910.			
11	R. B. Post.....	.48	11	Mar. 7	R. E. Haines.....	.90	2.2
27	.....do.....	.25	7.8	28	.....do.....	.95	3.6
Sept. 9	.....do.....	.15	7	Apr. 23	.....do.....	1.05	4.7
30	.....do.....	.05	3.4	May 9	.....do.....	1.16	5.3
Oct. 21	.....do.....	.08	3.7	June 23	C. H. Lee.....	1.11	9.0
Nov. 5	.....do.....	.05	4.2	July 13	.....do.....	1.19	11.0
29	.....do.....	.00	3.3	Aug. 1	.....do.....	1.10	8.3
Dec. 12	.....do.....	.50	3.3	22	F. G. Wood.....	.98	5.8
				Sept. 16	G. T. Peekema.....	.81	3.8
1908.				Oct. 20	.....do.....	.86	2.9
Feb. 15	R. B. Post.....	.43	2.4	Nov. 16	.....do.....	.79	3.0
Mar. 10	.....do.....	.42	2.2	Dec. 19	.....do.....	.79	3.0
21	.....do.....	.43	2.4				
Apr. 9	.....do.....	.17	2.3	1911.			
29	.....do.....	.22	3.7	Jan. 23	G. T. Peekema.....	.79	3.0
May 2	.....do.....	.27	5.9				

NOTE.—Gage moved 2 miles up stream and set at different datum Feb. 25, 1907. Gage datum lowered 1 foot on Mar. 7, 1910.

Daily gage height, in feet, of Taboose Creek near Aberdeen, Cal., for 1906-1911.

Day.	Aug.	Sept.	Day.	Aug.	Sept.	Day.	Aug.	Sept.
1906.			1906.			1906.		
1.....		2.1	11.....		2.2	21.....	2.35	2.1
2.....		2.1	12.....		2.2	22.....	2.30	2.05
3.....		2.1	13.....		2.2	23.....	2.25	2.07
4.....		2.2	14.....		2.25	24.....		1.95
5.....		2.2	15.....		2.25	25.....	2.15	1.9
6.....		2.18	16.....		2.26	26.....	2.1	1.88
7.....		2.2	17.....		2.25	27.....	2.1	1.9
8.....		2.18	18.....		2.28	28.....	2.1	1.9
9.....		2.2	19.....	2.30	2.25	29.....	2.1	1.88
10.....		2.2	20.....	2.32	2.15	30.....	2.1	1.85
						31.....	2.1	

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1906-7.												
1.....	1.85		1.75	1.6		0.2	0.2	0.8		0.7		
2.....	1.85				1.6						0.6	0.2
3.....	1.85	1.7	1.7	1.6			.2		1.0	.8		
4.....	1.85					.2		.8				
5.....	1.85	1.7	1.7	1.6	1.55		.2		1.1	.9		
6.....	1.84					.2		.75			.55	.15
7.....		1.8	1.65		1.55				1.0			
8.....	1.80		1.65	1.6		.2	.2	.7				
9.....	1.82				1.55				.9	.7	.5	.15
10.....		1.75		1.6			.2	.75				
11.....			1.65			.2			.75	.6		
12.....				1.6	1.55		.25				.4	
13.....	1.82	1.7	1.65			.2		.75	.6	.6		.2
14.....					1.5							
15.....	1.82	1.7	1.65	1.6		.2	.25	.8		.6		
16.....					1.5						.4	.15
17.....	1.81	1.75		1.6			.25	.8	.55	.6		
18.....			1.6		1.5	.5						
19.....		1.75		1.6			.25		.5	.6	.4	
20.....	1.80		1.6		1.5	.35		.8				.1
21.....		1.75							.5			
22.....			1.6	1.6	1.5	.3	.75	.8		.45		
23.....	1.80										.4	.1
24.....		1.75	1.6	1.6			.8	.75	.55	.5		
25.....	1.80				.2	.25						
26.....			1.6	1.6			.8		.6	.55	.35	
27.....	1.8	1.75			.2	.2		.8		.65		.1
28.....												
29.....	1.8	1.75	1.6	1.6		.2	.8	.85		.5	.3	
30.....												.1
31.....	1.78			1.6				.9		.5		
1907-8.												
1.....		.1						.3	.4			
2.....			.05			.45						
3.....				.5	.45		.45			.5	.6	
4.....	.1	.05						.3				.4
5.....									.3			
6.....			.05	.5		.45	.45			.6		
7.....	.1				.45						.6	.45
8.....		.05						.3	.4			
9.....			.05			.45						
10.....				.5	.45		.2			.6	.6	
11.....	.1	.05						.25				.5
12.....									.5			
13.....			.5	.5		.45	.2			.7		
14.....	.05				.45						.5	.5
15.....		.05						.25	.45			
16.....			.5			.45						
17.....				.5	.45		.2			.6	.45	
18.....	.05	.05						.2				.45
19.....									.5			
20.....			.5	.5		.45	.2		.55			
21.....	.1				.45						.4	.35
22.....		.05						.2	.45			
23.....			.5			.45						
24.....				.5	.45		.2			.6	.45	
25.....	.1	.05						.3				.4

Daily gage height, in feet, of Taboose Creek near Aberdeen, Cal., for 1906-1911—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1907-8.												
26.									0.5			
27.			0.5	0.5		0.45	0.25			0.6		
28.	0.1				0.45						0.45	0.4
29.		0.05						0.4	.5			
30.			.5			.45						
31.				.45							.4	
1908-9.												
1.				.3	.3	.2	.25			1.15	.3	
2.	.35	.3										
3.								.45				.3
4.			.3	.25					.9			
5.	.35				.3	.2	.25			.8		
6.		.3									.3	.2
7.			.35					.5	.7			
8.				.3	.3	.25						
9.	.3	.3					.25			.7	.3	
10.								.5				.1
11.			.4	.3					.65			
12.	.3				.3	.2	.25			.75		
13.		.3									.25	.05
14.			.55					.4	.7			
15.				.3	.3	.2						
16.	.3	.3					.3			.7	.25	
17.				.3				.4				.1
18.			.6		.3	.25	.4		.7			
19.	.3									.7		
20.		.3		.25	.3	.25					.3	.05
21.			.3					.4	.7			
22.				.3	.3	.25						
23.	.3	.3					.35			.6	.3	
24.					.2			.4				.05
25.			.3	.3					.95			
26.	.3				.25	.25	.35			.5		
27.		.3									.3	
28.			.3					.45	1.0			.00
29.				.3		.2						
30.	.3	.3					.4			.4	.3	
31.								.6				
1909-10.												
1.	.05	.00					.95				1.2	
2.								1.1				.9
3.			-.05	.95					1.35	1.15		
4.	.05				.9	.9	.95					
5.		.00									1.1	.85
6.			-.05					1.1	1.4			
7.				1.9	.9	1.0				1.1		
8.	.05	.00					.95				1.1	
9.								1.15				.8
10.			-.05	.95					1.25			
11.	.05				.9	1.0	1.00			1.15		
12.		.00									1.05	.8
13.			.00					1.1	1.3			
14.	.05	.00		.95	.9	1.0						
15.							.98			1.2	1.0	
16.								1.2				.8
17.			-.05	.95					1.2			
18.	.00				.95	1.0	.98			1.2		
19.		.00									.95	.8
20.			-.05					1.15	1.2			
21.				.9	.9	1.0						
22.	.00	.00					1.00			1.3	1.0	
23.								1.25				.8
24.			.5	.9					1.15			
25.	.00				.9	1.0	1.10			1.2		
26.		-.05										
27.			.3					1.25	1.2		.95	.8
28.				.9	.9	.95						
29.	.00	-.05					1.10			1.2	.95	
30.									1.2			.8
31.			.1	.9				1.4				

Daily gage height, in feet, of Taboose Creek near Aberdeen, Cal., for 1906-1911—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Day.	Oct.	Nov.	Dec.	Jan.	Feb.
1910-11.						1910-11.					
1.....						16.....			0.8	0.8	.....
2.....			0.8	0.8		17.....	0.85				1.25
3.....	0.8				0.9	18.....		0.8			
4.....		0.8				19.....			.8		
5.....			.8			20.....				.8	.8
6.....				.8	.8	21.....	.9	.8			
7.....	.8	.8				22.....					
8.....						23.....			.8	.8	
9.....			.8	.8		24.....	.85				.78
10.....	.8				.8	25.....		.8			
11.....		.8				26.....			.8		
12.....			.8			27.....				.8	.78
13.....				.8	.8	28.....	.8	.8			
14.....	.9	.8				29.....					
15.....						30.....			.8	1.05	
						31.....	.8				

NOTE.—Gage moved 2 miles upstream and installed at a different datum Feb. 25, 1907. Beginning January, 1910, gage heights refer to a datum 1 foot lower than those prior to Jan. 1, 1910.

Daily discharge, in second-feet, of Taboose Creek near Aberdeen, Cal., for 1909-1911.

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909.									
1.....	4.4	4.4	2.5	2.5	7.1	13	37	10	10
2.....	4.4	4.4	2.5	3.3	7.1	23	39	10	10
3.....	4.4	4.4	2.5	3.3	8.6	26	33	10	10
4.....	3.3	4.4	2.5	3.3	10	30	30	10	10
5.....	4.4	4.4	2.5	3.3	10	26	26	10	7.6
6.....	4.4	4.4	2.5	3.3	10	26	26	10	7.6
7.....	4.4	4.4	2.5	3.3	10	23	25	10	7.6
8.....	4.4	4.4	3.3	3.3	10	23	23	10	6.3
9.....	4.4	4.4	2.5	3.3	10	23	23	10	5.2
10.....	4.4	4.4	2.5	3.3	10	23	23	10	5.2
11.....	4.4	4.4	2.5	3.3	10	21	23	10	5.2
12.....	4.4	4.4	2.5	3.3	8.6	23	25	10	5.2
13.....	4.4	4.4	2.5	4.4	7.1	23	23	9	4.3
14.....	4.4	4.4	2.5	4.4	7.1	23	23	9	5.2
15.....	4.4	4.4	2.5	4.4	7.1	23	23	9	5.2
16.....	4.4	4.4	2.5	4.4	7.1	23	23	9	5.2
17.....	4.4	4.4	2.5	4.4	7.1	23	23	10	5.2
18.....	4.4	4.4	2.5	7.1	7.1	23	23	10	5.2
19.....	4.4	4.4	3.3	7.1	7.1	23	23	10	5.2
20.....	3.3	4.4	3.3	7.1	7.1	23	23	10	4.3
21.....	4.4	4.4	3.3	7.1	7.1	23	21	10	4.3
22.....	1.4	4.4	3.3	7.1	7.1	24	20	10	4.3
23.....	4.4	3.3	3.3	5.7	7.1	26	20	10	4.3
24.....	4.4	2.5	3.3	5.7	7.1	30	20	10	4.3
25.....	4.4	2.5	3.3	5.7	7.1	32	16	10	3.7
26.....	4.4	3.3	3.3	5.7	7.1	33	16	10	3.7
27.....	4.4	2.5	2.5	7.1	7.1	33	16	10	3.7
28.....	4.4	2.5	2.5	7.1	8.6	33	15	10	3.7
29.....	4.4		2.5	7.1	10	35	13	10	3.7
30.....	4.4		2.5	7.1	18	37	13	10	3.7
31.....	4.4		2.5		13		13	10	.....

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909-10.												
1.....	4.3	3.7	3.4	3	2	2	3	5	15	11	11	4
2.....	4.3	3.7	3.4	3	2	2	3	5	14	10	11	4
3.....	4.3	3.7	3.4	3	2	2	3	5	13	10	10	4
4.....	4.3	3.7	3.4	5	2	2	3	5	14	10	9	4
5.....	4.3	3.7	3.4	10	2	3	3	4	14	9	8	4
6.....	4.3	3.7	3.4	15	2	3	3	4	15	8	8	4
7.....	4.3	3.7	3.4	30	2	4	3	4	14	8	8	4
8.....	4.3	3.7	3.4	15	2	4	3	5	13	8	8	3
9.....	4.3	3.7	3.4	5	2	4	3	5	12	9	8	3
10.....	4.3	3.7	3.4	3	2	4	4	5	11	10	8	3

Daily discharge, in second-feet, of Taboose Creek near Aberdeen, Cal., for 1909-1911—Con.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909-10.												
11.....	4.3	3.7	3.4	3	2	4	4	5	11	10	7	3
12.....	4.3	3.7	3.7	3	2	4	4	5	12	10	7	3
13.....	4.3	3.7	3.7	3	2	4	4	5	13	11	7	3
14.....	4.3	3.7	3.7	3	2	4	4	5	13	11	6	3
15.....	4.3	3.7	3.7	3	2	4	4	6	12	11	6	3
16.....	4.3	3.7	3.4	3	2	4	4	7	11	11	6	3
17.....	3.7	3.7	3.4	3	3	4	4	7	11	11	6	3
18.....	3.7	3.7	3.4	3	3	4	4	7	11	11	6	3
19.....	3.7	3.7	3.4	3	3	4	4	6	11	11	6	3
20.....	3.7	3.7	3.4	2	2	4	4	6	11	12	6	3
21.....	3.7	3.7	3.7	2	2	4	4	7	10	13	6	3
22.....	3.7	3.7	7.6	2	2	4	4	8	10	14	6	3
23.....	3.7	3.7	13	2	2	4	5	9	9	13	6	3
24.....	3.7	3.7	16	2	2	4	5	9	10	12	6	3
25.....	3.7	3.4	16	2	2	4	5	9	10	11	6	3
26.....	3.7	3.4	10	2	2	4	5	10	11	11	6	3
27.....	3.7	3.4	10	2	2	3	5	10	11	11	6	3
28.....	3.7	3.4	10	2	2	3	5	11	11	11	6	3
29.....	3.7	3.4	7.6	2	.....	3	5	12	11	11	6	3
30.....	3.7	3.4	5.2	2	.....	3	5	13	11	11	5	3
31.....	3.7	.....	5.2	2	.....	3	.....	15	.....	11	5	.....

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Day.	Oct.	Nov.	Dec.	Jan.	Feb.
1910-11.						1910-11.					
1.....	3	3	3	3	9	16.....	4	3	3	3	3
2.....	3	3	3	3	6	17.....	4	3	3	3	3
3.....	3	3	3	3	4	18.....	4	3	3	3	3
4.....	3	3	3	3	4	19.....	3	3	3	3	3
5.....	3	3	3	3	3	20.....	3	3	3	3	3
6.....	3	3	3	3	3	21.....	4	3	3	3	3
7.....	3	3	3	3	3	22.....	4	3	3	3	3
8.....	3	3	3	3	3	23.....	4	3	3	3	3
9.....	3	3	3	3	3	24.....	4	3	3	3	3
10.....	3	3	3	3	3	25.....	4	3	3	3	3
11.....	3	3	3	3	3	26.....	3	3	3	3	3
12.....	3	3	3	3	3	27.....	3	3	3	3	3
13.....	4	3	3	3	3	28.....	3	3	3	4	3
14.....	4	3	3	3	3	29.....	3	3	3	5	.....
15.....	4	3	3	3	3	30.....	3	3	3	7	.....
						31.....	3	.....	3	10	.....

NOTE.—Daily discharge determined from rating curves applicable as follows: Jan. 1 to June 1, 1909, well defined below 7 second-feet. June 2 to Dec. 31, 1909, well defined below 33 second-feet. Jan. 1 to Apr. 24, 1910, poorly defined. Apr. 25 to June 22, 1910, indirect method for shifting channels used. June 23, 1910, to Feb. 28, 1911, fairly well defined. Discharge interpolated for days on which gage was not read, except Jan. 31, 1911, which was estimated.

Monthly discharge of Taboose Creek near Aberdeen, Cal., for 1906-1911.

[Drainage area, 13.9 square miles.]

Month.	Discharge in second-feet.				Run-off.	
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.	Total in acre-feet.
1906.						
January.....	4.0	3.3	3.7	0.266	0.31	228
February.....	3.0	2.7	2.9	.209	.22	161
March.....	3.6	3.0	3.3	.237	.27	203
April.....	8.4	3.4	5.8	.417	.47	345
May.....	12	6.8	10.4	.748	.86	640
June.....	28	9.0	21.8	1.57	1.75	1,300
July.....	56	29	46.3	3.33	3.75	2,850
August.....	40	15	25.7	1.85	2.13	1,580
September.....	21	5.6	15.0	1.08	1.20	893
The period.....						8,200

Monthly discharge of Taboose Creek near Aberdeen, Cal., for 1906-1911—Continued.

Month.	Discharge in second-feet.				Run-off.	
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.	Total in acre-feet.
1906-7.						
October	5.6	3.2	3.7	0.266	0.31	228
November	4.0	3.0	3.6	.259	.29	214
December	4.0	3.0	3.5	.252	.29	215
January	2.3	2.3	2.3	.165	.19	141
February	6.2	1.4	2.2	.165	.17	128
March	14	6.2	7.3	.525	.61	448
April	24	6.2	12.0	.863	.96	714
May	28	20	23.0	1.65	1.90	1,410
June	36	14	21.0	1.51	1.68	1,250
July	28	12	18.0	1.29	1.49	1,110
August	18	8.5	12.0	.863	.99	738
September	6.2	4.3	5.0	.360	.40	298
The year	36	1.4	9.48	.682	9.28	6,890
1907-8.						
October	4.3	3.6	4.2	0.302	0.35	258
November	4.3	3.6	3.6	.259	.29	214
December	3.6	2.9	3.2	.230	.27	197
January	3.0	2.4	3.0	.216	.25	184
February	2.4	2.3	2.3	.165	.18	132
March	2.3	2.2	2.3	.165	.19	141
April	5.2	2.5	3.1	.223	.25	184
May	7.2	3.1	4.9	.352	.41	301
June	8.0	4.5	6.0	.432	.48	357
July	14	8.0	10.9	.784	.90	670
August	11	5.7	8.2	.590	.68	504
September	8	5.0	6.4	.460	.51	381
The year	14	2.2	4.84	.348	4.76	3,520
1908-9.						
October	5	4.0	4.5	0.324	0.37	277
November	4	4.0	4.0	.288	.32	238
December	10	4.0	5.5	.396	.46	338
January	4.4	3.3	4.33	.312	.36	266
February	4.4	2.5	4.05	.291	.31	225
March	3.3	2.5	2.73	.196	.23	168
April	7.1	2.5	4.92	.354	.40	293
May	18	7.1	8.65	.622	.72	532
June	37	13	25.7	1.85	2.06	1,530
July	39	13	22.6	1.63	1.88	1,390
August	10	9.0	9.87	.710	.82	607
September	10	3.7	5.64	.406	.45	336
The year	39	2.5	8.54	.614	8.38	6,200
1909-10.						
October	4.3	3.7	4.01	0.288	0.33	247
November	3.7	3.4	3.53	.254	.28	210
December	16	3.4	5.60	.403	.46	344
January	30	2	4.61	.332	.38	283
February	3	2	2.11	.152	.16	117
March	4	2	3.52	.253	.29	216
April	5	3	3.97	.286	.32	236
May	15	4	7.06	.508	.59	434
June	15	9	11.8	.849	.95	702
July	14	8	10.7	.770	.89	658
August	11	5	6.97	.501	.58	429
September	4	3	3.23	.232	.26	192
The year	30	2	5.59	.402	5.49	4,070
1910-11.						
October	4	3	3.35	0.241	0.28	206
November	3	3	3.0	.216	.24	179
December	3	3	3.0	.216	.25	184
January	10	3	3.5	.252	.29	215
February	9	3	3.4	.245	.26	189

NOTE.—Discharge prior to Aug. 19, 1906, determined by interpolating between discharge measurements Aug. 19, 1906, to Dec. 31, 1908, by the indirect method for shifting channels.

GOODALE CREEK NEAR ABERDEEN,¹ CAL.

This station, which was located at the point where the stream leaves the foothills, about 13 miles north of Independence, 4 miles west of Aberdeen railway station, and one-fourth mile west of the upper road crossing in sec. 16, T. 11 S., R. 34 E., was established September 20, 1906, and discontinued February 28, 1911.

No water is diverted above or near the station. The drainage area above the mouth of Goodale Creek canyon is about 5 square miles.

The gage is a vertical staff on the left bank. On March 7, 1910, the datum was lowered 1 foot; all gage heights for 1910-11 are referred to the new datum.

Discharge measurements were made from the footbridge at the gage.

The channel is composed of sand and shifts somewhat. There is but one channel at all stages and the current is swift.

Discharge measurements of Goodale Creek near Aberdeen, Cal., in 1906-1911.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
		<i>Fect.</i>	<i>Sec.-ft.</i>			<i>Fect.</i>	<i>Sec.-ft.</i>
1906.				1908.			
Apr. 12	G. R. Shuey		2.6	July 8	R. B. Post	0.50	7.4
May 2	do		4.2	Aug. 14	Post and Lamb	.50	8.1
May 9	do		2.5	Aug. 12	W. A. Lamb	.34	5.0
May 24	do		7.4	do	do	.26	4.0
16	do		7.4	Sept. 4	do	.16	2.5
23	do		7.5	do	do	.22	3.7
June 1	do		4.9	Oct. 5	do	.20	3.3
11 ^a	do		11	Oct. 21	Barrows and Lamb	.17	3.4
19 ^a	do		12	Nov. 9	do	.15	2.9
July 2 ^a	do		17				
7 ^a	do		27	1909.			
14 ^a	do		27	Jan. 20	Haines and Lee	.10	2.4
27 ^a	do		8.7	Feb. 8	R. E. Haines	.25	2.7
Oct. 31	do	0.60	5.4	do	do	.21	3.0
Dec. 8	do	.60	4.6	Mar. 15	do	.24	2.6
				Apr. 5	do	.28	3.5
1907.				do	do	.37	5.6
Jan. 27	G. R. Shuey	.45	3.7	May 17	do	.42	7.3
Feb. 25	do	.43	3.9	June 7	do	.75	16.2
Mar. 29	do	.40	3.0	do	do	.95	21.3
Apr. 15	do	.60	6.6	July 19	do	.70	13.6
May 6	do	.63	5.8	Aug. 9	do	.50	10.5
June 13	do	.75	9.7	do	do	.44	7.9
28	do	.90	12	Sept. 20	do	.27	4.8
July 11	do	1.10	18	Oct. 11	do	.19	4.3
Aug. 2	Shuey and Post	1.05	15	Nov. 1	do	.19	3.6
11	R. B. Post	.80	8.9	do	do	.16	3.8
27	do	.65	6.7				
Sept. 9	do	.50	4.8	1910.			
30	do	.45	3.1	Mar. 7	R. E. Haines	b 1.10	4.0
Oct. 21	do	.45	3.2	do	do	1.02	3.3
Nov. 5	do	.41	3.4	Apr. 23	do	1.18	6.0
29	do	.40	2.6	May 9	do	1.19	6.8
Dec. 12	do	.39	2.8	June 13	C. H. Lee	1.20	8.5
				July 13	do	1.20	9.5
1908.				Aug. 1	Lee and Wood	1.10	5.5
Feb. 15	R. B. Post	.30	2.3	do	F. G. Wood	1.02	4.1
Mar. 10	do	.32	2.2	Sept. 16	G. T. Peekema	.99	3.7
21	do	.34	2.2	Oct. 20	do	.97	3.2
Apr. 9	do	.30	2.3	Nov. 16	do	.95	3.1
May 29	do	.42	4.1	Dec. 19	do	.94	2.9
May 2	do	.33	4.2				
21	do	.23	2.5	1911.			
June 17	do	.35	4.4	Jan. 23	G. T. Peekema	.93	2.7
26	do	.36	4.8				

^a At upper road crossing.

^b Gage datum lowered 1 foot at this date.

¹ Formerly known as Tibbetts.

Daily gage height, in feet, of Goodale Creek near Aberdeen, Cal., for 1906-1911.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1906-7.												
1.	0.68		0.6	0.5		0.45	0.4	0.7		0.9		
2.					0.45						1.05	0.5
3.	.68	0.5	.6	.5			.4		0.9	.95		
4.						.45		.7				
5.		.5	.6	.5	.45		.4		.95	.95		
6.	.65					.45		.65			.95	.5
7.		.6	.55		.45				.9			
8.			.6	.5		.45	.45	.6				
9.	.62				.45					1.0	.95	.5
10.		.55		.5			.5	.65	.8			
11.	.61		.55			.4				1.1		
12.				.5	.45		.55		.75		.8	
13.	.6	.6	.55			.4		.65		1.05		.5
14.					.5				.7			
15.	.6	.6	.55	.5		.4	.6	.7		1.1		
16.					.5						.85	.5
17.	.62	.65		.5			.6	.7	.75	1.1		
18.			.5		.5	.6						
19.		.65		.5			.6		.8	1.1	.8	
20.	.6		.5		.5	.5		.7				.5
21.		.65							.8			
22.			.5	.5	.5	.45	.65	.7		1.0		
23.	.62										.75	.5
24.		.6	.5	.5			.7	.65	.85	.9		
25.	.6				.45	.4						
26.			.5	.5			.7		.85	.95	.7	
27.	.6	.6			.45	.35		.7				.45
28.									.9			
29.	.6	.6	.5	.45		.4	.7	.75		.95	.65	
30.												.45
31.	.6			.45				.8		.95		
1907-8.												
1.		.4						.45	.35			
2.			.4			.35						
3.				.4	.35		.35			.45	.4	
4.	.4	.4						.3				.2
5.									.3			
6.			.4	.4		.35	.35			.5		
7.	.4				.35						.5	.2
8.		.4				.35		.3	.35			
9.			.4			.35						
10.				.4	.35		.35			.5	.4	
11.	.4	.4						.3				.3
12.						.35	.35		.4			
13.			.4	.4						.5		
14.	.4				.35						.3	.3
15.		.4						.3	.4			
16.			.4			.35						
17.				.4	.35		.35			.45	.25	
18.	.4	.4						.25				.3
19.			.4	.4		.35	.4		.35	.4		
20.						.35						
21.	.4				.35						.25	.25
22.		.4						.3	.3			
23.			.4		.35							
24.			.4	.4	.35		.4			.4	.25	
25.	.4	.4						.3				.3
26.									.4			
27.			.4	.4		.35	.4			.4		
28.	.4				.35						.2	.3
29.		.4						.3	.45			
30.			.4			.35						
31.				.35						.4	.2	

Daily gage height, in feet, of Goodale Creek near Aberdeen, Cal., for 1906-1911—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1908-9.												
1.				0.2	0.2	0.2				1.15	0.5	
2.	0.25	0.15					0.2					
3.								0.5				0.4
4.			0.2	.15					0.9			
5.	.2				.2	.2	.2			.85		
6.		.15									.5	
7.			.2					.55	.8			.35
8.				.2	.2	.2						
9.	.25	.15					.25			.8	.5	
10.								.55				.3
11.			.25	.2					.75			
12.	.25				.2	.2	.25			.85		
13.		.18									.45	.3
14.			.3					.4	.85			
15.				.2	.2	.2						
16.	.2	.18					.25			.8	.4	
17.							.4					.3
18.			.3	.2				.75				
19.	.18				.2	.2	.4			.85		
20.		.15		.1							.5	.3
21.			.2					.5	.8			
22.					.2	.2						
23.	.2	.2					.35			.7	.5	
24.					.2			.5				.3
25.			.18	.2					1.0			
26.	.15				.2	.2	.3			.6		
27.		.2									.45	.25
28.			.18					.5	1.0			
29.				.2		.2						
30.	.15	.2					.4			.55	.4	
31.								.7				
1909-10.												
1.	.2	.2					1.0				1.1	
2.								1.2				1.0
3.			.15	1.1					1.3	1.15		
4.	.15				1.0	1.05	1.0					
5.		.2									1.1	1.0
6.			.15					1.15	1.3			
7.				1.2	1.0	1.1				1.1		
8.	.2	.2					1.0				1.1	
9.								1.15				.95
10.			.15	1.05					1.25			
11.	.2				1.0	1.1	1.05			1.2		
12.		.2									1.05	1.0
13.			.15					1.2	1.3	1.2		
14.				1.05	1.0	1.1						
15.	.2	.2					1.05			1.2	1.05	
16.								1.25				1.0
17.			.1	1.0					1.2			
18.	.2				1.0	1.1	1.1			1.2		
19.		.2									1.0	1.0
20.			.1					1.2	1.2			
21.				1.0	1.0	1.1						
22.	.2	.2					1.15			1.2	1.0	
23.							1.18	1.25	1.2			1.0
24.			.6	1.0					1.2			
25.	.2				1.0	1.0	1.2			1.15		
26.		.15									1.0	1.0
27.			.45					1.25	1.2			
28.				1.0	1.0	1.0						
29.	.15	.15					1.2			1.15	1.0	
30.									1.2			1.0
31.			.15	1.0				1.3				

Daily gage height, in feet, of Goodale Creek near Aberdeen, Cal., for 1906-1911—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Day.	Oct.	Nov.	Dec.	Jan.	Feb.
1910-11.						1910-11.					
1.....						16.....		0.95	0.95	0.95	
2.....			0.95	0.95		17.....	1.0				1.25
3.....	1.0				0.98	18.....		.95			
4.....		0.95				19.....			.95		
5.....			.95			20.....	.97			.95	.92
6.....				.95	.95	21.....	1.0	.95			
7.....	1.0	.95				22.....					
8.....						23.....			.95	.95	
9.....			.95	.95		24.....	.95				.92
10.....	1.0				.95	25.....		.95			
11.....		.95				26.....			.95		
12.....			.95			27.....				.95	.92
13.....				.95	.95	28.....		.95			
14.....	1.0	.95				29.....	.95				
15.....						30.....			.95	1.15	
						31.....	.95				

NOTE.—Beginning Jan. 1, 1910, gage heights refer to datum 1 foot lower than those previous to that date.

Daily discharge, in second-feet, of Goodale Creek near Aberdeen, Cal., for 1909-1911.

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909.									
1.....	2.4	2.4	2.4	2.4	6.2	14	26	9.5	7.3
2.....	2.4	2.4	2.4	2.4	8.8	17	27	9.5	7.3
3.....	2.4	2.4	2.4	2.4	8.8	20	23	9.5	7.3
4.....	2.1	2.4	2.4	2.4	8.8	20	20	9.5	7.3
5.....	2.4	2.4	2.4	2.4	8.8	20	18	9.5	7.3
6.....	2.4	2.4	2.4	2.4	8.8	17	17	9.5	6.3
7.....	2.4	2.4	2.4	2.4	10	17	17	9.5	5.4
8.....	2.4	2.4	2.4	2.4	10	17	17	9.5	5.4
9.....	2.4	2.4	2.4	3.0	10	17	17	9.5	5.4
10.....	2.4	2.4	2.4	3.0	10	17	17	9.5	5.4
11.....	2.4	2.4	2.4	3.0	6.2	16	17	9.5	5.4
12.....	2.4	2.4	2.4	3.0	6.2	17	18	9.5	5.4
13.....	2.4	2.4	2.4	3.0	6.2	17	17	8.4	5.4
14.....	2.4	2.4	2.4	3.0	6.2	18	17	7.3	5.4
15.....	2.4	2.4	2.4	3.0	6.2	17	17	7.3	5.4
16.....	2.4	2.4	2.4	3.0	6.2	17	17	7.3	5.4
17.....	2.4	2.4	2.4	3.9	6.2	17	17	7.3	5.4
18.....	2.4	2.4	2.4	5.0	6.2	16	17	8.4	5.4
19.....	2.1	2.4	2.4	6.2	7.5	17	18	9.5	5.4
20.....	2.0	2.4	2.4	6.2	8.8	17	17	9.5	5.4
21.....	2.0	2.4	2.4	6.2	8.8	17	16	9.5	5.4
22.....	2.0	2.4	2.4	6.2	8.8	17	14	9.5	5.4
23.....	2.4	2.4	2.4	5.0	8.8	20	14	9.5	5.4
24.....	2.4	2.4	2.4	3.9	8.8	23	14	9.5	5.4
25.....	2.4	2.4	2.4	3.9	8.8	23	12	9.5	5.4
26.....	2.4	2.4	2.4	3.9	8.8	23	12	9.5	5.4
27.....	2.4	2.4	2.4	3.9	8.8	23	12	8.4	4.7
28.....	2.4	2.4	2.4	5.0	8.8	23	12	7.3	4.1
29.....	2.4		2.4	6.2	12	23	12	7.3	4.1
30.....	2.4		2.4	6.2	14	25	11	7.3	4.1
31.....	2.4		2.4		14		10	7.3	

Daily discharge, in second-feet, of Goodale Creek near Aberdeen, Cal., for 1909-1911—Con.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909-10.												
1.....	4.1	4.1	3.7	4.2	3.1	3.2	3.1	6.9	13.5	8.4	5.6	3.7
2.....	4.1	4.1	3.7	4.2	3.1	3.3	3.1	6.9	13.5	7.9	5.6	3.7
3.....	4.1	4.1	3.7	4.2	3.1	3.5	3.1	6.6	13.5	7.3	5.6	3.7
4.....	4.1	4.1	3.7	4.9	3.1	3.6	3.1	6.2	13.5	6.9	5.6	3.7
5.....	4.1	4.1	3.7	5.6	3.1	3.8	3.1	5.9	13.5	6.4	5.6	3.7
6.....	4.1	4.1	3.7	6.2	3.1	4.0	3.1	5.6	13.5	6.0	5.6	3.6
7.....	4.1	4.1	3.7	6.9	3.1	4.2	3.1	5.6	12.9	5.6	5.6	3.4
8.....	4.1	4.1	3.7	5.8	3.1	4.2	3.1	5.6	12.4	6.4	5.6	3.2
9.....	4.1	4.1	3.7	4.7	3.1	4.2	3.3	5.6	11.8	7.3	5.6	3.1
10.....	4.1	4.1	3.7	3.6	3.1	4.2	3.5	5.9	11.2	8.2	5.2	3.3
11.....	4.1	4.1	3.7	3.6	3.1	4.2	3.6	6.2	12.0	9.0	4.9	3.5
12.....	4.1	4.1	3.7	3.6	3.1	4.2	3.6	6.6	12.7	9.0	4.6	3.7
13.....	4.1	4.1	3.7	3.6	3.1	4.2	3.6	6.9	13.5	9.0	4.6	3.7
14.....	4.1	4.1	3.7	3.6	3.1	4.2	3.6	7.9	12.4	9.0	4.6	3.7
15.....	4.1	4.1	3.6	3.4	3.1	4.2	3.6	8.9	11.3	9.0	4.6	3.7
16.....	4.1	4.1	3.6	3.2	3.1	4.2	3.8	10	10.2	9.0	4.3	3.7
17.....	4.1	4.1	3.6	3.1	3.1	4.2	4.0	9.2	9.0	9.0	4.1	3.7
18.....	4.1	4.1	3.6	3.1	3.1	4.2	4.2	8.4	9.0	9.0	3.9	3.7
19.....	4.1	4.1	3.6	3.1	3.1	4.2	4.6	7.7	9.0	9.0	3.7	3.7
20.....	4.1	4.1	3.6	3.1	3.1	4.2	4.9	6.9	9.0	9.0	3.7	3.7
21.....	4.1	4.1	4.1	3.1	3.1	4.2	5.2	7.9	9.0	9.0	3.7	3.7
22.....	4.1	4.1	7.3	3.1	3.1	3.9	5.6	8.9	9.0	9.0	3.7	3.7
23.....	4.1	4.1	7.3	3.1	3.1	3.6	6.4	10	9.0	8.4	3.7	3.7
24.....	4.1	4.1	12	3.1	3.1	3.4	6.6	10	9.0	7.9	3.7	3.7
25.....	4.1	3.7	11	3.1	3.1	3.1	6.9	10	9.0	7.3	3.7	3.7
26.....	4.1	3.7	9.5	3.1	3.1	3.1	6.9	10	9.0	7.3	3.7	3.7
27.....	4.1	3.7	8.4	3.1	3.1	3.1	6.9	10	9.0	7.3	3.7	3.7
28.....	3.7	3.7	7.3	3.1	3.1	3.1	6.9	10.9	9.0	7.3	3.7	3.7
29.....	3.7	3.7	5.4	3.1	.....	3.1	6.9	11.8	9.0	7.3	3.7	3.7
30.....	3.7	3.7	4.1	3.1	.....	3.1	6.9	12.6	9.0	6.7	3.7	3.7
31.....	4.1	.....	3.7	3.1	.....	3.1	.....	13.5	.....	6.2	3.7	.....

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Day.	Oct.	Nov.	Dec.	Jan.	Feb.
1910-11.						1910-11.					
1.....	3.7	3.1	3.1	3.1	8.5	16.....	3.7	3.1	3.1	3.1	3.0
2.....	3.7	3.1	3.1	3.1	5.0	17.....	3.7	3.1	3.1	3.1	3.0
3.....	3.7	3.1	3.1	3.1	3.5	18.....	3.6	3.1	3.1	3.1	3.0
4.....	3.7	3.1	3.1	3.1	3.4	19.....	3.4	3.1	3.1	3.1	3.0
5.....	3.7	3.1	3.1	3.1	3.2	20.....	3.3	3.1	3.1	3.1	2.7
6.....	3.7	3.1	3.1	3.1	3.1	21.....	3.7	3.1	3.1	3.1	2.7
7.....	3.7	3.1	3.1	3.1	3.1	22.....	3.5	3.1	3.1	3.1	2.7
8.....	3.7	3.1	3.1	3.1	3.1	23.....	3.3	3.1	3.1	3.1	2.7
9.....	3.7	3.1	3.1	3.1	3.1	24.....	3.1	3.1	3.1	3.1	2.7
10.....	3.7	3.1	3.1	3.1	3.1	25.....	3.1	3.1	3.1	3.1	2.7
11.....	3.7	3.1	3.1	3.1	3.1	26.....	3.1	3.1	3.1	3.1	2.7
12.....	3.7	3.1	3.1	3.1	3.1	27.....	3.1	3.1	3.1	3.1	2.7
13.....	3.7	3.1	3.1	3.1	3.1	28.....	3.1	3.1	3.1	4.0	2.7
14.....	3.7	3.1	3.1	3.1	3.1	29.....	3.1	3.1	3.1	6.0	.....
15.....	3.7	3.1	3.1	3.1	3.0	30.....	3.1	3.1	3.1	7.3	.....
						31.....	3.1	.....	3.1	9.0	.....

NOTE.—Daily discharge determined from rating curve, applicable as follows: Jan. 1 to June 30, 1909; July 1 to Dec. 31, 1909; Jan. 1 to May 30, 1910; May 31, 1910, to Feb. 29, 1911. Discharge interpolated or estimated for days on which the gage was not read.

Monthly discharge of Goodale Creek near Aberdeen, Cal., for 1906-1911.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1906.					
January.....			2.0	123	
February.....			1.0	56	
March.....			1.0	61	
April.....			3.5	208	
May.....			6.3	387	
June.....			11.2	666	
July.....			19.0	1,170	
August.....			6.4	394	
September.....			5.9	351	
The period.....				3,420	
1906-7.					
October.....	6.3	5.4	5.6	344	
November.....	5.6	5.0	5.3	315	
December.....	4.6	4.0	4.3	264	
January.....	4.0	3.4	3.9	240	D.
February.....	4.0	3.3	3.6	200	D.
March.....	5.4	3.4	3.3	203	D.
April.....	7.2	2.8	5.1	304	C.
May.....	9.2	5.4	7.0	430	C.
June.....	14	7.2	10.2	607	C.
July.....	18.0	12.0	15.1	928	C.
August.....	16.0	5.5	10.3	633	C.
September.....	4.0	3.4	3.9	232	C.
The year.....	18.0	2.8	6.47	4,700	
1907-8.					
October.....	2.8	2.8	2.8	172	D.
November.....	2.8	2.8	2.8	167	D.
December.....	2.8	2.8	2.8	172	D.
January.....	3.0	2.6	3.0	184	D.
February.....	2.6	2.2	2.6	150	D.
March.....	2.6	2.2	2.6	160	D.
April.....	3.0	2.2	2.7	161	D.
May.....	4.7	3.6	4.4	270	D.
June.....	7.4	4.7	5.8	345	D.
July.....	8.3	6.4	7.3	449	D.
August.....	8.3	3.2	5.0	307	D.
September.....	4.7	3.2	4.1	244	D.
The year.....	8.3	2.2	3.82	2,780	
1908-9.					
October.....	3.4	3.3	3.3	203	D.
November.....	3.0	3.0	3.0	179	D.
December.....	3.0	3.0	3.0	184	D.
January.....	2.4	2.0	2.34	144	D.
February.....	2.4	2.4	2.40	133	C.
March.....	2.4	2.4	2.40	148	C.
April.....	6.2	2.4	3.83	228	B.
May.....	14.0	6.2	8.58	528	B.
June.....	25.0	14.0	18.7	1,110	B.
July.....	27.0	10.0	16.5	1,010	B.
August.....	9.5	7.3	8.83	543	C.
September.....	7.3	4.1	5.59	333	B.
The year.....	27.0	2.0	6.54	4,740	
1909-10.					
October.....	4.1	3.7	4.06	250	C.
November.....	4.1	3.7	4.02	239	C.
December.....	12.0	3.7	4.95	304	B.
January.....	6.9	3.1	3.80	234	B.
February.....	3.1	3.1	3.10	172	B.
March.....	4.2	3.1	3.78	232	B.
April.....	6.9	3.1	4.54	271	B.
May.....	13.5	5.6	8.02	493	B.
June.....	13.5	9.0	10.9	649	B.
July.....	9.0	5.6	7.87	484	B.
August.....	5.6	3.7	4.49	276	B.
September.....	3.7	3.1	3.63	216	B.
The year.....	13.5	3.1	5.26	3,820	
1910-11.					
October.....	3.7	3.1	3.50	215	B.
November.....	3.1	3.1	3.10	184	B.
December.....	3.1	3.1	3.10	191	B.
January.....	9.0	3.1	3.55	218	B.
February.....	8.5	2.7	3.24	180	B.

NOTE.—Daily discharge determined as follows: January to March, 1906, estimated; April to September, 1906, interpolated between discharge measurements; October, 1906, to December, 1908, by the indirect method for shifting channels.

DIVISION CREEK NEAR INDEPENDENCE, CAL.

This station, which is located at a point about 200 feet above the lower intake of the power canal of the Los Angeles Aqueduct, in secs. 4 and 5, T. 12 S., R. 34 E., was originally established January 10, 1906, at a point on the upper road crossing, about $1\frac{1}{2}$ miles west of the Rickey ranch house and about 10 miles north of Independence, and was removed to its present site May 9, 1908.

When the upper aqueduct power plant was put into operation in April, 1909, gage-height observations were discontinued on account of the variable amount of water diverted, and discharge measurements were made during periods of steady load.

Discharge measurements of Division Creek near Independence, Cal., in 1906-1910.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
		<i>Feet.</i>	<i>Sec.-ft.</i>			<i>Feet.</i>	<i>Sec.-ft.</i>
1906.				1908.			
Jan. 18	G. R. Shuey	2.23	8.1	Apr. 3	R. B. Post	.90	5.5
Feb. 15	do.	2.23	5.1	13	do.	.90	5.7
Feb. 21	do.	2.23	5.1	20	do.	.88	5.7
Mar. 3	do.		5.0	May 6	do.	.65	7.2
15	do.		9.0	June 17	do.	.70	7.3
20	do.		5.4	July 14	Post and Lamb	.67	6.4
27	do.		4.7	31	W. A. Lamb	.93	9.8
Apr. 6	do.		4.9	Aug. 12	do.	.86	7.7
12	do.	2.25	5.4	24	do.	.76	7.7
18	do.	2.30	6.5	Oct. 5	do.	.68	7.3
24	do.		7.4	20	Lamb and Barrows	.80	7.5
May 2	do.	2.25	6.6	Nov. 5	A. T. Barrows	.82	8.0
9	do.	2.30	7.9				
16	do.	2.26	7.5	1909.			
23	do.	2.26	7.5	Jan. 20	Haines and Lee	0.80	7.4
June 1	do.	2.25	6.0	Feb. 4	R. E. Haines	.77	6.2
11	do.	2.28	7.7	24	do.	.76	7.6
19	do.	2.30	9.2	Mar. 11	do.	.77	7.3
25	do.	2.35	9.9	Apr. 2	do.		7.1
July 2	do.	2.40	11	22	do.		8.4
7	do.	2.45	13	May 17	do.		9.3
14	do.	2.65	17	June 7	do.		15.5
27	do.	2.95	22	28	do.		18.2
Aug. 18	do.	1.10	12	July 13	do.		16.4
Oct. 31	do.	2.60	14	Aug. 9	do.		15.0
Dec. 8	do.	2.55	11	30	do.		16.6
				Sept. 20	do.		14.0
1907.				Oct. 11	do.		13.4
Jan. 27	G. R. Shuey		10	Nov. 1	do.		13.4
Feb. 25	do.	2.40	8.9	18	do.		11.2
Mar. 29	do.	2.40	9				
Apr. 15	do.	2.40	10	1910.			
May 5	do.	2.30	9	Feb. 24	R. E. Haines		9.5
June 13	do.	2.40	12	Mar. 16	do.		a7.7
28	do.	2.30	10	Apr. 6	do.		8.8
July 7	do.	2.40	13	27	do.		8.2
Aug. 2	Shuey and Post	2.30	12	May 18	do.		9.0
11	R. B. Post	2.26	9.4	June 26 ^b	C. H. Lee	.93	7.1
27	do.	2.30	10	July 13 ^b	do.		6.8
Sept. 9	do.	2.30	9.8	Aug. 1 ^b	Lee and Wood	.76	6.9
25	do.	2.29	8.8	25 ^b	F. G. Wood		7.6
Oct. 9	do.	2.26	9.5	Sept. 16	G. T. Peekema	.69	6.9
Nov. 5	do.	2.21	10	Oct. 20 ^c	do.		7.2
29	do.	2.20	8.5	Nov. 16 ^d	do.		9.1
Dec. 12	do.	2.39	7.6	Dec. 30 ^e	do.		5.6
1908.				1911.			
Feb. 5	R. B. Post	1.01	7.2	Jan. 23	do.		6.2
Mar. 13	do.	.91	5.9	Feb. 1	do.		8.6

^a Owing to change in load at power house 2.6 second-feet had to be added to measurement. The 7.7 second-feet represents normal conditions on this date.

^b Made at Los Angeles Aqueduct power house No. 2.

^c Made by wading 300 feet below power plant No. 1; plant running.

^d Made 100 feet below power plant No. 2; plant running.

^e Made at road crossing near lower power house; plant running.

Daily gage height, in feet, of Division Creek near Independence, Cal., for 1906 and 1908.

Day.	Aug.	Sept.	Oct.	Nov.	Dec.	Day.	Aug.	Sept.	Oct.	Nov.	Dec.
1906. ^a						1906.					
1.		1.1				16.		1.1			2.5
2.		1.1			2.5	17.					
3.		1.1				18.	1.1			2.55	
4.		1.1		2.6		19.	1.1				
5.		1.1				20.	1.1				
6.		1.1				21.	1.1		2.6		
7.		1.1	2.65			22.	1.1				
8.		1.1				23.	1.1	2.65			2.5
9.		1.1			2.55	24.	1.1				
10.		1.1				25.	1.1			2.4	
11.		1.1		2.6		26.	1.1				
12.		1.1				27.	1.1				
13.		1.1				28.	1.1		2.6		
14.		1.1	2.62			29.	1.1				
15.		1.1				30.	1.1	2.65			2.5
						31.	1.1		2.6		

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1908.												
1.					0.85	0.7				0.7	0.85	
2.					.85		0.65				.85	
3.					.85	.7		0.75	0.75		.85	
4.					.85		.7	.9		.7	.85	0.8
5.		1.0			.85	.7		.75			.85	
6.					.85			.75	.75	.7	.85	.8
7.		1.0				.7	.7	.75			.85	
8.								.75	.75	.7	.85	
9.					.7	.7					.85	
10.		1.0			.7		.7	.75		.7	.85	.85
11.			1.0			.7		.75	.85	.7	.85	
12.					.7		.7	.75		.7	.85	
13.						.7	.7	.75	.75	.7	.85	.8
14.		1.0			.7			.75		.7	.85	
15.						.7		.75	.75	.7	.85	
16.		1.0			.7	.7	.7		.75	.7	.85	.8
17.		1.0						.75		.7	.85	.8
18.					.7		.7				.85	
19.		.95		0.85	.7	.7		.75		.75	.85	
20.				.85	.7		.7			.8	.85	.8
21.		1.0		.85	.7	.7		.75	.75	.8	.85	.8
22.				.85		.7	.65			.8	.85	
23.				.85	.7					.8	.8	
24.				.85		.7	.7	.75	.8	.8	.8	
25.				.85	.7					.85		.8
26.		1.0		.85		.7		.75	.75	.85		
27.				.85	.7		.7			.85		
28.				.85	.7			.75	.75	.85		.8
29.				.85		.7	.45			.85		
30.				.85	.7	.65	.95	.75	.75	.85		.8
31.					.7					.85		

^a From Aug. 18 to Sept. 18, 1906, the gage record was kept at the ranch house.

^b Channel changed during cloud-burst July 29, 1908.

Monthly discharge of Division Creek near Independence, Cal., for 1906-1909.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1906.					
January.....			6.7	412	
February.....			5.1	283	
March.....			6.1	375	
April.....			6.0	357	
May.....			7.3	449	
June.....			8.4	500	
July.....			17.2	1,060	
August.....			14.3	879	
September.....	12	10	10.9	649	
The period.....				4,960	
1906-7.					
October.....	14	10	12.6	775	
November.....	14	8.0	11.5	684	
December.....	11	10	10.1	621	
January.....			10.6	652	D.
February.....			10.8	600	D.
March.....			11.2	689	D.
April.....			10.1	601	D.
May.....			9.7	596	D.
June.....			11.1	660	D.
July.....			12.4	762	D.
August.....			10.1	621	D.
September.....			9.9	589	D.
The year.....			10.8	7,850	
1907-8.					
October.....			10.0	615	D.
November.....			9.0	536	D.
December.....			7.7	474	D.
January.....			7.0	430	D.
February.....	7.2	6.0	6.7	385	C.
March.....	5.9	5.9	5.9	363	C.
April.....	5.9	5.7	5.8	345	C.
May.....	7.2	5.7	7.0	430	C.
June.....	7.3	6.4	7.2	428	C.
July.....	10.0	6.4	7.2	443	C.
August.....	8.0	7.7	7.7	473	C.
September.....	7.7	7.5	7.7	458	C.
The year.....			7.41	5,380	
1908-9.					
October.....	8.0	7.3	7.5	461	C.
November.....	8.0	7.5	7.7	458	C.
December.....	8.0	7.5	7.6	467	C.
January.....			7.2	443	C.
February.....			6.9	383	C.
March.....			7.3	449	C.
April.....			7.9	470	C.
May.....			10.0	615	C.
June.....			16.7	994	C.
July.....			16.4	1,010	C.
August.....			15.6	959	C.
September.....			14.8	881	C.
The year.....			10.5	7,590	
1909.					
October.....			13.4	824	C.
November.....			11.9	708	C.
December.....			11.2	689	C.

NOTE.—Discharge Aug. 18 to Dec. 31, 1906, and during 1908, determined by the indirect method for shifting channels. The rest of the record was interpolated between discharge measurements.

SAWMILL CREEK¹ NEAR INDEPENDENCE, CAL.

This station, which is located at a point on the upper road crossing about 300 feet beyond the Eightmile ranch and about 8 miles north of Independence, in sec. 9, T. 12 S., R. 34 E., and above all diversions, was established September 20, 1906.

The gage was destroyed in the early part of 1907 and was not replaced.

Discharge measurements of Sawmill Creek near Independence, Cal., in 1906-1910.

Date.	Hydrographer.	Dis-charge.	Date.	Hydrographer.	Dis-charge.
1906.		<i>Sec.-ft.</i>	1908.		<i>Sec.-ft.</i>
Feb. 15	G. R. Shuey.....	2.7	Aug. 24	W. A. Lamb.....	5.8
Mar. 3	do.....	2.5	Sept. 14	do.....	3.5
15	do.....	5.0	Nov. 5	A. T. Barrows.....	5.4
27	do.....	3.4			
Apr. 6	do.....	3.0	1909.		
18	do.....	3.4	Jan. 20	Haines and Lee.....	4.0
24	do.....	4.1	Feb. 4	R. E. Haines.....	4.8
May 2	do.....	3.7	23	do.....	5.2
9	do.....	4.5	Mar. 11	do.....	4.8
16	do.....	4.4	Apr. 2	do.....	5.6
23	do.....	4.4	22	do.....	7.2
June 1	do.....	4.6	May 14	do.....	7.1
19	do.....	7.8	June 2	do.....	7.9
25	do.....	9.2	24	do.....	18.8
July 7	do.....	17	July 13	do.....	19.2
27	do.....	14	Aug. 3	do.....	13.8
Aug. 18	do.....	13	25	do.....	12.5
Oct. 31 ^a	do.....	5.0	Sept. 10	do.....	10.6
Dec. 8	do.....	5.0	29	do.....	10.2
			Oct. 26	do.....	8.2
1907.			Nov. 18	do.....	8.8
Apr. 10	G. R. Shuey.....	3.9			
May 5	do.....	6.0	1910.		
June 13	do.....	12	Feb. 24 ^b	R. E. Haines.....	6.1
Aug. 27	R. B. Post.....	6.6	Mar. 16	do.....	6.6
Oct. 9	do.....	6.3	Apr. 6 ^b	do.....	4.5
Dec. 2	do.....	5.4	27	do.....	5.7
			May 18	do.....	5.5
1908.			July 14	F. G. Wood.....	5.8
Feb. 28	R. B. Post.....	3.9	Aug. 12	do.....	4.2
Mar. 21	do.....	4.0	Sept. 6	do.....	4.9
Apr. 3	do.....	4.6	Oct. 10 ^c	G. T. Peekema.....	4.6
May 1	do.....	3.9	Nov. 11 ^d	do.....	5.0
June 13	do.....	3.1	Dec. 9 ^d	do.....	4.2
26	do.....	3.8	30 ^d	do.....	4.3
July 9	do.....	4.9			
July 31	W. A. Lamb.....	5.9	1911.		
Aug. 12	do.....	5.1	Feb. 1		9.0

^a Gage height 0.40 foot at regular station.

^b Made near mouth of canyon.

^c Made $\frac{1}{2}$ mile below mouth of canyon.

^d Made 2 miles above Eightmile ranch.

Monthly discharge of Sawmill Creek near Independence, Cal., for 1906.

Month.	Dis-charge in second-feet (mean).	Run-off (total in acre-feet).	Month.	Dis-charge in second-feet (mean).	Run-off (total in acre-feet).
1906.			1906.		
January.....	^a 3.0	184	August.....	12.6	775
February.....	2.7	150	September.....	9.8	583
March.....	3.7	228	October.....	6.7	412
April.....	3.4	202	November.....	^a 5.0	298
May.....	4.3	264	December.....	^a 5.0	307
June.....	7.6	452			
July.....	16.3	1,000	The year.....	6.7	4,860

^a Estimated.

NOTE.—The daily discharge, February to October, was obtained by interpolation between measurements. Values are approximate.

¹ Called Eightmile Creek in the 1906 report.

Monthly discharge of Sawmill Creek near Independence, Cal., for 1909.

Month.	Dis-charge in second-feet (mean).	Run-off (total in acre-feet).	Accu-racy.	Month.	Dis-charge in second-feet (mean).	Run-off (total in acre-feet).	Accu-racy.
1909.				1909.			
January.....	4.1	252	C.	August.....	13.1	806	C.
February.....	5.0	278	C.	September.....	10.6	631	C.
March.....	4.9	301	C.	October.....	9.0	553	C.
April.....	6.6	393	C.	November.....	8.7	518	C.
May.....	7.3	449	C.	December.....	8.0	492	C.
June.....	14.1	839	C.	The year.....	9.1	6,600	
July.....	17.8	1,090	C.				

NOTE.—This creek is one of the most uniform in flow in the Owens Valley, and the mean discharges have been obtained by interpolating between the 16 measurements made in 1909.

THIBAUT CREEK NEAR INDEPENDENCE, CAL.

A regular station was established on this creek February 13, 1908, at a point about 1 mile west of the county road between Independence and Big Pine and about 5 miles north of Independence. No gage record has been kept.

Discharge measurements of Thibaut Creek near Independence, Cal., in 1907-1909.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1907.				1908.			
May 6	G. R. Shuey.....	<i>Feet.</i>	<i>Sec-ft.</i>	July 31	W. A. Lamb.....	<i>Feet.</i>	<i>Sec-ft.</i>
May 24	do.....		1.7	Aug. 12	do.....	0.29	0.63
June 28	do.....		1.7			.40	.60
Aug. 31	R. B. Post.....		1.2	1909.			
Dec. 2	do.....		.9	Apr. 22			2.21
				June 2			2.98
1908.				June 24			2.87
Feb. 13	R. B. Post.....	0.25	.8	July 13			2.14
Apr. 3	do.....	.33	1.0	Aug. 3			1.41
May 6	do.....		.2	Aug. 25			.91
July 8	do.....	.29	.6	Oct. 27			.81

OAK CREEK NEAR INDEPENDENCE, CAL.

This station, which was located above and about three-fourths of a mile west of Bell's flour mill in sec. 2, T. 13 S., R. 34 E., was originally established June 15, 1905, about 1 mile west of Old Fort Independence. On October 1, 1906, the station was removed to Bell's flour mill, about 3 miles northwest of Independence; this site was in turn abandoned in favor of the one farther west on April 19, 1907, and the station was discontinued February 28, 1911.

No water is diverted above or near the station. The drainage area above the mouth of the canyon is approximately 15.4 square miles.

The gage is a vertical staff on the right bank.

Discharge measurements were made from the footbridge at the gage.

The channel is composed of sand and gravel, and shifts somewhat.

Discharge measurements of Oak Creek near Independence, Cal., in 1905-1911.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1905.		<i>Feet.</i>	<i>Sec.-ft.</i>	1908.		<i>Feet.</i>	<i>Sec.-ft.</i>
June 15	J. S. Evans.....	1.10	32	Mar. 24	R. B. Post.....	0.35	9.9
July 17	.....do.....	.63	17.6	Apr. 11	.....do.....	.32	9.9
Aug. 23	.....do.....	.30	11.7	May 22	.....do.....	.43	15
Nov. 8	F. R. S. Buttemer.....	.35	11	May 4	.....do.....	.44	15
Dec. 4	.....do.....	.25	5.8	May 30	.....do.....	.44	16
1906.				June 11	.....do.....	.49	20
Feb. 14	G. R. Shuey.....	.20	7.7	June 24	.....do.....	.53	23
July 21	.....do.....	.20	7.1	July 1	.....do.....	.58	22
Mar. 3	.....do.....		7.5	July 11	.....do.....	.63	30
10	.....do.....		7.5	W. A. Lamb.....		.60	28
20	.....do.....		7.5	Aug. 11	.....do.....	.59	29
27	.....do.....		8.9	31	.....do.....	.37	13
Apr. 6	.....do.....		8.5	Sept. 22	.....do.....	.37	13
12	.....do.....	.30	10	Oct. 14	.....do.....	.34	12
21	.....do.....	.50	14	26	A. T. Barrows.....	.32	13
24	.....do.....	.50	17	Nov. 2	.....do.....	.34	12
May 2	.....do.....	.44	14	14	.....do.....	.32	11
9	.....do.....	.90	26	1909.			
14	.....do.....	.98	27	Jan. 16	Haines and Lee.....	.37	10.9
23	.....do.....	1.08	34	Feb. 4	R. E. Haines.....	.34	10.7
June 3	.....do.....	1.08	36	23	.....do.....	.32	9.7
16	.....do.....		60	Mar. 10	.....do.....	.32	9.8
23	.....do.....		93	31	.....do.....	.30	9.2
July 7	.....do.....		162	Apr. 23	.....do.....	.42	15.7
14	.....do.....		143	May 13	.....do.....	.60	29.6
27	.....do.....		132	June 4	.....do.....	1.00	89.2
Aug. 9	.....do.....		77	23	.....do.....	.95	79.8
20	.....do.....		68	July 15	.....do.....	1.10	94.3
Sept. 23	.....do.....		21	Aug. 3	.....do.....	.94	34.4
Oct. 20	.....do.....	.35	17	25	.....do.....	.89	30.3
Nov. 19	.....do.....	.30	12.4	Sept. 10	.....do.....	.76	20.9
Dec. 21	.....do.....	.25	10.6	29	.....do.....	.70	15.5
1907.				Oct. 26	.....do.....	.69	15.1
Jan. 21	G. R. Shuey.....	.23	9.6	Nov. 17	.....do.....	.68	13.8
Feb. 24	.....do.....	.23	12	1910.			
Mar. 19	.....do.....	.31	20	Feb. 26	R. E. Haines.....	.61	11
Apr. 11	.....do.....	.29	15	Mar. 17	.....do.....	.61	11
19	.....do.....	.50	23	Apr. 7	.....do.....	.64	11
May 24	.....do.....	.58	28	.....do.....	.....do.....	.84	24
June 14	.....do.....	.60	31	May 19	.....do.....	.85	25
28	.....do.....	.80	54	June 22	C. H. Lee.....	.88	26
July 10	.....do.....	.80	58	July 14	.....do.....	.83	23
Aug. 2	Shuey and Post.....	.76	52	19	.....do.....	1.03	49
15	R. B. Post.....	.63	32	Aug. 8	.....do.....	.71	14
31	.....do.....	.54	25	Sept. 7	F. G. Wood.....	.61	11
Sept. 9	.....do.....	.45	18	28	G. T. Peekema.....	.57	7.6
Oct. 9	.....do.....	.41	14	Oct. 12	.....do.....	.60	8.7
31	.....do.....	.40	14	Nov. 10	.....do.....	.58	7.2
Nov. 19	.....do.....	.44	15	Dec. 8	.....do.....	.58	8
26	.....do.....	.40	12	1911.			
1908.				Jan. 20	G. T. Peekema.....	.59	7.2
Feb. 8	R. B. Post.....	.31	8.4	Feb. 17	C. H. Lee.....	.60	8.3

Daily gage height, in feet, of Oak Creek near Independence, Cal., for 1905 and 1906-1911.

Day.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Day.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1.....		1.0	0.6	0.4	0.3	0.3	0.3	16.....		0.8	0.4	0.2	0.2	0.3	0.3
2.....		1.0	.5	.4	.3	.3	.3	17.....		.8	.4	.2	.2	.3	.25
3.....		1.0	.5	.4	.3	.3	.25	18.....	1.3	.7	.4	.2	.3	.3	.25
4.....		.9	.5	.4	.3	.3	.25	19.....	1.3	.7	.4	.2	.3	.3	.25
5.....		1.0	.5	.4	.2	.3	.3	20.....	1.3	.6	.4	.2	.3	.3	.25
6.....		1.0	.5	.3	.2	.4	.3	21.....	1.4	.7	.4	.2	.3	.3	.25
7.....		1.0	.5	.3	.2	.4	.25	22.....	1.2	.6	.4	.2	.3	.3	.25
8.....		1.0	.5	.3	.3	.3	.25	23.....	1.2	.6	.4	.2	.3	.3	.25
9.....		1.0	.5	.3	.3	.4	.25	24.....	1.1	.7	.4	.2	.3	.3	.25
10.....		1.1	.5	.3	.3	.3	.25	25.....	1.0	.7	.4	.2	.3	.3	.25
11.....		1.1	.5	.3	.3	.3	.25	26.....	1.0	.7	.4	.2	.3	.3	.25
12.....		1.1	.5	.3	.3	.3	.25	27.....	1.0	.7	.4	.2	.3	.3	.25
13.....		1.0	.5	.3	.3	.3	.3	28.....	.9	.7	.4	.2	.3	.3	.25
14.....		.9	.4	.3	.2	.3	.3	29.....	1.0	.6	.4	.2	.3	.3	.25
15.....		.9	.4	.3	.3	.3	.3	30.....	1.0	.6	.4	.3	.3	.3	.25
								31.....		.6	.4		.3		.25

NOTE.—Station discontinued Dec. 31, 1905, and a new station established Oct. 1, 1906.

Daily gage height, in feet, of Oak Creek near Independence, Cal., for 1905 and 1906-1911—
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1906-7.												
1.....	0.4	0.3	0.2	0.2	0.25	0.2	0.25	0.5				
2.....	.4	.3	.25	.2	.25	.2	.25			0.8	0.7	0.55
3.....	.4	.3	.3	.2	.25	.2	.25	.5	0.8	.9		
4.....	.41	.3	.3	.2	.25	.2	.25		.8	1.0		.55
5.....	.42	.3	.3	.2	.25	.2	.25			1.0	.7	
6.....	.4	.3	.3	.2	.25	.25	.25	.5	.75			.5
7.....	.4	.3	.3	.25	.25	.3	.25		.7		.6	
8.....	.4	.3	.3	.25	.25	.25	.25	.5		.9		.5
9.....	.4	.3	.3	.25	.25	.25	.25		.65		.6	
10.....	.4	.3	.3	.25	.25	.25	.25			.8		
11.....	.4	.3	.3	.25	.25	.25	.3	.55		.8	.6	.45
12.....	.4	.3	.3	.25	.2	.25	.3					
13.....	.4	.3	.3	.25	.2	.25	.35	.5	.65	.85	.6	
14.....	.4	.3	.3	.25	.2	.25	.4			.85	.65	.45
15.....	.4	.3	.3	.25	.2	.25	.4	.5	.6		.65	
16.....	.39	.3	.3	.25	.2	.25	.4			.8		.45
17.....	.39	.3	.25	.25	.2	.3	.4	.55	.6	.8		
18.....	.38	.3	.25	.25	.2	.3	.4	.6	.55			.45
19.....	.38	.3	.25	.25	.2	.35	.4			.8	.5	
20.....	.35	.3	.25	.25	.2	.35	.4	.6				.45
21.....	.35	.3	.25	.25	.2	.3			.7	.8	.5	
22.....	.35	.3	.2	.25	.2	.3	.55	.6	.7			
23.....	.37	.25	.25	.25	.2	.3				.7	.55	.45
24.....	.36	.25	.25	.25	.2	.3	.55	.6	.6			.45
25.....	.36	.25	.25	.25	.2	.3		.6	.6	.7		.45
26.....	.36	.25	.25	.25	.2	.3					.55	
27.....	.35	.2	.25	.25	.2	.3	.6	.6	.8	.7		.45
28.....	.35	.2	.25	.25	.2	.25		.6	.8		.55	
29.....	.3	.2	.25	.25		.25	.55			.7		
30.....	.3	.2	.2	.25		.25		.65	.9			.45
31.....	.3		.2	.25		.25		.7		.7	.55	
1907-8.												
1.....				.3					.45			.4
2.....	.45	.4	.4		.35	.3	.3	.5	.45	.6	.6	
3.....				.3								.35
4.....	.45		.4		.35		.35	.5		.65	.6	
5.....		.4		.3		.35			.45			
6.....			.4			.35	.35	.45		.65	.6	.4
7.....	.45	.4		.3	.35			.4	.45			
8.....			.4		.3		.35			.65	.6	.4
9.....	.4	.4		.3				.4	.5			
10.....			.4		.3	.3	.35			.65	.6	.4
11.....	.4	.4		.3			.3		.5			
12.....	.4				.3	.3		.4		.65	.55	.45
13.....		.4	.4				.35	.4	.55			.5
14.....	.4			.3		.3	.35	.4	.55	.6		
15.....		.4	.4		.3		.4				.55	
16.....	.4			.3		.3		.4	.55	.6		.45
17.....	.4	.4	.4		.3		.4	.4			.5	.4
18.....				.3		.3			.5	.6	.5	
19.....	.4	.4	.4	.3	.3		.4	.4				.4
20.....	.4								.5	.6	.5	
21.....		.4	.4			.3	.4	.4	.55			.4
22.....	.4		.4	.3	.35	.35				.6	.5	
23.....		.4					.4	.4	.55		.5	.4
24.....			.4	.3	.3	.35		.45		.6		.4
25.....	.45	.4					.4		.6		.45	
26.....	.45		.4		.3			.5		.6		.4
27.....		.4		.3		.35	.45				.45	
28.....	.4		.4					.5	.6	.6		.4
29.....		.4		.35	.3	.35	.45				.4	
30.....	.4		.4				.5		.6	.6	.4	.4
31.....				.35		.35				.6		
1908-9.												
1.....		.35	.35			.35	.35				1.0	.85
2.....	.4				.3			.6	1.0	1.6		
3.....			.3	.3			.35			1.7	.95	
4.....	.4	.35	.3		.3	.35	.35		1.0	1.7	1.0	.85
5.....								.7	.95			
6.....	.35	.35	.3	.3	.35	.35	.35		.95			.85
7.....								.7		1.4	1.0	
8.....	.35	.35	.3	.3	.35			.7	.9		1.0	.8
9.....			.3			.35	.35			1.3		
10.....	.35	.35		.3	.35	.30		.65	.95		1.0	.75

a New station.

Daily gage height, in feet, of Oak Creek near Independence, Cal., for 1905 and 1906-1911—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1907-8.												
11.	0.35					0.35	0.35	0.65		1.3		
12.		0.35	0.3	0.4	0.35						1.0	0.75
13.	.4	.3				.35	.4	.6	1.0	1.3		
14.			.3	.5	.35						1.0	.75
15.	.35	.3				.35	.4	.6	1.0	1.3	1.0	
16.		.3	.3	.35	.35							.75
17.	.35			.35		.35	.45	.55	1.0		.95	
18.	.35	.3	.3		.35					1.3		
19.				.4		.35	.5	.55	1.0			.7
20.	.35	.3	.3	.4	.35						.95	
21.						.35	.5		1.0	1.3		7.
22.	.35	.3	.3	.4	.35			.6			.9	
23.					.30		.4		.95	1.2		
24.	.35	.3	.3	.35	.35	.35	.5		1.2		.9	.7
25.							.45	.65		1.2	.9	
26.	.35	.35			.35	.35			1.3			.7
27.			.3	.35			.5	.75	1.4		.9	
28.		.35			.35	.35				1.0		.7
29.	.35		.3	.35			.55	.75	1.4		.9	.7
30.		.35					.6			1.0		.7
31.	.35		.3	.3		.30					.85	
1909-10.												
1.		.7	.7						1.08			.62
2.					.65	.6	.63			.90	.80	
3.	.7			.65		.6		.80				.62
4.		.7			.65	.6	.63		1.02		.79	
5.			.7	.65			.63	.75		.89		.61
6.	.7	.7			.65	.65			.92		.75	
7.		.7	.7	.65			.65	.78		.90		.60
8.								.79			.71	
9.	.7	.7		.65	.65	.65	.68		.95	.82		.59
10.	.7		.7					.87			.70	
11.				.65	.65	.65	.70		.98			
12.	.7	.7	.7					.83		.89	.70	.58
13.					.65							
14.		.7		.65		.65	.70		.98		.69	.58
15.	.65		.7		.6			.90		.82		
16.				.65		.63	.70		.95			.60
17.	.65	.7	.7			.61		.87	.90		.68	
18.				.65	.6	.65	.71			1.15		
19.			.65					.87			.65	.60
20.	.7	.7			.6	.65	.73			1.05		
21.			.65	.65				.90	.85			.59
22.							.73		.88		.67	
23.	.7	.7		.65	.6	.65			.87			.60
24.			.65				.75	.93		.90	.65	
25.	.7				.6			.90	.85			
26.	.7	.7		.65	.61	.65	.82		.85	.85	.65	.58
27.	.7		.65		.6			.95				
28.		.7				.65	.84			.84		.60
29.	.7		.65	.65			.82	1.00	.85			
30.	.7	.7				.65				.82	.64	.58
31.				.65				1.05				
Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Day.	Oct.	Nov.	Dec.	Jan.	Feb.	
1910-11.						1910-11.						
1.		0.6				16.				0.58		
2.				0.58	0.62	17.	0.6	0.58	0.52			
3.		.58	0.6			18.	.58			.56	0.60	
4.	0.56			.55	.60	19.		.6	.56			
5.		.6	.6			20.					.58	
6.	.55				.62	21.	.58	.59	.52	.59		
7.			.57	.55		22.		.55			.58	
8.	.58	.6			.60	23.	.58			.59		
9.						24.			.57		.58	
10.		.58	.6	.60		25.	.6			.56		
11.	.59				.60	26.		.58				
12.		.6	.58	.58		27.	.59		.58		.57	
13.	.6				.60	28.		.59		.60		
14.			.54	.56		29.			.55			
15.	.62	.6			.59	30.	.58	.56				
						31.			.6	.78		

Daily discharge, in second-feet, of Oak Creek near Independence, Cal., for 1909-1911

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909.									
1.....	8.8	8.8	11	11	30	79	200	45	27
2.....	8.8	8.8	11	11	30	89	213	42	27
3.....	8.8	8.8	11	11	34	89	234	38	27
4.....	8.8	8.8	11	11	38	89	234	45	27
5.....	8.8	10	11	11	42	80	208	45	27
6.....	8.8	11	11	11	42	80	182	45	27
7.....	8.8	11	11	11	42	76	157	45	24
8.....	8.8	11	11	11	42	72	146	45	22
9.....	8.8	11	11	11	39	76	135	45	20
10.....	8.8	11	8.8	11	36	80	135	45	18
11.....	12	11	11	11	36	83	135	45	18
12.....	14	11	11	12	33	86	135	45	18
13.....	17	11	11	14	30	89	135	45	18
14.....	20	11	11	14	30	89	135	45	18
15.....	16	11	11	14	30	89	135	45	18
16.....	11	11	11	13	28	89	135	42	18
17.....	11	11	11	12	25	89	135	38	17
18.....	12	11	11	16	25	89	135	38	16
19.....	14	11	11	20	25	89	135	38	15
20.....	14	11	11	20	26	89	135	38	15
21.....	14	11	11	20	28	89	135	35	15
22.....	14	11	11	17	30	84	118	32	15
23.....	12	10	11	14	32	80	100	32	15
24.....	11	11	11	20	34	128	100	32	15
25.....	11	11	11	12	36	138	100	32	15
26.....	11	11	11	16	42	148	82	32	15
27.....	11	11	11	20	49	169	64	32	15
28.....	11	11	11	22	49	169	45	32	15
29.....	11	.....	10	25	49	169	45	32	15
30.....	9.9	.....	9	30	59	184	45	30	15
31.....	8.8	.....	8.8	.....	69	.....	45	27	.....

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909-10.												
1.....	15	15	15	12.2	12.2	10	11.7	22	58	28	22	9.7
2.....	15	15	15	12.2	12.2	10	11.4	21	55	30	21	9.7
3.....	15	15	15	12.2	12.2	10	11.4	21	51	30	20	9.7
4.....	15	15	15	12.2	12.2	10	11.4	19	48	29	20.3	9.4
5.....	15	15	15	12.2	12.2	11.1	11.4	17.4	40	29	18	9.2
6.....	15	15	15	12.2	12.2	12.2	11.8	18	33	29	17	9.0
7.....	15	15	15	12.2	12.2	12.2	12.2	19.6	34	30	16	8.7
8.....	15	15	15	12.2	12.2	12.2	12.9	20.3	36	27	14.6	8.5
9.....	15	15	15	12.2	12.2	12.2	13.6	24	37	23	14.2	8.3
10.....	15	15	15	12.2	12.2	12.2	14.0	27	39	25	13.9	8.2
11.....	15	15	15	12.2	12.2	12.2	14.5	26	41	27	13.9	8.1
12.....	15	15	15	12.2	12.2	12.2	14.5	24	41	29	13.9	7.9
13.....	14	15	15	12.2	12.2	12.2	14.5	26	41	27	13.6	7.9
14.....	13	15	15	12.2	11.1	12.2	14.5	28	41	25	13.4	7.9
15.....	12	15	15	12.2	10	11.8	14.5	30	39	23	13.2	8.3
16.....	12	15	15	12.2	10	11.4	14.5	28	37	25	13.0	8.7
17.....	12	15	15	12.2	10	10.4	14.8	27	30	27	12.9	8.7
18.....	13	15	14	12.2	10	12.2	15.2	27	29	74	12.1	8.7
19.....	14	15	12	12.2	10	12.2	15.8	27	28	64	11.3	8.7
20.....	15	15	12	12.2	10	12.2	16.4	28	27	53	11.6	8.5
21.....	15	15	12	12.2	10	12.2	16.4	30	26	47	12.0	8.3
22.....	15	15	12	12.2	10	12.2	16.4	31	28	41	11.8	8.5
23.....	15	15	12	12.2	10	12.2	17.1	33	27	35	11.8	8.4
24.....	15	15	12	12.2	10	12.2	17.8	34	26	30	11.3	8.7
25.....	15	15	12	12.2	10	12.2	20.4	30	26	28	11.3	8.1
26.....	15	15	12	12.2	10.4	12.2	23	34	26	26	11.3	7.9
27.....	15	15	12	12.2	10	12.2	24	37	26	25	11.2	8.3
28.....	15	15	12	12.2	10	12.2	25	40	26	25	11.1	8.7
29.....	15	15	12	12.2	.....	12.2	23	44	26	24	11.0	8.3
30.....	15	15	12	12.2	.....	12.2	22	48	26	23	10.8	7.9
31.....	15	.....	12	12.2	.....	11.9	.....	53	.....	22	10.2	.....

Daily discharge, in second-feet, of Oak Creek near Independence, Cal., for 1909-1911—Con.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Day.	Oct.	Nov.	Dec.	Jan.	Feb.
1910-11.						1910-11.					
1.....	7.5	8.7	7.6	8.0	15	16.....	8.7	8.3	5.7	7.9	12
2.....	7.4	8.3	8.1	7.9	9.7	17.....	8.3	7.9	5.5	7.5	12
3.....	7.2	7.9	8.7	7.3	9.2	18.....	7.9	8.3	6.3	7.1	8.7
4.....	7.1	8.3	8.7	6.7	8.7	19.....	7.9	8.7	7.1	7.5	8.3
5.....	6.9	8.7	8.7	6.7	9.2	20.....	7.9	8.5	6.3	7.9	7.9
6.....	6.7	8.7	8.1	6.7	9.7	21.....	7.9	8.3	5.5	8.3	7.9
7.....	7.3	8.7	7.5	6.7	9.2	22.....	7.9	7.5	6.2	8.3	7.9
8.....	7.9	8.7	7.9	7.3	8.7	23.....	7.9	6.7	6.8	8.3	7.9
9.....	8.0	8.3	8.3	8.0	8.7	24.....	8.3	7.1	7.5	7.7	7.9
10.....	8.1	7.9	8.7	8.7	8.7	25.....	8.7	7.5	7.6	7.1	7.9
11.....	8.3	8.3	8.3	8.3	8.7	26.....	8.5	7.9	7.8	7.6	8.0
12.....	8.5	8.7	7.9	7.9	8.7	27.....	8.3	8.1	7.9	8.2	8.1
13.....	8.7	8.7	7.1	7.5	8.7	28.....	8.1	8.3	7.3	8.7	8.0
14.....	9.2	8.7	6.3	7.1	8.5	29.....	8.0	7.7	6.7	10	.....
15.....	9.7	8.7	6.0	7.5	8.3	30.....	7.9	7.1	7.7	16	.....
						31.....	8.3	.....	8.7	20	.....

NOTE.—Daily discharge determined from rating curves applicable as follows: Jan. 1 to July 4, 1909, well defined below 90 second-feet; July 7 to 15, 1909, fairly well defined; July 18 to Aug. 1, 1909, indirect method for shifting channels; Aug. 3 to Dec. 31, 1909, fairly well defined; Jan. 1 to Apr. 26, 1910, fairly well defined; Apr. 28, 1910, to Feb. 27, 1911, fairly well defined. Discharge interpolated or estimated for days on which the gage was not read.

Monthly discharge of Oak Creek near Independence, Cal., for 1906-1911.

[Drainage area, 26.9 square miles.]

Month.	Discharge in second-feet.				Run-off.		Accu- racy.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.	Total in acre-feet.	
1906.							
January.....			6.0	0.223	0.26	369	
February.....			7.3	.271	.28	405	
March.....			7.8	.290	.33	480	
April.....			11.9	.442	.49	708	
May.....			28.0	1.04	1.20	1,720	
June.....			69.9	2.60	2.90	4,160	
July.....			140	5.21	6.01	8,610	
August.....			73.5	2.73	3.15	4,520	
September.....			32.2	1.20	1.34	1,920	
The period.....						22,900	
1906-7.							
October.....	26	12	20.5	.762	.87	1,260	
November.....	12	10	11.8	.439	.49	702	
December.....	12	10	11.3	.420	.48	695	
January.....	11	10	10.8	.402	.46	664	C
February.....	11	10	10.4	.387	.40	578	C.
March.....	17	10	12.2	.454	.52	750	C.
April.....	31	11	18.8	.699	.78	1,120	C.
May.....	43	21	26.9	1.00	1.15	1,650	C.
June.....	62	31	42.2	1.57	1.75	2,510	C.
July.....	88	43	57.0	2.12	2.44	3,500	C.
August.....	43	21	32.8	1.22	1.41	2,020	C.
September.....	31	17	20.4	.758	.85	1,210	C.
The year.....	88	10	22.9	.853	11.60	16,700	
1907-8.							
October.....	17	13	14.5	.539	.62	892	C.
November.....	13	13	13.0	.483	.54	774	C.
December.....	13	13	13.0	.483	.56	799	C.
January.....	11	8.6	10.0	.372	.43	615	C.
February.....	11	8.6	9.2	.342	.37	529	C.
March.....	11	8.6	9.3	.346	.40	572	C.
April.....	20	8.6	12.3	.457	.51	732	C.
May.....	20	13	15.8	.587	.68	972	C.
June.....	27	11	21.0	.751	.87	1,250	C.
July.....	31	27	29.0	1.08	1.24	1,780	C.
August.....	28	12	22.5	.836	.96	1,380	C.
September.....	20	12	15.5	.576	.64	922	C.
The year.....	31	8.6	15.4	.573	7.82	11,200	

Monthly discharge of Oak Creek near Independence, Cal., for 1906-1911—Continued.

Month.	Discharge in second-feet.				Run-off.		Accu- racy.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.	Total in acre-feet.	
1908-9.							
October.....	14.5	12.5	13.0	.483	.56	799	C.
November.....	12.5	10.4	11.6	.431	.48	690	C.
December.....	12.5	10.4	10.5	.390	.45	646	C.
January.....	20	8.8	11.4	.424	.49	701	B.
February.....	11	8.8	10.6	.394	.41	589	B.
March.....	11	8.8	10.8	.401	.46	664	B.
April.....	30	11	15.1	.561	.63	899	A.
May.....	69	25	36.8	1.37	1.58	2,260	A.
June.....	184	72	102	3.79	4.23	6,070	A.
July.....	234	45	131	4.87	5.62	8,060	B.
August.....	45	27	38.9	1.45	1.67	2,390	B.
September.....	27	15	18.9	.703	.78	1,120	B.
The year.....	234	8.8	34.2	1.27	17.36	24,900	
1909-10.							
October.....	15	12	14.5	.539	.62	592	B.
November.....	15	15	15.0	.558	.62	893	B.
December.....	15	12	13.6	.506	.58	835	B.
January.....	12.2	12.2	12.2	.454	.52	750	B.
February.....	12.2	10	11.1	.413	.43	616	B.
March.....	12.2	10	11.8	.439	.51	726	B.
April.....	25	11.4	16.3	.606	.68	970	B.
May.....	53	17.4	28.8	1.07	1.23	1,770	B.
June.....	58	26	34.9	1.30	1.45	2,080	B.
July.....	74	22	31.6	1.18	1.36	1,940	B.
August.....	22	10.2	13.9	.517	.60	855	B.
September.....	9.7	7.9	8.56	.318	.35	509	B.
The year.....	74	7.9	17.7	.658	8.95	12,800	
1910-11.							
October.....	9.7	6.7	8.03	.299	.34	494	B.
November.....	8.7	6.7	8.17	.304	.34	486	B.
December.....	8.7	5.5	7.37	.273	.31	453	B.
January.....	20	6.7	8.40	.312	.36	516	B.
February.....	15	7.9	8.76	.326	.34	487	B.

NOTE.—Discharge determined as follows: January, 1906, estimated; February to September, 1906, interpolated between discharge measurements. The remainder of the record from rating curves covering short periods of time and by the indirect method for shifting channels.

LITTLE PINE CREEK NEAR INDEPENDENCE, CAL.¹

This station, which was located about 300 feet above the city waterworks and 1 mile west of Independence, in sec. 18, T. 13 S., R. 35 E., was established August 20, 1906, and was discontinued February 28, 1911. It replaced the station at the city waterworks which was established June 15, 1905, and destroyed in June, 1906.

No water is diverted above the gage. The town of Independence diverts about 0.5 second-foot of water 100 feet below the station. The drainage area above the mouth of the canyon is approximately 8.4 square miles.

The gage is a vertical staff on the left bank at the footbridge from which discharge measurements were made.

Both banks are high and rocky and not likely to overflow. The bed of the stream is rough and the current is swift. The channel, which is composed of boulders and gravel, shifts somewhat.

¹ This creek is commonly known as Independence Creek.

Discharge measurements of Little Pine Creek near Independence, Cal., in 1905-1911.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
		<i>Feet.</i>	<i>Sec.-ft.</i>			<i>Feet.</i>	<i>Sec.-ft.</i>
1905.				1908.			
June 15	J. S. Evans	1.10	47	June 1	R. B. Post	1.01	19
July 21	do.	.72	19.4	11	do.	1.01	20
Aug. 23	do.	.47	7.3	23	do.	1.10	23
Nov. 11	F. R. S. Buttemer	.35	3.1	July 1	do.	1.18	26
Dec. 3	do.	.37	3.7	20	do.	1.20	34
1906.				11	W. A. Lamb	1.08	27
Jan. 23	G. R. Shuey	.42	4.5	28	do.	1.08	28
30	do.		2.8	Aug. 6	do.	1.10	30
Feb. 13	do.	.36	2.4	22	do.	.79	15
Mar. 2	do.		4.6	Sept. 21	do.	.71	11
25	do.		4.9	Oct. 3	do.	.68	8.8
Apr. 5	do.		5.0	14	do.	.67	9.4
14	do.	.50	6.6	26	A. T. Barrows	.63	7.2
22	do.	.60	11	Nov. 2	do.	.63	8.2
30	do.	.61	11	11	do.	.64	8.0
May 10	do.	.80	25		do.	.62	5.8
22	do.	.98	43	1909.			
29	do.	.87	32	Jan. 18	R. E. Haines	.63	6.5
June 4	do.	.85	31	Feb. 3	do.	.58	5.0
12	do.	1.55	86	20	do.	.60	6.0
23	do.		130	Mar. 9	do.	.60	5.6
July 1	do.		116	31	do.	.60	5.2
9	do.		144	Apr. 21	do.	.84	13.9
19	do.		137	May 12	do.	1.09	38.8
Aug. 9	do.		60	22	do.	1.07	36.0
Sept. 11	do.	.90	26	June 3	do.	1.55	84.0
23	do.	.67	16	25	do.	1.80	115
Oct. 20	do.	.50	7.5	July 6	do.	1.30	88.9
Nov. 13	do.	.45	5.0	14	do.	1.32	95.0
1907.				Aug. 4	do.	.78	39.6
Feb. 24	G. R. Shuey	.30	3.0	26	do.	.58	25.3
Mar. 19	do.	.60	10.0	Sept. 11	do.	.45	18.5
Apr. 16	do.	.80	19	30	do.	.35	10.5
May 23	do.	1.30	33	Oct. 27	do.	.31	7.6
June 3	do.	1.30	69	Nov. 17	do.	.32	7.6
28	do.	1.40	66	1910.			
July 10	do.	1.45	64	Feb. 26	R. E. Haines	.18	4.6
Aug. 14	R. B. Post	1.00	25	Mar. 18	do.	.25	6.2
30	do.	.85	14	Apr. 8	do.	.27	6.7
Sept. 26	do.	.60	5.3	29	do.	.53	22
Oct. 19	do.	.68	6.8	May 20	do.	.68	32
31	do.	.77	8.4	June 21	C. H. Lee	.68	32
Nov. 11	do.	.68	5.6	July 14	do.	.65	25
30	do.	.64	4.7	18	do.	1.10	71
1908.				Aug. 8	do.	.51	15
Feb. 6	R. B. Post	.52	2.6	Sept. 7	F. G. Wood	.33	6.8
27	do.	.54	2.6	28	G. T. Peekema	.28	4.9
Mar. 14	do.	.56	2.8	Oct. 19	do.	.29	5.8
24	do.	.63	5.4	Nov. 12	do.	.28	4.9
Apr. 10	do.	.60	4.7	Dec. 8	do.	.25	4.0
23	do.	.82	11	1911.			
May 1	do.	1.00	18	Jan. 20	G. T. Peekema	.26	4.4
9	do.	.96	16	Feb. 17	C. H. Lee	.31	6.5

NOTE.—Beginning Sept. 11, 1906, gage heights refer to gage at new station.

Daily gage height, in feet, of Little Pine Creek near Independence, Cal., for 1905-1911.

Day.	June.	July.	Aug.	Sept.	Day.	June.	July.	Aug.	Sept.
1905.					1905.				
1		0.9	0.65	0.45	16		0.8	0.55	0.35
2		.9	.65	.45	17		.75	.55	.4
3		.85	.65	.45	18		.75	.55	.4
4		.85	.6	.45	19		.75	.55	.4
5		.85	.6	.45	20		.75	.55	.35
6		.85	.6	.45	21	1.1	.7	.55	.35
7		.9	.55	.45	22	1.05	.7	.55	.35
8		.85	.55	.45	23	1.05	.7	.55	.4
9		.85	.55	.45	24	1.1	.7	.55	.4
10		.85	.55	.35	25	.95	.7	.55	.35
11		.9	.55	.35	26	.95	.7	.55	.35
12		.9	.55	.35	27	.95	.7	.5	.35
13		.9	.55	.4	28	.95	.7	.5	.35
14		.85	.55	.4	29	.9	.7	.5	.35
15	1.1	.8	.55	.35	30		.7	.5	
					31		.65	.45	

NOTE.—Gage heights interpolated June 16-20.

Daily gage height, in feet, of Little Pine Creek near Independence, Cal., for 1905-1911—Continued.

Day.	Oct.	Nov.	Dec.	Sept.	Day.	Oct.	Nov.	Dec.	Sept.
1905-6.					1905-6.				
1.	0.35				16.	0.4		0.4	
2.	.35				17.	.35		.4	0.8
3.	.35		0.4	0.9	18.	.35		.35	
4.	.35		.4		19.	.35		.4	.8
5.	.35		.4	.9	20.	.35		.4	
6.	.35		.4		21.	.4		.3	.7
7.	.35		.4	.9	22.	.35		.3	
8.	.35		.35		23.	.35		.35	.67
9.	.35		.4		24.	.35		.35	
10.	.35		.4		25.	.35		.3	.7
11.	.35	0.35	.4	.9	26.	.35		.3	
12.	.35	.35	.3		27.	.35		.3	.6
13.	.35		.35	.8	28.	.35		.35	
14.	.35		.35		29.			.35	.7
15.	.4		.4	.8	30.			.35	
					31.			.35	

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1906-7.												
1.	0.6			0.4	0.4	0.3	0.4			1.5		0.9
2.		0.5	0.5					0.9				
3.	.6			.5	.4	.3	.5		1.1	1.5		1.0
4.		.5	.5					.8			1.2	
5.	.6			.4	.3	.35	.5	.8	1.3	1.7		1.0
6.		.4	.4								1.3	
7.					.4	.3	.4	.8	1.3	1.6		.9
8.		.5	.4								1.1	
9.					.3	.3	.5	.9	1.2	1.5		1.0
10.		.5	.4						1.3		1.1	
11.	.7				.3	.35	.7	.95				
12.		.4	.4					.9	1.1		1.0	
13.	.6	.45		.5	.3	.3	.6			1.4		1.0
14.		.5	.4					.8	1.0		1.0	
15.	.6			.4	.3	.4	.7			1.3		.9
16.		.4	.5					1.0	1.2			
17.					.3		.8	1.1		1.3		1.0
18.	.6	.4	.4	.4							1.1	
19.					.3		.8	.9				.9
20.	.5	.5	.4	.4		.6					1.1	
21.	.7				.3		.9	.8				.8
22.	.6	.5	.5	.4		.4					1.0	
23.					.35		.9	.9				.7
24.		.4	.4	.5		.5					1.1	
25.					.4		.8	.9		1.4		
26.		.5	.4	.5		.5					1.0	
27.					.3		.9			1.3		
28.		.4	.5	.4		.4					1.2	
29.							.8		1.4	1.2	1.3	
30.			.4	.4		.4						
31.			.4	.5							1.2	
1907-8.												
1.	.6				.6		.6		.9		1.1	
2.		.7	.7	.6		.5		1.0		1.2		.7
3.	.6				.6		.6		1.0		1.1	
4.		.7	.7	.6		.5		1.0		1.2		.65
5.	.6				.6		.6		1.0		1.1	
6.		.7	.7	.6		.5		1.0		1.2		.6
7.	.6				.5		.6		1.0		1.1	
8.		.7	.7	.6		.55		.95		1.1		.6
9.	.6				.5		.6		1.0		1.1	
10.		.7	.7	.6		.55		.9		1.1		.7
11.	.6				.5		.6		1.05		1.05	
12.		.7	.7	.6		.5		.9		1.1		.6
13.	.6				.5		.65		1.1		1.0	
14.		.7	.7	.6		.55		.9		1.1		.6
15.	.6				.5		.7		1.1		.95	

Daily gage height, in feet, of Little Pine Creek near Independence, Cal., for 1905-1911—
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1907-8.												
16.		0.9	0.7	0.6		0.6		0.85		1.1		0.6
17.	0.6				0.5		0.7		1.1		0.9	
18.		.7	.7	.6		.6		.85		1.1		.6
19.	.7				.5		.75		1.15		.9	
20.		.7	.7	.6		.6		.9		1.05		.6
21.	.7				.5				1.1		.85	
22.		.7	.7	.6		.6	.8	.9		1.0		.65
23.	.7				.5				1.1		.8	
24.		.7	.7	.6		.6	.8	.95		1.05		.7
25.	.8				.5				1.0		.8	
26.		.7	.7	.6		.6	.8	.9		1.1		.7
27.	.8				.5				1.0		.75	
28.		.7		.6		.6	.85	1.0		1.1		.7
29.	.8		.7		.5				1.1		.7	
30.		.7		.6		.6	.9	1.0		1.1		.7
31.	.8		.7								.7	
1908-9.												
1.	.7			.6		.6	.6		1.4	1.55		.6
2.		.65	.65		.6						.75	
3.	.7			.6	.6	.65			1.65	1.65		.6
4.		.65	.6		.6		.6	1.0			.75	
5.	.7			.5		.6		1.0	1.65	1.45		.55
6.		.65	.6		.55		.6	1.0		1.3	.75	
7.	.7			.6		.6			1.65	1.25		.5
8.		.6	.6		.7		.6	1.0			.75	
9.	.7			.6		.65			1.6	1.25		.45
10.		.6	.6		.6		.65	1.25			.65	
11.	.7			.8		.6			1.55	1.3		.45
12.		.6	.6		.6		.7	1.25			.65	
13.	.7			.8		.6			1.55	1.45		.45
14.		.6	.6		.55		.75	1.0			.65	
15.	.7			.65		.6			1.55	1.45		.45
16.		.6	.6	.65	.6		.75	1.0			.65	
17.	.7			.6		.6			1.55	1.35		.45
18.		.6	.6		.65		.8	1.0			.75	
19.	.6			.6		.6			1.5	1.25		.45
20.		.6	.6		.6	.6	.85	1.0			.80	
21.	.6			.7		.6	.85		1.45	.95		.4
22.		.6	.6		.6			1.2			.65	
23.	.6			.65		.6			1.45	1.0		.35
24.		.6	.6		.65		.75	1.25			.65	
25.	.65			.6		.6			1.85			.3
26.		.6	.6		.6			1.3			.6	
27.	.65			.6		.6			1.85	.95		.35
28.		.6	.6		.6			1.3			.65	
29.	.65			.6		.6			1.65	.85		.35
30.		.6	.6					1.35			.65	.35
31.	.65			.6		.6				.85		
1909-10.												
1.	.35			.4		.25		.55		.75		.38
2.		.35	.35				.25		.95		.6	
3.	.35			.4	.25	.25		.55		.75		.44
4.		.35	.4				.25		.95		.6	
5.	.3			.35	.3	.25		.55		.7		.36
6.		.35	.4				.35		.95		.6	
7.	.3			.35	.3	.25		.55		.55		.40
8.		.35	.35				.35		.95		.51	
9.	.3			.35	.25	.25		.6		.65		.32
10.		.35	.45				.35		.95		.50	
11.	.35			.35	.25	.25		.65		.65	.50	.32
12.		.35					.35		.95		.48	
13.	.3			.35	.25	.25		.65		.65	.48	.30
14.		.35	.35				.35		.95	.65		
15.	.3			.35	.25	.25		.65		.65	.46	.40
16.		.35	.25				.35		.85			
17.	.35			.25	.3	.3		.65		.65		.32
18.		.35	.35			.25	.35		.8	1.10	.44	
19.	.35			.25	.25	.25		.65		1.00	.43	.33
20.		.3	.35				.45	.68	.75			

Daily gage height, in feet, of Little Pine Creek near Independence, Cal., for 1905-1911—
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909-10.												
21.....	0.35			0.25	0.3	0.25		0.7	0.68	0.85		0.29
22.....		0.35	0.35				0.55		.7		0.48	
23.....	.25			.25	.3	.25		.75		.85	.44	.31
24.....		.35	.35				.55		.65			
25.....	.25			.25	.3	.25		.8		.75		.28
26.....		.35	.35		.18		.55		.65			
27.....	.25			.25	.35	.25		.85		.75	.42	.30
28.....		.35	.35				.55		.75		.41	.28
29.....	.25			.25		.25	.53	.85		.7		.26
30.....		.35	.35				.55		.8		.42	
31.....	.35			.25		.25		.9		.65		

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Day.	Oct.	Nov.	Dec.	Jan.	Feb.
1910-11.						1910-11.					
1.....	0.3			0.17		16.....		0.25	0.25		0.34
2.....		0.25	0.25		0.36	17.....	0.3			0.20	
3.....	.25			.22		18.....		.3	.25		.30
4.....		.3	.25		.30	19.....	.3			.24	
5.....	.25			.20		20.....		.25	.25		.24
6.....		.3	.25		.26	21.....	.3			.30	
7.....	.25			.20		22.....		.3	.2		.22
8.....		.3	.25		.25	23.....				.24	
9.....	.3			.20		24.....	.3	.3	.25		.22
10.....		.25	.25		.20	25.....	.3			.25	
11.....	.3			.20		26.....		.25	.3		.12
12.....		.25	.25		.28	27.....	.3			.23	
13.....	.3			.24		28.....		.25	.2		.30
14.....		.3	.2		.24	29.....	.25			.44	
15.....	.35			.24		30.....		.25	.25		
						31.....	.3			.48	

Rating table for Little Pine Creek near Independence, Cal., from June 15 to December 31, 1905.

Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.
Feet.	Sec.-ft.	Feet.	Sec.-ft.	Feet.	Sec.-ft.	Feet.	Sec.-ft.
0.30	1.6	0.60	12.9	0.80	24	1.00	39
.40	4.8	.70	18	.90	31	1.10	47
.50	8.5						

NOTE.—Table is based on five discharge measurements made during 1905. It is well defined between gage heights 0.4 foot and 1.1 feet.

Daily discharge, in second-feet, of Little Pine Creek near Independence, Cal., for 1909-1911.

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909.									
1.....	5.3	5.3	5.3	5.3	22	69	112	44	27
2.....	5.3	5.3	5.8	5.3	24	82	117	40	27
3.....	5.3	5.3	6.4	5.3	26	96	122	40	27
4.....	4.6	5.3	5.8	5.3	28	96	112	40	26
5.....	4.0	5.0	5.3	5.3	28	96	103	40	24
6.....	4.6	4.6	5.3	5.3	28	96	89	40	22
7.....	5.3	6.2	5.3	5.3	28	96	84	40	20
8.....	5.3	7.8	5.8	5.3	28	94	84	40	18
9.....	5.3	6.6	6.4	5.8	40	91	84	36	16
10.....	8.6	5.3	5.8	6.4	53	88	86	31	16
11.....	12	5.3	5.3	7.1	53	85	89	31	16
12.....	12	5.3	5.3	7.8	53	85	96	31	16
13.....	12	5.0	5.3	8.7	40	85	103	31	16
14.....	9.2	4.6	5.3	9.6	28	85	103	31	16
15.....	6.4	5.0	5.3	9.6	28	85	103	31	16

Daily discharge, in second-feet, of Little Pine Creek near Independence, Cal., for 1909-1911—Continued.

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909.									
16.....	6.4	5.3	5.3	9.6	28	85	98	31	16
17.....	5.3	5.8	5.3	11	28	85	94	35	16
18.....	5.3	6.4	5.3	12	28	82	89	40	16
19.....	5.3	5.8	5.3	14	28	80	84	42	16
20.....	6.6	5.3	5.3	15	28	77	70	44	16
21.....	7.8	5.3	5.3	15	38	74	57	38	13
22.....	7.1	5.3	5.3	13	48	74	59	31	13
23.....	6.4	5.8	5.3	11	50	74	61	31	10
24.....	5.8	6.4	5.3	9.6	53	107	60	31	8.6
25.....	5.3	5.8	5.3	10	56	140	59	29	7.3
26.....	5.3	5.3	5.3	12	58	140	58	27	8.6
27.....	5.3	5.3	5.3	14	58	140	57	29	10
28.....	5.3	5.3	5.3	16	58	131	52	31	10
29.....	5.3	.....	5.3	18	61	122	48	31	10
30.....	5.3	.....	5.3	20	64	117	48	31	10
31.....	5.3	.....	5.3	.....	66	.....	48	29	.....

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909-10.												
1.....	10	10	10	13	6.5	6.5	6.5	22	54	38	23	8.7
2.....	10	10	10	13	6.5	6.5	6.5	22	56	38	21	10.1
3.....	10	10	12	13	6.5	6.5	6.5	22	56	38	21	11.5
4.....	8.6	10	13	12	7.2	6.5	6.5	22	56	36	21	9.7
5.....	7.3	10	13	10	8.0	6.5	8.0	22	56	34	21	7.9
6.....	7.3	10	13	10	8.0	6.5	10	22	56	28	21	8.7
7.....	7.3	10	12	10	8.0	6.5	10	22	56	22	18	9.5
8.....	7.3	10	10	10	7.2	6.5	10	24	56	26	15	7.9
9.....	7.3	10	13	10	6.5	6.5	10	26	56	30	15	6.3
10.....	8.6	10	16	10	6.5	6.5	10	28	56	30	14.5	6.3
11.....	10.0	10	15	10	6.5	6.5	10	30	56	30	14.5	6.3
12.....	8.6	10	14	10	6.5	6.5	10	30	56	30	13.5	5.9
13.....	7.3	10	12	10	6.5	6.5	10	30	56	30	13.5	5.5
14.....	7.3	10	10	10	6.5	6.5	10	30	56	30	13.0	7.5
15.....	7.3	10	7.6	10	6.5	6.5	10	30	52	30	12.5	9.5
16.....	8.6	10	5.2	8	7.2	7.2	10	30	48	30	12.2	7.9
17.....	10	10	7.6	6.5	8.0	8.0	10	30	45	30	11.8	6.3
18.....	10	10	10	6.5	7.2	6.5	10	30	43	71	11.5	6.5
19.....	10	8.6	10	6.5	6.5	6.5	13	30	41	59	11.0	6.7
20.....	10	7.3	10	6.5	7.2	6.5	16	32	38	52	11.8	6.0
21.....	10	8.6	10	6.5	8.0	6.5	19	34	32	44	12.7	5.2
22.....	7.6	10	10	6.5	8.0	6.5	22	36	34	44	13.5	5.6
23.....	5.2	10	10	6.5	8.0	6.5	22	38	32	44	11.5	5.9
24.....	5.2	10	10	6.5	8.0	6.5	22	41	30	39	11.2	5.4
25.....	5.2	10	10	6.5	8.0	6.5	22	43	30	34	11.0	4.9
26.....	5.2	10	10	6.5	4.6	6.5	22	45	30	34	10.8	5.2
27.....	5.2	10	10	6.5	10.0	6.5	22	48	34	34	10.5	5.5
28.....	5.2	10	10	6.5	8.0	6.5	22	48	38	32	10.0	4.9
29.....	5.2	10	10	6.5	.....	6.5	21	48	40	30	10.2	4.3
30.....	7.6	10	10	6.5	.....	6.5	22	50	43	28	10.5	4.9
31.....	10	.....	10	6.5	.....	6.5	.....	52	.....	26	9.5	.....

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Day.	Oct.	Nov.	Dec.	Jan.	Feb.
1910-11.						1910-11.					
1.....	5.5	4.8	4.0	2.4	10.0	16.....	6.5	4.0	4.0	3.1	7.1
2.....	4.8	4.0	4.0	2.8	7.9	17.....	5.5	4.8	4.0	2.5	6.3
3.....	4.0	4.8	4.0	3.1	6.2	18.....	5.5	5.5	4.0	3.1	5.5
4.....	4.0	5.5	4.0	2.8	5.5	19.....	5.5	4.8	4.0	3.7	4.6
5.....	4.0	5.5	4.0	2.5	4.9	20.....	5.5	4.0	4.0	4.6	3.7
6.....	4.0	5.5	4.0	2.5	4.3	21.....	5.5	4.8	3.2	5.5	3.4
7.....	4.0	5.5	4.0	2.5	4.2	22.....	5.5	5.5	2.5	4.6	3.1
8.....	4.8	5.5	4.0	2.5	4.0	23.....	5.5	5.5	3.2	3.7	3.1
9.....	5.5	4.8	4.0	2.5	3.2	24.....	5.5	5.5	4.0	3.8	3.1
10.....	5.5	4.0	4.0	2.5	2.5	25.....	5.5	4.8	4.8	4.0	2.6
11.....	5.5	4.0	4.0	2.5	3.7	26.....	5.5	4.0	5.5	3.7	2.1
12.....	5.5	4.0	4.0	3.1	4.9	27.....	5.5	4.0	4.0	3.4	3.8
13.....	5.5	4.8	3.2	3.7	4.3	28.....	4.8	4.0	2.5	6.0	5.5
14.....	6.5	5.5	2.5	3.7	3.7	29.....	4.0	4.0	3.2	11.5	.....
15.....	7.5	4.8	3.2	3.7	5.4	30.....	4.8	4.0	4.0	12.0	.....
						31.....	5.5	.....	4.0	13.5	.....

NOTE.—Daily discharge determined from rating curves applicable as follows: Jan. 1 to June 25, 1909, well defined below 115 second-feet; June 26, 1909, to July 18, 1910, well defined below 90 second-feet; July 19, 1910, to Feb. 28, 1911, fairly well defined. Discharge interpolated for days on which gage was not read.

Monthly discharge of Little Pine Creek near Independence, Cal., for 1905-1911.

[Drainage area, 21.4 square miles.]

Month.	Discharge in second-feet.				Run-off.		Accu- racy.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.	Total in acre-feet.	
1905.							
June 15-30.....	47	31	41.5	1.94	1.15	1,317	
July.....	31	15.4	23.5	1.10	1.27	1,445	
August.....	15.4	6.6	10.9	.509	.59	670	
September.....	6.6	3.1	4.6	.215	.24	274	
1905-6.							
October.....	4.8	1.6	3.2	.150	.17	198	
November.....	4.8	3.1	3.6	.168	.19	214	
December.....	4.8	1.6	3.6	.168	.19	223	
January.....	4.5	2.8	4.0	.187	.22	246	
February.....	4.2	2.4	2.8	.131	.14	156	
March.....	5.0	4.4	4.8	.224	.26	295	
April.....	11	5.0	8.0	.374	.42	476	
May.....	43	12	29.6	1.38	1.59	1,820	
June.....	226	31	96.4	4.50	5.02	5,740	
July.....	144	88	127.0	5.94	6.85	7,810	
August.....	84	37	54.4	2.54	2.93	3,340	
September.....	36	15	22.9	1.07	1.19	1,360	
The year.....	226	1.6	30.0	1.40	19.17	21,900	
1906-7.							
October.....	16	7.5	12.4	.579	.67	762	
November.....	10	4.0	6.1	.285	.32	363	
December.....	7.5	4.0	5.2	.243	.28	320	
January.....	7.0	4.5	5.5	.257	.30	338	B.
February.....	4.5	3.0	3.5	.163	.17	194	B.
March.....	10	3.0	4.9	.229	.26	301	B.
April.....	25	4.5	14.9	.696	.78	887	B.
May.....	43	19	26.0	1.22	1.41	1,600	B.
June.....	93	33	62.0	2.89	3.22	3,690	C.
July.....	137	43	70.6	3.30	3.80	4,340	C.
August.....	53	25	35.8	1.67	1.92	2,200	C.
September.....	25	4.9	16.7	.780	.87	994	C.
The year.....	137	3	22.0	1.03	14.00	16,000	
1907-8.							
October.....	11	4.6	6.6	.308	.36	406	C.
November.....	17	6.9	7.6	.355	.40	452	C.
December.....	6.9	6.9	6.9	.323	.37	424	C.
January.....	4.3	4.3	4.3	.201	.23	264	C.
February.....	4.3	2.0	2.4	.112	.12	138	C.
March.....	4.3	2.0	3.4	.159	.18	209	C.
April.....	14	4.3	7.4	.346	.39	440	C.
May.....	19	12	15.7	.733	.85	965	C.
June.....	27	14	21.5	1.00	1.12	1,280	C.
July.....	35	22	29.0	1.35	1.56	1,780	C.
August.....	28	10	19.9	.925	1.07	1,220	C.
September.....	10	6.1	8.3	.386	.43	494	C.
The year.....	35	2	11.1	.518	7.08	8,070	
1908-9.							
October.....	10	6.1	9.0	.418	.48	406	C.
November.....	8.2	6.1	6.6	.307	.34	452	C.
December.....	8.2	6.1	6.3	.293	.34	424	C.
January.....	12	4.0	6.40	.297	.34	394	B.
February.....	7.8	4.6	5.54	.257	.27	308	B.
March.....	6.4	5.3	5.44	.253	.29	334	B.
April.....	20	5.3	9.92	.461	.51	590	C.
May.....	66	22	40.5	1.89	2.18	2,490	B.
June.....	140	69	95.2	4.45	4.96	5,660	B.
July.....	122	48	81.6	3.81	4.39	5,020	B.
August.....	44	27	34.7	1.62	1.87	2,130	B.
September.....	27	7.3	16.1	.752	.84	958	B.
The year.....	140	4	26.4	1.23	16.81	19,200	
1909-10.							
October.....	10	5.2	7.88	.368	.42	484	B.
November.....	10	7.3	9.82	.459	.51	584	B.
December.....	16	5.2	10.8	.504	.58	664	B.
January.....	13	6.5	8.60	.402	.46	529	B.
February.....	10	4.6	7.22	.337	.35	401	B.
March.....	8	6.5	6.57	.307	.36	404	A.

Monthly discharge of Little Pine Creek near Independence, Cal., for 1905-1911—Contd.

Month.	Discharge in second-feet.				Run-off.		Accu- racy.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.	Total in acre-feet.	
1909-10.							
April.....	22	6.5	13.6	0.635	0.71	809	A.
May.....	52	22	32.8	1.53	1.76	2,020	B.
June.....	56	30	46.4	2.17	2.42	2,760	B.
July.....	71	22	35.5	1.66	1.91	2,180	B.
August.....	23	9.5	14.1	.659	.76	867	A.
September.....	11.5	4.3	6.88	.321	.36	409	A.
The year.....	71	4.3	16.7	.780	10.60	12,100	
1910-11.							
October.....	7.5	4.0	5.25	.245	.28	323	A.
November.....	5.5	4.0	4.74	.221	.25	282	A.
December.....	5.5	2.5	3.80	.178	.21	234	A.
January.....	13.5	2.4	4.24	.198	.23	261	A.
February.....	10.0	2.1	4.62	.216	.22	257	A.

NOTE.—Discharge determined from rating curves covering short periods of time and by interpolation when there is no gage record.

SHEPARD CREEK NEAR THEBE, CAL.¹

No regular gaging station has been maintained on Shepard Creek. All measurements were made at a point about 3 miles east of the mouth of the canyon, in sec. 9, T. 14 S., R. 35 E., above all diversions.

Discharge measurements of Shepard Creek near Thebe, Cal., in 1906-1909.

Date.	Hydrographer.	Discharge.	Date.	Hydrographer.	Discharge.
1906.		<i>Sec.-ft.</i>	1908.		<i>Sec.-ft.</i>
Feb. 7	G. R. Shuey.....	1.7	Feb. 10	R. B. Post.....	1.0
Apr. 14	do.....	6.2	29	do.....	1.6
22	do.....	16	Mar. 11	do.....	1.3
May 1	do.....	9.8	Apr. 4	do.....	0.7
10	do.....	34	17	do.....	1.4
18	do.....	32	30	do.....	6.3
26	do.....	27	May 8	do.....	6.3
June 2	do.....	15	15	do.....	5.4
12	do.....	60	June 8	do.....	8.2
21	do.....	95	23	do.....	11
29	do.....	70	July 3	do.....	24
July 9	do.....	109	13	Post and Lamb.....	18
23	do.....	111	24	W. A. Lamb.....	17
Sept. 10	do.....	11	Aug. 9	do.....	34
Oct. 22	do.....	1.2	17	do.....	18
Nov. 14	do.....	.3	Sept. 2	do.....	6
Dec. 19	do.....	3.4	Oct. 1	do.....	8.5
1907.			20	Barrows and Lamb.....	4.7
Jan. 30	G. R. Shuey.....	2.0	Nov. 3	do.....	3.0
Feb. 24	do.....	2.7	11	A. T. Barrows.....	2.5
Mar. 22	do.....	3.8	1909.		
Apr. 16	do.....	9.7	Jan. 16	Haines and Lee.....	4.7
May 4	do.....	9.1	Feb. 2	R. E. Haines.....	2.3
June 5	do.....	13	22	do.....	a.0
15	do.....	31	Mar. 3	do.....	2.5
27	do.....	20	30	do.....	2.1
July 9	do.....	30	Apr. 19	do.....	11.3
31	do.....	39	May 11	do.....	16.3
Aug. 12	do.....	36	31	do.....	15.9
28	R. B. Post.....	23	June 22	do.....	31.6
Sept. 11	do.....	14	July 12	do.....	43.5
27	do.....	3.3	Aug. 5	do.....	21.1
Oct. 17	do.....	3.3	24	do.....	20.0
Nov. 4	do.....	6.1	Sept. 9	do.....	12.7
24	do.....	4.9	28	do.....	6.9
Dec. 14	do.....	4.6	Oct. 25	do.....	2.9
		2.7	Nov. 16 ^a	do.....	7.4

^a Frozen part of the day.

^b Frozen up at noon. Some flow later.

¹ Described in the 1906 report as near Independence.

Discharge measurements of Shepard Creek near Thebe, Cal., in 1910-11.

Date.	Hydrographer.	North Branch discharge.	South Branch discharge.	Total Shepard Creek discharge.
		<i>Sec.-ft.</i>	<i>Sec.-ft.</i>	<i>Sec.-ft.</i>
Feb. 25	R. E. Haines.....	1.7	0.0	1.7
Mar. 15	.....do.....	2.1	0	2.1
Apr. 5	.....do.....	0	2.5	2.5
26	.....do.....	1.4	5.2	6.6
May 17	.....do.....	6.9	4.5	11.4
June 21	C. H. Lee.....	9.6	3.3	12.9
July 16	F. G. Wood.....	3.7	15.2	18.9
Aug. 11	.....do.....	3.6	8.6	12.2
29	G. T. Peekema.....	8	7.2	8.0
Sept. 30	.....do.....	2.1	1.4	3.5
Oct. 31	.....do.....	2.0	1.8	3.8
Dec. 7	.....do.....	1.2	1.3	2.5
1911.				
Jan. 12	G. T. Peekema.....	2.5	2.2	4.7
Feb. 23	.....do.....		1.8	

NOTE.—The discharge past the regular gaging station was determined by adding together the measured discharge of the North and South branches. Measurements of these were made at several sections.

Monthly discharge of Shepard Creek near Thebe, Cal., for 1906-1909.

Month.	Mean discharge in second-feet.	Run-off (total in acre-feet).	Month.	Mean discharge in second feet.	Run-off (total in acre-feet).
1906.			1907-8.		
January.....	2.0	123	January.....	1.3	80
February.....	2.0	111	February.....	1.3	75
March.....	2.0	123	March.....	1.3	80
April.....	9.0	536	April.....	2.6	155
May.....	26.5	1,630	May.....	6.2	381
June.....	62.2	3,700	June.....	13.4	797
July.....	104	6,400	July.....	22.0	1,350
August.....	63.0	3,870	August.....	21.0	1,290
September.....	12.0	714	September.....	9.6	571
The period.....		17,200	The year.....	7.62	5,550
1906-7.			1908-9.		
October.....	2.6	160	October.....	5.7	350
November.....	.5	30	November.....	2.6	155
December.....	3.0	184	December.....	2.0	123
January.....	2.0	123	January.....	4.7	289
February.....	2.4	133	February.....	3.0	167
March.....	3.4	209	March.....	2.5	154
April.....	8.1	482	April.....	8.8	524
May.....	14.0	861	May.....	14.8	910
June.....	26.0	1,550	June.....	37.9	2,260
July.....	37.0	2,280	July.....	42.4	2,610
August.....	21.0	1,290	August.....	20.6	1,250
September.....	4.7	280	September.....	11.0	655
The year.....	10.4	7,580	The year.....	13.0	9,450
1907-8.			1909.		
October.....	5.1	314	October.....	4.7	289
November.....	4.7	280	November.....	3.0	179
December.....	2.9	178	December.....	3.0	184

NOTE.—Discharge determined by interpolating between discharge measurements. Record is only approximate.

BAIRS CREEK¹ NEAR THEBE, CAL.

No regular gaging station has been maintained on Bairs Creek. All measurements were made at a point about 3 miles east of the mouth of the canyon, in sec. 16, T. 14 S., R. 35 E., above all diversions.

Discharge measurements of Bairs Creek near Thebe, Cal., in 1906-1911.

Date.	Hydrographer.	Discharge.	Date.	Hydrographer.	Discharge.
		<i>Sec.-ft.</i>			<i>Sec.-ft.</i>
1906.			1908.		
Apr. 14	G. R. Shuey	1.5	Aug. 9	W. A. Lamb	8.2
22a	do	6.5	17	do	4.5
May 1a	do	3.9	Sept. 2	do	1.5
10a	do	14	Oct. 1	do	2.9
18	do	14	Nov. 12	A. T. Barrows	1.7
26	do	15			
June 2	do	10	1909.		
12	do	37	Jan. 16	Haines and Lee	1.00
21a	do	44	Feb. 2	R. E. Haines	.41
29a	do	27	22	do	(c) 1.48
July 9	do	39	Mar. 3	do	1.38
23a	do	28	30	do	10.3
Sept. 10a	do	3.9	Apr. 19	do	13.9
Oct. 22a	do	1.6	May 11	do	17.8
Dec. 19b	do	.2	31	do	20.3
			June 22	do	14.1
1907.			July 12	do	6.07
Mar. 22	G. R. Shuey	3.5	Aug. 5	do	3.99
Apr. 16	do	7.2	24	do	2.86
May 20	do	9.6	Sept. 9	do	1.85
June 5	do	14	28	do	.92
15	do	10	Oct. 25	do	1.51
27	do	13	Nov. 16a	do	
July 9	do	15			
31	do	5.9	1910.		
Aug. 12	R. B. Post	4.4	Feb. 25	R. E. Haines	.14
28	do	3.9	Mar. 15	do	.26
Sept. 11	do	.6	Apr. 5	do	.12
Oct. 17	do	1.8	26	do	1.9
Nov. 4	do	2.6	May 17	do	8.6
24	do	1.6	June 21	C. H. Lee	4.8
Dec. 14	do	15	July 16	do	3.3
			Aug. 11	F. G. Wood	1.6
1908.			29	do	1.0
Feb. 10	R. B. Post	.0	Sept. 30	G. T. Peekema	.38
Apr. 17	do	.9	Oct. 31	do	.35
30	do	2.8	Dec. 7	do	.61
May 8	do	4.9			
15	do	3.8	1911.		
June 23	do	6.2	Jan. 12		1.2
July 3	do	3.7	Feb. 23		.9

^a Measured at diversion gates.

^b Estimated.

^c No flow; frozen up at 12.30 p. m.; ran later.

^d Creek frozen up at 11 a. m.

Monthly discharge of Bairs Creek near Thebe, Cal., for 1906-1909.

Month.	Mean discharge in second-feet.	Run-off (total in acre-feet).	Month.	Mean discharge in second-feet.	Run-off (total in acre-feet).
1906.			1906-7.		
January	1.0	61	January	1.0	61
February	1.0	56	February	1.0	56
March	1.0	61	March	3.0	184
April	3.2	190	April	7.0	417
May	12.5	769	May	9.6	580
June	31.3	1,860	June	12.2	726
July	30.3	1,860	July	11.7	719
August	13.4	824	August	4.4	270
September	4.3	256	September	1.1	65
The period		5,940	The year	4.54	3,300
1906-7.			1907-8.		
October	2.0	123	October	1.7	104
November	1.0	60	November	2.1	125
December	.5	31	December	1.5	92

¹ Called Moffett Creek in the 1906 report.

Monthly discharge of Bairs Creek near Thebe, Cal., for 1906-1909—Continued.

Month.	Mean discharge in second- feet.	Run-off (total in acre-feet).	Month.	Mean discharge in second- feet.	Run-off (total in acre-feet).
1907-8.			1908-9.		
January.....	1.0	61	January.....	1.0	61
February.....	.0	0	February.....	.5	28
March.....	.0	0	March.....	1.5	92
April.....	1.2	71	April.....	7.7	458
May.....	3.0	184	May.....	13.0	799
June.....	4.0	238	June.....	24.0	1,430
July.....	4.5	277	July.....	15.2	935
August.....	4.0	246	August.....	5.0	307
September.....	1.6	95	September.....	3.9	232
The year.....	2.05	1,490	The year.....	6.28	4,560
1908-9.			1909.		
October.....	1.4	86	October.....	1.2	72
November.....	1.2	71	November.....	1.0	60
December.....	1.0	61	December.....	1.0	61

NOTE.—Discharge determined by comparison with neighboring streams and by interpolating between discharge measurements. Record is only approximate.

GEORGE CREEK NEAR THEBE, CAL.¹

A gage has been placed on George Creek at a point about 1 mile west of the road from Independence to Lone Pine, in sec. 27, T. 14 S., R. 35 E.

No water is diverted above the gage.

No gage-height record is available, but the following discharge measurements were made near the gage:

Discharge measurements of George Creek near Thebe, Cal., in 1906-1911.

Date.	Hydrographer.	Gage height.	Dis- charge.	Date.	Hydrographer.	Gage height.	Dis- charge.
1906.				1908.			
Feb. 7	G. R. Shuey.....	<i>Feet.</i>	<i>Sec.-ft.</i>	Feb. 10	R. B. Post.....	<i>Feet.</i>	<i>Sec.-ft.</i>
Apr. 14	do.....		1.0	Feb. 29	do.....	.68	1.5
22	do.....		5.1	do.....	do.....	.75	1.7
May 1	do.....		14	Mar. 11	do.....	.75	1.8
10	do.....		7.4	Apr. 4	do.....	.80	2.6
18	do.....		21	17	do.....	.82	2.8
26	do.....		28	30	do.....	1.18	14
June 12	do.....		20	May 8	do.....	1.03	8.6
29	do.....		53	15	do.....	.95	6.1
July 9	do.....		66	June 8	do.....	.85	6.8
23	do.....		84	23	do.....	1.09	12
Aug. 10	do.....		102	July 3	do.....	1.20	19
Oct. 22	do.....		42	13	Post and Lamb.....	1.15	18
30	do.....		4.5	24	W. A. Lamb.....	1.10	14
Dec. 19	do.....		3.1	Aug. 9	do.....	1.15	22
	do.....		1.6	17	do.....	.95	11
1907.				Sept. 2	do.....	.80	7.1
Feb. 24	G. R. Shuey.....		2.7	Oct. 1	do.....	.87	8.7
Mar. 22	do.....	0.95	5.6	20	Lamb and Barrows.....	.75	4.0
Apr. 16	do.....	1.20	12	30	A. T. Barrows.....		5.8
May 4	do.....	1.20	14	Nov. 3	Lamb and Barrows.....	.67	3.4
20	do.....	1.35	19	12	A. T. Barrows.....	.64	3.0
June 15	do.....	1.20	16	1909.			
July 9	do.....	1.55	33	Jan. 16	Haines and Lee.....	0.64	3.0
Aug. 12	R. B. Post.....	1.20	14	Feb. 2	R. E. Haines.....	.55	2.0
28	do.....	1.05	8.7	22	do.....	.58	2.4
Sept. 11	do.....	.89	4.4	Mar. 3	do.....	.63	3.5
27	do.....	.79	2.0	30	do.....	.59	2.9
Oct. 19	do.....	1.01	6.8	Apr. 19	do.....	1.00	14.2
Nov. 4	do.....	.99	6.1	May 11	do.....	1.15	21.7
24	do.....	.82	2.8	31	do.....	1.20	24.0
Dec. 14	do.....	.80	2.3	June 22	do.....	1.40	38.1

¹ Described in the 1906 report as near Independence.

Discharge measurements of George Creek near Thebe, Cal., in 1906-1911—Continued.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
		<i>Feet.</i>	<i>Sec.-ft.</i>			<i>Feet.</i>	<i>Sec.-ft.</i>
1909.				1910.			
July 12	R. E. Haines	1.35	36.2	May 17	R. E. Haines	1.00	16
Aug. 5	do.	1.10	15.2	June 21	C. H. Lee	1.00	13
Aug. 24	do.	1.05	14.3	July 16	F. G. Wood	.95	11
Sept. 9	do.	.90	10.4	Aug. 11	do.		6.4
Sept. 28	do.	.76	5.2	Aug. 29	do.	.76	5.6
Oct. 25	do.	.64	2.6	Sept. 30	G. T. Peekema	.68	3.2
Nov. 16	do.	.60	1.9	Oct. 31	do.	.83	4.9
				Dec. 7	do.	.70	2.6
1910.				1911.			
Feb. 25	R. E. Haines	.53	1.1	Jan. 12			2.9
Mar. 15	do.	.65	3.0	Feb. 23			1.9
Apr. 5	do.	.61	2.4				
Nov. 26	do.	.94	11				

Monthly discharge of George Creek near Thebe, Cal., for 1906-1909.

Month.	Mean discharge in second-feet.	Run-off (total in acre-feet).	Month.	Mean discharge in second-feet.	Run-off (total in acre-feet).
1906.			1907-8.		
January	1.0	61	January	2.7	166
February	1.0	56	February	1.9	109
March	2.0	123	March	2.2	135
April	10.3	613	April	5.3	315
May	21.1	1,300	May	8.0	492
June	52.9	3,150	June	11.0	655
July	86.9	5,340	July	18.0	1,110
August	42.3	2,600	August	14.0	861
September	21.0	1,250	September	8.1	482
The period		14,500	The year	6.88	5,010
1906-7.			1908-9.		
October	7.7	473	October	6.0	369
November	2.6	155	November	3.2	190
December	1.7	105	December	3.0	184
January	2.0	123	January	2.8	172
February	2.5	139	February	2.3	128
March	5.0	307	March	3.2	197
April	11.0	655	April	11.4	678
May	17.0	1,040	May	19.4	1,190
June	19.0	1,130	June	43.7	2,600
July	28.0	1,720	July	38.4	2,360
August	13.0	799	August	14.7	904
September	4.0	238	September	8.7	518
The year	9.46	6,880	The year	13.1	9,490
1907-8.			1909.		
October	5.2	320	October	3.5	215
November	3.8	226	November	2.0	119
December	2.3	141	December	1.9	117

NOTE.—Discharge determined by comparison with neighboring streams and by interpolating between discharge measurements. Record is only approximate.

LONE PINE CREEK NEAR LONE PINE, CAL.

This station, which was located at a point about three-fourths of a mile west of the town of Lone Pine and about 500 feet above the division boxes on the creek, in sec. 29, T. 15 S., R. 36 E., was established September 24, 1906, and discontinued February 28, 1911.

No water is diverted above the station.

The gage is a vertical staff on the left bank at the footbridge, from which discharge measurements were made.

The drainage area above the mouth of the canyon is about 12 square miles.

Both banks are high and rocky and not subject to overflow. The channel is composed of gravel and boulders and shifts somewhat at high stages. The records may be considered good.

Discharge measurements of Lone Pine Creek near Lone Pine, Cal., in 1906-1911.

Date.	Hydrographer.	Gage height.	Discharge.	Date.	Hydrographer.	Gage height.	Discharge.
1906.		<i>Feet.</i>	<i>Sec.-ft.</i>	1908.		<i>Feet.</i>	<i>Sec.-ft.</i>
Jan. 31	G. R. Shuey		3.1	June 5	R. B. Post.....	2.51	12
Feb. 17	do.....		3.1	14	do.....	2.90	29
Mar. 24	do.....		2.2	July 2	do.....	3.00	38
23	do.....		4.0	21	W. A. Lamb.....	3.00	39
29	do.....		4.0	Aug. 7	do.....	3.40	73
29	do.....		4.4	18	do.....	2.85	29
Apr. 15	do.....		5.5	Sept. 7	do.....	3.00	32
28	do.....		12	10	do.....	3.20	49
May 10	do.....		26	23	do.....	2.62	19
17	do.....		33	Oct. 18	do.....	2.45	10
26	do.....		32	28	A. T. Barrows.....	2.42	11
June 13	do.....		66	Nov. 21	do.....	2.25	6.6
21	do.....		90				
29	do.....		100	1909.			
July 10	do.....		134	Jan. 27	R. E. Haines.....	2.27	7.6
25	do.....		139	Feb. 17	do.....	2.25	7.4
Aug. 10	do.....		72	Mar. 4	do.....	2.21	6.5
Sept. 6	do.....		36	26	do.....	2.20	6.2
24	do.....	1.92	18	Apr. 15	do.....	2.46	11.7
Oct. 23	do.....	1.80	13	May 5	do.....	2.90	33.0
Nov. 20	do.....	1.70	8	25	do.....	2.80	28.8
1907.				June 17	do.....	3.40	88.9
Jan. 30	G. R. Shuey	1.67	5.6	July 8	do.....	3.15	68.7
Feb. 23	do.....	1.70	6.9	29	do.....	2.90	40.4
Mar. 21	do.....	1.80	9.6	Aug. 18	do.....	3.10	66.1
Apr. 16	do.....	2.05	21	Sept. 14	do.....	2.45	20.1
May 21	do.....	2.30	32	Oct. 6	do.....	2.16	11.0
June 5	do.....	2.60	46	22	do.....	2.00	7.6
27	do.....	2.85	69	Nov. 11	do.....	2.02	8.2
July 9	do.....	2.80	74				
30	do.....	2.60	54	1910.			
Aug. 12	R. B. Post.....	2.33	30	Mar. 2	R. E. Haines.....	1.90	5.5
29	do.....	2.60	26	22	do.....	1.94	6.5
Sept. 10	do.....	2.40	15	Apr. 12	do.....	2.03	8.2
28	do.....	2.10	8.6	May 3	do.....	2.32	15
Oct. 13	do.....	2.25	9.5	24	do.....	2.72	30
23	do.....	2.49	17	June 28	C. H. Lee.....	2.68	30
Nov. 7	do.....	2.31	9.7	July 21	do.....	3.10	47
22	do.....	2.22	9.0	Aug. 16	F. G. Wood.....	2.50	18
1908.				Sept. 3	do.....	2.39	14
Feb. 1	R. B. Post.....	2.05	8.1	27	G. T. Peekema.....	2.42	15
Mar. 16	do.....	2.23	8.7	Oct. 22	do.....	2.23	9.3
Apr. 17	do.....	2.34	10	Nov. 30	do.....	2.01	5.8
26	do.....	2.49	16				
May 19	do.....	2.40	10	1911.			
27	do.....	2.55	16	Jan. 6	G. T. Peekema.....	1.98	4.8
				Feb. 6	do.....	2.09	6.9

^a Change in channel section.

Daily gage height, in feet, of Lone Pine Creek near Lone Pine, Cal., for 1906-1911.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1906-7.												
1	1.89		1.7	1.8		1.8	1.7		2.5	2.8		
2		1.7			1.7							2.4
3	1.89		1.7	1.8		1.8	1.7				2.6	
4		1.7			1.7					3.0		
5	1.89		1.7	1.8		1.8	2.0		2.6			2.4
6		1.7			1.7						2.6	
7			1.7	1.8		1.8	2.0			3.0		
8	1.89	1.7			1.7				2.45			2.4
9			1.7			1.8	2.0				2.5	
10	1.83		1.8	1.7						2.8		
11			1.7			1.6	2.0		2.5			2.4
12	1.81	1.7		1.8							2.4	
13			1.7	1.8		1.6	2.0			2.8		
14					1.7				2.4			2.4
15		1.7	1.7	1.8		1.8	2.0				2.4	
16										2.6		
17			1.7	1.7	1.7	1.8	2.05		2.2			2.4
18											2.4	
19		1.7	1.7	1.7	1.7	1.8	2.2			2.7		
20		1.7		1.7					2.3			2.2
21			1.7	1.7	1.7	1.8	2.15				2.4	
22										2.7		
23		1.8	1.7	1.7	1.7	1.8	2.2		2.6			2.2
24										2.7	2.3	
25			1.7	1.7	1.7	1.8	2.2			2.7		
26									2.8			2.1
27			1.7	1.7	1.7	1.8	2.2				2.2	
28		1.7								2.5		
29			1.7	1.7		1.8	2.1		2.8		2.6	2.0
30			1.7								2.8	
31			1.7	1.7		1.8				2.6		
1907-8.												
1		2.7	2.2		2.05		2.3	2.55		3.0		
2	2.1			2.05		2.1						2.6
3					2.0		2.3	2.65	2.65		3.75	
4		2.65	2.2			2.1				3.05		
5	2.3											2.6
6				2.05					2.65		3.75	
7		2.6	2.2		2.0		2.25	2.65		3.1		
8	2.3					2.1						3.0
9				2.05					2.8		3.55	
10		2.6	2.2		2.05		2.3	2.7		3.15		
11	2.3					2.15						3.0
12				2.05					2.9		3.5	
13		2.3	2.1		2.1		2.3	2.65		3.2		
14	2.3					2.15						2.8
15				2.0					2.95		3.4	
16		2.2	2.1		2.1		2.4	2.6		3.2		
17	2.6					2.2						2.65
18				2.0					3.0		3.3	
19		2.2	2.1		2.1		2.4	2.5		3.1		
20	2.5					2.2						2.6
21				2.0					3.0		2.7	
22		2.2	2.1		2.35		2.45	2.45		3.0		
23						2.25						2.6
24	2.6			2.2					3.05		2.7	
25		2.2	2.05		2.2		2.5	2.5		3.0		
26	2.75					2.25						2.8
27				2.2					3.05		2.6	
28		2.15	2.1		2.1		2.5	2.55		3.0		
29	2.7					2.25						2.75
30									3.1		2.6	
31			2.1					2.65		3.0		
1908-9.												
1		2.45	2.25			2.25					2.85	
2	2.6				2.15				3.3	3.6		
3				2.15			2.25	2.85				2.75
4		2.35	2.25			2.2					2.8	
5	2.5				2.15			2.9	3.7	3.4		
6				2.15			2.3	2.95				2.7
7		2.35	2.25			2.2					2.75	
8	2.5				2.25				3.6	3.35		
9				2.15			2.3	2.9				2.55
10		2.35	2.25			2.2					2.75	

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1908-9.												
11.	2.45				2.8				3.4	3.2		
12.				2.15								2.6
13.		2.35	2.3			2.2					2.75	2.45
14.	2.45				2.3				3.7	3.3		2.45
15.				2.4			2.35	2.8				
16.		2.3	2.3			2.2					2.75	
17.	2.45				2.25				3.4	3.3		2.3
18.				2.35			2.6	2.7			3.1	
19.		2.25	2.25		2.25	2.2			3.3	3.2	3.3	
20.	2.45											
21.				2.35			2.5	2.85				2.3
22.		2.25	2.15			2.2					2.9	
23.	2.45				2.25				3.35	3.0		2.3
24.			2.3				2.6	2.8				2.3
25.		2.2	2.15			2.2		2.8			2.75	
26.	2.45				2.2	2.2			3.5	3.05		
27.				2.25		2.2	2.6	2.9				2.3
28.		2.25	2.15			2.2					2.9	
29.	2.45								3.7	3.1		
30.				2.2			2.75	3.0				2.25
31.			2.15								2.75	
1909-10.												
1.				2.0			1.9					2.35
2.		1.9	2.0			1.9			3.0	2.6	2.75	
3.	2.2				2.1			2.3				
4.				2.0			1.9					2.35
5.		1.95	2.0			1.9			2.95	2.5	2.7	
6.	2.2				2.1			2.35				
7.				2.0			2.0					2.3
8.		2.0	2.1			1.9			2.95	2.6	2.65	
9.	2.1				2.1			2.35				
10.				1.9			2.0					2.2
11.		2.05	2.1			1.9			2.9	2.6	2.6	
12.	2.1				2.2			2.5				
13.				1.9			2.05					2.2
14.		2.05	2.0			2.0			2.75	2.65	2.6	
15.	2.05				2.1			2.5				
16.				1.9			2.05					2.75
17.		2.0	2.0			2.0			2.6	2.65	2.5	
18.	2.0				1.9		2.1	2.6				
19.				1.9								2.6
20.		2.0	2.0			2.0			2.6		2.45	
21.	2.0				1.9		2.2	2.65		3.05		
22.				2.0								2.45
23.		2.0	2.0			1.9	2.3	2.65	2.6		2.5	
24.	2.0				1.9					2.95		
25.				1.9								2.3
26.		2.0	2.0			1.9			2.6		2.5	
27.	1.95				1.9		2.4	2.65		3.0	2.5	
28.				1.9								2.25
29.		2.0	1.9									

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Day.	Oct.	Nov.	Dec.	Jan.	Feb.
1910-11.						1910-11.					
1.	2.2				2.2	16.	2.2			1.95	2.1
2.				2.0		17.					
3.		2.1	2.0			18.		2.0	2.1		2.05
4.	2.2				2.4	19.	2.2				
5.				2.0		20.				1.95	
6.		2.05	2.0			21.		2.0	2.1		
7.	2.2				2.2	22.	2.2			1.95	2.0
8.				1.95		23.					
9.		2.0	2.0			24.		2.0	2.1		1.95
10.	2.1				2.05	25.	2.25				
11.				1.95		26.				1.95	
12.		2.0	2.0			27.		2.0	2.0		
13.	2.35				2.05	28.	2.3				1.95
14.				1.95		29.				2.3	
15.		2.0	2.0			30.		2.0	2.0		
						31.					

Daily discharge, in second-feet, of Lone Pine Creek near Lone Pine, Cal., for 1909-1911.

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909.									
1.....	5.2	5.5	7.0	6.8	26	58	111	44	36
2.....	5.2	5.2	6.6	6.9	28	66	108	42	36
3.....	5.2	5.2	6.3	7.0	30	78	102	41	36
4.....	5.2	5.2	6.0	7.3	32	91	96	40	35
5.....	5.2	5.2	6.0	7.6	33	104	89	39	34
6.....	5.2	5.8	6.0	8.0	37	105	88	37	33
7.....	5.2	6.6	6.0	8.0	36	107	86	36	30
8.....	5.2	7.0	6.0	8.0	34	108	84	36	26
9.....	5.2	14	6.0	8.0	33	102	80	36	24
10.....	5.2	21	6.0	8.0	33	96	75	36	25
11.....	5.2	27	6.0	8.0	33	89	71	36	26
12.....	5.2	20	6.0	8.0	33	98	74	36	27
13.....	7.0	14	6.0	8.4	31	108	77	36	24
14.....	8.8	8.0	6.0	8.8	29	118	80	36	20
15.....	10	7.6	6.0	9.2	27	108	80	36	20
16.....	9.7	7.3	6.0	12	26	98	80	36	18
17.....	9.4	7.0	6.0	14	24	89	80	50	16
18.....	9.2	7.0	6.0	17	22	86	77	63	14
19.....	9.2	7.0	6.0	16	25	83	74	80	14
20.....	9.2	7.0	6.0	14	28	80	71	69	14
21.....	9.2	7.0	6.0	13	30	82	66	58	14
22.....	8.8	7.0	6.0	14	29	83	60	47	14
23.....	8.4	7.0	6.0	16	28	84	55	44	14
24.....	8.0	6.6	6.0	17	27	90	56	40	14
25.....	7.7	6.3	6.0	17	27	94	58	36	14
26.....	7.4	6.0	6.0	17	30	98	59	40	14
27.....	7.0	6.3	6.0	17	33	104	60	44	14
28.....	6.6	6.6	6.0	19	36	111	62	47	14
29.....	6.3	-----	6.2	22	38	118	63	44	14
30.....	6.0	-----	6.4	24	41	114	56	40	13
31.....	5.8	-----	6.6	-----	50	-----	50	36	-----

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909-10.												
1.....	13	6.5	7.8	7.5	7.0	5.8	5.8	15.0	44	26	30	12.8
2.....	12	6.5	7.8	7.5	8.2	5.8	5.8	15.0	42	26	29	12.8
3.....	12	6.8	7.8	7.5	9.5	5.8	5.8	15.0	41	25	28	12.8
4.....	12	7.0	7.8	7.5	9.5	5.8	5.8	15.6	40	23	27	12.8
5.....	12	7.2	7.8	7.5	9.5	5.8	6.3	16.2	40	22	26	12.2
6.....	12	7.4	8.4	7.5	9.5	5.8	6.9	16.8	40	23	25	11.6
7.....	11	7.6	9.0	7.5	9.5	5.8	7.5	16.8	40	25	25	11.0
8.....	10	7.8	9.7	6.9	9.5	5.8	7.5	16.8	40	26	24	10.2
9.....	9.7	8.2	9.7	6.3	9.5	5.8	7.5	16.8	39	26	23	9.4
10.....	9.7	8.5	9.7	5.8	10.3	5.8	7.5	18.5	39	26	23	8.7
11.....	9.7	8.8	9.7	5.8	11.1	5.8	7.8	20	38	26	22	8.7
12.....	9.7	8.8	9.2	5.8	12.0	6.3	8.1	22	36	27	22	8.7
13.....	9.4	8.8	8.6	5.8	11.1	6.9	8.5	22	34	27	22	8.7
14.....	9.1	8.8	7.8	5.8	10.3	7.5	8.5	22	32	28	22	15.4
15.....	8.8	8.4	7.8	5.8	9.5	7.5	8.5	22	30	28	21	22
16.....	8.5	8.1	7.8	5.8	8.2	7.5	8.5	23	28	28	19	29
17.....	8.2	7.8	7.8	5.8	7.0	7.5	9.0	25	26	28	18.0	26
18.....	7.8	7.8	7.8	5.8	5.8	7.5	9.5	26	26	32	17.4	24
19.....	7.8	7.8	7.8	5.8	5.8	7.5	10.3	26	26	36	16.8	22
20.....	7.8	7.8	7.8	6.3	5.8	7.5	11.1	28	26	40	16.2	20
21.....	7.8	7.8	7.8	6.9	5.8	6.9	12.0	28	26	45	16.8	18.1
22.....	7.8	7.8	7.8	7.5	5.8	6.3	13.0	28	26	43	17.4	16.2
23.....	7.8	7.8	7.8	6.9	5.8	5.8	14.0	28	26	41	18.0	14.4
24.....	7.8	7.8	7.8	6.3	5.8	5.8	15.0	28	26	39	18.0	12.7
25.....	7.6	7.8	7.8	5.8	5.8	5.8	16.2	28	26	40	18.0	11.0
26.....	7.4	7.8	7.8	5.8	5.8	5.8	17.3	28	26	41	18.0	10.6
27.....	7.2	7.8	7.4	5.8	5.8	5.8	18.5	28	26	42	18.0	10.2
28.....	7.0	7.8	7.0	5.8	5.8	5.8	17.3	34	26	37	19.0	9.8
29.....	6.8	7.8	6.5	5.8	-----	5.8	16.2	40	26	32	20	9.4
30.....	6.5	7.8	6.5	5.8	-----	5.8	15.0	47	26	31	20	9.0
31.....	6.5	-----	6.5	5.8	-----	5.8	-----	45	-----	30	16.4	-----

Daily discharge, in second-feet, of Lone Pine Creek near Lone Pine, Cal., for 1909-1911—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Day.	Oct.	Nov.	Dec.	Jan.	Feb.
1910-11.						1910-11.					
1.....	8.7	8.0	5.5	5.5	8.7	16.....	8.7	5.5	5.9	4.5	6.8
2.....	8.7	7.4	5.5	5.5	10.0	17.....	8.7	5.5	6.3	4.5	6.6
3.....	8.7	6.8	5.5	5.5	10.0	18.....	8.7	5.5	6.8	4.5	6.4
4.....	8.7	6.6	5.5	5.5	14.5	19.....	8.7	5.5	6.8	4.5	6.2
5.....	8.7	6.4	5.5	5.5	10.0	20.....	8.7	5.5	6.8	4.5	6.0
6.....	8.7	6.2	5.5	5.2	10.0	21.....	8.7	5.5	6.8	4.5	5.8
7.....	8.7	5.9	5.5	4.8	8.7	22.....	8.7	5.5	6.8	4.5	5.5
8.....	8.0	5.7	5.5	4.5	8.0	23.....	9.0	5.5	6.8	4.5	5.2
9.....	7.4	5.5	5.5	4.5	7.1	24.....	9.4	5.5	6.8	4.5	4.8
10.....	6.8	5.5	5.5	4.5	6.2	25.....	9.8	5.5	6.3	4.5	4.5
11.....	8.8	5.5	5.5	4.5	6.2	26.....	10.2	5.5	5.9	4.5	4.5
12.....	10.8	5.5	5.5	4.5	6.2	27.....	10.6	5.5	5.5	4.5	4.5
13.....	12.8	5.5	5.5	4.5	6.2	28.....	11.0	5.5	5.5	7.0	4.5
14.....	11.4	5.5	5.5	4.5	6.4	29.....	10.2	5.5	5.5	11	.....
15.....	10.0	5.5	5.5	4.5	6.6	30.....	9.4	5.5	5.5	16	.....
						31.....	8.7	.....	5.5	11	.....

NOTE.—Daily discharge determined from fairly well-defined rating curves applicable as follows: Jan. 9 to June 5, 1909; June 7 to Dec. 31, 1909; Jan. 1 to July 21, 1910; July 22, 1910, to Feb. 28, 1911. Discharge interpolated or estimated for days on which gage was not read.

Monthly discharge of Lone Pine Creek near Lone Pine, Cal., for 1906-1911.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1906.					
January.....			α 3.0	184	
February.....	3.1	2.2	2.9	161	
March.....	4.5	2.7	3.8	234	
April.....	14	4.5	7.2	428	
May.....	40	15	28.5	1,750	
June.....	103	42	73.5	4,370	
July.....	139	106	129	7,930	
August.....	111	44	68.4	4,210	
September.....	43	17	27.2	1,620	
The period.....				20,900	
1906-7.					
October.....	16	12	14	861	
November.....	8	8	8	476	
December.....	8	8	8	492	
January.....	9.5	6.5	8.2	504	C.
February.....	6.5	6.5	6.5	361	C.
March.....	9.5	4.0	8.8	541	C.
April.....	27	6.5	19.5	1,160	C.
May.....			α 30.0	1,840	C.
June.....	65	27	45.6	2,710	C.
July.....	80	44	61.5	3,780	C.
August.....	51	26	39.5	2,430	C.
September.....	23	7.9	11.5	684	C.
The year.....	80	4	21.8	15,800	
1907-8.					
October.....	38	8.1	19.6	1,210	C.
November.....	34	8.6	16.2	964	C.
December.....	8.9	8.1	8.5	523	C.
January.....			8.0	492	D.
February.....	10	7.0	7.7	443	C.
March.....	9.5	7.5	8.2	504	C.
April.....	16	8.9	11.3	672	C.
May.....	22	13	17.4	1,070	C.
June.....	45	14	32.0	1,900	C.
July.....	54	38	44.0	2,700	C.
August.....	110	18	58.0	3,570	C.
September.....	54	16	24.0	1,430	C.
The year.....	110	7	21.2	15,500	

α Estimated.

Monthly discharge of Lone Pine Creek near Lone Pine, Cal., for 1906-1911—Continued.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1908-9.					
October.....	16	10	11.3	695	C.
November.....	10	6.5	7.6	452	C.
December.....	7.5	5.5	6.3	387	C.
January.....	10	5.2	6.97	429	B.
February.....	27	5.2	8.76	487	B.
March.....	7.0	6.0	6.10	375	B.
April.....	24	6.8	12.2	726	B.
May.....	50	22	31.3	1,920	B.
June.....	118	58	95.0	5,650	B.
July.....	111	50	75.1	4,620	C.
August.....	80	36	43.3	2,660	C.
September.....	36	13	21.6	1,290	B.
The year.....	118	5.2	27.1	19,700	
1909-10.					
October.....	13	6.5	9.05	556	B.
November.....	8.8	6.5	7.81	464	B.
December.....	9.7	6.5	8.01	493	B.
January.....	7.5	5.8	6.39	393	C.
February.....	12	5.8	8.04	447	C.
March.....	7.5	5.8	6.29	387	B.
April.....	18.5	5.8	10.4	619	B.
May.....	47	15	24.5	1,510	B.
June.....	44	26	32.2	1,920	B.
July.....	45	22	31.3	1,920	B.
August.....	30	16.2	21.2	1,300	B.
September.....	29	8.7	14.0	833	B.
The year.....	47	5.8	14.9	10,800	
1910-11.					
October.....	12.8	6.8	9.23	568	B.
November.....	8	5.5	5.80	345	B.
December.....	6.8	5.5	5.87	361	C.
January.....	16	4.5	5.56	342	C.
February.....	14.5	4.5	7.00	389	C.

NOTE.—Discharge determined as follows: February and September, 1906, by interpolating between discharge measurements. The rest of the record from rating curves covering short periods of time.

TUTTLE CREEK NEAR LONE PINE, CAL.

This station, which was located about 2 miles southwest of Lone Pine, in sec. 32, T. 15 S., R. 36 E., at the point where the stream leaves the foothills and enters the valley, was established February 17, 1906, but gage-height record was not commenced until November 2, 1906, and discontinued February 28, 1911.

The gage is a vertical staff on the right bank at the footbridge 50 feet above the division box which controls the water diverted from this stream.

Discharge measurements were made from the footbridge.

The drainage area above the mouth of the canyon is approximately 7.8 square miles.

As the channel is continually shifting, the estimates have been prepared by the indirect method. The record is rated as approximate.

Discharge measurements of Tuttle Creek near Lone Pine, Cal., in 1906-1911.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
		<i>Feet.</i>	<i>Sec.-ft.</i>			<i>Feet.</i>	<i>Sec.-ft.</i>
1906.				1908.			
Jan. 31	G. R. Shuey		4.9	June 5	R. B. Post	1.08	6.7
Feb. 17	do	0.90	5.0	14	do	1.11	10
24	do	.90	4.4	July 2	do	1.20	11
Mar. 13	do		4.2	21	W. A. Lamb	1.20	15
23	do		4.2	Aug. 7	do	1.32	21
29	do		4.6	18	do	1.19	14
Apr. 15	do	.87	4.6	Sept. 7	do	1.11	10
May 11	do	.98	10	23	do	1.10	10
18	do	1.02	12	Oct. 18	do	1.10	8.2
26	do	1.05	13	28	A. T. Barrows	1.10	8.1
June 13	do	1.15	20	Nov. 21	do	1.10	7.1
21	do	1.45	32				
29	do	1.60	39	1909.			
July 25	do		67	Jan. 27	R. E. Haines	1.09	6.0
Aug. 11	do	1.65	35	Feb. 17	do	1.09	6.4
Sept. 6	do	1.40	18	Mar. 4	do	1.08	6.0
25	do	1.18	11	26	do	1.09	5.9
Oct. 24	do	1.12	9.5	Apr. 15	do	1.09	7.0
Nov. 20	do	1.13	8.5	May 7	do	1.18	12.4
				25	do	1.17	11.7
1907.				June 17	do	1.5	27.2
Jan. 30	G. R. Shuey	1.10	5.4	July 8	do	1.8	33.2
Feb. 23	do	1.02	6.4	29	do	1.58	23.8
Mar. 21	do	1.02	5.3	Aug. 18	do	1.38	18.1
Apr. 16	do	1.00	5.7	Sept. 14	do	1.25	12.0
May 21	do	1.10	85	Oct. 6	do	1.19	9.1
June 5	do	1.25	12	22	do	1.16	7.6
27	do	1.35	18	Nov. 11	do	1.18	7.7
July 9	do	1.55	28				
30	do	1.50	21	1910.			
Aug. 12	R. B. Post	1.33	14	Mar. 2	R. E. Haines	1.10	5.5
29	do	1.20	12	22	do	1.09	5.3
Sept. 10	do	1.12	8.4	Apr. 22	do	1.09	5.6
28	do	1.07	5.9	May 3	do	1.22	6.1
Oct. 12	do	1.10	6.1	24	do	1.29	8.7
23	do	1.17	7.4	June 28	C. H. Lee	1.33	11
Nov. 7	do	1.14	6.8	July 21	do	1.41	13
22	do	1.12	6.3	Aug. 16	F. G. Wood	1.32	8.8
				Sept. 3	do	1.33	8.5
1908.				22	G. T. Peekema	1.33	10
Feb. 1	R. B. Post	1.10	4.5	Oct. 27	do	1.30	6.4
Mar. 16	do	1.05	5.1	Nov. 30	do	1.29	6.8
Apr. 16	do	1.08	5.3				
27	do	1.05	5.8	1911.			
May 19	do	1.02	6.0	Jan. 6	G. T. Peekema	1.30	6.1
27	do	1.02	5.5	Feb. 6	do	1.30	7.4

Daily gage height, in feet, of Tuttle Creek near Lone Pine, Cal., for 1906-1911.

Day.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1906-7.											
1		1.1	1.2	1.2	1.2	1.0		1.2	1.4		1.2
2	1.1		1.2	1.2	1.2	1.0				1.45	
3		1.1	1.2	1.2	1.2	1.0			1.5		
4	1.1		1.2	1.2	1.2	1.0		1.25			1.2
5		1.1	1.2	1.2	1.2	1.0					
6	1.1		1.2	1.2	1.2	1.0				1.5	
7		1.1	1.2	1.2	1.2	1.0			1.5		
8	1.1		1.2	1.2	1.2	1.0		1.25			1.2
9		1.1	1.2	1.2	1.2	1.0				1.4	
10	1.1								1.55		
11		1.1	1.2	1.2	1.2	1.0		1.2			1.1
12	1.15		1.2	1.2	1.2	1.0				1.3	
13		1.1	1.2	1.2	1.2	1.0			1.5		
14			1.2	1.2	1.0	1.0		1.3			1.2
15		1.1	1.2	1.2	1.0					1.3	
16									1.25		
17			1.2	1.2	1.0	1.0		1.4			1.2
18		1.1								1.3	
19	1.15		1.1	1.2	1.0	1.2			1.3		
20	1.13	1.1						1.2			1.1

Daily gage height, in feet, of Tuttle Creek near Lone Pine, Cal., for 1906-1911—Contd.

Day.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1906-7.											
21	1.15	.....	1.1	1.2	1.0	1.2	.....	.....	1.3	.....	.....
22	.....	1.1	.....	.....	.....	.....	.....	.....	.....	.....	.....
23	1.15	.....	1.1	1.2	1.0	1.2	.....	1.8	.....	.....	1.1
24	.....	1.1	.....	.....	.....	.....	.....	.....	1.3	.....	.....
25	1.15	.....	1.1	1.2	1.0	1.2	.....	.....	1.3	.....	.....
26	.....	1.1	.....	.....	.....	.....	.....	1.7	.....	.....	1.1
27	.....	.....	1.1	1.2	1.0	1.2	.....	.....	1.25	1.2	.....
28	1.1	1.1	.....	.....	.....	.....	.....	.....	.....	.....	.....
29	.....	.....	1.1	.....	1.0	1.2	.....	1.5	.....	.....	1.1
30	1.1	1.1	.....	.....	.....	.....	.....	.....	.....	1.2	.....
31	.....	.....	1.1	.....	1.0	.....	.....	.....	1.5	.....	.....

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1907-8.												
1	.....	1.2	1.1	.....	1.1	.....	1.3	1.25	.....	1.15	.....	.....
2	1.0	.....	.....	.....	.....	1.1	.....	.....	.....	.....	.....	1.1
3	.....	.....	.....	1.05	.....	.....	.....	.....	1.1	.....	1.25	.....
4	.....	1.25	1.1	.....	1.05	.....	1.3	1.25	.....	1.2	.....	.....
5	1.2	.....	.....	.....	.....	1.1	.....	.....	.....	.....	.....	1.1
6	.....	.....	.....	1.05	.....	.....	.....	.....	1.15	.....	1.3	.....
7	.....	1.25	1.1	.....	1.05	.....	1.25	1.25	.....	1.2	.....	.....
8	1.1	.....	.....	.....	.....	1.1	.....	.....	.....	.....	.....	1.1
9	.....	.....	.....	1.05	.....	.....	.....	.....	1.15	.....	1.3	.....
10	.....	1.2	1.1	.....	1.1	.....	1.3	1.3	.....	1.25	.....	.....
11	1.1	.....	.....	.....	.....	1.15	.....	.....	.....	.....	.....	1.5
12	.....	.....	.....	1.05	.....	.....	.....	.....	1.15	.....	1.25	.....
13	.....	1.2	1.05	.....	1.1	.....	1.3	1.25	.....	1.3	.....	.....
14	1.1	.....	.....	.....	.....	1.15	.....	.....	.....	.....	.....	1.15
15	.....	.....	.....	1.0	.....	.....	.....	.....	1.2	.....	1.25	.....
16	.....	.....	1.1	1.1	.....	1.1	.....	1.2	.....	1.2	.....	.....
17	1.25	.....	.....	.....	1.1	.....	1.2	.....	.....	.....	.....	1.1
18	.....	.....	.....	1.0	.....	.....	.....	.....	1.25	.....	1.2	.....
19	.....	1.1	1.1	.....	1.1	.....	1.4	1.0	.....	1.15	.....	.....
20	1.1	.....	.....	.....	.....	1.2	.....	.....	.....	.....	.....	1.1
21	.....	.....	.....	1.0	.....	.....	.....	.....	1.25	.....	1.2	.....
22	.....	1.1	1.1	.....	1.25	.....	1.15	1.0	.....	1.15	.....	.....
23	1.2	.....	.....	.....	.....	1.25	.....	.....	.....	.....	.....	1.1
24	.....	.....	.....	1.2	.....	.....	.....	.....	1.3	.....	1.2	.....
25	.....	1.1	1.05	.....	1.2	.....	1.2	1.05	.....	1.1	.....	.....
26	1.25	.....	.....	.....	.....	1.25	.....	.....	.....	.....	.....	1.15
27	.....	.....	.....	1.2	.....	.....	.....	.....	1.3	.....	1.15	.....
28	.....	1.05	1.1	.....	1.1	.....	1.2	1.1	.....	1.1	.....	.....
29	1.2	.....	.....	.....	.....	1.25	.....	.....	.....	.....	.....	1.1
30	.....	.....	.....	.....	.....	.....	.....	.....	1.35	.....	1.15	.....
31	.....	.....	1.1	.....	.....	.....	.....	1.1	.....	1.1	.....	.....
1908-9.												
1	.....	1.1	1.1	.....	.....	1.1	.....	.....	.....	.....	1.4	.....
2	1.1	.....	.....	.....	.95	.....	.....	.....	1.25	1.8	.....	.....
3	.....	.....	.....	1.05	.....	.....	1.1	1.15	.....	.....	.....	1.3
4	.....	1.1	1.1	.....	.....	1.1	.....	.....	.....	.....	1.3	.....
5	1.1	.....	.....	.....	1.0	.....	.....	.....	1.3	1.75	.....	.....
6	.....	.....	.....	1.05	.....	.....	1.1	1.2	.....	.....	.....	1.3
7	.....	1.1	1.1	.....	.....	1.1	.....	1.2	.....	.....	1.3	.....
8	1.05	.....	.....	.....	.95	.....	.....	.....	1.35	1.75	.....	.....
9	.....	.....	.....	1.05	.....	.....	1.1	1.15	.....	.....	.....	1.2
10	.....	1.1	1.1	.....	.....	1.1	.....	.....	.....	.....	1.3	.....
11	1.1	.....	.....	.....	1.15	.....	.....	.....	1.4	1.7	.....	.....
12	.....	.....	.....	1.05	.....	.....	1.1	1.1	.....	.....	.....	1.1
13	.....	1.1	1.1	.....	.....	1.1	.....	.....	.....	.....	1.3	.....
14	1.1	.....	.....	.....	1.1	.....	.....	.....	1.5	1.85	.....	1.25
15	.....	.....	.....	1.1	.....	.....	1.1	1.2	.....	.....	.....	1.1
16	.....	1.1	1.1	.....	.....	1.1	.....	.....	.....	.....	1.3	.....
17	1.1	.....	.....	.....	1.1	.....	.....	.....	1.6	1.8	.....	.....
18	.....	.....	.....	1.1	.....	.....	1.1	1.2	.....	.....	1.4	1.1
19	.....	1.1	1.1	.....	.....	1.1	.....	.....	.....	.....	1.4	.....
20	1.1	.....	.....	.....	1.1	.....	.....	.....	1.6	1.7	.....	.....

Daily gage height, in feet, of Tuttle Creek near Lone Pine, Cal., for 1906-1911—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1908-9.												
21.				1.1			1.1	1.25				1.2
22.		1.1	1.05			1.1					1.1	
23.	1.1				1.05				1.7	1.65		
24.				1.05			1.1	1.2				1.2
25.		1.1	1.05			1.1		1.15			1.3	
26.	1.1				1.1				1.7	1.65		
27.				1.0			1.1	1.2				1.2
28.		1.1	1.05			1.1					1.2	
29.	1.1								1.75	1.6		
30.				1.0			1.1	1.25				1.2
31.			1.05	1.0		1.1					1.2	
1909-10.												
1.				1.1			1.2					1.35
2.		1.1	1.3			1.1			1.4	1.3	1.4	
3.	1.2				1.4			1.2				
4.				1.2			1.3					1.3
5.		1.15	1.4			1.1			1.4	1.3	1.4	
6.	1.1				1.4			1.2				
7.				1.3			1.3					1.3
8.		1.15	1.5			1.0			1.4	1.3	1.35	
9.	1.05				1.4			1.2				
10.				1.2			1.3					1.3
11.		1.15	1.5			1.0			1.4	1.3	1.35	
12.	1.05				1.5			1.2				
13.				1.2			1.1					1.3
14.		1.15	1.3			1.1			1.4	1.35	1.35	
15.	1.1				1.4			1.2				
16.				1.2			1.0					1.4
17.		1.15	1.2			1.1			1.35	1.35	1.3	
18.	1.2				1.3		1.0	1.3				
19.				1.3								1.35
20.		1.15	1.25			1.2			1.35		1.3	
21.	1.2				1.1		1.4	1.3		1.4		
22.				1.4								1.35
23.		1.15	1.4			1.2			1.3		1.3	
24.	1.2				1.1		1.4	1.3		1.4		
25.				1.4								1.3
26.		1.2	1.4			1.1			1.3		1.3	
27.	1.2				1.1		1.2	1.3		1.6		
28.				1.3								1.3
29.		1.2	1.2			1.2			1.3		1.3	
30.	1.1						1.3	1.4		1.4		
31.				1.3								
Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Day.	Oct.	Nov.	Dec.	Jan.	Feb.	
1910-11.						1910-11.						
1.	1.3				1.3	16.	1.3				1.4	
2.				1.3		17.				1.3		
3.		1.3	1.3			18.		1.3	1.3			
4.	1.3				1.4	19.	1.3				1.35	
5.				1.3		20.				1.3		
6.		1.3	1.3		1.3	21.		1.3	1.3			
7.	1.3				1.35	22.	1.3				1.35	
8.				1.3		23.				1.3		
9.		1.3	1.3			24.		1.3	1.3			
10.	1.3				1.3	25.	1.3				1.3	
11.				1.3		26.				1.3		
12.		1.3	1.3			27.		1.3	1.3			
13.	1.3				1.3	28.	1.3				1.3	
14.				1.3		29.				1.4		
15.		1.3	1.3			30.		1.3	1.3			
						31.	1.3					

Daily discharge, in second-feet, of Tuttle Creek near Lone Pine, Cal., for 1909-1911.

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909.									
1.....	5	4	6	7	7	15	36	16	10
2.....	5	4	6	7	8	15	36	16	14
3.....	5	4	6	7	10	17	35	12	14
4.....	5	4	6	7	12	17	35	12	14
5.....	5	5	6	7	12	17	32	12	14
6.....	5	5	6	7	12	17	31	12	14
7.....	5	4	6	7	12	17	31	13	14
8.....	5	4	6	7	12	20	30	13	10
9.....	5	5	6	7	10	22	28	13	10
10.....	5	7	6	7	9	22	28	13	10
11.....	5	8	6	7	9	22	28	13	7
12.....	5	7	6	7	9	22	31	13	7
13.....	5	7	6	7	9	27	34	14	10
14.....	6	7	6	7	12	27	36	14	12
15.....	6	7	6	7	12	27	34	14	7
16.....	6	7	6	7	13	32	34	14	7
17.....	6	8	6	7	13	32	34	16	7
18.....	6	8	6	8	13	32	34	19	7
19.....	6	7	6	8	13	32	29	19	7
20.....	6	7	6	8	13	31	29	14	10
21.....	6	7	6	8	15	30	29	10	10
22.....	6	6	6	8	13	35	29	7	10
23.....	5	6	6	8	13	35	27	10	10
24.....	5	6	6	8	13	34	27	10	10
25.....	5	7	6	8	11	34	27	14	10
26.....	4	7	6	8	13	33	27	14	10
27.....	4	7	6	8	13	33	25	10	10
28.....	4	6	6	8	13	32	25	10	10
29.....	4	.....	6	8	13	34	25	10	10
30.....	4	.....	6	8	15	36	25	10	10
31.....	4	.....	6	.....	15	.....	16	10	.....

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909-10.												
1.....	9	6	14	6	13	6	8	8	13	10	12	9
2.....	9	6	14	7	14	6	9	7	13	10	12	8
3.....	9	6	14	7	16	6	10	6	13	10	12	8
4.....	9	7	16	8	16	6	12	6	13	10	12	8
5.....	6	7	16	9	16	6	12	6	13	10	12	8
6.....	6	7	16	10	16	5	12	6	13	10	11	8
7.....	6	7	22	12	16	5	12	6	13	10	11	8
8.....	5	7	22	11	16	4	12	6	13	10	10	8
9.....	5	7	22	9	16	4	12	6	13	10	10	8
10.....	5	7	22	8	18	4	12	6	13	9	10	8
11.....	5	7	22	8	19	4	10	6	13	9	10	8
12.....	5	7	16	8	20	5	8	6	13	10	10	8
13.....	5	7	16	8	19	5	6	6	13	10	10	8
14.....	6	7	14	8	17	6	5	6	13	11	10	9
15.....	6	7	14	8	16	6	5	6	13	11	10	10
16.....	6	7	9	8	15	6	4	7	12	11	9	12
17.....	9	7	9	9	14	6	4	8	12	11	8	11
18.....	9	7	12	10	12	7	4	9	12	11	8	11
19.....	9	7	12	12	10	7	8	9	12	12	8	10
20.....	9	7	12	13	8	8	12	9	12	13	8	10
21.....	9	7	14	15	6	7	16	9	11	13	8	10
22.....	9	7	12	16	6	5	6	9	11	13	8	10
23.....	9	7	16	16	6	8	11	9	10	12	8	10
24.....	9	7	16	16	6	7	16	9	10	12	8	9
25.....	9	9	16	16	6	7	13	9	10	15	8	9
26.....	9	9	16	14	6	6	10	9	10	18	8	9
27.....	9	9	16	13	6	7	7	9	10	21	8	8
28.....	9	9	14	12	6	7	8	10	11	18	8	8
29.....	6	9	9	12	.....	8	8	12	10	15	8	8
30.....	6	9	9	12	.....	8	9	13	10	12	8	8
31.....	6	.....	9	12	.....	8	.....	13	.....	12	8	.....

Daily discharge, in second-feet, of Tuttle Creek near Lone Pine, Cal., for 1906-1911—Con.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Day.	Oct.	Nov.	Dec.	Jan.	Feb.
1910-11.						1910-11.					
1.....	8	6	7	6	6	16.....	7	7	7	6	9
2.....	8	6	7	6	7	17.....	7	7	7	6	8
3.....	8	6	7	6	8	18.....	7	7	7	6	8
4.....	8	6	7	6	9	19.....	7	7	7	6	8
5.....	8	7	7	6	8	20.....	7	7	6	6	8
6.....	8	7	7	6	7	21.....	7	7	6	6	8
7.....	8	7	7	6	8	22.....	7	7	6	6	8
8.....	8	7	7	6	8	23.....	7	7	6	6	8
9.....	8	7	7	6	7	24.....	7	7	6	6	7
10.....	8	7	7	6	7	25.....	7	7	6	6	7
11.....	8	7	7	6	7	26.....	7	7	6	6	7
12.....	8	7	7	6	7	27.....	6	7	6	7	7
13.....	8	7	7	6	7	28.....	6	7	6	8	7
14.....	8	7	7	6	7	29.....	6	7	6	9	
15.....	7	7	7	6	8	30.....	6	7	6	9	
						31.....	6		6	8	

NOTE.—Daily discharge determined by the indirect method for shifting channels. Discharge interpolated for days on which gage was not read.

Monthly discharge of Tuttle Creek near Lone Pine, Cal., for 1906-1911.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1906.					
January.....			5.0	307	
February.....			4.8	267	
March.....			4.3	264	
April.....			5.4	321	
May.....			11.1	682	
June.....			26.0	1,550	
July.....			54.1	3,330	
August.....			33.1	2,040	
September.....			14.2	845	
The period				9,610	
1906-7.					
October.....			9.6	590	
November.....			9.0	536	
December.....			8.0	492	
January.....			7.4	455	
February.....			8.5	472	
March.....			7.4	455	
April.....			7.3	434	
May.....			9.0	553	
June.....			17.1	1,020	
July.....			18.8	1,160	
August.....			15.0	922	
September.....			7.1	422	
The year			10.4	7,510	
1907-8.					
October.....			7.8	480	
November.....			7.6	452	
December.....			5.9	363	
January.....			5.0	307	
February.....			4.5	259	
March.....			5.0	307	
April.....			5.5	327	
May.....			6.0	369	
June.....			10	595	
July.....			14	861	
August.....			15	922	
September.....			12	714	
The year			8.20	5,960	

^a Estimated.

Monthly discharge of Tuttle Creek near Lone Pine, Cal., for 1906-1911—Continued.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1908-9.					
October.....			8	492	
November.....			7	417	
December.....			7	430	
January.....	6	4	5.10	314	C.
February.....	8	4	6.10	339	C.
March.....	6	6	6.0	369	C.
April.....	8	7	7.43	442	C.
May.....	15	7	11.8	726	C.
June.....	36	15	26.6	1,580	C.
July.....	36	16	29.9	1,840	C.
August.....	16	10	12.8	787	C.
September.....	14	7	10.2	607	C.
The year.....			11.5	8,340	
1909-10.					
October.....	9	5	7.36	453	C.
November.....	9	6	7.3	434	C.
December.....	22	9	14.9	916	C.
January.....	16	6	10.7	658	C.
February.....	20	6	12.7	705	C.
March.....	8	4	6.13	377	C.
April.....	16	4	8.97	534	C.
May.....	13	6	7.94	488	C.
June.....	13	10	11.9	708	C.
July.....	21	9	11.9	732	C.
August.....	12	8	9.39	577	C.
September.....	12	8	8.90	530	C.
The year.....	22	4	9.84	7,110	
1910-11.					
October.....	8	6	7.29	448	C.
November.....	7	6	6.87	409	C.
December.....	7	6	6.61	406	C.
January.....	9	6	6.4	394	C.
February.....	9	6	7.5	417	C.

NOTE.—Discharge for 1906 determined by interpolating between discharge measurements; 1907 and 1908 by the indirect method for shifting channels.

COTTONWOOD CREEK NEAR OLANCHA, CAL.

The gaging station, which was located at a point 100 feet above the head of the diversion pipe of the Los Angeles Aqueduct, in sec. 21, T. 17 S., R. 36 E., was established September 9, 1908, replacing the station established September 26, 1906, at a point about one-fourth mile above the crossing of the Los Angeles Aqueduct and about 15 miles south of Lone Pine.

No water is diverted above the station. Just below the station the Los Angeles Aqueduct diverts water for the development of power. The drainage area above the mouth of the canyon is about 42 square miles.

The gage is a vertical staff on the right bank 500 feet below the footbridge from which discharge measurements were made.

The channel is composed of sand and gravel and is somewhat shifting. Both banks are high and rocky, and the current is swift at all stages.

The record may be considered good.

The station was discontinued March 31, 1911.

Discharge measurements of Cottonwood Creek near Olancho, Cal., in 1906-1911.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1906.		<i>Feet.</i>	<i>Sec.-ft.</i>	1908.		<i>Feet.</i>	<i>Sec.-ft.</i>
Jan. 6	G. R. Shuey.....	.....	5.6	Aug. 8	W. A. Lamb	0.90	24
Mar. 29	.....do.....	.....	12	19	.....do.....	.80	19
Apr. 20	.....do.....	.....	28	Sept. 9	.....do.....	1.86	16
27	.....do.....	.....	31	24	.....do.....	2.05	21
May 19	.....do.....	.....	158	Oct. 19	.....do.....	1.90	18
27	.....do.....	.....	131	29	A. T. Barrows.....	1.88	20
June 13	.....do.....	.....	434	Nov. 20	.....do.....	.48	7.6
28	.....do.....	.....	300				
July 10	.....do.....	.....	249	1909.			
24	.....do.....	.....	190	Jan. 28	R. E. Haines.....	1.90	18.1
Aug. 12	.....do.....	.....	104	Feb. 18	.....do.....	1.76	17.2
Sept. 26	.....do.....	0.80	22	Mar. 5	.....do.....	1.78	16.8
Oct. 26	.....do.....	.74	17	15	.....do.....	1.78	16.0
Nov. 21	.....do.....	.50	9.3	Apr. 26	.....do.....	2.30	42.6
				May 6	.....do.....	3.30	158
1907.				26	.....do.....	3.32	162
Jan. 31	G. R. Shuey.....	.55	11	June 18	.....do.....	3.55	198
Feb. 22	.....do.....	.60	11	July 9	.....do.....	3.00	117
Apr. 17	.....do.....	1.35	51	30	.....do.....	2.35	51.2
May 21	.....do.....	2.20	144	Aug. 19	.....do.....	2.15	40.8
June 4	.....do.....	2.30	157	Sept. 15	.....do.....	1.78	19.7
19	.....do.....	1.70	89	Oct. 5	.....do.....	1.72	16.7
25	.....do.....	1.70	84	21	.....do.....	1.50	11.4
July 30	.....do.....	1.20	40	Nov. 12	.....do.....	1.55	13.8
Aug. 13	R. B. Post.....	1.00	30				
28	.....do.....	.87	19	1910.			
Sept. 11	.....do.....	.70	13	Mar. 3	R. E. Haines.....	1.53	13
27	.....do.....	.56	9.7	23	.....do.....	1.80	22
Oct. 13	.....do.....	.82	19	Apr. 13	.....do.....	2.00	30
23	.....do.....	1.20	43	May 4	.....do.....	2.58	73
Nov. 8	.....do.....	.89	24	25	.....do.....	2.50	67
23	.....do.....	.75	15	June 29	C. H. Lee.....	1.85	27
				July 22	Lee and Wood.....	1.79	20
1908.				Aug. 17	F. G. Wood.....	1.52	13
Jan. 31	R. B. Post.....	.77	12	Sept. 2	.....do.....	1.43	12
Mar. 4	.....do.....	.69	16	20	G. T. Peekema.....	1.57	15
Apr. 15	.....do.....	1.29	49	Oct. 28	.....do.....	1.50	14
26	.....do.....	1.63	82	Dec. 1	.....do.....	1.41	11
May 28	.....do.....	1.33	50				
June 5	.....do.....	1.29	45	1911.			
14	.....do.....	1.16	39	Jan. 4	G. T. Peekema.....	1.41	12
July 22	W. A. Lamb.....	.80	22	Feb. 8	.....do.....	1.76	21
23	.....do.....	.80	20				

NOTE.—Beginning Sept. 9, 1908, gage heights refer to gage at new station.

Daily gage height, in feet, of Cottonwood Creek near Olancho, Cal., for 1906-1911.

Day.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1906-7.													
1.		0.8	0.7	0.5	0.5	0.55					1.75	1.3	0.8
2.		.8	.75			.55	0.6	0.65					
3.		.8	.75		.5						1.75	1.4	.8
4.		.8		.5				.65					
5.		.75			.5	.55	.6				1.75		.75
6.		.7						.65				1.2	
7.		.7		.5		.55	.6						.75
8.		.7			.5							1.15	
9.		.7		.6			.6	.9			1.7		
10.		.7			.5	.55		1.3				1.1	.7
11.		.7		.6						2.1	1.65		.7
12.		.7			.6	.55	.65						
13.		.7		.6				1.45		2.1	1.6	1.0	.7
14.		.7				.55	.65						
15.		.7		.8	.5			1.3		2.1		1.0	
16.		.7											
17.		.65	.6		.5	.6	.65			1.5			
18.		.65	.6	.6				1.35			1.0	.6	
19.		.6			.5	.6	.7			1.7	1.5		.6
20.		.6		.6				1.6		1.6	1.4	.95	.6

Daily gage height, in feet, of Cottonwood Creek near Olancha, Cal., for 1906-1911—Con.

Day.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1906-7.													
21.		0.5	0.5			0.6	0.75						
22.		.65		0.6	0.6					1.8		0.9	
23.		.5	.6			.6	.7	1.65			1.3		
24.		.7			.6	.6						.9	0.6
25.		.75	.5	.6				1.85		1.7	1.3		
26.	0.8	.74			.6	.6	.65					.9	.55
27.	.8	.7	.5	.6				1.9		1.8	1.3		
28.	.8	.7				.6	.65					.85	.55
29.	.8	.65	.5	.6	.6					1.8			
30.	.8	.70					.65	1.8			1.2	.85	
31.		.65			.55								
Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	
1907-8.													
1.	0.55		0.8		0.65					1.15			
2.						0.6			1.9	1.15			
3.	.5		.7							1.15			
4.		1.2			.65	.7					0.9		
5.	.8		.6			.75				1.1	1.05		
6.		.8								1.1	.95		
7.										1.1	.9		
8.	1.0		.9		.65	.7				1.1	.9		
9.		.8								1.1	.9		
10.	.9		.8		.65			1.55		1.05	1.0		
11.		.9						1.55		1.05	.9		
12.	.8		.8			.7			1.25	1.0	.9		
13.		.8							1.2	1.0	.8		
14.					.65				1.2	1.0	.8		
15.	.7	.7	.8			.7			1.2	1.0	.8		
16.									1.2	1.0	.8		
17.	1.4	.5	.7		.60				1.2	1.0	.75		
18.									1.2	1.0	.75		
19.	1.1	.5	.8			.95			1.2	1.05	.75		
20.									1.2	1.05	.75		
21.		.5			.6				1.2	1.05	.7		
22.	1.0		.8			1.1			1.1	1.0	.7		
23.									1.2	1.0	.7		
24.	1.25	.75	.75		.7				1.2	1.0	.65		
25.									1.1	1.0	.65		
26.	1.2	.8	.75			1.0			1.2	1.0	.6		
27.										1.0	.6		
28.	1.2	.8			.6				1.09	1.05	.6		
29.			.75			1.0			1.2	1.05	.6		
30.		.8							1.2		.5		
31.			.75					1.7			.6		
1908-9.													
1.		2.0	1.7	1.5	1.9	1.75	1.8	3.0	4.2	3.3	2.2	2.0	
2.		1.9	1.7	1.5	1.8	1.75	1.8	3.1	4.35	3.3	2.2	1.9	
3.		1.9	1.7	1.5	1.75	1.75	1.85	3.2	4.6	3.3	2.2	1.9	
4.		1.9	1.7	1.5	1.7	1.75	1.9	3.3	4.55	3.3	2.2	1.9	
5.		1.85	1.7	1.5	1.7	1.8	1.9	3.4	4.4	3.25	2.15	1.9	
6.		1.85	1.7	1.5	1.7	1.8	1.9	3.4	4.15	3.2	2.1	1.9	
7.		1.9	1.7	1.5	1.7	1.8	1.9	3.45	3.95	3.15	2.1	1.9	
8.		2.0	1.7	1.55	1.7	1.8	1.9	3.3	3.8	3.0	2.1	1.9	
9.		2.0	1.7	1.55	1.7	1.8	1.9	3.3	3.65	3.0	2.1	1.9	
10.		2.0	1.65	1.5	1.8	1.75	1.9	3.3	3.65	2.9	2.1	1.9	
11.	1.75	2.0	1.6	1.5	1.8	1.75	1.9	3.3	3.65	2.9	2.1	1.8	
12.	1.75	1.9	1.6	1.6	1.8	1.75	1.9	3.3	3.65	2.9	2.0	1.8	
13.	1.75	1.85	1.6	1.65	1.8	1.75	2.0	3.2	3.65	2.9	2.0	1.8	
14.	1.7	1.9	1.6	2.0	1.8	1.75	2.1	3.1	3.65	2.9	2.0	1.8	
15.	1.75	1.5	1.6	1.7	1.8	1.75	2.2	3.2	3.6	2.9	2.0	1.75	
16.	1.9	1.5	1.6	1.7	1.8	1.75	2.3	3.2	3.6	2.8	2.0	1.7	
17.	1.9	1.4	1.6	1.7	1.75	1.75	2.4	3.2	3.6	2.8	1.9	1.7	
18.	2.0	1.4	1.6	1.7	1.75	1.75	2.5	3.2	3.5	2.8	2.5	1.7	
19.	2.25	1.4	1.5	1.7	1.75	1.75	2.55	3.2	3.45	2.7	2.2	1.7	
20.	2.2	1.5	1.5	2.0	1.75	1.75	2.4	3.2	3.4	2.7	2.0	1.7	

Daily gage height, in feet, of Cottonwood Creek near Olancha, Cal., for 1906-1911—Con.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	
1908-9.													
21.....	2.45	1.5	1.5	2.0	1.75	1.75	2.4	3.3	3.4	2.7	2.0	1.7	
22.....	2.3	1.6	1.5	2.0	1.75	1.75	2.4	3.3	3.4	2.6	2.0	1.7	
23.....	2.1	1.6	1.5	1.9	1.75	1.8	2.3	3.25	3.4	2.6	2.0	1.7	
24.....	2.05	1.6	1.5	1.9	1.75	1.8	2.3	3.25	3.4	2.6	2.0	1.65	
25.....	2.0	1.5	1.5	1.9	1.75	1.8	2.4	3.25	3.4	2.6	1.9	1.65	
26.....	1.9	1.7	1.5	1.9	1.75	1.8	2.5	3.35	3.4	2.5	1.9	1.6	
27.....	1.9	1.7	1.5	1.9	1.75	1.75	2.6	3.5	3.4	2.45	1.9	1.6	
28.....	1.9	1.6	1.5	1.85	1.75	1.75	2.8	3.5	3.35	2.4	1.9	1.9	
29.....	1.9	1.7	1.5	1.85	1.75	1.75	2.8	3.3	3.35	2.4	2.0	1.75	
30.....	1.9	1.7	1.5	1.9	1.75	1.8	2.8	3.35	3.35	2.3	2.6	1.7	
31.....	2.0	1.5	1.5	1.9	1.75	1.8	2.8	3.85	3.85	2.25	2.1	2.1	
1909-10.													
1.....	1.7	1.4	1.5	1.7	1.5	1.45	1.65	2.7	2.5	1.8	1.75	1.45	
2.....	1.7	1.4	1.6	1.6	1.4	1.5	1.7	2.7	2.5	1.8	1.7	1.4	
3.....	1.6	1.4	1.3	1.5	1.4	1.5	1.7	2.6	2.5	1.8	1.7	1.4	
4.....	1.7	1.4	1.2	1.6	1.4	1.55	1.75	2.35	2.5	1.75	1.7	1.4	
5.....	1.7	1.4	1.5	1.6	1.5	1.6	1.8	2.3	2.5	1.75	1.7	1.4	
6.....	1.7	1.4	1.5	1.7	1.5	1.6	1.8	2.5	2.5	1.75	1.65	1.4	
7.....	1.7	1.3	1.6	1.7	1.5	1.6	1.8	2.6	2.5	1.7	1.65	1.4	
8.....	1.7	1.4	1.6	1.6	1.5	1.65	1.85	2.6	2.4	1.7	1.6	1.35	
9.....	1.65	1.4	1.7	1.6	1.5	1.7	1.85	2.6	2.3	1.7	1.6	1.35	
10.....	1.6	1.4	1.6	1.6	1.45	1.7	1.9	2.6	2.3	1.7	1.6	1.35	
11.....	1.6	1.45	1.7	1.6	1.45	1.7	2.0	2.6	2.25	1.7	1.55	1.3	
12.....	1.6	1.5	1.8	1.6	1.45	1.7	2.0	2.6	2.2	1.7	1.55	1.3	
13.....	1.6	1.5	1.8	1.6	1.45	1.7	2.0	2.6	2.2	1.7	1.55	1.3	
14.....	1.6	1.5	1.7	1.6	1.45	1.75	2.0	2.6	2.2	1.65	1.5	1.3	
15.....	1.6	1.5	1.7	1.6	1.45	1.7	2.0	2.6	2.2	1.65	1.5	3.0	
16.....	1.6	1.6	1.7	1.6	1.4	1.75	2.1	2.6	2.2	1.65	1.5	1.9	
17.....	1.6	1.6	1.6	1.5	1.4	1.75	2.2	2.5	2.2	1.65	1.5	1.7	
18.....	1.5	1.6	1.5	1.5	1.4	1.75	2.25	2.5	2.1	2.0	1.5	1.65	
19.....	1.5	1.55	1.6	1.5	1.4	1.75	2.3	2.5	2.0	1.9	1.5	1.6	
20.....	1.45	1.55	1.5	1.5	1.4	1.8	2.4	2.5	2.0	1.8	1.5	1.55	
21.....	1.45	1.6	1.6	1.5	1.45	1.8	2.5	2.45	2.0	1.8	1.5	1.55	
22.....	1.4	1.55	1.5	1.5	1.45	1.75	2.5	2.45	2.0	1.8	1.5	1.55	
23.....	1.4	1.5	1.5	1.5	1.45	1.65	2.6	2.45	2.0	1.75	1.5	1.55	
24.....	1.4	1.6	1.5	1.5	1.45	1.65	2.65	2.45	1.9	1.7	1.5	1.5	
25.....	1.4	1.6	1.5	1.4	1.45	1.7	2.7	2.4	1.9	1.7	1.5	1.5	
26.....	1.4	1.5	1.5	1.5	1.45	1.55	2.75	2.4	1.9	1.7	1.5	1.5	
27.....	1.4	1.4	1.5	1.5	1.45	1.7	2.8	2.4	1.85	1.85	1.5	1.5	
28.....	1.4	1.6	1.5	1.5	1.45	1.7	2.8	2.4	1.85	2.1	1.5	1.5	
29.....	1.35	1.5	1.5	1.5	1.45	1.7	2.7	2.4	1.85	1.9	1.5	1.5	
30.....	1.3	1.5	1.5	1.5	1.45	1.7	2.7	2.4	1.85	1.85	1.45	1.5	
31.....	1.3	1.5	1.6	1.5	1.45	1.6	2.7	2.4	1.85	1.8	1.45	1.5	
1910-11.													
Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.
1910-11.													
1.....	1.5	1.5	1.4	1.5	1.7	1.35	16.....	1.5	1.3	1.3	1.5	1.4	1.6
2.....	1.5	1.45	1.35	1.5	1.8	1.4	17.....	1.6	1.3	1.3	1.45	1.5	1.55
3.....	1.5	1.45	1.4	1.4	1.8	1.4	18.....	1.7	1.5	1.4	1.45	1.45	1.55
4.....	1.5	1.5	1.3	1.4	1.7	1.4	19.....	1.5	1.15	1.4	1.4	1.45	1.55
5.....	1.45	1.5	1.4	1.4	1.7	1.4	20.....	1.5	1.3	1.5	1.4	1.4	1.55
6.....	1.45	1.4	1.5	1.4	1.85	1.45	21.....	1.6	1.4	1.5	1.4	1.4	1.6
7.....	1.45	1.3	1.5	1.4	1.75	1.45	22.....	1.6	1.4	1.5	1.4	1.4	1.6
8.....	1.45	1.4	1.5	1.4	1.75	1.5	23.....	1.5	1.4	1.5	1.4	1.4	1.6
9.....	1.45	1.4	1.4	1.4	1.65	1.6	24.....	1.5	1.3	1.5	1.4	1.4	1.6
10.....	1.4	1.4	1.5	1.35	1.65	1.65	25.....	1.5	1.35	1.5	1.5	1.4	1.6
11.....	1.45	1.4	1.5	1.45	1.6	1.65	26.....	1.5	1.3	1.5	1.5	1.4	1.6
12.....	1.3	1.4	1.3	1.5	1.5	1.65	27.....	1.5	1.3	1.45	1.5	1.4	1.6
13.....	1.4	1.5	1.3	1.5	1.5	1.6	28.....	1.5	1.3	1.4	1.5	1.4	1.6
14.....	1.3	1.5	1.3	1.5	1.5	1.6	29.....	1.5	1.3	1.4	1.7	1.7	1.7
15.....	1.5	1.4	1.3	1.5	1.45	1.6	30.....	1.5	1.3	1.4	1.8	1.8	1.8
							31.....	1.5	1.3	1.4	1.9	1.9	1.8

Rating tables for Cottonwood Creek near Olancho, Cal.

For 1907.

Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.
<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>
0.50	9.4	1.00	27	1.50	65	2.00	120
.60	11	1.10	33	1.60	75	2.10	132
.70	13	1.20	40	1.70	85	2.20	144
.80	17	1.30	48	1.80	96	2.30	157
.90	21	1.40	56	1.90	108		

NOTE.—Table applicable only to open channel. It is based on 16 discharge measurements made during 1907, and is well defined between gage heights 0.5 foot and 2.3 feet.

January 1 to September 8, 1908.

0.60	11	1.10	35	1.60	76	2.10	132
.70	15	1.20	42	1.70	86	2.20	145
.80	19	1.30	49	1.80	97	2.30	158
.90	24	1.40	57	1.90	108		
1.00	29	1.50	66	2.00	120		

NOTE.—Table applicable only to open channel. It is based on 14 discharge measurements made during 1908, and is well defined between gage heights 0.8 foot and 1.7 feet.

September 9 to December 31, 1908.

1.40	12.5	1.60	14.5	1.80	17.0	2.00	20.0
1.50	13.5	1.70	15.5	1.90	18.5		

Daily discharge, in second-feet, of Cottonwood Creek near Olancho, Cal., for 1909–1911.

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909.									
1.....	8.3	20	15	16	117	302	159	42	29
2.....	8.3	16	15	16	130	326	159	42	24
3.....	8.3	15	15	18	144	366	159	42	24
4.....	8.3	13	15	20	159	358	159	42	24
5.....	8.3	13	16	20	174	334	152	38	24
6.....	8.3	13	16	20	174	294	144	35	24
7.....	8.3	13	16	20	182	262	137	35	24
8.....	9.4	13	16	20	159	238	117	35	24
9.....	9.4	13	16	20	159	214	117	35	24
10.....	8.3	16	1	20	159	214	104	35	24
11.....	8.3	16	15	20	159	214	104	35	20
12.....	10	16	15	20	159	214	104	29	20
13.....	12	16	15	24	144	214	104	29	20
14.....	24	16	15	30	130	214	104	29	20
15.....	13	16	15	36	144	206	104	29	18
16.....	13	16	15	43	144	206	92	29	17
17.....	13	15	15	51	144	206	92	24	17
18.....	13	15	15	60	144	190	92	65	17
19.....	13	15	15	65	144	182	82	42	17
20.....	24	15	15	51	144	174	82	29	17
21.....	24	15	15	51	159	174	82	29	17
22.....	24	15	15	51	159	174	73	29	17
23.....	20	15	16	43	152	174	73	29	17
24.....	20	15	16	43	152	174	73	29	16
25.....	20	15	16	51	152	174	73	24	16
26.....	20	15	16	60	166	174	65	24	14
27.....	20	15	15	70	190	174	61	24	14
28.....	18	15	15	92	190	166	57	24	24
29.....	18	.....	15	92	159	166	57	29	18
30.....	20	.....	16	92	166	166	49	73	17
31.....	20	.....	16	.....	246	.....	46	35	.....

Daily discharge, in second-feet, of Cottonwood Creek near Olancho, Cal., for 1909-1911—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909-10.												
1.....	17	9	11	18	13	12	16	86	65	21	20	12
2.....	17	9	14	15	11	13	18	86	65	21	18	11
3.....	14	9	8	13	11	13	18	75	65	21	18	11
4.....	17	9	7	15	11	14	20	53	65	20	18	11
5.....	17	9	11	15	13	15	21	49	65	20	18	11
6.....	17	9	11	18	13	15	21	65	65	20	16	11
7.....	17	8	14	18	13	15	21	75	65	18	16	11
8.....	17	9	14	15	13	16	23	75	57	18	15	10
9.....	16	9	17	15	13	18	23	75	49	18	15	10
10.....	14	9	14	15	12	18	25	75	49	18	15	10
11.....	14	8.5	17	15	12	18	30	75	46	18	14	9
12.....	14	11	20	15	12	18	30	75	42	18	14	9
13.....	14	11	20	15	12	18	30	75	42	18	14	9
14.....	14	11	17	15	12	20	30	75	42	16	13	9
15.....	14	11	17	15	12	18	30	75	42	16	13	121
16.....	14	14	17	15	11	20	36	75	42	16	13	25
17.....	14	14	14	13	11	20	42	65	42	16	13	18
18.....	11	14	11	13	11	20	46	65	36	30	13	16
19.....	11	12	14	13	11	20	49	65	30	25	13	15
20.....	10	12	11	13	11	21	57	65	30	21	13	14
21.....	10	14	14	13	12	21	65	61	30	21	13	14
22.....	9	12	11	13	12	20	65	61	30	21	13	14
23.....	9	11	11	13	12	16	75	61	30	20	13	14
24.....	9	14	11	13	12	16	80	61	25	18	13	13
25.....	9	14	11	11	12	18	86	57	25	18	13	13
26.....	9	11	11	13	12	14	92	57	25	18	13	13
27.....	9	9	11	13	12	18	97	57	23	23	13	13
28.....	9	14	11	13	12	18	97	57	23	36	13	13
29.....	8.5	11	11	13	.....	18	86	57	23	25	13	13
30.....	8	11	11	13	.....	18	86	57	23	23	12	13
31.....	8	.....	14	13	.....	15	.....	57	.....	21	12	.....

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.
1910-11.							1910-11.						
1.....	13	13	11	13	18	10	16.....	13	9	9	13	11	15
2.....	13	12	10	13	21	11	17.....	15	9	9	12	13	14
3.....	13	12	11	11	21	11	18.....	18	13	11	12	12	14
4.....	13	13	9	11	18	11	19.....	13	6	11	11	12	14
5.....	12	13	11	11	18	11	20.....	13	9	13	11	11	14
6.....	12	11	13	11	23	12	21.....	15	11	13	11	11	15
7.....	12	9	13	11	20	12	22.....	15	11	13	11	11	15
8.....	12	11	13	11	20	13	23.....	13	11	13	11	11	15
9.....	12	11	11	11	16	15	24.....	13	9	13	11	11	15
10.....	11	11	13	10	16	16	25.....	13	10	13	13	11	15
11.....	12	11	13	12	15	16	26.....	13	9	13	13	11	15
12.....	9	11	9	13	13	16	27.....	13	9	12	13	11	15
13.....	11	13	9	13	13	15	28.....	13	9	11	13	11	15
14.....	9	13	9	13	13	15	29.....	13	9	11	18	.....	18
15.....	13	11	9	13	12	15	30.....	13	9	11	21	.....	21
							31.....	13	.....	11	25	.....	21

NOTE.—Daily discharge determined from rating curves applicable as follows: Jan. 1 to June 3, 1909, fairly well defined between 15 and 200 second-feet; June 4 to Dec. 31, 1909, fairly well defined between 11 and 200 second-feet; Jan. 1, 1910, to Mar. 31, 1911, well defined above 10 second-feet.

Monthly discharge of Cottonwood Creek near Olancho, Cal., for 1906-1911.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1906.					
January.....			6.2	381	
February.....			8.2	455	
March.....			10.9	670	
April.....			24.2	1,440	
May.....			114	7,010	
June.....			333	19,800	
July.....			225	13,800	
August.....			104	6,400	
September.....			42.4	2,520	
The period.....					52,500
1906-7.					
October.....	22	10	15.9	978	
November.....	17	9.0	13.3	791	
December.....	22	9.0	12.8	787	
January.....	11	9.4	10.0	615	B.
February.....	11	10	10.5	583	B.
March.....	15	11	12	738	B.
April.....	108	12	56.3	3,350	B.
May.....			a 115	7,070	D.
June.....			a 110	6,550	D.
July.....	90	44	67.1	4,130	B.
August.....	56	18	28.8	1,770	B.
September.....	17	10	12.5	744	B.
The year.....					38.7 28,100
1907-8.					
October.....	56	9.4	28.0	1,720	B.
November.....	40	9.4	18.6	1,110	B.
December.....	21	11	15.8	972	B.
January.....			a 12.0	738	D.
February.....	15	11	12.5	719	B.
March.....	42	11	22.2	1,360	B.
April.....	81	29	58.1	3,460	B.
May.....	86	46	62.2	3,820	B.
June.....	108	35	48.5	2,890	B.
July.....	38	22	31.2	1,920	B.
August.....	32	7	18.7	1,150	B.
September.....			18.0	1,070	D.
The year.....					28.8 20,900
1908-9.					
October.....			a 19.0	1,170	D.
November.....	20	12.5	16.3	970	D.
December.....	15.5	13.5	14.4	885	D.
January.....	24	8.3	14.6	898	B.
February.....	20	13	15.0	833	B.
March.....	16	15	15.4	947	B.
April.....	92	16	41.2	2,450	A.
May.....	246	117	158.0	9,720	A.
June.....	366	166	221.0	13,200	B.
July.....	159	46	99.2	6,100	A.
August.....	73	24	34.5	2,120	B.
September.....	29	14	19.9	1,180	B.
The year.....					55.7 40,500
1909-10.					
October.....	17	8	12.6	775	B.
November.....	14	8	11.0	654	B.
December.....	20	7	13.1	806	B.
January.....	18	11	14.2	873	B.
February.....	13	11	11.9	661	B.
March.....	21	12	17.2	1,060	B.
April.....	97	16	47.2	2,810	B.
May.....	86	49	66.7	4,100	B.
June.....	65	23	42.0	2,500	B.
July.....	36	16	20.4	1,250	B.
August.....	20	12	14.3	879	B.
September.....	121	9	16.2	964	B.
The year.....					23.9 17,300

^a Estimated.

NOTE.—Discharge January to September, 1906, determined by interpolating between discharge measurements.

Monthly discharge of Cottonwood Creek near Olancho, Cal., for 1906-1911—Continued.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1910-11.					
October.....	18	9	12.8	787	B.
November.....	13	6	10.6	631	B.
December.....	13	9	11.3	695	B.
January.....	25	10	12.8	787	B.
February.....	23	11	14.4	800	B.
March.....	21	10	14.5	892	B.

ASH CREEK NEAR LONE PINE, CAL.

This station, which was located at a point just above the forks of the creek, near the mouth of the canyon, about 16 miles south of Lone Pine, in sec. 11, T. 17 S., R. 36 E., was established April 15, 1907.

No water is diverted above or near the station.

No gage-height record is available except during 1908.

Discharge measurements of Ash Creek near Lone Pine, Cal., in 1906-1910.

Date.	Hydrographer.	Gage height.	Dis- charge.	Date.	Hydrographer.	Gage height.	Dis- charge.
1906.				1908.			
Jan. 6	G. R. Shuey.....	<i>Feet.</i>	<i>Sec.-ft.</i>	Sept. 24	W. A. Lamb.....	<i>Feet.</i>	<i>Sec.-ft.</i>
Mar. 29	.....do.....	1.3	1.3	Oct. 19	.....do.....	1.40	4.1
Apr. 27	.....do.....	4.8	4.8	29	A. T. Barrows.....	1.28	2.3
May 19	.....do.....	10.7	10.7	29	.....do.....	1.25	2.5
27	.....do.....	16	16	Nov. 20	.....do.....	1.26	2.4
June 14	.....do.....	16	16	1909.			
29	.....do.....	21	21	Jan. 28	R. E. Haines.....	1.49	3.3
July 10	.....do.....	58	58	Feb. 18	R. E. Haines.....	1.53	5.3
Aug. 13	.....do.....	31	31	Mar. 5	.....do.....	1.61	6.1
Sept. 26	.....do.....	5.9	5.9	25	.....do.....	1.58	6.2
Oct. 26	.....do.....	3.2	3.2	Apr. 16	.....do.....	1.91	11.4
Nov. 21	.....do.....	2.8	2.8	May 6	.....do.....	2.60	32.8
1907.				26	.....do.....	2.70	39.0
Feb. 22	G. R. Shuey.....	2.4	2.4	June 18	.....do.....	2.60	39.0
Apr. 17	.....do.....	2.9	2.9	July 9	.....do.....	1.85	12.5
May 22	.....do.....	16	16	30	.....do.....	1.50	7.2
June 19	.....do.....	2.50	2.50	Aug. 9	.....do.....	1.40	5.1
July 30	.....do.....	2.00	2.00	Sept. 15	.....do.....	1.30	3.6
Aug. 14	R. B. Post.....	1.35	4.3	Oct. 5	.....do.....	1.31	3.9
29	.....do.....	1.30	3.9	21	.....do.....	1.30	3.3
Sept. 11	.....do.....	1.28	3.9	Nov. 12	.....do.....	1.32	3.5
27	.....do.....	1.21	2.6	1910.			
Oct. 13	.....do.....	1.18	2.1	Mar. 3	R. E. Haines.....	1.38	3.5
Nov. 8	.....do.....	1.32	3.6	23	.....do.....	1.40	4.0
23	.....do.....	1.59	5.4	Apr. 13	.....do.....	1.87	4.7
1908.				May 4	.....do.....	2.40	16
Jan. 31	R. B. Post.....	1.46	4.1	25 ^a	.....do.....	2.15	11
Mar. 4	.....do.....	1.35	4.1	June 29	C. H. Lee.....	1.66	2.9
Apr. 15	.....do.....	1.51	4.8	July 22 ^b	Lee and Wood.....	2.01	1.9
26	.....do.....	1.87	10.0	Aug. 17	F. G. Wood.....	1.92	1.5
May 28	.....do.....	2.10	15.0	Sept. 2	.....do.....	1.80	1.2
June 4	.....do.....	1.91	11.0	21	G. T. Peekema.....	1.90	1.9
14	.....do.....	1.85	11.0	Oct. 28	.....do.....	2.09	1.9
July 22	W. A. Lamb.....	1.68	7.0	Dec. 1 ^c	.....do.....	1.61	1.7
23	.....do.....	1.20	2.4	1911.			
Aug. 8	.....do.....	1.24	2.6	Jan. 4	G. T. Peekema.....	.....	2.1
Sept. 9	.....do.....	1.20	2.2	Feb. 8	.....do.....	.....	5.8
	.....do.....	1.15	1.8				

^a Made by wading 20 feet above footbridge.

^b Possible backwater effect from debris lodged below gage section during high water of July 18-19, 1910.

^c Brush dam just below measuring section removed.

Daily gage height, in feet, of Ash Creek near Lone Pine, Cal., for 1908.

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1.		1.35				1.9	1.4					
2.			1.5	1.7								
3.									1.2			
4.		1.35	1.5			1.85						1.3
5.				1.7			1.4					
6.					1.85			1.2				
7.												1.25
8.		1.35	1.5			1.9						
9.				1.75					1.3			1.3
10.		1.35			1.9		1.4					
11.						1.7						
12.			1.5	1.9				1.2				
13.					1.9				1.5			1.25
14.		1.3										
15.			1.5		1.95							1.3
16.				1.85		1.6	1.3	1.2	1.2			
17.		1.3						1.2				
18.					2.0							1.3
19.			1.7			1.55				1.3		
20.											1.25	
21.		1.3										
22.			1.8		2.0							
23.						1.55					1.25	
24.		1.4										
25.												
26.			1.75		1.9							
27.				2.1					1.3		1.25	
28.		1.55				1.45						1.3
29.			1.7							1.25		
30.							1.2	1.2	1.3			
31.	1.35											

Rating table for Ash Creek near Lone Pine, Cal., for 1908.

Gage height.	Discharge.	Gage height.	Discharge.	Gage height.	Discharge.	Gage height.	Discharge.
<i>Feet.</i>	<i>Sec.-ft.</i>	<i>Feet.</i>	<i>Sec.-ft.</i>	<i>Feet.</i>	<i>Sec.-ft.</i>	<i>Feet.</i>	<i>Sec.-ft.</i>
1.00	0.8	1.40	4.0	1.80	9.2	2.10	15.0
1.10	1.5	1.50	5.1	1.90	10.9	2.20	17.3
1.20	2.2	1.60	6.3	2.00	12.8	2.30	20.0
1.30	3.1	1.70	7.7				

NOTE.—Table applicable only to open channel. It is based upon 15 discharge measurements made during 1908 and is well defined between gage heights 1.2 feet and 2.1 feet.

Monthly discharge of Ash Creek near Lone Pine, Cal., for 1906-1909.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1906.					
January.....			1.7	105	
February.....			3.2	178	
March.....			4.5	277	
April.....			8.3	494	
May.....			14.8	910	
June.....			30.6	1,820	
July.....			25.3	1,560	
August.....			5.8	357	
September.....			4.0	238	
The period.....				5,940	
1906-7.					
October.....			3.0	184	
November.....			2.5	149	
December.....			2.2	135	
January.....			2.5	154	D.

Monthly discharge of Ash Creek near Lone Pine, Cal., for 1906-1909—Continued.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1906-7.					
February.....			2.5	139	D.
March.....			2.5	154	D.
April.....			20	1,190	D.
May.....			39.4	2,420	B.
June.....			29.4	1,750	B.
July.....			5.5	338	B.
August.....			3.5	215	C.
September.....			2.5	149	D.
The year.....			9.62	6,980	
1907-8.					
October.....			4.0	246	D.
November.....			4.5	268	D.
December.....			4.0	246	D.
January.....			4.0	246	D.
February.....	5.7	3.1	3.7	213	C.
March.....	9.2	5.1	6.6	406	C.
April.....	15	7.7	10.9	649	C.
May.....	13	10	11.5	707	C.
June.....	11	4.6	7.3	434	C.
July.....	4	2.2	3.2	197	D.
August.....	2.2	2.2	2.2	135	D.
September.....	5.1	2.2	3.0	179	D.
The year.....			5.41	3,930	
1908-9.					
October.....	3.1	2.6	3.0	184	D.
November.....	2.6	2.6	2.6	155	D.
December.....	3.1	2.6	3.0	184	C.
January.....			3.2	197	C.
February.....			4.5	250	C.
March.....			6.3	387	C.
April.....			14.0	833	C.
May.....			33.6	2,070	C.
June.....			49.7	2,960	C.
July.....			13.2	812	C.
August.....			5.4	332	C.
September.....			3.8	226	C.
The year.....			11.9	8,590	
1909.					
October.....			3.6	221	C.
November.....			3.5	208	C.
December.....			3.5	215	C.

NOTE.—Discharge estimated by comparison with neighboring streams or interpolated between discharge measurements except during 1908.

MISCELLANEOUS MEASUREMENTS.

The following measurements have been made on streams and ditches in the Owens River basin:

Miscellaneous measurements in Owens River drainage basin.

Date.	Stream.	Locality.	Discharge.
			<i>Sec.-ft.</i>
July 24, 1907	Owens River.....	Thompson ranch, Long Valley.....	217
May 18, 1908	do.....	Citrus, Cal.....	44
May 26, 1908	do.....	do.....	46
June 3, 1908	do.....	do.....	40
May 18, 1908	do.....	Alabama Hills.....	50
May 26, 1908	do.....	do.....	51
June 3, 1908	do.....	do.....	45
Aug. 26, 1910	do.....	Hand ranch.....	76
Oct. 31, 1903	Ash Creek.....	Olancha, Cal.....	1.2
May 5, 1904	do.....	do.....	3.0
June 19, 1905	do.....	Base of foothills.....	10.6
July 19, 1905	do.....	do.....	1.8
Aug. 14, 1903	Big Pine Creek.....	Big Pine.....	112
Oct. 12, 1903	do.....	do.....	16.4

Miscellaneous measurements in Owens River drainage basin—Continued.

Date.	Stream.	Locality.	Discharge. Sec.-ft.
Oct. 10, 1903	Birch Creek	Bishop, Cal.	5.0
Apr. 1, 1904	do.	do.	4.8
Apr. 5, 1904	do.	do.	5.0
Aug. 1, 1905	do.	do.	12
Oct. 13, 1903	do.	Fish Springs	3.5
Apr. 5, 1904	do.	do.	5.0
May 19, 1909	Birch Creek No. 2	South edge of Round Valley	7.1
June 29, 1909	do.	do.	22.6
Nov. 4, 1909	do.	do.	7.74
June 18, 1904	Bishop Creek, North Fork	Bishop	81
Dec. 12, 1906	Black Rock Springs	Near Independence	27
Feb. 19, 1907	do.	do.	27
Mar. 12, 1908	do.	do.	24
May 21, 1907	Carroll Creek	Lone Pine-Olancha road crossing	5.4
June 4, 1907	do.	do.	7.5
June 25, 1907	do.	do.	4.2
July 8, 1907	do.	do.	2.0
May 28, 1908	do.	do.	1.4
June 19, 1909	do.	do.	7.14
May 25, 1910	do.	do.	1.2
Oct. 13, 1903	Clear Creek	Black Rock	1.7
Apr. 5, 1904	do.	do.	6.4
June 14, 1905	do.	Near Big Pine	10.4
July 17, 1905	do.	do.	5.5
Aug. 4, 1902	Convict Creek	Bishop road crossing	37
July 18, 1907	do.	Long Valley	188
Oct. 31, 1903	Cottonwood Creek	Near Olancha	7.6
May 5, 1904	do.	do.	21
June 10, 1904	do.	do.	30
June 16, 1905	do.	do.	91
July 20, 1905	do.	do.	30
Nov. 10, 1905	do.	do.	4.3
Sept. 26, 1906	do.	Near Lone Pine	25
Jan. 31, 1907	do.	Below junction of South Fork	13
Sept. 28, 1907	do.	Intake Los Angeles Aqueduct pipe line	13
Nov. 8, 1907	do.	do.	25
Nov. 23, 1907	do.	do.	17
Oct. 12, 1903	Coyote Creek	Bishop	1.6
Apr. 4, 1904	do.	do.	2.0
Mar. 8, 1907	do.	$\frac{1}{2}$ mile above junction with Bishop Creek	.3
Apr. 29, 1907	do.	do.	16
July 23, 1907	Crooked Creek	Long Valley	15
Oct. 13, 1903	Division Creek	Near Independence	2.5
Apr. 5, 1904	do.	Black Rock Springs	2.5
June 14, 1905	do.	Near Independence	3.3
July 17, 1905	do.	do.	2.1
Dec. 2, 1905	do.	do.	5.4
Feb. 19, 1907	do.	Mouth of canyon	13
Dec. 4, 1905	Fish Springs	Near Big Pine	29
Dec. 7, 1906	do.	do.	36
Feb. 8, 1907	do.	do.	25
Oct. 14, 1903	George Creek	Near Independence	.8
May 4, 1904	do.	do.	2.4
June 15, 1905	do.	do.	24
Sept. 7, 1906	do.	do.	25
Oct. 30, 1906	do.	do.	4.8
Oct. 13, 1903	Goodale Creek	Black Rock	6.6
Apr. 5, 1904	do.	do.	2.1
June 14, 1905	do.	Near Aberdeen (Tibbetts)	5.9
July 17, 1905	do.	do.	3.5
Aug. 22, 1905	do.	do.	3.4
Nov. 17, 1905	do.	do.	4.6
July 18, 1907	Hilton Creek	Long Valley	44
Apr. 28, 1904	Horton Creek	Round Valley	5
Jan. 24, 1907	do.	Round Valley-Bishop road crossing	11
Mar. 11, 1907	do.	do.	2
June 19, 1908	do.	do.	6.6
July 16, 1908	do.	do.	12
Aug. 3, 1908	do.	do.	20
Aug. 25, 1908	do.	do.	6.2
Sept. 16, 1908	do.	do.	8.6
Oct. 7, 1908	do.	do.	5.3
Oct. 22, 1908	do.	do.	13
Nov. 6, 1908	do.	do.	12
Nov. 25, 1908	do.	do.	13
Jan. 22, 1909	do.	do.	29.9
Feb. 12, 1909	do.	do.	21.6
Feb. 28, 1909	do.	do.	11.3
Mar. 19, 1909	do.	do.	3.9
Apr. 8, 1909	do.	do.	3.19

Miscellaneous measurements in Owens River drainage basin—Continued.

Date.	Stream.	Locality.	Discharge. Sec.-ft.
Apr. 29, 1909	Horton Creek	Round Valley-Bishop road crossing	.88
May 19, 1909	do.	do.	5.61
June 10, 1909	do.	do.	27.0
June 29, 1909	do.	do.	49.6
Aug. 11, 1909	do.	do.	15.0
Sept. 22, 1909	do.	do.	5.32
Nov. 3, 1909	do.	do.	7.13
Mar. 8, 1910	do.	do.	7.4
Apr. 21, 1910	do.	do.	5.3
July 19, 1907	Hot Creek	Long Valley	120
Aug. 13, 1903	Little Pine Creek	Independence	8.6
Sept. 17, 1903	do.	do.	4.5
Oct. 14, 1903	do.	do.	4.3
Apr. 5, 1904	do.	do.	3.3
June 24, 1904	do.	do.	40
Dec. 19, 1904	do.	do.	3.5
Sept. 11, 1906	do.	do.	28
Nov. 13, 1906	do.	do.	5.3
July 15, 1909	Little Pine and Oak Creek waste.	Near Owens River	91.1
Oct. 15, 1903	Lone Pine Creek	Lone Pine	3.3
May 4, 1904	do.	do.	4.0
June 10, 1904	do.	do.	28
June 15, 1905	do.	Near Lone Pine	37
July 19, 1905	do.	do.	30
Nov. 9, 1905	do.	do.	3.5
Sept. 8, 1906	do.	do.	31
Sept. 24, 1906	do.	do.	20
Oct. 23, 1906	do.	do.	10
Oct. 10, 1903	McGee Creek	Bishop	2.6
Apr. 1, 1904	do.	do.	3.8
Aug. 1, 1905	do.	Near Bishop	8.7
July 22, 1907	Magee Creek	Long Valley	141
June 19, 1908	do.	Road crossing, Round Valley	2.0
July 16, 1908	do.	do.	3.7
Apr. 30, 1909	do.	South end of Round Valley	6.35
Aug. 4, 1902	Marmoth Creek	Sawmill	26.9
Oct. 12, 1903	Mill Creek	Big Pine	7.0
Apr. 4, 1904	do.	do.	5.2
Oct. 14, 1903	Moffitt Creek	Near Independence	3
June 15, 1905	do.	do.	9.0
Oct. 13, 1903	Oak Creek	do.	10.7
Apr. 5, 1904	do.	do.	9.4
June 24, 1904	do.	do.	35
Aug. 20, 1906	Oak Creek, North Fork	do.	49
Nov. 17, 1906	do.	do.	12
Nov. 19, 1906	do.	do.	12
Aug. 20, 1906	Oak Creek, South Fork	do.	52
Nov. 19, 1906	do.	do.	4.3
Mar. 12, 1907	Pine Creek	Mouth of canyon, Round Valley	25
Jan. 25, 1911	Rock Creek	Below Pine Creek, sec. 10, T. 6 S., R. 31 E.	59
Apr. 16, 1912	do.	do.	47
May 9, 1912	do.	do.	50
May 22, 1912	do.	do.	50
June 12, 1912	do.	do.	175
Dec. 4, 1905	Sawmill Creek	Near Independence	3.2
Apr. 8, 1908	Seeley Springs	Near Charles Butte	1.3
May 22, 1908	do.	do.	1.4
June 2, 1908	do.	do.	1.1
June 12, 1908	do.	do.	1.3
July 29, 1908	do.	do.	1.8
Nov. 25, 1908	do.	do.	1.3
May 1, 1909	do.	do.	1.33
Oct. 14, 1903	Shepard Creek	Near Independence	2.1
May 4, 1904	do.	do.	1.0
June 15, 1905	do.	do.	15.2
July 18, 1905	do.	do.	6.4
Nov. 14, 1906	do.	Near Independence, at mouth of canyon	5.4
Do.	do.	Near Independence, at fork 4 miles east of canyon	3.5
May 4, 1907	Symmes Creek	Near Independence	2.0
May 23, 1907	do.	do.	9.8
June 15, 1907	do.	do.	13
July 10, 1907	do.	do.	15
Aug. 14, 1907	do.	do.	1.8
Aug. 30, 1907	do.	do.	1.1
May 9, 1908	do.	do.	2.1
June 23, 1908	do.	do.	2.3
Jan. 18, 1909	do.	do.	.0
Apr. 23, 1909	do.	do.	5.42
May 13, 1909	do.	do.	18.5
June 4, 1909	do.	do.	40.6
June 23, 1909	do.	do.	25.2

Miscellaneous measurements in Owens River drainage basin—Continued.

Date.	Stream.	Locality.	Discharge. <i>Sec.-ft.</i>
July 16, 1909	Symmes Creek	Near Independence	16.1
Aug. 23, 1909	do.	do.	3.43
May 19, 1910	do.	do.	3.5
June 22, 1910	do.	do.	3.8
July 16, 1910	do.	do.	a. 1
Aug. 8, 1910	do.	do.	1.6
Sept. 7, 1910	do.	do.	.0
Oct. 13, 1903	Taboose Creek	Black Rock	4.8
Apr. 5, 1904	do.	do.	4.2
June 14, 1905	do.	Near Aberdeen (Tibbetts)	17.8
July 17, 1905	do.	do.	12
Aug. 24, 1905	do.	do.	5
Nov. 17, 1905	do.	do.	3.8
Dec. 2, 1905	do.	do.	4.6
Dec. 8, 1906	do.	do.	5.4
Jan. 24, 1907	do.	do.	3.4
Nov. 17, 1906	Thibaut Creek	do.	1.6
Aug. 12, 1910	do.	1 mile west of road from Independence to Big Pine.	a. 15
Sept. 6, 1910	do.	do.	a. 20
Oct. 13, 1903	Tinemaha Creek	Fish Springs	3.6
Apr. 5, 1904	do.	do.	4.0
June 14, 1905	do.	Near Tinemaha	19.5
July 17, 1905	do.	do.	14.8
Dec. 2, 1905	do.	do.	3.1
Oct. 15, 1903	Tuttle Creek	Near Lone Pine	2.3
May 5, 1904	do.	do.	3.0
June 16, 1905	do.	do.	10.8
July 19, 1905	do.	do.	10.8
July 22, 1909	A. O. Collins canal	3 miles east of Bishop	29.3
Feb. 9, 1907	Big Pine canal	Near Center School	31
May 1, 1907	do.	do.	38
Apr. 30, 1907	Bishop Creek canal	3 miles above Bishop	97
Jan. 22, 1907	Blake & Miller canal	$\frac{1}{2}$ mile below headgate	50
May 16, 1907	do.	do.	12.2
May 11, 1907	Dell canal	Flume 3 miles below headgate	26
July 24, 1909	do.	2 $\frac{1}{2}$ miles east of road crossing	13.1
May 16, 1908	East Side canal	Citrus, Cal.	9.1
May 26, 1908	do.	do.	12
June 3, 1908	do.	do.	15
Apr. 30, 1907	Farmers canal	3 miles above Bishop	29
July 22, 1909	do.	do.	20.4
May 1, 1907	Geo. Collins canal	do.	9.9
July 22, 1909	do.	do.	5.9
July 30, 1903	Hillside canal	Bishop	3.8
Aug. 5, 1903	do.	do.	1.9
Aug. 15, 1903	do.	do.	2.3
Sept. 7, 1903	do.	do.	2.7
Sept. 15, 1903	do.	do.	2.9
Apr. 21, 1904	do.	do.	8.4
July 11, 1904	do.	do.	5.0
Aug. 10, 1904	do.	do.	6.3
Nov. 17, 1904	do.	do.	11.5
Aug. 10, 1909	South Hillside canal	1 mile west of gaging station	18
Do.	Upper North Hillside canal	$\frac{1}{2}$ mile west of gaging station	14.5
Do.	Lower North Hillside canal	$\frac{1}{2}$ mile west of gaging station	4.7
Apr. 12, 1904	Hughes ditch	Bishop	1.5
Oct. 1, 1904	do.	do.	.3
Oct. 10, 1904	do.	do.	3.0
Nov. 3, 1904	do.	do.	2.2
Feb. 20, 1904	Indian ditch	do.	12.1
Aug. 5, 1903	Love's ditch	do.	.9
Aug. 15, 1903	do.	do.	.5
Sept. 5, 1903	do.	do.	1.5
Sept. 15, 1903	do.	do.	2.4
May 14, 1904	do.	do.	5.6
Apr. 21, 1904	do.	do.	4.2
July 11, 1904	do.	do.	3.8
May 13, 1907	McNally canal	Intake $3\frac{1}{2}$ miles north of Bishop	61
July 22, 1909	do.	3 miles north and 1 mile west of Bishop	16.1
Apr. 30, 1907	Owens River canal	Sec. 27, T. 6 S., R. 32 E., Mount Diablo meridian	42
July 23, 1909	do.	300 feet south of road crossing	73.4
May 1, 1907	Rawson canal	County bridge $2\frac{1}{2}$ miles east of Bishop	36
July 24, 1909	Sanger canal	$\frac{1}{2}$ mile east of Alvord	18.4
May 16, 1908	Stevens canal	Citrus, Cal.	9.7
May 26, 1908	do.	do.	9.7
June 3, 1908	do.	do.	11
Apr. 13, 1907	Williams canal	Williams ranch	5

a Estimated.

MOHAVE RIVER BASIN.

MOHAVE RIVER AT VICTORVILLE, CAL.

This station was established February 27, 1899. It was located in the town of Victorville, a station on the Atchison, Topeka & Santa Fe Railway, where Mohave River passes through a narrow gorge locally known as the "Narrows." Above the "Narrows" the valley broadens into a large reservoir site.

The channel is straight for 300 feet above and below the section where the rod was located. Both banks are high and rocky and not subject to overflow. The channel is composed of sand, which is constantly shifting.

During medium and low stages discharge measurements were made from a low foot bridge or by wading. During floods discharge measurements were made from the county bridge. The monthly discharge was obtained by averaging the discharge measurements made during the year.

Gage readings were discontinued in 1902. On March 1, 1905, a new inclined rod was fastened to the rock on the left bank about 300 feet above the county bridge. This gage was established as a matter of interest in connection with the discharge of the stream at high stages. There is no relation between gage readings and the discharge, as the bed of the stream is constantly changing at different stages of the river.

Discharge measurements of Mohave River at Victorville, Cal., in 1899-1906.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
		<i>Feet.</i>	<i>Sec.-ft.</i>			<i>Feet.</i>	<i>Sec.-ft.</i>
1899.				1901.			
Feb. 27	B. Cole.....	1.0	44	Oct. 5	P. H. Leahy.....	0.9	57
May 5	S. G. Bennett.....	.9	33	24	do.....	.9	82
June 13	do.....	.9	31	Nov. 6	do.....	.9	78
July 26	do.....	.85	27	24	do.....	.9	76
Sept. 5	do.....	.85	28	Dec. 10	do.....	.9	76
				25	do.....	.9	69
1900.							
Apr. 13	S. G. Bennett.....	.9	36	1902.			
28	P. H. Leahy.....	.9	42	Jan. 4	P. H. Leahy.....	.9	47
May 11	do.....	.9	36	21	do.....	.9	53
23	do.....	.9	34	Feb. 1	do.....	.9	58
29	do.....	.9	26	25	do.....	.9	63
June 3	do.....	.9	24	Mar. 5	do.....	.9	66
20	do.....	.85	29	29	do.....	.9	66
July 6	do.....	.85	31	Apr. 5	do.....	.9	67
25	do.....	.85	28	19	do.....	.9	62
				26	do.....		47
1901.				May 10	do.....		37
Feb. 11	S. G. Bennett.....	1.4	664	25	do.....		49
Mar. 4	P. H. Leahy.....	1.3	512	June 8	do.....		53
25	do.....	.9	50	27	do.....		47
Apr. 9	do.....	.9	39	July 5	do.....		38
27	do.....	.9	48	26	do.....		41
May 10	do.....	.85	47	Aug. 9	do.....		48
25	do.....	.85	51	15	do.....		33
June 10	do.....	.85	43	Oct. 20	do.....		49
25	do.....	.9	42	30	do.....		45
July 12	do.....	.9	40	Nov. 10	do.....		43
28	do.....	.9	42	27	do.....		50
Aug. 8	do.....	.9	45	Dec. 11	do.....		68
31	do.....	.9	55	19	do.....		69
Sept. 6	do.....	.9	49	27	S. G. Bennett.....		55
20	do.....	.9	61				

Discharge measurements of Mohave River at Victorville, Cal., in 1899-1906—Continued.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
		<i>Feet.</i>	<i>Sec.-ft.</i>			<i>Feet.</i>	<i>Sec.-ft.</i>
1903.				1904.			
Feb. 6	P. H. Leahy		59	Aug. 2	P. H. Leahy		34
14	do		57	5	do		31
21	do		67	9	do		32
28	do		74	12	do		33
Mar. 7	do		75	16	do		31
14	do		69	19	do		46
21	do		74	23	do		42
31	do		a 13,413	26	do		35
Apr. 1	do		a 3,760	30	do		33
4	do		a 1,135	Sept. 3	do		36
15	do		a 262	6	do		36
18	do		a 458	9	do		34
25	do		a 418	15	do		31
May 9	do		54	17	do		33
16	do		50	20	do		32
23	do		47	26	do		39
30	do		45	30	do		34
June 6	do		45	Oct. 4	do		41
13	do		38	7	do		47
20	do		35	11	do		49
27	do		34	15	do		49
July 3	do		38	18	do		48
11	do		40	22	do		53
18	do		39	25	do		51
31	do		32	28	do		52
Aug. 8	do		52	Nov. 1	do		54
15	do		34	4	do		48
24	do		37	8	do		47
Sept. 14	do		36	11	do		49
21	do		45	15	do		47
28	do		52	18	do		47
Oct. 8	do		55	22	do		51
19	do		49	25	do		52
26	do		54	29	do		53
31	do		51	Dec. 2	do		53
Nov. 8	do		53	6	do		53
14	do		57	9	do		66
21	do		54	13	do		70
28	do		59	16	do		56
Dec. 5	do		58	20	do		59
12	do		60	23	do		59
21	do		55	27	do		59
29	do		59	30	do		58
1904.				1905.			
Jan. 7	P. H. Leahy		62	Jan. 3	P. H. Leahy		56
16	do		67	6	do		58
23	do		58	10	do		70
28	do		45	13	do		71
30	do		62	17	do		59
Feb. 7	do		57	20	do		59
15	do		62	25	do		56
20	do		52	27	do		53
29	do		54	31	do		56
Mar. 5	do		68	Feb. 5	do		822
14	do		51	8	do		82
28 ^b	do		60	11	do		90
Apr. 6	do		49	15	do		2,082
16	do		41	18	do		97
25	do		42	21	do		95
30	do		40	Mar. 2	do		98
May 8	do		46	3	E. C. La Rue	3.96	90
16	do		48	6	P. H. Leahy	3.92	90
23	do		51	11	do	3.85	74
31	do		44	13	do	3.77	71
June 6	do		43	15	do	9.90	5,410
14	do		40	16	O. W. Peterson	4.95	820
21	do		30	18	P. H. Leahy	4.06	2,350
27	do		37	22	do	4.04	980
July 2	W. B. Clapp		28	25	do	4.0	740
12	P. H. Leahy		36	27	do	3.91	460
15	do		29	31	do	3.75	340
18	do		30	Apr. 6	R. S. Hawley	3.75	133
22	do		32	8	P. H. Leahy	3.75	133
26	do		40	11	do	3.7	123
29	do		34	14	do	3.66	104
				18	do	3.58	93

^a Float measurement.^b Small flood discharge on Mar. 23, of which measurement was not obtained on account of poor conditions. Estimated discharge 500 second-feet for short period. Stream soon assumed natural conditions.

Discharge measurements of Mohave River at Victorville, Cal., in 1899-1906—Continued.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1905.		Feet.	Sec.-ft.	1905.		Feet.	Sec.-ft.
Apr. 24	P. H. Leahy	3.5	60	Dec. 15	P. H. Leahy	4.02	73
25	R. S. Hawley	3.5	38	19	do.	4.05	71
29	P. H. Leahy	3.45	58	22	do.	4.05	67
May 3	do.	3.76	151	26	do.	4.03	66
6	do.	3.98	218	30	do.	4.03	58
10	do.	4.60	327				
13	do.		260	1906.			
16	do.		152	Jan. 2	P. H. Leahy	4.03	65
20	do.	3.98	80	6	do.		63
23	do.		65	9	do.	4.03	67
27	do.		55	12	do.	4.09	66
29	do.		48	16	do.		66
June 2	do.		63	20	do.	4.17	88
6	do.		51	23	do.	4.11	62
10	do.		46	26	do.	4.10	72
13	do.		39	31	do.	4.10	65
16	do.		43	Feb. 2	do.	4.10	64
20	do.		43	6	do.	4.10	67
27	do.		30	10	do.	4.10	68
30	do.		35	13	do.	4.11	64
July 3	do.		36	17	do.	4.11	50
7	do.		32	21	do.	4.12	79
11	do.		31	24	do.	4.12	65
14	do.		27	27	do.	4.08	70
18	do.		36	Mar. 2	do.	4.11	67
21	do.		32	7	do.	4.11	52
25	do.		30	9	do.	4.10	56
28	do.		34	12	do.	7.80	9,260
Aug. 2	do.		30	18	do.	4.15	1,620
5	do.		29	20	do.	4.11	828
25	do.		36	23	do.	4.45	552
28	do.		29	25	do.	6.25	4,530
31	do.		35	26	do.	5.60	5,570
Sept. 1	do.		47	27	Burrage and Leahy	4.90	2,100
5	do.		35	27	do.	4.80	1,880
8	do.		35	28	do.	4.40	1,240
11	do.		37	30	P. H. Leahy	4.30	1,430
15	do.		42	31	do.	4.30	965
19	do.		43	Apr. 2	do.	4.60	682
22	do.		43	6	do.	4.50	647
26	do.		42	10	do.	4.50	525
29	do.		42	13	do.	4.30	401
Oct. 3	do.		40	17	do.	4.20	348
6	do.		49	20	do.	4.20	273
10	do.		41	24	do.	4.10	202
13	do.		44	28	do.	4.20	222
17	do.		44	May 1	do.	4.20	227
20	do.		54	3	do.	4.20	202
24	do.		51	11	do.	4.00	123
27	do.		50	19	do.	4.00	42
Nov. 3	do.	4.20	49	25	do.	4.02	44
7	do.	4.20	46	June 1	do.	4.40	187
10	do.	4.29	81	10	do.	4.00	74
14	do.	4.21	66	17	do.	3.92	32
17	do.	4.20	62	24	do.	4.05	38
22	do.	4.16	58	29	do.	4.16	29
24	do.	4.15	65	July 5	do.	4.24	27
28	do.	4.16	73	13	do.	4.31	28
Dec. 1	do.	4.15	67	19	do.	4.32	33
5	do.	4.16	65	22	do.	4.36	33
8	do.	4.09	72	29	do.	4.41	31
12	do.	4.09	67	31	W. B. Clapp	4.39	22
		4.02	65	Nov. 12	W. F. Martin		41

Daily gage height, in feet, of Mohave River at Victorville, Cal., for 1899-1901 and 1905.

Day.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1899.								
1		1.0	1.1	1.0	1.0	0.9	0.9	0.85
2		1.0	1.1	1.0	.9	.9	.85	.85
3		1.0	1.0	.9	1.0	.9	.85	.85
4		1.0	1.0	.9	.9	.9	.85	.85
5		1.0	1.0	.9	.9	.9	.85	.85
6		1.0	.9	.9	.9	.9	.85	.85
7		.9	1.0	1.0	.9	.9	.85	.85
8		.9	1.0	1.0	.9	.9	.85	.85
9		1.0	.9	1.0	.9	.9	.9	.85
10		1.0	1.0	.9	.9	.9	.9	.85

Daily gage height, in feet, of Mohave River at Victorville, Cal., for 1899-1901 and 1905—
Continued.

Day.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.				
1899.												
11.....		1.0	1.0	0.9	0.9	0.9	0.9	0.85				
12.....		1.0	1.0	.9	.9	.9	.9	.85				
13.....		.9	.9	1.0	.9	.9	.85	.85				
14.....		.9	1.0	1.0	.9	.9	.85	.85				
15.....		.9	1.0	1.0	.9	.9	.85	.85				
16.....		1.0	.9	1.0	.9	.9	.85	.85				
17.....		1.0	.9	.9	.9	.9	.9	.85				
18.....		1.1	1.0	1.0	.9	.9	.9	.85				
19.....		.9	1.0	1.0	.9	.9	.8	.85				
20.....		.9	1.0	1.0	.9	.9	.85	.85				
21.....		1.1	1.0	1.0	.9	.9	.85	.85				
22.....		1.0	.9	1.0	.9	.9	.85	.85				
23.....		1.0	1.0	1.0	.9	.9	.85	.85				
24.....		1.0	1.0	1.0	.9	.9	.85	.85				
25.....		1.0	1.0	1.0	.9	.9	.85	.85				
26.....		1.0	1.0	.9	.9	.85	.9	.85				
27.....	1.0	.9	.9	.9	.9	.85	.9	.85				
28.....	1.0	1.0	1.0	.9	.9	.85	.85	.85				
29.....		1.0	1.0	1.0	.9	.85	.85	.85				
30.....		.9	1.0	1.0	.9	.85	.85	.85				
31.....		1.0		1.0		.85	.85					
Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1899-1900.												
1.....	0.85	0.9	0.9	1.0	1.1	1.1	1.0	0.9	0.9	0.8	0.85	0.85
2.....	.85	.9	.9	1.0	1.1	1.1	1.0	.9	.9	.8	.85	.85
3.....	.85	.9	.9	1.0	1.1	1.2	1.0	.9	.9	.8	.85	.85
4.....	.85	.9	.9	1.0	1.1	1.2	1.0	.9	.9	.8	.85	.85
5.....	.85	.9	.9	1.0	1.1	1.2	1.0	.9	.9	.8	.85	.85
6.....	.85	.9	.9	1.0	1.1	1.2	.9	.9	.9	.8	.85	.85
7.....	.85	.85	.9	1.0	1.1	1.1	.9	.9	.9	.8	.85	.85
8.....	.85	.85	.9	1.0	1.1	1.1	.9	.9	.9	.8	.85	.85
9.....	.85	.85	.9	1.0	1.1	1.1	.9	.9	.9	.8	.85	.85
10.....	.85	.85	.9	1.0	1.0	1.1	.9	.9	.9	.8	.85	.85
11.....	.9	.85	.9	1.0	1.0	1.1	.9	.9	.9	.8	.85	.85
12.....	.8	.85	.9	1.0	1.0	1.1	.9	.9	.9	.8	.85	.85
13.....	.85	.9	.9	1.0	1.0	1.1	.9	.9	.9	.8	.85	.85
14.....	.85	1.0		1.0	1.0	1.1	.9	.9	.9	.8	.85	.85
15.....	.85	.9		1.0	1.0	1.0	.9	.9	.9	.8	.85	.85
16.....	.85	.9		1.0	1.0	1.0	.9	.9	.9	.8	.85	.85
17.....	.85	.9		1.0	1.0	1.0	.9	.9	.9	.8	.85	.85
18.....	.85	.9		1.0	1.0	1.0	.9	.9	.9	.8	.85	.85
19.....	.85	.9		1.0	1.0	1.0	.9	.9	.85	.8	.85	.85
20.....	.85	.9		1.0	1.0	1.0	.9	.9	.85	.8	.85	.85
21.....	.85	.9		1.0	1.0	1.0	.9	.9	.85	.8	.85	.85
22.....	.85	.9		1.0	1.0	1.0	.9	.9	.8	.85	.85	.85
23.....	.85	.9		1.0	1.0	1.1	.9	.9	.8	.85	.85	.85
24.....	.85	.9		1.0	1.0	1.1	.9	.9	.8	.85	.85	.85
25.....	.85	.9		1.0	1.0	1.1	.9	.9	.8	.85	.85	.85
26.....	.85	.9		1.0	1.0	1.1	.9	.9	.8	.85	.85	.85
27.....	.9	.9		1.0	1.0	1.1	.9	.9	.8	.85	.85	.85
28.....	.9	.9		1.0	1.0	1.1	.9	.9	.8	.85	.85	.85
29.....	.9	.9		1.0		1.1	.9	.9	.8	.85	.85	.85
30.....	.9	.9		1.0		1.0	.9	.9	.8	.85	.85	.85
31.....	.9			1.0		1.0		.9		.85	.85	
1900-1901.												
1.....	.85	.9	.9	.9	.9	1.4	.9	.9	.85	.9	.9	.9
2.....	.85	.9	.9	.9	.9	1.4	.9	.9	.85	.9	.9	.9
3.....	.85	.9	.9	.9	.9	1.3	.9	.9	.85	.9	.9	.9
4.....	.85	.9	.9	.9	.9	1.3	.9	.9	.85	.9	.9	.9
5.....	.85	.9	.9	.9	2.6	1.2	.9	.85	.85	.9	.9	.9
6.....	.85	.9	.9	.9	4.0	1.2	.9	.85	.85	.9	.9	.9
7.....	.85	.9	.9	3.6	2.0	1.2	.9	.85	.85	.9	.9	.9
8.....	.85	.9	.9	1.0	1.6	1.2	.9	.85	.85	.9	.9	.9
9.....	.9	.9	.9	1.0	1.0	1.2	.9	.85	.9	.9	.9	.9
10.....	.9	.9	.9	.9	1.0	1.0	.9	.85	.9	.9	.9	.9

Daily gage height, in feet, of Mohave River at Victorville, Cal., for 1899-1901 and 1905—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1900-1901.												
11.....	0.9	0.9	0.9	0.9	1.0	1.0	0.9	0.85	0.9	0.9	0.9	0.9
12.....	.9	.9	.9	.9	1.2	1.0	.9	.85	.9	.9	.9	.9
13.....	.9	.9	.9	.9	1.2	1.0	.9	.85	.9	.9	.9	.9
14.....	.9	.9	.9	.9	1.2	1.0	.9	.85	.9	.9	.9	.9
15.....	.9	.9	.9	.9	1.4	1.0	.9	.85	.9	.9	.9	.9
16.....	.9	.9	.9	.9	1.4	1.0	.9	.85	.9	.9	.9	.9
17.....	.9	.9	.9	.9	1.6	.9	.9	.85	.9	.9	.9	.9
18.....	.9	.9	.9	.9	1.6	.9	.9	.85	.9	.9	.9	.9
19.....	.9	.9	.9	.9	1.8	.9	.9	.85	.9	.9	.9	.9
20.....	.9	.9	.9	.9	1.9	.9	.9	.85	.9	.9	.9	.9
21.....	.9	3.0	.9	.9	2.0	.9	.9	.85	.9	.9	.9	.9
22.....	.9	.9	.9	.9	2.0	.9	.9	.85	.9	.9	.9	.9
23.....	.9	.9	.9	.9	2.0	.9	.9	.85	.9	.9	.9	.9
24.....	.9	.9	.9	.9	1.5	.9	.9	.85	.9	.9	.9	.9
25.....	.9	.9	.9	.9	1.4	.9	.9	.85	.9	.9	.9	.9
26.....	.9	.9	.9	.9	1.4	.9	.9	.85	.9	.9	.9	.9
27.....	.9	.9	.9	.9	1.4	.9	.9	.85	.9	.9	.9	.9
28.....	.9	.9	.9	.9	1.4	.9	.9	.85	.9	.9	.9	.9
29.....	.9	.9	.9	.9	.....	.9	.9	.85	.9	.9	.9	.9
30.....	.9	.9	.9	.9	.....	.9	.9	.85	.9	.9	.9	.9
31.....	.9	.....	.9	.9	.....	.9	.....	.85	.....	.9	.9	.....

Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.
1901.											
1.....	0.9	0.9	0.9	11.....	0.9	0.9	0.9	21.....	0.9	0.9	0.9
2.....	.9	.9	.9	12.....	.9	.9	.9	22.....	.9	.9	.9
3.....	.9	.9	.9	13.....	.9	.9	.9	23.....	.9	.9	.9
4.....	.9	.9	.9	14.....	.9	.9	.9	24.....	.9	.9	.9
5.....	.9	.9	.9	15.....	.9	.9	.9	25.....	.9	.9	.9
6.....	.9	.9	.9	16.....	.9	.9	.9	26.....	.9	.9	.9
7.....	.9	.9	.9	17.....	.9	.9	.9	27.....	.9	.9	.9
8.....	.9	.9	.9	18.....	.9	.9	.9	28.....	.9	.9	.9
9.....	.9	.9	.9	19.....	.9	.9	.9	29.....	.9	.9	.9
10.....	.9	.9	.9	20.....	.9	.9	.9	30.....	.9	.9	.9
								31.....	.9	.....	.9

Day.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1905.										
1.....	4.0	3.9	3.45	4.0	4.05	4.0	4.0	4.1	4.2	4.15
2.....	3.95	3.9	3.5	4.0	4.0	4.0	4.0	4.1	4.2	4.15
3.....	.....	3.85	3.65	4.0	4.0	4.0	4.0	4.1	4.2	4.15
4.....	3.95	3.9	3.85	4.0	4.0	4.0	4.0	4.1	4.2	4.15
5.....	3.85	3.8	3.95	4.0	4.0	4.0	4.0	4.1	4.2	4.15
6.....	3.85	3.75	4.0	4.0	4.0	4.0	4.0	4.15	4.2	4.1
7.....	3.8	3.75	4.85	4.0	4.0	4.0	4.0	4.15	4.3	4.1
8.....	3.8	3.4	4.85	4.0	4.0	4.0	4.0	4.15	4.3	4.1
9.....	3.8	3.4	.....	4.0	4.0	4.0	4.0	4.15	4.25	4.1
10.....	3.75	3.65	4.6	4.0	4.0	4.0	4.0	4.15	4.2	4.05
11.....	3.75	3.65	4.6	4.0	4.0	4.0	4.0	4.15	4.2	4.05
12.....	3.75	3.65	4.2	4.0	4.0	4.0	4.0	4.15	4.2	4.0
13.....	9.95	3.65	4.2	4.05	4.0	4.0	4.0	4.15	4.2	4.0
14.....	5.0	3.65	4.1	4.05	4.0	4.0	4.0	4.15	4.2	4.0
15.....	5.0	3.6	4.1	4.05	4.0	4.0	4.0	4.15	4.2	4.0
16.....	5.05	3.6	4.05	4.05	4.0	4.0	4.0	4.15	4.15	4.0
17.....	4.1	3.6	4.0	4.05	4.0	4.0	4.0	4.2	4.15	4.0
18.....	4.05	3.6	4.0	4.05	4.0	4.0	4.0	4.2	4.15	4.05
19.....	4.05	3.55	4.0	4.05	4.0	4.0	4.0	4.2	4.15	4.05
20.....	4.05	3.65	4.0	4.05	4.0	4.0	4.0	4.2	4.15	4.05
21.....	4.05	3.6	4.0	4.05	4.0	4.0	4.0	4.2	4.15	4.05
22.....	4.05	3.6	4.0	4.05	4.0	4.0	4.0	4.2	4.15	4.05
23.....	4.0	3.5	4.0	4.05	4.0	4.0	4.0	4.2	4.15	4.05
24.....	4.0	3.5	4.0	4.05	4.0	4.0	4.0	4.2	4.15	4.05
25.....	4.0	3.5	3.95	4.05	4.0	4.0	4.0	4.2	4.2	4.05
26.....	4.0	3.5	3.95	4.05	4.0	4.0	4.0	4.2	4.2	4.05
27.....	4.0	3.45	4.0	4.05	4.0	4.0	4.0	4.2	4.15	4.05
28.....	3.85	3.45	4.2	4.05	4.0	4.0	4.0	4.2	4.15	4.05
29.....	3.8	3.45	4.1	4.05	4.0	4.0	4.0	4.2	4.15	4.05
30.....	4.2	3.45	4.1	4.05	4.0	4.0	4.0	4.2	4.15	4.05
31.....	3.9	.....	4.0	.....	4.0	4.0	4.0	4.2	.....	4.05

Monthly discharge of Mohave River at Victorville, Cal., for 1899-1905.

[Drainage area, 400 square miles.]

Month.	Discharge in second-feet.				Run-off.	
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.	Total in acre-feet.
1899.						
March.....	60	28	37	0.09	0.10	2,275
April.....	60	28	37	.09	.10	2,202
May.....	44	28	33	.08	.09	2,029
June.....	44	28	29	.07	.08	1,726
July.....	28	22	27	.07	.08	1,660
August.....	28	17	24	.06	.07	1,476
September.....	22	22	22	.05	.06	1,309
The period.....						12,700
1899-1900.						
October.....	28	17	23	.06	.07	1,414
November.....	44	22	27	.07	.08	1,607
December.....	44	28	32	.08	.09	1,970
January.....	44	44	44	.11	.13	2,705
February.....	60	44	49	.12	.12	2,721
March.....	80	44	57	.14	.16	3,505
April.....	44	33	35	.09	.10	2,083
May.....	33	33	33	.08	.09	2,029
June.....	33	25	30	.08	.09	1,785
July.....	29	25	26	.06	.07	1,599
August.....	29	29	29	.07	.08	1,783
September.....	29	29	29	.07	.08	1,726
The year.....	80	17	34.5	.086	1.16	24,900
1900-1901.						
October.....	33	29	32	.08	.09	1,968
November.....	3,200	33	139	.35	.39	8,271
December.....	33	33	33	.08	.09	2,029
January.....	4,180	50	183	.46	.53	11,252
February.....	4,820	50	925	2.31	2.41	51,372
March.....	660	50	178	.45	.52	10,945
April.....	44	44	44	.11	.12	2,618
May.....	49	49	49	.12	.14	3,013
June.....	42	42	42	.11	.12	2,499
July.....	40	40	40	.10	.12	2,460
August.....	50	50	50	.13	.15	3,074
September.....	55	55	55	.14	.16	3,273
The year.....	4,820	29	148	.370	4.84	103,000
1901-2.						
October.....	69	69	69	.17	.20	4,243
November.....	77	77	77	.19	.21	4,582
December.....	73	73	73	.18	.21	4,489
January.....	53	47	50	.13	.15	3,074
February.....	63	58	60	.15	.16	3,332
March.....	66	66	66	.17	.20	4,058
April.....	67	47	59	.15	.17	3,512
May.....	49	37	43	.11	.13	2,644
June.....	53	47	50	.13	.15	2,975
July.....	41	38	40	.10	.12	2,460
August.....	48	33	40	.10	.12	2,460
September.....			44	.11	.12	2,618
The year.....	77	33	55.9	.140	1.94	40,400
1902-3.						
October.....	49	45	47	.12	.14	2,890
November.....	50	43	46	.12	.13	2,737
December.....	69	55	64	.16	.18	3,808
January.....	58	55	57	.14	.16	3,505
February.....	74	57	63	.16	.17	3,499
March.....	13,413	69	503	1.26	1.45	30,928
April.....	3,760	262	765	1.91	2.13	45,521
May.....	262	45	80	.20	.23	4,919
June.....	45	34	39	.10	.11	2,321
July.....	40	32	37	.09	.10	2,275
August.....	52	34	39	.10	.12	2,398
September.....	53	36	41	.10	.11	2,440
The year.....	13,413	32	148	.370	5.03	107,000

Monthly discharge of Mohave River at Victorville, Cal., for 1899-1905—Continued.

Month.	Discharge in second-feet.				Run-off.	
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.	Total in acre-feet.
1903-4.						
October.....	55	49	52	0.13	0.15	3,197
November.....	59	51	55	.14	.16	3,273
December.....	60	55	58	.15	.17	3,566
January.....	67	45	60	.15	.17	3,689
February.....	62	52	57	.14	.15	3,279
March.....	68	51	58	.14	.16	3,566
April.....	55	40	45	.11	.12	2,678
May.....	51	41	47	.12	.14	2,890
June.....	44	28	38	.10	.11	2,261
July.....	40	29	33	.08	.09	2,029
August.....	46	31	35	.09	.10	2,152
September.....	39	31	34	.08	.09	2,023
The year.....	68	28	47.7	.119	1.61	34,600
1904-5.						
October.....	54	36	48	.12	.14	2,951
November.....	54	47	50	.12	.13	2,975
December.....	70	53	59	.15	.17	3,628
January.....	71	53	60.1	.150	.17	3,695
February.....	2,032	60	309	.772	.80	17,160
March.....	5,410	74	695	1.76	2.03	42,734
April.....	263	38	110	.275	.31	6,545
May.....	327	48	146	.365	.42	8,977
June.....	63	30	43.4	.108	.12	2,583
July.....	36	27	32.3	.081	.09	1,986
August.....	36	29	31.6	.079	.09	1,943
September.....	47	34	40.0	.100	.11	2,380
The year.....	5,410	27	135	.338	4.58	97,600
1905.						
October.....	54	40	46.5	.116	.13	2,859
November.....	81	46	64.0	.160	.18	3,808
December.....	73	58	67.0	.168	.19	4,120

ANTELOPE VALLEY.

LITTLE ROCK CREEK NEAR PALMDALE, CAL.

This station was located about 8 miles southeast of West Palmdale, at the headworks of the South Antelope Valley canal. The creek is diverted through a tunnel into a flume at the headworks, which at the normal stage of the stream will carry all of the water. A gage was placed in this flume, in which the discharge measurements were made at low stages. During high water measurements were made from the bridge, where the flume crosses the creek, one-half mile below the headworks, and a gage rod was placed there for that station. The flume is straight. The channel of the stream is crooked and the bed is full of bowlders. The banks are high, and the creek will not leave its present channel at the bridge.

These records were furnished by the South Antelope Valley Irrigation Co., through the courtesy of Burt Cole, chief engineer.

Discharge measurements of Little Rock Creek near Palmdale, Cal., in 1896-1898.

Date.	Hydrographer.	Gage height.	Discharge.	Locality.
1896.		<i>Feet.</i>	<i>Sec.-feet.</i>	
Apr. 20	J. A. Vogleson.....	0.40	5.6	In flume.
20	do.....	10.33	7.2	In creek above headworks.
June 2	J. B. Lippincott.....	.17	1.0	In flume.
2	do.....	10.10	1.0	In creek above headworks.
July 7	Burt Cole.....		.3	
1897.				
Feb. 9	J. B. Lippincott.....	.56	20	At long flume.
9	do.....	.91	21	At headworks flume.
9	do.....	.34	21	At long chute.
9	do.....	2.00	126	At box flume.
Mar. 7	Burt Cole.....	1.17	26	
7	do.....	2.00	69	
Apr. 7	J. B. Lippincott.....	2.80	126	
16	Burt Cole.....	.70	14	
May 3	do.....	1.47	47	
15	do.....	.45	7	
1898.				
Jan. 5	J. B. Lippincott.....		3	
Feb. 20	Burt Cole.....		5	

Daily gage height, in feet, of Little Rock Creek near Palmdale, Cal., for 1897-98.

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.
1897.								1897.							
1.....	0.4	2.1	2.25	2.8	2.05	0.4	0.05	16.....	0.6	0.7	1.4	2.7	1.1	0.4	.....
2.....	.3	2.5	2.1	2.8	1.95	.4	.05	17.....	.62	.7	1.4	2.7	1.0	.4	.....
3.....	.25	2.25	2.15	2.8	1.8	.4	.05	18.....	.65	1.55	1.6	2.7	.9	.4	.....
4.....	.2	1.7	2.1	2.8	2.0	.4	.03	19.....	.6	1.35	1.6	2.7	.8	.4	.....
5.....	.3	1.75	2.1	2.8	2.0	.4	.03	20.....	.55	1.0	1.9	2.35	.7	.4	.....
6.....	.3	2.05	2.0	2.8	1.85	.4	.03	21.....	.65	1.0	1.6	2.45	.7	.4	.....
7.....	.3	1.6	2.0	2.8	1.8	.4	.03	22.....	.82	1.0	1.6	2.25	.7	.4	.....
8.....	.3	1.5	1.75	2.8	1.65	.4	.02	23.....	.8	.9	1.35	2.25	.7	.4	.....
9.....	.32	1.22	1.4	2.5	1.65	.4	.02	24.....	.8	.9	1.45	2.2	.7	.4	.....
10.....	.35	1.15	1.4	2.6	1.55	.4	.....	25.....	.8	1.0	1.9	2.3	.65	.4	.....
11.....	.45	1.0	1.45	2.7	1.45	.4	.....	26.....	.75	1.15	2.6	2.0	.6	.4	.....
12.....	.48	.8	1.45	2.7	1.4	.4	.....	27.....	.6	1.8	2.35	2.15	.55	.35	.....
13.....	.52	.9	1.4	2.7	1.35	.4	.....	28.....	.6	1.7	2.4	2.25	.55	.3	.....
14.....	.42	.8	1.4	2.7	1.25	.4	.....	29.....	.7	.....	2.7	2.25	.6	.25	.....
15.....	.5	.8	1.4	2.7	1.25	.4	.....	30.....	1.1	.....	2.8	2.2	.55	.15	.....
								31.....	1.35	.....	2.8	.....	.45	.....	.....
Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.						
1897-98.															
1.....		0.4	0.35	0.35	0.4	0.38	0.42	0.31	0.20						
2.....		.4	.3	.35	.4	.38	.42	.27	.10						
3.....		0.05	.4	.3	.35	.4	.38	.45	.....					
4.....		.1	.4	.3	.35	.4	.38	.45	.....					
5.....		.1	.4	.3	.35	.4	.38	.45	.....					
6.....		.15	.4	.3	.35	.4	.38	.45	.35						
7.....		.2	.4	.3	.35	.5	.38	.45	.33						
8.....		.2	.4	.3	.4	.85	.38	.43	.32						
9.....		.25	.4	.35	.4	.61	.38	.41	.32						
10.....		.3	.4	.35	.4	.5	.4	.4	.28						
11.....		.4	.4	.35	.4	.48	.42	.4	.26						
12.....		.4	.4	.35	.4	.45	.4	.4	.24						
13.....		.4	.4	.35	.4	.42	.38	.4	.22						
14.....		.4	.4	.35	.4	.41	.39	.4	.22						
15.....		.4	.4	.35	.5	.41	.39	.39	.24						
16.....		.4	.4	.35	.4	.41	.39	.39	.72						
17.....		.4	.4	.35	.4	.4	.39	.39	.56						
18.....		.4	.4	.35	.4	.4	.38	.38	.53						
19.....		.4	.4	.35	.4	.4	.39	.38	.48						
20.....		.4	.4	.35	.4	.4	.4	.37	.47						

Daily gage height, in feet, of Little Rock Creek near Palmdale, Cal., for 1897-98—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1897-98.									
21.....	0.4	0.4	0.35	0.4	0.38	0.4	0.36	0.41	.....
22.....	.4	.4	.35	.4	.38	.4	.36	.42	.....
23.....	.4	.4	.35	.4	.38	.38	.36	.38	.....
24.....	.4	.4	.35	.4	.35	.38	.32	.37	.....
25.....	.4	.4	.35	.4	.35	.38	.29	.34	.....
26.....	.4	.4	.35	.4	.4	.4	.28	.31	.....
27.....	.4	.4	.35	.4	.4	.4	.28	.29	.....
28.....	.4	.4	.35	.4	.33	.4	.27	.27	.....
29.....	.4	.35	.35	.4	.....	.41	.28	.25	.....
30.....	.4	.35	.35	.4	.....	.42	.29	.22	.....
31.....	.4	.....	.35	.4	.....	.41	.....	.20	.....

NOTE.—Creek dry July 10 to Oct. 2, 1897, and June 3 to Dec. 31, 1898.

Rating table for Little Rock Creek near Palmdale, Cal., for 1896-97.

Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.
<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>
0.0	0	0.8	19	1.6	54	2.4	96
.1	0.5	.9	23	1.7	59	2.5	102
.2	2	1.0	27	1.8	64	2.6	108
.3	4	1.1	31	1.9	70	2.7	114
.4	6	1.2	35	2.0	75	2.8	120
.5	9	1.3	39	2.1	80	2.9	126
.6	12	1.4	44	2.2	86	3.0	132
.7	15	1.5	49	2.3	91		

Monthly discharge of Little Rock Creek near Palmdale, Cal., for 1896-1899.

[Drainage area, 78 square miles.]

Month.	Discharge in second-feet.				Depth in inches on drainage area.	Total in acre-feet.
	Maximum.	Minimum.	Mean.	Per square mile.		
1896.						
January.....			18.6	0.238	0.27	1,144
February.....			18.6	.238	.26	1,070
March.....			54.2	.700	.81	3,332
April.....			7.9	.101	.11	470
May.....			1.8	.023	.03	110
June.....	1.0	0.2	.5	.006	.007	30
July.....	.3	.2	.2	.003	.003	12
August.....	.2	.2	.2	.003	.003	12
September.....	.5	.5	.5	.006	.007	30
The period.....						6,210
1896-97.						
October.....	10.4	.3	1.0	.013	.02	61
November.....	3.9	.5	1.5	.020	.02	89
December.....	11.5	1.9	3.8	.047	.05	234
January.....	144	4	14	.183	.21	879
February.....	308	15	52	.668	.70	2,894
March.....	120	41	68	.873	1.01	4,187
April.....	120	75	106	1.354	1.51	6,284
May.....	77	8	36	.456	.53	2,189
June.....	7	3	6.7	.086	.10	399
July.....	1	.2	.4	.005	.005	22.1
August.....	.2	.2	.2	.003	.003	12.3
September.....	.2	.2	.2	.003	.003	11.9
The year.....	308	.2	24.2	.310	4.16	17,800

Monthly discharge of Little Rock Creek near Palmdale, Cal., for 1896-1899—Continued.

Month.	Discharge in second-feet.				Depth in inches on drainage area.	Total in acre-feet.
	Maximum.	Minimum.	Mean.	Per square mile.		
1897-98.						
October.....	7	0.2	5.5	0.071	0.08	338
November.....	8	6	6.9	.088	.10	411
December.....	6	5	5.7	.073	.08	350
January.....	12.1	5.5	6.06	.08	.09	373
February.....	20.0	5	7.00	.09	.09	389
March.....	6.4	5.8	6.04	.08	.09	371
April.....	7.4	3.7	6.10	.08	.09	364
May.....	19.2	1.9	5.20	.07	.08	319
June.....	0	0	0	0	0	0
July.....	0	0	0	0	0	0
August.....	10	0	.4	0	0	10
September.....	0	0	0	0	0	0
The year.....	20	0	4.04	.052	.70	2,930
1898-99.						
October.....	0	0	0	0	0	0
November.....	0	0	0	0	0	0
December.....	0	0	0	0	0	0
January.....	7	0.0	4.90	0.062	0.08	318
February.....	5	3	4.41	.056	.06	245
March.....	16.5	4	7.66	.098	.11	472
April.....	6	2	4.50	.058	.06	268
May.....	2	1	1.50	.019	.02	166
June.....	3	.2	2.00	.026	.03	119
July.....	.2	.2	.20	.003	.003	12
August.....	.2	.2	.20	.003	.003	12
September.....	.2	.2	.20	.003	.003	12
The year.....	16.5	0	2.13	.027	.37	1,620
1899.						
October.....	0	0	0	0	0	0
November.....	0	0	0	0	0	0
December.....	4	0	1	.013	.01	61

MISCELLANEOUS MEASUREMENTS.

The following miscellaneous measurements have been made on streams flowing into Mohave Desert:

Miscellaneous measurements of streams that discharge into the Mohave Desert.

Date.	Stream.	Locality.	Discharge.
			<i>Sec.-ft.</i>
Jan. 4, 1898	Big Rock Creek.....	Dam site above development tunnel.....	5.27
Do.....	do.....	Diversion to tunnel.....	1.27
Do.....	do.....	Developed in tunnel.....	1.33
Do.....	do.....	Cienaga on Pallett tributary.....	.78
Oct. 13, 1908	Little Rock Creek.....	3 miles above Little Rock.....	1.1
Oct. 14, 1908	Rock Creek.....	1½ miles above Shoemaker.....	6.5
Do.....	do.....	Road crossing below junction of Pallett Creek...	9.4
Do.....	Pallett Creek.....	Above junction with Rock Creek.....	1.8

SALTON SINK.

SALTON SEA NEAR SALTON, CAL.

During the high water of the summer of 1891 the Colorado overflowed into Salton Sink to such an extent as to endanger the Southern Pacific Railroad at its lowest point. In the summer of 1905, after a succession of winter and spring floods in Gila River followed by an

exceptionally heavy summer flow in the Colorado, the flood into the sink was repeated on a much larger scale. The old river channel occupied by Alamo River was transformed into a deep wide gorge, and another channel, now called New River, was formed. The flood did great damage to the tracks of the Southern Pacific Railroad, to the plant of the New Liverpool Salt Co. below Mecca, and to the ranches in the vicinity.

Gage-height records kept by the New Liverpool Salt Co. from November, 1904, to February 26, 1906, show the actual depth of the water above the lowest portion of the sink. February 23, 1906, the Government installed a gage at the same datum, about half a mile west of Salton railroad station and 3 miles southeast of the old Salton station. This gage was destroyed by waves. The Southern Pacific Co. had graduated a trestle bent across Salt Creek about $2\frac{1}{2}$ miles east of Salton, using the company's datum; the zero of this gage is 273.5 feet below mean sea level as determined from United States Geological Survey bench marks, or at an elevation of 280.3 feet below sea level according to the Southern Pacific Co.

Practically all the water received by Salton Sea enters through Alamo and New rivers, but chiefly through the former. These rivers run through Imperial Valley and are the drainage channels for the excess and waste water from the irrigation system and from the power plants.

Daily gage height, in feet, of Salton Sea near Salton, Cal., for 1904-1911.

Day.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1904-5.											
1.....	0.0	0.6	0.8	2.2	3.8	4.8	5.7	7.0	9.1	13.5	15.7
2.....	.0	.6	.7	2.2	3.9	4.8	5.8	7.1	9.2	13.8	15.7
3.....	.0	.6	.6	2.3	4.0	4.8	5.9	7.0	9.4	13.8	15.7
4.....	.0	.6	.6	2.4	4.2	4.9	6.0	7.1	9.6	13.8	15.7
5.....	.0	.2	.6	2.4	4.4	5.0	5.8	7.2	9.7	13.8	15.7
6.....	.0	.0	.7	2.4	4.4	5.2	5.8	7.3	9.8	13.8	15.8
7.....	.0	.3	.7	2.5	4.4	5.3	6.2	7.6	10.1	14.0	15.8
8.....	.0	.7	.8	2.6	4.4	5.2	6.1	7.2	10.2	14.1	15.8
9.....	.0	.7	.8	2.7	4.4	5.4	6.0	7.3	10.3	14.2	15.8
10.....	.0	.7	.9	2.8	4.3	5.2	5.8	7.6	10.3	14.2	15.9
11.....	.0	.7	1.0	2.8	4.3	5.2	6.2	7.5	10.7	14.2	15.9
12.....	.0	.7	1.0	2.8	4.3	5.3	6.2	7.7	10.8	14.4	16.0
13.....	.0	.7	1.1	2.9	4.3	5.4	6.2	7.7	10.9	14.3	16.0
14.....	.0	.7	1.1	3.0	4.2	5.5	6.3	7.7	10.9	14.4	16.1
15.....	.2	.7	1.1	3.2	4.2	5.4	6.3	7.8	11.1	14.5	16.1
16.....	.2	.7	1.7	3.2	4.2	5.5	6.4	7.8	11.2	14.6	16.2
17.....	.3	.7	1.8	3.2	4.6	5.3	6.4	7.8	11.4	14.7	16.2
18.....	.3	.7	1.8	3.2	4.6	5.5	6.4	7.8	11.7	14.8	16.2
19.....	.3	.7	1.8	3.3	4.6	5.2	6.5	8.0	11.9	14.8	16.2
20.....	.4	.7	1.8	3.3	4.5	5.5	6.6	8.0	11.9	14.9	16.3
21.....	.5	.7	1.8	3.4	4.5	5.4	6.5	8.2	12.1	15.0	16.3
22.....	.5	.7	1.8	3.4	4.5	5.7	6.7	8.2	12.2	15.0	16.4
23.....	.4	.7	1.8	3.4	4.6	5.7	6.5	8.3	12.4	15.1	16.4
24.....	.4	.6	1.9	3.4	4.6	5.7	6.8	8.4	12.5	15.2	16.5
25.....	.4	.6	2.0	3.5	4.6	5.5	6.6	8.5	12.7	15.2	16.5
26.....	.4	.1	2.0	3.6	4.6	5.6	6.6	8.5	12.8	15.3	16.6
27.....	.5	.0	2.0	3.7	4.6	5.7	6.6	8.7	13.0	15.4	16.7
28.....	.5	.8	2.0	3.8	4.7	5.8	6.8	8.8	13.1	15.5	16.8
29.....	.6	.8	2.1	-----	4.6	5.8	6.8	8.8	13.2	15.5	16.8
30.....	.6	.8	2.1	-----	4.6	5.8	7.0	9.0	13.2	15.6	16.8
31.....	-----	.8	2.2	-----	4.6	-----	6.8	-----	13.4	15.6	-----

Daily gage height, in feet, of Salton Sea near Salton, Cal., for 1904-1911--Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1905-6.												
1.....	16.8	18.3	19.8	22.8	23.9	.....	28.3	34.1	42.7	59.1	66.7	69.5
2.....	16.9	18.3	19.8	22.8	24.0	25.6	.....	.....	43.3	59.4	66.9	69.5
3.....	16.9	18.4	19.9	22.8	24.0	.....	28.7	34.4	43.8	60.1	67.0	69.6
4.....	17.0	18.5	19.9	22.8	24.2	.....	.....	34.5	44.4	60.3	67.0	69.6
5.....	17.0	18.5	20.0	22.9	24.2	25.8	29.1	.....	44.7	60.5	67.1	69.7
6.....	17.1	18.6	20.1	22.9	24.3	.....	.....	.....	.....	61.0	67.2	69.8
7.....	17.1	18.7	20.2	23.0	24.4	25.9	29.5	.....	.....	61.4	67.3	69.9
8.....	17.1	18.8	20.3	23.0	24.4	26.0	29.7	.....	.....	61.7	67.4	69.9
9.....	17.1	18.8	20.5	23.1	24.5	.....	.....	.....	.....	62.1	67.5	69.9
10.....	17.2	18.8	20.7	23.1	24.5	26.0	30.2	.....	47.9	62.3	67.6	69.9
11.....	17.2	18.8	20.8	23.2	24.7	.....	.....	.....	48.4	62.6	67.7	69.9
12.....	17.2	18.9	21.0	23.2	24.8	26.0	30.5	36.4	48.6	62.8	67.8	70.0
13.....	17.2	19.0	21.2	23.2	24.8	26.2	30.9	.....	49.5	63.3	67.9	70.0
14.....	11.2	19.0	21.3	23.2	24.9	.....	31.1	36.9	50.0	63.3	68.1	70.0
15.....	17.3	19.1	21.5	23.3	25.0	.....	31.3	37.2	.....	63.5	68.2	70.1
16.....	17.3	19.2	21.7	23.3	25.0	.....	.....	.....	51.3	63.8	68.3	70.1
17.....	17.4	19.2	21.8	23.3	25.1	26.3	31.7	37.5	.....	64.1	68.4	70.1
18.....	17.5	19.2	21.9	23.3	25.1	26.4	.....	37.8	52.3	64.3	68.5	70.1
19.....	18.0	19.2	22.0	23.4	25.2	26.4	32.0	38.0	.....	64.4	68.6	70.1
20.....	17.7	19.3	22.1	23.4	25.2	.....	32.2	38.4	52.8	64.6	68.7	70.1
21.....	17.8	19.3	22.2	23.4	25.2	26.5	32.3	.....	.....	64.8	68.8	70.1
22.....	17.8	19.4	22.2	23.5	25.3	.....	.....	38.9	.....	65.0	68.9	70.1
23.....	17.9	19.4	22.3	23.6	25.4	26.8	.....	.....	.....	65.3	69.0	70.1
24.....	17.9	19.5	22.3	23.5	25.5	27.0	.....	39.5	.....	65.3	69.0	70.1
25.....	18.0	19.5	22.4	23.6	25.6	27.1	33.0	39.8	55.3	65.5	69.1	70.1
26.....	18.0	19.6	22.4	23.6	25.7	.....	.....	40.0	55.7	65.7	69.2	70.2
27.....	18.1	19.7	22.5	23.6	.....	27.6	33.3	40.7	56.2	65.9	69.3	70.2
28.....	18.2	19.7	22.6	23.7	.....	27.7	.....	41.3	56.7	66.1	69.4	70.2
29.....	18.2	19.8	22.6	23.7	.....	.....	33.6	41.5	57.3	66.2	69.4	70.2
30.....	18.2	19.8	22.7	23.8	.....	28.2	.....	41.8	57.9	66.3	69.4	70.3
31.....	18.2	.....	22.7	23.8	.....	.....	.....	42.5	.....	66.5	69.4	.....
1906-7.												
1.....	70.3	71.5	71.3	72.6	75.4	76.0	75.9	.....	75.1	74.7	74.5	74.2
2.....	70.3	71.5	71.3	72.7	75.5	76.0	75.9	.....	75.1	74.7	74.5	74.2
3.....	70.3	71.5	71.2	72.8	75.6	76.0	75.9	.....	75.1	74.6	74.5	74.2
4.....	70.4	71.5	71.2	72.9	75.6	76.0	75.9	.....	75.1	74.6	74.5	74.2
5.....	70.4	71.6	71.2	72.9	75.7	76.0	75.9	.....	75.1	74.6	74.5	74.1
6.....	70.4	71.6	71.2	73.0	75.7	76.0	75.9	.....	75.1	74.6	74.5	74.1
7.....	70.4	71.6	71.2	73.0	75.8	76.0	75.9	.....	75.1	74.6	74.5	74.0
8.....	70.6	71.6	71.2	73.1	.....	76.0	75.9	.....	75.1	74.6	74.4	73.9
9.....	70.6	71.6	71.2	73.1	.....	76.0	75.9	.....	75.1	74.6	74.4	73.9
10.....	70.8	71.6	71.2	73.2	76.0	76.0	75.9	.....	75.0	74.6	74.4	73.8
11.....	70.9	71.6	71.2	73.4	76.0	76.0	75.9	.....	75.0	74.6	74.4	73.8
12.....	71.1	71.6	71.2	73.5	76.0	76.0	75.9	.....	75.0	74.6	74.4	73.8
13.....	71.3	71.6	71.4	73.6	76.0	76.0	75.8	.....	75.0	74.6	74.4	73.8
14.....	71.3	71.6	71.4	73.7	76.0	76.0	75.7	.....	75.0	74.6	74.4	73.8
15.....	71.3	71.6	71.5	73.8	76.0	76.0	75.7	75.4	75.0	74.6	74.4	73.8
16.....	71.3	71.5	71.5	73.9	76.0	76.0	75.7	75.4	75.0	74.6	74.4	73.7
17.....	71.3	71.5	71.5	74.0	76.0	76.0	75.7	75.4	75.0	74.6	74.4	73.7
18.....	71.3	71.5	71.6	74.1	76.0	76.0	.....	75.3	74.9	74.6	74.4	73.7
19.....	71.3	71.5	71.7	74.2	76.0	76.0	.....	75.2	74.9	74.6	74.3	73.6
20.....	71.3	71.5	71.8	74.3	76.0	76.0	.....	75.2	74.9	74.6	74.3	73.6
21.....	71.4	71.5	71.8	.....	76.0	76.0	.....	75.2	74.9	74.6	74.3	73.6
22.....	71.4	71.5	71.9	.....	76.0	76.0	.....	75.2	74.9	74.6	74.3	73.6
23.....	71.4	71.5	72.0	.....	76.0	76.0	.....	75.1	74.9	74.6	74.3	73.6
24.....	71.4	71.5	72.1	.....	76.0	76.0	.....	75.1	74.8	74.6	74.3	73.6
25.....	71.4	71.4	72.2	74.9	76.0	76.0	.....	75.1	74.8	74.6	74.3	73.5
26.....	71.4	71.4	72.3	75.0	76.0	76.0	.....	75.1	74.8	74.6	74.3	73.5
27.....	71.4	71.4	72.3	75.2	76.0	76.0	.....	75.1	74.7	74.6	74.3	73.5
28.....	71.5	71.4	72.3	75.3	76.0	76.0	.....	75.1	74.7	74.5	74.2	73.5
29.....	71.5	71.3	72.4	75.3	.....	76.0	.....	75.1	74.7	74.5	74.2	73.5
30.....	71.5	71.3	72.4	75.3	.....	75.9	.....	75.1	74.7	74.5	74.2	73.5
31.....	71.5	.....	72.5	75.3	.....	75.9	.....	75.1	.....	74.5	.....	.....

Daily gage height, in feet, of Salton Sea near Salton, Cal., for 1904-1911—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1907-8.												
1.....	73.5	73.1	72.6	72.3	72.3	72.2	71.9	71.6	71.0	70.5	70.1	69.4
2.....	73.4	73.1	72.6	72.3	72.3	72.2	71.9	71.6	71.0	70.5	70.1	69.3
3.....	73.4	73.1	72.6	72.3	72.3	72.2	71.9	71.5	70.9	70.5	70.0	69.3
4.....	73.3	73.0	72.5	72.3	72.3	72.2	71.9	71.5	70.9	70.5	70.0	69.3
5.....	73.3	73.0	72.5	72.3	72.3	72.1	71.9	71.5	70.9	70.4	70.0	69.3
6.....	73.3	73.0	72.5	72.3	72.3	72.1	71.9	71.5	70.9	70.4	70.0	69.3
7.....	73.2	73.0	72.5	72.3	72.4	72.1	71.9	71.4	70.9	70.4	69.9	69.3
8.....	73.2	73.0	72.5	72.3	72.4	72.1	71.8	71.4	70.8	70.4	69.9	69.2
9.....	73.2	73.0	72.5	72.3	72.4	72.1	71.8	71.4	70.8	70.4	69.9	69.2
10.....	73.2	73.0	72.5	72.3	72.3	72.1	71.8	71.4	70.8	70.4	69.9	69.2
11.....	73.2	73.0	72.5	72.3	72.3	72.1	71.8	71.4	70.8	70.3	69.9	69.2
12.....	73.1	72.9	72.5	72.3	72.3	72.1	71.8	71.3	70.8	70.3	69.8	69.2
13.....	73.1	72.9	72.4	72.3	72.3	72.1	71.8	71.3	70.8	70.3	69.8	69.1
14.....	73.1	72.9	72.4	72.3	72.3	72.1	71.8	71.3	70.8	70.3	69.8	69.1
15.....	73.1	72.9	72.4	72.3	72.3	72.1	71.8	71.3	70.8	70.3	69.8	69.1
16.....	73.1	72.9	72.4	72.3	72.3	72.1	71.8	71.3	70.7	70.3	69.7	69.1
17.....	73.1	72.9	72.4	72.3	72.3	72.1	71.7	71.2	70.7	70.3	69.7	69.1
18.....	73.1	72.8	72.4	72.3	72.3	72.1	71.7	71.2	70.7	70.3	69.7	69.0
19.....	73.1	72.8	72.4	72.3	72.2	72.1	71.7	71.2	70.7	70.2	69.6	69.0
20.....	73.2	72.8	72.4	72.3	72.2	72.1	71.7	71.2	70.7	70.2	69.6	69.0
21.....	73.2	72.8	72.4	72.3	72.2	72.1	71.7	71.2	70.6	70.2	69.6	69.0
22.....	73.2	72.7	72.4	72.3	72.2	72.0	71.7	71.2	70.6	70.2	69.6	68.9
23.....	73.2	72.7	72.4	72.3	72.2	72.0	71.6	71.1	70.6	70.2	69.6	68.9
24.....	73.2	72.7	72.4	72.3	72.2	72.0	71.6	71.1	70.6	70.2	69.6	68.9
25.....	73.2	72.7	72.4	72.3	72.2	72.0	71.6	71.1	70.6	70.2	69.5	68.8
26.....	73.2	72.7	72.4	72.3	72.2	72.0	71.6	71.1	70.6	70.1	69.5	68.8
27.....	73.2	72.6	72.3	72.3	72.2	72.0	71.6	71.1	70.5	70.1	69.5	68.7
28.....	73.2	72.6	72.3	72.3	72.2	72.0	71.6	71.1	70.5	70.1	69.5	68.7
29.....	73.2	72.6	72.3	72.3	.....	72.0	71.6	71.1	70.5	70.1	69.4	68.7
30.....	73.1	72.6	72.3	72.3	.....	72.0	71.6	71.1	70.5	70.1	69.4	68.6
31.....	73.1	.....	72.3	72.3	.....	72.0	.....	71.0	.....	70.0	69.4	.....
1908-9.												
1.....	68.6	67.9	67.6	67.45	67.4	67.25	67.0	66.7	66.25	65.9	65.3	65.35
2.....	68.6	67.9	67.6	67.45	67.4	67.25	67.0	66.7	66.25	65.95	65.25	65.3
3.....	68.5	67.9	67.6	67.45	67.4	67.25	67.0	66.7	66.25	65.85	65.2	65.25
4.....	68.5	67.9	67.6	67.45	67.4	67.25	67.0	66.7	66.2	65.8	65.2	65.3
5.....	68.5	67.9	67.6	67.45	67.4	67.2	66.95	66.7	66.2	65.8	65.2	65.25
6.....	68.5	67.9	67.6	67.45	67.4	67.2	66.95	66.7	66.15	65.75	65.15	65.25
7.....	68.5	67.9	67.6	67.4	67.35	67.2	66.95	66.7	66.1	65.75	65.35	65.3
8.....	68.4	67.9	67.6	67.4	67.35	67.2	66.95	66.7	66.1	65.75	65.3	65.25
9.....	68.4	67.8	67.5	66.4	67.35	67.2	66.95	66.65	66.15	65.7	65.3	62.25
10.....	68.4	67.8	67.5	67.4	67.3	67.15	66.95	66.65	66.15	65.7	65.25	65.25
11.....	68.4	67.9	67.5	67.45	67.3	67.15	66.9	66.65	66.15	65.7	65.25	65.2
12.....	68.4	67.9	67.5	67.45	67.3	67.15	66.9	66.65	66.15	65.7	65.25	65.15
13.....	68.4	67.8	67.5	67.45	67.3	67.1	66.9	66.65	66.15	65.65	65.2	65.1
14.....	68.4	67.8	67.5	67.45	67.3	67.1	66.9	66.65	66.1	65.65	65.2	65.05
15.....	68.3	67.8	67.5	67.45	67.3	67.1	66.9	66.65	66.1	65.65	65.2	65.05
16.....	68.3	67.8	67.5	67.45	67.3	67.1	66.9	66.6	66.1	65.65	65.25	65.05
17.....	68.3	67.8	67.5	67.45	67.3	67.1	66.9	66.6	66.05	65.6	65.15	65.0
18.....	68.2	67.8	67.4	67.45	67.3	67.1	66.85	66.6	66.05	65.55	65.2	65.0
19.....	68.2	67.8	67.4	67.45	67.3	67.05	66.85	66.6	66.0	65.55	65.2	65.0
20.....	68.1	67.8	67.4	67.45	67.3	67.05	66.85	66.6	66.0	65.55	65.15	64.95
21.....	68.1	67.8	67.4	67.45	67.3	67.05	66.8	66.6	66.0	65.55	65.2	64.9
22.....	68.1	67.8	67.4	67.4	67.3	67.05	66.8	66.6	66.0	65.55	65.15	64.9
23.....	68.1	67.8	67.4	67.4	67.3	67.05	66.8	66.55	66.0	65.55	65.15	64.9
24.....	68.0	67.7	67.4	67.4	67.3	67.05	66.8	66.55	65.95	65.5	65.15	64.9
25.....	68.0	67.7	67.4	67.4	67.3	67.05	66.8	66.5	65.95	65.45	65.15	64.85
26.....	68.0	67.7	67.4	67.4	67.25	67.05	66.75	66.45	65.95	65.45	65.1	64.85
27.....	68.0	67.6	67.4	67.4	67.25	67.05	66.75	66.45	65.95	65.4	65.1	64.8
28.....	68.0	67.6	67.4	67.4	67.25	67.05	66.75	66.4	65.95	65.35	65.1	64.8
29.....	67.9	67.6	67.4	67.4	.....	67.05	66.75	66.35	65.9	65.35	65.1	64.75
30.....	67.9	67.6	67.4	67.4	.....	67.0	66.7	66.3	65.9	65.35	65.15	64.75
31.....	67.9	.....	67.4	67.4	.....	67.0	.....	66.3	.....	65.3	65.25	.....

Daily gage height, in feet, of Salton Sea near Salton, Cal., for 1904-1911—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909-10.												
1.....	64.7	64.1	63.65	63.4	63.4	63.2	62.95	62.65	62.15	61.5	61.05	60.4
2.....	64.65	64.1	63.65	63.4	63.4	63.2	62.95	62.65	62.15	61.5	61.05	60.4
3.....	64.6	64.1	63.65	63.4	63.4	63.2	62.95	62.65	62.1	61.45	61.05	60.35
4.....	64.6	64.05	63.65	63.45	63.35	63.2	62.95	62.6	62.1	61.45	61.0	60.3
5.....	64.55	64.05	63.6	63.4	63.35	63.2	62.9	62.55	62.1	61.45	61.0	60.25
6.....	64.55	64.05	63.6	63.4	63.3	63.2	62.95	62.55	62.1	61.4	60.95	60.2
7.....	64.5	64.05	63.55	63.4	63.3	63.2	62.85	62.5	62.05	61.4	60.95	60.15
8.....	64.5	64.0	63.55	63.4	63.3	63.2	62.9	62.5	62.05	61.35	60.9	60.05
9.....	64.5	64.0	63.6	63.4	63.3	63.15	62.9	62.55	62.05	61.35	60.85	60.0
10.....	64.45	63.95	63.55	63.4	63.3	63.15	62.9	62.5	62.05	61.35	60.85	59.95
11.....	64.45	63.95	63.55	63.4	63.3	63.15	62.85	62.45	62.0	61.35	60.8	59.9
12.....	64.45	63.9	63.55	63.4	63.3	63.1	62.8	62.45	61.95	61.3	60.85	59.9
13.....	64.4	63.9	63.55	63.4	63.3	63.15	62.85	62.45	61.95	61.3	60.8	59.9
14.....	64.4	63.9	63.55	63.4	63.3	63.1	62.85	62.45	61.9	61.25	60.7	59.85
15.....	64.4	63.85	63.55	63.4	63.3	63.15	62.85	62.4	61.8	61.25	60.7	59.85
16.....	64.35	63.8	63.5	63.4	63.25	63.1	62.8	62.35	61.75	61.25	60.7	59.8
17.....	64.35	63.8	63.5	63.4	63.25	63.1	62.8	62.35	61.75	61.25	60.65	59.8
18.....	64.3	63.75	63.5	63.4	63.25	63.1	62.8	62.35	61.75	61.2	60.6	59.8
19.....	64.3	63.75	63.5	63.4	63.25	63.1	62.8	62.35	61.75	61.25	60.55	59.8
20.....	64.3	63.75	63.5	63.4	63.25	63.1	62.8	62.35	61.75	61.25	60.55	59.8
21.....	64.3	63.75	63.45	63.4	63.25	63.1	62.8	62.25	61.75	61.25	60.55	59.75
22.....	64.25	63.7	63.45	63.4	63.25	63.1	62.75	62.25	61.7	61.2	60.5	59.75
23.....	64.25	63.7	63.45	63.4	63.25	63.1	62.75	62.25	61.65	61.25	60.5	59.75
24.....	64.25	63.75	63.45	63.4	63.15	63.1	62.75	62.25	61.6	61.2	60.5	59.75
25.....	64.25	63.75	63.4	63.4	63.15	63.1	62.75	62.25	61.65	61.15	60.45	59.75
26.....	64.2	63.75	63.4	63.4	63.2	63.05	62.75	62.25	61.55	61.15	60.45	59.75
27.....	64.2	63.7	63.4	63.4	63.25	63.05	62.7	62.25	61.55	61.15	60.45	59.75
28.....	64.2	63.7	63.4	63.4	63.2	63.05	62.7	62.2	61.55	61.1	60.45	59.7
29.....	64.2	63.7	63.4	63.4	.....	63.05	62.7	62.2	61.55	61.1	60.4	59.7
30.....	64.2	63.65	63.4	63.4	.....	62.95	62.65	62.2	61.5	61.05	60.4	59.7
31.....	64.2	.....	63.4	63.4	.....	62.95	.....	62.15	.....	61.05	60.4	.....
1910-11.												
1.....	59.7	59.15	58.85	58.44	58.23	58.14	58.01	57.61	57.10	56.50	56.23	55.81
2.....	59.65	59.15	58.8	58.44	58.23	58.14	58.00	57.60	57.08	56.49	56.21	55.82
3.....	59.65	59.15	58.8	58.43	58.25	58.13	57.99	57.59	57.05	56.47	56.20	55.80
4.....	59.6	59.1	58.8	58.42	58.30	58.13	57.98	57.57	57.03	56.46	56.19	55.79
5.....	59.6	59.1	58.8	58.41	58.29	58.12	57.97	57.55	57.00	56.44	56.17	55.78
6.....	59.6	59.1	58.75	58.40	58.28	58.12	57.96	57.54	56.98	56.43	56.15	55.77
7.....	59.55	59.1	58.75	58.39	58.26	58.12	57.96	57.53	56.96	56.42	56.14	55.76
8.....	59.55	59.05	58.75	58.39	58.25	58.11	57.95	57.52	56.95	56.41	56.12	55.74
9.....	59.5	59.05	58.7	58.38	58.23	58.11	57.94	57.51	56.92	56.40	56.10	55.71
10.....	59.5	59.05	58.7	58.38	58.23	58.10	57.93	57.51	56.90	56.39	56.08	55.70
11.....	59.5	59.0	58.7	58.38	58.23	58.10	57.92	57.49	56.89	56.38	56.06	55.66
12.....	59.45	59.0	58.7	58.37	58.23	58.10	57.90	57.48	56.87	56.37	56.05	55.64
13.....	59.45	59.0	58.7	58.37	58.23	58.10	57.88	57.47	56.86	56.35	56.03	55.61
14.....	59.45	59.0	58.7	58.36	58.22	58.09	57.87	57.45	56.85	56.34	56.01	55.58
15.....	59.4	59.0	58.65	58.34	58.22	58.09	57.85	57.43	56.84	56.33	55.99	55.54
16.....	59.4	59.0	58.65	58.33	58.22	58.09	57.85	57.40	56.82	56.31	55.97	55.52
17.....	59.35	59.0	58.65	58.31	58.22	58.08	57.84	57.38	56.80	56.30	55.95	55.51
18.....	59.35	59.0	58.65	58.30	58.22	58.08	57.83	57.35	56.78	56.29	55.93	55.50
19.....	59.3	58.95	58.65	58.29	58.21	58.08	57.82	57.33	56.76	56.28	55.91	55.48
20.....	59.3	58.95	58.65	58.28	58.20	58.07	57.82	57.30	56.75	56.28	55.90	55.47
21.....	59.3	58.95	58.6	58.26	58.20	58.07	57.81	57.29	56.73	56.30	55.89	55.45
22.....	59.25	58.95	58.6	58.26	58.19	58.06	57.80	57.27	56.71	56.32	55.88	55.43
23.....	59.25	58.95	58.6	58.26	58.18	58.06	57.78	57.25	56.69	56.32	55.88	55.40
24.....	59.25	58.9	58.55	58.25	58.17	58.05	57.75	57.24	56.67	56.32	55.88	55.38
25.....	59.25	58.9	58.55	58.25	58.17	58.05	57.73	57.22	56.65	56.31	55.88	55.36
26.....	59.2	58.9	58.55	58.25	58.16	58.05	57.70	57.21	56.62	56.30	55.88	55.32
27.....	59.2	58.9	58.5	58.24	58.15	58.04	57.67	57.19	56.60	56.29	55.87	55.30
28.....	59.2	58.9	58.5	58.24	58.15	58.04	57.65	57.17	56.58	56.28	55.86	55.27
29.....	59.2	58.85	58.5	58.24	.....	58.03	57.63	57.15	56.55	56.27	55.85	55.25
30.....	59.2	58.85	58.45	58.24	.....	58.03	57.62	57.13	56.52	56.26	55.84	55.22
31.....	59.15	.....	58.45	58.23	.....	58.02	.....	57.12	.....	56.24	55.83	.....

Daily gage height, in feet, of Salton Sea near Salton, Cal., for 1904-1911—Continued.

Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.
1911.				1911.				1911.			
1.....	55.20	54.57	54.28	11.....	54.91	54.42	54.24	21.....	54.74	54.34	53.94
2.....	55.16	54.55	54.27	12.....	54.90	54.42	54.23	22.....	54.73	54.33	54.20
3.....	55.12	54.54	54.27	13.....	54.88	54.41	54.23	23.....	54.72	54.33	54.17
4.....	55.09	54.52	54.26	14.....	54.86	54.41	54.23	24.....	54.71	54.31	54.16
5.....	55.06	54.51	54.26	15.....	54.84	54.40	54.22	25.....	54.69	54.30	54.15
6.....	55.03	54.50	54.26	16.....	54.81	54.34	54.22	26.....	54.68	54.30	54.15
7.....	54.98	54.49	54.25	17.....	54.79	54.38	54.21	27.....	54.66	54.29	54.14
8.....	54.96	54.48	54.24	18.....	54.77	54.37	54.21	28.....	54.64	54.29	54.13
9.....	54.95	54.46	54.24	19.....	54.76	54.36	54.20	29.....	54.63	54.29	54.12
10.....	54.93	54.44	54.24	20.....	54.75	54.35	54.19	30.....	54.61	54.28	54.11
								31.....	54.60	.....	54.10

Monthly rise of Salton Sea near Salton, Cal., for 1904-1911.

Month.	Month-ly rise.	Total rise.	Month.	Month-ly rise.	Total rise.	Month.	Month-ly rise.	Total rise.
1904.	<i>Feet.</i>	<i>Feet.</i>	1907.	<i>Feet.</i>	<i>Feet.</i>	1909.	<i>Feet.</i>	<i>Feet.</i>
November.....	0.6	0.6	March.....	-0.1	75.9	September.....	-0.5	64.75
December.....	.2	.8	April.....	-3	75.6	October.....	-.55	64.2
1905.			May.....	-5	75.1	November.....	-.55	63.65
January.....	1.4	2.2	June.....	-4	74.7	December.....	-.25	63.4
February.....	1.6	3.8	July.....	-2	74.5	1910.		
March.....	.8	4.6	August.....	-3	74.2	January.....	.0	63.4
April.....	1.2	5.8	September.....	-7	73.5	February.....	-.2	63.2
May.....	1.0	6.8	October.....	-4	73.1	March.....	-.25	62.95
June.....	2.2	9.0	November.....	-5	72.6	April.....	-.3	62.65
July.....	4.4	13.4	December.....	-3	72.3	May.....	-.5	62.15
August.....	2.2	15.6	1908.			June.....	-.65	61.5
September.....	1.2	16.8	January.....	.0	72.3	July.....	-.45	61.05
October.....	1.4	18.2	February.....	-.1	72.2	August.....	-.65	60.4
November.....	1.6	19.8	March.....	-.2	72.0	September.....	-.7	59.7
December.....	2.9	22.7	April.....	-.4	71.6	October.....	-.55	59.15
1906.			May.....	-.6	71.0	November.....	-.3	58.85
January.....	1.1	23.8	June.....	-.5	70.5	December.....	-.4	58.45
February.....	1.8	25.6	July.....	-.5	70.4	1911.		
March.....	2.7	28.3	August.....	-.6	69.4	January.....	-.22	58.23
April.....	5.6	33.9	September.....	-.8	68.6	February.....	-.08	58.15
May.....	8.6	42.5	October.....	-.7	67.9	March.....	-.13	58.02
June.....	15.4	57.9	November.....	-.3	67.6	April.....	-.40	57.62
July.....	8.6	66.5	December.....	-.2	67.4	May.....	-.50	57.12
August.....	2.9	69.4	1909.			June.....	-.60	56.52
September.....	.9	70.3	January.....	.0	67.4	July.....	-.28	56.24
October.....	1.2	71.5	February.....	-.15	67.25	August.....	-.41	55.83
November.....	-.2	71.3	March.....	-.25	67.0	September.....	-.61	55.22
December.....	1.2	72.5	April.....	-.3	66.7	October.....	-.62	54.60
1907.			May.....	-.4	66.3	November.....	-.32	54.28
January.....	2.8	75.3	June.....	-.4	65.9	December.....	-.18	54.10
February.....	.7	76.0	July.....	-.6	65.3			
			August.....	-.05	65.25			

ALAMO RIVER NEAR BRAWLEY, CAL.

During 1908 discharge measurements were made on Alamo River at a highway bridge $3\frac{1}{2}$ miles east of Brawley, Cal., by H. R. Edwards, engineer for the New Liverpool Salt Co. During 1909 measurements were made by engineers of the United States Geological Survey. On June 24, 1909, a continuous record of gage heights was commenced at this point. The staff gage is spiked vertically to a pile in the left abutment of the bridge. The datum of the gage has remained the same during the maintenance of the station. All discharge measurements are made from the bridge.

The data obtained at this station, together with those obtained on New River, show the amount of waste water reaching Salton Sea and are of value in connection with experiments being made by the United States Weather Bureau for determining the evaporation from Salton Sea.

Conditions for obtaining accurate discharge data are poor. The channel is constantly scouring or filling as the stage fluctuates. Both banks are high and well above overflow.

The station, which was maintained in cooperation with P. L. Sherman, jr., was discontinued January 6, 1912.

Discharge measurements of Alamo River near Brawley, Cal., in 1908-1910.

[By H. R. Edwards.]

Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.
	<i>Feet.</i>	<i>Sec.-ft.</i>		<i>Feet.</i>	<i>Sec.-ft.</i>		<i>Feet.</i>	<i>Sec.-ft.</i>
Jan. 1908.			Mar. 1908.			Apr. 1908.		
7.....	6.6	632	9.....	5.9	300	28.....	5.0	115
8.....	6.5	519	11.....	5.3	152	30.....	5.5	188
10.....	6.4	573	13.....	5.0	100	May 2.....	5.6	181
13.....	6.6	542	14.....	5.3	190	4.....	5.4	174
15.....	6.2	416	16.....	5.2	141	6.....	5.8	214
17.....	6.2	379	18.....	4.8	88	8.....	5.8	242
20.....	6.2	374	22.....	5.5	105	10.....	5.1	102
23.....	6.2	383	23.....	5.1	117	June 21.....	6.0	394
26.....	6.4	428	24.....	5.6	186	22.....	5.5	254
27.....	6.6	438	25.....	5.8	253	23.....	5.3	168
29.....	6.6	496	27.....	5.5	198	24.....	5.5	220
31.....	6.5	411	29.....	5.7	254	26.....	6.2	417
Feb. 2.....	6.5	395	31.....	5.0	93	27.....	5.9	331
4.....	7.3	697	Apr. 5.....	5.8	258	28.....	5.9	307
6.....	6.8	585	7.....	5.0	96	29.....	5.7	268
10.....	5.9	270	9.....	4.4	52	30.....	5.5	222
12.....	6.1	357	11.....	4.6	65	July 1.....	5.7	274
14.....	5.4	142	13.....	4.9	90	2.....	5.2	163
23.....	4.2	39	15.....	5.0	107	3.....	5.2	155
25.....	6.0	312	17.....	5.2	122	4.....	6.4	520
27.....	5.8	256	19.....	5.9	275	6.....	6.7	589
29.....	5.9	309	20.....	6.1	355	7.....	6.1	401
Mar. 2.....	6.0	412	22.....	6.1	377	8.....	5.6	228
4.....	6.1	337	24.....	6.4	432			
6.....	5.9	266	26.....	5.1	142			

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
		<i>Feet.</i>	<i>Sec.-ft.</i>			<i>Feet.</i>	<i>Sec.-ft.</i>
1909.				1910.			
Jan. 14	Hardy and Jones.....	5.01	213	Jan. 9	A. H. Koebig, jr.....	7.10	1,030
June 24	W. F. Martin.....	5.40	401	Feb. 5	W. B. Clapp.....	4.00	98
July 30	do.....	5.26	290	May 3	G. C. Noble.....	4.30	95
Sept. 12	A. H. Koebig, jr.....	6.00	675	Sept. 16	N. F. Shaw.....	5.80	395
Dec. 31	do.....	4.70	164	Oct. 16	P. L. Sherman, jr.....	5.80	436
				Dec. 18	do.....	5.30	288

Daily gage height, in feet, of Alamo River near Brawley, Cal., for 1909-1912.

Day.	June.	July.	Aug.	Sept.	Day.	June.	July.	Aug.	Sept.			
1909.					1909.							
1.....		5.95	5.5	8.0	16.....		4.7	5.95	5.4			
2.....		5.8	5.45	7.6	17.....		4.8	7.65	5.2			
3.....		5.9	5.3	7.1	18.....		4.95	7.65	5.15			
4.....		5.85	5.35	6.8	19.....		5.05	8.3	5.0			
5.....		5.9	5.2	6.3	20.....		4.85	8.1	5.25			
6.....		5.7	5.3	4.95	21.....		4.8	7.9	5.7			
7.....		5.5	5.3	5.1	22.....		4.95	8.4	5.6			
8.....		5.4	5.35	5.55	23.....		4.75	8.35	5.35			
9.....		5.35	5.4	6.3	24.....	5.5	4.65	8.4	5.4			
10.....		5.4	5.35	6.2	25.....	5.65	5.45	8.4	5.45			
11.....		5.65	5.15	6.0	26.....	5.8	5.45	8.5	5.55			
12.....		5.6	5.0	6.0	27.....	5.65	4.9	8.4	5.65			
13.....		5.45	5.05	6.4	28.....	5.9	4.85	7.8	5.8			
14.....		5.15	5.3	5.85	29.....	5.95	4.95	5.95	5.85			
15.....		4.8	5.45	5.8	30.....	5.95	5.2	5.95	6.2			
					31.....		5.3	7.15				
Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909-10.												
1.....	5.8	5.4	5.65	4.9	4.35	3.25	3.85	4.45	4.1	4.3		4.15
2.....	5.75	5.35	5.45	4.9	4.5	3.2	3.8	4.5	4.25	4.15		4.15
3.....	5.65	5.45	5.4	4.75	4.4	3.2	3.9	4.4	4.2	4.05		3.85
4.....	5.45	5.45	5.4	6.55	4.35	3.2	3.95	4.35	4.05	4.2		3.9
5.....	5.75	5.3	5.45	6.9	3.95	3.2	3.8	4.0	4.0	4.35		4.25
6.....	5.55	5.3	5.45	7.0	3.75	3.2	3.7	3.9	4.2	4.2		4.35
7.....	5.6	5.25	5.4	7.25	3.7	3.25	3.65	4.25	3.9	4.1		4.85
8.....	5.65	5.35	5.4	7.1	4.25	3.4	3.75	4.5	3.8	4.3		4.75
9.....	5.65	5.15	5.5	7.05	3.8	3.25	3.7	4.4	3.95	4.2		4.5
10.....	5.35	5.2	5.8	6.55	3.6	3.25	3.9	4.25	3.8	4.15		3.95
11.....	5.25	5.25	5.8	6.4	3.5	3.3	4.1	4.25	4.0	4.1		4.6
12.....	5.25	5.2	6.1	6.45	3.5	3.4	3.9	4.1	4.25	3.95		4.65
13.....	5.2	5.25	6.1	5.9	3.4	3.5	3.9	4.15	4.0	3.95		5.05
14.....	5.1	5.35	5.8	5.25	3.45	3.35	3.7	4.0	4.05	4.05		5.3
15.....	5.05	5.35	5.8	5.15	3.35	3.25	3.85	4.3	3.8	3.95		5.65
16.....	5.0	5.4	5.85	4.75	3.4	3.3	3.95	4.4	3.8	4.0		5.9
17.....	5.05	5.35	5.55	4.45	3.4	3.35	3.85	4.25	3.85	4.0		5.75
18.....	5.15	5.35	5.45	4.35	3.4	3.4	4.0	4.1	3.75	3.8		6.15
19.....	5.2	5.5	5.35	4.25	3.4	3.45	3.75	4.15	4.0	3.85		5.75
20.....	5.2	5.65	5.2	4.4	3.35	3.4	4.05	4.15	4.05	3.85		5.55
21.....	5.25	5.45	5.15	4.55	3.3	3.35	3.8	4.0	3.9	3.9		5.9
22.....	5.25	5.6	5.3	4.65	3.3	3.4	4.0	4.1	3.85	3.95		5.8
23.....	5.2	5.35	5.2	4.95	3.3	3.45	3.8	4.25	3.85	3.9		5.55
24.....	5.2	5.3	5.25	4.85	3.3	3.6	3.85	4.25	4.0	3.8		5.25
25.....	5.15	5.4	5.55	4.95	3.3	3.5	4.0	4.0	4.3	3.7	4.3	5.2
26.....	5.15	5.55	5.55	4.8	3.3	3.55	4.0	4.1	4.3	3.65		5.2
27.....	5.2	5.6	5.65	4.45	3.2	3.8	3.85	4.0	4.55	3.35		5.1
28.....	5.1	5.75	5.35	4.45	3.25	3.65	3.85	4.2	4.7	3.3	3.85	5.4
29.....	5.2	5.8	5.0	4.45		3.8	4.0	4.3	4.85		4.15	5.2
30.....	5.3	5.8	4.85	4.5		3.85	4.35	4.35	4.2		3.95	5.15
31.....	5.3		4.55	4.45		3.8		4.0			4.0	
1910-11.												
1.....	5.1	6.0	5.2	5.7	5.1	4.0	4.0	5.3	5.6		6.0	4.8
2.....	5.0	6.0	5.1		5.3	4.4	5.0	5.4	5.4	5.5	5.6	4.6
3.....	5.15	6.1	5.2	5.8	5.4	4.2	4.9	5.4	5.5		5.2	4.5
4.....	5.65	6.3	5.2	5.6	5.8	4.3	4.8	5.4	5.6		5.3	4.8
5.....	5.55	6.6	5.1	5.4	6.0	4.3	5.0	5.4	5.7	5.6	5.5	4.6
6.....	5.4	6.1	5.4	5.3	6.2	4.4	5.0	5.3	5.5	5.6	5.3	4.1
7.....	5.1	6.5	5.1	5.4	6.0	4.2	4.9	5.0	5.4	5.5	5.5	4.9
8.....	5.45	6.6	4.9	5.3	6.0	4.3	5.1	5.1	5.5	5.9	5.6	4.7
9.....	5.8	6.0	4.8	5.4	6.3	4.3	5.2	5.0	5.4	6.0	5.5	5.0
10.....	5.65	6.2	5.1	5.0	6.2	4.3	5.5	4.6	5.7	5.9	5.0	4.8
11.....	5.6	6.3	5.0	5.5	6.0	4.2	5.3	4.4	5.5	5.8	4.9	4.5
12.....	5.6	6.2	4.9	5.6	5.7	4.0	4.8	4.0	5.5	6.0	4.7	4.2
13.....	6.15	6.2	5.0	5.4	5.4	4.0	4.0	4.0	5.4	6.1	4.9	3.9
14.....	6.55	7.0	4.8	5.4	5.1	4.0	4.1	4.5	5.5	6.2	4.8	4.0
15.....	5.65	7.0	5.2	5.5	6.0	3.9	3.7	4.8	5.7	6.4	4.9	4.0

Daily gage height, in feet, of Alamo River near Brawley, Cal., for 1909-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.												
16.....	5.7	7.0	5.2	5.7	4.8	3.7	4.0	4.4	5.8	5.0	4.9	5.0
17.....	6.0	7.0	5.5	5.5	5.6	3.7	4.1	5.0	5.5	4.5	4.7	4.7
18.....	6.05	6.6	5.2	5.4	5.5	3.8	4.2	5.5	5.3	4.5	4.4	5.1
19.....	6.2	6.3	5.1	5.6	5.3	4.0	3.5	5.3	5.4	.....	4.6	4.9
20.....	6.5	6.4	5.5	5.7	5.1	4.0	3.7	5.2	5.5	6.2	4.7	4.6
21.....	6.1	5.8	5.1	5.6	5.2	3.9	4.5	5.5	5.4	6.0	4.5	4.8
22.....	5.8	5.4	5.3	5.5	4.5	3.6	4.4	5.7	5.3	.....	4.4	5.0
23.....	6.0	4.9	5.5	5.6	4.3	4.0	4.3	5.5	5.1	.....	4.2	5.4
24.....	6.1	4.8	5.4	5.3	4.2	4.1	4.4	5.6	5.3	.....	4.2	5.0
25.....	5.9	5.2	5.5	5.2	4.5	4.0	4.6	5.7	4.9	6.8	4.0	5.2
26.....	5.9	5.3	5.4	5.4	4.3	4.2	4.5	5.6	5.3	6.6	4.2	5.0
27.....	5.5	5.3	5.5	5.5	4.5	4.4	4.8	5.5	5.5	6.5	4.1	5.0
28.....	5.3	5.0	5.4	5.5	4.2	4.4	4.5	5.6	5.4	6.5	4.3	5.2
29.....	5.0	5.2	5.5	5.2	.....	4.1	4.7	5.5	6.0	6.5	4.2	5.5
30.....	5.7	5.1	5.2	5.5	.....	4.2	5.0	5.5	5.9	6.5	4.4	5.6
31.....	6.1	.....	5.4	5.4	.....	4.1	.....	5.4	.....	6.5	4.5	.....
Day.	Oct.	Nov.	Dec.	Jan.	Day.			Oct.	Nov.	Dec.	Jan.	
1911-12.					1911-12.							
1.....	5.8	6.6	6.2	5.8	16.....			5.8	6.7	6.4	.....
2.....	5.5	6.5	6.4	5.9	17.....			6.0	6.3	6.8	.....
3.....	5.7	6.7	6.5	5.3	18.....			5.7	6.3	6.9	.....
4.....	5.4	6.6	6.8	5.2	19.....			5.8	6.8	6.7	.....
5.....	5.5	7.0	6.5	4.8	20.....			5.5	6.4	6.5	.....
6.....	5.5	7.1	6.4	6.0	21.....			5.8	6.3	6.3	.....
7.....	5.6	7.2	6.5	.....	22.....			6.0	6.5	6.0	.....
8.....	5.2	7.1	6.5	.....	23.....			6.1	5.8	5.8	.....
9.....	5.6	7.0	6.3	.....	24.....			6.2	5.5	5.7	.....
10.....	5.8	6.8	6.5	.....	25.....			6.0	6.0	6.0	.....
11.....	5.8	5.7	6.3	.....	26.....			5.8	6.1	6.1	.....
12.....	5.6	5.5	6.2	.....	27.....			6.0	6.2	5.8	.....
13.....	5.5	5.5	6.3	.....	28.....			6.1	6.2	5.6	.....
14.....	5.3	5.7	6.0	.....	29.....			6.2	5.8	5.5	.....
15.....	6.0	6.1	6.5	.....	30.....			6.5	6.0	5.5	.....
					31.....			6.1	.....	5.7	.....

Daily discharge, in second-feet, of Alamo River near Brawley, Cal., for 1909-10.

Day.	June.	July.	Aug.	Sept.	Day.	June.	July.	Aug.	Sept.
1909.					1909.				
1.....		604	410	1,480	16.....		176	604	368
2.....		539	389	1,310	17.....		194	1,330	293
3.....		582	328	1,100	18.....		226	1,330	278
4.....		560	348	969	19.....		250	1,610	237
5.....		582	293	754	20.....		204	1,530	310
6.....		496	328	226	21.....		194	1,440	496
7.....		410	328	263	22.....		226	1,660	453
8.....		368	348	432	23.....		185	1,640	348
9.....		348	368	754	24.....		410	1,660	368
10.....		368	348	711	25.....		474	1,660	389
11.....		474	278	625	26.....		539	1,700	432
12.....		453	237	625	27.....		474	1,660	474
13.....		389	250	797	28.....		582	1,400	539
14.....		278	328	560	29.....		604	604	560
15.....		194	389	539	30.....		604	604	711
					31.....		328	1,120	.....

Daily discharge, in second-feet, of Alamo River near Brawley, Cal., for 1909-1910—Con.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909-10.												
1.....	539	368	474	192	117	38	74	128	93	112	.....	98
2.....	518	348	389	192	134	36	71	134	107	98	.....	98
3.....	474	389	368	168	122	36	78	122	102	89	.....	74
4.....	389	389	368	716	117	36	82	117	89	102	.....	78
5.....	518	328	389	910	82	36	71	85	85	117	.....	107
6.....	432	328	389	972	68	36	64	78	102	102	.....	117
7.....	453	310	368	1,150	64	38	61	107	78	93	.....	184
8.....	474	348	368	1,040	107	46	68	134	71	112	.....	168
9.....	474	278	410	1,000	71	38	64	122	82	102	.....	134
10.....	348	293	539	716	58	38	78	107	71	98	.....	82
11.....	310	310	539	647	52	41	93	107	85	93	.....	146
12.....	310	293	668	669	52	46	78	93	107	82	.....	153
13.....	293	310	668	450	46	52	78	98	85	82	.....	220
14.....	263	348	539	264	49	44	64	85	89	89	.....	276
15.....	250	348	539	241	44	38	74	112	71	82	.....	370
16.....	237	368	560	168	46	41	82	122	71	85	.....	450
17.....	250	348	432	128	46	44	74	107	74	85	.....	401
18.....	278	348	389	117	46	46	85	93	68	71	.....	541
19.....	293	410	348	107	46	49	68	98	85	74	.....	401
20.....	293	474	293	122	44	46	89	98	89	74	.....	341
21.....	310	389	278	140	41	44	71	85	78	78	.....	450
22.....	310	453	328	153	41	46	85	93	74	82	.....	417
23.....	293	348	293	201	41	49	71	107	74	78	.....	341
24.....	293	328	310	184	41	58	74	107	85	71	.....	264
25.....	278	368	432	201	41	52	85	85	112	64	112	252
26.....	278	432	432	175	41	55	85	93	112	61	.....	252
27.....	293	453	474	128	36	71	74	85	140	44	.....	230
28.....	263	518	348	128	38	61	74	102	160	41	74	301
29.....	293	539	237	128	.....	71	85	112	184	.....	98	252
30.....	328	539	204	134	.....	74	117	102	102	.....	82	241
31.....	328	.....	153	128	.....	71	.....	85	.....	.....	85	.....

Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.
1910.				1910.				1910.			
1.....	230	484	252	11.....	355	604	210	21.....	521	417	230
2.....	210	484	230	12.....	355	561	192	22.....	417	301	276
3.....	241	521	252	13.....	541	561	210	23.....	484	192	327
4.....	370	604	252	14.....	716	972	175	24.....	521	175	301
5.....	341	740	230	15.....	370	972	252	25.....	450	252	327
6.....	301	521	301	16.....	385	972	252	26.....	450	276	301
7.....	230	691	230	17.....	484	972	327	27.....	327	276	327
8.....	314	740	192	18.....	502	740	252	28.....	276	210	301
9.....	417	484	175	19.....	561	604	230	29.....	210	252	327
10.....	370	561	230	20.....	691	647	327	30.....	385	230	252
								31.....	521	.....	301

NOTE.—Daily discharge determined from two rating curves fairly well defined above a discharge of 100 second-feet applicable as follows: Jan. 1 to Dec. 31, 1909, and Jan. 1 to Dec. 31, 1910.

Monthly discharge of Alamo River near Brawley for 1909-10.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accuracy.
	Maximum.	Minimum.	Mean.		
1909.					
June 24-30.....	604.	410	529	7,340	B.
July.....	604	168	339	20,800	B.
August.....	1,700	237	856	52,600	B.
September.....	1,480	226	580	34,500	B.
1909-10.					
October.....	539	237	344	21,200	B.
November.....	539	278	377	22,400	B.
December.....	668	153	404	24,800	B.
January.....	1,150	107	376	23,100	B.
February.....	134	36	61.8	3,430	C.
March.....	74	36	47.6	2,930	C.
April.....	117	61	77.2	4,590	C.
May.....	134	78	104	6,400	B.
June.....	184	68	94.2	5,610	B.
July (28 days).....	117	41	84.3	4,680	C.
September.....	541	74	248	14,800	B.
1910.					
October.....	716	210	405	24,900	B.
November.....	972	175	534	31,800	B.
December.....	327	175	259	15,900	B.

NEW RIVER NEAR BRAWLEY, CAL.

During 1908 discharge measurements were made at a wagon bridge over New River, $1\frac{1}{2}$ miles west of Brawley, Cal., by H. R. Edwards, engineer for the New Liverpool Salt Co. During 1909 measurements were made by engineers of the United States Geological Survey. On June 24, 1909, a continuous record of gage heights was begun at this point. The staff gage is spiked vertically to the third bridge pile from the right bank. The datum of the gage has remained the same during the maintenance of the station. At high stages discharge measurements are made from the bridge, but at medium and low stage measurements are made by wading near the bridge.

The data obtained at this station, together with those obtained on Alamo River, show the amount of waste water reaching Salton Sea and are of value in connection with experiments being made by the United States Weather Bureau to determine the evaporation from Salton Sea.

Conditions for obtaining accurate discharge data are exceedingly poor. The great amount of fine silt carried by this stream causes continual changes in the channel. The current is light at low stages. Floods occur at long intervals and are extremely torrential.

Conditions at this station during 1909 were fairly good up to the middle of August, when heavy rains fell in the Imperial Valley and surrounding country. A considerable flood occurred on New River, washing out the earth approaches to the bridge, and changing the channel so completely that measurements made prior to August are not comparable with those that will be made later. Probably the channel was fairly stable after October 1, 1909, but sufficient dis-

charge measurements have not been made to define the new rating curve. Estimates of flow are therefore withheld.

This station was maintained in cooperation with P. T. Sherman, jr.

Discharge measurements of New River near Brawley, Cal., in 1908-1910.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1908.		<i>Fect.</i>	<i>Sec.-ft.</i>	1909.		<i>Fect.</i>	<i>Sec.-ft.</i>
Feb. 23	H. R. Edwards.....		44	Jan. 14	H. A. Jones.....	6.00	47
Mar. 23	.....do.....		36	June 24	W. F. Martin.....	6.31	89
Apr. 5	.....do.....		39	July 30	.....do.....	6.18	63
13	.....do.....		40				
June 22	.....do.....		26	1910.			
1909.				Feb. 4	W. B. Clapp.....	4.80	40
Jan. 8	Hardy and Jones.....		46				

Daily gage height, in feet, of New River near Brawley, Cal., for 1909-10.

Day.	June.	July.	Aug.	Sept.	Day.	June.	July.	Aug.	Sept.
1909.					1909.				
1.....		6.15	6.2	6.8	16.....		6.2	6.85	5.0
2.....		6.1	6.2	6.15	17.....		6.25	6.8	5.0
3.....		6.1	6.25	5.5	18.....		6.25	6.8	5.0
4.....		6.15	6.25	5.5	19.....		6.0	7.1	5.0
5.....		6.1	6.25	5.5	20.....		5.9	7.05	5.0
6.....		6.1	5.9	5.6	21.....		5.9	6.75	5.0
7.....		6.1	5.9	5.6	22.....		5.85	6.6	5.0
8.....		6.15	5.9	5.3	23.....		5.8	6.6	5.0
9.....		6.2	5.9	5.3	24.....		6.3	6.3	5.0
10.....		6.2	5.9	5.3	25.....		6.3	5.95	4.95
11.....		6.2	5.9	5.2	26.....		6.3	6.05	5.0
12.....		6.2	6.2	5.1	27.....		6.25	6.1	4.95
13.....		6.2	7.15	5.0	28.....		6.3	6.15	5.05
14.....		6.2	7.0	5.1	29.....		6.25	6.2	5.0
15.....		6.2	6.9	5.0	30.....		6.2	9.2	4.9
					31.....		6.2	8.75	

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909-10.												
1.....	5.0	4.9	4.8	5.1	4.7	4.65	4.75	5.3	5.2	5.3	4.8	4.9
2.....	4.9	4.85	4.9	5.0	4.7	4.75	4.8	5.1	5.1	5.3	4.8	4.9
3.....	4.95	4.85	4.8	5.0	4.7	4.7	5.4	5.1	5.0	5.3	4.7	5.0
4.....	4.8	4.9	4.85	5.0	4.75	4.7	5.5	5.3	5.3	5.45	4.7	4.9
5.....	4.8	4.9	4.9	4.9	4.75	4.7	5.0	5.35	5.25	5.35	4.7	4.8
6.....	4.8	4.9	4.85	4.8	4.65	4.7	5.1	5.65	5.0	5.2	4.8	4.8
7.....	4.8	4.9	4.8	4.9	4.75	4.7	4.9	5.9	5.15	5.35	4.8	4.8
8.....	4.8	4.85	4.9	4.9	4.8	4.7	4.8	5.9	5.25	5.2	4.7	4.9
9.....	4.8	4.8	4.9	4.9	4.8	4.7	4.8	5.7	5.35	5.3	4.7	4.8
10.....	4.7	4.8	4.9	4.8	4.8	4.7	4.7	5.3	5.45	5.15	4.7	5.05
11.....	4.7	4.8	4.9	4.95	4.8	4.75	4.7	5.35	5.45	4.8	4.7	5.4
12.....	4.7	4.8	4.8	4.95	4.7	4.7	4.7	5.3	5.4	4.8	4.7	5.5
13.....	4.7	4.8	4.8	4.9	4.8	4.7	4.8	5.4	5.4	4.8	4.7	5.55
14.....	4.7	4.8	4.8	4.9	4.75	4.7	4.85	5.8	5.3	4.8	4.7	5.65
15.....	4.7	4.9	4.8	4.9	4.7	4.7	4.7	5.9	5.3	4.8	4.7	5.55
16.....	4.7	4.9	4.8	4.9	4.6	4.7	4.8	5.45	5.5	4.9	4.7	5.45
17.....	4.7	4.9	4.8	4.9	4.6	4.8	4.7	5.3	5.85	4.9	4.7	5.4
18.....	4.7	4.9	4.95	4.8	4.7	4.8	4.8	5.1	6.0	4.9	4.7	5.4
19.....	4.7	4.85	4.85	4.85	4.7	4.7	4.85	4.8	5.85	4.9	4.7	5.4
20.....	4.7	4.9	4.9	4.85	4.7	4.8	5.0	4.7	5.65	4.9	4.7	5.4

^a Estimated. Maximum gage height was 12.5 feet.

Daily gage height, in feet, of New River near Brawley, Cal., for 1909-10—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909-10.												
21.....	4.7	4.9	5.15	4.8	4.75	4.75	5.0	4.7	5.45	4.9	4.75	5.4
22.....	4.7	4.9	5.0	4.9	4.8	4.8	5.4	4.8	5.25	4.8	4.8	5.4
23.....	4.7	4.9	5.0	4.9	4.7	4.7	4.9	5.0	5.35	4.7	4.8	5.4
24.....	4.7	4.85	4.9	4.9	4.65	4.8	4.7	5.2	5.25	4.7	4.8	5.25
25.....	4.7	4.9	5.0	4.8	4.7	4.8	4.7	5.5	5.4	4.7	4.8	5.25
26.....	4.7	4.9	4.9	4.8	4.7	4.8	4.9	5.5	5.3	4.7	4.8	5.3
27.....	4.7	4.8	4.9	4.8	4.7	4.8	5.0	5.35	5.2	4.7	4.7	5.3
28.....	4.7	4.9	5.0	4.8	4.7	4.8	4.95	5.2	5.15	4.8	4.8	5.3
29.....	4.65	4.9	5.0	4.7	-----	4.8	5.3	5.35	5.1	4.7	4.9	5.3
30.....	4.5	4.8	5.1	4.8	-----	4.85	5.3	5.25	5.3	4.7	4.8	5.3
31.....	4.5	-----	5.1	4.7	-----	4.75	-----	5.3	-----	4.8	4.8	-----

Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.
1910.				1910.				1919.			
1.....	5.25	5.2	5.5	11.....	5.0	5.3	5.3	21.....	4.9	5.5	5.3
2.....	5.35	5.1	5.4	12.....	4.9	5.3	5.2	22.....	4.9	5.5	5.2
3.....	5.4	5.0	5.8	13.....	4.9	5.3	5.2	23.....	4.9	5.6	5.2
4.....	5.4	5.3	5.6	14.....	4.9	5.4	5.2	24.....	4.9	5.6	5.3
5.....	5.3	5.3	5.7	15.....	5.0	5.3	5.2	25.....	4.9	5.6	5.3
6.....	5.3	5.3	5.7	16.....	4.9	5.3	5.3	26.....	4.9	5.5	5.4
7.....	5.3	5.3	5.7	17.....	4.9	5.5	5.3	27.....	4.9	5.5	5.4
8.....	5.2	5.3	5.5	18.....	4.8	5.5	5.4	28.....	4.9	5.4	5.5
9.....	5.2	5.2	5.4	19.....	4.9	5.5	5.6	29.....	5.0	5.4	5.6
10.....	5.2	5.3	5.3	20.....	4.9	5.6	5.4	30.....	5.1	5.4	5.5
								31.....	5.2	-----	5.5

LOWER COLORADO RIVER BASIN.

COLORADO RIVER AT HARDYVILLE, ARIZ.

This station, which was located a quarter of a mile above the deserted town of Hardyville and 7 miles above Fort Mohave, Ariz., was established May 11, 1905, and discontinued October 1, 1907. It was maintained in cooperation with the State of California.

The bed of the stream is composed of cemented gravel and changes gradually as the river falls from flood stage to low water, a bar forming in that portion of the section nearest the right bank and altering conditions of flow materially. The right bank is composed of cemented gravel, is high and not subject to overflow; the left bank is made up of alluvial material, easily eroded, is low and wooded, and is liable to overflow at flood stages. Discharge measurements were made from a car and cable. The datum of the staff gage, which remained the same as long as the station was maintained, was at elevation 507.18 feet above sea level. The gage was located 275 feet below the cable from which discharge measurements were made.

60055°—WSP 300—13—27

Discharge measurements of Colorado River at Hardyville, Ariz., in 1905-1907.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1905.		<i>Feet.</i>	<i>Sec.-ft.</i>	1906.		<i>Feet.</i>	<i>Sec.-ft.</i>
May 17	O. W. Peterson.....	6.65	33,140	Apr. 8	C. W. Jenkins.....	6.90	21,500
20	do.....	6.95	33,910	15	do.....	7.30	24,100
27	C. W. Jenkins.....	11.20	69,010	22	do.....	8.10	32,200
June 4	do.....	10.50	64,750	24	Murphy and Lee.....	8.84	37,500
10	do.....	14.50	107,700	30	Lee and Jenkins.....	9.00	40,800
18	do.....	12.80	81,030	3	C. W. Jenkins.....	8.70	33,100
25	do.....	10.15	52,860	13	do.....	11.20	67,200
July 9	do.....	6.70	30,650	20	C. H. Lee.....	11.90	63,700
16	do.....	5.70	22,400	27	C. W. Jenkins.....	14.60	92,800
23	do.....	5.10	17,620	3	do.....	14.05	96,200
Aug. 6	do.....	4.00	14,590	9	do.....	13.10	92,000
13	do.....	5.00	17,040	16	do.....	14.40	109,000
27	do.....	4.20	12,270	July 1	F. T. Cavin.....	10.35	63,700
Sept. 2	do.....	4.00	11,650	8	Lee and Cavin.....	19.30	47,500
17	do.....	3.20	5,934	15	F. T. Cavin.....	8.50	34,600
Oct. 1	do.....	3.40	7,523	22	do.....	8.56	38,100
15	do.....	3.00	4,657	29	do.....	7.55	27,600
29	do.....	3.90	6,579	Aug. 5	do.....	7.35	24,400
Nov. 4	Jenkins and Lee.....	3.60	6,574	11	do.....	7.00	19,500
12	C. W. Jenkins.....	3.48	5,949	18	do.....	6.45	16,200
19	do.....	3.85	6,504	25	do.....	6.20	14,200
25	do.....	3.70	5,979	Sept. 1	do.....	6.50	15,500
Dec. 3	do.....	3.60	5,757	8	do.....	6.63	12,700
		6.00	17,850	15	do.....	6.50	11,400
1906.				22	C. J. Brunk.....	6.73	12,100
Jan. 1	C. W. Jenkins.....	3.70	3,430	29	do.....	7.38	16,900
7	do.....	3.50	3,440	Oct. 6	do.....	7.63	16,000
14	do.....	3.30	3,360	13	do.....	7.00	12,000
21	do.....	4.15	5,900	20	do.....	6.75	9,840
28	do.....	4.50	7,850	28	do.....	6.60	8,400
Feb. 5	do.....	4.10	5,110	Nov. 4	do.....	6.80	9,470
12	do.....	4.40	6,390	10	do.....	7.30	12,800
25	do.....	4.30	6,350	17	do.....	7.15	10,300
Mar. 4	do.....	4.10	5,710	24	do.....	6.85	9,430
11	do.....	4.20	1,520	Dec. 1	do.....	6.70	7,720
18	do.....	6.40	19,400	8	do.....	8.48	23,300
25	do.....	5.80	12,800	15	do.....	7.25	11,300
Apr. 1	do.....	7.50	30,000	22	do.....	6.89	9,230
				29	do.....	6.50	7,160

Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.
1907.	<i>Feet.</i>	<i>Sec.-ft.</i>	1907.	<i>Feet.</i>	<i>Sec.-ft.</i>	1907.	<i>Feet.</i>	<i>Sec.-ft.</i>
Jan 5.....	6.95	9,270	Apr. 6.....	9.15	22,300	July 6.....	15.30	104,000
12.....	6.56	7,410	13.....	9.36	24,800	13.....	14.40	100,000
19.....	6.88	8,890	20.....	12.28	42,500	18.....	13.00	64,200
26.....	6.69	7,910	28.....	10.92	35,200	20.....	12.9	57,200
Feb. 2.....	6.89	8,260	May 4.....	10.45	31,600	27.....	11.2	50,800
9.....	7.30	10,500	11.....	9.95	26,900	Aug 3.....	10.65	45,900
16.....	7.30	10,500	18.....	10.60	38,300	10.....	9.72	44,100
23.....	7.45	11,600	25.....	13.45	67,900	17.....	8.80	27,200
Mar. 2.....	7.69	14,200	June 1.....	14.40	65,600	24.....	8.60	23,400
9.....	8.11	14,900	8.....	13.78	65,300	Sept. 1.....	8.60	21,800
16.....	7.59	15,000	11.....	15.38	110,000	8.....	8.40	22,300
23.....	7.80	14,200	22.....	15.40	104,000	Oct. 6.....	7.20	13,400
30.....	9.78	29,200	29.....	14.70	81,000			

STREAM MEASUREMENTS IN LOWER COLORADO RIVER BASIN. 419

Daily gage height, in feet, of Colorado River at Hardyville, Ariz., for 1905-1907.

Day.	May.	June.	July.	Aug.	Sept.	Day.	May.	June.	July.	Aug.	Sept.
1905.						1905.					
1.....		^a 11.8	8.55	4.5	3.4	16.....	6.95	13.8	5.85	4.0	3.45
2.....		^a 11.5	8.4	4.5	3.4	17.....	6.7	13.3	5.5	3.9	3.4
3.....		^a 11.1	8.3	^a 4.65	3.2	18.....	6.8	12.8	5.3	3.8	3.3
4.....		10.7	8.0	4.8	3.2	19.....	6.95	12.5	5.25	3.8	3.2
5.....		10.8	7.9	5.2	3.45	20.....	7.0	12.2	^a 5.2	3.8	3.2
6.....		11.85	7.55	5.0	3.55	21.....	7.35	11.85	5.1	3.75	3.05
7.....		12.5	7.3	4.7	3.5	22.....	8.1	11.35	5.1	3.75	3.05
8.....		13.1	7.0	4.7	3.6	23.....	8.8	10.8	5.1	3.6	3.0
9.....		13.7	6.7	4.85	3.5	24.....	9.5	10.5	4.95	3.6	3.05
10.....		14.4	6.7	4.6	3.6	25.....	9.9	10.15	4.85	3.6	2.95
11.....	6.85	14.3	6.5	4.5	4.0	26.....	10.6	10.0	4.7	4.75	2.95
12.....	6.9	14.0	6.15	4.3	3.7	27.....	11.1	9.5	4.7	3.7	2.95
13.....	6.95	14.3	^a 6.0	4.25	3.5	28.....	11.5	9.1	4.7	3.4	2.95
14.....	7.15	14.45	5.85	^a 4.15	3.5	29.....	12.7	9.2	4.7	3.3	3.95
15.....	7.15	14.5	5.2	4.0	3.45	30.....	^a 12.4	9.6	4.65	3.4	3.95
						31.....	^a 12.1		4.6	3.4	

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1905-6.												
1.....	3.75	3.45	7.4	^a 3.7	^a 4.2	4.4	7.85	9.5	13.2	10.35	7.4	6.5
2.....	4.05	3.45	7.1	3.5	4.1	4.2	8.25	9.2	13.8	10.0	7.4	6.35
3.....	4.7	3.5	6.05	3.5	4.05	4.2	7.9	9.1	14.0	9.7	7.6	6.35
4.....	4.35	3.45	5.35	3.4	4.1	4.1	7.4	9.2	13.8	9.4	7.5	6.5
5.....	5.1	3.5	4.8	3.35	4.1	4.1	7.45	8.9	13.75	9.4	7.35	6.5
6.....	4.8	3.5	4.5	3.4	4.1	4.1	7.1	8.8	13.8	9.2	7.2	6.55
7.....	4.8	3.6	4.3	3.5	4.2	4.1	6.85	8.7	13.6	9.35	7.0	6.55
8.....	4.7	4.0	^a 4.2	3.35	4.2	4.2	6.9	8.1	13.3	9.25	7.1	6.7
9.....	4.7	3.85	4.1	3.3	4.3	4.2	6.9	8.7	13.0	9.35	7.0	6.7
10.....	4.45	3.85	3.9	3.45	4.4	4.2	6.9	9.3	13.1	9.1	7.0	6.7
11.....	4.25	3.75	3.75	3.3	^a 4.4	4.25	7.1	10.1	13.25	8.9	7.05	6.55
12.....	4.1	3.85	3.75	3.35	4.4	4.2	7.1	10.5	13.5	8.8	6.85	6.6
13.....	^a 4.0	3.8	3.8	3.3	4.4	4.35	7.6	11.05	13.1	8.8	6.8	6.55
14.....	3.95	3.65	3.8	3.4	4.4	4.5	7.5	11.85	13.95	8.45	6.7	6.55
15.....	3.85	3.85	3.7	3.35	4.3	5.1	7.35	11.9	^a 14.0	8.5	6.65	6.55
16.....	3.8	3.75	3.7	3.4	4.3	^a 5.8	7.4	12.5	14.1	8.35	6.6	6.55
17.....	3.7	3.7	3.7	3.7	4.3	6.4	7.45	12.75	14.6	8.55	6.55	6.5
18.....	3.7	3.7	3.7	3.8	4.25	6.35	7.6	12.6	14.8	8.5	6.45	6.6
19.....	3.7	3.7	3.6	3.9	4.2	5.9	7.6	12.1	15.2	8.55	6.45	6.9
20.....	3.6	3.7	3.6	4.2	4.1	5.8	7.6	11.9	15.4	8.65	6.25	6.7
21.....	3.55	3.6	^a 3.65	4.15	4.2	5.9	7.9	12.3	15.0	8.75	6.2	6.6
22.....	3.5	3.6	3.7	4.5	^a 4.2	5.9	8.1	12.75	15.0	8.6	6.1	6.75
23.....	3.5	3.6	3.8	4.4	4.2	5.8	^a 8.4	13.4	14.35	8.55	6.3	7.2
24.....	^a 3.5	3.7	3.8	4.3	4.2	5.8	8.8	13.7	13.8	8.35	6.6	7.0
25.....	3.45	3.6	3.8	4.4	4.3	5.8	8.9	14.2	13.1	8.15	6.2	6.9
26.....	3.5	5.4	3.95	4.5	4.3	6.5	9.2	14.2	12.4	8.05	6.2	7.0
27.....	3.45	5.4	3.9	4.4	4.3	6.4	9.8	14.55	11.85	7.85	^a 6.25	7.0
28.....	3.5	5.1	3.9	4.45	4.4	6.3	10.4	14.5	11.6	7.65	6.35	^a 7.2
29.....	3.55	5.0	3.9	4.4		6.55	10.3	^a 14.2	11.2	7.55	6.45	7.4
30.....	3.5	5.1	3.8	4.4		7.3	10.0	13.9	10.6	7.55	6.5	7.6
31.....	3.5		^a 3.8	4.3		7.75		13.4		^a 7.5	^a 6.5	

^a Estimated.

Daily gage height, in feet, of Colorado River at Hardyville, Ariz., for 1905-1907—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1906-7.												
1.....	^a 7.55	6.65	6.7	6.65	6.8	7.7	9.8	10.2	14.4	14.8	11.05	8.5
2.....	7.5	6.6	6.65	6.85	6.9	7.7	9.7	10.2	14.0	14.6	10.8	8.45
3.....	7.7	^a 6.7	6.7	6.75	6.8	-----	9.5	10.2	13.2	15.0	10.65	8.9
4.....	7.7	6.8	6.65	6.9	6.8	7.8	9.5	10.45	-----	15.1	10.2	9.2
5.....	7.7	6.75	6.6	6.95	6.9	8.0	9.4	10.55	13.0	15.0	10.7	8.85
6.....	7.6	^a 6.8	6.8	7.0	7.3	7.9	9.15	10.55	12.9	15.3	10.5	8.9
7.....	7.4	6.9	7.45	6.9	7.25	8.25	9.15	10.5	13.0	15.1	10.4	8.8
8.....	7.3	6.9	8.45	6.8	7.2	8.2	9.05	10.4	13.8	15.0	10.15	8.8
9.....	7.2	7.0	7.9	6.7	7.3	8.1	9.05	10.4	14.3	15.0	9.7	8.6
10.....	7.1	7.3	7.7	6.7	7.3	8.0	9.2	10.2	14.7	14.8	9.7	-----
11.....	7.1	7.3	^a 7.6	6.6	7.3	8.3	9.3	10.0	15.35	14.7	9.45	8.1
12.....	7.1	^a 7.3	7.5	6.55	-----	8.1	9.3	9.85	15.5	14.7	9.25	8.05
13.....	7.0	7.3	7.4	6.6	7.4	8.0	9.4	9.8	15.45	14.4	9.15	7.95
14.....	7.0	7.2	7.3	6.6	7.35	7.85	9.65	9.85	15.3	14.2	9.0	7.85
15.....	6.95	7.15	7.25	6.7	7.35	7.7	9.9	9.75	15.0	14.0	8.9	7.65
16.....	6.9	7.15	7.1	6.8	7.3	7.65	10.5	-----	15.1	13.7	8.9	7.55
17.....	6.85	7.15	6.95	6.9	7.3	7.55	11.25	10.15	15.3	13.35	8.8	7.4
18.....	6.8	7.1	6.95	-----	7.4	7.5	11.8	10.65	15.0	13.0	8.75	7.5
19.....	6.8	7.0	6.9	6.9	7.5	7.6	12.05	11.1	15.4	13.2	8.7	7.6
20.....	6.75	6.9	6.9	6.85	7.6	7.5	12.35	11.3	15.4	12.9	8.6	7.35
21.....	6.7	6.85	6.9	6.75	7.45	-----	12.5	11.3	15.2	12.65	8.4	7.15
22.....	6.7	6.85	6.85	6.7	7.4	7.5	12.35	11.5	15.4	11.9	-----	7.2
23.....	6.7	6.9	6.75	6.75	7.45	7.8	12.3	11.8	15.05	11.6	8.2	7.2
24.....	6.65	6.85	6.65	6.7	7.9	7.7	12.2	12.4	15.4	11.2	8.6	7.3
25.....	6.6	6.85	6.55	6.65	7.6	7.65	-----	13.6	14.8	10.9	-----	7.35
26.....	6.6	^a 6.85	6.45	6.65	7.5	8.5	11.35	14.5	14.85	11.05	8.9	7.4
27.....	6.55	6.85	6.4	6.7	7.4	9.0	10.95	15.5	14.7	11.2	8.1	-----
28.....	6.6	6.9	6.4	6.65	7.9	9.6	10.75	15.0	14.7	10.9	8.0	7.35
29.....	6.75	6.9	6.5	6.65	-----	9.5	10.5	14.9	14.7	11.15	7.9	7.1
30.....	^a 6.75	6.8	6.55	6.5	-----	9.6	10.3	14.4	14.7	11.1	8.5	7.05
31.....	6.75	-----	6.5	6.65	-----	9.8	-----	-----	-----	11.1	8.75	-----

^a Estimated.

Daily discharge, in second-feet, of Colorado River at Hardyville, Ariz., for 1905-1907.

Day.	May.	June.	July.	Aug.	Sept.	Day.	May.	June.	July.	Aug.	Sept.
1905.						1905.					
1.....		73,460	45,260	14,080	7,160	16.....	32,360	92,700	23,840	10,850	7,460
2.....		70,700	44,020	14,080	7,160	17.....	30,410	87,740	21,180	10,220	7,160
3.....		67,090	43,200	15,090	5,970	18.....	31,190	82,880	19,690	9,600	6,560
4.....		63,550	40,750	16,110	5,970	19.....	32,360	80,000	19,320	9,600	5,970
5.....		64,430	39,940	18,950	7,460	20.....	32,750	77,180	18,950	9,600	5,970
6.....		73,920	37,120	17,500	8,065	21.....	35,520	73,920	18,220	9,290	5,090
7.....		80,000	35,120	15,430	7,760	22.....	41,560	69,340	18,220	9,290	5,090
8.....		85,780	32,750	15,430	8,370	23.....	47,330	64,430	18,220	8,370	4,800
9.....		91,700	30,410	16,460	7,760	24.....	53,230	61,810	17,150	8,370	5,090
10.....		98,780	30,410	14,750	8,370	25.....	56,640	58,790	16,460	8,370	4,515
11.....	31,580	97,760	28,850	14,080	10,850	26.....	62,680	57,500	15,430	15,770	4,515
12.....	31,970	94,700	26,160	12,770	8,980	27.....	67,090	53,230	15,430	8,980	4,515
13.....	32,360	97,760	25,000	12,440	7,760	28.....	70,700	49,840	15,430	7,160	4,515
14.....	33,940	99,290	23,840	11,800	7,760	29.....	81,920	50,680	15,430	6,560	10,540
15.....	33,940	99,800	18,950	10,850	7,460	30.....	79,060	54,080	15,090	7,160	10,540
						31.....	76,240	-----	14,750	7,160	-----

STREAM MEASUREMENTS IN LOWER COLORADO RIVER BASIN. 421

Daily discharge, in second-feet, of Colorado River at Hardyville, Ariz., for 1905-1907—Con.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1905-6.												
1.....	9,290	5,650	29,500	3,430	6,100	6,700	33,600	45,900	83,500	62,600	25,000	15,500
2.....	11,600	5,700	28,500	3,000	5,600	6,000	36,900	42,900	91,700	59,000	25,000	13,200
3.....	15,900	6,000	18,200	3,100	5,200	6,000	32,800	41,800	95,500	55,000	29,000	12,500
4.....	13,100	5,750	14,300	2,900	5,250	5,700	27,300	41,300	94,300	51,000	27,000	13,500
5.....	18,200	5,800	11,500	2,850	5,110	5,700	27,100	36,400	95,000	50,500	24,400	13,000
6.....	15,600	5,500	10,400	3,100	5,000	5,650	23,600	34,000	96,500	47,500	21,500	13,000
7.....	15,300	6,000	10,200	3,440	5,300	5,600	21,100	34,000	94,500	48,700	18,500	12,200
8.....	14,300	8,500	9,500	3,150	5,300	5,700	21,500	28,500	93,200	47,000	20,700	13,600
9.....	14,000	7,200	8,800	3,050	5,700	5,650	21,300	35,600	91,200	47,500	18,800	13,600
10.....	12,000	7,000	7,400	3,300	6,100	5,600	22,100	42,500	92,000	44,100	19,100	13,600
11.....	10,300	6,000	6,300	3,200	6,200	5,700	22,800	52,700	93,200	41,000	20,500	12,000
12.....	8,900	6,500	6,300	3,250	6,400	5,800	22,900	58,500	95,800	39,600	17,800	12,600
13.....	7,900	6,200	6,700	3,200	6,200	6,700	27,000	68,800	91,000	39,000	18,000	12,100
14.....	7,200	5,200	6,700	3,500	6,200	7,500	26,100	72,800	100,000	34,500	17,500	12,100
15.....	6,200	6,700	6,000	3,450	6,000	10,600	24,600	71,500	100,000	34,600	17,200	12,100
16.....	6,000	6,100	6,000	3,700	6,050	15,000	25,200	77,100	101,000	33,500	17,300	11,700
17.....	5,300	5,800	6,000	4,500	6,100	19,300	25,700	78,000	105,000	36,000	17,600	11,300
18.....	5,600	5,900	6,000	4,800	5,900	19,000	27,200	72,800	110,000	35,700	16,200	12,000
19.....	5,600	5,980	5,300	5,200	5,800	15,400	27,200	68,000	115,000	36,500	16,500	15,000
20.....	5,200	6,000	5,300	5,700	5,600	14,300	27,300	63,700	116,000	37,200	14,000	12,500
21.....	4,850	5,400	5,600	5,900	5,850	14,900	30,200	68,500	113,000	39,700	13,500	10,800
22.....	4,800	5,500	6,000	7,300	5,900	14,300	32,200	73,500	113,000	38,500	12,500	11,800
23.....	4,800	5,600	6,700	7,000	6,000	13,500	34,100	81,000	106,000	38,000	15,000	16,500
24.....	5,050	6,350	6,700	6,700	6,050	13,200	37,100	83,000	100,000	35,700	20,300	14,000
25.....	4,700	5,760	6,700	7,200	6,350	12,800	38,300	89,500	93,000	33,600	14,200	12,500
26.....	5,400	17,800	7,800	7,700	6,300	18,000	41,700	89,500	85,000	32,600	14,000	13,000
27.....	5,050	17,300	7,400	7,300	6,300	17,600	58,600	92,200	79,700	30,500	14,100	13,000
28.....	5,700	14,500	7,400	7,700	6,700	17,200	55,600	93,000	76,700	28,500	15,000	15,000
29.....	6,050	13,200	7,400	7,200	.....	22,300	54,500	91,000	72,500	27,600	16,500	17,400
30.....	5,900	13,300	6,700	7,100	.....	26,800	51,200	89,000	66,000	27,500	16,500	19,500
31.....	5,900	.....	6,700	6,700	.....	31,800	.....	84,500	.....	27,500	16,500	.....
1906-7.												
1.....	17,800	8,300	7,720	7,800	7,900	14,100	28,600	29,400	65,600	86,200	50,000	21,400
2.....	16,000	8,000	6,800	8,800	8,260	14,200	27,500	29,400	61,000	83,600	47,300	21,800
3.....	17,500	8,600	6,700	8,300	7,850	14,300	27,700	29,500	62,300	93,200	45,900	24,200
4.....	16,800	9,470	6,000	9,100	7,850	14,400	25,400	31,600	52,100	96,000	42,500	25,800
5.....	16,600	8,900	5,500	9,270	8,300	15,400	24,400	32,400	52,000	95,500	48,600	25,200
6.....	15,800	9,200	6,000	9,600	10,500	14,400	22,300	32,400	52,000	104,000	47,700	25,600
7.....	13,500	9,500	10,100	9,000	10,200	16,400	22,500	31,800	54,000	102,000	47,600	25,000
8.....	12,800	9,500	23,100	8,550	9,900	15,800	21,900	30,900	65,700	102,000	46,400	25,000
9.....	12,100	10,000	14,500	8,000	10,500	14,900	22,000	30,700	77,300	104,000	43,000	23,600
10.....	11,700	12,800	13,000	8,000	10,500	14,600	23,300	29,000	89,500	102,000	44,100	22,000
11.....	12,000	12,700	12,600	7,500	10,500	17,100	24,100	27,400	110,000	102,000	40,000	20,000
12.....	12,300	12,500	12,400	7,410	10,800	16,200	24,300	26,900	112,000	105,000	36,600	19,600
13.....	12,000	12,200	11,700	7,600	11,000	16,100	25,200	27,400	110,000	100,000	34,200	19,000
14.....	12,000	11,300	11,300	7,600	10,800	15,600	25,800	28,600	106,000	93,400	31,800	18,200
15.....	11,700	10,700	11,300	8,000	10,800	15,200	26,800	28,600	98,500	87,500	30,000	16,900
16.....	11,100	10,600	10,100	8,500	10,500	15,400	30,700	31,800	100,000	80,000	29,000	16,200
17.....	10,800	10,300	9,100	9,000	10,600	14,400	36,000	33,600	104,000	71,500	27,200	15,300
18.....	10,300	10,200	9,100	8,950	11,100	13,800	40,000	38,700	96,700	64,200	25,600	16,000
19.....	10,200	9,600	9,000	8,900	11,700	14,200	41,800	42,800	106,000	64,000	26,000	16,400
20.....	9,840	9,200	9,000	8,700	12,200	13,200	43,000	44,400	105,000	57,200	24,800	14,800
21.....	9,800	9,000	9,000	8,200	11,400	13,000	45,600	44,000	100,000	56,300	23,000	13,600
22.....	9,300	9,200	8,900	7,900	11,300	12,600	44,900	45,600	104,000	49,500	22,900	13,900
23.....	9,200	9,400	8,300	8,200	11,600	14,200	45,000	48,700	95,000	47,700	21,700	13,800
24.....	8,900	9,430	7,600	7,900	14,400	13,800	44,600	55,000	102,000	45,300	23,400	14,400
25.....	8,500	9,200	7,000	7,700	12,900	13,500	41,500	70,200	87,500	44,000	24,600	14,600
26.....	8,450	9,200	6,700	7,700	12,400	19,000	37,800	83,500	87,500	47,800	25,200	14,900
27.....	8,200	9,200	6,400	7,850	12,000	22,700	35,100	102,000	83,800	50,800	19,200	14,900
28.....	8,400	9,500	6,400	7,500	15,100	27,400	33,800	87,300	82,200	47,600	18,400	14,700
29.....	9,400	9,500	7,160	7,400	.....	26,800	31,900	82,000	81,000	50,800	17,500	13,000
30.....	9,400	8,800	7,400	6,700	.....	27,800	30,200	70,400	82,600	50,300	21,600	12,700
31.....	9,400	.....	7,700	7,300	.....	29,000	.....	67,500	.....	50,400	20,600	.....

NOTE.—These discharges were obtained by the indirect method for shifting channels, except from May 11 to Oct. 1, 1905, when a rating table was used.

Monthly discharge of Colorado River at Hardyville, Ariz., for 1905-1907.

Month.	Discharge in second-feet.			Run-off (total in acre-feet.)	Accu- racy.
	Maximum.	Minimum.	Mean.		
1905.					
May 11-31.....	81,920	30,410	47,370	1,973,000	B.
June.....	99,800	49,840	75,760	4,508,000	B.
July.....	45,260	14,750	25,310	1,556,000	B.
August.....	18,950	6,560	11,810	726,200	B.
September.....	10,850	4,515	6,972	414,900	B.
The period.....				9,180,000	
1905-6.					
October.....	18,200	4,700	8,571	527,000	C.
November.....	17,800	5,200	7,606	452,600	C.
December.....	29,500	5,300	9,097	559,400	C.
January.....	7,700	2,850	4,830	297,000	B.
February.....	6,700	5,000	5,880	327,000	B.
March.....	31,800	5,600	12,300	756,000	B.
April.....	55,600	21,100	31,600	1,880,000	B.
May.....	93,000	28,500	64,500	3,970,000	B.
June.....	116,000	66,000	95,300	5,670,000	B.
July.....	62,600	27,500	40,000	2,460,000	B.
August.....	29,000	12,500	18,400	1,130,000	B.
September.....	19,500	10,800	13,400	797,000	B.
The year.....	116,000	2,850	26,000	18,800,000	
1906-7.					
October.....	17,800	8,200	11,700	719,000	B.
November.....	12,800	8,000	9,870	587,000	B.
December.....	23,100	5,500	9,260	569,000	B.
January.....	9,600	6,700	8,160	502,000	B.
February.....	15,100	7,850	10,800	600,000	B.
March.....	29,000	12,600	16,800	1,030,000	B.
April.....	45,600	21,900	31,700	1,890,000	B.
May.....	102,000	26,900	44,900	2,760,000	B.
June.....	112,000	52,000	85,900	5,110,000	B.
July.....	104,000	44,000	75,300	4,630,000	B.
August.....	50,000	17,500	32,500	2,000,000	B.
September.....	25,800	12,700	18,400	1,090,000	B.
The year.....	112,000	5,500	29,600	21,500,000	

COLORADO RIVER AT BULLS HEAD, NEAR MOHAVE, ARIZ.

This station was established December 5, 1902, at a point of rocks known as the Bulls Head, and discontinued May 18, 1903. The station was about 28 miles from Needles, Cal., and 12 miles from Mohave, Ariz.

The gage was an inclined 1 by 5 inch board 24 feet long, spiked to a 4 by 6 inch timber. The timber was fastened to the rocks by iron braces.

Discharge measurements were made from a cable and car.

The channel is straight for 300 feet above and below the station, and the current is swift. Both banks are high and rocky and are without trees. There is but one channel. The bed of the stream is composed of silt and sand and is shifting.

Discharge measurements of Colorado River at Bulls Head, Ariz., in 1902 and 1903.

Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.
1902.	<i>Feet.</i>	<i>Sec.-ft.</i>	1903.	<i>Feet.</i>	<i>Sec.-ft.</i>	1903.	<i>Feet.</i>	<i>Sec.-ft.</i>
Dec. 5.....	3.00	5,459	Jan. 27.....	2.75	3,651	Mar. 25.....	3.90	7,976
10.....	2.65	4,051	29.....	2.60	3,652	27.....	4.00	8,652
13.....	2.45	3,222	30.....	2.65	3,455	30.....	4.45	9,403
17.....	2.95	4,138	31.....	2.65	3,525	Apr. 1.....	5.10	11,759
20.....	3.50	4,792	Feb. 4.....	3.00	4,289	3.....	5.30	14,457
24.....	3.23	4,939	7.....	3.35	4,380	6.....	6.10	17,420
29.....	2.45	3,366	10.....	3.35	4,924	10.....	6.40	18,991
31.....	2.20	2,913	19.....	2.70	3,975	13.....	5.30	14,476
			21.....	2.60	3,611	15.....	4.95	12,611
1903.			25.....	3.20	4,582	17.....	5.20	12,975
Jan. 3.....	2.20	2,899	27.....	3.15	4,221	20.....	5.20	13,152
5.....	2.40	3,416	Mar. 4.....	3.20	4,991	22.....	5.15	12,308
7.....	2.20	2,978	7.....	3.15	5,551	24.....	5.30	15,323
14.....	2.60	3,415	9.....	3.30	6,274	30.....	6.25	17,266
18.....	2.85	3,856	13.....	4.00	8,723	May 1.....	6.80	20,359
20.....	3.00	3,826	14.....	3.90	7,988	4.....	7.65	25,981
21.....	3.00	3,700	17.....	4.00	8,505	6.....	7.55	25,362
22.....	3.10	3,776	18.....	4.15	9,001	11.....	8.40	34,272
23.....	3.10	3,953	20.....	4.50	10,456			
24.....	3.05	4,164	23.....	4.45	9,329			

Daily gage height, in feet, of Colorado River at Bulls Head, Ariz., for 1902-3.

Day.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Day.	Dec.	Jan.	Feb.	Mar.	Apr.	May.
1.....	.....	2.02	.....	3.60	5.10	6.85	16.....	2.65	2.50	2.45	4.00	4.95	10.00
2.....	.....	1.98	2.75	3.20	5.20	7.20	17.....	2.95	2.65	2.60	4.00	5.20	10.25
3.....	.....	2.20	2.90	3.40	5.30	7.55	18.....	3.24	2.85	2.60	4.20	5.30	10.70
4.....	.....	2.30	3.00	3.20	5.25	7.65	19.....	3.20	2.98	2.65	4.55	5.30	.....
5.....	3.00	2.40	3.09	3.20	6.65	7.70	20.....	3.50	3.00	2.70	4.50	5.20	.....
6.....	3.02	2.30	3.30	3.10	6.10	7.55	21.....	3.45	3.00	2.60	4.55	.....	.....
7.....	2.90	2.20	3.35	3.15	8.00	7.60	22.....	3.40	3.05	2.60	4.50	5.15	.....
8.....	2.78	2.40	3.35	3.20	7.50	7.80	23.....	3.38	3.10	3.00	4.45	.....	.....
9.....	2.72	2.70	3.38	3.30	.....	8.10	24.....	3.20	3.03	3.10	.....	5.30	.....
10.....	2.65	2.80	3.35	3.30	6.40	8.45	25.....	3.13	2.96	3.20	3.90	5.30	.....
11.....	.....	2.50	3.15	3.95	6.00	8.50	26.....	3.02	2.85	3.20	3.70	.....	.....
12.....	2.50	2.60	3.30	4.00	5.60	8.65	27.....	2.82	2.74	3.00	4.00	5.25	.....
13.....	2.45	2.50	2.50	3.85	5.30	8.90	28.....	2.72	2.62	3.15	4.25	.....	.....
14.....	2.50	2.60	2.40	3.90	5.10	9.20	29.....	2.48	2.60	.....	4.40	5.75	.....
15.....	2.64	2.60	2.40	4.15	4.95	9.50	30.....	2.35	2.68	.....	4.45	6.30	.....
							31.....	2.18	2.70	.....	4.65	.....	.....

COLORADO RIVER AT YUMA, ARIZ.

This station, which is located in the town of Yuma, Ariz., $1\frac{1}{2}$ miles below the mouth of Gila River and 10 miles by river above the Mexican border, furnishes information concerning the amount of water available for irrigation along the lower Colorado River. Records of river height have been kept by the Southern Pacific Co. since April 1, 1878.

At Laguna dam, 14 miles above the station, water is diverted for irrigation on the California side. At Yuma, below the station, water is pumped from the river for irrigation in the Yuma Valley. At the Imperial canal headworks, 6 miles below Yuma, diversions are made for use in Imperial Valley.

The records at present are furnished by the United States Reclamation Service, through the project engineer at Yuma, Ariz.

The gage is a vertical staff, in two sections, the upper section, reading above 24 feet, being the original gage established in 1876. It is located at the railroad bridge, 600 feet above the cable station. The elevation of the zero of the gage is 102.79 feet above sea level.

As the bed of the stream is composed of silt and sand and is very unstable, frequent measurements are necessary to properly determine the daily discharge. Neither bank is subject to overflow. Previous to May 31, 1903, discharge measurements were made from the railroad bridge. On that date a cable station was established at a point 600 feet below the bridge, and all measurements are now made from a car, except during highest floods, when a boat is used. At flood stages a large part of the water flows through an old channel and does not pass under the cable. At such times this overflow water is measured at the point where it passes under the railway trestle, one-third mile north of the main channel.

Discharge measurements of Colorado River at Yuma, Ariz., 1876, 1895, 1896, 1901, 1902.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1876.		<i>Feet.</i>	<i>Sec.-ft.</i>	1902.		<i>Feet.</i>	<i>Sec.-ft.</i>
Mar. 15	United States Engineers	.....	7,659	Nov. 13	S. G. Bennett.....	17.50	3,865
1895.				15	W. D. Smith.....	18.55	5,276
Jan. 17	J. B. Lippincott.....	20.3	9,737	18	.....do.....	18.05	4,213
Apr. 18	.....do.....	20.2	21,094	20	.....do.....	18.00	4,368
July 10	.....do.....	21.2	45,533	22	.....do.....	18.10	4,600
1896.				24	.....do.....	18.45	5,500
May 20	J. B. Lippincott.....	22.2	57,903	26	.....do.....	18.40	4,979
1901.				28	.....do.....	18.50	5,544
Aug. 18	H. G. Heisler.....	20.7	18,683	Dec. 1	.....do.....	20.00	12,596
1902.				3	.....do.....	19.25	7,862
Jan. 9	J. B. Lippincott.....	17.20	3,637	5	.....do.....	18.85	6,347
Feb. 20	S. G. Bennett.....	17.15	3,239	8	.....do.....	18.30	4,825
May 30	.....do.....	23.00	38,400	10	.....do.....	18.20	5,081
July 7	W. W. Follett.....	21.06	18,350	12	.....do.....	18.00	4,609
July 9	S. G. Bennett.....	20.52	14,799	15	.....do.....	17.65	3,818
Oct. 11	.....do.....	18.50	6,030	16	.....do.....	17.50	3,589
14	R. P. H. Laney.....	17.90	4,798	18	.....do.....	18.30	5,361
17	.....do.....	17.50	3,559	19	.....do.....	18.05	4,607
21	.....do.....	17.60	4,203	20	.....do.....	18.05	5,237
24	.....do.....	17.50	3,547	22	.....do.....	17.70	4,698
Nov. 12	S. G. Bennett.....	17.40	3,614	24	.....do.....	18.00	4,863
				26	.....do.....	18.10	5,356
				27	.....do.....	18.30	5,497
				29	.....do.....	18.00	4,588
				31	.....do.....	17.70	4,176

STREAM MEASUREMENTS IN LOWER COLORADO RIVER BASIN. 425

Discharge measurements of Colorado River at Yuma, Ariz., in 1903.

[By Smith, Swain, and Barnes.]

Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.
1903.	<i>Feet.</i>	<i>Sec.-ft.</i>	1903.	<i>Feet.</i>	<i>Sec.-ft.</i>	1903.	<i>Feet.</i>	<i>Sec.-ft.</i>
Jan. 2.....	17.40	3,423	Mar. 30.....	19.58	6,530	Aug. 11.....	20.50	11,233
3.....	17.30	3,503	31.....	20.20	8,295	19.....	19.75	8,170
5.....	17.00	3,133	Apr. 2.....	20.27	8,961	21.....	19.83	9,193
7.....	16.90	2,826	8.....	21.55	20,359	Sept. 2.....	19.20	5,759
9.....	16.90	2,722	9.....	22.85	32,623	4.....	19.00	5,501
10.....	16.90	2,818	10.....	22.75	25,400	10.....	19.40	5,942
12.....	16.80	2,694	16.....	20.58	12,263	12.....	19.35	6,309
14.....	16.95	2,905	18.....	20.40	11,466	15.....	19.10	5,138
19.....	17.00	2,939	21.....	20.64	11,442	17.....	19.50	7,399
21.....	17.00	2,900	23.....	20.55	10,038	19.....	19.50	7,714
23.....	17.10	3,078	25.....	20.68	11,584	21.....	19.30	6,943
24.....	17.20	3,170	27.....	20.90	12,218	23.....	19.60	8,331
25.....	17.20	2,997	29.....	20.70	11,762	25.....	19.60	7,991
26.....	17.40	3,320	May 2.....	21.60	17,243	29.....	19.70	7,649
27.....	17.40	3,266	4.....	21.75	21,177	Oct. 2.....	20.40	9,352
29.....	17.50	3,297	6.....	21.90	22,479	4.....	20.70	11,493
31.....	17.40	3,382	9.....	22.00	22,771	6.....	21.00	15,806
Feb. 2.....	17.20	2,978	12.....	22.55	27,500	8.....	20.35	9,852
3.....	17.15	2,847	15.....	23.30	29,760	10.....	19.90	7,906
5.....	17.20	2,997	18.....	23.80	34,000	12.....	20.10	8,403
6.....	17.20	3,179	21.....	24.45	43,160	14.....	20.40	9,916
7.....	17.25	3,171	23.....	25.20	48,980	16.....	20.00	8,044
9.....	17.41	3,512	25.....	25.60	56,401	19.....	19.80	6,745
10.....	17.55	3,643	28.....	24.65	48,485	22.....	19.70	6,763
11.....	17.71	3,906	31.....	23.60	37,925	25.....	19.70	6,396
14.....	17.98	4,113	June 2.....	23.40	28,770	27.....	19.70	6,365
16.....	18.00	3,973	4.....	23.40	29,600	29.....	19.75	6,128
17.....	17.77	3,807	6.....	23.40	29,360	31.....	19.70	6,148
18.....	17.55	3,447	8.....	24.25	40,990	Nov. 3.....	19.70	6,386
20.....	17.25	3,123	10.....	24.80	49,050	5.....	19.70	6,071
21.....	17.21	3,182	12.....	25.25	52,459	7.....	19.70	5,702
23.....	17.24	2,910	15.....	25.75	54,290	10.....	19.70	5,700
24.....	17.29	3,313	17.....	26.35	56,720	13.....	19.70	5,353
26.....	17.28	3,127	19.....	26.65	61,675	16.....	19.70	5,245
28.....	17.25	3,255	22.....	27.15	65,500	18.....	19.70	5,238
Mar. 2.....	17.50	3,500	24.....	27.50	69,174	21.....	19.65	5,011
3.....	17.65	3,700	26.....	27.65	67,737	24.....	19.60	5,054
5.....	17.69	3,695	29.....	27.60	72,219	26.....	19.55	4,963
6.....	18.14	4,099	July 2.....	27.25	66,512	28.....	19.40	4,707
7.....	19.01	5,791	5.....	26.70	54,216	30.....	19.50	4,944
9.....	18.68	4,974	7.....	26.05	51,265	Dec. 2.....	19.70	5,345
10.....	18.48	4,695	9.....	25.20	44,430	5.....	19.20	4,479
12.....	18.26	4,183	11.....	24.45	41,853	8.....	19.42	4,689
13.....	18.23	4,097	13.....	23.15	34,096	10.....	19.60	5,056
14.....	18.35	4,177	15.....	22.70	30,950	12.....	19.65	5,027
16.....	19.84	7,146	17.....	22.80	30,219	14.....	19.50	4,908
18.....	19.73	6,806	20.....	22.40	28,558	16.....	19.36	4,786
20.....	19.68	6,284	22.....	22.20	25,956	18.....	19.20	4,370
21.....	19.63	6,434	24.....	22.90	30,400	20.....	18.85	3,886
23.....	20.54	9,408	27.....	22.70	27,120	22.....	18.55	3,627
24.....	20.28	8,789	29.....	21.80	22,726	25.....	18.35	3,253
26.....	20.05	8,682	31.....	21.60	20,350	28.....	18.40	3,410
28.....	19.84	7,662	Aug. 8.....	20.80	13,325	30.....	18.90	3,896

Discharge measurements of Colorado River at Yuma, Ariz., in 1904.

[By W. D. Smith, S. M. Smith, and J. N. Johannsen.]

Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.
	<i>Feet.</i>	<i>Sec.-ft.</i>		<i>Feet.</i>	<i>Sec.-ft.</i>		<i>Feet.</i>	<i>Sec.-ft.</i>
Jan. 2	18.92	3,981	Apr. 23	20.3	6,173	Aug. 6	21.85	15,427
5	18.84	4,007	26	21.3	13,534	8	22.15	16,357
8	18.75	3,677	28	21.8	17,605	12	21.95	17,686
11	18.6	3,494	29	22.0	19,204	16	21.95	16,660
14	16.55	3,418	May 2	21.7	17,838	18	21.65	14,636
16	18.7	3,512	4	21.7	17,959	20	21.5	14,199
19	18.6	3,407	6	21.5	17,046	23	21.3	12,957
21	18.75	3,694	7	21.85	18,407	24	23.0	23,652
23	18.75	3,586	9	22.3	20,916	26	22.25	18,740
26	18.7	3,511	10	22.95	26,036	30	22.8	23,185
28	18.75	3,595	11	22.85	25,605	Sept. 1	22.1	18,358
30	18.8	3,622	14	22.5	22,854	5	22.0	18,060
Feb. 1	18.85	3,649	16	22.6	23,123	7	22.4	18,351
4	18.9	3,812	19	22.9	25,083	9	21.8	15,773
6	19.9	3,736	21	23.55	32,200	13	21.0	12,940
9	18.75	3,484	23	23.95	32,523	15	20.9	11,772
11	18.7	3,342	25	24.1	35,653	19	20.35	8,063
13	18.75	3,540	27	24.7	40,839	22	20.1	7,682
16	18.75	3,490	31	25.4	46,677	26	19.6	6,508
18	18.95	3,753	June 2	25.95	46,956	28	19.45	5,984
20	19.05	3,794	5	26.25	49,485	30	19.3	5,538
22	19.2	4,162	7	26.0	51,170	Oct. 4	19.3	6,014
25	19.35	4,229	9	25.9	49,183	6	20.95	12,408
27	19.25	4,247	11	25.5	45,820	10	20.9	11,193
Mar. 1	19.45	4,446	13	24.9	42,295	14	21.85	19,134
3	19.5	4,627	15	24.7	34,256	17	22.35	21,603
5	19.55	4,725	17	24.8	38,192	19	21.15	14,579
8	19.7	4,943	20	25.0	38,981	22	20.6	11,476
10	19.9	5,526	22	25.4	43,202	25	20.2	10,055
12	20.0	5,720	24	25.7	45,435	29	19.95	8,825
14	20.55	9,320	27	25.65	43,706	Nov. 1	20.0	7,964
15	20.25	8,141	29	25.55	44,909	5	19.85	6,955
17	19.9	7,111	July 2	25.15	35,701	8	19.65	6,544
19	19.85	6,645	5	24.25	32,421	12	19.65	6,430
22	19.8	5,795	7	24.0	32,186	15	19.65	6,423
25	19.95	5,861	9	23.8	27,608	19	19.5	5,948
29	20.15	6,250	11	23.4	23,675	23	19.3	5,269
31	20.05	5,971	13	23.0	22,761	26	19.1	5,156
Apr. 2	20.0	5,926	15	23.05	22,269	30	19.05	4,754
5	20.15	6,046	18	22.85	21,050	Dec. 3	19.1	5,080
7	20.5	7,033	21	22.55	18,681	6	19.05	4,797
9	20.4	6,984	22	22.5	18,178	10	19.0	4,819
11	20.05	6,430	25	22.2	15,269	13	18.85	4,696
14	19.95	5,847	28	22.25	16,044	17	18.85	4,756
16	19.95	5,823	30	21.9	13,939	19	19.1	4,822
19	20.15	6,323	Aug. 1	22.2	16,193	24	18.4	3,641
21	20.25	5,964	4	22.25	15,973	29	18.4	3,933

STREAM MEASUREMENTS IN LOWER COLORADO RIVER BASIN. 427

Discharge measurements of Colorado River at Yuma, Ariz., in 1905.

[By W. D. Smith and others.]

Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.
	<i>Feet.</i>	<i>Sec.-ft.</i>		<i>Feet.</i>	<i>Sec.-ft.</i>		<i>Feet.</i>	<i>Sec.-ft.</i>
Jan. 4.....	18.6	3,985	Apr. 13.....	25.3	45,800	Aug. 21.....	18.85	8,090
6.....	18.95	4,573	14.....	29.4	93,800	23.....	18.75	7,795
9.....	18.65	4,170	19.....	24.9	45,050	26.....	18.65	7,241
10.....	21.1	16,090	21.....	23.3	39,500	28.....	18.7	7,013
11.....	19.2	6,401	24.....	22.3	31,690	30.....	19.6	10,290
13.....	19.25	6,348	26.....	23.4	37,160	Sept. 1.....	18.5	6,440
17.....	22.3	20,420	27.....	23.95	41,630	4.....	18.45	6,464
18.....	23.95	27,450	29.....	23.95	34,990	6.....	18.3	5,644
20.....	21.0	12,170	May 1.....	25.0	41,520	9.....	18.45	6,051
23.....	20.2	7,863	4.....	24.25	37,280	11.....	18.95	7,631
25.....	19.8	7,055	6.....	24.55	37,410	13.....	18.85	7,706
28.....	19.55	5,727	8.....	25.1	40,050	14.....	19.4	9,667
31.....	19.3	5,278	10.....	26.1	49,200	16.....	18.8	7,700
Feb. 2.....	19.6	6,054	13.....	25.4	38,840	18.....	18.6	6,743
4.....	19.7	6,632	16.....	25.0	37,820	20.....	18.7	7,131
6.....	21.4	16,600	18.....	24.7	39,910	23.....	18.45	6,063
8.....	28.0	67,730	20.....	24.3	34,580	26.....	18.2	5,260
9.....	28.75	82,820	23.....	24.9	38,390	29.....	18.0	5,287
10.....	26.2	39,580	26.....	25.8	45,800	Oct. 2.....	18.0	5,222
11.....	24.1	32,120	29.....	26.8	54,810	4.....	18.65	7,172
16.....	21.5	18,610	31.....	27.4	59,020	6.....	18.8	7,295
18.....	21.4	16,490	June 3.....	28.0	68,160	7.....	20.1	13,080
20.....	25.1	47,000	6.....	28.45	67,600	10.....	20.3	14,060
22.....	25.8	54,730	8.....	28.3	72,930	13.....	19.7	10,660
23.....	23.7	32,990	12.....	28.25	72,590	16.....	19.1	8,290
24.....	22.05	21,990	14.....	28.7	82,020	19.....	18.7	6,779
25.....	21.5	18,860	19.....	29.15	94,320	23.....	18.6	6,025
27.....	23.45	27,730	22.....	29.1	92,400	27.....	18.4	5,507
Mar. 1.....	23.95	29,070	26.....	28.55	77,610	31.....	18.4	5,579
2.....	24.9	39,260	29.....	27.6	64,370	Nov. 3.....	18.5	5,812
3.....	26.7	70,170	July 3.....	25.9	50,640	6.....	18.35	5,709
6.....	24.8	44,310	5.....	25.45	44,950	9.....	18.75	6,632
9.....	24.1	36,400	10.....	23.35	32,980	13.....	18.75	6,308
11.....	24.2	38,625	13.....	22.05	30,870	16.....	18.85	6,787
13.....	24.45	38,870	15.....	21.9	27,710	23.....	18.8	6,495
15.....	24.0	36,720	18.....	21.75	25,300	27.....	19.0	6,652
16.....	26.1	60,640	19.....	21.3	22,320	30.....	31.3	102,700
17.....	27.35	65,820	21.....	20.9	22,000	Dec. 1.....	28.78	77,360
19.....	28.0	73,440	24.....	20.5	20,800	2.....	23.5	37,160
20.....	30.25	110,800	26.....	20.35	20,460	5.....	21.3	28,650
22.....	28.9	91,200	28.....	20.05	18,910	8.....	19.5	16,970
23.....	27.75	76,930	31.....	19.95	16,750	11.....	18.75	12,620
24.....	25.6	58,600	Aug. 2.....	19.9	15,790	14.....	18.3	9,613
25.....	24.1	43,050	4.....	19.8	13,560	16.....	18.2	8,795
27.....	22.1	31,020	7.....	20.2	15,940	18.....	17.95	7,807
30.....	22.0	24,390	9.....	20.3	16,770	21.....	17.85	7,670
Apr. 1.....	21.5	20,690	11.....	20.4	16,960	26.....	17.95	7,502
3.....	21.3	19,480	14.....	20.1	15,960	30.....	17.8	5,981
5.....	21.6	21,000	16.....	19.6	13,800			
7.....	22.5	29,840	19.....	19.1	9,757			

Discharge measurements of Colorado River at Yuma, Ariz., in 1906.

[By W. D. Smith and others.]

Date.	Gage height.	Discharge.	Date.	Gage height.	Discharge.	Date.	Gage height.	Discharge.
	<i>Feet.</i>	<i>Sec.-ft.</i>		<i>Feet.</i>	<i>Sec.-ft.</i>		<i>Feet.</i>	<i>Sec.-ft.</i>
Jan. 3.....	17.7	5,730	May 18.....	26.2	52,800	Sept. 17.....	16.65	10,700
5.....	17.55	5,580	21.....	27.1	64,200	19.....	18.4	9,920
9.....	17.45	5,090	24.....	27.2	68,900	21.....	18.4	10,200
13.....	17.4	4,550	28.....	27.6	71,100	24.....	18.4	10,300
19.....	17.4	4,260	June 1.....	28.6	81,800	26.....	19.1	13,200
23.....	19.5	16,100	5.....	28.3	92,400	28.....	18.7	11,700
25.....	19.6	13,800	8.....	27.4	89,000	Oct. 1.....	19.55	15,900
27.....	18.8	10,000	11.....	27.3	82,100	3.....	19.4	14,700
30.....	18.7	9,740	13.....	26.9	65,800	6.....	19.35	15,800
Feb. 2.....	18.55	9,110	16.....	26.95	80,600	8.....	19.1	14,900
5.....	18.2	7,280	18.....	26.9	80,800	10.....	18.8	14,300
9.....	18.2	6,360	21.....	26.75	79,800	11.....	18.6	13,300
12.....	18.55	8,220	23.....	27.3	83,000	16.....	18.1	10,700
15.....	18.9	9,640	25.....	27.8	96,600	18.....	18.1	10,800
16.....	19.95	14,600	28.....	28.05	96,900	22.....	18.0	9,950
19.....	19.6	12,200	30.....	27.3	80,300	24.....	18.0	9,800
21.....	19.4	10,800	July 3.....	24.35	60,400	27.....	18.0	8,980
24.....	19.3	10,200	5.....	22.85	48,100	29.....	18.05	8,610
Mar. 6.....	18.9	8,600	9.....	21.85	40,400	Nov. 1.....	18.35	8,630
9.....	18.9	7,730	11.....	21.8	38,600	3.....	18.5	9,150
12.....	18.85	6,740	13.....	21.4	38,100	6.....	18.65	8,430
15.....	26.35	54,300	16.....	20.95	35,400	8.....	18.75	9,420
16.....	27.55	66,700	18.....	21.15	32,900	9.....	18.75	9,430
17.....	24.75	42,300	20.....	21.3	32,400	10.....	18.8	9,650
19.....	22.75	33,200	23.....	21.6	31,600	12.....	19.2	11,600
21.....	22.05	24,600	25.....	21.4	33,000	14.....	19.1	11,500
24.....	21.5	22,400	28.....	21.1	29,100	16.....	19.0	10,800
27.....	24.0	43,800	30.....	20.7	29,100	20.....	18.95	10,000
28.....	26.5	65,600	Aug. 1.....	20.35	25,600	22.....	18.75	9,280
29.....	28.1	75,000	4.....	20.0	24,500	24.....	18.8	9,230
31.....	23.7	34,700	7.....	19.7	21,900	26.....	18.8	8,670
Apr. 3.....	23.8	37,500	9.....	19.3	22,000	28.....	18.8	9,210
5.....	23.4	37,800	11.....	19.55	20,500	Dec. 1.....	18.7	9,080
9.....	22.3	27,200	13.....	19.4	19,500	3.....	18.65	9,080
11.....	22.7	29,800	15.....	19.2	16,900	5.....	18.5	8,470
14.....	22.45	27,800	18.....	19.1	16,500	6.....	21.1	26,000
16.....	22.7	29,500	20.....	19.25	16,400	8.....	23.9	47,000
18.....	22.40	27,200	21.....	19.9	18,500	10.....	21.9	37,030
20.....	22.45	26,100	24.....	19.2	15,500	11.....	21.0	23,200
23.....	22.65	29,000	25.....	19.8	17,900	12.....	20.3	23,400
25.....	23.1	31,700	27.....	19.1	15,200	15.....	19.6	18,300
27.....	23.55	36,700	29.....	19.5	16,400	17.....	19.3	15,800
30.....	24.50	44,100	31.....	18.9	13,400	19.....	19.1	13,900
May 2.....	25.1	50,800	Sept. 3.....	19.2	14,500	21.....	18.9	12,300
5.....	24.55	40,600	5.....	18.85	12,500	24.....	18.8	11,300
8.....	24.3	36,800	7.....	18.7	12,000	26.....	18.6	10,600
10.....	23.7	35,100	10.....	18.75	11,800	28.....	18.5	8,870
12.....	24.25	42,100	13.....	18.8	11,800	29.....	18.5	8,940
15.....	24.9	46,500	15.....	18.7	10,700			

Discharge measurements of Colorado River at Yuma, Ariz., in 1907 and 1908.

[By Robertson, North, Dyer, and Priest.]

Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.
1907.	<i>Feet.</i>	<i>Sec.-ft.</i>	1907.	<i>Feet.</i>	<i>Sec.-ft.</i>	1908.	<i>Feet.</i>	<i>Sec.-ft.</i>
Jan. 1.....	22.75	36,600	July 8.....	27.5	108,000	Jan. 18.....	18.1	5,600
3.....	20.85	24,700	10.....	27.8	110,000	20.....	18.1	5,600
5.....	20.6	18,800	15.....	27.8	114,000	27.....	18.4	6,300
7.....	20.2	15,200	17.....	27.5	110,000	30.....	18.4	6,100
9.....	20.0	15,900	20.....	26.75	102,000	Feb. 5.....	18.7	7,400
11.....	20.7	18,200	22.....	25.65	92,000	7.....	23.95	45,000
14.....	22.0	29,700	24.....	24.8	82,400	11.....	19.7	14,200
16.....	20.5	20,400	29.....	23.1	58,600	14.....	20.0	14,900
18.....	19.8	16,300	31.....	22.8	55,400	19.....	19.7	12,900
21.....	21.7	27,300	Aug. 3.....	23.3	61,900	21.....	19.9	10,600
23.....	20.6	22,100	5.....	22.85	55,300	24.....	19.7	9,900
25.....	20.15	15,900	7.....	22.45	50,600	26.....	20.65	16,900
28.....	19.7	13,200	10.....	22.15	49,900	Mar. 3.....	20.25	11,700
30.....	19.6	12,700	12.....	21.45	41,300	9.....	22.2	27,000
Feb. 2.....	22.05	29,500	14.....	20.95	33,900	11.....	21.1	18,700
4.....	21.6	27,100	17.....	20.45	32,900	12.....	21.9	24,700
6.....	20.6	18,800	19.....	20.25	28,600	14.....	20.6	15,200
8.....	20.4	17,900	22.....	20.25	26,800	17.....	20.05	13,400
11.....	20.9	20,300	24.....	19.95	24,500	19.....	19.85	11,300
13.....	20.6	17,400	26.....	20.5	27,300	23.....	20.2	13,200
16.....	20.5	16,600	29.....	20.3	25,000	25.....	20.45	14,300
18.....	20.4	14,900	31.....	19.6	23,100	28.....	20.95	17,200
20.....	20.2	14,100	Sept. 2.....	22.25	43,300	31.....	20.8	16,100
23.....	21.0	17,400	4.....	21.25	35,000	Apr. 2.....	20.8	16,400
25.....	20.7	15,000	7.....	21.25	34,500	6.....	20.4	13,900
28.....	21.9	22,900	9.....	20.75	31,900	9.....	20.2	13,400
Mar. 2.....	20.75	16,700	11.....	20.5	27,600	17.....	20.6	13,600
5.....	21.0	18,000	14.....	19.65	21,900	22.....	21.1	16,500
9.....	24.65	46,200	16.....	19.2	18,400	25.....	22.0	27,100
11.....	22.2	26,500	21.....	19.0	15,500	27.....	21.95	26,000
13.....	21.75	24,900	23.....	19.0	14,100	29.....	22.05	28,100
16.....	21.2	19,700	25.....	19.0	13,400	May 2.....	22.7	29,800
18.....	20.8	16,900	28.....	19.1	13,400	5.....	22.0	27,100
20.....	20.4	14,800	Oct. 1.....	18.9	12,000	9.....	21.4	23,100
25.....	22.0	26,200	3.....	18.8	11,300	13.....	21.65	25,100
27.....	21.5	20,200	5.....	18.7	10,300	16.....	21.55	23,500
30.....	23.0	31,200	8.....	18.75	10,300	18.....	22.2	27,900
Apr. 1.....	22.8	29,000	10.....	19.1	12,200	22.....	22.3	27,500
3.....	23.2	32,100	12.....	19.7	15,900	26.....	22.15	25,500
6.....	22.7	29,200	14.....	19.75	15,500	31.....	22.8	31,300
8.....	22.4	27,400	17.....	19.6	14,000	June 5.....	22.6	30,900
10.....	22.2	24,700	19.....	19.5	13,800	8.....	22.4	33,600
13.....	22.45	25,900	21.....	19.55	14,600	12.....	23.3	35,200
15.....	22.5	26,000	23.....	19.95	15,900	15.....	23.3	38,700
17.....	23.0	29,500	26.....	19.5	14,200	17.....	23.3	39,400
20.....	24.8	41,500	28.....	20.25	18,800	19.....	24.35	48,300
22.....	25.55	46,900	30.....	19.9	16,300	22.....	24.95	55,100
24.....	25.8	49,900	Nov. 2.....	19.55	14,300	24.....	25.25	59,700
27.....	25.6	45,700	4.....	19.4	12,900	26.....	25.35	61,700
29.....	24.7	44,600	6.....	19.3	11,900	29.....	24.6	55,400
May 1.....	23.75	35,500	9.....	19.1	11,800	July 1.....	24.5	53,800
4.....	23.2	32,400	12.....	19.1	10,900	4.....	24.2	53,100
6.....	23.1	33,000	14.....	19.1	10,700	6.....	23.8	49,300
8.....	23.3	33,900	18.....	18.8	9,600	8.....	23.05	41,100
11.....	23.2	32,800	20.....	18.8	9,900	10.....	22.3	35,400
13.....	22.8	30,400	23.....	18.8	9,600	13.....	21.9	31,200
15.....	22.65	29,100	26.....	18.7	9,100	15.....	21.5	29,800
18.....	22.8	28,600	29.....	18.7	9,000	17.....	21.2	28,800
20.....	23.5	31,900	Dec. 2.....	18.5	8,600	20.....	21.0	25,600
22.....	24.4	37,500	5.....	18.3	7,800	22.....	20.7	24,600
25.....	24.7	41,300	7.....	18.3	8,000	24.....	20.7	24,100
27.....	25.55	51,000	9.....	18.3	7,500	27.....	20.55	21,600
29.....	27.0	61,800	12.....	18.3	7,900	29.....	20.1	19,300
June 1.....	28.4	72,400	14.....	18.5	7,700	31.....	20.2	18,900
3.....	29.1	77,000	16.....	18.45	7,800	Aug. 3.....	20.85	22,700
6.....	28.95	87,100	18.....	18.4	7,300	5.....	20.7	21,400
8.....	27.75	80,100	21.....	18.4	7,400	7.....	21.1	25,200
10.....	26.9	72,200	24.....	18.35	7,500	10.....	22.05	31,900
12.....	27.1	81,800	28.....	18.15	6,300	12.....	21.8	28,200
15.....	28.05	94,400	30.....	18.1	6,000	14.....	21.05	24,000
17.....	28.55	101,000				17.....	20.6	20,700
19.....	29.15	106,000	1908.			19.....	20.4	20,500
22.....	29.05	108,000	Jan. 2.....	18.0	5,800	21.....	20.45	19,300
24.....	28.9	112,000	5.....	18.2	6,400	24.....	22.4	33,800
26.....	28.9	114,000	8.....	18.6	7,400	26.....	22.1	28,200
29.....	28.6	115,000	11.....	18.4	6,900	28.....	21.6	25,000
July 1.....	28.3	113,000	13.....	18.3	6,700	31.....	20.65	18,900
6.....	27.4	107,000	16.....	18.2	5,900	Sept. 2.....	20.4	19,200

Discharge measurements of Colorado River at Yuma, Ariz., in 1907 and 1908—Contd.

Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.
1908.	<i>Feet.</i>	<i>Sec.-ft.</i>	1908.	<i>Feet.</i>	<i>Sec.-ft.</i>	1908.	<i>Feet.</i>	<i>Sec.-ft.</i>
Sept. 4.....	20.1	16,600	Oct. 23.....	19.4	8,200	Dec. 2.....	19.2	6,200
7.....	19.6	14,100	26.....	21.15	20,600	4.....	19.4	6,600
11.....	19.3	11,800	28.....	20.05	13,700	7.....	19.6	7,400
17.....	19.1	10,400	30.....	19.75	12,100	9.....	19.6	7,700
19.....	18.8	8,900	Nov. 2.....	19.3	9,900	11.....	19.55	7,400
21.....	18.7	8,200	4.....	19.2	9,200	12.....	19.5	7,300
23.....	18.65	7,700	6.....	19.3	8,500	14.....	19.4	6,900
25.....	18.6	7,000	9.....	19.3	8,200	16.....	19.1	6,100
28.....	18.8	7,500	11.....	19.4	8,200	17.....	19.4	7,300
30.....	18.8	7,200	13.....	19.5	8,700	19.....	27.1	72,500
Oct. 3.....	18.9	6,600	16.....	19.5	8,000	20.....	27.3	68,900
5.....	19.4	8,200	18.....	19.6	7,600	22.....	21.5	25,400
7.....	19.5	8,500	20.....	19.6	7,500	23.....	23.1	37,200
9.....	19.8	10,000	23.....	19.55	7,300	26.....	20.6	19,400
12.....	19.5	8,600	25.....	19.7	7,200	28.....	19.8	14,800
14.....	19.8	9,900	27.....	19.7	7,400	30.....	19.2	11,200
19.....	19.3	7,700	30.....	19.2	6,000			

Discharge measurements of Colorado River at Yuma, Ariz., in 1909.

[By North and Conway.]

Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.
	<i>Feet.</i>	<i>Sec.-ft.</i>		<i>Feet.</i>	<i>Sec.-ft.</i>		<i>Feet.</i>	<i>Sec.-ft.</i>
Jan. 1.....	18.7	7,800	May 10.....	23.0	37,300	Sept. 18.....	19.9	40,000
4.....	18.4	6,000	12.....	23.5	42,500	21.....	18.9	33,600
6.....	18.6	6,800	14.....	24.2	49,000	23.....	18.4	29,400
8.....	18.3	6,100	17.....	25.2	60,400	28.....	17.6	22,600
12.....	18.3	5,800	19.....	25.7	65,400	30.....	17.4	21,300
15.....	18.8	6,200	21.....	26.2	68,500	Oct. 2.....	17.1	19,200
18.....	19.4	7,400	24.....	25.95	64,700	5.....	16.8	17,200
20.....	19.6	11,900	26.....	25.5	65,400	7.....	16.7	16,100
22.....	19.2	9,900	29.....	25.8	71,400	9.....	16.5	14,500
25.....	20.4	15,300	June 1.....	26.5	74,600	12.....	16.3	13,500
27.....	20.9	21,300	3.....	26.9	76,700	12.....	16.3	13,300
30.....	20.5	17,600	7.....	27.1	78,700	14.....	16.3	12,700
Feb. 1.....	21.8	25,100	9.....	27.05	79,000	14.....	16.3	12,900
3.....	20.7	18,100	12.....	26.45	77,100	16.....	16.5	13,700
5.....	20.1	15,500	14.....	26.8	80,400	16.....	16.5	13,700
9.....	19.7	12,300	16.....	27.6	90,700	19.....	16.4	13,100
11.....	19.7	12,000	18.....	28.8	114,900	19.....	16.4	13,300
15.....	19.8	11,400	20.....	29.6	126,000	21.....	16.4	12,900
17.....	20.0	11,800	22.....	30.3	139,500	21.....	16.4	12,900
19.....	20.3	12,800	24.....	30.75	149,500	23.....	16.4	12,700
23.....	20.2	12,200	26.....	30.65	145,000	23.....	16.4	12,600
25.....	20.9	16,800	July 1.....	29.4	130,200	26.....	16.3	12,000
27.....	20.0	12,000	3.....	29.4	132,400	26.....	16.3	12,000
Mar. 1.....	19.9	11,400	6.....	29.0	132,000	28.....	16.3	11,400
3.....	20.2	12,000	8.....	28.2	116,900	30.....	16.0	11,100
5.....	20.3	12,900	10.....	27.0	102,900	30.....	16.0	11,000
8.....	20.2	11,100	13.....	25.5	86,300	Nov. 1.....	16.0	10,900
10.....	20.3	11,600	15.....	24.6	75,300	4.....	15.9	10,000
13.....	20.75	15,700	17.....	23.8	68,400	6.....	15.8	9,600
15.....	20.9	17,500	19.....	22.2	62,600	9.....	15.8	9,300
17.....	21.1	18,700	22.....	20.0	42,900	11.....	15.8	8,700
19.....	20.8	16,100	24.....	19.4	35,600	13.....	15.8	9,100
23.....	20.8	14,600	26.....	18.9	34,400	16.....	15.9	9,000
25.....	21.5	18,200	29.....	19.25	46,500	18.....	15.9	9,100
27.....	21.5	17,700	31.....	19.8	51,900	20.....	15.9	9,400
29.....	21.5	16,900	Aug. 3.....	19.5	44,300	23.....	15.9	9,300
Apr. 1.....	24.9	43,800	5.....	18.9	38,700	27.....	16.0	9,500
3.....	23.4	33,500	7.....	18.6	36,100	30.....	15.85	9,000
5.....	22.6	29,100	10.....	18.0	28,400	Dec. 2.....	15.9	9,600
8.....	21.4	24,100	12.....	18.4	30,400	4.....	16.0	9,800
10.....	21.2	21,600	14.....	18.3	28,500	7.....	16.1	10,800
12.....	21.8	25,600	17.....	19.3	42,500	9.....	16.1	11,600
15.....	21.95	26,400	19.....	19.8	42,300	11.....	16.0	10,900
17.....	21.5	22,500	21.....	19.7	39,400	14.....	16.0	10,200
20.....	21.3	22,000	24.....	20.95	53,800	16.....	15.7	9,300
22.....	21.2	21,300	26.....	21.2	50,600	18.....	15.35	7,600
24.....	22.65	32,900	28.....	20.2	47,200	21.....	15.1	6,300
26.....	24.2	43,700	31.....	19.8	42,400	23.....	15.2	6,600
28.....	24.65	46,100	Sept. 2.....	19.45	39,000	25.....	15.3	6,600
30.....	23.9	41,900	4.....	21.1	65,200	28.....	15.0	5,700
May 3.....	22.7	32,400	7.....	20.8	50,400	30.....	14.8	4,800
5.....	23.2	38,600	11.....	22.3	76,000			
7.....	23.4	40,400	15.....	22.5	79,900			

STREAM MEASUREMENTS IN LOWER COLORADO RIVER BASIN. 431

Discharge measurements of Colorado River at Yuma, Ariz., in 1910.

[By Conway, Tompkins, and North.]

Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.
	<i>Feet.</i>	<i>Sec.-ft.</i>		<i>Feet.</i>	<i>Sec.-ft.</i>		<i>Feet.</i>	<i>Sec.-ft.</i>
Jan. 1.....	14.65	4,400	May 3.....	21.5	49,200	Aug. 20.....	15.8	9,400
4.....	20.7	48,700	5.....	22.0	54,900	23.....	15.4	7,800
6.....	19.7	38,400	7.....	22.7	65,300	25.....	15.5	7,800
8.....	17.3	21,200	10.....	22.9	70,900	27.....	15.5	7,800
11.....	16.9	19,300	10.....	22.9	63,600	31.....	15.15	6,500
13.....	15.8	13,400	12.....	22.1	61,600	Sept. 3.....	15.0	5,500
15.....	15.0	10,000	12.....	22.1	55,900	6.....	14.9	4,800
18.....	15.0	9,100	14.....	21.5	50,400	8.....	14.9	4,800
20.....	15.5	12,300	17.....	21.6	53,100	10.....	15.3	5,300
22.....	16.2	15,200	19.....	22.0	60,100	13.....	14.7	4,800
25.....	16.4	15,500	24.....	23.0	70,300	15.....	15.8	8,000
29.....	15.8	12,600	26.....	21.95	57,500	17.....	15.6	7,100
Feb. 1.....	15.4	10,600	26.....	21.95	61,600	20.....	15.2	6,100
3.....	15.6	10,200	28.....	21.0	48,400	22.....	15.5	6,900
5.....	15.8	10,300	31.....	20.1	42,100	24.....	15.5	6,200
8.....	15.8	9,500	31.....	20.1	44,400	27.....	15.2	5,600
10.....	15.8	9,300	June 2.....	19.9	40,100	29.....	15.8	7,600
14.....	15.9	8,800	4.....	20.0	41,900	Oct. 1.....	15.6	6,500
17.....	15.9	8,700	7.....	21.8	56,200	4.....	15.8	8,200
19.....	15.7	8,100	11.....	23.2	67,100	8.....	15.3	5,900
21.....	15.8	8,400	14.....	23.2	69,100	10.....	15.5	5,700
24.....	15.8	8,400	16.....	22.15	57,000	15.....	15.5	5,600
26.....	16.0	8,200	18.....	21.25	48,100	18.....	15.4	5,400
Mar. 1.....	15.9	8,200	21.....	20.35	40,500	22.....	16.0	6,100
3.....	15.9	7,600	23.....	19.95	35,200	24.....	16.7	10,400
5.....	16.3	8,700	25.....	19.4	32,200	27.....	16.4	11,900
8.....	17.0	13,700	28.....	18.75	28,700	29.....	16.4	10,600
10.....	17.6	20,000	30.....	18.35	26,900	Nov. 1.....	16.2	8,710
12.....	18.2	24,000	July 2.....	18.05	23,500	3.....	16.25	8,470
15.....	20.4	40,600	5.....	17.8	21,100	5.....	16.4	8,970
17.....	19.9	36,100	7.....	18.3	23,900	8.....	16.2	8,040
19.....	18.9	29,500	9.....	17.4	19,300	10.....	16.2	7,160
22.....	18.3	26,500	12.....	16.95	16,800	12.....	16.2	7,450
24.....	18.2	25,000	14.....	16.5	14,300	15.....	16.5	8,410
26.....	18.4	26,000	16.....	16.6	15,100	19.....	16.3	7,840
29.....	19.3	33,800	19.....	16.1	12,100	22.....	16.4	8,210
31.....	20.1	38,800	21.....	16.1	10,600	26.....	16.8	8,890
Apr. 2.....	20.1	36,400	23.....	16.0	9,800	30.....	16.3	7,790
5.....	19.15	30,200	26.....	16.0	10,000	Dec. 3.....	16.3	7,260
7.....	18.6	27,300	28.....	15.7	7,600	6.....	16.0	6,520
9.....	18.3	24,100	30.....	15.7	7,700	8.....	16.3	7,310
12.....	18.5	23,500	Aug. 1.....	15.9	8,300	10.....	16.4	6,610
14.....	18.1	22,000	4.....	16.3	10,100	13.....	16.2	6,980
16.....	18.1	22,400	6.....	16.6	11,600	15.....	16.2	7,170
19.....	18.7	24,900	9.....	16.1	11,100	17.....	16.2	6,920
23.....	19.2	30,500	11.....	16.2	12,700	20.....	16.0	6,440
26.....	19.1	30,100	13.....	16.4	13,200	24.....	16.2	7,150
28.....	19.9	33,800	16.....	15.8	10,300	28.....	16.3	6,860
30.....	20.3	38,500	18.....	16.0	10,500	31.....	16.0	5,560

Discharge measurements of Colorado River at Yuma, Ariz., in 1911.

[By Tompkins and Cloyd.]

Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.
	<i>Feet.</i>	<i>Sec.-ft.</i>		<i>Feet.</i>	<i>Sec.-ft.</i>		<i>Feet.</i>	<i>Sec.-ft.</i>
Jan. 3.....	15.8	5,430	May 9.....	20.8	32,280	Sept. 16.....	16.55	7,300
5.....	15.8	4,960	11.....	20.9	30,820	19.....	16.35	6,600
7.....	15.7	4,750	16.....	22.8	49,540	21.....	17.6	10,100
11.....	15.0	4,320	18.....	23.5	55,100	23.....	16.8	8,300
14.....	16.1	6,510	20.....	23.9	64,200	26.....	16.6	7,500
17.....	16.0	7,130	23.....	23.3	54,750	28.....	18.0	14,200
19.....	17.2	12,820	25.....	23.0	54,790	30.....	16.8	8,700
21.....	17.8	15,460	27.....	23.2	58,750	Oct. 3.....	16.6	8,000
24.....	17.0	11,580	June 1.....	22.2	50,310	5.....	18.65	22,400
26.....	17.0	11,080	3.....	22.5	51,330	7.....	21.05	37,600
28.....	16.7	9,840	6.....	22.6	53,810	10.....	21.55	40,100
31.....	17.0	10,550	10.....	23.2	56,540	12.....	22.8	49,400
Feb. 2.....	16.7	9,360	13.....	23.8	63,180	14.....	24.0	59,600
4.....	17.3	11,310	15.....	24.0	66,540	17.....	20.1	34,700
7.....	19.3	22,260	22.....	25.45	70,650	19.....	18.95	26,800
9.....	18.5	16,990	24.....	25.85	78,300	21.....	18.15	22,200
11.....	19.9	24,920	July 1.....	24.7	69,540	24.....	17.3	18,200
14.....	18.3	16,560	5.....	23.2	57,300	26.....	17.1	15,600
16.....	17.6	13,320	8.....	21.65	50,250	28.....	17.1	15,200
18.....	17.0	10,680	11.....	22.1	53,880	31.....	17.05	14,000
23.....	16.1	9,330	13.....	21.35	50,220	Nov. 2.....	17.1	13,200
25.....	16.5	7,920	15.....	20.9	44,190	4.....	18.1	18,300
28.....	16.5	7,450	17.....	20.2	38,490	7.....	17.65	15,100
Mar. 2.....	16.6	7,590	20.....	20.9	42,610	9.....	17.2	13,300
4.....	16.4	7,000	22.....	21.15	42,610	11.....	17.1	12,700
7.....	16.2	6,590	25.....	21.55	47,740	14.....	17.0	11,600
9.....	18.2	17,780	27.....	22.75	55,290	16.....	16.9	11,100
11.....	17.7	12,600	29.....	22.2	51,230	18.....	16.9	10,000
14.....	21.4	34,900	Aug. 1.....	21.45	46,070	21.....	17.0	10,700
16.....	19.3	21,630	3.....	20.4	36,030	23.....	17.0	9,400
18.....	19.7	24,700	5.....	19.2	28,630	25.....	16.9	9,300
21.....	19.1	21,150	8.....	18.1	22,190	28.....	17.0	9,600
25.....	18.5	17,600	10.....	18.0	18,180	30.....	17.0	9,500
28.....	18.2	16,670	12.....	18.1	17,800	Dec. 2.....	17.1	10,100
30.....	18.3	16,950	15.....	17.8	13,850	5.....	17.15	10,000
Apr. 1.....	18.6	17,430	17.....	17.6	12,330	7.....	17.0	8,300
4.....	18.8	18,180	19.....	17.5	12,800	9.....	16.85	7,700
8.....	18.8	19,900	22.....	17.05	11,400	12.....	16.2	5,800
11.....	19.4	22,370	24.....	17.1	11,400	14.....	16.15	5,600
13.....	19.7	24,860	26.....	17.1	10,970	16.....	16.65	5,900
15.....	19.7	24,960	29.....	17.45	11,400	19.....	17.2	8,000
20.....	18.9	19,610	31.....	18.55	17,200	21.....	17.0	7,700
22.....	18.7	18,410	Sept. 2.....	17.6	12,000	23.....	16.8	7,600
25.....	18.5	17,780	5.....	17.7	12,000	26.....	16.65	6,800
27.....	18.6	19,040	7.....	17.1	10,600	28.....	16.7	6,900
29.....	19.1	21,900	9.....	16.6	8,300	30.....	16.7	6,900
May 2.....	20.0	27,420	12.....	16.35	7,300			
6.....	20.95	32,780	14.....	16.6	7,800			

Discharge measurements of Colorado River at Yuma, Ariz., in 1912.

[By B. R. Cloyd.]

Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.
1912.	<i>Feet.</i>	<i>Sec.-ft.</i>	1912.	<i>Feet.</i>	<i>Sec.-ft.</i>	1912.	<i>Feet.</i>	<i>Sec.-ft.</i>
Jan. 2.....	16.60	6,000	Mar. 2.....	17.50	7,700	May 2.....	18.70	15,600
4.....	16.00	5,100	5.....	17.60	7,000	4.....	19.50	21,500
6.....	15.70	4,400	7.....	17.50	7,000	7.....	19.80	23,300
9.....	15.60	4,500	9.....	17.50	7,100	9.....	21.45	36,100
11.....	15.25	3,600	12.....	17.80	7,900	11.....	21.50	35,800
13.....	15.00	3,400	14.....	18.45	15,100	14.....	21.00	32,600
16.....	15.20	3,500	16.....	19.55	23,400	16.....	21.75	39,300
18.....	15.40	3,600	19.....	18.40	17,000	18.....	22.10	41,100
20.....	16.05	4,600	21.....	18.10	14,400	21.....	22.65	47,200
23.....	16.80	6,100	23.....	18.20	15,300	23.....	22.50	46,000
25.....	17.20	7,200	26.....	18.00	14,100	25.....	23.15	53,400
27.....	17.60	8,000	28.....	19.90	24,800	28.....	24.30	62,200
30.....	17.40	7,600	30.....	19.10	20,700	30.....	25.00	68,800
Feb. 1.....	17.45	7,700	Apr. 1.....	18.50	17,500	June 1.....	25.60	80,200
3.....	17.40	7,500	4.....	18.20	14,700	4.....	27.00	90,800
6.....	17.10	7,200	6.....	18.00	14,600	6.....	28.00	112,500
8.....	17.10	7,400	9.....	18.40	15,300	8.....	28.40	120,700
10.....	17.10	7,300	11.....	18.70	17,800	11.....	28.30	117,100
13.....	17.10	7,000	13.....	19.80	23,200	13.....	28.00	120,600
15.....	17.20	7,200	16.....	21.00	32,400	15.....	28.00	116,500
17.....	17.10	6,700	18.....	21.35	34,200	18.....	28.45	129,800
20.....	17.40	7,200	20.....	20.60	28,600	20.....	28.90	140,800
22.....	17.40	8,000	23.....	19.50	21,900	25.....	25.55	89,800
24.....	17.40	7,600	25.....	19.25	20,300	27.....	23.60	70,700
25.....	17.30	7,400	27.....	19.10	19,100	29.....	22.70	58,100
29.....	17.50	7,800	30.....	18.70	16,000			

Daily gage height, in feet, of Colorado River at Yuma, Ariz., for 1891-1912.

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1891.									
1.....	17.58	16.58	23.83	20.50	20.83	22.25	22.67	19.08	18.50
2.....	17.75	16.69	22.17	19.00	21.67	21.92	22.67	19.00	18.25
3.....	18.50	16.75	21.75	18.83	21.50	22.00	22.50	19.50	18.00
4.....	18.92	16.83	20.83	18.75	21.67	21.92	22.25	19.25	17.92
5.....	18.17	16.75	20.25	18.67	21.83	21.92	22.17	19.67	17.83
6.....	17.92	16.75	20.00	18.58	22.25	22.08	21.92	20.08	17.83
7.....	17.83	16.75	19.58	18.25	22.67	22.50	21.83	22.17	17.67
8.....	17.75	16.83	19.25	18.00	22.83	22.58	21.67	20.25	17.58
9.....	17.75	16.83	18.92	18.00	22.83	22.33	21.33	19.67	17.50
10.....	17.67	16.83	18.75	17.92	22.92	22.00	21.33	19.42	17.42
11.....	17.75	16.83	18.83	17.92	23.00	21.75	21.17	19.33	17.33
12.....	18.50	16.83	19.17	17.83	23.17	21.50	21.00	19.33	17.25
13.....	17.92	16.92	18.42	17.83	23.25	21.33	21.00	19.00	17.25
14.....	17.92	16.75	18.00	17.92	23.58	21.25	21.00	18.75	17.17
15.....	17.83	16.67	19.75	18.17	24.17	21.67	21.00	18.58	17.00
16.....	17.83	16.75	19.50	18.75	24.83	22.25	20.92	18.50	16.92
17.....	17.83	16.75	19.33	18.67	25.00	22.83	20.83	18.33	16.83
18.....	17.75	16.83	19.00	18.50	24.83	23.00	20.75	18.33	16.67
19.....	17.67	17.92	19.00	18.25	24.50	23.25	20.67	18.33	16.67
20.....	17.50	18.33	19.42	18.50	23.92	23.32	20.42	18.67	16.58
21.....	17.42	20.00	19.33	19.33	23.67	23.33	20.42	18.50	16.50
22.....	17.33	21.33	19.75	19.08	23.50	22.83	20.33	18.50	16.42
23.....	17.33	28.50	19.50	20.33	23.17	22.50	20.17	18.25	16.42
24.....	17.25	25.00	19.75	20.00	22.67	22.25	20.08	18.17	16.50
25.....	17.17	25.50	18.00	20.00	22.42	22.33	20.00	17.92	17.58
26.....	17.17	27.17	18.50	20.50	22.42	22.50	19.83	17.92	16.58
27.....	17.00	32.00	19.17	20.50	22.58	22.67	19.67	17.92	16.50
28.....	16.75	28.17	19.17	20.00	22.67	22.67	19.42	18.00	18.25
29.....	16.67	.....	20.17	19.75	22.83	22.58	19.33	18.50	18.00
30.....	16.58	.....	20.33	19.67	22.58	22.42	19.25	18.50	19.50
31.....	16.58	.....	20.17	.....	22.33	.....	19.17	.....	.....

Daily gage height, in feet, of Colorado River at Yuma, Ariz., for 1891-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1891-92.												
1.....	20.25	17.75	17.50	17.50	17.67	18.25	18.75	20.17	23.67	25.25	19.50	18.00
2.....	19.92	17.75	17.50	17.42	17.50	18.75	18.58	20.08	23.92	25.33	19.42	17.83
3.....	19.67	17.75	17.50	17.33	17.50	19.08	18.50	20.00	24.00	25.42	19.75	17.75
4.....	19.67	17.75	17.42	17.33	18.00	18.75	18.75	20.50	24.33	25.25	19.75	17.75
5.....	18.92	17.67	17.42	17.25	17.83	18.67	18.50	20.92	24.50	25.17	20.17	17.67
6.....	18.50	17.67	17.33	17.25	18.00	18.67	18.50	21.00	24.67	25.00	20.17	17.58
7.....	18.08	17.67	17.33	17.00	18.17	19.00	18.42	21.08	24.67	24.83	19.67	17.50
8.....	18.00	17.67	17.42	16.83	18.25	20.00	18.42	21.67	24.50	24.50	19.50	17.50
9.....	18.00	17.50	17.42	16.75	18.83	19.50	18.42	22.00	24.33	24.25	19.25	17.42
10.....	18.50	17.50	17.33	16.83	19.00	19.67	18.58	22.17	24.08	24.08	19.17	17.33
11.....	18.58	17.42	17.33	16.83	18.75	19.33	19.83	21.83	23.92	23.83	18.83	17.25
12.....	18.08	17.33	17.33	16.67	18.83	19.33	19.83	21.67	24.33	23.50	18.67	17.25
13.....	17.92	17.33	17.50	16.42	18.67	19.75	19.58	21.47	24.42	23.25	18.50	17.25
14.....	17.75	17.25	17.50	16.33	18.58	19.50	19.50	21.17	24.25	22.92	18.42	17.17
15.....	17.67	17.25	17.58	17.00	18.33	19.33	19.50	21.25	24.33	22.75	18.42	17.08
16.....	18.00	17.25	17.67	17.42	18.33	19.33	19.75	21.42	24.42	22.67	18.17	17.08
17.....	17.75	17.25	17.58	17.50	19.17	19.33	19.50	21.50	24.50	22.67	18.25	17.50
18.....	17.75	17.25	17.58	17.33	19.17	19.33	19.50	21.50	24.67	22.33	18.17	17.00
19.....	17.75	17.25	17.67	17.25	19.00	19.25	19.92	21.67	24.75	22.00	18.17	16.92
20.....	17.75	17.25	17.67	17.25	18.75	19.25	20.42	21.83	24.75	21.75	18.17	16.83
21.....	17.75	17.25	17.50	17.25	18.67	19.33	20.58	22.17	24.42	21.50	18.08	16.83
22.....	17.75	17.25	17.25	17.33	18.58	19.50	20.58	22.17	24.25	21.33	18.17	16.75
23.....	17.75	17.33	16.83	17.33	18.50	19.50	20.83	22.25	24.08	21.00	18.17	16.75
24.....	17.75	17.33	16.83	17.42	18.50	19.42	21.00	22.42	23.92	20.75	18.08	16.67
25.....	17.75	17.42	16.83	17.33	18.42	19.25	20.92	22.42	23.75	20.58	18.08	16.58
26.....	17.67	17.42	16.75	17.33	18.42	19.25	20.75	22.42	23.83	20.33	18.08	16.58
27.....	17.83	17.42	17.25	17.50	18.42	19.17	20.50	22.50	24.00	20.17	18.08	16.50
28.....	17.83	17.50	17.42	17.50	18.33	19.08	20.42	22.67	24.33	20.00	18.08	16.42
29.....	17.75	17.58	17.50	17.75	18.33	19.00	20.42	23.00	24.67	19.83	18.08	16.42
30.....	17.83	17.50	17.58	17.50	-----	18.92	20.33	23.17	25.00	19.50	18.17	16.33
31.....	17.83	-----	17.50	17.67	-----	18.75	-----	22.42	-----	19.33	18.08	-----
1892-93.												
1.....	16.25	16.42	17.00	15.50	16.50	16.83	18.50	18.92	23.50	23.00	19.17	19.50
2.....	16.25	16.42	17.08	15.50	16.42	16.75	18.50	19.08	23.17	22.58	18.92	18.08
3.....	16.33	16.58	17.00	15.50	16.42	16.75	18.50	19.25	23.17	22.17	18.75	17.83
4.....	16.25	16.67	16.92	15.58	16.25	16.75	18.67	19.92	22.92	21.83	18.75	17.50
5.....	16.17	16.67	16.75	15.58	16.17	16.67	19.25	19.83	22.92	21.67	18.50	17.50
6.....	16.17	16.75	16.67	15.75	16.17	16.67	19.17	19.50	23.17	21.33	19.08	17.42
7.....	16.17	16.92	16.67	15.75	16.17	16.75	19.00	19.50	23.25	21.00	18.67	17.50
8.....	16.17	17.17	16.67	15.92	16.17	16.83	18.92	20.25	23.50	20.83	18.50	17.33
9.....	16.17	17.08	16.83	16.00	16.50	16.92	19.08	20.33	23.67	20.60	18.50	17.50
10.....	16.08	17.00	16.83	16.08	16.67	16.83	19.08	19.00	23.75	20.33	18.42	17.42
11.....	16.08	17.00	16.83	16.33	16.67	16.83	18.83	19.92	23.83	20.08	18.67	17.25
12.....	16.08	17.08	16.83	16.42	16.75	16.83	18.83	18.75	23.92	20.00	19.08	17.25
13.....	16.08	17.08	16.67	16.50	16.83	16.83	19.58	20.17	23.50	19.83	19.00	17.25
14.....	16.08	17.08	16.67	16.33	16.75	17.00	19.50	20.42	23.33	19.67	18.83	17.25
15.....	16.00	17.08	16.58	16.33	17.00	17.00	19.25	20.25	23.50	19.50	18.58	16.92
16.....	16.00	17.25	16.58	16.33	16.83	17.00	19.08	20.17	23.58	19.50	18.42	17.00
17.....	16.00	17.42	16.58	16.33	16.92	16.92	19.25	20.08	23.75	19.25	18.33	17.17
18.....	15.92	17.33	16.58	16.33	17.42	16.83	19.17	20.17	24.00	19.17	18.25	16.92
19.....	15.92	17.25	16.83	16.33	17.50	16.83	19.08	21.50	24.17	19.17	18.25	16.92
20.....	15.92	17.17	16.92	16.42	17.08	16.75	19.00	22.42	24.25	19.00	18.75	16.83
21.....	15.92	17.17	17.00	16.42	17.00	16.75	19.00	22.75	24.33	19.17	18.92	16.75
22.....	15.92	17.08	16.92	16.42	17.00	17.08	18.92	22.83	24.50	19.50	18.50	16.58
23.....	15.92	17.08	16.75	16.42	17.00	17.25	18.75	23.33	24.50	19.17	18.67	16.50
24.....	16.00	17.08	16.67	16.33	17.00	17.50	18.67	24.00	24.50	19.08	19.00	16.42
25.....	16.00	17.08	16.50	16.42	17.17	19.25	18.67	24.25	24.50	19.08	18.83	16.67
26.....	16.08	17.08	16.25	16.42	17.17	18.33	18.67	24.67	24.25	19.25	18.42	16.67
27.....	16.08	17.00	16.08	16.33	17.25	18.17	18.58	25.08	24.00	19.25	18.50	16.58
28.....	16.08	17.00	16.00	16.33	17.00	18.42	18.83	25.17	23.67	19.25	19.50	16.33
29.....	16.17	17.00	15.92	16.33	-----	18.33	18.83	25.17	23.50	19.08	18.92	16.42
30.....	16.17	17.00	15.75	16.50	-----	18.42	18.92	24.83	23.17	18.92	18.50	16.33
31.....	16.33	-----	15.50	16.50	-----	18.42	-----	24.00	-----	18.92	18.83	-----

STREAM MEASUREMENTS IN LOWER COLORADO RIVER BASIN. 435

Daily gage height, in feet, of Colorado River at Yuma, Ariz., for 1891-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1893-94.												
1.	17.00	16.42	16.58	17.00	16.58	16.42	18.33	19.42	22.83	20.25	19.42	19.00
2.	16.83	16.42	16.67	16.83	16.67	16.75	18.25	19.58	22.75	20.33	19.42	19.08
3.	16.75	16.58	16.75	16.67	16.67	16.92	18.00	19.67	22.83	20.25	19.42	19.16
4.	16.67	16.50	16.67	16.50	16.58	17.00	17.92	20.75	22.83	20.25	19.33	19.42
5.	16.42	16.50	16.67	16.42	16.58	17.00	17.92	20.92	23.00	20.08	19.33	19.42
6.	19.83	16.50	16.58	16.42	16.58	17.08	17.92	21.00	23.00	20.00	19.25	19.25
7.	18.75	16.50	16.50	16.42	16.83	17.00	18.00	21.00	23.08	19.83	19.25	18.92
8.	18.00	16.50	16.58	16.58	17.00	17.16	18.00	20.92	23.16	19.83	19.33	18.67
9.	17.83	16.50	16.33	16.92	17.00	17.25	18.08	20.67	23.16	19.67	19.25	18.67
10.	17.42	16.58	16.25	17.00	17.00	17.08	18.06	20.50	23.25	19.67	19.33	18.67
11.	17.08	16.75	16.33	17.08	17.00	16.92	18.16	20.33	23.25	19.67	19.33	18.50
12.	17.00	16.83	16.33	16.83	16.92	17.00	18.33	20.50	23.33	19.67	19.33	18.67
13.	16.92	16.75	16.42	16.92	16.92	16.92	18.50	20.83	23.58	19.83	19.25	18.08
14.	16.92	16.67	16.58	16.83	16.83	16.92	18.42	21.50	23.67	20.25	19.33	18.67
15.	16.83	16.83	16.67	16.58	16.83	16.92	18.33	21.08	23.67	20.16	19.25	18.58
16.	16.67	16.75	16.83	16.42	16.75	16.92	18.00	22.42	23.33	19.83	19.42	18.67
17.	16.58	16.67	16.92	16.25	16.92	17.00	18.00	22.50	23.00	19.67	19.16	18.50
18.	16.58	16.67	17.00	16.16	16.83	16.92	18.00	22.58	22.67	19.75	19.25	18.42
19.	16.42	16.83	17.17	16.00	16.83	17.25	18.00	22.75	22.25	19.75	19.25	18.67
20.	16.33	16.75	17.17	15.92	16.75	17.42	18.33	23.08	22.16	19.50	19.16	18.67
21.	16.25	16.92	16.75	15.83	16.83	17.33	18.25	23.25	21.83	19.42	19.00	18.50
22.	16.33	17.00	16.75	15.83	16.83	17.25	18.16	23.42	21.67	19.33	19.00	18.50
23.	16.42	16.92	16.83	15.83	16.83	17.25	18.16	23.33	21.50	19.33	18.83	18.67
24.	16.42	17.00	16.83	15.83	16.75	17.25	18.50	23.16	21.16	19.50	18.83	18.58
25.	16.50	16.92	16.92	15.92	16.67	17.58	18.83	23.00	21.00	19.67	18.75	18.58
26.	16.42	16.83	17.00	16.00	16.58	18.42	19.08	23.08	20.75	19.67	18.75	18.50
27.	16.50	16.83	17.17	16.25	16.58	18.33	19.50	23.16	20.58	19.50	18.75	18.42
28.	16.42	16.75	17.17	16.33	16.50	18.16	19.33	23.33	20.50	19.58	18.92	18.42
29.	16.42	16.75	17.17	16.42	.....	18.08	19.42	23.42	20.25	19.67	19.00	18.42
30.	16.50	16.67	17.17	16.58	.....	18.16	19.33	23.16	20.16	19.50	19.16	18.33
31.	16.50	.....	17.17	16.58	.....	18.33	.....	23.08	.....	19.42	19.25	.....
1894-95.												
1.	18.42	18.75	18.50	18.83	18.08	17.17	18.58	21.92	22.67	21.00	19.92	18.75
2.	18.42	18.75	18.50	18.92	17.83	17.75	18.92	22.00	22.58	21.00	20.00	18.50
3.	18.33	18.75	18.58	19.00	17.75	17.67	19.58	22.33	22.33	21.00	20.00	18.75
4.	18.33	18.33	18.58	19.17	17.67	17.67	19.50	22.42	22.33	20.83	19.83	18.83
5.	18.25	18.83	18.58	19.17	17.42	17.83	19.83	22.67	22.50	20.83	19.75	18.50
6.	18.33	19.16	18.67	19.33	17.25	19.50	19.83	22.83	22.50	21.00	19.67	18.42
7.	18.33	19.16	18.67	19.50	17.17	19.42	19.75	23.00	22.17	21.67	19.50	18.42
8.	18.33	19.08	18.67	19.42	17.08	19.17	19.50	22.75	22.00	21.58	19.58	18.42
9.	18.33	19.08	18.67	19.25	17.00	19.00	19.33	22.50	21.83	21.50	19.75	18.42
10.	18.50	19.00	18.67	19.17	16.83	19.08	19.17	22.17	21.83	21.50	19.83	18.25
11.	18.50	18.83	18.67	19.00	16.83	19.00	19.17	21.83	21.83	21.17	19.83	18.25
12.	18.42	18.83	18.67	19.00	16.75	19.08	19.17	21.75	21.83	20.92	19.83	18.25
13.	18.50	18.75	18.67	18.92	16.75	19.00	19.17	21.50	21.75	20.92	19.67	18.25
14.	18.67	18.58	18.83	18.92	16.75	18.75	19.33	21.33	22.00	20.83	19.58	18.33
15.	18.67	18.58	18.83	18.92	16.83	18.75	19.33	21.33	22.33	20.67	19.50	18.33
16.	18.58	18.58	18.83	18.92	16.83	18.67	19.33	21.83	22.33	20.58	19.42	18.33
17.	18.58	18.58	18.92	19.00	17.00	18.75	19.25	22.50	22.42	20.33	19.25	18.33
18.	18.58	18.50	18.83	22.00	17.50	18.83	19.33	23.00	22.50	20.25	19.25	18.33
19.	18.58	18.50	18.92	24.75	17.58	18.75	20.33	23.25	22.67	20.33	19.33	18.25
20.	18.50	18.58	18.83	25.33	17.75	18.67	20.50	23.42	22.83	20.83	19.17	18.25
21.	18.67	18.58	18.75	26.33	17.67	18.67	20.67	23.58	22.83	20.75	19.17	18.00
22.	18.67	18.58	18.67	23.58	17.67	18.67	21.00	23.67	22.75	20.58	19.33	17.83
23.	18.67	18.50	18.67	23.00	17.50	18.50	20.92	23.75	22.83	20.50	19.33	17.83
24.	18.58	18.58	18.75	21.17	17.50	18.33	21.00	23.67	22.83	20.58	19.17	17.75
25.	18.67	18.67	18.75	20.92	17.33	18.25	21.25	23.42	22.67	20.33	19.25	17.75
26.	18.67	18.58	18.67	20.00	17.25	18.33	22.00	23.42	22.33	20.17	19.17	17.75
27.	18.75	18.58	19.08	19.67	17.25	18.33	22.17	23.33	22.00	20.00	19.17	17.75
28.	18.75	18.50	19.00	19.42	17.25	18.50	22.25	23.33	21.75	19.92	19.25	17.75
29.	18.75	18.50	18.92	19.17	.....	18.50	22.25	23.17	21.50	19.92	19.00	17.67
30.	18.75	18.50	18.80	18.75	.....	18.50	22.00	23.00	21.17	19.83	18.75	17.58
31.	18.75	.....	.....	18.42	.....	18.50	.....	22.83	.....	19.75	18.83	.....

Daily gage height, in feet, of Colorado River at Yuma, Ariz., for 1891-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1895-96.												
1.....	17.50	18.25	19.00	18.25	19.00	19.08	19.42	20.00	21.83	21.25	19.83	19.83
2.....	17.83	18.17	18.92	18.25	19.08	19.17	19.42	20.00	22.00	21.17	19.42	19.67
3.....	17.83	18.33	18.75	18.17	19.17	19.25	19.83	21.50	22.50	21.00	19.50	19.67
4.....	18.08	18.42	18.75	18.08	19.42	19.33	19.42	22.17	23.25	20.83	19.60	20.33
5.....	18.25	18.50	19.00	18.00	19.25	19.42	19.42	22.42	23.50	20.67	19.60	20.67
6.....	19.00	18.50	19.00	18.00	19.25	19.42	20.00	22.60	23.83	20.42	19.60	19.75
7.....	19.50	18.33	19.00	18.00	19.17	19.42	20.00	22.33	23.92	20.42	19.75	19.60
8.....	19.50	18.25	19.00	18.00	19.08	19.42	19.92	22.33	24.00	20.25	20.00	19.67
9.....	18.92	18.33	18.92	18.00	18.92	19.42	19.83	22.25	24.08	20.25	19.92	19.42
10.....	18.67	18.25	18.92	18.00	18.92	19.42	19.83	22.00	24.00	20.25	19.75	19.00
11.....	18.50	18.25	18.75	18.00	18.83	19.42	19.75	22.25	23.83	20.25	19.75	18.83
12.....	18.50	18.33	18.75	17.92	18.83	19.25	19.67	22.33	23.75	20.00	19.75	18.92
13.....	18.50	18.33	18.67	17.92	18.83	19.17	19.75	22.42	23.42	20.00	19.50	19.33
14.....	19.00	18.33	18.67	17.92	18.83	19.17	19.83	22.50	23.17	20.00	19.33	18.83
15.....	18.67	18.50	18.67	18.00	18.83	19.17	19.67	22.60	22.92	20.00	19.25	18.60
16.....	18.42	18.50	18.67	18.17	18.75	19.17	19.75	22.75	22.75	20.00	19.17	18.42
17.....	18.42	18.42	18.67	18.17	18.67	19.17	19.75	22.75	22.75	20.00	19.00	18.42
18.....	18.50	18.67	18.67	18.17	18.67	19.17	19.83	22.60	22.67	20.25	19.08	18.60
19.....	18.50	18.58	18.58	18.17	18.60	19.08	20.00	22.33	22.42	20.33	19.42	18.83
20.....	18.50	18.50	18.25	18.17	18.50	19.08	20.00	22.17	22.42	21.00	19.75	18.92
21.....	18.50	18.50	18.25	18.00	18.50	19.08	19.92	21.92	22.17	20.33	19.00	18.60
22.....	18.25	18.50	18.17	18.25	18.50	19.08	19.92	21.60	21.92	20.08	19.00	18.92
23.....	18.17	18.50	18.17	18.42	18.67	19.00	19.83	21.33	21.92	20.67	19.00	19.33
24.....	18.00	18.50	18.00	18.50	18.75	19.00	19.83	21.08	21.83	20.75	19.00	19.25
25.....	18.00	18.42	18.00	18.50	18.75	19.00	19.83	20.83	21.67	20.67	18.75	19.50
26.....	18.17	19.25	18.00	18.50	18.83	19.08	19.92	20.67	21.60	20.50	18.75	18.83
27.....	18.17	19.50	18.00	18.50	18.92	19.17	20.00	20.50	21.50	20.60	19.00	18.42
28.....	18.33	19.42	18.00	18.67	18.92	19.25	20.00	20.50	21.50	20.50	19.00	19.50
29.....	18.33	19.33	18.25	18.75	18.92	19.33	20.00	20.75	21.33	20.50	18.75	23.17
30.....	18.25	19.17	18.33	18.83	.....	19.50	19.00	20.67	21.25	20.83	18.42	24.50
31.....	18.25	.....	18.33	18.92	.....	19.50	.....	21.08	.....	20.75	18.42	.....
1896-97.												
1.....	22.08	19.42	18.92	18.58	18.33	18.33	19.42	22.42	25.17	21.50	19.25	18.58
2.....	20.83	19.83	18.92	18.75	18.17	18.50	19.67	22.42	25.42	21.25	19.17	18.58
3.....	20.00	19.17	19.00	18.58	18.33	18.50	19.25	22.67	25.67	20.92	19.17	18.50
4.....	19.67	19.00	18.83	18.50	18.25	19.17	20.17	22.92	25.75	20.92	19.17	18.50
5.....	19.33	18.83	18.83	18.42	18.42	19.33	20.00	23.00	25.83	20.92	19.00	18.58
6.....	19.00	18.83	18.83	18.33	18.50	19.08	20.42	22.92	25.83	20.92	18.92	18.50
7.....	19.50	18.75	18.83	18.25	18.50	19.75	20.42	23.00	25.92	20.58	18.83	18.42
8.....	19.00	19.08	18.83	18.17	18.50	19.42	20.67	23.42	26.00	20.42	18.83	18.25
9.....	18.67	18.92	18.92	18.00	18.42	19.00	21.00	23.75	26.08	20.42	18.67	18.25
10.....	18.67	18.75	18.83	18.00	18.17	19.50	21.42	24.00	26.00	20.25	18.75	18.17
11.....	18.67	18.75	18.67	18.00	18.00	20.33	21.42	24.33	25.83	20.33	18.75	18.08
12.....	18.75	18.83	18.42	17.92	17.92	19.75	21.00	24.58	25.33	20.50	18.58	18.42
13.....	18.67	18.75	18.08	18.33	18.17	19.58	21.42	24.83	24.75	20.58	18.83	18.17
14.....	18.67	18.67	17.83	19.00	18.25	19.33	21.50	24.92	24.00	20.25	18.75	18.67
15.....	18.60	18.50	17.75	20.92	18.25	19.17	21.50	25.08	23.58	20.08	19.00	18.75
16.....	18.50	18.50	17.50	21.42	18.25	19.00	21.42	25.25	23.33	20.25	18.92	18.33
17.....	19.00	18.50	17.42	22.50	18.25	19.17	21.25	25.33	23.25	20.25	18.92	18.25
18.....	19.42	17.92	17.42	22.83	18.17	19.50	21.25	25.42	23.17	20.33	19.00	19.33
19.....	18.83	18.42	17.50	21.92	18.17	19.25	21.42	25.50	23.08	20.33	19.08	19.83
20.....	18.83	18.42	17.83	20.00	18.17	19.17	21.42	25.50	23.25	20.25	19.17	20.25
21.....	18.75	18.42	18.00	19.42	18.17	19.00	21.42	25.42	23.25	20.00	19.08	20.75
22.....	19.25	18.42	18.17	19.75	18.17	18.92	21.92	25.25	23.42	19.75	19.08	20.75
23.....	20.00	18.33	18.25	19.42	18.17	18.92	22.42	25.08	23.25	19.50	18.92	19.83
24.....	19.17	18.25	18.25	19.00	18.00	18.92	22.75	25.00	23.08	19.50	18.83	19.50
25.....	19.67	18.33	18.33	18.83	18.00	18.75	23.00	25.00	22.33	19.42	18.75	19.50
26.....	19.19	18.42	18.33	18.75	18.42	19.33	23.17	25.17	22.17	19.42	19.25	19.25
27.....	19.33	18.50	18.42	18.67	18.42	19.17	23.00	25.25	21.75	19.42	18.75	19.00
28.....	19.17	18.50	18.42	18.67	18.33	19.17	22.83	25.42	21.67	19.33	18.67	18.83
29.....	19.33	18.83	18.50	18.67	.....	18.92	22.50	25.42	21.67	19.33	18.75	19.08
30.....	19.17	18.83	18.50	18.50	.....	18.92	22.42	25.33	21.67	19.33	18.75	18.92
31.....	19.33	.....	18.50	18.42	.....	19.33	.....	25.25	.....	19.25	18.75	.....

Daily gage height, in feet, of Colorado River at Yuma, Ariz., for 1891-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1897-98.												
1.....	18.92	18.75	18.42	17.92	18.00	18.92	18.67	21.50	21.58	23.42	.....	19.75
2.....	18.92	18.83	18.42	17.83	18.00	19.00	18.67	21.42	21.50	23.42	.....	19.75
3.....	18.92	19.17	18.75	17.75	18.25	19.00	18.58	21.42	21.58	23.17	.....	19.83
4.....	18.83	19.17	18.58	17.75	18.25	19.00	18.58	21.75	21.75	22.83	.....	19.83
5.....	19.17	18.92	18.42	17.58	17.92	18.92	18.83	22.00	22.25	22.58	.....	19.75
6.....	19.17	18.75	18.58	17.58	18.00	18.83	18.67	22.00	22.58	22.25	.....	19.83
7.....	18.92	18.75	18.58	17.58	17.83	18.75	18.50	22.00	22.75	22.00	.....	19.67
8.....	18.75	18.75	18.42	17.50	17.75	18.67	18.50	22.00	22.83	21.83	.....	19.42
9.....	18.42	18.67	18.42	17.50	18.00	18.67	18.67	21.75	22.92	21.67	.....	19.17
10.....	18.50	18.67	18.33	17.83	18.08	18.75	19.00	21.58	23.17	21.50	.....	19.00
11.....	18.83	18.67	18.25	17.75	18.33	19.00	19.08	21.33	23.17	21.33	.....	19.08
12.....	19.25	18.58	18.25	17.75	18.17	19.08	18.92	21.25	23.00	21.25	.....	19.00
13.....	21.00	18.58	18.08	17.92	18.17	19.25	18.67	21.17	22.92	21.50	.....	18.92
14.....	20.75	18.50	18.08	18.08	18.17	19.08	18.50	21.17	22.67	21.50	.....	18.83
15.....	21.50	18.58	18.08	18.42	18.25	18.92	18.75	21.17	22.58	21.42	.....	18.83
16.....	21.42	18.58	18.00	18.58	18.42	18.75	18.92	21.00	22.50	21.33	.....	18.75
17.....	20.92	18.58	18.00	18.75	18.50	18.75	18.83	20.83	22.42	21.50	.....	18.67
18.....	20.17	18.58	18.00	18.75	18.58	18.92	18.92	20.83	22.83	21.33	.....	18.58
19.....	19.92	18.58	18.00	18.75	18.58	18.92	19.00	20.92	22.42	21.25	.....	18.75
20.....	19.67	18.50	18.00	18.83	18.50	18.83	20.08	21.17	22.33	21.08	.....	18.75
21.....	19.58	18.42	17.92	18.83	18.58	18.92	20.17	21.50	22.83	21.08	.....	18.58
22.....	19.42	18.42	18.00	18.75	18.67	19.17	20.25	21.67	22.50	21.50	.....	18.42
23.....	19.92	18.42	18.17	18.50	18.92	19.08	21.17	21.75	22.75	22.00	.....	18.42
24.....	19.50	18.33	18.25	18.42	18.92	19.08	21.08	21.75	23.08	21.92	.....	18.42
25.....	19.33	18.33	18.08	18.25	18.92	18.83	21.67	21.67	23.25	21.50	.....	18.42
26.....	19.25	18.42	18.08	18.42	18.92	18.75	21.75	21.83	23.50	21.17	.....	18.42
27.....	19.00	18.50	18.08	18.50	18.92	18.67	21.58	21.75	23.50	21.00	.....	18.33
28.....	19.00	18.50	18.08	18.33	18.92	18.67	21.50	21.50	23.50	20.50	.....	18.25
29.....	19.00	18.50	18.08	18.17	.....	18.67	21.50	21.50	23.50	20.33	.....	18.17
30.....	18.83	18.42	18.08	18.17	.....	18.75	21.50	21.50	23.42	20.17	.....	18.00
31.....	18.75	.....	18.00	18.08	.....	18.67	.....	21.42	.....	20.17	.....	.....
1898-99.												
1.....	18.00	18.17	18.58	17.75	18.58	19.00	19.00	20.50	23.42	25.67	20.83	18.83
2.....	18.00	18.25	18.50	17.92	18.50	19.08	18.83	20.67	23.33	25.58	20.83	18.75
3.....	18.08	18.33	18.42	18.00	18.58	19.25	19.00	21.25	23.67	25.58	20.75	18.75
4.....	18.00	18.33	18.33	17.92	18.58	19.50	19.00	21.50	23.67	25.50	20.67	18.67
5.....	18.00	18.50	18.33	17.83	18.58	19.75	19.00	21.75	23.67	25.33	20.92	18.58
6.....	18.00	18.58	18.33	17.75	18.67	19.75	19.00	22.00	23.83	25.00	21.17	18.50
7.....	18.00	18.58	18.42	17.75	18.67	19.75	19.00	22.08	23.83	24.75	21.33	18.42
8.....	18.00	18.50	18.42	17.92	18.67	19.67	19.00	22.17	24.00	24.67	21.50	18.42
9.....	18.00	18.58	18.58	18.08	18.67	19.58	19.83	21.83	24.33	24.50	21.17	18.42
10.....	18.00	18.50	18.58	18.08	18.75	19.58	20.17	21.42	24.17	24.33	21.50	18.42
11.....	18.00	18.50	18.58	18.00	18.75	19.42	19.83	21.17	24.00	24.33	21.67	18.42
12.....	18.00	18.50	18.50	17.83	18.75	19.08	19.75	21.00	23.67	24.08	21.75	18.42
13.....	17.92	18.50	18.50	17.75	18.75	19.00	19.58	20.75	23.67	24.00	21.67	18.25
14.....	17.92	18.50	18.50	17.67	18.83	19.00	19.50	20.50	23.83	23.83	21.83	18.33
15.....	17.92	18.50	18.50	17.75	18.83	19.00	19.50	20.50	24.00	23.75	20.83	18.33
16.....	17.92	18.58	18.58	18.00	18.92	19.00	19.50	20.67	24.08	23.33	20.33	18.33
17.....	17.83	18.67	18.75	18.42	18.92	19.17	19.58	21.00	24.33	23.17	20.00	18.33
18.....	17.83	18.75	18.92	18.58	18.75	19.17	19.50	21.50	24.33	23.00	19.92	18.17
19.....	17.83	18.83	19.00	18.67	18.67	19.25	19.50	22.33	24.33	22.83	19.67	18.17
20.....	17.83	18.83	18.83	18.67	18.58	19.17	19.50	23.42	24.58	22.58	19.50	18.08
21.....	17.83	18.92	18.67	18.67	18.67	19.08	19.42	23.83	24.83	22.42	19.42	18.00
22.....	17.83	18.92	18.42	18.67	18.75	19.17	19.42	24.00	25.00	22.17	19.33	17.92
23.....	17.83	18.92	18.17	18.75	18.83	19.17	19.50	24.17	25.00	22.00	19.33	17.83
24.....	17.83	18.75	18.00	18.67	18.75	19.17	19.58	24.33	25.17	22.00	19.42	17.83
25.....	17.83	18.75	17.92	18.67	18.83	19.25	19.67	24.50	25.25	21.67	19.50	17.67
26.....	18.00	18.75	17.75	18.67	18.75	19.33	20.33	24.50	25.33	21.83	19.00	17.50
27.....	18.00	18.75	17.67	18.67	18.92	19.25	20.92	24.50	25.33	21.75	19.00	18.67
28.....	18.08	18.75	17.67	18.58	18.92	19.17	20.92	24.17	25.50	21.50	19.08	18.17
29.....	18.17	18.67	17.58	18.42	.....	19.08	20.83	23.83	25.75	21.33	19.00	18.08
30.....	18.17	18.67	17.50	18.50	.....	19.00	20.58	23.50	25.67	21.17	18.92	18.00
31.....	18.17	.....	17.58	18.50	.....	19.00	.....	23.33	.....	21.00	18.83	.....

Daily gage height, in feet, of Colorado River at Yuma, Ariz., for 1891-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1899-1900.												
1.	18.00	18.25	18.58	17.8	18.3	17.7	19.4	19.7	24.6	23.0	17.6	16.9
2.	17.92	18.25	18.58	17.8	18.3	17.8	19.3	19.7	24.8	22.8	18.0	16.8
3.	17.83	18.25	18.67	17.7	18.3	17.8	19.3	20.5	25.0	22.7	17.4	16.7
4.	17.75	18.25	18.58	17.5	18.2	17.8	19.3	20.5	25.2	22.3	17.3	16.6
5.	17.75	18.33	18.50	17.4	18.1	17.7	19.3	20.5	25.3	22.0	17.3	16.5
6.	17.75	18.33	18.58	17.3	18.0	17.7	19.4	20.1	25.5	21.7	17.2	16.6
7.	17.75	18.25	18.58	17.2	18.1	17.6	19.5	20.3	25.7	21.6	17.1	16.5
8.	17.67	18.33	18.58	17.2	18.0	17.7	19.4	20.3	25.8	21.3	17.2	16.5
9.	17.50	18.33	18.67	17.2	18.0	17.8	19.3	20.3	26.0	21.2	17.2	16.5
10.	17.50	18.33	18.58	17.2	17.9	17.8	19.3	20.5	26.0	20.7	17.2	16.4
11.	17.50	18.25	18.33	17.3	17.9	17.7	19.4	20.7	26.0	20.5	17.2	16.4
12.	17.50	18.25	18.33	17.3	17.8	17.7	19.4	21.0	25.9	20.3	17.3	16.6
13.	17.33	18.25	18.25	17.4	17.7	17.7	19.3	21.3	25.7	20.2	17.2	17.3
14.	17.25	18.17	18.17	17.4	17.8	17.8	19.2	21.4	25.5	19.8	16.9	18.0
15.	17.17	18.17	18.17	17.4	17.8	17.8	19.2	21.6	25.4	19.7	16.8	17.7
16.	17.00	18.17	18.25	17.7	17.7	18.0	19.2	21.7	25.3	19.6	16.9	17.5
17.	17.00	18.17	18.25	17.8	17.8	18.0	19.5	22.3	25.2	19.5	16.7	17.7
18.	17.00	18.17	18.08	18.1	17.8	18.1	19.5	22.9	24.8	19.2	16.7	17.4
19.	17.08	18.17	18.00	18.2	17.8	18.2	19.4	23.4	24.7	19.0	16.7	17.7
20.	17.08	18.25	17.83	18.3	17.8	18.3	19.5	23.7	24.5	18.9	16.8	18.1
21.	17.08	18.50	17.75	18.3	17.8	18.3	19.8	23.8	24.2	18.8	16.8	17.8
22.	17.17	18.50	17.67	18.3	17.7	18.5	20.3	24.0	24.2	18.8	16.8	17.7
23.	18.67	18.42	17.67	18.3	17.7	18.5	20.2	24.0	24.0	18.5	16.8	17.4
24.	19.17	18.42	17.67	18.2	17.7	18.5	20.3	24.2	23.9	18.4	16.8	17.3
25.	18.92	18.42	17.58	18.2	17.7	18.6	19.9	24.4	23.8	18.3	16.9	17.2
26.	18.67	18.50	17.67	18.2	17.7	18.6	19.8	24.7	23.7	18.3	16.9	17.2
27.	18.50	18.50	17.58	18.2	17.8	18.7	19.7	24.7	23.4	18.2	16.8	17.0
28.	18.25	18.50	17.50	18.2	17.8	19.2	19.7	24.5	23.3	18.0	16.9	17.0
29.	18.17	18.50	17.50	18.3	.....	19.8	19.7	24.2	23.1	17.9	16.7	17.0
30.	18.17	18.58	17.33	18.3	.....	19.7	19.7	24.2	23.1	17.8	16.7	17.0
31.	18.25	.....	17.42	18.3	.....	19.6	.....	24.4	.....	17.7	16.7	.....
1900-1901.												
1.	17.0	17.6	17.8	17.1	17.2	19.8	18.5	20.5	27.0	23.9	19.6	19.2
2.	16.9	17.6	17.7	17.0	17.2	20.2	18.4	21.0	27.0	24.1	19.8	19.1
3.	16.8	17.5	17.4	16.9	17.2	20.0	18.3	21.2	27.7	23.9	19.8	19.2
4.	16.7	17.4	17.7	16.9	17.3	20.0	18.4	21.8	26.4	23.8	19.8	19.1
5.	16.8	17.5	17.7	17.0	17.4	19.7	18.3	22.3	26.2	23.6	19.9	19.0
6.	16.8	17.4	17.7	17.0	17.7	19.6	18.3	22.6	26.2	23.2	20.0	19.1
7.	16.8	17.4	17.7	17.0	18.0	19.5	18.3	22.7	25.9	23.0	20.4	19.3
8.	16.9	17.4	17.7	17.0	18.3	19.3	18.3	23.2	25.6	23.1	20.1	19.3
9.	17.3	17.4	17.7	16.9	18.5	19.2	18.3	23.7	25.3	23.0	20.0	19.0
10.	17.3	17.5	17.7	16.8	20.7	19.0	18.2	24.1	24.9	22.7	20.2	19.3
11.	17.2	17.5	17.7	16.6	19.2	19.0	18.2	23.9	24.7	22.7	19.7	19.1
12.	17.2	17.5	17.7	16.4	18.7	19.2	18.2	23.6	24.5	22.6	19.4	18.7
13.	17.2	17.5	17.7	16.3	18.7	19.2	18.2	23.7	24.2	22.4	19.3	18.7
14.	17.3	17.5	17.7	16.2	18.7	19.3	18.0	23.7	24.2	22.1	20.0	18.7
15.	17.3	17.5	17.7	16.2	18.6	19.3	17.9	23.5	24.0	21.9	19.5	19.0
16.	17.3	17.5	17.7	16.4	18.5	19.3	17.9	23.4	24.2	21.7	19.3	18.8
17.	17.3	17.5	17.6	16.5	18.7	19.5	17.9	23.4	24.3	21.4	19.3	18.7
18.	17.3	17.6	17.4	16.5	18.7	19.6	17.9	23.7	24.3	21.2	20.7	18.5
19.	17.4	17.5	17.4	16.7	18.6	20.0	18.0	24.0	24.5	21.1	20.0	18.3
20.	17.3	17.6	17.4	17.0	18.3	19.7	18.1	24.2	24.2	21.0	19.6	18.2
21.	17.3	17.7	17.4	17.0	18.2	19.6	18.1	24.5	24.0	20.9	19.6	17.9
22.	17.3	17.7	17.4	16.8	18.1	19.3	18.2	24.8	23.8	20.9	19.3	17.8
23.	17.6	17.7	17.5	16.8	18.0	19.2	18.2	25.2	23.7	20.7	19.2	17.7
24.	17.6	18.1	17.5	16.8	18.0	19.1	18.3	25.5	23.5	20.6	19.0	17.6
25.	17.7	18.3	17.5	17.0	18.2	19.0	18.6	25.6	23.3	20.4	19.1	17.6
26.	17.8	18.6	17.5	17.1	18.4	18.8	18.7	25.9	23.2	20.2	19.1	17.6
27.	17.8	18.7	17.5	17.1	18.7	18.7	18.8	26.3	23.3	20.1	18.7	17.5
28.	17.7	17.9	17.4	17.1	18.8	18.7	19.2	26.7	23.7	19.9	19.2	17.5
29.	17.6	17.6	17.3	17.0	.....	18.5	19.7	26.8	23.7	19.7	20.1	17.4
30.	17.6	17.7	17.2	17.0	.....	18.5	19.4	26.9	23.7	19.5	20.1	17.3
31.	17.6	.....	17.1	17.0	.....	18.6	.....	27.0	.....	19.3	19.7	.....

Daily gage height, in feet, of Colorado River at Yuma, Ariz., for 1891-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1901-2.												
1.....	17.2	17.2	17.7	17.1	18.0	17.9	18.2	20.0	22.3	22.0	18.4	17.5
2.....	17.1	17.3	17.7	17.0	18.0	17.9	18.0	20.7	22.2	21.7	18.3	17.3
3.....	17.0	17.3	17.5	17.0	18.0	18.0	17.9	20.8	22.2	21.5	18.3	17.0
4.....	16.9	17.3	17.5	17.0	17.9	17.9	17.9	20.5	22.7	21.3	18.3	18.0
5.....	16.8	17.4	17.5	17.0	17.9	17.9	17.9	20.3	23.1	21.1	18.1	18.8
6.....	16.8	17.5	17.6	17.0	17.8	17.9	18.0	20.3	23.1	20.8	18.0	18.3
7.....	16.8	17.5	17.6	17.0	17.7	18.1	18.0	20.4	23.5	20.7	17.9	18.0
8.....	16.7	17.5	17.5	17.2	17.7	18.2	18.2	20.5	23.7	20.6	17.8	17.6
9.....	16.8	17.5	17.5	17.2	17.6	18.1	18.2	20.3	24.0	20.4	17.8	17.5
10.....	16.8	17.5	17.5	17.3	17.5	18.1	18.2	20.5	24.2	20.3	17.8	17.3
11.....	16.8	17.5	17.5	17.3	17.5	18.1	18.2	22.0	24.3	20.3	17.7	17.3
12.....	16.8	17.5	17.5	17.3	17.6	18.1	18.2	22.3	24.2	20.6	17.7	17.3
13.....	16.8	17.5	17.5	17.3	17.1	18.2	18.2	22.3	24.3	20.5	17.6	17.3
14.....	16.8	17.7	17.5	17.3	17.1	18.2	18.2	22.8	24.0	20.2	17.6	17.3
15.....	16.8	17.6	17.5	17.3	17.2	18.3	18.2	22.9	23.8	20.1	17.5	17.3
16.....	16.8	17.7	17.5	17.3	17.3	18.4	18.2	23.2	23.9	20.0	17.4	17.2
17.....	16.8	17.7	17.5	17.4	17.3	18.4	18.1	23.5	23.7	20.3	17.3	17.7
18.....	16.9	17.7	17.7	17.6	17.3	18.3	18.0	23.7	23.8	19.8	17.3	17.5
19.....	16.9	17.7	17.7	17.7	17.3	18.3	18.0	24.1	23.7	19.8	17.1	17.3
20.....	16.9	17.6	17.7	17.7	17.2	18.3	18.0	24.3	23.6	19.7	17.0	17.3
21.....	16.9	17.5	17.7	17.7	17.1	18.3	18.0	24.3	23.5	19.5	17.8	17.0
22.....	17.0	17.5	17.8	17.7	17.3	18.3	18.3	24.4	23.5	19.4	18.5	16.8
23.....	17.1	17.5	17.8	17.7	17.7	18.3	19.3	24.4	23.2	19.3	18.3	16.8
24.....	17.2	17.5	17.8	17.7	18.0	18.3	19.8	24.4	23.1	19.4	17.9	16.9
25.....	17.2	17.5	17.8	17.8	18.1	18.3	19.8	24.4	23.0	19.1	17.8	17.1
26.....	17.2	17.5	17.7	17.9	18.1	18.2	19.8	24.5	22.7	19.3	18.0	16.8
27.....	17.2	17.5	17.6	17.9	18.1	18.3	19.9	24.3	22.6	19.0	17.9	16.7
28.....	17.2	17.5	17.5	17.9	18.0	18.3	20.0	24.0	22.5	18.8	17.7	16.6
29.....	17.2	17.6	17.2	17.8	-----	18.3	19.8	23.5	22.3	18.5	17.3	17.5
30.....	17.2	17.7	17.0	18.0	-----	18.3	19.8	23.0	22.2	18.4	17.2	19.4
31.....	17.2	-----	17.0	18.0	-----	18.3	-----	22.7	-----	18.3	17.2	-----
1902-3.												
1.....	18.9	17.4	20.0	17.6	17.3	17.37	20.48	20.88	23.5	27.45	21.55	19.35
2.....	18.5	17.3	19.5	17.4	17.25	17.53	20.3	21.55	23.4	27.25	21.5	19.25
3.....	18.4	17.3	19.3	17.3	17.15	17.64	20.4	21.72	23.4	27.1	21.6	19.2
4.....	18.6	17.3	19.0	17.2	17.1	17.7	21.05	21.75	23.4	26.9	21.45	19.05
5.....	18.3	17.3	18.9	17.0	17.2	17.72	20.8	21.8	23.25	26.65	21.3	19.15
6.....	18.1	17.3	18.6	16.9	17.2	18.02	20.98	21.9	23.4	26.35	21.1	19.5
7.....	18.0	17.2	18.4	16.9	17.2	18.96	21.28	21.98	23.75	26.05	20.95	19.35
8.....	18.1	17.2	18.3	16.9	17.28	18.92	21.5	21.95	24.25	25.75	20.85	19.3
9.....	18.1	17.2	18.3	16.9	17.38	18.66	22.75	22.0	24.5	25.2	20.8	19.4
10.....	18.1	17.3	18.2	16.9	17.52	18.48	22.65	22.15	24.8	24.75	20.65	19.4
11.....	18.5	17.3	18.1	16.85	17.71	18.37	22.2	22.2	25.0	24.35	20.5	19.55
12.....	18.3	17.4	18.0	16.8	17.82	18.22	21.92	22.5	25.25	23.65	20.45	19.4
13.....	18.0	17.5	18.1	16.8	17.9	18.22	21.42	22.75	25.55	23.25	20.15	19.15
14.....	17.8	18.0	17.6	16.95	17.95	18.32	21.05	23.05	25.65	22.9	20.1	19.05
15.....	17.8	18.5	17.7	17.0	18.04	19.85	20.78	23.3	25.75	22.7	20.1	19.05
16.....	17.6	18.0	17.5	17.1	18.0	19.8	20.45	23.4	26.2	22.75	20.05	19.05
17.....	17.6	17.8	17.7	17.1	17.76	19.52	20.5	23.5	26.35	22.8	19.8	19.4
18.....	17.4	18.1	18.3	17.05	17.54	19.75	20.4	23.8	26.5	22.6	19.8	19.95
19.....	17.6	18.1	18.1	17.0	17.36	19.88	20.55	23.98	26.65	22.4	19.8	19.5
20.....	17.6	18.1	18.0	17.0	17.25	19.65	20.65	24.2	26.8	22.4	19.85	19.3
21.....	17.4	18.0	17.8	17.0	17.21	19.62	20.6	24.45	26.95	22.3	19.8	19.3
22.....	17.4	18.1	17.8	17.0	17.22	20.58	20.6	24.9	27.15	22.15	19.7	19.55
23.....	17.3	18.1	17.8	17.1	17.24	20.52	20.55	25.2	27.25	22.15	19.65	19.6
24.....	17.3	18.4	18.0	17.2	17.27	20.3	20.5	25.45	27.5	22.9	19.45	19.6
25.....	17.3	18.5	18.2	17.35	17.3	20.1	20.68	25.6	27.65	23.0	19.25	19.6
26.....	17.3	18.4	18.1	17.4	17.27	20.02	20.88	25.45	27.65	22.9	19.2	19.7
27.....	17.3	18.5	18.3	17.4	17.24	20.02	20.9	25.1	27.7	22.6	19.2	19.75
28.....	17.3	18.5	18.2	17.45	17.26	19.88	20.8	24.65	27.6	22.3	19.2	19.7
29.....	17.2	18.5	18.0	17.5	-----	19.65	20.7	24.25	27.5	21.85	19.2	19.7
30.....	17.2	18.3	17.8	17.5	-----	19.6	20.72	23.85	27.6	21.75	19.25	20.1
31.....	17.3	-----	17.7	17.4	-----	20.15	-----	23.6	-----	21.6	19.4	-----

Daily gage height, in feet, of Colorado River at Yuma, Ariz., for 1891-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1903-4.												
1.....	20.4	19.7	19.6	18.92	18.85	19.45	20.05	22.0	25.7	25.3	22.25	22.1
2.....	20.35	19.7	19.7	18.92	18.85	19.5	20.0	21.75	25.9	25.15	22.2	22.0
3.....	20.6	19.7	19.65	18.88	18.9	19.5	20.0	21.8	26.1	24.9	22.2	22.1
4.....	20.7	19.7	19.45	18.84	18.9	19.55	20.0	21.7	26.25	24.45	22.25	22.4
5.....	20.7	19.7	19.2	18.84	18.9	19.55	20.15	21.5	26.25	24.25	21.95	21.95
6.....	21.0	19.7	19.25	18.84	18.9	19.55	20.2	21.5	26.2	24.05	21.85	22.25
7.....	20.95	19.7	19.4	18.79	18.85	19.6	20.5	21.85	26.0	24.0	22.1	22.3
8.....	20.4	19.7	19.4	18.75	18.8	19.7	20.6	22.1	25.9	23.95	22.1	22.0
9.....	20.15	19.7	19.5	18.74	18.75	19.8	20.4	22.3	25.9	23.8	22.25	21.75
10.....	19.95	19.7	19.6	18.65	18.75	19.9	20.2	22.8	25.7	23.5	22.2	21.45
11.....	19.95	19.7	19.65	18.6	18.7	20.0	20.05	22.9	25.5	23.4	22.2	21.1
12.....	20.2	19.7	19.65	18.51	18.7	20.0	20.0	22.65	25.3	23.15	21.95	21.0
13.....	20.4	19.7	19.6	18.47	18.75	20.4	20.0	22.65	24.9	23.0	22.1	20.95
14.....	20.35	19.7	19.55	18.55	18.75	20.55	19.95	22.5	24.7	23.0	21.95	20.9
15.....	20.1	19.7	19.5	18.64	18.75	20.25	19.9	22.4	24.7	23.05	21.95	20.9
16.....	19.95	19.7	19.4	18.7	18.75	19.95	19.95	22.6	24.7	22.9	21.95	20.6
17.....	19.95	19.7	19.3	18.7	18.85	19.9	19.9	22.7	24.8	22.85	22.0	20.5
18.....	19.85	19.7	19.2	18.7	18.95	19.85	19.95	22.7	24.55	22.85	21.75	20.5
19.....	19.8	19.65	19.05	18.6	19.0	19.85	20.15	22.9	24.8	22.75	21.4	20.3
20.....	19.8	19.65	18.85	18.7	19.05	19.85	20.3	23.25	25.1	22.55	21.5	20.25
21.....	19.8	19.65	18.65	18.75	19.1	19.85	20.25	23.6	25.3	22.5	21.3	20.1
22.....	19.7	19.65	18.55	18.75	19.2	19.8	20.3	23.9	25.4	22.4	21.3	20.1
23.....	19.7	19.6	18.5	18.75	19.15	19.8	20.3	23.95	25.5	22.3	21.3	19.95
24.....	19.7	19.6	18.4	18.75	19.2	19.9	20.3	24.05	25.7	22.25	23.0	19.85
25.....	19.7	19.6	18.35	18.75	19.3	19.95	20.5	24.1	25.7	22.1	23.0	19.7
26.....	19.7	19.6	18.3	18.7	19.35	19.95	21.3	24.4	25.6	22.1	22.25	19.6
27.....	19.7	19.45	18.35	18.7	19.25	19.95	21.6	24.7	25.65	22.05	22.1	19.55
28.....	19.75	19.4	18.45	18.75	19.25	20.1	21.8	24.95	25.65	22.25	22.1	19.45
29.....	19.8	19.35	18.75	18.75	19.3	20.15	22.0	25.0	25.55	22.0	22.4	19.35
30.....	19.8	19.5	18.9	18.8	.....	20.15	22.0	25.05	25.5	22.0	22.9	19.3
31.....	19.7	.....	18.9	18.8	.....	20.05	.....	25.3	.....	22.3	22.25	.....
1904-5.												
1.....	19.3	20.0	19.1	18.5	19.45	23.9	21.5	25.0	27.55	26.8	19.95	18.5
2.....	19.3	20.0	19.1	18.5	19.6	25.05	21.4	24.7	27.8	26.5	19.9	18.4
3.....	19.3	20.0	19.1	18.5	19.7	26.7	21.3	24.7	28.0	25.9	19.85	18.4
4.....	19.3	19.9	19.05	18.6	19.7	26.7	21.3	24.25	28.2	25.45	19.8	18.45
5.....	19.55	19.85	19.0	18.75	20.3	25.3	21.65	24.25	28.35	25.45	19.8	18.4
6.....	20.95	19.8	19.0	18.95	21.2	24.8	22.6	24.55	28.45	25.0	19.9	18.3
7.....	20.3	19.7	19.05	19.0	21.05	24.8	22.5	24.7	28.55	24.6	20.3	18.2
8.....	20.2	19.65	19.05	18.9	20.7	24.7	22.1	25.1	28.3	24.1	20.5	18.3
9.....	20.3	19.6	19.0	18.65	20.75	24.1	22.0	25.75	28.2	23.8	20.3	18.45
10.....	20.9	19.6	19.0	21.0	20.6	23.9	22.0	26.1	28.15	23.35	20.2	18.95
11.....	20.6	19.6	18.9	19.25	24.1	24.1	21.85	26.3	28.2	22.8	20.45	18.7
12.....	20.7	19.65	18.9	19.2	22.95	24.75	22.1	26.1	28.25	22.6	20.4	18.6
13.....	21.4	19.65	18.85	19.25	22.4	24.35	25.45	25.5	28.4	22.1	20.15	18.85
14.....	21.85	19.65	18.85	19.45	22.2	23.7	29.25	25.1	28.7	22.0	20.1	19.45
15.....	22.3	19.65	18.8	19.65	22.25	24.35	29.65	25.0	28.7	21.9	19.75	19.2
16.....	22.8	19.6	18.8	19.75	21.6	26.35	27.2	25.05	28.75	21.95	19.6	18.8
17.....	22.35	19.5	18.85	22.2	21.1	27.35	24.9	24.95	28.85	22.25	19.35	18.65
18.....	22.0	19.5	19.05	23.8	21.4	26.55	24.55	24.7	28.95	21.7	19.15	18.6
19.....	21.15	19.5	19.1	22.2	22.65	28.1	24.9	24.5	29.15	21.3	19.05	18.6
20.....	21.0	19.5	19.0	21.0	24.9	30.3	24.4	24.3	29.05	21.25	19.0	18.7
21.....	20.75	19.4	18.85	20.45	25.75	29.75	23.3	24.45	29.1	20.95	18.85	18.6
22.....	20.6	19.3	18.7	20.55	25.85	28.9	22.8	24.65	29.1	20.7	18.8	18.45
23.....	20.4	19.3	18.5	20.3	23.55	27.75	22.6	24.85	29.0	20.5	18.75	18.45
24.....	20.3	19.3	18.4	20.0	23.0	25.6	22.35	25.25	28.85	20.5	18.7	18.4
25.....	20.2	19.2	18.35	19.8	21.45	24.1	22.6	25.55	28.75	20.45	18.65	18.35
26.....	20.1	19.1	18.3	19.75	23.65	23.4	23.45	25.75	28.55	20.35	18.65	18.2
27.....	20.1	19.1	18.3	19.65	23.5	23.1	23.95	26.0	28.25	20.2	18.7	18.0
28.....	20.1	19.05	18.3	18.55	23.5	22.85	24.15	26.4	27.9	20.05	18.7	18.0
29.....	19.95	19.05	18.4	19.4	.....	22.4	23.95	26.8	27.6	19.95	18.65	18.0
30.....	19.95	19.05	18.6	19.35	.....	22.0	24.55	27.0	27.25	20.0	19.5	18.0
31.....	19.95	.....	18.5	19.3	.....	21.9	.....	27.4	.....	19.95	18.8	.....

Daily gage height, in feet, of Colorado River at Yuma, Ariz., for 1891-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1905-6.												
1.....	18.0	18.4	28.05	17.75	18.6	19.0	24.2	24.75	28.6	26.5	20.35	18.8
2.....	18.0	18.45	24.05	17.7	18.55	19.0	23.9	25.1	28.6	25.55	20.3	19.0
3.....	18.3	18.5	23.95	17.7	18.55	19.0	23.8	25.0	28.8	24.35	20.2	19.2
4.....	18.8	18.4	22.9	17.6	18.45	19.0	24.0	24.7	28.6	23.35	20.0	19.1
5.....	19.0	18.35	21.3	17.55	18.2	18.95	23.4	24.55	28.3	22.85	20.15	18.85
6.....	18.95	18.35	20.5	17.4	18.3	18.9	23.2	24.55	27.95	22.4	20.0	18.7
7.....	20.05	18.4	20.0	17.4	18.2	18.95	22.95	24.4	27.6	22.0	19.7	18.7
8.....	20.2	18.65	19.5	17.5	18.2	18.95	22.9	24.2	27.4	21.9	19.4	18.7
9.....	20.6	18.75	19.2	17.45	18.2	18.9	22.45	23.95	27.4	21.85	19.3	18.65
10.....	20.3	18.8	18.95	17.5	18.2	18.85	22.9	23.8	27.45	21.85	19.2	18.75
11.....	20.1	18.8	18.75	17.5	18.7	18.85	22.7	23.8	27.3	21.8	19.55	18.8
12.....	19.95	19.0	18.45	17.5	18.55	18.85	22.65	24.25	27.1	21.55	19.4	18.85
13.....	19.7	18.75	18.4	17.4	18.7	18.9	22.6	24.3	26.9	21.4	19.4	18.8
14.....	19.3	18.65	18.3	17.4	18.8	20.2	22.45	24.5	26.7	21.3	19.4	18.8
15.....	19.2	18.75	18.2	17.4	18.9	26.2	22.9	24.9	26.75	21.1	19.2	18.7
16.....	19.1	18.85	18.2	17.4	19.95	27.55	22.7	25.4	26.95	20.95	19.2	18.7
17.....	18.9	18.85	18.0	17.4	20.0	25.5	22.4	25.85	26.95	20.95	19.1	18.65
18.....	18.75	18.8	17.95	17.4	19.8	23.2	22.4	26.9	26.9	21.25	19.1	18.6
19.....	18.7	18.95	17.9	17.4	19.6	22.65	22.55	26.45	26.8	21.5	19.5	18.4
20.....	18.7	18.9	17.95	17.45	19.4	22.85	22.45	26.8	26.7	21.2	19.25	18.35
21.....	18.65	18.8	17.8	17.4	19.4	22.05	22.4	27.1	26.75	21.35	19.9	18.45
22.....	18.6	18.8	17.85	17.5	19.4	21.7	22.4	27.2	26.85	21.5	19.3	18.6
23.....	18.6	18.8	17.85	19.5	19.3	21.6	22.6	27.3	27.3	21.6	19.25	18.6
24.....	18.6	18.7	17.9	19.4	19.3	21.5	22.9	27.2	27.6	21.5	19.2	18.4
25.....	18.6	18.75	17.85	19.6	19.2	21.35	23.1	27.2	27.8	21.4	19.8	18.7
26.....	18.5	18.8	17.95	19.0	19.1	21.2	23.5	27.3	27.85	21.4	19.45	19.1
27.....	18.4	19.05	17.9	18.8	19.0	23.1	23.55	27.5	28.10	21.2	19.15	18.8
28.....	18.35	21.3	17.8	18.75	19.0	26.0	23.8	27.6	28.05	21.1	18.9	18.7
29.....	18.4	26.2	17.8	18.75	.....	27.95	24.2	27.8	27.85	20.9	19.5	18.8
30.....	18.45	31.3	17.8	18.7	.....	25.0	24.5	28.2	27.3	20.7	19.2	19.0
31.....	18.4	.....	17.8	18.7	.....	23.8	.....	28.4	.....	20.5	18.9	.....
1906-7.												
1.....	19.55	18.35	18.7	22.95	19.55	20.85	22.85	23.75	28.45	28.3	23.1	20.65
2.....	19.4	18.5	18.8	21.2	21.55	20.8	22.9	23.45	28.9	28.05	23.1	22.25
3.....	19.4	18.5	18.65	20.9	22.4	21.25	23.2	23.3	29.1	27.65	23.3	21.6
4.....	19.45	18.6	18.6	20.7	21.5	21.0	23.05	23.2	29.2	27.4	23.05	21.2
5.....	19.45	18.6	18.5	20.6	21.1	21.1	22.8	23.1	29.15	27.4	22.85	21.55
6.....	19.35	18.65	20.3	20.3	20.65	21.25	22.75	23.15	28.9	27.35	22.5	21.5
7.....	19.15	18.7	25.3	20.2	20.35	22.85	22.65	23.25	28.3	27.35	22.45	21.25
8.....	19.1	18.75	23.55	19.9	20.6	27.0	22.35	23.3	27.7	27.5	22.45	20.65
9.....	18.9	18.8	21.2	20.0	20.95	24.55	22.2	23.3	27.25	27.7	22.3	20.75
10.....	18.8	18.8	22.1	20.7	21.0	23.2	22.2	23.2	26.85	27.8	22.15	21.0
11.....	18.6	18.85	20.9	20.7	20.9	22.3	22.4	23.15	26.95	28.05	21.85	20.5
12.....	18.4	19.2	20.3	23.7	20.75	21.7	22.5	23.0	27.15	28.0	21.45	20.0
13.....	18.25	19.3	20.05	23.3	20.6	21.85	22.45	22.85	27.45	28.05	21.25	19.65
14.....	18.25	19.1	19.8	22.0	20.5	21.8	22.5	22.65	27.75	27.95	20.95	19.65
15.....	18.2	19.1	19.5	21.1	20.55	21.35	22.5	22.65	28.05	27.8	20.65	19.35
16.....	18.1	19.0	19.3	20.5	20.5	21.15	22.8	22.75	28.25	27.65	20.5	19.2
17.....	18.1	18.95	19.3	19.95	20.4	20.9	23.05	22.7	28.55	27.5	20.45	19.15
18.....	18.1	18.9	19.15	19.8	20.4	20.7	23.5	22.8	28.85	27.45	20.3	19.05
19.....	18.1	18.9	19.05	21.4	20.35	20.55	24.25	23.0	29.1	27.1	20.25	18.95
20.....	18.0	18.9	19.01	22.85	20.2	20.4	24.8	23.6	29.15	26.75	20.1	18.9
21.....	18.0	18.9	18.9	21.5	20.55	20.4	25.15	24.1	29.15	26.1	20.3	19.0
22.....	18.0	18.8	19.0	21.0	21.25	20.4	25.5	24.45	29.1	25.65	20.25	19.25
23.....	18.0	18.8	18.9	20.6	20.95	20.4	25.75	24.6	29.0	25.3	20.1	19.0
24.....	18.0	18.8	18.8	20.3	20.75	20.55	25.85	24.7	28.9	24.85	19.95	19.0
25.....	17.95	18.8	18.7	20.1	20.7	22.3	25.85	24.75	28.9	24.3	20.2	19.0
26.....	17.95	18.8	18.6	20.0	21.4	22.3	25.75	25.05	28.85	23.6	20.5	19.0
27.....	18.0	18.75	18.5	19.8	21.85	21.5	25.6	25.5	28.75	23.25	20.4	19.05
28.....	18.0	18.8	18.5	19.7	21.3	21.7	25.3	26.15	28.7	23.0	20.5	19.1
29.....	18.05	18.75	18.5	19.6	.....	22.95	24.8	26.95	28.6	23.1	20.3	19.25
30.....	18.1	18.8	18.4	19.6	.....	23.0	24.3	27.5	28.4	22.8	19.9	19.05
31.....	18.15	.....	24.55	19.6	.....	23.05	.....	27.95	.....	22.8	19.6	.....

Daily gage height, in feet, of Colorado River at Yuma, Ariz., for 1891-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1907-8.												
1.....	18.9	19.9	18.6	18.0	18.5	20.3	20.75	22.7	22.85	24.5	20.35	20.4
2.....	18.9	19.55	18.5	18.0	18.5	20.25	20.8	22.7	22.75	24.45	20.8	20.4
3.....	18.8	19.4	18.5	18.1	18.6	20.25	20.7	22.55	22.6	24.25	20.95	20.3
4.....	18.65	19.4	18.4	18.2	18.7	20.85	20.5	22.3	22.6	24.1	20.6	20.05
5.....	18.7	19.35	18.3	18.4	18.75	21.0	20.4	22.0	22.6	23.9	20.75	19.8
6.....	18.7	19.3	18.3	18.45	19.7	20.7	20.4	21.75	22.3	23.9	21.1	19.65
7.....	18.75	19.2	18.3	18.55	23.8	20.65	20.25	21.55	22.3	23.35	21.2	19.55
8.....	18.75	19.2	18.3	18.6	21.4	23.05	20.1	21.4	22.5	23.05	21.55	19.5
9.....	19.0	19.1	18.3	18.6	20.35	22.2	20.2	21.35	22.7	22.7	22.25	20.05
10.....	19.1	19.15	18.3	18.55	19.75	21.4	20.05	21.4	22.95	22.3	22.0	19.5
11.....	19.1	19.1	18.3	18.4	19.7	21.45	20.1	21.55	23.2	22.1	21.8	19.25
12.....	19.7	19.1	18.3	18.3	19.7	21.9	20.25	21.7	23.3	22.0	21.7	19.2
13.....	19.7	19.1	18.4	18.3	19.95	21.0	20.45	21.65	23.5	21.85	21.0	19.4
14.....	19.75	19.1	18.5	18.3	20.0	20.6	20.6	21.6	23.5	21.7	21.15	19.1
15.....	19.4	19.0	18.4	18.2	19.95	20.55	20.65	21.45	23.3	21.4	20.65	19.05
16.....	19.4	18.9	18.45	18.2	19.9	20.3	20.7	21.55	23.2	21.3	20.5	19.9
17.....	19.6	18.8	18.45	18.1	19.8	20.05	20.6	21.95	23.3	21.2	20.6	19.25
18.....	19.65	18.8	18.4	18.1	19.7	19.9	20.65	22.2	23.8	21.05	20.35	19.8
19.....	19.5	18.8	18.35	18.1	19.7	19.85	20.7	22.25	24.3	21.0	20.4	18.8
20.....	19.35	18.8	18.4	18.1	19.8	19.8	20.8	22.3	24.6	21.0	20.2	18.75
21.....	19.55	18.85	18.4	18.1	19.9	19.8	20.8	22.3	24.75	20.9	20.45	18.7
22.....	19.2	18.8	18.5	18.1	20.05	21.0	21.1	22.3	25.0	20.7	20.8	18.75
23.....	19.95	18.8	18.5	18.1	19.75	20.2	21.7	22.2	25.2	20.55	21.3	18.65
24.....	19.9	18.8	18.35	18.2	19.7	20.35	21.95	22.0	25.2	20.7	22.45	18.6
25.....	19.8	18.7	18.3	18.2	19.95	20.45	22.00	22.0	25.25	20.7	22.35	18.6
26.....	19.5	18.7	18.3	18.35	20.65	20.75	21.95	22.15	25.3	20.7	22.05	18.6
27.....	19.4	18.6	18.3	18.4	20.8	20.9	21.95	22.5	25.15	20.5	21.8	18.65
28.....	20.25	18.65	18.15	18.45	20.7	20.95	22.0	22.9	24.8	20.2	21.45	18.8
29.....	19.7	18.7	18.1	18.5	20.4	20.9	22.05	23.0	24.55	20.1	20.85	18.8
30.....	19.9	18.6	18.1	18.5	20.85	22.45	22.9	24.55	25.0	20.2	20.9	18.85
31.....	20.25	.....	18.0	18.4	.....	20.8	.....	22.75	.....	20.25	20.6	.....
1908-9.												
1.....	18.8	19.4	19.2	18.65	21.7	19.9	24.8	23.45	26.6	29.4	20.0	19.5
2.....	18.8	19.3	19.2	18.6	21.1	20.2	24.1	23.0	26.7	29.45	19.8	19.5
3.....	19.0	19.2	19.4	18.45	20.6	20.25	23.5	22.7	26.9	29.4	19.4	19.6
4.....	19.3	19.2	19.4	18.35	20.2	20.55	23.05	22.85	27.0	29.35	19.05	21.25
5.....	19.6	19.25	19.55	18.55	20.1	20.3	22.65	23.25	27.0	29.15	18.9	21.75
6.....	19.7	19.25	19.6	18.6	20.05	20.3	22.15	23.45	27.1	29.05	18.85	21.05
7.....	19.55	19.3	19.6	18.4	19.85	20.35	22.0	23.35	27.15	28.6	18.5	20.9
8.....	19.75	19.3	19.6	18.25	19.75	20.15	21.55	23.05	27.15	28.1	18.45	20.4
9.....	19.8	19.3	19.6	18.3	19.7	20.25	21.65	23.0	26.95	27.6	18.3	20.35
10.....	19.6	19.4	19.6	18.3	19.65	20.35	21.3	23.0	26.65	26.95	18.05	21.65
11.....	19.5	19.4	19.5	18.35	19.7	20.35	21.75	23.15	26.4	26.55	18.05	22.45
12.....	19.5	19.5	19.5	18.3	19.7	20.5	21.8	23.55	26.45	26.1	18.35	23.3
13.....	19.65	19.5	19.5	18.45	19.9	20.75	21.8	23.95	26.6	25.6	18.35	23.7
14.....	19.7	19.5	19.3	18.7	19.8	20.85	21.95	24.2	26.9	25.05	18.35	23.5
15.....	19.45	19.5	19.2	18.8	19.9	20.9	22.0	24.5	27.25	24.65	18.85	22.3
16.....	19.35	19.55	19.1	18.9	20.1	20.9	21.85	24.9	27.6	24.2	20.4	21.2
17.....	19.25	19.6	19.3	19.05	20.05	21.05	21.45	25.3	28.25	23.65	19.35	20.35
18.....	19.25	19.6	19.65	19.6	20.5	20.85	21.25	25.6	28.8	22.8	19.1	19.85
19.....	19.3	19.6	26.25	19.75	20.35	20.8	21.35	25.8	29.3	22.05	19.85	19.55
20.....	19.3	19.6	26.25	19.6	20.3	20.85	21.35	26.2	29.7	21.35	19.95	19.2
21.....	19.3	19.6	21.5	19.35	20.15	20.65	21.25	26.2	30.05	20.7	19.8	18.85
22.....	19.3	19.6	21.3	19.2	20.2	20.65	21.25	26.3	30.25	20.05	20.65	18.6
23.....	19.35	19.6	23.05	19.1	20.3	21.0	21.55	26.2	30.5	19.8	20.45	18.35
24.....	19.4	19.75	22.1	19.25	20.45	21.3	22.8	25.95	30.75	19.45	21.0	18.2
25.....	20.05	19.7	21.15	20.4	20.75	21.55	23.7	25.75	30.75	19.1	21.1	18.05
26.....	21.05	19.7	20.5	20.35	20.25	21.6	24.3	25.5	30.65	18.9	21.15	17.8
27.....	20.5	19.7	20.1	20.85	20.0	21.5	24.65	25.55	30.45	19.1	20.5	17.7
28.....	20.05	19.6	19.75	20.55	19.9	21.5	24.65	25.75	30.1	18.95	20.1	17.6
29.....	19.75	19.45	19.45	20.55	.....	21.55	24.15	25.85	29.85	19.35	19.35	17.55
30.....	19.7	19.2	19.15	20.5	.....	22.15	23.85	26.0	29.65	19.75	19.45	17.4
31.....	19.6	.....	18.85	22.0	.....	24.3	.....	26.35	.....	19.85	19.9	.....

Daily gage height, in feet, of Colorado River at Yuma, Ariz., for 1891-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909-10.												
1.....	17.35	16.0	15.8	14.7	15.45	15.85	20.2	20.6	19.95	18.2	16.0	15.25
2.....	17.1	16.0	15.95	14.85	15.5	15.85	20.05	21.05	19.9	18.0	16.2	15.0
3.....	17.05	15.9	16.0	20.45	15.65	15.95	19.7	21.5	19.9	17.85	16.05	15.0
4.....	16.9	15.85	16.05	20.95	15.75	16.05	19.45	21.8	20.05	17.8	16.35	15.0
5.....	16.8	15.8	16.0	22.95	15.8	16.3	19.1	22.1	20.7	17.8	16.4	14.95
6.....	16.8	15.8	16.0	19.65	15.8	16.8	18.85	22.55	21.3	18.3	16.55	14.9
7.....	16.7	15.8	16.1	17.9	15.8	17.05	18.6	22.8	21.8	18.2	16.25	14.9
8.....	16.6	15.8	16.2	17.4	15.8	17.05	18.45	22.8	22.3	17.6	16.4	14.85
9.....	16.5	15.8	16.1	17.2	15.8	17.4	18.3	22.95	22.75	17.3	16.1	15.3
10.....	16.4	15.8	16.0	17.35	15.8	17.5	18.45	22.9	23.0	17.1	16.05	15.2
11.....	16.3	15.75	16.0	16.75	15.8	18.1	18.6	22.6	23.2	17.05	16.2	15.0
12.....	16.3	15.75	16.0	16.1	15.75	18.05	18.45	22.1	23.45	16.95	16.1	15.0
13.....	16.3	15.8	16.0	15.65	15.8	18.7	18.3	21.85	23.2	16.7	16.4	15.0
14.....	16.35	15.8	16.0	15.2	15.9	19.85	18.15	21.45	23.1	16.45	16.1	16.1
15.....	16.35	15.8	16.0	14.95	15.85	20.35	18.15	21.2	22.6	16.75	15.85	15.75
16.....	16.5	15.9	15.7	14.7	15.9	20.25	18.2	21.25	22.1	16.55	15.8	15.65
17.....	16.45	15.95	15.5	14.9	15.9	19.8	18.35	21.6	21.6	16.25	15.85	15.45
18.....	16.4	15.9	15.3	15.0	15.8	19.3	18.5	21.9	21.2	16.2	15.95	15.35
19.....	16.45	15.9	15.25	15.7	15.7	18.85	18.7	22.05	20.95	16.1	15.95	15.3
20.....	16.4	15.9	15.2	15.75	15.8	18.6	18.9	22.55	20.55	16.1	15.75	15.4
21.....	16.4	15.95	15.15	16.35	15.85	18.4	19.15	22.85	20.35	16.1	15.55	15.55
22.....	16.4	15.9	15.2	16.15	15.9	18.3	19.25	23.1	20.1	16.0	15.4	15.5
23.....	16.4	15.9	15.25	16.4	15.8	18.25	19.15	23.0	19.9	16.0	15.4	15.25
24.....	16.3	15.95	15.3	16.95	15.85	18.2	19.1	23.0	19.7	15.9	15.5	15.5
25.....	16.3	16.05	15.3	16.35	15.95	18.25	19.25	22.55	19.35	15.95	15.5	15.4
26.....	16.3	16.0	15.3	16.1	16.05	18.45	19.15	21.95	19.05	16.0	15.55	15.45
27.....	16.3	16.0	15.15	15.95	16.15	18.5	19.5	21.4	19.0	15.85	15.5	15.5
28.....	16.25	15.95	15.0	15.9	16.0	18.85	19.95	21.0	18.75	15.7	15.55	15.6
29.....	16.1	15.95	14.9	15.8	.....	19.3	20.15	20.7	18.7	15.7	15.15	15.8
30.....	16.0	15.85	14.75	15.55	.....	19.75	20.35	20.45	18.3	15.65	15.35	15.5
31.....	16.0	.....	14.6	15.5	.....	20.1	.....	20.1	.....	15.6	15.2	.....
1910-11.												
1.....	15.6	16.2	16.4	16.15	16.85	16.65	18.55	19.9	22.2	24.6	21.5	17.9
2.....	15.5	16.2	16.4	15.7	16.75	16.5	18.8	20.0	22.35	24.4	20.95	17.55
3.....	15.5	16.3	16.3	15.8	17.15	16.4	18.85	20.0	22.5	24.25	20.3	17.6
4.....	15.55	16.2	16.2	15.8	17.45	16.4	18.8	20.15	22.6	23.8	19.7	17.6
5.....	15.6	16.35	16.2	15.75	18.1	16.4	18.65	20.4	22.65	22.9	19.2	17.7
6.....	15.5	16.2	16.2	15.7	17.9	16.3	19.0	20.9	22.6	22.0	18.8	17.3
7.....	15.45	16.2	16.3	15.7	19.6	16.2	18.6	21.2	22.8	21.6	18.35	17.05
8.....	15.4	16.2	16.3	15.7	19.25	16.2	19.0	21.05	22.9	21.7	18.1	16.8
9.....	15.55	16.2	16.4	15.4	18.45	16.3	18.9	20.9	23.0	22.0	17.85	16.6
10.....	15.45	16.2	16.35	15.0	18.6	18.5	19.25	21.0	23.25	22.2	18.0	16.5
11.....	15.35	16.2	16.4	15.0	20.0	17.65	19.35	20.85	23.5	22.05	18.15	16.4
12.....	15.25	16.2	16.2	15.1	19.35	18.0	19.55	21.2	23.55	21.6	18.1	16.45
13.....	15.2	16.2	16.2	16.0	18.7	20.0	19.75	21.5	23.8	21.3	18.15	16.45
14.....	15.3	16.2	16.2	15.95	18.25	21.35	19.85	21.85	23.9	21.1	18.0	16.6
15.....	15.5	16.5	16.2	17.45	17.8	19.95	19.7	22.25	24.05	20.95	17.8	16.55
16.....	15.5	16.65	16.2	16.7	17.55	19.25	19.45	22.9	24.3	20.35	17.65	16.55
17.....	15.3	16.45	16.2	15.95	17.4	19.45	19.25	23.3	24.4	20.2	17.55	16.45
18.....	15.4	16.4	16.2	15.9	17.0	19.85	19.1	23.6	24.75	20.4	17.5	16.5
19.....	15.4	16.3	16.1	17.3	16.7	20.5	18.9	23.9	24.75	20.35	17.5	16.35
20.....	15.4	16.3	16.0	18.0	16.6	20.3	18.9	23.9	25.05	20.8	17.5	16.6
21.....	15.8	16.3	16.0	17.75	16.55	20.05	18.8	23.75	25.25	20.9	17.25	17.5
22.....	15.95	16.05	16.0	17.55	16.45	19.6	18.65	23.4	25.45	21.15	17.05	17.0
23.....	15.8	16.3	16.1	17.3	16.3	19.0	18.4	23.15	25.6	21.25	17.0	16.75
24.....	16.65	16.35	16.2	16.9	16.5	18.6	18.3	23.0	25.85	21.0	17.1	16.6
25.....	16.55	16.6	16.2	16.8	16.5	18.4	18.5	23.0	25.65	21.15	17.1	16.6
26.....	16.8	16.8	16.25	17.0	16.35	18.2	18.6	23.2	25.45	22.4	17.05	16.6
27.....	16.35	16.6	16.3	16.85	16.5	18.1	18.65	23.2	25.25	22.85	17.05	17.25
28.....	16.25	16.3	16.3	16.7	16.55	18.0	18.9	23.3	24.95	22.55	17.25	17.8
29.....	16.35	16.3	16.0	16.9	.....	18.2	19.2	23.15	24.8	22.2	17.45	17.05
30.....	16.2	16.3	16.05	17.3	.....	18.3	19.55	22.6	24.7	22.75	18.0	16.75
31.....	16.2	.....	16.0	16.95	.....	18.4	.....	22.4	.....	21.95	18.45	.....

Daily gage height, in feet, of Colorado River at Yuma, Ariz., for 1891-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.									
1.....	16.75	17.0	17.05	16.6	17.45	17.5	18.45	18.65	25.6
2.....	16.6	17.1	17.1	16.45	17.4	17.5	18.3	18.8	26.0
3.....	17.65	17.45	17.05	16.15	17.35	17.45	18.2	19.4	26.6
4.....	18.9	18.2	17.1	16.0	17.05	17.6	18.15	19.45	27.1
5.....	18.95	18.1	17.1	15.9	17.0	17.6	18.1	19.35	27.6
6.....	20.6	17.75	17.1	15.7	17.05	17.5	18.05	19.4	28.05
7.....	21.05	17.6	17.0	15.65	17.1	17.5	18.0	19.9	28.35
8.....	21.0	17.4	16.95	15.7	17.1	17.55	18.25	20.9	28.4
9.....	21.1	17.2	17.05	15.55	17.1	17.5	18.45	21.5	28.5
10.....	21.65	17.2	16.55	15.4	17.1	17.55	18.6	21.65	28.45
11.....	22.35	17.1	16.3	15.25	17.1	17.6	18.8	21.45	28.3
12.....	22.9	17.05	16.15	15.05	17.1	18.55	19.2	21.25	28.2
13.....	23.5	17.0	16.15	15.0	17.1	18.2	19.75	20.9	28.0
14.....	24.1	17.0	16.15	15.1	17.15	18.5	20.2	21.05	28.0
15.....	23.75	16.9	16.45	15.5	17.2	18.8	20.6	21.45	27.95
16.....	21.45	16.9	16.6	15.25	17.5	19.3	21.0	21.8	27.95
17.....	20.0	16.95	16.8	15.3	17.15	18.35	21.35	22.0	28.15
18.....	19.3	16.95	17.1	15.5	17.3	18.35	21.4	22.1	28.5
19.....	18.9	17.05	17.2	15.8	17.4	18.35	21.1	22.45	28.7
20.....	18.45	17.05	17.0	16.15	17.4	18.2	20.55	22.65	28.9
21.....	18.1	17.0	17.0	16.35	17.4	18.05	20.05	22.7	29.0
22.....	17.7	17.05	17.0	16.5	17.4	17.95	19.85	22.5	29.05
23.....	17.4	17.05	16.8	16.85	17.4	18.4	19.5	22.5	28.35
24.....	17.35	17.1	16.8	16.95	17.4	18.1	19.35	22.85	26.8
25.....	17.25	16.9	16.6	17.25	17.2	18.05	19.2	23.2	25.45
26.....	17.1	17.0	16.65	17.5	17.3	18.0	19.2	23.75	24.35
27.....	17.0	17.0	16.8	17.6	17.35	18.8	19.05	24.1	23.5
28.....	17.15	17.0	16.7	17.45	17.4	19.9	18.9	24.35	22.85
29.....	17.35	17.0	16.6	17.4	17.5	19.6	18.7	24.65	22.75
30.....	17.15	17.05	16.7	17.4	.....	19.05	18.65	25.05	22.75
31.....	17.05	.....	16.45	17.4	.....	18.7	.....	25.6	.....

Yearly maximum and minimum gage heights, in feet, of Colorado River at Yuma, Ariz., 1878 to 1891.

[Compiled from the records of Capt. Isaac Polhamus, the Southern Pacific Railroad, and the U. S. Geological Survey.]

Year.	Maximum.		Minimum.		Year.	Maximum.		Minimum.	
	Height.	Date.	Height.	Date.		Height.	Date.	Height.	Date.
1878.....	23.0	June 24	14.7	Dec. 31	1885.....	24.7	June 13	13.7	Feb. 8
1879.....	20.0	May 12	13.2	Oct. 14	1886.....	26.8	June 6	14.4	Jan. 19
1880.....	24.0	May 31	14.9	Dec. 8	1887.....	23.5	June 10	14.9	Jan. 26
1881.....	23.5	June 14	15.0	Jan. 25	1888.....	21.8	June 25	14.8	Jan. 4
1882.....	22.6	June 18	15.5	Dec. 20	1889.....	22.4	June 7	15.4	Sept. 27
1883.....	24.5	July 3	14.0	Dec. 14	1890.....	25.5	June 5	16.4	Jan. 29
1884.....	^a 28.5	June 27	14.2	Dec. 5	1891.....	^b 33.2	Feb. 26	16.4	Sept. 22

^a Said to be highest flood for 17 years preceding.

^b Highest flood recorded.

Rating table for Colorado River at Yuma, Ariz., for January 1 to October 10, 1902.

Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.
<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>
16.5	3,030	18.2	4,920	20.4	13,800	22.6	33,400
16.6	3,050	18.4	5,340	20.6	15,200	22.8	35,800
16.7	3,080	18.6	5,790	20.8	16,600	23.0	38,200
16.8	3,120	18.8	6,310	21.0	18,200	23.2	40,800
16.9	3,170	19.0	6,910	21.2	19,800	23.4	43,400
17.0	3,230	19.2	7,590	21.4	21,500	23.6	46,100
17.2	3,380	19.4	8,360	21.6	23,300	23.8	48,900
17.4	3,580	19.6	9,300	21.8	25,100	24.0	51,700
17.6	3,850	19.8	10,300	22.0	27,000	24.2	54,700
17.8	4,160	20.0	11,400	22.2	29,000	24.4	57,700
18.0	4,520	20.2	12,600	22.4	31,200	-----	-----

Daily discharge, in second-feet, of Colorado River at Yuma, Ariz., for 1905-1912.

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1905.									
1.	3,750	5,800	29,070	20,690	41,520	61,500	57,800	16,400	6,440
2.	3,750	6,054	39,260	20,100	39,700	65,300	55,500	15,790	6,280
3.	3,800	6,500	70,170	19,480	39,700	68,160	50,640	14,700	6,250
4.	3,985	6,632	70,200	19,450	37,280	67,900	45,000	13,560	6,464
5.	4,300	9,800	51,100	21,000	37,100	67,600	44,950	12,900	6,160
6.	4,570	16,590	44,310	30,100	37,410	67,600	42,400	14,200	5,644
7.	4,700	9,400	44,100	29,840	38,000	69,500	40,100	15,940	5,060
8.	4,500	62,080	43,100	25,800	40,050	72,930	37,200	17,450	5,560
9.	4,170	82,820	36,400	24,800	46,000	70,300	35,500	16,770	6,051
10.	16,090	52,580	34,400	24,900	49,200	69,600	32,980	16,200	8,000
11.	6,400	37,320	38,620	23,000	52,000	71,000	32,100	16,960	7,631
12.	6,300	29,700	42,000	26,100	48,000	72,590	31,720	16,900	6,900
13.	6,350	22,800	38,870	45,800	38,840	76,000	30,870	16,150	7,706
14.	7,000	21,900	32,000	93,800	37,800	82,020	29,500	15,960	9,667
15.	8,370	22,500	36,720	97,500	37,300	82,000	27,710	14,500	8,900
16.	8,600	18,610	60,640	70,100	37,320	83,000	28,300	13,800	7,700
17.	20,100	14,600	65,820	45,000	37,000	86,000	31,100	11,900	7,000
18.	27,500	16,490	62,400	43,600	33,910	88,500	25,300	10,300	6,743
19.	19,300	31,500	73,440	45,050	34,200	94,320	22,320	9,757	6,720
20.	12,120	47,000	110,840	43,400	34,580	91,500	22,250	9,350	7,131
21.	9,300	54,200	103,500	39,500	35,700	92,400	22,000	8,690	6,700
22.	10,170	54,730	91,200	35,900	37,000	92,390	21,500	8,100	6,080
23.	7,863	32,990	76,930	33,900	38,390	89,800	20,900	7,796	6,063
24.	7,900	21,990	58,600	31,690	41,500	84,800	20,800	7,550	5,890
25.	7,025	18,850	43,050	33,000	43,700	82,000	20,650	7,380	5,740
26.	6,770	30,500	34,600	37,160	45,290	77,610	20,460	7,241	5,260
27.	6,250	27,730	31,020	41,630	47,600	73,500	19,700	7,240	5,270
28.	5,730	25,000	29,500	39,000	51,100	68,500	18,910	7,013	5,280
29.	5,400	.....	26,900	34,990	54,810	64,370	17,200	6,850	5,287
30.	5,070	.....	24,390	38,700	56,300	61,500	17,500	10,290	5,260
31.	4,900	.....	23,500	.....	59,020	.....	16,750	7,500	.....

Daily discharge, in second-feet, of Colorado River at Yuma, Ariz., for 1905-1912—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1905-6.												
1.....	5,240	5,620	77,360	5,860	9,280	9,350	39,600	46,900	81,800	74,200	25,600	12,700
2.....	5,220	5,720	37,160	5,800	9,100	9,210	37,600	50,800	84,000	68,000	25,500	13,300
3.....	6,140	5,810	40,200	5,730	9,000	9,000	37,500	48,600	84,200	60,400	25,200	14,500
4.....	7,170	5,750	35,000	5,640	8,500	8,900	38,000	43,400	87,200	52,200	24,500	13,800
5.....	8,250	5,700	28,650	5,580	7,280	8,750	37,800	40,600	92,400	48,100	24,900	12,500
6.....	7,300	5,710	23,300	5,400	7,500	8,600	35,900	41,000	91,100	44,600	24,400	12,100
7.....	13,080	5,860	20,100	5,280	6,800	8,350	33,400	38,500	89,800	41,900	21,900	12,000
8.....	13,560	6,360	16,970	5,230	6,600	8,000	31,000	36,800	89,000	41,100	21,900	11,900
9.....	15,500	6,630	15,000	5,090	6,360	7,730	27,200	36,000	86,700	40,400	22,000	11,900
10.....	14,060	6,680	13,700	4,950	6,450	7,300	32,200	35,100	85,300	39,500	21,900	11,800
11.....	12,950	6,550	12,620	4,830	8,860	6,900	29,800	36,700	82,100	38,600	20,500	11,800
12.....	12,100	6,950	10,500	4,700	8,220	6,740	29,200	42,100	74,000	40,600	19,700	11,900
13.....	10,660	6,310	10,200	4,550	8,840	7,060	29,000	42,800	65,800	38,100	19,500	11,800
14.....	9,100	6,050	9,610	4,500	9,250	15,600	27,800	44,000	65,060	37,400	19,200	11,700
15.....	8,650	6,500	9,100	4,450	9,640	54,300	31,200	46,500	70,000	36,300	16,900	10,700
16.....	8,290	6,790	8,800	4,400	14,600	66,700	29,560	48,900	80,600	35,400	16,800	10,700
17.....	7,500	6,640	8,100	4,350	14,800	42,300	27,200	51,100	80,600	34,600	16,600	10,700
18.....	6,950	6,560	7,810	4,300	13,500	36,000	27,200	52,800	80,800	32,900	16,500	10,500
19.....	6,780	6,320	7,750	4,200	12,200	33,200	28,200	55,900	80,400	32,600	17,500	9,900
20.....	6,700	6,240	7,720	4,600	11,000	33,500	26,100	60,200	80,100	32,400	16,400	9,600
21.....	6,400	6,320	7,670	4,400	10,800	24,600	25,800	64,200	79,800	32,200	18,500	10,200
22.....	6,100	6,400	7,640	5,000	10,700	23,300	25,500	66,000	80,400	31,800	18,100	10,900
23.....	6,020	6,500	7,600	16,100	10,300	22,800	29,000	67,700	83,000	31,600	15,800	11,000
24.....	6,000	6,520	7,560	14,000	10,200	22,400	30,600	68,900	91,600	32,300	15,500	10,300
25.....	5,970	6,550	7,540	13,800	9,880	21,200	31,700	69,200	96,600	33,000	17,900	11,500
26.....	5,750	6,580	7,500	11,000	9,550	19,000	36,200	69,700	96,400	32,400	16,400	13,200
27.....	5,510	6,650	7,200	10,000	9,250	43,800	36,700	70,600	99,200	30,800	15,200	12,100
28.....	5,400	24,500	6,700	9,940	9,190	65,600	38,600	71,200	97,100	29,100	14,300	11,700
29.....	5,540	62,500	6,400	9,830	.....	75,000	41,800	73,500	92,000	29,100	16,400	12,200
30.....	5,670	102,700	5,980	9,740	.....	47,500	44,100	77,300	79,300	29,100	15,000	13,300
31.....	5,580	.....	5,900	9,600	.....	34,700	.....	79,800	.....	27,000	13,400	.....
1906-7.												
1.....	15,900	8,630	9,080	38,400	12,400	17,200	29,360	35,500	72,900	113,000	57,500	31,100
2.....	15,000	9,360	9,860	26,900	25,700	16,900	29,960	32,600	76,200	111,000	58,500	43,300
3.....	14,700	9,150	9,080	25,000	31,300	19,300	32,100	31,200	77,000	110,000	61,900	38,400
4.....	15,100	9,270	9,000	21,600	26,600	18,000	30,700	32,400	77,700	110,000	58,200	35,000
5.....	15,200	8,700	8,470	18,860	24,400	18,500	28,500	31,800	77,400	110,000	55,300	38,000
6.....	15,800	8,430	17,800	16,000	19,200	19,300	29,200	33,000	87,100	107,000	51,200	37,600
7.....	15,000	9,000	60,000	15,200	17,700	28,600	28,900	33,700	83,300	107,000	50,600	34,500
8.....	14,900	9,420	43,900	16,100	19,000	68,700	27,100	33,900	80,100	108,000	50,600	35,500
9.....	14,500	9,700	27,900	15,900	20,500	45,100	24,700	33,900	77,200	110,000	50,300	31,900
10.....	14,300	9,650	38,700	18,400	20,800	34,500	24,700	33,500	72,200	110,000	49,900	33,300
11.....	13,300	9,800	27,400	18,200	20,300	27,300	27,400	32,800	72,700	112,000	46,200	27,600
12.....	11,800	11,600	23,400	44,300	18,900	24,700	28,000	30,600	81,800	112,000	41,300	24,200
13.....	10,900	12,500	21,600	40,900	17,400	25,800	25,900	30,400	86,500	114,000	38,300	21,900
14.....	10,800	11,500	19,800	29,700	16,600	25,400	26,000	30,500	90,400	113,000	33,900	21,900
15.....	10,500	11,500	17,500	24,400	17,000	21,100	26,000	29,100	94,400	114,000	29,500	19,600
16.....	10,700	11,400	15,900	20,400	16,600	19,200	28,100	30,000	97,100	114,000	32,200	18,400
17.....	10,800	10,560	15,800	17,100	14,900	17,600	29,500	29,600	101,000	110,000	32,900	17,700
18.....	10,800	10,200	14,560	16,300	14,900	16,200	33,000	28,600	105,000	109,000	29,700	16,300
19.....	10,700	9,900	13,800	25,200	14,700	15,600	38,200	29,600	106,000	104,000	28,600	14,960
20.....	10,300	9,750	13,200	33,400	14,100	14,800	41,500	31,900	106,000	102,000	25,400	14,200
21.....	10,100	9,850	12,300	25,800	15,500	14,800	43,800	34,700	106,000	94,900	29,200	15,500
22.....	10,000	9,300	12,800	23,900	18,400	14,800	46,900	37,500	108,060	92,000	26,800	16,500
23.....	9,800	9,330	12,000	22,100	17,200	14,800	48,300	38,700	110,000	88,900	25,700	14,160
24.....	9,800	9,230	11,300	18,000	15,400	15,900	49,900	39,300	112,000	82,400	24,500	13,800
25.....	9,500	8,900	11,000	15,200	15,000	28,400	50,500	41,300	113,000	76,800	25,800	13,400
26.....	9,200	8,670	10,600	15,000	19,600	28,400	49,300	45,700	114,000	68,800	27,300	13,100
27.....	9,000	8,700	9,500	13,800	22,600	20,200	45,700	51,000	115,000	62,700	26,300	13,200
28.....	8,800	9,210	8,870	13,200	19,000	21,700	46,200	57,800	115,000	58,800	27,300	13,400
29.....	8,600	9,000	8,000	12,700	.....	30,800	44,600	61,000	115,000	58,600	25,000	14,000
30.....	8,600	9,080	6,800	12,700	.....	31,200	43,500	65,500	115,000	52,400	23,900	13,200
31.....	8,600	.....	48,900	12,700	.....	31,600	.....	68,800	.....	55,400	23,100	.....

STREAM MEASUREMENTS IN LOWER COLORADO RIVER BASIN. 447

Daily discharge, in second-feet, of Colorado River at Yuma, Ariz., for 1905-1912—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1907-8.												
1.	12,000	16,300	8,800	5,800	6,300	13,400	15,900	32,000	32,200	53,800	18,600	17,300
2.	11,600	14,300	8,600	6,100	6,300	12,500	16,400	30,000	31,300	53,000	22,400	19,200
3.	11,300	12,900	8,500	6,100	6,500	11,700	15,800	29,500	30,300	49,800	22,700	19,300
4.	10,300	12,900	8,100	6,400	6,900	16,000	14,600	28,500	30,600	53,100	21,800	16,600
5.	10,300	12,500	7,800	7,000	7,400	16,500	14,300	27,100	30,900	52,400	21,400	14,000
6.	10,100	11,900	7,900	7,200	9,500	14,000	13,900	25,400	30,000	49,300	24,900	12,700
7.	10,200	11,800	8,000	7,300	45,000	13,400	13,500	24,100	31,200	45,000	25,200	14,100
8.	10,300	11,800	7,800	7,400	30,000	33,000	13,100	23,200	33,500	41,100	29,500	13,600
9.	11,500	11,800	7,500	7,400	19,000	27,000	13,400	23,100	33,900	37,300	36,100	16,400
10.	12,200	11,600	7,600	7,200	15,000	20,900	12,900	23,300	34,300	35,400	31,900	13,600
11.	12,200	11,200	7,700	6,900	14,200	18,700	13,000	24,500	34,800	33,900	30,100	11,800
12.	15,900	10,900	7,900	6,800	14,200	24,700	13,200	25,200	35,200	33,100	28,200	11,000
13.	15,600	10,800	7,800	6,700	14,800	18,500	13,400	25,100	36,000	31,200	23,700	12,600
14.	15,500	10,700	7,700	6,700	14,900	15,200	14,000	25,000	35,600	29,100	24,000	10,300
15.	13,500	10,500	7,500	6,400	14,800	15,000	14,100	23,000	38,700	29,800	21,800	9,900
16.	13,500	10,200	7,300	5,900	14,600	14,300	14,000	23,500	40,200	29,100	20,500	16,400
17.	14,000	10,000	7,300	5,800	14,300	13,400	13,600	26,000	39,400	28,800	20,700	10,400
18.	14,000	9,600	7,300	5,600	12,900	12,500	13,800	27,900	43,600	28,300	18,900	9,000
19.	13,800	9,800	7,300	5,600	12,900	11,300	14,000	28,000	48,300	28,100	20,500	8,900
20.	13,600	9,900	7,300	5,600	11,800	10,500	14,700	28,100	50,400	25,600	20,300	8,600
21.	14,600	9,700	7,400	5,600	10,600	10,100	14,800	27,800	51,700	24,000	19,500	8,200
22.	13,200	9,600	7,500	5,600	11,500	13,400	16,500	27,500	55,100	24,600	22,600	8,600
23.	15,900	9,600	7,500	5,600	10,000	13,200	24,000	27,000	57,900	24,100	25,600	7,700
24.	15,900	9,400	7,500	5,800	9,900	14,000	27,100	26,000	59,700	24,100	33,800	7,200
25.	15,500	9,300	7,200	5,800	11,700	14,300	27,100	25,000	59,700	24,100	33,400	7,000
26.	14,200	9,100	7,100	6,100	16,900	16,000	26,200	25,500	61,700	24,100	28,200	7,000
27.	13,800	8,800	6,900	6,300	17,400	17,000	26,000	29,900	58,700	21,600	22,600	7,700
28.	18,800	8,900	6,300	6,400	17,000	17,200	27,000	32,800	50,700	19,800	25,600	7,500
29.	15,500	8,900	6,100	6,400	16,000	17,000	28,100	33,500	55,400	19,300	20,200	7,500
30.	16,300	8,800	6,000	6,300	16,800	16,800	35,000	32,800	55,000	19,800	20,500	7,200
31.	17,800	8,800	5,800	6,100	16,100	16,100	31,300	31,300	55,000	18,900	18,900	7,000
1908-9.												
1.	7,200	10,200	6,000	7,800	25,100	11,400	43,800	39,400	75,100	130,200	51,600	39,800
2.	7,200	9,900	6,200	7,100	21,100	13,200	37,600	36,900	75,600	133,000	48,500	39,300
3.	6,600	9,400	6,700	6,100	18,100	12,000	33,500	32,400	76,700	132,400	43,300	47,800
4.	7,900	9,200	6,600	6,000	14,900	12,700	31,100	33,600	77,200	133,700	39,200	66,200
5.	8,200	9,600	7,000	6,900	15,500	12,900	29,400	39,200	77,200	132,000	38,700	65,700
6.	9,200	8,500	7,400	6,800	15,300	12,900	26,600	41,700	78,700	133,000	39,500	56,200
7.	8,500	8,500	7,400	6,000	14,400	13,400	25,800	40,000	79,200	124,700	33,000	51,000
8.	9,200	8,500	7,400	6,100	14,000	11,100	24,700	37,200	79,200	115,400	34,200	52,000
9.	10,000	8,200	7,700	6,100	12,300	12,000	25,100	36,800	78,700	110,000	32,300	55,200
10.	9,000	8,200	7,700	6,100	11,900	11,600	22,800	37,400	77,700	102,000	29,300	67,300
11.	8,500	8,200	7,400	6,200	12,000	11,800	28,500	38,500	76,900	98,500	25,000	77,500
12.	8,600	8,700	7,300	5,800	12,000	12,600	25,000	43,000	77,100	93,500	29,500	87,700
13.	9,200	8,700	7,300	5,900	13,800	15,700	25,600	47,200	78,500	88,100	29,600	93,200
14.	9,900	8,700	6,900	6,100	11,400	16,600	26,600	49,000	81,300	80,800	29,600	91,500
15.	8,400	8,700	6,100	6,200	11,400	17,500	26,700	51,800	86,200	76,200	34,900	77,800
16.	8,000	8,000	6,100	6,300	12,000	17,500	25,900	55,500	90,700	71,700	47,400	63,700
17.	7,500	7,600	7,300	6,400	11,800	18,700	22,100	61,500	103,700	66,300	42,800	50,700
18.	7,500	7,600	8,300	7,400	13,500	17,200	20,300	65,000	114,900	62,700	39,500	39,600
19.	7,700	7,600	72,500	8,100	12,800	16,100	21,200	66,400	124,900	60,200	42,700	37,800
20.	7,700	7,500	68,900	11,900	12,800	16,500	22,100	70,400	127,500	54,500	42,300	35,500
21.	7,700	7,500	25,400	10,600	12,300	14,800	21,900	68,500	134,500	48,700	40,200	33,300
22.	7,700	7,500	25,400	9,900	12,500	14,800	21,600	69,100	138,700	43,500	47,700	31,100
23.	8,200	7,300	37,200	9,400	12,200	14,600	23,800	68,500	144,200	40,300	48,500	28,000
24.	8,200	7,200	29,800	10,200	13,700	17,200	34,100	64,700	149,500	36,000	54,100	27,700
25.	11,400	7,200	22,900	15,300	16,800	18,200	41,300	61,700	148,000	34,500	52,400	26,500
26.	20,600	7,200	19,400	15,100	12,500	18,700	44,400	65,400	145,000	34,400	50,200	24,400
27.	16,000	7,400	15,800	21,300	12,000	17,700	46,800	66,400	142,700	39,200	47,600	23,600
28.	13,700	7,300	14,800	17,100	11,500	17,700	46,100	70,400	138,300	40,700	46,500	22,600
29.	11,800	6,700	12,800	17,100	16,900	43,400	72,400	135,200	135,200	47,700	40,800	22,300
30.	12,100	6,000	11,200	17,600	21,700	41,600	72,300	133,100	133,100	51,800	40,800	21,300
31.	11,300	9,100	31,500	35,900	73,900	52,800	43,100	52,800	43,100	43,100	43,100	43,100

Daily discharge, in second-feet, of Colorado River at Yuma, Ariz., for 1905-1912—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909-10.												
1.....	20,700	10,900	8,800	4,600	10,800	8,000	38,500	40,900	40,500	25,200	8,900	6,800
2.....	19,200	10,900	9,800	6,200	10,400	7,700	36,100	45,000	40,100	23,100	10,000	5,600
3.....	18,800	10,100	9,900	49,500	10,500	7,900	34,000	49,200	40,500	21,800	8,800	5,500
4.....	17,800	9,800	10,100	53,800	10,500	7,900	32,000	52,700	42,500	21,200	10,500	5,300
5.....	17,200	9,600	9,900	67,500	10,300	8,700	30,200	56,100	47,800	21,100	10,600	5,100
6.....	17,000	9,600	10,000	35,300	10,000	12,300	28,500	61,700	52,400	24,500	11,200	4,800
7.....	16,100	9,500	10,800	24,800	9,800	14,200	27,300	66,000	56,200	23,100	10,300	4,800
8.....	15,300	9,400	11,900	21,200	9,500	14,100	25,700	65,200	59,900	19,500	12,200	4,600
9.....	14,500	9,300	11,600	21,200	9,400	17,800	24,100	65,300	63,300	18,400	11,100	5,800
10.....	13,900	9,000	10,900	22,300	9,300	19,200	24,600	64,200	65,400	17,100	11,100	5,000
11.....	13,600	8,300	10,900	17,800	9,200	24,000	25,100	60,700	67,100	17,100	12,700	4,600
12.....	13,500	8,300	10,700	14,100	8,500	23,700	23,200	55,900	69,400	16,800	11,500	4,900
13.....	13,100	9,100	10,400	12,300	8,500	26,600	22,800	53,500	68,400	15,400	13,200	5,100
14.....	13,100	8,800	10,200	10,300	8,800	37,000	22,500	49,900	68,400	13,900	11,600	11,300
15.....	12,800	8,400	9,900	9,600	8,500	40,200	22,600	48,000	62,500	16,600	10,300	7,800
16.....	13,700	9,000	9,300	7,900	8,800	39,300	23,200	49,300	56,700	14,800	10,300	7,300
17.....	13,500	9,700	8,400	8,800	8,700	35,300	23,700	53,100	51,800	12,600	10,000	6,300
18.....	13,000	9,100	7,300	9,100	8,400	32,300	24,100	57,800	47,700	12,500	10,200	6,200
19.....	13,600	9,200	6,700	14,000	8,100	29,200	24,900	60,700	45,600	12,100	10,300	6,200
20.....	13,200	9,400	6,800	14,500	8,500	27,900	26,800	64,500	42,000	11,300	9,100	6,600
21.....	12,900	9,900	6,500	18,300	8,700	26,800	29,000	67,200	40,500	10,600	8,300	7,500
22.....	12,800	9,400	6,700	14,800	9,000	26,500	30,200	69,700	37,400	10,300	7,700	6,900
23.....	12,700	9,300	6,800	16,500	8,400	25,800	30,200	69,700	34,800	9,800	7,800	5,400
24.....	12,200	9,600	6,800	21,000	8,800	25,000	30,000	70,300	33,900	9,200	8,100	6,200
25.....	12,100	10,500	6,600	15,000	8,600	25,200	30,900	64,300	31,800	9,600	7,800	5,800
26.....	12,000	9,800	6,800	13,500	8,600	26,300	30,300	57,000	30,200	10,000	8,100	6,200
27.....	11,700	9,500	6,200	12,900	9,200	27,100	32,000	52,000	30,000	8,800	7,600	6,600
28.....	11,200	9,400	5,700	12,900	8,600	30,300	34,200	48,400	28,700	7,600	8,200	7,100
29.....	11,000	9,500	5,300	12,600	-----	33,800	36,500	46,300	28,700	7,600	6,800	7,600
30.....	11,000	9,000	4,600	11,000	-----	36,700	38,900	44,500	26,500	7,500	7,400	6,100
31.....	11,000	-----	4,100	10,900	-----	38,800	-----	42,100	-----	6,900	6,800	-----
1910-11.												
1.....	6,500	8,700	8,200	6,500	9,900	8,100	17,000	27,000	50,300	69,000	46,500	13,300
2.....	6,300	8,300	8,000	4,800	9,700	7,800	18,800	27,400	50,900	67,000	41,300	11,700
3.....	6,400	8,500	7,300	5,400	11,300	7,300	18,900	27,100	51,300	65,500	35,300	11,800
4.....	6,900	7,900	7,100	5,200	12,400	7,000	18,200	27,800	53,000	61,900	31,500	11,500
5.....	7,200	8,800	7,300	4,700	16,200	7,200	17,200	29,100	52,900	55,200	28,600	12,000
6.....	6,800	7,900	7,500	4,600	12,300	6,900	20,600	32,500	53,800	48,800	26,300	10,500
7.....	6,600	7,900	7,800	4,700	24,300	6,600	17,800	34,700	54,900	46,500	23,500	10,300
8.....	6,300	8,000	7,310	5,500	22,200	6,100	21,500	33,500	55,200	50,700	22,200	9,100
9.....	6,500	7,600	7,250	4,800	16,500	18,200	20,000	32,300	55,500	53,400	18,600	8,300
10.....	5,400	7,200	6,300	3,700	15,900	19,800	22,000	32,400	56,900	54,600	18,200	7,800
11.....	5,000	7,300	7,100	4,300	25,700	12,300	22,000	30,400	59,500	53,500	18,800	7,500
12.....	4,500	7,500	6,600	3,800	22,100	12,200	23,600	34,000	60,700	50,800	17,800	7,900
13.....	4,300	7,200	7,000	7,100	18,300	26,400	25,200	37,000	63,200	49,700	17,800	7,400
14.....	4,700	7,000	7,100	5,800	16,100	34,500	25,900	40,000	64,900	46,900	16,000	7,800
15.....	5,600	8,400	7,200	16,300	13,700	25,500	25,000	44,000	67,900	44,700	13,800	7,400
16.....	5,600	9,500	7,100	10,900	13,000	21,500	23,300	50,500	67,900	39,000	12,800	7,300
17.....	4,900	8,500	6,900	7,000	12,800	22,800	21,900	53,600	67,800	38,500	12,000	6,900
18.....	5,400	8,200	7,200	6,100	10,700	25,700	20,900	55,800	69,200	39,500	12,200	7,300
19.....	5,000	7,800	7,000	13,700	9,700	30,500	19,500	61,000	68,500	37,800	12,800	6,600
20.....	4,900	7,700	6,500	18,700	9,800	29,200	19,600	64,200	69,600	41,500	13,500	6,300
21.....	5,800	7,500	6,400	15,100	10,500	27,500	19,000	61,300	70,200	41,200	12,800	9,500
22.....	5,900	6,300	6,300	14,500	10,700	24,500	18,000	57,100	70,600	42,600	11,400	8,000
23.....	5,500	7,200	6,700	13,300	10,600	20,400	16,100	53,700	74,100	44,000	10,900	8,800
24.....	10,200	7,200	7,100	10,900	9,800	17,700	15,600	53,800	78,300	41,200	11,400	7,300
25.....	10,600	8,100	6,900	10,000	7,900	16,700	17,800	54,800	76,800	49,800	11,200	7,400
26.....	13,500	8,900	7,000	11,100	7,000	15,500	18,800	57,600	75,300	53,700	11,800	7,500
27.....	11,500	8,200	7,100	10,500	7,600	15,200	19,400	58,800	73,900	56,000	10,000	10,500
28.....	10,200	6,900	6,900	9,800	7,700	15,000	20,800	59,100	71,800	53,900	10,700	12,600
29.....	10,300	7,400	5,600	10,700	-----	16,000	22,700	57,800	70,500	51,200	11,400	9,200
30.....	9,200	7,800	5,800	13,200	-----	17,000	24,800	53,700	69,800	56,100	14,400	8,700
31.....	9,000	-----	5,600	10,300	-----	16,700	-----	52,000	-----	50,400	16,500	-----

Daily discharge, in second-feet, of Colorado River at Yuma, Ariz., for 1905-1912—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.									
1.....	8,500	13,000	9,800	6,500	7,700	7,800	17,000	15,400	80,200
2.....	7,800	13,200	10,100	5,800	7,500	7,700	15,700	16,500	83,300
3.....	15,500	16,200	9,700	5,200	7,300	7,000	14,800	21,000	87,700
4.....	25,200	19,200	9,800	5,100	6,500	7,300	14,300	21,200	91,500
5.....	24,500	18,600	9,500	5,000	6,500	7,000	14,700	20,200	102,300
6.....	36,000	15,800	9,300	4,400	7,000	7,000	15,000	20,500	112,800
7.....	37,600	14,600	8,300	4,300	7,300	7,000	13,700	24,000	117,500
8.....	36,500	14,000	8,100	4,600	7,300	7,000	14,800	31,700	120,700
9.....	36,700	13,300	8,900	4,300	7,300	7,100	15,800	36,500	122,600
10.....	41,300	13,300	6,700	4,000	7,300	7,000	17,000	37,800	120,800
11.....	46,800	12,700	5,900	3,600	7,200	7,000	18,600	35,300	117,100
12.....	50,500	12,200	5,500	3,400	7,100	12,800	20,200	34,000	119,700
13.....	55,200	11,700	5,600	3,400	7,000	12,200	22,800	31,500	120,600
14.....	60,200	11,700	5,600	3,600	7,100	15,500	26,300	33,000	118,600
15.....	58,900	11,100	6,500	5,200	7,200	17,500	29,400	36,500	115,500
16.....	43,500	11,100	6,700	3,700	8,800	21,700	32,400	39,800	117,200
17.....	33,800	11,000	7,100	3,600	7,000	14,500	34,700	41,000	122,700
18.....	29,100	10,400	8,100	4,000	7,300	15,300	34,700	41,100	130,700
19.....	26,800	11,000	8,000	4,600	7,500	16,500	32,500	45,200	135,800
20.....	23,800	11,000	7,300	5,300	7,200	15,200	28,200	47,200	140,800
21.....	21,800	10,700	7,700	5,500	7,600	14,100	25,000	47,700	142,700
22.....	19,600	10,400	8,100	5,500	8,000	13,200	24,000	45,800	144,000
23.....	18,000	9,800	7,600	6,300	7,800	17,000	21,900	46,000	137,500
24.....	18,700	10,400	7,500	6,400	7,600	14,600	21,000	50,000	108,500
25.....	17,200	9,300	6,600	7,500	7,000	14,300	19,900	53,800	88,500
26.....	15,600	9,800	6,800	8,200	7,300	14,100	19,900	57,800	78,000
27.....	14,600	9,700	7,600	8,000	7,700	18,200	18,700	60,400	70,000
28.....	15,500	9,600	6,900	7,500	7,700	24,800	17,500	62,600	62,500
29.....	17,300	9,600	6,500	7,400	7,800	23,500	16,000	65,600	58,400
30.....	15,200	9,800	6,900	7,600	-----	20,200	15,500	69,100	57,100
31.....	14,000	-----	5,800	7,500	-----	18,300	-----	76,500	-----

NOTE.—Daily discharge determined by the indirect method for shifting channels.

Monthly discharge of Colorado River at Yuma, Ariz., for 1902-1912.

[Drainage area, 225,000 square miles.]

Month.	Discharge in second-feet.				Run-off.	
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.	Total in acre-feet.
1902.						
January.....	4,520	3,230	3,727	0.017	0.02	229,000
February.....	4,720	3,300	3,955	.018	.02	220,000
March.....	5,340	4,340	4,903	.022	.02	301,000
April.....	11,400	4,340	6,179	.027	.03	368,000
May.....	59,200	11,400	35,961	.160	.18	2,211,000
June.....	56,200	29,000	42,520	.189	.21	2,530,000
July.....	27,000	5,130	12,527	.056	.06	770,000
August.....	5,560	3,230	4,183	.019	.02	257,000
September.....	8,360	3,050	3,819	.017	.02	227,000
The period.....	-----	-----	-----	-----	-----	7,110,000
1902-3.						
October.....	6,600	3,140	4,299	.019	.02	264,000
November.....	5,540	3,140	4,187	.019	.02	249,000
December.....	12,600	3,590	5,412	.024	.03	333,000
January.....	3,900	2,694	3,089	.014	.02	190,000
February.....	4,100	2,800	3,372	.015	.02	187,000
March.....	9,525	3,875	6,117	.027	.03	376,000
April.....	31,600	9,200	14,326	.064	.07	852,000
May.....	56,400	13,050	33,735	.150	.17	2,074,000
June.....	72,219	28,300	53,148	.236	.26	3,163,000
July.....	69,500	20,350	37,479	.166	.19	2,304,000
August.....	19,900	6,200	10,869	.048	.06	668,000
September.....	9,200	5,000	6,786	.030	.03	404,000
The year.....	72,000	2,694	15,200	.068	.02	11,100,000

Monthly discharge of Colorado River at Yuma, Ariz., for 1902-1912—Continued.

Month.	Discharge in second-feet.				Run-off.	
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.	Total in acre-feet.
1903-4.						
October	15,806	6,128	8,482	0.038	0.04	522,000
November	6,386	4,675	5,399	.024	.03	321,000
December	5,345	3,170	4,343	.019	.02	267,000
January	4,007	3,350	3,635	.016	.02	224,000
February	4,310	3,342	3,797	.017	.02	218,000
March	9,320	4,446	5,978	.027	.03	368,000
April	19,400	5,600	8,058	.036	.04	479,000
May	45,900	17,040	27,697	.123	.14	1,703,000
June	51,170	32,846	43,814	.195	.22	2,607,000
July	38,930	14,580	23,047	.102	.12	1,417,000
August	24,000	12,950	17,144	.076	.09	1,054,000
September	18,500	5,538	11,621	.052	.06	691,000
The year	51,170	3,170	13,600	.060	.83	9,870,000
1904-5.						
October	23,200	5,660	11,642	.052	.06	716,000
November	7,964	4,754	6,151	.027	.03	366,000
December	5,079	3,480	4,477	.020	.02	275,000
January	27,500	3,750	8,130	.036	.04	500,000
February	82,820	5,800	28,100	.125	.13	1,561,000
March	110,800	23,500	50,540	.225	.26	3,108,000
April	97,500	19,450	37,830	.168	.19	2,251,000
May	59,020	33,910	42,170	.187	.22	2,593,000
June	94,320	61,500	76,470	.340	.38	4,550,000
July	57,800	16,750	30,310	.135	.16	1,864,000
August	17,450	6,850	12,100	.054	.06	744,000
September	9,667	5,060	6,495	.029	.03	386,000
The year	110,800	3,480	26,200	.116	1.58	18,900,000
1905-6.						
October	15,500	5,220	8,037	.036	.04	494,000
November	102,700	5,620	12,000	.053	.06	714,000
December	77,360	5,900	15,400	.068	.08	947,000
January	16,100	4,260	6,870	.030	.03	422,000
February	14,800	6,360	9,560	.042	.04	531,000
March	75,000	6,740	25,400	.113	.13	1,560,000
April	44,100	25,500	32,500	.144	.16	1,930,000
May	79,800	35,100	54,100	.240	.28	3,330,000
June	99,200	65,000	84,200	.374	.42	5,010,000
July	74,200	27,000	39,000	.173	.20	2,400,000
August	25,600	13,400	19,200	.085	.10	1,180,000
September	14,500	9,600	11,700	.052	.06	696,000
The year	102,000	4,260	26,500	.118	1.60	19,200,000
1906-7.						
October	15,900	8,600	11,700	.052	.06	719,000
November	12,500	8,430	9,710	.043	.05	578,000
December	60,000	6,800	18,300	.081	.09	1,130,000
January	44,300	12,700	21,500	.096	.11	1,320,000
February	31,300	12,400	18,800	.084	.09	1,040,000
March	68,700	14,800	24,100	.107	.12	1,480,000
April	50,500	24,700	35,300	.157	.18	2,100,000
May	68,800	28,600	37,900	.168	.19	2,330,000
June	115,000	72,200	94,800	.421	.47	5,640,000
July	114,000	52,400	96,400	.428	.49	5,930,000
August	61,900	23,100	37,600	.167	.19	2,310,000
September	43,300	13,100	23,200	.103	.12	1,380,000
The year	115,000	6,800	35,800	.159	2.16	26,000,000
1907-8.						
October	18,800	10,100	13,600	.060	.07	836,000
November	16,300	8,800	10,800	.048	.05	643,000
December	8,800	5,800	7,450	.033	.04	458,000
January	7,400	5,600	6,320	.028	.03	389,000
February	45,000	6,300	14,200	.063	.07	817,000
March	33,000	10,100	16,100	.072	.08	990,000
April	35,000	12,900	17,800	.079	.09	1,060,000
May	33,700	23,000	27,200	.121	.14	1,670,000
June	61,700	30,000	42,900	.191	.21	2,550,000
July	53,800	18,900	32,600	.145	.17	2,000,000
August	36,100	18,600	24,300	.108	.12	1,490,000
September	19,300	7,000	11,400	.051	.06	678,000
The year	61,700	5,600	18,700	.083	1.13	13,600,000

Monthly discharge of Colorado River at Yuma, Ariz., for 1902-1912—Continued.

Month.	Discharge in second-feet.				Run-off.	
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.	Total in acre-feet.
1908-9.						
October	20,600	6,600	9,510	0.042	0.05	585,000
November	10,200	6,000	8,090	.036	.04	481,000
December	72,500	6,000	15,900	.071	.08	978,000
January	31,500	5,800	10,000	.044	.05	615,000
February	25,100	11,400	13,900	.062	.06	772,000
March	35,900	11,100	15,900	.071	.08	978,000
April	46,800	20,300	30,300	.135	.15	1,800,000
May	73,900	32,400	54,100	.240	.28	3,330,000
June	149,500	75,100	105,000	.467	.52	6,250,000
July	133,700	34,400	79,600	.354	.41	4,890,000
August	54,100	25,000	40,800	.181	.21	2,510,000
September	93,200	21,300	48,500	.216	.24	2,890,000
The year	149,500	5,800	36,000	.160	2.17	26,100,000
1909-10.						
October	20,700	11,000	14,000	.062	.07	861,000
November	10,900	8,300	9,440	.042	.05	582,000
December	11,900	4,100	8,410	.037	.04	517,000
January	67,500	4,600	18,800	.084	.10	1,160,000
February	10,800	8,100	9,160	.041	.04	509,000
March	40,200	7,700	24,400	.108	.12	1,500,000
April	38,900	22,500	28,700	.128	.14	1,710,000
May	70,300	40,900	56,500	.251	.29	3,470,000
June	69,400	26,500	47,000	.209	.23	2,800,000
July	25,200	6,900	14,700	.065	.08	904,000
August	13,200	6,300	9,620	.043	.05	592,000
September	11,300	4,600	6,170	.028	.03	367,000
The year	70,300	4,100	20,600	.092	1.24	15,000,000
1910-11.						
October	13,500	4,300	6,980	.031	.04	429,000
November	9,500	6,300	7,850	.035	.04	467,000
December	8,200	5,600	6,940	.031	.04	427,000
January	18,700	3,700	8,800	.039	.04	541,000
February	25,700	7,000	13,400	.059	.06	743,000
March	34,500	6,100	17,400	.077	.09	1,070,000
April	25,900	15,600	20,400	.091	.10	1,210,000
May	64,200	27,000	45,000	.200	.23	2,760,000
June	78,300	50,300	64,200	.285	.32	3,820,000
July	69,000	37,800	50,100	.223	.26	3,080,000
August	46,500	10,000	18,400	.082	.10	1,130,000
September	13,300	6,300	8,900	.040	.04	530,000
The year	78,300	3,700	22,400	.099	1.36	16,200,000
1911-12.						
October	60,200	7,800	28,600	.125	.14	1,760,000
November	19,200	9,300	12,140	.054	.06	722,000
December	10,100	5,500	7,600	.034	.04	465,000
January	8,200	3,400	5,390	.024	.03	331,000
February	8,800	6,500	7,370	.033	.04	424,000
March	24,800	7,000	13,300	.059	.07	818,000
April	34,700	13,700	21,100	.094	.10	1,260,000
May	76,500	15,400	40,800	.181	.21	2,510,000
June	144,000	57,100	108,000	.480	.54	6,430,000
The period						14,700,000

NOTE.—Daily discharge determined by the indirect method for shifting channels. Monthly values computed by engineers of the United States Geological Survey.

COLORADO RIVER BELOW YUMA, ARIZ.

During the period 1903-1906 the United States Geological Survey made frequent measurements and installed gages at a number of points on the lower Colorado River and Imperial Valley canals. It was during this period that the flood, described on page 32, occurred. The following descriptions and data apply to the work done at that time.

COLORADO RIVER BELOW HEADING No. 3 OF THE IMPERIAL CANAL.

Measurements at this point were begun July 12, 1905, as so much water was at that date going down the canal that it was simpler and more economical to measure the water in the old channel of the Colorado than to continue the measurements on the canal itself.

In the center of the river, opposite heading No. 3, was an island nearly a mile long. The channel on the west side of the island was about 600 feet wide; that on the east side was about 800 feet wide. At first the discharge was measured at a point below the island, but by August 15 a sand bar had formed from the island to the west bank of the river below the heading, and all water passing down on the west of the island entered the canal. August 31 a gage was established above the head of the island, and after that date all discharge measurements were made at the head of the island. Measurements were not made at one certain point, but at any favorable cross section among the shifting bars of mud and quicksand that could be reached and measured by boat or by wading.

The old channel continued to silt up gradually and the new one to scour deeper, and October 20, 1905, all the water was carried by the new channel—the Imperial canal. The California Development Co. made a serious and expensive effort to turn the water back by constructing a dam of piles, brush mats, brush, and sand bags. By the latter part of November this dam had progressed sufficiently to raise the height of the water 2.5 feet, and about 300 second-feet of water flowed down the old channel. Most of the great flood of November 29 at its crest went down the old channel; but by the time it had receded the dam was washed away, the old channel was silted up higher than before, and the new channel was scoured still deeper.

The gage was a vertical rod nailed to the root of a large willow stump on the east bank of the river. It was located at a point nearly opposite the upper end of the upper row of piling, extending from the head of the island obliquely upstream to the west bank, and was opposite station 425 of the Yuma Valley levee line.

Discharge measurements of Colorado River, below heading No. 3 of Imperial canal, in 1905-6.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1905.		<i>Feet.</i>	<i>Sec.-ft.</i>	1905.		<i>Feet.</i>	<i>Sec.-ft.</i>
July 12	W. D. Smith.....		11,610	Nov. 30	J. A. Tolin.....		^b 70,000
30	L. B. Brainard.....		2,484	Dec. 7	W. D. Smith.....		878
Aug. 3	F. R. S. Buttemer.....		1,999	13	do.....		c 0
10	do.....		2,218	17	do.....		c 0
18	W. D. Smith.....		1,169	23	do.....		a 0
24	do.....		769				
31	do.....	2.90	557	1906.			
Sept. 7	do.....	1.80	90	Apr. 10	W. D. Smith.....	4.90	1,760
14	do.....	3.80	1,232	24	do.....	4.60	974
22	do.....	2.10	175	May 4	do.....	5.60	2,040
28	do.....	1.60	37	14	do.....	5.10	1,040
Oct. 11	do.....	3.50	1,014	22	do.....	6.70	3,840
18	do.....	1.50	25	29	do.....	6.80	3,440
25	do.....	1.00	a 0	June 7	do.....	7.00	3,210
30	do.....	.95	a 0	19	do.....	6.30	398
Nov. 4	do.....	.95	a 0	27	Smith and Buttemer...	7.10	^d 1,220
11	do.....		a 0	July 4	F. R. S. Buttemer.....	4.50	34
18	do.....	2.10	87	11	do.....	3.80	0
25	do.....	2.45	205				

a No discharge Oct. 20 to Nov. 11, 1905.
b Estimated.

c No discharge Dec. 13-31, 1905.
d Second channel estimated.

IMPERIAL CANAL AT HEADINGS IN UNITED STATES AND MEXICO.

General statement.—The original heading of the Imperial canal, designated in the following tables as heading No. 1, is located about 10 miles by Colorado River below Yuma, Ariz., on the California side, immediately above the international boundary line and opposite Pilot Knob Mountain. During the summer of 1904 a second heading was made immediately below the boundary line, and in October of the same year an opening was made to the river at a point 4 miles below the boundary. This last opening is designated as heading No. 3. No gage was placed at either heading No. 2 or No. 3. The canal runs parallel to the river for the first 4 miles of its course, so that it was necessary to cut a channel only half a mile long.

The first 12 miles of the canal was constructed; the remaining 40 miles is an old natural channel, called Alamo River. The whole length of the canal lies in the Colorado River delta, which is composed of loose, sandy soil, covered with a heavy growth of mesquite, willow, and arrowwood. The canal as a whole had a greater fall per mile than the river, but for the first 15 miles the fall was less than that in the river, and for this reason the canal had to be dredged constantly to keep it open. The exceptional floods of January, February, March, and April, 1905, scoured it out to a channel of considerable depth, and during the regular annual flood of May and June, which was unusually high and long, this scouring was continued to such an extent that when the flood began to recede and the river again began to deposit mud, the velocity in the canal was much greater than in the river below heading No. 3. The result was that the old river channel silted up heavily while the new channel, the

canal from heading No. 3 down, was still scouring. As the old river channel filled with silt a greater proportion of the water went down the canal, increasing the velocity; and as the canal scoured deeper the amount and velocity of the water going down the old channel were decreased. These reactions were so great that the process of scouring a new channel, which had been going on slowly for several months, began to make rapid progress. The canal was widened in a few days from 100 to 300 or 400 feet. June 30 the total discharge of the river was 61,500 second-feet, 22 per cent of which went down the canal; July 8 the total discharge was 37,200 second-feet, 67 per cent of which went down the canal.

Meter measurements were made weekly during 1905 to determine the total amount of water diverted by the canal, the amount diverted in the United States, the amount diverted in Mexico, and the amount going down the old river channel.

Besides miscellaneous gagings farther down the canal, measurements were made at five points, as follows: Heading No. 1, heading No. 2, heading No. 3 above its junction with the original canal (giving discharge of heading No. 3 alone), heading No. 3 below the junction (giving the total discharge of the canal), and the old channel of the Colorado below heading No. 3. At all of these stations except the last the conditions were constantly changing. The banks were washing away or being filled in, and the bed was silting up or scouring out and being dredged out. For these reasons it was necessary to put in new gages often. The frequent passage of barges and dredges rendered the maintenance of permanent cables impracticable, and a light cable was stretched for each gaging. Measurements each week have been made at such points as would give the desired results, directly or indirectly, with the least expenditure of time and money.

The total discharge of the canal during 1905 was obtained as follows: From January 1 to March 10 by direct meter measurements at heading No. 3 below the junction; from March 11 to June 30 by adding discharges of headings Nos. 1, 2, and 3; from July 1 to December 31 by subtracting the discharge of the old channel below heading No. 3 from the discharge of Colorado River at Yuma. To obtain the discharge of the old channel below heading No. 3 on the dates when it was not measured directly, the total discharge of the canal was subtracted from the discharge of the Colorado at Yuma.

The mean discharge of heading No. 1 for each month was obtained by averaging results of meter measurements. The mean discharge of the whole canal for each month was obtained in the same way. Measurements for the first ten months are so well distributed that they are given equal weight. On account of the flood of November 29, the estimate for November and December is based on an interpolation of the percentage of the total flow of the river diverted by

the canal. As the flood in the old channel lasted only five days, any error from this method of calculation is not great.

The monthly summary of the discharge of headings Nos. 2 and 3, showing total diversion made in Mexico, is obtained by subtracting the discharge of heading No. 1 from the total. The monthly summary of the discharge of the old channel below heading No. 3 is obtained by subtracting the total discharge of the canal from the discharge of Colorado River at Yuma.

No gage observer was obtainable for the three lower stations, but gage-height records were kept at headings Nos. 1 and 2.

June 15, 1904, a waste gate was put in operation at a point 12 miles below heading No. 1, called the Quail River waste gate. Water going through this gate passes through Quail River into Padrones River and thence into Volcano Lake. Volcano Lake has two outlets—New River, which discharges into Salton Basin, and Hardy River, which discharges into the Gulf of California through the old channel of the Colorado. March 20, 1905, the flood silted up the channel leading from the waste gate and no more water was diverted from the canal at this point.

After the flood of November 29, 1905, a channel was dredged from the canal to Quail River from a point 15 miles below heading No. 1, and a considerable amount of water diverted to Padrones River and Volcano Lake. All the water going down the canal past this point discharges through Alamo and New rivers into Salton Basin, except what is lost by seepage and used for irrigation in the Imperial Valley.

Heading No. 1.—This station was established October 24, 1903. It was located half a mile from the river, 600 feet below the wooden head gates, and was 10 miles by river below Yuma, Ariz., on the California side.

The channel is straight for 600 feet above and 300 feet below the cable and has a width of 70 feet. The right bank is low and is liable to overflow; the left bank has an elevation of 6 feet above high water. The bed of the canal is composed of silt and sand, is free from vegetation, and is very unstable. There is but one channel at all stages, but when the gage at Yuma reads about 26 feet the river overflows into the channel below the gaging section. The current has a moderate velocity.

Discharge measurements were made by means of a boat and cable.

A vertical gage was located just above the international boundary line, on the right bank.

The canal at this heading is filled with mud and has been temporarily abandoned, but some flood water passed through it during 1905 and was carefully measured.

Heading No. 2.—This heading diverts water from Colorado River at a point in Mexico 50 feet below the international boundary line,

400 feet below heading No. 1, and 10 miles by river from Yuma, Ariz. The station was established January 12, 1905, and weekly discharge measurements were made until August 31, 1905.

The channel is straight for 200 feet above and 600 feet below the cable and is about 80 feet wide. The bed and banks are composed of clay and silt and are unstable. There is but one channel at all stages, but when the gage in Yuma reads about 28 feet the river overflows into the canal below the gaging section. As the canal from heading No. 1 joins this canal about 800 feet below the gage rod, the two gages read about the same.

Discharge measurements were made by means of a boat and cable.

A vertical rod gage was driven into the north bank of the canal at a point 50 feet from the river.

Heading No. 3 (above the junction).—This heading or intake was in Mexico, 4 miles below the California-Mexico boundary line and 14 miles by Colorado River below Yuma, Ariz. The station was established March 8, 1905. The point of gaging was about one-half mile from the river and 150 feet above the junction of heading No. 3 with the original canal. Gagings at this point give the discharge of heading No. 3 alone.

The channel is straight for 500 feet above the point of gaging and nearly straight for 500 feet below. In the highest floods the banks are overflowed both above and below the station. The cross section is regular, the bed is unstable, and the current is swift. During July, 1905, the flood widened the channel from 100 to 300 feet and lowered the bed about 10 feet.

Discharge measurements were made by means of a boat and cable.

The gage was the same as for heading No. 3 below the junction, described below. The gage height is an indication of the total discharge of the canal and not of this heading alone.

Heading No. 3 (below the junction).—This station was established October 7, 1904. The point of gaging was about half a mile from the river and 300 feet below the junction of heading No. 3 with the original canal. Gagings at this point give the total discharge of the canal.

The channel is straight for 300 feet above and 500 feet below the cable. The banks are subject to overflow. The cross section is regular. The bed of the canal is composed of silt and sand and is very unstable. During July, 1905, the canal, which at this point was about 100 feet wide, was scoured out to a width of 400 feet and the depth increased about 8 feet.

Discharge measurements were made by means of a boat and cable.

The gage was a vertical rod on the south bank.

STREAM MEASUREMENTS IN LOWER COLORADO RIVER BASIN. 457

Discharge measurements of Imperial canal at California-Mexico boundary line, head of canal, in 1903-1904.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1903.		<i>Feet.</i>	<i>Sec.-ft.</i>	1904.		<i>Feet.</i>	<i>Sec.-ft.</i>
Jan. 8	W. D. Smith.....	7.6	301	Apr. 6	W. D. Smith.....	9.80	704
Jan. 28	do.....	8.4	429	20	do.....	10.00	725
Feb. 25	do.....	8.1	456	May 8	do.....	12.75	1,377
Mar. 12	W. W. Follett.....	9.0	643	24	do.....	12.20	1,331
Apr. 17	W. D. Smith.....	10.1	761	June 4	do.....	10.80	1,011
May 5	do.....	11.9	904	10	do.....	14.10	2,097
May 19	do.....	10.0	703	16	do.....	13.95	1,776
June 5	do.....	9.0	553	Aug. 3	do.....	13.40	1,646
June 23	do.....	10.7	605	9	S. M. Smith.....	13.60	1,626
July 8	do.....	9.7	449	17	W. D. Smith.....	13.35	1,752
July 21	do.....	10.7	792	27	do.....	13.30	1,679
Aug. 10	L. M. Barnes.....	8.8	436	Sept. 3	S. M. Smith.....	13.30	1,691
Sept. 11	W. D. Smith.....	8.9	490	10	do.....	12.50	1,642
Oct. 9	do.....	10.0	770	17	do.....	12.00	1,271
Oct. 24	do.....	10.6	820	24	W. D. Smith.....	11.10	868
Nov. 6	do.....	9.5	644	Oct. 1	do.....	10.90	762
Nov. 20	do.....	9.2	624	7	do.....	10.60	1,213
Dec. 7	do.....	8.9	456	15	do.....	12.75	1,976
Dec. 20	do.....	8.7	528	21	do.....	10.60	1,356
Dec. 21	do.....	8.45	429	28	do.....	9.35	1,016
1904.				Nov. 4	do.....	9.30	898
Jan. 1	W. D. Smith.....	8.60	455	11	do.....	9.20	937
Jan. 15	do.....	8.30	410	18	do.....	8.95	954
Jan. 27	do.....	8.30	408	25	do.....	8.85	886
Feb. 12	do.....	8.30	438	Dec. 2	do.....	8.60	826
Feb. 26	do.....	8.82	551	9	do.....	8.85	879
Mar. 16	do.....	10.16	780	20	do.....	8.90	899
Mar. 16	do.....	10.14	751	28	do.....	8.00	607

Discharge measurements made at the Imperial canal headings during 1905.

Date.	Heading No. 1.	Heading No. 2.	Heading No. 3.		Total discharge of canal.
			Above junction.	Below junction.	
	<i>Sec.-ft.</i>	<i>Sec.-ft.</i>	<i>Sec.-ft.</i>	<i>Sec.-ft.</i>	<i>Sec.-ft.</i>
Jan. 12		380		900	900
Jan. 26	90	350		990	990
Feb. 8				6,690	6,690
14	460	900		2,480	2,480
28				3,100	3,100
Mar. 8	1,110	1,530	1,180	3,600	3,600
18	1,270	2,200	1,530		5,000
21	2,590	2,240	1,920		6,750
28	530	1,180	1,750		3,460
Apr. 6	450	1,190	1,650		3,290
20	760	1,190	2,610		4,560
27	460	1,100			
May 3	180	1,470	3,360		5,010
11		1,940	4,160		6,100
17		1,580	3,780		5,360
25		1,790	3,560		5,350
June 1		2,240	4,500		6,740
7		2,660	5,830		8,490
15		2,700	6,130		8,830
23		3,260	6,880		10,140
30	390	3,140	10,430		13,960
July 8				a 25,000	a 25,000
20		1,720	15,480		17,200
25			11,220		
Aug. 3		840			
10		750			
18		480			
24		440			
31		470			

^a Estimated.

NOTE.—Figures in first four columns represent measurements; figures in fifth column are derived from the preceding.

Daily gage height, in feet, of Imperial canal at California-Mexico boundary line near Yuma, Ariz., for 1903-4.

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1903.									
1	8.5	8.2	8.3	10.6	10.6	.....	11.0	10.0	9.00
2	8.3	8.0	8.3	10.7	10.7	.....	10.9	9.7	8.95
3	8.1	8.0	8.4	10.8	11.3	.....	10.9	.....	8.90
4	8.0	7.9	8.5	11.4	11.7	.....	10.5	9.7	8.80
5	7.8	8.0	8.4	11.3	.....	9.0	10.4	8.0	8.80
6	7.7	8.0	8.5	11.5	.....	9.0	10.0	9.2	9.00
7	7.7	8.1	9.4	11.5	.....	9.3	9.8	8.1	9.10
8	7.6	8.1	9.6	11.6	.....	.....	9.7	9.0	8.95
9	7.5	8.2	9.4	12.0	.....	.....	9.4	9.3	8.90
10	7.5	8.5	9.2	11.7	.....	.....	9.2	9.0	9.00
11	7.5	8.6	9.1	10.8	.....	.....	10.3	8.2	9.00
12	7.4	8.7	9.0	10.7	.....	9.7	10.0	8.3	9.20
13	7.4	8.8	8.9	10.4	.....	.....	10.3	8.7	9.50
14	7.4	8.8	8.9	10.4	.....	.....	9.2	10.2	8.90
15	7.5	8.9	10.3	10.4	.....	.....	10.3	.....	8.80
16	7.6	8.9	10.3	10.3	.....	9.7	10.7	10.3	8.80
17	7.7	8.7	10.0	10.3	.....	9.9	10.6	10.3	8.70
18	7.8	8.4	10.2	10.3	.....	.....	10.6	10.1	9.20
19	7.8	8.3	10.4	10.4	.....	10.1	10.6	10.5	9.10
20	7.7	8.0	10.2	10.5	.....	10.5	10.6	10.4	.....
21	7.7	8.0	10.1	10.5	.....	9.3	10.7	.....	9.55
22	7.8	8.0	11.1	10.4	.....	10.0	10.3	.....	9.60
23	8.0	8.1	10.9	10.4	.....	10.4	10.5	9.9	.....
24	8.2	8.1	10.7	10.3	.....	10.7	10.5	9.8	10.00
25	8.2	8.1	10.5	10.4	.....	10.7	11.9	9.4	.....
26	8.5	8.1	10.4	10.6	.....	11.0	11.7	9.4	9.90
27	8.4	8.1	10.2	10.5	.....	11.0	10.7	9.4	10.00
28	8.4	8.2	9.9	10.4	.....	.....	10.7	9.2	8.85
29	8.3	.....	10.0	10.5	.....	11.2	9.7	9.1	9.90
30	8.3	.....	10.5	10.5	.....	11.2	10.0	9.5	10.10
31	8.3	.....	10.5	.....	.....	.....	9.5	9.5	.....

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.
1903-4.													
1	10.50	9.40	9.02	8.60	8.50	8.90	9.60	12.85	11.05	14.70	13.60	13.30	10.90
2	10.60	9.40	9.50	8.60	8.50	9.00	9.60	12.70	11.00	14.70	13.50	13.20	10.90
3	10.75	9.30	9.02	8.55	8.50	9.00	9.60	12.70	11.00	14.65	13.40	13.20	10.85
4	11.15	9.30	8.78	8.50	8.50	9.05	9.60	12.60	10.95	14.60	13.35	13.55	10.85
5	11.10	9.30	8.70	8.55	8.50	9.10	9.60	12.30	10.80	14.55	13.10	13.10	12.70
6	11.00	9.20	8.68	8.50	8.45	9.05	9.75	12.25	11.30	(a)	13.00	13.45	12.10
7	11.80	9.10	8.70	8.50	8.40	9.05	9.95	12.60	11.80	(a)	13.40	13.55	.....
8	10.80	9.05	8.80	8.50	8.35	9.10	10.15	12.85	13.10	(a)	13.20	13.20	.....
9	10.70	9.10	8.82	8.45	8.30	9.20	10.00	13.00	13.80	(a)	13.70	12.95	.....
10	10.30	9.10	8.92	8.40	8.20	9.30	10.00	13.35	14.00	(a)	13.60	12.55	12.60
11	10.00	9.00	9.00	8.35	8.35	9.45	9.90	13.50	13.95	(a)	13.65	12.10	.....
12	10.00	9.00	9.00	8.30	8.35	9.55	9.90	13.00	14.10	(a)	13.45	12.05	.....
13	10.80	9.00	8.95	8.20	8.35	9.95	9.80	12.70	14.20	(a)	13.45	12.10	.....
14	11.00	9.00	9.00	8.25	8.40	10.70	9.85	12.00	14.30	(a)	13.40	12.05	.....
15	10.50	9.00	8.90	8.25	8.40	10.50	9.90	11.90	14.10	(a)	13.20	12.10	14.15
16	10.20	9.05	8.90	8.25	8.40	10.20	9.90	12.15	14.00	(a)	13.30	11.90	.....
17	10.10	8.97	8.90	8.25	8.50	10.05	9.95	12.30	14.05	(a)	13.25	11.95	(c)
18	9.90	8.90	8.95	8.30	8.60	9.95	9.80	12.45	14.10	(a)	12.85	11.80	.....
19	9.80	8.90	8.75	8.30	8.60	9.85	9.85	12.70	14.25	(a)	12.70	11.65	.....
20	9.60	8.90	8.68	8.30	8.60	9.80	10.00	12.70	14.45	(a)	12.70	11.55	.....
21	9.60	8.90	8.55	8.40	8.60	9.60	10.10	12.55	14.60	(a)	12.60	11.30	.....
22	9.50	8.90	8.40	8.40	8.70	9.60	10.10	12.25	14.60	(a)	12.55	11.20	.....
23	9.50	8.95	8.32	8.40	8.70	9.50	10.15	12.20	14.60	(a)	12.50	11.20	.....
24	9.50	8.90	8.23	8.45	8.70	9.50	10.10	12.20	14.60	(a)	13.85	11.20	.....
25	9.50	8.90	8.20	8.35	8.70	9.60	10.20	12.15	14.60	(a)	14.10	11.15	.....
26	9.50	8.88	8.15	8.35	8.80	9.60	11.85	11.80	14.70	(a)	13.50	11.15	.....
27	9.50	8.82	8.17	8.30	8.80	9.65	12.60	11.00	14.75	13.10	13.20	11.20	.....
28	9.50	8.90	8.20	8.40	8.80	9.65	12.80	11.15	14.70	13.05	13.30	11.10	.....
29	9.50	8.85	8.40	8.40	8.80	9.65	12.80	11.15	14.70	13.00	13.55	11.05	.....
30	9.50	9.02	8.55	8.40	.....	9.70	12.80	11.00	14.70	13.40	14.10	10.90	.....
31	9.40	.....	8.55	8.40	.....	9.80	.....	.....	.....	13.55	13.50	.....	.....

^a Gage destroyed; replaced July 27.

^b Estimated.

^c Station discontinued.

^d Assumed from height of river at Yuma.

Portion of Colorado River diverted by Imperial canal during 1905.

Date.	Discharge of Colorado River in second-feet.		Diversion by Imperial canal.		Date.	Discharge of Colorado River in second-feet.		Diversion by Imperial canal.	
	At Yuma.	Below heading No. 3 of Imperial canal.	Second-feet.	Per cent.		At Yuma.	Below heading No. 3 of Imperial canal.	Second-feet.	Per cent.
Jan. 12..	6,300	5,400	900	14	July 30..	17,500	2,480	15,020	86
26..	6,770	5,780	990	15	Aug. 3..	14,700	2,000	12,700	86
Feb. 8..	62,080	55,390	6,690	11	10..	16,200	2,220	13,980	86
14..	21,900	19,420	2,480	11	18..	10,300	1,170	9,130	89
28..	25,000	21,900	3,100	12	24..	7,550	770	6,780	90
Mar. 8..	43,100	39,500	3,600	8	31..	7,500	560	6,940	93
18..	62,400	57,400	5,000	8	Sept. 7..	5,060	90	4,970	98
21..	103,500	96,750	6,750	7	14..	9,670	1,230	8,440	87
28..	29,500	26,040	3,460	12	22..	6,080	180	5,900	97
Apr. 6..	30,100	26,810	3,290	11	28..	5,280	40	5,240	99
20..	43,400	38,840	4,560	11	Oct. 11..	12,950	1,010	11,940	92
May 3..	39,700	34,690	5,010	13	18..	6,950	25	6,925	99
11..	52,000	45,900	6,100	12	25..	5,970	.....	5,970	100
17..	37,000	31,640	5,360	14	30..	5,670	.....	5,670	100
25..	43,700	38,350	5,350	12	Nov. 4..	5,750	.....	5,750	100
June 1..	61,500	54,760	6,740	11	11..	6,550	.....	6,550	100
7..	69,500	61,010	8,490	12	18..	6,560	90	6,470	99
15..	82,000	73,170	8,830	11	25..	6,550	.....	6,550	97
23..	89,800	79,660	10,140	11	30..	102,700	a 70,000	a 32,700	32
30..	61,500	47,540	13,960	23	Dec. 7..	20,100	880	19,220	96
July 8..	37,200	12,200	a 25,000	67	13..	10,200	.....	10,200	100
12..	31,720	11,610	20,110	63	17..	8,100	.....	8,100	100
20..	22,250	5,050	17,200	77	23..	7,600	.....	7,600	100
25..	20,650	a 8,150	a 12,500	61	31..	5,900	.....	5,900	100

a Approximate.

Estimated monthly discharge of Imperial canal during 1905.

Month.	Heading No. 1, including total diversion in United States.		Headings Nos. 2 and 3, including total diversion in Mexico.		Total discharge.	
	Second-feet.	Total in acre-feet.	Second-feet.	Total in acre-feet.	Second-feet.	Total in acre-feet.
January.....	45	2,770	900	55,330	945	58,100
February.....	460	25,550	3,630	201,600	4,090	227,200
March.....	1,370	84,240	3,330	204,800	4,700	289,000
April.....	555	33,020	3,370	200,500	3,925	233,600
May.....	20	1,230	5,435	334,200	5,455	335,400
June.....	200	11,900	9,430	561,100	9,630	573,000
July.....	130	7,990	17,840	1,097,000	17,960	1,105,000
August.....	.....	.....	9,905	609,000	9,905	609,000
September.....	.....	.....	6,140	365,400	6,140	365,400
October.....	.....	.....	7,625	468,800	7,625	468,800
November.....	.....	.....	8,400	500,000	a 8,400	a 500,000
December.....	.....	.....	12,200	750,000	a 12,200	a 750,000
The year.....	232	166,700	7,350	5,348,000	7,582	5,514,000

a Approximate.

IMPERIAL VALLEY CANALS.

In July, 1904, stations were established on all canals entering the Imperial Valley, as follows: Holt canal, Hemlock canal, Alamo channel, Alamitos canal, Main canal, and Boundary canal. These stations

are located on United States territory, and each is near the California-Mexico boundary line.

Discharge measurements were made from footbridges constructed at each station.

The gages were vertical 4 by 4 inch timbers substantially embedded in the ground. Automatic water-stage registers, from which the daily gage-height record was compiled, were placed at the first five stations mentioned above. These canals enter the valley east of Calexico, Cal.

In October, 1904, canal No. 6, or Wisteria canal, was completed, which enters the valley west of Calexico, Cal. A station was established on this canal in November and weekly discharge measurements made. After April 11, 1905, the Holt canal supplied a much larger district than originally, covering territory which had been taking its supply from Alamo channel, near Eastside levee. A new canal, known as New Holt or No. 7, was built to replace the Holt, and a station was established in May. A station was also established on the Tamarack canal in June. The latter canal diverted water from New River to a district on the west side of New River below Imperial, which formerly obtained its supply from Main canal. Gages were established at both of these stations, but no automatic registers were placed on either canal.

The station on Alamo channel was inaccessible after the end of February on account of the flooded condition of the country. Water was not taken from the Alamo for irrigation after March. Discharge measurements were also made at Rockwood, on Alamo River, but no gage heights were kept. They show the amount of water flowing through this channel to Salton Sea.

Measurements were made at Brawley, on New River, for a similar purpose. They were made under such difficulties, however, that they are of little value. Measurements made at Calexico were used to determine the waste into Salton Sea, since the only diversion was through Tamarack canal. A large quantity of water was wasted from Main canal into New River below the gaging station at Calexico; this waste was measured and added to the discharge of New River in making estimate of total discharge of New River into Salton Sea.

STREAM MEASUREMENTS IN LOWER COLORADO RIVER BASIN. 461

Discharge measurements of Holt canal near Calexico, Cal., in 1904-5.

Date.	Hydrographer.	Gage height.	Discharge.	Date.	Hydrographer.	Gage height.	Discharge.
		<i>Feet.</i>	<i>Sec.-ft.</i>			<i>Feet.</i>	<i>Sec.-ft.</i>
1904.				1905.			
July 14	W. V. Hardy	2.02	62.0	Mar. 13	R. R. McCoslin	1.88	51
23	do	1.79	53.6	20	do	2.06	64
26	do	1.75	48.4	27	do	2.84	118
29	do	1.72	44.0	Apr. 3	do	2.81	131
Aug. 2	do	1.70	43.0	10	do	1.13	21
5	do	1.70	41.8	17	do	3.70	246
10	do	1.88	50.0	24	do	3.70	256
17	do	2.03	59.0	May 1	do	3.37	202
23	do	1.96	56.0	8	do	2.76	143
26	do	1.97	56.0	15	do	2.91	163
Sept. 3	Hardy and La Rue	2.03	60.0	22	do	2.92	169
10	do	2.14	61.0	29	do	2.70	128
18	do	1.63	37.0	June 5	do	2.86	150
24	S. M. Smith	1.60	36.0	12	do	3.02	177
27	do	1.55	33.0	18	do	1.69	57
Oct. 1	do	1.90	49.0	26	do	1.64	50
5	do	1.73	41.0	July 3	do	.38	6.9
8	do	2.03	56.0	10	do	.33	6.1
15	do	1.97	48.0	17	do	.35	5.8
22	do	1.98	47.0	24	do	.36	4.8
29	do	1.61	30.0	31	do	.36	4.2
Nov. 4	do	1.62	36.3	Aug. 7	do	1.45	30
11	Hardy and Smith	1.95	54.0	14	do	1.25	38
18	W. V. Hardy	1.92	50.0	21	do		85
25	do	1.72	40.0	21	do	.039	5.1
Dec. 2	do	1.52	32.0	28	do	2.62	133
8	do	1.65	37.0	Sept. 4	do	2.67	131
15	do	1.46	27.0	Oct. 10	W. V. Hardy	3.08	169
22	do	1.58	32.0	17	do	.25	2
				23	do	2.65	128
1905.				Nov. 6	do	1.40	21
Jan. 4	W. V. Hardy	1.30	19.5	13	do	1.51	35
12	do	1.41	30	20	do	1.33	40
19	do	1.43	28	29	do	1.31	22
26	do	1.23	19.5	Oct. 30	do	2.55	124
Feb. 2	do	1.23	18.1	Sept. 11	do	2.88	159
9	do	1.07	13.5	25	do	2.75	128
17	do	1.90	40	Oct. 2	do	2.80	137
24	do	.93	11.1				

Daily gage height, in feet, of Holt canal near Calexico, Cal., for 1904-5.

Day.	July.	Aug.	Sept.	Day.	July.	Aug.	Sept.	Day.	July.	Aug.	Sept.
1904.				1904.				1904.			
1.		1.85	2.00	11.		1.90	2.15	21.		(2.05)	1.65
2.		1.70	2.10	12.		1.90	2.10	22.	1.80	(2.00)	1.55
3.		1.70	2.00	13.		1.95	1.90	23.	1.80	1.95	1.55
4.		1.70	2.00	14.		1.95	1.70	24.	1.75	(1.95)	1.55
5.		1.70	2.00	15.		2.00	1.65	25.	1.70	(1.95)	1.55
6.		1.65	1.90	16.		2.00	1.60	26.	1.75	1.95	1.50
7.		1.60	1.90	17.		2.05	1.55	27.	1.80	2.00	1.55
8.		1.80	2.10	18.		2.05	1.60	28.	1.75	2.05	1.50
9.		1.85	2.10	19.		2.05	1.60	29.	1.70	2.00	1.50
10.		1.90	2.15	20.		(2.05)	1.60	30.	1.35	1.90	1.70
								31.	1.90	2.00	

Daily gage height, in feet, of Holt canal near Calexico, Cal., for 1904-5—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1904-5.												
1.....	1.90	1.60	1.60	(1.0)	1.25	1.4	2.85	3.3	2.8	0.0	0.35	3.05
2.....	1.80	1.55	1.55	(1.0)	1.25	1.3	2.9	3.25	2.85	.0	.35	3.0
3.....	1.80	1.55	1.50	(1.2)	1.25	(1.45)	2.8	3.3	2.8	.4	.35	2.75
4.....	1.80	1.60	1.55	(1.3)	1.25	(1.6)	2.5	3.2	2.8	.35	.5	2.65
5.....	1.75	1.70	1.60	(1.3)	1.25	(1.4)	2.6	2.9	2.85	.35	1.15	2.7
6.....	1.70	1.80	1.75	(1.5)	1.3	1.4	3.05	(2.75)	2.95	.35	1.45	2.9
7.....	1.80	1.65	1.65	(1.5)	1.15	1.55	(3.3)	(2.75)	3.0	.35	1.55	2.7
8.....	2.00	2.15	1.65	(1.5)	(1.1)	1.7	(3.25)	2.75	2.95	.35	1.65	2.5
9.....	2.00	2.15	1.60	(1.5)	1.05	1.8	(3.25)	2.75	3.0	.35	1.65	2.75
10.....	1.85	2.05	1.60	(1.5)	1.05	1.65	2.15	2.75	3.05	.35	1.65	2.85
11.....	1.80	2.00	1.65	(1.5)	1.05	(1.8)	3.6	2.75	3.0	.35	1.55	2.9
12.....	1.85	1.90	1.65	1.4	1.0	(1.9)	3.65	2.8	2.95	.35	1.35	3.0
13.....	1.90	1.90	1.65	1.4	1.2	1.95	3.6	2.9	2.6	.35	1.3	3.1
14.....	1.85	1.90	1.60	1.35	1.4	2.0	3.55	2.9	2.5	.35	1.25	3.05
15.....	1.80	1.85	1.50	1.35	1.6	1.55	3.65	2.85	2.5	.35	1.1	3.0
16.....	1.90	1.85	1.50	1.35	1.75	1.3	3.65	2.9	2.5	.35	.95	3.1
17.....	1.90	1.90	1.45	1.35	1.8	1.5	3.7	2.85	2.0	.35	.95	3.15
18.....	1.95	1.90	1.50	1.35	1.35	1.55	3.8	2.85	1.75	.35	.95	3.1
19.....	1.95	1.90	1.50	1.4	1.4	1.95	3.75	2.9	1.7	.35	1.0	2.6
20.....	1.95	1.90	1.45	1.55	1.4	1.8	3.8	2.9	1.65	.35	1.0	2.3
21.....	2.00	1.85	1.55	1.65	1.4	1.85	3.75	2.95	1.65	.35	1.05	2.75
22.....	1.95	1.85	1.55	1.7	1.4	2.05	3.75	2.95	1.6	.35	1.5	2.95
23.....	1.85	1.80	1.45	1.6	1.4	2.2	3.75	2.7	1.65	.35	1.95	2.9
24.....	1.75	1.75	1.25	(1.45)	.95	2.35	3.7	2.6	1.6	.35	2.0	2.8
25.....	1.60	1.75	1.20	1.3	1.1	2.2	3.5	2.5	1.65	.35	2.0	2.0
26.....	1.65	1.75	1.05	(1.25)	1.4	(2.6)	3.35	2.45	1.65	.35	2.0	1.35
27.....	1.70	1.75	1.10	1.1	1.55	2.85	3.35	2.5	0	.35	2.0	2.25
28.....	1.65	1.70	1.05	.95	1.5	2.8	3.35	2.55	0	.35	2.6	2.8
29.....	1.60	1.70	(1.05)	1.0	.....	2.6	3.35	2.9	0	.35	2.7	2.8
30.....	1.60	1.65	(1.05)	(1.1)	.....	2.7	3.35	2.7	0	.35	2.75	2.8
31.....	1.60	.....	(1.05)	(1.2)	.....	2.8	.....	2.65	.....	.35	2.85	.....

NOTE.—Gage heights in parentheses are estimated.

Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.
1905.											
1.....	2.8	2.0	1.3	11.....	3.15	1.45	2.7	21.....	1.3	0.95	.....
2.....	2.8	1.7	2.6	12.....	1.25	1.5	.....	22.....	1.5	.9	.....
3.....	2.8	1.7	2.8	13.....	.25	1.55	.....	23.....	2.65	.95	.....
4.....	2.85	1.7	3.0	14.....	.25	1.7	.....	24.....	2.65	1.0	.....
5.....	2.85	1.5	3.0	15.....	.25	1.1	.....	25.....	2.7	.95	.....
6.....	2.95	1.4	2.95	16.....	.25	.95	.....	26.....	2.7	.95	.....
7.....	3.1	1.35	2.9	17.....	.25	.9	.....	27.....	2.7	.85	.....
8.....	3.1	1.35	2.9	18.....	.25	.9	.....	28.....	2.7	.8	.....
9.....	3.15	1.35	2.85	19.....	.25	.85	.....	29.....	2.6	.9	.....
10.....	3.05	1.4	2.7	20.....	1.2	1.05	.....	30.....	2.4	1.25	.....
								31.....	2.3	.....	.....

Monthly discharge of Holt canal near Calexico, Cal., for 1905.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).
	Maximum.	Minimum.	Mean.	
January.....	40	10	24.8	1,525
February.....	35	9	21.0	1,166
March.....	123	23	57.4	3,530
April.....	260	83	208	12,380
May.....	210	109	152	9,346
June.....	181	0	a 150	8,926
July.....	7	0	a 150	9,223
August.....	158	3	a 150	9,223
September.....	202	35	144	8,569
October.....	196	2	96.6	5,940
November.....	71	8	27.0	1,607
The period.....				71,430

a Estimated. Flood water used for irrigation. Beginning with Mar. 6 Holt heading was used to divert water in No. 5 main canal, but its capacity was not sufficient until Apr. 16.

Monthly discharge of New Holt or No. 7 canal near Calexico, Cal., for 1905.

Month.	Discharge in second-feet.			Total (in acre-feet).
	Maximum.	Minimum.	Mean.	
May.....			18	1,107
June.....			33	1,964
July.....			33	2,029
August.....			33	2,029
September.....			33	1,964
October.....			33	2,029
November.....			33	1,964
The period.....				13,090

NOTE.—The station record is of no value because most of the water used was obtained from flooded basins to the east. The mean discharge for the entire district covered by the canal was estimated in the field at 33 second-feet.

Discharge measurements of Hemlock canal near Calexico, Cal., in 1904-5.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1904.		<i>Feet.</i>	<i>Sec.-ft.</i>	1905.		<i>Feet.</i>	<i>Sec.-ft.</i>
July 23	W. V. Hardy.....	0.95	4.4	Mar. 13	R. R. McCoslin.....	1.20	8.7
26	do.....	1.15	6.4	20	do.....	1.45	13.2
29	do.....	1.14	6.0	27	do.....	1.73	23.0
Aug. 2	do.....	.92	3.6	Apr. 3	do.....	1.85	20.0
5	do.....	1.20	7.3	10	do.....	1.42	12.7
10	do.....	1.00	4.4	17	do.....	2.45	36.0
17	do.....	1.08	5.7	24	do.....	0.70	1.6
23	do.....	1.03	5.0	May 1	do.....	1.10	6.4
26	do.....	1.02	4.9	8	do.....	2.04	20.4
Sept. 3	Hardy and LaRue.....	1.02	4.3	15	do.....	1.94	18.6
10	do.....	1.07	4.6	22	do.....	1.75	14.5
18	do.....	1.44	11.5	29	do.....	1.54	12.1
24	S. M. Smith.....	1.10	3.9	June 5	do.....	1.81	16.9
27	do.....	1.10	4.5	12	do.....	0.78	2.1
Oct. 1	do.....	1.79	14.5	18	do.....	1.7	13.2
5	do.....	1.15	5.4	26	do.....	1.96	21.0
8	do.....	1.31	8.2	July 3	do.....	1.23	7.2
15	do.....	1.45	8.8	10	do.....	1.73	17.9
22	do.....	1.50	10.6	17	do.....	1.69	15.9
29	do.....	.98	3.1	24	do.....	0.75	0.8
Nov. 4	do.....	1.13	6.4	31	do.....	1.23	7.9
11	Hardy and Smith.....	1.29	8.0	Aug. 7	do.....	1.43	12.7
18	W. V. Hardy.....	1.31	8.2	14	do.....	1.59	17.4
25	do.....	1.28	8.0	21	do.....	1.23	9.8
Dec. 2	do.....	1.39	9.5	28	do.....	1.12	7.3
8	do.....	1.13	6.3	Sept. 4	W. V. Hardy.....	0.97	4.4
15	do.....	1.04	3.3	11	do.....	1.42	13.3
22	do.....	.88	1.8	25	do.....	0.82	2.1
1905.				Oct. 2	do.....	1.11	7.3
Jan. 4	W. V. Hardy.....	0.87	2.0	10	do.....	1.30	8.3
12	do.....	0.88	2.2	17	do.....	1.12	8.0
19	do.....	1.41	9.5	23	do.....	1.20	8.4
26	do.....	0.84	1.9	30	do.....	1.04	5.2
Feb. 2	do.....	1.25	7.4	Nov. 6	do.....	0.90	4.0
9	do.....	1.64	16.4	13	do.....	1.00	6.4
17	R. R. McCoslin.....	1.59	12.5	20	do.....	0.70	2.0
24	do.....	1.79	17.2	29	do.....	0.89	3.1

Daily gage height, in feet, of Hemlock canal near Calexico, Cal., for 1904-5.

Day.	July.	Aug.	Sept.	Day.	July.	Aug.	Sept.	Day.	July.	Aug.	Sept.
1904.				1904.				1904.			
1.....		0.95	0.95	11.....		1.00	1.10	21.....		(1.05)	1.10
2.....		.90	.95	12.....		.80	1.05	22.....	1.00	(1.05)	1.00
3.....		.95	1.00	13.....		.90	1.05	23.....	.95	1.05	1.00
4.....		1.10	1.05	14.....		1.05	1.00	24.....	1.00	(1.05)	1.00
5.....		1.20	1.05	15.....		1.05	1.05	25.....	1.05	(1.00)	1.05
6.....		1.30	1.05	16.....		1.05	1.10	26.....	1.15	1.00	1.10
7.....		(a)	1.05	17.....		1.10	1.05	27.....	1.15	(1.05)	1.25
8.....		(a)	1.05	18.....		1.05	1.20	28.....	.75	(1.05)	1.45
9.....		.90	1.05	19.....		1.10	1.65	29.....	1.15	(1.20)	1.35
10.....		1.00	1.10	20.....		(1.05)	1.35	30.....	1.15	(1.25)	1.35
								31.....	1.00	(1.05)	.....

* Dry.

Daily gage height, in feet, of Hemlock canal near Calexico, Cal., for 1904-5—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1904-5.												
1.....	1.70	1.05	1.20	1.0	1.0	0.9	(1.8)	1.1	1.55	1.6	1.2	1.15
2.....	1.50	1.10	1.40	.9	1.25	.9	1.9	1.05	1.55	1.5	1.2	1.1
3.....	1.40	1.15	1.40	.95	1.3	.9	1.85	1.2	1.6	1.25	1.2	.9
4.....	1.35	1.15	1.40	1.0	1.3	.9	1.8	1.35	1.7	1.2	1.3	.95
5.....	1.15	1.20	1.30	1.05	1.1	1.05	2.0	1.7	1.8	1.2	1.3	1.2
6.....	1.05	1.25	.95	1.15	.8	1.25	(2.0)	1.95	1.9	1.2	1.4	1.35
7.....	1.05	1.35	1.15	1.3	.8	1.3	(1.9)	2.0	1.95	1.55	1.45	1.35
8.....	1.15	1.40	1.15	1.4	1.0	1.3	(1.6)	2.1	2.05	1.75	1.4	1.35
9.....	.85	1.35	1.10	1.0	1.65	1.5	(1.5)	2.1	2.1	1.75	1.4	1.35
10.....	.80	1.30	1.10	.75	1.65	1.25	(1.4)	2.1	2.15	1.75	1.4	1.4
11.....	.75	1.30	1.10	.75	1.55	1.25	(1.6)	2.1	2.15	1.75	1.5	1.4
12.....	.65	1.30	1.10	.75	1.35	1.3	(1.7)	2.1	.8	1.75	1.55	1.45
13.....	.95	1.30	1.10	.75	1.1	1.2	1.9	2.1	.8	1.7	1.55	1.5
14.....	1.30	1.30	1.10	.75	1.15	1.05	1.8	2.1	.9	1.7	1.6	1.55
15.....	1.45	1.35	1.00	.75	1.4	.95	2.0	1.95	.9	1.7	1.4	1.55
16.....	1.45	1.45	1.00	.75	1.8	.9	(2.2)	2.0	.9	1.7	1.25	1.55
17.....	1.45	1.45	.95	.75	1.6	1.05	2.45	1.95	1.4	1.7	1.2	1.55
18.....	1.45	1.35	.95	1.0	1.75	1.0	2.5	1.85	1.7	1.8	1.2	1.3
19.....	1.45	1.30	.90	1.4	1.75	1.05	2.2	1.85	1.65	1.85	1.2	.95
20.....	1.50	1.30	.90	1.55	1.65	1.45	2.45	1.8	1.6	1.45	1.2	1.0
21.....	1.50	1.30	.90	(1.4)	1.5	1.5	2.35	1.75	1.55	1.0	1.25	1.05
22.....	1.50	1.30	.90	(1.3)	1.45	1.4	2.2	1.75	1.5	1.0	1.2	1.0
23.....	1.45	1.30	.85	(1.2)	1.55	1.25	(2.0)	1.7	1.5	1.0	1.2	1.0
24.....	1.35	1.30	.80	(1.0)	1.8	1.3	1.45	1.75	1.75	.75	1.2	.9
25.....	1.25	1.30	.80	(.9)	1.65	1.55	1.45	(1.7)	1.95	.75	1.2	.95
26.....	1.15	1.30	.65	.85	1.05	1.55	1.2	(1.65)	1.85	.75	1.2	1.0
27.....	1.05	1.30	.60	1.0	.9	1.75	1.1	(1.6)	1.8	.75	1.2	1.0
28.....	1.00	1.30	.75	1.0	.9	1.55	1.1	(1.55)	1.8	1.05	1.1	.9
29.....	1.00	1.25	(.75)	.7	-----	1.15	1.1	1.5	1.75	1.25	1.1	.95
30.....	1.05	1.20	(.75)	.6	-----	1.5	1.1	1.55	1.75	1.25	1.05	.95
31.....	1.05	-----	(.75)	.55	-----	1.9	-----	1.6	-----	1.25	1.0	-----

NOTE.—Gage heights in parentheses are estimated.

Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.
1905.				1905.				1905.			
1.....	1.0	1.1	1.0	11.....	1.4	1.05		21.....	1.0	0.8	-----
2.....	1.1	1.15	1.0	12.....	1.35	1.1		22.....	1.0	.9	-----
3.....	1.1	1.25	2.0	13.....	1.5	1.05		23.....	1.2	.85	-----
4.....	1.15	1.1	1.5	14.....	1.0	.95		24.....	1.15	.75	-----
5.....	1.2	.95	1.5	15.....	1.15	.75		25.....	1.05	.75	-----
6.....	1.3	.9	1.7	16.....	1.25	.8		26.....	1.05	.75	-----
7.....	1.45	.9	1.65	17.....	1.1	.8		27.....	1.1	.75	-----
8.....	1.45	.9	1.6	18.....	1.0	.85		28.....	1.1	.85	-----
9.....	1.4	.95	1.55	19.....	1.05	.8		29.....	1.2	.95	-----
10.....	1.35	1.0	1.6	20.....	1.1	.7		30.....	.9	1.3	-----
								31.....	.85	-----	-----

Estimated monthly discharge of Hemlock canal near Calexico, Cal., for 1905.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).
	Maximum.	Minimum.	Mean.	
January.....	12.0	0.4	4.3	264
February.....	17.4	2.0	10.0	555
March.....	23.0	3.3	10.7	658
April.....	39.0	6.6	19.3	1,149
May.....	21.6	5.4	15.7	965
June.....	25.2	1.8	14.1	839
July.....	18.4	0.8	10.9	670
August.....	17.5	5.2	10.4	639
September.....	14.0	3.3	8.1	482
October.....	12.6	2.4	7.5	461
November.....	9.6	1.4	4.6	274
The period.....				6,955

Discharge measurements of Alamo channel near Calexico, Cal., in 1904-5

Date.	Hydrographer.	Gage height.	Dis- charge.	Date.	Hydrographer.	Gage height.	Dis- charge.
1904.		<i>Feet.</i>	<i>Sec.-ft.</i>	1905.		<i>Feet.</i>	<i>Sec.-ft.</i>
July 14	W. V. Hardy.....	3.20	144	Feb. 4	W. V. Hardy.....		151
23	do.....	2.80	115	11	do.....		61
26	do.....	3.09	138	20	do.....		530
29	do.....	3.51	177	25	do.....		94
Aug. 2	do.....	1.63	39	Mar. 3	do.....	7.48	387
5	do.....	1.61	36.5	11	do.....	6.80	1,088
10	do.....	3.38	163	17	do.....	7.15	1,379
17	do.....	3.82	219	25	do.....	10.00	1,806
23	do.....	3.67	200	30	do.....	9.50	1,443
26	do.....	3.68	197	Apr. 8	do.....	6.20	635
Sept. 3	Hardy and La Rue...	4.00	239	13	do.....	6.00	692
10	do.....	4.00	256	19	R. R. McCoslin.....	6.00	772
18	do.....	2.95	136	26	do.....	(a)	a 632
24	S. M. Smith.....	2.77	124	May 3	do.....		1,044
27	do.....	2.80	135	10	do.....		1,770
Oct. 1	do.....	3.79	240	17	do.....	6.00	990
5	do.....	2.65	123	24	W. V. Hardy.....	6.37	1,562
8	do.....	3.55	205	31	do.....	5.92	1,692
15	do.....	3.40	182	June 7	do.....	6.28	2,110
22	do.....	3.82	228	14	do.....	6.85	3,644
29	do.....	3.05	157	21	do.....		5,348
Nov. 4	do.....	2.97	146	28	do.....	9.60	3,253
11	Hardy and Smith.....	3.04	152	July 6	do.....	9.00	4,234
18	W. V. Hardy.....	2.43	97	13	do.....	9.50	3,932
25	do.....	2.22	86	19	do.....		3,501
Dec. 2	do.....	2.14	80	26	do.....		3,104
8	do.....	2.56	107	Aug. 2	do.....	8.80	3,551
15	do.....	2.55	111	9	do.....	8.60	2,815
22	do.....	2.32	80	16	do.....	8.50	2,874
1905.				23	do.....	9.80	2,439
Jan. 7	W. V. Hardy.....		49	30	do.....	9.93	2,509
14	do.....		205	Sept. 6	Hardy and McCoslin...	9.95	2,115
21	do.....		77	13	do.....	10.45	3,500
28	do.....		112				

(a) Gage washed out.

Daily gage height, in feet, of Alamo channel near Calexico, Cal., for 1904.

Day.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Day.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1.....		1.80	(3.90)	3.75	2.95	2.10	16.....		3.75	(2.90)	3.45	(2.40)	(2.55)
2.....		1.65	(3.90)	3.35	2.95	2.15	17.....		3.80	(2.90)	3.40	(2.40)	(2.55)
3.....		1.65	4.00	3.00	2.95	2.15	18.....		3.80	2.90	3.50	2.40	(2.50)
4.....		1.60	4.00	(2.70)	3.00	2.20	19.....		3.80	2.90	3.75	2.40	(2.50)
5.....		1.60	4.00	2.65	2.70	2.30	20.....		3.80	2.90	3.80	3.40	(2.40)
6.....		1.80	4.00	3.55	2.50	2.35	21.....		3.80	2.80	3.85	2.35	(2.35)
7.....		2.50	4.00	2.75	2.50	2.55	22.....	3.25	3.80	2.70	3.80	2.30	2.30
8.....		2.65	4.00	3.25	(3.00)	2.55	23.....	2.80	3.65	2.75	3.70	2.25	2.15
9.....		2.85	4.00	3.50	(3.00)	2.55	24.....	2.90	3.65	2.75	3.25	2.25	2.00
10.....		3.40	4.00	3.45	(3.00)	2.60	25.....	2.95	3.70	2.80	3.20	2.20	(2.00)
11.....		3.60	4.00	3.40	3.00	2.60	26.....	3.10	3.70	2.75	3.25	2.25	(2.00)
12.....		3.60	3.95	3.40	2.75	2.60	27.....	3.30	3.80	2.80	3.15	2.25	(1.90)
13.....		3.50	3.65	3.40	2.50	2.60	28.....	3.40	3.80	2.75	3.05	2.20	(1.80)
14.....		3.65	3.35	3.35	(2.40)	2.55	29.....	3.50	3.80	2.95	3.00	2.15	1.75
15.....		3.65	(3.00)	3.40	(2.40)	2.55	30.....	3.60	3.80	3.40	3.00	2.10	(1.75)
							31.....	3.80	3.80		2.95		(1.75)

NOTE.—Gage heights in parentheses are estimated.

Discharge measurements of New River near Calexico, Cal., in 1904-5.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1904.		<i>Feet.</i>	<i>Sec.-ft.</i>	1905.		<i>Feet.</i>	<i>Sec.-ft.</i>
Oct. 12	S. M. Smith.....		154	Apr. 6	R. R. McCoslin.....	6.95	1,307
Nov. 2	Hardy and Smith.....		52	12	do.....	6.50	949
10	S. M. Smith.....		28	18	do.....	6.80	1,149
17	W. V. Hardy.....		24	25	do.....	8.71	3,052
23	do.....		20	May 2	do.....	8.47	2,417
Dec. 1	do.....		18.6	9	do.....	8.80	2,890
7	do.....		16.7	16	do.....	9.19	3,237
14	do.....		22	23	do.....	9.24	3,097
21	do.....		10.2	30	do.....	9.38	3,400
1905.				June 6	do.....	9.77	3,817
Jan. 5	W. V. Hardy.....	2.00	12	13	do.....	10.85	5,958
13	do.....	3.20	82	20	do.....	11.81	5,949
20	do.....	3.30	99	27	do.....	12.70	10,810
27	do.....	3.20	323	July 5	do.....	13.21	11,940
Feb. 3	do.....	4.00	126	12	do.....	13.34	13,640
10	do.....	5.70	451	18	Hardy and McCoslin.....	13.11	13,220
18	do.....	6.90	986	25	do.....	12.42	10,040
23	R. R. McCoslin.....	7.14	1,063	Aug. 1	R. R. McCoslin.....	11.38	8,221
Mar. 2	do.....	7.48	1,461	8	McCoslin and Hardy.....	10.72	6,531
9	do.....	7.90	1,702	15	do.....	10.90	6,997
16	do.....	7.77	1,648	22	do.....	10.22	5,529
23	do.....	6.74	1,159	29	M. V. Hardy.....	9.42	4,308
29	do.....	8.93	2,916	Sept. 5	Hardy and McCoslin.....	9.31	3,830
				12	do.....	7.52	1,892

Waste measurements in Imperial Valley in 1904.

Date.	Hydrographer.	Stream.	Location.	Dis-charge.
				<i>Sec.-ft.</i>
Oct. 10	Hardy and Smith.	New River.	Brawley, Cal.	238
11	do.	Alamo channel.	Rockwood, Cal.	43
		Canal No. 5.	Bernice, Cal.	(a)
18	S. M. Smith.	New River.	Brawley, Cal.	380
18	do.	Alamo channel.	Rockwood, Cal.	45
19	do.	Canal No. 5.	Bernice, Cal.	77
		Total waste.		502
31	Hardy and Smith.	New River.	Brawley, Cal.	381
Nov. 1	do.	Alamo channel.	Rockwood, Cal.	59
1	do.	Canal No. 5.	Bernice, Cal.	58
		Total waste.		498
9	W. V. Hardy.	New River.	Brawley, Cal.	318
9	do.	Alamo channel.	Rockwood, Cal.	49
9	do.	Canal No. 5.	Bernice, Cal.	0
		Total waste.		367
16	do.	New River.	Brawley, Cal.	270
15	do.	Alamo channel.	Rockwood, Cal.	117
15	do.	Canal No. 5.	Bernice, Cal.	1
		Total waste.		388
24	do.	New River.	Brawley, Cal.	311
22	do.	Alamo channel.	Rockwood, Cal.	81
22	do.	Canal No. 5.	Bernice, Cal.	3
		Total waste.		395
30	do.	New River.	Brawley, Cal.	231
30	do.	Alamo channel.	Rockwood, Cal.	73
30	do.	Canal No. 5.	Bernice, Cal.	0
		Total waste.		304
Dec. 6	do.	New River.	Brawley, Cal.	257
6	do.	Alamo channel.	Rockwood, Cal.	46
6	do.	Canal No. 5.	Bernice, Cal.	0
		Total waste.		303
13	do.	New River.	Brawley, Cal.	301
13	do.	Alamo channel.	Rockwood, Cal.	52
13	do.	Canal No. 5.	Bernice, Cal.	0
		Total waste.		353
24	do.	New River.	Brawley, Cal.	254
24	do.	Alamo channel.	Rockwood, Cal.	39
24	do.	Canal No. 5.	Bernice, Cal.	0
		Total waste.		293

a No measurement made.

STREAM MEASUREMENTS IN LOWER COLORADO RIVER BASIN. 469

Discharge measurements of Alamitos canal near Calexico, Cal., in 1904-5.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
		<i>Feet.</i>	<i>Sec.-ft.</i>			<i>Feet.</i>	<i>Sec.-ft.</i>
1904.				1905.			
July 14	W. V. Hardy	1.40	26.6	Mar. 1	R. R. McCoslin	0.82	9.1
23	do	1.48	24.3	8	do		0
26	do	1.30	18.4	15	do		0
29	do	1.50	26.3	22	do		0
Aug. 2	do	1.08	8.2	29	do	1.20	24
5	do	1.04	13.3	Apr. 5	do	1.53	44
10	do	.81	3.0	11	do	1.63	50
17	do	1.20	17.7	17	do	1.67	57
23	do	1.17	17.4	24	do	1.39	40
26	do	1.13	15.6	May 1	do	1.10	26
Sept. 3	do	1.10	16.3	8	do	1.15	28
10	do	1.15	21.0	15	do	1.41	39
18	do	1.39	31.0	22	do	1.34	35
24	S. M. Smith	.87	8.3	29	do	1.37	36
27	do	1.02	13.7	June 5	do	1.35	36
Oct. 1	do	1.10	8.4	12	do	1.32	37
5	do	1.19	18.7	18	W. V. Hardy	1.30	30
8	do	1.54	36.0	26	R. R. McCoslin	1.35	36
15	do	1.50	35.0	July 5	do	1.33	34
22	do	1.30	26.0	10	do	1.34	33
29	do	1.24	25.0	17	do	1.35	34
Nov. 4	do	1.21	23.0	24	do	1.34	33
11	Smith and Hardy	1.37	30.0	31	do	1.34	33
18	W. V. Hardy	1.48	35.0	Aug. 7	do	1.12	22
25	do	1.48	26.0	14	do	1.12	22
Dec. 2	do	1.34	22.0	21	do	1.17	24
8	do	1.41	25.0	28	do	1.27	31
15	do	1.43	26.0	Sept. 4	do	1.34	39
22	do	1.46	29.0	11	W. V. Hardy	1.42	43
1905.				25	do	1.23	36
Jan. 3	W. V. Hardy	1.48	30	Oct. 9	do	1.30	40
11	do	1.54	39	16	do	1.32	45
18	do	1.11	15.1	23	do	1.27	38
26	do	1.05	12.9	Nov. 13	do		0
Feb. 2	do	1.06	13.6	18	do		0
9	do	.52	1.0	30	do	.42	5.4
17	R. R. McCoslin	1.05	16.8	Oct. 30	do	.90	18.3
24	do	1.00	15.7	Nov. 6	do		0

Daily gage height, in feet, of Alamitos canal near Calexico, Cal., for 1904-5.

Day.	July.	Aug.	Sept.	Day.	July.	Aug.	Sept.	Day.	July.	Aug.	Sept.
1904.				1904.				1904.			
1		1.00	(1.10)	11		.90	1.15	21		1.15	1.15
2		1.10	(1.10)	12		.85	1.20	22		1.40	(1.10)
3		1.10	1.10	13		.95	1.15	23		1.50	1.10
4		1.05	1.05	14		1.00	1.15	24		1.40	(1.05)
5		1.05	1.10	15		1.10	1.10	25		1.35	(1.05)
6		1.00	1.10	16		1.15	1.15	26		1.30	1.05
7		1.00	(1.10)	17		1.20	1.25	27		1.35	1.05
8		.90	1.15	18		1.20	1.40	28		1.40	(1.05)
9		1.00	1.15	19		1.20	1.30	29		1.50	(1.05)
10		.80	1.15	20		(1.20)	1.25	30		1.50	(1.00)
								31		1.65	(1.00)

Daily gage height, in feet, of Alamos canal near Calexico, Cal., for 1904-5—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1904-5.												
1.....	1.10	1.25	1.35	1.5	1.2	0.8	1.35	1.1	1.35	1.3	1.05	1.4
2.....	.65	1.25	1.35	1.5	1.1	.8	1.5	1.1	1.35	1.3	.9	1.4
3.....	.90	1.25	1.35	1.5	1.25	.6	1.6	1.1	1.35	1.35	1.05	1.35
4.....	1.15	1.25	1.35	1.45	1.1	.4	1.55	1.1	1.35	1.35	1.1	1.35
5.....	1.25	1.30	1.35	1.45	.95	.35	1.5	1.1	1.35	1.35	1.1	1.3
6.....	1.30	1.35	1.40	1.4	.95	.35	1.55	1.1	1.35	1.35	1.1	1.35
7.....	1.40	1.25	1.40	1.45	.95	.3	1.6	1.1	1.35	1.35	1.1	1.45
8.....	1.45	1.20	1.40	1.5	.9	.1	1.6	1.15	1.35	1.35	1.1	1.45
9.....	1.35	1.25	1.50	1.6	.7	.1	1.6	1.2	1.3	1.35	1.15	1.4
10.....	1.35	1.30	1.60	1.6	.5	.1	1.65	1.25	1.35	1.35	1.15	1.4
11.....	1.35	1.35	1.45	1.6	.5	.1	1.65	1.3	1.3	1.35	1.15	1.4
12.....	1.35	1.45	1.40	1.6	.5	.1	1.65	1.4	1.3	1.35	1.15	1.45
13.....	1.40	1.45	1.45	1.6	.5	.1	1.65	1.4	1.3	1.35	1.15	1.5
14.....	1.45	1.45	1.45	1.7	.5	.1	1.65	1.4	1.35	1.35	1.1	1.45
15.....	1.50	1.45	1.45	1.45	.55	.0	1.65	1.4	1.35	1.35	1.1	1.4
16.....	1.55	1.45	1.45	1.5	.65	.0	1.65	1.3	1.35	1.35	1.1	1.4
17.....	1.10	1.45	1.45	1.15	1.05	.0	1.65	1.2	1.3	1.35	1.1	1.4
18.....	.90	1.50	1.45	1.1	1.05	.0	1.7	1.2	1.3	1.35	1.1	1.4
19.....	.90	1.45	1.45	1.1	1.05	.0	1.75	1.2	1.3	1.35	1.15	1.35
20.....	1.15	(a)	1.50	1.1	1.05	.0	1.35	1.25	1.3	1.35	1.2	1.4
21.....	1.35	(a)	1.50	1.05	1.05	.0	1.4	1.35	1.3	1.35	1.2	1.45
22.....	1.30	1.35	1.45	1.1	1.05	.0	1.55	1.35	1.3	1.35	1.15	1.45
23.....	1.30	1.40	1.40	1.1	1.0	.15	1.45	1.35	1.3	1.35	1.2	1.4
24.....	1.25	1.40	1.35	1.1	1.0	.65	1.4	1.35	1.3	1.35	1.25	1.2
25.....	1.25	1.40	1.25	1.0	1.05	.7	1.4	1.35	1.35	1.35	1.25	1.25
26.....	1.25	1.40	1.20	1.05	1.1	.7	1.4	1.35	1.35	1.35	1.25	1.25
27.....	1.25	1.40	1.30	1.15	.8	.85	1.4	1.35	1.35	1.35	1.3	1.2
28.....	1.25	1.40	1.40	1.2	.75	.9	1.25	1.35	1.35	1.35	1.3	1.1
29.....	1.25	1.40	(1.40)	1.2	.....	1.3	1.15	1.35	1.35	1.35	1.3	1.15
30.....	1.25	1.40	(1.40)	1.2	.....	1.4	1.15	1.35	1.3	1.35	1.25	1.1
31.....	1.25	.....	(1.40)	1.25	.....	1.3	.....	1.35	.....	1.35	1.3	.....

NOTE.—Gage heights in parentheses are estimated.

Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.
1905.				1905.				1905.			
1.....	1.1	0.45	0.2	11.....	1.25	0.25	0.2	21.....	1.2	0.15	.....
2.....	1.25	.45	.25	12.....	1.25	.3	.25	22.....	1.15	.15	.....
3.....	1.15	.2	.25	13.....	1.25	.3	.....	23.....	1.25	.15	.....
4.....	1.3	.1	.2	14.....	1.3	.25	.....	24.....	1.25	.2	.....
5.....	1.3	.0	.2	15.....	1.3	.3	.....	25.....	1.2	.25	.....
6.....	1.3	.15	.2	16.....	1.35	.3	.....	26.....	1.2	.25	.....
7.....	1.25	.25	.2	17.....	1.35	.25	.....	27.....	1.15	.35	.....
8.....	1.25	.3	.2	18.....	1.35	.2	.....	28.....	1.15	.4	.....
9.....	1.25	.3	.2	19.....	1.25	.2	.....	29.....	1.15	.35	.....
10.....	1.25	.3	.2	20.....	1.2	.2	.....	30.....	.9	.25	.....
								31.....	.8	.....	.....

a Dry.

STREAM MEASUREMENTS IN LOWER COLORADO RIVER BASIN. 471

Monthly discharge of Alamitos canal near Calexico, Cal., for 1905.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).
	Maximum.	Minimum.	Mean.	
January.....	50	11	26.6	1,636
February.....	23	5	11.4	633
March.....	36	0	4.9	301
April.....	65	28	45.6	2,714
May.....	40	25	31.8	1,955
June.....	38	30	34.4	2,047
July.....	35	32	33.9	2,084
August.....	34	11	23.9	1,470
September.....	49	28	40.8	2,428
October.....	47	18	35.8	2,201
November.....	6	0	2.7	161
The period.....				17,630

Discharge measurements of Imperial canal (main) near Calexico, Cal., in 1904-5.

Date.	Hydrographer.	Gage height.	Dis- charge.	Date.	Hydrographer.	Gage height.	Dis- charge.
1904.		<i>Feet.</i>	<i>Sec.-ft.</i>	1905.		<i>Feet.</i>	<i>Sec.-ft.</i>
July 14	W. V. Hardy.....	4.60	615	Feb. 23	R. R. McCoslin.....	3.95	447
21	do.....	4.60	642	Mar. 1	do.....	4.49	595
23	do.....	4.53	625	8	do.....		0
26	do.....	4.32	598	15	do.....		0
Aug. 2	do.....	4.03	519	22	do.....	3.52	410
9	do.....	4.73	652	29	do.....	4.79	651
10	do.....	4.83	677	Apr. 5	do.....	4.84	675
17	do.....	4.16	556	11	do.....	4.98	729
23	do.....	4.72	644	17	do.....	5.04	735
26	do.....	4.74	669	24	do.....	4.91	725
Sept. 3	do.....	4.76	696	May 1	do.....	4.47	648
10	do.....	4.93	717	8	do.....	4.42	623
18	do.....	4.91	682	15	do.....	4.34	586
24	do.....	4.62	662	22	do.....	4.24	562
27	do.....	4.27	573	29	do.....	4.32	595
Oct. 1	S. M. Smith.....	4.10	560	June 5	do.....	4.19	566
5	do.....	3.11	249	12	do.....	4.17	575
8	do.....	3.97	474	18	do.....	4.17	540
15	do.....	4.13	548	26	do.....	4.23	671
22	do.....	4.59	642	July 3	do.....	4.25	572
29	do.....	4.70	639	10	do.....	4.38	567
Nov. 4	Smith and Hardy.....	4.63	656	17	do.....	4.36	582
11	do.....	4.45	598	24	do.....	4.32	583
18	do.....	4.41	601	31	do.....	4.23	580
Dec. 2	W. V. Hardy.....	4.62	620	Aug. 7	do.....	4.29	556
8	do.....	4.54	602	14	do.....	4.33	562
15	do.....	4.48	586	21	do.....	4.33	540
22	do.....	4.45	573	28	do.....	4.29	536
	do.....	4.42	561	Sept. 4	do.....	4.30	558
	do.....	4.40	563	11	W. V. Hardy.....		0
1905.				25	do.....	4.27	551
Jan. 3	W. V. Hardy.....	3.90	439	Oct. 2	do.....		0
11	do.....	4.20	524	9	do.....	4.29	559
18	do.....	4.50	567	16	do.....	4.30	546
26	do.....	4.20	510	Nov. 3	do.....	2.90	298
Feb. 2	do.....	4.18	507	6	do.....	3.60	380
15	do.....	4.09	485	13	do.....	3.60	378
17	R. R. McCoslin.....	4.15	472	18	do.....	3.55	376
				30	do.....	3.50	

Daily gage height, in feet, of Imperial canal (main) near Calexico, Cal., for 1904-5.

Day.	July.	Aug.	Sept.	Day.	July.	Aug.	Sept.	Day.	July.	Aug.	Sept.
1904.				1904.				1904.			
1.....		4.60	4.85	11.....		4.20	4.90	21.....	4.60	4.75	4.55
2.....		4.75	4.90	12.....		4.30	4.85	22.....	4.55	4.75	4.50
3.....		4.70	4.95	13.....		4.40	4.80	23.....	4.55	4.75	4.35
4.....		4.85	4.90	14.....	4.60	4.55	4.75	24.....	4.50	4.75	4.15
5.....		4.80	4.90	15.....	4.60	4.65	4.75	25.....	4.45	4.75	4.10
6.....		4.80	4.90	16.....	4.70	4.65	4.75	26.....	4.30	4.75	4.10
7.....		4.70	4.90	17.....	4.60	4.70	4.65	27.....	4.25	4.80	4.15
8.....		4.55	4.90	18.....	4.60	4.75	4.60	28.....	4.00	4.80	4.15
9.....		4.40	4.90	19.....	4.60	4.90	4.60	29.....	4.00	4.85	4.10
10.....		4.15	4.90	20.....	4.60	4.75	4.55	30.....	4.00	4.85	3.30
								31.....	4.10	4.85	

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1904-5.												
1.....	2.90	4.50	4.50	3.9	4.05	4.5	4.7	4.45	4.2	4.25	4.2	4.3
2.....	3.50	4.50	4.45	3.95	4.2	4.45	4.85	4.4	4.2	4.25	4.2	4.3
3.....	3.80	4.45	4.45	3.9	4.25	4.05	4.95	4.4	4.2	4.25	4.2	4.3
4.....	4.05	4.45	4.45	3.85	4.15	(a)	4.9	4.4	4.2	4.25	4.25	4.3
5.....	4.00	4.50	4.50	3.85	3.95	(a)	4.85	4.45	4.2	4.25	4.25	4.3
6.....	3.95	4.55	4.50	3.75	3.8	(a)	4.9	4.4	4.2	4.25	4.25	4.3
7.....	4.00	4.25	4.45	3.7	3.8	(a)	4.95	4.4	4.2	4.3	4.3	(a)
8.....	4.15	4.25	4.45	3.75	3.8	(a)	4.95	4.45	4.2	4.35	4.3	(a)
9.....	4.25	4.30	4.45	3.95	3.85	(a)	5.0	4.45	4.2	4.35	4.3	(a)
10.....	4.40	4.35	4.40	4.2	3.85	(a)	5.0	4.4	4.2	4.35	4.3	(a)
11.....	4.40	4.40	4.45	4.2	3.85	(a)	5.0	4.4	4.2	4.35	4.35	(a)
12.....	4.40	4.50	4.45	4.4	3.85	(a)	5.0	4.45	4.2	4.35	4.35	.5
13.....	4.40	4.55	4.45	4.55	3.8	(a)	5.0	4.45	4.2	4.35	4.35	2.0
14.....	4.55	4.55	4.40	4.4	3.95	(a)	5.0	4.4	4.25	4.35	4.35	2.5
15.....	4.60	4.55	4.40	4.3	4.1	(a)	5.05	4.35	4.2	4.35	4.35	2.95
16.....	4.60	4.60	(4.40)	4.35	4.2	(a)	5.05	4.3	4.2	4.35	4.35	3.1
17.....	4.70	4.60	(4.40)	4.4	4.1	(a)	5.05	4.3	4.25	4.35	4.35	3.15
18.....	4.75	4.60	(4.40)	(4.5)	4.05	(a)	5.1	4.3	4.2	4.35	4.35	3.15
19.....	4.80	4.65	(4.40)	4.5	4.05	(a)	5.1	4.3	4.2	4.35	4.35	3.5
20.....	4.75	4.70	(4.40)	4.55	4.0	(1.5)	5.0	4.3	4.2	4.35	4.35	3.9
21.....	4.70	4.70	(4.40)	4.5	3.9	3.35	5.0	4.3	4.2	4.35	4.35	4.05
22.....	4.70	4.60	4.40	4.55	3.9	3.5	5.0	4.25	4.25	4.3	4.3	4.2
23.....	4.65	4.55	4.35	4.5	3.95	3.8	4.9	4.3	4.3	4.3	4.3	4.35
24.....	4.65	4.55	4.30	4.35	4.1	4.15	4.95	4.3	4.3	4.3	4.3	4.35
25.....	4.60	4.55	4.20	4.25	4.3	(4.5)	4.9	4.3	4.25	4.35	4.3	4.3
26.....	4.65	4.55	4.15	4.2	4.4	(4.8)	4.9	4.3	4.25	4.3	4.3	4.25
27.....	4.60	4.60	4.10	4.05	4.5	(4.8)	4.9	4.3	4.25	4.3	4.3	4.25
28.....	4.60	4.55	4.00	3.95	4.5	(4.8)	4.9	4.3	4.25	4.3	4.3	4.25
29.....	4.65	4.55	(4.00)	3.9	.....	(4.8)	4.8	4.3	4.25	4.3	4.3	4.25
30.....	4.60	4.50	(4.00)	3.85	.....	4.8	4.6	4.2	4.25	4.3	4.3	3.1
31.....	4.55	.....	(4.00)	3.85	.....	4.7	.....	4.2	.....	4.25	4.3	.....

Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.
1905.				1905.				1905.			
1.....	(a)	2.3	3.4	11.....	4.3	3.6	.....	21.....	4.3	3.4	.....
2.....	(a)	2.9	3.45	12.....	4.3	3.6	.....	22.....	4.3	3.4	.....
3.....	(a)	3.22	3.75	13.....	4.3	3.6	.....	23.....	(a)	3.2	.....
4.....	(a)	3.55	3.5	14.....	4.3	3.6	.....	24.....	(a)	3.05	.....
5.....	3.95	3.45	3.9	15.....	4.3	(3.6)	.....	25.....	(a)	3.05	.....
6.....	4.2	(3.55)	3.95	16.....	4.35	(3.6)	.....	26.....	(a)	3.05	.....
7.....	4.25	(3.6)	3.95	17.....	4.35	(3.6)	.....	27.....	.1	3.05	.....
8.....	4.2	(3.6)	3.95	18.....	4.35	3.6	.....	28.....	.8	3.05	.....
9.....	4.3	(3.6)	3.95	19.....	4.3	3.55	.....	29.....	.85	3.4	.....
10.....	4.3	(3.6)	3.6	20.....	4.3	3.4	.....	30.....	1.7	3.45	.....
								31.....	1.7	.....	.....

a No flow.

NOTE.—Gage heights in parentheses are estimated.

Monthly discharge of main canal near Calexico, Cal., for 1905.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).
	Maximum.	Minimum.	Mean.	
January.....	600	398	500	30,740
February.....	595	416	470	26,100
March.....	672	0	261	16,050
April.....	752	634	719	42,780
May.....	648	566	598	36,770
June.....	582	548	570	33,920
July.....	593	556	575	35,360
August.....	568	536	553	34,000
September.....	570	0	369	21,960
October.....	561	0	328	20,170
November.....	390	220	351	20,890
The period.....				318,700

Discharge measurements of Boundary canal near Calexico, Cal., 1904-5.

Date.	Hydrographer.	Gage height.	Dis- charge.	Date.	Hydrographer.	Gage height.	Dis- charge.
1904.		<i>Feet.</i>	<i>Sec.-ft.</i>	1905.		<i>Feet.</i>	<i>Sec.-ft.</i>
July 23	W. V. Hardy.....	1.20	10.0	Mar. 1	R. R. McCoslin.....	1.00	10.0
26	do.....	1.20	10.0	5	do.....	0	0
29	do.....	1.15	9.1	8	do.....	.88	7.8
Aug. 2	do.....	1.65	12.7	22	do.....	.80	6.2
5	do.....	1.10	13.0	29	do.....	.85	8.5
10	do.....	1.06	10.5	Apr. 5	do.....	.99	10.4
17	do.....	.91	8.3	11	do.....	1.00	11.7
23	do.....	.85	11.9	17	do.....	1.08	13.0
26	do.....	1.10	15.6	24	do.....	.83	6.1
Sept. 3	Hardy and LaRue.....	1.07	13.2	May 1	do.....	.83	7.5
10	do.....	1.08	12.9	8	do.....	.74	6.1
18	do.....	.85	7.5	15	do.....	.85	8.0
24	S. M. Smith.....	.99	11.0	22	do.....	.90	8.4
27	do.....	.90	9.9	June 5	do.....	.35	.22
Oct. 1	do.....	1.00	10.8	12	do.....	1.00	11.0
5	do.....	1.00	10.0	18	do.....	.91	7.5
8	do.....	.90	9.4	26	do.....	.93	6.4
15	do.....	.90	5.9	July 3	do.....	.78	4.8
22	do.....	.10	7.0	10	do.....	.77	4.2
29	do.....	.78	6.2	17	do.....	.96	6.6
Nov. 4	W. V. Hardy.....	.85	6.6	24	do.....	.87	5.3
11	Smith and Hardy.....	.82	6.3	31	do.....	.83	6.2
18	W. V. Hardy.....	.84	7.0	Aug. 7	do.....	.78	5.7
25	do.....	.65	4.8	14	do.....	.79	5.7
Dec. 2	do.....	.74	5.5	21	do.....	.79	4.8
8	do.....	.46	4.0	28	do.....	.80	3.8
15	do.....			Sept. 4	do.....	0	0
22	do.....			11	do.....	0	0
1905.				Oct. 2	W. V. Hardy.....	.90	8.4
Jan. 3	do.....	.80	6.4	6	do.....	.87	5.3
11	do.....	.98	8.6	9	do.....	.90	5.0
18	do.....	1.00	8.9	16	do.....	.25	0
25	do.....		7.8	18	do.....	.95	8.0
Feb. 2	do.....	.99	9.1	30	do.....	.90	8.4
9	do.....	.95	8.3	Nov. 13	do.....	.95	7.0
17	R. R. McCoslin.....	.79	5.3	18	do.....	1.03	12.7
23	do.....	.98	8.3	30	do.....		

Monthly discharge of Boundary canal near Calexico, Cal., for 1905.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).
	Maximum.	Minimum.	Mean.	
January.....	8.9	6.0	8.1	498
February.....	9.8	5.1	7.8	433
March.....	10.0	0	3.6	221
April.....	13.0	7.0	10.2	607
May.....	8.0	5.1	6.5	400
June.....	11.0	.2	7.9	471
July.....	6.8	4.2	5.4	332
August.....	6.2	4.4	5.6	344
September.....	6.0	0	3.8	227
October.....	8.0	0	4.4	271
November.....	12.7	7.0	9.0	536
The period.....				4,340

Discharge measurements of Wisteria canal near Calexico, Cal., in 1905.

Date.	Hydrographer.	Gage height.	Dis- charge.	Date.	Hydrographer.	Gage height.	Dis- charge.
		<i>Feet.</i>	<i>Sec.-ft.</i>			<i>Feet.</i>	<i>Sec.-ft.</i>
Jan. 5	W. V. Hardy.....	1.12	3.0	June 13	R. R. McCoslin.....	0.35	10.6
11	do.....	.15	0	19	W. V. Hardy.....	.57	13.5
18	do.....	.52	7.7	26	R. R. McCoslin.....	.38	10.6
25	do.....	.92	22	July 5	do.....	.30	9.4
Feb. 1	do.....	.80	16.5	11	do.....	.96	32
10	do.....		0	18	do.....	.66	17.8
18	do.....		0	25	W. V. Hardy.....		0
25	R. R. McCoslin.....		0	Aug. 1	do.....	.33	7.8
Mar. 1	do.....		0	8	do.....		0
15	do.....		0	15	R. R. McCoslin.....		0
23	do.....		0	22	W. V. Hardy.....		0
29	do.....	.90	26	29	R. R. McCoslin.....		0
Apr. 6	do.....	1.65	64	Sept. 5	W. V. Hardy.....		0
12	do.....	1.29	47	12	do.....		0
18	do.....	1.00	33	26	do.....		0
25	do.....	.95	32	Oct. 3	do.....		0
May 2	do.....	.50	13.1	11	do.....		0
9	do.....	.85	26	18	do.....	.60	12.8
16	do.....	.43	12.2	31	do.....	.60	14
23	do.....	.63	17.1	Nov. 7	do.....	.40	12
30	do.....	.42	12.1	14	do.....		0
June 6	do.....	.38	11.9	21	do.....	.15	0

STREAM MEASUREMENTS IN LOWER COLORADO RIVER BASIN. 475

Daily gage height, in feet, of Wisteria canal near Calexico, Cal., for 1905.

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.
1.....	0.95	0.8	0.25	1.5	0.3	0.4	0.3	0.35	0	0.0	0.6
2.....	.9	.8	.2	1.2	.4	.4	.3	.05	0	.0	.6
3.....	1.15	.8	.2	1.7	.4	.4	.3	.05	0	.0	.6
4.....	1.1	1.0	.2	1.8	.4	.4	.3	.05	0	.0	.6
5.....	1.1	.55	.2	1.6	.7	.4	.3	.0	0	.0	.0
6.....	1.1	.3	.2	1.65	.7	.4	.3	.0	0	.0	.4
7.....	1.25	.0	.2	1.7	.8	.4	.3	.0	0	.0	.4
8.....	1.3	.0	.15	1.6	.8	.4	.3	.0	0	.0	.75
9.....	.95	.0	.15	1.5	.8	.4	.3	.0	0	.0	.75
10.....	.95	.0	.15	1.45	.8	.3	.3	.0	0	.0	.0
11.....	.15	.0	.15	1.35	.5	.3	.95	.0	0	.0	.0
12.....	.1	.3	.35	1.15	.45	.3	1.8	.0	0	.0	.0
13.....	.1	.2	.35	1.1	.45	.3	1.1	.0	0	.6	.0
14.....	.0	.25	.40	.95	.45	.25	1.0	.0	0	.6	.0
15.....	.0	.3	.35	1.0	.45	.25	1.0	.0	0	.6	.5
16.....	.0	.35	.3	1.0	.45	.3	.9	.0	0	.6	.0
17.....	.6	.25	.3	1.0	.45	.0	.6	.0	0	.6	.0
18.....	.2	.1	.3	1.0	.45	.0	.65	.0	0	.6	.0
19.....	.65	.0	.5	.8	.75	.4	.5	.0	0	.6	.0
20.....	.8	.0	.5	.7	.8	.4	.5	.0	0	.6	.0
21.....	.8	.0	.5	.65	.8	.4	.5	.0	0	.45	.15
22.....	.8	.0	.5	1.0	.7	.4	.45	.0	0	.45	.35
23.....	.8	.0	.8	.1	.6	.4	.0	.0	0	.0	.35
24.....	.9	.0	.8	.9	.6	.4	.0	.0	0	.0	.1
25.....	.9	.0	.8	1.1	.7	.4	.0	.0	0	.0	.0
26.....	1.0	.2	.65	1.15	.7	.4	.0	.0	0	.0	.0
27.....	1.1	.2	.6	.9	.65	.4	.0	.0	0	.05	.0
28.....	1.0	.3	.8	.45	.65	.3	.0	.0	0	.05	.0
29.....	1.0		.9	.4	.4	.2	.0	.0	0	.6	.0
30.....	1.0		1.0	.35	.4	.3	.1	.0	0	.6	.0
31.....	.8		1.15		.4		.35	.0	0	.6	

Monthly discharge of Wisteria canal near Calexico, Cal., for 1905.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).
	Maximum.	Minimum.	Mean.	
January.....	40	0	17.9	1,100
February.....	25	0	3.8	211
March.....	32	0	7.1	436
April.....	75	0	39.5	2,325
May.....	25	0	16.7	1,027
June.....	12	0	9.6	572
July.....	80	0	14.2	873
August.....	11	0	.4	25
September.....	0	0	.0	0
October.....	14	0	5.4	332
November.....	25	0	5.6	334
The period.....				7,261

Discharge measurements of Tamarack canal near Imperial, Cal., in 1905.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
		Feet.	Sec.-ft.			Feet.	Sec.-ft.
May 25	W. V. Hardy.....		52	Oct. 19	W. V. Hardy.....		a 40
June 1	R. R. McCoslin.....	1.70	51	26	.....do.....		a 40
8	W. V. Hardy.....	1.80	56	Nov. 2	.....do.....		a 40
14	.....do.....	1.64	43	9	.....do.....		a 40
22	.....do.....	14.50	14	16	.....do.....		a 40
Oct. 4	.....do.....		a 40	23	.....do.....		a 30
12	.....do.....		a 40				

a Estimated.

Daily gage height, in feet, of Tamarack canal near Imperial, Cal., for 1905.

Day.	June.	Day.	June.	Day.	June.
1.....	1.7	11.....	1.95	21.....	1.5
2.....	1.68	12.....	2.05	22.....	1.45
3.....	1.7	13.....	1.35	23.....	1.35
4.....	1.55	14.....	1.65	24.....	1.2
5.....	1.65	15.....	1.65	25.....	1.2
6.....	1.75	16.....	1.6	26.....	1.05
7.....	1.8	17.....	1.65	27.....	1.0
8.....	1.8	18.....	1.7	28.....	.9
9.....	1.8	19.....	1.65	29.....	.9
10.....	1.9	20.....	1.75	30.....	.7

Monthly discharge of Tamarack canal near Imperial, Cal., for 1905.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).
	Maximum.	Minimum.	Mean.	
June.....			34.3	2,041
July.....			(40)	2,460
August.....			(40)	2,460
September.....			(40)	2,380
October.....			(40)	2,460
November.....			(40)	2,380
The period.....				14,180

NOTE.—Monthly means in parentheses estimated in the field.

Total amount of water (in acre-feet) entering the Imperial Valley through irrigation canals at international boundary, January to November, 1905, inclusive.

Canal.	January.	February.	March.	April.	May.	June.
Hemlock.....	263	555	658	1,149	965	839.
Boundary.....	249	216.5	110.5	303.5	200	235.5
Wisteria.....	1,100	211	436	2,351	1,027	572
Tamarack.....						2,041
New Holt, or No. 7.....					1,107	1,964
Main.....	30,744	26,102	16,045	42,783	36,770	33,517
Alamitos.....	1,636	633	301	2,714	1,955	2,047
Holt, or No. 5 Main.....	1,525	1,162	3,530	12,377	9,346	8,926
Alamo Channel.....	5,500	8,330	9,223			
Total.....	41,017	37,209	30,306	61,677	51,370	50,541

Canal.	July.	August.	September.	October.	November.	Total.
Hemlock.....	670	639	482	461	274	6,955
Boundary.....	166	172	113.5	135.5	268	2,170
Wisteria.....	873	25	0	332	334	7,261
Tamarack.....	2,460	2,460	2,380	2,460	2,380	14,181
New Holt, or No. 7.....	2,029	2,029	1,964	2,029	1,964	13,086
Main.....	35,355	34,003	21,957	20,168	20,886	318,733
Alamitos.....	2,084	1,470	2,428	2,201	161	17,630
Holt, or No. 5 Main.....	9,223	9,223	8,569	5,940	1,607	71,428
Alamo Channel.....						23,053
Total.....	52,860	50,021	37,893	33,726	27,874	474,494

Total amount of water (in acre-feet) entering Imperial Valley, including canals, New River, and Alamo channel; also amount of waste water discharging into Salton Sea and amount used for irrigation, January to November, 1905, inclusive.

Month.	Total discharge Imperial canal at headings below Yuma, Ariz.	Total discharge into Imperial Valley.	Total discharge (waste) into Sal- ton Sea.	Total amount of water used for irrigation.
	<i>Acre-feet.</i>	<i>Acre-feet.</i>	<i>Acre-feet.</i>	<i>Acre-feet.</i>
January.....	58,100	55,590	55,356	20,234
February.....	227,150	92,913	77,919	14,994
March.....	283,990	210,896	194,548	16,348
April.....	233,550	223,171	182,494	40,677
May.....	335,420	321,239	287,869	33,370
June.....	573,020	622,911	587,370	35,541
July.....	1,104,620	1,037,724	978,244	50,480
August.....	609,030	597,751	564,946	32,805
September.....	365,360	a 353,360	324,869	28,491
October.....	468,840	a 456,840	435,227	21,613
November.....	500,000	a 488,000	477,977	10,023
Total.....	4,764,080	4,460,395	4,155,819	304,576

a Estimated.

Total amount of irrigated land (as per examination made in March and April, 1905).....acres.. 79,591
Amount of water used per acre (in acre-feet)..... 3.83

LANDS IRRIGATED IN THE IMPERIAL VALLEY.

In April, 1904, an examination was made to determine the amount of lands irrigated in the valley. The gross area under irrigation at that time was 66,741 acres. A second examination was made in September of the same year by W. V. Hardy, of the Reclamation Service, and showed the total area irrigated at that time to be 31,318 acres. Another examination by Mr. Hardy in March and April, 1905, gave a total irrigated area of 79,591 acres.

The examination of area of irrigated land made in March and April, 1905, is used in computing the amount of water per acre used during 1905. It is probable that this area was greatly reduced during the summer, as areas for the raising of hay and grain were not again used after the crops were harvested until the late fall months, when they were again seeded. Large areas of alfalfa and kafir corn were necessarily irrigated throughout the year.

DUTY OF WATER IN THE IMPERIAL VALLEY.

During the fall of 1904 rating flumes were placed on two canals in Imperial Valley for the study of the duty of water. Two types of soil were selected for these investigations, one known as "hard soil" and classified as "Imperial loam" as shown on soil map of Bureau of Soils, United States Department of Agriculture. The other type is known as "soft soil" and classified as "Imperial sandy loam."

The location of the investigation on "Imperial loam" was at the ranch of W. W. McKim, 7 miles east of Imperial, being the west half of sec. 8, T. 15 S., R. 14 E.

The location of the investigation on "Imperial sandy loam" was on lands of the California-Mexico Land Co., $3\frac{1}{2}$ miles east of Mexicala in Mexican territory and directly south of the California-Mexico boundary line in T. 17 S., R. 15 E.

Permanent flumes were constructed at the head of each of these canals and a sufficient number of measurements were made throughout the year for rating them. Self-recording registers were placed at each of these stations, and the mean daily gage height was computed from the register records.

During 1905 the Imperial Valley received a very unusual rainfall. The precipitation at Imperial was 10.06 inches for the year. At Calexico the precipitation was 9.33 inches for the year. The mean annual rainfall will probably not exceed 3 inches in normal years.

CALIFORNIA-MEXICO LAND & CATTLE CO.'S FLUME.

This station was established November 28, 1904. It was located $3\frac{1}{2}$ miles east of Mexicala. The total area irrigated under this flume was 575 acres. The soil is classified as "Imperial sandy loam." In December, 1904, the entire area was sown to barley, 75 acres were cut for hay, averaging $1\frac{1}{4}$ tons to the acre; the balance of the acreage was used for pasturage. The crop was equally as good over the entire area as that on the 75 acres which was cut for hay. In May, 1905, the entire area was sown to kafir corn. This crop was poor and scattering and used in the fall for pasturage. This area received an ample supply of water for the crops raised.

The rainfall for this station is taken from the United States Weather Bureau records kept at Calexico, Cal.

Monthly duty of water under California-Mexico Land & Cattle Co.'s flume during 1905.

Month.	Acre-feet.		Rainfall in inches.
	Total.	Per acre.	
January.....	67.6	0.12	1.50
February.....	5.6	.01	3.76
March.....	30.7	.05	.91
April.....	113.0	.20	.50
May.....	313.0	.55	.00
June.....	214.0	.37	.00
July.....	332.0	.58	.03
August.....	289.0	.50	.00
September.....	131.0	.23	.13
October.....	91.7	.16	.00
November.....	66.0	.11	1.96
December.....	104.0	.18	.54
Total irrigation.....	1,757.6	3.06	9.33
Total, including rainfall.....		3.84	

McKIM FLUME.

This station was established on September 23, 1904. The amount of land irrigated under this flume was 380 acres. The soil is classified as "Imperial loam." The crops raised during 1905 consisted of 100

acres in barley, which was sown in October, 1904. The crop was only fair and was used for the pasturage of hogs. The balance of the area, 280 acres, had been previously planted to alfalfa, 100 acres having been sown in October, 1902, and 100 acres in October, 1903. This area in alfalfa was in fair condition at the time the station was established. The crop of 1905 was fair and used only for the pasturage of hogs. The supply of water furnished for this area was not enough for thorough irrigation. Water was taken from Alamo channel until March, 1905, and up to this time the supply was sufficient for thorough irrigation. After March, 1905, water was taken from Alamitos canal on account of flood conditions in the Alamo channel which destroyed the levee at point where the diversion was made. The water supply received from the Alamitos canal was not enough for the thorough irrigation of this area and crops suffered considerably from lack of water after March.

The rainfall for this station is taken from the United States Weather Bureau records kept at Imperial, Cal.

Monthly duty of water under McKim flume during 1905.

Month.	Acre-feet.		Rainfall in inches.
	Total.	Per acre.	
January.....	24.6	0.06	1.50
February.....	16.7	.04	6.12
March.....	12.3	.03	1.05
April.....	114.0	.30	.15
May.....	85.6	.22	.00
June.....	108.0	.28	.00
July.....	79.4	.21	.07
August.....	61.0	.16	.00
September.....	71.9	.19	.04
October.....	49.2	.13	.00
November.....	17.9	.05	.83
December.....	49.2	.13	.30
Total irrigation.....	689.8	1.81	10.06
Total, including rainfall.....		2.64	

MISCELLANEOUS MEASUREMENTS.

The following miscellaneous measurements have been made on streams and ditches in the lower Colorado River basin:

Miscellaneous measurements in Colorado River drainage basin.

Date.	Stream.	Hydrographer.	Locality.	Discharge.
				<i>Sec.-feet.</i>
Aug. 18, 1875	Colorado River.....	U. S. Engineers.....	Stones Ferry.....	18,410
Aug. 20, 1875	.....do.....	.....do.....	Camp Mohave.....	11,610
Jan. 1, 1902	Williams River.....	J. B. Lippincott.....	Mouth of river.....	4
Oct. 28, 1902	.....do.....	E. T. Perkins.....	.....do.....	4
Nov. 14, 1902	Imperial Canal.....	.....do.....	International boundary.....	374
Dec. 14, 1902	.....do.....	.....do.....	.....do.....	494
Aug. 4, 1904	.....do.....	W. D. Smith.....	Junction with Carter River, Mex.....	309
Aug. 3, 1904	Imperial Canal, main channel.....	.....do.....	Below Bests' camp, Mex.....	525
Do.....	Padrone River diversion.....	.....do.....	.....do.....	609

SOUTH PACIFIC COAST STREAMS.**TIA JUANA RIVER BASIN.****COTTONWOOD CREEK AND DULZURA CONDUIT NEAR JAMUL, CAL.**

This station, which is located at the Barrett dam site, $1\frac{1}{2}$ miles below the intake of the Dulzura conduit, in the SW. $\frac{1}{4}$ sec. 15, T. 17 S., R. 3 E., about 6 miles above the San Diego Campo road and about 12 miles east of Jamul, was established December 14, 1905.

Pine Valley Creek enters Cottonwood Creek 1 mile and Lyons Creek half a mile above the gaging station. The drainage area above the station, including that of Pine Valley Creek, is approximately 270 square miles.

The Southern California Mountain Water Co. diverts water from Pine Valley and Cottonwood creeks about half a mile above their junction by way of Dulzura conduit (13.4 miles long) and the headwaters of Dulzura Creek, whence it flows 12 miles to the lower Otay reservoir, which supplies water to the city of San Diego. The capacity of the canal is about 60 second-feet. The amount diverted is measured in the diversion flume about $1\frac{1}{2}$ miles below the intake and one-fourth mile below the station of Cottonwood Creek. A staff gage is located at the measuring section in the flume.

Several gages with independent datums have been installed at this station. Two vertical staff gages are now used. The upper one is on the left bank near the end of the dam and reads the depth of the water on the crest of the dam. The lower gage is on the upstream side of the dam near the right bank, and its datum is 2.50 feet lower. The gage heights beginning 1909 are referred to the datum of the lower gage.

Discharge measurements to determine the excess water not diverted to the lower Otay reservoir are made at the low concrete dam, back of which sand and gravel have been deposited to the level of its crest. At low stages the flow is restricted to a rectangular wooden opening through the wall of the dam, but at high stages the flow is over the entire length of the dam, which is 61 feet. Measurements are usually made by wading, except at high stages, when only float velocities can be obtained.

The gage height records are furnished by the Southern California Mountain Water Co. The results obtained at this station are only fair.

Discharge measurements of Cottonwood Creek near Jamul, Cal., in 1905-1910.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
		<i>Feet.</i>	<i>Sec.-ft.</i>			<i>Feet.</i>	<i>Sec.-ft.</i>
1905.				1907.			
Nov. 18	W. B. Clapp		0.5	Mar. 20	W. V. Hardy	0.60	89
Dec. 14	C. H. Lee	0.05	1.1	Apr. 12	do.	.64	105
				27	do.	.51	72
1906.				28	do.	.50	68
Jan. 6	W. V. Hardy	.10	3.5	May 19	do.	.37	34
19	do.	.21	12.4	29	Hardy and Hall	.41	46
19	do.	.30	32	June 11	Clapp and Hardy	.28	22
20	do.	.40	39		N. L. Hall		27
20	do.	.50	63	20	do.	1.08	19
20	do.	.55	76	27	W. V. Hardy	.89	14
Feb. 3	do.	.05	4.1	Dec. 6	do.	.72	11
14	do.	.23	15.5				
Mar. 11	do.	.12	13.2	1908.			
12	do.	1.21	383	Jan. 17	W. V. Hardy	.81	14
13	Joe Hooker	2.20	644	27	do.	1.95	52
16	do.	.82	150	Feb. 14	do.	2.30	62
21	do.	.58	90	23	do.	1.97	43
24	do.	6.00	5,330	Mar. 12	do.	1.53	31
25	do.	6.50	4,100	21	do.	1.12	20
31	do.	1.10	416	Apr. 5	do.	.91	17
Apr. 7	do.	.81	239	May 12	do.	.73	11
19	W. V. Hardy	.59	116	Nov. 18	do.		1.6
May 8	do.	.40	76	Dec. 22	do.		4.3
June 22	C. H. Lee	.28	14.2				
Oct. 5	W. F. Martin		1.0	1909.			
Nov. 27	W. V. Hardy	.90	32	Feb. 24	W. V. Hardy	2.55	90
Dec. 15	do.	2.00	40	Apr. 21	Clapp and Hardy	.55	7.8
				May 27	W. V. Hardy		.5
1907.				1910.			
Jan. 5	W. V. Hardy	2.25	56	Jan. 24	W. V. Hardy	.50	5.7
15	do.	.60	171	Mar. 13	do.	.31	2.2
Feb. 7	do.	.38	50	June 5	do.	.10	.4
26	do.	.48	59				
Mar. 8	do.	.80	191				

NOTE.—The discharge measurements are referred to several gages at independent datums. At present two gages are used, one being read at low stages when the water flows through a 6-foot flume in the dam, and the other when the water flows over the crest of the dam. Some measurements were made with the 6-foot flume open and others with the flume closed. The difference between the gages is 2.5 feet.

Daily gage height, in feet, of Cottonwood Creek near Jamul, Cal., for 1909-10.

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909.									
1.		1.4	1.9	2.8	0.5	0.25	0.2	0.0	0.7
2.		1.0	1.7	2.75	.4	.25	.2	.0	.45
3.		.6	1.8	2.7	.4	.25	.15	.0	.4
4.		1.45	1.2	2.6	.4	.25	.15	.0	.35
5.		.55	1.1	2.6	.4	.25	.15	.0	.35
6.		.6	1.0	2.5	.35	.25	.15	.65	.55
7.		.6	1.8	2.3	.3	.25	.15	.3	.5
8.		2.9	1.3	2.05	.4	.25	.15	.15	.35
9.		2.4	1.2	1.8	.3	.2	.15	.15	.3
10.		1.8	1.1	1.7	.35	.2	.15	.15	.2
11.		1.7	.7	1.65	.35	.2	.15	.0	.2
12.		2.8	.6	1.5	.35	.25	.15	.0	.15
13.		3.05	.5	1.35	.35	.2	.15	.0	.15
14.		2.8	.4	1.2	.3	.2	.15	.1	.1
15.		2.8	.4	1.0	.3	.2	.1	.1	.1
16.		2.5	.45	.85	.3	.2	.1	.45	.1
17.		2.3	.5	.7	.3	.2	.1	.3	.1
18.		2.1	.4	.6	.3	.2	.08	.25	.1
19.		1.5	.4	.6	.3	.2	.08	.7	.1
20.		1.2	.4	.6	.3	.2	.0	.4	.1
21.		3.1	2.0	.6	.3	.2	.0	.2	.1
22.		2.8	3.2	.6	.3	.2	.0	.15	.1
23.		2.6	2.9	.5	.3	.2	.0	.1	.15
24.		2.6	2.7	.5	.3	.2	.05	.1	.2
25.		2.4	2.65	.4	.3	.2	.05	.1	.2
26.		2.3	2.7	.4	.3	.2	.05	.0	.2
27.	2.8	2.1	3.5	.4	.3	.2	.2	.55	.2
28.	2.8	2.0	3.55	.35	.3	.2	.2	.25	.15
29.	2.4		3.45	.65	.3	.15	.1	.1	.15
30.	2.1		3.25	.65	.25	.5	.0	1.0	.15
31.	1.7		3.2		.25		.0	1.2	

Daily gage height, in feet, of Cottonwood Creek near Jamul, Cal., in 1909-10—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.
1909-10.										
1.....	0.15	0.3	0.6	2.4	0.44	0.4	2.35	0.16	0.09	0.02
2.....	.15	.3	.8	1.6	.4	.39	2.15	.16	.11	.02
3.....	.2	.3	.7	1.9	.41	.39	2.05	.15	.11	.02
4.....	.25	.3	.6	1.25	.44	.39	1.4	.22	.11	.01
5.....	.2	.3	1.1	2.5	.42	.35	.55	.21	.09	.....
6.....	.2	.3	.9	1.95	.42	.35	.42	.28	.08	.....
7.....	.2	.3	.5	1.55	.42	.38	.41	.3	.09	.....
8.....	.15	.3	.5	1.4	.39	.31	.38	.28	.08	.....
9.....	.1	.5	2.6	1.3	.34	.36	.38	.19	.06	.....
10.....	.1	.5	1.5	1.05	.32	.35	.35	.18	.05	.....
11.....	.75	.6	.5	1.2	.36	.34	.32	.18	.05	.....
12.....	.15	.7	.4	1.25	.32	.31	.4	.16	.05	.....
13.....	.1	.65	.3	.9	.31	.31	.39	.18	.05	.02
14.....	.1	.8	.3	1.3	.32	.32	.31	.18	.05	.....
15.....	.1	1.05	.3	1.55	.34	.32	.3	.19	.18	.....
16.....	.1	.7	.3	3.0	.33	.32	.31	.19	.18	.....
17.....	.1	.65	.3	2.85	.3	.35	.29	.18	.18	.....
18.....	.15	.6	.3	1.9	.32	.42	.29	.19	.11	.02
19.....	.2	.6	.3	1.65	.42	.35	.22	.16	.09	.....
20.....	.2	.55	.8	1.35	1.25	.32	.22	.19	.08	.....
21.....	.2	.55	3.0	.95	.82	.32	.22	.18	.02	.....
22.....	.2	.6	1.05	.8	.45	.32	.22	.18	.08	.....
23.....	.2	.6	.6	.61	.4	.32	.19	.15	.06	.....
24.....	.2	.6	.7	.5	.4	.32	.55	.14	.06	.....
25.....	.2	.6	.5	.58	.41	.38	.2	.14	.06	.....
26.....	.2	1.65	.5	.5	.4	.62	.2	.12	.05	.....
27.....	.2	1.5	.4	.46	.4	.9	.16	.12	.02	.....
28.....	.2	.95	.4	.45	.35	2.4	.2	.09	.02	.....
29.....	.2	.8	.35	.41	.....	2.15	.16	.12	.02	.....
30.....	.25	.7	.35	.42	.....	1.7	.15	.09	.02	.....
31.....	.25	.....	.4	.4	.....	1.75	.....	.08	.....	.....

Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.
1910.				1910.				1910.			
1.....	0.22	0.29	.....	11.....	0.26	0.28	.....	21.....	0.08	0.36	0.3
2.....	.26	.29	.....	12.....	.29	.26	.....	22.....	.06	.3	.3
3.....	.35	.28	.....	13.....	.35	.26	.....	23.....	.12	.29	.29
4.....	.45	.28	.....	14.....	.58	.29	.....	24.....	.11	.29	.29
5.....	.35	.31	.....	15.....	.....	.44	.26	25.....	.09	.29	.28
6.....	.29	.31	.....	16.....	.....	.38	.26	26.....	.11	.32	.32
7.....	.29	.29	.....	17.....	.....	.32	.28	27.....	.12	.3	.26
8.....	.29	.29	.....	18.....	.....	.3	.28	28.....	.15	.3	.28
9.....	.29	.29	.....	19.....	0.02	.39	.29	29.....	.18	.3	.25
10.....	.26	.29	.....	20.....	.04	.31	.35	30.....	.2	.31	.25
								31.....	.21	.....	.31

Daily discharge, in second-feet, of Cottonwood Creek near Jamul, Cal., for 1909-1911.

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909.									
1.....	8	27	43	132	6.0	2.0	1.5	.....	10
2.....	8	17	36	122	4.0	2.0	1.5	.....	5.0
3.....	8	8.1	39	111	4.0	2.0	1.0	.....	4.0
4.....	8	29	22	92	4.0	2.0	1.0	.....	3.0
5.....	8	7.0	20	92	4.0	2.0	1.0	.....	3.0
6.....	8	8.1	17	78	3.2	2.0	1.0	9.0	7.0
7.....	8	8.1	39	62	2.5	2.0	1.0	2.5	6.0
8.....	8	159	25	49	4.0	2.0	1.0	1.0	3.0
9.....	8	69	22	39	2.5	1.5	1.0	1.0	2.5
10.....	12	39	20	36	3.2	1.5	1.0	1.0	1.5
11.....	10	36	10	34	3.2	1.5	1.0	.....	1.5
12.....	8	132	8.1	30	3.2	2.0	1.0	.....	1.0
13.....	17	208	6.0	26	3.2	1.5	1.0	.....	1.0
14.....	208	132	4.0	22	2.5	1.5	1.0	.5	.5
15.....	56	132	4.0	17	2.5	1.5	.5	.5	.5
16.....	44	78	5.0	14	2.5	1.5	.5	5.0	.5
17.....	34	62	6.0	10	2.5	1.5	.5	2.5	.5
18.....	34	51	4.0	8.1	2.5	1.5	.3	2.0	.5
19.....	20	30	4.0	8.1	2.5	1.5	.4	10	.5
20.....	17	22	4.0	8.1	2.5	1.5	.....	4.0	.5
21.....	15	226	47	8.1	2.5	1.5	.....	1.5	.5
22.....	78	132	273	8.1	2.5	1.5	.....	1.0	.5
23.....	464	92	159	6.0	2.5	1.5	.....	.5	1.0
24.....	464	92	111	6.0	2.5	1.5	.3	.5	1.5
25.....	620	69	102	4.0	2.5	1.5	.3	.5	1.5
26.....	620	62	111	4.0	2.5	1.5	.3	.....	1.5
27.....	132	51	473	4.0	2.5	1.5	1.5	7.0	1.5
28.....	132	47	509	3.2	2.5	1.5	1.5	2.0	1.0
29.....	69	.....	438	9.2	2.5	1.0	.5	.5	1.0
30.....	51	.....	304	9.2	2.0	6.0	.....	17	1.0
31.....	36	.....	273	.....	2.0	.....	.....	22	.....

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.
1909-10.										
1.....	1.0	2.5	8.1	69	4.8	4.0	65	0.8	0.4	0.1
2.....	1.0	2.5	12	33	4.0	3.8	54	.8	.5	.1
3.....	1.5	2.5	10	43	4.2	3.8	49	.7	.5	.1
4.....	2.0	2.5	8.1	23.4	4.8	3.8	27.3	1.3	.5	.....
5.....	1.5	2.5	20	78	4.4	3.1	7.0	1.2	.4	.....
6.....	1.5	2.5	15	45	4.4	3.1	4.4	2.1	.3	.....
7.....	1.5	2.5	6.0	31.5	4.4	3.6	4.2	2.3	.4	.....
8.....	1.0	2.5	6.0	27.3	3.8	2.5	3.6	2.1	.3	.....
9.....	.5	6.0	92	24.7	3.0	3.3	3.6	1.0	.2	.....
10.....	.5	6.0	30	18.3	2.6	3.1	3.1	1.0	.2	.....
11.....	11	8.1	6.0	22.1	3.3	3.0	2.6	1.0	.2	.....
12.....	1.0	10	4.0	23.4	2.6	2.5	4.0	.8	.2	.....
13.....	.5	9.2	2.5	14.7	2.5	2.5	3.8	1.0	.2	.....
14.....	.5	12	2.5	24.7	2.6	2.6	2.5	1.0	.2	.....
15.....	.5	18	2.5	31.5	3.0	2.6	2.3	1.0	1.0	.....
16.....	.5	10	2.5	190	2.8	2.6	2.5	1.0	1.0	.....
17.....	.5	9.2	2.5	145	2.3	3.1	2.2	1.0	1.0	.....
18.....	1.0	8.1	2.5	43	2.6	4.4	2.2	1.0	.5	.....
19.....	1.5	8.1	2.5	34.5	4.4	3.1	1.3	.8	.4	.....
20.....	1.5	7.0	12	26	23.4	2.6	1.3	1.0	.3	.....
21.....	1.5	7.0	190	15.9	12.9	2.6	1.3	1.0	.1	.....
22.....	1.5	8.1	18	12.5	5.0	2.6	1.3	1.0	.3	.....
23.....	1.5	8.1	8.1	8.3	4.0	2.6	1.0	.7	.2	.....
24.....	1.5	8.1	10	6.0	4.0	2.6	7.0	.7	.2	.....
25.....	1.5	8.1	6.0	7.7	4.2	2.6	1.1	.7	.2	.....
26.....	1.5	34	6.0	6.0	4.0	8.5	1.1	.5	.2	.....
27.....	1.5	30	4.0	5.2	4.0	14.7	.8	.5	.1	.....
28.....	1.5	16	4.0	5.0	3.1	69	1.1	.4	.1	.....
29.....	1.5	12	3.2	4.2	.....	54	.8	.5	.1	.....
30.....	2.0	10	3.2	4.4	.....	36	.7	.4	.1	.....
31.....	2.0	.....	4.0	4.0	.....	37.5	.....	.3	.....	.....

Daily discharge, in second-feet, of Cottonwood Creek near Jamul, Cal., for 1909-1911—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1910-11.									
1.....		1.3	2.2	3.4	3.7	2.2	1.1	1.0	1.7
2.....		1.8	2.2	3.4	2.6	2.2	1.5	1.1	1.7
3.....		3.1	2.1	3.4	3.7	3.7	1.4	1.0	1.7
4.....		5.0	2.1	2.6	2.8	1.3	1.4	1.1	1.4
5.....		3.1	2.5	2.6	35	7.2	1.4	1.0	1.3
6.....		2.2	2.5	2.6	3.7	2.4	1.4	1.0	1.2
7.....		2.2	2.2	2.0	3.7	2.0	1.5	1.0	.7
8.....		2.2	2.2	2.0	3.7	2.0	1.4	.8	.7
9.....		2.2	2.2	2.6	4.6	2.0	1.5	.8	.5
10.....		1.8	2.2	11	4.6	3.0	1.4	.8	.4
11.....		1.8	2.1	8.6	3.7	5.4	1.1	.8	.2
12.....		2.2	1.8	3.1	3.4	2.3	1.1	.8	.2
13.....		3.1	1.8	3.1	3.1	2.0	1.1	.8	.2
14.....		7.7	2.2	2.8	22	2.0	1.0	1.5	.2
15.....		4.8	1.8	3.1	5.9	1.5	1.0	1.0	.2
16.....		3.6	1.8	2.6	3.7	1.5	1.0	1.1	.2
17.....		2.6	2.1	2.5	3.6	1.4	1.0	.8	.2
18.....		2.3	2.1	2.5	3.1	1.1	1.0	.8	.2
19.....	0.1	3.8	2.2	2.3	2.3	1.1	1.0	.7	.2
20.....	.2	2.5	3.1	2.3	3.1	1.1	1.0	.7	.2
21.....	.3	3.3	2.3	2.3	2.5	1.4	1.1	1.3	.2
22.....	.2	2.3	2.3	2.3	2.0	1.4	1.0	1.3	.2
23.....	.5	2.2	2.2	2.3	2.0	1.4	1.1	1.3	.2
24.....	.5	2.2	2.2	2.3	2.0	1.1	1.0	1.0	.2
25.....	.4	2.2	2.1	2.3	1.9	1.1	1.1	.8	.2
26.....	.5	2.6	2.6	2.3	1.5	1.1	1.5	1.0	.2
27.....	.5	2.3	1.8	2.3	2.3	1.1	1.5	.7	.1
28.....	.8	2.3	2.1	2.3	2.6	1.1	1.5	1.3	.0
29.....	1.0	2.3	1.7	2.6	-----	1.1	1.0	1.0	.0
30.....	1.1	2.5	1.7	2.6	-----	1.1	1.0	1.0	.0
31.....	1.2	-----	2.5	3.7	-----	1.1	-----	1.0	-----

Day.	Dec.	Day.	Dec.	Day.	Dec.
1911.					
1.....	0.1	11.....	.9	21.....	1.5
2.....	.1	12.....	.9	22.....	1.5
3.....	.1	13.....	.9	23.....	1.5
4.....	.1	14.....	.9	24.....	1.5
5.....	.6	15.....	.9	25.....	1.5
6.....	.6	16.....	.9	26.....	1.5
7.....	.6	17.....	1.5	27.....	1.5
8.....	.6	18.....	1.5	28.....	1.5
9.....	.6	19.....	1.5	29.....	1.5
10.....	.9	20.....	1.5	30.....	1.5
				31.....	1.5

NOTE.—Daily discharge determined from a rating curve well defined below 55 second-feet. Discharge Jan. 1-26, 1909, and during 1911 furnished by Southern California Mountain Water Co. Creek dry on all days for which no discharge is given.

Discharge measurements of Dulzura conduit near Jamul, Cal., 1909-10.

Date.	Hydrographer.	Gage height.	Discharge.	Date.	Hydrographer.	Gage height.	Discharge.
1909.		<i>Feet.</i>	<i>Sec.-ft.</i>	1910.		<i>Feet.</i>	<i>Sec.-ft.</i>
Feb. 24	W. V. Hardy	3.40	52.0	Jan. 25	W. V. Hardy	0.94	6.1
24	do	3.40	51.0	25	do	1.26	12.0
Apr. 21	Clapp and Hardy	3.70	54.2	25	do	1.56	18.0
May 27	W. V. Hardy	1.65	16.2	25	do	2.23	26.0
1910.				25	do	2.75	38.0
Jan. 25	W. V. Hardy	0.45	0.9	25	do	3.28	48.0
25	do .....	.49	1.1	25	do	3.50	53.0
25	do .....	.62	2.3	Mar. 13	do	1.85	19.0
				June 5	do .....	.37	.8

Daily gage height, in feet, of Dulzura conduit near Jamul, Cal., for 1909-10.

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.
1909.							
1	0.6	2.0	3.4	3.6	2.5	1.3	0.4
2	.6	2.0	3.3	3.6	2.7	1.2	.5
3	.6	3.0	3.0	3.7	2.5	1.1	.35
4	.6	3.0	3.65	3.7	2.4	1.2	.35
5	.6	2.75	3.4	3.7	2.4	1.1	.3
6	.6	2.5	3.4	3.7	2.3	4.2	.3
7	.6	2.5	3.45	3.8	2.3	1.2	.3
8	.6	2.8	3.4	3.5	2.4	1.2	.25
9	.6	3.1	3.4	3.5	2.2	1.2	.2
10	.8	3.1	3.25	3.7	2.1	1.2	.2
11	.7	3.4	3.5	3.7	2.2	1.1	.....
12	.6	3.0	3.4	3.7	2.1	1.2	.....
13	1.0	2.85	3.15	3.7	2.3	1.1	.....
14	3.2	2.75	3.15	3.7	2.3	1.0	.....
15	2.2	3.0	3.1	3.7	2.1	1.0	.....
16	1.9	2.9	3.1	3.7	2.1	1.0	.....
17	1.6	2.9	3.1	3.6	2.0	1.0	.....
18	1.3	3.0	3.1	3.7	2.0	.9	.....
19	1.1	3.35	3.3	3.7	2.0	1.0	.....
20	1.0	3.35	3.05	3.7	1.9	1.1	.....
21	.9	3.35	.....	3.7	1.9	1.0	.....
22	.....	2.85	.....	3.7	1.9	.9	.....
23	.....	3.05	1.7	3.4	1.9	.9	.....
24	.....	3.4	3.5	3.3	1.9	.7	.....
25	.....	3.35	3.5	3.3	1.9	.7	.....
26	1.6	3.4	3.55	3.1	1.7	.7	.....
27	1.5	3.4	3.35	3.0	1.7	.6	.....
28	2.1	3.4	3.5	3.0	1.6	.6	.....
29	1.9	.....	3.45	3.3	1.6	.6	.....
30	2.2	.....	3.6	2.6	1.6	.6	.....
31	2.3	.....	3.6	.....	1.5	.....	.....

Daily gage height, in feet, of Dulzura conduit near Jamul, Cal., for 1909-10—Contd.

Day.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	Dec.
1909-10.								
1.....		1.85	3.0	2.2	.....	1.2	0.3	.....
2.....		.0	3.35	2.15	.....	1.3	.32	.....
3.....		1.6	3.0	2.1	.....	1.3	.32	.....
4.....		3.4	2.75	2.05	1.3	1.25	.32	.....
5.....		3.35	2.85	2.0	2.65	1.15	.34	.....
6.....	1.0	3.6	2.7	2.0	2.8	1.1	.3	.....
7.....	.95	3.8	2.7	2.0	2.7	.98	.3	.....
8.....	1.1	3.7	2.75	2.0	2.5	.92	.3	.....
9.....	2.25	3.7	2.75	2.1	2.4	.9	.26	.....
10.....	3.45	3.7	2.7	1.9	2.4	.9	.2	.....
11.....	2.4	3.65	2.55	1.8	2.4	.88	.15	.....
12.....	1.6	3.7	2.5	1.8	3.2	.8	.15	.....
13.....	1.35	3.55	2.45	1.8	3.0	.8	.12	.....
14.....	1.25	3.45	2.45	1.75	2.55	.8	.15	.....
15.....	1.15	3.5	2.6	1.85	2.3	.85	.....	.....
16.....	1.05	3.65	2.5	1.9	2.1	.82	.....	.....
17.....	.95	3.6	2.3	2.1	1.9	.7	.....	.....
18.....	.9	3.5	2.4	2.6	1.85	.65	.....	.....
19.....	.9	3.7	2.6	2.4	1.7	.65	.....	.....
20.....	2.05	3.65	3.5	2.2	1.65	.85	.....	.....
21.....	3.5	3.7	2.8	2.0	1.65	.8	.....	.....
22.....	2.65	3.7	2.8	2.2	1.5	.75	.....	.....
23.....	2.5	3.7	2.7	2.4	1.45	.7	.....	.....
24.....	2.4	3.7	2.5	2.1	1.65	.6	.....	.....
25.....	2.3	3.4	2.6	2.3	1.25	.55	.....	.....
26.....	2.05	3.4	2.4	3.65	1.15	.55	.....	.....
27.....	2.0	3.25	2.4	3.4	1.05	.52	.....	0.3
28.....	1.85	3.15	2.25	3.55	1.15	.45	.....	.3
29.....	1.85	3.15	.....	3.6	1.15	.41	.....	.3
30.....	1.85	3.05	.....	3.6	1.2	.28	.....	.3
31.....	2.35	2.9	.....	3.65	.....	.32	.....	.3

NOTE.—The conduit was dry on days for which no gage height is given.

Daily discharge, in second-feet, of Dulzura conduit near Jamul, Cal., for 1909-1911.

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.
1909.							
1.....	2.1	23.2	50	54	32.1	11.8	0.7
2.....	2.1	23.2	48	54	36	10.3	1.1
3.....	2.1	28.4	42	56	32.1	8.8	.6
4.....	2.1	42.0	55	56	30.2	10.3	.6
5.....	2.1	37.0	50	56	30.2	8.8	.4
6.....	2.1	32.1	50	56	28.4	10.3	.4
7.....	2.1	32.1	51	58	28.4	10.3	.4
8.....	2.1	38	50	52	30.2	10.3	.3
9.....	2.1	44	50	52	26.6	10.3	.2
10.....	4.5	44	47	56	24.9	10.3	.2
11.....	3.2	44	52	56	26.6	8.8	.....
12.....	2.1	42	50	56	24.9	10.3	.....
13.....	7.3	39	45	56	28.4	8.8	.....
14.....	46.0	37	45	56	28.4	7.3	.....
15.....	26.6	42	44	56	24.9	7.3	.....
16.....	21.5	40	44	56	24.9	7.3	.....
17.....	16.6	40	44	54	23.2	7.3	.....
18.....	11.8	42	44	56	23.2	5.9	.....
19.....	8.8	49	48	56	23.2	7.3	.....
20.....	7.3	49	43	56	21.5	8.8	.....
21.....	5.9	49	.....	56	21.5	7.3	.....
22.....	.....	39	.....	56	21.5	5.9	.....
23.....	.....	43	18.2	50	21.5	5.9	.....
24.....	.....	50	52	48	21.5	3.2	.....
25.....	.....	49	52	48	21.5	3.2	.....
26.....	16.6	50	53	44	18.2	3.2	.....
27.....	15.0	50	49	42	18.2	2.1	.....
28.....	24.9	50	52	42	16.6	2.1	.....
29.....	21.5	.....	51	48	16.6	2.1	.....
30.....	26.6	.....	54	34	16.6	2.1	.....
31.....	28.4	.....	54	.....	15.0	.....	.....

Daily discharge, in second-feet, of Dulzura conduit near Jamul, Cal., for 1909-1911—Con.

Day.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1909-10.							
1.....		20.6	42	26.6		10.3	0.4
2.....			49	25.7		11.8	.5
3.....		16.6	42	24.9		11.8	.5
4.....		50	37	24.0	11.8	11.0	.5
5.....		49	39	23.2	35	9.5	.5
6.....	7.3	54	36	23.2	38	8.8	.4
7.....	6.6	58	36	23.2	36	7.0	.4
8.....	8.8	56	37	23.2	32.1	6.2	.4
9.....	27.5	56	37	24.9	30.2	5.9	.3
10.....	51	56	36	21.5	30.2	5.9	.2
11.....	30.2	55	33	19.8	30.2	5.6	.2
12.....	16.6	56	32.1	19.8	26.6	4.5	.2
13.....	12.6	53	31.1	19.8	42	4.5	.1
14.....	11.0	51	31.1	19.0	33	4.5	.2
15.....	9.6	52	34	20.6	28.4	5.2	
16.....	8.0	55	32.1	21.5	24.9	4.8	
17.....	6.6	54	28.4	24.9	21.5	3.2	
18.....	5.9	52	30.2	34	20.6	2.6	
19.....	5.9	56	34	30.2	18.2	2.6	
20.....	24.0	55	52	26.6	17.4	5.2	
21.....	52	56	38	23.2	17.4	4.5	
22.....	35	56	38	26.6	15.0	3.8	
23.....	32.1	56	36	30.2	14.2	3.2	
24.....	30.2	56	32.1	24.9	2.6	2.1	
25.....	28.4	50	34	28.4	11.0	1.6	
26.....	24.0	50	30.2	55	9.5	1.6	
27.....	23.2	47	30.2	50	8.0	1.4	
28.....	20.6	45	27.5	53	9.5	.9	
29.....	20.6	45		54	9.5	.7	
30.....	20.6	43		54	10.3	.4	
31.....	29.3	40		55		.4	

Day.	Dec.	Jan.	Feb.	Mar.	Apr.	Day.	Dec.	Jan.	Feb.	Mar.	Apr.
1910-11.						1910-11.					
1.....			19.2	24.0	8.4	16.....		20.0	42.5	19.2	7.0
2.....			16.3	32.7	20.0	17.....		4.6	32.7	18.6	7.0
3.....			32.7	42.5	16.3	18.....		16.3	28.2	17.0	7.0
4.....			65.1	65.1	13.0	19.....		7.0	26.0	14.5	7.0
5.....			62.1	32.7	9.8	20.....		7.0	24.0	14.2	7.0
6.....			37.4	24.0	9.8	21.....		4.6	20.0	13.5	7.0
7.....			20.0	24.0	24.0	22.....		4.6	13.0	16.3	7.0
8.....			47.9	28.2	16.3	23.....		7.0	9.8	14.5	5.8
9.....			42.5	32.7	13.0	24.....		13.0	9.8	13.2	5.8
10.....			40.5	59.2	11.4	25.....		4.6	14.2	13.2	5.8
11.....			37.4	37.4	9.8	26.....		14.4	13.0	13.0	5.8
12.....			32.7	37.4	9.8	27.....	0.4	7.0	35.1	12.4	5.8
13.....			18.1	28.2	9.8	28.....	.4	4.6	28.2	11.0	5.8
14.....			50.7	24.0	8.4	29.....	.4	7.0		10.5	5.8
15.....		4.6	47.9	20.7	8.4	30.....	.4	13.0		8.4	5.8
						31.....	.4	9.9		8.4	

NOTE.—Daily discharge 1909-10 determined from a rating curve well defined between 0.7 and 54 second-feet. Discharge for 1911 furnished by the Southern California Mountain Water Co. Conduit was dry on all days for which no discharge is given. Probably a small amount of water in conduit during May, 1911.

Daily discharge, in second-feet, of Cottonwood Creek and Dulzura conduit near Jamul, Cal., for 1909-1911.

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909.									
1.....	10	50	93	186	38	14	2.2	-----	10
2.....	10	40	84	175	40	12	2.6	-----	5
3.....	10	36	81	167	36	11	1.6	-----	4
4.....	10	71	77	148	34	12	1.6	-----	3
5.....	10	44	70	148	34	11	1.4	-----	3
6.....	10	40	67	134	31	12	1.4	9.0	7
7.....	10	40	90	120	31	12	1.4	2.5	6
8.....	10	198	75	101	34	12	1.6	1.0	3
9.....	10	113	72	91	29	12	1.2	1.0	2.5
10.....	16	83	67	92	28	12	1.2	1.0	1.5
11.....	13	80	62	90	30	10	1.0	-----	1.5
12.....	10	174	58	86	28	12	1.0	-----	1.0
13.....	24	247	51	82	31	10	1.0	-----	1.0
14.....	254	169	49	78	31	8.8	1.0	.5	.5
15.....	83	174	48	73	27	8.8	.5	.5	.5
16.....	66	118	49	69	27	8.8	.5	5.0	.5
17.....	51	102	50	64	26	8.8	.5	5.0	.5
18.....	46	93	48	64	26	7.4	.3	2.0	.5
19.....	29	79	52	64	26	8.8	.4	10.0	.5
20.....	24	71	47	64	24	10.0	-----	4.0	.5
21.....	21	275	47	64	24	8.8	-----	1.5	.5
22.....	78	171	280	64	24	7.4	-----	1.0	.5
23.....	464	135	178	56	24	7.4	-----	.5	1.0
24.....	464	142	162	54	24	4.7	.3	.5	1.5
25.....	620	118	152	52	24	4.7	.3	.5	1.5
26.....	637	112	163	48	21	4.7	.3	-----	1.5
27.....	147	101	522	46	21	3.6	1.5	7.0	1.5
28.....	157	97	562	45	19	3.6	1.5	20	1.0
29.....	90	-----	488	57	19	3.1	.5	.5	1.0
30.....	78	-----	357	43	19	8.1	-----	17	1.0
31.....	64	-----	327	-----	17	-----	-----	22	-----

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.
1909-10.										
1.....	1.0	2.5	8	90	47	31	65	11	0.8	0.1
2.....	1.0	2.5	12	33	53	30	54	13	.9	.1
3.....	1.5	2.5	10	61	46	29	49	12	.9	.1
4.....	2.0	2.5	8	73	42	28	39	12	.9	-----
5.....	1.5	2.5	20	127	43	26	42	11	.9	-----
6.....	1.5	2.5	22	99	40	26	42	11	.7	-----
7.....	1.5	2.5	13	90	40	27	40	9.3	.8	-----
8.....	1.0	2.5	15	83	41	26	36	8.3	.7	-----
9.....	.5	6	120	81	40	28	34	6.9	.6	-----
10.....	.5	6	81	74	39	25	33	6.9	.4	-----
11.....	11	8	36	77	36	23	33	6.6	.4	-----
12.....	1.0	10	21	79	35	22	31	5.3	.4	-----
13.....	.5	9	15	68	34	22	46	5.5	.3	-----
14.....	.5	12	14	76	34	22	36	5.5	.4	-----
15.....	.5	18	12	84	37	23	31	6.2	1.0	-----
16.....	.5	10	10	245	35	24	27	5.8	1.0	-----
17.....	.5	9	9.1	199	31	28	24	4.2	1.0	-----
18.....	1.0	8	8.4	95	33	38	23	3.6	.5	-----
19.....	1.5	8	8.4	90	38	33	20	3.4	.4	-----
20.....	1.5	7	36	81	75	29	19	6.2	.3	-----
21.....	1.5	7	242	72	51	26	19	5.5	.1	-----
22.....	1.5	8	53	68	43	29	16	4.8	.3	-----
23.....	1.5	8	40	64	40	33	15	3.9	.2	-----
24.....	1.5	8	40	62	36	28	9.6	2.8	.2	-----
25.....	1.5	8	34	58	38	32	12	2.3	.2	-----
26.....	1.5	34	30	56	34	64	11	2.1	.2	-----
27.....	1.5	30	27	52	34	65	8.8	1.9	.1	-----
28.....	1.5	16	25	50	31	122	11	1.3	.1	-----
29.....	1.5	12	24	49	-----	108	10	1.2	.1	-----
30.....	2.0	10	24	47	-----	90	11	.8	.1	-----
31.....	2.0	-----	33	44	-----	92	-----	.7	-----	-----

Daily discharge, in second-feet, of Cottonwood Creek and Dulzura conduit near Jamul, Cal., for 1909-1911—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	Dec.
1910-11.										
1.		1.3	2.2	3.4	23	26	9.5	1.0	1.7	0.1
2.		1.8	2.2	3.4	19	35	22	1.1	1.7	.1
3.		3.1	2.1	3.4	36	46	18	1.0	1.7	.1
4.		5.0	2.1	2.6	68	78	14	1.1	1.4	.1
5.			2.5	2.6	97	40	11	1.0	1.3	.6
6.		2.2	2.5	2.6	41	26	11	1.0	1.2	.6
7.		2.2	2.2	2.0	24	26	26	1.0	.7	.6
8.		2.2	2.2	2.0	52	30	18	.8	.7	.6
9.		2.2	2.2	2.6	47	35	14	.8	.5	.6
10.		1.8	2.2	11	45	62	13	.8	.4	.9
11.		1.8	2.1	8.6	41	43	11	.8	.2	.9
12.		2.2	1.8	3.1	36	40	11	.8	.2	.9
13.		3.1	1.8	3.1	21	30	11	.8	.2	.9
14.		7.7	2.2	2.8	73	26	9.4	1.5	.2	.9
15.		4.8	1.8	7.7	54	22	9.4	1.0	.2	.9
16.		3.6	1.8	23	46	21	8.0	1.1	.2	.9
17.		2.6	2.1	7.1	36	20	8.0	.8	.2	1.5
18.		2.3	2.1	19	31	18	8.0	.8	.2	1.5
19.	0.1	3.8	2.2	9.3	28	16	8.0	.7	.2	1.5
20.	.2	2.5	3.1	9.3	27	15	8.0	.7	.2	1.5
21.	.3	3.3	2.3	6.9	22	15	8.1	1.3	.2	1.5
22.	.2	2.3	2.3	6.9	15	18	8.0	1.3	.2	1.5
23.	.5	2.2	2.2	9.3	12	16	6.9	1.3	.2	1.5
24.	.5	2.2	2.2	15	12	14	6.8	1.0	.2	1.5
25.	.4	2.2	2.1	6.9	16	14	6.9	.8	.2	1.5
26.	.5	2.6	2.6	17	14	14	7.3	1.0	.2	1.5
27.	.5	2.3	2.2	9.3	37	14	7.3	.7	.1	1.5
28.	.8	2.3	2.5	6.9	31	12	7.3	1.3	.....	1.5
29.	1.0	2.3	2.1	9.6	.....	12	6.8	1.0	.....	1.5
30.	1.1	2.5	2.1	16	.....	9.5	6.8	1.0	.....	1.5
31.	1.2	.....	2.9	14	.....	9.5	.....	1.0	.....	1.5

NOTE.—These values include both the creek and conduit. Both creek and conduit were dry on days for which no discharge is given. Data during 1909-1911 have been furnished by the Southern California Mountain Water Co.

Monthly discharge of Cottonwood Creek near Jamul, Cal., for 1906-1911.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1906.					
January.....	59	2.0	15.5	953	
February.....	100	7.0	24.1	1,340	
March.....	5,800	5.0	594	36,500	
April.....	350	93	176	10,500	
May.....	93	20	54.9	3,380	
June.....	55	20	30.5	1,820	
July.....	93	2.0	12.0	738	
August.....	51	.9	6.0	369	
September.....	4.8	.8	1.3	77	
The period.....				55,700	
1906-7.					
October.....	7.1	0.9	3.0	184	
November.....	33	7.6	20.4	1,210	
December.....	375	30	80.8	4,970	
January.....	1,170	46	175	10,800	B.
February.....	116	36	66.9	3,720	B.
March.....	648	44	191	11,700	B.
April.....	306	64	111	4,600	B.
May.....	66	28	44.4	2,730	B.
June.....	49	9	23.2	1,380	B.
July.....	8.7	2.2	4.2	258	C.
August.....	2.5	.1	1.2	74	C.
September.....	2	.3	1.0	60	C.
The year.....	1,170	.1	60.2	41,700	

Monthly discharge of Cottonwood Creek near Jamul, Cal., for 1906-1911—Continued.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1907-8.					
October.....	16	2.2	7.5	461	C.
November.....	12	7.0	8.9	530	C.
December.....	12	7.6	9.8	603	C.
January.....	96	10	25.2	1,550	C.
February.....	155	28	58.4	3,360	C.
March.....	74	15	34.0	2,090	C.
April.....	31	10	15.6	928	C.
May.....	20	6.4	9.51	585	C.
June.....	6.6	.50	3.49	208	C.
July.....	.70	.02	.145	9	D.
August.....	.50	.05	.085	5	D.
September.....	.32	.07	.214	13	D.
The year.....	155	.02	14.4	10,300	
1908-9.					
October.....	6.3	.32	2.37	146	D.
November.....	5.0	3.6	4.31	256	C.
December.....	8.6	4.7	6.22	382	C.
January.....	637	10	114	7,010	C.
February.....	275	36	113	6,280	C.
March.....	562	48	146	8,980	C.
April.....	186	43	87.5	5,210	C.
May.....	40	17	27.3	1,680	C.
June.....	14	3.1	8.98	534	C.
July.....	2.6	.0	.855	52	C.
August.....	22	.0	2.95	181	C.
September.....	10	.5	2.10	125	C.
The year.....	637	.0	43.0	30,800	
1909-10.					
October.....	11	.5	1.55	95	C.
November.....	34	2.5	9.07	540	C.
December.....	242	8	33.9	2,080	C.
January.....	245	33	81.5	5,010	C.
February.....	75	31	40.2	2,230	C.
March.....	122	22	39.6	2,430	C.
April.....	65	8.8	28.2	1,680	C.
May.....	13	.7	5.84	359	C.
June.....	1	.1	.50	30	C.
July.....	.1	.0	.01	1	C.
August.....	.0	.0	.00	0	
September.....	.0	.0	.00	0	
The year.....	245	.0	20.0	14,500	
1910-11.					
October.....	1.2	.0	.24	15	C.
November.....	7.7	1.3	2.78	165	C.
December.....	3.1	1.8	2.20	135	C.
January.....	23	2	7.95	489	C.
February.....	97	12	35.9	1,990	C.
March.....	78	9.5	25.9	1,590	D.
April.....	26	6.8	10.7	637	D.
May.....	1.5	.7	.98	60	D.
June.....	1.7	.0	.49	29	D.
July.....	.0	.0	.0	0	
August.....	.0	.0	.0	0	
September.....	.0	.0	.0	0	
The year.....	97	.0	7.26	5,110	
1911.					
October.....	.0	.0	.0	0	
November.....	.0	.0	.0	0	
December.....	1.5	.1	1.04	64	D.

NOTE.—Beginning January, 1909, these values include both the discharge of the river at the gage and of the Dulzura conduit.

PINE VALLEY CREEK NEAR JAMUL, CAL.

Pine Valley Creek flows in a southerly direction and enters Cottonwood Creek about 1 mile north of Barrett's dam. Its drainage area is about half of the total drainage area of Cottonwood Creek above Barrett's dam.

The gaging station, which was located a few hundred feet above the confluence of the two creeks, was established in January, 1906, and discontinued December 31, 1908.

The channel at the station is composed of shifting sand, and is straight for about 200 feet above and 250 feet below the point of measurement. The right bank is high and rocky and not subject to overflow, while the left bank is liable to overflow in very high stages, forming two channels.

In almost all stages measurements could be made by wading, but two wires were stretched across the channel 50 feet apart for convenience in float measurements. There was no cable and car.

The gage was a staff fastened to a small tree.

Conditions for obtaining accurate discharge data were bad. On account of its isolated location only occasional gage readings were made during 1907 and none in 1908. All estimates of discharge are approximate only. No monthly discharges were computed for 1908.

Discharge measurements of Pine Valley Creek near Jamul, Cal., in 1906-1908.

Date.	Hydrographer.	Gage height.	Discharge.	Date.	Hydrographer.	Gage height.	Discharge.
		<i>Feet.</i>	<i>Sec.-ft.</i>			<i>Feet.</i>	<i>Sec.-ft.</i>
1906.				1907.			
Jan. 5	W. V. Hardy		1.8	Mar. 20	W. V. Hardy	4.32	38
19	do.	3.10	14.4	Apr. 11	do.	4.35	51
19	do.	3.20	17.6	27	do.	4.20	30
20	do.	3.45	41	May 19	do.	3.95	17
Feb. 3	do.	2.94	4	29	do.	3.90	13
15	do.	3.12	20	June 11	Clapp and Hardy	3.75	14
Mar. 11	do.	3.00	8.2	16	N. L. Hall	3.77	10
Apr. 19	do.	4.50	57	Dec. 16	W. V. Hardy	3.33	3.2
May 8	do.	4.40	32				
June 22	C. H. Lee	4.20	7.7	1908.			
Oct. 5	W. F. Martin	4.00	0.24	Jan. 16	W. V. Hardy	3.40	5.3
Nov. 27	W. V. Hardy	4.21	6.7	27	do.	3.74	20
Dec. 15	do.	4.30	14.6	Feb. 14	do.	3.88	24
				23	do.	3.80	20
1907.				Mar. 12	do.		13
Jan. 5	W. V. Hardy	4.45	27	21	do.		10
15	do.	4.60	55	Apr. 5	do.		7.2
Feb. 7	do.	4.30	31	May 12	do.		4.1
27	do.	4.30	39	Nov. 18	do.		.91
Mar. 8	do.	4.58	90	Dec. 22	do.		2.1

Daily gage height, in feet, of Pine Valley Creek near Jamul, Cal., for 1906.

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1.....		3.00	3.00	4.90	4.55	4.40	4.12	4.02	3.95	3.94	4.10	4.15
2.....		2.95	3.00	4.90	4.55	4.35	4.12	4.01	3.95	4.03	4.05	4.20
3.....		2.95	2.98	4.75	4.50	4.35	4.11	4.01	3.95	4.10	4.05	4.20
4.....		2.95	3.00	4.75	4.50	4.30	4.12	4.00	3.95	3.98	4.00	4.20
5.....		2.96	3.04	4.80	4.55	4.30	4.13	3.95	3.94	3.80	4.10	4.20
6.....		3.24	2.98	4.75	4.50	4.30	4.10	3.93	3.94	3.55	4.10	4.25
7.....		3.15	2.92	4.80	4.50	4.30	4.20	3.80	4.00	3.60	4.10	4.25
8.....		3.07	2.93	4.70	4.40	4.30	4.20	3.79	4.00	3.70	4.10	4.25
9.....		3.09	2.92	4.65	4.40	4.30	4.22	3.76	3.98	3.75	4.10	4.25
10.....		3.01	2.95	4.65	4.40	4.30	4.20	3.65	3.98	3.80	4.10	4.20
11.....		3.11	2.97	4.60	4.35	4.25	4.17	3.60	4.00	4.00	4.05	4.25
12.....		3.01	4.35	4.55	4.40	4.20	4.15	3.55	4.00	4.00	4.10	4.30
13.....		3.01	5.00	4.60	4.40	4.20	4.12	3.48	4.09	4.05	4.10	4.45
14.....		3.09	4.03	4.55	4.40	4.20	4.12	3.40	4.08	4.05	4.05	4.45
15.....		4.02	3.70	4.55	4.40	4.20	4.10	3.37	4.12	3.95	4.10	4.30
16.....		3.60	4.04	4.50	4.40	4.20	4.11	3.00	4.02	3.95	4.10	4.30
17.....		3.40	3.95	4.50	4.35	4.20	4.10	2.70	4.05	4.00	4.10	4.20
18.....	3.00	3.30	3.60	4.50	4.35	4.20	4.10	4.40	3.96	4.00	4.10	4.20
19.....	3.20	3.28	3.50	4.50	4.30	4.15	4.11	4.40	4.05	4.10	4.05	4.30
20.....	3.45	3.20	3.38	4.50	4.30	4.15	4.10	4.20	4.03	4.05	4.05	4.20
21.....	3.25	3.21	3.31	4.45	4.30	4.10	4.07	4.20	3.98	4.10	4.10	4.20
22.....	3.20	3.22	3.35	4.45	4.40	4.20	4.05	4.20	4.02	4.10	4.10	4.15
23.....	3.18	3.19	3.30	4.50	4.40	4.15	4.06	4.20	3.91	4.05	4.20	4.20
24.....	3.10	3.08		4.50	4.40	4.15	4.06	4.19	4.01	4.10	4.20	4.20
25.....	3.08	3.01		4.50	4.40	4.15	4.05	4.18	4.03	4.05	4.20	4.20
26.....	3.05	2.96		4.50	4.50	4.15	4.05	4.18	4.00	4.00	4.20	4.20
27.....	3.03	2.94		4.50	4.45	4.15	4.05	4.18	4.04	4.10	4.20	4.30
28.....	3.03	2.97	5.20	4.65	4.50	4.20	4.04	4.16	3.98	4.10	4.20	4.70
29.....	3.03		4.82	4.75	4.50	4.15	4.03	4.10	3.92	4.10	4.10	4.60
30.....	3.03		4.80	4.65	4.40	4.15	4.02	4.00	4.00	4.00	4.15	4.50
31.....	3.03		5.00		4.40		4.02	4.00		4.10		4.50

Monthly discharge of Pine Valley Creek near Jamul, Cal., for 1906-7.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1906.					
January.....	41	1	10.4	640	
February.....	75	5	19.4	1,080	
March.....	1,500	3	156	9,590	
April.....	150	44	89.6	5,330	
May.....	71	15	39.4	2,420	
June.....	32	1.8	9.8	583	
July.....	8.2	.6	2.6	160	
August.....	32	.0	4.0	246	
September.....	2.7	.2	.6	36	
The period.....				20,100	
1906-7.					
October.....	1.8	0.0	.8	49	
November.....	6.5	.3	2.6	155	
December.....	114	4.2	20.1	1,240	
January.....	124	19	49.3	3,030	C.
February.....	45	26	34.8	1,930	C.
March.....	119	36	62.4	3,840	C.
April.....	71	27	45.0	2,680	C.
May.....	30	12	19.8	1,220	C.
June.....	16	3	10.0	595	C.
July.....	3	1	2.0	123	D.
August.....	1.3	0	.6	37	D.
September.....	8	0	.3	18	D.
The year.....			20.6	14,900	
1907.					
October.....	7	1.2	3.1	191	D.
November.....	3.5	2.8	3.0	179	D.
December.....	5.1	2.8	3.4	209	D.

NOTE.—Discharge January, 1906, to June, 1907, determined by the indirect method for shifting channels. For the rest of 1907 discharge was estimated by comparison with Cottonwood Creek.

SWEETWATER RIVER BASIN.

SWEETWATER RESERVOIR.

The following record of run-off has been kept at the Sweetwater reservoir by the San Diego Land & Town Co.:

Estimated annual run-off at Sweetwater reservoir.

[Drainage area, 186 square miles.]

Year ending June 30—	Rainfall (inches). ^a	Run-off.		
		Total in acre-feet.	Acre-feet per square mile.	Depth in inches on drainage area.
1888.....	16.00	7,048	37.9	0.71
1889.....	33.55	25,253	135.7	2.57
1890.....	38.65	20,532	110.4	2.07
1891.....	37.92	21,565	115.9	2.16
1892.....	24.58	6,198	33.3	.62
1893.....	26.16	16,261	87.4	1.63
1894.....	10.12	1,338	7.2	.13
1895.....	35.23	73,412	395.0	7.38
1896.....	16.41	1,321	7.1	.13
1897.....	23.88	6,891	37.0	.69
1898.....	18.03	4	.0	.00
1899.....	13.56	245	1.3	.02
1900.....	16.13	0	.0	.00
1901.....	24.82	861	4.6	.08
1902.....	20.25	0	.0	.00
1903.....	20.77	0	.0	.00
1904.....	14.94	0	.0	.00
1905.....	35.95	11,730	63.1	1.19
Mean, 18 years.....	23.72	10,703	57.5	1.07

^a Taken as mean between Sweetwater dam and Cuyamaca.

SWEETWATER RIVER NEAR DESCANSO, CAL.

This station, which is located at the Ellis ranch, $1\frac{1}{2}$ miles below Descanso post office, in the SE. $\frac{1}{4}$ sec. 25, T. 15 S., R. 3 E., was established November 21, 1905.

Guatay Creek enters the river from the east about 2 miles above the gaging station. About one-fourth second-foot of water is diverted above the station for irrigation on the Ellis ranch. About 20 miles below water for irrigation is pumped from wells along the banks of the stream.

The staff gage is in three sections on the left bank. No change has been made in the datum of the gage since the station was established. Discharge measurements are made from a cable or by wading near the gage.

Discharge for 1910 was determined by the indirect method for shifting channels and from rating tables covering short periods. The record may be considered fair.

Discharge measurements of Sweetwater River near Descanso, Cal., in 1905-1912.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
		Feet.	Sec.-ft.			Feet.	Sec.-ft.
1905.				1908.			
Sept. 11 ^a	D. W. Murphy.....		0.4	Mar. 22	W. V. Hardy.....	3.43	4.3
Nov. 21	C. H. Lee.....	3.54	1.1	Apr. 3	do.....	3.44	4.7
Dec. 10	do.....	3.62	2.5	13	do.....	3.44	3.7
1906.				28	do.....	3.33	4.0
Jan. 6	W. V. Hardy.....	3.62	2.7	May 7	do.....	3.32	4.9
23	do.....	3.79	9.3	13	do.....	3.32	5.0
Feb. 4	do.....	3.68	4.8	27	do.....	3.16	1.8
15	do.....	4.60	115	June 13	do.....	3.10	1.1
16	do.....	4.50	96	July 7	do.....	2.98	.36
16	do.....	4.40	75	Nov. 16	do.....	3.11	.78
16	do.....	4.30	62	Dec. 8	do.....	3.21	1.5
16	do.....	4.20	51	19	do.....	3.21	1.4
16	do.....	4.10	46	1909.			
17	do.....	4.00	32	Jan. 26	W. V. Hardy.....	3.9	15.1
19	do.....	3.90	20	Feb. 21	do.....	4.8	12.4
Mar. 10	do.....	3.88	10.7	22	do.....	4.4	76
Apr. 5	do.....	4.85	81	22	do.....	4.6	81
6	do.....	4.65	74	Mar. 10	do.....	4.08	27
13	do.....	4.27	37	24	do.....	4.2	39
20	do.....	4.20	35	Apr. 7	do.....	4.3	49
May 8	do.....	4.05	24	20	Hardy and Clapp.....	4.1	28
June 19	C. H. Lee.....	3.60	4.3	20	do.....	4.1	28
Aug. 7	R. S. Hawley.....	3.16	1.1	May 26	W. V. Hardy.....	3.75	9.8
Oct. 9	W. F. Martin.....	3.15	1.1	28	R. E. Haines.....	3.64	7.8
Nov. 28	W. V. Hardy.....	3.20	4.4	1910.			
Dec. 13	do.....	3.48	12.7	Jan. 23	W. V. Hardy.....	4.20	32
1907.				27	do.....	4.10	22
Jan. 4	W. V. Hardy.....	3.58	9.6	Feb. 14	do.....	3.95	12
12	do.....	4.00	49	17	do.....	3.93	13
13	do.....	4.10	49	Mar. 3	do.....	3.94	9.2
Feb. 6	do.....	4.00	26	4	do.....	3.92	8.8
9	do.....	3.90	22	12	do.....	3.88	6.7
25	do.....	4.12	27	14	do.....	3.86	7.6
28	do.....	4.08	25	Apr. 2	do.....	4.02	17
Mar. 7	do.....	4.80	95	3	do.....	4.12	20
19	do.....	4.20	43	26	do.....	4.10	6.7
Apr. 9	do.....	4.30	49	May 7	do.....	4.08	5.7
25	do.....	4.10	26	24	do.....	3.98	4.6
May 18	do.....	3.82	18	26	do.....	3.92	3.4
30	do.....	3.68	15	June 4	do.....	3.84	2.4
June 14	do.....	3.52	11	25	do.....	3.68	1.2
23	do.....	3.30	2.5	Sept. 18	C. C. Jacob.....	3.59	.34
July 23	W. A. Lamb.....	3.30	2.5	Nov. 16	W. V. Hardy.....	3.55	1.3
Dec. 15	W. V. Hardy.....	3.29	4.7	1911.			
31	do.....	3.27	3.3	Feb. 9	W. V. Hardy.....	3.70	6.1
1908.				Mar. 8	do.....	4.12	24
Jan. 15	W. V. Hardy.....	3.41	5.9	Apr. 17	do.....	3.85	4.6
26	do.....	3.50	10	May 8	do.....	3.77	2.3
27	do.....	3.41	7.9	Nov. 9	F. C. Ebert.....	3.58	.70
28	do.....	3.60	13	1912.			
Feb. 11	do.....	3.50	12	Jan. 16	F. C. Ebert.....	3.62	.6
11	do.....	3.52	12	4	do.....	3.82	3.2
11	do.....	3.60	17	Mar. 4	do.....	3.73	1.9
12	do.....	3.82	36	5	do.....	4.12	14
22	do.....	3.49	9.8	28	do.....	4.14	15
24	do.....	3.50	12	29	do.....	4.12	9.1
Mar. 3	do.....	3.52	9.4	May 6	do.....	4.12	10
4	do.....	3.73	18	7	do.....	3.74	.8
11	do.....	3.50	9.1	June 28	do.....	3.78	1.6
20	do.....	3.42	4.2	29	do.....		

^a Weir measurement.

^b Estimated.

Daily gage height, in feet, of Sweetwater River near Descanso, Cal., for 1905-1912.

Day.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	
1905-6.												
1.....		3.69	3.7	3.65	4.0	4.8	4.2	3.9	3.45	3.2	3.3	
2.....		3.64	3.65	3.65	3.95	4.7	4.15	3.85	3.4	3.2	3.3	
3.....		3.61	3.7	3.65	3.9	4.7	4.1	3.85	3.4	3.2	3.3	
4.....		3.60	3.7	3.7	4.0	4.6	4.1	3.85	3.4	3.2	3.3	
5.....		3.60	3.65	3.85	3.95	4.7	4.2	3.85	3.4	3.2	3.3	
6.....		3.58	3.65	3.95	3.9	4.7	4.15	3.85	3.4	3.2	3.3	
7.....		3.58	3.6	3.9	3.85	4.65	4.15	3.8	3.4	3.2	3.3	
8.....		3.58	3.6	3.8	3.85	4.6	4.1	3.8	3.4	3.2	3.3	
9.....		3.58	3.6	3.8	3.85	4.6	4.25	3.75	3.4	3.2	3.3	
10.....		3.64	3.6	3.85	3.85	4.5	4.0	3.7	3.4	3.15	3.25	
11.....		3.68	3.6	3.95	3.9	4.45	4.0	3.7	3.35	3.15	3.25	
12.....		3.69	3.6	3.9	4.95	4.4	4.1	3.7	3.35	3.15	3.25	
13.....		3.65	3.65	3.9	5.05	4.4	4.0	3.7	3.35	3.15	3.25	
14.....		3.60	3.75	3.9	4.5	4.35	4.0	3.65	3.4	3.15	3.3	
15.....		3.60	3.7	4.45	4.4	4.35	3.95	3.65	3.4	3.15	3.65	
16.....		3.60	3.7	4.2	4.65	4.3	3.9	3.6	3.35	3.15	3.45	
17.....		3.60	3.65	4.1	5.05	4.3	3.9	3.6	3.35	3.3	3.25	
18.....		3.67	3.65	3.95	4.65	4.25	3.9	3.6	3.3	3.6	3.2	
19.....		3.66	4.05	3.9	4.5	4.25	3.9	3.6	3.3	3.6	3.15	
20.....		3.66	4.15	3.85	4.4	4.2	3.9	3.6	3.3	3.5	3.15	
21.....	3.53	3.78	3.9	3.95	4.35	4.2	3.9	3.55	3.3	3.45	3.15	
22.....	3.54	3.70	3.85	4.0	4.45	4.15	3.85	3.55	3.3	3.4	3.1	
23.....	3.54	3.62	3.8	3.95	4.35	4.1	3.9	3.55	3.3	3.4	3.1	
24.....	3.54	3.62	3.75	3.9	7.35	4.15	3.9	3.55	3.3	3.45	3.15	
25.....	3.53	3.64	3.75	3.85	6.8	4.15	3.9	3.5	3.35	3.35	3.15	
26.....	3.54	3.65	3.75	3.85	6.6	4.1	4.05	3.55	3.35	3.35	3.15	
27.....	3.84	3.65	3.7	3.85	5.6	4.1	4.0	3.6	3.3	3.35	3.1	
28.....	3.84	3.65	3.7	3.95	5.2	4.4	4.2	3.55	3.25	3.35	3.1	
29.....	3.71	3.69	3.7	.....	4.85	4.4	4.0	3.5	3.25	3.35	3.15
30.....	3.70	3.66	3.7	.....	4.7	4.25	3.95	3.45	3.2	3.35	3.2
31.....	.....	3.72	3.7	.....	4.7	.....	3.9	.....	3.2	3.3	.....
Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1906-7.												
1.....	3.15	3.32	3.2	3.55	4.1	4.05	4.0	3.65	3.38	3.26	3.24
2.....	3.15	3.32	3.25	3.6	4.1	4.0	4.35	4.0	3.65	3.38	3.26	3.24
3.....	3.15	3.32	3.25	3.55	4.1	4.0	4.8	4.0	3.6	3.38	3.26	3.24
4.....	3.15	3.32	3.3	3.6	4.05	4.05	4.4	4.0	3.6	3.38	3.26	3.24
5.....	3.1	3.2	3.25	3.6	4.0	5.1	4.4	4.05	3.65	3.36	3.26	3.24
6.....	3.1	3.2	3.25	3.75	4.0	4.85	4.3	4.05	3.7	3.35	3.26	3.24
7.....	3.1	3.2	3.2	3.8	3.95	4.8	4.3	4.0	3.7	3.35	3.28	3.24
8.....	3.1	3.2	3.2	3.8	3.9	4.85	4.3	3.95	3.7	3.35	3.23
9.....	3.1	3.2	3.2	3.9	3.95	4.7	4.3	3.95	3.65	3.36	3.23
10.....	3.1	3.15	3.32	4.9	3.9	4.65	4.3	3.95	3.6	3.38	3.23
11.....	3.1	3.15	3.4	4.15	3.85	4.65	4.25	4.0	3.55	3.38	3.25	3.23
12.....	3.1	3.15	3.9	4.0	3.85	4.6	4.25	3.95	3.6	3.37	3.25	3.23
13.....	3.1	3.15	3.45	4.1	3.85	4.5	4.2	3.9	3.65	3.37	3.25	3.23
14.....	3.1	3.2	3.3	4.45	3.85	4.45	4.2	3.9	3.55	3.37	3.25	3.23
15.....	3.1	3.2	3.2	4.25	3.85	4.4	4.2	3.9	3.5	3.37	3.25	3.23
16.....	3.1	3.15	3.2	4.1	4.5	4.4	4.2	3.85	3.45	3.37	3.24	3.23
17.....	3.15	3.15	3.2	4.2	4.1	4.25	4.2	3.85	3.45	3.37	3.24	3.23
18.....	3.15	3.15	3.2	5.05	4.1	4.2	4.2	3.8	3.45	3.37	3.24	3.23
19.....	3.15	3.15	3.2	4.8	4.05	4.2	4.15	3.8	3.45	3.36	3.24	3.23
20.....	3.15	3.15	3.2	4.8	4.1	4.3	4.1	3.8	3.45	3.32	3.24	3.23
21.....	3.15	3.15	3.2	4.7	4.1	4.4	4.05	3.75	3.45	3.32	3.24	3.23
22.....	3.15	3.4	3.2	4.7	4.4	4.3	4.05	3.75	3.45	3.3	3.22	3.23
23.....	3.2	3.45	3.2	4.6	4.2	4.25	4.05	3.75	3.45	3.28	3.22	3.23
24.....	3.2	3.35	3.2	4.5	4.15	4.3	4.1	3.75	3.45	3.28	3.22	3.23
25.....	3.2	3.3	3.2	4.35	4.15	4.65	4.1	3.75	3.4	3.28	3.22	3.23
26.....	3.2	3.3	3.45	4.2	4.1	4.9	4.1	3.75	3.4	3.29	3.22	3.23
27.....	3.2	3.35	3.7	4.1	4.1	4.95	4.05	3.75	3.4	3.29	3.23	3.23
28.....	3.25	3.2	4.5	4.1	4.05	4.55	4.05	3.75	3.4	3.29	3.24	3.23
29.....	3.25	3.2	3.8	4.1	4.5	4.05	3.7	3.4	3.28	3.24	3.23
30.....	3.2	3.2	3.5	4.5	4.0	3.7	3.4	3.28	3.24	3.23
31.....	3.2	3.5	4.25	3.7	3.27	3.24

^a Estimated.

Daily gage height, in feet, of Sweetwater River near Descanso, Cal., for 1905-1912—Con.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1907-8.												
1.....	3.25	3.25	3.2	3.25	3.45	3.55	3.5	3.25	3.15	3.05	3.0	3.1
2.....	3.25	3.25	3.2	3.25	3.4	3.5	3.45	3.4	3.15	.....	3.0	.....
3.....	3.25	3.25	3.25	3.25	3.9	3.5	3.45	3.5	3.15	.....	3.0	.....
4.....	3.25	3.2	3.25	3.25	3.8	3.8	3.45	3.35	3.15	.....	3.0	.....
5.....	3.25	3.2	3.25	3.25	3.6	3.85	3.45	3.3	3.15	.....	3.0	.....
6.....	3.3	3.2	3.4	3.25	3.5	3.8	3.45	3.3	3.15	.....	.....	3.1
7.....	3.3	3.2	3.35	3.25	3.4	3.7	3.5	3.3	3.15	3.0	.....	.....
8.....	3.25	3.2	3.3	3.25	3.4	3.6	3.5	3.3	3.15	3.0	.....	.....
9.....	3.25	3.2	3.3	3.25	3.6	3.55	3.45	3.3	3.1	3.0	.....	.....
10.....	3.25	3.2	3.4	3.25	3.6	3.5	3.45	3.3	3.1	3.0	3.0	3.7
11.....	3.25	3.2	3.35	3.2	3.6	3.5	3.45	3.3	3.1	3.0	.....	.....
12.....	3.25	3.2	3.3	3.2	3.7	3.45	3.45	3.35	3.1	3.0	.....	.....
13.....	3.25	3.2	3.3	3.25	3.6	3.45	3.45	3.3	3.1	3.0	.....	.....
14.....	3.6	3.25	3.3	3.5	3.55	3.45	3.45	3.3	3.1	3.0	.....	.....
15.....	3.5	3.25	3.3	3.4	3.55	3.45	3.4	3.25	3.1	3.0	.....	.....
16.....	3.35	3.25	3.3	3.3	3.55	3.45	3.4	3.25	3.1	3.0	.....	.....
17.....	3.35	3.25	3.3	3.25	3.55	3.45	3.35	3.25	3.1	3.0	3.05	.....
18.....	3.3	3.25	3.3	3.25	3.5	3.45	3.35	3.25	3.1	3.0	.....	.....
19.....	3.3	3.25	3.3	3.25	3.5	3.45	3.3	3.25	3.1	3.0	.....	.....
20.....	3.3	3.25	3.25	3.25	3.5	3.45	3.3	3.2	3.1	3.0	.....	.....
21.....	3.3	3.25	3.25	3.25	3.5	3.45	3.3	3.2	3.1	3.0	.....	.....
22.....	3.35	3.25	3.25	3.25	3.5	3.45	3.65	3.2	3.05	3.0	.....	.....
23.....	3.45	3.25	3.25	3.4	3.5	3.45	3.65	3.2	3.05	3.0	.....	3.15
24.....	3.45	3.25	3.25	3.45	3.5	3.45	3.55	3.2	3.05	3.0	3.05	3.2
25.....	3.4	3.25	3.25	3.55	.....	3.5	3.45	3.2	3.05	3.0	.....	.....
26.....	3.35	3.25	3.25	3.5	.....	3.75	3.4	3.2	3.05	3.0	.....	.....
27.....	3.35	3.25	3.25	3.45	3.4	3.7	3.4	3.2	3.05	3.0	.....	.....
28.....	3.3	3.25	3.3	3.6	3.45	3.6	3.3	3.15	3.05	3.0	.....	.....
29.....	3.3	3.25	3.3	3.55	3.6	3.6	3.25	3.15	3.05	3.0	.....	.....
30.....	3.25	3.2	3.3	3.45	.....	3.55	3.25	3.15	3.05	3.0	.....	.....
31.....	3.25	.....	3.3	3.45	.....	3.5	.....	3.15	.....	3.0	3.1	.....
1908-9.												
1.....	3.1	3.1	3.1	3.15	3.85	3.3	4.6	3.8	3.75	3.5	3.45	3.5
2.....	3.1	3.1	3.15	3.2	3.8	3.25	4.5	3.8	3.75	3.45	3.45	3.5
3.....	3.1	3.1	3.2	3.2	3.95	3.2	4.45	3.8	3.75	3.45	3.45	3.5
4.....	3.1	3.1	3.2	3.2	4.1	3.2	4.4	3.8	3.7	3.45	3.45	3.5
5.....	3.1	3.1	.....	3.2	4.0	3.15	4.4	3.8	3.7	3.45	3.45	3.55
6.....	3.1	3.1	.....	3.2	3.95	3.1	4.3	3.8	3.7	3.45	3.7	3.6
7.....	3.1	3.1	.....	3.2	3.95	3.4	4.2	3.8	3.7	3.45	3.6	3.5
8.....	3.1	3.1	3.2	3.2	4.65	3.5	4.2	3.8	3.7	3.45	3.6	3.5
9.....	3.1	3.1	3.2	3.25	4.4	3.5	4.2	3.8	3.7	3.45	3.5	3.5
10.....	3.1	3.1	3.2	3.3	4.35	4.1	4.15	3.8	3.7	3.45	3.5	3.5
11.....	3.1	3.1	3.2	3.25	4.75	4.05	4.15	3.8	3.65	3.45	3.5	3.5
12.....	3.1	3.1	3.2	3.35	4.95	4.05	4.15	3.8	3.65	3.45	3.45	3.5
13.....	3.1	3.1	3.2	3.75	5.05	4.05	4.1	3.8	3.65	3.45	3.45	3.5
14.....	3.1	3.1	3.2	3.95	4.7	4.0	4.1	3.8	3.6	3.45	3.7	3.5
15.....	3.15	3.1	3.2	3.5	4.6	4.0	4.1	3.8	3.6	3.45	3.65	3.5
16.....	3.2	3.1	3.25	3.4	4.5	4.0	4.1	3.8	3.6	3.45	3.65	3.45
17.....	3.15	3.1	3.25	3.4	4.4	4.0	4.1	3.8	3.6	3.45	3.6	3.45
18.....	3.15	3.1	3.2	3.35	4.35	4.0	4.1	3.8	3.6	3.45	3.6	3.45
19.....	3.15	3.1	3.2	3.3	4.3	4.0	4.1	3.8	3.6	3.45	3.5	3.45
20.....	3.1	3.1	3.2	3.3	4.25	4.0	4.1	3.8	3.6	3.45	3.5	3.45
21.....	3.1	3.1	3.2	3.8	4.9	4.0	4.1	3.8	3.6	3.45	3.5	3.45
22.....	3.1	.....	3.2	6.25	4.5	4.2	4.05	3.8	3.6	3.5	3.5	3.4
23.....	3.1	.....	3.2	4.0	4.2	4.25	4.0	3.8	3.55	3.5	3.5	3.4
24.....	3.1	.....	3.2	3.9	3.9	4.2	4.0	3.8	3.55	3.45	3.45	3.4
25.....	3.1	.....	3.2	3.95	3.6	4.25	4.0	3.8	3.55	3.45	3.45	3.4
26.....	3.1	3.15	3.2	3.9	3.35	4.5	3.95	3.8	3.55	3.45	3.45	3.4
27.....	3.1	3.15	3.2	4.1	3.3	5.0	3.95	3.8	3.55	3.45	3.4	3.4
28.....	3.1	3.15	3.2	4.0	3.3	4.8	3.95	3.8	3.55	3.45	3.4	3.4
29.....	3.1	3.15	3.2	3.9	.....	4.75	3.9	3.75	3.5	3.45	3.45	3.4
30.....	3.1	3.1	3.2	3.9	.....	4.7	3.85	3.75	3.5	3.45	3.7	3.4
31.....	3.1	.....	3.2	3.85	.....	4.7	.....	3.75	.....	3.45	3.6	.....

Daily gage height, in feet, of Sweetwater River near Descanso, Cal., for 1905-1912—Con.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909-10.												
1.....	3.4	3.45	3.6	6.05	4.08	.....	4.17	4.11	3.82	3.64	.....	3.53
2.....	3.4	3.45	3.55	4.75	4.08	.....	4.12	4.11	3.81	3.64	.....	3.53
3.....	3.4	3.45	3.55	4.85	4.02	3.94	4.12	4.14	3.81	3.64	.....	3.53
4.....	3.4	3.45	3.55	4.6	4.0	3.94	4.1	4.13	3.81	3.64	.....	3.53
5.....	3.4	3.45	3.6	4.54	4.0	.....	4.08	4.13	3.79	3.64	.....	3.52
6.....	3.45	3.45	3.6	4.39	4.0	3.91	4.06	4.11	3.79	3.64	.....	3.51
7.....	3.45	3.45	3.6	4.32	4.0	3.91	4.06	4.11	3.78	3.64	.....	3.51
8.....	3.45	3.5	3.6	4.25	4.0	3.91	4.06	4.09	3.78	3.64	.....	3.51
9.....	3.45	3.55	4.6	4.2	3.99	3.91	4.06	4.07	3.77	3.64	.....	3.51
10.....	3.45	3.6	4.1	4.2	3.99	3.91	4.04	4.04	3.76	3.64	.....	3.51
11.....	3.45	3.6	3.6	4.19	3.98	3.9	4.11	4.02	3.76	3.64	.....	3.5
12.....	3.45	3.6	3.6	4.16	3.97	3.89	4.21	4.0	3.75	3.64	.....	3.5
13.....	3.45	3.6	3.6	4.15	3.97	3.88	4.14	4.0	3.74	3.67	.....	3.52
14.....	3.45	3.75	3.6	4.15	3.96	3.92	4.09	4.0	3.72	3.66	3.54	3.55
15.....	3.5	3.9	3.6	4.4	3.96	3.92	4.06	4.0	3.71	3.64	3.54	3.52
16.....	3.5	3.7	3.6	4.95	3.94	3.9	4.01	4.0	3.7	3.64	3.54	3.5
17.....	3.45	3.6	3.55	4.6	3.94	3.93	3.99	4.0	3.7	3.64	3.54	3.59
18.....	3.45	3.55	3.5	5.58	3.92	3.94	3.97	4.0	3.7	3.64	3.54	3.59
19.....	3.45	3.55	3.4	4.52	4.02	3.91	3.95	4.0	3.69	3.64	3.54	3.59
20.....	3.45	3.5	3.8	4.45	4.15	3.88	3.97	3.99	3.68	3.62	3.54	3.59
21.....	3.45	3.5	4.35	4.35	4.0	3.84	3.99	3.97	3.68	3.62	3.54	3.59
22.....	3.45	3.5	3.95	4.2	3.93	3.91	3.98	3.96	3.68	3.62	3.54	3.59
23.....	3.45	3.5	3.85	4.2	3.92	3.94	3.96	3.95	3.68	3.62	3.54	3.59
24.....	3.45	3.5	3.8	4.18	3.92	3.86	3.95	3.94	3.68	3.61	3.54	3.59
25.....	3.45	3.5	3.8	4.12	3.93	4.04	3.97	3.92	3.67	3.61	3.54	3.59
26.....	3.45	3.9	3.8	4.1	3.93	4.12	3.99	3.92	3.66	3.61	3.54	3.59
27.....	3.45	3.8	3.75	4.1	3.93	4.12	4.01	3.88	3.66	3.60	3.54	3.59
28.....	3.45	3.7	3.75	4.09	3.93	4.35	4.01	3.87	3.66	3.62	3.53	3.67
29.....	3.45	3.65	3.75	4.06	.....	4.22	4.09	3.86	3.66	3.62	3.53	3.55
30.....	3.45	3.6	3.75	4.04	.....	4.2	4.11	3.84	3.66	3.62	3.53	3.54
31.....	3.45	.....	3.9	4.02	.....	4.18	.....	3.82	.....	3.62	3.53	.....
1910-11.												
1.....	3.52	3.56	3.48	3.48	4.50	3.96	4.06	.....	3.64	3.51	3.54	3.52
2.....	3.52	3.56	3.48	3.48	4.15	3.98	4.14	.....	3.62	3.51	3.54	3.52
3.....	3.51	3.6	3.48	3.48	4.28	4.10	4.07	.....	3.62	3.51	3.53	3.52
4.....	3.51	3.54	3.48	3.47	4.55	4.85	4.04	.....	3.61	3.51	3.52	3.52
5.....	3.51	3.54	3.48	3.47	4.55	4.48	4.02	.....	3.61	3.51	3.52	3.52
6.....	3.51	3.52	3.48	3.47	4.85	4.12	4.02	.....	3.60	3.52	3.52	3.52
7.....	3.51	3.52	3.48	3.46	4.85	4.08	4.10	.....	3.60	3.52	3.52	3.52
8.....	3.51	3.52	3.48	3.47	3.72	4.08	4.05	.....	3.60	3.52	3.52	3.52
9.....	3.51	3.52	3.48	3.48	3.70	4.08	3.96	3.71	3.60	3.53	3.52	3.52
10.....	3.51	3.52	3.49	4.15	3.70	4.38	3.92	3.71	3.60	3.54	3.52	3.52
11.....	3.51	.....	3.5	4.88	3.85	4.29	3.92	3.71	3.59	3.54	3.52	3.50
12.....	3.51	.....	3.5	3.77	3.95	4.25	3.91	3.71	3.59	3.54	3.52	3.50
13.....	3.52	.....	3.49	3.71	3.98	4.18	3.89	3.71	3.58	3.54	3.52	3.50
14.....	3.58	.....	3.5	3.7	4.28	4.02	3.88	3.71	3.67	3.54	3.52	3.50
15.....	3.72	.....	3.5	3.74	4.08	3.98	3.88	3.71	3.65	3.54	3.52	3.50
16.....	3.68	3.55	3.5	3.71	3.86	3.98	3.88	3.71	3.54	3.54	3.52	3.50
17.....	3.67	3.52	3.5	3.64	3.91	3.98	3.86	3.71	3.54	3.54	3.52	3.50
18.....	3.59	3.52	3.5	3.61	3.89	3.98	3.86	3.71	3.53	3.54	3.52	3.50
19.....	3.56	3.52	3.54	3.59	3.86	3.97	3.86	3.71	3.52	3.54	3.51	3.50
20.....	3.55	3.52	3.64	3.56	3.82	3.98	3.86	3.64	3.51	3.54	3.51	3.50
21.....	3.54	3.52	3.6	3.54	3.8	4.00	3.86	3.64	3.51	3.54	3.51	3.50
22.....	3.54	3.52	3.56	3.51	3.79	4.06	3.86	3.62	3.51	3.54	3.51	3.52
23.....	3.54	3.5	3.52	3.50	3.77	4.06	3.84	3.64	3.51	3.54	3.51	3.52
24.....	3.54	3.5	3.5	3.48	3.78	4.00	3.82	3.65	3.51	3.54	3.51	3.52
25.....	3.54	3.5	3.52	3.67	3.85	3.99	3.82	3.66	3.51	3.54	3.51	3.52
26.....	3.54	3.5	3.53	3.62	3.95	3.99	3.85	3.68	3.51	3.54	3.51	3.52
27.....	3.54	3.5	3.51	3.58	3.95	3.98	3.87	3.69	3.51	3.60	3.51	3.52
28.....	3.54	3.5	3.5	3.60	3.15	3.97	3.86	3.69	3.51	3.60	3.51	3.52
29.....	3.56	3.5	3.49	3.59	.....	3.97	3.86	3.68	3.51	3.54	3.51	3.53
30.....	3.56	3.5	3.49	3.58	.....	3.96	3.85	3.67	3.51	3.54	3.51	3.56
31.....	3.56	.....	3.48	3.58	.....	3.94	.....	3.66	.....	3.54	3.51	.....

Daily gage height, in feet, of Sweetwater River near Descanso, Cal., for 1905-1912—Con.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.									
1.....	3.54	3.58	3.60	3.65	3.6	3.7	4.25	4.15	3.95
2.....	3.52	3.58	3.60	3.65	3.6	4.0	4.2	4.15	3.95
3.....	3.52	3.58	3.60	3.65	3.6	3.8	4.1	4.1	4.0
4.....	3.53	3.58	3.60	3.65	3.6	3.6	4.1	4.1	3.95
5.....	3.53	3.58	3.60	3.6	3.6	4.1	4.1	4.1	3.95
6.....	3.54	3.58	3.65	3.6	3.6	4.4	4.0	4.1	3.95
7.....	3.54	3.58	3.69	3.6	3.6	4.3	3.95	4.1	3.9
8.....	3.54	3.58	3.65	3.6	3.6	5.75	4.0	4.5	3.9
9.....	3.54	3.58	3.64	3.65	3.6	5.2	4.05	4.4	3.9
10.....	3.54	3.58	3.62	3.65	3.6	4.2	4.15	4.2	3.9
11.....	3.54	3.58	3.62	3.65	3.6	4.15	4.3	4.15	3.9
12.....	3.54	3.59	3.62	3.6	3.6	4.1	4.6	4.15	3.9
13.....	3.54	3.60	3.62	3.6	3.6	4.1	4.55	4.1	3.85
14.....	3.54	3.60	3.62	3.6	3.6	4.2	4.7	4.05	3.85
15.....	3.54	3.60	3.62	3.6	3.6	4.1	4.6	4.0	3.85
16.....	3.54	3.60	3.62	3.6	3.6	4.0	4.6	4.0	3.85
17.....	3.54	3.60	3.68	3.6	3.6	3.95	4.55	4.0	3.85
18.....	3.54	3.60	3.66	3.6	3.6	3.95	4.5	4.05	3.85
19.....	3.54	3.60	3.64	3.6	3.6	3.95	4.45	4.05	3.8
20.....	3.54	3.60	3.64	3.6	3.6	4.1	4.4	4.05	3.8
21.....	3.54	3.60	3.64	3.6	3.6	4.05	4.3	4.05	3.8
22.....	3.54	3.60	3.64	3.6	3.6	4.1	4.25	4.05	3.8
23.....	3.54	3.60	3.64	3.6	3.6	4.1	4.2	4.05	3.8
24.....	3.54	3.60	3.64	3.6	3.6	4.0	4.2	4.05	3.8
25.....	3.54	3.60	3.68	3.6	3.6	3.95	4.2	4.05	3.8
26.....	3.54	3.60	3.66	3.6	3.6	4.3	4.15	4.05	3.8
27.....	3.62	3.60	3.65	3.65	3.6	4.2	4.15	4.05	3.8
28.....	3.60	3.60	3.70	3.6	3.6	4.15	4.15	4.05	3.8
29.....	3.60	3.60	3.78	3.6	3.6	4.15	4.15	4.05	3.8
30.....	3.60	3.60	3.71	3.6	.....	4.3	4.15	4.05	3.75
31.....	3.58	.....	3.68	3.6	.....	4.3	.....	4.0	.....

Daily discharge, in second-feet, of Sweetwater River near Descanso, Cal., for 1909-1912.

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909.									
1.....	1.1	13	1.9	91	11	9.5	4.4	3.8	4.4
2.....	1.4	11	1.7	75	11	9.5	3.8	3.8	4.4
3.....	1.4	18	1.4	68	11	9.5	3.8	3.8	4.4
4.....	1.4	29	1.4	61	11	8.0	3.8	3.8	4.4
5.....	1.4	21	1.1	61	11	8.0	3.8	3.8	5.2
6.....	1.4	18	.8	49	11	8.0	3.8	8.0	6.0
7.....	1.4	18	3.2	39	11	8.0	3.8	6.0	4.4
8.....	1.4	100	4.4	39	11	8.0	3.8	6.0	4.4
9.....	1.8	61	4.4	39	11	8.0	3.8	4.4	4.4
10.....	2.2	55	29	34	11	8.0	3.8	4.4	4.4
11.....	1.8	117	25	34	11	7.0	3.8	4.4	4.4
12.....	2.7	156	25	34	11	7.0	3.8	3.8	4.4
13.....	9.5	177	25	29	11	7.0	3.8	3.8	4.4
14.....	18	108	21	29	11	6.0	3.8	8.0	4.4
15.....	4.4	91	21	29	11	6.0	3.8	7.0	4.4
16.....	3.2	75	21	29	11	6.0	3.8	7.0	3.8
17.....	3.2	61	21	29	11	6.0	3.8	6.0	3.8
18.....	2.7	55	21	29	11	6.0	3.8	6.0	3.8
19.....	2.2	49	21	29	11	6.0	3.8	4.4	3.8
20.....	2.2	44	21	29	11	6.0	3.8	4.4	3.8
21.....	11	145	21	29	11	6.0	3.8	4.4	3.8
22.....	506	115	39	25	11	6.0	4.4	4.4	3.2
23.....	21	89	44	21	11	5.2	4.4	4.4	3.2
24.....	15	60	39	21	11	5.2	3.8	3.8	3.2
25.....	18	31	44	21	11	5.2	3.8	3.8	3.2
26.....	15	2.7	75	18	11	5.2	3.8	3.8	3.2
27.....	29	2.2	166	18	11	5.2	3.8	3.2	3.2
28.....	21	2.2	126	18	11	5.2	3.8	3.2	3.2
29.....	15	.....	117	15	9.5	4.4	3.8	3.8	3.2
30.....	15	.....	108	13	9.5	4.4	3.8	8.0	3.2
31.....	13	.....	108	.....	9.5	.....	3.8	6.0	.....

Daily discharge, in second-feet, of Sweetwater River near Descanso, Cal., for 1909-1912—
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909-10.												
1.....	3.2	3.8	6.0	479	19	10	25	6.0	2.3	0.7	0.4	0.1
2.....	3.2	3.8	5.2	116	19	10	20	6.0	2.2	.7	.4	.1
3.....	3.2	3.8	5.2	138	16	10	20	7.0	2.2	.7	.4	.1
4.....	3.2	3.8	5.2	88	15	10	19	7.0	2.2	.7	.4	.1
5.....	3.2	3.8	6.0	78	15	9.0	17	7.0	2.0	.7	.4	.1
6.....	3.8	3.8	6.0	56	15	8.0	16	6.0	2.0	.7	.4	.05
7.....	3.8	3.8	6.0	47	15	8.0	15	6.0	1.9	.7	.3	.05
8.....	3.8	4.4	6.0	38	15	8.0	15	6.0	1.9	.7	.3	.05
9.....	3.8	5.2	91	32	14	8.0	14	6.0	1.8	.7	.3	.05
10.....	3.8	6.0	29	32	14	8.0	13	5.0	1.7	.7	.3	.05
11.....	3.8	6.0	6.0	31	14	8.0	15	4.9	1.7	.7	.3	.0
12.....	3.8	6.0	6.0	27	13	7.0	19	4.6	1.6	.7	.3	.0
13.....	3.8	6.0	6.0	26	13	7.0	15	4.6	1.5	.9	.3	.1
14.....	3.8	9.5	6.0	26	13	8.0	13	4.6	1.3	.8	.2	.2
15.....	4.4	15	6.0	57	13	9.0	11	4.6	1.2	.7	.2	.1
16.....	4.4	8.0	6.0	160	13	9.0	9.0	4.6	1.1	.7	.2	.0
17.....	3.8	6.0	5.2	88	13	10	9.0	4.6	1.1	.7	.2	.4
18.....	3.8	5.2	4.4	85	12	11	9.0	4.6	1.1	.7	.2	.4
19.....	3.8	5.2	3.2	75	16	10	8.0	4.6	1.0	.7	.2	.4
20.....	3.8	4.4	11	64	22	10	8.0	4.5	1.0	.5	.2	.4
21.....	3.8	4.4	55	50	14	9.0	7.0	4.2	1.0	.5	.2	.4
22.....	3.8	4.4	18	32	12	11	7.0	4.0	1.0	.5	.2	.4
23.....	3.8	4.4	13	32	11	12	6.0	3.9	1.0	.5	.2	.4
24.....	3.8	4.4	11	30	11	10	6.0	3.8	1.0	.5	.2	.4
25.....	3.8	4.4	11	22	11	17	5.0	3.5	.9	.5	.2	.4
26.....	3.8	15	11	20	11	21	5.0	3.5	.8	.5	.2	.4
27.....	3.8	11	9.5	20	11	21	5.0	3.0	.8	.4	.2	.4
28.....	3.8	8.0	9.5	19	10	39	5.0	2.9	.8	.5	.1	.3
29.....	3.8	7.0	9.5	18	.....	28	6.0	2.8	.8	.5	.1	.2
30.....	3.8	6.0	9.5	17	.....	27	6.0	2.5	.8	.5	.1	.2
31.....	3.8	.....	15	16	.....	26	.....	2.3	.....	.5	.1	.....
1910-11.												
1.....	0.1	1.5	2.0	0.3	107	16	18	4.2	1.1	0.4	0.6	0.5
2.....	.1	1.5	2.0	.3	50	17	26	3.8	.9	.4	.6	.5
3.....	.05	2.0	2.0	.3	69	26	19	3.4	.9	.4	.5	.5
4.....	.05	1.5	2.0	.2	182	146	17	3.1	.9	.4	.5	.5
5.....	.05	1.5	2.0	.2	182	76	14	2.8	.9	.4	.5	.5
6.....	.05	1.0	2.0	.2	182	28	14	2.5	.8	.5	.5	.5
7.....	.05	1.0	2.0	.2	182	23	22	2.2	.8	.5	.5	.5
8.....	.05	1.0	2.0	.2	8.0	20	17	1.9	.8	.5	.5	.5
9.....	.05	1.0	2.0	.3	6.0	20	10	1.6	.8	.5	.5	.5
10.....	.05	1.0	2.0	31	6.0	55	7.7	1.6	.8	.6	.5	.5
11.....	.05	1.0	2.5	168	16	43	7.7	1.6	.8	.6	.5	.4
12.....	.05	3.0	2.5	5	26	38	7.1	1.6	.8	.6	.5	.4
13.....	.1	2.0	2.5	3.7	29	30	6.1	1.6	.7	.6	.5	.4
14.....	.3	4.0	2.5	3.0	68	14	5.7	1.6	.7	.6	.5	.4
15.....	3.0	3.0	2.5	4.0	41	11	5.7	1.6	.6	.6	.5	.4
16.....	2.5	1.3	2.5	3.7	14	11	5.7	1.6	.6	.6	.5	.4
17.....	2.0	1.0	2.5	2.0	18	11	5.0	1.6	.6	.6	.5	.4
18.....	1.5	1.0	2.5	1.8	16	11	5.0	1.6	.5	.6	.5	.4
19.....	1.5	1.0	3.0	1.6	14	11	5.0	1.6	.5	.6	.4	.4
20.....	1.5	1.0	5.0	1.4	11	11	5.0	1.1	.4	.6	.4	.4
21.....	1.5	1.0	4.0	1.4	8.0	13	5.0	1.1	.4	.6	.4	.4
22.....	1.5	1.0	3.5	1.2	7.0	18	5.0	.9	.4	.6	.4	.5
23.....	1.5	1.5	3.0	1.2	6.0	18	4.2	1.1	.4	.6	.4	.5
24.....	1.5	1.5	3.0	1.0	7.0	13	3.5	1.2	.4	.6	.4	.5
25.....	1.5	1.5	3.0	4.0	10	12	3.5	1.2	.4	.6	.4	.5
26.....	1.5	1.5	3.0	2.6	15	12	4.6	1.4	.4	.6	.4	.5
27.....	1.5	1.5	3.0	2.0	15	11	5.4	1.4	.4	.8	.4	.5
28.....	1.5	1.5	3.0	2.4	0	11	5.0	1.4	.4	.8	.4	.5
29.....	1.5	1.5	3.0	2.2	.....	11	5.0	1.4	.4	.6	.4	.5
30.....	1.5	1.5	3.0	2.0	.....	10	4.6	1.3	.4	.6	.4	.6
31.....	1.5	.....	3.0	2.2	.....	8.9	.....	1.2	.....	.6	.4	.....

Daily discharge, in second-feet, of Sweetwater River near Descanso, Cal., for 1909-1912—
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.									
1.	0.6	0.7	0.8	1.2	0.8	1.5	26	12	3.8
2. ....	.5	.7	.8	1.2	.8	12.6	20	12	3.8
3. ....	.5	.7	.8	1.2	.8	2.7	12	8.5	4.9
4. ....	.5	.7	.8	1.2	.8	.8	12	8.5	3.8
5. ....	.5	.7	.8	.8	.8	22	12	8.5	3.8
6. ....	.6	.7	1.2	.8	.8	58	7	8.5	3.8
7. ....	.6	.7	1.4	.8	.8	44	5.4	8.5	2.7
8. ....	.6	.7	1.2	.8	.8	380	7	57	2.7
9. ....	.6	.7	1.1	1.2	.8	209	9.8	41	2.7
10. ....	.6	.7	.9	1.2	.8	20	16	16	2.7
11. ....	.6	.7	.9	1.2	.8	16	31	12	2.7
12. ....	.6	.8	.9	.8	.8	12	75	12	2.7
13. ....	.6	.8	.9	.8	.8	12	67	8.5	2.0
14. ....	.6	.8	.9	.8	.8	20	94	6.7	2.0
15. ....	.6	.8	.9	.8	.8	12	74	4.9	2.0
16. ....	.6	.8	.9	.8	.8	7	74	4.9	2.0
17. ....	.6	.8	1.4	.8	.8	5.4	66	4.9	2.0
18. ....	.6	.8	1.2	.8	.8	5.4	57	6.7	2.0
19. ....	.6	.8	1.1	.8	.8	5.4	49	6.7	1.4
20. ....	.6	.8	1.1	.8	.8	12	41	6.7	1.4
21. ....	.6	.8	1.1	.8	.8	9.8	27	6.7	1.4
22. ....	.6	.8	1.1	.8	.8	12	22	6.7	1.4
23. ....	.6	.8	1.1	.8	.8	12	16	6.7	1.4
24. ....	.6	.8	1.1	.8	.8	7.0	16	6.7	1.4
25. ....	.6	.8	1.4	.8	.8	5.4	16	6.7	1.4
26. ....	.6	.8	1.2	.8	.8	31	12	6.7	1.4
27. ....	.9	.8	1.2	1.2	.8	20	12	6.7	1.4
28. ....	.8	.8	1.5	.8	.8	16	12	6.7	1.4
29. ....	.8	.8	2.5	.8	.8	16	12	6.7	1.4
30. ....	.8	.8	1.6	.8	.8	31	12	6.7	1.0
31. ....	.7	-----	1.4	.8	-----	31	-----	4.9	-----

NOTE.—Daily discharge determined from rating curves applicable as follows: Jan. 1 to Dec. 31, 1909, well defined below 130 second-feet; Jan. 1 to Feb. 14, 1910, poorly defined; Feb. 15 to Mar. 2, 1910, indirect method for shifting channels; Mar. 3 to Mar. 12, 1910, poorly defined; Mar. 13 to Apr. 25, 1910, indirect method for shifting channels; Apr. 26 to Oct. 15, 1910, fairly well defined; Oct. 16, 1910, to Mar. 7, 1911, indirect method for shifting channels; Mar. 8, 1911, to Mar. 8, 1912, fairly well defined; Mar. 9 to Apr. 14, 1912, fairly well defined; Apr. 15 to June 30, 1912, fairly well defined. Discharge interpolated Feb. 22-25, 1909, Mar. 1-2, 1909, and May 1-8, 1911.

Monthly discharge of Sweetwater River near Descanso, Cal., for 1906-1912.

[Drainage area, 40 square miles.]

Month.	Discharge in second-feet.				Run-off.		Accuracy.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.	Total in acre-feet.	
1906.							
January.....	44	2.0	8.7	0.217	0.25	534	
February.....	86	4.2	22.3	.558	.58	1,240	
March.....	1,250	17.0	180	4.50	5.19	11,100	
April.....	84	26	48.5	1.21	1.35	2,880	
May.....	36	13	21.6	.540	.62	1,418	
June.....	15	2.6	7.0	.178	.20	412	
July.....	2.6	1.2	1.8	.046	.05	112	
August.....	4.6	1.1	1.8	.044	.05	108	
September.....	5.8	1.0	1.5	.038	.04	90	
The period.....						17,800	
1906-7.							
October.....	1.4	1.0	1.1	.028	.03	68	
November.....	12	1.1	3.0	.074	.08	177	
December.....	66	4.4	10.1	.252	.29	121	
January.....	134	9	56.7	1.42	1.64	3,490	B.
February.....	63	18	28.6	.715	.74	1,590	B.
March.....	123	24	65.0	1.62	1.87	4,000	B.
April.....	95	23	39.8	.995	1.11	2,370	B.
May.....	26	15	19.6	.490	.56	1,210	B.
June.....	15	6.5	9.8	.245	.27	583	B.
July.....	6.0	3.4	5.0	.125	.14	307	B.
August.....	3.7	2.3	2.9	.072	.08	178	B.
September.....	2.8	2.6	2.6	.065	.07	155	B.
The year.....	134	1.0	20.3	.508	6.88	14,200	
1907-8.							
October.....	12	3.0	4.5	.112	.13	277	B.
November.....	3.0	1.9	2.6	.065	.07	155	B.
December.....	6.5	1.9	3.8	.095	.11	234	B.
January.....	13	2	4.9	.122	.14	301	C.
February.....	34	6	13.8	.345	.37	794	C.
March.....	26	5	10.2	.255	.29	627	C.
April.....	16	3	5.4	.135	.15	321	C.
May.....	11	1.5	3.6	.090	.10	221	C.
June.....	1.5	.5	1.0	.025	.03	60	C.
July.....	.4	.4	.4	.010	.01	25	C.
August.....	1.0	.4	.5	.012	.01	31	C.
September.....	20	1.0	1.8	.045	.05	107	C.
The year.....	34	.4	4.38	.109	1.46	3,150	
1908-9.							
October.....	2.0	1	1.0	.025	.03	61	C.
November.....	1.0	1	1.0	.025	.03	60	C.
December.....	1.5	1	1.5	.038	.04	92	C.
January.....	506	1.1	24.0	.600	.69	1,480	B.
February.....	177	2.2	61.6	1.54	1.60	3,420	B.
March.....	166	.8	37.4	.935	1.08	2,300	A.
April.....	91	13	35.2	.880	.98	2,090	A.
May.....	11	9.5	10.9	.272	.31	670	A.
June.....	9.5	4.4	6.65	.166	.19	396	B.
July.....	4.4	3.8	3.87	.097	.11	238	B.
August.....	8.0	3.8	4.88	.122	.14	300	B.
September.....	6.0	3.2	4.00	.100	.11	238	B.
The year.....	506	.8	16.0	.40	5.31	11,300	

Monthly discharge of Sweetwater River near Descanso, Cal., for 1906-1912—Continued.

Month.	Discharge in second-feet.				Run-off.		Accu- racy.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.	Total in acre-feet.	
1909-10.							
October.....	4.4	3.2	3.74	.094	.11	230	B.
November.....	15	3.8	6.08	.152	.17	362	B.
December.....	91	5.2	12.8	.320	.37	787	A.
January.....	479	16	65.1	1.63	1.88	4,000	C.
February.....	22	10	13.9	.348	.36	772	C.
March.....	39	7	12.9	.322	.37	793	C.
April.....	25	5	11.6	.290	.32	690	C.
May.....	7	2.3	4.66	.116	.13	287	C.
June.....	2.3	.8	1.39	.035	.04	83	C.
July.....	.9	.4	.63	.016	.02	39	C.
August.....	.4	.1	.25	.006	.007	15	C.
September.....	.4	.0	.208	.005	.006	12	C.
The year.....	479	.0	11.1	.278	3.783	8,070	
1910-11.							
October.....	3	.05	.955	.024	.03	59	C.
November.....	4	1	1.51	.038	.04	90	C.
December.....	5	2	2.66	.066	.08	164	C.
January.....	168	.2	8.05	.201	.23	495	C.
February.....	182	.0	46.2	1.16	1.21	2,570	C.
March.....	146	8.9	24.4	.610	.70	1,500	C.
April.....	26	3.5	8.95	.224	.25	533	C.
May.....	4.2	.9	1.81	.045	.05	111	C.
June.....	1.1	.4	.63	.016	.02	37	C.
July.....	.8	.4	.57	.014	.02	35	C.
August.....	.6	.4	.46	.012	.01	28	C.
September.....	.6	.4	.47	.012	.01	28	C.
The year.....	182	.0	8.06	.202	2.65	5,650	
1911-12.							
October.....	.9	.5	.62	.016	.02	38	C.
November.....	.8	.7	.76	.019	.02	45	C.
December.....	2.5	.8	1.14	.028	.03	70	C.
January.....	1.2	.8	.90	.022	.03	55	B.
February.....	.8	.8	.80	.020	.02	46	B.
March.....	380	.8	33.8	.845	.97	2,080	B.
April.....	94	5.4	30.4	.760	.85	1,810	B.
May.....	57	4.9	10.5	.262	.30	646	B.
June.....	4.9	1.0	2.28	.057	.06	136	B.
The period.....						4,930	

NOTE.—Discharge 1906-1908 determined by the indirect method for shifting channels and from rating curves covering short periods of time.

MISCELLANEOUS MEASUREMENTS.

The following miscellaneous measurements have been made in the Sweetwater River basin:

Miscellaneous measurements in Sweetwater River drainage basin.

Date.	Stream.	Locality.	Discharge.
May 8, 1911	Ellis flume.....	½ mile below point of diversion, near Descanso.	Sec.-ft. 0.3
June 28, 1912	do.....	do.....	.1

SAN DIEGO RIVER BASIN.

SAN DIEGO RIVER AT LAKESIDE, CAL.

This station, which is located about three-fourths of a mile above the San Diego, Cuyamaca & Eastern Railway station, at crossing of the road from Lakeside to Padre Barona Valley, on the Elcajon land grant, was established December 3, 1905.

Chocolate Creek enters the river from the south 7 miles above, and San Vicente Creek from the north 1 mile below the gaging station. The drainage area at this point is 208 square miles.

The San Diego flume diverts water from the river at a point about 1,000 feet below the junction of Boulder Creek and about 15 miles above the gaging station. This flume diverts all the low flow of the river and a sufficient amount of the winter flow to fill La Mesa storage reservoir. The present capacity of the flume is about 16 second-feet. In addition, there are five pumping plants, located from 1 to 3 miles above the station, that obtain water for irrigation from wells along the banks of the stream. Their capacity ranges from about one-half to $2\frac{1}{2}$ second-feet. There are several similar pumping plants below the station. Cuyamaca reservoir, at the headwaters of Boulder Creek, has a capacity of 11,400 acre-feet.

The staff gage is in three sections on the left bank at the cable from which discharge measurements are made. The gage datum has remained unchanged since the station was established.

Discharge measurements of San Diego River near Lakeside, Cal., in 1906-1912.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1906.		<i>Feet.</i>	<i>Sec.-ft.</i>	1908.		<i>Feet.</i>	<i>Sec.-ft.</i>
Jan. 9	W. V. Hardy.....	2.67	0.4	Apr. 28	W. V. Hardy.....	3.31	4.8
24	do.....	3.04	12.5	May 5	do.....	3.45	16
Feb. 6	do.....	2.90	1.3	13	do.....	3.38	5.2
12	do.....	3.20	42	26	do.....	3.27	.5
20	do.....	3.28	45	July 7	do.....	3.26	.2
22	do.....	3.54	100				
22	do.....	3.50	92	1909.			
22	do.....	3.40	67	Jan. 21	W. V. Hardy.....	3.11	1.0
Mar. 9	do.....	3.10	17	22	Beadle and Hardy.....	6.00	2,500
13	do.....	4.50	714	22	do.....	7.00	3,440
13	do.....	4.80	995	23	do.....	4.60	1,090
14	do.....	4.10	280	23	W. V. Hardy.....	4.55	946
15	do.....	3.90	201	23	do.....	4.20	457
Apr. 7	do.....	4.50	403	24	do.....	3.80	236
17	do.....	4.25	183	25	do.....	3.60	162
21	do.....	4.15	98	Feb. 3	do.....	3.33	50
24	do.....	4.07	130	19	do.....	3.50	130
30	do.....	4.25	186	27	do.....	3.60	200
May 1	do.....	3.92	96	Mar. 6	do.....	3.52	105
9	do.....	3.86	62	7	Hardy and Thum.....	3.52	105
12	do.....	3.94	89	11	W. V. Hardy.....	3.38	71
June 20	C. H. Lee.....	3.45	2.8	22	do.....	3.60	163
Aug. 8	R. S. Hawley.....	3.39	.3	25	do.....	3.58	141
Dec. 19	W. V. Hardy.....	3.30	1.0	28	Beadle and Thum.....	4.25	457
				Apr. 6	W. V. Hardy.....	3.70	165
1907.				8	do.....	3.50	96
Jan. 3	W. V. Hardy.....	3.65	39	12	F. Thum and H. Thum.....	3.45	98
8	do.....	3.80	82	17	W. V. Hardy.....	3.40	67
10	do.....	4.10	234	23	do.....	3.35	43
18	do.....	4.60	667	May 2	F. Thum and H. Thum.....	3.30	29.8
19	do.....	4.20	419	9	Beadle and Thum.....	3.22	23.1
20	do.....	4.00	303	25	W. V. Hardy.....	3.20	10.3
Feb. 4	do.....	3.75	105	Dec. 29	R. E. Haines.....	3.04	15.2
11	do.....	3.60	74				
23	do.....	3.90	152	1910.			
Mar. 4	do.....	3.62	81	Jan. 12	W. V. Hardy.....	3.50	152
5	do.....	4.15	335	21	do.....	3.33	100
5	do.....	4.35	623	28	do.....	3.22	65
5	do.....	4.50	576	Feb. 12	do.....	3.14	38
11	do.....	3.85	187	18	do.....	3.17	36
18	do.....	3.75	116	24	do.....	3.18	44
23	do.....	3.95	268	28	do.....	3.15	36
Apr. 1	do.....	3.90	189	Mar. 5	do.....	3.13	22
13	do.....	3.80	145	11	do.....	3.12	18
24	do.....	3.65	91	23	do.....	3.13	20
May 3	do.....	3.60	62	Apr. 1	do.....	3.37	68
17	do.....	3.54	33	3	do.....	3.28	54
25	do.....	3.48	26	25	do.....	3.20	30
31	do.....	3.49	20	27	do.....	3.07	2.7
June 8	do.....	3.50	23	May 6	do.....	3.02	1.1
13	do.....	3.52	30	17	do.....	3.06	2.6
July 22	W. A. Lamb.....	3.30	.62	19	do.....	3.02	.82
Dec. 14	W. V. Hardy.....	3.16	.57	June 2	do.....	3.00	.33
19	do.....	3.18	.66	6	do.....	2.97	.31
30	do.....	3.20	1.10	Nov. 19	do.....	2.95	.23
							.0
1908.				1911.			
Jan. 3	W. V. Hardy.....	3.20	1.0	Feb. 10	W. V. Hardy.....	2.92	18
14	do.....	3.22	1.2	Mar. 9	do.....	3.47	108
18	do.....	3.23	1.4	10	do.....	3.95	272
24	do.....	3.36	13	24	do.....	3.60	176
24	do.....	3.40	23	Apr. 18	do.....	3.10	12
25	do.....	3.50	30	May 9	do.....	3.03	.7
28	do.....	3.60	105	Oct. 9	F. C. Ebert.....		Dry.
Feb. 10	do.....	3.80	133				
15	do.....	3.60	84	1912.			
22	do.....	3.50	44	Mar. 27	F. C. Ebert.....	3.52	98
26	do.....	3.45	39	28	do.....	3.30	68
Mar. 3	do.....	3.50	40	29	do.....	3.20	46
4	do.....	3.60	62	30	do.....	3.62	153
5	do.....	3.80	132	Apr. 13	do.....	3.94	240
13	do.....	3.48	30	May 1	do.....	2.93	27
20	do.....	3.45	26	4	do.....	2.88	21
25	do.....	3.38	14	7	do.....	2.86	16
Apr. 1	do.....	3.41	19	June 6	do.....	2.87	13
6	do.....	3.40	17	25	do.....	2.80	.7
12	do.....	3.34	4.5	29	do.....	2.78	a.6
17	do.....	3.35	3.9				
25	do.....	3.45	21				

a Estimated.

Daily gage height, in feet, of San Diego River near Lakeside, Cal., for 1905-1912.

Day.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1905-6.										
1.		2.66	2.90	3.32	4.9	4.2	3.8	3.45	3.4	3.35
2.		2.66	2.91	3.26	4.75	4.15	3.75	3.45	3.4	3.35
3.	2.60	2.66	2.91	3.20	4.65	4.0	3.75	3.45	3.4	3.35
4.	2.60	2.67	2.91	3.20	4.6	3.95	3.75	3.45	3.4	3.35
5.	2.60	2.68	2.92	3.28	4.5	3.9	3.7	3.45	3.4	3.3
6.	2.60	2.68	2.98	3.18	4.5	3.95	3.7	3.45	3.4	3.3
7.	2.60	2.68	3.02	3.12	4.5	3.9	3.7	3.4	3.4	3.3
8.	2.60	2.68	3.12	3.11	4.55	3.85	3.65	3.4	3.4	3.3
9.	2.60	2.68	3.02	3.10	4.45	3.85	3.65	3.4	3.4	
10.	2.62	2.67	3.12	3.08	4.4	3.8	3.65	3.4	3.4	
11.	2.62	2.66	3.15	3.08	4.35	3.85	3.6	3.4	3.4	
12.	2.63	2.65	3.18	3.20	4.35	3.85	3.6	3.4	3.4	
13.	2.63	2.65	3.18	4.50	4.25	3.9	3.6	3.4	3.4	
14.	2.63	2.66	3.20	4.10	4.2	3.85	3.6	3.4	3.4	
15.	2.63	2.66	3.28	3.96	4.2	3.8	3.55	3.4	3.4	
16.	2.63	2.67	4.00	4.05	4.2	3.8	3.55	3.4	3.4	
17.	2.63	2.67	3.64	4.65	4.2	3.8	3.5	3.4	3.4	
18.	2.64	2.67	3.48	4.36	4.2	3.75	3.5	3.4	3.4	
19.	2.64	2.74	3.41	4.25	4.15	3.8	3.5	3.4	3.4	
20.	2.66	3.91	3.28	3.94	4.1	3.75	3.5	3.4	3.4	
21.	2.66	3.40	3.26	3.88	4.15	3.75	3.5	3.4	3.4	
22.	2.66	3.35	3.54	3.84	4.1	3.75	3.5	3.4	3.4	
23.	2.65	3.68	3.48	3.90	4.1	3.75	3.5	3.4	3.4	
24.	2.65	3.07	3.38	5.58	4.05	3.75	3.5	3.4	3.4	
25.	2.65	3.00	3.24	7.00	4.05	3.75	3.45	3.4	3.4	
26.	2.65	2.96	3.22	6.88	4.0	3.75	3.45	3.4	3.35	
27.	2.67	2.92	3.18	5.80	4.0	3.85	3.45	3.4	3.35	
28.	2.67	2.92	3.18	5.42	4.05	3.75	3.5	3.4	3.35	
29.	2.67	2.92		5.14	4.2	3.95	3.5	3.4	3.35	
30.	2.66	2.91		4.96	4.25	3.85	3.5	3.4	3.35	
31.		2.90		4.99		3.8		3.4	3.35	
1906-7.										
1.		3.8	3.95	3.65	3.95	3.65	3.5	3.30		
2.		3.85	3.8	3.65	4.0	3.6	3.5	3.28		
3.		3.65	3.75	3.6	4.1	3.6	3.5	3.27		
4.	3.35	3.6	3.75	3.6	4.0	3.6	3.5	3.28		
5.	3.3	3.6	3.7	4.4	4.0	3.65	3.5	3.26		
6.	3.3	3.95	3.7	4.1	4.0	3.65	3.5	3.28		
7.	3.3	3.9	3.65	4.1	3.95	3.7	3.5	3.3		
8.	3.3	3.8	3.6	4.1	3.9	3.65	3.55	3.3		
9.	3.35	3.8	3.6	4.0	3.9	3.6	3.5	3.28		
10.	3.35	4.1	3.6	3.9	3.85	3.6	3.5	3.27		
11.	3.3	4.4	3.55	3.85	3.85	3.6	3.5	3.26		
12.	3.4	3.95	3.5	3.9	3.85	3.6	3.5	3.28		
13.	3.6	3.8	3.5	3.9	3.8	3.6	3.5	3.28		
14.	3.4	3.9	3.55	3.8	3.75	3.6	3.5	3.28		
15.	3.3	4.0	3.5	3.8	3.75	3.55	3.45	3.28		
16.	3.3	3.95	3.55	3.85	3.8	3.55	3.45	3.28		
17.	3.3	3.95	4.0	3.8	3.8	3.55	3.45	3.29		
18.	3.3	5.0	3.8	3.7	3.75	3.5	3.4	3.3		
19.	3.3	4.2	3.75	3.75	3.7	3.5	3.4	3.29		
20.	3.3	4.0	3.7	3.7	3.7	3.5	3.4	3.29		
21.	3.35	4.0	3.65	4.0	3.7	3.5	3.4	3.3		
22.	3.3	3.95	3.7	3.95	3.7	3.5	3.4	3.29		
23.	3.3	3.9	3.7	3.9	3.65	3.5	3.4	3.28		
24.	3.3	3.8	3.65	3.85	3.65	3.5	3.4	3.3		
25.	3.3	3.8	3.6	3.8	3.7	3.5	3.4	3.3		
26.	3.35	3.75	3.7	4.8	3.65	3.5	3.35	3.28		
27.	3.4	3.7	3.7	4.4	3.7	3.5	3.35	3.29		
28.	3.8	3.7	3.65	4.1	3.6	3.5	3.3	3.29		
29.	4.15	3.7		3.95	3.65	3.5	3.3	3.28		
30.	3.8	3.8		3.9	3.7	3.5	3.3	3.28		
31.	3.75	3.7		3.95		3.5		3.27		

Daily gage height, in feet, of San Diego River near Lakeside, Cal., for 1905-1912—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1907-8.												
1.....			3.1	3.2	3.3	3.6	3.45	3.3	3.3	3.3		
2.....			3.1	3.2	3.3	3.6	3.45	3.3	3.3	3.3		
3.....			3.1	3.2	3.65	3.5	3.4	3.35	3.3	3.3		
4.....			3.1	3.2	4.25	3.55	3.4	3.5	3.3	3.25		
5.....			3.1	3.2	3.7	3.8	3.4	3.45	3.3	3.25		
6.....			3.1	3.2	3.5	3.75	3.4	3.4	3.3	3.25		
7.....			3.15	3.2	3.5	3.65	3.4	3.35	3.3	3.25		
8.....			3.15	3.2	3.4	3.6	3.4	3.35	3.3	3.25		
9.....			3.15	3.2	3.45	3.6	3.4	3.3	3.3	3.25		
10.....		3.15	3.10	3.2	4.0	3.55	3.4	3.3	3.3	3.25		
11.....		3.1	3.15	3.2	3.85	3.5	3.4	3.3	3.3	3.25		
12.....		3.1	3.15	3.2	3.8	3.5	3.4	3.3	3.3	3.25		
13.....		3.1	3.15	3.2	3.9	3.5	3.35	3.35	3.3	3.25		
14.....		3.05	3.15	3.2	3.7	3.45	3.35	3.4	3.3	3.25		
15.....		3.05	3.15	3.35	3.6	3.45	3.35	3.35	3.3	3.25		
16.....		3.05	3.15	3.4	3.6	3.45	3.3	3.3	3.3	3.25		
17.....		3.1	3.15	3.4	3.6	3.45	3.35	3.3	3.3	3.25		
18.....		3.1	3.15	3.2	3.5	3.45	3.35	3.3	3.3	3.2		
19.....		3.1	3.2	3.2	3.5	3.45	3.35	3.3	3.3	3.2		
20.....		3.1	3.15	3.2	3.5	3.45	3.3	3.3	3.3	3.2		
21.....		3.1	3.15	3.2	3.5	3.45	3.3	3.3	3.3	3.1		
22.....		3.1	3.15	3.2	3.5	3.4	3.35	3.3	3.3	3.1		
23.....		3.1	3.15	3.25	3.55	3.4	3.5	3.3	3.3	3.1		
24.....		3.1	3.2	3.4	3.5	3.35	3.5	3.3	3.3	3.1		
25.....		3.1	3.2	3.5	3.5	3.4	3.45	3.3	3.3	3.1		
26.....		3.1	3.2	3.6	3.45	3.6	3.4	3.3	3.3	3.0		
27.....		3.1	3.2	3.45	3.4	3.7	3.4	3.3	3.3			
28.....		3.1	3.2	3.45	3.4	3.6	3.35	3.3	3.3			
29.....		3.1	3.2	3.6	3.45	3.5	3.3	3.3	3.3			
30.....		3.1	3.2	3.5		3.45	3.3	3.3	3.3			
31.....			3.2	3.4		3.45		3.3	3.3			
1908-9.												
1.....				3.25	3.35	3.5	3.65	3.3	3.15	3.1	3.1	
2.....				3.25	3.3	3.5	3.6	3.3	3.1	3.1	3.1	
3.....				3.25	3.35	3.45	3.55	3.3	3.1	3.1	3.9	
4.....				3.25	3.8	3.5	3.5	3.3	3.1	3.1	3.6	
5.....				3.25	3.6	3.45	3.55	3.25	3.1	3.15	3.6	
6.....				3.25	3.5	3.45	3.6	3.25	3.1	3.15	3.0	
7.....				3.25	3.5	3.5	3.5	3.25	3.1	3.15	3.0	
8.....				3.25	5.0	3.5	3.5	3.25	3.1	3.15	3.0	
9.....				3.25	3.75	3.4	3.45	3.25	3.1	3.15		
10.....				3.25	3.65	3.4	3.45	3.25	3.1	3.15		
11.....				3.25	3.85	3.4	3.4	3.25	3.10	3.15		
12.....				3.25	3.85	3.4	3.45	3.25	3.15	3.15		
13.....				3.15	4.5	3.3	3.4	3.2	3.1	3.15		
14.....				3.3	4.0	3.3	3.4	3.2	3.1	3.15		
15.....				3.35	3.8	3.3	3.4	3.2	3.1	3.15		
16.....				3.1	3.75	3.3	3.4	3.2	3.1	3.15		
17.....			3.2	3.1	3.7	3.3	3.4	3.2	3.1	3.15		
18.....			3.2	3.1	3.6	3.3	3.4	3.2	3.15	3.15		
19.....			3.2	3.1	3.55	3.3	3.4	3.2	3.15	3.15		
20.....			3.2	3.1	3.55	3.3	3.4	3.2	3.15	3.15		
21.....			3.25	3.1	4.5	3.3	3.4	3.2	3.15	3.15		
22.....			3.25	6.05	3.85	3.65	3.4	3.2	3.15	3.15		
23.....			3.25	4.5	3.8	3.6	3.35	3.2	3.15	3.15		
24.....			3.25	3.75	3.7	3.65	3.35	3.2	3.15	3.1		
25.....			3.25	3.6	3.65	3.6	3.3	3.2	3.15	3.1		
26.....			3.25	3.6	3.6	3.5	3.3	3.2	3.15	3.1		
27.....			3.25	3.5	3.6	4.05	3.3	3.2	3.15	3.1		
28.....			3.25	3.7	3.5	4.15	3.3	3.2	3.15	3.1		
29.....			3.25	3.55		3.95	3.3	3.2	3.15	3.1		
30.....			3.25	3.45		3.8	3.35	3.2	3.1	3.1		
31.....			3.25	3.35		3.7		3.15		3.1		

Daily gage height, in feet, of San Diego River near Lakeside, Cal., for 1905-1912—Contd.

Day.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.
1909-10.								
1.....		4.02	3.23	3.20	3.36	3.08	3.00	2.98
2.....		4.15	3.30	3.18	3.33	3.08	3.00	2.98
3.....		3.95	3.25	3.15	3.38	3.08	3.00	3.00
4.....		3.78	3.20	3.12	3.30	3.07	2.95	3.00
5.....	3.2	3.65	3.12	3.13	3.29	3.10	2.95	3.00
6.....	3.2	3.52	3.20	3.12	3.27	3.06	2.95	3.00
7.....	3.2	3.48	3.18	3.18	3.30	3.07	2.97	2.98
8.....	3.2	3.48	3.20	3.18	3.27	3.06	3.00	2.95
9.....	3.2	3.40	3.20	3.19	3.20	3.05	3.00	
10.....	3.8	3.50	3.20	3.15	3.18	3.04	2.98	
11.....	3.2	3.45	3.15	3.12	3.20	3.04	2.95	
12.....	2.85	3.50	3.15	3.17	3.29	3.03	2.90	
13.....	2.75	3.40	3.11	3.11	3.40	3.03	2.90	
14.....	2.7	3.35	3.11	3.08	3.30	3.03	2.98	
15.....	2.6	3.35	3.11	3.09	3.25	3.00	2.97	
16.....	2.55	3.70	3.15	3.16	3.20	3.02	2.98	
17.....	2.65	3.95	3.12	3.10	3.18	3.01	2.97	
18.....	2.65	3.55	3.17	3.11	3.14	3.02	2.98	
19.....	2.65	3.45	3.20	3.11	3.16	3.03	2.96	
20.....	2.75	3.40	3.22	3.13	3.15	3.01	2.96	
21.....	3.4	3.35	3.45	3.11	3.12	3.02	2.96	
22.....	3.5	3.30	3.22	3.14	3.11	3.02	2.98	
23.....	3.35	3.25	3.19	3.15	3.11	3.01	2.98	
24.....	3.45	3.22	3.18	3.14	3.08	3.02	2.98	
25.....	3.2	3.21	3.19	3.13	3.07	3.03	2.98	
26.....	3.1	3.28	3.20	3.25	3.09	3.03	2.98	
27.....	3.1	3.25	3.15	3.30	3.05	3.03	3.00	
28.....	3.1	3.22	3.17	3.55	3.03	3.03	2.98	
29.....	3.0	3.23		3.75	3.02	3.02	2.98	
30.....	3.0	3.20		3.7	3.03	3.01	3.00	
31.....	3.0	3.18		3.5		3.01		

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.
1911.							
1.....		2.79	3.35	3.10	3.10	3.00	
2.....		2.82	3.25	3.40	3.10	3.00	2.8
3.....		2.91	3.20	3.25	3.05	3.00	2.8
4.....		4.15	3.84	3.20	3.04	3.00	2.8
5.....		3.80	3.60	3.18	3.00	3.00	2.8
6.....		3.32	3.46	3.18	3.00	3.00	2.8
7.....		3.23	3.37	3.30	3.00	3.00	2.8
8.....		3.05	3.50	3.40	3.00	3.00	
9.....		3.00	3.50	3.30	3.00	3.00	
10.....		2.92	3.68	3.25	3.02	3.00	
11.....		2.90	3.60	3.20	3.00	3.00	
12.....		2.91	3.50	3.15	3.00	3.00	
13.....		3.05	3.42	3.12	3.00	3.00	
14.....		3.70	3.33	3.12	3.00	3.00	
15.....		3.33	3.32	3.12	3.00	3.00	
16.....		3.29	3.30	3.12	3.04	3.00	
17.....		3.18	3.27	3.10	3.02	3.00	
18.....		3.15	3.25	3.10	3.00	3.00	
19.....		3.10	3.23	3.09	3.00	3.00	
20.....		3.09	3.20	3.08	3.00	3.00	
21.....		3.05	3.20	3.08	3.00	3.00	
22.....		3.01	3.20	3.10	3.00	3.00	
23.....		3.02	3.20	3.10	3.00	3.00	
24.....		3.03	3.19	3.08	3.00	3.00	
25.....		3.07	3.18	3.08	3.00	3.00	
26.....	3.00	3.15	3.15	3.06	3.00	3.00	
27.....	2.95	3.12	3.11	3.10	3.00	3.00	
28.....	2.90	3.23	3.12	3.11	3.00	3.00	
29.....	2.90		3.10	3.10	3.00	3.00	
30.....	2.88		3.09	3.10	3.00	3.00	
31.....	2.90		3.10		3.00		

Daily gage height, in feet, of San Diego River near Lakeside, Cal., for 1905-1912—Contd.

Day.	Mar.	Apr.	May.	June.	Day.	Mar.	Apr.	May.	June.
1912.					1912.				
1.....		3.6	2.95	2.8	16.....	3.05	3.85	3.0	2.7
2.....		3.4	3.0	2.75	17.....	3.0	3.8	2.9	2.7
3.....		3.3	3.0	2.75	18.....	2.95	3.5	2.9	2.75
4.....		3.2	2.95	2.75	19.....	2.9	3.4	2.9	2.7
5.....		3.2	2.9	2.75	20.....	2.85	3.3	2.9	2.75
6.....		3.2	2.9	2.75	21.....	2.9	3.3	2.85	2.75
7.....		3.15	2.85	2.8	22.....	3.2	3.2	2.9	2.75
8.....		3.05	3.6	2.8	23.....	3.5	3.2	2.9	2.75
9.....		3.05	3.8	2.8	24.....	3.0	3.1	2.9	2.7
10.....	4.2	3.25	3.4	2.75	25.....	2.95	3.1	2.9	2.7
11.....	3.5	3.8	3.2	2.75	26.....	3.3	3.05	2.9	2.7
12.....	2.8	4.15	3.2	2.75	27.....	3.7	3.0	2.9	2.7
13.....	3.85	4.0	3.1	2.75	28.....	3.3	3.0	2.85	2.7
14.....	3.7	3.95	3.1	2.75	29.....	3.2	3.0	2.85	2.8
15.....	3.2	4.0	3.0	2.7	30.....	3.6	3.0	2.85	2.75
					31.....	3.8		2.8	

NOTE.—The river was dry or water standing in pools Sept. 9 to Dec. 3, 1906; Aug. 1 to Nov. 9, 1907; July 27 to Dec. 16, 1908; Aug. 9 to Dec. 4, 1909; July 9, 1910, to Jan. 25, 1911; and July 1, 1911, to Mar. 9, 1912.

Daily discharge, in second-feet, of San Diego River near Lakeside, Cal., for 1909-1912.

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.
1909.								
1.....	0.2	50	135	135	31	9	5	1
2.....	.2	45	125	120	30	9	5	1
3.....	.2	55	105	105	29	9	5	260
4.....	.2	235	110	85	28	9	5	125
5.....	.2	145	105	105	27	9	5	125
6.....	.2	110	105	125	26	8	4	2
7.....	.2	110	105	100	25	8	4	1
8.....	.2	1,310	100	96	24	8	4	1
9.....	.2	225	70	96	23	8	4	
10.....	.2	170	70	96	22	8	4	
11.....	.2	285	75	97	22	8	4	
12.....	.2	285	75	98	21	8	4	
13.....	1.0	810	50	92	20	7	4	
14.....	5.0	390	50	86	19	7	3	
15.....	10	265	50	80	19	7	3	
16.....	8.0	240	50	74	18	7	3	
17.....	6.0	215	55	67	17	7	3	
18.....	4.0	170	55	63	16	7	3	
19.....	3.0	150	55	59	15	7	3	
20.....	2.0	150	55	55	15	7	3	
21.....	1.0	850	55	51	14	6	3	
22.....	2,550	320	180	47	13	6	2	
23.....	850	290	160	43	12	6	2	
24.....	200	240	175	42	11	6	2	
25.....	162	220	150	40	10	6	2	
26.....	160	200	105	39	10	6	2	
27.....	120	200	360	37	10	6	2	
28.....	200	145	390	36	10	6	2	
29.....	165		265	34	10	5	2	
30.....	95		190	33	9	5	1	
31.....	55		150		9		1	

Daily discharge, in second-feet, of San Diego River near Lakeside, Cal., for 1909-1912—Con.

Day.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.
1909-10.								
1.		391	65	46	69	3.6	0.6	0.4
2.		462	86	38	62	3.6	.6	.4
3.		355	70	30	74	3.6	.6	.6
4.		273	56	22	54	3.0	.2	.6
5.	1	217	36	22	52	5.0	.2	.6
6.	1	164	56	20	47	2.4	.2	.6
7.	1	149	50	30	54	3.0	.3	.3
8.	1	149	56	32	47	2.4	.6	.2
9.	1	120	56	32	32	2.0	.6	
10.	225	156	56	24	29	1.6	.4	
11.	30	138	43	18	32	1.6	.2	
12.	6	156	41	27	52	1.2	.1	
13.	4	120	30	17	80	1.2	.1	
14.	3	102	29	12	54	1.2	.4	
15.	2	102	27	14	43	.6	.3	
16.	2	238	35	25	30	1.0	.4	
17.	2	355	27	15	26	.8	.3	
18.	2	176	36	17	18	1.0	.4	
19.	2	138	44	17	22	1.2	.3	
20.	4	120	50	20	20	.8	.3	
21.	75	102	124	17	14	1.0	.3	
22.	90	86	52	22	11	1.0	.4	
23.	50	71	46	23	11	.8	.4	
24.	85	62	44	22	5.0	1.0	.4	
25.	35	59	46	20	2.7	1.2	.4	
26.	20	80	49	43	4.3	1.2	.4	
27.	20	70	37	54	2.0	1.2	.6	
28.	20	62	39	125	1.2	1.2	.4	
29.	15	65		194	1.0	1.0	.4	
30.	15	56		176	1.2	.8	.6	
31.	15	50		109		.8		

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	Day.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911.							1911.						
1.		2	84	17	9	0.2	16.		97	67	16	1.2	0.2
2.		4	56	88	9	.2	17.		65	58	12	.4	.2
3.		16	38	44	3	.2	18.		50	52	12	.2	.2
4.		655	290	33	2	.2	19.		40	46	10	.2	.2
5.		375	167	29	.3	.2	20.		37	40	8	.2	.2
6.		123	113	29	.3	.2	21.		23	40	8	.2	.2
7.		93	80	57	.3	.2	22.		18	40	11	.2	.2
8.		43	120	83	.3	.2	23.		20	40	11	.2	.2
9.		32	117	55	.3	.2	24.		18	35	7	.2	.2
10.		18	140	43	.5	.2	25.		24	32	7	.2	.2
11.		14	176	32	.2	.2	26.	32	37	27	5	.2	.2
12.		16	133	22	.2	.2	27.	22	30	20	10	.2	.2
13.		37	105	16	.2	.2	28.	14	56	21	11	.2	.2
14.		295	75	16	.2	.2	29.	14		17	10	.2	.2
15.		116	72	16	.2	.2	30.	30		15	9	.2	.2
							31.	14		17		.2	

Daily discharge, in second-feet, of San Diego River near Lakeside, Cal., for 1909-1912—Con.

Day.	Mar.	Apr.	May.	June.	Day.	Mar.	Apr.	May.	June.
1912.					1912.				
1.....	0	150	29	2	16.....	26	245	26	.2
2.....	0	108	35	.5	17.....	21	202	16	.2
3.....	0	82	35	.5	18.....	16	125	16	.5
4.....	0	64	29	.5	19.....	12	103	16	.2
5.....	0	64	23	.5	20.....	9	82	16	.5
6.....	0	64	20	.5	21.....	12	82	12	.5
7.....	0	56	16	1.5	22.....	46	64	15	.5
8.....	0	42	145	1.5	23.....	100	64	15	.5
9.....	0	42	195	1.5	24.....	21	48	15	.2
10.....	285	73	95	.5	25.....	16	48	15	.2
11.....	100	202	55	.5	26.....	62	42	14	.2
12.....	6	307	55	.5	27.....	146	35	13	.2
13.....	184	260	38	.5	28.....	62	35	8	.2
14.....	146	245	38	.5	29.....	46	35	7	1.0
15.....	46	260	26	.2	30.....	150	35	6	.5
					31.....	202		2	

NOTE.—Daily discharge determined as follows: Jan. 1 to Aug. 8, 1909, and Dec. 5 to 31, 1909, estimated from gage heights, precipitation records, and local conditions; Jan. 1 to Feb. 12, 1910, from rating curve, fairly well defined between 30 and 180 second-feet; Feb. 13 to Mar. 11, 1910, indirect method for shifting channels; Mar. 12 to Apr. 16, 1910, from rating curve, fairly well defined between 16 and 80 second-feet; Apr. 17 to 24, 1910, indirect method for shifting channels; Apr. 25 to July 8, 1910, from rating curve, fairly well defined; Jan. 26 to May 10, 1911, indirect method for shifting channels; May 11 to June 30, 1911, estimated; Mar. 10 to 29, 1912, not well defined; Mar. 30 to May 5, 1912, not well defined; May 6 to June 30, 1912, not well defined. River was dry on days for which no discharge is given.

Monthly discharge of San Diego River near Lakeside, Cal., for 1906-1908.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1906.					
January.....	212	0.6	16.7	1,030	
February.....	252	1.4	43.6	2,420	
March.....	3,800	15	683	42,000	
April.....	890	105	277	16,500	
May.....	170	39	65.7	4,040	
June.....	51	2.8	15.1	898	
July.....	2.8	.8	1.2	74	
August.....	.8	.4	.6	37	
September.....	.3	.0	.1	6	
The period.....				67,000	
1906-7.					
October.....	0	0	0	0	
November.....	0	0	0	0	
December.....	152	0	11	676	
January.....	1,050	27	183	11,300	C.
February.....	260	32	87.6	4,870	C.
March.....	940	60	242	14,900	C.
April.....	320	68	157	9,340	C.
May.....	83	23	45.4	2,790	C.
June.....	23	.6	15	893	D.
July.....	.6	.2	.44	27	
August.....	0	0	0	0	
September.....	0	0	0	0	
The year.....			61.8	44,800	
1907-8.					
October.....	0	0	0	0	
November.....	.5	.1	.2	12	D.
December.....	1	.3	.6	37	D.
January.....	100	1	15.5	953	C.
February.....	300	14	76	4,370	C.
March.....	130	12	44	2,700	C.
April.....	30	4	11.6	690	C.
May.....	25	.5	5	307	C.
June.....	.5	.2	.4	24	D.
July.....	.2	0	.1	6	D.
August.....	0	0	0	0	
September.....	0	0	0	0	
The year.....			12.4	9,100	
1908.					
October.....	0	0	0	0	
November.....	0	0	0	0	
December.....	.2	0	.1	6	D.

SAN DIEGO FLUME NEAR LAKESIDE, CAL.

The San Diego flume which diverts water from San Diego River 12½ miles below the Cuyamaca reservoir, is 30 miles long, 6 feet wide, and 16 inches deep, and has a capacity of 16 second-feet. It discharges into the La Mesa reservoir, about 8 miles northeast of San Diego. Prior to 1907 this system supplied water to the city of San Diego for municipal purposes, but now supplies water for irrigation for about 6,000 acres. There is considerable loss between the intake and the gaging station, due to leakage in the flume. Occasionally water is diverted into this flume from the South Fork of San Diego River. On the Capitan Grande Indian Reservation there is a diversion from the flume for irrigation, so the following record does not show the total diversion.

The station, which is located one-fourth mile above the trestle crossing at Los Coches Creek, about 3 miles southeast of Lakeside, was established January 1, 1907.

Discharge measurements are made at the reference point at the patrolman's cabin.

Discharge measurements of San Diego flume near Lakeside, Cal., in 1908-1912.

Date.	Hydrographer.	Gage height.	Discharge.	Date.	Hydrographer.	Gage height.	Discharge.
1908.		<i>Fect.</i>	<i>Sec.-ft.</i>	1910.		<i>Fect.</i>	<i>Sec.-ft.</i>
May 27	W. V. Hardy	0.66	9.6	Apr. 1	W. V. Hardy	0.68	11
Nov. 13	.....do.....	.50	5.8	3	.....do.....	.51	6.8
Dec. 6	.....do.....	.27	1.8	25	.....do.....	.72	12
				27	.....do.....	.76	12
1909.				May 6	.....do.....	.72	11
Jan. 25	W. V. Hardy .....	.52	6.3	23	.....do.....	.57	8
Mar. 23	.....do.....	.51	6.2	June 3	.....do.....	.66	9.5
25	.....do.....	.74	12.4	26	.....do.....	.64	8.1
Apr. 6	.....do.....	.42	4.5	Nov. 18	.....do.....	.30	2.7
19	Clapp and Hardy .....	.74	11.5				
May. 25	W. V. Hardy .....	.80	11.6	1911.			
				Feb. 10	W. V. Hardy .....	.82	14
1910.				Oct. 9	F. C. Ebert		0
Jan. 22	W. V. Hardy .....	.35	3.3				
Feb. 12	.....do.....	.53	7.8	1912.			
Mar. 4	.....do.....	.56	8.8	May 6	F. C. Ebert .....	.76	12.8
11	.....do.....	.63	9.8	June 29	.....do.....	.68	10.4

Daily gage height, in feet, of San Diego flume near Lakeside, Cal., for 1907-1912.

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1907.									
1.....	0.64	0.21	0.33	0.54	0.71	0.88	0.62	0.65	0.67
2.....	.65	.17	.32	.55	.71	.78	.64	.62	.60
3.....	.75	.17	.31	.52	.71	.70	.69	.60	.54
4.....	.67	.17	.49	.53	.74	.67	.71	.57	.57
5.....	.58	.24	.43	.53	.67	.53	.70	.57	.67
6.....	.56	.22	.41	.50	.62	.55	.70	.58	.65
7.....	.55	.21	.41	.52	.62	.55	.70	.56	.64
8.....	.67	.23	.31	.52	.62	.61	.71	.55	.59
9.....	.47	.24	.31	.50	.62	.65	.69	.52	.60
10.....	.43	.23	.31	.50	.62	.60	.66	.55	.66
11.....	.29	.24	.30	.50	.73	.62	.66	.61	.66
12.....	.38	.24	.32	.58	.79	.65	.61	.62	.67
13.....	.44	.39	.34	.58	.76	.73	.60	.66	.67
14.....	.49	.47	.35	.55	.69	.88	.60	.65	.68
15.....	.35	.46	.33	.54	.67	.60	.66	.65	.68
16.....	.36	.50	.33	.53	.67	.55	.69	.81	.66
17.....	.38	.49	.33	.52	.66	.60	.69	.67	.67
18.....	.25	.47	.35	.51	.67	.64	.66	.66	.67
19.....	.27	.40	.33	.50	.67	.62	.62	.66	.68
20.....	.30	.27	.35	.50	.65	.60	.65	.67	.68
21.....	.32	.27	.41	.50	.67	.64	.66	.69	.64
22.....	.35	.30	.40	.65	.69	.67	.65	.65	.49
23.....	.31	.27	.38	.71	.72	.65	.65	.60	.51
24.....	.33	.44	.44	.71	.81	.65	.65	.58	.67
25.....	.23	.54	.38	.71	.82	.62	.65	.57	.67
26.....	.22	.52	.32	.71	.83	.64	.67	.59	.67
27.....	.26	.45	.36	.71	.84	.64	.67	.65	.66
28.....	.27	.33	.38	.71	.85	.62	.68	.66	.67
29.....	.51	.....	.38	.71	.88	.61	.65	.65	.62
30.....	.42	.....	.36	.71	.88	.62	.64	.67	.64
31.....	.23	.....	.48	.....	.88	.....	.65	.68	.....

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1907-8.												
1.....	0.61	0.43	0.50	0.43	0.71	0.34	0.44	0.71	0.59	0.57	0.62	0.58
2.....	.61	.38	.30	.42	.71	.34	.45	.76	.53	.58	.62	.54
3.....	.64	.43	.42	.40	.79	.36	.45	.76	.53	.58	.64	.56
4.....	.61	.42	.32	.40	.49	.33	.55	.74	.52	.56	.60	.60
5.....	.59	.41	.52	.40	.56	.28	.53	.72	.51	.53	.56	.58
6.....	.58	.36	.31	.39	.58	.27	.53	.71	.52	.54	.58	.52
7.....	.60	.40	.56	.31	.60	.27	.55	.70	.60	.54	.51	.50
8.....	.57	.44	.55	.29	.62	.27	.62	.69	.60	.56	.54	.51
9.....	.52	.44	.25	.30	.62	.26	.64	.68	.50	.59	.58	.56
10.....	.54	.30	.15	.30	.50	.26	.62	.68	.60	.60	.58	.58
11.....	.54	.44	.18	.40	.49	.31	.62	.68	.55	.61	.41	.52
12.....	.53	.42	.24	.42	.48	.43	.71	.71	.60	.59	.26	.52
13.....	.51	.39	.15	.50	.54	.43	.71	.73	.58	.59	.35	.46
14.....	.52	.28	.16	.50	.31	.43	.71	.70	.53	.60	.57	.51
15.....	.64	.08	.38	.48	.28	.42	.69	.68	.62	.60	.58	.56
16.....	.61	.18	.11	.49	.40	.41	.69	.66	.54	.61	.49	.60
17.....	.55	.25	.08	.54	.60	.41	.69	.65	.55	.62	.54	.61
18.....	.48	.12	.03	.52	.....	.42	.68	.61	.57	.58	.56	.61
19.....	.47	.21	.02	.46	.....	.42	.65	.57	.57	.55	.57	.62
20.....	.49	.....	.26	.48	.48	.45	.66	.51	.57	.50	.59	.55
21.....	.39	.....	.29	.55	.48	.41	.69	.57	.55	.50	.58	.54
22.....	.46	.....	.41	.57	.48	.42	.72	.53	.55	.59	.58	.52
23.....	.55	.10	.25	.60	.48	.41	.64	.54	.56	.60	.57	.61
24.....	.49	.51	.25	.66	.48	.40	.69	.49	.54	.58	.56	.66
25.....	.52	.54	.38	.71	.48	.39	.72	.50	.55	.59	.57	.52
26.....	.54	.54	.....	.71	.48	.45	.71	.58	.55	.42	.60	.64
27.....	.51	.55	.24	.71	.49	.46	.69	.61	.57	.54	.59	.64
28.....	.52	.29	.38	.71	.46	.39	.69	.61	.58	.56	.59	.64
29.....	.53	.42	.50	.68	.36	.41	.71	.58	.58	.55	.59	.62
30.....	.34	.33	.64	.71	.....	.45	.70	.58	.57	.56	.59	.59
31.....	.36	.....	.34	.73	.....	.45	.....	.59	.....	.61	.60	.....

Daily gage height, in feet, of San Diego flume near Lakeside, Cal., for 1907-1912—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1908-9.												
1.....	0.55	0.50	0.47	0.47	0.80	0.02	0.38	0.77	0.68	0.46	0.47	0.58
2.....	.59	.48	.44	.50	.43	.....	.39	.75	.60	.46	.55	.62
3.....	.59	.45	.33	.43	.33	.....	.31	.76	.61	.48	.59	.55
4.....	.57	.46	.10	.33	.40	.17	.46	.76	.56	.53	.59	.46
5.....	.56	.48	.27	.30	.36	.18	.41	.75	.28	.54	.60	.50
6.....	.54	.47	.....	.30	.33	.....	.41	.76	.17	.54	.57	.53
7.....	.52	.44	.34	.28	.36	.....	.46	.80	.59	.59	.49	.65
8.....	.51	.42	.48	.29	.45	.....	.60	.79	.62	.59	.49	.70
9.....	.50	.43	.48	.34	.40	.44	.61	.78	.61	.55	.54	.65
10.....	.58	.45	.44	.47	.29	.28	.61	.78	.60	.54	.60	.59
11.....	.54	.51	.42	.48	.34	.19	.60	.77	.57	.57	.59	.60
12.....	.54	.51	.36	.48	.38	.04	.59	.77	.53	.58	.60	.59
13.....	.57	.50	.32	.35	.45	.45	.59	.80	.50	.57	.56	.58
14.....	.57	.49	.33	.43	.43	.33	.53	.80	.62	.59	.66	.57
15.....	.57	.49	.33	.52	.33	.34	.65	.78	.68	.21	.09	.54
16.....	.59	.49	.32	.60	.16	.22	.73	.76	.70	.56	.....	.53
17.....	.58	.48	.38	.66	.34	.20	.71	.75	.69	.56	.....	.53
18.....	.53	.50	.38	.66	.25	.25	.72	.80	.70	.55	.....	.53
19.....	.44	.52	.33	.61	.10	.....	.74	.79	.71	.55	.53	.53
20.....	.47	.50	.28	.56	.10	.55	.72	.79	.65	.53	.57	.51
21.....	.54	.45	.25	.57	.57	.44	.74	.79	.58	.54	.63	.52
22.....	.53	.45	.24	.15	.03	.45	.73	.79	.54	.56	.63	.58
23.....	.51	.47	.23	.19	.....	.42	.74	.77	.51	.62	.62	.60
24.....	.52	.48	.23	.41	.....	.51	.74	.78	.50	.70	.66	.60
25.....	.49	.32	.21	.55	.....	.32	.71	.77	.49	.65	.66	.60
26.....	.49	.33	.17	.71	.34	.35	.72	.76	.51	.58	.66	.57
27.....	.51	.47	.17	.71	.....	.44	.74	.73	.51	.59	.63	.51
28.....	.52	.48	.18	.71	.70	.40	.78	.75	.55	.59	.63	.52
29.....	.55	.49	.27	.84	.....	.27	.78	.77	.59	.56	.55	.49
30.....	.56	.48	.29	.84	.....	.26	.78	.76	.52	.53	.58	.49
31.....	.55	.....	.38	.84	.....	.22	.....	.70	.....	.50	.56	.....
1909-10.												
1.....	.48	.44	.34	.53	.....	.....	.54	.76	.60	.61	.52	.60
2.....	.49	.47	.26	.37	.....	.16	.44	.75	.62	.61	.57	.65
3.....	.49	.49	.28	.30	.....	.....	.45	.73	.65	.59	.60	.69
4.....	.49	.48	.33	.26	.....	.55	.29	.70	.66	.58	.60	.64
5.....	.49	.47	.34	.23	.14	.53	.26	.70	.65	.57	.56	.65
6.....	.49	.52	.53	.06	.40	.43	.25	.72	.64	.65	.59	.43
7.....	.48	.53	.59	.....	.....	.....	.34	.72	.64	.61	.58	.21
8.....	.48	.54	.56	.....	.....	.....	.52	.69	.60	.56	.56	.60
9.....	.54	.54	.46	.10	.04	.....	.58	.65	.58	.55	.57	.62
10.....	.49	.48	.45	.32	.....	.39	.40	.64	.51	.51	.59	.67
11.....	.49	.41	.58	.44	.16	.63	.29	.64	.50	.54	.57	.57
12.....	.52	.39	.65	.41	.35	.63	.29	.62	.49	.56	.58	.58
13.....	.51	.30	.65	.40	.57	.60	.33	.60	.58	.57	.61	.63
14.....	.54	.18	.66	.39	.34	.26	.45	.61	.62	.60	.57	.65
15.....	.56	.43	.67	.44	.32	.05	.60	.67	.61	.59	.58	.58
16.....	.52	.33	.60	.39	.24	.41	.68	.65	.60	.59	.60	.60
17.....	.49	.32	.56	.41	.14	.58	.67	.58	.59	.56	.61	.58
18.....	.49	.25	.57	.36	.....	.58	.67	.56	.57	.54	.61	.59
19.....	.49	.16	.55	.33	.....	.55	.75	.57	.57	.56	.62	.58
20.....	.49	.18	.58	.33	.....	.55	.82	.59	.56	.57	.59	.59
21.....	.49	.39	.62	.31	.21	.55	.80	.64	.57	.56	.57	.68
22.....	.46	.50	.70	.32	.41	.54	.76	.60	.59	.57	.59	.67
23.....	.42	.48	.72	.28	.35	.57	.75	.57	.59	.58	.58	.64
24.....	.36	.43	.71	.30	.24	.60	.72	.54	.59	.55	.59	.63
25.....	.42	.40	.70	.23	.....	.54	.74	.52	.61	.58	.52	.58
26.....	.52	.48	.67	.....	.47	.57	.76	.55	.60	.61	.53	.59
27.....	.61	.49	.67	.....	.46	.39	.76	.55	.59	.60	.53	.62
28.....	.60	.55	.66	.....	.15	.11	.77	.56	.59	.54	.46	.61
29.....	.50	.48	.68	.53	.....	.27	.76	.56	.58	.51	.46	.58
30.....	.45	.47	.71	.28	.....	.....	.56	.59	.57	.49	.54	.58
31.....	.44	.....	.69	.....	.....	.19	.....	.64	.....	.51	.59	.....

Daily gage height, in feet, of San Diego flume near Lakeside, Cal., for 1907-1912—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.												
1.....	0.62	0.48	0.40	0.30	0.71	0.33	0.66	0.70	0.50	.....	0.57	0.52
2.....	.62	.49	.39	.31	.72	.58	.60	.72	.47	.....	.59	.51
3.....	.67	.48	.43	.30	.64	.34	.75	.73	.34	0.16	.57	.51
4.....	.70	.49	.51	.42	.42	.30	.30	.64	.58	.54	.54	.51
5.....	.61	.43	.57	.45	.45	.35	.73	.72	.58	.56	.55	.51
6.....	.56	.28	.52	.46	.70	.30	.70	.64	.46	.58	.54	.49
7.....	.57	.42	.47	.47	.78	.27	.66	.70	.35	.54	.55	.47
8.....	.61	.53	.35	.47	.77	.27	.67	.68	.32	.17	.29	.46
9.....	.67	.56	.50	.51	.78	.40	.73	.64	.31	.....	.....	.34
10.....	.66	.53	.47	.51	.78	.41	.71	.61	.20	.....	.....	.30
11.....	.74	.55	.45	.50	.73	.41	.73	.60	.31	.....	.....	.18
12.....	.64	.54	.42	.59	.66	.33	.75	.60	.17	.....	.01	.27
13.....	.65	.48	.44	.61	.66	.30	.01	.57	.21	.....	.16	.28
14.....	.65	.47	.43	.57	.72	.22	.01	.56	.38	.55	.52	.31
15.....	.59	.33	.43	.56	.72	.17	.77	.60	.47	.60	.55	.35
16.....	.31	.12	.44	.64	.70	.46	.79	.60	.51	.55	.57	.38
17.....	.00	.10	.46	.64	.62	.62	.80	.57	.56	.44	.60	.38
18.....	.16	.32	.46	.61	.70	.57	.84	.54	.55	.43	.62	.36
19.....	.46	.43	.48	.53	.70	.55	.86	.53	.18	.42	.60	.34
20.....	.46	.46	.57	.46	.70	.55	.87	.47	.....	.48	.56	.30
21.....	.56	.45	.48	.41	.72	.54	.73	.41	.....	.56	.47	.21
22.....	.60	.45	.29	.38	.70	.58	.75	.30	.....	.60	.33	.22
23.....	.44	.41	.25	.34	.68	.53	.84	.41	.32	.24	.20	.26
24.....	.40	.34	.38	.40	.68	.43	.85	.58	.55	.....	.21	.29
25.....	.53	.33	.45	.52	.58	.52	.78	.60	.56	.....	.25	.....
26.....	.55	.44	.48	.58	.17	.54	.79	.62	.58	.....	.34	.07
27.....	.52	.48	.42	.67	.20	.56	.77	.64	.59	.....	.52	.03
28.....	.48	.42	.40	.60	.33	.61	.59	.64	.25	.....	.54	.....
29.....	.50	.42	.42	.64	.....	.67	.70	.56	.....	.17	.53	.08
30.....	.47	.41	.43	.68	.....	.70	.70	.48	.....	.50	.48	.02
31.....	.49	.....	.34	.67	.....	.72	.....	.49	.....	.55	.52	.....

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.									
1.....	0.12	0.17	0.26	0.83	0.72
2.....04	.17	.44	.83	.44
3.....06	.17	.48	.80	.55
4.....	0.03	.....	.....	.....	.17	.51	.77	.80
5.....17	.62	.83	.77
6.....03	.....	.....	.05	.16	.65	.80	.85
7.....16	.58	.82	.78
8.....17	.46	.89	.74
9.....28	.....	.....	.....	.18	.51	.85	.70
10.....22	.19	.41	.85	.69
11.....01	.19	.71	.83	.48
12.....12	.18	.73	.75	.47
13.....01	.....	.....	.17	.18	.70	.60	.45
14.....18	.81	.60	.60
15.....33	.17	.83	.65	.68
16.....02	.16	.83	.77	.52
17.....1	.16	.75	.76	.76
18.....31	.16	.81	.75	.86
19.....22	.16	.81	.78	.86
20.....15	.21	.80	.78	.85
21.....15	.25	.79	.77	.87
22.....15	.22	.81	.58	.84
23.....12	.19	.79	.60	.86
24.....08	.21	.72	.83	.77
25.....19	.19	.76	.82	.83
26.....17	.17	.75	.84	.83
27.....19	.19	.73	.84	.82
28.....24	.17	.79	.83	.81
29.....22	.17	.81	.85	.81
30.....	0.14	.23	.....	.84	.84	.84
31.....10	.17	.....	.79	.....	.83

NOTE.—The flume was dry on days for which no gage height is given.

Rating table for San Diego flume near Lakeside, Cal., for 1907 and 1908.

Gage height.	Discharge.	Gage height.	Discharge.	Gage height.	Discharge.	Gage height.	Discharge.
<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>
0.00	0.00	0.25	1.66	0.50	5.90	0.75	12.22
.05	.12	.30	2.30	.55	7.02	.80	13.70
.10	.30	.35	3.05	.60	8.20	.85	15.20
.15	.64	.40	3.90	.65	9.47	.90	16.70
.20	1.10	.45	4.85	.70	10.80		

NOTE.—This table is not applicable for obstructed-channel conditions. It is based on seven discharge measurements made during 1908 and 1909 and is well defined.

Daily discharge, in second-feet, of San Diego flume near Lakeside, Cal., for 1909–1912.

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909.									
1.....	5.4	13	0.0	3.6	12	10	5.2	5.4	7.7
2.....	6.0	4.6	.0	3.8	12	8.2	5.2	7.1	8.7
3.....	4.6	2.8	.0	2.5	12	8.4	5.6	8.0	7.1
4.....	2.8	4.0	.7	5.2	12	7.3	6.6	8.0	5.2
5.....	2.3	3.3	.8	4.2	12	2.0	6.9	8.2	6.0
6.....	2.3	2.8	.0	4.2	12	.7	6.9	7.5	6.6
7.....	2.0	3.3	.0	5.2	13	8.0	8.0	5.8	9.4
8.....	2.1	5.0	.0	8.2	13	8.7	8.0	5.8	11
9.....	3.0	4.0	4.8	8.4	13	8.4	7.1	6.9	9.4
10.....	5.4	2.1	2.0	8.4	13	8.2	6.9	8.2	8.0
11.....	5.6	3.0	.9	8.2	12	7.5	7.5	8.0	8.2
12.....	5.6	3.6	.1	8.0	12	6.6	7.7	8.2	8.0
13.....	3.1	5.0	5.0	8.0	13	6.0	7.5	7.3	7.7
14.....	4.6	4.6	2.8	6.6	13	8.7	8.0	9.6	7.5
15.....	6.4	2.8	3.0	9.4	13	10	1.1	.3	6.9
16.....	8.2	.7	1.2	11	12	11	7.3	.0	6.6
17.....	9.6	3.0	1.0	11	12	10	7.3	.0	6.6
18.....	9.6	1.6	1.6	11	13	11	7.1	.0	6.6
19.....	8.4	.3	.0	12	13	11	7.1	6.6	6.6
20.....	7.3	.3	7.1	11	13	9.4	6.6	7.5	6.2
21.....	7.5	7.5	4.8	12	13	7.7	6.9	8.9	6.4
22.....	.6	.1	5.0	11	13	6.9	7.3	8.9	7.7
23.....	.9	.0	4.4	12	12.4	6.2	8.7	8.7	8.2
24.....	4.2	.0	6.2	12	13	6.0	11	9.6	8.2
25.....	7.1	.0	2.6	11	12	5.8	9.4	9.6	8.2
26.....	11	3.0	3.1	11	12	6.2	7.7	9.6	7.5
27.....	11	.0	4.8	12	11	6.2	8.0	8.9	6.2
28.....	11	11	4.0	13	12	7.1	8.0	8.9	6.4
29.....	14	.....	1.8	13	12	8.0	7.3	7.1	5.8
30.....	14	.....	1.7	13	12	6.4	6.6	7.7	5.8
31.....	15	.....	1.2	.....	11	.....	6.0	7.3	.....

Daily discharge, in second-feet, of San Diego flume near Lakeside, Cal., for 1909-1912—
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909-10.												
1.....	5.6	4.8	3.0	6.9	0.0	0.0	7.1	12.5	8.5	8.7	6.7	8.5
2.....	5.8	5.4	1.7	3.7	.0	.9	5.0	12.3	9.0	8.7	7.8	9.7
3.....	5.8	5.8	2.0	2.5	.0	.0	5.2	11.7	9.7	8.3	8.5	10.7
4.....	5.8	5.6	2.8	2.0	.0	7.4	2.4	10.9	9.9	8.0	8.5	9.5
5.....	5.8	5.4	3.0	1.6	.7	6.9	2.0	10.9	9.7	7.8	7.6	9.7
6.....	5.8	6.4	6.6	.2	4.2	4.8	1.8	11.4	9.5	9.7	8.3	4.8
7.....	5.6	6.5	8.0	.0	.0	.0	3.2	11.4	9.5	8.7	8.0	1.3
8.....	5.6	6.9	7.3	.0	.0	.0	6.7	10.7	8.5	7.6	7.6	8.5
9.....	6.4	6.9	5.2	.4	.2	.0	8.0	9.7	8.0	7.4	7.8	9.0
10.....	5.8	5.6	5.0	2.8	.0	4.0	4.2	9.5	6.4	6.4	8.3	10.2
11.....	5.8	4.2	7.7	5.0	.9	9.2	2.4	9.5	6.2	7.1	7.8	7.2
12.....	6.4	3.8	9.4	4.4	3.3	9.2	2.4	9.0	6.0	7.6	8.0	8.8
13.....	6.2	2.3	9.4	4.2	7.8	8.5	3.0	8.5	8.0	7.8	8.7	9.0
14.....	6.9	.8	9.6	4.0	3.2	2.0	5.2	8.7	9.0	8.5	7.8	9.0
15.....	7.3	4.6	9.9	5.0	2.8	.2	8.5	10.2	8.7	8.3	8.0	7.8
16.....	6.4	2.8	8.2	4.0	1.7	4.4	10.4	9.7	8.5	8.3	8.5	8.5
17.....	5.8	2.6	7.3	4.4	.7	8.0	10.2	8.0	8.3	7.6	8.7	8.0
18.....	5.8	1.6	7.5	3.5	.0	8.0	10.2	7.6	7.8	7.1	8.7	8.3
19.....	5.8	.7	7.1	3.0	.0	7.4	12.3	7.8	7.8	7.6	9.0	8.0
20.....	5.8	.8	7.7	3.0	.0	7.4	14.2	8.3	7.6	7.8	8.3	8.3
21.....	5.8	3.8	8.7	2.7	1.3	7.4	13.6	9.5	7.8	7.6	7.8	10.4
22.....	5.2	6.0	11	2.8	4.4	7.1	12.5	8.5	8.3	7.8	8.3	10.2
23.....	4.4	5.6	11	2.2	3.3	7.8	12.3	7.8	8.3	8.0	8.0	9.5
24.....	3.3	4.6	11	2.5	1.7	8.5	11.4	7.1	8.3	7.4	8.3	9.2
25.....	4.4	4.0	11	1.6	.0	7.1	12.0	6.7	8.7	8.0	6.7	8.0
26.....	6.4	5.6	9.9	.0	5.6	7.8	12.5	7.4	8.5	8.7	6.9	8.3
27.....	8.4	5.8	9.9	.0	5.4	4.0	12.5	7.4	8.3	8.5	6.9	9.0
28.....	8.2	7.1	9.6	.0	.8	.5	12.8	7.6	8.3	7.1	5.4	8.7
29.....	6.0	5.6	10	6.9	.....	2.1	12.5	7.6	7.8	6.4	5.4	8.0
30.....	5.0	5.4	11	2.2	.....	.0	7.6	8.3	7.8	6.0	7.1	8.0
31.....	5.0	.....	10	.0	.....	1.1	.....	9.5	.....	6.4	8.3	.....
1910-11.												
1.....	9.0	5.8	4.2	2.5	11.2	3.0	9.9	10.9	6.2	0.0	7.8	6.4
2.....	9.0	6.0	4.0	2.7	11.4	8.0	8.5	11.4	5.6	.0	8.3	6.7
3.....	10.2	5.8	4.8	2.5	9.5	3.2	12.2	11.7	3.2	.9	7.8	6.4
4.....	10.9	6.0	6.4	4.6	4.6	2.5	2.5	9.5	8.0	7.1	7.1	6.4
5.....	8.7	4.8	7.8	5.2	5.2	3.4	11.7	11.4	8.0	7.6	7.4	6.4
6.....	7.6	2.2	6.7	5.4	10.9	2.5	10.9	9.5	5.4	8.0	7.1	6.0
7.....	7.8	4.6	5.6	5.6	13.1	2.1	9.9	10.9	3.4	7.1	7.4	5.6
8.....	8.7	6.9	3.3	5.6	12.8	2.1	10.2	10.4	2.8	1.0	2.4	5.4
9.....	10.2	7.6	6.2	6.4	13.1	4.2	11.7	9.5	2.7	.0	.0	3.2
10.....	9.9	6.9	5.6	6.4	13.1	4.4	11.2	8.7	1.2	.0	.0	2.5
11.....	12.0	7.4	5.2	6.2	11.7	4.4	11.7	8.5	2.7	.0	.0	1.0
12.....	9.5	7.1	4.6	8.3	9.9	3.0	12.2	8.5	1.0	.0	.0	2.1
13.....	9.7	5.8	5.0	8.7	9.9	2.5	.0	7.8	1.3	.0	.9	2.2
14.....	9.7	5.6	4.8	7.8	11.4	1.5	.0	7.6	3.9	7.4	6.7	2.7
15.....	8.3	3.0	4.8	7.6	11.4	1.0	12.8	8.5	5.6	8.5	7.4	3.4
16.....	2.7	.6	5.0	9.5	10.9	5.4	13.3	8.5	6.4	7.4	7.8	3.9
17.....	.0	.4	5.4	9.5	9.0	9.0	13.6	7.8	7.6	5.0	8.5	3.9
18.....	.9	2.8	5.4	8.7	10.9	7.8	14.8	7.1	7.4	4.8	9.0	3.5
19.....	5.4	4.8	5.8	6.9	10.9	7.4	15.3	6.9	1.0	4.6	8.5	3.2
20.....	5.4	5.4	7.8	5.4	10.9	7.4	15.6	5.6	.0	5.8	7.6	2.5
21.....	7.6	5.2	5.8	4.4	11.4	7.1	11.7	4.4	.0	7.6	5.6	1.3
22.....	8.5	5.2	2.3	3.9	10.9	8.0	12.2	2.5	.0	8.5	3.0	1.5
23.....	5.0	4.4	1.8	3.2	10.4	6.9	14.8	4.4	2.8	1.7	1.2	2.0
24.....	4.2	3.2	3.9	4.2	10.4	4.8	15.0	8.0	7.4	.0	1.3	2.4
25.....	6.9	3.0	5.2	6.7	8.0	6.7	13.1	8.5	7.6	.0	1.8	.0
26.....	7.4	5.0	5.8	8.0	1.0	7.1	13.3	9.0	8.0	.0	3.2	.3
27.....	6.7	5.8	4.6	10.2	1.2	7.6	12.8	9.5	8.3	.0	6.7	.1
28.....	5.8	4.6	4.2	8.5	3.0	8.7	8.3	9.5	1.8	.0	7.1	.0
29.....	6.2	4.6	4.6	9.5	.....	10.2	10.9	7.6	.0	1.0	6.9	.3
30.....	5.6	4.4	4.8	10.4	.....	10.9	10.9	5.8	.0	6.2	5.8	.1
31.....	6.0	.....	3.2	10.2	.....	11.4	.....	6.0	.....	7.4	6.7	.....

Daily discharge, in second-feet, of San Diego flume near Lakeside, Cal., for 1909-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.									
1.....	0.0	0.0	0.0	0.6	1.0	2.0	14.4	11.4	14.2
2.....	.0	.0	.0	.2	1.0	5.0	14.4	5.0	13.1
3.....	.0	.0	.0	.2	1.0	5.8	13.6	7.4	12.0
4.....	.1	.0	.0	.0	1.0	6.4	12.8	13.6	10.9
5.....	.0	.0	.0	.0	1.0	9.0	14.4	12.8	10.7
6.....	.1	.0	.0	.2	.9	9.7	13.6	15.0	10.7
7.....	.0	.0	.0	.0	.9	8.0	14.2	13.1	10.2
8.....	.0	.0	.0	.0	1.0	5.4	16.1	12.0	9.5
9.....	2.2	.0	.0	.0	1.0	6.4	15.0	10.9	9.0
10.....	.0	.0	.0	1.5	1.1	4.4	15.0	10.7	9.7
11.....	.0	.0	.0	.0	1.1	11.2	14.4	5.8	9.5
12.....	.0	.0	.0	.6	1.0	11.7	12.2	5.6	9.0
13.....	.0	.0	.0	1.0	1.0	10.9	8.5	5.2	8.0
14.....	.0	.0	.0	.0	1.0	13.9	8.5	8.5	8.5
15.....	.0	.0	.0	3.0	1.0	14.4	9.7	10.4	8.5
16.....	.0	.0	.0	.1	.9	14.4	12.8	6.7	7.6
17.....	.0	.0	.0	.4	.9	12.2	12.5	12.5	6.4
18.....	.0	.0	.0	2.7	.9	13.9	12.2	15.3	3.9
19.....	.0	.0	.0	1.5	.9	13.9	13.1	15.3	5.6
20.....	.0	.0	.0	.8	1.3	13.6	13.1	15.0	7.1
21.....	.0	.0	.0	.8	1.8	13.3	12.8	15.6	8.0
22.....	.0	.0	.0	.8	1.5	13.9	8.0	14.7	10.4
23.....	.0	.0	.0	.6	1.1	13.3	8.5	15.3	10.7
24.....	.0	.0	.0	.3	1.3	11.4	14.4	12.8	11.2
25.....	.0	.0	.0	1.1	1.1	12.5	14.2	14.4	10.4
26.....	.0	.0	.0	1.0	1.0	12.2	14.7	14.4	9.0
27.....	.0	.0	.0	1.1	1.1	11.7	14.7	14.2	9.0
28.....	.0	.0	.0	1.7	1.0	13.3	14.4	13.9	9.5
29.....	.0	.0	.7	1.5	1.0	13.9	15.0	13.9	10.2
30.....	.0	.0	3.0	1.6	.....	14.7	14.7	14.7	11.7
31.....	.0	.....	.4	1.0	.....	13.3	.....	14.4	.....

NOTE.—Daily discharge determined from rating curves applicable as follows: Jan. 1 to Dec. 31, 1909, well defined; Jan. 1, 1910, to Dec. 31, 1911, fairly well defined; and Jan. 1 to June 30, 1912, fairly well defined.

Monthly discharge of San Diego flume near Lakeside, Cal., for 1907-8

Month.	Mean discharge in second-feet.	Run-off (total in acre-feet).	Accu-racy.	Month.	Mean discharge in second-feet.	Run-off (total in acre-feet).	Accu-racy.
1907.				1907-8.			
January.....	4.62	284	A.	January.....	6.38	392	A.
February.....	2.97	165	A.	February.....	6.02	326	A.
March.....	3.31	204	A.	March.....	3.58	220	A.
April.....	7.79	464	A.	April.....	9.27	552	A.
May.....	11.58	712	A.	May.....	9.29	571	A.
June.....	9.44	562	A.	June.....	6.94	413	A.
July.....	9.76	600	A.	July.....	7.95	489	A.
August.....	8.91	548	A.	August.....	7.20	443	A.
September.....	9.20	547	A.	September.....	7.50	446	A.
The period.....		4,080		The year.....	6.39	4,620	
1907-8.				1908.			
October.....	6.63	408	A.	October.....	6.76	416	A.
November.....	3.16	188	A.	November.....	5.22	311	A.
December.....	2.79	172	A.	December.....	2.65	163	A.

Daily discharge, in second-feet, of San Diego River and flume near Lakeside, Cal., for 1909-1912.

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909.									
1.....	6	63	135	139	43	19	10	6	8
2.....	6	50	125	124	42	17	10	8	9
3.....	5	58	105	107	41	17	11	268	7
4.....	3	239	111	90	40	16	12	133	5
5.....	2	148	106	109	39	11	12	133	6
6.....	2	113	105	129	38	9	11	10	7
7.....	2	113	105	105	38	16	12	7	9
8.....	2	1,320	100	104	37	17	12	7	11
9.....	3	229	75	104	36	16	11	7	9
10.....	6	172	72	104	35	16	11	8	8
11.....	6	288	76	105	34	16	12	8	8
12.....	6	289	75	106	33	15	12	8	8
13.....	4	815	55	100	33	13	12	7	8
14.....	10	395	53	93	32	16	11	10	8
15.....	16	268	53	89	32	17	4	0	7
16.....	16	241	51	85	30	18	10	0	7
17.....	16	218	56	78	29	17	10	0	7
18.....	14	172	57	74	29	18	10	0	7
19.....	11	150	55	71	28	18	10	7	7
20.....	9	150	62	66	28	16	10	8	6
21.....	9	858	60	63	27	14	10	9	6
22.....	2,550	320	185	58	26	13	9	9	8
23.....	850	290	164	55	24	12	11	9	8
24.....	204	240	181	54	24	12	13	10	8
25.....	169	220	153	51	22	12	11	10	8
26.....	171	203	108	50	22	12	10	10	8
27.....	131	200	365	49	21	12	10	9	6
28.....	211	156	394	49	22	13	10	9	6
29.....	179	-----	267	47	22	13	9	7	6
30.....	109	-----	192	46	21	11	8	8	6
31.....	69	-----	151	-----	20	-----	7	7	-----

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909-10.												
1.....	6	5	3	398	65	46	76	16	9	9	6.7	8.5
2.....	6	5	2	466	86	39	67	16	10	9	7.8	9.7
3.....	6	6	2	358	70	30	79	15	10	9	8.5	10.7
4.....	6	6	3	275	56	29	56	14	10	9	8.5	9.5
5.....	6	5	4	219	37	29	54	16	10	8	7.6	9.7
6.....	6	6	8	164	60	25	49	14	10	10	8.3	4.8
7.....	6	7	9	149	50	30	57	14	10	9	8.0	1.3
8.....	6	7	8	149	56	32	54	13	9	8	7.6	8.5
9.....	6	7	6	120	56	32	40	12	9	7.4	7.8	9.0
10.....	6	6	230	159	56	28	33	11	7	6.4	8.3	10.2
11.....	6	4	38	143	44	27	34	11	6	7.1	7.8	7.8
12.....	6	4	15	160	44	36	54	10	6	7.6	8.0	8.0
13.....	6	2	13	124	38	25	83	10	8	7.8	8.7	9.2
14.....	7	1	13	106	32	14	59	10	9	8.5	7.8	9.7
15.....	7	5	12	107	30	14	52	11	9	8.3	8.0	8.0
16.....	6	3	10	242	37	29	40	11	9	8.3	8.5	8.5
17.....	6	3	9	359	28	23	36	9	9	7.6	8.7	8.0
18.....	6	2	10	180	36	25	28	9	8	7.1	8.7	8.3
19.....	6	1	9	141	44	24	34	9	8	7.6	9.0	8.0
20.....	6	1	12	123	50	27	34	9	8	7.8	8.3	8.3
21.....	6	4	84	105	125	24	28	10	8	7.6	7.8	10.4
22.....	5	6	101	89	56	29	24	10	9	7.8	8.3	10.2
23.....	4	6	61	73	49	31	23	9	9	8.0	8.0	9.5
24.....	3	5	96	64	46	30	16	8	9	7.4	5.3	9.2
25.....	4	4	46	61	46	27	15	8	9	8.0	6.7	8.0
26.....	6	6	30	80	55	51	17	9	9	8.7	6.9	8.3
27.....	8	6	30	70	42	58	14	9	9	8.5	6.9	9.0
28.....	8	7	30	62	40	126	14	9	9	7.1	5.4	8.7
29.....	6	6	25	72	-----	196	14	9	8	6.4	5.4	8.0
30.....	5	5	26	58	-----	176	9	9	8	6.0	7.1	8.0
31.....	5	-----	25	50	-----	110	-----	10	-----	6.4	8.3	-----

Daily discharge, in second-feet, of San Diego River and flume near Lakeside, Cal., for 1909-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.												
1.....	9.0	5.8	4.2	2.5	13	87	27	20	6.4	0	7.8	6.4
2.....	9.0	6.0	4.0	2.7	15	64	96	20	5.8	0	8.3	6.7
3.....	10.2	5.8	4.8	2.5	26	41	56	15	3.4	.9	7.8	6.4
4.....	10.9	6.0	6.4	4.6	660	292	36	12	8.2	7.1	7.1	6.4
5.....	8.7	4.8	7.8	5.2	380	170	41	12	8.2	7.6	7.4	6.4
6.....	7.6	2.2	6.7	5.4	134	116	40	9.8	5.6	8.0	7.1	6.0
7.....	7.8	4.6	5.6	5.6	106	82	67	11	3.6	7.1	7.4	5.6
8.....	8.7	6.9	3.3	5.6	56	122	93	11	3.0	1.0	2.4	5.4
9.....	10.2	7.6	6.2	6.4	45	121	67	9.8	2.9	0	0	3.2
10.....	9.9	6.9	5.6	6.4	31	144	54	9.2	1.4	0	0	2.5
11.....	12.0	7.4	5.2	6.2	26	180	44	8.7	2.9	0	0	1.0
12.....	9.5	7.1	4.6	8.3	26	136	34	8.7	1.2	0	0	2.1
13.....	9.7	5.8	5.0	8.7	47	107	16	8.0	1.5	0	.9	2.2
14.....	9.7	5.6	4.8	7.8	306	76	16	7.8	4.1	7.4	6.7	2.7
15.....	8.3	3.0	4.8	7.6	127	73	29	8.7	5.8	8.5	7.4	3.4
16.....	2.7	.6	5.0	9.5	108	72	29	9.7	6.6	7.4	7.8	3.9
17.....	0	.4	5.4	9.5	74	67	26	8.2	7.8	5.0	8.5	3.9
18.....	.9	2.8	5.4	8.7	61	60	27	7.3	7.6	4.8	9.0	3.5
19.....	5.4	4.8	5.8	6.9	51	53	25	7.1	1.2	4.6	8.5	3.2
20.....	5.4	5.4	7.8	5.4	48	47	24	5.8	.2	5.8	7.6	2.5
21.....	7.6	5.2	5.8	4.4	34	47	20	4.6	.2	7.6	5.6	1.3
22.....	8.5	5.2	2.3	3.9	29	48	23	2.7	.2	8.5	3.0	1.5
23.....	5.0	4.4	1.8	3.2	30	47	26	4.6	3.0	1.7	1.2	2.0
24.....	4.2	3.2	3.9	4.2	28	40	22	8.2	7.6	0	1.3	2.4
25.....	6.9	3.0	5.2	6.7	32	39	20	8.7	7.8	0	1.8	0
26.....	7.4	5.0	5.8	40	38	34	18	9.2	8.2	0	3.2	.3
27.....	6.7	5.8	4.6	32	31	28	23	9.7	8.5	0	6.7	.1
28.....	5.8	4.6	4.2	22	59	30	19	9.7	2.0	0	7.1	0
29.....	6.2	4.6	4.6	24	-----	27	21	7.8	.2	1.0	6.9	.3
30.....	5.6	4.4	4.8	22	-----	26	20	6.0	.2	6.2	5.8	.1
31.....	6.0	-----	3.2	24	-----	28	-----	6.2	-----	7.4	6.7	-----

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.									
1.....	0.0	0.0	0.0	0.6	1.0	2.0	164	40	16.2
2.....	.0	.0	.0	.2	1.0	5.0	117	40	13.6
3.....	.0	.0	.0	.2	1.0	5.8	96	42	12.5
4.....	.1	.0	.0	.0	1.0	6.4	77	43	11.4
5.....	.0	.0	.0	.0	1.0	9.0	78	36	11.2
6.....	.1	.0	.0	.2	.9	9.7	78	35	11.2
7.....	.0	.0	.0	.0	.9	8.0	70	29	11.7
8.....	.0	.0	.0	.0	1.0	5.4	58	157	11.0
9.....	2.2	.0	.0	.0	1.0	6.4	57	206	10.5
10.....	.0	.0	.0	1.5	1.1	289	88	106	10.2
11.....	.0	.0	.0	.0	1.1	111	216	61	10.0
12.....	.0	.0	.0	.6	1.0	17.7	319	61	9.5
13.....	.0	.0	.0	1.0	1.0	195	268	43	8.5
14.....	.0	.0	.0	.0	1.0	160	254	46	9.0
15.....	.0	.0	.0	3.0	1.0	60	270	36	8.7
16.....	.0	.0	.0	.1	.9	40	258	33	7.8
17.....	.0	.0	.0	.0	.9	33	214	28	6.6
18.....	.0	.0	.0	2.7	.9	30	137	31	4.4
19.....	.0	.0	.0	1.5	.9	26	116	31	5.8
20.....	.0	.0	.0	.8	1.3	23	95	31	7.6
21.....	.0	.0	.0	.8	1.8	25	95	28	8.5
22.....	.0	.0	.0	.8	1.5	60	72	30	10.9
23.....	.0	.0	.0	.6	1.1	113	72	30	11.2
24.....	.0	.0	.0	.3	1.3	32	62	28	11.4
25.....	.0	.0	.0	1.1	1.1	28	62	29	10.6
26.....	.0	.0	.0	1.0	1.0	74	57	28	9.2
27.....	.0	.0	.0	1.1	1.1	158	50	27	9.2
28.....	.0	.0	.0	1.7	1.0	75	49	22	9.7
29.....	.0	.0	.7	1.5	1.0	60	50	21	11.2
30.....	.0	.0	3.0	1.6	-----	165	50	21	12.2
31.....	.0	-----	.4	1.0	-----	215	-----	16.4	-----

NOTE.—These figures are the sum of those representing the discharge of the river and of the flume and give the total flow of the river.

Monthly discharge of San Diego River and flume near Lakeside, Cal., for 1909-1912.

[Drainage area, 208 square miles.]

Month.	Discharge in second-feet.				Run-off.		Accu- racy.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.	Total in acre-feet.	
1909.							
January.....	2,550	2	155	0.748	0.86	9,530	C.
February.....	1,320	50	285	1.37	1.43	15,800	C.
March.....	394	51	124	.596	.69	7,620	C.
April.....	139	46	83.5	.401	.45	4,970	C.
May.....	43	20	30.6	.147	.17	1,880	C.
June.....	19	11	14.7	.071	.08	875	C.
July.....	13	4	10.4	.050	.06	640	C.
August.....	268	.0	23.6	.113	.13	1,450	C.
September.....	11	5	7.40	.036	.04	440	C.
The period.....						43,200	
1909-10.							
October.....	8	3	5.87	.028	.03	360	C.
November.....	7	1	4.70	.023	.03	280	C.
December.....	230	2	31.3	.150	.17	1,920	C.
January.....	466	50	159	.764	.88	9,780	
February.....	125	28	51.2	.246	.26	2,840	
March.....	196	14	46.0	.221	.25	2,830	
April.....	83	9	39.8	.191	.21	2,370	
May.....	16	8	10.9	.052	.06	670	
June.....	10	6	8.68	.042	.05	516	
July.....	10	6	7.89	.038	.04	485	
August.....	9	5.4	7.80	.038	.04	480	
September.....	10.7	1.3	8.50	.041	.05	506	
The year.....	466	1	31.8	.153	2.07	23,000	
1910-11.							
October.....	12	.0	7.27	.035	.04	447	
November.....	7.6	.4	4.83	.023	.03	287	
December.....	7.8	1.8	4.99	.024	.03	307	
January.....	40	2.5	10.1	.049	.06	621	C.
February.....	660	13	93.6	.450	.47	5,200	C.
March.....	292	26	80.8	.388	.45	4,970	C.
April.....	96	16	35.3	.170	.19	2,100	C.
May.....	20	2.7	9.26	.045	.05	569	B.
June.....	8.5	.2	4.18	.020	.02	249	B.
July.....	8.5	.0	3.47	.017	.02	213	B.
August.....	9.0	.0	5.19	.025	.03	319	B.
September.....	6.7	.0	3.05	.015	.02	181	D.
The year.....	660	.0	21.8	.105	1.41	15,500	
1911-12.							
October.....	2.2	.0	.08	.0004	.0004	5	D.
November.....	.0	.0	.00	.0000	.0000	0	
December.....	3.0	.0	.13	.0006	.0007	8	D.
January.....	3.0	.0	.78	.0038	.004	48	C.
February.....	1.8	.9	1.06	.0051	.006	61	C.
March.....	289	2.0	66.0	.317	.37	4,060	B.
April.....	319	49	122	.587	.65	7,260	B.
May.....	206	16.4	45.7	.220	.25	2,810	B.
June.....	16.2	4.4	10.0	.048	.05	595	C.
The period.....						14,800	

NOTE.—On account of leakage from the flume and diversions above the station, values of "Discharge per square mile" and "Run-off, depth in inches," are in error.

MISCELLANEOUS MEASUREMENTS.

The following miscellaneous measurements have been made in the San Diego River basin:

Miscellaneous measurements in San Diego River drainage basin.

Date.	Stream.	Locality.	Gage height.	Dis-charge.
			<i>Feet.</i>	<i>Sec.-ft.</i>
Nov. 23, 1905	San Diego River.....	Head of San Diego Flume Co.'s flume.		1.9
May 1, 1912	.....do.....	Diverting dam just below junction of Boulder Creek, NE. $\frac{1}{4}$ NE. $\frac{1}{4}$ sec. 11, T. 1 S., R. 2 E.	2.00	22
May 1, 1912	.....do.....	Old Mission Dam, about 3 miles west of Santee.	7.66	33
May 5, 1912	.....do.....	.....do.....	7.47	23
May 11, 1912	.....do.....	.....do.....	8.79	126
May 25, 1912	.....do.....	.....do.....	7.39	14
June 6, 1912	.....do.....	.....do.....	7.15	.2
May 1, 1912	.....do.....	About 2 $\frac{1}{2}$ miles east of San Diego.	1.00	39
May 4, 1912	.....do.....	.....do.....	.99	34
May 20, 1912	.....do.....	.....do.....	.90	25
May 25, 1912	.....do.....	.....do.....	.82	13
June 6, 1912	.....do.....	.....do.....	.45	a. 1
May 1, 1912	San Diego flume.....	Diverting dam in NE. $\frac{1}{4}$ NE. $\frac{1}{4}$ sec. 11, T. 14 S., R. 2 E.	1.71	40
May 24, 1912	.....do.....	.....do.....	.50	4.6
May 24, 1912	.....do.....	.....do.....	.68	8.2
May 24, 1912	.....do.....	.....do.....	.96	16.5
May 24, 1912	.....do.....	.....do.....	1.19	22
May 24, 1912	.....do.....	.....do.....	1.67	40
May 24, 1912	.....do.....	.....do.....	1.92	8.4
May 6, 1912	San Vicente Creek.....	One-half mile above Foster		2.1

^a Estimated.

SAN DIEGUITO RIVER ¹ BASIN.

SANTA YSABEL CREEK NEAR ESCONDIDO, CAL.

This station, which is located at the mouth of the narrow canyon at the upper end of the San Pasqual Valley, in the SW. $\frac{1}{4}$ sec. 31, T. 12 S., R. 1 E., 9 miles southeast of Escondido, was established December 17, 1905.

Roden Canyon Creek and Temescal Creek, tributaries from the north, enter Santa Ysabel Creek 1 $\frac{1}{2}$ and 5 miles, respectively, above the gaging station. Santa Maria Creek enters from the south 4 miles below the gaging station.

No water is diverted from this stream above the gaging station. Within half a mile below the station, in the San Pasqual Valley, are two small irrigation canals. A third canal, with a capacity of about 45 second-feet, heads about 1 mile below the station, and about 2 miles below is a fourth, with a capacity of about 25 second-feet.

The gage is an inclined staff on the left bank. The datum of the gage has not been changed since the station was established. Beginning May 14, 1912, a temporary low-water section was used at datum 8.76 feet below the old datum. All gage heights have been reduced to original datum.

¹ Called Bernardo River in previous Water-Supply Papers.

At high stages, discharge measurements are made from a car and cable at the gage.

The conditions for obtaining accurate discharge data at this station are extremely poor. The channel is composed of shifting sand, which scours out at high stages of the stream and immediately fills in again as the flow decreases. Frequent measurements of discharge are necessary to procure reliable estimates.

This station is now maintained in cooperation with the Volcan Land & Water Co. through W. S. Post, engineer.

Discharge measurements of Santa Ysabel River near Escondido, Cal., in 1905-1912.

[By W. V. Hardy and others.]

Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.
	<i>Feet.</i>	<i>Sec.-ft.</i>		<i>Feet.</i>	<i>Sec.-ft.</i>
1905.			1908.		
Nov. 21.....		4.5	Jan. 4.....	2.30	11
28.....	3.72	41	13.....	2.30	10
Dec. 21.....	3.55	10.4	18.....	2.27	10
1906.			23.....	2.30	14
Jan. 10.....	3.56	4.2	29.....	2.50	71
30.....	3.55	13.5	30.....	2.40	44
Feb. 8.....	3.57	17.8	Feb. 8.....	2.24	43
11.....	3.64	25	17.....	2.19	60
22.....	3.70	44	21.....	2.12	42
Mar. 8.....	3.70	28	26.....	2.06	37
15.....	3.75	158	Mar. 2.....	2.05	41
23.....	3.52	132	5.....	2.20	91
26.....	4.00	5,300	6.....	2.10	72
26.....	2.65	3,240	14.....	1.95	30
26.....	2.00	2,040	19.....	1.98	26
27.....	1.00	916	25.....	1.92	23
27.....	0.85	870	31.....	1.91	25
27.....	0.70	900	Apr. 7.....	1.91	23
28.....	0.50	713	12.....	1.87	18
Apr. 14.....	1.00	183	18.....	1.86	14
25.....	1.45	116	25.....	1.85	34
30.....	1.82	151	29.....	1.80	16
May 12.....	2.18	88	May 4.....	1.84	21
June 24.....	2.35	25	14.....	1.82	20
Aug. 10.....	2.45	3.7	20.....	1.78	10
Oct. 3.....	2.46	2.6	22.....	1.77	11
Nov. 30.....	2.54	15	29.....	1.77	9.2
Dec. 7.....	2.64	10.8	June 4.....	1.77	8.2
20.....	2.70	10	10.....	1.73	5.6
1907.			14.....	1.72	4.9
Jan. 1.....	2.80	60	July 6.....	1.61	.31
22.....	2.05	127	Nov. 11.....	1.70	1.8
28.....	1.90	101	26.....	1.77	5.6
30.....	2.20	311	Dec. 3.....	1.80	8.1
30.....	2.30	242	11.....	1.78	3.8
Feb. 12.....	1.90	67	16.....	1.83	4.8
16.....	1.99	62	24.....	1.80	5.4
21.....	2.05	55	1909.		
Mar. 12.....	2.18	97	Jan. 19.....	1.87	11
15.....	2.10	111	28.....	.76	156
Apr. 2.....	2.00	177	Feb. 1.....	.54	65
6.....	1.95	146	4.....	.90	173
15.....	1.90	95	5.....	.78	153
19.....	1.90	82	6.....	.68	101
May 4.....	2.00	61	8.....	1.10	325
10.....	2.02	58	8.....	1.02	284
21.....	1.99	40	9.....	.84	260
24.....	1.99	42	9.....	.87	238
June 4.....	2.01	28	17.....	.98	129
7.....	2.06	35	27.....	.93	154
17.....	2.02	22	Mar. 4.....	1.15	96
July 19.....	2.02	5.7	13.....	1.25	86
Dec. 13.....	2.28	12	18.....	1.28	82
21.....	2.28	10	26.....	1.32	89
29.....	2.32	15	27.....	1.80	342
			27.....	1.70	285

Discharge measurements of Santa Ysabel River near Escondido, Cal., in 1905-1912—Continued.

Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.
	<i>Feet.</i>	<i>Sec.-feet.</i>		<i>Feet.</i>	<i>Sec.-ft.</i>
1909.			1910.		
Mar. 28.....	1.60	214	May 30.....	.75	4.2
28.....	1.55	288	June 2.....	.79	5.7
28.....	1.51	191	8.....	.77	3.3
29.....	1.40	173	30.....	.74	1.3
Apr. 5.....	1.40	115	Nov. 25.....	.80	2.9
10.....	1.35	100			
15.....	1.28	63	1911.		
24.....	1.23	44	Feb. 7.....	.80	59
May 24.....	1.20	31	Mar. 5.....	.87	140
Dec. 23.....	1.22	83	Apr. 11.....	.48	48
			May 10.....	.25	17
1910.			June 26.....	.10	2.4
Jan. 11.....	.60	105	Oct. 15.....	.06	a 2
31.....	.51	66			
Feb. 11.....	.57	44	1912.		
19.....	.60	46	Jan. 22.....	.12	3.7
22.....	.67	53	Feb. 8.....	.14	4.2
23.....	.69	56	Mar. 6.....	.47	47
Mar. 6.....	.72	31	8.....	.26	22
10.....	.76	34	Apr. 1.....	.12	49
22.....	.80	39	12.....	.75	266
31.....	.96	57	22.....	.18	62
Apr. 4.....	.94	42	May 8.....	.10	53
8.....	.90	42	15.....	.00	36
15.....	.90	34	23.....	b -.04	21
28.....	.86	18	June 22.....	-.14	5.1
May 5.....	.87	20	July 13.....	-.19	1.0
16.....	.84	10			

^a Estimated.

^b Stream in two channels.

NOTE.—Beginning May 14, 1912, temporary gage was used. This reads 8.76 feet higher than old gage. All gage heights reduced to datum of old gage.

Daily gage height, in feet, of Santa Ysabel Creek near Escondido, Cal., for 1905-1912.

Day.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1905-6.										
1.....		3.55	3.5	3.7	0.7	1.85	2.4	2.4	2.4	2.45
2.....		3.5	3.5	3.65	.9	1.85	2.4	2.4	2.45	2.45
3.....		3.55	3.5	3.65	.7	1.8	2.4	2.35	2.4	2.45
4.....		3.45	3.5	3.7	.7	1.8	2.35	2.4	a 2.4	2.4
5.....		3.55	3.5	3.7	.75	1.9	2.35	2.35	2.35	2.45
6.....		3.6	3.65	3.65	.55	1.95	2.35	2.4	2.4	2.45
7.....		3.55	3.6	3.65	.4	1.95	2.35	2.4	2.4	2.5
8.....		3.55	3.55	3.7	.45	1.95	2.3	2.4	2.4	2.4
9.....		3.5	3.6	3.65	.7	2.0	2.3	2.35	2.4	2.45
10.....		3.55	3.5	3.7	.7	2.0	2.35	2.4	2.45	2.45
11.....		3.55	3.65	3.7	.7	2.0	2.3	2.35	2.4	2.5
12.....		3.6	3.6	4.2	.9	2.2	2.3	2.35	2.4	2.5
13.....		3.6	3.6	4.5	.9	2.2	2.3	2.4	2.4	2.5
14.....		3.6	3.6	3.75	1.0	2.15	2.3	2.4	2.4	2.5
15.....		3.6	3.9	3.7	1.0	2.1	2.35	2.4	2.45	2.5
16.....		3.5	3.9	3.8	1.05	2.2	2.3	2.4	2.45	2.5
17.....	3.46	3.5	3.75	4.25	1.15	2.2	2.3	2.4	2.45	2.5
18.....	3.47	3.6	3.7	3.9	a 1.15	2.2	2.25	2.4	2.5	2.5
19.....	3.47	3.85	3.7	3.65	a 1.15	2.2	2.3	2.4	2.55	2.45
20.....	3.48	3.75	3.7	3.6	a 1.15	2.15	2.3	2.4	2.45	2.4
21.....	3.54	3.6	3.65	3.55	a 1.2	2.2	2.3	2.4	2.45	2.4
22.....	3.52	3.5	3.7	3.6	1.2	2.25	2.25	2.4	2.4	a 2.4
23.....	3.50	3.5	3.7	3.5	1.3	2.25	2.2	2.4	2.4	2.45
24.....	3.48	3.55	3.65	6.3	1.4	2.3	2.3	2.4	2.45	2.45
25.....	3.49	3.5	3.65	3.5	1.45	2.3	2.4	2.45	a 2.4	2.5
26.....	3.48	3.5	3.65	1.9	1.4	2.45	2.3	2.45	2.4	2.5
27.....	3.47	3.55	3.65	.9	1.5	2.35	2.35	2.4	2.4	2.5
28.....	3.48	3.55	3.7	.6	1.6	2.25	2.4	2.4	2.45	2.5
29.....	3.51	3.55	.....	.8	1.7	2.3	2.35	2.4	2.4	2.5
30.....	3.52	3.55	.....	.9	1.6	2.4	2.3	2.4	2.4	2.45
31.....	3.55	3.55	.....	.9	.....	2.4	.....	2.4	2.45	.....

^a Estimated.

Daily gage height, in feet, of Santa Ysabel Creek near Escondido, Cal., for 1905-1912—
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1906-7.												
1.....	2.45	2.50	2.55	2.75	1.90	2.10	2.00	2.00	2.00	1.99	2.01	2.03
2.....	2.45	2.50	2.60	2.70	1.95	2.10	2.00	2.00	2.00	2.00	2.02	2.04
3.....	2.45	2.50	2.60	2.60	1.90	2.10	2.10	2.00	2.00	2.00	2.02	2.03
4.....	2.45	2.50	2.60	2.60	1.90	2.20	2.00	2.00	2.00	2.01	2.01	2.03
5.....	2.40	2.50	2.65	2.60	1.90	2.65	1.95	2.00	2.00	2.01	2.02	2.02
6.....	2.40	2.50	2.60	2.90	1.85	2.35	2.00	2.00	2.00	2.00	2.02	2.02
7.....	2.45	2.50	2.65	2.70	1.85	2.25	1.95	2.00	2.05	2.00	2.03	2.01
8.....	2.45	2.40	2.70	2.60	1.85	2.20	1.95	2.00	2.05	2.00	2.02	2.00
9.....	2.45	2.50	2.70	2.70	1.90	2.15	1.90	2.00	2.00	2.00	2.01	2.01
10.....	2.40	2.45	2.70	3.00	1.85	2.10	1.90	2.00	2.00	1.99	2.02	2.01
11.....	2.40	2.45	2.70	2.55	1.90	2.10	1.90	2.00	2.00	2.00	2.01	2.01
12.....	2.40	2.45	3.00	2.60	1.90	2.20	1.95	2.00	2.00	2.02	2.01	2.02
13.....	2.40	2.50	2.70	2.90	1.85	2.10	1.90	2.00	2.00	2.01	2.01	2.03
14.....	2.40	2.50	2.70	2.50	1.90	2.00	1.90	2.00	2.05	2.01	2.01	2.02
15.....	2.40	2.55	2.70	2.50	1.90	2.00	1.90	2.00	2.00	2.02	2.02	2.03
16.....	2.45	2.50	2.70	2.50	2.00	2.10	1.95	2.00	2.00	2.03	2.04	2.05
17.....	2.45	2.50	2.70	2.40	2.00	2.10	1.90	2.00	2.00	2.02	2.01	2.06
18.....	2.50	2.50	2.70	3.00	2.05	2.10	1.90	2.00	2.00	2.01	2.02	2.07
19.....	2.50	2.50	2.70	2.30	2.00	2.15	1.90	2.00	2.00	2.00	2.03	.....
20.....	2.50	2.50	2.70	2.20	2.00	2.20	1.90	2.00	2.00	1.99	2.03	.....
21.....	2.50	2.55	2.70	2.10	2.00	2.20	1.90	2.00	2.00	1.99	2.03	.....
22.....	2.50	2.55	2.70	2.05	2.15	2.20	1.90	2.00	2.05	2.00	2.02	.....
23.....	2.50	2.60	2.75	2.00	2.10	2.15	1.90	2.00	2.05	2.01	2.02	.....
24.....	2.50	2.50	2.70	2.00	2.05	2.10	1.95	2.00	2.00	2.01	2.01	.....
25.....	2.50	2.55	2.70	1.90	2.00	2.45	1.95	2.00	2.00	2.02	2.01	.....
26.....	2.50	2.60	2.80	1.90	2.05	2.10	1.90	2.00	2.00	2.02	2.02	2.07
27.....	2.50	2.55	2.80	1.90	2.15	2.25	1.90	2.00	2.00	2.03	2.04	2.05
28.....	2.50	2.55	2.75	1.90	2.15	2.10	2.00	2.00	2.00	2.03	2.02	2.05
29.....	2.50	2.55	2.70	1.90	.....	2.05	2.00	2.00	2.00	2.03	2.04	2.09
30.....	2.50	2.55	2.75	2.25	.....	2.00	2.00	2.00	2.00	2.02	2.04	2.09
31.....	2.50	.....	2.85	1.85	.....	2.00	.....	2.00	.....	2.01	2.02	.....
1907-8.												
1.....	2.10	2.20	2.30	2.30	2.40	2.10	1.91	1.80	1.77	1.61	.....	.....
2.....	2.10	2.20	2.30	2.30	2.35	2.05	1.91	1.80	1.76	1.62	.....	.....
3.....	2.10	2.20	2.30	2.30	2.90	2.00	1.90	1.88	1.76	1.64	.....	.....
4.....	2.10	2.20	2.25	2.30	2.40	2.20	1.89	1.84	1.77	1.59	.....	.....
5.....	2.10	2.20	2.25	2.30	2.35	2.15	1.90	1.80	1.77	1.62	.....	.....
6.....	2.15	2.25	2.25	2.30	2.30	2.10	1.91	1.80	1.77	1.61	.....	.....
7.....	2.05	2.25	2.35	2.30	2.30	2.00	1.90	1.81	1.76	1.62	.....	.....
8.....	2.05	2.25	2.35	2.30	2.40	2.00	1.89	1.79	1.77	1.52	.....	.....
9.....	2.05	2.25	2.40	2.30	2.45	2.00	1.88	1.79	1.72	1.61	.....	.....
10.....	2.00	2.30	2.40	2.30	2.45	2.00	1.88	1.79	1.73	.....	.....	.....
11.....	2.05	2.25	2.30	2.30	2.25	2.00	1.84	1.80	1.73	.....	.....	.....
12.....	2.05	2.25	2.30	2.30	2.25	2.00	1.87	1.83	1.73	.....	.....	.....
13.....	2.05	2.25	2.30	2.30	2.30	2.00	1.82	1.83	1.72	1.50	.....	.....
14.....	2.05	2.25	2.30	2.35	2.25	1.95	1.84	1.82	1.71	.....	.....	.....
15.....	2.10	2.30	2.25	2.30	2.20	2.00	1.84	1.79	1.73	.....	.....	.....
16.....	2.10	2.30	2.30	2.30	2.20	2.00	1.84	1.78	1.73	.....	.....	.....
17.....	2.40	2.30	2.30	2.30	2.20	1.92	1.86	1.77	1.71	.....	.....	.....
18.....	2.10	2.35	2.30	2.25	2.10	1.96	1.86	1.74	1.73	.....	.....	.....
19.....	2.10	2.25	2.30	2.25	2.10	1.98	1.85	1.77	1.73	.....	.....	.....
20.....	2.10	2.25	2.30	2.30	2.10	1.93	1.83	1.78	1.73	.....	.....	.....
21.....	2.10	2.25	2.30	2.30	2.10	1.94	1.83	1.77	1.72	.....	.....	.....
22.....	2.10	2.30	2.30	2.30	2.10	1.91	1.90	1.77	1.72	.....	.....	.....
23.....	2.35	2.30	2.30	2.30	2.15	1.90	1.98	1.73	1.73	.....	.....	.....
24.....	2.30	2.30	2.30	2.50	2.10	1.92	1.90	1.76	1.70	.....	.....	.....
25.....	2.10	2.30	2.30	2.70	2.05	1.90	1.85	1.80	1.70	.....	.....	.....
26.....	2.10	2.30	2.30	2.40	2.05	1.98	1.80	1.76	1.70	.....	.....	.....
27.....	2.15	2.30	2.30	2.40	2.05	2.10	1.80	1.73	1.69	.....	.....	.....
28.....	2.20	2.25	2.30	2.55	2.10	1.95	1.78	1.76	1.66	.....	.....	.....
29.....	2.20	2.30	2.30	2.50	2.10	1.92	1.79	1.77	1.70	.....	.....	.....
30.....	2.20	2.30	2.30	2.40	.....	1.92	1.78	1.73	1.71	.....	.....	.....
31.....	2.20	.....	2.30	2.40	.....	1.90	.....	1.72	.....	.....	.....	.....

Daily gage height, in feet, of Santa Ysabel Creek near Escondido, Cal., for 1905-1912—
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1908-9.												
1.....	1.6	1.7	1.75	1.8	0.55	1.0	1.3	1.2	1.15	1.15	1.05	0.95
2.....	1.6	1.7	1.8	1.8	.55	1.0	1.3	1.2	1.15	1.15	1.0	1.0
3.....	1.65	1.65	1.9	1.8	.55	1.05	1.3	1.2	1.15	1.15	1.05	1.0
4.....	1.7	1.65	1.8	1.8	.9	1.1	1.3	1.2	1.15	1.1	1.05	1.0
5.....	1.7	1.7	1.8	1.8	.7	1.1	1.4	1.2	1.15	1.1	1.05	1.0
6.....	1.7	1.7	1.8	1.85	.65	1.15	1.35	1.2	1.15	1.15	1.0	1.1
7.....	1.65	1.7	1.8	1.85	.75	1.2	1.3	1.2	1.2	1.15	1.05	1.1
8.....	1.6	1.7	1.8	1.85	1.15	1.2	1.3	1.2	1.15	1.1	1.05	1.05
9.....	1.6	1.7	1.8	1.85	.8	1.2	1.3	1.2	1.15	1.1	1.05	1.0
10.....	1.7	1.7	1.8	1.85	.9	1.15	1.25	1.2	1.15	1.1	1.05	1.0
11.....	1.7	1.7	1.8	1.8	1.05	1.2	1.3	1.2	1.15	1.1	1.0	1.0
12.....	1.65	1.7	1.75	1.85	1.2	1.25	1.25	1.2	1.15	1.1	1.0	1.0
13.....	1.7	1.7	1.75	2.1	1.3	1.2	1.25	1.2	1.15	1.1	1.0	.95
14.....	1.65	1.7	1.75	2.25	1.1	1.25	1.3	1.2	1.15	1.05	.95	.95
15.....	1.7	1.7	1.8	1.9	1.0	1.2	1.3	1.2	1.15	1.05	1.0	.95
16.....	1.7	1.7	1.8	1.85	.9	1.2	1.25	1.2	1.15	1.05	1.0	.9
17.....	1.75	1.7	1.8	1.85	1.0	1.25	1.25	1.2	1.1	1.05	1.0	.....
18.....	1.8	1.75	1.8	1.85	1.0	1.2	1.25	1.2	1.1	1.1	1.0	.....
19.....	1.75	1.75	1.8	1.85	1.0	1.3	1.25	1.2	1.15	1.1	1.0	.....
20.....	1.7	1.7	1.8	1.85	.9	1.25	1.25	1.2	1.15	1.0	1.0	.....
21.....	1.7	1.7	1.85	2.05	1.4	1.3	1.25	1.2	1.1	.95	.95	.....
22.....	1.7	1.7	1.85	4.65	1.0	1.35	1.25	1.2	1.15	1.0	1.0	.....
23.....	1.7	1.75	1.8	1.4	.9	1.5	1.25	1.2	1.15	1.05	.95	.....
24.....	1.7	1.75	1.8	.8	.95	1.45	1.25	1.2	1.15	1.0	1.0	1.0
25.....	1.7	1.75	1.8	.75	.95	1.4	1.25	1.2	1.15	1.0	1.0	1.05
26.....	1.65	1.75	1.8	.75	.95	1.4	1.2	1.15	1.15	1.05	1.0	1.05
27.....	1.65	1.75	1.8	.9	.95	1.8	1.25	1.15	1.15	1.1	1.0	1.05
28.....	1.65	1.7	1.8	.75	.95	1.6	1.25	1.15	1.1	1.05	.95	1.05
29.....	1.7	1.75	1.8	.65	.....	1.4	1.2	1.2	1.1	1.05	0	1.05
30.....	1.7	1.75	1.8	.6	.....	1.35	1.2	1.15	1.1	1.05	1.05	1.05
31.....	1.7	.....	1.8	.6	.....	1.35	.....	1.15	.....	1.05	1.15	.....

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.
1909-10.										
1.....	1.05	1.05	1.2	2.40	0.52	0.73	0.94	0.88	0.78	0.70
2.....	1.05	1.0	1.2	1.60	.52	.72	.94	.87	.79	.66
3.....	1.05	1.0	1.2	1.42	.53	.72	.94	.86	.79	.64
4.....	1.05	1.0	1.2	1.20	.53	.71	.94	.85	.79	.63
5.....	1.1	1.0	1.25	.95	.53	.71	.93	.86	.79	.62
6.....	1.05	1.0	1.35	.70	.52	.72	.93	.85	.79	.64
7.....	1.05	1.0	1.3	.68	.51	.72	.92	.84	.79	.63
8.....	1.0	1.05	1.25	.68	.52	.71	.92	.83	.79	.62
9.....	1.0	1.05	1.9	.66	.52	.72	.92	.82	.77	.....
10.....	1.0	1.1	1.55	.64	.52	.72	.91	.82	.76	.....
11.....	1.0	1.15	1.35	.60	.57	.73	.92	.83	.74	.....
12.....	1.0	1.15	1.3	.60	.53	.73	1.03	.83	.75	.....
13.....	1.0	1.1	1.3	.60	.54	.74	1.02	.82	.76	.....
14.....	1.0	1.1	1.3	.57	.55	.73	1.01	.82	.77	.....
15.....	1.0	1.25	1.25	.60	.56	.74	1.00	.82	.77	.....
16.....	1.0	1.15	1.25	.90	.60	.75	.98	.82	.78	.....
17.....	1.0	1.1	1.25	.70	.58	.77	.98	.82	.76	.....
18.....	1.05	1.1	1.25	.60	.60	.77	.98	.81	.76	.....
19.....	1.05	1.1	1.25	.58	.70	.77	.97	.80	.77	.....
20.....	1.05	1.1	1.4	.55	.80	.78	.95	.80	.75	.....
21.....	1.0	1.1	2.4	.53	.75	.78	.92	.80	.73	.....
22.....	1.0	1.1	1.25	.52	.73	.79	.90	.82	.74	.....
23.....	1.0	1.1	1.3	.52	.72	.80	.84	.81	.74	.....
24.....	1.0	1.15	1.25	.52	.73	.80	.86	.81	.73	.....
25.....	1.0	1.1	1.2	.52	.72	.80	.87	.81	.71	.....
26.....	1.0	1.25	1.15	.52	.72	.81	.88	.80	.70	.....
27.....	1.0	1.2	1.15	.52	.75	.90	.89	.79	.68	.....
28.....	1.0	1.2	1.15	.52	.74	1.30	.86	.76	.67	.....
29.....	1.05	1.15	1.1	.52	.....	1.09	.87	.77	.66	.....
30.....	1.05	1.2	1.1	.52	.....	.94	.89	.77	.70	.....
31.....	1.05	.....	1.1	.52	.....	.97	.....	.....	.....	.....

Daily gage height, in feet, of Santa Ysabel Creek near Escondido, Cal., for 1905-1912—Continued.

Day.	Apr.	May.	June.	July.	Day.	Apr.	May.	June.	July.
1911.					1911.				
1.....		0.35	0.23	0.10	16.....	0.39	0.26	0.17	.....
2.....		.30	.21	.10	17.....	.38	.22	.18	.....
3.....		.31	.24	.09	18.....	.40	.20	.15	.....
4.....		.32	.25	.10	19.....	.40	.25	.16	.....
5.....		.25	.20	.09	20.....	.39	.18	.16	.....
6.....		.26	.20	.07	21.....	.37	.19	.19	.....
7.....		.27	.18	.03	22.....	.40	.18	.20	.....
8.....		.27	.19	.02	23.....	.39	.20	.13	.....
9.....		.25	.15		24.....	.39	.25	.14	.....
10.....		.25	.17		25.....	.37	.23	.11	.....
11.....	0.48	.25	.19		26.....	.37	.22	.12	.....
12.....	.50	.26	.19		27.....	.40	.20	.10	.....
13.....	.47	.27	.16		28.....	.40	.20	.11	.....
14.....	.40	.25	.15		29.....	.40	.22	.10	.....
15.....	.45	.28	.14		30.....	.37	.25	.10	.....
					31.....		.23		.....

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.									
1.....			0.10	0.2	0.15	0.15	0.1	0.05	-0.1
2.....			.10	.2	.15	.3	.15	.0	-.1
3.....			.10	.2	.15	.15	.1	.05	-.1
4.....			.11	.2	.2	.15	.1	.0	-.15
5.....			.11	.2	.2	.2	.1	.0	-.1
6.....			.17	.15	.15	.5	.05	.0	-.05
7.....			.20	.15	.15	.35	.05	.0	-.1
8.....			.18	.15	.15	.25		.1	-.1
9.....			.15	.15	.15	.3	.1	.2	-.1
10.....			.11	.2	.15	1.4	.2	.2	-.1
11.....			.12	.2	.15	.4	.85	.15	-.1
12.....			.10	.15	.15	.35	.85	.1	-.1
13.....		0.08	.09	.15	.15	.85	.6	.1	-.1
14.....		.09	.09	.15	.15	.35	.5	.05	-.1
15.....	0.06	.10	.10	.15	.15	.35	.5	.0	-.1
16.....		.10	.11	.2	.15	.35	.5	.0	-.1
17.....		.11	.12	.2	.15	.3	.45	.0	-.15
18.....		.10	.12	.2	.1	.3	.3	.0	-.1
19.....		.09	.10	.2	.15	.3	.25	-.05	-.1
20.....		.15	.10	.2	.1	.3	.2	-.05	-.15
21.....		.15	.11	.2	.1	.3	.15	-.05	-.15
22.....		.14	.20	.15	.15	.3	.15	-.05	-.15
23.....		.12	.21	.1	.15	.25	.15	-.05	-.15
24.....		.10	.19	.15	.15	.25	.1	-.05	.....
25.....		.10	.17	.15	.15	.25	.1	-.05	-.15
26.....		.10	.15	.15	.15	.3	.1	-.05	-.15
27.....		.09	.15	.2	.15	.3	.1	-.05	-.15
28.....		.08	.16	.2	.15	.3	.1	-.05	-.15
29.....		.05	.20	.2	.15	.4	.1	-.05	-.15
30.....		.08	.21	.2		.6	.1	-.1	-.15
31.....			.19	.15		.45		-.1	.....

NOTE.—Creek dry July 10-12, July 14 to Sept. 30, and Oct. 10-11, 1908; Sept. 17-23, 1909; July 9 to Dec. 31, 1910; July 7 to Oct. 14, 1911, and Oct. 16 to Nov. 12, 1911. No record Sept. 19-25, 1907, or Jan. 1 to Apr. 10, 1911.

Daily discharge, in second-feet, of Santa Ysabel Creek near Escondido, Cal., for 1910-1912.

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.
1910.								1910.							
1....	3,100	64	45	50	19	5	1	16....	340	45	37	49	10	2	.....
2....	1,320	62	41	47	19	6	1	17....	170	46	37	48	10	2	.....
3....	1,020	60	39	44	20	5	.5	18....	105	46	37	47	9	2	.....
4....	690	58	35	42	20	5	.5	19....	100	46	38	45	8	2	.....
5....	390	56	33	42	20	4	.5	20....	80	48	38	40	7	2	.....
6....	170	54	31	42	19	4	.5	21....	70	50	38	33	7	2	.....
7....	155	52	31	42	18	3	.5	22....	65	53	39	29	7	2	.....
8....	155	50	32	42	17	3	.5	23....	65	56	40	19	6	1	.....
9....	140	48	33	45	16	3	.....	24....	65	58	40	21	6	1	.....
10....	125	46	34	42	15	3	.....	25....	65	54	40	22	6	1	.....
11....	105	44	35	42	14	3	.....	26....	65	52	42	22	5	1	.....
12....	105	44	35	62	13	3	.....	27....	65	53	51	23	5	1	.....
13....	105	44	36	60	12	3	.....	28....	65	49	90	18	4	1	.....
14....	90	45	36	62	11	3	.....	29....	65	.....	70	18	4	1	.....
15....	105	45	36	56	10	3	.....	30....	65	.....	54	18	4	1	.....
								31....	66	.....	57	.....	4	.....	.....

Day.	Apr.	May.	June.	July.	Day.	Apr.	May.	June.	July.
1911.					1911.				
1.....	.....	29	14	2.4	16.....	35	17	8.1	.....
2.....	.....	22	12	2.4	17.....	33	13	8.9	.....
3.....	.....	23	15	1.9	18.....	36	10	6.4	.....
4.....	.....	25	16	2.4	19.....	36	16	7.3	.....
5.....	.....	16	10	1.9	20.....	35	8.9	7.3	.....
6.....	.....	17	10	1.0	21.....	32	9.7	9.7	.....
7.....	.....	19	8.9	.....	22.....	36	8.9	10	.....
8.....	.....	19	9.7	.....	23.....	35	10	4.8	.....
9.....	.....	16	6.4	.....	24.....	35	16	5.6	.....
10.....	.....	16	8.1	.....	25.....	32	14	3.2	.....
11.....	49	16	9.7	.....	26.....	32	13	4.0	.....
12.....	52	17	9.7	.....	27.....	36	10	2.4	.....
13.....	47	19	7.3	.....	28.....	36	10	3.2	.....
14.....	36	16	6.4	.....	29.....	36	13	2.4	.....
15.....	44	20	5.6	.....	30.....	32	16	2.4	.....
					31.....	.....	14	.....	.....

Daily discharge, in second-feet, of Santa Ysabel Creek near Escondido, Cal., for 1910-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.									
1.....			2.4	10	5	5	48	38	10
2.....			2.4	10	5	20	59	28	10
3.....			2.4	10	5	5	48	38	10
4.....			3.2	10	10	5	48	28	6
5.....			3.2	10	10	10	48	28	10
6.....			8.1	5	5	5	38	28	19
7.....			10	5	5	38	38	28	10
8.....			8.9	5	5	24	28	48	10
9.....			6.4	5	5	30	48	70	10
10.....			3.2	10	5	630	70	70	10
11.....			4.0	10	5	125	315	59	10
12.....			2.4	5	5	110	315	48	10
13.....		1.4	1.9	5	5	315	200	48	10
14.....		1.9	1.9	5	5	110	160	38	10
15.....	0.2	2.4	2.4	5	5	110	160	28	10
16.....		2.4	3.2	10	5	110	160	28	10
17.....		3.2	4.0	10	5	95	142	28	6
18.....		2.4	4.0	10	2	95	95	28	10
19.....		1.9	2.4	10	5	95	82	19	10
20.....		6.4	2.4	10	2	95	70	19	6
21.....		6.4	3.2	10	2	95	59	19	6
22.....		5.6	10	5	5	95	59	19	6
23.....		4.0	12	2	5	82	59	19	6
24.....		2.4	9.7	5	5	82	48	19	6
25.....		2.4	8.1	5	5	82	48	19	6
26.....		2.4	6.4	5	5	95	48	19	6
27.....		1.9	6.4	10	5	95	48	19	6
28.....		1.4	7.3	10	5	95	48	19	6
29.....		.0	10	10	5	125	48	19	6
30.....		1.4	12	10	.....	200	48	10	6
31.....		.....	9.7	5	.....	142	.....	10	.....

NOTE.—Daily discharge determined by the indirect method for shifting channels and from rating curves covering short periods of time. Creek dry July 9 to Dec. 31, 1910; July 11 to Oct. 14, 1911; and Oct. 16 to Nov. 12, 1911. No record Jan. 1 to Apr. 10, 1911.

Monthly discharge of Santa Ysabel Creek near Escondido, Cal., for 1906-1912.

[Drainage area, 128 square miles.]

Month.	Discharge in second-feet.				Run-off.		Accuracy.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.	Total in acre-feet.	
1906.							
January.....	83	2	11.4	0.089	0.10	701	
February.....	95	8	30.5	.238	.25	1,690	
March.....	8,000	29	633	4.94	5.70	38,900	
April.....	400	102	221	1.73	1.93	13,200	
May.....	90	35	69.7	.545	.63	4,290	
June.....	35	23	28.4	.222	.25	1,690	
July.....	30	5	12.4	.097	.11	762	
August.....	6	4	4.2	.033	.04	258	
September.....	4	3	3.1	.024	.03	184	
The period.....						61,700	
1906-7.							
October.....	7	3	4.7	.037	.04	289	
November.....	15	6	9.6	.075	.08	571	
December.....	21	11	12.4	.097	.11	762	
January.....	500	40	155	1.21	1.40	9,530	
February.....	110	50	72.4	.566	.59	4,020	
March.....	290	50	138	1.08	1.24	8,480	
April.....	200	67	108	.844	.94	6,430	
May.....	65	33	49	.383	.44	3,010	
June.....	35	16	24.6	.192	.21	1,460	
July.....	15	5	8.6	.067	.08	529	
August.....	5	5	5.0	.039	.04	307	
September.....	6	5	5.5	.043	.05	327	
The year.....	500	3	49.4	.386	5.22	35,700	

Monthly discharge of Santa Ysabel Creek near Escondido, Cal., for 1906-1912—Contd.

Month.	Discharge in second-feet.				Run-off.		Accu- racy.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.	Total in acre-feet.	
1907-8.							
October.....	15	6	8.1	.063	.07	498	
November.....	12	9	10.2	.080	.09	607	
December.....	15	10	12	.093	.11	738	
January.....	136	10	25.6	.200	.23	1,570	
February.....	146	37	54.1	.423	.46	3,110	
March.....	82	20	37.7	.294	.34	2,320	
April.....	44	12	20.9	.163	.18	1,240	
May.....	25	5	13.7	.107	.12	842	
June.....	9	1	5.06	.040	.04	301	
July.....	1	0	.129	.0010	.001	8	
August.....	0	0	.0	.00	.00	0	
September.....	0	0	.0	.00	.00	0	
The year.....	146	0	15.6	.122	1.64	11,200	
1908-9.							
October.....	2	0	.603	.0047	.005	37	
November.....	5	1	2.74	.021	.02	163	
December.....	17	2	5.65	.044	.05	347	
January.....	6,500	5	293	2.29	2.64	18,000	
February.....	800	65	216	1.69	1.76	12,000	
March.....	340	80	118	.922	1.06	7,260	
April.....	125	42	74.8	.584	.65	4,450	
May.....	41	28	34.5	.270	.31	2,120	
June.....	27	14	23.2	.181	.20	1,380	
July.....	22	3	11.7	.091	.10	719	
August.....	20	0	5.32	.042	.05	327	
September.....	14	0	4.33	.034	.04	258	
The year.....	6,500	0	65.8	.514	6.89	47,100	
1909-10.							
October.....	14	4	5.87	.046	.05	361	
November.....	52	4	17.1	.134	.15	1,020	
December.....	700	20	90.2	.705	.81	5,550	
January.....	3,100	65	300	2.34	2.70	18,400	
February.....	64	44	51.0	.398	.41	2,830	
March.....	90	31	41.3	.323	.37	2,540	
April.....	62	18	39.1	.305	.34	2,330	
May.....	20	4	11.4	.089	.10	701	
June.....	6	1	2.6	.020	.02	155	
July.....	1	0	.16	.001	.001	10	
August.....	0	0	.0	.0	.0	0	
September.....	0	0	.0	.0	.0	0	
The year.....	3,100	0	46.6	.364	4.95	33,900	
1910-11.							
October.....	0	0	.0	.0	.0	0	
November.....	0	0	.0	.0	.0	0	
December.....	0	0	.0	.0	.0	0	
April 11-30.....	52	32	37.2	.291	.22	1,480	B.
May.....	29	8.9	15.8	.123	.14	972	B.
June.....	16	2.4	7.82	.061	.07	465	B.
July.....	2.4	.0	.39	.003	.004	24	D.
August.....	.0	.0	.0	.0	.0	0	
September.....	.0	.0	.0	.0	.0	0	
1911-12.							
October.....		0	.032	.0003	.00	2.0	D.
November.....	6.4	0	2.06	.016	.02	123	C.
December.....	12	1.9	5.60	.044	.05	344	B.
January.....	10	5	7.65	.060	.07	470	B.
February.....	10	2	5.03	.039	.04	289	B.
March.....	630	5	10.4	.813	.94	6,400	B.
April.....	315	28	89.5	.699	.78	5,330	B.
May.....	70	10	30.3	.237	.27	1,860	B.
June.....	19	6	8.57	.067	.07	510	B.
The period.....						15,300	

NOTE.—Discharge 1906-1909 determined by the indirect method of shifting channels. Values are approximate.

SANTA YSABEL CREEK NEAR RAMONA, CAL.

This station, which is located at Pamo, 4 miles north of Ramona, 1 mile below the mouth of Temescal Creek, was established February 5, 1912. It is 5 miles above the gaging station known as Santa Ysabel Creek, near Escondido, at the mouth of the canyon.

The gage is a staff, in four sections, on the left bank. The channel is composed of sand and is somewhat shifting. Discharge measurements are made from car and cable at the gage. Results are good.

The station is maintained in cooperation with the Volcan Land & Water Co. through W. S. Post, engineer.

Discharge measurements of Santa Ysabel Creek near Ramona, Cal., in 1912.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1912.		<i>Feet.</i>	<i>Sec.-ft.</i>	1912.		<i>Feet.</i>	<i>Sec.-ft.</i>
Feb. 5	H. L. Davis.....	0.30	3.3	Apr. 5	H. L. Davis.....	0.85	41
5	do.....	.30	3.8	12	F. C. Ebert.....	2.22	206
8	F. C. Ebert.....	.32	3.8	14	H. L. Davis.....	1.70	154
17	H. L. Davis.....	.28	3.0	14	do.....	1.72	154
Mar. 6	F. C. Ebert.....	.94	49.0	15	do.....	1.68	141
8	do.....	.62	21.0	23	do.....	.84	53
8	H. L. Davis.....	.60	18.0	May 8	F. C. Ebert.....	.92	54
27	F. C. Ebert.....	.94	50.0	27	H. L. Davis.....	.50	21
Apr. 1	do.....	1.01	50.0	July 15	F. C. Ebert.....	.10	1.4

Daily gage height, in feet, of Santa Ysabel Creek near Ramona, Cal., for 1912.

Day.	Feb.	Mar.	Apr.	May.	June.	Day.	Feb.	Mar.	Apr.	May.	June.
1.....		0.43	1.04	0.68	0.40	16.....	0.28	0.82	1.45	0.63	0.34
2.....		.56	.97	.68	.39	17.....	.27	.68	1.23	.56	.30
3.....		.43	.88	.67	.39	18.....	.27	.59	1.19	.54	.26
4.....		.51	.84	.64	.37	19.....	.27	.52	1.10	.52	.25
5.....	0.30	.57	.85	.64	.36	20.....	.27	.46	1.01	.49	.24
6.....	.30	1.00	.80	.63	.37	21.....	.29	.60	.94	.49	.23
7.....	.30	.72	.73	.80	.36	22.....	.28	.62	.88	.49	.23
8.....	.30	.63	.81	1.25	.34	23.....	.27	.55	.82	.48	.24
9.....	.32	.74	.87	1.38	.33	24.....	.27	.55	.78	.48	.24
10.....	.32	2.7	.90	1.15	.34	25.....	.27	.50	.76	.47	.23
11.....	.32	.99	2.3	1.03	.34	26.....	.27	.89	.74	.49	.20
12.....	.32	.97	2.5	.93	.34	27.....	.27	1.00	.81	.48	.18
13.....	.30	2.05	2.0	.85	.34	28.....	.27	.80	.75	.47	.16
14.....	.30	1.13	1.85	.75	.35	29.....	.23	.90	.72	.45	.21
15.....	.30	.89	1.6	.67	.34	30.....		1.6	.70	.45	.25
						31.....		1.16		.43	

NOTE.—Gage height, Mar. 5, 6, 9, 10, 12, 29, 30, Apr. 10-18, and May 7-10 determined by means of a graph and comparison with San Luis Rey River near Mesa Grande. Observer reads gage several times a day during flood stages.

Daily discharge, in second-feet, of Santa Ysabel Creek near Ramona, Cal., for 1912.

Day.	Feb.	Mar.	Apr.	May.	June.	Day.	Feb.	Mar.	Apr.	May.	June.
1.....		9.5	59	34	14	16.....	3.4	38	114	30	11
2.....		17	52	34	14	17.....	3.1	25	89	25	9
3.....		9.5	43	34	14	18.....	3.1	18	85	24	7.2
4.....		14	40	31	12	19.....	3.1	14	75	22	6.8
5.....	4	17	40	31	12	20.....	3.1	11	66	20	6.3
6.....	4	55	36	30	12	21.....	3.7	19	59	20	5.8
7.....	4	29	30	45	12	22.....	3.4	21	53	20	5.8
8.....	4	21	37	92	11	23.....	3.1	16	47	20	6.3
9.....	4.8	31	42	106	10	24.....	3.1	16	43	20	6.3
10.....	4.8	278	45	80	11	25.....	3.1	13	41	19	5.8
11.....	4.8	54	218	68	11	26.....	3.1	44	40	20	4.5
12.....	4.8	52	252	58	11	27.....	3.1	55	46	20	3.9
13.....	4	182	185	50	11	28.....	3.1	36	40	19	3.3
14.....	4	69	166	40	12	29.....	1.9	45	38	18	5.0
15.....	4	44	133	34	11	30.....		122	36	18	6.8
						31.....		73		16	

NOTE.—Daily discharge determined from rating curves well defined above 3 second-feet, applicable as follows: Feb. 5 to Apr. 11, 1912, and Apr. 12 to June 30, 1912.

Monthly discharge of Santa Ysabel Creek near Ramona, Cal., for 1912.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
February 5-29.....	4.8	1.9	3.62	180	A.
March.....	278	9.5	46.7	2,870	A.
April.....	252	30	75.0	4,460	A.
May.....	106	16	35.4	2,180	A.
June.....	14	3.3	9.06	539	A.

SAN DIEGUITO RIVER AT BERNARDO, CAL.

This station, which is located at highway bridge at Bernardo on the San Bernardo grant, about 5 miles below junction of Santa Ysabel and Santa Maria creeks, and 16 miles above the mouth of the river, was established April 17, 1911.

A chain gage is fastened to the highway bridge. The length of the chain is 23.18 feet.

The channel is fine shifting sand.

Discharge measurements are made by wading near gage. A car and cable will be installed for use at high stages.

The results are considered good.

East and West San Pasqual ditches divert water for irrigation from the Santa Ysabel at the upper end of San Pasqual Valley. Water for irrigation is also pumped from wells along the river.

The station is maintained in cooperation with the Volcan Land & Water Co. through W. S. Post, engineer.

Discharge measurements of San Dieguito River at Bernardo, Cal., in 1912.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1912.		<i>Feet.</i>	<i>Sec.-ft.</i>	1912.		<i>Feet.</i>	<i>Sec.-ft.</i>
Apr. 17	F. C. Ebert.....	10.29	125	May 23	F. C. Ebert.....	9.51	16
22	H. L. Davis.....	9.92	66	June 8	W. S. Post.....	9.19	.65
May 2	F. C. Ebert.....	9.48	14	23	E. W. Case.....	9.15	.23
8	do.....	9.88	53	July 1	F. C. Ebert.....	9.11	a. 2
15	E. W. Case.....	9.80	37	13	do.....	9.10	a. 1

a Estimated.

NOTE.—All gage heights refer to datum of chain gage installed May 23, 1912.

Daily gage height, in feet, of San Dieguito River at Bernardo, Cal., for 1912.

Day.	Apr.	May.	June.	Day.	Apr.	May.	June.	Day.	Apr.	May.	June.
1.....		9.56	9.19	11.....		10.2	9.2	21.....	10.0	9.55	9.16
2.....		9.45	9.18	12.....		10.08	9.2	22.....	9.92	9.58	9.16
3.....		9.35	9.19	13.....		10.0	9.19	23.....	9.9	9.44	9.16
4.....		9.25	9.21	14.....		9.91	9.19	24.....	9.85	9.32	9.15
5.....		9.22	9.21	15.....		9.78	9.19	25.....	9.82	9.31	9.15
6.....		9.24	9.19	16.....		9.68	9.19	26.....	9.75	9.29	9.14
7.....		9.66	9.19	17.....	10.3	9.61	9.19	27.....	9.74	9.25	9.14
8.....		9.92	9.2	18.....	10.21	9.55	9.16	28.....	9.72	9.25	9.14
9.....	10.6	9.2		19.....	10.11	9.6	9.16	29.....	9.69	9.26	9.12
10.....	10.3	9.2		20.....	10.04	9.6	9.16	30.....	9.68	9.22	9.12
								31.....		9.22	

NOTE.—All gage heights refer to datum of chain gage installed May 23, 1912.

Daily discharge, in second-feet, of San Dieguito River at Bernardo, Cal., for 1912.

Day.	Apr.	May.	June.	Day.	Apr.	May.	June.	Day.	Apr.	May.	June.
1.....		20	0.7	11.....		107	0.8	21.....	71	19	0.3
2.....		12	.5	12.....		85	.8	22.....	59	21	.3
3.....		6.5	.7	13.....		71	.7	23.....	56	11	.3
4.....		2.1	1.0	14.....		58	.7	24.....	50	5.0	.3
5.....		1.3	1.0	15.....		41	.7	25.....	46	4.5	.3
6.....		1.8	.7	16.....		30	.7	26.....	38	3.6	.3
7.....		28	.7	17.....	127	24	.7	27.....	36	2.1	.3
8.....		59	.8	18.....	109	19	.3	28.....	34	2.1	.3
9.....		192	.8	19.....	90	23	.3	29.....	31	2.5	.2
10.....		127	.8	20.....	78	23	.3	30.....	30	1.3	.2
								31.....		1.3	

NOTE.—Daily discharge determined from a fairly well-defined rating curve.

Monthly discharge of San Dieguito River at Bernardo, Cal., for 1912.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1912.					
Apr. 17-30.....	127	30	61.1	1,700	B.
May.....	192	1.3	32.4	1,990	B.
June.....	1.0	.2	.55	32.7	B.

MISCELLANEOUS MEASUREMENTS.

The following miscellaneous measurements have been made in the San Dieguito River basin:

Miscellaneous measurements in San Dieguito River drainage basin.

Date.	Stream.	Locality.	Dis-charge.
May 2, 1912..	East side San Pasqual ditch..	Sand box, 9 miles from Escondido, N. W. $\frac{1}{4}$ sec. 36 T. 12 S., R. 1 W.	<i>Sec.-ft.</i> 12.1
June 8, 1912..	do.....	do.....	3.5
June 22, 1912..	do.....	do.....	2.9
May 2, 1912....	West side San Pasqual ditch.	N. E. $\frac{1}{4}$ sec. 34, T. 12 S., R. 1 W.	11.1
May 15, 1912..	do.....	do.....	7.0
May 23, 1912..	do.....	do.....	9.0
June 23, 1912..	do.....	do.....	.9

SAN LUIS REY RIVER BASIN.

SAN LUIS REY RIVER AT DIVERSION FLUME.

Measurements of the flow of San Luis Rey River at a diversion flume in sec. 23, T. 10 S., R. 1 E., were made in 1894 and 1895, and the daily discharge of the river, supposedly at this same point, has been computed for 1896 to 1899, although it is not definitely known that the records for 1899 refer to the point of measurement in 1894-95.

Discharge measurements of San Luis Rey River at diversion flume in 1894-95.

Date.	Hydrographer.	Dis-charge.	Date.	Hydrographer.	Dis-charge.
1894.		<i>Sec.-ft.</i>	1895.		<i>Sec.-ft.</i>
May —	E. F. Tabor.....	a 6,720	Mar. 8	E. F. Tabor.....	152
Oct. —	do.....	4	Apr. 11	do.....	100
Dec. 8	do.....	10	17	do.....	72
20	do.....	240	May 10	do.....	39
			19	do.....	19
1895.					
Jan. 15	E. F. Tabor.....	a 5,000			

a Estimated.

NOTE.—The point of measurement is in sec. 23, T. 10 S., R. 1 E.

Daily discharge, in second-feet, of San Luis Rey River at diversion flume for 1896-1898.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
1896-97.							
1.....		3	5	7			
2.....		3	5	7			
3.....		2	5	6			79
4.....		2	5	6			
5.....		2	5	6			
6.....		3	5	6			
7.....		3	5	5			
8.....		3	5	5			
9.....		3	4	5			
10.....		4	4	10	24		31
11.....		5	5	18	21		26
12.....		5	5	37	21		31
13.....		4	5	21	21		35
14.....		3	5		21		33
15.....		2	40		19		28
16.....		3	13		19		27
17.....		2	9		21		24
18.....		2	8		29		24
19.....		2	7				22
20.....		3	6				22
21.....		3	5	24			
22.....		3	5	21			
23.....		3	5	19			
24.....		7	5	19	300		
25.....		17	4	19			
26.....			4	19			
27.....	7	7	4	21			
28.....	10	7	13	19			
29.....	8	7	38	24			
30.....	4	5	10	30			
31.....			7	33			

Day.	Dec.	Jan.	Feb.	Mar.	Day.	Dec.	Jan.	Feb.	Mar.
1897-98.					1897-98.				
1.....		5	16	8	16.....	7	21	10	17
2.....	4	5	16	8	17.....	6	26	13	22
3.....	4	9	16	8	18.....	10	38	22	21
4.....	4		15	8	19.....		19	17	26
5.....	4	6	15	8	20.....	10	18	13	28
6.....	3	8	13	8	21.....	10	14	12	20
7.....	3	8	15	8	22.....		13	10	17
8.....	3	50		8	23.....		40	10	18
9.....	2.5		22	8	24.....		35	9	15
10.....	2.5		19	27	25.....	9	26	9	
11.....	2.5		17	33	26.....	9	20	9	
12.....	2.5		15	21	27.....	9	14	9	
13.....	2.5		12	17	28.....	8	19	9	
14.....	2.5	19	10	18	29.....	8	22		
15.....	2.5	19	10	24	30.....	8	19		
					31.....	6	16		

NOTE.—The above record is very incomplete, as the discharge was measured over a weir in the flume, and at times of high water no record was kept. The river was probably dry during the summer months.

Daily discharge, in second-feet, of San Luis Rey River in canyon, California, for 1899.

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	0.0	3.0	5.6	10.9	(a)	10.0	(a)	(a)	(a)	(a)	0.0	0.0
2.....	.0	20.0	5.3	9.3	.....	10.0	.....	.....	.....	.....	.0	.0
3.....	.0	33.0	5.0	9.0	.....	.0	.....	.....	.....	.....	.0	.0
4.....	.0	13.3	4.7	8.6	.....	.0	.....	.....	.....	.....	.0	.0
5.....	.0	14.9	4.1	8.1	.....	.0	.....	.....	.....	.....	.0	.0
6.....	.0	10.1	3.6	7.8	.....	.0	.....	.....	.....	.....	.0	.0
7.....	.0	10.2	3.6	7.3	.....	.0	.....	.....	.....	.....	.0	.0
8.....	.0	10.2	3.6	6.5	.....	.0	.....	.....	.....	.....	.0	.0
9.....	.0	9.3	3.6	6.2	.....	.0	.....	.....	.....	.....	.0	.0
10.....	.0	9.0	3.6	5.9	.....	.0	.....	.....	.....	.....	.0	.0
11.....	24.0	8.6	3.6	5.3	.....	.0	.....	.....	.....	.....	.0	.0
12.....	.0	7.8	3.6	4.9	.....	.0	.....	.....	.....	.....	.0	.0
13.....	.0	7.8	3.6	4.6	.....	.0	.....	.....	.....	.....	.0	.0
14.....	10.0	7.8	3.6	4.4	.....	.0	.....	.....	.....	.....	.0	.0
15.....	.0	7.8	3.6	4.1	.....	.0	.....	.....	.....	.....	.0	.0
16.....	6.0	7.3	3.6	3.9	.....	.0	.....	.....	.....	.....	.0	2.0
17.....	6.0	6.9	24.4	3.6	.....	.0	.....	.....	.....	.....	.0	.0
18.....	6.0	5.9	24.4	.0	.....	.0	.....	.....	.....	.....	.0	4.8
19.....	5.6	5.6	11.7	.0	.....	.0	.....	.....	.....	.....	.0	3.6
20.....	5.3	5.3	11.7	.0	.....	.0	.....	.....	.....	.....	.0	.0
21.....	4.9	4.9	25.0	.0	.....	.0	.....	.....	.....	.....	.0	.0
22.....	4.7	4.7	18.5	.0	.....	.0	.....	.....	.....	.....	.0	.0
23.....	3.0	4.7	13.3	.0	.....	.0	.....	.....	.....	.....	3.0	.0
24.....	3.6	16.8	11.7	.0	.....	.0	.....	.....	.....	.....	.0	.0
25.....	3.6	10.1	10.9	.0	.....	.0	.....	.....	.....	.....	.0	2.6
26.....	3.6	7.5	19.5	4.7	.....	.0	.....	.....	.....	.....	.0	.0
27.....	3.4	6.6	11.7	4.1	.....	.0	.....	.....	.....	.....	.0	.0
28.....	3.0	5.9	10.9	.0	.....	.0	.....	.....	.....	.....	.0	.0
29.....	3.0	.....	17.8	.0	.....	.0	.....	.....	.....	.....	.0	.0
30.....	3.0	.....	15.1	.0	.....	.0	.....	.....	.....	.....	.0	7.2
31.....	3.0	.....	11.7	.....	.....	.....	.....	.....	.....	.....	.....	5.4

a River dry for month.

SAN LUIS REY RIVER NEAR MESA GRANDE, CAL.

This station, which is located on a concrete weir in the NE. $\frac{1}{4}$ sec. 9, T. 11 S., R. 2 E., 1 mile below the Warner dam site and about 5 miles north of Mesa Grande, was established October 3, 1911.

The channel is composed of sand and gravel and is somewhat shifting. The drainage area above the station is 208 square miles. Discharge measurements are made from car and cable about 1 mile above the gage or by wading. Frequent measurements are secured and results are good.

The station is maintained in cooperation with the Volcan Land & Water Co. through W. S. Post, engineer.

Discharge measurements of San Luis Rey River near Mesa Grande, Cal., 1911-12.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
		<i>Feet.</i>	<i>Sec.-ft.</i>			<i>Feet.</i>	<i>Sec.-ft.</i>
1911.				1912.			
Oct. 11	F. C. Ebert.	0.09	1.8	Mar 13	H. L. Davis	1.45	184
11	H. L. Davis.	.09	1.7	14	do.	.87	90
Dec. 13	do.	.11	2.2	15	do.	.68	59
20	do.	.21	2.4	23	do.	.51	29
23	do.	.12	2.6	27	do.	.61	43
22	do.	.12	2.4	31	do.	.64	46
29	do.	.50	20	31	F. C. Ebert.	.64	48
				Apr. 3	H. L. Davis.	.52	29
1912.				4	do.	.50	26
Jan. 17	F. C. Ebert.	.32	4.4	11	do.	2.15	420
18	do.	.32	4.4	12	do.	2.28	496
27	C. B. Ireland.	.33	6.5	13	do.	1.14	146
Feb. 6	H. L. Davis.	.27	3.4	24	do.	.56	32
10	F. C. Ebert.	.25	3.5	May 4	do.	.46	21
10	H. L. Davis.	.25	3.6	9	do.	.76	62
16	do.	.25	3.2	20	do.	.41	12
28	do.	.22	3.0	28	do.	.36	9.4
Mar. 2	do.	.40	11	June 6	do.	.32	3.3
6	do.	.92	84	8	do.	.32	3.1
11	do.	.90	85	14	do.	.28	3.4
12	do.	.68	56	18	do.	.27	1.8

Daily gage height, in feet, of San Luis Rey River near Mesa Grande, Cal., for 1911-12.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.									
1.		0.10	0.07	0.28	0.27	0.32	0.58	0.49	0.34
2.		.08	.06	.24	.28	.40	.55	.50	.37
3.	0.10	.08	.07	.25	.30	.35	.52	.46	.33
4.	.09	.07	.08	.28	.29	.54	.50	.46	.33
5.	.10	.07	.10	.25	.28	.50	.50	.47	.32
6.	.10	.06	.10	.30	.27	1.08	.50	.47	.32
7.	.11	.09	.16	.30	.26	.58	.47	.48	.34
8.	.09	.09	.13	.30	.26	.47	.44	.78	.32
9.	.09	.10	.12	.30	.25		.52	.87	.34
10.	.09	.09	.10	.30	.25	3.2	.61	.61	.34
11.	.09	.09	.11	.30	.27	.84	1.90	.51	.34
12.	.09	.07	.11	.31	.28	.99	2.0	.49	.34
13.	.09	.08	.11	.31	.27	1.55	1.18	.48	.30
14.	.09	.10	.10	.30	.26	.85	1.14	.45	.28
15.	.09	.09	.10	.30	.26	.67	1.21	.44	.32
16.	.09	.08	.10	.30	.25	.64	1.20	.43	.29
17.	.09	.08	.26	.34	.26	.61	1.07	.42	.26
18.	.09	.07	.26	.32	.24	.56	.94	.42	.28
19.	.10	.06	.23	.32	.25	.54	.81	.41	.27
20.	.10	.07	.21	.31	.23	.54	.71	.41	.28
21.	.09	.07	.24	.30	.23	.56	.66	.41	.26
22.	.10	.08	.12	.30	.24	.58	.62	.41	.26
23.	.12	.08	.13	.30	.23	.50	.62	.40	.28
24.	.12	.09	.16	.30	.23	.50	.56	.40	.27
25.	.12	.09	.13	.30	.23	.48	.56	.38	
26.	.13	.09	.10	.30	.21	.68	.53	.38	.26
27.	.18	.09	.10	.33	.22	.61	.60	.41	.25
28.	.16	.08	.20	.28	.22	.55	.53	.36	.26
29.	.09	.08	.45	.26	.22	.64	.52	.34	.28
30.	.09	.07	.29	.27		1.13	.49	.37	.23
31.	.09		.27	.27		.65		.36	

NOTE.—Maximum, Mar. 6, 1.32 feet; Mar. 10, 5.10 feet; night of Mar. 12-13, 3.00 feet; night of Mar. 29-30, 1.60 feet. Gage heights for Mar. 5-7, 9, 10, 12, 13, 26, 29, and 30 computed from graph comparison with record on Santa Ysabel River near Ramona, Cal.

Daily discharge, in second-feet, of San Luis Rey River near Mesa Grande, Cal., for 1911-12.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.									
1.....	1.8	1.8	1.6	4.3	4.1	5.8	37	24	5.8
2.....	1.8	1.7	1.6	3.4	4.3	10	32	25	8.2
3.....	1.8	1.7	1.6	3.6	4.7	7.4	28	20	5.2
4.....	1.7	1.6	1.7	4.3	4.5	25	25	20	5.2
5.....	1.8	1.6	1.8	3.6	4.3	20	25	21	4.5
6.....	1.8	1.6	1.8	4.7	4.1	119	25	21	4.5
7.....	1.9	1.7	2.3	4.7	3.9	30	21	22	5.8
8.....	1.7	1.7	2.0	4.7	3.9	17	17	70	4.5
9.....	1.7	1.8	2.0	4.7	3.6	46	28	88	5.8
10.....	1.7	1.7	1.8	4.7	3.6	790	42	42	5.8
11.....	1.7	1.7	1.9	4.7	4.1	71	360	26	5.8
12.....	1.7	1.6	1.9	5.2	4.3	113	392	24	5.8
13.....	1.7	1.7	1.9	5.2	4.1	254	157	22	3.6
14.....	1.7	1.8	1.8	4.7	3.9	84	148	18	2.9
15.....	1.7	1.7	1.8	4.7	3.9	51	164	17	4.5
16.....	1.7	1.7	1.8	4.7	3.6	46	162	16	3.2
17.....	1.7	1.7	3.9	6.8	3.9	42	131	15	2.2
18.....	1.7	1.6	3.9	5.8	3.4	34	102	15	2.9
19.....	1.8	1.6	3.2	5.8	3.6	31	76	13	2.6
20.....	1.8	1.6	2.8	5.2	3.2	31	58	13	2.9
21.....	1.7	1.6	3.4	4.7	3.2	34	50	13	2.2
22.....	1.8	1.7	2.0	4.7	3.4	37	43	13	2.2
23.....	2.0	1.7	2.0	4.7	3.2	25	43	12	2.9
24.....	2.0	1.7	2.3	4.7	3.2	25	34	12	2.6
25.....	2.0	1.7	2.0	4.7	3.2	22	34	9.2	2.4
26.....	2.0	1.7	1.8	4.7	2.8	53	30	9.2	2.2
27.....	2.4	1.7	1.8	6.3	3.0	42	40	13	2.0
28.....	2.3	1.7	2.6	4.3	3.0	32	30	7.2	2.2
29.....	1.7	1.7	15	3.9	3.0	46	28	5.8	2.9
30.....	1.7	1.6	4.5	4.1	.....	145	24	8.2	1.5
31.....	1.7	.....	4.1	4.1	.....	48	.....	7.2	.....

NOTE.—Daily discharge determined from fairly well defined rating curves applicable as follows: Oct. 3, 1911, to Mar. 11, 1912, and Mar. 12 to June 30, 1912. Discharge estimated Oct. 1 and 2, 1911, and Mar. 9, 1912.

Monthly discharge of San Luis Rey River near Mesa Grande, Cal., for 1911-12.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1911-12.					
October.....	2.4	1.7	1.81	111	C.
November.....	1.8	1.6	1.68	100	C.
December.....	15	1.6	2.73	168	C.
January.....	6.8	3.4	4.72	290	B.
February.....	4.7	2.8	3.69	212	B.
March.....	790	5.8	75.4	4,640	B.
April.....	392	17	79.5	4,730	B.
May.....	88	5.8	20.7	1,270	B.
June.....	8.2	1.5	3.83	228	B.
The period.....				11,700	

SAN LUIS REY RIVER NEAR PALA, CAL.

This station, which is located at the road crossing to Sickler's mill, 4 miles southeast of Pala, in the NW. $\frac{1}{4}$ sec. 31, T. 9 S., R. 1 W., was established October 9, 1903.

No tributaries enter the river near the gaging station. Water is diverted from the river during the winter and spring months at a point in the rough canyon about 11 miles above the station, to a

storage reservoir, and is used during the summer period for irrigation and municipal supply at Escondido and the surrounding country. About 3 miles below this point there is a diversion for irrigation on the Rincon Indian Reservation. One mile above the station a small amount is diverted for use on the Sickler ranch. There are two diversions below the station that are used for irrigation on the Pala Indian Reservation. There are several pumping plants between Pala and the mouth, which obtain water from wells along the banks of the stream. The drainage area above the station is 318 square miles.

The staff gage is in two sections on the left bank 75 feet above the cable from which discharge measurements are made. The datum of the gage was lowered 4.66 feet on November 13, 1906.

Conditions for obtaining accurate discharge data are poor. The channel is wide, is composed of sand, gravel, and bowlders, and is subject to constant change. The current is swift at flood stages.

The estimates of discharge were prepared from rating curves covering short periods of time and by interpolation on the days when the gage was not read. The record may be considered good.

The station is maintained in cooperation with the Volcan Land & Water Co. through W. S. Post, engineer.

Discharge measurements of San Luis Rey River near Pala, Cal., in 1903-1912.

[By W. V. Hardy and others.]

Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.
	<i>Feet.</i>	<i>Sec.-feet.</i>		<i>Feet.</i>	<i>Sec.-feet.</i>
1903.			1906.		
Aug. 16.....	.....	1.1	Mar. 5.....	1.20	48
Oct. 9.....	1.72	1.1	6.....	1.00	38
1905.			7.....	.93	32
Feb. 8.....	2.25	108	16.....	3.70	447
17.....	2.72	188	17.....	5.30	1,540
18.....	4.75	735	17.....	4.70	984
Mar. 17.....	7.50	5,180	17.....	4.30	811
22.....	2.64	305	18.....	3.80	532
22.....	2.64	299	19.....	2.70	367
Apr. 11.....	1.80	104	20.....	2.50	238
May 15.....	1.20	49	21.....	2.40	182
17.....	1.10	40	Apr. 12.....	2.20	307
20.....	1.40	57	26.....	1.52	119
July 6.....	.55	3.5	May 14.....	1.18	166
Aug. 8.....	.....	3	June 27.....	.61	28
19.....	.....	3.2	Aug. 5.....	.30	5.9
26.....	.....	3.3	Oct. 10.....	.....	3.0
Sept. 2.....	.....	2.7	Nov. 13.....	a 5.27	3.5
9.....	.....	2.7	Dec. 5.....	5.55	13
16.....	.....	2.5	28.....	7.15	322
21.....	.....	2.1	1907.		
23.....	.42	2.8	Jan. 23.....	7.50	193
Oct. 28.....	.53	3.6	25.....	7.40	169
Dec. 27.....	.63	12.9	Feb. 13.....	6.43	78
29.....	.61	9.4	15.....	6.40	76
1906.			19.....	6.62	110
Jan. 11.....	.60	9.0	20.....	6.57	105
28.....	.18	14.7	Mar. 13.....	7.32	183
Feb. 9.....	.13	10.4	14.....	7.18	141
26.....	.66	17.9	27.....	7.95	593
Mar. 4.....	1.02	38	Apr. 3.....	7.82	330
4.....	1.10	43	5.....	7.70	282
			16.....	6.70	135

a New gage installed Nov. 13, 1906, the datum of which is 4.66 feet below that of the former gage.

Discharge measurements of San Luis Rey River near Pala, Cal., in 1903-1912—Continued.

Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.
1907.	Feet.	Sec.-feet.	1909.	Feet.	Sec.-feet.
Apr. 18.....	6.65	123	Mar. 2.....	7.32	120
May 6.....	6.39	105	16.....	6.52	73
8.....	6.30	82	Apr. 1.....	7.27	182
23.....	5.93	46	2.....	7.2	167
June 5.....	5.82	32	13.....	6.55	87
18.....	5.70	17	May 1.....	6.13	44
July 24.....	5.40	3	June 4.....	5.63	7.7
Dec. 11.....	5.73	15			
23.....	5.60	9.9	1910.		
1908.			Jan. 8.....	7.55	164
Jan. 7.....	5.62	12	Feb. 3.....	6.93	102
20.....	5.61	12	20.....	7.10	141
31.....	6.40	73	21.....	6.85	109
Feb. 1.....	6.30	58	21.....	6.78	103
3.....	8.70	819	Mar. 8.....	6.40	43
4.....	7.70	513	9.....	6.37	42
4.....	7.60	459	29.....	7.30	177
4.....	7.40	365	Apr. 11.....	6.54	60
5.....	6.90	217	12.....	6.74	83
5.....	6.75	163	12.....	6.80	95
6.....	6.68	146	13.....	6.70	76
19.....	6.50	86	13.....	6.60	64
29.....	6.55	119	May 3.....	6.04	18
Mar. 8.....	6.42	87	4.....	6.07	20
16.....	6.07	39	11.....	5.81	11
27.....	6.40	90	31.....	5.72	8.4
Apr. 11.....	5.75	16	June 28.....	5.67	5.7
23.....	6.30	71	Sept. 20.....	5.62	3.9
30.....	5.64	12	Nov. 23.....	5.72	6.9
May 16.....	5.81	21			
30.....	5.58	9.5	1911.		
June 3.....	5.63	12	Feb. 5.....	7.50	266
8.....	5.56	7.4	6.....	7.20	200
July 12.....	5.39	2.6	Mar. 6.....	7.20	161
Nov. 5.....	5.55	5.8	Apr. 12.....	6.30	43
28.....	5.50	5.3	May 11.....	5.77	9.9
Dec. 15.....	5.60	8.6	June 27.....	5.72	6.3
28.....	5.56	7.8	Oct. 14.....	5.70	5.8
1909.			1912.		
Jan. 30.....	7.3	155	Jan. 21.....	5.78	8.8
31.....	7.33	104	Feb. 12.....	5.75	7.0
Feb. 11.....	7.9	272	13.....	5.77	7.5
11.....	8.2	389	Mar. 7.....	6.52	66
11.....	8.5	545	29.....	6.50	48
12.....	8.77	617	Apr. 2.....	6.58	64
12.....	8.62	575	4.....	7.13	132
12.....	9.1	900	May 2.....	6.33	38
12.....	9.48	1,131	22.....	6.08	18
13.....	9.1	909	June 15.....	5.83	7.4
13.....	8.85	796	25.....	5.72	5.8
15.....	8.0	438	July 12.....	5.72	3.3

Daily gage height, in feet, of San Luis Rey River near Pala, Cal., for 1903-1911.

Date.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1903-4.												
1.....		1.73	1.72	1.74	1.74	1.87	2.32	1.80	1.68			
2.....		1.73	1.72	1.74	1.74	1.84	2.28	1.90	1.68			
3.....		1.72	1.71	1.74	1.74	1.82	2.24	1.85	1.68			
4.....		1.72	1.71	1.74	1.74	1.79	2.20	1.80	1.68			
5.....		1.72	1.71	1.74	1.86	1.77	2.18	1.78	1.69			
6.....		1.73	1.71	1.74	1.80	1.77	2.10	1.75	1.69			
7.....		1.73	1.71	1.74	1.80	1.77	2.08	1.75	1.69			
8.....		1.73	1.71	1.74	1.80	1.77	2.05	1.74	1.68			
9.....	1.72	1.73	1.72	1.74	1.79	1.77	2.05	1.74	1.67			2.03
10.....	1.73	1.73	1.72	1.74	1.78	1.77	2.05	1.73	1.67			
11.....	1.72	1.73	1.72	1.74	1.78	1.95	2.04	1.73	1.67			
12.....	1.72	1.73	1.72	1.74	1.78	1.82	2.00	1.72	1.66			
13.....	1.71	1.73	1.72	1.74	1.78	1.80	1.95	1.72	1.66			
14.....	1.70	1.73	1.72	1.74	1.78	1.77	1.90	1.72	1.65			
15.....	1.69	1.74	1.73	1.74	1.78	1.75	1.85	1.71	1.65			

Daily gage height, in feet, of San Luis Rey River near Pala, Cal., for 1903-1911—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1903-4.												
16.	1.69	1.73	1.73	1.74	1.80	1.75	1.80	1.71	1.64			
17.	1.70	1.73	1.73	1.74	1.82	1.75	1.78	1.71	1.64			
18.	1.70	1.73	1.73	1.75	1.80	1.75	1.78	1.71	1.65			
19.	1.70	1.74	1.73	1.75	1.80	1.77	1.78	1.71	1.65			
20.	1.71	1.74	1.72	1.75	1.80	1.82	1.85	1.71	1.66			
21.	1.71	1.74	1.73	1.75	1.80	1.77	1.85	1.71	1.66			
22.	1.72	1.73	1.73	1.75	1.79	1.77	1.80	1.71	1.65			
23.	1.72	1.73	1.73	1.75	1.79	3.50	1.80	1.71	1.65			
24.	1.72	1.74	1.72	1.75	1.78	2.61	1.80	1.71	1.65			
25.	1.72	1.74	1.73	1.74	1.78	2.31	1.79	1.71	1.65			
26.	1.73	1.74	1.73	1.74	1.78	2.22	1.82	1.70	1.66			
27.	1.72	1.73	1.73	1.74	1.78	2.18	1.82	1.70	1.65			
28.	1.73	1.74	1.73	1.74	1.78	2.10	1.80	1.70	1.65			
29.	1.73	1.73	1.73	1.74	1.88	2.52	1.80	1.69	1.66			
30.	1.72	1.73	1.74	1.74	2.50	1.80	1.80	1.69	1.65			
31.	1.72	1.74	1.74	1.74	2.50	1.80	1.80	1.68	1.65			
1904-5.												
1.		1.40	1.45	1.45	1.70	2.20	2.00	1.00	1.10	0.70		
2.		1.40	1.55	1.45	2.60	1.70	1.90	2.20	1.00	.65		
3.		1.41	1.55	1.45	3.70	1.45	1.85	2.60	1.05	.65		
4.		1.40	1.55	1.45	4.70	1.85	1.80	2.40	1.05	.60		
5.		1.40	1.55	1.45	4.20	1.60	1.70	2.30	1.05	.58		
6.		1.40	1.55	1.45	3.60	1.60	1.60	2.00	1.00	.55		
7.		1.39	1.55	1.45	2.70	1.45	1.55	1.50	1.00	.53		
8.		1.39	1.55	1.45	2.25	1.40	1.55	2.30	1.00	.55		
9.		1.39	1.55	2.10	2.10	1.40	1.55	2.10	.99	.56		
10.	1.70	1.39	1.55	1.90	2.00	1.40	1.50	1.90	.98	.56		
11.	1.52	1.39	1.55	1.80	1.90	1.40	2.00	1.70	.98			
12.	1.40	1.39	1.55	1.70	1.85	1.80	1.80	1.60	.97			
13.	1.40	1.39	1.50	1.65	1.80	2.90	1.60	1.50	.96			
14.	1.40	1.39	1.45	1.60	1.70	3.80	1.50	1.40	.96			
15.	1.40	1.39	1.40	1.60	1.70	2.95	1.45	1.20	.96			
16.	1.41	1.40	1.40	1.90	3.50	4.10	1.35	1.10	.96			
17.	1.40	1.41	1.40	1.90	2.60	7.00	1.30	1.10	.96			
18.	1.40	1.42	1.40	1.90	4.00	4.10	1.25	1.20	.94			
19.	1.40	1.43	1.40	1.85	2.70	3.50	1.15	1.35	.92			
20.	1.40	1.45	1.40	1.80	2.70	3.70	1.10	1.40	.91			
21.	1.40	1.45	1.40	1.90	2.00	2.90	1.05	1.40	.91			
22.	1.41	1.45	1.40	1.90	2.00	2.70	1.05	1.35	.90			
23.	1.40	1.45	1.45	1.90	1.90	2.55	1.05	1.30	.90			
24.	1.39	1.45	1.45	1.85	1.80	2.40	1.05	1.20	.89			0.42
25.	1.39	1.45	1.45	1.80	1.70	2.40	1.00	1.10	.85			.42
26.	1.40	1.45	1.45	1.80	1.70	2.20	1.00	1.05	.84			.43
27.	1.39	1.45	1.45	1.75	1.70	2.10	1.00	1.50	.80			.43
28.	1.40	1.45	1.45	1.75	1.90	2.10	1.05	1.40	.80			.42
29.	1.41	1.45	1.45	1.70	2.20	2.20	1.05	1.30	.76			.43
30.	1.41	1.45	1.45	1.70	2.20	2.55	1.00	1.20	.74			.43
31.	1.40	1.50	1.50	1.70	2.20	2.20	1.10	1.10				
1905-6.												
1.	.43	.54	.9	.75	.1	.8	3.35	1.6	1.1	0.5	0.5	.2
2.	.43	.54	.8	.7	.1	.8	2.9	1.5	1.1	.5	.5	.2
3.	.43	.54	.8	.7	.9	.8	2.55	1.4	1.1	.5	.5	.2
4.	.42	.54	.75	.7	.9	1.0	2.5	1.4	1.1	.5	.5	.2
5.	.43	.56	.74	.7	.15	1.2	2.75	1.5	1.1	.5	.5	.2
6.	.42	.58	.7	.7	.2	1.0	3.0	1.45	1.05	.5	.5	.2
7.	.43	.6	.68	.7	.3	.95	3.0	1.4	1.0	.5	.25	.2
8.	.44	1.1	.67	.7	.3	.7	3.05	1.3	1.0	.5	.3	.2
9.	.43	.62	.65	.65	.25	.6	2.6	1.3	.9	.5	.25	.2
10.	.43	.61	.6	.65	.2	.65	2.6	1.3	.85	.5	.25	.2
11.	.44	.62	.6	.6	.65	.65	2.45	1.25	.8	.5	.3	.2
12.	.44	.6	.65	.6	.5	5.0	2.2	1.55	.7	.5	.25	.2
13.	.44	.6	.65	.6	.4	6.55	2.15	1.4	.7	.5	.2	.2
14.	.44	.59	.68	.7	.4	3.55	2.15	1.2	.65	.5	.2	.2
15.	.44	.58	.7	.7	.8	2.3	2.15	1.15	.6	.5	.2	.5
16.	.44	.58	.7	.7	2.65	2.85	2.05	1.1	.6	.5	.2	.35
17.	.44	.59	.7	.65	.85	4.8	2.05	1.05	.85	.5	.2	.2
18.	.44	.59	.71	.65	.95	3.65	1.95	1.0	.8	.5	.8	.2
19.	.45	.6	.71	1.0	.85	2.95	1.95	1.0	.7	.5	.7	.2
20.	.46	.6	.7	2.6	.75	2.5	1.85	.95	.6	.5	.6	.2

Daily gage height, in feet, of San Luis Rey River near Pala, Cal., for 1903-1911—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1905-6.												
21.....	0.47	0.6	0.7	1.2	0.9	2.4	1.8	1.0	0.6	0.5	0.5	0.2
22.....	.52	.61	.68	.9	.95	2.5	1.75	.9	.65	.5	.3	.2
23.....	.52	.61	.65	.6	1.0	2.5	1.75	.9	.6	.5	.25	.2
24.....	.52	.62	.63	.3	.95	10.0	1.65	.9	.55	.5	.25	.2
25.....	.52	.62	.64	.3	.9	7.0	1.6	.9	.5	.5	.2	.2
26.....	.53	.62	.65	.25	.6	7.25	1.5	1.25	.5	.5	.2	.2
27.....	.53	.8	.64	.2	.6	4.6	1.45	1.5	.5	.5	.2	.2
28.....	.53	1.2	.63	.18	.9	4.4	1.7	1.7	.5	.5	.2	.2
29.....	.53	1.15	.63	.15	.....	4.1	1.7	1.5	.5	.5	.2	.2
30.....	.54	1.05	.64	.15	.....	3.35	1.6	1.3	.5	.5	.2	.2
31.....	.53	.....	.67	.15	.....	4.0	.....	1.25	.....	.5	.2	.....
1906-7.												
1.....	.2	.....	5.6	6.7	7.9	6.55	7.3	6.35	5.9	5.54	5.3	5.34
2.....	.2	.....	5.6	6.55	7.4	6.5	7.9	6.3	5.85	5.52	5.32	5.34
3.....	.2	.....	5.55	6.5	7.4	6.5	7.85	6.3	5.85	5.5	5.32	5.35
4.....	.2	.....	5.55	6.5	7.35	6.8	7.7	6.25	5.85	5.5	5.3	5.35
5.....	.2	.....	5.55	6.6	7.3	9.7	7.7	6.3	5.85	5.5	5.29	5.34
6.....	.2	.....	5.55	7.9	6.9	8.0	7.65	6.4	5.85	5.51	5.28	5.35
7.....	.2	.....	5.5	7.1	6.8	8.0	7.55	6.35	5.85	5.5	5.28	5.35
8.....	.2	.....	5.5	6.7	6.75	7.7	7.4	6.3	5.8	5.5	5.3	5.34
9.....	.2	.....	5.5	6.9	6.6	7.6	7.3	6.25	5.8	5.5	5.3	5.35
10.....	.2	.....	5.45	8.85	6.5	7.55	7.15	6.2	5.8	.....	5.32	5.34
11.....	.2	.....	5.4	7.2	6.5	7.5	7.05	6.2	5.8	.....	5.33	5.35
12.....	.2	.....	7.8	6.8	6.45	7.5	6.95	6.2	5.8	.....	5.32	5.35
13.....	.2	a 5.25	7.2	6.5	6.45	7.3	6.85	6.25	5.8	.....	5.32	5.34
14.....	.2	5.25	6.5	7.85	6.4	7.2	6.85	6.2	5.75	5.37	5.3	5.35
15.....	.2	5.25	5.8	7.4	6.4	7.0	6.8	6.1	5.75	5.37	5.3	5.37
16.....	.....	5.25	5.8	7.5	8.5	6.95	6.75	6.05	5.75	5.37	5.31	5.37
17.....	.....	5.25	5.7	7.7	7.4	6.85	6.7	6.0	5.7	5.32	5.3	5.35
18.....	.....	5.25	5.65	10.8	6.8	6.8	6.65	6.0	5.7	5.33	5.3	5.35
19.....	.....	5.25	5.6	10.4	6.6	6.75	6.55	6.0	5.7	5.32	5.3	5.38
20.....	.....	5.25	5.55	9.6	6.55	7.0	6.5	5.95	5.7	5.32	5.3	5.38
21.....	.....	5.25	5.55	8.2	6.8	8.5	6.5	5.95	5.7	5.32	5.32	5.37
22.....	.....	5.5	5.5	8.1	7.4	7.2	6.45	5.9	5.7	5.32	5.32	5.35
23.....	.....	5.65	5.5	7.4	7.0	7.2	6.45	5.95	5.7	5.32	5.35	5.35
24.....	.....	5.6	5.45	7.45	6.9	7.0	6.45	5.9	5.75	5.33	5.35	5.38
25.....	.....	5.6	5.4	7.4	6.85	8.8	6.45	5.9	5.7	5.32	5.35	5.38
26.....	.....	5.6	5.8	7.4	6.75	8.5	6.45	5.85	5.7	5.31	5.36	5.37
27.....	.....	5.7	6.6	7.4	6.7	7.95	6.4	5.85	5.65	5.32	5.35	5.38
28.....	.....	5.6	6.7	7.4	6.6	7.4	6.4	5.85	5.65	5.30	5.37	5.38
29.....	.....	5.6	6.8	7.4	.....	7.4	6.4	5.85	5.6	5.3	5.37	5.45
30.....	.....	5.6	6.6	8.6	.....	7.35	6.45	5.85	5.55	5.32	5.37	5.36
31.....	.....	.....	6.7	8.4	.....	7.3	.....	5.9	.....	5.32	5.35	.....
1907-8.												
1.....	5.35	5.85	5.5	5.7	6.3	6.45	5.95	5.6	5.6	5.4	5.35	.....
2.....	5.35	5.9	5.5	5.65	6.3	6.35	5.9	5.65	5.65	5.4	.....	.....
3.....	5.4	5.85	5.5	5.65	7.75	6.2	5.9	5.8	5.65	5.4	.....	.....
4.....	5.5	5.85	5.5	5.65	7.55	6.6	5.9	5.8	5.6	5.45	.....	.....
5.....	5.45	5.85	5.5	5.6	6.8	6.75	5.85	5.8	5.6	5.45	.....	.....
6.....	5.5	5.8	5.5	5.65	6.7	6.6	5.85	5.75	5.6	5.45	.....	.....
7.....	5.45	5.85	5.7	5.6	6.55	6.45	5.85	5.75	5.6	5.45	.....	.....
8.....	5.5	5.85	5.75	5.6	6.4	6.4	5.85	5.75	5.55	5.45	.....	.....
9.....	5.5	5.85	5.75	5.6	7.1	6.4	5.8	5.7	5.6	5.4	5.85	.....
10.....	5.45	5.8	5.7	5.6	7.85	6.4	5.8	5.7	5.55	5.4	5.75	.....
11.....	5.5	5.8	5.75	5.6	7.3	6.35	5.75	5.7	5.55	5.4	5.55	.....
12.....	5.5	5.8	5.7	5.6	7.1	6.25	5.7	5.75	5.55	5.4	5.4	.....
13.....	5.5	5.8	5.7	5.65	7.0	6.15	5.7	5.75	5.55	5.4	5.35	.....
14.....	5.5	5.8	5.7	5.8	6.9	6.1	5.65	5.75	5.55	5.4	5.35	.....
15.....	5.55	5.8	5.7	6.0	6.85	6.05	5.65	5.75	5.55	5.35	.....	.....
16.....	5.7	5.8	5.7	5.8	6.6	6.0	5.65	5.8	5.6	5.35	.....	.....
17.....	5.85	5.8	5.7	5.7	6.5	5.95	5.65	5.8	5.55	5.55	.....	.....
18.....	5.8	5.95	5.65	5.7	6.5	5.9	5.65	5.75	5.55	5.35	.....	.....
19.....	5.8	5.9	5.65	5.65	6.5	5.9	5.6	5.7	5.55	5.35	.....	.....
20.....	5.8	5.85	5.6	5.6	6.5	5.9	5.6	5.65	5.55	5.35	.....	.....
21.....	5.8	5.85	5.6	5.6	6.5	5.85	5.9	5.65	5.5	5.35	.....	.....
22.....	5.9	5.8	5.6	5.6	6.5	5.9	6.25	5.6	5.5	5.35	.....	.....
23.....	6.4	5.8	5.6	5.75	6.5	5.85	6.3	5.6	5.5	5.35	.....	.....
24.....	6.5	5.8	5.6	6.6	6.35	5.85	6.15	5.6	5.5	5.35	.....	.....
25.....	6.2	5.75	5.6	7.1	6.3	5.85	5.95	5.6	5.45	5.35	.....	.....

a Gage heights after Nov. 13, 1906, are by the new gage, the datum of which is 4.66 feet below that of the old gage.

Daily gage height, in feet, of San Luis Rey River near Pala, Cal., for 1903-1911—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1907-8.												
26.....	6.0	5.7	5.6	6.85	6.3	6.0	5.65	5.6	5.45	5.35		
27.....	5.9	5.7	5.6	6.55	6.3	6.4	5.65	5.6	5.4	5.35		
28.....	6.0	5.65	5.7	7.25	6.3	6.3	5.65	5.6	5.4	5.35		
29.....	6.1	5.6	5.7	7.7	6.55	6.3	5.65	5.6	5.4	5.35		
30.....	6.0	5.55	5.7	6.65		6.2	5.65	5.6	5.4	5.35		
31.....	5.9		5.7	6.5		6.0		5.6		5.35		
1908-9.												
1.....	5.35	5.5	5.5	5.6	7.3	7.3	7.25	6.15	5.6	5.55		
2.....	5.35	5.5	5.5	5.55	7.3	7.3	7.2	6.15	5.6			
3.....	5.35	5.5	5.65	5.6	7.4	7.2	7.05	6.1	5.6			
4.....	5.35	5.5	5.85	5.55	8.2	7.15	7.0	6.1	5.65			
5.....	5.35	5.55	5.7	5.55	7.7	7.1	6.95	6.1	5.6		5.5	
6.....	5.35	5.55	5.7	5.55	7.2	7.0	6.9	6.1	5.6	5.5	5.5	
7.....	5.35	5.55	5.65	5.55	7.8	6.9	6.9	6.05	5.6	5.5		
8.....	5.35	5.55	5.6	5.55	8.5	6.8	6.85	6.05	5.6	5.5		5.5
9.....	5.35	5.55	5.6	5.55	7.8	6.75	6.85	6.0	5.6	5.55		5.5
10.....	5.35	5.55	5.6	5.65	7.6	6.7	6.8	6.0	5.55	5.55		5.5
11.....	5.35	5.55	5.6	5.6	8.2	6.7	6.7	5.95	5.55	5.55		5.5
12.....	5.35	5.55	5.6	5.7	9.0	6.65	6.65	5.95	5.55			5.5
13.....	5.35	5.55	5.6	6.3	9.15	6.6	6.6	5.95	5.55			5.5
14.....	5.35	5.6	5.6	6.7	8.0	6.6	6.55	5.95	5.55			5.5
15.....	5.35	5.6	5.6	6.2	8.0	6.55	6.55	6.0	5.55			5.5
16.....	5.4	5.55	5.65	5.9	8.0	6.5	6.5	6.0	5.6			5.5
17.....	5.5	5.6	5.7	5.8	7.95	6.5	6.5	6.0	5.6			5.5
18.....	5.5	5.6	6.65	6.75	7.8	6.5	6.5	5.95	5.6			5.5
19.....	5.5	5.6	5.55	5.7	7.6	6.55	6.45	5.9	5.55			5.5
20.....	5.5	5.6	5.5	5.7	7.5	6.55	6.4	5.85	5.55			5.5
21.....	5.5	5.6	5.5	6.8	8.85	6.65	6.4	5.85	5.5			5.5
22.....	5.5	5.6	5.5	11.15	8.3	7.5	6.4	5.9	5.55			5.5
23.....	5.5	5.6	5.5	8.3	7.9	7.5	6.35	5.85	5.55	5.5		5.5
24.....	5.45	5.55	5.55	7.5	7.8	7.2	6.3	5.85	5.55	5.5		5.5
25.....	5.5	5.55	5.55	7.6	7.65	6.9	6.25		5.55	5.5	5.5	5.5
26.....	5.5	5.55	5.55	7.7	7.4	7.1	6.2		5.5		5.55	5.5
27.....	5.5	5.55	5.6	8.3	7.3	8.15	6.2		5.5		5.55	5.5
28.....	5.5	5.5	5.6	7.9	7.3	8.15	6.15		5.5		5.5	5.5
29.....	5.5	5.5	5.6	7.6		7.8	6.15	5.7	5.5		5.5	5.5
30.....	5.5	5.5	5.6	7.3		7.55	6.15	5.65	5.5		5.55	5.5
31.....	5.5		5.6	7.35		7.4		5.65				
1909-10.												
1.....	5.5	5.5	5.75	11.49	7.10	6.70	6.72	6.08	5.71			
2.....	5.5	5.5	5.75	9.48	7.00	6.70	6.70	6.07	5.70			
3.....	5.5	5.5	5.75	8.40	6.93	6.55	6.70	6.05	5.70			
4.....	5.5	5.5	5.75	7.60	6.92	6.62	6.70	5.98	5.70			
5.....	5.5	5.5	6.0	7.58	6.90	6.55	6.70	5.90	5.68			
6.....	5.5	5.5	6.05	7.55	6.82	6.60	6.68	5.94	5.69			
7.....	5.5	5.5	6.0	7.56			6.62	5.90	5.74			
8.....	5.5	5.5	6.05	7.55			6.60	5.86	5.67			
9.....	5.5	5.5	7.6	7.55			6.58	5.85	5.66			
10.....	5.5	5.65	7.55	7.55			6.55	5.80	5.65			
11.....	5.5	5.8	7.4	7.68			6.54	5.81	5.64			
12.....	5.5	5.85	7.1	7.60			6.77	5.81	5.66			
13.....	5.5	5.75	7.0	7.55		6.32	6.65	5.80	5.66			
14.....	5.5	5.9	6.85	7.50	6.37	6.41	6.54	5.80	5.66			
15.....	5.5	5.95	6.85	7.58			6.51	5.80	5.66			
16.....	5.5	5.95	6.0	8.80		6.34	6.48	5.80	5.66			
17.....	5.5	5.95	5.9	8.60		6.40	6.45	5.79	5.66			
18.....	5.5	5.9	5.95	8.56		6.60	6.40	5.79	5.66			
19.....	5.5	5.85	6.0	8.40		6.48	6.34	5.78	5.66			
20.....	5.5	5.8	6.0	8.35	6.67	6.35	6.35	5.77	5.66			
21.....	5.5	5.8	8.0	8.26	6.68	6.30	6.26	5.77	5.67			
22.....	5.5	5.7	7.55	8.15		6.42	6.21	5.76	5.67			
23.....	5.5	5.7	7.4	8.00			6.17	5.76	5.67			
24.....	5.5	5.7	7.35	7.96	6.60		6.19	5.75	5.67			
25.....	5.5	5.7	7.2	7.84	6.68		6.12	5.75	5.67			
26.....	5.5	5.8	7.0	7.72		6.60	6.13	5.74	5.67			
27.....	5.5	5.8	6.9	7.60	6.65	6.78	6.12	5.74	5.67			
28.....	5.5	5.8	6.85	7.58	6.70	7.73	6.11	5.73	5.67			
29.....	5.5	5.75	6.85	7.40		7.38	6.11	5.73	5.67			
30.....	5.5	5.75	6.85	7.32		7.12	6.10	5.72	5.67			
31.....	5.5		7.3	7.22		6.85		5.72				

Daily gage height, in feet, of San Luis Rey River near Pala, Cal., for 1903-1911—Contd.

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	Day.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911.							1911.						
1.....		6.23	6.90	.....	5.96	5.81	16.....		7.10	7.05	6.23	5.85	5.68
2.....		6.45	6.85	.....	5.90	5.82	17.....				6.21	5.85	5.66
3.....		6.65	7.20	.....	5.88	5.79	18.....				6.18	5.83	5.65
4.....		9.25	8.69	.....	5.91	5.80	19.....			6.95	6.15	5.78	5.67
5.....		7.65	7.65	.....	5.88	5.80	20.....				6.15	5.71	5.68
6.....		7.20	7.20	.....	5.88	5.79	21.....				6.18	5.69	5.68
7.....				.....	5.88	5.73	22.....				6.19	5.72	5.70
8.....				.....	5.87	5.73	23.....		8.20		6.17	5.75	5.68
9.....				.....	5.86	5.70	24.....		7.55		6.13	5.75	5.70
10.....	7.20			.....	5.86	5.71	25.....				6.12	5.75	5.70
11.....	7.70		8.80	.....	5.85	5.72	26.....				6.80	5.76	5.70
12.....	8.00			6.30	5.85	5.69	27.....		6.90		6.60	5.76	5.70
13.....			7.20	6.30	5.85	5.70	28.....		7.28		6.50	5.74	5.72
14.....		7.25		6.24	5.88	5.71	29.....				6.01	5.77	5.71
15.....				6.21	5.87	5.68	30.....				5.99	5.78	5.70
							31.....					5.81	.....

Daily discharge, in second-feet, of San Luis Rey River near Pala, Cal., for 1910-11.

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	Day.	Jan.	Feb.	Mar.	Apr.	May.	June.
1910.							1911.						
1.....	3,770	100	79	82	20	63	1.....	5	29	146	80	18	10
2.....	1,200	85	79	79	20	6	2.....	5	49	138	300	15	11
3.....	485	78	60	79	18	6	3.....	5	72	200	150	14	9.6
4.....	205	77	69	79	15	6	4.....	5	1,130	778	100	16	10
5.....	200	75	60	79	12	5.6	5.....	5	308	262	90	14	10
6.....	192	71	66	76	14	5.8	6.....	5	200	161	90	14	9.6
7.....	195	67	62	69	12	7.2	7.....	5	140	140	170	14	7.2
8.....	192	63	58	66	11	5.4	8.....	5	100	140	280	14	7.2
9.....	192	60	54	64	10	5.2	9.....	5	75	100	160	13	6
10.....	192	56	50	60	9	5.0	10.....	188	65	350	100	13	6.4
11.....	225	52	45	59	9.3	4.8	11.....	274	60	805	65	12	6.8
12.....	205	49	41	89	9.3	5.2	12.....	375	70	400	43	12	5.7
13.....	192	45	37	72	9	5.2	13.....	150	80	161	43	12	6
14.....	180	41	45	59	9	5.2	14.....	30	210	150	38	14	6.4
15.....	200	47	42	55	9	5.2	15.....	45	200	140	35	14	5.4
16.....	695	52	39	52	9	5.2	16.....	45	181	135	37	12	5.4
17.....	580	58	44	49	8.7	5.2	17.....	30	170	130	35	12	4.8
18.....	560	63	66	44	8.7	5.2	18.....	20	160	125	33	12	4.5
19.....	485	69	52	39	8.4	5.2	19.....	10	160	120	30	9.2	5.1
20.....	462	75	40	40	8.1	5.2	20.....	10	150	115	30	6.4	5.4
21.....	422	76	35	32	8.1	5.4	21.....	10	140	110	33	5.7	5.4
22.....	375	73	46	28	7.8	5.4	22.....	10	170	110	33	6.8	6
23.....	320	69	51	25	7.8	5.4	23.....	10	510	105	32	8.0	5.4
24.....	308	66	56	26	7.5	5.4	24.....	10	280	105	29	8.0	6
25.....	272	76	61	22	7.5	5.4	25.....	10	170	100	28	8.0	6
26.....	236	74	66	23	7.2	5.4	26.....	140	145	95	98	8.4	6
27.....	205	72	90	22	7.2	5.4	27.....	60	146	90	74	8.4	6
28.....	200	79	259	22	6.9	5.4	28.....	30	216	90	63	7.6	6.8
29.....	155	.....	191	22	6.9	5.4	29.....	30	.....	85	21	8.8	6.4
30.....	139	.....	145	21	6.6	5.4	30.....	25	.....	85	20	9.2	6
31.....	119	.....	101	.....	6.6	.....	31.....	25	.....	80	.....	10	.....

NOTE.—Daily discharge determined from fairly well defined rating curves applicable as follows: Jan. 1 to Feb. 13, 1910; Feb. 14 to June 30, 1910; Jan. 1 to Feb. 4, 1911; Feb. 5 to Mar. 4, 1911; Mar. 5 to June 30, 1911; no record July to December in 1910 and 1911. Discharge interpolated for days on which gage was not read in January to June, 1910. Discharge estimated from hydrographs of neighboring streams for days on which gage was not read in January to June, 1911.

Monthly discharge of San Luis Rey River near Pala, Cal., for 1903-1911.

[Drainage area, 318 square miles.]

Month.	Discharge in second-feet.				Run-off.		Accu- racy.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.	Total in acre-feet.	
1903-4.							
October (23 days).....	1.5	1	1.1	0.0035	0.003	50	
November.....	1.5	1	1.4	.0044	.005	83	
December.....	1.5	1	1.2	.0038	.004	74	
January.....	1.5	1.5	1.5	.0047	.005	92	
February.....	2.5	1.5	2	.0063	.007	115	
March.....	348	1.5	41.6	.131	.15	2,558	
April.....	104	20	43.6	.137	.15	2,595	
May.....	35	12	16.2	.051	.06	996	
June.....	12	9	10.8	.034	.04	643	
July.....	9	3	3.8	.012	.01	234	
August.....	2	2	2	.0063	.007	123	
September.....	2	2	2	.0063	.007	119	
The period						7,680	
1904-5.							
October.....	13	2	2.5	.0079	.009	154	
November.....	3	2	2.4	.0076	.008	143	
December.....	5.5	2	3.7	.012	.01	227	
January.....	66	3	19.1	.060	.07	1,174	
February.....	711	13	151	.475	.49	8,386	
March.....	4,265	2	336	1.06	1.22	20,660	
April.....	139	27	64.9	.204	.23	3,862	
May.....	282	27	88.1	.277	.32	5,417	
June.....	35	11	23	.072	.08	1,369	
July.....	9	3	4.1	.013	.01	252	
August.....	3.5	3	3.0	.0094	.01	184	
September.....	3	2.5	2.6	.0082	.009	155	
The year	4,265	2	58.4	.184	2.47	42,000	
1905-6.							
October.....	3.8	2.8	3.2	.010	.01	197	
November.....	96	3.8	17.8	.056	.06	1,059	
December.....	47	10	18.3	.058	.07	1,125	
January.....	232	9	21.4	.067	.08	1,320	
February.....	241	10	28.6	.090	.09	1,590	
March.....	13,000	17	1,120	3.52	4.06	68,900	
April.....	620	114	301	.947	1.06	17,900	
May.....	260	100	158	.497	.57	9,720	
June.....	128	19	65.6	.206	.23	3,900	
July.....	19	19	19	.060	.07	1,170	
August.....	43	3	10.3	.032	.04	633	
September.....	19	3	3.7	.012	.01	220	
The year	13,000	2.8	147	.463	6.35	108,000	
1906-7.							
October.....	3	3	3	.0094	.01	184	D. B. C. C. C. B. B. B. B.
November.....	28	3	8.3	.026	.03	494	
December.....	550	9	79.3	.249	.29	4,880	
January.....	2,800	151	541	1.70	1.96	33,300	
February.....	910	79	154	.484	.5	8,550	
March.....	2,100	85	326	1.03	1.19	20,000	
April.....	410	98	167	.525	.59	9,940	
May.....	98	33	62.5	.197	.23	3,840	
June.....	40	8	22.8	.072	.08	1,360	
July.....	7.6	1	3.27	.010	.01	201	
August.....	2.4	.6	1.42	.0045	.01	87	
September.....	4.5	1.8	2.22	.007	.01	132	
The year	2,800	.6	114	.359	4.91	83,000	
1907-8.							
October.....	109	2	28.1	.088	.10	1,730	B. B. B. C. C. C. C. C. C.
November.....	47	8	27.8	.087	.10	1,650	
December.....	22	6	13.3	.042	.05	818	
January.....	480	10	62.6	.197	.23	3,850	
February.....	544	60	175	.550	.59	10,100	
March.....	169	21	61.1	.192	.22	3,760	
April.....	71	10	21.3	.067	.07	1,270	
May.....	18	10	13.2	.041	.05	812	
June.....	12	4	7.4	.023	.03	440	

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Monthly discharge of San Luis Rey River near Pala, Cal., for 1903-1911—Continued.

Month.	Discharge in second-feet.				Run-off.		Accu- racy.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.	Total in acre-feet.	
1907-8.							
July.....	5	2	3.0	0.0094	0.01	184	C. C. C.
August.....	21	2	3.4	.011	.01	209	
September.....	2	2	2.0	.0063	.01	119	
The year.....	544	2	34.8	.110	1.47	24,900	
1908-9.							
October.....	5	2	3.5	.011	.01	215	C C. C.
November.....	7	5	6.1	.019	.02	363	
December.....	12	5	8.6	.027	.03	529	
January.....	3,240	7	198	.622	.72	12,200	
February.....	930	110	332	1.04	1.08	18,400	
March.....	425	67	137	.431	.50	8,420	
April.....	182	45	91.0	.286	.32	5,410	
May.....	44	8	27.6	.087	.10	1,700	
June.....	8	5	6.23	.020	.02	371	
July.....	6	5	5.35	.017	.02	329	
August.....	6	5	5.13	.016	.02	315	
September.....	5	5	5.00	.016	.02	298	
The year.....	3,240	2	68.8	.216	2.86	48,600	
1909-10.							
October.....	5	5	5.00	.016	.02	307	C. B. B. B. B.
November.....	23	5	12.4	.039	.04	738	
December.....	350	13	107	.336	.39	6,580	
January.....	3,770	119	431	1.35	1.56	26,500	
February.....	100	41	66.7	.210	.22	3,700	
March.....	259	35	70.6	.222	.26	4,340	
April.....	89	21	51.1	.161	.18	3,040	
May.....	20	6.6	9.99	.034	.04	614	
June.....	7.2	4.8	5.47	.017	.02	325	
The period.....						46,100	
1911.							
January.....	375	5	50.1	.158	.18	3,080	D. C. C. C. C. C.
February.....	1,130	29	192	.604	.63	10,700	
March.....	805	80	187	.588	.68	11,500	
April.....	300	20	78.0	.245	.27	4,640	
May.....	18	5.7	11.3	.036	.04	695	
June.....	11	4.5	6.75	.021	.02	402	
The period.....						31,000	

NOTE.—Discharge determined by the indirect method for shifting channels and from rating curves covering short periods of time.

SAN LUIS REY RIVER AT BONSALL, CAL.

This station, which is located at the concrete highway bridge at Bonsall, in the SW. $\frac{1}{4}$ SW. $\frac{1}{4}$ sec. 20, T. 10 S., R. 3 W., just below Moosa Canyon, about 14 miles below the gaging station near Pala, and 14 miles above the mouth of the river, was established April 16, 1912.

In addition to the water diverted from the San Luis Rey above the Pala gaging station, the Morena ditch and the Pala Indian Reservation canal divert water for irrigation in the vicinity of Pala.

The gage is a vertical staff on the right bank, about 150 feet below the bridge. The channel is composed of sand and is somewhat shifting. Discharge measurements are made from the bridge.

The results are considered good.

The station is maintained in cooperation with the Volcan Land & Water Co. through W. S. Post, engineer.

Discharge measurements of San Luis Rey River at Bonsall, Cal., in 1912.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1912.		<i>Feet.</i>	<i>Sec.-ft.</i>			<i>Feet.</i>	<i>Sec.-ft.</i>
Apr. 16	F. C. Ebert.....	1.88	219	May 14	E. W. Case.....	1.60	44
19	H. L. Davis.....	1.93	174	22	F. C. Ebert.....	1.53	16
May 3	F. C. Ebert.....	1.61	48	June 15	E. W. Case.....	1.29	.3

Daily gage height, in feet, of San Luis Rey River at Bonsall, Cal., for 1912.

Day.	Apr.	May.	June.	Day.	Apr.	May.	June.	Day.	Apr.	May.	June.
1.....		1.65	1.32	11.....		1.78	1.3	21.....		1.82	1.5
2.....		1.52	1.32	12.....		1.65	1.3	22.....		1.78	1.5
3.....		1.55	1.32	13.....		1.6	1.3	23.....		1.68	1.48
4.....		1.5	1.3	14.....		1.6	1.3	24.....		1.68	1.4
5.....		1.5	1.3	15.....		1.65	1.3	25.....		1.68	1.4
6.....		1.5	1.3	16.....		1.85	1.62	26.....		1.62	1.4
7.....		1.5	1.28	17.....		1.92	1.5	27.....		1.7	1.4
8.....		1.7	1.25	18.....		2.0	1.5	28.....		1.58	1.35
9.....		1.92	1.3	19.....		1.88	1.5	29.....		1.55	1.35
10.....		1.9	1.3	20.....		1.8	1.5	30.....		1.68	1.32
								31.....		1.3	

NOTE.—Water reported standing in pools after June 18, 1912.

Daily discharge, in second-feet, of San Luis Rey River at Bonsall, Cal., for 1912.

Day.	Apr.	May.	June.	Day.	Apr.	May.	June.	Day.	Apr.	May.	June.
1.....		58	1.8	11.....		109	1.0	21.....		126	14
2.....		19	1.8	12.....		58	1.0	22.....		109	14
3.....		27	1.8	13.....		40	1.0	23.....		70	12
4.....		14	1.0	14.....		40	1.0	24.....		70	5.0
5.....		14	1.0	15.....		58	1.0	25.....		70	5.0
6.....		14	1.0	16.....		202	47	26.....		47	5.0
7.....		14	.6	17.....		218	14	27.....		77	5.0
8.....		77	.0	18.....		228	14	28.....		35	3.0
9.....		170	1.0	19.....		151	14	29.....		27	3.0
10.....		160	1.0	20.....		117	14	30.....		70	1.8
								31.....		1.0	

NOTE.—Daily discharge determined from a fairly well-defined rating curve. Indirect method for shifting channels used Apr. 16-18, 1912.

Monthly discharge of San Luis Rey River at Bonsall, Cal., for 1912.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
April 16-30.....	228	27	108	3,210	B.
May.....	170	1.0	33.7	2,070	B.
June.....	1.8	.0	.60	35.7	C.

SAN LUIS REY RIVER NEAR OCEANSIDE, CAL.

This station, which is located opposite the Oceanside pumping plant, in the SE. $\frac{1}{4}$ NE. $\frac{1}{4}$ sec. 22, T. 11 S., R. 5 W., and about $1\frac{1}{2}$ miles above the mouth of the river, was established April 17, 1912.

The gage is a vertical staff on the right bank just above the ford. The channel is composed of sand and shifts somewhat.

Discharge measurements are made from a concrete highway bridge about three-fourths of a mile below the gage or by wading. The results are considered good.

In addition to diversions mentioned in the description of the San Luis Rey at Bonsall, several small canals divert water for irrigation in Mission Valley. Water is also pumped from wells at various points in the valley.

This station is maintained in cooperation with the Volcan Land & Water Co. through W. S. Post, engineer.

Discharge measurements of San Luis Rey River near Oceanside, Cal., in 1912.

Date.	Hydrographer.	Gage height.	Dis-charge.
1912.		<i>Feet.</i>	<i>Sec.-feet.</i>
Apr. 17	F. C. Ebert.....	2.55	215
May 3	do.....	2.24	33
13	E. W. Case.....	2.28	46
21	F. C. Ebert.....	2.06	9.1

Daily gage height, in feet, of San Luis Rey River near Oceanside, Cal., for 1912.

Day.	Apr.	May.	Day.	Apr.	May.	Day.	Apr.	May.
1.....		2.28	11.....		2.31	21.....	2.54	2.1
2.....		2.25	12.....		2.26	22.....	2.44	2.04
3.....		2.22	13.....		2.22	23.....	2.41	2.0
4.....		2.19	14.....		2.22	24.....	2.38	1.98
5.....		2.15	15.....		2.19	25.....	2.36	1.9
6.....		2.15	16.....		2.16	26.....	2.32	1.9
7.....		2.14	17.....	2.52	2.12	27.....	2.34	1.9
8.....		2.26	18.....	2.54	2.1	28.....	2.31	1.9
9.....		2.48	19.....	2.55	2.14	29.....	2.31	.....
10.....		2.44	20.....	2.54	2.11	30.....	2.3	.....
						31.....	.....	.....

NOTE.—River dry May 31 to June 30, 1912.

Daily discharge, in second-feet, of San Luis Rey River near Oceanside, Cal., for 1912.

Day.	Apr.	May.	Day.	Apr.	May.	Day.	Apr.	May.
1.....		47	11.....		58	21.....	208	12
2.....		39	12.....		42	22.....	128	8.4
3.....		31	13.....		31	23.....	107	6
4.....		24	14.....		31	24.....	91	5.2
5.....		18	15.....		24	25.....	81	2
6.....		18	16.....		20	26.....	62	2
7.....		17	17.....	189	15	27.....	72	2
8.....		42	18.....	208	12	28.....	58	2
9.....	156	19	19.....	218	17	29.....	58	2
10.....	128	20.....	20.....	208	13	30.....	53	1
						31.....	.....	0

NOTE.—Daily discharge determined from a rating curve well defined above 8 second-feet. Discharge interpolated May 29-30, 1912.

Monthly discharge of San Luis Rey River near Oceanside, Cal., for 1912.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
April 17-30.....	218	53	124	3,440	A.
May.....	156	0	26.6	1,640	A.
June.....	0	0	0	0	

MISCELLANEOUS MEASUREMENTS.

The following miscellaneous measurements have been made in the San Luis Rey River basin:

Miscellaneous measurements in San Luis Rey River drainage basin.

Date.	Stream.	Locality.	Gage height.	Discharge.
			<i>Feet.</i>	<i>Sec.-ft.</i>
May —, 1894	San Luis Rey River			6,720
Oct. —, 1894	do			4
Dec. 8, 1894	do			10
Dec. 20, 1894	do			240
Jan. 15, 1895	do			5,000
Mar. 8, 1895	do			152
Apr. 11, 1895	do			100
Apr. 17, 1895	do			72
May 10, 1895	do			39
May 19, 1895	do			19
Sept. —, 1899	do			3.50
Do.....	do	4 miles east of Sickler's mill, Pala.		2.50
June 20, 1899	do	Headworks Escondido Irrigation district canal.		1.04
Aug. 19, 1900	do	do		2.00
Apr. 2, 1900	do	4 miles east of Sicklers mill, Pala.		10.0
Aug. 14, 1903	do	Above head of Escondido canal.		.5
Aug. 15, 1903	do	Dam site, Warner's ranch reservoir.		2.8
Aug. 16, 1903	do	Pala, Cal.		1.1
May 21, 1908	do	Dam site, Warner's ranch.		5.2
Aug. 15, 1903	Sicklers canal	Sickler's ranch.		2.1
Oct. 9, 1903	do	do		2.1
Apr. 20, 1912	San Luis Rey River	Near Valley Center, SW. $\frac{1}{4}$ sec. 36, T. 10 S., R. 1 W.		88
May 2, 1912	do	do		22
May 14, 1912	do	do		14
May 22, 1912	do	do		4.6
June 16, 1912	do	do		6.4
June 25, 1912	do	do		4.0
Mar. 28, 1912	do	Highway bridge at Pala, NW. $\frac{1}{4}$ SE. $\frac{1}{4}$ sec. 26, T. 9 S., R. 2 W.		64
Apr. 2, 1912	do	do	2.92	61
Apr. 20, 1912	do	do	3.45	126
May 14, 1912	do	do	3.00	29
June 15, 1912	do	do	2.80	.5
Apr. 19, 1912	do	Mission bridge, 1 mile north of San Luis Rey, NE. $\frac{1}{4}$ NW. $\frac{1}{4}$ sec. 8, T. 11 S., R. 4 W.		167
Apr. 18, 1912	do	Concrete arch near Oceanside below U. S. Geological Survey gage, SE. $\frac{1}{4}$ NE. $\frac{1}{4}$ sec. 22, T. 11 S., R. 5 W.		164
Feb. 12, 1912	Pauma Creek	$\frac{1}{2}$ mile above Pauma Indian Reservation reservoir.		1.4
Apr. 20, 1912	do	County highway bridge near Pala.		22
May 2, 1912	do	do		6.6
May 22, 1912	do	do		4.1
June 15, 1912	do	do		0
Mar. 29, 1912	Agua Tibia Creek	Near mouth, sec. 31, T. 9 S., R. 1 W.		1.3
Apr. 20, 1912	do	do		2.7
Feb. 13, 1912	Pala Indian Reservation canal.	Below sand box, $\frac{1}{2}$ mile below intake at Pala.		5.2
May 22, 1912	do	do	.37	2.6
June 15, 1912	do	do	.66	6.4
June 25, 1912	do	do	.62	5.3
June 26, 1912	Morena ditch.	Pala.		2.1
May 3, 1912	San Luis Rey ditch.	$\frac{1}{2}$ mile below intake SW. $\frac{1}{4}$ NW. $\frac{1}{4}$ sec. 3, T. 11 S., R. 4 W.		2.4
Do.	Libby ditch.	Near intake, below intake at San Luis Rey ditch, NE. $\frac{1}{4}$ NE. $\frac{1}{4}$ sec. 4, T. 11 S., R. 4 W.		1.6

SANTA MARGARITA RIVER BASIN.

TEMECULA CREEK NEAR TEMECULA, CAL.

This station, which was located about $1\frac{1}{2}$ miles south of the town of Temecula at the bridge on the road from Temecula to Pala and Falbrook, was established December 30, 1905.

The channel is straight for 500 feet above and 100 feet below. The bed is shifting sand and the channel is continually changing, being usually in two channels at low water. Neither bank is liable to overflow at any stage.

During low water, discharge measurements were made by wading below the bridge. High-water measurements were made from the downstream side of the bridge.

The gage was a timber fastened to the downstream pier nearest to the right bank.

Discharge measurements of Temecula River near Temecula, Cal., in 1905-6.

Date.	Hydrographer.	Gage height.	Discharge.	Date.	Hydrographer.	Gage height.	Discharge.
1905.		<i>Feet.</i>	<i>Sec.-ft.</i>	1906.		<i>Feet.</i>	<i>Sec.-ft.</i>
Nov. 14	W. B. Clapp	3.10	5.8	Apr. 13	W. V. Hardy	5.84	12.1
Dec. 30	W. V. Hardy	2.98	4.6	Apr. 27	do	5.82	5.6
				May 15	do	5.88	6.4
1906.				June 26	C. H. Lee	5.80	2.6
Jan. 12	W. V. Hardy	2.90	4.4	Aug. 5	R. S. Hawley .....	.....	0.8
29	do	2.94	4.9	Oct. 10	W. F. Martin .....	.....	3.9
Feb. 10	do	2.99	4.4	Nov. 12	W. V. Hardy	5.80	7.6
24	do	3.20	3.3	Dec. 4	do	6.00	7.2
Mar. 5	do	3.49	6.0	29	do	6.10	14.9
6	do	3.42	5.4				
18	do	3.82	16.8	1908.			
19	do	3.69	12.0	July 12	.....	6.12	2.6

Daily gage height, in feet, of Temecula River near Temecula, Cal., for 1906.

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Dec.
1.....	3.0	2.9	3.4	5.9	5.75	5.8	5.8	-----
2.....	3.0	2.8	3.5	5.8	5.7	5.8	5.8	-----
3.....	3.0	2.8	3.5	5.8	5.7	5.8	5.8	6.0
4.....	3.0	2.8	3.45	5.8	5.7	5.8	5.8	6.0
5.....	3.0	2.8	3.45	6.7	5.75	5.8	5.8	6.0
6.....	3.0	2.8	3.5	6.3	5.75	5.8	5.8	6.0
7.....	3.0	2.8	3.5	5.8	5.75	5.8	5.8	5.9
8.....	3.0	2.9	3.55	5.8	5.75	5.8	5.8	5.9
9.....	2.9	2.95	3.5	5.8	5.75	5.8	5.8	5.9
10.....	2.9	2.95	3.6	5.8	5.75	5.8	5.8	5.9
11.....	2.9	3.0	3.9	5.8	5.75	5.75	5.8	5.9
12.....	2.9	3.0	4.9	5.8	5.7	5.7	5.8	6.0
13.....	2.9	3.0	5.0	5.8	5.7	5.75	5.8	6.0
14.....	2.9	3.0	4.9	5.8	5.7	5.8	5.8	5.9
15.....	2.9	3.0	4.9	5.8	5.7	5.75	5.8	5.9
16.....	2.9	3.2	3.7	5.8	5.8	5.75	5.8	5.95
17.....	2.9	3.2	3.7	5.8	5.85	5.75	5.8	6.0
18.....	2.9	3.25	3.65	5.8	5.85	5.75	-----	6.0
19.....	3.1	3.25	3.65	5.75	5.85	5.75	-----	5.9
20.....	3.0	3.25	3.5	5.75	5.85	5.75	-----	5.9
21.....	3.0	3.25	3.3	5.75	5.85	5.75	-----	5.9
22.....	3.0	3.25	3.4	5.75	5.9	5.75	-----	5.9
23.....	3.0	3.25	9.6	5.75	5.9	5.75	-----	5.95
24.....	3.0	3.25	9.65	5.75	5.85	5.75	-----	5.9
25.....	3.0	3.25	8.0	5.75	5.85	5.75	-----	-----
26.....	3.0	3.3	7.6	5.75	5.9	5.8	-----	6.2
27.....	2.9	3.4	6.0	5.75	5.85	5.8	-----	6.0
28.....	2.9	3.4	5.5	5.75	5.8	5.8	-----	6.2
29.....	2.9	-----	5.5	5.75	5.8	5.8	-----	6.05
30.....	2.9	-----	5.9	5.75	5.8	5.8	-----	6.1
31.....	2.9	-----	5.9	-----	5.8	-----	-----	6.25

NOTE.—No gage height record was kept from July 18 to Dec. 2, 1906. Discharges have not been computed on account of the small number of measurements at times of excessive changes in channel.

The following discharge measurement of Temecula River was made at Pœuba dam site, 12 miles above Temecula, Cal., November 14, 1905: Discharge, 2.5 second-feet.

SANTA ANA RIVER BASIN.

SANTA ANA RIVER AND PACIFIC LIGHT & POWER CO.'S CANAL NEAR MENTONE, CAL.

This station, which is located at the road crossing opposite Warm Spring Canyon, about three-fourths of a mile below the head works of the Pacific Light & Power Co.'s canal,¹ 5 miles northeast of Mentone, in the SW. $\frac{1}{4}$ SW. $\frac{1}{4}$ sec. 34, T. 1 N., R. 2 W., S. B. M., was established in June, 1896, and is about 2 miles below the mouth of Alder Creek.

Since 1905 practically all the low-water flow is diverted above the station into the power canal. After leaving the power house this water is carried across the river to an irrigation canal. The flow in the canal is measured by a 10-foot rectangular weir at the tail race of the Pacific Light & Power Co.'s plant and is added to that at the

¹ Canal formerly known as Santa Ana canal and also as Mentone Power Co.'s canal.

station on the river in order to obtain the total for the stream. The acquired water rights exceed the low-water flow.

The original staff gage was fastened to the left bank about 100 feet above the ford. On November 9, 1898, the station was moved to a point 800 feet below the mouth of Warm Spring Canyon, where the discharge of the river was obtained by adding together the flow in the several irrigating ditches. After January 1, 1901, the old gage was again used. The gage datum was lowered June 30, 1903, and the new datum was maintained until January 1, 1910, when a severe flood carried away both gage and the car and cable from which discharge measurements were made and destroyed existing bench marks. The channel was completely changed. A new inclined staff gage was installed January 23, 1910, on the left bank, 50 feet above the former location, and set at a new datum. On February 25, 1910, however, it was found desirable to install a gage in the west channel, which carried most of the water. All gage heights for 1910 prior to February 25 have been corrected to the datum of the west gage from a relation curve obtained from synchronous readings of the two gages.

The Greenspot pipe line originally took water from the river below the station, but since 1903 it has also been taking water from the power canal, the amount of which is not included in the total discharge of the river. In September, 1911, the pipe line began to divert water from the forebay of the power canal, and since that time a record has been kept of the amount diverted.

Discharge measurements are made by wading at low and medium stages. As it is very difficult to reach the station at high stages the cable has not been replaced.

Conditions for obtaining accurate discharge data are fair. The stream has a rocky bed and is subject to slight change. At high stages the current is swift and it is difficult to get accurate gagings. The records are fairly satisfactory.

Discharge measurements of Santa Ana River and Pacific Light & Power Co.'s canal near Mentone, Cal., in 1896-1912.

Date.	Hydrographer.	Gage height of river.	Discharge.		
			River.	Canal.	Total for river.
1896.		<i>Feet.</i>	<i>Sec.-ft.</i>	<i>Sec.-ft.</i>	<i>Sec.-ft.</i>
Apr. 27	J. A. Vogleson.....				51
June 20	J. B. Lippincott.....	1.28	61.8	18.3	80.1
July 25	J. H. Quinton.....	1.29			75
28	do.....	1.29	59.7	15	74.7
Nov. 21	J. B. Lippincott.....	.98	31.7	3.5	35.2
1897.					
Jan. 27	J. B. Lippincott.....		43.6	4.0	47.6
Mar. 4	do.....	1.45	101	5	106
May 3	do.....	1.50	96		96
4	do.....	1.50	98		98
June 15	do.....	1.15	64	19	83
July 5	A. Q. Campbell.....	1.20	72	18	90

*Discharge measurements of Santa Ana River and Pacific Light & Power Co.'s canal near
Mentone, Cal., in 1896-1912—Continued.*

Date.	Hydrographer.	Gage height of river.	Discharge.		
			River.	Canal.	Total for river.
1897.		<i>Feet.</i>	<i>Sec.-ft.</i>	<i>Sec.-ft.</i>	<i>Sec.-ft.</i>
July 6	A. Q. Campbell	1.11	60	11	71
Aug. 8	.....do.....	1.32	56	19	75
31	.....do.....	1.35	60	18	78
Sept. 30	.....do.....	1.13	43	23	66
Nov. 14	.....do.....	1.25	40	7	47
1898.					
Jan. 8	J. B. Lippincott.....	1.00	26	9	35
Mar. 9	H. Crowe.....	1.05	44	7	51
Apr. 11	J. B. Lippincott.....	.98	32	8	40
29	.....do.....	.90	30	13	43
June 12	.....do.....	1.10	35	4	39
July 23	.....do.....	1.10	42	5	47
Sept. 8	.....do.....	1.05	35	2	37
Oct. 18	F. H. Olmsted.....	.95	23	8	31
Nov. 9	.....do.....	2.10	22	19.5	41.5
Dec. 8	.....do.....	2.13	25	20.6	45.6
1899.					
Jan. 12	S. G. Bennett.....	2.34	38	.....	38
Feb. 18	.....do.....	2.16	28	4	32
Mar. 23	.....do.....	2.30	30	7.6	37.6
May 6	.....do.....	2.45	25.8	3.4	29.2
31	.....do.....	2.27	21	1.1	22.1
June 15	.....do.....	2.21	19.6	.2	19.8
July 15	.....do.....	2.30	25.9	.....	25.9
27	.....do.....	2.30	23.6	.....	23.6
Aug. 24	.....do.....	1.85	10.9	.....	10.9
1900.					
Apr. 14	S. G. Bennett.....	2.25	22.7	.....	22.7
May 5	.....do.....	4.35	244	.....	244
July 13	.....do.....	2.35	22.3	.....	22.3
Nov. 20	.....do.....	3.30	102	.....	102
1901.					
Feb. 5	S. G. Bennett.....	1.65	101	.....	101
23	.....do.....	1.80	110	.....	110
Mar. 4	.....do.....	1.70	102	.....	102
30	.....do.....	1.35	40.6	3.4	44
July 6	.....do.....	1.15	26.1	13.2	39.3
Aug. 20	.....do.....	1.24	30.8	.....	30.8
Oct. 8	.....do.....	1.25	32	13.2	45.2
Dec. 5	.....do.....	1.03	14	9.7	23.7
1902.					
Apr. 5	S. G. Bennett.....	1.39	51	4	55
May 31	.....do.....	.91	8	21	29
July 10	.....do.....	.84	5	18	23
Sept. 3	W. B. Clapp.....	.95	10	14	24
Nov. 5	S. G. Bennett.....	.87	5	13	18
1903.					
Feb. 6	W. B. Clapp.....	1.30	37	3	40
Apr. 1	.....do.....	7.00	4,906	.....	.....
2	.....do.....	3.30	1,068	.....	.....
3	.....do.....	2.50	565	.....	.....
24	Clapp and Clausen.....	1.10	132	.....	.....
May 16	W. B. Clapp.....	.85	95	.....	.....
June 30	.....do.....	.20	56	.....	.....
Aug. 31	.....do.....	.....	.....	41	.....
Nov. 24	.....do.....	.....	.....	26	.....
1904.					
Jan. 29	W. B. Clapp.....	.....	.....	26	26
Mar. 4	.....do.....	1.15	21	12	33
12	.....do.....	1.25	26	17	43
22	Clapp and Murphy.....	1.10	20	19	39
Apr. 20	W. B. Clapp.....	1.65	49	19	68
21	.....do.....	1.38	24	35	59
May 14	.....do.....	1.25	16	20	36
28	.....do.....	1.40	21	18	39
June 29	.....do.....	1.45	24	22	46
Sept. 21	.....do.....	.....	.....	56	58
Nov. 11	E. C. La Rue.....	.83	1	18	19

^a New gage installed 800 feet below mouth of canyon. ^b Station moved back to old gage Jan. 1, 1901.

Discharge measurements of Santa Ana River and Pacific Light & Power Co.'s canal near
Mentone, Cal., in 1896-1912—Continued.

Date.	Hydrographer.	Gage height of river.	Discharge.		
			River.	Canal.	Total for river.
		<i>Feet.</i>	<i>Sec.-ft.</i>	<i>Sec.-ft.</i>	<i>Sec.-ft.</i>
1905.					
Feb. 13	Clapp and La Rue.....	1.15	10	40	50
21	E. C. La Rue.....	1.70	17	74	91
22	do.....	1.65	10	71	81
23	do.....	1.65	11	63	74
Mar. 14a	do.....	2.60	188	-----	188
14b	do.....	2.50	138	50	188
15a	do.....	2.30	132	57	189
15b	do.....	2.10	113	57	170
30	R. S. Hawley.....	1.90	81	46	127
Apr. 14	do.....	1.95	86	1	87
May 17	do.....	2.25	111	37	148
June 7	do.....	2.20	79	-----	79
26	do.....	1.43	4	66	70
July 6	do.....	1.40	3	61	64
1906.					
Jan. 20	C. H. Lee.....	2.17	87	37	124
Feb. 11	do.....	1.51	11	42	53
11	do.....	1.57	15.8	42	58
11	do.....	1.54	12.8	42	55
12	do.....	1.45	6.7	52	59
Mar. 14	do.....	3.50	351	27	378
16	do.....	5.40	1,410	49	1,460
16	do.....	5.80	1,870	49	1,920
17	do.....	4.15	677	-----	677
17	do.....	3.85	597	-----	597
18	do.....	3.70	405	11	416
23	M. P. Beeson.....	3.05	156	55	211
25	do.....	4.90	913	35	948
26	do.....	6.35	2,250	34	2,280
26	do.....	5.90	1,780	34	1,810
27	do.....	5.25	1,200	25	1,220
Apr. 10	C. H. Lee.....	3.00	130	68	198
21	M. P. Beeson.....	3.50	214	72	286
May 12	do.....	3.60	148	71	219
12	do.....	3.60	160	71	231
June 2	do.....	3.50	149	66	215
28	do.....	3.00	70	71	141
Aug. 4	R. S. Hawley.....	2.55	13.1	72	85
Oct. 11	W. F. Martin.....	2.31	2.9	61	64
Dec. 28	do.....	3.85	276	74	350
1907.					
Jan. 10	W. F. Martin.....	3.82	284	76	360
Feb. 27	do.....	3.95	379	76	455
Mar. 12	do.....	4.1	501	76	577
26	do.....	4.65	872	72	944
Apr. 29	W. B. Clapp.....	3.35	184	73	257
June 12	W. F. Martin.....	3.00	110	70	180
27	W. B. Clapp.....	2.75	79	70	149
July 30	W. F. Martin.....	2.52	59	69	128
Aug. 22	do.....	2.15	16	69	85
Sept. 18	W. B. Clapp.....	1.85	2.6	66	69
1908.					
Jan. 29	W. F. Martin.....	3.0	126	-----	126
Feb. 20	do.....	2.64	77	78	155
May 15	W. B. Clapp.....	1.85	4	68	72
1909.					
Mar. 5	W. B. Clapp.....	2.75	49	76	125
23	W. F. Martin.....	3.30	124	76	200
May 12	W. B. Clapp.....	3.05	83	73	156
June 18	do.....	2.38	9	76	85
July 9	do.....	2.20	2.8	64	66.8
Dec. 31	do.....	4.75	477	70	547
1910.					
Feb. 5	R. E. Haines.....	1.55	31	73	104
24	J. E. Stewart.....	1.40	19	66	85
Apr. 13	do.....	1.95	67	78	145
28	W. B. Clapp.....	1.30	11	78	89
June 7	do.....	1.21	6.9	72	79
July 20	J. E. Stewart.....	1.92	67	0	67
Sept. 14	W. B. Clapp.....	1.28	6.4	58	64

Discharge measurements of Santa Ana River and Pacific Light & Power Co.'s canal near Mentone, Cal., in 1896-1912—Continued.

Date.	Hydrographer.	Gage height of river.	Discharge.		
			River.	Canal.	Total for river.
1911.		<i>Feet.</i>	<i>Sec.-ft.</i>	<i>Sec.-ft.</i>	<i>Sec.-ft.</i>
Feb. 17	W. V. Hardy.....	2.28	104	72	176
21	.....do.....	2.01	76	72	148
Apr. 8	.....do.....	3.68	162	71	233
22	.....do.....	3.43	96	71	167
May 25	.....do.....	3.15	49	74	123
June 26	H. D. McGlashan.....	2.94	21	77	98
Aug. 29	F. C. Ebert.....	2.53	1.7	66	68
1912.					
Jan. 11	F. C. Ebert.....	2.50	1.4	.....	.....
Mar. 20	.....do.....	2.71	9.3	.....	.....
May 27	.....do.....	2.49	2.2	.....	.....

NOTE.—Gage heights in the above table refer to the discharge of the river alone and not to the combined discharge.

Daily gage height, in feet, of Santa Ana River near Mentone, Cal., for 1896-1903.

Day.	July.	Aug.	Sept.	Day.	July.	Aug.	Sept.	Day.	July.	Aug.	Sept.
1896.				1896.				1896.			
1.....	1.21	1.35	1.33	11.....	1.29	1.29	0.92	21.....	1.33	1.18	1.21
2.....	1.21	1.27	1.35	12.....	1.36	1.27	.94	22.....	1.38	1.19	1.19
3.....	1.25	1.33	1.33	13.....	1.38	1.29	1.12	23.....	1.38	1.00	1.12
4.....	1.25	1.29	1.21	14.....	1.21	1.27	1.25	24.....	1.38	1.02	1.11
5.....	1.25	1.31	1.21	15.....	1.29	1.27	1.25	25.....	1.29	1.06	1.17
6.....	1.25	1.27	1.04	16.....	1.25	1.27	1.33	26.....	1.17	1.10	1.22
7.....	1.17	1.39	1.29	17.....	1.33	1.10	1.37	27.....	1.25	1.10	1.08
8.....	1.17	1.27	1.29	18.....	1.33	1.08	1.36	28.....	1.25	1.19	1.12
9.....	1.29	1.27	1.27	19.....	1.33	1.33	1.33	29.....	1.38	1.33	1.17
10.....	1.31	1.27	1.27	20.....	1.33	1.17	1.29	30.....	1.31	1.33	1.25
								31.....	1.35	1.18	

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1896-97.												
1.....	1.29	1.00	1.00	1.25	2.70	1.60	1.60	1.50	1.10	1.15	1.30	.....
2.....	1.38	1.00	1.00	1.23	2.10	1.60	1.60	1.50	1.05	1.05	1.35	.....
3.....	1.27	1.00	1.02	1.00	1.85	1.55	1.55	1.50	1.10	1.10	1.35	.....
4.....	1.25	1.00	1.02	1.00	1.85	1.50	1.60	1.50	1.15	1.15	1.35	.....
5.....	1.14	1.00	1.02	1.00	1.65	1.45	1.60	1.50	1.10	1.10	1.35	.....
6.....	1.12	1.00	1.02	.96	1.65	1.60	1.65	1.50	1.05	1.10	1.30	.....
7.....	1.21	.96	1.02	.92	1.65	2.50	1.70	1.50	1.05	1.10	1.30	.....
8.....	1.21	.96	1.02	.92	1.80	1.65	1.70	1.45	1.05	1.15	1.35	.....
9.....	1.17	.96	1.02	.92	1.85	1.65	1.65	1.40	1.05	1.20	1.35	.....
10.....	1.25	.96	1.02	.92	1.65	1.60	1.65	1.30	1.10	1.15	1.35	.....
11.....	1.29	.96	1.02	1.12	1.50	1.50	1.75	1.30	1.10	1.20	1.35	.....
12.....	1.25	.98	1.02	1.10	1.50	1.50	1.75	1.30	1.10	1.20	1.40	.....
13.....	1.17	.96	1.02	1.16	1.50	1.50	1.80	1.30	1.15	1.15	1.40	.....
14.....	1.17	.96	1.02	1.21	1.40	1.40	1.80	1.30	1.15	1.25	1.40	.....
15.....	1.18	.96	1.02	1.37	1.40	1.50	1.75	1.25	1.20	1.15	1.40	.....
16.....	1.08	.96	1.04	1.21	1.35	1.60	1.75	1.25	1.20	1.30	1.30	.....
17.....	1.17	.96	1.04	1.40	1.40	1.50	1.75	1.20	1.20	1.20	1.30	.....
18.....	1.19	.96	1.04	1.40	2.90	1.45	1.80	1.15	1.20	1.20	1.30	.....
19.....	1.19	.96	1.04	1.35	2.10	1.40	1.80	1.10	1.20	1.20	1.30	.....
20.....	1.19	.96	1.04	1.35	2.05	1.60	1.80	1.10	1.20	1.15	1.35	.....
21.....	1.06	.98	1.04	1.40	1.70	1.45	1.70	1.10	1.20	1.10	1.45	.....
22.....	1.12	.98	1.04	1.40	1.70	1.40	1.65	1.10	1.20	1.15	1.25	.....
23.....	1.11	1.00	1.02	1.45	1.65	1.40	1.60	1.10	1.15	1.15	1.15	.....
24.....	1.08	1.00	1.02	1.45	1.60	1.30	1.60	1.15	1.15	1.20	1.25	.....
25.....	1.08	1.19	1.02	1.45	1.60	1.35	1.60	1.10	1.15	1.20	1.35	.....

Daily gage height, in feet, of Santa Ana River near Mentone, Cal., for 1896-1903—Con.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1896-97.												
26.....	1.08	1.04	1.00	1.45	1.65	1.35	1.60	1.05	1.20	1.25	1.35	.....
27.....	1.75	1.04	1.00	1.45	1.55	1.40	1.55	1.00	1.20	1.35	1.30	.....
28.....	1.17	1.02	1.08	1.45	1.55	1.75	1.60	1.00	1.20	1.30	1.30	.....
29.....	1.17	1.02	1.08	1.45	.....	1.60	1.55	1.00	1.10	1.30	1.35	.....
30.....	1.17	1.02	1.06	1.50	.....	1.55	1.50	.95	1.15	1.30	1.35	.....
31.....	1.17	.....	1.02	1.45	.....	1.60	.....	.95	.....	1.30	1.35	.....
1897-98.												
1.....	1.30	1.15	1.10	1.00	1.05	1.00	1.02	1.10	1.17	1.10	1.10	1.05
2.....	1.17	1.15	1.05	1.00	1.05	1.00	1.02	1.10	1.15	1.12	1.10	1.05
3.....	1.15	1.15	1.05	1.00	1.05	.97	1.00	.90	1.15	1.13	1.10	1.05
4.....	1.15	1.15	1.05	1.00	1.05	.95	1.00	.90	1.05	1.10	1.10	1.05
5.....	1.20	1.15	1.05	1.00	1.05	.95	1.00	.85	1.05	1.10	1.07	1.05
6.....	1.25	1.15	1.05	1.00	1.35	1.00	1.00	.85	1.15	1.10	1.05	.90
7.....	1.23	1.15	1.05	1.00	1.35	1.05	1.00	.85	1.15	1.07	1.00	.90
8.....	1.30	1.15	1.05	1.00	1.25	1.05	1.00	.85	1.10	1.07	1.10	.92
9.....	1.23	1.20	1.05	1.00	1.20	1.05	1.00	.95	1.10	1.07	1.20	1.10
10.....	1.12	1.20	1.05	1.45	1.15	1.05	1.02	.95	1.15	1.15	1.25	1.15
11.....	1.20	1.30	1.05	1.15	1.15	1.03	1.00	1.40	1.15	1.15	1.25	1.15
12.....	1.20	1.30	1.05	1.15	1.10	1.07	.91	1.40	1.10	1.22	1.22	1.15
13.....	1.23	1.30	1.05	1.15	1.07	1.10	.91	1.30	1.10	1.20	1.20	1.12
14.....	2.60	1.27	1.05	1.15	1.05	1.00	1.00	1.30	1.10	1.15	1.17	1.10
15.....	1.25	1.25	1.15	1.10	1.05	1.03	1.02	1.60	1.05	1.15	1.15	1.05
16.....	1.15	1.25	1.05	1.10	1.05	1.05	1.02	1.40	1.05	1.15	1.12	1.00
17.....	1.10	1.20	.95	1.10	1.05	1.00	1.02	1.30	1.05	1.07	1.15	.95
18.....	.90	1.20	1.00	1.10	1.10	.90	.97	1.30	1.05	1.00	1.15	1.03
19.....	.90	1.20	1.00	1.10	1.05	.90	.97	1.25	1.05	1.00	1.15	1.07
20.....	.90	1.20	.90	1.10	1.05	.87	.95	1.25	1.05	1.10	1.15	1.00
21.....	.90	1.17	.80	1.10	1.05	1.00	.95	1.25	1.22	1.12	1.05	1.05
22.....	.90	1.15	.80	1.15	1.00	.82	.92	1.25	1.25	1.12	1.05	1.05
23.....	.90	1.15	.90	1.25	1.00	.82	.92	1.20	1.25	1.12	1.05	1.05
24.....	.95	1.15	.90	1.10	1.00	.85	.92	1.20	1.25	1.12	1.00	1.05
25.....	.95	1.25	1.00	1.00	1.00	.90	.92	1.20	1.25	1.10	1.10	1.05
26.....	1.05	1.15	1.00	1.00	1.00	1.05	.92	1.20	1.25	1.05	1.00	.92
27.....	1.05	1.15	1.00	1.00	1.00	.95	.90	1.25	1.12	1.10	1.10	.95
28.....	1.10	1.15	1.00	1.05	1.00	1.00	.90	1.25	1.12	1.10	1.00	1.00
29.....	1.25	1.15	1.00	1.05	.....	1.00	.90	1.25	1.10	1.10	1.05	1.05
30.....	1.25	1.15	1.00	1.05	.....	1.00	.90	1.25	1.10	1.10	1.05	1.05
31.....	1.25	.....	1.00	1.05	.....	1.02	.....	1.20	.....	1.10	1.05	.....
1898-99.												
1.....	1.05	.....	2.10	2.10	2.20	2.20	2.30	2.35	2.65	2.30	2.20	1.90
2.....	1.00	.....	2.10	2.10	2.25	2.20	2.20	2.30	2.35	2.30	2.20	1.90
3.....	.90	.....	2.10	2.10	2.25	2.20	2.15	2.30	2.40	2.30	2.20	1.90
4.....	.90	.....	2.10	2.10	2.25	2.20	2.20	2.35	2.35	2.30	2.00	1.90
5.....	.90	.....	2.10	2.10	2.20	2.20	2.20	2.40	2.30	2.30	2.00	1.90
6.....	.85	.....	2.10	2.10	2.20	2.20	2.20	2.45	2.30	2.35	2.00	1.90
7.....	.80	.....	2.10	2.10	2.20	2.20	2.20	2.45	2.30	2.35	1.90	1.90
8.....	.80	.....	2.10	2.10	2.20	2.20	2.20	2.35	2.30	2.35	1.90	1.90
9.....	1.00	.....	2.20	2.10	2.20	2.20	2.15	2.25	2.30	2.35	1.90	1.90
10.....	1.00	2.10	2.10	2.10	2.20	2.20	2.15	2.25	2.25	2.37	1.90	1.90
11.....	.97	2.10	2.10	2.30	2.20	2.20	2.15	2.30	2.25	2.37	1.90	1.90
12.....	.95	2.10	2.10	2.30	2.20	2.20	2.15	2.30	2.25	2.35	1.90	1.90
13.....	.95	2.10	2.10	2.30	2.20	2.15	2.15	2.35	2.30	2.35	1.90	1.90
14.....	.95	2.10	2.10	2.30	2.20	2.15	2.10	2.35	2.30	2.35	1.90	1.90
15.....	.95	2.10	2.10	2.20	2.20	2.15	2.10	2.30	2.30	2.30	1.90	1.90
16.....	.....	2.10	2.10	2.20	2.20	2.20	2.40	2.30	2.25	2.30	1.90	1.90
17.....	.....	2.10	2.10	2.20	2.20	2.25	2.35	2.30	2.30	2.30	1.90	1.90
18.....	.....	2.10	2.10	2.20	2.20	2.35	2.35	2.25	2.30	2.30	1.90	1.80
19.....	.....	2.10	2.10	2.20	2.20	2.30	2.35	2.25	2.20	2.30	1.90	1.80
20.....	.....	2.30	2.10	2.20	2.20	2.55	2.30	2.25	2.30	2.25	1.87	1.80
21.....	.....	2.20	2.10	2.20	2.20	2.55	2.30	2.30	2.30	2.20	1.87	1.80
22.....	.....	2.10	2.10	2.20	2.20	2.30	2.30	2.20	2.25	2.25	1.87	1.80
23.....	.....	2.10	2.10	2.20	2.20	2.30	2.30	2.25	2.25	2.25	1.87	1.85
24.....	.....	2.10	2.10	2.20	2.30	2.35	2.35	2.30	2.25	2.25	1.87	1.85
25.....	.....	2.10	2.10	2.20	2.20	2.35	2.40	2.30	2.30	2.50	1.90	1.85
26.....	.....	2.10	2.10	2.20	2.25	2.35	2.40	2.30	2.35	2.50	1.90	1.90
27.....	.....	2.10	2.10	2.20	2.20	2.40	2.40	2.25	2.30	2.30	1.90	1.90
28.....	.....	2.10	2.10	2.20	2.20	2.35	2.40	2.30	2.30	2.27	1.90	1.90
29.....	.....	3.10	2.10	2.20	.....	2.35	2.40	2.30	2.28	2.25	1.90	1.90
30.....	.....	2.10	2.10	2.20	.....	2.35	2.35	2.30	2.28	2.20	1.90	1.90
31.....	.....	.....	2.10	2.20	.....	2.30	.....	2.30	.....	2.20	1.90	.....

Daily gage height, in feet, of Santa Ana River near Mentone, Cal., for 1896-1903—Con.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1899-1900.												
1.....	1.90	2.20	2.35	2.30	2.20	2.23	2.20	2.64	2.33	2.26	1.85	1.85
2.....	1.90	2.20	2.24	2.30	2.23	2.23	2.23	2.56	2.35	2.33	1.85	1.85
3.....	1.90	2.20	2.24	2.36	2.23	2.23	2.33	2.50	2.30	2.33	1.85	1.90
4.....	1.90	2.20	2.26	2.58	2.23	2.26	2.33	2.45	2.30	2.30	1.85	1.90
5.....	1.90	2.11	2.20	2.53	2.26	2.40	2.33	4.40	2.33	2.30	1.85	1.85
6.....	1.90	2.12	2.17	2.45	2.26	2.33	2.30	a 4.24	2.30	2.35	1.85	1.85
7.....	2.00	2.15	2.18	2.30	2.26	2.33	2.23	a 4.20	2.26	2.26	1.85	1.85
8.....	1.95	2.16	2.15	2.26	2.30	2.33	2.20	a 3.55	2.30	2.23	1.85	1.85
9.....	1.95	2.15	2.22	2.23	2.23	2.30	2.30	a 2.90	2.26	2.20	1.85	1.85
10.....	1.90	2.15	2.27	2.30	2.26	2.26	2.30	2.69	2.23	2.20	1.85	1.85
11.....	1.90	2.15	2.16	2.30	2.26	2.26	2.26	2.55	2.23	2.23	1.85	1.85
12.....	1.90	2.12	2.25	2.30	2.23	2.23	2.30	a 3.10	2.20	2.26	1.85	1.85
13.....	2.20	2.17	2.25	2.33	2.26	2.26	2.23	a 2.76	2.20	2.23	1.85	1.85
14.....	2.20	2.15	2.25	2.38	2.23	2.26	2.30	2.60	2.26	2.30	1.85	1.85
15.....	2.15	2.61	2.25	2.35	2.23	2.33	2.26	2.66	2.23	2.30	1.85	1.85
16.....	2.15	2.19	2.25	2.23	2.20	2.26	2.23	2.65	2.20	2.23	1.80	1.85
17.....	2.15	2.30	2.51	2.33	2.23	2.26	2.20	2.65	2.20	2.33	1.85	1.85
18.....	2.15	2.44	2.47	2.23	2.23	2.23	2.16	2.60	2.20	2.33	1.85	1.85
19.....	2.17	2.24	2.48	2.30	2.30	2.23	2.16	2.56	2.16	2.26	1.85	1.85
20.....	2.17	2.29	2.44	2.33	2.30	2.20	2.16	2.56	2.16	2.23	1.90	1.85
21.....	2.17	2.26	2.37	2.30	2.23	2.26	2.50	2.58	2.23	2.03	1.90	1.85
22.....	2.17	2.95	2.49	2.33	2.26	2.26	2.52	2.50	2.26	1.95	1.80	1.85
23.....	2.17	2.51	2.71	2.26	2.26	2.43	2.45	2.47	2.26	2.00	1.80	1.85
24.....	2.17	2.24	2.64	2.26	2.26	2.37	2.40	2.40	2.30	2.00	1.80	1.90
25.....	2.20	2.30	2.22	2.23	2.23	2.30	2.30	2.37	2.30	1.95	1.80	2.06
26.....	2.20	2.26	2.34	2.20	2.23	2.30	2.40	2.35	2.30	1.90	1.80	2.00
27.....	2.20	2.33	2.36	2.16	2.23	2.26	2.47	2.23	2.30	1.90	1.80	1.95
28.....	2.20	2.25	2.40	2.20	2.23	2.23	2.50	2.20	2.26	1.95	1.75	1.90
29.....	2.20	2.25	2.39	2.16	.....	2.26	2.69	2.20	2.26	1.90	1.75	1.90
30.....	2.20	2.25	2.34	2.20	.....	2.23	2.69	2.23	2.20	1.90	1.80	1.90
31.....	2.20	.....	2.47	2.20	.....	2.26	.....	2.20	.....	1.85	1.90	.....

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.
1900-1901.								
1.....	1.95	2.00	2.50	1.25	1.40	1.75	1.45	1.50
2.....	1.95	2.00	2.50	1.25	1.40	1.75	1.45	1.40
3.....	1.95	2.00	2.45	1.25	2.70	1.75	1.40	1.35
4.....	1.95	2.00	2.45	1.25	2.80	1.70	1.35	1.35
5.....	2.00	2.00	2.45	1.25	2.78	1.65	1.35	1.35
6.....	1.95	2.00	2.45	1.30	2.90	1.65	1.35	1.30
7.....	1.95	2.00	2.45	1.40	2.90	1.60	1.35	1.30
8.....	1.90	2.00	2.45	3.00	2.60	1.60	1.30	1.30
9.....	1.90	2.00	2.45	1.80	2.00	1.60	1.30	1.30
10.....	1.90	2.00	2.45	1.75	1.90	1.60	1.30	1.30
11.....	1.90	2.00	2.45	1.75	1.90	1.60	1.30	1.30
12.....	1.95	2.00	2.45	1.75	1.80	1.60	1.30	1.30
13.....	2.00	2.00	2.45	1.66	1.70	1.55	1.30	1.30
14.....	2.06	2.00	2.45	1.66	1.70	1.50	1.30	1.30
15.....	2.03	2.03	2.45	1.50	1.70	1.45	1.30	1.30
16.....	1.95	2.03	2.45	1.40	1.70	1.40	1.30	1.30
17.....	1.95	2.16	2.40	1.40	1.70	1.40	1.30	1.30
18.....	1.95	a 2.50	2.40	1.40	1.70	1.40	1.30	1.30
19.....	2.03	a 2.90	2.40	1.40	1.80	1.40	1.30	1.30
20.....	1.95	3.30	2.40	1.60	1.85	1.40	1.30	1.30
21.....	2.00	a 7.70	2.40	1.60	1.85	1.40	1.30	1.30
22.....	2.00	a 5.10	2.35	1.40	1.85	1.40	1.30	1.30
23.....	2.00	4.00	2.35	1.40	1.85	1.40	1.30	1.30
24.....	2.00	3.75	2.35	1.40	1.75	1.40	1.30	1.30
25.....	2.00	3.40	2.35	1.40	1.75	1.35	1.30	1.30
26.....	2.00	3.20	2.35	1.40	1.70	1.35	1.30	1.30
27.....	2.00	3.00	2.35	1.50	1.75	1.35	1.30	1.30
28.....	2.00	2.90	2.35	1.50	1.75	1.35	1.30	1.30
29.....	2.00	2.80	2.35	1.40	.....	1.35	1.30	1.25
30.....	2.00	2.75	2.35	1.40	.....	1.35	1.70	1.25
31.....	2.00	.....	2.35	1.40	.....	1.45	.....	1.25

a Estimated.

Daily gage height, in feet, of Santa Ana River near Mentone, Cal., for 1896-1903—Con.

Day.	Feb.	Mar.	Apr.	Day.	Feb.	Mar.	Apr.	Day.	Feb.	Mar.	Apr.
1902.				1902.				1902.			
1.....		1.50	1.35	11.....	1.55	1.27	21.....		1.22	1.45	
2.....		2.8	1.4	12.....	1.55	1.27	22.....		1.25	1.30	
3.....		1.60	1.40	13.....	1.55	1.25	23.....		1.30	1.31	
4.....		1.50	1.40	14.....	1.55	1.24	24.....		1.40		
5.....		1.50	1.45	15.....	1.35	1.24	25.....		1.45		
6.....		1.25	1.33	16.....	1.23	1.24	26.....	2.20	1.50		
7.....		1.45	1.35	17.....	1.25	1.23	27.....	1.60	1.55		
8.....		1.36	1.38	18.....	1.25	1.23	28.....	1.50	1.53		
9.....		2.03	1.30	19.....	1.30	1.24	29.....		1.53		
10.....		1.70	1.30	20.....	1.25	1.25	30.....		1.50		
							31.....		1.45		

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	Day.	Jan.	Feb.	Mar.	Apr.	May.	June.
1903.							1903.						
1.....	1.13	1.7	1.3	7.00	1.0	0.65	16.....	0.95	1.35	1.35	1.1	0.8	0.3
2.....	1.13	1.35	1.3	3.3	1.0	.65	17.....	.95	1.35	1.35	1.4	.8	.25
3.....	1.13	1.35	1.3	2.5	1.0	.65	18.....	.95	1.3	1.35	1.3	.8	.2
4.....	1.13	1.3	1.5	2.0	.95	.65	19.....	.95	1.3	1.35	1.2	.8	.2
5.....	1.07	1.3	1.8	2.0	.9	.65	20.....	.95	1.3	1.3	1.2	.8	.2
6.....	1.07	1.3	1.5	1.5	.9	.65	21.....	.95	1.35	1.3	1.2	.75	.2
7.....	1.07	1.35	1.4	1.4	.85	.6	22.....	.95	1.35	1.3	1.1	1.0	.2
8.....	1.05	1.35	1.4	1.35	.8	.6	23.....	1.05	1.35	1.3	1.05	.75	
9.....	1.05	1.4	1.4	1.2	.8	.6	24.....	1.1	1.35	1.4	1.1	.75	
10.....	1.05	1.4	1.35	1.0	.8	.55	25.....	1.13	1.35	1.9	1.1	.75	
11.....	1.05	1.45	1.3	1.0	.8	.55	26.....	1.13	1.35	2.4	1.1	.75	
12.....	1.05	1.45	1.3	1.0	.8	.5	27.....	1.13	1.35	1.8	1.1	.7	
13.....	.85	1.45	1.32	1.0	.8	.5	28.....	2.3	1.35	1.8	1.1	.7	
14.....	.85	1.45	1.32	.95	.8	.4	29.....	1.5		1.8	1.0	.67	
15.....	.95	1.45	1.35	.95	.8	.35	30.....	1.5		1.9	1.0	.65	
							31.....	1.5		4.9		.65	

NOTE.—On Nov. 9, 1898, the station was moved downstream and a new gage established 800 feet below the mouth of Warm Springs canyon. On Jan. 1, 1901, the station was moved back to the former location and the old gage read thereafter.

Discharge record was obtained by measurements over weirs in the canals at mouth of canyon during June 1, 1901, to Feb. 25, 1902; Apr. 24 to Dec. 31, 1902; and June 23, 1903, to Dec. 31, 1904.

Daily gage height, in feet, of Santa Ana River near Mentone, Cal., for 1905-1912.

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1905.									
1.....	0.85	0.8	1.3	1.7	1.3	2.3	1.4	1.3	1.3
2.....	.85	2.5	1.3	2.05	2.2	2.3	1.4	1.3	1.3
3.....	.85	2.3	1.3	2.05	2.0	2.3	1.4	1.3	1.3
4.....	.85	2.8	1.3	1.35	2.0	2.3	1.4	1.3	1.3
5.....	.85	3.0	1.3	1.35	1.9	2.3	1.4	1.3	1.3
6.....	.85	1.9	1.25	1.35	1.9	2.25	1.4	1.3	1.3
7.....	.85	1.9	1.25	1.35	2.0	2.25	1.4	1.3	1.3
8.....	.85	1.75	1.25	1.35	2.3	2.2	1.4	1.3	1.3
9.....	2.0	1.5	1.25	1.35	2.2	2.2	1.4	1.3	1.3
10.....	1.0	1.5	1.25	1.35	2.2	2.2	1.4	1.3	1.3
11.....	.85	1.35	1.25	1.35	2.2	2.15	1.4	1.3	1.3
12.....	.85	1.25	1.3	1.35	2.2	1.6	1.4	1.3	1.3
13.....	.85	1.15	3.4	1.3	2.2	1.75	1.4	1.3	1.3
14.....	.85	1.1	2.6	1.3	2.5	1.6	1.4	1.3	1.3
15.....	.85	1.1	2.35	1.3	2.5	1.45	1.4	1.3	1.3
16.....	.8	2.8	2.4	1.3	2.6	1.45	1.35	1.3	1.3
17.....	.8	2.1	2.5	2.2	2.6	1.6	1.35	1.3	1.3
18.....	.8	1.9	2.6	2.0	2.5	1.6	1.35	1.3	1.3
19.....	.8	1.9	2.5	2.1	2.6	1.55	1.35	1.3	1.3
20.....	.8	1.8	2.6	1.2	2.6	1.55	1.35	1.3	1.3

Daily gage height, in feet, of Santa Ana River near Mentone, Cal., for 1905-1912—Con.

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1905.									
21.....	1.65	1.7	2.5	1.15	2.5	1.45	1.35	1.3	1.3
22.....	.85	1.7	2.4	1.2	2.2	1.45	1.35	1.3	1.3
23.....	.85	1.5	2.0	1.4	2.2	1.45	1.35	1.3	1.3
24.....	.85	1.3	1.9	1.4	2.1	1.45	1.3	1.3	1.3
25.....	.85	1.85	1.9	1.3	2.3	1.45	1.3	1.3	1.3
26.....	.85	1.25	1.9	1.3	2.2	1.45	1.3	1.3	1.3
27.....	.85	1.35	1.8	1.3	2.2	1.45	1.3	1.3	1.3
28.....	.85	1.3	1.65	1.25	2.4	1.4	1.3	1.3	1.3
29.....	.8		1.5	1.2	2.4	1.4	1.3	1.3	1.3
30.....	.8		2.0	1.2	2.4	1.4	1.3	1.3	1.3
31.....	.8		1.8		2.4		1.3	1.3	

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1905-6.												
1.....	1.3	1.3	1.5	1.3	1.3	1.9	3.9	3.1	4.0	3.0	2.6	2.3
2.....	1.3	1.3	1.5	1.3	1.3	1.9	3.4	3.0	3.5	3.0	2.6	2.3
3.....	1.3	1.3	1.4	1.3	1.3	1.7	3.3	2.9	3.5	2.9	2.5	2.3
4.....	1.3	1.3	1.4	1.3	1.3	1.6	3.4	2.9	3.3	2.9	2.5	2.3
5.....	1.3	1.3	1.4	1.3	1.3	1.5	3.4	3.6	3.3	3.0	2.4	2.3
6.....	1.3	1.3	1.4	1.3	1.3	1.5	3.3	3.7	3.3	3.0	2.4	2.3
7.....	1.3	1.35	1.4	1.3	1.3	1.4	3.2	3.4	3.2	3.0	2.4	2.2
8.....	1.3	1.4	1.4	1.3	1.3	1.4	3.1	3.8	3.2	3.0	2.4	2.2
9.....	1.3	1.35	1.4	1.3	1.3	1.4	3.0	3.8	3.2	2.9	2.4	2.2
10.....	1.3	1.3	1.4	1.3	1.3	1.4	3.0	3.8	3.2	2.9	2.4	2.2
11.....	1.3	1.3	1.4	1.3	1.3	1.4	3.0	3.8	3.4	2.9	2.4	2.2
12.....	1.3	1.3	1.4	1.3	1.3	6.5	2.9	3.6	3.2	2.9	2.4	2.2
13.....	1.3	1.3	1.4	1.3	1.3	4.5	2.9	3.6	3.2	2.9	2.6	2.2
14.....	1.3	1.3	1.4	1.3	1.3	3.4	3.0	3.4	3.2	2.9	2.6	2.2
15.....	1.3	1.3	1.4	1.3	1.3	3.0	2.9	3.3	3.2	2.9	2.5	2.2
16.....	1.3	1.3	1.4	1.3	1.3	5.0	2.9	3.3	3.2	3.0	2.6	2.3
17.....	1.3	1.3	1.4	1.3	1.3	4.15	2.9	3.2	3.1	2.9	2.9	2.3
18.....	1.3	1.3	1.4	1.3	1.3	3.7	2.9	3.2	3.1	2.9	3.0	2.3
19.....	1.3	1.35	1.6	2.4	1.3	3.45	2.9	3.2	3.1	2.8	2.7	2.3
20.....	1.3	1.35	2.2	2.2	1.3	3.25	3.0	3.2	3.1	2.8	2.6	2.3
21.....	1.3	1.4	1.6	1.7	1.3	3.15	3.5	3.2	3.1	2.7	2.5	2.3
22.....	1.3	1.35	1.5	1.5	1.9	3.1	3.8	3.4	3.1	2.8	2.4	2.5
23.....	1.3	1.35	1.5	1.5	2.0	3.05	3.9	3.5	3.1	2.8	2.3	2.5
24.....	1.3	1.35	1.5	1.4	2.0	4.6	3.9	3.5	3.4	2.9	2.1	2.5
25.....	1.3	1.35	1.5	1.4	2.0	4.95	3.7	3.2	3.1	2.8	2.0	2.5
26.....	1.3	1.8	1.5	1.3	2.0	5.8	3.7	3.2	3.0	2.8	2.3	2.5
27.....	1.3	2.5	1.5	1.3	2.0	5.2	3.1	3.3	3.1	2.8	2.3	2.5
28.....	1.3	2.9	1.5	1.3	2.0	4.9	3.3	4.9	3.1	2.7	2.3	2.5
29.....	1.3	1.7	2.0	1.3		4.6	3.8	4.4	3.0	2.7	2.3	2.5
30.....	1.3	1.5	1.6	1.3		4.3	3.8	4.3	3.0	2.7	2.3	2.5
31.....	1.3		1.5	1.3		4.2		4.0		2.6	2.3	

1906-7.												
1.....	2.5	2.3	2.3	2.7	3.5	3.4	4.2	3.7	3.0	2.8	2.4	2.1
2.....	2.5	2.3	2.3	2.6	3.5	3.6	4.3	3.7	3.0	2.8	2.4	2.1
3.....	2.5	2.3	2.4	2.5	3.7	3.2	4.4	3.6	3.0	2.8	2.4	2.1
4.....	2.5	2.3	2.7	2.5	3.8	3.3	4.3	3.4	3.0	2.8	2.3	2.1
5.....	2.5	2.3	2.7	2.5	3.8	5.3	4.2	3.4	3.0	2.8	2.3	2.0
6.....	2.5	2.3	2.3	3.0	3.8	4.4	4.2	3.4	3.0	2.8	2.3	2.0
7.....	2.5	2.3	2.3	3.0	3.4	4.1	4.2	3.1	3.0	2.8	2.3	2.0
8.....	2.5	2.3	2.3	3.0	3.4	4.5	4.3	3.1	3.0	2.8	2.3	1.9
9.....	2.5	2.3	2.3	3.0	3.2	4.4	4.3	3.0	3.0	2.8	2.2	1.9
10.....	2.5	2.3	2.3	4.5	3.1	3.7	4.3	3.5	3.0	2.7	2.2	1.9
11.....	2.5	2.3	2.3	3.6	3.1	4.2	4.3	3.4	3.0	2.7	2.2	1.9
12.....	2.5	2.3	5.2	3.6	3.0	4.1	4.3	3.4	3.0	2.7	2.2	1.9
13.....	2.5	2.3	3.2	3.7	3.0	4.0	4.3	3.4	3.0	2.7	2.2	1.9
14.....	2.5	2.3	2.9	3.8	3.0	4.0	4.3	3.2	3.0	2.7	2.2	1.9
15.....	2.5	2.3	2.3	3.7	2.9	3.4	4.3	3.2	3.0	2.7	2.1	1.9
16.....	2.5	2.3	2.4	3.8	2.9	3.4	4.3	3.0	3.0	2.7	2.1	1.9
17.....	2.5	2.3	2.4	3.8	3.1	3.4	3.7	3.0	2.9	2.7	2.1	1.8
18.....	2.5	2.3	2.2	4.0	3.0	3.5	3.6	3.0	2.8	2.6	2.1	1.8
19.....	2.5	2.3	2.2	3.9	2.9	4.1	3.8	3.6	2.8	2.6	2.1	1.8
20.....	2.5	2.3	2.0	3.6	2.9	4.4	4.3	3.6	2.8	2.6	2.0	3.1

Daily gage height, in feet, of Santa Ana River near Mentone, Cal., for 1905-1912.—Con.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1906-7.												
21.....	2.3	2.3	2.0	3.6	3.6	6.0	4.2	3.6	2.8	2.6	2.1	1.9
22.....	2.3	2.3	2.0	3.6	4.4	4.9	4.1	3.2	2.8	2.5	2.1	1.9
23.....	2.3	2.3	2.0	3.6	4.4	4.8	3.7	3.2	2.8	2.5	2.1	1.9
24.....	2.3	2.3	2.0	3.6	4.1	4.6	3.6	3.2	2.8	2.5	2.1	1.9
25.....	2.3	2.3	2.0	3.0	4.0	4.8	3.6	3.1	2.8	2.5	2.1	1.9
26.....	2.3	2.3	2.0	2.9	4.0	4.7	3.6	3.1	2.8	2.5	2.1	1.9
27.....	2.3	2.3	3.2	2.9	4.0	4.7	3.7	3.2	2.8	2.5	2.1	1.9
28.....	2.3	2.3	3.5	2.9	3.4	4.5	3.7	3.1	2.7	2.5	2.1	1.9
29.....	2.3	2.3	3.5	2.9	.....	4.4	3.4	3.1	2.7	2.4	2.1	1.9
30.....	2.3	2.3	2.1	3.4	.....	4.3	3.7	3.0	2.8	2.4	2.1	1.9
31.....	2.3	.....	2.8	3.0	.....	4.2	.....	3.0	.....	2.4	2.1	.....
1907-8.												
1.....	1.9	2.4	1.9	1.7	2.0	3.0	2.7	2.0	1.8	1.8	1.8	1.8
2.....	1.9	2.4	1.9	1.7	2.9	2.9	2.6	2.0	1.8	1.8	1.8	1.8
3.....	1.9	2.4	1.8	1.7	2.9	2.9	2.4	2.4	1.8	1.8	1.8	1.8
4.....	1.9	2.7	1.8	1.7	3.6	3.0	2.2	2.2	1.8	1.8	1.8	1.8
5.....	2.0	2.7	1.8	1.7	2.8	3.0	2.1	2.1	1.8	1.8	1.8	1.8
6.....	2.0	2.7	1.8	1.7	2.5	2.5	2.0	2.1	1.8	1.8	1.8	1.8
7.....	1.9	2.3	1.8	1.7	2.3	2.4	2.0	2.0	1.8	1.8	1.8	1.8
8.....	1.9	2.0	1.8	1.7	2.2	2.4	2.0	1.9	1.8	1.8	1.8	1.8
9.....	1.9	1.9	1.8	1.7	2.1	2.1	1.9	1.9	1.8	1.8	1.8	1.8
10.....	1.9	2.3	1.8	1.7	2.2	2.0	1.9	1.8	1.8	1.8	1.8	1.8
11.....	1.9	2.7	1.8	1.7	2.2	2.0	1.9	1.8	1.8	1.8	1.8	1.8
12.....	1.9	2.7	1.8	1.7	2.2	2.0	1.9	1.8	1.8	1.8	1.8	1.8
13.....	1.9	2.7	1.8	1.7	2.1	2.0	2.1	1.8	1.8	1.8	1.8	1.8
14.....	1.9	2.7	1.8	1.7	2.0	2.0	2.2	1.8	1.8	1.8	1.8	1.8
15.....	1.9	2.7	1.8	1.7	2.7	2.2	2.1	1.8	1.8	1.8	1.8	1.8
16.....	2.2	2.7	1.8	1.7	2.6	2.2	2.1	1.8	1.8	1.8	1.8	1.8
17.....	2.1	2.7	1.8	1.7	2.6	2.2	2.1	1.8	1.8	1.8	1.8	1.8
18.....	2.1	2.7	1.7	1.7	2.6	2.9	2.1	1.8	1.8	1.8	1.8	1.8
19.....	2.1	2.6	1.7	1.7	2.6	3.0	2.0	1.8	1.8	1.8	1.8	1.8
20.....	2.0	2.6	1.7	1.7	2.6	3.0	2.1	1.8	1.8	1.8	1.8	1.8
21.....	2.0	2.6	1.7	1.7	2.6	3.0	2.0	1.8	1.8	1.8	1.8	1.8
22.....	1.9	2.6	1.7	1.7	2.6	3.0	2.0	1.8	1.8	1.8	1.8	1.8
23.....	2.0	2.5	1.7	1.7	2.6	3.0	2.7	1.8	1.8	1.8	1.8	1.8
24.....	2.5	2.5	1.7	3.0	2.6	2.9	2.3	1.8	1.8	1.8	1.8	1.8
25.....	2.2	1.9	1.7	3.4	2.6	2.9	2.3	1.8	1.8	1.8	1.8	1.8
26.....	2.1	1.9	1.7	2.8	2.6	2.3	2.2	1.8	1.8	1.8	1.8	1.8
27.....	2.1	1.9	1.7	2.4	2.7	2.4	2.2	1.8	1.8	1.8	1.8	1.8
28.....	2.4	1.9	1.7	3.0	2.7	2.4	2.1	1.8	1.8	1.8	1.8	1.8
29.....	2.4	1.9	1.7	3.2	3.3	2.6	2.2	1.8	1.8	1.8	1.8	1.8
30.....	2.4	1.9	1.7	3.0	.....	2.7	2.1	1.8	1.8	1.8	1.8	1.8
31.....	2.4	.....	1.7	3.0	.....	2.7	.....	1.8	.....	1.8	1.8	.....
1908-9.												
1.....	1.8	1.8	1.8	1.8	2.3	2.9	3.3	3.4	2.5	2.2	2.2	2.2
2.....	1.8	1.8	1.8	1.8	2.2	2.9	3.3	3.5	2.5	2.2	2.2	2.2
3.....	1.8	1.8	1.8	1.8	2.1	2.9	3.7	3.4	2.5	2.2	2.2	2.2
4.....	1.8	1.8	1.8	1.8	3.0	2.8	3.7	3.3	2.5	2.2	2.2	2.2
5.....	1.8	1.8	1.8	1.8	2.6	2.8	3.7	3.3	2.6	2.2	2.2	2.2
6.....	1.8	1.8	1.8	1.8	2.5	2.8	3.7	3.3	3.4	2.2	2.2	2.2
7.....	1.8	1.8	1.8	1.8	4.5	2.8	3.3	3.4	3.4	2.2	2.2	2.2
8.....	1.8	1.8	1.8	1.8	4.1	2.8	2.9	3.4	3.4	2.2	2.2	2.2
9.....	1.8	1.8	1.8	1.8	3.5	2.7	2.9	3.0	2.7	2.2	2.2	2.2
10.....	1.8	1.8	1.8	1.8	3.3	2.7	2.9	3.1	2.7	2.2	2.2	2.2
11.....	1.8	1.8	1.8	1.8	3.4	2.7	2.9	3.1	2.7	2.2	2.2	2.2
12.....	1.8	1.8	1.8	1.8	3.8	2.6	2.9	3.1	2.7	2.2	2.2	2.2
13.....	1.8	1.8	1.8	1.8	4.6	2.6	2.8	3.1	2.7	2.2	2.2	2.2
14.....	1.8	1.8	1.8	2.3	4.0	2.5	2.9	3.1	2.7	2.2	2.2	2.2
15.....	1.8	1.8	1.8	1.8	3.9	2.5	3.0	3.0	2.7	2.2	2.2	2.2
16.....	1.8	1.8	1.8	1.8	3.6	2.5	3.1	3.0	2.6	2.2	2.2	2.2
17.....	1.8	1.8	1.8	1.8	3.5	2.5	3.1	2.9	2.4	2.2	2.3	2.2
18.....	1.8	1.8	1.8	1.8	3.4	3.1	3.3	2.8	2.3	2.2	2.5	2.2
19.....	1.8	1.8	1.8	1.8	3.4	3.1	3.3	2.8	2.5	2.2	2.3	2.2
20.....	1.8	1.8	1.8	1.8	3.4	3.1	3.3	2.8	2.4	2.2	2.2	2.2
21.....	1.8	1.8	1.8	1.8	3.4	3.2	3.1	2.7	2.3	2.2	2.2	2.2
22.....	1.8	1.8	1.8	5.5	3.2	3.2	3.4	2.7	2.2	2.2	2.2	2.2
23.....	1.8	1.8	1.8	3.6	3.2	3.3	3.4	2.7	2.2	2.2	2.2	2.2
24.....	1.8	1.8	1.8	3.1	3.2	3.7	3.4	2.7	2.2	2.2	2.2	2.2
25.....	1.8	1.8	1.8	2.8	3.1	3.7	3.4	2.9	2.2	2.2	2.2	2.2

Daily gage height, in feet, of Santa Ana River near Mentone, Cal., for 1905-1912—Con.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1908-9.												
26.....	1.8	1.8	1.8	2.6	3.0	3.6	3.4	2.8	2.2	2.2	2.2	2.2
27.....	1.8	1.8	1.8	3.0	3.0	3.8	3.4	2.7	2.2	2.2	2.2	2.2
28.....	1.8	1.8	1.8	2.6	2.9	3.9	3.4	2.8	2.2	2.2	2.2	2.4
29.....	1.8	1.8	1.8	2.5	.....	3.7	3.4	2.6	2.2	2.2	2.2	2.2
30.....	1.8	1.8	1.8	2.4	.....	3.7	3.4	2.6	2.2	2.2	2.2	2.2
31.....	1.8	.....	1.8	2.4	.....	3.7	.....	2.5	.....	2.2	2.2	.....
1909-10.												
1.....	2.2	2.2	2.2	.....	1.65	1.5	1.75	1.3	1.1	1.1	1.1	1.4
2.....	2.2	2.2	2.2	.....	1.65	1.5	2.0	1.3	1.1	1.1	1.1	1.4
3.....	2.2	2.2	2.2	.....	1.65	1.5	1.7	1.3	1.1	1.1	1.1	1.4
4.....	2.2	2.2	2.2	.....	1.75	1.5	1.5	1.3	1.1	1.1	1.1	1.2
5.....	2.2	2.2	2.2	.....	1.5	1.5	1.5	1.3	1.1	1.1	1.1	1.2
6.....	2.2	2.2	2.2	.....	1.75	1.5	1.4	1.3	1.1	1.1	1.1	1.2
7.....	2.2	2.2	2.2	.....	1.65	1.5	1.3	1.3	1.1	1.1	1.1	1.2
8.....	2.2	2.2	2.2	.....	1.65	1.5	1.3	1.3	1.1	1.1	1.1	1.2
9.....	2.2	2.2	4.2	.....	1.9	1.5	1.3	1.3	1.1	1.1	1.1	1.2
10.....	2.2	2.6	4.5	.....	2.25	1.5	1.3	1.3	1.1	1.1	1.1	1.3
11.....	2.2	2.2	3.1	.....	2.25	1.5	1.8	1.3	1.1	1.1	1.1	1.3
12.....	2.2	2.2	2.9	.....	2.25	1.5	1.9	1.3	1.1	1.1	1.1	1.4
13.....	2.2	2.2	2.5	.....	1.9	2.3	1.9	1.3	1.1	1.1	1.1	1.4
14.....	2.2	2.2	2.3	.....	1.9	2.3	1.9	1.3	1.2	1.1	1.1	1.3
15.....	2.2	2.5	2.2	.....	1.5	1.5	1.9	1.3	1.2	1.1	1.1	1.2
16.....	2.2	2.2	2.2	.....	1.5	1.5	1.9	1.3	1.2	2.1	1.1	1.4
17.....	2.2	2.2	2.2	.....	1.5	1.5	1.8	1.2	1.2	2.1	1.1	1.2
18.....	2.2	2.2	2.2	.....	1.5	1.5	1.8	1.3	1.2	2.0	1.1	1.2
19.....	2.2	2.2	2.2	.....	1.5	1.5	1.5	1.3	1.2	2.0	1.1	1.2
20.....	2.2	2.2	2.2	.....	1.5	1.5	1.4	1.3	1.2	1.9	1.1	1.2
21.....	2.2	2.2	2.2	.....	1.5	1.5	1.3	1.3	1.1	1.9	1.1	1.2
22.....	2.2	2.2	2.2	.....	1.5	1.5	1.3	1.3	1.1	1.9	1.1	1.2
23.....	2.2	2.2	2.2	2.25	1.5	1.5	1.2	1.3	1.1	1.5	1.1	1.2
24.....	2.2	2.2	2.2	1.9	1.5	1.5	1.2	1.3	1.1	1.4	1.1	1.2
25.....	2.2	2.2	2.2	2.6	1.5	1.7	1.3	1.3	1.1	1.3	1.1	1.2
26.....	2.2	2.2	3.0	2.4	1.5	1.7	1.2	1.1	1.1	1.2	1.1	1.2
27.....	2.2	2.2	3.0	2.25	1.5	1.5	1.2	1.1	1.1	1.2	1.1	1.2
28.....	2.2	2.2	2.2	2.25	1.5	1.5	1.2	1.1	1.1	1.1	1.1	1.2
29.....	2.2	2.2	2.2	2.25	.....	1.9	1.3	1.1	1.1	1.1	1.1	1.2
30.....	2.2	2.2	2.2	2.1	.....	1.75	1.3	1.1	1.1	1.1	1.1	1.2
31.....	2.2	.....	4.9	2.1	.....	1.75	.....	1.1	.....	1.1	1.6	.....
1910-11.												
1.....	1.2	1.1	1.1	1.1	2.8	2.1	3.9	3.4	3.0	2.9	2.5	2.5
2.....	1.2	1.1	1.1	1.1	2.6	2.1	3.9	3.4	3.0	2.9	2.5	2.5
3.....	1.2	1.1	1.1	1.1	2.4	2.1	3.9	3.4	3.0	3.9	2.5	2.5
4.....	1.2	1.1	1.1	1.1	3.4	3.2	3.9	3.4	3.0	2.9	2.5	2.5
5.....	1.2	1.1	1.1	1.1	2.9	2.6	3.9	3.4	3.0	2.8	2.5	2.5
6.....	1.2	1.1	1.1	1.1	2.6	2.5	3.8	3.4	3.0	2.8	2.5	2.5
7.....	1.2	1.1	1.1	1.1	2.5	2.5	3.8	3.4	3.0	2.8	2.5	2.5
8.....	1.2	1.1	1.1	1.1	2.5	3.2	3.7	3.3	3.0	2.8	2.5	2.5
9.....	1.2	1.1	1.1	1.1	2.4	4.0	3.6	3.3	3.0	2.8	2.5	2.5
10.....	1.2	1.1	1.1	2.7	2.3	5.0	3.6	3.2	3.0	2.7	2.5	2.5
11.....	1.2	1.1	1.1	1.9	2.2	4.9	3.7	3.1	3.6	2.7	2.5	2.5
12.....	1.4	1.1	1.1	1.4	2.2	4.7	3.7	3.1	3.0	2.7	2.5	2.5
13.....	1.4	1.1	1.1	1.0	2.2	4.5	3.6	3.1	3.0	2.7	2.5	2.5
14.....	1.4	1.1	1.1	1.0	2.6	4.3	3.6	3.1	3.0	2.7	2.5	2.5
15.....	1.1	1.1	1.1	2.0	2.6	4.3	3.6	3.3	3.0	2.7	2.5	2.5
16.....	1.1	1.1	1.1	1.9	2.6	4.2	3.6	3.2	3.0	2.8	2.5	2.5
17.....	1.1	1.1	1.1	1.6	2.2	4.1	3.5	3.2	3.0	3.0	2.5	2.5
18.....	1.1	1.1	1.1	1.1	2.1	4.1	3.5	3.2	3.0	2.9	2.5	2.5
19.....	1.1	1.1	1.1	1.0	2.1	4.1	3.5	3.1	3.0	2.9	2.5	2.5
20.....	1.1	1.1	1.1	.9	2.1	4.0	3.4	3.1	3.0	2.8	2.5	2.5
21.....	1.1	1.1	1.1	.9	2.0	3.9	3.4	3.1	3.0	3.4	2.5	2.5
22.....	1.1	1.1	1.1	.9	2.0	3.9	3.4	3.1	3.0	3.4	2.5	2.5
23.....	1.1	1.1	1.1	.9	2.1	3.9	3.4	3.1	3.0	3.5	2.5	2.5
24.....	1.1	1.1	1.1	.9	2.1	3.9	3.4	3.1	3.0	3.5	2.5	2.5
25.....	1.1	1.1	1.1	2.3	2.0	3.9	3.4	3.1	3.0	3.5	2.5	2.5
26.....	1.1	1.1	1.1	2.4	2.0	3.9	3.4	3.1	2.9	3.5	2.5	2.5
27.....	1.1	1.1	1.1	1.6	2.1	3.9	3.4	3.1	2.9	3.0	2.5	2.5
28.....	1.1	1.1	1.1	1.2	2.1	3.9	3.4	3.1	2.9	2.8	2.5	2.5
29.....	1.1	1.1	1.1	4.5	.....	3.9	3.4	3.1	2.9	2.5	2.5	2.9
30.....	1.1	1.1	1.1	2.8	.....	3.9	3.4	3.1	2.9	2.5	2.5	2.9
31.....	1.1	.....	1.1	2.6	.....	3.9	.....	3.0	.....	2.5	2.5	.....

Daily gage height, in feet, of Santa Ana River near Mentone, Cal., for 1905-1912—Con.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.									
1.....	2.6	2.5	2.5	2.5	2.5	2.5	2.5	2.8	2.5
2.....	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.8	2.5
3.....	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.8	2.4
4.....	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.7	2.4
5.....	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.7	2.4
6.....	2.5	2.5	2.5	2.5	2.5	4.0	2.5	2.7	2.4
7.....	2.5	2.5	2.5	2.5	2.5	3.1	2.5	2.7	2.4
8.....	2.5	2.5	2.5	2.5	2.5	2.8	2.5	2.7	2.4
9.....	2.5	2.5	2.5	2.5	2.5	2.5	2.8	2.8	2.4
10.....	2.5	2.5	2.5	2.5	2.5	3.9	2.7	2.8	2.4
11.....	2.5	2.5	2.5	2.5	2.5	3.3	3.3	2.8	2.4
12.....	2.5	2.5	2.5	2.5	2.5	2.9	3.1	2.8	2.4
13.....	2.5	2.5	2.5	2.5	2.5	3.2	3.2	2.8	2.4
14.....	2.5	2.5	2.5	2.5	2.5	3.0	3.2	2.8	2.4
15.....	2.5	2.5	2.5	2.5	2.5	3.0	3.2	2.8	2.4
16.....	2.5	2.5	2.5	2.5	2.5	3.0	3.2	2.8	2.4
17.....	2.5	2.5	2.5	2.5	2.5	3.4	3.2	2.7	2.4
18.....	2.5	2.5	2.5	2.5	2.5	2.7	3.1	2.7	2.4
19.....	2.5	2.5	2.5	2.5	2.5	2.5	3.1	2.7	2.4
20.....	2.5	2.5	2.5	2.5	2.5	2.5	3.0	2.6	2.4
21.....	2.5	2.5	2.5	2.5	2.5	2.5	2.9	2.6	2.4
22.....	2.5	2.5	2.5	2.5	2.5	2.5	2.8	2.6	2.4
23.....	2.5	2.5	2.5	2.5	2.5	2.5	2.8	2.6	2.4
24.....	2.5	2.5	2.5	2.5	2.5	2.5	2.8	2.5	2.4
25.....	2.5	2.5	2.5	2.5	2.5	2.5	2.8	2.5	2.4
26.....	2.5	2.5	2.5	2.5	2.5	2.5	2.8	2.5	2.4
27.....	2.5	2.5	2.5	2.5	2.5	2.5	2.9	2.5	2.4
28.....	2.5	2.5	2.5	2.5	2.5	2.5	2.9	2.5	2.4
29.....	2.5	2.5	2.5	2.5	2.5	2.5	2.9	2.5	2.4
30.....	2.5	2.5	2.5	2.5	.....	2.7	2.8	2.5	2.4
31.....	2.5	.....	2.5	2.5	.....	2.5	.....	2.5	.....

NOTE.—Datum of the gage lowered on June 30, 1903. Gage washed out Dec. 31, 1909, and new gage installed Jan. 23, 1910. No gage heights published for part of 1903 and 1904, as the determination of the discharge was made over weirs.

Rating tables for Santa Ana River near Mentone, Cal.

July 1, 1896, to May 31, 1897.

Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.
<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>
0.90	25	1.50	101	2.10	300	2.60	500
1.00	33	1.60	126	2.20	340	2.70	540
1.10	41	1.70	153	2.30	380	2.80	580
1.20	52	1.80	186	2.40	420	2.90	620
1.30	64	1.90	221	2.50	460	3.00	660
1.40	81	2.00	260				

June 1 to July 31, 1897.

1.00	55	1.20	67	1.40	92	1.60	129
1.10	60	1.30	78	1.50	110	1.70	151

August 1 to December 31, 1897.

0.80	23	1.00	26	1.20	38	1.40	70
.90	24	1.10	30	1.30	52	1.50	90

Rating tables for Santa Ana River near Mentone, Cal.—Continued.

January 1 to October 15, 1898.

Gage height	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.
<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>
0.80	25	1.10	40	1.30	66	1.50	112
.90	28	1.20	51	1.40	87	1.60	149
1.00	33						

November 9 to December 31, 1898.

2.10	22	2.20	28	2.30	34	2.40	42
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January 1 to April 15, 1899.

1.80	12.5	2.00	18.0	2.20	26.5	2.40	48.0
1.90	15.0	2.10	21.5	2.30	34.0		

April 16 to December 31, 1899.

1.70	8.0	2.10	16.5	2.40	25.0	2.70	36.0
1.80	10.0	2.20	19.0	2.50	28.5	2.80	41.0
1.90	12.0	2.30	22.0	2.60	32.0	2.90	46.5
2.00	14.0						

January 1 to December 31, 1900.

1.80	10	2.60	37	3.40	114	4.00	190
2.00	14	2.80	52	3.60	138	4.20	219
2.20	20	3.00	71	3.80	163	4.40	250
2.40	27	3.20	92				

January 1, 1901, to March 30, 1903.

0.90	7	1.50	63	2.10	208	2.70	440
1.00	12	1.60	80	2.20	240	2.80	485
1.10	18	1.70	102	2.30	277	2.90	540
1.20	26	1.80	125	2.40	315	3.00	600
1.30	36	1.90	150	2.50	355		
1.40	48	2.00	178	2.60	395		

March 31 to December 31, 1903.

0.00	48	1.00	112	3.00	856	5.00	2,550
.10	52	1.20	142	3.20	989	5.20	2,752
.20	56	1.40	179	3.40	1,136	5.40	2,961
.30	60	1.60	224	3.60	1,292	5.60	3,177
.40	65	1.80	278	3.80	1,455	5.80	3,399
.50	70	2.00	345	4.00	1,623	6.00	3,629
.60	76	2.20	425	4.20	1,799	6.20	3,868
.70	82	2.40	516	4.40	1,980	6.40	4,119
.80	90	2.60	618	4.60	2,165	6.60	4,378
.90	100	2.80	733	4.80	2,354	7.00	4,908

January 1 to March 31, 1904.

0.40	1	1.10	20	1.80	69	2.50	161
.50	3	1.20	24	1.90	79	2.60	179
.60	5	1.30	30	2.00	91	2.70	199
.70	7	1.40	36	2.10	102	2.80	221
.80	10	1.50	43	2.20	114	2.90	245
.90	13	1.60	51	2.30	129	3.00	280
1.00	16	1.70	60	2.40	144		

Rating tables for Santa Ana River near Mentone, Cal.—Continued.

April 1, 1904, to February 17, 1905.

Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.
<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>
0.80	1	1.40	23	2.00	80	2.60	170
.90	2	1.50	29	2.10	93	2.70	186
1.00	5	1.60	37	2.20	106	2.80	202
1.10	8	1.70	47	2.30	122	2.90	218
1.20	12	1.80	57	2.40	138	3.00	234
1.30	17	1.90	68	2.50	154		

February 18 to March 12 and June 1 to December 31, 1905.

1.30	1	2.00	48	2.70	164	3.40	290
1.40	3	2.10	62	2.80	182	3.50	308
1.50	6	2.20	78	2.90	200	3.60	326
1.60	11	2.30	94	3.00	218	3.70	344
1.70	17	2.40	110	3.10	236	3.80	362
1.80	25	2.50	128	3.20	254	3.90	380
1.90	35	2.60	146	3.30	272		

March 13 to May 31, 1905.

0.80	1	1.60	46	2.40	151	3.20	287
.90	2	1.70	56	2.50	168	3.30	304
1.00	4	1.80	68	2.60	185	3.40	321
1.10	8	1.90	80	2.70	202	3.50	338
1.20	13	2.00	92	2.80	219	3.60	355
1.30	20	2.10	106	2.90	236	3.70	362
1.40	28	2.20	120	3.00	253	3.80	379
1.50	36	2.30	135	3.10	270		

Jan. 1 to Dec. 31, 1906, indirect method for shifting channels.

January 1 to April 16, 1907.

2.50	10	3.40	155	4.30	625	5.20	1,300
2.60	18	3.50	181	4.40	700	5.30	1,375
2.70	27	3.60	210	4.50	775	5.40	1,450
2.80	38	3.70	241	4.60	850	5.50	1,525
2.90	52	3.80	275	4.70	925	5.60	1,600
3.00	69	3.90	330	4.80	1,000	5.70	1,675
3.10	88	4.00	400	4.90	1,075	5.80	1,750
3.20	108	4.10	475	5.00	1,150	5.90	1,825
3.30	131	4.20	550	5.10	1,225	6.00	1,900

NOTE.—Table applicable only to open channel. It is based on four discharge measurements made during January to March, 1907, and is well defined between gage heights 3.8 feet and 4.7 feet.

April 17 to December 31, 1907.

1.70	1	2.40	40	3.10	132	3.80	314
1.80	2	2.50	50	3.20	150	3.90	360
1.90	4	2.60	60	3.30	170	4.00	415
2.00	9	2.70	72	3.40	192	4.10	475
2.10	15	2.80	85	3.50	217	4.20	550
2.20	22	2.90	100	3.60	243	4.30	625
2.30	31	3.00	116	3.70	276		

NOTE.—Table applicable only to open channel. It is based on five discharge measurements made during April to August, 1907, and is well defined between gage heights 2.0 feet and 3.5 feet.

January 1 to December 31, 1908.

1.70	0	2.30	33	2.90	105	3.50	217
1.80	2	2.40	43	3.00	120	3.60	240
1.90	5	2.50	54	3.10	137	3.70	264
2.00	9	2.60	66	3.20	155	3.80	289
2.10	16	2.70	78	3.30	174	3.90	315
2.20	24	2.80	91	3.40	195	4.00	342

NOTE.—Table applicable only to open channel. It is based on eight discharge measurements made during 1907 and 1908 and is well defined between gage heights 1.8 feet and 4 feet.

Daily discharge, in second-feet, of Santa Ana River near Mentone, Cal., for 1901-1904 and 1910-1912.

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1901.									
1.....	31	48	114	56	63	36	41	41	60
2.....	31	48	114	56	48	37	37	48	53
3.....	31	440	114	48	42	36	35	44	52
4.....	31	485	102	42	42	35	36	39	53
5.....	31	476	91	42	42	35	40	37	50
6.....	36	540	91	42	36	35	40	42	51
7.....	48	540	80	42	36	34	36	44	45
8.....	600	395	80	36	36	32	35	38	47
9.....	125	178	80	36	36	32	34	40	42
10.....	114	150	80	36	36	34	36	35	44
11.....	114	150	80	36	36	35	38	37	48
12.....	114	125	80	36	36	31	36	35	49
13.....	93	102	74	36	36	31	35	43	49
14.....	93	102	63	36	36	32	35	41	49
15.....	63	102	56	36	36	30	37	43	48
16.....	48	102	48	36	36	33	37	49	49
17.....	48	102	48	36	36	33	36	200	47
18.....	48	102	48	36	36	41	36	75	50
19.....	48	125	48	36	36	42	36	50	51
20.....	80	138	48	36	36	43	37	31	49
21.....	80	138	48	36	36	41	37	34	48
22.....	48	138	48	36	36	41	40	37	54
23.....	48	138	48	36	36	44	42	40	47
24.....	48	114	48	36	36	44	41	43	51
25.....	48	114	42	36	36	40	37	51	50
26.....	48	102	42	36	36	40	38	51	47
27.....	63	114	42	36	36	40	39	55	47
28.....	63	114	42	36	36	37	38	54	49
29.....	48	.....	42	36	31	36	37	55	48
30.....	48	.....	42	102	31	37	40	58	52
31.....	48	.....	56	.....	31	.....	41	60	.....

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1901-2.												
1.....	51	34	24	20	20	63	42	45	32	24	24	23
2.....	55	36	24	22	24	485	48	44	30	32	24	25
3.....	50	29	24	24	22	80	48	43	29	31	25	26
4.....	50	26	24	23	25	63	48	43	30	31	25	29
5.....	49	25	24	23	27	63	56	42	27	23	25	26
6.....	48	25	24	23	28	31	40	40	29	23	25	24
7.....	46	25	25	21	27	56	42	39	26	23	26	23
8.....	48	25	25	23	27	43	46	40	26	25	28	23
9.....	47	24	24	23	27	187	36	38	26	25	30	23
10.....	45	30	24	22	27	102	36	38	32	25	29	24
11.....	42	29	24	23	28	72	33	37	34	23	28	25
12.....	42	26	25	23	28	72	33	34	40	26	28	23
13.....	44	26	24	23	28	72	31	34	39	26	28	28
14.....	46	25	21	23	27	72	30	38	39	27	25	27
15.....	48	25	22	23	28	42	30	34	47	26	25	24
16.....	49	26	24	23	28	29	30	35	45	24	25	23
17.....	51	25	25	23	28	31	29	35	45	24	25	24
18.....	51	24	24	23	28	31	29	35	45	25	25	24
19.....	51	24	23	23	27	36	30	35	44	24	24	25
20.....	48	26	23	24	26	31	31	33	29	24	23	26
21.....	50	25	24	22	26	28	56	33	27	24	22	26
22.....	45	24	24	24	32	31	36	32	27	24	22	24
23.....	48	22	24	24	33	36	37	33	26	25	22	23
24.....	46	24	24	45	30	48	54	33	39	25	22	23
25.....	44	24	24	41	33	56	49	32	35	28	23	22
26.....	96	23	23	28	240	63	47	34	30	26	25	22
27.....	65	24	23	25	80	72	46	31	32	25	22	23
28.....	27	24	22	26	63	68	43	31	31	30	25	23
29.....	24	24	22	25	.....	68	46	31	23	30	26	25
30.....	26	24	24	21	.....	63	44	31	23	27	27	27
31.....	48	.....	24	21	.....	56	.....	31	.....	26	26	.....

Daily discharge, in second-feet, of Santa Ana River near Mentone, Cal., for 1901-1904 and 1910-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1902-3.												
1.....	31	43	23	20	102	36	4,910	112	79	47.5	56.5	52.5
2.....	30	23	23	20	42	36	1,060	112	79	46.5	56.0	44.5
3.....	31	23	23	20	42	36	565	112	79	51.5	56.5	49.0
4.....	33	22	22	20	36	63	345	106	79	47.5	55.5	47.5
5.....	37	20	22	16	36	125	345	100	79	50.0	51.5	46.0
6.....	36	19	22	16	36	63	200	100	79	48.0	51.0	49.0
7.....	34	20	22	16	42	48	179	95	76	48.0	50.5	50.5
8.....	37	20	21	15	42	48	169	90	76	44.5	50.5	51.0
9.....	42	20	21	15	48	48	142	90	76	50.0	52.5	50.0
10.....	43	20	21	15	48	42	112	90	73	50.0	52.0	55.0
11.....	44	31	27	15	55	36	112	90	73	54.5	51.0	55.5
12.....	42	26	21	15	55	36	112	90	70	51.5	50.0	56.5
13.....	36	23	21	10	55	38	112	90	70	50.0	50.0	61.0
14.....	36	23	22	10	55	38	106	90	65	50.0	56.5	59.0
15.....	35	23	21	10	55	42	106	90	62	47.5	56.5	59.0
16.....	33	23	22	10	42	42	126	90	60	48.0	54.0	57.5
17.....	32	19	19	10	42	42	179	90	58	49.5	55.0	54.5
18.....	32	20	21	10	36	42	160	90	56	52.5	55.5	51.0
19.....	34	31	24	10	36	42	142	90	56	54.0	57.5	49.5
20.....	36	25	22	10	36	36	142	90	56	54.0	57.5	48.0
21.....	40	23	24	10	42	36	142	86	56	52.0	54.5	47.0
22.....	39	24	24	10	42	36	126	112	56	50.5	56.0	47.5
23.....	49	24	26	15	42	36	119	86	50	51.0	57.5	49.5
24.....	51	21	23	18	42	48	126	86	50	51.0	58.0	51.5
25.....	55	26	23	20	42	150	126	86	48	53.5	58.0	53.0
26.....	27	26	24	20	42	315	126	86	48	53.5	58.5	49.5
27.....	49	26	25	20	42	125	126	82	48	53.5	58.0	54.5
28.....	50	26	21	277	42	125	126	82	46	53.5	57.5	64.0
29.....	47	26	24	63	-----	125	112	80	46	53.5	56.0	47.0
30.....	49	26	21	63	-----	150	112	79	55	56.5	54.5	50.5
31.....	52	-----	20	63	-----	2,450	-----	79	-----	56.0	49.5	-----
1903-4.												
1.....	45.5	51.5	29.5	27	26	37	106	48	42	45	44	46
2.....	45.0	37.0	27.0	27	26	38	81	48	42	45	44	42
3.....	30.0	32.5	27.0	27	27	36	80	48	46	47	44	42
4.....	38.0	32.0	27.0	27	27	34	80	48	46	49	46	49
5.....	36.5	28.0	26.5	25	32	28	80	45	48	50	46	47
6.....	35.0	27.0	27.0	24	31	30	80	43	49	52	48	52
7.....	33.5	28.5	27.5	24	28	29	52	43	50	47	48	58
8.....	35.0	29.5	29.0	26	29	30	53	42	50	42	44	51
9.....	39.0	31.5	27.5	26	29	30	41	42	48	41	41	51
10.....	49.0	29.5	28.5	26	29	30	38	42	43	46	43	50
11.....	44.5	30.0	27.0	26	29	54	38	37	44	45	44	52
12.....	38.5	29.0	26.0	26	28	48	43	36	40	45	46	51
13.....	39.0	29.0	25.5	27	28	38	42	34	38	45	41	51
14.....	42.5	29.0	25.5	26	28	33	43	36	37	47	35	51
15.....	49.0	29.0	24.5	26	29	30	43	36	42	46	41	51
16.....	47.5	29.5	26.5	26	29	32	43	37	43	48	45	53
17.....	51.0	29.5	27.5	26	28	33	42	37	43	48	45	53
18.....	55.5	29.5	26.5	26	28	45	41	40	43	48	45	53
19.....	51.0	29.5	26.5	26	31	45	42	39	44	47	46	57
20.....	53.0	29.5	26.5	26	31	69	36	40	45	45	52	56
21.....	50.5	29.5	27.5	25	31	35	36	40	46	45	54	57
22.....	51.0	27.5	27.5	27	29	36	44	42	46	45	56	56
23.....	54.5	27.5	27.0	28	30	280	43	39	45	45	48	50
24.....	54.0	27.5	27.5	28	29	95	48	40	46	40	48	49
25.....	54.0	27.5	27.5	27	29	96	49	40	46	37	47	49
26.....	54.0	27.5	27.5	28	29	93	52	46	45	43	49	47
27.....	56.5	27.5	27.5	28	29	79	52	46	43	43	51	46
28.....	56.0	27.5	27.5	28	94	91	52	44	44	43	46	42
29.....	54.0	27.5	27.5	27	92	162	52	44	44	37	45	40
30.....	55.5	28.0	27.5	26	-----	161	52	41	45	39	46	40
31.....	55.5	-----	27.5	26	-----	109	-----	41	-----	41	46	-----

Daily discharge, in second-feet, of Santa Ana River near Mentone, Cal., for 1901-1904 and 1910-1912—Continued.

Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.
1904.				1904.				1904.			
1.....	49	22	19.3	11.....	37	19.5	20	21.....	54	19.8	19.3
2.....	56	20	19.1	12.....	54	20	19.8	22.....	56	19.8	19.7
3.....	56	20	21	13.....	48	20	19.5	23.....	52	19.8	19.7
4.....	52	21	21	14.....	43	21	20	24.....	56	19.5	20
5.....	50	21	20	15.....	43	21	18.4	25.....	49	18.0	21
6.....	51	22	20	16.....	43	19.6	19.9	26.....	46	19.3	21
7.....	50	20	19.8	17.....	44	20	22	27.....	45	19.3	20
8.....	48	20	22	18.....	50	20	21	28.....	49	22	20
9.....	46	19.1	20	19.....	50	17.7	20	29.....	41	19.3	20
10.....	44	19.6	20	20.....	52	18.6	20	30.....	45	.....	19.9
								31.....	22	.....	23

NOTE.—Daily discharge obtained from a rating curve Jan. 1 to May 31, 1901, Feb. 26 to Apr. 23, 1902, and Jan. 1 to Jan. 22, 1903. During the remainder of 1901-1904 discharge was measured over weirs at head of canals.

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910.									
1.....	a 8,500	38	26	48	11	2	2	2	15
2.....		38	26	74	11	2	2	2	15
3.....		38	26	43	11	2	2	2	15
4.....		48	26	26	11	2	2	2	4
5.....		26	26	26	11	2	2	2	4
6.....		48	26	18	11	2	2	2	4
7.....		38	26	11	11	2	2	2	4
8.....		38	26	11	11	2	2	2	4
9.....		63	26	11	11	2	2	2	4
10.....		103	26	11	11	2	2	2	8
11.....		103	26	53	11	2	2	2	8
12.....		103	26	63	11	2	2	2	15
13.....		63	109	63	11	2	2	2	15
14.....		63	109	63	11	6	2	2	8
15.....		26	26	63	11	6	2	2	4
16.....		26	26	63	11	6	85	2	15
17.....		26	26	53	6	6	85	2	4
18.....		26	26	53	11	6	74	2	4
19.....		26	26	26	11	6	74	2	4
20.....		26	26	18	11	6	63	2	4
21.....		26	26	11	11	2	63	2	4
22.....		26	26	11	11	2	63	2	4
23.....		103	26	6	11	2	26	2	4
24.....		63	26	6	11	2	18	2	4
25.....		154	26	43	11	2	11	2	4
26.....		123	26	43	6	2	6	2	4
27.....		103	26	26	6	2	6	2	4
28.....		103	26	26	6	2	2	2	4
29.....		103	63	11	2	2	2	2	4
30.....		85	48	11	2	2	2	2	4
31.....		85	48	.....	2	.....	2	33	.....

a Computed from cross-section and slope data obtained after the high water.

Daily discharge, in second-feet, of Santa Ana River near Mentone, Cal., for 1901-1904 and 1910-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.												
1.	4	2	2	3	193	86	240	89	29	19	1	1
2.	4	2	2	3	158	86	240	89	29	19	1	1
3.	4	2	2	3	127	86	240	89	29	19	1	1
4.	4	2	2	3	360	290	240	89	29	19	1	1
5.	4	2	2	3	213	158	240	89	29	12	1	1
6.	4	2	2	3	158	142	202	89	29	12	1	1
7.	4	2	2	3	142	142	202	89	29	12	1	1
8.	4	2	2	3	142	290	168	71	29	12	1	1
9.	4	2	2	3	127	690	137	71	29	12	1	1
10.	4	2	2	175	113	1,840	137	55	29	7	1	1
11.	4	2	2	62	99	1,400	168	41	137	7	1	1
12.	15	2	2	16	99	900	168	41	29	7	1	1
13.	15	2	2	1	99	570	137	41	29	7	1	1
14.	15	2	2	1	158	435	137	41	29	7	1	1
15.	2	2	2	74	158	435	137	71	29	7	1	1
16.	2	2	2	62	158	375	137	55	29	12	1	1
17.	2	2	2	32	99	325	111	55	29	29	1	1
18.	2	2	2	3	86	325	111	55	29	19	1	1
19.	2	2	2	1	86	325	111	41	29	19	1	1
20.	2	2	2	0	86	280	89	41	29	12	1	1
21.	2	2	2	0	74	240	89	41	29	89	1	1
22.	2	2	2	0	74	240	89	41	29	89	1	1
23.	2	2	2	0	86	240	89	41	29	111	1	1
24.	2	2	2	0	86	240	89	41	29	111	1	1
25.	2	2	2	113	74	240	89	41	29	111	1	1
26.	2	2	2	127	74	240	89	41	19	111	1	1
27.	2	2	2	32	86	240	89	41	19	29	1	1
28.	2	2	2	6	86	240	89	41	19	12	1	1
29.	2	2	2	1,160	.....	240	89	41	19	1	1	19
30.	2	2	2	193	.....	240	89	41	19	1	1	19
31.	2	.....	2	158	.....	240	.....	29	.....	1	1	.....

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.									
1.	3	1	1	1	1	1	1	12	1
2.	1	1	1	1	1	1	1	12	1
3.	1	1	1	1	1	1	1	12	0
4.	1	1	1	1	1	1	1	7	0
5.	1	1	1	1	1	1	1	7	0
6.	1	1	1	1	1	280	1	7	0
7.	1	1	1	1	1	41	1	7	0
8.	1	1	1	1	1	12	1	7	0
9.	1	1	1	1	1	1	12	12	0
10.	1	1	1	1	1	240	7	12	0
11.	1	1	1	1	1	71	71	12	0
12.	1	1	1	1	1	19	41	12	0
13.	1	1	1	1	1	55	55	12	0
14.	1	1	1	1	1	29	55	12	0
15.	1	1	1	1	1	29	55	12	0
16.	1	1	1	1	1	29	55	12	0
17.	1	1	1	1	1	89	55	7	0
18.	1	1	1	1	1	7	41	7	0
19.	1	1	1	1	1	1	41	7	0
20.	1	1	1	1	1	1	29	3	0
21.	1	1	1	1	1	1	19	3	0
22.	1	1	1	1	1	1	12	3	0
23.	1	1	1	1	1	1	12	3	0
24.	1	1	1	1	1	1	12	1	0
25.	1	1	1	1	1	1	12	1	0
26.	1	1	1	1	1	1	12	1	0
27.	1	1	1	1	1	1	19	1	0
28.	1	1	1	1	1	1	19	1	0
29.	1	1	1	1	1	1	19	1	0
30.	1	1	1	1	.....	7	12	1	0
31.	1	.....	1	1	.....	1	.....	1	.....

NOTE.—Daily discharge obtained from rating curves applicable as follows: Jan. 23 to Aug. 30, 1910, Aug. 31 to Dec. 31, 1910, Jan. 1 to Mar. 10, 1911, and Mar. 13 to June 30, 1912. Mar. 11-12, 1911, indirect method for shifting channels.

Daily discharge, in second-feet, of Pacific Light & Power Co.'s canal^a near Mentone, Cal., for 1901-1903 and 1905-1912.

Day.	Mar.	Apr.	May.	Day.	Mar.	Apr.	May.	Day.	Mar.	Apr.	May.
1901.				1901.				1901.			
1.....			4.6	11.....	6.0	3.0	3.8	21.....	3.5	2.5	3.8
2.....			4.6	12.....	6.0	3.0	3.8	22.....	3.5	2.5	3.8
3.....			4.6	13.....	6.0	3.0	3.8	23.....	3.0	2.5	3.8
4.....			4.6	14.....	6.0	3.0	3.8	24.....	3.0	2.5	3.8
5.....			4.6	15.....	6.0	3.0	3.8	25.....	3.0	2.5	3.8
6.....		3.0	4.0	16.....	5.0	3.0	3.8	26.....	3.0	2.5	3.8
7.....		3.0	4.0	17.....	4.0	2.5	3.8	27.....	3.0	2.5	3.8
8.....		3.0	4.0	18.....	4.0	2.5	3.8	28.....	3.0	2.5	3.8
9.....		3.0	4.0	19.....	3.5	2.5	3.8	29.....	3.0	2.5	3.8
10.....		3.0	3.8	20.....	3.5	2.5	3.8	30.....	3.0	4.6	3.8
								31.....	3.0		3.8

Day.	Mar.	Apr.	Day.	Mar.	Apr.	Day.	Mar.	Apr.
1902.			1902.			1902.		
1.....	12	11	11.....		15	21.....	13	13
2.....		15	12.....		15	22.....	14	13
3.....		15	13.....	13	15	23.....	14	12
4.....		15	14.....	15	15	24.....		
5.....	12	15	15.....	15	15	25.....		
6.....	11	15	16.....	13	15	26.....		
7.....		15	17.....	14	14	27.....		
8.....		15	18.....	14	14	28.....		
9.....		15	19.....	14	13	29.....		
10.....		15	20.....	14	13	30.....		
						31.....		

Day.	Jan.	Feb.	Mar.	Apr.	May.	Day.	Jan.	Feb.	Mar.	Apr.	May.
1903.						1903.					
1.....	3	3	2		1	16.....	9		2		
2.....	3	3	2		1	17.....	9		2		
3.....	3	3	2		1	18.....	9		2		
4.....	3	3	2		1	19.....	9	2	2		
5.....	4	3	2		1	20.....	9	2	2		
6.....	4	3	2		1	21.....	9	2	2		
7.....	4	3	2		1	22.....	9	2	2		
8.....	4	3	2		1	23.....	5	2	2		
9.....	4	3	2		1	24.....	5	2	2		
10.....	4	3	2			25.....	5	2	2		
11.....	4	3	2			26.....	4	2	2		
12.....	4		2			27.....	4	2	2		
13.....	10		2			28.....		2	2		
14.....	9		2			29.....			2		
15.....	9		2			30.....			2		
						31.....					

^a Formerly known as Santa Ana canal and Mentone Power Co.'s canal.

Daily discharge, in second-feet, of Pacific Light & Power Co.'s canal near Mentone, Cal., 1901-1903 and 1905-1912—Continued.

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1905.									
1.....	22	25	60	57	71	0	63	53	66
2.....	22	64	57	0	66	0	61	53	63
3.....	21	64	60	0	66	0	61	51	63
4.....	21	0	60	54	56	0	61	61	63
5.....	21	0	60	63	58	0	61	61	66
6.....	22	22	57	63	73	0	61	61	66
7.....	21	42	57	63	51	0	58	63	66
8.....	20	37	54	72	56	0	58	63	61
9.....	0	37	51	78	66	0	56	63	61
10.....	61	35	48	78	76	0	56	63	63
11.....	54	43	48	72	76	0	58	63	73
12.....	41	26	51	66	76	66	61	63	76
13.....	41	28	0	66	76	43	63	66	76
14.....	31	29	0	63	0	71	66	68	78
15.....	31	35	0	57	0	71	66	68	78
16.....	27	29	97	43	71	71	63	71	78
17.....	29	32	78	0	71	68	63	71	78
18.....	33	42	0	0	71	68	63	81	78
19.....	25	70	0	0	36	68	61	81	73
20.....	27	70	0	71	36	68	61	56	68
21.....	66	70	0	66	32	68	61	56	68
22.....	61	74	78	66	29	68	61	56	61
23.....	49	74	66	66	29	68	61	56	68
24.....	40	66	78	66	29	68	61	73	68
25.....	31	66	78	71	0	68	61	73	51
26.....	29	58	60	71	0	68	61	73	56
27.....	27	51	85	66	0	68	61	76	56
28.....	25	58	85	66	0	63	61	76	66
29.....	25	.....	78	71	0	63	61	76	66
30.....	25	.....	42	76	0	63	56	73	66
31.....	25	.....	57	.....	0	.....	56	73	.....

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1905-6.												
1.....	51	46	34	34	32	51	0	70	71	71	72	63
2.....	51	32	32	33	32	48	56	71	66	66	72	58
3.....	56	32	34	34	32	48	55	71	70	71	72	58
4.....	56	32	32	34	32	43	57	71	71	71	72	63
5.....	51	32	32	34	32	56	56	71	70	71	72	63
6.....	46	36	32	34	35	52	52	71	70	71	72	63
7.....	46	41	32	34	35	51	65	71	70	71	71	66
8.....	41	46	32	34	35	50	70	70	70	71	68	64
9.....	56	41	32	34	44	50	70	72	70	71	70	63
10.....	46	29	30	34	41	50	68	71	70	71	71	62
11.....	46	29	32	33	42	46	73	66	70	71	71	62
12.....	61	30	32	34	52	43	74	71	70	71	71	62
13.....	66	32	29	35	59	40	74	66	71	71	71	59
14.....	56	30	29	45	55	27	66	63	71	71	72	60
15.....	61	30	32	44	63	43	66	66	71	71	72	64
16.....	56	29	30	44	62	49	66	66	71	71	72	63
17.....	51	29	30	37	64	0	68	66	70	71	45	58
18.....	46	29	29	37	51	11	68	68	70	71	42	58
19.....	43	29	29	59	49	35	71	70	71	71	72	56
20.....	41	29	29	37	48	44	72	70	71	71	72	56
21.....	41	34	32	48	48	43	72	66	70	71	72	57
22.....	46	32	25	50	60	58	71	71	72	71	72	54
23.....	41	30	25	37	58	55	71	71	71	71	72	52
24.....	41	29	25	37	56	71	71	71	71	71	72	52
25.....	46	30	25	41	55	35	70	66	71	72	72	52
26.....	46	30	25	38	53	34	71	66	66	72	70	52
27.....	41	41	29	35	51	25	71	64	64	72	70	59
28.....	41	50	28	35	49	55	71	0	71	72	66	62
29.....	41	41	30	33	.....	34	71	66	71	72	66	63
30.....	41	32	29	33	.....	21	71	66	71	72	65	64
31.....	41	.....	27	33	.....	27	.....	64	.....	72	66	.....

Daily discharge, in second-feet, of Pacific Light & Power Co.'s canal near Mentone, Cal., 1901-1903 and 1905-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1906-7.												
1.....	64	67	62	76	76	76	76	76	70	69	69	69
2.....	64	60	61	76	76	76	76	76	70	69	69	69
3.....	64	60	70	76	76	76	76	76	70	69	69	69
4.....	63	62	71	76	76	76	76	76	70	69	69	69
5.....	63	64	71	76	76	76	76	74	70	69	69	69
6.....	63	66	72	76	76	76	76	74	70	69	69	69
7.....	61	66	67	76	76	76	76	74	70	69	69	69
8.....	61	56	60	76	76	76	76	74	70	69	69	65
9.....	61	60	60	76	76	76	76	74	70	69	69	65
10.....	61	60	68	76	76	76	76	74	70	69	69	65
11.....	61	60	61	76	76	76	76	74	70	69	69	60
12.....	61	60	59	76	76	76	76	74	70	69	69	58
13.....	61	58	74	76	76	76	76	74	70	69	69	62
14.....	61	54	72	76	76	76	76	74	70	69	69	62
15.....	61	57	72	76	76	76	76	74	70	69	69	62
16.....	61	54	65	76	76	76	76	74	70	69	69	62
17.....	61	54	68	76	76	76	76	74	70	69	69	64
18.....	64	56	65	76	76	76	76	74	70	69	69	66
19.....	63	56	65	76	76	76	76	0	70	69	69	66
20.....	63	54	59	76	76	77	76	0	70	69	69	0
21.....	67	57	59	76	76	58	76	0	70	69	69	66
22.....	67	53	59	76	76	56	76	68	70	69	69	64
23.....	67	53	56	76	76	66	76	70	70	69	69	66
24.....	67	53	61	76	76	68	76	70	70	69	69	65
25.....	67	52	59	76	76	72	76	70	70	69	69	68
26.....	67	52	76	76	76	72	76	70	70	69	69	64
27.....	66	59	74	76	76	74	76	70	70	69	69	66
28.....	64	56	74	76	76	66	76	70	70	69	69	64
29.....	68	57	74	76	76	77	73	70	70	69	69	68
30.....	67	62	73	76	76	77	76	70	70	69	69	64
31.....	67	74	76	76	76	76	76	70	70	69	69	69
1907-8.												
1.....	64	76	60	55	64	78	77	77	67	60	60	59
2.....	64	76	60	55	0	78	77	77	62	57	61	60
3.....	63	76	60	55	0	78	77	77	62	57	56	60
4.....	68	76	59	55	0	78	77	77	62	56	62	60
5.....	77	76	57	53	76	78	77	77	62	57	62	58
6.....	73	76	59	53	78	76	77	77	60	57	63	59
7.....	73	76	67	53	78	78	77	77	60	58	66	59
8.....	69	76	62	53	78	78	77	77	58	61	52	59
9.....	64	76	59	53	78	77	77	76	57	63	66	59
10.....	66	76	60	53	76	77	74	77	57	63	62	59
11.....	64	76	72	53	76	76	74	74	62	66	66	59
12.....	64	76	62	53	78	74	77	77	65	68	60	59
13.....	64	76	61	55	78	76	77	76	62	68	68	59
14.....	64	76	61	63	76	77	74	73	62	64	68	59
15.....	67	76	60	63	78	77	77	71	58	66	68	59
16.....	72	76	60	61	78	77	77	73	57	64	64	59
17.....	72	76	60	61	78	77	77	72	56	64	62	59
18.....	73	76	59	61	78	0	77	66	56	64	59	60
19.....	71	76	59	61	78	0	77	66	53	59	63	59
20.....	71	76	59	55	78	0	74	64	56	59	63	58
21.....	64	76	56	55	78	0	77	66	56	56	58	58
22.....	70	76	56	57	78	0	77	64	56	58	59	56
23.....	74	76	55	57	78	0	77	61	56	61	62	56
24.....	76	76	54	70	78	0	77	63	56	63	62	75
25.....	76	70	55	72	78	0	77	61	57	67	61	55
26.....	76	70	55	70	78	74	77	63	60	63	61	49
27.....	76	65	54	76	78	74	77	64	64	61	61	44
28.....	76	64	55	0	78	77	77	62	64	64	61	43
29.....	76	60	55	0	78	77	77	61	64	69	60	42
30.....	76	64	55	0	78	77	77	67	62	69	60	44
31.....	76	55	55	0	78	77	77	71	68	68	60	60

Daily discharge, in second-feet, of Pacific Light & Power Co.'s canal near Mentone, Cal., 1901-1903 and 1905-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1908-9.												
1.....	58	65	40	40	76	76	76	76	73	74	73	63
2.....	59	48	38	38	76	76	76	76	73	72	60	56
3.....	60	45	56	38	74	76	76	76	73	73	56	53
4.....	60	41	56	38	76	76	76	74	73	70	55	52
5.....	59	40	50	37	76	76	76	73	73	70	55	54
6.....	45	40	47	39	76	76	76	73	0	70	60	53
7.....	45	40	41	37	76	76	76	73	0	70	62	56
8.....	53	40	43	37	56	76	76	73	0	73	63	55
9.....	48	39	43	35	76	76	76	73	60	64	61	53
10.....	66	39	43	63	76	76	76	73	60	70	61	55
11.....	61	40	41	49	76	76	76	73	65	64	55	63
12.....	59	40	41	48	76	76	76	73	65	64	55	63
13.....	62	37	41	66	0	76	76	73	65	64	61	59
14.....	66	39	40	68	0	76	76	73	65	63	60	60
15.....	66	38	40	64	0	76	76	73	65	63	61	58
16.....	63	40	40	60	76	76	76	73	65	59	60	59
17.....	62	38	40	58	76	76	76	73	78	59	66	54
18.....	64	40	37	49	76	76	76	73	76	62	68	59
19.....	54	38	36	48	76	76	76	73	78	62	63	63
20.....	46	37	36	46	76	76	76	73	78	62	62	65
21.....	46	37	40	77	76	76	76	73	76	60	61	59
22.....	52	38	41	48	76	76	76	73	81	61	60	59
23.....	45	38	41	76	76	76	76	73	80	61	61	58
24.....	52	49	41	76	76	76	76	73	80	75	68	62
25.....	48	39	40	76	76	76	76	73	80	71	67	57
26.....	48	39	41	76	76	76	76	73	78	67	65	63
27.....	50	40	39	76	76	76	76	73	78	68	67	57
28.....	53	41	38	76	76	76	76	73	75	67	59	69
29.....	57	38	38	76	76	76	76	73	74	64	57	65
30.....	62	41	37	76	76	76	76	73	74	68	57	63
31.....	61	.....	38	76	76	76	76	73	73	73	64	.....
1909-10.												
1.....	62	56	50	0	74	64	74	78	73	57	55	58
2.....	61	55	51	0	72	66	66	78	72	57	57	58
3.....	65	52	54	0	72	72	64	78	72	57	58	59
4.....	59	52	41	0	73	74	72	78	72	56	51	54
5.....	53	50	44	0	73	76	71	78	55	56	55	51
6.....	54	50	50	0	68	72	72	79	74	63	56	55
7.....	47	48	50	0	76	72	78	76	72	59	57	55
8.....	47	46	51	0	73	72	79	66	72	59	59	60
9.....	59	49	72	39	76	72	78	78	71	59	59	56
10.....	57	56	66	45	76	68	79	76	72	56	62	60
11.....	56	53	76	57	74	68	79	76	68	55	58	58
12.....	59	47	76	52	63	68	74	76	63	62	55	60
13.....	60	49	74	58	68	0	78	76	71	56	56	58
14.....	58	57	73	54	73	0	78	76	71	64	59	58
15.....	59	58	73	58	68	73	79	73	73	66	55	60
16.....	60	59	71	49	68	77	78	76	73	0	56	62
17.....	58	53	65	56	68	79	78	76	71	0	58	60
18.....	56	53	59	62	68	78	77	77	66	0	57	52
19.....	56	51	38	55	73	77	77	78	64	0	68	52
20.....	55	51	65	55	64	78	77	77	65	0	66	59
21.....	57	.8	71	57	73	78	77	76	66	0	68	59
22.....	49	.8	63	57	72	79	77	76	60	0	66	55
23.....	45	51	68	64	66	79	73	76	64	43	64	62
24.....	51	49	78	66	66	74	73	76	60	54	62	64
25.....	54	46	78	65	66	65	73	74	60	55	60	58
26.....	54	57	77	62	64	71	78	78	57	54	59	59
27.....	54	63	79	62	62	70	73	73	59	54	63	60
28.....	55	46	74	78	64	72	78	74	59	66	62	60
29.....	52	5.3	70	78	.....	68	79	74	59	68	63	60
30.....	54	58	70	79	.....	71	78	73	60	63	60	70
31.....	51	.....	70	79	.....	70	.....	73	.....	63	62	.....

Daily discharge, in second-feet, of Pacific Light & Power Co.'s canal near Mentone, Cal., 1901-1903 and 1905-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.												
1.....	68	52	43	41	68	72	73	70	74	77	64	60
2.....	59	46	42	42	72	72	73	71	74	76	70	65
3.....	57	45	44	40	71	72	73	72	74	76	66	65
4.....	58	48	42	40	71	72	73	72	74	76	65	57
5.....	57	44	44	41	71	73	72	74	72	74	65	57
6.....	51	45	43	41	71	73	73	74	72	76	65	57
7.....	55	44	41	41	71	72	73	74	72	74	64	58
8.....	58	42	41	40	71	72	71	74	73	74	63	59
9.....	57	43	41	40	72	71	72	74	72	76	62	59
10.....	58	41	42	73	72	60	73	74	72	76	60	59
11.....	62	42	43	68	73	73	73	74	0	76	65	63
12.....	58	41	41	68	72	72	73	74	78	76	66	65
13.....	58	42	42	58	72	72	72	74	76	76	66	66
14.....	56	48	41	55	73	73	73	74	76	73	66	66
15.....	58	52	41	72	72	72	71	74	77	74	66	70
16.....	54	48	41	71	72	73	70	74	77	74	66	68
17.....	54	45	41	58	72	72	71	76	77	76	65	68
18.....	57	45	44	71	72	73	72	74	74	74	65	63
19.....	51	44	44	64	73	73	71	74	77	76	58	60
20.....	46	44	45	62	73	73	72	73	77	76	59	55
21.....	59	43	43	59	72	72	72	74	77	0	59	58
22.....	64	45	42	57	72	72	71	74	76	0	58	57
23.....	54	44	44	55	73	72	72	74	76	0	57	57
24.....	54	44	43	62	72	73	71	74	77	0	59	57
25.....	58	42	41	73	72	73	70	74	77	0	62	56
26.....	63	51	43	0	72	73	71	74	77	0	66	55
27.....	65	48	43	71	72	73	71	73	76	44	66	60
28.....	59	48	42	70	72	73	71	72	76	66	66	63
29.....	59	43	42	58	.....	73	71	73	77	72	66	66
30.....	58	42	43	70	.....	73	71	74	77	66	62	65
31.....	56	.....	41	72	.....	73	.....	74	.....	70	60	.....

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.									
1.....	70	51	38	43	38	34	66	78	65
2.....	56	49	41	45	37	39	71	81	65
3.....	59	49	33	45	37	39	71	78	65
4.....	58	54	44	45	34	50	73	78	83
5.....	56	54	41	45	37	45	71	78	60
6.....	54	50	43	45	37	66	73	76	60
7.....	54	42	46	45	37	71	71	73	60
8.....	50	42	44	43	37	71	73	76	58
9.....	50	43	44	41	34	65	78	76	56
10.....	50	43	44	39	34	71	77	76	56
11.....	45	54	39	39	34	71	78	76	54
12.....	57	45	44	40	34	66	77	76	58
13.....	58	44	43	40	37	71	76	76	50
14.....	59	44	41	38	34	71	79	76	56
15.....	56	43	42	38	34	73	79	76	54
16.....	59	44	41	38	34	71	81	71	54
17.....	58	49	41	41	38	0	79	76	49
18.....	65	49	43	38	38	70	78	76	49
19.....	59	49	43	38	37	73	78	76	49
20.....	63	50	41	40	37	63	78	76	56
21.....	60	49	45	38	37	71	81	76	56
22.....	59	46	45	38	34	71	79	71	56
23.....	58	40	45	39	37	66	79	66	58
24.....	54	42	45	38	37	63	79	71	60
25.....	60	40	45	38	34	65	79	71	58
26.....	63	40	43	38	32	65	79	71	60
27.....	71	40	43	38	34	66	79	68	63
28.....	57	40	43	39	34	66	78	68	63
29.....	56	40	48	38	34	66	73	71	60
30.....	54	40	43	38	.....	71	78	71	68
31.....	51	.....	43	38	.....	73	.....	71	.....

Daily discharge, in second-feet, of Greenspot pipe line near Mentone, Cal., for 1911-12.

Day.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.										
1.....		6.0	0.0	6.0	3.0	5.0	4.0	0.0	1.0	4.0
2.....		6.0	.0	5.0	3.0	5.0	4.0	.0	1.0	4.0
3.....		.0	.0	5.0	.0	5.0	4.0	.0	1.0	3.5
4.....		.0	.0	4.0	.0	5.0	3.0	.0	1.0	3.5
5.....		.0	.0	4.0	.0	5.0	4.0	.0	1.0	3.5
6.....		.0	.5	4.0	.0	4.5	5.0	.0	4.0	3.5
7.....	1.3	.0	7.0	.0	.0	4.5	.0	.0	4.0	3.5
8.....	1.6	.0	7.0	2.5	5.0	4.5	.0	.0	4.0	3.5
9.....	1.6	1.0	7.0	2.5	5.0	4.5	.0	.0	4.0	3.5
10.....	1.6	2.3	7.0	2.5	5.0	4.5	.0	1.0	4.0	4.0
11.....	1.8	6.5	6.0	2.5	5.0	4.5	.0	1.0	4.0	4.0
12.....	.0	6.5	6.0	2.5	5.0	4.5	.0	1.0	4.0	4.0
13.....	.0	6.5	6.0	2.5	5.0	4.5	.0	1.0	4.0	4.0
14.....	.0	6.5	6.0	2.5	5.0	4.5	.0	1.0	4.0	4.0
15.....	.0	6.5	6.0	3.0	5.0	4.5	.0	1.0	4.0	4.0
16.....	.0	6.5	6.0	3.0	5.0	4.5	.0	1.0	4.0	4.0
17.....	1.0	7.5	.0	3.5	4.0	2.5	.0	1.0	4.0	4.0
18.....	2.0	1.5	.0	3.5	4.0	2.5	.0	1.0	4.0	4.0
19.....	9.0	3.0	.0	3.5	4.0	2.5	.0	1.0	4.0	4.0
20.....	7.5	1.0	.0	3.5	3.0	2.5	.0	1.0	4.0	4.0
21.....	.5	1.0	.0	.0	3.0	3.0	.0	1.0	4.0	4.0
22.....	.6	.0	.0	.0	3.0	3.0	.0	1.0	5.5	4.0
23.....	.6	.0	7.3	.0	3.0	3.0	.0	1.0	5.5	4.0
24.....	.5	.4	7.3	.0	3.0	3.0	.0	1.0	5.5	4.0
25.....	.0	.0	7.3	.8	3.0	3.0	.0	1.0	5.5	4.0
26.....	9.1	.0	7.3	1.0	3.0	5.0	.0	1.0	5.5	4.0
27.....	9.0	.0	7.3	1.0	4.0	5.0	.0	1.0	5.5	4.0
28.....	9.0	.0	7.3	2.0	4.0	5.0	.0	1.0	5.5	4.0
29.....	7.0	.0	7.3	2.0	4.0	4.0	.0	1.0	5.5	4.0
30.....	7.0	.0	7.3	3.0	4.5	.....	.0	1.0	5.5	4.0
31.....	.....	.0	.....	3.0	4.5	.....	.0	.....	4.0	.....

Combined daily discharge, in second-feet, of Santa Ana River and Pacific Light & Power Co.'s canal near Mentone, Cal., for 1909-1912.

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909.									
1.....	42	82	142	211	233	92	76	76	66
2.....	40	78	142	211	256	92	74	62	58
3.....	40	75	142	311	233	92	76	58	56
4.....	40	157	128	311	209	92	72	58	54
5.....	39	105	128	311	208	102	72	58	56
6.....	41	95	128	311	208	157	72	62	56
7.....	39	651	128	211	230	157	72	64	58
8.....	39	437	128	142	230	157	76	66	58
9.....	37	256	116	142	154	100	66	64	56
10.....	65	211	116	142	170	100	72	64	58
11.....	51	233	116	142	170	105	66	58	66
12.....	50	343	105	142	170	105	66	58	66
13.....	68	632	105	128	170	105	66	64	62
14.....	101	340	95	142	170	105	66	62	62
15.....	66	302	95	157	154	105	66	64	60
16.....	62	282	95	173	154	94	62	62	62
17.....	60	256	95	173	139	89	62	72	56
18.....	51	233	173	211	125	82	64	70	62
19.....	50	233	173	211	125	97	64	69	66
20.....	48	233	173	211	125	89	64	64	68
21.....	79	233	191	173	113	82	62	64	62
22.....	1,380	191	191	233	113	84	64	62	62
23.....	282	191	211	233	113	82	64	64	60
24.....	173	191	311	233	113	82	78	70	64
25.....	128	173	311	233	139	82	74	70	60
26.....	105	157	282	233	125	80	70	68	66
27.....	157	157	343	233	113	80	70	70	60
28.....	105	142	378	233	125	78	70	62	80
29.....	95	.....	311	233	102	76	66	60	68
30.....	87	.....	311	233	102	76	70	60	66
31.....	87	.....	311	.....	92	.....	76	66	.....

Combined daily discharge, in second-feet, of Santa Ana River and Pacific Light & Power Co.'s canal near Mentone, Cal., for 1909-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909-10.												
1.....	64	58	52	28,500	112	90	122	89	75	59	57	73
2.....	64	58	54	.....	110	92	140	89	74	60	59	73
3.....	68	54	56	.....	110	98	107	89	74	59	60	74
4.....	62	54	44	.....	121	100	98	89	74	58	53	58
5.....	56	52	46	.....	99	102	97	89	57	58	57	55
6.....	56	52	52	.....	116	98	90	90	76	65	58	59
7.....	50	50	52	.....	114	98	89	87	74	61	59	59
8.....	50	48	54	.....	111	98	90	77	74	61	61	64
9.....	62	52	497	.....	139	98	89	89	73	61	61	60
10.....	60	85	641	.....	179	94	90	87	74	58	64	68
11.....	58	56	173	.....	177	94	132	87	70	57	60	66
12.....	62	50	142	.....	166	94	137	87	65	64	57	75
13.....	62	52	93	.....	131	109	141	87	73	58	58	73
14.....	60	60	79	.....	136	109	141	87	77	66	61	66
15.....	62	77	76	.....	94	99	142	84	79	68	57	64
16.....	62	62	74	.....	94	103	141	87	79	85	58	77
17.....	60	56	68	.....	94	105	131	79	77	85	60	64
18.....	58	56	62	.....	94	104	130	88	72	74	59	56
19.....	58	54	40	.....	99	103	103	89	70	74	70	56
20.....	58	54	68	.....	90	104	95	88	71	63	68	63
21.....	60	3	74	.....	99	104	88	87	68	63	70	63
22.....	52	3	66	.....	98	105	88	87	62	63	68	59
23.....	48	54	70	167	92	105	79	87	66	69	66	66
24.....	54	52	80	129	92	100	79	87	62	72	64	68
25.....	56	48	80	219	92	108	84	85	62	66	62	62
26.....	56	60	158	185	90	114	84	80	59	60	61	63
27.....	56	66	160	165	88	96	79	75	61	60	65	64
28.....	58	48	76	181	90	98	84	76	61	68	64	64
29.....	54	56	72	181	.....	131	90	76	61	70	65	64
30.....	56	60	72	164	.....	119	89	75	62	65	62	74
31.....	54	.....	897	164	.....	118	.....	75	.....	65	95	.....
1910-11.												
1.....	72	54	45	44	261	158	313	159	103	96	65	61
2.....	63	48	44	45	230	158	313	160	103	95	71	66
3.....	61	47	46	43	198	158	313	161	103	95	67	66
4.....	62	50	44	43	431	362	313	161	103	95	66	58
5.....	61	46	46	44	284	231	312	163	101	86	66	58
6.....	55	47	45	44	229	215	275	163	101	88	66	58
7.....	59	46	43	44	213	214	275	163	101	86	65	60
8.....	62	44	43	43	213	362	239	145	102	86	64	62
9.....	61	45	43	43	199	761	209	145	101	88	63	62
10.....	62	43	44	248	185	1,900	210	129	101	83	61	66
11.....	66	44	45	130	172	1,470	241	115	137	83	66	66
12.....	73	43	43	84	171	972	241	115	107	83	67	66
13.....	73	44	44	59	171	642	209	115	105	83	67	67
14.....	71	50	43	56	231	508	210	115	105	80	67	67
15.....	60	54	43	146	230	507	208	145	106	81	67	71
16.....	56	50	43	133	230	448	207	129	106	86	67	69
17.....	56	47	43	90	171	397	182	131	106	105	66	70
18.....	59	47	46	74	158	398	183	129	103	93	66	66
19.....	53	46	46	65	159	398	182	115	106	95	59	70
20.....	48	46	47	62	159	353	161	114	106	88	60	64
21.....	61	45	45	59	146	312	161	115	106	89	60	60
22.....	66	47	44	57	146	312	160	115	105	89	59	59
23.....	56	46	46	55	159	312	161	115	105	111	58	59
24.....	56	46	45	62	158	313	160	115	106	111	60	58
25.....	60	44	43	186	146	313	159	115	106	111	63	57
26.....	65	53	45	127	146	313	160	115	96	111	67	65
27.....	67	50	45	103	158	313	160	114	95	73	67	70
28.....	61	50	44	76	158	313	160	113	95	78	67	73
29.....	61	45	44	1,220	.....	313	160	114	96	73	67	92
30.....	60	44	45	263	.....	313	160	115	96	67	63	91
31.....	58	.....	43	230	.....	313	.....	103	.....	71	61	.....

^a Estimated.

Combined daily discharge, in second-feet, of Santa Ana River and Pacific Light & Power Co.'s canal near Mentone, Cal., for 1909-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.									
1.....	79	52	45	47	44	39	67	91	70
2.....	63	50	47	49	43	44	72	94	70
3.....	60	50	39	46	43	44	72	91	68
4.....	59	55	49	46	40	54	74	86	66
5.....	57	55	46	46	43	50	72	86	64
6.....	55	52	48	46	42	351	74	87	64
7.....	55	50	47	46	42	112	72	84	64
8.....	51	50	48	49	42	83	74	87	62
9.....	52	51	48	47	40	66	90	92	60
10.....	53	51	48	45	40	311	85	92	60
11.....	52	61	42	45	40	142	150	92	58
12.....	64	52	48	46	40	85	119	92	62
13.....	66	51	46	46	42	126	132	92	54
14.....	66	51	44	44	40	100	135	92	60
15.....	64	50	46	44	40	102	135	92	58
16.....	66	50	45	44	40	100	137	87	58
17.....	66	50	46	46	42	89	135	87	53
18.....	68	50	48	43	42	77	120	87	53
19.....	63	50	48	43	40	74	120	87	53
20.....	65	51	46	44	40	64	108	83	60
21.....	62	50	46	42	41	72	101	83	60
22.....	60	47	46	42	38	72	92	80	60
23.....	59	48	46	43	41	67	92	74	62
24.....	55	50	46	42	41	64	92	78	64
25.....	61	48	47	42	38	66	92	78	62
26.....	64	48	45	42	38	66	92	78	64
27.....	72	48	45	43	40	67	99	74	67
28.....	58	48	46	44	40	67	98	74	67
29.....	57	48	51	43	39	67	93	78	64
30.....	55	48	47	44	.....	78	91	78	72
31.....	52	.....	47	44	.....	74	.....	76	.....

NOTE.—Beginning September, 1911, these values include the water diverted by the Greenspot pipe line.

Monthly discharge of Santa Ana River, exclusive of Pacific Light & Power Co.'s canal, at Warmspring, Cal., for 1896-1901.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).
	Maximum.	Minimum.	Mean.	
1896.				
July.....	76	48	63	3,891
August.....	83	33	57	3,492
September.....	77	27	55	3,289
1896-97.				
October.....	170	38	55	3,387
November.....	52	30	33	1,939
December.....	40	33	35	2,176
January.....	101	27	62	3,836
February.....	580	72	181	19,060
March.....	460	64	119	7,317
April.....	186	101	146	8,675
May.....	101	29	61	3,769
June.....	67	57	63	3,737
July.....	85	57	67	4,119
August.....	80	34	57	3,505
September.....	61	38	47	2,779
The year.....	580	27	77.2	55,300

Monthly discharge of Santa Ana River, exclusive of Pacific Light & Power Co.'s canal, at Warmspring, Cal., for 1896-1901—Continued.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).
	Maximum.	Minimum.	Mean.	
1897-98.				
October.....	250	25	42	2,582
November.....	52	34	38	2,261
December.....	30	22	26	1,610
January.....	58	33	40	2,460
February.....	76	33	40	2,221
March.....	40	25	32	1,968
April.....	34	28	31	1,845
May.....	149	26	55	3,382
June.....	58	36	44	2,618
July.....	53	33	41	2,521
August.....	58	33	41	2,521
September.....	45	28	36	2,142
The year.....	250	22	38.8	28,100
1898-99.				
October.....	36	19	26	1,599
November.....	34	18	22	1,309
December.....	28	22	22	1,353
January.....	34	22	26	1,593
February.....	34	27	27	1,516
March.....	48	24	32	1,949
April.....	34	22	25	1,458
May.....	27	19	22	1,365
June.....	34	19	22	1,315
July.....	29	19	22	1,371
August.....	19	11	13	782
September.....	12	10	12	690
The year.....	48	10	22.6	16,300
1899-1900.				
October.....	19	12	17	1,015
November.....	49	17	21	1,268
December.....	36	18	23	1,427
January.....	36	19	23	1,414
February.....	23	20	22	1,222
March.....	28	20	23	1,414
April.....	43	19	25	1,488
May.....	250	20	57	3,505
June.....	25	19	22	1,309
July.....	25	11	19	1,168
August.....	12	9	11	676
September.....	16	11	12	714
The year.....	250	9	22.9	16,600
1900-1901.				
October.....	16	12	14	861
November.....	1,564	14	107	6,367
December.....	31	25	28	1,722
January.....	600	31	78	4,796
February.....	540	48	194	10,774
March.....	114	45	68	4,181
April.....	107	39	43	2,559
May.....	68	35	42	2,582
June.....	44	30	37	2,202
July.....	42	34	38	2,337
August.....	200	31	50	3,074
September.....	60	42	49	2,916
The year.....	1,564	12	62.3	44,400
1901.				
October.....	96	24	48	2,951
November.....	36	22	26	1,547
December.....	25	21	24	1,476

Monthly discharge of Pacific Light & Power Co.'s canal^a at Warmspring, Cal., for 1896-1898 and 1901.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).
	Maximum.	Minimum.	Mean.	
1896.				
July.....			14	861
August....			14	861
September.....			14	833
1896-97.				
October.....			16	984
November.....			3.5	2,083
December.....			4.2	2,582
January.....	8.5	3.2	5.6	344
February.....	6	.0	4.0	222
March.....	6	.5	5.2	320
April.....	12	.0	3.8	226
May.....	20	.0	15.0	922
June.....	19	.0	16.6	988
July.....	18.5	10.6	15.6	960
August.....	20	17.4	18.3	1,125
September.....			20	1,190
The year.....	20	.0	10.6	11,900
1897-98.				
October.....			12.4	762
November.....			7	417
December.....			7	430
January.....			9	553
February.....			8	444
March.....			8	492
April.....			8	476
May.....			6	369
June.....			4	238
July.....			2	123
August.....			2	123
September.....			2	119
The year.....			6.28	4,550
1898.				
October.....			0	0
November.....			0	0
December.....			0	0
1901.				
March.....	6	0	2.71	167
April.....	4.62	0	2.34	139
May.....	4.62	3.8	3.96	243

^a Formerly known as Santa Ana canal and Mentone Power Co.'s canal.

Monthly discharge of Santa Ana River and canals at Warmspring, Cal., for 1896-1898.

[Drainage area, 188 square miles.]

Month.	Discharge in second-feet.				Run-off.	
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.	Total in acre-feet.
1896.						
July.....			77	0.41	0.47	4,753
August.....			71	.38	.44	4,353
September.....			69	.37	.41	4,124
1896-97.						
October.....			71	.38	.44	4,372
November.....			37	.19	.21	2,148
December.....			39	.21	.24	2,435
January.....	104	35	68	.36	.41	4,179
February.....	585	77	185	.98	1.02	10,282
March.....	465	70	124	.66	.76	7,637
April.....	190	113	150	.80	.89	8,899
May.....	113	48	76	.41	.47	4,690
June.....	86	60	80	.42	.47	4,723
July.....	102	70	83	.44	.51	5,077
August.....	100	54	75	.40	.46	4,628
September.....	81	58	67	.35	.39	3,968
The year.....			87.9	.468	6.27	63,000
1897-98.						
October.....	270	45	54	.29	.33	3,347
November.....	59	40	45	.24	.27	2,678
December.....	38	29	33	.18	.21	2,040
January.....			49	.26	.30	2,987
February.....			48	.26	.27	2,688
March.....			40	.21	.24	2,448
April.....			39	.21	.23	2,333
May.....			61	.32	.37	3,727
June.....			48	.25	.28	2,840
July.....			43	.23	.26	2,625
August.....			43	.23	.26	2,653
September.....			38	.20	.22	2,223
The year.....			45.1	.240	3.24	32,600
1898.						
October.....			26	.14	.16	1,581
November.....			22	.12	.13	1,285
December.....			22	.12	.14	1,364

Monthly discharge of Santa Ana River and Pacific Light & Power Co.'s canal^a near Mentone, Cal., for 1902-1912.

[Drainage area, 182 square miles.]

Month.	Discharge in second-feet.				Run-off.		Accuracy.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.	Total in acre-feet.	
1902.							
January.....	45	20	24	0.13	0.15	1,476	
February.....	240	20	38	.21	.22	2,110	
March.....	485	41	79	.43	.50	4,858	
April.....	71	43	51	.28	.31	3,035	
May.....	45	31	36	.20	.23	2,214	
June.....	47	23	33	.18	.20	1,964	
July.....	32	23	26	.14	.16	1,599	
August.....	30	22	25	.14	.16	1,537	
September.....	29	22	24	.13	.15	1,428	
The period.....						20,200	

^a Formerly known as Santa Ana canal and Mentone Power Co.'s canal.

Monthly discharge of Santa Ana River and Pacific Light & Power Co.'s canal near Mentone, Cal., for 1902-1912—Continued.

Month.	Discharge in second-feet.				Run-off.		Accu- racy.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.	Total in acre-feet.	
1902-3.							
October.....	55	30	39	0.21	0.24	2,398	
November.....	43	19	24	.13	.15	1,428	
December.....	27	19	22	.12	.14	1,353	
January.....	277	19	33	.18	.21	2,029	
February.....	105	36	48	.26	.27	2,666	
March.....	2,451	38	148	.81	.93	9,100	
April.....	4,908	106	352	1.93	2.15	20,945	
May.....	113	79	92	.51	.59	5,657	
June.....	79	47	64	.35	.39	3,808	
July.....	57	44	51	.28	.32	3,136	
August.....	59	50	55	.30	.35	3,382	
September.....	64	45	52	.29	.32	3,094	
The year.....	4,908	19	81.7	.449	6.06	59,600	
1903-4.							
October.....	57	30	47	.26	.30	2,890	
November.....	52	27	30	.16	.18	1,785	
December.....	30	25	27	.15	.17	1,660	
January.....	28	24	26	.14	.16	1,599	
February.....	94	26	33	.18	.19	1,898	
March.....	280	28	64	.35	.40	3,935	
April.....	106	36	53	.29	.32	3,154	
May.....	48	34	41	.23	.27	2,521	
June.....	50	37	44	.24	.27	2,618	
July.....	52	37	45	.25	.29	2,767	
August.....	56	35	46	.25	.29	2,828	
September.....	58	40	50	.27	.30	2,975	
The year.....	280	24	42.2	.232	3.14	30,600	
1904-5.							
October.....	56	22	48	.26	.30	2,951	
November.....	22	17.7	20	.11	.12	1,190	
December.....	23	18.4	20	.11	.13	1,230	
January.....	108	22	36.6	.201	.23	2,251	
February.....	234	26	97.6	.536	.56	5,420	
March.....	321	48	130	.714	.82	7,993	
April.....	120	63	90.5	.497	.55	5,385	
May.....	256	91	172	.945	1.09	10,580	
June.....	94	64	77.7	.427	.48	4,624	
July.....	69	57	62.9	.346	.40	3,867	
August.....	82	52	66.8	.367	.42	4,107	
September.....	79	52	68.3	.375	.42	4,064	
The year.....	321	17.7	74.2	.408	5.52	53,700	
1905-6.							
October.....	67	42	49.2	.270	.31	3,025	
November.....	250	30	47.5	.261	.29	2,827	
December.....	107	31	38.4	.211	.24	2,362	
January.....	181	34	46.8	.257	.30	2,880	
February.....	121	33	63.1	.347	.36	3,500	
March.....	2,440	51	530	2.91	3.36	32,600	
April.....	495	186	274	1.50	1.67	16,300	
May.....	536	163	245	1.35	1.56	15,100	
June.....	329	135	172	.945	1.05	10,200	
July.....	140	90	119	.654	.75	7,320	
August.....	111	67	80.5	.442	.51	4,950	
September.....	74	58	64.1	.352	.39	3,810	
The year.....	2,440	30	144	.793	10.79	105,000	
1906-7.							
October.....	74	66	71.4	.392	.45	4,390	
November.....	69	54	60.3	.331	.37	3,590	
December.....	859	56	111	.610	.70	6,820	
January.....	851	86	239	1.31	1.51	14,700	B.
February.....	776	128	292	1.60	1.67	16,200	B.
March.....	1,960	184	681	3.74	4.31	41,900	B.
April.....	776	265	552	3.03	3.38	32,800	B.
May.....	352	186	236	1.30	1.50	14,500	B.
June.....	186	142	171	.940	1.05	10,200	B.
July.....	154	109	135	.742	.86	8,300	B.
August.....	109	78	90.2	.496	.57	5,550	B.
September.....	132	62	73.2	.402	.45	4,360	B.
The year.....	1,960	54	226	1.24	16.82	163,000	

Monthly discharge of Santa Ana River and Pacific Light & Power Co.'s canal near Mentone, Cal., for 1902-1912—Continued.

Month.	Discharge in second-feet.				Run-off.		Accuracy.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.	Total in acre-feet.	
1907-8.							
October.....	126	68	84.2	0.463	0.53	5,180	B.
November.....	148	64	119	.654	.73	7,080	B.
December.....	74	55	60.4	.332	.38	3,710	B.
January.....	267	53	82.1	.451	.52	5,050	A.
February.....	252	73	135	.742	.80	7,760	A.
March.....	198	83	125	.687	.79	7,690	A.
April.....	155	79	98.9	.543	.61	5,880	A.
May.....	120	63	76.3	.419	.48	4,690	A.
June.....	69	55	61.6	.338	.38	3,670	A.
July.....	71	58	64.3	.353	.41	3,950	A.
August.....	70	54	63.8	.351	.40	3,920	A.
September.....	77	44	58.8	.323	.36	3,500	A.
The year.....	267	44	85.8	.471	6.39	62,100	
1908-9.							
October.....	68	47	57.8	.318	.37	3,550	A.
November.....	67	39	42.8	.235	.26	2,550	A.
December.....	58	38	43.4	.238	.27	2,670	A.
January.....	1,383	37	120	.659	.76	7,380	B.
February.....	651	75	238	1.31	1.36	13,200	B.
March.....	378	95	183	1.01	1.16	11,300	B.
April.....	311	128	209	1.15	1.28	12,400	B.
May.....	256	92	158	.868	1.00	9,720	B.
June.....	157	76	97.3	.535	.60	5,790	B.
July.....	78	62	69.0	.379	.44	4,240	B.
August.....	76	58	64.2	.353	.41	3,950	B.
September.....	80	54	61.8	.340	.38	3,680	B.
The year.....	1,383	37	112	.616	8.29	80,400	
1909-10.							
October.....	68	48	57.9	.318	.37	3,560	B.
November.....	85	3	53.0	.291	.33	3,150	B.
December.....	897	40	136	.747	.86	8,360	B.
Jan. 23-31.....	219	129	173	.951	.32	3,090	
February.....	179	88	112	.615	.64	6,220	
March.....	131	90	103	.566	.65	6,330	
April.....	142	79	105	.577	.64	6,250	
May.....	90	75	84.9	.466	.54	5,220	
June.....	79	57	69.4	.381	.43	4,130	
July.....	85	57	65.0	.357	.41	4,000	
August.....	95	53	62.5	.343	.40	3,840	
September.....	77	55	65.0	.357	.40	3,870	
The year.....	897	3	90.7	.498	5.99	58,000	
1910-11.							
October.....	73	48	61.4	.337	.39	3,780	
November.....	54	43	47.0	.258	.29	2,800	
December.....	47	43	44.4	.244	.28	2,730	
January.....	1,220	43	128	.703	.81	7,870	B.
February.....	431	146	197	1.08	1.12	10,900	A.
March.....	1,900	158	453	2.49	2.87	27,900	B.
April.....	313	159	213	1.17	1.30	12,700	A.
May.....	163	103	130	.714	.82	7,990	A.
June.....	137	95	104	.571	.64	6,190	A.
July.....	111	67	89	.489	.56	5,470	A.
August.....	71	58	64.5	.354	.41	3,970	A.
September.....	92	57	65.8	.362	.40	3,920	A.
The year.....	1,900	43	133	.731	9.89	96,200	
1911-12.							
October.....	79	51	60.6	.333	.38	3,730	A.
November.....	61	47	50.5	.277	.31	3,000	A.
December.....	51	39	46.3	.254	.29	2,850	A.
January.....	49	42	44.6	.245	.28	2,740	A.
February.....	44	38	40.7	.224	.24	2,340	A.
March.....	351	39	92.7	.509	.59	5,700	A.
April.....	150	67	99.5	.547	.61	5,920	A.
May.....	94	74	84.9	.466	.54	5,220	A.
June.....	72	53	62.0	.341	.38	3,690	A.
The period.....						35,200	

NOTE.—Beginning September, 1911, these values include the water diverted by the Greenspot pipeline.

SANTA ANA RIVER AND MINOR STREAMS AND CANALS IN SANTA ANA RIVER BASIN.

Discharge measurements of Santa Ana River, San Bernardino County, Cal.

Date.	Hydrographer.	Locality.	Discharge. Sec.-ft.
July 27, 1896	J. H. Quinton	Above mouth of Bear Creek	14.2
Aug. 31, 1897	A. Q. Campbell	do	17.9
Nov. 14, 1897	J. B. Lippincott	do	17.5
June 17, 1898	F. H. Olmsted	Below Jurupa ditch	9.7
July 27, 1900	S. G. Bennett	Below Roubidoux, Evans Upper, and Trujillo ditches.	.44
Oct. 25, 1900	K. Sanborn	do	.56
Aug. 27, 1898	F. H. Olmsted	1½ miles below intake of Riverside Water Co.'s lower canal.	.50
Aug. 28, 1898	do	Below West Riverside bridge	3.85
July 30, 1900	S. G. Bennett	do	1.16
Oct. 25, 1900	K. Sanborn	do	8.45
Aug. 30, 1901	J. B. Lippincott	do	1.19
Aug. 30, 1899	S. G. Bennett	2 miles below West Riverside bridge	5.6
Oct. 25, 1900	K. Sanborn	1,000 feet below Roubidoux bridge	.56
June 22, 1898	F. H. Olmsted	Near Rincon	34.7
Sept. 15, 1899	J. B. Lippincott	do	27.9
Oct. 26, 1899	do	do	17.1
Aug. 15, 1900	W. P. Searcy	do	18.4
Sept. 3, 1900	do	do	18.2
Sept. 22, 1900	do	do	16.7
Oct. 16, 1900	do	do	30
Nov. 5, 1900	do	do	29
Aug. 31, 1901	do	do	23.1
July 17, 1888	F. C. Finkle	Auburndale bridge	14.6
Aug. 22, 1888	do	do	13.3
Sept. 15, 1888	do	do	14.2
Aug. 14, 1889	do	do	15.6
Sept. 28, 1889	do	do	16.7
Aug. 13, 1890	do	do	22.3
Sept. 10, 1891	do	do	25.6
Sept. 11, 1892	do	do	43.4
June 21, 1898	F. H. Olmsted	Auburndale bridge, including ditches	60
Aug. 30, 1899	S. G. Bennett	do	53.1
Sept. 12, 1899	J. B. Lippincott	Auburndale bridge	59.8
July 28, 1900	S. G. Bennett	Auburndale bridge, including ditches	54.4
Oct. 5, 1900	W. W. Cockins, jr	do	69.7
Aug. 27, 1901	J. B. Lippincott	Auburndale bridge, above Robert's ditch	43.7
Aug. 31, 1901	do	do	28.5
Sept. 23, 1903	W. B. Clapp	Auburndale bridge	58
Oct. 26, 1899	J. B. Lippincott	Opposite Esperanza station	49.2
Aug. 30, 1901	do	Above Fuller's ditch	24.3
Aug. 31, 1901	do	Newberry's east line	40.7
July 16, 1888	F. C. Finkle	Riverside Narrows	10.1
July 17, 1888	do	do	10.5
Aug. 21, 1888	do	do	8.5
Sept. 14, 1888	do	do	9.5
Aug. 13, 1889	do	do	11
Sept. 27, 1889	do	do	11.2
Aug. 12, 1890	do	do	18.8
Sept. 9, 1891	do	do	15.5
Sept. 10, 1892	do	do	29.4
June 20, 1898	F. H. Olmsted	do	47.6
Aug. 29, 1898	do	do	39
July 17, 1899	F. Rolfe	do	31.7
Sept. 9, 1899	J. B. Lippincott	do	39.7
July 27, 1900	S. G. Bennett	do	38.4
Oct. 25, 1900	K. Sanborn	do	70.6
Aug. 30, 1901	J. B. Lippincott	do	33.9
Apr. 22, 1903	Clapp and Clausen	Colton bridge	13
May 18, 1903	W. B. Clapp	do	0
May 15, 1903	Clapp and Mylne	Orange Avenue	30
Apr. 14, 1905	do	do	76
May 15, 1903	Clapp and Mylne	¾ mile below Orange Avenue	0
Apr. 29, 1903	O. W. Peterson	1 mile above heading of Santa Ana and Anaheim canals.	214
Sept. 23, 1903	W. B. Clapp	Heading	72
Sept. 28, 1904	E. C. La Rue	do	66
Apr. 29, 1903	O. W. Peterson	2 miles below heading	185
Apr. 30, 1903	do	2 miles above Yorba	130
Do	do	¾ mile above Yorba	141
May 1, 1903	do	¾ mile above Southern California Ry. crossing at Olive.	51
Do	do	¾ mile below crossing.	0

Discharge measurements of Santa Ana River at Rincon wagon bridge, San Bernardino County, Cal.

Date.	Hydrographer.	Discharge.	Date.	Hydrographer.	Discharge.
		<i>Sec.-ft.</i>			<i>Sec.-ft.</i>
1899.			1903.		
Sept 13	J. B. Lippincott.....	72.6	Aug. 19	W. B. Clapp	60
Oct. 25	.....do.....	130	Sept. 23	.....do.....	78
26	.....do.....	147	Oct. 30	.....do.....	93
Nov. 18	.....do.....	151	Nov. 25	.....do.....	102
Dec. 28	.....do.....	165			
1900.			1904.		
Jan. 18	.....	224	Jan. 26	W. B. Clapp.....	109
29	.....	184	Feb. 29	.....do.....	162
Feb. 21	.....	162	Mar. 21	Clapp and Murphy.....	107
Apr. 17	W. P. Searcy.....	102	Apr. 29	W. B. Clapp.....	96
June 24	.....do.....	69.2	May 23	.....do.....	82
July 7	.....do.....	84.5	June 20	Clapp and Hardy.....	63
28	S. G. Bennett.....	60.8	July 23	E. C. La Rue.....	62
Aug. 15	W. P. Searcy.....	87.1	Aug. 20	.....do.....	69
Sept. 3	.....do.....	88.2	Sept. 20	W. B. Clapp.....	74
Oct. 5	W. W. Cockins, jr.....	74.2	Oct. 28	E. C. La Rue.....	75
16	.....	122	Oct. 22	.....do.....	73
Nov. 5	.....	117	Nov. 19	.....do.....	103
Dec. 4	.....	338	Dec. 10	.....do.....	110
31	.....	210			
1901.			1905.		
Aug. 27	J. B. Lippincott.....	78.6	Feb. 24	.....	205
31	.....do.....	65.3	Apr. 17	.....	172
1902.			May 16	.....	115
Sept. 2	W. B. Clapp.....	74.9	June 6	.....	87
1903.			July 29	.....	70
Mar. 31	W. B. Clapp	400	Sept. 21	.....	76
Apr. 29	O. W. Peterson.....	193			
May 18	W. B. Clapp.....	108	1906.		
June 12	.....do.....	85	June 25	.....	82
July 23	.....do.....	59	Aug. 3	.....	56
			Nov. 7	.....	94
			1907.		
			Aug. 23	.....	63

Discharge measurements of Santa Ana River 1 mile below railroad bridge, Rincon, Cal. in 1898-1900.

Date.	Hydrographer.	Discharge.		
		River.	Canal.	Total for river.
		<i>Sec.-ft.</i>	<i>Sec.-ft.</i>	<i>Sec.-ft.</i>
1898				
June 21	F. H. Olmsted	79.8	3.2	83
Aug. 29	.....do.....	62.7	4.2	66.9
1899				
Jan. 3	S. G. Bennett.....	209	2.3	211
16	F. Rolfe .....	.....	.....	232
28	.....do.....	216	6.5	222
Feb. 15	.....do.....	181	1.8	183
Mar. 4	.....do.....	.....	.....	109
18	.....do.....	.....	.....	200
Apr. 6	.....do.....	.....	.....	172
18	.....do.....	101	2.8	104
May 2	.....do.....	100	2.4	102
15	.....do.....	100	4	104
June 3	.....do.....	110	3.2	113
15	.....do.....	84.4	1.9	86.3
July 4	.....do.....	68.9	2.4	71.3
16	Bennett and Rolfe	101	1.9	103
16	.....do.....	87.9	1.6	89.5
18	F. Rolfe	64.1	1.5	65.6
Aug. 1	.....do.....	57.8	3.4	61.2
15	.....do.....	64.7	3.2	67.9
30	.....do.....	65.9	2	67.9
31	.....do.....	68	3.1	71.1
Sept. 13	J. B. Lippincott.....	72.7	.....	.....
1900				
Apr. 16	S. G. Bennett.....	.....	.....	90.9

Discharge measurements of Greenspot pipe line, San Bernardino County, Cal., in 1896-1904.

Date.	Hydrographer.	Dis-charge.	Date.	Hydrographer.	Dis-charge.
1896.		<i>Sec.-ft.</i>	1901.		<i>Sec.-ft.</i>
Nov. 21	J. B. Lippincott	0.40	Feb. 5	S. G. Bennett.....	a 0.00
1898.			Mar. 4	do.....	a 2.73
Jan. 8	J. B. Lippincott.....	.38	30	do.....	a 0.00
Apr. 12	do.....	a 1.88	July 6	do.....	a 3.68
12	do.....	b 1.74	6	do.....	b 3.49
29	do.....	2.94	Aug. 20	do.....	a 0.00
June 12	do.....	.63	Oct. 8	do.....	5.77
July 23	do.....	2.20	Dec. 5	do.....	1.65
Sept. 8	do.....	0.00	1902.		
Oct. 18	F. H. Olmsted.....	1.36	May 31	S. G. Bennett.....	a 2.70
Nov. 9	do.....	.50	31	do.....	b 2.50
Dec. 8	do.....	.50	July 10	do.....	a 0.00
8	do.....	b .15	Sept. 3	W. W. Clapp.....	a 0.00
1899.			Nov. 5	S. G. Bennett.....	a 2.83
Jan. 12	S. G. Bennett.....	0.00	1903.		
Feb. 18	do.....	a 3.53	Aug. 31	W. B. Clapp.....	a 6.3
18	do.....	b .35	1904.		
Mar. 23	do.....	3.71	Jan. 29	W. B. Clapp.....	a 4.2
May 6	do.....	a 1.43	May 14	do.....	a 1.8
6	do.....	b .62	28	do.....	a 4.9
31	do.....	.14	June 29	do.....	a 7.3
July 15	do.....	a .59	Sept. 21	do.....	a 6.0
15	do.....	b .44	Nov. 11	E. C. La Rue.....	a 1.1
27	do.....	a .64			
27	do.....	b .54			
Aug. 24	do.....	b .28			
1900.					
Apr. 14	S. G. Bennett.....	2.15			
July 13	do.....	a 0.00			
Oct. 2	W. W. Cockins, jr.....	a .12			

a Intake.

b Outlet (lower end).

Daily discharge, in second-feet, of Greenspot pipe line, Santa Ana River, at headworks weir, for 1901.

Date.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Date.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1....	3.0	3.5	2.5	6.0	6.0	3.0	1.3	16....	1.5	1.8	2.5	6.0	6.0	4.3	1.5
2....	.5	3.5	2.5	6.0	6.0	3.0	1.3	17....	1.5	1.8	0.0	4.0	6.0	.5	1.8
3....	.5	3.5	2.5	6.0	6.0	2.0	1.6	18....	2.5	1.8	0.0	4.0	6.0	.5	1.5
4....	.5	3.5	2.5	6.0	6.0	2.0	1.7	19....	2.5	1.8	0.0	4.0	6.0	.5	1.8
5....	.5	3.5	2.5	6.0	6.0	2.0	1.7	20....	3.5	1.8	0.0	4.0	6.0	0.0	1.6
6....	.5	3.5	0.0	6.0	6.0	0.0	1.8	21....	3.5	1.8	0.0	4.0	6.0	0.0	1.6
7....	.5	1.6	3.0	6.0	6.0	0.0	1.1	22....	0.0	2.5	0.0	4.0	6.0	1.5	1.6
8....	.5	1.6	3.0	6.0	6.0	0.0	1.2	23....	3.5	2.5	0.0	4.0	6.0	1.5	0.0
9....	.5	1.6	3.0	6.0	6.0	0.0	1.8	24....	3.5	2.5	2.5	6.0	6.0	1.6	0.0
10....	.5	1.6	3.0	6.0	6.0	1.7	1.8	25....	2.5	2.5	3.0	6.0	6.0	1.8	0.0
11....	1.5	1.6	3.0	6.0	6.0	3.5	1.4	26....	2.5	2.5	5.0	6.0	6.0	2.1	0.0
12....	1.5	1.6	5.5	6.0	4.0	2.6	1.3	27....	2.5	2.5	5.0	6.0	6.0	1.8	0.0
13....	1.5	1.6	2.5	6.0	4.0	2.6	1.3	28....	2.5	2.5	8.0	6.0	6.0	1.8	0.0
14....	1.5	1.8	2.5	6.0	4.0	3.7	1.6	29....	3.8	2.5	6.0	6.0	6.0	1.6	0.0
15....	1.5	1.8	2.5	6.0	4.0	4.5	1.4	30....	3.5	2.5	6.0	6.0	6.0	1.3	2.5
								31....	.....	2.5	6.0	.....	6.0	.....	2.5

Monthly discharge of Greenspot pipe line at head of Crafton ditch, Cal., for 1897-1901.

Month.	Discharge in second- feet (mean).	Run-off (total in acre-feet).	Month.	Discharge in second- feet (mean).	Run-off (total in acre-feet).
1897.			1899-1900.		
August.....	21.5	1,320	October.....	6.6	406
September.....	15.8	940	November.....	8.6	512
1897-98.			December.....	9.5	584
October (1-21).....	13.2	550	January.....	2.1	129
April.....	17.0	1,010	February.....	2.5	139
May.....	17.2	1,060	March.....	1.5	92
June.....	13.2	786	April.....	2.3	137
July.....	9.1	560	May.....	1.9	117
August.....	9.1	560	June.....	.4	24
September.....	8.2	488	July 1-15.....	1.1	33
1898-99.			August.....	0	0
October.....	9.0	553	September.....	0	0
November.....	10	595	1900-1901.		
December.....	10.7	658	October.....	0	0
January (1-9).....	11	196	November.....	0	0
February.....	11.6	644	December.....	0	0
March.....	12.2	750	June.....	1.5	89
April.....	11.8	702	July.....	2.3	141
May.....	11.2	689	August.....	2.7	166
June.....	5.4	300	September.....	5.5	327
July.....	5.8	312	1901.		
August.....	5.8	312	October.....	5.7	359
September.....	4.1	244	November.....	1.7	101
			December.....	1.2	74

Highlands or North Fork canal diverts water from Santa Ana River at the mouth of the canyon, opposite the Mentone Power Co.'s power house.

Discharge measurements of Highlands or North Fork canal at intake weir, San Bernardino County, Cal., in 1896-1904.

Date.	Hydrographer.	Dis- charge.	Date.	Hydrographer.	Dis- charge.
1896.			1901.		
Nov. 21	J. B. Lippincott.....	Sec.-feet. 8.50	July 6	S. G. Bennett.....	Sec.-feet. 13.28
1898.			Aug. 20	do.....	15.79
Jan. 8	J. B. Lippincott.....	11.91	Oct. 8	do.....	14.30
Mar. 9	H. Crowe.....	10.76	Dec. 5	do.....	8.53
Apr. 12	J. B. Lippincott.....	12.40	May 31	do.....	7.90
29	do.....	17.03	1902.		
June 12	do.....	11.37	May 31	S. G. Bennett.....	7.90
Sept. 8	do.....	13.29	July 10	do.....	11.50
Oct. 18	F. H. Olmsted.....	9.85	Sept. 3	W. B. Clapp.....	11.10
Nov. 9	do.....	8.12	Nov. 5	S. G. Bennett.....	10.02
Dec. 8	do.....	6.95	1903.		
1899.			Apr. 24	W. B. Clapp.....	6
Feb. 18	S. G. Bennett.....	8.07	May 16	do.....	18
Mar. 23	do.....	11.78	Aug. 31	do.....	15.6
May 6	do.....	7.70	1904.		
31	do.....	6.74	Jan. 29	W. B. Clapp.....	10.7
June 15	do.....	10.30	May 14	do.....	11.4
July 15	do.....	13.14	28	do.....	12.0
27	do.....	11.92	June 29	do.....	13.5
Aug. 24	do.....	4.28	Sept. 21	do.....	16.4
1900.			Nov. 11	E. C. La Rue.....	7.8
Apr. 14	S. G. Bennett.....	7.48			
July 13	do.....	(a)			
Oct. 2	W. W. Cockins, jr.....	5.61			

^a Water not going through weir basin; weir was being repaired.

Daily discharge, in second-feet, of Highlands canal at Sand Box weir for 1901.

Day.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	12.7	14.7	14.6	16.5	16.3	8.8	7.9
2.....	11.7	14.2	13.6	16.5	15.9	9.0	7.9
3.....	11.3	12.5	.....	16.5	14.4	9.8	7.7
4.....	12.1	12.0	13.0	16.5	14.4	8.8	8.2
5.....	11.4	12.6	12.4	16.5	14.3	8.8	8.2
6.....	11.5	13.9	14.1	15.4	14.1	8.2	10.0
7.....	12.2	13.8	15.8	16.5	13.8	8.4	7.4
8.....	12.3	14.9	14.4	15.8	14.3	10.5	7.4
9.....	11.1	14.4	14.5	12.8	14.5	10.5	7.0
10.....	11.9	14.9	14.5	16.2	14.1	9.5	7.4
11.....	12.7	15.3	15.4	16.1	14.3	9.2	7.2
12.....	12.7	14.7	14.6	16.1	14.3	10.3	6.7
13.....	12.0	14.6	15.3	15.2	13.4	10.8	6.7
14.....	12.0	14.7	15.4	15.4	12.1	10.0	7.0
15.....	10.0	15.3	16.0	14.5	14.3	9.2	6.3
16.....	11.3	15.3	19.4	15.4	13.1	9.5	7.0
17.....	11.1	14.7	.....	16.1	13.3	10.4	7.0
18.....	11.1	15.4	13.0	15.8	15.0	9.5	7.0
19.....	11.1	12.9	13.1	16.5	14.5	9.5	7.2
20.....	14.6	12.8	12.0	16.4	14.2	7.7	7.4
21.....	14.6	12.3	.....	14.3	14.5	8.9	7.4
22.....	14.0	14.6	.....	15.4	12.0	7.9	7.2
23.....	13.9	15.3	6.0	14.5	12.1	9.5	7.2
24.....	14.1	14.2	12.0	14.6	14.3	11.1	7.2
25.....	14.4	14.2	17.5	16.3	12.0	9.7	7.2
26.....	13.9	15.0	17.5	16.3	12.1	9.2	7.0
27.....	14.9	14.6	17.5	16.5	11.0	10.0	7.0
28.....	14.0	14.4	17.5	16.5	9.0	8.2	7.2
29.....	14.3	15.1	17.5	13.9	8.8	8.2	7.2
30.....	14.1	14.4	17.5	16.3	11.2	9.2	7.2
31.....	.....	14.2	17.5	.....	12.0	.....	7.2

Redlands or South Fork canal diverts water from Santa Ana River at the mouth of the canyon, opposite the Mentone Power Co.'s power house.

Discharge measurements of Redlands or South Fork canal at Sand Box weir in 1896-1904.

Date.	Hydrographer.	Dis-charge.	Date.	Hydrographer.	Dis-charge.
1896.		<i>Sec.-feet.</i>	1900.		<i>Sec.-feet.</i>
July 29	J. H. Quinton.....	40.62	July 13	S. G. Bennett.....	10.65
Nov. 21	J. B. Lippincott.....	12.00	Oct. 2	W. W. Cockins, jr.....	6.25
1898.			1901.		
Jan. 8	J. B. Lippincott.....	21.32	Mar. 30	S. G. Bennett.....	30.00
Mar. 9	H. Crowe.....	22.22	May 31	.....do.....	19.60
Apr. 12	J. B. Lippincott.....	16.70	July 6	.....do.....	19.91
June 29	.....do.....	13.00	Aug. 20	.....do.....	16.75
July 23	.....do.....	18.40	Oct. 8	.....do.....	24.10
Sept. 28	.....do.....	15.00	Dec. 5	.....do.....	14.27
Oct. 18	F. H. Olmsted.....	7.26	1902.		
Nov. 9	.....do.....	10.20	May 31	S. G. Bennett.....	19.60
Dec. 8	.....do.....	12.00	July 10	.....do.....	10.06
1899.			Sept. 3	W. B. Clapp.....	14.60
Jan. 12	S. G. Bennett.....	15.10	Nov. 5	S. G. Bennett.....	7.55
Feb. 18	.....do.....	15.70	1903.		
Mar. 23	.....do.....	17.00	Apr. 24	W. B. Clapp.....	9.6
May 6	.....do.....	15.49	May 16	.....do.....	29.0
May 31	.....do.....	14.67	Aug. 31	.....do.....	28.0
June 15	.....do.....	7.76	1904.		
July 27	.....do.....	12.40	Jan. 29	W. B. Clapp.....	12.3
Aug. 24	.....do.....	5.71	May 14	.....do.....	23.8
1900.			May 28	.....do.....	26.0
Apr. 14	S. G. Bennett.....	12.10	June 29	.....do.....	22.0
			Nov. 11	E. C. La Rue.....	9.6

Daily discharge, in second-feet, of Redlands canal at Sand Box weir for 1901.

Day.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	20.0	22.7	23.9	37.3	28.6	22.0	14.9
2.....	24.6	18.9	31.4	30.0	32.9	24.0	14.9
3.....	24.0	18.9	.....	29.3	30.0	17.1	14.4
4.....	22.0	20.7	23.3	30.2	30.0	15.3	13.8
5.....	23.3	23.7	22.0	27.3	28.6	14.0	13.8
6.....	22.7	22.8	27.9	29.3	28.0	16.6	12.0
7.....	20.8	20.7	25.2	23.3	26.6	16.9	16.4
8.....	19.5	18.9	20.7	25.3	28.0	14.1	16.4
9.....	20.6	18.3	22.0	23.3	26.6	13.8	15.2
10.....	21.4	19.5	17.1	21.4	25.3	18.6	14.7
11.....	20.7	20.7	18.9	25.9	21.4	16.1	15.2
12.....	17.1	19.5	14.8	27.3	23.3	13.0	16.6
13.....	17.7	18.9	25.2	28.0	26.6	12.5	16.4
14.....	18.3	18.9	23.3	28.0	29.5	11.4	12.8
15.....	18.9	19.5	24.6	27.3	30.0	10.9	14.1
16.....	20.1	19.5	27.4	27.3	30.0	12.0	15.8
17.....	20.7	19.5	0.0	27.3	31.4	13.8	15.8
18.....	27.3	18.3	0.0	30.0	30.0	14.1	15.2
19.....	28.6	21.4	11.6	30.0	30.0	14.1	14.1
20.....	24.6	22.6	9.3	28.6	28.0	17.8	14.1
21.....	22.6	22.6	34.3	30.0	29.4	16.4	14.9
22.....	27.3	23.3	11.6	34.3	27.0	14.9	14.9
23.....	26.6	24.6	28.0	28.6	29.4	11.2	16.4
24.....	26.6	23.9	28.0	30.0	25.8	11.2	16.6
25.....	23.3	20.7	30.0	27.6	26.0	12.2	16.4
26.....	23.3	20.7	28.0	24.6	28.0	12.0	15.8
27.....	22.6	21.4	32.9	24.6	17.0	12.0	15.8
28.....	20.7	20.7	28.6	26.6	12.0	14.4	15.2
29.....	18.3	18.9	31.4	27.9	9.0	14.4	14.9
30.....	18.9	22.6	34.3	30.0	9.0	13.6	13.8
31.....	.....	24.6	36.4	.....	30.0	.....	13.8

A small stream from Morton Canyon enters Santa Ana River from the east a short distance below the mouth of the canyon where the Santa Ana leaves the foothills.

Discharge measurements of Morton Canyon water, in 1898-1905.

Date.	Hydrographer.	Dis-charge.	Date.	Hydrographer.	Dis-charge.
1898.		<i>Sec.-feet.</i>	1900.		<i>Sec.-feet.</i>
Apr. 12	J. B. Lippincott.....	0.20	July 13	S. G. Bennett.....	0.09
29	do.....	.20	Oct. 2	W. W. Cockins, jr.....	.12
June 12	do.....	.12			
1899.			1903.		
May 31	S. G. Bennett.....	.23	Aug. 31	W. B. Clapp.....	.2
June 15	do.....	.17			
July 15	do.....	.12	1904.		
Aug. 24	do.....	.11	May 28	W. B. Clapp.....	.13
			Sept. 21	do.....	.14
1900.			1905.		
Apr. 14	S. G. Bennett.....	.29	Sept. 22	W. B. Clapp.....	.16

Discharge measurements of Redlands or Bolen tunnel in 1896-1905.

Date.	Hydrographer.	Dis-charge.	Date.	Hydrographer.	Dis-charge.
1896.		<i>Sec.-feet.</i>	1901.		<i>Sec.-feet.</i>
Nov. 21	J. B. Lippincott.....	1.00	July 6	S. G. Bennett.....	1.40
1898.			Dec. 5	.....do.....	.90
June 12	J. B. Lippincott.....	1.24	1902.		
Sept. 8	.....do.....	1.24	July 10	S. G. Bennett.....	.90
1899.			1903.		
June 15	S. G. Bennett.....	.67	Aug. 31	W. B. Clapp.....	1.8
July 15	.....do.....	1.03	1904.		
Aug. 24	.....do.....	1.10	May 28	W. B. Clapp.....	1.59
1900.			June 29	.....do.....	1.55
Apr. 14	S. G. Bennett.....	.88	Sept. 21	.....do.....	1.04
July 13	.....do.....	.84	1905.		
Oct. 2	W. W. Cockins, jr.....	.85	Sept. 22	.....do.....	1.10

MILL CREEK IN CANYON, CAL.

This stream is one of the larger tributaries of Santa Ana River, although on account of its importance for irrigation it is generally considered as an independent stream. It rises on the western slope of the San Bernardino Mountains, draining the area immediately south of the headwaters of Santa Ana River. Mill Creek appears from its canyon about 5 miles east of Redlands. The Crafton Water Co. diverts practically all the water of this creek at the mouth of the canyon. The water passes over a weir, and the volume was therefore determined with considerable accuracy. The records have been furnished to this office by Mr. Herbert Garstine, president of the Crafton Water Co. They are particularly accurate for low-water measurements.

Discharge measurements of Mill Creek near headworks of Crafton canal in 1896-1905.

Date.	Hydrographer.	Dis-charge.	Date.	Hydrographer.	Dis-charge.
1896.		<i>Sec.-feet.</i>	1902.		<i>Sec.-feet.</i>
July 29	J. H. Quinton.....	14.2	Oct. 2	W. W. Cockins, jr.....	8.6
1898.			1901.		
Apr. 12	J. B. Lippincott.....	15.7	Mar. 30	S. G. Bennett.....	20
29	.....do.....	18.9	July 6	.....do.....	23.3
June 12	.....do.....	18.1	Dec. 5	.....do.....	14.5
July 23	.....do.....	11.8	1902.		
Sept. 8	.....do.....	13.1	Apr. 5	S. G. Bennett.....	21
Oct. 18	F. H. Olmsted.....	15.3	May 31	.....do.....	19.2
Nov. 9	.....do.....	15.2	July 10	.....do.....	10.8
Dec. 8	.....do.....	12.6	Sept. 3	W. B. Clapp.....	5.3
1899.			Nov. 5	S. G. Bennett.....	12.3
Jan. 12	S. G. Bennett.....	10.8	1903.		
Feb. 18	.....do.....	10.4	Apr. 1	W. B. Clapp.....	1,280
Mar. 23	.....do.....	15.6	24	Clapp and Clausen.....	39
May 6	.....do.....	14.6	May 16	W. B. Clapp.....	68
31	.....do.....	11.6	June 9	.....do.....	46
June 15	.....do.....	6.8	July 1	.....do.....	29
July 15	.....do.....	7.4	Sept. 1	.....do.....	22
27	.....do.....	4.3	1904.		
Aug. 24	.....do.....	7.2	Sept. 21	W. B. Clapp.....	15.2
1900.			Nov. 11	E. C. La Rue.....	14.1
Apr. 14	S. G. Bennett.....	10.8	1905.		
May 5	.....do.....	47	Sept. 23	.....do.....	20
July 13	.....do.....	8.8			

NOTE.—These values include the total flow at this point.

Daily discharge, in second-feet, of Mill Creek at head of Crafton zanja, California, for 1897-1901.

Day	July.	Aug.	Sept.	Day.	July.	Aug.	Sept.	Day.	July.	Aug.	Sept.
1897.				1897.				1897.			
1.....		21	22	11.....	19	18	21.....		24	20	
2.....		23	22	12.....	24	20	22.....		22	27	
3.....		24	22	13.....	24	20	23.....		21	19	
4.....		24	21	14.....	20	18	24.....		21	16	
5.....		24	20	15.....	20	18	25.....		22	19	
6.....		21	20	16.....	19	19	26.....	28	21	19	
7.....		22	19	17.....	19	16	27.....	22	21	18	
8.....		22	19	18.....	24	17	28.....	27	20	18	
9.....		22	18	19.....	26	18	29.....	27	20	19	
10.....		19	18	20.....	24	19	30.....	24	20	19	
							31.....	24	20	.....

Day.	Oct.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1897-98.								
1.....	18		17	26	16	11	8	9
2.....	18		17	22	16	10	8	9
3.....	19		17	17	16	10	8	7
4.....	19		17	17	16	11	8	9
5.....	17		17	16	16	11	8	8
6.....	21		17	17	14	11	7	9
7.....	19		17	17	12	11	7	8
8.....	19		17	17	14	10	7	8
9.....	19		17	17	14	10	7	8
10.....	18		17	15	15	8	a 10	8
11.....	16		16	15	14	8	10	8
12.....	16		17	15	14	10	8	7
13.....	15		17	15	14	10	8	8
14.....	15		18	15	13	10	7	8
15.....	18		18	18	13	9	7	8
16.....	18		17	18	13	9	7	7
17.....	18		17	18	12	9	7	8
18.....	18		17	18	15	8	7	8
19.....	20		17	20	12	9	7	8
20.....	18		17	18	12	9	11	8
21.....	18	17	17	17	13	9	25	8
22.....			17	16	12	9	17	8
23.....			17	16	13	9	14	8
24.....			17	18	12	8	10	8
25.....		18	16	16	12	7	10	9
26.....		18	16	16	11	9	9	9
27.....		17	15	18	11	7	9	9
28.....		17	16	18	11	7	13	9
29.....		17	19	17	10	7	13	8
30.....		17	19	16	10	8	11	9
31.....		17		16		7	11	.....

a Not entire flow of creek.

Daily discharge, in second-feet, of Mill Creek at head of Crafton zanja, California, for 1897-1901—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1898-99.												
1.....	9	10	10	11	11	11	13	12	17	5.6	7.1	5.5
2.....	9	10	10	11	11	11	13	11	13	6.2	6.2	5.6
3.....	9	10	10	11	11	11	12	11	12	6.2	5.8	5.4
4.....	9	10	10	11	11	11	12	11	11	6.2	6.7	5.4
5.....	9	10	10	11	11	11	12	11	10	4.9	7.2	5.5
6.....	9	10	10	12	11	11	11	11	11	6.7	6.9	5.6
7.....	9	10	10	11	11	11	12	12	10	6.7	6.7	5.6
8.....	9	10	10	10	11	11	12	12	10	6.7	6.2	5.3
9.....	9	10	10	11	12	11	12	12	10	6.7	6.2	5.7
10.....	9	10	11	.....	12	.....	12	12	8	6.2	6.2	5.3
11.....	9	10	11	.....	12	10	12	12	8	6.2	6.2	5.3
12.....	9	10	11	.....	12	10	11	12	8	6.2	6.2	4.9
13.....	9	10	11	.....	.....	10	11	12	8	4.8	5.6	4.9
14.....	9	10	11	.....	12	10	11	11	7	4.8	5.3	4.9
15.....	9	10	12	.....	12	10	11	12	7	5.1	6.2	5.2
16.....	9	10	11	.....	12	10	12	12	8	7.2	5.6	4.8
17.....	9	10	12	.....	.....	13	12	12	9	6.3	5.3	3.2
18.....	9	10	11	.....	12	13	13	11	8	4.9	6.0	3.0
19.....	9	10	11	.....	12	11	12	11	8	6.2	6.0	3.0
20.....	9	10	11	.....	12	15	11	11	8	4.9	5.3	2.8
21.....	9	10	11	.....	.....	14	11	11	8	5.1	5.9	2.8
22.....	9	10	11	.....	11	12	12	11	8	5.8	5.9	2.8
23.....	9	10	10	.....	11	12	11	11	7	6.2	5.3	2.8
24.....	8	10	10	.....	13	16	12	10	7	6.5	5.2	2.8
25.....	9	10	11	.....	11	16	12	10	7	5.4	5.3	2.8
26.....	8	10	11	.....	12	16	12	10	8	5.4	5.3	2.8
27.....	9	10	10	.....	12	12	12	11	8	4.8	5.8	2.9
28.....	9	10	11	.....	11	12	12	10	7	4.8	4.3	2.0
29.....	9	10	11	.....	.....	16	12	11	6	5.5	4.3	2.7
30.....	10	10	11	.....	.....	16	12	11	4	5.5	5.3	2.8
31.....	10	.....	11	.....	.....	14	.....	11	.....	5.5	2.9	.....
1899-1900.												
1.....	4.8	7.2	9.8	9.8	10.2	9.8	9.0	13.0	8.2	5.5	4.9	5.1
2.....	5.3	7.2	9.5	10.0	10.6	9.8	9.1	13.0	8.2	5.5	4.9	5.5
3.....	5.3	6.8	9.4	.....	10.0	9.8	10.0	12.1	7.6	5.6	5.1	5.5
4.....	4.3	6.8	8.8	.....	10.2	11.9	9.8	12.1	7.8	5.6	5.7	5.7
5.....	4.6	7.2	8.0	.....	10.6	10.2	9.2	.....	8.0	6.3	5.7	5.5
6.....	6.3	7.2	7.8	.....	10.6	10.2	9.3	.....	8.0	6.3	5.5	5.5
7.....	5.6	7.2	8.0	.....	10.6	10.2	9.8	15.5	8.0	5.1	5.5	5.0
8.....	4.8	7.2	5.3	.....	10.2	10.2	9.8	14.6	8.0	4.3	5.5	5.0
9.....	5.6	6.1	9.0	.....	10.6	10.2	9.7	16.4	8.0	4.3	5.1	5.0
10.....	5.2	6.1	8.8	.....	10.2	9.8	8.9	17.0	8.0	4.5	5.1	5.5
11.....	5.7	6.8	9.0	.....	10.2	9.8	8.9	.....	8.0	4.5	5.4	5.5
12.....	6.1	6.8	8.2	.....	10.2	9.6	9.3	.....	8.0	5.5	5.5	5.5
13.....	6.2	6.4	9.8	.....	10.0	9.6	9.3	.....	8.2	5.5	5.5	5.5
14.....	8.5	11.2	9.6	.....	10.0	9.8	8.9	.....	8.0	5.5	5.5	5.5
15.....	7.8	11.2	9.6	.....	10.0	9.8	8.9	.....	8.0	5.5	5.5	4.5
16.....	7.8	9.8	7.8	.....	10.0	9.8	9.8	12.0	8.2	4.5	5.5	4.5
17.....	7.8	9.8	14.6	.....	10.0	9.8	8.9	12.0	7.2	3.8	5.5	4.3
18.....	7.2	9.8	13.0	9.8	10.0	9.8	8.9	12.0	4.8	3.3	5.5	5.1
19.....	7.8	9.8	12.6	10.0	10.2	9.8	8.9	13.0	6.8	4.4	5.5	4.5
20.....	7.2	9.7	9.8	10.0	10.2	9.8	8.9	12.0	7.6	4.0	5.5	4.1
21.....	7.2	9.7	9.4	10.6	10.2	10.2	10.2	12.0	7.6	5.4	5.5	5.1
22.....	7.2	9.6	11.0	10.4	10.2	10.2	13.3	10.1	6.5	5.4	5.5	5.1
23.....	7.8	9.7	9.6	10.6	10.2	13.2	10.8	12.0	6.5	4.8	4.9	4.9
24.....	6.6	9.8	9.8	10.6	10.2	10.6	10.8	10.1	.....	5.0	5.5	5.3
25.....	6.6	10.4	9.8	10.6	10.2	9.8	10.2	10.1	.....	5.0	4.9	5.3
26.....	7.8	10.0	10.0	10.4	10.2	10.2	10.2	9.9	.....	5.0	4.9	5.3
27.....	7.2	9.8	10.0	10.4	9.8	10.2	10.2	9.9	.....	5.0	4.3	4.9
28.....	7.2	9.8	8.5	10.4	9.8	11.6	10.8	8.4	5.4	5.0	4.3	4.9
29.....	7.2	9.8	9.4	10.4	.....	10.2	13.0	8.6	5.4	5.0	4.3	4.9
30.....	7.2	9.8	9.8	10.6	.....	9.8	13.0	8.6	5.3	4.7	5.1	4.9
31.....	7.2	.....	10.0	10.2	.....	9.8	.....	8.2	.....	4.7	5.1	.....

Daily discharge, in second-feet, of Mill Creek at head of Crafton zanja, California, for 1897-1901—Continued.

Day.	Oct.	Nov.	June.	July.	Aug.	Sept.	Day.	Oct.	Nov.	June.	July.	Aug.	Sept.
1900-01.							1900-01.						
1.....	4.9	5.1	.....	19.00	50.00	16.00	16.....	5.4	8.5	.....	15.04	(a)	13.18
2.....	5.1	5.1	.....	19.12	30.00	16.00	17.....	5.2	7.5	.....	15.04	.....	13.18
3.....	5.1	5.1	.....	19.00	20.00	16.00	18.....	5.0	.....	.....	15.04	.....	12.30
4.....	5.3	5.1	.....	19.00	20.00	16.58	19.....	5.0	.....	20.08	14.40	.....	12.30
5.....	4.9	5.1	.....	18.00	20.00	16.58	20.....	5.0	.....	20.08	13.94	.....	12.30
6.....	5.1	5.1	.....	16.96	19.10	16.58	21.....	4.1	.....	21.00	14.40	.....	11.42
7.....	5.1	5.1	.....	16.96	19.10	16.58	22.....	4.6	.....	20.90	14.40	.....	11.42
8.....	4.1	5.1	.....	16.80	18.00	16.00	23.....	5.2	.....	20.40	13.94	.....	12.30
9.....	3.8	5.1	.....	16.80	16.08	16.60	24.....	5.2	.....	20.08	13.94	16.00	12.30
10.....	3.9	5.1	.....	16.00	16.08	14.04	25.....	5.2	.....	20.08	14.40	16.00	14.58
11.....	4.9	5.1	.....	16.00	16.08	14.00	26.....	5.2	.....	20.00	14.40	15.04	13.18
12.....	4.9	5.1	.....	16.00	18.24	14.00	27.....	5.2	.....	19.80	16.96	15.04	13.18
13.....	5.6	5.1	.....	16.00	16.96	14.00	28.....	5.2	.....	19.80	15.04	15.04	13.18
14.....	5.8	5.1	.....	15.04	16.96	14.00	29.....	5.2	.....	19.50	15.04	16.00	13.18
15.....	5.8	5.1	.....	15.04	16.96	13.18	30.....	5.3	.....	19.40	15.04	16.00	13.18
							31.....	5.1	.....	.....	15.04	16.00	.....

Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.
1901.				1901.				1901.			
1.....	13.18	12.30	11.70	11.....	12.64	12.30	12.10	21.....	12.30	12.30	12.10
2.....	13.18	12.30	10.26	12.....	12.64	12.30	12.10	22.....	12.30	12.30	12.10
3.....	13.18	12.30	11.10	13.....	12.30	12.30	12.10	23.....	12.30	12.30	12.10
4.....	13.18	12.30	12.28	14.....	12.30	12.30	12.10	24.....	12.30	12.30	12.10
5.....	13.18	12.30	12.28	15.....	12.30	12.30	12.10	25.....	12.30	12.30	12.10
6.....	13.18	12.30	12.10	16.....	12.30	12.30	12.10	26.....	12.30	12.30	12.10
7.....	13.18	12.30	12.10	17.....	12.30	12.30	12.10	27.....	12.30	12.30	12.10
8.....	13.18	12.30	12.10	18.....	12.30	12.30	12.10	28.....	12.30	12.30	12.10
9.....	12.80	12.30	12.10	19.....	12.30	12.30	12.10	29.....	12.30	12.30	12.10
10.....	12.64	12.30	12.10	20.....	12.30	12.30	12.10	30.....	12.30	11.60	12.10
								31.....	12.30	.....	12.10

^a On Aug. 16 a cloudburst in Mill Creek canyon and Crafton Hills filled zanja and supply canal with sand.

Daily discharge, in second-feet, of water pumped from Mill Creek at Crafton headworks, California, for 1900.

Day.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.
1.....	1.7	2.0	2.2	3.5	2.9	2.9	2.9	2.9
2.....	1.7	2.0	2.2	3.5	2.9	2.9	2.9	2.9
3.....	1.7	2.0	2.2	3.5	2.9	2.9	2.9	2.9
4.....	1.7	2.0	2.2	3.5	2.9	2.9	2.9	2.9
5.....	1.7	.....	2.2	3.5	2.9	2.9	2.9	2.9
6.....	1.7	.....	2.2	3.5	2.9	2.9	2.9	2.9
7.....	1.7	.....	2.2	3.5	2.9	2.9	2.9	2.9
8.....	1.7	.....	2.2	3.5	2.9	2.9	2.9	2.9
9.....	1.7	.....	2.2	3.5	2.9	2.9	2.9	2.9
10.....	1.7	.....	2.2	3.3	2.9	2.9	2.8	2.9
11.....	1.7	2.2	2.2	3.3	2.9	2.9	2.8	2.9
12.....	1.7	.....	2.2	3.5	2.9	2.9	2.8	2.9
13.....	1.7	.....	2.2	3.5	2.9	2.9	2.8	2.9
14.....	1.7	.....	2.2	3.5	2.9	2.9	2.8	2.9
15.....	1.7	.....	2.2	3.5	2.9	2.9	2.8	2.9
16.....	1.7	2.2	2.2	3.3	2.9	2.9	2.8	2.9
17.....	1.7	2.2	2.2	3.2	2.9	2.9	2.8	2.9
18.....	1.7	2.2	2.2	3.2	2.9	2.9	2.8	.....
19.....	1.7	2.2	2.2	3.2	2.9	2.9	2.8	.....
20.....	1.7	.....	2.2	3.2	2.9	2.9	2.8	.....
21.....	1.7	2.2	3.7	3.2	2.9	2.9	2.8	.....
22.....	1.7	2.2	3.7	3.2	2.9	2.9	2.8	.....
23.....	1.7	2.2	3.7	3.2	2.9	2.9	2.8	.....
24.....	1.7	2.2	3.7	3.2	2.9	2.9	2.8	.....
25.....	1.7	2.2	3.7	3.2	2.9	2.9	2.8	.....
26.....	1.7	2.2	3.7	3.2	2.9	2.9	2.8	.....
27.....	2.2	3.7	3.2	2.9	2.9	2.8	.....
28.....	1.0	2.2	3.7	3.2	2.9	2.2	2.8	.....
29.....	1.5	2.2	3.7	3.2	2.9	2.9	2.8	.....
30.....	1.7	2.2	3.7	3.3	2.9	2.9	2.9	.....
31.....	1.7	2.2	.....	3.3	2.9	.....	2.9	.....

NOTE.—No record from Nov. 17 to Dec. 31.

Monthly discharge of Mill Creek canals at Crafton headworks, California, for 1895-96 and 1899-1901.

[Drainage area, 47 square miles.]

Month.	Discharge in second-feet.				Run-off.	
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.	Total in acre-feet.
1895.						
August.....	27.6	24.0	24.5	0.52	0.60	1,505
September.....	26.5	19.5	20.0	.47	.52	1,310
1895-96.						
October.....	24.5	17.0	19.6	.42	.48	1,205
May.....	21.4	9.4	13.4	.28	.33	825
June.....	16	5.1	10.3	.22	.25	615
July.....	16	6.1	11.5	.24	.28	709
August.....	13.2	8.7	11.6	.25	.28	716
September.....	15	7.4	11.5	.24	.27	687
1896.						
October.....	13.1	9.0	10.5	.22	.26	637
1899.						
February.....	13	11	11.6	.25	.26	644
March.....	16	10	12.2	.26	.30	750
April.....	13	11	11.8	.25	.28	702
May.....	12	10	11.2	.23	.26	689
June.....	17	4	8.7	.19	.21	518
July.....	7.2	4.8	5.8	.12	.14	357
August.....	7.2	2.9	5.8	.12	.14	357
September.....	5.7	2.0	4.1	.09	.10	244
The period.....						4,260
1899-1900.						
October.....	8.5	4.3	6.5	.14	.16	400
November.....	11.2	6.1	8.6	.18	.20	512
December.....	14.6	5.3	9.5	.20	.23	584
January (16 days).....	10.6	9.8	10	.22	.13	317
February.....	10.6	9.8	10	.22	.23	555
March.....	13.2	9.6	10	.22	.25	615
April.....	13.3	8.9	10	.22	.25	595
May.....	17.0	8.2	12	.27	.31	738
June.....	8.2	5.3	7	.16	.18	417
July.....	6.3	3.3	5	.11	.13	307
August.....	5.7	4.3	5	.11	.13	307
September.....	5.7	4.3	5	.11	.12	298
The year.....	17.0	3.3	8.22	.175	2.32	5,640
1900-1901.						
October.....	5.8	3.8	5	.11	.13	307
November 1-17.....	8.5	5.1	5	.11	.07	169
July.....	19.12	13.94	15.86	.34	.39	975
August ^a			19.07	.41	.35	867
September.....	16.58	11.42	14.04	.30	.33	833
1901.						
October.....	13.18	12.30	12.58	.27	.31	774
November.....	12.30	11.60	12.28	.26	.29	732
December.....	12.28	10.26	12.00	.26	.30	738

^a Partial month.

MILL CREEK AT FOREST HOME,¹ CAL.

This station is located at Forest Home, in the NW. $\frac{1}{4}$ NE. $\frac{1}{4}$ sec. 13, T. 1 S., R. 1 W., about $2\frac{1}{2}$ miles below Falls Creek, 4 miles above Mountain Home Creek, and 14 miles east of Redlands.

The discharge is obtained by combining the flow in the power canal with the flow over the diverting dam. Current meters measurements are made in the flume of the power canal. The flow over the diverting dam is approximate. The daily discharge is the mean of two observations secured each day. No record is given when the flow exceeds 100 second-feet. When the entire flow is diverted into the canal, the results are good; at higher stages they are approximate.

The following records of daily discharge were furnished by the Southern California Edison Co., through H. W. Dennis, construction engineer.

Daily discharge, in second-feet, of Mill Creek at Forest Home, Cal., for 1903-1911.

Day.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1903-4.													
1.....		19	12	11	10	9.2	11	14	17	15	11	11	9.8
2.....		17	12	11	10	9.2	10	14	17	14	11	11	9.6
3.....		16	12	11	10	9.2	10	(c)	16	14	11	11	9.6
4.....		16	12	11	10	8.9	9.8	18	16	14	11	12	9.6
5.....		16	12	11	9.1	9.2	9.5	18	16	14	11	11	9.6
6.....		15	12	11	9.7	10	9.6	21	16	14	10	(b)	9.7
7.....		14	12	11	9.7	9.2	9.5	20	16	14	10	11	9.4
8.....		15	11	11	9.6	9.0	9.5	21	16	14	10	10	9.4
9.....		15	12	11	9.6	9.1	9.4	20	16	13	10	10	9.6
10.....		14	12	11	9.6	9.2	11	20	16	13	10	10	9.7
11.....		14	12	11	9.6	9.1	11	20	16	13	10	10	9.0
12.....		14	12	11	9.4	9.1	10	20	16	13	9.9	11	11
13.....		14	11	11	9.4	9.1	10	20	16	13	9.9	11	9.2
14.....		14	11	11	9.4	9.1	11	20	16	13	9.8	11	8.8
15.....		14	11	11	9.4	9.0	11	18	16	13	9.7	11	8.7
16.....		13	11	11	9.4	14	11	17	16	12	9.7	12	8.8
17.....		13	11	10	9.4	11	10	16	15	12	9.6	10	8.7
18.....		13	11	10	9.5	10	10	16	15	12	9.6	10	8.7
19.....		13	11	10	9.3	9.6	10	18	15	14	9.5	10	8.7
20.....		13	11	10	9.0	9.2	26	18	15	11	9.4	10	8.7
21.....		13	11	10	9.4	9.2	11	18	15	12	9.4	10	8.7
22.....		13	11	10	9.5	9.3	11	17	15	12	9.4	11	8.7
23.....	13	12	11	10	9.4	9.2	50	26	15	12	9.3	10	8.7
24.....	13	12	11	10	9.5	9.1	13	16	16	12	9.0	10	8.6
25.....	18	12	11	10	9.4	9.2	12	17	16	12	10	11	8.6
26.....	14	12	11	10	9.4	9.3	15	17	16	12	12	11	8.6
27.....	17	12	11	10	9.4	9.2	17	17	15	11	12	11	8.5
28.....	17	12	11	10	9.4	14	18	16	15	11	11	10	8.5
29.....	17	12	11	10	9.4	13	48	15	15	11	11	10	8.5
30.....	16	12	11	10	9.4	.....	19	16	15	11	11	10	8.4
31.....		12	.....	10	9.3	.....	14	.....	15	.....	11	9.8	.....

^a No record reported.

^b Discharge over 100 second-feet at time of one daily observation.

¹ Akers Camp on map of San Geronio quadrangle, U. S. Geological Survey.

Daily discharge, in second-feet, of Mill Creek at Forest Home, Cal., for 1903-1911—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1904-5.												
1.....	8.3	8.2	7.8	7.5	8.2	18	24	36	54	37	24	20
2.....	8.2	8.2	7.8	7.4	12	20	29	38	54	38	24	19
3.....	8.2	8.3	7.8	7.4	14	18	24	47	48	36	24	19
4.....	8.4	8.3	7.6	7.4	13	19	24	40	48	36	24	19
5.....	8.4	8.2	7.6	7.4	12	18	25	45	48	35	24	19
6.....	8.4	8.2	7.6	7.6	11	18	22	50	48	34	24	19
7.....	8.4	8.2	7.6	7.4	10	18	31	40	48	34	22	19
8.....	9.5	8.2	7.6	7.4	9.9	19	31	48	49	32	20	18
9.....	8.9	8.2	7.6	14	11	19	20	45	49	28	20	19
10.....	8.7	8.2	7.6	9.8	10	19	31	42	49	30	22	18
11.....	8.6	8.2	7.6	8.3	9.9	21	31	40	49	30	22	18
12.....	8.4	8.2	7.6	7.6	9.8	(a)	31	40	49	30	21	19
13.....	8.4	8.1	7.6	7.5	9.6	66	30	41	49	30	21	19
14.....	8.4	8.1	7.6	7.4	9.6	26	31	50	49	30	21	19
15.....	8.3	(b)	7.6	7.4	14	30	31	(a)	49	30	21	18
16.....	8.4	8.0	7.5	8.3	(a)	27	27	(a)	49	30	20	18
17.....	8.4	8.0	7.5	7.6	16	23	26	(a)	39	29	25	18
18.....	8.4	8.0	7.5	7.4	16	22	31	74	39	29	20	18
19.....	8.4	7.0	7.5	7.4	16	23	31	73	39	28	20	17
20.....	8.3	7.0	7.5	7.5	15	26	31	74	39	28	25	18
21.....	8.3	8.0	7.5	10	15	23	31	59	40	29	20	17
22.....	8.2	7.9	7.6	8.3	14	23	31	58	41	28	20	17
23.....	8.2	7.9	7.5	8.1	14	24	31	69	39	26	20	18
24.....	8.2	7.8	7.5	8.1	15	24	31	78	39	26	19	14
25.....	8.2	7.7	7.5	8.0	17	24	31	58	39	26	19	17
26.....	8.2	7.9	7.4	8.0	16	24	31	58	39	26	19	17
27.....	8.2	7.9	7.4	8.0	16	26	31	52	39	26	21	17
28.....	8.1	7.8	7.4	8.0	18	24	31	53	39	26	22	17
29.....	8.2	7.8	7.4	8.0	.....	24	31	56	39	26	21	18
30.....	8.2	7.8	7.4	8.1	.....	24	31	54	39	25	20	17
31.....	8.2	.....	7.4	8.1	.....	24	.....	54	.....	24	20	.....
1905-6.												
1.....	16	15	25	14	13	14	40	40	60	29	29	28
2.....	16	15	15	14	13	15	42	40	60	32	29	28
3.....	16	15	15	14	13	15	43	40	60	32	28	28
4.....	16	15	15	14	13	18	42	40	60	32	28	28
5.....	16	15	15	13	14	15	50	40	60	32	28	28
6.....	16	15	15	13	14	16	50	40	60	30	28	28
7.....	16	21	15	13	13	16	50	45	50	30	28	28
8.....	16	20	15	13	18	16	50	45	50	30	28	28
9.....	16	18	15	13	13	15	55	45	50	30	28	28
10.....	17	16	15	13	14	15	60	45	42	30	28	28
11.....	16	16	15	13	14	15	55	45	42	30	28	28
12.....	16	15	15	13	14	.....	50	40	40	30	28	28
13.....	16	15	15	13	14	60	50	40	40	35	28	28
14.....	16	15	15	14	14	36	50	40	40	30	28	28
15.....	16	16	14	14	16	32	50	40	40	30	28	28
16.....	16	15	15	13	20	(a)	55	40	40	30	28	28
17.....	16	16	15	13	15	(a)	55	40	40	26	28	28
18.....	16	15	15	13	15	40	55	40	40	30	28	28
19.....	16	15	14	24	14	37	55	45	38	30	28	28
20.....	16	16	14	16	15	34	55	45	37	35	28	28
21.....	15	15	17	14	16	34	55	45	37	30	28	27
22.....	15	15	14	14	15	31	55	45	36	30	28	25
23.....	16	15	14	13	15	30	55	45	35	30	28	24
24.....	15	15	14	17	14	.....	55	40	29	30	28	24
25.....	15	15	14	14	14	.....	55	40	35	30	28	24
26.....	15	15	14	14	14	.....	55	45	35	30	28	24
27.....	14	19	14	14	14	(a)	50	45	37	30	28	24
28.....	15	16	14	14	15	50	40	.....	35	30	28	24
29.....	14	16	14	13	.....	45	40	(a)	34	30	28	24
30.....	15	15	14	13	.....	38	40	65	32	30	28	24
31.....	15	.....	14	13	.....	30	.....	55	.....	30	28	.....

^a Discharge over 100 second-feet at time of one daily observation.

^b No record reported.

Daily discharge, in second-feet, of Mill Creek at Forest Home, Cal., for 1903-1911—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1906-7.												
1.....	23	20	16	17	22	30	50	80	50	36	30	30
2.....	23	20	18	17	22	30	50	80	48	38	30	30
3.....	23	20	19	16	22	30	50	80	45	36	30	30
4.....	23	20	18	19	24	40	50	80	45	36	30	30
5.....	23	20	18	27	25	45	50	80	45	36	30	30
6.....	(a)	24	18	23	25	30	55	70	45	36	30	30
7.....	(a)	20	17	17	25	30	60	(b)	45	35	30	30
8.....	(a)	18	17	18	28	30	60	70	45	34	30	30
9.....	23	19	18	20	30	30	65	65	45	34	30	28
10.....	22	19	17	22	30	30	70	70	45	34	30	25
11.....	22	19	17	22	30	30	70	69	45	34	30	26
12.....	22	19	42	20	30	30	70	70	48	34	30	25
13.....	22	18	19	21	30	30	70	70	48	34	30	48
14.....	22	18	18	21	30	30	70	70	48	34	30	25
15.....	21	17	18	21	30	30	70	70	42	34	30	25
16.....	21	18	18	21	30	30	70	70	40	34	30	23
17.....	21	18	17	21	43	30	70	70	50	34	30	27
18.....	21	18	17	20	30	30	70	65	40	34	30	27
19.....	21	17	17	17	30	30	(b)	58	40	34	30	23
20.....	21	16	17	25	30	(b)	80	52	40	34	30	22
21.....	20	16	17	27	30	(b)	80	50	39	34	30	27
22.....	20	16	17	22	50	(b)	80	50	54	34	30	27
23.....	20	16	17	22	30	60	80	50	38	34	30	27
24.....	20	16	17	22	30	60	80	50	38	30	30	27
25.....	20	16	24	22	30	60	80	45	39	30	30	22
26.....	20	16	23	22	30	60	80	50	38	30	30	27
27.....	20	16	26	22	30	60	80	50	40	30	30	22
28.....	20	16	(b)	22	30	60	80	50	40	30	30	22
29.....	20	16	22	22	.....	60	80	50	40	30	30	22
30.....	20	16	20	24	.....	50	80	50	40	30	30	22
31.....	20	.....	20	23	.....	50	.....	50	.....	30	30	.....
1907-8.												
1.....	22	22	18	17	15	20	32	40	40	22	28	14
2.....	22	22	18	17	16	18	32	40	40	21	16	14
3.....	22	22	18	17	19	17	32	40	40	21	16	16
4.....	22	21	18	17	18	16	32	40	38	21	17	15
5.....	22	21	18	17	16	17	32	40	36	20	18	14
6.....	22	21	18	16	16	29	32	40	40	19	28	14
7.....	22	22	18	16	15	16	32	40	40	18	20	16
8.....	22	21	18	16	15	16	32	40	38	20	16	14
9.....	22	21	18	16	15	17	32	40	36	20	55	(b)
10.....	22	21	18	16	15	19	32	40	36	20	29	18
11.....	22	20	18	15	15	20	32	40	34	19	16	14
12.....	22	20	18	14	15	21	33	40	32	19	16	14
13.....	22	20	18	14	15	22	34	40	32	19	16	14
14.....	22	20	18	16	16	26	34	40	31	19	16	15
15.....	22	20	18	15	16	26	34	40	30	19	15	14
16.....	22	20	18	15	17	29	34	40	30	28	16	13
17.....	22	20	18	14	16	32	34	40	30	21	16	13
18.....	22	19	18	14	17	32	34	40	29	20	19	12
19.....	22	19	18	14	16	32	36	40	28	16	17	12
20.....	22	19	18	24	16	32	34	40	28	20	14	13
21.....	22	19	18	14	16	32	34	40	28	19	14	12
22.....	23	19	18	14	16	32	34	40	27	19	14	12
23.....	45	19	18	18	16	32	34	40	26	30	14	12
24.....	22	19	18	20	16	32	37	40	24	20	14	30
25.....	22	18	17	18	14	32	40	40	22	19	14	14
26.....	22	18	17	17	20	32	40	40	22	19	15	12
27.....	22	18	17	15	22	31	40	40	22	19	15	12
28.....	22	18	17	16	22	32	40	40	22	19	15	11
29.....	22	18	17	16	21	32	40	40	22	18	15	12
30.....	22	18	17	16	.....	32	40	40	22	18	15	13
31.....	22	.....	17	16	.....	32	.....	40	.....	18	14	.....

^a No record reported.^b Discharge over 100 second-feet at time of one daily observation.

Daily discharge, in second-feet, of Mill Creek at Forest Home, Cal., for 1903-1911—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1908-9.												
1.....	12	12	11	12	15	23	29	42	40	29	24	22
2.....	12	12	12	12	16	24	30	45	40	29	24	20
3.....	12	12	15	11	18	24	43	48	39	29	24	20
4.....	12	12	13	11	18	24	32	50	39	28	24	20
5.....	13	12	12	11	17	23	30	50	39	28	24	21
6.....	12	12	12	11	18	27	29	50	38	28	24	20
7.....	12	12	12	11	25	28	28	50	38	28	24	20
8.....	12	12	11	11	18	28	28	50	38	28	23	25
9.....	12	12	11	20	29	28	29	50	38	28	23	20
10.....	12	12	11	11	18	28	29	50	38	28	22	20
11.....	12	11	11	12	24	28	31	50	34	28	22	20
12.....	12	11	11	14	25	28	32	47	34	27	22	20
13.....	12	11	11	38	22	28	32	47	34	27	22	20
14.....	12	11	11	45	22	28	35	47	34	27	24	20
15.....	12	11	11	17	20	28	36	44	34	26	(a)	20
16.....	12	12	11	13	21	28	36	44	34	26	(a)	20
17.....	12	11	11	12	24	28	36	44	33	26	(a)	19
18.....	12	11	11	12	24	28	36	44	33	26	29	19
19.....	12	11	11	12	24	28	36	44	32	26	26	19
20.....	12	11	11	12	24	28	36	44	32	25	22	19
21.....	13	11	12	(a)	24	28	36	44	32	25	23	19
22.....	17	11	12	.....	24	28	36	44	32	25	23	19
23.....	20	16	12	45	24	28	36	44	32	32	22	18
24.....	18	11	12	12	24	28	36	44	31	28	22	18
25.....	13	11	12	14	24	28	38	44	31	28	22	18
26.....	19	11	12	14	24	28	39	44	30	25	22	18
27.....	14	11	12	14	24	28	40	44	30	25	23	18
28.....	12	11	12	14	24	28	40	43	30	25	22	18
29.....	12	11	12	14	.....	28	40	42	29	25	22	18
30.....	12	11	12	14	.....	28	42	42	29	25	22	18
31.....	12	.....	12	15	.....	28	.....	41	.....	25	22	.....
1909-10.												
1.....	19	16	16	.....	50	50	60	60	44	36	33	25
2.....	19	16	16	.....	50	50	60	59	45	36	33	25
3.....	18	16	15	(a)	51	50	60	58	45	35	33	25
4.....	14	16	15	55	52	50	60	59	45	35	32	25
5.....	18	16	15	50	52	50	60	60	45	33	32	25
6.....	18	16	24	54	52	50	60	60	44	33	30	24
7.....	18	16	16	56	52	50	60	58	44	33	30	24
8.....	18	16	17	56	52	50	60	58	42	33	30	23
9.....	18	18	.....	53	52	50	60	57	42	32	29	24
10.....	18	16	34	54	52	50	56	57	42	32	29	24
11.....	18	16	24	54	52	50	56	56	42	32	29	24
12.....	17	16	16	54	52	50	60	56	42	32	29	24
13.....	17	16	16	54	52	50	60	55	42	32	29	24
14.....	17	17	16	55	52	50	57	55	42	33	27	24
15.....	17	16	16	55	52	50	54	55	42	36	27	24
16.....	17	18	16	52	52	50	53	55	42	40	28	23
17.....	18	17	15	54	52	50	53	55	41	36	27	23
18.....	18	16	15	53	52	50	53	55	41	36	27	23
19.....	17	16	15	52	52	50	53	54	40	35	27	23
20.....	17	16	15	46	52	50	53	54	39	43	28	22
21.....	17	16	15	46	53	50	54	52	39	41	28	22
22.....	17	16	16	46	52	50	55	51	38	40	27	22
23.....	17	16	16	48	52	50	56	51	38	38	27	22
24.....	17	16	16	48	52	50	56	48	38	37	26	24
25.....	16	16	16	48	52	50	56	49	37	37	27	22
26.....	16	18	16	49	52	50	56	49	37	36	26	22
27.....	16	18	16	50	52	50	56	48	37	36	26	22
28.....	16	16	16	50	52	50	56	48	37	35	25	22
29.....	16	16	16	50	.....	50	56	48	37	35	25	22
30.....	16	16	18	50	.....	60	60	46	36	36	25	22
31.....	16	.....	(a)	50	.....	60	.....	44	.....	35	24	.....

a Discharge over 100 second-feet at time of one daily observation.

Daily discharge, in second-feet, of Mill Creek at Forest Home, Cal., for 1903-1911—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.												
1.....	22	22	22	20	70	50	.....	.....	81	62	40	30
2.....	22	22	22	19	54	49	.....	.....	(a) 60	40	30	30
3.....	22	25	22	20	46	59	.....	.....	81	58	40	29
4.....	22	24	22	20	75	74	.....	.....	81	56	39	30
5.....	22	23	21	20	55	61	.....	.....	81	55	38	30
6.....	22	23	21	20	50	52	.....	.....	81	53	37	39
7.....	22	22	21	20	50	66	.....	.....	81	52	37	30
8.....	22	23	21	20	40	(a)	.....	.....	80	50	36	30
9.....	22	22	21	25	42	.....	.....	.....	80	50	36	30
10.....	22	22	21	.....	43	.....	.....	.....	80	50	35	30
11.....	23	22	21	31	45	.....	.....	.....	80	48	37	29
12.....	23	22	21	22	46	.....	.....	.....	80	48	36	29
13.....	23	23	21	21	44	.....	.....	.....	80	47	35	29
14.....	26	25	21	20	48	.....	.....	.....	78	44	34	29
15.....	27	25	21	48	45	.....	.....	.....	77	46	34	30
16.....	27	25	21	27	45	.....	.....	.....	77	52	34	28
17.....	26	23	22	23	45	.....	.....	.....	77	55	34	28
18.....	24	23	21	22	43	.....	.....	.....	77	56	34	27
19.....	23	23	22	20	42	.....	.....	.....	76	53	33	27
20.....	22	23	23	20	41	.....	.....	.....	76	50	33	27
21.....	23	22	23	20	42	.....	.....	.....	74	52	33	27
22.....	23	22	22	20	40	.....	.....	.....	72	52	33	27
23.....	22	22	22	20	(a)	.....	.....	.....	70	52	32	26
24.....	22	22	22	29	42	.....	.....	.....	68	49	32	26
25.....	22	22	21	37	42	.....	.....	.....	66	48	32	26
26.....	22	23	21	27	42	.....	.....	97	65	48	32	26
27.....	22	23	21	25	45	.....	.....	95	64	46	32	27
28.....	22	22	21	27	48	.....	.....	92	64	46	32	32
29.....	22	22	21	.....	.....	.....	.....	90	62	45	32	37
30.....	22	22	21	80	.....	.....	.....	88	62	44	31	45
31.....	22	.....	20	(a)	.....	.....	.....	86	.....	42	31	.....

Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.
1911.				1911.				1911.			
1.....	37	28	25	11.....	31	27	24	21.....	26	25	24
2.....	35	27	24	12.....	30	28	24	22.....	27	25	24
3.....	34	27	25	13.....	29	27	24	23.....	27	25	23
4.....	34	26	24	14.....	29	26	24	24.....	27	26	23
5.....	33	26	24	15.....	30	26	24	25.....	27	25	23
6.....	33	26	25	16.....	29	26	24	26.....	28	25	23
7.....	32	26	26	17.....	28	25	26	27.....	32	25	22
8.....	32	26	25	18.....	28	25	24	28.....	30	29	23
9.....	32	26	25	19.....	27	25	24	29.....	29	24	24
10.....	31	26	24	20.....	27	25	24	30.....	29	25	23
								31.....	28	.....	23

^a Discharge over 100 second-feet at time of one daily observation.

NOTE.—For days on which no record is given, and not otherwise noted, the discharge was over 100 second-feet.

Monthly discharge of Mill Creek at Forest Home, Cal., for 1903-1911.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).
	Maximum.	Minimum.	Mean.	
1903.				
September 23-30.....	18	13	15.6	247
1903-4.				
October.....	19	12	13.7	842
November.....	12	11	11.4	678
December.....	11	10	10.5	646
January.....	10	9.0	9.50	584
February.....	14	8.9	9.76	561
March.....	50	9.4	14.4	885
April 1-2, 4-30.....	26	14	18.1	1,040
May.....	17	15	15.7	965
June.....	15	11	12.7	756
July.....	12	9.0	10.2	627
August 1-5, 7-31.....	12	9.8	10.6	631
September.....	11	8.4	9.07	540
1904-5.				
October.....	9.5	8.1	8.37	515
November 1-14, 16-30.....	8.2	7.0	7.98	459
December.....	7.8	7.4	7.55	464
January.....	14	7.4	8.08	497
February 1-15, 17-28.....	18	8.2	13.0	696
March 1-11, 13-31.....	66	18	23.8	1,420
April.....	31	20	29.0	1,730
May 1-14, 18-31.....	78	36	52.6	2,920
June.....	54	39	44.6	2,650
July.....	38	24	29.7	1,830
August.....	25	19	21.5	1,320
September.....	20	14	18.0	1,070
1905-6.				
October.....	17	14	15.6	959
November.....	21	15	15.8	940
December.....	25	14	15.0	922
January.....	24	13	14.0	861
February.....	20	13	14.5	805
March 1-15, 18-23, 28-31.....	60	14	27.8	1,320
April.....	60	40	50.4	3,000
May 1-27, 30-31.....	65	40	43.4	2,500
June.....	60	29	43.1	2,560
July.....	35	26	30.4	1,870
August.....	29	28	28.1	1,730
September.....	28	24	26.8	1,590
1906-7.				
October 1-5, 9-31.....	23	20	21.2	1,180
November.....	24	16	17.9	1,070
December 1-27, 29-31.....	42	16	19.3	1,150
January.....	27	16	21.1	1,300
February.....	50	22	29.5	1,640
March 1-19, 23-31.....	60	30	39.8	2,210
April 1-18, 20-30.....	80	50	69.0	3,970
May 1-6, 8-31.....	80	45	62.8	3,740
June.....	54	38	43.5	2,590
July.....	38	30	33.5	2,060
August.....	30	30	30.0	1,840
September.....	48	22	27.0	1,610
1907-8.				
October.....	45	22	22.8	1,400
November.....	22	18	19.8	1,180
December.....	18	17	17.8	1,090
January.....	24	14	16.1	990
February.....	22	14	16.6	955
March.....	32	16	26.1	1,600
April.....	40	32	34.6	2,060
May.....	40	40	40.0	2,460
June.....	40	22	30.8	1,830
July.....	30	16	20.0	1,230
August.....	55	14	18.2	1,120
September 1-8, 10-30.....	30	11	14.1	811

Monthly discharge of Mill Creek at Forest Home, Cal., for 1903-1911—Continued.

Month.	Discharge in second-feet.			Run-off (total in acre-feet.)
	Maximum.	Minimum.	Mean.	
1908-9.				
October.....	20	12	13.0	799
November.....	16	11	11.5	684
December.....	15	11	11.7	719
January 1-20, 23-31.....	45	11	16.0	920
February.....	29	15	21.9	1,220
March.....	28	23	27.3	1,680
April.....	43	28	34.5	2,050
May.....	50	41	45.7	2,810
June.....	40	29	34.2	2,040
July.....	32	25	26.9	1,650
August 1-14, 18-31.....	29	22	23.1	1,280
September.....	25	18	19.5	1,160
1909-10.				
October.....	19	14	17.1	1,050
November.....	18	16	16.3	970
December 1-8, 10-30.....	34	15	17.0	978
January 4-31.....	56	46	51.5	2,860
February.....	53	50	51.9	2,880
March.....	60	50	50.6	3,110
April.....	60	53	57.0	3,390
May.....	60	44	53.9	3,310
June.....	45	36	40.8	2,430
July.....	43	32	35.5	2,180
August.....	33	24	28.2	1,730
September.....	25	22	23.3	1,390
1910-11.				
October.....	27	22	22.8	1,400
November.....	25	22	22.8	1,360
December.....	23	20	21.4	1,320
January 1-9, 11-28, 30.....	80	19	25.8	1,430
February 1-22, 23-28.....	75	40	47.0	2,520
March 1-7.....	74	49	58.7	815
April.....				
May 26-31.....	97	86	91.3	1,090
June 1, 3-30.....	81	62	74.9	4,310
July.....	62	42	50.6	3,110
August.....	40	31	34.6	2,130
September.....	45	26	29.4	1,750
1911.				
October.....	37	26	30.0	1,840
November.....	29	24	25.9	1,540
December.....	26	22	24.0	1,480

NOTE.—Monthly values computed by engineers of the United States Geological Survey.

Miscellaneous discharge measurements of Mill Creek, San Bernardino County, Cal.

Date.	Hydrographer.	Locality.	Discharge.
			<i>Second-feet.</i>
July 15, 1899	S. G. Bennett.....	Redlands Power Co., lower intake.....	8.9
Oct. 2, 1900	W. W. Cockins, jr.....	do.....	7.3
Mar. 22, 1904	Clapp and Murphy.....	Wier at Edison electric power house, Nos. 2 and 3.....	17.6
Sept. 21, 1904	W. B. Clapp.....	do.....	14.1
Nov. 11, 1904	E. C. La Rue.....	do.....	11.2
Apr. 14, 1905		At road crossing between Mentone and Santa Ana Canyon.....	46
June 26, 1907		Above upper division, Edison Electric Co.....	61
Sept. 18, 1907		Below power plant No. 1, Edison Electric Co.....	33

PLUNGE, CITY, EAST TWIN, AND WEST TWIN CREEKS IN CANYON, SAN BERNARDINO COUNTY, CAL.

Plunge Creek, City Creek, East Twin Creek, and West Twin Creek, all rise on the southern slope of Sierra Madre and flow southward into the Santa Ana Valley, although all the flow is used for irrigation before it reaches the Santa Ana River.

Discharge measurements of Plunge Creek, at head works in canyon, San Bernardino County, Cal., in 1898-1907.

Date.	Hydrographer.	Dis-charge.	Date.	Hydrographer.	Dis-charge.
1898.		<i>Sec.-feet.</i>	1904.		<i>Sec.-feet.</i>
June 12	J. B. Lippincott.....	2.30	Sept. 21	W. B. Clapp.....	0.6
Sept. 9	do.....	.20	1905.		
1899.			Sept. 22		1
Mar. 25	S. G. Bennett.....	10.90	1907.		
Aug. 25	do.....	.50	Sept. 19		3
1900.			1903.		
July 12	S. G. Bennett.....	.34	Apr. 23 ^a	W. B. Clapp.....	.0
1902.			May 17 ^a	do.....	.0
Apr. 7	S. G. Bennett.....	12.40	1905.		
Sept. 4	W. B. Clapp.....	.37	Apr. 15 ^a		9.9
1903.					
Apr. 23	W. B. Clapp and J. C. Clausen.	.23			
May 17	W. B. Clapp.....	.9			
Sept. 11	do.....	.6			

^a Measurement made at Orange Avenue.

Discharge measurements of City Creek at mouth of canyon, San Bernardino County, Cal., in 1898-1907.

Date.	Hydrographer.	Dis-charge.	Date.	Hydrographer.	Dis-charge.
1898.		<i>Sec.-feet.</i>	1903.		<i>Sec.-feet.</i>
June 11	J. B. Lippincott.....	3.03	Apr. 23	W. B. Clapp and J. C. Clausen.	.22
Sept. 9	do.....	.07	May 17	W. B. Clapp.....	11.2
1899.			Sept. 11	do.....	.2
Mar. 25	S. G. Bennett.....	8.80	1904.		
Aug. 25	do.....	.17	Sept. 22	W. B. Clapp.....	.5
1900.			1905.		
July 12	S. G. Bennett.....	.16	Sept. 23	W. B. Clapp.....	1.16
Oct. 1	W. W. Cockins, jr.....	.21	1907.		
1902.			Sept. 19		4.6
Apr. 7	S. G. Bennett.....	12.5			
Sept. 4	W. B. Clapp.....	.2			

Discharge measurements of East Twin Creek in canyon, San Bernardino County, Cal., in 1898-1903.

Date.	Hydrographer.	Dis-charge.	Date.	Hydrographer.	Dis-charge.
1898. June 11	J. B. Lippincott.....	<i>Sec.-ft.</i> a 1.95 b 1.11	1900. Oct. 1	W. W. Cockins, jr.....	<i>Sec.-ft.</i> a. 36 b. 21
	Total.....	2.06		Total.....	.57
Sept. 9	J. B. Lippincott.....	a. 43 b. 30	1902. Apr. 4	S. G. Bennett.....	<i>c</i> 4.7 b. 2
	Total.....	.73		Total.....	4.9
1899. Mar. 24	S. G. Bennett.....	a3.88 b. 50	Sept. 4	W. B. Clapp.....	.4
	Total.....	4.38	1903. Apr. 23	Clapp and Clausen.....	<i>c</i> 10
Aug. 25	S. G. Bennett.....	a. 58 b. 16	May 17	W. B. Clapp.....	<i>c</i> 3.2 a 1.6
	Total.....	.74		Total.....	4.8
1900. July 12	S. G. Bennett.....	<i>a</i> 62 b. 15	Sept. 11	W. B. Clapp (total).....	a. 4
	Total.....	.77			

a Ditch

b Tunnel.

c Creek.

Discharge measurements of East Twin Creek, San Bernardino County, Cal., in 1903-1907.

Date.	Hydrographer.	Locality.	Dis-charge.
1903. Apr. 23	W. B. Clapp.....	1 mile above Southern California Ry.....	<i>Sec.-ft.</i> 0.0
May 17	do.....	do.....	.0
1904. Sept. 22	W. B. Clapp.....	Head of pipe line.....	.6
1905. Sept. 23	W. B. Clapp.....	Near Arrowhead Springs.....	.54
1906. July 14	do.....	do.....	2.7
1907. Sept. 17	do.....	do.....	2.3

Discharge measurements of West Twin Creek^a in canyon, San Bernardino County, Cal., in 1898-1902.

Date.	Hydrographer.	Dis-charge.	Date.	Hydrographer.	Dis-charge.
1898. June 11	J. B. Lippincott.....	<i>Sec.-ft.</i> b1.06 c.68 d.40	1899. Aug. 25	S. G. Bennett.....	<i>Sec.-ft.</i> 0.20
	Total.....	2.14	1900. July 12	S. G. Bennett.....	.22
Sept. 9	J. B. Lippincott.....	.38	Oct. 1	W. W. Cockins, jr.....	.16
1899. Mar. 21	S. G. Bennett.....	3.00	1902. Apr. 4	S. G. Bennett.....	3.20
			Sept. 4	W. B. Clapp.....	.13

^a More recently called Waterman Canyon Creek.

^b Pipe line to Waterman ranch.

^c Flume to Settlers.

^d Hot Springs at Old ranch.

Discharge measurements of West Twin Creek,^a San Bernardino County, Cal., in 1903-1907.

Date.	Hydrographer.	Locality.	Dis-charge.
1903. Apr. 23	Clapp and Clausen.....	Mouth of canyon.....	<i>Sec.-ft.</i> 8.6
23	W. B. Clapp.....	Southern California Ry.....	.0
May 18	do.....	do.....	.0
18	do.....	Total at mouth of canyon.....	4.4
Sept. 11	do.....	do.....	.3
1904. Sept. 21	W. B. Clapp.....	Head of pipe line.....	.4
1905. July 13	K. Sanborn.....	Near Arrowhead Springs.....	1.02
1906. July 14	K. Sanborn.....	Mouth of canyon.....	4
1907. Sept. 17	K. Sanborn.....	Near Arrowhead Springs.....	2

^a More recently called Waterman Canyon Creek.

WATERMAN CANYON CREEK NEAR SAN BERNARDINO, CAL.

This station, which is located just above the old toll bridge at the mouth of the canyon in the SW. $\frac{1}{4}$ SW. $\frac{1}{4}$ sec. 2, T. 1 N., R. 4 W., about 6 miles north of San Bernardino, was established November 2, 1911.

The gage is a vertical staff fastened to an alder tree on the left bank about 300 feet above the bridge. The channel is composed of boulders and gravel and will shift at high stages. The drainage area is 4.55 square miles and was almost entirely burned over by a forest fire July 25 to August 4, 1911.

Discharge measurements are made from a foot plank 15 feet below the gage or by wading. The results are considered fair.

Discharge measurements of Waterman Canyon Creek near San Bernardino, Cal., 1911-12.

Date.	Hydrographer.	Gage height.	Discharge.	Date.	Hydrographer.	Gage height.	Discharge.
1911.		<i>Feet.</i>	<i>Sec.-ft.</i>	1912.		<i>Feet.</i>	<i>Sec.-ft.</i>
Nov. 2	F. C. Ebert.....	1.62	1.8	Feb. 18	F. C. Ebert.....	1.62	1.8
				Mar. 9	.....do.....	1.94	8.2
1912.				Mar. 19	.....do.....	1.88	4.5
Jan. 10	F. C. Ebert.....	1.72	2.1	Apr. 19	.....do.....	2.01	9.2
12	.....do.....	1.70	2.1	May 28	.....do.....	1.78	2.8
30	.....do.....	1.65	2.1				

Daily gage height, in feet, of Waterman Canyon Creek near San Bernardino, Cal., for 1911-12.

Day.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1.....		1.76	1.77	1.65	1.67	1.93	1.89	1.8
2.....	1.61	1.77	1.75	1.67	1.64	1.92	1.88	1.8
3.....	1.63	1.77	1.75	1.68	1.63	1.91	1.87	1.8
4.....	1.63	1.77	1.76	1.7	1.73	1.9	1.86	1.8
5.....	1.66	1.73	1.76	1.69	.....	1.9	1.85	1.8
6.....	1.63	1.73	1.76	1.68	.....	1.9	1.87	1.8
7.....		1.81	1.76	1.68	.....	1.9	1.87	1.8
8.....	1.66	1.79	1.76	1.68	.....	1.91	1.88	1.8
9.....	1.67	1.77	1.76	1.68	1.94	2.2	1.88	1.8
10.....	1.67	1.77	1.76	1.67	2.6	2.03	1.87	1.8
11.....	1.72	1.73	1.74	1.67	2.3	2.25	1.86	1.8
12.....	1.69	1.71	1.72	1.67	2.5	2.15	1.86	1.8
13.....	1.69	1.71	1.7	1.68	2.2	2.1	1.85	1.8
14.....	1.69	1.72	1.7	1.68	2.15	2.1	1.85	1.79
15.....	1.69	1.72	1.7	1.69	2.1	2.1	1.85	1.79
16.....	1.72	1.71	1.7	1.69	2.05	2.08	1.84	1.77
17.....	1.73	1.77	1.69	1.68	2.0	2.06	1.84	1.75
18.....	1.74	1.77	1.69	1.64	1.98	2.05	1.84	1.75
19.....	1.74	1.74	1.69	1.63	1.92	2.02	1.84	1.77
20.....	1.73	1.74	1.68	1.65	1.95	1.99	1.84	.75
21.....	1.74	1.74	1.68	1.62	1.92	1.98	1.84	1.78
22.....	1.74	1.76	1.68	1.62	1.93	1.96	1.84	1.8
23.....	1.74	1.77	1.67	1.62	1.9	1.95	1.84	1.8
24.....	1.74	1.76	1.67	1.63	1.89	1.94	1.84	1.78
25.....	1.74	1.76	1.68	1.64	1.98	1.94	1.83	1.78
26.....	1.74	1.76	1.68	1.64	1.98	1.93	1.83	1.79
27.....	1.74	1.76	1.68	1.64	1.99	1.94	1.83	1.79
28.....	1.74	1.79	1.68	1.63	1.94	1.92	1.81	1.79
29.....	1.76	1.79	1.67	1.6	1.92	1.9	1.8	1.8
30.....	1.76	1.81	1.67	.....	1.94	1.89	1.8	1.78
31.....		1.79	1.67	.....	.....	.....	1.8	

NOTE.—Flood of Mar. 5-8, 1912 partially destroyed the gage and filled channel with sand and gravel, which scoured out as flood subsided.

Daily discharge, in second feet, of Waterman Canyon Creek near San Bernardino, Cal., for 1911-12. •

Day.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1.....	1.7	2.9	2.9	1.9	2.0	6.2	5.0	3.2
2.....	1.7	3.0	2.7	2.0	1.8	5.9	4.8	3.2
3.....	1.8	3.0	2.7	2.1	1.8	5.5	4.6	3.2
4.....	1.8	3.0	2.8	2.2	2.5	5.2	4.4	3.2
5.....	2.0	2.5	2.8	2.1	.....	5.2	4.2	3.2
6.....	1.8	2.5	2.8	2.1	.....	5.2	4.6	3.2
7.....	1.9	3.5	2.8	2.1	.....	5.2	4.6	3.2
8.....	2.0	3.2	2.8	2.1	.....	5.5	4.8	3.2
9.....	2.0	3.0	2.8	2.1	8.2	20	4.8	3.2
10.....	2.0	3.0	2.8	2.0	57	10.	4.6	3.2
11.....	2.4	2.5	2.6	2.0	30	24	4.4	3.2
12.....	2.1	2.3	2.4	2.0	47	16.7	4.4	3.2
13.....	2.1	2.3	2.2	2.1	22	13.4	4.2	3.2
14.....	2.1	2.4	2.2	2.1	18	13.4	4.2	3.1
15.....	2.1	2.4	2.2	2.1	14	13.4	4.2	3.1
16.....	2.4	2.3	2.2	2.1	12	12.4	4.0	2.9
17.....	2.5	3.0	2.1	2.1	8.8	11.4	4.0	2.7
18.....	2.6	3.0	2.1	1.8	7.8	11.0	4.0	2.7
19.....	2.6	2.6	2.1	1.8	5.9	9.5	4.0	2.9
20.....	2.5	2.6	2.1	1.9	6.8	8.2	4.0	2.7
21.....	2.6	2.6	2.1	1.7	5.9	7.8	4.0	3.0
22.....	2.6	2.9	2.1	1.7	6.2	7.2	4.0	3.2
23.....	2.6	3.0	2.0	1.7	5.2	6.8	4.0	3.2
24.....	2.6	2.9	2.0	1.8	5.0	6.5	4.0	3.0
25.....	2.6	2.9	2.1	1.8	7.8	6.5	3.8	3.0
26.....	2.6	2.9	2.1	1.8	7.8	6.2	3.8	3.1
27.....	2.6	2.9	2.1	1.8	8.2	6.5	3.8	3.1
28.....	2.6	3.2	2.1	1.8	6.5	5.9	3.4	3.1
29.....	2.9	3.2	2.0	1.6	5.9	5.2	3.2	3.2
30.....	2.9	3.5	2.0	.....	6.5	5.0	3.2	3.0
31.....	.....	3.2	2.0	.....	6.4	.....	3.2	.....

NOTE.—Daily discharge determined from a fairly well-defined rating curve applicable Nov. 2, 1911, to Mar. 4, 1912, and Mar. 19 to June 30, 1912. Indirect method for shifting channels used Mar. 9-18, 1912. No estimates have been attempted for the flood period Mar. 5-8, 1912.

Monthly discharge of Waterman Canyon Creek near San Bernardino, Cal., for 1911-12.

Month.	Discharge in second-feet.			Run-off (total in acre-feet.)	Accu- racy.
	Maximum.	Minimum.	Mean.		
November.....	2.8	1.7	2.28	136	B.
December.....	3.4	2.3	2.78	171	B.
January.....	2.9	2.0	2.35	144	B.
February.....	2.2	1.6	1.94	112	B.
April.....	24	5.0	9.03	537	B.
May.....	5.0	3.2	4.14	255	B.
June.....	3.2	2.7	3.09	184	B.

DEVIL CANYON CREEK NEAR SAN BERNARDINO, CAL.

This station, which is located at the mouth of the canyon, in the SE. $\frac{1}{4}$ NE. $\frac{1}{4}$, sec. 6, T. 1 N., R. 4 W., about 200 feet below the ford, about 7 miles northwest of San Bernardino, was established November 1, 1911.

The gage is a vertical staff fastened to an alder tree on the left bank about 200 feet below the ford. The channel is composed of boulders and gravel. Discharge measurements are made from a foot plank about 75 feet below the gage or by wading.

This station is maintained in cooperation with the United States Forest Service, by whom the gage-height record was furnished. The results are considered good.

The area drained by Devil Canyon Creek is similar in all respects to that tributary to Waterman Canyon Creek except that it retains its forest cover.

Discharge measurements of Devil Canyon Creek near San Bernardino, Cal., in 1911-12.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1911.		<i>Feet.</i>	<i>Sec ft.</i>	1912.		<i>Feet.</i>	<i>Sec.-ft.</i>
Nov. 1	F. C. Ebert	1.48	2.1	Mar. 10	F. C. Ebert	2.15	18
1912.				19	do.	1.74	4.5
Jan. 12	F. C. Ebert	1.55	2.9	Apr. 19	do.	1.89	7.2
Feb. 19	do.	1.51	2.0	May 28	do.	1.63	2.5

Daily gage height, in feet, of Devil Canyon Creek near San Bernardino, Cal., for 1911-12.

Day.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1.	1.46	1.53	1.52	-----	1.6	-----	1.75	1.6
2.	1.47	1.53	-----	-----	-----	1.71	-----	1.6
3.	1.48	1.52	-----	-----	-----	-----	1.75	-----
4.	1.49	1.56	-----	1.5	1.95	-----	-----	-----
5.	1.49	1.54	1.57	-----	-----	1.7	1.74	-----
6.	1.49	1.62	-----	-----	2.16	-----	1.75	-----
7.	1.50	1.61	1.55	-----	-----	1.7	-----	1.6
8.	1.51	1.59	-----	-----	-----	1.69	1.79	1.59
9.	1.52	-----	-----	-----	-----	1.86	1.76	1.6
10.	1.69	-----	-----	-----	2.18	1.96	1.74	1.6
11.	1.56	-----	-----	1.51	1.95	2.16	1.73	1.6
12.	1.52	-----	1.55	-----	2.12	2.19	1.74	-----
13.	1.52	-----	-----	-----	-----	1.98	1.73	1.6
14.	1.52	-----	1.52	-----	-----	2.0	1.71	1.6
15.	1.50	-----	-----	-----	-----	2.0	1.7	-----
16.	1.50	-----	-----	-----	-----	1.98	1.68	1.6
17.	1.50	-----	-----	-----	1.92	1.95	1.66	1.58
18.	1.49	-----	-----	1.5	-----	1.92	1.64	1.58
19.	1.49	-----	-----	1.51	1.74	1.9	1.63	1.58
20.	1.50	-----	-----	-----	1.79	1.88	1.63	1.57
21.	1.52	-----	1.52	-----	-----	1.85	-----	1.57
22.	1.54	-----	-----	1.5	-----	1.82	1.63	1.58
23.	1.54	-----	-----	-----	-----	1.8	1.62	1.56
24.	1.57	-----	-----	-----	1.72	1.79	-----	1.55
25.	1.56	-----	-----	1.5	-----	1.78	1.62	1.53
26.	1.54	-----	-----	-----	-----	1.82	1.62	1.53
27.	1.54	-----	-----	-----	-----	1.8	1.61	1.52
28.	1.55	-----	1.52	-----	-----	1.78	1.61	1.51
29.	1.55	-----	-----	1.5	1.78	1.76	1.60	1.5
30.	1.54	-----	-----	-----	-----	1.75	1.60	1.5
31.	-----	-----	-----	-----	1.77	-----	1.60	-----

NOTE.—Flood existed at this station Mar. 5-9, 1912. Maximum gage height was 2.5 feet.

Daily discharge, in second-feet, of Devil Canyon Creek near San Bernardino, Cal., for 1911-12.

Day.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1.....	2.0	2.4	2.3	2.3	2.8	4.6	4.7	2.8
2.....	2.1	2.4	2.3	2.3	5.0	4.1	4.7	2.8
3.....	2.1	2.3	2.4	2.3	7.2	4.0	4.7	2.8
4.....	2.2	2.6	2.5	2.2	9.4	3.9	4.6	2.8
5.....	2.2	2.4	2.6	2.2	.....	3.9	4.5	2.8
6.....	2.2	3.0	2.5	2.2	.....	3.9	4.7	2.8
7.....	2.2	2.9	2.5	2.2	.....	3.9	5.0	2.8
8.....	2.3	2.7	2.5	2.3	.....	3.8	5.3	2.7
9.....	2.3	.....	2.5	2.3	.....	6.9	4.9	2.8
10.....	3.8	.....	2.5	2.3	19	9.7	4.5	2.8
11.....	2.6	.....	2.5	2.3	9.4	18	4.4	2.8
12.....	2.3	.....	2.5	2.3	16	20	4.5	2.8
13.....	2.3	.....	2.4	2.3	14	10	4.4	2.8
14.....	2.3	.....	2.3	2.3	12	11	4.1	2.8
15.....	2.2	.....	2.3	2.2	11	11	3.9	2.8
16.....	2.2	.....	2.3	2.2	10	10	3.7	2.8
17.....	2.2	.....	2.3	2.2	8.4	9.4	3.5	2.7
18.....	2.2	.....	2.3	2.2	6.4	8.4	3.2	2.7
19.....	2.2	.....	2.3	2.3	4.5	7.8	3.1	2.7
20.....	2.2	.....	2.3	2.3	5.3	7.3	3.1	2.6
21.....	2.3	.....	2.3	2.2	5.0	6.6	3.1	2.6
22.....	2.4	.....	2.3	2.2	4.7	6.0	3.1	2.7
23.....	2.4	.....	2.3	2.2	4.4	5.5	3.0	2.6
24.....	2.6	.....	2.3	2.2	4.2	5.3	3.0	2.5
25.....	2.6	.....	2.3	2.2	4.4	5.2	3.0	2.4
26.....	2.4	.....	2.3	2.2	4.6	6.0	3.0	2.4
27.....	2.4	.....	2.3	2.2	4.8	5.5	2.9	2.3
28.....	2.5	.....	2.3	2.2	5.0	5.2	2.9	2.3
29.....	2.5	.....	2.3	2.2	5.2	4.9	2.8	2.2
30.....	2.4	.....	2.3	.....	5.1	4.7	2.8	2.2
31.....	.....	.....	2.3	.....	5.0	.....	2.8	.....

NOTE.—Daily discharge determined from a fairly well defined rating curve. Discharge interpolated for days on which gage was not read except Dec. 9-31, 1911, and Mar. 5-9, 1912, which was a flood period and for which no estimates have been made.

Monthly discharge of Devil Canyon Creek near San Bernardino, Cal., for 1911-12.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
November.....	3.8	2.0	2.35	140	D.
December 1-8.....	3.0	2.3	2.59	41.1	D.
January.....	2.6	2.3	2.37	146	B.
February.....	2.3	2.2	2.24	129	B.
April.....	20	3.8	7.22	430	B.
May.....	5.3	2.8	3.80	234	B.
June.....	2.8	2.2	2.65	158	B.

LYTLE CREEK AT MOUTH OF CANYON, CAL.

This small stream drains the southern slope of the Sierra Madre and discharges its waters upon the plains northwest of San Bernardino. Although it drains a comparatively small area of 54 square miles, at the mouth of the canyon its waters are important for irrigation purposes. Owing to the controversies which have arisen over its diversions, a number of lawsuits for the settlement of the claims have been instituted from time to time. A number of measurements of this

stream at the mouth of the canyon from 1892 to 1896, inclusive, are given below. They are copied from court records of proceedings in which the water supply of this creek was involved. These cases were tried in the San Bernardino courts by Judge A. W. McKinley. The measurements were made by A. H. Koebig and G. O. Newman, on weirs, and are believed to be accurate.

Discharge measurements of Lytle Creek at mouth of canyon, Cal.

Date.	Discharge.	Date.	Discharge.	Date.	Discharge.
1892.	<i>Second-feet.</i>	1894.	<i>Second-feet.</i>	1896.	<i>Second-feet.</i>
June 3.....	35.58	June 6.....	17.96	Mar. 3.....	18.08
Sept. 20.....	18.70	8.....	15.50	Apr. 23.....	19.14
30.....	22.04	July 10.....	13.22	24.....	18.60
Oct. 28.....	20.64	11.....	13.22	25.....	20.52
Nov. 21.....	22.04	25.....	13.36	May 3.....	18.52
27.....	20.68	Aug. 19.....	11.44	4.....	17.26
		25.....	12.32	10.....	18.16
		Oct. 3.....	16.20	25.....	15.32
				26.....	12.84
1893.					
Sept. 7.....	49.20				
18.....	49.20				
25.....	46.34	1895.			
Oct. 4.....	45.30	Sept. 2.....	56.10		
		30.....	40.78		

Beginning in 1894, measurements of Lytle Creek were also made by H. D. Sibley, who waszanjero of the Lytle Creek canals at that time. The measurements were usually made because the discharge of the stream was below normal. In the winter and spring only the amount of water needed for irrigation was turned into the ditches, but later in the summer the entire flow was diverted. These measurements also were made over weirs, and are believed to be fairly accurate. During 1898 trouble was experienced by miners taking the water from the natural channel and turning it into dry channels, sluice boxes, weirs, mill races, etc., thereby causing a loss of from 20 to 25 per cent of the total flow of the creek. Only a portion of these latter diversions were returned to the creek. The measurements of Mr. Sibley would not show the full flow of Lytle Creek at all times, and sometimes show less than the full discharge, for the reasons mentioned above. During 1899 the amount of water which was diverted into the main canal was measured daily by the Anglo-American Canaigre Co., at a weir erected near the head of its cement ditch. The volumes given have been occasionally checked by visiting the canal and making meter measurements. It is believed that during 1899 practically all of the water of the stream was diverted into the canal.

Daily discharge, in second-feet, of Lytle Creek main canal above Rialto, Cal., for 1894-1901.

Day.	Apr.	May.	June.	July.	Aug.	Sept.	Day.	Apr.	May.	June.	July.	Aug.	Sept.
1894.							1894.						
1.....			15.5				16.....	22.6		14.4			
2.....							17.....		19.1				
3.....		24.1	17.2		10.9		18.....			15.0		13.7	11.5
4.....							19.....	22.6			14.1		
5.....	16.1			10.8			20.....						
6.....		22.6					21.....			14.8	12.7		
7.....			14.1				22.....	24.9				11.9	12.7
8.....	19.9				10.8	13.0	23.....			14.6			
9.....							24.....		18.2	14.9			
10.....							25.....	25.4					
11.....	17.8	18.5	14.3	10.8			26.....						
12.....							27.....			15.0			
13.....	21.8			13.4			28.....		16.6				
14.....			14.3			13.2	29.....						
15.....							30.....						
							31.....				11.7	13.4	

Day.	Oct.	Nov.	Apr.	May.	June.	July.	Aug.	Sept.
1894-95.								
1.....					54.4			
2.....								
3.....		13.5						
4.....					68.0			51.4
5.....								
6.....								
7.....	11.4	14.5						
8.....				33.9				
9.....		13.7						
10.....								48.8
11.....	13.7							
12.....								50.8
13.....								
14.....								
15.....								
16.....							50.4	
17.....								44.8
18.....	14.5		26.4	43.8				
19.....								
20.....								
21.....				57.5				
22.....		12.9						
23.....			37.4				52.5	
24.....								47.1
25.....	14.2							
26.....							54.4	
27.....								
28.....								36.5
29.....								
30.....		12.5						
31.....								

[illegible][illegible]

Daily discharge, in second-feet, of Lytle Creek main canal above Rialto, Cal., for 1894-1901—Continued.

Day.	May.	June.	July.	Day.	May.	June.	July.	Day.	May.	June.	July.
1898.				1898.				1898.			
1.....			10.9	11.....				21.....			
2.....				12.....				22.....		11.7	
3.....				13.....				23.....			
4.....				14.....				24.....			
5.....				15.....		13.9		25.....			
6.....				16.....				26.....			
7.....				17.....				27.....			
8.....				18.....				28.....	14.6	9.0	
9.....				19.....				29.....			
10.....				20.....		11.5		30.....			
								31.....			

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1899.												
1.....	11.1	11.8	11.2	9.7	11.2	12.2	6.3	9.4	14.5	10.9	10.5	11.1
2.....	12.1	12.1	11.1	8.9	10.9	10.4	6.8	10.4	15.1	10.8	10.3	11.3
3.....	12.1	12.1	11.2	8.5	10.9	9.7	6.4	9.6	16.6	10.8	10.3	11.4
4.....	11.4	12.4	11.1	12.6	10.5	9.5	6.4	10.7	16.7	10.8	10.6	11.1
5.....	11.7	12.4	10.8	12.5	10.5	9.4	6.4	12.2	16.0	10.7	10.5	11.3
6.....	11.6	12.5	10.6	12.1	10.5	9.6	6.4	11.0	16.0	10.6	10.6	11.3
7.....	11.6	12.6	10.4	11.9	10.5	9.2	6.3	10.8	16.0	10.1	10.6	11.3
8.....	11.6	12.4	10.4	11.8	10.2	9.0	6.2	11.0	15.9	9.9	9.9	11.6
9.....	11.6	12.1	10.9	11.7	11.8	6.2	11.0	16.5	10.2	9.9	11.4	
10.....	12.0	11.8	10.6	11.9	9.5	7.2	6.0	8.7	16.1	10.8	10.0	11.5
11.....	16.1	11.8	10.6	11.7	9.5	7.5	5.9	12.0	16.0	11.7	10.2	11.4
12.....	13.1	11.8	10.6	11.7	9.2	8.2	6.0	12.0	15.8	12.1	10.5	11.3
13.....	12.2	11.8	10.7	11.0	9.6	8.1	5.9	12.2	15.3	12.4	10.9	11.2
14.....	12.0	11.6	10.7	10.6	9.5	7.8	5.9	12.1	15.4	13.5	11.0	11.1
15.....	11.9	11.5	10.7	10.6	9.8	7.3	6.0	12.3	16.0	12.7	11.3	11.2
16.....	12.0	11.5	15.3	10.7	9.4	7.6	6.0	12.3	15.5	13.0	11.7	12.9
17.....	12.0	11.5	14.7	10.6	9.4	7.8	5.8	12.2	15.3	13.0	11.5	11.8
18.....	12.0	11.3	13.7	10.7	9.4	7.9	5.4	12.6	14.3	12.3	12.0	11.8
19.....	11.9	11.4	12.3	10.2	9.7	7.7	5.6	13.0	15.7	12.0	11.9	11.6
20.....	11.8	11.3	13.7	10.8	9.8	7.3	5.6	13.0	14.9	11.4	11.8	11.6
21.....	11.7	11.3	13.1	9.9	9.5	7.5	5.8	12.5	15.2	11.2	12.2	11.3
22.....	11.8	11.3	12.9	9.9	9.4	7.6	7.2	12.4	16.1	11.6	12.7	11.1
23.....	11.7	11.3	12.8	10.3	9.4	7.4	8.6	12.4	10.8	11.9	12.1	11.1
24.....	11.6	11.8	13.2	10.6	9.2	7.1	9.3	12.5	10.4	10.3	12.0	11.1
25.....	11.6	11.4	14.8	10.5	9.2	7.2	8.9	12.4	10.3	10.7	13.8	10.9
26.....	11.6	11.4	13.5	10.4	9.0	7.4	9.2	12.6	10.3	11.4	11.7	11.2
27.....	11.6	11.3	13.4	10.4	9.0	7.3	9.4	12.5	10.5	11.3	11.5	11.1
28.....	11.6	11.3	13.6	10.4	9.0	7.2	9.5	12.2	10.5	11.1	11.5	11.1
29.....	11.6	.....	13.6	11.0	9.4	6.7	9.7	12.3	10.6	11.0	11.4	11.2
30.....	11.6	.....	13.5	11.2	9.3	6.4	9.6	12.2	10.6	11.4	11.2	11.1
31.....	11.7	.....	13.5	.....	.....	.....	10.0	12.1	.....	11.3	.....	11.3

^a Rain in mountains.

Daily discharge, in second-feet, of Lytle Creek main canal above Rialto, Cal., for 1894-1901—Continued.

Day.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.
1901.								
1.....		21.7	14.0	11.3	10.5	9.5	11.0	17.6
2.....		20.4	15.2	11.6	10.0	9.5	10.8	17.3
3.....		19.8	14.6	11.3	10.2	9.2	10.8	18.5
4.....		18.5	14.3	11.1	10.8	9.2	10.8	18.8
5.....		13.8	13.2	10.5	10.8	9.5	10.8	18.5
6.....		14.9	13.2	10.2	11.0	9.7	10.5	18.5
7.....		15.2	13.2	10.5	11.3	9.7	10.5	
8.....		15.1	14.6	10.2	11.3	9.7	12.6	
9.....		14.3	13.2	10.2	11.0	10.0	12.4	
10.....		12.1	12.4	10.0	10.5	9.7	12.1	
11.....		12.7	12.9	9.7	10.2	9.5	11.8	
12.....		13.5	12.7	9.5	10.5	9.5	12.1	
13.....		14.0	12.7	9.5	10.5	9.2	12.4	
14.....		14.3		9.5	10.5	9.2	12.4	
15.....		14.3	12.9	9.5	10.5	9.0	12.6	
16.....		16.1	12.1	9.5	10.2	9.0	13.2	
17.....		16.1	12.1	9.5	10.2	8.7	12.6	
18.....		16.1	12.1	9.5	10.0	9.0	13.2	
19.....		16.1	12.1	8.7	10.0	9.2	13.2	
20.....		16.1	12.4	9.0	10.2	9.5	12.6	
21.....		15.8	12.4	9.5	10.5	9.7	12.6	
22.....		14.9	11.6	9.2	10.8	11.3	13.5	
23.....		14.9	11.8	9.5	10.5	11.5	14.0	
24.....		15.8	12.9		10.5	11.0	14.0	
25.....		18.5	12.7		10.0	10.8	15.8	
26.....		16.7	12.1		10.2	10.5		
27.....	16.1	16.1	11.6		10.2	10.5		
28.....	16.1	16.1	11.0		10.0	10.2		
29.....	16.1	16.1	11.0		10.0	10.8	16.1	
30.....	16.1	16.1	10.5		10.0	11.3	16.1	
31.....		15.2			9.7		15.8	

Discharge measurements of Lytle Creek at mouth of canyon, San Bernardino County, Cal., in 1896-1906.

Date.	Hydrographer.	Dis-charge.	Date.	Hydrographer.	Dis-charge.
1896.		<i>Sec.-feet.</i>	1903.		<i>Sec.-feet.</i>
July 24	J. H. Quinton.....	15.7	Apr. 1	W. B. Clapp.....	1.790
1898.			22	Clapp and Clausen.....	.63
June 10	J. B. Lippincott.....	10.7	22a	W. B. Clapp.....	.0
Aug. 27	F. H. Olmsted.....	10.0	May 19a	do.....	.0
1899.			19	do.....	29.5
Aug. 29	S. G. Bennett.....	12.5	July 2	do.....	16.5
1900.			Sept. 12	do.....	14.7
June 8	S. G. Bennett.....	6.2	1904.		
Sept. 29	W. W. Cockins, jr.....	4.6	Sept. 22	W. B. Clapp.....	9.2
1902.			1905.		
Apr. 4	S. G. Bennett.....	19.9	June 16	K. Sanborn.....	23
Sept. 5	W. B. Clapp.....	5.0	1906.		
			July 16		81.4

^a Measurement made at Highland Avenue.

Monthly discharge of Lytle Creek canals at intake for 1899.

[Drainage area, 54 square miles.]

Month.	Discharge in second-feet.				Run-off.	
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.	Total in acre-feet.
1899.						
January.....	16. 07	11. 07	11. 90	0. 220	0. 25	732
February.....	12. 60	11. 29	11. 74	. 216	. 23	650
March.....	15. 29	10. 37	12. 23	. 226	. 26	750
April.....	12. 55	8. 47	10. 83	. 200	. 22	643
May.....	11. 78	8. 98	9. 81	. 181	. 21	603
June.....	12. 20	6. 39	8. 14	. 150	. 17	482
July.....	10. 02	5. 41	7. 06	. 131	. 15	437
August.....	12. 60	8. 68	11. 76	. 218	. 25	726
September.....	16. 68	10. 29	14. 30	. 265	. 30	851
The period.....						5, 870
October.....	72. 14	9. 85	13. 30	. 246	. 29	818
November.....	12. 69	9. 90	11. 20	. 207	. 23	666
December.....	12. 93	10. 94	11. 30	. 209	. 24	695

Monthly discharge of Lytle Creek at headgates Rialto canals for 1901.

[Drainage area, 52 square miles.]

Month.	Discharge in second-feet.				Run-off.	
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.	Total in acre-feet.
1901.						
May.....	21. 7	12. 1	15. 8	0. 30	0. 35	971
June.....	15. 2	10. 5	12. 6	. 24	. 27	750
July 1-23.....			10. 0	. 19	. 16	456
August.....	11. 3	9. 7	10. 4	. 20	. 23	639
September.....	11. 5	8. 7	9. 8	. 19	. 21	583
October 1-25, 29-31.....			12. 7	. 24	. 25	705

LYTLE CREEK NEAR SAN BERNARDINO, CAL.

This station is located below the junction of the North and Middle forks of Lytle Creek, in the NW. $\frac{1}{4}$ sec. 26, T. 2 N., R. 6 W., in the Angeles National Forest, about 3 miles above the mouth of the canyon and 14 miles northwest of San Bernardino.

The discharge is obtained by combining the flow in the power canal with the flow over the diverting dam. Flow in the power canal is measured, near the intake, by an 8-foot steel plate rectangular weir. The capacity of the canal is about 23 second-feet. The flow over the diverting dam is approximate. The daily discharge is the mean of two observations recorded each day. No record is given when the flow exceeded 80 second-feet. When the entire flow is diverted into the canal, the results are good; above 23 second-feet they are approximate.

The following records of daily discharge were furnished by the Southern California Edison Co., through H. W. Dennis, construction engineer.

Daily discharge, in second-feet, of Lytle Creek near San Bernardino, Cal., for 1904-1911.

Day.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1904.													
1.....		5.3	8.0	9.3	12	15	33	50	37	34	29	26	32
2.....		5.2	8.3	9.6	12	.....	33	49	43	34	29	26	32
3.....		5.1	8.2	9.8	12	.....	33	48	38	34	28	26	32
4.....		7.5	8.2	9.8	12	.....	33	48	40	34	28	26	32
5.....		7.6	8.5	9.6	12	.....	33	48	38	33	28	26	32
6.....		8.2	8.6	9.7	12	(a)	33	46	38	33	28	26	33
7.....		8.5	8.8	9.7	11	45	33	46	38	32	28	27	33
8.....		8.6	8.7	9.7	11	45	32	44	39	32	28	28	34
9.....		8.8	8.5	9.6	13	40	32	44	38	32	27	28	34
10.....		8.7	8.4	9.6	15	39	32	44	38	32	27	29	34
11.....		8.6	8.4	9.6	14	37	33	44	38	32	27	30	35
12.....		8.6	8.6	9.8	14	36	(a)	42	38	32	27	30	35
13.....		8.4	8.2	9.6	14	35	.....	42	38	31	26	30	36
14.....		8.3	8.8	9.6	14	29	.....	42	37	31	26	31	36
15.....		8.5	8.9	9.6	14	37	(a)	42	37	31	26	31	37
16.....		8.4	8.6	9.6	16	.....	.....	40	37	31	26	31	37
17.....		8.4	8.9	9.6	15	58	.....	40	37	31	26	31	38
18.....	6.8	8.4	8.8	9.6	14	44	.....	40	37	30	26	31	38
19.....	7.2	8.2	8.5	9.6	14	41	(a)	40	37	30	26	32	38
20.....	7.2	8.3	8.6	9.6	14	41	75	40	36	30	26	32	38
21.....	7.0	8.4	8.6	9.6	19	40	70	40	36	30	26	32	39
22.....	7.7	8.4	8.8	10	18	38	68	40	36	30	25	32	39
23.....	7.6	8.7	8.8	10	17	37	63	39	36	30	25	32	39
24.....	9.1	7.7	9.0	10	16	36	58	39	36	30	26	32	39
25.....	8.0	8.0	9.2	10	16	34	55	39	35	30	26	32	39
26.....	8.1	7.8	9.2	10	16	33	54	38	35	29	26	32	40
27.....	7.7	7.8	9.3	10	15	32	53	38	35	29	26	32	39
28.....	7.6	7.8	9.3	10	16	32	50	38	35	29	26	32	40
29.....	5.5	7.8	9.1	10	15	.....	55	38	35	29	26	32	39
30.....	5.1	7.8	9.4	10	15	.....	51	38	34	29	26	32	39
31.....	.....	8.0	.....	14	15	.....	48	.....	34	.....	26	32	.....

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1905-6.												
1.....	39	38	40	27	25	24	.....	65	55	45	51	47
2.....	39	38	40	27	24	24	.....	64	55	44	51	47
3.....	39	38	40	26	24	24	.....	65	55	46	51	47
4.....	39	38	40	25	24	29	.....	64	54	47	51	47
5.....	38	40	40	24	24	25	.....	62	53	48	51	47
6.....	38	38	40	24	25	24	.....	63	53	49	51	47
7.....	38	40	40	24	24	24	.....	62	53	50	51	47
8.....	38	42	40	24	23	24	.....	62	52	51	51	47
9.....	38	38	40	24	23	24	.....	60	51	51	51	47
10.....	38	38	40	24	24	24	.....	59	51	51	51	46
11.....	38	38	40	24	24	25	.....	59	50	51	51	45
12.....	38	38	40	25	23	.....	(a)	58	49	53	50	45
13.....	38	39	40	25	23	.....	71	59	49	53	49	46
14.....	38	39	40	25	23	.....	73	57	49	53	48	45
15.....	38	39	40	24	24	.....	72	57	49	55	49	45
16.....	38	40	32	24	24	.....	72	57	48	55	49	45
17.....	38	40	32	24	23	.....	71	56	47	57	49	45
18.....	38	39	31	24	24	.....	70	55	47	57	49	45
19.....	38	39	31	44	24	.....	69	55	47	57	49	45
20.....	38	42	30	35	24	.....	68	55	47	56	49	45
21.....	39	40	30	34	25	.....	68	55	47	55	49	44
22.....	39	40	29	34	25	.....	67	53	46	55	49	43
23.....	38	40	29	34	24	.....	67	53	45	55	49	43
24.....	38	40	29	33	24	.....	67	53	45	55	49	43
25.....	38	40	28	32	24	.....	67	53	45	54	49	43
26.....	38	40	28	32	24	.....	65	56	45	53	49	43
27.....	38	42	28	32	24	.....	66	57	45	53	48	43
28.....	38	41	28	31	25	.....	68	62	45	53	47	43
29.....	38	40	28	28	.....	.....	67	59	45	53	47	42
30.....	38	40	28	26	.....	.....	67	58	45	53	47	43
31.....	38	.....	27	26	.....	.....	.....	56	.....	53	47	.....

^a Discharge over 80 second-feet at time of one daily observation.

Daily discharge, in second-feet, of Lytle Creek near San Bernardino, Cal., for 1904-1911—
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Sept.	Day.	Oct.	Nov.	Dec.	Jan.	Sept.	
1906-7.						1906-7.						
1.....	43	39	38	68	-----	16.....	41	37	69	-----	70	
2.....	41	39	43	68	-----	17.....	41	37	69	-----	65	
3.....	41	39	47	66	(a)	18.....	40	37	65	-----	60	
4.....	41	39	47	66	70	19.....	39	37	62	-----	60	
5.....	41	39	47	70	70	20.....	39	37	62	-----	60	
6.....	41	39	45	67	70	21.....	39	37	61	-----	60	
7.....	41	39	45	74	70	22.....	39	37	60	-----	60	
8.....	41	39	45	72	70	23.....	39	37	60	-----	60	
9.....	41	39	45	(a)	70	24.....	39	37	60	-----	60	
10.....	41	39	45	-----	70	25.....	39	37	59	-----	60	
11.....	41	39	45	-----	70	26.....	39	37	65	-----	60	
12.....	41	38	-----	-----	70	27.....	39	37	68	-----	60	
13.....	41	37	-----	-----	70	28.....	39	37	-----	-----	60	
14.....	41	37	-----	-----	70	29.....	39	37	68	-----	60	
15.....	41	37	(a)	-----	70	30.....	39	37	68	-----	60	
						31.....	39	-----	68	-----	-----	
Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1907-8.												
1.....	60	60	50	40	-----	60	50	50	30	21	20	19
2.....	60	60	50	40	-----	60	50	50	30	21	20	19
3.....	60	60	50	40	-----	60	50	50	30	21	20	19
4.....	60	60	50	40	-----	60	50	50	30	22	20	19
5.....	60	60	50	40	-----	60	50	50	30	22	20	19
6.....	60	60	50	40	-----	60	50	50	30	22	(b)	19
7.....	60	60	50	40	-----	60	50	50	(b)	(b)	20	19
8.....	60	60	50	40	-----	60	50	50	30	(b)	19	20
9.....	60	60	50	40	-----	60	50	50	30	21	19	20
10.....	60	60	50	40	-----	60	50	50	30	21	19	20
11.....	60	55	50	40	-----	60	50	50	28	21	19	20
12.....	60	50	50	40	-----	60	50	50	26	21	19	20
13.....	60	50	50	40	-----	55	50	50	26	21	19	20
14.....	60	50	50	40	-----	50	50	50	26	21	19	20
15.....	60	50	45	40	(a)	50	50	50	26	20	19	20
16.....	60	50	40	40	(a)	50	50	50	26	20	19	21
17.....	60	50	40	40	60	50	50	50	26	20	19	20
18.....	60	50	40	40	60	50	50	50	26	21	19	20
19.....	60	50	40	40	60	50	50	40	26	20	19	21
20.....	60	50	40	40	60	50	50	40	26	20	19	21
21.....	60	50	40	40	60	50	50	40	24	20	19	21
22.....	60	50	40	40	60	50	50	40	23	20	19	21
23.....	65	50	40	55	60	50	50	40	23	20	19	21
24.....	60	50	40	-----	60	50	50	40	23	20	19	22
25.....	60	50	40	-----	60	50	50	40	22	20	19	22
26.....	60	50	40	-----	60	50	50	40	22	20	19	22
27.....	60	50	40	-----	60	50	50	40	22	20	19	22
28.....	60	50	40	-----	60	50	50	40	22	20	19	21
29.....	60	50	40	-----	60	50	50	30	21	20	19	21
30.....	60	50	40	-----	-----	50	50	30	21	20	19	21
31.....	60	-----	40	-----	-----	50	-----	30	-----	20	19	-----
1908-9.												
1.....	21	22	22	20	30	-----	43	43	43	33	29	37
2.....	22	22	34	20	43	-----	43	43	37	33	29	37
3.....	22	22	36	20	43	-----	43	43	37	33	29	37
4.....	22	22	28	20	43	-----	43	43	37	33	29	37
5.....	22	22	27	20	43	(a)	43	43	37	33	29	37
6.....	22	22	27	20	43	60	43	43	37	33	29	37
7.....	21	22	27	20	(a)	60	43	43	37	33	29	37
8.....	21	21	27	19	-----	60	43	43	37	33	29	37
9.....	21	22	26	21	-----	60	43	43	37	31	29	37
10.....	21	22	27	20	-----	60	43	43	37	29	29	37

^a Discharge over 80 second-feet at time of one daily observation.

^b No record reported.

Daily discharge, in second-feet, of Lytle Creek near San Bernardino, Cal., for 1904-1911—
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1908-9.												
11.....	22	22	26	20	.....	60	43	43	37	29	29	36
12.....	22	22	26	21	.....	40	43	43	37	29	29	35
13.....	22	22	26	23	.....	40	43	43	37	29	30	35
14.....	22	22	26	23	.....	40	43	43	37	29	31	35
15.....	22	22	26	23	.....	40	43	43	37	29	31	35
16.....	23	22	26	22	.....	40	43	43	37	29	32	35
17.....	24	22	26	22	.....	40	43	43	37	29	33	35
18.....	24	22	25	22	.....	40	43	43	37	29	35	35
19.....	23	22	24	22	.....	40	43	43	37	29	35	35
20.....	23	22	23	22	.....	40	43	43	37	29	35	35
21.....	23	22	22	(a)	.....	50	43	43	37	29	35	35
22.....	23	22	22	.....	.....	50	43	43	37	29	35	35
23.....	22	22	22	.....	.....	40	43	43	37	29	35	35
24.....	23	22	21	.....	.....	43	43	43	37	29	35	35
25.....	23	22	21	.....	.....	43	43	43	37	31	35	35
26.....	22	22	21	60	.....	43	43	43	37	29	36	35
27.....	22	22	21	60	.....	43	43	43	37	29	37	35
28.....	22	22	21	55	.....	43	43	43	37	29	37	35
29.....	22	22	20	50	.....	43	43	43	37	29	37	35
30.....	22	22	20	45	.....	43	43	43	37	29	37	35
31.....	22	.....	20	35	.....	43	.....	43	.....	29	38	.....
1909-10.												
1.....	35	33	(b)	.....	61	61	35	31	30	30	30	28
2.....	35	33	(b)	.....	61	56	34	31	30	30	30	28
3.....	37	33	33	.....	61	45	34	31	30	30	30	28
4.....	35	33	33	.....	61	39	33	31	30	30	30	28
5.....	35	33	33	.....	61	38	33	31	30	30	30	28
6.....	35	33	33	.....	61	37	33	31	30	30	30	28
7.....	34	33	33	.....	61	37	33	31	30	30	30	(b)
8.....	33	33	33	.....	61	37	32	31	30	30	30	28
9.....	33	37	.....	.....	61	37	33	31	30	30	30	28
10.....	33	35	47	.....	61	37	33	31	30	30	30	28
11.....	33	35	38	.....	61	36	33	31	31	30	30	28
12.....	33	35	(b)	.....	61	35	33	31	30	30	30	27
13.....	33	35	37	.....	61	35	33	31	30	30	30	27
14.....	33	39	37	.....	61	35	33	31	30	30	30	27
15.....	33	37	37	.....	61	35	33	31	30	30	30	27
16.....	33	37	37	.....	61	35	33	31	30	30	30	27
17.....	33	37	37	.....	61	35	33	31	29	30	30	27
18.....	33	34	37	(a)	61	33	33	31	29	30	30	27
19.....	33	33	37	58	61	35	33	31	29	30	28	27
20.....	33	33	37	63	61	35	33	31	29	30	28	27
21.....	33	33	40	63	61	35	33	31	29	30	38	27
22.....	33	33	37	63	61	35	33	31	30	30	28	27
23.....	33	33	37	63	61	35	33	31	30	30	28	27
24.....	33	33	36	63	61	34	33	31	30	30	28	27
25.....	33	33	35	63	61	33	32	31	30	30	28	27
26.....	33	35	35	63	61	33	31	31	30	30	28	27
27.....	33	34	35	63	61	36	31	31	30	30	28	27
28.....	33	33	35	63	61	39	31	31	30	30	28	27
29.....	33	33	35	62	.....	37	31	31	30	30	28	27
30.....	33	33	34	61	.....	35	31	30	23	30	28	27
31.....	33	.....	.....	61	.....	35	.....	30	.....	30	28	.....
1910-11.												
1.....	27	24	23	21	43	55	.....	73	73	46	34	32
2.....	27	24	23	21	43	55	.....	(a)	73	46	34	32
3.....	27	24	22	21	43	(a)	.....	73	72	46	34	32
4.....	27	24	22	21	.....	.....	.....	73	72	46	34	32
5.....	27	24	22	21	(a)	.....	.....	73	72	42	34	32
6.....	27	24	22	21	52	.....	.....	73	72	42	34	32
7.....	27	24	22	21	52	.....	.....	73	72	42	33	32
8.....	26	24	22	21	53	.....	.....	73	72	42	32	32
9.....	26	24	22	22	53	.....	.....	73	72	42	32	32
10.....	26	24	22	.....	53	.....	.....	73	67	42	32	32

^a Discharge over 80 second-feet at time of one daily observation.

^b No record reported.

Daily discharge, in second-feet, of Lytle Creek near San Bernardino, Cal., for 1904-1911—
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.												
11.....	26	24	22	30	53	.....	.....	73	62	42	32	32
12.....	26	24	22	32	53	.....	.....	73	62	42	32	32
13.....	26	24	22	31	53	.....	.....	73	62	40	32	32
14.....	26	24	22	31	53	.....	.....	73	62	38	32	32
15.....	26	24	22	.....	53	.....	.....	73	62	38	32	32
16.....	26	24	22	43	53	.....	.....	73	62	38	32	32
17.....	26	24	22	38	53	.....	.....	73	62	38	32	32
18.....	26	24	22	33	53	.....	.....	73	62	38	32	32
19.....	26	24	22	32	53	.....	.....	73	62	38	32	32
20.....	26	23	22	32	53	.....	.....	73	62	38	32	32
21.....	26	23	22	33	53	.....	.....	73	62	38	32	32
22.....	26	23	22	31	53	.....	.....	73	60	37	32	32
23.....	26	23	21	29	53	.....	.....	73	58	36	32	32
24.....	26	23	21	32	53	.....	.....	73	58	36	32	32
25.....	26	23	21	53	53	.....	.....	73	55	36	32	32
26.....	26	23	21	43	53	.....	.....	73	52	36	32	32
27.....	26	23	21	43	53	.....	.....	73	52	36	32	32
28.....	25	23	21	.....	53	.....	.....	73	52	36	32	33
29.....	24	23	21	.....	.....	.....	.....	73	52	36	32	38
30.....	24	23	21	53	.....	.....	.....	73	49	36	32	40
31.....	24	.....	21	(a)	.....	.....	.....	73	.....	34	32	.....

^a Discharge over 80 second-feet at time of one daily observation.

Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.
1911.				1911.				1911.			
1.....	38	36	30	11.....	38	32	30	21.....	36	30	30
2.....	38	34	30	12.....	38	32	30	22.....	36	30	30
3.....	38	32	30	13.....	38	32	30	23.....	36	30	30
4.....	38	32	30	14.....	38	32	30	24.....	36	30	30
5.....	38	32	30	15.....	38	31	30	25.....	36	30	29
6.....	38	32	30	16.....	38	30	30	26.....	36	30	28
7.....	38	32	30	17.....	36	30	30	27.....	36	30	28
8.....	38	32	30	18.....	36	30	30	28.....	36	30	28
9.....	38	32	30	19.....	36	30	30	29.....	36	30	28
10.....	38	32	30	20.....	36	30	30	30.....	36	30	28
								31.....	36	.....	28

NOTE.—For days on which no record is given, and not otherwise noted, the discharge was over 80 second-feet.

Monthly discharge of Lytle Creek near San Bernardino, Cal., for 1904-1911.

Month.	Discharge in second-feet.			Run-off (in acre- feet).
	Maximum.	Minimum.	Mean.	
1904.				
September 18-30	9.1	5.1	7.28	188
1904-5.				
October.....	8.8	5.1	7.93	488
November.....	9.4	8.0	8.71	518
December.....	14	9.3	9.88	608
January.....	19	11	14.3	879
February 1, 7-15, 16-28.....	58	15	37.5	1,640
March 1-11, 20-31.....	75	32	46.1	2,100
April.....	50	38	42.2	2,510
May.....	43	34	37.0	2,280
June.....	34	29	31.1	1,850
July.....	29	25	26.6	1,640
August.....	32	26	30.0	1,840
September.....	40	32	36.3	2,160
1905-6.				
October.....	39	38	38.2	2,350
November.....	42	38	39.5	2,350
December.....	40	27	34.5	2,120
January.....	44	24	27.9	1,720
February.....	25	23	24.0	1,330
March 1-11.....	29	24	24.6	537
April 13-30.....	73	65	68.6	2,450
May.....	65	53	58.7	3,610
June.....	55	45	48.9	2,910
July.....	57	44	52.3	3,220
August.....	51	47	49.4	3,040
September.....	47	42	45.0	2,680
1906-7.				
October.....	43	39	40.2	2,470
November.....	39	37	37.8	2,250
December 1-11, 16-27, 29-31.....	69	38	56.0	2,890
January 1-8.....	74	66	68.9	1,090
February.....	(a)	(a)	.....	.....
March.....	(a)	(a)	.....	.....
April.....	(a)	(a)	.....	.....
May.....	(a)	(a)	.....	.....
June.....	(a)	(a)	.....	.....
July.....	(a)	(a)	.....	.....
August.....	(a)	(a)	.....	.....
September 4-30.....	70	60	65.0	3,480
1907-8.				
October.....	65	60	60.2	3,700
November.....	60	50	53.5	3,180
December.....	50	40	44.7	2,750
January 1-23.....	55	40	40.7	1,860
February 17-29.....	60	60	60.0	1,550
March.....	60	50	54.0	3,320
April.....	50	50	50.0	2,980
May.....	50	30	44.8	2,750
June 1-6, 8-30.....	30	21	26.0	1,500
July 1-6, 9-31.....	22	20	20.6	1,180
August 1-5, 7-31.....	20	19	19.2	1,140
September.....	22	19	20.3	1,210
1908-9.				
October.....	24	21	22.2	1,360
November.....	22	21	22.0	1,310
December.....	36	20	24.7	1,520
January 1-20, 26-31.....	60	19	27.9	1,440
February 1-6.....	43	30	40.8	486
March 6-31.....	60	40	46.3	2,390
April.....	43	43	43.0	2,560
May.....	43	43	43.0	2,640
June.....	43	37	37.2	2,210
July.....	33	29	30.2	1,860
August.....	38	29	32.5	2,000
September.....	37	35	35.7	2,120

a Discharge greater than 80 second-feet.

Monthly discharge of Lytle Creek near San Bernardino, Cal., for 1904-1911—Continued.

Month.	Discharge in second-feet.			Run-off (in acre- feet).
	Maximum.	Minimum.	Mean.	
1909-10.				
October.....	37	33	33.5	2,060
November.....	39	33	34.1	2,030
December 3-8, 10-11, 13-30.....	47	33	36.1	1,860
January 19-31.....	63	58	62.2	1,600
February.....	61	61	61.0	3,390
March.....	61	33	37.4	2,300
April.....	35	31	32.7	1,950
May.....	31	30	30.9	1,900
June.....	31	23	29.6	1,760
July.....	30	30	30.0	1,840
August.....	30	28	29.2	1,800
September 1-6, 8-30.....	28	27	27.3	1,570
1910-11.				
October.....	27	24	26.0	1,600
November.....	24	23	23.6	1,400
December.....	23	21	21.8	1,340
January 1-9, 11, 14, 16-27, 30.....	53	21	31.1	1,600
February 1-3, 6-28.....	53	43	51.8	2,670
March.....	(a)	55	(a)	-----
April.....	(a)	(a)	(a)	-----
May 3-31.....	73	73	73.0	4,200
June.....	73	49	64.5	3,840
July.....	46	34	39.5	2,430
August.....	34	32	32.4	1,990
September.....	40	32	32.5	1,930
1911.				
October.....	38	36	37.0	2,280
November.....	36	30	31.2	1,860
December.....	30	28	29.6	1,820

a Discharge greater than 80 second-feet.

NOTE.—Monthly values computed by engineers of the United States Geological Survey.

TEMESCAL CREEK NEAR RINCON, CAL.

This stream rises in the extreme southwestern corner of Riverside County. Its smaller tributaries have their sources on the eastern slope of the Santa Ana Mountains. The river flows in a general northerly direction, entering Santa Ana River $2\frac{1}{2}$ miles above Rincon and just above the lower narrows of the Santa Ana. San Jacinto River discharges into Lake Elsinore. During years of heavy rainfall this lake overflows and the surplus water finds its way into Temescal Creek. During the last few years, however, there has been no such discharge from Lake Elsinore. The water of Temescal Creek and of its tributary, Coldwater Creek, is used for irrigation in the vicinity of Corona. A series of measurements of Temescal and Coldwater creeks have been made by F. Rolfe, and are given below.

During the recent dry years there has been no surface flow of Temescal Creek. The water flowing in the upper pipe line of the Temescal Land & Water Co. includes the principal part of the flow of Coldwater Creek and Temescal Hot Springs, augmented by water pumped from wells in Temescal Valley.

Discharge measurements of Temescal Creek at upper pipe line, Temescal Land & Water Co., Temescal, Riverside County, Cal.

Date.	Hydrographer.	Dis-charge.	Date.	Hydrographer.	Dis-charge.
1899.		<i>Sec.-feet.</i>	1899.		<i>Sec.-feet.</i>
Jan. 4	S. G. Bennett	0.99	Apr. 29	F. Rolfe	3.22
27	F. Rolfe	.74	May 6	do	2.80
Feb. 4	do	1.62	13	do	4.02
11	do	.87	18	do	4.21
18	do	3.67	30	do	4.01
24	do	3.37	June 9	do	3.36
Mar. 3	do	4.87	16	do	3.52
12	do	5.10	July 10	do	3.21
16	do	3.56	19	do	3.20
25	do	3.74	25	do	3.67
31	do	4.16	Aug. 11	do	1.48
Apr. 14	do	2.93	11	do	4.26
22	do	3.71	21	do	3.84

Discharge measurements of Temescal Creek at lower pipe line, Temescal Land & Water Co., Temescal, Riverside County, Cal.

Date.	Hydrographer.	Dis-charge.	Date.	Hydrographer.	Dis-charge.
1899.		<i>Sec.-feet.</i>	1899.		<i>Sec.-feet.</i>
Jan. 28	F. Rolfe	0.66	Apr. 29	F. Rolfe	2.28
Feb. 1	do	.00	May 6	do	4.46
11	do	.31	13	do	2.55
15	do	1.39	30	do	3.08
20	do	1.56	June 9	do	3.10
Mar. 4	do	4.22	15	do	2.36
12	do	3.55	July 4	do	2.87
18	do	2.69	19	do	2.03
25	do	2.91	25	do	2.49
31	do	3.42	Aug. 5	do	1.12
Apr. 14	do	.89	11	do	2.40
22	do	2.28	21	do	2.65

COLDWATER CREEK.

Discharge measurements of Coldwater Creek, Riverside County, one-fifth mile above dam.

Date.	Hydrographer.	Dis-charge.	Date.	Hydrographer.	Dis-charge.
1899.		<i>Sec.-feet.</i>	1899		<i>Sec.-feet.</i>
Jan. 4	F. Rolfe	0.82	Apr. 14	F. Rolfe	0.68
18	do	1.43	15	do	.62
27	do	.84	21	do	.26
Feb. 3	do	.99	26	do	.38
11	do	.97	May 5	do	.37
18	do	.78	13	do	.21
24	do	.94	17	do	.21
Mar. 1	do	.92	29	do	.27
12	do	.71	31	do	.38
17	do	1.60	31	do	.30
25	do	1.18	June 5	do	.30
31	do	.84	7	do	.22

CUCAMONGA AND SAN ANTONIO CREEKS.

Cucamonga and San Antonio creeks rise in the San Antonio Mountains, Sierra Madre, and flow southward into the Santa Ana Valley, where they are lost in the sand.

Discharge measurements of Cucamonga Creek, San Bernardino County, Cal.

Date.	Hydrographer.	Locality.	Dis-charge.
			<i>Sec.-feet.</i>
Aug. 26, 1898.	F. H. Olmsted.	Head works in canyon.	1.04
July 11, 1900.	S. G. Bennett.	do.	1.08
Oct. 7, 1901.	do.	do.	2.06
Apr. 3, 1902.	do.	do.	4.80
Apr. 21, 1903.	Clapp and Clausen.	At mouth of canyon.	15
Do.	do.	Southern California Railway.	0
May 25, 1903.	W. B. Clapp.	Mouth of canyon.	5.5
Do.	do.	Base line avenue.	0
Sept. 13, 1903.	do.	Above head works of Hermosa Water Co.	3.6
Sept. 23, 1904.	do.	Point of diversion of Cucamonga Water Co.	1.8

Discharge measurements of tributaries of Cucamonga Creek around Red Hill, Cal.

Date.	Hydrographer.	Locality.	Dis-charge.
			<i>Sec.-feet.</i>
Sept. 9, 1898.	O. J. Sutton.	Springs.	2.20
Do.	do.	Tunnels.	2.80
Do.	do.	Artesian wells.	1.80
Total.			6.80
Aug. 29, 1899.	S. G. Bennett.	From Stowell wells to Ontario.	2.48
July 11, 1900.	do.	East side.	4.03
Do.	do.	West side.	2.97
Do.	do.	San Antonio water, Haskell well.	2.13
Do.	do.	Sixteenth Street wells.	1.72
Total from Red Hills.			10.85

Discharge measurements of San Antonio Creek, San Bernardino County, Cal.

Date.	Hydrographer.	Locality.	Dis-charge.
			<i>Sec.-feet.</i>
July 23, 1896.	J. H. Quinton.	Mouth of canyon.	7.9
Do.	do.	Ontario water from tunnel.	1.88
July 2, 1898.	F. H. Olmsted.	Mouth of canyon.	6.59
Do.	do.	In creek at Pierce's camp.	3.36
Aug. 26, 1898.	do.	Division weir.	5.18
Aug. 25, 1899.	S. G. Bennett.	Mouth of canyon.	4.48
July 11, 1900.	do.	do.	4.07
Sept. 25, 1900.	W. W. Cockins, jr.	Division weir.	3.72
Oct. 7, 1900.	S. G. Bennett.	do.	5.99
Apr. 3, 1902.	do.	do.	11.4
Apr. 1, 1903.	W. B. Clapp.	Mouth of canyon.	854
Do.	Clapp and Clausen.	do.	57
Do.	do.	1 mile below Southern Pacific Railway.	0
May 25, 1903.	W. B. Clapp.	Mouth of canyon.	34
Do.	do.	Southern Pacific Railway.	0
July 3, 1903.	do.	Mouth of canyon.	19.5
Sept. 13, 1903.	do.	do.	11
Sept. 23, 1904.	do.	do.	6.4
1902.			
June 28.	J. B. Lippincott.	Baby Ruth weir.	7.69
July 12, 11.40 a. m.	do.	do.	6.88
12, 1.13 p. m.	do.	do.	6.58
Aug. 2, 11.15 a. m.	do.	do.	6.15
9, 11 a. m.	do.	do.	6.15
9, 1.12 p. m.	do.	do.	5.99
29, 11.45 a. m.	do.	do.	5.61
Sept. 29, 12.30 p. m.	do.	do.	4.88
Oct. 18, 12.30 p. m.	do.	do.	4.74

Discharge measurements of San Antonio Creek, San Bernardino County, Cal.—Contd.

Date.	Hydrographer.	Locality.	Dis-charge.
			<i>Sec.-feet.</i>
1902.			
June 28.....	J. B. Lippincott.....	Division weir.....	6.56
28.....	do.....	Gird water.....	.42
			6.98
July 12, 10.58 a. m.....	do.....	Division weir.....	5.76
12.....	do.....	Gird water.....	.35
			6.11
12, 2.40 p. m.....	do.....	Division weir.....	5.20
12.....	do.....	Gird water.....	.35
			5.55
Aug. 2, 10.30 a. m.....	do.....	Division weir.....	4.83
2.....	do.....	Gird water.....	.36
			5.19
2, 2.30 p. m.....	do.....	Division weir.....	4.35
2.....	do.....	Gird water.....	.36
			4.71
9, 10.18 a. m.....	do.....	Division weir.....	4.76
9.....	do.....	Gird water.....	.35
			5.11
9, 2.40 p. m.....	do.....	Division weir.....	4.18
9.....	do.....	Gird water.....	.35
			4.53
29, 10.55 a. m.....	do.....	Division weir.....	4.26
29.....	do.....	Gird water.....	.38
			4.64
29, 2.27 p. m.....	do.....	Division weir.....	3.55
29.....	do.....	Gird water.....	.38
			3.93
Sept. 27, 10.30 a. m.....	do.....	Division weir.....	4.00
27.....	do.....	Gird water.....	.33
			4.33
27, 2.15 p. m.....	do.....	Division weir.....	3.57
27.....	do.....	Gird water.....	.33
			3.90
Oct. 18, 10.55 a. m.....	do.....	Division weir.....	3.98
18.....	do.....	Gird water.....	.38
			4.36
June 28.....	do.....	Fountain of Life spring—weir measurement.....	.34
July 12, 12.15 p. m.....	do.....	do.....	.34
Aug. 2, 12.05 p. m.....	do.....	do.....	.30
9, 11.42 a. m.....	do.....	do.....	.32
29, 12.20 p. m.....	do.....	do.....	.29
Sept. 27, 11.33 a. m.....	do.....	do.....	.29
Oct. 18, 12 m.....	do.....	do.....	.30
June 28.....	do.....	San Antonio tunnel—wier measurement.....	1.38
July 12, 10.36 a. m.....	do.....	do.....	1.27
Aug. 2, 10.10 a. m.....	do.....	do.....	1.19
9, 10 a. m.....	do.....	do.....	1.17
30, 10.30 a. m.....	do.....	do.....	1.15
Sept. 27, 10.12 a. m.....	do.....	do.....	1.12
June 28.....	do.....	San Gabriel Electric Co.'s power house—con- crete weir basin—weir measurement.....	7.40
July 12, 12.20 p. m.....	do.....	do.....	6.10
Aug. 2, 12 m.....	do.....	do.....	5.59
9, 11.48 a. m.....	do.....	do.....	5.67
29, 12.30 p. m.....	do.....	do.....	4.59
Sept. 27, 11.37 a. m.....	do.....	do.....	4.64
Oct. 13, 11.38 a. m.....	do.....	do.....	4.31

Discharge measurements of San Antonio Creek, San Bernardino County, Cal.—Contd.

Date.	Hydrographer.	Locality.	Dis-charge.
1902.			<i>Sec.-feet.</i>
June 28.....	J. B. Lippincott.....	San Gabriel Electric Co.'s power house—weir measurement in creek.	0.55
July 12, 12.33 p. m.	do.....	do.....	.47
Aug. 2, 12.10 p. m.	do.....	do.....	.40
9, 12.11 p. m.	do.....	do.....	.40
29, 12.40 p. m.	do.....	do.....	.35
Sept. 27, 12 m.....	do.....	do.....	.36
Oct. 18, 12 m.....	do.....	do.....	.39
Aug. 2, 11.45 a. m.	do.....	Spring Hill weir.....	6.31
9, 11.22 a. m.	do.....	do.....	6.36
9, 1 p. m.....	do.....	do.....	5.88
29, 12.07 p. m.	do.....	do.....	5.59
29, 12.10 p. m.	do.....	do.....	5.40
Sept. 27, 12.05 p. m.	do.....	do.....	5.28
Oct. 18, 12.12 p. m.	do.....	do.....	5.01

Weir measurements of San Antonio Creek at division dam, California, 1889–1891.

[Measurements by F. E. Trask.]

Date.	Discharge.	Date.	Discharge.
1889.	<i>Second-feet.</i>	1890.	<i>Second-feet.</i>
July 15.....	20.56	Aug. 1.....	32.08
Aug. 1.....	18.00	15.....	26.76
15.....	16.40	Sept. 1.....	22.14
Sept. 2.....	16.24	15.....	18.92
16.....	13.96		
Oct. 1.....	13.32	1891.	
17.....	13.94	July 15.....	20.10
Nov. 2.....	23.70	Aug. 1.....	16.67
Dec. 2.....	33.02	15.....	16.26
		Sept. 13.....	12.26
1890.			
July 15.....	37.71		

Weir measurements of San Antonio Creek at division box, California, 1892–1903.

[Measurements by F. E. Trask.]

Date.	Discharge.	Date.	Discharge.
1892.	<i>Second-feet.</i>	1897.	<i>Second-feet.</i>
July 15.....	12.50	Sept. 20.....	9.24
Sept. 15.....	8.16		
Nov. 19.....	7.09	1898.	
		July 5.....	5.24
1893.		Aug. 1.....	4.72
Aug. 14.....	14.30	Sept. 5.....	4.24
30.....	12.72		
Sept. 25.....	12.16	1899.	
Oct. 25.....	10.84	July 3.....	2.98
		Aug. 7.....	3.88
1894.		Sept. 3.....	4.06
July 16.....	6.00		
		1900.	
1895.		July 1.....	4.36
July 15.....	18.48	Aug. 6.....	3.54
Aug. 22.....	16.78	Sept. 1.....	3.22
Sept. 7.....	14.20		
		1902.	
1896.		July 21.....	5.30
June 25.....	6.58	Aug. 16.....	4.22
July 15.....	5.20	Sept. 13.....	3.40
Sept. 15.....	5.44		
		1903.	
1897.		Aug. 10.....	9.40
July 6.....	17.24	16.....	7.66
Aug. 16.....	10.82		

July 18, 1888, float measurement by F. E. Trask showed 22.12 second-feet discharge for entire creek above division. (Excludes gird water=0.4 second-feet. Gird water purchased by the San Antonio Water Co., May, 1896, and diverted above division weir.)

Discharge measurements of San Antonio tunnel at the portal, Cal., in 1888-1904.

[Measurements by F. E. Trask.]

Date.	Discharge.	Date.	Discharge.
1888.	<i>Second-feet.</i>	1897.	<i>Second-feet.</i>
Apr. 2.....	4.84	Sept. 6.....	1.32
Apr. 15.....	2.32	Oct. 4.....	1.19
Oct. 10.....	.73		
1889.		1898.	
Jan. 10.....	1.61	Mar. 16.....	1.30
May 31.....	1.33	Apr. 4.....	1.30
June 17.....	1.26	May 4.....	1.21
July 15.....	.91	June 6.....	1.42
Aug. 15.....	.61	July 5.....	1.23
Sept. 2.....	.61	Aug. 1.....	1.12
Oct. 1.....	.57	Sept. 5.....	1.06
Nov. 2.....	.86	Oct. 2.....	.97
Dec. 2.....	.81	Nov. 6.....	1.02
		Dec. 5.....	1.05
1890.		1899.	
Jan. 27.....	5.58	Jan. 3.....	1.08
June 12.....	2.57	May 1.....	1.09
July 15.....	2.49	July 3.....	.97
Aug. 15.....	2.23	Aug. 7.....	.95
Sept. 15.....	1.36	Dec. 31.....	1.24
1891.		1900.	
July 15.....	4.93	Feb. 1.....	1.14
Aug. 15.....	3.55	Mar. 5.....	1.07
Sept. 15.....	2.74	Apr. 1.....	1.01
1892.		May 7.....	1.00
July 16.....	3.49	July 1.....	1.00
Sept. 15.....	2.98	Oct. 8.....	1.00
1893.		1902.	
July 15.....	5.03	June 28.....	1.35
1894.		July 5.....	1.32
May 11.....	2.72	Aug. 2.....	1.19
July 16.....	2.75	Sept. 6.....	1.14
1895.		Oct. 4.....	1.08
July 15.....	1.79	1903.	
Aug. 22.....	1.53	Jan. 19.....	.92
Sept. 7.....	1.45	Mar. 16.....	1.29
1896.		Apr. 24.....	4.86
June 25.....	1.62	July 29.....	1.51
July 15.....	1.52	Aug. 24.....	1.25
Sept. 15.....	1.19	Oct. 6.....	.99
1897.		Dec. 1.....	1.07
Jan. 25.....	1.93	1904.	
July 19.....	2.08	Jan. 22.....	1.07
Aug. 2.....	1.72	Feb. 8.....	1.07
		Apr. 6.....	2.32
		May 28.....	1.60
		June 4.....	1.47

CHINO CREEK AT RINCON, CAL.

San Antonio Creek discharges from the southern slope of the Sierra Madre upon a large bed of sand and gravel. The underground waters percolate slowly to the south, and begin to appear again in the channel of what is known as Chino Creek. This creek enters Santa Ana River just before the latter stream passes through its lower canyon in the Coast Range. The discharge of Chino Creek is very constant, owing to the nature of its supply, and hence water rights along its course are valuable on account of their permanency. A series of measurements of the supply of this creek have been made and are published herewith. There was no gage rod, owing to the shifting nature of the stream bed.

Discharge measurements of Chino Creek near Rincon, Cal., in 1898-1907.

Date.	Hydrographer.	Dis-charge.	Date.	Hydrographer.	Dis-charge.
1898.		<i>Sec.-feet.</i>	1903.		<i>Sec.-feet.</i>
Aug. 30	F. H. Olmsted.....	4.95	Apr. 29	O. W. Peterson.....	23
1899.			May 18	W. B. Clapp.....	15
May 2	F. Rolfe.....	12.8	June 12	do.....	6.5
15	do.....	8.64	July 23	do.....	3.4
June 3	do.....	17.0	Aug. 19	do.....	2.4
15	do.....	5.63	Sept. 23	do.....	3.3
July 4	do.....	3.02	Oct. 30	do.....	6
17	do.....	4.68	Nov. 25	do.....	9.2
Aug. 1	do.....	7.49	1904.		
15	do.....	2.14	Jan. 26	W. B. Clapp.....	14.7
31	do.....	3.19	Feb. 29	do.....	24
Sept. 13	J. B. Lippincott.....	3.53	Mar. 21	Clapp and Murphy.....	16
29	do.....	3.88	Apr. 29	W. B. Clapp.....	15
Oct. 25	do.....	14.5	May 23	do.....	4.3
26	F. Rolfe.....	14.5	June 20	Clapp and Hardy.....	2
Nov. 18	do.....	20.1	July 23	E. C. La Rue.....	1.5
1900.			Aug. 20	do.....	1.6
Jan. 18	F. Rolfe.....	24.1	Sept. 20	W. B. Clapp.....	2.8
29	do.....	27.0	28	E. C. La Rue.....	3.6
Feb. 21	do.....	13.4	Oct. 22	do.....	5.6
Apr. 17	W. P. Searcy.....	8.8	Nov. 19	do.....	8.3
June 24	do.....	4.0	Dec. 10	do.....	8.7
July 7	do.....	2.1	1905.		
28	S. G. Bennett.....	2.2	Feb. 24	do.....	46
Aug. 15	W. P. Searcy.....	1.1	Apr. 17	do.....	26
Sept. 3	do.....	0	May 16	do.....	17
Oct. 5	W. W. Cockins, Jr.....	5.0	June 6	do.....	6
16	W. P. Searcy.....	.4	July 29	do.....	1.1
Nov. 5	do.....	14.4	Sept. 21	do.....	1.9
Dec. 4	do.....	17.1	1906.		
31	do.....	16.6	June 25	do.....	3.9
1901.			Aug. 31	do.....	2.6
Aug. 31	J. B. Lippincott.....	2.8	Nov. 7	do.....	10.3
1903.			1907.		
Mar. 31	W. B. Clapp.....	146	Aug. 23	do.....	2.6

RETURN WATERS IN SAN BERNARDINO COUNTY.

Natural flow, in second-feet, of return water compared with developed water in San Bernardino Valley above Colton, Cal.

[By K. Sanborn, engineer Riverside Water Co.]

Date.	Location.	De-veloped.	Natural.	Total.
		<i>Sec.-ft.</i>	<i>Sec.-ft.</i>	<i>Sec.-ft.</i>
Sept. 4, 1903	Barnhill pumping plant.....	0.80	.....	0.80
May 12, 1904	do.....	.85	.....	.85
Aug. 15, 1904	do.....	.77	.....	.77
June 9, 1905	do.....	1.10	.....	1.10
Sept. 27, 1905	do.....	.80	.....	.80
June 23, 1906	do.....	1.30	.....	1.30
Aug. 27, 1906	do.....	1.50	.....	1.50
June 25, 1907	do.....	1.70	.....	1.70
Sept. 18, 1907	do.....	1.30	.....	1.30
June —, 1898	Beam ditch.....	.....	0.67	.67
Sept. —, 1898	do.....	.....	.65	.65
Mar. —, 1899	do.....	.....	.72	.72
June —, 1899	do.....	.....	.52	.52
Aug. —, 1899	do.....	.....	.40	.40
Mar. —, 1900	do.....	.....	.68	.68
June —, 1900	do.....	.....	.50	.50
Sept. —, 1900	do.....	.....	.33	.33
Oct. 13, 1902	do.....	.....	.22	.22
Aug. 17, 1903	do.....	.....	.08	.08
June 4, 1904	do.....	.....	.02	.02
Aug. 20, 1904	do.....	.....	.00	.00
June 10, 1905	do.....	.....	.00	.00
Sept. 2, 1905	do.....	.....	.00	.00

Natural flow, in second-feet, of return water compared with developed water in San Bernardino Valley above Colton, Cal.—Continued.

Date.	Location.	De- veloped.	Natural.	Total.
		Sec.-ft.	Sec.-ft.	Sec.-ft.
June 18, 1906	Beam ditch		0.00	0.00
Aug. 23, 1906	do		.00	.00
June 21, 1907	do		.00	.00
Sept. 28, 1907	do		.00	.00
June —, 1898	Bloomington pumping plant	5.26		5.26
Sept. —, 1898	do	5.49		5.49
Mar. —, 1899	do	.00		.00
June —, 1899	do	5.93		5.93
Aug. —, 1899	do	3.05		3.05
Mar. —, 1900	do	3.80		3.80
June —, 1900	do	3.68		3.68
Sept. —, 1900	do	3.28		3.28
Oct. 7, 1902	do	2.28		2.28
Sept. 4, 1903	do	8.82		8.82
May 12, 1904	do	.00		.00
Aug. 17, 1904	do	5.61		5.61
June 16, 1905	do	6.62		6.62
Sept. 27, 1905	do	7.20		7.20
June 20, 1906	do	10.50		10.50
Sept. 20, 1906	do	6.70		6.70
June 21, 1907	do	5.60		5.60
Sept. 26, 1907	do	6.50		6.50
Sept. 9, 1903	Brown tract, artesian well	.11		.11
June —, 1898	Camp Carlton ditch	.61		.61
Sept. —, 1898	do	1.20		1.20
Mar. —, 1899	do	2.13		2.13
June —, 1899	do	1.63		1.63
Aug. —, 1899	do	1.02		1.02
Mar. —, 1900	do	2.55		2.55
June —, 1900	do	2.60		2.60
Sept. —, 1900	do	1.67		1.67
Oct. 7, 1902	do	1.70		1.70
Aug. 22, 1903	do	2.20		2.20
June 4, 1904	do	2.50		2.50
Aug. 19, 1904	do	2.60		2.60
May 31, 1905	do	2.60		2.60
Aug. 14, 1905	do	1.20		1.20
June 20, 1906	do	2.70		2.70
Sept. 7, 1906	do	1.94		1.94
June 20, 1907	do		4.40	4.40
Sept. 25, 1907	do	3.10		3.10
Aug. 12, 1904	Carr pumping plant	.72		.72
June 10, 1905	do	.72		.72
Aug. 14, 1905	do	.60		.60
June 19, 1906	do	.40		.40
Aug. 24, 1906	do	.70		.70
June 22, 1907	do	.00		.00
Sept. 20, 1907	do	.00		.00
Sept. 20, 1906	Citizens Water Co. pumping plant	1.50		1.50
June 25, 1907	do	4.00		4.00
Sept. 26, 1907	do	2.00		2.00
May 31, 1904	City of San Bernardino	.82	1.87	2.69
Aug. 17, 1904	do	1.02	1.79	2.81
June 19, 1905	City of San Bernardino, Lytle Creek		2.04	2.04
Sept. 27, 1905	do		1.90	1.90
June 20, 1906	do		1.90	1.90
Sept. 20, 1906	do		2.00	2.00
June 10, 1905	City of San Bernardino, Sixth Street pumping plant	1.99		1.99
Sept. 27, 1905	do	4.80		4.80
June 29, 1906	do	2.00		2.00
Oct. 23, 1906	do	4.80		4.80
June 20, 1907	do	4.00		4.00
Sept. 28, 1907	do	2.30		2.30
June —, 1898	City of Colton pumping plant (total)	6.82		6.82
Sept. —, 1898	do	7.40		7.40
Mar. —, 1899	do	3.20		3.20
June —, 1899	do	5.49		5.49
Aug. —, 1899	do	3.89		3.89
Mar. —, 1900	do	4.94		4.94
June —, 1900	do	3.21		3.21
Sept. —, 1900	do	3.54		3.54
Oct. 7, 1902	do	3.53		3.53
Sept. 4, 1903	do	3.17		3.17
May 12, 1904	do	3.00		3.00
Aug. 19, 1904	do	2.06		2.06
June 9, 1905	do	3.81		3.81
Sept. 27, 1905	do	2.70		2.70
June 19, 1906	do	2.40		2.40
Aug. 27, 1906	do	3.50		3.50

Natural flow, in second-feet, of return water compared with developed water in San Bernardino Valley above Colton, Cal.—Continued.

Date.	Location.	De- veloped.	Natural.	Total.
		<i>Sec.-ft.</i>	<i>Sec.-ft.</i>	<i>Sec.-ft.</i>
June 25, 1907	City of Colton pumping plant (total)	4.50		4.50
Sept. 18, 1907	do	4.50		4.50
June —, 1898	City of Colton (water used for irrigating)	1.97		1.97
Sept. —, 1898	do	1.61		1.61
Mar. —, 1899	do	1.69		1.69
June —, 1899	do	1.30		1.30
Aug. —, 1899	do	1.30		1.30
Mar. —, 1900	do	1.69		1.69
June —, 1900	do	1.54		1.54
Sept. —, 1900	do	1.53		1.53
Oct. 7, 1902	do	1.08		1.08
Sept. 27, 1905	do	1.20		1.20
June 19, 1906	do .....	.70		.70
Aug. 27, 1906	do	1.60		1.60
June 25, 1907	do	1.20		1.20
Sept. 18, 1907	do .....	.00		.00
Sept. 7, 1903	Cooley tract, artesian well	2.70		2.70
June —, 1898	Daley ditch		0.63	.63
Sept. —, 1898	do .....		.67	.67
Mar. —, 1899	do .....		.71	.71
June —, 1899	do .....		.51	.51
Aug. —, 1899	do .....		.51	.51
Mar. —, 1900	do .....		.72	.72
June —, 1900	do		1.12	1.12
Sept. —, 1900	do .....		.54	.54
Oct. 13, 1902	do .....		.00	.00
Sept. 9, 1903	do .....		.00	.00
June 4, 1904	do .....		.00	.00
Aug. 20, 1904	do .....		.00	.00
June 10, 1905	do .....		.00	.00
Sept. 4, 1905	do .....		.00	.00
June 25, 1906	do .....		.00	.00
Oct. 24, 1906	do .....		.00	.00
June 20, 1907	do .....		.00	.00
Sept. 25, 1907	do .....	.00		.00
May 30, 1905	Excelsior Land & Water Co. ....	.65		.65
Sept. 28, 1905	do .....	.40		.40
June 27, 1906	do .....	.60		.60
Aug. 24, 1906	do .....	.75		.75
June 19, 1907	do .....	.65		.65
Sept. 18, 1907	do .....	.65		.65
June —, 1898	Gage canal intake, Santa Ana River		1.16	1.16
Sept. —, 1898	do		1.16	1.16
Mar. —, 1899	do .....		.72	.72
June —, 1899	do .....		.24	.24
Aug. —, 1899	do .....		.64	.64
Mar. —, 1900	do .....		.395	.395
June —, 1900	do .....		.29	.29
Sept. —, 1900	do .....		.17	.17
Oct. 7, 1902	do .....		.00	.00
Aug. 21, 1903	do .....		.00	.00
May 31, 1904	do .....		.00	.00
Aug. 15, 1904	do .....		.00	.00
May 26, 1905	do .....		.00	.00
Sept. 4, 1905	do .....		.00	.00
June 19, 1906	do		8.30	.00
Sept. 7, 1906	do .....		.00	.00
June 20, 1907	do .....		.00	.00
Sept. 20, 1907	do .....		.40	.40
June —, 1898	Gage canal, Palm Avenue weir	26.26		26.26
Sept. —, 1898	do	25.07		25.07
Mar. —, 1899	do	26.68		26.68
June —, 1899	do	25.22		25.22
Aug. —, 1899	do	23.47		23.47
Mar. —, 1900	do	21.96		21.96
June —, 1900	do	22.23		22.23
Sept. —, 1900	do	27.85		27.85
Oct. 11, 1902	do	30.17		30.17
Aug. 21, 1903	do	30.82		30.82
May 31, 1904	do	27.80		27.80
Aug. 19, 1904	do	31.96		31.96
May 31, 1905	do	28.83		28.83
Sept. 2, 1905	do	32.70		32.70
June 20, 1906	do	22.90	8.30	31.20
Sept. 7, 1906	do	38.00		38.00
June 20, 1907	do		50.10	50.10
Sept. 20, 1907	do	33.20	.40	33.60
Sept. 9, 1903	Garner tract, artesian well .....	.77		.77

Natural flow, in second-feet, of return water compared with developed water in San Bernardino Valley above Colton, Cal.—Continued.

Date.	Location.	De- veloped.	Natural.	Total.
		<i>Sec.-ft.</i>	<i>Sec.-ft.</i>	<i>Sec.-ft.</i>
May 12, 1904	Grand Terrace pumping plant.	0.34		0.34
Aug. 17, 1904	do.	.34		.34
May 31, 1905	do.	.54		.54
Aug. 14, 1905	do.	.00		.00
June 9, 1906	do.	.30		.30
Sept. 7, 1906	do.	.35		.35
June 20, 1907	do.	.70		.70
Sept. 20, 1907	do.	.00		.00
June —, 1898	Haws & Talmadge ditch.		0.84	.84
Sept. —, 1898	do.	.00		.00
Mar. —, 1899	do.	.28		.28
June —, 1899	do.	.00		.00
Aug. —, 1899	do.	.00		.00
Mar. —, 1900	do.	.00		.00
June —, 1900	do.	.00		.00
Sept. —, 1900	do.	.00		.00
Sept. 30, 1902	do.	.00		.00
Aug. 17, 1903	do.	.00		.00
May 13, 1904	do.	.00		.00
Aug. 15, 1904	do.	.00		.00
June 2, 1905	do.	.00		.00
Sept. 5, 1905	do.	.00		.00
June 14, 1906	do.	.05		.05
Aug. 23, 1906	do.	.08		.08
June 21, 1907	do.	.08		.08
Sept. 28, 1907	do.	.00		.00
Sept. 4, 1903	Hunter pumping plant.	1.79		1.79
June 2, 1904	do.	1.82		1.82
Aug. 17, 1904	do.	1.54		1.54
June 6, 1905	do.	1.09		1.09
Sept. 4, 1905	do.	1.60		1.60
June 19, 1906	do.	1.90		1.90
Aug. 27, 1906	do.	1.50		1.50
June 25, 1907	do.	1.50		1.50
Sept. 18, 1907	do.	1.50		1.50
Sept. 9, 1903	Hurd tract, artesian well.	.21		.21
Sept. 4, 1903	Johnson & Hubbard pumping plant.	.42		.42
June 2, 1904	do.	.67		.67
Aug. 17, 1904	do.	.39		.39
June 9, 1905	do.	.59		.59
Sept. 4, 1905	do.	.30		.30
June 23, 1906	do.	.52		.52
Aug. 27, 1906	do.	.48		.48
June 25, 1907	do.	.40		.40
Sept. 18, 1907	do.	.00		.00
Sept. 4, 1903	Lamb pumping plant.	.24		.24
May 12, 1904	do.	.25		.25
Aug. 15, 1904	do.	.25		.25
June 9, 1905	do.	.30		.30
Sept. 27, 1905	do.	.00		.00
June 23, 1906	do.	.00		.00
Aug. 27, 1906	do.	.00		.00
June 25, 1907	do.	.00		.00
Sept. 18, 1907	do.	.00		.00
Sept. 4, 1903	Lawson Well Co., pumping plant.	.59		.59
June 12, 1904	do.	.65		.65
Aug. 15, 1904	do.	.50		.50
June 9, 1905	do.	.62		.62
Sept. 27, 1905	do.	.60		.60
June 23, 1906	do.	.60		.60
Aug. 27, 1906	do.	.70		.70
June 25, 1907	do.	.90		.90
Sept. 18, 1907	do.	.90		.90
June —, 1898	Logsdon & Farrell ditch.		.72	.72
Sept. —, 1898	do.	.63		.63
Mar. —, 1899	do.	1.61		1.61
June —, 1899	do.	1.15		1.15
Aug. —, 1899	do.	.54		.54
Mar. —, 1900	do.	1.26		1.26
June —, 1900	do.	.49		.49
Sept. —, 1900	do.	.20		.20
Oct. 13, 1902	do.	.00		.00
Aug. 22, 1903	do.	.00		.00
June 4, 1904	do.	.00		.00
Aug. 3, 1904	do.	.00		.00
June 10, 1905	do.	.00		.00
Sept. 2, 1905	do.	.00		.00
June 18, 1906	do.	.00		.00
Oct. 24, 1906	do.	.00		.00

Natural flow, in second-feet, of return water compared with developed water in San Bernardino Valley above Colton, Cal.—Continued.

Date.	Location.	De- veloped.	Natural.	Total.
		Sec.-ft.	Sec.-ft.	Sec.-ft.
June 20, 1907	Logsdon & Farrell ditch.....		0.00	0.00
Sept. 25, 1907	.....do.....		.00	.00
Aug. 17, 1904	Lytle Creek Water & Improvement Co. pumping plant	4.00		4.00
June 10, 1905	.....do.....	.00		.00
Sept. 27, 1905	.....do.....	.00		.00
June 20, 1906	.....do.....	.00		.00
Sept. 20, 1906	.....do.....	.00		.00
June 22, 1907	.....do.....	.00		.00
Sept. 20, 1907	.....do.....	.00		.00
June —, 1898	McIntyre ditch.....		.37	.37
Sept. —, 1898	.....do.....		.038	.038
Mar. —, 1899	.....do.....		.82	.82
June —, 1899	.....do.....		.15	.15
Aug. —, 1899	.....do.....		.00	.00
Mar. —, 1900	.....do.....		.14	.14
June —, 1900	.....do.....		.01	.01
Sept. —, 1900	.....do.....		.00	.00
Oct. 7, 1902	.....do.....		.00	.00
Sept. 9, 1903	.....do.....		.00	.00
Aug. 15, 1904	.....do.....		.00	.00
June 16, 1905	.....do.....		.00	.00
Sept. 28, 1905	.....do.....		.00	.00
June 22, 1906	.....do.....		.00	.00
Sept. 20, 1906	.....do.....		.00	.00
June 25, 1907	.....do.....		.00	.00
Sept. 18, 1907	.....do.....		.00	.00
June —, 1898	McKenzie ditch.....		2.54	2.54
Sept. —, 1898	.....do.....		2.08	2.08
Mar. —, 1899	.....do.....		9.40	9.40
June —, 1899	.....do.....		3.86	3.86
Aug. —, 1899	.....do.....		2.00	2.00
Mar. —, 1900	.....do.....		2.30	2.30
June —, 1900	.....do.....		1.57	1.57
Sept. —, 1900	.....do.....		1.69	1.69
Sept. 30, 1902	.....do.....		.00	.00
Aug. 17, 1903	.....do.....		.00	.00
May 13, 1904	.....do.....	.67		.67
Aug. 12, 1904	.....do.....	.58		.58
June 2, 1905	.....do.....		.00	.00
Sept. 5, 1905	.....do.....		.00	.00
June 18, 1906	.....do.....		.00	.00
Aug. 23, 1906	.....do.....		.00	.00
June 21, 1907	.....do.....		.00	.00
Sept. 28, 1907	.....do.....		.00	.00
June —, 1898	Meeks & Daley ditch.....		8.42	8.42
Sept. —, 1898	.....do.....		17.00	17.00
Mar. —, 1899	.....do.....		17.00	17.00
June —, 1899	.....do.....		15.48	15.48
Aug. —, 1899	.....do.....		10.45	10.45
Mar. —, 1900	.....do.....		13.94	13.94
June —, 1900	.....do.....		13.78	13.78
Sept. —, 1900	.....do.....		14.68	14.68
Sept. 30, 1902	.....do.....		13.40	13.40
Sept. 1, 1903	.....do.....		12.87	12.87
May 31, 1904	.....do.....		16.30	16.30
Aug. 3, 1904	.....do.....		16.75	16.75
June 9, 1905	.....do.....		15.70	15.70
Sept. 2, 1905	.....do.....		15.50	15.50
June 28, 1906	.....do.....		16.90	16.90
Aug. 31, 1906	.....do.....		17.10	17.10
June 19, 1907	.....do.....		22.30	22.30
Oct. 3, 1907	.....do.....		17.10	17.10
May 12, 1904	Merryfield pumping plant.....	.90		.90
Aug. 5, 1904	.....do.....	.80		.80
May 30, 1905	.....do.....	.67		.67
Sept. 28, 1905	.....do.....	.40		.40
June 28, 1906	.....do.....	.80		.80
Aug. 24, 1906	.....do.....	.79		.79
June 19, 1907	.....do.....	.70		.70
Sept. 18, 1907	.....do.....	.70		.70
May 21, 1904	Mount Vernon Water Co.....		.91	.91
Aug. 17, 1904	.....do.....		.91	.91
Sept. 4, 1903	Orange Land & Water Co. pumping plant.....	1.08		1.08
May 12, 1904	.....do.....	1.14		1.14
Aug. 17, 1904	.....do.....	1.12		1.12
June 9, 1905	.....do.....	.00		.00
Sept. 27, 1905	.....do.....	1.60		1.60
June 23, 1906	.....do.....	.00		.00

Natural flow, in second-feet, of return water compared with developed water in San Bernardino Valley above Colton, Cal.—Continued.

Date.	Location.	De- veloped.	Natural.	Total.
		<i>Sec.-ft.</i>	<i>Sec.-ft.</i>	<i>Sec.-ft.</i>
Aug. 27, 1906	Orange Land & Water Co. pumping plant	0.00		0.00
June 25, 1907	do.	.00		.00
Sept. 26, 1907	do.	.00		.00
June —, 1898	Rabel ditch		5.37	5.37
Sept. —, 1898	do.		3.07	3.07
Mar. —, 1899	do.		2.26	2.26
June —, 1899	do.		1.54	1.54
Aug. —, 1899	do.		.94	.94
Mar. —, 1900	do.		.54	.54
June —, 1900	do.		.35	.35
Sept. —, 1900	do.		.07	.07
Sept. 30, 1902	do.	.00	.00	.00
Aug. 17, 1903	do.	.00	.00	.00
May 13, 1904	do.	.00	.00	.00
Aug. 15, 1904	do.	.00	.00	.00
June 2, 1905	do.	.00	.00	.00
Sept. 2, 1905	do.	.00	.00	.00
June 14, 1906	do.	.00	.00	.00
Aug. 23, 1906	do.	.00	.00	.00
June 21, 1907	do.	.60		.60
Sept. 28, 1907	do.	1.00		1.00
June —, 1898	Ranchero ditch		1.75	1.75
Sept. —, 1898	do.		1.64	1.64
Mar. —, 1899	do.		1.64	1.64
June —, 1899	do.		1.00	1.00
Aug. —, 1899	do.		.41	.41
Mar. —, 1900	do.		.24	.24
June —, 1900	do.		.55	.55
Sept. —, 1900	do.	.80	1.33	2.13
Sept. 7, 1903	Rancheria pumping plant.	1.09		1.09
May 12, 1904	do.	1.46		1.46
Aug. 17, 1904	do.	1.30		1.30
June 16, 1905	do.	1.24		1.24
Sept. 27, 1905	do.	1.10		1.10
June 20, 1906	do.	2.00		2.00
Sept. 20, 1906	do.	1.90		1.90
June 25, 1907	do.	2.00		2.00
Sept. 26, 1907	do.	2.00		2.00
June —, 1898	Riverside Highland Water Co. pumping plant, Lytle Creek	4.40		4.40
Sept. —, 1898	do.	4.43		4.43
Mar. —, 1899	do.	4.25		4.25
June —, 1899	do.	2.08		2.08
Aug. —, 1899	do.	2.00		2.00
Mar. —, 1900	do.	6.59		6.59
June —, 1900	do.	5.38		5.38
Sept. —, 1900	do.	3.70		3.70
Sept. 4, 1903	do.	8.98		8.98
May 12, 1904	do.	7.92		7.92
Aug. 17, 1904	do.	2.00		2.00
June 16, 1905	do.	7.05		7.05
Sept. 28, 1905	do.	8.00		8.00
June 20, 1906	do.	3.60		3.60
Sept. 20, 1906	do.	6.10		6.10
June 25, 1907	do.	4.20		4.20
Sept. 26, 1907	do.	5.40		5.40
May 12, 1904	Riverside Highland Water Co., Santa Ana River.	.00		.00
Aug. 19, 1904	do.	6.43	0.42	6.85
May 31, 1905	do.	6.36		6.36
Sept. 4, 1905	do.	7.60	.40	8.00
June 20, 1906	do.	1.80	2.50	4.30
Sept. 7, 1906	do.	6.90		6.90
June 20, 1907	do.	2.50	1.60	4.10
Sept. 25, 1907	do.	3.60		3.60
June —, 1898	Riverside Water Co. upper canal.	18.00	41.04	59.04
Sept. —, 1898	do.	17.54	43.80	61.34
Mar. —, 1899	do.	18.04	42.49	60.53
June —, 1899	do.	17.50	36.42	53.92
Aug. —, 1899	do.	27.50	24.54	52.04
Mar. —, 1900	do.	24.54	37.40	61.94
June —, 1900	do.	32.36	20.58	52.94
Sept. —, 1900	do.	27.00	34.02	61.02
Sept. 30, 1902	do.	26.08	21.89	47.97
Sept. 1, 1903	do.	23.89	32.01	55.90
May 31, 1904	do.	29.44	12.96	42.40
July 29, 1904	do.	19.85	18.28	38.13
May 31, 1905	do.	25.33	24.85	50.18
Aug 31, 1905	do.	21.20	12.90	34.10
June 19, 1906	do.	2.90	38.60	41.50

Natural flow, in second-feet, of return water compared with developed water in San Bernardino Valley above Colton, Cal.—Continued.

Date.	Location.	De- veloped.	Natural.	Total.
		<i>Sec.-ft.</i>	<i>Sec.-ft.</i>	<i>Sec.-ft.</i>
Aug. 31, 1906	Riverside Water Co. upper canal.....	23.65		50.00
June 19, 1907	do.....		26.35	63.00
Sept. 26, 1907	do.....	16.00	63.00	46.00
June —, 1898	Riverside Water Co. mill pumping plant.....	1.94	30.00	1.94
Sept. —, 1898	do.....	2.04		2.04
Mar. —, 1899	do.....	.00		.00
June —, 1899	do.....	1.77		1.77
Aug. —, 1899	do.....	1.67		1.67
Mar. —, 1900	do.....	.00		.00
June —, 1900	do.....	1.88		1.88
Sept. —, 1900	do.....	1.52		1.52
Sept. 30, 1902	do.....	1.20		1.20
May 31, 1904	do.....	1.32		1.32
July 29, 1904	do.....	1.38		1.38
May 31, 1905	do.....	.92		.92
Aug. 31, 1905	do.....	1.30		1.30
June 23, 1906	do.....	.00		.00
Aug. 31, 1906	do.....	.00		.00
June 27, 1907	do.....	.00		.00
Sept. 20, 1907	do.....	.00		.00
June —, 1898	Riverside Water Co. flume.....		3.12	3.12
Sept. —, 1898	do.....		3.36	3.36
Mar. —, 1899	do.....		5.30	5.30
June —, 1899	do.....		7.29	7.29
Aug. —, 1899	do.....		2.56	2.56
Mar. —, 1900	do.....		2.67	2.67
June —, 1900	do.....		2.17	2.17
Sept. —, 1900	do.....		.94	.94
Sept. 30, 1902	do.....		.50	.50
Aug. 18, 1903	do.....		.00	.00
May 31, 1904	do.....		2.68	2.68
July 29, 1904	do.....		.00	.00
May 31, 1905	do.....		2.24	2.24
Aug. 31, 1905	do.....		.00	.00
June 20, 1906	do.....		16.70	16.70
Aug. 31, 1906	do.....		.00	.00
June 19, 1907	do.....		.00	.00
Sept. 20, 1907	do.....		.00	.00
Oct. 11, 1902	Riverside Water Co. flume pump No. 1.....	2.95		2.95
Aug. 18, 1903	do.....	4.08		4.08
May 31, 1904	do.....	1.79		1.79
July 29, 1904	do.....	2.99		2.99
May 26, 1905	do.....	3.95		3.95
Aug. 31, 1905	do.....	3.60		3.60
June 25, 1906	do.....	.00		.00
Aug. 31, 1906	do.....	.00		.00
June 27, 1907	do.....	.00		.00
Sept. 20, 1907	do.....	.00		.00
Oct. 11, 1902	Riverside Water Co. flume pump No. 2.....	2.08		2.08
Aug. 18, 1903	do.....	2.63		2.63
May 31, 1904	do.....	1.76		1.76
July 29, 1904	do.....	2.52		2.52
May 26, 1905	do.....	3.18		3.18
Aug. 31, 1905	do.....	3.00		3.00
June 25, 1906	do.....	.00		.00
Aug. 31, 1906	do.....	.00		.00
June 27, 1907	do.....	.00		.00
Sept. 20, 1907	do.....	.00		.00
Aug. 19, 1903	Riverside Water Co. river ditch pump.....	5.79		5.79
May 21, 1904	do.....	9.33		9.33
Aug. 23, 1904	do.....	9.14		9.14
Oct. 11, 1902	Rogers pumping plant.....	4.38		4.38
Aug. 19, 1903	do.....	4.44		4.44
May 31, 1904	do.....	.00		.00
Aug. 15, 1904	do.....	.00		.00
June 6, 1905	do.....	.00	.00	.00
Aug. 31, 1905	do.....	.00		.00
June 19, 1906	do.....	1.60		1.60
Sept. 7, 1906	do.....	2.40		2.40
June 19, 1907	do.....	.00		.00
Sept. 18, 1907	do.....	2.20		2.20
May 21, 1904	Rosedale Water Co. pumping plant.....	.60		.60
Aug. 12, 1904	do.....	.50		.50
June 6, 1905	do.....	.30		.30
Sept. 28, 1905	do.....	.00		.00
June 28, 1906	do.....	.50		.50
Aug. 24, 1906	do.....	.00		.00
June 19, 1907	do.....	.00		.00
Sept. 26, 1907	do.....	.40		.40

Natural flow, in second-feet, of return water compared with developed water in San Bernardino Valley above Colton, Cal.—Continued.

Date.	Location.	De- veloped.	Natural.	Total.
		<i>Sec.-ft.</i>	<i>Sec.-ft.</i>	<i>Sec.-ft.</i>
June —, 1898	Shay or Stout dam ditch.		2.30	2.30
Sept. —, 1898	do.		2.08	2.08
Mar. —, 1899	do.		2.23	2.23
June —, 1899	do.		1.13	1.13
Aug. —, 1899	do.		.90	.90
Mar. —, 1900	do.		.507	.507
June —, 1900	do.		.40	.40
Sept. —, 1900	do.		.16	.16
Sept. 30, 1902	do.		.00	.00
Aug. 17, 1903	do.		.00	.00
May 13, 1904	do.		.00	.00
Aug. 15, 1904	do.		.00	.00
June 2, 1905	do.		.00	.00
Sept. 5, 1905	do.		.00	.00
June 25, 1906	do.		.00	.00
Aug. 23, 1906	do.		.00	.00
June 21, 1907	do.		.24	.24
Sept. 28, 1907	do.		2.60	2.60
June —, 1898	Swamp ditch.		1.30	1.30
Sept. —, 1898	do.		1.00	1.00
Mar. —, 1899	do.		1.02	1.02
June —, 1899	do.		.85	.85
Aug. —, 1899	do.		.77	.77
Mar. —, 1900	do.		.69	.69
June —, 1900	do.		.70	.70
Sept. —, 1900	do.		.89	.89
Oct. 14, 1902	do.		.86	.86
Sept. 7, 1903	do.		.93	.93
June 4, 1904	do.		.42	.42
Aug. 12, 1904	do.		.51	.51
May 31, 1905	do.		.47	.47
Aug. 14, 1905	do.		.47	.47
June 23, 1906	do.		.40	.40
Aug. 28, 1906	do.		.80	.80
June 20, 1907	do.		.64	.64
Sept. 21, 1907	do.		2.20	2.20
June —, 1898	Ward & Warren ditch.		1.00	1.00
Sept. —, 1898	do.	1.60	.72	2.32
Mar. —, 1899	do.	1.60	.72	2.32
June —, 1899	do.	1.60	1.49	3.09
Aug. —, 1899	do.		.615	.615
Mar. —, 1900	do.	1.56		1.56
June —, 1900	do.	1.60	.95	2.55
Sept. —, 1900	do.	1.60	.10	1.70
Oct. 14, 1902	do.	.53		.53
Aug. 21, 1903	do.	.30	1.58	1.88
June 4, 1904	do.	1.44	.17	1.61
Aug. 20, 1904	do.		.00	.00
May 31, 1905	do.		.00	.00
Sept. 4, 1905	do.	.00		.00
June 20, 1906	do.		.00	.00
Sept. 7, 1906	do.		5.10	5.10
June 20, 1907	do.		.06	.06
Sept. 25, 1907	do.		2.10	2.10
Sept. 25, 1907	do.		.00	.00
Sept. 25, 1907	West Riverside Water Co. 350-inch pumping plant.	5.94		5.94
Aug. 19, 1903	do.	3.41		3.41
May 21, 1904	do.	6.52		6.52
Aug. 19, 1904	do.	5.35		5.35
June 6, 1905	do.	2.00		2.00
Sept. 28, 1905	do.	5.60		5.60
June 27, 1906	do.	6.00		6.00
Aug. 31, 1906	do.	6.50		6.50
June 19, 1907	do.		10.30	10.30
Sept. 21, 1907	do.	8.80		8.80
June —, 1898	Whiting ditch.		.26	.26
Sept. —, 1898	do.		.01	.01
Mar. —, 1899	do.		.76	.76
June —, 1899	do.		.246	.246
Aug. —, 1899	do.		.01	.01
Mar. —, 1900	do.		1.12	1.12
June —, 1900	do.		.13	.13
Sept. —, 1900	do.		.00	.00
Oct. 13, 1902	do.		.00	.00
Aug. 17, 1903	do.		.00	.00
June 4, 1904	do.		.00	.00
Aug. 20, 1904	do.		.00	.00
June 6, 1905	do.		.00	.00
Sept. 4, 1905	do.		.00	.00
Oct. 24, 1906	do.		.00	.00
June 25, 1907	do.		.00	.00

Natural flow, in second-feet, of return water compared with developed water in San Bernardino Valley above Colton, Cal.—Continued.

Date.	Location.	De- veloped.	Natural.	Total.
		<i>Sec.-ft.</i>	<i>Sec.-ft.</i>	<i>Sec.-ft.</i>
Sept. 25, 1907	Whiting ditch		0.00	0.00
June —, 1898	Whitlock ditch .....		.34	.34
Sept. —, 1898	.....do.....		.38	.38
Mar. —, 1899	.....do.....		.47	.47
June —, 1899	.....do.....		.28	.28
Aug. —, 1899	.....do.....		.09	.09
Mar. —, 1900	.....do.....		.23	.23
June —, 1900	.....do.....		.00	.00
Sept. —, 1900	.....do.....		.00	.00
Oct. 13, 1902	.....do.....		.00	.00
Aug. 22, 1903	.....do.....		.00	.00
June 4, 1904	.....do.....		.00	.00
Aug. 20, 1904	.....do.....		.00	.00
June 19, 1905	.....do.....		.00	.00
Sept. 2, 1905	.....do.....		.00	.00
June 22, 1906	.....do.....		.00	.00
Oct. 24, 1906	.....do.....		.00	.00
June 21, 1907	.....do.....		.00	.00
Sept. 20, 1907	.....do.....		.00	.00
Sept. 9, 1903	Wozencraft tract, artesian well	0.23	.....	.23

Return waters, in second-feet, in San Bernardino Valley below Slover Mountain and above Riverside Narrows, Cal.

[By K. Sanborn, engineer Riverside Water Co.]

Date.	Location.	De- veloped.	Natural.	Total.
		<i>Sec.-ft.</i>	<i>Sec.-ft.</i>	<i>Sec.-ft.</i>
Sept. 29, 1902	Alvitez ditch at headgate, east end of West Riverside Bridge		1.96	1.96
Aug. 20, 1903	.....do.....		3.10	3.10
May 13, 1904	.....do.....		1.63	1.63
Aug. 8, 1904	.....do.....		2.23	2.23
May 27, 1905	.....do.....		3.00	3.00
Aug. 11, 1905	.....do.....		1.30	1.30
June 27, 1906	.....do.....		5.20	5.20
Aug. 28, 1906	.....do.....		5.00	5.00
June 24, 1907	.....do.....		.70	.70
Sept. 19, 1907	.....do.....		2.50	2.50
June 29, 1906	California Orange Co., pumping plant	1.30	.....	1.30
Sept. 7, 1906	.....do.....	1.40	.....	1.40
June 24, 1907	.....do.....	.00	.....	.00
Sept. 20, 1907	.....do.....	1.50	.....	1.50
Aug. 18, 1904	Cuttle's pumping plant	2.45	.....	2.45
June 6, 1905	.....do.....	2.50	.....	2.50
Oct. 4, 1905	.....do.....	2.25	.....	2.25
June 29, 1906	.....do.....	2.50	.....	2.50
Sept. 7, 1906	.....do.....	2.50	.....	2.50
June 24, 1907	.....do.....	.00	.....	.00
Sept. 20, 1907	.....do.....	2.50	.....	2.50
Sept. 29, 1902	Evans Island or Jansen ditch, under west end of West Riverside Bridge		5.35	5.35
Aug. 20, 1903	.....do.....		4.71	4.71
May 13, 1904	.....do.....		3.43	3.43
Aug. 8, 1904	.....do.....		.00	.00
May 27, 1905	.....do.....		.00	.00
Aug. 11, 1905	.....do.....		.00	.00
June 29, 1906	.....do.....		.00	.00
Sept. 3, 1906	.....do.....		.00	.00
June 24, 1907	.....do.....		4.70	4.70
Sept. 19, 1907	.....do.....		.00	.00
Sept. 29, 1902	Evans ditch near Riverside County line		2.17	2.17
Aug. 21, 1903	.....do.....		.81	.81
May 16, 1904	.....do.....		2.53	2.53
Aug. 11, 1904	.....do.....		.00	.00
May 29, 1905	.....do.....		.00	.00
Aug. 11, 1905	.....do.....		.50	.50
June 26, 1906	.....do.....		1.90	1.90
Sept. 3, 1906	.....do.....		.00	.00
June 19, 1907	.....do.....		.00	.00
Sept. 20, 1907	.....do.....		.00	.00

Return waters, in second-feet, in San Bernardino Valley below Slover Mountain and above Riverside Narrows, Cal.—Continued.

Date.	Location.	De- veloped.	Natural.	Total.
		<i>Sec.-ft.</i>	<i>Sec.-ft.</i>	<i>Sec.-ft.</i>
Sept. 29, 1902	Evans or Smith ditch, 1 mile below Riverside County line.		0.53	0.53
Aug. 22, 1903	do.		.70	.70
May 16, 1904	do.		2.03	2.03
Aug. 11, 1904	do.		1.31	1.31
May 29, 1905	do.		2.30	2.30
Aug. 14, 1905	do.		.00	.00
June 25, 1906	do.		1.70	1.70
Sept. 3, 1906	do.		.00	.00
June 19, 1907	do.		5.70	5.70
Sept. 20, 1907	do.		.00	.00
June 2, 1904	Evans well ditch, Santa Ana Street.	0.51		.51
Aug. 8, 1904	do.	.04		.04
May 29, 1905	do.	.00		.00
Aug. 9, 1905	do.	1.70		1.70
June 23, 1906	do.		.00	.00
Sept. 3, 1906	do.		.00	.00
June 19, 1907	do.		.00	.00
Sept. 23, 1907	do.	.80		.80
June 3, 1904	Evans pipe line to China Gardens at headworks.		1.41	1.41
Aug. 8, 1904	do.		.00	.00
May 30, 1905	do.		.00	.00
Aug. 11, 1905	do.		.00	.00
June 29, 1906	do.		.00	.00
Sept. 13, 1906	do.		.00	.00
June 24, 1907	do.		1.40	1.40
Sept. 19, 1907	do.		.00	.00
Aug. 8, 1904	Evans pumping plant, 1,000 feet south of west end of West Riverside Bridge.			
	do.	3.03		3.03
May 27, 1905	do.	2.87		2.87
Sept. 5, 1905	do.	4.20		4.20
June 27, 1906	do.	3.60		3.60
Aug. 28, 1906	do.	5.53		5.53
June 24, 1907	do.	.00		.00
Sept. 19, 1907	do.		.00	.00
Aug. 18, 1904	Evans Jurupa pumping plant.	2.00		2.00
June 19, 1905	do.	2.00		2.00
Oct. 4, 1905	do.	.00		.00
June 29, 1906	do.	.00		.00
June 24, 1907	do.	.00		.00
Sept. 19, 1907	do.		.00	.00
June 3, 1904	Ferris Gallagher ditch near headworks.		1.72	1.72
Aug. 8, 1904	do.		1.71	1.71
May 30, 1905	do.		2.20	2.20
Aug. 14, 1905	do.		2.00	2.00
June 30, 1906	do.		2.90	2.90
Sept. 13, 1906	do.		3.25	3.25
June 24, 1907	do.		.00	.00
Sept. 19, 1907	do.		1.10	1.10
June 3, 1904	Gallagher ditch.		.86	.86
Aug. 18, 1904	do.		.92	.92
May 30, 1905	do.		.00	.00
Aug. 14, 1905	do.		1.20	1.20
June 30, 1906	do.		.76	.76
Sept. 13, 1906	do.		.00	.00
June 24, 1907	do.		1.60	1.60
Sept. 19, 1907	do.		.00	.00
June 3, 1904	Jurupa pumping plant, to supply Rubidoux ditch.	.00		.00
Aug. 11, 1904	do.	4.35		4.35
May 29, 1905	do.	2.10		2.10
Aug. 15, 1905	do.	4.80		4.80
June 26, 1906	do.	2.30		2.30
Sept. 3, 1906	do.	5.20		5.20
June 22, 1907	do.	.00		.00
Sept. 23, 1907	do.	4.80		4.80
June —, 1898	Lower canal, Riverside Water Co.		10.3	10.30
Sept. —, 1898	do.		7.70	7.70
Mar. —, 1899	do.		16.20	16.20
June —, 1899	do.		9.09	9.09
Aug. —, 1899	do.		7.38	7.38
Mar. —, 1900	do.		8.00	8.00
June —, 1900	do.		7.16	7.16
July 27, 1900	do.		7.13	7.13
Sept. —, 1900	do.		6.69	6.69
Sept. 29, 1902	do.		3.07	3.07
Aug. 21, 1903	do.		2.05	2.05
May 21, 1904	do.		3.15	3.15
Aug. 11, 1904	do.		.39	.39
May 30, 1905	do.		2.20	2.20
Sept. 5, 1905	do.		.00	.00

Return waters, in second-feet, in San Bernardino Valley below Slover Mountain and above Riverside Narrows, Cal.—Continued.

Date.	Location.	De- veloped.	Natural.	Total.
		<i>Sec.-ft.</i>	<i>Sec.-ft.</i>	<i>Sec.-ft.</i>
June 27, 1906	Lower canal, Riverside Water Co.....		3.10	3.10
Sept. 3, 1906	do.....		.00	.00
June 19, 1907	do.....		11.70	11.70
Sept. 23, 1907	do.....		.00	.00
June 6, 1905	Pond's pumping plant.....	2.50		2.50
Oct. 4, 1905	do.....	2.25		2.25
June 29, 1906	do.....	1.30		1.30
Sept. 7, 1906	do.....	2.50		2.50
June 24, 1907	do.....	2.50		2.50
Sept. 23, 1907	do.....	1.50		1.50
May 16, 1904	Riverside Power Co. canal at Pedley crossing.....		38.30	38.30
Aug. 18, 1904	do.....		29.50	29.50
June 15, 1905	do.....		30.60	30.60
Sept. 22, 1905	do.....		27.00	27.00
June 21, 1906	do.....		27.70	27.70
Sept. 29, 1906	do.....		35.00	35.00
June 26, 1907	do.....		49.50	49.50
Sept. 19, 1907	do.....		36.00	36.00
June 19, 1905	Rivero Land Co. pumping plant.....	.80		.80
Oct. 4, 1905	do.....	.60		.60
June 29, 1906	Rivino Land Co. pumping plant No. 1.....	.80		.80
Sept. 7, 1906	do.....	.70		.70
June 24, 1907	do.....	1.35		1.35
Sept. 23, 1907	do.....	1.00		1.00
Sept. 13, 1906	Rivino Land Co. pumping plant No. 2.....	.83		.83
June 26, 1907	do.....	2.30		2.30
Sept. 23, 1907	do.....	.00		.00
Sept. 29, 1902	Roubidoux ditch at measuring box.....		7.19	7.19
Aug. 21, 1903	do.....	1.74	4.78	6.52
May 16, 1904	do.....		6.49	6.49
Aug. 8, 1904	do.....		2.82	2.82
May 29, 1905	do.....		4.92	4.92
Aug. 15, 1905	do.....		7.20	7.20
June 15, 1906	do.....		4.40	4.40
Sept. 3, 1906	do.....		2.00	2.00
June 19, 1907	do.....		9.80	9.80
Sept. 23, 1907	do.....	4.80	1.60	6.40
Oct. 10, 1902	Santa Ana River at Riverside Narrows.....		43.25	43.25
Aug. 25, 1903	do.....		40.70	40.70
Aug. 8, 1904	Spanishtown, pumping plant at weir at end of main.....	3.22		3.22
May 29, 1905	do.....	4.17		4.17
Aug. 11, 1905	do.....	2.60		2.60
June 26, 1906	do.....	4.60		4.60
Sept. 3, 1906	do.....	.00		.00
June 22, 1907	do.....	.00		.00
Sept. 24, 1907	do.....	.00		.00
Aug. 8, 1904	Springbrook, pumping plant at weir at end of main.....		4.84	4.84
May 27, 1905	do.....		5.58	5.58
Aug. 11, 1905	do.....		3.60	3.60
June 23, 1906	do.....	.00		.00
Sept. 3, 1906	do.....	.00		.00
June 22, 1907	do.....	.00		.00
Sept. 24, 1907	do.....		.00	.00
Aug. 8, 1904	Soquel ditch.....		1.49	1.49
May 27, 1905	do.....		3.20	3.20
Aug. 11, 1905	do.....		2.70	2.70
June 27, 1906	do.....		6.60	6.60
Aug. 28, 1906	do.....		5.30	5.30
June 24, 1907	do.....		1.90	1.90
Sept. 19, 1907	do.....		3.70	3.70
June 3, 1904	Zimmerman pipe line.....		.00	.00
Aug. 8, 1904	do.....		1.08	1.08
May 30, 1905	do.....		1.40	1.40
Aug. 14, 1905	do.....		1.20	1.20
June 30, 1906	do.....		2.20	2.20
Sept. 13, 1906	do.....		.00	.00
June 24, 1907	do.....		.00	.00
Sept. 19, 1907	do.....		.00	.00

MISCELLANEOUS MEASUREMENTS.

The following miscellaneous measurements have been made in the Santa Ana River basin:

Miscellaneous measurements of streams in Santa Ana River drainage basin.

Date.	Stream.	Hydrographer.	Locality.	Dis-charge.
				<i>Sec.-feet.</i>
Aug. 8, 1897	Alder Creek	A. Q. Campbell		0.88
Aug. 31, 1897	do.	do.		1.00
Nov. 14, 1897	do.	J. B. Lippincott		2.00
Apr. 14, 1900	do.	S. G. Bennett		1.90
Oct. 8, 1901	do.	do. ....		.89
July 27, 1896	Bear Creek	J. H. Quinton		70.6
Aug. 31, 1897	do.	A. Q. Campbell		54.3
Nov. 14, 1897	do.	J. B. Lippincott		8.95
July 16, 1906	Cable Canyon Creek		Near Glen Helen	2.20
June 8, 1900	Cajon Creek	S. G. Bennett	Keenebrook station	1.37
July 16, 1906	do.		do.	3.3
Oct. 11, 1910	do.		Below junction with Lone Pine Creek	4.8
Oct. 13, 1905	Devil Canyon Creek	K. Sanborn	Mouth of canyon	1.26
July 14, 1906	do.		do.	5.20
Nov. 14, 1897	Keller Creek	A. Q. Campbell		1.00
Apr. 14, 1900	do.	S. G. Bennett .....		.67
June 19, 1898	Spring Brook	F. H. Olmsted	Below West Riverside bridge	2.92
Aug. 28, 1898	do.	do.	do.	1.27
July 28, 1900	do.	S. G. Bennett	Below West Riverside bridge	2.77
Aug. 30, 1901	do.	J. B. Lippincott	Orange County	2.08
May 24, 1899	Trabuco Creek	F. Rolfe	At foot of Bear Valley trail	1.08
Feb. 16, 1898	Whitewater River	J. B. Lippincott	2 miles above mouth	14.2
Feb. 17, 1898	do.	do.	At mouth	17.8
Do.	Whitewater River, Middle Fork	do. ....		.82
Do.	Whitewater River, North Fork	do.	do.	4.64
Feb. 15, 1898	Whitewater River, South Fork	do.	At tunnel	7.42
Mar. 4, 1899	do.	do.	do.	2.52
July 14, 1900	San Timoteo Creek	S. G. Bennett	Bicknell station	1.50
Feb. 22, 1898	Snow Creek	J. B. Lippincott		4.50

Discharge measurements of canals between the Riverside Narrows and the Auburndale bridge having their source in Santa Ana River.

[By K. Sanborn, engineer Riverside Water Co.]

Date.	Canal.	Dis-charge.
		<i>Sec.-feet.</i>
Sept. 5, 1903	Castile ditch	3
May 15, 1904	do. ....	.0
Aug. 18, 1904	do.	1.0
June 15, 1905	do. ....	.0
Sept. 22, 1905	do. ....	.0
June 21, 1906	do. ....	.0
Sept. 29, 1906	do. ....	.0
June 26, 1907	do. ....	.0
Sept. 27, 1907	do. ....	.0
May 15, 1904	Durkee ditch at Auburndale bridge .....	.0
Aug. 20, 1904	do. ....	.0
June 15, 1905	do.	4.1
Sept. 22, 1905	do. ....	.0
June 21, 1906	do.	3.2
Sept. 29, 1906	do.	3.5
June 26, 1907	do.	3.4
Sept. 27, 1907	do.	9.8
Sept. 5, 1903	Fuller ditch	13.4
May 15, 1904	do.	11.2
Aug. 20, 1904	do.	4.6
June 15, 1905	do.	5.6
Sept. 22, 1905	do.	5.4
June 21, 1906	do.	12.7
Sept. 29, 1906	do.	6.7

Discharge measurements of canals between the Riverside Narrows and the Auburndale bridge having their source in Santa Ana River—Continued.

Date.	Canal.	Dis-charge.
		<i>Sec.-feet.</i>
June 26, 1907	Fuller ditch.....	8.3
Sept. 27, 1907	.....do.....	1.7
May 15, 1904	Gilliland ditch at Auburndale bridge.....	.61
Aug. 20, 1904	.....do.....	.42
June 15, 1905	.....do.....	1.40
Sept. 22, 1905	.....do.....	.30
June 21, 1906	.....do.....	.17
Sept. 29, 1906	.....do.....	.50
June 26, 1907	.....do.....	1.10
Sept. 27, 1907	.....do.....	.60
May 15, 1904	Newberry ditch at Auburndale bridge.....	.94
Aug. 20, 1904	.....do.....	2.70
June 15, 1905	.....do.....	.00
Sept. 22, 1905	.....do.....	.00
June 21, 1906	.....do.....	.00
Sept. 29, 1906	.....do.....	1.60
June 26, 1907	.....do.....	.00
Sept. 27, 1907	.....do.....	.80
Sept. 5, 1903	Newton ditch, near intake.....	4.10
May 15, 1904	.....do.....	4.70
Aug. 20, 1904	.....do.....	7.70
June 15, 1905	.....do.....	2.30
Sept. 22, 1905	.....do.....	1.70
June 21, 1906	.....do.....	.00
Sept. 29, 1906	.....do.....	.00
June 26, 1907	.....do.....	.00
Sept. 27, 1907	.....do.....	.00
Sept. 5, 1903	Roberts ditch near intake.....	2.60
May 15, 1904	.....do.....	2.20
Aug. 20, 1904	.....do.....	1.40
June 15, 1905	.....do.....	1.00
Sept. 22, 1905	.....do.....	1.70
June 21, 1906	.....do.....	2.60
Sept. 29, 1906	.....do.....	1.50
June 26, 1907	.....do.....	.80
Sept. 27, 1907	.....do.....	.00
June 15, 1905	Santa Ana River at Auburndale Bridge.....	63.60
Sept. 22, 1905	.....do.....	57.00
June 21, 1906	.....do.....	56.00
Sept. 29, 1906	.....do.....	52.00
June 26, 1906	.....do.....	78.00
Sept. 27, 1906	.....do.....	57.70
June 15, 1905	Santa Ana River at Auburndale Bridge, including canals.....	71.13
Sept. 22, 1905	.....do.....	57.80
June 21, 1906	.....do.....	59.37
Sept. 29, 1906	.....do.....	57.60
June 26, 1907	.....do.....	86.00
Sept. 27, 1907	.....do.....	66.50
Sept. 5, 1903	Wilbur ditch at Roger's pipe trestle crossing.....	1.70
May 15, 1904	.....do.....	2.54
Aug. 20, 1904	.....do.....	2.13
June 15, 1905	.....do.....	6.10
Sept. 22, 1905	.....do.....	6.40
June 21, 1906	.....do.....	.00
Sept. 29, 1906	.....do.....	.00
June 26, 1907	.....do.....	.00
Sept. 27, 1907	.....do.....	.00

Miscellaneous measurements of canals in Santa Ana River drainage basin, Cal.

Date.	Stream.	Hydrographer.	Locality.	Dis-charge.
				<i>Sec.-feet.</i>
Oct. 25, 1900	Alvitrez ditch.....	K. Sanborn.....	Vicinity of Colton and River- side.	1.53
Apr. 29, 1903	Anaheim and Fuller- ton canal.	O. W. Peterson.....	Heading.....	2.8
Sept. 25, 1903	.....do.....	W. B. Clapp.....	Esperanza.....	32
June 22, 1898	Anaheim and Santa Ana canals.	F. H. Olmsted.....	Division box.....	67.5
Aug. 30, 1898	.....do.....	.....do.....	.....do.....	52.9
Aug. 30, 1899	.....do.....	S. G. Bennett.....	.....do.....	59.6
Sept. 15, 1899	.....do.....	J. B. Lippincott.....	.....do.....	71.7
Oct. 25, 1899	.....do.....	.....do.....	.....do.....	145
July 28, 1900	.....do.....	S. G. Bennett.....	.....do.....	49.7
Oct. 5, 1900	.....do.....	W. W. Cockins, jr.....	.....do.....	75.1
Aug. 27, 1901	.....do.....	J. B. Lippincott.....	.....do.....	64.5
Aug. 31, 1901	.....do.....	.....do.....	.....do.....	55.4
Sept. 7, 1898	Bear Valley ditch.....	.....do.....	Joint headworks with Palm Spring.	9.35
Aug. 25, 1899	.....do.....	S. G. Bennett.....	.....do.....	6.34
Feb. 17, 1898	.....do.....	J. B. Lippincott.....	1/2 mile northeast of ranch house.	3.05
Sept. 28, 1899	.....do.....	.....do.....	Headgate.....	5.20
Sept. 29, 1899	.....do.....	.....do.....	1 mile below headgate.....	2.49
Aug. 30, 1901	Castillo ditch.....	.....do.....	Below Riverside Narrows.....	1.19
Sept. 3, 1899	Durkee ditch.....	.....do.....	Near ranch house.....	1.38
Sept. 13, 1899	.....do.....	.....do.....	Newberry east line.....	6.14
July 28, 1900	.....do.....	S. G. Bennett.....	Ranch house.....	1.80
Aug. 27, 1901	.....do.....	J. B. Lippincott.....	.....do.....	3.98
Aug. 31, 1901	.....do.....	.....do.....	.....do.....	8.24
Sept. 23, 1903	.....do.....	W. B. Clapp.....	Auburndale Bridge.....	3.40
July 1, 1899	Evans ditch.....	.....do.....	Near Temescal, Riverside County.	3.75
Aug. —, 1899	.....do.....	.....do.....	.....do.....	3.00
June 19, 1898	Evans lower ditch.....	F. H. Olmsted.....	Riverside County.....	5.68
Aug. 28, 1898	.....do.....	.....do.....	.....do.....	4.87
Aug. 30, 1899	.....do.....	S. G. Bennett.....	.....do.....	4.48
July 27, 1900	.....do.....	.....do.....	.....do.....	5.27
Oct. 25, 1900	.....do.....	K. Sanborn.....	.....do.....	4.36
July 27, 1900	Evans upper ditch.....	S. G. Bennett.....	.....do.....	1.04
Oct. 25, 1900	.....do.....	K. Sanborn.....	.....do.....	3.32
Aug. 30, 1901	.....do.....	J. B. Lippincott.....	.....do.....	1.88
Oct. 5, 1900	Fuller ditch.....	W. W. Cockins, jr.....	.....do.....	6.50
Aug. 30, 1901	.....do.....	J. B. Lippincott.....	Near intake.....	9.69
Do.....	.....do.....	.....do.....	Fuller's ranch house.....	7.15
July 28, 1900	Gilliland's ditch.....	S. G. Bennett.....	Auburndale Bridge.....	1.4
Sept. 23, 1903	.....do.....	W. B. Clapp.....	.....do.....	1.2
June 20, 1898	"H" ditch.....	F. H. Olmsted.....	On right bank of Santa Ana River 3 miles below River- side Narrows.	3.75
Do.....	"J" ditch.....	.....do.....	On right bank of Santa Ana River 5 miles below River- side Narrows.	9.99
June 18, 1898	Jurupa canal.....	.....do.....	.....do.....	13.8
July 1, 1898	.....do.....	Lippincott and San- born.	.....do.....	7.11
Aug. 27, 1898	.....do.....	F. H. Olmsted.....	.....do.....	10.2
Sept. 22, 1898	.....do.....	J. B. Lippincott.....	.....do.....	5.41
May 31, 1898	.....do.....	S. G. Bennett.....	.....do.....	6.74
July 15, 1898	.....do.....	.....do.....	.....do.....	13.1
July 26, 1899	.....do.....	.....do.....	Submerged flume above Col- ton Bridge.	5.11
Aug. 24, 1899	.....do.....	.....do.....	.....do.....	4.28
July 27, 1900	.....do.....	.....do.....	.....do.....	14.4
Oct. 19, 1900	.....do.....	K. Sanborn.....	.....do.....	14.0
July 28, 1900	Newberry ditch.....	S. G. Bennett.....	Auburndale Bridge.....	5.47
Aug. 27, 1901	.....do.....	J. B. Lippincott.....	Head.....	3.05
Aug. 31, 1901	.....do.....	.....do.....	.....do.....	3.23
Sept. 23, 1903	.....do.....	W. B. Clapp.....	Auburndale Bridge.....	3.3
Aug. 30, 1901	.....do.....	J. B. Lippincott.....	Below Narrows.....	7.04
June 17, 1898	Riverside Water Co.'s lower canal.	F. H. Olmsted.....	.....do.....	9.27
June 18, 1898	.....do.....	.....do.....	.....do.....	11.3
Aug. 30, 1901	.....do.....	J. B. Lippincott.....	.....do.....	4.52
Sept. 30, 1902	.....do.....	K. Sanborn.....	.....do.....	3.07
Aug. 30, 1899	Riverside Water Co.'s upper canal.	S. G. Bennett.....	.....do.....	57.4
July 26, 1900	.....do.....	.....do.....	.....do.....	43.3
Aug. 27, 1901	Roberts ditch.....	J. B. Lippincott.....	.....do.....	.0
Aug. 31, 1901	.....do.....	.....do.....	.....do.....	.0

Miscellaneous measurements of canals in Santa Ana River drainage basin, Cal.—Contd.

Date.	Stream.	Hydrographer.	Locality.	Dis-charge.
				<i>Sec.-feet.</i>
June 19, 1898	Roubidoux ditch	F. H. Olmsted		8.94
Aug. 28, 1898	do	do		8.50
July 27, 1900	do	S. G. Bennett		8.18
Oct. 25, 1900	do	K. Sanborn		7.80
Aug. 30, 1901	do	J. B. Lippincott		8.75
July 14, 1900	San Timoteo ditch	K. Sanborn	Bicknell Station	1.50
June 22, 1898	Santa Ana Irrigation Co.'s canal	F. H. Olmsted	Near bridge at Yorba	29.0
Aug. 30, 1898	do	do	do	24.6
May 26, 1899	do	F. Rolfe	3 miles above Olive	44.0
Sept. 15, 1899	do	J. B. Lippincott		30.3
Oct. 26, 1899	do	do		47.2
Sept. 3, 1900	do	W. P. Searcy		39.0
Aug. 15, 1900	do	do		25.7
Aug. 31, 1901	do	J. B. Lippincott	Road crossing	18.3
Apr. 30, 1903	do	O. W. Peterson	1 mile below heading	43
Sept. 23, 1903	do	W. B. Clapp	do	34
June 24, 1901	Seecher ditch	W. P. Searcy	Rincon Bridge	62
June 20, 1898	Townsend ditch	F. H. Olmsted		4.80
Oct. 5, 1900	do	W. W. Cockins, jr.		5.84
July 27, 1900	Trujillo ditch	S. G. Bennett . . . . .		.46
Oct. 25, 1900	do	K. Sanborn . . . . .		.53
Aug. 30, 1901	Wilbur ditch	J. B. Lippincott		4.52
Oct. 26, 1899	Yorba ditch	do		8.88
Aug. 15, 1900	do	W. P. Searcy		14.0
Sept. 3, 1900	do	do		21.4
Aug. 31, 1901	do	J. B. Lippincott . . . . .		.40
Sept. 25, 1903	do	W. B. Clapp	Esperanza . . . . .	.6

Miscellaneous low-water measurements made in basin of Santa Ana River, Los Angeles, San Bernardino, Riverside, and Orange counties.

Date.	Locality.	Dis-charge.
		<i>Sec.-feet.</i>
1900.		
Sept. 25	Frey's ranch, near Spadra	1.85
25	Phillips's ranch, near Spadra (weir) . . . . .	.74
27	C. L. Lancaster, Mesa avenue, Lordsburg (weir) . . . . .	.559
26	Covina Irrigation Co. compressor pumping plant, south of Lordsburg	3.58
24	Neuruff place, corner Holt avenue and San Antonio avenue, Pomona (weir) . . . . .	.33
26	Pomona Land & Water Co., Garey avenue (weir)	1.28
26	Consolidated Water Co.'s Pomona air-compressor plant (weir)	3.34
24	Consolidated Water Co., north of Pomona College (weir) . . . . .	.82
25	James Warden's place (weir) . . . . .	.25
24	Brundege place, San Antonio avenue, Pomona . . . . .	.26
25	Del Monte Water Co. (weir) . . . . .	.96
25	San Antonio Water Co.'s wells in Claremont; water goes to Ontario (weir) . . . . .	.40
25	San Antonio Water Co.'s wells at Indian Hill, $\frac{1}{2}$ mile north of Pomona College (weir) . . . . .	.99
25	San Antonio Canyon. From records of Pomona Land & Water Co. The discharge from San Antonio Canyon was 7.53 second-feet Sept. 2, 1895, and 9.02 second-feet on Sept. 6, 1897 (weir) ^a	3.72
RED HILL, CUCAMONGA.		
July 11	Cucamonga Land & Water Co., Cucamonga Creek, 30-inch pipe line (weir)	1.15
11	Cucamonga Land & Water Co., Lone Star Spring pumping plant (weir)	1.20
11	Cucamonga Land & Water Co. "Y" tunnel (weir)	1.68
11	Stowell water from 90-acre tract; west side part to Ontario (weir)	2.97
11	San Antonio Water Co., Haskell well (weir)	2.13
11	San Antonio Water Co., Sixteenth street, pumping plant (weir)	1.72
		10.85

^a July 11, 1900, measurement made of water in San Antonio Canyon by S. G. Bennett; discharge, 4.07 second-feet.

Tabulation of measurements of cienagas and developments at Red Hill, Cal., as indicated in miner's inches.

[Fifty miner's inches to one second-foot.]

Date.	Hydrographer.	East side.								West side.										
		Creek Div. box, 30-inch line.	Div. box 1 16-inch line and V tunnel, built in 1886-1887.	China cienaga.	Lone Star Spring tunnel.	Y tunnel, built prior to 1886.	Cienaga below No. 1.	Total without Lone Star.	Total.	Spring northwest of tunnel No. 2 portal.	W. cienaga, "D."	Poncio Spring, cienaga C.	Artesian wells Nos. 1 and 2.	Tiburcio Spring.	Tunnel No. 2 on 90 acre.	China garden.	Stowell wells and tunnel above 90-acre tract.	Rain previous season.	Total on 90-acre tract.	Grand total, Red Hills.
Sept. 26, 1885	Wm. M. Fitzhugh.....	225.36	-----	51.73	(2.02)	$\left\{ \begin{array}{l} 6.61 \\ 9.61 \\ 16.22 \end{array} \right\}$	-----	293.31	295.33	56.47	45.27	(9.00)	-----	(1.00)	-----	-----	-----	10.81	111.74	406.07
Nov. 30, 1886	J. P. Culver..	261.43	64.67	11.46	2.02	-----	-----	337.56	339.57	9.50	$\left\{ \begin{array}{l} 5.70 \\ 97.80 \\ .90 \end{array} \right\}$	18.40	-----	2.16	-----	(a)	-----	21.83	134.46	474.03
July 24, 1887	F. Eaton.....	147.50	169.50	(10.00)	(2.00)	163.00	-----	327.00	329.00	13.67	31.90	10.00	(b)	(1.00)	-----	(16.76)	-----	14.50	73.33	402.33
July 13, 1888	J. P. Culver..	155.78	183.61	18.10	13.59	138.62	46.43	357.49	371.08	3.14	38.89	5.38	15.14	1.59	17.70	16.76	-----	17.76	98.60	469.68
July 13, 1889	E. T. Wright..	184.58	163.57	13.27	9.78	136.23	48.36	361.42	371.20	3.94	40.53	17.33	15.14	1.81	54.02	(16.76)	-----	20.97	149.53	520.73
July 14, 1890	do.....	260.03	228.53	17.32	10.85	156.01	72.52	505.88	516.73	3.08	71.98	30.53	13.98	0.92	73.82	(16.76)	-----	25.45	211.07	727.80
Do.....	J. P. Culver..	266.82	238.04	18.50	11.25	165.55	72.49	523.36	534.61	3.14	81.78	31.47	14.29	2.38	75.42	(16.76)	-----	225.24	759.85	
June, 29, 1893	E. T. Wright..	-----	-----	-----	-----	152.42	-----	-----	-----	-----	13.29	-----	-----	-----	36.45	-----	-----	19.82	-----	-----
July 14, 1893	do.....	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Sept. 15, 1894	do.....	160.31	182.84	13.14	(8.00)	141.10	41.74	356.29	364.29	-----	-----	-----	-----	-----	-----	-----	-----	8.13	-----	-----
June 12, 1895	do.....	198.53	154.87	21.00	(7.00)	(110.60)	(44.27)	374.40	381.40	-----	-----	-----	-----	-----	-----	-----	-----	20.98	-----	-----
June 14, 1896	N. W. Stowell.	-----	-----	-----	-----	-----	-----	-----	-----	0.00	22.00	1.00	23.00	-----	18.00	0.00	-----	-----	64.00	352.55
Aug. 20, 1896	F. E. Trask..	132.40	137.90	11.25	(7.00)	-----	-----	281.55	288.55	-----	-----	-----	-----	-----	-----	-----	46.00	8.11	-----	-----
Mar. 2, 1897	N. W. Stowell.	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Aug. 5, 1897	do.....	-----	-----	-----	9.42	-----	-----	-----	-----	0.00	$\left\{ \begin{array}{l} 20.00 \\ 7.00 \end{array} \right\}$	(0.50)	20.25	0.00	41.40	0.00	-----	-----	89.15	334.07
Aug. 10, 1897	F. E. Trask..	104.90	120.10	10.50	(9.42)	-----	-----	235.50	244.92	0.00	27.00	-----	-----	-----	-----	-----	-----	16.74	-----	-----
Aug. 13, 1898	do.....	76.68	95.91	7.84	147.00	-----	-----	180.43	227.43	0.00	-----	-----	-----	-----	-----	-----	-----	8.24	-----	-----
Aug. 14, 1898	N. W. Stowell.	-----	-----	-----	-----	-----	-----	-----	-----	0.00	24.00	(0.50)	13.00	0.00	26.00	0.00	-----	-----	63.50	290.93
Apr. 1, 1899	do.....	107.25	98.20	-----	-----	-----	-----	205.45	-----	0.00	-----	-----	-----	-----	-----	-----	-----	7.49	-----	-----
Aug. 21, 1899	E. T. Wright..	91.58	80.95	-----	27.00	56.17	24.78	172.53	199.53	0.00	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Aug. 25, 1899	E. T. Wright and F. C. Finkle.....	-----	-----	-----	75.00	-----	-----	-----	247.53	-----	3.13	-----	2.68	-----	61.80	-----	92.40	-----	67.61	267.14

Apr. 1, 1899	Newman and Finkle.....	107.25	98.20	(5.00)	35.60	72.60	-----	210.45	246.05	0.00	15.49	-----	7.90	-----	-----	-----	-----	-----
Feb. 3 and 5, 1900.	Newman, Trask, and Finkle.....	m 97.06	77.22	-----	17.06	54.88	-----	174.28	191.34	0.00	3.91	-----	1.45	-----	-----	-----	-----	-----
Feb. 11, 1900	Trask and Finkle.....	-----	-----	-----	-----	-----	-----	-----	-----	-----	3.81	0.56	1.20	-----	55.90	-----	76.25	-----
																	61.47	252.81

^a China garden included in "D."

^b Fall, 1897.

^c Tunnel.

^d Construction begun January, 1888.

^e Length, 2,600 feet.

^f 1 p. m.

^g Caved in.

^h August 4, well No. 2 cut.

ⁱ Exterior of tunnel begun, 11.

^j Stowell.

^k June 12, not pumped.

^l July 24, not pumped.

^m And China cienaga.

ⁿ Flow.

^o Pumped.

^p When Lone Star Tunnel was pumped.

^q March 15.

NOTE.—By the law of Mar. 23, 1901, 40 California miner's inches equal 1 second-foot.

WATER ABSORBED IN SAND AND GRAVELS.

During the winter of 1902-3 the precipitation in southern California was greater than at any time during the preceding 10 years. This resulted in heavy irrigation during the spring of 1903, many irrigators taking advantage of this condition to thoroughly saturate the soil at a time when water was plenty and cheap, thereby saving much expense and contention which always accompanies a later irrigation when water is scarce, expensive, and in greater demand than can be supplied.

Immediately following the rain of April 16, 1903, a series of measurements were made by W. B. Clapp under the direction of the United States Geological Survey to determine the amount of water being absorbed in the sand and gravel washes of the larger tributary streams of the three principal river basins of southern California—Santa Ana, San Gabriel, and Los Angeles rivers. Measurements were taken at the mouths of the canyons where the streams leave the mountains, at all canal diversions, and at such intervals along the streams as time and the available force detailed for this work would allow, the location of the point where the stream entirely disappeared or left the valley being noted in all cases. These measurements show the amount of water taken up in the sand and gravel wash of this stream on the days given, and the following tables give this amount in second-feet and acre-feet for a period of 24 hours:

Water discharged from tributary streams and sinking in the Santa Ana River basin above Colton, Cal.

[Discharge for 24 hours.]

Stream.	Second-feet.			Acre-feet.		
	Diver-sion.	Waste.	Total.	Diver-sion.	Waste.	Total.
<i>Apr. 24, 1903.</i>						
Santa Ana.....	16	116	132	32	230	262
Mill Creek.....	5	34	39	10	67	77
Plunge Creek.....		23	23		46	46
City Creek.....		22	22		44	44
East Twin Creek.....		10	10		20	20
West Twin Creek.....		8.6	8.6		17	17
Lytle Creek.....	7	56	63	14	111	125
	28	270	298	56	535	591
<i>May 16, 1903.</i>						
Santa Ana.....	47	48	95	93	95	188
Mill Creek.....	49	19	68	97	38	135
Plunge Creek.....	6	3	9	12	6	18
City Creek.....	7	4	11	14	8	22
East Twin Creek.....	2	3	5	4	6	10
West Twin Creek.....	2	2	4	4	4	8
Lytle Creek.....	15	14	29	30	28	58
	128	93	221	254	185	439

Water discharged from tributary streams and sinking in the San Gabriel River basin above El Monte, Cal.

[Discharge for 24 hours.]

Stream.	Second-feet.			Acre-feet.			Passing El Monte.	
	Diver-sion.	Waste.	Total.	Diver-sion.	Waste.	Total.	Second-feet.	Acre-feet.
<i>Apr. 26, 1903.</i>								
San Gabriel.....	40	285	325	79	565	644	229	454
San Dimas.....		19	19		38	38		
Dalton.....		9	9		18	18		
Santa Anita.....		40	40		79	79		
Eaton Canyon.....		29	29		57	57		
	40	382	422	79	757	836	229	454
<i>May 23, 1903.</i>								
San Gabriel.....	70	97	167	139	192	331		
San Dimas.....	2	.5	2.5	4	1	5		
Dalton.....	1.3	1.4	2.7	26	2.8	5.4		
Santa Anita.....	3	10	13	6	20	26		
Eaton Canyon.....	3	3	6	6	6	12		
	79	112	191	158	222	380		

Water discharged from tributary streams and sinking in the Los Angeles River basin above Burbank, Cal.

[Discharge for 24 hours.]

Stream.	Second-feet.			Acre-feet.		
	Diver-sion.	Waste.	Total.	Diver-sion.	Waste.	Total.
<i>Apr. 18, 1903.</i>						
Tujunga.....		157	157		311	311
Little Tujunga.....		27	27		54	54
Pacoima.....		98	98		194	194
		282	282		559	559
<i>May 5, 1903.</i>						
Tujunga.....		37	37		73	
Little Tujunga.....		4	4		8	
Pacoima.....		24	24		48	
		65	65		129	
<i>June 4, 1903.</i>						
Tujunga.....	3	9.3	12.3	6	18	24
Little Tujunga.....		.7	.7		1.4	1.4
Pacoima.....	3	5	8	6	10	16
	6	15	21	12	29.4	41.4

SAN GABRIEL RIVER BASIN.

SAN GABRIEL RIVER AND CANALS NEAR AZUSA, CAL.

This station, which is located just above the road crossing at the mouth of the canyon, about one-fourth mile above the Pacific Light & Power Co.'s power house and 2 miles north of Azusa, in the NW. $\frac{1}{4}$ sec. 23, T. 1 N., R. 10 W., S. B. M., was established in 1895. Estimates of flow were very unsatisfactory until after the completion of the power canal in 1898.

The station is well below all tributaries and is 5 miles below the intake of the power canal.

The gage is an inclined staff in several sections, on the left bank.

Discharge measurements are made from a car and cable near the gage.

The flow in the power canal was measured by a weir but is now computed from the kilowatt output of the power plant and is added to that at the station to obtain the total flow of the stream. During the spring months additional water is diverted about 500 feet above the station and is used for irrigation. The acquired water rights greatly exceed the low-water flow of the stream.

The channel is composed of gravel and boulders and is subject to considerable change, especially above and below the measuring section. The current is swift, and measurements at flood stages are difficult. Various temporary diversions for irrigation just above the station affect the discharge.

Discharge measurements of San Gabriel River and canals near Azusa, Cal., in 1895-1912.

Date.	Hydrographer.	Gage height of river.	Discharge.		
			River.	Canals.	Total.
1895.		<i>Feet.</i>	<i>Sec.-ft.</i>	<i>Sec.-ft.</i>	<i>Sec.-ft.</i>
Sept. 10	J. B. Lippincott.....	1.19			34.9
Nov. 5	.....do.....	1.5	10.4	2.8	13.2
Dec. 11	.....do.....		.0	37.5	37.5
21	.....do.....	1.9	27.3	26.6	53.9
1896.					
Feb. 19	J. B. Lippincott.....	1.35	4.86	33.0	37.9
Mar. 22	.....do.....	2.27	69.9	35.2	105
Apr. 30	.....do.....		.0	55.2	55.2
June 17	.....do.....		19.9	5.53	25.4
July 22	J. H. Quinton.....		.0	26.7	26.7
Nov. 22	J. B. Lippincott.....		.0	21.1	21.1
1897.					
Jan. 10	J. B. Lippincott.....	1.28	4.50	21.6	26.1
25	.....do.....	2.00	57.8	17.3	75.1
Feb. 1	.....do.....	5.1	1,725	.0	1,725
2	.....do.....	3.4	422	.0	422
Mar. 12	.....do.....	3.3	410	18.0	428
Apr. 29	.....do.....	2.6	162	71.3	233
May 24	.....do.....	2.08	76.0	67.9	144
June 30	A. S. Campbell.....		.0	55.7	55.7
July 5	.....do.....		.0	53.9	53.9
Aug. 7	.....do.....	2.33	.0	31.4	31.4
Sept. 1	.....do.....	2.2	.0	24.2	24.2
29	.....do.....	2.1	.0	19.3	19.3
Nov. 13	.....do.....		7.56	24.2	31.8
27	J. B. Lippincott.....		3.50	32.9	36.4
28	.....do.....				42.1
1898.					
Jan. 12	J. B. Lippincott.....	1.38	23.3	25.0	48.3
Mar. 8	H. F. Crowe.....		.0	49.2	49.2
Apr. 2	J. B. Lippincott.....		.0	41.2	41.2
May 10	.....do.....		.0	23.3	23.3
17	.....do.....	1.03	15.4	44.6	60.0
July 1	F. H. Olmsted.....		.0	15.4	15.4
21	J. B. Lippincott.....		.0	13.2	
Aug. 16	.....do.....			5.78	
21	.....do.....			5.78	
22	.....do.....		.0	6.20	6.20
23	.....do.....		.0	8.48	8.48

Discharge measurements of San Gabriel River and canals near Azusa, Cal., in 1895-1912—
Continued.

Date.	Hydrographer.	Gage height of river.	Discharge.		
			River.	Canals.	Total.
1899.		<i>Feet.</i>	<i>Sec.-ft.</i>	<i>Sec.-ft.</i>	<i>Sec.-ft.</i>
Jan. 11	J. B. Lippincott	1.16	15.9	33.3	49.2
12	.....	1.08	12.0	.....	.....
13	.....	.90	16.0	.....	.....
14	.....	.78	2.0	.....	.....
15	.....	.70	1.0	.....	.....
16	H. F. Parkinson.....	.....	.....	.....	18.0
Aug. 26	do.....	.....	.0	5.5	5.5
Oct. 14	.....	1.10	13.0	.....	.....
1900.					
Jan. 3	.....	.....	49.0	.....	.....
4	.....	.....	19.0	.....	.....
May 5	.....	.....	38.0	.....	.....
6	.....	.....	26.0	.....	.....
11	.....	.....	9.0	.....	.....
Nov. 21	S. G. Bennett.....	.....	.0	46.3	46.3
1901.					
Jan. 7	S. G. Bennett.....	6.16	2,710	.0	2,710
Feb. 4	do.....	2.30	112	65.0	177
5	do.....	7.6	2,250	.0	6,250
22	do.....	4.1	700	65	765
Mar. 5	do.....	3.0	248	65	313
29	do.....	2.25	96.5	33.0	130
July 11	do.....	.....	.0	31.6	31.6
Sept. 19	do.....	.....	15.6	.....	.....
1902.					
Jan. 25	W. B. Clapp.....	.....	.0	50.9	50.9
Feb. 26	J. B. Lippincott.....	2.05	126	64.0	190
Mar. 6	J. Ahern.....	1.57	46.2	62.0	108
Apr. 8	S. G. Bennett.....	1.4	26.0	44.6	70.6
June 12	do.....	.....	.0	25.7	25.7
Sept. 1	W. B. Clapp.....	.....	.....	.....	5.0
1903.					
Jan. 29	C. A. Miller.....	3.20	467	64	531
Feb. 5	W. B. Clapp.....	1.70	56	70	126
Mar. 23	do.....	1.05	11	72	83
25	do.....	3.50	570	72	642
Apr. 1	do.....	7.95	8,430	72	8,500
May 23	do.....	2.20	97	70	167
June 10	do.....	1.70	38	70	108
13	do.....	1.50	20	81	101
Sept. 14	do.....	.....	.....	.....	27.5
1904.					
Mar. 18	Clapp and Murphy.....	.....	.0	43	43
Apr. 8	W. B. Clapp.....	1.30	14	68	82
19	Clapp and Webb.....	1.58	38	66	104
1905.					
Feb. 10	E. C. La Rue.....	2.20	190	66	256
17	do.....	3.50	560	66	626
Mar. 12	R. S. Hawley.....	9.30	11,055	72	11,127
14	W. B. Clapp.....	5.30	2,030	70	2,100
16	R. S. Hawley.....	5.80	3,225	80	3,305
24	do.....	4.20	611	54	665
31	do.....	3.80	400	80	480
Apr. 13	do.....	3.45	262	80	342
19	do.....	3.30	190	80	270
May 2	do.....	4.12	553	80	633
9	do.....	3.50	288	80	368
June 5	do.....	2.91	97	80	177
23	W. B. Clapp.....	2.60	41	84	125
July 5	Hawley and Clapp.....	2.28	17	85	102
Nov. 4	W. B. Clapp.....	.....	00	30	30
1906.					
Jan. 19	M. P. Beeson.....	3.88	375	0	375
20	do.....	2.90	104	76	180
20	do.....	2.95	110	76	186
Feb. 10	do.....	1.70	3.5	57	60
15	do.....	2.70	60	15	75
15	do.....	2.70	69	15	84
17	do.....	2.60	49	40	89

^a Calculated by Kutter's formula.

Discharge measurements of San Gabriel River and canals near Azusa, Cal., in 1895-1912—
Continued.

Date.	Hydrographer.	Gage height of river.	Discharge.		
			River.	Canals.	Total.
		<i>Feet.</i>	<i>Sec.-ft.</i>	<i>Sec.-ft.</i>	<i>Sec.-ft.</i>
1906.					
Mar. 12	M. P. Beeson.....	6.60	4,940	74	5,010
13	do.....	5.90	3,360	74	3,430
13	do.....	5.40	2,530	74	2,600
14	do.....	4.40	2,210	74	1,280
17	do.....	5.28	2,120	78	2,270
17	do.....	5.15	2,140	78	2,220
18	do.....	4.70	1,440	78	1,520
21	do.....	4.00	1,066	72	738
21	do.....	4.00	688	72	760
30	do.....	4.00	1,380	76	1,460
Apr. 4	do.....	5.10	1,757	76	833
18	do.....	4.50	394	76	470
18	do.....	3.80	436	76	512
May 11	do.....	3.80	209	76	285
May 11	do.....	3.30	212	76	288
June 1	do.....	3.30	292	54	346
1	do.....	3.55	273	54	327
29	C. H. Lee.....	3.55	157	54	233
July 30	W. B. Clapp.....	2.90	25	76	101
Dec. 28	W. B. Clapp and R. S. Hawley....	2.20	25	76	101
		5.20	1,500	76	1,580
1907.					
Jan. 2	Clapp and Martin.....	3.03	169	76	245
9	W. F. Martin.....	4.88	1,110	76	1,190
19	do.....	4.3	706	76	782
Feb. 7	do.....	4.3	1,020	76	1,100
28	do.....	4.2	618	76	694
Mar. 5	do.....	7.4	5,980	76	6,060
5	do.....	7.0	5,060	76	6,040
6	do.....	6.5	3,660	76	3,740
6	do.....	6.4	3,310	76	3,390
8	do.....	6.0	2,590	76	2,670
8	do.....	6.0	2,630	76	2,710
13	do.....	5.2	1,400	76	1,480
13	do.....	5.15	1,350	76	1,430
27	do.....	6.3	2,020	76	2,100
27	do.....	6.2	1,900	76	1,980
Apr. 5	do.....	5.4	1,240	76	1,320
5	do.....	5.4	1,290	76	1,370
15	do.....	5.0	893	76	960
30	W. B. Clapp.....	4.4	460	76	536
May 24	do.....	3.9	258	76	334
June 13	do.....	3.6	192	76	268
28	do.....	3.35	141	76	217
July 11	do.....	3.1	88	76	164
29	W. F. Martin.....	2.8	53	76	129
Aug. 22	do.....	2.1	2.8	76	79
1908.					
Jan. 27	do.....	3.8	271	76	347
Feb. 3	do.....	5.6	1,885	76	1,961
19	do.....	3.35	127	76	203
Apr. 14	W. B. Clapp.....	3.2	80	76	156
28	do.....	3.1	73	76	149
May 18	W. F. Martin.....	2.85	47	76	123
26	W. B. Clapp.....	2.55	31	76	107
June 13	do.....		4	76	80
1909.					
Feb. 26	Clapp and Martin.....	4.5	307	67	374
Mar. 22	W. F. Martin.....	4.95	697	67	764
Apr. 28	W. B. Clapp.....	4.4	296	67	363
May 14	do.....	4.2	230	30	260
June 3	do.....	3.62	110	65	175
22	do.....	3.4	62	67	129
July 8	do.....	3.1	27	69	96
21	do.....		1.8	67	69
Dec. 18	J. E. Stewart.....	3.28	24	74	98
1910.					
Jan. 3	do.....	5.10	1,870	57	1,930
29	R. E. Haines.....	3.60	267	69	336
Feb. 28	Clapp and Stewart.....	3.15	80	73	153
Mar. 30	W. B. Clapp.....	3.30	108	73	181
Apr. 12	J. E. Stewart.....	3.10	84	72	156
29	W. B. Clapp.....	2.80	43	72	115

Discharge measurements of San Gabriel River and canals near Azusa, Cal., in 1895-1912—Continued.

Date.	Hydrographer.	Gage height of river.	Discharge.		
			River.	Canals.	Total.
1910.		<i>Feet.</i>	<i>Sec.-ft.</i>	<i>Sec.-ft.</i>	<i>Sec.-ft.</i>
May 5	W. B. Clapp	2.63	23	72	95
13	.....do.....	2.24	6	72	78
June 3	.....do.....	1.85	0	68	68
1911.					
Feb. 14	W. V. Hardy	4.12	503		
18	.....do.....	3.90	371		
Mar. 14	.....do.....	5.52	2,110		
23	.....do.....	5.10	963		
Apr. 16	.....do.....	4.60	580		
21	.....do.....	4.20	350		
May 16	.....do.....	4.10	214		
June 2	.....do.....	3.90	121		
22	.....do.....	3.70	76		
Nov. 4	Ebert and Lee		0		
1912.					
Mar. 19	F. C. Ebert	3.73	132		
21	.....do.....	3.82	109		
Apr. 9	.....do.....	4.13	183		
May 17	.....do.....	3.70	82		
29	.....do.....	3.53	43		

Daily gage height, in feet, of San Gabriel River near Azusa, Cal., for 1897-1912.

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	Day.	Jan.	Feb.	Mar.	Apr.	May.	June.
1897.							1897.						
1		5.01	3.00	3.10		1.80	16		2.00	3.20	3.07		
2		4.00	3.00	3.00			17		2.10	3.50	3.05		
3		3.00	3.10	3.10	2.50		18	2.00	5.00	3.00	3.05	2.20	
4		2.90	3.05	3.00		1.80	19		3.90	3.20	3.00	2.15	
5	1.25	2.55	3.05	3.00	2.50		20		3.60	3.15	2.90		
6	1.25	2.60	4.60	3.10			21		3.20	3.10	2.90		
7		2.50	5.15	3.10			22	2.00	3.00	3.00	2.80	2.05	
8		2.45	4.30	3.10	2.50		23	2.00	2.95	3.00	2.70		
9		2.40	3.80	3.10			24		2.90	3.00	2.65	2.10	
10	1.30	2.35	3.50	3.15			25		3.00	3.10			
11	1.90	2.25	3.45	3.10			26		3.05	3.10	2.57		
12		2.20	3.40	3.15	2.38		27	1.98	3.00	3.10		1.90	
13		2.15	3.30	3.20			28		3.00	3.00			
14		2.10	3.20	3.20			29			3.10		1.85	
15		2.10	3.20	3.20	2.25		30	2.10		3.10		1.80	
							31	2.05		3.10			
Day.	Jan.	Feb.	Mar.	May.			Day.	Jan.	Feb.	Mar.	May.		
1898.							1898.						
1			0.98				16	1.28	1.50			1.35	
2			.98				17	1.23	1.50			1.03	
3			.98				18	1.22	1.05			1.00	
4			.98				19	1.20	1.05			1.02	
5			.52		1.08		20	1.19	1.05			1.00	
6			.52				21	1.18	1.04				
7			.52				22	1.18	1.03				
8			1.65				23	1.17	1.00				
9	1.40	1.50	1.50				24	1.17					
10	1.50	1.40	1.40	0.67			25	1.17					
11	1.40	1.30					26	1.17					
12	1.36	1.15					27	1.17					
13	1.35	1.10					28	1.17					
14	1.34	1.05					29	1.17					
15	1.30	1.00			1.90		30	1.17					
							31	.98					

Daily gage height, in feet, of San Gabriel River near Azusa, Cal., for 1897-1912—Con.

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	Day.	Jan.	Feb.	Mar.	Apr.	May.	June.
1901.							1901.						
1.....		1.90	3.40	1.95	2.80	1.35	16.....	1.40	3.80	2.20	1.60	1.45	.....
2.....		1.90	3.40	1.90	2.20	1.30	17.....	1.30	4.00	2.20	1.50	1.40	.....
3.....		1.90	3.30	1.90	2.15	1.30	18.....	1.20	4.00	2.15	1.50	1.35	.....
4.....		2.30	3.30	1.90	2.50	1.35	19.....	1.15	4.00	2.15	1.40	1.30	.....
5.....		6.00	3.00	1.90	2.00	1.30	20.....	1.08	4.10	2.15	1.40	1.30	.....
6.....		5.00	2.95	1.80	1.95	1.20	21.....	2.70	4.10	2.25	1.37	1.25	.....
7.....	5.00	4.40	2.90	1.80	1.90	1.10	22.....	2.35	4.20	2.10	1.35	1.20	.....
8.....	3.50	4.50	2.80	1.80	1.80	1.02	23.....	1.95	4.10	2.10	1.15	1.20	.....
9.....	2.50	4.20	2.70	1.75	1.75	1.02	24.....	1.80	4.00	2.05	1.15	1.30	.....
10.....	2.20	3.90	2.70	1.75	1.70	1.02	25.....	1.80	3.80	2.05	1.15	2.20	.....
11.....	2.00	3.60	2.65	1.75	1.60	1.00	26.....	1.80	3.60	2.00	1.15	1.80	.....
12.....	1.90	3.50	2.55	1.75	1.55	.....	27.....	1.90	3.50	2.00	1.15	1.60	.....
13.....	1.70	3.40	2.50	1.70	1.50	.....	28.....	2.20	3.40	2.25	1.10	1.60	.....
14.....	1.60	3.50	2.40	1.70	1.50	.....	29.....	2.00	.....	2.25	1.10	1.50	.....
15.....	1.50	3.80	2.30	1.65	1.50	.....	30.....	1.90	.....	2.00	1.60	1.40	.....
							31.....	1.90	.....	2.00	.....	1.40	.....

Day.	Feb.	Mar.	Apr.	Day.	Feb.	Mar.	Apr.	Day.	Feb.	Mar.	Apr.
1902.				1902.				1902.			
1.....		0.85	1.10	11.....	1.70	1.05	21.....	.....	0.90	1.05	.....
2.....		3.00	1.50	12.....	1.50	1.00	22.....	.....	.80	0.80	.....
3.....		1.90	1.10	13.....	1.40	1.00	23.....	.....	.90	0.00	.....
4.....		1.55	1.05	14.....	1.30	0.95	24.....	.....	1.65	0.00	.....
5.....		1.40	1.02	15.....	1.20	0.00	25.....	.....	1.40	0.00	.....
6.....		1.57	1.00	16.....	1.10	0.00	26.....	.....	1.75	1.30	0.00
7.....		1.20	1.20	17.....	1.00	0.00	27.....	.....	1.35	1.15	0.00
8.....		1.20	1.20	18.....	.93	0.00	28.....	.....	1.05	1.10	0.00
9.....		2.30	1.15	19.....	1.25	0.00	29.....	.....	1.05	1.05	0.00
10.....		1.95	1.10	20.....	1.05	0.00	30.....	.....	1.20	2.00	0.00
							31.....	.....	1.10	.....	.....

Day.	Nov.	Jan.	Feb.	Mar.	Apr.	May.	June.	Day.	Nov.	Jan.	Feb.	Mar.	Apr.	May.	June.
1902-3								1902-3							
1.....			2.25	0.00	7.10	2.90	1.90	16.....			1.30	1.90	3.00	2.40	1.40
2.....			2.20	.00	4.95	2.85	1.85	17.....			1.20	1.70	4.25	2.30	1.38
3.....			1.80	.00	4.50	2.85	1.85	18.....			1.10	1.50	3.50	2.20	1.35
4.....			1.90	1.00	4.00	2.80	1.80	19.....			1.00	1.40	3.50	2.20	1.30
5.....			1.70	3.00	3.90	2.80	1.75	20.....			.90	1.30	3.60	2.20	1.25
6.....			1.65	2.90	3.60	2.80	1.70	21.....			.60	1.20	3.50	2.20	1.22
7.....			1.60	2.80	3.30	2.80	1.70	22.....			.....	1.10	3.50	2.20	1.22
8.....			1.65	2.90	3.20	2.70	1.70	23.....			.....	1.05	3.50	2.20	1.09
9.....			1.45	2.80	3.10	2.60	1.70	24.....			.....	2.30	3.40	2.25	1.00
10.....			1.40	2.60	2.90	2.60	1.70	25.....			.....	3.50	3.30	2.10	1.00
11.....	1.20		1.45	2.40	2.80	2.50	1.60	26.....			.....	2.85	3.30	2.10	.....
12.....			1.45	2.30	2.90	2.50	1.50	27.....			.....	2.40	3.25	2.10	.....
13.....			1.55	2.20	2.70	2.40	1.50	28.....		5.65	.....	2.40	3.00	2.00	.....
14.....			1.45	2.10	2.65	2.40	1.48	29.....		3.20	.....	2.40	2.90	1.90	.....
15.....			1.45	2.00	2.70	2.40	1.45	30.....		2.30	.....	2.80	2.90	1.90	.....
								31.....		2.30	.....	4.45	.....	1.90	.....

Day.	Jan.	Feb.	Mar.	Apr.	May.	Day.	Jan.	Feb.	Mar.	Apr.	May.
1904.						1904.					
1.....			1.30	1.70	1.50	16.....					.....
2.....			1.10	1.60	1.50	17.....					.....
3.....				1.55	1.45	18.....					.....
4.....				1.50	1.40	19.....				1.65	.....
5.....				1.40	1.40	20.....				1.70	.....
6.....				1.40	1.35	21.....				1.50	.....
7.....				1.35	1.30	22.....				1.40	.....
8.....				1.30	1.25	23.....			4.15	1.35	.....
9.....				1.20	1.20	24.....			2.40	1.30	.....
10.....				1.10	1.15	25.....			2.00	1.20	.....
11.....			1.85	.90	1.10	26.....			1.80	1.50	.....
12.....			1.20	.75	1.00	27.....			1.70	1.45	.....
13.....					.80	28.....		3.20	1.70	1.40	.....
14.....						29.....		1.70	2.00	1.40	.....
15.....						30.....			1.90	1.40	.....
						31.....			1.80	.....	.....

Daily gage height, in feet, of San Gabriel River near Azusa, Cal., for 1897-1912—Con.

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.
1905.								1905.							
1.....		0	2.1	α3.8	3.1	2.95	2.4	16.....		α3.5	5.8	α3.4	3.3	2.7	2.05
2.....		2.6	2.1	α3.75	3.7	2.95	2.35	17.....		α3.5	5.1	α3.4	3.3	2.7	2.0
3.....		5.5	2.1	α3.75	3.4	2.95	2.35	18.....		3.1	4.8	α3.35	3.3	2.7	1.9
4.....		α4.75	2.1	α3.7	3.3	2.9	2.35	19.....		3.0	4.7	3.3	3.3	2.65	1.8
5.....		4.0	2.3	α3.7	3.2	2.9	2.25	20.....		2.8	4.4	3.3	3.2	2.6	1.5
6.....		3.0	2.3	α3.65	3.2	2.9	2.25	21.....		2.7	4.3	3.3	3.2	2.6	.....
7.....		2.7	1.7	α3.65	3.2	2.85	2.2	22.....	1.55	2.5	4.2	3.3	3.2	2.6	.....
8.....		2.5	1.7	α3.6	4.0	2.85	2.15	23.....		2.4	4.2	3.2	3.2	2.6	.....
9.....		2.3	1.65	α3.6	3.6	2.85	2.15	24.....		2.3	4.2	3.2	3.15	2.6	.....
10.....		2.2	1.65	α3.55	3.5	2.8	2.15	25.....		2.2	4.2	3.2	3.1	2.55	.....
11.....		2.0	1.7	α3.55	3.4	2.8	2.55	26.....		2.2	α4.2	3.2	3.1	2.55	.....
12.....		1.9	9.3	α3.5	3.4	2.8	2.15	27.....		2.2	α4.1	3.1	3.1	2.55	.....
13.....		1.8	α7.3	3.5	3.3	2.8	2.15	28.....		2.2	α4.0	3.1	3.1	2.5	.....
14.....		1.8	5.3	3.45	3.3	2.8	2.1	29.....			4.0	3.1	3.1	2.45	.....
15.....		α3.0	4.7	α3.4	3.3	2.75	2.1	30.....			α3.9	3.05	3.05	2.45	.....
								31.....			3.8	.....	3.0	.....	.....

α Estimated.

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.
1906.								
1.....				4.8	3.4	3.6	2.8	2.1
2.....				4.7	3.4	3.6	2.8	2.0
3.....				4.7	3.4	3.5	2.8	1.9
4.....			2.6	4.5	3.4	3.5	2.75	1.9
5.....			2.7	4.7	3.45	3.4	2.75	1.85
6.....				4.4	3.45	3.4	2.7	1.8
7.....				4.2	3.4	3.4	2.75	1.7
8.....				4.2	3.4	3.3	2.7	1.7
9.....				4.2	3.4	3.3	2.7	1.65
10.....				4.2	3.4	3.2	2.7	1.6
11.....				4.2	3.4	3.2	2.6	1.6
12.....			7.9	4.1	3.3	3.2	2.6	1.55
13.....		2.7	7.2	4.0	3.3	3.1	2.6	1.5
14.....		2.7	4.35	4.0	3.3	3.1	2.6	1.4
15.....		2.7	4.5	4.0	3.3	3.1	2.6	1.3
16.....		2.7	4.8	3.9	3.3	3.05	2.6	.....
17.....		2.6	5.2	3.8	3.3	3.0	2.55	.....
18.....		2.1	4.8	3.8	3.2	3.0	2.55	.....
19.....	3.9	2.0	4.8	3.8	3.2	3.0	2.55	.....
20.....	2.9	2.0	4.6	3.8	3.2	3.0	2.55	.....
21.....	2.7	1.9	4.3	3.7	3.2	2.95	2.55	.....
22.....	2.3	2.3	4.1	3.6	3.2	2.95	2.5	.....
23.....	2.0	2.0	4.1	3.6	3.2	2.9	2.5	.....
24.....	1.75	1.9	5.15	3.6	3.1	2.9	2.4	.....
25.....	1.6	1.9	7.55	3.6	3.1	3.0	2.4	.....
26.....		1.8	8.45	3.5	3.4	2.9	2.35	.....
27.....			7.45	3.5	3.3	2.95	2.35	.....
28.....			6.7	3.7	4.8	2.95	2.3	.....
29.....			6.65	3.5	4.1	2.9	2.25	.....
30.....			5.1	3.4	3.75	2.85	2.2	.....
31.....			5.1	.....	3.7	.....	2.15	.....

Daily gage height, in feet, of San Gabriel River near Azusa, Cal., for 1897-1912—Contd.

Day.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1906-7.										
1.		3.2	4.2	4.2	5.7	4.3	3.7	2.8	2.6	2.2
2.		3.1	4.2	4.1	5.7	4.2	3.7	3.0	2.6	2.1
3.		2.9	4.6	4.1	5.7	4.2	3.7	3.2	2.5	2.1
4.		2.9	4.6	4.1	5.6	4.1	3.7	3.3	2.5	2.1
5.		2.2	4.7	7.6	5.5	4.1	3.7	3.2	2.5	2.0
6.		3.2	4.7	6.7	5.4	4.1	3.7	3.2	2.5	2.0
7.		3.6	4.5	6.2	5.3	4.0	3.7	3.2	2.5	2.0
8.		5.2	4.4	6.1	5.3	4.0	3.7	3.2	2.4	
9.		5.5	4.3	6.1	5.2	4.0	3.65	3.1	2.4	
10.		6.85	4.3	6.1	5.2	3.9	3.65	3.0	2.4	
11.		5.7	4.2	6.0	5.2	3.9	3.65	3.0	2.4	
12.	4.0	5.5	4.2	5.4	5.2	3.9	3.65	3.0	2.4	
13.	3.8	5.2	4.1	5.3	5.2	3.85	3.6	2.9	2.3	
14.	3.5	4.5	4.1	5.2	5.2	3.85	3.6	2.8	2.3	
15.	3.0	4.6	4.1	5.1	5.2	3.85	3.6	2.8	2.2	
16.	2.3	4.5	4.1	4.8	5.0	3.85	3.6	2.8	2.2	
17.	2.1	4.5	4.9	4.7	5.0	3.85	3.55	2.8	2.2	
18.	2.1	4.6	4.9	4.6	4.9	3.85	3.55	2.7	2.2	
19.	2.1	4.5	4.6	4.6	4.8	3.8	3.55	2.7	2.2	
20.	1.8	4.3	4.2	4.7	4.7	3.8	3.5	2.7	2.2	
21.		4.1	4.2	6.1	4.7	3.8	3.5	2.7	2.1	
22.		4.0	4.9	5.8	4.6	3.8	3.45	2.6	2.1	
23.		4.0	4.6	5.3	4.6	3.8	3.45	2.6	2.1	
24.		3.9	4.3	5.8	4.6	3.8	3.4	2.6	2.1	
25.		4.1	4.3	6.0	4.6	3.8	3.4	2.6	2.1	
26.		4.2	4.2	6.5	4.5	3.8	3.4	2.6	2.1	
27.	2.0	4.1	4.2	6.0	4.5	3.8	3.35	2.6	2.1	
28.	5.2	4.1	4.2	6.0	4.4	3.75	3.35	2.6	2.1	
29.	3.8	4.3		6.0	4.4	3.75	3.3	2.6	2.1	
30.	3.5	4.5		6.0	4.4	3.75	3.3	2.6	2.1	
31.	3.2	4.4		5.8		3.75		2.6	2.2	
Day.	Oct.	Nov.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.
1907-8.										
1.		2.1		3.6	3.5	3.4	3.1	2.4		2.7
2.		2.0		3.6	3.4	3.4	3.2	2.3		
3.				3.7	3.4	3.5	3.2	2.3		
4.				4.7	3.3	3.4	3.1	2.3		
5.				4.2	3.3	3.3	3.1	2.3		
6.				4.0	3.3	3.3	3.1	2.3		
7.				3.7	3.3	3.2	3.1	2.3		
8.				3.6	3.2	3.1	3.0	2.3		
9.				3.6	3.2	3.1	3.0	2.2		
10.				3.9	3.1	3.0	3.3	2.2		
11.				3.7	3.0	3.0	3.0			
12.				3.7	3.0	3.1	3.0			
13.				3.6	3.2	3.1	3.0			
14.				3.6	3.2	3.1	3.0			
15.			2.4	3.4	3.2	3.2	2.9			
16.	2.1		2.2	3.4	3.6	3.2	2.9			
17.	2.2		2.0	3.4	3.7	3.1	2.9			
18.	2.1			3.4	3.7	3.1	2.8			
19.	2.0			3.4	3.7	3.1	2.8			
20.	2.0			3.4	3.7	3.0	2.8			
21.				3.4	3.7	3.0	2.8			
22.				3.4	3.6	3.0	2.5			
23.				3.4	3.4	3.1	2.5			
24.	2.0		4.8	3.3	3.4	3.1	2.5			
25.	2.1		5.3	3.3	3.6	3.1	2.5			
26.	2.0		4.5	3.3	3.6	3.0	2.5			
27.	2.3		4.0	3.3	3.5	3.1	2.5			
28.	2.5		3.8	3.3	3.4	3.1	2.4			
29.	2.4		3.9	3.5	3.4	3.1	2.4			
30.	2.2		3.7		3.4	3.1	2.4			
31.	2.1		3.6		3.4		2.5			

Daily gage height, in feet, of San Gabriel River near Azusa, Cal., for 1897-1912—Contd.

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.
1909.								1909.							
1.....		4.3	4.3	4.8	4.3	3.7	3.1	16.....	2.5	5.2	4.2	4.6	4.1	3.4	2.9
2.....		4.3	4.3	4.9	4.3	3.7	3.0	17.....	2.3	5.0	4.1	4.6	4.1	3.4	2.7
3.....		4.3	4.3	4.9	4.3	3.6	2.9	18.....	2.2	4.9	4.1	4.5	4.1	3.4	
4.....		4.3	4.3	5.0	4.3	3.6	2.9	19.....	2.2	4.8	4.1	4.5	4.1	3.5	
5.....		4.3	4.3	4.9	4.3	3.6	2.9	20.....	2.2	4.7	4.0	4.5	4.1	3.5	
6.....		4.3	4.3	4.8	4.2	3.6	2.9	21.....	6.3	4.6	5.6	4.5	4.3	3.4	
7.....		8.0	4.3	4.8	4.2	3.6	2.9	22.....	6.9	4.5	5.0	4.5	4.3	3.4	
8.....		6.5	4.3	4.7	4.2	3.6	3.1	23.....	5.7	4.5	4.7	4.5	4.3	3.3	
9.....		5.3	4.3	4.7	4.2	3.5	3.1	24.....	4.8	4.4	4.6	4.5	4.2	3.3	
10.....		5.0	4.3	4.7	4.2	3.5	3.0	25.....	4.6	4.4	4.5	4.4	4.0	3.3	
11.....								26.....	4.4	4.4	4.8	4.4	4.0	3.2	
12.....		5.4	4.2	4.6	4.2	3.4	3.0	27.....	4.6	4.4	5.0	4.4	4.0	3.2	
13.....		6.0	4.2	4.6	4.2	3.4	3.0	28.....	4.5	4.4	4.9	4.4	4.0	3.2	
14.....	2.2	6.3	4.2	4.6	4.2	3.4	2.9	29.....	4.4		4.9	4.4	4.0	3.2	
15.....	2.7	5.9	4.2	4.5	4.2	3.4	2.9	30.....	4.3		4.8	4.3	3.9	3.2	
	2.7	5.4	4.2	4.5	4.2	3.4	2.9	31.....	4.3		4.8		3.8		
Day.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	Day.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1909-1910.								1909-1910.							
1.....		9.8	3.6	3.1	3.2	2.7	1.85	16.....	3.4	4.0	3.3	3.0	3.0	2.2	
2.....		5.7	3.5	3.1	3.2	2.7		17.....	3.3	3.9	3.3	3.0	3.0	2.2	
3.....		5.1	3.5	3.1	3.2	2.7		18.....	3.3	3.9	3.3	3.1	3.0	2.2	
4.....		4.8	3.5	3.1	3.2	2.7		19.....	3.3	3.9	3.3	3.0	3.0	2.2	
5.....		4.5	3.5	3.1	3.1	2.7		20.....	3.3	3.9	3.3	3.0	3.0	2.2	
6.....		4.5	3.4	3.1	3.1	2.6		21.....	3.7	3.9	3.2	3.0	2.9	2.2	
7.....		4.5	3.4	3.1	3.1	2.6		22.....	3.5	3.8	3.2	3.45	2.9	2.2	
8.....		4.2	3.4	3.1	3.1	2.6		23.....	3.6	3.8	3.2	3.2	2.9	2.1	
9.....	5.6	4.2	3.4	3.1	3.1	2.5		24.....	3.5	3.8	3.2	3.2	2.9	2.1	
10.....	4.7	4.1	3.4	3.1	3.1	2.5		25.....	3.4	3.7	3.2	3.1	2.9	2.1	
11.....	4.0	4.1	3.4	3.1	3.1	2.5		26.....	3.4	3.7	3.2	3.1	2.9	2.1	
12.....	3.8	4.1	3.3	3.0	3.1	2.3		27.....	3.4	3.7	3.1	3.1	2.9	2.1	
13.....	3.5	4.0	3.3	3.0	3.1	2.3		28.....	3.3	3.7	3.1	3.3	2.9	2.1	
14.....	3.5	4.0	3.3	3.0	3.0	2.3		29.....	3.3	3.6		3.3	2.8	2.0	
15.....	3.4	4.0	3.3	3.0	3.0	2.3		30.....	3.3	3.6		3.3	2.7	2.0	
								31.....	7.5	3.5		3.3		1.9	
Day.				Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.			
1911.															
1.....						5.0	3.7	4.7	4.1	3.9	3.4	2.8			
2.....						4.5	3.7	4.8	4.1	3.8	3.4				
3.....						4.7	4.2	4.8	4.1	3.8	3.4				
4.....						6.0	5.6	4.7	4.1	3.8	3.4				
5.....						5.4	5.2	4.6	4.1	3.7	3.4				
6.....						4.9	5.0	4.6	4.1	3.7	3.4				
7.....						4.6	5.0	4.6	4.1	3.7	3.3				
8.....						4.4	6.2	4.5	4.1	3.7	3.3				
9.....						4.5	8.05	4.5	4.1	3.7	3.3				
10.....					4.5	4.3	8.6	4.4	4.1	3.6	3.3				
11.....					3.5	4.3	6.7	4.4	4.1	3.6	3.3				
12.....					2.9	4.3	6.2	4.4	4.1	3.6	3.3				
13.....					2.5	4.3	5.6	4.4	4.0	3.6	3.3				
14.....					2.1	4.3	5.5	4.4	4.3	3.6	3.2				
15.....					4.8	4.2	5.4	4.3	4.1	3.5	3.2				
16.....					3.9	4.1	5.4	4.3	4.1	3.5	3.2				
17.....					3.4	4.0	5.3	4.3	4.1	3.5	3.2				
18.....					3.1	3.9	5.3	4.3	4.1	3.5	3.2				
19.....					2.9	3.8	5.3	4.3	4.0	3.5	3.2				
20.....					2.8	3.7	5.2	4.2	4.0	3.5	3.2				
21.....					2.7	3.7	5.2	4.2	4.2	3.5	3.2				
22.....					2.6	3.6	5.1	4.2	4.0	3.5	3.2				
23.....					2.5	3.6	5.1	4.2	4.0	3.5	3.2				
24.....					2.4	3.5	5.0	4.2	3.9	3.4	3.1				
25.....					4.5	3.5	5.0	4.2	3.9	3.4	3.1				
26.....					4.0	3.5	4.9	4.2	3.9	3.4	3.0				
27.....					3.7	3.7	4.9	4.2	3.9	3.4	3.0				
28.....					3.6	3.7	4.8	4.2	3.9	3.4	2.9				
29.....					7.0		4.8	4.1	3.9	3.4	2.9				
30.....					5.1		4.7	4.1	3.9	3.4	2.9	3.4			
31.....					6.5		4.7		3.9		2.9				

Daily gage height, in feet, of San Gabriel River near Azusa, Cal., for 1897-1912—Contd.

Day.	Oct.	Mar.	Apr.	May.	June.	Day.	Oct.	Mar.	Apr.	May.	June.
1911-12.						1911-12.					
1.....	3.1		3.6	4.1	3.5	16.....		4.1	4.3	3.8	
2.....	2.8		3.6	4.1	3.5	17.....		4.0	4.3	3.7	
3.....			3.6	4.0	3.4	18.....		3.9	4.3	3.7	
4.....			3.6	4.0	3.4	19.....		3.9	4.3	3.7	
5.....		4.2	3.6	3.9	3.4	20.....		3.9	4.4	3.7	
6.....		5.0	3.6	3.9	3.4	21.....		3.8	4.3	3.7	
7.....		4.2	3.6	3.9	3.3	22.....		3.8	4.3	3.6	
8.....		3.7	3.6	4.1	3.3	23.....		3.7	4.3	3.6	
9.....		3.5	4.1	4.0	3.3	24.....		3.7	4.3	3.6	
10.....		6.0	4.1	3.9	3.2	25.....		3.7	4.3	3.6	
11.....		4.6	4.7	3.9	3.2	26.....		3.7	4.3	3.6	
12.....		4.2	4.4	3.9	3.2	27.....		3.7	4.2	3.5	
13.....		4.5	4.2	3.9	3.0	28.....		3.7	4.2	3.5	
14.....		4.2	4.3	3.8		29.....		3.7	4.1	3.5	
15.....		4.2	4.3	3.8		30.....		3.7	4.1	3.5	
						31.....		3.6		3.5	

NOTE.—River was dry on days for which no gage height is given except Jan. 9 and Sept. 29, 1911, and Jan. 14 and Mar. 4, 1912. On these days the discharge was estimated.

Rating tables for San Gabriel River near Azusa, Cal.

November 5 to October 10, 1896.

Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.
<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>
0.70	0.0	1.20	2.3	1.70	16	2.20	59
0.80	0.1	1.30	4.0	1.80	21	2.30	75
0.90	0.3	1.40	6.0	1.90	28	2.40	94
1.00	0.5	1.50	8.8	2.00	36	2.50	109
1.10	1.3	1.60	12	2.10	46	2.60	134

October 11 to December 31, 1896.

0.60	0.0	1.20	4.0	1.80	28	2.40	104
0.70	0.1	1.30	6.0	1.90	36	2.50	126
0.80	0.3	1.40	8.8	2.00	46	2.60	142
0.90	0.5	1.50	12	2.10	59	2.70	159
1.00	1.3	1.60	16	2.20	75	2.80	177
1.10	2.3	1.70	21	2.30	94		

January 1 to December 31, 1897.

2.20	73	2.80	214	3.80	625	5.00	1,600
2.30	90	2.90	243	4.00	750	5.20	1,820
2.40	108	3.00	275	4.20	890	5.40	2,080
2.50	130	3.20	345	4.40	1,040	5.60	2,340
2.60	155	3.40	420	4.60	1,210		
2.70	185	3.60	520	4.80	1,395		

NOTE.—Below gage height 2.20 feet the table for 1897 is the same as the table for Oct. 11 to Dec. 31, 1896.

January 1, 1898, to December 31, 1899.

0.40	0.0	0.90	6.0	1.40	26	1.90	63
0.50	0.2	1.00	9	1.50	31	2.00	80
0.60	0.5	1.10	13	1.60	38		
0.70	1.2	1.20	17	1.70	45		
0.80	3.0	1.30	21	1.80	53		

Rating tables for San Gabriel River near Azusa, Cal.—Continued.

January 1 to December 31, 1901.

Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.
<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>
1.00	10	2.00	80	3.00	248	4.00	645
1.10	13	2.10	92	3.10	275	4.20	770
1.20	18	2.20	103	3.20	305	4.40	930
1.30	24	2.30	115	3.30	335	4.60	1,090
1.40	30	2.40	130	3.40	370	4.80	1,260
1.50	37	2.50	145	3.50	410	5.00	1,450
1.60	44	2.60	160	3.60	450	6.00	2,600
1.70	52	2.70	180	3.70	495		
1.80	60	2.80	200	3.80	540		
1.90	70	2.90	222	3.90	590		

January 1 to December 31, 1902.

0.80	4	1.50	37	2.20	128	2.90	288
.90	7	1.60	44	2.30	147	3.00	318
1.00	10	1.70	52	2.40	167	3.10	350
1.10	13	1.80	63	2.50	188	3.20	384
1.20	18	1.90	77	2.60	210		
1.30	24	2.00	93	2.70	234		
1.40	30	2.10	110	2.80	260		

January 1 to March 30, 1903.

0.60	1	1.60	45	2.60	211	4.20	1,110
.70	2	1.70	54	2.70	240	4.40	1,295
.80	4	1.80	65	2.80	273	4.60	1,500
.90	7	1.90	78	2.90	310	4.80	1,728
1.00	10	2.00	92	3.00	350	5.00	1,980
1.10	13	2.10	107	3.20	438	5.20	2,254
1.20	18	2.20	125	3.40	535	5.40	2,549
1.30	24	2.30	144	3.60	652	5.60	2,855
1.40	30	2.40	164	3.80	792		
1.50	37	2.50	186	4.00	945		

March 31 to December 31, 1903.

0.80	0	1.80	44	3.60	652	5.60	2,855
.90	2	1.90	55	3.80	792	5.80	3,180
1.00	4	2.00	68	4.00	945	6.00	3,525
1.10	6	2.20	98	4.20	1,110	6.20	3,890
1.20	9	2.40	139	4.40	1,295	6.40	4,275
1.30	12	2.60	190	4.60	1,500	6.60	4,683
1.40	16	2.80	250	4.80	1,728	6.80	5,120
1.50	21	3.00	323	5.00	1,980	7.00	5,580
1.60	27	3.20	417	5.20	2,254	7.50	6,900
1.70	35	3.40	528	5.40	2,549	8.00	8,600

January 1, 1904, to February 1, 1905.

0.60	1	2.00	92	3.40	535	5.60	2,855
.70	2	2.10	107	3.50	590	5.80	3,180
.80	4	2.20	125	3.60	652	6.00	3,525
.90	7	2.30	144	3.70	720	6.20	3,890
1.00	10	2.40	164	3.80	792	6.40	4,275
1.10	13	2.50	186	3.90	867	6.60	4,683
1.20	18	2.60	211	4.00	945	6.80	5,120
1.30	24	2.70	240	4.20	1,110	7.00	5,580
1.40	30	2.80	273	4.40	1,295	7.20	6,072
1.50	37	2.90	310	4.60	1,500	7.40	6,610
1.60	45	3.00	350	4.80	1,728	7.60	7,205
1.70	54	3.10	393	5.00	1,980	7.80	7,870
1.80	65	3.20	438	5.20	2,254	8.00	8,600
1.90	78	3.30	485	5.40	2,549		

*Rating tables for San Gabriel River near Azusa, Cal.—Continued.***February 2 to March 11, 1905.**

Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.
<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>
1.10	0	2.50	207	3.60	610	4.70	1,620
1.50	55	2.60	231	3.70	670	4.80	1,750
1.60	65	2.70	259	3.80	730	4.90	1,900
1.70	76	2.80	289	3.90	800	5.00	2,050
1.80	88	2.90	320	4.00	870	5.10	2,220
1.90	101	3.00	351	4.10	950	5.20	2,390
2.00	115	3.10	390	4.20	1,040	5.30	2,570
2.10	130	3.20	430	4.30	1,140	5.40	2,750
2.20	147	3.30	470	4.40	1,250	5.50	2,940
2.30	165	3.40	513	4.50	1,370		
2.40	185	3.50	560	4.60	1,490		

NOTE.—The above table is applicable only for open-channel conditions. It is based on discharge measurements made during first part of 1905.

March 12 to December 31, 1905.

1.70	1	3.20	170	4.70	1,040	6.40	4,499
1.80	2.5	3.30	202	4.80	1,160	6.60	4,951
1.90	4.5	3.40	237	4.90	1,300	6.80	5,403
2.00	7	3.50	273	5.00	1,460	7.00	5,855
2.10	10	3.60	311	5.10	1,640	7.20	6,307
2.20	14	3.70	351	5.20	1,830	7.40	6,759
2.30	18	3.80	394	5.30	2,030	7.60	7,211
2.40	24	3.90	441	5.40	2,245	7.80	7,663
2.50	32	4.00	492	5.50	2,470	8.00	8,115
2.60	42	4.10	550	5.60	2,695	8.20	8,567
2.70	55	4.20	616	5.70	2,920	8.40	9,019
2.80	71	4.30	687	5.80	3,145	8.60	9,471
2.90	90	4.40	762	5.90	3,370	8.80	9,923
3.00	113	4.50	841	6.00	3,595	9.00	10,375
3.10	140	4.60	935	6.20	4,047	9.20	10,828

NOTE.—The above table is applicable only for open-channel conditions. It is based on 11 discharge measurements made during 1905.

January 1 to December 31, 1906.

[Indirect method for shifting channels used.]

January 1 to March 13, 1907.

2.00	1	3.10	190	4.20	660	5.60	1,910
2.10	4	3.20	225	4.30	710	5.80	2,220
2.20	12	3.30	260	4.40	760	6.00	2,600
2.30	22	3.40	300	4.50	820	6.20	3,000
2.40	35	3.50	340	4.60	890	6.40	3,450
2.50	50	3.60	380	4.70	960	6.60	3,950
2.60	67	3.70	420	4.80	1,030	6.80	4,460
2.70	85	3.80	460	4.90	1,110	7.00	5,010
2.80	105	3.90	510	5.00	1,200	7.20	5,570
2.90	130	4.00	560	5.20	1,400	7.40	6,130
3.00	160	4.10	610	5.40	1,630	7.60	6,730

NOTE.—Table applicable only to open channel. It is based on 13 discharge measurements made during January to March, 1907, and is well defined between gage heights 3 feet and 7.5 feet.

March 14 to 26, 1907.

[Indirect method for shifting channels used.]

Rating tables for San Gabriel River near Azusa, Cal.—Continued.

March 27 to December 31, 1907.

Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Ris-charge.	Gage height.	Dis-charge.
<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>
2.00	1	2.90	63	3.80	240	4.70	655
2.10	3	3.00	77	3.90	270	4.80	730
2.20	6	3.10	92	4.00	302	4.90	810
2.30	11	3.20	108	4.10	336	5.00	890
2.40	17	3.30	125	4.20	374	5.20	1,050
2.50	24	3.40	143	4.30	415	5.40	1,210
2.60	32	3.50	163	4.40	460	5.60	1,380
2.70	41	3.60	186	4.50	515	5.80	1,560
2.80	51	3.70	212	4.60	585	6.00	1,740

NOTE.—Table applicable only to open channel. It is based on 12 discharge measurements made during March to August, 1907, and is fairly well defined between gage heights 2 feet and 6.3 feet.

January 1 to December 31, 1908.

2.00	0	3.00	56	4.00	309	5.00	925
2.10	1	3.10	71	4.10	353	5.20	1,085
2.20	2	3.20	87	4.20	401	5.40	1,245
2.30	4	3.30	105	4.30	452	5.60	1,405
2.40	6	3.40	126	4.40	505	5.80	1,575
2.50	10	3.50	149	4.50	560	6.00	1,745
2.60	16	3.60	174	4.60	620	6.20	1,915
2.70	23	3.70	202	4.70	690	6.40	2,085
2.80	32	3.80	234	4.80	765		
2.90	43	3.90	270	4.90	845		

NOTE.—Table applicable only to open channel. It is based on 19 discharge measurements made during 1907 and 1908, and is fairly well defined.

Daily discharge, in second-feet, of San Gabriel River near Azusa, Cal., for 1894-95, 1898, and 1910-1912.

Day.	May.	June.	July.	Aug.	Sept.	Day.	May.	June.	July.	Aug.	Sept.
1894.						1894.					
1.....	34	27	17	11	23	16.....	45	22	13	13	14
2.....	35	27	17	11	21	17.....	38	24	13	13	14
3.....	35	26	15	11	18	18.....	34	24	11	11	13
4.....	35	26	15	10	18	19.....	32	24	11	14	13
5.....	34	25	15	11	18	20.....	33	24	9	13	13
6.....	34	26	16	13	17	21.....	32	21	9	13	13
7.....	33	26	15	14	17	22.....	32	21	9	13	13
8.....	33	26	14	15	15	23.....	30	21	9	13	13
9.....	32	22	14	15	15	24.....	28	21	10	13	13
10.....	31	23	14	15	15	25.....	27	19	10	14	13
11.....	30	22	14	14	14	26.....	27	19	10	17	13
12.....	30	23	14	15	15	27.....	27	18	9	15	13
13.....	30	24	14	14	15	28.....	27	18	9	15	13
14.....	31	24	13	14	15	29.....	27	18	9	27	14
15.....	50	22	13	14	14	30.....	27	17	10	21	16
						31.....	27	.....	11	22	.....

Daily discharge, in second-feet, of San Gabriel River near Azusa, Cal., for 1894-95, 1898, and 1910-1912—Continued.

Day.	Oct.	Nov.	Aug.	Sept.	Day.	Oct.	Nov.	Aug.	Sept.	
1894-95.					1894-95.					
1.....	16	14	.....	39	16.....	13	.....	43	32
2.....	15	14	.....	38	17.....	13	.....	42	31
3.....	14	13	.....	36	18.....	13	.....	41	31
4.....	14	13	.....	36	19.....	13	.....	40	31
5.....	13	13	.....	36	20.....	13	.....	40	31
6.....	13	13	.....	36	21.....	13	.....	39	31
7.....	14	13	.....	36	22.....	14	.....	39	31
8.....	14	13	47	35	23.....	14	.....	39	30
9.....	13	13	47	34	24.....	14	.....	39	29
10.....	14	13	47	34	25.....	14	.....	38	29
11.....	14	13	46	33	26.....	14	.....	38	29
12.....	14	13	46	32	27.....	14	.....	39	29
13.....	13	13	46	32	28.....	14	.....	39	29
14.....	13	13	45	32	29.....	14	.....	40	29
15.....	13	13	44	32	30.....	14	.....	40	29
					31.....	14	.....	40	.....
Day.	Oct.	Nov.	Day.		Oct.	Nov.	Day.		Oct.	Nov.
1895.			1895.		1895.			1895.		
1.....	29	29	11.....	28	21.....	.....	32	.....	.....
2.....	28	29	12.....	28	22.....	.....	32	.....	.....
3.....	28	29	13.....	27	23.....	.....	32	.....	.....
4.....	29	50	14.....	27	24.....	.....	31	.....	.....
5.....	29	.....	15.....	29	25.....	.....	30	.....	.....
6.....	29	.....	16.....	30	26.....	.....	30	.....	.....
7.....	29	.....	17.....	30	27.....	.....	30	.....	.....
8.....	29	.....	18.....	30	28.....	.....	30	.....	.....
9.....	28	.....	19.....	31	29.....	.....	30	.....	.....
10.....	28	.....	20.....	31	30.....	.....	30	.....	.....
					31.....	.....	29	.....	.....
Day.	Jan.	Feb.	Mar.	May.	Day.	Jan.	Feb.	Mar.	May.	
1898. ^a					1898. ^a					
1.....	.....	8	.....	.....	16.....	21	31	.....	24
2.....	.....	9	.....	.....	17.....	19	31	.....	11
3.....	.....	9	.....	.....	18.....	17	11	.....	9
4.....	.....	9	.....	.....	19.....	17	11	.....	9
5.....	.....	.2	.....	13	20.....	17	11	.....	9
6.....	.....	.2	.....	.....	21.....	17	11	.....	.....
7.....	.....	.2	.....	.....	22.....	17	11	.....	.....
8.....	.....	41	.....	.....	23.....	15	9	.....	.....
9.....	26	31	.....	.....	24.....	15	.....	.....	.....
10.....	31	26	1	.....	25.....	15	.....	.....	.....
11.....	26	21	.....	.....	26.....	15	.....	.....	.....
12.....	24	15	.....	.....	27.....	15	.....	.....	.....
13.....	24	13	.....	.....	28.....	15	.....	.....	.....
14.....	24	11	.....	.....	29.....	15	.....	.....	.....
15.....	21	9	.....	63	30.....	15	.....	.....	.....
					31.....	9	.....	.....	.....

^a River was dry on all other days during 1898.

Daily discharge, in second-feet, of San Gabriel River near Azusa, Cal., for 1894-95, 1898, and 1910-1912—Continued.

Day.	Jan.	Feb.	Mar.	Apr.	May.	Day.	Jan.	Feb.	Mar.	Apr.	May.
1910.						1910.					
1.....	12,400	253	78	96	30	16.....	541	119	63	63	4.5
2.....	3,090	200	78	96	30	17.....	455	119	63	63	4.5
3.....	1,850	200	78	96	30	18.....	455	119	78	63	4.5
4.....	1,440	200	78	96	30	19.....	455	119	63	63	4.5
5.....	1,070	200	78	78	30	20.....	455	119	63	63	4.5
6.....	1,070	153	78	78	22	21.....	455	96	63	50	4.5
7.....	1,070	153	78	78	22	22.....	379	96	176	50	4.5
8.....	733	153	78	78	22	23.....	379	96	96	50	2.5
9.....	733	153	78	78	16	24.....	379	96	96	50	2.5
10.....	634	153	78	78	16	25.....	312	96	78	50	2.5
11.....	634	153	78	78	16	26.....	312	96	78	50	2.5
12.....	634	119	63	78	7	27.....	312	78	78	50	2.5
13.....	541	119	63	78	7	28.....	312	78	119	50	2.5
14.....	541	119	63	63	7	29.....	253	-----	119	39	1
15.....	541	119	63	63	7	30.....	253	-----	119	30	1
						31.....	200	-----	119	-----	0.5

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Sept.
1911.								
1.....		1,540	235	580	246	128	28	-----
2.....		900	235	680	245	98	28	-----
3.....		1,140	585	690	243	98	28	-----
4.....		3,180	2,470	590	241	98	28	-----
5.....		2,140	1,830	500	239	76	28	-----
6.....		1,400	1,540	510	238	76	28	-----
7.....		1,020	1,540	520	236	76	19	-----
8.....		785	3,560	430	234	76	19	-----
9.....	100	900	7,660	440	232	76	19	-----
10.....	1,070	680	9,100	360	231	57	19	-----
11.....	200	680	4,500	370	229	57	19	-----
12.....	50	680	3,430	375	227	57	19	-----
13.....	16	680	2,300	380	175	57	19	-----
14.....	2	680	2,060	390	360	57	12	-----
15.....	1,440	585	1,820	310	218	41	12	-----
16.....	455	500	1,780	320	217	41	12	-----
17.....	153	420	1,570	325	217	41	12	-----
18.....	78	350	1,520	350	217	41	12	-----
19.....	50	290	1,470	375	168	41	12	-----
20.....	39	235	1,270	325	168	41	12	-----
21.....	30	235	1,200	350	280	41	12	-----
22.....	22	185	1,020	345	168	41	12	-----
23.....	16	185	963	345	168	41	12	-----
24.....	11	140	840	340	128	28	7	-----
25.....	1,070	140	850	340	128	28	7	-----
26.....	541	140	730	335	128	28	3	-----
27.....	312	235	740	335	128	28	3	-----
28.....	253	235	640	330	128	28	1	-----
29.....	5,190	-----	650	250	128	28	1	50
30.....	1,680	-----	560	248	128	28	1	28
31.....	4,150	-----	570	-----	128	-----	1	-----

Daily discharge, in second-feet, of San Gabriel River near Azusa, Cal., for 1894-95, 1898, and 1910-1912—Continued.

Day.	Oct.	Jan.	Mar.	Apr.	May.	June.	Day.	Oct.	Jan.	Mar.	Apr.	May.	June.
1911-12.							1911-12.						
1.....	7			45	217	41	16.....			320	320	98	.....
2.....				45	217	41	17.....			260	320	76	.....
3.....				45	168	28	18.....			205	315	76	.....
4.....			100	45	168	28	19.....			205	310	76	.....
5.....			290	45	128	28	20.....			165	440	76	.....
6.....			1,170	45	128	28	21.....			98	355	76	.....
7.....			310	40	128	19	22.....			95	355	57	.....
8.....			90	40	217	19	23.....			70	355	57	.....
9.....			50	170	168	19	24.....			70	355	57	.....
10.....			2,950	170	128	12	25.....			70	355	57	.....
11.....			750	650	128	12	26.....			65	355	57	.....
12.....			360	415	128	12	27.....			65	280	41	.....
13.....			660	245	128	3	28.....			65	280	41	.....
14.....		47	380	320	98	.....	29.....			65	217	41	.....
15.....			390	320	98	.....	30.....			60	217	41	.....
							31.....			45	.....	41	.....

NOTE.—Daily discharge for 1910-11 determined from fairly well defined rating curves applicable as follows: Jan. 1, 1910, to Jan. 29, 1911; Jan. 30 to Mar. 10, 1911, and May 16 to Dec. 31, 1911; Mar. 11 to May 15, 1911, determined by the indirect method for shifting channels. River dry on days for which no discharge is given. Discharge estimated Sept. 29, 1911, Jan. 14, 1912, and Mar. 4, 1912. Mar. 5 to Apr. 20, 1912, determined by the indirect method for shifting channels. Apr. 21 to June 13, 1912, fairly well defined.

Monthly discharge of San Gabriel River near Azusa, Cal., for 1896-1902 and 1910-1912.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.		
	Maximum.	Minimum.	Mean.				
1896.							
January.....	25	0	11	676			
February.....	28	3	12	690			
March.....	134	27	75	4,612			
April.....	46	0	11	655			
May.....	0	0	0	0			
June.....	0	0	0	0			
July.....	0	0	0	0			
August.....	0	0	0	0			
September.....	0	0	0	0			
The period.....				6,630			
1896-97.							
October.....	177	0	12	738			
November.....	16	0	3	179			
December.....	12	0	2	123			
January.....	130	5	40	2,484			
February.....	1,710	46	332	18,420			
March.....	1,765	275	448	27,572			
April.....	345	141	259	15,417			
May.....	141	28	82	5,042			
June.....	28	.2	5	274			
July.....	0	.0	0	0			
August.....	0	.0	0	0			
September.....	0	.0	0	0			
The year.....				1,765	.0	98.6	70,200
1897-98.							
October.....	1,600	0.0	72	4,458			
November.....	15	.4	8	475			
December.....	5	3.0	4	221			
January.....	31	0	14	863			
February.....	41	0	11	622			
March.....	1	0	.03	2			
April.....	0	0	0	0			
May.....	63	0	4.5	277			
June.....	0	0	0	0			
July.....	0	0	0	0			
August.....	0	0	0	0			
September.....	0	0	0	0			
The year.....				1,600	0.0	9.46	6,920

Monthly discharge of San Gabriel River near Azusa, Cal., for 1896-1902, and 1910-1912—
Continued.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1898-99.					
October.....	0	0	0	0	
November.....	0	0	0	0	
December.....	0	0	0	0	
January.....	16	0	1.2	123	
February.....	0	0	0	0	
March.....	0	0	0	0	
April.....	0	0	0	0	
May.....	0	0	0	0	
June.....	0	0	0	0	
July.....	0	0	0	0	
August.....	0	0	0	0	
September.....	0	0	0	0	
The year.....	16	0	.1	123	
1899-1900.					
October.....	13	0	.42	26	
November.....	0	0	0	0	
December.....	0	0	0	0	
January.....	49	0	2	123	
February.....	0	0	0	0	
March.....	0	0	0	0	
April.....	0	0	0	0	
May.....	38	0	2	123	
June.....	0	0	0	0	
July.....	0	0	0	0	
August.....	0	0	0	0	
September.....	0	0	0	0	
The year.....	49	0	.37	272	
1900-1901.					
October.....	0	0	0	0	
November.....	5,168	0	172	10,235	
December.....	0	0	0	0	
January.....	1,450	0	111	6,825	
February.....	2,600	70	613	34,044	
March.....	370	80	158	9,715	
April.....	75	13	43	2,559	
May.....	200	18	55	3,382	
June.....	27	0	7	417	
July.....	0	0	0	0	
August.....	0	0	0	0	
September.....	0	0	0	0	
The year.....	5,168	0	96.6	67,200	
1901-2.					
October.....	70	0	3	184	
November.....	0	0	0	0	
December.....	0	0	0	0	
January.....	0	0	0	0	
February.....	57	0	3	167	
March.....	318	4	38	2,337	
April.....	37	0	7	417	
May.....	0	0	0	0	
June.....	0	0	0	0	
July.....	0	0	0	0	
August.....	0	0	0	0	
September.....	0	0	0	0	
The year.....	318	0	4.25	3,100	
1902.					
October.....	0	0	0	0	
November.....	0	0	0	0	
December.....	0	0	0	0	
1910.					
January.....	12,400	200	1,060	65,200	C.
February.....	253	78	135	7,500	B.
March.....	176	63	83.3	5,120	B.
April.....	96	30	66.5	3,960	B.
May.....	30	.5	11.0	676	B.
June.....	0	0	0	0	
July.....	0	0	0	0	
August.....	0	0	0	0	
September.....	0	0	0	0	
The period.....				82,500	

Monthly discharge of San Gabriel River near Azusa, Cal., for 1896-1902, and 1910-1912—
Continued.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1910-11.					
October.....	0	0	0	0	
November.....	0	0	0	0	
December.....	0	0	0	0	
January.....	5,190	0	546	33,600	C.
February.....	3,180	140	724	40,200	B.
March.....	9,100	235	1,910	117,000	C.
April.....	690	248	401	23,900	B.
May.....	360	128	201	12,400	B.
June.....	128	28	55.1	3,280	C.
July.....	28	1	14.4	885	D.
August.....	0	0	0	0	
September.....	50	0	2.6	155	D.
The year.....	9,100	0	321	231,000	
1911-12.					
October.....	7	0	.2	12	D.
November.....	0	0	.0	0	
December.....	0	0	.0	0	
January.....	47	0	1.5	92	D.
February.....	0	0	.0	0	
March.....	2,950	0	304	18,700	B.
April.....	650	40	249	14,800	B.
May.....	217	41	104	6,400	B.
June.....	41	0	9.7	577	C.
The period.....				40,600	

Daily discharge, in second-feet, of the San Gabriel canals near Azusa, Cal., for 1898-1906.

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1898.									
1.....	28	28	33	36.5	26	30	14.5	9.5	8.2
2.....	28	28	32	37	39	28	13	9.5	10
3.....	28	28	31	37	37	25	13.5	9.5	8.2
4.....	28	28	31	37	36	23.5	13	9	8.2
5.....	27	32	31	37.5	34	22.8	13	9	8.2
6.....	27	32	31	36.5	31.5	21	12	9	8.2
7.....	27	32	30	36	32	20.2	14	8.5	7.9
8.....	27	29	30	35	31	20	12.5	8.5	7.9
9.....	32	29	28	35	30	20	11.5	8.5	8
10.....	32	29	34	35	28	21.5	11.5	8.4	8
11.....	31	29	34	34	25	23.5	11	8.5	7.5
12.....	25	32	32.5	32.5	25	22	11	8.5	7.5
13.....	25	32	34	32.5	25	21.4	10	8.4	7.5
14.....	25	32	33.5	32.5	25.5	21	10	6.5	7.5
15.....	25	32	33.5	34	20	20.2	9.7	7	7
16.....	25	10	36	34	27.5	18	10	7	7
17.....	25	10	36	34	45.5	17.5	9.7	7	6.7
18.....	25	29	37	34	40	16.2	10	7	6.5
19.....	25	29	37	33	38.5	15.2	10	5	6.5
20.....	25	29	37	33	33.5	17	10	5.5	6.1
21.....	25	29	37	32	37	16	11.5	6	7.5
22.....	24	29	36	30	36	17	11.5	6	7.5
23.....	24	29	34	29	35	17.3	11.5	6	7.5
24.....	23	34	34	27	32.5	17	9.5	6	7.5
25.....	23	34	34	26	30.5	16	9.5	5.5	8.5
26.....	23	34	48	25.3	30	16	9	5.5	8.5
27.....	23	34	41	25.3	30	16	9	6.3	7.5
28.....	23	34	39	27	30.5	15.8	9	7.5	10.2
29.....	23	.....	36	30	29.5	15	9.5	7	8
30.....	23	.....	36	35.5	30.5	14.5	9.5	7	10.2
31.....	28	.....	37	.....	30	.....	9.5	7	.....

Daily discharge, in second-feet, of the San Gabriel canals near Azusa, Cal., for 1898-1906—
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1898-99.												
1.	9	9	11.7	14.8	27.2	20.3	28	17.5	22.2	4	5	3.4
2.	9.8	8.5	11.8	24.2	28	20.3	27.5	17.5	20	4	5.1	3
3.	10	8.5	11.8	20.3	26.2	21.5	25.2	17	17	4	5.5	4
4.	10.5	8	11.9	19	24.2	19.4	24.8	17	15	4	5.5	4.3
5.	9	8.5	11.9	19	23.5	18.7	24.8	15.5	14.8	4	6	3.7
6.	9	9	11.9	18	23.5	18.5	25	17.5	13.5	4.2	6	4.3
7.	8.5	9	12	18	23.5	18	24	17.5	12	4.2	5	3.7
8.	8.5	9	12	18	23.5	18.5	22.2	16.5	11	3.5	4.7	4.5
9.	8.5	8.5	12	18	23.4	18.7	22	15.5	9.7	3.4	4.7	5.5
10.	9	8.7	12.2	22	23.4	18.7	23.5	14	8.5	3.4	4.5	5
11.	8.7	9	12.5	33	23.4	19	23.5	13	8.8	3.5	4.7	4
12.	8	9.8	12.6	32	23.4	19	22.2	13	9	3.4	4.5	4
13.	8	9.8	12.6	22	23	19	21	12.5	9.5	3	4.5	3.6
14.	7.5	9.2	12.6	22	21.8	19	21	12	9.2	3.4	4.3	3.8
15.	7.5	9.8	18.2	22	21.6	19	20.5	12.5	8	3.5	4	4.2
16.	7.5	9.8	15.2	22	20.3	31.2	20	14.1	7.8	3.5	4	4
17.	8	9.8	15	18	20	36.4	19.7	13	7.5	3.3	4.5	3.7
18.	8	9	15	18	20	35	19.5	13	7.5	3	6	3.7
19.	8.4	10.1	14.4	19.7	19.7	29	19.5	13.5	7.3	3	6	3.7
20.	8.6	10.5	14.5	19.3	19.7	39.5	18.5	11.5	7	3	6	3.3
21.	7.9	10.5	14.5	20.4	19.7	37.4	17	11.5	7	3	5.5	3.3
22.	8.2	10.5	14.5	21.6	19.7	32.7	16.5	11.5	6.2	3.3	5.5	3.3
23.	9	11.2	14.5	22.8	20.3	31.7	16.2	11.5	6.2	3.5	5	3.3
24.	10	11.2	14.5	23.6	22.4	32.5	17.5	12	6.2	3.5	4	3
25.	9	10.5	14.8	24	21.8	35.5	19.3	12	6.2	3.5	4	3
26.	9.1	10.5	14	24	21.2	35.4	21	12	6.2	4	4	3
27.	9.1	10.5	14	24.1	21.2	32	21.3	11.5	6	4	4	3.3
28.	8.9	11	14	23.5	21	32	20.5	11.5	5.5	4	5.5	3.3
29.	8.9	11.5	14.3	23.2	.....	31.6	18	12.7	5.5	4	4	3.3
30.	8.4	11.5	14	24.2	.....	30	17.5	12	4.9	4	4	3.7
31.	8.4	.....	14.5	26.2	.....	29.5	.....	13.5	.....	4	4	.....
1899-1900.												
1.	3.7	12	16.2	a22	a22.8	17	15.5	17	21	9.9	3.5	4.5
2.	4	11.5	16	a22	a22.7	17	16	17	21.5	10.1	3.5	4.7
3.	4	11.5	16	40	a22.6	a17.5	17	16.2	19.4	9.6	3.5	5.2
4.	4	11.7	16	50	22.5	a27.5	16	25	a18.5	8.4	3.5	5
5.	4	10.1	16.3	a50	23	a30	16	a48	18	8.9	4.4	4.6
6.	4	10.2	16	a40	a22.5	a24.5	15.5	54	17.5	7.8	4.6	4.3
7.	4.3	10.2	16	40	a22.2	23	20	a54	a17.5	7.4	4.4	4.1
8.	3.7	10.2	15.7	a38	21.8	a22	17.6	a49	a17.5	7.6	4.3	4
9.	3.7	10.3	15.5	a34	21.5	21	16.3	a43	.....	7.2	4.5	4.2
10.	4.4	12	15.5	a31	20.8	20	16.1	a43	17.1	6.6	4.7	4.3
11.	8.5	12	15.5	32	20.6	20	15	a56	17.5	6.2	4	4.5
12.	9	12	15.5	a31	20.5	19.5	a14.6	56	17.1	5.6	4.6	4.5
13.	22	12	15.5	a30	20.4	19.3	a15	52	18.1	5.1	4.3	4.6
14.	22	14.5	15.5	30	20.4	20	a15	47	17.5	5.1	4.5	4.8
15.	26	15	16	a29.2	20.3	18	a14.6	41.6	16	7.2	4.1	4.5
16.	19	15	23	a28.5	20.3	18	a13.5	40.3	15.4	5.9	3.9	4.1
17.	16	15	39	a28	19.5	18	a13.5	39	14.3	5.6	3.7	3.7
18.	15	14	30	27.5	19	17.6	a13	a38.5	13.7	5.3	4.3	3.5
19.	13.5	14	28	a27	19	18.4	a13	a36.5	12.3	5.3	4.6	3.3
20.	13.5	14	25	a26.5	19	18.2	a14	a31	11.5	5.9	4.5	3.4
21.	13	16	23	26	18.7	18.1	a26	a30.5	11.7	5.4	4	3.3
22.	13.5	23.5	22.5	a25.4	18.7	18	a22	a29	10.9	5.4	3.6	3.1
23.	14	20	21.5	a24.8	17.5	25	a19	a30.5	10.1	4.8	3.6	3.8
24.	14	18.3	20.7	a24.2	18	23	18.5	a29.5	11	4.6	3.6	5.2
25.	12.5	18	20.7	24.5	18	20	18.5	a27	10.8	4.3	3.6	5.7
26.	12	17.2	20.7	a24.4	18	20	19.7	a24	10.1	4.3	3.6	5.2
27.	12	17	20.7	a24.3	18	19.5	21	a23.5	9.6	4.6	3.7	4.7
28.	12.3	17	21	24.2	17.5	17.5	21.5	a22.5	9.6	4.2	3.6	4.3
29.	11.5	16.7	23	a23.8	.....	17	20.6	a22	9.1	4.9	3.5	4.2
30.	13	16.3	23	23.4	.....	15.5	18.5	a21	8.3	4.5	3.9	3.9
31.	12.3	.....	22	23	.....	15.5	.....	a19.5	.....	4.1	4.3	.....

a Estimated.

Daily discharge, in second-feet, of the San Gabriel canals near Azusa, Cal., for 1898-1906—
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1900-1901.												
1.....	3.7	5.3	52.6	28	67	70	55	72	66	41	23.5	15
2.....	4.2	5.5	49.6	28	67	70	55	72	66	41	24.2	13
3.....	4.7	5.5	48.7	28	67	70	55	59	66	41	25	18.7
4.....	4.8	5.5	46.2	28	67	70	55	59	63	40	25	19
5.....	4.9	5.6	44.3	28	5	70	55	59	63	38	26.8	18.8
6.....	4.9	5.8	42.9	.....	70	70	68	59	63	36	24	19.2
7.....	4.5	5.8	43.5	.....	70	70	60	59	63	34	23.4	19
8.....	4.3	5.8	42.3	35	70	69	56	67	63	33	23	17.9
9.....	4	5.9	35.6	90	70	69	56	67	63	33	22	17.3
10.....	4	5.9	35.6	78	70	69	56	67	63	32.5	21	17.2
11.....	4.4	5.5	34.5	71	70	69	56	68	63	32	20	16.8
12.....	4.7	5.7	31.4	70	70	69	56	68	62	32	20	16.6
13.....	5.6	5.7	33.6	69	70	69	56	68	62	31.5	21	16.4
14.....	6.4	5.9	32.9	69	70	69	59	68	60	30	19.5	16.4
15.....	5.8	6.2	32.3	68	70	69	63	68	60	30	19.5	15.9
16.....	5.3	7.1	32.4	68	70	69	63	68	60	30	19.5	16
17.....	5.2	13.4	.....	67	70	68	70	68	55	29	19	15.7
18.....	5.5	15.6	.....	66	70	68	70	68	54.5	28	21	15.8
19.....	5.6	13.2	.....	66	70	68	70	68	54	27	19.3	15.6
20.....	6	16.7	.....	66	70	68	70	65	53.5	28	19	15.7
21.....	5.7	a 31.8	.....	77	70	35	71.5	65	50	29	19	16.5
22.....	5.5	.....	.....	73	70	57	71.5	65	49.5	27	18.5	18.6
23.....	5.5	.....	.....	70	70	57	82	65	49.5	26	18	19.6
24.....	5.8	.....	.....	69	70	57	82	66	49.5	25	17	20.4
25.....	5.8	.....	.....	68	70	57	82	66	52	24.7	15.7	19.1
26.....	5.8	.....	.....	68	70	57	82	66	48.5	24.2	15	17.9
27.....	5.3	.....	.....	68	70	57	82	66	46.5	24.2	15	17.5
28.....	5.8	45.2	.....	71	70	39	82	66	43.5	24.2	15	17.3
29.....	6.2	48	.....	70	.....	39	82	66	41	24.2	15	18.7
30.....	5.7	54.8	.....	67	.....	55	84	66	41	25	15	20.4
31.....	5.7	.....	.....	67	.....	55	.....	66	.....	24.2	15	.....
1901-2.												
1.....	21	36	29	25	30	58	62	48	30	16	7	5
2.....	20	34	29	25	30	60	62	48	28	16	7	5
3.....	20	33	29	25	30	60	62	48	26	16	8	5
4.....	20	32	30	25	30	60	62	47	26	17	7	5
5.....	20	30.5	30	25	30	61	62	46	25	17	8	5
6.....	20	30	30	25	29	62	62	46	23	16	8	5
7.....	17	30	30	25	29	62	62	46	21	16	7	5
8.....	15.5	30	29	25	29	62	62	45	20	14	7	4
9.....	16	30	38.7	25	29	62	62	43	20	12	8	5
10.....	16	50	29	25	29	62	62	43	22	12	8	5
11.....	15.5	46	29	25	29	62	62	43	25	11	8	5
12.....	14.5	36	29	24	29	62	62	42	25	10	8	5
13.....	14.5	35	29	24	28	62	46	40	22	10	8	5
14.....	14.5	34	29	24	28	62	62	44	22	10	8	5
15.....	15	33	29.5	24	28	62	62	42	21	10	8	5
16.....	15.5	32.5	29	24	28	62	62	40	20	10	8	6
17.....	15.5	32	28.5	24	28	62	62	40	20	10	8	6
18.....	15.5	32	28.5	27	28	62	60	37	19	10	8	6
19.....	16	31	28.5	30	27	62	61	37	18	10	8	6
20.....	15.5	31	28.5	28	27	62	61	37	16	8	8	6
21.....	14.5	31	28	26	32	62	62	37	16	8	7	6
22.....	14.5	30	28	26	35	62	62	36	16	8	6	6
23.....	16	29	27	26	34	62	60	35	14	8	6	6
24.....	17	29	27	51	35	62	60	34	14	8	7	6
25.....	18	30	27	42	40	62	56	34	14	8	6	6
26.....	64	30	27	32	63	62	54	34	14	9	6	6
27.....	52	29	26	32	62	62	52	32	14	10	6	6
28.....	56	29	26	32	62	62	50	30	15	10	6	6
29.....	50	29	26	32	.....	62	48	30	15	10	6	6
30.....	.....	29	.....	31	.....	55	48	30	14	9	6	6
31.....	.....	.....	.....	30	.....	62	.....	30	.....	8	6	.....

^a Power conduit washed out soon after noon.

Daily discharge, in second-feet, of the San Gabriel canals near Azusa, Cal., for 1898-1906—
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1902-3.												
1.....	6	9	16	30.5	68	59	72	70	70	58.5	34.8	23.5
2.....	6	8	16	30	68	57	22	70	70	57	34.8	23
3.....	6	8	16	29	68	57	20	70	70	55	34.5	23
4.....	6	8	16	28.5	70	70	20	70	70	53	32.5	22
5.....	6	8	17	28	70	72	52	70	68	52	31.5	21
6.....	6	8	17	27	70	72	54	70	70	50	30.7	24
7.....	6	8	18	27.5	70	72	54	70	70	50	30.7	27
8.....	6	9	18	26	70	72	62	70	68	49	30.7	23
9.....	6	9	24	25	70	72	62	70	68	47	30.2	23
10.....	6	9	30	25	70	72	62	70	70	46	30	22.5
11.....	7	62	36	24.5	70	72	62	70	84	43.5	30	22.5
12.....	8	43	32	24.5	70	72	62	70	84	43	30	24.7
13.....	8	25	28	24	70	72	62	70	81	43	30	26.0
14.....	8	23	26	23.5	70	72	62	70	84	43	30	27.5
15.....	6	23	25	23	70	72	62	70	84	43	29.5	25.5
16.....	6	23	25	22.5	74	72	62	70	83	42	28	23.5
17.....	6	22	46	22	74	72	62	70	82	42	26.7	22.5
18.....	6	22	68	22	74	72	62	70	81	42	25.8	23
19.....	6	22	61	22	74	72	16	70	80	42	26.3	23
20.....	7	22	55	22	74	72	18	70	79.5	41	26.3	23
21.....	7	21	48	22	74	72	40	70	79	40	25.8	23
22.....	8	20	42	22	72	72	52	70	79	38	25.3	22.5
23.....	9	20	35	22	70	72	62	70	81	38	25.8	21.7
24.....	10	20	35	22.5	68	72	62	50	80	37.5	26.4	21.7
25.....	10	20	35	23	65	72	62	70	73	37	26.9	24
26.....	9	20	35	23	63	72	0	60	66	36.5	27	24.5
27.....	8	20	35	32	61	72	68	60	64	36	27	29
28.....	8	20	34	64	61	72	68	68	63	36	26	34.5
29.....	8	19	33	64	-----	72	68	70	63	35.5	25	31.5
30.....	8	17	32	68	-----	72	68	70	62	35.3	25	31.5
31.....	8	-----	31	68	-----	72	-----	70	-----	34.8	24.5	-----
1903-4.												
1.....	31.5	21.5	21.5	24	23	47	66	67	38	18	10	11
2.....	31	22.5	24	24	23.5	51.5	66	67	36.5	17.5	9.5	10.5
3.....	30	22.5	24	24	23.5	47	66	67	35.5	17	10	10.5
4.....	29	22.5	23	24	23.5	42	66	67	32.5	17	10	10.8
5.....	26.5	22.5	22.5	24	59	40	66	67	32	16.5	10	10
6.....	26.5	23	24	23.5	37	38	66	67	31	16	10	9
7.....	26	23	23.5	23.3	31.5	37.5	66	67	30	16	12	8.5
8.....	26	24.5	24.5	24	31	35.5	68	67	30	15.7	12.7	7.5
9.....	26	24	24.5	24.5	30	35	68	67	29	15.5	11.5	8.5
10.....	27.8	24	24.5	24.5	30	35.5	68	67	28	15	11.5	9.5
11.....	24.8	24	24.7	24.5	30	60	68	67	26.5	13.8	11	9.5
12.....	22.8	24	25.5	24	28	60	68	66	25.2	14	10	9.5
13.....	22.5	25	25	24	28	56	66	65	25.2	14.3	29	12.5
14.....	22.5	25	25	23.5	28	51	64	64	23	15.5	15	11.5
15.....	22.5	25.5	25	23.5	28	49	64	61	24	15	14.5	11
16.....	22	25.5	25	23.5	40	46	61	59	23	15	14	10
17.....	21.6	25.5	24.5	23.5	41	44.5	58	56	22.5	14	14	11
18.....	20.5	24.5	24.5	28.2	38	42.6	57	55	22	14	13.7	12
19.....	21.5	24.5	24.8	27.4	34.5	41.5	66	53	22	13	13.7	12
20.....	21.5	24.5	24.8	27.4	33	50	66	51	22	12.5	13.7	12
21.....	21	25	24.8	25.5	31.4	48	66	49	25	11.8	13.5	12
22.....	21	24.5	24.8	25.2	30.8	46	66	48	23	12	15	12
23.....	21	23.4	24.5	24.6	30	62	67	44.5	23	12	15	11
24.....	21	24	24.5	24.5	29.5	62	67	44.5	23	11.1	14.5	12
25.....	21	24	24.5	24.5	29.5	62	67	46	22	11	14.5	12.7
26.....	21	23.3	24.5	24.5	29.5	62	67	51	19	11	13	13.5
27.....	21	23.3	24	24	30	62	67	46.5	18.5	12	12.5	12.5
28.....	21	23.3	24	23.5	0	62	67	40	18.5	11.5	11.5	12
29.....	21	23.3	24	23.5	38	66	67	40	18.5	12	11.3	10.5
30.....	21	21.5	24	23.5	-----	66	67	37	17.5	12	11	10.5
31.....	21	-----	24	23	-----	66	-----	38	-----	11	11	-----

Daily discharge, in second-feet, of the San Gabriel canals near Azusa, Cal., for 1898-1906—
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1904-5.												
1.....	10.5	12.5	15	30	34	67	80	80	80	85	55	34
2.....	9	12.5	15.3	23	67	67	80	80	80	85	54	33
3.....	10	12.5	15.3	21	70	67	80	80	80	86	54	32
4.....	10	12.5	15.3	20	78	67	80	80	80	85	53	33
5.....	11	12.5	15.3	19.5	68	0	80	80	80	85	52	34
6.....	12	12.5	14.7	19	78	67	80	80	80	86	50	35
7.....	12.5	12.5	15.2	18.5	69	72	80	80	80	86	47	34
8.....	15	12	15.3	18.5	86	72	80	48	80	85	46	33
9.....	15.5	11	16	41	74	72	80	80	80	85	45	32
10.....	15.5	11	16	59	66	72	80	80	80	85	45	32
11.....	15.5	11.5	16	40	66	72	80	80	73	71	46	32
12.....	14.5	12	16	35	66	72	80	80	73	74	44	32
13.....	13.5	12.5	16	31	66	0	80	80	76	75	44	32
14.....	13	12.5	16	29	66	70	80	80	76	74	43	31
15.....	13.5	12.5	16	27	66	79	80	80	0	74	43	31
16.....	13.5	12.5	16	30	67	80	80	80	78	74	42	30
17.....	12	12.6	16	30	66	80	80	80	78	74	41	31
18.....	11.5	13.3	16	28	68	80	80	80	78	74	40	31
19.....	10.5	13	16	28	69	79	80	80	78	73	41	30
20.....	9.5	13.5	15.5	27	68	80	80	80	78	73	41	29
21.....	10	13.5	15.7	55	68	80	80	80	78	70	40	29
22.....	10.5	13.5	16.3	67	68	78	80	80	88	69	40	28
23.....	11	13.5	16.8	67	68	57	80	80	84	68	39	30
24.....	11	13	17	57	67	54	80	80	84	67	38	30
25.....	11	13	16.7	46	68	69	80	80	84	64	38	30
26.....	11.5	13.5	16	41	67	80	80	80	84	62	36	29
27.....	11.5	14	16.7	40	67	80	80	80	84	64	36	30
28.....	11.5	14	16.5	38	67	80	80	80	84	62	35	31
29.....	12	14.5	16	37	-----	80	80	80	84	60	34	32
30.....	12.5	14.5	16	36	-----	80	80	80	84	68	33	31
31.....	12.5	-----	48	34	-----	80	-----	80	-----	56	33	-----
1905-6.												
1.....	30	29	50	37	50	75	78	76	54	76	76	54
2.....	29	29	47	37	50	68	52	76	52	76	76	55
3.....	28	29	45	37	49	65	58	76	54	76	76	53
4.....	28	29	44	37	50	20	76	76	65	76	76	52
5.....	28	29	44	37	63	20	74	76	76	76	76	52
6.....	28	32	42	37	63	74	76	76	76	76	76	50
7.....	28	44	42	37	56	70	78	76	76	76	76	50
8.....	28	95	41	37	47	70	78	76	76	76	76	49
9.....	27	53	39	37	47	71	77	76	76	76	76	49
10.....	27	42	37	36	57	64	76	76	76	76	76	49
11.....	27	38	37	36	72	56	65	76	76	76	76	49
12.....	27	36	37	37	69	74	74	76	76	76	76	49
13.....	28	36	38	37	15	74	78	76	76	76	76	50
14.....	29	34	39	49	15	74	76	76	76	76	76	50
15.....	29	34	39	52	15	77	76	76	76	76	76	52
16.....	29	45	39	41	15	78	76	76	76	76	76	51
17.....	30	53	39	41	40	78	72	76	76	76	76	50
18.....	30	43	39	42	74	78	76	76	76	76	72	46
19.....	30	40	38	0	74	77	76	76	76	76	68	45
20.....	29	42	46	76	74	75	76	76	76	76	68	45
21.....	29	41	42	76	75	72	76	76	76	76	68	44
22.....	31	39	39	76	74	71	76	76	76	76	68	44
23.....	32	38	38	76	74	65	76	76	76	76	68	43
24.....	31	37	37	76	74	78	76	76	76	76	66	43
25.....	30	37	38	66	70	76	76	76	76	76	64	43
26.....	29	37	38	66	70	78	76	76	76	76	60	43
27.....	29	97	38	61	73	78	76	76	76	76	60	43
28.....	29	87	38	57	76	78	76	76	76	76	59	43
29.....	28	62	37	58	-----	76	76	53	76	76	59	42
30.....	29	53	37	54	-----	76	76	48	76	76	58	42
31.....	28	-----	38	52	-----	78	-----	60	-----	76	57	-----

Daily discharge, in second-feet, of Pacific Light & Power Co.'s canal near Azusa, Cal., for 1906-12.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1906-7.												
1.....	42	38	45	76	76	76	76	76	76	76	76	76
2.....	42	38	46	76	76	76	76	76	76	76	76	76
3.....	42	38	58	76	76	76	76	76	76	76	76	76
4.....	42	38	64	76	76	76	76	76	76	76	76	76
5.....	41	38	51	76	76	76	76	76	76	76	76	76
6.....	40	39	51	76	76	76	76	76	76	76	76	76
7.....	40	39	47	76	76	76	76	76	76	76	76	72
8.....	40	39	47	76	76	76	76	76	76	76	76	67
9.....	40	38	50	76	76	76	76	76	76	76	76	59
10.....	40	38	76	76	76	0	76	76	76	76	76	59
11.....	40	38	60	76	76	76	76	76	76	76	76	57
12.....	40	38	75	76	76	76	76	76	76	76	76	57
13.....	40	38	76	76	76	76	76	76	76	76	76	57
14.....	39	38	76	76	76	76	76	76	76	76	76	57
15.....	38	38	76	76	76	76	76	76	76	76	76	57
16.....	38	38	76	76	76	76	76	76	76	76	76	57
17.....	39	38	76	76	76	0	76	76	76	76	76	57
18.....	39	37	76	76	76	76	76	76	76	76	76	57
19.....	40	37	76	76	76	76	76	76	76	76	76	57
20.....	41	38	72	76	76	76	76	76	76	76	76	56
21.....	40	41	65	76	76	76	76	76	76	76	76	53
22.....	40	45	62	76	76	76	76	76	76	76	76	51
23.....	40	47	59	76	76	76	76	76	76	76	76	50
24.....	40	45	58	76	76	76	76	76	76	76	76	50
25.....	40	45	58	76	76	76	76	76	76	76	76	50
26.....	40	46	76	76	76	76	76	76	76	76	76	50
27.....	39	46	76	76	76	76	76	76	76	76	76	50
28.....	38	45	76	76	76	76	76	76	76	76	76	50
29.....	38	45	76	76	76	76	76	76	76	76	76	50
30.....	38	45	76	76	-----	76	76	76	76	76	76	51
31.....	38	-----	76	76	-----	76	-----	76	-----	76	76	-----
1907-8.												
1.....	51	76	54	56	76	76	76	76	76	48	37	29
2.....	50	76	54	54	76	76	76	76	76	47	42	29
3.....	50	76	53	54	76	76	76	76	76	45	43	28
4.....	50	71	54	52	76	76	76	76	76	44	42	26
5.....	58	69	54	52	76	76	76	76	76	45	40	26
6.....	63	66	54	51	76	76	76	76	76	43	40	26
7.....	60	65	76	51	76	76	76	76	76	43	39	26
8.....	56	66	76	50	76	76	76	76	76	42	39	28
9.....	54	67	67	50	76	76	76	76	76	42	37	29
10.....	50	76	63	50	76	76	76	27	76	42	42	32
11.....	50	73	66	50	76	76	76	76	76	42	41	30
12.....	50	66	62	48	76	76	76	76	76	42	39	28
13.....	50	64	58	49	76	76	76	76	76	42	38	27
14.....	50	63	57	76	76	76	76	76	76	41	37	26
15.....	66	62	57	76	76	76	76	76	76	40	37	26
16.....	76	61	57	66	76	76	76	76	76	39	37	26
17.....	76	58	57	58	76	76	76	76	76	39	35	27-
18.....	75	59	57	56	76	76	76	76	76	39	34	28
19.....	70	59	57	56	76	76	76	76	76	39	34	27
20.....	67	61	57	56	76	76	76	76	76	38	32	26
21.....	61	61	56	54	76	76	76	76	76	37	32	28
22.....	66	61	55	54	76	76	76	76	76	37	31	28
23.....	76	61	55	65	76	76	76	76	76	36	30	26
24.....	76	58	54	76	76	76	76	76	56	36	30	62
25.....	76	57	54	76	76	76	76	76	54	36	30	54
26.....	76	57	54	76	76	76	76	76	53	36	30	39
27.....	76	57	54	76	76	76	76	76	52	36	30	36
28.....	76	57	65	76	76	76	76	76	51	36	29	33
29.....	76	56	67	76	-----	76	76	76	50	35	29	32
30.....	76	55	57	76	-----	76	76	76	49	34	29	31
31.....	76	-----	57	76	-----	76	-----	76	-----	33	29	-----

Daily discharge, in second-feet, of Pacific Light & Power Co.'s canal near Azusa, Cal., for 1906-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1908-9.												
1.....	30	32	34	39	66	67	67	67	40	66	59	52
2.....	31	32	57	39	67	67	67	67	40	68	59	48
3.....	38	32	80	39	67	67	67	67	65	68	58	45
4.....	36	32	80	39	67	67	0	67	66	69	56	45
5.....	35	32	81	39	67	67	67	67	66	68	56	43
6.....	34	31	67	39	67	67	67	67	66	68	55	42
7.....	32	32	56	39	67	67	67	67	66	69	55	43
8.....	30	32	47	39	67	67	67	67	66	69	55	42
9.....	30	32	47	62	67	67	67	67	66	69	53	40
10.....	29	32	44	82	67	67	67	67	66	69	52	40
11.....	29	33	44	58	66	67	67	62	66	68	51	38
12.....	30	33	43	58	65	67	67	62	66	68	50	39
13.....	32	33	43	76	66	67	67	34	66	68	49	38
14.....	32	33	43	69	66	67	67	30	66	68	48	37
15.....	32	33	41	62	66	67	67	39	66	68	48	37
16.....	34	33	41	62	66	67	67	40	66	68	48	36
17.....	40	33	43	62	67	67	67	40	66	68	49	36
18.....	40	33	40	62	67	67	67	40	66	68	56	36
19.....	39	33	40	59	67	67	67	40	66	68	56	35
20.....	39	33	40	58	67	67	67	0	66	67	53	35
21.....	38	33	40	69	67	67	67	0	67	67	49	35
22.....	36	33	40	32	67	67	67	0	67	66	48	35
23.....	34	33	40	63	67	67	67	0	68	66	47	35
24.....	34	33	40	62	67	67	67	0	67	67	45	36
25.....	34	33	40	64	67	67	67	0	67	67	44	37
26.....	32	33	40	62	67	67	67	0	69	67	43	38
27.....	33	36	40	62	67	67	67	0	69	68	43	38
28.....	32	35	39	62	67	67	67	0	68	67	43	37
29.....	32	34	39	62	67	67	67	0	69	64	42	36
30.....	32	34	39	62	67	67	67	0	66	62	52	37
31.....	32	39	62	67	67	67	67	0	61	51	51	37
1909-10.												
1.....	36	36	54	53	69	73	73	72	67	49	33	24
2.....	43	35	53	49	72	73	73	72	68	50	32	24
3.....	50	34	54	57	74	73	74	72	68	49	31	24
4.....	46	35	53	68	74	73	73	72	68	48	31	24
5.....	42	35	57	71	74	73	73	72	68	47	31	25
6.....	41	35	68	70	74	73	73	72	67	45	30	25
7.....	41	36	62	71	74	73	73	73	67	45	29	24
8.....	39	36	66	71	73	73	72	72	66	43	29	24
9.....	37	46	74	72	73	73	73	72	63	42	29	24
10.....	35	51	74	72	73	73	73	72	63	42	29	23
11.....	35	47	74	72	74	73	72	72	61	40	29	23
12.....	35	46	73	72	73	73	72	72	60	41	29	23
13.....	35	43	74	73	74	73	72	72	61	40	29	23
14.....	35	53	74	72	65	73	72	72	62	40	29	24
15.....	35	66	74	72	66	73	72	72	66	39	29	24
16.....	37	55	74	73	71	73	72	72	66	39	28	24
17.....	39	52	74	72	73	73	72	72	64	37	28	24
18.....	39	50	74	72	73	73	72	72	58	38	26	23
19.....	37	49	74	65	73	73	72	71	56	38	25	22
20.....	37	47	74	22	73	73	72	71	54	36	26	23
21.....	37	47	74	70	74	73	72	70	54	37	26	23
22.....	36	47	74	73	73	73	72	70	55	37	26	21
23.....	35	46	74	75	73	73	72	70	56	36	26	21
24.....	34	45	74	70	73	73	71	70	54	35	26	21
25.....	34	45	74	68	73	73	72	70	52	36	25	22
26.....	34	62	74	74	73	73	71	70	50	34	25	22
27.....	34	82	74	69	73	73	72	70	49	35	26	22
28.....	35	65	74	69	73	73	72	69	50	35	25	22
29.....	36	59	74	69	73	73	72	69	50	35	25	22
30.....	37	56	74	69	73	73	72	68	50	34	25	22
31.....	38	75	69	69	73	73	68	68	35	25	25	22

Daily discharge, in second-feet, of Pacific Light & Power Co. canal near Azusa, Cal.,
for 1906-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.												
1.....	23	26	33	33	70	75	70	64	72	71	69	45
2.....	22	26	32	33	68	75	73	71	72	44	69	46
3.....	23	29	31	33	69	75	73	71	72	71	69	47
4.....	23	31	32	33	70	67	74	71	71	71	69	46
5.....	24	29	32	33	72	71	74	71	71	72	68	48
6.....	23	28	32	32	72	68	74	71	70	72	68	49
7.....	22	29	32	32	73	66	74	71	70	72	68	48
8.....	23	29	32	32	71	71	74	71	72	72	66	47
9.....	23	29	31	37	72	65	74	71	71	72	65	46
10.....	23	28	32	44	73	55	74	71	72	72	65	46
11.....	25	27	32	61	72	58	74	70	72	72	64	44
12.....	26	27	33	62	72	60	74	70	71	72	61	43
13.....	26	39	32	64	72	60	74	70	71	72	60	44
14.....	26	36	32	66	72	61	74	40	72	71	58	43
15.....	32	36	32	68	72	60	74	70	71	72	59	43
16.....	32	35	32	70	72	63	74	71	71	72	58	41
17.....	31	34	32	69	75	64	74	71	72	72	56	41
18.....	30	34	33	74	75	68	74	72	72	72	56	40
19.....	27	34	34	75	75	24	74	72	72	72	54	41
20.....	26	32	36	75	75	73	73	72	72	72	54	40
21.....	26	32	35	74	73	74	73	54	72	72	54	41
22.....	26	32	33	74	75	69	73	71	72	72	54	41
23.....	25	32	33	74	75	69	73	72	71	72	52	42
24.....	24	31	35	74	75	69	72	72	71	72	52	42
25.....	24	31	35	74	75	69	72	72	71	72	51	42
26.....	25	34	34	74	75	72	72	72	71	72	52	42
27.....	25	34	34	74	75	71	71	72	71	72	52	42
28.....	24	33	33	74	75	71	72	72	71	70	51	42
29.....	24	33	33	74	-----	71	71	72	71	70	50	68
30.....	27	33	32	74	-----	70	72	72	71	70	49	66
31.....	27	-----	33	74	-----	68	-----	72	-----	70	46	-----
<hr/>												
Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.			
1911-12.												
1.....	67	49	44	48	42	40	75	54	77			
2.....	70	49	43	53	42	42	75	58	77			
3.....	66	45	43	49	41	39	75	59	77			
4.....	60	45	44	48	41	56	75	69	75			
5.....	56	46	45	49	41	72	75	75	77			
6.....	55	47	50	49	40	72	75	77	77			
7.....	52	47	56	48	40	71	75	63	77			
8.....	51	46	49	48	40	74	75	57	77			
9.....	52	47	47	47	41	74	74	60	77			
10.....	51	49	46	47	40	74	74	76	77			
11.....	51	52	46	48	40	75	73	76	77			
12.....	50	51	45	48	40	75	75	76	77			
13.....	48	50	45	47	40	75	75	76	77			
14.....	47	50	46	0	40	75	75	77	77			
15.....	45	49	46	45	38	75	75	77	77			
16.....	44	50	46	45	38	75	75	77	77			
17.....	45	47	48	45	39	75	75	77	77			
18.....	45	46	48	45	38	75	74	77	77			
19.....	45	47	47	45	38	75	74	77	76			
20.....	44	47	47	45	36	75	18	77	75			
21.....	44	47	47	44	36	75	0	77	72			
22.....	44	47	45	44	38	75	0	77	72			
23.....	44	47	46	42	37	75	0	77	73			
24.....	44	46	45	42	36	75	0	77	75			
25.....	44	46	45	42	37	75	0	77	71			
26.....	45	43	45	42	37	75	0	77	69			
27.....	53	44	46	44	37	75	24	77	67			
28.....	55	44	47	44	37	75	37	77	66			
29.....	53	44	54	42	35	75	44	77	63			
30.....	53	44	50	41	-----	75	51	77	63			
31.....	51	-----	48	42	-----	75	-----	77	-----			

Monthly discharge of San Gabriel canals near Azusa, Cal., for 1896-1902 and 1910-1912.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).
	Maximum.	Minimum.	Mean.	
1896.				
January.....	26	26	26	1,599
February.....	34	26	30	1,726
March.....	43	35	36	2,214
April.....	45	40	43	2,559
May.....	42	29	36	2,214
June.....	27	13	19	1,131
July.....	15	9	12	738
August.....	36	9	14	861
September.....	19	11	13	774
The period.....				13,800
1896-97.				
October.....	17	10	11	676
November.....	24	15	17	1,012
December.....	25	10	20	1,230
January.....	22	13	17.56	1,072
February.....	20	3	13.10	726
March.....	21	0	17.14	1,051
April.....	60	15	35.30	2,102
May.....	68	55	62.97	3,810
June.....	71	54	63.20	3,759
July.....	52	27	38.13	2,343
August.....	34	22	26.45	1,613
September.....	23	18	20.66	1,226
The year.....	71	0	28.5	20,600
1897-98.				
October.....	26	10	18.03	1,106
November.....	29	16	23.30	1,385
December.....	29	25	26.84	1,648
January.....	32	23	26	1,591
February.....	34	10	29	1,618
March.....	48	28	35	2,129
April.....	37	25.3	33	1,950
May.....	45	20.0	32	1,947
June.....	30	14.5	19	1,159
July.....	14	9	11	672
August.....	9	5	7	456
September.....	10	6.1	8	467
The year.....	48	5	22.3	16,100
1898-99.				
October.....	10	7.5	9	533
November.....	11	8	10	580
December.....	18	11.7	14	832
January.....	33	15	21.8	1,340
February.....	27	20	22	1,244
March.....	40	18	26	1,623
April.....	28	16	21	1,262
May.....	17	12	14	842
June.....	22	5	10	565
July.....	4	3	4	221
August.....	6	4	5	295
September.....	6	3	4	220
The year.....	40	3	13.4	9,560
1899-1900.				
October.....	26	4	11.1	683
November.....	24	10	14.0	847
December.....	39	16	20	1,247
January.....	50	22	30	1,845
February.....	23	18	20	1,111
March.....	30	16	20	1,230
April.....	26	13	17	1,012
May.....	56	16	35	2,152
June.....	22	8	15	893
July.....	10	4	6	369
August.....	5	4	4	246
September.....	6	3	4	238
The year.....	56	3	16.3	11,900

Monthly discharge of San Gabriel canals near Azusa, Cal., for 1896-1902, and 1910-1912—
Continued.

March.	Discharge in second-feet.			Run-off (total in acre-feet.)
	Maximum.	Minimum.	Mean.	
1900-1901.				
October.....	6	4	5	307
November.....	55	5	14	833
December.....	53	31	40	1,269
January.....	90	0	58	3,566
February.....	70	5	67	3,721
March.....	70	35	63	3,874
April.....	84	55	67	3,987
May.....	72	59	66	4,058
June.....	66	41	56	3,332
July.....	41	24	30	1,845
August.....	27	15	20	1,230
September.....	20	15	17	1,012
The year.....	90	0	41.9	29,000
1901-2.				
October.....	64	0	21	1,291
November.....	50	29	32	1,904
December.....	30	26	27	1,660
January.....	51	24	28	1,722
February.....	63	27	34	1,888
March.....	62	55	61	3,750
April.....	62	46	59	3,510
May.....	48	30	39	2,398
June.....	29.5	13.5	20	1,190
July.....	17	7.5	11	676
August.....	8.5	6	7	430
September.....	6	4.5	5	298
The year.....	64	0	28.7	20,700
1902.				
October.....	10.5	5.5	7	430
November.....	62	7.5	19	1,131
December.....	68	16	32	1,968
1910.				
January.....	75	22	67.5	4,150
February.....	74	65	72.5	4,030
March.....	73	73	73.0	4,490
April.....	74	71	72.3	4,300
May.....	73	68	71.1	4,370
June.....	68	49	59.8	3,560
July.....	50	34	39.9	2,450
August.....	33	25	27.8	1,710
September.....	25	21	23.1	1,370
The period.....				30,400
1910-11.				
October.....	32	22	25.4	1,560
November.....	39	26	31.4	1,870
December.....	36	31	32.8	2,020
January.....	75	32	59.4	3,650
February.....	75	68	72.9	4,050
March.....	75	24	66.1	4,060
April.....	74	70	73.1	4,350
May.....	72	40	69.5	4,270
June.....	72	70	71.4	4,250
July.....	72	44	70.7	4,350
August.....	69	46	58.7	3,610
September.....	66	40	45.0	2,680
The year.....	75	22	56.4	40,700
1911-12.				
October.....	70	44	50.8	3,120
November.....	52	43	47.0	2,800
December.....	56	43	46.7	2,870
January.....	53	0	44.1	2,710
February.....	42	35	38.8	2,230
March.....	75	39	70.6	4,340
April.....	75	0	53.1	3,160
May.....	77	54	73.0	4,490
June.....	77	63	74.2	4,420
The period.....				30,100

Combined daily discharge, in second-feet, of San Gabriel River and Pacific Light & Power Co. canal, near Azusa, Cal., for 1909-1912.

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909.									
1.....	39	308	309	605	309	154	109	59	52
2.....	39	309	309	687	309	152	109	59	48
3.....	39	309	309	687	309	173	106	58	45
4.....	39	309	309	710	309	172	105	56	45
5.....	39	309	309	687	309	170	102	56	43
6.....	39	309	309	605	272	168	100	55	42
7.....	39	7,100	309	605	272	166	99	55	43
8.....	39	3,190	309	529	272	163	96	55	42
9.....	62	1,080	309	529	272	161	94	53	40
10.....	82	777	309	529	272	158	92	52	40
11.....	58	1,210	272	460	267	156	89	51	38
12.....	58	2,160	272	460	267	153	87	50	39
13.....	78	2,760	272	460	260	151	85	49	38
14.....	92	1,980	272	400	255	149	83	48	37
15.....	85	1,210	272	400	255	146	81	48	37
16.....	72	971	272	460	255	144	79	48	36
17.....	66	777	239	460	252	141	77	49	36
18.....	64	687	239	400	250	139	75	56	36
19.....	61	605	239	400	246	137	73	56	35
20.....	60	529	209	400	242	134	70	53	35
21.....	2,760	460	1,500	400	242	132	69	49	35
22.....	4,080	400	777	400	242	130	68	48	35
23.....	1,640	400	529	400	224	129	68	47	35
24.....	600	350	460	400	216	126	68	45	36
25.....	457	350	400	350	208	123	68	44	37
26.....	345	350	605	350	200	123	68	43	38
27.....	455	350	777	350	193	121	68	43	38
28.....	395	350	687	350	186	118	68	43	37
29.....	345	.....	687	350	178	117	64	42	36
30.....	304	.....	605	309	172	111	62	52	37
31.....	304	.....	605	.....	162	.....	61	51	.....

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909-10.												
1.....	36	36	54	12,500	322	151	169	102	67	49	33	24
2.....	43	35	53	3,140	272	151	169	102	68	50	32	24
3.....	50	34	54	1,900	274	151	170	102	68	49	31	24
4.....	46	35	53	1,510	274	151	169	102	68	48	31	24
5.....	42	35	57	1,140	274	151	151	102	68	47	31	25
6.....	41	35	68	1,140	227	151	151	94	67	45	30	25
7.....	41	36	62	1,140	227	151	151	95	67	45	29	24
8.....	39	36	66	804	226	151	150	94	66	43	29	24
9.....	37	46	1,500	805	226	151	151	88	63	42	29	24
10.....	35	51	536	706	226	151	151	88	63	42	29	23
11.....	35	47	216	706	227	151	150	88	61	40	29	23
12.....	35	46	166	706	192	136	150	79	60	41	29	23
13.....	35	43	118	614	193	136	150	79	61	40	29	23
14.....	35	53	118	613	184	136	135	79	62	40	29	24
15.....	35	66	107	613	185	136	135	79	66	39	29	24
16.....	37	55	107	614	190	136	135	76	66	39	28	24
17.....	39	52	98	527	192	136	135	76	64	37	28	24
18.....	39	50	98	527	192	151	135	76	58	38	26	23
19.....	37	49	98	520	192	136	135	76	56	38	25	22
20.....	37	47	98	477	192	136	135	76	54	36	26	23
21.....	37	47	148	525	170	136	122	75	54	37	26	23
22.....	36	47	118	452	169	249	122	74	55	37	26	21
23.....	35	46	132	454	169	169	122	73	56	36	26	21
24.....	34	45	118	449	169	169	121	73	54	35	26	21
25.....	34	45	107	380	169	151	122	72	52	36	25	22
26.....	34	62	107	386	169	151	121	72	50	34	25	22
27.....	34	92	107	381	151	151	122	72	49	35	26	22
28.....	35	65	98	381	151	192	122	71	50	35	25	22
29.....	36	59	98	322	.....	192	111	70	50	35	25	22
30.....	37	56	98	322	.....	192	102	69	50	34	25	22
31.....	38	.....	5,680	269	.....	192	.....	68	.....	35	25	.....

Combined daily discharge, in second-feet, of San Gabriel River and Pacific Light & Power Co. canal, near Azusa, Cal., for 1909-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.												
1.....	23	26	33	33	1,610	310	650	310	200	99	69	45
2.....	22	26	32	33	968	310	753	316	170	72	69	46
3.....	23	29	31	33	1,210	660	763	314	170	99	69	47
4.....	23	31	32	33	3,250	2,540	664	312	169	99	69	46
5.....	24	29	32	33	2,210	1,900	574	310	147	100	68	48
6.....	23	28	32	32	1,470	1,610	584	309	146	100	68	49
7.....	22	29	32	32	1,090	1,610	594	307	146	91	68	48
8.....	23	29	32	32	856	3,630	504	305	148	91	66	46
9.....	23	29	31	137	972	7,720	514	303	147	91	65	47
10.....	23	28	32	1,110	753	9,160	434	302	129	91	65	46
11.....	25	27	32	261	752	4,560	444	299	129	91	64	44
12.....	26	27	32	112	752	3,490	449	297	128	91	61	43
13.....	26	39	32	80	752	2,360	454	245	128	91	60	44
14.....	26	36	32	68	752	2,120	464	400	129	83	58	43
15.....	32	36	32	1,510	657	1,880	384	288	112	84	59	43
16.....	32	35	32	525	572	1,840	394	288	112	84	58	41
17.....	31	34	32	222	495	1,630	399	288	113	84	56	41
18.....	30	34	33	152	425	1,590	424	289	113	84	56	41
19.....	27	34	34	125	365	1,490	449	240	113	84	54	40
20.....	26	32	36	114	310	1,340	398	240	113	84	54	40
21.....	26	32	35	104	308	1,270	423	334	113	84	54	41
22.....	26	32	33	96	260	1,090	418	239	113	84	54	41
23.....	25	32	33	90	260	1,030	418	240	112	84	52	42
24.....	24	31	35	85	215	909	412	200	99	79	52	42
25.....	24	31	35	1,140	215	919	412	200	99	79	51	42
26.....	25	34	34	615	215	802	407	200	99	75	52	42
27.....	25	34	34	386	310	811	406	200	99	75	52	42
28.....	24	33	33	327	310	711	402	200	99	71	51	42
29.....	24	33	33	5,260	.....	721	321	200	99	71	50	113
30.....	27	33	32	1,750	.....	630	320	200	99	71	49	94
31.....	27	.....	33	4,220	.....	638	.....	200	.....	71	46	.....

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.			
1911-12.												
1.....	74	49	44	48	42	40	120	271	118			
2.....	70	49	43	53	42	42	120	275	118			
3.....	66	45	43	49	41	39	120	227	105			
4.....	60	45	44	48	41	156	120	237	103			
5.....	56	46	45	49	41	362	120	203	105			
6.....	55	47	50	49	40	1,240	120	205	105			
7.....	52	47	56	48	40	381	115	191	96			
8.....	51	46	49	48	40	164	115	274	96			
9.....	52	47	47	47	41	124	244	228	96			
10.....	51	49	46	47	40	3,020	244	204	89			
11.....	51	52	46	48	40	825	723	204	89			
12.....	50	51	45	48	40	435	490	204	89			
13.....	48	50	45	47	40	735	320	204	80			
14.....	47	50	46	47	40	455	395	175	77			
15.....	45	49	46	45	38	465	395	175	77			
16.....	44	50	46	45	38	395	395	175	77			
17.....	45	47	48	45	39	335	395	153	77			
18.....	45	46	48	45	38	280	389	153	77			
19.....	45	47	47	45	38	280	384	153	76			
20.....	44	47	47	45	36	240	458	153	75			
21.....	44	47	47	44	36	173	355	153	72			
22.....	44	47	45	44	38	170	355	134	72			
23.....	44	47	46	42	37	145	355	134	73			
24.....	44	46	45	42	36	145	355	134	75			
25.....	44	46	45	42	37	145	355	134	71			
26.....	45	43	45	42	37	140	355	134	69			
27.....	53	44	46	44	37	140	304	118	67			
28.....	55	44	47	44	37	140	317	118	66			
29.....	53	44	54	42	35	140	261	118	63			
30.....	53	44	56	41	.....	135	268	118	63			
31.....	51	.....	48	42	.....	120	.....	118	.....		

NOTE.—Additional water is diverted above the station during irrigating season. From May 13 to July 28, 1909, this additional water is included in the above values.

Monthly discharge of San Gabriel River and canals near Azusa, Cal., for 1894-1912.

[Drainage area, 222 square miles.]

Month.	Discharge in second-feet.				Run-off.		Accuracy.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.	Total in acre-feet.	
1894.							
May	50	27	32	0.14	0.16	1,968	
June	27	17	23	.10	.11	1,369	
July	17	9	12	.05	.06	738	
August	27	10	14	.06	.07	861	
September	23	13	15	.07	.08	893	
1894-5.							
October	16	13	14	.06	.07	861	
November 1-15	14	13	13	.06	.03	387	
August 8-31	47	38	42	.19	.17	1,999	
September	39	29	32	.14	.16	1,904	
1895-6.							
October	32	27	29	.13	.15	1,783	
November	50	29	40	.18	.20	2,380	
December	45	37	42	.19	.22	2,582	
January	51	26	37	.17	.20	2,275	
February	61	36	41	.18	.19	2,358	
March	169	37	111	.50	.58	6,825	
April	91	40	54	.24	.27	3,213	
May	40	29	36	.16	.18	2,214	
June	27	13	19	.09	.10	1,131	
July	15	9	12	.05	.06	738	
August	36	9	14	.06	.07	861	
September	19	11	13	.06	.07	774	
The year	169	9	37.3	.168	2.29	27,100	
1896-7.							
October	188	10	24	.11	.13	1,476	
November	40	15	19	.09	.10	1,131	
December	37	17	22	.10	.12	1,353	
January	147	25	57.9	.260	.29	3,617	
February	1,713	64	344.8	1.553	1.58	19,146	
March	1,765	294	465.6	2.097	2.42	28,623	
April	370	201	294.4	1.325	1.48	17,519	
May	196	94	145.0	.653	.75	8,851	
June	91	54	67.8	.306	.34	4,033	
July	52	27	38.1	.171	.20	2,343	
August	34	22	26.4	.118	.14	1,613	
September	23	18	20.7	.088	.10	1,226	
The year	1,765	10	127	.572	7.65	90,900	
1897-8.							
October	1,640	22	90.5	0.403	.46	5,564	
November	34	31	33.3	.141	.15	1,860	
December	34	28	30.5	.137	.16	1,875	
January	63	28	40	.18	.20	2,453	
February	70	32	40	.18	.19	2,241	
March	48	28	35	.16	.18	2,131	
April	37	25.3	33	.15	.17	1,950	
May	83	25.0	36	.16	.19	2,213	
June	30	14.5	19	.09	.10	1,159	
July	14	9.0	11	.05	.06	672	
August	9	5.0	7	.03	.04	456	
September	10	6.1	8	.04	.04	467	
The year	1,640	5	31.9	.144	1.94	23,000	
1898-9.							
October	10	7.5	9	.04	.05	533	
November	11	8.0	10	.04	.05	580	
December	18	11.7	14	.06	.07	832	
January	33	15	23	.104	.12	1,414	
February	28	20	22	.102	.11	1,244	
March	40	18	26	.119	.14	1,623	
April	28	16	21	.096	.11	1,262	
May	17	12	14	.062	.07	842	
June	22	5	10	.043	.05	565	
July	4	3	4	.016	.02	221	
August	6	4	5	.022	.02	295	
September	6	3	4	.019	.02	220	
The year	40	3	13.5	.061	.83	9,630	

Monthly discharge of San Gabriel River and canals near Azusa, Cal., for 1894-1912—Con.

Month.	Discharge in second-feet.				Run-off.		Accuracy.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.	Total in acre-feet.	
1899-1900.							
October.....	26	4	11	0.050	0.06	683	
November.....	24	10	14	.064	.07	847	
December.....	39	16	20	.091	.10	1,247	
January.....	89	22	32	.14	.16	1,968	
February.....	23	18	20	.09	.09	1,111	
March.....	30	16	20	.09	.10	1,230	
April.....	26	13	17	.08	.09	1,012	
May.....	86	16	37	.17	.20	2,275	
June.....	22	8	15	.07	.08	893	
July.....	10	4	6	.03	.03	369	
August.....	5	4	4	.02	.02	246	
September.....	6	3	4	.02	.02	238	
The year.....	89	3	16.7	.075	1.02	12,100	
1900-1901.							
October.....	6	4	5	.02	.02	307	
November.....			186	.84	.93	11,068	
December.....			40	.18	.11	1,269	
January.....	1,450	28	169	.76	.87	10,391	
February.....	2,605	137	680	3.06	3.19	37,765	
March.....	440	135	221	1.00	1.15	13,589	
April.....	130	95	110	.50	.56	6,545	
May.....	272	83	121	.55	.63	7,440	
June.....	93	41	63	.28	.31	3,749	
July.....	41	24	30	.14	.16	1,845	
August.....	27	15	20	.09	.10	1,240	
September.....	20	15	17	.08	.09	1,012	
The year.....	2,605	4	138	.624	8.12	96,200	
1901-2.							
October.....	122	0	24	.11	.13	1,476	
November.....	50	29	32	.14	.16	1,904	
December.....	30	26	27	.12	.14	1,660	
January.....	51	24	28	.13	.15	1,722	
February.....	120	38	37	.17	.18	2,055	
March.....	378	63	99	.45	.52	6,088	
April.....	99	48	66	.30	.33	3,928	
May.....	48	30	39	.18	.21	2,398	
June.....	30	14	20	.09	.10	1,190	
July.....	17	8	11	.05	.06	676	
August.....	8	6	7	.03	.03	430	
September.....	6	4	5	.02	.02	298	
The year.....	378	0	32.9	.149	2.03	23,800	
1902-3.							
October.....	10	6	7	.03	.03	430	
November.....	80	8	19	.09	.10	1,131	
December.....	68	16	32	.14	.16	1,968	
January.....	2,999	22	148	.67	.77	9,100	
February.....	203	61	102	.46	.48	5,665	
March.....	1,417	57	257	1.16	1.34	15,802	
April.....	5,892	267	792	3.57	3.98	47,127	
May.....	355	125	217	.98	1.13	13,343	
June.....	125	62	95	.43	.48	5,653	
July.....	58	35	43	.19	.22	2,644	
August.....	35	24	29	.13	.15	1,783	
September.....	34	21	25	.11	.12	1,488	
The year.....	5,892	6	147	.663	8.96	106,000	

Monthly discharge of San Gabriel River and canals near Azusa, Cal., for 1894-1912—Con.

Month.	Discharge in second-feet.				Run-off.		Accuracy.	
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.	Total in acre-feet.		
1903-4.								
October.....	32	20	24	0.11	0.13	1,476		
November.....	26	22	24	.11	.12	1,428		
December.....	26	22	24	.11	.13	1,476		
January.....	28.2	23	24.4	.11	.13	1,500		
February.....	438	23	47.7	.21	.23	2,744		
March.....	1,130	35	110.8	.50	.58	6,813		
April.....	120	57	89.7	.40	.45	5,337		
May.....	104	37	66.5	.30	.35	4,089		
June.....	38	17.5	25.5	.11	.12	1,517		
July.....	18	11	14.0	.06	.07	861		
August.....	29	9.5	12.9	.06	.07	793		
September.....	13.5	7.5	10.8	.05	.06	643		
The year.....	1,130	7.5	39.5	.178	2.44	28,700		
1904-5.								
October.....	15.5	9	12	.05	.06	738		
November.....	14.5	11	12.8	.06	.07	762		
December.....	48	14.7	16.9	.08	.09	1,039		
January.....	108	18.5	36.6	.165	.19	2,251		
February.....	3,010	34	466	2.10	2.19	25,880		
March.....	11,130	142	1,222	5.50	6.34	75,140		
April.....	474	206	329	1.48	1.65	19,580		
May.....	540	193	278	1.25	1.44	17,090		
June.....	182	63	139	.626	.70	8,271		
July.....	109	56	83.0	.374	.43	5,103		
August.....	55	33	42.8	.193	.22	2,631		
September.....	35	28	31.4	.141	.16	1,869		
The year.....	11,130	9	222	1.00	13.54	160,000		
1905-6.								
October.....	32	27	28.8	.130	.15	1,771		
November.....	97	29	44.7	.201	.22	2,660		
December.....	50	37	40.1	.181	.21	2,466		
January.....	441	36	68.1	.307	.35	4,190		
February.....	92	47	68.1	.307	.32	3,780		
March.....	9,436	56	2,160	9.73	11.22	133,000		
April.....	1,110	321	578	2.60	2.90	34,400		
May.....	1,110	251	342	1.54	1.78	21,000		
June.....	364	204	262	1.18	1.32	15,600		
July.....	295	97	155	.698	.80	9,530		
August.....	93	57	72.8	.328	.38	4,480		
September.....	55	42	47.7	.215	.24	2,840		
The year.....	9,430	27	322	1.45	19.89	236,000		
1906-7.								
October.....	42	38	39.8	.179	.21	2,450		
November.....	47	37	40.4	.182	.20	2,400		
December.....	1,600	45	188	.847	.98	11,600		
January.....	4,670	88	949	4.27	4.92	58,400		
February.....	1,190	686	848	3.82	3.98	47,100		
March.....	6,810	686	1,880	8.47	9.76	116,000		
April.....	1,550	491	982	4.42	4.93	58,400		
May.....	491	302	350	1.58	1.82	21,500		
June.....	288	201	254	1.14	1.27	15,100		
July.....	201	108	136	.613	.71	8,360		
August.....	108	79	87.7	.395	.46	5,390		
September.....	82	50	60.2	.271	.30	3,580		
The year.....	6,810	37	485	2.18	29.54	350,000		

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Monthly discharge of San Gabriel River and canals near Azusa, Cal., for 1894-1912—Con.

Month.	Discharge in second-feet.				Run-off.		Accu- racy.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.	Total in acre-feet.	
1907-8.							
October.....	100	50	66.5	0.300	0.35	4,090	B.
November.....	79	55	63.9	.288	.32	3,800	B.
December.....	76	53	58.6	.264	.30	3,600	B.
January.....	1,240	48	180	.811	.94	11,100	C.
February.....	766	181	260	1.17	1.26	15,000	C.
March.....	278	132	207	.932	1.07	12,700	C.
April.....	225	132	156	.703	.78	9,280	C.
May.....	163	82	117	.527	.61	7,190	C.
June.....	82	49	70.4	.317	.35	4,190	C.
July.....	89	34	41.6	.187	.22	2,560	C.
August.....	60	25	36.0	.162	.19	2,210	C.
September.....	62	26	30.6	.138	.15	1,820	C.
The year.....	1,240	26	107	.482	6.54	77,500	
1908-9.							
October.....	40	29	33.6	.151	.17	2,070	C.
November.....	36	31	32.9	.148	.17	1,960	C.
December.....	80	34	46.7	.210	.24	2,870	C.
January.....	4,080	39	414	1.86	2.14	25,500	
February.....	7,100	308	1,070	4.82	5.02	59,400	
March.....	1,500	209	428	1.93	2.22	26,300	
April.....	710	309	471	2.12	2.36	28,000	
May.....	309	162	248	1.12	1.29	15,200	
June.....	173	111	144	.649	.72	8,570	
July.....	109	61	82.0	.369	.43	5,040	
August.....	59	42	50.7	.228	.26	3,120	
September.....	52	35	39.0	.176	.20	2,320	
The year.....	7,100	29	255	1.15	15.22	180,000	
1909-10.							
October.....	50	34	37.5	.169	.19	2,310	
November.....	92	34	48.4	.218	.24	2,880	
December.....	5,690	53	340	1.53	1.76	20,900	
January.....	12,500	269	1,130	5.09	5.87	69,500	
February.....	322	151	207	.932	.97	11,500	
March.....	249	136	156	.703	.81	9,590	
April.....	170	102	139	.626	.70	8,270	
May.....	102	68	82.1	.370	.43	5,050	
June.....	68	49	59.8	.269	.30	3,560	
July.....	50	34	39.9	.180	.21	2,450	
August.....	33	25	27.8	.125	.14	1,710	
September.....	25	21	23.1	.104	.12	1,370	
The year.....	12,500	21	191	.860	11.74	139,000	
1910-11.							
October.....	32	22	25.4	.114	.13	1,560	
November.....	39	26	31.4	.141	.16	1,870	
December.....	36	31	32.8	.148	.17	2,020	
January.....	5,260	32	605	2.73	3.15	37,200	
February.....	3,250	215	797	3.59	3.74	44,300	
March.....	9,160	310	1,980	8.92	10.28	122,000	
April.....	763	320	474	2.14	2.39	28,200	
May.....	400	200	270	1.22	1.41	16,600	
June.....	200	99	126	.568	.63	7,500	
July.....	100	71	85.1	.383	.44	5,230	
August.....	69	46	58.7	.264	.30	3,610	
September.....	113	40	47.6	.214	.24	2,830	
The year.....	9,160	22	378	1.70	23.04	273,000	
1911-12.							
October.....	74	44	51.0	.230	.27	3,140	
November.....	52	43	47.0	.212	.24	2,800	
December.....	56	43	46.7	.210	.24	2,870	
January.....	53	41	45.6	.205	.24	2,800	
February.....	42	35	38.8	.175	.19	2,230	
March.....	3,020	39	374	1.68	1.94	23,000	
April.....	723	115	302	1.36	1.52	18,000	
May.....	275	118	177	.797	.92	10,900	
June.....	118	63	83.9	.378	.42	4,990	
The period.....						70,700	

CREEKS, CANALS, AND MISCELLANEOUS WATER SUPPLIES IN SAN GABRIEL RIVER BASIN.

The following tables are prepared from measurements made three times daily for the San Gabriel Electric Co. and filed in a suit before the United States land office at Los Angeles, Cal. The mean of the three daily measurements is here given.

Daily discharge, in second-feet, over weir on the west branch of North Fork of San Gabriel River, Cal., for 1900.

Day.	July.	Aug.	Sept.	Oct.	Day.	July.	Aug.	Sept.	Oct.
1.....	.....	0.23	0.19	0.20	21.....	0.39	0.22	0.15	.....
2.....	0.28	.23	.19	.12	22.....	.24	.22	.12	.....
3.....	.27	.23	.17	.18	23.....	.26	.22	.15	.....
4.....	.27	.26	.22	.18	24.....	.26	.22	.22	.....
5.....	.26	.17	.12	.23	25.....	.28	.22	.27	.....
6.....	.28	.23	.12	.23	26.....	.37	.23	.26	.....
7.....	.24	.23	.22	.19	27.....	.37	.18	.26	.....
8.....	.23	.22	.18	.19	28.....	.26	.18	.22	.....
9.....	.25	.12	.20	.19	29.....	.23	.25	.20	.....
10.....	.23	.12	.22	.19	30.....	.23	.20	.17	.....
11.....	.25	.19	.22	.19	31.....	.23	.....	.....	.....
12.....	.25	.19	.22	.19	Mean.....	.28	.21	.19	.19
13.....	.22	.19	.22	.22					
14.....	.27	.19	.18	.....				
15.....	.27	.15	.18	.....				
16.....	.31	.26	.12	.....				
17.....	.31	.23	.12	.....				
18.....	.27	.23	.25	.....				
19.....	.31	.23	.15	.....				
20.....	.39	.22	.12	.....				

Daily discharge, in second-feet, over weir on the north branch of North Fork of San Gabriel River, Cal., for 1900.

Day.	July.	Aug.	Sept.	Oct.	Day.	July.	Aug.	Sept.	Oct.
1.....	.....	0.89	0.62	0.65	21.....	0.97	0.60	0.53	.....
2.....	0.92	.89	.62	.72	22.....	.96	.....	.53	.....
3.....	.92	.89	.62	.68	23.....	1.07	.55	.53	.....
4.....	.92	.95	.62	.68	24.....	.95	.52	.81	.....
5.....	.89	.95	.60	.68	25.....	.95	.52	.68	.....
6.....	.89	.74	.65	.68	26.....	.96	.56	.65	.....
7.....	.89	.74	.61	.56	27.....	.68	.57	.65	.....
8.....	.82	.74	.61	.56	28.....	.68	.57	.68	.....
9.....	.80	.77	.83	.56	29.....	.89	.57	.68	.....
10.....	.70	.77	.61	.57	30.....	.86	.74	.68	.....
11.....	.81	.74	.61	.59	31.....	.68	.....	.....	.....
12.....	.83	.74	.63	.59	Mean.....	.89	.70	.63	.62
13.....	.86	.77	.61	.59					
14.....	.95	.68	.63	.....				
15.....	.97	.74	.63	.....				
16.....	.97	.62	.59	.....				
17.....	.97	.65	.59	.....				
18.....	.97	.65	.59	.....				
19.....	.97	.62	.59	.....				
20.....	.97	.60	.59	.....				

Daily discharge, in second-feet, over weir on West Fork of San Gabriel River, Cal., above North Fork, for 1900.

Day.	July.	Aug.	Sept.	Oct.	Day.	July.	Aug.	Sept.	Oct.
1.....	0.55	0.05	0.12	0.16	21.....	0.07	0.12	0.16	.....
2.....	.62	.02	.12	.16	22.....	.12	.10	.16	.....
3.....	.68	.....	.12	.16	23.....	.....	.07	.....	.....
4.....	.62	.....	.12	.16	24.....	.....	.08	.....	.....
5.....	.53	.....	.08	.15	25.....	.08	.08	.12	.....
6.....	.55	.....	.11	.20	26.....	.....	.....	.20	.....
7.....	.55	.....	.16	.20	27.....	.....	.08	.16	.....
8.....	.55	.....	.12	.16	28.....	.05	.08	.16	.....
9.....	.44	.....	.12	.16	29.....	.....	.10	.13	.....
10.....	.34	.....	.16	.13	30.....	.05	.12	.14	.....
11.....	.29	.....	.16	.20	31.....	.05	.10	.....	.....
12.....	.26	.08	.12	.20	Mean.....	.29	.09	.14	.17
13.....	.24	.07	.12	.20					
14.....	.20	.08	.16	.....				
15.....	.13	.08	.16	.....				
16.....	.12	.12	.16	.....				
17.....	.16	.10	.16	.....				
18.....	.16	.12	.11	.....				
19.....	.12	.10	.12	.....				
20.....	.12	.12	.12	.....				

Daily discharge, in second-feet, over weir on Coldwater Creek, Cal., $2\frac{1}{2}$ miles from mouth, for 1900.

Day.	July.	Aug.	Sept.	Oct.	Day.	July.	Aug.	Sept.	Oct.
1.....	0.43	0.52	.....	21.....	.....	0.56	.....	.....
2.....58	0.60	22.....	.....	.51	.....	.....
3.....49	.62	.62	23.....	.....	.49	.....	.....
4.....46	.57	.61	24.....	.....	.45	.....	.....
5.....54	.55	.63	25.....	.....	.44	.....	.....
6.....53	.56	.61	26.....	.....	.45	.....	.....
7.....50	.51	.58	27.....	0.37	.42	.....	.....
8.....50	.51	.58	28.....	.49	.42	.....	.....
9.....53	.56	.58	29.....	.50	.41	.....	.....
10.....56	.50	.55	30.....	.47	.40	.....	.....
11.....53	.55	.60	31.....	.46	.56	.....	.....
12.....51	.52	.60	Mean.....	.46	.48	.55	.60
13.....46	.....	.64					
14.....47	.....	.....			
15.....45	.....	.....			
16.....45	.....	.....			
17.....47	.....	.....			
18.....47	.....	.....			
19.....52	.....	.....			
20.....55	.....	.....			

Daily discharge, in second-feet, over weir on San Gabriel River, Cal., 100 yards above Fish Fork, for 1900.

Day.	July.	Aug.	Sept.	Oct.	Day.	July.	Aug.	Sept.	Oct.
1.....	2.24	.....	.....	1.67	21.....	2.00	1.68	1.59	.....
2.....	2.48	.....	.....	1.67	22.....	2.00	1.68	1.63	.....
3.....	2.48	1.72	.....	1.71	23.....	2.00	1.68	1.79	.....
4.....	2.42	1.80	.....	1.84	24.....	1.97	1.68	1.89	.....
5.....	2.33	1.80	.....	1.84	25.....	2.18	1.76	1.84	.....
6.....	2.27	1.80	.....	1.80	26.....	2.00	1.68	1.84	.....
7.....	2.06	1.80	.....	1.72	27.....	2.00	1.60	1.67	.....
8.....	2.12	1.80	.....	1.67	28.....	1.95	1.60	1.63	.....
9.....	2.09	1.80	1.84	1.71	29.....	1.77	1.68	1.67	.....
10.....	2.15	1.80	1.80	1.71	30.....	1.77	1.68	1.79	.....
11.....	2.09	1.80	1.72	1.75	31.....	.....	1.97	.....	.....
12.....	2.15	1.97	1.76	1.76	Mean.....	2.09	1.75	1.74	1.75
13.....	2.15	1.92	1.72	1.89					
14.....	2.03	1.85	1.76	.....				
15.....	2.03	1.80	1.76	.....				
16.....	2.12	1.68	1.80	.....				
17.....	2.00	1.76	1.71	.....				
18.....	2.00	1.68	1.72	.....				
19.....	1.97	1.68	1.72	.....				
20.....	1.97	1.64	1.68	.....				

Daily discharge, in second-feet, over weir on Fish Fork of San Gabriel River, Cal., 100 yards from mouth, for 1900.

Day.	July.	Aug.	Sept.	Oct.	Day.	July.	Aug.	Sept.	Oct.
1.....	1.42	.....	.....	0.95	21.....	1.12	0.89	0.84	.....
2.....	1.66	.....	.....	.90	22.....	1.12	.90	.80	.....
3.....	1.68	0.99	.....	.95	23.....	1.13	.90	.98	.....
4.....	1.66	.96	.....	.96	24.....	1.06	.90	1.02	.....
5.....	1.28	1.02	.....	.93	25.....	1.02	.92	1.01	.....
6.....	1.25	1.06	.....	.93	26.....	.90	.92	.98	.....
7.....	1.16	1.06	.....	.93	27.....	.90	.92	.78	.....
8.....	1.18	.92	.....	.93	28.....	.90	.92	.80	.....
9.....	1.08	.95	1.52	.90	29.....	.87	.99	.81	.....
10.....	.98	1.02	.92	.89	30.....	.87	.95	.84	.....
11.....	.96	.99	.96	.95	31.....	.....	1.08	.....	.....
12.....	.98	1.11	1.13	.95	Mean.....	1.11	.96	.96	0.94
13.....	.98	1.11	1.10	1.01					
14.....	1.04	1.02	.99	.....				
15.....	1.02	.99	1.08	.....				
16.....	1.25	.90	.94	.....				
17.....	.93	.90	.93	.....				
18.....	1.00	.84	.89	.....				
19.....	1.00	.84	.86	.....				
20.....	1.00	.95	.84	.....				

Daily discharge, in second-feet, over weir on Iron Fork of San Gabriel River, Cal., 100 yards from mouth, for 1900.

Day.	July.	Aug.	Sept.	Oct.	Day.	July.	Aug.	Sept.	Oct.
1.....	1.97	.....	.....	1.05	21.....	1.31	1.12	0.91	.....
2.....	1.97	0.87	.....	1.08	22.....	1.34	1.12	.87	.....
3.....	2.03	1.05	.....	1.05	23.....	1.37	1.02	1.12	.....
4.....	2.09	1.09	.....	1.12	24.....	1.24	1.02	1.27	.....
5.....	1.89	1.16	.....	1.20	25.....	1.29	.95	1.20	.....
6.....	1.91	1.16	.....	1.12	26.....	1.24	.95	1.20	.....
7.....	1.83	.62	.....	1.09	27.....	1.26	.95	1.05	.....
8.....	1.66	1.16	.....	1.16	28.....	1.21	1.02	1.01	.....
9.....	1.55	1.12	1.09	1.12	29.....	1.09	1.09	1.01	.....
10.....	1.58	1.16	1.12	1.09	30.....	1.14	1.09	1.16	.....
11.....	1.50	1.24	1.12	1.20	31.....	1.24	1.12	.....	.....
12.....	1.39	1.06	1.09	1.20	Mean.....	1.50	1.07	1.09	1.14
13.....	1.42	1.09	1.09	1.23					
14.....	1.42	1.20	1.12	1.31					
15.....	1.44	1.24	1.16	.....				
16.....	1.42	1.12	1.09	.....				
17.....	1.42	1.12	1.16	.....				
18.....	1.37	1.09	1.09	.....				
19.....	1.37	1.09	1.09	.....				
20.....	1.42	1.16	1.05	.....				

Discharge measurements of miscellaneous water supplies at points in San Gabriel Valley.

Date.	Hydrographer.	Locality.	Dis-charge.
1900.			<i>Sec.-feet.</i>
Sept. 17	W. W. Cockins.....	Bradbury ranch, Santa Anita, and Rose avenues....	1.44
17	.....do.....	San Gabriel Sanitarium tunnel.....	.04
18	.....do.....	W. A. Highland, Rose avenue, Lamanda Park.....	.10
19	.....do.....	Chapman ranch, 2 wells pumped; 1 artesian well....	1.01
19	.....do.....	Chapman ranch, 4 wells pumped.....	1.90
20	.....do.....	Chapman ranch, natural flow of ciénaga.....	.07
20	.....do.....	Chapman ranch dairy.....	.72
		Chapman ranch, total.....	3.70
20	.....do.....	Alhambra Water Co., weir No. 1.....	2.58
20	.....do.....	Alhambra Water Co., weir No. 2.....	.34
		Total.....	2.92
24	.....do.....	Santa Anita Canyon, natural flow.....	.22
24	.....do.....	Sierra Madre Water Co. (weir).....	1.45
24	.....do.....	Remamettes east of Sierra Madre.....	.09
18	.....do.....	Monrovia Water Co., 3 wells pumped.....	3.24
24	.....do.....	Monrovia Canyon, to Monrovia Water Co. (weirs)...	.428
		To Bradbury.....	.116
		Total.....	.544
21	.....do.....	Duarte Mutual Improvement & Canal Co.....	.78
21	.....do.....	Beardsley Water Co.....	.44
13	.....do.....	Morengo Water Co., Southern Pacific Co.'s Garfield station (weir).....	1.82
13	.....do.....	Morengo Water Co.'s weir in Morengo Canyon (weir).....	.46
13	.....do.....	Los Robles Water Co.'s reservoir (weir).....	.31
13	.....do.....	Reservoir at junction of Glenarm and Los Robles avenues, Pasadena (weir).....	.068
13	.....do.....	Graves & Bean tunnel.....	1.10
14	.....do.....	Brick kiln between Molino and Hope streets, Pasadena.....	.02
14	.....do.....	Oak Knoll Park, Pasadena.....	.34
14	.....do.....	Patton tunnel, near Kewen Lake.....	.18
14	.....do.....	Patton's east canyon.....	1.48
17	.....do.....	Patton's east canyon, natural flow; pump not running.....	.37
17	.....do.....	Mission ditch, Patton ranch.....	.20
14	.....do.....	Winston ranch.....	.56
14	.....do.....	Shorbes ranch (weir).....	.18
15	.....do.....	Y oakham's ranch (weir).....	.12
15	.....do.....	Robert Liddel, San Pasqual and Shorb (weir).....	.10
15	.....do.....	R. W. Scoville (weir).....	.07
15	.....do.....	Mrs. Black, San Pasqual and Craig streets (weir).....	.07
15	.....do.....	Morningside ranch (weir).....	.04

Discharge measurement of Cattle Canyon above Coldwater, San Gabriel River, Los Angeles County, Cal.

Date.	Hydrographer.	Dis-charge.
April, 1900.....	J. B. Lippincott et al.....	<i>Sec.-feet.</i> 0.32

Discharge measurement of West Fork of San Gabriel River above Bear Creek, Los Angeles County, Cal.

Date.	Hydrographer.	Dis-charge.
April, 1900.....	J. B. Lippincott et al.....	<i>Sec.-feet.</i> 1.80

Discharge measurements of San Gabriel River at point above Iron Fork.

Date.	Hydrographer.	Dis-charge.	Date.	Hydrographer.	Dis-charge.
November, 1896.....	F. C. Finkle.....	<i>Sec.-feet.</i> 7.7	June, 1897.....	F. C. Finkle.....	<i>Sec.-feet.</i> 25.4
December, 1896.....	do.....	7.4	July, 1897.....	do.....	17.8
January, 1897.....	do.....	28.4	August, 1897.....	do.....	16.4
February, 1897.....	do.....	42.0	September, 1897.....	do.....	16.5
March, 1897.....	do.....	52.1	April, 1900.....	J. B. Lippincott et al.	5.76
April, 1897.....	do.....	27.9			
May, 1897.....	do.....	24.7			

Discharge measurements of Iron Fork of San Gabriel River at mouth.

Date.	Hydrographer.	Dis-charge.	Date.	Hydrographer.	Dis-charge.
November, 1896.....	F. C. Finkle.....	<i>Sec.-feet.</i> 5.6	June, 1897.....	F. C. Finkle.....	<i>Sec.-feet.</i> 7.7
December, 1896.....	do.....	3.0	July, 1897.....	do.....	8.6
January, 1897.....	do.....	10.1	August, 1897.....	do.....	3.9
February, 1897.....	do.....	18.3	September, 1897.....	do.....	4.1
March, 1897.....	do.....	18.9	April, 1900.....	J. B. Lippincott et al.	1.69
April, 1897.....	do.....	10.2			
May, 1897.....	do.....	8.9			

Discharge measurements of Bear Creek, San Gabriel River, Los Angeles County, Cal.

Date.	Hydrographer.	Dis-charge.	Date.	Hydrographer.	Dis-charge.
November, 1896.....	F. C. Finkle.....	<i>Sec.-feet.</i> 3.3	March, 1897.....	F. C. Finkle.....	<i>Sec.-feet.</i> 23.9
December, 1896.....	do.....	3.4	April, 1897.....	do.....	17.3
January, 1897.....	do.....	9.1	May, 1897.....	do.....	14.1
February, 1897.....	do.....	24.7			

Discharge measurements of Bear Creek, San Gabriel River, at point near mouth, Los Angeles County, Cal.

Date.	Hydrographer.	Dis-charge.	Date.	Hydrographer.	Dis-charge.
		<i>Sec.-feet.</i>			<i>Sec.-feet.</i>
June, 1897.....	F. C. Finkle.....	6.3	September, 1897....	F. C. Finkle.....	4.5
July, 1897.....	.....do.....	6.2	April, 1900.....	J. B. Lippincott	2.42
August, 1897.....	.....do.....	4.4		et al.	

Discharge measurements of Coldwater Creek, San Gabriel River, Los Angeles County, Cal.

Date.	Hydrographer.	Dis-charge.	Date.	Hydrographer.	Dis-charge.
		<i>Sec.-feet.</i>			<i>Sec.-feet.</i>
November, 1896....	F. C. Finkle.....	4.1	June, 1897.....	F. C. Finkle.....	8.3
December, 1896....	.....do.....	4.2	July, 1897.....	.....do.....	6.5
January, 1897.....	.....do.....	11.3	August, 1897.....	.....do.....	5.1
February, 1897....	.....do.....	19.1	September, 1897....	.....do.....	5.0
March, 1897.....	.....do.....	17.8	April, 1900.....	J. B. Lippincott	1.46
April, 1897.....	.....do.....	11.3		et al.	
May, 1897.....	.....do.....	9.8			

Discharge measurements of North Fork of San Gabriel River.

Date.	Hydrographer.	Dis-charge.	Date.	Hydrographer.	Dis-charge.
		<i>Sec.-feet.</i>			<i>Sec.-feet.</i>
November, 1896....	F. C. Finkle.....	3.7	June, 1897.....	F. C. Finkle.....	7.1
December, 1896....	.....do.....	3.6	July, 1897.....	.....do.....	5.9
January, 1897.....	.....do.....	10.8	August, 1897.....	.....do.....	4.1
February, 1897....	.....do.....	17.0	September, 1897....	.....do.....	3.9
March, 1897.....	.....do.....	19.4	April, 1900.....	J. B. Lippincott	1.43
April, 1897.....	.....do.....	13.8		et al.	
May, 1897.....	.....do.....	11.2			

Discharge measurements of water supplies in San Dimas Wash, Cal.

Date.	Hydrographer.	Well.	Dis-charge.
			<i>Sec.-feet.</i>
1900.			
Sept. 27	Irwin F. Daniels.....	Daty & Sons.....	1.80
27	.....do.....	San Dimas Irrigation Co., F. D. Smith well.....	1.20
27	.....do.....	Thacker well.....	.80
27	.....do.....	Smith well (private).....	.30
27	.....do.....	Chapman well.....	.70
27	.....do.....	Ruddock well.....	.50
27	.....do.....	Artesian Belt Co., 2 wells.....	1.60
27	.....do.....	Azusa city well.....	.20
27	.....do.....	Walker well.....	.90
27	.....do.....	Citizens' Water Co. (Covina).....	.10
27	.....do.....	Covina plant, Deacon well.....	.44
27	.....do.....	Natural flow, San Dimas Canyon.....	.04
27	.....do.....	Spark's well.....	.40
			11.38

Discharge measurements in San Gabriel Valley at wells on Lordsburg Mesa, Cal.

Date.	Hydrographer.	Well.	Dis-charge.
			<i>Sec.-feet.</i>
Sept. 27	Irwin F. Daniels.....	Richards, 4 wells.....	1.52
27	do.....	Sumner.....	.48
27	do.....	Sheldon Bros.....	.30
27	do.....	La Verne Land & Water Co.....	.70
27	do.....	Rodgers.....	.10
27	do.....	True (5 days in 30).....	.16
27	do.....	Rodney Soper.....	.24
27	do.....	Hayes & Stratton.....	.20
27	do.....	Wallace.....	.16
27	do.....	Mullard.....	.30
27	do.....	Douglas & McQuilly.....	.76
27	do.....	Norris.....	.30
27	do.....	Williams Bros.....	.80
27	do.....	Kulp (intermittent) south of Mesa Avenue.....	.20
27	do.....	D. Fulton.....	.50
27	do.....	Stevens.....	.20
27	do.....	Daniels & Overholtzer.....	1.34
27	do.....	Massey, 2 wells.....	.76
27	do.....	Hanser Bros.....	.50
27	do.....	Moorwaw & Son.....	.88
27	do.....	Sleider.....	.40
27	do.....	Rutherford & Co.....	.40
27	do.....	New Deal Water Co.....	.90
27	do.....	Kiser.....	.90
			12.64

MISCELLANEOUS MEASUREMENTS.

The following miscellaneous measurements have been made in the San Gabriel River basin:

Miscellaneous measurements in San Gabriel River drainage basin.

Date.	Stream.	Hydrographer.	Locality.	Dis-charge.
				<i>Sec.-ft.</i>
July 1, 1898	Sawpit Creek.....	F. H. Olmsted.....	Near mouth of canyon.....	1.33
Aug. 7, 1900	Sheep Creek.....	S. G. Bennett.....	.....	2.46
Oct. 3, 1903	do.....	W. B. Clapp.....	Whittier flume crossing.....	4.6
Oct. 5, 1904	do.....	do.....	do.....	1.4
Oct. 6, 1905	do.....	do.....	do.....	4.6
Sept. 1, 1902	Slauson well.....	do.....	.....	.9
Aug. 7, 1900	Standiferd ditch.....	S. G. Bennett.....	.....	14.6
July 15, 1902	do.....	J. B. Lippincott.....	.....	19.1
Oct. 2, 1903	do.....	W. B. Clapp.....	Heading.....	14.0
Oct. 5, 1904	do.....	do.....	do.....	12.9
Oct. 6, 1905	do.....	do.....	do.....	15.6
July 3, 1898	Temple ditch.....	F. H. Olmsted.....	Left of Narrows flume.....	9.1
Aug. 7, 1900	do.....	S. G. Bennett.....	.....	1.2
July 3, 1898	Whittier ditch.....	F. H. Olmsted.....	El Monte road crossing.....	2.52
Aug. 7, 1900	do.....	S. G. Bennett.....	.....	5.71
Oct. 3, 1903	do.....	W. B. Clapp.....	Pumping plant east of El Monte, developed water.....	5.1
Oct. 19, 1898	Mayberry Canyon.....	J. B. Lippincott.....	Alhambra and Mayberry water.....	1.64
Sept. 23, 1899	do.....	do.....	Alhambra water.....	1.38
June 2, 1911	San Gabriel Water Co.'s canal.....	.....	100 feet above U. S. G. S. gaging station on San Gabriel River near Azusa.....	6.2
June 22, 1911	do.....	.....	do.....	15
Jan. 30, 1912	Azusa canal.....	.....	1,000 feet below power house at Azusa.....	.32
Do.....	Duarte canal.....	.....	1/4 mile below tailrace of Pacific Light & Power Co.'s power house.....	9.9
June 17, 1896	San Gabriel River.....	J. B. Lippincott.....	Mouth of Vineland tunnel.....	1.54
Do.....	do.....	do.....	Same; pump running.....	2.11
Apr. 29, 1897	do.....	do.....	Mouth of Vineland tunnel.....	2.23
Do.....	do.....	do.....	Same; shaft No. 2.....	2.11

Miscellaneous measurements in San Gabriel River drainage basin—Continued.

Date.	Stream.	Hydrographer.	Locality.	Dis-charge.
				<i>Sec.-ft.</i>
Apr. 29, 1897	San Gabriel River	J. B. Lippincott	Mouth of Vineland tunnel, at head of flume, between shafts Nos. 3 and 4.	2.13
Do.....	.....do.....	.....do.....	Same; right fork, above shaft No. 4.	1.07
May 24, 1897	.....do.....	.....do.....	Mouth of Vineland tunnel.	1.88
June 17, 1896	.....do.....	.....do.....	Azusa irrigators' development tunnel.	3.99
Aug. 24, 1898	.....do.....	.....do.....	Same place; river being diverted through power company's conduit.	.22
Do.....	.....do.....	.....do.....	Irrigators' development tunnel, pumped; additional.	.30
Aug. 23, 1898	.....do.....	.....do.....	Junction of East and West forks.	9.87
Do.....	.....do.....	.....do.....	Head works of San Gabriel Power Co.	8.42
July 3, 1898	.....do.....	F. H. Olmsted.....	Original river channel.....	6.18
Do.....	.....do.....	.....do.....	Channel No. 2; Baldwin ranch house road.	8.79
Do.....	.....do.....	.....do.....	Channel No. 3; Campers station.	3.36
Apr. 15, 1903	.....do.....	W. B. Clapp.....	El Monte Bridge.....	50
Apr. 26, 1903	.....do.....	O. W. Peterson.....	.....do.....	2.29
May 26, 1903	.....do.....	W. B. Clapp.....	.....do.....	0
Apr. 13, 1905	.....do.....	R. S. Hawley.....	.....do.....	47
Apr. 15, 1903	.....do.....	W. B. Clapp.....	Lexington wash at El Monte.	3
May 26, 1903	.....do.....	.....do.....	Total at head of Lexington wash.	66
Apr. 14, 1903	.....do.....	.....do.....	Upper road crossing, Duarte to Azusa.	264
Apr. 23, 1903	.....do.....	O. W. Peterson.....	Opposite Alamitos.....	311
Apr. 24, 1903	.....do.....	.....do.....	Southern California Ry. at Rivera.	365
Do.....	.....do.....	.....do.....	Southern California Ry. at Studebaker.	364
Dec. 5, 1897	.....do.....	J. B. Lippincott.....	Whittier road crossing.....	106
Apr. 25, 1903	.....do.....	O. W. Peterson.....	.....do.....	361
Do.....	.....do.....	.....do.....	Road crossing east of Durfee's ranch.	264
Aug. 23, 1898	San Gabriel River, East Fork.	J. B. Lippincott.....	Above junction with West Fork.	7.11
Do.....	San Gabriel River, West Fork.	.....do.....	Above junction with East Fork.	2.67
June 20, 1910	.....do.....	.....do.....	100 feet above junction with North Fork.	8.5
Do.....	San Gabriel River, North Fork of West Fork.	.....do.....	500 feet above mouth.....	7.2
July 3, 1898	Rio Hondo.....	F. H. Olmsted.....	Old Mission Bridge.....	29.8
Aug. 8, 1900	.....do.....	S. G. Bennett.....	.....do.....	23.3
July 15, 1902	.....do.....	J. B. Lippincott.....	.....do.....	23.8
Aug. 18, 1902	.....do.....	J. A. Worthen.....	.....do.....	24.3
Sept. 8, 1902	.....do.....	.....do.....	.....do.....	25.6
Sept. 27, 1902	.....do.....	.....do.....	.....do.....	21.5
Oct. 11, 1902	.....do.....	.....do.....	.....do.....	24.7
Apr. 27, 1903	.....do.....	O. W. Peterson.....	.....do.....	36
Oct. 2, 1903	.....do.....	W. B. Clapp.....	.....do.....	29
June 15, 1904	.....do.....	J. A. Worthen.....	.....do.....	22
July 8, 1904	.....do.....	.....do.....	.....do.....	24.1
Aug. 31, 1904	.....do.....	.....do.....	.....do.....	22.2
Sept. 24, 1904	.....do.....	.....do.....	.....do.....	21.7
Oct. 5, 1904	.....do.....	W. B. Clapp.....	.....do.....	22
Oct. 15, 1904	.....do.....	J. A. Worthen.....	.....do.....	27
Oct. 6, 1905	.....do.....	W. B. Clapp.....	.....do.....	21
Apr. 20, 1903	.....do.....	O. W. Peterson.....	San Pedro, Los Angeles & Salt Lake Ry. above Workman.	29
Apr. 27, 1903	.....do.....	.....do.....	Whittier road crossing.....	17
Do.....	.....do.....	.....do.....	Road crossing west of Rivera.	12
Do.....	.....do.....	.....do.....	Southern Pacific R. R. west of Downey.	12
Aug. 8, 1900	Agricultural ditch.....	S. G. Bennett.....	.....do.....	.0
Do.....	Arroyo ditch.....	.....do.....	.....do.....	21.1
July 25, 1902	.....do.....	J. A. Worthen.....	Dam.....	21.7
June 15, 1904	.....do.....	.....do.....	.....do.....	20.6
July 8, 1904	.....do.....	.....do.....	.....do.....	19.7
Aug. 31, 1904	.....do.....	.....do.....	.....do.....	18.6

Miscellaneous measurements in San Gabriel River drainage basin—Continued.

Date.	Stream.	Hydrographer.	Locality.	Dis-charge.
				<i>Sec.-ft.</i>
Sept. 24, 1904	Arroyo ditch	J. A. Worthen	Dam	17.9
Oct. 15, 1904	do	do	do	20.8
Sept. 27, 1902	do	do	Intake	24.6
Oct. 11, 1902	do	do	do	24.2
June 21, 1904	do	Clapp and Parker	do	21.7
Sept. 8, 1902	do	J. A. Worthen	San Pedro, Los Angeles & Salt Lake Ry.	19.6
Oct. 11, 1902	do	do	do	20.5
June 15, 1904	do	do	do	17.5
July 8, 1904	do	do	do	17.9
Aug. 18, 1904	do	do	do	20.6
Aug. 31, 1904	do	do	do	16.4
Sept. 24, 1904	do	do	do	17.0
Sept. 27, 1904	do	do	do	18.8
Oct. 15, 1904	do	do	do	18.5
June 21, 1904	do	Clapp and Parker	do	19.4
Aug. 18, 1902	do	J. A. Worthen	Point of diversion	23.7
Sept. 8, 1902	do	do	do	23.2
June 21, 1904	do	Clapp and Parker	Head of flume	16.7
Aug. 31, 1904	do	J. A. Worthen	do	16.2
Sept. 24, 1904	do	do	do	15.5
Oct. 10, 1904	do	do	do	18.6
Apr. 25, 1903	do	J. B. Lippincott	Southern California Ry.	21
July 29, 1902	Baldwin ditch (Rio Hondo).	J. A. Worthen	Point 1.	3.2
Aug. 18, 1902	do	do	do	3.7
Sept. 8, 1902	do	do	do	.91
Sept. 27, 1902	do	do	do	2.0
Oct. 15, 1902	do	do	do	1.6
June 15, 1904	do	do	do	3.0
July 8, 1904	do	do	do	3.4
Aug. 31, 1904	do	do	do	3.0
Sept. 24, 1904	do	do	do	2.8
Oct. 5, 1904	do	W. B. Clapp	do	2.9
Oct. 15, 1904	do	J. A. Worthen	do	.2
July 20, 1902	do	do	Point 3	1.2
Aug. 18, 1902	do	do	do	.70
Sept. 8, 1902	do	do	do	.72
Sept. 27, 1902	do	do	do	.63
Oct. 11, 1902	do	do	do	.75
Sept. 24, 1903	do	do	do	.94
Oct. 15, 1903	do	do	do	.78
June 8, 1904	do	do	do	.96
June 15, 1904	do	do	do	1.40
Aug. 31, 1904	do	do	do	.80
July 29, 1902	Baldwin ditch	do	Point 4	1.9
Aug. 18, 1902	do	do	do	1.2
Sept. 8, 1902	do	do	do	.99
Sept. 27, 1902	do	do	do	.52
Oct. 11, 1902	do	do	do	.81
June 15, 1904	do	do	do	.00
July 8, 1904	do	do	do	.00
Aug. 31, 1904	do	do	do	.62
Oct. 15, 1904	do	do	do	.00
Oct. 6, 1905	do	W. B. Clapp	Old Mission Bridge	3.00
May 23, 1903	Baldwin division (Santa Anita Creek).	do	Heading	3.0
Sept. 9, 1903	do	do	do	1.4
Aug. 7, 1900	Banta ditch	S. G. Bennett	do	15.4
July 15, 1902	do	J. B. Lippincott	do	16.5
Oct. 2, 1903	do	W. B. Clapp	Heading	28.0
Oct. 5, 1904	do	do	100 feet below division box	19.5
Oct. 6, 1905	do	do	Below headgate of Ran-chito ditch.	16.8
Aug. 7, 1900	Cate ditch	S. G. Bennett	Near head	8.7
July 15, 1902	do	J. B. Lippincott	In flume at road crossing	10.6
Oct. 2, 1903	do	W. B. Clapp	do	5.5
Oct. 11, 1904	do	do	do	11.1
Oct. 6, 1905	do	do	do	11.2
Apr. 20, 1903	Dalton Creek	Clapp and Clausen	Mouth of canyon	9.0
May 22, 1903	do	W. B. Clapp	do	2.7
Sept. 14, 1903	do	do	do	.0
May 22, 1903	do	do	1 mile below mouth of canyon.	.0
Apr. 20, 1903	do	do	Southern California Ry	.0
Oct. 3, 1903	Durfee ditch	do	Road crossing above ranch house.	1.6
Oct. 5, 1904	do	do	do	.0

^a Estimated. Main stream flowing through waste gate into old channel.

Miscellaneous measurements in San Gabriel River drainage basin—Continued.

Date.	Stream.	Hydrographer.	Locality.	Dis-charge.
				<i>Sec.-ft.</i>
Nov. 14, 1898	Eaton Canyon Creek	J. B. Lippincott		2.11
Jan. 11, 1899	do	E. P. Dewey	Near falls	.50
Apr. 18, 1903	do	W. B. Clapp	Mouth of canyon	29.0
May 21, 1903	do	do	do	3.0
Do.			Water Co.'s diversion	3.0
Sept. 9, 1903	Eaton Canyon Creek	W. B. Clapp	Mouth of canyon	.0
Apr. 18, 1903	do	do	Southern California Ry.	.0
May 21, 1903	do	do	1 mile above Southern California Ry.	.0
Aug. 7, 1900	Killion's pumping plant.	S. G. Bennett	4 wells near El Monte	10.2
Aug. 8, 1900	Little Lake	do		.22
July 3, 1898	Puente ditch	F. H. Olmsted	50 per cent of usual head in ditch.	1.22
July 7, 1898	Rincon ditch	S. G. Bennett		2.47
Oct. 3, 1903	do	W. B. Clapp	Rincon road crossing	3.4
Oct. 5, 1904	do	do	do	1.5
Oct. 6, 1905	do	do	do	3.4
Aug. 8, 1900	Rodriguez ditch	S. G. Bennett	Near Old Mission	2.0
Apr. 20, 1903	San Dimas Creek	Clapp and Clausen	Mouth of canyon	19.0
May 22, 1903	do	W. B. Clapp	do	2.5
Sept. 14, 1903	do	do	do	.0
Apr. 20, 1903	do	do	Base Line avenue	.0
Apr. 25, 1903	San Jose Creek	O. W. Peterson	Whittier and Puente road.	8.0
Apr. 18, 1903	Santa Anita Creek	W. B. Clapp	Mouth of canyon	35.0
Oct. 23, 1905	do	do	do	1.5
Apr. 18, 1903	do	do	Southern Pacific R. R., Monrovia branch.	.0
May 23, 1903	do	do	White Oak Avenue	.0
Apr. 18, 1903	Santa Anita Creek, Little.	do	Above Santa Anita Creek.	5.0

LOS ANGELES RIVER BASIN.

DIVERSIONS FROM LOS ANGELES RIVER.

During the summer the amount of water in the 44-inch conduit and in the main-supply conduit of the city of Los Angeles has been measured to determine the amount of water diverted from Los Angeles River for domestic supply. The water is taken from the river near Burbank and the measurements show the entire surface flow and underground development of the river at this point during the summer. Some return seepage water appears again in the river channel near Huron Street, Los Angeles, near which point the city has an underground gallery or tunnel for collecting an auxiliary supply which is pumped into the reservoir and used in the general distributing system.

Discharge measurements of Los Angeles River at Los Angeles, Cal.

Date.	Hydrographer.	Discharge.			
		44-inch conduit.	Main supply ditch.	River at Huron Street.	Total.
1904.		<i>Sec.-ft.</i>	<i>Sec.-ft.</i>	<i>Sec.-ft.</i>	<i>Sec.-ft.</i>
Apr. 15	F. B. Cook	42.3	4.5	.....	46.8
May 25	Clapp and Cook	40.0	8.0	.....	48.0
June 18	F. B. Cook	29.2	10.8	.....	40.0
24	do	31.7	8.6	.....	40.3
27	Clapp and La Rue	34.2	8.6	3.7	46.5
July 19	La Rue and Cook	33.1	10.2	5.3	48.6
Aug. 9	F. B. Cook	29.9	10.4	.....	40.3
18	La Rue and Cook	30.5	10.8	3.6	44.9
Sept. 7	F. B. Cook	29.7	10.4	.....	40.1
20	E. C. La Rue	31.1	11.0	3.4	45.5
Oct. 20	do	31.9	11.6	8.2	51.7
25	F. B. Cook	31.4	11.6	.....	43.0
Nov. 18	La Rue and Cook	33.3	11.8	8.4	53.5
Dec. 28	E. C. La Rue	27.7	10.0	22.2	59.9
1905.					
May 15	.....	42.0	11.0	10.6	63.6
June 22	.....	38.0	9.9	3.3	51.2
July 28	.....	37.0	8.4	4.6	50.0
Sept. 19	.....	35.3	8.7	3.4	47.4

Measurements of flow, in second-feet, of diversions from Los Angeles River by the city of Los Angeles in 1906-1909.

Date.	44-inch conduit discharge.	Main-supply conduit discharge.	Total.	Date.	44-inch conduit discharge.	Main-supply conduit discharge.	Total.
1906.				1908.			
Feb. 24 ^a	26.59	6.58	33.17	May 21	43.31	13.81	57.12
Apr. 20	36.23	7.67	43.90	June 25	42.72	12.67	55.39
June 23	31.76	15.86	47.62	July 31	37.73	12.96	50.69
July 17	34.73	9.43	44.16	Aug. 3	33.34	17.16	50.60
20	33.95	10.23	44.18	5	38.12	13.00	51.12
Aug. 22	30.49	13.67	44.16	7	35.73	15.16	50.89
31	32.86	11.30	44.16	26	34.73	16.43	51.16
Sept. 21	38.11	4.43	42.54	Sept. 22	38.73	16.30	55.03
23	29.48	13.20	42.68	Oct. 23	40.24	14.65	54.89
Nov. 22	32.73	13.50	46.23	Nov. 20	35.54	21.78	57.32
Dec. 18	33.61	15.66	49.27	Dec. 30	36.91	22.98	59.89
1907.				1909.			
Apr. 8	42.50	22.61	65.11	Mar. 16	40.19	25.47	65.66
May 9	44.96	19.50	64.46	Apr. 9	37.99	24.65	62.64
June 5	50.46	8.55	59.01	May 13	37.84	23.41	61.25
July 12	35.13	18.03	53.16	June 9	37.93	23.25	61.18
Aug. 8	32.24	17.38	49.62	July 20	37.28	21.90	59.18
29	36.45	14.69	51.14	Aug. 12	35.28	22.22	57.50
Oct. 8	38.51	16.26	54.77	Sept. 8	36.04	21.06	57.10
Nov. 9	35.52	19.63	55.15	Oct. 23	37.02	22.03	59.05
1908.							
Apr. 29	44.44	12.30	56.74				

^a On Feb. 24, 1906, 23.9 second-feet was passing intake and is not included in above total. On Apr. 20, 7.4 second-feet was passing intake and is not included in above total.

LOS ANGELES RIVER ABOVE LOS ANGELES, CAL.

Discharge of Los Angeles River at weirs above Los Angeles, Cal.

Weir No. 11, 9.88 miles above city limits.

Month.	Discharge in second-feet.			Total in acre-feet.
	Maxi-mum.	Mini-mum.	Mean.	
1896.				
August.....	16	13	14	861
September.....	16	14	15	893
October.....	22	14	16	984
November.....	18	15	16	952
December.....	19	15	16	984

Weir No. 1, 9.79 miles above city limits.

1896.				
August.....	21	19	20	1,230
September.....	21	19	20	1,190
October.....	26	19	20	1,230
November.....	24	19	21	1,250
December.....	23	19	20	1,230

Weir No. 4, 7.27 miles above city limits.

1896.				
August.....	46	41	44	2,705
September.....	44	41	43	2,559
October.....	56	41	44	2,705
November.....	52	43	46	2,737
December.....	55	43	47	2,828
1897.				
January.....	47	44	46	2,828

Weir No. 5, 4.87 miles above city limits.

1896.				
August.....	77	67	71	4,366
September.....	76	63	71	4,225
October.....	82	65	69	4,243
November.....	76	68	70	4,165
December.....	96	67	72	4,427
1897.				
January.....	96	67	73	4,489
February.....	96	71	77	4,276

Weir No. 8, 3.65 miles above city limits.

1896.				
August.....	73	67	70	4,304
September.....	73	65	69	4,106
October.....	83	65	69	4,243
November.....	74	67	71	4,225
December.....	93	68	73	4,489
1897.				
January.....	79	71	73	4,489

LOS ANGELES RIVER AT THE NARROWS, CAL.

Los Angeles River heads immediately south of Santa Clara River, its various tributaries receiving their supply from the mountains surrounding the San Fernando Plains. It passes out of the lower end of the plain through a narrow valley known as The Narrows, at the lower end of which is the city of Los Angeles. The streams entering

San Fernando Valley have brought down immense quantities of sand and gravel from the mountainous area, and thus have formed the San Fernando Plains. This coarse deposit acts as a natural regulator, absorbing the flood waters, which gradually appear lower down. The rainfall of southern California was deficient for the few years prior to 1902, but the discharge of Los Angeles River at The Narrows remained exceptionally constant, the decrease in 1900 being not more than 20 per cent of the average. On account of the numerous lawsuits which have arisen regarding water rights on this river, a thorough study of its discharge was instituted by the city of Los Angeles, the work being under the direction of J. B. Lippincott, as consulting engineer for the city. The majority of the measurements were made by C. A. Miller, although a number of them were made by F. H. Olmsted, city engineer. Several weirs were placed in the river where the measurements are made. The points of measurements are as follows, in order downstream:

Weir A, at the intersection of Pacoima Avenue with Los Angeles River, in the Lankershim Rancho subdivision.

Weir B, at the intersection of Vineland Avenue with Los Angeles River.

Weir C, at the intersection of Fernando Avenue with Los Angeles River.

Weir E, at the southwest corner of block 73, Providencia Rancho.

Weir G, at the intersection of the east line of block 71, Providencia Rancho, with Los Angeles River.

Weir L, 770 feet above weir H.

Weir H, approximately 300 feet east of the intersection of Buena Vista Street with Los Angeles River.

Weir I, 2,543 feet below weir H.

Weir J, 600 feet east of the west line of block 69, Providencia Rancho.

Weir K, in block 79, Providencia Rancho, 300 feet west of center.

Measuring bridge P, near the southwest corner of block 81, Providencia Rancho, in the headworks site of the city of Los Angeles, commonly known as the Pomeroy & Hooker tract, where river turns to the east at angle of 90 degrees.

Measuring bridge Q, about 400 feet above the junction of the Verdugo Wash with Los Angeles River.

Measuring bridge No. 2, about 600 feet above the head of the power ditch of the Los Angeles City Water Co., in the so-called Crystal Springs tract.

Weir No. 7, 1 mile below the head, in the main supply ditch, sometimes called the Woolen Mill ditch, in the headworks site.

Measuring point No. 7B, at a 3-foot cement pipe in the same ditch, west of bridge No. 2 and at the Los Felix ranch house.

Weir No. 17, opposite bridge No. 2, on what is called the Glassell tributary.

(To get the total flow of river at bridge No. 2, there should be combined the flow at bridges No. 2, No. 17, and No. 7B. In case measurements were not taken on the main supply ditch at No. 7B, the measurement observed at weir No. 7, above No. 7B on the main supply ditch, was used, and the loss between No. 7 and No. 7B, 2.49 second-feet, was deducted. This is shown in detail in the table for bridge No. 2. For bridge Q a similar process is followed, omitting No. 17. For bridge P the observed flow at the bridge is combined with either the flow at No. 7 or at No. 7B.)

Weir No. 9, at the mouth of Tujunga Creek, near the western end of the headworks site, and near the intersection of Buena Vista Street with Los Angeles River.

Weir No. 10, approximately 200 feet west of weir No. 9, at the outlet of a small cut which was run into the gravel bed for the development of water.

Weir M, block 67, Providencia Rancho, on a small stream entering the river in the headworks tract.

Discharge measurements of Los Angeles River.

Weir A.

Date.	Dis-charge.	Average for month.	Date.	Dis-charge.	Average for month.
1899.			1900.		
Aug. 14.....	0.565	0.612	May 17.....	0.461	0.461
19.....	.660		June 12.....	.461	
Sept. 20.....	.500		29.....	.402	
26.....	.500	.500	Aug. 1.....	.310	.370
Oct. 24.....	.687		8.....	.368	
Nov. 24.....	.725		15.....	.372	
28.....	.721	.723	31.....	.430	.368
Dec. 7.....	.678		Sept. 8.....	.378	
28.....	.768		11.....	.400	
			27.....	.328	.380
			Nov. 10.....	.380	
Mean.....		.649	Mean.....		.402

Weir B.

1899.			1900.		
Aug. 14.....	0.500	0.500	May 17.....	0.482	0.482
Sept. 20.....	.500		June 12.....	.430	
26.....	.500		29.....	.280	.355
Oct. 24.....	.755	.755	July 27.....	.160	
Nov. 24.....	.937		Aug. 1.....	.180	
28.....	.941	.939	15.....	.197	.198
Dec. 7.....	.864		31.....	.219	
28.....	.982		Sept. 8.....	.209	.203
			11.....	.223	
			27.....	.176	
			Nov. 10.....	.260	.260
Mean.....		.723	Mean.....		.276

Weir C.

1899.			1900.		
Aug. 14.....	2.88	2.88	May 17.....	2.98	2.98
28.....	2.88		June 12.....	2.91	
Sept. 20.....	2.69		27.....	2.45	2.45
26.....	2.26	2.48	Aug. 1.....	2.50	
Oct. 9.....	2.88		8.....	2.48	
24.....	2.98	2.93	15.....	2.48	2.50
Nov. 24.....	3.45		31.....	2.55	
28.....	3.42	3.43	Sept. 8.....	1.58	1.86
Dec. 28.....	3.44		11.....	2.38	
			27.....	1.63	
			Nov. 10.....	2.42	2.42
Mean.....		3.03	Mean.....		2.52

Weir E.

1899.			1900.		
Aug. 14.....	5.55	5.55	May 15.....	5.45	5.45
28.....	5.55		June 12.....	5.18	
Sept. 20.....	5.35		29.....	4.81	4.99
26.....	5.25	5.30	July 12.....	4.80	
Oct. 25.....	5.99		27.....	4.80	
Nov. 17.....	6.53	5.99	Aug. 1.....	4.53	4.80
28.....	6.24		15.....	4.47	
Dec. 13.....	6.24		31.....	4.88	4.63
21.....	6.24	6.26	Sept. 8.....	4.49	
26.....	6.30		11.....	4.65	
			27.....	4.30	4.48
			Nov. 10.....	4.67	
Mean.....		5.89	Mean.....		4.84

*Discharge measurements of Los Angeles River—Continued.***Weir G.**

Date.	Dis-charge.	Average for month.	Date.	Dis-charge.	Average for month.
1899.			1900.		
Aug. 14.....	Sec.-ft. 7.92	7.92	May 15.....	Sec.-ft. 7.94	7.94
28.....	7.92		June 12.....	7.63	
Sept. 20.....	7.60		29.....	7.00	
26.....	7.60	7.60	July 27.....	6.45	6.45
Oct. 9.....	7.66		Aug. 1.....	6.45	
25.....	8.60		15.....	6.80	6.70
Nov. 17.....	9.17	9.08	31.....	6.87	
28.....	8.99		Sept. 8.....	6.72	
Dec. 13.....	8.90	8.90	11.....	7.00	6.80
21.....	8.90		27.....	6.68	
26.....	8.92		Nov. 13.....	6.99	
Mean.....		8.33	Mean.....		7.03

Weir L.

1899.			1900.		
Aug. 14.....	9.08	9.00	May 15.....	8.85	8.79
28.....	8.93		23.....	8.73	
Sept. 20.....	8.59		June 12.....	8.62	8.46
26.....	8.89	8.74	29.....	8.30	
Oct. 9.....	8.59		July 27.....	7.53	
25.....	9.58	9.22	Aug. 1.....	7.53	7.71
27.....	9.48		8.....	7.59	
Nov. 17.....	10.15		15.....	7.69	7.71
28.....	9.93	10.04	31.....	8.02	
Dec. 13.....	10.02		Sept. 8.....	7.82	
21.....	10.02	10.11	11.....	8.20	7.92
26.....	10.30		27.....	7.76	
Mean.....		9.42	Nov. 10.....	8.34	
			Mean.....		8.12

Weir H.

1899.			1900.		
Aug. 14.....	11.88	12.04	May 15.....	11.42	11.31
28.....	12.19		23.....	11.21	
Sept. 20.....	11.60		June 12.....	11.01	10.84
26.....	12.03	11.82	29.....	10.68	
Oct. 9.....	11.60		July 27.....	9.96	
25.....	12.66	12.31	Aug. 1.....	9.96	9.96
27.....	12.66		8.....	10.16	
Nov. 17.....	13.73		15.....	10.13	10.20
28.....	13.47	13.60	31.....	10.57	
Dec. 13.....	13.42		Sept. 8.....	10.15	
21.....	13.64	13.62	11.....	10.39	10.19
26.....	13.80		27.....	10.03	
Mean.....		12.68	Nov. 10.....	10.54	
			Mean.....		10.51

Weir I.

1899.			1900.		
Aug. 14.....	17.18	17.04	May 15.....	16.25	16.15
28.....	16.91		23.....	16.05	
Sept. 20.....	17.15		June 12.....	15.66	15.57
26.....	17.32	17.23	29.....	15.49	
Oct. 9.....	17.19		July 12.....	15.58	
25.....	18.33	17.76	27.....	14.74	15.16
Nov. 17.....	19.04		Aug. 1.....	14.37	
28.....	18.72		8.....	14.94	14.70
Dec. 13.....	18.93	18.88	15.....	14.69	
26.....	18.99		31.....	14.80	
			Sept. 8.....	14.54	14.53
			11.....	14.74	
			27.....	14.31	
			Nov. 10.....	14.92	14.92
Mean.....		17.97	Mean.....		15.17

Discharge measurements of Los Angeles River—Continued.

Weir J.

[Total discharge of river at weir J equals discharge over weir + discharge at No. 7, or + No. 7B + 2.49.]

Date.	Discharge at No. 7, or No 7B+2.49	Discharge over weir.	Total dis- charge for weir.	Average for month.
1899.				
Aug. 14.....	<i>Second-feet.</i> 18.59	<i>Second-feet.</i> 0.55	<i>Second-feet.</i> 19.14	18.76
28.....	17.90	.49	18.39	
Sept. 20.....	17.90	.49	18.39	18.58
26.....	18.28	.49	18.77	
Oct. 9.....	18.08	.44	18.52	18.91
25.....	17.45	1.85	19.30	
Nov. 17.....	18.02	2.91	20.93	20.71
28.....	13.78	6.71	20.49	
Dec. 13.....	13.90	6.34	20.24	20.31
26.....	13.66	6.73	20.39	
Mean.....				19.45
1900.				
May 15.....	20.09	1.39	21.48	19.76
23.....	16.37	1.67	18.04	
June 12.....	19.81	.86	20.67	18.92
29.....	16.31	.86	17.17	
Aug. 15.....	18.49	.41	18.90	19.31
31.....	19.25	.46	19.71	
Sept. 8.....	.42			19.15
11.....	19.81	.52	20.33	
27.....	17.59	.39	17.98	
Nov. 10.....	14.84	1.49	16.33	
Mean.....				18.69

Weir K.

[Total discharge of river at weir K equals discharge over weir + discharge at No. 7, or + No. 7B + 2.49.]

1899.				
Aug. 14.....	18.59	4.13	22.72	22.27
28.....	17.90	3.92	21.82	
Sept. 20.....	17.90	3.91	21.81	22.03
26.....	18.28	3.98	22.26	
Oct. 9.....	18.08	4.13	22.21	22.68
25.....	17.45	5.70	23.15	
Nov. 17.....	18.02	6.97	24.99	24.73
28.....	13.78	10.69	24.47	
Dec. 13.....	13.90	10.69	24.59	24.58
26.....	13.66	10.92	24.58	
Mean.....				23.26
1900.				
May 15.....	20.09	4.94	25.03	23.17
23.....	16.37	4.94	21.31	
July 2.....	16.32	2.93	19.25	19.25
Aug. 1.....		2.55		
15.....	18.49	2.71	21.20	21.50
31.....	19.25	2.55	21.80	
Sept. 8.....		2.81		21.35
11.....	19.81	2.80	22.61	
27.....	17.59	2.50	20.09	
Nov. 10.....	14.84	4.12	18.96	
Mean.....				20.85

*Discharge measurements of Los Angeles River—Continued.***Bridge P.**

[Total discharge of river at bridge P equals discharge at bridge + discharge at No. 7, or + discharge at No. 7B.]

Date.	Discharge at No. 7, or No. 7B.	Discharge at bridge.	Total dis- charge at bridge.	Average for month.
1899.				
Aug. 25.....	<i>Second-feet.</i> 18.66	<i>Second-feet.</i> 20.22	<i>Second-feet.</i> 38.88	<i>Second-feet.</i> 38.88
Sept. 20.....	17.90	19.36	37.26	38.50
27.....	18.66	21.08	39.74	
Oct. 10.....	18.08	19.81	37.89	
25.....	17.45	17.62	35.07	37.16
28.....	17.45	21.06	38.51	
Nov. 17.....	18.02	25.73	43.75	
28.....	13.18	27.75	40.93	42.34
Dec. 13.....	13.90	31.94	45.84	
26.....	13.66	27.67	41.33	
Mean.....				40.09
1900.				
May 15.....	17.60	21.22	38.82	36.49
23.....	13.88	20.28	34.16	
June 12.....	17.32	18.59	35.91	
July 2.....	13.83	19.51	33.34	32.16
12.....	14.00	16.99	30.99	
Aug. 1.....	14.00	17.04	31.04	
8.....	14.00	18.71	32.71	33.23
15.....	16.00	19.94	35.94	
Sept. 8.....		19.26		
11.....	17.32	19.67	36.99	35.23
28.....	15.10	18.38	33.48	
Mean.....				34.60

Bridge Q.

[Total discharge of river at bridge Q equals discharge at Q + discharge at No. 7-2.49, or + No. 7B.]

Date.	Discharge at No. 7-2.49, or 7B.	Discharge at bridge.	Total dis- charge at bridge.	Average for month.
1899.				
Sept. 20.....	<i>Second-feet.</i> 15.41	<i>Second-feet.</i> 28.12	<i>Second-feet.</i> 43.53	<i>Second-feet.</i> 43.84
27.....	16.17	27.99	44.16	41.31
Oct. 10.....	15.59	27.77	43.36	
25.....	8.21	27.66	35.87	
28.....	8.23	36.48	44.71	47.58
Nov. 17.....	9.36	39.71	49.07	
29.....	12.20	33.89	46.09	
Dec. 13.....	11.41	35.99	47.40	45.21
26.....	11.17	31.86	43.03	
Mean.....				44.49
1900.				
May 15.....	17.60	28.42	46.02	43.93
23.....	13.88	27.97	41.85	
June 12.....	17.32	27.64	44.96	
July 2.....	13.83	26.20	40.03	39.41
12.....	14.00	24.79	38.79	
Aug. 1.....	14.00	24.48	38.48	
Sept. 8.....		27.09		43.98
11.....	17.32	26.22	43.54	
28.....	15.10	29.33	44.43	
Mean.....				42.15

Discharge measurements of Los Angeles River near bridge No. 2.

Date.	Hydrographer.	Locality.	Discharge.
1889.			<i>Sec.-feet.</i>
June 15	Wm. Mulholland	River	36.7
15	do	Power ditch	11.1
15	do	Main supply ditch	11.2
	Total at bridge No. 2		59.0
July 15	Wm. Mulholland	River	33.3
15	do	Power ditch	11.0
15	do	Main supply ditch	14.1
	Total at bridge No. 2		58.4
1891.			
Nov. 18	Wm. Mulholland	River	68.0
18	do	Power ditch	10.0
18	do	Main supply ditch	3.0
	Total at bridge No. 2		81.0
1893.			
Nov. —	Wm. Mulholland	River	58.8
—	do	Power ditch	15.0
—	do	Main supply ditch	(.)
1898.			
Feb. 28	do	River	51.8
28	do	Glassell tributary	.7
28	do	Main supply ditch	15.0
28	do	Power ditch, measurement above	
	Total at bridge No. 2		67.5

Discharge measurements of Los Angeles River at bridge No. 2.

[Total discharge of river at bridge No. 2 equals discharge at No. 2+discharge at No. 7B, or No. 2+No.7—2.49.]

Date.	Discharge at No. 7—2.49, or No. 7B.	Discharge at No. 17.	Discharge at bridge.	Total discharge at bridge.	Average for month.
1899.	<i>Sec.-feet.</i>	<i>Sec.-feet.</i>	<i>Sec.-feet.</i>	<i>Sec.-feet.</i>	<i>Sec.-feet.</i>
Aug. 19	15.59	0.06	41.29	56.94	57.79
25	16.17	.06	42.41	58.64	
Sept. 20	15.41	.06	40.23	55.70	56.00
27	16.17	.06	40.07	56.30	
Oct. 10	15.59	.05	39.35	54.99	55.61
25	8.21	.05	48.88	57.14	
28	8.23	.05	44.45	52.73	
31	8.78	.05	48.73	57.56	
Nov. 17	9.36	.06	49.71	59.13	57.39
29	12.20	.06	43.40	55.66	
Dec. 13	11.41	.07	46.69	58.17	58.15
26	11.17	.07	46.89	58.13	
Mean					56.99
1900.					
May 16	17.60	.14	39.61	57.35	54.91
23	13.88	.14	38.46	52.48	
June 12	17.32	.14	39.23	56.69	56.69
July 2	13.83	.10	35.38	49.31	
13	15.32	.14	40.10	55.56	52.43
Aug. 1	14.00	.10	34.62	48.72	
8	14.00	.10	34.77	48.87	
15	16.00	.10	38.58	54.68	
31	16.76	.10	35.36	52.22	51.12
Sept. 8			34.27		
11	17.32	.20	35.56	53.08	
28	15.10	.08	34.28	49.46	
Nov. 10	14.84	.10	39.45	54.39	54.39
Mean					53.46

Average discharge of Los Angeles River at weir 9.

Month.	1899	1900	Month.	1899	1900
	<i>Sec.-feet.</i>	<i>Sec.-feet.</i>		<i>Sec.-feet.</i>	<i>Sec.-feet.</i>
January.....	1.17	0.52	July.....	0.55	0.15
February.....	1.00	.49	August.....	.48	.18
March.....	1.16	.39	September.....	.44	.20
April.....	1.10	.38	October.....	.64	.....
May.....	.71	.30	November.....	.56	.....
June.....	.69	.24	December.....	.52	.....

Average discharge of developed water at weir 10.

Month.	1899	1900	Month.	1899	1900
	<i>Sec.-feet.</i>	<i>Sec.-feet.</i>		<i>Sec.-feet.</i>	<i>Sec.-feet.</i>
January.....		0.89	July.....	0.79	0.74
February.....		.81	August.....	.79	.73
March.....	0.96	.86	September.....	.83	.70
April.....	.93	.79	October.....	.86	.....
May.....	.90	.82	November.....	.94	.....
June.....	.86	.79	December.....	.91	.....

Average discharge of small tributary of Los Angeles River at weir M.

Month.	Discharge.	Month.	Discharge.
1899.	<i>Sec.-feet.</i>	1899.	<i>Sec.-feet.</i>
January.....	0.29	July.....	Dry.
February.....	.20	August.....	Do.
March.....	.20	September.....	Do.
April.....	.14	October.....	Do.
May.....	.07	November.....	Do.
June.....	.06	December.....	Do.

Average discharge of cut of West Los Angeles Water Co. in San Fernando Valley, from gravel beds of Los Angeles River.

Month.	1899	1900	Month.	1899	1900
	<i>Sec.-feet.</i>	<i>Sec.-feet.</i>		<i>Sec.-feet.</i>	<i>Sec.-feet.</i>
May.....		5.79	September.....	6.02	.....
June.....		5.85	October.....	5.94	.....
July.....		5.75	November.....	6.07	.....
August.....	6.01	5.87	December.....	6.08	.....

Average discharge of Los Angeles River.

Measuring point.	Interv- ing distance along river.	Average discharge, August to December, inclusive, 1899.	Rate of growth per 100 feet, 1899.	Average discharge May to No- vember, inclusive, 1900.	Rate of growth per 100 feet, 1900.
	<i>Feet.</i>	<i>Sec.-ft.</i>		<i>Sec.-ft.</i>	
Weir A.....	10,280	0.649	0.001	0.402	0.001
Weir B.....	3,486	.723	.066	.276	.064
Weir C.....	7,069	3.03	.039	2.52	.033
Weir E.....	4,585	5.89	.053	4.84	.048
Weir G.....	1,041	8.33	.105	7.03	.105
Weir L.....	770	9.42	.424	8.12	.310
Weir H.....	2,543	12.68	.210	10.51	.183
Weir I.....	3,926	17.97	.038	15.17	.089
Weir J.....	3,600	19.45	.100	18.69	.060
Weir K.....	6,345	23.06	.268	20.85	.217
Bridge P.....	4,629	40.09	.095	34.60	.163
Bridge Q.....	6,756	44.49	.185	42.15	.167
Bridge No. 2.....		56.99		53.46	

ARROYO SECO NEAR PASADENA, CAL.

This station, which is located in the SE. $\frac{1}{4}$ sec. 30, T. 2 N., R. 12 W., at the forest ranger's station in the Angeles National Forest, $5\frac{1}{2}$ miles northwest of Pasadena, was established December 1, 1910.

The staff gage is in two sections, fastened to an alder tree on the right bank, 300 feet southeast of the ranger's cabin. Discharge measurements are made by wading below the gage.

This station is maintained in cooperation with the United States Forest Service.

Discharge measurements of Arroyo Seco near Pasadena, Cal., in 1910-1912.

Date.	Hydrographer.	Gage height.	Dis- charge.	Date.	Hydrographer.	Gage height.	Dis- charge.
1910. Dec. 1	W. V. Hardy.....	<i>Feet.</i> 3.44	<i>Sec.-ft.</i> 1.4	1911. Nov. 3 Nov. 3	F. C. Ebert..... Lasley Lee.....	<i>Feet.</i> 3.14 3.14	<i>Sec.-ft.</i> 1.6 1.6
1911. Feb. 21 Mar. 1 May 2 June 21	W. V. Hardy..... do..... do..... do..... do.....	3.78 3.85 3.47 3.30	18 22 13 4.8	1912. Jan. 31 Mar. 17	F. C. Ebert..... do.....	3.24 3.62	2.2 20

Daily gage height, in feet, of Arroyo Seco near Pasadena, Cal., for 1910-1912.

Day.	Dec.	Apr.	May.	June.	July.	Aug.	Sept.	Day.	Dec.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.								1910-11.							
1....	3.44	3.92	.....	3.36	3.25	3.13	3.01	16....	3.55	.....	3.39	3.27	3.15	3.11	3.02
2....	.....	3.91	.....	3.35	3.24	.....	3.01	17....	3.55	3.54	3.39	3.27	3.14	3.12	3.01
3....	.....	3.91	3.54	3.35	3.23	.....	3.01	18....	3.56	3.51	3.39	3.27	3.14	3.11	3.01
4....	.....	3.90	3.48	3.34	3.22	.....	3.00	19....	3.56	3.50	3.38	3.27	3.14	3.10	3.02
5....	3.47	3.86	3.46	3.33	3.22	.....	3.00	20....	3.57	3.49	.....	3.27	3.15	3.09	3.01
6....	3.48	3.79	3.44	3.32	3.22	.....	3.00	21....	3.57	.....	.....	3.27	3.14	3.07	3.01
7....	3.48	3.75	.....	3.32	3.21	.....	3.00	22....	3.59	3.49	.....	3.26	3.14	3.06	3.02
8....	3.47	3.71	3.40	3.31	3.20	.....	3.00	23....	3.59	.....	.....	3.26	3.14	3.06	3.02
9....	3.48	3.62	3.39	3.31	3.18	.....	3.01	24....	3.60	3.48	.....	3.26	3.15	3.05	3.03
10....	3.47	3.62	3.39	3.30	3.17	3.12	3.01	25....	3.62	3.47	.....	3.26	3.15	3.05	3.04
11....	3.48	3.61	3.38	3.29	3.16	3.12	3.01	26....	3.62	3.58	.....	3.25	3.15	3.05	3.04
12....	3.47	3.59	3.38	3.28	3.15	3.12	3.01	27....	3.63	3.58	.....	3.25	3.15	3.05	3.04
13....	3.49	3.59	3.37	3.28	3.15	.....	3.02	28....	3.63	3.57	.....	3.25	3.15	3.04	3.09
14....	3.51	3.57	3.39	3.28	3.15	3.13	3.02	29....	3.62	.....	.....	3.25	3.15	3.03	3.08
15....	3.54	3.56	3.39	3.28	3.15	3.12	3.02	30....	3.62	.....	3.36	3.25	3.15	3.02	3.08
								31....	3.63	.....	3.36	.....	3.14	3.01	.....

NOTE.—No record Jan. 1-Mar. 31, 1911.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	May.	June.
1911-12.								
1....	.....	3.21	3.16	.....	.....	3.94	.....	3.5
2....	3.25	3.22	3.16	3.17	.....	3.93	.....	.....
3....	3.24	3.20	.....	3.17	.....	.....	.....	3.5
4....	3.23	3.19	3.17	3.18	.....	5.15	.....	3.5
5....	3.20	.....	3.16	3.18	.....	5.3	.....	3.49
6....	3.19	3.19	3.21	3.18	.....	4.28	.....	3.48
7....	3.21	3.18	3.20	3.19	.....	4.0	.....	3.48
8....	.....	3.18	3.20	3.18	.....	3.5	.....	3.47
9....	3.19	3.17	3.20	3.18	.....	5.3	.....	.....
10....	3.18	3.24	.....	3.18	.....	7.2	.....	3.47
11....	3.17	3.22	3.19	3.18	.....	5.15	.....	3.46
12....	3.15	.....	3.18	3.19	.....	3.05	.....	3.46
13....	3.15	3.21	3.18	.....	.....	5.1	.....	3.45
14....	3.19	3.20	3.18	.....	.....	5.05	.....	3.44
15....	.....	3.19	3.17	.....	.....	.....	.....	3.43
16....	3.14	3.19	3.16	.....	.....	.....	.....	3.42
17....	3.14	3.18	.....	.....	.....	3.62	.....	3.41
18....	3.14	3.18	3.17	.....	.....	5.0	.....	3.40
19....	3.14	3.18	3.17	.....	.....	4.09	.....	.....
20....	3.14	3.17	3.17	.....	3.15	5.0	.....	.....
21....	3.15	3.16	3.17	.....	3.15	5.0	.....	3.38
22....	3.15	3.15	3.16	.....	.....	4.09	.....	3.36
23....	3.16	3.15	.....	.....	3.15	4.07	.....	3.35
24....	3.17	3.15	.....	.....	3.15	.....	.....	3.35
25....	3.17	3.14	.....	.....	.....	5.05	3.52	3.34
26....	3.18	3.14	.....	.....	3.15	4.07	.....	.....
27....	3.20	3.15	.....	.....	3.15	4.08	3.52	3.33
28....	3.22	3.15	.....	.....	3.15	.....	3.51	3.33
29....	3.21	3.16	.....	.....	3.15	.....	3.52	3.32
30....	3.20	3.15	.....	.....	.....	.....	3.52	3.32
31....	3.21	.....	.....	3.24	.....	.....	3.51	.....

Daily discharge, in second-feet, of Arroyo Seco near Pasadena, Cal., for 1910-11.

Day.	Dec.	Apr.	May.	June.	July.	Aug.	Sept.				
1910-11.											
1.....	1.4	63	19	7.2	3.2	1.3	0.6				
2.....	1.6	62	19	6.8	3.0	1.3	.6				
3.....	1.7	62	18	6.8	2.8	1.3	.6				
4.....	1.8	60	14	6.3	2.5	1.3	.5				
5.....	2.0	54	13	5.8	2.5	1.3	.5				
6.....	2.1	44	11	5.4	2.5	1.2	.5				
7.....	2.1	39	10	5.4	2.2	1.2	.5				
8.....	2.0	34	9.0	5.0	2.0	1.2	.5				
9.....	2.1	25	8.6	5.0	1.8	1.2	.6				
10.....	2.0	25	8.6	4.5	1.7	1.2	.6				
11.....	2.1	24	8.1	4.2	1.6	1.2	.6				
12.....	2.0	22	8.1	4.0	1.5	1.2	.6				
13.....	2.3	22	7.6	4.0	1.5	1.2	.6				
14.....	2.8	21	8.6	4.0	1.5	1.3	.6				
15.....	3.9	20	8.6	4.0	1.5	1.2	.6				
16.....	4.2	19	8.6	3.8	1.5	1.1	.6				
17.....	4.2	18	8.6	3.8	1.4	1.2	.6				
18.....	4.6	16	8.6	3.8	1.4	1.1	.6				
19.....	4.6	15	8.1	3.8	1.4	1.0	.6				
20.....	5.0	14	8.0	3.8	1.5	1.0	.6				
21.....	5.0	14	7.9	3.8	1.4	.8	.6				
22.....	5.6	14	7.9	3.5	1.4	.8	.6				
23.....	5.6	14	7.8	3.5	1.4	.8	.6				
24.....	6.0	14	7.7	3.5	1.5	.8	.6				
25.....	7.0	13	7.6	3.5	1.5	.8	.7				
26.....	7.0	21	7.5	3.2	1.5	.8	.7				
27.....	7.5	21	7.4	3.2	1.5	.8	.7				
28.....	7.5	21	7.4	3.2	1.5	.7	1.0				
29.....	7.0	20	7.3	3.2	1.5	.6	60				
30.....	7.0	20	7.2	3.2	1.5	.6	31				
31.....	7.5	.....	7.2	.....	1.4	.6	.....			
Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.
1911.				1911.				1911.			
1.....	17	2.2	1.6	11.....	1.7	2.5	1.9	21.....	1.5	1.6	1.7
2.....	3.2	2.5	1.6	12.....	1.5	2.4	1.8	22.....	1.5	1.5	1.6
3.....	3.0	2.0	1.6	13.....	1.5	2.2	1.8	23.....	1.6	1.5	1.6
4.....	2.8	1.9	1.7	14.....	1.9	2.0	1.8	24.....	1.7	1.5	1.6
5.....	2.0	1.9	1.6	15.....	1.6	1.9	1.7	25.....	1.7	1.4	1.6
6.....	1.9	1.9	2.2	16.....	1.4	1.9	1.6	26.....	1.8	1.4	1.5
7.....	2.2	1.8	2.0	17.....	1.4	1.8	1.6	27.....	2.0	1.5	1.5
8.....	2.0	1.8	2.0	18.....	1.1	1.8	1.7	28.....	2.5	1.5	1.5
9.....	1.9	1.7	2.0	19.....	1.4	1.8	1.7	29.....	2.2	1.6	1.5
10.....	1.8	3.0	2.0	20.....	1.4	1.7	1.7	30.....	2.0	1.5	1.5
								31.....	2.2	1.5

NOTE.—Daily discharge determined from two fairly well defined rating curves applicable as follows: Dec. 1, 1910, to Mar. 10, 1911, and Mar. 11 to Sept. 30, 1911. No record during Jan. 1 to Mar. 31, 1911. Discharge interpolated on days for which no gage height is given during December, 1910, and Apr. 1 to Dec. 31, 1911. Daily discharge for 1912 withheld until additional data has been secured.

Monthly discharge of Arroyo Seco near Pasadena, Cal., for 1910-11.

[Drainage area, 16.4 square miles.]

Month.	Discharge in second-feet.				Run-off.		Accuracy.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.	Total in acre-feet.	
1910-11.							
December.....	7.5	1.4	4.10	0.250	0.29	252	C.
April.....	63	13	27.7	1.69	1.89	1,650	B.
May.....	19	7.2	9.55	.582	.67	587	B.
June.....	7.2	3.2	4.37	.266	.30	260	C.
July.....	3.2	1.4	1.78	.109	.13	109	D.
August.....	1.3	.6	1.04	.063	.07	64	D.
September.....	60	.5	3.60	.220	.25	214	D.
The period.....						2,880	
1911.							
October.....	17	1.4	2.38	.145	.17	146	D.
November.....	3	1.4	1.86	.113	.13	111	D.
December.....	2.2	1.5	1.70	.104	.12	105	D.

MISCELLANEOUS MEASUREMENTS.

The following miscellaneous discharge measurements have been made in the drainage basin of Los Angeles River:

Miscellaneous measurements in Los Angeles River drainage basin.

Date.	Stream.	Hydrographer.	Locality.	Dis-charge.
				<i>Sec.-ft.</i>
June 24, 1898	Los Angeles River		Creek below Macy Street	a 0.50
Do.	do.		Zanja No. 7	5.59
Do.	do.		Diversion below Zanja No. 7	.64
Aug. 10, 1898	do.		New bridge, Weir B.	1.32
Do.	do.		San Fernando road crossing	4.84
Do.	do.		North Cahuenga road	9.74
Do.	do.		Old bridge, No. 4	14.4
Do.	do.		Tujunga Creek junction	.87
Aug. 15, 1898	do.		Bridge No. 2, at Narrows	38.7
Do.	do.		Main supply ditch	16.4
Do.	do.		Total river at Crystal Springs	55.1
Jan. 5, 1899	do.		The Narrows	67
Feb. 14, 1899	do.		do.	61
Feb. 25, 1899	do.		do.	67
Mar. 11, 1899	do.		do.	63
Mar. 25, 1899	do.		do.	61
Apr. 29, 1899	do.		do.	52
May 18, 1899	do.		do.	58
June 7, 1899	do.		do.	56
July 18, 1899	do.		do.	55
Aug. 19, 1899	do.		do.	57
Aug. 25, 1899	do.		do.	59
Sept. 20, 1899	do.		do.	53
Sept. 27, 1899	do.		do.	54
Oct. 25, 1899	do.		do.	57
Oct. 31, 1899	do.		do.	58
Nov. 17, 1899	do.		do.	59
Nov. 28, 1899	do.		do.	56
Dec. 13, 1899	do.		do.	58
Dec. 26, 1899	do.		do.	58
Sept. 20, 1901	do.		Bridge No. 2	45.9
Mar. 25, 1903	do.	J. F. Danforth	Los Feliz Bridge	109
Apr. 8, 1903	do.	J. C. Clausen	do.	37
Apr. 13, 1903	do.	O. W. Peterson	do.	28
Apr. 17, 1903	do.	do.	do.	64
Jan. 28, 1903	do.	C. A. Miller	Aliso Street Bridge	66
Apr. 11, 1903	do.	J. C. Clausen	Ninth Street Bridge	20

a Approximate.

Miscellaneous measurements in Los Angeles River drainage basin—Continued.

Date.	Stream.	Hydrographer.	Locality.	Dis-charge.
Apr. 18, 1903	Los Angeles River	O. W. Peterson	Ninth Street Bridge	Sec.-ft. 106
Apr. 12, 1905	do.	W. B. Clapp	do.	12.7
Apr. 18, 1903	do.	O. W. Peterson	Boyle Avenue	75
Do.	do.	do.	Opposite Bell station	73
Apr. 20, 1903	do.	do.	Above junction of Rio Hondo	25
Do.	do.	do.	Below junction of Rio Hondo	54
Do.	do.	do.	½ mile above Compton and Clearwater road.	82
Do.	do.	do.	Opposite Clearwater	53
Apr. 21, 1903	do.	do.	½ mile above Cerritos road	39
Do.	do.	do.	1½ miles below Cerritos road	77
Do.	do.	do.	Opposite Seabright	78
Mar. 13, 1905	do.	do.	Fourth Street Bridge	4,520
Apr. 12, 1905	do.	do.	Huron Street	43
Mar. 13, 1906	do.	do.	Seventh Street Bridge, a. m.	850
Do.	do.	do.	Seventh Street Bridge, p. m.	555
Mar. 16, 1906	do.	do.	do.	75
Mar. 17, 1906	do.	do.	Seventh Street Bridge, a. m.	1,200
Do.	do.	do.	Seventh Street Bridge, p. m.	420
Mar. 5, 1907	do.	do.	do.	3,200
Oct. 9, 1900	Pacifica Creek	S. G. Bennett	Submerged dam	.09
Aug. 21, 1899	do.	do.	Mouth of canyon	.0
Jan. 9, 1901	do.	L. Messmer	do.	50
July 12, 1901	do.	S. G. Bennett	do.	.0
Sept. 20, 1901	do.	do.	do.	.0
Apr. 9, 1903	do.	J. C. Clausen	do.	47
Apr. 18, 1903	do.	do.	do.	98
May 5, 1903	do.	do.	do.	24
June 5, 1903	do.	do.	do.	8
Sept. 26, 1903	do.	W. B. Clapp	do.	.0
Apr. 12, 1905	do.	do.	do.	30
Apr. 9, 1903	do.	R. S. Hawley	do.	32
Apr. 19, 1903	do.	J. C. Clausen	Southern Pacific R. R.	57
May 5, 1903	do.	do.	do.	16
June 5, 1903	do.	do.	do.	.0
Apr. 12, 1905	do.	W. B. Clapp	do.	17.6
May 5, 1903	do.	R. S. Hawley	do.	.0
Apr. 12, 1905	do.	J. C. Clausen	1½ miles below Southern Pacific R. R.	.0
Apr. 18, 1903	do.	do.	3 miles below Southern Pacific R. R.	.0
Apr. 12, 1905	do.	do.	do.	.0
Aug. 21, 1899	Tujunga Creek	R. S. Hawley	do.	.44
Oct. 9, 1900	do.	S. G. Bennett	Head works Monte Vista canal	.19
Sept. 21, 1901	do.	W. W. Cockins	do.	.22
Nov. 21, 1900	do.	S. G. Bennett	do.	.0
Nov. 22, 1900	do.	do.	Southern Pacific R. R.	a 1,060
Apr. 9, 1903	do.	do.	do.	19.2
Apr. 17, 1903	do.	J. C. Clausen	do.	2.0
May 5, 1903	do.	do.	do.	124
June 4, 1903	do.	do.	do.	0
Apr. 12, 1905	do.	W. B. Clapp	do.	0
Nov. 22, 1900	do.	R. S. Hawley	do.	29
Apr. 17, 1903	do.	S. G. Bennett	3 miles below Southern Pacific R. R.	.05
Apr. 12, 1905	do.	J. C. Clausen	1½ miles below Southern Pacific R. R.	.0
Apr. 10, 1903	do.	R. S. Hawley	2 miles below Southern Pacific R. R.	.0
Apr. 17, 1903	do.	J. C. Clausen	Mouth of canyon	59
May 5, 1903	do.	do.	do.	157
June 4, 1903	do.	do.	do.	37
Sept. 26, 1903	do.	W. B. Clapp	do.	12
Apr. 12, 1905	do.	do.	do.	1
Aug. 11, 1898	Tujunga Creek, Little	R. S. Hawley	do.	61.0
Aug. 21, 1899	do.	do.	do.	.05
July 12, 1901	do.	S. G. Bennett	do.	.0
Apr. 10, 1903	do.	do.	do.	.0
Apr. 17, 1903	do.	J. C. Clausen	do.	10.0
May 5, 1903	do.	do.	do.	27.0
June 4, 1903	do.	do.	do.	4.0
Sept. 26, 1903	do.	W. B. Clapp	do.	1.0
Apr. 11, 1905	do.	do.	do.	.0
Jan. 15, 1901	Main supply ditch plus Crystal Springs.	R. S. Hawley	do.	3.3
Apr. 24, 1901	do.	W. Mulholland	Above Bellevue reservoir di- version.	53.9
June 4, 1901	do.	do.	do.	51.4
	do.	do.	do.	46.4

a Calculated from flood marks.

Miscellaneous measurements in Los Angeles River drainage basin—Continued.

Date.	Stream.	Hydrographer.	Locality.	Dis-charge.
				<i>Sec.-ft.</i>
Jan. 10, 1899.....	Arroyo Seco.....	E. P. Dewey.....	Cable station, Terminal quarries.	3.02
Jan. 11, 1899.....	do.....	do.....	do.....	1.90
Jan. 12, 1899.....	do.....	do.....	do.....	2.00
Do.....	do.....	do.....	do.....	2.06
Feb. 1, 1899.....	do.....	W. B. Clapp.....	do.....	.24
Mar. 17, 1899.....	do.....	do.....	do.....	3.24
Mar. 18, 1899.....	do.....	do.....	do.....	1.77
Mar. 19, 1899.....	do.....	do.....	do.....	.93
Mar. 20, 1899.....	do.....	do.....	do.....	2.52
Mar. 21, 1899.....	do.....	do.....	do.....	1.90
Mar. 22, 1899.....	do.....	do.....	do.....	1.64
Mar. 23, 1899.....	do.....	do.....	do.....	1.56
Mar. 26, 1899.....	do.....	do.....	do.....	2.20
Mar. 28, 1899.....	do.....	do.....	do.....	1.22
Apr. 2, 1899.....	do.....	do.....	do.....	.28
Apr. 12, 1899.....	do.....	do.....	do.....	.08
Jan. 3, 1900.....	do.....	do.....	do.....	20.3
Jan. 4, 1900.....	do.....	do.....	do.....	4.3
Mar. 5, 1900.....	do.....	do.....	do.....	7.2
Mar. 6, 1900.....	do.....	do.....	do.....	1.2
May 5, 1900.....	do.....	do.....	do.....	42.4
May 6, 1900.....	do.....	do.....	do.....	10.5
May 7, 1900.....	do.....	do.....	do.....	5.4
May 14, 1900.....	do.....	do.....	do.....	2.2
Nov. 20, 1900.....	do.....	E. P. Dewey.....	do.....	.23
Nov. 21, 1900, 11 a. m.....	do.....	do.....	do.....	32
Nov. 21, 1900, 12 m.....	do.....	do.....	do.....	35
Nov. 21, 1900, 1 p. m.....	do.....	do.....	do.....	75.0
Nov. 21, 1900, 1.30 p. m.....	do.....	do.....	do.....	81
Nov. 21, 1900, 2 p. m.....	do.....	do.....	do.....	100
Nov. 21, 1900, 3 p. m.....	do.....	do.....	do.....	144
Nov. 22, 1900, 11 a. m.....	do.....	do.....	do.....	85
Nov. 22, 1900, 2 p. m.....	do.....	do.....	do.....	99
Nov. 23, 1900.....	do.....	do.....	do.....	31
Nov. 24, 1900.....	do.....	do.....	do.....	11.5
Nov. 26, 1900.....	do.....	do.....	do.....	8.7
Dec. 1, 1900.....	do.....	W. B. Clapp.....	do.....	4.3
Dec. 6, 1900.....	do.....	do.....	do.....	1.4
Jan. 6, 1901.....	do.....	do.....	do.....	7
Jan. 7, 1901, 9.30 a. m.....	do.....	do.....	do.....	172
Jan. 7, 1901, 3.45 p. m.....	do.....	do.....	do.....	103
Jan. 8, 1901.....	do.....	do.....	do.....	28
Jan. 11, 1901.....	do.....	do.....	do.....	14
Jan. 14, 1901.....	do.....	do.....	do.....	7
Jan. 20, 1901.....	do.....	do.....	do.....	5
Jan. 21, 1901.....	do.....	do.....	do.....	11
Jan. 23, 1901.....	do.....	do.....	do.....	7
Jan. 28, 1901.....	do.....	do.....	do.....	32
Jan. 29, 1901.....	do.....	do.....	do.....	11
Feb. 4, 1901.....	do.....	do.....	do.....	29
Feb. 5, 1901, 11 a. m.....	do.....	do.....	do.....	869
Feb. 5, 1901, 3 p. m.....	do.....	do.....	do.....	410
Feb. 6, 1901.....	do.....	do.....	do.....	200
Feb. 9, 1901.....	do.....	do.....	do.....	102
Feb. 11, 1901.....	do.....	do.....	do.....	102
Mar. 16, 1901.....	do.....	do.....	do.....	17
Apr. 29, 1901.....	do.....	do.....	do.....	1.6
May 10, 1901.....	do.....	do.....	do.....	5.3
July 12, 1897.....	do.....	T. D. Allen.....	Near Devils Gate.....	5.12
Aug. 9, 1897.....	do.....	do.....	do.....	4.63
Oct. 11, 1897.....	do.....	do.....	do.....	4.13
Nov. 8, 1897.....	do.....	do.....	do.....	4.16
Sept. 16, 1898.....	do.....	F. H. Olmsted.....	do.....	3.60
Oct. 12, 1898.....	do.....	J. B. Lippincott.....	do.....	3.44
June 14, 1899.....	do.....	T. D. Allen.....	do.....	5.17
May 31, 1899.....	do.....	do.....	do.....	3.17
July 10, 1899.....	do.....	W. B. Clapp.....	do.....	2.87
Sept. 17, 1899.....	do.....	do.....	do.....	3.55
Apr. 13, 1903.....	do.....	do.....	Devils Gate.....	17.0
May 21, 1903.....	do.....	do.....	do.....	2.0
Do.....	do.....	do.....	1 mile below Devils Gate.....	.0
Apr. 11, 1905.....	do.....	do.....	Devils Gate.....	12.5
Apr. 18, 1906.....	do.....	do.....	do.....	9.2
Sept. 16, 1898.....	do.....	F. H. Olmsted.....	Sheep corral, total.....	1.69
Oct. 24, 1898.....	do.....	J. B. Lippincott.....	do.....	1.48
May 29, 1899.....	do.....	W. B. Clapp.....	Sheep coral, total.....	1.43
June 3, 1899.....	do.....	do.....	do.....	1.36
June 21, 1899.....	do.....	do.....	do.....	1.62
July 1, 1899.....	do.....	do.....	do.....	1.33

Miscellaneous measurements in Los Angeles River drainage basin—Continued.

Date.	Stream.	Hydrographer.	Locality.	Dis-charge.
				<i>Sec.-ft.</i>
July 13, 1899.....	Arroyo Seco	W. B. Clapp	Sheep coral, total	1.30
Sept. 19, 1899.....	do.....	W. W. Cockins, jr.	do.....	1.94
Sept. 21, 1899.....	do.....	J. B. Lippincott.....	do.....	1.37
Apr. 13, 1903.....	do.....	W. B. Clapp	do.....	4.0
Apr. 17, 1903.....	do.....	do.....	do.....	80
Feb. 6, 1901.....	do.....	S. G. Bennett.....	Avenue 26 bridge.....	270
Jan. 28, 1903.....	do.....	C. A. Miller.....	do.....	274
Mar. 25, 1903.....	do.....	J. F. Danforth.....	do.....	128
Apr. 17, 1903.....	do.....	O. W. Peterson.....	do.....	77
Apr. 13, 1903.....	do.....	W. B. Clapp.....	Mouth of canyon.....	24
Apr. 17, 1903.....	do.....	do.....	do.....	100
May 21, 1903.....	do.....	do.....	do.....	10
Apr. 11, 1905.....	do.....	do.....	do.....	17.1
Apr. 18, 1906.....	do.....	do.....	do.....	20
Apr. 17, 1907.....	do.....	do.....	do.....	40
May 14, 1907.....	do.....	do.....	do.....	18
Apr. 17, 1908.....	do.....	do.....	do.....	5
Sept. 16, 1898.....	do.....	do.....	Total flow into Osage Grove Avenue reservoir.....	.60
Do.....	do.....	do.....	Marengo Improvement Co. reservoir.....	1.47
Jan. 11, 1899.....	do.....	W. B. Clapp.....	Loughery dam site.....	4.17
Apr. 13, 1903.....	do.....	do.....	Garvanza wagon bridge.....	.00
Oct. 27, 1905.....	do.....	J. B. Lippincott.....	Sycamore grove, near Morgan's south line.....	.10
Apr. 11, 1905.....	do.....	W. B. Clapp.....	1,000 feet above submerged dam of Pasadena Land & Water Co.....	2.60
Apr. 18, 1906.....	do.....	do.....	Submerged dam.....	.00
July 14, 1908.....	do.....	do.....	1 mile above junction with Millard Canyon.....	.30
Apr. 7, 1910.....	do.....	do.....	Mouth of Millard Canyon, 4 miles north of Pasadena.....	7.7
June 6, 1910.....	do.....	do.....	In flume at intake of North Pasadena Land & Water Co. Total flow of stream.....	2.0
June 28, 1910.....	do.....	do.....	do.....	1.2
Jan. 28, 1901.....	Aliso Creek.....	J. B. Lippincott.....	Chatsworth road crossing.....	.60
Do.....	do.....	do.....	2 miles below road crossing.....	.32

^a Devils Gate developments including Richardson and Wilson tunnels.

MALIBU CREEK BASIN.

MALIBU CREEK NEAR CALABASAS, CAL.

This station was established November 29, 1901, and discontinued December 31, 1906. It was located at Chapman's ranch, 40 miles from Los Angeles, by wagon road, and 8 miles southwest of Calabasas, about one-fourth mile below the mouth of Las Virgenes Creek.

The channel section was poor and subject to change during high water, but was at the only point where an observer could be employed. The excessive cost of visiting the station made it impossible to obtain as many meter measurements as were desired, but the observer was instructed to take float velocities at various gage heights, and these data, with cross sections and slope, were used in addition to meter measurements for computing discharges for use in constructing rating curves and tables. The estimated discharge is only roughly approximate.

The channel is straight for about 600 feet above the station and curved for about 300 feet below. The current is swift. Both banks

are high. The right bank is rocky, and the bed of the stream is composed of rock and gravel.

The gage was a vertical staff fastened to an alder tree on the right bank.

No data are available prior to January 1, 1903.

Discharge measurements of Malibu Creek near Calabasas, Cal., in 1903-1906.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1903.		<i>Feet.</i>	<i>Sec.-feet.</i>	1905.		<i>Feet.</i>	<i>Sec.-feet.</i>
Mar. 6	W. B. Clapp.....	1.30	23	May 12	R. S. Hawley.....	0.82	8.5
25	J. G. Chapman.....	2.45	^a 292	1906.			
26	.....do.....	2.00	^a 100	Mar. 11	C. H. Lee.....	.85	1.0
27	.....do.....	1.90	^a 72	12	.....do.....	2.30	122
31	.....do.....	3.40	^a 956	25	.....do.....	2.80	^a 406
Apr. 1	.....do.....	3.25	^a 826	Apr. 18	.....do.....	1.30	19
July 26	W. B. Clapp.....	1.12	2.1	May 24	.....do.....	1.00	7.1
1905.							
Apr. 20	R. S. Hawley.....	.9	9.3				

^a Measured by floats.

Daily gage height, in feet, of Malibu Creek near Calabasas, Cal., for 1903-1906.

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.
1903.								1903.							
1....	0.7	1.2	1.0	3.25	1.3	1.25	1.15	16....	.75	1.15	1.1	3.2	1.3	1.2	1.1
2....	.7	1.2	1.0	2.55	1.3	1.25	1.15	17....	.8	1.15	1.1	2.63	1.3	1.2	1.1
3....	.7	1.15	1.0	2.23	1.3	1.25	1.15	18....	.8	1.15	1.1	2.15	1.3	1.2	1.1
4....	.7	1.15	1.4	2.1	1.3	1.25	1.15	19....	.8	1.15	1.05	2.0	1.3	1.2	1.1
5....	.7	1.15	1.43	1.9	1.3	1.25	1.15	20....	.8	1.15	1.05	1.8	1.3	1.2	1.1
6....	.7	1.15	1.4	1.9	1.3	1.25	1.15	21....	.75	1.15	1.0	1.75	1.3	1.2	1.1
7....	.7	1.15	1.25	1.9	1.3	1.2	1.15	22....	.75	1.15	1.0	1.7	1.3	1.2	1.1
8....	.7	1.15	1.2	1.6	1.3	1.2	1.15	23....	.75	1.15	1.0	1.6	1.25	1.2	1.1
9....	.7	1.15	1.15	1.6	1.3	1.2	1.15	24....	.75	1.15	1.18	1.5	1.25	1.2	1.1
10....	.7	1.15	1.15	1.5	1.3	1.2	1.15	25....	.8	1.15	2.4	1.4	1.25	1.2	1.1
11....	.7	1.15	1.15	1.5	1.2	1.2	1.1	26....	.8	1.15	1.95	1.4	1.25	1.2	1.1
12....	.75	1.15	1.1	1.5	1.3	1.2	1.1	27....	.9	1.0	1.9	1.35	1.25	1.15	1.1
13....	.75	1.15	1.1	1.5	1.3	1.2	1.1	28....	2.05	1.0	1.5	1.3	1.25	1.15	1.1
14....	.75	1.15	1.1	1.45	1.3	1.2	1.1	29....	1.38	.....	1.5	1.3	1.25	1.15	1.1
15....	.75	1.15	1.1	1.4	1.3	1.2	1.1	30....	1.2	.....	1.5	1.3	1.25	1.15	1.1
								31....	1.05	.....	2.8	.....	1.25	.....	1.1

Daily gage height, in feet, of Malibu Creek near Calabasas, Cal., for 1903-1906—Contd.

Day.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.
1903-4.									
1.....	1.1	1.1	1.2	1.2	1.2	1.2	1.15	1.05	1.05
2.....	1.1	1.1	1.2	1.2	1.2	1.2	1.15	1.05	1.05
3.....	1.1	1.1	1.2	1.2	1.2	1.2	1.15	1.05	.....
4.....	1.1	1.1	1.2	1.2	1.2	1.2	1.15	1.05	.....
5.....	1.1	1.1	1.2	1.2	1.2	1.1	1.15	1.05	.....
6.....	1.1	1.1	1.2	1.2	1.2	1.1	1.15	1.05	.....
7.....	1.1	1.1	1.2	1.2	1.2	1.1	1.15	1.05	.....
8.....	1.1	1.1	1.2	1.2	1.2	1.05	1.15	1.05	.....
9.....	1.1	1.15	1.2	1.2	1.2	1.0	1.15	1.05	.....
10.....	1.1	1.15	1.2	1.2	1.6	1.0	1.15	1.05	.....
11.....	1.1	1.15	1.2	1.2	1.45	1.05	1.1	1.05	.....
12.....	1.1	1.2	1.2	1.2	1.25	1.05	1.1	1.05	.....
13.....	1.1	1.2	1.2	1.2	1.15	1.05	1.1	1.05	.....
14.....	1.1	1.2	1.2	1.2	1.15	1.05	1.05	1.05	.....
15.....	1.1	1.2	1.2	1.2	1.15	1.05	1.05	1.05	.....
16.....	1.1	1.2	1.2	1.3	1.15	1.05	1.05	1.05	.....
17.....	1.1	1.2	1.2	1.25	1.15	1.05	1.05	1.05	.....
18.....	1.1	1.2	1.2	1.25	1.15	1.05	1.05	1.05	.....
19.....	1.1	1.2	1.2	1.2	1.15	1.15	1.05	1.05	.....
20.....	1.1	1.2	1.2	1.2	1.15	1.15	1.05	1.05	.....
21.....	1.1	1.2	1.2	1.2	1.15	1.15	1.0	1.05	.....
22.....	1.1	1.2	1.2	1.2	1.15	1.15	1.0	1.05	.....
23.....	1.1	1.2	1.2	1.2	1.5	1.15	1.0	1.05	.....
24.....	1.1	1.2	1.2	1.2	1.25	1.15	1.0	1.05	.....
25.....	1.1	1.2	1.2	1.2	1.2	1.15	1.0	1.05	.....
26.....	1.1	1.2	1.2	1.2	1.2	1.15	1.0	1.05	.....
27.....	1.1	1.2	1.2	1.25	1.2	1.15	1.0	1.05	.....
28.....	1.1	1.2	1.2	1.2	1.2	1.15	1.05	1.05	.....
29.....	1.1	1.2	1.2	1.2	1.2	1.15	1.05	1.05	.....
30.....	1.1	1.2	1.2	.....	1.2	1.15	1.05	1.05	.....
31.....	.....	1.2	1.2	.....	1.2	.....	1.05	.....	.....

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1904-5.												
1.....	.....	1.0	1.15	1.2	1.2	1.1	1.5	0.8	0.6	0.5	0.5	0.5
2.....	.....	1.0	1.15	1.2	1.3	1.1	1.25	.8	.6	.5	.5	.5
3.....	.....	1.0	1.2	1.2	1.6	1.1	1.2	.8	.6	.5	.5	.5
4.....	.....	1.0	1.2	1.2	2.85	1.1	1.2	.8	.6	.5	.5	.5
5.....	.....	1.0	1.2	1.2	1.85	1.1	1.2	.8	.6	.5	.5	.5
6.....	.....	1.0	1.2	1.2	2.1	1.1	1.25	.8	.6	.5	.5	.5
7.....	.....	1.0	1.2	1.2	1.3	1.1	1.25	1.3	.6	.5	.5	.5
8.....	.....	1.0	1.2	1.2	1.2	1.1	1.25	.9	.6	.5	.5	.5
9.....	.....	1.0	1.2	1.2	1.15	1.1	1.2	.9	.6	.6	.5	.5
10.....	.....	1.0	1.2	1.2	1.15	1.1	1.2	.9	.6	.6	.5	.5
11.....	.....	1.0	1.2	1.2	1.15	1.0	1.2	.9	.6	.6	.5	.45
12.....	.....	1.0	1.2	1.2	1.15	7.6	1.1	.9	.6	.6	.5	.45
13.....	.....	1.0	1.2	1.2	1.15	4.2	1.25	.9	.6	.6	.5	.45
14.....	.....	1.0	1.2	1.2	1.1	3.25	1.0	.7	.6	.6	.5	.45
15.....	1.0	1.0	1.2	1.2	1.1	3.25	1.0	.7	.6	.6	.5	.45
16.....	1.0	1.0	1.2	1.2	1.8	4.75	1.0	.7	.6	.6	.5	.45
17.....	1.0	1.0	1.2	1.2	1.65	3.55	1.0	.7	.6	.6	.5	.45
18.....	1.0	1.0	1.2	1.2	1.55	2.8	.9	.7	.6	.6	.5	.4
19.....	1.0	1.0	1.2	1.22	1.4	2.5	.9	.7	.6	.6	.5	.4
20.....	1.0	1.0	1.2	1.25	1.3	2.4	.9	.7	.6	.6	.5	.4
21.....	1.0	1.0	1.2	1.3	1.2	2.4	.9	.7	.6	.6	.5	.4
22.....	1.0	1.0	1.2	1.24	1.2	2.3	.9	.7	.6	.6	.5	.4
23.....	1.0	1.0	1.2	1.2	1.15	2.2	.9	.7	.6	.5	.5	.45
24.....	1.0	1.0	1.2	1.2	1.1	2.2	.9	.7	.6	.5	.5	.45
25.....	1.0	1.0	1.2	1.2	1.1	1.0	.9	.7	.5	.5	.5	.45
26.....	1.0	1.0	1.2	1.2	1.1	1.6	.9	.7	.5	.5	.5	.45
27.....	1.0	1.1	1.2	1.2	1.1	1.45	.9	.7	.5	.5	.5	.45
28.....	1.0	1.1	1.2	1.2	1.1	1.55	.8	.6	.5	.5	.5	.45
29.....	1.0	1.1	1.2	1.2	.....	1.7	.8	.6	.5	.5	.5	.45
30.....	1.0	1.15	1.2	1.2	.....	1.7	.8	.6	.5	.5	.5	.45
31.....	1.0	.....	1.2	1.2	.....	1.55	.....	.6	.....	.5	.5	.....

Daily gage height, in feet, of Malibu Creek near Calabasas, Cal., for 1903-1906—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1905-6.												
1.....	.4	.45	.5	.6	.6	1.0	1.85	1.1	1.0	1.0	.9	.9
2.....	.4	.45	.5	.6	.6	1.0	1.8	1.1	1.0	1.0	.9	.9
3.....	.4	.45	.5	.6	.6	1.0	1.7	1.1	1.0	1.0	.9	.9
4.....	.4	.45	.5	.6	.7	.8	1.6	1.1	1.0	1.0	.9	.9
5.....	.4	.55	.5	.6	.7	.8	1.5	1.1	1.0	.95	.9	.9
6.....	.4	.55	.5	.6	.7	.8	1.4	1.1	1.0	.9	.9	.9
7.....	.4	.55	.5	.6	.7	.7	1.35	1.1	1.0	.9	.9	.9
8.....	.4	.55	.5	.6	.7	.7	1.4	1.1	1.0	.9	.9	.9
9.....	.4	.55	.5	.6	.7	.8	1.4	1.1	1.0	.9	.9	.9
10.....	.4	.55	.6	.6	.7	.8	1.4	1.05	1.0	.9	.9	.9
11.....	.4	.55	.6	.6	.6	.9	^a 1.4	1.05	1.0	.9	.9	.9
12.....	.4	.6	.6	.6	.6	2.55	1.4	1.05	1.0	.9	.9	.9
13.....	.4	.6	.6	.6	.6	2.2	1.25	1.05	1.0	.9	.9	.9
14.....	.4	.6	.6	.7	1.1	1.55	1.25	1.05	1.0	.9	.9	.9
15.....	.4	.6	.6	.7	1.25	1.2	1.2	1.05	1.0	.9	.9	.9
16.....	.4	.6	.6	.7	.7	2.6	1.2	1.05	1.0	.9	.9	.85
17.....	.4	.6	.6	.7	.7	2.1	1.2	1.0	1.0	.9	.9	.85
18.....	.4	.6	.6	.7	.7	^a 1.8	1.3	1.0	1.0	.9	.9	.85
19.....	.4	.6	.6	.7	.7	^a 1.6	1.3	1.0	1.0	.9	.9	.85
20.....	.4	.6	.6	.7	.7	1.45	1.3	1.0	1.0	.9	.9	.85
21.....	.4	.6	.6	1.0	.7	1.68	1.3	1.0	1.0	.9	.9	.85
22.....	.4	.6	.6	1.0	.7	1.55	1.05	1.0	1.0	.9	.9	.8
23.....	.4	.6	.6	1.0	.7	1.5	1.05	1.0	1.0	.9	.9	.8
24.....	.4	.6	.6	1.0	.7	3.4	1.05	^a 1.0	1.0	.9	.9	.8
25.....	.4	.6	.6	1.0	1.0	2.92	1.05	^a 1.1	1.0	.9	.9	.8
26.....	.4	.5	.6	1.0	1.0	5.55	1.05	1.1	1.0	.9	.9	.8
27.....	.4	.5	.6	1.0	1.0	3.35	1.1	1.2	1.0	.9	.9	.85
28.....	.4	.5	.6	.6	1.0	2.9	1.1	1.2	1.0	.9	.9	.85
29.....	.45	.5	.6	.6	-----	2.1	1.1	1.1	1.0	.9	.9	.85
30.....	.45	.5	.6	.6	-----	1.98	1.1	1.0	1.0	.9	.9	.85
31.....	.45	-----	.6	.6	-----	1.9	-----	1.0	-----	.9	-----	-----

Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.
1906.				1906.				1906.			
1.....	0.9	^a 0.9	0.9	11.....	0.9	0.9	1.05	21.....	0.9	0.9	0.8
2.....	.9	.9	.9	12.....	.9	.9	1.4	22.....	.9	.9	.8
3.....	.9	.9	.9	13.....	.9	.9	1.0	23.....	.9	.9	.8
4.....	.9	.9	.9	14.....	.9	.9	1.0	24.....	.9	.9	.8
5.....	.9	.9	.9	15.....	.9	.9	.9	25.....	.9	.9	.8
6.....	.9	.9	.9	16.....	.9	.9	.85	26.....	.9	.9	.85
7.....	.9	.9	.9	17.....	.9	.9	.85	27.....	.9	.9	1.85
8.....	.9	.9	.9	18.....	.9	.9	.8	28.....	.9	.9	2.6
9.....	.9	.9	.9	19.....	.9	.9	.8	29.....	.9	.9	1.45
10.....	.9	.9	1.0	20.....	.9	.9	.8	30.....	.9	.9	1.2
								31.....	.9	-----	2.2

^a Estimated.

NOTE.—No record July 3 to Oct. 14, 1904.

Rating tables for Malibu Creek near Calabasas, Cal.

January 1 to March 30, 1903.

Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.
<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>
0.50	1.0	1.10	14	1.70	50	2.30	210
.60	1.5	1.20	18	1.80	62	2.40	265
.70	2.5	1.30	23	1.90	75	2.50	330
.80	4.5	1.40	28	2.00	98		
.90	7.0	1.50	34	2.10	128		
1.00	10.0	1.60	41	2.20	165		

March 31, 1903, to December 31, 1904.

1.00	1	1.70	44	2.40	265	3.10	720
1.10	2	1.80	57	2.50	330	3.20	785
1.20	5	1.90	72	2.60	395	3.30	850
1.30	10	2.00	95	2.70	460	3.40	915
1.40	16	2.10	128	2.80	525	3.50	980
1.50	24	2.20	165	2.90	590		
1.60	33	2.30	210	3.00	655		

Monthly discharge of Malibu Creek near Calabasas, Cal., for 1903-1906.

[Drainage area, 97 square miles.]

Month.	Discharge in second-feet.				Run-off.	
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.	Total in acre-feet.
1903.						
January.....	113	2.5	8.5	0.09	0.10	523
February.....	18	10	15.7	.16	.17	872
March.....	525	10	46.0	.47	.54	2,828
April.....	817	10	120.8	1.25	1.39	7,188
May.....	10	8	9.4	.10	.12	578
June.....	8	4	5.5	.06	.07	327
July.....	4	2	2.6	.03	.03	160
The period.....						12,500
1903-4.						
November.....	2	2	2.0	.02	.02	119
December.....	5	2	4.1	.04	.05	252
January.....	5	5	5.0	.05	.06	307
February.....	10	5	5.5	.06	.06	316
March.....	33	4	6.9	.07	.08	424
April.....	5	1	3.0	.03	.03	179
May.....	4	1	2.2	.02	.02	135
June.....	1.5	1.5	1.5	.02	.02	89
The period.....						1,820
1904-5.						
October 15-31.....	1	1	1.0	.01	.01	61
November.....	4	1	1.2	.01	.01	71
December.....	5	4	4.9	.05	.06	301
January.....	10	5	5.4	.056	.06	332
February.....	560	2	36.1	.372	.39	2,005
March.....	6,800	1	484	4.99	5.75	29,760
April.....	41	8	14.4	.148	.16	857
May.....	24	4	7.3	.075	.09	449
June.....	4	3	3.8	.039	.04	226
July.....	3	3	3	.031	.04	184
August.....	3	3	3	.031	.04	184
September.....	3	1	2.1	.022	.02	125
The period.....						34,600

Monthly discharge of Malibu Creek near Calabasas, Cal., for 1903-1906—Continued.

Month.	Discharge in second-feet.				Run-off.	
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.	Total in acre-feet.
1905-6.						
October.....	2	1	1.1	.011	.01	68
November.....	4	2	3.6	.037	.04	214
December.....	4	3	3.7	.038	.04	228
January.....	3	.8	1.3	.013	.01	80
February.....	12	.8	1.8	.019	.02	100
March.....	2,600	.9	223	2.30	2.65	13,700
April.....	62	9	22.1	.228	.25	1,320
May.....	15	7	9.1	.094	.11	560
June.....	7	7	7.1	.073	.08	422
July.....	7	4	4.8	.049	.06	295
August.....	4.4	4.4	4.4	.045	.05	271
September.....	4.4	2	3.6	.037	.04	214
The year.....	2,600	.8	23.0	.247	3.36	17,500
1906.						
October.....	4.4	4.4	4.4	.045	.05	271
November.....	4.4	4.4	4.4	.045	.05	262
December.....	275	2	19.8	.204	.24	1,220

^a Taken as mean for month.

NOTE.—During 1905-6 discharge was determined by the indirect method of shifting channels. Values are only approximate.

TRIUNFO CREEK NEAR CALABASAS, CAL.

This station was located 8 miles southwest of Calabasas, Cal., about one-half mile above the mouth of Las Virgenes Creek.

The channel section was poor and subject to change during high water, but was at the only point where an observer could be secured. The excessive cost of visiting the station made it impossible to obtain as many meter measurements as desired, but the observer was instructed to take float velocities during floods at various gage heights, and these data, with cross sections and grade of stream, were used in addition to meter measurements for computing discharges for use in constructing rating curves and tables. The estimated discharge of this stream is a rough approximation only.

The channel is straight for about 400 feet above and 800 feet below the station, and the water is swift. Both banks are high and rocky. The bed of the stream is composed of gravel and sand and is shifting.

The gage was a vertical staff bolted to rock cliff on right bank.

The station was discontinued December 31, 1906.

Discharge measurements of Triunfo Creek near Calabasas, Cal., in 1903-1906.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1903.		<i>Feet.</i>	<i>Sec.-ft.</i>	1906.		<i>Feet.</i>	<i>Sec.-ft.</i>
Mar. 6	W. B. Clapp.....	1.15	23	Mar. 11	C. H. Lee.....	1.25	0.8
25	J. G. Chapman.....	1.75	155	11	do.....	1.38	1.8
26	do.....	1.15	a 40	12	do.....	2.25	98
27	do.....	1.05	a 13	25	do.....	2.95	459
31	do.....	2.75	a 1,075	25	do.....	2.79	313
Apr. 1	do.....	2.35	a 625	25	do.....	3.00	399
16	do.....	2.30	a 551	26	do.....	4.50	a2, 320
July 26	W. B. Clapp.....	.40	1.0	Apr. 18	do.....	2.00	19
1905.				May 24	do.....	2.05	6.1
Apr. 20	R. S. Hawley.....	1.60	8.0				
May 12	do.....	1.44	7.1				

a Measured by floats.

Daily gage height, in feet, of Triunfo Creek near Calabasas, Cal., for 1903-1905.

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Day.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.
1903.								1903-4.							
1....	0.75	1.0	1.0	2.26	0.7	0.5	0.4	1....		0.35	0.45	0.45	0.45	0.45	0.4
2....	.75	1.05	1.0	1.45	.7	.5	.4	2....		.35	.45	.45	.45	.4	.4
3....	.8	1.05	1.0	1.1	.7	.5	.4	3....		.35	.45	.45	.45	.4	.4
4....	.8	1.05	1.22	1.0	.7	.5	.4	4....		.35	.45	.45	.45	.4	.4
5....	.8	1.05	1.17	.9	.7	.5	.4	5....		.0	.45	.55	.45	.4	.4
6....	.8	1.05	1.1	.85	.7	.5	.4	6....		.35	.45	.50	.45	.4	.4
7....	.8	1.05	1.1	.8	.7	.5	.4	7....		.35	.45	.50	.45	.4	.4
8....	.8	1.05	1.1	.75	.7	.5	.4	8....		.35	.45	.45	.4	.35	.4
9....	.8	1.05	1.1	.75	.7	.5	.4	9....		.35	.45	.45	.4	.3	.35
10....	.8	1.05	1.05	.7	.7	.5	.4	10....		.35	.45	.45	1.0	.3	.35
11....	.8	1.05	1.05	.65	.7	.5	.4	11....		.35	.45	.45	.8	.3	.3
12....	.75	1.05	1.05	.65	.7	.5	.4	12....		.4	.45	.45	.5	.3	.25
13....	.75	1.05	1.05	.65	.65	.5	.4	13....		.4	.45	.45	.45	.3	.2
14....	.75	1.05	1.05	.65	.65	.5	.4	14....		.4	.45	.45	.45	.35	1.5
15....	.75	1.05	1.05	.65	.65	.5	.4	15....		.4	.45	.55	.45	.4	1.5
16....	.75	1.05	1.05	2.15	.65	.5	.4	16....		.4	.45	.65	.45	.4	.1
17....	.8	1.05	1.05	1.9	.65	.5	.4	17....		.4	.45	.6	.45	.45	.1
18....	.8	1.05	1.05	1.38	.65	.5	.4	18....		.4	.45	.6	.45	.45	.1
19....	.8	1.05	1.05	1.3	.65	.5	.4	19....		.45	.45	.55	.45	.5	.1
20....	.8	1.05	1.05	1.2	.6	.45	.4	20....		.45	.45	.5	.45	.4	.1
21....	.75	1.05	1.0	1.1	.6	.45	.4	21....	0.4	.45	.45	.5	.45	.4	.....
22....	.75	1.05	1.0	1.05	.6	.45	.4	22....	.4	.45	.45	.5	.45	.4	.....
23....	.75	1.05	1.0	1.0	.6	.45	.4	23....	.4	.45	.45	.5	.9	.4	.....
24....	.8	1.05	1.1	.9	.6	.45	.4	24....	.4	.45	.45	.5	.6	.4	.....
25....	.8	1.05	1.6	.8	.6	.45	.4	25....	.4	.45	.45	.5	.55	.4	.....
26....	.8	1.05	1.13	.8	.6	.45	.4	26....	.4	.45	.45	.5	.5	.4	.....
27....	.85	1.0	1.05	.75	.6	.4	.4	27....	.4	.45	.45	.6	.5	.4	.....
28....	1.18	1.0	1.05	.7	.6	.4	.4	28....	.35	.45	.45	.5	.5	.4	.....
29....	1.05	.....	1.05	.7	.6	.4	.4	29....	.35	.45	.45	.5	.45	.4	.....
30....	1.0	.....	1.05	.7	.5	.4	.4	30....	.35	.45	.45	.....	.45	.4	.....
31....	1.0	.....	2.13	.....	.5	.....	.4	31....	.....	.45	.45	.....	.45	.....	.....

Daily gage height, in feet, in Triunfo Creek, near Calabasas, Cal., for 1903-1905—Con.

Day.	Feb.	Mar.	Apr.	May.	June.	July.	Day.	Feb.	Mar.	Apr.	May.	June.	July.
1905.							1905.						
1.....	.....	0.5	1.3	.....	1.3	1.0	16.....	1.65	3.3	1.5	1.2	1.25	1.2
2.....	0.75	.5	1.5	.....	1.3	1.1	17.....	1.45	3.1	1.5	1.2	1.25	1.2
3.....	.9	.5	1.5	.....	1.3	1.1	18.....	1.3	2.6	1.5	1.2	1.2	1.2
4.....	2.15	.5	1.5	.....	1.3	1.1	19.....	1.2	2.25	1.4	1.2	1.2	1.2
5.....	1.65	.5	1.5	.....	1.3	1.1	20.....	1.1	1.2	1.4	1.2	1.2	1.2
6.....	2.2	.5	1.5	.....	1.3	1.1	21.....	.9	1.2	1.4	1.2	1.2	1.2
7.....	1.65	.5	1.6	1.4	1.3	1.1	22.....	.85	1.2	1.4	1.2	1.2	1.2
8.....	1.0	.5	1.6	.8	1.3	1.1	23.....	.8	1.1	.....	1.2	1.2	1.1
9.....	.9	.5	1.6	.4	1.3	1.2	24.....	.8	2.2	.....	1.2	1.2	1.1
10.....	.7	.45	1.5	.....	1.3	1.2	25.....	.7	1.6	.....	1.2	1.0	1.1
11.....	.55	.45	1.55	.....	1.25	1.2	26.....	.7	1.4	.....	1.3	1.0	1.1
12.....	.5	6.0	1.5	.....	1.25	1.2	27.....	.7	1.4	.....	1.3	1.0	1.1
13.....	.5	2.55	1.5	.....	1.25	1.2	28.....	.6	1.3	.....	1.3	1.0	1.1
14.....	.3	2.15	1.5	1.2	1.25	1.2	29.....	.....	1.4	.....	1.3	1.0	1.1
15.....	.3	2.05	1.5	1.2	1.25	1.2	30.....	.....	1.4	.....	1.3	1.0	1.0
							31.....	.....	1.4	.....	1.3	.....	.....

NOTE—No record Aug. 1 to Oct. 31, 1903; creek was dry Nov. 1-20, 1903, May 21, 1904, to Feb. 1, 1905, Apr. 23 to May 6, May 10-13, and Aug. 1 to Dec. 31, 1905.

Rating tables for Triunfo Creek near Calabasas, Cal.

January 1 to March 30, 1903.

Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.
Feet.	Sec.-feet.	Feet.	Sec.-feet.	Feet.	Sec.-feet.	Feet.	Sec.-feet.
0.70	1	1.30	38	1.90	225	2.50	775
.80	2	1.40	55	2.00	280	2.60	895
.90	4	1.50	76	2.10	347	2.70	1,015
1.00	8	1.60	102	2.20	435		
1.10	16	1.70	136	2.30	545		
1.20	25	1.80	177	2.40	660		

March 31, 1903, to December 31, 1904.

0.30	0.5	0.9	19	1.50	101	2.10	373
.40	2	1.00	26	1.60	129	2.20	450
.50	4	1.10	35	1.70	162	2.30	550
.60	6	1.20	46	1.80	200	2.40	670
.70	9	1.30	60	1.90	250		
.80	14	1.40	78	2.00	305		

Monthly discharge of Triunfo Creek near Calabasas, Cal., for 1903-1906.

[Drainage area, 72 square miles.]

Month.	Discharge in second-feet.				Run-off.	
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.	Total in acre-feet.
1903.						
January.....	23	1.5	3.3	0.05	0.06	203
February.....	12	8	11.6	.16	.17	644
March.....	373	8	27.5	.39	.45	1,691
April.....	510	8	60.0	.83	.93	3,570
May.....	9	4	7.5	.10	.12	461
June.....	4	2	3.5	.05	.06	208
July.....	2	2	2.0	.03	.03	123
The period.....						6,900
1903-4.						
November.....	2	0	.6	.01	.01	36
December.....	3	0	2.0	.03	.03	123
January.....	3	3	3	.04	.05	184
February.....	8	3	4.1	.06	.06	236
March.....	26	2	4.8	.07	.08	295
April.....	4	0.5	1.8	.02	.02	107
May.....	2	0	.6	.01	.01	37
The period.....						1,010
1905.						
January.....	0	0	0.0	0.0	0.0	0
February.....	410	0	26.2	.364	.38	1,455
March.....	5,000	1	353.0	4.90	5.65	21,700
April.....	40	0	11.2	.156	.17	666
May.....	6	0	1.0	.014	.02	61
June.....	2	1	1.3	.018	.02	77
July.....	1	0	.97	.013	.02	60
August.....	0	0	.0	.0	.0	0
September.....	0	0	.0	.0	.0	0
The period.....						24,000
1905-6.						
October.....	0	0	.0	.0	.0	0
November.....	0	0	.0	.0	.0	0
December.....	0	0	.0	.0	.0	0
January.....	0.7	0	0.2	.0028	.003	12
February.....	10	0	1.1	.015	.02	61
March.....	2,000	6	155	2.15	2.48	9,530
April.....	55	8	19.3	.268	.30	1,150
May.....	12	5	6.9	.096	.11	424
June.....	6	6	6.0	.083	.09	357
July.....	6	3	3.6	.050	.06	221
August.....	3	0	1.7	.024	.03	105
September.....	0	0	0.0	.00	.00	0
The year.....	2,000	0	16.2	.225	3.09	11,900
1906.						
October.....	0	0	0	0.0	0.0	0
November.....	4	0	1.5	.021	.02	89
December.....	100	2	10.8	.150	.17	664

NOTE.—Discharge for 1905-6 determined by the indirect method for shifting channels.

SANTA CLARA RIVER BASIN.

SANTA CLARA RIVER AT FILLMORE, CAL.

This station, which is located at the highway bridge at Fillmore, in the NW. $\frac{1}{4}$ sec. 31, T. 4 N., R. 19 W., about $1\frac{1}{2}$ miles above the mouth of Sespe Creek and half a mile southwest of Fillmore, was established August 31, 1911.

The gage is a vertical staff fastened to the piling at the right end of the bridge. The channel is composed of sand and shifts considerably. Discharge measurements are made from bridge or by wading.

Water is diverted above the station from the main river and tributaries for irrigation. The discharge was computed by the indirect method for shifting channels and the results are only approximate.

Discharge measurements of Santa Clara River at Fillmore, Cal., in 1911-12.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1911.		<i>Feet.</i>	<i>Sec.-feet.</i>	1912.		<i>Feet.</i>	<i>Sec.-feet.</i>
Aug. 31	F. C. Ebert	a 3.16	36	Feb. 29	F. C. Ebert	2.07	14
Oct. 25	do	2.40	23	Mar. 16	do	2.57	91
25	Lasley Lee	2.40	23	25	do	2.81	64
1912.				Apr. 25	do	3.32	40
Jan. 8	F. C. Ebert	2.23	27	May 13	do	3.24	34
26	do	2.22	26	June 26	do	2.96	18
Feb. 4	do	2.14	20				

a Point of zero flow was 1.2 feet.

Daily gage height, in feet, of Santa Clara River at Fillmore, Cal., for 1911-12.

Day.	Aug.	Sept.	Day.	Aug.	Sept.	Day.	Aug.	Sept.		
1911.			1911.			1911.				
1.....		3.15	11.....		3.15	21.....		3.15		
2.....		3.15	12.....		3.15	22.....		3.0		
3.....		3.25	13.....		3.15	23.....		3.15		
4.....		3.3	14.....		3.15	24.....				
5.....		3.15	15.....		3.15	25.....				
6.....		3.15	16.....		3.15	26.....				
7.....		3.15	17.....		3.0	27.....				
8.....		3.15	18.....		3.0	28.....				
9.....		3.0	19.....		3.15	29.....				
10.....		3.15	20.....		3.25	30.....				
						31.....	3.15			
Day.		Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.										
1.....		3.15	2.45	2.45	2.25	2.25	2.2	2.9	3.25	3.35
2.....		3.15	2.45	2.45	2.25	2.25	2.2	2.9	3.2	3.35
3.....		3.15	2.45	2.45	2.25	2.25	2.2	2.9	3.25	3.3
4.....		3.15	2.45	2.45	2.25	2.15	3.0	2.8	3.25	3.3
5.....		3.0	2.45	2.45	2.25	2.15	3.2	3.9	3.25	3.3
6.....		3.0	2.45	2.45	2.25	2.2	3.7	3.9	3.25	3.3
7.....		3.15	2.45	2.45	2.25	2.2	2.7	3.9	3.35	3.35
8.....		3.15	2.45	2.45	2.25	2.2	3.25	3.9	3.4	3.35
9.....		3.15	2.45	2.45	2.25	2.15	4.0	3.3	3.4	3.35
10.....		3.25	2.45	2.45	2.25	2.15	3.3	3.3	3.4	3.35
11.....		3.15	2.45	2.25	2.25	2.15	2.3	3.3	3.3	3.3
12.....		3.0	2.45	2.25	2.25	2.15	3.1	3.3	3.25	3.3
13.....		3.0	2.45	2.25	2.25	2.15	2.25	3.0	3.25	3.3
14.....		3.25	2.45	2.25	2.25	2.15	2.7	3.0	3.25	3.35
15.....		3.0	2.45	2.25	2.25	2.15	2.65	3.0	3.25	3.35
16.....		3.0	2.45	2.25	2.25	2.15	2.6	3.3	3.25	3.35
17.....		3.0	2.45	2.25	2.25	2.15	2.8	3.3	3.25	3.3
18.....		3.15	2.45	2.25	2.25	2.15	2.8	3.3	3.25	3.3
19.....		3.15	2.45	2.25	2.25	2.15	2.7	3.7	3.15	3.3
20.....		3.0	2.45	2.25	2.25	2.15	2.7	3.9	3.15	3.35
21.....		3.0	2.45	2.25	2.25	2.15	2.7	3.9	3.3	3.35
22.....		3.0	2.45	2.25	2.25	2.15	2.8	3.8	3.3	3.35
23.....		3.15	2.45	2.25	2.25	2.15	2.8	3.2	3.3	3.35
24.....		2.45	2.45	2.25	2.25	2.15	2.8	3.2	3.3	3.3
25.....		2.45	2.45	2.25	2.2	2.15	2.8	3.2	3.3	3.3
26.....		2.45	2.45	2.25	2.2	2.15	2.4	3.2	3.3	2.95
27.....		2.45	2.45	2.25	2.2	2.15	2.4	3.2	3.3	2.95
28.....		2.45	2.45	2.25	2.2	2.15	2.4	3.2	3.3	2.95
29.....		2.45	2.45	2.25	2.2	2.15	2.8	3.2	3.3	2.95
30.....		2.45	2.45	2.25	2.2	2.3	3.25	3.3	3.3	2.85
31.....		2.45		2.25	2.25	2.8			3.35	

Daily discharge, in second-feet, of Santa Clara River at Fillmore, Cal., for 1911-12.

Day.	Aug.	Sept.	Day.	Aug.	Sept.	Day.	Aug.	Sept.
1911.			1911.			1911.		
1.....		36	11.....		39	21.....		41
2.....		36	12.....		39	22.....		36
3.....		41	13.....		39	23.....		43
4.....		43	14.....		39	24.....		43
5.....		36	15.....		39	25.....		43
6.....		36	16.....		41	26.....		43
7.....		36	17.....		36	27.....		43
8.....		39	18.....		36	28.....		43
9.....		34	19.....		41	29.....		43
10.....		39	20.....		45	30.....		43
						31.....	36	.....

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.									
1.....	43	26	31	29	29	25	55	34	42
2.....	45	26	31	29	29	25	53	31	42
3.....	45	26	31	29	29	25	51	34	38
4.....	45	26	31	29	21	86	42	34	38
5.....	39	26	31	29	21	112	147	34	38
6.....	39	26	31	29	25	182	143	34	38
7.....	45	27	31	29	25	70	138	42	42
8.....	45	27	31	29	25	131	135	46	42
9.....	45	27	31	29	21	245	68	46	42
10.....	51	27	31	29	21	148	66	46	42
11.....	47	27	25	29	21	50	64	38	38
12.....	41	27	25	29	21	132	62	34	38
13.....	41	28	25	29	21	52	38	34	38
14.....	51	28	25	29	21	95	36	34	42
15.....	41	28	25	29	21	93	33	34	42
16.....	41	28	25	29	21	93	52	34	42
17.....	41	28	25	29	21	109	50	34	38
18.....	49	28	25	29	21	103	48	34	38
19.....	49	29	25	29	21	85	78	28	38
20.....	43	29	25	29	21	80	95	28	42
21.....	43	29	26	29	21	75	92	38	42
22.....	43	29	26	29	21	78	80	38	42
23.....	49	29	26	29	21	72	31	38	42
24.....	24	29	26	29	21	68	31	38	38
25.....	24	30	26	25	21	63	31	38	38
26.....	25	30	26	25	21	33	31	38	18
27.....	25	30	26	25	21	32	31	38	18
28.....	25	30	26	25	21	30	31	38	18
29.....	25	30	26	25	21	53	31	38	18
30.....	25	30	26	25	.....	22	34	38	13
31.....	25	.....	26	29	.....	50	.....	42	.....

NOTE.—Daily discharge determined from fairly well defined rating curves and by the indirect method of shifting channels.

Monthly discharge of Santa Clara River at Fillmore, Cal., for 1911-1912.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
September.....	45	34	39.7	2,360	D
October.....	51	24	39.3	2,420	D.
November.....	30	26	28.0	1,670	D.
December.....	31	25	27.3	1,680	D.
January.....	29	25	28.2	1,730	B.
February.....	29	21	22.2	1,280	B.
March.....	245	22	81.2	4,990	C.
April.....	147	31	62.6	3,720	C.
May.....	46	28	36.6	2,250	B.
June.....	42	13	36.2	2,150	B.
The period.....				21,900	

PIRU CREEK NEAR PIRU, CAL.

This station, which is located below the suspension footbridge in the southern part of the Temescal grant in the Santa Barbara National Forest, about $1\frac{3}{4}$ miles northeast of Piru, was established October 28, 1911.

The gage is a vertical staff, in two sections, fastened to a cottonwood tree on the right bank, about 300 feet below the bridge. The channel is composed of gravel and is somewhat shifting. Discharge measurements are made from the footbridge or by wading near the gage. The drainage area above the station is 432 square miles.

Water is diverted above the station, through a 4-inch pipe, for municipal purposes at Piru.

This station is maintained in cooperation with the United States Forest Service, by which the gage-height record was furnished.

On January 25, 1912, Sabin canal, which diverts from Piru Creek, was carrying 5.5 second-feet.

Discharge measurements of Piru Creek near Piru, Cal., in 1911-12.

Date.	Hydrographer.	Gage height.	Dis- charge.	Date.	Hydrographer.	Gage height.	Dis- charge.
1911. Oct. 28	F. C. Ebert.....	<i>Feet.</i> 2.57	<i>Sec.-ft.</i> 30	1912. Feb. 4	F. C. Ebert.....	<i>Feet.</i> 2.89	<i>Sec.-ft.</i> 25
				29	do.....	2.95	27
				Mar. 16	do.....	3.60	160
1912. Jan. 8	do.....	2.93	31	25	do.....	3.36	111
25	do.....	2.92	30	May 12	do.....	3.49	80
				16	do.....	3.30	64
				June 26	do.....	2.90	18

Daily gage height, in feet, of Piru Creek near Piru, Cal., for 1911-12.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.									
1						3.0	3.35	3.4	3.2
2						3.0	3.35	3.35	3.2
3						3.0	3.35	3.35	3.2
4					2.9	3.75	3.35	3.35	3.2
5						3.75	3.35	3.3	3.15
6						4.7	3.35	3.3	3.15
7					2.3	3.7	3.4	3.75	3.1
8				2.95		3.4	3.45	3.75	3.1
9		2.01				3.45	3.5	3.7	3.1
10		2.01				3.8	3.95	3.65	3.1
11						3.65	3.8	3.6	3.1
12						3.85	3.7	3.55	3.05
13						3.6	3.7	3.45	3.05
14		2.01			2.3	3.55	3.6	3.4	3.05
15						3.5	3.6	3.35	3.05
16						3.5	3.6	3.3	3.05
17						3.5	3.6	3.3	3.05
18						3.55	3.6	3.3	3.05
19		2.01			2.3	3.55	3.6	3.3	3.05
20						3.6	3.6	3.3	3.0
21						3.6	3.5	3.3	3.0
22						3.55	3.4	3.3	3.0
23						3.55	3.45	3.3	3.0
24						3.45	3.45	3.25	3.0
25				2.9		3.4	3.45	3.2	3.0
26						3.4	3.45	3.2	3.0
27						3.35	3.45	3.2	2.9
28	2.57					3.4	3.4	3.2	2.9
29					2.95	3.4	3.4	3.2	2.9
30	2.57					3.4	3.4	3.2	2.9
31						3.35		3.2	

Daily discharge, in second-feet, of Piru Creek near Piru, Cal., for 1912.

Day.	Mar.	Apr.	May.	June.	Day.	Mar.	Apr.	May.	June.
1	37	114	72	48	16	137	100	60	32
2	37	114	66	48	17	137	100	60	32
3	37	114	66	48	18	145	100	60	32
4	137	114	66	48	19	145	100	60	32
5	137	114	60	42	20	153	100	60	27
6	310	114	60	42	21	153	85	60	27
7	170	122	124	37	22	145	72	60	27
8	122	130	124	37	23	145	78	60	27
9	130	137	115	37	24	130	78	54	27
10	188	216	108	37	25	122	78	48	27
11	162	132	100	37	26	122	78	48	27
12	198	115	92	32	27	114	78	48	18
13	153	115	78	32	28	122	72	48	18
14	145	100	72	32	29	122	72	48	18
15	137	100	66	32	30	122	72	48	18
					31	114		48	

* NOTE.—Daily discharge determined from fairly well-defined rating curves applicable as follows: Feb. 1 to Mar. 6, 1912; Mar. 7 to Apr. 10, 1912, and Apr. 11 to June 30, 1912.

Monthly discharge of Piru Creek near Piru, Cal., for 1912.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
January.....			a 30.0	1,840	D.
February.....			a 26.0	1,500	D.
March.....				8,360	B.
April.....	310	37	136	6,190	B.
May.....	216	72	104	4,240	B.
June.....	124	48	69.0	1,940	B.
	48	18	32.6		
The period.....				24,100	

a Estimated.

SESPE CREEK NEAR SESPE, CAL.

This station, which is located at the Southern Pacific Railroad bridge in the NW. $\frac{1}{4}$ sec. 25, T. 4 N., R. 20 W., $1\frac{1}{2}$ miles above the junction with Santa Clara River and half a mile southeast of Sespe, was established August 31, 1911.

The gage is an inclined staff, in two sections, on the left bank at the bridge. Discharge measurements are made from the railroad bridge or by wading below the gage. The channel is composed of gravel and will shift at high stages.

The Fillmore Irrigation Co.'s canal, which diverts about 4 miles above the station, furnishes water for irrigation and domestic uses at Sespe and Fillmore. On May 16, 1912, this canal was carrying 3.5 second-feet.

The results are considered good.

Discharge measurements of Sespe Creek near Sespe, Cal., in 1911-12.

Date.	Hydrographer.	Gage height.	Dis- charge.	Date.	Hydrographer.	Gage height.	Dis- charge.
1911.		<i>Feet.</i>	<i>Sec.-ft.</i>	1912.		<i>Feet.</i>	<i>Sec.-ft.</i>
Aug. 31	F. C. Ebert.....	a 4.18	7.3	Mar. 12	F. C. Ebert.....	6.33	1,510
Oct. 26	Lasley Lee.....	4.20	7.0	15	do.....	5.53	246
1912.				24	do.....	4.92	83
Jan. 8	F. C. Ebert.....	4.43	19	Apr. 24	do.....	4.97	94
26	do.....	4.34	12	May 13	do.....	4.70	52
Feb. 3	do.....	4.25	9.4	June 26	do.....	4.16	9.2
28	do.....	4.15	5.0				

a Point of zero flow about 3.4 feet.

Daily gage height, in feet, of Sespe Creek near Sespe, Cal., for 1911-12.

Day.	Aug.	Sept.	Day.	Aug.	Sept.	Day.	Aug.	Sept.
1911.			1911.			1911.		
1.....		4.20	11.....		4.22	21.....		4.20
2.....		4.20	12.....		4.25	22.....		4.20
3.....		4.20	13.....		4.25	23.....		4.25
4.....		4.22	14.....		4.25	24.....		4.30
5.....		4.20	15.....		4.28	25.....		4.30
6.....		4.20	16.....		4.28	26.....		4.30
7.....		4.22	17.....		4.28	27.....		4.30
8.....		4.22	18.....		4.28	28.....		4.30
9.....		4.22	19.....		4.20	29.....		4.30
10.....		4.22	20.....		4.20	30.....		4.32
						31.....	4.18	

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.									
1.....	4.38	4.00	4.33	4.45	4.3	4.2	4.95	4.8	4.42
2.....	4.35	3.90	4.35	4.45	4.28	4.22	4.92	4.8	4.42
3.....	4.35	3.83	4.33	4.45	4.28	4.25	4.9	4.8	4.4
4.....	4.33	3.90	4.35	4.45	4.28	5.2	4.85	4.75	4.4
5.....	4.33	3.93	4.35	4.43	4.28	6.5	4.82	4.75	4.35
6.....	4.33	3.95	4.40	4.43	4.28	5.68	4.8	4.8	4.35
7.....	4.30	4.25	4.45	4.43	4.28	6.6	4.75	4.9	4.35
8.....	4.30	4.28	4.50	4.43	4.28	6.5	4.95	4.9	4.32
9.....	4.30	4.28	4.45	4.42	4.28	5.7	6.0	4.85	4.3
10.....	4.30	4.28	4.45	4.42	4.28	6.2	6.2	4.8	4.3
11.....	4.28	4.28	4.45	4.43	4.28	5.4	6.4	4.7	4.25
12.....	4.28	4.10	4.45	4.45	4.28	6.0	5.8	4.7	4.22
13.....	4.28	4.10	4.43	4.42	4.28	6.3	5.6	4.7	4.22
14.....	4.40	4.35	4.43	4.42	4.28	5.6	5.5	4.65	4.2
15.....	4.30	4.40	4.43	4.42	4.28	5.5	5.4	4.65	4.2
16.....	4.33	4.38	4.45	4.4	4.28	5.5	5.4	4.65	4.15
17.....	4.33	4.35	4.43	4.4	4.25	5.4	5.45	4.65	4.15
18.....	4.28	4.35	4.40	4.38	4.25	5.3	5.35	4.62	4.12
19.....	4.25	4.38	4.40	4.35	4.25	5.2	5.3	4.62	4.12
20.....	4.22	4.35	4.43	4.35	4.25	5.15	5.35	4.6	4.1
21.....	4.20	4.35	4.43	4.35	4.25	5.1	5.2	4.6	4.1
22.....	4.20	4.33	4.45	4.35	4.25	5.02	5.1	4.58	4.05
23.....	4.20	4.33	4.45	4.35	4.25	5.0	5.05	4.55	4.05
24.....	4.20	4.33	4.43	4.35	4.25	4.92	4.9	4.55	4.05
25.....	4.18	4.30	4.43	4.38	4.25	4.95	4.9	4.6	4.05
26.....	4.20	4.33	4.43	4.38	4.22	5.02	4.85	4.6	4.05
27.....	4.25	4.33	4.45	4.38	4.22	5.1	4.85	4.55	4.02
28.....	4.28	4.30	4.45	4.35	4.2	5.05	4.85	4.55	4.02
29.....	4.30	4.33	4.45	4.32	4.2	5.05	4.85	4.52	4.02
30.....	4.30	4.33	4.45	4.32		5.0	4.85	4.5	4.0
31.....	4.28		4.43	4.3		4.95		4.45	

NOTE.—During Oct. and Nov., 1911, a retaining wall was being built about one-fourth mile above the county bridge and water was diverted from the main stream about Nov. 1-6 and 12-13. Gage heights not a true index to discharge for these days.

Daily discharge, in second-feet, of Sespe Creek near Sespe, Cal., for 1911-12.

Day.	Aug.	Sept.	Day.	Aug.	Sept.	Day.	Aug.	Sept.
1911.			1911.			1911.		
1.....		7.0	11.....		7.9	21.....		7.0
2.....		7.0	12.....		9.2	22.....		7.0
3.....		7.0	13.....		9.2	23.....		9.2
4.....		7.9	14.....		9.2	24.....		11
5.....		7.0	15.....		10	25.....		11
6.....		7.0	16.....		10	26.....		11
7.....		7.9	17.....		10	27.....		11
8.....		7.9	18.....		10	28.....		11
9.....		7.9	19.....		7.0	29.....		11
10.....		7.9	20.....		7.0	30.....		12
						31.....	6.4	

Daily discharge, in second-feet, of Sespe Creek near Sespe, Cal., for 1911-12—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.									
1.....	16	10	13	21	11.3	7.0	89	65	19
2.....	14	10	14	21	10.4	7.9	84	65	19
3.....	14	10	13	21	10.4	9.2	80	65	17
4.....	13	10	14	21	10.4	140	72	58	17
5.....	13	10	14	19	10.4	1,980	68	58	14.2
6.....	13	10	17	19	10.4	373	65	65	14.2
7.....	11	9.2	20	19	10.4	2,280	58	80	14.2
8.....	11	10	23	19	10.4	1,980	89	80	12.4
9.....	11	10	20	19	10.4	390	770	72	11.3
10.....	11	10	20	19	10.4	1,180	1,180	65	11.3
11.....	10	10	20	19	10.4	200	1,700	50	9.2
12.....	10	12	20	21	10.4	770	490	50	7.9
13.....	10	12	19	19	10.4	1,430	305	50	7.9
14.....	17	14	19	19	10.4	305	240	44	7.0
15.....	11	17	19	19	10.4	240	200	44	7.0
16.....	13	16	20	17	10.4	240	200	44	5.6
17.....	13	14	19	17	9.2	200	220	44	5.6
18.....	10	14	17	16	9.2	165	182	40	4.7
19.....	9.2	16	17	14.2	9.2	140	165	40	4.7
20.....	7.9	14	19	14.2	9.2	129	182	37	4.1
21.....	7.0	14	19	14.2	9.2	118	140	37	4.1
22.....	7.0	13	20	14.2	9.2	102	118	35	3.2
23.....	7.0	13	20	14.2	9.2	98	108	31	3.2
24.....	7.0	13	19	14.2	9.2	84	80	31	3.2
25.....	6.4	11	19	16	9.2	89	80	37	3.2
26.....	7.0	13	19	16	7.9	102	72	37	3.2
27.....	9.2	13	20	16	7.9	118	72	31	2.7
28.....	10	11	20	14.2	7.0	108	72	31	2.7
29.....	11	13	20	12.4	7.0	108	72	27	2.7
30.....	11	13	20	12.4	.....	98	72	25	2.3
31.....	10	.....	19	11.3	.....	89	.....	21	.....

NOTE.—Daily discharge determined from fairly well-defined rating curve applicable as follows: Aug. 31 to Dec. 31, 1911, and Jan. 1 to June 30, 1912. Discharge interpolated Nov. 1-6 and 12-13, 1911.

Monthly discharge of Sespe Creek near Sespe, Cal., for 1911-12.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
September.....	12	7.0	8.84	526	B.
October.....	17	6.4	10.7	658	B.
November.....	17	9.2	12.2	726	B.
December.....	23	13	18.5	1,140	B.
January.....	21	11.3	17.0	1,040	A.
February.....	11.3	7.0	9.65	555	A.
March.....	2,280	7.0	428	26,300	B.
April.....	1,700	58	244	14,500	A.
May.....	80	21	47.1	2,900	A.
June.....	19	2.3	8.13	484	A.
The period.....	.....	.....	.....	48,300	.....

SANTA PAULA CREEK NEAR SANTA PAULA, CAL.

This station, which is just below the mouth of Sisar Creek, at the east boundary of the Ojai grant in Santa Barbara National Forest, about $5\frac{1}{2}$ miles northwest of Santa Paula, and 6 miles above junction with Santa Clara River, was established October 27, 1911.

The gage is a vertical staff fastened to a tree on the left bank about 600 feet below the mouth of Sisar Creek. The channel is

composed of boulders and gravel and will shift at high stages. Discharge measurements are made from a highway bridge 1 mile below the gage or by wading near the gage. The drainage area above the station is 33.4 square miles.

The gage-height record was furnished by the United States Forest Service.

Discharge measurements of Santa Paula Creek near Santa Paula, Cal., in 1911-12.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1911.		<i>Feet.</i>	<i>Sec.-ft.</i>	1912.		<i>Feet.</i>	<i>Sec.-ft.</i>
Oct. 27	F. C. Ebert.....	2.40	4.9	Mar. 14	F. C. Ebert.....	3.07	39
27	Lasley Lee.....	2.40	4.8	24	do.....	2.70	17
				Apr. 24	do.....	2.88	26
1912.				May 14	do.....	2.62	13
Jan. 6	F. C. Ebert.....	2.43	4.9	June 25	do.....	2.39	6.3
Feb. 2	do.....	2.41	4.7				

Daily gage height, in feet, of Santa Paula Creek near Santa Paula, Cal., for 1912.

Day.	Mar.	Apr.	May.	June.	Day.	Mar.	Apr.	May.	June.
1.....		2.7	2.8	2.6	16.....		3.0	2.7	2.5
2.....		2.75	2.8	2.6	17.....		3.2	2.7	2.5
3.....		2.7	2.8	2.6	18.....		3.5	2.7	2.5
4.....		2.75	2.7	2.6	19.....		3.0	2.6	2.5
5.....		2.7	2.8	2.6	20.....		3.0	2.6	2.5
6.....		2.7	2.9	2.6	21.....		3.0	2.6	2.5
7.....		2.7	2.7	2.5	22.....		3.9	2.6	2.5
8.....		2.7	2.7	2.5	23.....		3.0	2.6	2.5
9.....		3.5	2.7	2.5	24.....	2.7	3.9	2.6	2.4
10.....		4.1	2.7	2.5	25.....	2.8	2.9	2.65	2.45
11.....		3.7	2.7	2.5	26.....	3.0	2.8	2.65	2.4
12.....		3.0	2.7	2.5	27.....	2.9	2.9	2.6	2.4
13.....		2.8	2.75	2.45	28.....	2.8	2.8	2.6	2.4
14.....		2.8	2.7	2.5	29.....	2.8	2.8	2.6	2.4
15.....		2.7	2.7	2.5	30.....	2.7	2.8	2.6	2.4
					31.....	2.0		2.6	

NOTE.—Dec. 31, 1911, gage height was 2.45 feet.

Daily discharge, in second-feet, of Santa Paula Creek near Santa Paula, Cal., for 1912.

Day.	Mar.	Apr.	May.	June.	Day.	Mar.	Apr.	May.	June.
1.....		17	22	12	16.....		34	17	8
2.....		20	22	12	17.....		50	17	8
3.....		17	22	12	18.....		80	17	8
4.....		20	17	12	19.....		34	12	8
5.....		17	22	12	20.....		34	12	8
6.....		17	28	12	21.....		34	12	8
7.....		17	17	8	22.....		130	12	8
8.....		17	17	8	23.....		34	12	8
9.....		80	17	8	24.....	17	130	12	5
10.....		158	17	8	25.....	22	28	14	6
11.....		104	17	8	26.....	34	22	14	5
12.....		34	17	8	27.....	28	28	12	5
13.....		22	20	5	28.....	22	22	12	5
14.....		22	17	8	29.....	22	22	12	5
15.....		17	17	8	30.....	17	22	12	5
					31.....	17		12	

NOTE.—Daily discharge determined from a rating curve well defined between 10 and 80 second-feet.

Monthly discharge of Santa Paula Creek near Santa Paula, Cal., for 1912.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
March 24-31.....	34	17	22.4	355	A.
April.....	158	17	42.8	2,550	A.
May.....	28	12	16.1	990	A.
June.....	12	5	8.1	482	B.

MISCELLANEOUS MEASUREMENTS.

The following miscellaneous discharge measurements have been made in the Santa Clara River basin:

Miscellaneous measurements in Santa Clara River drainage basin.

Date.	Stream.	Hydrographer.	Locality.	Dis- charge.
				<i>Sec.-ft.</i>
Aug. 9, 1898	Santa Clara River.....	F. H. Olmsted.....	Newhall ranch.....	10.8
Aug. 19, 1899	.....do.....	S. G. Bennett.....	.....do.....	8.4
Oct. 8, 1900	.....do.....	W. W. Cockins, jr.....	.....do.....	10.2
Apr. 30, 1903	.....do.....	W. B. Clapp.....	.....do.....	8.0
June 16, 1903	.....do.....	.....do.....	.....do.....	6.2
Sept. 16, 1903	.....do.....	.....do.....	.....do.....	5.4
Oct. 19, 1905	.....do.....	.....do.....	.....do.....	5.3
June 18, 1898	.....do.....	J. B. Lippincott.....	1 mile east of Camulor....	25.7
Aug. 11, 1898	.....do.....	F. H. Olmsted.....	.....do.....	17.4
Aug. 19, 1899	.....do.....	S. G. Bennett.....	.....do.....	1.24
Apr. 30, 1903	.....do.....	W. B. Clapp.....	.....do.....	25.0
June 17, 1903	.....do.....	.....do.....	.....do.....	21.1
Sept. 16, 1903	.....do.....	.....do.....	.....do.....	5.1
Oct. 19, 1905	.....do.....	.....do.....	.....do.....	10.1
Mar. 15, 1899	.....do.....	S. G. Bennett.....	In cienaga, 1 mile east of Fillmore.....	3.6
Aug. 18, 1899	.....do.....	.....do.....	Near Santa Paula.....	10.3
May 3, 1903	.....do.....	W. B. Clapp.....	.....do.....	127.0
June 22, 1903	.....do.....	.....do.....	.....do.....	22.0
July 16, 1903	.....do.....	.....do.....	.....do.....	23.4
Aug. 13, 1903	.....do.....	Lippincott & Power.....	.....do.....	20.8
Sept. 18, 1903	.....do.....	W. B. Clapp.....	.....do.....	18.2
Oct. 21, 1905	.....do.....	.....do.....	.....do.....	27.0
Aug. 14, 1903	.....do.....	Lippincott & Power.....	Below head of Santa Clara Water & Irrigation Co.'s canal.....	3.3
Sept. 18, 1903	.....do.....	W. B. Clapp.....	.....do.....	3.9
Oct. 21, 1905	.....do.....	.....do.....	.....do.....	24.0
Mar. 10, 1895	Piru Creek.....	J. B. Lippincott.....	Robertson Mill.....	3.54
Jan. 21, 1896	.....do.....	S. Stewart.....	Smith's.....	18.0
Jan. 31, 1896	.....do.....	J. B. Lippincott.....	.....do.....	13.3
Aug. 11, 1898	.....do.....	F. H. Olmsted.....	French House.....	.92
Mar. 14, 1899	.....do.....	S. G. Bennett.....	Narrows near Dutton's....	5.00
Mar. 16, 1899	.....do.....	.....do.....	Piru City, wagon-road crossing.....	61.0
Mar. 17, 1899	.....do.....	.....do.....	.....do.....	152.0
Aug. 19, 1899	.....do.....	.....do.....	Head of Piru pipe line....	1.30
Oct. 8, 1900	.....do.....	W. W. Cockins, jr.....	Ditches from lower creek..	2.20
May 1, 1903	.....do.....	W. B. Clapp.....	Dunton ranch.....	57.0
May 1, 1903	.....do.....	.....do.....	Southern Pacific R. R. bridge.....	55.0
June 17, 1903	.....do.....	.....do.....	.....do.....	2.7
Sept. 17, 1903	.....do.....	.....do.....	.....do.....	.1
June 17, 1903	.....do.....	.....do.....	1 mile above Esperanza...	3.9
Oct. 20, 1905	.....do.....	.....do.....	.....do.....	3.4
Do.....	.....do.....	.....do.....	1 mile above Piru City...	5.3
June 17, 1903	Piru Land & Water Co.'s upper diversion.....	.....do.....	Near Esperanza.....	1.8
Sept. 17, 1903	.....do.....	.....do.....	.....do.....	1.2
Oct. 20, 1905	.....do.....	.....do.....	.....do.....	1.4
June 17, 1903	Lower diversion.....	.....do.....	Southern Pacific R. R. bridge.....	3.7
Sept. 17, 1903	.....do.....	.....do.....	.....do.....	1.0
Dec. 15, 1896	Gorman Creek.....	J. B. Lippincott.....	Below Gorman station....	.2
Aug. 11, 1898	San Francisquito Creek..	F. H. Olmsted.....	Junction with Santa Clara River.....	2.07

Miscellaneous measurements in Santa Clara River drainage basin—Continued.

Date.	Stream.	Hydrographer.	Locality.	Dis-charge.
Apr. 30, 1903	San Francisquito Creek.	W. B. Clapp.....	Road crossing, Newhall ranch.	Sec.-ft. 2.0
June 16, 1903	do.	do.	do.	2.4
Sept. 16, 1903	do.	do.	do.	2.0
Oct. 19, 1905	do.	do.	do.	1.3
Aug. 11, 1898	Sespe Creek.	F. H. Olmsted	do.	2.5
Mar. 15, 1899	do.	S. G. Bennett.	Head of water company's canal.	8.3
Aug. 18, 1899	do.	do.	do.	1.9
May 2, 1903	do.	W. B. Clapp	Southern Pacific R. R. bridge.	89.0
Sept. 17, 1903	do.	do.	Below canal heading	.1
Oct. 20, 1905	do.	do.	do.	4.8
Aug. 18, 1889	Santa Paula Creek.	S. G. Bennett.	Above Neepers schoolhouse	85
May 3, 1903	do.	W. B. Clapp	5 miles above Santa Paula	28.0
Do.	do.	do.	Santa Paula.	19.0
Oct. 21, 1905	do.	do.	3 miles above Santa Paula.	4.9
May 3, 1903	Santa Paula Water Co.'s ditch.	do.	Heading	5.6
June 22, 1903	do.	do.	do.	10.1
Sept. 18, 1903	do.	do.	do.	2.7
Sept. 17, 1903	Sespe Land & Water Co.'s canal.	do.	$\frac{1}{2}$ mile below heading.	4.6
Oct. 20, 1905	do.	do.	do.	6.6
Aug. 19, 1899	Camulor ditch.	S. G. Bennett.	do.	17.6
Oct. 8, 1900	do.	W. W. Cockins, jr.	Head of wooden flume.	11.4
June 17, 1903	do.	W. B. Clapp	Head.	7.6
Sept. 16, 1903	do.	do.	do.	11.6
Oct. 19, 1905	do.	do.	1,000 feet below head.	7.6
June 16, 1903	Newhall ditch.	do.	Southern Pacific R. R. bridge.	1.7
Sept. 16, 1903	do.	do.	do.	1.8
Aug. 18, 1899	Farmers' ditch.	S. G. Bennett.	do.	16.0
June 22, 1903	do.	W. B. Clapp	1 mile above Santa Paula.	7.8
July 16, 1903	do.	do.	do.	8.4
Aug. 13, 1903	do.	do.	do.	8.6
Sept. 18, 1903	do.	do.	do.	8.6
Oct. 21, 1905	do.	do.	do.	7.2
Aug. 18, 1899	Grees ditch.	S. G. Bennett.	do.	8.6
June 22, 1903	do.	W. B. Clapp	1 mile above Santa Paula.	11.0
July 16, 1903	do.	do.	do.	5.8
Aug. 13, 1903	do.	do.	do.	11.1
Sept. 18, 1903	do.	do.	do.	7.4
Oct. 21, 1905	do.	do.	do.	9.2
Aug. 18, 1899	Richardson ditch.	S. G. Bennett.	do.	5.8
June 22, 1903	do.	W. B. Clapp	1 mile above Santa Paula.	4.2
July 16, 1903	do.	do.	do.	2.3
Aug. 13, 1903	do.	do.	do.	1.2
Sept. 18, 1903	do.	do.	do.	1.2
July 15, 1903	Santa Clara Water & Irrigation Co.'s canal.	Clapp and Power.	Head.	30.0
July 16, 1903	do.	do.	do.	33.0
Aug. 14, 1903	do.	Lippincott and Power.	do.	31.6
Sept. 18, 1903	do.	W. B. Clapp	do.	26.7
do.	do.	do.	do.	16.7
Sept. 3, 1911	Piru Creek.	do.	900 feet above Southern Pacific R. R. bridge at Piru.	16.0
Oct. 27, 1911	Sisar Creek.	do.	100 feet above mouth.	1.0
Jan. 6, 1912	do.	do.	Near mouth, SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 16, T. 4 N., R. 21 W.	1.2
Feb. 2, 1912	do.	do.	do.	1.0
Mar. 24, 1912	do.	do.	do.	5.1
May 14, 1912	do.	do.	do.	2.9

VENTURA RIVER BASIN.

VENTURA RIVER NEAR NORDHOFF, CAL.

This station, which is located just below the junction of Matilija Creek and North Fork of Matilija Creek, in the N. $\frac{1}{2}$ SW. $\frac{1}{4}$ sec. 28, T. 5 N., R. 23 W., about 4 miles northwest of Nordhoff, was established October 23, 1911.

The gage is a vertical staff, in three sections, on the right bank about 300 feet below the junction of the creeks. The channel is composed of gravel and bowlders and may shift during high water. Discharge measurements are made from a suspension footbridge 1 mile below the gage or by wading. A small ditch diverts water for irrigation from the North Fork of Matilija Creek above the station. The results obtained are considered good.

Discharge measurements of Ventura River near Nordhoff, Cal., in 1911-12.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
		<i>Feet.</i>	<i>Sec.-ft.</i>			<i>Feet.</i>	<i>Sec.-ft.</i>
1911.				1912.			
Oct. 23	F. C. Ebert.....	2.18	11	Feb. 27	F. C. Ebert.....	2.16	11
23	Lasley Lee.....	2.18	11	Mar. 15	.....do.....	3.32	71
				23	.....do.....	2.87	35
1912.				Apr. 23	.....do.....	2.90	32
Jan. 6	F. C. Ebert.....	2.27	14	May 14	.....do.....	2.50	20
Feb. 2	.....do.....	2.20	11	June 25	.....do.....	2.19	10

Daily gage height, in feet, of Ventura River near Nordhoff, Cal., for 1911-12.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1.....		2.25	2.20	2.3	2.22	2.2	2.75	2.72	2.32
2.....		2.22	2.20	2.3	2.2	2.2	2.75	2.7	2.35
3.....		2.22	2.20	2.3	2.2	2.2	2.75	2.68	2.35
4.....		2.22	2.25	2.3	2.2	2.68	2.72	2.68	2.35
5.....		2.22	2.25	2.3	2.18	5.6	2.7	2.65	2.32
6.....		2.22	2.60	2.28	2.18	4.5	2.7	2.65	2.3
7.....		2.22	2.35	2.28	2.18	3.2	2.7	2.7	2.3
8.....		2.22	2.30	2.28	2.18	3.0	2.68	2.7	2.3
9.....		2.22	2.30	2.28	2.18	3.0	2.9	2.68	2.3
10.....		2.22	2.30	2.28	2.18	3.8	4.2	2.65	2.3
11.....		2.25	2.30	2.3	2.18	3.8	3.7	2.6	2.3
12.....		2.25	2.30	2.25	2.18	4.05	3.4	2.58	2.3
13.....		2.25	2.30	2.22	2.18	4.9	3.3	2.55	2.3
14.....		2.25	2.30	2.22	2.18	3.4	3.2	2.52	2.3
15.....		2.25	2.30	2.22	2.15	3.3	3.2	2.5	2.28
16.....		2.22	2.28	2.22	2.15	3.2	3.2	2.5	2.25
17.....		2.22	2.28	2.22	2.15	3.1	3.15	2.48	2.22
18.....		2.22	2.28	2.22	2.15	3.0	3.1	2.45	2.2
19.....		2.22	2.28	2.22	2.12	2.95	3.05	2.45	2.2
20.....		2.22	2.28	2.22	2.12	3.05	3.0	2.45	2.2
21.....		2.22	2.28	2.22	2.12	3.05	3.0	2.45	2.2
22.....		2.22	2.28	2.22	2.15	2.9	2.95	2.45	2.2
23.....		2.18	2.25	2.28	2.22	2.15	2.85	2.95	2.45
24.....		2.20	2.20	2.28	2.22	2.15	2.8	2.9	2.45
25.....		2.20	2.20	2.28	2.22	2.15	2.8	2.9	2.7
26.....		2.22	2.20	2.28	2.22	2.15	2.85	2.85	2.5
27.....		2.25	2.20	2.28	2.25	2.18	3.0	2.8	2.5
28.....		2.28	2.20	2.32	2.25	2.18	3.0	2.78	2.45
29.....		2.25	2.20	2.32	2.25	2.18	2.9	2.75	2.4
30.....		2.25	2.20	2.30	2.25	.....	2.85	2.75	2.38
31.....		2.25	.....	2.30	2.22	.....	2.8	.....	2.35

Daily discharge, in second-feet, of Ventura River near Nordhoff, Cal., for 1911-12.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1.....		13	12	14	12	12	30	29	15
2.....		12	12	14	12	12	30	28	16
3.....		12	12	14	12	12	30	27	16
4.....		12	13	14	12	27	29	27	16
5.....		12	13	14	12	395	28	26	15
6.....		12	27	14	12	204	28	26	14
7.....		12	17	14	12	56	28	28	14
8.....		12	15	14	12	43	27	28	14
9.....		12	15	14	12	43	37	27	14
10.....		12	15	14	12	112	161	26	14
11.....		13	15	14	12	112	100	24	14
12.....		13	15	13	12	142	71	23	14
13.....		13	15	12	12	269	63	22	14
14.....		13	15	12	12	71	56	21	14
15.....		13	15	12	11	63	56	20	14
16.....		12	14	12	11	56	56	20	13
17.....		12	14	12	11	49	52	19	12
18.....		12	14	12	11	43	49	18	12
19.....		12	14	12	10	40	46	18	12
20.....		12	14	12	10	46	43	18	12
21.....		12	14	12	10	46	43	18	12
22.....		12	14	12	11	37	40	18	12
23.....	11	13	14	12	11	34	40	18	12
24.....	12	12	14	12	11	32	37	18	12
25.....	12	12	14	12	11	32	37	28	12
26.....	12	12	14	12	11	34	34	20	12
27.....	13	12	14	13	12	43	32	20	11
28.....	14	12	16	13	12	43	31	18	11
29.....	13	12	16	13	12	37	30	17	11
30.....	13	12	15	13	.....	34	30	16	10
31.....	13	.....	15	12	.....	32	.....	16	.....

NOTE.—Daily discharge determined from fairly well defined rating curves applicable as follows: Oct. 23 to Dec. 3, 1911, and Jan. 1 to June 30, 1912.

Monthly discharge of Ventura River near Nordhoff, Cal., for 1911-12.

Month.	Discharge in second-feet.			Run-off (total in acre feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
October 23-31.....	14	11	12.6	225	B.
November.....	13	12	12.2	726	B.
December.....	27	12	14.7	904	B.
January.....	14	12	12.9	793	B.
February.....	12	10	11.5	662	B.
March.....	395	12	71.3	4,380	C.
April.....	161	27	45.8	2,730	B.
May.....	29	16	22.0	1,350	B.
June.....	16	10	13.1	780	B.
The period.....	.....	.....	.....	12,600	.....

VENTURA RIVER NEAR VENTURA, CAL.

This station, which is located at the highway bridge in Foster Memorial Park, near the southeast corner of the Santa Ana grant, one-fourth of a mile below the mouth of Coyote Creek and about 5 miles north of Ventura and the mouth of the river, was established September 4, 1911.

The gage is a chain gage at the bridge. The length of the chain is 28.14 feet. The channel is composed of gravel and bowlders and

may shift during high water. Discharge measurements are made from the bridge or by wading.

Water is diverted from the main river and tributaries above the station for irrigation. The results are considered fairly good.

Discharge measurements of Ventura River near Ventura, Cal., for 1911-12.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1911		<i>Feet.</i>	<i>Sec.-ft.</i>	1912		<i>Feet.</i>	<i>Sec.-ft.</i>
Sept. 4	F. C. Ebert.....	1.71	24	Feb. 28	F. C. Ebert.....	1.50	12
Oct. 24	.....do.....	1.70	18	Mar. 13	.....do.....	2.81	220
24	Lasley Lee.....	1.70	18	14	.....do.....	2.59	136
				23	.....do.....	2.05	50
1912				Apr. 23	.....do.....	2.11	54
Jan. 5	F. C. Ebert.....	1.72	21	May 15	.....do.....	1.81	25
Feb. 3	.....do.....	1.64	16	June 24	.....do.....	1.52	11

NOTE.—Point of zero flow about 0.8 foot.

Daily gage height, in feet, of Ventura River near Ventura, Cal., for 1911-12.

Day.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.										
1.....		1.70	1.70	1.70	1.75	1.72	1.5	2.0	1.98	1.69
2.....		1.72	1.70	1.70	1.75	1.7	1.5	2.0	1.95	1.67
3.....		1.70	1.70	1.70	1.75	1.65	1.5	2.0	1.9	1.67
4.....	1.72	1.70	1.70	1.70	1.78	1.65	1.55	2.0	1.9	1.67
5.....	1.72	1.70	1.70	1.70	1.78	1.65	3.2	1.95	1.9	1.67
6.....	1.72	1.72	1.70	1.78	1.78	1.65	3.3	1.95	1.9	1.67
7.....	1.72	1.70	1.70	1.78	1.78	1.65	2.4	1.95	1.9	1.65
8.....	1.72	1.68	1.70	1.78	1.75	1.65	2.2	1.95	1.9	1.65
9.....	1.72	1.70	1.70	1.78	1.75	1.65	2.2	2.1	1.9	1.65
10.....		1.68	1.70	1.75	1.75	1.65	2.8	2.2	1.88	1.65
11.....	1.72	1.68	1.70	1.75	1.75	1.65	2.3	3.1	1.85	1.68
12.....	1.72	1.70	1.70	1.75	1.75	1.65	4.5	2.65	1.85	1.68
13.....	1.72	1.70	1.70	1.75	1.75	1.65	2.78	2.5	1.8	1.68
14.....	1.72	1.70	1.70	1.75	1.75	1.65	2.5	2.4	1.8	1.63
15.....	1.70	1.70	1.70	1.78	1.75	1.58	2.4	2.35	1.78	1.63
16.....	1.68	1.70	1.70	1.78	1.75	1.58	2.3	2.35	1.78	1.63
17.....	1.70	1.65	1.70	1.78	1.75	1.6	2.2	2.25	1.75	1.51
18.....	1.65	1.70	1.70	1.75	1.75	1.6	2.2	2.2	1.73	1.46
19.....	1.60	1.65	1.70	1.75	1.75	1.6	2.12	2.18	1.73	1.46
20.....	1.68	1.68	1.70	1.75	1.75	1.55	2.12	2.15	1.73	1.51
21.....	1.65	1.70	1.70	1.75	1.75	1.55	2.12	2.12	1.73	1.51
22.....	1.68	1.70	1.70	1.75	1.75	1.55	2.05	2.1	1.7	1.49
23.....	1.70	1.70	1.70	1.75	1.75	1.55	2.05	2.1	1.66	1.49
24.....	1.68	1.70	1.70	1.75	1.75	1.55	2.05	2.08	1.66	1.52
25.....	1.68	1.70	1.70	1.75	1.75	1.55	2.05	2.05	1.76	1.5
26.....	1.68	1.70	1.70	1.75	1.75	1.55	2.05	2.05	1.8	1.5
27.....	1.65	1.70	1.70	1.75	1.75	1.55	2.2	2.05	1.76	1.5
28.....	1.70	1.70	1.70	1.75	1.75	1.5	2.1	2.0	1.74	1.5
29.....	1.70	1.70	1.70	1.75	1.75	1.5	2.05	2.0	1.72	1.5
30.....	1.70	1.70	1.70	1.75	1.75		2.0	2.0	1.69	1.5
31.....		1.70		1.75	1.75		2.0		1.69	

NOTE.—Water was diverted above the station during portions of May and June, 1912.

Daily discharge, in second-feet, of Ventura River near Ventura, Cal., for 1911-12.

Day.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.										
1.....		21	21	21	22	19	12	43	41	18
2.....		23	21	21	22	18	12	43	38	17
3.....		21	21	21	22	16	12	43	33	17
4.....	23	21	21	21	24	16	14	43	33	17
5.....	23	21	21	21	24	16	335	38	33	17
6.....	23	23	21	27	24	16	375	38	33	17
7.....	23	21	21	27	24	16	105	38	33	16
8.....	23	20	21	27	22	16	70	38	33	16
9.....	23	21	21	27	22	16	70	55	33	16
10.....	^a 23	20	21	25	22	16	205	70	31	16
11.....	23	20	21	25	22	16	87	300	29	17
12.....	23	21	21	25	22	16	890	162	29	17
13.....	23	21	21	25	22	16	199	125	25	17
14.....	23	21	21	25	22	16	125	105	25	16
15.....	21	21	21	27	22	14	105	96	24	16
16.....	20	21	21	27	22	14	87	96	24	16
17.....	21	18	21	27	22	15	70	78	22	12
18.....	18	21	21	25	22	15	70	70	20	11
19.....	14	18	21	25	22	15	58	67	20	11
20.....	20	20	21	25	22	14	58	62	20	12
21.....	18	21	21	25	22	14	58	58	20	12
22.....	20	21	21	25	22	14	49	55	18	12
23.....	21	21	21	25	22	14	49	55	17	12
24.....	20	21	21	25	22	14	49	53	17	13
25.....	20	21	21	25	22	14	49	49	22	12
26.....	20	21	21	25	22	14	49	49	25	12
27.....	18	21	21	25	22	14	70	49	22	12
28.....	21	21	21	25	22	12	55	43	21	12
29.....	21	21	21	25	22	12	49	43	19	12
30.....	21	21	21	25	22		43	43	18	12
31.....		21		25	22		43		18	

^a Interpolated.

NOTE.—Daily discharge determined from fairly well defined rating curves applicable as follows: Sept. 4 to Dec. 31, 1911, and Jan. 1 to June 30, 1912.

Monthly discharge of Ventura River near Ventura, Cal., for 1911-12.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1911.					
September 4-30.....	23	14	21.0	1,120	B.
1911-12.					
October.....	23	18	20.8	1,280	B.
November.....	21	21	21.0	1,250	B.
December.....	27	21	24.8	1,520	B.
January.....	24	22	22.3	1,370	A.
February.....	19	12	15.1	369	A.
March.....	890	12	114	7,010	B.
April.....	300	38	70.2	4,180	A.
May.....	41	17	25.7	1,580	A.
June.....	18	11	14.4	857	A.
The period.....				19,400	

MISCELLANEOUS MEASUREMENTS.

The following miscellaneous measurements have been made in the Ventura River basin:

Miscellaneous measurements in Ventura River drainage basin.

Date.	Stream.	Hydrographer.	Locality.	Dis-charge.
1902.				<i>Sec.-ft.</i>
Sept. 25	Ventura River.....	J. B. Lippencott.....	Below diversion of Ventura city water system, Coyote Creek.	5.23
25	Ventura River, North Fork.....	do.....	In flume.....	.33
25	Matilija Creek.....	do.....	Above mouth of North Fork...	2.0
26	Power ditch.....	do.....	Near head.....	1.5
1903.				
Sept. 19	Ventura River.....	W. B. Clapp.....	Below upper diversion.....	3.7
19	Ventura Light & Power Co.'s canal.....	do.....	Upper diversion city supply....	7.0
19	Power ditch.....	do.....	Old mill.....	3.3
1906.				
Oct. 24	Matilija Creek.....		Above junction of North Fork...	7.7
24	Matilija Creek, North Fork.....		500 feet above junction with Matilija Creek.	2.2
24	San Antonio Creek.....		1½ miles below Nordhoff.....	4.4
1911.				
Oct. 23	Matilija Creek.....		300 feet above junction with North Fork.	9.0
23	Matilija Creek, North Fork.....		100 feet above mouth.....	20
23	Flume.....		Intake, diverts from North Fork.	1.3
1912.				
Jan. 6	Matilija Creek.....		200 feet above junction with North Fork.	10
6	Matilija Creek, North Fork.....		Near mouth.....	3.4
Feb. 2	do.....		do.....	2.1
27	do.....		do.....	2.0
Mar. 23	do.....		do.....	6.1
Apr. 23	do.....		do.....	7.4
May 14	do.....		do.....	3.0
June 25	do.....		Above diversion.....	2.1
Mar. 23	Coyote Creek.....		Near mouth.....	8.0
Apr. 23	do.....		do.....	7.3
May 15	do.....		do.....	3.0

SAN ROQUI CREEK.

San Roqui Creek was measured during the year 1890 by Charles J. Johansen for the Pacific Improvement Co. The point of measurement was a short distance below the San Roqui tunnel, which was being built from 1899 to 1901, the point of measurement being near an old dam in the stream. This drainage line is called San Roqui Creek in its mountainous portions, but lower down and south of the Southern Pacific Railroad it is called the Arroyo Burro.

Discharge measurements of San Roque Creek, Santa Barbara County.

[By Charles J. Johansen.]

At old diversion box below tunnel.

Date.	Dis-charge.	Date.	Dis-charge.	Date.	Dis-charge.
1890.	Sec.-feet.	1890.	Sec.-feet.	1890.	Sec.-feet.
Feb. 13.....	4.96	May 1.....	1.55	July 9.....	0.29
19.....	5.70	3.....	1.39	11.....	.26
21.....	9.61	5.....	1.39	13.....	.26
26.....	11.03	7.....	1.39	15.....	.26
Mar. 1.....	6.91	9.....	1.23	17.....	.26
3.....	6.28	11.....	1.23	19.....	.23
5.....	5.67	13.....	1.30	21.....	.20
6.....	5.67	15.....	1.23	23.....	.20
8.....	5.20	17.....	1.23	25.....	.20
10.....	5.20	19.....	1.23	27.....	.20
12.....	4.96	20.....	.63	29.....	.20
14.....	4.96	22.....	.65	31.....	.24
16.....	4.27	24.....	.65	Aug. 2.....	.24
18.....	4.27	26.....	.65	4.....	.24
20.....	4.73	28.....	.54	6.....	.24
22.....	4.73	30.....	.54	8.....	.26
24.....	4.27	June 2.....	.52	10.....	.26
26.....	3.84	4.....	.52	12.....	.26
28.....	3.84	5.....	.44	14.....	.23
30.....	3.84	7.....	.40	16.....	.23
Apr. 1.....	3.42	9.....	.35	18.....	.20
3.....	3.42	11.....	.35	19.....	.20
5.....	3.42	13.....	.35	22.....	.17
7.....	3.21	15.....	.35	Sept. 2.....	.19
9.....	3.21	17.....	.38	3.....	.19
11.....	3.00	19.....	.38	4.....	.19
13.....	2.80	21.....	.38	5.....	.19
15.....	2.62	23.....	.38	6.....	.19
17.....	2.62	25.....	.35	7.....	.19
19.....	2.42	27.....	.35	8.....	.19
21.....	2.15	29.....	.29	10.....	.19
23.....	1.88	July 1.....	.29	11.....	.19
25.....	1.80	3.....	.29	12.....	.19
27.....	1.80	5.....	.29	13.....	.19
29.....	1.55	7.....	.29	14.....	.19

Below old diversion box.

Aug. 26.....	0.09	Sept. 4.....	0.04	Sept. 12.....	0.04
28.....	.09	6.....	.05	14.....	.04
30.....	.07	8.....	.04		
Sept. 2.....	.04	10.....	.04		

SAN JOSE CREEK.

The following measurements of San Jose Creek were made by Charles J. Johansen for the Pacific Improvement Co. The pipe line along the West Fork of San Jose Creek was not carrying water in the year 1890.

The point of measurement of the West Fork was a short distance above its junction with the East Fork, or main stream. The main stream, or East Fork, of San Jose Creek was gaged a short distance above its junction with the West Fork.

Discharge measurements of San Jose Creek, Santa Barbara County, Cal.

[By Charles J. Johansen.]

West Fork at mouth.

Date.	Dis-charge.	Date.	Dis-charge.	Date.	Dis-charge.
1890.	Sec.-feet.	1890.	Sec.-feet.	1890.	Sec.-feet.
Feb. 4.	1.57	Apr. 21.	0.32	June 16.	0.27
15.	.54	23.	.32	18.	.21
28.	.94	25.	.32	20.	.19
Mar. 1.	.60	27.	.32	22.	.21
3.	.60	29.	.35	24.	.17
5.	.54	May 1.	.32	26.	.19
7.	.54	3.	.26	28.	.20
9.	.50	5.	.32	30.	.20
11.	.50	7.	.32	July 2.	.17
13.	.44	9.	.26	4.	.17
15.	.44	11.	.26	6.	.18
17.	.44	12.	.23	8.	.17
19.	.50	13.	.26	10.	.17
21.	.44	15.	.23	12.	.17
23.	.40	17.	.26	14.	.16
25.	.40	19.	.26	16.	.16
27.	.40	21.	.23	18.	.14
29.	.40	23.	.23	20.	.16
31.	.40	25.	.23	22.	.14
Apr. 2.	.40	27.	.23	24.	.17
4.	.40	29.	.23	26.	.16
6.	.40	31.	.21	28.	.17
8.	.40	June 2.	.21	30.	.17
10.	.35	4.	.21	Aug. 1.	.17
12.	.40	6.	.21	2.	.17
14.	.40	8.	.18	3.	.17
15.	.32	10.	.23	4.	.17
17.	.29	12.	.21	6.	.17
19.	.32	14.	.21	8.	.17

East Fork above West Fork.

1890.	Sec.-feet.	1890.	Sec.-feet.	1890.	Sec.-feet.
Mar. 1.	6.38	May 13.	1.59	July 28.	0.54
3.	5.76	15.	1.47	30.	.60
5.	5.17	17.	1.47	Aug. 1.	.63
7.	4.88	19.	1.47	2.	.63
9.	4.59	21.	1.19	3.	.63
11.	4.03	23.	1.19	4.	.63
13.	3.76	25.	1.25	6.	.63
15.	3.51	27.	1.19	8.	.63
17.	3.00	29.	1.19	11.	.88
19.	3.51	31.	1.19	13.	.88
21.	5.11	June 2.	1.12	15.	.82
23.	4.59	4.	.94	17.	.65
25.	4.59	6.	.88	19.	.60
27.	4.31	8.	.91	21.	.60
29.	4.31	10.	.91	23.	.60
31.	4.03	12.	.94	25.	.65
Apr. 2.	4.03	14.	1.00	27.	.65
4.	3.51	16.	1.12	29.	.60
6.	3.51	18.	1.06	31.	.60
8.	3.51	20.	1.00	Sept. 2.	.57
10.	3.25	22.	.82	4.	.40
12.	3.00	24.	.82	6.	.44
14.	3.00	26.	.88	8.	.57
15.	1.97	28.	.94	10.	.44
17.	2.24	30.	.82	12.	.54
19.	2.10	July 2.	.76	14.	.50
21.	2.10	4.	.76	15.	.60
23.	1.97	6.	.79	18.	.60
25.	1.97	8.	.76	20.	.65
27.	1.97	10.	.71	22.	.60
29.	2.10	12.	.73	24.	.71
May 1.	1.97	14.	.70	26.	.71
3.	1.72	16.	.70	28.	.82
5.	1.72	18.	.65	30.	.71
7.	1.72	20.	.62	Oct. 2.	.71
9.	1.72	22.	.60	4.	.68
11.	1.72	24.	.60	6.	.60
12.	1.18	26.	.63	7.	.61

LOMA ABAJO RIVER.

The Loma Abajo was measured by Charles J. Johansen for the Pacific Improvement Co., as indicated below. The point of measurement was a short distance above the junction with Gato Creek. At the time of these measurements no water was flowing in the pipe line from the Loma Abajo to the Ontare ranch.

Discharge measurements of Loma Abajo River in Santa Barbara County, Cal., in 1890.

Above junction with Gato Creek.

[By Charles J. Johansen.]

Date.	Dis-charge.	Date.	Dis-charge.	Date.	Dis-charge.
	<i>Sec.-feet.</i>		<i>Sec.-feet.</i>		<i>Sec.-feet.</i>
Feb. 7.....	3.84	May 14.....	0.46	July 27.....	0.21
14.....	3.00	16.....	.60	29.....	.21
27.....	5.67	18.....	.53	31.....	.23
Mar. 2.....	3.21	20.....	.53	Aug. 2.....	.24
4.....	3.00	20.....	.74	4.....	.26
6.....	2.80	22.....	.59	6.....	.20
9.....	2.80	24.....	.59	8.....	.18
11.....	2.24	26.....	.61	10.....	.24
13.....	2.06	28.....	.61	12.....	.27
15.....	2.06	30.....	.59	14.....	.30
17.....	1.88	June 1.....	.58	17.....	.12
21.....	1.88	3.....	.49	19.....	.13
23.....	1.88	5.....	.49	21.....	.17
25.....	1.55	7.....	.44	23.....	.11
27.....	1.55	9.....	.47	25.....	.12
29.....	1.55	11.....	.47	27.....	.12
31.....	1.39	13.....	.42	29.....	.11
Apr. 2.....	1.39	15.....	.50	31.....	.09
4.....	1.39	17.....	.56	Sept. 2.....	.07
6.....	1.23	19.....	.52	4.....	.08
8.....	1.23	21.....	.49	6.....	.12
10.....	1.08	23.....	.42	8.....	.06
12.....	1.23	25.....	.45	10.....	.09
14.....	1.08	27.....	.42	12.....	.07
17.....	.92	29.....	.37	14.....	.09
18.....	.76	July 1.....	.34	16.....	.09
20.....	.76	3.....	.42	18.....	.11
22.....	.76	5.....	.26	20.....	.08
24.....	.76	7.....	.24	22.....	.09
26.....	.76	9.....	.23	24.....	.12
28.....	.76	11.....	.24	26.....	.13
30.....	.76	13.....	.24	28.....	.14
May 2.....	.76	15.....	.24	30.....	.30
4.....	.68	17.....	.20	Oct. 2.....	.20
6.....	.68	19.....	.23	4.....	.14
8.....	.60	21.....	.17	6.....	.14
10.....	.60	23.....	.20		
12.....	.60	25.....	.18		

Date.	Locality.	Dis-charge.	Date.	Locality.	Dis-charge.
		<i>Sec.-feet.</i>			<i>Sec.-feet.</i>
Aug. 18, a. m.....	Below Upper Forks.	0.07	May 21.....	Upper Forks—West Fork.	0.07
18, p. m.....	Do.	.04	June 4.....	Upper Forks—East Fork.	.31
21, a. m.....	Do.	.11	4.....	Upper Forks—West Fork.	.06
21, p. m.....	Do.	.04			
May 21.....	Upper Forks—East Fork.	.46			

GATO CREEK.

Gato Creek was measured by Charles J. Johansen for the Pacific Improvement Co., as given below. It was gaged a short distance above its junction with the Loma Abajo, and at the time of its measurement no water was being conveyed in the pipe line situated along this stream.

Discharge measurements of Gato Creek at mouth, Santa Barbara County, Cal., in 1890.

[By Charles J. Johansen.]

Date.	Dis-charge.	Date.	Dis-charge.	Date.	Dis-charge.
	<i>Sec.-ft.</i>		<i>Sec.-ft.</i>		<i>Sec.-ft.</i>
Feb. 7.....	2.26	May 12.....	0.53	July 27.....	0.32
14.....	2.37	14.....	.46	29.....	.34
27.....	2.81	16.....	.53	31.....	.34
Mar. 2.....	2.05	18.....	.46	Aug. 2.....	.34
4.....	1.95	20.....	.46	4.....	.34
6.....	1.85	22.....	.59	6.....	.29
9.....	1.85	24.....	.59	8.....	.27
11.....	1.65	26.....	.58	10.....	.32
13.....	1.55	28.....	.56	12.....	.35
15.....	1.45	30.....	.56	14.....	.30
17.....	1.36	June 1.....	.54	15.....	.27
21.....	1.45	3.....	.49	17.....	.26
23.....	1.36	5.....	.50	19.....	.28
25.....	1.27	7.....	.49	21.....	.35
27.....	1.09	9.....	.44	23.....	.28
29.....	1.09	11.....	.50	25.....	.30
31.....	1.00	13.....	.45	27.....	.30
Apr. 2.....	1.00	15.....	.50	29.....	.28
4.....	.92	17.....	.58	31.....	.26
6.....	.92	19.....	.50	Sept. 2.....	.22
8.....	.92	21.....	.49	4.....	.22
10.....	.83	23.....	.44	6.....	.26
12.....	.83	25.....	.47	8.....	.26
14.....	.76	27.....	.45	10.....	.26
16.....	.76	29.....	.42	12.....	.26
17.....	.68	July 1.....	.44	14.....	.22
18.....	.76	3.....	.49	16.....	.22
20.....	.76	5.....	.34	18.....	.26
22.....	.76	7.....	.35	21.....	.30
24.....	.68	9.....	.32	22.....	.22
26.....	.68	11.....	.34	24.....	.22
28.....	.60	13.....	.34	26.....	.22
30.....	.68	15.....	.35	28.....	.37
May 2.....	.60	17.....	.33	30.....	.60
4.....	.68	19.....	.35	Oct. 2.....	.42
6.....	.68	21.....	.27	4.....	.35
8.....	.60	23.....	.32	6.....	.30
10.....	.53	25.....	.26	7.....	.30

SANTA YNEZ RIVER BASIN.

SANTA YNEZ RIVER NEAR SANTA BARBARA, CAL.

This station was originally established on November 21, 1902, above the mouth of Mono Creek. On November 1, 1903, the station was moved downstream about 5 miles to a point about one-fourth mile below the Gibraltar dam site, in the NE $\frac{1}{4}$ NE. $\frac{1}{4}$ sec. 15, T. 5 N., R. 27 W., and about 7 miles north of Santa Barbara.

Mono Creek enters about $3\frac{1}{2}$ miles above the station. No water is diverted above the gage. Water rights far exceed the mean low-water flow of the stream. The drainage area above the station is about 207 square miles.

The staff gage, in three sections, is on the right bank, about 300 yards below the north portal of the Santa Barbara city waterworks tunnel. The gage datum was lowered 5.00 feet on April 13, 1911. All gage heights beginning January 1, 1911, refer to the new datum.

The channel is composed of sand and gravel and is fairly permanent. As no discharge measurements were made during 1907-10, no estimates of daily discharge have been prepared for 1909 or 1910.

The station is maintained by the city of Santa Barbara. The gage-height record has been furnished by the board of water commissioners through its engineer, Lee M. Hyde.

Discharge measurements of Santa Ynez River near Santa Barbara, Cal., in 1903-1904, 1906, and 1911-12.

[By H. Rankin, R. L. North, L. M. Hyde, and C. M. Watts.]

Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.
1903.	<i>Feet.</i>	<i>Sec.-ft.</i>	1903.	<i>Feet.</i>	<i>Sec.-ft.</i>	1903.	<i>Feet.</i>	<i>Sec.-ft.</i>
Jan. 12.....	1.10	1.8	Mar. 27.....	1.50	17.1	May 27.....	1.40	11.4
25.....	1.10	1.9	28.....	1.49	16.9	28.....	1.40	11.2
27.....	1.20	3.3	29.....	1.50	18.0	29.....	1.40	10.7
28.....	3.55	457	30.....	2.10	93	30.....	1.40	10.4
29.....	1.70	50	31.....	2.15	111	June 1.....	1.38	8.7
30.....	1.50	22	Apr. 1.....	3.50	535	2.....	1.38	8.5
31.....	1.48	17.9	2.....	2.60	242	3.....	1.37	7.8
Feb. 1.....	1.50	22	3.....	2.20	137	4.....	1.35	7.1
2.....	1.45	16	4.....	2.10	114	5.....	1.35	7.0
3.....	1.42	14.6	5.....	1.90	73	6.....	1.35	7.0
4.....	1.45	15.3	6.....	1.85	57	8.....	1.33	6.0
5.....	1.45	14.9	7.....	1.80	53	9.....	1.32	5.7
7.....	1.45	15.6	8.....	1.70	44	10.....	1.32	4.9
8.....	1.58	25	9.....	1.65	43	11.....	1.31	4.9
9.....	1.50	18.4	10.....	1.65	38	12.....	1.30	4.9
10.....	1.49	17.6	11.....	1.62	38	13.....	1.30	4.9
11.....	1.46	16.1	12.....	1.60	34	15.....	1.30	4.7
12.....	1.45	15.5	14.....	1.56	30	16.....	1.30	4.4
13.....	1.44	14.9	15.....	1.55	29	17.....	1.30	4.4
14.....	1.44	14.7	16.....	2.50	175	18.....	1.30	4.4
16.....	1.40	10.8	17.....	2.30	136	20.....	1.28	3.1
17.....	1.40	11.3	18.....	2.10	95	July 12.....	1.20	1.2
18.....	1.40	11.1	19.....	2.05	86	Dec. 20.....	(a)	.30
19.....	1.40	11	20.....	2.00	79	21.....	(a)	.35
20.....	1.39	10.8	21.....	1.90	74	22.....	(a)	.35
21.....	1.39	11	22.....	1.85	67	23.....	(a)	.40
23.....	1.38	10.1	23.....	1.80	54	24.....	(a)	.40
24.....	1.37	9	24.....	1.75	44	25.....	(a)	.40
25.....	1.37	9.1	25.....	1.71	43	26.....	(a)	.40
26.....	1.36	8.6	27.....	1.68	35	27.....	(a)	.40
27.....	1.35	8.7	28.....	1.65	35	28.....	(a)	.40
28.....	1.35	8.3	29.....	1.60	33	29.....	(a)	.42
Mar. 1.....	1.35	8.2	30.....	1.59	32	30.....	(a)	.42
2.....	1.35	8	May 2.....	1.56	28	31.....	(a)	.42
3.....	1.35	7.9	3.....	1.55	27			
4.....	1.45	14.8	4.....	1.55	28			
5.....	1.65	32	5.....	1.54	27	Jan. 18.....	2.20	4.32
6.....	1.50	20	6.....	1.51	20	19.....	2.07	1.77
7.....	1.50	20	7.....	1.50	19.6	Feb. 5.....	2.28	3.44
9.....	1.43	13.5	8.....	1.50	19.0	6.....	.....	3.27
10.....	1.42	13.2	10.....	1.49	17.8	7.....	2.15	2.35
11.....	1.42	13.4	11.....	1.48	17.5	8.....	2.15	2.27
12.....	1.41	12.7	12.....	1.48	17.7	9.....	2.10	2.17
13.....	1.42	13.2	13.....	1.48	16.7	10.....	2.08	1.74
14.....	1.43	12.8	14.....	1.48	16.7	16.....	.....	6.89
15.....	1.43	13.1	15.....	1.46	16.1	17.....	.....	4.49
16.....	1.43	12.8	16.....	1.45	15.2	18.....	.....	2.74
17.....	1.42	11.6	17.....	1.45	14.9	19.....	.....	2.53
18.....	1.41	11.3	18.....	1.45	15.5	20.....	.....	2.11
19.....	1.40	11.1	19.....	1.45	15.2	27.....	.....	45.00
20.....	1.40	10.9	20.....	1.45	14.4	28.....	3.00	96.00
21.....	1.40	10.6	21.....	1.45	13.5	29.....	2.32	16.20
22.....	1.40	10.5	22.....	1.45	13.6	Mar. 1.....	.....	7.00
23.....	1.40	10.6	23.....	1.45	13.4	2.....	.....	5.28
25.....	1.67	29	25.....	1.43	12.2	3.....	.....	4.33
26.....	1.55	19.6	26.....	1.42	11.9	4.....	.....	2.70

a Weir.

Discharge measurements of Santa Ynez River near Santa Barbara, Cal., in 1903-1904, 1906, and 1911-12—Continued.

Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.
1904.	<i>Feet.</i>	<i>Sec.-ft.</i>	1904.	<i>Feet.</i>	<i>Sec.-ft.</i>	1911.	<i>Feet.</i>	<i>Sec.-ft.</i>
Mar. 5.....	2.95		May 18.....	2.16	4.43	June 5.....	4.96	55
6.....	2.88		19.....	2.12	3.60	11.....	4.91	49
7.....	2.43		21.....	2.12	3.29	29.....	4.80	27
8.....	2.33		22.....	2.12	3.34	July 2.....	4.75	27
9.....	2.60		23.....	2.11	3.13	6.....	4.75	22
10.....	2.35		24.....	2.11	3.19	13.....	4.70	19
11.....	3.08	135.00	25.....	2.16	4.43	20.....	4.66	15
12.....	2.44	27.00	26.....	2.14	4.41	24.....	4.65	13
13.....	2.36	16.40	27.....	2.12	3.32	28.....	4.60	10
14.....	2.32	11.90	30.....	2.09	2.99	Aug. 3.....	4.56	8.3
15.....	2.28	10.20	31.....	2.09	3.12	11.....	4.60	8.5
19.....	2.20	7.24	June 1.....	2.09	2.94	21.....	4.55	5.0
20.....	2.20	6.96	2.....	2.07	2.60	29.....	4.52	5.0
21.....	2.18	6.41	3.....	2.06	2.50	31.....	4.50	4.9
23.....	3.88	442.00	4.....	2.05	2.28	Sept. 6 ^b	4.50	4.9
24.....	2.82	70.00	5.....	2.05	2.28	6.....	4.50	4.7
25.....	2.68	49.00	6.....	2.03	2.06	20.....	4.50	4.7
26.....	2.52	30.00	10.....	2.01	.94	Oct. 2.....	4.52	4.9
27.....	2.46	26.00				14.....	4.53	5.4
28.....	2.43	24.00	1906.			21.....	4.52	6.0
29.....	2.47	26.00	Jan. 12.....	2.10	4.7	31.....	4.66	8.3
30.....	2.45	25.00	26.....	2.18	10.1	Nov. 11.....	4.68	8.9
31.....	2.42	23.00	Feb. 7.....	2.21	10.1	20.....	4.80	10
Apr. 1.....	2.37	16.30	10.....	2.40	37	Dec. 1.....	4.80	10
2.....	2.35	14.50	11.....	2.61	63	11.....	4.85	13
3.....	2.33	14.20	15.....	2.94	144	21.....	4.83	13
4.....	2.31	11.20	16.....	2.53	59			
5.....	2.32	12.40	24.....	2.30	24	1912.		
6.....	2.27	10.10	Mar. 14.....	3.37	291	Jan. 2.....	4.83	13
7.....	2.26	9.64	15.....	3.10	189	11.....	4.86	14
8.....	2.25	8.87	16 ^a	5.30	2,440	22.....	4.85	11
12.....	2.20	6.80	16 ^a	6.70	4,170	31.....	4.85	11
13.....	2.20	6.87	16 ^a	7.65	5,440	Feb. 19.....	4.81	10
14.....	2.19	5.32	16 ^a	8.65	6,700	22 ^b	4.80	9.6
15.....	2.19	5.24	17 ^a	4.30	970	22.....	4.80	9.3
16.....	2.21	5.93	17 ^a	4.10	780	23.....	4.80	9.4
17.....	2.20	5.61	17 ^a	4.30	968	23 ^b	4.80	9.2
18.....	2.20	5.64	17 ^a	4.10	777	Mar. 3.....	5.04	51
19.....	3.03	101.00	18 ^a	3.74	544	4.....	5.00	28
20.....	2.83	74.00	18 ^a	3.74	534	5.....	6.55	492
21.....	2.52	30.00	Apr. 17.....	2.80	131	5.....	5.39	105
22.....	2.47	25.00	June 1.....	2.50	65	6.....	6.50	499
24.....	2.39	17.10	29.....	2.21	22	6.....	6.02	304
25.....	2.37	16.60	July 9.....	2.10	8.5	12.....	7.10	765
27.....	2.47	24.00	27.....	1.95	2.0	12.....	7.50	993
28.....	2.46	23.00	Aug. 17.....	1.82	1.0	24.....	5.08	53
29.....	2.43	21.00	Sept. 24.....	1.82	0.7	Apr. 12.....	5.57	167
30.....	2.43	20.00	Dec. 27.....	3.90	468	20.....	5.17	83
May 2.....	2.38	17.20				May 1.....	5.03	38
5.....	2.32	11.40	1911.			13.....	4.95	29
6.....	2.29	10.50	Mar. 27.....	6.50	514	24.....	4.88	26
7.....	2.28	10.20	31.....	6.20	361	25.....	5.15	82
8.....	2.23	7.90	Apr. 13.....	6.72	229	June 4.....	4.82	14
9.....	2.23	8.05	24.....	5.48	155	5.....	4.80	12
10.....	2.22	7.69	29.....	5.40	148	5 ^c	4.80	10
14.....	2.19	5.89	May 5.....	5.29	108	6 ^c	4.80	10
15.....	2.19	6.40	10.....	5.20	105	6.....	4.80	12
16.....	2.15	4.28	20.....	5.10	85	14.....	4.78	9.8
17.....	2.13	4.05	30.....	5.00	62	24.....	4.75	8.0

^a Measured by floats.

^b Measured over weir.

^c Made by F. C. Ebert.

NOTE.—Measurements during 1911-12 were made about 2,000 feet above the gage. There is an inflow of 0.5 to 1.05 second-feet between the section and the gage. Beginning June 29, 1911, this inflow was closely estimated and added to the measured amount.

Daily gage height, in feet, of Santa Ynez River near Santa Barbara, Cal., for 1903-1912.

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.
1903.								1903.							
1.....	1.10	1.50	1.35	3.50	1.58	1.38	.....	16.....	1.10	1.40	1.43	2.50	1.45	1.30	.....
2.....	1.10	1.45	1.35	2.60	1.56	1.38	.....	17.....	1.10	1.40	1.42	2.30	1.45	1.30	.....
3.....	1.10	1.42	1.35	2.20	1.55	1.37	.....	18.....	1.10	1.40	1.41	2.10	1.45	1.30	.....
4.....	1.10	1.45	1.45	2.10	1.55	1.35	.....	19.....	1.10	1.40	1.40	2.05	1.45	1.30	.....
5.....	1.10	1.45	1.65	1.90	1.54	1.35	.....	20.....	1.10	1.39	1.40	2.00	1.45	1.28	.....
6.....	1.10	1.45	1.50	1.85	1.51	1.35	.....	21.....	1.10	1.39	1.40	1.90	1.45	.....	.....
7.....	1.10	1.45	1.50	1.80	1.50	1.34	.....	22.....	1.10	1.39	1.40	1.85	1.45	.....	.....
8.....	1.10	1.58	1.45	1.70	1.50	1.33	.....	23.....	1.10	1.38	1.40	1.80	1.45	.....	.....
9.....	1.10	1.50	1.43	1.65	1.50	1.32	.....	24.....	1.10	1.37	1.45	1.75	1.44	.....	.....
10.....	1.10	1.49	1.42	1.65	1.49	1.32	.....	25.....	1.10	1.37	1.67	1.71	1.43	.....	.....
11.....	1.10	1.46	1.42	1.62	1.48	1.31	.....	26.....	1.10	1.36	1.55	1.70	1.42	.....	.....
12.....	1.10	1.45	1.41	1.60	1.48	1.30	1.20	27.....	1.20	1.35	1.50	1.68	1.40	.....	.....
13.....	1.10	1.44	1.42	1.60	1.48	1.30	.....	28.....	3.55	1.35	1.49	1.65	1.40	.....	.....
14.....	1.10	1.44	1.43	1.56	1.48	1.30	.....	29.....	1.70	.....	1.50	1.60	1.40	.....	.....
15.....	1.10	1.42	1.43	1.55	1.46	1.30	.....	30.....	1.50	.....	2.10	1.59	1.40	.....	.....
								31.....	1.45	.....	2.15	.....	1.39	.....	.....

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	Sept.	Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	Sept.
1904.								1904.							
1.....	2.21	2.36	2.40	2.09	.....	16.....	.....	.....	2.40	2.26	2.20	2.16	.....
2.....	2.13	2.34	2.38	2.08	.....	17.....	.....	2.32	2.23	2.20	2.13	.....	.....
3.....	2.12	2.32	2.33	2.06	.....	18.....	2.20	2.24	2.21	2.20	2.15	.....	.....
4.....	2.09	2.31	2.34	2.05	.....	19.....	2.07	2.22	2.20	3.08	2.12	.....	.....
5.....	2.28	2.09	2.31	2.32	2.05	.....	20.....	.....	2.21	2.20	2.78	2.13	.....	.....
6.....	2.27	2.09	2.27	2.30	2.03	.....	21.....	.....	2.05	2.18	2.56	2.12	.....	.....
7.....	2.15	2.08	2.26	2.27	2.02	.....	22.....	.....	.....	2.18	2.47	2.12	.....	.....
8.....	2.15	2.08	2.25	2.24	2.02	.....	23.....	.....	.....	3.89	2.44	2.12	.....	.....
9.....	2.10	2.09	2.25	2.23	2.02	.....	24.....	.....	.....	2.83	2.39	2.11	.....	3.00
10.....	2.08	2.70	2.23	2.22	2.01	.....	25.....	.....	.....	2.66	2.37	2.15	.....	8.20
11.....	2.70	2.21	2.21	2.00	.....	26.....	.....	.....	2.52	2.40	2.14	.....	3.00
12.....	2.44	2.20	2.20	2.00	.....	27.....	.....	3.12	2.45	2.47	2.12	.....	2.60
13.....	2.36	2.20	2.20	.....	.....	28.....	.....	3.00	2.44	2.42	2.10	.....	2.50
14.....	2.30	2.20	2.19	.....	.....	29.....	.....	2.30	2.47	2.46	2.10	.....	2.45
15.....	2.28	2.19	2.20	.....	.....	30.....	.....	.....	2.44	2.43	2.09	.....	2.40
								31.....	.....	.....	2.40	.....	2.09	.....	.....

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1904-5.												
1.....	2.37	2.18	2.20	2.3	2.5	3.1	3.25	2.65	2.4	2.05	2.0	1.9
2.....	2.32	2.19	2.20	2.3	3.6	3.05	3.25	2.7	2.4	2.05	2.0	1.9
3.....	2.30	2.19	2.21	2.25	8.4	3.0	3.2	2.65	2.4	2.05	2.0	1.85
4.....	2.27	2.19	2.21	2.25	6.8	3.0	3.15	2.6	2.4	2.05	2.0	1.85
5.....	2.26	2.19	2.21	2.25	4.0	3.05	3.15	2.6	2.4	2.05	2.0	1.85
6.....	2.27	2.19	2.20	2.25	3.9	3.1	3.1	2.6	2.4	2.05	2.0	1.85
7.....	2.36	2.19	2.21	2.2	3.75	3.0	3.1	2.6	2.4	2.05	2.0	1.85
8.....	2.38	2.19	2.20	3.8	3.7	2.9	3.05	2.6	2.4	2.05	2.0	1.85
9.....	2.34	2.19	2.21	3.7	3.65	2.9	3.05	2.6	2.35	2.05	2.0	1.85
10.....	2.32	2.19	2.21	2.6	3.65	2.85	3.05	2.6	2.35	2.05	2.0	1.85
11.....	2.29	2.19	2.21	2.55	3.6	2.9	3.0	2.6	2.35	2.05	2.0	1.85
12.....	2.26	2.19	2.21	2.5	3.6	4.7	3.05	2.6	2.3	2.05	2.0	1.85
13.....	2.26	2.19	2.21	2.45	3.6	8.9	3.0	2.55	2.3	2.05	2.0	1.85
14.....	2.24	2.20	2.20	2.4	3.55	5.65	2.95	2.55	2.25	2.05	2.0	1.85
15.....	2.22	2.20	2.20	2.45	3.4	4.65	2.95	2.55	2.25	2.05	2.0	1.85
16.....	2.21	2.20	2.20	2.5	4.45	5.3	2.9	2.55	2.2	2.05	1.95	1.85
17.....	2.20	2.20	2.21	2.45	6.55	4.65	2.9	2.55	2.2	2.05	1.95	1.85
18.....	2.20	2.20	2.21	2.4	4.0	4.4	2.9	2.5	2.2	2.05	1.95	1.85
19.....	2.20	2.20	2.21	2.4	3.75	4.15	2.85	2.5	2.15	2.05	1.95	1.85
20.....	2.20	2.22	2.21	2.4	3.7	4.0	2.85	2.5	2.15	2.05	1.95	1.85
21.....	2.19	2.22	2.21	4.25	3.65	3.8	2.85	2.5	2.15	2.05	1.95	1.85
22.....	2.19	2.21	2.21	3.15	3.5	3.75	2.8	2.5	2.1	2.05	1.95	1.85
23.....	2.18	2.21	2.21	2.9	3.4	3.65	2.8	2.5	2.1	2.05	1.95	1.8
24.....	2.18	2.21	2.21	2.8	3.3	3.6	2.8	2.5	2.1	2.05	1.9	1.8
25.....	2.18	2.21	2.21	2.75	3.2	3.55	2.75	2.45	2.1	2.05	1.9	1.8

Daily gage height, in feet, of Santa Ynez River near Santa Barbara, Cal., for 1903-1912—
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.			
1904-5.															
26.....	2.18	2.21	2.21	2.65	3.15	3.5	2.75	2.45	2.1	2.0	1.9	1.8			
27.....	2.18	2.21	2.21	2.65	3.1	3.4	2.85	2.45	2.1	2.0	1.9	1.8			
28.....	2.18	2.21	2.21	2.6	3.1	3.4	2.75	2.45	2.1	2.0	1.9	1.8			
29.....	2.18	2.20	2.21	2.6	.....	3.6	2.7	2.45	2.1	2.0	1.9	1.8		
30.....	2.18	2.20	2.21	2.5	.....	3.4	2.7	2.45	2.1	2.0	1.9	1.8		
31.....	2.18	.....	2.32	2.5	.....	3.3	.....	2.45	.....	2.0	1.9	.....		
1905-6.															
1.....	1.8	1.8	2.05	2.0	2.15	2.25	3.6	2.55	2.5	2.2	1.95	1.8			
2.....	1.8	1.8	2.05	2.0	2.1	2.25	3.55	2.5	2.5	2.2	1.95	1.8			
3.....	1.8	1.8	2.05	2.05	2.1	2.25	3.5	2.5	2.45	2.2	1.9	1.8			
4.....	1.8	1.8	2.05	2.05	2.1	2.8	3.4	2.5	2.45	2.15	1.9	1.8			
5.....	1.8	1.8	2.05	2.05	2.1	2.5	3.3	2.5	2.4	2.15	1.9	1.8			
6.....	1.8	1.85	2.05	2.05	2.2	2.4	3.3	2.45	2.4	2.15	1.9	1.8			
7.....	1.8	1.85	2.05	2.05	2.2	2.35	3.2	2.45	2.4	2.1	1.9	1.8			
8.....	1.8	1.85	2.05	2.05	2.2	2.3	3.1	2.45	3.35	2.1	1.9	1.8			
9.....	1.8	1.85	2.05	2.05	2.15	2.3	3.1	2.45	2.35	2.1	1.9	1.8			
10.....	1.8	1.85	2.05	2.05	2.3	2.3	3.05	2.45	2.35	2.1	1.85	1.8			
11.....	1.8	1.85	2.05	2.05	2.6	2.3	3.05	2.4	2.3	2.1	1.85	1.8			
12.....	1.8	1.9	2.05	2.1	2.4	6.4	3.0	2.4	2.3	2.1	1.85	1.8			
13.....	1.8	1.9	2.05	2.15	2.2	6.0	3.0	2.4	2.3	2.1	1.85	1.8			
14.....	1.8	1.9	2.05	2.25	2.4	3.7	2.9	2.4	2.3	2.1	1.85	1.8			
15.....	1.8	1.9	2.05	2.25	3.05	3.05	2.8	2.4	2.3	2.1	1.85	1.8			
16.....	1.8	1.9	2.05	2.25	2.5	7.2	2.8	2.4	2.3	2.1	1.8	1.8			
17.....	1.8	1.9	2.05	2.25	2.4	4.2	2.8	2.4	2.25	2.1	1.8	1.8			
18.....	1.8	1.9	2.05	2.25	2.35	3.65	2.75	2.35	2.25	2.1	1.8	1.8			
19.....	1.8	1.9	2.05	2.8	2.3	3.35	2.75	2.35	2.25	2.1	1.8	1.8			
20.....	1.8	1.9	2.05	2.5	2.3	3.15	2.7	2.35	2.25	2.05	1.8	1.8			
21.....	1.8	1.9	2.05	2.35	2.4	3.1	2.7	2.35	2.25	2.05	1.8	1.8			
22.....	1.8	1.9	2.05	2.3	2.4	3.0	2.7	2.35	2.25	2.05	1.8	1.8			
23.....	1.8	1.9	2.05	2.3	2.3	3.85	2.7	2.35	2.25	2.0	1.8	1.8			
24.....	1.8	1.9	2.05	2.25	2.3	6.6	2.7	2.35	2.25	2.0	1.8	1.8			
25.....	1.8	1.9	2.05	2.25	2.3	6.75	2.65	2.35	2.25	2.0	1.8	1.8			
26.....	1.8	2.0	2.05	2.2	2.3	7.1	2.65	2.5	2.2	2.0	1.8	1.8			
27.....	1.8	2.1	2.05	2.15	2.25	4.9	2.6	3.15	2.2	2.0	1.8	1.8			
28.....	1.8	2.1	2.05	2.15	2.25	4.4	2.6	3.9	2.2	1.95	1.8	1.8			
29.....	1.8	2.1	2.05	2.15	.....	4.0	2.6	2.9	2.2	1.95	1.8	1.8		
30.....	1.8	2.05	2.05	2.15	.....	3.8	2.6	2.7	2.2	1.95	1.8	1.8		
31.....	1.8	.....	2.05	2.15	.....	3.7	.....	2.55	.....	1.95	1.8	.....		
Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
1906-7.															
1.....	1.8	1.8	1.9	2.52	3.6	2.9	3.95	16.....	1.8	1.85	2.2	4.2	3.8	3.6	3.0
2.....	1.8	1.8	1.9	2.52	3.55	2.87	3.85	17.....	1.8	1.85	2.2	5.25	3.8	3.55	2.97
3.....	1.8	1.8	1.9	2.5	4.0	2.8	3.8	18.....	1.8	1.85	2.15	4.3	3.55	3.5	2.95
4.....	1.8	1.8	1.9	2.49	4.25	9.5	3.65	19.....	1.8	1.85	2.1	4.3	3.2	7.45	2.94
5.....	1.8	1.8	1.9	2.48	4.2	8.0	3.6	20.....	1.8	1.85	2.1	4.3	2.95	6.3	2.92
6.....	1.8	1.8	1.9	2.7	4.2	7.0	3.5	21.....	1.8	1.85	2.1	4.3	2.95	5.85	2.9
7.....	1.8	1.85	1.9	3.6	4.15	5.2	3.6	22.....	1.8	1.85	2.05	4.3	3.7	5.5	2.85
8.....	1.8	1.85	1.9	9.3	4.1	4.1	3.4	23.....	1.8	1.85	2.05	4.3	3.5	5.3	2.81
9.....	1.8	1.85	1.95	10.4	3.95	4.05	3.35	24.....	1.8	1.85	2.05	4.3	3.3	5.0	2.8
10.....	1.8	1.85	2.1	7.0	3.9	4.0	3.3	25.....	1.8	1.85	2.05	4.3	3.2	7.0	2.76
11.....	1.8	1.85	2.25	5.8	3.85	4.0	3.3	26.....	1.8	1.85	2.6	4.3	3.1	5.45	2.72
12.....	1.8	1.85	3.85	5.0	3.8	3.75	3.25	27.....	1.8	1.85	3.35	4.3	2.97	4.7	2.69
13.....	1.8	1.85	2.5	4.5	3.75	3.7	3.15	28.....	1.8	1.85	2.8	4.3	2.93	4.6	2.66
14.....	1.8	1.85	2.4	4.1	3.7	3.65	3.1	29.....	1.8	1.95	2.75	4.1	4.4	2.63
15.....	1.8	1.85	2.3	4.3	3.75	3.65	3.05	30.....	1.8	1.9	2.75	4.0	4.3	2.61
								31.....	1.8	3.0	3.55	4.2

Daily gage height, in feet, of Santa Ynez River near Santa Barbara, Cal., for 1903-1912—
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Day.	Oct.	Nov.	Dec.	Jan.
1907-8.					1907-8.				
1.....	1.81	2.05	1.91	.....	16.....	.....	1.97	.....	.....
2.....	.....	.....	.....	.....	17.....	.....	1.97	2.1	2.09
3.....	.....	2.0	1.92	.....	18.....	.....	.....	.....	.....
4.....	.....	.....	.....	1.95	19.....	.....	1.96	2.08	.....
5.....	1.81	.....	.....	.....	20.....	.....	.....	.....	2.06
6.....	.....	1.98	1.92	.....	21.....	1.83	.....	.....	.....
7.....	.....	1.98	.....	1.94	22.....	.....	.....	.....	.....
8.....	1.82	.....	.....	.....	23.....	.....	1.94	2.08	2.04
9.....	.....	.....	2.3	1.93	24.....	2.01	.....	.....	.....
10.....	.....	1.97	.....	.....	25.....	1.99	.....	2.06	6.40
11.....	.....	.....	2.15	1.93	26.....	2.3	.....	.....	5.00
12.....	.....	1.98	.....	.....	27.....	3.42	1.92	2.05	5.00
13.....	.....	.....	.....	1.92	28.....	2.4	.....	2.0	4.00
14.....	.....	1.98	2.12	2.17	29.....	.....	1.91	2.0	3.01
15.....	.....	.....	.....	2.12	30.....	2.21	1.9	.....	2.78
					31.....	.....	.....	1.98	2.61

Day.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910.								
1.....	.....	2.0	.....	.....	1.45	1.25	1.05	1.0
2.....	.....	2.0	.....	.....	1.45	1.25	1.05	1.0
3.....	.....	2.0	.....	.....	1.45	1.2	1.05	1.0
4.....	.....	2.0	2.25	.....	1.4	1.2	1.05	1.0
5.....	.....	2.0	2.25	.....	1.4	1.2	1.05	1.0
6.....	2.0	1.95	2.25	.....	1.4	1.2	1.05	1.0
7.....	2.0	1.95	2.25	.....	1.4	1.2	1.05	1.0
8.....	2.0	1.95	2.2	.....	1.4	1.2	1.05	1.0
9.....	2.0	1.95	2.2	.....	1.4	1.2	1.05	1.0
10.....	2.0	1.95	2.2	.....	1.4	1.15	1.05	1.0
11.....	2.0	1.95	2.1	1.7	1.4	1.15	1.05	1.0
12.....	2.0	1.95	2.05	1.7	1.4	1.1	1.05	1.0
13.....	2.0	1.95	2.05	1.7	1.4	1.1	1.05	1.0
14.....	2.0	2.0	2.05	1.7	1.4	1.1	1.05	1.0
15.....	2.0	2.0	2.05	1.7	1.4	1.1	1.05	1.8
16.....	2.0	1.95	2.05	1.7	1.4	1.1	1.05	1.8
17.....	2.0	1.95	2.0	1.55	1.4	1.1	1.05	1.6
18.....	2.0	1.95	2.0	1.65	1.4	1.1	1.05	1.4
19.....	2.0	1.95	2.0	1.65	1.4	1.1	1.05	1.2
20.....	2.0	1.95	2.0	1.65	1.35	1.1	1.05	1.2
21.....	2.0	1.95	2.0	1.65	1.35	1.1	1.05	1.2
22.....	2.0	.....	2.0	1.6	1.35	1.1	1.05	1.2
23.....	2.0	.....	2.0	1.6	1.35	1.1	1.05	1.2
24.....	2.0	2.0	2.0	1.6	1.3	1.1	1.05	1.15
25.....	2.0	2.8	.....	1.6	1.3	1.1	1.05	.....
26.....	2.0	2.8	.....	1.6	1.3	1.1	1.0	.....
27.....	2.0	2.9	.....	1.55	1.25	1.1	1.0	.....
28.....	2.0	2.0	.....	1.55	1.25	1.1	1.0	.....
29.....	.....	.....	.....	1.55	1.2	1.05	1.0	.....
30.....	.....	.....	.....	1.5	1.25	1.05	1.0	.....
31.....	.....	.....	.....	1.5	.....	1.05	1.0	.....

Daily gage height, in feet, of Santa Ynez River near Santa Barbara, Cal., for 1903-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.												
1.....		1.1	1.2	6.21	8.55	8.45	6.18	5.37	5.00	4.77	4.57	-----
2.....		1.1	1.2	6.21	7.90	8.85	6.15	-----	-----	4.76	4.56	-----
3.....		1.1	1.2	6.21	8.35	9.95	6.13	5.32	4.99	-----	4.56	4.50
4.....		1.15	1.2	6.21	9.75	10.10	-----	5.31	4.98	-----	-----	4.50
5.....		1.15	1.2	6.21	9.00	10.65	6.07	5.29	4.96	4.75	-----	4.50
6.....		1.15	1.2	6.21	8.70	10.85	6.04	5.27	4.96	4.75	4.58	4.50
7.....		1.15	1.2	6.21	8.20	11.55	5.98	5.25	4.95	4.73	4.58	4.50
8.....		-----	1.2	6.21	8.10	14.10	5.90	5.25	4.94	4.72	4.58	4.50
9.....		1.15	1.2	6.35	8.10	20.00	5.86	5.22	4.93	4.72	4.59	4.50
10.....		1.2	1.2	8.10	8.00	12.45	5.82	5.20	4.92	4.72	4.59	4.50
11.....		1.2	1.2	6.80	8.40	10.40	5.79	5.20	4.91	4.71	4.60	4.51
12.....	1.1	1.2	1.2	6.65	8.20	9.10	5.77	5.19	-----	4.71	4.60	4.51
13.....	1.1	1.2	1.2	6.87	8.00	8.90	5.72	5.19	4.89	4.70	4.57	4.51
14.....	1.1	1.2	1.2	6.90	8.20	-----	5.70	5.17	4.88	4.70	4.57	4.51
15.....	1.1	1.2	1.2	7.80	8.00	7.80	5.67	5.16	4.88	4.69	4.57	4.51
16.....	1.1	1.2	1.2	7.07	7.85	7.65	5.65	5.15	4.89	4.67	4.56	4.51
17.....	1.1	1.2	1.2	-----	7.80	7.55	5.62	5.14	4.88	-----	4.56	4.50
18.....	1.1	1.2	1.2	6.76	7.75	7.50	5.59	5.12	4.87	4.67	4.56	-----
19.....	1.1	1.2	1.2	6.69	7.70	7.40	5.57	5.11	4.85	4.66	4.56	4.50
20.....	1.1	1.2	1.2	6.62	7.73	7.28	5.53	5.10	4.84	4.66	4.55	4.50
21.....	1.1	1.2	1.2	6.58	7.64	7.30	5.51	5.09	4.84	4.66	4.55	4.50
22.....	1.1	1.2	1.2	6.55	7.60	7.00	5.50	5.06	4.83	4.65	4.53	4.50
23.....	1.1	1.2	-----	6.52	7.52	6.80	5.49	5.06	4.83	4.65	4.53	4.50
24.....	1.1	1.2	1.2	6.82	7.47	6.70	5.48	5.04	4.83	4.65	4.53	4.50
25.....	1.1	1.2	1.2	8.00	7.41	6.62	5.46	5.04	4.82	4.64	4.52	4.50
26.....	1.1	1.2	1.25	7.48	7.38	6.53	5.44	5.04	4.81	4.62	4.53	4.50
27.....	1.1	1.2	1.25	7.18	7.42	6.50	5.45	5.03	4.81	4.61	4.53	4.50
28.....	1.1	1.2	1.25	8.55	7.68	6.43	5.41	5.01	4.81	4.60	4.52	4.51
29.....	1.1	1.2	1.25	12.30	-----	6.35	5.40	5.01	4.80	4.60	4.52	5.51
30.....	1.1	1.2	1.25	10.80	-----	6.27	5.38	5.00	4.78	4.59	4.51	4.52
31.....	1.1	-----	1.2	10.50	-----	6.20	-----	5.00	-----	4.59	4.50	-----

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.									
1.....	4.52	4.65	4.80	4.83	4.85	4.8	5.06	5.03	4.84
2.....	4.52	4.65	4.80	4.83	4.85	4.8	5.05	5.02	4.83
3.....	4.52	-----	4.80	4.83	-----	5.0	5.04	5.02	4.82
4.....	4.52	4.65	-----	4.83	4.85	4.98	5.02	5.02	4.82
5.....	4.52	4.65	4.82	4.83	4.84	5.95	5.0	5.01	4.8
6.....	4.53	4.65	4.95	4.84	4.83	6.25	5.0	4.9	4.8
7.....	4.53	4.65	4.85	4.84	4.83	5.35	5.0	4.9	-----
8.....	4.53	4.65	4.85	4.84	4.83	5.3	4.98	5.0	-----
9.....	-----	4.65	4.85	4.84	4.83	5.35	4.98	-----	4.8
10.....	-----	4.65	4.85	4.84	4.82	5.8	-----	5.0	4.8
11.....	4.53	4.68	4.85	4.86	4.82	5.36	5.7	5.0	4.78
12.....	4.53	4.73	4.83	4.86	4.82	6.75	5.56	5.0	4.78
13.....	4.53	4.77	4.83	4.86	4.82	6.0	5.4	4.95	4.78
14.....	4.53	4.78	4.82	4.86	4.82	5.7	5.32	4.95	4.78
15.....	4.53	4.79	4.82	-----	4.82	5.5	5.24	4.93	4.77
16.....	4.53	4.79	4.82	4.86	4.82	5.38	5.27	4.91	4.76
17.....	4.53	4.79	4.83	4.86	4.82	5.3	5.22	4.91	4.75
18.....	4.52	4.79	4.83	4.85	4.81	5.22	5.22	4.9	4.75
19.....	4.52	4.79	4.83	4.85	4.81	-----	5.22	4.9	4.75
20.....	4.52	4.80	4.83	4.85	4.81	5.2	5.17	4.9	4.73
21.....	4.52	4.80	4.83	4.85	4.81	5.13	5.15	4.9	4.72
22.....	4.52	-----	4.83	4.85	4.8	5.13	5.12	4.9	4.72
23.....	-----	4.80	4.83	4.85	4.8	5.1	5.1	4.9	4.75
24.....	4.52	4.80	4.83	4.85	4.8	5.08	5.09	4.88	4.75
25.....	4.52	4.81	-----	4.85	4.8	5.08	5.07	5.02	4.74
26.....	4.54	4.81	-----	4.86	4.8	5.12	5.06	5.02	4.72
27.....	4.60	4.81	4.83	4.89	4.8	5.23	5.06	5.0	4.72
28.....	4.62	4.81	4.83	4.86	4.8	5.13	5.06	4.9	4.71
29.....	4.65	4.80	4.84	4.85	4.8	5.11	5.05	4.86	4.71
30.....	4.65	4.80	4.83	4.85	-----	5.1	5.05	4.85	4.71
31.....	4.66	-----	4.83	4.85	-----	5.08	-----	4.85	-----

NOTE.—No record June 21 to Nov. 3, 1903. Discharge measured over weir Dec. 21, 1903 to Jan. 17, 1904, Jan. 20 to Feb. 4, Feb. 11-15, 22-26, June 13-30, and July 1-14, 1904. River dry Nov. 3 to Dec. 20, 1903, and July 15 to Sept. 23, 1904. Station moved to Gibraltar dam site on Nov. 3, 1903, 5 miles below former location. After Jan. 1, 1911, gage heights refer to new gage installed Apr. 13, 1911. The datum of the new gage is 5 feet lower than that of the old gage.

Rating tables for Santa Ynez River near Santa Barbara, Cal.

January 1, 1904, to February 2, 1905.

Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.
<i>Feet.</i>	<i>Sec.-ft.</i>	<i>Feet.</i>	<i>Sec.-ft.</i>	<i>Feet.</i>	<i>Sec.-ft.</i>	<i>Feet.</i>	<i>Sec.-ft.</i>
2.00	0.4	2.60	38	3.20	154	3.80	401
2.10	2.8	2.70	50	3.30	186	3.90	451
2.20	6.4	2.80	65	3.40	222	4.00	502
2.30	11.6	2.90	82	3.50	263		
2.40	18.5	3.00	103	3.60	306		
2.50	28	3.10	126	3.70	353		

February 3 to December 31, 1905.

1.80	1	3.00	153	4.20	875	5.80	2,790
1.90	2	3.10	184	4.30	965	6.00	3,070
2.00	3	3.20	220	4.40	1,065	6.20	3,360
2.10	5	3.30	265	4.50	1,175	6.40	3,650
2.20	10	3.40	315	4.60	1,285	6.60	3,940
2.30	19	3.50	370	4.70	1,395	6.80	4,230
2.40	30	3.60	430	4.80	1,510	7.00	4,520
2.50	44	3.70	495	4.90	1,630	7.50	5,245
2.60	60	3.80	565	5.00	1,750	8.00	5,970
2.70	79	3.90	635	5.20	1,990	8.50	6,695
2.80	100	4.00	710	5.40	2,250	9.00	7,420
2.90	125	4.10	790	5.60	2,510		

NOTE.—Table applicable only to open channel. It is based on discharge measurements made during January, February, and March, 1906.

January 1, 1906, to December 31, 1908.

1.80	1	2.20	12	2.60	65	3.00	156
1.90	2	2.30	22	2.70	83	3.10	186
2.00	3	2.40	35	2.80	104	3.20	223
2.10	6	2.50	49	2.90	129		

NOTE.—This table is based on discharge measurements made during 1906 and is fairly well defined. Above gage height 3.20 it is the same as the 1905 table.

Daily discharge, in second-feet, of Santa Ynez River near Santa Barbara, Cal., for 1911-12.

Day.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Day.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1911.								1911.							
1.....		377	137	62	27	8	4	16....	1,230	209	90	44	15	7	4
2.....		366	132	61	26	7	4	17....	1,160	201	88	43	15	7	4
3.....		360	126	60	25	7	4	18....	1,120	192	84	42	15	7	4
4.....		350	123	59	25	7	4	19....	1,050	187	82	38	14	7	4
5.....		339	119	56	24	8	4	20....	966	177	80	37	14	6	4
6.....		329	115	56	24	8	4	21....	980	172	78	37	14	6	4
7.....		309	110	54	22	8	4	22....	780	169	73	36	14	6	4
8.....		283	110	52	21	8	4	23....	655	166	73	36	14	6	4
9.....		271	104	51	21	8	4	24....	600	164	69	36	14	6	4
10.....		258	100	49	21	8	4	25....	560	159	69	34	13	5	4
11.....		249	100	48	19	9	4	26....	515	154	69	32	11	6	4
12.....		243	98	46	19	9	4	27....	500	156	67	32	10	6	4
13.....		229	98	44	18	8	4	28....	471	146	64	32	9	5	4
14.....		223	94	43	18	8	4	29....	439	144	64	31	9	5	4
15.....	1,350	215	92	43	17	8	4	30....	409	139	62	28	8	4	5
								31....	384	.....	62	.....	8	4	.....

Daily discharge, in second-feet, of Santa Ynez River near Santa Barbara, Cal., for 1911-12—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.									
1.....	5	8	12	13	15	10	45	39	14
2.....	5	8	12	13	15	10	43	38	13
3.....	5	8	12	13	15	34	41	38	12
4.....	5	8	12	13	15	31	38	38	12
5.....	5	8	13	13	14	272	34	36	10
6.....	6	8	18	14	13	380	34	20	10
7.....	6	8	14	14	13	106	34	20	10
8.....	6	8	14	14	13	95	31	34	10
9.....	6	8	14	14	13	106	31	34	10
10.....	6	8	14	14	12	225	113	34	10
11.....	6	9	14	16	12	109	195	34	8.6
12.....	6	10	13	16	12	588	158	34	8.6
13.....	6	11	13	16	12	290	118	27	8.6
14.....	6	11	13	16	12	195	100	27	8.6
15.....	6	12	13	16	12	142	82	24	8.0
16.....	6	12	13	16	12	113	88	21	7.5
17.....	6	12	13	16	12	95	77	21	7.0
18.....	5	12	13	15	11	74	77	20	7.0
19.....	5	12	13	15	11	74	77	20	7.0
20.....	5	12	13	15	11	73	67	20	6.0
21.....	5	12	13	15	11	58	62	20	5.6
22.....	5	12	13	15	10	58	56	20	5.6
23.....	5	12	13	15	10	52	52	20	7.0
24.....	5	12	13	15	10	48	50	18	7.0
25.....	5	12	13	15	10	48	47	38	6.5
26.....	6	12	13	16	10	56	45	38	5.6
27.....	7	12	13	19	10	80	45	34	5.6
28.....	7	12	13	16	10	58	45	20	5.2
29.....	8	12	14	15	10	54	43	16	5.2
30.....	8	12	13	15	.....	52	43	15	5.2
31.....	8	.....	13	15	.....	48	.....	15	.....

NOTE.—Daily discharge determined from the fairly well defined rating curves applicable as follows: Mar. 15 to Dec. 31, 1911, and Jan. 1 to June 30, 1912. Discharge interpolated on days for which there is no gage height.

Monthly discharge of Santa Ynez River above Mono Creek, near Santa Barbara, Cal., for 1903.

[Drainage area, 71 square miles.]

Month.	Discharge in second-feet.				Run-off.	
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.	Total in acre-feet.
January.....	457	2	19	0.27	0.31	1,168
February.....	25	8	14	.20	.21	778
March.....	111	6	20	.28	.32	1,230
April.....	535	29	84	1.18	1.32	4,998
May.....	31	9	17	.24	.28	1,045
June 1-20.....	9	3	6	.08	.06	238
The period.....						9,460

Monthly discharge of Santa Ynez River near Santa Barbara, Cal., for 1904-1907 and 1911-12.

[Drainage area, 207 square miles.]

Month.	Discharge in second-feet.				Run-off.		Accu- racy.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.	Total in acre-feet.	
1904.							
January 7-31.....	6.4	0.5	0.9	0.004	0.01	45	
February.....	131	.6	12	.058	.06	690	
March.....	445	2.3	30.2	.146	.17	1,857	
April.....	121	6.0	18.9	.091	.10	1,125	
May.....	18.5	2.6	6.8	.033	.04	418	
June.....	2.6	.1	.7	.003	.00	42	
July.....	.1	.0	.034	.000	.00	2	
August.....	.0	.0	.0	.000	.00	0	
September.....	5,450	.0	193	.832	1.04	11,484	
The period.....						15,700	
1904-5.							
October.....	17	5.6	8.7	.042	.05	535	
November.....	7.4	5.6	6.4	.031	.04	381	
December.....	12.8	6.4	7.0	.034	.04	430	
January.....	635	28	73.8	.357	.41	4,538	
February.....	6,550	28	905	4.37	4.55	50,260	
March.....	7,275	112	797	3.85	4.44	49,010	
April.....	242	79	143	.691	.77	8,509	
May.....	100	37	52.5	.254	.29	3,228	
June.....	30	5	15.9	.077	.09	946	
July.....	4	3	3.8	.018	.02	234	
August.....	3	2	2.6	.013	.02	160	
September.....	2	1	1.4	.0068	.01	83	
The year.....	7,275	1	168	.812	10.74	118,000	
1905-6.							
October.....	1	1	1.0	0.0048	.01	61	
November.....	5	1	2.1	.010	.01	125	
December.....	4	4	4.0	.019	.02	246	
January.....	104	3	14.8	.071	.08	910	
February.....	171	6	27.4	.132	.14	1,520	
March.....	4,810	17	1,050	5.07	5.84	64,600	
April.....	430	65	158	.763	.85	9,400	
May.....	635	28	67.4	.326	.38	4,140	
June.....	49	12	23.9	.115	.13	1,420	
July.....	12	2.5	5.7	.028	.03	350	
August.....	2.5	1.0	1.4	.0068	.01	86	
September.....	1	1	1	.0048	.01	60	
The year.....	4,810	1	113	.546	7.51	82,900	
1906-7.							
October.....	1	1	1	.0048	.01	61	
November.....	2.5	1	1.4	.0068	.01	83	
December.....	600	2	52.1	.252	.29	3,200	
January.....	9,450	49	1,470	7.10	8.19	90,400	B.
February.....	920	142	490	2.37	2.47	27,200	B.
March.....	8,150	104	1,520	7.34	8.46	93,500	B.
April.....	670	65	237	1.14	1.27	14,100	B.
The period.....						229,000	
1907.							
October.....	315	1	14.4	0.070	.08	885	B.
November.....	4	2	2.7	.013	.01	161	B.
December.....	22	2	5.6	.027	.03	344	B.
1911.							
March 15-31.....	1,350	384	775	3.74	2.36	26,100	B.
April.....	377	139	231	1.12	1.25	13,700	A.
May.....	137	62	91.4	.442	.51	5,620	A.
June.....	62	28	44.1	.213	.24	2,620	B.
July.....	27	8	16.9	.082	.09	1,040	B.
August.....	9	4	6.8	.033	.04	418	C.
September.....	5	4	4.0	.019	.02	238	D.
The period.....						49,700	

Monthly discharge of Santa Ynez River near Santa Barbara, Cal., for 1904-1907 and 1911-12—Continued.

Month.	Discharge in second-feet.				Run-off.		Accu- racy.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.	Total in acre-feet.	
1911-12.							
October.....	8	5	5.8	.028	.03	357	C.
November.....	12	8	10.4	.050	.06	619	C.
December.....	18	12	13.2	.064	.07	812	C.
January.....	19	13	14.9	.072	.08	915	B.
February.....	15	10	11.9	.057	.06	684	B.
March.....	588	10	117	.565	.65	7,190	A.
April.....	195	31	65.7	.317	.35	3,910	B.
May.....	39	15	26.9	.130	.15	1,650	B.
June.....	14	5.2	8.21	.040	.04	489	B.
The period.....						16,627	

SANTA YNEZ RIVER NEAR LOMPOC, CAL.

This station, which was established November 10, 1906, was originally located at the highway bridge $1\frac{1}{2}$ miles east of Lompoc, in La Misión Vieja de la Purísima land grant. Early in January, 1907, the bridge was destroyed by heavy floods. A new bridge was built during the summer of 1907, and the station was reestablished September 25, 1907, at the same location.

No tributaries enter the stream in the vicinity of the station and no diversions have been made above since the station was established. The head works of canals previously diverting water were destroyed by floods and have not been reconstructed. Acquired water rights exceed the low flow of the stream. The drainage area above the station is about 725 square miles. There are several pumping plants above the station that obtain water for irrigation from wells along the banks of the stream.

The gage is a vertical staff on the pier of the bridge from which discharge measurements are made. The datum of the gage has remained unchanged since the station was established.

The conditions at this station are extremely unfavorable for accurate results. The channel is wide and the stream shifts constantly.

The gage height record is furnished by the Santa Barbara Water Commission, through L. M. Hyde, engineer.

Discharge measurements of Santa Ynez River near Lompoc, Cal., in 1906-1912.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1906.		<i>Feet.</i>	<i>Sec.-ft.</i>	1910.		<i>Feet.</i>	<i>Sec.-ft.</i>
Nov. 10	R. S. Hawley.....	5.02	10	June 9	J. E. Stewart.....	3.79	40
Dec. 12	L. M. Hyde.....	5.88	259	9	do.....	3.79	42
1907.				Aug. 4	D. McDonald.....	3.55	20
Sept. 24	Clapp and Hyde.....	2.75	30	Sept. 14	C. C. Jacob.....	3.60	22
1908.				1911.			
Jan. 28	L. M. Hyde.....	4.80	3,480	Feb. 27	W. V. Hardy.....	4.85	548
29	do.....	3.85	1,490	Mar. 2	Donald McDonald.....	6.50	4,930
Mar. 10	W. F. Martin.....	3.28	418	22	do.....	2.80	1,870
1909.				Apr. 11	do.....	2.90	765
Jan. 23	McDonald and Hyde...	4.25	2,290	May 10	do.....	3.00	389
23	do.....	4.15	1,850	June 7	do.....	3.00	243
24	do.....	3.85	1,150	July 11	do.....	2.90	127
25	do.....	4.35	2,560	Aug. 19	do.....	2.75	55
26	do.....	6.65	11,100	Sept. 8	do.....	2.70	47
26	do.....	6.9	10,800	8	F. C. Ebert.....	2.70	48
26	do.....	8.15	15,700	Oct. 11	Donald McDonald.....	2.70	37
26	do.....	8.5	18,500	Nov. 13	do.....	2.72	45
27	do.....	6.25	8,040	Dec. 7	do.....	2.80	67
27	McDonald and Dyer.....			1912.			
27	Donald McDonald and H. M. McDonald.....	5.95	6,640	Jan. 18	Donald McDonald.....	2.77	61
1910.				Feb. 10	do.....	2.72	55
Jan. 30	W. B. Clapp.....	4.10	309	25	do.....	2.79	42
Mar. 5	J. E. Stewart.....	3.84	112	25	F. C. Ebert.....	2.79	43
Apr. 15	D. McDonald.....	4.00	135	Mar. 6	Donald McDonald.....	3.26	199
May 4	do.....	3.90	98	Apr. 13	do.....	3.30	407
27	do.....	3.80	58	May 16	do.....	2.87	89
				June 7	F. C. Ebert.....	2.86	54
				10	Donald McDonald.....	2.86	44

Daily gage height, in feet, of Santa Ynez River near Lompoc, Cal., for 1906-1912.

Day.	Nov.	Dec.	Jan.	Sept.	Day.	Nov.	Dec.	Jan.	Sept.
1906-7.					1906-7.				
1.....		5.1	6.1	.....	16.....	5.0	5.5	.....	.....
2.....		5.1	5.95	.....	17.....	5.0	5.45	.....	.....
3.....		5.1	5.85	.....	18.....	5.0	5.35	.....	.....
4.....		5.1	5.8	.....	19.....	5.0	5.35	.....	.....
5.....		5.1	5.95	.....	20.....	5.0	5.35	.....	.....
6.....		5.1	6.0	.....	21.....	5.0	5.3	.....	.....
7.....		5.1	6.9	.....	22.....	5.0	5.3	.....	.....
8.....		5.1	16.2	.....	23.....	5.0	5.3	.....	.....
9.....		5.1	20.5	.....	24.....	5.0	5.3	.....	.....
10.....	5.0	5.1	.....	.....	25.....	5.05	5.3	.....	2.75
11.....	5.0	5.3	.....	.....	26.....	5.05	5.3	.....	2.75
12.....	5.0	6.2	.....	.....	27.....	5.1	5.6	.....	2.75
13.....	5.0	6.2	.....	.....	28.....	5.1	6.75	.....	2.75
14.....	5.0	5.85	.....	.....	29.....	5.1	6.4	.....	2.75
15.....	5.0	5.65	.....	.....	30.....	5.1	6.25	.....	2.75
					31.....		6.15	.....	.....

Daily gage height, in feet, of Santa Ynez River near Lompoc, Cal., for 1906-1912—Con.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1907-8.												
1.....	2.75	3.05	2.85	2.85	3.6	3.7	3.15	3.1	2.9	2.9	2.75	2.7
2.....	2.75	3.0	2.85	2.85	3.85	3.65	3.1	3.1	2.9	2.9	2.75	2.7
3.....	2.75	2.95	2.85	2.85	5.35	3.65	3.1	3.1	2.9	2.9	2.75	2.7
4.....	2.75	2.95	2.85	2.85	5.0	3.6	3.1	3.1	2.9	2.9	2.7	2.7
5.....	2.75	2.95	2.85	2.85	4.1	3.6	3.1	3.1	2.9	2.9	2.7	2.7
6.....	2.75	2.9	2.9	2.85	4.0	3.55	3.05	3.05	2.9	2.9	2.7	2.7
7.....	2.75	2.9	2.95	2.85	3.8	3.55	3.05	3.05	2.9	2.9	2.7	2.7
8.....	2.75	2.9	2.95	2.85	3.8	3.55	3.05	3.05	2.9	2.9	2.7	2.7
9.....	2.75	2.9	2.95	2.85	4.7	3.5	3.05	3.05	2.9	2.9	2.7	2.7
10.....	2.75	2.9	2.9	2.85	4.7	3.4	3.1	3.05	2.9	2.85	2.7	2.7
11.....	2.75	2.9	2.9	2.85	4.2	3.3	3.1	3.0	2.9	2.85	2.7	2.7
12.....	2.75	2.9	2.85	2.85	4.1	3.25	3.1	3.0	2.9	2.85	2.7	2.7
13.....	2.75	2.9	2.85	2.85	4.0	3.3	3.1	3.0	2.9	2.8	2.7	2.7
14.....	2.75	2.9	2.85	3.0	3.9	3.3	3.1	3.0	2.9	2.8	2.7	2.7
15.....	2.75	2.9	2.85	3.0	3.8	3.3	3.1	3.0	2.9	2.8	2.7	2.7
16.....	2.75	2.9	2.9	3.0	3.7	3.3	3.1	3.0	2.9	2.8	2.7	2.7
17.....	2.75	2.9	2.9	3.0	3.5	3.3	3.1	2.95	2.9	2.8	2.7	2.7
18.....	2.75	2.9	2.9	2.95	3.55	3.35	3.1	2.9	2.9	2.75	2.7	2.7
19.....	2.75	2.9	2.85	2.95	3.55	3.4	3.1	2.9	2.9	2.75	2.7	2.7
20.....	2.75	2.85	2.85	2.95	3.55	3.4	3.1	2.9	2.9	2.75	2.7	2.7
21.....	2.75	2.85	2.85	2.95	3.6	3.35	3.1	2.9	2.9	2.75	2.7	2.7
22.....	2.8	2.85	2.85	2.9	3.75	3.3	3.1	2.9	2.9	2.75	2.7	2.7
23.....	3.0	2.85	2.85	2.9	3.7	3.3	3.1	2.9	2.9	2.75	2.7	2.75
24.....	3.0	2.85	2.85	3.0	3.6	3.3	3.1	2.9	2.9	2.75	2.7	2.95
25.....	3.05	2.85	2.85	4.25	3.6	3.3	3.1	2.9	2.9	2.75	2.7	2.8
26.....	3.35	2.85	2.85	4.8	3.6	3.3	3.1	2.9	2.9	2.75	2.7	2.75
27.....	3.25	2.85	2.85	5.55	3.65	3.25	3.1	2.9	2.9	2.75	2.7	2.7
28.....	3.35	2.85	2.85	5.3	3.05	3.2	3.1	2.9	2.9	2.75	2.7	2.7
29.....	3.2	2.85	2.85	3.85	3.75	3.2	3.1	2.9	2.9	2.75	2.7	2.7
30.....	3.15	2.85	2.85	3.8	-----	3.2	3.1	2.9	2.9	2.75	2.7	2.7
31.....	3.05	-----	2.85	3.65	-----	3.2	-----	2.9	-----	2.75	2.7	-----
1908-9.												
1.....	2.7	2.7	2.7	2.7	4.5	5.0	5.4	4.8	4.4	4.2	4.1	3.9
2.....	2.7	2.7	2.7	2.7	4.4	5.1	5.5	4.75	4.4	4.2	4.1	3.9
3.....	2.7	2.7	2.8	2.7	4.5	5.0	5.4	4.75	4.3	4.2	4.1	3.9
4.....	2.7	2.7	2.7	2.7	4.7	5.0	5.4	4.75	4.3	4.1	4.1	3.9
5.....	2.7	2.7	2.9	2.7	4.4	4.9	5.2	4.7	4.3	4.1	4.0	3.9
6.....	2.7	2.7	2.9	2.7	4.8	4.9	5.1	4.65	4.3	4.1	4.0	3.9
7.....	2.7	2.7	2.85	2.7	8.65	4.9	5.2	4.65	4.3	4.1	4.0	3.9
8.....	2.7	2.7	2.8	2.7	7.95	5.0	5.2	4.65	4.3	4.1	4.0	3.9
9.....	2.7	2.7	2.8	3.0	5.9	5.0	5.2	4.65	4.3	4.1	4.0	3.9
10.....	2.7	2.7	3.05	2.75	5.7	5.0	5.1	4.65	4.3	4.1	4.0	3.9
11.....	2.7	2.7	2.8	2.9	6.05	4.9	5.2	4.6	4.3	4.1	4.0	3.9
12.....	2.7	2.7	2.85	2.9	7.6	4.9	5.2	4.6	4.3	4.1	4.0	3.9
13.....	2.7	2.7	2.75	3.15	6.7	4.9	5.2	4.6	4.3	4.1	4.0	3.9
14.....	2.7	2.7	2.75	3.7	5.5	4.9	5.3	4.6	4.3	4.1	4.0	3.9
15.....	2.7	2.7	2.7	3.35	5.2	4.9	5.2	4.6	4.3	4.1	4.0	3.9
16.....	2.7	2.7	2.7	3.2	5.1	4.9	5.2	4.6	4.3	4.1	4.0	3.9
17.....	2.7	2.7	2.7	3.05	5.2	4.9	5.2	4.6	4.3	4.1	3.9	3.9
18.....	2.7	2.7	2.7	2.85	5.2	4.8	5.2	4.6	4.3	4.1	3.9	3.9
19.....	2.7	2.7	2.8	2.85	5.2	4.8	5.2	4.6	4.2	4.1	3.9	3.9
20.....	2.7	2.7	2.75	2.75	5.2	4.7	5.2	4.55	4.2	4.1	3.9	3.9
21.....	2.7	2.7	2.75	4.65	5.2	4.9	5.2	4.55	4.2	4.1	3.9	3.9
22.....	2.7	2.7	2.75	5.6	5.1	5.0	5.1	4.5	4.2	4.1	3.9	3.9
23.....	2.7	2.7	2.75	4.3	5.1	5.1	5.1	4.5	4.2	4.1	3.9	3.9
24.....	2.7	2.7	2.75	4.1	5.1	5.0	5.1	4.5	4.2	4.1	3.9	3.9
25.....	2.7	2.7	2.7	4.3	5.2	6.9	5.1	4.5	4.2	4.1	3.9	3.9
26.....	2.7	2.7	2.7	7.4	5.1	5.7	5.1	4.5	4.2	4.1	3.9	3.9
27.....	2.7	2.7	2.7	6.9	5.0	5.9	5.1	4.5	4.2	4.1	3.9	3.9
28.....	2.7	2.7	2.7	4.95	5.0	5.5	5.1	4.4	4.2	4.1	3.9	3.9
29.....	2.7	2.7	2.7	4.8	-----	5.5	5.0	4.4	4.2	4.1	3.9	3.9
30.....	2.7	2.7	2.7	4.5	-----	5.6	4.9	4.4	4.2	4.1	3.9	3.9
31.....	2.7	-----	2.7	4.5	-----	5.4	-----	4.4	-----	4.1	3.9	-----

Daily gage height, in feet, of Santa Ynez River near Lompoc, Cal., for 1906-1912—Con.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909-10.												
1.....	3.9	3.9	4.0	7.65	4.0	3.9	4.4	3.9	3.8	3.7	3.55	3.6
2.....	3.9	3.9	4.0	5.0	4.0	3.8	4.3	3.9	3.8	3.7	3.55	3.6
3.....	3.9	3.9	4.0	4.8	4.0	3.8	4.3	3.9	3.8	3.7	3.55	3.6
4.....	3.9	3.9	4.0	4.5	4.0	3.8	4.2	3.9	3.8	3.7	3.55	3.6
5.....	3.9	3.9	4.0	4.4	3.9	3.8	4.2	3.9	3.8	3.7	3.55	3.6
6.....	3.9	3.9	4.0	4.4	3.9	3.85	4.2	3.9	3.8	3.7	3.55	3.6
7.....	3.9	3.9	4.1	4.4	3.9	3.85	4.2	3.9	3.8	3.65	3.55	3.6
8.....	3.9	3.9	4.1	4.3	3.9	3.8	4.2	3.9	3.8	3.65	3.55	3.6
9.....	3.9	3.9	4.9	4.3	3.9	3.8	4.1	3.9	3.8	3.65	3.55	3.6
10.....	3.9	3.9	4.8	4.2	3.9	3.8	4.1	3.9	3.8	3.65	3.55	3.6
11.....	3.9	3.9	4.5	4.1	3.9	3.8	4.1	3.9	3.8	3.65	3.55	3.6
12.....	3.9	3.9	4.4	4.1	3.9	3.8	4.1	3.9	3.8	3.65	3.55	3.6
13.....	3.9	3.9	4.3	4.0	3.9	3.8	4.1	3.9	3.8	3.65	3.55	3.6
14.....	3.9	4.0	4.2	4.0	3.9	3.9	4.1	3.9	3.8	3.65	3.55	3.6
15.....	3.9	4.0	4.2	4.3	3.9	3.85	4.0	3.9	3.8	3.6	3.55	3.7
16.....	3.9	4.0	4.2	4.4	3.9	3.8	4.0	3.9	3.8	3.6	3.6	3.7
17.....	3.9	4.0	4.2	4.7	3.9	3.8	4.0	3.8	3.75	3.6	3.6	3.7
18.....	3.9	4.0	4.1	4.5	3.9	3.9	4.0	3.8	3.75	3.6	3.6	3.65
19.....	3.9	4.0	4.1	4.4	3.9	3.9	4.0	3.8	3.75	3.6	3.6	3.65
20.....	3.9	4.0	4.1	4.3	3.9	3.9	4.0	3.8	3.75	3.6	3.6	3.6
21.....	3.9	4.0	4.1	4.3	3.9	3.9	3.9	3.8	3.75	3.55	3.6	3.6
22.....	3.9	4.0	4.1	4.2	3.9	4.5	3.9	3.8	3.75	3.55	3.6	3.6
23.....	3.9	4.0	4.1	4.2	3.9	4.3	3.9	3.8	3.7	3.55	3.6	3.6
24.....	3.9	4.0	4.1	4.2	3.9	4.2	3.9	3.8	3.7	3.55	3.6	3.6
25.....	3.9	4.0	4.1	4.2	3.9	4.1	3.9	3.8	3.7	3.55	3.6	3.6
26.....	3.9	4.0	4.1	4.2	3.9	4.1	3.9	3.8	3.7	3.6	3.6	3.6
27.....	3.9	4.0	4.0	4.2	3.9	4.45	3.9	3.8	3.7	3.6	3.6	3.6
28.....	3.9	4.0	4.0	4.1	3.9	4.9	3.9	3.8	3.7	3.55	3.6	3.6
29.....	3.9	4.0	4.0	4.1	-----	4.6	3.9	3.8	3.7	3.55	3.6	3.6
30.....	3.9	4.0	4.0	4.1	-----	4.5	3.9	3.8	3.7	3.55	3.6	3.6
31.....	3.9	-----	4.0	4.0	-----	4.5	-----	3.8	-----	3.55	3.6	-----
1910-11.												
1.....	3.6	3.6	3.7	3.7	5.6	6.45	2.9	3.0	3.0	2.9	2.85	2.7
2.....	3.6	3.6	3.7	3.7	-----	6.6	2.9	3.0	3.0	2.9	2.85	2.7
3.....	3.6	3.6	3.7	3.7	-----	5.6	2.9	3.1	3.0	2.9	2.85	2.7
4.....	3.6	3.65	3.7	3.7	6.5	6.9	2.9	3.0	3.0	2.9	2.85	2.7
5.....	3.6	3.7	3.7	3.7	5.8	7.05	2.9	3.0	3.0	2.9	2.85	2.7
6.....	3.6	3.7	3.7	3.7	5.5	7.05	2.9	3.0	3.0	2.9	2.85	2.7
7.....	3.6	3.7	3.7	3.7	5.1	9.65	2.9	3.0	3.0	2.9	2.85	2.7
8.....	3.6	3.7	3.7	3.7	4.9	9.05	2.9	3.0	3.0	2.9	2.85	2.7
9.....	3.6	3.7	3.7	3.7	4.9	9.95	2.9	3.0	3.0	2.9	2.85	2.7
10.....	3.6	3.7	3.7	3.9	4.9	7.0	2.9	3.0	3.0	2.9	2.85	2.7
11.....	3.6	3.7	3.7	4.4	5.3	5.0	2.9	3.0	3.0	2.9	2.85	2.7
12.....	3.6	3.7	3.7	4.3	5.2	4.2	2.9	3.0	3.0	2.9	2.85	2.7
13.....	3.65	3.7	3.7	4.3	5.0	3.4	2.9	3.0	3.0	2.9	2.8	2.7
14.....	3.65	3.7	3.7	4.3	5.2	3.2	2.9	3.0	3.0	2.9	2.8	2.7
15.....	3.65	3.7	3.7	4.4	5.0	3.2	2.9	3.0	3.0	2.9	2.8	2.7
16.....	3.65	3.7	3.7	4.5	4.9	2.9	2.9	3.0	3.0	2.9	2.8	2.7
17.....	3.6	3.7	3.7	4.2	4.8	2.7	3.0	3.0	3.0	2.9	2.75	2.7
18.....	3.6	3.7	3.7	4.0	4.8	2.7	3.0	3.0	3.0	2.9	2.75	2.7
19.....	3.6	3.7	3.7	3.9	4.8	2.8	3.0	3.0	3.0	2.85	2.75	2.7
20.....	3.6	3.7	3.8	3.9	4.9	2.8	3.0	3.0	2.9	2.85	2.75	2.7
21.....	3.6	3.7	3.75	3.9	4.9	2.8	3.0	3.0	2.9	2.85	2.75	2.7
22.....	3.6	3.7	3.75	3.9	4.9	2.8	3.0	3.0	2.9	2.85	2.75	2.7
23.....	3.6	3.7	3.75	3.8	4.9	2.7	3.0	3.0	2.9	2.85	2.7	2.7
24.....	3.6	3.7	3.7	3.8	4.9	2.9	3.0	3.0	2.9	2.85	2.7	2.7
25.....	3.6	3.7	3.7	4.5	4.9	2.8	3.0	3.0	2.9	2.85	2.7	2.7
26.....	3.6	3.7	3.7	4.8	4.8	2.7	3.1	3.0	2.9	2.85	2.7	2.7
27.....	3.6	3.7	3.7	4.5	4.8	2.8	3.0	3.0	2.9	2.85	2.7	2.7
28.....	3.65	3.7	3.7	4.7	5.0	2.7	-----	3.0	2.9	2.85	2.7	2.7
29.....	3.65	3.7	3.7	9.3	-----	2.7	3.0	3.0	2.9	2.85	2.7	2.7
30.....	3.65	3.7	3.7	6.0	-----	2.7	3.0	3.0	2.9	2.85	2.7	2.7
31.....	3.65	-----	3.7	7.05	-----	2.8	-----	3.0	-----	2.85	2.7	-----

Daily gage height, in feet, of Santa Ynez River near Lompoc, Cal., for 1906-1912—Con.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.									
1.....	2.7	2.7	2.7	2.8	2.7	2.8	3.0	2.9	2.9
2.....	2.7	2.7	2.7	2.8	2.7	2.8	3.0	2.9	2.9
3.....	2.7	2.7	2.7	2.8	2.7	2.8	3.0	2.9	2.9
4.....	2.7	2.7	2.7	2.8	2.7	2.9	3.0	2.9	2.9
5.....	2.7	2.7	2.7	2.8	2.7	2.9	3.0	2.9	2.9
6.....	2.7	2.7	2.7	2.8	2.7	3.35	3.0	2.9	2.9
7.....	2.7	2.7	2.8	2.8	2.7	3.4	3.0	2.9	2.9
8.....	2.7	2.7	2.8	2.8	2.7	3.0	2.9	2.9	2.9
9.....	2.7	2.7	2.8	2.8	2.7	3.0	2.9	2.9	2.9
10.....	2.7	2.7	2.8	2.8	2.7	3.2	2.9	2.9	2.9
11.....	2.7	2.7	2.8	2.8	2.7	3.1	3.0	2.9	2.9
12.....	2.7	2.7	2.8	2.8	2.7	3.6	3.4	2.9	2.9
13.....	2.7	2.7	2.8	2.8	2.7	3.5	3.3	2.9	2.9
14.....	2.7	2.7	2.8	2.8	2.7	3.3	3.2	2.9	2.9
15.....	2.7	2.7	2.8	2.8	2.7	3.1	3.1	2.9	2.8
16.....	2.7	2.7	2.8	2.8	2.7	3.1	3.1	2.9	2.8
17.....	2.7	2.7	2.8	2.8	2.7	3.1	3.1	2.9	2.8
18.....	2.7	2.7	2.8	2.8	2.7	3.1	3.1	2.9	2.8
19.....	2.7	2.7	2.8	2.8	2.7	3.1	3.1	2.9	2.8
20.....	2.7	2.7	2.8	2.8	2.7	3.1	3.1	2.9	2.8
21.....	2.7	2.7	2.8	2.8	2.7	3.1	3.1	2.9	2.8
22.....	2.7	2.7	2.8	2.8	2.7	3.1	3.0	2.9	2.8
23.....	2.7	2.7	2.8	2.7	2.7	3.1	3.0	2.9	2.8
24.....	2.7	2.7	2.8	2.7	2.7	3.1	3.0	2.9	2.8
25.....	2.7	2.7	2.8	2.7	2.8	3.1	3.0	3.0	2.8
26.....	2.7	2.7	2.8	2.7	2.8	3.1	3.0	3.0	2.8
27.....	2.7	2.7	2.8	2.7	2.8	3.1	3.0	3.0	2.8
28.....	2.7	2.7	2.8	2.7	2.8	3.1	2.9	3.0	2.8
29.....	2.7	2.7	2.8	2.7	2.8	3.1	2.9	3.0	2.8
30.....	2.7	2.7	2.8	2.7	2.8	3.1	2.9	3.0	2.8
31.....	2.7	2.7	2.8	2.7	2.8	3.0	3.0	3.0	2.8

Rating tables for Santa Ynez River near Lompoc, Cal.

November 10, 1906, to January 7, 1907.

Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.
Feet.	Sec.-ft.	Feet.	Sec.-ft.	Feet.	Sec.-ft.	Feet.	Sec.-ft.
5.00	8	5.50	114	6.00	320	6.50	750
5.10	23	5.60	146	6.10	380	6.60	870
5.20	42	5.70	182	6.20	450	6.70	1,010
5.30	64	5.80	242	6.30	540	6.80	1,170
5.40	88	5.90	270	6.40	640	6.90	1,330

NOTE.—Table applicable only to open channel. It is based on 2 discharge measurements made during 1906 and the form of the 1907-8 curve and is not well defined.

September 25, 1907, to December 31, 1908.

2.70	18	3.50	790	4.30	2,320	5.10	4,080
2.80	44	3.60	950	4.40	2,540	5.20	4,300
2.90	90	3.70	1,120	4.50	2,760	5.30	4,520
3.00	155	3.80	1,300	4.60	2,980	5.40	4,740
3.10	240	3.90	1,480	4.70	3,200	5.50	4,960
3.20	350	4.00	1,680	4.80	3,420	5.60	5,180
3.30	480	4.10	1,880	4.90	3,640	5.70	5,400
3.40	630	4.20	2,100	5.00	3,860		

NOTE.—Table applicable only to open channel. It is based on 4 discharge measurements made during 1907 and 1908 and is not well defined.

Daily discharge, in second-feet, of Santa Ynez River near Lompoc, Cal., for 1910-1912.

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910.									
1.....	11,100	225	150	550	95	52	30	20	22
2.....	1,580	225	90	385	95	51	30	20	22
3.....	1,200	225	90	380	95	49	30	20	22
4.....	1,750	225	90	275	95	48	30	20	22
5.....	620	150	90	275	95	47	30	20	22
6.....	620	150	120	275	95	46	30	20	22
7.....	620	150	120	275	95	44	26	00	22
8.....	500	150	90	275	95	43	26	20	22
9.....	500	150	90	197	95	42	26	20	22
10.....	400	150	90	197	95	42	26	20	22
11.....	310	150	90	197	95	42	26	20	22
12.....	310	150	90	197	95	42	26	20	22
13.....	225	150	90	197	95	42	26	20	22
14.....	225	150	150	197	95	42	26	20	22
15.....	500	150	120	138	95	42	22	20	30
16.....	620	150	90	138	95	42	22	22	30
17.....	1,040	150	90	138	58	36	22	22	30
18.....	750	150	150	138	58	36	22	22	26
19.....	620	150	150	138	58	36	22	22	26
20.....	500	150	150	138	58	36	22	22	22
21.....	500	150	150	95	58	36	20	22	22
22.....	400	150	740	95	58	36	20	22	22
23.....	400	150	480	95	58	30	20	22	22
24.....	400	150	375	95	58	30	20	22	22
25.....	400	150	275	95	58	30	20	22	22
26.....	400	150	270	95	58	30	22	22	22
27.....	400	150	615	95	58	30	22	22	22
28.....	310	150	1,260	95	57	30	20	22	22
29.....	310	.....	785	95	56	30	20	22	22
30.....	310	.....	640	95	54	30	20	22	22
31.....	225	.....	625	.....	53	.....	20	22	.....

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.												
1.....	22	22	30	30	2,070	4,750	1,400	520	274	127	97	45
2.....	22	22	30	30	790	5,290	1,340	500	269	127	97	45
3.....	22	22	30	30	230	2,070	1,270	590	264	127	97	46
4.....	22	26	30	30	4,930	6,430	1,210	470	258	127	97	46
5.....	22	30	30	30	2,610	7,030	1,150	460	253	127	97	47
6.....	22	30	30	30	1,830	7,030	1,090	440	248	127	97	47
7.....	22	30	30	30	970	19,000	1,020	430	243	127	97	48
8.....	22	30	30	30	620	16,100	960	420	243	127	97	48
9.....	22	30	30	30	620	20,400	900	400	243	127	97	48
10.....	22	30	30	64	620	15,000	830	389	243	127	97	47
11.....	22	30	30	335	1,380	9,000	765	384	243	127	97	47
12.....	22	30	30	260	1,170	6,000	745	379	243	127	97	47
13.....	26	30	30	260	790	3,800	725	373	243	127	67	46
14.....	26	30	30	260	1,170	3,300	700	368	243	127	67	46
15.....	26	30	30	335	790	3,200	680	363	243	127	67	46
16.....	26	30	30	430	620	2,500	660	358	243	127	67	45
17.....	22	30	30	195	470	2,000	820	353	243	127	55	45
18.....	22	30	30	97	470	1,900	800	347	243	127	55	45
19.....	22	30	30	64	470	2,100	770	342	243	97	55	44
20.....	22	30	42	64	620	2,000	750	337	127	97	56	44
21.....	22	30	36	64	620	1,900	730	332	127	97	56	44
22.....	22	30	36	64	620	1,870	710	327	127	97	57	43
23.....	22	30	36	42	620	1,600	690	321	127	97	40	43
24.....	22	30	30	42	620	1,900	660	316	127	97	40	43
25.....	22	30	30	430	620	1,630	640	311	127	97	41	42
26.....	22	30	30	810	470	1,370	800	305	127	97	41	42
27.....	22	30	30	430	470	1,500	600	300	127	97	42	42
28.....	26	30	30	670	790	1,270	580	295	127	97	42	41
29.....	26	30	30	17,300	.....	1,210	550	290	127	97	43	41
30.....	26	30	30	3,210	.....	1,150	530	284	127	97	44	41
31.....	26	.....	30	7,030	.....	1,270	.....	279	.....	97	44	.....

Daily discharge, in second-feet, of Santa Ynez River near Lompoc, Cal., for 1910-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.									
1.....	40	37	37	80	45	45	125	75	70
2.....	40	37	37	80	45	45	125	75	70
3.....	40	37	37	80	45	45	125	80	70
4.....	39	37	37	80	45	95	125	80	70
5.....	39	37	37	80	45	95	125	85	70
6.....	39	37	37	80	45	280	125	85	70
7.....	38	37	67	80	45	350	125	90	70
8.....	38	37	67	80	45	50	70	90	70
9.....	38	37	67	80	45	55	70	90	70
10.....	37	37	67	80	45	185	70	95	70
11.....	37	37	67	80	45	110	125	95	70
12.....	37	37	67	80	45	670	540	100	70
13.....	37	37	67	80	45	560	410	100	70
14.....	37	37	67	80	45	340	300	100	70
15.....	37	37	67	80	45	170	205	100	30
16.....	37	37	67	80	45	185	205	100	30
17.....	37	37	67	80	45	205	205	100	30
18.....	37	37	67	80	40	205	205	100	30
19.....	37	37	67	80	35	205	205	95	30
20.....	37	37	67	80	32	205	205	95	30
21.....	37	37	67	80	30	205	205	90	30
22.....	37	37	67	80	28	205	125	90	30
23.....	37	37	67	45	25	205	125	85	30
24.....	37	37	67	45	22	205	125	85	30
25.....	37	37	67	45	45	205	125	150	30
26.....	37	37	67	45	45	205	125	150	30
27.....	37	37	67	45	45	205	125	140	30
28.....	37	37	67	45	45	205	70	140	30
29.....	37	37	67	45	45	205	70	135	30
30.....	37	37	67	45	.....	205	70	135	30
31.....	37	.....	67	45	.....	125	.....	135	.....

NOTE.—Daily discharge determined from rating curves applicable as follows: Jan. 1 to Mar. 21, 1910, poorly defined and only approximate above 400 second-feet; Mar. 22 to Apr. 3, 1910, indirect method for shifting channels. Apr. 4 to May 27, 1910, poorly defined; May 28 to June 8, 1910, interpolated; June 9, 1910, to Jan. 29, 1911, poorly defined; Jan. 30 to Mar. 9, 1911, poorly defined; Mar. 10 to June 6, 1911, indirect method for shifting channels; June 7 to Aug. 16, 1911, poorly defined; Aug. 17, 1911, to June 30, 1912, indirect method for shifting channels and rating tables covering short periods of time.

Monthly discharge of Santa Ynez River near Lompoc, Cal., for 1906-1908 and 1910-1912.

[Drainage area, 725 square miles.^a]

Month.	Discharge in second-feet.				Run-off.		Accu- racy.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.	Total in acre-feet.	
1906-7.							
November 10-30	23	8	11.5	.....	.....	479	
December	1,090	23	169	.....	.....	10,400	
January 1-7	1,330	224	442	.....	.....	6,140	
1907-8.							
October	555	30	114	.....	.....	7,010	
November	197	67	90.5	.....	.....	5,390	
December	122	67	76.8	.....	.....	4,720	
January	5,070	67	686	.....	.....	42,200	
February	4,630	790	1,880	.....	.....	108,000	
March	1,120	350	613	.....	.....	37,700	
April	295	197	236	.....	.....	14,000	
May	240	90	145	.....	.....	8,920	
June	90	90	90	.....	.....	5,360	
July	90	30	53.3	.....	.....	3,280	
August	30	18	19.2	.....	.....	1,180	
September	122	18	23.1	.....	.....	1,370	
The year	5,070	18	336	.....	.....	239,000	

^a Drainage area published as 785 square miles in earlier reports.

Monthly discharge of Santa Ynez River near Lompoc, Cal., for 1906-1908 and 1910-1912—Continued.

Month.	Discharge in second-feet.				Run-off.		Accu- racy.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.	Total in acre-feet.	
1908.							
October.....	18	18	18	-----	-----	1,110	
November.....	18	18	18	-----	-----	1,070	
December.....	197	18	38.5	-----	-----	2,370	
1910.							
January.....	11,100	225	872	1.20	1.38	53,600	D.
February.....	225	150	161	.222	.23	8,940	C.
March.....	1,260	90	271	.374	.43	16,700	C.
April.....	550	95	188	.260	.29	11,200	C.
May.....	95	53	76.7	.106	.12	4,720	C.
June.....	52	30	39.1	.054	.06	2,330	C.
July.....	30	20	24.0	.033	.04	1,480	C.
August.....	22	20	21.0	.029	.03	1,290	C.
September.....	30	22	23.1	.032	.04	1,370	C.
The period.....						102,000	
1910-11.							
October.....	26	22	23.0	0.032	0.04	1,410	C.
November.....	30	22	29.1	.040	.04	1,730	C.
December.....	42	30	31.0	.043	.05	1,910	C.
January.....	17,300	30	1,060	1.46	1.68	65,200	C.
February.....	4,930	230	1,000	1.38	1.44	55,500	B.
March.....	20,400	1,150	5,020	6.92	7.98	309,000	C.
April.....	1,400	530	836	1.15	1.28	49,700	D.
May.....	590	279	374	.516	.59	23,000	D.
June.....	274	127	204	.281	.31	12,100	B.
July.....	127	97	114	.157	.18	7,010	B.
August.....	97	40	69.1	.095	.11	4,250	C.
September.....	48	41	44.8	.062	.07	2,670	D.
The year.....	20,400	22	734	1.01	13.77	533,000	
1911-12.							
October.....	40	37	37.6	.052	.06	2,310	D.
November.....	37	37	37.0	.051	.06	2,200	D.
December.....	67	37	61.2	.084	.10	3,760	D.
January.....	80	45	69.8	.096	.11	4,290	C.
February.....	45	22	41.4	.057	.06	2,380	B.
March.....	670	45	202	.279	.32	12,400	B.
April.....	540	70	162	.223	.25	9,640	B.
May.....	150	75	102	.141	.16	6,270	C.
June.....	70	30	48.7	.067	.07	2,900	B.
The period.....						46,200	

NOTE.—Values, 1906-1908, are only approximate.

MONO CREEK AT MONO DAM SITE, NEAR SANTA BARBARA, CAL.

This station was established November 22, 1902, and discontinued June 30, 1904. It was located about half a mile above the junction of Mono Creek and Santa Ynez River, 15 miles above the San Marcos ranch and 17 miles by trail from Santa Barbara. The river at this point traverses Mono Flat. The gage was an inclined timber, spiked to a willow tree on the right bank. The tree was blazed above the gage for use in recording flood stages above the gage rod. Discharge measurements were made by means of a cable and by wading. The cable was located about 500 feet below the dam site and was just above the gage. The channel is slightly curved for about 500 feet above and below the station. Both banks are high and are not

liable to overflow The bed of the stream is composed of sandy gravel, free from vegetation, and is not liable to shift. The record of the discharge, kept by means of a weir, from November 1 to December 31, 1903, showed a constant discharge for this period of 0.05 second-foot.

Discharge measurements of Mono Creek at Mono dam site, near Santa Barbara, Cal., in 1902-1904

[By H. Rankin and R. L. North.]

Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.
	Feet.	Sec.-ft.		Feet.	Sec.-ft.		Feet.	Sec.-ft.
1902.			1903.			1903.		
Nov. 11.....		8.7	Mar. 25.....	2.50	153	May 22.....	1.42	9.3
			26.....	1.90	62	23.....	1.42	9.1
1903.			27.....	1.70	36	25.....	1.41	8.8
Jan. 28.....	2.95	295	28.....	1.60	27	26.....	1.41	8.4
29.....	1.55	20	29.....	1.61	30	27.....	1.40	7.7
30.....	1.30	12.5	30.....	2.65	177	28.....	1.40	7.5
31.....	1.25	9.0	31.....	2.80	227	29.....	1.40	7.5
Feb. 1.....	1.35	14.8	Apr. 1.....	4.50	710	30.....	1.40	7.4
2.....	1.30	10.1	2.....	3.00	270	June 1.....	1.37	6.2
3.....	1.20	6.9	3.....	2.50	131	2.....	1.35	5.7
4.....	1.28	8.8	4.....	2.40	92	3.....	1.33	5.7
5.....	1.28	8.2	5.....	2.20	69	4.....	1.30	4.4
6.....	1.21	8.1	6.....	2.00	52	5.....	1.28	3.4
8.....	1.35	12.0	7.....	1.90	41	6.....	1.28	3.2
9.....	1.29	8.8	8.....	1.85	40	8.....	1.35	5.1
10.....	1.28	8.4	9.....	1.80	39	9.....	1.40	8.2
11.....	1.27	8.8	10.....	1.77	34	10.....	1.45	10.6
12.....	1.26	8.2	11.....	1.73	29	11.....	1.40	8.6
13.....	1.25	7.6	12.....	1.70	28	12.....	1.35	4.7
14.....	1.20	4.9	14.....	1.65	26	13.....	1.33	4.4
16.....	1.20	5.1	15.....	1.63	25	15.....	1.30	3.3
17.....	1.20	5.0	16.....	2.20	71	16.....	1.30	3.2
18.....	1.20	5.1	17.....	2.40	106	17.....	1.30	3.2
19.....	1.20	5.2	18.....	2.30	94	18.....	1.29	3.0
20.....	1.19	4.8	19.....	2.35	90	20.....	1.22	2.0
21.....	1.19	4.7	20.....	2.10	72	July 12.....	.80	.4
23.....	1.17	4.6	21.....	2.00	59			
24.....	1.15	4.6	22.....	1.90	46	1904.		
25.....	1.15	4.6	23.....	1.85	43	Feb. 28.....	1.89	30.0
26.....	1.15	4.4	24.....	1.80	38	29.....	1.41	3.5
27.....	1.14	3.8	25.....	1.75	36	Mar. 11.....	1.90	32.0
28.....	1.14	3.8	27.....	1.70	29	12.....	1.48	8.0
Mar. 1.....	1.12	3.6	28.....	1.70	28	13.....	1.35	2.6
2.....	1.12	3.6	29.....	1.67	28	14.....	1.33	2.3
3.....	1.12	3.6	30.....	1.65	27	25.....	1.71	18.2
4.....	1.30	11.0	May 2.....	1.60	24	27.....	1.52	8.2
5.....	1.60	26	3.....	1.58	21	29.....	1.48	7.9
6.....	1.37	13.6	4.....	1.56	19.2	Apr. 1.....	1.52	8.1
7.....	1.35	13.3	5.....	1.55	18.9	3.....	1.43	4.1
9.....	1.30	9.8	6.....	1.52	17.2	19.....	1.95	34.0
10.....	1.25	6.6	7.....	1.50	17.0	20.....	1.77	19.4
11.....	1.22	6.3	8.....	1.50	16.4	21.....	1.64	9.7
12.....	1.22	6.6	10.....	1.50	15.6	24.....	1.45	5.4
13.....	1.22	6.5	11.....	1.48	14.3	25.....	1.42	4.0
14.....	1.27	9.2	12.....	1.48	14.0	26.....	1.63	8.9
15.....	1.25	7.5	13.....	1.48	13.8	27.....	1.63	8.8
16.....	1.30	9.8	14.....	1.47	13.6	29.....	1.62	8.2
17.....	1.32	9.9	15.....	1.45	13.5	May 1.....	1.46	6.4
18.....	1.26	8.2	16.....	1.45	11.8	5.....	1.43	4.2
19.....	1.25	8.0	17.....	1.43	11.7	7.....	1.32	2.1
20.....	1.24	7.1	18.....	1.43	11.7	9.....	1.32	2.0
21.....	1.24	7.1	19.....	1.43	11.8	11.....	1.32	2.0
22.....	1.23	7.2	20.....	1.42	10.3			
23.....	1.23	7.2	21.....	1.42	10.0			

Daily gage height, in feet, of Mono Creek at Mono dam site, near Santa Barbara, Cal, for 1903-4.

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.
1903.								1904.							
1....	1.00	1.35	1.12	4.50	1.63	1.37	-----	1....				1.52	1.46	(1.29)	-----
2....	1.00	1.30	1.12	3.00	1.60	1.35	-----	2....				(1.47)	(1.47)	1.29	-----
3....	1.00	1.20	1.12	2.50	1.58	1.33	-----	3....				1.43	(1.48)	1.29	-----
4....	1.00	1.28	1.30	2.40	1.56	1.30	-----	4....				1.38	1.49	(1.29)	-----
5....	1.00	1.28	1.60	2.20	1.55	1.28	-----	5....				1.38	1.43	1.29	-----
6....	1.00	1.21	1.37	2.00	1.52	1.28	-----	6....				(1.38)	(1.37)	(1.29)	-----
7....	1.00	1.25	1.35	1.90	1.50	1.28	-----	7....				1.37	1.32	1.29	-----
8....	1.00	1.35	1.30	1.85	1.50	1.35	-----	8....				1.35	(1.32)	1.28	-----
9....	1.00	1.29	1.30	1.80	1.50	1.40	-----	9....				(1.35)	1.32	1.25	-----
10....	1.00	1.28	1.25	1.77	1.50	1.45	-----	10....				(1.35)	(1.32)	1.28	-----
11....	1.00	1.27	1.22	1.73	1.48	1.40	-----	11....			1.90	(1.35)	1.32	1.28	-----
12....	1.00	1.26	1.22	1.70	1.48	1.35	0.80	12....			1.48	1.35	1.39	1.26	-----
13....	1.00	1.25	1.22	1.68	1.48	1.33	-----	13....			1.35	1.35	(1.38)	1.26	-----
14....	1.00	1.20	1.27	1.65	1.47	1.32	-----	14....			1.33	1.35	(1.38)	1.25	-----
15....	1.00	1.20	1.25	1.63	1.45	1.30	-----	15....			(1.33)	1.35	1.37	1.25	-----
16....	1.00	1.20	1.30	2.20	1.45	1.30	-----	16....			(1.32)	(1.35)	(1.37)	1.25	-----
17....	1.00	1.20	1.32	2.40	1.43	1.30	-----	17....			(1.31)	1.36	1.36	1.25	-----
18....	1.00	1.20	1.26	2.30	1.43	1.29	-----	18....			(1.30)	(1.36)	(1.35)	(1.25)	-----
19....	1.00	1.20	1.25	2.35	1.43	1.26	-----	19....				1.95	1.34	1.25	-----
20....	1.00	1.19	1.24	2.10	1.42	1.22	-----	20....				1.77	(1.34)	1.25	-----
21....	1.00	1.19	1.24	2.00	1.42	-----	-----	21....				1.64	(1.35)	1.25	-----
22....	1.00	1.18	1.23	1.90	1.42	-----	-----	22....				1.58	1.35	1.25	-----
23....	1.00	1.17	1.23	1.85	1.42	-----	-----	23....				1.52	(1.34)	1.25	-----
24....	1.00	1.15	1.30	1.80	1.42	-----	-----	24....			2.21	1.45	1.33	1.25	-----
25....	1.00	1.15	2.50	1.75	1.41	-----	-----	25....			1.71	1.42	(1.34)	(1.25)	-----
26....	1.00	1.15	1.90	1.75	1.41	-----	-----	26....			(1.60)	1.63	1.35	(1.24)	-----
27....	1.00	1.14	1.70	1.70	1.40	-----	-----	27....		3.05	1.52	1.63	1.34	(1.23)	-----
28....	2.95	1.14	1.60	1.70	1.40	-----	-----	28....		1.89	(1.50)	(1.63)	(1.33)	1.22	-----
29....	1.55	-----	1.61	1.67	1.40	-----	-----	29....		1.41	1.48	1.62	(1.32)	1.21	-----
30....	1.30	-----	2.65	1.65	1.40	-----	-----	30....			(1.50)	(1.60)	(1.31)	(1.21)	-----
31....	1.25	-----	2.80	-----	1.38	-----	-----	31....			1.52	-----	1.30	-----	-----

NOTE.—No record June 21 to Nov. 1, 1903, or after July 1, 1904. Record kept on weir from Nov. 1, 1903, to Mar. 23, 1904, except Mar. 11-18, 1904. Constant discharge of 0.05 second-foot during November and December, 1903. Gage heights in parenthesis are estimated.

Rating table for Mono Creek at Mono dam site, near Santa Barbara, Cal., from January 1 to June 30, 1904.

Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.
<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>
1.10	0.0	1.50	6.6	1.90	31	2.60	162
1.15	0.2	1.55	8.6	1.95	35	2.70	188
1.20	0.5	1.60	11.2	2.00	40	2.80	214
1.25	1.0	1.65	13.8	2.10	54	2.90	242
1.30	1.5	1.70	16.8	2.20	73	3.00	270
1.35	2.4	1.75	20	2.30	93	3.10	300
1.40	3.5	1.80	23.5	2.40	114	3.20	330
1.45	5.0	1.85	27	2.50	137		

Monthly discharge of Mono Creek at Mono dam site, near Santa Barbara, Cal., for 1903-4.

[Drainage area, 119 square miles.]

Month.	Discharge in second-feet.				Run-off.	
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.	Total in acre-feet.
1903.						
January.....	295	0.17	11	0.09	0.10	676
February.....	15	4	7	.06	.06	389
March.....	227	4	30	.25	.29	1,845
April.....	710	25	81	.68	.76	4,820
May.....	26	6	13	.11	.13	799
June 1-20.....	11	2	5	.04	.03	198
The period.....						8,730
1903-4.						
November.....			0.05			3
December.....			.05			3
January.....	.07	.04	.04			2
February.....	285	.03	11	.09	.10	633
March.....	76	.06	6.3	.05	.06	387
April.....	35	2.4	7.1	.06	.07	422
May.....	6.3	1.5	2.8	.02	.02	172
June.....	1.4	.6	1.1	.01	.01	65
The period.....						1,690

NOTE.—Discharge for 1903 obtained by interpolating between discharge measurements.

MISCELLANEOUS MEASUREMENTS.

The following miscellaneous measurements have been made in the Santa Ynez River basin:

Miscellaneous measurements in Santa Ynez River drainage basin.

Date.	Stream.	Locality.	Dis-charge.
			<i>Sec.-feet.</i>
Sept. 25, 1905	Santa Ynez River	2½ miles above Lompoc	8.8
Apr. 19, 1906	do.	do.	358
July 25, 1906	do.	do.	21
Sept. 25, 1906	do.	do.	7.1
Nov. 10, 1906	do.	1½ miles above Lompoc	10
Dec. 12, 1906	do.	do.	259
Apr. 11, 1903	Amagusa Creek	Mouth	6.2
15, 1903	do.	do.	4.5
21, 1903	do.	do.	7.6
23, 1903	do.	do.	6.9
28, 1903	do.	do.	6.3
10, 1903	Blue Canyon Creek	do.	11.1
22, 1903	do.	do.	11.7
29, 1903	do.	do.	6.3
10, 1903	Trail Creek	do.	1.4
22, 1903	do.	do.	2.0
11, 1903	Ruiz Creek	do.	5.4
15, 1903	do.	do.	4.3
21, 1903	do.	do.	7.0
23, 1903	do.	do.	5.7
28, 1903	do.	do.	4.5

MISCELLANEOUS MEASUREMENTS OF STREAMS IN SANTA BARBARA COUNTY.

The following miscellaneous measurements have been made on streams in Santa Barbara County:

Miscellaneous measurements of streams in Santa Barbara County.

Date.	Stream.	Hydrographer.	Locality.	Dis-charge.
				<i>Sec.-ft.</i>
Aug. —, 1889	Aguilar Creek	G. F. Wright		0.12
Do.	Armas Creek	do.		.08
Do.	Armitas Creek	do.		.04
Do.	Arroyo Burro	do.		.23
June 21, 1902	do.	J. B. Lippincott	100 feet below Moore's north line.	.0036
Aug. —, 1889	Arroyo Carnero	G. F. Wright		.08
Do.	Canada del Corral	do.		.15
Do.	Canada Lares	do.		.08
Do.	Canada Refugio	do.		.31
Do.	Canada Verde	do.		.08
Do.	Capitan (El) Creek	do.		.23
Do.	Carpinteria Creek	do.	1 mile above Placitas Road	.08
June 16, 1900	do.	R. Moyer	do.	.003
Aug. 13, 1897	Cold Spring Canyon Creek.	Montecito Water Co.	Falls	.08
Sept. 6, 1897	do.	do.	do.	.06
Sept. 12, 1897	do.	do.	do.	.09
Oct. 2, 1897	do.	do.	do.	.09
Dec. 8, 1897	do.	do.	do.	.09
Jan. 26, 1898	do.	do.	do.	.11
June 10, 1900	do.	do.	do.	.00
Mar. 22, 1896	do.	do.	do.	.00
Aug. —, 1889	do.	G. F. Wright		.23
Mar. 22, 1896	Cold Spring Canyon, City tunnel.	Montecito Water Co.		.06
Aug. 13, 1897	do.	do.		.66
Sept. 6, 1897	do.	do.		.31
Sept. 12, 1897	do.	do.		.31
Oct. 2, 1897	do.	do.		.28
Dec. 8, 1897	do.	do.		.22
Jan. 26, 1898	do.	do.		.22
Apr. 19, 1898	do.	do.		.22
June 10, 1900	do.	J. B. Lippincott	Portal.	.41
June 14, 1900	do.	R. Moyer	Station 29+97	.02
Do.	do.	do.	do.	.04
Aug. —, 1889	Dinsmoore Creek	G. F. Wright		.23
Do.	Dos Pueblos Creek	do.		.54
Do.	Gobernador Creek	do.		.58
Do.	Maria Ygnacio Creek	do.		.23
Jan. 15, 1888	Mission Creek	A. Poett	200 feet above dam	.93
Jan. 24, 1888	do.	do.	do.	2.80
Feb. 7, 1888	do.	do.	do.	1.37
Mar. 16, 1888	do.	do.	do.	2.23
July 26, 1888	do.	do.	do.	.36
July 13, 1889	do.	do.	do.	.43
Aug. —, 1889	do.	G. F. Wright	do.	.46
Sept. 1, 1889	do.	A. Poett	do.	.32
June 11, 1892	do.	do.	do.	.36
June 17, 1900	do.	R. Moyer	do.	.05
Aug. —, 1889	Padero Creek	G. F. Wright		.31
Do.	Rincon Creek	do.		.12
June 16, 1900	do.	R. Moyer		.03
Aug. —, 1889	San Jose Creek	G. F. Wright		.27
Do.	San Pedro Creek	do.		.08
June 17, 1900	San Roque Creek	J. Harrington	Above tunnel.	.03
Do.	do.	do.	Below tunnel.	.03
May 2, 1900	do.	do.	Station 6, opposite tunnel.	.04
Do.	do.	do.	Station 8, opposite tunnel.	.02
Do.	do.	do.	Tunnel of Pacific Improvement Co.	.08
June 21, 1902	do.	J. B. Lippincott	do.	.25
Do.	do.	do.	Below tunnel.	.009
Do.	do.	do.	Station 44, opposite tunnel	.011
Do.	do.	do.	Station 65, opposite tunnel	.0063
Nov. 2, 1889	San Ysidro Creek	Greenheld	Above dam	.06
Dec. 3, 1889	do.	do.	do.	.15
Mar. 6, 1900	do.	do.	do.	1.00
Mar. 19, 1900	do.	do.	do.	.35

Miscellaneous measurements of streams in Santa Barbara County—Continued.

Date.	Stream.	Hydrographer.	Locality.	Dis-charge.
June 16, 1900	San Ysidro Creek	R. Moyer	Above dam	<i>Sec.-ft.</i>
Aug. —, 1889	Santa Monica Creek	G. F. Wright	$\frac{1}{2}$ mile above Fithian's house.	.07
June 16, 1900	.....do	R. Moyer .....	.....	.23
Aug. —, 1889	Tecolote Creek	G. F. Wright .....	.....	.11
June 16, 1900	Toro Canyon	J. B. Lippincott .....	.....	.27
Sept. 9, 1911	Santa Maria River .....	.....	Wagon bridge at Santa Maria.	.05
				.00

MISCELLANEOUS MEASUREMENTS OF STREAMS IN SAN LUIS OBISPO COUNTY.

The following miscellaneous measurements have been made on streams in San Luis Obispo County:

Miscellaneous measurements of streams in San Luis Obispo County.

Date.	Stream.	Hydrographer.	Locality.	Dis-charge.
Nov. 20, 1897	Arroyo Grande	W. W. Brier .....	.....	<i>Sec.-ft.</i>
Nov. 19, 1897	Lopez Creek .....	.....do	10 miles above Arroyo Grande.	7.80
				5.51

SANTA MARIA RIVER BASIN.

SANTA MARIA RIVER NEAR SANTA MARIA, CAL.

This station was established October 22, 1903, and discontinued December 31, 1905. It was located near the ranch house on Dutard's ranch, 21 miles above Santa Maria, Cal., a station on the Pacific Coast Railway.

The channel is slightly curved for 300 feet above and curved for 1,000 feet below the station. The water is swift at medium and flood stages.

The right bank is high and rocky and not liable to overflow. The left bank is low, covered with scattering poplar trees, but not liable to overflow. The bed of the stream is composed of sand and gravel. A portion of the bed is covered with a light growth of low brush. The channel is not liable to much change.

At low and medium stages, discharge measurements were made by wading. During high water, velocities were measured by means of floats. For this purpose two wires were stretched across the stream 254 feet apart. The rise in the channel above the upper wire was 0.40 foot in 100 feet, and below the upper wire it was 0.57 foot in 100 feet.

The gage was an inclined staff, fastened to a rock ledge at the right bank.

Discharge measurements of Santa Maria River near Santa Maria, Cal., in 1903-1906.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1903.		<i>Feet.</i>	<i>Sec.-ft.</i>	1905.		<i>Feet.</i>	<i>Sec.-ft.</i>
Aug. 26	W. B. Clapp.....		1.0	Feb. 2	E. C. La Rue.....	3.30	80
Oct. 22	.....do.....	1.97	.8	Mar. 6	O. W. Peterson.....	2.70	47
				21	.....do.....	1.20	67
1904.				1906.			
Feb. 18	W. B. Clapp.....	2.65	15.5	Feb. 23	R. S. Hawley.....	.90	17.9
Mar. 12	J. A. Thompson.....	3.60	^a 220	June 6	.....do.....	^b 2.20	11.9
24	.....do.....	4.00	^a 499	Nov. 7	.....do.....	1.70	4.9

^a Float measurements.

^b Zero of gage lowered 2 feet.

Daily gage height, in feet, of Santa Maria River near Santa Maria, Cal., for 1903-1905.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1903-4.									
1.....		1.97	1.97	2.30	2.38	2.60	2.63	2.20	1.80
2.....		1.97	1.97	2.30	2.38	2.57	2.60	2.20	1.80
3.....		1.97	1.97	2.30	2.38	2.55	2.45	2.20	1.80
4.....		1.97	1.98	2.30	2.38	2.50	2.30	2.18	1.80
5.....		1.97	2.00	2.30	2.50	2.45	2.27	2.15	1.80
6.....		1.97	2.05	2.30	2.50	2.40	2.20	2.15	1.80
7.....		1.97	2.07	2.30	2.50	2.38	2.15	2.15	1.80
8.....		1.97	2.10	2.30	2.50	2.36	2.11	2.15	1.80
9.....		1.97	2.10	2.30	2.45	2.35	2.05	2.10	1.80
10.....		1.97	2.10	2.30	2.43	2.35	2.05	2.05	1.80
11.....		1.97	2.13	2.30	2.41	2.70	2.05	2.00	1.80
12.....		1.97	2.15	2.30	2.41	3.60	2.05	2.00	1.80
13.....		1.97	2.16	2.30	2.50	3.00	2.05	2.00	1.80
14.....		1.97	2.18	2.30	2.40	3.40	2.05	1.90	1.80
15.....		1.97	2.19	2.30	2.48	2.80	2.05	1.90	1.80
16.....		1.97	2.20	2.30	3.10	2.65	2.05	1.87	1.80
17.....		1.97	2.20	2.30	2.70	2.60	2.05	1.85	1.80
18.....		1.97	2.21	2.40	2.65	2.50	2.05	1.80	1.80
19.....		1.97	2.21	2.40	2.60	2.40	2.20	1.80	1.80
20.....		1.97	2.21	2.40	2.58	2.50	2.40	1.85	1.80
21.....		1.97	2.22	2.40	2.50	2.45	2.30	1.85	1.80
22.....	1.97	1.97	2.22	2.40	2.50	2.43	2.30	1.85	1.80
23.....	1.97	1.97	2.22	2.39	2.48	3.00	2.20	1.85	1.80
24.....	1.97	1.97	2.23	2.38	2.45	2.80	2.20	1.85	1.80
25.....	1.97	1.97	2.24	2.38	2.40	3.00	2.20	1.85	1.80
26.....	1.97	1.97	2.26	2.38	2.40	2.70	2.30	1.85	1.80
27.....	1.97	1.97	2.27	2.38	2.40	2.75	2.40	1.82	1.80
28.....	1.97	1.97	2.27	2.38	2.80	2.60	2.35	1.80	1.80
29.....	1.97	1.97	2.28	2.38	2.60	2.90	2.20	1.80	1.80
30.....	1.97	1.97	2.28	2.38	.....	2.70	2.20	1.80	1.80
31.....	1.97	.....	2.29	2.38	.....	2.60	.....	1.80	.....

Daily gage height, in feet, of Santa Maria River near Santa Maria, Cal., for 1903-1905—
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1904-5.												
1.....	3.95	2.50	2.53	3.5	2.6	2.05	0.9	0.8	0.65	0.7	0.6	0.5
2.....	3.50	2.50	2.55	3.0	3.8	2.05	.9	1.1	.65	.7	.6	.5
3.....	3.50	2.50	2.57	2.9	6.0	2.05	.9	1.0	.7	.7	.6	.5
4.....	3.50	2.50	2.60	2.7	5.95	2.05	.9	.85	.7	.7	.6	.5
5.....	3.50	2.51	2.60	2.7	5.0	2.05	.9	.8	.7	.7	.6	.5
6.....	3.50	2.51	2.62	2.7	5.0	2.7	.9	.8	.7	.7	.6	.5
7.....	3.65	2.50	2.62	2.7	3.5	2.65	.85	.8	.7	.7	.6	.5
8.....	3.80	2.49	2.63	2.7	3.2	2.5	.85	1.2	.7	.7	.6	.5
9.....	3.83	2.49	2.61	2.7	3.0	2.35	.85	1.25	.7	.7	.6	.5
10.....	3.85	2.49	2.60	2.7	2.9	2.2	.85	1.0	.7	.7	.6	.5
11.....	3.90	2.51	2.63	2.7	2.85	2.2	.85	.9	.7	.7	.6	.5
12.....	3.50	2.54	2.65	2.65	2.8	2.2	.85	.9	.7	.7	.6	.5
13.....	3.00	2.55	2.66	2.65	2.75	10.0	.85	.85	.7	.7	.6	.5
14.....	2.50	2.55	2.68	2.65	2.75	a 5.0	.85	.85	.7	.7	.6	.5
15.....	2.49	2.54	2.68	2.65	2.65	a 4.5	.85	.8	.7	.7	.6	.5
16.....	2.48	2.54	2.68	2.7	3.0	a 4.0	.85	.8	.7	.7	.6	.5
17.....	2.48	2.53	2.68	2.65	4.1	a 4.0	.85	.8	.7	.65	.6	.5
18.....	2.48	2.53	2.69	2.65	5.95	a 3.5	.85	.8	.7	.65	.6	.5
19.....	2.47	2.53	2.68	2.65	4.0	a 3.5	.85	.8	.7	.65	.6	.5
20.....	2.46	2.53	2.68	2.65	2.6	a 2.0	.85	.8	.7	.65	.6	.5
21.....	2.46	2.53	2.70	3.0	2.4	1.2	.85	.8	.7	.65	.6	.5
22.....	2.45	2.53	2.70	2.8	2.35	1.1	.85	.75	.7	.65	.6	.5
23.....	2.45	2.53	2.71	2.7	2.25	1.05	.85	.75	.7	.65	.6	.5
24.....	2.45	2.53	2.70	2.7	2.15	1.05	.85	.7	.7	.65	.6	.5
25.....	2.45	2.53	2.71	2.65	2.15	1.0	.85	.65	.7	.65	.55	.7
26.....	2.46	2.53	2.72	2.65	2.15	1.0	.85	.6	.7	.65	.55	.7
27.....	2.48	2.53	2.72	2.65	2.1	1.0	.85	.6	.7	.65	.55	.65
28.....	2.48	2.53	2.70	2.65	2.05	1.2	.85	.6	.7	.65	.55	.6
29.....	2.49	2.53	2.70	2.65	-----	1.2	.8	.6	.7	.65	.5	.6
30.....	2.50	2.53	2.70	2.6	-----	1.1	.8	.65	.7	.6	.5	.6
31.....	2.50	-----	3.00	2.6	-----	1.0	-----	.65	-----	.6	.5	-----

a Estimated.

Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.
1905.				1905.				1905.			
1.....	0.6	0.75	0.85	11.....	0.65	0.75	0.8	21.....	0.7	0.75	0.85
2.....	.6	.75	.85	12.....	.65	.75	.8	22.....	.7	.75	.85
3.....	.6	.75	.85	13.....	.65	.75	.8	23.....	.7	.75	.85
4.....	.65	.75	.8	14.....	.65	.75	.8	24.....	.7	.75	.85
5.....	.65	.75	.8	15.....	.65	.75	.8	25.....	.75	.75	.85
6.....	.65	.75	.8	16.....	.7	.75	.8	26.....	.75	.75	.8
7.....	.65	.75	.8	17.....	.7	.75	.8	27.....	.75	.75	.8
8.....	.65	.75	.8	18.....	.7	.75	.8	28.....	.75	.85	.8
9.....	.65	.75	.8	19.....	.7	.75	.85	29.....	.75	.85	.85
10.....	.65	.75	.8	20.....	.7	.75	.85	30.....	.75	.85	.85
								31.....	.75	-----	.85

NOTE.—No record July 1 to Sept. 30, 1904.

Rating tables for Santa Maria River near Santa Maria, Cal.

January 1 to December 31, 1904.

Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.
<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>
1.75	0.0	2.20	3	2.90	40	3.60	220
1.80	.2	2.30	5	3.00	53	3.70	265
1.85	.3	2.40	7	3.10	70	3.80	325
1.90	.5	2.50	10	3.20	90	3.90	400
1.95	.7	2.60	13	3.30	115	4.00	500
2.00	1	2.70	18	3.40	140		
2.10	2	2.80	27	3.50	175		

January 1 to February 2, 1905.

2.00	1	2.60	13	3.20	67	3.70	178
2.10	2	2.70	18	3.30	82	3.80	213
2.20	3	2.80	25	3.40	100	3.90	250
2.30	5	2.90	33	3.50	122	4.00	290
2.40	7	3.00	43	3.60	148	4.10	330
2.50	10	3.10	54				

February 3 to March 12, 1905.

1.70	1	2.70	48	3.70	285	4.70	915
1.80	2	2.80	59	3.80	335	4.80	990
1.90	3	2.90	72	3.90	385	4.90	1,065
2.00	5	3.00	87	4.00	440	5.00	1,140
2.10	8	3.10	105	4.10	500	5.20	1,290
2.20	12	3.20	125	4.20	565	5.40	1,440
2.30	17	3.30	147	4.30	630	5.60	1,595
2.40	23	3.40	173	4.40	700	5.80	1,755
2.50	30	3.50	205	4.50	770	6.00	1,915
2.60	38	3.60	242	4.60	840		

March 13 to December 31, 1905.

0.50	1	2.00	250	4.00	1,070	7.00	3,260
0.60	3	2.10	280	4.20	1,185	7.20	3,450
0.70	6	2.20	310	4.40	1,305	7.40	3,650
0.80	10	2.30	340	4.60	1,435	7.60	3,870
0.90	18	2.40	375	4.80	1,565	7.80	4,100
1.00	31	2.50	410	5.00	1,700	8.00	4,350
1.10	47	2.60	445	5.20	1,840	8.20	4,640
1.20	65	2.70	480	5.40	1,980	8.40	4,970
1.30	84	2.80	520	5.60	2,130	8.60	5,340
1.40	105	2.90	560	5.80	2,280	8.80	5,750
1.50	127	3.00	600	6.00	2,430	9.00	6,200
1.60	150	3.20	690	6.20	2,585	10.00	10,000
1.70	175	3.40	780	6.40	2,745		
1.80	200	3.60	875	6.60	2,910		
1.90	225	3.80	975	6.80	3,080		

NOTE.—The upper part of the rating curve is based on slope measurements.

Monthly discharge of Santa Maria River near Santa Maria, Cal., for 1904-5.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).
	Maximum.	Minimum.	Mean.	
1904.				
January.....	7	5	5.9	363
February.....	70	7	12.2	702
March.....	220	6	28.2	1,734
April.....	14	1.5	4.0	238
May.....	3	.2	1.1	68
June.....	.2	.2	.2	12
1904-5.				
October.....	450	8	109	6,702
November.....	12	10	10.7	637
December.....	53	11	17.3	1,064
January.....	122	13	22.5	1,384
February.....	1,915	6	361	20,050
March.....	10,000	6	574	35,290
April.....	18	10	14.5	863
May.....	74	3	15.5	953
June.....	6	4	5.9	352
July.....	6	3	5.0	307
August.....	3	1	2.7	166
September.....	6	1	1.6	96
The year.....	10,000	1	95.0	67,900
1905.				
October.....	8	3	5.4	332
November.....	14	8	8.6	512
December.....	14	10	11.7	719

NOTE.—High water values are only approximate.

MISCELLANEOUS MEASUREMENTS.

The following miscellaneous measurements have been made in the Santa Maria River basin:

Miscellaneous measurements in Santa Maria River drainage basin.

Date.	Stream	Tributary to—	Locality.	Dis-charge.
1903.				
Aug. 25	Sisquoc River.....	Santa Maria River.....	Sisquoc ranch.....	Sec.-ft. 1.1
Oct. 23	.....do.....	.....do.....	.....do.....	.0

SALINAS RIVER BASIN.**SALINAS RIVER NEAR SALINAS, CAL.**

This station was established January 8, 1900. On account of the shifting nature of the channel during floods, four gage rods were set between January 8 and April 2, 1900, and each was referred to a different datum. On June 8, 1900, a permanent station was established at the county bridge $3\frac{3}{4}$ miles south of Salinas.

The gage, which was a vertical staff, was attached to one of the piers of the bridge. The gage heights given in the following tables have been adjusted to the rod which was established June 8, 1900.

On account of the continual shifting of the stream bed, and the improbability of its water being used for either power or irrigation

purposes, the record on this stream was discontinued on August 3, 1901.

Discharge measurements of Salinas River near Salinas, Cal., in 1900-1901.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1900.		<i>Feet.</i>	<i>Sec.-ft.</i>	1900.		<i>Feet.</i>	<i>Sec.-ft.</i>
Apr. 9	S. G. Bennett	4.20	25.51	Aug. 18	D. A. Porter	3.65	9.88
12	D. A. Porter	4.20	26.04	Sept. 1	do.	3.65	10.10
15	do.	4.15	15.44	26	S. G. Bennett	3.45	1.7
19	do.	4.10	13.10	Oct. 23	J. B. Lippincott	3.45	1.7
22	do.	4.10	17.04	26	W. W. Cockins, jr.	3.45	1.1
25	do.	4.25	33.85	Nov. 14	do.	3.7	8.6
May 1	do.	4.15	18.91	16	do.	4.2	31.6
4	do.	4.10	18.02	19	do.	6.7	2,056
7	do.	4.10	16.40	20	do.	5.9	829
12	do.	4.10	17.50	21	do.	5.6	743
16	do.	4.10	17.85	22	do.	15.6	33,600
19	do.	4.10	17.94	23	do.	9.7	12,851
24	do.	4.10	16.23				
29	do.	4.1	17.20	1901.			
June 2	do.	4.1	17.43	Jan. 15	S. G. Bennett	6.8	2,142
5	do.	4.05	13.32	22	do.	5.8	1,338
8	do.	4.05	15.29	24	W. W. Cockins, jr.	5.9	1,598
12	do.	4.0	14.05	Feb. 9	S. G. Bennett	7.9	4,982
15	do.	4.05	15.79	19	do.	6.05	1,551
18	do.	4.05	15.32	Mar. 17	W. W. Cockins, jr.	5.6	1,204
22	do.	4.0	13.93	24	do.	5.2	668
26	do.	4.0	12.91	30	do.	4.9	541
30	do.	4.0	11.47	Apr. 6	do.	4.75	512
July 3	do.	3.9	10.50	12	do.	4.7	342
16	do.	3.65	9.96	July 9	do.	3.6	40
Aug. 1	do.	3.70	9.56	Oct. 1	do.		24
		3.70	9.83				

Daily gage height, in feet, of Salinas River near Salinas, Cal., for 1900-1901.

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1900.									
1		5.1	4.4	4.2	4.1	4.05	3.8	3.7	3.6
2		5.1	4.3	4.2	4.1	4.05	3.7	3.7	3.7
3		5.0	4.3	4.3	4.1	4.05	3.65	3.6	3.6
4		4.9	4.5	4.2	4.1	4.05	3.6	3.6	3.7
5		4.9	4.6	4.2	4.1	4.05	3.6	3.6	3.6
6		5.0	4.6	4.2	4.05	4.05	3.6	3.7	3.7
7		5.0	4.5	4.2	4.05	4.05	3.6	3.7	3.6
8	7.1	4.9	4.5	4.2	4.05	4.05	3.7	3.7	3.7
9	6.9	4.9	5.1	4.2	4.05	4.05	3.7	3.7	3.6
10	6.7	4.9	5.0	4.2	4.05	4.05	3.8	3.7	3.7
11	6.5	4.9	5.0	4.1	4.05	4.05	3.8	3.7	3.6
12	6.3	4.9	5.0	4.1	4.05	4.05	3.6	3.7	3.7
13	6.1	4.8	4.9	4.1	4.05	4.05	3.6	3.7	3.7
14	6.0	4.8	4.9	4.1	4.05	4.05	3.7	3.7	3.6
15	5.9	4.7	4.9	4.1	4.05	4.05	3.7	3.7	3.7
16	5.7	4.7	4.8	4.1	4.05	4.0	3.7	3.7	3.6
17	5.7	4.7	4.7	4.1	4.05	4.0	3.7	3.6	3.7
18	5.6	4.6	4.6	4.1	4.05	4.0	3.7	3.7	3.6
19	5.5	4.7	4.6	4.1	4.05	4.0	3.7	3.7	3.7
20	5.5	4.7	4.5	4.1	4.05	4.0	3.7	3.6	3.6
21	5.4	4.6	4.4	4.2	4.05	4.0	3.7	3.7	3.6
22	5.4	4.5	4.4	4.2	4.05	4.0	3.7	3.6	3.5
23	5.3	4.4	4.4	4.2	4.05	4.0	3.7	3.7	3.5
24	5.3	4.4	4.4	4.1	4.05	4.0	3.7	3.6	3.5
25	5.3	4.4	4.3	4.1	4.05	4.0	3.7	3.7	3.5
26	5.2	4.4	4.3	4.1	4.05	4.0	3.7	3.6	3.4
27	5.2	4.4	4.3	4.1	4.05	4.0	3.7	3.7	3.5
28	5.2	4.4	4.3	4.1	4.05	4.0	3.7	3.6	3.4
29	5.2		4.2	4.1	4.05	3.9	3.6	3.7	3.4
30	5.2		4.2	4.1	4.05	3.9	3.7	3.6	3.4
31	5.1		4.2		4.05		3.7	3.7	

Daily gage height, in feet, of Salinas River near Salinas, Cal., for 1900-1901—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.
1900-1901.											
1.....	3.4	3.4	6.0	4.65	4.95	6.25	4.65	4.95	4.15	3.5	3.45
2.....	3.5	3.4	5.9	4.6	4.9	6.05	4.65	5.7	4.15	3.5	3.45
3.....	3.4	3.4	5.8	4.6	4.9	6.05	4.65	6.35	4.1	3.5	3.45
4.....	3.5	3.5	5.7	4.6	4.9	6.0	4.65	6.45	3.95	3.5	.....
5.....	3.4	3.6	5.6	7.55	5.05	6.0	4.6	6.0	3.95	3.5	.....
6.....	3.4	3.3	5.5	16.15	12.25	5.95	4.55	5.65	3.8	3.5	.....
7.....	3.4	3.4	5.4	14.15	9.25	5.95	4.5	5.35	3.75	3.5	.....
8.....	3.4	3.5	5.3	11.25	8.45	5.95	4.5	5.15	3.75	3.5	.....
9.....	3.5	3.4	5.3	10.5	7.8	5.9	4.5	4.95	3.7	3.5	.....
10.....	3.4	3.4	5.2	9.75	7.65	5.9	4.45	4.9	3.7	3.5	.....
11.....	3.4	3.4	5.1	8.95	7.4	5.9	4.4	4.75	3.65	3.5	.....
12.....	3.4	3.5	5.1	8.55	7.1	5.85	4.4	4.7	3.6	3.5	.....
13.....	3.4	3.7	5.0	7.8	6.9	5.85	4.4	4.6	3.6	3.5	.....
14.....	3.45	3.7	5.0	7.3	6.65	5.8	4.4	4.5	3.6	3.5	.....
15.....	3.35	3.7	5.0	6.95	6.45	5.8	4.4	4.55	3.6	3.45	.....
16.....	3.45	3.8	5.0	6.5	6.25	5.7	4.4	4.55	3.6	3.45	.....
17.....	3.35	4.1	5.0	6.2	6.15	5.6	4.35	4.45	3.6	3.45	.....
18.....	3.45	5.5	5.0	6.0	6.05	5.45	4.35	4.45	3.6	3.45	.....
19.....	3.45	6.7	5.0	5.9	6.05	5.4	4.3	4.4	3.6	3.45	.....
20.....	3.45	5.9	4.9	5.8	6.9	5.35	4.3	4.3	3.6	3.45	.....
21.....	3.4	5.7	4.9	5.65	11.6	5.3	4.3	4.3	3.55	3.45	.....
22.....	3.4	15.6	4.9	5.8	9.15	5.2	4.3	4.3	3.55	3.45	.....
23.....	3.4	9.7	4.8	6.2	7.85	5.1	4.25	4.25	3.55	3.45	.....
24.....	3.4	8.6	4.8	6.25	7.55	5.0	4.2	4.25	3.55	3.45	.....
25.....	3.4	7.9	4.8	6.05	7.25	5.0	4.2	4.2	3.55	3.45	.....
26.....	3.4	7.4	4.7	5.85	7.0	4.95	4.2	4.2	3.55	3.45	.....
27.....	3.4	7.0	4.7	5.7	6.75	4.9	4.15	4.2	3.5	3.45	.....
28.....	3.4	6.6	4.7	5.55	6.5	4.85	4.15	4.2	3.5	3.45	.....
29.....	3.4	6.3	4.7	5.4	.....	4.8	4.15	4.2	3.5	3.45	.....
30.....	3.4	6.1	4.7	5.25	.....	4.75	4.15	4.2	3.5	3.45	.....
31.....	3.4	.....	4.7	5.25	.....	4.7	.....	4.15	.....	3.45	.....

Rating tables for Salinas River near Salinas, Cal.

January 8 to December 31, 1900.

Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.
Feet.	Sec.-feet.	Feet.	Sec.-feet.	Feet.	Sec.-feet.	Feet.	Sec.-feet.
3.60	6	4.60	65	5.60	650	7.50	3,500
3.80	10	4.80	105	5.80	850	8.00	4,750
4.00	15	5.00	173	6.00	1,050	8.50	6,350
4.20	25	5.20	285	6.50	1,725	9.00	8,350
4.40	40	5.40	455	7.00	2,500	9.50	11,000

January 1 to August 3, 1901.

Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.
Feet.	Sec.-feet.	Feet.	Sec.-feet.	Feet.	Sec.-feet.	Feet.	Sec.-feet.
3.40	20	5.20	730	7.00	2,790	11.50	18,225
3.60	40	5.40	900	7.50	3,900	12.00	20,100
3.80	65	5.60	1,100	8.00	5,400	12.50	21,975
4.00	110	5.80	1,300	8.50	7,180	13.00	23,850
4.20	180	6.00	1,500	9.00	8,950	14.00	27,600
4.40	280	6.20	1,715	9.50	10,780	15.00	31,350
4.60	380	6.40	1,950	10.00	12,600	16.00	35,100
4.80	480	6.60	2,205	10.50	14,480		
5.00	600	6.80	2,480	11.00	16,350		

Monthly discharge of Salinas River near Salinas, Cal., for 1900-1901.

[Drainage area, 4,084 square miles.]

Month.	Discharge in second-feet.				Run-off.	
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.	Total in acre-feet.
1900.						
January 8-31.....	2,700	223	848	0.21	0.19	40,368
February.....	223	40	105	.03	.03	5,831
March.....	223	25	73	.02	.02	4,489
April.....	32	19	22	.01	.01	1,309
May.....	19	17	17	.0	.0	1,045
June.....	17	15	16	.0	.0	952
July.....	10	6	8	.0	.0	492
August.....	8	6	7	.0	.0	430
September.....	8	2	6	.0	.0	357
The period.....						55,300
1900-1901.						
October.....	4	1	2	.0	.0	123
November.....	33,600	0	2,413	.59	.66	143,583
December.....	1,050	82	295	.07	.08	18,139
January.....	35,162	380	4,921	1.21	1.39	302,580
February.....	20,927	540	4,172	1.02	1.06	231,701
March.....	1,772	430	1,063	.26	.30	65,361
April.....	405	160	270	.07	.07	16,066
May.....	2,012	160	533	.13	.15	32,773
June.....	160	30	56	.01	.01	3,332
July.....	30	25	27	.01	.01	1,660
The period.....						815,000

NACIMIENTO¹ CREEK NEAR BRYSON, CAL.

Nacimiento Creek drains the eastern slopes of the Santa Lucia Mountains and enters Salinas River 5 miles above Bradley. A gaging station was established on this stream at the Harris ranch, near Bryson, on February 17, 1901. The record on this stream was discontinued April 30, 1901. The total area drained above the gaging station is 171 square miles.

Discharge measurements of Nacimiento Creek near Bryson, Cal.

Date.	Hydrographer.	Gage height.	Dis-charge.
1901.		<i>Feet.</i>	<i>Sec.-feet.</i>
Feb. 17	S. G. Bennett.....	6.15	284
Mar. 25	W. W. Cockins, jr.....	5.3	105
Apr. 3	.....do.....	5.3	121

Discharge measurements of Nacimiento Creek near Newhall ranch house, San Miguelito ranch, Monterey County, Cal.

Date.	Hydrographer.	Gage height.	Dis-charge.
1901.		<i>Feet.</i>	<i>Sec.-feet.</i>
Jan. 18	S. G. Bennett.....	6.1	106
Feb. 13	.....do.....	6.5	169
June 3	H. Hamlin.....	4.82	33
July 12	.....do.....	4.42	3.8

¹ Called Siena River on post route and Land Office maps.

Daily gage height, in feet, of Nacimiento Creek near Bryson, Cal., for 1901.

Day.	Feb.	Mar.	Apr.	May.	Day.	Feb.	Mar.	Apr.	May.
1.....		6.3	5.2	7.6	16.....		5.6	5.0	
2.....		6.2	5.2		17.....	6.1	5.5	5.0	
3.....		6.1	5.2		18.....	6.1	5.5	5.0	
4.....		6.0	5.1		19.....	6.2	5.5	5.0	
5.....		5.9	5.1		20.....	11.0	5.4	4.9	
6.....		5.9	5.1		21.....	8.7	5.4	4.9	
7.....		5.8	5.1		22.....	7.8	5.4	4.9	
8.....		5.7	5.1		23.....	7.5	5.3	4.9	
9.....		5.7	5.1		24.....	7.1	5.3	4.9	
10.....		6.0	5.0		25.....	6.9	5.3	4.9	
11.....		6.3	5.0		26.....	6.7	5.3	4.9	
12.....		5.9	5.0		27.....	6.6	5.2	4.9	
13.....		5.8	5.0		28.....	6.4	5.2	4.9	
14.....		5.7	5.0		29.....		5.2	7.0	
15.....		5.6	5.0		30.....		5.2	7.1	
					31.....		5.2		

Monthly discharge of Nacimiento Creek near Bryson, Cal., for 1901.

[Drainage area, 171 square miles.]

Month.	Discharge in second-feet.				Run-off.	
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.	Total in acre-feet.
February (17-28).....	3,300	295	855	5.00	2.23	20,350
March.....	365	110	184	1.08	1.24	11,314
April.....	670	87	99	.58	.65	5,891

SAN ANTONIO RIVER NEAR JOLON, CAL.

San Antonio River drains the eastern slopes of the Santa Lucia Mountains and enters Salinas River at Bradley. A gaging station was established near Jolon December 15, 1900. The total area drained is 161 square miles. The record on this stream was discontinued April 30, 1901.

Discharge measurements of San Antonio River near Jolon, Cal.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1901.		<i>Feet.</i>	<i>Sec.-feet.</i>	1901.		<i>Feet.</i>	<i>Sec.-feet.</i>
Jan. 19	S. G. Bennett.....	4.45	185	Apr. 5	W. W. Cockins, jr.....	4.3	76
Feb. 12	.....do.....	4.8	242	18	S. G. Bennett.....	4.1	59
Mar. 18	W. W. Cockins, jr.....	4.5	148	July 11	H. Hamlin.....		.64
26	.....do.....	4.3	76				

Daily gage height, in feet, of San Antonio River near Jolon, Cal., for 1900-1901.

Day.	Dec.	Jan.	Feb.	Mar.	Apr.	Day.	Dec.	Jan.	Feb.	Mar.	Apr.
1.....		3.4	4.4	5.0	4.2	16.....	3.7	4.3	4.7	4.5	4.1
2.....		3.4	4.4	5.0	4.2	17.....	3.9	4.3	4.7	4.5	4.1
3.....		3.3	4.4	4.9	4.2	18.....	3.9	4.3	4.7	4.5	4.1
4.....		7.2	4.6	4.9	4.2	19.....	3.7	4.3	4.9	4.5	4.1
5.....		7.4	5.8	4.8	4.2	20.....	3.7	4.5	5.6	4.4	4.0
6.....		7.6	6.4	4.8	4.2	21.....	3.7	4.9	5.8	4.4	4.0
7.....		6.6	5.8	4.7	4.2	22.....	3.7	5.4	5.5	4.4	4.0
8.....		4.4	5.4	4.6	4.2	23.....	3.7	5.0	5.4	4.3	4.0
9.....		4.3	5.3	4.6	4.2	24.....	3.7	4.8	5.2	4.3	4.0
10.....		4.2	5.2	4.6	4.2	25.....	3.7	4.6	5.0	4.3	4.0
11.....		4.2	5.0	4.6	4.2	26.....	3.6	4.6	5.1	4.3	4.0
12.....		4.3	4.9	4.6	4.2	27.....	3.6	4.5	5.1	4.3	4.0
13.....		4.3	4.9	4.6	4.1	28.....	3.6	4.5	5.1	4.3	4.3
14.....		4.3	4.8	4.5	4.1	29.....	3.7	4.5	.....	4.3	4.7
15.....	3.7	4.3	4.8	4.5	4.1	30.....	3.5	4.5	.....	4.3	5.5
						31.....	3.5	4.4	.....	4.3	.....

Daily discharge, in second-feet, of San Antonio River near Jolon, Cal., for 1901.

Day.	Jan.	Feb.	Mar.	Apr.	Day.	Jan.	Feb.	Mar.	Apr.
1.....	150	110	400	64	16.....	84	230	142	50
2.....	150	110	400	64	17.....	84	230	142	50
3.....	130	110	340	64	18.....	84	230	142	50
4.....	2,940	183	340	64	19.....	84	340	142	50
5.....	3,300	1,010	280	64	20.....	142	820	110	39
6.....	3,700	1,700	280	64	21.....	340	1,010	110	39
7.....	1,980	1,010	230	64	22.....	670	740	110	39
8.....	110	670	183	64	23.....	400	670	84	39
9.....	84	600	183	64	24.....	280	530	84	39
10.....	64	530	183	64	25.....	183	400	84	39
11.....	64	400	183	64	26.....	183	460	84	39
12.....	84	340	183	64	27.....	142	460	84	39
13.....	84	340	183	50	28.....	142	460	84	84
14.....	84	280	142	50	29.....	142	.....	84	230
15.....	84	280	142	50	30.....	142	.....	84	740
					31.....	110	.....	84	.....

Monthly discharge of San Antonio River near Jolon, Cal., for 1901.

[Drainage area 161 square miles.]

Month.	Discharge in second-feet.				Run-off.	
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.	Total in acre-feet.
January.....	3,700	64	523	3.25	3.75	32,158
February.....	1,700	110	509	3.17	3.31	28,208
March.....	400	84	171	1.06	1.22	10,514
April.....	740	39	83	.52	.58	4,939

SAN LORENZO CREEK NEAR KING CITY, CAL.

San Lorenzo Creek drains the western slopes of the Gavilan Mountains and enters Salinas River near King City, Cal. There is a reservoir and dam site on the stream 5 miles above its mouth. This stream is entirely dry during the summer months. The flood waters are used for winter irrigation.

A gaging station was established December 16, 1900, at Hollenbeck's ranch. To obtain a reliable observer it was necessary to move the gaging station to the Mathews dam site one-half mile above the Hollenbeck ranch on November, 1901. The stream is very flashy, and the rating curve for 1902 was completed by taking the cross section and slope with a level and calculating the discharge by Kutter's formula. The station was discontinued May 31, 1903, and reestablished on September 12, 1911, in order to obtain estimates of the flood discharge.

Discharge measurements of San Lorenzo Creek near King City, Cal., in 1901-1903.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1901.		<i>Feet.</i>	<i>Sec.-ft.</i>	1902.		<i>Feet.</i>	<i>Sec.-ft.</i>
Jan. 22	S. G. Bennett.....	4.98	28.7	Feb. 24	S. G. Bennett.....	1.09	43
Feb. 14	.....do.....	5.3	71.2	Apr. 30	.....do.....	.09	2
Mar. 27	W. W. Cockins, jr.....	4.3	12.6	July 16	H. Hamlin.....	.....	1
Apr. 1	.....do.....	4.2	5.1	Nov. 12	.....do.....	.85	6
Nov. 2	.....do.....	4.1	2.1				
	H. E. Green.....	.9	2.8	1903.			
1902.				June 1	S. G. Bennett.....	.9	3.3
Jan. 24	S. G. Bennett.....	.9	5	Aug. 20	H. Hamlin.....	.65	.5

Daily gage height, in feet, of San Lorenzo Creek near King City, Cal., for 1900-1903.

Day.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Day.	Dec.	Jan.	Feb.	Mar.	Apr.	May.
1900-1901.							1900-1901.						
1.....		4.25	4.25	4.7	4.2	5.15	16.....	4.3	4.45	5.4	4.45	4.2	.....
2.....		4.25	4.25	4.6	4.2	.....	17.....	4.25	4.45	5.3	4.5	4.2	.....
3.....		4.25	4.25	4.6	4.35	.....	18.....	4.35	4.45	5.6	4.45	4.2	.....
4.....		4.3	4.25	4.6	4.35	.....	19.....	4.35	4.5	5.7	4.45	4.2	.....
5.....		7.8	12.0	4.6	4.4	.....	20.....	4.25	4.5	5.9	4.45	4.2	.....
6.....		9.4	9.5	4.6	4.35	.....	21.....	4.25	4.7	6.05	4.45	4.2	.....
7.....		7.05	8.5	4.6	4.2	.....	22.....	4.25	4.8	5.25	4.45	4.2	.....
8.....		5.35	5.5	4.55	4.2	.....	23.....	4.25	4.6	5.15	4.45	4.2	.....
9.....		4.85	5.5	4.5	4.2	.....	24.....	4.25	4.4	5.15	4.45	4.2	.....
10.....		4.4	4.9	4.6	4.2	.....	25.....	4.25	4.3	5.1	4.45	4.2	.....
11.....		4.4	4.7	4.6	4.2	.....	26.....	4.25	4.3	5.0	4.3	4.25	.....
12.....		4.4	4.6	4.6	4.2	.....	27.....	4.25	4.35	5.0	4.25	4.3	.....
13.....		4.4	5.0	4.6	4.2	.....	28.....	4.25	4.4	4.9	4.25	4.3	.....
14.....		4.4	5.4	4.6	4.2	.....	29.....	4.25	4.25	.....	4.25	4.3	.....
15.....		4.45	5.5	4.55	4.2	.....	30.....	4.25	4.25	.....	4.25	4.65	.....
							31.....	4.25	4.25	.....	4.3	.....	.....

Day.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	Day.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
1901-2.							1901-2.						
1.....			1.2	0.9	1.1	0.9	16.....	1.0	1.05	.9	.9	1.0	.9
2.....			1.0	.9	3.0	.9	17.....	1.0	1.05	.9	.9	1.0	.8
3.....			1.0	.9	2.2	.9	18.....	1.0	.95	.9	.9	1.0	.8
4.....			1.0	.9	1.4	.9	19.....	1.0	.95	.9	.9	1.0	.8
5.....			1.0	.9	1.2	.9	20.....	1.0	.95	.9	.9	1.0	.8
6.....			1.2	.9	1.6	.9	21.....	1.0	.95	.9	.9	.9	.8
7.....			1.1	.9	1.6	.9	22.....	1.0	.9	.9	1.7	.9	.8
8.....			1.0	.9	1.8	.9	23.....	1.0	.9	.9	1.6	.9	.8
9.....			1.0	.9	1.8	.9	24.....	1.0	.9	1.0	1.7	.9	.8
10.....			1.3	1.05	.9	.9	25.....	1.0	.9	1.0	2.9	1.0	.8
11.....			1.3	1.05	.9	.9	26.....	1.0	.9	.9	2.3	1.0	.8
12.....			1.3	1.05	.9	.9	27.....	1.0	.9	.9	1.5	.9	.9
13.....			1.3	1.05	.9	.9	28.....	1.2	.9	.9	1.2	.9	.9
14.....			1.0	1.05	.9	.9	29.....	2.75	.....	.9	.....	.9	.9
15.....			1.0	1.05	.9	.9	30.....	1.55	.....	.9	.....	.9	.9
							31.....	.....	.....	.9	.....	.9	.....

Daily gage height, in feet, of San Lorenzo Creek near King City, Cal., for 1900-1903—
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.
1902-3.								
1.....		1.0	1.0	0.9	1.8	0.9	2.4	0.9
2.....		1.0	1.0	.9	1.6	.9	2.4	.9
3.....		1.0	.9	.9	1.5	1.0	2.0	.9
4.....		1.0	.9	.9	1.4	1.0	1.8	.9
5.....		1.0	.9	.9	1.2	1.0	1.8	.9
6.....		1.0	.9	.9	1.2	1.0	1.6	.9
7.....		1.0	.9	.9	1.2	1.0	1.2	.9
8.....		1.0	.9	.9	1.8	1.0	1.2	.9
9.....		1.0	.9	.9	1.6	1.0	1.2	.9
10.....		1.0	1.0	.9	1.6	1.0	1.1	.9
11.....		1.8	1.0	.9	1.4	1.0	1.1	.9
12.....		1.7	1.0	.9	1.2	1.0	.9	.9
13.....		1.6	1.0	.9	1.0	1.0	.9	.9
14.....		1.6	.9	.9	1.0	1.0	.9	.9
15.....		1.6	.9	.9	1.0	1.8	.9	.9
16.....		1.6	.9	.9	1.0	1.6	.9	.9
17.....		1.6	.9	.9	1.0	1.4	.9	.9
18.....		1.5	.9	.9	1.0	1.8	.9	.9
19.....	0.9	1.8	.9	.9	1.0	1.6	.9	.8
20.....	.9	1.7	.9	.9	1.0	1.2	.9	.8
21.....	1.0	1.6	.9	.9	1.0	1.0	.9	.8
22.....	1.0	1.6	.9	.9	.9	1.0	.9	.8
23.....	1.0	1.4	.9	.9	.9	1.0	.9	.8
24.....	1.0	1.4	.9	.9	.9	1.0	.9	.8
25.....	1.0	1.4	.9	1.0	.9	1.6	.9	.8
26.....	1.0	1.4	.9	1.0	.9	1.8	.9	.8
27.....	1.0	1.4	.9	1.2	.9	1.6	.9	.8
28.....	1.0	1.4	.9	1.9	.9	2.0	.9	.8
29.....	1.0	1.2	.9	1.8	.....	2.0	.9	.8
30.....	1.0	1.2	.9	1.6	.....	1.8	.9	.8
31.....	1.0	.....	.9	2.0	.....	2.4	.....	.8

Rating tables for San Lorenzo Creek near King City, Cal.

January 1 to May 1, 1901.

Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.
Feet.	Sec.-feet.	Feet.	Sec.-feet.	Feet.	Sec.-feet.	Feet.	Sec.-feet.
4.00	0	6.00	240	8.00	1,820	10.00	4,800
4.20	6	6.20	350	8.20	2,052	10.20	5,160
4.40	13	6.40	460	8.40	2,284	10.40	5,520
4.60	22	6.60	600	8.60	2,540	10.60	5,920
4.80	32	6.80	720	8.80	2,820	10.80	6,360
5.00	46	7.00	870	9.00	3,100	11.00	6,800
5.20	62	7.20	1,040	9.20	3,420	11.50	7,900
5.40	80	7.40	1,200	9.40	3,740	12.00	9,200
5.60	125	7.60	1,400	9.60	4,080	12.50	10,600
5.80	175	7.80	1,610	9.80	4,440		

November 10, 1901, to May 31, 1903.

0.80	3	1.40	88	2.00	274	2.60	585
.90	5	1.50	110	2.10	317	2.70	650
1.00	15	1.60	135	2.20	364	2.80	720
1.10	32	1.70	166	2.30	415	2.90	795
1.20	50	1.80	200	2.40	470	3.00	875
1.30	68	1.90	236	2.50	525		

Monthly discharge of San Lorenzo Creek near King City, Cal., for 1900-1902.

[Drainage area, 235 square miles.]

Month.	Discharge in second-feet.				Run-off.	
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.	Total in acre-feet.
1900-1901.						
December 16-31.....	13	9	9	0.04	0.02	286
January.....	2,540	9	171	.73	.84	10,514
February.....	9,200	9	725	3.09	3.21	40,264
March.....	27	9	17	.07	.08	1,045
April.....	13	6	8	.03	.03	476
1902.						
January.....	15	5	6	.03	.03	369
February.....	795	5	69	.29	.30	3,832
March.....	875	5	81	.34	.39	4,980
April.....	5	3	4	.02	.02	238
1902-3.						
October 19-31.....			15	.06	.03	357
November.....	200	15	85	.36	.40	5,057
December.....	15	5	7	.03	.03	430
January.....	274	5	34	.14	.16	2,091
February.....	200	5	52	.22	.23	2,888
March.....	470	5	89	.38	.44	5,472
April.....	470	5	69	.29	.32	4,106
May.....	5	3	4	.02	.02	246
The period.....						20,600

Discharge measurements of San Lorenzo Creek at King City, Cal., in 1912.

Date.	Hydrographer.	Gage height.	Dis-charge.
Apr. 13	Lasley Lee.....	Feet. 5.44	Sec.-feet. 39
13do.....	5.38	31
14do.....	5.26	14

Daily gage height, in feet, of San Lorenzo Creek at King City, Cal., for 1912.

Day.	Mar.	Apr.	Day.	Mar.	Apr.	Day.	Mar.	Apr.
1.....			11.....	5.5	6.4	21.....		
2.....			12.....	5.5	5.6	22.....		
3.....			13.....	6.3	5.42	23.....		
4.....	5.6		14.....	5.9	5.35	24.....		
5.....	5.8		15.....	5.75	5.25	25.....		
6.....	5.65		16.....	5.7	5.08	26.....		
7.....	5.5		17.....			27.....		
8.....	5.5		18.....			28.....		
9.....	5.5	6.4	19.....			29.....		
10.....	5.5	6.9	20.....			30.....		
						31.....		

NOTE.—River was dry Sept. 12, 1911, to June 30, 1912, except on days for which gage heights are given.

ARROYO SECO NEAR SOLEDAD, CAL.

The gaging station on Arroyo Seco was established in December, 1900, at Foster's ranch, near Piney, but in April, 1901, it was moved to Pettitt's ranch, about 15 miles south of Soledad, in sec. 21, T. 19 S., R. 6 E., and 4 miles below the original station.

No water is diverted above the station. The Clark Colony Water Co., irrigating about 4,000 acres, and the Spreckles Sugar Co. about 3,500 acres, divert water $1\frac{1}{2}$ and 3 miles, respectively, below the station. These canals head above the broad wash of gravel and sand into which the low water sinks and disappears, and from which the stream receives the name Arroyo Seco.

The staff gage is in two sections on the right bank.

Discharge measurements are made from a cable 300 feet below the gage. The channel shifts more or less during high water, and the current is very swift. Measurements made at such stages may be considerably in error.

Discharge measurements of Arroyo Seco near Soledad, Cal., in 1901-1904.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1901.		<i>Feet.</i>	<i>Sec.-ft.</i>	1903.		<i>Feet.</i>	<i>Sec.-ft.</i>
Feb. 11 ^a	S. G. Bennett.....	3.70	505	Mar. 28	R. J. Love.....	8.60	1,707
July 10	H. Hamlin.....	5.30	23	Apr. 1	do.....	10.60	3,863
Nov. 6	H. A. Green.....	5.20	15	May 26	S. G. Bennett.....	5.69	71
				Aug. 21	H. Hamlin.....	5.00	.6
1902.				1904.			
Feb. 24	S. G. Bennett.....	8.20	1,720	Jan. 22	F. R. S. Buttemar....	5.52	24
25	do.....	11.70	7,883	Feb. 5	F. W. Huber.....	6.08	150
26	do.....	9.00	2,777	13	W. B. Newhall.....	6.65	372
Apr. 29	do.....	5.75	144	Mar. 11	do.....	6.85	470
July 18	H. Hamlin.....	5.08	10	16	do.....	6.08	184
Aug. 7	do.....	4.90	2	20	do.....	7.02	600
Nov. 14	do.....	5.42	50	23	do.....	8.40	1,514
15	do.....	5.40	35	23	do.....	7.80	1,117
Dec. 31	S. G. Bennett.....	5.40	43	May 12	F. W. Huber.....	5.85	103
1903.				July 29	O. W. Peterson.....	5.20	1.1
Mar. 21	do.....	6.23	247				

^a Measured at Foster's ranch near Piney, Cal.

Discharge measurements of Arroyo Seco near Soledad, Cal., in 1905-1912.

[By Charles Pettit and others.]

Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.
1905.	<i>Feet.</i>	<i>Sec.-ft.</i>	1907.	<i>Feet.</i>	<i>Sec.-ft.</i>	1910.	<i>Feet.</i>	<i>Sec.-ft.</i>
Jan. 31.	5.91	128	Jan. 4.	6.22	386	May 23.	5.52	52
Feb. 2.	8.80	1,574	9.	10.20	3,190	30.	5.45	34
3.	7.50	856	11.	9.55	2,840	June 5.	5.42	33
5.	7.35	778	13.	7.88	1,240	13.	5.38	30
16.	6.82	486	17.	8.35	1,600	19.	5.35	18
17.	8.95	1,829	25.	7.40	957	26.	5.30	14
Mar. 11.	5.90	142	28.	9.12	2,260	July 3.	5.25	13
13.	10.05	2,253	Mar. 4.	6.62	502	10.	5.20	9
16.	8.00	1,315	5.	7.55	915	17.	5.15	6.8
17.	7.50	838	10.	8.55	1,820	25.	5.08	3.6
19.	9.30	2,233	12.	8.08	1,400	30.	5.05	2.7
29.	7.05	585	18.	10.10	3,160	Aug. 21.	4.98	1.2
Apr. 9.	6.10	248	19.	12.00	5,200	Sept. 11.	4.80	1.0
16.	6.09	210	20.	10.10	3,230	21.	5.12	2.9
19.	6.16	240	22.	8.88	2,230	Oct. 31.	5.20	7.8
29.	5.95	125	25.	11.10	4,180	Dec. 1.	5.35	14
May 7.	8.30	1,317	Apr. 7.	7.00	728	1911.		
8.	7.12	689	May 5.	5.85	229	Jan. 11.	5.80	94
28.	5.93	123	12.	5.77	215	15.	8.50	1,630
June 4.	5.83	116	28.	5.55	147	22.	6.30	250
12.	5.75	78	June 25.	5.32	60	30.	11.60	4,390
18.	5.70	68	July 29.	5.08	31	Feb. 14.	7.12	704
18.	5.70	78	Aug. 11.	5.00	23	Mar. 1.	7.06	656
24.	5.62	54	Oct. 15.	5.01	25	13.	8.05	1,890
July 3.	5.55	39	26.	5.70	200	24.	6.20	665
9.	5.48	28	1908.			Apr. 2.	5.55	422
15.	5.45	24	Jan. 25.	6.82	640	17.	5.10	265
23.	5.42	21	26.	7.72	1,130	30.	4.80	206
29.	5.40	16	28.	6.58	540	May 14.	4.58	148
Aug. 6.	5.38	13	Feb. 2.	9.08	2,080	28.	4.40	107
10.	5.33	8	3.	7.75	1,220	June 10.	4.25	79
1906.			9.	7.00	772	July 9.	3.95	35
Feb. 24.	6.52	396	Mar. 9.	5.82	202	21.	3.88	28
Mar. 6.	6.22	436	July 12.	4.78	3.6	31.	3.78	20
9.	6.30	388	Oct. 12.	4.80	3.2	Aug. 17.	3.75	13
11.	6.15	328	1909.			25.	4.12	58
13.	11.90	5,700	Jan. 8.	10.00	2,660	27.	3.68	11
13.	8.20	1,530	9.	7.88	1,220	Sept. 13.	3.60	12
15.	10.10	3,330	14.	9.50	2,430	13.	3.60	13
16.	9.32	2,440	21.	12.80	5,660	24.	3.75	13
17.	8.45	1,790	22.	10.20	2,910	Oct. 8.	3.75	9.3
18.	7.88	1,240	24.	9.18	2,120	20.	3.73	15
20.	7.38	856	Feb. 12.	12.80	6,190	Nov. 5.	3.80	19
23.	11.40	3,900	Apr. 11.	6.40	344	19.	3.86	26
24.	8.75	1,900	May 2.	5.98	180	Dec. 3.	3.86	23
26.	8.96	2,430	June 27.	5.46	36	17.	3.95	30
30.	8.10	1,410	Nov. 9.	5.35	28	21.	4.05	42
31.	9.25	2,510	Dec. 7.	6.32	386	1912.		
Apr. 8.	6.95	633	1910.			Jan. 21.	4.10	49
15.	6.35	414	Jan. 25.	6.88	546	28.	4.35	91
22.	6.15	338	30.	6.20	247	Feb. 11.	3.98	38
29.	6.00	282	Feb. 11.	5.90	137	26.	3.93	26
May 5.	5.81	226	17.	5.80	105	29.	3.93	30
13.	5.72	198	27.	5.75	88	Mar. 6.	6.02	519
21.	5.00	169	Mar. 6.	5.70	79	13.	5.84	458
28.	7.40	1,010	15.	5.72	86	24.	4.40	94
June 4.	6.00	294	20.	7.88	1,260	Apr. 10.	5.36	295
5.	5.93	269	27.	7.20	798	21.	4.53	121
24.	5.50	121	Apr. 3.	6.33	331	May 5.	4.28	76
July 4.	5.35	82	11.	6.10	219	26.	5.12	235
13.	5.25	52	18.	5.88	134	June 2.	4.15	50
29.	5.13	28	26.	5.75	115	16.	3.95	31
Aug. 12.	5.05	15.1	May 4.	5.70	95	23.	3.93	26
26.	5.02	18.2	8.	5.65	86	July 7.	3.75	14
Sept. 18.	4.90	13.5	15.	5.55	58			
Oct. 27.	5.01	11.2						
Dec. 31.	7.20	83.8						

Daily gage height, in feet, of Arroyo Seco at Foster's ranch, near Piney, Cal., for 1901.

Day.	Jan.	Feb.	Mar.	Apr.	Day.	Jan.	Feb.	Mar.	Apr.
1.....	3.0	3.2	3.8	3.0	16.....	3.5	3.6	3.3	2.8
2.....	3.0	3.2	3.8	3.0	17.....	3.5	3.6	3.3	2.8
3.....	3.0	3.2	3.7	3.0	18.....	3.4	3.6	3.3	2.8
4.....	6.3	3.3	3.7	3.0	19.....	3.3	4.5	3.2	2.8
5.....	6.1	5.8	3.6	3.0	20.....	3.4	5.5	3.1	2.8
6.....	7.0	5.4	3.6	3.0	21.....	4.2	5.0	3.1	2.8
7.....	6.0	3.8	3.5	3.0	22.....	3.8	4.7	3.1	2.8
8.....	5.0	3.5	3.6	2.9	23.....	3.7	4.7	3.1	2.8
9.....	4.5	4.0	3.5	2.9	24.....	3.6	4.5	3.1	2.8
10.....	4.2	4.0	3.4	2.9	25.....	3.5	4.3	3.1	2.8
11.....	4.0	3.6	3.4	2.8	26.....	3.5	4.1	3.1	2.8
12.....	3.9	3.7	3.4	2.9	27.....	3.5	4.0	3.0	2.8
13.....	3.8	3.7	3.4	2.8	28.....	3.4	4.0	3.0	2.8
14.....	3.6	3.6	3.4	2.8	29.....	3.3	.....	3.0	3.8
15.....	3.6	3.6	3.3	2.8	30.....	3.2	.....	3.0	5.5
					31.....	3.2	.....	3.0	.....

Daily gage height, in feet, of Arroyo Seco near Soledad, Cal., for 1901-1912.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1901-2.												
1.....			5.5	5.3	5.3	7.5	5.9	5.7	5.5	5.2	5.0	4.9
2.....			5.4	5.3	5.3	8.7	6.0	5.7	5.4	5.2	5.0	4.9
3.....			5.4	5.3	5.3	7.8	5.9	5.7	5.5	5.2	5.0	4.8
4.....			5.4	5.3	5.3	7.2	5.8	5.7	5.4	5.2	4.9	4.9
5.....			5.4	5.3	5.3	6.9	5.8	5.7	5.4	5.2	5.0	4.8
6.....		5.2	5.4	5.3	5.3	7.1	5.8	5.7	5.4	5.2	4.9	4.9
7.....		5.15	5.4	5.3	5.3	6.9	8.1	5.7	5.4	5.2	4.9	4.8
8.....		5.1	5.4	5.3	5.3	8.3	6.7	5.6	5.4	5.2	4.9	4.8
9.....		5.1	5.4	5.3	5.7	7.9	6.4	5.7	5.4	5.2	4.9	4.8
10.....		5.2	5.4	5.3	5.5	7.3	6.3	5.6	5.4	5.2	4.9	4.8
11.....		5.73	5.3	5.3	5.5	7.1	6.2	5.6	5.4	5.2	4.9	4.8
12.....		5.3	5.3	5.3	5.6	6.8	6.2	5.6	5.4	5.2	4.9	4.8
13.....		5.3	5.3	5.3	5.5	6.8	6.1	5.6	5.4	5.2	4.9	4.8
14.....		5.3	5.3	5.3	5.5	6.5	6.0	5.6	5.4	5.1	4.9	4.8
15.....		5.25	5.3	5.3	6.4	6.4	6.0	5.6	5.4	5.1	4.9	4.8
16.....		5.25	5.3	5.3	6.0	6.3	6.0	5.6	5.3	5.1	4.9	4.8
17.....		5.3	5.3	5.3	6.0	6.3	6.0	5.6	5.3	5.1	4.9	4.8
18.....		5.3	5.3	5.3	5.9	6.2	5.9	5.6	5.3	5.1	4.9	4.8
19.....		5.2	5.3	5.3	5.9	6.2	5.9	5.5	5.3	5.1	4.9	4.8
20.....		5.2	5.3	5.4	5.7	6.2	5.9	5.5	5.3	5.1	4.9	4.8
21.....		5.2	5.3	5.3	7.4	6.1	5.9	5.5	5.3	5.1	4.9	4.8
22.....		5.2	5.3	5.3	8.8	6.0	5.9	5.5	5.3	5.1	4.9	4.8
23.....		5.2	5.3	5.3	6.3	6.0	5.8	5.5	5.3	5.0	4.9	4.8
24.....		5.2	5.3	5.3	8.7	6.1	6.0	5.5	5.3	5.0	4.9	4.8
25.....		5.2	5.3	5.4	9.1	6.0	5.9	5.5	5.3	5.0	4.9	4.8
26.....		5.2	5.3	5.4	9.1	6.1	5.9	5.5	5.2	5.0	4.9	4.8
27.....		5.2	5.3	5.4	8.2	6.0	5.8	5.5	5.2	5.0	4.9	4.8
28.....		5.6	5.3	5.4	7.8	5.9	5.8	5.5	5.2	5.0	4.9	4.8
29.....		5.6	5.3	5.4	.....	5.9	5.8	5.5	5.2	5.0	4.9	4.8
30.....		5.6	5.3	5.3	.....	5.9	5.8	5.5	5.2	5.0	4.9	4.8
31.....		.....	5.3	5.3	.....	5.9	.....	5.5	.....	5.0	4.9	.....
1902-3.												
1.....	4.8	5.2	5.3	5.4	7.4	5.8	9.9	5.9	5.6	5.4	5.2	5.1
2.....	4.8	5.2	5.3	5.4	6.9	5.8	8.4	5.9	5.6	5.4	5.3	5.1
3.....	4.8	5.2	5.3	5.4	6.6	5.8	8.2	5.9	5.6	5.4	5.2	5.1
4.....	4.8	5.2	5.3	5.4	6.5	5.9	7.4	5.9	5.6	5.4	5.2	5.1
5.....	4.9	5.2	5.3	5.4	6.4	6.2	7.2	5.9	5.6	5.4	5.2	5.1
6.....	4.8	5.1	5.3	5.4	6.3	6.0	7.0	5.9	5.6	5.4	5.2	5.1
7.....	4.8	5.1	5.3	5.4	6.2	6.0	6.9	5.8	5.6	5.4	5.2	5.1
8.....	4.9	5.1	5.3	5.3	7.6	6.3	6.8	5.8	5.6	5.4	5.2	5.1
9.....	4.9	5.1	5.4	5.3	6.8	6.3	6.6	5.8	5.6	5.4	5.2	5.0
10.....	4.9	7.0	5.8	5.3	6.7	6.2	6.5	5.8	5.5	5.3	5.2	5.0
11.....	4.9	5.9	5.7	5.3	6.5	6.1	6.5	5.8	5.5	5.4	5.2	5.0
12.....	4.9	5.5	5.7	5.3	6.4	6.1	6.4	5.8	5.5	5.4	5.2	5.0
13.....	5.0	5.5	5.7	5.3	6.4	6.0	6.3	5.8	5.5	5.3	5.2	5.0
14.....	4.9	5.4	5.6	5.3	6.3	6.9	6.3	5.8	5.5	5.3	5.2	5.0
15.....	5.0	5.4	5.5	5.3	6.3	6.5	6.3	5.8	5.5	5.3	5.2	5.0

Daily gage height, in feet, of Arroyo Seco near Soledad, Cal., for 1901-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1902-3.												
16.....	4.9	5.4	5.7	5.3	6.3	6.5	6.4	5.7	5.5	5.3	5.2	5.0
17.....	5.0	5.4	5.6	5.3	6.3	6.5	6.3	5.7	5.5	5.3	5.2	4.9
18.....	4.9	5.4	5.5	5.3	6.3	6.4	6.2	5.7	5.5	5.3	5.2	4.9
19.....	5.0	5.4	5.5	5.3	6.2	6.4	6.2	5.7	5.5	5.3	5.1	4.9
20.....	5.0	5.4	5.5	5.3	6.2	6.3	6.1	5.7	5.5	5.3	5.1	5.0
21.....	5.0	5.4	5.5	5.3	6.1	6.3	6.1	5.7	5.5	5.3	5.1	5.0
22.....	5.0	5.3	5.5	5.3	6.0	6.3	6.1	5.7	5.5	5.3	5.1	5.0
23.....	5.0	5.3	5.4	5.3	6.0	6.2	6.1	5.7	5.5	5.3	5.1	5.1
24.....	5.3	5.3	5.5	5.4	6.0	6.2	6.0	5.7	5.5	5.3	5.1	5.1
25.....	5.5	5.3	5.4	5.3	5.9	6.7	6.0	5.7	5.5	5.3	5.1	5.1
26.....	5.4	5.3	5.4	5.4	5.9	6.3	6.0	5.7	5.5	5.3	5.1	5.1
27.....	5.2	5.3	5.5	5.4	5.9	6.2	6.0	5.6	5.4	5.3	5.1	5.1
28.....	5.2	5.3	5.4	5.6	5.9	7.8	6.0	5.6	5.4	5.3	5.1	5.1
29.....	5.2	5.3	5.4	7.2	-----	7.8	6.0	5.6	5.4	5.3	5.1	5.1
30.....	5.2	5.3	5.4	7.6	-----	9.3	5.9	5.6	5.4	5.3	5.1	5.1
31.....	5.2	-----	5.4	7.0	-----	9.8	-----	5.6	-----	5.2	5.1	-----
1903-4.												
1.....	5.2	5.2	5.5	5.45	5.50	6.10	6.60	6.10	5.60	5.35	5.15	4.55
2.....	5.2	5.3	5.4	5.50	5.50	6.00	6.50	6.00	5.60	5.35	5.20	4.50
3.....	5.2	5.2	5.4	5.50	5.50	5.90	6.35	5.95	5.60	5.35	5.15	4.50
4.....	5.2	5.3	5.4	5.50	5.45	5.90	6.30	5.90	5.60	5.35	5.15	5.40
5.....	5.2	5.3	5.4	5.50	6.10	5.85	6.20	5.90	5.60	5.35	5.20	4.35
6.....	5.2	5.3	5.4	5.50	5.80	5.80	6.15	5.85	5.55	5.30	5.20	4.30
7.....	5.2	5.3	5.4	5.50	5.75	5.75	6.10	5.85	5.55	5.30	5.15	4.30
8.....	5.3	5.3	5.4	5.50	5.70	5.70	6.10	5.80	5.50	5.30	5.15	4.25
9.....	5.3	5.3	5.4	5.50	5.70	5.70	6.00	5.80	5.50	5.30	5.10	4.15
10.....	5.3	5.3	5.4	5.50	5.70	8.15	6.00	5.80	5.50	5.30	5.10	4.10
11.....	5.2	5.3	5.4	5.50	5.70	7.00	6.00	5.80	5.50	5.30	5.10	4.00
12.....	5.3	5.3	5.4	5.45	6.90	6.55	5.90	5.80	5.50	5.30	5.10	4.00
13.....	5.3	5.3	5.4	5.45	6.60	6.30	5.90	5.75	5.45	5.30	5.10	4.00
14.....	5.3	5.3	5.4	5.45	6.00	6.20	5.90	5.70	5.45	5.30	5.05	3.95
15.....	5.3	5.6	5.4	5.45	5.90	6.20	5.90	5.70	5.45	5.30	5.05	3.95
16.....	5.3	5.5	5.4	5.45	8.40	6.10	5.85	5.70	5.45	5.30	5.05	3.90
17.....	5.2	5.4	5.4	5.45	6.45	6.15	5.80	5.70	5.45	5.30	5.05	3.85
18.....	5.3	5.4	5.4	5.50	6.10	6.85	8.00	5.70	5.45	5.30	5.00	3.80
19.....	5.3	5.4	5.4	5.60	5.90	6.50	6.80	5.70	5.45	5.30	5.00	3.75
20.....	5.2	5.9	5.4	5.60	6.00	7.00	6.45	5.70	5.40	5.30	5.00	3.70
21.....	5.2	5.9	5.4	5.55	5.80	6.70	6.30	5.70	5.40	5.25	5.00	3.70
22.....	5.2	5.7	5.4	5.55	5.75	6.50	6.20	5.70	5.40	5.25	5.00	3.70
23.....	5.2	5.7	5.4	5.50	5.70	8.50	6.10	5.70	5.40	5.25	4.95	4.05
24.....	5.2	5.6	5.4	5.50	5.70	7.75	6.10	5.65	5.40	5.25	4.90	5.80
25.....	5.2	5.5	5.4	5.50	5.75	7.10	6.10	5.65	5.40	5.20	4.90	5.60
26.....	5.2	5.5	5.4	5.50	5.80	6.80	6.10	5.60	5.40	5.20	4.85	5.80
27.....	5.2	5.5	5.45	5.50	6.80	6.55	6.10	5.60	5.40	5.20	4.80	5.60
28.....	5.2	5.5	5.45	5.50	6.60	6.50	6.10	5.60	5.35	5.20	4.80	5.50
29.....	5.3	5.5	5.45	5.50	6.25	7.35	6.05	5.60	5.35	5.20	4.70	5.50
30.....	5.3	5.5	5.45	5.50	-----	7.00	6.00	5.60	5.35	5.20	4.65	5.40
31.....	5.3	-----	5.45	5.50	-----	6.80	-----	5.60	-----	5.20	4.60	-----
1904-5.												
1.....	5.40	5.50	5.50	6.1	8.4	6.15	6.5	5.9	5.85	5.6	5.4	5.2
2.....	5.40	5.50	5.45	5.9	8.6	6.1	6.45	6.55	5.85	5.55	5.4	5.2
3.....	5.35	5.50	5.45	5.8	7.45	6.05	6.4	6.2	5.8	5.5	5.4	5.2
4.....	5.35	5.50	5.45	5.75	7.4	6.0	6.35	6.05	5.85	5.5	5.4	5.2
5.....	5.35	5.50	5.45	5.7	7.35	6.0	6.3	6.0	5.8	5.5	5.4	5.2
6.....	5.35	5.50	5.45	5.7	7.2	6.0	6.25	6.0	5.8	5.5	5.4	5.2
7.....	5.40	5.45	5.45	5.65	7.0	5.95	6.25	7.9	5.8	5.5	5.35	5.2
8.....	5.40	5.45	5.45	5.6	6.8	5.9	6.2	7.2	5.8	5.5	5.35	5.2
9.....	6.10	5.45	5.45	5.8	6.65	5.9	6.1	6.8	5.8	5.5	5.35	5.2
10.....	6.20	5.45	5.50	6.0	6.55	5.9	6.15	6.6	5.8	5.5	5.35	5.2
11.....	7.00	5.45	5.45	5.9	6.45	5.9	6.1	6.45	5.75	5.45	5.35	5.2
12.....	6.10	5.45	5.45	5.8	6.35	6.55	6.1	6.4	5.75	5.45	5.35	5.2
13.....	5.85	5.45	5.45	5.8	6.3	10.1	6.1	6.3	5.7	5.45	5.35	5.2
14.....	5.75	5.40	5.45	5.9	6.25	7.85	6.1	6.2	5.7	5.45	5.35	5.2
15.....	5.70	5.50	5.45	5.9	6.2	7.5	6.05	6.2	5.7	5.45	5.35	5.2
16.....	5.65	5.55	5.45	6.95	6.8	8.0	6.1	6.15	5.7	5.45	5.3	5.25
17.....	5.60	5.50	5.45	6.3	8.5	7.6	6.05	6.1	5.7	5.45	5.3	5.25
18.....	5.60	5.50	5.45	6.1	7.45	7.3	6.0	6.1	5.7	5.45	5.3	5.25
19.....	5.55	5.50	5.45	6.2	7.05	9.1	6.2	6.05	5.7	5.45	5.3	5.25
20.....	5.55	5.50	5.45	6.1	6.9	7.6	6.1	6.05	5.7	5.4	5.3	5.2

STREAM MEASUREMENTS IN SOUTH PACIFIC COAST BASINS. 765

Daily gage height, in feet, of Arroyo Seco near Soledad, Cal., for 1901-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1904-5.												
21.....	5.55	5.50	5.45	6.5	6.6	7.35	6.05	6.0	5.7	5.4	5.3	5.2
22.....	5.50	5.50	5.45	6.2	6.5	7.1	6.05	6.0	5.65	5.4	5.3	5.2
23.....	5.50	5.50	5.45	6.1	6.4	6.9	6.0	5.95	5.65	5.4	5.3	5.2
24.....	5.50	5.45	5.45	6.05	6.35	6.75	6.0	5.9	5.65	5.4	5.3	5.2
25.....	5.50	5.45	5.75	6.1	6.3	6.7	6.0	5.9	5.6	5.4	5.3	5.2
26.....	5.50	5.50	5.55	6.0	6.25	6.65	6.0	5.95	5.6	5.4	5.3	5.2
27.....	5.50	5.50	5.50	6.0	6.2	6.55	6.0	5.95	5.6	5.4	5.25	5.2
28.....	5.50	5.50	5.50	6.0	6.2	6.5	6.0	5.95	5.6	5.4	5.25	5.2
29.....	5.50	5.50	5.50	5.95	.....	7.5	5.95	5.9	5.6	5.4	5.25	5.2
30.....	5.50	5.50	5.50	5.9	.....	6.65	5.95	5.9	5.6	5.4	5.25	5.2
31.....	5.50	.....	7.40	5.9	.....	6.6	.....	5.85	.....	5.4	5.25	.....
1905-6.												
1.....	5.25	5.35	5.65	5.55	5.65	6.2	8.3	5.95	6.1	5.4	5.1	4.5
2.....	5.25	5.35	5.6	5.52	5.6	6.15	8.0	5.9	6.05	5.4	5.1	4.5
3.....	5.25	5.35	5.55	5.52	5.58	6.6	7.75	5.9	6.0	5.4	5.1	4.7
4.....	5.25	5.35	5.5	5.53	5.55	8.45	7.55	5.9	6.0	5.35	5.1	4.6
5.....	5.25	5.35	5.5	5.52	5.52	6.9	7.35	5.8	5.9	5.35	5.1	4.6
6.....	5.25	5.35	5.5	5.52	5.6	6.65	7.2	5.8	5.9	5.35	5.1	4.6
7.....	5.25	5.35	5.5	5.52	5.5	6.5	7.0	5.8	5.85	5.3	5.1	4.6
8.....	5.25	5.35	5.5	5.52	5.49	6.39	6.95	5.75	5.8	5.3	5.1	4.6
9.....	5.25	5.35	5.5	5.51	5.45	6.3	6.8	5.7	5.8	5.3	5.1	4.5
10.....	5.25	5.35	5.5	5.51	5.41	6.21	6.7	5.7	5.75	5.3	5.1	4.6
11.....	5.25	5.35	5.5	5.52	5.7	6.28	6.6	5.8	5.7	5.3	5.05	4.6
12.....	5.25	5.35	5.5	6.85	5.51	11.3	6.5	5.75	5.7	5.25	5.05	4.6
13.....	5.25	5.35	5.5	8.18	5.8	8.15	6.5	5.7	5.7	5.25	5.05	4.6
14.....	5.25	5.35	5.5	7.48	5.92	7.8	6.4	5.7	5.65	5.25	5.05	4.6
15.....	5.25	5.35	5.5	7.30	7.05	10.1	6.35	5.7	5.65	5.2	5.0	4.7
16.....	5.25	5.35	5.5	6.75	6.45	9.25	6.3	5.7	5.6	5.2	5.0	4.7
17.....	5.3	5.4	5.5	7.98	6.3	8.4	6.3	5.65	5.6	5.2	5.0	4.8
18.....	5.3	5.4	5.55	7.98	6.28	7.88	6.2	5.6	5.6	5.2	5.0	4.9
19.....	5.3	5.4	5.6	10.12	6.18	7.6	6.2	5.6	5.55	5.2	5.0	4.9
20.....	5.3	5.4	5.6	8.0	6.1	7.3	6.2	5.6	5.5	5.2	5.0	5.0
21.....	5.3	5.4	5.6	7.2	6.3	7.95	6.2	5.6	5.5	5.2	5.0	5.0
22.....	5.3	5.4	5.6	6.8	6.85	7.48	6.2	5.6	5.5	5.2	5.05	5.0
23.....	5.35	5.4	5.6	6.5	6.6	8.94	6.2	5.6	5.5	5.2	5.05	5.0
24.....	5.35	5.5	5.55	6.3	6.59	8.85	6.2	5.6	5.5	5.2	5.05	5.0
25.....	5.35	5.65	5.55	6.15	6.49	8.7	6.2	5.6	5.5	5.2	5.05	5.05
26.....	5.35	5.5	5.5	6.0	6.39	9.0	6.05	6.55	5.5	5.15	5.0	5.05
27.....	5.35	5.5	5.5	5.95	6.3	8.35	6.05	8.3	5.5	5.1	5.0	5.05
28.....	5.35	5.75	5.5	5.9	6.3	8.0	6.0	7.3	5.5	5.1	4.9	5.05
29.....	5.35	5.6	5.55	5.85	.....	7.7	6.0	6.75	5.45	5.15	4.8	5.0
30.....	5.35	5.9	5.5	5.75	.....	8.12	6.0	6.45	5.4	5.1	4.7	5.0
31.....	5.3	.....	5.5	5.7	.....	9.08	.....	6.4	.....	5.1	4.6	.....
1906-7.												
1.....	5.0	5.05	5.2	6.6	7.55	6.15	7.8	5.95	5.5	5.25	5.05	5.0
2.....	5.0	5.05	5.15	6.3	7.45	6.15	7.6	5.9	5.5	5.25	5.05	5.0
3.....	5.0	5.05	5.15	6.3	7.5	6.1	7.45	5.9	5.5	5.25	5.05	5.0
4.....	5.0	5.25	5.15	6.05	7.3	6.8	7.3	5.9	5.5	5.2	5.05	5.0
5.....	5.0	5.5	5.15	6.25	7.25	7.9	7.25	5.85	5.5	5.2	5.05	5.0
6.....	5.0	5.25	5.15	6.1	7.1	7.4	7.1	5.85	5.5	5.2	5.0	5.0
7.....	4.9	5.15	5.15	6.1	7.0	7.0	7.0	5.8	5.5	5.2	5.0	5.0
8.....	4.8	5.15	5.15	7.1	6.9	6.85	6.9	5.8	5.5	5.2	5.0	5.0
9.....	4.8	5.1	5.3	10.10	6.85	7.4	6.8	5.8	5.45	5.2	5.0	5.0
10.....	4.8	5.1	5.3	10.10	6.7	8.6	6.75	5.8	5.45	5.2	4.9	5.0
11.....	4.8	5.1	13.0	9.70	6.6	8.4	6.7	5.8	5.45	5.2	5.0	4.95
12.....	4.9	5.1	7.95	8.5	6.6	8.1	6.6	5.75	5.45	5.2	5.0	4.95
13.....	5.0	5.1	7.2	7.9	6.5	7.75	6.55	5.75	5.5	5.2	5.0	4.95
14.....	5.0	5.1	6.6	7.9	6.5	7.5	6.5	5.75	5.5	5.15	4.95	4.95
15.....	5.0	5.1	6.2	7.55	6.4	7.35	6.5	5.7	5.45	5.15	4.95	4.95
16.....	5.0	5.1	6.1	7.8	6.4	7.3	6.4	5.7	5.45	5.15	4.95	4.95
17.....	5.0	5.1	5.85	8.4	6.4	7.9	6.4	5.7	5.4	5.15	4.95	4.95
18.....	5.0	5.1	5.8	7.7	6.4	9.35	6.3	5.65	5.4	5.1	4.95	4.95
19.....	5.0	5.1	5.7	7.5	6.3	11.85	6.3	5.65	5.4	5.1	4.95	4.95
20.....	5.0	5.1	5.6	7.25	6.3	10.20	6.25	5.65	5.4	5.1	4.95	4.95
21.....	5.0	5.1	5.55	7.15	6.5	9.25	6.2	5.6	5.35	5.1	4.95	4.95
22.....	5.05	5.15	5.5	7.1	6.5	8.90	6.15	5.6	5.35	5.1	4.95	4.95
23.....	5.05	5.15	5.5	7.05	6.4	12.00	6.1	5.65	5.35	5.1	4.95	4.95
24.....	5.05	5.1	5.5	7.1	6.4	11.60	6.1	5.65	5.35	5.1	4.9	4.95
25.....	5.05	5.15	5.5	7.5	6.4	11.20	6.1	5.6	5.3	5.1	4.9	4.95

• Estimated.

Daily gage height, in feet, of Arroyo Seco near Soledad, Cal., for 1901-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1906-7.												
26.....	5.05	5.15	7.45	7.3	6.4	10.8	6.05	5.6	5.3	5.1	4.9	4.95
27.....	5.05	5.15	7.2	7.25	6.2	9.6	6.05	5.6	5.3	5.1	4.9	5.0
28.....	5.05	5.15	6.7	9.1	6.2	9.1	6.0	5.55	5.3	5.1	4.95	5.0
29.....	5.05	5.2	6.35	8.4	.....	8.6	6.0	5.55	5.3	5.1	4.95	5.0
30.....	5.05	5.2	6.25	8.0	.....	8.3	5.95	5.55	5.25	5.1	4.95	5.0
31.....	5.05	.....	7.2	7.7	.....	7.9	.....	5.5	.....	5.05	5.0	.....
1907-8.												
1.....	5.0	5.2	5.1	5.75	5.95	6.1	5.5	5.2	5.1	4.9	4.65	4.5
2.....	5.0	5.2	5.15	5.6	9.15	6.1	5.45	5.35	5.1	4.9	4.6	4.4
3.....	5.0	5.2	5.15	5.5	7.8	6.0	5.45	5.3	5.1	4.9	4.6	4.4
4.....	5.0	5.15	5.15	5.5	6.9	6.0	5.45	5.25	5.1	4.85	4.6	4.4
5.....	5.0	5.15	5.15	5.45	6.5	6.05	5.4	5.2	5.1	4.85	4.6	4.4
6.....	4.95	5.15	5.15	5.4	6.8	6.0	5.4	5.2	5.1	4.85	4.6	4.4
7.....	4.95	5.15	6.5	5.4	6.15	5.9	5.4	5.2	5.1	4.85	4.6	4.4
8.....	4.95	5.15	5.45	5.4	6.0	5.9	5.4	5.2	5.1	4.85	4.6	4.4
9.....	5.0	5.1	5.4	5.35	6.95	5.8	5.4	5.2	5.1	4.8	4.6	4.4
10.....	5.0	5.1	5.5	5.3	6.5	5.75	5.35	5.2	5.1	4.8	4.6	4.35
11.....	5.0	5.1	5.7	5.3	6.3	5.7	5.35	5.2	5.05	4.8	4.6	4.35
12.....	5.0	5.1	5.7	5.3	6.25	5.7	5.35	5.2	5.05	4.8	4.6	4.35
13.....	5.0	5.1	5.5	5.8	6.2	5.7	5.35	5.2	5.05	4.8	4.6	4.35
14.....	5.0	5.1	5.4	6.1	6.2	5.7	5.35	5.2	5.0	4.8	4.6	4.35
15.....	5.0	5.15	5.4	5.75	6.15	5.7	5.35	5.2	5.0	4.8	4.6	4.3
16.....	5.05	5.15	5.45	5.6	6.15	5.65	5.35	5.2	5.0	4.75	4.6	4.3
17.....	5.1	5.15	5.45	5.5	5.95	5.65	5.35	5.2	5.0	4.75	4.6	4.3
18.....	5.1	5.15	5.45	5.5	5.85	5.6	5.3	5.2	5.0	4.75	4.55	4.3
19.....	5.1	5.15	5.4	5.6	5.8	5.6	5.3	5.2	5.0	4.75	4.55	4.2
20.....	5.05	5.15	5.4	5.4	5.8	5.6	5.3	5.2	5.0	4.75	4.55	4.2
21.....	5.05	5.15	5.35	5.5	5.75	5.6	5.3	5.2	5.0	4.7	4.55	4.1
22.....	5.05	5.15	5.3	5.5	5.7	5.55	5.3	5.2	5.0	4.7	4.55	4.1
23.....	5.1	5.1	5.3	5.45	5.7	5.55	5.4	5.2	4.95	4.7	4.55	4.15
24.....	5.1	5.1	5.3	5.95	5.7	5.55	5.4	5.2	4.95	4.7	4.55	4.3
25.....	5.15	5.1	5.25	6.85	5.65	5.55	5.3	5.15	4.95	4.7	4.55	4.5
26.....	5.7	5.15	5.25	7.6	5.65	5.5	5.3	5.15	4.95	4.65	4.55	4.5
27.....	5.6	5.15	5.25	6.9	5.6	5.5	5.3	5.1	4.95	4.65	4.55	4.7
28.....	5.4	5.15	5.25	6.6	5.6	5.5	5.25	5.1	4.95	4.65	4.55	4.75
29.....	5.3	5.1	5.25	6.3	6.1	5.5	5.25	5.1	4.9	4.65	4.5	4.75
30.....	5.25	5.1	5.7	6.2	.....	5.5	5.2	5.1	4.9	4.65	4.5	4.75
31.....	5.25	.....	5.75	6.0	.....	5.5	.....	5.1	.....	4.65	4.5	.....
1908-9.												
1.....	4.75	4.9	5.0	5.1	7.7	6.7	6.95	6.0	5.7	5.4	5.25	5.1
2.....	4.75	4.9	5.0	5.35	7.65	6.65	6.9	6.0	5.7	5.4	5.2	5.1
3.....	4.75	4.9	5.05	5.3	10.3	6.6	6.85	5.95	5.7	5.4	5.2	5.1
4.....	4.75	4.9	5.15	5.4	8.6	6.6	6.8	5.95	5.7	5.4	5.2	5.1
5.....	4.75	4.9	5.1	5.3	8.3	6.6	6.75	5.95	5.65	5.4	5.2	5.1
6.....	4.8	4.9	5.1	5.45	8.0	6.65	6.7	5.9	5.65	5.4	5.2	5.1
7.....	4.8	4.9	5.1	6.05	8.9	6.6	6.65	5.9	5.65	5.4	5.2	5.1
8.....	4.8	4.9	5.1	7.2	8.4	6.5	6.6	5.9	5.65	5.4	5.2	5.1
9.....	4.8	4.9	5.1	7.9	8.2	6.5	6.55	5.9	5.6	5.35	5.2	5.1
10.....	4.8	4.9	5.4	6.3	7.9	6.45	6.5	5.9	5.6	5.4	5.2	5.1
11.....	4.8	4.9	5.2	6.1	11.2	6.4	6.45	5.85	5.6	5.35	5.2	5.1
12.....	4.8	4.9	5.2	6.05	12.3	6.4	6.45	5.85	5.55	5.35	5.2	5.1
13.....	4.8	4.9	5.15	8.4	11.0	6.35	6.3	5.85	5.55	5.25	5.2	5.1
14.....	4.8	4.9	5.1	11.2	9.15	6.3	6.3	5.85	5.55	5.35	5.2	5.1
15.....	4.8	4.9	5.1	9.2	8.8	5.3	6.3	5.8	5.55	5.3	5.2	5.1
16.....	4.8	4.9	5.1	7.85	8.4	6.25	6.3	5.8	5.5	5.3	5.2	5.1
17.....	4.8	4.9	5.1	7.0	8.1	6.25	6.25	5.8	5.5	5.3	5.15	5.1
18.....	4.85	4.9	5.1	6.85	7.8	6.2	6.2	5.8	5.6	5.3	5.15	5.1
19.....	4.85	4.9	5.1	6.5	7.6	6.2	6.2	5.8	5.6	5.3	5.15	5.1
20.....	4.9	4.9	5.1	6.5	7.4	6.2	6.2	5.8	5.6	5.25	5.15	5.1
21.....	4.9	4.9	5.1	13.0	7.6	6.85	6.15	5.8	5.55	5.25	5.15	5.1
22.....	4.9	4.95	5.1	10.6	7.4	6.4	6.15	5.8	5.55	5.25	5.15	5.1
23.....	4.9	4.95	5.1	8.6	7.2	6.35	6.15	5.75	5.5	5.25	5.15	5.1
24.....	4.85	5.0	5.1	8.2	7.1	6.7	6.1	5.75	5.5	5.25	5.1	5.1
25.....	4.85	5.0	5.1	8.8	7.0	7.1	6.1	5.75	5.5	5.25	5.1	5.1
26.....	4.85	5.1	5.1	12.4	6.9	7.1	6.05	5.75	5.5	5.25	5.1	5.1
27.....	4.85	5.1	5.1	9.3	6.8	7.0	6.05	5.7	5.45	5.25	5.1	5.2
28.....	4.9	5.0	5.1	8.4	6.75	6.5	6.05	5.75	5.45	5.25	5.1	5.2
29.....	4.9	5.05	5.1	7.8	.....	7.75	6.0	5.75	5.45	5.25	5.1	5.2
30.....	4.9	5.0	5.1	8.2	.....	7.2	6.0	5.75	5.45	5.25	5.1	5.25
31.....	4.9	.....	5.1	7.8	.....	7.05	.....	5.75	.....	5.25	5.1	.....

Daily gage height, in feet, of Arroyo Seco near Soledad, Cal., for 1901-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909-10.												
1.	5.25	5.3	5.4	8.15	6.15	5.75	6.50	5.7	5.4	5.25	5.05	4.93
2.	5.3	5.3	5.4	6.5	6.15	5.75	6.40	5.7	5.4	5.25	5.05	4.93
3.	5.3	5.3	5.4	6.4	6.1	5.7	6.35	5.7	5.4	5.24	5.04	4.92
4.	5.3	5.3	5.4	6.2	6.0	5.7	6.28	5.7	5.4	5.24	5.03	4.91
5.	5.3	5.3	5.6	6.0	6.0	5.7	6.20	5.7	5.4	5.22	5.03	4.9
6.	5.3	5.3	5.8	5.95	5.95	5.7	6.20	5.7	5.4	5.22	5.03	4.89
7.	5.25	5.4	6.1	5.9	6.0	5.7	6.15	5.7	5.4	5.21	5.02	4.86
8.	5.25	5.4	9.25	5.9	6.0	5.7	6.1	5.7	5.4	5.21	5.01	4.84
9.	5.2	5.35	8.6	5.85	5.95	5.7	6.1	5.65	5.4	5.20	5.0	4.82
10.	5.2	5.35	6.45	5.85	5.9	5.7	6.05	5.65	5.4	5.20	5.0	4.81
11.	5.2	5.4	6.2	5.8	5.9	5.65	6.1	5.6	5.4	5.20	5.0	4.8
12.	5.2	5.4	6.0	5.8	5.9	5.65	6.05	5.6	5.4	5.19	5.0	4.78
13.	5.2	5.35	5.9	5.75	5.85	5.65	6.0	5.6	5.4	5.16	4.98	4.72
14.	5.2	5.4	5.8	6.6	5.85	5.7	6.0	5.6	5.4	5.16	4.98	4.7
15.	5.25	5.4	5.8	7.05	5.85	5.7	5.95	5.05	5.4	5.15	4.98	4.78
16.	5.25	5.4	5.8	7.05	5.8	5.7	5.9	5.55	5.35	5.15	4.98	4.8
17.	5.25	5.4	5.7	6.8	5.8	5.7	5.9	5.55	5.35	5.15	4.98	5.15
18.	5.25	5.4	5.7	6.5	5.8	5.7	5.9	5.55	5.35	5.15	4.98	5.15
19.	5.25	5.35	5.7	6.4	5.8	5.7	5.85	5.55	5.35	5.13	4.98	5.14
20.	5.25	5.35	5.7	6.35	5.8	6.8	5.85	5.55	5.35	5.13	4.98	5.14
21.	5.25	5.35	5.7	6.25	5.75	8.7	5.85	5.55	5.35	5.12	4.98	5.13
22.	5.25	5.35	5.7	6.2	5.75	8.6	5.8	5.5	5.35	5.1	4.98	5.13
23.	5.25	5.35	5.65	6.1	5.85	7.6	5.8	5.5	5.35	5.1	4.98	5.12
24.	5.25	5.35	5.65	7.35	5.8	7.05	5.8	5.5	5.3	5.09	4.97	5.12
25.	5.25	5.4	5.6	6.9	5.8	6.75	5.75	5.5	5.3	5.09	4.96	5.12
26.	5.25	5.4	5.6	6.7	5.8	6.6	5.75	5.5	5.3	5.09	4.95	5.12
27.	5.25	5.4	5.6	6.5	5.75	7.5	5.75	5.45	5.3	5.08	4.95	5.12
28.	5.25	5.4	5.6	6.35	5.75	7.0	5.75	5.45	5.25	5.08	4.94	5.12
29.	5.25	5.4	5.6	6.3	.....	6.8	5.7	5.45	5.25	5.06	4.93	5.12
30.	5.3	5.4	5.6	6.2	.....	6.7	5.7	5.45	5.25	5.05	4.93	5.12
31.	5.3	.....	5.7	6.2	.....	6.6	.....	5.45	.....	5.05	4.93	.....
1910-11.												
1.	5.1	5.2	5.35	5.39	9.40	7.05	5.59	4.80	4.36	4.05	3.75	3.64
2.	5.1	5.25	5.35	5.39	8.50	7.10	5.55	4.78	4.35	4.04	3.72	3.63
4.	5.1	5.25	5.35	5.39	8.25	11.50	5.50	4.76	4.34	4.03	3.75	3.63
4.	5.1	5.25	5.4	5.39	7.90	9.60	5.40	4.75	4.33	4.01	3.78	3.63
5.	5.1	5.25	5.4	5.39	7.60	11.40	5.52	4.75	4.30	4.00	3.78	3.65
6.	5.1	5.25	5.4	5.39	7.40	15.90	5.70	4.73	4.28	3.98	3.78	3.65
7.	5.1	5.25	5.35	5.39	7.15	18.30	5.52	4.71	4.28	3.98	3.97	3.65
8.	5.1	5.25	5.35	5.39	7.00	13.20	5.50	4.69	4.26	3.97	3.77	3.65
9.	5.1	5.25	5.35	5.61	6.90	10.50	5.40	4.67	4.26	3.95	3.75	3.65
10.	5.1	5.25	5.4	6.30	6.80	9.60	5.35	4.65	4.25	3.94	3.75	3.65
11.	5.12	5.3	5.4	5.80	7.25	8.60	5.32	4.63	4.23	3.93	3.75	3.63
12.	5.18	5.3	5.45	8.85	6.95	8.40	5.25	4.62	4.22	3.91	3.75	3.63
13.	5.3	5.3	5.45	11.20	7.20	8.05	5.22	4.60	4.22	3.91	3.75	3.62
14.	5.3	5.3	5.4	11.85	7.15	7.80	5.20	4.58	4.22	3.90	3.73	3.61
15.	5.25	5.3	5.4	8.80	7.00	7.60	5.15	4.57	4.22	3.90	3.72	3.63
16.	5.25	5.3	5.4	7.50	6.90	7.41	5.10	4.56	4.22	3.90	3.71	3.65
17.	5.25	5.3	5.4	6.60	6.85	7.25	5.10	4.55	4.20	3.90	3.70	3.65
18.	5.2	5.3	5.4	6.50	6.70	7.00	5.05	4.52	4.20	3.89	3.70	3.65
19.	5.2	5.3	5.4	6.45	6.65	6.90	5.01	4.50	4.18	3.89	3.70	3.63
20.	5.2	5.3	5.4	6.35	6.60	6.80	5.00	4.48	4.16	3.89	3.69	3.63
21.	5.2	5.3	5.4	6.41	6.50	6.60	5.00	4.46	4.15	3.88	3.68	3.63
22.	5.2	5.3	5.4	6.30	6.48	6.40	4.98	4.45	4.15	3.88	3.67	3.70
23.	5.2	5.3	5.4	6.20	6.45	6.30	4.92	4.43	4.13	3.86	3.67	3.70
24.	5.2	5.3	5.4	7.70	6.42	6.20	4.90	4.42	4.13	3.85	3.67	3.75
25.	5.2	5.35	5.4	7.68	6.40	6.05	4.89	4.41	4.12	3.83	3.68	3.75
26.	5.2	5.35	5.4	7.30	6.33	6.00	4.86	4.40	4.11	3.81	3.68	3.75
27.	5.2	5.35	5.4	7.30	6.35	5.90	4.85	4.39	4.10	3.80	3.68	3.74
28.	5.2	5.35	5.4	7.78	6.42	5.80	4.85	4.40	4.10	3.80	3.67	3.74
29.	5.2	5.35	5.4	12.75	.....	5.75	4.83	4.41	4.08	3.80	3.65	3.76
30.	5.2	5.35	5.4	11.60	.....	5.72	4.80	4.39	4.05	3.79	3.65	3.75
31.	5.2	.....	5.4	11.00	.....	5.65	.....	4.38	.....	3.78	3.65	.....

Daily gage height, in feet, of Arroyo Seco near Soledad, Cal., for 1901-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.									
1.....	3.75	3.80	3.86	4.05	4.15	3.93	4.2	4.5	4.18
2.....	3.76	3.80	3.86	4.25	4.1	3.93	4.19	4.38	4.15
3.....	3.78	3.80	3.86	4.2	4.09	3.93	4.18	4.35	4.12
4.....	3.78	3.80	3.89	4.1	4.08	4.04	4.17	4.3	4.1
5.....	3.78	3.80	3.89	4.05	4.05	4.21	4.16	4.28	4.09
6.....	3.78	3.80	3.95	4.0	4.05	5.9	4.15	4.25	4.07
7.....	3.76	3.80	3.99	4.0	4.03	5.2	4.13	4.3	4.05
8.....	3.75	3.80	4.00	4.0	4.0	4.98	4.11	4.27	4.03
9.....	3.75	3.80	4.00	4.1	4.0	4.5	4.69	4.28	4.02
10.....	3.75	3.82	3.98	4.1	4.0	4.45	5.25	4.25	4.01
11.....	3.76	4.00	3.97	4.09	3.98	4.4	5.85	4.2	4.05
12.....	3.76	3.95	3.95	4.2	3.98	7.2	5.6	4.2	4.0
13.....	3.78	3.90	3.95	4.1	3.97	5.95	5.5	4.2	3.99
14.....	3.75	3.89	3.92	4.15	3.96	5.35	5.3	4.18	3.98
15.....	3.75	3.89	3.92	4.1	3.95	5.1	5.0	4.15	3.98
16.....	3.75	3.88	3.91	4.1	3.95	5.1	4.88	4.1	3.95
17.....	3.75	3.87	3.95	4.2	3.94	4.9	4.86	4.1	3.95
18.....	3.74	3.86	3.95	4.11	3.94	4.8	4.84	4.1	3.95
19.....	3.74	3.86	3.95	4.1	3.94	4.7	4.63	4.08	3.91
20.....	3.73	3.86	3.94	4.1	3.93	4.65	4.58	4.05	3.9
21.....	3.73	3.86	3.94	4.05	3.93	4.58	4.53	4.09	3.89
22.....	3.73	3.86	3.94	4.04	3.93	4.5	4.48	4.1	3.9
23.....	3.74	3.86	3.94	4.02	3.92	4.44	4.43	4.09	3.95
24.....	3.75	3.86	3.94	4.0	3.92	4.4	4.4	4.07	3.92
25.....	3.75	3.86	3.92	4.62	3.93	4.4	4.38	4.48	3.91
26.....	3.75	3.86	3.92	4.62	3.93	4.38	4.35	5.0	3.91
27.....	3.75	3.86	3.92	4.7	3.93	4.35	4.32	4.5	3.9
28.....	3.75	3.86	4.03	4.35	3.93	4.3	4.3	4.38	3.9
29.....	3.76	3.86	4.20	4.28	3.93	4.25	4.59	4.35	3.9
30.....	3.78	3.86	4.09	4.25	.....	4.23	4.63	4.28	3.89
31.....	3.78	.....	4.05	4.2	.....	4.22	.....	4.2	.....

Rating table for Arroyo Seco at Foster's ranch, near Piney, Cal.

January 1 to April 30, 1901.

Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.
<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>
2.20	65	3.60	400	5.00	1,930	6.40	3,620
2.40	75	3.80	610	5.20	2,150	6.60	3,900
2.60	85	4.00	830	5.40	2,380	6.80	4,200
2.80	95	4.20	1,050	5.60	2,620	7.00	4,500
3.00	105	4.40	1,270	5.80	2,860		
3.20	160	4.60	1,490	6.00	3,100		
3.40	240	4.80	1,710	6.20	3,360		

Rating tables for Arroyo Seco near Soledad, Cal.

November 6, 1901, to December 31, 1902.

Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.
<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>
5.00	7	6.80	620	8.60	2,200	10.40	5,130
5.20	15	7.00	750	8.80	2,450	10.60	5,540
5.40	40	7.20	890	9.00	2,720	10.80	5,960
5.60	75	7.40	1,030	9.20	3,010	11.00	6,380
5.80	145	7.60	1,190	9.40	3,320	11.20	6,800
6.00	230	7.80	1,360	9.60	3,650	11.40	7,220
6.20	320	8.00	1,550	9.80	4,000	11.60	7,650
6.40	410	8.20	1,750	10.00	4,360	11.80	8,090
6.60	510	8.40	1,970	10.20	4,740	12.00	8,530

Rating tables for Arroyo near Soledad, Cal.—Continued.

January 1 to December 31, 1903.

Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.
<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>
5.00	1	6.00	150	7.00	600	8.20	1,430
5.10	6	6.10	190	7.10	660	8.40	1,610
5.20	13	6.20	230	7.20	720	8.60	1,790
5.30	22	6.30	270	7.30	780	8.80	1,970
5.40	32	6.40	310	7.40	840	9.00	2,170
5.50	44	6.50	350	7.50	900	9.20	2,380
5.60	56	6.60	400	7.60	970	9.40	2,600
5.70	72	6.70	450	7.70	1,040	9.60	2,830
5.80	92	6.80	500	7.80	1,110	9.80	3,080
5.90	120	6.90	550	8.00	1,270	10.00	3,350

January 1 to December 31, 1904.

5.00	0	6.30	230	7.60	930	8.90	1,960
5.10	0.5	6.40	270	7.70	1,000	9.00	2,050
5.20	1	6.50	310	7.80	1,070	9.20	2,250
5.30	3	6.60	360	7.90	1,140	9.40	2,460
5.40	9	6.70	410	8.00	1,210	9.60	2,680
5.50	18	6.80	460	8.10	1,290	9.80	2,900
5.60	30	6.90	510	8.20	1,370	10.00	3,140
5.70	48	7.00	560	8.30	1,450	10.20	3,380
5.80	71	7.10	620	8.40	1,530	10.40	3,620
5.90	100	7.20	680	8.50	1,610	10.60	3,880
6.00	130	7.30	740	8.60	1,690	10.80	4,140
6.10	160	7.40	800	8.70	1,780	11.00	4,410
6.20	195	7.50	860	8.80	1,870	11.50	5,150

January 1 to December 31, 1905.

5.20	2	6.30	265	7.40	800	9.00	1,900
5.30	6	6.40	305	7.50	860	9.20	2,060
5.40	15	6.50	345	7.60	920	9.40	2,225
5.50	30	6.60	390	7.70	980	9.60	2,400
5.60	50	6.70	435	7.80	1,045	9.80	2,580
5.70	70	6.80	480	7.90	1,110	10.00	2,760
5.80	95	6.90	530	8.00	1,175	10.20	2,945
5.90	125	7.00	580	8.20	1,310	10.40	3,135
6.00	155	7.10	635	8.40	1,450		
6.10	190	7.20	690	8.60	1,595		
6.20	225	7.30	745	8.80	1,745		

NOTE.—The above table is applicable only for open-channel conditions. It is based on 31 discharge measurements made during 1905. It is well defined between gage heights 5.3 feet and 9.5 feet.

January 1 to December 31, 1906.

4.50	0	5.90	252	7.30	868	9.40	2,580
4.60	1	6.00	286	7.40	928	9.60	2,780
4.70	3	6.10	320	7.50	990	9.80	2,980
4.80	5	6.20	356	7.60	1,055	10.00	3,180
4.90	8	6.30	393	7.70	1,125	10.20	3,380
5.00	14	6.40	431	7.80	1,195	10.40	3,580
5.10	24	6.50	470	7.90	1,265	10.60	3,780
5.20	40	6.60	510	8.00	1,340	10.80	3,980
5.30	63	6.70	553	8.20	1,495	11.00	4,180
5.40	91	6.80	599	8.40	1,660	12.00	5,180
5.50	121	6.90	648	8.60	1,840	13.00	6,250
5.60	153	7.00	700	8.80	2,020		
5.70	185	7.10	754	9.00	2,200		
5.80	218	7.20	810	9.20	2,390		

NOTE.—This table is based on 35 discharge measurements made during 1906 and is well defined between gage heights 5 feet and 10 feet.

Rating tables for Arroyo Seco near Soledad, Cal.—Continued.

January 1, 1907, to December 31, 1908.

Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.
<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>
4.50	0.5	5.80	216	7.10	760	8.80	2,000
4.60	1	5.90	250	7.20	815	9.00	2,180
4.70	2	6.00	285	7.30	870	9.20	2,365
4.80	4	6.10	320	7.40	925	9.40	2,555
4.90	11	6.20	355	7.50	980	9.60	2,745
5.00	21	6.30	395	7.60	1,040	9.80	2,935
5.10	33	6.40	435	7.70	1,105	10.00	3,125
5.20	47	6.50	475	7.80	1,175	10.20	3,320
5.30	64	6.60	520	7.90	1,250	10.40	3,520
5.40	88	6.70	565	8.00	1,330	10.60	3,720
5.50	118	6.80	610	8.20	1,490	10.80	3,920
5.60	150	6.90	660	8.40	1,655	11.00	4,125
5.70	183	7.00	710	8.60	1,825	12.00	5,175

NOTE.—Table applicable only to open channel. It is based upon 34 discharge measurements made during 1907 and 1908 and is well defined between gage heights 4.8 feet and 12 feet.

Daily discharge, in second-feet, of Arroyo Seco near Soledad, Cal., for 1909–1912.

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909.									
1.....	33	1,040	480	608	178	79	31	18	10
2.....	76	1,010	455	580	178	79	31	15	10
3.....	64	3,200	430	555	158	79	31	15	10
4.....	88	1,700	430	530	158	79	31	15	10
5.....	64	1,460	430	505	158	68	31	15	10
6.....	103	1,250	455	480	139	68	31	15	10
7.....	302	1,940	430	455	139	68	31	15	10
8.....	815	1,540	385	430	139	68	31	15	10
9.....	1,250	1,390	385	408	139	58	26	15	10
10.....	395	1,180	364	385	139	58	31	15	10
11.....	320	4,130	342	364	122	58	26	15	10
12.....	302	5,340	342	364	122	58	26	15	10
13.....	1,660	3,920	321	300	122	50	26	15	10
14.....	4,340	2,140	300	300	122	50	26	15	10
15.....	2,360	1,860	300	300	106	50	22	15	10
16.....	1,210	1,540	280	300	106	42	22	15	10
17.....	710	1,320	280	280	106	42	22	12	10
18.....	635	1,110	259	259	106	58	22	12	10
19.....	475	980	259	259	106	58	22	12	10
20.....	475	860	259	259	106	58	18	12	10
21.....	6,150	980	555	238	106	50	18	12	10
22.....	3,500	860	342	238	106	50	18	12	10
23.....	1,700	745	321	238	92	42	18	12	10
24.....	1,390	600	480	218	92	42	18	10	10
25.....	1,860	635	690	218	92	42	18	10	10
26.....	5,460	580	690	198	92	42	18	10	10
27.....	2,270	530	635	198	79	36	18	10	15
28.....	1,540	505	385	198	92	36	18	10	15
29.....	1,110	-----	1,080	178	92	36	18	10	15
30.....	1,390	-----	-----	745	92	36	18	10	18
31.....	1,110	-----	662	-----	92	-----	18	10	-----

Daily discharge, in second-feet, of Arroyo Seco near Soledad, Cal., for 1909-1912—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909-10.												
1.	18	22	31	1,360	238	100	385	86	27	12	2.6	1.2
2.	22	22	31	385	238	100	342	86	27	12	2.6	1.2
3.	22	22	31	342	217	86	321	86	27	11	2.5	1.2
4.	22	22	38	258	179	86	292	86	27	11	2.3	1.1
5.	22	22	15	179	179	86	258	86	27	9.4	2.3	1.0
6.	22	22	108	162	162	86	258	86	27	9.4	2.3	1.0
7.	18	31	216	144	179	86	238	86	27	8.7	2.1	.9
8.	18	31	2,220	144	179	86	217	86	27	8.7	2.0	.8
9.	15	26	1,700	128	162	86	217	74	27	8	1.8	.8
10.	15	26	364	128	144	86	198	74	27	8	1.8	.7
11.	15	31	259	113	144	74	217	62	27	8	1.8	.7
12.	15	31	178	113	144	74	198	62	27	7.6	1.8	.7
13.	15	26	139	100	128	74	179	62	27	6.2	1.6	.5
14.	15	31	109	430	128	86	179	62	27	6.2	1.6	.5
15.	18	31	106	662	128	86	162	52	27	5.8	1.6	.7
16.	18	31	106	662	113	86	144	52	21	5.8	1.6	.7
17.	18	31	79	530	113	86	144	52	21	5.8	1.6	5.8
18.	18	31	79	385	113	86	144	52	21	5.8	1.6	5.8
19.	18	26	79	342	113	86	128	52	21	4.8	1.6	5.3
20.	18	26	79	321	113	530	128	52	21	4.8	1.6	5.3
21.	18	26	79	279	100	1,780	128	52	21	4.4	1.6	4.8
22.	18	26	79	258	100	1,700	113	42	21	3.5	1.6	4.8
23.	18	26	68	217	128	985	113	42	21	3.5	1.6	4.4
24.	18	26	68	830	113	662	113	42	15	3.3	1.6	4.4
25.	18	31	58	580	113	505	100	42	15	3.3	1.5	4.4
26.	18	31	58	480	113	430	100	42	15	3.3	1.4	4.4
27.	18	31	58	385	100	920	100	34	15	3.2	1.4	4.4
28.	18	31	58	321	100	635	100	34	12	3.2	1.3	4.4
29.	18	31	58	300	.....	530	86	34	12	2.8	1.2	4.4
30.	22	31	58	258	.....	480	86	34	12	2.6	1.2	4.4
31.	22	.....	79	258	.....	430	.....	34	.....	2.6	1.2	.....
1910-11.												
1.	3.5	8	21	26	2,360	662	446	196	98	46	16	12
2.	3.5	12	21	26	1,620	685	432	191	96	45	15	12
3.	3.5	12	21	26	1,420	4,460	415	186	95	44	16	12
4.	3.5	12	27	26	1,180	2,530	380	184	93	40	17	12
5.	3.5	12	27	26	985	4,350	422	184	87	39	17	12
6.	3.5	12	27	26	860	10,000	490	178	84	37	17	12
7.	3.5	12	21	26	712	13,300	422	174	84	37	17	12
8.	3.5	12	21	26	635	6,970	415	169	80	35	17	12
9.	3.5	12	21	64	580	3,980	380	164	80	33	16	12
10.	3.5	12	27	300	530	3,120	362	160	78	32	16	12
11.	4.4	15	27	113	770	2,280	352	155	75	31	16	12
12.	7.1	15	34	1,900	608	2,120	329	153	73	28	16	12
13.	15	15	34	4,130	740	1,860	319	148	73	28	16	12
14.	15	15	27	4,850	712	1,670	313	144	73	27	15	11
15.	12	15	27	1,860	635	1,530	298	141	73	27	15	12
16.	12	15	27	920	580	1,400	282	139	73	27	14	12
17.	12	15	27	430	555	1,290	282	137	70	27	14	12
18.	8	15	27	385	480	1,130	267	130	70	26	14	12
19.	8	15	27	364	455	1,070	255	126	67	26	14	12
20.	8	15	27	321	430	1,010	252	122	64	26	14	12
21.	8	15	27	346	385	900	252	118	62	25	13	12
22.	8	15	27	300	376	795	246	116	62	25	13	14
23.	8	15	27	258	364	745	229	112	59	23	13	14
24.	8	15	27	1,050	351	700	223	110	59	22	13	16
25.	8	21	27	1,040	342	632	220	108	57	21	13	16
26.	8	21	27	800	313	610	212	106	56	19	13	16
27.	8	21	27	800	321	570	210	104	54	18	13	16
28.	8	21	27	1,100	351	530	210	106	54	18	13	16
29.	8	21	27	5,910	.....	510	204	108	51	18	12	16
30.	8	21	27	4,570	.....	498	196	104	46	18	12	16
31.	8	.....	27	3,920	.....	470	.....	102	.....	17	12	.....

Daily discharge, in second-feet, of Arroyo Seco near Soledad, Cal., for 1909-1912—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.									
1.....	16	18	23	46	62	31	60	105	57
2.....	16	18	23	78	54	31	59	87	54
3.....	17	18	23	70	52	31	57	82	50
4.....	17	18	26	54	51	45	56	75	47
5.....	17	18	26	46	46	72	55	72	46
6.....	17	18	33	39	46	475	54	68	43
7.....	16	18	38	39	44	260	51	75	41
8.....	16	18	39	39	39	205	48	70	39
9.....	16	18	39	54	39	105	143	72	37
10.....	16	20	37	54	39	98	272	68	36
11.....	16	39	35	52	37	90	458	60	41
12.....	16	33	33	70	37	1,080	370	60	35
13.....	17	27	33	54	35	495	340	60	34
14.....	16	26	29	62	34	298	285	57	33
15.....	16	26	29	54	33	235	210	54	33
16.....	16	25	28	54	33	235	181	47	30
17.....	16	24	33	70	32	185	177	47	30
18.....	16	23	33	56	32	165	173	47	30
19.....	16	23	33	54	32	145	131	45	26
20.....	15	23	32	54	31	135	121	41	25
21.....	15	23	32	46	31	121	111	46	24
22.....	15	23	32	45	31	105	102	47	25
23.....	16	23	32	42	29	96	94	46	30
24.....	16	23	32	39	29	90	90	43	27
25.....	16	23	29	153	31	90	87	102	26
26.....	16	23	29	153	31	87	82	210	26
27.....	16	23	29	171	31	82	78	105	25
28.....	16	23	44	96	31	75	75	87	25
29.....	16	23	70	84	31	68	123	82	25
30.....	17	23	52	78	.....	64	131	72	24
31.....	17	.....	46	70	.....	63	.....	60	.....

NOTE.—Daily discharge determined from fairly well defined rating curves applicable as follows: Jan. 1-20, 1909; Jan. 21 to Dec. 31, 1909; Jan. 1, 1910, to Mar. 7, 1911; Mar. 8, 1911, to Mar. 5, 1912, and Mar. 6 to June 30, 1912.

Monthly discharge of Arroyo Seco near Soledad, Cal., for 1901-1912.

[Drainage area, 215 square miles.]

Month.	Discharge in second-feet.				Run-off.		Accuracy.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.	Total in acre-feet.	
1901.							
January.....	4,500	105	888	4.13	4.76	54,601	
February.....	2,860	160	931	4.33	4.51	51,705	
March.....	610	105	246	1.14	1.32	15,126	
April.....	2,500	95	195	.91	1.01	11,603	
May.....	.....	.....	95	.44	.51	5,841	
June.....	.....	.....	58	.27	.30	3,451	
July.....	.....	.....	22	.10	.12	1,353	
August.....	.....	.....	15	.07	.08	922	
September.....	.....	.....	8	.04	.04	476	
The period.....	.....	.....	.....	.....	.....	145,000	
1901-2.							
October.....	.....	.....	10	.05	.05	615	
November.....	.....	.....	22	.10	.11	1,309	
December.....	.....	.....	26	.12	.14	1,599	
January.....	40	25	28	.13	.15	1,722	
February.....	2,860	25	605	2.81	2.93	33,600	
March.....	2,320	185	620	2.88	3.32	38,122	
April.....	1,650	145	270	1.26	1.41	16,066	

Monthly discharge of Arroya Seco near Soledad, Cal., for 1901-1912—Continued.

Month.	Discharge in second-feet.				Run-off.		Accu- racy.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.	Total in acre-feet.	
1901-2.							
May.....	105	55	74	0.34	0.39	4,550	
June.....	55	15	32	.15	.17	1,904	
July.....	15	7	12	.06	.07	738	
August.....	7	3	4	.02	.02	246	
September.....	3	0	0	.00	.00	0	
The year.....	2,860	0	142	.66	8.76	100,000	
1902-3.							
October.....	55	0	9	.04	.05	553	
November.....	750	11	57	.27	.30	3,392	
December.....	145	25	54	.25	.29	3,320	
January.....	1,790	22	205	.94	1.08	12,605	
February.....	970	120	313	1.44	1.50	17,383	
March.....	3,080	92	466	2.15	2.48	28,653	
April.....	3,210	120	483	2.23	2.49	28,740	
May.....	720	56	84	.39	.45	5,165	
June.....	120	32	46	.21	.23	2,737	
July.....	56	13	25	.12	.14	1,537	
August.....	32	6	10	.05	.06	615	
September.....	6	0	4	.02	.02	238	
The year.....	3,210	0	146	.679	9.09	105,000	
1903-4.							
October.....	22	13	17	.08	.09	1,045	
November.....	120	13	40	.18	.20	2,380	
December.....	44	32	33	.15	.17	2,029	
January.....	30	14	18	.08	.09	1,107	
February.....	510	14	181	.83	.90	10,411	
March.....	1,610	48	394	1.82	2.10	24,226	
April.....	1,210	71	214	.99	1.10	12,734	
May.....	160	30	62	.29	.33	3,812	
June.....	30	6	16	.07	.08	952	
July.....	6	1	3	.01	.01	184	
August.....	1	0	0	.00	.00	0	
September.....	71	0	8	.04	.04	476	
The year.....	1,610	0	82.2	.382	5.11	59,400	
1904-5.							
October.....	560	6	54	.25	.29	3,320	
November.....	24	9	17	.08	.09	1,012	
December.....	800	14	42	.19	.22	2,582	
January.....	555	50	160	.744	.86	9,838	
February.....	1,595	225	556	2.59	2.70	30,880	
March.....	2,850	125	586	2.73	3.15	36,030	
April.....	345	140	202	.940	1.05	12,020	
May.....	1,110	110	246	1.14	1.31	15,130	
June.....	110	50	75.6	.352	.39	4,499	
July.....	50	15	22.8	.106	.12	1,402	
August.....	15	4	8.6	.040	.05	529	
September.....	4	2	2.3	.011	.01	137	
The year.....	2,850	2	164	.764	10.24	117,000	
1905-6.							
October.....	10	4	6.1	.028	.03	375	
November.....	125	10	22.4	.104	.12	1,333	
December.....	60	30	36.5	.170	.20	2,245	
January.....	3,300	124	556	2.59	2.99	34,200	
February.....	727	94	302	1.41	1.47	16,800	
March.....	4,480	338	1,360	6.32	7.29	83,600	
April.....	1,580	286	558	2.60	2.90	33,200	
May.....	1,580	153	297	1.38	1.59	18,300	
June.....	320	91	178	.828	.92	10,600	
July.....	91	24	50.8	.236	.27	3,120	
August.....	24	1	17.3	.080	.09	1,060	
September.....	19	0	7.1	.033	.04	422	
The year.....	4,480	0	283	1.32	17.91	205,000	
1906-7.							
October.....	19	5	14.1	.066	.08	867	
November.....	121	19	31.8	.148	.16	1,890	
December.....	6,250	32.	492	2.29	2.64	30,300	

Monthly discharge of Arroyo Seco near Soledad, Cal., for 1901-1912—Continued.

Month.	Discharge in second-feet.				Run-off.		Accu- racy.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.	Total in acre-feet.	
1906-7.							
January.....	3,220	302	1,150	5.35	6.17	70,700	A.
February.....	1,010	355	568	2.64	2.75	31,500	A.
March.....	5,180	320	1,910	8.88	10.24	117,000	A.
April.....	1,180	268	529	2.46	2.74	31,500	A.
May.....	268	118	188	.874	1.01	11,600	A.
June.....	118	55	94.3	.439	.49	5,610	A.
July.....	55	27	40.3	.186	.21	2,480	B.
August.....	27	11	18.3	.090	.10	1,130	B.
September.....	21	16	18.3	.090	.10	1,090	B.
The year.....	6,250	5	421	1.96	26.69	306,000	
1907-8.							
October.....	183	16	39.0	.184	.21	2,400	B.
November.....	47	33	38.1	.177	.20	2,270	B.
December.....	475	33	99.6	.463	.53	6,120	B.
January.....	1,040	64	228	1.06	1.22	14,000	A.
February.....	2,320	150	416	1.93	2.08	23,900	A.
March.....	320	118	187	.870	1.00	11,500	A.
April.....	118	47	77.3	.360	.40	4,600	B.
May.....	76	33	46.0	.214	.25	2,830	B.
June.....	33	11	23.9	.111	.12	1,420	B.
July.....	11	1.5	4.2	.020	.02	258	C.
August.....	1.5	.5	.9	.0042	.01	55	D.
September.....	3	.0	.4	.0018	.00	24	D.
The year.....	2,320	0	96.7	.450	6.04	69,400	
1908-9.							
October.....	11	3	6.2	.029	.03	381	C.
November.....	33	11	14.7	.088	.08	875	B.
December.....	88	21	35.2	.164	.19	2,160	B.
January.....	6,150	33	1,390	6.47	7.46	85,500	B.
February.....	5,340	505	1,590	7.40	7.71	88,300	B.
March.....	1,080	259	444	2.07	2.39	27,300	B.
April.....	608	178	334	1.55	1.73	19,900	A.
May.....	178	79	117	.544	.63	7,190	B.
June.....	79	36	54.4	.253	.28	3,240	B.
July.....	31	18	23.7	.110	.13	1,460	B.
August.....	18	10	13.1	.061	.07	806	C.
September.....	18	10	10.8	.050	.06	643	C.
The year.....	6,150	3	336	1.56	20.76	238,000	
1909-10.							
October.....	22	15	18.3	.085	.10	1,120	B.
November.....	31	22	27.7	.129	.14	1,650	B.
December.....	2,220	31	217	1.01	1.16	13,300	A.
January.....	1,360	100	357	1.66	1.91	22,000	B.
February.....	238	100	142	.660	.69	7,890	B.
March.....	1,780	74	362	1.68	1.94	22,300	B.
April.....	385	86	180	.837	.93	10,700	B.
May.....	86	34	59.0	.274	.32	3,630	B.
June.....	27	12	22.3	.104	.12	1,330	B.
July.....	12	2.6	6.28	.029	.03	386	B.
August.....	2.6	1.2	1.75	.0081	.01	108	B.
September.....	5.8	.5	2.69	.013	.01	166	B.
The year.....	2,220	.5	116	.540	7.36	84,600	
1910-11.							
October.....	15	3.5	7.24	.034	.04	445	B.
November.....	21	8.0	15.1	.070	.08	898	B.
December.....	34	21	26.3	.122	.14	1,620	B.
January.....	5,910	26	1,160	5.40	6.23	71,300	B.
February.....	2,360	313	702	3.27	3.40	39,000	B.
March.....	13,300	470	2,330	10.8	12.45	143,000	B.
April.....	490	196	310	1.44	1.61	18,400	B.
May.....	196	102	141	.656	.76	8,670	B.
June.....	98	46	71.5	.333	.37	4,250	B.
July.....	46	17	28.5	.133	.15	1,750	B.
August.....	17	12	14.6	.068	.08	898	C.
September.....	16	11	13.0	.060	.07	774	C.
The year.....	13,300	3.5	402	1.87	25.38	291,000	

Monthly discharge of Arroyo Seco near Soledad, Cal., for 1901-1912—Continued.

Month.	Discharge in second-feet.				Run-off.		Accu- racy.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.	Total in acre-feet.	
1911-12.							
October.....	17	15	16.1	0.075	0.09	990	C.
November.....	39	18	22.7	.106	.12	1,350	B.
December.....	70	23	33.9	.158	.18	2,080	B.
January.....	171	39	67.0	.312	.36	4,120	B.
February.....	62	29	37.3	.174	.19	2,150	B.
March.....	1,080	31	173	.805	.93	10,600	B.
April.....	458	48	142	.660	.74	8,450	B.
May.....	210	41	70.7	.329	.38	4,350	B.
June.....	57	24	34.1	.159	.18	2,030	B.
The period.....						36,100	

MISCELLANEOUS MEASUREMENTS.

The following miscellaneous measurements have been made in the Salinas River basin:

Miscellaneous measurements in Salinas River drainage basin.

Date.	Stream.	Hydrographer.	Locality.	Dis- charge.
1901.				<i>Sec.-ft.</i>
Feb. 14	Salinas River.....	S. G. Bennett.....	Bridge, Bradley.....	1,420
Apr. 17	San Antonio Creek.....	J. B. Lippincott.....	Los Ojitos dam.....	50
17	do.....	do.....	Pinkerton dam site.....	37
4	Burnett Creek.....	W. W. Cockins, jr.....	do.....	21
Feb. 15	Nacimiento Creek.....	S. G. Bennett.....	4 miles above mouth.....	527
1900.				
June 20	Arroyo Seco.....	D. A. Porter.....	First pool above entrance of Santa Lucia.	11.8
20	do.....	do.....	Between second and third pools above entrance of Santa Lucia.	12.4
21	do.....	do.....	Road crossing between Moor's and Abbott's houses.	10.4
21	do.....	do.....	200 feet above Currier's dam site.	7.30
21	do.....	do.....	50 feet below head gate of Salina Valley Water Co.'s ditch No. 2. Canal was taking all of creek.	6.14
1901.				
Feb. 11	Arroyo Seco.....	S. G. Bennett.....	Point near Foster's.....	535
Mar. 26	do.....	W. W. Cockins, jr.....	do.....	162
Apr. 2	do.....	do.....	Pettitt's ranch.....	105
Sept. 24	do.....	Homer Hamlin.....	do.....	7.9
1911.				
Sept. 14	Carmel River.....		$\frac{1}{2}$ mile above mouth, near Monterey.	a 3
10	Salinas River.....		Wagon bridge at San Miguel.....	a 1
11	do.....		Wagon bridge at Bradley.....	a 2
10	Estrella Creek.....		Mouth, near San Miguel.....	(b)
11	San Antonio River.....		$\frac{1}{2}$ miles above mouth, near Bradley.	(b)
12	San Lorenzo River.....		Mathews's dam site, 5 miles east of King City.	9.1

^a Estimated.

^b Dry.

PAJARO RIVER AT WATSONVILLE, CAL.

This station, which is located at the highway bridge at Watsonville, about 10 miles below the mouth of San Benito River and 5 miles above the mouth of Pajaro River, was established September 14, 1911.

The gage is a vertical staff on the first pier from the right end of the bridge. The channel is composed of sand and shifts considerably. Discharge measurements are made from the bridge or by wading. The amount of water diverted above the station is not known and the drainage area has not been measured.

The results are considered fair.

Discharge measurements of Pajaro River at Watsonville, Cal., in 1911-12.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1911.		<i>Feet.</i>	<i>Sec.-ft.</i>	1912.		<i>Feet.</i>	<i>Sec.-ft.</i>
Sept. 14	F. C. Ebert.....	2.22	0.8	Feb. 8	Lasley Lee.....	2.40	45
Oct. 19	do.....	2.20	12	Mar. 21	do.....	2.49	70
19	Lasley Lee.....	2.20	12	Apr. 12	do.....	3.53	378
				15	do.....	2.64	106
1912.				June 8	F. C. Ebert.....	1.83	8.4
Jan. 3	F. C. Ebert.....	2.54	53				

Daily gage height, in feet, of Pajaro River at Watsonville, Cal., for 1911-12.

Day.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.										
1		2.28	2.42	2.45	2.52	2.42	2.34	2.18	2.27	1.8
2		2.35	2.42	2.46	2.5	2.45	2.33	2.16	2.2	1.79
3		2.30	2.40	2.46	2.5	2.42	2.32	2.18	2.15	1.78
4		2.28	2.40	2.48	2.48	2.4	2.33	2.17	2.1	1.76
5		2.28	2.40	2.42	2.48	2.4	2.35	2.16	2.08	1.76
6		2.28	2.40	2.45	2.48	2.4	2.6	2.16	2.06	1.75
7		2.25	2.40	2.42	2.6	2.4	2.5	2.17	2.08	1.75
8		2.30	2.42	2.42	2.65	2.4	2.45	2.16	2.08	1.74
9		2.14	2.42	2.40	2.62	2.39	2.4	2.25	2.07	1.72
10		2.16	2.48	2.40	2.6	2.38	2.35	2.28	2.04	1.72
11		2.20	2.50	2.42	2.58	2.38	2.33	3.91	2.03	1.72
12		2.28	2.48	2.45	2.54	2.38	3.12	3.6	2.0	1.7
13		2.30	2.45	2.42	2.5	2.35	3.7	2.9	2.0	1.7
14	2.22	2.32	2.40	2.40	2.52	2.38	3.1	2.7	1.98	1.7
15	2.25	2.30	2.38	2.42	2.52	2.35	2.8	2.65	1.9	1.7
16	2.22	2.32	2.28	2.45	2.58	2.35	2.79	2.52	1.88	1.7
17	2.22	2.30	2.44	2.50	2.63	2.35	2.74	2.47	1.86	1.7
18	2.22	2.30	2.45	2.45	2.65	2.36	2.7	2.4	1.84	1.69
19	2.24	2.28	2.44	2.45	2.62	2.35	2.6	2.35	1.85	1.69
20	2.25	2.28	2.38	2.42	2.58	2.35	2.55	2.3	1.9	1.68
21	2.25	2.28	2.38	2.40	2.6	2.32	2.48	2.26	1.92	1.68
22	2.28	2.26	2.40	2.42	2.62	2.3	2.42	2.24	2.34	1.68
23	2.28	2.28	2.40	2.40	2.6	2.32	2.38	2.2	2.2	1.68
24	2.28	2.32	2.40	2.40	2.58	2.3	2.35	2.18	1.89	1.68
25	2.29	2.35	2.40	2.40	2.55	2.38	2.3	2.17	2.15	1.68
26	2.30	2.45	2.42	2.40	2.56	2.38	2.3	2.18	1.95	1.69
27	2.30	2.30	2.45	2.42	2.58	2.36	2.3	2.18	1.92	1.68
28	2.25	2.32	2.45	2.45	2.62	2.36	2.28	2.18	1.88	1.68
29	2.30	2.36	2.45	2.50	2.58	2.35	2.25	2.28	1.84	1.68
30	2.28	2.40	2.45	2.52	2.5	2.22	2.22	2.37	1.82	1.66
31		2.40		2.52	2.48		2.2		1.8	

Daily discharge, in second-feet, of Pajaro River at Watsonville, Cal., for 1911-12.

Day.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.										
1.....		17	34	38	49	48	36	28	37	6
2.....		25	34	40	46	52	34	27	30	5.6
3.....		19	31	40	46	48	33	88	26	5.3
4.....		17	31	43	43	45	34	28	22	4.6
5.....		17	31	34	43	45	38	27	21	4.6
6.....		17	31	38	43	45	80	27	19	4.2
7.....		15	31	34	65	45	60	28	21	4.2
8.....		19	34	34	74	45	52	27	21	3.9
9.....		8	34	31	70	44	45	35	20	3.2
10.....		9	43	31	68	42	38	38	18	3.2
11.....		11	46	34	65	42	34	524	17	3.2
12.....		17	43	38	58	42	227	405	15	2.5
13.....		19	38	34	50	38	440	170	15	2.5
14.....	13	21	31	31	54	42	230	115	14	2.5
15.....	15	19	29	34	55	38	140	102	10	2.5
16.....	13	21	17	38	67	38	138	74	9	2.5
17.....	13	19	37	46	75	38	125	66	8	2.5
18.....	13	19	38	38	80	39	115	55	8	2.4
19.....	14	17	37	38	74	38	90	48	8	2.4
20.....	15	17	29	34	68	38	80	40	10	2.2
21.....	15	17	29	31	72	33	67	36	11	2.2
22.....	17	16	31	34	75	30	58	34	46	2.2
23.....	17	17	31	31	73	33	52	30	30	2.2
24.....	17	21	31	31	69	30	48	28	10	2.2
25.....	18	25	31	31	64	42	40	28	26	2.2
26.....	19	38	34	31	60	42	40	28	12	2.4
27.....	19	19	38	34	70	39	40	28	11	2.2
28.....	15	21	38	38	78	39	38	28	9	2.2
29.....	19	26	38	46	72	38	35	38	8	2.2
30.....	17	31	38	49	58	.....	32	50	7	1.9
31.....		31	.....	49	56	.....	30	.....	6	.....

NOTE.—Daily discharge determined from rating curves covering short periods of time and by the indirect method of shifting channels.

Monthly discharge of Pajaro River at Watsonville, Cal., for 1911-12.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1911.					
September 14-30.....	19	13	15.8	533	C.
1911-12.					
October.....	38	8	19.5	1,200	C.
November.....	46	17	33.9	2,020	C.
December.....	49	31	36.5	2,240	C.
January.....	80	43	62.8	3,860	B.
February.....	52	30	40.6	2,340	B.
March.....	440	30	82.5	5,070	A.
April.....	524	27	74.0	4,400	A.
May.....	46	6	16.9	1,040	A.
June.....	6	1.9	3.06	182	B.
The period.....	.....	.....	.....	22,400	

MISCELLANEOUS MEASUREMENTS IN SAN MATEO AND SAN BENITO COUNTIES.

The following miscellaneous discharge measurements have been made on streams in San Benito and San Mateo counties:

Miscellaneous measurements of streams in San Benito County.

Date.	Stream.	Hydrographers.	Locality.	Dis-charge.
Dec.13, 1904..	San Benito River.....	Clapp and Senger	7 miles above Hollister....	<i>Sec.-ft.</i> 1.6

Miscellaneous measurements of streams in San Mateo County.

Date.	Stream.	Hydrographer.	Locality.	Dis-charge.
Oct. 17, 1893..	Arroyo Leon.....	W. W. Brier.....	$\frac{1}{2}$ mile above Halfmoon Bar.	<i>Sec.-ft.</i> 0.63
Do.....	Butano Creek.....	do.....	5 miles above junction with Pescadero Creek.	2.05
Do.....	Gazos Creek.....	do.....	6 miles above mouth.....	1.85
Do.....	Lobitos Creek.....	do.....	1 mile above mouth.....	.18
Do.....	Pescadero Creek.....	do.....	6 miles above Pescadero..	4.67
Do.....	Pilarcitos Creek.....	do.....	$\frac{3}{4}$ miles above Halfmoon Bay.	.80
Do.....	Pomponio Creek.....	do.....	2 miles above mouth.....	.27
Do.....	Purisima Creek.....	do.....	$\frac{1}{4}$ miles above Purissima..	2.03
Do.....	San Gregorio Creek.....	do.....	$\frac{1}{2}$ mile above San Gregorio..	6.49
Do.....	Tunitas Creek.....	do.....	Mouth.....	1.14

MINOR SAN FRANCISCO BAY DRAINAGE BASINS.

ALAMEDA CREEK IN ALAMEDA COUNTY, CAL.

Estimates of discharge for 1889-1900 for Alameda Creek at Niles dam have been published in Water-Supply Paper 81. These estimates were computed by engineers of the United States Geological Survey from gage-height records presented as Exhibit 11 in a suit entitled "Clough v. Spring Valley Water Co. of San Francisco," tried in the Alameda County superior court in the fall of 1901.

Since the proof of this report has been received the attention of the Survey has been called to the fact that the published estimates do not agree with estimates made by others. On investigation it was found that the base data used were incorrect and that the flood discharge was much greater than the published estimates. Lack of time before this report goes to press renders it impossible to revise these estimates and they are therefore omitted from this report.

MISCELLANEOUS MEASUREMENTS.

Miscellaneous measurements in San Francisco Bay drainage basins in 1910.

Date.	Stream.	Tributary to—	Locality.	Dis-charge.
June 3, 1910	Sonoma Creek.....	San Pablo Bay.....	Wading at bridge, $\frac{1}{2}$ mile north of Eldredge, Cal.	<i>Sec.-ft.</i> 4.8
July 9, 1910	.....do.....	.....do.....	.....do.....	5.6
Aug. 16, 1910	.....do.....	.....do.....	.....do.....	.9
June 3, 1910	.....do.....	.....do.....	Wading 200 feet above bridge, $\frac{1}{2}$ miles south of Sonoma, Cal.	5.9
July 9, 1910	.....do.....	.....do.....	.....do.....	2.4
Aug. 16, 1910	.....do.....	.....do.....	.....do.....	7.4
June 3, 1910	Arroyo Seco.....	Sonoma Creek.....	Wading 50 feet above bridge, $2\frac{1}{2}$ miles south of Sonoma, Cal.	.2
May 24, 1910	Napa River.....	San Pablo Bay.....	Wading under bridge at Calistoga, Cal.	2.0
July 12, 1910	.....do.....	.....do.....	.....do.....	.3
Aug. 13, 1910	.....do.....	.....do.....	.....do.....	.1
May 26, 1910	.....do.....	.....do.....	Wading 100 feet below bridge on road from Bale railroad station, 4 miles north of St. Helena, Cal.	5.1
July 13, 1910	.....do.....	.....do.....	.....do.....	1.5
Aug. 14, 1910	.....do.....	.....do.....	.....do.....	.4
May 26, 1910	.....do.....	.....do.....	Wading 75 feet below bridge, 1 mile northeast of Helena, Cal.	5.5
July 13, 1910	.....do.....	.....do.....	.....do.....	1.4
Aug. 14, 1910	.....do.....	.....do.....	.....do.....	.4
May 27, 1910	.....do.....	.....do.....	Wading at bridge, 1 mile east of Rutherford, Cal.	11.
July 13, 1910	.....do.....	.....do.....	.....do.....	2.7
Aug. 14, 1910	.....do.....	.....do.....	.....do.....	1.4
Aug. 28, 1911	.....do.....	.....do.....	Wading 600 feet below second bridge, 6 miles northwest of Napa, Cal.	2.7
May 26, 1910	Lyman Creek.....	Napa River.....	Wading 30 feet below bridge, 3 miles north of St. Helena, Cal.	.7
July 13, 1910	.....do.....	.....do.....	.....do.....	.4
Aug. 14, 1910	.....do.....	.....do.....	.....do.....	.2
May 26, 1910	Bell Creek.....	.....do.....	Wading 150 feet below bridge, 2 miles north of St. Helena, Cal.	.6
May 27, 1910	Conn Creek.....	.....do.....	Wading 75 feet below bridge on Skellenger ranch, 3 miles southeast of Rutherford, Cal.	.3
July 13, 1910	.....do.....	.....do.....	.....do.....	0
May 27, 1910	Rector Creek.....	Conn Creek.....	Wading 200 feet above Frey dam, 3 miles northeast of Yountville, Cal.	1.3
July 13, 1910	.....do.....	.....do.....	.....do.....	.6
Aug. 15, 1910	.....do.....	.....do.....	.....do.....	.7
May 28, 1910	Dry Creek.....	Napa River.....	Wading 1,000 feet above second dam, 2 miles west of Oak Knoll, Cal.	4.0
July 14, 1910	.....do.....	.....do.....	.....do.....	.2
Aug. 15, 1910	.....do.....	.....do.....	.....do.....	.0
May 28, 1910	.....do.....	.....do.....	Wading 300 feet below bridge, $\frac{1}{2}$ mile south of Trubody, Cal.	.2
June 2, 1910	Milliken Creek.....	.....do.....	Wading at bridge, 4 miles northeast of Napa, Cal.	.3
July 14, 1910	.....do.....	.....do.....	.....do.....	.2
May 28, 1910	.....do.....	.....do.....	Wading 600 feet below bridge, $2\frac{1}{2}$ miles northeast of Napa, Cal.	.5
July 14, 1910	.....do.....	.....do.....	.....do.....	.1
Aug. 15, 1910	.....do.....	.....do.....	.....do.....	.1
May 28, 1910	North Branch of Napa Creek.....	.....do.....	Wading 300 feet above stone bridge, 3 miles west of Napa, Cal.	1.0
July 14, 1910	.....do.....	.....do.....	.....do.....	.0

NOTE.—These measurements were made by U. S. Department of Agriculture, Irrigation Investigations.

NORTH PACIFIC COAST STREAMS.

RUSSIAN RIVER BASIN.

RUSSIAN RIVER NEAR UKIAH, CAL.

This station, which is located at Bailey's bridge, in the Yokayo grant, just above the junction with the East Fork, 3 miles northeast of Ukiah, was established August 18, 1911.

The gage is painted on the left abutment of the bridge, with a vertical staff for low water. The channel is composed of sand and gravel, and may shift slightly at high stages. Discharge measurements are made from the bridge or by wading.

Discharge measurements of Russian River near Ukiah, Cal., in 1911-12.

Date.	Hydrographers.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1911.		<i>Feet.</i>	<i>Sec.-ft.</i>	1912.		<i>Feet.</i>	<i>Sec.-ft.</i>
Aug. 18	E. O. Christiansen.....	3.12	0.5	Mar. 6	R. C. Rice.....	5.60	510
Nov. 2	do.....	3.10	a. 2	15	do.....	10.35	3,390
20	Whipple and Stanley...	3.25	.5	16	do.....	6.78	1,090
1912.				28	do.....	4.13	60
Jan. 27	R. C. Rice.....	6.05	652	Apr. 5	do.....	3.85	32

a Discharge estimated.

Daily gage height, in feet, of Russian River near Ukiah, Cal., for 1911-12.

Day.	Aug.	Sept.	Day.	Aug.	Sept.	Day.	Aug.	Sept.
1911.			1911.			1911.		
1.....		3.10	11.....		2.95	21.....	3.05	2.88
2.....		3.10	12.....		2.95	22.....	3.11	2.88
3.....		3.11	13.....		2.95	23.....	3.14	2.88
4.....		3.12	14.....		2.88	24.....	3.14	2.88
5.....		3.12	15.....		2.88	25.....	3.14	2.88
6.....		3.11	16.....		2.88	26.....	3.10	2.88
7.....		3.14	17.....		2.88	27.....	3.10	2.88
8.....		3.14	18.....		2.88	28.....	3.10	2.88
9.....		3.14	19.....	3.11	2.88	29.....	3.10	2.88
10.....		3.12	20.....	3.12	2.88	30.....	3.08	2.88
						31.....	3.10	.....

Daily gage height, in feet, of Russian River near Ukiah, Cal., for 1911-12—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.									
1.....	2.95	3.14	3.16	4.22	4.12	3.90	4.02	7.2	3.75
2.....	3.00	3.10	3.20	3.88	4.10	3.90	3.95	6.15	3.70
3.....	2.96	3.10	3.30	3.62	3.92	3.82	3.90	5.35	3.70
4.....	2.96	3.10	3.30	3.55	3.90	3.85	3.85	4.95	3.70
5.....	2.97	3.11	3.30	3.51	3.90	4.00	3.88	4.70	3.68
6.....	2.96	3.11	3.32	3.50	3.80	5.55	3.88	4.60	3.65
7.....	2.97	3.11	3.32	3.52	4.20	5.15	3.90	4.50	3.60
8.....	2.96	3.11	3.35	3.56	4.20	4.80	3.90	4.40	3.60
9.....	2.98	3.12	3.38	4.22	4.15	4.60	3.90	4.30	3.60
10.....	2.98	3.14	3.38	3.98	4.12	4.50	3.90	4.25	3.60
11.....	2.97	3.14	3.38	3.90	4.05	4.50	4.75	4.10	3.60
12.....	2.97	3.14	3.38	3.86	4.00	7.5	4.65	4.05	3.60
13.....	2.98	3.14	3.38	4.05	4.22	8.1	4.35	4.00	3.60
14.....	2.98	3.14	3.38	4.02	4.65	6.2	4.22	3.90	3.58
15.....	2.98	3.14	3.40	4.05	4.50	8.0	4.05	3.90	3.58
16.....	2.98	3.14	3.40	4.18	4.50	7.0	4.00	3.95	3.58
17.....	3.02	3.16	3.45	4.04	5.25	5.9	4.00	3.90	3.58
18.....	3.01	3.16	3.45	4.39	5.95	5.55	3.92	3.80	3.58
19.....	3.04	3.16	3.40	4.24	5.0	5.05	3.90	3.80	3.55
20.....	3.04	3.16	3.40	3.95	4.70	4.85	3.85	4.00	3.50
21.....	3.04	3.20	3.38	3.90	4.50	4.80	3.85	3.90	3.50
22.....	3.01	3.20	3.38	3.85	4.35	4.70	3.80	3.90	3.50
23.....	3.04	3.20	3.38	3.80	4.20	4.65	3.80	3.90	3.50
24.....	3.04	3.20	3.38	3.88	4.05	4.45	3.80	3.90	3.50
25.....	3.04	3.20	3.38	9.4	4.10	4.35	3.75	3.90	3.50
26.....	3.04	3.20	3.38	7.7	4.00	4.32	3.75	3.90	3.52
27.....	3.04	3.18	3.51	6.05	4.00	4.25	3.80	4.00	3.52
28.....	3.04	3.18	3.78	5.05	3.95	4.12	3.80	4.00	3.50
29.....	3.04	3.18	3.70	4.55	3.90	4.10	5.85	3.90	3.50
30.....	3.04	3.16	3.55	4.45	.....	4.05	5.65	3.80	3.50
31.....	3.04	.....	3.75	4.32	.....	4.05	.....	3.80	.....

NOTE.—Mar. 15, 1912, maximum recorded stage, 11.8 feet at 1 p. m.

RUSSIAN RIVER AT GEYSERVILLE, CAL.

This station, which is located at the highway bridge on the Tzabaco Spanish land grant, half a mile northeast of Geyserville, was established December 5, 1910.

As water is diverted from the South Eel to the East Fork of Russian River for power development at Potter Valley, the record at this station does not show the natural run-off from the basin, but indicates the amount of water available for irrigation.

The gage is painted on the lower caisson of the sixth pier from the right end of the bridge.

The channel is composed of gravel and shifts slightly at high stages. There is an overflow section on the left bank.

Discharge measurements are made from the highway bridge or by wading.

Discharge measurements of Russian River at Geyserville, Cal., 1910-1912.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1910.		<i>Feet.</i>	<i>Sec.-ft.</i>	1911.		<i>Feet.</i>	<i>Sec.-ft.</i>
Dec. 4	W. V. Hardy.....	10.04	354	Oct. 29	E. O. Christiansen.....	8.63	10
				Nov. 24	Stanley and Whipple...	8.85	40
1911.				1912.			
Mar. 4	J. E. Stewart.....	11.00	2,680	Jan. 28	R. C. Rice.....	10.69	2,000
June 24	E. A. Ingham.....	9.40	213	Mar. 5	.....do.....	9.86	503
July 22	.....do.....	8.95	52	Apr. 6	.....do.....	9.95	501
Aug. 18	E. O. Christiansen.....	8.62	a 2				

a Estimated.

Daily gage height, in feet, of Russian River at Geyserville, Cal., for 1910-1912.

Day.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.										
1.....		9.4	12.7	10.2	9.95	9.78	9.10	9.36	8.78	8.30
2.....		9.4	12.7	10.2	9.9	9.78	9.50	9.36	8.76	8.25
3.....		9.35	11.8	10.7	9.9	9.75	9.55	9.36	8.75	8.05
4.....	10.40	9.35	11.5	11.0	10.0	9.70	9.55	9.35	8.76	7.88
5.....	9.98	9.3	11.0	14.5	11.0	9.70	9.55	9.35	8.70	7.80
6.....	9.92	9.35	11.0	15.8	10.5	9.70	9.55	9.35	8.70	7.60
7.....	9.91	9.25	10.8	14.7	10.3	9.69	9.40	9.35	8.69	7.50
8.....	9.90	9.25	10.65	13.5	10.3	9.68	9.40	9.35	8.69	7.38
9.....	9.85	9.3	10.55	12.3	10.35	9.68	9.40	9.34	8.68	7.20
10.....	9.92	9.35	10.75	11.85	10.3	9.68	9.40	9.34	8.66	7.00
11.....	9.96	9.55	13.0	11.3	10.25	9.65	9.40	9.33	8.65	.....
12.....	9.94	10.1	12.0	11.0	10.25	9.65	9.40	9.33	8.65	.....
13.....	9.94	10.6	12.85	10.8	10.2	9.65	9.39	9.30	8.65	.....
14.....	9.90	11.0	11.7	10.65	10.15	9.65	9.39	9.30	8.63	.....
15.....	9.90	11.05	11.2	10.55	10.1	9.65	9.39	9.28	8.60	.....
16.....	9.89	10.55	11.05	10.5	10.15	9.65	9.39	9.25	8.60	.....
17.....	9.88	10.4	10.8	10.4	10.05	9.70	9.39	9.25	8.60	.....
18.....	9.84	10.3	10.6	10.35	10.0	9.80	9.39	9.15	8.60	.....
19.....	9.78	10.9	10.6	10.2	10.0	9.80	9.39	9.10	8.55	.....
20.....	9.70	14.1	10.5	10.2	10.0	9.80	9.39	9.05	8.52	.....
21.....	9.75	11.4	10.45	10.2	9.95	9.80	9.38	9.00	8.52	.....
22.....	9.65	10.7	10.45	10.15	9.95	9.75	9.38	8.95	8.52	.....
23.....	9.65	10.55	10.4	10.15	9.95	9.75	9.38	8.93	8.50	.....
24.....	9.50	11.35	10.35	10.1	9.9	9.75	9.38	8.90	8.48	.....
25.....	9.55	11.35	10.3	10.1	9.9	9.70	9.38	8.88	8.48	.....
26.....	9.55	11.4	10.3	10.1	9.8	9.70	9.38	8.85	8.48	.....
27.....	9.50	13.25	10.2	10.05	9.9	9.70	9.38	8.83	8.45	.....
28.....	9.50	15.0	10.2	10.05	9.85	9.65	9.37	8.80	8.45	.....
29.....	9.50	13.0	.....	10.0	9.85	9.65	9.37	8.80	8.42	7.00
30.....	9.45	13.5	.....	9.95	9.8	9.65	9.36	8.80	8.42	8.10
31.....	9.45	12.5	.....	9.95	.....	9.50	.....	8.79	8.35	.....

NOTE.—River dry Sept. 11-28, 1911.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.									
1.....	8.10	8.58	8.88	9.10	9.95	9.78	10.00	11.5	9.95
2.....	8.10	8.60	8.88	9.10	9.90	9.78	9.98	11.3	9.94
3.....	8.15	8.60	8.88	9.10	9.85	9.78	9.95	11.0	9.92
4.....	8.12	8.62	8.90	9.08	9.80	9.80	9.95	10.85	9.92
5.....	8.12	8.62	8.90	9.08	9.78	9.86	9.95	10.5	9.92
6.....	8.10	8.65	8.90	9.08	9.75	10.7	9.95	10.40	9.95
7.....	8.10	8.65	8.92	9.08	9.72	10.9	9.95	10.35	9.95
8.....	8.20	8.65	8.95	9.10	9.72	10.5	9.98	10.32	9.80
9.....	8.50	8.68	8.98	9.10	9.80	10.30	9.98	10.20	9.80
10.....	8.50	8.68	8.98	9.08	9.80	10.28	9.99	10.15	9.82
11.....	8.55	8.68	8.98	9.18	9.80	10.25	10.25	10.10	9.82
12.....	8.55	8.70	8.98	9.55	9.82	12.2	10.38	10.08	9.82
13.....	8.60	8.72	8.95	9.55	9.82	11.6	10.15	10.08	9.82
14.....	8.70	8.72	8.95	9.52	9.85	11.6	10.02	10.08	9.82
15.....	8.68	8.72	8.95	9.52	9.85	11.5	10.00	10.05	9.82
16.....	8.55	8.78	8.95	9.58	9.90	12.0	10.00	10.02	9.80
17.....	8.65	8.80	8.98	9.60	9.90	11.3	9.98	10.00	9.80
18.....	8.65	8.80	8.98	9.72	10.38	11.0	9.95	9.98	9.80
19.....	8.62	8.82	8.95	10.00	10.15	10.7	9.92	9.98	9.78
20.....	8.62	8.82	8.95	9.90	10.00	10.5	9.92	9.98	9.78
21.....	8.62	8.85	8.95	9.80	9.90	10.45	9.92	9.98	9.75
22.....	8.60	8.88	8.95	9.50	9.80	10.42	9.92	9.98	9.72
23.....	8.68	8.88	8.95	9.60	9.75	10.30	9.92	9.98	9.72
24.....	8.58	8.88	8.95	9.80	9.72	10.30	9.95	9.98	9.72
25.....	8.50	8.88	8.98	12.1	9.72	10.20	9.95	10.00	9.72
26.....	8.50	8.88	8.98	13.5	9.70	10.20	9.95	10.00	9.70
27.....	8.50	8.85	8.98	11.5	9.70	10.20	9.95	10.02	9.68
28.....	8.52	8.88	9.00	10.75	9.75	10.18	10.20	10.0	9.65
29.....	8.55	8.88	9.02	10.35	9.75	10.18	10.9	9.98	9.65
30.....	8.55	8.88	9.02	10.20	.....	10.18	11.05	9.95	9.62
31.....	8.52	.....	9.10	10.00	.....	10.10	.....	9.95	.....

EAST FORK OF RUSSIAN RIVER NEAR UKIAH, CAL.

This station, which is located at the suspension footbridge in the Yokayo grant, about three-fourths of a mile above the junction with Russian River and 3 miles northeast of Ukiah, was established August 19, 1911.

The Snow Mountain Water & Power Co. diverts water from the South Eel for use in power development. This water enters the East Fork of Russian River about 14 miles above the station. At low stages regulation at the power plant of the Snow Mountain Water & Power Co. causes a noticeable fluctuation in the discharge. The daily load fluctuates greatly and hence the low-water gage heights are liable to considerable error.

The gage is a vertical staff in two sections on the left bank, about 40 feet below the bridge. The channel is composed of sand and gravel and shifts during high stages. Discharge measurements are made from the footbridge or by wading.

Discharge measurements of East Fork of Russian River near Ukiah Cal., in 1911-12.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1911.		<i>Feet.</i>	<i>Sec.-ft.</i>	1912.		<i>Feet.</i>	<i>Sec.-ft.</i>
Aug. 19	E. O. Christiansen.....	4.80	^a 2.0	Mar. 6	R. C. Rice.....	7.07	610
Nov. 1	.....do.....	4.69	4.9	Mar. 16	.....do.....	7.27	933
20	Whipple and Stanley..	5.04	22	28	.....do.....	6.18	284
				Apr. 5	.....do.....	6.20	286
1912.							
Jan. 27	R. C. Rice.....	6.69	373				

^a Estimated.

Daily gage height, in feet, of East Fork of Russian River near Ukiah, Cal., for 1911-12.

Day.	Aug.	Sept.	Day.	Aug.	Sept.	Day.	Aug.	Sept.
1911.			1911.			1911.		
1.....		4.70	11.....		5.25	21.....	4.90	4.90
2.....		4.85	12.....		5.25	22.....	5.30	4.75
3.....		4.70	13.....		5.10	23.....	5.20	4.90
4.....		5.02	14.....		5.15	24.....	4.90	5.00
5.....		4.95	15.....		4.99	25.....	4.20	5.00
6.....		4.52	16.....		5.08	26.....	4.78	4.85
7.....		5.00	17.....		4.90	27.....	5.09	5.00
8.....		4.85	18.....		4.95	28.....	4.90	4.90
9.....		4.85	19.....	4.70	5.00	29.....	5.00	4.95
10.....		4.90	20.....	4.90	4.95	30.....	4.70	5.10
						31.....	4.65	.....

Daily gage height, in feet, of East Fork of Russian River near Ukiah, Cal., for 1911-12—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.									
1.....	4.95	5.12	5.15	5.50	6.40	6.35	6.30	7.6	6.20
2.....	5.05	5.05	5.10	5.50	6.39	6.38	6.25	7.45	6.18
3.....	5.05	5.00	5.10	5.55	6.35	6.40	6.35	7.35	6.15
4.....	5.15	5.05	5.10	5.45	6.48	6.42	6.35	6.30	6.16
5.....	5.20	5.10	5.10	5.55	6.48	6.46	6.20	6.34	6.18
6.....	5.08	5.15	5.20	5.65	6.48	6.9	6.15	6.30	6.16
7.....	5.15	5.15	5.20	5.85	6.45	6.8	6.15	6.32	6.15
8.....	4.90	5.12	5.30	5.85	6.40	6.75	6.15	6.28	6.15
9.....	4.90	5.05	5.30	6.05	6.35	6.65	6.21	6.25	6.15
10.....	5.05	5.10	5.25	6.20	6.35	6.6	6.20	6.21	6.19
11.....	5.05	5.15	5.25	6.35	6.35	6.6	6.65	6.18	6.16
12.....	5.20	5.25	5.20	6.6	6.40	7.7	6.31	6.15	6.19
13.....	4.90	5.12	5.25	6.6	6.5	8.0	6.38	6.18	6.15
14.....	4.95	5.15	5.28	6.45	6.46	7.2	6.28	6.18	6.16
15.....	4.85	5.00	5.32	6.45	6.45	8.9	6.28	6.18	6.15
16.....	4.80	5.02	5.35	6.48	6.41	7.65	6.26	6.15	6.15
17.....	5.00	4.95	5.38	6.5	6.49	6.75	6.20	6.14	5.96
18.....	5.08	4.99	5.41	6.5	6.5	6.6	6.20	6.15	5.66
19.....	5.15	5.00	5.40	6.40	6.5	6.5	6.21	6.18	5.59
20.....	5.15	5.00	5.42	6.45	6.48	6.55	6.22	6.22	5.58
21.....	4.95	4.96	5.40	6.5	6.48	6.5	6.28	6.24	5.56
22.....	4.95	4.95	5.35	6.5	6.45	6.48	6.21	6.22	5.48
23.....	4.98	4.98	5.35	6.55	6.44	6.45	6.25	6.21	5.32
24.....	4.85	5.00	5.40	6.8	6.42	6.35	6.25	6.21	5.70
25.....	4.98	5.01	5.40	7.1	6.38	6.35	6.25	6.22	5.82
26.....	5.10	4.95	5.40	7.0	6.38	6.30	6.31	6.22	5.78
27.....	5.00	4.95	5.44	6.8	6.38	6.25	6.28	6.22	5.76
28.....	5.00	5.00	5.45	6.5	6.38	6.35	6.31	6.24	5.79
29.....	5.05	5.02	5.50	6.48	6.40	6.38	6.6	6.20	5.79
30.....	5.00	5.00	5.50	6.45	.....	6.35	6.6	6.20	5.82
31.....	5.10	.....	5.51	6.40	.....	6.38	.....	6.20	.....

NOTE.—At low water gage heights are affected by operation of Snow Mountain Water & Power Co.'s plant.

MISCELLANEOUS MEASUREMENTS.

The following miscellaneous measurements have been made in the Russian River basin:

Miscellaneous measurements in Russian River drainage basin.

Date.	Stream.	Locality.	Dis-charge.
			<i>Sec.-ft.</i>
Sept. 21, 1905	Russian River.....	Near Calpella.....	1.2
Aug. 11, 1910	do.....	1 mile north of Calpella.....	.7
Sept. 22, 1905	do.....	Near Preston.....	10.3
May 16, 1910	do.....	1 mile east of Ukiah.....	96
May 29, 1911	do.....	do.....	229
May 17, 1910	do.....	200 feet above mouth of East Fork.....	19
July 5, 1910	do.....	100 feet above mouth of East Fork.....	2.6
Aug. 30, 1911	do.....	Below bridge 3 miles southeast of Ukiah.....	6.8
May 18, 1910	do.....	Below bridge $\frac{1}{2}$ mile west of Hopland.....	238
May 19, 1910	do.....	1 mile north of Cloverdale.....	289
Aug. 11, 1910	do.....	At bridge at Cloverdale.....	6.6
Aug. 29, 1911	do.....	4 miles north of Healdsburg.....	17
Jan. 23, 1903	do.....	At Healdsburg.....	628
May 20, 1910	do.....	do.....	348
Sept. 21, 1905	East Fork of Russian River.	Near Ukiah.....	2.2
May 17, 1910	do.....	Near mouth, 3 miles north of Ukiah.....	207
July 5, 1910	do.....	do.....	22
Aug. 11, 1910	do.....	do.....	3.5
Nov. 2, 1911	Ackerman Creek.....	Near mouth, about 2 miles north of Ukiah.....	Dry.
Do.....	Orr Creek.....	Near mouth, about $\frac{1}{2}$ mile north of Ukiah.....	Dry.
Oct. 29, 1911	Pieta Creek.....	Near mouth, about 1 mile south of Pieta.....	2
May 25, 1910	Kellogg Creek.....	100 feet below mouth of Yellowjacket Creek at Kellogg.....	2.6
July 12, 1910	do.....	do.....	.7
May 25, 1910	Yellowjacket Creek.....	1 mile east of Kellogg.....	2.7
Aug. 13, 1910	do.....	do.....	.7
Do.....	Mill Creek.....	1 mile above mouth, 1 mile north of Kellogg.....	.8

MATTOLE RIVER BASIN.

MATTOLE RIVER NEAR PETROLIA, CAL.

This station, which is located at the highway bridge in the SW. $\frac{1}{4}$ sec. 11, T. 2 S., R. 2 W., about 2 miles southeast of Petrolia, was established November 21, 1911.

The gage is painted on the left pier of the highway bridge. The channel is composed of sand and gravel and will probably shift during high water. The area drained is 264 square miles. Discharge measurements are made from the bridge or by wading.

Discharge measurements of Mattole River near Petrolia, Cal., 1911-12.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1911.		<i>Fect.</i>	<i>Sec.-fect.</i>	1912.		<i>Fect.</i>	<i>Sec.-ft.</i>
Nov. 21	E. O. Christiansen.....	5.70	114	Mar. 21	E. O. Christiansen.....	8.40	1,900
1912.				May 23	.....do.....	7.97	1,650
Jan. 13	E. O. Christiansen.....	9.60	4,570	25	.....do.....	7.80	1,250
14	.....do.....	8.92	2,780	25	.....do.....	7.78	1,240

Daily gage height, in feet, of Mattole River near Petrolia, Cal., for 1911-12.

Day.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.								
1.....		5.38	7.75	8.8	7.55	7.3	12.0	7.4
2.....		5.35	7.4	8.6	7.45	7.25	10.3	7.4
3.....		5.35	7.1	8.35	7.4	7.2	9.3	7.3
4.....		5.35	6.9	8.25	7.35	7.15	8.8	7.2
5.....		5.54	6.8	8.2	7.7	7.1	8.45	7.15
6.....		7.32	6.75	8.1	8.4	7.05	8.25	7.1
7.....		6.88	7.35	8.6	9.4	7.05	8.0	7.05
8.....		6.39	7.3	9.45	8.85	7.0	7.85	7.0
9.....		6.12	8.3	9.6	8.55	7.0	7.75	6.95
10.....		5.98	8.45	10.0	8.25	7.0	7.6	6.9
11.....		5.88	8.6	9.6	8.0	7.05	7.5	6.9
12.....		5.79	8.5	9.05	8.3	7.1	7.45	6.95
13.....		5.74	9.8	9.3	8.0	7.0	7.35	7.0
14.....		5.69	8.95	9.1	7.85	6.95	7.25	7.05
15.....		5.64	8.45	8.95	10.7	6.9	7.2	7.0
16.....		5.61	8.05	9.7	10.6	6.85	7.15	6.95
17.....		5.75	7.75	11.2	9.8	6.85	7.15	6.9
18.....		5.54	7.8	10.7	9.5	6.85	7.1	6.85
19.....		5.28	8.25	9.7	9.05	6.8	7.1	6.8
20.....		6.15	7.95	9.1	8.65	6.8	7.5	6.8
21.....	5.70	6.04	7.85	8.8	8.35	6.8	7.4	6.75
22.....	5.65	5.94	7.95	8.5	8.25	6.8	7.5	6.75
23.....	5.60	6.04	7.75	8.35	8.15	6.8	8.2	6.8
24.....	5.54	6.02	12.9	8.15	8.05	6.9	7.9	6.8
25.....	5.50	5.48	25.2	8.0	7.85	6.9	7.8	6.75
26.....	5.49	5.89	17.0	8.0	7.7	6.85	8.1	6.75
27.....	5.44	7.20	12.1	7.75	7.6	6.9	8.2	6.7
28.....	5.42	7.98	10.5	7.7	7.5	7.05	7.95	6.7
29.....	5.40	7.36	9.6	7.65	7.35	11.0	7.8	6.7
30.....	5.40	7.09	9.25	.....	7.35	12.0	7.6	6.7
31.....	.....	7.58	8.9	.....	7.35	.....	7.5	.....

MISCELLANEOUS MEASUREMENTS.

The following miscellaneous measurements have been made in the Mattole River basin:

Miscellaneous measurements in Mattole River drainage basin.

Date.	Stream.	Locality.	Dis-charge.
			<i>Sec.-ft.</i>
Nov. 20, 1911	Honey Dew Creek.....	Mouth, sec. 6, T. 3 S., R. 1 E.....	13
Jan. 15, 1912	.....do.....	Above Upper Mattole, NW. $\frac{1}{4}$ sec. 7, T. 3 S., R. 1 E.....	70
May 26, 1912	.....do.....	.....do.....	294
Nov. 21, 1911	Squaw Creek.....	Mouth, sec. 30, T. 2 S., R. 1 W.....	α 2
May 25, 1912	.....do.....	.....do.....	90
May 26, 1912	Bear Creek or West Fork...	Mouth, at Etterburg, NW. $\frac{1}{4}$ sec. 7, T. 4 S., R. 2 E.....	352
May 25, 1912	Cumming Creek.....	36 miles from Ferndale, NW. $\frac{1}{4}$ sec. 24, T. 2 S., R. 2 W.....	10
Nov. 22, 1911	North Fork of Mattole River.	Near mouth, NW. $\frac{1}{4}$ sec. 4, T. 2 S., R. 2 W.....	α 3
Mar. 21, 1912	.....do.....	.....do.....	224
May 23, 1912	.....do.....	.....do.....	131

α Estimated.

EEL RIVER BASIN.

SOUTH EEL RIVER AT HEARST, CAL.

This station, which is located at the highway bridge at Hearst, 300 feet above the mouth of Salt Creek, about 3 miles below the mouth of Sanhedrin Creek, in the NE. $\frac{1}{4}$ sec. 20, T. 19 N., R. 12 W., was established December 7, 1910.

Water is diverted above the station, and is conducted through a tunnel to the basin of the East Fork of Russian River, where it is used by the Snow Mountain Water & Power Co. for power development.

A staff gage in two sections is bolted to the bedrock on the left bank at the bridge, and a third section is painted on the lower caisson of the bridge at the left end.

Discharge measurements are made from the highway bridge.

No estimates of daily or monthly discharge have been prepared.

Discharge measurements of South Eel River at Hearst, Cal., in 1910-1912.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
		<i>Feet.</i>	<i>Sec.-ft.</i>			<i>Feet.</i>	<i>Sec.-ft.</i>
1910.				1912.			
Aug. 13	W. V. Hardy.....		5. 4	Jan. 30	R. C. Rice.....	10. 72	636
Dec. 8	.....do.....	8. 45	44	Mar. 8	.....do.....	11. 40	1,080
				Apr. 3	.....do.....	9. 48	330
1911.				4	.....do.....	9. 46	264
Mar. 3	J. E. Stewart.....	10. 29	471				
Aug. 19	E. O. Christiansen.....	7. 10	4. 5				
Nov. 4	.....do.....	7. 09	4. 6				
19	Whipple and Stanley...	7. 26	8. 7				

Daily gage height, in feet, of South Eel River at Hearst, Cal., for 1910-1912.

Day.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.										
1.....		7.95	14.65	10.30	12.70	10.10	9.90	7.50	7.19	7.00
2.....		7.93	14.85	10.10	12.40	10.25	9.50	7.50	7.17	7.00
3.....		7.90	14.35	10.30	11.80	10.30	9.40	7.49	7.16	7.00
4.....		7.90	13.70	12.60	12.40	10.40	9.10	7.48	7.15	7.00
5.....		7.90	13.15	15.50	16.00	10.65	9.05	7.47	7.20	7.00
6.....		7.88	12.90	20.30	15.00	10.30	8.90	7.42	7.19	7.00
7.....		7.86	12.40	20.00	12.80	10.00	9.05	7.41	7.18	7.00
8.....	8.45	7.85	12.20	16.95	12.70	9.92	8.90	7.40	7.18	7.00
9.....	9.35	7.89	11.60	15.80	12.50	9.80	8.80	7.41	7.17	7.00
10.....	9.02	8.10	11.40	13.30	12.35	9.70	8.60	7.39	7.16	7.00
11.....	9.62	10.65	13.90	13.20	12.20	9.70	8.52	7.43	7.15	7.00
12.....	9.42	10.22	13.20	12.70	12.10	9.70	8.46	7.35	7.16	7.00
13.....	8.80	10.42	13.70	12.40	11.80	9.65	8.37	7.33	7.16	7.02
14.....	8.50	11.30	12.90	12.30	11.50	9.65	8.10	7.30	7.15	7.02
15.....	8.35	11.06	12.30	12.20	11.40	9.35	8.05	7.31	7.14	7.02
16.....	8.30	10.15	11.90	12.10	11.50	9.40	7.94	7.31	7.12	7.00
17.....	8.26	9.65	11.50	12.30	11.20	9.45	7.87	7.30	7.10	7.00
18.....	8.20	10.40	11.30	12.30	11.10	11.45	7.70	7.30	7.10	7.00
19.....	8.12	18.65	11.80	12.20	11.00	10.70	7.68	7.29	7.11	7.00
20.....	8.12	18.20	11.51	12.35	10.90	10.20	7.65	7.29	7.12	7.00
21.....	8.10	13.70	11.11	12.40	10.80	10.10	7.62	7.29	7.12	7.00
22.....	8.00	12.10	11.10	12.50	10.80	10.10	7.64	7.28	7.15	7.00
23.....	8.00	11.38	11.00	12.30	10.85	10.05	7.62	7.28	7.12	7.00
24.....	8.00	13.52	10.80	12.20	11.40	9.90	7.61	7.26	7.10	7.00
25.....	8.00	13.15	10.80	12.00	11.10	9.50	7.61	7.25	7.10	7.02
26.....	7.97	13.50	10.60	11.90	11.00	9.50	7.60	7.24	7.08	7.02
27.....	7.95	15.80	10.45	11.50	10.80	9.40	7.60	7.23	7.05	7.05
28.....	7.95	16.85	10.45	11.80	10.60	9.30	7.58	7.22	7.05	7.10
29.....	7.92	14.95		11.90	10.20	9.20	7.52	7.24	7.02	7.08
30.....	7.94	17.25		12.50	10.10	9.30	7.50	7.20	7.02	
31.....	7.97	16.00		12.60		9.40		7.18	7.02	
Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	
1911-12.										
1.....	7.02	7.02	7.20	7.35	9.7	8.3	9.8	17.2	9.8	
2.....	7.05	7.02	7.20	7.45	9.6	8.2	9.6	14.0	9.7	
3.....	7.08	7.10	7.20	7.45	9.5	8.05	9.5	13.0	9.4	
4.....	7.02	7.10	7.22	7.5	8.6	8.5	9.45	12.4	9.1	
5.....	7.05	7.10	7.25	7.65	8.35	12.6	9.3	12.3	9.0	
6.....	7.02	7.08	7.22	7.85	8.35	12.3	9.1	12.2	8.8	
7.....	7.02	7.10	7.20	8.0	9.8	10.9	8.9	12.0	8.5	
8.....	7.05	7.10	7.20	8.3	9.95	11.1	9.2	11.8	8.4	
9.....	7.22	7.10	7.25	8.95	9.35	10.7	9.15	11.7	8.3	
10.....	7.22	7.70	7.22	8.96	9.3	10.5	9.5	11.5	8.2	
11.....	7.18	7.30	7.25	8.58	9.35	10.3	11.3	11.3	8.2	
12.....	7.12	7.20	7.25	8.85	9.2	10.3	11.4	10.9	8.2	
13.....	7.10	7.20	7.25	8.4	9.6	10.9	9.7	10.9	8.1	
14.....	7.10	7.25	7.25	8.38	10.0	11.2	10.35	10.5	7.9	
15.....	7.10	7.40	7.25	8.3	9.6	15.6	10.25	10.3	7.9	
16.....	7.10	7.25	7.32	8.3	9.9	11.9	10.15	10.1	7.88	
17.....	7.08	7.22	7.50	8.38	10.2	11.9	10.0	9.85	7.8	
18.....	7.08	7.18	7.45	8.4	11.8	11.8	9.9	9.8	7.8	
19.....	7.08	7.18	7.38	8.38	11.0	11.8	9.7	9.7	7.78	
20.....	7.08	7.22	7.35	8.2	10.5	11.5	9.5	10.3	7.72	
21.....	7.08	7.22	7.35	8.1	10.0	11.5	9.3	10.0	7.7	
22.....	7.08	7.22	7.40	7.98	9.95	10.8	9.2	9.9	7.7	
23.....	7.10	7.22	7.38	7.92	9.8	10.7	9.1	10.1	7.72	
24.....	7.05	7.22	7.30	9.75	9.7	10.6	9.2	10.5	7.7	
25.....	7.08	7.22	7.28	18.7	9.6	10.5	9.1	11.0	7.7	
26.....	7.05	7.20	7.30	17.8	9.4	10.35	9.1	11.0	7.68	
27.....	7.02	7.20	7.30	16.0	9.1	10.15	8.92	11.2	7.65	
28.....	7.05	7.20	7.40	13.0	9.1	10.5	8.8	10.8	7.62	
29.....	7.05	7.20	7.75	10.8	8.9	10.45	12.4	10.5	7.6	
30.....	7.02	7.20	7.78	10.8		10.1	14.2	10.2	7.6	
31.....	7.02		7.75	10.0		9.9		9.9		

NOTE.—Gage height Mar. 7, 1912, is that recorded by observer at 8 a. m. and is probably in error as the hydrographer read gage 11.9 feet at 6.15 p. m. on a falling stage.

EEL RIVER NEAR LAYTONVILLE, CAL.

This station, which is located at the highway bridge on the Laytonville-Covelo road in the SW. $\frac{1}{4}$ sec. 31, T. 22 N., R. 13 W., about 500 feet below the junction of Middle and South Eel rivers and about 12 miles east of Laytonville, was established November 15, 1911. Burger Creek enters about 1 mile below the station.

The Snow Mountain Water & Power Co. diverts water from the South Eel above Hearst to the East Fork of Russian River for use in power development.

The gage is a staff, in three sections, on the right bank at the bridge. The channel is through solid rock and coarse gravel and appears permanent. Discharge measurements are made from a car and cable, three-fourths of a mile below the gage, or by wading.

Estimates are withheld until additional data are available.

Discharge measurements of Eel River near Laytonville, Cal., 1911-12.

Date.	Hydrographer.	Gage height.	Discharge.	Date.	Hydrographer.	Gage height.	Discharge.
1911.				1912.			
Nov. 15	Christiansen and Whipple.....	Feet. 7.85	Sec.-ft. 101	Feb. 1	R. C. Rice.....	Feet. 11.65	Sec.-ft. 1,940
1912.				Mar. 9	.....do.....	12.67	3,100
Jan. 20	E. O. Christiansen.....	10.19	792	10	.....do.....	12.34	2,620
21	.....do.....	9.94	710	Apr. 1	.....do.....	11.49	1,850

Daily gage height, in feet, of Eel River near Laytonville, Cal., for 1911-12.

Day.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1.....		7.16	9.6	11.8	10.4	11.6	23.2	11.9
2.....		7.15	9.4	11.4	10.3	11.5	18.9	11.8
3.....		7.10	8.4	11.2	10.1	11.4	15.8	11.6
4.....		7.16	8.4	10.8	10.1	11.2	15.2	11.4
5.....		7.20	8.55	10.8	11.5	11.1	15.3	11.2
6.....		7.40	8.55	10.6	14.4	11.0	15.6	11.0
7.....		8.00	9.6	11.4	16.0	11.0	15.0	10.8
8.....		8.00	10.8	13.4	14.1	11.1	14.2	10.6
9.....		7.65	12.0	13.5	12.8	11.2	14.2	10.4
10.....		7.52	11.8	12.9	12.4	11.5	13.5	10.4
11.....		7.41	11.7	11.8	12.0	12.8	13.2	10.2
12.....		7.40	10.5	11.7	12.6	13.4	13.1	10.1
13.....		7.41	11.8	11.9	15.0	13.4	12.9	10.1
14.....		7.36	11.4	12.2	14.5	12.4	12.2	10.0
15.....	8.80	7.30	10.8	11.8	18.2	12.0	12.0	9.95
16.....	9.10	7.40	10.7	11.6	16.8	12.0	12.0	9.75
17.....	8.60	8.60	10.9	14.5	14.8	11.8	12.0	9.7
18.....	8.25	8.40	10.6	16.7	13.9	11.9	11.8	9.55
19.....	7.90	8.08	10.5	14.6	13.4	11.5	11.6	9.4
20.....	7.62	7.88	10.2	13.5	13.0	11.3	12.0	9.35
21.....	7.52	7.72	9.95	13.3	12.6	11.2	12.0	9.5
22.....	7.50	7.55	9.8	12.4	12.4	11.0	11.8	9.45
23.....	7.49	7.50	9.9	11.9	12.0	11.1	11.8	9.5
24.....	7.44	7.62	10.0	11.6	12.3	11.2	12.0	9.45
25.....	7.30	7.60	28.6	11.3	12.2	11.2	13.3	9.35
26.....	7.30	7.50	26.4	11.0	12.0	11.0	13.2	9.25
27.....	7.26	8.40	19.2	10.9	12.0	10.8	13.4	9.15
28.....	7.21	9.80	15.5	10.5	12.2	10.8	12.8	9.05
29.....	7.20	9.20	14.5	10.6	12.2	17.8	12.5	9.0
30.....	7.20	8.95	12.5	.....	12.0	18.1	12.4	8.9
31.....	.....	8.85	12.1	.....	12.9	.....	12.1	.....

NOTE.—Maximum gage height Jan. 25-26, during the night, was 33 feet. May 1 maximum observed gage height was 24 feet at noon.

EEL RIVER AT SCOTIA, CAL.

This station, which is located in sec. 18, T. 1 N., R. 1 E., at Wild-wood Ferry, half a mile northeast of Scotia, was established December 15, 1910.

Van Duzen River enters the Eel about 7 miles below and Larabee Creek about 14 miles above the station.

The staff gage is in four sections on the left bank of the river. The first three sections are 70 feet above the ferry; the upper section is at the mouth of Dean Creek, about 150 feet farther upstream.

Discharge measurements are made from the ferry or a small boat.

No estimates of daily or monthly discharge have been prepared.

Discharge measurements of Eel River at Scotia, Cal., in 1910-1912.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1910. Aug. 17 Dec. 15	W. V. Hardy..... .....do.....	<i>Feet.</i> 11.59	<i>Sec.-ft.</i> 91 2,110	1911. Nov. 28	E. O. Christiansen.....	<i>Feet.</i> 9.98	<i>Sec.-ft.</i> 201
1911. Aug. 28 Sept. 26	E. O. Christiansen..... .....do.....	9.90 9.61	128 78	1912. Feb. 3 Mar. 19 May 31	E. O. Christiansen..... .....do..... .....do.....	13.28 15.94 12.85	5,880 15,800 5,200

Daily gage height, in feet, of Eel River at Scotia, Cal., for 1910-1912.

Day.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.										
1.....		10.8	20.95	12.6	13.9	12.5	12.2	10.7		
2.....		10.75	20.35	12.5	14.0	12.55	12.3	10.6		
3.....		10.7	20.15	12.5	14.0	12.7	12.25	10.5		
4.....		10.65	18.25	12.7	13.75	12.95	12.2	10.5		
5.....		10.6	17.2	14.1	16.9	12.9	12.05	10.45		
6.....		10.55	16.65	18.55	19.85	12.95	12.0	10.4		
7.....		10.05	15.9	24.3	16.95	12.7	11.9	10.4		
8.....		10.6	15.1	21.8	15.45	12.5	11.9	10.3		
9.....		10.85	14.6	19.1	14.9	12.5	11.7	10.3		
10.....		11.25	14.55	17.25	16.25	12.4	11.7	10.25		
11.....		12.7	16.7	16.15	15.55	12.2	11.7	10.25		
12.....		15.4	16.6	15.35	14.3	12.2	11.6	10.2		
13.....		14.55	17.6	14.8	13.75	12.25	11.55	10.2		
14.....		14.25	17.4	14.4	13.75	12.2	11.5	10.15		
15.....		15.1	16.2	14.15	13.75	12.1	11.7	10.15		
16.....		14.6	15.35	14.0	13.75	12.15	11.6	10.15		
17.....		13.85	14.8	13.9	13.6	12.7	11.55	10.15		
18.....	11.59	15.5	14.95	13.9	13.35	14.05	11.4	10.15		
19.....	11.47	23.7	14.9	13.9	13.55	14.9	11.3	10.15		
20.....	11.35	33.4	14.4	13.8	13.35	13.7	11.25	10.15		
21.....	11.3	25.2	14.1	13.85	13.15	13.3	11.2	10.15		
22.....	11.2	16.95	13.75	13.8	13.15	13.15	11.2	10.15		
23.....	11.15	13.55	13.5	13.8	13.15	13.0	11.15	10.15		
24.....	11.1	15.0	13.3	13.9	13.2	13.0	11.0	10.1		9.6
25.....	11.05	16.2	13.2	13.8	13.3	12.75	10.9	10.0		9.6
26.....	11.0	18.3	13.4	13.75	13.4	12.5	10.8	9.92		9.6
27.....	10.95	18.7	12.9	13.5	13.2	12.35	10.8	9.9		9.6
28.....	10.9	24.2	12.75	13.45	12.95	12.35	10.8		9.9	9.6
29.....	10.85	22.15		13.5	12.75	12.15	10.75			9.6
30.....	10.8	23.25		13.5	12.55	12.1	10.7			9.6
31.....	10.8	25.0		13.75		12.1				

Daily gage height, in feet, of Eel River at Scotia, Cal., for 1910-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.									
1.....	9.6	9.6	9.95	11.75	14.0	12.4	12.6	25.4	12.7
2.....	9.6	9.6	9.95	11.8	13.5	12.4	12.5	23.2	12.5
3.....	9.6	9.6	9.95	11.65	13.2	12.2	12.5	19.1	12.4
4.....	9.6	9.6	9.95	11.35	13.0	12.1	12.4	17.2	12.3
5.....	9.6	9.6	10.08	11.2	12.8	12.7	12.3	16.2	12.1
6.....	9.6	9.6	10.22	11.05	12.7	16.6	12.2	15.6	12.0
7.....	9.6	9.6	10.22	11.6	12.8	18.8	12.3	15.1	11.9
8.....	9.6	9.6	10.25	12.9	13.4	17.5	12.1	14.7	11.8
9.....	9.6	9.6	10.25	13.4	14.1	16.0	12.1	14.4	11.7
10.....	9.6	9.98	10.22	14.0	14.1	15.1	12.3	14.1	11.7
11.....	9.6	10.22	10.20	14.2	14.0	14.5	13.2	13.8	11.6
12.....	9.6	10.22	10.18	13.4	13.7	14.4	13.1	13.6	11.5
13.....	9.6	10.25	10.10	13.3	13.9	15.4	13.1	13.4	11.5
14.....	9.6	10.38	10.02	13.6	14.2	15.4	12.9	13.2	11.55
15.....	9.6	10.45	10.00	13.0	14.2	16.5	12.6	13.0	11.5
16.....	9.6	10.60	10.06	12.5	14.1	21.0	12.5	12.9	11.45
17.....	9.6	10.68	10.25	12.5	15.4	18.3	12.5	12.7	11.3
18.....	9.6	10.78	10.45	12.4	18.9	16.8	12.4	12.6	11.2
19.....	9.6	10.52	10.51	12.7	17.4	15.9	12.3	12.5	11.15
20.....	9.6	10.42	10.60	12.4	15.7	15.3	12.2	12.6	11.15
21.....	9.6	10.22	10.58	12.2	14.8	14.6	12.1	13.0	11.1
22.....	9.6	10.10	10.32	12.0	14.2	14.1	12.0	13.0	11.1
23.....	9.6	10.50	10.30	11.9	13.8	13.8	12.0	12.9	11.1
24.....	9.6	10.25	10.34	14.2	13.5	13.6	11.55	13.0	11.1
25.....	9.6	9.95	10.30	29.8	13.2	13.5	12.1	13.3	11.05
26.....	9.6	9.95	10.25	36.5	13.0	13.3	12.2	13.6	11.05
27.....	9.6	9.95	10.58	25.8	12.8	13.2	12.1	13.5	11.0
28.....	9.6	9.95	11.60	19.3	12.6	13.0	12.2	13.5	11.0
29.....	9.6	9.95	11.71	16.8	12.5	13.0	18.0	13.2	10.9
30.....	9.6	9.95	11.55	15.4	.....	13.0	22.2	13.0	10.85
31.....	9.6	.....	11.50	14.5	.....	12.8	.....	12.8	.....

MIDDLE EEL RIVER NEAR COVELO, CAL.

This station, which is located below the highway bridge near Covelo ranger station, in the E. $\frac{1}{2}$ sec. 36, T. 23 N., R. 12 W., and about 7 miles east of Covelo, was established August 22, 1911.

The gage is an inclined staff, in two sections, on the left bank, about one-fourth mile west of ranger station and 1 mile below the bridge. The channel is composed of small bowlders and gravel and appears permanent. Discharge measurements are made from downstream side of the bridge or by wading. The discharge of Williams Creek, which enters between the bridge and the gage, is added to give the flow at the gage.

The station is maintained in cooperation with the United States Forest Service, by which the gage-height record was furnished.

Discharge measurements of Middle Eel River near Covelo, Cal., in 1911-12.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1911.		<i>Feet.</i>	<i>Sec.-ft.</i>	1912.		<i>Feet.</i>	<i>Sec.-ft.</i>
Aug. 22	E. O. Christiansen.....	7.30	16	Jan. 23	E. O. Christiansen.....	9.30	367
Nov. 7	.....do.....	7.30	14	Mar. 12	R. C. Rice.....	10.00	802
12	S. C. Whipple.....	7.81	39	31	.....do.....	10.44	1,130

NOTE.—1912 measurements made at bridge above mouth of Williams Creek. To get the flow at the gage as given above, the flow of Williams Creek was added to discharge measurements as follows: Jan. 23, 35 second-feet; Mar. 13, 78 second-feet; Mar. 31, 59 second-feet.

Daily gage height, in feet, of Middle Eel River near Covelo, Cal., for 1911-12.

Day.	Aug.	Sept.	Day.	Aug.	Sept.	Day.	Aug.	Sept.
1911.			1911.			1911.		
1.....		7.22	11.....		7.25	21.....		7.18
2.....		7.22	12.....		7.25	22.....	7.40	7.20
3.....		7.25	13.....		7.25	23.....	7.30	7.20
4.....		7.24	14.....		7.25	24.....	7.22	7.19
5.....		7.20	15.....		7.25	25.....	7.30	7.22
6.....		7.22	16.....		7.25	26.....	7.25	7.22
7.....		7.24	17.....		7.24	27.....	7.28	7.28
8.....		7.22	18.....		7.21	28.....	7.24	7.28
9.....		7.22	19.....		7.20	29.....	7.22	7.31
10.....		7.22	20.....		7.18	30.....	7.21	7.30
						31.....	7.22	

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	April.	May.	June.
1911-12.									
1.....	7.30	7.30	7.50	7.9	10.2	9.6	10.4	14.5	11.0
2.....	7.29	7.30	7.55	7.9	10.2	9.5	10.35	12.6	10.9
3.....	7.30	7.29	7.60	8.0	10.0	9.4	10.4	12.7	10.7
4.....	7.30	7.30	7.60	8.1	10.0	9.4	10.2		10.5
5.....	7.31	7.29	7.60	8.1	10.0	9.5	10.2	12.8	10.4
6.....	7.20	7.30	7.75	8.1	10.0	10.4	10.35	13.1	10.2
7.....	7.28	7.30	8.00	9.0	10.8	10.4	10.3	13.0	10.0
8.....	7.31		7.95	9.5	12.3	10.2	10.4	12.8	10.0
9.....	7.32	7.35	7.85	10.3	11.2	10.0	10.3		9.8
10.....	7.40	8.25	7.80	9.8	10.9	9.8	11.4	12.1	9.7
11.....	7.40	8.08	7.80	9.5	10.9	9.8	11.1	12.1	9.6
12.....	7.35	7.80	7.70	9.3	10.8	10.0	10.7	12.1	9.6
13.....	7.38	7.72	7.70	9.6	10.6	9.8	10.5	11.6	9.5
14.....	7.35	7.70	7.70	10.3	10.5	9.9	10.6	11.6	9.5
15.....	7.34	8.15	7.65	10.0	10.6	10.6	10.6	11.4	9.5
16.....	7.32	8.85	7.72	10.0	10.7	10.3	10.6	11.0	9.4
17.....	7.30	8.30	7.88	9.7	15.0	10.3	10.6	10.9	9.1
18.....	7.30	8.15	7.65	9.5	13.3	10.4	10.5	10.8	9.1
19.....	7.28	8.02	7.70	9.35	12.1	10.4	10.4	10.8	9.1
20.....	7.28	8.05	7.70	9.3	11.4	10.5	10.3	11.0	9.1
21.....	7.28	7.95	7.70	9.3	11.1	10.5	10.1	10.7	9.1
22.....	7.28	7.84	7.70	9.3	10.6	10.6	10.0	10.8	9.0
23.....	7.28	7.80	7.70	9.3	10.4	10.7	10.1	10.8	9.0
24.....	7.28	7.74	7.72	11.0	10.2	10.3	10.15	11.4	9.0
25.....	7.26	7.70	7.75	18.6	10.0	10.7	10.1	12.6	9.0
26.....	7.30	7.70	7.78	15.6	9.7	10.4	10.1	12.0	8.95
27.....	7.30	7.68	7.95	13.0	9.7	10.7	10.0	11.9	8.9
28.....	7.30	7.65	8.00	12.9	9.6	11.0	10.6	11.7	8.8
29.....	7.35	7.64	7.85	10.9	9.6	11.2	12.6	11.5	8.8
30.....	7.35	7.60	7.85	10.6		10.6	13.5	11.5	8.75
31.....	7.31		7.95	10.4		10.4		11.3	

SOUTH FORK OF EEL RIVER AT GARBERVILLE, CAL.

This station, which is located at the highway bridge in the SW. $\frac{1}{4}$ sec. 24, T. 4 S., R. 3 E., about a mile southwest of Garberville, was established August 25, 1911.

A chain gage is used and is on the downstream side of the bridge. The channel is composed of bowlders and gravel and will probably shift slightly during high water. Discharge measurements are made from the bridge or by wading.

Discharge estimates are withheld until additional data are available.

Discharge measurements of South Fork of Eel River at Garberville, Cal., in 1911-12.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1911.		<i>Feet.</i>	<i>Sec.-ft.</i>	1912.		<i>Feet.</i>	<i>Sec.-ft.</i>
Aug. 25	E. O. Christiansen	6.75	53	Mar. 17	E. O. Christiansen.....	12.57	5,750
Nov. 18	.....do.....	7.36	157	May 27	.....do.....	8.90	1,050
				June 19	.....do.....	7.62	296
1912.							
Jan. 16	E. O. Christiansen.....	9.14	1,120				

Daily gage height, in feet, of South Fork of Eel River at Garberville, Cal., for 1911-12.

Day.	Aug.	Sept.	Day.	Aug.	Sept.	Day.	Aug.	Sept.
1911.			1911.			1911.		
1.....		6.7	11.....		6.7	21.....		6.65
2.....		6.7	12.....		6.7	22.....		6.65
3.....		6.7	13.....		6.7	23.....		6.65
4.....		6.7	14.....		6.7	24.....		6.65
5.....		6.7	15.....		6.7	25.....	6.75	6.65
6.....		6.7	16.....		6.7	26.....	6.75	6.65
7.....		6.7	17.....		6.7	27.....	6.75	6.7
8.....		6.7	18.....		6.7	28.....	6.75	6.7
9.....		6.7	19.....		6.7	29.....	6.75	6.7
10.....		6.7	20.....		6.65	30.....	6.75	6.7
						31.....	6.72	.....

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.									
1.....	6.7	6.7	6.82	9.1	9.9	8.9	8.75	16.9	8.4
2.....	6.75	6.7	6.82	8.9	9.6	8.8	8.65	14.2	8.3
3.....	6.8	6.7	6.82	8.45	9.3	8.7	8.6	12.6	8.2
4.....	6.8	6.7	6.84	8.2	9.05	8.65	8.55	11.6	8.15
5.....	6.8	6.7	6.90	8.0	8.85	10.0	8.45	10.9	8.1
6.....	6.78	6.7	7.29	7.93	8.75	12.2	8.35	11.0	8.0
7.....	6.75	6.7	7.51	8.65	9.05	13.0	8.4	10.1	8.0
8.....	6.78	6.7	7.46	9.4	9.6	12.0	8.45	9.8	7.96
9.....	6.9	6.78	7.24	10.2	10.0	11.3	8.3	9.45	7.92
10.....	6.88	7.48	7.12	10.4	10.0	10.8	8.3	9.3	7.89
11.....	6.95	7.70	7.06	10.4	10.0	10.3	8.7	9.1	7.85
12.....	6.9	7.25	7.02	9.8	9.7	10.5	8.8	8.95	7.91
13.....	6.85	7.15	7.00	10.8	10.2	10.4	8.7	8.85	7.92
14.....	6.88	7.18	6.96	10.0	10.4	10.0	8.4	8.75	7.92
15.....	6.9	7.40	6.96	9.45	10.2	13.3	8.35	8.65	7.84
16.....	6.85	7.95	6.98	9.2	10.4	13.7	8.2	8.55	7.76
17.....	6.8	7.68	7.50	9.05	12.5	12.7	8.15	8.45	7.70
18.....	6.8	7.32	7.72	9.15	13.9	11.9	8.1	8.4	7.65
19.....	6.8	7.18	7.60	9.35	12.9	11.3	8.05	8.4	7.60
20.....	6.75	7.06	7.44	9.05	11.4	10.8	8.0	8.8	7.61
21.....	6.75	7.00	7.32	8.85	10.7	10.5	7.96	8.95	7.62
22.....	6.7	6.96	7.28	8.75	10.3	10.2	7.91	8.75	7.56
23.....	6.7	6.92	7.24	8.65	10.0	10.0	8.0	8.75	7.60
24.....	6.7	6.90	7.25	11.1	9.8	9.8	8.15	8.8	7.58
25.....	6.7	6.90	7.24	23.4	9.6	9.6	8.2	8.8	7.58
26.....	6.7	6.88	7.18	20.3	9.4	9.5	8.15	8.8	7.58
27.....	6.7	6.88	7.78	15.5	9.25	9.3	8.1	8.9	7.50
28.....	6.7	6.84	9.55	13.3	9.1	9.2	8.2	8.8	7.41
29.....	6.7	6.82	8.79	11.8	9.0	9.1	13.8	8.7	7.38
30.....	6.7	6.82	8.40	11.1	.....	8.95	14.2	8.6	7.36
31.....	6.7	.....	8.56	10.4	.....	8.8	.....	8.5	.....

NOTE.—Chain gage was found to be 0.5 foot too long on June 30, 1912. Corrections to gage height have been made on the assumption that the change in datum was gradual.

VAN DUZEN RIVER AT BRIDGEVILLE, CAL.

This station, which is located just below the highway bridge at Bridgeville, in the NW. $\frac{1}{4}$ sec. 13, T. 1 N., R. 3 E., was established September 22, 1911.

The gage is a staff, in two sections, on the right bank just below bridge. The channel is composed of gravel and will probably shift during high water. The drainage area above the station is 194 square miles. Discharge measurements are made from a car and cable 90 feet below the gage or by wading.

Discharge estimates are withheld until additional data are available.

Discharge measurements of Van Duzen River at Bridgeville, Cal., in 1911-12.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1911.		<i>Feet.</i>	<i>Sec.-ft.</i>	1912.		<i>Feet.</i>	<i>Sec.-ft.</i>
Sept. 22	E. O. Christiansen.....	4.50	6.9	Jan. 27	E. O. Christiansen.....	12.94	4,910
Oct. 19	.....do.....	4.71	12	Mar. 12	.....do.....	8.70	1,320
				Apr. 26	.....do.....	7.35	569
1912.				27	.....do.....	7.25	515
Jan. 6	E. O. Christiansen.....	6.02	155	June 7	.....do.....	6.66	281

Daily gage height, in feet, of Van Duzen River at Bridgeville, Cal., for 1911-12.

Day.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.										
1.....		4.59	4.64	4.90	6.0	8.0	6.55	7.4	17.2	7.1
2.....		4.60	4.65	4.90	5.88	7.9	6.5	7.4	13.4	7.0
3.....		4.62	4.66	4.89	5.8	7.75	6.5	7.25	10.8	6.9
4.....		4.66	4.65	4.88	5.8	7.55	6.4	7.0	9.6	6.9
5.....		4.66	4.63	5.12	5.85	7.5	9.2	7.0	8.9	6.9
6.....		4.64	4.65	5.46	6.05	7.6	10.4	7.0	8.8	6.9
7.....		4.61	4.67	5.80	9.8	8.0	9.4	7.0	8.6	6.75
8.....		4.62	4.72	5.47	8.2	9.0	9.6	7.0	8.4	6.7
9.....		4.81	5.12	5.36	10.0	8.6	9.4	7.0	8.2	6.6
10.....		4.88	5.65	5.24	9.8	8.7	8.4	6.9	7.95	6.5
11.....		4.81	5.61	5.18	9.3	8.5	8.0	7.0	7.75	6.5
12.....		4.79	5.61	5.06	8.9	8.4	8.4	7.0	7.65	6.5
13.....		4.75	5.46	4.92	10.8	8.8	8.2	7.15	7.5	6.5
14.....		4.82	5.48	5.05	9.2	8.4	8.0	7.0	7.45	6.5
15.....		4.88	6.30	5.25	8.2	8.3	10.0	7.0	7.2	6.5
16.....		4.78	6.50	5.50	7.75	10.8	10.0	7.0	7.15	6.48
17.....		4.77	6.05	5.60	7.4	14.4	9.5	6.9	7.05	6.38
18.....		4.74	5.62	5.56	7.7	12.6	9.0	6.8	7.0	6.28
19.....		4.70	5.48	5.62	7.8	10.8	8.6	6.8	7.1	6.19
20.....		4.69	5.32	5.65	7.6	9.1	8.3	6.8	7.55	6.12
21.....		4.65	5.25	5.55	7.2	8.6	8.1	6.7	7.8	6.1
22.....	4.51	4.65	5.16	5.62	7.05	8.0	7.95	6.7	7.8	6.0
23.....	4.51	4.65	5.05	5.68	7.0	7.95	7.95	6.75	8.2	6.08
24.....	4.51	4.66	5.04	5.72	13.9	7.65	7.9	7.1	8.6	6.08
25.....	4.51	4.68	5.01	5.62	24.1	7.5	7.9	7.4	8.7	6.04
26.....	4.53	4.69	4.96	5.60	18.0	7.3	7.85	7.45	8.5	6.01
27.....	4.59	4.67	4.91	6.40	13.6	7.0	7.8	7.15	8.4	6.0
28.....	4.59	4.65	4.91	6.20	10.8	7.0	7.75	7.7	7.95	5.98
29.....	4.59	4.65	4.90	6.00	9.9	6.85	7.7	16.8	7.75	5.98
30.....	4.59	4.66	4.90	5.95	9.1	7.55	7.55	15.5	7.4	5.95
31.....	4.59	4.68	.....	6.00	8.4	7.45	7.45	7.25	7.25	.....

NOTE.—Jan. 25, maximum recorded gage height, 26.0 feet at 4.55 p. m.

YAGER CREEK AT CARLOTTA, CAL.

This station, which is located at the highway bridge at Carlotta, in sec. 28, T. 2 N., R. 1 E., about half a mile above the junction with Van Duzen River, was established August 29, 1911.

The gage is a vertical staff fastened to the left abutment of the highway bridge. The channel is composed of sand and gravel and may shift slightly at high stages. The drainage area above the station is 146 square miles. Discharge measurements are made from a railroad bridge 40 feet below gage or by wading.

Discharge measurements of Yager Creek at Carlotta, Cal., in 1911-12.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
		Feet.	Sec.-ft.			Feet.	Sec.-ft.
1911.				1912.			
Aug. 29	E. O. Christiansen	5.57	0.5	Mar. 14	E. O. Christiansen.....	7.82	598
Sept. 23	.....do.....	5.55	a. 2	Apr. 28	.....do.....	7.47	394
Oct. 20	.....do.....	5.61	1.2	June 8	.....do.....	6.78	68
				Do....	.....do.....	6.78	72
1912.							
Jan. 7	E. O. Christiansen.....	11.40	3,200				

a Estimated.

Daily gage height, in feet, of Yager Creek at Carlotta, Cal., for 1911-12.

Day.	Aug.	Sept.	Day.	Aug.	Sept.	Day.	Aug.	Sept.
1911.			1911.			1911.		
1.....		5.55	11.....		5.55	21.....		5.55
2.....		5.55	12.....		5.55	22.....		5.55
3.....		5.55	13.....		5.55	23.....		5.56
4.....		5.55	14.....		5.55	24.....		5.58
5.....		5.55	15.....		5.55	25.....		5.58
6.....		5.55	16.....		5.55	26.....		5.60
7.....		5.55	17.....		5.55	27.....		5.60
8.....		5.55	18.....		5.55	28.....		5.60
9.....		5.55	19.....		5.55	29.....	5.56	5.60
10.....		5.55	20.....		5.55	30.....	5.55	5.60
						31.....	5.55	.....

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.									
1.....	5.6	5.6	5.6	7.5	7.43	7.06	6.77	12.7	7.05
2.....	5.6	5.6	5.6	7.0	7.23	6.98	6.80	10.8	7.01
3.....	5.6	5.6	5.6	6.8	7.13	6.95	6.92	9.6	7.00
4.....	5.6	5.6	5.6	6.7	6.99	6.88	6.82	8.8	6.96
5.....	5.6	5.6	5.6	6.6	6.90	7.7	6.72	8.35	6.91
6.....	5.6	5.6	5.7	6.6	6.90	9.6	6.66	8.05	6.86
7.....	5.6	5.6	6.15	12.0	7.08	9.6	6.64	7.8	6.84
8.....	5.6	5.6	5.9	9.9	8.45	8.7	6.64	7.6	6.80
9.....	5.6	5.6	5.65	9.8	7.75	8.25	6.62	7.48	6.80
10.....	5.6	5.8	5.6	9.4	7.7	8.0	6.62	7.4	6.80
11.....	5.6	6.4	5.6	8.5	7.6	7.8	7.3	7.34	6.78
12.....	5.6	5.95	5.6	8.05	7.44	7.1	7.7	7.29	6.81
13.....	5.6	5.65	5.6	9.0	7.55	8.0	7.6	7.21	6.78
14.....	5.6	6.05	5.6	8.05	7.55	7.8	7.5	7.16	6.75
15.....	5.6	6.0	5.6	7.55	7.48	9.4	7.37	7.12	6.74
16.....	5.6	7.0	5.6	7.26	10.7	10.0	7.17	7.06	6.71
17.....	5.6	6.5	6.5	7.06	12.9	9.1	7.03	7.02	6.68
18.....	5.6	6.2	6.5	6.92	11.2	8.5	7.05	7.00	6.65
19.....	5.6	5.9	6.3	7.13	9.5	8.2	6.98	7.00	6.61
20.....	5.6	5.8	6.7	6.93	8.7	7.9	6.95	7.21	6.60

Daily gage height, in feet, of Yager Creek at Carlotta, Cal., for 1911-12—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.									
21.....	5.6	5.7	6.3	6.78	8.15	7.7	6.95	7.35	6.51
22.....	5.6	5.6	6.25	6.68	7.85	7.49	6.9	7.38	6.50
23.....	5.6	5.6	6.35	6.62	7.9	7.36	6.9	7.39	6.68
24.....	5.6	5.6	6.75	8.9	7.65	7.29	6.88	7.5	6.75
25.....	5.6	5.6	6.45	14.7	7.48	7.22	7.35	7.42	6.62
26.....	5.6	5.6	6.4	12.2	7.38	7.13	7.75	7.34	6.60
27.....	5.6	5.6	7.0	10.1	7.28	7.03	7.65	7.42	6.60
28.....	5.6	5.6	7.75	9.1	7.18	6.94	7.7	7.30	6.58
29.....	5.6	5.6	7.0	8.5	7.14	6.92	12.6	7.26	6.55
30.....	5.6	5.6	6.8	7.95	.....	6.90	11.0	7.21	6.55
31.....	5.6	.....	7.5	7.65	.....	6.78	.....	7.15	.....

NOTE.—Jan. 25, 1912, maximum recorded gage height, 15.7 feet at 4 p. m.

MISCELLANEOUS MEASUREMENTS.

The following miscellaneous measurements have been made in the Eel River basin:

Miscellaneous measurements in Eel River drainage basin.

Date.	Stream.	Locality.	Dis-charge.
			<i>Sec.-ft.</i>
Oct. 21, 1903	Eel River	Near Stingleys station	189
Sept. 20, 1905	do	Laytonville	27
Aug. 15, 1910	do	Dyerville	28
Sept. 19, 1905	Eel River, Middle	Covelo	7
Sept. 20, 1905	do	Laytonville	8
Aug. 14, 1910	do	Just above junction with South Eel	8.3
Sept. 8, 1905	Eel River, South	Just above Preston	5.5
Sept. 19, 1905	do	Hearst	9.5
Sept. 20, 1905	do	Laytonville	19.2
Aug. 14, 1910	do	Just above junction with Middle Eel	5.3
Nov. 5, 1911	Burger Creek	Road crossing, sec. 10, T. 21 N., R. 14 W.	a.25
Nov. 16, 1911	do	do	a.1.00
Jan. 16, 1912	do	do	a.5
Feb. 1, 1912	do	do	a.3
Apr. 2, 1912	do	do	a.3
Nov. 4, 1911	Tomki Creek	Road crossing, sec. 26, T. 19 N., R. 13 W.	Dry.
Apr. 4, 1912	do	do	4
Apr. 3, 1912	Outlet Creek	Above Long Valley Creek, sec. 33, T. 20 N., R. 14 W.	61
Do.....	Long Valley Creek	Mouth	a.4
Sept. 5, 1910	South Fork of Eel River	1 mile south of Garberville	38
Aug. 15, 1910	do	Near mouth at Dyerville	36
May 28, 1912	Buck Creek	Garberville	a.5
Nov. 19, 1911	Redwood Creek	Briceland, SW. $\frac{1}{4}$ sec. 18, T. 45, R. 3 E	a.5
Jan. 15, 1912	do	do	3.0
May 27, 1912	do	do	a.2.0
May 28, 1912	Bohne Creek	Highway bridge, SW. $\frac{1}{4}$ sec. 1, T. 45, R. 3 E	20
Mar 8, 1912	Bear Creek	Highway bridge, 3 miles north of Garberville	a.5
Mar. 18, 1912	Rocky Glen Creek	Highway bridge near mouth, SW. $\frac{1}{4}$ sec. 19, T. 35, R. 4 E.	a.3
May 28, 1912	do	do	13
Do.....	Elk Creek	Below highway bridge near Miranda NW. $\frac{1}{4}$ sec. 21, T. 35, R. 3 E.	12
May 29, 1912	Bear Creek	Near mouth near Dyerville, NW. $\frac{1}{4}$ sec. 32, T. 1 N., R. 2 E.	16
Do.....	Monument Creek	Highway bridge near Rio Dell, sec. 18, T. 1 N., R. 1 E.	13
Aug. 15, 1910	Van Duzen River	$\frac{1}{2}$ mile south of Alton	5.1
June 7, 1912	Little Larabee Creek	Near Bridgeville, sec. 7, T. 1 N., R. 3 E	9.3
Sept. 22, 1911	Grizzly Creek	Near mouth, sec. 11, T. 1 N., R. 2 E	a.25
Oct. 19, 1911	do	do	a.25
Jan. 6, 1912	do	do	a.3.0
Apr. 27, 1912	do	do	a.2.0
June 7, 1912	do	do	a.1.0
Sept. 22, 1911	Healy Creek	Near mouth, road from Carlotta to Bridgeville	a.1
Oct. 19, 1911	do	do	a.2
June 7, 1912	do	do	a.1.0
Do.....	Salmon Creek	do	a.1.0
Sept. 21, 1911	Lawrence Creek	500 feet below Booth Run	1.5

a Estimated.

MAD RIVER BASIN.

MAD RIVER NEAR ARCATA, CAL.

This station, which is located at the Oregon & Eureka Railroad bridge at Essex, in sec. 15, T. 6 N., R. 1 E., 1 mile below Warren Creek and about 5 miles northeast of Arcata, was established December 29, 1910.

The gage is a vertical staff, in two sections, on the right bank at the railroad bridge. The channel is composed of sand and gravel and will shift slightly at high stages. The drainage area is 452 square miles. Discharge measurements are made from a highway bridge just above the gage, or by wading.

Estimates of discharge are withheld until additional measurements are available.

Discharge measurements of Mad River near Arcata, Cal., in 1910-1912.

Date.	Hydrographer.	Gage height.	Discharge.	Date.	Hydrographer.	Gage height.	Discharge.
1910.		<i>Feet.</i>	<i>Sec.-ft.</i>	1912.		<i>Feet.</i>	<i>Sec.-ft.</i>
Aug. 20	W. V. Hardy.....		32	Jan. 9	E. O. Christiansen	17.20	5,150
Dec. 29	do.....	12.70	241	Mar. 6	do.....	16.70	3,840
				Apr. 22	do.....	14.02	740
1911.				May 18	do.....	13.82	713
Aug. 30	E. O. Christiansen.....	11.84	29	June 21	do.....	13.04	310
Sept. 25	do.....	11.79	21				

Daily gage height, in feet, of Mad River near Arcata, Cal., for 1910-1912.

Day.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.										
1.....		12.9	17.9	13.9	14.6	13.4	13.3	12.35	11.95	11.85
2.....		12.8	17.8	13.95	14.6	13.5	13.3	12.3	11.95	11.85
3.....		12.7	18.0	13.85	14.1	13.55	13.2	12.3	11.9	11.85
4.....		12.7	17.1	14.2	14.1	13.45	13.15	12.3	11.9	11.85
5.....		12.65	16.1	14.4	19.0	14.15	13.05	12.3	11.9	11.8
6.....		12.6	16.6	15.25	17.1	13.8	13.0	12.25	11.9	11.8
7.....		12.55	16.15	17.55	15.95	13.9	13.0	12.2	11.9	11.8
8.....		12.55	15.5	17.3	15.5	14.0	12.95	12.2	11.9	11.8
9.....		13.2	15.25	16.2	15.6	14.4	12.95	12.2	11.9	11.8
10.....		14.6	15.1	15.95	16.2	14.1	12.9	12.2	11.9	11.8
11.....		17.2	16.55	15.5	16.75	13.95	12.8	12.15	11.9	11.8
12.....		15.35	16.35	15.3	16.2	13.75	12.7	12.15	11.9	11.8
13.....		15.15	16.3	15.15	15.7	13.6	12.7	12.1	11.9	11.8
14.....		14.75	15.85	15.05	15.45	13.5	12.7	12.1	11.9	11.8
15.....		14.65	15.55	15.0	15.1	13.45	12.65	12.05	11.9	11.8
16.....		14.5	15.1	15.0	15.0	13.7	12.6	12.05	11.9	11.8
17.....		14.45	15.05	15.05	14.9	14.6	12.6	12.05	11.85	11.8
18.....		14.55	15.85	15.1	14.7	18.1	12.6	12.05	11.85	11.8
19.....		22.0	15.5	15.1	14.5	16.4	12.55	12.0	11.85	11.8
20.....		20.8	15.3	15.1	14.3	15.55	12.55	12.0	11.85	11.8
21.....		18.0	15.0	15.15	14.15	15.1	12.5	12.0	11.85	11.8
22.....		16.5	14.8	15.05	14.1	14.7	12.5	12.0	11.85	11.8
23.....		15.85	14.6	15.25	14.0	14.6	12.5	12.0	11.85	11.8
24.....		15.7	14.5	15.15	13.9	14.2	12.45	12.0	11.85	11.8
25.....		16.0	14.45	14.9	13.85	13.95	12.45	12.0	11.85	11.8
26.....		16.8	14.2	14.7	13.8	13.8	12.4	12.0	11.85	11.8
27.....		16.75	14.2	14.5	13.75	13.65	12.4	12.0	11.85	11.8
28.....	12.7	16.6	14.05	14.2	13.6	13.5	12.4	11.95	11.85	11.8
29.....	12.7	16.3		14.25	13.5	13.45	12.4	11.95	11.85	11.8
30.....	12.7	19.75		14.7	13.45	13.4	12.35	11.95	11.85	11.8
31.....	13.0	19.3		14.65		13.3		11.95	11.85	

Daily gage height, in feet, of Mad River near Arcata, Cal., for 1910-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.									
1.....	11.8	11.80	12.00	14.35	15.4	14.35	14.55	22.2	14.25
2.....	11.8	11.80	12.08	13.6	15.0	14.3	14.4	18.4	13.9
3.....	11.8	11.80	12.08	13.2	14.9	14.25	14.35	17.8	13.9
4.....	11.8	11.80	12.08	13.15	14.7	14.2	14.3	16.9	13.75
5.....	11.8	11.80	12.05	12.9	14.6	14.8	14.2	16.2	13.5
6.....	11.8	11.80	12.05	12.9	14.5	16.7	14.2	16.0	13.5
7.....	11.82	11.80	12.30	18.0	14.6	17.0	14.1	15.5	13.45
8.....	11.85	11.82	12.25	16.9	16.2	16.2	14.1	15.2	13.4
9.....	11.85	11.85	12.20	17.2	16.2	16.0	14.05	15.1	13.35
10.....	11.85	12.40	12.18	16.6	16.0	15.6	14.05	14.7	13.3
11.....	11.85	12.40	12.15	16.0	15.9	15.4	14.5	14.65	13.2
12.....	11.85	12.25	12.10	15.4	15.7	15.2	14.6	14.4	13.3
13.....	11.85	12.18	12.08	18.4	15.5	15.2	14.55	14.2	13.3
14.....	11.88	12.10	12.08	16.6	15.4	15.1	14.4	14.1	13.4
15.....	11.85	13.12	12.05	15.7	15.6	15.4	14.35	14.0	13.3
16.....	11.85	13.55	12.10	15.3	18.4	16.7	14.3	14.0	13.2
17.....	11.85	13.00	12.74	14.95	23.5	16.6	14.25	13.8	13.1
18.....	11.85	12.70	12.75	14.7	20.8	16.2	14.2	13.8	13.1
19.....	11.85	12.35	12.60	14.6	18.5	16.0	14.2	13.75	13.0
20.....	11.85	12.30	12.58	14.3	16.8	15.8	14.15	14.1	13.05
21.....	11.85	12.20	12.55	14.05	16.0	15.5	14.1	14.3	13.05
22.....	11.85	12.20	12.48	13.85	15.8	15.2	14.0	14.4	13.0
23.....	11.82	12.18	12.50	13.7	15.3	15.1	13.95	14.5	13.0
24.....	11.82	12.10	12.52	14.2	15.3	15.0	14.1	14.95	12.98
25.....	11.82	12.08	12.58	23.8	15.0	15.0	14.5	15.0	12.98
26.....	11.82	12.02	12.60	23.1	14.85	14.9	14.9	15.0	12.9
27.....	11.82	12.02	13.29	19.0	14.7	14.9	14.9	14.85	12.88
28.....	11.82	12.00	14.60	17.7	14.55	14.9	14.8	14.8	12.85
29.....	11.82	12.00	13.60	16.6	14.45	14.8	19.1	14.65	12.8
30.....	11.82	12.00	13.40	16.2	-----	14.7	19.9	14.4	12.78
31.....	11.82	-----	14.05	15.7	-----	14.6	-----	14.3	-----

MISCELLANEOUS MEASUREMENTS.

The following miscellaneous measurements have been made in the Mad River basin:

Miscellaneous measurements in Mad River drainage basin.

Date.	Stream.	Locality.	Dis-charge.
Oct. 20, 1903	Mad River.....	Near Vance.....	Sec.-ft. 53
Sept. 19, 1911	.....do.....	Below mouth of Bug Creek, sec. 9, T. 3 N., R. 4 E.	46
June 10, 1912	North Fork of Mad River....	600 feet below highway bridge at Korbelt.....	25

REDWOOD CREEK BASIN.

REDWOOD CREEK NEAR KORBEL, CAL.

This station, which is located at the highway bridge at Bair's ranch, in the SE. $\frac{1}{4}$ sec. 28, T. 7 N., R. 3 E., 200 feet above Minor Creek and about 9 miles northeast of Korbelt, was established September 4, 1911.

A temporary staff gage was used from September 4 to October 14, when a permanent chain gage was installed on the downstream side of bridge at the same datum as the staff gage. The channel is composed of sand and gravel and will probably shift slightly at high

stages. The drainage area above the station is 81 square miles. Discharge measurements are made from the bridge or by wading near the gage.

Estimates of discharge are withheld until additional data are available.

Discharge measurements of Redwood Creek near Korbel, Cal., in 1911-12.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1911.		<i>Feet.</i>	<i>Sec.-ft.</i>	1912.		<i>Feet.</i>	<i>Sec.-ft.</i>
Sept. 4	E. O. Christiansen.....	5.25	a 2	Feb. 6	E. O. Christiansen.....	7.20	231
Oct. 14	.....do.....	5.75	14	Apr. 13	.....do.....	6.88	171
Dec. 28	.....do.....	6.88	151	June 14	.....do.....	6.58	114

a Estimated.

Daily gage height, in feet, of Redwood Creek near Korbel, Cal., for 1911-12.

Day.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1.....		5.32	5.30	5.65	6.78	7.53	7.26	7.05	11.9	7.25
2.....		5.36	5.30	5.65	6.55	7.42	7.22	7.05	10.4	7.10
3.....		5.50	5.30	5.65	6.39	7.33	7.17	7.00	10.1	6.98
4.....	5.28	5.70	5.30	5.65	6.32	7.35	7.15	6.96	8.4	6.90
5.....	5.31	5.62	5.32	5.68	6.29	7.30	7.50	6.95	8.2	6.82
6.....	5.32	5.54	5.34	5.80	6.36	7.25	7.87	6.93	8.1	6.75
7.....	5.35	5.50	5.35	6.00	8.9	7.41	7.90	6.91	7.89	6.72
8.....	5.34	5.60	5.48	5.88	8.15	8.4	7.77	6.89	7.80	6.69
9.....	5.32	5.84	5.95	5.80	8.95	7.92	7.62	6.87	7.75	6.64
10.....	5.30	5.49	6.35	5.76	8.4	7.94	7.52	6.87	7.68	6.59
11.....	5.30	5.40	5.65	5.75	7.95	7.79	7.42	6.90	7.58	6.55
12.....	5.30	5.38	5.52	5.70	8.2	7.29	7.36	6.99	7.48	6.82
13.....	5.30	5.48	6.20	5.70	9.4	7.59	7.32	6.90	7.41	6.64
14.....	5.30	5.65	6.00	5.68	8.45	7.74	7.29	6.86	7.36	6.62
15.....	5.30	5.61	7.30	5.72	8.05	7.78	8.2	6.88	7.30	6.62
16.....	5.30	5.48	6.80	5.94	7.75	10.7	8.15	6.90	7.22	6.58
17.....	5.30	5.45	6.40	6.44	7.50	12.6	7.98	6.90	7.18	6.50
18.....	5.30	5.41	6.12	6.12	7.34	10.2	7.83	6.90	7.12	6.40
19.....	5.30	5.42	6.00	6.08	7.27	9.1	7.75	6.88	7.08	6.36
20.....	5.29	5.42	5.90	6.15	7.18	8.65	7.60	6.80	7.48	6.50
21.....	5.25	5.45	5.86	6.01	7.08	8.3	7.51	6.76	7.50	6.52
22.....	5.25	5.55	5.80	5.95	7.03	8.1	7.44	6.74	7.44	6.40
23.....	5.25	5.45	5.76	6.20	6.98	8.05	7.37	6.70	7.46	6.65
24.....	5.25	5.45	5.75	6.22	7.68	7.81	7.37	6.99	7.52	6.49
25.....	5.30	5.42	5.70	6.16	11.3	7.69	7.32	7.02	7.60	6.38
26.....	5.35	5.42	5.70	6.10	10.0	7.59	7.31	7.34	7.65	6.35
27.....	5.35	5.30	5.70	7.02	8.7	7.48	7.29	7.22	7.66	6.35
28.....	5.35	5.30	5.70	6.88	8.35	7.38	7.21	7.50	7.50	6.31
29.....	5.35	5.30	5.68	5.50	8.05	7.34	7.21	11.2	7.46	6.26
30.....	5.32	5.30	5.65	6.38	7.87	.....	7.13	11.0	7.40	6.21
31.....	.....	5.30	.....	6.82	7.70	.....	7.05	.....	7.36	.....

REDWOOD CREEK AT ORICK, CAL.

This station, which is located at the highway bridge at Orick, in the NE. $\frac{1}{4}$ sec. 4, T. 10 N., R. 1 E., about $1\frac{1}{2}$ miles above the mouth, was established September 10, 1911.

A chain gage has been installed on the upstream side of the bridge near the left bank. Length of chain is 33.01 feet. The area drained is 262 square miles. The channel is composed of gravel and sand and may shift slightly at high stages. Discharge measurements are made from highway bridge or by wading near gage.

Estimates of discharge are withheld until additional data are available.

Discharge measurements of Redwood Creek at Orick, Cal., in 1911-12.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1911.		Feet.	Sec.-ft.	1912.		Feet.	Sec.-ft.
Sept. 10	E. O. Christiansen.....	5.21	19	Mar. 29	E. O. Christiansen.....	6.87	827
Dec. 17	.....do.....	6.75	432	May 3	.....do.....	10.37	4,080
				4	.....do.....	9.57	3,150
1912.				5	.....do.....	9.10	2,550
Mar. 2	E. O. Christiansen.....	7.22	936	6	.....do.....	8.90	2,250

Daily gage height, in feet, of Redwood Creek at Orick, Cal., for 1911-12.

Day.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1		5.16	5.15	5.28	8.4	7.9	7.55	6.55	12.9	7.1
2		5.15	5.14	5.22	7.65	7.75	7.45	6.45	11.4	7.0
3		5.14	5.12	5.20	6.55	8.0	7.25	6.4	10.4	6.95
4		5.12	5.12	5.28	6.6	8.3	7.5	6.35	9.6	6.8
5		5.19	5.12	5.45	8.9	8.1	7.8	6.25	9.2	6.7
6		5.28	5.16	5.52	10.1	7.8	8.4	6.2	8.8	6.65
7		5.35	5.22	5.48	9.6	7.45	8.9	6.15	8.7	6.65
8		5.40	5.32	5.38	9.4	7.55	8.7	6.1	8.4	6.6
9		5.42	5.75	5.32	10.2	7.8	8.3	6.25	8.3	6.55
10	5.20	5.45	6.52	5.25	10.0	8.0	7.8	6.5	8.0	6.55
11	5.20	5.45	6.48	5.20	9.6	8.3	7.35	6.45	7.85	6.6
12	5.20	5.48	6.40	5.20	10.0	8.5	7.2	6.4	7.8	6.65
13	5.20	5.48	6.35	5.35	13.1	9.2	7.2	6.35	7.65	6.7
14	5.20	5.50	6.45	5.52	11.5	10.4	7.65	6.25	7.6	6.7
15	5.20	5.50	6.58	5.61	9.9	10.4	8.1	6.2	7.5	6.65
16	5.18	5.49	6.62	5.80	9.1	12.6	8.6	6.15	7.45	6.6
17	5.16	5.46	6.25	6.02	8.6	17.6	8.8	6.05	7.4	6.45
18	5.15	5.44	6.00	6.05	7.85	14.7	9.0	6.35	7.3	6.3
19	5.14	5.41	5.60	5.70	8.1	11.9	8.4	6.75	7.25	6.0
20	5.12	5.36	5.25	5.50	8.1	11.4	7.95	6.85	7.2	5.68
21	5.11	5.28	5.45	5.38	7.6	10.9	7.75	6.6	7.35	5.39
22	5.10	5.22	5.65	5.30	7.35	10.8	7.5	6.45	7.5	5.15
23	5.10	5.22	5.62	5.36	8.0	10.6	7.35	6.65	7.3	4.92
24	5.10	5.20	5.59	5.45	9.8	10.4	7.2	6.85	7.3	4.76
25	5.14	5.18	5.56	5.55	13.7	10.0	7.1	7.2	7.45	4.65
26	5.20	5.18	5.52	5.85	13.5	9.3	7.0	7.5	7.65	4.56
27	5.20	5.18	5.50	6.55	12.4	8.6	7.0	8.1	7.7	4.40
28	5.20	5.16	5.48	7.25	11.0	8.0	7.95	8.6	7.7	4.18
29	5.19	5.15	5.39	7.55	9.8	7.65	6.85	9.1	7.6	3.92
30	5.18	5.15	5.32	7.75	8.7	.....	6.75	10.2	7.5	3.61
31	5.15	.....	.....	8.10	8.3	.....	6.6	.....	7.25	.....

MISCELLANEOUS MEASUREMENTS.

The following miscellaneous measurements have been made in the Redwood Creek basin:

Miscellaneous measurements in Redwood Creek drainage basin.

Date.	Stream.	Locality.	Dis-charge.
Sept. 2, 1910	Redwood Creek.....	Orick, sec. 4, T. 10 N., R. 1 E.....	<i>Sec.-ft.</i> 6.9
Apr. 14, 1912	do.....	4 miles above United States Geological Survey gage at Bair's ranch, NW. $\frac{1}{4}$ sec. 14, T. 6 N., R. 3 E.	169
June 11, 1912	do.....	do.....	103
Sept. 4, 1911	Minor Creek.....	Mouth, sec. 28, T. 7 N., R. 3 E.....	a. 25
Oct. 14, 1911	do.....	do.....	a. 75
Apr. 13, 1912	do.....	do.....	19
Sept. 5, 1911	Prairie Creek.....	Prairie, sec. 2, T. 11 N., R. 1 E.....	Dry.
Nov. 29, 1911	do.....	do.....	a 2.0
May 5, 1912	do.....	Near mouth, about 3 miles northeast of Orick.....	149

a Estimated.

KLAMATH RIVER BASIN.

SPRAGUE RIVER AT CHILOQUIN, OREG.

This station, which is located in sec. 3, T. 35 S., R. 7 E., at the Southern Pacific Railroad bridge at Chiloquin, 200 feet above the junction of Sprague and Williamson rivers, was established July 25, 1911.

There is a chain gage fastened to the railroad bridge. The main channel is rocky and probably permanent, while the overflow channel is piled up with gravel and may shift during flood stages. The conditions are such that good results should be obtained.

Above the forks of Sprague River there is a considerable amount of diversion for irrigation. At present there are no diversions below the forks, but a canal is being built to divert water a short distance above this station.

The station is maintained by the United States Reclamation Service and the records are worked up and published by the Survey.

Discharge measurements of Sprague River at Chiloquin, Oreg., in 1911-12.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1911.		<i>Feet.</i>	<i>Sec.-ft.</i>	1912.		<i>Feet.</i>	<i>Sec.-ft.</i>
July 25	Leland Moser.....	1.00	513	Feb. 20	L. Moser.....	2.05	1,140
Aug. 28	R. W. Davenport.....	.98	428	Mar. 9	do.....	1.62	652
Nov. 21	W. O. Harmon.....	1.22	424	May 3	H. Kimble.....	1.93	941
				7	do.....	2.33	1,420

Daily gage height, in feet, of Sprague River at Chiloquin, Oreg., for 1911-12.

Day.	Aug.	Sept.	Day.	Aug.	Sept.	Day.	Aug.	Sept.
1911.								
1.....	1.0	1.0	11.....	1.0	1.0	21.....	1.0	1.0
2.....	1.0	1.0	12.....	1.0	1.0	22.....	1.0	1.0
3.....	1.0	1.0	13.....	1.0	1.0	23.....	1.0	1.0
4.....	1.0	1.0	14.....	1.0	1.0	24.....	1.0	1.0
5.....	1.0	1.0	15.....	1.0	1.0	25.....	1.0	1.0
6.....	1.0	1.0	16.....	1.0	1.0	26.....	1.0	1.0
7.....	1.0	1.0	17.....	1.0	1.0	27.....	1.0	1.0
8.....	1.0	1.0	18.....	1.0	1.0	28.....	1.0	1.1
9.....	1.0	1.0	19.....	1.0	1.0	29.....	1.0	1.1
10.....	1.0	1.0	20.....	1.0	1.0	30.....	1.0	1.1
						31.....	1.0	.....

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.									
1.....	1.1	1.1	1.2	1.1	1.5	1.7	1.8	1.8	2.4
2.....	1.1	1.1	1.2	1.1	1.5	1.6	1.7	1.9	2.4
3.....	1.1	1.1	1.2	1.1	1.5	1.6	1.7	2.0	2.4
4.....	1.1	1.1	1.2	1.2	1.5	1.6	1.7	2.1	2.4
5.....	1.1	1.1	1.2	1.2	1.5	1.6	1.6	2.2	2.4
6.....	1.1	1.1	1.2	1.2	1.5	1.6	1.6	2.3	2.4
7.....	1.1	1.1	1.2	1.2	1.6	1.6	1.6	2.3	2.3
8.....	1.1	1.1	1.2	1.2	1.6	1.6	1.7	2.3	2.3
9.....	1.1	1.1	1.2	1.2	1.6	1.6	1.7	2.2	2.3
10.....	1.1	1.1	1.2	1.3	1.6	1.6	1.8	2.2	2.2
11.....	1.1	1.2	1.2	1.3	1.7	1.6	1.8	2.1	2.1
12.....	1.1	1.2	1.2	1.3	1.7	1.6	1.8	2.1	2.1
13.....	1.1	1.2	1.2	1.3	1.8	1.6	1.8	2.0	2.1
14.....	1.1	1.2	1.2	1.4	1.8	1.6	1.8	2.0	2.1
15.....	1.1	1.2	1.2	1.5	1.9	1.6	1.8	2.1	2.1
16.....	1.1	1.2	1.2	1.5	1.9	1.6	1.8	2.1	2.1
17.....	1.1	1.2	1.2	1.4	1.9	1.6	1.8	2.2	2.1
18.....	1.1	1.2	1.2	1.4	2.0	1.5	1.8	2.2	2.0
19.....	1.1	1.2	1.2	1.3	2.0	1.5	1.8	2.3	1.9
20.....	1.1	1.2	1.2	1.3	1.9	1.5	1.8	2.4	1.9
21.....	1.1	1.2	1.2	1.3	1.9	1.5	1.6	2.5	1.9
22.....	1.1	1.2	1.2	1.3	1.9	1.5	1.6	2.5	1.9
23.....	1.1	1.2	1.2	1.4	1.9	1.5	1.6	2.6	1.8
24.....	1.1	1.2	1.2	1.4	1.9	1.6	1.6	2.6	1.7
25.....	1.1	1.2	1.2	1.4	1.9	1.6	1.6	2.6	1.7
26.....	1.1	1.2	1.2	1.5	1.9	1.6	1.7	2.6	1.7
27.....	1.1	1.2	1.1	1.5	1.8	1.6	1.7	2.6	1.7
28.....	1.1	1.2	1.1	1.5	1.8	1.7	1.7	2.5	1.6
29.....	1.1	1.2	1.1	1.5	1.8	1.7	1.8	2.5	1.5
30.....	1.1	1.2	1.1	1.5	.....	1.8	1.8	2.5	1.5
31.....	1.1	.....	1.1	1.5	.....	1.8	.....	2.4	.....

UPPER KLAMATH LAKE NEAR KLAMATH FALLS, OREG.

Upper Klamath Lake is to be used by the United States Reclamation Service as a source of water supply to irrigate large areas of land. The main canal of the Klamath project has its intake at the lake.

A gage was installed on this lake near Klamath Falls, Oreg., May 28, 1904. The elevation of the zero of the gage is 4,136.13 feet above sea level. The daily records since February 16, 1906, are the mean daily heights obtained from a Friez automatic water gage.

The winds have a marked effect on the level of the water surface of this lake. The water is lowered as much as 6 inches near the

outlet when the wind blows from the south, and is raised as much over its normal level when the wind is in the opposite direction. Differences of a foot are frequently noticeable within a few hours. If the wind effect were eliminated, the lake heights would show much more gradual changes than indicated by the accompanying records. Data for this station are furnished by the United States Reclamation Service.

Daily gage height, in feet, of Upper Klamath Lake near Klamath Falls, Oreg., for 1904.

Day.	May.	June.	July.	Aug.	Sept.	Oct.	Day.	May.	June.	July.	Aug.	Sept.	Oct.
1.....		5.7	4.5	3.85	3.4	3.4	16.....		5.15	4.2	3.65	3.4	3.3
2.....		5.65	4.55	3.85	3.35	3.35	17.....		5.1	4.15	3.5	3.4	3.35
3.....		5.65	4.5	3.85	3.4	3.35	18.....		5.05	4.2	3.55	3.35	3.3
4.....		5.6	4.5	3.75	3.4	3.3	19.....		5.0	4.1	3.5	3.35	3.4
5.....		5.6	4.45	3.75	3.4	3.3	20.....		4.95	4.1	3.45	3.5	3.45
6.....		5.55	4.55	3.8	3.35	3.25	21.....		4.9	4.05	3.45	3.4	3.5
7.....		5.5	4.45	3.85	3.4	3.3	22.....		4.85	4.05	3.45	3.5	3.45
8.....		5.5	4.3	3.85	3.4	3.3	23.....		4.8	4.05	3.4	3.6	
9.....		5.45	4.35	3.85	3.4	3.4	24.....		4.75	4.0	3.4	3.6	
10.....		5.4	4.4	3.7	3.3	3.45	25.....		4.7	4.05	3.4	3.55	
11.....		5.35	4.2	3.65	3.35	3.5	26.....		4.7	3.95	3.45	3.5	
12.....		5.3	4.3	3.7	3.4	3.45	27.....		4.7	3.9	3.4	3.5	
13.....		5.25	4.35	3.75	3.35	3.4	28.....		5.8	4.65	3.95	3.35	3.45
14.....		5.2	4.3	3.7	3.35	3.35	29.....		5.8	4.6	3.95	3.4	3.5
15.....		5.2	4.2	3.75	3.35	3.3	30.....		5.75	4.6	3.85	3.4	3.4
							31.....		5.7		3.9	3.45	

Daily gage height, in feet, of Upper Klamath Lake at Klamath Falls, Oreg., for 1906-12.

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1906.									
1.....			5.30		7.00	6.30	5.70	4.95	4.50
2.....			5.25		6.80	6.20	5.75	4.90	4.55
3.....			5.35		6.80	6.10	5.70	4.90	4.50
4.....			5.35		6.80	6.20	5.75	4.85	4.50
5.....			5.40		6.70	6.30	5.70	4.90	4.50
6.....			5.40		6.60	6.20	5.65	4.90	4.50
7.....		5.02	5.40	6.15	6.50	6.20	5.60	4.90	4.35
8.....			5.40	6.10	6.50	6.10	5.65	4.90	4.50
9.....			5.40	6.20	6.40	6.20	5.60	4.80	4.60
10.....			5.51	6.40	6.30	5.90	5.55	4.75	4.65
11.....		5.02		6.40	6.60	5.70	5.50	4.70	4.55
12.....				6.30	6.60	6.20	5.40	4.80	4.40
13.....				6.40	6.40	6.20	5.45	4.70	4.60
14.....		5.10		6.50	6.20	6.10	5.40	4.75	4.65
15.....				6.30	6.40	6.00	5.45	4.70	4.50
16.....		5.20		6.50	6.40	6.20	5.35	4.75	4.55
17.....		5.20	5.50	6.50	6.30	6.10	5.35	4.70	4.50
18.....		5.21	5.50	6.50	6.30	6.20	5.30	4.75	4.55
19.....		5.21	5.50	6.50	6.40	6.20	5.25	4.70	4.55
20.....		5.20	5.40	6.30	6.50	6.20	5.20	4.70	4.55
21.....	4.38	5.22	5.20	6.50	6.40	6.10	5.30	4.70	4.50
22.....		5.23	5.20	6.60	6.30	6.10	5.20	4.60	4.35
23.....		5.25	5.00	6.80	6.30	6.10	5.20	4.55	4.50
24.....		5.26	5.52	6.70	6.10	6.00	5.15	4.50	4.55
25.....		5.35	5.45	6.80	5.90	6.00	5.20	4.45	4.55
26.....		5.35	5.50	6.70	6.20	6.05	5.15	4.55	4.55
27.....		5.40	5.60	6.90	6.20	6.00	5.10	4.55	4.55
28.....	5.29	5.35	5.55	7.00	6.50	5.95	5.10	4.55	4.50
29.....			5.55	7.00	6.50	5.90	5.00	4.50	4.50
30.....			5.50	6.80	6.40	5.80	5.10	4.50	4.55
31.....			6.45		6.40		5.00	4.50	

Daily gage height, in feet, of Upper Klamath Lake at Klamath Falls, Oreg., for 1906-12—
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1906-7.												
1.....	4.50	4.70	5.00	5.15	5.35	6.20	7.05	6.92	6.60	5.85	5.20	4.80
2.....	4.65	4.30	4.90	5.15	5.50	6.30	7.00	6.90	6.60	5.80	5.25	4.80
3.....	4.65	4.50	4.90	5.15	5.55	6.70	6.90	7.00	6.58	5.85	5.20	4.80
4.....	4.60	4.50	4.90	5.15	5.65	6.60	6.60	6.95	6.50	5.85	5.15	4.80
5.....	4.55	4.60	4.90	5.20	5.90	6.45	6.80	6.85	6.55	5.88	5.15	4.80
6.....	4.50	4.60	4.90	5.40	6.05	6.35	6.85	6.80	6.60	5.70	5.12	4.82
7.....	4.50	4.70	4.90	5.40	6.20	6.35	7.05	6.85	6.55	5.75	5.10	4.85
8.....	4.50	4.80	4.90	5.40	6.30	6.35	7.08	6.85	6.40	5.75	5.15	4.85
9.....	4.50	4.80	4.95	5.40	6.40	6.40	7.03	6.70	6.30	5.70	5.15	4.85
10.....	4.50	4.80	4.80	5.40	6.50	6.30	7.05	6.70	6.25	5.68	5.05	4.85
11.....	4.50	4.85	5.00	5.40	6.50	6.40	7.08	6.78	6.20	5.68	5.10	4.87
12.....	4.55	4.75	5.00	5.40	6.50	6.45	7.09	6.90	6.25	5.70	5.05	4.90
13.....	4.50	4.90	5.00	5.40	6.55	6.35	7.09	6.80	6.28	5.60	5.05	4.90
14.....	4.55	4.85	5.00	5.40	6.55	6.30	7.15	6.78	6.30	5.60	5.05	4.85
15.....	4.45	4.80	5.00	5.40	6.55	6.30	7.15	6.75	6.30	5.55	5.05	.....
16.....	4.50	5.00	4.95	5.40	6.55	6.30	7.10	6.75	6.25	5.55	5.05	.....
17.....	4.65	5.30	5.00	5.40	6.50	5.70	7.13	6.72	6.25	5.55	5.05	.....
18.....	4.70	5.15	4.95	5.40	6.55	6.25	7.10	6.48	6.25	5.55	4.85	.....
19.....	4.80	5.95	5.00	5.40	6.55	6.05	7.08	6.63	6.20	5.55	4.85	.....
20.....	4.75	5.85	5.05	5.40	6.55	5.95	7.07	6.63	6.20	5.45	4.85	.....
21.....	4.65	5.00	5.05	5.40	6.50	6.35	7.10	6.65	6.25	5.38	4.85	4.72
22.....	4.60	5.15	5.00	5.40	6.55	6.00	7.15	6.68	6.20	5.35	4.85	4.72
23.....	4.55	5.20	5.05	5.40	6.45	6.25	7.20	6.62	6.11	5.35	4.85	4.70
24.....	4.55	5.05	5.10	5.40	6.15	6.80	7.20	6.65	6.10	5.32	4.95	4.68
25.....	4.60	5.15	5.05	5.40	6.10	6.90	7.15	6.60	6.08	5.37	4.98	4.70
26.....	4.55	5.15	5.10	5.40	6.25	7.00	7.15	6.65	6.05	5.38	5.00	4.70
27.....	4.60	5.10	5.15	5.40	6.40	7.05	7.20	6.65	5.98	5.30	4.95	4.80
28.....	4.60	5.05	5.15	5.40	6.25	7.00	6.95	6.65	6.00	5.27	4.95	4.95
29.....	4.65	5.00	5.05	5.35	.....	6.90	7.00	6.60	5.95	5.25	4.95	4.85
30.....	4.70	5.00	5.10	5.35	.....	6.95	6.95	6.58	5.85	5.23	4.95	4.80
31.....	4.75	.....	5.15	5.35	.....	.....	.....	6.60	.....	5.20	4.85	.....
1907-8.												
1.....	4.85	4.90	4.98	5.60	5.70	5.40	5.70	5.35	.....	4.85	4.47	4.25
2.....	4.80	4.90	4.98	5.60	.....	5.45	5.65	5.58	.....	4.80	4.42	4.25
3.....	4.77	5.00	5.20	5.60	.....	5.45	5.85	5.60	.....	4.75	4.18	4.25
4.....	4.75	5.00	5.40	5.70	.....	5.50	5.70	5.48	.....	4.75	4.20	4.25
5.....	4.75	5.02	5.00	5.70	5.65	5.55	5.75	5.45	.....	.....	4.18	4.34
6.....	4.75	5.02	5.10	5.75	5.65	5.55	5.90	5.20	5.24	4.72	4.15	4.30
7.....	4.75	5.00	5.00	5.75	5.65	5.50	5.85	5.60	5.05	4.67	4.13	4.45
8.....	4.85	5.00	5.05	5.60	5.60	5.47	5.70	5.60	5.15	4.70	4.26	4.34
9.....	4.75	4.95	5.05	5.75	5.60	5.47	5.60	5.55	5.05	.....	4.35	4.35
10.....	4.55	4.80	5.00	5.75	5.60	5.45	5.55	5.35	5.05	4.65	4.38	4.36
11.....	4.55	4.80	5.10	5.75	5.60	5.46	5.55	5.60	5.10	4.61	4.35	4.34
12.....	4.60	4.90	5.00	5.85	5.60	5.45	5.53	5.50	5.05	4.60	4.42	4.37
13.....	4.68	4.95	5.30	5.83	5.58	5.45	5.55	5.30	5.08	4.50	4.40	4.40
14.....	4.66	4.90	5.40	5.88	5.57	5.45	5.50	5.35	5.15	4.55	4.38	4.40
15.....	4.68	4.90	5.35	5.85	5.55	5.40	5.50	5.35	5.10	4.60	4.28	4.55
16.....	4.68	4.95	5.35	5.82	5.55	5.45	5.40	5.32	5.10	4.40	4.28	4.55
17.....	4.67	4.90	5.35	5.80	5.55	5.50	5.35	4.95	5.10	4.60	4.28	4.40
18.....	4.66	5.10	5.35	5.60	5.53	5.38	5.40	5.25	5.05	4.60	4.28	4.40
19.....	4.70	5.10	5.30	5.60	5.54	5.40	5.50	5.40	4.95	4.55	4.28	4.45
20.....	4.72	5.15	5.30	5.80	5.55	5.50	5.70	5.35	4.80	4.55	4.29	4.45
21.....	4.72	5.10	5.30	5.82	5.53	5.40	5.60	5.40	4.95	4.58	4.30	4.45
22.....	4.70	5.00	5.25	5.80	5.55	5.50	5.50	5.40	4.85	4.60	4.30	4.50
23.....	4.70	5.00	5.25	5.75	5.52	5.45	5.35	5.32	4.80	4.40	4.40	4.70
24.....	4.75	4.90	5.25	5.78	5.49	5.40	5.60	5.45	4.80	4.50	4.60	4.65
25.....	4.70	4.90	5.20	5.85	5.47	.....	5.48	5.50	4.80	4.40	4.32	4.50
26.....	4.75	4.80	5.65	5.90	5.45	.....	5.52	5.40	4.90	.....	4.35	4.50
27.....	4.90	4.90	5.60	5.80	5.50	.....	5.65	5.40	4.80	4.70	4.50	.....
28.....	4.95	4.95	5.70	5.75	5.35	.....	5.88	5.40	4.85	4.54	4.60	4.45
29.....	4.90	4.98	5.70	5.75	5.10	.....	5.50	5.55	4.90	4.55	4.60	4.45
30.....	4.90	5.00	5.60	5.85	.....	5.75	5.40	5.50	4.85	4.48	4.25	4.45
31.....	4.92	.....	5.60	5.75	.....	5.75	.....	.....	.....	4.45	4.25	.....
1908-9.												
1.....	4.80	4.70	4.92	4.95	5.50	5.95	.....	5.40	5.30	.....	4.12	4.60
2.....	4.90	4.70	4.88	4.95	5.50	5.95	.....	5.50	.....	.....	4.20	4.60
3.....	4.61	4.75	4.85	.....	6.10	5.90	.....	5.51	.....	4.80	4.16	4.70
4.....	4.50	4.75	4.90	.....	6.00	6.00	6.00	5.40	.....	4.70	4.15	4.45
5.....	4.45	4.75	4.90	.....	6.05	5.85	.....	.....	5.40	4.60	4.18	4.46

Daily gage height, in feet, of Upper Klamath Lake at Klamath Falls, Oreg., for 1906-12—
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1908-9.												
6.....	4.50	4.75	4.85	.....	5.80	6.05	5.80	.....	.....	4.60	4.20	4.47
7.....	4.50	4.75	5.00	.....	5.85	6.05	5.75	.....	5.25	4.60	4.38	4.50
8.....	4.45	.....	5.05	.....	5.82	6.15	5.75	.....	.....	4.60	4.44	4.47
9.....	4.50	.....	4.95	.....	5.81	6.10	5.70	5.10	.....	4.60	4.37	4.60
10.....	4.50	.....	5.10	5.00	5.82	6.10	.....	5.12	.....	4.50	4.34	4.52
11.....	4.50	4.75	5.05	4.95	5.82	6.00	.....	5.15	.....	4.70	4.38	4.45
12.....	4.45	4.75	5.05	.....	5.75	5.90	.....	4.99	5.10	4.68	4.40	4.35
13.....	4.35	4.75	4.90	.....	5.78	5.90	.....	5.00	5.30	4.80	4.37	4.36
14.....	4.50	4.74	4.95	5.08	5.85	5.90	.....	4.98	5.18	4.45	4.26	4.37
15.....	4.70	4.72	4.90	5.06	5.85	5.90	.....	4.97	5.05	4.35	4.12	4.33
16.....	4.74	4.68	4.97	.....	5.75	5.85	.....	5.60	.....	4.25	4.08	4.37
17.....	4.80	4.60	4.96	5.40	5.87	5.80	.....	5.56	.....	4.54	4.08	4.30
18.....	.....	4.72	4.95	5.40	5.87	5.35	5.70	5.40	.....	4.60	4.06	4.40
19.....	5.01	4.40	4.95	5.35	5.95	5.20	5.70	5.38	.....	.....	4.08	4.55
20.....	5.00	4.70	4.98	5.25	5.93	4.90	5.70	5.30	.....	.....	4.20	4.50
21.....	4.75	4.65	4.98	5.55	6.10	5.90	5.70	5.20	.....	.....	4.25	4.40
22.....	4.75	.....	5.00	5.65	6.08	5.90	5.75	5.00	5.15	.....	4.35	4.35
23.....	4.74	4.90	4.98	5.70	6.10	5.80	5.70	.....	5.07	.....	4.25	4.23
24.....	4.74	4.83	4.98	5.45	5.70	5.80	5.65	.....	5.02	.....	4.23	3.90
25.....	4.75	4.85	4.95	5.55	5.90	5.82	5.65	5.40	4.97	4.65	4.20	.....
26.....	4.73	4.90	4.95	5.55	6.00	5.85	5.50	.....	4.85	4.55	4.30	.....
27.....	4.72	4.85	4.95	5.55	5.95	5.85	5.55	.....	.....	4.38	4.30	.....
28.....	4.65	4.85	4.95	5.55	5.93	.....	5.60	.....	.....	4.22	4.38	.....
29.....	4.55	4.85	4.95	5.55	.....	.....	5.40	5.40	.....	4.20	4.60	.....
30.....	4.68	4.85	4.95	5.45	.....	.....	5.40	.....	.....	4.16	4.62	.....
31.....	4.72	.....	4.95	5.30	.....	.....	.....	.....	.....	4.13	4.62	.....
1909-10.												
1.....	.....	4.50	4.60	6.00	.....	5.75	6.70	6.10	5.90	4.90	4.50	.....
2.....	.....	4.58	.....	6.00	.....	5.90	6.80	6.08	5.60	.....	4.43	.....
3.....	.....	4.58	5.90	6.00	5.40	6.00	6.62	6.10	5.55	.....	4.48	4.30
4.....	.....	4.65	5.90	6.00	5.40	5.90	6.58	6.05	5.30	.....	4.35	4.30
5.....	4.30	4.65	5.89	6.00	5.40	5.95	6.60	6.05	5.35	.....	4.35	4.32
6.....	4.50	4.43	5.89	6.00	5.40	6.00	6.51	6.00	5.35	.....	4.59	4.35
7.....	4.38	4.50	5.88	6.00	5.40	6.10	6.45	5.92	5.30	.....	4.56	4.30
8.....	4.38	4.70	5.87	6.00	5.41	6.17	6.45	5.85	5.18	.....	4.51	4.30
9.....	4.25	4.75	5.85	6.00	5.43	6.23	6.30	5.66	5.10	4.80	4.51	4.31
10.....	4.25	4.80	5.84	5.90	5.45	6.30	6.10	5.90	5.10	4.80	4.51	.....
11.....	4.27	4.85	5.82	5.90	5.50	6.35	6.52	5.90	5.35	4.80	4.54	.....
12.....	4.25	4.75	5.78	5.80	5.50	6.43	6.60	5.80	5.35	4.75	4.59	.....
13.....	4.25	.....	5.78	5.60	5.41	6.46	6.55	5.65	5.40	4.70	4.50	.....
14.....	4.25	4.52	5.78	5.50	5.42	6.45	6.40	5.60	5.25	4.50	4.53	.....
15.....	4.26	4.23	5.78	5.50	5.43	6.46	6.37	5.44	5.30	4.55	4.50	.....
16.....	.....	4.21	.....	5.50	5.43	6.51	6.35	5.40	5.15	4.62	.....	.....
17.....	.....	4.21	.....	5.50	5.43	6.20	6.30	5.42	5.10	4.75	.....	4.52
18.....	.....	4.15	.....	5.50	5.43	6.30	6.10	5.50	4.60	4.62	.....	4.50
19.....	.....	4.18	.....	5.50	5.40	5.90	6.35	5.50	4.80	4.50	.....	4.60
20.....	.....	.....	.....	5.50	5.40	6.00	6.30	5.40	4.80	4.56	4.31	4.28
21.....	.....	.....	.....	5.50	5.38	6.00	6.25	5.25	4.80	4.70	4.30	4.32
22.....	.....	.....	.....	5.50	5.39	6.13	6.20	5.20	4.76	4.60	4.31	4.30
23.....	.....	.....	.....	.....	5.38	6.13	6.45	5.10	4.70	4.55	4.50	4.32
24.....	4.45	4.38	.....	.....	5.45	6.23	6.30	5.20	4.70	4.65	4.30	4.65
25.....	4.46	4.43	.....	.....	5.45	6.33	6.40	5.10	4.94	4.55	4.30	4.58
26.....	4.42	4.43	.....	.....	5.50	6.70	6.40	5.20	4.98	4.55	4.30	4.58
27.....	4.46	4.45	.....	.....	5.60	7.00	6.40	5.20	5.02	4.50	.....	4.59
28.....	4.50	4.51	.....	.....	5.65	6.95	6.40	5.65	4.92	4.45	.....	4.62
29.....	4.50	4.64	.....	.....	.....	6.85	6.35	5.75	5.05	4.50	.....	4.59
30.....	4.40	4.65	.....	.....	.....	6.90	6.20	5.70	4.98	4.48	.....	4.60
31.....	4.45	.....	.....	.....	.....	6.90	.....	5.75	.....	4.59	.....	.....
1910-11.												
1.....	4.60	.....	5.58	5.60	5.50	5.58	6.28	6.53	5.97	5.40	5.07	4.87
2.....	4.20	.....	5.55	5.60	5.50	5.57	6.30	6.56	6.00	5.31	5.04	4.88
3.....	4.76	.....	5.50	5.60	5.50	5.56	6.30	6.50	6.00	5.34	5.02	4.88
4.....	.....	.....	5.49	5.60	5.50	5.55	6.26	6.28	6.02	5.37	5.01	4.86
5.....	.....	4.78	5.49	5.60	5.50	5.54	6.33	6.57	5.95	5.33	5.02	4.82
6.....	4.49	4.75	5.49	5.60	5.50	5.54	6.42	6.52	5.93	5.35	5.01	4.70
7.....	4.47	4.95	5.52	5.60	5.53	5.48	6.44	6.50	5.85	5.38	5.01	4.67
8.....	4.45	5.09	5.55	5.53	5.53	5.47	6.36	6.40	5.90	5.41	5.01	4.62
9.....	4.42	.....	5.68	5.51	5.53	5.49	6.35	.....	5.85	5.27	5.08	4.63
10.....	4.50	.....	5.74	5.51	5.53	5.50	6.40	.....	5.83	5.30	5.00	4.60

Daily gage height, in feet, of Upper Klamath Lake at Klamath Falls, Oreg., for 1906-12—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.												
11.....	4.63	.....	5.77	5.52	5.54	5.50	6.45	.....	5.80	5.28	5.01	4.61
12.....	4.65	5.00	5.79	5.55	5.54	5.51	6.55	.....	5.82	5.23	5.00	4.64
13.....	4.70	4.95	5.80	5.52	5.55	5.51	6.55	.....	5.88	5.23	5.00	4.83
14.....	4.75	5.00	5.80	5.52	5.56	5.52	6.50	6.55	5.87	5.20	5.00	4.87
15.....	4.61	4.95	5.89	5.52	5.56	5.52	6.55	6.45	5.86	5.18	4.99	4.91
16.....	4.70	4.94	6.14	5.52	5.57	5.53	.....	6.40	5.84	5.15	5.00	4.97
17.....	4.72	5.05	6.25	5.51	5.57	5.55	.....	6.38	5.82	5.15	5.00	.....
18.....	4.71	5.20	6.30	5.51	5.57	5.55	.....	.....	5.75	5.09	5.00	.....
19.....	4.65	4.96	6.30	5.50	5.57	5.56	6.95	.....	5.71	5.10	5.00	.....
20.....	4.63	4.99	6.30	5.50	5.57	5.57	6.92	.....	5.70	.....	5.00	.....
21.....	4.65	5.18	6.30	5.50	5.57	5.58	6.86	6.43	5.55	.....	4.99	4.35
22.....	4.60	5.22	6.30	5.50	5.58	5.60	6.90	6.32	5.58	5.00	4.98	4.41
23.....	4.68	5.40	6.30	5.50	5.59	5.68	6.80	6.32	5.57	5.03	4.93	4.41
24.....	4.68	5.45	6.14	5.50	5.59	5.77	6.78	6.35	5.48	5.00	4.93	4.39
25.....	4.67	5.45	5.70	5.50	5.59	5.88	6.75	6.30	5.46	5.03	4.91	4.35
26.....	4.82	5.43	5.73	5.50	5.59	5.90	6.70	6.20	5.45	5.18	4.89	4.35
27.....	4.82	5.47	5.71	5.50	5.58	5.94	6.70	6.15	5.50	5.03	4.89	4.39
28.....	4.78	5.57	5.69	5.50	5.58	6.04	6.70	6.12	5.49	4.99	4.89	.....
29.....	.....	5.56	5.66	5.50	.....	6.09	6.65	6.13	5.51	5.00	4.89	.....
30.....	.....	5.60	5.87	5.50	.....	6.15	6.55	6.12	5.48	5.00	4.88	4.40
31.....	.....	.....	5.80	5.50	.....	6.21	.....	5.95	.....	5.02	4.82	.....
Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.			
1911-12.												
1.....	4.49	4.63	4.84	5.00	5.38	5.80	5.68	5.35	5.50	5.50	5.56	5.56
2.....	4.53	4.63	4.84	5.00	5.38	5.88	5.63	5.47	5.56	5.56	5.56	5.56
3.....	4.48	4.63	4.85	5.00	5.40	5.84	5.60	5.45	5.60	5.56	5.56	5.60
4.....	4.48	4.69	4.85	5.00	5.38	5.75	5.60	5.45	5.63	5.56	5.56	5.63
5.....	.....	.....	4.83	5.00	5.39	5.80	5.55	5.40	5.64	5.56	5.56	5.64
6.....	.....	.....	4.95	5.00	5.38	5.80	5.55	5.40	5.70	5.56	5.56	5.70
7.....	4.45	.....	5.02	5.00	5.38	5.80	5.50	5.38	5.67	5.56	5.56	5.67
8.....	4.33	.....	4.98	5.01	5.38	5.80	5.48	5.38	5.60	5.56	5.56	5.60
9.....	4.47	.....	4.98	5.02	5.39	5.80	5.30	5.37	5.48	5.56	5.56	5.48
10.....	4.53	.....	4.98	5.02	5.40	5.80	5.27	5.36	5.45	5.56	5.56	5.45
11.....	4.52	4.75	4.96	5.02	5.41	5.80	5.16	5.36	5.37	5.56	5.56	5.37
12.....	4.50	.....	4.96	5.06	5.40	5.80	5.10	5.38	5.45	5.56	5.56	5.45
13.....	4.37	.....	4.93	5.09	5.45	5.80	5.17	5.37	5.40	5.56	5.56	5.40
14.....	4.51	.....	4.90	5.10	5.49	5.80	5.37	5.36	5.53	5.56	5.56	5.53
15.....	4.62	.....	4.89	5.10	5.55	5.80	5.35	5.35	5.46	5.56	5.56	5.46
16.....	4.60	.....	4.86	5.10	5.60	5.50	5.40	5.33	5.39	5.56	5.56	5.39
17.....	4.60	.....	4.87	5.11	5.70	5.50	5.35	5.32	5.26	5.56	5.56	5.26
18.....	4.64	4.80	4.86	5.12	5.69	5.50	5.40	5.36	5.27	5.56	5.56	5.27
19.....	.....	4.80	4.86	5.12	5.65	5.80	5.45	5.22	5.00	5.56	5.56	5.00
20.....	.....	4.80	4.99	5.25	5.71	5.70	5.45	5.50	5.30	5.56	5.56	5.30
21.....	4.60	4.84	5.00	5.25	5.68	5.60	5.46	5.55	5.24	5.56	5.56	5.24
22.....	.....	4.82	5.00	5.26	5.68	5.60	5.43	5.55	5.38	5.56	5.56	5.38
23.....	.....	4.81	5.00	5.26	5.67	5.60	5.40	5.53	5.29	5.56	5.56	5.29
24.....	.....	4.81	5.00	5.27	5.80	5.60	5.38	5.50	5.30	5.56	5.56	5.30
25.....	.....	4.81	5.00	5.28	5.73	5.65	5.35	5.30	5.24	5.56	5.56	5.24
26.....	.....	4.81	5.00	5.29	5.80	5.65	5.33	5.40	5.20	5.56	5.56	5.20
27.....	.....	4.82	5.00	5.31	5.80	5.70	5.30	5.49	5.32	5.56	5.56	5.32
28.....	4.50	4.83	5.00	5.34	5.79	5.71	5.00	5.40	5.40	5.56	5.56	5.40
29.....	4.55	4.83	4.99	5.35	5.78	5.75	5.28	5.58	5.30	5.56	5.56	5.30
30.....	4.54	4.83	4.99	5.37	.....	5.74	5.10	5.50	.....	5.56	5.56	.....
31.....	4.60	.....	4.99	5.37	.....	5.71	.....	5.40	.....	5.56	5.56	.....

α Reading from staff gage.

NOTE.—Gage heights for 1910-11 furnished by United States Reclamation Service. Lake probably frozen during January and first part of February, 1910, and from December 13, 1910, to March 7, 1911. During 1911 the Friez automatic gage was not working well. The published values have been obtained by careful study of the gage sheets and comparison with readings on the staff gage. The values during January 1-October 31 may be 0.01 to 0.2 foot in error and those of September may be as much as 0.7 foot too low. The breaks in the record were caused by the stopping of the automatic register or the loss of the record sheets.

LINK RIVER AT KLAMATH FALLS, OREG.

This station, which is located in sec. 32, T. 38 S., R. 9 E., at the county bridge over Link River at Klamath Falls, $1\frac{1}{4}$ miles below the outlet of Upper Klamath Lake and immediately at the head of Lake Ewauna, was established May 15, 1904. The river has a fall of 56 feet in the $1\frac{1}{4}$ miles between the lakes, a portion of which is utilized for water power.

The records prior to June 6, 1908, especially the individual daily records, are not reliable. It is probable that for longer periods—a month or more—the total flow as determined is not greatly in error. This condition is accounted for by the effect of wind on the flow of water at this station. The original gage was located at the bridge at the upper end of Lake Ewauna. At the outlet of Upper Klamath Lake the river breaks over a rather shallow ledge. A strong wind upstream blows the water back from this outlet and at the same time increases the height of water on the gage by backing the water in Lake Ewauna. So great is this wind effect that the river has been known to go entirely dry for a few hours at a time. When the wind is downstream the flow of Link River is greatly increased, but owing to the large surface of Lake Ewauna this increase in flow is not shown by the gage heights. In the long run these wind effects are no doubt compensatory, but little dependence can be placed in the published daily records prior to March 7, 1908. On this date an anemometer was installed on the bridge and a ship's taffrail log was trailed in the water under the bridge. It was hoped that the daily reading from this log would afford some indication of the velocities with the anemometer records. Although the records obtained by this device were much more reliable during 1907 than previously, even they were not all that could be desired. It became evident that owing to the sudden changes of the wind complete data could not be obtained without automatic recording devices on both the log and anemometer. The method was effective, however, in reducing the probable error of the estimates from about 15 per cent to within less than 5 per cent. On June 6, 1908, a Friez gage was installed in the rapids, where it could be affected only by change in flow, measurements being made at the bridge as formerly.

For the remainder of 1908 and for 1909 the records obtained are reliable. Measurements made during 1911 indicate that the channel in the rapids changed during 1910, but the precise date of the change can not be definitely determined. The Friez gage readings were also somewhat affected by backwater from log jams.

As a result the records published for 1910 and the latter part of 1909 are subject to considerable error, and no estimates of discharge have been prepared for 1911–12.

Water is diverted in the Keno canal around the Friez gage. Part of this is used to supply the power plant operated by Moore Bros., and the remainder is wasted at a spillway. Both power plant and spillway are located above the bridge and below the Friez gage. All water therefore passes the bridge gage and is included in the discharge measurements, but does not pass the Friez gage. There is no record of the amount of water diverted, except a few miscellaneous measurements which do not include the water wasted into the spillway.

This station was maintained after January 1, 1910, by the United States Reclamation Service, but the daily and monthly discharge tables were computed by the United States Geological Survey.

Discharge measurements of Link River near Klamath Falls, Oreg., in 1904-1909.

Gage at bridge.

Date.	Hydrographer.	Gage height.	Discharge.	Date.	Hydrographer.	Gage height.	Discharge.
		<i>Fect.</i>	<i>Sec.-ft.</i>			<i>Fect.</i>	<i>Sec.-ft.</i>
1904.				1907.			
May 15	Lewis and Landes	7.15	9,073	Jan. 10	L. F. Hendricks	3.80	2,300
June 7	.....do.....	6.55	7,342	Feb. 18	.....do.....	4.90	4,910
Aug. 25	T. H. Humphreys	3.70	1,915	Mar. 2	.....do.....	5.00	4,980
Sept. 16	C. T. Darley	3.40	1,782	Apr. 1	.....do.....	5.60	5,620
28	.....do.....	3.30	2,005	20	.....do.....	5.80	5,570
Oct. 18	.....do.....	3.40	2,135	May 9	Stevens and Ellsworth.	5.65	4,000
Nov. 8	.....do.....	3.50	1,968	23	J. C. Stevens	5.30	4,220
24	.....do.....	3.60	1,898	June 13	C. E. Ellsworth	4.98	4,390
1905.				19	.....do.....	4.85	3,740
Jan. 4	C. T. Darley	4.05	2,862	July 5	.....do.....	4.35	2,450
17	.....do.....	4.10	2,768	23	.....do.....	3.85	1,950
17	.....do.....	4.10	2,872	31	.....do.....	3.65	1,640
17	.....do.....	4.10	2,627	Aug. 12	.....do.....	3.40	1,610
Feb. 1	.....do.....	4.30	3,338	Sept. 4	.....do.....	3.15	1,640
13	.....do.....	4.50	2,994	19	.....do.....	3.05	1,490
17	.....do.....	4.40	2,802	Oct. 26	.....do.....	3.25	1,870
Mar. 2	.....do.....	4.40	2,984	Nov. 13	.....do.....	3.32	1,830
Apr. 12	.....do.....	4.49	3,645	1908.			
June 5	.....do.....	3.88	2,324	Feb. 17	C. E. Ellsworth	4.19	3,030
20	.....do.....	3.59	1,800	Mar. 14	.....do.....	4.20	2,800
28	.....do.....	3.40	1,517	21	.....do.....	4.15	2,890
July 11	.....do.....	3.14	1,466	3	.....do.....	4.36	3,800
18	.....do.....	2.97	1,063	Apr. 15	.....do.....	4.26	2,620
28	.....do.....	2.80	1,049	18	.....do.....	4.18	2,700
Aug. 7	.....do.....	2.63	1,041	21	.....do.....	4.28	2,610
14	.....do.....	2.59	1,066	25	Ellsworth and Kimble.	4.16	2,820
16	Clapp and Darley	2.60	1,104	30	.....do.....	4.16	2,670
Sept. 7	C. T. Darley	2.58	1,032	May 5	.....do.....	4.11	2,560
16	.....do.....	2.58	1,073	9	H. Kimble	4.02	2,620
Nov. 2	.....do.....	2.90	1,283	13	.....do.....	4.07	2,680
1906.				18	.....do.....	4.03	2,170
May 11	L. F. Hendricks	5.06	4,560	21	.....do.....	4.04	2,980
June 20	.....do.....	4.65	3,400	25	.....do.....	3.94	2,530
22	Clapp and Hendricks ..	4.65	3,640	30	.....do.....	3.87	2,910
July 9	L. F. Hendricks	4.25	2,860	June 4	.....do.....	3.76	2,290
24	.....do.....	3.80	2,190	13	.....do.....	.....	2,000
Aug. 22	.....do.....	3.00	1,390				
Dec. 20	.....do.....	3.48	2,050				

*Discharge measurements of Link River near Klamath Falls, Oreg., in 1904-1909—Contd.***Friez gage.**

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
		<i>Feet.</i>	<i>Sec.-ft.</i>			<i>Feet.</i>	<i>Sec.-ft.</i>
1908.				1908.			
June 17	H. Kimble.....	1.85	2,110	Oct. 13	H. Kimble.....	1.20	1,180
23	do.....		1,710	26	do.....	1.59	1,760
29	do.....	1.65	1,760	31	do.....	1.60	1,720
July 1	do.....	1.57	1,620	Nov. 13	do.....	1.65	1,870
7	do.....	1.42	1,570	Dec. 7	do.....	1.64	1,880
9	do.....	1.44	1,530				
13	do.....	1.70	1,920	1909.			
18	do.....	1.33	1,330	Feb. 16	Howard Kimble.....	2.58	3,420
22	do.....	1.30	1,390	Apr. 17	do.....	2.64	3,440
28	do.....	1.19	1,210	May 24	Kimble and Geiger.....	2.24	2,760
Aug. 14	do.....	1.20	1,250	June 24	A. E. Geiger.....	2.02	2,090
Sept. 1	do.....	.75	715	June 23	do.....	2.03	2,320
16	do.....	1.02	1,080	Sept. 9	John Yadon.....		1,040
29	do.....	.92	936				

Discharge measurements of Link River at Klamath Falls, Oreg., in 1910-11.

Date.	Hydrographer.	Gage height.		Dis-charge.
		Gage at bridge.	Friez gage.	
		<i>Feet.</i>	<i>Feet.</i>	<i>Sec.-ft.</i>
1910.				
Mar. 17	John Yadon.....	5.08	3.20	4,520
July 29	do.....	2.90	a 1.10	1,180
Aug. 25	Leland Moser.....	2.57	a .82	1,160
Dec. 12	do.....	3.90	a 2.30	3,320
18	do.....	4.12	a 2.48	3,640
28	do.....	4.15	a 2.29	3,240
1911.				
Jan. 7	Leland Moser.....	4.12	2.14	3,010
June 1	do.....	4.88	2.55	3,830
20	do.....	4.40	2.22	2,972
July 1	do.....	4.18	1.83	2,290
Aug. 27	do.....	2.69	1.09	1,280
Nov. 21	do.....	3.05	1.50	1,920

a Automatic gage not read at time of measurement. This gage height is the mean for the day.

*Daily gage height, in feet, of Link River at Klamath Falls, Oreg., for 1904-1912.***Gage at bridge.**

Day.	May.	June.	July.	Aug.	Sept.	Day.	May.	June.	July.	Aug.	Sept.
1904.						1904.					
1.....		6.75	5.5	4.35	3.5	16.....	7.1	6.25	5.0	3.90	3.35
2.....		6.8	5.45	4.3	3.5	17.....	7.1	6.2	4.95	3.85	3.35
3.....		6.7	5.4	4.25	3.5	18.....	7.15	6.1	4.9	3.85	3.3
4.....		6.7	5.4	4.2	3.45	19.....	7.1	6.05	4.85	3.8	3.3
5.....		6.65	5.35	4.2	3.45	20.....	7.1	6.0	4.8	3.8	3.3
6.....		6.6	5.3	4.15	3.45	21.....	7.1	6.0	4.8	3.75	3.3
7.....		6.55	5.3	4.15	3.45	22.....	7.05	5.95	4.75	3.75	3.45
8.....		6.55	5.25	4.15	3.45	23.....	7.0	5.85	4.75	3.7	3.4
9.....		6.5	5.25	4.1	3.4	24.....	7.0	5.8	4.75	3.7	3.35
10.....		6.45	5.2	4.05	3.4	25.....	6.95	5.75	4.7	3.7	3.3
11.....		6.4	5.2	4.05	3.4	26.....	6.9	5.75	4.65	3.65	3.3
12.....		6.4	5.15	4.0	3.4	27.....	6.9	5.7	4.6	3.65	3.25
13.....		6.35	5.1	4.0	3.35	28.....	6.9	5.65	4.55	3.6	3.3
14.....		6.3	5.1	3.95	3.35	29.....	6.85	5.6	4.5	3.55	3.2
15.....	7.15	6.3	5.05	3.95	3.35	30.....	6.85	5.55	4.45	3.55	3.2
						31.....	6.8		4.4	3.55	

Daily gage height, in feet, of Link River at Klamath Falls, Oreg., for 1904-1912—Contd.

Gage at bridge.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1904-5.												
1.....	3.3	3.5	3.55	4.1	4.2	4.4	4.5	4.2	3.95	3.45	2.79	2.6
2.....	3.3	3.45	3.6	4.1	4.4	4.4	4.5	4.2	3.85	3.45	2.75	2.6
3.....	3.3	3.45	3.6	4.1	4.4	4.4	4.5	4.2	3.85	3.3	2.7	2.58
4.....	3.3	3.45	3.6	4.1	4.4	4.4	4.5	4.2	3.9	3.3	2.67	2.6
5.....	3.3	3.45	3.65	4.1	4.5	4.4	4.5	4.2	3.88	3.25	2.67	2.58
6.....	3.3	3.5	3.7	4.1	4.5	4.4	4.5	4.2	3.88	3.3	2.67	2.6
7.....	3.3	3.5	3.7	4.1	4.4	4.4	4.5	4.2	3.81	3.2	2.5	2.58
8.....	3.35	3.5	3.7	4.1	4.4	4.4	4.5	4.2	3.88	3.2	2.63	2.58
9.....	3.4	3.5	3.7	4.1	4.4	4.4	4.5	4.2	3.85	3.25	2.6	2.58
10.....	3.4	3.5	3.7	4.1	4.5	4.4	4.5	4.2	3.8	3.25	2.6	2.62
11.....	3.4	3.55	3.7	4.1	4.5	4.4	4.5	4.2	3.8	3.25	2.59	2.63
12.....	3.35	3.55	3.7	4.1	4.5	4.4	4.5	4.2	3.78	3.2	2.6	2.58
13.....	3.35	3.6	3.75	4.1	4.5	4.4	4.5	4.2	3.75	3.2	2.6	2.58
14.....	3.4	3.5	3.75	4.1	4.5	4.4	4.5	4.2	3.7	3.1	2.59	2.6
15.....	3.4	3.5	3.8	4.1	4.5	4.4	4.5	4.1	3.6	3.05	2.6	2.6
16.....	3.45	3.5	3.8	4.1	4.5	4.4	4.5	4.1	3.7	3.0	2.6	2.55
17.....	3.4	3.5	3.8	4.1	4.4	4.4	4.5	4.1	3.62	2.9	2.60	2.5
18.....	3.4	3.5	3.8	4.1	4.4	4.4	4.45	4.05	3.61	2.9	2.63	2.55
19.....	3.45	3.55	3.8	4.1	4.4	4.4	4.4	4.05	3.6	3.0	2.6	2.6
20.....	3.45	3.5	3.8	4.1	4.4	4.4	4.4	4.05	3.59	2.9	2.6	2.6
21.....	3.45	3.5	3.8	4.1	4.4	4.4	4.35	4.0	3.55	2.9	2.6	2.6
22.....	3.45	3.55	3.85	4.1	4.4	4.4	4.35	4.0	3.5	2.95	2.6	2.58
23.....	3.45	3.55	3.9	4.1	4.4	4.4	4.35	4.0	3.5	2.85	2.6	2.6
24.....	3.45	3.6	3.95	4.2	4.4	4.4	4.3	4.0	3.5	2.85	2.6	2.68
25.....	3.45	3.6	.....	4.2	4.4	4.4	4.3	4.0	3.4	2.85	2.6	2.55
26.....	3.45	3.6	.....	4.2	4.4	4.4	4.3	4.0	3.4	2.85	2.7	2.58
27.....	3.45	3.6	.....	4.2	4.4	4.4	4.3	4.0	3.4	2.8	2.8	2.6
28.....	3.45	3.6	.....	4.1	4.4	4.5	4.25	4.0	3.4	2.8	2.6	2.62
29.....	3.45	3.6	.....	4.2	.....	4.6	4.25	4.0	3.4	2.78	2.6	2.65
30.....	3.45	3.65	.....	4.2	.....	4.5	4.25	3.95	3.35	2.79	2.65	2.65
31.....	3.45	.....	.....	4.2	.....	4.5	.....	3.95	.....	2.78	2.55	.....
1905-6.												
1.....	2.7	2.81	3.25	3.5	3.65	3.75	4.25	5.0	4.85	4.4	3.5	2.9
2.....	2.65	2.8	3.3	3.45	3.65	3.9	4.2	5.05	4.85	4.35	3.5	2.85
3.....	2.7	2.81	3.29	3.4	3.65	3.85	4.2	5.0	4.9	4.4	3.5	2.9
4.....	2.7	2.84	3.2	3.5	3.65	3.7	4.2	4.95	4.9	4.4	3.45	2.9
5.....	2.9	2.82	3.2	3.5	3.65	3.7	4.2	5.0	4.95	4.3	3.45	2.9
6.....	2.9	2.88	3.2	3.45	3.6	3.7	4.3	5.0	4.8	4.3	3.4	2.85
7.....	2.95	2.86	3.21	3.45	3.6	3.7	4.35	4.95	4.8	4.25	3.35	2.95
8.....	2.7	2.99	3.23	3.45	3.6	3.7	4.45	4.95	4.85	4.3	3.3	2.95
9.....	2.9	2.99	3.24	3.5	3.6	3.75	4.4	5.0	4.8	4.25	3.3	2.9
10.....	2.8	2.98	3.28	3.5	3.6	3.75	4.5	5.05	4.95	4.2	3.3	2.8
11.....	2.75	2.99	3.25	3.5	3.6	3.7	4.5	5.05	5.0	4.15	3.3	2.8
12.....	2.8	2.9	3.26	3.5	3.6	3.85	4.5	4.9	4.9	4.15	3.2	2.85
13.....	2.8	2.95	3.27	3.5	3.6	3.9	4.55	4.9	4.75	4.15	3.15	2.8
14.....	2.8	2.95	3.24	3.6	3.6	3.9	4.6	5.1	4.7	4.05	3.2	2.8
15.....	2.7	2.95	3.34	3.55	3.65	3.95	4.65	5.0	4.8	4.05	3.15	2.8
16.....	2.8	2.9	3.26	3.8	3.6	3.9	4.75	4.9	4.75	4.05	3.15	2.85
17.....	2.8	2.9	3.33	3.8	3.65	3.9	4.8	4.9	4.7	4.05	3.15	2.85
18.....	2.8	2.9	3.32	3.8	3.75	3.95	4.8	5.15	4.65	4.00	3.1	2.85
19.....	2.8	3.2	3.32	3.85	3.65	3.9	4.8	4.95	4.6	3.95	3.1	2.85
20.....	2.85	3.1	3.26	3.8	3.65	3.95	4.85	4.9	4.65	3.95	3.05	2.85
21.....	2.85	3.3	3.27	3.85	3.7	4.0	4.9	4.85	4.55	3.95	3.1	2.85
22.....	2.79	3.2	3.33	3.7	3.7	3.95	4.95	4.8	4.6	3.85	3.0	2.8
23.....	2.8	3.15	3.3	3.75	3.75	4.15	5.0	4.85	4.6	3.8	2.95	2.8
24.....	2.85	3.1	3.32	3.75	3.7	3.95	4.95	4.9	4.6	3.75	3.0	2.9
25.....	2.81	3.2	3.29	3.7	3.7	4.05	4.95	5.1	4.55	3.75	3.0	2.9
26.....	2.8	3.25	3.35	3.7	3.85	4.0	4.95	5.0	4.55	3.7	3.05	2.85
27.....	2.89	3.15	3.36	3.7	3.7	4.0	5.05	4.95	4.5	3.65	3.0	2.85
28.....	2.88	3.15	3.33	3.7	3.6	4.05	5.1	5.0	4.5	3.7	2.9	2.85
29.....	2.88	3.4	3.4	3.7	.....	4.1	5.0	4.9	4.45	3.6	3.0	2.85
30.....	2.81	3.2	3.53	3.7	.....	4.2	4.95	4.9	4.45	3.55	2.9	2.85
31.....	2.9	.....	3.53	3.65	.....	4.2	.....	4.9	.....	3.55	2.9	.....

α Estimated.

Daily gage height, in feet, of Link River at Klamath Falls, Oreg., for 1904-1912—Contd.

Gage at bridge.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept
1906-7.												
1.....	2.85	3.0	3.3	3.60	3.90	5.02	5.60	5.68	5.28	4.42	3.55	3.15
2.....	2.9	3.3	3.25	3.85	3.95	5.00	5.68	5.70	5.25	4.45	3.52	3.15
3.....	2.8	3.4	3.25	3.80	4.10	5.05	5.62	5.65	5.15	4.40	3.50	3.15
4.....	2.8	a 2.95	3.3	3.80	4.25	5.10	5.75	5.60	5.12	4.38	3.48	3.15
5.....	2.85	2.95	3.3	3.75	4.25	5.12	5.65	5.65	5.08	4.32	3.45	3.15
6.....	a 2.85	2.95	3.3	3.75	4.32	5.15	5.70	5.62	5.05	4.32	3.42	3.15
7.....	a 2.85	2.95	3.45	3.75	4.40	5.12	5.72	5.68	5.00	4.28	3.38	3.10
8.....	2.85	3.0	3.3	3.75	4.45	5.10	5.72	5.62	4.95	4.25	3.35	3.10
9.....	2.85	3.05	a 3.3	3.80	4.50	5.10	5.70	5.62	4.92	4.20	3.35	.....
10.....	2.85	3.05	3.45	3.80	4.55	5.10	5.72	5.70	4.90	4.18	3.30	.....
11.....	2.85	3.05	3.4	3.80	4.62	5.15	5.75	5.62	4.98	4.18	3.30	.....
12.....	2.8	3.1	3.4	3.80	4.70	5.15	5.79	5.48	4.95	4.15	3.32	.....
13.....	2.8	3.15	3.4	3.80	4.75	5.05	5.80	5.48	4.90	4.12	3.28	.....
14.....	2.9	3.1	3.4	3.80	4.80	5.05	5.78	5.50	4.88	4.02	3.25	.....
15.....	2.85	3.2	3.5	3.82	4.80	5.10	5.75	5.50	4.82	3.98	3.25	.....
16.....	2.85	3.2	3.45	3.82	4.80	5.05	5.75	5.48	4.82	3.95	3.25	.....
17.....	2.85	3.25	3.5	3.85	4.85	5.10	5.75	5.42	4.82	3.90	3.22	3.10
18.....	2.85	3.2	3.45	3.85	4.90	5.20	5.80	5.45	4.85	3.88	3.20	3.08
19.....	2.85	3.2	3.4	3.85	4.90	5.32	5.78	5.40	4.82	3.88	3.20	3.10
20.....	2.9	3.2	3.5	3.85	4.90	5.28	5.75	5.32	4.78	3.88	3.18	3.12
21.....	2.9	3.25	3.5	3.90	4.90	5.45	5.80	5.38	4.75	3.82	3.15	3.10
22.....	2.9	3.15	3.6	3.90	4.90	5.62	5.80	5.35	4.70	3.80	3.15	3.10
23.....	2.9	3.25	a 3.5	3.88	4.90	5.35	5.78	5.35	4.70	3.80	3.15	3.15
24.....	2.9	3.3	3.5	3.82	5.00	5.42	5.78	5.32	4.65	3.78	3.30	3.12
25.....	2.9	a 3.3	a 3.5	3.80	5.05	5.48	5.75	5.30	6.62	3.75	3.22	3.18
26.....	2.9	3.3	3.6	3.80	5.00	5.48	5.70	5.28	4.65	3.75	3.20	3.08
27.....	2.95	3.3	3.6	3.80	5.00	5.52	5.72	5.30	4.60	3.70	3.18	3.12
28.....	2.95	3.3	3.6	3.80	4.92	5.58	5.68	5.30	4.55	3.70	3.20	3.10
29.....	2.95	3.3	3.6	3.80	.....	5.62	5.65	5.28	4.52	3.65	3.18	3.10
30.....	2.9	3.3	3.6	3.82	.....	5.58	5.62	5.25	4.52	3.65	3.15	3.15
31.....	3.0	.....	3.6	3.90	.....	5.60	.....	5.28	.....	3.60	3.15	.....
1907-8.												
1.....	3.12	3.28	3.43	4.00	4.40	.....	4.22	4.25	3.84	3.37	2.90	2.50
2.....	3.10	3.30	3.45	4.01	4.50	4.22	4.25	4.14	3.76	3.38	.....	2.52
3.....	3.15	3.30	3.48	4.05	4.40	4.20	4.35	.....	3.77	3.38	2.79	2.60
4.....	3.15	3.29	3.50	.....	4.34	4.20	4.24	4.09	3.75	.....	2.82	2.60
5.....	3.10	3.28	3.40	4.00	4.34	4.22	.....	4.11	3.75	3.25	2.78	2.47
6.....	3.15	3.30	3.50	4.04	4.50	4.20	4.24	4.22	3.74	3.25	2.80	.....
7.....	3.15	3.30	3.46	4.10	4.31	4.21	4.27	4.12	3.80	3.25	2.77	2.45
8.....	3.10	3.33	.....	4.18	4.50	.....	4.21	4.06	.....	3.23	2.72	2.39
9.....	3.10	3.30	3.45	4.12	.....	4.20	4.24	4.04	3.74	3.20	.....	2.43
10.....	3.10	3.35	3.52	4.08	4.24	.....	4.25	4.06	3.72	3.18	2.77	2.46
11.....	3.15	3.35	3.49	4.10	4.25	4.20	4.26	4.05	3.68	3.11	2.70	2.46
12.....	3.12	3.36	3.58	.....	4.24	4.20	.....	4.06	3.71	3.17	2.72	2.44
13.....	3.12	3.32	3.62	4.11	4.26	4.18	4.35	4.04	3.74	3.15	2.62	2.43
14.....	3.18	3.30	3.55	4.12	4.25	4.20	4.27	4.01	3.65	3.12	.....	2.43
15.....	3.15	3.36	.....	4.14	.....	4.20	4.22	4.04	3.68	3.06	2.68	2.46
16.....	3.15	3.32	.....	4.10	4.30	4.19	4.28	4.05	3.66	3.08	.....	2.43
17.....	3.15	3.35	3.60	4.15	4.22	4.22	4.30	4.10	3.60	3.07	2.70	2.44
18.....	3.15	3.32	3.60	4.20	4.24	4.14	4.20	4.03	3.66	3.05	.....	2.47
19.....	3.16	3.36	3.67	.....	4.20	4.19	4.18	3.98	3.56	3.05	2.68	2.48
20.....	.....	3.36	3.65	4.20	4.22	4.22	4.29	4.01	3.85	.....	2.63	.....
21.....	.....	3.39	3.60	4.20	4.20	4.15	4.24	4.02	3.47	3.02	.....	.....
22.....	.....	3.39	.....	4.20	4.20	4.20	4.18	3.96	3.52	2.98	2.67	2.45
23.....	3.20	3.38	3.69	4.25	.....	4.18	4.18	3.95	3.53	2.99	.....	2.45
24.....	3.21	.....	.....	4.22	4.22	4.40	4.22	4.03	3.50	2.99	2.62	2.46
25.....	3.25	3.40	3.70	4.22	4.25	4.18	4.16	3.96	3.47	2.91	2.53	.....
26.....	3.25	3.41	3.95	.....	4.30	4.25	4.16	3.88	3.40	.....	2.56	2.48
27.....	3.30	3.40	3.90	4.25	4.20	.....	4.15	3.85	3.40	2.95	2.57	2.53
28.....	3.30	3.40	3.92	4.22	4.25	4.15	4.17	3.96	3.40	.....	2.54	2.53
29.....	3.30	.....	3.97	4.21	.....	4.25	4.16	3.85	3.41	.....	2.48	2.53
30.....	3.30	3.42	4.02	.....	.....	4.22	4.21	3.80	3.41	2.88	.....	2.51
31.....	3.25	.....	4.00	4.19	.....	4.20	.....	3.83	.....	2.90	2.49	.....

a Estimated.

Daily gage height, in feet, of Link River at Klamath Falls, Oreg., for 1904-1912—Contd.

Gage at bridge.

Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.
1908.				1908.				1908.			
1.....	2.58	3.19	3.37	11.....			3.40	21.....		3.30	
2.....		3.26	3.38	12.....		3.23	3.34	22.....	3.11	3.30	3.48
3.....	2.51	3.20	3.40	13.....	2.75	3.25	3.47	23.....	3.11	3.32	
4.....	2.59	3.17	3.44	14.....		3.25	3.41	24.....	3.14	3.35	3.48
5.....	2.55	3.20	3.43	15.....		3.27	3.40	25.....	3.23	3.35	3.50
6.....	2.58	3.18	3.43	16.....	3.01	3.25	3.4	26.....		3.34	3.48
7.....	2.58		3.42	17.....			3.48	27.....		3.35	
8.....	2.72		3.53	18.....		3.28	3.48	28.....	3.33	3.36	
9.....	2.68		3.44	19.....	3.16	3.50	3.50	29.....	3.30		3.46
10.....	2.75	3.24	3.42	20.....	3.20	3.34	3.50	30.....	3.16	3.25	
								31.....	3.18		3.50

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909-10.												
1.....			4.04	4.3	4.2	4.45	5.4	5.05	4.15	3.35	2.75	2.55
2.....			4.18	4.25	4.3	4.45	5.7	5.05	4.1	3.35	2.75	2.55
3.....			4.18	4.25	4.3	4.5	5.4	5.1	4.1	3.5	2.8	2.6
4.....			4.20	4.25	4.25	4.55	5.4	5.1	4.15	3.35	2.8	2.6
5.....			4.22	4.25	4.2	4.6	5.4	5.05	4.1	3.3	2.75	2.6
6.....			4.23	4.25	4.2	4.65	5.35	5.05	4.1	3.3	2.7	2.55
7.....			4.32	4.25	4.2	4.7	5.35	5.0	4.0	3.25	2.75	2.55
8.....		3.19	4.32	4.25	4.2	4.75	5.4	4.95	4.0	3.2	2.75	2.6
9.....		3.04	4.32	4.25	4.25	4.75	5.4	4.95	4.0	3.2	2.75	2.6
10.....		3.01	4.32	4.25	4.2	4.85	5.4	4.9	4.0	3.2	2.75	2.55
11.....		3.04	4.32	4.25	4.2	4.9	5.4	4.75	4.0	3.2	2.7	2.6
12.....		3.04	4.34	4.4	4.2	4.9	5.35	4.75	4.0	3.2	2.65	2.6
13.....		3.04	4.34	4.4	4.25	4.95	5.35	4.55	4.0	3.2	2.65	2.6
14.....		3.06	4.30	4.3	4.2	5.0	5.3	4.45	3.95	3.15	2.65	2.55
15.....		3.06	4.31	4.25	4.2	5.0	5.3	4.45	3.85	3.15	2.6	2.55
16.....		3.09	4.27	4.2	4.2	5.05	5.3	4.55	3.75	3.05	2.6	2.6
17.....		3.09	4.24	4.2	4.25	5.05	5.35	4.5	3.8	3.0	2.65	2.55
18.....		3.09	4.23	4.15	4.2	5.2	5.4	4.55	3.8	3.0	2.65	2.55
19.....		3.15	4.25	4.2	4.2	5.15	5.35	4.5	3.8	3.0	2.6	2.7
20.....		3.38	4.24	4.2	4.25	5.15	5.3	4.5	3.6	3.0	2.6	2.65
21.....		3.42	4.23	4.15	4.3	5.2	5.25	4.45	3.55	3.05	2.6	2.6
22.....		3.54	4.23	4.2	4.25	5.2	5.25	4.45	3.55	2.95	2.6	2.6
23.....		3.61	4.23	4.2	4.25	5.3	5.25	4.45	3.5	2.95	2.55	2.6
24.....		3.66	4.24	4.25	4.3	5.3	5.2	4.45	3.5	2.95	2.55	2.6
25.....		3.71	4.22	4.3	4.35	5.35	5.3	4.35	3.5	2.95	2.55	2.6
26.....			4.21	4.25	4.3	5.4	5.15	4.35	3.5	2.9	2.6	2.6
27.....		3.78	4.20	4.2	4.3	5.4	5.25	4.25	3.45	2.9	2.55	2.6
28.....		3.84	4.20	4.2	4.45	5.35	5.15	4.2	3.5	2.9	2.6	2.65
29.....		3.89	4.20	4.2		5.4	5.05	4.15	3.45	2.9	2.6	2.6
30.....		3.94	4.24	4.25		5.4	5.1	4.1	3.45	2.9	2.6	2.6
31.....		3.99	4.26	4.2		5.4		4.2		2.85	2.6	
1910-11.												
1.....	2.6	3.05	3.65	4.16	4.20	4.00	4.17	5.05	4.85	4.10		2.70
2.....	2.7	3.15	3.65	4.15	4.25	3.99	4.10	5.07	4.82	4.10		2.70
3.....	2.7	2.95	3.7	4.15	4.11	4.05	4.25	5.00	4.79	4.09		2.65
4.....	2.65	2.95	3.65	4.13	4.05	4.00	4.30	5.02	4.79	4.03		2.65
5.....	2.75	2.95	3.7	4.11	4.05	4.05	4.00	5.05	4.83	4.00		2.65
6.....	2.75	2.9	3.75	4.10	4.00	4.17	4.35	5.10	4.69	4.01		2.63
7.....	2.75	3.0	3.75	4.15	4.02	4.15	4.35	5.10	4.70	4.00		2.65
8.....	2.75	3.15	3.8	4.10	4.00	3.99	4.57	5.07	4.69	3.97		2.65
9.....	2.85	3.1	3.95	4.25	4.00	4.00	4.65	5.02	4.68	3.94		2.65
10.....	2.85	3.25	3.95	4.26	4.15	3.96	4.60	5.07	4.60	3.89		2.65
11.....	2.9	3.0	3.95	4.23	4.18	3.95	4.70	5.05	4.60	3.85		2.65
12.....	3.0	3.0	3.95	4.25	4.17	3.95	4.73	5.05	4.61			2.60
13.....	2.9	3.05	3.95	4.23	4.10	3.95	4.70	5.02	4.60			2.62
14.....	2.85	3.05	4.0	4.20	4.10	3.95	4.65	5.05	4.56			2.62
15.....	2.85	3.1	4.0	4.25	4.05	4.05	4.70	5.05	4.56			2.62
16.....	2.85	3.05	4.0	4.20	4.10	4.00	4.70	5.15	4.51			2.60
17.....	2.9	3.1	4.2	4.30	4.06	4.05	4.87	5.05	4.47			2.60
18.....	2.9	3.15	4.1	4.35	4.10	4.01	4.85	5.20	4.43			2.57
19.....	3.0	3.1	4.1	4.25	4.05	4.05	4.90	5.02	4.47			2.59
20.....	2.95	3.1	4.1	4.25	4.16	4.05	4.91	4.95	4.43		2.72	2.62

Daily gage height, in feet, of Link River at Klamath Falls, Oreg., for 1904-1912—Contd.

Gage at bridge.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.												
21.....	2.95	3.25	4.15	4.27	4.05	4.05	4.90	4.95	4.37	.....	2.73	2.62
22.....	3.0	3.15	4.15	4.27	4.02	4.08	4.50	4.94	4.36	.....	2.70	2.62
23.....	2.95	3.4	4.15	4.32	3.95	4.10	4.85	5.00	4.34	.....	2.70	2.62
24.....	2.95	3.45	4.1	4.30	4.01	4.05	4.80	4.93	4.33	.....	2.70	2.62
25.....	3.0	3.4	4.15	4.35	3.90	4.05	4.85	4.92	4.33	.....	2.70	2.60
26.....	3.0	3.45	4.05	4.38	3.95	4.09	5.02	4.87	4.27	.....	2.75	2.62
27.....	3.0	3.55	4.0	4.40	3.90	4.05	5.05	4.87	4.23	.....	2.70	2.62
28.....	3.0	3.5	4.15	4.27	3.95	4.05	5.01	4.92	4.24	.....	2.70	2.65
29.....	3.0	3.55	4.1	4.35	.....	4.07	5.00	4.90	4.20	.....	2.70	2.65
30.....	3.0	3.55	4.15	4.20	.....	4.10	5.05	4.87	4.15	.....	2.70	2.67
31.....	.....	.....	4.15	4.20	.....	4.15	.....	4.87	.....	.....	2.70	.....

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.									
1.....	2.68	2.85	3.08	3.3	3.5	4.0	4.2	4.0	4.0
2.....	2.70	2.86	3.08	3.3	3.5	4.0	4.2	4.0	4.0
3.....	2.74	2.85	3.08	3.3	3.5	4.0	4.2	4.0	4.0
4.....	2.75	2.86	3.08	3.3	3.5	4.1	4.2	4.0	4.0
5.....	2.74	2.89	3.08	3.3	3.5	4.1	4.2	4.0	4.0
6.....	2.74	2.88	3.09	3.3	3.5	4.0	4.2	4.0	4.0
7.....	2.74	2.90	3.08	3.3	3.6	4.2	4.2	4.1	4.0
8.....	2.74	2.91	3.07	3.4	3.6	4.1	4.0	4.0	4.0
9.....	2.74	2.90	3.09	3.4	3.6	4.0	4.0	4.0	4.0
10.....	2.74	2.89	3.10	3.4	3.6	4.1	4.1	4.0	4.0
11.....	2.74	2.90	3.08	3.4	3.6	4.1	4.1	4.0	4.0
12.....	2.74	2.91	3.07	3.4	3.7	4.1	4.0	4.0	4.0
13.....	2.73	2.92	3.08	3.4	3.7	4.1	4.0	4.0	4.0
14.....	2.94	2.93	3.08	3.4	3.7	4.2	4.0	4.0	4.0
15.....	2.74	.....	3.09	3.4	3.7	4.2	4.0	3.8	4.0
16.....	2.73	.....	3.09	3.4	3.8	4.2	4.1	3.8	4.0
17.....	2.74	.....	3.11	3.4	3.8	4.2	4.0	4.0	4.0
18.....	2.74	.....	3.12	3.4	3.8	4.2	4.1	4.0	4.0
19.....	2.75	.....	3.13	3.4	3.8	4.1	4.1	.....	4.0
20.....	2.79	.....	3.16	3.4	3.8	4.1	4.1	.....	4.0
21.....	2.80	.....	3.18	3.4	3.9	4.1	4.1	.....	4.0
22.....	2.80	.....	3.20	3.4	4.0	4.2	4.0	.....	4.0
23.....	2.81	.....	3.23	3.4	4.0	4.2	4.0	.....	.....
24.....	2.80	.....	3.25	3.5	3.9	4.2	4.0	.....	.....
25.....	2.79	3.08	3.24	3.5	3.9	4.2	4.1	.....	.....
26.....	2.80	3.09	3.25	3.5	4.0	4.2	4.0	3.9	.....
27.....	2.81	3.10	3.23	3.5	4.0	4.1	4.0	4.0	.....
28.....	2.81	3.09	.....	3.5	4.0	4.2	3.5	4.0	.....
29.....	2.82	3.08	.....	3.5	4.0	4.1	3.8	4.0	.....
30.....	2.84	3.09	.....	3.5	.....	4.0	4.2	4.0	.....
31.....	2.85	.....	.....	3.5	.....	.....	.....	4.0	.....

Gage at foot of rapids.

Day.	Mar.	Apr.	May.	June.	Day.	Mar.	Apr.	May.	June.
1908.					1908.				
1.....	.....	2.82	2.00	2.48	16.....	2.75	2.65	2.55	.....
2.....	.....	2.80	2.70	.....	17.....	2.81	2.53	2.25	.....
3.....	.....	3.20	.....	2.60	18.....	2.65	2.65	2.60	.....
4.....	.....	2.80	2.65	2.40	19.....	2.70	2.70	2.50	.....
5.....	.....	.....	2.60	2.40	20.....	2.80	2.74	2.54	.....
6.....	.....	.....	2.30	2.22	21.....	2.70	2.60	2.58	.....
7.....	.....	.....	2.55	2.25	22.....	2.70	2.62	.....	.....
8.....	.....	2.80	2.63	.....	23.....	2.63	.....	2.55	.....
9.....	2.65	2.72	2.68	.....	24.....	.....	2.90	2.60	.....
10.....	.....	.....	2.60	.....	25.....	2.85	2.75	2.66	.....
11.....	2.65	2.74	2.75	.....	26.....	2.85	2.74	2.54	.....
12.....	2.68	.....	2.70	.....	27.....	.....	2.84	2.46	.....
13.....	2.60	.....	2.54	.....	28.....	2.83	.....	2.60	.....
14.....	2.66	2.66	2.40	.....	29.....	.....	2.65	2.75	.....
15.....	.....	2.60	.....	.....	30.....	2.92	.....	2.68	.....
					31.....	2.90	.....	2.45	.....

Daily gage height, in feet, of Link River at Klamath Falls, Oreg., for 1904-1912—Contd.

Friez automatic gage.

Day.	June.	July.	Aug.	Sept.	Day.	June.	July.	Aug.	Sept.			
1908.					1908.							
1.....		1.63	1.21	0.80	16.....	1.90	1.38	1.00	1.00			
2.....		1.64	1.22	.77	17.....	1.86	1.40	1.01	.90			
3.....		1.58	1.16	.76	18.....	1.90	1.37	1.00	.90			
4.....		1.62	1.16	.74	19.....	1.82	1.35	1.02	.95			
5.....		1.58	1.15	.80	20.....	1.52	1.30	1.02	.97			
6.....	1.84	1.54	1.13	.80	21.....	1.72	1.36	1.02	.96			
7.....	1.84	1.46	1.10	.91	22.....	1.68	1.30	1.03	.98			
8.....	1.84	1.46	1.08	.86	23.....		1.30	1.02	1.16			
9.....	1.82	1.46	1.10	.86	24.....		1.30	1.10	1.10			
10.....	1.80	1.46	1.08	.86	25.....		1.34	.90	1.00			
11.....	1.80	1.42	1.06	.83	26.....		1.30	.87	.94			
12.....	1.78	1.40	1.13	.87	27.....	1.78	1.26	.87	.93			
13.....	1.77	1.36	1.16	.90	28.....	1.68	1.22	.85	.94			
14.....	1.80	1.42	1.08	.89	29.....	1.65	1.25	.98	.94			
15.....	1.86	1.50	1.02	.94	30.....	1.66	1.17	.80	.96			
					31.....		1.14	.80				
Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1908-9.												
1.....	1.20		1.90	1.68	2.10	2.75		2.46	2.25	1.60	1.25	0.95
2.....	1.30	1.55	1.95	1.69	2.00	2.80		2.45	2.25	1.55	1.12	.95
3.....	1.05	1.62	1.95	1.70	2.70			2.44	2.24	1.65	1.14	.92
4.....	1.00	1.60	1.90	1.71	2.60			2.60	2.32	1.70	1.15	.95
5.....	.96	1.62	1.79	1.82	2.70			2.43	2.30	1.58	1.23	.95
6.....	.98	1.64	1.68	1.85	2.50	2.90		2.48	2.25	1.60	1.23	.93
7.....	.96	1.64	1.70	1.85	2.75	2.90		2.43		1.48	1.10	.92
8.....	.94		1.75	1.85	2.75	2.98		2.40		1.51	1.10	.92
9.....	1.00		1.65	2.05	2.73	3.00		2.42		1.52	.93	1.03
10.....	1.16		1.60	1.98	2.73	3.00		2.40		1.49	.92	1.12
11.....	1.35		1.65	1.97	2.72	2.95	2.70	2.45		1.54	.96	.98
12.....	1.30		1.75	1.96	2.70	2.95	2.65	2.37		1.52	1.04	.98
13.....	1.20			1.96		2.88	2.68	2.38		1.55	.98	.95
14.....	.80		1.70		2.65	2.75	2.68	2.38		1.58	1.00	.95
15.....	.58		1.70	2.05	2.65	2.80	2.65	2.38		1.46	1.02	.90
16.....	.62		1.55	2.12	2.75	2.75	2.60			1.48	.98	1.00
17.....	.70		1.70	2.12	2.70	2.85	2.60			1.48	1.00	1.00
18.....		1.62	1.70	2.13	2.68	2.70	2.75	2.40		1.48	1.02	.95
19.....	1.95		1.70	2.08	2.75	2.70	2.80	2.44	2.00	1.38	1.00	1.00
20.....	1.92		1.70	1.92	2.75	2.10	2.80	2.42	1.90	1.24	1.13	1.05
21.....	1.52	1.60	1.72	2.15	3.10	2.65	2.64	2.38	1.85	1.28	1.00	.92
22.....	1.58	1.65	1.73		2.88	2.70	2.57	2.30	1.79	1.30	1.08	.88
23.....	1.59	1.65	1.74	2.50	2.70	2.65	2.58	2.28	1.81	1.34	.97	.70
24.....	1.60	1.65	1.73	2.25	2.70	2.65		2.25	1.86	1.35	.97	.71
25.....	1.62	1.60	1.72	2.40	2.93	2.70		2.32	1.76	1.38	.94	.91
26.....	1.62	1.52		2.65	2.92	2.68		2.33	1.71	1.40	1.03	1.05
27.....	1.60	1.54		2.68	2.88	2.69	2.60	2.30	1.80	1.25	1.08	.92
28.....	1.54	1.58		2.67	2.85		2.60	2.18	1.58	1.14	.85	.75
29.....	1.35	1.65		2.48			2.50	2.15	.80	1.12	.95	.90
30.....	1.56	1.62	1.70	2.40			2.48	2.19	1.57	1.08	.90	.88
31.....	1.56		1.69	2.10				2.21		1.20	.90	
1909-10.												
1.....	1.05	1.24		2.42	2.27	2.36	3.30	2.80	2.75	1.90	1.15	0.90
2.....	1.00	1.34		2.40	2.24	2.48	3.55	2.78	2.48	1.90	1.10	.91
3.....	.98	1.36		2.37	2.24	2.55	3.35	2.80	2.51	2.20	1.00	1.00
4.....	.90	1.36		2.34	2.24	2.65	3.32	2.71	2.55	2.15	1.10	.92
5.....	.93	1.37		2.31	2.04	2.75	3.35	2.72	2.46	2.15	.98	.89
6.....	1.20		2.60	2.28	2.04	2.84	3.25	2.68	2.50	2.20	1.08	.98
7.....	.90	1.10	2.59	2.28	2.04	2.89	3.22	2.48	2.45	2.35	1.02	1.00
8.....	.90	1.30	2.59	2.37	2.03	2.97	3.22	2.40	2.41	2.32	1.02	.88
9.....	1.20	1.40	2.59	2.36	2.03	3.01	2.78	2.15	2.41	2.35	.95	.88
10.....	1.22	1.65	2.60	2.35	2.02	3.05	3.05	2.17	2.60	2.35	.95	.95
11.....	1.30			2.31	2.02	3.08	3.22	2.25	2.70	2.52	.93	1.08
12.....	1.30			2.20	2.07	3.14	3.22	2.28	2.56	2.50	1.02	.99
13.....	1.44			2.18	2.08	3.15	3.15	2.26	2.60	2.42	1.08	.80
14.....	1.42			2.18	2.10	3.15	3.10	2.29	2.20	2.05	1.03	.89
15.....	1.40			2.18	2.09	3.17	3.08	2.25	2.05	2.20	1.06	.87

Daily gage height, in feet, of Link River at Klamath Falls, Oreg., for 1904-1912—Contd.

Friez automatic gage.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909-10.												
16.	0.95	-----	-----	2.15	2.06	3.19	3.10	2.20	1.76	2.40	1.08	0.85
17.	.90	-----	-----	2.12	2.05	3.18	3.06	2.40	1.65	2.70	.98	.98
18.	.70	-----	2.60	2.12	2.08	2.95	2.90	2.70	1.50	2.45	.85	1.22
19.	.80	-----	2.58	2.11	2.10	3.18	3.10	2.65	1.43	2.20	.80	1.19
20.	.75	-----	2.56	2.08	2.10	3.24	3.08	2.53	1.65	1.60	.75	.89
21.	1.10	-----	2.54	2.09	2.07	3.28	3.04	2.53	1.80	1.25	.88	.88
22.	1.20	-----	2.53	2.14	2.06	3.42	2.98	2.53	1.85	1.22	.88	.92
23.	1.20	-----	2.51	2.14	2.06	3.40	2.92	2.35	1.95	1.20	.94	.98
24.	-----	-----	2.50	2.13	2.15	3.45	2.80	2.58	1.90	1.20	1.20	1.02
25.	-----	-----	-----	2.17	2.15	3.25	2.85	2.45	2.00	1.20	.91	1.10
26.	-----	-----	-----	2.18	2.13	3.20	2.90	2.38	2.20	1.20	.82	1.02
27.	-----	-----	2.50	2.19	2.20	3.50	2.95	2.47	2.24	1.20	.90	1.00
28.	-----	-----	2.40	2.21	2.30	3.45	2.86	2.22	2.60	1.10	.91	1.00
29.	1.20	-----	2.38	2.25	-----	3.40	2.89	2.45	2.40	1.06	1.10	1.02
30.	1.05	-----	2.38	2.26	-----	3.41	2.88	2.45	2.10	1.10	.88	1.00
31.	1.15	-----	2.40	2.33	-----	3.40	-----	2.65	-----	1.10	.90	-----
1910-11.												
1.	1.02	-----	1.71	2.28	1.95	1.66	3.15	3.48	-----	2.20	1.57	-----
2.	1.20	-----	1.70	2.25	1.94	1.62	3.18	3.63	-----	2.20	1.53	-----
3.	1.00	-----	2.05	2.22	1.64	1.61	3.09	3.40	-----	2.21	1.53	0.99
4.	1.09	-----	2.09	2.20	1.47	1.72	-----	2.72	-----	2.21	1.70	1.15
5.	1.10	1.00	2.11	2.19	1.48	1.72	-----	2.90	-----	-----	1.62	1.09
6.	1.11	.96	2.09	2.18	1.49	1.73	-----	-----	-----	-----	-----	.98
7.	1.09	1.10	2.11	2.16	1.49	1.77	-----	-----	-----	-----	-----	1.02
8.	1.10	1.00	2.15	2.15	1.49	1.55	-----	3.05	-----	1.80	-----	1.01
9.	1.08	.98	2.24	2.14	1.55	1.50	-----	3.08	-----	1.80	-----	1.05
10.	.98	1.30	2.26	2.14	1.61	1.50	-----	3.06	-----	1.90	-----	-----
11.	1.05	1.49	2.28	2.18	1.70	1.51	-----	3.13	-----	1.90	1.20	.89
12.	1.21	1.46	2.30	2.18	1.71	1.50	-----	3.10	-----	-----	-----	.89
13.	1.28	1.45	2.32	2.16	1.71	1.85	-----	3.15	-----	-----	-----	1.02
14.	1.35	1.39	2.34	2.14	1.71	1.90	-----	3.15	-----	-----	1.20	.98
15.	1.28	1.34	2.40	2.15	1.70	2.15	-----	3.05	-----	-----	1.18	.95
16.	1.28	1.33	2.58	-----	1.70	2.40	-----	2.98	-----	-----	1.15	1.03
17.	1.35	1.38	2.61	-----	1.70	2.45	-----	2.96	-----	-----	1.18	-----
18.	1.35	1.37	2.48	-----	1.70	-----	-----	-----	-----	-----	1.16	-----
19.	1.28	1.35	2.45	-----	1.70	-----	-----	2.89	2.50	-----	1.18	-----
20.	1.28	1.39	2.45	-----	1.70	-----	-----	2.93	2.35	-----	1.13	-----
21.	1.29	1.45	2.40	2.10	1.70	-----	-----	3.05	2.25	-----	1.13	-----
22.	1.22	1.50	2.39	2.10	1.68	-----	-----	3.12	2.32	1.60	1.02	-----
23.	1.19	1.73	2.34	2.09	1.67	-----	-----	3.05	2.31	1.45	1.05	-----
24.	1.14	1.72	2.38	2.05	1.67	-----	-----	3.05	2.24	1.05	.99	-----
25.	1.21	1.68	2.35	2.07	1.68	3.00	-----	-----	2.21	1.30	.97	-----
26.	1.28	1.45	2.32	2.06	1.71	3.05	-----	-----	2.38	1.25	1.09	1.04
27.	1.12	1.60	2.31	2.05	1.70	3.10	-----	-----	2.42	1.29	1.01	1.08
28.	1.10	1.71	2.29	2.07	1.69	3.18	-----	-----	2.48	1.37	1.03	1.06
29.	1.10	1.79	2.28	1.96	-----	3.25	3.65	-----	2.37	1.39	1.01	1.10
30.	1.08	1.80	2.30	1.96	-----	3.30	3.50	-----	2.25	1.45	.98	-----
31.	1.09	-----	2.32	1.94	-----	3.35	-----	-----	-----	1.57	1.10	-----

Daily gage height, in feet, of Link River at Klamath Falls, Oreg., for 1904-1912—Contd.

Friez automatic gage.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.									
1.....		1.16				2.20	2.25	1.88	1.99
2.....		1.16	1.58			2.12	2.05	1.98	2.05
3.....	1.21	1.16	1.65		1.71	2.10	2.18	1.93	2.00
4.....	1.30	1.12			1.70	1.95	2.28	1.91	1.96
5.....	1.22	1.10			1.70	1.90	2.17	1.97	1.96
6.....	1.22	1.08			1.68	1.95	2.17	1.88	1.90
7.....	1.10	1.10			1.65	2.05	2.09	1.86	1.88
8.....		1.13			1.65	2.07	2.12	1.90	1.85
9.....	1.25		1.38		1.65	2.49	2.12	1.92	1.97
10.....	1.24		1.37	1.30	1.68	2.35	2.22	1.92	1.90
11.....	1.22	1.28	1.40	1.31	1.73	2.21	2.20	1.85	1.85
12.....	1.20	1.20	1.39	1.38	1.70	2.45	2.18	1.83	1.80
13.....		1.18	1.38	1.47	1.66	2.36	2.17	1.78	1.90
14.....		1.31	1.38	1.48	1.72	2.15	2.20	1.70	2.00
15.....	1.12	1.62	1.38	1.48	1.65	2.28	2.23	1.80	1.96
16.....	1.05	1.50	1.38	1.50	1.73	2.25	2.29	1.83	1.89
17.....	1.13		1.37	1.50	1.98	2.32	2.30	1.84	1.85
18.....	1.18	1.50	1.35	1.50	1.95	2.45	2.58	1.80	1.67
19.....	1.12	1.51	1.36	1.50	1.86	2.33	2.20	1.82	1.90
20.....	1.10	1.65	1.34	1.48	2.00	2.38	2.12	1.82	1.89
21.....	1.00	1.52	1.33	1.47	1.93	2.31	1.89	1.80	1.95
22.....	1.03	1.49	1.33	1.47	2.30	2.28	1.70	1.90	1.80
23.....	1.02	1.49		1.41	2.20	2.31	1.90	1.85	1.87
24.....	1.10	1.50		1.48	2.10	2.29	1.90	1.85	1.89
25.....	1.30	1.54		1.50	2.10	2.29	1.89	1.85	1.79
26.....	1.20	1.56		1.50	2.08	2.25	1.81	1.88	1.88
27.....	1.05				2.10	2.20	1.77	1.98	1.97
28.....	1.10				2.15	2.41	1.45	2.05	1.97
29.....	1.06				2.18	2.42	1.64	1.99	
30.....	1.12					2.25	1.60	1.98	
31.....	1.18					2.30		2.00	

Rating tables for Link River at Klamath Falls, Oreg.

Gage at bridge, May 15, 1904, to December 31, 1908.

Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.
Feet.	Sec.-ft.	Feet.	Sec.-ft.	Feet.	Sec.-ft.	Feet.	Sec.-ft.
2.40	935	3.50	1,800	4.60	3,400	5.70	5,570
2.50	985	3.60	1,920	4.70	3,580	5.80	5,790
2.60	1,035	3.70	2,045	4.80	3,770	5.90	6,020
2.70	1,090	3.80	2,175	4.90	3,960	6.00	6,250
2.80	1,150	3.90	2,310	5.00	4,150	6.20	6,710
2.90	1,220	4.00	2,450	5.10	4,340	6.40	7,180
3.00	1,300	4.10	2,590	5.20	4,530	6.60	7,660
3.10	1,390	4.20	2,740	5.30	4,730	6.80	8,140
3.20	1,485	4.30	2,900	5.40	4,930		
3.30	1,585	4.40	3,060	5.50	5,140		
3.40	1,690	4.50	3,230	5.60	5,350		

NOTE.—This table is not applicable for ice or obstructed channel conditions. It is based on discharge measurements made during 1904 to 1908 and is not well defined.

Friez automatic gage, June 6 to December 31, 1908.

0.60	625	1.00	994	1.40	1,474	1.80	2,036
.70	703	1.10	1,106	1.50	1,612	1.90	2,184
.80	792	1.20	1,224	1.60	1,750	2.00	2,332
.90	888	1.30	1,344	1.70	1,892		

NOTE.—Table applicable only for open channel. It is based on eighteen discharge measurements made during 1908 and is well defined.

Daily discharge, in second-feet, of Link River at Klamath Falls, Oreg., for 1908-1910.

Day.	Mar.	Apr.	May.	June.	Day.	Mar.	Apr.	May.	June.
1908.					1908.				
1.....		3,290	2,690	2,510	16.....	2,610	2,670	2,430	.....
2.....		3,170	2,670	2,530	17.....	2,590	2,560	2,380	.....
3.....		3,230	2,670	2,420	18.....	2,780	2,650	2,300	.....
4.....		3,450	2,720	2,260	19.....	2,670	2,860	2,520	.....
5.....		3,230	2,730	2,130	20.....	2,650	2,710	2,490	.....
6.....		3,410	2,620	.....	21.....	2,760	2,690	2,750	.....
7.....	2,600	3,540	2,610	.....	22.....	2,650	2,700	2,640	.....
8.....	2,610	3,250	2,970	.....	23.....	2,650	2,640	2,580	.....
9.....	2,620	3,050	2,770	.....	24.....	2,570	2,960	2,880	.....
10.....	2,530	2,870	2,600	.....	25.....	2,700	3,000	2,900	.....
11.....	2,580	3,020	2,600	.....	26.....	3,020	2,970	2,570	.....
12.....	2,630	3,050	2,750	.....	27.....	3,100	3,180	2,550	.....
13.....	2,380	2,960	2,540	.....	28.....	3,120	3,180	2,470	.....
14.....	2,530	3,020	2,230	.....	29.....	2,970	3,000	2,620	.....
15.....	2,440	2,770	2,380	.....	30.....	3,070	2,670	2,790	.....
					31.....	3,180	.....	2,660	.....

NOTE.—Daily discharge computed from the gage heights at the bridge, taking into account also the readings of the taffrail log and the direction and force of the wind.

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909.									
1.....	1,860	2,530	3,670	3,560	3,150	2,780	1,750	1,280	941
2.....	1,880	2,360	3,760	3,570	3,130	2,780	1,680	1,130	941
3.....	1,890	3,580	3,810	3,570	3,110	2,770	1,820	1,150	909
4.....	1,900	3,400	3,860	3,570	3,400	2,900	1,890	1,170	941
5.....	2,070	3,580	3,900	3,570	3,090	2,870	1,720	1,260	941
6.....	2,120	3,220	3,950	3,570	3,180	2,780	1,750	1,260	920
7.....	2,120	3,670	3,950	3,580	3,090	2,740	1,580	1,110	909
8.....	2,120	3,670	4,100	3,580	3,040	2,700	1,630	1,110	909
9.....	2,440	3,630	4,140	3,580	3,080	2,660	1,640	920	1,030
10.....	2,330	3,630	4,140	3,580	3,040	2,630	1,600	909	1,130
11.....	2,310	3,620	4,040	3,580	3,130	2,600	1,670	952	973
12.....	2,300	3,580	4,040	3,490	2,990	2,570	1,640	1,040	973
13.....	2,300	3,540	3,910	3,540	3,010	2,540	1,680	973	941
14.....	2,370	3,490	3,670	3,540	3,010	2,510	1,720	994	941
15.....	2,440	3,490	3,760	3,490	3,010	2,480	1,560	1,020	888
16.....	2,560	3,670	3,670	3,400	3,020	2,450	1,580	973	994
17.....	2,560	3,580	3,860	3,400	3,030	2,420	1,580	994	994
18.....	2,580	3,540	3,580	3,670	3,040	2,390	1,580	1,020	941
19.....	2,500	3,670	3,580	3,760	3,110	2,360	1,450	994	994
20.....	2,230	3,670	2,530	3,760	3,080	2,200	1,270	1,140	1,050
21.....	2,620	4,340	3,490	3,470	3,010	2,120	1,320	994	909
22.....	2,920	3,910	3,580	3,350	2,870	2,020	1,340	1,080	869
23.....	3,220	3,580	3,490	3,360	2,840	2,060	1,400	962	703
24.....	2,780	3,580	3,490	3,370	2,780	2,140	1,410	962	712
25.....	3,040	4,010	3,580	3,380	2,900	1,980	1,450	930	899
26.....	3,490	3,990	3,540	3,390	2,920	1,900	1,470	1,030	1,050
27.....	3,540	3,910	3,560	3,400	2,870	2,040	1,280	1,080	909
28.....	3,530	3,860	3,560	3,400	2,670	1,720	1,150	840	748
29.....	3,180	.....	3,560	3,220	2,620	1,792	1,130	941	888
30.....	3,040	.....	3,560	3,180	2,680	1,710	1,080	888	869
31.....	2,530	.....	3,560	.....	2,720	.....	1,220	888	.....

Daily discharge, in second-feet, of Link River at Klamath Falls, Oreg., for 1908-1910—
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909-10.												
1.....	1,050	1,270	2,510	2,900	2,740	3,140	4,930	4,240	2,660	1,640	1,120	1,010
2.....	994	1,400	2,710	2,820	2,900	3,140	5,570	4,240	2,590	1,640	1,120	1,010
3.....	973	1,420	2,710	2,820	2,900	3,230	4,930	4,340	2,590	1,800	1,150	1,040
4.....	888	1,420	2,740	2,820	2,820	3,320	4,930	4,340	2,660	1,640	1,150	1,040
5.....	920	1,440	2,770	2,820	2,740	3,400	4,930	4,240	2,590	1,580	1,120	1,040
6.....	1,220	1,280	2,790	2,820	2,740	3,490	4,830	4,240	2,590	1,580	1,090	1,010
7.....	888	1,110	2,930	2,820	2,740	3,580	4,830	4,150	2,450	1,540	1,120	1,010
8.....	888	1,480	2,930	2,820	2,740	3,680	4,930	4,060	2,450	1,480	1,120	1,040
9.....	1,220	1,340	2,930	2,820	2,820	3,680	4,930	4,060	2,450	1,480	1,120	1,040
10.....	1,250	1,310	2,930	2,820	2,740	3,860	4,930	3,960	2,450	1,480	1,120	1,010
11.....	1,340	1,340	2,930	2,820	2,740	3,960	4,930	3,680	2,450	1,480	1,090	1,040
12.....	1,340	1,340	2,960	3,060	2,740	3,960	4,830	3,680	2,450	1,480	1,060	1,040
13.....	1,530	1,340	2,960	3,060	2,820	4,060	4,830	3,320	2,450	1,480	1,060	1,040
14.....	1,500	1,350	2,900	2,900	2,740	4,150	4,730	3,140	2,380	1,440	1,060	1,010
15.....	1,470	1,350	2,920	2,820	2,740	4,150	4,730	3,140	2,240	1,440	1,040	1,010
16.....	941	1,380	2,850	2,740	2,740	4,240	4,730	3,320	2,110	1,340	1,040	1,040
17.....	888	1,380	2,800	2,740	2,820	4,240	4,830	3,230	2,180	1,300	1,060	1,010
18.....	703	1,380	2,790	2,660	2,740	4,530	4,930	3,320	2,180	1,300	1,060	1,010
19.....	792	1,440	2,820	2,740	2,740	4,440	4,830	3,230	2,180	1,300	1,040	1,090
20.....	748	1,670	2,800	2,740	2,820	4,440	4,730	3,230	1,920	1,300	1,040	1,060
21.....	1,110	1,710	2,790	2,660	2,900	4,530	4,630	3,140	1,860	1,340	1,040	1,040
22.....	1,220	1,850	2,790	2,740	2,820	4,530	4,630	3,140	1,860	1,260	1,040	1,040
23.....	1,220	1,930	2,790	2,740	2,820	4,730	4,630	3,140	1,800	1,260	1,010	1,040
24.....	1,220	2,000	2,800	2,820	2,900	4,730	4,530	3,140	1,800	1,260	1,010	1,040
25.....	1,220	2,060	2,770	2,900	2,980	4,830	4,730	2,980	1,800	1,260	1,010	1,040
26.....	1,220	2,150	2,760	2,820	2,900	4,930	4,440	2,980	1,800	1,220	1,040	1,040
27.....	1,220	2,230	2,740	2,740	2,900	4,930	4,630	2,820	1,740	1,220	1,010	1,040
28.....	1,220	2,300	2,740	2,740	3,140	4,830	4,440	2,740	1,800	1,220	1,040	1,060
29.....	1,220	2,370	2,740	2,740	.....	4,930	4,240	2,660	1,740	1,220	1,040	1,040
30.....	1,050	2,440	2,800	2,820	.....	4,930	4,340	2,590	1,740	1,220	1,040	1,040
31.....	1,160	.....	2,840	2,740	.....	4,930	.....	2,740	.....	1,180	1,040	.....

Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.
1910.				1910.				1910.			
1.....	1,040	1,340	1,980	11.....	1,220	1,300	2,380	21.....	1,260	1,540	2,660
2.....	1,090	1,440	1,980	12.....	1,300	1,300	2,380	22.....	1,300	1,440	2,660
3.....	1,090	1,260	2,040	13.....	1,220	1,340	2,380	23.....	1,260	1,090	2,660
4.....	1,060	1,260	1,980	14.....	1,180	1,340	2,450	24.....	1,260	1,740	2,590
5.....	1,120	1,260	2,040	15.....	1,180	1,390	2,450	25.....	1,300	1,090	2,660
6.....	1,120	1,220	2,110	16.....	1,180	1,340	2,450	26.....	1,300	1,740	2,520
7.....	1,120	1,300	2,110	17.....	1,220	1,390	2,740	27.....	1,300	1,860	2,450
8.....	1,120	1,440	2,180	18.....	1,220	1,440	2,590	28.....	1,300	1,800	2,660
9.....	1,180	1,360	2,380	19.....	1,300	1,390	2,590	29.....	1,300	1,860	2,590
10.....	1,180	1,540	2,380	20.....	1,260	1,390	2,590	30.....	1,300	1,860	2,660
								31.....	1,320	.....	2,660

NOTE.—Discharge Jan. 1 to Nov. 7, 1909, based on automatic gage and fairly well defined rating curve. Discharge Nov. 8, 1909, to Dec. 31, 1910, based on gage at bridge and poorly defined rating curve. Condition became so bad in 1911 that no discharge was computed.

Monthly discharge of Link River at Klamath Falls, Oreg., for 1904-1910.

[Drainage area, 3,110 square miles.]

Month.	Discharge in second-feet.				Run-off.		Accu- racy.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.	Total in acre-feet.	
1904.							
May 15-31.....	9,015	8,140	8,640	2.78	1.76	291,300	
June.....	8,140	5,245	6,740	2.17	2.42	401,100	
July.....	5,140	3,060	4,123	1.33	1.53	253,500	
August.....	2,980	1,860	2,336	.751	.87	143,600	
September.....	1,800	1,535	1,662	.535	.60	98,900	
1904-5.							
October.....	1,745	1,585	1,686	.542	.62	103,700	
November.....	1,982	1,745	1,837	.591	.66	109,300	
December.....	2,520	1,860	2,185	.702	.81	134,400	
January.....	2,740	2,590	2,624	.844	.97	161,300	
February.....	3,230	2,740	3,103	.998	1.04	172,300	
March.....	3,400	3,060	3,087	.992	1.14	189,800	
April.....	3,230	2,820	3,106	.999	1.11	184,800	
May.....	2,740	2,380	2,597	.835	.96	159,700	
June.....	2,380	1,638	2,004	.645	.72	119,200	
July.....	1,745	1,138	1,363	.438	.50	83,810	
August.....	1,144	985	1,051	.338	.39	64,620	
September.....	1,062	985	1,033	.332	.37	61,290	
The year.....	3,400	985	2,140	.688	9.29	1,540,000	
1905-6.							
October.....	1,260	1,062	1,159	.372	.43	71,260	
November.....	1,690	1,150	1,330	.428	.48	79,140	
December.....	1,860	1,485	1,587	.510	.59	100,800	
January.....	2,240	1,690	1,950	.627	.72	120,000	
February.....	2,240	1,920	1,990	.640	.67	111,000	
March.....	2,740	2,040	2,320	.746	.86	143,000	
April.....	4,340	2,740	3,520	1.13	1.26	209,000	
May.....	4,440	3,770	4,080	1.31	1.51	251,000	
June.....	4,150	3,140	3,620	1.17	1.30	215,000	
July.....	3,060	1,860	2,490	.800	.92	153,000	
August.....	1,800	1,220	1,470	.473	.55	90,400	
September.....	1,260	1,150	1,190	.383	.43	70,800	
The year.....	4,440	1,062	2,230	.717	9.72	1,610,000	
1906-7.							
October.....	1,300	1,150	1,200	.386	.44	73,800	
November.....	1,690	1,260	1,460	.470	.52	86,900	
December.....	1,920	1,540	1,740	.560	.65	107,000	
January.....	2,310	1,920	2,190	.704	.81	135,000	
February.....	4,240	2,310	3,530	1.14	1.19	196,000	C.
March.....	5,390	4,150	4,650	1.50	1.73	286,000	C.
April.....	5,790	5,350	5,630	1.81	2.02	335,000	C.
May.....	5,570	4,630	5,090	1.64	1.89	313,000	C.
June.....	7,710	3,260	4,020	1.29	1.44	239,000	C.
July.....	3,140	1,920	2,470	.794	.92	152,000	C.
August.....	1,860	1,440	1,570	.505	.58	96,500	C.
September.....	1,470	1,370	1,410	.454	.51	83,900	C.
The year.....	7,710	1,150	2,910	.937	12.70	2,100,000	
1907-8.							
October.....	1,580	1,390	1,460	.470	.54	89,800	C.
November.....	1,710	1,560	1,630	.524	.58	97,000	C.
December.....	2,480	1,690	1,970	.634	.73	121,000	C.
January.....	2,820	2,450	2,660	.855	.99	164,000	C.
February.....	3,230	2,740	2,890	.929	1.00	166,000	C.
March.....	3,180	2,380	2,730	.878	1.01	168,000	B.
April.....	3,540	2,560	2,990	.962	1.07	178,000	B.
May.....	2,970	2,230	2,620	.842	.97	161,000	B.
June.....	2,530	1,640	2,060	.662	.74	123,000	A.
July.....	1,810	1,150	1,470	.473	.55	90,400	A.
August.....	1,250	792	1,040	.335	.39	64,000	A.
September.....	1,180	739	900	.290	.32	53,600	A.
The year.....	3,540	739	2,040	.655	8.89	1,480,000	

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Monthly discharge of Link River at Klamath Falls, Oreg., for 1904-1910—Continued.

Month.	Discharge in second-feet.				Run-off.		Accu- racy.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.	Total in acre-feet.	
1908-9.							
October.....	2,260	612	1,350	0.434	0.50	83,000	A.
November.....	1,820	1,640	1,770	.569	.63	105,000	A.
December.....	2,260	1,680	1,940	.624	.72	119,000	A.
January.....	3,540	1,860	2,540	.817	.94	156,000	A.
February.....	4,340	2,360	3,580	1.15	1.20	199,000	B.
March.....	4,140	2,530	3,710	1.19	1.37	228,000	B.
April.....	3,760	3,180	3,500	1.12	1.25	208,000	B.
May.....	3,400	2,620	2,990	.961	1.11	184,000	A.
June.....	2,900	792	2,350	.756	.84	140,000	B.
July.....	1,890	1,080	1,520	.489	.56	93,500	A.
August.....	1,280	840	1,030	.331	.38	63,300	A.
September.....	1,130	703	927	.298	.33	55,200	A.
The year.....	4,340	612	2,270	.730	9.83	1,630,000	
1909-10.							
October.....	1,530	703	1,120	.360	.42	68,900	A.
November.....	2,440	1,110	1,620	.521	.58	96,400	C.
December.....	2,960	2,510	2,810	.904	1.04	173,000	C.
January.....	3,060	2,660	2,810	.904	1.04	173,000	C.
February.....	3,140	2,740	2,820	.907	.94	157,000	C.
March.....	4,930	3,140	4,180	1.34	1.54	257,000	C.
April.....	5,570	4,240	4,770	1.53	1.71	284,000	C.
May.....	4,340	2,590	3,460	1.11	1.28	213,000	C.
June.....	2,660	1,740	2,200	.707	.79	131,000	C.
July.....	1,800	1,180	1,400	.450	.52	86,100	C.
August.....	1,150	1,010	1,070	.344	.40	65,800	C.
September.....	1,090	1,010	1,030	.331	.37	61,300	C.
The year.....	5,570	703	2,440	.785	10.63	1,770,000	
1910.							
October.....	1,320	1,040	1,210	.389	.45	74,400	C.
November.....	1,860	1,220	1,480	.476	.53	88,100	C.
December.....	2,740	1,980	2,420	.778	.90	149,000	C.

Discharge measurements of Moore Bros. flume near Klamath Falls, Oreg., in 1910-11.

Date.		Discharge.	Date.		Discharge.
1910.		Sec.-ft.	1911.		Sec.-ft.
June 9.....		133	Sept. 25.....		214
13.....		130	26.....		210
			Nov. 22.....		213
			24.....		200
July 28.....		135	27.....		200

LOWER KLAMATH LAKE NEAR BROWNELL, CAL.

Lower Klamath Lake is connected with Klamath River by the Klamath Straits. The Southern Pacific Co. has constructed a railroad through the marshes parallel to Klamath River. The embankment which crosses Klamath Straits is provided with gates whereby the surface flow can be regulated.

A gage was established in Lower Klamath Lake near Brownell, Cal., January 23, 1907. The elevation of the zero of the gage is 4,082.50 feet above sea level, and all gage heights have been referred to this datum. The normal area of the lake is 21,000 acres.

Daily gage height, in feet, of Lower Klamath Lake near Brownell, Cal., for 1907-1909.

Day.	Jan	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1907.									
1.....		3.0	3.9	4.3	4.7	4.3	3.8	2.8	2.4
2.....		3.0	3.9	4.4	4.7	4.3	3.8	2.7	2.4
3.....		3.1	3.9	4.4	4.8	4.3	3.7	2.7	2.4
4.....		3.2	3.9	4.4	4.8	4.3	3.7	2.6	2.4
5.....		3.2	3.9	4.4	4.7	4.3	3.6	2.6	2.4
6.....		3.2	3.9	4.5	4.6	4.3	3.6	2.6	2.4
7.....		3.3	4.0	4.5	4.7	4.2	3.5	2.6	2.4
8.....		3.3	4.0	4.5	4.6	4.2	3.5	2.6	2.4
9.....		3.3	4.0	4.4	4.5	4.2	3.5	2.6	2.4
10.....		3.3	4.0	4.4	4.5	4.2	3.4	2.6	2.4
11.....		3.3	4.0	4.4	4.6	4.2	3.4	2.6	2.3
12.....		3.4	4.0	4.4	4.6	4.2	3.4	2.6	2.3
13.....		3.4	4.0	4.4	4.5	4.2	3.4	2.6	2.3
14.....		3.4	4.0	4.5	4.5	4.2	3.4	2.6	2.3
15.....		3.4	4.1	4.6	4.4	4.1	3.4	2.6	2.3
16.....		3.4	4.1	4.6	4.5	4.1	3.4	2.6	2.3
17.....		3.5	4.1	4.6	4.5	4.1	3.4	2.6	2.3
18.....		3.5	4.1	4.7	4.3	4.1	3.3	2.6	2.3
19.....		3.6	4.1	4.7	4.4	4.1	3.3	2.5	2.3
20.....		3.7	4.1	4.7	4.4	4.1	3.2	2.5	2.3
21.....		3.7	4.1	4.7	4.3	4.1	3.2	2.5	2.3
22.....		3.7	4.1	4.7	4.4	4.1	3.2	2.5	2.3
23.....	2.9	3.8	4.1	4.7	4.4	4.1	3.2	2.5	2.3
24.....	2.9	3.7	4.1	4.7	4.4	4.1	3.1	2.5	2.3
25.....	2.9	3.8	4.1	4.7	4.4	4.0	3.1	2.5	2.3
26.....	2.9	3.8	4.2	4.7	4.4	4.0	3.0	2.5	2.3
27.....	2.9	3.8	4.3	4.7	4.4	3.9	3.0	2.5	2.3
28.....	2.9	3.8	4.3	4.7	4.4	3.8	3.0	2.5	2.3
29.....	2.9	3.8	4.3	4.7	4.4	3.8	3.0	2.5	2.3
30.....	2.9	3.8	4.3	4.7	4.3	3.8	2.9	2.5	2.3
31.....	3.0	3.8	4.3	4.7	4.3	3.8	2.9	2.5	2.3

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1907-8.												
1.....	2.3	2.1	2.6	2.8	3.2	3.3	3.3	3.2	3.1	2.5	2.1	1.7
2.....	2.3	2.1	2.6	2.8	3.2	3.3	3.3	3.2	3.1	2.5	2.1	1.7
3.....	2.3	2.1	2.6	2.8	3.2	3.3	3.3	3.2	3.1	2.5	2.1	1.7
4.....	2.3	2.2	2.6	2.8	3.3	3.3	3.3	3.2	3.1	2.5	2.1	1.7
5.....	2.3	2.3	2.6	2.8	3.3	3.4	3.3	3.2	3.0	2.5	2.0	1.7
6.....	2.3	2.3	2.6	2.8	3.3	3.4	3.3	3.2	3.0	2.5	2.0	1.7
7.....	2.3	2.4	2.6	2.8	3.4	3.4	3.3	3.2	3.0	2.5	2.0	1.7
8.....	2.3	2.4	2.6	2.8	3.4	3.4	3.3	3.2	3.0	2.5	1.9	1.7
9.....	2.3	2.4	2.6	2.8	3.4	3.4	3.3	3.2	3.0	2.5	1.9	1.7
10.....	2.3	2.4	2.6	2.8	3.4	3.4	3.3	3.2	3.0	2.4	1.9	1.6
11.....	2.3	2.4	2.6	2.8	3.4	3.4	3.3	3.2	3.0	2.4	1.9	1.6
12.....	2.3	2.4	2.6	2.9	3.4	3.4	3.3	3.1	2.9	2.4	1.9	1.6
13.....	2.3	2.4	2.6	2.9	3.4	3.4	3.3	3.1	2.9	2.4	1.9	1.6
14.....	2.3	2.5	2.6	3.0	3.4	3.4	3.3	3.1	2.9	2.4	1.9	1.6
15.....	2.3	2.5	2.6	3.0	3.4	3.4	3.3	3.1	2.9	2.4	1.9	1.6
16.....	2.3	2.5	2.6	3.0	3.4	3.4	3.2	3.1	2.9	2.3	1.9	1.6
17.....	2.3	2.5	2.6	3.0	3.4	3.4	3.0	3.1	2.9	2.3	1.9	1.6
18.....	2.3	2.5	2.6	3.1	3.4	3.4	3.1	3.1	2.9	2.3	1.9	1.6
19.....	2.3	2.5	2.7	3.1	3.4	3.3	3.1	3.1	2.8	2.2	1.9	1.6
20.....	2.3	2.5	2.7	3.1	3.4	3.3	3.1	3.1	2.8	2.2	1.9	1.6
21.....	2.3	2.5	2.7	3.1	3.4	3.3	3.1	3.1	2.8	2.2	1.8	1.6
22.....	2.3	2.5	2.7	3.1	3.4	3.3	3.0	3.1	2.8	2.2	1.8	1.6
23.....	2.3	2.5	2.7	3.1	3.4	3.3	3.0	3.1	2.8	2.2	1.8	1.7
24.....	2.3	2.5	2.7	3.1	3.4	3.3	3.1	3.1	2.8	2.2	1.8	1.7
25.....	2.3	2.5	2.7	3.1	3.4	3.3	3.2	3.1	2.8	2.1	1.8	1.7
26.....	2.3	2.5	2.7	3.1	3.4	3.3	3.2	3.1	2.8	2.1	1.8	1.7
27.....	2.3	2.5	2.7	3.1	3.4	3.3	3.2	3.1	2.8	2.1	1.8	1.7
28.....	2.2	2.5	2.7	3.1	3.3	3.3	3.2	3.1	2.8	2.1	1.8	1.7
29.....	2.2	2.5	2.7	3.2	3.3	3.3	3.2	3.1	2.8	2.1	1.8	1.6
30.....	2.2	2.6	2.7	3.2	3.3	3.3	3.2	3.1	2.8	2.1	1.7	1.6
31.....	2.2	2.6	2.7	3.2	3.3	3.3	3.2	3.1	2.8	2.1	1.7	1.6

Daily gage height, in feet, of Lower Klamath Lake near Brownell, Cal., for 1907-1909—
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1908-9.												
1.	1.6	2.1	2.4	2.5	2.9	3.5	3.7	3.6	3.3	2.8	-----	-----
2.	1.6	2.1	2.4	2.5	2.9	3.5	3.7	3.5	3.2	2.8	-----	-----
3.	1.6	2.1	2.4	2.5	2.9	3.5	3.7	3.5	3.2	2.8	-----	-----
4.	1.7	2.2	2.4	2.5	2.9	3.5	3.7	3.5	3.2	2.7	-----	-----
5.	1.7	2.2	2.4	2.5	2.9	3.5	3.7	3.5	3.2	2.7	-----	-----
6.	1.7	2.2	2.3	2.5	2.9	3.5	3.7	3.5	3.2	2.7	-----	-----
7.	1.7	2.2	2.2	2.5	3.0	3.6	3.7	3.5	3.2	2.7	-----	-----
8.	1.7	2.2	2.2	2.5	3.0	3.6	3.7	3.5	3.2	2.7	-----	-----
9.	1.7	2.2	2.2	2.6	3.0	3.6	3.8	3.5	3.2	2.6	-----	-----
10.	1.7	2.2	2.2	2.6	3.0	3.6	3.8	3.5	3.2	2.6	-----	-----
11.	1.8	2.2	2.3	2.6	3.0	3.6	3.8	3.5	3.2	2.6	-----	-----
12.	1.8	2.3	2.3	2.7	3.0	3.6	3.8	3.5	3.2	2.6	-----	-----
13.	1.9	2.3	2.4	2.7	3.0	3.6	3.8	3.5	3.1	2.5	-----	-----
14.	1.9	2.3	2.5	2.8	3.1	3.7	3.8	3.5	3.1	2.5	-----	-----
15.	2.0	2.3	2.5	2.8	3.1	3.7	3.7	3.5	3.1	2.5	-----	-----
16.	2.0	2.3	2.5	2.8	3.2	3.7	3.7	3.4	3.1	-----	-----	-----
17.	2.0	2.3	2.5	2.8	3.3	3.7	3.6	3.4	3.1	-----	-----	-----
18.	2.1	2.3	2.5	2.8	3.3	3.7	3.6	3.4	3.1	-----	-----	-----
19.	2.1	2.2	2.5	2.8	3.3	3.7	3.7	3.4	3.0	-----	-----	-----
20.	2.1	2.2	2.5	2.9	3.3	3.7	3.7	3.4	3.0	-----	-----	-----
21.	2.1	2.2	2.5	2.9	3.4	3.7	3.7	3.4	3.0	-----	-----	-----
22.	2.1	2.2	2.5	2.8	3.4	3.7	3.6	3.4	3.0	-----	-----	-----
23.	2.1	2.2	2.5	2.8	3.5	3.7	3.6	3.4	3.0	-----	-----	-----
24.	2.1	2.2	2.5	2.8	3.5	3.7	3.6	3.4	3.0	-----	-----	-----
25.	2.1	2.3	2.5	2.8	3.5	3.7	3.6	3.4	2.9	-----	-----	-----
26.	2.1	2.4	2.5	2.8	3.5	3.7	3.6	3.4	2.9	-----	-----	-----
27.	2.1	2.4	2.5	2.8	3.5	3.7	3.6	3.4	2.9	-----	-----	-----
28.	2.1	2.4	2.5	2.8	3.5	3.7	3.6	3.4	2.9	-----	-----	-----
29.	2.1	2.4	2.5	2.8	-----	3.7	3.6	3.4	2.9	-----	-----	-----
30.	2.1	2.4	2.5	2.9	-----	3.7	3.6	3.3	2.8	-----	-----	-----
31.	2.1	-----	2.5	2.9	-----	3.7	-----	3.3	-----	-----	-----	-----

KLAMATH RIVER BELOW KLAMATH FALLS, OREG.

The lands along Klamath River through the bordering marshes from Klamath Falls to Keno are grown up with tules and other aquatic plants. They will ultimately be drained and large areas of very fertile land thus be made suitable for agriculture. For the purpose of making a general study of the level of the water surface in this territory three gages were established:

Gage No. 1, located 4 miles below Klamath Falls, was established June 20, 1906. The elevation of the zero of the gage is 4,079.86 feet above sea level.

Gage No. 2, at Lee's ranch, 12 miles below Klamath Falls, was established December 19, 1906. The elevation of the zero of the gage is 4,075.04. As this gage is inaccessible during high water, it has not been possible to obtain continuous records.

Gage No. 3, at Teeter's landing, 17 miles below Klamath Falls, was established December 19, 1906. The elevation of the zero of the gage is 4,079.44.

During 1909 only gage No. 1 was read.

Daily gage height, in feet, of Klamath River 4 miles below Klamath Falls, Oreg., for 1907-1909.

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1907.									
1.....	5.8	-----	6.8	7.35	7.5	7.0	6.4	5.55	-----
2.....	5.8	-----	6.8	7.4	-----	-----	-----	-----	5.2
3.....	5.8	-----	-----	7.4	7.4	7.0	6.4	5.5	-----
4.....	5.8	-----	9.0	-----	-----	-----	-----	-----	5.15
5.....	-----	-----	9.0	7.5	7.5	-----	6.3	5.45	-----
6.....	-----	-----	9.0	7.5	-----	7.0	-----	-----	5.15
7.....	5.8	-----	9.0	-----	7.5	-----	6.25	5.4	-----
8.....	5.8	-----	9.0	7.5	-----	6.9	6.25	-----	-----
9.....	5.8	-----	9.9	7.5	-----	-----	6.2	-----	5.15
10.....	5.8	-----	-----	7.5	-----	-----	-----	5.35	-----
11.....	-----	-----	7.0	-----	7.4	6.9	6.2	-----	5.2
12.....	-----	6.2	-----	7.5	-----	-----	-----	5.35	-----
13.....	-----	6.3	-----	-----	7.35	6.85	-----	5.35	-----
14.....	5.8	6.3	-----	7.55	7.4	-----	-----	-----	5.15
15.....	5.8	6.3	-----	-----	7.4	6.8	6.0	-----	-----
16.....	5.8	6.3	-----	-----	7.35	-----	-----	5.3	5.1
17.....	5.8	6.2	-----	-----	7.3	-----	5.95	5.25	-----
18.....	5.8	6.7	-----	7.55	7.3	-----	5.95	-----	5.1
19.....	5.8	6.7	-----	-----	-----	6.8	-----	5.25	-----
20.....	5.8	6.7	-----	7.55	7.25	-----	5.9	-----	5.1
21.....	5.8	6.7	-----	-----	7.2	-----	-----	-----	5.1
22.....	5.8	6.8	-----	7.6	7.2	6.65	5.8	5.15	-----
23.....	5.8	6.8	-----	-----	-----	-----	5.8	-----	-----
24.....	5.8	-----	-----	7.5	7.2	6.6	-----	5.25	5.1
25.....	5.8	9.0	-----	-----	7.15	-----	5.75	-----	-----
26.....	5.8	6.8	-----	7.5	-----	6.55	5.7	-----	-----
27.....	5.8	-----	7.2	-----	-----	-----	5.7	5.2	5.0
28.....	-----	6.8	7.3	-----	7.1	-----	-----	-----	-----
29.....	-----	-----	7.3	7.5	7.1	6.5	5.65	-----	5.0
30.....	-----	-----	7.3	-----	7.1	-----	5.65	5.2	-----
31.....	-----	-----	7.35	-----	-----	-----	5.6	5.2	-----

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1907-8.												
1.....	-----	-----	-----	-----	6.2	6.15	-----	-----	5.85	5.3	4.75	-----
2.....	-----	5.2	-----	5.9	6.3	6.15	6.15	6.1	5.8	5.2	4.7	4.4
3.....	5.1	-----	5.4	5.9	-----	-----	6.15	6.0	-----	-----	-----	-----
4.....	-----	5.2	-----	-----	6.25	6.15	-----	-----	-----	-----	4.7	4.35
5.....	5.1	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
6.....	-----	-----	5.5	5.95	-----	-----	6.15	-----	5.7	-----	-----	-----
7.....	5.1	5.25	-----	-----	-----	6.15	-----	6.0	-----	5.2	-----	4.4
8.....	-----	-----	-----	-----	6.4	-----	6.15	6.0	5.75	-----	4.65	-----
9.....	5.1	5.25	5.4	6.0	-----	6.15	-----	5.95	-----	5.1	4.65	4.3
10.....	-----	-----	-----	-----	6.15	-----	-----	-----	-----	-----	-----	-----
11.....	5.1	5.3	-----	5.95	6.2	6.15	6.15	-----	5.7	5.1	-----	4.35
12.....	5.1	-----	5.5	-----	-----	-----	-----	6.0	-----	-----	-----	-----
13.....	-----	-----	-----	6.0	6.2	6.1	6.1	-----	5.7	5.1	4.65	4.35
14.....	5.1	5.25	5.55	-----	6.2	6.1	-----	6.0	5.7	5.0	4.65	-----
15.....	-----	-----	-----	6.0	6.2	-----	-----	-----	-----	-----	-----	-----
16.....	-----	5.3	5.55	-----	-----	6.15	-----	-----	-----	-----	4.65	-----
17.....	5.1	-----	-----	-----	6.2	-----	6.2	-----	5.6	-----	-----	4.4
18.....	-----	5.25	-----	6.05	-----	6.1	6.1	5.95	-----	5.0	-----	-----
19.....	5.1	-----	-----	-----	6.15	-----	-----	-----	-----	-----	4.6	4.4
20.....	-----	5.3	5.55	6.05	6.15	-----	-----	5.95	5.8	5.0	-----	-----
21.....	5.1	-----	-----	-----	-----	6.1	6.2	-----	-----	-----	-----	-----
22.....	-----	-----	-----	-----	6.15	-----	-----	-----	5.4	-----	4.55	4.4
23.....	-----	5.3	5.6	6.15	-----	6.1	6.15	5.9	-----	4.95	-----	-----
24.....	5.15	-----	-----	-----	-----	-----	-----	-----	5.55	-----	4.55	4.4
25.....	-----	5.35	-----	6.1	6.15	-----	6.1	5.85	-----	-----	-----	-----
26.....	5.15	-----	5.85	-----	-----	6.1	-----	-----	-----	-----	4.5	4.4
27.....	-----	5.35	-----	6.15	6.15	-----	6.0	-----	5.4	4.86	-----	-----
28.....	5.2	-----	5.8	-----	-----	6.1	-----	5.9	5.35	-----	-----	-----
29.....	-----	5.35	5.95	6.15	-----	-----	6.15	5.85	-----	4.8	4.45	-----
30.....	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
31.....	5.15	-----	-----	-----	-----	6.1	-----	-----	-----	-----	4.45	-----

Daily gage height, in feet, of Klamath River 4 miles below Klamath Falls, Oreg., for 1907-1909—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1908-9.												
1.	4.4			5.35	6.2	6.5	6.5	6.4	6.05			
2.						6.5	6.5	6.35				
3.	4.4	5.1	5.25	5.35		6.6	6.5	6.35				
4.			5.3		6.15		6.45	6.3	5.95			
5.												
6.		5.1		5.55		6.4						
7.	4.5					6.45	6.45		5.85			
8.					6.15	6.45		6.3				
9.			5.3	5.55								
10.	4.6	5.1			6.15		6.4		5.9			
11.						6.5		6.2				
12.	4.65		5.25	5.55					5.85			
13.					6.3	6.5	6.45					
14.		5.15										
15.			5.3	5.7	6.2	6.55	6.5	6.2	5.8			
16.	4.9											
17.		5.2					6.4	6.2	5.85			
18.			5.4		6.4	6.55						
19.				5.95			6.35	6.15	5.8			
20.	5.0			5.8	6.4							
21.		5.2	5.4				6.4		5.7			
22.					6.3	6.55		6.2				
23.	5.0	5.25		5.85					5.75			
24.			5.35		6.5		6.4	6.15				
25.												
26.	5.0	5.2	5.35	5.95		6.55	6.4		5.6			
27.	5.05				6.45			6.15				
28.		5.25		6.0					5.65			
29.				6.0			6.3	6.1				
30.			5.4			6.55						
31.								6.05				

Daily gage height, in feet, of Klamath River 12 miles below Klamath Falls, Oreg., for 1907-8.

Day.	Jan.	Feb.	Mar.	Apr.	Day.	Jan.	Feb.	Mar.	Apr.
1907.					1907.				
1.	10.5	10.8	11.7	12.1	16.	10.7	11.5	11.8	
2.	10.6	10.9	11.7	12.1	17.	10.7	11.5	11.9	
3.	10.7	11.0	11.7	12.2	18.	10.7	11.5	12.1	
4.	10.8	11.0	11.7	12.2	19.	10.7	11.5	12.1	
5.	10.7	11.1	11.7	12.2	20.	10.7	11.5	12.0	
6.	10.7	11.1	11.7	12.2	21.	10.7	11.5	12.1	
7.	10.7	11.2	11.7		22.	10.7	11.6	12.0	
8.	10.7	11.2	11.8		23.	10.7	11.6	12.1	
9.	10.7	11.2	11.8		24.	10.7	11.7	12.1	
10.	10.7	11.3	11.8		25.	10.7	11.7	12.1	
11.	10.7	11.4	11.9		26.	10.7	11.7	12.1	
12.	10.7	11.4	11.8		27.	10.7	11.7	12.1	
13.	10.7	11.4	11.8		28.	10.8	11.7	12.1	
14.	10.7	11.4	11.8		29.	10.8		12.1	
15.	10.7	11.4	11.8		30.	10.8		12.1	
					31.	10.8		12.1	

Daily gage height, in feet, of Klamath River 12 miles below Klamath Falls, Oreg., for 1907-08—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1907-8.												
1.	10.0	10.1	10.3	10.7	11.2	11.1	11.2				9.8	
2.	10.0	10.1	10.3	10.7	11.2	11.2	11.2					
3.	10.0	10.1	10.3	10.8	11.2	11.2	11.2					
4.	10.0	10.1	10.3	10.8	11.2	11.2	11.2			10.15		
5.	10.0	10.1	10.3	10.9	11.2	11.2	11.2					
6.	10.0	10.1	10.3	10.9	11.2	11.2	11.2		10.6			9.4
7.	10.0	10.1	10.3	10.9	11.2	11.2	11.2					
8.	10.0	10.1	10.3	10.9	11.2	11.2	11.2				9.7	
9.	10.0	10.2	10.3	10.9	11.2	11.2	11.2					
10.	10.0	10.2	10.3	11.0	11.2	11.2	11.2			10.0		
11.	10.0	10.2	10.3	11.0	11.2	11.2	11.2					
12.	10.0	10.2	10.3	11.0	11.2	11.2	11.2					
13.	10.0	10.2	10.3	11.0	11.2	11.2	11.2		10.55			9.5
14.	10.0	10.2	10.3	11.0	11.2	11.2	11.2					
15.	10.0	10.2	10.3	11.0	11.2	11.2	11.2				9.6	
16.	11.0	10.2	10.3	11.0	11.2	11.2	11.2					
17.	10.0	10.2	10.3	11.1	11.2	11.2	11.2					
18.	10.0	10.2	10.3	11.1	11.2	11.2	11.2			9.9		
19.	10.0	10.2	10.3	11.1	11.2	11.2	11.2					
20.	10.0	10.2	10.3	11.1	11.2	11.2	11.2		10.4			
21.	10.0	10.2	10.3	11.1	11.2	11.2	11.2					
22.	10.0	10.2	10.4	11.1	11.2	11.2	11.2				9.6	
23.	10.0	10.2	10.4	11.1	11.1	11.2	11.2					
24.	10.0	10.2	10.5	11.1	11.1	11.2	11.2	10.8				
25.	10.1	10.3	10.5	11.1	11.1	11.2	11.2			9.8		
26.	10.1	10.3	10.5	11.1	11.1	11.2	11.2					
27.	10.1	10.3	10.5	11.1	11.1	11.2	11.2		10.3			
28.	10.1	10.3	10.5	11.1	11.2	11.2	11.2					
29.	10.1	10.3	10.5	11.1	11.2	11.2	11.2					
30.	10.1	10.3	10.5	11.2	11.2	11.2	11.2	10.7			9.5	
31.	10.1		10.5	11.2		11.2	11.2					

Daily gage height, in feet, of Klamath River 17 miles below Klamath Falls, Oreg., for 1907-8.

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1907.									
1.	6.07	6.20	7.10	7.60	7.80	7.40	6.80	6.00	5.58
2.	6.10	6.25	7.10	7.60	7.80	7.40	6.75	5.90	5.58
3.	6.12	6.30	7.12	7.63	7.75	7.35	6.73	5.90	5.58
4.	6.27	6.45	7.12	7.80	7.75	7.33	6.70	5.90	5.58
5.	6.30	6.47	7.15	7.75	7.80	7.30	6.68	5.90	5.58
6.	6.15	6.50	7.17	7.65	7.75	7.32	6.65	5.83	5.58
7.	6.15	6.55	7.20	7.65	7.75		6.60	5.70	5.55
8.	6.12	6.60	7.20	7.70	7.75	7.25	6.60	5.75	5.55
9.	6.10	6.65	7.25	7.70	7.80	7.20	6.60	5.78	5.55
10.	6.15	6.70	7.25	7.70	7.90	7.20	6.56	5.80	5.55
11.	6.15	6.72	7.25	7.70	7.75	7.25	6.52	5.80	5.55
12.	6.15	6.77	7.22	7.75	7.65	7.22	6.50	5.75	5.50
13.	6.15	6.80	7.22	7.80	7.70			5.75	5.50
14.	6.15	6.80	7.22	7.80	7.70		6.45	5.75	5.50
15.	6.15	6.85	7.27	7.80	7.70		6.40	5.72	5.50
16.	6.17	6.90	7.25	7.80	7.65	7.22	6.37	5.70	5.65
17.	6.17	6.90	7.30	7.75	7.65	7.22	6.35		5.48
18.	6.17	6.90	7.50	7.80	7.60	7.22	6.32	5.68	5.48
19.	6.20	6.92	7.35	7.80	7.60	7.19	6.30	5.68	5.48
20.	6.20	6.95	7.45	7.90	7.60	7.19	6.30	5.65	5.50
21.	6.20	6.97	7.42	7.90	7.45		6.23	5.62	5.48
22.	6.20	7.00	7.47	7.80	7.50		6.20	5.60	5.48
23.	6.20	7.00	7.55	7.80	7.50	7.00	6.20	5.58	5.50
24.	6.20	7.05	7.50	7.80	7.50	7.00	6.17	5.70	5.48
25.	6.20	7.00	7.50	7.85	7.50	6.97	6.15	5.65	5.50
26.	6.20	7.05	7.50	7.85	7.50	6.95	6.10	5.65	5.45
27.	6.17	7.05	7.50	7.85	7.40	6.94	6.10	5.60	5.40
28.	6.15	7.10	7.50	7.80	7.40	6.94	6.10	5.63	5.40
29.	6.15		7.55	7.80	7.40	6.87	6.10	5.63	5.40
30.	6.15		7.60	7.80	7.40	6.80	6.10	5.63	5.50
31.	6.10		7.60		7.40		6.00	5.60	

Daily gage height, in feet, of Klamath River 17 miles below Klamath Falls, Oreg., for 1907-8—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1907-8.												
1.....	5.48	.....	5.80	6.20	.....	6.51	6.50	.....	.....	5.75	.....	4.95
2.....	5.50	5.60	5.80	6.20	6.58	.....	6.50	.....	.....	5.74	.....	4.95
3.....	5.50	5.60	5.85	6.20	6.59	6.53	6.50	.....	.....	5.72	.....	4.92
4.....	5.50	5.60	5.85	6.20	6.60	6.52	6.50	6.41	.....	5.70	.....	4.96
5.....	5.50	5.60	5.85	6.22	.....	6.52	.....	6.41	6.14	5.70	.....	4.95
6.....	5.50	5.60	5.85	6.30	.....	6.52	.....	.....	6.12	5.69	.....	4.96
7.....	5.50	5.60	5.80	6.31	6.55	6.52	.....	.....	6.10	5.68	.....	4.90
8.....	5.50	5.65	5.80	.....	.....	6.52	6.50	.....	6.18	5.67	.....	4.88
9.....	5.53	5.67	5.80	.....	6.55	6.51	6.50	.....	6.10	5.64	.....	4.85
10.....	5.50	5.70	5.80	6.31	6.55	6.51	6.51	.....	6.10	5.62	.....	4.85
11.....	5.50	5.70	5.80	6.32	.....	6.51	6.51	.....	6.09	5.59	.....	4.87
12.....	5.50	5.70	5.90	6.32	.....	6.50	6.51	.....	6.08	.....	.....	4.88
13.....	5.50	.....	5.90	6.32	6.57	6.50	6.51	6.42	6.06	.....	.....	4.89
14.....	5.53	5.70	5.90	.....	6.58	6.50	6.51	6.42	6.02	.....	.....	4.85
15.....	5.53	5.70	5.90	6.37	6.58	6.49	6.51	.....	6.00	.....	5.15	4.85
16.....	5.53	5.70	5.90	6.37	6.52	6.49	6.51	6.41	.....	.....	5.10	4.86
17.....	5.53	.....	5.90	6.40	6.52	.....	6.51	.....	.....	.....	5.10	4.88
18.....	5.53	5.70	5.90	6.40	6.53	.....	6.51	6.41	.....	.....	5.10	4.89
19.....	5.53	5.72	6.00	6.46	.....	6.49	6.52	6.41	5.98	.....	5.10	4.89
20.....	5.53	5.72	5.90	6.46	6.53	6.49	6.52	.....	5.90	.....	5.05	4.90
21.....	5.53	5.72	5.90	6.47	6.55	6.50	6.53	.....	.....	.....	5.05	4.92
22.....	5.53	5.75	5.90	6.47	6.55	6.49	.....	6.40	5.90	.....	5.05	4.95
23.....	5.55	5.75	6.00	6.48	6.55	6.49	.....	.....	5.90	.....	5.05	4.96
24.....	5.55	5.75	6.00	6.50	6.53	.....	.....	.....	5.90	.....	5.00	4.95
25.....	5.55	5.75	6.00	6.50	6.53	.....	6.47	.....	5.90	.....	4.96	4.95
26.....	5.57	5.75	6.20	6.50	6.52	.....	6.45	.....	.....	.....	5.00	4.92
27.....	5.57	5.75	6.15	6.50	.....	.....	.....	6.40	5.80	.....	4.80	4.95
28.....	5.59	5.75	6.20	6.50	.....	6.47	.....	6.40	5.78	.....	4.85	4.95
29.....	5.60	5.75	6.22	.....	.....	.....	6.44	.....	5.76	.....	4.90	4.96
30.....	5.60	5.80	6.20	.....	.....	.....	.....	.....	5.76	.....	4.95	4.98
31.....	5.60	.....	6.20	.....	.....	6.50	.....	.....	.....	.....	4.95	.....

Day.	Oct.	Nov.	Day.	Oct.	Nov.	Day.	Oct.	Nov.
1908.			1908.			1908.		
1.....	4.98	.....	11.....	5.06	.....	21.....	5.48	.....
2.....	5.05	.....	12.....	5.10	.....	22.....	5.46	.....
3.....	5.08	.....	13.....	5.35	.....	23.....	5.48	.....
4.....	4.98	.....	14.....	5.36	.....	24.....	5.50	.....
5.....	5.00	.....	15.....	5.38	.....	25.....	5.50	.....
6.....	5.00	5.54	16.....	5.39	.....	26.....	5.50	.....
7.....	5.01	5.55	17.....	5.40	.....	27.....	5.50	.....
8.....	5.05	5.55	18.....	5.41	.....	28.....	5.50	.....
9.....	5.02	.....	19.....	5.45	.....	29.....	5.50	.....
10.....	5.05	.....	20.....	5.50	.....	30.....	5.50	.....
						31.....	5.50	.....

KLAMATH RIVER AT KENO, OREG.

This station, which is located at the county bridge at Keno, in sec. 31, T. 39 S., R. 8 E., at the lower end of the lakes and marshes that form the headwaters of Klamath River, was established May 31, 1904. The United States Reclamation Service is reclaiming lands for irrigation in two ways—by diverting waters from Klamath Lake and by draining the large swamp areas bordering this stream and the lakes which are tributary to it. Immediately below the station the river breaks over a rocky ledge with a fall of about 200 feet to the mile.

During the winter the river usually freezes over, but as the water is comparatively deep and the ice is not very thick the accuracy of records has not been greatly affected by the ice. At low stages a growth of aquatic plants clogs the section and to some extent lessens the accuracy of the results. An additional source of error has resulted from the effect of wind on the wide expanse of water above the station. A strong upstream wind will blow the water back from the outlet and diminish the flow, but as the gage is located at the bridge, 1,000 feet above the measuring section, gage heights are not always affected to a corresponding degree. The datum of the gage has not been changed since it was installed.

Discharge measurements are made from a cable 1,000 feet below the gage.

This station was not visited in 1910 or 1911, but conditions seem to be fairly permanent, and the 1909 discharge rating curve is believed to give reasonably close results for 1910. No discharge determined for 1911. The station was maintained during 1910 and 1911 by the United States Reclamation Service, but the daily and monthly discharge tables for 1910 were computed by the United States Geological Survey.

Discharge measurements of Klamath River at Keno, Oreg., in 1904-1909.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	dis-charge.
1904.		<i>Feet.</i>	<i>Sec.-ft.</i>	1907.		<i>Feet.</i>	<i>Sec.-ft.</i>
May 31	Lewis and Landis.....	15.15	8,321	Apr. 2	L. F. Hendricks.....	14.10	4,550
June 5	do.....	15.05	8,230	16	do.....	14.25	4,880
18	T. H. Humphreys.....	14.65	7,205	May 23	J. C. Stevens.....	14.06	4,420
Aug. 12	do.....	13.00	2,571	June 1	C. E. Ellsworth.....	13.90	4,230
Sept. 17	do.....	12.40	1,791	15	do.....	13.65	3,650
28	C. T. Darley.....	12.40	1,721	29	do.....	13.45	3,160
Oct. 19	do.....	12.50	1,900	July 22	do.....	12.90	2,240
Nov. 3	do.....	12.60	1,938	29	do.....	12.75	1,970
26	do.....	12.65	2,161	Aug. 19	do.....	12.40	1,540
1905.				Sept. 2	do.....	12.30	1,450
Jan. 10	C. T. Darley.....	13.00	2,590	21	do.....	12.20	1,240
23	do.....	13.30	2,930	Oct. 3	do.....	12.25	1,350
30	do.....	13.20	2,875	25	do.....	12.30	1,430
Feb. 9	do.....	13.25	2,975	Nov. 4	do.....	12.37	1,470
18	do.....	13.30	3,192	14	do.....	12.40	1,520
Mar. 3	do.....	13.30	3,145	1908.			
31	do.....	13.32	3,159	Feb. 18	C. E. Ellsworth.....	13.20	2,690
Apr. 13	do.....	13.28	3,015	Mar. 6	do.....	13.17	2,580
May 17	do.....	13.03	2,676	Apr. 1	do.....	13.15	2,520
June 19	do.....	12.68	2,102	17	do.....	13.19	2,560
July 14	do.....	12.20	1,445	May 5	Ellsworth and Kimble.	13.02	2,400
Aug. 14	do.....	11.80	1,146	22	H. Kimble.....	12.90	2,570
31	do.....	11.75	924	June 12	do.....	12.80	2,260
Nov. 3	do.....	12.00	680	July 14	do.....	12.25	1,450
Dec. 3	do.....	12.28	851	Sept. 1	do.....	11.70	704
1906.				17	do.....	11.60	789
May 8	L. F. Hendricks.....	13.7	3,600	Oct. 1	do.....	11.55	1,130
June 30	do.....	13.4	3,330	27	do.....	12.20	1,250
July 23	do.....	12.9	2,540	Nov. 29	Kimble and McGlashan	12.38	1,460
Sept. 5	do.....	12.05	1,170	1909.			
1907.				Apr. 30	Howard Kimble.....	13.38	2,880
Feb. 19	L. F. Hendricks.....	13.55	3,240	June 2	A. E. Gerger.....	13.09	2,810
Mar. 13	do.....	13.80	3,760	29	do.....	12.76	1,930
				Sept. 14	John Yadon.....	11.87	877

Daily gage height, in feet, of Klamath River at Keno, Oreg., for 1904-1912.

Day.	May.	June.	July.	Aug.	Sept.	Day.	May.	June.	July.	Aug.	Sept.
1904.						1904.					
1.....		15.1	14.2	13.3	12.7	16.....		14.8	13.8	13.0	12.4
2.....		15.1	14.1	13.3	12.6	17.....		14.7	13.8	12.9	12.4
3.....		15.1	14.1	13.3	12.6	18.....		14.7	13.8	12.9	12.4
4.....		15.5	14.1	13.2	12.6	19.....		14.6	13.7	12.9	12.4
5.....		15.0	14.05	13.2	12.6	20.....		14.6	13.7	12.9	12.4
6.....		15.0	14.0	13.2	12.6	21.....		14.6	13.7	12.9	12.4
7.....		15.0	14.0	13.1	12.5	22.....		14.6	13.6	12.8	12.4
8.....		14.9	14.0	13.1	12.5	23.....		14.5	13.6	12.8	12.4
9.....		14.9	14.0	13.1	12.5	24.....		14.5	13.6	12.8	12.4
10.....		14.9	13.9	13.0	12.5	25.....		14.4	13.5	12.8	12.4
11.....		14.9	13.9	13.0	12.5	26.....		14.4	13.5	12.8	12.4
12.....		14.9	13.9	13.0	12.4	27.....		14.4	13.5	12.7	12.4
13.....		14.8	13.8	13.0	12.4	28.....		14.3	13.4	12.7	12.4
14.....		14.8	13.8	13.0	12.4	29.....		14.3	13.4	12.7	12.4
15.....		14.8	13.8	13.0	12.4	30.....		14.2	13.4	12.7	12.4
						31.....	15.1		13.4	12.7	.....

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1904-5.												
1.....	12.4	12.6	12.7	12.9	13.2	13.3	13.4	13.2	13.0	12.5	11.9	11.8
2.....	12.4	12.6	12.7	12.9	13.2	13.3	13.4	13.2	13.0	12.4	11.9	11.8
3.....	12.4	12.6	12.7	13.0	13.3	13.3	13.4	13.2	13.0	12.4	11.9	11.8
4.....	12.4	12.6	12.7	13.0	13.3	13.3	13.4	13.2	13.0	12.4	11.9	11.8
5.....	12.4	12.6	12.7	13.0	13.3	13.3	13.4	13.2	13.0	12.4	11.9	11.8
6.....	12.4	12.6	12.7	13.0	13.3	13.3	13.4	13.2	12.9	12.3	11.8	11.8
7.....	12.4	12.6	12.7	13.0	13.3	13.3	13.4	13.2	12.9	12.3	11.8	11.8
8.....	12.4	12.6	12.7	13.1	13.3	13.3	13.4	13.1	12.9	12.2	11.8	11.8
9.....	12.5	12.6	12.7	13.1	13.3	13.3	13.4	13.1	12.9	12.2	11.8	11.8
10.....	12.5	12.6	12.8	13.1	13.3	13.3	13.4	13.1	12.9	12.2	11.8	11.8
11.....	12.5	12.6	12.8	13.1	13.3	13.3	13.4	13.1	12.9	12.2	11.8	11.8
12.....	12.4	12.6	12.8	13.1	13.3	13.3	13.3	13.1	12.8	12.2	11.8	11.8
13.....	12.4	12.6	12.8	13.1	13.3	13.2	13.3	13.1	12.8	12.2	11.8	11.8
14.....	12.4	12.6	12.8	13.1	13.3	13.2	13.3	13.1	12.8	12.2	11.8	11.8
15.....	12.4	12.6	12.8	13.1	13.3	13.2	13.3	13.1	12.7	12.2	11.8	11.8
16.....	12.4	12.6	12.8	13.1	13.3	13.2	13.3	13.1	12.7	12.2	11.8	11.8
17.....	12.5	12.6	12.8	13.1	13.3	13.2	13.3	13.0	12.7	12.2	11.8	11.8
18.....	12.5	12.6	12.8	13.1	13.3	13.2	13.3	13.0	12.7	12.2	11.8	11.8
19.....	12.5	12.6	12.8	13.1	13.3	13.2	13.2	13.0	12.6	12.1	11.8	11.8
20.....	12.5	12.6	12.8	13.1	13.3	13.2	13.2	13.0	12.6	12.1	11.8	11.8
21.....	12.5	12.7	12.8	13.1	13.3	13.2	13.2	13.0	12.6	12.1	11.8	11.8
22.....	12.5	12.7	12.8	13.1	13.3	13.2	13.2	13.0	12.5	12.1	11.8	11.8
23.....	12.5	12.7	12.8	13.3	13.3	13.2	13.2	13.0	12.5	12.1	11.8	11.8
24.....	12.5	12.7	12.8	13.1	13.3	13.2	13.2	13.0	12.5	12.1	11.8	11.8
25.....	12.5	12.7	.....	13.1	13.3	13.3	13.2	13.0	12.5	12.0	11.8	11.8
26.....	12.5	12.7	.....	13.1	13.3	13.3	13.2	13.0	12.5	12.0	11.8	11.8
27.....	12.5	12.7	.....	13.1	13.3	13.3	13.2	13.0	12.5	12.0	11.8	11.8
28.....	12.5	12.7	.....	13.2	13.3	13.4	13.2	13.0	12.5	12.0	11.8	11.8
29.....	12.5	12.7	.....	13.2	.....	13.4	13.2	13.0	12.5	12.0	11.8	11.9
30.....	12.5	12.7	.....	13.2	.....	13.4	13.2	13.0	12.5	12.0	11.8	11.9
31.....	12.5	.....	.....	13.2	.....	13.4	.....	13.0	.....	11.9	11.8	.....
1905-6.												
1.....	11.9	12.1	12.3	12.5	12.8	12.8	13.1	13.6	13.7	13.4	12.6	12.1
2.....	11.9	12.1	12.3	12.5	12.8	12.9	13.1	13.6	13.7	13.4	12.6	12.1
3.....	11.9	12.1	12.3	12.5	12.8	12.9	13.1	13.6	13.7	13.4	12.6	12.1
4.....	11.9	12.1	12.3	12.5	12.8	12.8	13.1	13.7	13.7	13.3	12.6	12.1
5.....	11.9	12.1	12.3	12.5	12.8	12.8	13.1	13.7	13.7	13.3	12.6	12.1
6.....	11.9	12.1	12.3	12.5	12.8	12.8	13.2	13.7	13.7	13.3	12.6	12.1
7.....	11.9	12.1	12.3	12.5	12.8	12.8	13.2	13.7	13.7	13.3	12.5	12.1
8.....	11.9	12.1	12.4	12.5	12.7	12.8	13.2	13.7	13.7	13.3	12.5	12.1
9.....	11.9	12.1	12.4	12.5	12.7	12.8	13.2	13.7	13.7	13.3	12.5	12.1
10.....	11.9	12.1	12.4	12.5	12.7	12.8	13.2	13.7	13.7	13.2	12.5	12.1
11.....	11.9	12.1	12.4	12.4	12.7	12.8	13.3	13.7	13.7	13.2	12.5	12.1
12.....	11.9	12.1	12.4	12.5	12.7	12.8	13.3	13.7	13.6	13.2	12.5	12.0
13.....	11.9	12.1	12.4	12.6	12.7	12.8	13.3	13.7	13.6	13.2	12.5	12.0
14.....	11.9	12.1	12.4	12.7	12.7	12.8	13.3	13.7	13.6	13.2	12.4	12.0
15.....	11.9	12.1	12.4	12.6	12.7	12.9	13.3	13.7	13.6	13.2	12.4	12.0

Daily gage height, in feet, of Klamath River at Keno, Oreg., for 1904-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1905-6.												
16.	11.9	12.2	12.4	12.7	12.7	12.9	13.4	13.7	13.6	13.2	12.4	12.0
17.	12.0	12.2	12.4	12.7	12.7	12.9	13.4	13.7	13.6	13.1	12.3	12.0
18.	12.0	12.2	12.4	12.7	12.7	12.9	13.4	13.7	13.6	13.1	12.3	12.0
19.	12.0	12.2	12.4	12.8	12.7	12.9	13.5	13.7	13.6	13.1	12.3	12.0
20.	12.0	12.2	12.4	12.8	12.7	12.9	13.5	13.7	13.5	13.1	12.3	12.0
21.	12.0	12.3	12.4	12.8	12.7	12.9	13.5	13.7	13.5	13.1	12.3	12.0
22.	12.0	12.3	12.4	12.8	12.8	12.9	13.5	13.7	13.5	13.0	12.2	12.0
23.	12.0	12.3	12.4	12.8	12.8	12.9	13.5	13.7	13.5	12.9	12.2	12.0
24.	12.0	12.3	12.4	12.8	12.8	12.9	13.5	13.7	13.5	12.9	12.2	12.0
25.	12.0	12.3	12.4	12.8	12.8	13.0	13.5	13.7	13.5	12.8	12.2	12.0
26.	12.0	12.3	12.4	12.8	12.8	13.0	13.5	13.7	13.5	12.8	12.2	12.0
27.	12.0	12.3	12.5	12.8	12.8	13.0	13.6	13.7	13.5	12.8	12.2	12.0
28.	12.1	12.3	12.5	12.8	12.8	13.0	13.6	13.7	13.4	12.8	12.2	12.0
29.	12.1	12.3	12.5	12.8	.....	13.0	13.6	13.7	13.4	12.7	12.2	12.0
30.	12.1	12.3	12.5	12.8	.....	13.0	13.6	13.7	13.4	12.7	12.2	12.0
31.	12.1	.....	12.5	12.8	.....	13.0	.....	13.7	.....	12.7	12.1	.....
1906-7.												
1.	12.0	12.2	12.4	12.70	12.90	13.70	14.10	14.30	13.92	13.40	12.65	12.35
2.	12.0	12.2	12.4	12.70	13.00	13.70	14.10	14.30	13.90	13.37	12.60	12.30
3.	12.0	12.2	12.5	12.70	13.10	13.70	14.10	14.30	13.88	13.35	12.55	12.30
4.	12.0	12.2	12.5	12.70	13.10	13.70	14.30	14.30	13.86	13.32	12.54	12.30
5.	12.0	12.2	12.5	12.70	13.20	13.80	14.20	14.30	13.84	13.30	12.52	12.27
6.	12.0	12.2	12.5	12.70	13.20	13.80	14.20	14.30	13.81	13.25	12.50	12.25
7.	12.0	12.2	12.5	12.70	13.30	13.80	14.20	14.30	13.80	13.23	12.49	12.25
8.	12.0	12.2	12.5	12.70	13.30	13.80	14.20	14.30	13.79	13.21	12.48	12.25
9.	12.0	12.2	12.5	12.80	13.40	13.80	14.30	14.30	13.77	13.20	12.47	12.25
10.	12.0	12.2	12.5	12.80	13.40	13.80	14.30	14.20	13.75	13.18	12.47	12.25
11.	12.0	12.2	12.5	12.80	13.40	13.80	14.30	14.20	13.73	13.16	12.45	12.25
12.	12.0	12.3	12.5	12.80	13.40	13.80	14.30	14.10	13.73	13.15	12.45	12.24
13.	12.0	12.3	12.5	12.80	13.40	13.80	14.30	14.20	13.73	13.13	12.43	12.24
14.	12.0	12.3	12.5	12.80	13.50	13.80	14.30	14.20	13.71	13.10	12.42	12.23
15.	12.0	12.3	12.5	12.80	13.50	13.80	14.20	14.20	13.69	13.05	12.41	12.23
16.	12.0	12.3	12.5	12.80	13.50	13.80	14.30	14.20	13.66	13.02	12.40	12.23
17.	12.0	12.3	12.6	12.80	13.50	13.90	14.30	14.20	13.64	13.00	12.40	12.23
18.	12.0	12.3	12.6	12.80	13.50	14.10	14.30	14.20	13.62	12.98	12.39	12.23
19.	12.0	12.4	12.6	12.80	13.50	14.00	14.40	14.10	13.60	12.95	12.39	12.22
20.	12.1	12.4	12.6	12.80	13.60	14.00	14.40	14.10	13.58	12.92	12.37	12.22
21.	12.1	12.4	12.6	12.80	13.60	14.00	14.30	14.10	13.56	12.91	12.35	12.20
22.	12.1	12.4	12.7	12.80	13.60	14.00	14.30	14.10	13.55	12.90	12.33	12.20
23.	12.1	12.4	12.6	12.80	13.60	14.00	14.30	14.00	13.54	12.87	12.30	12.20
24.	12.1	12.4	12.6	12.80	13.60	14.00	14.30	14.00	13.53	12.85	12.30	12.20
25.	12.1	12.4	12.6	12.80	13.70	14.00	14.30	13.98	13.53	12.82	12.31	12.17
26.	12.1	12.4	12.6	12.80	13.70	14.00	14.30	13.96	13.51	12.80	12.31	12.15
27.	12.1	12.4	12.6	12.80	13.70	14.00	14.30	13.95	13.50	12.78	12.31	12.15
28.	12.1	12.4	12.6	12.90	13.70	14.00	14.30	13.94	13.47	12.76	12.31	12.15
29.	12.1	12.4	12.6	12.90	.....	14.10	14.30	13.93	13.45	12.75	12.32	12.17
30.	12.1	12.4	12.7	12.90	.....	14.10	14.30	13.93	13.42	12.72	12.32	12.20
31.	12.2	.....	12.7	12.90	.....	14.10	.....	13.93	.....	12.70	12.34	.....
1907-8.												
1.	12.22	12.40	12.50	12.90	13.10	13.20	13.15	13.00	12.80	12.50	11.97	11.66
2.	12.25	12.33	12.50	12.92	13.10	13.17	13.15	13.00	12.75	12.50	11.95	11.66
3.	12.21	12.44	12.50	12.95	13.10	13.19	13.13	13.00	12.75	12.45	12.00	11.64
4.	12.20	12.37	12.50	12.95	13.15	13.19	13.15	13.00	12.80	12.42	12.00	11.65
5.	12.20	12.38	12.50	12.97	13.17	13.19	13.15	13.00	12.80	12.40	12.00	11.65
6.	12.20	12.39	12.52	12.99	13.27	13.19	13.16	13.00	12.80	12.39	12.00	11.63
7.	12.22	12.39	12.38	13.00	13.22	13.19	13.17	13.00	12.80	12.40	12.00	11.61
8.	12.23	12.39	12.50	13.00	13.30	13.19	13.19	13.00	12.80	12.36	12.00	11.55
9.	12.23	12.39	12.50	13.00	13.27	13.19	13.19	12.99	12.79	12.32	11.95	11.58
10.	12.25	12.40	12.50	13.00	13.20	13.19	13.19	12.99	12.79	12.30	11.90	11.60
11.	12.25	12.40	12.50	13.00	13.20	13.19	13.19	12.99	12.80	12.30	11.85	11.60
12.	12.25	12.40	12.60	13.00	13.19	13.19	13.19	12.99	12.79	12.25	11.89	11.60
13.	12.25	12.40	12.60	13.00	13.20	13.19	13.19	12.99	12.79	12.20	11.80	11.60
14.	12.25	12.40	12.60	13.00	13.20	13.17	13.19	12.98	12.75	12.20	11.82	11.58
15.	12.25	12.40	12.60	13.02	13.20	13.17	13.19	12.97	12.70	12.15	11.82	11.59
16.	12.25	12.40	12.60	13.04	13.20	13.15	13.19	13.00	12.65	12.15	11.82	11.60
17.	12.25	12.40	12.63	13.08	13.20	13.00	13.20	13.01	12.63	12.15	11.82	11.60
18.	12.25	12.40	12.63	13.09	13.20	13.17	13.15	12.95	12.61	12.15	11.80	11.64
19.	12.30	12.40	12.64	13.09	13.19	13.17	13.17	12.96	12.59	12.15	11.80	11.60
20.	12.30	12.42	12.65	13.10	13.20	13.15	13.20	12.99	12.60	12.13	11.79	11.62

Daily gage height, in feet, of Klamath River at Keno, Oreg., for 1904-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1907-8.												
21.....	12.30	12.43	12.65	13.10	13.20	13.15	13.20	12.95	12.59	12.11	11.75	11.65
22.....	12.30	12.46	12.66	13.13	13.20	13.15	13.10	12.96	12.59	12.10	11.71	11.65
23.....	12.30	12.48	12.69	13.15	13.20	13.10	13.19	12.97	12.59	12.09	11.71	11.66
24.....	12.30	12.48	12.73	13.17	13.20	13.90	13.10	12.95	12.59	12.06	11.71	11.67
25.....	12.30	12.49	12.78	13.17	13.17	13.50	13.10	12.95	12.57	12.00	11.71	11.68
26.....	12.30	12.49	12.90	13.16	13.15	13.50	13.10	12.85	12.45	12.02	11.71	11.69
27.....	12.30	12.49	12.90	13.15	13.15	13.70	13.10	12.90	12.50	12.04	11.60	11.70
28.....	12.36	12.49	12.89	13.15	13.17	13.10	13.10	12.90	12.50	12.05	11.62	11.70
29.....	12.37	12.50	12.90	13.15	13.20	13.10	13.09	12.90	12.50	12.04	11.64	11.69
30.....	12.30	12.50	12.90	13.15	.....	13.00	13.09	12.80	12.45	12.20	11.66	11.68
31.....	12.30	.....	12.90	13.15	.....	13.10	.....	12.80	.....	12.00	11.68	.....
1908-9.												
1.....	11.55	12.22	12.41	12.50	13.14	13.50	13.50	13.39	13.12	12.65	12.14	11.84
2.....	11.50	12.23	12.41	12.49	13.15	13.50	13.50	13.39	13.11	12.64	12.12	11.87
3.....	11.63	12.25	12.41	12.48	13.10	13.50	13.50	13.38	13.50	12.60	12.12	11.88
4.....	11.65	12.30	12.45	12.50	13.15	13.50	13.50	13.38	13.60	12.60	12.10	11.87
5.....	11.70	12.28	12.46	12.59	13.18	13.50	13.50	13.34	13.50	12.59	.....	11.88
6.....	11.75	12.28	12.47	12.59	13.18	13.50	13.50	13.35	13.50	12.58	.....	11.89
7.....	11.75	12.29	12.47	12.62	13.19	13.50	13.50	13.32	13.10	12.58	.....	11.89
8.....	11.75	12.30	12.46	12.68	13.20	13.50	13.50	13.31	13.10	12.57	.....	11.87
9.....	11.70	12.30	12.45	12.68	13.20	13.50	13.50	13.32	13.20	12.49	.....	11.87
10.....	11.80	12.30	12.45	12.68	13.20	13.50	13.45	13.18	13.10	12.46	.....	11.89
11.....	11.80	12.30	12.44	12.68	13.20	13.50	13.45	13.21	13.10	12.44	11.99	11.87
12.....	11.82	12.30	12.43	12.68	13.28	13.50	13.45	13.26	13.20	12.44	11.97	11.86
13.....	11.80	12.30	12.43	12.69	13.28	13.50	13.45	13.21	13.10	12.42	11.95	11.85
14.....	12.20	12.31	12.44	12.70	13.28	13.50	13.45	13.23	12.97	12.40	11.94	11.86
15.....	12.10	12.31	12.45	12.72	13.28	13.50	13.45	13.21	12.95	12.38	11.93	11.87
16.....	12.05	12.35	12.46	12.80	13.28	13.50	13.45	13.22	12.95	12.37	11.92	11.87
17.....	12.10	12.36	12.47	12.81	13.30	13.50	13.45	13.20	12.95	12.36	11.91	11.82
18.....	12.15	12.40	12.48	12.80	13.38	13.50	13.40	13.21	12.95	12.36	11.91	11.83
19.....	12.00	12.40	12.49	12.85	13.40	13.50	13.40	13.22	12.90	12.35	11.89	11.82
20.....	12.10	12.30	12.49	12.92	13.40	13.50	13.40	13.18	12.90	12.32	11.82	11.75
21.....	12.15	12.39	12.49	12.92	13.40	13.50	13.40	13.20	12.91	12.30	11.88	11.85
22.....	12.15	12.35	12.49	12.91	13.40	13.50	13.40	13.20	12.86	12.28	11.78	11.86
23.....	12.20	12.33	12.49	12.95	13.40	13.50	13.40	13.22	12.85	12.26	11.85	11.85
24.....	12.20	12.32	12.49	13.10	13.40	13.50	13.40	13.18	12.86	12.24	11.87	11.90
25.....	12.20	12.33	12.49	13.00	13.40	13.50	13.40	13.20	12.84	12.20	11.86	11.88
26.....	12.20	12.35	12.49	13.03	13.40	13.50	13.40	13.21	12.81	12.18	11.86	11.87
27.....	12.25	12.40	12.49	13.05	13.40	13.50	13.40	13.10	12.81	12.15	11.87	11.87
28.....	12.30	12.40	12.50	13.07	13.50	13.50	13.40	13.18	12.80	12.16	11.85	11.88
29.....	12.25	12.40	12.50	13.08	.....	13.50	13.40	13.15	12.80	12.17	11.88	11.87
30.....	12.20	12.41	12.50	13.11	.....	13.50	13.38	13.12	12.78	12.20	11.83	11.84
31.....	12.20	.....	12.50	13.12	.....	13.50	.....	13.18	.....	12.15	11.80	.....
1909-10.												
1.....	11.93	12.08	12.85	13.2	13.25	13.5	13.9	13.8	13.05	12.4	11.95	11.75
2.....	11.84	12.07	12.85	13.2	13.25	13.5	13.9	13.8	13.1	12.35	11.95	11.7
3.....	11.86	12.10	12.85	13.2	13.25	13.5	13.9	13.8	13.1	12.4	11.85	11.6
4.....	11.86	12.16	12.85	13.2	13.25	13.55	13.9	13.8	13.1	12.4	11.95	11.75
5.....	11.87	12.15	12.90	13.25	13.3	13.55	13.9	13.8	13.0	12.4	11.9	11.75
6.....	11.89	12.17	12.90	13.25	13.3	13.55	13.95	13.75	13.0	12.4	11.9	11.7
7.....	11.90	12.14	12.90	13.25	13.3	13.6	13.95	13.75	13.0	12.4	11.9	11.75
8.....	11.91	12.16	12.90	13.3	13.3	13.6	13.95	13.75	13.0	12.35	11.9	11.7
9.....	11.98	12.15	12.90	13.3	13.3	13.65	13.95	13.7	12.95	12.35	11.85	11.65
10.....	11.96	12.18	12.90	13.3	13.3	13.65	13.9	13.7	12.95	12.35	11.85	11.65
11.....	11.98	12.20	12.90	13.3	13.3	13.65	13.95	13.65	12.9	12.35	11.85	11.75
12.....	11.95	12.25	12.95	13.3	13.3	13.65	13.9	13.6	12.9	12.3	11.8	11.75
13.....	11.95	12.28	12.97	13.3	13.3	13.65	13.95	13.55	12.9	12.3	11.8	11.7
14.....	11.97	12.30	12.70	13.2	13.3	13.7	13.9	13.55	12.85	12.25	11.8	11.7
15.....	11.96	12.30	12.95	13.2	13.3	13.7	13.95	13.5	12.85	12.25	11.8	11.75
16.....	11.98	12.38	12.98	13.2	13.3	13.7	13.95	13.45	12.8	12.25	11.8	11.65
17.....	12.00	12.36	12.98	13.2	13.3	13.75	13.95	13.4	12.75	12.15	11.85	11.65
18.....	12.05	12.39	13.00	13.2	13.3	13.8	13.95	13.4	12.75	12.15	11.85	11.75
19.....	11.90	12.45	13.10	13.2	13.3	13.8	13.95	13.35	12.75	12.15	11.8	11.85
20.....	12.00	12.48	13.00	13.2	13.3	13.8	13.95	13.35	12.65	12.15	11.7	11.8
21.....	12.01	12.55	13.10	13.2	13.3	13.8	13.95	13.35	12.65	12.05	11.75	11.8
22.....	12.02	12.55	13.10	13.2	13.35	13.85	13.95	13.35	12.6	12.15	11.75	11.85
23.....	12.00	12.55	13.10	13.2	13.35	13.85	13.95	13.35	12.6	12.1	11.75	11.85
24.....	12.01	12.60	13.10	13.2	13.35	13.9	13.9	13.3	12.6	12.1	11.75	11.85
25.....	12.02	12.68	13.50	13.2	13.4	13.9	13.9	13.25	12.6	12.1	11.75	11.85

Daily gage height, in feet, of Klamath River at Keno, Oreg., for 1904-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909-10.												
26.....	12.00	12.70	13.50	13.2	13.4	13.9	13.85	13.2	12.55	12.05	11.7	11.85
27.....	12.01	12.75	13.50	13.2	13.4	13.9	13.85	13.15	12.4	12.05	11.75	11.85
28.....	12.03	12.75	13.20	13.2	13.4	13.9	13.8	13.15	12.5	12.05	11.65	11.85
29.....	12.05	12.80	13.20	13.2	.....	13.9	13.8	13.1	12.5	12.0	11.7	11.85
30.....	12.00	12.80	13.20	13.2	.....	.....	13.8	13.15	12.45	12.0	11.75	11.85
31.....	12.00	.....	13.20	13.25	.....	.....	.....	13.15	.....	12.0	11.65	.....
1910-11.												
1.....	11.65	12.15	12.55	13.0	13.2	12.9	13.0	13.5	13.6	13.1	12.35	11.95
2.....	11.85	12.1	12.6	13.0	13.2	12.9	13.0	13.5	13.6	13.0	12.35	11.95
3.....	11.75	12.1	12.6	13.0	13.1	13.0	12.9	13.5	13.6	13.0	12.35	11.9
4.....	11.9	12.1	12.65	13.0	13.0	13.0	13.0	13.7	13.6	13.0	12.3	11.9
5.....	11.9	12.1	12.65	13.0	13.0	13.0	13.0	13.6	13.5	13.0	12.3	11.82
6.....	11.9	12.1	12.7	13.0	13.0	13.0	13.1	13.7	13.5	12.9	12.25	11.95
7.....	11.9	12.1	12.7	13.0	13.0	13.0	13.2	13.6	13.5	12.9	12.2	11.95
8.....	11.9	12.15	12.7	13.0	13.0	13.0	13.2	13.6	13.5	12.9	12.2	11.9
9.....	12.0	12.15	12.75	13.0	13.0	13.0	13.2	13.6	13.5	12.9	12.25	11.9
10.....	11.9	12.25	12.8	13.0	13.1	13.0	13.2	13.6	13.4	12.8	12.2	11.95
11.....	12.0	12.1	12.8	13.0	13.1	13.0	13.3	13.6	13.4	12.8	12.2	11.95
12.....	12.1	12.1	12.8	13.0	13.1	13.0	13.3	13.5	13.4	12.8	12.2	12.0
13.....	12.0	12.15	12.85	13.0	13.0	13.0	13.4	13.6	13.4	12.8	12.15	11.9
14.....	12.0	12.15	12.85	13.0	13.0	13.0	13.4	13.7	13.4	12.8	12.2	11.85
15.....	12.0	12.15	12.85	13.0	13.0	13.0	13.4	13.6	13.4	12.8	12.1	11.85
16.....	12.0	12.15	12.85	13.0	13.0	13.0	13.4	13.6	13.3	12.8	12.1	11.9
17.....	12.05	12.15	12.95	13.1	13.0	13.0	13.4	13.6	13.2	12.8	12.1	11.9
18.....	12.05	12.2	12.95	13.1	13.0	13.0	13.4	13.6	13.3	12.8	12.1	11.9
19.....	12.1	12.2	12.95	13.1	13.0	13.0	13.4	13.7	13.3	12.7	12.0	11.9
20.....	12.05	12.2	12.95	13.1	13.0	13.0	13.4	13.6	13.3	12.7	12.05	11.95
21.....	12.05	12.3	12.95	13.1	13.0	13.0	13.4	13.6	13.3	12.6	12.05	11.82
22.....	12.05	12.25	12.95	13.1	13.0	13.0	13.4	13.6	13.2	12.6	12.05	11.9
23.....	12.05	12.4	12.95	13.1	13.0	12.9	13.5	13.5	13.1	12.6	12.05	11.9
24.....	12.1	12.45	12.95	13.1	13.0	13.0	13.5	13.6	13.2	12.6	12.05	11.95
25.....	12.1	12.45	12.95	13.1	13.0	13.0	13.5	13.6	13.2	12.45	12.05	11.9
26.....	12.1	12.45	12.95	13.1	13.0	13.0	13.5	13.6	13.1	12.45	12.05	12.0
27.....	12.1	12.5	12.95	13.1	12.9	13.0	13.5	13.6	13.1	12.45	12.0	11.85
28.....	12.1	12.5	12.95	13.1	12.9	13.0	13.5	13.6	13.0	12.45	12.0	11.95
29.....	12.1	12.5	12.95	13.1	.....	13.0	13.5	13.6	13.0	12.4	12.0	11.95
30.....	12.1	12.5	12.95	13.1	.....	13.0	13.5	13.6	13.0	12.4	12.0	11.95
31.....	12.1	.....	12.95	13.2	.....	13.0	.....	13.6	13.1	12.4	11.95	.....
Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1911-12.												
1.....	11.95	12.15	12.35	12.5	12.8	13.0	13.2	13.1	13.0	13.1	13.0	13.0
2.....	11.95	12.15	12.35	12.5	12.8	13.0	13.2	13.2	13.1	13.1	13.0	13.0
3.....	12.00	12.15	12.35	12.5	12.8	13.1	13.2	13.2	13.1	13.1	13.0	13.0
4.....	11.95	12.15	12.40	12.5	12.8	13.1	13.2	13.2	13.1	13.1	13.0	13.0
5.....	11.95	12.10	12.45	12.6	12.8	13.2	13.2	13.2	13.1	13.1	13.0	13.0
6.....	12.05	12.10	12.40	12.6	12.8	13.2	13.2	13.2	13.2	13.1	13.0	13.0
7.....	12.05	12.15	12.40	12.7	12.9	13.2	13.2	13.2	13.2	13.1	13.0	13.0
8.....	12.05	12.04	12.40	12.7	12.8	13.2	13.2	13.2	13.2	13.1	13.0	13.0
9.....	11.95	12.05	12.40	12.7	12.8	13.2	13.2	13.2	13.2	13.1	13.0	13.0
10.....	12.00	12.25	12.40	12.7	12.8	13.2	13.2	13.1	13.1	13.1	13.0	13.0
11.....	12.00	12.25	12.45	12.7	12.8	13.2	13.2	13.2	13.2	13.1	13.1	13.0
12.....	12.05	12.25	12.45	12.7	12.8	13.2	13.2	13.1	13.2	13.1	13.2	12.9
13.....	12.15	12.25	12.45	12.6	12.8	13.2	13.2	13.1	13.1	13.1	13.1	12.9
14.....	11.93	12.25	12.45	12.7	12.8	13.2	13.2	13.2	13.2	13.1	13.1	12.9
15.....	12.05	12.25	12.45	12.7	12.8	13.3	13.2	13.2	13.2	13.0	13.0	13.0
16.....	12.05	12.25	12.45	12.7	12.8	13.3	13.2	13.2	13.2	13.1	13.1	13.0
17.....	12.05	12.25	12.45	12.7	12.8	13.2	13.2	13.1	13.1	13.0	13.0	13.0
18.....	12.05	12.30	12.45	12.7	12.9	13.2	13.0	13.1	13.0	13.1	13.0	13.0
19.....	12.05	12.30	12.45	12.7	13.0	13.2	13.0	13.2	13.0	13.0	13.0	12.8
20.....	12.10	12.30	12.45	12.7	13.0	13.2	13.0	13.2	13.1	13.1	13.1	12.9
21.....	12.10	12.30	12.45	12.7	13.0	13.2	13.0	13.2	13.2	13.1	13.1	12.8
22.....	12.05	12.30	12.45	12.7	12.9	13.2	13.2	13.1	13.1	13.0	13.0	12.9
23.....	12.05	12.35	12.45	12.7	12.9	13.2	13.2	13.2	13.2	13.0	13.0	13.0
24.....	12.10	12.35	12.45	12.8	13.0	13.2	13.1	13.1	13.1	13.0	13.0	13.0
25.....	12.10	12.30	12.45	12.8	13.0	13.2	13.1	13.1	13.1	13.0	13.0	13.0
26.....	12.10	12.35	12.45	12.8	13.0	13.2	13.1	13.1	13.1	13.0	13.0	12.9
27.....	12.10	12.35	12.45	12.7	12.9	13.2	13.2	13.1	13.1	13.0	13.0	12.9
28.....	12.10	12.35	12.45	12.7	13.0	13.2	13.1	13.1	13.1	13.0	13.0	12.9
29.....	12.10	12.35	12.45	12.7	13.0	13.2	13.1	13.2	13.1	13.0	13.0	12.8
30.....	12.10	12.35	12.45	12.8	.....	.....	13.1	13.2	13.1	13.2	13.0	12.9
31.....	12.15	.....	12.45	12.8	.....	.....	13.2	.....	13.0	.....	13.0	.....

NOTE.—Gage heights little affected by ice.

Rating tables for Klamath River at Keno, Oreg.

May 31, 1904, to December 31, 1906.

Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.
<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>
11.60	900	12.60	1,960	13.60	3,730	14.60	6,590
11.70	970	12.70	2,100	13.70	3,980	14.70	6,940
11.80	1,050	12.80	2,250	13.80	4,200	14.80	7,300
11.90	1,140	12.90	2,400	13.90	4,460	14.90	7,670
12.00	1,240	13.00	2,560	14.00	4,730	15.00	8,050
12.10	1,350	13.10	2,730	14.10	5,010	15.10	8,440
12.20	1,460	13.20	2,910	14.20	5,300	15.20	8,840
12.30	1,580	13.30	3,100	14.30	5,600	15.30	9,250
12.40	1,700	13.40	3,300	14.40	5,920		
12.50	1,830	13.50	3,510	14.50	6,250		

NOTE.—Table applicable only to open channel. It is based on 22 discharge measurements made during 1904-5. It is well defined between gage heights 12.2 feet and 13.3 feet.

January 1, 1907, to December 31, 1910.

11.50	730	12.30	1,390	13.10	2,520	13.90	4,080
11.60	780	12.40	1,510	13.20	2,690	14.00	4,300
11.70	840	12.50	1,630	13.30	2,870	14.10	4,530
11.80	900	12.60	1,760	13.40	3,060	14.20	4,760
11.90	970	12.70	1,900	13.50	3,250	14.30	4,990
12.00	1,060	12.80	2,050	13.60	3,450	14.40	5,220
12.10	1,160	12.90	2,200	13.70	3,660		
12.20	1,270	13.00	2,360	13.80	3,870		

NOTE.—Table applicable only to open channel. It is based on discharge measurements made during 1906 to 1909, and is fairly well defined.

Daily discharge, in second-feet, of Klamath River at Keno, Oreg., for 1909-10.

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909.									
1.....	1,630	2,590	3,250	3,250	3,040	2,550	1,830	1,200	928
2.....	1,620	2,600	3,250	3,250	3,040	2,540	1,820	1,180	949
3.....	1,610	2,520	3,250	3,250	3,020	3,250	1,760	1,180	956
4.....	1,630	2,600	3,250	3,250	3,020	3,450	1,760	1,160	949
5.....	1,750	2,660	3,250	3,250	2,950	3,250	1,750	1,140	956
6.....	1,750	2,660	3,250	3,250	2,960	3,250	1,730	1,130	963
7.....	1,790	2,670	3,250	3,250	2,910	2,520	1,730	1,120	963
8.....	1,870	2,690	3,250	3,250	2,890	2,520	1,720	1,110	949
9.....	1,870	2,690	3,250	3,250	2,910	2,600	1,620	1,090	949
10.....	1,870	2,690	3,250	3,160	2,660	2,520	1,580	1,070	963
11.....	1,870	2,690	3,250	3,160	2,710	2,520	1,560	1,050	949
12.....	1,870	2,830	3,250	3,160	2,800	2,690	1,560	1,080	942
13.....	1,890	2,830	3,250	3,160	2,710	2,520	1,530	1,020	935
14.....	1,900	2,830	3,250	3,160	2,740	2,810	1,510	1,010	942
15.....	1,930	2,830	3,250	3,160	2,710	2,280	1,490	1,000	949
16.....	2,050	2,830	3,250	3,160	2,730	2,280	1,470	988	949
17.....	2,060	2,870	3,250	3,160	2,690	2,280	1,460	979	914
18.....	2,050	3,020	3,250	3,060	2,710	2,280	1,460	979	921
19.....	2,120	3,060	3,250	3,060	2,730	2,200	1,450	963	914
20.....	2,230	3,060	3,250	3,060	2,660	2,200	1,410	914	870
21.....	2,230	3,060	3,250	3,060	2,690	2,220	1,390	956	935
22.....	2,220	3,060	3,250	3,060	2,690	2,140	1,370	888	942
23.....	2,280	3,060	3,250	3,060	2,730	2,120	1,340	935	935
24.....	2,520	3,060	3,250	3,060	2,660	2,140	1,320	949	870
25.....	2,360	3,060	3,250	3,060	2,690	2,110	1,270	942	956
26.....	2,410	3,060	3,250	3,060	2,710	2,060	1,250	942	949
27.....	2,440	3,060	3,250	3,060	2,520	2,060	1,220	949	949
28.....	2,470	3,250	3,250	3,060	2,660	2,050	1,230	935	956
29.....	2,490	.....	3,250	3,060	2,600	2,050	1,240	956	949
30.....	2,540	.....	3,250	3,030	2,550	2,020	1,270	921	928
31.....	2,550	.....	3,250	.....	2,660	.....	1,220	900	.....

Daily discharge, in second-feet, of Klamath River at Keno, Oreg., for 1909-10—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909-10.												
1.....	997	1,140	2,120	2,690	2,780	3,250	4,080	3,870	2,440	1,510	1,020	870
2.....	928	1,130	2,120	2,690	2,780	3,250	4,080	3,870	2,520	1,450	1,020	840
3.....	942	1,160	2,120	2,690	2,780	3,250	4,080	3,870	2,520	1,510	935	780
4.....	942	1,230	2,120	2,690	2,780	3,350	4,080	3,870	2,520	1,510	1,020	870
5.....	949	1,220	2,200	2,780	3,870	3,350	4,080	3,870	2,360	1,510	970	870
6.....	963	1,240	2,200	2,780	2,870	3,350	4,190	3,760	2,360	1,510	970	840
7.....	970	1,200	2,200	2,780	2,870	3,450	4,190	3,760	2,360	1,510	970	870
8.....	979	1,230	2,200	2,870	2,870	3,450	4,190	3,760	2,360	1,450	970	840
9.....	1,040	1,220	2,200	2,870	2,870	3,560	4,190	3,660	2,280	1,450	935	810
10.....	1,020	1,250	2,200	2,870	2,870	3,560	4,080	3,660	2,280	1,450	935	810
11.....	1,040	1,270	2,200	2,870	2,870	3,560	4,190	3,560	2,200	1,450	935	870
12.....	1,020	1,330	2,280	2,870	2,870	3,560	4,080	3,450	2,200	1,390	900	870
13.....	1,020	1,370	2,310	2,870	2,870	3,560	4,190	3,350	2,200	1,390	900	840
14.....	1,030	1,390	1,900	2,690	2,870	3,660	4,080	3,350	2,120	1,330	900	840
15.....	1,020	1,390	2,280	2,690	2,870	3,660	4,190	3,250	2,120	1,330	900	870
16.....	1,040	1,490	2,330	2,690	2,870	3,660	4,190	3,160	2,050	1,330	900	810
17.....	1,060	1,460	2,330	2,690	2,870	3,760	4,190	3,060	1,980	1,220	935	810
18.....	1,110	1,500	2,360	2,690	2,870	3,870	4,190	3,060	1,980	1,220	935	870
19.....	970	1,570	2,520	2,690	2,870	3,870	4,190	2,960	1,980	1,220	900	935
20.....	1,060	1,610	2,360	2,690	2,870	3,870	4,190	2,960	1,830	1,220	840	900
21.....	1,070	1,700	2,520	2,690	2,870	3,870	4,190	2,960	1,830	1,110	870	900
22.....	1,080	1,700	2,520	2,690	2,960	3,980	4,190	2,960	1,760	1,220	870	935
23.....	1,060	1,700	2,520	2,690	2,960	3,980	4,190	2,960	1,760	1,160	870	935
24.....	1,070	1,760	2,520	2,690	2,960	4,080	4,080	2,870	1,760	1,160	870	935
25.....	1,080	1,870	3,250	2,690	3,060	4,080	4,080	2,780	1,760	1,160	870	935
26.....	1,060	1,900	3,250	2,690	3,060	4,080	3,980	2,600	1,700	1,110	840	935
27.....	1,070	1,980	3,250	2,690	3,060	4,080	3,980	2,600	1,510	1,110	870	935
28.....	1,090	1,980	2,690	2,690	3,060	4,080	3,870	2,600	1,630	1,110	810	935
29.....	1,110	2,050	2,690	2,690	.....	4,080	3,870	2,520	1,630	1,060	840	935
30.....	1,060	2,050	2,690	2,690	.....	4,080	3,870	2,600	1,570	1,060	870	935
31.....	1,060	.....	2,690	2,780	.....	4,080	.....	2,600	.....	1,060	810	.....

Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.
1910.											
1.....	810	1,220	1,700	11.....	1,060	1,160	2,050	21.....	1,110	1,390	2,280
2.....	935	1,160	1,780	12.....	1,160	1,160	2,050	22.....	1,110	1,330	2,280
3.....	870	1,160	1,780	13.....	1,060	1,220	2,120	23.....	1,110	1,510	2,280
4.....	970	1,160	1,830	14.....	1,060	1,220	2,120	24.....	1,160	1,570	2,280
5.....	970	1,160	1,830	15.....	1,060	1,220	2,120	25.....	1,160	1,570	2,280
6.....	970	1,160	1,900	16.....	1,060	1,220	2,120	26.....	1,160	1,570	2,280
7.....	970	1,160	1,900	17.....	1,110	1,220	2,280	27.....	1,160	1,630	2,280
8.....	970	1,220	1,900	18.....	1,110	1,270	2,280	28.....	1,160	1,630	2,280
9.....	1,060	1,220	1,980	19.....	1,160	1,270	2,280	29.....	1,160	1,630	2,280
10.....	970	1,330	2,050	20.....	1,110	1,270	2,280	30.....	1,160	1,630	2,280
								31.....	1,160	.....	2,280

NOTE.—Daily discharge determined from a rating curve fairly well defined for 1909 but uncertain for 1910, due to lack of discharge measurements.

Monthly discharge of Klamath River at Keno, Oreg., for 1904-1910.

[Drainage area, 3,150 square miles.]

Month.	Discharge in second-feet.				Run-off.		Accu- racy.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.	Total in acre-feet.	
1904.							
June.....	8,440	5,300	7,076	2.25	2.51	421,100	
July.....	5,300	3,300	4,177	1.33	1.53	256,800	
August.....	3,100	2,100	2,513	.798	.92	154,500	
September.....	2,100	1,700	1,778	.564	.63	105,900	
1904-5.							
October.....	1,830	1,700	1,775	.564	.65	109,100	
November.....	2,100	1,960	2,007	.637	.71	119,400	
December.....	2,400	2,100	2,235	.709	.82	137,400	
January.....	3,100	2,400	2,716	.862	.99	167,000	
February.....	3,100	2,910	3,086	.980	1.02	171,400	
March.....	3,300	2,910	3,052	.969	1.12	187,700	
April.....	3,300	2,910	3,097	.983	1.10	184,300	
May.....	2,910	2,560	2,688	.853	.98	165,300	
June.....	2,560	1,830	2,157	.685	.76	128,400	
July.....	1,830	1,140	1,436	.456	.53	88,300	
August.....	1,140	1,050	1,065	.338	.39	65,480	
September.....	1,140	1,050	1,056	.335	.37	62,840	
The year.....	3,300	1,050	2,200	.698	9.44	1,590,000	
1905-6.							
October.....	1,350	1,140	1,203	.382	.44	73,970	
November.....	1,580	1,350	1,445	.459	.51	85,980	
December.....	1,830	1,580	1,694	.538	.62	104,200	
January.....	2,250	1,700	2,050	.651	.75	126,000	
February.....	2,250	2,100	2,180	.692	.72	121,000	
March.....	2,560	2,250	2,380	.756	.87	146,000	
April.....	3,730	2,730	3,220	1.02	1.14	192,000	
May.....	3,960	3,730	3,940	1.25	1.44	242,000	
June.....	3,960	3,300	3,710	1.18	1.32	221,000	
July.....	3,300	2,100	2,750	.873	1.01	169,000	
August.....	1,960	1,350	1,680	.533	.61	103,000	
September.....	1,350	1,240	1,280	.406	.45	76,200	
The year.....	3,960	1,140	2,290	.727	9.88	1,660,000	
1906-7.							
October.....	1,460	1,240	1,290	.409	.47	79,300	
November.....	1,700	1,460	1,580	.502	.56	94,000	
December.....	2,100	1,700	1,900	.603	.70	117,000	
January.....	2,200	1,900	2,030	.644	.74	125,000	
February.....	3,660	2,200	3,120	.990	1.03	173,000	B.
March.....	4,530	3,660	4,070	1.29	1.49	250,000	A.
April.....	5,220	4,530	4,920	1.56	1.74	293,000	A.
May.....	4,990	4,150	4,630	1.47	1.70	285,000	A.
June.....	4,120	3,100	3,600	1.14	1.27	214,000	A.
July.....	3,060	1,900	2,430	.772	.89	149,000	A.
August.....	1,830	1,390	1,530	.486	.56	94,100	B.
September.....	1,450	1,220	1,310	.416	.46	78,000	B.
The year.....	5,220	1,220	2,700	.857	11.61	1,950,000	
1907-8.							
October.....	1,470	1,270	1,350	.429	.49	83,000	B.
November.....	1,630	1,430	1,540	.489	.55	91,600	B.
December.....	2,200	1,490	1,820	.578	.67	112,000	B.
January.....	2,640	2,200	2,450	.778	.90	151,000	B.
February.....	2,870	2,520	2,670	.848	.91	154,000	B.
March.....	4,080	2,360	2,730	.867	1.00	168,000	B.
April.....	2,690	2,500	2,610	.829	.92	155,000	B.
May.....	2,380	2,050	2,300	.730	.84	141,000	C.
June.....	2,050	1,570	1,870	.594	.66	111,000	C.
July.....	1,630	1,060	1,290	.409	.47	79,300	C.
August.....	1,060	780	925	.294	.34	56,900	C.
September.....	840	755	801	.254	.28	47,700	C.
The year.....	4,080	755	1,860	.592	8.03	1,350,000	

Monthly discharge of Klamath River at Keno, Oreg., for 1904-1910—Continued.

Month.	Discharge in second-feet.				Run-off.		Accu- racy.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.	Total in acre-feet.	
1908-9.							
October.....	1,390	730	1,070	0.340	0.39	65,800	B.
November.....	1,520	1,290	1,420	.451	.50	84,500	B.
December.....	1,630	1,520	1,590	.505	.58	97,800	B.
January.....	2,520	1,610	2,060	.654	.75	127,000	A.
February.....	3,250	2,520	2,850	.905	.94	158,000	A.
March.....	3,250	3,250	3,250	1.03	1.19	200,000	A.
April.....	3,250	3,030	3,140	.997	1.11	187,000	A.
May.....	3,040	2,520	2,770	.880	1.01	170,000	B.
June.....	3,450	2,020	2,440	.775	.86	145,000	B.
July.....	1,830	1,220	1,490	.473	.55	91,600	B.
August.....	1,200	900	1,020	.324	.37	62,700	B.
September.....	970	870	943	.299	.33	56,100	B.
The year.....	3,450	730	2,000	.636	8.58	1,450,000	
1909-10.							
October.....	1,110	928	1,030	.327	.38	63,300	B.
November.....	2,050	1,130	1,500	.477	.53	89,300	B.
December.....	3,250	1,900	2,420	.768	.89	149,000	B.
January.....	2,870	2,690	2,740	.870	1.00	168,000	B.
February.....	3,060	2,780	2,890	.917	.95	160,000	B.
March.....	4,080	3,250	3,720	1.18	1.36	229,000	B.
April.....	4,190	3,870	4,110	1.30	1.45	245,000	B.
May.....	3,870	2,520	3,230	1.03	1.19	199,000	B.
June.....	2,520	1,510	2,050	.651	.73	122,000	B.
July.....	1,510	1,060	1,300	.413	.48	79,900	B.
August.....	1,020	810	909	.289	.33	55,900	B.
September.....	935	730	878	.279	.31	52,200	B.
The year.....	4,190	780	2,230	.708	9.60	1,610,000	
1910.							
October.....	1,160	810	1,070	.340	.39	65,800	B.
November.....	1,630	1,160	1,320	.419	.47	78,600	B.
December.....	2,280	1,700	2,110	.670	.77	130,000	B.

KLAMATH RIVER NEAR HAPPY CAMP, CAL.

This station, which is located at Evans Ferry, in the NW. $\frac{1}{4}$ sec. 16, T. 16 N., R. 8 E., about 4 miles southeast of Happy Camp, was established September 10, 1911. Indian Creek enters $3\frac{1}{2}$ miles below the station.

The gage is a vertical staff, in two sections, on the left bank. Low-water section is 60 feet and upper section is 1,200 feet below ferry cable. The channel is composed of bowlders and gravel. Discharge measurements are made from a suspension bridge about 2,000 feet above gage.

Water is diverted from the main river and tributaries above the station for use in irrigation and power development.

Estimates of discharge are withheld until additional data are available.

Discharge measurements of Klamath River near Happy Camp, Cal., in 1911-12.

Date.	Hydrographer.	Gage height.	Discharge.	Date.	Hydrographer.	Gage height.	Discharge.
1911. Sept. 10	G. T. Peekema.....	<i>Feet.</i> 2.55	<i>Sec.-ft.</i> 1,670	1912. Jan. 17	H. J. Tompkins.....	<i>Feet.</i> 4.48	<i>Sec.-ft.</i> 4,060
1912. Jan. 14	H. J. Tompkins.....	5.38	6,530	May 25	Lasley Lee.....	5.55	6,810
				26	.....do.....	5.75	7,440

Daily gage height, in feet, of Klamath River near Happy Camp, Cal., for 1911-12.

Day.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.										
1.....		2.6	2.9	3.3	3.4	4.5	4.9	4.9	6.8	5.9
2.....		2.65	2.9	3.3	3.4	4.5	4.8	5.0	6.8	5.9
3.....		2.8	2.9	3.3	3.4	4.4	4.7	5.0	6.2	6.0
4.....		2.8	2.9	3.3	3.5	4.3	4.8	5.0	6.0	5.9
5.....		2.7	2.9	3.3	3.4	4.4	4.8	4.9	5.9	6.0
6.....		2.7	2.9	3.4	3.4	4.6	5.0	4.9	5.9	6.0
7.....		2.7	3.0	3.3	3.6	4.6	5.1	4.9	6.0	5.9
8.....		2.8	3.0	3.3	3.7	4.8	5.0	4.9	6.2	5.9
9.....		3.0	3.0	3.3	4.0	5.0	4.9	4.9	6.2	5.7
10.....	2.55	2.75	3.0	3.3	4.1	5.2	4.8	5.1	6.3	5.5
11.....	2.55	2.8	3.0	3.3	4.0	5.2	4.8	5.3	6.2	5.4
12.....	2.6	2.8	3.0	3.3	5.4	5.0	4.8	5.3	6.2	5.3
13.....	2.6	2.9	3.1	3.3	6.3	4.8	4.8	5.0	6.2	5.5
14.....	2.6	3.0	3.1	3.3	5.4	4.8	4.8	5.0	6.2	5.4
15.....	2.6	2.9	3.5	3.3	4.9	4.7	5.0	5.0	6.3	5.2
16.....	2.55	2.8	3.5	3.3	4.6	5.9	5.2	4.9	6.2	5.0
17.....	2.55	2.8	3.4	3.4	4.5	9.2	5.2	4.8	6.1	4.9
18.....	2.6	2.8	3.3	3.4	4.4	10.1	5.3	4.8	6.0	4.8
19.....	2.6	2.8	3.3	3.3	4.3	7.8	5.1	4.8	6.0	4.8
20.....	2.6	2.8	3.3	3.3	4.2	6.8	5.0	4.8	6.0	4.8
21.....	2.6	2.8	3.3	3.3	4.1	6.2	5.0	4.8	6.0	4.8
22.....	2.6	2.8	3.2	3.4	4.1	5.8	4.9	4.7	5.8	4.7
23.....	2.6	2.8	3.2	3.3	4.1	5.6	4.9	4.7	5.6	4.8
24.....	2.6	2.8	3.2	3.4	4.2	5.4	4.9	4.8	5.6	5.0
25.....	2.65	2.8	3.2	3.4	6.9	5.3	5.0	4.8	5.6	4.9
26.....	2.6	2.8	3.2	3.4	7.4	5.2	5.0	4.8	5.7	4.8
27.....	2.7	2.9	3.2	3.4	6.2	5.1	5.0	4.8	5.9	4.7
28.....	2.65	2.9	3.2	3.4	5.4	5.0	5.0	4.8	5.8	4.6
29.....	2.6	2.9	3.2	3.3	5.0	5.0	5.0	5.1	6.1	4.5
30.....	2.6	2.9	3.2	3.4	4.7	.....	4.9	5.6	6.0	4.4
31.....	.....	2.9	.....	3.5	4.6	.....	4.9	.....	6.0	.....

KLAMATH RIVER NEAR REQUA, CAL.

This station, which is located at Schofield Ferry, in sec. 29, T. 13 N., R. 2 E., 9 miles above Requa, was established December 26, 1910. It is 30 miles below the mouth of Trinity River and 10 miles above the mouth of Klamath River.

The staff gage is in four sections on the right bank near the ferry.

Discharge measurements are made from the ferry or a small boat.

The channel is composed of gravel and may shift at high stages.

Estimates of discharge are withheld until additional measurements can be secured.

Discharge measurements of Klamath River near Requa, Cal., in 1910-1912.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1910. Aug. 31 Dec. 25	W. V. Hardy..... .....do.....	<i>Feet.</i> <i>a</i> 5.78 8.78	<i>Sec.-ft.</i> 2,430 10,300	1911. Dec. 15	E. O. Christiansen.....	<i>Feet.</i> 6.36	<i>Sec.-ft.</i> 3,770
1911. Sept. 6	E. O. Christiansen.....	5.45	2,980	1912. Feb. 25 May 8	E. O. Christiansen..... .....do.....	12.91 15.01	24,300 38,800

a Approximate.*Daily gage height, in feet, of Klamath River near Requa, Cal., for 1910-1912.*

Day.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.										
1.....		8.31	15.35	9.84	15.02	12.18	13.02	8.64	6.34	5.43
2.....		8.26	14.48	9.72	14.78	12.54	12.78	8.55	6.28	5.41
3.....		8.21	14.38	9.66	14.46	12.68	12.46	8.52	6.24	5.40
4.....		8.17	14.16	10.00	14.16	12.62	12.13	8.54	6.22	5.40
5.....		8.13	13.68	11.28	15.14	13.12	11.94	8.54	6.18	5.41
6.....		8.10	13.19	12.03	15.22	12.86	11.94	8.52	6.14	5.43
7.....		8.08	12.89	14.61	14.12	12.42	11.73	8.38	.....	5.45
8.....		8.02	12.24	14.84	.....	12.38	11.62	8.12	.....	5.45
9.....		8.09	11.94	13.38	13.78	12.22	11.46	7.96	6.00	5.48
10.....		8.40	11.82	12.88	13.98	11.86	11.48	7.75	5.98	5.45
11.....		9.04	12.26	12.32	13.90	11.74	11.79	7.68	5.96	5.45
12.....		8.93	12.19	12.02	13.36	11.82	11.85	7.68	5.93	5.42
13.....		8.62	12.48	11.88	12.64	11.78	11.80	7.70	5.90	5.50
14.....		8.59	12.12	11.92	12.58	11.61	11.84	7.74	5.88	5.52
15.....		8.52	11.66	11.98	12.52	.....	11.66	7.80	5.85	5.50
16.....		8.54	11.28	12.18	12.46	.....	11.22	7.72	5.81	5.42
17.....		8.56	11.18	12.49	12.56	11.76	10.93	7.58	5.78	5.40
18.....		9.78	11.36	12.88	12.62	14.08	10.65	7.46	5.76	5.35
19.....		14.12	11.16	13.06	12.54	13.47	10.42	7.38	5.72	5.35
20.....		18.70	11.04	13.24	12.38	12.92	10.30	7.25	5.70	5.35
21.....		15.08	10.88	13.48	12.34	12.69	10.12	7.14	5.64	5.35
22.....		13.58	10.68	13.96	12.46	13.00	9.86	7.00	5.62	5.35
23.....		12.46	10.69	14.36	12.68	13.26	9.56	6.88	5.62	5.32
24.....		11.65	10.48	14.42	13.28	13.98	9.48	6.84	5.58	5.32
25.....	8.78	11.62	10.42	13.89	13.74	12.52	9.16	6.82	5.55	5.40
26.....	8.63	11.68	10.12	13.42	13.68	11.98	9.12	6.76	5.52	5.50
27.....	8.56	11.64	9.98	13.02	13.36	11.78	9.18	6.65	5.50	5.52
28.....	8.45	12.22	.....	12.88	12.86	11.76	9.16	6.60	5.49	5.55
29.....	8.40	12.46	.....	13.22	12.48	11.86	8.96	6.55	5.48	5.50
30.....	8.43	13.56	.....	13.90	12.26	12.14	8.82	6.49	5.46	5.50
31.....	8.37	15.55	.....	14.58	.....	12.36	.....	6.40	5.45	.....

Daily gage height, in feet, of Klamath River near Requa, Cal., for 1910-1912—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.									
1.....	5.50	5.70	6.32	6.8	12.0	11.2	11.2	18.8	13.6
2.....	5.50	5.70	6.28	6.7	11.5	10.9	11.1	18.4	13.6
3.....	5.52	5.70	6.28	6.7	11.0	10.8	11.2	16.8	13.5
4.....	5.65	5.70	6.28	6.6	10.8	10.6	11.2	15.8	13.5
5.....	5.65	5.70	6.35	6.6	12.1	10.9	11.1	14.8	13.4
6.....	5.60	5.70	6.82	6.8	12.0	11.6	11.1	14.7	13.2
7.....	5.60	5.70	6.85	9.9	11.9	12.0	11.1	14.8	13.0
8.....	5.62	5.82	6.78	10.2	13.3	12.1	11.1	15.0	13.6
9.....	5.95	6.12	6.60	12.0	13.9	11.9	11.0	15.2	12.3
10.....	5.85	6.88	6.52	12.8	13.9	11.6	11.4	14.9	12.0
11.....	5.85	6.55	6.45	13.1	13.6	11.3	11.6	14.7	11.8
12.....	5.75	6.20	6.40	19.7	13.1	11.1	11.4	14.5	11.8
13.....	5.75	6.55	6.35	16.0	12.5	11.2	11.1	14.2	11.7
14.....	6.00	6.70	6.35	14.3	12.0	11.2	10.8	14.2	11.6
15.....	6.00	8.78	6.35	13.2	13.3	12.3	10.8	14.1	11.0
16.....	5.80	8.98	6.60	12.6	18.3	12.2	10.7	13.8	10.6
17.....	5.78	7.65	7.02	11.8	27.3	12.1	10.6	13.7	10.4
18.....	5.70	7.22	6.82	11.1	25.2	12.0	10.6	13.5	10.3
19.....	5.70	6.90	6.70	10.8	21.0	12.0	10.5	13.4	10.4
20.....	5.65	6.80	6.62	10.3	18.1	11.9	10.4	13.6	10.4
21.....	5.65	6.70	6.52	10.0	15.9	11.9	10.4	13.0	10.2
22.....	5.65	6.60	6.65	9.9	14.8	11.5	10.2	12.5	9.8
23.....	5.62	6.50	6.80	9.8	14.0	11.6	10.2	12.4	9.9
24.....	5.65	6.42	6.85	10.6	13.3	11.6	10.0	12.2	9.8
25.....	5.65	6.38	6.80	20.9	12.8	11.5	9.9	12.7	9.8
26.....	5.68	6.35	6.82	25.2	12.3	11.5	10.4	13.8	9.6
27.....	5.70	6.32	7.40	19.4	11.9	11.6	10.4	14.0	9.5
28.....	5.70	6.30	7.60	15.9	11.6	11.8	11.7	14.2	9.4
29.....	5.70	6.32	7.85	14.2	11.4	11.6	13.4	14.0	9.3
30.....	5.70	6.35	7.80	13.2	-----	11.4	15.5	13.8	9.2
31.....	5.70	-----	7.20	12.6	-----	11.3	-----	13.7	-----

SYCAN RIVER NEAR SILVERLAKE, OREG.

This station was established May 2, 1905. It was located about 30 miles south of Silverlake, Oreg., in sec. 19, T. 32 S., R. 14 E.

The channel is straight for about 20 feet above and 150 feet below the station. The current is swift. The right bank is high, rocky, and clean and does not overflow. The left bank is low, clean, and subject to overflow at extreme high stages. The bed of the stream is of rocks, gravel, and sand, free from vegetation, and permanent. There is but one channel at low and two channels at high stages.

Discharge measurements were made from a private bridge.

The gage was a vertical staff fastened to a bent of the bridge.

Discharge measurements of Sycan River near Silverlake, Oreg., in 1905-6.

Date.	Hydrographer.	Gage height.	Discharge.	Date.	Hydrographer.	Gage height.	Discharge.
1905.		Feet.	Sec.-ft.	1905.		Feet.	Sec.-ft.
Mar. 16	Ivan Landes.....	2.40	38	Nov. 7	Ivan Landes.....	1.12	6.0
Apr. 10	do.....	3.05	110				
May 2	do.....	3.45	163	1906.			
June 12	do.....	2.32	69	May 9	Ivan Landes.....	6.20	559
July 30	H. W. King.....	1.27	10.2	May 31	do.....	4.80	344
Oct. 3	Ivan Landes.....	1.70	5.4				

Daily gage height, in feet, of Sycan River near Silverlake, Oreg., for 1905.

Day.	May.	June.	July.	Aug.	Sept.	Oct.	Day.	May.	June.	July.	Aug.	Sept.	Oct.
1.....		2.6	1.8	1.25	1.4		16.....	3.35	2.2	1.5	1.0	1.75	1.8
2.....	3.45	2.6	1.8	1.25	1.4	1.7	17.....	3.5	2.15	1.45	1.0	1.75	1.8
3.....	3.35	2.6	1.75	1.1	1.5	1.85	18.....	3.4	2.05	1.45	1.05	1.8	1.8
4.....	3.25	3.0	1.75	1.15	1.5	1.7	19.....	3.3	2.2	1.3	1.05	1.8	1.7
5.....	3.2	3.1	1.7	.8	1.55	1.85	20.....	3.4	2.1	1.35	1.1	1.75	1.85
6.....	3.2	3.1	1.7	.8	1.55	1.8	21.....	2.9	2.0	1.4	1.1	1.75	1.7
7.....	3.25	3.2	1.7	.8	1.55	2.0	22.....	3.0	1.8	1.4	1.15	1.75	1.7
8.....	3.6	3.0	1.6	.8	1.55	1.9	23.....	3.1	1.9	1.4	1.15	1.75	1.85
9.....	3.4	3.0	1.6	.8	1.6	1.8	24.....	3.0	1.9	1.4	1.2	1.75	1.85
10.....	3.35	2.5	1.5	.8	1.65	1.7	25.....	2.9	1.9	1.3	1.25	1.75	1.85
11.....	3.35	2.4	1.5	.8	1.7	1.7	26.....	3.2	1.95	1.25	1.25	1.75	1.85
12.....	3.3	2.3	1.5	.8	1.7	1.8	27.....	3.55	1.9	1.25	1.3	2.0	1.85
13.....	3.4	2.4	1.5	.8	1.75	1.7	28.....	3.1	1.9	1.25	1.3	1.9	1.7
14.....	3.25	2.6	1.5	1.0	1.75	1.7	29.....	2.9	1.85	1.25	1.35	1.8	.....
15.....	3.3	2.4	1.5	1.0	1.75	1.65	30.....	2.8	1.85	1.25	1.35	1.8	.....
							31.....	2.7	.....	1.25	1.4	1.8	.....

Daily discharge, in second-feet, of Sycan River near Silverlake, Oreg., for 1905.

Day.	May.	June.	July.	Aug.	Sept.	Oct.	Day.	May.	June.	July.	Aug.	Sept.	Oct.
1.....	160	87	33	10	6	8	16.....	158	60	19	1	10	12
2.....	163	87	33	10	6	5	17.....	177	57	17	1	10	12
3.....	160	87	30	6	8	9	18.....	164	50	17	2	12	17
4.....	138	130	30	7	8	5	19.....	160	58	12	2	12	14
5.....	132	142	28	1	9	9	20.....	172	51	14	3	10	19
6.....	132	142	28	1	9	8	21.....	112	45	15	3	10	14
7.....	138	155	28	1	9	14	22.....	122	34	15	4	10	14
8.....	183	140	24	0	9	11	23.....	134	39	15	4	10	19
9.....	164	140	24	0	11	12	24.....	122	39	15	5	10	19
10.....	158	85	20	0	12	9	25.....	112	39	11	2	10	19
11.....	158	76	20	0	9	9	26.....	146	42	10 ²⁵	2	10	19
12.....	151	68	20	0	9	12	27.....	192	39	10	3	14	24
13.....	164	76	19	0	10	9	28.....	134	39	10	3	11	19
14.....	145	94	19	1	10	9	29.....	118	37	10	5	8	19
15.....	151	76	19	1	10	8	30.....	107	37	10	5	8	19
							31.....	97	.....	10	6	.....	19

NOTE.—These discharges were obtained by the indirect method for shifting channels.

Monthly discharge of Sycan River near Silverlake, Oreg., for 1905.

Month.	Discharge in second-feet.			Total in acre-feet.
	Maximum.	Minimum.	Mean.	
May.....	192	97	146	8,980
June.....	155	34	75.0	4,460
July.....	33	10	18.9	1,160
August.....	10	0	2.87	176
September.....	14	6	9.67	575
October.....	24	5	13.4	824
The period.....				16,200

NOTE.—These values are fair.

WILLIAMSON RIVER NEAR KLAMATH AGENCY, OREG.

This station, which is located 13 miles northeast of the Klamath Agency, in the NW. $\frac{1}{4}$ sec. 1, T. 33 S., R. 7 E., at a point locally known as Rocky Ford, at the lower extremity of Klamath Marsh, was established March 26, 1908, in cooperation with the United

States Office of Indian Affairs, and discontinued June 26, 1910, as the observer moved away and no other was obtainable.

The nearest tributary is Spring Creek, 11 miles below the station. Owing to the inaccessibility of the station, it has not been practicable to obtain continuous records of discharge. During the winter months it is almost impossible to reach the station on account of snow.

Discharge measurements are made from a cable and car.

The staff gage was originally located about 1,000 feet above the cable. On October 17, 1908, a Bristol self-registering gage was installed, and as this required only weekly visits by the observer, continuous records were obtained during the remainder of the year. The gage was moved downstream May 30, 1909, to the location of the cable. It was set to read the same as at the former location, but on account of the slope of the river there is no constant relation. The datum of the gage as reset is at an elevation of 4,622.19 feet above sea level. On November 10, 1909, an auxiliary staff gage was installed below the mouth of Spring Creek to be used when the regular station is inaccessible. Simultaneous readings were made on both gages from November, 1909, to June, 1910. The upper gage was washed out during the high water of March, 1910, and was replaced April 15 with a Bristol self-recording gage.

In the meantime weekly readings were continued on the lower gage. The relation between the two gages has been determined and the gage heights for the missing period have been estimated.

Owing to the large storage capacity in Klamath Marsh the river is not subject to great fluctuations. It is probable that weekly observations will give sufficient data for an estimate of the flow.

The accuracy of the results is somewhat affected by the growth of aquatic plants in the river channel during the season, and a comparatively large number of measurements will be necessary in order to secure reliable results.

Discharge measurements of Williamson River near Klamath Agency, Oreg., in 1908-1910.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1908.		<i>Feet.</i>	<i>Sec.-ft.</i>	1909.		<i>Feet.</i>	<i>Sec.-ft.</i>
Mar. 26	C. E. Ellsworth.....	2.29	792	Apr. 26	Stevens and Kimble...	1.62	526
Mar. 27	.....do.....	2.30	824	May 30	A. E. Geiger.....	.93	270
Apr. 28	.....do.....	1.56	505	Sept. 30	John Yadon.....	.30	73
May 15	H. Kimble.....	1.33	351	Nov. 7	.....do.....	1.00	239
June 19	.....do.....	.90	243				
July 16	.....do.....	.82	162	1910.			
Sept. 26	.....do.....	.48	167	Aug. 11 ^a	Leland Moser.....	.54	55.2
Oct. 17	.....do.....	1.00	184				
Nov. 20	McGlashan and Kimble	1.09	278				

^a The accuracy of this measurement is very uncertain, as the velocity was very low and the river bed covered with grass and tules.

Daily gage height, in feet, of Williamson River near Klamath Agency, Oreg., 1908-1910.

Day.	Mar.	Apr.	Sept.	Day.	Mar.	Apr.	Sept.	Day.	Mar.	Apr.	Sept.
1.		2.27		11.		2.05		21.		1.69	
2.		2.26		12.		2.02		22.		1.65	
3.		2.24		13.		1.96		23.		1.64	
4.		2.20		14.		1.92		24.			
5.		2.18		15.		1.90		25.	2.32		
6.		2.16		16.		1.86		26.	2.30		0.50
7.		2.14		17.		1.78		27.	2.30		.50
8.		2.14		18.		1.74		28.	2.31	1.56	.50
9.		2.12		19.		1.71		29.	2.30		.50
10.		2.08		20.		1.70		30.	2.30		.50
								31.	2.28		

[illegible]

Daily gage height, in feet, of Williamson River near Klamath Agency, Oreg., 1908—1910—
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1909-10.									
1								1.7	
2				1.8			2.6	1.7	
3	0.31							1.65	
4								1.65	
5			1.70					1.65	
6					1.45	2.7		1.65	1.0
7		1.00						1.65	1.0
8								1.65	1.0
9				1.6				1.6	1.0
10	.43						2.5	1.6	1.0
11								1.55	1.0
12			2.40					1.55	1.0
13					1.25	3.7		1.5	1.0
14		1.20						1.5	.95
15							2.1	1.5	.95
16				1.2			2.1	1.5	.95
17	.47						2.1	1.3	.95
18							2.1	1.2	.9
19			2.30				2.1	1.0	.9
20					1.25	3.4	1.9	1.05	
21		1.90					1.85	1.35	
22							1.9	1.2	
23				1.15			1.85	1.2	
24	.70						1.85	1.1	
25							1.75	1.1	
26			1.90				1.8	1.1	.9
27					1.6	3.1	1.75	1.0	
28		2.50					1.7	1.0	
29							1.7	1.1	
30				1.45			1.7		
31	.85								

Daily gage height, in feet, of Williamson River below Spring Creek, near Klamath Agency, Oreg., for 1910.

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	Day.	Jan.	Feb.	Mar.	Apr.	May.	June.
1							16	0.20					
2	0.70			1.10			17						
3							18						
4							19						0.0
5							20		0.10	1.90			
6		0.20	1.30			0.0	21						
7							22					1.5	
8					0.27		23	.17					
9	.60						24				0.35		
10				1.00			25						
11							26						.0
12						.0	27		.10	1.60			
13		.15	2.20				28						
14							29					.10	
15					.20		30	.25			.30		
							31						

Rating table for Williamson River near Klamath Agency, Oreg., for 1908.

Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.
<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>
0.50	72	1.00	239	1.50	450	2.00	674
.60	100	1.10	279	1.60	494	2.10	720
.70	130	1.20	320	1.70	539	2.20	766
.80	165	1.30	362	1.80	584	2.30	812
.90	201	1.40	406	1.90	629	2.40	858

NOTE.—Table applicable only to open channel. It is based on nine discharge measurements made in 1908, and is fairly well defined.

Daily discharge, in second-feet, of Williamson River near Klamath Agency, Oreg., for 1909-10.

Day.	Jan.	Apr.	May.	June.	July.	Aug.	Sept.	Day.	Jan.	Apr.	May.	June.	July.	Aug.	Sept.
1909.								1909.							
1....	280		354					16....			300				
2....	280							17....							
3....	280							18....		682					
4....	288							19....					113		
5....	350						68	20....				164			
6....	350							21....							68
7....	371							22....						64	
8....	392							23....							
9....	363		329					24....							
10....	350							25....					104		
11....	350				128			26....							70
12....	456							27....				150			
13....	495						68	28....							
14....	464							29....						62	
15....								30....			241				78
								31....							

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1909-10.									
1....								567	
2....				567			990	567	
3....	75							544	
4....								544	
5....			567					544	
6....					371	1,040		544	268
7....		268						544	268
8....								544	268
9....					522			522	268
10....	96						940	522	268
11....								500	268
12....			893					500	268
13....					329	1,590		477	268
14....		350						477	249
15....							752	477	249
16....				350			752	477	249
17....							752	392	249
18....	104						752	350	230
19....			846				752	268	230
20....					329	1,410	659	288	
21....		659					636	413	
22....							659	350	
23....				288			636	350	
24....							636	308	
25....	164						590	308	
26....			659				613	308	230
27....					434	1,240	590	268	
28....		940					567	268	
29....							567	308	
30....				371			567		
31....	213								

NOTE.—Daily discharge determined by means of the gage heights at Rocky Ford and a fairly well defined discharge rating curve. The measurement made during 1910 is believed not to be reliable. Discharge for January and February, 1910, reduced by varying amounts to allow for effect of ice as indicated by the observer's notes; discharge interpolated between dates when gage was read.

Monthly discharge of Williamson River near Klamath Agency, Oreg., for 1908-1910.

[Drainage area, 840 square miles.]

Month.	Discharge in second-feet.				Run-off.		Accu- racy.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.	Total in acre-feet.	
1908.							
March 25-31	821	803	813	0.968	0.25	11,300	A.
April	798	464	621	.739	.82	37,000	B.
May			375	.446	.51	23,100	C.
June			201	.239	.27	12,000	C.
July			172	.205	.24	10,600	C.
August			130	.155	.18	7,990	C.
September			86	.102	.11	5,120	C.
The period.....						107,000	
1908-9.							
October	251	72	166	.198	.23	10,200	B.
November	300	239	261	.311	.35	15,500	B.
December	263	165	235	.280	.32	14,400	B.
January 1-14			362	.431	.22	10,100	B.
April 18-30			532	.633	.31	13,700	D.
May			299	.356	.41	18,400	C.
June			183	.218	.24	10,900	C.
July			118	.140	.16	7,260	C.
August			73.5	.088	.10	4,520	C.
September			68.4	.081	.09	4,070	C.
1909-10.							
October			124	.147	.17	7,620	C.
November			502	.598	.67	29,900	C.
December			734	.874	1.01	45,100	C.
January	567	288	412	.491	.57	25,300	C.
February	520	329	364	.433	.45	20,200	C.
March	1,590	600	1,240	1.48	1.71	76,200	C.
April	1,040	567	785	.935	1.04	46,700	B.
May	567	268	424	.505	.58	26,100	B.
June 1-26	293	230	255	.304	.29	13,200	B.
The period.....						290,000	

WILLIAMSON RIVER AT CHILOQUIN, OREG.

This station, which is located in sec. 3, T. 35 S., R. 7 E., at the highway bridge at Chiloquin, just above the mouth of Sprague River, was established July 25, 1911.

The gage is a vertical staff on the wagon bridge, from which discharge measurements are made. The channel is composed of rocks and gravel and is probably permanent. Conditions are not particularly favorable, but fairly reliable results have been obtained.

The station is maintained by the United States Reclamation Service and the records are worked up and published by the Survey.

Discharge measurements of Williamson River at Chiloquin, Oreg., in 1911-12.

Date.	Hydrographer.	Gage height.	Dis- charge.	Date.	Hydrographer.	Gage height.	Dis- charge.
1911.		<i>Feet.</i>	<i>Sec.-ft.</i>	1912.		<i>Feet.</i>	<i>Sec.-ft.</i>
July 25	L. Moser	4.00	579	Feb. 20	L. Moser	5.40	1,400
Nov. 21	W. O. Harmon	4.40	740	May 3	H. Kimble	4.54	761

Daily gage height, in feet, of Williamson River at Chiloquin, Oreg., for 1911-12.

Day.	Aug.	Sept.	Day.	Aug.	Sept.	Day.	Aug.	Sept.
1911.			1911.			1911.		
1.....	4.0	3.9	11.....	4.0	3.9	21.....	3.9	3.9
2.....	4.0	3.9	12.....	4.0	3.9	22.....	3.9	3.9
3.....	4.0	3.9	13.....	4.0	3.9	23.....	3.9	3.9
4.....	4.0	3.9	14.....	4.0	3.9	24.....	3.9	3.9
5.....	4.0	3.9	15.....	4.0	3.9	25.....	3.9	3.9
6.....	4.0	3.9	16.....	4.0	3.9	26.....	3.9	3.9
7.....	4.0	3.9	17.....	4.0	3.9	27.....	3.9	3.9
8.....	4.0	3.9	18.....	4.0	3.9	28.....	3.9	3.9
9.....	4.0	3.9	19.....	4.0	3.9	29.....	3.9	3.9
10.....	4.0	3.9	20.....	3.9	3.9	30.....	3.9	3.9
						31.....	3.9	

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.									
1.....	3.9	4.2	4.5	4.2	4.7	5.2	4.9	4.5	4.2
2.....	3.9	4.2	4.5	4.2	4.7	5.2	4.9	4.5	4.2
3.....	3.9	4.2	4.5	4.2	4.8	5.2	4.8	4.6	4.2
4.....	3.9	4.2	4.5	4.2	4.8	5.2	4.8	4.6	4.2
5.....	3.9	4.2	4.5	4.2	4.8	5.2	4.8	4.6	4.2
6.....	3.9	4.2	4.5	4.2	4.8	5.3	4.7	4.6	4.2
7.....	3.9	4.2	4.5	4.2	4.9	5.3	4.7	4.6	4.1
8.....	3.9	4.2	4.5	4.2	4.9	5.3	4.7	4.5	4.1
9.....	3.9	4.2	4.5	4.2	4.9	5.2	4.7	4.5	4.1
10.....	3.9	4.2	4.5	4.2	4.9	5.2	4.7	4.4	4.1
11.....	3.9	4.2	4.5	4.2	4.9	5.2	4.7	4.4	4.1
12.....	3.9	4.2	4.5	4.2	4.9	5.2	4.7	4.4	4.1
13.....	4.0	4.2	4.5	4.2	5.0	5.1	4.7	4.4	4.1
14.....	4.1	4.2	4.5	4.2	5.1	5.1	4.7	4.4	4.1
15.....	4.1	4.2	4.5	4.2	5.2	5.1	4.6	4.4	4.1
16.....	4.0	4.3	4.5	4.2	5.3	5.0	4.6	4.3	4.1
17.....	4.1	4.3	4.5	4.2	5.3	5.0	4.6	4.3	4.1
18.....	4.1	4.3	4.5	4.3	5.3	5.0	4.6	4.4	4.1
19.....	4.1	4.3	4.5	4.3	5.3	5.0	4.6	4.4	4.1
20.....	4.1	4.3	4.5	4.3	5.3	5.0	4.6	4.3	4.1
21.....	4.1	4.3	4.4	4.3	5.3	5.0	4.6	4.3	4.0
22.....	4.1	4.4	4.4	4.3	5.3	5.0	4.6	4.3	4.0
23.....	4.1	4.4	4.3	4.4	5.3	5.0	4.6	4.3	4.0
24.....	4.1	4.4	4.3	4.4	5.3	4.9	4.5	4.3	4.0
25.....	4.1	4.4	4.2	4.5	5.3	4.9	4.5	4.3	4.0
26.....	4.2	4.4	4.2	4.5	5.3	4.9	4.5	4.2	4.0
27.....	4.2	4.4	4.2	4.5	5.3	4.9	4.5	4.2	4.0
28.....	4.2	4.5	4.2	4.5	5.3	4.9	4.5	4.3	4.0
29.....	4.2	4.5	4.2	4.5	5.2	4.9	4.5	4.3	4.0
30.....	4.2	4.5	4.2	4.6		4.9	4.5	4.3	4.0
31.....	4.2		4.2	4.6		4.9		4.3	

Daily discharge, in second-feet, of Williamson River at Chiloquin, Oreg., for 1911-12.

Day.	Aug.	Sept.	Day.	Aug.	Sept.	Day.	Aug.	Sept.
1911.			1911.			1911.		
1.....	580	560	11.....	580	560	21.....	560	560
2.....	580	560	12.....	580	560	22.....	560	560
3.....	580	560	13.....	580	560	23.....	560	560
4.....	580	560	14.....	580	560	24.....	560	560
5.....	580	560	15.....	580	560	25.....	560	560
6.....	580	560	16.....	580	560	26.....	560	560
7.....	580	560	17.....	580	560	27.....	560	560
8.....	580	560	18.....	580	560	28.....	560	560
9.....	580	560	19.....	580	560	29.....	560	560
10.....	580	560	20.....	560	560	30.....	560	560
						31.....	560	560

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.									
1.....	560	650	780	650	890	1,230	1,010	780	650
2.....	560	650	780	650	890	1,230	1,010	780	650
3.....	560	650	780	650	950	1,230	950	830	650
4.....	560	650	780	650	950	1,230	950	830	650
5.....	560	650	780	650	950	1,230	950	830	650
6.....	560	650	780	650	950	1,310	890	830	650
7.....	560	650	780	650	1,010	1,310	890	830	610
8.....	560	650	780	650	1,010	1,310	890	780	610
9.....	560	650	780	650	1,010	1,230	890	780	610
10.....	560	650	780	650	1,010	1,230	890	730	610
11.....	560	650	780	650	1,010	1,230	890	730	610
12.....	560	650	780	650	1,010	1,230	890	730	610
13.....	580	650	780	650	1,080	1,150	890	730	610
14.....	610	650	780	650	1,150	1,150	890	730	610
15.....	610	650	780	650	1,230	1,150	830	730	610
16.....	580	690	780	650	1,310	1,080	830	690	610
17.....	610	690	780	650	1,310	1,080	830	690	610
18.....	610	690	780	690	1,310	1,080	830	730	610
19.....	610	690	780	690	1,310	1,080	830	730	610
20.....	610	690	780	690	1,310	1,080	830	690	610
21.....	610	690	730	690	1,310	1,080	830	690	580
22.....	610	730	730	690	1,310	1,080	830	690	580
23.....	610	730	690	730	1,310	1,080	830	690	580
24.....	610	730	690	730	1,310	1,010	780	690	580
25.....	610	730	650	780	1,310	1,010	780	690	580
26.....	650	730	650	780	1,310	1,010	780	650	580
27.....	650	730	650	780	1,310	1,010	780	650	580
28.....	650	780	650	780	1,310	1,010	780	690	580
29.....	650	780	650	780	1,230	1,010	780	690	580
30.....	650	780	650	830	.....	1,010	780	690	580
31.....	650	.....	650	830	.....	1,010	.....	690	.....

NOTE.—Daily discharge determined from a fairly well-defined rating curve.

Monthly discharge of Williamson River at Chiloquin, Oreg., for 1911-12.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1911.					
August.....	580	560	572	35,200	B.
September.....	560	560	560	33,300	B.
1911-12.					
October.....	650	560	596	36,600	B.
November.....	780	650	687	40,900	B.
December.....	780	650	742	45,600	B.
January.....	830	650	694	42,700	B.
February.....	1,310	890	1,150	66,200	B.
March.....	1,310	1,010	1,130	69,500	B.
April.....	1,010	780	860	51,200	B.
May.....	830	650	732	45,000	B.
June.....	650	580	608	36,200	B.
The period.....				434,000	

WOOD RIVER AT FORT KLAMATH, OREG.

This station, which is located at a highway bridge in sec. 22, T. 33 S., R. 7½ E., one-fourth mile north of Fort Klamath, was established August 5, 1911.

The gage is a vertical staff attached to the bridge. The channel is composed of clean gravel and will probably shift slightly at high stages. Discharge measurements are made from the highway bridge at the gage. As the field conditions are excellent, reliable results should be obtained.

The station is maintained by the United States Reclamation Service and the estimates are worked up and published by the Survey.

Discharge measurements of Wood River at Fort Klamath, Oreg., in 1911.

Date.	Hydrographer.	Gage height.	Dis- charge.	Date.	Hydrographer.	Gage height.	Dis- charge.
1911.		<i>Feet.</i>	<i>Sec.-ft.</i>	1911.		<i>Feet.</i>	<i>Sec.-ft.</i>
July 25	L. Moser.....	1.45	318	Aug. 30	R. W. Davenport.....	1.40	295
Aug 5	.....do.....	1.65	339	Nov. 18	W. O. Harmon.....	1.52	274

Daily gage height, in feet, of Wood River at Fort Klamath, Oreg., for 1911-12.

Day.	Aug.	Sept.	Day.	Aug.	Sept.	Day.	Aug.	Sept.
1911.			1911.			1911.		
1.....		1.35	11.....	1.65	1.4	21.....	1.5	1.4
2.....		1.35	12.....	1.55	1.4	22.....	1.5	1.4
3.....		1.35	13.....	1.6	1.4	23.....	1.5	1.4
4.....		1.35	14.....	1.55	1.4	24.....	1.45	1.45
5.....	1.7	1.35	15.....	1.55	1.4	25.....	1.45	1.5
6.....	1.6	1.35	16.....	1.55	1.4	26.....	1.45	1.5
7.....	1.6	1.35	17.....	1.55	1.4	27.....	1.4	1.5
8.....	1.6	1.35	18.....	1.55	1.4	28.....	1.4	1.45
9.....	1.65	1.4	19.....	1.5	1.4	29.....	1.4	1.45
10.....	1.65	1.4	20.....	1.5	1.4	30.....	1.4	1.45
						31.....	1.35	.....

Daily gage height, in feet, of Wood River at Fort Klamath, Oreg., for 1911-12—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.									
1.....	1.45	1.40	1.46	1.30	1.32	1.30	1.40	1.22	1.25
2.....	1.45	1.40	1.45	1.25	1.35	1.30	1.35	1.22	1.30
3.....	1.45	1.40	1.45	1.20	1.30	1.30	1.32	1.20	1.30
4.....	1.50	1.40	1.42	1.20	1.30	1.25	1.30	1.20	1.25
5.....	1.50	1.38	1.45	1.20	1.32	1.30	1.28	1.25	1.30
6.....	1.45	1.40	1.48	1.25	1.35	1.35	1.25	1.25	1.40
7.....	1.45	1.45	1.45	1.27	1.35	1.30	1.28	1.28	1.45
8.....	1.45	1.50	1.43	1.30	1.40	1.25	1.25	1.30	1.45
9.....	1.45	1.50	1.40	1.32	1.45	1.25	1.25	1.32	1.40
10.....	1.45	1.50	1.40	1.40	1.50	1.25	1.30	1.35	1.30
11.....	1.45	1.50	1.40	1.45	1.45	1.25	1.30	1.35	1.30
12.....	1.45	1.55	1.40	1.50	1.38	1.25	1.25	1.30	1.40
13.....	1.45	1.60	1.45	1.50	1.35	1.25	1.25	1.30	1.30
14.....	1.45	1.65	1.48	1.55	1.35	1.25	1.22	1.30	1.30
15.....	1.45	1.80	1.50	1.60	1.40	1.25	1.20	1.30	1.30
16.....	1.45	1.65	1.45	1.60	1.75	1.25	1.20	1.32	1.25
17.....	1.45	1.55	1.40	1.55	2.80	1.25	1.20	1.30	1.25
18.....	1.45	1.60	1.40	1.55	1.90	1.25	1.20	1.25	1.20
19.....	1.45	1.55	1.35	1.50	1.55	1.20	1.20	1.25	1.30
20.....	1.45	1.50	1.30	1.45	1.45	1.20	1.20	1.20	1.40
21.....	1.45	1.50	1.20	1.40	1.35	1.20	1.20	1.15	1.50
22.....	1.45	1.50	1.20	1.35	1.35	1.20	1.20	1.10	1.50
23.....	1.40	1.48	1.25	1.35	1.35	1.25	1.20	1.10	1.85
24.....	1.40	1.48	1.25	1.38	1.25	1.30	1.20	1.05	1.80
25.....	1.40	1.46	1.25	1.43	1.30	1.35	1.20	1.05	1.80
26.....	1.40	1.45	1.30	1.45	1.35	1.40	1.20	1.10	1.80
27.....	1.40	1.45	1.30	1.40	1.30	1.45	1.22	1.10	1.75
28.....	1.40	1.44	1.25	1.38	1.30	1.45	1.25	1.15	1.70
29.....	1.40	1.45	1.25	1.35	1.30	1.45	1.25	1.20	1.70
30.....	1.40	1.50	1.27	1.35	.....	1.40	1.25	1.20	1.70
31.....	1.40	.....	1.30	1.32	.....	1.35	.....	1.20	.....

LOST RIVER NEAR CLEAR LAKE, CAL.

This station, which is located 13 miles from Langell, Oreg., at the outlet of Clear Lake, 1 mile below the mouth of Willow Creek, was established September 1, 1904, and discontinued June 13, 1909.

Clear Lake is the site of a reservoir, and a dam at the outlet has been constructed by the United States Reclamation Service, where it is proposed to store the flood and winter flow of the stream for irrigation. The reservoir will hold three years' run-off.

In the winter months the stream is frequently frozen for weeks at a time, and for such periods the records are not reliable. Until construction work was begun on the dam it was almost impossible to procure gage observations with any degree of regularity. A Friez automatic water register was established November 4, 1905, which required weekly visits by the observer, but as he was compelled to ride 12 miles to change the record sheets, it was not always possible for him to do so. Where missing records could be estimated with a reasonable degree of accuracy, it has been done.

The conditions at the station during low stages of the river are not conducive to accurate results. The channel is obstructed by the growth of weeds and aquatic plants, and a large number of measurements are required for reliable estimates of flow. At such times,

however, the discharge is very low, so that the total run-off can be accepted with safety.

On June 13, 1909, water was shut off at the Clear Lake dam, and there has been no flow past the station since that time.

Discharge measurements of Lost River near Clear Lake, Cal., in 1904-1909.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1904.		<i>Feet.</i>	<i>Sec.-ft.</i>	1907.		<i>Feet.</i>	<i>Sec.-ft.</i>
Sept. 7	T. H. Humphreys.....	4.95	10.73	Jan. 30	Hendricks and Stickse.	7.25	444
25	C. T. Darley.....	5.20	16.00	31	do.....	7.30	497
Oct. 21	F. S. Chapman.....	5.15	14.00	Feb. 6	L. F. Hendricks.....	9.80	2,230
Nov. 6	C. T. Darley.....	5.15	17.60	10	do.....	8.50	1,170
Dec. 9	do.....	5.18	14.00	Mar. 6	do.....	7.80	782
1905.				Apr. 12	do.....	8.70	1,280
Jan. 26	C. T. Darley.....	6.30	161	24	do.....	7.20	491
Feb. 3	do.....	7.20	453	May 13	Stevens and Ellsworth.	6.60	235
7	do.....	6.39	216	June 4	C. E. Ellsworth.....	5.90	67
24	do.....	6.01	124	23	do.....	5.68	39
Mar. 7	do.....	6.35	196	July 26	do.....	5.25	13
13	do.....	6.50	252	Aug. 14	do.....	5.27	11
Apr. 3	do.....	7.30	535	Sept. 6	do.....	5.20	8.7
8	do.....	6.24	174	25	do.....	5.25	11
28	do.....	5.26	24	Oct. 14	do.....	5.38	12
June 2	do.....	5.00	7.9	21	do.....	5.35	14
Sept. 11	do.....	5.02	5.8	1908.			
Oct. 30	do.....	5.10	7.6	Feb. 21	C. E. Ellsworth.....	5.55	32
1906.				Apr. 8	do.....	5.80	71
Mar. 2	C. T. Darley.....	6.18	146	May 2	Kimble and Ellsworth.	5.25	17
3	do.....	6.25	157	19	H. Kimble.....	5.70	36
6	do.....	6.60	235	June 25	do.....	4.84	5.2
7	do.....	7.18	452	July 25	do.....	5.00	7.1
8	do.....	7.35	534	Sept. 3	do.....	4.80	2.5
9	do.....	7.18	460	Oct. 8	do.....	5.20	8.6
27	do.....	8.80	1,330	23	do.....	5.24	11
Apr. 3	do.....	9.00	1,480	Nov. 25	Kimble and McGlashan	5.23	10.8
6	do.....	9.10	1,610	1909.			
17	do.....	8.50	1,270	Mar. 4	Howard Kimble.....	7.35	622
24	L. F. Hendricks.....	7.50	626	May 3	do.....	6.10	154
May 2	do.....	6.90	365	27	Geiger and Kimble.....	5.63	32
June 14	do.....	5.80	58				
July 15	do.....	5.20	13.9				
Oct. 30	do.....	5.20	10.2				

Daily gage height, in feet, of Lost River near Clear Lake Cal., for 1904-1909.

Day.	Sept.	Day.	Sept.	Day.	Sept.
1904.		1904.		1904.	
1.....		11.....	5.0	21.....	5.0
2.....		12.....	5.0	22.....	5.05
3.....		13.....	5.0	23.....	5.1
4.....	5.0	14.....	5.0	24.....	5.1
5.....	5.0	15.....	5.0	25.....	5.2
6.....	5.0	16.....	5.0	26.....	5.25
7.....	5.0	17.....	5.0	27.....	5.25
8.....	5.0	18.....	5.0	28.....	5.25
9.....	5.0	19.....	5.0	29.....	5.25
0.....	5.0	20.....	5.0	30.....	5.25
				31.....	.....

Daily gage height, in feet, of Lost River near Merrill, Oreg., for 1904-1909—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1904-5.												
1.....	3.55	3.5	3.5	3.5	4.7	4.5	4.8	3.5	3.5	3.4	3.4	3.3
2.....	3.55	3.5	3.5	3.5	5.7	4.5	4.8	3.5	3.5	3.4	3.4	3.3
3.....	3.55	3.5	3.5	3.5	6.3	4.5	6.0	3.5	3.5	3.4	3.4	3.3
4.....	3.55	3.5	3.5	3.5	6.8	4.5	7.0	3.5	3.5	3.4	3.4	3.3
5.....	3.55	3.5	3.5	3.5	7.0	4.6	6.8	3.5	3.5	3.4	3.4	3.3
6.....	3.55	3.5	3.5	3.5	6.2	4.6	6.0	3.5	3.5	3.4	3.4	3.3
7.....	3.55	3.5	3.5	3.5	5.6	4.6	5.3	3.5	3.5	3.4	3.4	3.3
8.....	3.55	3.5	3.5	3.5	5.1	4.55	5.4	3.5	3.5	3.4	3.4	3.3
9.....	3.55	3.5	3.5	3.5	4.7	4.55	5.6	3.5	3.5	3.4	3.4	3.3
10.....	3.55	3.5	3.5	3.5	4.4	4.4	5.8	3.5	3.5	3.4	3.4	3.3
11.....	3.55	3.5	3.5	3.5	4.2	4.3	5.9	3.5	3.5	3.4	3.4	3.3
12.....	3.55	3.5	3.5	3.5	4.0	4.35	4.0	3.5	3.55	3.4	3.4	3.3
13.....	3.55	3.5	3.5	3.5	3.9	4.2	4.0	3.5	3.55	3.4	3.4	3.3
14.....	3.55	3.5	3.5	3.5	3.8	4.2	4.0	3.5	3.55	3.4	3.4	3.3
15.....	3.55	3.5	3.5	3.5	3.8	4.2	4.0	3.5	3.4	3.4	3.4	3.3
16.....	3.55	3.5	3.5	3.5	3.7	4.1	3.9	3.5	3.4	3.4	3.4	3.3
17.....	3.55	3.5	3.5	3.5	3.7	4.1	3.9	3.5	3.4	3.4	3.4	3.3
18.....	3.55	3.5	3.5	3.5	3.7	4.1	3.8	3.5	3.4	3.4	3.4	3.3
19.....	3.5	3.5	3.5	3.5	3.7	4.1	3.8	3.5	3.4	3.4	3.4	3.3
20.....	3.5	3.5	3.5	3.5	3.8	4.2	3.8	3.5	3.4	3.4	3.4	3.3
21.....	3.5	3.5	3.5	3.5	3.8	4.4	3.7	3.5	3.4	3.4	3.4	3.3
22.....	3.5	3.5	3.5	3.5	3.9	4.5	3.7	3.5	3.4	3.4	3.4	3.3
23.....	3.5	3.5	3.5	3.5	4.4	4.6	3.7	3.5	3.4	3.4	3.4	3.3
24.....	3.5	3.5	3.5	3.5	4.4	4.7	3.6	3.5	3.4	3.4	3.4	3.3
25.....	3.5	3.5	-----	4.5	4.5	4.9	3.6	3.5	3.4	3.4	3.4	3.3
26.....	3.5	3.5	-----	5.4	4.5	4.6	3.5	3.5	3.4	3.4	3.4	3.3
27.....	3.5	3.5	-----	5.3	4.55	4.6	3.5	3.5	3.4	3.4	3.4	3.3
28.....	3.5	3.5	-----	5.0	4.55	5.0	3.5	3.5	3.4	3.4	3.4	3.3
29.....	3.5	3.5	-----	4.7	-----	4.9	3.5	3.5	3.4	3.4	3.4	3.3
30.....	3.5	3.5	-----	4.5	-----	4.8	3.5	3.5	3.4	3.4	3.4	3.3
31.....	3.5	-----	-----	4.4	-----	4.8	-----	3.5	-----	3.4	3.4	-----
1905-6.												
1.....	3.3	3.3	3.3	3.3	3.3	4.55	12.9	5.6	4.45	3.7	3.55	3.5
2.....	3.3	3.3	3.3	3.3	3.3	5.2	13.6	5.3	4.45	3.7	3.55	3.5
3.....	3.3	3.3	3.3	3.3	3.3	5.0	12.7	5.05	4.5	3.7	3.55	3.5
4.....	3.3	3.3	3.3	3.3	-----	4.6	11.5	5.0	4.3	3.7	3.55	3.5
5.....	3.3	3.3	3.3	3.3	-----	4.35	10.6	4.85	4.3	3.7	3.55	3.5
6.....	3.3	3.3	3.3	3.3	-----	4.2	10.45	4.65	4.25	3.7	3.55	3.5
7.....	3.3	3.3	3.3	3.3	3.4	4.1	11.0	4.6	4.2	3.7	3.5	3.5
8.....	3.3	3.3	3.3	3.3	3.4	4.1	11.75	4.6	4.3	3.65	3.5	3.5
9.....	3.3	3.3	3.3	3.3	3.4	4.65	12.4	4.5	4.3	3.65	3.5	3.5
10.....	3.3	3.3	3.3	3.3	3.4	5.8	13.0	4.45	4.3	3.6	3.5	3.5
11.....	3.3	3.3	3.3	3.3	3.4	6.3	13.5	4.35	4.4	3.6	3.5	3.5
12.....	3.3	3.3	3.3	3.3	3.4	6.7	13.05	4.25	4.15	3.7	3.5	3.5
13.....	3.3	3.3	3.3	3.3	3.4	5.85	12.1	4.2	4.15	3.7	3.55	3.5
14.....	3.3	3.3	3.3	3.3	3.45	5.5	11.2	4.3	4.1	3.6	3.55	3.5
15.....	3.3	3.3	3.3	3.3	3.45	5.9	10.55	4.2	4.2	3.6	3.55	3.5
16.....	3.3	3.3	3.3	3.3	3.5	5.2	10.1	4.15	4.2	3.6	3.5	3.5
17.....	3.3	3.3	3.3	3.3	3.5	4.9	9.95	4.2	4.0	3.6	3.55	3.5
18.....	3.3	3.3	3.3	3.3	3.6	4.5	9.9	4.25	3.9	3.6	3.55	3.5
19.....	3.3	3.3	3.3	3.3	3.8	4.4	9.25	4.15	3.95	3.6	3.55	3.5
20.....	3.3	3.3	3.3	3.3	4.0	4.35	8.45	4.05	3.85	3.6	3.55	3.5
21.....	3.3	3.3	3.3	3.3	4.45	4.45	7.95	4.1	3.85	3.6	3.55	3.5
22.....	3.3	3.3	3.3	3.3	5.15	4.75	7.4	4.05	3.8	3.6	3.5	3.5
23.....	3.3	3.3	3.3	3.3	5.2	5.5	7.1	4.1	3.85	3.6	3.5	3.5
24.....	3.3	3.3	3.3	3.3	5.3	8.9	6.85	4.0	3.85	3.55	3.55	3.5
25.....	3.3	3.3	3.3	3.3	4.9	10.8	6.6	4.2	3.8	3.55	3.55	3.5
26.....	3.3	3.3	3.3	3.3	4.5	11.4	6.5	4.1	3.8	3.55	3.55	3.5
27.....	3.3	3.3	3.3	3.3	4.3	12.1	6.5	4.05	3.8	3.55	3.55	3.5
28.....	3.3	3.3	3.3	3.3	4.3	12.1	6.25	4.05	3.8	3.55	3.55	3.5
29.....	3.3	3.3	3.3	3.3	-----	11.5	5.85	4.1	3.7	3.55	3.5	3.5
30.....	3.3	3.3	3.3	3.3	-----	11.05	5.9	4.15	3.7	3.55	3.5	3.5
31.....	3.3	-----	3.3	3.3	-----	11.5	-----	4.25	-----	3.55	3.5	-----
1906-7.												
1.....	3.5	3.4	3.4	4.48	5.7	7.75	11.55	6.7	6.1	6.1	5.5	5.0
2.....	3.5	3.4	3.4	4.2	7.9	7.4	12.45	6.6	6.2	6.1	5.4	5.0
3.....	3.5	3.4	3.4	4.15	8.7	6.9	12.1	6.5	6.2	5.9	5.4	5.0
4.....	3.5	3.4	3.4	4.0	12.4	6.7	11.5	6.5	6.2	5.9	5.4	5.0
5.....	3.5	3.4	3.4	3.9	15.8	6.6	11.1	6.4	6.3	5.9	5.4	5.0

Daily gage height, in feet, of Lost River near Merrill, Oreg., for 1904-1909—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1906-7.												
6.....	3.5	3.4	3.4	3.8	18.1	6.75	11.55	6.5	6.4	5.8	5.4	5.0
7.....	3.5	3.4	3.4	3.8	18.25	7.1	10.52	6.5	6.2	5.8	5.4	5.0
8.....	3.5	3.4	3.4	3.75	16.85	7.1	10.95	6.5	6.2	5.9	5.4	5.0
9.....	3.5	3.4	3.4	3.7	14.55	7.0	12.1	6.5	6.2	5.8	5.4	5.0
10.....	3.5	3.4	3.4	3.65	11.55	7.65	12.25	6.3	6.3	5.8	5.3	5.0
11.....	3.5	3.4	3.4	3.6	9.35	7.85	10.95	6.4	6.45	5.8	5.3	5.0
12.....	3.5	3.4	3.45	3.6	8.35	7.5	10.1	6.2	6.3	5.8	5.3	5.0
13.....	3.5	3.4	3.45	3.5	7.9	6.9	9.72	6.3	6.3	5.7	5.3	5.0
14.....	3.5	3.4	3.45	3.5	7.4	6.75	9.5	6.4	6.0	5.7	5.3	5.0
15.....	3.5	3.4	3.45	3.55	7.1	6.55	9.15	6.4	6.0	5.8	5.2	5.0
16.....	3.5	3.4	3.45	3.6	6.8	6.35	8.82	6.45	6.15	5.7	5.2	5.0
17.....	3.5	3.4	3.45	3.5	6.55	6.4	8.62	6.4	6.2	5.7	5.2	5.0
18.....	3.5	3.4	3.45	3.5	6.45	7.05	8.38	6.4	6.2	5.7	5.2	5.0
19.....	3.5	3.4	3.45	3.5	6.5	9.9	8.22	6.3	6.45	5.6	5.2	4.9
20.....	3.5	3.4	3.45	3.45	6.7	13.75	8.0	6.3	6.15	5.7	5.2	4.9
21.....	3.5	3.4	3.45	3.45	6.65	15.8	7.85	6.2	6.0	5.6	5.1	4.85
22.....	3.5	3.4	3.45	3.45	6.7	16.0	7.65	6.25	6.1	5.7	5.1	4.85
23.....	3.5	3.4	3.45	3.45	6.8	14.95	7.45	6.3	6.1	5.6	5.1	4.85
24.....	3.5	3.4	3.45	3.45	8.35	13.3	7.3	6.3	6.1	5.6	5.1	4.8
25.....	3.5	3.4	3.5	3.45	8.6	11.85	7.2	6.3	6.1	5.6	5.1	4.8
26.....	3.5	3.4	3.5	3.45	7.7	11.05	7.1	6.3	6.1	5.5	5.1	4.8
27.....	3.5	3.4	3.65	3.4	7.65	10.6	6.95	6.2	6.1	5.5	5.1	4.8
28.....	3.5	3.4	4.85	3.4	8.05	10.25	6.85	6.2	6.0	5.6	5.1	4.8
29.....	3.5	3.4	5.6	3.45	.....	9.95	6.8	6.3	6.0	5.5	5.0	4.8
30.....	3.5	3.4	5.2	3.45	.....	9.8	6.7	6.25	6.1	5.5	5.0	4.8
31.....	3.5	.....	4.8	3.65	.....	10.4	.....	6.2	.....	5.5	5.0	.....
1907-8.												
1.....	4.7	4.7	4.6	5.2	5.1	5.0	5.3	5.0	4.6	4.2	3.9	3.6
2.....	4.7	4.7	4.6	5.1	5.0	5.0	5.3	4.9	4.4	4.2	3.8	3.6
3.....	4.7	4.7	4.6	5.0	5.0	5.0	5.2	4.7	4.4	4.2	3.8	3.6
4.....	4.7	4.7	4.6	5.0	5.0	5.0	5.2	4.8	4.5	4.2	3.8	3.6
5.....	4.7	4.7	4.6	5.0	5.0	5.0	5.2	4.8	4.5	4.2	3.8	3.6
6.....	4.7	4.7	4.6	5.0	5.0	5.0	5.1	4.8	4.5	4.2	3.8	3.6
7.....	4.7	4.7	4.6	4.9	5.0	5.0	5.0	4.8	4.5	4.2	3.8	3.6
8.....	4.7	4.7	4.6	4.9	5.0	5.0	5.0	4.7	4.5	4.1	3.8	3.6
9.....	4.7	4.7	4.6	4.9	5.0	5.0	5.0	4.7	4.5	4.1	3.8	3.6
10.....	4.7	4.6	4.6	4.9	5.0	5.0	5.0	4.65	4.5	4.1	3.8	3.6
11.....	4.7	4.6	4.6	4.9	4.8	5.0	5.0	4.6	4.5	4.0	3.8	3.6
12.....	4.7	4.6	4.6	4.9	4.9	5.0	5.0	4.7	4.5	4.1	3.8	3.6
13.....	4.7	4.6	4.6	4.9	4.9	5.0	5.0	4.7	4.5	4.1	3.7	3.6
14.....	4.7	4.6	4.6	4.8	4.9	5.0	5.0	4.7	4.5	4.2	3.7	3.6
15.....	4.7	4.6	4.6	4.8	4.9	5.1	5.0	4.7	4.5	3.9	3.7	3.6
16.....	4.7	4.6	4.6	4.9	4.9	5.8	5.1	4.7	4.5	4.0	3.7	3.6
17.....	4.7	4.6	4.6	5.45	4.9	7.4	5.1	4.8	4.4	4.0	3.7	3.6
18.....	4.7	4.6	4.6	6.0	4.9	7.7	5.1	5.0	4.3	4.0	3.7	3.6
19.....	4.7	4.6	4.6	6.2	4.9	7.5	5.0	4.9	4.3	4.0	3.7	3.6
20.....	4.7	4.6	4.6	6.1	4.9	6.9	5.0	4.9	4.4	3.9	3.7	3.6
21.....	4.7	4.6	4.6	5.9	4.9	6.5	5.0	4.7	4.3	3.9	3.7	3.6
22.....	4.7	4.6	4.7	5.7	4.9	6.2	4.9	4.8	4.3	3.9	3.7	3.6
23.....	4.7	4.6	4.7	5.7	4.9	6.0	4.9	4.8	4.3	3.9	3.7	3.6
24.....	4.7	4.6	4.7	5.7	4.9	6.0	4.9	4.8	4.3	3.9	3.7	3.6
25.....	4.7	4.6	4.7	5.6	4.9	5.8	4.8	4.8	4.3	3.9	3.7	3.6
26.....	4.7	4.6	4.7	5.5	4.9	5.6	4.8	4.7	4.3	3.9	3.7	3.6
27.....	4.7	4.6	5.7	5.3	4.9	5.5	4.7	4.7	4.2	3.9	3.7	3.6
28.....	4.7	4.6	5.75	5.2	4.9	5.5	4.8	4.8	4.2	3.8	3.6	3.6
29.....	4.7	4.6	5.6	5.2	5.2	5.5	4.8	4.7	4.3	3.8	3.6	3.6
30.....	4.7	4.6	5.4	5.1	.....	5.4	4.9	4.6	4.3	3.8	3.6	3.6
31.....	4.7	.....	5.3	5.1	.....	5.3	.....	4.6	.....	3.9	3.6	.....

Daily gage height, in feet, of Lost River near Merrill, Oreg., for 1904-1909—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Day.	Oct.	Nov.	Dec.	Jan.	Feb.
1908-9.						1908-9.					
1.....	3.6	3.5	3.5	3.5	5.0	16.....	3.5	3.5	3.5	4.8	7.1
2.....	3.6	3.5	3.5	3.5	4.8	17.....	3.6	3.5	3.5	9.85	7.1
3.....	3.5	3.5	3.5	3.5	4.8	18.....	3.5	3.5	3.5	13.2	11.2
4.....	3.5	3.5	3.5	3.5	5.4	19.....	3.5	3.5	3.5	14.45	10.6
5.....	3.5	3.5	3.5	3.5	6.5	20.....	3.5	3.5	3.5	14.3	10.6
6.....	3.5	3.5	3.5	3.5	5.1	21.....	3.5	3.5	3.5	13.6	8.5
7.....	3.5	3.5	3.5	3.5	5.0	22.....	3.5	3.5	3.5	13.3	6.7
8.....	3.5	3.5	3.5	3.6	4.8	23.....	3.5	3.5	3.5	13.1	6.5
9.....	3.5	3.5	3.5	3.8	4.7	24.....	3.5	3.5	3.5	10.0	6.7
10.....	3.5	3.5	3.5	4.	4.7	25.....	3.5	3.5	3.5	8.8	6.7
11.....	3.5	3.5	3.5	4.0	4.5	26.....	3.5	3.5	3.5	7.6	6.4
12.....	3.5	3.5	3.5	4.2	4.5	27.....	3.5	3.5	3.5	6.9	6.4
13.....	3.5	3.5	3.5	3.9	4.5	28.....	3.5	3.5	3.5	6.1	6.2
14.....	3.5	3.5	3.5	3.8	5.0	29.....	3.5	3.5	3.5	5.6	.....
15.....	3.6	3.5	3.5	3.8	6.2	30.....	3.5	3.5	3.5	5.2	.....
						31.....	3.5	.....	3.5	5.0	.....

Rating tables for Lost River near Merrill, Oreg.

July 16, 1904, to May 17, 1906.^a

Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.
Feet.	Sec.-feet.	Feet.	Sec.-feet.	Feet.	Sec.-feet.	Feet.	Sec.-feet.	Feet.	Sec.-feet.
3.30	102	4.50	467	5.70	887	6.90	1,307	9.20	2,160
3.40	125	4.60	502	5.80	922	7.00	1,342	9.40	2,240
3.50	150	4.70	537	5.90	957	7.20	1,414	9.60	2,320
3.60	176	4.80	572	6.00	992	7.40	1,488	9.80	2,400
3.70	203	4.90	607	6.10	1,027	7.60	1,562	10.00	2,480
3.80	232	5.00	642	6.20	1,062	7.80	1,636	11.00	2,930
3.90	262	5.10	677	6.30	1,097	8.00	1,710	12.00	3,440
4.00	294	5.20	712	6.40	1,132	8.20	1,784	13.00	4,000
4.10	328	5.30	747	6.50	1,167	8.40	1,858	14.00	4,630
4.20	362	5.40	782	6.60	1,202	8.60	1,932		
4.30	397	5.50	817	6.70	1,237	8.80	2,006		
4.40	432	5.60	852	6.80	1,272	9.00	2,080		

May 18 to December 31, 1906.^b

3.40	66	3.90	185	4.40	342	4.90	511	5.40	685
3.50	87	4.00	215	4.50	375	5.00	545	5.50	720
3.60	108	4.10	246	4.60	409	5.10	580	5.60	755
3.70	131	4.20	278	4.70	443	5.20	615		
3.80	157	4.30	310	4.80	477	5.30	650		

^a This table is based on discharge measurements made during 1904-1906 and is well defined.

^b This table is based on 3 discharge measurements made during 1906 and is well defined between gage heights 3.5 feet and 4.1 feet.

Daily discharge, in second-feet, of Lost River near Merrill, Oreg., for 1907.

Day.	Jan.	Feb.	Mar.	Apr.	May.	Day.	Jan.	Feb.	Mar.	Apr.	May.
1.....	444	824	1,490	2,800	600	16.....	180	1,180	856	1,560	360
2.....	360	1,560	1,380	3,260	540	17.....	150	1,100	856	1,450	330
3.....	345	1,870	1,180	3,080	495	18.....	150	1,060	1,050	1,380	330
4.....	300	3,680	1,110	2,770	480	19.....	150	1,080	2,080	1,310	300
5.....	270	6,300	1,080	2,570	435	20.....	135	1,140	4,030	1,210	300
6.....	240	9,000	1,110	2,800	450	21.....	135	1,130	5,620	1,140	270
7.....	240	9,200	1,210	2,290	450	22.....	135	1,140	5,780	1,080	270
8.....	225	7,250	1,210	2,500	420	23.....	135	1,180	4,870	984	300
9.....	210	5,160	1,140	3,080	420	24.....	135	1,140	3,740	920	300
10.....	195	3,210	1,340	3,160	360	25.....	135	1,830	2,970	872	285
11.....	180	2,140	1,410	2,470	360	26.....	135	1,490	2,570	824	270
12.....	180	1,740	1,280	2,120	300	27.....	120	1,470	2,330	760	240
13.....	150	1,560	1,080	1,950	330	28.....	120	1,620	2,160	696	240
14.....	150	1,380	984	1,830	360	29.....	135	.....	2,050	664	270
15.....	165	1,280	920	1,700	360	30.....	135	.....	1,990	600	255
						31.....	195	.....	2,250	.....	240

NOTE.—Daily discharge determined by the indirect method for shifting channels.

Monthly discharge of Lost River near Merrill, Oreg., for 1904-1907.

Month.	Discharge in second-feet.			Run-off (total in acre- feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1904.					
July 26-31.....	203	203	203	2,415	
August.....	203	176	199	12,240	
September.....	176	163	165	9,818	
1904-5.					
October.....	163	150	158	9,715	
November.....	150	150	150	8,926	
December.....	150	150	150	9,223	
January.....	782	150	248	15,250	
February.....	1,342	203	514	28,550	
March.....	642	328	461	28,350	
April.....	1,342	150	470	27,970	
May.....	150	150	150	9,223	
June.....	163	125	138	8,212	
July.....	125	125	125	7,686	
August.....	125	125	125	7,686	
September.....	102	102	102	6,069	
The year.....	1,342	102	233	167,000	
1905-6.					
October.....	102	102	102	6,272	
November.....	102	102	102	6,069	
December.....	102	102	102	6,272	
January.....	102	102	102	6,270	
February.....	747	102	259	14,400	
March.....	3,500	328	1,260	77,500	
April.....	4,380	940	2,540	151,000	
May.....	852	215	386	23,700	
June.....	375	131	240	14,300	
July.....	131	98	113	6,950	
August.....	98	87	93.7	5,760	
September.....	87	87	87.0	5,180	
The year.....	4,380	87	449	324,000	
1906-7.					
October.....	87	87	87	5,350	
November.....	66	66	66	3,930	
December.....	755	66	130	7,990	
January.....	444	120	191	11,700	C.
February.....	9,200	824	2,600	144,000	B.
March.....	5,780	856	2,040	125,000	B.
April.....	3,260	600	1,790	107,000	B.
May.....	600	240	352	21,600	B.
The period.....				427,000	

TULE LAKE NEAR MERRILL, OREG.

This station, which is located at J. F. Adam's ranch, near the mouth of Lost River, in sec. 8, T. 41 S., R. 11 E., about 3 miles east of Merrill, was established May 17, 1904.

The elevation of the zero of the gage has been taken as 4,048.21 feet above sea level. When the station was established the gage was referred to a bench mark on a juniper post near by. The bench mark at that time was 13.7 feet above the zero of the gage. On October 21, 1904, this elevation was verified. On May 11, 1907, the elevation of the same bench mark was found to be 12.87 feet above zero of the gage, and was independently verified on June 11, 1907, and again on November 27, 1908. It appears, therefore, that some time between October, 1904, and May, 1907, gage was raised 0.83 foot. This change was probably due to action of ice in the lake, although nothing of this kind has been observed since that time. Just when it occurred it has been impossible to ascertain, and a graph of the heights has failed to reveal any critical points that would account for a sudden change. It is therefore likely that the gage was raised a little at a time during the winters of 1905-6 and 1906-7.

On account of this error the gage heights prior to May, 1907, should not be used for refined studies.

The data for this station are furnished by the United States Reclamation Service since 1909.

Daily gage height, in feet, of Tule Lake near Merrill, Oreg., for 1904-1911.

Day.	May.	June.	July.	Aug.	Sept.	Day.	May.	June.	July.	Aug.	Sept.
1904.						1904.					
1.....						16.....			10.10		
2.....						17.....	10.50				
3.....						18.....					8.90
4.....						19.....					
5.....						20.....					
6.....						21.....					
7.....						22.....				9.25	
8.....						23.....					
9.....						24.....					
10.....		10.40				25.....					
11.....					9.0	26.....					
12.....						27.....					
13.....						28.....					
14.....						29.....	10.70				
15.....				9.40		30.....					
						31.....				9.10	

[illegible]

Daily gage height, in feet, of Tule Lake near Merrill, Oreg., for 1904-1911—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1906-7.												
6.										10.95		
7.												
8.			7.1	7.3			10.9	11.3	11.3			
9.	7.3											
10.		7.15			8.6						10.4	
11.												
12.						9.3						
13.										10.85		
14.												9.95
15.												
16.				7.3			11.15	11.3	11.3			
17.											10.3	
18.			7.25									
19.	7.2				8.8							
20.		7.15								10.75		
21.						9.9						9.8
22.							11.3					
23.				7.35				11.3				
24.									11.15		10.25	
25.			7.3									
26.												
27.										10.65		
28.					9.05							9.75
29.												
30.		7.0					11.35	11.3	11.0			
31.	7.15		7.35			10.5					10.15	
1907-8.												
1.				9.7	9.9						8.7	
2.		9.7		9.7				9.9				
3.				9.75								
4.				9.8			10.1			9.2		
5.	9.75											8.1
6.									9.6			
7.			9.6			9.95						
8.					9.9						8.6	
9.		9.7						9.85				
10.												
11.				9.8			10.05			9.15		
12.	9.75											8.0
13.									9.45			
14.						9.95						
15.					9.9						8.45	
16.		9.65	9.55					9.8				
17.												
18.				9.85			10.0			9.0		
19.	9.75											7.85
20.									9.35			
21.			9.6			10.0						
22.					9.9						8.2	
23.		9.6						9.75				
24.												
25.				9.9			9.95			8.9		
26.	9.75											7.8
27.									9.25			
28.			9.65			10.1						
29.			9.65		9.95						8.1	
30.		9.6	9.7					9.7				
31.			9.7									
1908-9.												
1.								9.7				
2.				7.35								
3.	7.75						9.4			9.05		
4.												7.95
5.			7.5						9.4			
6.					8.6	9.4	9.6					
7.		7.6									8.45	
8.								9.7				
9.				7.4								
10.	7.7						9.7			8.95		

Daily gage height, in feet, of Tule Lake near Merrill, Oreg., for 1904-1911—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1908-9.												
11												7.85
12			7.5						9.35			
13					8.8	9.45						
14		7.6									8.35	
15								9.5				
16				7.5								
17	7.65						9.8			8.7		
18												7.8
19			7.4		8.9	9.5			9.3			
20												
21		7.5									8.2	
22								9.45				
23				8.0								
24	7.65						9.8			8.6		
25												7.75
26			7.35						9.15			
27			7.35		9.0	9.5						
28		7.5	7.35								8.05	
29			7.35					9.4				
30			7.35	8.4								
31	7.6		7.35							8.55		
1909-10.												
1				7.95								
2	7.6						9.05			8.05		
3												6.80
4			7.8		8.0	8.50			8.50			
5												
6		7.45									7.50	
7				7.95				8.80				
8												
9	7.5						9.05			7.95		
10												6.70
11			8.0		8.00				8.40			
12						8.75						
13		7.45									7.40	
14				7.95				8.75				
15												
16	7.4						9.00			7.80		6.65
17			8.0						8.30			
18					8.15	8.90						
19		7.5									7.20	
20								8.70				
21				7.95								
22												
23	7.4						8.95			7.70		
24												6.50
25			7.95						8.10			
26					8.25	9.00						
27		7.6						8.60			7.00	
28				7.95								
29							8.90			7.60		
30	7.45											
31												
1910-11.												
1	6.50						7.90			7.60		6.60
2												
3												
4			6.70		7.20	7.25			7.95			
5		6.50									7.10	
6												
7				7.00				8.20				
8	6.50						8.25			7.50		
9												6.50
10			6.80						7.95			
11					7.20	7.30						
12		6.55									6.95	
13												
14				7.10								
15	6.55						8.50	8.10		7.45		

Daily gage height, in feet, of Tule Lake near Merrill, Oreg., for 1904-1911—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.												
16.....			6.90						7.95			6.45
17.....		6.60			7.20	7.40						
18.....											6.80	
19.....								8.02				
20.....				7.10								
21.....	6.55						8.65			7.35		
22.....												6.40
23.....			7.00					7.70				
24.....					7.20	7.55						
25.....		6.65									6.70	
26.....								7.95				
27.....	6.50			7.10								
28.....							8.50			7.25		
29.....												6.30
30.....			7.00									
31.....												

Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.
1911.				1911.				1911.			
1.....				11.....		6.10		21.....	6.20		
2.....			6.10	12.....				22.....			
3.....				13.....				23.....			6.10
4.....		6.10		14.....	6.30			24.....			
5.....				15.....				25.....		6.10	
6.....				16.....			6.10	26.....			
7.....	6.30			17.....				27.....			
8.....				18.....		6.10		28.....	6.10		
9.....			6.10	19.....				29.....			
10.....				20.....				30.....			6.10
								31.....			

NOTE.—Lake frozen January, 1905, Dec. 18, 1909, to Mar. 1, 1910, and Jan. 21 to Feb. 25, 1911. Probably frozen during other winters, but no record was made of the fact.

MILLER CREEK NEAR LORELLA, OREG.

This station, which was established August 10, 1904, was originally located in sec. 13, T. 39 S., R. 13 E., at the lower end of Horsefly Valley. On April 1, 1909, it was moved to an old highway bridge in sec. 7, T. 40 S., R. 14 E., 3 miles south of Lorella post office and 1 mile east of the Swingle ranch in Langell Valley. All measurements in 1909 were referred to this gage. Both points are below all tributaries and the results should be comparable, although the drainage area at the lower station is 50 square miles greater than at the upper, the areas being 270 and 220 square miles, respectively.

A small amount of water is diverted for irrigation by a dam about one-fourth mile above the present station.

A vertical staff gage is attached to the bridge, and its datum has remained unchanged since the station was reestablished. A Bristol self-recording pressure gage was installed May 2, 1909; the records obtained from it have been used during high water, but during low stages it was too much affected by temperature changes and the weekly readings of the staff gage have been used. The Bristol gage was replaced by a Friez recording gage on January 30, 1910, and since that time the gage heights have been fully reliable.

Discharge measurements are made from the highway bridge or by wading at low water.

During the winter months the river freezes over completely, and the data obtained at such periods are not reliable, but a large error during such periods is admissible without affecting the total annual flow. At flood stages, even during the winter, the relation between gage height and discharge is probably not affected by ice.

The conditions at the station during the open season are favorable for good results. A riffle that controls the flow just below the station seems to have shifted slightly during the spring flood of 1910.

High-water measurements made 1911 indicate that the computed flood discharge of November, 1909, is considerably too small, but the yearly total is not materially affected thereby.

This station has been maintained since May, 1909, by the United States Reclamation Service, but the tables of daily and monthly discharge were computed by the United States Geological Survey.

Discharge measurements of Miller Creek near Lorella, Oreg., in 1904-1911.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1904.		<i>Fect.</i>	<i>Sec.-ft.</i>	1907.		<i>Fect.</i>	<i>Sec.-ft.</i>
June 24	T. H. Humphreys		^a 15.00	Feb. 8	L. F. Hendricks	7.70	332
July 7	.....do.....		^a 12.00	Apr. 13	.....do.....	7.95	466
Aug. 4	.....do.....		^a 5.00	25	.....do.....	7.00	80
23	.....do.....		^a 1.00	May 14	Stevens and Ellsworth	6.75	57
Sept. 27	.....do.....	6.10	1.71	June 6	C. E. Ellsworth	6.20	5.8
Oct. 16	C. T. Darley	6.20	4.09	21	.....do.....	6.41	16
Nov. 19	.....do.....	6.25	7.26				
1905.				1908.			
Jan. 28	C. T. Darley	7.25	146	Feb. 22	C. E. Ellsworth	6.32	12
Feb. 4	.....do.....	7.30	161	Mar. 19	.....do.....	7.56	298
6	.....do.....	6.99	87	Apr. 7	.....do.....	6.60	35
25	.....do.....	7.30	177	May 1	Ellsworth and Kimble	6.10	2.0
Mar. 8	.....do.....	7.14	124	Nov. 24	Kimble and McGlashan	6.09	1.5
15	F. S. Chapman	6.92	95				
Apr. 2	C. T. Darley	8.00	460	1909.			
9	.....do.....	6.88	62	Mar. 3	Howard Kimble	5.90	651
28	.....do.....	6.19	3.1	26	.....do.....	4.90	285
June 1	.....do.....	6.11	2.0	May 2	.....do.....	3.45	54
				26	Kimble and Geiger	2.92	9.5
1906.				Sept. 18	John Yadon	2.12	1.35
Mar. 27	L. F. Hendricks	8.65	883	Nov. 22	.....do.....	8.05	1,590
28	C. T. Darley	8.65	884	24	.....do.....	6.60	891
29	L. F. Hendricks	8.80	1,040				
30	.....do.....	9.50	1,440	1910.			
30	.....do.....	10.10	1,940	Aug. 2	Yadon and Moser	2.55	^a 1.25
Apr. 4	.....do.....	8.25	629				
5	.....do.....	9.00	1,110	1911.			
6	.....do.....	9.28	1,240	Mar. 21	Leland Moser	6.40	990
9	.....do.....	10.65	2,550	21	.....do.....	6.65	1,080
10	.....do.....	9.72	1,690	29	.....do.....	7.55	1,800
22	.....do.....	7.55	308	31	.....do.....	6.65	1,080
25	.....do.....	7.62	309	31	.....do.....	8.05	2,160
July 14	.....do.....	5.80	0	Apr. 6	.....do.....	6.65	1,110
				16	.....do.....	4.90	334
1907.				May 3	.....do.....	3.90	88.5
Feb. 8	L. F. Hendricks	8.02	505				

^a Estimated.

Daily gage height, in feet, of Miller Creek near Lorella, Oreg., for 1904-1912.

Day.	Aug.	Sept.	Day.	Aug.	Sept.	Day.	Aug.	Sept.
1904.			1904.			1904.		
1.....		6.0	11.....	6.1		21.....	6.1	
2.....		6.0	12.....	6.1		22.....	6.1	
3.....		6.0	13.....	6.1		23.....	6.05	
4.....		6.0	14.....	6.1		24.....	6.05	
5.....		6.0	15.....	6.1		25.....	6.05	
6.....		6.0	16.....	6.1		26.....	6.7	
7.....	6.1	6.0	17.....	6.1		27.....	6.7	6.1
8.....	6.1	6.0	18.....	6.1		28.....	6.0	6.1
9.....	6.1	6.0	19.....	6.1		29.....	6.0	6.1
10.....	6.1	6.0	20.....	6.1		30.....	6.0	6.1
						31.....	6.0	

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1904-5.									
1.....	6.1	6.1	6.2	6.3	8.0	7.2	7.0	6.3	6.2
2.....	6.1	6.2	6.2	6.3	8.2	7.2	8.0	6.3	6.1
3.....	6.1	6.2	6.15	6.3	7.7	7.3	7.8	6.3	6.1
4.....	6.1	6.2	6.1	6.3	7.3	7.3	7.6	6.3	6.2
5.....	6.1	6.2	6.1	6.3	7.7	7.3	7.4	6.3	6.2
6.....	6.1	6.2	6.1	6.3	7.0	7.2	7.2	6.3	6.3
7.....	6.1	6.2	6.1	6.3	7.0	7.2	7.0	6.2	6.3
8.....	6.1	6.2	6.1	6.3	7.0	7.2	6.9	6.2	6.3
9.....	6.15	6.2	6.1	6.3	7.0	7.1	6.8	6.4	6.3
10.....	6.15	6.15	6.1	6.3	6.9	7.1	6.8	6.4	6.3
11.....	6.3	6.15		6.3	6.6	7.0	6.8	6.4	6.3
12.....	6.3	6.15		6.3	6.5	7.1	6.6	6.4	6.3
13.....	6.2	6.15		6.3	6.5	7.1	6.6	6.4	6.2
14.....	6.15	6.15		6.3	6.4	7.1	6.5	6.4	6.2
15.....	6.2	6.11		6.3	6.4	6.8	6.5	6.3	6.2
16.....	6.2	6.11		7.5	6.4	7.3	6.6	6.3	6.2
17.....	6.2	6.1		7.6	6.4	7.3	6.6	6.3	
18.....	6.2	6.3		7.7	6.4	7.3	6.6	6.3	
19.....	6.1	6.2		7.5	6.8	7.4	6.5	6.3	
20.....	6.1	6.2		7.5	7.2	7.4	6.5	6.2	
21.....	6.1	6.2		7.5	7.3	7.1	6.5	6.1	
22.....	6.1	6.2		7.9	7.3	7.3	6.4	6.0	
23.....	6.1	6.2		8.2	7.3	7.3	6.4	6.0	
24.....	6.1	6.2		7.9	7.3	7.2	6.4	6.0	
25.....	6.1	6.2		7.9	7.3	7.2	6.3	5.9	
26.....	6.1	6.2		7.7	7.3	7.9	6.3	6.1	
27.....	6.1	6.2		7.7	7.3	7.5	6.2	6.1	
28.....	6.1	6.2		7.3	7.3	7.4	6.2	6.2	
29.....	6.1	6.2		7.5		7.4	6.2	6.3	
30.....	6.1	6.2		8.0		7.2	6.2	6.2	
31.....	6.1			8.3		7.2		6.2	

Daily gage height, in feet, of Miller Creek near Lorella, Oreg., for 1904-1912—Continued.

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.
1906.							
1.....	6.2	6.3	7.0	8.1	7.0	7.2	6.15
2.....	6.2	6.3	7.1	8.1	7.0	7.0	6.15
3.....	6.2	6.3	7.1	8.4	6.9	6.9	6.1
4.....	6.2	6.3	7.05	8.15	6.8	6.9	6.1
5.....	6.2	6.3	7.0	9.2	6.7	7.0	6.05
6.....	6.2	6.3	7.05	9.5	6.7	7.3	6.05
7.....	6.3	6.3	7.2	9.9	6.7	7.2	6.0
8.....	6.3	6.3	7.5	9.9	6.6	7.2	6.0
9.....	6.4	6.3	7.7	10.5	6.6	7.1	
10.....	6.4	6.3	7.8	10.0	6.5	7.0	
11.....	6.4	6.3	7.7	9.1	6.5	6.9	
12.....	6.3	6.3	7.6	8.8	6.5	6.8	
13.....	6.3	6.3	7.5	8.8	6.6	6.8	
14.....	6.3	6.3	7.3	8.7	6.7	6.7	
15.....	6.3	6.3	7.1	8.7	6.7	6.6	
16.....	6.3	6.3	6.9	8.9	6.7	6.5	
17.....	6.3	6.3	6.7	8.5	6.7	6.5	
18.....	6.3	6.3	6.7	8.1	6.6	6.4	
19.....	6.3	6.3	6.7	7.9	6.6	6.4	
20.....	6.3	6.3	6.7	7.8	6.5	6.3	
21.....	6.3	6.3	7.2	7.7	6.5	6.3	
22.....	6.3	6.3	7.8	7.5	6.5	6.2	
23.....	6.3	6.3	8.3	7.5	6.5	6.2	
24.....	6.3	6.2	8.8	7.4	6.5	6.1	
25.....	6.3	6.4	9.7	7.5	6.4	6.1	
26.....	6.3	6.6	9.0	7.4	6.5	6.1	
27.....	6.3	6.7	8.6	7.3	6.8	6.1	
28.....	6.3	6.8	8.65	7.4	7.1	6.15	
29.....	6.3		8.65	7.4	7.5	6.15	
30.....	6.3		9.7	7.2	7.5	6.15	
31.....	6.3		9.6		7.4		

Day.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.
1906-7.									
1.....		6.1	6.45	7.70	7.30		6.77	6.26	
2.....		6.1	6.20	8.90	7.30		6.73	6.25	
3.....		6.1	6.10	11.55	7.25		6.70	6.24	
4.....		6.1	6.10	13.00	7.20		6.70	6.20	
5.....		6.2	6.10	14.00	7.35		6.68	6.18	
6.....		6.2	6.10	12.00	7.40	8.10	6.65	6.22	6.00
7.....		6.35	6.10	10.00	7.40	9.50	6.65		
8.....		6.4	6.10	7.70	7.85		6.65	6.35	
9.....		6.3	6.10	7.85	7.90		6.63		
10.....		6.3	6.10	7.65	7.55		6.58		
11.....		6.3	6.10	7.55	7.50		6.70		
12.....		6.2	6.10	7.45	7.30		6.78		
13.....		6.2	6.10	7.30	7.35	8.00	6.81		
14.....		6.2	6.10	7.25	7.20		6.75		
15.....		6.2	6.10	7.20	7.20		6.66	7.00	
16.....		6.2	6.10	7.20	7.20		6.58		
17.....		6.2	6.10	7.35	8.00		6.50		
18.....	6.1	6.2	6.10	7.50	9.80		6.50		
19.....	6.1	6.2	6.10	7.40	10.15		6.58		
20.....	6.1	6.25	6.10	7.35	9.80	7.10	6.62		
21.....	6.1	6.3	6.10	7.30	9.40	7.10	6.65		
22.....	6.1	6.3	6.10	8.00	9.00	7.10	6.75	6.30	
23.....	6.1	6.4	6.20	7.80	7.05	7.05	6.70		
24.....	6.1	6.6	6.20	7.40	8.30	7.00			
25.....	6.1	7.65	6.30	7.80	7.90	7.00	6.70		
26.....	6.1	8.35	6.30	7.85	7.60	6.95	6.65		5.70
27.....	6.1	7.95	6.30	7.70	7.75	6.90	6.57		
28.....	6.1	7.4	6.30	7.40	7.65	6.88	6.49		
29.....	6.1	7.4	6.65		7.95	6.85	6.42	6.10	
30.....	6.1	6.8	7.20		8.50	6.80	6.35		
31.....		6.6	7.95		8.40		6.29		

Daily gage height, in feet, of Miller Creek near Lorella, Oreg., for 1904-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1907-8.									
1.....		6.18			6.20		6.70	6.10	.....
2.....		6.20					6.70	6.07	.....
3.....		6.20					6.60	6.05	6.00
4.....		6.20		6.50			6.50	6.04	.....
5.....		6.19					6.50	6.05	.....
6.....		6.19					6.51	6.09	.....
7.....		6.18	6.20			6.70	6.55	6.09	5.90
8.....					6.20		6.54	6.05	.....
9.....		6.10			6.16		6.50		.....
10.....		6.10			6.00		6.44	6.21	.....
11.....		6.10		6.40	6.15		6.40	6.22	.....
12.....		6.10			6.18		6.40	6.22	.....
13.....		6.10			6.20		3.40	6.23	.....
14.....		6.10	6.10			7.60	6.38	6.18	5.90
15.....		6.10			6.40		6.36	6.12	.....
16.....		6.10			6.35		6.35	5.90	.....
17.....		6.12			6.30		6.50	6.50	.....
18.....		6.11		7.30	6.30		6.40		.....
19.....		6.11		7.30	6.30	7.60	6.39		.....
20.....		6.11		7.30	6.30		6.32		.....
21.....		6.11	6.40	7.32		6.90	6.28		.....
22.....		6.16		7.34	6.32		6.26		.....
23.....		6.20	8.00	7.37			6.24		.....
24.....			8.00				6.24	6.60	.....
25.....			7.60	7.40			6.23		.....
26.....	6.12		7.15				6.22		.....
27.....	6.15		7.15				6.22		.....
28.....	6.20		7.05			6.70	6.15		.....
29.....	6.17				6.50		6.10		.....
30.....	6.20	6.10							.....
31.....	6.20					6.70			.....
Day.	Nov.	Dec.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1908-9.									
1.....		6.01		5.00	3.45	3.08	2.54	2.40	.....
2.....					3.37	3.06	2.52		.....
3.....			5.90		3.37	3.04	2.50		.....
4.....					3.28	3.00	2.45		.....
5.....		6.02			3.28	2.81	2.42		2.30
6.....					3.28	2.81	2.30		.....
7.....					3.27	2.75	2.35		.....
8.....				5.30	3.00	2.88	2.30	2.50	.....
9.....						2.90	2.23		.....
10.....						2.85	2.20		.....
11.....						2.82	2.30		.....
12.....						2.78			2.20
13.....						2.75			.....
14.....						2.76			.....
15.....				5.00		2.90		2.40	.....
16.....					2.66	2.92			.....
17.....					2.87	2.93			.....
18.....					2.95	3.00	2.20		2.12
19.....					2.95	3.08			2.12
20.....					2.95	3.20			.....
21.....					2.83	3.10			.....
22.....				4.40	2.90	3.00	2.20	2.40	.....
23.....					2.95	2.75			.....
24.....	6.09				2.93	2.75			.....
25.....					2.95	2.66	2.20		.....
26.....			4.90		2.95	2.63			2.10
27.....					2.97	2.49			.....
28.....					2.95	2.50			.....
29.....				3.70	3.10	2.53		2.40	.....
30.....					3.00	2.54			.....
31.....					2.98				.....

Daily gage height, in feet, of Miller Creek near Lorella, Oreg., for 1904-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909-10.												
1.....				2.20	3.95	8.50	4.24	2.85	2.95	2.66	2.60	2.65
2.....				2.40	3.75	7.10	4.10	2.96	2.95	2.70	2.60	2.65
3.....	2.20			2.40	3.56	6.70	4.02	3.12	2.94	2.70	2.60	2.60
4.....				2.20	3.20	7.00	3.95	3.22	2.80	2.70	2.60	2.60
5.....	2.20		3.30	2.40	3.00	6.80	3.85	3.18	2.78	2.70	2.60	2.60
6.....				2.60	3.08	6.40	3.76	3.06	2.78	2.70	2.58	2.61
7.....		3.00		2.50	3.08	6.10	3.65	2.98	2.77	2.70	2.59	2.62
8.....				2.50	3.08	6.05	3.56	2.89	2.75	2.70	2.60	2.62
9.....				2.00	3.08	6.10	3.50	2.78	2.74	2.70	2.61	2.62
10.....	2.30			1.80	3.08	6.10	3.45	2.72	2.71	2.70	2.63	2.61
11.....				1.80	3.15	6.15	3.45	2.65	2.70	2.70	2.64	2.61
12.....			3.30	2.00	3.18	6.20	3.50	2.59	2.70	2.65	2.66	2.62
13.....				2.30	3.70	6.10	3.37	2.48	2.70	2.65	2.68	2.63
14.....		3.00		2.30	3.42	6.10	3.25	2.35	2.70	2.62	2.69	2.66
15.....				2.10	3.38	6.00	3.15	2.28	2.72	2.62	2.70	2.70
16.....				1.60	3.22	5.80	3.06	2.22	2.76	2.60	2.70	2.72
17.....	2.20			1.80	3.18	5.90	2.98	2.19	2.78	2.60	2.71	2.71
18.....		3.00	3.20	1.90	3.00	6.00	2.90	2.52	2.78	2.60	2.70	2.71
19.....		3.50		1.70	2.90	6.18	2.81	2.90	2.78	2.61	2.70	2.72
20.....		4.50		2.00	2.90	5.54	2.74	2.95	2.76	2.63	2.70	2.73
21.....		7.20		3.20	2.90	5.15	2.71	2.98	2.75	2.64	2.70	2.75
22.....		8.05		6.10	2.90	5.35	2.70	2.96	2.75	2.63	2.70	2.74
23.....		8.00		6.20	2.90	5.40	2.68	2.92	2.75	2.60	2.68	2.72
24.....	2.40	6.60		4.60	3.20	5.00	2.60	2.90	2.74	2.60	2.62	2.70
25.....		5.90		4.20	4.40	4.90	2.55	2.91	2.70	2.60	2.59	2.70
26.....		5.00	2.80	3.80	4.10	4.65	2.48	2.94	2.67	2.60	2.58	2.70
27.....		4.30		4.10	4.30	4.62	2.50	2.92	2.66	2.60	2.60	2.70
28.....		4.10		4.10	6.60	4.42	2.47	2.90	2.65	2.60	2.60	2.70
29.....		3.60		4.30		4.22	2.52	2.88	2.65	2.60	2.60	2.70
30.....		3.30		4.20		4.16	2.71	2.85	2.65	2.60	2.62	2.70
31.....	2.70			4.10		4.15		2.89		2.60	2.64	
1910-11.												
1.....	2.70	2.81	4.30	2.70	2.17		7.70	3.95	2.96	2.70	2.27	2.25
2.....	2.69	2.81	5.35	2.69	2.16		7.20	3.87	2.90	2.68	2.27	2.30
3.....	2.68	2.82	6.40	2.69	2.14		6.30	3.85	2.91	2.65	2.29	2.30
4.....	2.78	2.82	5.52	2.69	2.20	2.45	6.40	3.79	2.89	2.62	2.30	2.30
5.....	2.79	2.81	4.90		2.20	2.65	7.40	3.85	2.86	2.59	2.30	2.35
6.....	2.78	2.81	4.50		2.20	3.20	6.60	4.00	2.88	2.56	2.30	2.39
7.....	2.75	2.82	4.10	2.55	2.20	3.00	6.20	3.90	3.00	2.54	2.30	2.39
8.....	2.73	2.92	6.00	2.49		3.10	5.80	3.81	3.03	2.49	2.30	2.38
9.....	2.70	2.88	6.20	2.46		3.20	5.70	3.75	3.03	2.44	2.30	2.40
10.....	2.70	2.87	7.05	2.42		3.40	5.10	3.65	2.93	2.40	2.30	2.39
11.....	2.70	2.89	5.25	2.40	2.20	3.35	5.20	3.55	2.84	2.40	2.35	2.38
12.....	2.78	2.90	4.30		2.20	3.35		3.45	2.70	2.40	2.40	2.38
13.....	2.80	2.89	4.10		2.20	3.40		3.36	2.62	2.40	2.43	2.38
14.....	2.79	2.88	4.02	2.35		3.50		3.29	2.76	2.39	2.42	2.38
15.....	2.78	2.86	3.95	2.25		3.55	4.86	3.23	2.65	2.40	2.38	2.38
16.....	2.80	2.85	3.73	2.20		3.80	5.30	3.20	2.65	2.40	2.32	2.40
17.....	2.80	2.87	3.60	2.20		4.10	5.30	3.30	2.77	2.39	2.30	2.42
18.....	2.80	2.90	3.43	2.20	2.20	4.20	5.08	3.69	2.62	2.40	2.30	2.46
19.....	2.80	2.90	3.45	2.20	2.20	4.09	4.75	3.76	2.56	2.40	2.30	2.49
20.....	2.80	2.99	3.45	2.20		4.60	4.78	3.65	2.52	2.38	2.30	2.49
21.....	2.80	3.01	3.45	2.20		5.20	4.85	3.50	2.50	2.38	2.30	2.50
22.....	2.80	3.05	3.45			6.20	4.84	3.34	2.52	2.30	2.30	2.51
23.....	2.80	3.80	3.45			7.15	4.78	3.20	2.68	2.30	2.30	2.50
24.....	2.80	4.30	3.45			7.40	4.60	3.00	2.69	2.30	2.30	2.50
25.....	2.80	4.45	3.00			7.30	4.50	2.98	2.67	2.30	2.30	2.55
26.....	2.80	4.30	3.00			6.95	4.39		2.68	2.31	2.30	2.61
27.....	2.80	4.30	2.99			7.30	4.38	2.99	2.69	2.30	2.28	2.61
28.....	2.80	4.00	2.99	2.20		7.50	4.39	2.91	2.67	2.30	2.27	2.60
29.....	2.80	4.18	2.98	2.20		7.55	4.21	2.86	2.65	2.28	2.27	2.60
30.....	2.80	4.10	2.96	2.20		7.70	4.05	2.87	2.65	2.28	2.26	2.60
31.....	2.80		2.80	2.16		7.90		2.81		2.27	2.25	

Daily gage height, in feet, of Miller Creek near Lorella, Oreg., for 1904-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.									
1.....	2.60	2.80	.....	3.12	3.63	3.30	3.80	5.80	3.08
2.....		2.80	2.80	3.13	3.50	3.40	3.80	6.10	2.98
3.....		2.80	2.80	3.13	3.58	3.50	3.80	5.95	2.82
4.....		2.80	2.80	3.05	3.63	3.70	3.80	5.27	2.78
5.....		2.81	2.80	3.00	4.20	3.70	3.80	4.75	2.57
6.....		2.82	2.81	3.00	4.10	3.70	3.80	4.85	2.45
7.....	2.68	2.83	2.82	3.00	4.10	3.70	3.80	4.50	2.42
8.....	2.67	2.86	2.82	3.00	4.95	3.70	3.95	4.18	2.45
9.....	2.68	2.97	2.90	3.00	5.10	3.66	3.97	5.91	2.70
10.....		2.97	2.90	3.00	5.20	3.64	4.00	3.78	2.58
11.....		3.00	2.90	3.00	4.86	3.52	4.36	3.67	2.45
12.....		3.00	2.90	3.15	4.22	3.47	4.30	3.60	2.40
13.....		3.00	2.90	3.52	3.98	3.65	4.15	3.50	2.49
14.....	2.70	2.97	2.90	3.65	4.04	3.50	4.09	3.49	2.55
15.....		2.98	2.90	3.59	5.00	3.38	4.19	3.23	2.62
16.....		3.10	2.92	3.45	7.90	3.48	3.90	3.12	2.78
17.....		3.14	2.92	3.38	8.40	3.55	3.84	3.08	2.65
18.....		3.07	2.93	3.27	6.00	3.90	3.99	3.00	2.53
19.....		3.00	2.93	3.25	4.50	3.96	3.75	2.98	2.40
20.....		2.94	2.93	3.25	3.52	3.80	3.75	2.92	2.30
21.....	2.80	2.90	2.94	3.25	3.50	3.65	3.65	3.05	2.29
22.....		2.88	3.05	3.48	3.50	3.60	3.70	3.28	2.35
23.....		2.88	3.40	3.50	3.50	3.80	3.75	3.41	2.49
24.....		2.88	3.40	4.42	3.29	4.00	3.80	3.49	2.53
25.....		2.80	3.40	6.50	3.29	4.00	3.90	3.50	2.53
26.....		2.80	3.40	6.10	3.28	3.98	4.00	3.54	2.65
27.....		2.80	3.40	4.70	3.11	3.96	4.12	3.54	2.88
28.....		2.80	.....	4.40	3.15	3.96	3.92	3.49	2.91
29.....		2.80	.....	4.10	3.20	3.96	4.48	3.42	2.91
30.....		.....	.....	3.85	.....	3.98	5.70	3.22	.....
31.....		.....	.....	3.75	.....	3.80	.....	3.10	.....

NOTE.—River dry June 17 to Dec. 31, 1905; July 7 to Nov. 17, 1906; July 18 to Oct. 25, 1907; and July 1 to Nov. 10, 1908. River freezes over at the gage during the winter, but not at the riffle control, so the discharge is not materially affected. Low gage heights, Jan. 9 to 20, 1910, probably due to low temperature and not low discharge.

Rating tables for Miller Creek near Lorella, Oreg.

August 7, 1904, to December 31, 1905.

Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.
<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>
6.00	0	6.80	52	7.60	274	8.40	665
6.10	1.5	6.90	67	7.70	317	8.50	717
6.20		7.00	86	7.80	363	8.60	770
6.30	4	7.10	109	7.90	411	8.70	823
6.40	13	7.20	135	8.00	460	8.80	876
6.50	20	7.30	163	8.10	510	8.90	929
6.60	29	7.40	196	8.20	561	9.00	982
6.70	39	7.50	234	8.30	613	.....	.....

NOTE.—The above table is based on 13 discharge measurements made during 1904-5, and is well defined between gage heights 6.1 feet and 8 feet.

January 1 to December 31, 1906.

.....	.....	7.60	290	8.40	715	9.40	1,415
.....	.....	7.70	337	8.50	775	9.60	1,575
.....	.....	7.80	387	8.60	835	9.80	1,745
.....	.....	7.90	437	8.70	900	10.00	1,915
7.20	136	8.00	490	8.80	965	10.20	2,085
7.30	168	8.10	545	8.90	1,035	10.40	2,265
7.40	205	8.20	600	9.00	1,110	.....	.....
7.50	245	8.30	655	9.20	1,260	.....	.....

NOTE.—This table is based on discharge measurements made during 1904-1906 and is well defined. Below gage height 7.20 feet this table is the same as the 1905 table.

Rating tables for Miller Creek near Lorella, Oreg.—Continued.

January 1, 1907, to December 31, 1908.

Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.
<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>
5.90	0	7.20	138	8.50	775	10.60	2,490
6.00	0.3	7.30	170	8.60	835	10.80	2,690
6.10	1.7	7.40	206	8.70	900	11.00	2,900
6.20	5.0	7.50	246	8.80	965	11.20	3,120
6.30	10.0	7.60	290	8.90	1,035	11.40	3,360
6.40	16.6	7.70	337	9.00	1,110	11.60	3,600
6.50	25	7.80	387	9.20	1,260	11.80	3,840
6.60	35	7.90	437	9.40	1,415	12.00	4,080
6.70	46	8.00	490	9.60	1,575	13.00	5,310
6.80	59	8.10	545	9.80	1,745	14.00	6,730
6.90	73	8.20	600	10.00	1,920	.....	.....
7.00	90	8.30	655	10.20	2,100	.....	.....
7.10	112	8.40	715	10.40	2,290	.....	.....

NOTE.—Table applicable only to open channel. It is based on discharge measurements made during 1904 to 1908 and is well defined.

Daily discharge, in second-feet, of Miller Creek near Lorella, Oreg., for 1909–1912.

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909.									
1.....	5	110	560	330	49	17	4.4	3.0	2.5
2.....	5	110	590	340	41	16	4.2	3.1	2.5
3.....	5	70	622	360	41	14	4.0	3.3	2.3
4.....	5	30	680	370	32	12	3.5	3.5	2.1
5.....	5	20	740	380	32	7.2	3.2	3.5	2.0
6.....	15	20	620	390	32	7.2	2.0	3.7	1.9
7.....	20	70	500	400	32	6.5	2.5	3.9	1.8
8.....	70	120	410	418	12	8.6	2.0	4.0	1.8
9.....	120	120	380	400	11	9.0	1.7	3.9	1.7
10.....	160	130	360	390	10	8.0	1.5	3.7	1.7
11.....	100	130	340	380	10	7.4	2.0	3.5	1.6
12.....	60	140	330	360	9	6.8	2.0	3.5	1.5
13.....	60	150	320	350	8	6.5	2.0	3.3	1.4
14.....	80	180	320	340	7	6.6	2.0	3.1	1.3
15.....	100	220	310	330	6	9.0	1.5	3.0	1.3
16.....	190	270	310	300	5.6	9.6	1.5	3.0	1.3
17.....	400	320	300	280	8.4	9.9	1.5	3.0	1.2
18.....	500	370	300	250	10.5	12	1.5	3.0	1.1
19.....	510	390	300	220	10.5	17	1.5	3.0	1.1
20.....	570	390	300	190	10.5	26	1.5	3.0	1.1
21.....	500	380	300	160	7.6	18	1.5	3.0	1.1
22.....	460	370	300	134	9.0	12	1.5	3.0	1.1
23.....	450	380	300	126	10.5	6.5	1.5	3.0	1.0
24.....	450	400	300	118	9.9	6.5	1.5	3.0	1.0
25.....	440	420	300	110	10.5	5.6	1.5	3.0	1.0
26.....	400	460	302	102	10.5	5.3	1.5	3.0	1.0
27.....	200	490	310	94	11.1	3.9	1.5	3.0	1.1
28.....	120	530	320	86	10.5	4.0	1.5	3.0	1.2
29.....	110	.....	320	78	18	4.3	3.0	3.0	1.2
30.....	110	.....	320	62	12	4.4	3.0	2.9	1.3
31.....	110	.....	330	.....	11.4	.....	3.0	2.7	.....

Daily gage height, in feet, of Lost River near Merrill, Oreg., for 1904-1909—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1904-5.												
1.....	3.55	3.5	3.5	3.5	4.7	4.5	4.8	3.5	3.5	3.4	3.4	3.3
2.....	3.55	3.5	3.5	3.5	5.7	4.5	4.8	3.5	3.5	3.4	3.4	3.3
3.....	3.55	3.5	3.5	3.5	6.3	4.5	6.0	3.5	3.5	3.4	3.4	3.3
4.....	3.55	3.5	3.5	3.5	6.8	4.5	7.0	3.5	3.5	3.4	3.4	3.3
5.....	3.55	3.5	3.5	3.5	7.0	4.6	6.8	3.5	3.5	3.4	3.4	3.3
6.....	3.55	3.5	3.5	3.5	6.2	4.6	6.0	3.5	3.5	3.4	3.4	3.3
7.....	3.55	3.5	3.5	3.5	5.6	4.6	5.3	3.5	3.5	3.4	3.4	3.3
8.....	3.55	3.5	3.5	3.5	5.1	4.55	5.4	3.5	3.5	3.4	3.4	3.3
9.....	3.55	3.5	3.5	3.5	4.7	4.55	5.6	3.5	3.5	3.4	3.4	3.3
10.....	3.55	3.5	3.5	3.5	4.4	4.4	5.8	3.5	3.5	3.4	3.4	3.3
11.....	3.55	3.5	3.5	3.5	4.2	4.3	5.9	3.5	3.5	3.4	3.4	3.3
12.....	3.55	3.5	3.5	3.5	4.0	4.35	4.0	3.5	3.55	3.4	3.4	3.3
13.....	3.55	3.5	3.5	3.5	3.9	4.2	4.0	3.5	3.55	3.4	3.4	3.3
14.....	3.55	3.5	3.5	3.5	3.8	4.2	4.0	3.5	3.55	3.4	3.4	3.3
15.....	3.55	3.5	3.5	3.5	3.8	4.2	4.0	3.5	3.4	3.4	3.4	3.3
16.....	3.55	3.5	3.5	3.5	3.7	4.1	3.9	3.5	3.4	3.4	3.4	3.3
17.....	3.55	3.5	3.5	3.5	3.7	4.1	3.9	3.5	3.4	3.4	3.4	3.3
18.....	3.55	3.5	3.5	3.5	3.7	4.1	3.8	3.5	3.4	3.4	3.4	3.3
19.....	3.5	3.5	3.5	3.5	3.7	4.1	3.8	3.5	3.4	3.4	3.4	3.3
20.....	3.5	3.5	3.5	3.5	3.8	4.2	3.8	3.5	3.4	3.4	3.4	3.3
21.....	3.5	3.5	3.5	3.5	3.8	4.4	3.7	3.5	3.4	3.4	3.4	3.3
22.....	3.5	3.5	3.5	3.5	3.9	4.5	3.7	3.5	3.4	3.4	3.4	3.3
23.....	3.5	3.5	3.5	3.5	4.4	4.6	3.7	3.5	3.4	3.4	3.4	3.3
24.....	3.5	3.5	3.5	3.5	4.4	4.7	3.6	3.5	3.4	3.4	3.4	3.3
25.....	3.5	3.5	.....	4.5	4.5	4.9	3.6	3.5	3.4	3.4	3.4	3.3
26.....	3.5	3.5	.....	5.4	4.5	4.6	3.5	3.5	3.4	3.4	3.4	3.3
27.....	3.5	3.5	.....	5.3	4.55	4.6	3.5	3.5	3.4	3.4	3.4	3.3
28.....	3.5	3.5	.....	5.0	4.55	5.0	3.5	3.5	3.4	3.4	3.4	3.3
29.....	3.5	3.5	.....	4.7	.....	4.9	3.5	3.5	3.4	3.4	3.4	3.3
30.....	3.5	3.5	.....	4.5	.....	4.8	3.5	3.5	3.4	3.4	3.4	3.3
31.....	3.5	.....	.....	4.4	.....	4.8	.....	3.5	.....	3.4	3.4	.....
1905-6.												
1.....	3.3	3.3	3.3	3.3	3.3	4.55	12.9	5.6	4.45	3.7	3.55	3.5
2.....	3.3	3.3	3.3	3.3	3.3	5.2	13.6	5.3	4.45	3.7	3.55	3.5
3.....	3.3	3.3	3.3	3.3	3.3	5.0	12.7	5.05	4.5	3.7	3.55	3.5
4.....	3.3	3.3	3.3	3.3	.....	4.6	11.5	5.0	4.3	3.7	3.55	3.5
5.....	3.3	3.3	3.3	3.3	.....	4.35	10.6	4.85	4.3	3.7	3.55	3.5
6.....	3.3	3.3	3.3	3.3	.....	4.2	10.45	4.65	4.25	3.7	3.55	3.5
7.....	3.3	3.3	3.3	3.3	3.4	4.1	11.0	4.6	4.2	3.7	3.5	3.5
8.....	3.3	3.3	3.3	3.3	3.4	4.1	11.75	4.6	4.3	3.65	3.5	3.5
9.....	3.3	3.3	3.3	3.3	3.4	4.65	12.4	4.5	4.3	3.65	3.5	3.5
10.....	3.3	3.3	3.3	3.3	3.4	5.8	13.0	4.45	4.3	3.6	3.5	3.5
11.....	3.3	3.3	3.3	3.3	3.4	6.3	13.5	4.35	4.4	3.6	3.5	3.5
12.....	3.3	3.3	3.3	3.3	3.4	6.7	13.05	4.25	4.15	3.7	3.5	3.5
13.....	3.3	3.3	3.3	3.3	3.4	5.85	12.1	4.2	4.15	3.7	3.55	3.5
14.....	3.3	3.3	3.3	3.3	3.45	5.5	11.2	4.3	4.1	3.6	3.55	3.5
15.....	3.3	3.3	3.3	3.3	3.45	5.9	10.55	4.2	4.2	3.6	3.55	3.5
16.....	3.3	3.3	3.3	3.3	3.5	5.2	10.1	4.15	4.2	3.6	3.5	3.5
17.....	3.3	3.3	3.3	3.3	3.5	4.9	9.95	4.2	4.0	3.6	3.55	3.5
18.....	3.3	3.3	3.3	3.3	3.6	4.5	9.9	4.25	3.9	3.6	3.55	3.5
19.....	3.3	3.3	3.3	3.3	3.8	4.4	9.25	4.15	3.95	3.6	3.55	3.5
20.....	3.3	3.3	3.3	3.3	4.0	4.35	8.45	4.05	3.85	3.6	3.55	3.5
21.....	3.3	3.3	3.3	3.3	4.45	4.45	7.95	4.1	3.85	3.6	3.55	3.5
22.....	3.3	3.3	3.3	3.3	5.15	4.75	7.4	4.05	3.8	3.6	3.5	3.5
23.....	3.3	3.3	3.3	3.3	5.2	5.5	7.1	4.1	3.85	3.6	3.5	3.5
24.....	3.3	3.3	3.3	3.3	5.3	8.9	6.85	4.0	3.85	3.55	3.55	3.5
25.....	3.3	3.3	3.3	3.3	4.9	10.8	6.6	4.2	3.8	3.55	3.55	3.5
26.....	3.3	3.3	3.3	3.3	4.5	11.4	6.5	4.1	3.8	3.55	3.55	3.5
27.....	3.3	3.3	3.3	3.3	4.3	12.1	6.5	4.05	3.8	3.55	3.55	3.5
28.....	3.3	3.3	3.3	3.3	4.3	12.1	6.25	4.05	3.8	3.55	3.55	3.5
29.....	3.3	3.3	3.3	3.3	.....	11.5	5.85	4.1	3.7	3.55	3.5	3.5
30.....	3.3	3.3	3.3	3.3	.....	11.05	5.9	4.15	3.7	3.55	3.5	3.5
31.....	3.3	.....	3.3	3.3	.....	11.5	.....	4.25	.....	3.55	3.5	.....
1906-7.												
1.....	3.5	3.4	3.4	4.48	5.7	7.75	11.55	6.7	6.1	6.1	5.5	5.0
2.....	3.5	3.4	3.4	4.2	7.9	7.4	12.45	6.6	6.2	6.1	5.4	5.0
3.....	3.5	3.4	3.4	4.15	8.7	6.9	12.1	6.5	6.2	5.9	5.4	5.0
4.....	3.5	3.4	3.4	4.0	12.4	6.7	11.5	6.5	6.2	5.9	5.4	5.0
5.....	3.5	3.4	3.4	3.9	15.8	6.6	11.1	6.4	6.3	5.9	5.4	5.0

Daily gage height, in feet, of Lost River near Merrill, Oreg., for 1904-1909—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1906-7.												
6.....	3.5	3.4	3.4	3.8	18.1	6.75	11.55	6.5	6.4	5.8	5.4	5.0
7.....	3.5	3.4	3.4	3.8	18.25	7.1	10.52	6.5	6.2	5.8	5.4	5.0
8.....	3.5	3.4	3.4	3.75	16.85	7.1	10.95	6.5	6.2	5.9	5.4	5.0
9.....	3.5	3.4	3.4	3.7	14.55	7.0	12.1	6.5	6.2	5.8	5.4	5.0
10.....	3.5	3.4	3.4	3.65	11.55	7.65	12.25	6.3	6.3	5.8	5.3	5.0
11.....	3.5	3.4	3.4	3.6	9.35	7.85	10.95	6.4	6.45	5.8	5.3	5.0
12.....	3.5	3.4	3.45	3.6	8.35	7.5	10.1	6.2	6.3	5.8	5.3	5.0
13.....	3.5	3.4	3.45	3.5	7.9	6.9	9.72	6.3	6.3	5.7	5.3	5.0
14.....	3.5	3.4	3.45	3.5	7.4	6.75	9.5	6.4	6.0	5.7	5.3	5.0
15.....	3.5	3.4	3.45	3.55	7.1	6.55	9.15	6.4	6.0	5.8	5.2	5.0
16.....	3.5	3.4	3.45	3.6	6.8	6.35	8.82	6.45	6.15	5.7	5.2	5.0
17.....	3.5	3.4	3.45	3.5	6.55	6.4	8.62	6.4	6.2	5.7	5.2	5.0
18.....	3.5	3.4	3.45	3.5	6.45	7.05	8.38	6.4	6.2	5.7	5.2	5.0
19.....	3.5	3.4	3.45	3.5	6.5	9.9	8.22	6.3	6.45	5.6	5.2	4.9
20.....	3.5	3.4	3.45	3.45	6.7	13.75	8.0	6.3	6.15	5.7	5.2	4.9
21.....	3.5	3.4	3.45	3.45	6.65	15.8	7.85	6.2	6.0	5.6	5.1	4.85
22.....	3.5	3.4	3.45	3.45	6.7	16.0	7.65	6.25	6.1	5.7	5.1	4.85
23.....	3.5	3.4	3.45	3.45	6.8	14.95	7.45	6.3	6.1	5.6	5.1	4.85
24.....	3.5	3.4	3.45	3.45	8.35	13.3	7.3	6.3	6.1	5.6	5.1	4.8
25.....	3.5	3.4	3.5	3.45	8.6	11.85	7.2	6.3	6.1	5.6	5.1	4.8
26.....	3.5	3.4	3.5	3.45	7.7	11.05	7.1	6.3	6.1	5.5	5.1	4.8
27.....	3.5	3.4	3.65	3.4	7.65	10.6	6.95	6.2	6.1	5.5	5.1	4.8
28.....	3.5	3.4	4.85	3.4	8.05	10.25	6.85	6.2	6.0	5.6	5.1	4.8
29.....	3.5	3.4	5.6	3.45	.....	9.95	6.8	6.3	6.0	5.5	5.0	4.8
30.....	3.5	3.4	5.2	3.45	.....	9.8	6.7	6.25	6.1	5.5	5.0	4.8
31.....	3.5	.....	4.8	3.65	.....	10.4	.....	6.2	.....	5.5	5.0	.....
1907-8.												
1.....	4.7	4.7	4.6	5.2	5.1	5.0	5.3	5.0	4.6	4.2	3.9	3.6
2.....	4.7	4.7	4.6	5.1	5.0	5.0	5.3	4.9	4.4	4.2	3.8	3.6
3.....	4.7	4.7	4.6	5.0	5.0	5.0	5.2	4.7	4.4	4.2	3.8	3.6
4.....	4.7	4.7	4.6	5.0	5.0	5.0	5.2	4.8	4.5	4.2	3.8	3.6
5.....	4.7	4.7	4.6	5.0	5.0	5.0	5.2	4.8	4.5	4.2	3.8	3.6
6.....	4.7	4.7	4.6	5.0	5.0	5.0	5.1	4.8	4.5	4.2	3.8	3.6
7.....	4.7	4.7	4.6	4.9	5.0	5.0	5.0	4.8	4.5	4.2	3.8	3.6
8.....	4.7	4.7	4.6	4.9	5.0	5.0	5.0	4.7	4.5	4.1	3.8	3.6
9.....	4.7	4.7	4.6	4.9	5.0	5.0	5.0	4.7	4.5	4.1	3.8	3.6
10.....	4.7	4.6	4.6	4.9	5.0	5.0	5.0	4.65	4.5	4.1	3.8	3.6
11.....	4.7	4.6	4.6	4.9	4.8	5.0	5.0	4.6	4.5	4.0	3.8	3.6
12.....	4.7	4.6	4.6	4.9	4.9	5.0	5.0	4.7	4.5	4.1	3.8	3.6
13.....	4.7	4.6	4.6	4.9	4.9	5.0	5.0	4.7	4.5	4.1	3.7	3.6
14.....	4.7	4.6	4.6	4.8	4.9	5.0	5.0	4.7	4.5	4.2	3.7	3.6
15.....	4.7	4.6	4.6	4.8	4.9	5.1	5.0	4.7	4.5	3.9	3.7	3.6
16.....	4.7	4.6	4.6	4.9	4.9	5.8	5.1	4.7	4.5	4.0	3.7	3.6
17.....	4.7	4.6	4.6	5.45	4.9	7.4	5.1	4.8	4.4	4.0	3.7	3.6
18.....	4.7	4.6	4.6	6.0	4.9	7.7	5.1	5.0	4.3	4.0	3.7	3.6
19.....	4.7	4.6	4.6	6.2	4.9	7.5	5.0	4.9	4.3	4.0	3.7	3.6
20.....	4.7	4.6	4.6	6.1	4.9	6.9	5.0	4.9	4.4	3.9	3.7	3.6
21.....	4.7	4.6	4.6	5.9	4.9	6.5	5.0	4.7	4.3	3.9	3.7	3.6
22.....	4.7	4.6	4.7	5.7	4.9	6.2	4.9	4.8	4.3	3.9	3.7	3.6
23.....	4.7	4.6	4.7	5.7	4.9	6.0	4.9	4.8	4.3	3.9	3.7	3.6
24.....	4.7	4.6	4.7	5.7	4.9	6.0	4.9	4.8	4.3	3.9	3.7	3.6
25.....	4.7	4.6	4.7	5.6	4.9	5.8	4.8	4.8	4.3	3.9	3.7	3.6
26.....	4.7	4.6	4.7	5.5	4.9	5.6	4.8	4.7	4.3	3.9	3.7	3.6
27.....	4.7	4.6	5.7	5.3	4.9	5.5	4.7	4.7	4.2	3.9	3.7	3.6
28.....	4.7	4.6	5.75	5.2	4.9	5.5	4.8	4.8	4.2	3.8	3.6	3.6
29.....	4.7	4.6	5.6	5.2	5.2	5.5	4.8	4.7	4.3	3.8	3.6	3.6
30.....	4.7	4.6	5.4	5.1	.....	5.4	4.9	4.6	4.3	3.8	3.6	3.6
31.....	4.7	.....	5.3	5.1	.....	5.3	.....	4.6	.....	3.9	3.6	.....

Daily gage height, in feet, of Lost River near Merrill, Oreg., for 1904-1909—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Day.	Oct.	Nov.	Dec.	Jan.	Feb.
1908-9.						1908-9.					
1.....	3.6	3.5	3.5	3.5	5.0	16.....	3.5	3.5	3.5	4.8	7.1
2.....	3.6	3.5	3.5	3.5	4.8	17.....	3.6	3.5	3.5	9.85	7.1
3.....	3.5	3.5	3.5	3.5	4.8	18.....	3.5	3.5	3.5	13.2	5.85
4.....	3.5	3.5	3.5	3.5	5.4	19.....	3.5	3.5	3.5	14.45	11.2
5.....	3.5	3.5	3.5	3.5	6.5	20.....	3.5	3.5	3.5	14.3	10.6
6.....	3.5	3.5	3.5	3.5	5.1	21.....	3.5	3.5	3.5	13.6	8.5
7.....	3.5	3.5	3.5	3.5	5.0	22.....	3.5	3.5	3.5	13.3	6.7
8.....	3.5	3.5	3.5	3.6	4.8	23.....	3.5	3.5	3.5	13.1	6.5
9.....	3.5	3.5	3.5	3.8	4.7	24.....	3.5	3.5	3.5	10.0	6.7
10.....	3.5	3.5	3.5	4.	4.7	25.....	3.5	3.5	3.5	8.8	6.7
11.....	3.5	3.5	3.5	4.0	4.5	26.....	3.5	3.5	3.5	7.6	6.4
12.....	3.5	3.5	3.5	4.2	4.5	27.....	3.5	3.5	3.5	6.9	6.4
13.....	3.5	3.5	3.5	3.9	4.5	28.....	3.5	3.5	3.5	6.1	6.2
14.....	3.5	3.5	3.5	3.8	5.0	29.....	3.5	3.5	3.5	5.6	-----
15.....	3.6	3.5	3.5	3.8	6.2	30.....	3.5	3.5	3.5	5.2	-----
						31.....	3.5	-----	3.5	5.0	-----

Rating tables for Lost River near Merrill, Oreg.

July 16, 1904, to May 17, 1906.^a

Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.
Feet.	Sec.-feet.	Feet.	Sec.-feet.	Feet.	Sec.-feet.	Feet.	Sec.-feet.	Feet.	Sec.-feet.
3.30	102	4.50	467	5.70	887	6.90	1,307	9.20	2,160
3.40	125	4.60	502	5.80	922	7.00	1,342	9.40	2,240
3.50	150	4.70	537	5.90	957	7.20	1,414	9.60	2,320
3.60	176	4.80	572	6.00	992	7.40	1,488	9.80	2,400
3.70	203	4.90	607	6.10	1,027	7.60	1,562	10.00	2,480
3.80	232	5.00	642	6.20	1,062	7.80	1,636	11.00	2,930
3.90	262	5.10	677	6.30	1,097	8.00	1,710	12.00	3,440
4.00	294	5.20	712	6.40	1,132	8.20	1,784	13.00	4,000
4.10	328	5.30	747	6.50	1,167	8.40	1,858	14.00	4,630
4.20	362	5.40	782	6.60	1,202	8.60	1,932		
4.30	397	5.50	817	6.70	1,237	8.80	2,006		
4.40	432	5.60	852	6.80	1,272	9.00	2,080		

May 18 to December 31, 1906.^b

3.40	66	3.90	185	4.40	342	4.90	511	5.40	685
3.50	87	4.00	215	4.50	375	5.00	545	5.50	720
3.60	108	4.10	246	4.60	409	5.10	580	5.60	755
3.70	131	4.20	278	4.70	443	5.20	615		
3.80	157	4.30	310	4.80	477	5.30	650		

^a This table is based on discharge measurements made during 1904-1906 and is well defined.

^b This table is based on 3 discharge measurements made during 1906 and is well defined between gage heights 3.5 feet and 4.1 feet.

Daily discharge, in second-feet, of Lost River near Merrill, Oreg., for 1907.

Day.	Jan.	Feb.	Mar.	Apr.	May.	Day.	Jan.	Feb.	Mar.	Apr.	May.
1.....	444	824	1,490	2,800	600	16.....	180	1,180	856	1,560	360
2.....	360	1,560	1,380	3,260	540	17.....	150	1,100	856	1,450	330
3.....	345	1,870	1,180	3,080	495	18.....	150	1,060	1,050	1,380	330
4.....	300	3,680	1,110	2,770	480	19.....	150	1,080	2,080	1,310	300
5.....	270	6,300	1,080	2,570	435	20.....	135	1,140	4,030	1,210	300
6.....	240	9,000	1,110	2,800	450	21.....	135	1,130	5,620	1,140	270
7.....	240	9,200	1,210	2,290	450	22.....	135	1,140	5,780	1,080	270
8.....	225	7,250	1,210	2,500	420	23.....	135	1,180	4,870	984	300
9.....	210	5,160	1,140	3,080	420	24.....	135	1,140	3,740	920	300
10.....	195	3,210	1,340	3,160	360	25.....	135	1,830	2,970	872	285
11.....	180	2,140	1,410	2,470	360	26.....	135	1,490	2,570	824	270
12.....	180	1,740	1,280	2,120	300	27.....	120	1,470	2,330	760	240
13.....	150	1,560	1,080	1,950	330	28.....	120	1,620	2,160	696	240
14.....	150	1,380	984	1,830	360	29.....	135	.....	2,050	664	270
15.....	165	1,280	920	1,700	360	30.....	135	.....	1,990	600	255
						31.....	195	.....	2,250	.....	240

NOTE.—Daily discharge determined by the indirect method for shifting channels.

Monthly discharge of Lost River near Merrill, Oreg., for 1904-1907.

Month.	Discharge in second-feet.			Run-off (total in acre- feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1904.					
July 26-31.....	203	203	203	2,415	
August.....	203	176	199	12,240	
September.....	176	163	165	9,818	
1904-5.					
October.....	163	150	158	9,715	
November.....	150	150	150	8,926	
December.....	150	150	150	9,223	
January.....	782	150	248	15,250	
February.....	1,342	203	514	28,550	
March.....	642	328	461	28,350	
April.....	1,342	150	470	27,970	
May.....	150	150	150	9,223	
June.....	163	125	138	8,212	
July.....	125	125	125	7,686	
August.....	125	125	125	7,686	
September.....	102	102	102	6,069	
The year.....	1,342	102	233	167,000	
1905-6.					
October.....	102	102	102	6,272	
November.....	102	102	102	6,069	
December.....	102	102	102	6,272	
January.....	102	102	102	6,270	
February.....	747	102	259	14,400	
March.....	3,500	328	1,260	77,500	
April.....	4,380	940	2,540	151,000	
May.....	852	215	386	23,700	
June.....	375	131	240	14,300	
July.....	131	98	113	6,950	
August.....	98	87	93.7	5,760	
September.....	87	87	87.0	5,180	
The year.....	4,380	87	449	324,000	
1906-7.					
October.....	87	87	87	5,350	
November.....	66	66	66	3,930	
December.....	755	66	130	7,990	
January.....	444	120	191	11,700	C.
February.....	9,200	824	2,600	144,000	B.
March.....	5,780	856	2,040	125,000	B.
April.....	3,260	600	1,790	107,000	B.
May.....	600	240	352	21,600	B.
The period.....				427,000	

TULE LAKE NEAR MERRILL, OREG.

This station, which is located at J. F. Adam's ranch, near the mouth of Lost River, in sec. 8, T. 41 S., R. 11 E., about 3 miles east of Merrill, was established May 17, 1904.

The elevation of the zero of the gage has been taken as 4,048.21 feet above sea level. When the station was established the gage was referred to a bench mark on a juniper post near by. The bench mark at that time was 13.7 feet above the zero of the gage. On October 21, 1904, this elevation was verified. On May 11, 1907, the elevation of the same bench mark was found to be 12.87 feet above zero of the gage, and was independently verified on June 11, 1907, and again on November 27, 1908. It appears, therefore, that some time between October, 1904, and May, 1907, gage was raised 0.83 foot. This change was probably due to action of ice in the lake, although nothing of this kind has been observed since that time. Just when it occurred it has been impossible to ascertain, and a graph of the heights has failed to reveal any critical points that would account for a sudden change. It is therefore likely that the gage was raised a little at a time during the winters of 1905-6 and 1906-7.

On account of this error the gage heights prior to May, 1907, should not be used for refined studies.

The data for this station are furnished by the United States Reclamation Service since 1909.

Daily gage height, in feet, of Tule Lake near Merrill, Oreg., for 1904-1911.

Day.	May.	June.	July.	Aug.	Sept.	Day.	May.	June.	July.	Aug.	Sept.
1904.						1904.					
1.....						16.....			10.10		
2.....						17.....	10.50				
3.....						18.....					8.90
4.....						19.....					
5.....						20.....					
6.....						21.....					
7.....						22.....				9.25	
8.....						23.....					
9.....						24.....					
10.....		10.40				25.....					
11.....					9.0	26.....					
12.....						27.....					
13.....						28.....					
14.....						29.....	10.70				
15.....				9.40		30.....					
						31.....				9.10	

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1904-5												
1.												
2.	8.80						9.25					
3.												
4.			8.50					9.2	9.05	8.6		
5.												
6.						9.1						
7.											7.95	
8.												
9.	8.80											7.4
10.									9.0	8.5		
11.												
12.					8.9							
13.				8.6								
14.											7.8	7.3
15.		8.65				9.15						
16.								9.15				
17.										8.4		
18.					8.9				8.95			
19.												
20.												
21.											7.6	
22.												7.2
23.							9.2	9.1				
24.						9.1				8.3		
25.												
26.												
27.					9.0				8.7			
28.												
29.												
30.												7.1
31.				8.65						8.05	7.5	
1905-6.												
1.												
2.												
3.					6.05	6.8	7.75		9.0	8.85	8.4	7.75
4.												
5.				6.5								
6.												
7.							8.4					7.7
8.	7.05	6.85	6.85					9.1			8.2	
9.					6.05	6.95			9.0	8.8		
10.												
11.				6.5								
12.												
13.									9.0			
14.												
15.			6.7									7.6
16.	7.0	6.8				7.1	8.85	9.1		8.7	8.05	
17.												
18.												
19.												
20.												
21.												
22.									8.9			
23.	6.9	6.8		6.7			9.0			8.45	7.85	7.5
24.						7.3		9.05				
25.						7.3						
26.			6.6									
27.												
28.											7.8	
29.												
30.	6.95	6.8										

Daily gage height, in feet, of Tule Lake near Merrill, Oreg., for 1904-1911—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1906-7.												
6.										10.95		
7.												
8.			7.1	7.3			10.9	11.3	11.3			
9.	7.3											
10.		7.15			8.6						10.4	
11.												
12.						9.3						
13.										10.85		
14.												9.95
15.												
16.				7.3			11.15	11.3	11.3			
17.											10.3	
18.			7.25									
19.	7.2				8.8							
20.		7.15								10.75		
21.						9.9						9.8
22.							11.3					
23.				7.35				11.3				
24.									11.15		10.25	
25.			7.3									
26.												
27.										10.65		
28.					9.05							9.75
29.												
30.		7.0					11.35		11.0			
31.	7.15		7.35			10.5		11.3			10.15	
1907-8.												
1.				9.7	9.9						8.7	
2.		9.7		9.7				9.9				
3.				9.75								
4.				9.8			10.1			9.2		
5.	9.75											8.1
6.									9.6			
7.			9.6			9.95						
8.					9.9						8.6	
9.		9.7						9.85				
10.												
11.				9.8			10.05			9.15		
12.	9.75											8.0
13.						9.95			9.45			
14.											8.45	
15.					9.9							
16.		9.65	9.55					9.8				
17.												
18.				9.85			10.0			9.0		
19.	9.75											7.85
20.									9.35			
21.			9.6			10.0						
22.					9.9						8.2	
23.		9.6						9.75				
24.							9.95			8.9		
25.				9.9								
26.	9.75											7.8
27.									9.25			
28.			9.65			10.1						
29.			9.65		9.95						8.1	
30.		9.6	9.7					9.7				
31.			9.7									
1908-9.												
1.								9.7				
2.				7.35								
3.	7.75						9.4			9.05		
4.												7.95
5.			7.5						9.4			
6.					8.6	9.4	9.6					
7.		7.6									8.45	
8.								9.7				
9.				7.4								
10.	7.7						9.7			8.95		

Daily gage height, in feet, of Tule Lake near Merrill, Oreg., for 1904-1911—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1908-9.												
11.												7.85
12.			7.5						9.35			
13.					8.8	9.45					8.35	
14.		7.6						9.5				
15.												
16.				7.5								
17.	7.65						9.8			8.7		
18.												7.8
19.			7.4						9.3			
20.					8.9	9.5						
21.		7.5									8.2	
22.								9.45				
23.				8.0								
24.	7.65						9.8			8.6		
25.												7.75
26.			7.35						9.15			
27.			7.35		9.0	9.5						
28.		7.5	7.35								8.05	
29.			7.35					9.4				
30.			7.35	8.4								
31.	7.6		7.35							8.55		
1909-10.												
1.				7.95								
2.							9.05			8.05		
3.	7.6											6.80
4.			7.8						8.50			
5.					8.0	8.50						
6.		7.45									7.50	
7.								8.80				
8.				7.95								
9.	7.5						9.05			7.95		
10.												6.70
11.			8.0		8.00				8.40			
12.						8.75						
13.		7.45									7.40	
14.								8.75				
15.			7.95									
16.	7.4						9.00			7.80		
17.												6.65
18.			8.0						8.30			
19.		7.5			8.15	8.90					7.20	
20.												
21.				7.95				8.70				
22.												
23.	7.4						8.95			7.70		
24.												6.50
25.			7.95						8.10			
26.					8.25	9.00						
27.		7.6									7.00	
28.								8.60				
29.				7.95								
30.	7.45						8.90			7.60		
31.												
1910-11.												
1.	6.50						7.90			7.60		6.60
2.												
3.			6.70						7.95			
4.					7.20	7.25						
5.		6.50									7.10	
6.								8.20				
7.				7.00								
8.	6.50						8.25			7.50		
9.												6.50
10.			6.80						7.95			
11.					7.20	7.30						
12.		6.55									6.95	
13.												
14.				7.10								
15.	6.55						8.50	8.10		7.45		

Daily gage height, in feet, of Tule Lake near Merrill, Oreg., for 1904-1911—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.												
16.....			6.90						7.95			6.45
17.....		6.60			7.20	7.40						
18.....											6.80	
19.....								8.02				
20.....												
21.....				7.10								
22.....	6.55						8.65			7.35		
23.....												6.40
24.....			7.00					7.70				
25.....					7.20	7.55						
26.....		6.65									6.70	
27.....								7.95				
28.....	6.50			7.10								
29.....							8.50			7.25		
30.....												6.30
31.....			7.00									

Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.
1911.				1911.				1911.			
1.....				11.....		6.10		21.....	6.20		
2.....			6.10	12.....				22.....			
3.....				13.....				23.....			6.10
4.....		6.10		14.....	6.30			24.....			
5.....				15.....				25.....		6.10	
6.....				16.....			6.10	26.....			
7.....	6.30			17.....				27.....			
8.....				18.....		6.10		28.....	6.10		
9.....			6.10	19.....				29.....			
10.....				20.....				30.....			6.10
								31.....			

NOTE.—Lake frozen January, 1905, Dec. 18, 1909, to Mar. 1, 1910, and Jan. 21 to Feb. 25, 1911. Probably frozen during other winters, but no record was made of the fact.

MILLER CREEK NEAR LORELLA, OREG.

This station, which was established August 10, 1904, was originally located in sec. 13, T. 39 S., R. 13 E., at the lower end of Horsefly Valley. On April 1, 1909, it was moved to an old highway bridge in sec. 7, T. 40 S., R. 14 E., 3 miles south of Lorella post office and 1 mile east of the Swingle ranch in Langell Valley. All measurements in 1909 were referred to this gage. Both points are below all tributaries and the results should be comparable, although the drainage area at the lower station is 50 square miles greater than at the upper, the areas being 270 and 220 square miles, respectively.

A small amount of water is diverted for irrigation by a dam about one-fourth mile above the present station.

A vertical staff gage is attached to the bridge, and its datum has remained unchanged since the station was reestablished. A Bristol self-recording pressure gage was installed May 2, 1909; the records obtained from it have been used during high water, but during low stages it was too much affected by temperature changes and the weekly readings of the staff gage have been used. The Bristol gage was replaced by a Friez recording gage on January 30, 1910, and since that time the gage heights have been fully reliable.

Discharge measurements are made from the highway bridge or by wading at low water.

During the winter months the river freezes over completely, and the data obtained at such periods are not reliable, but a large error during such periods is admissible without affecting the total annual flow. At flood stages, even during the winter, the relation between gage height and discharge is probably not affected by ice.

The conditions at the station during the open season are favorable for good results. A riffle that controls the flow just below the station seems to have shifted slightly during the spring flood of 1910.

High-water measurements made 1911 indicate that the computed flood discharge of November, 1909, is considerably too small, but the yearly total is not materially affected thereby.

This station has been maintained since May, 1909, by the United States Reclamation Service, but the tables of daily and monthly discharge were computed by the United States Geological Survey.

Discharge measurements of Miller Creek near Lorella, Oreg., in 1904-1911.

Date.	Hydrographer.	Gage height.	Discharge.	Date.	Hydrographer.	Gage height.	Discharge.
1904.		<i>Feet.</i>	<i>Sec.-ft.</i>	1907.		<i>Feet.</i>	<i>Sec.-ft.</i>
June 24	T. H. Humphreys.....		^a 15.00	Feb. 8	L. F. Hendricks.....	7.70	332
July 7	.....do.....		^a 12.00	Apr. 13	.....do.....	7.95	466
Aug. 4	.....do.....		^a 5.00	25	.....do.....	7.00	80
23	.....do.....		^a 1.00	May 14	Stevens and Ellsworth.	6.75	57
Sept. 27	.....do.....	6.10	1.71	June 6	C. E. Ellsworth.....	6.20	5.8
Oct. 16	C. T. Darley.....	6.20	4.09	21	.....do.....	6.41	16
Nov. 19	.....do.....	6.25	7.26				
1905.				1908.			
Jan. 28	C. T. Darley.....	7.25	146	Feb. 22	C. E. Ellsworth.....	6.32	12
Feb. 4	.....do.....	7.30	161	Mar. 19	.....do.....	7.56	298
6	.....do.....	6.99	87	Apr. 7	.....do.....	6.60	35
25	.....do.....	7.30	177	May 1	Ellsworth and Kimble.	6.10	2.0
Mar. 8	.....do.....	7.14	124	Nov. 24	Kimble and McGlashan	6.09	1.5
15	F. S. Chapman.....	6.92	95				
Apr. 2	C. T. Darley.....	8.00	460	1909.			
9	.....do.....	6.88	62	Mar. 3	Howard Kimble.....	5.90	651
28	.....do.....	6.19	3.1	26	.....do.....	4.90	285
June 1	.....do.....	6.11	2.0	May 2	.....do.....	3.45	54
				26	Kimble and Geiger.....	2.92	9.5
1906.				Sept. 18	John Yadon.....	2.12	1.35
Mar. 27	L. F. Hendricks.....	8.65	883	Nov. 22	.....do.....	8.05	1,590
28	C. T. Darley.....	8.65	884	24	.....do.....	6.60	891
29	L. F. Hendricks.....	8.80	1,040				
30	.....do.....	9.50	1,440	1910.			
30	.....do.....	10.10	1,940	Aug. 2	Yadon and Moser.....	2.55	^a 1.25
Apr. 4	.....do.....	8.25	629				
5	.....do.....	9.00	1,110	1911.			
6	.....do.....	9.28	1,240	Mar. 21	Leland Moser.....	6.40	990
9	.....do.....	10.65	2,550	21	.....do.....	6.65	1,080
10	.....do.....	9.72	1,690	29	.....do.....	7.55	1,800
22	.....do.....	7.55	308	31	.....do.....	6.65	1,080
25	.....do.....	7.62	309	31	.....do.....	8.05	2,160
July 14	.....do.....	5.80	0	Apr. 6	.....do.....	6.65	1,110
				16	.....do.....	4.90	334
1907.				May 3	.....do.....	3.90	88.5
Feb. 8	L. F. Hendricks.....	8.02	505				

^a Estimated.

Daily gage height, in feet, of Miller Creek near Lorella, Oreg., for 1904-1912.

Day.	Aug.	Sept.	Day.	Aug.	Sept.	Day.	Aug.	Sept.
1904.			1904.			1904.		
1.....		6.0	11.....	6.1		21.....	6.1	
2.....		6.0	12.....	6.1		22.....	6.1	
3.....		6.0	13.....	6.1		23.....	6.05	
4.....		6.0	14.....	6.1		24.....	6.05	
5.....		6.0	15.....	6.1		25.....	6.05	
6.....		6.0	16.....	6.1		26.....	6.7	
7.....	6.1	6.0	17.....	6.1		27.....	6.7	6.1
8.....	6.1	6.0	18.....	6.1		28.....	6.0	6.1
9.....	6.1	6.0	19.....	6.1		29.....	6.0	6.1
10.....	6.1	6.0	20.....	6.1		30.....	6.0	6.1
						31.....	6.0	

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1904-5.									
1.....	6.1	6.1	6.2	6.3	8.0	7.2	7.0	6.3	6.2
2.....	6.1	6.2	6.2	6.3	8.2	7.2	8.0	6.3	6.1
3.....	6.1	6.2	6.15	6.3	7.7	7.3	7.8	6.3	6.1
4.....	6.1	6.2	6.1	6.3	7.3	7.3	7.6	6.3	6.2
5.....	6.1	6.2	6.1	6.3	7.7	7.3	7.4	6.3	6.2
6.....	6.1	6.2	6.1	6.3	7.0	7.2	7.2	6.3	6.3
7.....	6.1	6.2	6.1	6.3	7.0	7.2	7.0	6.2	6.3
8.....	6.1	6.2	6.1	6.3	7.0	7.2	6.9	6.2	6.3
9.....	6.15	6.2	6.1	6.3	7.0	7.1	6.8	6.4	6.3
10.....	6.15	6.15	6.1	6.3	6.9	7.1	6.8	6.4	6.3
11.....	6.3	6.15		6.3	6.6	7.0	6.8	6.4	6.3
12.....	6.3	6.15		6.3	6.5	7.1	6.6	6.4	6.3
13.....	6.2	6.15		6.3	6.5	7.1	6.6	6.4	6.2
14.....	6.15	6.15		6.3	6.4	7.1	6.5	6.4	6.2
15.....	6.2	6.11		6.3	6.4	6.8	6.5	6.3	6.2
16.....	6.2	6.11		7.5	6.4	7.3	6.6	6.3	6.2
17.....	6.2	6.1		7.6	6.4	7.3	6.6	6.3	
18.....	6.2	6.3		7.7	6.4	7.3	6.6	6.3	
19.....	6.1	6.2		7.5	6.8	7.4	6.5	6.3	
20.....	6.1	6.2		7.5	7.2	7.4	6.5	6.2	
21.....	6.1	6.2		7.5	7.3	7.1	6.5	6.1	
22.....	6.1	6.2		7.9	7.3	7.3	6.4	6.0	
23.....	6.1	6.2		8.2	7.3	7.3	6.4	6.0	
24.....	6.1	6.2		7.9	7.3	7.2	6.4	6.0	
25.....	6.1	6.2		7.9	7.3	7.2	6.3	5.9	
26.....	6.1	6.2		7.7	7.3	7.9	6.3	6.1	
27.....	6.1	6.2		7.7	7.3	7.5	6.2	6.1	
28.....	6.1	6.2		7.3	7.3	7.4	6.2	6.2	
29.....	6.1	6.2		7.5		7.4	6.2	6.3	
30.....	6.1	6.2		8.0		7.2	6.2	6.2	
31.....	6.1			8.3		7.2		6.2	

Daily gage height, in feet, of Miller Creek near Lorella, Oreg., for 1904-1912—Continued.

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.
1906.							
1.....	6.2	6.3	7.0	8.1	7.0	7.2	6.15
2.....	6.2	6.3	7.1	8.1	7.0	7.0	6.15
3.....	6.2	6.3	7.1	8.4	6.9	6.9	6.1
4.....	6.2	6.3	7.05	8.15	6.8	6.9	6.1
5.....	6.2	6.3	7.0	9.2	6.7	7.0	6.05
6.....	6.2	6.3	7.05	9.5	6.7	7.3	6.05
7.....	6.3	6.3	7.2	9.9	6.7	7.2	6.0
8.....	6.3	6.3	7.5	9.9	6.6	7.2	6.0
9.....	6.4	6.3	7.7	10.5	6.6	7.1	.....
10.....	6.4	6.3	7.8	10.0	6.5	7.0	.....
11.....	6.4	6.3	7.7	9.1	6.5	6.9	.....
12.....	6.3	6.3	7.6	8.8	6.5	6.8	.....
13.....	6.3	6.3	7.5	8.8	6.6	6.8	.....
14.....	6.3	6.3	7.3	8.7	6.7	6.7	.....
15.....	6.3	6.3	7.1	8.7	6.7	6.6	.....
16.....	6.3	6.3	6.9	8.9	6.7	6.5	.....
17.....	6.3	6.3	6.7	8.5	6.7	6.5	.....
18.....	6.3	6.3	6.7	8.1	6.6	6.4	.....
19.....	6.3	6.3	6.7	7.9	6.6	6.4	.....
20.....	6.3	6.3	6.7	7.8	6.5	6.3	.....
21.....	6.3	6.3	7.2	7.7	6.5	6.3	.....
22.....	6.3	6.3	7.8	7.5	6.5	6.2	.....
23.....	6.3	6.3	8.3	7.5	6.5	6.2	.....
24.....	6.3	6.2	8.8	7.4	6.5	6.1	.....
25.....	6.3	6.4	9.7	7.5	6.4	6.1	.....
26.....	6.3	6.6	9.0	7.4	6.5	6.1	.....
27.....	6.3	6.7	8.6	7.3	6.8	6.1	.....
28.....	6.3	6.8	8.65	7.4	7.1	6.15	.....
29.....	6.3	.....	8.65	7.4	7.5	6.15	.....
30.....	6.3	.....	9.7	7.2	7.5	6.15	.....
31.....	6.3	.....	9.6	.....	7.4	.....	.....

Day.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.
1906-7.									
1.....		6.1	6.45	7.70	7.30	.....	6.77	6.26	.....
2.....		6.1	6.20	8.90	7.30	.....	6.73	6.25	.....
3.....		6.1	6.10	11.55	7.25	.....	6.70	6.24	.....
4.....		6.1	6.10	13.00	7.20	.....	6.70	6.20	.....
5.....		6.2	6.10	14.00	7.35	.....	6.68	6.18	.....
6.....		6.2	6.10	12.00	7.40	8.10	6.65	6.22	6.00
7.....		6.35	6.10	10.00	7.40	9.50	6.65	.....	.....
8.....		6.4	6.10	7.70	7.85	.....	6.65	6.35	.....
9.....		6.3	6.10	7.85	7.90	.....	6.63	.....	.....
10.....		6.3	6.10	7.65	7.55	.....	6.58	.....	.....
11.....		6.3	6.10	7.55	7.50	.....	6.70	.....	.....
12.....		6.2	6.10	7.45	7.30	.....	6.78	.....	.....
13.....		6.2	6.10	7.30	7.35	8.00	6.81	.....	.....
14.....		6.2	6.10	7.25	7.20	.....	6.75	.....	.....
15.....		6.2	6.10	7.20	7.20	.....	6.66	7.00	.....
16.....		6.2	6.10	7.20	7.20	.....	6.58	.....	.....
17.....		6.2	6.10	7.35	8.00	.....	6.50	.....	.....
18.....	6.1	6.2	6.10	7.50	9.80	.....	6.50	.....	.....
19.....	6.1	6.2	6.10	7.40	10.15	.....	6.58	.....	.....
20.....	6.1	6.25	6.10	7.35	9.80	7.10	6.62	.....	.....
21.....	6.1	6.3	6.10	7.30	9.40	7.10	6.65	.....	.....
22.....	6.1	6.3	6.10	8.00	9.00	7.10	6.75	6.30	.....
23.....	6.1	6.4	6.20	7.80	8.70	7.05	6.70	.....	.....
24.....	6.1	6.6	6.20	7.40	8.30	7.00	.....	.....	.....
25.....	6.1	7.65	6.30	7.80	7.90	7.00	6.70	.....	.....
26.....	6.1	8.35	6.30	7.85	7.60	6.95	6.65	.....	5.70
27.....	6.1	7.95	6.30	7.70	7.75	6.90	6.57	.....	.....
28.....	6.1	7.4	6.30	7.40	7.65	6.88	6.49	.....	.....
29.....	6.1	7.4	6.65	.....	7.95	6.85	6.42	6.10	.....
30.....	6.1	6.8	7.20	.....	8.50	6.80	6.35	.....	.....
31.....		6.6	7.95	.....	8.40	.....	6.29	.....	.....

Daily gage height, in feet, of Miller Creek near Lorella, Oreg., for 1904-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1907-8.									
1.....		6.18			6.20		6.70	6.10	.....
2.....		6.20					6.70	6.07	.....
3.....		6.20					6.60	6.05	6.00
4.....		6.20		6.50			6.50	6.04	.....
5.....		6.19					6.50	6.05	.....
6.....		6.19					6.51	6.09	.....
7.....		6.18	6.20			6.70	6.55	6.09	5.90
8.....					6.20		6.54	6.05	.....
9.....		6.10			6.16		6.50		.....
10.....		6.10			6.00		6.44	6.21	.....
11.....		6.10		6.40	6.15		6.40	6.22	.....
12.....		6.10			6.18		6.40	6.22	.....
13.....		6.10			6.20		5.40	6.23	.....
14.....		6.10	6.10			7.60	6.38	6.18	5.90
15.....		6.10			6.40		6.36	6.12	.....
16.....		6.10			6.35		6.35	5.90	.....
17.....		6.12			6.30		6.50	6.50	.....
18.....		6.11		7.30	6.30		6.40		.....
19.....		6.11		7.30	6.30	7.60	6.39		.....
20.....		6.11		7.30	6.30		6.32		.....
21.....		6.11	6.40	7.32		6.90	6.28		.....
22.....		6.16		7.34	6.32		6.26		.....
23.....		6.20	8.00	7.37			6.24		.....
24.....			8.00				6.24	6.60	.....
25.....			7.60	7.40			6.23		.....
26.....	6.12		7.15				6.22		.....
27.....	6.15		7.15				6.22		.....
28.....	6.20		7.05			6.70	6.15		.....
29.....	6.17				6.50		6.10		.....
30.....	6.20	6.10							.....
31.....	6.20					6.70			.....
Day.	Nov.	Dec.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1908-9.									
1.....		6.01		5.00	3.45	3.08	2.54	2.40	.....
2.....					3.37	3.06	2.52		.....
3.....			5.90		3.37	3.04	2.50		.....
4.....					3.28	3.00	2.45		.....
5.....		6.02			3.28	2.81	2.42		2.30
6.....					3.28	2.81	2.30		.....
7.....					3.27	2.75	2.35		.....
8.....				5.30	3.00	2.88	2.30	2.50	.....
9.....						2.90	2.23		.....
10.....						2.85	2.20		.....
11.....						2.82	2.30		.....
12.....						2.78			2.20
13.....						2.75			.....
14.....						2.76			.....
15.....				5.00		2.90		2.40	.....
16.....					2.66	2.92			.....
17.....					2.87	2.93			.....
18.....					2.95	3.00	2.20		2.12
19.....					2.95	3.08			2.12
20.....					2.95	3.20			.....
21.....					2.83	3.10			.....
22.....				4.40	2.90	3.00	2.20	2.40	.....
23.....					2.95	2.75			.....
24.....	6.09				2.93	2.75			.....
25.....					2.95	2.66	2.20		.....
26.....			4.90		2.95	2.63			2.10
27.....					2.97	2.49			.....
28.....					2.95	2.50			.....
29.....				3.70	3.10	2.53		2.40	.....
30.....					3.00	2.54			.....
31.....					2.98				.....

Daily gage height, in feet, of Miller Creek near Lorella, Oreg., for 1904-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909-10.												
1.....				2.20	3.95	8.50	4.24	2.85	2.95	2.66	2.60	2.65
2.....				2.40	3.75	7.10	4.10	2.96	2.95	2.70	2.60	2.65
3.....	2.20			2.40	3.56	6.70	4.02	3.12	2.94	2.70	2.60	2.60
4.....				2.20	3.20	7.00	3.95	3.22	2.80	2.70	2.60	2.60
5.....	2.20		3.30	2.40	3.00	6.80	3.85	3.18	2.78	2.70	2.60	2.60
6.....				2.60	3.08	6.40	3.76	3.06	2.78	2.70	2.58	2.61
7.....		3.00		2.50	3.08	6.10	3.65	2.98	2.77	2.70	2.59	2.62
8.....				2.50	3.08	6.05	3.56	2.89	2.75	2.70	2.60	2.62
9.....				2.00	3.08	6.10	3.50	2.78	2.74	2.70	2.61	2.62
10.....	2.30			1.80	3.08	6.10	3.45	2.72	2.71	2.70	2.63	2.61
11.....				1.80	3.15	6.15	3.45	2.65	2.70	2.70	2.64	2.61
12.....			3.30	2.00	3.18	6.20	3.50	2.59	2.70	2.65	2.66	2.62
13.....				2.30	3.70	6.10	3.37	2.48	2.70	2.65	2.68	2.63
14.....		3.00		2.30	3.42	6.10	3.25	2.35	2.70	2.62	2.69	2.66
15.....				2.10	3.38	6.00	3.15	2.28	2.72	2.62	2.70	2.70
16.....				1.60	3.22	5.80	3.06	2.22	2.76	2.60	2.70	2.72
17.....	2.20			1.80	3.18	5.90	2.98	2.19	2.78	2.60	2.71	2.71
18.....		3.00	3.20	1.90	3.00	6.00	2.90	2.52	2.78	2.60	2.70	2.71
19.....		3.50		1.70	2.90	6.18	2.81	2.90	2.78	2.61	2.70	2.72
20.....		4.50		2.00	2.90	5.54	2.74	2.95	2.76	2.63	2.70	2.73
21.....		7.20		3.20	2.90	5.15	2.71	2.98	2.75	2.64	2.70	2.75
22.....		8.05		6.10	2.90	5.35	2.70	2.96	2.75	2.63	2.70	2.74
23.....		8.00		6.20	2.90	5.40	2.68	2.92	2.75	2.60	2.68	2.72
24.....	2.40	6.60		4.60	3.20	5.00	2.60	2.90	2.74	2.60	2.62	2.70
25.....		5.90		4.20	4.40	4.90	2.55	2.91	2.70	2.60	2.59	2.70
26.....		5.00	2.80	3.80	4.10	4.65	2.48	2.94	2.67	2.60	2.58	2.70
27.....		4.30		4.10	4.30	4.62	2.50	2.92	2.66	2.60	2.60	2.70
28.....		4.10		4.10	6.60	4.42	2.47	2.90	2.65	2.60	2.60	2.70
29.....		3.60		4.30		4.22	2.52	2.88	2.65	2.60	2.60	2.70
30.....		3.30		4.20		4.16	2.71	2.85	2.65	2.60	2.62	2.70
31.....	2.70			4.10		4.15		2.89		2.60	2.64	-----
1910-11.												
1.....	2.70	2.81	4.30	2.70	2.17	-----	7.70	3.95	2.96	2.70	2.27	2.25
2.....	2.69	2.81	5.35	2.69	2.16	-----	7.20	3.87	2.90	2.68	2.27	2.30
3.....	2.68	2.82	6.40	2.69	2.14	-----	6.30	3.85	2.91	2.65	2.29	2.30
4.....	2.78	2.82	5.52	2.69	2.20	2.45	6.40	3.79	2.89	2.62	2.30	2.30
5.....	2.79	2.81	4.90	-----	2.20	2.65	7.40	3.85	2.86	2.59	2.30	2.35
6.....	2.78	2.81	4.50	-----	2.20	3.20	6.60	4.00	2.88	2.56	2.30	2.39
7.....	2.75	2.82	4.10	2.55	2.20	3.00	6.20	3.90	3.00	2.54	2.30	2.39
8.....	2.73	2.92	6.00	2.49	-----	3.10	5.80	3.81	3.03	2.49	2.30	2.38
9.....	2.70	2.88	6.20	2.46	-----	3.20	5.70	3.75	3.03	2.44	2.30	2.40
10.....	2.70	2.87	7.05	2.42	-----	3.40	5.10	3.65	2.93	2.40	2.30	2.39
11.....	2.70	2.89	5.25	2.40	2.20	3.35	5.20	3.55	2.84	2.40	2.35	2.38
12.....	2.78	2.90	4.30	-----	2.20	3.35	-----	3.45	2.70	2.40	2.40	2.38
13.....	2.80	2.89	4.10	-----	2.20	3.40	-----	3.36	2.62	2.40	2.43	2.38
14.....	2.79	2.88	4.02	2.35	-----	3.50	-----	3.29	2.76	2.39	2.42	2.38
15.....	2.78	2.86	3.95	2.25	-----	3.55	4.86	3.23	2.65	2.40	2.38	2.38
16.....	2.80	2.85	3.73	2.20	-----	3.80	5.30	3.20	2.65	2.40	2.32	2.40
17.....	2.80	2.87	3.60	2.20	-----	4.10	5.30	3.30	2.77	2.39	2.30	2.42
18.....	2.80	2.90	3.43	2.20	2.20	4.20	5.08	3.69	2.62	2.40	2.30	2.46
19.....	2.80	2.90	3.45	2.20	2.20	4.09	4.75	3.76	2.56	2.40	2.30	2.49
20.....	2.80	2.99	3.45	2.20	-----	4.60	4.78	3.65	2.52	2.38	2.30	2.49
21.....	2.80	3.01	3.45	2.20	-----	5.20	4.85	3.50	2.50	2.38	2.30	2.50
22.....	2.80	3.05	3.45	-----	-----	6.20	4.84	3.34	2.52	2.30	2.30	2.51
23.....	2.80	3.80	3.45	-----	-----	7.15	4.78	3.20	2.68	2.30	2.30	2.50
24.....	2.80	4.30	3.45	-----	-----	7.40	4.60	3.00	2.69	2.30	2.30	2.50
25.....	2.80	4.45	3.00	-----	-----	7.30	4.50	2.98	2.67	2.30	2.30	2.55
26.....	2.80	4.30	3.00	-----	-----	6.95	4.39	-----	2.68	2.31	2.30	2.61
27.....	2.80	4.30	2.99	-----	-----	7.30	4.38	2.99	2.69	2.30	2.28	2.61
28.....	2.80	4.00	2.99	2.20	-----	7.50	4.39	2.91	2.67	2.30	2.27	2.60
29.....	2.80	4.18	2.98	2.20	-----	7.55	4.21	2.86	2.65	2.28	2.27	2.60
30.....	2.80	4.10	2.96	2.20	-----	7.70	4.05	2.87	2.65	2.28	2.26	2.60
31.....	2.80	-----	2.80	2.16	-----	7.90	-----	2.81	-----	2.27	2.25	-----

Daily gage height, in feet, of Miller Creek near Lorella, Oreg., for 1904-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.									
1.....	2.60	2.80	.....	3.12	3.63	3.30	3.80	5.80	3.08
2.....		2.80	2.80	3.13	3.50	3.40	3.80	6.10	2.98
3.....		2.80	2.80	3.13	3.58	3.50	3.80	5.95	2.82
4.....		2.80	2.80	3.05	3.63	3.70	3.80	5.27	2.78
5.....		2.81	2.80	3.00	4.20	3.70	3.80	4.75	2.57
6.....		2.82	2.81	3.00	4.10	3.70	3.80	4.85	2.45
7.....	2.68	2.83	2.82	3.00	4.10	3.70	3.80	4.50	2.42
8.....	2.67	2.86	2.82	3.00	4.95	3.70	3.95	4.18	2.45
9.....	2.68	2.97	2.90	3.00	5.10	3.66	3.97	3.91	2.70
10.....		2.97	2.90	3.00	5.20	3.64	4.00	3.78	2.58
11.....		3.00	2.90	3.00	4.86	3.52	4.36	3.67	2.45
12.....		3.00	2.90	3.15	4.22	3.47	4.30	3.60	2.40
13.....		3.00	2.90	3.52	3.98	3.65	4.15	3.50	2.49
14.....	2.70	2.97	2.90	3.65	4.04	3.50	4.09	3.49	2.55
15.....		2.98	2.90	3.59	5.00	3.38	4.19	3.23	2.62
16.....		3.10	2.92	3.45	7.90	3.48	3.90	3.12	2.78
17.....		3.14	2.92	3.38	8.40	3.55	3.84	3.08	2.65
18.....		3.07	2.93	3.27	6.00	3.90	3.99	3.00	2.53
19.....		3.00	2.93	3.25	4.50	3.96	3.75	2.98	2.40
20.....		2.94	2.93	3.25	3.52	3.80	3.75	2.92	2.30
21.....	2.80	2.90	2.94	3.25	3.50	3.65	3.65	3.05	2.29
22.....		2.88	3.05	3.48	3.50	3.60	3.70	3.28	2.35
23.....		2.88	3.40	3.50	3.50	3.80	3.75	3.41	2.49
24.....		2.88	3.40	4.42	3.29	4.00	3.80	3.49	2.53
25.....		2.80	3.40	6.50	3.29	4.00	3.90	3.50	2.53
26.....		2.80	3.40	6.10	3.29	3.98	4.00	3.54	2.65
27.....		2.80	3.40	4.70	3.11	3.96	4.12	3.54	2.88
28.....		2.80	.....	4.40	3.15	3.96	3.92	3.49	2.91
29.....		2.80	.....	4.10	3.20	3.96	4.48	3.42	2.91
30.....		.....	.....	3.85	.....	3.98	5.70	3.22	.....
31.....		.....	.....	3.75	.....	3.80	.....	3.10	.....

NOTE.—River dry June 17 to Dec. 31, 1905; July 7 to Nov. 17, 1906; July 18 to Oct. 25, 1907; and July 1 to Nov. 10, 1908. River freezes over at the gage during the winter, but not at the riffle control, so the discharge is not materially affected. Low gage heights, Jan. 9 to 20, 1910, probably due to low temperature and not low discharge.

Rating tables for Miller Creek near Lorella, Oreg.

August 7, 1904, to December 31, 1905.

Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.
<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>
6.00	0	6.80	52	7.60	274	8.40	665
6.10	1.5	6.90	67	7.70	317	8.50	717
6.20	4	7.00	86	7.80	363	8.60	770
6.30	8	7.10	109	7.90	411	8.70	823
6.40	13	7.20	135	8.00	460	8.80	876
6.50	20	7.30	163	8.10	510	8.90	929
6.60	29	7.40	196	8.20	561	9.00	982
6.70	39	7.50	234	8.30	613	.....	.....

NOTE.—The above table is based on 13 discharge measurements made during 1904-5, and is well defined between gage heights 6.1 feet and 8 feet.

January 1 to December 31, 1906.

.....	7.60	290	8.40	715	9.40	1,415
.....	7.70	337	8.50	775	9.60	1,575
.....	7.80	387	8.60	835	9.80	1,745
.....	7.90	437	8.70	900	10.00	1,915
7.20	136	8.00	490	8.80	965	2,085
7.30	168	8.10	545	8.90	1,035	2,265
7.40	205	8.20	600	9.00	1,110	.....
7.50	245	8.30	655	9.20	1,200	.....

NOTE.—This table is based on discharge measurements made during 1904-1906 and is well defined. Below gage height 7.20 feet this table is the same as the 1905 table.

Rating tables for Miller Creek near Lorella, Oreg.—Continued.

January 1, 1907, to December 31, 1908.

Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.	Gage height.	Dis-charge.
<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>	<i>Feet.</i>	<i>Sec.-feet.</i>
5.90		7.20	138	8.50	775	10.60	2,490
6.00	0.3	7.30	170	8.60	835	10.80	2,690
6.10	1.7	7.40	206	8.70	900	11.00	2,900
6.20	5.0	7.50	246	8.80	965	11.20	3,120
6.30	10.0	7.60	290	8.90	1,035	11.40	3,360
6.40	16.6	7.70	337	9.00	1,110	11.60	3,600
6.50	25	7.80	387	9.20	1,260	11.80	3,840
6.60	35	7.90	437	9.40	1,415	12.00	4,080
6.70	46	8.00	490	9.60	1,575	13.00	5,310
6.80	59	8.10	545	9.80	1,745	14.00	6,730
6.90	73	8.20	600	10.00	1,920		
7.00	90	8.30	655	10.20	2,100		
7.10	112	8.40	715	10.40	2,290		

NOTE.—Table applicable only to open channel. It is based on discharge measurements made during 1904 to 1908 and is well defined.

Daily discharge, in second-feet, of Miller Creek near Lorella, Oreg., for 1909–1912.

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909.									
1.....	5	110	560	330	49	17	4.4	3.0	2.5
2.....	5	110	590	340	41	16	4.2	3.1	2.5
3.....	5	70	622	360	41	14	4.0	3.3	2.3
4.....	5	30	680	370	32	12	3.5	3.5	2.1
5.....	5	20	740	380	32	7.2	3.2	3.5	2.0
6.....	15	20	620	390	32	7.2	2.0	3.7	1.9
7.....	20	70	500	400	32	6.5	2.5	3.9	1.8
8.....	70	120	410	418	12	8.6	2.0	4.0	1.8
9.....	120	120	380	400	11	9.0	1.7	3.9	1.7
10.....	160	130	360	390	10	8.0	1.5	3.7	1.7
11.....	100	130	340	380	10	7.4	2.0	3.5	1.6
12.....	60	140	330	360	9	6.8	2.0	3.5	1.5
13.....	60	150	320	350	8	6.5	2.0	3.3	1.4
14.....	80	180	320	340	7	6.6	2.0	3.1	1.3
15.....	100	220	310	330	6	9.0	1.5	3.0	1.3
16.....	190	270	310	300	5.6	9.6	1.5	3.0	1.3
17.....	400	320	300	280	8.4	9.9	1.5	3.0	1.2
18.....	500	370	300	250	10.5	12	1.5	3.0	1.1
19.....	510	390	300	220	10.5	17	1.5	3.0	1.1
20.....	570	390	300	190	10.5	26	1.5	3.0	1.1
21.....	500	380	300	160	7.6	18	1.5	3.0	1.1
22.....	460	370	300	134	9.0	12	1.5	3.0	1.1
23.....	450	380	300	126	10.5	6.5	1.5	3.0	1.0
24.....	450	400	300	118	9.9	6.5	1.5	3.0	1.0
25.....	440	420	300	110	10.5	5.6	1.5	3.0	1.0
26.....	400	460	302	102	10.5	5.3	1.5	3.0	1.0
27.....	200	490	310	94	11.1	3.9	1.5	3.0	1.1
28.....	120	530	320	86	10.5	4.0	1.5	3.0	1.2
29.....	110		320	78	18	4.3	3.0	3.0	1.2
30.....	110		320	62	12	4.4	3.0	2.9	1.3
31.....	110		330		11.4		3.0	2.7	

Daily discharge, in second-feet, of Miller Creek near Lorella, Oreg., for 1909-1912—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909-10.												
1.....	1.3	6	34	2	111	2,620	148	6	8	3	2	2
2.....	1.4	6	34	3	84	1,410	122	9	8	3	2	2
3.....	1.5	6	34	3	61	1,120	109	14	8	3	2	2
4.....	1.5	12	34	2	26	1,330	98	18	5	3	2	2
5.....	1.5	12	34	3	14	1,190	83	16	5	3	2	2
6.....	1.6	12	34	5	18	940	71	12	5	3	2	2
7.....	1.7	12	34	4	18	770	58	9	4	3	2	2
8.....	1.8	12	34	4	18	745	49	7	4	3	2	2
9.....	1.9	12	34	2	18	770	43	5	4	3	2	2
10.....	2.0	12	34	2	18	770	38	3	3	3	2	2
11.....	1.9	12	34	2	22	795	38	2	3	3	2	2
12.....	1.8	12	34	2	25	820	43	2	3	3	2	2
13.....	1.8	12	32	2	78	770	30	1	3	2	3	2
14.....	1.7	12	32	2	46	770	20	0	3	2	3	3
15.....	1.7	12	30	2	42	720	15	0	3	2	3	3
16.....	1.6	12	28	2	28	620	12	0	4	2	3	3
17.....	1.5	12	28	2	25	670	9	0	5	2	3	3
18.....	1.6	12	26	2	14	720	7	1	5	2	3	3
19.....	1.9	54	24	2	11	810	5	7	5	2	3	3
20.....	2.2	206	22	2	11	516	4	8	4	2	3	4
21.....	2.3	1,180	19	26	11	380	3	9	4	2	3	4
22.....	2.6	1,600	16	770	11	447	3	9	4	2	3	4
23.....	2.9	1,570	13	820	11	464	3	8	4	2	3	3
24.....	3.0	900	11	238	26	334	2	7	4	2	2	3
25.....	3.0	622	9	152	192	306	2	7	3	2	2	3
26.....	4.0	330	7	90	134	239	1	8	3	2	2	3
27.....	4.0	168	7	134	172	231	1	8	3	2	2	3
28.....	5.0	134	7	134	1,060	184	1	7	2	2	2	3
29.....	5.0	66	7	172	.....	144	1	7	2	2	2	3
30.....	6.0	34	7	152	.....	133	3	6	2	2	2	3
31.....	6.0	.....	7	134	.....	131	.....	7	.....	2	2	.....
1910-11.												
1.....	3	5	160	5.7	0.1	1.7	1,900	106	12	5.7	0.6	0.4
2.....	3	5	447	5.5	.1	1.8	1,450	95	10	5.4	.6	.7
3.....	3	5	940	5.5	.1	1.9	879	92	10	4.8	.6	.7
4.....	5	5	508	5.5	.2	2.0	938	85	9.9	4.3	.7	.7
5.....	5	5	306	5.0	.2	4.8	1,640	92	9.1	3.9	.7	1.1
6.....	5	5	202	4.0	.2	23	1,060	112	9.6	3.4	.7	1.4
7.....	4	5	122	3.3	.2	13	823	99	13	3.2	.7	1.4
8.....	4	8	720	2.5	.2	17	626	87	14	2.5	.7	1.3
9.....	3	7	820	2.2	.2	23	582	80	14	1.9	.7	1.5
10.....	3	6	1,370	1.7	.2	39	362	68	11	1.5	.7	1.4
11.....	3	7	413	1.5	.2	34	393	56	8.7	1.5	1.1	1.3
12.....	5	7	160	1.4	.2	34	370	44	5.7	1.5	1.5	1.3
13.....	5	7	122	1.2	.2	39	345	35	4.3	1.5	1.8	1.3
14.....	5	7	109	1.1	.2	50	320	29	6.9	1.4	1.7	1.3
15.....	5	6	98	.4	.2	56	296	25	4.8	1.5	1.3	1.3
16.....	5	6	68	.2	.2	86	426	23	4.8	1.5	.9	1.5
17.....	5	6	53	.2	.2	127	426	30	7.1	1.4	.7	1.7
18.....	5	7	36	.2	.2	144	356	73	4.3	1.5	.7	2.2
19.....	5	7	38	.2	.2	126	268	81	3.4	1.5	.7	2.5
20.....	5	10	38	.2	.3	231	275	68	2.9	1.3	.7	2.5
21.....	5	10	38	.2	.5	393	293	50	2.6	1.3	.7	2.6
22.....	5	12	38	.2	.6	823	290	34	2.9	.7	.7	2.7
23.....	5	76	38	.2	.9	1,440	275	23	5.4	.7	.7	2.6
24.....	5	160	38	.2	1.0	1,640	231	13	5.5	.7	.7	2.6
25.....	5	191	10	.2	1.2	1,560	207	12	5.2	.7	.7	2.3
26.....	5	160	10	.2	1.3	1,300	182	12	5.4	.8	.7	4.2
27.....	5	160	10	.2	1.5	1,560	180	13	5.5	.7	.6	4.2
28.....	5	106	10	.2	1.6	1,720	182	10	5.2	.7	.6	4.0
29.....	5	136	9	.2	.....	1,770	146	9.1	4.8	.6	.6	4.0
30.....	5	122	5	.2	.....	1,900	120	9.4	4.8	.6	.5	4.0
31.....	5	.....	5	.1	.....	2,070	.....	7.9	.....	.6	.4	.....

Daily discharge, in second-feet, of Miller Creek near Lorella, Oreg., for 1909-1912—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.									
1.....	4.0	7.7	7.7	18	66	30	86	626	16
2.....	4.0	7.7	7.7	19	50	39	86	770	12
3.....	4.2	7.7	7.7	19	60	50	86	696	8.2
4.....	4.4	7.7	7.7	15	66	74	86	416	7.3
5.....	4.8	7.9	7.7	13	144	74	86	268	3.6
6.....	5.0	8.2	7.9	13	127	74	86	293	2.0
7.....	5.4	8.4	8.2	13	127	74	86	207	1.7
8.....	5.2	9.1	8.2	13	320	74	105	141	2.0
9.....	5.4	12	10	13	362	69	108	100	5.7
10.....	5.4	12	10	13	393	67	112	84	3.7
11.....	5.5	13	10	13	296	52	176	70	2.0
12.....	5.6	13	10	20	148	47	163	62	1.5
13.....	5.6	13	10	52	109	68	136	50	2.5
14.....	5.7	12	10	68	118	50	126	49	3.3
15.....	6.0	12	10	61	393	37	142	25	4.3
16.....	6.3	17	11	44	2,070	48	99	18	7.3
17.....	6.6	19	11	37	2,520	56	91	16	4.8
18.....	6.9	16	11	28	720	99	111	13	3.0
19.....	7.2	13	11	26	207	107	80	12	1.5
20.....	7.5	11	11	26	52	86	80	11	.7
21.....	7.7	10	11	26	50	68	68	15	.6
22.....	7.7	9.6	15	48	50	62	74	29	1.1
23.....	7.7	9.6	39	50	50	86	80	40	2.5
24.....	7.7	9.6	39	189	29	112	86	49	3.0
25.....	7.7	7.7	39	1,000	29	112	99	50	3.0
26.....	7.7	7.7	39	770	29	109	112	55	4.8
27.....	7.7	7.7	39	255	18	107	130	55	9.6
28.....	7.7	7.7	39	184	20	107	102	49	10.4
29.....	7.7	7.7	34	127	23	107	202	41	10.4
30.....	7.7	7.7	28	92	.....	109	582	24	10
31.....	7.7	.....	23	80	.....	86	.....	17	.....

NOTE.—Discharge determined from fairly well defined rating curves applicable as follows: Jan. 1 to Dec. 31, 1909; Jan. 1 to Feb. 28, 1910; Mar. 1 to Dec. 31, 1910; Jan. 1, 1911, to June 30, 1912. On days when gage was not read the discharge was interpolated or estimated from hydrographs of neighboring streams. Discharge below 10 second-feet are only approximate.

Monthly discharge of Miller Creek near Lorella, Oreg., for 1904-1911.

[Drainage area, 270 square miles.]

Month.	Discharge in second-feet.				Run-off.		Accu- racy.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.	Total in acre-feet.	
1904.							
August.....	1.5	.75	1.3			79	
September.....	1.5	.0	.2			12	
1904-5.							
October.....	8	1.5	2.4			148	
November.....	8	1.5	3.7			221	
December.....	10.5	1.5	6.2			381	
January.....	613	8	179			11,010	
February.....	561	13	138			7,664	
March.....	411	52	153			9,408	
April.....	460	4	71.0			4,225	
May.....	13	0	6.5			400	
June.....	8	0	3.0			179	
July.....	0	0	.0			0	
August.....	0	0	.0			0	
September.....	0	0	.0			0	
The year.....	613	0	46.9			33,600	

Monthly discharge of Miller Creek near Lorella, Oreg., for 1904-1911—Continued.

Month.	Discharge in second-feet.				Run-off.		Accuracy.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.	Total in acre-feet.	
1905-6.							
October.....	0	0	0			0	B.
November.....	0	0	0			0	
December.....	0	0	0			0	
January.....	13	4	7.7			474	
February.....	52	4	11.5			639	
March.....	1,660	39	445			27,400	
April.....	2,360	136	779			46,400	
May.....	245	13	56.7			3,490	
June.....	168	1.5	47.3			2,810	
July.....	2.8	0	.3			18	
August.....	0	0	0			0	C.
September.....	0	0	0			0	
The year.....	2,360	0	112			81,200	
1906-7.							
October.....	0	0	0			0	C.
November.....	1.5	0	.6			36	
December.....	685	1.5	68.1			4,190	
January.....	464	1.7	24.3			1,490	
February.....	6,730	138	1,020			56,600	
March.....	2,060	138	543			33,400	
April.....	1,500	59	448			26,700	
May.....	60	9.5	39.0			2,400	
June.....	90	1.5	26.6			1,580	
July.....	1.3	0	.17			10.4	
August.....	0	0	0			0	B.
September.....	0	0	0			0	
The year.....	6,730	0	181			126,000	
1907-8.							
October.....	5	0	.80			49.2	C.
November.....	5	1.7	3.02			180	
December.....	490	1.7	71.9			4,420	
January.....	206	16.6	95.4			5,870	
February.....	25	.3	10.1			581	
March.....	290	28	123			7,560	
April.....	46	1.7	17.5			1,040	
May.....	35	0	13.9			855	
June.....	7	0	.39			23	
July.....	0	0	0			0		B.
August.....	0	0	0			0	
September.....	0	0	0			0	C.
The year.....	490	0	28.0			20,600	
1908-9.							
October.....	0	0	0			0	D.
November.....		0	.48			29	
December.....			.56			34	
January.....			204	0.756	0.87	12,500	
February.....			242	.896	.93	13,400	
March.....			387	1.43	1.65	23,800	
April.....			254	.941	1.05	15,100	
May.....	49	5.6	16.1	.060	.07	990	
June.....	26	3.9	9.56	.035	.04	569	
July.....			2.16	.0080	.01	133	
August.....			3.21	.012	.01	197	C.
September.....			1.47	.0054	.006	87	
The year.....			93.4			66,800	
1909-10.							
October.....			2.51	.0093	.01	154	C.
November.....			235	.870	.97	14,000	
December.....			23.9	.088	.10	1,470	
January.....	820	2	92.6	.343	.40	5,690	
February.....	1,060	11	82.3	.305	.32	4,570	
March.....	2,620	131	705	2.61	3.01	43,300	
April.....	148	1	34.1	.126	.14	2,030	
May.....	18	0	6.5	.024	.03	400	
June.....	8	2	4.1	.015	.02	244	
July.....	3	2	2.4	.0089	.01	148	
August.....	3	2	2.4	.0089	.01	148	C.
September.....	4	2	2.7	.010	.01	161	
The year.....	2,620	0	99.5	.368	5.03	72,300	

Monthly discharge of Miller Creek near Lorella, Oreg., for 1904-1911—Continued.

Month.	Discharge in second-feet.				Run-off.		Accu- racy.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.	Total in acre-feet.	
1910-11.							
October.....	5	3	4.5	0.017	0.02	277	C.
November.....	191	5	42	.156	.17	2,500	B.
December.....	1,370	5	244	.830	.96	13,800	B.
January.....	5.7	.1	1.60	.0059	.007	98.4	D.
February.....	1.6	.1	.44	.0016	.002	24	D.
March.....	2,070	1.7	556	2.06	2.38	34,200	A.
April.....	1,900	120	529	1.96	2.19	31,500	A.
May.....	112	7.9	50.8	.188	.22	3,120	C.
June.....	14	2.6	7.09	.026	.03	422	D.
July.....	5.7	.6	1.91	.0071	.01	117	D.
August.....	1.8	.4	.80	.0030	.003	49	D.
September.....	4.2	.4	2.06	.076	.08	123	D.
The year.....	2,070	.1	120	.444	6.07	86,200	
1911-12.							
October.....	7.7	4	6.30	.023	.03	388	D.
November.....	19	7.7	10.4	.038	.04	619	D.
December.....	39	7.7	17.2	.064	.07	1,060	D.
January.....	1,000	13	108	.400	.46	6,640	B.
February.....	2,520	18	296	1.10	1.19	17,000	B.
March.....	112	30	75.5	.280	.32	4,640	B.
April.....	582	68	122	.452	.50	7,260	B.
May.....	770	11	140	.519	.60	8,610	B.
June.....	16	.6	4.95	.018	.02	295	C.
The period.....						46,500	

SHASTA RIVER AT MONTAGUE, CAL.

This station, which is located at the highway bridge at Lucas ranch, in the N. $\frac{1}{2}$ NE. $\frac{1}{4}$ sec. 33, T. 45 N., R. 6 W., $1\frac{1}{4}$ miles southwest of Montague, was established August 24, 1911. Little Shasta River enters 1 mile above and Yreka Creek 5 miles below the station.

The gage is painted on upstream caisson of the bridge pier on the right bank with a vertical staff for low water on the same pier. Discharge measurements are made from upstream side of bridge or by wading.

The channel is composed of bowlders and gravel.

Water is diverted above the station for irrigation and for use in power development.

Estimates of discharge are withheld until additional data are secured.

Discharge measurements of Shasta River at Montague, Cal., in 1911-12.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1911.		<i>Feet.</i>	<i>Sec.-ft.</i>	1912.		<i>Feet.</i>	<i>Sec.-ft.</i>
Aug. 24	Harry Barnes.....	2.80	102	Jan. 24	H. J. Tompkins.....	2.98	322
Sept. 3	G. T. Peekema.....	2.75	126	May 21	Lasley Lee.....	3.50	344
Oct. 25	Harry Barnes.....	2.82	158	22	do.....	3.61	382
				28	do.....	3.34	298

Daily gage height, in feet, of Shasta River at Montague, Cal., for 1911-12.

Day.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.										
1.....	-----	2.65	2.85	3.0	2.95	3.1	3.0	2.8	4.0	3.35
2.....	-----	2.7	2.85	3.0	2.9	3.1	2.95	2.8	3.6	3.3
3.....	2.75	2.7	2.9	3.0	2.9	3.1	2.95	2.8	3.6	3.3
4.....	2.75	2.7	2.9	3.0	2.9	3.1	2.95	2.8	3.4	3.3
5.....	2.8	2.7	2.9	3.0	2.9	3.05	3.0	2.8	3.4	3.3
6.....	2.8	2.7	2.9	3.0	2.9	3.05	3.3	2.8	-----	3.0
7.....	2.75	2.7	2.9	3.0	2.9	3.05	3.3	2.8	-----	3.0
8.....	2.75	2.7	2.9	3.0	3.0	3.05	3.3	2.8	-----	3.0
9.....	2.75	2.8	2.9	3.0	3.15	3.1	3.1	2.8	-----	3.4
10.....	2.8	2.85	2.9	3.0	3.15	3.1	3.05	2.8	-----	3.2
11.....	2.8	2.8	2.95	3.0	3.15	3.1	3.1	2.8	-----	3.2
12.....	2.8	2.8	2.95	3.0	3.1	3.1	3.05	2.8	3.2	3.2
13.....	2.8	2.8	2.95	3.0	3.1	3.05	3.1	2.85	3.1	3.2
14.....	2.8	2.8	2.95	3.0	3.1	3.05	3.1	2.85	3.1	3.2
15.....	2.75	2.8	2.95	3.0	3.15	3.05	3.1	2.9	3.1	3.2
16.....	2.75	2.8	2.95	3.0	3.1	3.3	3.1	2.9	3.1	3.0
17.....	2.8	2.8	2.95	3.0	3.1	3.7	3.1	2.8	3.0	3.0
18.....	2.8	2.8	3.0	3.0	3.1	4.0	3.1	2.8	3.1	3.0
19.....	2.8	2.8	2.95	3.0	3.1	3.6	3.1	2.8	3.2	2.8
20.....	2.8	2.8	3.0	3.0	3.1	3.2	3.05	2.8	3.3	2.8
21.....	2.8	2.8	2.95	2.95	3.0	3.2	3.05	2.8	3.5	3.0
22.....	2.8	2.8	2.95	3.0	3.0	3.1	3.0	2.8	3.6	3.2
23.....	2.8	2.8	3.0	3.0	3.0	3.1	3.05	2.8	3.5	3.5
24.....	2.7	2.8	3.0	3.0	3.0	3.05	3.0	2.9	3.4	3.8
25.....	2.7	2.8	3.0	3.0	-----	3.0	3.0	2.9	3.35	3.6
26.....	2.75	2.85	3.0	3.0	-----	3.0	3.0	2.9	3.3	3.2
27.....	2.75	2.85	3.0	3.0	-----	3.0	2.9	2.8	3.3	3.35
28.....	2.6	2.85	3.0	3.0	3.3	3.0	2.9	2.9	3.35	3.0
29.....	2.6	2.85	3.0	2.95	3.3	3.0	2.9	3.4	3.35	3.0
30.....	2.6	2.85	3.0	2.95	3.2	-----	2.85	3.7	3.35	3.1
31.....	-----	2.85	-----	2.95	3.2	-----	2.8	-----	3.35	-----

Note.—Jan. 25, maximum recorded gage height 23.0 feet at 9 a. m.

EAST FORK OF SCOTT RIVER NEAR CALLAHAN, CAL.

Scott River rises in the Scott Mountains in the southern part of Siskiyou County, and flows northwestward to its junction with Klamath River near Hamburg Bar. The length of the main river from the junction of the South and East forks near Callahan is about 50 miles. The basin is narrow and the tributaries are small. Scott Valley, extending from Fort Jones to French Gulch, is a rich agricultural valley. Below this valley the river enters a canyon in which it continues to its mouth.

The gaging station, which is located 500 feet west of W. Schneider's ranch house, 6 miles east of Callahan, in sec. 18., T. 40 N., R. 7 W., in the Shasta National Forest, was established November 1, 1910.

The gage is a vertical staff fastened to a willow tree on the left bank.

Discharge measurements are made from the foot log 30 feet below the gage.

This station is maintained in cooperation with the United States Forest Service.

Discharge measurements of East Fork of Scott River near Callahan, Cal., in 1910-1912.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1910		<i>Feet.</i>	<i>Sec.-ft.</i>	1911		<i>Feet.</i>	<i>Sec.-ft.</i>
Oct. 13	W. V. Hardy.....		0.5	May 30	G. T. Peekema.....	3.92	121
Nov. 23	F. G. Wood.....	3.22	14	Sept. 20	do.....	2.80	1.6
1911				1912			
Apr. 10	G. T. Peekema.....	3.80	85	Jan. 21	H. J. Tompkins.....	3.00	8.9

Daily gage height, in feet, of East Fork of Scott River near Callahan, Cal., for 1910-1912.

Day.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Sept.
1910-11										
1.....	2.95	.....	3.2	3.7	3.3	4.5	.....	.....	3.2	.....
2.....	3.0	3.3	.....	.....	3.3	.....	.....	.....	.....	.....
3.....	.....	3.4	.....	.....	3.3	.....	3.8	.....	.....	.....
4.....	3.0	3.5	.....	.....	3.4	.....	.....	4.2	.....	.....
5.....	.....	3.4	.....	.....	3.6	.....	.....	.....	.....	.....
6.....	.....	3.3	.....	.....	4.85	.....	.....	.....	.....	.....
7.....	3.0	3.25	.....	.....	4.3	.....	.....	.....	.....	.....
8.....	.....	3.3	.....	.....	4.0	.....	.....	.....	.....	.....
9.....	.....	3.5	.....	3.4	3.85	.....	.....	.....	.....	.....
10.....	3.0	3.6	.....	3.5	3.8	3.8	3.9	4.1	3.1	.....
11.....	3.1	3.7	.....	3.5	3.8	.....	.....	.....	.....	.....
12.....	.....	.....	.....	.....	3.8	.....	.....	.....	.....	.....
13.....	.....	.....	.....	.....	3.8	3.5	.....	.....	.....	.....
14.....	.....	.....	.....	.....	3.8	.....	.....	.....	.....	.....
15.....	.....	.....	.....	.....	3.8	.....	.....	.....	.....	.....
16.....	.....	.....	.....	.....	3.8	.....	4.0	3.9	.....	.....
17.....	.....	.....	3.1	.....	3.85	.....	.....	.....	.....	.....
18.....	.....	.....	3.15	.....	3.9	.....	.....	.....	3.0	.....
19.....	.....	.....	3.7	.....	4.0	.....	.....	.....	.....	.....
20.....	.....	.....	3.6	.....	4.0	.....	4.0	3.7	.....	2.8
21.....	.....	.....	3.5	.....	.....	3.7	.....	.....	.....	.....
22.....	.....	.....	3.4	.....	.....	.....	.....	.....	2.9	.....
23.....	3.2	.....	3.4	.....	.....	.....	.....	3.6	.....	.....
24.....	3.45	.....	3.4	.....	.....	.....	.....	.....	.....	.....
25.....	3.3	.....	3.4	.....	.....	.....	.....	.....	.....	.....
26.....	3.25	.....	3.4	.....	.....	3.9	.....	.....	2.8	.....
27.....	3.25	.....	3.45	.....	.....	.....	4.1	3.4	.....	.....
28.....	.....	.....	3.4	3.3	4.2	.....	.....	.....	.....	.....
29.....	.....	.....	3.5	.....	.....	.....	.....	.....	.....	.....
30.....	.....	.....	4.0	.....	.....	3.8	3.9	.....	.....	.....
31.....	.....	3.2	3.9	.....	.....	.....	4.1	.....	.....	.....

Daily gage height, in feet, of East Fork of Scott River near Callahan, Cal., for 1910-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.									
1.....		2.0		3.0		2.9			3.8
2.....	2.8							5.0	
3.....			3.0		3.05				
4.....						3.0			
5.....									
6.....							2.9	4.5	
7.....						3.4			
8.....									
9.....					3.0				
10.....						3.2	2.8		
11.....									3.6
12.....				3.1					
13.....									
14.....									
15.....	2.8				3.0		3.0	4.4	
16.....		2.9				3.2			
17.....									3.5
18.....			3.0						
19.....					3.0	3.2			
20.....							3.3	4.4	
21.....				3.0					
22.....									3.4
23.....									3.9
24.....				3.3			3.9		3.7
25.....				4.0	2.9				3.6
26.....				3.7		3.5			
27.....				3.4				4.0	
28.....				3.1			4.5		3.4
29.....									
30.....		2.9				3.3			
31.....	2.0		3.0						

Daily discharge, in second-feet, of East Fork of Scott River near Callahan, Cal., for 1910-1912.

Day.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Sept.
1910-11.										
1.....	6	18	16	71	23	265	88	160	16	
2.....	7	23	16	71	23	245	88	170	16	
3.....	7	32	16	71	23	225	88	175	15	
4.....	7	43	16	71	32	205	88	180	14	
5.....	7	32	16	71	56	185	88	175	14	
6.....	7	23	16	32	382	165	88	170	13	
7.....	7	20	16	32	205	145	108	170	13	
8.....	7	23	16	32	130	125	108	165	12	
9.....	7	43	11	32	98	105	108	160	11	
10.....	7	56	11	43	88	88	108	155	11	
11.....	11	71	11	43	88	73	112	147	11	
12.....	11	90	11	33	88	58	115	140	10	
13.....	11	70	11	33	88	43	119	132	10	
14.....	11	40	11	33	88	40	123	124	9	
15.....	11	30	11	33	88	40	126	116	8	
16.....	11	30	11	33	88	40	130	108	8	
17.....	14	30	11	33	98	45	130	99	7	
18.....	16	20	14	33	108	50	130	89	7	
19.....	16	20	71	33	130	55	130	80	6	
20.....	16	20	56	33	130	60	130	71	6	2
21.....	16	20	43	33	135	71	135	66	5	
22.....	16	20	32	33	140	78	140	61	4	
23.....	16	15	32	33	150	86	140	56	3	
24.....	38	15	32	33	155	93	145	50	3	
25.....	23	15	32	33	160	101	145	44	3	
26.....	20	15	32	33	170	108	150	38	2	
27.....	20	15	38	33	175	103	155	32		
28.....	18	15	32	23	180	98	140	28		
29.....	16	15	43		200	93	124	24		
30.....	16	15	130		220	88	108	20		
31.....		16	108		240		55			

Daily discharge, in second-feet, of East Fork of Scott River near Callahan, Cal., for 1910-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.									
1.....		0		7		4			88
2.....	2							435	
3.....			7		9				
4.....						7			
5.....									
6.....							4	265	
7.....						32			
8.....									
9.....					7				
10.....						16	2		
11.....									56
12.....				11					
13.....									
14.....									
15.....	2				7		7	235	
16.....		4				16			
17.....									43
18.....			7						
19.....					7	16			
20.....							23	235	
21.....				7					
22.....									32
23.....									108
24.....				23			108		71
25.....				130	4				56
26.....				71		43			
27.....				32				130	
28.....				11			265		32
29.....									
30.....		4				23			
31.....	0		7						

NOTE.—Daily discharge determined from a rating curve fairly well defined below 130 second-feet. Discharge estimated from hydrographs of neighboring streams on days when gage was not read.

Monthly discharge of East Fork of Scott River near Callahan, Cal., for 1910-11.

Month.	Mean discharge in second-feet.	Run-off (total in acre-feet).	Accuracy.	Month.	Mean discharge in second-feet.	Run-off (total in acre-feet).	Accuracy.
November.....	13.2	786	D.	August.....	2.0	123	D.
December.....	29.4	1,810	D.	September.....	2.0	119	D.
January.....	29.7	1,830	C.				
February.....	40.0	2,220	D.	The period.....		35,370	
March.....	128	7,870	C.				
April.....	106	6,310	C.	1911.			
May.....	121	7,440	C.	October.....	14	86	D.
June.....	107	6,370	C.	November.....	2.9	173	D.
July.....	8.0	492	D.	December.....	7.0	430	D.

SCOTT RIVER NEAR SCOTT BAR, CAL.

This station, which is located at a highway bridge about $2\frac{1}{2}$ miles west of Scott Bar, in the NW. $\frac{1}{4}$ sec. 6, T. 45 N., R. 10 W., and about half a mile above the junction with Klamath River, was established September 12, 1911.

The gage is a vertical staff fastened to left abutment of bridge near upstream end. Discharge measurements are made from the bridge or by wading.

The channel is composed of boulders and gravel.

There is some water diverted above the station for irrigation and mining.

Discharge measurements of Scott River near Scott Bar, Cal., in 1911-12.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1911. Sept. 13	G. T. Peekema.....	Feet. 1.48	Sec.-ft. 85	1912. May 24	Lasley Lee.....	Feet. 3.53	Sec.-ft. 1,470
1912. Jan. 19	H. J. Tompkins.....	2.41	439	May 27	.....do.....	4.09	2,210

Daily gage height, in feet, of Scott River near Scott Bar, Cal., for 1911-12.

Day.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1.....		1.5	1.6	1.7	1.7	2.4	2.6	2.6	3.6	4.1
2.....		1.5	1.6	1.7	1.7	2.3	2.6	2.6	3.6	4.2
3.....		1.5	1.6	1.7	1.7	2.2	2.6	2.6	3.5	4.2
4.....		1.5	1.6	1.7	1.7	2.2	2.5	2.6	3.3	4.4
5.....		1.5	1.6	1.75	1.7	2.5	2.5	2.6	3.3	4.5
6.....		1.5	1.6	1.75	1.7	2.6	2.6	2.6	3.3	4.4
7.....		1.5	1.6	1.75	1.8	2.5	2.65	2.6	3.5	4.4
8.....		1.5	1.6	1.7	1.8	2.8	2.6	2.6	3.5	4.2
8.....		1.5	1.6	1.7	2.0	3.0	2.5	2.6	3.9	4.1
10.....		1.5	1.7	1.7	2.1	3.2	2.5	2.7	4.0	3.95
11.....		1.5	1.7	1.7	2.0	3.2	2.5	2.8	4.0	3.8
12.....	1.5	1.5	1.7	1.7	2.7	3.0	2.5	2.8	4.0	4.0
13.....	1.5	1.5	1.7	1.7	3.4	2.8	2.5	2.7	4.0	3.9
14.....	1.5	1.7	1.7	1.7	3.4	2.7	2.4	2.7	4.1	3.7
15.....	1.5	1.6	2.3	1.7	3.1	2.75	2.6	2.7	4.1	3.55
16.....	1.5	1.6	1.9	1.7	2.8	3.3	2.6	2.6	4.2	3.4
17.....	1.5	1.6	1.9	1.75	2.6	5.3	2.6	2.6	4.1	3.4
18.....	1.5	1.6	1.9	1.75	2.5	5.4	2.7	2.6	4.0	3.4
19.....	1.5	1.6	1.8	1.7	2.4	4.5	2.6	2.6	4.0	3.4
20.....	1.5	1.6	1.8	1.7	2.4	4.0	2.6	2.55	4.1	3.45
21.....	1.5	1.6	1.8	1.7	2.35	3.8	2.5	2.5	4.1	3.45
22.....	1.5	1.55	1.8	1.7	2.3	3.4	2.5	2.5	3.8	4.0
23.....	1.5	1.55	1.8	1.7	2.3	3.2	2.5	2.5	3.6	3.6
24.....	1.4	1.55	1.8	1.7	2.3	3.1	2.5	2.5	3.4	3.5
25.....	1.4	1.55	1.8	1.7	4.1	3.0	2.5	2.5	3.4	3.4
26.....	1.4	1.7	1.8	1.7	4.5	2.8	2.5	2.5	4.0	3.3
27.....	1.5	1.7	1.7	1.7	3.6	2.8	2.5	2.4	4.2	3.3
28.....	1.5	1.7	1.7	1.7	3.4	2.7	2.5	2.4	4.0	3.3
29.....	1.5	1.6	1.7	1.7	2.8	2.7	2.55	2.7	4.2	3.25
30.....	1.5	1.6	1.7	1.7	2.8	.....	2.6	3.0	4.4	3.2
31.....	.....	1.6	.....	1.7	2.5	.....	2.6	.....	4.2	.....

Daily discharge, in second-feet, of Scott River near Scott Bar, Cal., for 1911-12.

Day.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1.....		88	106	130	130	430	570	570	1,560	2,220
2.....		88	106	130	130	370	570	570	1,560	2,360
3.....		88	106	130	130	320	570	570	1,440	2,360
4.....		88	106	130	130	320	500	570	1,210	2,650
5.....		88	106	145	130	500	500	570	1,210	2,800
6.....		88	106	145	130	570	570	570	1,210	2,650
7.....		88	106	145	160	500	605	570	1,440	2,650
8.....		88	106	130	160	720	570	570	1,440	2,360
9.....		88	106	130	230	900	500	570	1,940	2,220
10.....		88	130	130	270	1,100	500	640	2,080	2,010
11.....		88	130	130	230	1,100	500	720	2,080	1,810
12.....	88	88	130	130	640	900	500	720	2,080	2,080
13.....	88	88	130	130	1,320	720	500	640	2,080	1,940
14.....	88	130	130	130	1,320	640	430	640	2,220	1,680
15.....	88	106	370	130	1,000	680	570	640	2,220	1,500
16.....	88	106	190	130	720	1,210	570	570	2,360	1,320
17.....	88	106	190	145	570	4,020	570	570	2,220	1,320
18.....	88	106	190	145	500	4,180	640	570	2,080	1,320
19.....	88	106	160	130	430	2,800	570	570	2,080	1,320
20.....	88	106	160	130	430	2,080	570	535	2,220	1,380
21.....	88	106	160	130	400	1,810	500	500	2,220	1,380
22.....	88	97	160	130	370	1,320	500	500	1,810	2,080
23.....	88	97	160	130	370	1,100	500	500	1,560	1,560
24.....	73	97	160	130	370	1,000	500	500	1,320	1,440
25.....	73	97	160	130	2,220	900	500	500	1,320	1,320
26.....	73	130	160	130	2,800	720	500	500	2,080	1,210
27.....	88	130	130	130	1,560	720	500	430	2,360	1,210
28.....	88	130	130	130	1,320	640	500	430	2,080	1,210
29.....	88	106	130	130	720	640	535	640	2,360	1,160
30.....	88	106	130	130	720	.....	570	900	2,650	1,100
31.....	.....	106	.....	130	500	.....	570	.....	2,360	.....

NOTE.—Daily discharge determined from a rating curve well defined between 300 and 3,500 second-feet.

Monthly discharge of Scott River near Scott Bar, Cal., for 1911-12.

Month.	Discharge in second-feet.			Run-off (total in acre- feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1911.					
September 12-30	88	73	85.6	3,230	B.
1911-12.					
October	130	88	100	6,150	B.
November	370	106	145	8,630	B.
December	145	130	132	8,120	B.
January	2,800	130	649	39,900	A.
February	4,180	320	1,130	65,000	A.
March	640	430	534	32,800	A.
April	900	430	578	34,400	A.
May	2,650	1,210	1,900	117,000	A.
June	2,800	1,100	1,790	107,000	A.
The period				419,000	

INDIAN CREEK NEAR HAPPY CAMP, CAL.

This station, which is located above the highway bridge at Robert's ranch, near the forest ranger's station, in the NW. $\frac{1}{4}$ sec. 22, T. 17 N., R. 7 E., was established September 8, 1911. The station is about 4 miles north of Happy Camp and the mouth of the creek, in the Klamath National Forest.

The gage is a vertical staff fastened to an alder tree on the left bank, about 700 feet above the bridge. Discharge measurements are made from the bridge or by wading.

The channel is composed of gravel and small boulders.

The Reeve-Davis Consolidated Mining Co.'s ditch diverts water above the station and returns it below. Other small ditches also divert water for mining.

Discharge measurements and the gage height record are furnished by the United States Forest Service.

Estimates of discharge are withheld until additional data are available.

Discharge measurements of Indian Creek River near Happy Camp, Cal., in 1911-12.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1911. Sept. 8	G. T. Peekema	<i>Feet.</i> 2.58	<i>Sec.-ft.</i> 39	1912. Jan. 16 May 25	H. J. Tompkins..... Lasley Lee.....	<i>Feet.</i> 4.55 4.09	<i>Sec.-ft.</i> 888 592

Daily gage height, in feet, of Indian Creek near Happy Camp, Cal., for 1911-12.

Day.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1		2.55		2.7		4.3	4.0	3.8	5.2	4.15
2		2.5			2.8	4.2	4.0	3.8	4.6	4.3
3				2.6		4.1	4.0	3.8	4.35	4.05
4		2.6			2.7	4.35	3.8	3.8		4.05
5		2.6				5.1	3.9	3.8	4.3	4.05
6		2.6	2.5	3.6	2.8	4.7	3.9	3.8	4.5	4.05
7		2.5			3.0	4.8	3.9	3.8	4.85	4.05
8	2.6	2.7			3.9	5.3	3.8	3.75	5.0	
9	2.6	2.6	2.95	2.9	3.7	5.5	3.8		5.0	3.8
10	2.6	2.6	2.8		4.2	5.6	3.9		4.8	3.7
11	2.6			2.8	3.9	5.4	3.8	3.8		3.6
12	2.7	2.6		2.7	6.6	5.0	3.8	3.7	4.6	
13	2.6	2.65		2.7	6.6	4.9	3.8	3.8		
14	2.6	2.7	3.0	2.7	5.7	4.6	4.1	3.65	4.55	
15	2.6		4.4	2.7	5.6	4.5	4.2	3.6	4.45	
16	2.6	2.6	3.6		4.55	7.5	4.2		4.35	
17	2.6	2.6	3.3	2.8	4.15	10.6	4.1		4.35	3.5
18	2.6				4.3	7.8	4.0		4.35	
19	2.55	2.6			4.2	6.3	4.0			3.5
20		2.55		2.7	4.2	5.5	4.0			3.5
21	2.5	2.5			4.1	5.3	3.8			3.5
22	2.5		3.0	2.7	4.0	5.2	3.8	3.55	4.1	
23	2.5	2.5			4.0	4.8	3.8			3.4
24	2.45			2.8	6.8	4.3	3.9		4.1	
25	2.6	2.5			7.4	4.2	3.9	3.6	4.1	3.4
26	2.6		3.0	2.7	6.0	4.2	3.9	3.6	4.1	3.4
27	2.6	2.55			5.2	4.2	3.8			3.35
28	2.6	2.55	3.0	2.8	4.8	4.1	3.9	3.8	4.15	3.3
29	2.6				4.6	4.0	4.0	4.2	4.3	3.3
30	2.55	2.55	2.8	2.7	4.2		4.0	4.6		
31					4.3				4.1	

REEVE-DAVIS CONSOLIDATED MINING CO.'S DITCH NEAR HAPPY CAMP, CAL.

This station, which is located in a flume in the SE. $\frac{1}{4}$ sec. 16, T. 17 N., R. 7 E., about 5 miles north of Happy Camp, was established September 8, 1911.

The gage is a vertical staff fastened to the west side of the flume. Discharge measurements are made from a footbridge at the gage.

Discharge measurements and gage height record are furnished by the United States Forest Service.

Estimates of discharge are withheld until additional data are available.

Discharge measurements of Reeve-Davis Consolidated Mining Co.'s ditch near Happy Camp, Cal., in 1911-12.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1911. Sept. 8	G. T. Peekema.....	Feet. 0.73	Sec.-ft. 9.8	1912. Jan. 16 May 25	H. J. Tompkins..... Lasley Lee.....	Feet. 1.10 1.80	Sec.-ft. 20 41

Daily gage height, in feet, of Reeve-Davis Consolidated Mining Co.'s ditch near Happy Camp, Cal., for 1911-12.

Day.	Sept.	Oct.	May.	June.	Day.	Sept.	Oct.	May.	June.
1.....		0.75		1.5	16.....				
2.....					17.....	0.75	0.8		
3.....		.8			18.....				
4.....					19.....	.75	.8		
5.....		.8			20.....				
6.....					21.....	.72	.7		1.65
7.....		.75			22.....				
8.....	0.75				23.....	.7	.7		
9.....	.7	.9			24.....		.75		
10.....				1.65	25.....	.75	.78	1.8	
11.....	.75	.8			26.....				
12.....	.8				27.....	.72	.4		
13.....	.85	.85	1.75		28.....		.75		
14.....	.8				29.....	.72			
15.....		.9			30.....				
					31.....		.78		

NOTE.—Gage destroyed by ditch tender first part of November, 1911.

SALMON RIVER AT SOMESBAR, CAL.

This station, which is located below the bridge about 600 feet northeast of Somesbar post office, in the SE. $\frac{1}{4}$ sec. 2, T. 13 N., R. 6 E., and about $1\frac{3}{4}$ miles above the junction with Klamath River, was established September 17, 1911.

The gage is a vertical staff, in two sections, on the right bank, about 900 feet below the bridge from which discharge measurements are made.

The channel is composed of gravel and bowlders.

Estimates of discharge are withheld until additional data are available.

Discharge measurements of Salmon River at Somesbar, Cal., in 1911-12.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1911. Sept. 18	G. T. Peekema.....	Feet. 3.55	Sec.-ft. 193	1912. Feb. 13 Feb. 14	E. O. Christiansen..... Christiansen and Ho- telling.....	Feet. 5.82 5.72	Sec.-ft. 2,460 1,940

Daily gage height, in feet, of Salmon River at Somesbar, Cal., for 1911-12.

Day.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.										
1.....		3.65	3.55	3.65	3.8	5.4	5.0	5.1	7.5	6.8
2.....		3.6	3.55	3.65	3.8	5.2	4.95	5.1	6.9	7.0
3.....		3.6	3.5	3.65	3.8	5.0	4.9	5.1	6.5	7.0
4.....		3.7	3.5	3.65	3.8	5.0	4.9	5.1	6.3	7.0
5.....		3.65	3.5	3.7	3.8	5.2	5.0	5.1	6.5	7.0
6.....		3.5	3.5	4.0	3.9	5.4	5.05	5.1	6.6	7.0
7.....		3.5	3.5	4.0	4.2	5.4	5.0	5.1	6.8	7.0
8.....		3.5	3.55	3.9	4.9	5.9	4.9	5.15	7.0	7.0
9.....		3.8	3.8	3.9	5.2	6.3	4.9	5.15	7.1	6.1
10.....		3.8	4.0	3.8	5.4	6.6	4.9	5.45	7.1	6.1
11.....		3.75	3.8	3.8	5.7	6.2	4.85	5.45	6.9	6.1
12.....		3.7	3.8	3.75	6.3	6.0	4.8	5.2	6.9	6.0
13.....		3.65	3.8	3.7	9.7	5.8	4.8	5.2	7.0	6.1
14.....		3.85	3.9	3.7	8.9	5.7	4.8	4.9	6.9	5.9
15.....		3.85	5.0	3.7	8.0	5.6	4.9	4.9	6.9	5.9
16.....		3.75	4.7	3.8	7.6	7.9	5.1	4.9	6.8	5.7
17.....	3.6	3.7	4.2	3.8	7.0	13.4	5.1	4.9	6.7	5.6
18.....	3.55	3.65	3.9	3.8	6.6	10.8	5.1	5.0	6.6	5.4
19.....	3.55	3.65	3.9	3.85	6.1	8.0	5.1	5.0	6.7	5.6
20.....	3.5	3.6	3.9	3.8	5.6	7.2	5.1	4.95	6.7	5.4
21.....	3.5	3.6	3.9	3.9	5.1	6.8	5.1	4.9	6.8	5.25
22.....	3.5	3.6	3.85	3.9	5.0	6.2	5.1	4.9	6.0	5.2
23.....	3.5	3.55	3.6	3.9	5.0	6.1	5.1	4.9	6.0	5.1
24.....	3.5	3.55	3.8	3.9	5.6	5.8	5.2	4.85	6.2	5.1
25.....	3.5	3.55	3.7	3.9	9.1	5.6	5.3	4.85	6.5	5.1
26.....	3.55	3.55	3.7	3.9	8.4	5.5	5.3	4.85	6.5	5.15
27.....	3.65	3.6	3.7	4.0	8.1	5.3	5.3	4.85	6.3	5.1
28.....	3.6	3.6	3.7	4.2	7.9	5.3	5.2	4.85	6.4	5.1
29.....	3.6	3.6	3.7	4.2	7.1	5.1	5.2	5.65	6.7	5.0
30.....	3.6	3.6	3.65	4.0	6.6	.....	5.15	5.9	6.8	5.0
31.....	3.6	3.6	.....	3.9	5.8	.....	5.2	.....	6.8	.....

NOTE.—Feb. 17, maximum recorded gage height 14.1 feet at 3.30 p. m.

TRINITY RIVER NEAR TRINITY CENTER, CAL.

This station, which is located below the highway bridge $1\frac{1}{2}$ miles southeast of Trinity Center, in the NE. $\frac{1}{4}$ sec. 16, T. 36 N., R. 7 W., in the Shasta National Forest, was established December 15, 1910.

Brush Creek enters about half a mile, Hatchet $1\frac{3}{4}$ miles, and Coffee Creek 6 miles above the station. Swift Creek enters $1\frac{1}{2}$ miles below. The East Fork of Trinity River joins the main stream about three-fourths mile below the station.

The gage is a vertical staff on the right bank 650 feet below the bridge. August 20, 1911, a low-water section was installed 400 feet below the bridge, to read the same as the original gage.

Discharge measurements are made from the bridge above the gage.

A small amount of water, diverted from the North Fork of Swift Creek for placer mining, enters a short distance above the station. Otherwise the record at this point represents the natural run-off from this drainage area.

This station is maintained in cooperation with the United States Forest Service.

Discharge measurements of Trinity River near Trinity Center, Cal., in 1910-1912.

Date.	Hydrographer.	Gage height.	Discharge.	Date.	Hydrographer.	Gage height.	Discharge.
1910.		<i>Feet.</i>	<i>Sec.-feet.</i>	1912.		<i>Feet.</i>	<i>Sec.-feet.</i>
Dec. 15	F. G. Wood	3.47	509	Feb. 6	H. J. Tompkins.....	3.49	443
1911.				July 28	Lesley Lee.....	3.32	291
Apr. 6	G. T. Peekema.....	5.05	2,010	29	.....do.....	3.13	250
May 19	.....do.....	4.77	1,550				
Aug. 20	.....do.....	2.68	134				
Oct. 2	H. J. Tompkins.....	2.62	122				

Daily gage height, in feet, of Trinity River near Trinity Center, Cal., for 1910-1912.

Day.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.										
1.....		3.0								2.45
2.....			4.3							
3.....		2.8		3.4			4.9			
4.....										
5.....		2.9	3.8						2.85	
6.....				4.4	5.05			3.7		
7.....		2.78	3.7							
8.....										
9.....		2.85		4.4			5.1			
10.....		2.95	3.6					3.5		
11.....									2.75	2.55
12.....		2.9		4.5						
13.....			3.7					3.4		
14.....		3.05								2.6
15.....	3.47			4.2						
16.....	3.3	3.2	3.5				4.85			
17.....				4.4						
18.....		3.25								
19.....	3.2		3.3	4.55		4.8	4.7			
20.....						4.75			2.68	
21.....	3.2							3.2		
22.....		4.0	3.4	5.15			4.25			
23.....	3.2									
24.....				5.35						
25.....		3.8	3.4				4.0			
26.....	3.05					4.9	4.05			
27.....				4.9						2.65
28.....	3.0	3.8	3.5					3.0		
29.....							3.9		2.5	
30.....	2.9			5.1		4.85				
31.....	2.9	4.5								

Daily gage height, in feet, of Trinity River near Trinity Center, Cal., in 1910-1912—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.									
1.....						3.4			
2.....	2.62		2.61						
3.....				2.6	3.4				6.1
4.....		2.61							
5.....									
6.....	2.6				3.5			5.05	
7.....						3.8		5.3	
8.....					3.7				
9.....				2.9					
10.....					4.1				
11.....				2.8	3.95				
12.....								5.7	
13.....				3.4	3.8				
14.....			2.68						4.8
15.....				3.2	3.65	3.7		5.8	
16.....					3.8				
17.....	2.6				5.8				
18.....					5.1				
19.....									
20.....					4.3				
21.....				3.2	4.05				
22.....								5.3	
23.....					3.85				
24.....		2.61							4.3
25.....			2.7	7.0		4.0			
26.....			2.6		3.6			7.1	
27.....	2.61								4.2
28.....									
29.....			2.7						
30.....				3.7					
31.....						4.1			

Daily discharge, in second-feet, of Trinity River near Trinity Center, Cal., for 1910-1912.

Day.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.										
1.....		240	1,170	480	2,300	1,430	1,730	745	210	89
2.....		204	1,120	460	2,300	1,450	1,740	725	205	89
3.....		168	980	440	2,200	1,470	1,760	695	200	89
4.....		185	850	450	2,100	1,480	1,800	675	190	89
5.....		202	710	600	2,000	1,490	1,840	655	185	89
6.....		182	670	1,220	1,940	1,500	1,880	635	180	98
7.....		162	635	1,220	1,800	1,460	1,920	605	175	106
8.....		174	615	1,220	1,650	1,430	1,960	570	170	106
9.....		185	585	1,220	1,550	1,400	2,000	530	165	106
10.....		221	565	1,250	1,400	1,380	1,960	500	160	106
11.....		212	585	1,290	1,300	1,370	1,920	480	154	106
12.....		202	615	1,320	1,200	1,370	1,870	460	154	109
13.....		232	635	1,220	1,100	1,370	1,830	440	154	113
14.....		261	590	1,130	1,050	1,390	1,780	425	154	116
15.....	482	296	545	1,030	1,000	1,430	1,740	410	154	116
16.....	383	330	500	1,120	980	1,480	1,700	395	135	116
17.....	365	343	460	1,220	980	1,530	1,650	385	135	116
18.....	348	356	422	1,300	980	1,600	1,590	375	135	116
19.....	330	400	383	1,380	980	1,650	1,540	360	135	116
20.....	330	400	402	1,600	1,000	1,600	1,430	345	135	110
21.....	330	500	420	1,840	1,050	1,650	1,310	330	135	110
22.....	330	865	440	2,060	1,100	1,700	1,190	320	135	110
23.....	330	815	440	2,190	1,200	1,750	1,080	310	135	110
24.....	307	760	440	2,320	1,450	1,800	970	290	135	110
25.....	284	710	440	2,140	1,650	1,780	865	280	96	110
26.....	261	710	460	1,950	1,900	1,760	905	260	96	140
27.....	250	710	480	1,760	1,800	1,740	865	250	96	128
28.....	240	710	500	1,800	1,500	1,730	825	240	96	127
29.....	221	800		1,800	1,400	1,720	785	235	96	125
30.....	202	950		2,000	1,400	1,700	765	225	94	124
31.....	202	1,320		2,200		1,720		220	91	

Daily discharge, in second-feet, of Trinity River near Trinity Center, Cal., for 1910-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	May.	June.
1911-12.								
1.....	122	121	118	150	459	363	2,600	3,560
2.....	121	120	118	140	411	407	2,500	3,380
3.....	120	119	118	116	363	451	2,400	3,210
4.....	118	118	118	130	382	495	2,200	3,050
5.....	117	118	118	144	400	540	2,000	2,900
6.....	116	118	150	158	420	585	1,840	2,750
7.....	115	118	170	176	488	630	2,150	2,600
8.....	114	118	165	197	555	620	2,250	2,450
9.....	122	118	160	202	702	610	2,350	2,300
10.....	130	130	155	185	850	600	2,450	2,150
11.....	130	130	150	168	745	591	2,550	2,000
12.....	130	130	145	304	688	582	2,660	1,850
13.....	135	130	140	440	630	573	2,700	1,700
14.....	160	130	135	385	575	564	2,750	1,550
15.....	135	130	140	330	520	555	2,800	1,490
16.....	120	170	145	330	630	577	2,700	1,430
17.....	116	150	155	330	2,800	599	2,600	1,380
18.....	114	120	155	330	1,900	621	2,510	1,330
19.....	112	120	155	330	1,460	643	2,420	1,280
20.....	110	120	155	330	1,030	665	2,330	1,230
21.....	110	120	148	330	810	687	2,240	1,180
22.....	110	118	140	400	738	709	2,150	1,130
23.....	110	118	140	600	668	731	2,770	1,080
24.....	110	118	140	2,000	607	753	3,390	1,030
25.....	110	118	140	4,650	546	775	4,010	1,000
26.....	112	118	116	3,000	485	787	4,640	970
27.....	118	118	120	2,000	454	799	4,460	940
28.....	135	118	128	1,000	424	811	4,280	910
29.....	130	118	140	700	393	824	4,100	880
30.....	125	118	160	555	.....	837	3,920	860
31.....	122	.....	170	507	.....	850	3,740	.....

NOTE.—Daily discharge determined from fairly well defined rating curves applicable as follows: December 15, 1910, to January 25, 1912, and December 26 to June 30, 1912. Discharge interpolated or estimated from discharge of neighboring streams for days on which gage was not read.

Monthly discharge of Trinity River near Trinity Center, Cal., for 1910-1912.

Month.	Mean discharge in second-feet.	Run-off (total in acre-feet).	Accuracy.	Month.	Mean discharge in second-feet.	Run-off (total in acre-feet).	Accuracy.
1910-11.				1911-12.			
December 15-31.....	306	10,300	B.	October.....	121	7,440	C.
January.....	445	27,400	B.	November.....	124	7,380	C.
February.....	595	33,000	B.	December.....	142	8,730	C.
March.....	1,390	85,500	B.	January.....	665	40,900	C.
April.....	1,480	88,100	C.	February.....	729	41,900	C.
May.....	1,560	95,900	C.	March.....	640	39,400	C.
June.....	1,510	89,800	C.	May.....	2,850	175,000	C.
July.....	431	26,500	C.	June.....	1,790	107,000	C.
August.....	145	8,920	C.				
September.....	110	6,550	C.				
The period.....	.....	472,000					

TRINITY RIVER AT LEWISTON, CAL.

This station, which is located at the highway bridge at Lewiston, in the NE. $\frac{1}{4}$ sec. 19, T. 33 N., R. 8 W., about 9 miles below Stewarts Fork, was established August 28, 1911.

The gage is a vertical staff, in two sections, on the left bank at the bridge. Discharge measurements are made from the bridge or by wading.

The channel is composed of gravel and small bowlders and is fairly permanent.

Water is diverted above the station for use in irrigation, placer mining, and power development.

Discharge measurements of Trinity River at Lewiston, Cal., in 1910-1912.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1910. Dec. 19	H. D. McGlashan.....	<i>Feet.</i> 3.62	<i>Sec.-ft.</i> 782	1911. Sept. 28	H. J. Tompkins.....	<i>Feet.</i> 2.50	<i>Sec.-ft.</i> 183
1911. Mar. 21	G. T. Peekema.....	6.38	4,330	1912. Jan. 31	.....do.....	4.00	1,010
May 18	.....do.....	6.18	3,540	July 23	Lasley Lee	3.23	535
Aug. 28	.....do.....	2.31	162				

Daily gage height, in feet, of Trinity River at Lewiston, Cal., for 1911-12.

Day.	Aug.	Sept.	Day.	Aug.	Sept.	Day.	Aug.	Sept.
1911.			1911.			1911.		
1.....		2.28	11.....		2.39	21.....		2.32
2.....		2.30	12.....		2.36	22.....		2.32
3.....		2.29	13.....		2.38	23.....		2.32
4.....		2.30	14.....		2.48	24.....		2.31
5.....		2.40	15.....		2.39	25.....		2.32
6.....		2.32	16.....		2.36	26.....		2.53
7.....		2.34	17.....		2.35	27.....		2.49
8.....		2.34	18.....		2.40	28.....	2.30	2.49
9.....		2.34	19.....		2.35	29.....	2.30	2.46
10.....		2.35	20.....		2.33	30.....	2.29	2.46
						31.....	2.29	

Daily gage height, in feet, of Trinity River at Lewiston, Cal., for 1911-12.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1.....	2.43	2.47	2.44	2.60	3.6	3.7	4.9	7.4	7.4
2.....	2.45	2.47	2.44	2.66	3.6	3.7	5.0	6.6	7.6
3.....	2.49	2.45	2.48	2.50	3.55	3.7	5.2	6.0	7.4
4.....	2.45	2.46	2.49	2.60	3.55	3.7	5.2	5.7	7.6
5.....	2.45	2.45	2.48	2.66	3.65	3.85	4.9	6.2	7.5
6.....	2.44	2.44	2.68	2.68	3.75	4.8	4.8	6.3	7.5
7.....	2.41	2.49	2.78	2.65	3.85	4.4	5.0	6.4	7.6
8.....	2.40	2.49	2.71	2.89	4.4	4.05	4.8	6.8	7.2
9.....	2.58	2.50	2.62	2.94	4.45	4.6	4.8	6.8	6.9
10.....	2.59	2.49	2.65	3.0	4.8	4.22	5.9	7.6	6.4
11.....	2.53	2.59	2.59	2.99	4.8	4.1	5.6	7.2	6.6
12.....	2.51	2.52	2.53	2.98	4.45	4.35	5.3	7.6	6.6
13.....	2.51	2.53	2.51	4.1	4.8	4.4	5.0	7.7	6.2
14.....	2.71	2.55	2.49	3.8	4.4	4.35	4.9	7.5	6.0
15.....	2.61	2.53	2.51	3.45	4.1	4.4	4.9	7.6	5.4
16.....	2.52	2.82	2.53	4.15	4.2	5.0	4.8	7.4	5.4
17.....	2.52	2.80	2.59	3.7	6.3	4.6	4.7	7.2	5.4
18.....	2.50	2.55	2.56	3.75	7.2	4.6	4.8	7.2	5.3
19.....	2.51	2.58	2.54	3.65	6.6	4.6	4.8	7.2	5.4
20.....	2.45	2.59	2.53	3.5	5.3	4.45	4.7	8.1	5.3
21.....	2.42	2.60	2.53	3.5	4.9	4.3	4.7	7.8	5.0
22.....	2.41	2.58	2.49	3.6	4.5	4.4	4.5	7.6	4.9
23.....	2.44	2.57	2.51	3.65	4.3	4.3	4.6	6.7	5.2
24.....	2.44	2.59	2.51	4.3	4.05	4.5	4.5	6.6	4.9
25.....	2.46	2.58	2.49	9.8	4.0	4.5	4.3	8.7	4.7
26.....	2.48	2.59	2.50	8.2	4.0	4.7	4.2	9.6	4.8
27.....	2.59	2.58	2.50	6.3	4.05	4.9	4.25	8.8	4.45
28.....	2.61	2.54	2.55	5.1	3.95	5.2	4.3	8.2	4.6
29.....	2.58	2.54	2.64	5.0	3.85	5.3	6.2	8.1	4.5
30.....	2.52	2.48	2.71	4.45	.....	5.3	6.1	8.1	4.4
31.....	2.47	.....	2.75	4.0	.....	5.0	.....	7.4	.....

Daily discharge, in second-feet, of Trinity River at Lewiston, Cal., for 1911.

Day.	Aug.	Sept.	Day.	Aug.	Sept.	Day.	Aug.	Sept.
1.....		144	11.....		168	21.....		152
2.....		148	12.....		161	22.....		152
3.....		146	13.....		166	23.....		152
4.....		148	14.....		190	24.....		150
5.....		170	15.....		168	25.....		152
6.....		152	16.....		161	26.....		204
7.....		157	17.....		159	27.....		192
8.....		157	18.....		170	28.....	148	192
9.....		157	19.....		159	29.....	148	185
10.....		159	20.....		155	30.....	146	185
						31.....	146	.....

Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.
1.....	178	188	180	11.....	204	222	222	21.....	175	225	204
2.....	182	188	180	12.....	198	201	204	22.....	172	219	192
3.....	192	182	190	13.....	198	204	198	23.....	180	216	198
4.....	182	185	192	14.....	264	210	192	24.....	180	222	198
5.....	182	182	190	15.....	228	204	198	25.....	185	219	192
6.....	180	180	253	16.....	201	303	204	26.....	190	222	195
7.....	172	192	288	17.....	201	295	222	27.....	222	219	195
8.....	170	192	264	18.....	195	210	213	28.....	228	207	210
9.....	219	195	232	19.....	198	219	207	29.....	219	207	239
10.....	222	192	242	20.....	182	222	204	30.....	201	190	264
								31.....	188	.....	278

NOTE.—Estimates of discharge for 1912 withheld until more discharge measurements are obtained.

Monthly discharge of Trinity River at Lewiston, Cal., for 1911.

Month.	Discharge in second-feet.			Run-off (total in acre- feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
September.....	204	144	164	9,760	B.
October.....	264	170	196	12,100	B.
November.....	303	180	210	12,500	B.
December.....	288	180	214	13,200	B.

TRINITY RIVER NEAR CHINA FLAT, CAL.

This station, which is located at the suspension footbridge, in sec. 15, T. 6 N., R. 5 E., about 2 miles above the junction with South Fork and 8 miles above China Flat, was established October 11, 1911.

The gage is a staff, in three sections, bolted to a rock ledge on the left bank, 40 feet above the bridge from which discharge measurements are made.

The channel is composed of gravel and boulders which are partly covered with silt, the débris from placer mining.

A small amount of water is diverted above the station for use in irrigation, power development, and placer mining.

Estimates of discharge are withheld until additional data are secured.

Discharge measurements of Trinity River near China Flat, Cal., in 1911-12.

Date.	Hydrographer.	Gage height.	Dis- charge.	Date.	Hydrographer.	Gage height.	Dis- charge.
1911. Dec. 31	E. O. Christiansen	<i>Feet.</i> 5.00	<i>Sec.-ft.</i> 588	1912. Feb. 8 Apr. 15	E. O. Christiansen	<i>Feet.</i> 9.69 8.88	<i>Sec.-ft.</i> 3,490 3,510

Daily gage height, in feet, of Trinity River near China Flat, Cal., for 1911-12.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1.....		4.80	5.00	5.15	9.1	8.1	9.08	15.18	12.18
2.....		4.80	4.95	5.2	8.85	7.98	9.25	14.35	13.48
3.....		4.80	4.95	5.0	8.4	7.85	9.45	12.9	13.55
4.....		4.80	4.95	5.0	8.3	7.72	9.32	12.3	13.29
5.....		4.78	4.95	4.95	8.45	7.95	9.1	12.2	13.4
6.....		4.78	5.10	5.0	8.45	8.92	9.0	12.6	12.8
7.....		4.78	5.30	5.6	8.7	9.3	8.98	12.9	12.75
8.....		4.78	5.40	6.3	9.6	9.1	9.18	12.9	12.32
9.....		4.80	5.30	6.85	10.9	8.85	9.0	13.25	11.22
10.....		5.22	5.15	6.9	10.55	8.75	9.85	13.5	10.9
11.....		5.12	5.10	6.7	10.4	8.45	10.3	13.3	10.7
12.....	4.90	5.00	5.08	6.8	10.0	8.35	10.0	12.95	11.55
13.....	4.90	5.00	5.00	10.0	9.65	8.85	9.35	13.25	11.2
14.....	4.90	5.00	5.00	9.1	9.45	8.65	9.1	12.8	10.2
15.....	5.00	5.38	5.05	8.1	9.35	8.95	8.9	13.28	9.68
16.....	5.00	5.90	5.20	7.8	11.4	9.6	8.9	12.8	9.11
17.....	4.94	5.68	5.20	7.8	18.3	9.3	9.0	12.28	8.91
18.....	4.90	5.45	5.20	7.3	18.25	9.25	8.95	12.22	9.02
19.....	4.90	5.30	5.10	7.45	14.0	9.3	8.95	12.1	9.39
20.....	4.85	5.28	5.08	7.2	12.3	9.3	8.85	13.45	9.32
21.....	4.85	5.20	5.15	7.0	11.2	9.25	8.7	12.2	8.85
22.....	4.82	5.20	5.00	7.0	10.1	9.1	8.4	11.28	8.3
23.....	4.80	5.12	5.00	6.8	9.8	9.0	8.4	10.8	8.26
24.....	4.78	5.02	5.08	7.0	9.45	9.0	8.35	10.65	8.65
25.....	4.78	5.00	5.00	22.5	9.1	9.3	8.22	14.1	8.22
26.....	4.78	5.00	4.98	21.5	8.85	9.25	8.15	14.85	8.15
27.....	4.80	5.00	5.20	15.0	8.62	9.4	8.2	15.65	8.22
28.....	4.80	5.00	5.25	12.0	8.4	9.65	8.2	13.7	8.12
29.....	4.85	5.00	5.15	10.8	8.15	9.92	10.78	13.8	8.0
30.....	4.85	5.00	5.10	10.0	.....	9.65	12.3	13.8	7.86
31.....	4.82	.....	5.00	9.45	.....	9.28	.....	12.7	.....

TRINITY RIVER AT HOOPA, CAL.

This station, which is located at the Hoopa Indian Agency in the NW. $\frac{1}{4}$ sec. 25, T. 8 N., R. 4 E., about 1 mile above Hoopa Ferry and about 11 miles above the junction with Klamath River, was established September 3, 1911.

The gage is a staff, in three sections, on the left bank, 800 feet above the mouth of Supply Creek.

The channel is composed of sand and gravel and appears permanent.

Discharge measurements are made from the ferry 1 mile below the gage. Supply Creek enters between the gage and the ferry and it is therefore necessary to deduct the discharge of the stream from the measurements to obtain the flow at the gage.

Estimates of discharge are withheld until additional data are secured.

Discharge measurements of Trinity River at Hoopa, Cal., in 1911-12.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1911. Oct. 8	E. O. Christiansen.....	<i>Feet.</i> 4.70	<i>Sec.-ft.</i> 492	1912. Feb. 11	E. O. Christiansen.....	<i>Feet.</i> 9.50	<i>Sec.-ft.</i> 7,380
Dec. 30	.....do.....	5.30	812	Apr. 18	.....do.....	8.79	5,580

Daily gage height, in feet, of Trinity River at Hoopa, Cal., for 1911-12.

Day.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1.....		4.65	4.71	4.92	5.3	8.9	8.2	9.1	15.6	11.5
2.....		4.62	4.70	4.90	5.3	8.6	8.2	8.9	14.6	11.4
3.....	4.40	4.68	4.70	4.90	5.3	8.4	8.0	9.2	13.8	11.2
4.....	4.44	4.72	4.70	4.92	5.0	8.3	7.8	9.2	12.5	11.2
5.....	4.49	4.74	4.70	5.08	5.0	8.2	8.1	9.0	12.1	11.1
6.....	4.50	4.70	4.70	5.28	5.15	8.2	9.2	8.8	12.0	10.9
7.....	4.52	4.70	4.70	5.38	6.2	8.2	9.6	8.8	12.0	10.8
8.....	4.54	4.69	4.71	5.28	6.7	9.4	9.4	9.0	12.0	10.4
9.....	4.52	4.75	4.82	5.20	7.8	9.8	9.1	8.8	12.2	9.8
10.....	4.50	4.85	5.32	5.16	7.8	9.8	9.0	9.2	12.0	9.6
11.....	4.51	4.91	5.30	5.04	7.4	9.7	8.8	9.6	11.8	9.7
12.....	4.56	4.89	5.12	5.02	7.5	9.3	8.8	9.4	11.8	9.6
13.....	4.60	4.84	5.18	5.00	10.4	9.0	9.2	9.1	11.6	9.9
14.....	4.62	4.91	5.15	5.00	9.6	9.0	8.9	8.8	11.7	9.1
15.....	4.61	4.98	5.90	5.00	8.8	8.9	9.2	8.7	11.6	8.9
16.....	4.58	4.98	6.22	5.11	8.4	10.7	10.0	8.7	11.5	8.6
17.....	4.55	4.88	5.92	5.38	8.2	15.9	9.9	8.7	11.0	8.3
18.....	4.51	4.82	5.68	5.26	7.9	16.0	9.7	8.7	10.8	8.4
19.....	4.49	4.80	5.60	5.20	7.9	13.7	9.7	8.6	10.8	8.6
20.....	4.49	4.76	5.35	5.20	7.8	12.1	9.6	8.4	12.7	8.5
21.....	4.48	4.71	5.19	5.12	7.5	11.2	9.5	8.3	11.2	8.2
22.....	4.46	4.70	5.19	5.00	7.3	10.4	9.3	8.2	10.4	8.0
23.....	4.44	4.70	5.12	5.11	7.6	9.9	9.2	8.1	10.0	8.1
24.....	4.42	4.70	5.05	5.18	19.5	10.0	9.3	8.3	10.0	8.2
25.....	4.49	4.70	5.00	5.06	21.5	9.2	9.4	8.2	11.2	8.0
26.....	4.60	4.70	5.00	5.05	14.8	9.0	9.3	8.1	12.5	7.8
27.....	4.65	4.70	5.00	5.40	11.6	8.9	9.4	8.1	12.0	7.8
28.....	4.70	4.72	4.98	5.46	10.4	8.5	9.6	8.2	12.6	7.7
29.....	4.69	4.78	4.95	5.35	10.0	8.3	9.7	11.2	12.0	7.6
30.....	4.66	4.74	4.95	5.30	9.3	.....	9.6	13.2	12.6	7.4
31.....	.....	4.72	.....	5.26	9.2	.....	9.4	.....	11.0	.....

COFFEE CREEK AT COFFEE, CAL.

This station, which is located at a private bridge at Coffee, 5 miles above the junction with Trinity River, in the NW. $\frac{1}{4}$ sec. 4, T. 37 N., R. 8 W., in the Shasta National Forest, was established December 16, 1910. Boulder Creek enters 400 feet above and Little Boulder Creek $1\frac{1}{4}$ miles below the station.

The gage is a vertical staff near the upstream end of the bridge pier near the right bank.

Discharge measurements are made from the bridge or by wading.

This stream is utilized by the Trinity Gold Mining & Reduction Co. to operate the mine near Carrville.

From April to July, inclusive, and occasionally throughout the remainder of the year, two dams with automatic or "self-shooting" gates are operated about 10 miles above the station. The Nash mine operates a dam having a working capacity of about 125 acre-feet.

The Holland mine, on the East Fork, operates a dam having a working capacity of about 40 acre-feet. At the beginning of the season, in April, these dams fill and "shoot" about once an hour; at the end of the season, in July, once in 20 or 24 hours. During high water the "floods" are hardly perceptible, but late in the season their effect is pronounced. It is endeavored to obtain gage-height readings when the flow is normal, but the record is subject to some error from April to July.

This station is maintained in cooperation with the United States Forest Service.

Discharge measurements of Coffee Creek at Coffee, Cal., in 1910-1912.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
		<i>Feet.</i>	<i>Sec.-ft.</i>			<i>Feet.</i>	<i>Sec.-ft.</i>
1910. Dec. 16	F. G. Wood.....	4.17	176	1912. Feb. 5	H. J. Tompkins.....	3.95	122
1911. May 20	G. T. Peekema.....	5.20	739	July 26	Lasley Lee.....	4.03	105
Aug. 18	do.....	3.54	62	29	do.....	3.97	100
Oct. 3	H. J. Tompkins.....	3.40	41				

Daily gage height, in feet, of Coffee Creek at Coffee, Cal., for 1910-1912.

Day.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.										
1.....		3.75	4.40	4.0	5.5	5.5	5.8	4.9	3.8	3.35
2.....		3.80	4.30	4.1	5.4	5.5	5.9	4.9	3.75	3.35
3.....		3.80	4.20	4.1	5.4	5.6	5.9	4.8	3.7	3.35
4.....		3.75	4.10	4.05	5.4	5.6	5.5	4.7	3.7	3.35
5.....		3.73	4.10	4.15	5.4	5.6	5.5	4.65	3.65	3.35
6.....		3.72	4.00	4.7	5.3	5.6	5.5	4.6	3.6	3.35
7.....		3.75	3.95	4.6	5.4	5.5	5.55	4.6	3.6	3.37
8.....		3.75	3.90	4.5	5.3	5.5	5.4	4.55	3.6	3.37
9.....		3.78	3.93	4.3	5.3	5.4	5.6	4.55	3.55	3.38
10.....		3.73	3.95	4.25	5.2	5.5	5.6	4.5	3.55	3.38
11.....		3.70	3.97	4.2	5.5	5.5	5.7	4.5	3.55	3.38
12.....		3.68	4.00	4.15	5.0	5.4	5.6	4.5	3.55	3.38
13.....		3.67	4.00	4.15	4.9	5.4	5.7	4.45	3.55	3.38
14.....		3.65	4.00	4.2	4.9	5.4	5.6	4.4	3.55	3.38
15.....		3.64	3.97	4.2	4.9	5.3	5.8	4.4	3.55	3.38
16.....	4.17	3.63	3.95	4.3	4.9	5.3	5.8	4.35	3.55	3.38
17.....	4.15	3.65	3.93	4.45	5.1	5.3	5.5	4.35	3.50	3.39
18.....	4.15	3.70	3.93	4.5	5.1	5.2	5.5	4.3	3.50	3.39
19.....	4.00	3.85	3.92	4.6	5.1	5.3	5.7	4.3	3.50	3.40
20.....	3.92	3.85	3.91	4.66	5.2	5.25	5.6	4.25	3.50	3.40
21.....	3.90	3.82	3.92	4.8	5.2	5.3	5.5	4.2	3.48	3.40
22.....	3.88	3.80	3.95	4.9	5.2	5.4	5.4	4.1	3.48	3.42
23.....	3.87	3.80	3.96	4.95	5.4	5.5	5.2	4.1	3.48	3.42
24.....	3.87	3.80	4.00	5.0	5.6	5.6	5.2	4.05	3.47	3.42
25.....	3.86	3.85	4.00	4.95	5.6	5.5	5.1	4.05	3.47	3.42
26.....	3.86	3.87	4.07	5.0	5.8	5.5	5.05	4.0	3.46	3.42
27.....	3.84	3.90	4.05	5.0	5.5	5.5	5.1	4.0	3.45	3.42
28.....	3.82	3.90	4.00	5.0	5.5	5.6	5.05	3.95	3.40	3.42
29.....	3.80	3.98		4.95	5.5	5.6	5.05	3.9	3.40	3.42
30.....	3.78	4.20		5.05	5.6	5.7	5.0	3.9	3.38	3.42
31.....	3.75	4.60		5.3		5.8		3.85	3.35	

Daily gage height, in feet, of Coffee Creek at Coffee, Cal., for 1910-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.									
1.....	3.42	3.48	3.37	3.5	3.9	4.0	.....	4.8	.....
2.....	3.42	3.48	3.38	3.5	3.9	4.0	.....	4.7	6.8
3.....	4.00	3.50	3.38	3.5	3.87	4.0	.....	4.7	7.0
4.....	3.42	3.50	3.40	3.5	3.85	4.0	.....	4.9	7.0
5.....	3.42	3.50	3.40	3.5	3.8	4.1	.....	5.2	7.0
6.....	3.41	3.52	3.40	3.5	3.85	4.1	.....	5.3	.....
7.....	3.42	3.52	3.40	3.55	3.85	4.1	.....	5.5	6.8
8.....	3.42	3.52	3.40	3.6	3.9	4.0	.....	5.5	6.5
9.....	3.42	3.52	3.42	3.7	3.95	4.0	.....	5.5	5.8
10.....	3.42	3.52	3.42	3.75	4.0	4.0	.....	5.6	.....
11.....	3.42	3.52	3.45	3.8	4.1	4.0	.....	5.6	.....
12.....	3.42	3.55	3.45	3.85	4.1	4.0	.....	5.7	5.5
13.....	3.42	3.55	3.45	3.9	4.15	4.0	.....	5.8	.....
14.....	3.42	3.58	3.45	3.9	.....	4.0	.....	5.8	.....
15.....	3.42	3.58	3.45	3.95	4.2	4.0	.....	5.8	.....
16.....	3.42	3.60	3.45	3.95	4.6	4.0	.....	.....	5.0
17.....	3.42	3.58	3.45	3.95	5.6	4.0	.....	.....	.....
18.....	3.43	3.55	3.45	3.95	5.2	4.0	.....	5.6	.....
19.....	3.43	3.50	3.47	4.0	5.0	3.9	.....	5.7	.....
20.....	3.44	3.50	3.47	4.2	4.5	3.9	.....	5.6	5.0
21.....	3.44	3.48	3.47	4.25	.....	3.9	.....	5.7	5.0
22.....	3.44	3.48	3.48	4.5	4.2	4.0	.....	5.8	5.0
23.....	3.44	3.45	3.48	5.2	4.2	4.0	4.5	5.8	5.2
24.....	3.44	3.42	.....	5.3	4.15	4.1	4.5	6.2	.....
25.....	3.45	3.40	.....	5.2	4.1	4.2	4.5	6.5	.....
26.....	3.45	3.38	3.50	4.5	4.05	4.2	4.6	6.5	5.0
27.....	3.45	3.38	3.50	4.3	4.05	4.3	4.6	7.0	4.9
28.....	3.40	3.35	3.50	4.1	4.0	4.4	4.7	6.8	.....
29.....	3.40	3.35	3.50	4.0	4.0	4.5	4.8	6.8	.....
30.....	3.48	3.35	3.50	4.0	.....	4.6	4.8	6.8	4.9
31.....	3.48	.....	3.50	3.9	.....	4.65	.....	.....	.....

Daily discharge, in second-feet, of Coffee Creek at Coffee, Cal., for 1910-1912.

Day.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.										
1.....	.....	86	258	133	1,000	1,000	1,290	510	93	40
2.....	.....	93	222	159	910	1,000	1,390	510	86	40
3.....	.....	93	189	159	910	1,100	1,390	445	78	40
4.....	.....	86	159	146	910	1,100	1,000	390	78	40
5.....	.....	82	159	174	910	1,100	1,000	365	72	40
6.....	.....	81	133	390	820	1,100	1,000	340	65	40
7.....	.....	86	122	340	910	1,000	1,050	340	65	41
8.....	.....	86	111	297	820	1,000	910	318	65	41
9.....	.....	90	118	222	820	910	1,100	318	60	42
10.....	.....	82	122	206	735	1,000	1,100	297	60	42
11.....	.....	78	126	189	658	1,000	1,190	297	60	42
12.....	.....	75	133	174	580	910	1,100	297	60	42
13.....	.....	74	133	174	510	910	1,190	278	60	42
14.....	.....	72	133	189	510	910	1,100	258	60	42
15.....	.....	70	126	189	510	820	1,290	258	60	42
16.....	180	69	122	222	510	820	1,290	240	60	42
17.....	174	72	118	278	655	820	1,000	240	54	43
18.....	174	78	118	297	655	735	1,000	222	54	43
19.....	133	102	115	340	655	820	1,190	222	54	44
20.....	115	102	113	370	735	778	1,100	205	54	44
21.....	111	97	115	445	735	820	1,000	189	52	44
22.....	107	93	122	510	735	910	1,100	189	52	46
23.....	106	93	124	545	910	1,000	735	159	52	46
24.....	106	93	133	580	1,100	1,100	735	146	51	46
25.....	104	102	133	545	1,100	1,000	655	146	51	46
26.....	104	106	151	580	1,290	1,000	618	133	50	46
27.....	100	111	146	580	1,000	1,000	655	133	49	46
28.....	97	111	133	580	1,000	1,100	618	122	44	46
29.....	93	129	.....	545	1,000	1,100	618	111	44	46
30.....	90	189	.....	618	1,100	1,190	580	111	42	46
31.....	86	340	.....	820	.....	1,290	.....	102	40	.....

Daily discharge, in second-feet, of Coffee Creek at Coffee, Cal., for 1910-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.									
1.....	46	52	41	54	111	133	.....	445	2,390
2.....	46	52	42	54	111	133	.....	390	2,390
3.....	46	54	42	54	106	133	.....	390	2,630
4.....	46	54	44	54	102	133	.....	510	2,630
5.....	46	54	44	54	93	159	.....	735	2,630
6.....	45	56	44	54	102	159	.....	820	2,510
7.....	46	56	44	60	102	159	.....	1,000	2,390
8.....	46	56	44	65	111	133	.....	1,000	2,050
9.....	46	56	46	78	122	133	.....	1,000	1,230
10.....	46	56	46	86	133	133	.....	1,100	1,140
11.....	46	56	49	93	159	133	.....	1,100	1,040
12.....	46	60	49	102	159	133	.....	1,190	940
13.....	46	60	49	111	174	133	.....	1,290	830
14.....	46	63	49	111	182	133	.....	1,290	730
15.....	46	63	49	122	189	133	.....	1,290	630
16.....	46	65	49	122	340	133	.....	1,230	530
17.....	46	63	49	122	1,100	133	.....	1,160	530
18.....	47	60	49	122	735	133	.....	1,100	530
19.....	47	54	51	133	580	111	.....	1,190	530
20.....	48	54	51	189	297	111	.....	1,100	530
21.....	48	52	51	206	243	111	.....	1,190	530
22.....	48	52	52	297	189	133	.....	1,290	530
23.....	48	49	52	735	189	133	297	1,290	680
24.....	48	46	53	820	174	159	297	1,720	630
25.....	49	44	53	735	159	189	297	2,050	580
26.....	49	42	54	297	146	189	340	2,050	530
27.....	49	42	54	222	146	222	340	2,630	465
28.....	50	40	54	159	133	258	390	2,390	465
29.....	50	40	54	133	133	297	445	2,390	465
30.....	52	40	54	133	.....	340	445	2,390	465
31.....	52	.....	54	111	.....	365	.....	2,390	.....

NOTE.—Daily discharge determined from a fairly well defined rating curve. Discharge Oct. 3, 1911, estimated.

Monthly discharge of Coffee Creek at Coffee, Cal., for 1910-1912.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1910-11.					
December 16-31.....	180	86	118	3,750	B.
January.....	340	69	101	6,210	B.
February.....	258	111	139	7,720	B.
March.....	820	133	355	21,800	B.
April.....	1,290	510	823	49,000	B.
May.....	1,290	735	979	60,200	B.
June.....	1,390	580	993	59,100	B.
July.....	510	102	255	15,700	B.
August.....	93	40	58.9	3,620	B.
September.....	46	40	43.0	2,560	B.
The period.....				230,000	
1911-12.					
October.....	52	45	47.3	2,910	B.
November.....	65	40	53.0	3,150	B.
December.....	54	41	48.9	3,010	B.
January.....	820	54	183	11,300	A.
February.....	1,100	93	225	12,900	A.
March.....	365	111	164	10,100	A.
April 23-30.....	445	297	356	5,650	A.
May.....	2,630	390	1,330	81,800	B.
June.....	2,630	465	1,140	67,800	B.

EAST FORK OF TRINITY RIVER NEAR TRINITY CENTER, CAL.

This station, which is located at the highway bridge $2\frac{1}{4}$ miles south-east of Trinity Center and one-fourth mile above the junction with Trinity River, in the SW. $\frac{1}{4}$ sec. 15, T. 36 N., R. 7 W., in the Shasta National Forest, was established December 15, 1910.

The gage is a vertical staff on the downstream end of the left abutment of the bridge.

Discharge measurements are made from the bridge or by wading.

The water of this stream is used to irrigate about 400 acres of land. The principal diversion canal, that belonging to the Trinity Farm & Cattle Co., heads about 4 miles above the station.

This station is maintained in cooperation with the United States Forest Service.

Discharge measurements of East Fork of Trinity River near Trinity Center, Cal., 1910-1912.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1910. Dec. 15	F. G. Wood.....	<i>Feet.</i> 4.77	<i>Sec.-ft.</i> 238	1911. Aug. 20 Oct. 2	G. T. Peekema H. J. Tompkins.....	<i>Feet.</i> 3.44 3.55	<i>Sec.-ft.</i> 6.7 12
1911. Apr. 5 May 19	G. T. Peekema ..........do.....	6.25 5.55	1,160 701	1912. Feb. 6	H. J. Tompkins.....	4.46	132

Daily gage height, in feet, of East Fork of Trinity River near Trinity Center, Cal., for 1910-1912.

Day.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.										
1.....		4.0	6.3							3.4
2.....										
3.....		4.1		5.7			5.7			
4.....									3.5	
5.....		4.05	5.8		6.25					
6.....				5.6		5.95		4.1		
7.....		4.0	5.75			5.9				
8.....						5.8				
9.....		4.05		5.4		5.6	5.4			
10.....		4.08	5.5					4.05		
11.....									3.45	3.5
12.....		3.95		5.3						
13.....			5.7					3.95		
14.....		4.15								3.5
15.....	4.77			5.25		5.6	5.2			
16.....		4.2	5.4							
17.....	4.5	4.3		5.5						
18.....										
19.....	4.3		5.3	5.65		5.55	4.8			
20.....						5.5			3.44	
21.....	4.2							3.8	3.4	
22.....		4.2	5.0	5.9						
23.....	4.15						4.6			
24.....			5.4	6.2						
25.....		4.3								
26.....	4.0					5.8	4.45			
27.....			5.55	5.8						3.6
28.....	4.0	4.9						3.7	3.4	
29.....					5.7		4.3			
30.....	4.05					5.8				
31.....	4.0	6.4		6.1						

Daily gage height, in feet, of East Fork of Trinity River near Trinity Center, Cal., for 1910 and 1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	May.	June.
1911-12.								
1.....						4.4		
2.....	3.55		3.6					
3.....								5.7
4.....		3.61						
5.....								
6.....	3.6				4.46		5.85	
7.....							5.9	
8.....					4.6			
9.....								5.05
10.....					4.9			
11.....								
12.....							6.1	
13.....								
14.....			3.61					4.9
15.....							6.25	
16.....								
17.....	3.6							
18.....								
19.....								
20.....								
21.....				4.1				
22.....							5.5	
23.....					4.75			
24.....		3.6						4.9
25.....							7.6	
26.....								
27.....	3.62				4.6	5.2		4.4
28.....								
29.....								
30.....				4.6				
31.....						5.1		

Daily discharge, in second-feet, of East Fork of Trinity River near Trinity Center, Cal., for 1910-1912.

Day.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.										
1.....		40	1,270	715	1,200	830	810	79	11	6
2.....		46	1,160	745	1,300	855	790	73	10	6
3.....		52	1,060	770	1,200	880	770	68	9	6
4.....		49	950	720	1,200	905	735	62	9	6
5.....		46	845	680	1,220	935	700	57	9	6
6.....		43	826	630	1,170	965	665	52	9	8
7.....		40	808	610	1,080	925	635	50	9	9
8.....		43	750	585	1,000	845	600	49	8	9
9.....		46	690	565	940	700	565	48	8	9
10.....		50	630	545	870	700	545	46	8	9
11.....		43	680	525	800	700	525	43	8	9
12.....		36	720	505	750	700	505	39	8	9
13.....		48	770	496	690	700	490	36	8	9
14.....		60	700	487	640	700	470	34	8	9
15.....	243	64	630	478	600	700	450	33	8	9
16.....	194	68	565	705	590	690	400	31	7	9
17.....	145	89	545	630	580	680	350	30	7	9
18.....	117	85	525	680	580	675	305	29	7	9
19.....	89	81	505	735	600	665	255	27	7	9
20.....	78	76	450	795	620	630	235	26	7	9
21.....	68	72	400	865	640	700	220	24	6	13
22.....	64	68	345	925	670	760	200	23	6	13
23.....	60	75	455	1,050	730	830	180	22	6	13
24.....	53	82	565	1,180	800	900	163	21	6	13
25.....	47	89	600	1,070	900	870	147	21	6	13
26.....	40	160	630	960	1,000	845	130	20	6	13
27.....	40	230	665	845	850	845	116	19	6	13
28.....	40	300	690	910	780	845	103	18	6	13
29.....	43	500		970	770	845	89	16	6	12
30.....	46	800		1,030	800	845	84	14	6	12
31.....	40	1,360		1,090		825		12	6	

Daily discharge, in second-feet, of East Fork of Trinity River near Trinity Center, Cal., for 1910-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	May.	June.
1911-12.								
1.....	11	14	13			115		
2.....	11	14	13					
3.....	12	14	13					770
4.....	12	14	13					
5.....	12	15	13					
6.....	13	15	13		133		885	
7.....	13	15	13				925	
8.....	13	15	14		180			
9.....	13	15	14					370
10.....	13	15	14		300			
11.....	13	15	14					
12.....	13	15	14				1,090	
13.....	13	15	14					
14.....	13	15	14					300
15.....	13	15	14				1,220	
16.....	13	15	14					
17.....	13	15	14					
18.....	13	15	14					
19.....	13	15	14					
20.....	13	15	14					
21.....	13	15	15	52				
22.....	13	15	15				630	
23.....	14	15	15		235			
24.....	14	13	15					300
25.....	14	13	15				2,610	
26.....	14	13	15		180	450		
27.....	14	13	15					115
28.....	14	13	15					
29.....	14	13	15					
30.....	14	13	15	180				
31.....	14		15			395		

NOTE.—Daily discharge determined from a well-defined rating curve. Discharge interpolated or estimated for days on which the gage was not read during 1910-11.

Monthly discharge of East Fork of Trinity River near Trinity Center, Cal., for 1910-11.

Month.	Mean discharge in second-feet.	Run-off (total in acre-feet).	Accuracy.	Month.	Mean discharge in second-feet.	Run-off (total in acre-feet).	Accuracy.
1910-11.				1910-11.			
December 15-31.....	82.8	2,790	B.	September.....	9.7	577	C.
January.....	156	9,590	C.	The period.....		224,000	
February.....	694	38,500	C.				
March.....	758	46,600	C.	1911.			
April.....	852	50,700	D.	October.....	13.1	806	C.
May.....	790	48,600	C.	November.....	14.4	857	C.
June.....	408	24,300	C.	December.....	14.1	867	C.
July.....	36.2	2,230	C.				
August.....	7.5	461	C.				

SWIFT CREEK NEAR TRINITY CENTER, CAL.

This station, which is located one-fourth mile above the junction with the North Fork of Swift Creek, $2\frac{1}{2}$ miles southwest of Trinity Center, in the E. $\frac{1}{2}$ sec. 13, T. 36 N., R. 8 W., in the Shasta National Forest, was established December 17, 1910.

No water is diverted above the station. Water is diverted below for placer mining in the vicinity of Trinity Center.

The gage is a vertical staff fastened to a cedar tree on the left bank 100 feet below the foot log from which discharge measurements are made. August 19, 1911, a low-water section was installed at the foot log to read the same as the original gage but at a different datum.

Estimates of discharge for 1912 are withheld until additional data are secured.

This station is maintained in cooperation with the United States Forest Service.

Discharge measurements of Swift Creek near Trinity Center, Cal., in 1910-1912.

Date.	Hydrographer.	Gage height.	Discharge.	Date.	Hydrographer.	Gage height.	Discharge.
1910. Dec. 17	F. G. Wood.....	2.09	133	1911. Aug. 19	G. T. Peekema.....	1.66	23
				Oct. 1	H. J. Tompkins.....	1.50	16
1911. Apr. 6	G. T. Peekema.....	2.59	297				
May 19	.....do.....	2.52	281	1912. Feb. 6	H. J. Tompkins	2.06	77

Daily gage height, in feet, of Swift Creek near Trinity Center, Cal., for 1910-1912.

Day.	Dec.	Jan.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.								
1.....		1.60						
2.....		1.50						
3.....		1.60		2.90				
4.....				3.00			1.65	
5.....								
6.....		1.45	2.60					1.55
7.....								
8.....				2.80		2.10		
9.....		1.45			2.80			
10.....								
11.....								
12.....								
13.....								1.50
14.....					3.00			
15.....		1.65						
16.....								
17.....	2.09							1.50
18.....		1.78				2.05		
19.....				2.50			1.66	
20.....	2.00			2.50				
21.....								
22.....	1.90				2.45			
23.....								1.55
24.....	1.90			2.90		1.80	1.60	
25.....								
26.....								
27.....	1.70			2.70				
28.....								
29.....	1.70							
30.....						1.70		
31.....	1.65							

Daily gage height, in feet, of Swift Creek near Trinity Center, Cal., for 1910-1912—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.									
1.	1.5								
2.									
3.									
4.		1.50						2.42	
5.									
6.					2.06				
7.									
8.									
9.	1.52								
10.									
11.									
12.								2.9	
13.									
14.									
15.									
16.									2.8
17.									
18.									
19.					2.4				
20.						2.0			
21.					2.2				
22.									
23.									
24.									
25.		1.50			2.1				2.4
26.									
27.									
28.	1.50							3.2	
29.					2.0				
30.									
31.									

Daily discharge, in second-feet, of Swift Creek near Trinity Center, Cal., for 1910-1911.

Day.	Dec.	Jan.	Apr.	May.	June.	July.	Aug.
1.		19	350	450	610	172	28
2.		14	340	450	670	164	27
3.		10	330	450	670	156	26
4.		19	330	460	350	148	25
5.		13	320	520	350	140	25
6.		7.5	307	480	370	133	25
7.		7	300	440	400	125	25
8.		7	300	405	300	117	25
9.		7.5	280	370	405	116	25
10.		10	270	400	460	114	25
11.		13	240	400	520	113	25
12.		16	210	380	520	111	25
13.		19	180	360	520	110	26
14.		22	180	350	520	109	26
15.		25	180	330	600	107	26
16.		31	180	310	600	106	26
17.	114	37	210	300	450	104	26
18.	106	43	240	280	450	103	26
19.	97		250	263	550	94	26
20.	89		250	263	450	85	
21.	77		260	310	300	75	
22.	65		270	360	242	65	
23.	65		350	410	234	55	
24.	65		420	460	226	46	
25.	54		500	360	219	43	
26.	42		600	360	211	40	
27.	31		450	354	203	37	
28.	31		450	400	195	35	
29.	31		450	450	187	33	
30.	28		450	510	179	31	
31.	25			560		29	

NOTE.—Daily discharge determined from a rating curve applicable as follows: Dec. 17, 1910, to Aug. 19, 1911. Discharge interpolated or estimated for days on which the gage was not read.

Monthly discharge of Swift Creek near Trinity Center, Cal., for 1910-11.

Month.	Mean discharge in second-feet.	Run-off (total in acre-feet).	Accuracy.	Month.	Mean discharge in second-feet.	Run-off (total in acre-feet).	Accuracy.
December 17-31.....	61.3	1,820	C.	May.....	393	24,200	B.
January.....	39.0	1,840	D.	June.....	399	23,700	B.
February.....	45.0	2,500	D.	July.....	94.1	5,790	C.
March.....	120	7,380	D.	August 1-19.....	25.7	969	C.
April.....	315	18,700	B.	The period.....		86,900	

NOTE.—Values for January, February, and March, 1911, have been estimated from hydrographs of neighboring streams.

NORTH FORK OF TRINITY RIVER AT HELENA, CAL.

This station, which is located just above the highway bridge at Helena, in sec. 28, T. 34 N., R. 11 W., about one-fourth of a mile above the junction with Trinity River, was established August 23, 1911.

The gage is a vertical staff fastened to an alder tree on the left bank, 150 feet above the bridge. The channel is composed of small boulders and gravel and may shift at high stages. Discharge measurements are made from the bridge below the gage or by wading.

Estimates of discharge are withheld until additional data are secured.

Discharge measurements of North Fork of Trinity River at Helena, Cal., in 1911-12.

Date.	Hydrographer.	Gage height.	Discharge.	Date.	Hydrographer.	Gage height.	Discharge.
1911. Aug. 23	G. T. Peekema.....	<i>Feet.</i> 1.40	<i>Sec.-ft.</i> 38	1912. Feb. 1	H. J. Tompkins.....	<i>Feet.</i> 2.65	<i>Sec.-ft.</i> 498
Sept. 29	H. J. Tompkins.....	1.40	31	July 24	Lasley Lee.....	1.96	130

Daily gage height, in feet, of North Fork of Trinity River at Helena, Cal., for 1911-12.

Day.	Aug.	Sept.	Day.	Aug.	Sept.	Day.	Aug.	Sept.
1911.			1911.			1911.		
1.....		1.3	11.....		1.4	21.....		1.35
2.....		1.25	12.....		1.35	22.....		1.35
3.....		1.25	13.....		1.35	23.....	1.4	1.35
4.....		1.25	14.....		1.35	24.....	1.4	1.35
5.....		1.25	15.....		1.35	25.....	1.4	1.45
6.....		1.25	16.....		1.35	26.....	1.4	1.45
7.....		1.45	17.....		1.35	27.....	1.35	1.4
8.....		1.4	18.....		1.35	28.....	1.35	1.4
9.....		1.4	19.....		1.35	29.....	1.35	1.4
10.....		1.4	20.....		1.35	30.....	1.3	1.4
						31.....	1.3	

Daily gage height, in feet, of North Fork of Trinity River at Helena, Cal., for 1911-12—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.									
1.....	1.4	1.4	1.45	1.05	2.65	2.5	2.95	5.2	3.6
2.....	1.4	1.4	1.45	1.48	2.65	2.5	2.95	4.8	3.6
3.....	1.4	1.4	1.43	1.48	2.65	2.65	2.9	4.4	3.6
4.....	1.4	1.4	1.43	1.45	2.65	2.6	2.95	4.0	3.6
5.....	1.4	1.4	1.43	1.45	2.65	2.75	2.95	3.8	3.6
6.....	1.4	1.4	1.58	1.45	2.7	2.9	2.95	3.9	3.6
7.....	1.4	1.4	1.7	1.7	2.8	2.9	2.9	4.0	3.5
8.....	1.5	1.4	1.65	2.1	3.5	2.9	2.9	4.0	3.45
9.....	1.5	1.4	1.6	2.6	3.5	2.8	2.9	4.0	3.45
10.....	1.5	1.55	1.58	2.8	2.9	2.75	3.05	3.8	3.4
11.....	1.5	1.48	1.55	3.0	2.85	2.7	3.0	3.8	3.4
12.....	1.5	1.45	1.5	3.0	2.85	2.7	3.0	3.8	3.4
13.....	1.55	1.45	1.5	4.2	3.0	2.8	2.95	3.7	3.3
14.....	1.55	1.45	1.5	4.0	3.05	2.8	2.9	3.7	3.25
15.....	1.55	1.45	1.5	3.1	3.6	2.85	2.9	3.7	3.15
16.....	1.5	1.55	1.5	2.6	4.7	2.85	2.9	3.7	3.0
17.....	1.45	2.0	1.5	2.4	7.6	2.85	2.85	3.7	3.0
18.....	1.4	1.8	1.5	2.3	5.2	2.85	2.85	3.6	2.9
19.....	1.4	1.65	1.5	2.2	4.4	2.9	2.8	3.6	2.85
20.....	1.4	1.5	1.5	2.2	4.0	2.95	2.7	3.6	2.8
21.....	1.4	1.48	1.5	2.25	3.6	2.95	2.7	3.6	2.7
22.....	1.4	1.45	1.5	2.15	3.5	2.9	2.7	3.6	2.6
23.....	1.4	1.45	1.5	2.1	3.4	2.9	2.65	3.6	2.55
24.....	1.4	1.45	1.5	3.0	3.35	2.9	2.6	3.6	2.5
25.....	1.4	1.45	1.5	7.6	3.25	2.9	2.55	3.6	2.45
26.....	1.4	1.45	1.5	7.0	3.15	2.9	2.5	3.6	2.45
27.....	1.4	1.45	1.5	5.6	3.05	3.0	2.5	3.6	2.45
28.....	1.4	1.45	1.55	4.8	2.85	3.1	2.5	3.6	2.4
28.....	1.4	1.45	1.55	3.2	2.7	3.1	2.65	3.6	2.4
30.....	1.4	1.45	1.5	3.05	-----	3.1	4.0	3.7	2.35
31.....	1.4	-----	1.5	2.8	-----	3.0	-----	3.6	-----

SOUTH FORK OF TRINITY RIVER NEAR CHINA FLAT, CAL.

This station, which is located at the suspension footbridge in sec. 17, T. 6 N., R. 5 E., one-fourth mile above the junction with Trinity River, about 6 miles above China Flat, was established October 12, 1911.

The gage is a vertical staff bolted to a rock ledge on the right bank, 30 feet above the bridge. The channel is composed of bowlders and gravel and appears permanent. Discharge measurements are made from the suspension bridge or by wading.

Estimates of discharge are withheld until additional data are secured.

Discharge measurements of South Fork of Trinity River near China Flat, Cal., in 1911-12.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1911. Oct. 12	E. O. Christiansen.....	<i>Feet.</i> 3.84	<i>Sec.-ft.</i> 102	1912. Feb. 8	E. O. Christiansen.....	<i>Feet.</i> 7.64	<i>Sec.-ft.</i> 2,240
Dec. 31	.....do.....	4.16	202	Apr. 16	.....do.....	6.52	1,400
				June 12	.....do.....	7.00	1,040

Daily gage height, in feet, of South Fork of Trinity River near China Flat, Cal., for 1911-12.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1.....		3.75	3.85	4.2	7.2	6.3	7.2	13.2	8.8
2.....		3.75	3.85	4.15	6.9	6.2	7.1	12.4	8.8
3.....		3.75	3.85	4.1	6.6	6.1	7.0	10.7	8.6
4.....		3.75	3.85	4.05	6.45	6.0	7.0	10.2	8.8
5.....		3.75	3.85	4.0	6.3	6.2	6.8	10.0	8.6
6.....		3.75	4.0	4.0	6.25	7.7	6.7	9.8	8.1
7.....		3.75	4.08	4.2	6.6	8.0	6.6	9.6	8.1
8.....		3.75	4.08	4.85	7.6	7.8	6.8	9.5	8.0
9.....		3.8	4.0	5.55	7.8	7.4	6.6	9.6	7.2
10.....		4.0	3.95	5.45	7.6	7.4	7.0	9.4	6.8
11.....		4.1	3.92	5.35	7.4	7.2	7.3	9.2	6.8
12.....	3.85	4.0	3.9	5.4	7.1	7.2	7.1	9.0	6.6
13.....	3.85	4.0	3.9	7.3	7.1	7.4	6.8	9.1	7.1
14.....	3.85	4.0	3.9	6.8	7.1	7.1	6.6	8.9	6.6
15.....	3.85	4.12	3.88	6.0	7.0	7.4	6.6	8.6	6.2
16.....	3.85	4.48	4.0	-5.8	8.2	8.2	6.6	8.6	5.9
17.....	3.85	4.3	4.15	5.8	12.6	8.0	6.5	8.3	5.7
18.....	3.85	4.2	4.08	5.45	12.9	8.0	6.45	8.2	5.75
19.....	3.8	4.0	4.02	5.65	11.4	8.0	6.45	8.0	5.8
20.....	3.8	4.0	4.0	5.55	9.3	8.0	6.3	8.8	5.7
21.....	3.78	4.0	4.0	5.45	8.4	7.8	6.2	8.3	5.6
22.....	3.78	3.95	4.0	5.3	8.1	7.5	6.05	7.8	5.4
23.....	3.75	3.92	4.0	5.2	7.8	7.4	6.0	7.5	5.4
24.....	3.75	3.9	4.02	5.45	7.4	7.4	6.0	7.6	5.55
25.....	3.75	3.9	4.0	18.4	7.1	7.6	6.0	9.8	5.35
26.....	3.75	3.85	3.98	18.2	7.0	7.6	6.0	9.8	5.3
27.....	3.75	3.85	4.2	11.8	6.8	7.6	6.0	10.3	5.3
28.....	3.75	3.85	4.25	10.0	6.45	7.8	6.0	9.5	5.25
29.....	3.75	3.85	4.2	9.0	6.4	7.8	8.4	9.2	5.1
30.....	3.73	3.85	4.12	8.0		7.6	11.1	9.2	5.0
31.....	3.75		4.15	7.6		7.3		8.6	

MISCELLANEOUS MEASUREMENTS.

The following miscellaneous measurements have been made in the Klamath River basin:

Miscellaneous measurements in Klamath River drainage basin.

Date.	Stream.	Tributary to—	Locality.	Dis-charge.
Oct. 24, 1903	Klamath River.....	Pacific Ocean.....	Klamathon.....	<i>Sec.-ft.</i> 2,000
July 1, 1907	.....do.....	.....do.....	Words Bridge, secs. 28-29, T. 48 N., R. 4 W., Cal.	4,000
Aug. 26, 1910	.....do.....	.....do.....	Martins Ferry, sec. 5, T. 9 N., R. 4 E.	2,360
June 19, 1905	Canal, McCormick mill- race.	.....do.....	Near Keno, Oreg.....	64
Aug. 31, 1905	.....do.....	.....do.....	.....do.....	53
July 3, 1907	Jenny Creek.....	Klamath River.....	Grieve's ranch, sec. 22 or 27, T. 40 S., R. 4 E., Oreg.	26

Miscellaneous measurements in Klamath River drainage basin—Continued.

Date.	Stream.	Tributary to—	Locality.	Dis-charge.
				<i>Sec.-ft.</i>
June 30, 1907	Fall Creek.....	Klamath River.....	Sec. 30, T. 48 N., R. 4 W., Cal.	59
June 26, 1907	Shasta River.....	do.....	4 miles northeast Yreka, Cal.	250
Aug. 29, 1905	do.....	do.....	5 miles northeast Yreka, Cal.	10
Aug. 22, 1911	do.....	do.....	Southern Pacific Ry. bridge, 2 miles south of Montague.	111
Aug. 29, 1905	Canal, Yreka Light & Power Co.'s.	do.....	5 miles northeast of Yreka.	107
June 8, 1904	Shasta River, Little....	Shasta River.....	Table Rock, Cal.....	117
Aug. 29, 1905	do.....	do.....	Little Shasta, Cal.....	3.8
Aug. 21, 1911	do.....	do.....	1½ miles northeast of Little Shasta.	7.2
Aug. 29, 1905	Shasta Springs, Little....	do.....	Little Shasta.....	20
May 28, 1912	Yreka Creek.....	do.....	Minor Street Bridge in Yreka.	5.6
Sept. 3, 1905	Ditch, Edson Foulk's.	do.....	In Shasta Valley.....	11
Sept. 3, 1911	Ditch, Siskiyou Electric Co.'s.	Diverts from Shasta River.	4 miles north of Yreka....	107
Aug. 29, 1905	Scott River.....	Klamath River.....	1 mile west of Fort Jones..	27
Oct. 12, 1910	do.....	do.....	Below wagon bridge, 1 mile below Callahan.	21
Nov. 22, 1910	do.....	do.....	do.....	63
Apr. 10, 1911	do.....	do.....	do.....	372
May 30, 1911	do.....	do.....	do.....	575
Sept. 20, 1911	do.....	do.....	do.....	17
Jan. 23, 1912	do.....	do.....	do.....	43
Nov. 1, 1911	do.....	do.....	3 miles north of Callahan..	14
Aug. 30, 1911	do.....	do.....	7 miles west of Fort Jones.	40
Sept. 8, 1911	Indian Creek.....	do.....	Bridge at Happy Camp, sec. 11, T. 16 N., R. 7 E.	52
Aug. 26, 1905	Trinity River.....	do.....	3 miles below Lewiston....	233
Aug. 24, 1910	do.....	do.....	50 feet above junction with South Fork.	275
Aug. 22, 1910	do.....	do.....	½ mile below ferry at Hoopa.	345
Aug. 24, 1911	do.....	do.....	½ mile above junction with North Fork, near Helena.	220
Aug. 21, 1911	Stewarts Fork of Trinity River.	Trinity River.....	½ mile above mouth, about 1½ miles south of Milnerville.	32
Sept. 30, 1911	do.....	do.....	do.....	33
Sept. 29, 1911	Canyon Creek.....	do.....	600 feet above highway bridge, about 1½ miles north of Junction City.	6.8
Sept. 30, 1911	Canyon Creek ditch.....	Canyon Creek.....	Intake 500 feet above highway bridge, about 1½ miles north of Junction City.	4.6
Aug. 23, 1910	South Fork of Trinity River.	Trinity River.....	50 feet below suspension bridge, near mouth.	74
Aug. 25, 1911	Hay Fork of Trinity River.	South Fork of Trinity River.	Below junction with Salt Creek, sec. 10, T. 31 N., R. 12 W.	3.4
Do.....	Salt Creek.....	Hay Fork of Trinity River.	Mouth.....	.5
Aug. 24, 1910	Willow Creek.....	Trinity River.....	Near mouth at China Flat.	a 1.7
Oct. 7, 1911	do.....	do.....	Near mouth at China Flat, sec. 29, T. 7 N., R. 5 E.	7.3
Dec. 30, 1911	do.....	do.....	do.....	36
Apr. 14, 1912	do.....	do.....	do.....	90
June 11, 1912	do.....	do.....	do.....	65
Aug. 24, 1910	Campbell Creek.....	do.....	Near mouth, near south boundary Hoopa Indian Reservation.	1
Oct. 9, 1911	do.....	do.....	do.....	a 2
Dec. 30, 1911	do.....	do.....	do.....	a 5
Apr. 19, 1912	do.....	do.....	do.....	a 5
June 13, 1912	do.....	do.....	do.....	12
Oct. 9, 1912	Hospital Creek.....	do.....	Mouth, near Hoopa.....	Dry.
Dec. 30, 1912	do.....	do.....	do.....	a 3
Apr. 19, 1912	do.....	do.....	do.....	a 2
Aug. 24, 1910	Supply Creek.....	do.....	Bridge, near Hoopa.....	2
Oct. 9, 1911	do.....	do.....	do.....	3.7

a Estimated.

Miscellaneous measurements in Klamath River drainage basin—Continued.

Date.	Stream.	Tributary to—	Locality.	Dis-charge. Sec.-ft.
Dec. 30, 1911	Supply Creek.....	Trinity River	1,200 feet above mouth, near Hoopa.	25
Feb. 11, 1912	do.....	do.....	do.....	53
Apr. 18, 1912	do.....	do.....	do.....	30
June 5, 1912	do.....	do.....	do.....	25
Aug. 20, 1912	Trinity Land & Cattle Co.'s ditch.	Diverts from East Fork of Trinity River.	About 3 miles southeast of Trinity Center.	11
July 28, 1912	do.....	do.....	do.....	5.8
Dec. 17, 1910	Trinity Gold Mine & Reduction Co.'s flume.	Diverts from Coffee Creek.	Near Carrville.....	34
Dec. 14, 1911	Prairie Creek.....	Hunter Creek.....	$\frac{1}{2}$ mile northeast of Requa.	a 5
Feb. 26, 1912	do.....	do.....	do.....	a 8
June 12, 1912	Madden Creek.....	South Fork of Trinity River.	Near mouth, near China Flat.	47
June 13, 1912	Mill Creek.....	Trinity River.....	Above ford, near Hoopa ..	9.9

a Estimated.

Miscellaneous measurements in Upper Klamath Lake drainage basin.

Date.	Stream.	Tributary to—	Locality.	Dis-charge. Sec.-ft.
May 26, 1904	Wood River.....	Upper Klamath Lake...	Fort Klamath.....	450
May 27, 1905	do.....	do.....	4 miles below Fort Klamath.	458
Aug. 22, 1905	do.....	do.....	Fort Klamath, Oreg.....	266
Nov. 14, 1905	do.....	do.....	do.....	259
Dec. 10, 1905	do.....	do.....	do.....	274
Aug. 30, 1906	do.....	do.....	do.....	257
Do.....	do.....	do.....	4 miles below Fort Klamath.	462
Aug. 6, 1907	do.....	do.....	Fort Klamath.....	295
Aug. 24, 1907	do.....	do.....	do.....	391
Sept. 16, 1907	do.....	do.....	do.....	338
Oct. 6, 1907	do.....	do.....	do.....	330
Mar. 3, 1908	do.....	do.....	do.....	318
Apr. 28, 1908	do.....	do.....	do.....	330
May 16, 1908	do.....	do.....	do.....	314
July 16, 1908	do.....	do.....	do.....	357
Sept. 26, 1908	do.....	do.....	do.....	279
Oct. 18, 1908	do.....	do.....	do.....	306
Oct. 2, 1909	do.....	do.....	do.....	292
Aug. 10, 1910	do.....	do.....	do.....	339
Aug. 7, 1907	Anna Creek.....	Wood River.....	Sec. 16, T. 33 S., R. 7 E..	62
May 15, 1908	do.....	do.....	do.....	62
Sept. 20, 1908	do.....	do.....	4 miles below Arants.....	45
Do.....	Anna Creek Spring.	Anna Creek.....	Arants.....	2.7
Aug. 10, 1910	Cream Creek.....	Upper Klamath Lake...	Near Sevenmile Creek...	12.3
Aug. 31, 1906	Fort Creek.....	Wood River.....	2 miles southeast of Fort Klamath.	115
Aug. 6, 1907	do.....	do.....	Sec. 27, T. 33 S., R. 6 E..	94
Apr. 28, 1908	do.....	do.....	2 miles southeast of Fort Klamath.	115
July 16, 1908	do.....	do.....	do.....	95
Sept. 26, 1908	do.....	do.....	do.....	94
Oct. 18, 1908	do.....	do.....	do.....	95
Oct. 2, 1909	do.....	do.....	do.....	85
Aug. 11, 1910	do.....	do.....	do.....	120
Aug. 3, 1911	do.....	do.....	do.....	83
May 27, 1905	Crooked River.....	do.....	$\frac{1}{2}$ miles from Klamath Agency.	46
Aug. 31, 1906	do.....	do.....	do.....	59
Aug. 7, 1907	do.....	do.....	do.....	41
Apr. 28, 1908	do.....	do.....	do.....	52
May 15, 1908	do.....	do.....	do.....	52
July 16, 1908	do.....	do.....	do.....	47
Sept. 25, 1908	do.....	do.....	do.....	52
Oct. 17, 1908	do.....	do.....	do.....	55
Aug. 3, 1911	do.....	do.....	do.....	106
Oct. 2, 1909	do.....	do.....	Above mouth of Tecumseh Creek.	45
Do.....	do.....	do.....	Below mouth of Tecumseh Creek.	80

Miscellaneous measurements in Upper Klamath Lake drainage basin—Continued.

Date.	Stream.	Tributary to—	Locality.	Dis-charge.
Nov. 8, 1909	Crooked River.....	Wood River.....	Below mouth of Tecumseh Creek.	<i>Sec.-ft.</i> 83
Aug. 10, 1910	do.....	do.....	do.....	110
Aug. 31, 1906	Spring Creek.....	Crooked River.....	1 mile from Klamath Agency.	27
Aug. 7, 1907	Tecumseh Creek.....	do.....	½ mile north of Klamath Agency.	20
Apr. 28, 1908	do.....	do.....	do.....	23
May 15, 1908	do.....	do.....	do.....	25
July 16, 1908	do.....	do.....	do.....	28
Sept. 25, 1908	do.....	do.....	do.....	29
Oct. 17, 1908	do.....	do.....	do.....	30
Oct. 2, 1909	do.....	do.....	Klamath Agency.....	32
Aug. 7, 1907	Beetles Rest Springs.....	Tecumseh Creek.....	½ mile north of Klamath Agency.	25
Mar. 23, 1908	do.....	do.....	do.....	26
Apr. 27, 1908	do.....	do.....	do.....	25
Oct. 1, 1909	do.....	do.....	do.....	24
May 25, 1905	Sevenmile Creek.....	Upper Klamath Lake.....	On road between Fort Klamath and Pelican Bay.	102
Sept. 1, 1906	do.....	do.....	do.....	83
Aug. 6, 1907	do.....	do.....	do.....	94
Oct. 19, 1908	do.....	do.....	do.....	57
Oct. 3, 1909	do.....	do.....	do.....	83
Aug. 10, 1910	do.....	do.....	do.....	82
Aug. 5, 1911	do.....	do.....	do.....	100
May 25, 1905	Crane Creek.....	Sevenmile Creek.....	do.....	10.7
Aug. 6, 1907	do.....	do.....	do.....	11
Aug. 5, 1911	do.....	do.....	do.....	10.4
Oct. 3, 1909	Unnamed Creek.....	do.....	do.....	9.7
May 25, 1905	Threemile Creek.....	Upper Klamath Lake.....	do.....	6.2
Aug. 5, 1907	do.....	do.....	do.....	^a 2
May 25, 1905	Cherry Creek.....	do.....	do.....	32
Sept. 1, 1906	do.....	do.....	do.....	9.4
Aug. 5, 1907	do.....	do.....	do.....	19
Oct. 3, 1909	do.....	do.....	do.....	5.8
Aug. 10, 1910	do.....	do.....	do.....	10
Aug. 3, 1907	Jones Creek.....	do.....	do.....	7.7
Oct. 3, 1909	do.....	do.....	do.....	1.9
Sept. 24, 1910	do.....	do.....	do.....	2.5
May 23, 1905	Moss Creek.....	do.....	On road from Klamath Falls to Pelican Bay.	2.5
Aug. 3, 1907	do.....	do.....	do.....	^a 1
Oct. 4, 1909	do.....	do.....	do.....	6.1
May 23, 1905	Rock Creek.....	do.....	Near Aspin Lake.....	9.6
May 24, 1905	do.....	Crystal Creek.....	Crystal, Oreg.....	5.9
Sept. 3, 1906	do.....	Upper Klamath Lake.....	7 miles below Odessa.....	12.8
Aug. 3, 1907	do.....	do.....	Sec. 9, T. 37 S., R. 7 E.....	6.8
Aug. 11, 1910	do.....	do.....	5 miles southeast of Odessa, Oreg.	13
Sept. 24, 1910	do.....	do.....	Pelican Bay.....	7.3
Aug. 5, 1911	do.....	do.....	do.....	8.4
May 24, 1905	Fourmile Creek.....	do.....	At road crossing between Klamath Falls and Pelican Bay.	53
May 15, 1909	do.....	do.....	Fourmile Lake.....	40
June 18, 1909	do.....	do.....	do.....	63
Aug. 14, 1909	do.....	do.....	do.....	2
May 20, 1910	do.....	do.....	do.....	60
June 17, 1910	do.....	do.....	do.....	5
Aug. 4, 1907	do.....	do.....	Sec. 4, T. 36 S., R. 5 E.....	2.3
May 24, 1905	Varney Creek.....	Fourmile Creek.....	do.....	9.1
May 8, 1910	Barclay Springs.....	Upper Klamath Lake.....	do.....	1.7
May 10, 1910	Cream Creek.....	do.....	do.....	12.3
May 25, 1904	Williamson River.....	do.....	Near junction with Sprague River.	2,091
May 27, 1905	do.....	do.....	do.....	1,371
Aug. 22, 1905	do.....	do.....	do.....	858
Aug. 29, 1906	do.....	do.....	do.....	880
Apr. 29, 1908	do.....	do.....	do.....	2,000
Nov. 14, 1905	do.....	do.....	Above junction with Sprague River.	625
Aug. 7, 1907	do.....	do.....	do.....	513
Oct. 7, 1907	do.....	do.....	do.....	507
Oct. 20, 1908	do.....	do.....	do.....	692
Aug. 8, 1907	do.....	do.....	4 miles above mouth.....	985
Oct. 5, 1907	do.....	do.....	do.....	960
June 21, 1912	do.....	do.....	Sec. 17, T. 30 S., R. 10 E.....	125
June 22, 1912	do.....	do.....	Sec. 4, T. 4 S., R. 11 E.....	14.5

a Estimated.

Miscellaneous measurements in Upper Klamath Lake drainage basin—Continued.

Date.	Stream.	Tributary to—	Locality.	Dis-charge.
				<i>Sec.-ft.</i>
Aug. 13, 1905	Spring Creek.....	Williamson River.....	200 feet above mouth.....	362
Sept. 27, 1908	do.....	do.....	Strattons Camp.....	473
Oct. 1, 1909	do.....	do.....	Klamath Agency.....	500
Nov. 19, 1911	do.....	do.....	Near Chiloquin.....	178
April 21, 1910	Miller Creek.....	do.....	Fish Lake.....	9.9
Sept. —, 1910	do.....	do.....	do.....	3.3
Nov. 14, 1911	do.....	do.....	Beaver Marsh.....	10.3
May 12, 1912	do.....	do.....	3 miles above station.....	23.5
Do.....	do.....	do.....	4 miles below station.....	10.0
June 22, 1912	Deep Creek.....	do.....	Sec. 21, T. 31 S., R. 11 E.....	17.5
Nov. 16, 1911	Sand Creek.....	do.....	Near Chiloquin.....	14.7
June 20, 1912	do.....	do.....	Sec. 27, T. 31 S., R. 7 E.....	22
May 21, 1904	Sprague River.....	Williamson River.....	10 miles above Yainax, Oreg.....	2,075
June 12, 1904	do.....	do.....	do.....	1,081
May 22, 1904	do.....	do.....	5 miles below Yainax, Oreg.....	3,915
Feb. 22, 1905	do.....	do.....	do.....	589
Oct. 7, 1907	do.....	do.....	do.....	290
Oct. 21, 1908	do.....	do.....	do.....	315
June 23, 1912	Sycan River.....	do.....	Sec. 12, T. 34 S., R. 11 E.....	135
Mar. 15, 1905	Dirty Creek.....	Sycan Marsh.....	do.....	1.4
Apr. 10, 1905	do.....	do.....	do.....	1.3
May 2, 1905	do.....	do.....	do.....	1.4
Mar. 15, 1905	Coyote Creek.....	do.....	do.....	4.2
Apr. 10, 1905	do.....	do.....	do.....	8.2
May 2, 1905	do.....	do.....	do.....	5.9
June 12, 1905	do.....	do.....	do.....	1.7
July 31, 1905	do.....	do.....	do.....	.6
Mar. 15, 1905	Long Creek.....	do.....	do.....	33.6
Apr. 10, 1905	do.....	do.....	do.....	54.6
May 1, 1905	do.....	do.....	do.....	68.1
June 12, 1905	do.....	do.....	do.....	58.6
July 31, 1905	do.....	do.....	do.....	18.6
June 8, 1904	Ankeny canal.....	Link River.....	Klamath Falls, Oreg.....	32
Aug. 15, 1904	do.....	do.....	do.....	48
Do.....	do.....	do.....	7 miles below intake.....	37
Do.....	do.....	do.....	Klamath Falls.....	40
Aug. 27, 1904	do.....	do.....	do.....	43
Do.....	do.....	do.....	do.....	29
Do.....	do.....	do.....	7 miles below intake.....	33
Do.....	Ankeny lateral.....	do.....	Klamath Falls.....	4.8
June 29, 1905	Ankeny canal.....	do.....	500 feet above power company's diversion.....	57
June 30, 1905	do.....	do.....	do.....	54
May 11, 1905	do.....	do.....	do.....	63
June 29, 1905	do.....	do.....	do.....	53
Apr. 23, 1905	do.....	do.....	200 feet below diversion.....	8.7
May 2, 1905	do.....	do.....	do.....	29
May 11, 1905	do.....	do.....	do.....	35
Mar. 25, 1905	Moore's power canal.....	do.....	1/2 mile below head.....	103
Do.....	do.....	do.....	200 feet above penstock.....	75
June 31, 1905	do.....	do.....	do.....	59
Do.....	do.....	do.....	do.....	53
Nov. 11, 1908	do.....	do.....	do.....	65
Nov. 21, 1908	do.....	do.....	do.....	65
Feb. 5, 1909	do.....	do.....	do.....	58
Mar. 25, 1905	Moore's irrigation canal.....	do.....	300 feet below head.....	129
June 21, 1905	do.....	do.....	do.....	10.9
May 21, 1908	Main Klamath project canal.....	Upper Klamath Lake.....	Klamath Falls.....	66
Oct. 25, 1909	Klamath Falls Light & Power Co.'s intake.....	Sink River.....	do.....	335
Oct. 30, 1909	do.....	do.....	do.....	332

Miscellaneous measurements in Lower Klamath Lake drainage basin.

Date.	Stream.	Tributary to—	Locality.	Gage height.	Dis-charge.
				<i>Feet.</i>	<i>Sec.-ft.</i>
June 14, 1904	Antelope Creek.....	Lower Klamath Lake.	Head.....		^a 155
June 17, 1905	do.....	do.....	12 miles below source.....		112
Aug. 28, 1905	do.....	do.....	15 miles below source.....		10.4
June 13, 1904	Butte Creek.....	do.....	$\frac{1}{2}$ mile above Wm. Bray's house, Cal.		148
June 15, 1904	do.....	do.....	1 mile above Boyce ranch, Cal.		124
May 5, 1905	do.....	do.....	do.....		68
May 19, 1905	do.....	do.....	do.....		75
June 16, 1905	do.....	do.....	do.....		52
Aug. 29, 1905	do.....	do.....	do.....		16.4
Nov. 23, 1905	do.....	do.....	do.....		8.1
Oct. 2, 1904	Adam's ditch.....	do.....	Near Merrill, Oreg.....		26
May 14, 1905	do.....	do.....	do.....		46
May 21, 1905	do.....	do.....	do.....		53
June 15, 1905	do.....	do.....	do.....		51
July 22, 1905	do.....	do.....	do.....		51
Aug. 24, 1905	do.....	do.....	do.....		37
Aug. 25, 1905	do.....	do.....	do.....		29
Do.....	do.....	do.....	do.....		41
June 15, 1905	Cottonwood Creek.....	do.....	Near Brownell, Cal., J. F. ranch.		10.2
Aug. 30, 1905	do.....	do.....	do.....		12.6
Feb. 13, 1906	do.....	do.....	do.....		14
Sept. 26, 1906	do.....	do.....	do.....		12.2
Aug. 20, 1907	do.....	Lower Klamath Falls.	Sec. 14, T. 47 N., R. 8 E., Cal.		13
May 6, 1908	do.....	do.....	Near J. F. ranch, Cal.		16
July 3, 1908	do.....	do.....	do.....		21
Nov. 8, 1908	do.....	do.....	do.....		14
June 3, 1909	do.....	do.....	do.....		20.1
June 30, 1909	do.....	do.....	do.....		16.9
Sept. 16, 1909	do.....	do.....	do.....		15.3
July 26, 1910	do.....	do.....	do.....		2
Sept. 20, 1910	do.....	do.....	do.....		16
June 18, 1905	Doris Creek.....	do.....	Doris ranch, Cal.		6.1
Feb. 14, 1906	do.....	do.....	do.....		8
Mar. 22, 1906	do.....	do.....	do.....		11.6
Sept. 26, 1906	do.....	do.....	do.....		8.4
May 6, 1908	do.....	do.....	do.....		8
July 2, 1908	do.....	do.....	do.....		7.6
Nov. 8, 1908	do.....	do.....	do.....		6.5
June 3, 1909	do.....	do.....	7 miles east of Doris.		4.5
June 29, 1909	do.....	do.....	do.....		6.1
Nov. 28, 1909	Fords Spring.....	Willow Creek.....	Near Brownell, Cal.		2
Aug. 18, 1905	Hot Springs Creek.....	Lower Klamath Lake.	Near Klamath Falls, Oreg.		4.4
Sept. 15, 1909	Klamath Straits.....	do.....	Near Ady, Oreg.		68
Oct. 2, 1909	do.....	do.....	do.....		359
May 18, 1905	Sheepy Creek.....	do.....	2 miles east of Doris ranch.		27
June 18, 1905	do.....	do.....	do.....		27
May 7, 1908	do.....	do.....	Near mouth, Doris, Cal.		32
July 4, 1908	do.....	do.....	do.....		34
Nov. 9, 1908	do.....	do.....	do.....		40
Sept. 15, 1909	do.....	do.....	do.....		36
Sept. 20, 1910	do.....	do.....	do.....		35
Aug. 20, 1907	Slow Creek.....	do.....	Lower marsh.....		^a 2
May 14, 1905	Van Brimmer ditch, north branch.	do.....	1 mile below heading.....	1.95	6
May 21, 1905	do.....	do.....	do.....	1.99	6.2
June 15, 1905	do.....	do.....	do.....	2.21	7.6
July 24, 1905	do.....	do.....	do.....	2.34	9.7
Do.....	do.....	do.....	do.....	2.34	9.5
Aug. 24, 1905	do.....	do.....	do.....	2.20	4.6
May 14, 1905	Van Brimmer ditch, south branch.	do.....	do.....	4.01	24
May 21, 1905	do.....	do.....	do.....	3.78	21
June 14, 1905	do.....	do.....	do.....	3.92	20
July 22, 1905	do.....	do.....	do.....	3.84	11.5
Aug. 24, 1905	do.....	do.....	do.....	3.72	7.5
Do.....	do.....	do.....	do.....	3.85	9.9
Aug. 25, 1905	do.....	do.....	do.....	4.12	16.3
Do.....	do.....	do.....	do.....	3.40	2.6
Do.....	do.....	do.....	do.....	3.55	4.3
May 20, 1905	Willow Creek.....	do.....	Near Brownell.		12.3
June 15, 1905	do.....	do.....	do.....		11.5
Aug. 30, 1905	do.....	do.....	do.....		9.7
Nov. 23, 1905	do.....	do.....	do.....		11

^a Estimated.

Miscellaneous measurements in Lower Klamath Lake drainage basin—Continued.

Date.	Stream.	Tributary to—	Locality.	Gage height.	Dis-charge.
				<i>Feet.</i>	<i>Sec.-ft.</i>
Feb. 13, 1906	Willow Creek	Lower Klamath Lake.	Near Brownell.....	.....	13
Mar. 24, 1906	.....do.....	.....do.....	.....do.....	.....	17.2
Sept. 26, 1906	.....do.....	.....do.....	.....do.....	.....	13
Aug. 20, 1907	.....do.....	.....do.....	.....do.....	.....	2.8
May 6, 1908	.....do.....	.....do.....	.....do.....	.....	10
July 3, 1908	.....do.....	.....do.....	.....do.....	.....	15
Nov. 8, 1908	.....do.....	.....do.....	.....do.....	.....	13
June 3, 1909	.....do.....	.....do.....	Near Davis ranch, Cal..	.....	9.9
June 30, 1909	.....do.....	.....do.....	Road from Doris, Cal., to Merrill, Oreg.	.....	10.8
Sept. 16, 1909	.....do.....	.....do.....	.....do.....	.....	9.6
July 26, 1910	.....do.....	.....do.....	Near Davis School.....	.....	9.7
Sept. 21, 1909	.....do.....	.....do.....	.....do.....	.....	16

Miscellaneous measurements in Tule Lake drainage basin.

Date.	Stream.	Tributary to—	Locality.	Dis-charge.
				<i>Sec.-ft.</i>
July 19, 1905	Boards ditch.....	Lost River.....	Near Olene, Oreg.....	0.3
May 31, 1905	Browne's west canal.....	.....do.....	Near Bonanza, Oreg.....	8.6
June 2, 1905	Griffith canal.....	.....do.....	Near Olene, Oreg.....	1.8
June 13, 1905	.....do.....	.....do.....	.....do.....	1.9
June 25, 1905	.....do.....	.....do.....	.....do.....	1.3
June 23, 1905	Horton ditch.....	.....do.....	Poe Valley, Oreg.....	4.4
May 23, 1904	Lost River.....	Tule Lake.....	Olene, Oreg.....	961
June 10, 1904	.....do.....	.....do.....	.....do.....	322
May 19, 1904	.....do.....	.....do.....	Langells Valley, Oreg.....	746
Mar. 17, 1908	.....do.....	.....do.....	10 miles above Merrill, Oreg.	1,300
Oct. 22, 1909	.....do.....	.....do.....	4 miles west of Bonanza, Oreg.	98
Nov. 22, 1909	.....do.....	.....do.....	Upper end of Langells Valley, Oreg.	656
May 13, 1907	Lost River, East Fork..	Lost River.....	Sec. 3, T. 48 N., R. 7 E., Cal.	2
May 20, 1904	Miller Creek.....	.....do.....	Near Lorella, Oreg.....	326
May 16, 1908	Olene Springs.....	.....do.....	Near Olene, Oreg.....	2.9
Mar. 28, 1911	Buck Creek.....	.....do.....	Yonna.....	41
June 13, 1905	Phillip's wheel canal.....	.....do.....	9 miles above Merrill, Oreg.	1.2
July 25, 1905	.....do.....	.....do.....	.....do.....	2
Mar. 28, 1911	Surface water.....	.....do.....	Clear Lake.....	144
Apr. 13, 1908	Tule Lake outlet ^a.....	.....do.....	Near Scorpion Point, Cal..	14.4
Apr. 23, 1908	.....do.....	.....do.....	.....do.....	14.4
May 3, 1908	.....do.....	.....do.....	.....do.....	16.4
May 12, 1908	.....do.....	.....do.....	.....do.....	14.2
June 10, 1908	.....do.....	.....do.....	.....do.....	11.9
June 26, 1908	.....do.....	.....do.....	.....do.....	12.8
July 10, 1908	.....do.....	.....do.....	.....do.....	14.4
Dec. 7, 1908	.....do.....	.....do.....	.....do.....	33
Dec. 23, 1908	.....do.....	.....do.....	.....do.....	29
Mar. 16, 1909	.....do.....	.....do.....	Scorpion Point, Cal.....	30
Sept. 17, 1909	.....do.....	.....do.....	.....do.....	30
June 2, 1905	Swingle flume canal.....	Miller Creek.....	Near Lorella, Oreg.....	2

^a This is an artificial outlet constructed by the United States Reclamation Service.**SMITH RIVER BASIN.****MIDDLE FORK OF SMITH RIVER NEAR CRESCENT CITY, CAL.**

This station, which is located at a highway bridge in the S. $\frac{1}{2}$ sec. 20, T. 17 N., R. 2 E., 800 feet above the junction of North and Middle Forks, one-eighth of a mile east of Gasquet, and 14 miles northeast of Crescent City, was established September 8, 1911.

There is a chain gage attached to the downstream guard rail of bridge. The channel is rough and composed of bowlders and gravel. The section is probably permanent. The area drained is 146 square

miles. Discharge measurements are made from the bridge or by wading.

The gage-height record was furnished by the United States Forest Service.

Estimates of discharge are withheld until additional data are secured.

Discharge measurements of Middle Fork of Smith River near Crescent City, Cal., in 1911-12.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1911.		<i>Feet.</i>	<i>Sec.-ft.</i>	1912.		<i>Feet.</i>	<i>Sec.-ft.</i>
Sept. 8	E. O. Christiansen	4.10	70	Mar. 26	E. O. Christiansen	5.83	615
Dec. 5	.....do.....	4.49	131	May 9	.....do.....	6.32	1,200
				May 27	E. M. Gilbert.....	6.00	627
1912.				June 5	.....do.....	5.34	380
Feb. 27	E. O. Christiansen	5.95	766				

Daily gage height, in feet, of Middle Fork of Smith River near Crescent City, Cal., for 1911-12.

Day.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1.....			4.02	4.40	5.48	6.62	5.72	5.53	11.72	5.62
2.....				4.40	5.16	6.32	5.62	5.48	8.97	5.39
3.....		4.10		4.38	5.14	6.25	5.54	5.48	7.74	5.38
4.....			4.00	4.35	4.96	6.35	5.49	5.38	7.22	5.31
5.....		4.15		4.65	4.92	6.85	5.66	5.33		5.28
6.....				5.28	4.96	6.60	5.92	5.33	6.50	5.12
7.....		4.08		5.08	8.34	6.40	6.26		6.40	5.10
8.....	4.10			4.86	7.28	6.68	6.19	5.26		5.06
9.....	4.10	4.45		4.73	9.46	7.08	5.87	5.16	6.35	4.95
10.....	4.10		5.00	4.66	10.07	7.68		5.26	6.00	4.90
11.....	4.10			4.58	7.92	7.77	5.74	5.21	5.98	4.89
12.....	4.15		4.52	4.54	13.22	7.34	5.74	5.21	5.75	5.10
13.....	4.25	4.42		4.61	12.42	7.11	5.87	5.11	5.76	5.16
14.....	4.12	4.50			9.00	7.66	5.77		5.70	5.25
15.....	4.12		8.60			7.46	7.37		5.59	5.05
16.....	4.12				7.50	13.19	7.82		5.35	4.82
17.....	4.10				7.08	16.39	7.62		5.32	4.76
18.....					6.68	11.69	7.12		5.32	4.65
19.....					6.58	9.46	6.80		5.35	4.70
20.....					6.38	8.20	6.38		5.70	4.82
21.....					6.16	7.54	6.10		5.70	4.89
22.....				4.90	6.01	7.14	6.00		5.55	4.80
23.....		4.05		5.27	5.96	6.90	6.05		5.42	4.84
24.....				5.10	6.46	6.49			5.42	4.79
25.....	4.08	4.05			12.76	6.25	5.90		5.52	4.64
26.....	4.15			4.95	12.14	6.18	5.82	5.54	5.58	4.68
27.....	4.10			5.52	9.64	6.00	5.78	5.42	6.12	4.69
28.....	4.10	4.05				5.86	5.73		5.80	4.64
29.....	4.08				7.79	5.79	5.83	7.38	5.88	4.54
30.....	4.05		4.42		7.42		5.70	8.62	5.85	4.56
31.....									5.60	

NORTH FORK OF SMITH RIVER NEAR CRESCENT CITY, CAL.

This station, which is located half a mile northeast of Gasquet, in the NE. $\frac{1}{4}$ sec. 20, T. 17 N., R. 2 E., half a mile above the junction of North and Middle forks and about 15 miles northeast of Crescent City, was established September 8, 1911.

The gage is a staff, in four sections, on the left bank, installed December 3, 1911. The original gage, which was destroyed by high water on November 15, was located one-eighth mile below the present gage. The original datum has not been maintained.

The channel is composed of bowlders and gravel and is very rough and probably permanent. The area drained is 81 square miles. Discharge measurements are made from a car and cable at the gage.

The gage-height record is furnished by the United States Forest Service.

Estimates of discharge are withheld until additional data are secured

Discharge measurements of North Fork of Smith River near Crescent City, Cal., in 1911-12.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1911. Sept. 8	E. O. Christiansen.....	<i>Feet.</i> 3.60	<i>Sec.-ft.</i> 73	1912. Mar. 26	E. O. Christiansen.....	<i>Feet.</i> 11.74	<i>Sec.-ft.</i> 824
Dec. 6	.....do.....	^a 12.82	1,440	May 9	.....do.....	11.64	845
1912. Feb. 27	E. O. Christiansen.....	11.77	907	June 27	E. M. Gilbert.....	12.55	1,390
				June 5	.....do.....	10.76	457

^a New gage installed at arbitrary datum Dec. 3, 1911.

Daily gage height, in feet, of North Fork of Smith River near Crescent City, Cal., for 1911-12

Day.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1.....			3.50		12.2	12.4	11.4	11.2	19.2	11.3
2.....					11.8	12.1	11.2	11.2	16.0	11.1
3.....		3.60		8.90	11.5	11.9	11.2	11.1	14.3	11.0
4.....			3.45	8.80	11.4	12.4	11.1	11.0	13.4	10.8
5.....		3.62		9.00	11.4	14.0	11.2	10.9		10.8
6.....				12.90	11.6	12.9	11.8	10.8	12.4	10.6
7.....		3.52		12.00	16.9	12.7	12.1			10.6
8.....	3.60			11.50	15.0	14.0	12.6	10.8		10.5
9.....	3.60	4.25		11.20	18.3	14.6	12.2	10.7	11.6	10.5
10.....	3.60		6.1	11.00	17.6	16.0		10.65	11.4	10.4
11.....	3.62		5.1	10.88	15.1	15.1	11.7	10.65	11.3	10.3
12.....	3.69			10.75	22.7	14.0	11.6	10.7		10.8
13.....	3.75	4.30		10.68	20.8	13.6	11.7	10.7	11.0	10.2
14.....	3.62	4.40			16.0	14.0	11.6		10.9	12.1
15.....	3.62		(^a)			13.5	15.8		10.8	11.6
16.....	3.65				13.8	20.8	15.1		10.7	11.2
17.....	3.58				13.1	23.8	14.2			11.0
18.....					12.6	18.4	13.8		10.6	10.85
19.....					12.5	15.7	13.3			10.7
20.....					12.4	14.3	12.8		10.85	11.8
21.....					12.0	13.5	12.5		11.3	10.8
22.....				11.45	11.8	12.9	12.3		11.1	10.8
23.....		3.52		12.28	11.8	12.8	12.2		11.0	10.8
24.....				12.00	12.2	12.5			10.9	10.65
25.....	3.52	3.52			19.6	12.2	11.9		10.9	10.6
26.....	3.62				19.3	12.0	11.8	12.3		10.5
27.....	3.68			12.55	16.5	11.8	11.7	12.0	12.7	10.45
28.....	3.55	3.50				11.6	11.6		11.9	10.35
29.....	3.52				14.2	11.5	11.6	16.0	11.9	10.25
30.....	3.52				13.4		11.4	16.8	11.8	10.2
31.....					12.9				11.8	

^a Gage washed out Nov. 15, 1911. New gage installed at arbitrary datum Dec. 3, 1911.

SOUTH FORK OF SMITH RIVER NEAR CRESCENT CITY, CAL.

This station, which is located just below the highway bridge, in the SW. $\frac{1}{4}$ NE. $\frac{1}{4}$ sec. 10, T. 16 N., R. 1 E., one-eighth of a mile above the mouth and 9 miles northeast of Crescent City, was established September 9, 1911.

The gage is a staff, in four sections, on the left bank 200 feet below the bridge. The channel is composed of bowlders and gravel and may shift during high water. The drainage area above the station is 290 square miles. Discharge measurements are made from car and cable 400 feet below gage or by wading.

Estimates of discharge are withheld until additional data is available.

Discharge measurements of South Fork of Smith River near Crescent City, Cal., in 1911-12.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1911.		<i>Feet.</i>	<i>Sec.-ft.</i>	1912.		<i>Feet.</i>	<i>Sec.-ft.</i>
Sept. 9	E. O. Christiansen.....	5.41	154	Mar. 27	E. O. Christiansen.....	6.93	1,630
Dec. 13	.....do.....	6.21	469	May 10	.....do.....	7.74	2,450
				25	E. M. Gilbert.....	6.90	1,600
1912.				June 2	.....do.....	6.68	1,400
Feb. 28	E. O. Christiansen.....	7.20	1,720	10	.....do.....	6.00	850
29 ^a	.....do.....	7.03	1,520	30	H. E. Green.....	5.56	665

^a Meter point found broken at end of measurement.

Daily gage height, in feet, of South Fork of Smith River near Crescent City, Cal., for 1911-12.

Day.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1.....		5.45	5.50	6.00	7.9	8.1	7.0	6.6	14.7	6.8
2.....		5.48	5.52	5.94	7.6	7.8	6.8	6.5	11.0	6.6
3.....		5.45	5.58	6.00	7.6	7.9	6.6	6.45	9.4	6.6
4.....		5.50	5.55	5.99	7.8	8.6	6.45	6.4	8.6	6.6
5.....		5.50	5.54	6.10	7.6	9.0	6.3	6.4	8.2	6.45
6.....		5.60	5.54	7.40	8.0	8.8	6.7	6.5	8.2	6.4
7.....		5.61	5.51	7.20	8.2	8.4	7.2	6.5	8.0	6.4
8.....		5.55	5.49	6.65	9.0	9.7	7.4	6.45	8.1	6.35
9.....	5.40	5.52	5.48	6.56	13.8	9.7	7.7	6.4	8.0	6.2
10.....	5.41	6.49	5.44	6.41	13.4	9.3	7.1	6.4	7.8	5.95
11.....		5.42	5.50	5.41	6.25	13.6	9.3	6.9	6.4	7.6
12.....	5.45	5.51	5.40	6.20	20.9	9.5	6.6	6.3	7.4	6.2
13.....	5.50	5.59	5.30	6.15	21.2	9.0	8.4	6.3	7.4	6.55
14.....	5.50	5.69	5.34	6.21	18.2	9.3	8.2	6.25	7.2	6.65
15.....	5.50	5.76	5.40	6.28	13.4	10.6	9.8	6.2	7.2	6.4
16.....	5.40	5.74	5.42	6.66	9.0	15.6	11.1	6.15	6.8	6.25
17.....	5.30	6.40	5.64	6.89	9.2	26.4	9.8	6.1	6.6	6.2
18.....	5.40	6.30	6.85	6.84	8.8	21.8	8.8	6.1	6.6	6.05
19.....	5.41	6.25	7.38	6.96	8.4	13.6	8.0	6.05	6.6	5.9
20.....	5.42	6.20	7.35	7.00	8.1	10.5	7.4	6.0	7.2	5.95
21.....	5.42	5.72	7.41	6.98	8.2	9.0	7.3	6.1	7.0	5.95
22.....	5.40	5.71	7.40	7.00	8.1	8.5	7.2	6.15	6.8	5.9
23.....	5.40	5.72	7.30	7.22	8.2	8.3	7.1	6.2	6.6	5.9
24.....	5.45	5.70	7.20	7.26	9.8	8.0	7.0	6.7	6.8	5.8
25.....	5.44	5.65	9.55	7.40	16.2	7.7	7.0	7.0	6.9	5.85
26.....	5.42	5.62	7.20	7.59	18.4	7.4	6.9	7.0	7.4	5.7
27.....	5.40	5.60	6.95	7.66	13.8	7.3	6.8	6.8	7.8	5.7
28.....	5.42	5.59	6.82	7.99	9.4	7.2	6.8	7.0	7.3	5.7
29.....	5.44	5.55	6.70	7.31	8.9	7.0	6.8	10.2	7.3	5.6
30.....	5.48	5.51	6.58	8.18	8.8	.....	6.7	12.8	7.1	5.55
31.....		5.50		7.95	8.4	.....	6.6	.....	6.8	.....

MISCELLANEOUS MEASUREMENTS.

The following miscellaneous measurements have been made in the Smith River basin:

Discharge measurements in Smith River drainage basin.

Date.	Stream.	Locality.	Discharge.
			<i>Sec.-feet.</i>
Sept. 7, 1911	Mill Creek.....	Highway bridge, sec. 19, T. 16 N. R. 1 E.....	<i>a</i> 4
Dec. 1, 1911	.....do.....	.....do.....	<i>a</i> 2
Feb. 29, 1912	.....do.....	.....do.....	<i>a</i> 10
May 11, 1912	.....do.....	.....do.....	<i>a</i> 10

a Estimated.

MINOR STREAMS DISCHARGING TO NORTH PACIFIC OCEAN.

The following miscellaneous discharge measurements have been made on minor streams discharging into the north Pacific Ocean:

Miscellaneous measurements of minor streams discharging into the north Pacific Ocean.

Date.	Stream.	Locality.	Discharge.
			<i>Sec.-feet.</i>
May 22, 1912	Zanoni Creek.....	Near mouth, near Petrolia, SW. $\frac{1}{4}$ sec. 30, T. 1 S., R. 3 W.	11
Nov. 22, 1911	Davis Creek.....	Near mouth, NW. $\frac{1}{4}$ sec. 13, T. 1 S., R. 3 W...	<i>a</i> 5
Mar. 22, 1912	.....do.....	.....do.....	<i>a</i> 4
May 22, 1912	.....do.....	.....do.....	15
Do.....	Singley Creek.....	Near mouth, NW. $\frac{1}{4}$ sec. 34, T. 1 N., R. 3 W...	10
Nov. 22, 1911	Bear Creek.....	Capetown, SW. $\frac{1}{4}$ sec. 13, T. 1 N., R. 3 W.....	<i>a</i> 5
May 21, 1912	.....do.....	.....do.....	229
Sept. 4, 1911	Little River.....	5 $\frac{1}{2}$ miles southeast of Trinidad.....	<i>a</i> 3
Nov. 29, 1911	.....do.....	3 miles southeast of Trinidad.....	<i>a</i> 2
Sept. 5, 1911	Maple Creek.....	Wagon bridge, sec. 20, T. 9 N., R. 1 E.....	<i>a</i> 1
Nov. 29, 1911	.....do.....	.....do.....	<i>a</i> 1
Feb. 23, 1912do.....do.....	<i>a</i> 5
Sept. 5, 1911	McDonald Creek.....	Wagon bridge, sec. 29, T. 10 N., R. 1 E.....	<i>a</i> 5

a Estimated.

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