

DEPARTMENT OF THE INTERIOR  
UNITED STATES GEOLOGICAL SURVEY  
GEORGE OTIS SMITH, DIRECTOR

WATER-SUPPLY PAPER 298

# WATER RESOURCES OF CALIFORNIA

## PART I

### STREAM MEASUREMENTS IN SACRAMENTO RIVER BASIN

PREPARED UNDER THE DIRECTION OF JOHN C. HOYT

BY

H. D. McGLASHAN AND F. F. HENSHAW

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



WASHINGTON  
GOVERNMENT PRINTING OFFICE  
1912

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Stream flow—Continued.	Page.
Station records—Continued.	
Asi Creek at Adin, Cal .....	107
Fall River at Fall River Mills, Cal .....	111
Hat Creek at Hawkins ranch, near Hat Creek, Cal .....	112
Hat Creek at Hat Creek, Cal .....	113
Rising River near Cassel, Cal .....	115
Burney Creek near Burney, Cal .....	117
Kosk Creek near Henderson, Cal .....	119
Montgomery Creek at Montgomery Creek, Cal .....	122
Squaw Creek near Ydalpom, Cal .....	125
McCloud River near Gregory, Cal .....	127
McCloud River at Baird, Cal .....	135
Clear Creek near Shasta, Cal .....	138
Cow Creek at Millville, Cal .....	140
Clover Creek at Millville, Cal .....	143
Little Cow Creek at Palo Cedro, Cal .....	145
Bear Creek near Millville, Cal .....	147
North Fork of Cottonwood Creek at Ono, Cal .....	148
Mill Creek near Los Molinos, Cal .....	155
Deer Creek near Vina, Cal .....	159
Stony Creek near Fruto, Cal .....	160
Little Stony Creek near Lodoga, Cal .....	175
North Fork of Feather River above Prattville, Cal .....	182
North Fork of Feather River below Prattville, Cal .....	186
North Fork of Feather River at Big Bend, near Oroville, Cal .....	194
Feather River at Oroville, Cal .....	202
Hamilton Branch of Feather River near Prattville, Cal .....	219
Butte Creek at Butte Valley, Cal .....	223
Indian Creek near Crescent Mills, Cal .....	230
Spanish Creek at Keddie, Cal .....	238
Middle Fork of Feather River at Cromberg, Cal .....	240
Middle Fork of Feather River near Oroville, Cal .....	242
Grizzly Creek near Beckwith, Cal .....	243
South Fork of Feather River at Enterprise, Cal .....	246
Palermo Land & Water Co.'s canal at Enterprise, Cal .....	247
Middle Fork of Yuba River at Freeman's bridge, near North San Juan, Cal .....	249
Middle Fork of Yuba River near North San Juan, Cal .....	251
Yuba River near Smartsville, Cal .....	253
Yuba River at Parks Bar bridge, near Smartsville, Cal .....	267
Oregon Creek near North San Juan, Cal .....	269
North Fork of Yuba River near Sierra City, Cal .....	271
North Fork of Yuba River at Goodyear Bar, Cal .....	272
North Fork of Yuba River near North San Juan, Cal .....	275
North Fork of North Fork of Yuba River at Downieville, Cal .....	277
Rock Creek at Goodyear Bar, Cal .....	281
Goodyear Creek at Goodyear Bar, Cal .....	284
Bear River near Colfax, Cal .....	287
Bear River at Van Trent, Cal .....	289
North Fork of American River near Colfax, Cal .....	300
American River at Fair Oaks, Cal .....	302
Middle Fork of American River near East Auburn, Cal .....	314
Rubicon River at Rubicon Springs, Cal .....	316

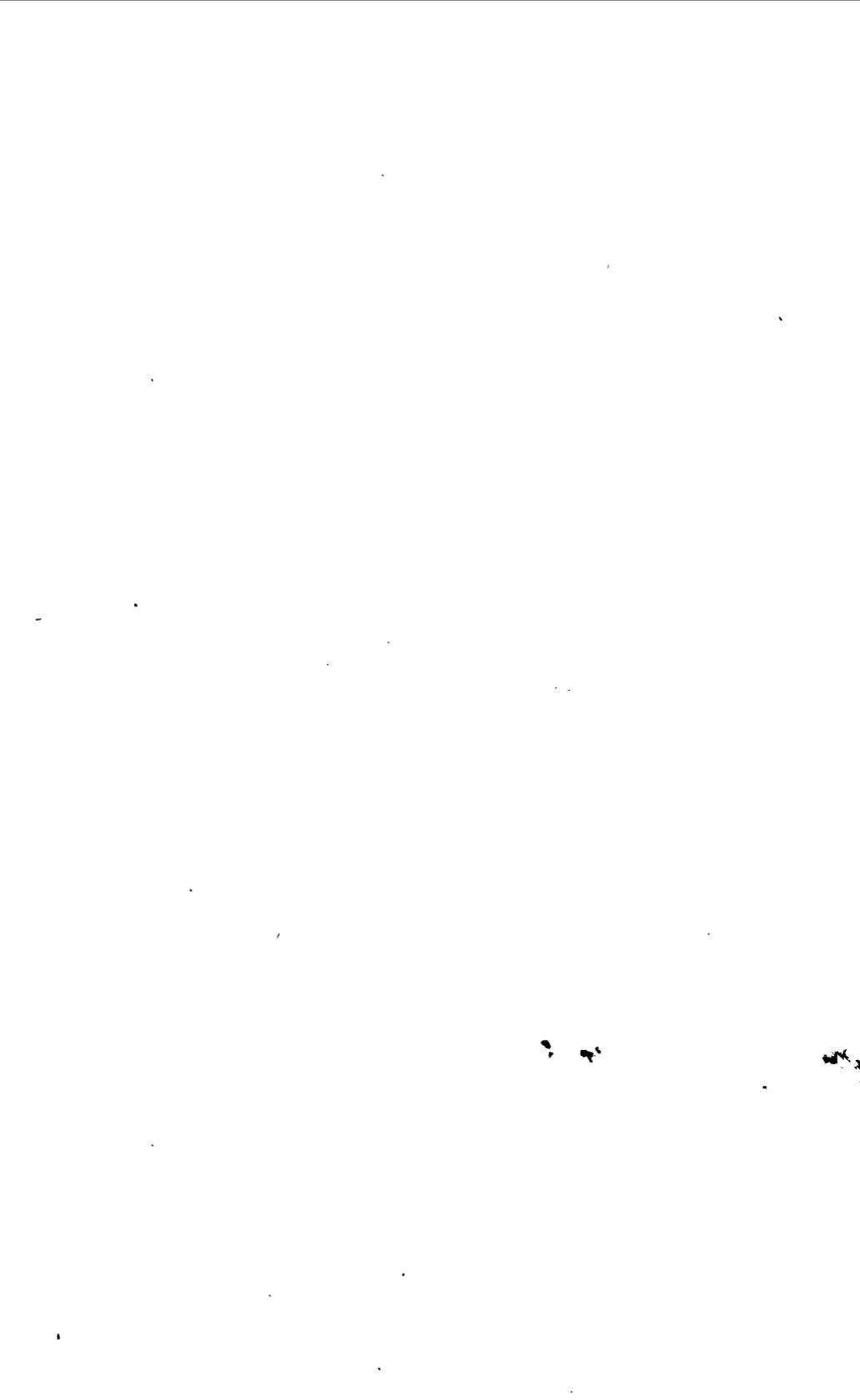
Stream flow—Continued.	Page.
Station records—Continued.	
Rubicon River near Quintette, Cal .....	318
Little Rubicon River near Rubicon Springs, Cal .....	319
Little South Fork of Rubicon River at South Fork sawmill, near Quintette, Cal .....	321
Little South Fork of Rubicon River below Gerle Creek, near Quintette, Cal .....	322
Little South Fork of Rubicon River at mouth, near Quintette, Cal....	324
Gerle Creek near Rubicon Springs, Cal .....	326
Little South Fork ditch at sawmill near Quintette, Cal .....	328
Pilot Creek near Quintette, Cal .....	329
Pilot Creek ditch near Quintette, Cal .....	331
South Fork of American River at Kyburz, Cal .....	333
South Fork of American River below Silver Fork, at Kyburz, Cal....	334
South Fork of American River near Kyburz, Cal .....	335
South Fork of American River near Placerville, Cal .....	336
Clear Lake in Lake County, Cal .....	338
Cache Creek at Lower Lake, Cal .....	340
Cache Creek at Yolo, Cal .....	356
Putah Creek near Guenoc, Cal .....	369
Putah Creek at Winters, Cal .....	374
Miscellaneous measurements .....	384
Index .....	395

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## ILLUSTRATIONS.

---

	Page.
PLATE I. Relief map of northern California .....	10
II. <i>A</i> , East Park dam site on Little Stony Creek; <i>B</i> , Gaging station on Stony Creek near Fruto, Cal .....	18
III. <i>A</i> , Mill Creek near Los Molinos; <i>B</i> , Great Western Power Co.'s dam on North Fork of Feather River at Big Bend .....	20
IV. Price current meters .....	30
V. Typical gaging stations: <i>A</i> , For bridge measurement; <i>B</i> , For wading measurement .....	31
VI. <i>A</i> , Typical gaging car; <i>B</i> , Typical gaging station showing automatic gage .....	32
VII. Gaging station on Sacramento River at Red Bluff: <i>A</i> , Car and cable; <i>B</i> , General view .....	56
VIII. <i>A</i> , Equipment of cable station on Yuba River at Smartsville; <i>B</i> , Gaging station on Yuba River at Smartsville .....	254
FIGURE 1. Mean monthly precipitation in Sacramento Valley .....	27
2. Precipitation at Sacramento, Cal., September, 1849, to August, 1909.	28
3. Mean monthly temperature of Sacramento Valley .....	29



# WATER RESOURCES OF CALIFORNIA.

## PART I. STREAM MEASUREMENTS IN SACRAMENTO RIVER BASIN.

By H. D. McGLASHAN and F. F. HENSHAW.

### INTRODUCTION.

The great part which the water resources have had in the development of California is evident throughout its history.

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 measurement 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. 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 289 points 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 this 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 III, 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.

#### 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 on 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 the subjects of 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 was carried on under the direction of Wm. Ham. Hall, State engineer, by C. E. Grunsky, who continued in charge 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. Numerous 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 repeated 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, and to R. C. Rice and H. J. Dean, who have assisted in the work of compilation and computation. Many records have been collected in cooperation with private individuals, to whom credit is given in connection with the published data.

#### TOPOGRAPHY.

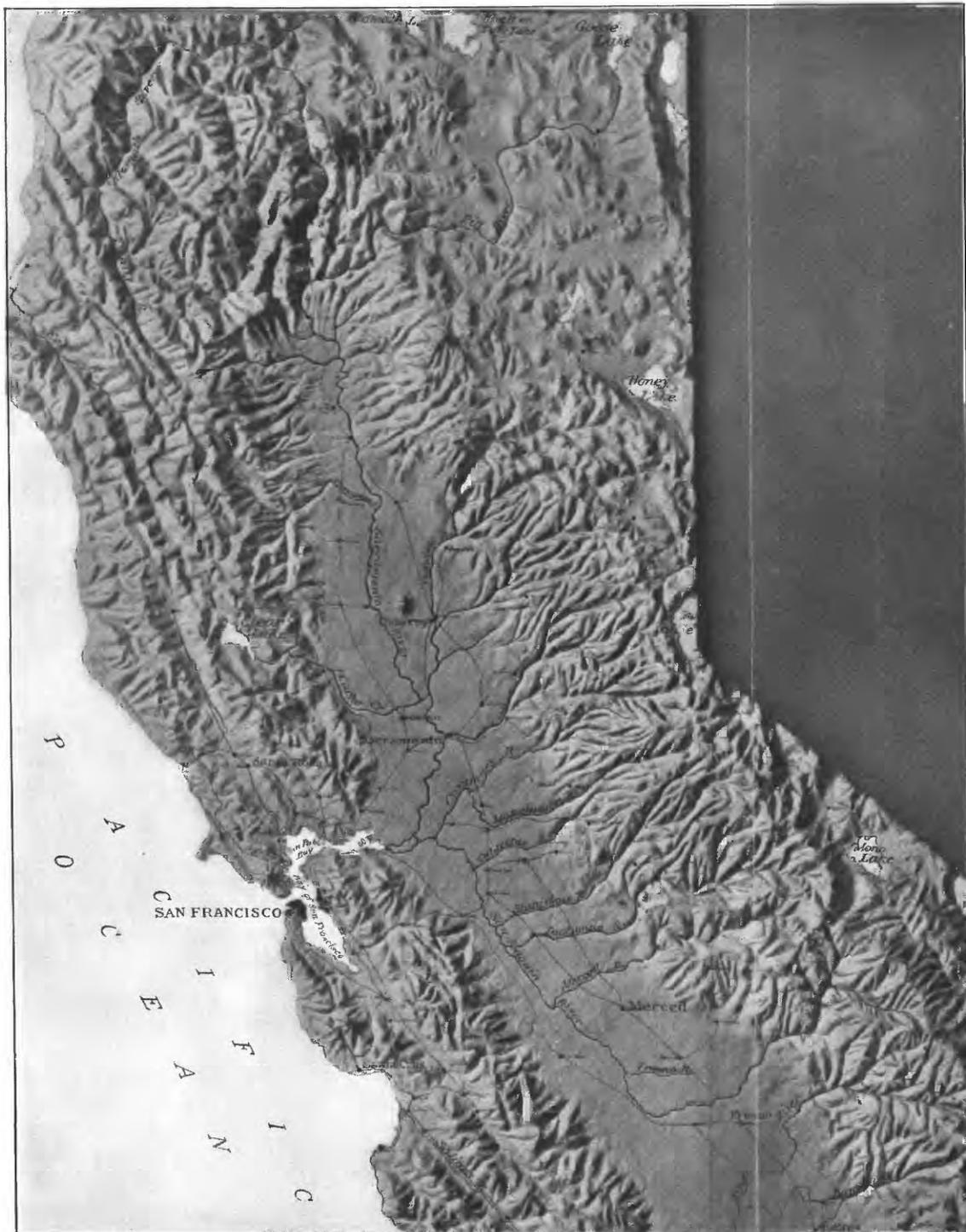
California is traversed on the east and west by two approximately parallel ranges of mountains—the Sierra Nevada and the Coast Range—which converge at Mount Shasta on the north and at Tehachapi on the south and inclose the largest body of farming land in the State, the area often spoken of as the Great Valley of California. This valley is a gently sloping and practically unbroken plain, about 400 miles long and ranging in width from a few miles to 80 miles, with an average width of 40 miles. The total area of the valley proper is 15,700 square miles, or 10,048,000 acres; including mountains and minor valleys it comprises more than 58,000 square miles.

On the east side the valley has since the beginning of Cretaceous time been bordered by the Sierra Nevada; on the west side diastrophic processes have gradually built up the barrier of the Coast Ranges, changing the depression from a gulf of the sea to a lake and from a lake to a drained valley. From the beginning of the Cretaceous period the Great Valley has been the depository of enormous masses removed by erosion from the rising land on the east, and to a less degree also of the débris from the Coast Ranges.<sup>1</sup>

The northern portion of the Great Valley is drained by Sacramento River; the southern portion is drained by the San Joaquin. The two rivers unite at the head of Suisun Bay, from which they pass through San Pablo and San Francisco bays and the Golden Gate to the Pacific Ocean.

The area drained by the Sacramento is divisible, according to elevation, into three parts—(1) the central region, known as the Sacramento Valley, whose general elevation is less than 500 feet above sea

<sup>1</sup> Lindgren, Waldemar, Tertiary gravels of the Sierra Nevada, California: Prof. Paper U. S. Geol. Survey No. 73, 1911, p. 15.



RELIEF MAP OF NORTHERN CALIFORNIA.

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



level; (2) the foothill region, made up of hills and ridges ranging in altitude from 500 to 2,300 feet and traversed by ravines and canyons of moderate depth; (3) the mountain region, in which altitudes exceed 2,300 feet above sea level. A general idea of the configuration of the land may be obtained from the relief map of northern California (Pl. I).

Sacramento Valley, which is by far the most important area in the drainage basin, lies along the lower course of Sacramento River for a distance of about 150 miles northward from its mouth. The elevation of the valley ranges from about 300 feet above sea level at Red Bluff to only a few feet at the mouth of the river. Except for Marysville Buttes, in its center, its slope is gentle and uniform, ranging from approximately 4 feet to the mile in the north to less than 6 inches to the mile in the south.

The monotonous surface of the alluvial plains of the Sacramento Valley is scarcely broken by any recognizable relief; the lowest depressions are covered with swamp grass and tule, among which are tortuous sloughs and sheets of standing water, widening in flood times to vast lakes. The only sharply salient features are the river banks of sand and clay, from a few feet to 20 feet high. The valley floor is the gently sloping surface of a Pleistocene lake bottom, only recently drained by constructive processes. The rivers are at their base-level and in their sluggish course deposit the loads of sand and clay brought down from the mountains, corrade their banks, and endeavor to establish new and changing channels.<sup>1</sup>

The total area of Sacramento Valley is about 4,250 square miles, including 2,510 square miles of high lands not subject to overflow but requiring irrigation for successful farming; 450 square miles of lower lands, overflowed occasionally; 1,250 square miles of low lands, overflowed periodically and submerged for a considerable period of the year; and 38 square miles of perennial stream surface.<sup>2</sup> It is thus evident that about 40 per cent of the valley suffers from floods and about 60 per cent from drought. The valley as a whole suffers from an excess of water at one season and a deficiency at another. The problem of remedying these defects embraces three distinct phases—the preservation and improvement of navigation, the reclamation of swamp and overflowed lands, and the development of irrigation for all the higher lands.

The floods occur in winter or early spring. The worst floods in recent years were those of 1904, 1907, and 1909. Each succeeding flood seems to cause more damage in proportion to the volume of water, partly because there is more property to be damaged and partly because of the effect of débris in the river channels. An account of the flood of March, 1907, prepared by W. B. Clapp, E. C. Murphy, and W. F. Martin, engineers of the United States Geological Survey, was published early in 1908.<sup>3</sup>

<sup>1</sup> Lindgren, Waldemar, *op. cit.*, p. 17.

<sup>2</sup> Rept. Com. Pub. Works California, 1894, p. 28.

<sup>3</sup> Trans. Am. Soc. Civil Eng., vol. 61, 1908, pp. 281-330.

From the rim of the valley there is a gentle rise across the zone of low-lying foothills, and steeper rise up the mountain side to the divide on the summit of the encircling ranges. The eastern watershed ranges in elevation from 10,000 feet in the south to 6,000 feet in the north; the western watershed ranges from 4,000 feet in the south to 9,000 in the north; and the northern from 4,000 to 8,000 feet, exclusive of Mount Shasta, which rises 14,380 feet above sea level.

The mountain ranges surrounding the basin belong to the Cordilleran system. The Sierra Nevada has an average width of approximately 70 miles from the rim of the valley to the crest of the range, which lies only a few miles west of the eastern boundary of the State. The range terminates in the Warner Mountains, in the northeastern part of the State, a region presenting evidence of recent volcanic action. Vast beds of lava cover the western slope of the range, and many cones, craters, ash deposits, and lakes exist in the vicinity of Mount Shasta and Lassen Peak, which are themselves the cones of extinct volcanoes. The Coast Range has an average width of approximately 35 miles from the rim of the valley to the crest, which lies inland from the shore at a distance ranging from 30 miles at the south to nearly 100 miles at the north, where the range takes the name Trinity Mountains.

## DRAINAGE.

### THE MAIN STREAM.

The mountain torrent that forms the head of Sacramento River issues from a small lake (unnamed on the map) lying 6,600 feet above sea level on Mount Eddy, one of the peaks of the Trinity Mountains. About 8 miles east of this lake, or 12 miles by the course of the stream, it receives Wagon Valley Creek, which is fed by springs emerging from the lava beds at the southwest base of Mount Shasta, springs that are frequently referred to as the source of the Sacramento. At a point 370 miles south of its junction with Wagon Valley Creek the river unites with the San Joaquin and enters Suisun Bay, 50 miles from San Francisco.

The river is joined by numerous tributaries from the east and west. Those coming from the Sierra Nevada flow almost southwest; those from the Coast Range flow in a general easterly direction. The broad western slope of the Sierra furnishes by far the larger part of the drainage and all the important tributaries. Most of the streams from the Coast Range do not reach the Sacramento directly but become lost "in the intricate plexus of sloughs which meander through the tule lands bordering the main river. On the east, also, only the larger tributaries reach the Sacramento by a definite channel, and often that becomes an exceedingly tortuous one."<sup>1</sup>

<sup>1</sup> Ransome, F. L., *The Great Valley of California*: Bull. Univ. California, vol. 1, 1893-1896, p. 379.

Of the total fall of the river—6,600 feet from source to sea level—5,913 feet occurs in the 56 miles above the mouth of Pit River and 447 feet more in the 67 miles between Pit River and Red Bluff, leaving only 240 feet of fall for the remaining 250 miles of course. The distribution of the fall is indicated by the table of distances and elevations below:

*Distances and elevations along Sacramento River from source to mouth.*

	Distance.	Elevation above sea level.	Distance between points.	Fall between points.	Fall per mile.
	Miles.	Feet.	Miles.	Feet.	Feet.
Source.....	0	6,600			
Wagon Valley Creek (mouth).....	12	3,400	12	3,200	266
Delta.....	40	1,000	28	2,400	86
Mouth of Pit River.....	56	687	16	313	20
Redding (bridge above).....	76	500	20	187	9
Red Bluff.....	123	240	47	260	5.5
Tehama.....	140	190	17	50	3
Stony Creek (mouth).....	177	140	37	50	1.3
Junction with San Joaquin River.....	370	0	193	140	.8

Above the mouth of Pit River the Sacramento is a comparatively small stream, flowing swiftly in a well-defined channel; below the Pit it is larger, and at Red Bluff, where it enters Sacramento Valley, it becomes a sluggish stream, of small slope and small capacity. It is navigable to Red Bluff, 250 miles above its mouth.

Below the mouth of Stony Creek, throughout a large part of its course, the Sacramento occupies a ridge 5 to 20 feet higher than the troughs of the nearly parallel flood basins on each side, which are 2 to 7 miles from the river. The channel capacity throughout this distance is less than one-third that necessary to carry ordinary floods. The levees that have been constructed to lessen or prevent overflow all fail at one or more places during extreme floods and some fail during ordinary floods. A large amount of water may thus pass from the river into the flood basins and be stored for a time, thus reducing the maximum rate of flow of the Sacramento and increasing the flood period.

The large overflow area on the west side of the Sacramento is divided into two basins—Colusa basin on the north and Yolo basin on the south—by a ridge of detritus brought down by Cache Creek. The flood area on the east side of the river is divided into four basins—called, from north to south, Butte, Sutter, American, and Sacramento—by Marysville Buttes and Feather and American rivers. The total area of these large flood basins is approximately 900 square miles and their combined storage capacity is equivalent to three days' continuous flood flow of all the streams discharging into the valley. When full these basins hold sufficient water to cover the entire valley to a depth of 1.38 feet.

The following data in regard to the area and capacity of these basins are taken from the Report of the Commissioner of Public Works to the Governor of California for 1904:

Colusa Basin is 50 miles long, from 2 to 7 miles wide, and has a capacity of 690,000 acre-feet at flood stage. It discharges into the Sacramento above Knights Landing through Sycamore Slough.

Yolo Basin is 40 miles long, 7 miles in average width, and its capacity at flood stage is 1,115,000 acre-feet. It discharges through Cache Slough into Steamboat Slough and thence into the Sacramento near the foot of Grand Island, about 25 miles above the head of Suisun Bay.

Butte Basin is north of Marysville Buttes and its area varies from 30 to 150 square miles, depending on the river stage; its capacity at flood stage is 450,000 acre-feet. It discharges through Butte Slough into Sutter Basin.

Sutter Basin is south of Marysville Buttes and north of Feather River. Its area is 138 square miles, and its flood-stage capacity is 895,000 acre-feet. It discharges into Sacramento River through sloughs above the mouth of Feather River.

American Basin is south of Feather River and north of the American. Its area is 110 square miles, and its capacity at flood stage is 571,000 acre-feet. It discharges into the Sacramento north of the city of Sacramento, but owing to its great depth it is never free from water.

Sacramento Basin is a narrow strip south of American River, extending from the city of Sacramento to Walnut Grove. It is filled by overflow from Mokelumne River or the Sacramento, but not so frequently as the other basins are filled.

Many islands have been formed in the delta region between the lower courses of the Sacramento and the San Joaquin. Several sloughs carry the water of one river to the other among the islands, especially at higher river stages. The islands range in size from 1,600 to 43,000 acres and are very fertile, but they are so low that those unprotected by levees are overflowed every year.

#### THE BRANCHES.

##### PIT RIVER.

Pit River is formed near Alturas, in Modoc County, by the union of its North and South forks. The South Fork rises on the western slope of Warner Mountains, about halfway between Warren and Eagle peaks, at an altitude 8,000 feet above sea level, flows southwestward 10 miles, westward about 10 miles, then turns and flows northward 16 miles through a swampy meadow to its junction with the North Fork. The North Fork flows southward from a point about half a mile south of Goose Lake but normally receives no overflow

from that water body. As overflow has, however, been recorded,<sup>1</sup> and as it is possible that water from the lake may reach the river by underground channels in the porous lavas which characterize this section, the area tributary to the lake is considered a part of the Pit River basin. The principal direct tributaries of the North Fork of the Pit—Swedrengen, Joseph, and Parker creeks—rise on the western slopes of the Warner Mountains, 6,000 feet above sea level, and flow westward, descending 1,200 feet in courses that measure less than a dozen miles.

From Alturas the Pit takes a general southwesterly course to its junction with the Sacramento about 12 miles north of Redding. The total fall between the head of the South Fork and the mouth of the main stream is about 7,300 feet, of which 3,550 occurs on the South Fork in the first 18 miles of its course.

Physically the Pit basin is not tributary to the larger Sacramento basin, but is really its upper extension under a different name. It comprises about 7,000 square miles, equal to about 23 per cent of the total area of the Sacramento River basin. The greater part of the basin of the Pit exceeds 4,000 feet in elevation and consists chiefly of barren lava beds in the north and numerous small, flat, marshy meadow valleys in the south. The area contains also many volcanic buttes and peaks, of which Mount Shasta (14,380 feet above sea level) and Lassen Peak (10,437 feet above sea level) are the most important, but these peaks are on the Pit basin divide and are shared in common with the upper Sacramento and Feather River basins, respectively.

About 50 per cent of the Pit basin is devoid of forests, the timberless area lying chiefly in the northern and eastern parts. There are two well-forested areas in the basin—one south of Pit River and north of Lassen Peak, and the other north of Pit River and south of Mount Shasta, extending westward from Fall River to the upper Sacramento River and including the McCloud basin. All the public land in the forested areas is included in national forests.

The principal tributaries of Pit River are McCloud River, Squaw Creek, and Fall River, from the north, and Burney, Hat, Beaver, Ash, and West Valley creeks from the south. McCloud and Fall rivers are the largest, each having a minimum flow of 1,200 to 1,500 second-feet. Hat and Burney creeks have a minimum flow of less than a hundred second-feet. Goose Lake, though topographically tributary to the Pit basin, has discharged water to it only once since 1869; it is said to have overflowed in 1881 for more than two hours during a severe storm from the north.

McCloud River drains an area comprising 649 square miles, lying just east of the upper Sacramento basin. The river rises in large

<sup>1</sup> Waring, G. A., *Geology and water resources of a portion of south-central Oregon: Water-Supply Paper U. S. Geol. Survey No. 220, 1908, p. 38.* See also *Water-Supply Paper U. S. Geol. Survey No. 295, 1912, p. 40.*

springs southeast of Mount Shasta, but its main water supply comes directly from the southern and eastern slopes of Mount Shasta through Squaw, Mud, Cold, and Ash creeks, its tributaries. The river flows southward, is about 60 miles long, and falls more than 4,000 feet. It discharges into Pit River about 4 miles east of the confluence of the latter with the Sacramento.

The precipitation in Pit River basin is very unevenly distributed. In the upper eastern part of the basin it is only about 10 inches annually and occurs largely as snow, which at moderate altitudes soon melts. In the western and northwestern parts, however, the mean annual precipitation ranges up to 75 inches, according to altitude, and occurs principally as rain except on the upper slopes of Mount Shasta, Lassen Peak, and other high peaks. In the McCloud basin it is seldom less than 40 inches and occasionally reaches 100 inches annually. Practically all the precipitation is confined to the rainy season—from November to April of each year.

The valleys of the Pit basin are used chiefly for meadow lands and the growing of stock feed. Some of them are flooded artificially for the raising of wild hay. The uplands are used only for domestic pasturage and for general stock raising, which is carried on extensively.

Numerous reservoir sites on the upper reaches of the Pit and its tributaries have been surveyed by the United States Reclamation Service. A reservoir at the Big Valley site, near Bieber, would store more water than the river furnishes at this point. Warm Spring reservoir, at Canby, would also have a large storage capacity.

The basin also affords exceptional opportunities for power development, especially below Fall River Mills, which is about half way between the source and mouth of the Pit. It is estimated that Fall River could develop more than 30,000 and McCloud River more than 200,000 horsepower continuously. Pit River and its tributaries could develop a total of about 1,000,000 horsepower continuously. About 50 per cent of this amount is commercially feasible of development, and only about 2 per cent has been developed.

Many perennial springs issue from crevices in the lava beds and some of them discharge several hundred second-feet. Fall River is fed by large springs about 10 miles above its mouth, which discharge approximately 1,500 second-feet. Hat and Burney creeks are fed largely by springs, and McCloud River draws heavily from numerous large springs on the southern slope of Mount Shasta. Most of the smaller tributaries are also spring fed.

#### COTTONWOOD CREEK.

Cottonwood Creek has three principal forks—North, Middle, and South forks. North Fork rises in Bully Choop Mountain, which reaches an elevation 7,073 feet above sea level, is about 20 miles

long, drains an area of 112 square miles, and has a total fall of about 4,200 feet. It unites with Middle Fork a short distance below Gas Point. Middle Fork is about 30 miles long, has a fall of 5,900 feet, and drains an area of 261 square miles. South Fork rises in the Yolla Bolly Mountains, which reach an elevation about 6,000 feet above sea level, and unites with the main creek a few miles west of the town of Cottonwood; it is about 45 miles long, drains an area of 395 square miles, and has a fall of 4,600 feet. The main creek flows eastward and empties into the Sacramento about 5 miles east of the town of Cottonwood and opposite the mouth of Battle Creek. The total drainage area is 929 square miles.

The crest of the Coast Range, which forms the western boundary of the basin for a distance of about 50 miles, ranges in elevation from 6,000 to 8,000 feet above sea level. From the crest toward the east, the basin slopes rapidly to the foothills around the north end of the Sacramento Valley, and is regularly furrowed by numerous drainage ways. About two-thirds of the area is more than 1,000 feet above sea level.

The basin is well timbered, but at the lower elevations the growth is more or less scrubby. The upper part of the basins of Middle and South forks is included in the Trinity National Forest.

The mean annual precipitation ranges from 25 inches in the lower part, where it occurs as rainfall, to more than 50 inches along the crest of the Coast Range, where much of it occurs as snow.

Some irrigation on a small scale is carried on in this basin, especially in the northern part, along the North Fork, and there is opportunity for further development. Storage and power development are undoubtedly possible in this basin, but to what extent is not known.

#### STONY CREEK.

Stony Creek drains an area on the eastern slope of the Coast Range, north of the Cache Creek basin and south of the basin of Thomas Creek, which lies between it and the Cottonwood Creek basin on the north. The total drainage area comprises about 828 square miles, of which about 600 square miles is embraced in an irregular parallelogram, 10 to 15 miles wide, that touches the crest of the range for a distance of 50 or 60 miles. The creek rises in the south end of this area and flows northward along its eastern border about 35 miles, then northeastward about 15 miles, and finally southeastward to its junction with the Sacramento near St. John. The creek is about 90 miles long and its fall is 4,000 to 5,000 feet.

The principal tributaries of Stony Creek are Little Stony Creek from the south end of the area, Briscoe Creek from its middle, Grindstone Creek from its north end, and North Fork, which enters the main creek about 10 miles northwest of Orland.

The drainage basin of Stony Creek is somewhat peculiar, topographically and geologically. The main stream lies wholly in sedimentary rocks; the tributaries from the west come from the granitic crest of the range and have heavy gradients. At various points in the basin the streams intersect conglomerate ridges which, because of their resistance to erosion, have produced favorable sites for dams and reservoirs (Pl. II, A). The basin ranges in elevation from a few hundred feet in the valley to 6,000 feet or more at the summit of the range.

The basin is covered with a good growth of grass and dense brush at the lower elevations and heavy, commercially valuable timber on the mountain summits. About three-fourths of the upper basin is included in a national forest reserve.

The mean annual precipitation ranges from 18 inches in the valley to 40 inches or more on the mountain summits, where more or less of it occurs as snowfall. The heaviest freshets occur during the winter.

For years this creek has been used as a source of water for irrigation on a small scale in the northeastern part of Glenn County. The United States Reclamation Service now has under construction the Orland reclamation unit, which will take water from Stony Creek to irrigate 14,000 acres around Orland.

The most important reservoir sites on the main stream and its tributaries were surveyed several years ago by the United States Geological Survey.<sup>1</sup> Without storage only a comparatively small amount of power could be developed continuously in Stony Creek basin; with a comprehensive storage system many thousand horsepower could be developed.

#### CACHE CREEK.

The Cache Creek drainage basin lies on the eastern slope of the Coast Range in Lake, Colusa, and Yolo counties, immediately south and west of the south end of the Stony Creek basin and north of the Putah Creek basin. The upper part of the area, comprising about 824 square miles, lies in the central part of Lake County, south of the divide separating the Eel River and Cache Creek basins. It is roughly rectangular in shape, and contains Clear Lake in its center. From Lake County the basin extends southeastward to the Sacramento Valley as a strip about 50 miles long and 10 miles wide. The total area of the basin is 1,290 square miles.

Cache Creek is the only known outlet of Clear Lake. The lake is very irregular in shape and has an area of 65 square miles and an elevation of 1,325 feet at mean level. Its length is 20 miles and its

<sup>1</sup> See Water-Supply Paper U. S. Geol. Survey No. 86, 1903.



A. EAST PARK DAM SITE, LITTLE STONY CREEK.



B. GAGING STATION ON STONY CREEK NEAR FRUTO.



greatest width 7 miles. The upper part, or main lake, has a maximum depth of 35 feet, but the lower neck has a few small areas as much as 50 feet in depth. The drainage area tributary to the lake is about 417 square miles, chiefly toward the south and west. The principal creeks flowing into the lake are Scotts, Middle, and Clover from the west, and Doba, Kelsey, and Cole<sup>1</sup> from the south. They are torrential during the rainy season, but are practically dry in the summer.

From the lake Cache Creek flows southeastward to Yolo basin and ultimately into Sacramento River through sloughs. Its total length is about 80 miles.

The largest and most important tributary of Cache Creek is the North Fork, which drains 250 square miles in the eastern part of Lake County. The only other important tributary is Bear Creek, which drains the western part of Colusa County. These creeks are very small in the summer, but rarely become dry. All the tributaries are torrential during the rainy season.

The upper part of the Cache Creek drainage basin in Lake County is mountainous and very rugged. Some of the peaks reach an altitude of 6,000 feet above sea level, and their slopes, as well as those of the lower ranges, are very steep. About 5 miles below the outlet the creek enters Cache Creek canyon, in which it flows for 25 miles on an average grade of 35 feet to the mile. In some places the canyon walls are vertical cliffs 300 feet high. Below the canyon the creek enters Capay Valley, from 1 to 3 miles wide and 20 miles long, through which it winds for a distance of nearly 30 miles before entering the Sacramento Valley.

On the northern slope of the ranges around Clear Lake are fine belts of fir, oak, and pine. Elsewhere on the high ranges the vegetation consists of a dense growth of greasewood and chaparral. A strip along the northern edge of the basin is included in a national forest.

The mean annual precipitation ranges from 17 inches in the Sacramento Valley to 40 inches or more on the mountainous summits in Lake County, where much of it occurs as snowfall in the winter season.

Cache Creek furnishes exceptional opportunities for irrigation development in Yolo County. At the present time many ditches take water from the creek for irrigating land in the vicinity of Woodland and Yolo.

Good storage sites are also available in this basin. Clear Lake is a natural storage reservoir which is very powerful in regulating Cache Creek.<sup>2</sup>

The opportunities for water-power development on Cache Creek are excellent.

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<sup>1</sup> Cole Creek is not named on Punnett's map of Lake County or on the sketch map accompanying Water-Supply Paper 45 (Pl. I).

<sup>2</sup> For a detailed account of storage on Cache Creek see Water-Supply Paper U. S. Geol. Survey No. 45, 1901.

The upper part of this basin contains springs, a number of which, especially in the North Fork basin, have medicinal properties that attract hundreds of visitors during the summer. Bartlett Springs are probably the best known.

#### FEATHER RIVER AND ITS TRIBUTARIES.

##### THE MAIN STREAM.

Feather River heads on the crest of the Sierra and takes a general southwesterly course to its junction with the Sacramento about 30 miles south of Marysville and about 15 miles northwest of Sacramento. It is about 175 miles long and its drainage area comprises approximately 6,590 square miles, lying on the western slope of the Sierra Nevada, south of the Pit River basin and north of the basin of American River.

The basin is roughly triangular in shape and is naturally subdivided into three other comparatively large basins: North Fork basin at the north and west, with a total drainage of about 2,220 square miles; Middle Fork basin, in the center and at the east, with a total drainage area of about 1,340 square miles; and Yuba basin at the south, with a total drainage area of more than 1,300 square miles.

The drainage basin of the North Fork, here regarded as the continuation of the main stream, includes the eastern part of Butte, the greater part of Plumas, and the southwestern corner of Lassen counties. In length the North Fork basin does not exceed 75 miles, and its width in Plumas County is about 65 miles.

Middle Fork basin is long but comparatively narrow except at its east end, where it broadens out and includes Sierra Valley, a large meadow valley at an altitude 5,000 feet above sea level. Beckwith Pass, which opens into this valley from the east, is the lowest pass in the Sierra Nevada, its elevation being about 5,200 feet above sea level. Sierra Valley and the surrounding country are very dry in the summer. The greatest elevation in the Middle Fork basin is about 8,500 feet. The Middle Fork unites with the North Fork in Butte County, about 6 miles northeast of Oroville.

Above Prattville are two small basins of almost equal size, the eastern being drained by Hamilton Branch and the western by North Fork. The eastern basin ranges in elevation from 4,300 to 7,500 feet, has an area of 230 square miles, and includes the East Arm of Big Meadows and the large level area called Mountain Meadows. The western basin has an area of 245 square miles, ranges in altitude from 4,300 to 10,000 feet above sea level, and includes the West Arm of Big Meadows and the higher elevations about Lassen Peak. Hamilton Branch unites with North Fork about 3 miles east of Prattville, at the lower end of Big Meadows.



A. MILL CREEK NEAR LOS MOLINOS.



B. GREAT WESTERN POWER CO.'S DAM ON NORTH FORK OF FEATHER RIVER AT BIG BEND.



The greater part of the Feather River basin is rough and mountainous and the slopes are deeply trenched by numerous stream channels. The rocks in the southern and eastern parts of the basin are principally granites; at the lower elevations some porous and deeply eroded slates and lavas are also found. The northern part of the basin is characterized by cones, craters, deposits of volcanic ash, and lakes, which indicate recent volcanic activity. The soil of the basin is porous, absorbs moisture readily, and serves to equalize the stream flow. The numerous meadows and valleys that exist in different parts of the area also help to maintain a steady flow in the streams during the dry season.

The basin is well forested. On the lower elevations the growth consists for the most part of brush and scrubby timber. The mountain sides, except around the summits of the highest peaks, like Lassen, are covered with merchantable timber. About two-thirds of the entire basin, 4,300 square miles in round numbers, is inclosed in national forest reserves, which include all the upper part of the basin except Sierra Valley on Middle Fork, the meadows around Prattville on North Fork, and a few other very small valleys.

The mean annual precipitation in the Feather basin is about 30 inches in the foothill belt, and increases toward the mountain summits. It ranges from 40 to 60 inches in the North and Middle Fork basins at the north and east, and from 40 to 75 inches at the Yuba basin at the south. In the winter much of it occurs as snowfall which does not disappear from the summits until summer.

Very little irrigation is practiced in the Feather basin, though some water is diverted for use in the small valleys and in the Sacramento Valley below the foothills. Considerable water is used for mining and power.

The basin affords many excellent storage sites, especially on the North and Middle forks. Surveys of a large number of reservoir sites in this area have been made by the United States Reclamation Service and many others have been made by private companies.

The minimum flow of the streams in the Feather River basin is sufficient to develop more than half a million horsepower, and this amount could be almost doubled with storage. On North Fork alone about 300,000 horsepower could be developed at low water, and with storage half a million would be available. On Middle Fork only about 66,000 could be developed at low water, and on Yuba River only about 130,000. At the present time the Great Western Power Co. is engaged in developing sites in the North Fork basin (Pl. III, B).

The basin has many large springs, especially in the lava districts, which supply a more or less steady flow throughout the year. In the North Fork basin, especially, are large perennial springs discharging 50 to 100 second-feet. One of the largest, Dotta Spring,

about 3 miles east of Prattville, has a maximum discharge of 100 second-feet and a minimum of 70 second-feet. Many perennial springs are also found in the Yuba basin. The Feather basin also contains many small glacial lakes, chiefly in Yuba and North Fork basins.

#### YUBA RIVER.

Yuba River rises near the crest on the western slope of the high Sierra and flows southwestward to its junction with Feather River at Marysville. The total length of the stream is about 90 miles. Its basin lies south of the Middle Fork of Feather River basin, west of the Truckee River basin, and north of the American and Bear River basins, is chiefly in Yuba, Sierra, and Nevada counties, and is one of the principal subdivisions of the Feather River basin. It has an area of more than 1,300 square miles and is triangular in shape, the base of the triangle lying along the crest of the Sierra. Its extreme length from the mouth of the Yuba River to the crest of the Sierra is about 70 miles, and its greatest width is about 35 miles. The river is formed by three principal forks—Middle, North, and South. The Middle Fork, which is considered the continuation of the main stream, rises in Sierra and Nevada counties on the west and south slopes of Weber Peak and takes a general southwesterly course. It receives the North Fork in Yuba County, in the northeastern part of T. 17 N., R. 7 E., and the South Fork in Nevada County, in the southwestern part of T. 17 N., R. 7 E.

The topography of the Yuba basin is rugged and mountainous. From the edge of the Sacramento Valley the surface rises gently through the foothills and then more abruptly through rounded and broken mountains to the crest of the Sierras, which along the Yuba-Truckee divide has a mean elevation of about 8,000 feet and a few peaks exceeding 9,000 feet. The streams have cut deep canyons which head well up in the mountains. Slates and kindred rocks, much eroded, are found in the lower western part of the basin; in the higher eastern part the rocks are granites and lavas. A stratum of serpentine traverses the basin parallel to the crest but at a considerable distance from it.

The soil is deep in most places and supports a hardy growth of brush and timber, especially along the sides of the canyons. The North Fork basin has at present the best forest cover, and that of South Fork the poorest, but this difference is the result of lumbering operations. All the upper part of the Yuba basin, more than 800 square miles, is now included in a national forest.

The mean annual precipitation ranges from 18 inches at Marysville to about 70 inches near the mountain crest. In the upper and central parts of the basin the precipitation ranges from 50 to 70

inches and occurs principally as snow, which remains on the ground all winter and well into the summer. The North and South Fork basins probably receive the greatest precipitation.

Little irrigation is practiced in the Yuba River basin, but the main stream could undoubtedly be used for irrigating a part of the Sacramento Valley.

Storage sites in the Yuba River basin are not numerous, though considerable storage is feasible, particularly along the upper part of South Fork. Numerous small lakes near the headwaters of the South Fork are utilized as storage reservoirs. The stored water was originally used in hydraulic mining. At present this water is used for irrigation along the foothill fruit belt in the vicinity of Auburn and also for power development. The minimum flow of the streams is sufficient to develop about 125,000 horsepower without storage.

The principal power development on the Yuba River is that of the Pacific Gas & Electric Co. at its Colgate plant, about 12 miles above the gaging station at Smartsville. The water is diverted from North Fork below Bullards Bar.

Perennial springs are found in different parts of Yuba River basin, particularly along the North Fork. In the South Fork basin at the higher elevations are many small glacial lakes, and here also are many rounded, denuded summits and glacial valleys.

The channel of Yuba River for many miles above its mouth has been filled with enormous quantities of mining débris—tailings from hydraulic mining. The depth of this débris is about 7 feet at the mouth, about 26 feet at Daguerre Point, 11 miles above the mouth, and about 84 feet in The Narrows, 18 miles above the mouth. An attempt has been made to restrain this débris from moving downstream by building barrier dams, but it has not been successful.

#### INDIAN CREEK.

Indian Creek rises in the Sierra divide and flows westward to its junction with North Fork of Feather River. The stream is about 50 miles long and its drainage area, comprising 733 square miles,<sup>1</sup> is much greater than that of North Fork above the junction of the two streams. The basin is in the northeastern part of Plumas County, north of Middle Fork of Feather River and east of the upper part of North Fork. For about 45 miles it lies along the Sierra divide, which separates it from Honey Lake drainage basin at the east. The principal tributaries are Squaw, Red, Clover, Little Grizzly, and Spanish creeks from the south and Light and Wolf creeks from the north.

Practically all of the Indian Creek basin has an altitude exceeding 5,000 feet, and much of it is a lava formation 6,000 to 7,000 feet in

<sup>1</sup> Fourth Ann. Rept. U. S. Recl. Service, 1906, p. 93.

altitude. The entire basin is included in a national forest reserve, except a few meadows, of which Indian and American valleys are the largest.

The mean annual precipitation is between 40 and 45 inches, and a large part of it occurs as snowfall. During the winter the streams freeze over occasionally.

The basin affords several good storage reservoir sites. Opportunities for power development are also good. With the available fall, the flow of the streams is sufficient to generate at least 20,000 horsepower continuously, and by utilizing storage 60,000 horsepower could be developed.

#### BEAR RIVER.

Bear River drains a narrow strip on the western slope of the Sierra below elevation 5,500 feet. The basin is about 60 miles long and not more than 10 miles wide, and lies south of Yuba River basin and north of American River basin. Its total area is less than 300 square miles.

The river rises in the extreme northeastern part of the basin near Emigrant Gap, and flows southwestward to its junction with Feather River about 15 miles south of Marysville. It is the boundary line between Nevada and Placer counties, and closely parallels the Bear-American divide, which is 1 to 2 miles south of it. Its principal tributaries are Steep Hollow Creek, Greenhorn River, and Wolf Creek, all from the north.

The Bear River basin has very little forest, except on a small area in the upper part. The mean annual precipitation ranges from 21 inches in the valley to 52 inches at the source of the river, where much of it occurs as snow that soon disappears.

Some irrigation is practiced in this basin. Storage is not feasible, and the minimum flow of the streams is not sufficient to develop much power.

#### AMERICAN RIVER.

American River drains the area lying on the western slope of the Sierra, south of the Bear and Yuba River basins, west of Lake Tahoe and the Truckee River basin, and north of the Cosumnes and Mokelumne River basins. The area is triangular in shape, about 80 miles long, and has a maximum width of 50 miles along the crest of the Sierra, and its total area is about 2,000 square miles.

American River is formed by the union of its three principal forks and flows southwestward about 110 miles to its junction with the Sacramento just above the city of Sacramento. North and Middle forks are about 60 miles long, with a fall of nearly 8,000 feet and drain areas measuring, respectively, 349 and 640 square miles.

South Fork, about 60 miles long, falls nearly 9,000 feet and drains an area of 861 square miles. North and Middle forks unite near Auburn, about 20 miles above the mouth of South Fork, which is only a few miles above Folsom. Each of the forks has many other forks, branches, and tributaries.

Almost half of the American drainage basin exceeds 5,000 feet in altitude and probably one-third of it ranges from 6,000 to 9,000 feet. The rocks of the upper part are chiefly granites, which have yielded to glacial and erosional action to such an extent as to form many regular ridges and drainage channels.

The lower elevations of the basin are barren or sparsely timbered, but the higher elevations support a good growth of timber. All the upper part of the basin, amounting to considerably more than half of the total, is included in a national forest.

The mean annual precipitation ranges from 21 inches in the Sacramento Valley to probably 60 inches near the summit of the Sierra, where it occurs as snow which does not disappear till summer. In the foothill region it ranges from 25 to 30 inches and in the central region from 45 to 55 inches. It is probably somewhat greater in the northern than in the southern part of the basin. At the higher altitudes there is much snow and ice during the winter.

Some water is diverted from the American for irrigation, particularly in the Sacramento Valley, but further development is possible.

Storage on a big scale is not possible in the American basin, though considerable storage for power and mining is feasible, particularly on Middle and South forks.

American River is also the source of the water supply of the city of Sacramento.

The minimum flow of the streams in this basin, with the existing fall, is sufficient to develop about 100,000 horsepower without storage, of which about 40 per cent is on the South Fork and nearly 30 per cent on the Middle Fork.

The upper part of the American basin shows evidence of glaciation, which has left many small lakes, some of which have been dammed and used for storage in connection with mining.

#### PUTAH CREEK.

The Putah Creek basin lies on the eastern slope of the Coast Range south of the Cache Creek basin and north of Napa Valley. It includes the southern part of Lake County, the northern half of Napa County, and small parts of Yolo and Solano counties. The basin is rather long from northwest to southeast and comparatively narrow, being about 20 miles wide at the north and less than 10 miles at the east. It has a total area of about 810 square miles.

Putah Creek rises in the northwestern corner of the basin in the St. Helena Range and flows southeastward into the Yolo Basin near Davis, and thence into Sacramento River through Cache Slough. The total length of the creek is about 80 miles. It has numerous tributaries which have a heavy flood discharge in the winter but are practically dry during the summer. The chief tributaries are Soda Creek from the north and Pope Creek from the west.

The topography of the Putah Creek basin is very rugged. Much of the upper basin is rough and precipitous. The underlying rock is an impervious slate and serpentine with only a thin soil covering. There is very little tilled land in the basin except below the foothills. Altitudes range from about 100 feet in the valley to about 5,000 feet on the mountain summits.

The lower parts of the basin are comparatively barren of timber, though they support a considerable growth of grass and brush which extends down as far as the foothills. At moderate elevations timber grows scatteringly, and the mountain summits are covered by a fairly heavy timber growth.

The mean annual precipitation varies widely in the different parts of the basin. Along the foothills it averages about 28 inches, in the central part about 40 inches, and along the crest of the divide, where some of it occurs as snowfall in the winter, about 65 inches. Helen Mine, on the northern slope of Mount St. Helena, receives almost 100 inches annually.

Below the foothills is a large area of rich irrigable land, which could be supplied with water from Putah Creek. Some of this land is already irrigated and has been proved to be susceptible of the highest state of cultivation.

At least two good reservoir sites exist on the main stream, one near Winters and the other near Guenoc.

Only a small amount of power could be developed continuously in the Putah Creek basin without storage because of the torrential nature of the streams. By utilizing the storage sites, however, many thousands of horsepower could be developed.

## CLIMATE AND VEGETATION.

### PRECIPITATION.

With all its great diversity of climate, ranging from torrid heat to arctic cold, from aridity to heavy rainfall and equally heavy snowfall, one climatic characteristic is common to all parts of California—there is a wet and a dry season, corresponding to the cold and warm seasons of the Atlantic coast States. Of the annual precipitation in the Sacramento basin 83 per cent, or five-sixths of it, comes in the months November to April, inclusive.

The cause of this unequal distribution of precipitation lies in the presence of the Pacific Ocean and the direction of the prevailing winds. Water receives heat and parts with heat more slowly than the land. Hence in the same latitude the sea is warmer than the land in winter and cooler in summer. Moreover, with its currents, tides, and waves, the sea maintains a more uniform temperature in different latitudes than does the land. The prevailing "westerlies" come from the Pacific laden with moisture. When such air currents reach a land which is cooler than they are, as happens in the winter season, they are chilled below the point of saturation and a part of their moisture is dropped as rain or snow. If, on the other hand, they meet a land warmer than they are, as is the case commonly in summer, they flow over it with little loss of moisture.

The mean relative humidity of the atmosphere for the year in the Sacramento Valley ranges from 69 per cent at Sacramento to 57 per cent at Red Bluff. On the mountains it is higher. At Sacramento the relative humidity in the wet season is 76 per cent and in the dry season 62 per cent.

The mean annual precipitation in the Sacramento basin ranges from 15 inches in the southern part of the valley to 25

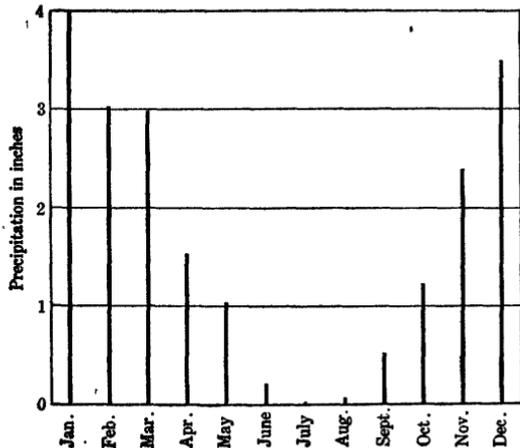


FIGURE 1.—Mean monthly precipitation in Sacramento Valley.

inches in the northern part; in the foothills and mountain area it ranges from 20 to 60 inches with an occasional year of over 100 inches. Snow begins to accumulate on the mountains in November and reaches a maximum depth of packed snow in March, when it begins to melt. Melting continues until the middle of June or first part of July. The storage of precipitation in the form of snow has had a great effect on the flow of streams, those streams that head in the crest of the high mountains having a much larger flow during June, July, and August than those that head at a lower altitude.

The mean monthly precipitation in this valley determined from records at 18 places in it is shown in figure 1. January is the wettest month, having an average precipitation of about 4 inches. December has a little less than 3.5 inches. February and March have each a little less than 3 inches. The months of June, July, and August are almost rainless. The total for the six months April to September is

about 3.4 inches and for the six months October to March it is about 16.9 inches.

The annual precipitation at Sacramento for the 60-year period September, 1849–August, 1909, is shown in figure 2. Each 12-month period extends from September 1 of one year to August 31 of the following year. The mean for the 60 periods of 12 months each is 19.61 inches. It may be noted that there is a variation in the precipitation of these 12-month periods, or years, from 4.71 inches per year to 36.36 inches. The maximum precipitation is 1.85 times the mean for the 60 years and the mean is 4.16 times the minimum. The precipitation is above the mean for 27 years and below the mean 33 years. Every fifth or sixth year is very dry, and there are periods of 8 years when the precipitation is each year below or very little above the normal. There may be two very dry years in succession.

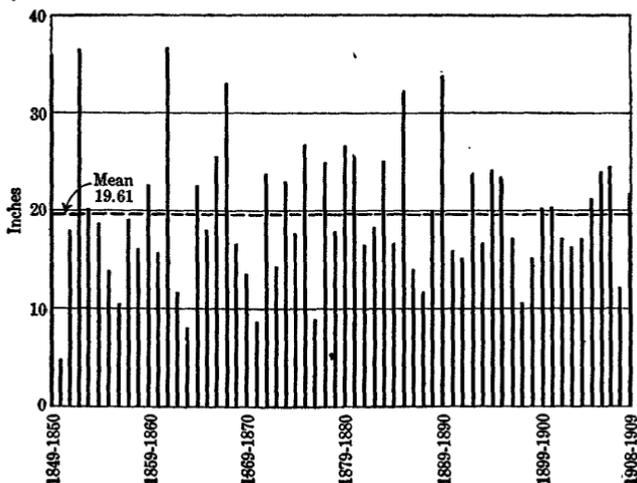


FIGURE 2.—Precipitation at Sacramento, Cal., September, 1849, to August, 1909.

During the 55-year period 1849–1903 the greatest monthly precipitation at Sacramento was 15.04 inches in January, 14.2 inches in April, and 13.4 inches in December. The greatest in August—the month of least precipitation—was 0.20 inch. The smallest monthly precipitation during this period was 0.15 inch in January, 0.04 inch in February, 0.04 inch in March, and 0.0 or a trace each of the other nine months of the year. Fourteen times during these 55 years the hourly rate has been greater than 0.20 inch; three times the hourly rate has been greater than 0.40; and once it was 1 inch per hour for two hours.

The total rainfall in 24 hours or less has been 2 inches on nineteen occasions, 4 inches on four occasions, and 7.24 inches in 22 hours on one occasion. The increase of rainfall from Folsom, which is at the

eastern edge of the Sacramento Valley, to Colfax, is more than 1 inch per hundred feet rise in elevation, but increase, however, is variable for different storms. The rainfall at Sacramento (71 feet above sea level) during February, 1904, was 5.26 inches, or 70 per cent in excess of the normal; at Folsom (252 feet above sea level) it was 7.19 inches, or 100 per cent in excess of the normal; at Colfax (2,421 feet above sea level) it was 20.10 inches, or 303 per cent in excess of normal.

#### TEMPERATURE.

The mean annual temperature is 60° at Sacramento and 63° at Red Bluff (fig. 3). These stations represent fairly well the valley portion of the Sacramento basin in this respect. On the mountains east and west of the valley temperatures are lower; at Summit, for example, 7,000 feet above sea level, the mean annual temperature is 42°.

At Sacramento the mean summer temperature is 72°; that of winter 47°. In the warmest month, July, the mean temperature is 74°; in the coldest month, January, it is 46°. The highest temperature on record is 108° and the lowest 19°, showing an extreme range of 89°.

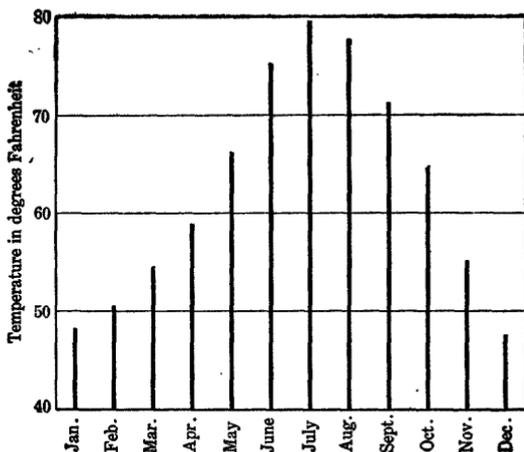


FIGURE 3.—Mean monthly temperature of Sacramento Valley.

These figures characterize the temperatures of the valley. The extreme temperatures of the mountainous portions of the area are characterized by the conditions at Summit. The mean summer temperature here is 58° and that of the warmest month, July, 61°; the mean winter temperature is 29° and that of the coldest month, January, is 28°. The highest temperature on record is 98°, and the lowest 12°, a total range of 110°.

Although the prevailing winds of California are westerly, the highly accented topography of the State locally modifies or changes the direction of the wind. The Sacramento basin, being sheltered by high coast ranges, is little affected by the sea breeze, which apparently gets but a short distance inland, and not infrequently it is visited by "northers"—hot dry winds from the north—which injure ripe fruit and wheat seriously. They occur most frequently in May, June, and July. Thunder storms and tornadoes are almost unknown in the valley.

## FORESTS.

The mountain and foothill slopes of the Sacramento basin are in general well forested. Coniferous trees constitute by far the greater portion of the forest growth, and oaks, ash, maple, mountain mahogany, aspen, cottonwood, California buckeye, western redbud, willows, alders, and other deciduous species the remainder. Much of the forest land is now held as national forests, but skirting the reserves are large areas of privately owned timber lands, extending from the Shasta National Forest on the north to the Stanislaus Forest on the south and containing probably over a million acres.

In the reserved lands are 11,451,565 acres of woodland, comprising the Shasta, Lassen, Plumas, Tahoe,<sup>1</sup> Stanislaus, Sierra, and Sequoia national forests. It is estimated<sup>2</sup> that these national forests contain 53,961,213,000 feet b. m. green saw timber, as well as about 35,000,000 feet cordwood and over 375,250 feet dead saw timber. The private timber claims within the limits of the national forests mentioned contain about 28,542,350,000 feet b. m. merchantable timber.

## POPULATION AND INDUSTRIES.

Twenty counties lie wholly or in part within the Sacramento River basin. The following table shows the population of these counties, according to the census of 1910:

*Population of counties in Sacramento River basin.*

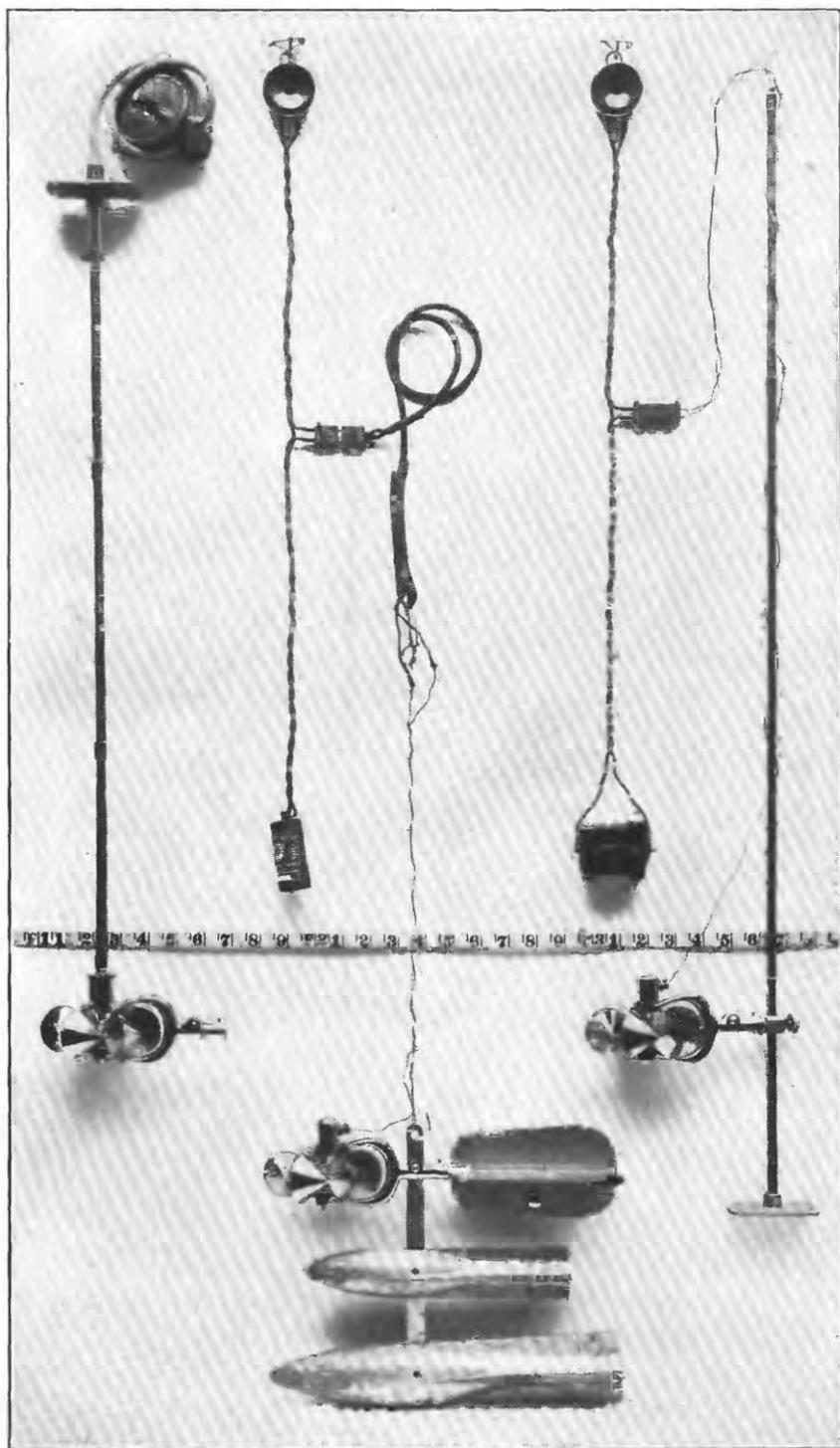
[Counties wholly in this basin marked by asterisk.]

County.	Popu- lation.	County.	Popu- lation.
Siskiyou.....	18,801	*Sutter.....	6,323
Modoc.....	6,191	*Yuba.....	10,042
*Shasta.....	18,920	Sierra.....	4,098
Lassen.....	4,802	Nevada.....	14,955
*Tehama.....	11,401	*Placer.....	18,237
*Plumas.....	5,259	Napa.....	19,800
*Glenn.....	7,172	*Yolo.....	13,926
*Butte.....	27,301	Sacramento.....	67,806
*Lake.....	5,526	*Eldorado.....	7,492
*Colusa.....	7,732	Solano.....	27,559

The industries of the Sacramento basin include mining, smelting, lumbering, dairying, grazing, orchard farming, graniculture, sugar manufacture, and fishing. The chief mine products are gold and copper, and there are also extensive quarries of granite, sandstone, and other rocks, and a number of mineral springs of economic importance. Dairying is growing rapidly in importance, as are also all agricultural industries except wheat production. Rice culture has

<sup>1</sup> Excluding 57,675 acres in the State of Nevada.

<sup>2</sup> Communicated by T. D. Woodbury, acting chief of silviculture, District 5, U. S. D. S., Forest Service, Mar. 12, 1909.



SMALL PRICE CURRENT METERS.



A. FOR BRIDGE MEASUREMENT.



B. FOR WADING MEASUREMENT.

TYPICAL GAGING STATIONS.

been started in Glenn County.<sup>1</sup> In the alluvial plain and foothill regions agriculture, fruit growing, and dairying are the principal industries.

Fishing as an industry deserves more prominent mention than is usually given to it. Sacramento River alone yields annually nearly \$1,250,000 worth of fish, representing about one-third of the total catch for the State.

### 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 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. IV), 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 (Pls. V and VI).

By plotting the results of measurements, using the discharges and corresponding gage heights 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."<sup>2</sup>

#### 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 per 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

<sup>1</sup> Eighteenth Ann. Rept. California State Board of Trade, 1908, p. 23.

<sup>2</sup> See also Hoyt, J. C., and others, Use and care of the current meter as practiced by the United States Geological Survey: Trans. Am. Soc. Civil Eng., vol. 66, 1910, p. 70.

in this series of reports are second-feet, second-foot 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 following table of equivalents:

“Second-foot 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. 36). 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 one and one-half 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.

“Run-off 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. It 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 connection with storage for irrigation.

#### EXPLANATION OF DATA.

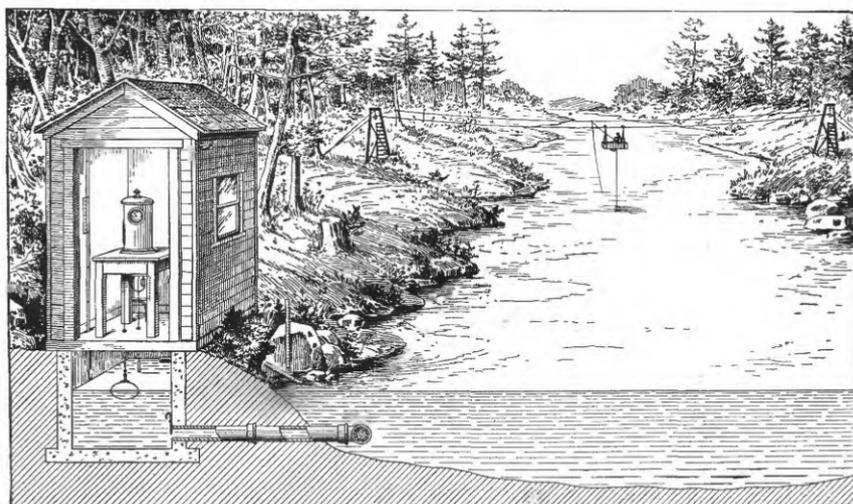
The order of treatment of stations in this paper is downstream. Records for all stations from the source to the mouth of the main stem of the river are presented first, and records for the tributaries in regular order from source to mouth follow, all records for each tributary basin being given before 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 discharges, table of monthly and yearly discharges and run-off. For stations located at weirs or dams the gage-height table is omitted.



A. TYPICAL GAGING CAR.



B. TYPICAL GAGING STATION, SHOWING AUTOMATIC GAGE.



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 points 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 not published in this report but can be determined from the daily gage heights and daily discharges 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 discharges 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 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 of "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, which are defined on page 32, 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-discharge 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 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.*

Discharge (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	5.398	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.

Discharge (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 covers 1 square mile 0.03719 inch deep.

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

1,000,000,000 (1 United States billion) cubic feet equals 11,570 second-feet for one 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 2.6 second-feet.

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

100 Colorado miner's inches for one day equals 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-feet.

1 acre-foot equals 325,850 gallons.

1 inch deep on 1 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 kilogram-meters per second.

1 horsepower equals 746 watts.

1 horsepower equals 1 second-foot falling 8.8 feet.

$\frac{1}{2}$  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 MAINTAINED IN THE SACRAMENTO RIVER BASIN.**

The following list comprises the gaging stations that have been maintained in the Sacramento River basin. The stations are arranged in downstream order, tributaries being indicated by indentations; a dash following the date implies that the station was being maintained June 30, 1912:

- Sacramento River at Castella, 1910-
- Sacramento River at Antler, 1910-1911.
- Sacramento River at Jellys Ferry, 1895-1902.
- Sacramento River near Red Bluff, 1902-
- Sacramento River at Red Bluff, 1894-1896.
- Sacramento River at Collinsville, 1878-1885.
- Pit River near Canby, 1904-5.
- Pit River near Bieber, 1904-1908.
- Pit River at Henderson, 1910-
- Pit River near Ydalpom, 1910-
  - Cottonwood Creek near Lakeview, Oreg., 1908-
  - Drews Creek near Lakeview, Oreg., 1909-
  - South Fork of Pit River near Ivy, 1904-5.
  - West Valley Creek near Likely, 1904-5.
- Ash Creek at Adin, 1904-5.
- Fall River at Fall River mills, 1912-
- Hat Creek at Hawkin's ranch, near Hat Creek, 1911-
- Hat Creek at Hat Creek, 1910-
  - Rising River <sup>1</sup> near Cassel, 1911-
- Burney Creek near Burney, 1911-
- Kosk Creek near Henderson, 1910-
- Montgomery Creek at Montgomery Creek, 1911-
- Squaw Creek near Ydalpom, 1911-
- McCloud River near Gregory, 1902-1908.
- McCloud River at Baird, 1910-
- Clear Creek near Shasta, 1911-
- Cow Creek at Millville, 1911-
  - Clover Creek at Millville, 1911-
  - Little Cow Creek near Palo Cedro, 1911-
- Bear Creek near Millville, 1911-
- North Fork of Cottonwood Creek at Ono, 1907-
- Mill Creek near Los Molinos, 1909-
- Deer Creek near Vina, 1911-
- Stony Creek near Fruto, 1901-
- Little Stony Creek near Ladoga, 1907-

<sup>1</sup> Rising River is a spring-fed stream (unnamed on the map) that enters Hat Creek from the east just south of Cassel.

## Sacramento River—Continued.

- North Fork of Feather River (head of Feather River) above Prattville, 1905-1907.
- North Fork of Feather River below Prattville, 1905-
- North Fork of Feather River near Big Bend, 1905-
- Feather River at Oroville, 1902-
  - Hamilton Branch near Prattville, 1905-1907.
  - Butt Creek at Butte Valley, 1905-
  - Indian Creek near Crescent Mills, 1905-1909, 1911-
  - Spanish Creek at Keddie, 1911-
  - Middle Fork of Feather River at Cromberg, 1910-
  - Middle Fork of Feather River near Oroville, 1911-
  - Grizzly Creek near Beckwith, 1905-6.
  - South Fork of Feather River at Enterprise, 1911-
    - Palermo Land & Water Co.'s canal at Enterprise, 1911-
  - Middle Fork of Yuba River (head of Yuba River) at Freeman's bridge near North San Juan, 1900.
  - Middle Fork of Yuba River near North San Juan, 1910-
  - Yuba River near Smartsville, 1903-
  - Yuba River at Parks Bar bridge near Smartsville, 1900.
    - Oregon Creek (tributary to Middle Fork of Yuba) near North San Juan, 1910.
    - North Fork of Yuba River near Sierra City, 1911-
    - North Fork of Yuba River at Goodyear Bar, 1910-
    - North Fork of Yuba River near North San Juan, 1900.
      - North Fork of North Fork of Yuba River at Downieville, 1910-
      - Rock Creek at Goodyear Bar, 1910-
      - Goodyear Creek at Goodyear Bar, 1910-
  - Bear River and Pacific Gas and Electric Company power canal near Colfax, 1911-
  - Bear River at Van Trent, 1904-
- North Fork of American River (head of American River) near Colfax, 1911.
- American River at Fair Oaks, 1904-
  - Middle Fork of American River near East Auburn, 1911-
  - Rubicon River at Rubicon Springs, 1910-11.
  - Rubicon River near Quintette, 1909-1911.
    - Little Rubicon River near Rubicon Springs, 1910-11.
    - Little South Fork of Rubicon River at Sawmill near Quintette, 1910-11.
    - Little South Fork of Rubicon River below Gerle Creek near Quintette, 1910-11.
    - Little South Fork of Rubicon River at mouth near Quintette, 1909-1911.
      - Little South Fork ditch at Sawmill near Quintette, 1910-11.
      - Gerle Creek near Rubicon Springs, 1910-11.
    - Pilot Creek near Quintette, 1910-11.
    - Pilot Creek ditch near Quintette, 1910-11.
  - South Fork of American River at Kyburz, 1906-7.
  - South Fork of American River near Kyburz, 1906.
  - South Fork of American River below Kyburz, 1907.
  - South Fork of American River near Placerville, 1911.
- Clear Lake in Lake County, 1874-1900.
- Cache Creek at Lower Lake, 1901-
- Cache Creek at Yolo, 1903-
- Putah Creek near Guenoc, 1904-1906.
- Putah Creek at Winters, 1905-

STATION RECORDS.

SACRAMENTO RIVER AT CASTELLA, CAL.

This station, which is located at the private highway bridge at Castella, in sec. 22, T. 38 N., R. 4 W., M. D. B. and M., was established October 15, 1910. Castle Creek enters the river about half a mile above the station.

The gage is a vertical staff on the downstream end of the bridge pier near the right bank.

Beginning March 8, 1912, discharge measurements were made at a highway bridge half a mile below the gage. Prior to this date they were made at the bridge at the gage.

*Discharge measurements of Sacramento River at Castella, Cal., in 1910-1912.*

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1910.		<i>Feet.</i>	<i>Sec.-ft.</i>	1912.		<i>Feet.</i>	<i>Sec.-ft.</i>
Oct. 8	W. V. Hardy.....		190	Jan. 26	H. J. Tompkins.....	5.78	2,720
				27	.....do.....	4.30	1,440
1911.				Mar. 8	Lasley Lee.....	3.46	601
Apr. 8	G. T. Peekema.....	5.22	2,370	May 20	.....do.....	4.88	1,920
May 27	.....do.....	4.38	1,490	20	.....do.....	4.79	1,860
Sept. 1	.....do.....	2.55	249	21	.....do.....	4.40	1,390
				29	.....do.....	4.73	1,680

*Daily gage height, in feet, of Sacramento River at Castella, Cal., for 1910-1912.*

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.												
1.....		2.5	3.0	2.7	4.4	3.0	6.0	4.6	4.6	3.1	2.8	2.5
2.....		2.5	3.0	2.7	4.4	3.0	6.0	4.5	4.6	3.1	2.7	2.5
3.....		2.5	5.0	2.7	4.1	3.0	5.9	4.8	4.6	3.0	2.7	2.5
4.....		2.5	4.0	2.7	4.0	3.5	5.4	4.9	4.6	3.0	2.7	2.5
5.....		2.5	3.5	2.7	3.9	4.2	6.2	5.8	4.5	3.0	2.7	2.5
6.....		2.5	3.2	2.7	3.8	6.5	5.3	4.9	4.5	3.0	2.7	2.5
7.....		2.5	3.0	2.7	3.7	5.5	5.2	4.8	4.4	3.0	2.7	2.5
8.....		2.7	3.2	2.7	3.5	5.5	5.2	4.8	4.3	3.0	2.6	2.5
9.....		2.7	3.4	2.8	3.4	4.4	5.6	4.5	4.2	3.0	2.6	2.5
10.....		2.6	4.0	2.7	3.5	4.1	4.9	4.5	4.2	3.0	2.6	2.5
11.....		3.0	4.4	2.6	3.6	4.0	4.9	4.4	4.3	3.0	2.5	2.5
12.....		2.7	3.8	2.5	3.6	3.9	4.7	4.4	4.3	3.0	2.5	2.5
13.....		2.6	3.5	2.5	3.5	3.9	4.4	4.4	4.3	3.0	2.5	2.5
14.....		2.6	3.2	2.5	3.4	4.0	4.3	4.4	4.2	2.9	2.5	2.5
15.....	2.5	2.6	3.1	2.6	3.3	4.0	4.3	4.4	4.1	2.9	2.5	2.5
16.....	2.5	2.6	3.1	2.6	3.2	4.1	4.2	4.6	4.0	2.9	2.5	2.5
17.....	2.5	2.7	3.0	2.6	3.1	4.2	4.2	4.4	4.0	2.9	2.5	2.5
18.....	2.5	2.7	3.0	3.1	3.1	4.3	4.4	4.9	3.9	3.0	2.5	2.5
19.....	2.5	2.7	3.0	4.45	3.1	4.4	4.4	4.5	3.8	3.0	2.5	2.5
20.....	2.5	2.6	3.0	3.8	3.1	4.5	4.5	4.5	3.8	2.9	2.5	2.5
21.....	2.5	2.6	3.0	3.2	3.1	4.6	4.5	4.4	3.8	2.9	2.5	2.5
22.....	2.5	2.7	3.0	3.0	3.1	4.9	4.8	4.8	3.5	2.9	2.5	2.5
23.....	2.5	3.8	3.0	3.0	3.1	5.1	4.9	5.1	3.5	2.8	2.5	2.5
24.....	2.5	5.1	2.9	3.0	3.1	4.9	5.3	5.0	3.4	2.8	2.5	2.5
25.....	2.5	3.5	2.9	3.0	3.1	4.9	5.7	4.5	3.3	2.8	2.5	2.6
26.....	2.5	3.1	2.9	3.0	3.0	4.8	5.3	4.5	3.3	2.8	2.5	2.6
27.....	2.5	3.0	2.9	3.1	3.0	4.6	5.0	4.4	3.3	2.8	2.5	2.6
28.....	2.5	3.2	2.9	3.2	3.0	4.6	4.8	4.4	3.2	2.8	2.5	2.5
29.....	2.5	3.2	2.8	3.5		4.9	4.5	4.4	3.1	2.8	2.5	2.5
30.....	2.5	3.1	2.8	4.8		5.2	4.5	4.4	3.1	2.8	2.5	2.5
31.....	2.5		2.7	4.6		5.8		4.6		2.8	2.5	

Daily gage height, in feet, of Sacramento River at Castella, Cal., for 1910-1912—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1911-12.												
1.....	2.6	2.6	2.6	2.5	3.1	2.9	3.6	5.4	4.6	.....	.....	.....
2.....	2.6	2.6	2.6	2.5	3.0	2.9	3.7	4.7	4.5	.....	.....	.....
3.....	2.6	2.6	2.6	2.5	3.0	2.9	3.8	4.3	4.4	.....	.....	.....
4.....	2.6	2.6	2.6	2.5	2.9	2.9	3.7	4.2	4.4	.....	.....	.....
5.....	2.6	2.6	2.8	2.5	2.9	3.1	3.7	4.2	4.4	.....	.....	.....
6.....	2.6	2.6	2.7	2.5	2.9	3.9	3.7	4.4	4.2	.....	.....	.....
7.....	2.6	2.6	2.6	2.5	2.9	3.6	3.7	4.4	4.0	.....	.....	.....
8.....	2.6	2.6	2.6	2.5	3.1	3.5	3.6	4.6	4.0	.....	.....	.....
9.....	2.8	2.6	2.6	2.6	3.1	3.4	3.6	4.6	3.9	.....	.....	.....
10.....	2.7	2.7	2.6	2.7	3.3	3.3	3.9	4.6	3.85	.....	.....	.....
11.....	2.6	2.6	2.6	2.7	3.2	3.3	3.8	4.6	3.8	.....	.....	.....
12.....	2.6	2.6	2.6	2.9	3.2	3.4	3.6	4.7	3.8	.....	.....	.....
13.....	2.6	2.6	2.6	3.0	3.3	3.3	3.5	4.5	3.65	.....	.....	.....
14.....	2.6	2.6	2.6	2.9	3.2	3.5	3.4	4.7	3.55	.....	.....	.....
15.....	2.6	2.8	2.6	2.9	3.0	3.65	3.4	4.8	3.4	.....	.....	.....
16.....	2.6	2.6	2.6	3.0	3.1	3.5	3.5	4.6	3.35	.....	.....	.....
17.....	2.6	2.6	2.5	2.9	3.7	3.4	3.5	4.4	3.3	.....	.....	.....
18.....	2.6	2.6	2.5	2.9	3.8	3.4	3.5	4.4	3.25	.....	.....	.....
19.....	2.6	2.6	2.5	2.9	3.5	3.4	3.4	4.3	3.2	.....	.....	.....
20.....	2.6	2.6	2.5	2.9	3.3	3.3	3.4	5.1	3.2	.....	.....	.....
21.....	2.6	2.6	2.5	2.8	3.3	3.3	3.4	4.6	3.2	.....	.....	.....
22.....	2.6	2.6	2.5	2.8	3.2	3.3	3.4	4.1	3.15	.....	.....	.....
23.....	2.6	2.6	2.5	2.8	3.1	3.3	3.4	3.95	3.35	.....	.....	.....
24.....	2.6	2.6	2.5	4.5	3.1	3.5	3.5	4.0	3.2	.....	.....	.....
25.....	2.6	2.6	2.5	6.75	3.0	3.55	3.4	4.4	3.1	.....	.....	.....
26.....	2.6	2.6	2.5	5.75	3.0	3.6	3.4	6.0	3.1	.....	.....	.....
27.....	2.6	2.6	2.5	4.4	3.0	3.8	3.4	5.2	3.1	.....	.....	.....
28.....	2.6	2.6	2.5	3.8	3.0	3.8	3.5	4.9	3.05	.....	.....	.....
29.....	2.6	2.6	2.5	3.5	2.9	3.8	4.7	4.8	3.0	.....	.....	.....
30.....	2.6	2.6	2.5	3.3	.....	3.7	4.6	4.6	3.0	.....	.....	.....
31.....	2.6	.....	2.5	3.2	.....	3.6	.....	4.4	.....	.....	.....	.....

Daily discharge, in second-feet, of Sacramento River at Castella, Cal., for 1910-1912.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.												
1.....	.....	220	390	280	1,380	390	3,360	1,590	1,590	435	315	220
2.....	.....	220	390	280	1,380	390	3,360	1,480	1,590	435	280	220
3.....	.....	220	2,050	280	1,100	390	3,220	1,810	1,590	390	280	220
4.....	.....	220	1,020	280	280	650	2,550	1,830	1,590	390	280	220
5.....	.....	220	650	280	940	1,190	3,640	3,080	1,480	390	280	220
6.....	.....	220	485	280	860	4,080	2,420	1,930	1,480	390	280	220
7.....	.....	220	390	280	785	2,680	2,290	1,810	1,380	390	280	220
8.....	.....	280	485	280	650	2,680	2,290	1,810	1,280	390	250	220
9.....	.....	280	590	315	590	1,380	2,810	1,480	1,190	390	250	220
10.....	.....	250	1,020	280	650	1,100	1,930	1,480	1,190	390	250	220
11.....	.....	390	1,380	250	715	1,020	1,930	1,380	1,280	390	220	220
12.....	.....	280	860	220	715	940	1,700	1,380	1,280	390	220	220
13.....	.....	250	650	220	650	940	1,380	1,380	1,280	390	220	220
14.....	.....	250	485	220	590	1,020	1,280	1,380	1,190	350	220	220
15.....	220	250	435	250	535	1,020	1,280	1,380	1,100	350	220	220
16.....	220	250	435	250	485	1,100	1,150	1,590	1,020	350	220	220
17.....	220	280	390	250	435	1,190	1,190	1,380	1,020	350	220	220
18.....	220	280	390	435	435	1,280	1,380	1,930	940	390	220	220
19.....	220	280	390	1,430	435	1,380	1,380	1,480	860	390	220	220
20.....	220	250	390	860	435	1,480	1,480	1,480	860	350	220	220
21.....	220	250	390	485	435	1,590	1,480	1,380	860	350	220	220
22.....	220	280	390	390	435	1,930	1,810	1,810	650	350	220	220
23.....	220	860	390	360	435	2,170	1,930	2,170	650	315	220	220
24.....	220	2,170	350	390	435	1,930	2,420	2,050	590	315	220	220
25.....	220	650	350	390	435	1,930	2,940	1,480	535	315	220	250
26.....	220	435	350	390	390	1,810	2,420	1,480	535	315	220	250
27.....	220	390	350	435	390	1,590	2,050	1,380	535	315	220	250
28.....	220	485	350	485	390	1,590	1,810	1,380	485	315	220	250
29.....	220	485	315	6,500	.....	1,930	1,480	1,380	435	315	220	220
30.....	220	435	315	1,810	.....	2,290	1,480	1,380	435	315	220	220
31.....	220	.....	280	1,590	.....	3,080	.....	1,590	.....	315	220	.....

Daily discharge, in second-feet, of Sacramento River at Castella, Cal., for 1910-1912—Con.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.									
1.....	250	250	250	220	435	350	715	2,550	1,590
2.....	250	250	250	220	390	350	785	1,700	1,480
3.....	250	250	250	220	390	350	860	1,280	1,380
4.....	250	250	250	220	350	350	785	1,190	1,380
5.....	250	250	315	220	350	435	785	1,190	1,380
6.....	250	250	280	220	350	940	785	1,380	1,190
7.....	250	250	250	220	350	715	785	1,380	1,020
8.....	250	250	250	220	435	650	715	1,590	1,020
9.....	315	250	250	250	435	590	715	1,590	940
10.....	280	280	250	280	535	535	940	1,590	900
11.....	250	250	250	280	485	535	860	1,590	860
12.....	250	250	250	350	485	590	715	1,700	860
13.....	250	250	250	390	535	535	650	1,480	750
14.....	250	250	250	350	485	650	590	1,700	682
15.....	250	315	250	350	390	750	590	1,810	590
16.....	250	250	250	390	435	650	650	1,590	562
17.....	250	250	220	350	785	590	650	1,380	535
18.....	250	250	220	350	860	590	650	1,380	510
19.....	250	250	220	350	650	590	590	1,280	485
20.....	250	250	220	350	535	535	590	2,170	485
21.....	250	250	220	315	535	535	590	1,590	485
22.....	250	250	220	315	485	535	590	1,100	460
23.....	250	250	220	315	435	535	590	980	562
24.....	250	250	220	1,480	435	535	650	1,020	485
25.....	250	250	220	4,530	390	682	590	1,380	435
26.....	250	250	220	3,080	390	715	590	3,360	435
27.....	250	250	220	1,380	390	860	590	2,280	435
28.....	250	250	220	8.0	390	860	650	1,930	412
29.....	250	250	220	650	350	860	1,700	1,810	390
30.....	250	250	220	535	-----	785	1,590	1,590	390
31.....	250	-----	220	485	-----	715	-----	1,380	-----

NOTE.—Daily discharge determined from a fairly well defined rating curve.

Monthly discharge of Sacramento River at Castella, Cal., for 1910-1912.

[Drainage area, 257 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.		
1910-11.								
October 15-31.....	220	-----	220	220	0.856	0.54	7,420	C.
November.....	2,170	-----	220	385	1.50	1.67	22,900	B.
December.....	2,050	-----	260	552	2.15	2.48	33,900	B.
January.....	1,810	-----	220	472	1.84	2.12	29,000	B.
February.....	1,380	-----	390	648	2.52	2.62	36,000	A.
March.....	4,080	-----	390	1,550	6.03	6.95	95,300	A.
April.....	3,640	-----	1,190	2,060	8.02	8.95	123,000	A.
May.....	3,080	-----	1,380	1,630	6.34	7.31	100,000	A.
June.....	1,590	-----	435	1,030	4.01	4.47	61,300	A.
July.....	435	-----	315	362	1.41	1.63	22,300	B.
August.....	315	-----	220	238	.926	1.07	14,600	C.
September.....	250	-----	220	223	.868	.97	13,300	C.
The period.....	-----	-----	-----	-----	-----	-----	559,000	-----
1911-12.								
October.....	315	-----	250	253	.984	1.13	15,600	C.
November.....	315	-----	250	253	.984	1.10	15,100	C.
December.....	315	-----	220	239	.930	1.07	14,700	C.
January.....	4,530	-----	220	637	2.48	2.86	39,200	A.
February.....	860	-----	350	464	1.81	1.95	26,700	B.
March.....	940	-----	370	610	2.38	2.74	37,500	A.
April.....	1,700	-----	500	751	2.92	3.26	44,700	A.
May.....	3,360	-----	930	1,610	6.26	7.22	99,000	A.
June.....	1,590	-----	390	770	3.00	3.35	45,800	A.
The period.....	-----	-----	-----	-----	-----	-----	338,000	-----

## SACRAMENTO RIVER AT ANTLER, CAL.

This station, which is located at the highway bridge at Antler, 200 feet above the mouth of Gregory Creek, in the SE.  $\frac{1}{4}$  sec. 13, T. 35 N., R. 5 W., about 22 miles below the gaging station at Castella, was established November 19, 1910, and discontinued December 31, 1911.

Middle Salt Creek enters the Sacramento about 2 miles above and Salt Creek about 3 miles below the station. Pit River, the main tributary of the upper Sacramento, enters about 14 miles below Antler.

The gage is a vertical staff on the downstream end of the pier at the right end of the bridge.

Discharge measurements are made from the bridge.

*Discharge measurements of Sacramento River at Antler, 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. 18	W. V. Hardy.....		266	Sept. 22	G. F. Peckema.....	2.00	246
Nov. 19	Fred G. Wood.....	2.20	306	22	.....do.....	2.01	246
1911.				1912.			
Apr. 3	G. F. Peckema.....	6.64	4,630	Jan. 28	H. J. Tompkins.....	4.88	2,220
May 26	.....do.....	4.71	2,080				

*Daily gage height, in feet, of Sacramento River at Antler, Cal., for 1910-11.*

Day.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.											
1.....		3.1	2.6	6.4	3.6	5.2	4.6	4.8	3.1	2.0	2.0
2.....		3.4	2.6	7.4	4.1	7.0	4.6	4.7	2.9	2.0	2.0
3.....		6.7	2.5	5.8	4.5	6.5	4.7	4.7	2.9	2.0	2.0
4.....		5.5	2.4	5.5	4.8	7.0	4.7	4.7	2.9	2.0	2.0
5.....		3.9	2.4	5.2	5.1	8.0	4.8	4.7	2.9	2.0	2.0
6.....		3.5	2.4	5.9	10.5	7.3	4.8	4.7	2.9	2.0	2.0
7.....		3.2	2.4	4.5	11.8	7.0	4.8	4.8	2.9	2.0	2.0
8.....		3.7	2.4	4.5	10.4	6.9	4.8	4.8	2.9	2.0	2.0
9.....		4.6	2.5	4.4	10.1	6.5	4.8	4.8	2.9	2.0	2.0
10.....		4.6	2.6	4.9	9.7	6.0	4.8	4.8	2.9	2.0	2.0
11.....		4.6	2.6	5.9	9.0	5.9	4.9	4.7	2.7	2.0	2.0
12.....		4.7	2.6	5.1	8.1	5.4	4.6	4.7	2.6	2.0	2.0
13.....		4.6	2.7	5.0	6.4	4.8	4.7	4.6	2.6	2.0	2.0
14.....		3.7	2.8	4.7	5.0	4.8	4.8	4.6	2.6	2.0	2.0
15.....		3.5	3.0	4.6	5.0	4.6	4.8	4.6	2.4	2.0	2.0
16.....		3.5	3.0	4.4	5.0	4.6	4.8	4.5	2.4	2.0	2.0
17.....		3.0	3.0	4.3	5.0	4.8	4.9	4.5	2.4	2.0	2.0
18.....		3.0	3.1	4.1	4.8	4.8	4.9	4.4	2.3	2.0	2.0
19.....	2.2	3.0	3.7	4.0	4.5	4.8	5.0	4.4	2.3	2.0	2.0
20.....	2.15	2.8	7.5	3.8	4.0	4.8	5.0	4.3	2.4	2.0	2.0
21.....	2.3	2.6	7.3	3.8	3.8	4.8	4.9	4.3	2.3	2.0	2.0
22.....	2.5	2.5	4.0	3.7	3.7	4.8	4.8	4.3	2.3	2.0	2.0
23.....	3.1	2.3	3.5	3.6	3.6	4.8	4.8	4.2	2.3	2.0	2.0
24.....	4.65	2.4	3.5	3.6	3.4	4.8	5.2	4.2	2.3	2.0	2.0
25.....	3.7	2.6	3.5	3.6	3.0	4.8	5.2	4.2	2.3	2.0	2.0
26.....	3.0	2.6	3.8	3.6	3.8	4.8	5.0	4.2	2.2	2.0	2.0
27.....	2.4	2.6	4.9	3.5	3.4	4.8	5.0	4.1	2.2	2.0	2.0
28.....	2.5	2.6	6.2	3.4	4.0	4.6	5.0	4.0	2.1	2.0	2.0
29.....	3.0	2.5	5.3	.....	4.0	4.6	4.9	3.8	2.1	2.0	2.0
30.....	3.2	2.5	9.2	.....	4.2	4.6	4.8	3.3	2.1	2.0	2.0
31.....		2.5	8.0	.....	4.7	.....	4.8	.....	2.0	2.0	.....

Daily gage height, in feet, of Sacramento River at Antler, Cal., for 1910-11—Contd.

Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.
1911.				1911.				1911.			
1.....	2.3	2.1	2.2	11.....	2.2	2.5	2.2	21.....	2.0	2.2	2.1
2.....	2.4	2.1	2.2	12.....	2.2	2.5	2.2	22.....	2.1	2.2	2.1
3.....	2.3	2.1	2.2	13.....	2.1	2.5	2.1	23.....	2.1	2.2	2.1
4.....	2.3	2.1	2.2	14.....	2.1	2.5	2.1	24.....	2.0	2.1	2.1
5.....	2.3	2.1	2.2	15.....	2.0	2.4	2.1	25.....	2.0	2.1	2.1
6.....	2.2	2.1	2.2	16.....	2.0	2.3	2.1	26.....	2.1	2.1	2.1
7.....	2.1	2.1	2.3	17.....	2.0	2.3	2.1	27.....	2.1	2.1	2.1
8.....	2.1	2.1	2.3	18.....	2.1	2.2	2.1	28.....	2.1	2.2	2.2
9.....	2.2	2.2	2.4	19.....	2.1	2.2	2.1	29.....	2.1	2.2	2.2
10.....	2.1	2.5	2.3	20.....	2.0	2.2	2.1	30.....	2.1	2.2	2.2
								31.....	2.1	.....	2.1

Daily discharge, in second-feet, of Sacramento River at Antler, Cal., for 1910-11.

Day.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.											
1.....		710	445	4,290	1,040	2,620	1,940	2,160	710	245	245
2.....		900	445	5,830	1,460	5,200	1,940	2,040	595	245	245
3.....		4,740	405	3,410	1,840	4,440	2,040	2,040	595	245	245
4.....		3,000	365	3,000	2,160	5,200	2,040	2,040	595	245	245
5.....		1,280	365	2,620	2,500	6,830	2,160	2,040	595	245	245
6.....			970	3,560	11,400	5,670	2,160	2,040	595	245	245
7.....			770	3,650	14,000	5,200	2,160	2,160	595	245	245
8.....			1,120	3,650	11,200	5,040	2,160	2,160	595	245	245
9.....			1,940	405	1,740	10,600	4,440	2,160	595	245	245
10.....			1,940	445	2,260	9,860	3,700	2,160	595	245	245
11.....		1,940	445	3,560	8,580	3,560	2,260	2,040	490	245	245
12.....		2,040	445	2,500	7,000	2,870	1,940	2,040	445	245	245
13.....		1,940	490	2,380	4,290	2,160	2,040	1,940	445	245	245
14.....		1,120	540	2,040	2,380	2,160	2,160	1,940	445	245	245
15.....			970	650	1,940	2,380	1,940	1,940	365	245	245
16.....			970	650	1,740	2,380	1,940	1,840	365	245	245
17.....			650	650	1,640	2,380	2,160	2,260	1,840	365	245
18.....			650	710	1,460	2,160	2,160	2,260	1,740	330	245
19.....	300		650	1,120	1,370	1,840	2,160	2,380	1,740	330	245
20.....	285		540	6,000	1,200	1,370	2,160	2,380	1,640	365	245
21.....	330		445	5,670	1,200	1,200	2,160	2,260	1,640	330	245
22.....	405		405	1,370	1,120	1,120	2,160	2,160	1,640	330	245
23.....	710		330	970	1,040	1,040	2,160	2,160	1,550	330	245
24.....	1,990		365	970	1,040	900	2,160	2,620	1,550	330	245
25.....	1,120		445	970	1,040	650	2,160	2,620	1,550	330	245
26.....	650		445	1,200	1,040	1,200	2,160	2,380	1,550	300	245
27.....	365		445	2,260	970	900	2,160	2,380	1,460	300	245
28.....	405		445	3,990	900	1,370	1,940	2,380	1,370	270	245
29.....	650		405	2,740	.....	1,370	1,940	2,260	1,200	270	245
30.....	770		405	8,940	.....	1,550	1,940	2,160	835	270	245
31.....			405	6,830	.....	2,040	.....	2,160	245	245	.....

Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.
1911.				1911.				1911.			
1.....	330	270	300	11.....	300	405	300	21.....	245	300	270
2.....	365	270	300	12.....	270	405	300	22.....	270	300	270
3.....	330	270	300	13.....	270	405	270	23.....	270	300	270
4.....	330	270	300	14.....	270	405	270	24.....	245	270	270
5.....	330	270	300	15.....	245	365	270	25.....	245	270	270
6.....	300	270	300	16.....	245	330	270	26.....	270	270	270
7.....	270	270	330	17.....	245	330	270	27.....	270	270	270
8.....	270	270	330	18.....	270	300	270	28.....	270	300	300
9.....	300	300	365	19.....	270	300	270	29.....	270	300	300
10.....	270	405	330	20.....	245	300	270	30.....	270	300	300
								31.....	270	.....	270

NOTE.—Daily discharge 1910-11 determined from a rating curve well defined below 6,000 second-feet.

*Monthly discharge of Sacramento River at Antler, Cal., for 1910-11.*

[Drainage area, 461 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.	
1910-11.							
November 19-30 .....	1,990	285	665	1.44	0.64	15,800	A.
December .....	4,740	330	1,080	2.34	2.70	66,400	A.
January .....	8,940	365	1,660	3.60	4.15	102,000	A.
February .....	5,830	900	2,090	4.53	4.72	116,000	A.
March .....	14,000	650	3,680	7.98	9.20	226,000	A.
April .....	6,830	1,940	3,080	6.68	7.45	183,000	A.
May .....	2,620	1,940	2,210	4.79	5.52	136,000	A.
June .....	2,160	835	1,800	3.90	4.35	107,000	A.
July .....	710	245	430	.983	1.08	26,400	A.
August .....	245	245	245	.531	.61	15,100	A.
September .....	245	245	245	.531	.59	14,600	A.
The period .....						1,010,000	
1911.							
October .....	365	245	278	0.603	0.70	17,100	A.
November .....	405	270	310	.672	.75	18,400	A.
December .....	365	270	289	.627	.72	17,800	A.

## SACRAMENTO RIVER AT JELLYS FERRY, CAL.

This station was established April 29, 1895, at Jellys Ferry, 12 miles above Red Bluff, Cal., and was maintained until June 30, 1902, when it was discontinued in favor of the Red Bluff station in Iron Canyon, where better measuring conditions existed.

The river is liable to overflow its left bank at a gage height of 25 feet. The bed of the river is of gravel and is fairly permanent. A rapid occurs about one-half mile below the station. No canals of importance are taken out above. The gage heights are affected by the contraction of the river in Iron Canyon, some miles below. This causes, during high stages, a wide fluctuation on the gage at Jellys Ferry.

The gage, which is located at the ferry, consists of a vertical rod in three sections nailed to trees.

Auxiliary gages placed above and below the cable were used to determine the slope of the water surface. The gage datum remained unchanged during the life of the station. The gage was read twice a day.

Measurements were made from the ferry boat, held in place by the ferry cable. Beginning in 1896, high-water measurements were made from a car attached to the cable. During 1897 to 1899 the ferryman made frequent measurements. In the revision of the data for this report only those measurements made by the hydrographers of the Geological Survey have been used in the development of the rating curve. Monthly estimates for the entire record have been recom-

puted on the basis of a fairly well defined rating curve which averages these measurements. The original current-meter notes and the meter rating tables have been examined and measurements recomputed when necessary.

The maximum crest discharge recorded at this station was 166,000 second-feet, for a gage height of 35.5 second-feet, February 25, 1902. This maximum has been far exceeded since records have been kept at Iron Canyon.

The lowest discharge recorded was 4,200 second-feet, September 6 to 22, 1901. Lower discharges have since been recorded at Iron Canyon.

*Discharge measurements of Sacramento River at Jellys Ferry, Cal., in 1895-1901.*

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1895.		<i>Feet.</i>	<i>Sec.-ft.</i>	1898.		<i>Feet.</i>	<i>Sec.-ft.</i>
Apr. 30 <sup>a</sup>	J. B. Lippincott .....	12.	22,800	Feb. 28 <sup>a</sup>	Fred Lemstrom .....	15.32	37,800
June 30	do .....	6.75	8,460	June 3	J. B. Lippincott .....	7.1	9,050
Aug. 25 <sup>a</sup>	Davis and Lippincott .....	5.55	6,110				
Oct. 5 <sup>a</sup>	J. B. Lippincott .....	5.55	6,090	1899.			
1896.				Jan. 14	Fred Lemstrom .....	11.4	21,200
Jan. 20 <sup>b</sup>	J. B. Lippincott .....	29.5	127,000	Mar. 29	do .....	11.5	22,000
Jan. 21 <sup>b</sup>	do .....	25.9	105,000				
Jan. 22 <sup>b</sup>	do .....	22.7	82,000	1900.			
July 7 <sup>a</sup>	C. C. Babb .....	6.6	7,760	Feb. 17	Richard Gernon .....	6.8	8,370
Nov. 1 <sup>a</sup>	Richard Gernon .....	5.9	6,490	Apr. 29	do .....	7.1	9,590
1897.				May 28	do .....	6.4	7,170
Apr. 3	J. B. Lippincott .....	10.85	21,500	Dec. 18	S. G. Bennett .....	10.0	18,400
Dec. 17	do .....	6.85	8,200				
17	Fred Lemstrom .....	6.85	8,800	1901.			
28	do .....	5.95	6,240	Jan. 27	S. G. Bennett .....	9.46	15,900
				Apr. 9	do .....	7.8	11,100
				Sept. 2	do .....	4.9	4,390

<sup>a</sup> Measurement recomputed.

<sup>b</sup> Measurement made at wagon bridge at Red Bluff and discharge reduced to give discharge at Jellys Ferry. For the description of these measurements see 18th Ann. Rept., U. S. Geol. Survey, pt. IV, pp. 362-363.

*Daily gage height, in feet, of Sacramento River at Jellys Ferry, Cal., for 1895-1902.*

Day.	Apr.	May.	June.	July.	Aug.	Sept.	Day.	Apr.	May.	June.	July.	Aug.	Sept.
1895.							1895.						
1.....	11.65	9.3	6.7	5.8	5.5	5.5	16.....	12.45	7.55	6.25	5.6	5.9	5.9
2.....	12.25	9.0	6.7	5.8	5.5	5.5	17.....	12.35	7.4	6.2	5.6	5.7	5.9
3.....	12.1	8.9	6.7	5.8	5.5	5.5	18.....	11.95	7.3	6.15	5.6	5.9	5.9
4.....	13.0	8.9	6.7	5.8	5.5	5.5	19.....	11.45	7.25	6.1	5.6	5.8	5.8
5.....	14.2	9.1	7.05	5.8	5.5	5.5	20.....	10.95	7.25	6.1	5.6	5.8	5.8
6.....	15.3	9.0	6.85	5.8	5.5	5.5	21.....	10.4	7.25	6.05	5.6	5.8	5.8
7.....	15.2	8.8	6.65	5.7	5.5	5.5	22.....	9.95	7.25	6.0	5.6	5.7	5.7
8.....	14.2	8.6	6.6	5.7	5.5	5.5	23.....	9.6	7.25	6.0	5.6	5.7	5.7
9.....	13.35	8.45	6.5	5.7	5.5	5.5	24.....	9.4	7.2	6.0	5.6	5.7	5.7
10.....	12.6	8.3	6.5	5.7	5.5	5.5	25.....	9.4	7.1	6.0	5.55	5.7	5.7
11.....	12.05	8.2	6.4	5.7	6.05	6.05	26.....	11.9	7.0	5.95	5.5	5.7	5.7
12.....	12.05	8.15	6.4	5.7	7.75	7.75	27.....	13.45	6.95	5.9	5.5	5.7	5.7
13.....	12.25	8.1	6.4	5.7	7.3	7.3	28.....	12.25	6.9	5.9	5.5	5.7	5.7
14.....	12.5	7.85	6.35	5.7	6.3	6.3	29.....	12.00	10.35	6.8	5.9	5.5	5.65
15.....	12.5	7.75	6.3	5.6	6.05	6.05	30.....	11.75	9.85	6.7	5.9	5.5	5.6
							31.....	9.5	.....	5.85	5.5	.....	.....

Daily gage height, in feet, of Sacramento River at Jellys Ferry, Cal., for 1895-1902—Con.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1895-96.												
1.	5.6	5.6	5.95	5.7	13.6	7.9	11.35	12.85	10.35	6.9	5.9	5.7
2.	5.6	5.6	5.9	5.7	12.9	7.85	10.8	13.25	10.3	6.8	5.9	5.7
3.	5.6	5.6	5.8	5.7	11.95	7.85	10.4	13.4	10.1	6.7	5.9	5.6
4.	5.5	5.6	5.8	5.7	11.25	7.75	10.0	21.2	10.05	6.7	5.8	5.6
5.	5.5	5.6	5.9	5.7	10.6	7.7	10.2	19.05	10.1	6.6	5.8	5.6
6.	5.5	5.6	7.3	5.7	10.15	8.1	12.45	16.45	10.0	6.6	5.8	5.6
7.	5.6	5.6	6.5	5.7	9.75	9.65	12.5	15.1	9.8	6.6	5.8	5.6
8.	5.6	5.6	6.15	5.7	9.45	10.35	11.55	14.0	9.65	6.5	5.8	5.6
9.	5.5	5.6	6.0	5.7	9.15	10.6	11.5	13.15	9.4	6.5	5.8	5.6
10.	5.5	5.6	5.9	5.7	8.95	9.7	11.3	12.45	9.2	6.5	5.8	5.6
11.	5.5	5.6	5.8	5.7	8.75	9.25	10.65	14.5	8.9	6.4	5.7	5.6
12.	5.5	5.6	5.8	5.7	8.55	9.05	10.35	13.7	8.8	6.4	5.7	5.6
13.	5.5	5.6	5.8	5.7	8.35	8.9	10.25	12.9	8.65	6.4	5.7	5.6
14.	5.5	5.6	5.8	5.9	8.2	8.8	11.15	12.35	8.55	6.3	5.7	5.6
15.	5.5	5.65	6.15	11.25	8.05	8.55	10.5	11.9	8.45	6.3	5.7	5.6
16.	5.5	5.7	6.0	19.0	7.9	8.45	10.1	11.35	8.3	6.3	5.7	5.5
17.	5.5	5.7	5.9	27.7	7.8	8.4	9.85	10.95	8.15	6.3	5.7	5.5
18.	5.5	5.7	5.85	28.85	7.7	8.3	9.55	10.65	8.05	6.2	5.7	5.5
19.	5.5	5.7	5.9	22.85	7.6	8.2	9.55	10.5	7.95	6.2	5.7	5.5
20.	5.5	5.7	12.75	27.85	7.55	8.8	9.35	10.15	7.8	6.2	5.7	5.75
21.	5.6	5.7	7.5	26.45	7.5	10.55	9.35	10.0	7.7	6.1	5.7	5.7
22.	5.6	5.7	6.5	22.35	7.5	11.8	9.4	12.55	7.6	6.1	5.7	5.7
23.	5.6	5.7	6.4	19.5	7.4	14.15	9.95	12.3	7.5	6.1	5.7	5.7
24.	5.6	5.7	6.2	18.3	7.4	16.3	18.55	11.55	7.4	6.0	5.6	5.7
25.	5.6	5.7	6.0	21.95	7.3	17.0	16.9	11.05	7.3	6.0	5.6	5.7
26.	5.6	5.7	5.9	20.45	7.3	17.8	15.75	10.9	7.2	6.0	5.6	5.7
27.	5.6	5.7	5.8	29.7	7.45	19.05	14.2	10.9	7.1	6.0	5.6	5.6
28.	5.6	5.7	5.8	24.3	8.05	16.45	13.1	10.8	7.1	6.0	5.6	5.6
29.	5.6	6.1	5.8	19.85	7.95	14.6	12.9	11.0	7.0	6.0	5.6	5.6
30.	5.6	5.8	5.7	17.05	-----	13.25	13.5	11.0	7.0	6.0	5.6	5.6
31.	5.6	-----	5.7	14.6	-----	12.15	-----	10.6	-----	5.9	5.7	-----
1896-97.												
1.	5.6	5.9	6.85	13.1	19.75	16.45	12.65	10.2	7.15	6.25	5.7	5.5
2.	5.6	5.8	6.95	11.25	19.2	13.45	11.95	10.05	7.1	6.2	5.7	5.5
3.	5.6	5.8	6.95	10.25	18.7	12.35	10.85	9.9	7.0	6.2	5.7	5.5
4.	5.6	5.7	7.0	9.5	20.55	11.6	10.55	9.9	6.95	6.2	5.7	5.5
5.	5.6	5.7	7.0	9.0	d23.75	11.9	10.5	9.95	6.9	6.15	5.6	5.5
6.	5.6	5.7	7.1	8.65	22.6	11.75	10.7	9.95	6.8	6.1	5.6	5.5
7.	5.5	5.7	7.1	8.45	20.3	12.2	11.2	9.6	6.7	6.1	5.6	5.5
8.	5.5	5.7	7.0	8.25	16.9	11.95	11.25	9.25	6.7	6.1	5.6	5.5
9.	5.5	5.75	6.9	8.05	15.4	11.75	11.35	9.0	6.6	6.1	5.6	5.5
10.	5.5	6.1	6.8	7.85	14.0	11.2	11.55	8.95	6.5	6.0	5.6	5.5
11.	5.5	5.9	6.7	7.75	12.75	10.6	12.0	9.2	6.5	6.0	5.6	5.5
12.	5.5	5.8	7.4	7.6	12.25	10.3	12.05	9.05	6.5	6.0	5.6	5.5
13.	5.5	5.8	11.25	7.65	11.55	9.85	12.0	9.05	6.4	6.0	5.6	5.5
14.	5.5	5.7	16.35	7.6	11.15	9.55	11.95	9.0	6.4	5.9	5.6	5.5
15.	5.5	5.7	24.0	7.5	11.0	9.45	12.1	8.85	6.55	5.9	5.6	5.5
16.	5.5	7.95	16.7	7.4	13.1	9.65	12.2	8.8	6.5	5.9	5.6	5.5
17.	5.5	11.7	13.15	7.25	12.0	9.75	12.15	8.65	6.4	5.9	5.6	5.5
18.	5.5	9.1	11.15	7.1	11.3	9.6	12.25	8.5	6.3	5.8	5.5	5.5
19.	5.5	7.55	9.9	7.0	13.95	9.55	12.45	8.3	6.35	5.8	5.5	5.5
20.	5.5	8.45	9.25	7.0	13.2	9.55	13.05	8.3	6.8	5.8	5.5	5.5
21.	5.5	7.45	8.8	6.95	11.55	9.1	12.1	8.2	7.2	5.8	5.5	5.5
22.	5.5	10.5	8.4	6.9	10.65	8.85	11.55	8.1	6.95	5.8	5.5	5.5
23.	5.5	10.6	8.05	6.9	10.15	8.65	11.15	8.0	6.85	5.8	5.5	5.5
24.	5.5	15.4	7.85	6.95	9.85	8.5	10.85	8.0	6.65	5.8	5.5	5.5
25.	5.5	11.45	7.75	7.0	9.9	8.7	10.8	7.9	6.55	5.8	5.5	5.5
26.	5.6	9.25	7.6	6.9	10.0	10.15	11.0	7.7	6.5	5.7	5.5	5.5
27.	6.5	8.3	9.95	6.9	10.1	10.1	11.2	7.5	6.5	5.7	5.5	5.5
28.	5.85	7.7	15.15	7.45	10.0	15.9	11.0	7.45	6.4	5.7	5.5	5.5
29.	5.7	7.25	15.65	17.45	-----	14.55	10.65	7.3	6.4	5.7	5.5	5.5
30.	5.7	7.05	16.6	13.95	-----	13.1	10.3	7.3	6.3	5.7	5.5	5.5
31.	5.7	-----	16.4	13.8	-----	12.15	-----	7.2	-----	5.7	5.5	-----

a Maximum, 29.9 feet.

b Maximum, 29.5 feet.

c 29.8 feet, a. m. reading; 29.6 feet, p. m. reading.

d Maximum, 25.9 feet.

Daily gage height, in feet, of Sacramento River at Jellys Ferry, Cal., for 1895-1902—Con.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1897-98.												
1.....	5.5	5.7	5.9	5.9	5.7	11.5	6.0	5.9	7.25	5.4	5.1	5.0
2.....	5.6	5.7	5.9	5.9	5.8	9.95	6.0	5.9	7.55	5.4	5.1	5.0
3.....	5.6	5.7	5.8	5.9	5.8	9.2	6.0	5.8	7.1	5.3	5.1	5.0
4.....	5.5	5.7	5.8	5.9	6.05	8.65	6.0	5.8	6.95	5.3	5.0	5.0
5.....	5.5	5.7	5.8	5.9	6.05	8.3	6.0	5.8	6.75	5.3	5.0	5.0
6.....	5.5	5.7	5.95	5.95	8.1	8.05	6.05	5.7	6.55	5.3	5.0	5.0
7.....	5.5	5.7	6.55	6.0	11.45	7.8	6.3	5.6	6.4	5.3	5.0	5.0
8.....	5.5	5.7	9.7	6.0	12.15	7.7	6.2	5.6	6.3	5.3	5.0	5.0
9.....	5.5	5.7	7.75	6.0	9.3	7.6	6.2	5.5	6.2	5.3	5.0	5.0
10.....	5.5	5.7	7.25	5.9	8.4	7.5	6.2	5.5	6.1	5.2	5.0	5.0
11.....	5.5	5.7	8.4	5.8	8.1	7.35	6.2	5.5	6.1	5.2	5.0	5.0
12.....	5.5	5.7	8.3	5.8	7.75	7.25	6.1	5.5	6.0	5.2	5.0	5.0
13.....	5.6	5.7	7.4	5.8	7.55	6.95	6.1	5.5	5.9	5.2	5.0	5.0
14.....	5.6	5.7	8.95	5.8	7.35	6.85	6.2	5.5	5.9	5.2	5.0	5.0
15.....	5.6	5.7	7.55	5.8	7.35	6.8	6.3	5.65	5.9	5.2	5.0	5.0
16.....	5.6	5.7	7.15	5.8	7.4	6.7	6.3	5.8	5.8	5.2	5.0	5.0
17.....	5.6	5.7	6.85	5.8	7.25	6.65	6.3	5.85	5.8	5.2	5.0	5.0
18.....	5.6	5.7	6.55	5.8	7.05	6.6	6.3	6.15	5.8	5.2	5.0	5.0
19.....	5.6	5.7	6.5	5.8	6.95	6.55	6.2	5.95	5.8	5.2	5.0	5.0
20.....	5.6	6.05	6.4	5.8	6.75	6.45	6.15	5.95	5.7	5.2	5.0	5.0
21.....	5.65	6.35	6.25	5.8	8.0	6.4	6.15	6.0	5.7	5.1	5.0	5.0
22.....	5.7	6.0	6.1	5.8	7.25	6.4	6.1	7.6	5.6	5.1	5.0	5.0
23.....	6.0	7.05	6.1	5.8	7.05	6.3	6.1	6.6	5.6	5.1	5.0	5.0
24.....	6.3	6.6	6.1	5.8	7.9	6.3	6.1	6.25	5.6	5.1	5.0	5.0
25.....	5.85	6.25	6.0	5.8	9.75	6.2	6.1	6.2	5.5	5.1	5.0	5.0
26.....	5.75	6.1	6.0	5.7	8.9	6.2	6.3	6.1	5.5	5.1	5.0	5.0
27.....	5.7	6.0	6.0	5.7	11.15	6.2	6.2	6.0	5.5	5.1	5.0	5.1
28.....	5.7	5.9	5.9	5.7	15.15	6.1	6.1	7.55	5.5	5.1	5.0	5.1
29.....	5.7	5.9	5.9	5.7	.....	6.1	6.0	7.05	5.4	5.1	5.0	5.1
30.....	5.7	5.9	5.9	5.7	.....	6.1	6.0	6.6	5.4	5.1	5.0	5.1
31.....	5.7	.....	5.9	5.7	.....	6.0	.....	6.4	.....	5.1	5.0	.....
1898-99.												
1.....	5.1	5.1	5.55	5.55	7.05	8.4	9.5	6.6	9.25	5.45	5.1	5.0
2.....	5.1	5.1	5.4	6.1	6.85	8.75	9.3	6.6	7.3	5.4	5.0	5.0
3.....	5.3	5.2	5.35	6.2	6.7	8.05	8.95	6.5	6.9	5.4	5.0	5.0
4.....	5.3	5.2	5.3	5.75	6.4	7.55	8.8	6.5	6.65	5.4	5.0	5.0
5.....	5.3	5.2	5.3	5.65	6.15	7.35	8.7	6.5	6.55	5.4	5.0	5.0
6.....	5.3	5.1	5.3	5.6	6.0	7.1	8.5	6.5	6.45	5.4	5.0	5.0
7.....	5.2	5.1	5.3	6.0	6.0	7.0	8.3	6.5	6.35	5.3	5.0	5.0
8.....	5.2	5.1	5.2	5.95	6.0	6.9	8.35	6.6	6.25	5.3	5.0	5.0
9.....	5.2	5.1	5.2	5.9	5.9	6.75	8.3	6.5	6.1	5.3	5.0	5.0
10.....	5.2	5.1	5.2	13.65	5.9	6.6	8.3	6.5	6.1	5.3	5.0	5.0
11.....	5.2	5.1	5.2	10.05	5.9	6.5	8.1	6.6	6.0	5.3	5.0	5.0
12.....	5.1	5.1	5.2	7.55	5.9	6.4	8.0	6.6	5.95	5.3	5.0	5.0
13.....	5.1	5.1	5.2	7.15	5.9	6.3	7.8	6.6	5.85	5.3	5.0	5.0
14.....	5.1	5.1	5.25	10.9	6.0	6.35	7.65	6.6	5.8	5.3	5.0	5.0
15.....	5.1	5.1	5.3	16.2	6.0	8.8	7.6	6.5	5.75	5.2	5.0	5.0
16.....	5.1	5.1	5.3	16.0	6.15	18.95	7.6	6.4	5.7	5.2	5.0	5.0
17.....	5.1	5.1	5.3	11.05	6.15	12.9	7.5	6.3	5.65	5.2	5.0	5.0
18.....	5.1	5.1	5.3	13.1	6.2	10.05	7.4	6.3	5.6	5.2	5.0	5.0
19.....	5.1	5.3	5.4	10.7	6.4	8.85	7.2	6.3	5.55	5.2	5.0	5.0
20.....	5.1	5.4	5.75	8.85	6.65	8.65	7.2	6.2	5.5	5.2	5.0	5.0
21.....	5.1	5.3	5.65	8.25	6.65	8.7	7.2	6.15	5.5	5.2	5.0	5.0
22.....	5.1	5.3	5.45	7.95	6.35	9.7	7.0	6.0	5.5	5.2	5.0	5.0
23.....	5.2	5.3	5.4	7.65	6.5	14.85	7.0	6.1	5.5	5.1	5.0	5.0
24.....	5.3	5.3	5.3	7.35	6.5	20.45	7.0	6.1	5.5	5.1	5.0	5.0
25.....	5.3	.....	5.3	7.15	6.4	23.0	7.05	6.2	5.6	5.1	5.0	5.0
26.....	5.3	5.2	5.3	7.15	6.3	16.5	6.85	6.2	5.6	5.1	5.0	5.0
27.....	5.2	5.2	5.3	7.35	6.1	13.9	6.85	6.2	5.5	5.1	5.0	5.0
28.....	5.15	5.35	5.3	7.5	6.1	12.4	6.75	6.1	5.5	5.1	5.0	5.0
29.....	5.1	6.0	5.3	7.55	.....	11.45	6.7	6.1	5.5	5.1	5.0	5.0
30.....	5.1	6.15	5.3	7.45	.....	10.4	6.7	6.1	5.5	5.1	5.0	5.0
31.....	5.1	.....	5.3	7.15	.....	9.8	.....	6.0	.....	5.1	5.0	.....

<sup>a</sup> Maximum, 16.2 feet.

<sup>b</sup> Maximum, 25.5 feet, 8 a. m.

Daily gage height, in feet, of Sacramento River at Jellys Ferry, Cal., for 1895-1902—Con.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1899-1900.												
1.....	5.0	5.5	11.2	19.5	7.4	8.1	7.7	7.2	6.1	5.4	4.9	4.9
2.....	5.0	5.4	9.7	25.0	7.3	8.0	9.05	7.2	6.1	5.4	4.9	4.9
3.....	5.0	5.4	8.9	25.0	7.4	8.55	9.0	7.25	6.0	5.4	4.9	4.9
4.....	5.0	5.4	8.35	18.5	8.1	9.85	8.5	7.2	6.0	5.35	4.9	4.8
5.....	5.0	5.4	8.7	15.45	7.65	10.25	8.1	10.75	5.9	5.3	4.9	5.6
6.....	5.0	5.4	7.85	17.25	7.5	11.0	7.9	8.85	5.9	5.3	4.9	5.2
7.....	5.0	5.4	7.6	19.0	7.4	15.75	8.35	8.3	5.8	5.3	4.9	5.1
8.....	5.0	5.4	7.95	18.5	7.3	a29.0	8.0	8.0	5.8	5.2	4.9	5.1
9.....	5.0	6.4	7.55	15.45	7.25	20.3	7.85	7.65	5.7	5.2	4.9	5.1
10.....	5.0	10.8	7.4	13.55	7.1	16.4	7.6	7.5	5.7	5.2	4.9	5.0
11.....	5.0	14.5	8.75	12.35	7.0	14.35	7.45	8.65	5.7	5.2	4.9	5.0
12.....	5.0	8.2	10.2	11.55	7.0	13.1	9.6	8.3	5.7	5.1	4.9	5.0
13.....	5.1	7.6	9.0	10.9	6.9	12.15	9.7	7.9	5.6	5.1	4.9	5.0
14.....	5.1	7.55	8.7	10.8	6.8	11.35	9.0	7.55	5.6	5.1	4.9	5.0
15.....	5.1	7.0	16.85	11.1	6.7	10.95	8.7	7.35	5.6	5.1	4.9	5.0
16.....	5.1	7.7	12.4	10.85	6.9	10.4	8.35	7.25	5.85	5.1	4.9	5.0
17.....	5.1	11.1	11.7	10.65	6.8	10.0	8.2	7.15	5.75	5.1	4.9	5.0
18.....	5.1	8.7	10.0	10.3	6.8	9.65	8.0	7.05	5.7	5.1	4.9	5.0
19.....	5.1	8.95	8.95	9.95	7.9	9.55	7.9	7.0	5.7	5.1	4.9	5.0
20.....	7.65	7.6	8.3	9.6	9.8	9.3	8.6	6.9	5.6	5.1	4.9	5.0
21.....	7.6	9.15	8.05	9.35	10.95	9.1	8.75	6.8	5.6	5.0	4.9	5.0
22.....	7.35	9.4	7.8	8.95	12.05	9.0	9.0	6.7	6.0	5.0	4.9	5.0
23.....	6.9	8.25	7.7	8.65	10.15	8.8	8.2	6.65	5.8	5.0	4.9	5.0
24.....	5.95	7.6	7.65	8.4	9.35	8.7	7.8	6.6	5.8	5.0	4.9	4.9
25.....	5.75	7.35	7.45	8.25	8.8	8.55	7.55	6.5	5.7	5.0	4.9	4.9
26.....	5.6	7.15	7.4	7.55	9.05	8.45	7.4	6.5	5.7	5.0	4.9	4.9
27.....	5.6	8.15	7.3	7.9	8.65	8.25	7.3	6.4	5.6	5.0	4.9	4.9
28.....	5.6	17.85	7.2	7.8	8.35	8.1	7.25	6.4	5.5	4.9	4.9	4.9
29.....	5.5	18.25	7.1	7.7	.....	7.9	7.1	6.3	5.5	4.9	4.9	4.9
30.....	5.4	14.65	8.9	7.65	.....	7.8	7.05	6.25	5.4	4.9	4.9	4.9
31.....	5.6	.....	8.55	7.55	.....	7.7	.....	6.1	.....	4.9	.....	.....
1900-1901.												
1.....	4.9	5.85	6.85	7.05	8.55	16.9	7.85	8.9	6.5	5.4	5.0	4.9
2.....	4.9	5.8	6.75	7.1	8.25	15.65	7.7	8.65	6.4	5.4	5.0	4.9
3.....	5.85	5.65	6.65	15.9	8.05	15.25	8.6	8.45	6.3	5.4	5.0	4.9
4.....	6.95	5.6	6.5	b21.65	8.4	14.15	8.0	8.2	6.2	5.4	5.0	4.9
5.....	11.2	5.6	6.4	12.75	12.15	13.2	7.95	8.0	6.2	5.4	5.0	4.9
6.....	6.75	5.5	6.3	11.3	9.4	12.75	8.3	7.95	6.2	5.3	5.0	4.8
7.....	5.65	5.5	6.3	10.55	8.6	12.3	8.05	7.9	6.1	5.3	5.0	4.8
8.....	5.45	5.5	6.2	9.35	8.9	11.9	7.85	7.8	6.0	5.3	5.0	4.8
9.....	5.35	5.5	6.2	8.85	8.3	11.45	7.65	7.7	5.95	5.3	4.9	4.8
10.....	5.3	5.4	6.2	8.35	7.75	11.3	7.55	7.65	5.9	5.3	4.9	4.8
11.....	5.2	5.4	6.1	8.25	7.45	11.8	7.5	7.7	5.85	5.25	4.9	4.8
12.....	5.2	5.4	6.0	8.7	7.35	11.2	7.5	7.7	5.7	5.2	4.9	4.8
13.....	5.15	5.4	6.0	9.7	7.4	10.85	7.4	7.6	5.7	5.2	4.9	4.8
14.....	5.1	5.3	9.95	9.5	8.85	10.35	7.65	7.6	5.7	5.15	4.9	4.8
15.....	5.1	5.3	8.6	10.7	8.65	10.05	7.65	7.5	5.6	5.2	4.9	4.8
16.....	5.1	5.4	9.9	9.8	10.85	9.8	7.5	7.5	5.6	5.2	4.9	4.8
17.....	5.1	8.45	12.65	9.7	14.45	9.7	7.4	7.45	5.6	5.2	4.9	4.8
18.....	5.2	8.5	9.9	9.65	12.65	9.45	7.4	7.35	5.6	5.2	4.9	4.8
19.....	9.5	6.95	9.95	9.4	18.25	9.3	7.5	7.15	5.6	5.2	4.9	4.8
20.....	8.7	6.6	12.25	9.0	25.8	9.15	7.4	7.0	5.6	5.1	4.9	4.8
21.....	7.75	13.05	22.5	12.0	22.9	9.1	7.5	6.9	5.6	5.1	4.9	4.8
22.....	6.1	8.1	15.25	17.45	19.35	9.0	7.5	6.8	5.6	5.1	4.9	4.8
23.....	6.0	7.15	13.15	14.25	22.65	8.85	7.45	6.7	5.6	5.1	4.9	5.15
24.....	5.8	6.8	11.05	12.1	21.8	8.75	7.4	6.6	5.6	5.1	4.9	5.75
25.....	5.6	7.45	10.2	11.0	19.85	8.7	7.3	6.7	5.5	5.1	4.9	5.6
26.....	5.5	8.9	9.1	10.0	18.65	8.8	7.3	6.8	5.5	5.1	4.9	5.3
27.....	5.5	8.2	8.55	9.45	17.75	8.65	7.2	6.7	5.5	5.05	4.9	5.2
28.....	5.5	8.5	8.1	9.4	17.45	8.5	7.35	6.8	5.5	5.0	4.9	5.2
29.....	5.5	7.05	7.75	9.3	.....	8.35	9.65	6.8	5.5	5.0	4.9	5.1
30.....	5.5	6.9	7.55	9.05	.....	8.20	9.7	6.7	5.45	5.0	4.9	5.3
31.....	5.5	.....	7.4	8.75	.....	8.15	.....	6.6	.....	5.0	4.9	.....

a Maximum, 30 feet, 8 a. m.

b Maximum 27.5 feet 8 a. m.

Daily gage height, in feet, of Sacramento River at Jellys Ferry, Cal., for 1895-1902—Con.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1901-2.												
1.....	5.2	5.2	8.8	5.7	5.5	19.65	8.90	11.35	8.25	.....	.....	.....
2.....	5.1	5.2	10.25	6.0	5.75	21.25	9.15	10.5	8.15	.....	.....	.....
3.....	5.1	5.2	11.35	6.25	5.55	16.75	9.65	9.95	7.85	.....	.....	.....
4.....	5.1	5.2	19.6	5.85	6.5	15.25	11.25	9.65	7.65	.....	.....	.....
5.....	5.1	5.2	13.1	5.8	8.1	14.2	10.9	9.45	7.6	.....	.....	.....
6.....	5.1	5.2	14.2	5.8	9.35	17.65	11.25	9.55	7.6	.....	.....	.....
7.....	5.1	5.2	10.3	5.7	16.0	15.8	18.35	11.5	7.5	.....	.....	.....
8.....	5.1	5.2	9.15	5.7	21.9	19.8	17.55	11.1	7.65	.....	.....	.....
9.....	5.1	5.2	8.25	5.7	25.15	21.9	14.55	10.75	7.7	.....	.....	.....
10.....	5.1	5.2	8.1	5.7	32.6	17.1	13.0	10.5	7.65	.....	.....	.....
11.....	5.0	5.2	7.6	5.6	29.65	15.1	12.35	10.15	7.55	.....	.....	.....
12.....	5.0	5.2	7.15	5.6	26.0	13.95	11.5	9.9	7.4	.....	.....	.....
13.....	5.0	5.2	7.0	5.6	19.25	15.15	11.0	10.6	7.3	.....	.....	.....
14.....	5.0	5.2	6.75	5.5	18.3	12.55	10.9	11.75	7.5	.....	.....	.....
15.....	5.0	5.2	6.6	5.5	23.8	11.95	10.85	12.25	6.93	.....	.....	.....
16.....	5.0	5.8	6.25	5.55	22.55	11.45	10.85	11.1	6.9	.....	.....	.....
17.....	5.0	5.7	6.2	5.5	23.1	11.1	10.85	10.65	6.85	.....	.....	.....
18.....	5.0	5.45	6.2	5.5	20.9	10.95	10.9	10.15	6.7	.....	.....	.....
19.....	5.0	5.4	6.2	5.35	17.45	10.95	11.35	9.75	6.6	.....	.....	.....
20.....	5.0	6.4	6.1	5.5	15.5	10.45	11.0	9.35	6.5	.....	.....	.....
21.....	5.0	6.45	6.1	5.95	17.1	10.55	10.6	9.1	6.5	.....	.....	.....
22.....	5.0	6.5	6.05	5.9	20.8	10.25	10.1	8.9	6.45	.....	.....	.....
23.....	5.0	6.4	6.0	5.75	21.2	10.25	9.75	8.8	6.4	.....	.....	.....
24.....	5.0	7.75	6.0	6.25	32.65	9.95	9.65	8.8	6.4	.....	.....	.....
25.....	5.0	6.65	6.0	5.85	32.0	9.6	9.75	8.8	6.3	.....	.....	.....
26.....	5.0	8.05	6.0	5.65	28.8	9.4	9.35	8.8	6.3	.....	.....	.....
27.....	5.4	8.4	5.9	5.6	25.9	9.2	9.2	9.15	9.15	.....	.....	.....
28.....	5.7	7.3	5.8	5.5	21.3	9.0	8.85	9.15	6.1	.....	.....	.....
29.....	5.65	16.55	5.8	5.5	.....	8.9	10.7	8.85	6.1	.....	.....	.....
30.....	5.35	11.05	5.8	5.5	.....	8.9	10.45	8.5	6.0	.....	.....	.....
31.....	5.2	.....	5.7	5.5	.....	8.9	.....	8.4	.....	.....	.....	.....

a Maximum 33.6 feet 5 p. m.

b Maximum 35.5 feet 5 p. m.

Rating table for Sacramento River at Jellys Ferry, Cal., for 1895-1902.

Gage height.		Dis-charge.													
Feet.	Sec.-ft.	Feet.	Sec.-ft.												
4.80	4,205	6.40	7,430	9.00	14,600	21.00	70,400	4.90	4,375	6.50	7,675	9.20	15,200	22.00	76,800
5.00	4,550	6.60	7,920	9.40	15,800	23.00	83,400	5.10	4,725	6.70	8,170	9.60	16,400	24.00	90,000
5.20	4,905	6.80	8,425	9.80	17,000	25.00	96,600	5.30	5,090	6.90	8,685	10.00	17,600	26.00	103,200
5.40	5,280	7.00	8,950	10.20	18,200	27.00	109,800	5.50	5,475	7.20	9,485	12.00	24,400	28.00	116,400
5.60	5,670	7.40	10,030	13.00	28,400	29.00	123,000	5.70	5,870	7.60	10,580	14.00	32,400	30.00	129,600
5.80	6,075	7.80	11,140	15.00	36,800	31.00	136,200	5.90	6,285	8.00	11,700	16.00	41,600	32.00	142,800
6.00	6,500	8.20	12,280	17.00	46,600	33.00	149,400	6.10	6,725	8.40	12,860	18.00	52,300	34.00	156,000
6.20	6,955	8.60	13,440	19.00	58,200	35.00	162,600	6.30	7,190	8.80	14,020	20.00	64,200	.....	.....

NOTE.—This table is not applicable for obstructed channel conditions. It is based mainly on discharge measurements made during 1895 to 1901 by hydrographers of the U. S. Geological Survey and is fairly well defined. Some of the measurements have been revised from a study of the original notes and the meter ratings. It is believed that this revised curve is fairly representative of the discharge during the period covered.

*Daily discharge, in second-feet, of Sacramento River at Jellys Ferry, Cal., for 1895-1902.*

Day.	Apr.	May.	June.	July.	Aug.	Sept.	Day.	Apr.	May.	June.	July.	Aug.	Sept.
1895.							1895.						
1		23,100	15,500	8,170	6,080	5,480	16		26,200	10,400	7,070	5,670	6,280
2		25,400	14,600	8,170	6,080	5,480	17		25,800	10,000	6,960	5,670	6,280
3		24,800	14,300	8,170	6,080	5,480	18		24,200	9,760	6,840	5,670	6,280
4		28,400	14,300	8,170	6,080	5,480	19		22,400	9,620	6,720	5,670	6,080
5		33,300	14,900	9,080	6,080	5,480	20		20,600	9,620	6,720	5,670	6,080
6		38,200	14,600	8,560	6,080	5,480	21		18,900	9,620	6,610	5,670	6,080
7		37,800	14,000	8,040	5,870	5,480	22		17,400	9,620	6,500	5,670	5,870
8		35,300	13,400	7,920	5,870	5,480	23		16,400	9,620	6,500	5,670	5,870
9		29,800	13,000	7,680	5,870	5,480	24		15,800	9,480	6,500	5,670	5,870
10		26,800	12,600	7,680	5,870	5,480	25		15,800	9,220	6,500	5,570	5,870
11		24,600	12,300	7,430	5,870	6,610	26		24,000	8,950	6,390	5,480	5,870
12		24,600	12,100	7,430	5,870	11,000	27		30,200	8,820	6,250	5,480	5,870
13		25,400	12,000	7,430	5,870	9,760	28		21,700	8,680	6,280	5,480	5,870
14		26,400	11,300	7,310	5,870	7,190	29		24,400	18,700	8,420	6,280	5,770
15		26,400	11,000	7,190	5,670	6,610	30		23,500	17,200	8,170	6,280	5,480
							31		16,100		6,180	5,480	5,870

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1895-96.												
1	5,670	5,670	6,390	5,870	30,800	11,400	22,100	27,800	18,700	8,680	6,280	5,870
2	5,670	5,670	6,280	5,870	28,000	11,300	20,200	29,400	18,600	8,420	6,280	5,870
3	5,670	5,670	6,080	5,870	24,200	11,300	18,900	30,000	17,900	8,170	6,280	5,670
4	5,480	5,670	6,080	5,870	21,700	11,000	17,600	71,700	17,800	8,170	6,080	5,670
5	5,480	5,670	6,280	5,870	19,500	10,900	18,200	58,500	17,900	7,920	6,080	5,670
6	5,480	5,670	9,760	5,870	18,100	12,000	26,200	43,800	17,600	7,920	6,080	5,670
7	5,670	5,670	7,680	5,870	16,800	16,600	26,400	37,300	17,000	7,920	6,080	5,670
8	5,670	5,670	6,840	5,870	16,000	18,700	22,800	32,400	16,600	7,680	6,080	5,670
9	5,480	5,670	6,500	5,870	15,000	19,500	22,600	29,000	15,800	7,680	6,080	5,670
10	5,480	5,670	6,280	5,870	14,500	16,700	21,900	26,200	15,200	7,680	6,080	5,670
11	5,480	5,670	6,080	5,870	13,900	15,400	19,700	34,600	14,300	7,430	5,870	5,670
12	5,480	5,670	6,080	5,870	13,300	14,800	18,700	31,200	14,000	7,430	5,870	5,670
13	5,480	5,670	6,080	5,870	12,700	14,300	18,400	28,000	13,600	7,430	5,870	5,670
14	5,480	5,670	6,080	6,280	12,300	14,000	21,300	25,800	13,300	7,190	5,870	5,670
15	5,480	5,770	6,840	21,700	11,800	13,300	19,200	24,000	13,000	7,190	5,870	5,670
16	5,480	5,870	6,500	58,200	11,400	13,000	17,900	22,100	12,600	7,190	5,870	5,480
17	5,480	5,870	6,280	114,000	11,100	12,900	17,200	20,600	12,100	7,190	5,870	5,480
18	5,480	5,870	6,180	122,000	10,900	12,600	16,200	19,700	11,800	6,960	5,870	5,480
19	5,480	5,870	6,280	82,400	10,600	12,300	16,200	19,200	11,600	6,960	5,870	5,480
20	5,480	5,870	27,400	115,000	10,400	14,000	15,600	18,100	11,100	6,960	5,870	5,970
21	5,670	5,870	10,300	106,000	10,300	19,400	15,600	17,600	10,900	6,720	5,870	5,870
22	5,670	5,870	7,680	79,100	10,300	23,700	15,800	26,600	10,600	6,720	5,870	5,870
23	5,670	5,870	7,430	61,200	10,000	33,100	17,400	25,600	10,300	6,720	5,870	5,870
24	5,670	5,870	6,960	54,100	10,000	43,100	55,500	22,800	10,000	6,500	5,670	5,870
25	5,670	5,870	6,500	76,500	9,760	46,600	46,100	21,000	9,760	6,500	5,670	5,870
26	5,670	5,870	6,280	67,000	9,760	51,200	40,400	20,500	9,480	6,500	5,670	5,870
27	5,670	5,870	6,080	128,000	10,200	58,500	33,300	20,500	9,220	6,500	5,670	5,670
28	5,670	5,870	6,080	92,000	11,800	43,800	28,800	20,200	9,220	6,500	5,670	5,670
29	5,670	6,720	6,080	63,300	11,600	35,000	28,000	20,900	8,950	6,500	5,670	5,670
30	5,670	6,080	5,870	46,900	.....	29,400	30,400	20,800	8,950	6,500	5,670	5,670
31	5,670	.....	5,870	35,000	.....	25,000	.....	19,500	.....	6,280	5,870	.....
1896-97.												
1	5,670	6,280	8,560	28,800	62,700	43,800	27,000	18,200	9,350	7,070	5,870	5,480
2	5,670	6,080	8,820	21,700	59,400	30,200	22,100	17,800	9,220	6,960	5,870	5,480
3	5,670	6,080	8,820	18,400	56,400	25,800	20,300	17,300	8,950	6,960	5,870	5,480
4	5,670	5,870	8,950	16,100	67,600	23,000	19,400	17,300	8,820	6,960	5,870	5,480
5	5,670	5,870	8,950	14,600	88,400	24,000	19,200	17,400	8,680	6,840	5,670	5,480
6	5,670	5,870	9,220	13,600	80,800	23,500	19,800	17,400	8,420	6,720	5,670	5,480
7	5,480	5,870	9,220	13,000	66,100	25,200	21,500	16,400	8,170	6,720	5,670	5,480
8	5,480	5,870	8,950	12,400	46,100	24,200	21,700	15,400	8,170	6,720	5,670	5,480
9	5,480	5,970	8,680	11,800	38,700	23,500	22,100	14,600	7,920	6,720	5,670	5,480
10	5,480	6,720	8,420	11,300	32,400	21,500	22,800	14,500	7,680	6,500	5,670	5,480
11	5,480	6,280	8,170	11,000	27,400	19,500	24,400	15,200	7,680	6,500	5,670	5,480
12	5,480	6,080	10,000	10,600	25,400	18,600	24,600	14,800	7,680	6,500	5,670	5,480
13	5,480	6,080	21,700	10,700	22,800	17,200	24,400	14,800	7,430	6,500	5,670	5,480
14	5,480	5,870	43,400	10,600	21,300	16,200	24,200	14,600	7,430	6,280	5,670	5,480
15	5,480	5,870	90,000	10,300	20,800	16,000	24,800	14,200	7,800	6,280	5,670	5,480

Daily discharge, in second-feet, of Sacramento River at Jellys Ferry, Cal., for 1895-1902—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1896-97.												
16	5,480	11,600	45,100	10,000	28,800	16,600	25,200	14,000	7,680	6,280	5,670	5,480
17	5,480	23,300	29,000	9,620	24,400	16,800	25,000	13,600	7,430	6,280	5,670	5,480
18	5,480	14,900	21,300	9,220	20,900	16,400	25,400	13,200	7,190	6,080	5,480	5,480
19	5,480	10,400	17,300	8,950	32,200	16,200	26,200	12,600	7,310	6,080	5,480	5,480
20	5,480	13,000	15,400	8,950	29,200	16,200	28,600	12,600	8,420	6,080	5,480	5,480
21	5,480	10,200	14,000	8,820	22,800	14,900	24,800	12,300	9,480	6,080	5,480	5,480
22	5,480	19,200	12,900	8,680	19,700	14,200	22,800	12,000	8,820	6,080	5,480	5,480
23	5,480	19,500	11,800	8,680	18,100	13,600	21,300	11,700	8,560	6,080	5,480	5,480
24	5,480	38,700	11,300	8,820	17,200	13,200	20,300	11,700	8,040	6,080	5,480	5,480
25	5,480	22,400	11,000	8,950	17,300	13,700	20,200	11,400	8,800	6,080	5,480	5,480
26	5,670	15,400	10,600	8,680	17,600	18,100	20,800	10,900	7,680	5,870	5,480	5,480
27	7,680	12,600	17,400	8,680	17,900	17,900	21,500	10,300	7,680	5,870	5,480	5,480
28	6,180	10,900	37,500	10,200	17,600	41,100	20,800	10,200	7,430	5,870	5,480	5,480
29	5,870	9,620	39,900	49,200	.....	34,800	19,700	9,760	7,430	5,870	5,480	5,480
30	5,870	9,080	44,600	32,200	.....	28,800	18,600	9,760	7,190	5,870	5,480	5,480
31	5,870	.....	43,600	31,600	.....	25,000	.....	9,480	.....	5,870	5,480	.....
1897-98.												
1	5,480	5,870	6,280	6,280	5,870	22,600	6,500	6,280	9,620	5,280	4,720	4,550
2	5,670	5,870	6,280	6,280	6,080	17,400	6,500	6,280	10,400	5,280	4,720	4,550
3	5,670	5,870	6,080	6,280	6,080	15,200	6,500	6,080	9,220	5,040	4,720	4,550
4	5,480	5,870	6,080	6,280	6,610	13,600	6,500	6,080	8,820	5,090	4,550	4,550
5	5,480	5,870	6,080	6,280	6,610	12,600	6,500	6,080	8,300	5,090	4,550	4,550
6	5,480	5,870	6,390	6,390	12,000	11,800	6,610	5,870	7,800	5,090	4,550	4,550
7	5,480	5,870	7,800	6,500	22,400	11,100	7,190	5,670	7,430	5,090	4,550	4,550
8	5,480	5,870	16,700	6,500	25,000	10,900	6,960	5,670	7,190	5,090	4,550	4,550
9	5,480	5,870	11,000	6,500	15,500	10,600	6,960	5,480	6,960	5,090	4,550	4,550
10	5,480	5,870	9,620	6,280	12,900	10,300	6,960	5,480	6,720	4,900	4,550	4,550
11	5,480	5,870	12,900	6,080	12,000	9,890	6,960	5,480	6,720	4,900	4,550	4,550
12	5,480	5,870	12,600	6,080	11,000	9,620	6,720	5,480	6,500	4,900	4,550	4,550
13	5,670	5,870	10,000	6,080	10,400	8,820	6,720	5,480	6,280	4,900	4,550	4,550
14	5,670	5,870	14,500	6,080	9,890	8,560	6,960	5,480	6,280	4,900	4,550	4,550
15	5,670	5,870	10,400	6,080	9,890	8,420	7,190	5,770	6,280	4,900	4,550	4,550
16	5,670	5,870	9,350	6,080	10,000	8,170	7,190	6,080	6,080	4,900	4,550	4,550
17	5,670	5,870	8,560	6,080	9,620	8,040	7,190	6,180	6,080	4,900	4,550	4,550
18	5,670	5,870	7,800	6,080	9,080	7,920	7,190	6,840	6,080	4,900	4,550	4,550
19	5,670	5,870	7,680	6,080	8,820	7,800	6,960	6,390	6,080	4,900	4,550	4,550
20	5,670	6,620	7,430	6,080	8,300	7,550	6,840	6,390	5,870	4,900	4,550	4,550
21	5,770	7,310	7,070	6,080	11,700	7,430	6,840	6,500	5,870	4,720	4,550	4,550
22	5,870	6,500	6,720	6,080	9,620	7,430	6,720	10,600	5,670	4,720	4,550	4,550
23	6,500	9,080	6,720	6,080	9,080	7,190	6,720	7,920	5,670	4,720	4,550	4,550
24	7,190	7,920	6,720	6,080	11,400	7,190	6,720	7,070	5,670	4,720	4,550	4,550
25	6,180	7,070	6,500	6,080	16,800	6,960	6,720	6,960	5,480	4,720	4,550	4,550
26	5,970	6,720	6,500	5,870	14,300	6,960	7,190	6,720	5,480	4,720	4,550	4,550
27	5,870	6,500	6,500	5,870	21,300	6,960	6,960	6,500	5,480	4,720	4,550	4,720
28	5,870	6,280	6,280	5,870	37,500	6,720	6,720	10,400	7,480	4,720	4,550	4,720
29	5,870	6,280	6,280	5,870	.....	6,720	6,500	9,080	5,280	4,720	4,550	4,720
30	5,870	6,280	6,280	5,870	.....	6,720	6,500	7,920	5,280	4,720	4,550	4,720
31	5,870	.....	6,280	5,870	.....	6,500	.....	7,430	.....	4,720	4,550	.....
1898-99.												
1	4,720	4,720	5,570	5,570	9,080	12,900	16,100	7,920	15,400	5,380	4,720	4,550
2	4,720	4,720	5,280	6,720	8,560	13,900	15,500	7,920	9,760	5,280	4,550	4,550
3	5,090	4,900	5,180	6,960	8,170	11,800	14,500	7,680	8,680	5,280	4,550	4,550
4	5,090	4,900	5,090	5,970	7,430	10,400	14,000	7,680	8,040	5,280	4,550	4,550
5	5,090	4,900	5,090	5,770	6,840	9,890	13,700	7,680	7,800	5,280	4,550	4,550
6	5,090	4,720	5,090	5,670	6,500	9,220	13,200	7,680	7,550	5,280	4,550	4,550
7	4,900	4,720	5,090	6,500	6,500	8,950	12,600	7,680	7,310	5,090	4,550	4,550
8	4,900	4,720	4,900	6,390	6,500	8,680	12,700	7,920	7,070	5,090	4,550	4,550
9	4,900	4,720	4,900	6,280	6,280	8,300	12,600	7,680	6,720	5,090	4,550	4,550
10	4,900	4,720	4,900	31,000	6,280	7,920	12,600	7,680	6,720	5,090	4,550	4,550
11	4,900	4,720	4,900	17,800	6,280	7,680	12,000	7,920	6,500	5,090	4,550	4,550
12	4,720	4,720	4,900	10,400	6,280	7,430	11,700	7,920	6,390	5,090	4,550	4,550
13	4,720	4,720	4,900	9,350	6,250	7,190	11,100	7,920	6,180	5,090	4,550	4,550
14	4,720	4,720	5,000	20,500	6,500	7,310	10,700	7,920	6,080	5,090	4,550	4,550
15	4,720	4,720	5,090	42,600	6,500	14,000	10,600	7,680	5,970	4,900	4,550	4,550
16	4,720	4,720	5,090	41,600	6,840	57,900	10,600	7,430	5,870	4,900	4,550	4,550
17	4,720	4,720	5,090	21,000	6,840	28,000	10,300	7,190	5,770	4,900	4,550	4,550
18	4,720	4,720	5,090	28,800	6,960	17,800	10,000	7,190	5,670	4,900	4,550	4,550
19	4,720	5,090	5,280	19,800	7,430	14,200	9,480	7,190	5,570	4,900	4,550	4,550
20	4,720	5,280	5,970	14,200	8,040	13,600	9,480	6,960	5,480	4,900	4,550	4,550

Daily discharge, in second-feet, of Sacramento River at Jellys Ferry, Cal., for 1895-1902—  
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1898-99.												
21.....	4,720	5,090	5,770	12,400	8,040	13,700	9,480	6,840	5,480	4,900	4,550	4,550
22.....	4,720	5,090	5,380	11,600	7,310	16,700	8,950	6,500	5,480	4,900	4,550	4,550
23.....	4,900	5,090	5,280	10,700	7,680	36,100	8,950	6,720	5,480	4,720	4,550	4,550
24.....	5,090	5,090	5,090	9,890	7,680	67,000	8,950	6,720	5,480	4,720	4,550	4,550
25.....	5,090	4,900	5,090	9,350	7,430	83,400	9,850	6,960	5,670	4,720	4,550	4,550
26.....	5,090	4,900	5,090	9,350	7,190	44,100	8,560	6,960	5,670	4,720	4,550	4,550
27.....	4,900	4,900	5,090	9,890	6,720	32,000	8,560	6,960	5,480	4,720	4,550	4,550
28.....	4,820	5,180	5,090	10,300	6,720	26,000	8,300	6,720	5,480	4,720	4,550	4,550
29.....	4,720	6,500	5,090	10,400	.....	22,400	8,170	6,720	5,480	4,720	4,550	4,550
30.....	4,720	6,840	5,090	10,200	.....	18,900	8,170	6,720	5,480	4,720	4,550	4,550
31.....	4,720	.....	5,090	9,350	.....	17,000	.....	6,500	.....	4,720	4,550	.....
1899-1900.												
1.....	4,550	5,480	21,500	61,200	10,000	12,000	10,900	9,480	6,720	5,280	4,380	4,380
2.....	4,550	5,280	16,700	96,600	9,760	11,700	14,800	9,480	6,720	5,280	4,380	4,380
3.....	4,550	5,280	14,300	96,600	10,000	13,300	14,600	9,620	6,500	5,280	4,380	4,380
4.....	4,550	5,280	12,700	55,200	12,000	17,200	13,200	9,480	6,500	5,180	4,380	4,200
5.....	4,550	5,280	13,700	39,000	10,700	18,400	12,000	20,000	6,280	5,090	4,380	5,670
6.....	4,550	5,280	11,300	48,000	10,300	20,800	11,400	14,200	6,280	5,090	4,380	4,900
7.....	4,550	5,280	10,600	58,200	10,000	40,400	12,700	12,600	6,080	5,090	4,380	4,720
8.....	4,550	5,280	11,600	55,200	9,760	123,000	11,700	11,700	6,080	4,900	4,380	4,720
9.....	4,550	7,430	10,400	39,000	9,620	66,100	11,300	10,700	5,870	4,900	4,380	4,720
10.....	4,550	20,200	10,000	30,600	9,220	43,600	10,600	10,300	5,570	4,900	4,380	4,550
11.....	4,550	34,600	13,900	25,800	8,950	33,900	10,200	13,600	5,870	4,900	4,380	4,550
12.....	4,550	12,300	18,200	22,800	8,950	28,800	16,400	12,600	5,870	4,720	4,380	4,550
13.....	4,720	10,600	14,600	20,500	8,680	25,000	16,700	11,400	5,670	4,720	4,380	4,550
14.....	4,720	10,400	13,700	20,200	8,420	22,100	14,600	10,400	5,670	4,720	4,380	4,550
15.....	4,720	8,950	45,800	21,200	8,170	20,600	13,700	9,890	5,670	4,720	4,380	4,550
16.....	4,720	10,900	26,000	20,300	8,680	18,900	12,700	9,620	6,180	4,720	4,380	4,550
17.....	4,720	21,200	23,300	19,700	8,420	17,600	12,300	9,350	5,970	4,720	4,380	4,550
18.....	4,720	13,700	17,600	18,600	8,420	16,600	11,700	9,080	5,870	4,720	4,380	4,550
19.....	4,720	14,500	14,500	17,400	11,400	16,200	11,400	8,950	5,870	4,720	4,380	4,550
20.....	10,700	10,600	12,600	16,400	17,000	15,500	13,400	8,680	5,670	4,720	4,380	4,550
21.....	10,600	15,000	11,800	15,600	20,600	14,900	13,900	8,420	5,670	4,550	4,380	4,550
22.....	9,890	15,800	11,100	14,500	24,600	14,600	14,600	8,170	6,500	4,550	4,380	4,550
23.....	8,680	12,400	10,900	13,600	18,100	14,000	12,300	8,040	6,080	4,550	4,380	4,550
24.....	6,390	10,600	10,700	12,900	15,600	13,700	11,100	7,920	6,080	4,550	4,380	4,380
25.....	5,970	9,890	10,200	12,400	14,000	13,300	10,400	7,680	5,870	4,550	4,380	4,380
26.....	5,670	9,350	10,000	10,400	14,800	13,000	10,000	7,680	5,870	4,550	4,380	4,380
27.....	5,670	12,100	9,760	11,400	13,600	12,400	9,760	7,430	5,670	4,550	4,380	4,380
28.....	5,480	51,400	9,480	11,100	12,700	12,000	9,620	7,430	5,480	4,380	4,380	4,380
29.....	5,480	53,800	9,220	10,900	.....	11,400	9,220	7,190	5,480	4,380	4,380	4,380
30.....	5,280	35,200	14,300	10,700	.....	11,100	9,280	7,070	5,280	4,380	4,380	4,380
31.....	5,670	.....	13,300	10,400	.....	10,900	.....	6,720	.....	4,380	4,380	.....
1900-01.												
1.....	4,380	6,180	8,560	9,080	13,300	46,100	11,300	14,300	7,680	5,280	4,550	4,380
2.....	4,380	6,080	8,300	9,220	12,400	39,900	10,900	13,600	7,430	5,280	4,550	4,380
3.....	6,180	5,770	8,040	41,100	11,800	38,000	13,400	13,000	7,190	5,280	4,550	4,380
4.....	8,820	5,670	7,680	74,600	12,900	33,100	11,700	12,300	6,960	5,280	4,550	4,380
5.....	21,500	5,670	7,430	27,400	25,000	29,200	11,600	11,700	6,960	5,280	4,550	4,380
6.....	8,300	5,480	7,190	21,900	15,800	27,400	12,600	11,600	6,960	5,090	4,550	4,200
7.....	5,770	5,480	7,190	19,400	13,400	25,600	11,800	11,400	6,720	5,090	4,550	4,200
8.....	5,380	5,480	6,960	15,600	14,300	24,000	11,300	11,100	6,500	5,090	4,550	4,200
9.....	5,180	5,480	6,960	14,200	12,600	22,400	10,700	10,900	6,390	5,090	4,380	4,200
10.....	5,090	5,280	6,960	12,700	11,000	21,900	10,400	10,700	6,280	5,090	4,380	4,200
11.....	4,900	5,280	6,720	12,400	10,200	23,700	10,300	10,900	6,180	5,000	4,380	4,200
12.....	4,900	5,280	6,500	13,700	9,890	21,500	10,300	10,900	5,870	4,900	4,380	4,200
13.....	4,820	5,280	6,500	16,700	10,000	20,300	10,000	10,600	5,870	4,900	4,380	4,200
14.....	4,720	5,090	17,400	16,100	14,200	18,700	10,700	10,600	5,870	4,820	4,380	4,200
15.....	4,720	5,090	13,400	19,800	13,600	17,800	10,700	10,300	5,670	4,900	4,380	4,200
16.....	4,720	5,280	17,300	17,000	20,300	17,000	10,300	10,300	5,670	4,900	4,380	4,200
17.....	4,720	13,000	27,000	16,700	34,400	16,700	10,000	10,200	5,670	4,900	4,380	4,200
18.....	4,900	13,200	17,300	16,600	27,000	16,000	10,000	9,890	5,670	4,900	4,380	4,200
19.....	16,100	8,820	17,400	15,800	53,800	15,500	10,300	9,350	5,670	4,900	4,380	4,200
20.....	13,700	7,920	25,400	14,600	102,000	15,000	10,000	8,950	5,670	4,720	4,380	4,200
21.....	11,000	28,600	80,100	24,400	82,700	14,900	10,300	8,680	5,670	4,720	4,380	4,200
22.....	6,720	12,000	38,000	49,200	60,300	14,600	10,300	8,420	5,670	4,720	4,380	4,200
23.....	6,500	9,350	30,000	33,500	81,100	14,200	10,200	8,170	5,670	4,720	4,380	4,200
24.....	6,080	8,420	21,000	24,800	75,500	13,900	10,000	7,920	5,670	4,720	4,380	5,970
25.....	5,670	10,200	18,200	20,800	63,300	13,700	9,760	8,170	5,480	4,720	4,380	5,670

Daily discharge, in second-feet, of Sacramento River at Jellys Ferry, Cal., for 1895-1902—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1901-01.												
26.....	5,480	14,300	14,900	17,600	56,100	14,000	9,760	8,420	5,480	4,720	4,380	5,090
27.....	5,480	12,300	13,300	16,000	50,900	13,600	9,480	8,170	5,480	4,640	4,380	4,900
28.....	5,480	13,200	12,000	15,800	49,200	13,200	9,890	8,420	5,480	4,550	4,380	4,900
29.....	5,480	9,080	11,000	15,500	.....	12,700	16,600	8,420	5,480	4,550	4,380	4,720
30.....	5,480	8,680	10,400	14,800	.....	12,400	16,700	8,170	5,380	4,550	4,380	5,090
31.....	5,480	.....	10,000	13,900	.....	12,100	.....	7,920	.....	4,550	4,380	.....
1901-2.												
1.....	4,900	4,900	14,000	5,870	5,480	62,100	14,500	22,100	12,400	.....	.....	.....
2.....	4,720	4,900	18,400	6,500	5,970	72,000	15,000	19,200	12,100	.....	.....	.....
3.....	4,720	4,900	22,100	7,070	5,570	45,400	16,600	17,400	11,300	.....	.....	.....
4.....	4,720	4,900	61,800	6,180	7,680	38,000	21,700	16,600	10,700	.....	.....	.....
5.....	4,720	4,900	28,800	6,080	12,000	33,300	20,500	16,000	10,600	.....	.....	.....
6.....	4,720	4,900	32,300	6,080	15,600	50,300	21,700	16,200	10,600	.....	.....	.....
7.....	4,720	4,900	18,600	5,870	41,600	40,600	54,400	22,600	10,300	.....	.....	.....
8.....	4,720	4,900	15,000	5,870	76,200	63,000	49,700	21,200	10,700	.....	.....	.....
9.....	4,720	4,900	12,400	5,870	97,600	76,200	34,800	20,000	10,900	.....	.....	.....
10.....	4,720	4,900	12,000	5,870	147,000	47,200	28,400	19,200	10,700	.....	.....	.....
11.....	4,550	4,900	10,600	5,670	127,000	37,300	25,800	18,100	10,400	.....	.....	.....
12.....	4,550	4,900	9,350	5,670	103,000	32,200	22,600	17,300	10,000	.....	.....	.....
13.....	4,550	4,900	8,950	5,670	59,700	37,500	20,800	19,500	9,760	.....	.....	.....
14.....	4,550	4,900	8,300	5,480	54,100	26,600	20,500	23,500	9,760	.....	.....	.....
15.....	4,550	4,900	7,920	5,480	88,700	24,200	20,300	25,400	8,820	.....	.....	.....
16.....	4,550	6,080	7,070	5,570	80,400	22,400	20,300	21,200	8,680	.....	.....	.....
17.....	4,550	5,870	6,960	5,480	84,100	21,200	20,300	19,700	8,560	.....	.....	.....
18.....	4,550	5,380	6,960	5,480	69,800	20,600	20,500	18,100	8,170	.....	.....	.....
19.....	4,550	5,280	6,960	5,180	49,200	20,600	22,100	16,800	7,920	.....	.....	.....
20.....	4,550	7,430	6,720	5,480	39,200	19,000	20,800	15,600	7,680	.....	.....	.....
21.....	4,550	7,550	6,720	6,390	47,200	19,400	19,500	14,900	7,680	.....	.....	.....
22.....	4,550	7,680	6,610	6,280	69,200	18,400	17,900	14,300	7,550	.....	.....	.....
23.....	4,550	7,430	6,500	5,970	71,700	18,400	16,800	14,000	7,430	.....	.....	.....
24.....	4,550	11,000	6,500	7,070	147,000	17,400	16,600	14,000	7,430	.....	.....	.....
25.....	4,550	8,040	6,500	6,180	143,000	16,400	16,800	14,000	7,190	.....	.....	.....
26.....	4,550	11,800	6,500	5,770	122,000	15,800	15,600	14,000	7,190	.....	.....	.....
27.....	5,280	12,900	6,280	5,670	103,000	15,200	15,200	15,000	6,960	.....	.....	.....
28.....	5,870	9,760	6,080	5,480	72,300	14,600	14,200	15,000	6,720	.....	.....	.....
29.....	5,770	44,400	6,080	5,480	.....	14,300	19,800	14,200	6,720	.....	.....	.....
30.....	5,180	21,000	6,080	5,480	.....	14,300	19,000	13,200	6,500	.....	.....	.....
31.....	4,900	.....	5,870	5,480	.....	14,300	.....	12,900	.....	.....	.....	.....

Monthly discharge of Sacramento River at Jellys Ferry, Cal., for 1895-1902.

[Drainage area, 10,200 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.								
May.....	38,200	15,800	24,500	2.40	2.77	1,510,000	A.	
June.....	15,500	8,170	11,300	1.11	1.24	672,000	A.	
July.....	9,080	6,180	7,200	.706	.81	443,000	B.	
August.....	6,080	5,480	5,760	.565	.65	354,000	B.	
September.....	11,000	5,480	6,190	.607	.68	368,000	B.	
The period.....							3,350,000	
1895-96.								
October.....	5,670	5,480	5,580	.547	.63	343,000	B.	
November.....	6,720	5,670	5,810	.570	.64	346,000	B.	
December.....	27,400	5,970	7,330	.719	.83	451,000	B.	
January.....	122,000	5,870	45,300	4.44	5.12	2,790,000	B.	
February.....	30,800	9,760	14,400	1.41	1.52	828,000	A.	
March.....	58,500	10,900	22,100	2.17	2.50	1,360,000	A.	
April.....	55,500	15,600	23,600	2.31	2.58	1,400,000	A.	
May.....	71,700	17,600	27,900	2.74	3.16	1,720,000	A.	

Monthly discharge of Sacramento River at Jellys Ferry, Cal., for 1895-1902—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.	
1895-96.							
June.....	18,700	8,950	13,300	1.30	1.45	791,000	A.
July.....	8,680	6,280	7,230	.709	.82	445,000	B.
August.....	6,280	5,670	5,910	.579	.67	363,000	B.
September.....	5,970	5,480	5,710	.560	.62	340,000	C.
The year.....	122,000	5,480	15,300	1.50	20.54	10,200,000	
1896-97.							
October.....	7,680	5,480	5,840	.573	.66	359,000	C.
November.....	38,700	5,870	11,000	1.08	1.20	655,000	B.
December.....	90,000	8,170	20,800	2.04	2.35	1,280,000	A.
January.....	49,200	8,680	14,400	1.41	1.63	885,000	A.
February.....	88,400	17,200	35,700	3.50	3.64	1,980,000	A.
March.....	43,800	13,200	21,600	2.12	2.44	1,330,000	A.
April.....	28,600	18,600	22,600	2.22	2.48	1,340,000	A.
May.....	18,200	9,480	13,700	1.34	1.54	842,000	A.
June.....	9,480	7,190	8,050	.789	.88	479,000	B.
July.....	7,070	5,870	6,340	.622	.72	390,000	B.
August.....	5,870	5,480	5,610	.550	.63	345,000	B.
September.....	5,480	5,480	5,480	.537	.60	326,000	C.
The year.....	90,000	5,480	14,300	1.40	18.77	10,200,000	
1897-98.							
October.....	7,190	5,480	5,750	.564	.65	354,000	C.
November.....	9,080	5,870	6,270	.615	.69	373,000	C.
December.....	16,700	6,080	8,240	.808	.93	507,000	B.
January.....	6,500	5,870	6,130	.601	.69	377,000	B.
February.....	37,500	5,870	12,500	1.23	1.28	694,000	A.
March.....	22,600	6,500	9,600	.941	1.08	590,000	A.
April.....	7,190	6,500	6,820	.669	.75	406,000	B.
May.....	10,600	5,480	6,630	.650	.75	408,000	B.
June.....	10,400	5,280	6,670	.654	.73	397,000	B.
July.....	5,280	4,720	4,900	.480	.55	301,000	C.
August.....	4,720	4,550	4,570	.448	.52	281,000	C.
September.....	4,720	4,550	4,570	.448	.50	272,000	C.
The year.....	37,500	4,550	6,890	.675	9.12	4,960,000	
1898-99.							
October.....	5,090	4,720	4,850	.475	.55	298,000	C.
November.....	6,840	4,720	4,980	.488	.54	296,000	B.
December.....	5,970	4,900	4,980	.488	.56	306,000	B.
January.....	42,600	5,570	13,800	1.35	1.56	848,000	A.
February.....	9,080	6,280	7,100	.696	.72	394,000	B.
March.....	83,400	7,190	21,100	2.07	2.39	1,300,000	A.
April.....	16,100	8,170	11,000	1.08	1.20	655,000	A.
May.....	7,920	6,500	7,330	.719	.83	451,000	B.
June.....	15,400	5,480	6,660	.653	.73	396,000	B.
July.....	5,380	4,720	4,970	.487	.56	306,000	B.
August.....	4,720	4,550	4,560	.447	.52	280,000	C.
September.....	4,550	4,550	4,550	.446	.50	271,000	C.
The year.....	83,400	4,550	7,990	.783	10.66	5,800,000	
1899-1900.							
October.....	10,700	4,550	5,580	.547	.63	343,000	C.
November.....	53,800	5,280	14,800	1.45	1.62	881,000	A.
December.....	45,800	9,220	14,600	1.43	1.65	898,000	A.
January.....	96,600	10,400	29,600	2.90	3.34	1,820,000	A.
February.....	24,600	8,170	11,500	1.13	1.18	639,000	A.
March.....	123,000	10,900	23,300	2.28	2.63	1,430,000	A.
April.....	16,700	9,080	12,200	1.20	1.34	726,000	A.
May.....	20,000	6,720	9,840	.965	1.11	605,000	A.
June.....	6,720	5,280	5,970	.585	.65	355,000	B.
July.....	5,280	4,380	4,770	.468	.54	293,000	B.
August.....	4,380	4,380	4,380	.429	.49	269,000	C.
September.....	5,670	4,380	4,550	.446	.50	271,000	C.
The year.....	123,000	4,380	11,800	1.16	15.68	8,530,000	

Monthly discharge of Sacramento River at Jellys Ferry, Cal., for 1895-1902—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.	
1900-1901.							
October.....	21,500	4,380	6,840	0.671	0.77	421,000	B.
November.....	28,600	5,090	8,560	.839	.94	509,000	B.
December.....	80,100	6,500	15,800	1.55	1.79	972,000	A.
January.....	74,600	9,080	21,000	2.06	2.38	1,290,000	A.
February.....	102,000	9,890	34,200	3.35	3.49	1,900,000	A.
March.....	46,100	12,100	20,600	2.02	2.33	1,270,000	A.
April.....	16,700	9,480	11,000	1.08	1.20	655,000	A.
May.....	14,300	7,920	10,100	.990	1.14	621,000	A.
June.....	7,880	5,380	6,080	.596	.66	362,000	B.
July.....	5,280	4,550	4,900	.480	.55	301,000	B.
August.....	4,550	4,380	4,420	.433	.50	272,000	C.
September.....	5,970	4,200	4,480	.439	.49	267,000	C.
The year.....	102,000	4,200	12,300	1.21	16.24	8,840,000	
1901-2.							
October.....	5,870	4,550	4,750	.466	.54	292,000	C.
November.....	44,400	4,900	8,170	.801	.89	486,000	B.
December.....	61,800	5,870	12,400	1.22	1.41	762,000	A.
January.....	7,070	5,180	5,860	.575	.66	360,000	B.
February.....	147,000	5,480	69,500	6.81	7.09	3,860,000	B.
March.....	76,200	14,300	31,200	3.06	3.53	1,920,000	A.
April.....	54,400	14,500	22,100	2.17	2.42	1,320,000	A.
May.....	25,400	12,900	17,500	1.72	1.98	1,080,000	A.
June.....	12,400	6,500	9,050	.887	.99	539,000	A.
The period.....						10,600,000	

NOTE.—Drainage area changed from 9,130 square miles to 10,200 square miles to include Goose Lake Basin, which is naturally a part of Sacramento River Basin.

SACRAMENTO RIVER NEAR RED BLUFF, CAL.

This station was established January 28, 1902, at the lower end of Iron Canyon, 4 miles above Red Bluff and about 3 miles, by river, below the proposed Iron Canyon dam site at the location previously used for stream gaging by the State engineer in 1879, and by the commissioner of public works in 1893 to 1894. Discharge measurements were begun in 1901 before the station was regularly established. The river at this point has a direct course for 2 or 3 miles. The width between the banks at low water is about 500 feet. The depth of water at low stages averages 6 feet with a maximum depth of 9 feet. The banks are steep and firm. The river flows in a bed of coarse gravel and cobblestones, with here and there small boulders. The bedrock is lava. Discharge measurements are made from a car and cable of about 700 feet span, which is anchored in the lava rock which forms the wall of the canyon (Pl. VII). The data collected are useful in connection with the maintenance of navigation below Red Bluff and in the consideration of reclamation problems in Sacramento Valley.

No important tributaries enter within several miles of the station, above or below. Antelope and Redbank creeks come in about 7 miles and Mill Creek about 16 miles below the station. Paines Creek

enters about 3 miles and Battle and Cottonwood creeks about 10 miles above the station. Pit River enters about 40 miles above and Feather River about 100 miles below.

The flow at the station is not affected by artificial storage. With the exception of a small amount of water diverted for irrigation from some of the minor tributaries the record at this station gives the natural run-off from this drainage basin.

The gage used by the commissioner of public works was still in place at the cable location and was used from January 28, 1902, the date upon which observations were begun, until December 31, 1903. A second set of gage rods were placed on the right bank, 3,200 feet below the cable, January 1, 1904, as no observer could be obtained to continue readings at the cable gage, and it was read until September 28, 1904. On this date these gage rods were removed to a point on the left bank about 4,000 feet below the measuring section and read until February 12, 1906. Since February 14, 1906, the cable gage has been read. By synchronous readings of these lower gages with that at the cable all readings have been reduced to equivalent readings for the cable gage. The datum of the cable gage has remained unchanged. This gage is located in lot 4, sec. 34, T. 28 N., R. 3 W.

In revising the data for this report the gage heights have been compared with the original gage books and corrections made where necessary. The maximum crest discharge recorded since 1902 was 278,000 second-feet for a gage height of 35.2 feet February 3, 1909. The flood of February 16, 1902, reached a gage height of about 31 feet during the night, the corresponding discharge being 224,000 second-feet. The crest discharge of the flood of 1907, as nearly as can be determined, was 204,000 second-feet for a gage height of 29.4 feet at 5 p. m. March 20, 1907. The lowest recorded discharge—3,980 second-feet—lasted from September 7 to 28, 1903.

*Discharge measurements of Sacramento River near Red Bluff, Cal., in 1901-1911.*

Date.	Hydrographer.	Gage height.	Discharge.	Date.	Hydrographer.	Gage height.	Discharge.
1901.		<i>Feet.</i>	<i>Sec.-ft.</i>	1904.		<i>Feet.</i>	<i>Sec.-ft.</i>
Oct. 30	S. G. Bennett.....	1.02	5,190	Jan. 23	W. B. Newhall....	3.15	10,600
Dec. 13	.....do.....	2.68	9,650	Feb. 8	F. W. Huber.....	2.80	10,700
1902.				17	S. G. Bennett.....	15.20	72,400
Jan. 28	S. G. Bennett.....	1.35	5,910	29	A. C. Lootz.....	12.30	57,400
Feb. 12 <sup>a</sup>	W. F. Luning.....	20.60	111,000	Mar. 30	Murphy and Bennett.....	15.08	66,700
Mar. 3	S. G. Bennett.....	10.60	41,600				
May 10	.....do.....	5.50	18,900	Apr. 1	A. C. Lootz.....	11.75	44,400
Sept. 13	C. A. Miller.....	.84	4,420	2	A. Buffinger.....	10.55	42,800
Dec. 31	S. G. Bennett.....	3.20	9,860	2	A. C. Lootz.....	10.70	42,300
1903.				4	.....do.....	10.98	46,200
Jan. 28	S. G. Bennett.....	10.90	45,700	4	.....do.....	10.94	44,700
May 16	.....do.....	2.95	10,000	5	.....do.....	10.20	39,500
July 30	.....do.....	1.05	4,620	6	.....do.....	10.18	39,700
Oct. 28	.....do.....	1.07	4,500	6	.....do.....	9.80	39,100
Dec. 15	.....do.....	2.20	7,460	June 13	O. W. Peterson.....	3.72	12,400
				July 15	.....do.....	2.25	7,850

<sup>a</sup> Measured by floats.



A. CAR AND CABLE.



B. GENERAL VIEW.

GAGING STATION ON SACRAMENTO RIVER AT RED BLUFF.



Discharge measurements of Sacramento River near Red Bluff, Cal., in 1901-1911—Con.

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>
Aug. 10	W. B. Clapp.....	1.70	6,060	May 5	W. G. Steward....	5.10	16,400
Sept. 27	O. W. Peterson.....	2.15	7,460	May 14	.....do.....	4.70	14,900
Dec. 7	.....do.....	2.48	8,060	June 20	W. F. Martin.....	3.47	10,200
				Sept. 10	W. A. Lamb.....	1.70	5,950
1905.				Oct. 15	.....do.....	1.70	5,570
Aug. 5	Peterson and Lee..	1.49	5,210				
Aug. 30	C. H. Lee.....	1.34	5,040	1908.			
1906.				Feb. 27	W. A. Lamb.....	3.80	12,800
Feb. 27	R. S. Hawley.....	10.30	41,600	Sept. 25	W. V. Hardy.....	1.20	4,230
27	.....do.....	9.45	36,000	Dec. 18	W. F. Martin.....	1.70	6,270
Mar. 13	.....do.....	9.60	38,200	1909.			
14	.....do.....	9.30	36,900	Jan. 20	W. F. Martin.....	9.80	38,000
26 <sup>a</sup>	.....do.....	18.30	92,900	May 27	.....do.....	3.80	12,200
Apr. 11	.....do.....	7.00	24,500	Nov. 15	W. V. Hardy.....	2.06	6,230
May 3	.....do.....	5.25	18,500				
16	.....do.....	4.64	15,700	1910.			
18	.....do.....	4.14	13,800	Jan. 24	J. E. Stewart.....	13.12	57,400
June 12	.....do.....	6.50	23,900	24	.....do.....	11.65	50,000
13	.....do.....	5.68	19,600	25	.....do.....	10.22	40,100
July 7	.....do.....	2.90	9,900	Mar. 18	.....do.....	5.60	18,700
Sept. 6	.....do.....	1.63	5,470	July 7	.....do.....	1.58	5,590
Dec. 11	.....do.....	7.60	26,900	Aug. 8	.....do.....	1.32	4,960
1907.				Sept. 14	W. V. Hardy.....	1.30	4,760
Feb. 10	R. S. Hawley.....	8.95	35,200	Oct. 5	.....do.....	1.40	5,000
23	.....do.....	9.10	36,100	1911.			
Mar. 7	.....do.....	7.65	28,800	Mar. 9	H. D. McGlashan..	12.40	55,500
Apr. 2	W. G. Steward.....	10.20	37,400	Apr. 29	J. E. Stewart.....	5.22	17,100
24	.....do.....	6.70	21,200	Aug. 21	.....do.....	1.48	5,330

<sup>a</sup> Measured by floats.

Daily gage height, in feet, of Sacramento River near Red Bluff, Cal., for 1902-1912.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1902.												
1.					1.3	12.3	4.2	5.8	4.0	1.9	1.4	1.1
2.					1.3	11.0	4.5	6.0	4.0	1.8	1.4	1.0
3.					1.3	9.4	4.8	6.0	4.0	1.7	1.4	1.0
4.					1.3	9.0	4.9	5.0	3.5	1.6	1.4	1.0
5.					3.6	8.0	5.8	4.8	3.2	1.6	1.4	1.0
6.					4.4	9.3	6.0	4.7	3.2	1.6	1.4	1.0
7.					9.4	9.8	12.7	6.5	3.2	1.6	1.3	1.0
8.					15.15	13.0	11.0	6.3	3.2	1.6	1.3	1.0
9.					17.4	14.0	9.7	5.9	3.2	1.6	1.3	1.0
10.					23.65	10.0	7.6	5.8	3.0	1.6	1.3	1.0
11.					22.7	9.0	6.7	5.4	3.0	1.6	1.3	1.0
12.					23.0	8.0	6.0	5.3	3.0	1.6	1.3	1.0
13.					14.1	7.5	5.9	5.2	3.0	1.6	1.3	1.0
14.					14.8	7.0	5.9	6.7	3.0	1.6	1.3	1.0
15.					17.5	6.8	5.9	6.8	3.0	1.6	1.3	1.0
16.					16.5	6.2	5.9	5.7	3.3	1.6	1.3	1.0
17.					16.0	6.0	5.9	6.5	3.2	1.5	1.3	1.0
18.					13.0	6.0	5.9	5.5	2.6	1.5	1.3	1.0
19.					11.0	6.0	6.3	4.8	3.0	1.5	1.3	1.0
20.					10.0	5.7	6.3	4.8	2.9	1.5	1.3	1.0
21.					11.3	5.3	5.5	4.2	2.8	1.4	1.3	1.0
22.					13.2	5.2	5.5	4.3	2.7	1.4	1.3	1.0
23.					15.3	5.1	5.4	3.0	2.6	1.4	1.3	1.0
24.					24.75	5.0	5.0	4.4	2.5	1.4	1.3	1.0
25.					24.8	4.8	5.1	4.4	2.4	1.4	1.3	1.0
26.					24.1	4.7	5.0	4.4	2.3	1.4	1.3	1.0
27.					20.3	4.5	5.0	4.3	2.2	1.4	1.3	1.0
28.				1.3	14.6	4.4	5.0	4.3	2.0	1.4	1.2	1.0
29.				1.3	.....	4.3	4.5	4.2	1.9	1.4	1.2	1.0
30.				1.3	.....	4.2	5.8	4.2	1.9	1.4	1.2	1.0
31.				1.3	.....	4.2	.....	4.3	.....	1.4	1.2	.....

Daily gage height, in feet, of Sacramento River near Red Bluff, Cal., for 1902-1912—Con.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1902-3.												
1.....	1.0	1.4	2.6	4.3	.....	.....	10.0	4.0	2.35	1.5	1.05	0.95
2.....	1.0	1.5	2.5	3.9	6.5	.....	8.7	4.0	2.4	1.45	1.05	.95
3.....	1.0	1.5	2.4	3.6	5.8	5.1	7.7	4.0	2.3	1.45	1.05	.95
4.....	1.0	1.4	2.4	3.5	5.3	.....	7.4	4.0	2.2	1.45	1.05	.95
5.....	1.0	1.3	2.3	3.4	5.0	6.3	6.8	4.0	2.1	1.4	1.05	.95
6.....	1.0	1.3	3.0	3.3	4.7	6.3	6.4	4.0	2.0	1.4	1.05	.95
7.....	1.0	1.8	6.0	3.2	4.7	5.5	6.1	3.9	2.0	1.4	1.05	.9
8.....	1.0	4.9	5.5	3.1	5.25	8.0	5.9	3.8	2.0	1.4	1.05	.9
9.....	1.0	17.45	5.0	3.0	5.2	6.3	5.9	3.6	2.0	1.35	1.05	.9
10.....	1.0	21.4	10.0	2.9	5.25	5.6	5.8	3.6	2.0	1.35	1.0	.9
11.....	1.0	8.5	9.0	2.8	5.6	5.25	5.4	3.5	1.95	1.3	1.0	.9
12.....	1.0	5.9	7.9	2.8	5.6	8.8	5.2	3.4	1.9	1.3	1.0	.9
13.....	1.0	5.0	7.5	2.7	5.35	11.0	5.0	3.3	1.9	1.3	.95	.9
14.....	1.0	5.3	6.5	2.7	4.75	15.3	4.9	3.2	1.9	1.3	.95	.9
15.....	1.0	5.5	4.9	2.7	4.45	13.3	4.8	3.1	1.9	1.3	.95	.9
16.....	1.0	6.0	4.5	2.5	4.15	11.0	4.6	3.0	1.85	1.25	.95	.9
17.....	1.0	6.7	4.1	2.5	4.15	9.3	4.5	3.0	1.8	1.25	.95	.9
18.....	1.0	5.8	3.8	2.4	3.9	8.0	4.9	3.9	1.75	1.25	.95	.9
19.....	1.0	5.8	3.6	2.4	3.8	7.1	4.5	3.85	1.7	1.25	.95	.9
20.....	1.0	5.2	3.4	2.4	3.8	6.3	4.3	2.8	1.7	1.25	.95	.9
21.....	1.0	5.0	3.3	2.8	3.75	6.1	4.3	2.7	1.7	1.2	.95	.9
22.....	1.7	4.5	3.2	8.5	3.9	5.8	4.3	2.6	1.7	1.2	.95	.9
23.....	1.7	4.0	3.9	13.9	5.05	5.6	4.3	2.6	1.7	1.15	.95	.9
24.....	3.5	3.7	3.9	13.7	5.45	5.6	4.3	2.6	1.65	1.15	.95	.9
25.....	3.4	3.5	3.9	22.8	5.3	6.3	4.3	2.6	1.6	1.15	.95	.9
26.....	2.5	3.4	9.6	.....	5.1	7.4	4.3	2.55	1.55	1.15	.95	.9
27.....	1.8	3.0	7.8	.....	4.85	8.0	4.2	2.55	1.5	1.15	.95	.9
28.....	2.0	2.8	6.1	.....	4.8	13.6	4.1	2.55	1.5	1.1	.95	.9
29.....	1.7	2.7	5.1	8.65	.....	15.7	4.0	2.5	1.5	1.1	.95	1.0
30.....	1.7	2.6	4.6	8.8	.....	12.0	4.0	2.4	1.5	1.1	.95	1.0
31.....	1.7	.....	4.6	8.35	.....	11.4	.....	2.4	.....	1.1	.95	.....
1903-4.												
1.....	1.1	1.1	3.5	3.6	2.8	13.1	11.9	8.5	5.05	2.8	2.2	1.5
2.....	1.1	1.1	3.4	3.5	2.5	15.55	10.5	8.4	4.8	2.8	2.2	1.5
3.....	1.1	1.1	3.2	3.4	2.4	14.4	10.7	8.3	4.7	2.8	2.05	1.5
4.....	1.1	1.1	3.1	3.4	2.3	15.8	10.7	8.2	4.5	2.8	2.05	1.5
5.....	1.1	1.4	3.0	3.15	2.5	14.7	10.6	8.05	4.4	2.8	2.05	1.5
6.....	1.1	1.5	2.7	3.0	3.3	13.1	10.5	7.95	4.3	2.8	1.9	1.5
7.....	1.1	1.6	2.6	2.9	3.3	16.3	10.1	7.75	4.3	2.7	1.9	1.5
8.....	1.1	1.5	2.5	3.4	3.3	24.4	9.9	7.6	4.2	2.7	1.9	1.5
9.....	1.1	1.4	2.5	3.4	3.3	18.95	9.8	7.5	4.3	2.65	1.9	1.5
10.....	1.8	1.3	2.4	3.4	3.3	17.9	9.65	7.4	4.2	2.65	1.8	1.5
11.....	2.1	1.3	2.4	3.4	3.3	15.8	9.6	7.3	3.95	2.65	1.8	1.5
12.....	1.1	1.3	2.3	3.15	3.3	14.7	9.65	7.2	3.85	2.65	1.8	1.5
13.....	1.1	3.3	2.3	3.0	6.3	13.3	9.65	7.1	3.75	2.65	1.8	1.5
14.....	1.1	6.8	2.3	2.9	6.3	15.8	9.8	7.0	3.6	2.65	1.8	1.5
15.....	1.1	4.3	2.3	2.8	17.25	17.35	9.9	6.9	3.6	2.65	1.8	1.5
16.....	1.1	3.8	7.5	3.0	28.0	18.3	9.8	6.8	3.6	2.65	1.8	1.5
17.....	1.1	3.6	11.7	3.4	15.2	.....	9.9	6.65	3.6	2.5	1.65	1.5
18.....	1.1	3.6	4.8	5.25	11.2	19.4	10.6	6.55	3.5	2.5	1.65	1.5
19.....	1.1	4.2	4.7	5.25	9.55	18.3	10.95	6.3	3.4	2.5	1.65	1.5
20.....	1.1	12.0	7.1	4.3	9.9	19.4	10.4	6.1	3.4	2.4	1.65	1.5
21.....	1.1	19.0	4.9	3.95	12.5	16.2	10.4	6.2	3.4	2.4	1.65	1.5
22.....	1.1	21.5	4.7	3.7	20.3	13.5	9.35	6.3	3.15	2.4	1.65	1.5
23.....	1.1	14.0	4.1	3.5	16.6	12.4	8.8	6.45	3.0	2.4	1.65	3.4
24.....	1.1	11.3	3.9	3.4	19.15	11.5	8.3	6.3	2.9	2.4	1.65	4.3
25.....	1.1	9.0	3.5	3.15	19.15	10.4	8.2	6.2	2.8	2.4	1.5	3.3
26.....	1.1	6.7	3.3	3.15	16.8	8.8	8.3	6.1	2.8	2.3	1.5	2.3
27.....	1.1	4.9	3.2	3.15	17.8	11.5	10.4	6.0	2.8	2.3	1.5	2.05
28.....	1.1	4.0	3.1	3.15	12.85	14.7	10.7	5.9	2.8	2.3	1.5	1.9
29.....	1.1	4.0	2.9	3.15	13.4	18.2	10.3	5.7	2.8	2.3	1.5	1.95
30.....	1.1	4.0	2.7	3.15	.....	14.8	8.8	5.6	2.8	2.3	1.5	1.95
31.....	1.1	.....	3.1	3.0	.....	13.0	.....	5.5	.....	2.2	1.5	.....
1904-5.												
1.....	1.9	2.35	3.85	7.2	8.9	4.85	8.05	4.05	3.0	1.95	1.45	1.25
2.....	1.75	2.8	3.2	6.15	15.85	4.75	7.8	4.3	3.0	1.95	1.45	1.25
3.....	1.8	2.6	3.05	4.8	13.3	4.6	7.55	4.3	3.0	1.9	1.45	1.25
4.....	1.8	2.35	2.9	4.7	11.35	4.55	7.1	3.9	3.0	1.9	1.45	1.25
5.....	1.8	2.35	2.8	4.3	10.15	4.5	6.8	3.7	3.0	1.9	1.45	1.25

a Gage height 9 a. m. Maximum gage height 31.0 feet same night.

Daily gage height, in feet, of Sacramento River near Red Bluff, Cal., for 1902-1912—Con.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1904-5.												
6.....	1.75	2.35	2.65	4.0	8.95	4.4	6.45	3.7	3.0	1.8	1.45	1.25
7.....	1.9	2.35	2.6	3.75	8.15	4.3	6.25	5.1	2.85	1.75	1.4	1.25
8.....	2.3	2.35	2.6	3.55	7.4	4.2	5.95	4.5	2.9	1.7	1.4	1.25
9.....	4.15	2.35	2.7	3.45	6.8	4.15	5.75	4.95	2.85	1.75	1.4	1.25
10.....	7.5	2.35	3.2	3.35	6.4	4.05	5.45	4.6	2.85	1.75	1.4	1.25
11.....	11.2	2.3	2.85	3.2	6.0	4.05	5.25	3.85	2.7	1.7	1.4	1.25
12.....	7.3	2.3	3.35	3.1	5.55	4.9	5.0	4.15	2.7	1.7	1.3	1.25
13.....	4.7	2.3	3.9	3.85	5.2	10.25	4.85	4.15	2.65	1.7	1.3	1.25
14.....	3.85	2.3	3.7	14.35	4.9	13.55	4.75	3.9	2.6	1.7	1.3	1.25
15.....	4.2	2.85	3.35	9.8	4.75	11.15	4.7	3.85	2.55	1.7	1.3	1.25
16.....	3.6	3.55	3.2	9.5	4.55	10.7	5.45	3.85	2.5	1.7	1.3	1.25
17.....	3.4	2.9	3.0	7.95	4.55	9.7	4.55	4.0	2.4	1.7	1.3	1.25
18.....	3.05	3.2	3.0	6.85	4.5	8.25	4.75	3.85	2.35	1.6	1.3	1.25
19.....	2.85	3.1	3.1	7.3	5.25	11.4	5.2	3.75	2.35	1.6	1.3	1.25
20.....	2.7	3.1	3.15	7.05	8.2	10.3	5.0	3.6	2.3	1.55	1.3	1.25
21.....	2.6	3.0	3.3	9.2	7.95	11.1	4.85	3.5	2.3	1.55	1.3	1.25
22.....	2.55	2.85	.....	14.3	7.2	11.2	4.7	3.4	2.25	1.55	1.3	1.25
23.....	2.5	2.7	2.65	20.3	6.6	9.0	4.55	3.35	2.25	1.55	1.3	1.25
24.....	2.35	2.6	5.75	15.55	6.0	9.8	4.4	3.3	2.2	1.5	1.3	1.25
25.....	2.35	2.6	5.7	15.45	5.7	8.45	4.4	3.2	2.25	1.5	1.25	1.25
26.....	2.35	2.6	3.85	12.75	5.45	9.0	4.4	3.2	2.2	1.45	1.25	1.25
27.....	2.3	3.8	3.4	9.8	5.3	8.9	4.3	3.2	2.1	1.45	1.25	1.25
28.....	2.25	3.4	3.25	8.95	5.0	8.2	4.15	3.2	2.0	1.45	1.25	1.3
29.....	2.25	3.0	3.4	7.5	.....	15.5	4.05	3.2	2.0	1.45	1.25	1.3
30.....	2.3	3.8	12.5	6.85	.....	9.85	4.0	3.15	1.95	1.45	1.25	1.3
31.....	2.4	.....	13.7	6.55	.....	8.7	.....	3.05	.....	1.45	1.25	.....
1905-6.												
1.....	1.3	1.3	1.75	1.7	3.45	7.65	15.5	5.5	5.6	3.3	1.9	1.7
2.....	1.3	1.3	1.55	1.55	3.35	6.95	12.55	5.4	5.5	3.25	1.9	1.65
3.....	1.3	1.3	1.55	1.55	3.2	10.65	10.75	5.3	5.5	3.2	1.9	1.65
4.....	1.25	1.3	1.55	1.55	3.2	10.75	9.6	5.2	8.85	3.1	1.9	1.65
5.....	1.25	1.3	1.55	1.55	3.1	8.2	8.55	5.3	7.75	3.0	1.9	1.65
6.....	1.25	1.4	1.55	1.6	3.05	7.3	7.9	5.15	7.8	2.95	1.8	1.65
7.....	1.3	1.4	1.55	1.65	3.0	6.9	7.5	5.0	6.85	2.9	1.8	1.6
8.....	1.3	1.4	1.55	1.6	3.0	6.6	7.3	4.9	6.2	2.8	1.8	1.6
9.....	1.3	1.4	1.55	1.7	3.1	6.6	7.25	4.8	6.0	2.8	1.8	1.6
10.....	1.3	1.4	1.55	2.1	3.2	6.5	7.1	4.9	5.6	2.7	1.75	1.6
11.....	1.3	1.4	1.55	2.0	3.85	6.45	6.9	4.8	5.35	2.7	1.75	1.6
12.....	1.3	1.45	1.55	3.9	4.6	14.85	6.55	4.7	6.35	2.6	1.75	1.6
13.....	1.25	1.45	1.7	5.45	.....	9.9	6.2	4.55	5.6	2.6	1.7	1.6
14.....	1.3	1.45	1.55	5.1	4.0	9.55	6.5	4.55	5.25	2.5	1.7	1.75
15.....	1.3	1.45	1.55	5.15	10.95	7.75	5.9	4.9	5.0	2.5	1.7	1.7
16.....	1.3	1.45	1.55	13.7	7.45	7.0	5.8	4.6	5.9	2.4	1.7	1.7
17.....	1.3	1.45	1.7	10.85	7.3	6.6	5.8	4.3	5.4	2.4	1.7	1.65
18.....	1.3	1.45	1.8	13.6	6.75	5.95	5.75	4.2	5.0	2.4	1.65	1.65
19.....	1.3	1.45	2.1	23.3	10.6	5.35	5.6	4.1	4.05	2.3	1.7	1.6
20.....	1.3	1.55	2.1	10.1	8.5	5.85	5.6	4.0	4.5	2.3	1.7	1.6
21.....	1.3	1.55	1.9	6.7	9.9	8.3	5.7	4.0	4.3	2.25	1.7	1.6
22.....	1.3	1.55	1.7	5.5	10.0	12.95	5.75	3.9	4.1	2.2	1.75	1.6
23.....	1.3	1.55	1.55	5.1	12.75	10.7	6.0	3.8	3.95	2.2	1.75	1.65
24.....	1.3	1.55	1.55	4.75	11.5	14.85	5.8	3.7	3.75	2.1	1.7	1.7
25.....	1.3	1.55	1.55	4.45	10.35	16.6	6.1	4.4	3.7	2.1	1.7	1.7
26.....	1.3	1.55	1.55	4.25	8.4	17.95	5.5	9.6	3.6	2.1	1.7	1.6
27.....	1.3	1.6	1.7	4.05	9.1	15.45	6.0	11.0	3.75	2.0	1.7	1.6
28.....	1.3	1.7	1.7	4.05	8.5	12.6	6.2	10.6	3.7	2.0	1.7	1.6
29.....	1.3	1.8	1.9	3.85	.....	10.8	5.6	8.95	3.5	2.0	1.7	1.6
30.....	1.3	1.95	1.8	3.8	.....	12.85	5.55	7.35	3.35	2.0	1.7	1.6
31.....	1.3	.....	1.9	3.6	.....	23.35	.....	6.5	.....	1.9	1.7	.....
1906-7.												
1.....	1.6	1.6	1.7	4.85	15.45	8.5	.....	5.4	3.95	2.8	2.0	1.7
2.....	1.6	1.6	1.7	4.55	21.2	7.5	10.2	5.4	3.9	2.7	2.0	1.8
3.....	1.6	1.85	1.65	4.8	20.4	7.0	10.2	5.25	3.8	2.7	2.0	1.8
4.....	1.55	2.4	1.7	14.45	23.1	6.5	9.7	5.2	3.85	2.7	1.95	1.8
5.....	1.55	3.25	1.7	10.85	18.35	6.9	10.3	5.1	3.7	2.65	1.95	1.8
6.....	1.55	2.2	1.75	6.95	16.3	7.8	11.15	5.05	3.6	2.6	1.95	1.8
7.....	1.55	2.0	2.35	5.5	13.95	7.6	11.7	4.9	3.7	2.55	1.95	1.8
8.....	1.55	1.9	2.35	5.3	20.4	7.1	10.8	4.9	3.6	2.5	1.95	1.75
9.....	1.55	1.85	2.4	5.9	.....	9.6	7.9	10.2	3.5	2.5	1.95	1.7
10.....	1.55	1.8	5.2	5.95	8.95	9.7	9.9	4.85	3.35	2.5	1.95	1.7

Daily gage height, in feet, of Sacramento River near Red Bluff, Cal., for 1902-1912—Con.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1906-7.												
11.....	1.55	1.8	7.75	5.25	8.1	9.75	9.8	5.25	3.95	2.5	1.95	1.7
12.....	1.55	1.75	7.3	4.7	7.35	9.3	9.55	5.15	7.45	2.4	1.95	1.7
13.....	1.55	1.75	5.0	4.3	6.9	8.1	9.3	4.85	6.75	2.3	1.95	1.7
14.....	1.55	1.75	3.85	4.3	6.4	7.3	9.3	4.7	4.6	2.3	1.9	1.7
15.....	1.6	1.8	3.15	4.15	6.1	6.8	9.15	4.6	4.0	2.3	1.9	1.7
16.....	1.6	1.8	3.0	3.85	5.85	6.6	8.8	4.6	3.8	2.3	1.9	1.7
17.....	1.6	1.8	2.85	4.1	6.0	10.0	8.4	4.55	3.7	2.25	1.85	1.7
18.....	1.6	1.75	2.8	4.1	6.3	21.4	7.9	4.5	3.6	2.25	1.85	1.7
19.....	1.6	1.7	2.6	3.9	5.85	26.05	7.7	4.9	3.5	2.25	1.8	1.7
20.....	1.6	1.7	2.4	3.8	5.7	28.7	7.6	4.2	3.4	2.2	1.8	1.65
21.....	1.55	1.7	2.4	3.75	5.6	22.85	7.0	4.7	3.4	2.2	1.8	1.65
22.....	1.6	1.7	2.3	3.75	6.35	18.4	7.0	4.4	3.3	2.2	1.8	1.65
23.....	1.6	1.7	2.3	3.75	8.85	21.65	6.9	4.45	3.2	2.15	1.8	1.65
24.....	1.6	1.7	2.65	3.8	7.65	16.8	6.7	4.2	3.15	2.15	1.8	1.65
25.....	1.6	1.7	4.8	4.5	13.1	14.3	6.4	4.15	3.0	2.1	1.75	1.65
26.....	1.6	1.7	12.7	5.2	10.8	13.25	6.4	4.1	3.0	2.1	1.75	1.6
27.....	1.6	1.7	13.65	5.35	9.0	12.15	6.25	4.05	3.0	2.1	1.75	1.6
28.....	1.6	1.65	8.55	10.7	8.0	10.5	6.0	4.0	2.9	2.1	1.75	1.6
29.....	1.6	1.7	6.5	12.15	.....	.....	5.8	4.0	2.9	2.05	1.75	1.6
30.....	1.6	1.7	5.3	10.55	.....	.....	5.6	3.95	2.8	2.05	1.7	1.6
31.....	1.6	.....	6.0	9.9	.....	.....	.....	3.9	.....	2.05	1.7	.....
1907-8.												
1.....	1.6	1.9	1.85	8.8	7.5	5.4	3.4	3.5	2.8	1.9	1.4	1.2
2.....	1.6	1.95	1.85	6.1	11.6	5.55	3.3	4.25	2.7	1.85	1.4	1.2
3.....	1.6	1.95	1.85	4.8	8.3	5.3	3.3	3.75	2.7	1.8	1.35	1.2
4.....	1.6	1.9	1.9	7.0	6.3	5.55	3.3	3.5	2.6	1.8	1.35	1.2
5.....	1.6	1.85	2.1	4.95	9.7	5.6	3.3	3.4	2.55	1.75	1.3	1.2
6.....	1.6	1.85	2.2	4.25	8.95	4.9	3.3	3.25	2.55	1.75	1.3	1.2
7.....	1.6	1.85	3.7	3.75	8.8	4.6	3.3	3.25	2.55	1.75	1.3	1.2
8.....	1.6	1.85	3.5	3.4	8.8	4.35	3.25	3.4	2.6	1.7	1.3	1.2
9.....	1.6	1.8	2.7	3.5	17.15	4.25	3.2	3.15	2.55	1.7	1.3	1.2
10.....	1.6	1.8	2.7	3.4	11.1	4.2	3.3	3.1	2.6	1.7	1.3	1.2
11.....	1.65	1.8	4.9	3.3	8.15	4.2	3.5	3.1	2.6	1.65	1.3	1.2
12.....	1.65	1.8	3.25	3.2	6.7	4.3	3.7	3.15	2.55	1.65	1.3	1.2
13.....	1.7	1.8	3.3	3.4	5.9	4.4	3.85	3.0	2.5	1.6	1.3	1.2
14.....	1.7	1.8	3.45	11.35	5.35	4.6	3.9	2.95	2.4	1.6	1.3	1.2
15.....	1.7	1.8	2.9	6.6	4.95	4.7	3.9	3.5	2.4	1.6	1.25	1.25
16.....	1.7	1.8	2.7	5.4	4.75	5.05	4.15	3.2	2.4	1.6	1.25	1.2
17.....	1.7	1.8	2.5	4.7	4.5	5.2	4.05	3.05	2.3	1.55	1.25	1.3
18.....	1.65	1.8	2.4	4.8	4.35	5.2	3.8	3.1	2.2	1.55	1.25	1.3
19.....	1.7	1.8	2.3	7.75	4.2	5.0	3.7	5.05	2.1	1.5	1.25	1.3
20.....	1.7	1.85	3.3	11.5	4.0	4.7	3.95	3.8	2.1	1.5	1.25	1.3
21.....	1.7	1.85	2.7	9.4	3.9	4.5	4.1	3.6	2.35	1.5	1.25	1.3
22.....	1.7	1.85	2.4	7.55	3.8	4.3	4.05	3.5	2.2	1.5	1.25	1.3
23.....	1.7	1.85	2.5	6.4	3.7	4.2	4.1	3.4	2.1	1.45	1.25	1.25
24.....	1.7	1.85	2.55	10.0	3.7	4.15	4.4	3.3	2.1	1.45	1.25	1.2
25.....	1.8	1.85	2.6	7.9	3.7	4.25	4.4	3.2	2.0	1.45	1.25	1.2
26.....	1.8	1.85	10.6	6.45	3.7	4.25	4.1	3.25	2.0	1.4	1.25	1.2
27.....	1.8	1.85	8.0	5.6	3.85	4.05	3.8	3.15	1.9	1.4	1.25	1.2
28.....	1.85	1.85	4.4	5.1	4.0	3.9	3.7	3.05	1.9	1.4	1.25	1.25
29.....	1.9	1.85	4.0	4.6	4.2	3.7	3.6	3.0	1.9	1.4	1.25	1.25
30.....	2.1	1.85	4.65	4.3	.....	3.6	3.55	2.9	1.9	1.4	1.2	1.25
31.....	2.15	.....	7.35	4.05	.....	3.5	.....	2.8	.....	1.4	1.2	.....
1908-9.												
1.....	1.25	1.6	1.7	2.75	13.75	7.4	6.6	5.0	3.7	2.45	1.7	1.6
2.....	1.25	1.55	1.65	4.5	22.65	7.2	6.5	5.05	3.9	2.4	1.7	1.6
3.....	1.25	1.5	1.65	9.9	33.4	7.15	6.4	5.1	3.85	2.4	1.7	1.6
4.....	1.25	1.5	1.9	6.5	22.1	11.2	6.3	5.3	3.8	2.3	1.7	1.6
5.....	1.25	1.5	3.3	8.8	18.35	10.2	6.1	5.2	3.8	2.3	1.7	1.6
6.....	1.25	1.5	2.5	16.9	13.75	9.7	5.9	5.0	3.6	2.35	1.7	1.6
7.....	1.25	1.45	2.1	13.7	12.9	9.4	5.75	4.8	3.45	2.3	1.7	1.6
8.....	1.25	1.45	1.95	20.55	11.1	8.35	5.5	4.7	3.35	2.3	1.7	1.55
9.....	1.25	1.45	2.35	19.65	10.0	7.75	5.5	4.65	3.3	2.3	1.7	1.55
10.....	1.25	1.45	2.2	11.8	12.75	7.2	5.6	4.55	3.2	2.25	1.7	1.55

a Maximum recorded gage height, 29.4 feet 5 p. m.

b Maximum recorded gage height was 35.2 feet.

Daily gage height, in feet, of Sacramento River near Red Bluff, Cal., for 1902-1912—Con.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1908-9.												
11.....	1.25	1.45	2.0	8.4	11.6	6.9	5.65	4.4	3.1	2.2	1.7	1.5
12.....	1.25	1.45	1.9	6.9	14.65	6.55	5.6	4.2	3.1	2.2	1.7	1.55
13.....	1.3	1.45	1.85	7.6	16.65	6.25	5.6	4.1	3.1	2.1	1.65	1.55
14.....	1.3	1.45	1.85	13.3	12.95	6.15	5.7	4.05	3.0	2.1	1.65	1.5
15.....	2.7	1.5	1.85	20.8	11.8	6.1	5.8	4.05	2.95	2.1	1.65	1.5
16.....	1.8	1.5	1.8	28.45	11.05	6.2	5.9	4.15	3.0	2.05	1.65	1.5
17.....	1.5	1.45	1.75	23.2	14.6	6.4	6.0	4.0	3.0	2.05	1.65	1.5
18.....	1.5	1.45	1.7	22.85	13.95	6.6	5.95	3.9	3.0	2.0	1.65	1.5
19.....	1.5	1.5	1.65	17.85	13.3	6.5	6.05	3.85	2.95	2.0	1.6	1.5
20.....	1.5	1.5	1.6	22.7	12.75	6.3	5.85	3.8	2.9	2.0	1.6	1.5
21.....	1.5	2.35	1.6	27.1	12.25	6.7	5.6	3.85	2.9	1.95	1.6	1.5
22.....	1.45	3.2	1.6	21.95	10.55	6.5	5.5	3.95	2.8	1.95	1.6	1.5
23.....	1.45	3.3	1.7	16.25	9.4	6.2	5.4	3.8	2.8	1.9	1.6	1.5
24.....	1.45	2.7	2.0	14.3	9.4	6.3	5.3	3.7	2.75	1.9	1.6	1.5
25.....	1.4	2.2	2.0	14.1	9.65	5.95	5.3	3.65	2.7	1.8	1.6	1.55
26.....	1.4	2.15	1.8	18.65	8.85	5.8	5.25	3.65	2.65	1.8	1.6	1.8
27.....	1.45	1.95	1.75	12.1	8.2	5.85	5.4	3.8	2.6	1.85	1.6	1.7
28.....	1.45	1.8	1.8	10.3	7.8	5.9	5.4	3.9	2.65	1.8	1.6	1.7
29.....	1.45	1.75	1.8	8.95	.....	7.1	5.2	3.8	2.6	1.8	1.6	1.85
30.....	1.7	1.75	1.8	9.5	.....	7.1	5.0	3.6	2.5	1.8	1.55	2.0
31.....	1.95	.....	1.75	12.1	.....	6.95	.....	3.6	.....	1.8	1.6	.....
1909-10.												
1.....	1.8	2.2	3.95	4.0	5.2	9.45	6.0	3.5	2.15	1.6	1.35	1.25
2.....	1.85	2.35	4.0	3.75	5.0	9.4	5.9	3.4	2.1	1.6	1.35	1.25
3.....	1.9	2.2	3.6	3.5	4.65	9.4	5.8	3.5	2.1	1.55	1.35	1.25
4.....	1.8	2.1	3.4	3.2	4.4	9.4	5.6	3.7	2.1	1.55	1.35	1.25
5.....	1.8	2.0	3.6	3.0	4.2	9.35	5.5	3.4	2.0	1.6	1.35	1.25
6.....	1.8	2.65	3.3	2.95	4.0	8.9	5.3	3.3	2.0	1.6	1.35	1.25
7.....	1.8	2.1	4.0	2.95	4.2	7.8	5.2	3.25	2.0	1.6	1.35	1.25
8.....	1.7	2.05	7.2	3.0	4.0	7.6	5.1	3.2	1.95	1.55	1.35	1.25
9.....	1.7	2.55	18.15	3.0	4.65	7.2	5.05	3.2	1.95	1.55	1.30	1.25
10.....	1.7	2.5	8.75	3.05	4.6	6.9	5.0	3.6	1.95	1.55	1.30	1.25
11.....	1.7	2.5	6.65	2.95	4.2	6.6	5.6	3.5	1.9	1.55	1.30	1.25
12.....	1.7	2.25	5.7	2.9	4.0	6.4	5.6	3.25	1.9	1.55	1.30	1.25
13.....	1.7	2.1	5.3	2.95	4.0	6.3	5.2	3.15	1.9	1.5	1.30	1.3
14.....	1.7	2.15	5.0	5.2	4.1	6.2	5.0	3.05	1.85	1.5	1.30	1.3
15.....	1.7	2.05	4.6	6.15	4.55	6.0	4.8	3.0	1.85	1.5	1.30	1.3
16.....	1.7	2.0	4.45	5.7	4.35	5.85	4.7	2.9	1.9	1.5	1.30	1.45
17.....	1.7	1.95	4.2	4.5	4.15	5.8	4.6	2.8	1.9	1.45	1.30	1.4
18.....	1.7	1.95	4.05	3.9	4.0	5.6	4.6	2.7	1.85	1.45	1.30	1.4
19.....	2.5	2.0	3.8	3.7	6.3	6.6	4.7	2.7	1.8	1.45	1.30	1.4
20.....	2.15	4.5	3.7	3.45	5.3	8.25	4.6	2.65	1.8	1.45	1.25	1.4
21.....	2.1	9.2	3.5	3.4	4.95	8.3	4.6	2.6	1.8	1.45	1.25	1.4
22.....	2.05	6.4	3.3	3.85	6.0	11.0	4.4	2.55	1.8	1.45	1.25	1.4
23.....	1.9	6.2	3.15	5.0	6.6	12.75	4.3	2.5	1.8	1.40	1.25	1.4
24.....	1.85	9.05	3.0	11.75	10.1	10.2	4.2	2.5	1.75	1.40	1.25	1.4
25.....	1.8	8.8	3.0	10.0	18.0	8.4	4.1	2.45	1.75	1.40	1.25	1.4
26.....	1.8	5.65	3.1	9.2	12.0	7.7	4.1	2.4	1.7	1.40	1.25	1.4
27.....	1.8	4.7	3.0	6.8	9.8	8.2	4.0	2.4	1.7	1.40	1.25	1.35
28.....	1.85	4.1	2.9	6.1	9.5	7.5	3.8	2.3	1.65	1.40	1.25	1.35
29.....	2.15	3.65	2.8	5.6	.....	6.9	3.7	2.3	1.65	1.40	1.25	1.35
30.....	2.05	3.5	2.75	5.4	.....	6.5	3.6	2.25	1.6	1.40	1.25	1.35
31.....	2.1	.....	4.05	5.1	.....	6.2	.....	2.2	.....	1.40	1.25	.....
1910-11.												
1.....	1.35	1.4	2.5	1.92	11.40	3.38	7.90	5.00	4.35	2.30	1.65	1.40
2.....	1.35	1.4	2.4	1.90	12.70	3.75	8.32	5.00	4.32	2.30	1.65	1.40
3.....	1.35	1.4	2.45	1.88	11.42	4.42	8.12	5.12	4.28	2.30	1.65	1.40
4.....	1.35	1.4	4.9	1.82	9.00	6.60	8.00	5.42	4.12	2.28	1.60	1.40
5.....	1.4	1.4	3.6	1.80	8.32	12.10	9.95	5.68	4.05	2.22	1.60	1.40
6.....	1.4	1.4	3.0	1.80	8.42	12.92	11.65	5.95	3.98	2.20	1.60	1.42
7.....	1.4	1.4	2.6	1.80	7.32	22.68	9.85	5.35	4.00	2.18	1.60	1.45
8.....	1.4	1.65	2.6	1.80	6.48	15.35	8.90	5.15	3.92	2.12	1.58	1.40
9.....	1.4	1.7	5.5	1.80	5.92	12.00	8.30	5.00	3.88	2.10	1.55	1.40
10.....	1.35	1.6	5.5	1.95	5.50	9.85	8.70	4.82	3.70	2.05	1.55	1.40
11.....	1.4	1.7	5.9	2.08	10.75	8.62	8.20	4.72	3.68	2.05	1.55	1.40
12.....	1.5	1.7	5.3	2.68	7.85	8.05	7.45	4.72	3.60	2.00	1.55	1.40
13.....	1.85	1.7	4.6	2.38	10.90	7.52	7.00	4.68	3.60	2.00	1.52	1.40
14.....	1.55	1.6	4.15	2.75	7.62	7.30	6.50	4.60	3.58	2.00	1.50	1.40
15.....	1.5	1.6	3.8	3.55	6.25	7.05	6.08	4.48	3.52	1.95	1.50	1.40

Daily gage height, in feet, of Sacramento River near Red Bluff, Cal., for 1902-1912—Con.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.												
16.....	1.5	1.5	3.45	2.95	5.32	7.02	5.78	4.38	3.42	1.92	1.50	1.40
17.....	1.45	1.5	3.25	2.48	4.98	7.02	5.58	4.58	3.25	1.90	1.50	1.40
18.....	1.45	1.6	2.95	2.50	4.65	6.92	5.52	6.28	3.12	1.90	1.50	1.40
19.....	1.45	1.65	2.7	2.40	4.45	6.95	5.48	5.62	3.08	1.95	1.50	1.40
20.....	1.4	1.6	2.6	12.5	4.22	7.02	5.35	5.08	3.00	1.92	1.48	1.40
21.....	1.4	1.6	2.45	5.75	4.08	7.32	5.28	4.90	2.88	1.88	1.45	1.40
22.....	1.4	1.6	2.3	4.55	3.88	7.80	5.40	4.88	2.80	1.85	1.45	1.40
23.....	1.4	1.65	2.2	3.78	3.78	7.95	5.40	5.00	2.72	1.82	1.45	1.40
24.....	1.4	2.8	2.2	5.28	3.72	8.25	5.58	4.95	2.70	1.80	1.45	1.45
25.....	1.4	4.9	2.1	5.15	3.62	8.20	5.85	4.70	2.62	1.80	1.45	1.48
26.....	1.4	3.0	2.0	5.65	3.50	8.15	5.98	4.45	2.52	1.80	1.45	1.52
27.....	1.4	2.4	2.0	5.70	3.42	7.85	5.85	4.25	2.48	1.75	1.42	1.52
28.....	1.4	2.6	2.0	13.20	3.35	7.45	5.45	4.20	2.40	1.75	1.40	1.50
29.....	1.4	3.0	1.95	10.48	.....	7.28	5.20	4.10	2.38	1.72	1.40	1.50
30.....	1.4	2.8	1.95	13.40	.....	7.40	5.10	4.10	2.32	1.70	1.40	1.50
31.....	1.4	.....	1.95	14.25	.....	7.75	.....	4.15	.....	1.65	1.42	.....
1911-12.												
1.....	1.50	1.55	1.55	1.7	.....	2.4	3.2	7.8	4.1	.....	.....	.....
2.....	1.50	1.55	1.55	1.6	.....	2.4	3.1	7.4	4.0	.....	.....	.....
3.....	1.50	1.50	1.55	1.6	.....	2.3	3.1	6.2	3.8	.....	.....	.....
4.....	1.50	1.50	1.55	1.5	2.7	2.3	3.1	5.6	3.6	.....	.....	.....
5.....	1.55	1.50	1.52	1.5	2.6	3.3	3.1	5.2	3.4	.....	.....	.....
6.....	1.50	1.50	1.80	1.5	2.5	8.5	2.9	4.9	3.3	.....	.....	.....
7.....	1.50	1.50	1.80	1.6	3.0	6.5	2.9	4.7	3.2	.....	.....	.....
8.....	1.50	1.50	1.65	1.7	4.1	5.8	2.9	4.5	3.0	.....	.....	.....
9.....	1.68	1.55	1.65	2.2	3.8	4.9	2.8	4.4	3.0	.....	.....	.....
10.....	1.68	1.60	1.60	2.4	3.9	4.4	3.8	4.2	2.9	.....	.....	.....
11.....	1.60	1.65	1.60	2.4	3.8	4.0	5.4	4.2	2.8	.....	.....	.....
12.....	1.60	1.58	1.60	2.2	3.5	6.0	5.1	4.0	2.8	.....	.....	.....
13.....	1.55	1.55	1.55	2.7	3.4	7.4	4.1	3.9	3.0	.....	.....	.....
14.....	1.52	1.55	1.55	2.5	3.3	5.2	3.8	3.7	2.8	.....	.....	.....
15.....	1.52	1.62	1.55	2.2	3.2	5.1	3.6	3.7	2.6	.....	.....	.....
16.....	1.50	1.78	1.55	2.2	3.0	7.0	3.6	3.7	2.5	.....	.....	.....
17.....	1.50	1.72	1.68	2.4	3.0	5.7	3.6	3.5	2.4	.....	.....	.....
18.....	1.50	1.65	1.58	2.5	4.2	5.1	3.5	3.3	2.3	.....	.....	.....
19.....	1.50	1.60	1.55	3.5	4.0	4.7	3.4	3.3	2.3	.....	.....	.....
20.....	1.50	1.60	1.55	2.9	3.6	4.5	3.2	3.8	2.2	.....	.....	.....
21.....	1.50	1.60	1.55	2.4	3.3	4.2	3.1	4.3	2.2	.....	.....	.....
22.....	1.50	1.60	1.50	2.2	3.2	3.8	3.0	4.1	2.2	.....	.....	.....
23.....	1.50	1.55	1.50	2.5	3.0	3.7	3.0	4.3	2.3	.....	.....	.....
24.....	1.50	1.55	1.50	3.4	2.9	3.6	3.0	4.0	2.6	.....	.....	.....
25.....	1.50	1.55	1.50	8.6	2.8	3.8	3.0	4.1	2.4	.....	.....	.....
26.....	1.58	1.55	1.50	12.9	2.6	3.6	3.0	5.0	2.2	.....	.....	.....
27.....	1.50	1.55	1.58	9.2	2.6	3.6	3.0	6.8	2.2	.....	.....	.....
28.....	1.50	1.55	1.70	.....	2.5	3.5	2.9	5.9	2.1	.....	.....	.....
29.....	1.50	1.55	1.60	.....	2.4	3.5	5.6	5.2	2.1	.....	.....	.....
30.....	1.50	1.55	1.60	.....	.....	3.5	6.9	4.8	2.0	.....	.....	.....
31.....	1.55	.....	1.60	.....	.....	3.3	.....	4.4	.....	.....	.....	.....

Rating table for Sacramento River near Red Bluff, Cal., for 1902-1912.

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>
0.90	3,980	2.80	8,910	5.40	18,170	18.00	89,700
1.00	4,200	2.90	9,220	5.60	18,970	19.00	97,600
1.10	4,420	3.00	9,540	5.80	19,780	20.00	105,900
1.20	4,650	3.10	9,860	6.00	20,600	21.00	114,600
1.30	4,880	3.20	10,190	6.20	21,440	22.00	123,700
1.40	5,110	3.30	10,520	6.40	22,290	23.00	133,200
1.50	5,350	3.40	10,860	6.60	23,150	24.00	143,100
1.60	5,590	3.50	11,200	6.80	24,020	25.00	153,500
1.70	5,840	3.60	11,540	7.00	24,900	26.00	164,500
1.80	6,090	3.70	11,890	8.00	29,400	27.00	176,000
1.90	6,350	3.80	12,240	9.00	34,100	28.00	187,500
2.00	6,610	3.90	12,590	10.00	39,000	29.00	199,500
2.10	6,880	4.00	12,940	11.00	44,200	30.00	211,500
2.20	7,150	4.20	13,660	12.00	49,700	31.00	224,000
2.30	7,430	4.40	14,380	13.00	55,600	32.00	236,500
2.40	7,710	4.60	15,120	14.00	61,700	33.00	249,000
2.50	8,000	4.80	15,860	15.00	68,200	34.00	262,000
2.60	8,300	5.00	16,620	16.00	75,100	35.00	275,000
2.70	8,600	5.20	17,390	17.00	82,200		

NOTE.—This table is not applicable for obstructed-channel conditions. It is based on discharge measurements made during 1902-1911 and is well defined between gage heights 1 foot and 21 feet. This curve averages all measurements made at this station as the channel is permanent

Daily discharge, in second-feet, of Sacramento River near Red Bluff, Cal., for 1902-1912.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1902.												
1					4,880	51,500	13,700	19,800	12,900	6,350	5,110	4,420
2					4,880	44,200	14,800	20,600	12,900	6,090	5,110	4,200
3					4,880	36,100	15,900	20,600	12,900	5,840	5,110	4,200
4					4,880	34,100	16,200	16,600	11,200	5,590	5,110	4,200
5					11,500	29,400	19,800	15,900	10,200	5,590	5,110	4,200
6					14,400	35,600	20,600	15,500	10,200	5,590	5,110	4,200
7					36,100	38,000	53,800	22,700	10,200	5,590	4,880	4,200
8					69,200	55,600	44,200	21,900	10,200	5,590	4,880	4,200
9					85,100	61,700	37,500	20,200	10,200	5,590	4,880	4,200
10					140,000	39,000	27,600	19,800	9,540	5,590	4,880	4,200
11					130,000	34,100	23,600	18,200	9,540	5,590	4,880	4,200
12					133,000	29,400	20,600	17,800	9,540	5,590	4,880	4,200
13					62,300	27,200	20,200	17,400	9,540	5,590	4,880	4,200
14					66,900	24,900	20,200	23,600	9,540	5,590	4,880	4,200
15					85,900	24,000	20,200	24,000	9,540	5,590	4,880	4,200
16					78,600	21,400	20,200	19,400	10,500	5,590	4,880	4,200
17					75,100	20,600	20,200	22,700	10,200	5,350	4,880	4,200
18					55,600	20,600	20,200	18,600	8,300	5,350	4,880	4,200
19					44,200	20,600	21,900	15,900	9,540	5,350	4,880	4,200
20					39,000	19,400	21,900	15,900	9,220	5,350	4,880	4,200
21					45,800	17,800	18,600	13,700	8,910	5,110	4,880	4,200
22					56,800	17,400	18,600	14,000	8,600	5,110	4,880	4,200
23					70,200	17,000	18,200	9,540	8,300	5,110	4,880	4,200
24					151,000	16,600	16,600	14,400	8,000	5,110	4,880	4,200
25					151,000	15,900	17,000	14,400	7,710	5,110	4,880	4,200
26					144,000	15,500	16,600	14,400	7,430	5,110	4,880	4,200
27					108,000	14,800	16,600	14,000	7,150	5,110	4,880	4,200
28				4,880	65,500	14,400	16,600	14,000	6,610	5,110	4,650	4,200
29				4,880		14,000	14,800	13,700	6,350	5,110	4,650	4,200
30				4,880		13,700	19,800	13,700	6,350	5,110	4,650	4,200
31				4,880		13,700		14,000		5,110	4,650	.....
1902-3.												
1	4,200	5,110	8,300	14,000	26,800	16,200	39,000	12,900	7,570	5,350	4,310	4,090
2	4,200	5,350	8,000	12,600	22,700	16,600	32,700	12,900	7,710	5,230	4,310	4,090
3	4,200	5,350	7,710	11,500	19,800	17,000	28,000	12,900	7,430	5,230	4,310	4,090
4	4,200	5,110	7,710	11,200	17,800	19,400	26,700	12,900	7,150	5,230	4,310	4,090
5	4,200	4,880	7,430	10,900	16,600	21,900	24,000	12,900	6,880	5,110	4,310	4,090
6	4,200	4,880	9,540	10,500	15,500	21,900	22,300	12,900	6,610	5,110	4,310	4,090
7	4,200	6,090	20,600	10,200	15,500	18,600	21,000	12,600	6,610	5,110	4,310	3,980
8	4,200	16,200	18,600	9,860	17,600	29,400	20,200	12,200	6,610	5,110	4,310	3,980
9	4,200	85,500	16,600	9,540	17,400	21,900	20,200	11,500	6,610	5,000	4,310	3,980
10	4,200	118,000	39,000	9,220	17,600	19,000	19,800	11,500	6,610	5,000	4,200	3,980
11	4,200	31,800	34,100	8,910	19,000	17,600	18,200	11,200	6,480	4,880	4,200	3,980
12	4,200	20,200	29,000	8,910	19,000	33,200	17,400	10,900	6,350	4,880	4,200	3,980
13	4,200	16,600	27,000	8,600	18,000	44,200	16,600	10,500	6,350	4,880	4,090	3,980
14	4,200	17,800	22,700	8,600	15,700	70,200	16,200	10,200	6,350	4,880	4,090	3,980
15	4,200	18,600	16,200	8,600	14,600	57,400	15,900	9,860	6,350	4,880	4,090	3,980
16	4,200	20,600	14,800	8,000	13,500	44,200	15,100	9,540	6,220	4,760	4,090	3,980
17	4,200	23,600	13,300	8,000	13,500	35,600	14,800	9,540	6,090	4,760	4,090	3,980
18	4,200	19,800	12,200	7,710	12,600	29,400	16,000	12,600	5,960	4,760	4,090	3,980
19	4,200	19,800	11,500	7,710	12,200	25,400	14,800	12,400	5,840	4,760	4,090	3,980
20	4,200	17,400	10,900	7,710	12,200	21,900	14,000	8,910	5,840	4,760	4,090	3,980
21	4,200	16,600	10,500	8,910	12,100	21,020	14,000	8,600	5,840	4,650	4,090	3,980
22	5,840	14,800	10,200	31,800	12,600	19,800	14,000	8,300	5,840	4,650	4,090	3,980
23	5,840	12,900	12,600	61,100	16,800	19,000	14,000	8,300	5,840	4,540	4,090	3,980
24	11,200	11,900	12,600	58,600	18,400	19,000	14,000	8,300	5,720	4,540	4,090	3,980
25	10,900	11,200	12,600	131,000	17,800	21,900	14,000	8,300	5,590	4,540	4,090	3,980
26	8,000	10,900	37,000	92,000	17,000	26,700	14,000	8,150	5,470	4,540	4,090	3,980
27	6,090	9,540	28,500	61,700	16,000	29,400	13,700	8,150	5,350	4,540	4,090	3,980
28	6,610	8,910	21,000	44,200	15,900	59,200	13,300	8,150	5,350	4,420	4,090	3,980
29	5,840	8,600	17,000	32,400		73,000	12,900	8,000	5,350	4,420	4,090	4,200
30	5,840	8,300	15,100	33,200		49,700	12,900	7,710	5,350	4,420	4,090	4,200
31	5,840		15,100	31,000		46,400		7,710		4,420	4,090	.....

NOTE.—The rating for 1902 is somewhat uncertain; the gage may not have been maintained correctly at datum, and determinations of the discharge are liable to some error.

Discharge estimated, Jan. 26-28, Feb. 1, Mar. 1, 2, 4, 1903.

Daily discharge, in second-feet, of Sacramento River near Red Bluff, Cal., for 1902-1912—  
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1903-4.												
1.....	4,420	4,420	11,200	11,500	8,910	56,200	49,200	31,800	16,800	8,910	7,150	5,350
2.....	4,420	4,420	10,900	11,200	8,000	72,000	41,600	31,200	15,900	8,910	7,150	5,350
3.....	4,420	4,420	10,200	10,900	7,710	64,200	42,600	30,800	15,500	8,910	6,740	5,350
4.....	4,420	4,420	10,900	10,900	7,430	73,700	42,600	30,300	14,800	8,910	6,740	5,350
5.....	4,420	5,110	9,540	10,000	8,000	66,200	42,100	29,600	14,400	8,910	6,740	5,350
6.....	4,420	5,350	8,600	9,540	10,500	56,200	41,600	29,200	14,000	8,910	6,350	5,350
7.....	4,420	5,590	8,300	9,220	10,500	77,200	39,500	28,300	14,000	8,600	6,350	5,350
8.....	4,420	5,300	8,000	10,900	10,500	147,000	33,500	27,600	13,700	8,600	6,350	5,350
9.....	4,420	5,110	8,000	10,000	10,500	97,200	33,000	27,200	14,000	8,450	6,350	5,350
10.....	6,090	4,880	7,710	10,900	10,500	88,900	37,300	26,700	13,700	8,450	6,090	5,350
11.....	6,880	4,880	7,710	10,900	10,500	73,700	37,000	26,200	12,800	8,450	6,090	5,350
12.....	4,420	4,880	7,430	10,000	10,000	66,200	37,300	25,800	12,400	8,450	6,090	5,350
13.....	4,420	10,500	7,430	9,540	21,900	57,400	37,300	25,400	12,100	8,450	6,090	5,350
14.....	4,420	24,000	7,430	9,220	21,900	73,700	38,000	24,900	11,500	8,450	6,090	5,350
15.....	4,420	14,000	7,430	8,910	84,800	84,000	38,500	24,500	11,500	8,450	6,090	5,350
16.....	4,420	12,200	27,200	9,540	188,000	92,000	38,000	24,000	11,500	8,450	6,090	5,350
17.....	4,420	11,500	48,000	10,500	69,600	96,500	38,500	23,400	11,500	8,000	5,720	5,350
18.....	4,420	11,500	15,900	17,600	45,300	101,000	42,100	22,900	11,200	8,000	5,720	5,350
19.....	4,420	13,700	15,500	17,600	36,800	92,000	43,900	21,900	10,900	8,000	5,720	5,350
20.....	4,420	49,700	25,400	14,000	38,600	101,000	41,100	21,000	10,900	7,710	5,720	5,350
21.....	4,420	97,600	16,200	12,800	52,600	76,500	41,100	21,400	10,900	7,710	5,720	5,350
22.....	4,420	119,000	15,500	108,900	108,000	58,600	35,800	21,900	10,000	7,710	5,720	5,350
23.....	4,420	61,700	13,300	11,200	79,300	52,100	33,200	22,500	9,540	7,710	5,720	10,900
24.....	4,420	45,800	12,600	10,900	98,800	47,000	30,800	21,900	9,220	7,710	5,720	14,000
25.....	4,420	34,100	11,200	10,000	98,800	41,100	30,300	21,400	8,910	7,710	5,350	10,500
26.....	4,420	23,600	10,500	10,000	80,800	33,200	30,800	21,000	8,910	7,430	5,350	7,430
27.....	4,420	16,200	10,200	10,000	88,200	47,000	41,100	20,600	8,910	7,430	5,350	6,740
28.....	4,420	12,900	9,860	10,000	54,700	66,200	42,600	20,200	8,910	7,430	5,350	6,350
29.....	4,420	12,900	9,220	10,000	58,000	91,300	40,600	19,400	8,910	7,430	5,350	6,480
30.....	4,420	12,900	8,600	10,000	.....	66,900	33,200	19,000	8,910	7,430	5,350	6,480
31.....	4,420	.....	9,860	9,540	.....	55,600	.....	18,600	.....	7,150	5,350	.....
1904-5.												
1.....	6,350	7,570	12,400	25,800	33,600	16,000	29,600	13,100	9,540	6,480	5,230	4,760
2.....	5,960	8,910	10,200	21,200	74,000	15,700	28,500	14,000	9,540	6,480	5,230	4,760
3.....	6,090	8,300	9,700	15,900	57,400	15,100	27,400	13,300	9,540	6,350	5,230	4,760
4.....	6,090	7,570	9,220	15,500	46,100	14,900	25,400	12,600	9,540	6,350	5,230	4,760
5.....	6,090	7,570	8,910	14,000	39,800	14,800	24,000	11,900	9,540	6,350	5,230	4,760
6.....	5,960	7,570	8,450	12,900	33,900	14,400	22,500	11,900	9,540	6,090	5,230	4,760
7.....	6,350	7,570	8,300	12,100	30,100	14,000	21,600	13,300	9,060	5,960	5,110	4,760
8.....	7,430	7,570	8,300	11,400	26,700	13,700	20,400	18,600	9,220	5,840	5,110	4,760
9.....	13,500	7,570	8,600	11,000	24,000	13,500	19,600	16,400	9,060	5,960	5,110	4,760
10.....	27,200	7,570	10,200	10,700	22,300	13,100	18,400	15,100	9,060	5,960	5,110	4,760
11.....	45,300	7,430	9,060	10,200	20,600	13,100	17,600	12,400	8,600	5,840	5,110	4,760
12.....	26,200	7,430	10,700	9,860	18,800	16,200	16,800	13,500	8,600	5,840	4,880	4,760
13.....	15,500	7,430	12,600	12,400	17,400	40,300	16,000	13,500	8,450	5,840	4,880	4,760
14.....	12,400	7,430	11,900	63,900	16,200	58,900	15,700	12,600	8,300	5,840	4,880	4,760
15.....	13,700	9,060	10,700	38,000	15,700	45,000	15,500	12,400	8,150	5,840	4,880	4,760
16.....	11,500	11,400	10,200	36,600	14,900	42,600	18,400	12,400	8,000	5,840	4,880	4,760
17.....	10,900	9,220	9,540	29,200	14,900	37,500	16,400	12,900	7,710	5,840	4,880	4,760
18.....	9,700	10,200	9,540	24,200	14,800	30,600	15,700	12,400	7,570	5,590	4,880	4,760
19.....	9,060	9,860	9,860	26,200	17,600	46,400	17,400	12,100	7,570	5,590	4,880	4,760
20.....	8,600	9,860	10,000	25,100	30,300	40,600	16,600	11,500	7,430	5,470	4,880	4,760
21.....	8,300	9,540	10,500	35,100	29,200	44,800	16,000	11,200	7,430	5,470	4,880	4,760
22.....	8,150	9,060	9,480	63,600	25,800	45,300	15,500	10,900	7,290	5,470	4,880	4,760
23.....	8,000	8,600	8,450	108,000	23,200	34,100	14,900	10,700	7,290	5,470	4,880	4,760
24.....	7,570	8,300	19,600	72,000	20,600	38,000	14,400	10,500	7,150	5,350	4,880	4,760
25.....	7,570	8,300	19,400	71,300	19,400	31,500	14,400	10,200	7,290	5,350	4,760	4,760
26.....	7,570	8,300	12,400	54,100	18,400	34,100	14,400	10,200	7,150	5,230	4,760	4,760
27.....	7,430	12,200	10,900	38,000	17,800	33,600	14,000	10,200	6,880	5,230	4,760	4,760
28.....	7,290	10,900	10,400	33,900	16,600	30,300	13,500	10,200	6,610	5,230	4,760	4,880
29.....	7,290	9,540	10,900	27,000	.....	71,600	13,100	10,200	6,610	5,230	4,760	4,880
30.....	7,430	12,200	52,600	24,200	.....	38,300	12,900	10,000	6,480	5,230	4,760	4,880
31.....	7,710	.....	59,800	22,900	.....	32,700	.....	9,700	.....	5,230	4,760	.....

NOTE.—Discharge estimated Mar. 17 and Dec. 22, 1904.

Daily discharge, in second-feet, of Sacramento River near Red Bluff, Cal., for 1902-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1905-6.												
1.	4,880	4,880	5,960	5,840	11,000	27,800	71,600	18,600	19,000	10,500	6,350	5,840
2.	4,880	4,880	5,470	5,470	10,700	24,700	62,900	18,200	18,600	10,400	6,350	5,720
3.	4,880	4,880	5,470	5,470	10,200	42,400	42,900	17,800	18,600	10,200	6,350	5,720
4.	4,760	4,880	5,470	5,470	10,200	42,900	37,000	17,400	33,400	9,860	6,350	5,720
5.	4,760	4,880	5,470	5,470	9,860	30,300	32,000	17,800	28,300	9,540	6,350	5,720
6.	4,760	5,110	5,470	5,590	9,700	26,200	29,000	17,200	28,500	9,380	6,090	5,720
7.	4,880	5,110	5,470	5,720	9,540	24,500	27,200	16,600	24,200	8,200	6,090	5,590
8.	4,880	5,110	5,470	5,590	9,540	23,200	26,200	16,200	21,400	8,910	6,090	5,590
9.	4,880	5,110	5,470	5,840	9,860	23,200	26,000	15,900	20,600	8,910	6,090	5,590
10.	4,880	5,110	5,470	6,880	10,200	22,700	25,400	16,200	19,000	8,600	5,960	5,590
11.	4,880	5,110	5,470	6,610	12,400	22,500	24,500	15,900	18,000	8,600	5,960	5,590
12.	4,880	5,230	5,470	12,600	15,100	67,200	22,900	15,500	22,100	8,300	5,960	5,590
13.	4,760	5,230	5,840	18,400	14,000	38,500	21,400	14,900	19,000	8,300	5,840	5,590
14.	4,880	5,230	5,470	17,000	12,900	36,800	22,700	14,900	17,600	8,000	5,840	5,960
15.	4,880	5,230	5,470	17,200	43,900	28,300	20,200	16,200	16,600	8,000	5,840	5,840
16.	4,880	5,230	5,470	59,800	26,900	24,900	19,800	15,100	20,200	7,710	5,840	5,840
17.	4,880	5,230	5,840	43,400	26,200	23,200	19,800	14,000	18,200	7,710	5,840	5,720
18.	4,880	5,230	6,090	59,200	23,800	20,400	19,600	13,700	16,600	7,710	5,720	5,720
19.	4,880	5,230	6,880	136,000	42,100	15,000	19,000	13,300	13,100	7,430	5,840	5,590
20.	4,880	5,470	6,880	39,500	31,800	20,000	19,000	12,900	14,800	7,430	5,840	5,590
21.	4,880	5,470	6,350	23,600	38,500	30,800	19,400	12,900	14,000	7,290	5,840	5,590
22.	4,880	5,470	5,840	18,600	39,000	55,300	19,600	12,600	13,300	7,150	5,960	5,590
23.	4,880	5,470	5,470	17,000	54,100	42,600	20,600	12,200	12,800	7,150	5,960	5,720
24.	4,880	5,470	5,470	15,700	47,000	67,200	19,800	11,900	12,100	6,880	5,840	5,840
25.	4,880	5,470	5,470	14,600	40,800	79,300	21,000	14,400	11,900	6,880	5,840	5,840
26.	4,880	5,470	5,470	13,800	31,300	89,300	18,600	37,000	11,500	6,880	5,840	5,590
27.	4,880	5,590	5,840	13,100	34,600	71,300	20,600	44,200	12,100	6,610	5,840	5,590
28.	4,880	5,840	6,840	13,100	31,800	53,200	21,400	42,100	11,900	6,610	5,840	5,590
29.	4,880	6,090	6,350	12,400	.....	43,200	19,000	33,900	11,200	6,610	5,840	5,590
30.	4,880	6,480	6,090	12,200	.....	54,700	18,800	26,500	10,700	6,610	5,840	5,590
31.	4,880	.....	6,350	11,500	.....	137,000	.....	22,700	.....	6,350	5,840	.....
1906-7.												
1.	5,590	5,590	5,840	16,000	71,300	31,800	39,000	18,200	12,800	8,910	6,610	5,840
2.	5,590	5,590	5,840	14,900	116,000	27,200	40,000	18,200	12,000	8,600	6,610	6,090
3.	5,590	6,220	5,720	15,900	109,000	24,900	40,000	17,600	12,200	8,600	6,610	6,090
4.	5,470	7,710	5,840	64,600	134,000	22,700	37,500	17,400	12,400	8,600	6,480	6,090
5.	5,470	10,400	5,840	43,400	92,400	24,500	40,600	17,000	11,900	8,450	6,480	6,090
6.	5,470	7,150	5,960	24,700	77,200	28,500	45,000	16,800	11,500	8,300	6,480	6,090
7.	5,470	6,610	7,570	18,600	61,400	27,600	48,000	16,600	11,900	8,150	6,480	6,090
8.	5,470	6,350	7,570	17,800	48,000	25,400	43,200	16,200	11,500	8,000	6,480	5,960
9.	5,470	6,220	7,710	20,200	37,000	29,000	40,000	15,900	11,200	8,000	6,480	5,840
10.	5,470	6,090	17,400	20,400	33,900	37,500	38,500	16,000	10,700	8,000	6,480	5,840
11.	5,470	6,090	28,300	17,600	29,900	37,800	38,000	17,600	12,800	8,000	6,480	5,840
12.	5,470	5,960	26,200	15,500	26,500	35,600	36,800	17,200	26,900	7,710	6,480	5,840
13.	5,470	5,960	16,600	14,000	24,500	29,900	35,600	16,000	23,800	7,430	6,480	5,840
14.	5,470	5,960	12,400	14,000	22,300	26,200	35,600	15,500	15,100	7,430	6,350	5,840
15.	5,590	6,090	10,000	13,500	21,000	24,000	34,800	15,100	12,900	7,430	6,350	5,840
16.	5,590	6,090	9,540	12,400	20,000	23,200	33,200	15,100	12,200	7,430	6,350	5,840
17.	5,590	6,090	9,160	13,300	20,600	39,000	31,300	14,900	11,900	7,290	6,220	5,840
18.	5,590	5,960	8,910	13,300	21,900	118,000	29,000	14,800	11,500	7,290	6,220	5,840
19.	5,590	5,840	8,300	12,600	20,000	165,000	28,000	16,200	11,200	7,290	6,090	5,840
20.	5,590	5,840	7,710	12,200	19,400	196,000	27,600	17,400	10,900	7,150	6,090	5,720
21.	5,470	5,840	7,710	12,100	19,000	132,000	24,900	15,500	10,900	7,150	6,090	5,720
22.	5,590	5,840	7,430	12,100	22,100	92,800	24,900	14,400	10,500	7,150	6,090	5,720
23.	5,590	5,840	7,430	12,100	33,400	120,000	24,500	14,600	10,200	7,020	6,090	5,720
24.	5,590	5,840	8,450	12,200	27,800	80,800	26,300	13,700	10,000	7,020	6,090	5,720
25.	5,590	5,840	15,900	14,800	56,290	63,600	22,300	13,500	9,540	6,880	5,960	5,720
26.	5,590	5,840	53,800	17,400	43,290	57,100	22,300	13,300	9,540	6,880	5,960	5,590
27.	5,590	5,840	59,500	18,000	34,100	50,600	21,600	13,100	9,540	6,880	5,960	5,590
28.	5,590	5,720	32,000	42,600	29,400	41,600	20,600	12,900	9,220	6,880	5,960	5,590
29.	5,590	5,840	22,700	50,600	.....	39,000	19,800	12,900	9,220	6,740	5,960	5,590
30.	5,590	5,840	17,800	41,900	.....	38,000	19,000	12,800	8,910	6,740	5,840	5,590
31.	5,590	.....	20,600	38,500	.....	37,800	.....	12,600	.....	6,740	5,840	.....

NOTE.—Discharge estimated Feb. 13, 1906, and Mar. 29 to Apr. 1, 1907.

Daily discharge, in second-feet, of Sacramento River near Red Bluff, Cal., for 1902-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1907-8.												
1.	5,590	6,350	6,220	33,200	27,200	18,200	10,900	11,200	8,910	6,350	5,110	4,650
2.	5,590	6,480	6,220	21,000	47,500	18,800	10,500	13,800	8,600	6,220	5,110	4,650
3.	5,590	6,480	6,220	15,900	30,800	17,800	10,500	12,100	8,600	6,090	5,000	4,650
4.	5,590	6,350	6,350	24,900	21,900	18,800	10,500	11,200	8,300	6,090	5,000	4,650
5.	5,590	6,220	6,880	16,400	37,500	19,000	10,500	10,900	8,150	5,960	4,880	4,650
6.	5,590	6,220	7,150	13,800	33,900	16,200	10,500	10,400	8,150	5,960	4,880	4,650
7.	5,590	6,220	11,900	12,100	33,200	15,100	10,500	10,400	8,150	5,960	4,880	4,650
8.	5,590	6,220	11,200	10,900	33,200	14,200	10,400	10,900	8,300	5,840	4,880	4,650
9.	5,590	6,090	8,600	11,200	33,300	13,800	10,200	10,000	8,150	5,840	4,880	4,650
10.	5,590	6,090	8,600	10,900	44,800	13,700	10,500	9,860	8,300	5,840	4,880	4,650
11.	5,720	6,090	16,200	10,500	30,100	13,700	11,200	9,860	8,300	5,720	4,880	4,650
12.	5,720	6,090	10,400	10,200	23,600	14,000	11,900	10,000	8,150	5,720	4,880	4,650
13.	5,840	6,090	10,500	10,900	20,200	14,400	12,400	9,540	8,000	5,590	4,880	4,650
14.	5,840	6,090	11,000	46,100	18,000	15,100	12,600	9,380	7,710	5,590	4,880	4,650
15.	5,840	6,090	9,220	23,200	16,400	15,500	12,600	11,200	7,710	5,590	4,760	4,650
16.	5,840	6,090	8,600	18,200	15,700	16,800	13,500	10,200	7,710	5,590	4,760	4,650
17.	5,840	6,090	8,000	15,500	14,800	17,400	13,100	9,700	7,430	5,470	4,760	4,880
18.	5,720	6,090	7,710	15,900	14,200	17,400	12,200	9,860	7,150	5,470	4,760	4,880
19.	5,840	6,090	7,430	28,300	13,700	16,600	11,900	16,800	6,880	5,350	4,760	4,880
20.	5,840	6,220	10,500	47,000	12,900	15,600	12,900	12,200	6,880	5,350	4,760	4,880
21.	5,840	6,220	8,600	36,100	12,600	14,800	13,300	11,500	7,570	5,350	4,760	4,880
22.	5,840	6,220	7,710	27,400	12,200	14,000	13,100	11,200	7,150	5,350	4,760	4,880
23.	5,840	6,220	8,000	22,300	11,900	13,700	13,300	10,900	6,880	5,230	4,760	4,760
24.	5,840	6,220	8,150	39,000	11,900	13,500	14,400	10,500	6,880	5,230	4,760	4,650
25.	6,090	6,220	8,300	29,000	11,900	13,800	14,400	10,500	6,610	5,230	4,760	4,650
26.	6,090	6,220	42,100	22,500	11,900	13,800	13,300	10,400	6,610	5,110	4,760	4,650
27.	6,090	6,220	29,400	19,000	12,400	13,100	12,200	10,000	6,350	5,110	4,760	4,650
28.	6,220	6,220	14,400	17,000	12,900	12,600	11,900	9,700	6,350	5,110	4,760	4,760
29.	6,350	6,220	12,900	15,100	13,700	11,900	11,500	9,540	6,350	5,110	4,760	4,760
30.	6,880	6,220	15,900	14,000	.....	11,500	11,400	9,220	6,350	5,110	4,650	4,760
31.	7,020	.....	26,500	13,100	.....	11,200	.....	8,910	.....	5,110	4,650	.....
1908-9.												
1.	4,760	5,590	5,840	8,760	60,200	26,700	23,200	16,600	11,900	7,860	5,840	5,590
2.	4,760	5,470	5,720	14,800	130,000	25,800	22,700	16,800	12,600	7,710	5,840	5,590
3.	4,760	5,350	5,720	38,500	254,000	25,600	22,300	17,000	12,400	7,710	5,840	5,590
4.	4,760	5,350	6,350	22,700	125,000	45,300	21,900	17,800	12,200	7,430	5,840	5,590
5.	4,760	5,350	10,500	33,200	92,400	40,000	21,000	17,400	12,200	7,430	5,840	5,590
6.	4,760	5,350	8,000	81,500	60,200	37,500	20,200	16,600	11,500	7,570	5,840	5,590
7.	4,760	5,230	6,880	59,800	55,000	36,100	19,600	15,800	11,000	7,430	5,840	5,590
8.	4,760	5,230	6,480	111,000	44,800	31,000	18,600	15,500	10,700	7,430	5,840	5,470
9.	4,760	5,230	7,570	103,000	39,000	28,300	18,600	15,300	10,500	7,430	5,840	5,470
10.	4,760	5,230	7,150	48,600	54,100	25,800	19,000	14,900	10,200	7,290	5,840	5,470
11.	4,760	5,230	6,610	31,300	47,500	24,500	19,200	14,400	9,860	7,150	5,840	5,350
12.	4,760	5,230	6,350	24,600	65,900	22,900	19,000	13,700	9,860	7,150	5,840	5,470
13.	4,880	5,230	6,220	27,600	79,700	21,600	19,000	13,300	9,860	6,880	5,720	5,470
14.	4,880	5,230	6,220	57,400	55,300	21,200	19,400	13,100	9,540	6,880	5,720	5,350
15.	8,600	5,350	6,220	113,000	48,600	21,000	19,800	13,100	9,380	6,880	5,720	5,350
16.	6,090	5,350	6,090	188,000	44,500	21,400	20,200	13,500	9,540	6,740	5,720	5,350
17.	5,350	5,230	5,960	135,000	65,500	22,300	20,600	12,900	9,540	6,740	5,720	5,350
18.	5,350	5,230	5,840	132,000	61,400	23,200	20,400	12,600	9,540	6,610	5,720	5,350
19.	5,350	5,350	5,720	88,500	57,400	22,700	20,800	12,400	9,380	6,610	5,590	5,350
20.	5,350	5,350	5,590	130,000	54,100	21,900	20,000	12,200	9,220	6,610	5,590	5,350
21.	5,350	7,570	5,590	177,000	51,200	23,600	19,000	12,400	9,220	6,480	5,590	5,350
22.	5,230	10,200	5,590	123,000	41,900	22,700	18,600	12,700	8,910	6,480	5,590	5,350
23.	5,230	10,500	5,840	76,900	36,000	21,400	18,200	12,200	8,910	6,350	5,590	5,350
24.	5,230	8,600	6,610	63,600	36,100	21,900	17,800	11,900	8,760	6,350	5,590	5,350
25.	5,110	7,150	6,610	62,300	37,300	20,400	17,800	11,700	8,600	6,090	5,590	5,470
26.	5,110	7,020	6,090	94,800	33,400	19,800	17,500	11,700	8,450	6,090	5,590	6,090
27.	5,230	6,480	5,960	50,300	30,300	20,000	18,200	12,200	8,300	6,220	5,590	5,840
28.	5,230	6,090	6,090	40,600	28,500	20,200	18,200	12,600	8,450	6,090	5,590	5,840
29.	5,230	5,960	6,090	33,900	.....	25,400	17,400	12,200	8,300	6,090	5,590	6,220
30.	5,840	5,960	6,090	36,600	.....	25,400	16,600	11,500	8,000	6,090	5,470	6,090
31.	6,480	.....	5,960	50,300	.....	24,700	.....	11,500	.....	6,090	5,590	.....
1909-10.												
1.	6,090	7,150	12,800	12,900	17,400	36,300	20,600	11,200	7,020	5,590	5,000	4,760
2.	6,220	7,570	12,900	12,100	16,600	36,100	20,200	10,900	7,880	5,590	5,000	4,760
3.	6,350	7,150	11,500	11,200	15,300	36,100	19,800	11,200	6,880	5,470	5,000	4,760
4.	6,090	6,880	10,900	10,200	14,400	36,100	19,000	11,900	6,880	5,470	5,000	4,760
5.	6,090	6,610	11,500	9,540	13,700	35,800	18,600	10,900	6,610	5,590	5,000	4,760

*Daily discharge, in second-feet, of Sacramento River near Red Bluff, Cal., for 1902-1912—Continued.*

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1902-10.												
6.	6,090	8,450	10,500	9,380	12,900	33,600	17,800	10,500	6,610	5,590	5,000	4,760
7.	6,090	6,880	12,900	9,380	13,700	28,500	17,400	10,400	6,610	5,590	5,000	4,760
8.	5,840	6,740	25,800	9,540	12,900	27,600	17,000	10,200	6,480	5,470	5,000	4,760
9.	5,840	8,150	90,800	9,540	15,300	25,800	16,800	10,200	6,480	5,470	4,880	4,760
10.	5,840	8,000	32,900	9,700	15,100	24,500	16,600	11,500	6,480	5,470	4,880	4,760
11.	5,840	8,000	23,400	9,380	13,700	23,200	19,000	11,200	6,350	5,470	4,880	4,760
12.	5,840	7,290	19,400	9,220	12,900	22,300	19,000	10,400	6,350	5,470	4,880	4,760
13.	5,840	6,880	17,800	9,380	12,900	21,900	17,400	10,000	6,350	5,350	4,880	4,880
14.	5,840	7,020	16,600	17,400	13,300	21,400	16,600	9,700	6,220	5,350	4,880	4,880
15.	5,840	6,740	15,100	21,200	14,900	20,600	15,900	9,540	6,220	5,350	4,880	4,880
16.	5,840	6,610	14,600	19,400	14,200	20,000	15,500	9,220	6,350	5,350	4,880	5,230
17.	5,840	6,480	13,700	14,800	13,500	19,800	15,100	8,910	6,350	5,230	4,880	5,110
18.	5,840	6,480	13,100	12,600	12,900	19,000	15,100	8,600	6,220	5,230	4,880	5,110
19.	8,000	6,610	12,200	11,900	21,900	23,200	15,500	8,600	6,090	5,230	4,880	5,110
20.	7,020	14,800	11,900	11,000	17,800	30,600	15,100	8,450	6,090	5,230	4,760	5,110
21.	6,880	35,100	11,200	10,900	16,400	30,800	15,100	8,300	6,090	5,230	4,760	5,110
22.	6,740	22,300	10,500	12,400	20,600	44,200	14,400	8,150	6,090	5,230	4,760	5,110
23.	6,350	21,400	10,000	16,600	23,200	54,100	14,000	8,000	6,090	5,110	4,760	5,110
24.	6,220	34,300	9,540	48,300	39,500	40,000	13,700	8,000	5,960	5,110	4,760	5,110
25.	6,090	33,200	9,540	48,300	39,500	31,300	13,300	7,860	5,960	5,110	4,760	5,110
26.	6,090	19,200	9,860	35,100	49,700	28,000	13,300	7,710	5,840	5,110	4,760	5,110
27.	6,090	15,500	9,540	24,000	38,000	30,300	12,900	7,710	5,840	5,110	4,760	5,000
28.	6,220	13,300	9,220	21,000	36,600	27,200	12,200	7,430	5,720	5,110	4,760	5,000
29.	7,020	11,700	8,910	19,000	.....	24,500	11,900	7,430	5,720	5,110	4,760	5,000
30.	6,740	11,200	8,760	18,200	.....	22,700	11,500	7,290	5,590	5,110	4,760	5,000
31.	6,880	.....	13,100	17,000	.....	21,400	.....	7,150	.....	5,110	4,760	.....
1910-11.												
1.	5,000	5,110	8,000	6,400	46,400	10,800	29,900	16,600	14,200	7,430	5,720	5,110
2.	5,000	5,110	7,710	6,350	53,800	12,100	30,900	16,600	14,100	7,430	5,720	5,110
3.	5,000	5,110	7,860	6,300	46,500	14,500	30,000	17,100	13,900	7,430	5,720	5,110
4.	5,000	5,110	16,200	6,140	34,100	23,200	29,400	18,200	13,400	7,370	5,590	5,110
5.	5,110	5,110	11,500	6,090	30,900	50,300	38,800	19,300	13,100	7,210	5,590	5,110
6.	5,110	5,110	9,540	6,090	31,400	55,100	47,800	20,400	12,900	7,150	5,590	5,160
7.	5,110	5,110	8,300	6,090	26,300	130,000	38,300	18,000	12,900	7,100	5,590	5,230
8.	5,110	5,720	8,300	6,090	22,600	70,600	33,600	17,200	12,700	6,930	5,540	5,110
9.	5,110	5,840	18,600	6,090	20,300	49,700	30,800	16,600	12,500	6,880	5,470	5,110
10.	5,000	5,590	18,600	6,480	18,600	38,300	32,700	15,900	11,900	6,480	5,470	5,110
11.	5,110	5,840	20,200	6,830	42,900	32,300	30,300	15,600	11,800	6,740	5,470	5,110
12.	5,350	5,840	17,800	8,540	28,700	29,600	26,900	15,600	11,500	6,610	5,470	5,110
13.	6,220	5,840	15,100	7,650	43,700	27,200	24,900	15,400	11,500	6,610	5,400	5,110
14.	5,470	5,590	13,500	8,760	27,700	26,200	22,700	15,100	11,500	6,610	5,350	5,110
15.	5,350	5,590	12,200	11,400	21,600	25,100	20,900	14,700	11,300	6,610	5,350	5,110
16.	5,350	5,350	11,000	9,380	17,900	25,000	19,700	14,300	10,900	6,400	5,350	5,110
17.	5,230	5,350	10,400	7,940	16,500	25,000	18,900	15,000	10,400	6,350	5,350	5,110
18.	5,230	5,590	9,380	8,000	15,300	24,500	18,600	21,800	9,930	6,350	5,350	5,110
19.	5,230	5,720	8,600	7,710	14,600	24,700	18,500	19,000	9,800	6,480	5,350	5,110
20.	5,110	5,590	8,300	52,600	13,700	25,000	18,000	16,900	9,540	6,400	5,300	5,110
21.	5,110	5,590	7,860	19,600	13,200	26,300	17,700	16,200	9,160	6,300	5,230	5,110
22.	5,110	5,590	7,430	14,900	12,500	28,500	18,200	16,200	8,910	6,220	5,230	5,110
23.	5,110	5,720	7,150	12,200	12,200	29,200	18,200	16,600	8,660	6,140	5,230	5,110
24.	5,110	8,910	7,150	17,700	12,000	30,600	18,900	16,400	8,600	6,090	5,230	5,230
25.	5,110	16,200	6,880	17,200	11,600	30,300	20,000	15,500	8,360	6,090	5,230	5,300
26.	5,110	9,540	6,610	19,200	11,200	30,100	20,500	14,600	8,060	6,090	5,230	5,400
27.	5,110	7,710	6,610	19,400	10,900	28,700	20,000	13,800	7,940	5,960	5,160	5,400
28.	5,110	8,300	6,610	56,800	10,700	26,900	18,400	13,700	7,710	5,960	5,110	5,350
29.	5,110	9,540	6,480	41,500	.....	26,200	17,400	13,300	7,650	5,890	5,110	5,350
30.	5,110	8,910	6,480	58,000	.....	26,700	17,000	13,300	7,500	5,840	5,110	5,350
31.	5,110	.....	6,480	63,300	.....	28,300	.....	13,500	.....	5,720	5,160	.....
1911-12.												
1.	5,350	5,470	5,470	5,840	10,000	7,710	10,200	28,500	13,300	.....	.....	.....
2.	5,350	5,470	5,470	5,590	9,500	7,710	9,800	26,700	12,900	.....	.....	.....
3.	5,350	5,350	5,470	5,590	9,000	7,430	9,800	21,400	12,200	.....	.....	.....
4.	5,350	5,350	5,470	5,350	8,600	7,430	9,800	19,000	11,500	.....	.....	.....
5.	5,470	5,350	5,470	5,350	8,300	10,500	9,800	17,400	10,900	.....	.....	.....
6.	5,350	5,350	6,090	5,350	8,000	31,800	9,220	16,200	10,500	.....	.....	.....
7.	5,350	5,350	6,090	5,590	9,540	22,700	9,220	15,500	10,200	.....	.....	.....
8.	5,350	5,350	5,720	5,840	13,300	19,800	9,220	14,800	9,540	.....	.....	.....
9.	5,790	5,470	5,720	7,150	12,200	16,200	8,910	14,400	9,540	.....	.....	.....
10.	5,790	5,590	5,590	7,710	12,600	14,400	12,200	13,700	9,220	.....	.....	.....

Daily discharge, in second-feet, of Sacramento River near Red Bluff, Cal., for 1902-1912—  
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1911-12												
11.....	5,590	5,720	5,590	7,710	12,200	12,900	18,200	13,700	8,910			
12.....	5,590	5,540	5,590	7,150	11,200	20,600	17,000	12,900	8,910			
13.....	5,470	5,470	5,470	8,600	10,900	26,700	13,300	12,600	9,540			
14.....	5,400	5,470	5,470	8,000	10,500	17,400	12,200	11,900	8,910			
15.....	5,400	5,640	5,470	7,150	10,200	17,000	11,500	11,900	8,300			
16.....	5,350	6,040	5,470	7,150	9,540	24,900	11,500	11,900	8,000			
17.....	5,350	5,890	5,790	7,710	9,540	19,400	11,500	11,200	7,710			
18.....	5,350	5,720	5,540	8,000	13,700	17,000	11,200	10,500	7,430			
19.....	5,350	5,590	5,470	11,200	12,900	15,500	10,900	10,500	7,430			
20.....	5,350	5,590	5,470	9,220	11,500	14,800	10,200	12,200	7,150			
21.....	5,350	5,590	5,470	7,710	10,500	13,700	9,860	14,000	7,150			
22.....	5,350	5,590	5,350	7,150	10,200	12,200	9,540	13,300	7,150			
23.....	5,350	5,470	5,350	8,000	9,540	11,900	9,540	14,000	7,430			
24.....	5,350	5,470	5,350	10,900	9,220	11,500	9,540	12,900	8,300			
25.....	5,350	5,470	5,350	32,200	8,910	12,200	9,540	13,300	7,710			
26.....	5,540	5,470	5,350	55,000	8,300	11,500	9,540	16,600	7,150			
27.....	5,350	5,470	5,540	35,100	8,300	11,500	9,540	24,000	7,150			
28.....	5,350	5,470	5,840	20,000	8,000	11,200	9,220	20,200	6,880			
29.....	5,350	5,470	5,590	12,000	7,710	11,200	19,000	17,400	6,880			
30.....	5,350	5,470	5,590	24,000		11,200	24,500	15,900	6,610			
31.....	5,470		5,590	11,000		10,500		14,400				

NOTE.—Daily discharge Jan. 28 to Feb. 3, 1912, estimated from gage heights of United States Weather Bureau at gage just above bridge.

Monthly discharge of Sacramento River near Red Bluff, Cal., for 1902-1912.

[Drainage area, 10,400 square miles.]<sup>a</sup>

Month.	Discharge in second-feet.			Per square mile.	Run-off.		Accuracy.
	Maximum.	Minimum.	Mean.		Depth in inches on drainage area.	Total in acre-feet.	
1902.							
February.....	151,000	4,880	69,200	6.65	6.92	3,840,000	A.
March.....	61,700	13,700	27,000	2.60	3.00	1,660,000	A.
April.....	53,800	13,700	21,600	2.08	2.32	1,290,000	A.
May.....	24,000	9,540	17,300	1.66	1.91	1,080,000	A.
June.....	12,900	6,350	9,380	.902	1.01	558,000	B.
July.....	6,350	5,110	5,440	.523	.60	334,000	B.
August.....	5,110	4,650	4,890	.470	.54	301,000	C.
September.....	4,420	4,200	4,210	.405	.45	251,000	C.
The period.....						9,290,000	
1902-3.							
October.....	11,200	4,200	5,170	.497	.57	318,000	C.
November.....	118,000	4,880	18,900	1.82	2.03	1,120,000	B.
December.....	39,000	7,430	17,000	1.63	1.88	1,050,000	A.
January.....	131,000	7,710	25,100	2.41	2.78	1,540,000	A.
February.....	26,800	12,100	16,600	1.60	1.67	922,000	A.
March.....	73,000	16,200	31,200	3.00	3.46	1,920,000	A.
April.....	39,000	12,900	18,300	1.76	1.96	1,090,000	A.
May.....	12,900	7,710	10,300	.990	1.14	633,000	A.
June.....	7,710	5,350	6,240	.600	.67	371,000	B.
July.....	5,350	4,420	4,820	.463	.53	296,000	C.
August.....	4,310	4,090	4,160	.400	.46	256,000	C.
September.....	4,200	3,960	4,020	.387	.43	239,000	C.
The year.....	131,000	3,960	13,500	1.30	17.58	9,760,000	

<sup>a</sup> Drainage area changed from 9,300 square miles to 10,400 square miles to include Goose Lake basin, which is naturally a part of the Sacramento River basin.

## Monthly discharge of Sacramento River near Red Bluff, Cal., for 1902-1912—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.	
1903-4.							
October.....	6,880	4,420	4,570	0.439	0.51	281,000	C.
November.....	119,000	4,420	21,400	2.06	2.30	1,270,000	B.
December.....	48,000	7,430	12,500	1.20	1.38	769,000	A.
January.....	17,600	8,910	10,700	1.03	1.19	658,000	A.
February.....	188,000	7,430	46,200	4.44	4.79	2,660,000	A.
March.....	147,000	33,200	73,900	7.05	8.13	4,510,000	A.
April.....	49,200	30,300	38,800	3.73	4.16	2,310,000	A.
May.....	31,800	18,600	24,500	2.36	2.72	1,510,000	A.
June.....	16,800	8,910	11,900	1.14	1.27	708,000	A.
July.....	8,910	7,150	8,160	.785	.90	502,000	B.
August.....	7,150	5,350	5,990	.576	.66	368,000	B.
September.....	14,000	5,350	6,220	.598	.67	370,000	B.
The year.....	188,000	4,420	22,000	2.12	28.68	15,900,000	
1904-5.							
October.....	45,300	5,960	10,900	1.05	1.21	670,000	A.
November.....	12,200	7,430	8,800	.846	.94	524,000	B.
December.....	59,800	8,300	13,600	1.31	1.51	836,000	A.
January.....	108,000	9,860	31,500	3.03	3.49	1,940,000	A.
February.....	74,000	14,800	26,400	2.54	2.64	1,470,000	A.
March.....	71,600	13,100	30,700	2.95	3.40	1,890,000	A.
April.....	29,600	12,900	18,200	1.75	1.95	1,080,000	A.
May.....	18,600	9,700	12,300	1.18	1.36	756,000	A.
June.....	9,540	6,480	8,140	.783	.87	484,000	B.
July.....	6,480	5,230	5,740	.552	.64	353,000	B.
August.....	5,230	4,760	4,960	.477	.55	305,000	B.
September.....	4,880	4,760	4,770	.459	.51	284,000	C.
The year.....	108,000	4,760	14,700	1.41	19.07	10,600,000	
1905-6.							
October.....	4,880	4,760	4,860	.467	.54	299,000	C.
November.....	6,480	4,880	5,310	.511	.57	316,000	B.
December.....	6,880	5,470	5,760	.554	.64	354,000	B.
January.....	136,000	5,470	20,400	1.96	2.26	1,250,000	A.
February.....	54,100	9,540	23,800	2.29	2.38	1,320,000	A.
March.....	137,000	18,000	42,300	4.07	4.69	2,600,000	A.
April.....	71,600	18,600	25,900	4.49	2.78	1,540,000	A.
May.....	44,200	11,900	19,000	1.83	2.11	1,170,000	A.
June.....	33,400	10,700	17,600	1.69	1.89	1,050,000	A.
July.....	10,500	6,350	8,060	.775	.89	496,000	B.
August.....	6,350	5,840	5,970	.574	.66	367,000	B.
September.....	5,960	5,690	5,680	.546	.61	338,000	B.
The year.....	137,000	4,760	15,400	1.48	20.02	11,100,000	
1906-7.							
October.....	5,590	5,470	5,540	.533	.61	341,000	B.
November.....	10,400	5,590	6,200	.596	.66	369,000	B.
December.....	59,500	5,720	15,000	1.44	1.66	922,000	A.
January.....	64,600	12,100	21,500	2.07	2.39	1,320,000	A.
February.....	134,000	19,000	45,400	4.37	4.55	2,520,000	A.
March.....	196,000	22,700	55,700	5.36	6.18	3,420,000	A.
April.....	48,000	19,000	32,200	3.10	3.46	1,920,000	A.
May.....	182,000	12,600	15,500	1.49	1.72	953,000	A.
June.....	26,900	8,910	12,200	1.17	1.30	726,000	A.
July.....	8,910	6,740	7,550	.726	.84	464,000	A.
August.....	6,610	5,840	6,260	.602	.69	385,000	A.
September.....	6,090	5,590	5,830	.561	.63	347,000	A.
The year.....	196,000	5,470	19,100	1.84	24.69	13,700,000	
1907-8.							
October.....	7,020	5,590	5,870	.564	.65	361,000	A.
November.....	6,480	6,090	6,200	.596	.66	369,000	A.
December.....	42,100	6,220	11,600	1.12	1.29	713,000	A.
January.....	47,000	10,200	21,000	2.02	2.33	1,290,000	A.
February.....	83,300	11,900	23,200	2.23	2.40	1,330,000	A.
March.....	19,000	11,200	15,000	1.44	1.66	922,000	A.
April.....	14,400	10,200	11,900	1.14	1.27	708,000	A.
May.....	16,800	8,910	10,700	1.03	1.19	658,000	A.
June.....	8,910	6,350	7,560	.727	.81	450,000	A.
July.....	6,350	5,110	5,570	.536	.62	342,000	A.
August.....	5,110	4,650	4,830	.464	.53	297,000	A.
September.....	4,880	4,650	4,710	.453	.51	280,000	A.
The year.....	83,300	4,650	10,700	1.03	13.92	7,720,000	

Monthly discharge of Sacramento River near Red Bluff, Cal., for 1902-1912—Contd.

Month.	Discharge in second-feet.				Run-off.		Accuracy.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.	Total in acre-feet.	
1908-9.							
October.....	8,600	4,760	5,230	0.503	0.58	322,000	A.
November.....	10,500	5,230	6,060	.583	.65	361,000	A.
December.....	10,500	5,590	6,370	.612	.71	392,000	A.
January.....	188,000	8,760	72,900	7.01	8.08	4,480,000	A.
February.....	254,000	28,500	63,900	6.14	6.39	3,550,000	A.
March.....	45,300	19,800	25,500	2.45	2.82	1,570,000	A.
April.....	23,200	16,600	19,500	1.88	2.10	1,160,000	A.
May.....	17,800	11,500	13,800	1.33	1.53	848,000	A.
June.....	12,600	8,000	9,890	.951	1.06	588,000	A.
July.....	7,860	6,090	6,840	.658	.76	421,000	A.
August.....	5,840	5,470	5,710	.549	.63	351,000	A.
September.....	6,610	5,350	5,560	.535	.60	331,000	A.
The year.....	254,000	4,760	20,100	1.93	25.91	13,400,000	
1909-10.							
October.....	8,000	5,840	6,250	.601	.69	384,000	A.
November.....	35,100	6,480	12,300	1.18	1.32	732,000	A.
December.....	90,800	8,760	16,100	1.55	1.79	990,000	A.
January.....	48,300	9,220	16,200	1.56	1.80	996,000	A.
February.....	89,700	12,900	21,800	2.10	2.19	1,210,000	A.
March.....	54,100	19,000	28,900	2.78	3.20	1,780,000	A.
April.....	20,600	11,500	16,000	1.54	1.72	952,000	A.
May.....	11,900	7,150	9,310	.895	1.03	572,000	A.
June.....	7,020	5,590	6,280	.604	.67	374,000	A.
July.....	5,590	5,110	5,320	.512	.59	327,000	A.
August.....	5,000	4,760	4,860	.467	.54	299,000	A.
September.....	5,230	4,760	4,940	.475	.53	294,000	A.
The year.....	90,800	4,760	12,400	1.19	16.07	8,910,000	
1910-11.							
October.....	6,220	5,000	5,170	.497	.57	318,000	A.
November.....	16,200	5,110	6,510	.626	.70	387,000	A.
December.....	20,200	6,480	10,200	.981	1.13	627,000	A.
January.....	63,300	6,090	17,100	1.64	1.89	1,050,000	A.
February.....	53,800	10,700	23,800	2.29	2.38	1,320,000	A.
March.....	130,000	10,800	33,300	3.20	3.69	2,050,000	A.
April.....	47,800	17,000	24,900	2.39	2.67	1,480,000	A.
May.....	21,800	13,300	16,200	1.56	1.80	996,000	A.
June.....	14,200	7,500	10,700	1.03	1.15	637,000	A.
July.....	7,430	5,720	6,550	.630	.73	403,000	A.
August.....	5,720	5,110	5,380	.517	.60	331,000	A.
September.....	5,400	5,110	5,170	.497	.55	308,000	A.
The year.....	130,000	5,000	13,700	1.32	17.86	9,910,000	
1911-12.							
October.....	5,790	5,350	5,410	.520	.60	333,000	A.
November.....	6,040	5,350	5,520	.531	.59	328,000	A.
December.....	6,090	5,350	5,550	.534	.62	341,000	A.
January.....	55,000	5,350	11,800	1.13	1.30	726,000	A.
February.....	13,700	7,710	10,100	.971	1.05	581,000	A.
March.....	31,800	7,430	14,900	1.43	1.65	916,000	A.
April.....	24,500	8,910	11,500	1.11	1.24	684,000	A.
May.....	28,500	10,500	15,600	1.50	1.73	959,000	A.
June.....	13,300	6,610	8,820	.848	.95	525,000	A.
The period.....						5,390,000	

SACRAMENTO RIVER AT RED BLUFF, CAL.

The United States Weather Bureau has maintained a record of gage heights on Sacramento River at the highway bridge in Red Bluff, Cal., since December 15, 1878.

During 1894 to 1896 the United States Geological Survey attempted to develop a rating curve for this station in the hope of utilizing these

long-time records, and to that end made several discharge measurements but with unfavorable results.

The Weather Bureau gage is located at the east end of the bridge from which the discharge measurements were made. The measuring section is badly broken by piers and the current is very swift. With the type of meter then used it was found impossible to accurately record the number of revolutions at flood stages, and the presence of piers greatly interfered with the accuracy of the results obtained. The United States Geological Survey abandoned this station in 1896 in favor of a new location at Jelys Ferry, where more favorable measuring conditions existed.

*Discharge measurements of Sacramento River at Red Bluff, Cal., in 1894-1896.*

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1894. Dec. 20	A. P. Davis .....	<i>Fect.</i> 10.7	<i>Sec.-ft.</i> <sup>a</sup> 45,000	1896. Jan. 20	J. B. Lippincott .....	<i>Fect.</i> 23.5	<i>Sec.-ft.</i> 6136,000
				21	.....do .....	20.8	109,000
				22	.....do .....	17.7	83,600
1895. Mar. 19	J. B. Lippincott .....	4.8	15,500				
Apr. 27	.....do .....	8.6	36,200				

<sup>a</sup> Approximate. High velocities could not be counted accurately with Haskell meter used.

<sup>b</sup> Estimated.

NOTE.—The 1896 measurements include discharges in the slough; Jan. 20, this was 21,000 sec.-feet; Jan. 21, 10,500 sec.-feet; and Jan. 22, 2,150 sec.-feet.

SACRAMENTO RIVER AT COLLINSVILLE, CAL.<sup>1</sup>

The flow of Sacramento River at Collinsville, the point of its junction with the San Joaquin and entry into Suisun Bay up to 1886 had never been directly measured. Its flow past the city of Sacramento, 57 miles above, had been determined by a number of low, medium-stage, and flood-water measurements in 1879 and 1880, and by low-water measurements in 1885; and its fluctuations noted by daily rod observations from October, 1878, to 1886; occasional examinations of the channel were made in the interim.

From the results of the measurements a scale of discharge was projected for the channel at Sacramento, giving the probable quantity of water flowing for each foot of elevation of surface from lowest to highest observed stage. These deduced data, applied to the results of the daily rod observations, averaged generally for five-day or longer periods when the river was not in an active state of fluctuation, have afforded the estimated volumes from which the total for each month, as given in the following table, was determined.

The flow as given in the table is an estimate of the total discharge of Sacramento River and tributaries passing Collinsville.

<sup>1</sup> Description, monthly means, and drainage area abstracted from "Physical data and statistics of California," collected and compiled by the State engineering department of California, William Ham. Hall, State engineer, 1886, pp. 406-407, 412-415.

STREAM MEASUREMENTS IN SACRAMENTO BASIN.

Monthly discharge of Sacramento River at Collinsville, Cal., for 1878-1885.

[Drainage area, 26,200 square miles.]<sup>a</sup>

Month.	Discharge in second-feet.		Run-off.	
	Mean.	Per square mile.	Depth in inches on drainage area.	Total in acre-feet.
1878-79.				
November.....	8,000	0.305	0.34	476,000
December.....	9,000	.344	.40	553,000
January.....	12,000	.458	.53	738,000
February.....	30,000	1.15	1.20	1,670,000
March.....	110,000	4.20	4.84	6,760,000
April.....	110,000	4.20	4.69	6,550,000
May.....	75,000	2.86	3.30	4,610,000
June.....	45,000	1.72	1.92	2,680,000
July.....	16,000	.611	.70	984,000
August.....	8,500	.324	.37	523,000
September.....	6,500	.248	.28	387,000
The period.....				25,900,000
1879-80.				
October.....	8,000	.305	.35	492,000
November.....	7,500	.286	.32	446,000
December.....	27,000	1.03	1.19	1,660,000
January.....	28,000	1.07	1.23	1,720,000
February.....	21,000	.802	.86	1,210,000
March.....	22,000	.840	.97	1,350,000
April.....	95,000	3.63	4.05	5,650,000
May.....	135,000	5.15	5.94	8,300,000
June.....	110,000	4.20	4.69	6,550,000
July.....	53,000	2.02	2.33	3,260,000
August.....	18,000	.687	.79	1,110,000
September.....	9,000	.344	.38	536,000
The year.....	44,500	1.70	23.10	32,300,000
1880-81.				
October.....	7,500	.286	.33	461,000
November.....	7,000	.258	.30	417,000
December.....	20,000	.753	.88	1,230,000
January.....	95,000	3.63	4.18	5,840,000
February.....	115,000	4.39	4.57	6,390,000
March.....	77,000	2.94	3.39	4,730,000
April.....	90,000	3.44	3.84	5,360,000
May.....	70,000	2.68	3.09	4,300,000
June.....	25,000	.955	1.07	1,490,000
July.....	14,000	.534	.62	861,000
August.....	8,000	.305	.35	492,000
September.....	6,500	.248	.28	387,000
The year.....	44,600	1.70	22.90	32,000,000
1881-82.				
October.....	7,000	.258	.31	430,000
November.....	8,200	.313	.35	488,000
December.....	16,000	.611	.70	984,000
January.....	24,000	.916	1.05	1,480,000
February.....	22,000	.840	.87	1,220,000
March.....	55,000	2.10	2.42	3,380,000
April.....	90,000	3.44	3.84	5,360,000
May.....	92,000	3.51	4.05	5,660,000
June.....	74,000	2.82	3.15	4,400,000
July.....	17,000	.649	.75	1,050,000
August.....	8,000	.305	.35	492,000
September.....	6,500	.248	.28	387,000
The year.....	35,000	1.34	18.12	25,300,000
1882-3.				
October.....	10,000	.382	.44	615,000
November.....	14,000	.534	.60	833,000
December.....	11,000	.420	.48	676,000
January.....	12,000	.458	.53	738,000
February.....	17,000	.649	.68	944,000
March.....	21,000	.802	.92	1,290,000
April.....	73,000	2.79	3.11	4,340,000
May.....	80,000	3.05	3.52	4,920,000

<sup>a</sup> Given as 26,187 square miles in "Physical data and statistics of California," compiled by the State engineering department of California, 1886.

*Monthly discharge of Sacramento River at Collinsville, Cal., for 1878-1885—Continued.*

Month.	Discharge in second-feet.		Run-off.	
	Mean.	Per square mile.	Depth in inches on drainage area.	Total in acre-feet.
1882-3.				
June.....	32,000	1.22	1.36	1,900,000
July.....	12,000	.458	.53	738,000
August.....	7,000	.267	.31	430,000
September.....	6,500	.248	.28	387,000
The year.....	24,600	.939	12.76	17,800,000
1883-4.				
October.....	7,000	.267	.31	430,000
November.....	7,500	.286	.32	446,000
December.....	7,400	.282	.33	455,000
January.....	12,000	.458	.53	738,000
February.....	24,000	.916	.99	1,380,000
March.....	80,000	3.05	3.52	4,920,000
April.....	105,000	4.01	4.47	6,250,000
May.....	111,000	4.24	4.89	6,820,000
June.....	90,000	3.44	3.84	5,360,000
July.....	31,000	1.18	1.36	1,910,000
August.....	12,000	.458	.53	738,000
September.....	7,500	.286	.32	446,000
The year.....	41,200	1.57	21.41	29,900,000
1884-5.				
October.....	8,000	.305	.35	492,000
November.....	7,000	.267	.30	417,000
December.....	31,000	1.18	1.36	1,910,000
January.....	90,000	3.44	3.97	5,530,000
February.....	52,000	1.98	2.06	2,890,000
March.....	30,000	1.15	1.33	1,840,000
April.....	29,000	1.11	1.24	1,730,000
May.....	23,000	.878	1.01	1,410,000
June.....	14,000	.534	.60	833,000
July.....	6,500	.248	.29	400,000
August.....	5,500	.210	.24	338,000
September.....	5,200	.198	.22	309,000
The year.....	25,100	.958	12.97	18,100,000

## PIT RIVER NEAR CANBY, CAL.

This station, which was located at the highway bridge  $3\frac{1}{2}$  miles southwest of Canby, Cal., was established December 26, 1903, and discontinued December 31, 1905. It was below the junction of North and South forks and above the mouth of Ash Creek. Data at this station are of importance as showing the amount of water available for storage in the proposed Warm Springs Valley reservoir.

The channel is straight for 150 feet above and 200 feet below the station and the current is moderate at all stages. The banks are high and are not subject to overflow. The channel is regular and is not subject to much change.

The datum of the vertical staff gage remained unchanged during the life of the station.

Discharge measurements were made from the bridge. The station was not maintained for a sufficient length of time to obtain maximum and minimum discharge values.

Discharge measurements of Pit River near Canby, Cal., in 1903-1905.

[By J. S. Evans and J. Y. Toler. a]

Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.
1903.			1905.		
Dec. 27.....	<i>Feet.</i> 3.60	<i>Sec.-ft.</i> 169	Feb. 13.....	<i>Feet.</i> 3.70	250
1904.			22.....	4.60	712
Feb. 12.....	3.65	183	27.....	3.90	309
18.....	6.25	1,670	Mar. 7.....	3.65	238
22.....	7.15	2,440	9.....	3.65	233
Mar. 3.....	7.30	2,630	14.....	3.70	243
5.....	9.05	4,380	22.....	4.60	659
29.....	10.10	6,200	26.....	4.65	674
May 2.....	9.70	5,240	Apr. 4.....	5.00	971
16.....	5.70	1,540	5.....	5.00	955
June 2.....	5.20	1,200	10.....	4.40	579
12.....	4.60	723	16.....	4.00	331
Sept. 6.....	2.70	8.7	19.....	3.90	282
19.....	2.75	16	May 1.....	3.30	90
22.....	2.75	19	2.....	3.30	91
26.....	2.82	20	5.....	2.90	31
Oct. 3.....	3.00	41	16.....	3.70	222
7.....	3.18	48	20.....	3.70	212
13.....	3.28	76	June 9.....	3.60	201
21.....	3.50	123	July 17.....	2.90	24
Nov. 4.....	3.45	110	22.....	2.85	23
9.....	3.50	117	Aug. 8.....	2.80	14
22.....	3.50	127	10.....	2.75	14
Dec. 6.....	3.50	106	21.....	2.50	3.7
10.....	3.35	82	28.....	2.45	2.1
20.....	3.68	213	31.....	2.45	2.3
29.....	3.50	131	Sept. 9.....	2.50	3.1
1905.			19.....	2.60	5.7
Jan. 5.....	4.20	476	Oct. 6.....	2.80	21
9.....	3.70	216	19.....	3.10	52
20.....	4.18	470	25.....	3.20	50
26.....	4.50	675	28.....	3.20	55
Feb. 7.....	4.40	641	Nov. 7.....	3.30	80
			11.....	3.30	83

a Measurements Dec. 27, 1903, to June 12, 1904, by J. S. Evans.

Daily gage height, in feet, of Pit River near Canby, Cal., for 1904-5.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1904.												
1.....				3.7	3.45	6.7	8.55	8.1	5.25	3.65	3.3	2.65
2.....				3.6	3.45	7.3	7.55	9.85	5.2	3.6	3.3	2.65
3.....				3.5	3.45	7.55	6.9	9.85	5.15	3.6	3.3	2.6
4.....				3.55	3.5	9.05	6.75	9.3	5.05	3.6	3.3	2.6
5.....				3.5	3.5	9.35	6.5	8.55	5.0	3.6	3.3	2.6
6.....				3.4	3.5	8.45	6.3	7.45	4.9	3.6	3.3	2.6
7.....				3.6	3.5	9.85	5.95	7.0	4.8	3.6	3.3	2.6
8.....				3.5	3.5	14.0	5.9	6.6	4.75	3.6	3.3	2.65
9.....				3.5	3.45	12.7	5.8	6.35	4.7	3.6	3.3	2.65
10.....				3.5	3.45	10.5	5.65	6.05	4.7	3.6	3.3	2.65
11.....				3.5	3.45	8.95	5.55	5.85	4.65	3.6	3.2	2.65
12.....				3.5	3.5	8.15	5.5	5.8	4.6	3.5	3.2	2.65
13.....				3.6	3.6	7.55	5.4	5.7	4.5	3.5	3.2	2.7
14.....				3.6	3.65	7.0	5.6	5.7	4.5	3.5	3.1	2.7
15.....				3.5	5.0	7.0	6.0	5.7	4.4	3.5	3.1	2.7
16.....				3.7	10.7	7.0	6.0	5.8	4.3	3.5	3.1	2.75
17.....				3.6	7.15	7.0	6.0	5.8	4.2	3.5	3.0	2.8
18.....				3.5	6.45	7.4	6.0	5.8	4.1	3.5	2.9	2.8
19.....				3.4	6.55	8.65	5.8	5.8	4.0	3.5	2.9	2.8
20.....				3.4	6.4	9.7	5.8	5.8	3.95	3.5	2.8	2.8
21.....				3.5	6.2	8.5	5.8	5.9	3.95	3.5	2.8	2.8
22.....				3.5	7.5	8.35	5.75	5.9	3.9	3.5	2.8	2.8
23.....				3.6	10.7	6.8	5.6	5.9	3.9	3.45	2.8	2.8
24.....				3.45	11.0	6.45	5.5	5.75	3.9	3.45	2.75	2.8
25.....				3.45	10.1	6.0	5.4	5.6	3.9	3.45	2.75	2.8

Daily gage height, in feet, of Pit River near Canby, Cal., for 1904-5—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1904.												
26.				3.45	10.5	6.15	5.3	5.5	3.8	3.45	2.7	2.85
27.				3.45	9.3	6.25	5.4	5.5	3.8	3.4	2.7	2.85
28.				3.45	7.7	7.2	5.5	5.4	3.75	3.4	2.75	2.9
29.				3.45	7.25	10.0	5.7	5.4	3.7	3.35	2.75	2.95
30.				3.45	.....	9.8	6.7	5.35	3.7	3.35	2.7	3.0
31.				3.45	.....	9.35	.....	5.3	.....	3.3	2.7	.....
1904-5.												
1.	3.0	3.5	3.55	4.55	4.6	3.8	5.5	3.4	3.6	3.3	2.9	2.5
2.	3.35	3.5	3.55	4.4	5.05	3.8	5.6	3.4	3.7	3.25	2.9	2.5
3.	3.1	3.5	3.55	4.1	5.25	3.75	5.5	3.3	3.7	3.25	2.9	2.5
4.	3.1	3.5	3.5	4.0	5.65	3.7	5.4	3.0	3.7	3.25	2.9	2.5
5.	3.1	3.5	3.45	3.9	4.85	3.7	5.5	3.0	3.7	3.25	2.9	2.5
6.	3.1	3.5	3.5	3.8	4.65	3.7	4.8	3.0	3.5	3.25	2.5	2.5
7.	3.1	3.5	3.5	3.8	4.25	3.65	4.8	3.6	3.6	3.2	2.5	2.5
8.	3.15	3.5	3.5	3.8	4.1	3.65	4.7	3.6	3.7	3.2	2.5	2.5
9.	3.15	3.5	3.5	3.7	4.05	3.65	4.5	3.3	3.65	3.2	2.5	2.5
10.	3.15	3.5	3.5	3.6	4.0	3.65	4.3	3.15	3.65	3.2	2.5	2.5
11.	3.2	3.5	3.5	3.55	3.9	3.65	4.2	3.2	3.6	3.2	2.5	2.5
12.	3.25	3.5	3.5	3.45	3.7	3.7	4.1	3.2	3.6	3.2	2.5	2.5
13.	3.3	3.5	3.5	3.5	3.7	3.7	4.1	3.2	3.6	3.2	2.5	2.5
14.	3.3	3.5	3.55	3.7	3.75	3.7	4.0	3.6	3.5	3.2	2.5	2.5
15.	3.4	3.5	3.6	3.95	3.7	3.7	4.0	3.8	3.5	3.2	2.5	2.5
16.	3.4	3.5	3.75	4.25	3.65	3.8	4.0	3.8	3.4	3.2	2.5	2.5
17.	3.4	3.5	3.75	4.3	3.75	4.1	4.0	3.8	3.4	3.2	2.5	2.5
18.	3.4	3.5	3.8	4.3	3.8	4.35	4.0	3.8	3.4	3.2	2.5	2.5
19.	3.45	3.5	3.8	4.3	4.2	4.4	4.0	3.8	3.4	3.2	2.5	2.6
20.	3.45	3.5	3.75	4.2	4.95	4.5	3.95	3.8	3.4	3.2	2.4	2.6
21.	3.45	3.5	3.65	4.1	4.8	4.95	3.85	3.75	3.4	3.2	2.4	2.6
22.	3.5	3.5	3.5	4.35	4.6	4.8	3.8	3.7	3.4	3.2	2.4	2.6
23.	3.5	3.5	3.45	4.5	4.3	4.45	3.3	3.65	3.4	3.1	2.4	2.6
24.	3.5	3.5	3.4	5.0	4.2	4.5	3.3	3.8	3.4	3.1	2.4	2.6
25.	3.5	3.5	3.5	5.35	4.1	4.6	3.3	3.7	3.4	3.1	2.4	2.6
26.	3.5	3.5	3.3	4.6	4.0	4.7	3.3	3.6	3.4	3.1	2.4	2.6
27.	3.5	3.5	3.3	4.2	4.0	4.8	3.4	3.5	3.3	3.1	2.5	2.7
28.	3.5	3.5	3.35	4.05	3.9	4.85	3.4	3.5	3.3	3.1	2.5	2.8
29.	3.5	3.55	3.6	4.0	.....	4.85	3.5	3.5	3.3	3.1	2.5	2.8
30.	3.5	3.55	4.6	4.0	.....	4.8	3.4	3.6	3.3	3.1	2.5	2.8
31.	3.5	.....	4.7	4.15	.....	5.0	.....	3.6	.....	3.1	2.5	.....

Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.
1905.							
1.	2.8	3.2	3.5	16.	3.1	3.25	3.3
2.	2.8	3.25	3.5	17.	3.15	3.25	3.3
3.	2.8	3.25	3.5	18.	3.15	3.25	3.3
4.	2.8	3.3	3.5	19.	3.2	3.25	3.35
5.	2.8	3.3	3.5	20.	3.2	3.3	3.4
6.	2.8	3.3	3.5	21.	3.2	3.3	3.4
7.	2.8	3.3	3.5	22.	3.2	3.3	3.4
8.	2.8	3.3	3.5	23.	3.2	3.35	3.4
9.	3.05	3.3	3.5	24.	3.2	3.35	3.4
10.	3.05	3.3	3.4	25.	3.2	3.4	3.4
11.	3.05	3.3	3.4	26.	3.2	3.4	3.4
12.	3.05	3.3	3.35	27.	3.2	3.4	3.4
13.	3.05	3.3	3.3	28.	3.2	3.4	3.4
14.	3.05	3.3	3.3	29.	3.2	3.45	3.4
15.	3.1	3.3	3.3	30.	3.2	3.5	3.4
				31.	3.2	.....	3.4

STREAM MEASUREMENTS IN SACRAMENTO BASIN.

Daily discharge, in second-feet, of Pit River near Canby, Cal., for 1904-5.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1904.												
1.				205	115	2,180	3,770	3,350	1,160	185	76	10
2.				165	115	2,660	2,860	5,620	1,120	165	76	10
3.				130	115	2,860	2,340	5,620	1,090	165	76	8
4.				148	130	4,340	2,220	4,680	1,020	165	76	8
5.				130	130	4,760	2,030	3,770	990	165	76	8
6.				100	130	3,670	1,890	2,780	925	165	76	8
7.				165	130	5,620	1,640	2,420	860	165	76	8
8.				130	130	17,000	1,610	2,100	828	165	76	10
9.				130	115	12,800	1,540	1,920	795	165	76	10
10.				130	115	6,900	1,440	1,720	795	165	76	10
11.				130	115	4,220	1,360	1,580	762	165	59	10
12.				130	130	3,400	1,330	1,540	730	130	59	10
13.				165	165	2,860	1,260	1,470	665	130	45	12
14.				165	185	2,420	1,400	1,470	665	130	45	12
15.				130	990	2,420	1,680	1,470	600	130	45	12
16.				205	7,340	2,420	1,680	1,540	535	130	45	15
17.				165	2,540	2,420	1,680	1,540	475	130	34	18
18.				130	2,000	2,740	1,680	1,540	415	130	25	18
19.				100	2,060	3,880	1,540	1,540	360	130	25	18
20.				100	1,960	5,340	1,540	1,540	332	130	18	18
21.				130	1,820	3,720	1,540	1,610	332	130	18	18
22.				130	2,820	3,580	1,500	1,610	305	130	18	18
23.				165	7,340	2,260	1,400	1,610	305	115	18	18
24.				115	8,000	2,000	1,330	1,500	305	115	15	18
25.				115	6,100	1,680	1,260	1,400	305	115	15	18
26.				115	6,900	1,780	1,190	1,330	255	115	12	22
27.				115	4,680	1,860	1,260	1,330	255	100	12	22
28.				115	2,990	2,580	1,330	1,260	230	100	15	25
29.				115	2,620	5,910	1,470	1,260	205	88	15	30
30.				115	5,530	5,910	1,470	1,220	205	88	12	34
31.				115	4,760	4,760	1,190	1,190	76	12	12	34
1904-5.												
1.	34	130	148	686	717	269	1,280	115	186	87	24	3.5
2.	88	130	148	593	996	269	1,340	115	226	76	24	3.5
3.	45	130	148	419	1,120	248	1,280	87	226	76	24	3.5
4.	45	130	130	366	1,370	226	1,220	34	226	76	24	3.5
5.	45	130	115	316	872	226	1,280	34	226	76	24	3.5
6.	45	130	130	269	748	226	841	34	148	76	3.5	3.5
7.	45	130	130	269	504	206	841	186	186	64	3.5	3.5
8.	52	130	130	269	419	206	779	186	226	64	3.5	3.5
9.	52	130	130	226	392	206	655	87	206	64	3.5	3.5
10.	52	130	130	186	366	206	533	56	206	64	3.5	3.5
11.	59	130	130	167	316	206	475	64	186	64	3.5	3.5
12.	68	130	130	132	226	226	419	64	186	64	3.5	3.5
13.	76	130	130	148	226	226	419	64	186	64	3.5	3.5
14.	76	130	148	226	248	226	366	186	148	64	3.5	3.5
15.	100	130	165	341	226	226	366	269	148	64	3.5	3.5
16.	100	130	230	504	206	269	366	269	115	64	3.5	3.5
17.	100	130	230	533	248	419	366	269	115	64	3.5	3.5
18.	100	130	255	533	269	563	366	269	115	64	3.5	3.5
19.	115	130	255	533	475	593	366	269	115	64	3.5	6
20.	115	130	230	475	934	655	341	269	115	64	1.5	6
21.	115	130	185	419	841	934	292	248	115	64	1.5	6
22.	130	130	130	563	717	841	269	226	115	64	1.5	6
23.	130	130	115	655	533	624	87	206	115	47	1.5	6
24.	130	130	100	965	475	655	87	269	115	47	1.5	6
25.	130	130	130	1,190	419	717	87	226	115	47	1.5	6
26.	130	130	76	717	366	779	87	186	115	47	1.5	6
27.	130	130	76	475	366	841	115	148	87	47	3.5	10
28.	130	130	88	392	316	872	115	148	87	47	3.5	16
29.	130	148	165	366	872	872	148	148	87	47	3.5	16
30.	130	148	730	366	841	841	115	186	87	47	3.5	16
31.	120	795	795	447	965	965	186	186	47	3.5	3.5	16

Daily discharge, in second-feet, of Pit River near Canby, Cal., for 1904-5—Continued.

Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.
1905.				1905.			
1.....	16	64	148	16.....	47	76	87
2.....	16	76	148	17.....	56	76	87
3.....	16	76	148	18.....	56	76	87
4.....	16	87	148	19.....	64	76	101
5.....	16	87	148	20.....	64	87	115
6.....	16	87	148	21.....	64	87	115
7.....	16	87	148	22.....	64	87	115
8.....	16	87	148	23.....	64	101	115
9.....	40	87	148	24.....	64	101	115
10.....	40	87	115	25.....	64	115	115
11.....	40	87	115	26.....	64	115	115
12.....	40	87	101	27.....	64	115	115
13.....	40	87	87	28.....	64	115	115
14.....	40	87	87	29.....	64	132	115
15.....	47	87	87	30.....	64	148	115
				31.....	64		115

NOTE.—Daily discharge for 1904-5 determined from rating curves applicable as follows: 1904, fairly well-defined between 12 and 6,000 second-feet; 1905, well-defined below 960 second-feet.

Monthly discharge of Pit River near Canby, Cal., for 1904-5.

[Drainage area, 2,590 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.	
1904.							
January.....	205	100	135	0.052	0.06	8,300	A.
February.....	7,340	115	2,140	.826	.89	123,000	B.
March.....	17,000	1,680	4,210	1.63	1.88	259,000	B.
April.....	3,770	1,190	1,680	.649	.72	100,000	B.
May.....	5,620	1,190	2,080	.803	.93	128,000	B.
June.....	1,160	205	594	.229	.26	35,300	A.
July.....	185	76	135	.052	.06	8,300	A.
August.....	76	12	43	.017	.02	2,640	A.
September.....	34	8	15	.0058	.006	893	B.
The period.....						665,000	
1904-5.							
October.....	130	34	91	.035	.04	5,600	A.
November.....	148	130	131	.051	.06	7,800	B.
December.....	795	76	188	.073	.08	11,600	A.
January.....	1,190	132	443	.171	.20	27,200	A.
February.....	1,370	206	533	.206	.21	29,600	A.
March.....	965	206	479	.185	.21	29,500	A.
April.....	1,340	87	510	.197	.22	30,300	A.
May.....	269	34	165	.064	.07	10,100	A.
June.....	226	87	151	.058	.06	8,980	A.
July.....	87	47	61.7	.024	.03	3,790	B.
August.....	24	1.5	6.4	.0025	.003	394	C.
September.....	16	3.5	5.6	.0022	.002	333	C.
The year.....	1,370	1.5	230	.089	1.185	165,000	
1905.							
October.....	64	16	45.4	.018	.02	2,790	B.
November.....	148	64	92.2	.036	.04	5,490	B.
December.....	148	87	118	.046	.05	7,260	B.

NOTE.—Drainage area changed from 1,500 square miles to 2,590 square miles, to include Goose Lake basin, which is naturally a part of Pit River basin.

PIT RIVER NEAR BIEBER CAL.

This station, which is located about 12 miles south of Bieber, near Holabird's ranch, in the gorge near the dam site at the lower end of Big Valley, was established January 22, 1904, to determine the quantity of water available for storage in the proposed Big Valley reservoir. It was discontinued September 30, 1908. No large tributaries enter Pit River near the station. Ash Creek comes in from the east about 16 miles above. Horse Creek enters from the south about 4 miles below, and Beaver Creek enters from the south at Pitville, about 12 miles below. Fall River, one of the chief tributaries, enters about 15 miles below the station. No diversions are made immediately above the station. A large part of the flow of the stream, however, is undoubtedly lost by evaporation from the surface of the numerous swamp valleys through which the stream flows. Many of the valleys are flooded artificially through the summer season. Many filings on the water and applications of right of way over public lands in this basin have been made. Most of the rights, however, have not been improved.

The stream is under no artificial control above or below the station that will affect the accuracy of the records. The channel conditions are, however, not of the best. The bed is rocky and rough, though not subject to change, and the current is very sluggish at low stages. The gage was a heavy wooden rod fastened to a large boulder on the right bank of the stream, and was read daily. No change in the gage datum was made. Discharge measurements were made from a car and cable.

During the winter ice extends out from the banks 10 to 15 feet, and may affect the flow. The records are fairly reliable.

The maximum recorded discharge was 27,500 second-feet for a gage height of 16.4 feet, March 19, 1907. The river goes practically dry at times during the summer of low-water years. The lowest month was September, 1905, with a mean discharge of 1.23 second-feet.

*Discharge measurements of Pit River near Bieber, Cal., in 1904-1907.*

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1904.		<i>Feet.</i>	<i>Sec.-feet.</i>	1904.		<i>Feet.</i>	<i>Sec.-feet.</i>
Jan. 22	J. S. Evans.....	3.20	221	Oct. 22	Clapp and Toler....	2.90	118
Feb. 20	.....do.....	7.51	4,850	Nov. 3	J. Y. Toler.....	3.00	142
Mar. 10	.....do.....	11.75	15,200	Nov. 11	.....do.....	2.95	139
Apr. 13	.....do.....	7.10	4,040	Nov. 25	.....do.....	3.05	163
May 4	.....do.....	9.15	7,830	Dec. 8	.....do.....	2.71	73
May 18	.....do.....	5.30	1,940	Dec. 27	.....do.....	3.45	280
June 3	.....do.....	4.50	1,140				
June 11	Bennett and Evans	4.00	712	1905.			
Aug. 29	J. Y. Toler.....	1.40	37	Jan. 8	.....do.....	3.70	340
Sept. 11	.....do.....	1.15	21	Jan. 22	.....do.....	5.25	1,430
Sept. 21	.....do.....	1.12	11	Jan. 23	.....do.....	6.00	2,250
Sept. 28	.....do.....	1.93	27	Jan. 23	.....do.....	5.94	2,220
Oct. 15	.....do.....	2.60	90	Feb. 9	.....do.....	4.80	1,060

## Discharge measurements of Pit River near Bieber, Cal., in 1904-1907—Continued.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1905.		<i>Feet.</i>	<i>Sec.-feet.</i>	1906.		<i>Feet.</i>	<i>Sec.-feet.</i>
Feb. 24	J. Y. Toler	5.08	1,300	Mar. 20	F. H. Holabird	6.20	2,390
Mar. 11	do	3.70	378	21	do	6.50	2,760
23	do	5.51	1,620	22	do	7.52	4,340
24	do	5.40	1,650	23 <sup>b</sup>	do	9.50	9,500
Apr. 6	do	5.40	1,650	Apr. 4	do	7.30	3,930
7	do	5.30	1,490	5	do	6.90	3,330
17	do	4.30	665	6	do	6.85	3,260
May 3	do	2.88	141	7	do	6.90	3,280
18	do	3.50	244	8	do	6.95	3,310
June 12	do	2.80	110	9	do	6.90	3,330
July 7	do	2.30	34	12	do	6.40	2,580
19	do	2.40	42	13	do	6.20	2,340
Aug. 9	do	1.85	23	14	do	6.10	2,190
18	do	1.80	19	15	do	5.90	1,880
29	do	1.70	9.9	17	do	5.80	1,870
Sept. 10	do	1.40	1.1	19	do	5.70	1,780
20	do	1.40	1.2	20	do	5.60	1,700
Oct. 7	do	1.50	1.7	27	do	5.32	1,440
17	do	1.70	10	May 5	do	4.70	933
26	do	2.20	41	12	do	4.70	906
Nov. 8	do	2.60	71	19	do	4.90	1,080
1906.				26	do	4.60	858
Jan. 29 <sup>a</sup>	F. H. Holabird	5.90	1,820	June 2	do	4.50	773
Feb. 3 <sup>a</sup>	do	5.00	1,320	9	do	4.35	657
5 <sup>a</sup>	do	5.00	1,180	16	do	4.10	525
8 <sup>a</sup>	do	4.70	938	Aug. 11	do	2.30	64
10 <sup>a</sup>	do	4.70	877	25	do	1.80	20
12	do	4.80	983	Sept. 1	do	1.80	20
14	do	5.20	1,310	8	do	1.80	19
16	do	6.30	2,660	15	do	1.90	27
17	do	6.20	2,430	23	do	2.00	29
19	do	6.40	2,690	29	do	1.85	24
21	do	6.70	3,190	Oct. 7	do	1.90	25
23	do	6.90	3,530	14	do	2.00	29
26	do	6.20	2,420	26	do	2.60	81
28	do	7.04	3,680	1907.			
Mar. 28	do	6.00	2,090	Jan. 27	do	4.30	646
12	do	7.10	3,640	31	do	6.80	3,360
13	do	7.65	4,610	Feb. 6	do	6.50	2,780
18	do	6.25	2,380				

<sup>a</sup> Measured by Toler and Holabird.<sup>b</sup> Velocities not measured in entire cross section; discharge probably too great.

## Daily gage height, in feet, of Pit River near Bieber, Cal., for 1904-1908.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1904.												
1.					3.2	9.8	8.1	8.3	5.0	2.9	2.3	1.2
2.					3.1	9.4	7.9	9.35	4.7	2.9	2.3	1.2
3.					3.2	8.3	7.8	9.3	4.5	2.9	2.3	1.2
4.					3.3	8.3	7.4	9.2	4.5	2.9	2.2	1.2
5.					3.3	7.8	7.2	8.8	4.4	2.8	2.2	1.2
6.					3.4	9.2	7.2	8.2	4.4	2.8	2.2	1.2
7.					3.3	9.6	7.2	7.8	4.2	2.8	2.2	1.2
8.					3.4	12.0	7.2	7.3	4.2	2.7	2.2	1.15
9.					3.4	12.7	7.2	6.4	4.1	2.7	2.2	1.15
10.					3.3	11.7	7.2	6.4	4.0	2.7	2.2	1.
11.					3.4	12.0	7.2	6.1	4.0	2.5	2.2	1.15
12.					3.4	10.8	7.1	5.9	4.0	2.5	2.1	1.15
13.					3.6	9.8	7.1	5.9	4.0	2.5	2.1	1.1
14.					3.8	9.2	7.1	5.8	3.8	2.5	2.1	1.1
15.					4.1	8.6	7.0	5.8	3.8	2.5	2.0	1.1
16.					6.6	7.5	6.8	5.8	3.4	2.4	1.8	1.1
17.					9.45	7.2	6.4	5.8	3.3	2.4	1.7	1.15
18.					8.1	7.5	6.4	5.8	3.3	2.4	1.7	1.15
19.					8.1	8.2	6.5	5.8	3.2	2.4	1.5	1.2
20.					7.4	8.6	6.8	5.7	3.2	2.7	1.4	1.2

Daily gage height, in feet, of Pit River near Bieber, Cal., for 1904-1908—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1904.												
21.....				3.2	7.6	8.1	6.9	5.7	3.1	2.7	1.0	1.2
22.....				3.2	7.8	7.8	6.4	5.6	3.0	2.6	1.2	1.2
23.....				3.2	9.8	7.2	6.4	5.5	2.8	2.5	1.2	1.3
24.....				3.3	11.3	6.8	6.2	5.5	2.8	2.5	1.3	1.5
25.....				3.5	10.8	6.2	6.5	5.4	2.7	2.4	1.4	1.4
26.....				3.5	10.1	6.1	6.4	5.4	2.9	2.4	1.4	1.6
27.....				3.4	9.8	7.0	7.8	5.3	2.9	2.4	1.4	1.8
28.....				3.3	9.3	8.2	8.1	5.2	2.8	2.3	1.4	1.95
29.....				3.3	9.1	8.5	8.5	5.2	2.8	2.3	1.3	1.75
30.....				3.2	8.7	8.5	8.5	5.1	2.8	2.3	1.2	1.75
31.....				3.2	8.4	8.4	8.4	5.0	2.8	2.3	1.2	1.75
1904-5.												
1.....	1.75	3.05	3.3	4.8	5.4	4.6	6.2	3.0	3.2	2.5	2.1	1.5
2.....	1.75	3.2	3.25	5.0	5.5	4.5	6.3	3.0	3.2	2.45	2.1	1.5
3.....	1.75	3.0	3.2	4.9	5.3	4.3	6.15	2.9	3.1	2.4	1.9	1.5
4.....	1.8	3.0	3.1	4.5	5.0	4.0	5.9	2.9	3.1	2.4	1.8	1.4
5.....	1.8	2.95	2.9	4.2	4.8	4.0	5.7	2.9	3.1	2.4	1.8	1.4
6.....	2.5	2.95	2.8	3.9	4.6	4.0	5.4	3.0	3.0	2.3	1.8	1.4
7.....	2.5	2.9	2.7	3.7	6.0	3.9	5.2	3.0	3.0	2.3	1.75	1.4
8.....	2.8	2.95	2.8	3.7	5.5	3.9	5.1	3.0	2.9	2.3	1.75	1.35
9.....	2.8	3.0	2.8	3.5	4.8	3.8	5.0	2.9	2.9	2.4	1.85	1.35
10.....	2.8	2.95	3.15	3.4	4.6	3.7	4.9	2.9	2.8	2.35	1.8	1.4
11.....	2.5	2.95	3.2	3.4	4.3	3.7	4.7	2.8	2.8	2.45	1.8	1.4
12.....	2.5	2.95	3.3	3.3	3.9	3.7	4.6	2.8	2.8	2.45	1.5	1.4
13.....	2.5	2.95	3.4	3.4	3.7	3.7	4.4	2.8	2.8	2.4	1.5	1.4
14.....	2.6	3.0	3.3	3.4	3.7	3.8	4.3	2.8	2.7	2.4	1.5	1.4
15.....	2.6	3.0	3.3	3.6	3.9	3.8	4.2	2.8	2.7	2.7	1.5	1.4
16.....	2.6	3.0	3.3	3.9	4.0	4.0	4.3	3.0	2.7	2.7	1.7	1.4
17.....	2.7	3.0	3.35	4.95	4.1	4.0	4.3	3.4	2.7	2.7	1.7	1.4
18.....	2.7	3.2	3.35	5.1	4.3	5.0	4.3	3.5	2.7	2.3	1.8	1.4
19.....	2.75	3.2	3.4	5.0	4.6	5.4	4.2	3.5	2.5	2.4	1.8	1.4
20.....	2.8	3.1	3.4	5.0	4.8	5.5	4.0	3.4	2.5	2.4	1.7	1.4
21.....	2.8	3.1	3.45	5.0	5.0	5.5	4.0	3.4	2.5	2.3	1.7	1.4
22.....	2.9	3.0	3.5	5.25	5.8	5.8	3.9	3.2	2.4	2.2	1.5	1.4
23.....	3.0	3.0	3.5	5.95	5.2	5.75	3.9	3.2	2.4	2.2	1.5	1.4
24.....	3.1	3.0	3.6	6.5	5.05	5.45	3.7	3.2	2.4	2.6	1.5	1.4
25.....	3.05	3.0	3.05	6.0	5.0	5.4	3.6	3.1	2.3	2.4	1.5	1.4
26.....	3.05	3.05	3.5	5.8	5.0	5.7	3.4	3.1	2.3	2.1	1.5	1.4
27.....	3.0	3.2	3.5	5.5	4.8	5.9	3.1	3.0	2.3	2.1	1.7	1.4
28.....	3.0	3.25	3.45	5.0	4.8	5.8	3.1	3.1	2.7	2.1	1.7	1.5
29.....	2.9	3.25	3.05	4.8	4.8	5.8	3.1	3.2	2.7	2.2	1.7	1.5
30.....	3.2	3.3	3.8	5.1	5.0	5.8	3.0	3.3	2.7	2.2	1.5	1.4
31.....	3.1	3.1	4.8	5.4	5.0	6.0	3.3	3.3	2.7	2.25	1.5	1.4
1905-6.												
1.....				(a)	5.5	6.7	9.1	5.1	4.5	4.1	2.6	1.8
2.....					5.0	6.5	8.3	5.1	4.5	4.0	2.6	1.8
3.....					5.0	6.3	7.8	4.9	4.5	4.0	2.6	1.8
4.....					5.0	6.05	7.3	4.8	4.5	3.8	2.6	1.8
5.....					5.0	6.1	6.9	4.7	4.5	3.8	2.6	1.8
6.....					5	4.8	6.0	6.85	4.7	4.4	3.8	2.6
7.....	1.5				4.7	6.0	6.9	4.7	4.4	3.8	2.5	1.8
8.....		2.6			4.7	6.0	6.95	4.7	4.4	3.85	2.5	1.8
9.....					4.7	6.4	6.9	4.7	4.35	3.85	2.4	1.8
10.....					4.7	6.8	6.8	4.7	4.3	3.7	2.3	1.8
11.....					4.7	7.0	6.5	4.7	4.3	3.7	2.3	1.8
12.....					4.8	7.1	6.4	4.7	4.2	3.7	2.3	1.8
13.....					5.1	7.6	6.2	4.8	4.2	3.7	2.3	1.8
14.....					5.2	7.1	6.1	4.9	4.2	3.5	2.9	1.8
15.....				3.45	5.8	6.8	6.0	4.9	4.2	3.5	2.9	1.9
16.....				4.35	6.3	6.3	5.9	4.8	4.1	3.5	2.6	1.9
17.....				4.25	6.2	6.1	5.8	4.8	4.1	3.4	2.4	2.0
18.....				4.6	6.2	6.2	5.8	4.8	4.0	3.4	2.2	2.0
19.....				5.8	6.4	6.4	5.7	4.9	4.0	3.35	2.2	2.0
20.....				6.4	6.4	6.2	5.6	4.9	3.5	3.35	2.2	1.9
21.....	2.0		3.3	6.4	6.7	6.4	5.5	4.9	3.4	3.3	2.0	1.9
22.....	2.0		3.3	6.8	7.2	7.4	5.5	4.8	3.35	3.35	2.0	1.9
23.....	2.0		(a)	7.3	6.9	9.5	5.4	4.65	3.55	3.55	2.0	1.9
24.....				7.8	6.7	10.5	5.4	4.65	3.55	3.55	2.0	1.9
25.....				6.0	6.5	11.5	5.2	4.6	4.2	3.5	1.8	2.0

<sup>a</sup> River frozen over Dec. 23 to 31, 1905. Probable ice conditions Jan. 1 to 14, 1906.

*Daily gage height, in feet, of Pit River near Bieber, Cal., for 1904-1908—Continued.*

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1905-6.												
26	2.2			6.0	6.2	11.0	5.2	4.6	4.2		1.8	1.9
27				6.1	6.4	10.2	5.3	4.6	4.2		1.8	1.9
28				6.1	7.0	9.3	5.3	4.6	4.2		1.8	1.9
29				6.1		8.6	5.2	4.6	4.2		1.8	1.85
30				6.0		8.2	5.15	4.6	4.1		1.8	1.85
31				5.8		8.4		4.6			1.8	
1906-7.												
1	1.85			5.0	7.3	6.4	6.8	5.6	4.6	4.6	3.0	2.25
2	1.85			5.0	9.6	6.3	6.7	5.3	4.6	4.6	2.95	2.3
3	1.9			4.8	10.1	6.1	6.6	5.1	5.0	4.5	2.95	2.3
4	1.9			4.6	10.5	6.3	6.6	5.0	5.1	4.4	2.9	2.3
5	1.9			4.4	10.7	6.55	6.5	4.9	5.6	4.3	2.8	2.35
6	1.9			4.3	10.35	6.9	6.5	4.9	5.6	4.1	2.8	2.35
7	1.9			4.1	9.0	7.0	6.5	4.85	5.9	3.9	2.8	2.35
8	1.9			4.0	8.4	7.0	6.6	4.8	6.1	3.9	2.8	2.3
9	1.9			4.0	7.55	6.8	6.6	4.8	6.8	3.8	2.8	2.3
10	2.0			3.8	7.0	6.8	6.7	4.8	6.85	3.8	2.9	2.3
11	2.0			3.8	6.5	6.6	7.0	4.9	6.9	3.7	2.8	2.3
12	2.0			3.8	6.2	6.4	7.0	5.0	7.0	3.75	2.7	2.3
13	2.0			3.7	5.9	6.2	7.0	5.1	6.8	3.7	2.6	2.35
14	2.0			3.7	5.8	6.1	7.0	5.2	6.9	3.6	2.5	2.35
15				3.8	5.7		7.0	5.0	6.9	3.5	2.45	2.35
16				3.9	5.5		6.9	4.9	6.95	3.4	2.4	2.35
17				3.7	5.6	12.8	6.9	4.9	6.8	3.35	2.4	2.35
18				3.5	5.9	15.5	6.9	4.9	6.7	3.3	2.3	2.35
19				3.4	6.4	16.4	6.8	4.9	6.6	3.35	2.3	2.35
20				3.3	6.1		6.75	4.8	6.4	3.4	2.3	2.35
21					6.0		6.7	4.8	6.1	3.5	2.25	2.35
22				3.4	5.75		6.8	4.8	6.0	3.4	2.25	2.3
23				3.5	6.0	9.7	6.9	4.8	5.8	3.35	2.25	2.3
24				3.6	6.1	8.5	6.4	4.8	5.6	3.35	2.25	2.3
25				3.7	6.4	7.4	6.3	4.9	5.6	3.3	2.3	2.3
26	2.6			4.1	6.7		6.25	4.95	5.2	3.3	2.35	2.35
27				4.3	6.6		6.2	5.0	4.8	3.2	2.4	2.35
28				4.9	6.4		6.1	5.0	4.6	3.1	2.4	2.4
29				6.2			6.0	4.95	4.6	3.0	2.25	2.4
30				6.5			5.7	4.8	4.6	3.0	2.25	2.4
31				6.8				4.7		3.0	2.25	
1907-8.												
1	2.4	3.55	3.9	4.4	3.5	3.1	3.4	2.35	3.05		2.0	
2	2.4	3.6	3.9	4.4	3.6	3.1	3.3	2.4	3.0		2.0	1.45
3	2.4	3.6	3.9	4.3	3.8	3.15	3.2	2.4	3.0		1.95	1.4
4	2.4	3.6	3.9	4.2	3.95	3.15	3.1	2.4	2.9		1.9	1.4
5	2.4	3.5	3.9	3.9	4.2	3.2	3.0	2.4	2.95		1.8	1.4
6	2.4	3.5	3.95	4.0	4.5	3.3	2.9	2.35	2.8		1.7	
7	2.4	3.4	4.0	4.2	4.7	3.4	2.8	2.3	2.7		1.6	
8	2.4	3.4	4.1	4.8	4.6	3.5	2.7	2.2	2.6	2.75	1.65	1.4
9	2.4	3.4	4.3	5.2	4.5	3.6	2.6	2.1	2.5	2.8	1.5	1.45
10	2.45	3.4	4.5	5.5	4.4	3.7	2.5	2.0	2.5	2.8	1.5	1.45
11	2.45	3.4	4.6	5.6	4.2	3.8	2.45	2.0	2.8	2.75	1.5	1.5
12	2.45	3.4	4.6	5.7	4.1	3.9	2.45	2.3	2.7	2.75		1.5
13	2.5	3.45	4.6	5.8	4.0	4.0	2.3	2.4	2.5	2.75		1.5
14	2.5	3.5	4.7	5.9	3.8	4.0	2.1	2.5	2.5	2.75	1.5	1.45
15	2.55	3.55	4.9	5.6	3.6	4.0	2.0	2.5	2.5	2.7	1.5	1.4
16	2.55	3.6	4.95	5.4		4.0	2.0	2.6	2.5	2.7	1.5	1.4
17	2.6	3.65	5.0	5.3		4.0	2.4	2.7	2.5	2.6	1.5	1.45
18	2.7	3.7	5.0	5.2	3.2	4.0	2.5	2.8	2.5	2.5	1.45	
19	2.8	3.7	5.0	5.0	3.1	4.0	2.6	2.8	2.5	2.5	1.4	
20	2.8	3.75	4.95	4.8	3.1	4.0	2.4	2.9	2.5	2.45	1.45	1.45
21	2.9	3.8	4.95	4.5	3.1	4.0	2.35	2.95	2.5	2.45	1.45	1.45
22	3.0	3.85	4.9	4.2	3.0	4.0	2.35	2.95	2.5	2.45	1.5	1.45
23	3.1	3.9	4.85	4.0	3.0	4.0	2.4	3.0	2.5	2.3	1.5	1.45
24	3.2	4.0	4.8	3.7	3.0	4.0	2.5	3.05	2.5	2.2	1.5	1.45
25	3.35	4.0	4.8	3.4	3.0	3.9	2.5	3.05	2.8	2.1	1.5	1.45
26	3.5	4.0	4.7	3.3	3.0	3.8	2.5	3.05	2.95	2.0		1.45
27	3.5	4.0	4.65	3.3	3.0	3.6	2.5	3.05	2.95	1.95		1.45
28	3.5	3.95	4.6	3.3	3.0	3.5	2.4	3.05	2.9	2.0	1.45	
29	3.5	3.9	4.55	3.3	3.1	3.4	2.35	3.05	2.8	2.0	1.45	
30	3.55	3.9	4.5	3.3		3.4	2.3	3.05	2.7	2.0	1.45	1.45
31	3.55		4.4	3.4		3.4		3.05		2.0	1.45	

NOTE.—The following gage heights were observed in October and November, 1908: Oct. 2, 1.5 feet; Oct. 5, 2.0 feet; Oct. 6, 2.5 feet; Nov. 5, 3.0 feet; Nov. 8, 2.8 feet; Nov. 13, 2.95 feet.

Daily discharge, in second-feet, of Pit River near Bieber, Cal., for 1904-1908.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1904.												
1.					220	9,420	5,780	6,140	1,600	120	57	14
2.					180	8,440	5,440	8,320	1,310	120	57	14
3.					220	6,140	5,280	8,200	1,130	120	57	14
4.					270	6,140	4,650	7,980	1,130	120	50	14
5.					270	5,280	4,350	7,100	1,040	108	50	14
6.					320	7,980	4,350	5,960	1,040	108	50	14
7.					270	8,920	4,350	5,280	870	108	50	14
8.					320	16,000	4,350	4,500	870	96	50	13
9.					320	18,300	4,350	3,210	790	96	50	13
10.					270	15,000	4,350	3,210	710	96	50	13
11.					320	16,000	4,350	2,820	710	75	50	13
12.					320	12,200	4,200	2,580	710	75	45	13
13.					435	9,420	4,200	2,580	710	75	45	12
14.					565	7,980	4,200	2,460	565	75	45	12
15.					790	6,700	4,050	2,460	565	75	40	12
16.					3,480	4,800	3,760	2,460	320	65	30	12
17.					8,560	4,350	3,210	2,460	270	65	26	13
18.					5,780	4,800	3,210	2,460	270	65	26	13
19.					5,780	5,960	3,340	2,460	220	65	20	14
20.					4,650	6,700	3,760	2,340	220	96	18	14
21.					4,960	5,780	3,900	2,340	180	96	10	14
22.				220	5,280	5,280	3,210	2,230	145	85	14	14
23.				220	9,420	4,350	3,210	2,120	108	75	14	16
24.				270	13,700	3,760	2,950	2,120	108	75	16	20
25.				375	12,200	2,950	3,340	2,010	96	65	18	18
26.				375	10,200	2,820	3,210	2,010	120	65	18	23
27.				320	9,420	4,050	5,280	1,900	120	65	18	30
28.				270	8,200	5,960	5,780	1,800	108	57	18	38
29.				270	7,760	6,500	6,500	1,800	108	57	16	28
30.				220	6,900	6,500	6,500	1,700	108	57	14	28
31.				220	6,320	6,320	6,320	1,600	57	14		
1904-5.												
1.	28	162	270	1,050	1,600	900	2,520	147	190	64	29	2.2
2.	28	220	245	1,220	1,700	830	2,660	147	190	58	29	2.2
3.	28	145	220	1,130	1,500	695	2,460	127	168	53	18	2.2
4.	30	145	180	830	1,220	505	2,150	127	168	53	14	1.0
5.	30	132	120	630	1,050	505	1,920	127	168	53	14	1.0
6.	75	132	108	448	900	505	1,600	147	147	44	14	1.0
7.	75	120	96	349	2,270	448	1,400	147	147	44	12	1.0
8.	108	132	108	349	1,700	448	1,300	147	127	44	12	.8
9.	108	145	108	270	1,050	396	1,220	127	127	53	16	.8
10.	108	132	200	239	900	349	1,130	127	109	48	14	1.0
11.	75	132	220	239	695	349	975	109	109	58	14	1.0
12.	75	132	270	213	448	349	900	109	109	58	2.2	1.0
13.	75	132	320	239	349	349	760	109	109	53	2.2	1.0
14.	85	145	270	239	349	396	695	109	92	53	2.2	1.0
15.	85	145	270	307	448	396	630	109	92	92	2.2	1.0
16.	85	145	270	448	505	505	695	147	92	92	9.6	1.0
17.	96	145	295	1,170	565	505	695	239	92	92	9.6	1.0
18.	96	220	295	1,300	695	1,220	695	270	92	44	14	1.0
19.	102	220	320	1,220	900	1,600	630	270	64	53	14	1.0
20.	108	180	320	1,220	1,050	1,700	505	239	64	53	9.6	1.0
21.	108	180	348	1,220	1,220	1,700	505	239	64	44	9.6	1.0
22.	120	145	375	1,450	2,040	2,040	448	190	53	36	2.2	1.0
23.	145	145	375	2,210	1,400	1,760	448	190	53	36	2.2	1.0
24.	180	145	435	2,960	1,260	1,650	349	190	53	77	2.2	1.0
25.	162	145	162	2,270	1,220	1,600	307	168	44	53	2.2	1.0
26.	162	162	375	2,040	1,220	1,920	239	168	44	29	2.2	1.0
27.	145	220	375	1,700	1,050	2,150	168	147	44	29	9.6	1.0
28.	145	245	348	1,220	1,050	2,040	168	168	92	29	9.6	2.2
29.	120	245	162	1,050	1,050	2,040	168	190	92	36	9.6	2.2
30.	220	270	565	1,300	1,300	2,040	147	213	92	36	2.2	2.2
31.	180	1,400	1,600	1,600	2,270	2,270	213	213	40	2.2	2.2	

NOTE.—Discharge Jan. 1-21, 1904, estimated as equivalent to 220 second-feet per day.  
 Discharge interpolated for days on which gage heights were not recorded in September, 1905.

Daily discharge, in second-feet, of Pit River near Bieber, Cal., for 1904-1908—Con.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1905-6.												
1.	2.2	44	150	.....	1,600	3,070	7,360	1,230	755	500	76	21
2.	2.2	53	180	.....	1,140	2,770	5,730	1,230	755	450	76	21
3.	2.2	53	180	.....	1,140	2,490	4,820	1,060	755	450	76	21
4.	2.2	64	180	.....	1,140	2,180	4,000	980	755	356	76	21
5.	2.2	64	180	.....	1,140	2,240	3,370	900	755	356	76	21
6.	2.2	64	180	.....	980	2,120	3,300	900	685	356	76	21
7.	2.2	64	210	.....	900	2,120	3,370	900	685	356	66	21
8.	2.2	77	210	.....	900	2,120	3,440	900	685	376	66	21
9.	2.2	77	210	.....	900	2,630	3,370	900	650	376	57	21
10.	2.2	77	210	.....	900	3,220	3,220	900	620	316	49	21
11.	2.2	77	220	.....	900	3,520	2,770	900	620	316	49	21
12.	5.8	77	225	.....	980	3,680	2,630	900	560	316	49	24
13.	5.8	77	225	.....	1,230	4,480	2,360	980	560	316	49	24
14.	5.8	77	225	.....	1,320	3,680	2,240	1,060	560	240	108	24
15.	5.8	92	225	222	1,900	3,220	2,120	1,060	560	240	108	24
16.	5.8	92	230	650	2,490	2,490	2,010	980	500	240	76	24
17.	9.6	92	230	590	2,360	2,240	1,900	980	500	205	57	29
18.	23	92	220	825	2,360	2,360	1,900	980	450	205	41	29
19.	23	92	220	1,900	2,630	2,630	1,800	1,060	450	190	41	29
20.	23	92	215	2,630	2,630	2,360	1,700	1,060	240	190	41	24
21.	23	92	213	2,630	3,070	2,630	1,600	1,060	205	177	41	24
22.	23	92	213	3,220	3,840	4,160	1,600	980	190	170	31	24
23.	23	120	215	4,000	3,370	8,310	1,500	860	258	160	21	29
24.	23	120	215	4,820	3,070	11,000	1,500	860	258	150	21	29
25.	23	120	215	2,120	2,770	13,800	1,320	825	560	140	21	29
26.	36	120	220	2,120	2,360	12,400	1,320	825	560	130	21	24
27.	36	120	220	2,240	2,630	10,200	1,410	825	560	120	21	24
28.	36	150	220	2,240	3,520	7,820	1,410	825	560	110	21	24
29.	36	150	220	2,240	.....	6,310	1,320	825	560	100	21	22
30.	44	150	220	2,120	.....	5,540	1,280	825	500	90	21	22
31.	44	.....	220	1,900	.....	5,920	.....	825	.....	80	21	.....
1906-7.												
1.	22	.....	.....	1,140	4,000	2,630	3,220	1,700	825	825	120	45
2.	22	.....	.....	1,140	8,560	2,490	3,070	1,410	825	825	114	49
3.	24	.....	.....	980	9,880	2,240	2,920	1,230	1,140	755	114	49
4.	24	.....	.....	825	11,000	2,490	2,920	1,140	1,230	685	108	49
5.	24	.....	.....	685	11,600	2,840	2,770	1,060	1,700	620	96	53
6.	24	.....	.....	620	10,600	3,370	2,770	1,060	1,700	500	96	53
7.	24	.....	.....	500	7,140	3,520	2,770	1,000	2,010	400	96	53
8.	24	.....	.....	450	5,920	3,520	2,920	980	2,240	400	96	49
9.	24	.....	.....	450	4,490	3,220	2,920	980	3,220	356	96	49
10.	29	.....	.....	356	3,520	3,220	3,070	980	3,300	356	108	49
11.	29	.....	.....	356	2,770	2,920	3,520	1,060	3,370	316	96	49
12.	29	.....	.....	356	2,360	2,630	3,520	1,140	3,520	336	86	49
13.	29	.....	.....	316	2,010	2,360	3,520	1,230	3,220	316	76	53
14.	29	.....	.....	316	1,900	2,240	3,520	1,320	3,370	276	66	53
15.	30	.....	.....	356	1,800	2,360	3,520	1,140	3,370	240	61	53
16.	40	.....	.....	400	1,600	2,770	3,370	1,060	3,440	265	57	53
17.	40	.....	.....	316	1,700	17,400	3,370	1,060	3,220	190	57	53
18.	40	.....	.....	240	2,010	25,000	3,370	1,060	3,070	177	49	53
19.	50	.....	.....	205	2,630	27,500	3,220	1,060	2,920	190	49	53
20.	50	.....	.....	177	2,240	25,000	3,140	980	2,630	205	49	53
21.	50	.....	.....	205	2,120	20,800	3,070	980	2,240	240	45	53
22.	60	.....	.....	240	1,850	13,800	3,220	980	2,120	205	45	49
23.	60	.....	.....	240	2,120	8,510	3,370	980	1,900	190	45	49
24.	60	.....	.....	276	2,240	6,110	2,630	980	1,700	190	45	49
25.	70	.....	.....	316	2,630	4,160	2,490	1,060	1,700	177	49	49
26.	76	.....	.....	500	3,070	4,000	2,420	1,100	1,320	177	53	53
27.	76	.....	.....	620	2,920	3,840	2,360	1,140	980	154	57	53
28.	80	.....	.....	1,060	2,630	3,680	2,240	1,140	825	135	57	57
29.	80	.....	.....	2,360	.....	3,520	2,120	1,100	825	120	45	57
30.	80	.....	.....	2,770	.....	3,370	1,800	980	825	120	45	57
31.	80	.....	.....	3,220	.....	3,300	.....	900	.....	120	45	.....

NOTE.—Discharge for days on which gage was not read estimated by hydrograph comparison with other Pit River stations. Discharge Jan. 1 to 14, 1906, estimated as equivalent to 220 second-feet per day.

Daily discharge, in second-feet, of Pit River near Bieber, Cal., for 1904-1908—Con.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1907-8. <sup>a</sup>												
1.....	57	258	400	685	240	135	205	53	127	86	29	5
2.....	57	276	400	685	276	135	177	57	120	87	29	5
3.....	57	276	400	620	356	144	154	57	120	88	26	4
4.....	57	276	400	560	425	144	135	57	108	89	23	4
5.....	57	240	400	400	560	154	120	57	114	90	18	4
6.....	57	240	425	450	755	177	108	53	96	90	13	4
7.....	57	205	450	500	900	205	96	49	86	91	9	4
8.....	57	205	500	980	825	240	86	41	76	91	11	4
9.....	57	205	620	1,320	755	276	76	35	66	96	6	5
10.....	61	205	755	1,600	685	316	66	29	66	96	6	5
11.....	61	205	825	1,700	560	356	61	29	96	91	6	6
12.....	61	205	825	1,800	500	400	61	49	86	91	6	6
13.....	66	222	825	1,900	450	450	49	57	66	91	6	6
14.....	66	240	900	2,010	356	450	35	66	66	91	6	5
15.....	71	258	1,060	1,700	276	450	29	66	66	86	6	4
16.....	71	276	1,100	1,500	236	450	29	76	66	86	6	4
17.....	76	296	1,140	1,410	195	450	57	86	66	76	6	5
18.....	86	316	1,140	1,320	154	450	66	96	66	66	5	5
19.....	96	316	1,140	1,140	135	450	76	96	66	66	4	5
20.....	96	336	1,100	980	135	450	57	108	66	61	5	5
21.....	108	356	1,100	755	135	450	53	114	66	61	5	5
22.....	120	376	1,060	560	120	450	53	114	66	61	6	5
23.....	135	400	1,020	450	120	450	57	120	66	49	6	5
24.....	154	450	*980	316	120	450	66	127	66	41	6	5
25.....	190	450	980	205	120	400	66	127	96	35	6	5
26.....	240	450	900	177	120	356	66	127	114	29	6	5
27.....	240	450	860	177	120	276	66	127	114	26	5	5
28.....	240	425	850	177	120	240	57	127	108	29	5	5
29.....	240	400	790	177	135	205	53	127	96	29	5	5
30.....	258	400	755	177	.....	205	49	127	86	29	5	5
31.....	258	.....	685	205	.....	205	.....	127	.....	29	5	.....

<sup>a</sup> Discharge estimated for days on which gage height was not recorded.

NOTE.—Daily discharge 1904 to 1908, except as indicated, determined from rating curves applicable as follows:

1904: Well defined between 110 and 5,600 second-feet. Below 110 second-feet the curve is poorly defined because of the poor conditions for measuring.

1905: Well defined between 270 and 2,300 second-feet.

1906: Well defined between 39 and 5,200 second-feet.

1907-8: Fairly well defined between 29 and 5,200 second-feet.

Monthly discharge of Pit River near Bieber, Cal., for 1904-1908.

[Drainage area, 4,040 square miles. <sup>c</sup>]

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.....	.....	.....	.....	<sup>b</sup> 238	0.059	0.07	14,600	B.
February.....	13,700	180	3,950	.978	1.05	227,000	.....	B.
March.....	18,300	2,820	7,590	1.88	2.17	467,000	.....	B.
April.....	6,500	2,950	4,210	1.04	1.16	251,000	.....	B.
May.....	8,320	1,600	3,440	.851	.98	212,000	.....	B.
June.....	1,600	96	542	.134	.15	32,300	.....	B.
July.....	120	57	83	.021	.02	5,100	.....	B.
August.....	57	10	33	.0082	.009	2,030	.....	C.
September.....	38	12	16	.0040	.004	952	.....	C.
The period.....	.....	.....	.....	.....	.....	1,210,000	.....	.....

<sup>a</sup> Drainage area increased from 2,950 square miles to include Goose Lake basin, which belongs naturally in Pit River basin.

<sup>b</sup> Partly estimated.

## Monthly discharge of Pit River near Bieber, Cal., for 1904-1908—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.	
1904-5.							
October.....	220	28	105	0.025	0.03	6,330	B.
November.....	270	120	165	.041	.05	9,820	B.
December.....	1,400	96	304	.075	.09	18,700	B.
January.....	2,960	213	1,040	.257	.30	64,000	A.
February.....	2,270	349	1,080	.267	.28	60,000	A.
March.....	2,270	349	1,100	.272	.31	67,600	A.
April.....	2,660	147	950	.235	.26	56,500	A.
May.....	270	109	166	.041	.05	10,200	B.
June.....	190	44	103	.025	.03	6,130	B.
July.....	92	29	51.8	.013	.01	3,190	C.
August.....	29	2.2	9.85	.0024	.003	606	C.
September.....	2.2	.8	1.23	.00030	.0003	73	C.
The year.....	2,960	.8	423	.105	1.433	303,000	
1905-6.							
October.....	44	2.2	15.4	.0038	.004	947	C.
November.....			<sup>a</sup> 91	.023	.03	5,410	C.
December.....			<sup>b</sup> 210	.052	.06	12,900	D.
January.....			<sup>a</sup> 1,280	.317	.37	78,700	C.
February.....	3,840	900	1,930	.478	.50	107,000	A.
March.....	13,800	2,120	4,640	1.15	1.33	285,000	B.
April.....	7,360	1,280	2,590	.641	.72	154,000	A.
May.....	1,230	825	948	.235	.27	58,300	A.
June.....	755	190	544	.135	.15	32,400	A.
July.....			<sup>a</sup> 251	.062	.07	15,400	B.
August.....	108	21	50.8	.013	.01	3,120	B.
September.....	29	21	23.8	.0059	.007	1,420	B.
The year.....			1,050	.260	3.521	755,000	
1906-7.							
October.....			<sup>a</sup> 44.5	.011	.01	2,740	C.
January.....	3,220	177	710	.176	.20	43,700	B.
February.....	11,600	1,600	4,190	1.04	1.08	233,000	B.
March.....	27,500	2,240	6,940	1.72	1.98	427,000	B.
April.....	3,520	1,800	2,970	.735	.82	177,000	B.
May.....	2,230	900	1,130	.280	.32	69,500	B.
June.....	3,520	825	2,160	.535	.60	129,000	B.
July.....	825	120	323	.080	.09	19,900	B.
August.....	120	45	71.7	.018	.02	4,410	B.
September.....	57	45	51.5	.013	.01	3,060	B.
The period.....						1,110,000	
1907-8.							
October.....	258	57	113	.028	.03	6,950	B.
November.....	450	205	307	.076	.08	18,300	B.
December.....	1,140	400	799	.198	.23	49,100	B.
January.....	2,010	177	861	.213	.25	52,900	B.
February.....	900	120	339	.084	.09	19,500	B.
March.....	450	135	322	.080	.09	19,800	B.
April.....	205	29	77.6	.019	.02	4,620	B.
May.....	127	29	83.3	.021	.02	5,120	B.
June.....	127	66	85.6	.021	.02	5,090	B.
July.....	96	26	68.3	.017	.02	4,200	B.
August.....	29	5	9.3	.0023	.003	572	C.
September.....	6	4	4.8	.0012	.001	286	C.
The year.....	2,010	4	256	.063	.854	187,000	

<sup>a</sup> Partly estimated.<sup>b</sup> Estimated by comparison with other Pit River stations.

## PIT RIVER AT HENDERSON, CAL.

This station, which is located at the ferry one-fourth mile above Henderson, in sec. 36, T. 37 N., R. 1 W., was established September 28, 1910.

Nelson Creek enters the river about half a mile above the station, and Kosk Creek about 1 mile below.

The gage is a vertical staff attached to an alder on the left bank 100 feet below the ferry. Discharge measurements are made from a cable just above the ferry.

Sufficient discharge measurements have not been made to define the rating curve at medium and high stages. The gage readings for 1911 are not entirely satisfactory and are withheld pending the development of a rating curve, when comparisons with the record of discharge at Ydalpom will aid in the proper interpretation.

*Discharge measurements of Pit River at Henderson, Cal., in 1910-1912.*

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1910.		<i>Feet.</i>	<i>Sec.-ft.</i>	1912.		<i>Feet.</i>	<i>Sec.-ft.</i>
Sept. 28	Hardy and Stutt .....	0.97	2,910	Jan. 14	Lasley Lee.....	1.10	3,240
Nov. 12 <sup>a</sup>	F. G. Wood .....	1.04	3,230	May 9	.....do.....	1.44	3,850
				10	.....do.....	1.41	3,810
1911.							
May 9	G. T. Peekema .....	2.20	5,350				
Aug. 12	J. E. Stewart .....	.98	3,110				

<sup>a</sup> Full reliance should not be given to this measurement, as meter weight was too light for the high velocities.

*Daily gage height, in feet, of Pit River at Henderson, Cal., for 1912.*

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	Day.	Jan.	Feb.	Mar.	Apr.	May.	June.
1.....	1.0	1.3	1.0	1.0	1.6	1.2	16.....	1.2	1.3	1.4	1.3	1.1	.9
2.....	1.0	1.3	1.1	1.0	1.8	1.2	17.....	1.2	1.4	1.5	1.2	1.0	.9
3.....	1.1	1.2	1.2	1.0	1.8	1.2	18.....	1.2	1.4	1.5	1.2	1.0	.9
4.....	1.1	1.2	1.2	1.0	1.8	1.1	19.....	1.2	1.3	1.4	1.1	1.0	.9
5.....	1.1	1.2	1.2	1.0	1.8	1.1	20.....	1.2	1.3	1.4	1.1	1.1	.9
6.....	1.1	1.2	1.2	1.1	1.6	1.0	21.....	1.2	1.3	1.4	1.2	1.2	1.0
7.....	1.2	1.1	1.2	1.1	1.5	1.0	22.....	1.1	1.2	1.4	1.2	1.2	1.0
8.....	1.2	1.2	1.2	1.1	1.4	.9	23.....	1.2	1.2	1.4	1.2	1.2	1.2
9.....	1.2	1.2	1.2	1.1	1.4	.9	24.....	1.2	1.2	1.3	1.2	1.3	1.1
10.....	1.2	1.2	1.2	1.2	1.4	.9	25.....	1.8	1.2	1.3	1.2	1.4	1.1
11.....	1.2	1.2	1.3	1.2	1.4	.9	26.....	2.0	1.2	1.2	1.2	1.4	1.0
12.....	1.2	1.2	1.3	1.3	1.4	.9	27.....	2.0	1.1	1.2	1.2	1.4	1.0
13.....	1.2	1.2	1.3	1.4	1.3	.9	28.....	1.7	1.0	1.2	1.3	1.4	1.0
14.....	1.1	1.2	1.4	1.4	1.3	.9	29.....	1.6	1.0	1.1	1.4	1.4	.9
15.....	1.1	1.2	1.4	1.4	1.2	.9	30.....	1.5	.....	1.1	1.4	1.4	.9
							31.....	1.4	.....	1.0	.....	1.2	.....

PIT RIVER NEAR YDALPOM, CAL.

This station which is located at Silverthorne Ferry, in the N. W.  $\frac{1}{4}$  sec. 32, T. 34 N., R. 3 W., about  $1\frac{1}{2}$  miles southwest of Ydalpom, about half a mile below the mouth of Squaw Creek, about 4 miles above the mouth of McCloud River, and 7 miles above the junction with the Sacramento, was established November 16, 1910. By combining these data with the record on the McCloud at Baird, the total flow of Pit River may be determined.

The gage is a vertical staff on an ash tree on the left bank 350 feet below the ferry.

Discharge measurements are made from a boat a short distance above the ferry cable, until October 1, 1911, when a car and cable were installed 50 feet above the ferry cable.

*Discharge measurements of Pit River near Ydaldpom, 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>
Oct. 16	W. V. Hardy		3,010	Jan. 24	Lasley Lee	3.98	4,780
Nov. 16	F. G. Wood	3.03	2,960	25	do	7.72	12,100
				25	do	8.65	14,500
1911.				25	do	9.38	16,100
A. pr. 2a	G. T. Peekema	8.43	18,400	25	do	9.30	16,600
May 24b	do	4.92	6,040	Mar. 9	do	4.52	5,410
Oct. 3c	do	3.00	3,110	9	do	4.49	5,250

a Measurement made from boat 30 feet below ferry cable; measurement very poor.

b Measurement made from boat 30 feet below ferry cable.

c Measurement made from cable.

*Daily gage height, in feet, of Pit River near Ydaldpom, Cal., for 1910-1912.*

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.												
1.			3.6	3.3	7.6	4.0	8.3	5.3	4.4	3.4	3.15	3.0
2.			3.75	3.3	9.8	4.0	8.3	5.3	4.4	3.4	3.15	3.0
3.			4.5	3.25	8.5	4.05	8.4	5.6	4.35	3.4	3.15	3.0
4.			4.45	3.25	7.6	4.2	8.25	5.45	4.35	3.4	3.1	3.0
5.			4.1	3.25	7.6	4.95	8.1	5.7	4.35	3.4	3.1	3.0
6.			3.85	3.25	7.7	6.65	10.1	5.5	4.3	3.4	3.1	3.0
7.			3.7	3.25	6.95	10.8	10.05	5.4	4.3	3.4	3.1	3.0
8.			3.75	3.25	6.65	9.9	9.2	5.25	4.2	3.4	3.1	3.0
9.			5.4	3.25	6.5	8.0	8.1	5.2	4.2	3.4	3.1	3.0
10.			5.9	3.3	6.45	7.7	8.0	5.2	4.1	3.4	3.1	3.0
11.			6.3	3.4	6.55	7.45	7.8	5.1	4.0	3.35	3.1	3.0
12.			5.9	3.45	6.9	7.45	7.55	5.0	3.95	3.35	3.1	3.0
13.			5.65	3.4	6.9	7.55	7.2	4.95	4.0	3.35	3.05	3.0
14.			5.55	3.5	6.2	7.75	6.8	4.8	3.95	3.35	3.05	3.0
15.			5.2	3.7	5.75	7.5	6.6	4.75	3.95	3.35	3.05	3.0
16.		3.03	4.8	3.55	5.1	7.5	6.1	4.85	3.9	3.35	3.0	3.0
17.		3.03	4.5	3.45	4.85	7.5	6.0	4.85	3.9	3.3	3.0	3.0
18.		3.15	4.75	3.4	4.8	7.65	5.9	7.15	3.8	3.3	3.0	3.0
19.		3.1	4.0	4.7	4.7	7.8	5.7	5.6	3.75	3.3	3.0	3.0
20.		3.1	3.85	6.5	4.55	7.9	5.6	5.4	3.7	3.3	3.0	3.0
21.		3.1	3.7	4.7	4.4	8.0	5.5	5.2	3.7	3.3	3.0	3.0
22.		3.05	3.75	4.2	4.4	8.6	5.55	5.1	3.7	3.3	3.0	3.0
23.		3.3	3.6	3.85	4.35	8.8	5.6	5.0	3.65	3.3	3.0	3.0
24.		3.8	3.55	3.95	4.3	9.0	5.6	4.9	3.65	3.25	3.0	3.0
25.		4.2	3.5	4.2	4.3	9.4	5.7	4.8	3.6	3.25	3.0	3.0
26.		3.65	3.45	4.55	4.2	9.2	5.7	4.7	3.55	3.25	3.0	3.0
27.		3.6	3.4	5.3	4.1	8.9	5.7	4.6	3.4	3.25	3.0	3.0
28.		3.75	3.35	7.2	4.0	8.5	5.5	4.45	3.5	3.2	3.0	3.0
29.		3.7	3.3	6.15		8.2	5.4	4.4	3.45	3.2	3.0	3.0
30.		3.65	3.3	8.95		8.25	5.35	4.5	3.4	3.2	3.0	3.0
31.			3.3	8.95		8.3		4.45		3.15	3.0	
1911-12.												
1.	3.0	3.05	3.1	3.1	3.9	3.6	3.8	6.0	4.0			
2.	3.0	3.05	3.1	3.1	3.8	3.6	3.8	5.7	4.0			
3.	3.0	3.05	3.1	3.1	3.7	3.5	3.7	5.4	4.0			
4.	3.05	3.05	3.1	3.1	3.6	3.5	3.6	5.1	3.9			
5.	3.05	3.1	3.1	3.1	3.6	3.7	3.6	5.0	3.9			
6.	3.05	3.1	3.1	3.1	3.5	5.4	3.6	4.7	3.6			
7.	3.05	3.1	3.1	3.2	3.6	5.0	3.6	4.6	3.6			
8.	3.05	3.1	3.1	3.3	4.0	4.9	3.6	4.5	3.5			
9.	3.05	3.1	3.1	3.4	4.2	4.5	3.6	4.5	3.5			
10.	3.05	3.2	3.1	3.5	4.3	4.5	4.1	4.4	3.4			

Daily gage height, in feet, of Pit River near Ydaldpom, Cal., for 1910-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1911-12.												
11.....	3.05	3.2	3.1	3.4	4.4	4.4	4.3	4.4	3.4	.....	.....	.....
12.....	3.05	3.2	3.1	3.6	4.2	4.5	4.0	4.3	3.3	.....	.....	.....
13.....	3.05	3.2	3.1	3.6	4.0	4.6	4.0	4.2	3.2	.....	.....	.....
14.....	3.1	3.25	3.1	3.5	4.0	4.8	4.0	3.9	3.2	.....	.....	.....
15.....	3.1	3.25	3.1	3.5	4.0	5.0	3.9	3.8	3.2	.....	.....	.....
16.....	3.1	3.25	3.1	3.5	3.8	5.9	3.9	3.7	3.2	.....	.....	.....
17.....	3.1	3.2	3.1	3.5	4.4	5.0	3.8	3.6	3.2	.....	.....	.....
18.....	3.1	3.2	3.1	3.8	4.8	4.8	3.8	3.6	3.2	.....	.....	.....
19.....	3.1	3.2	3.1	4.0	4.5	4.8	3.8	3.6	3.2	.....	.....	.....
20.....	3.1	3.2	3.1	3.9	4.3	4.6	3.7	3.6	3.3	.....	.....	.....
21.....	3.1	3.2	3.1	3.4	4.1	4.6	3.8	3.8	3.3	.....	.....	.....
22.....	3.1	3.2	3.1	3.4	4.0	4.4	3.7	4.0	3.3	.....	.....	.....
23.....	3.1	3.2	3.1	3.4	3.9	4.2	3.8	4.2	3.3	.....	.....	.....
24.....	3.05	3.2	3.1	4.0	3.8	4.2	3.8	4.1	3.2	.....	.....	.....
25.....	3.05	3.2	3.1	7.6	3.8	4.1	3.8	4.2	3.2	.....	.....	.....
26.....	3.05	3.2	3.1	8.4	3.7	4.0	3.7	4.7	3.2	.....	.....	.....
27.....	3.05	3.1	3.1	6.4	3.6	4.0	3.7	4.6	3.2	.....	.....	.....
28.....	3.05	3.1	3.1	5.2	3.6	3.9	3.7	4.4	3.2	.....	.....	.....
29.....	3.05	3.1	3.1	4.8	3.6	3.8	4.6	4.3	3.2	.....	.....	.....
30.....	3.05	3.1	3.1	4.5	.....	3.8	5.5	4.2	3.2	.....	.....	.....
31.....	3.05	.....	3.1	4.0	.....	3.8	.....	4.1	.....	.....	.....	.....

Daily discharge, in second-feet, of Pit River near Ydaldpom, Cal., for 1910-1912:

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.												
1.....	.....	.....	3,980	3,520	11,900	4,620	13,700	6,930	5,300	3,670	3,300	3,080
2.....	.....	.....	4,220	3,520	17,700	4,620	13,700	6,930	5,300	3,670	3,300	3,080
3.....	.....	.....	5,470	3,440	14,200	4,700	13,900	7,520	5,220	3,670	3,300	3,080
4.....	.....	.....	5,350	3,440	11,900	4,960	13,600	7,220	5,220	3,670	3,220	3,080
5.....	.....	.....	4,790	3,440	11,900	6,270	13,200	7,720	5,220	3,670	3,220	3,080
6.....	.....	.....	4,380	3,440	12,200	9,720	18,600	7,320	5,130	3,670	3,220	3,080
7.....	.....	.....	4,140	3,440	10,400	20,660	18,400	7,120	5,130	3,670	3,220	3,080
8.....	.....	.....	4,220	3,440	9,720	18,000	16,100	6,840	4,960	3,670	3,220	3,080
9.....	.....	.....	7,170	3,440	9,390	12,900	13,200	6,740	4,960	3,670	3,220	3,080
10.....	.....	.....	8,120	3,520	9,280	12,200	12,900	6,740	4,790	3,670	3,220	3,080
11.....	.....	.....	8,960	3,670	9,500	11,600	12,400	6,550	4,620	3,600	3,220	3,080
12.....	.....	.....	8,120	3,740	10,300	11,600	11,800	6,360	4,540	3,600	3,220	3,080
13.....	.....	.....	7,620	3,670	10,300	11,800	11,000	6,270	4,620	3,600	3,150	3,080
14.....	.....	.....	7,420	3,820	8,750	12,300	10,100	6,000	4,540	3,600	3,150	3,080
15.....	.....	.....	6,740	4,140	7,820	11,700	9,610	5,910	4,540	3,600	3,150	3,080
16.....	.....	3,120	6,000	3,900	6,550	11,700	8,540	6,090	4,460	3,600	3,080	3,080
17.....	.....	3,120	5,470	3,740	6,090	11,700	8,330	6,090	4,460	3,520	3,080	3,080
18.....	.....	3,330	5,040	3,670	6,000	12,100	8,120	10,900	4,300	3,520	3,080	3,080
19.....	.....	3,270	4,620	5,820	5,820	12,400	7,720	7,520	4,220	3,520	3,080	3,080
20.....	.....	3,220	4,380	9,390	5,560	12,700	7,520	7,120	4,140	3,520	3,080	3,080
21.....	.....	3,220	4,140	5,820	5,300	12,900	7,320	6,740	4,140	3,520	3,080	3,080
22.....	.....	3,150	4,060	4,960	5,300	14,500	7,420	6,550	4,140	3,520	3,080	3,080
23.....	.....	3,520	3,980	4,380	5,220	15,000	7,520	6,360	4,060	3,520	3,080	3,080
24.....	.....	4,370	3,900	4,540	5,130	15,500	7,520	6,180	4,060	3,440	3,080	3,080
25.....	.....	4,960	3,820	4,960	5,130	16,600	7,720	6,000	3,980	4,440	3,080	3,080
26.....	.....	4,060	3,740	5,560	4,960	16,100	7,720	5,820	3,900	3,440	3,080	3,080
27.....	.....	3,990	3,670	6,930	4,790	15,300	7,720	5,640	3,670	3,440	3,080	3,080
28.....	.....	4,220	3,600	11,000	4,620	14,200	7,320	5,380	3,820	3,370	3,080	3,080
29.....	.....	4,140	3,520	8,640	.....	13,400	7,120	5,300	3,740	3,370	3,080	3,080
30.....	.....	4,060	3,520	15,400	.....	13,600	7,020	5,470	3,670	3,370	3,080	3,080
31.....	.....	.....	3,520	15,400	.....	13,700	.....	5,380	.....	3,300	3,080	.....
1911-12.												
1.....	3,080	3,150	3,220	3,220	4,460	3,980	4,300	8,330	4,620	.....	.....	.....
2.....	3,080	3,150	3,220	3,220	4,300	3,980	4,300	7,720	4,620	.....	.....	.....
3.....	3,080	3,150	3,220	3,220	4,140	3,820	4,140	7,120	4,620	.....	.....	.....
4.....	3,150	3,150	3,220	3,220	3,980	3,820	3,980	6,550	4,460	.....	.....	.....
5.....	3,150	3,220	3,220	3,220	3,980	4,140	3,980	6,360	4,460	.....	.....	.....

Daily discharge, in second-feet, of Pit River near Ydalpom, Cal., for 1910-1912—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1911-12.												
6.....	3,150	3,220	3,220	3,220	3,820	7,120	3,980	5,820	3,980	.....	.....	.....
7.....	3,150	3,220	3,220	3,370	3,980	6,360	3,980	5,640	3,980	.....	.....	.....
8.....	3,150	3,220	3,220	3,520	4,620	6,180	3,980	5,470	3,820	.....	.....	.....
9.....	3,150	3,220	3,220	3,670	4,960	5,470	3,980	5,470	3,820	.....	.....	.....
10.....	3,150	3,370	3,220	3,820	5,130	5,470	4,790	5,300	3,670	.....	.....	.....
11.....	3,150	3,370	3,220	3,670	5,300	5,300	5,130	5,300	3,670	.....	.....	.....
12.....	3,150	3,370	3,220	3,980	4,960	5,470	4,620	5,130	3,520	.....	.....	.....
13.....	3,150	3,370	3,220	3,980	4,620	5,640	4,620	4,960	3,370	.....	.....	.....
14.....	3,220	3,440	3,220	3,820	4,620	6,000	4,620	4,460	3,370	.....	.....	.....
15.....	3,220	3,440	3,220	3,820	4,620	6,360	4,620	4,300	3,370	.....	.....	.....
16.....	3,220	3,440	3,220	3,820	4,300	8,120	4,460	4,140	3,370	.....	.....	.....
17.....	3,220	3,370	3,220	3,820	5,300	6,360	4,300	3,980	3,370	.....	.....	.....
18.....	3,220	3,370	3,220	4,300	6,000	6,000	4,300	3,980	3,370	.....	.....	.....
19.....	3,220	3,370	3,220	4,620	5,470	6,000	4,300	3,980	3,370	.....	.....	.....
20.....	3,220	3,370	3,220	4,460	5,130	5,640	4,140	3,980	3,520	.....	.....	.....
21.....	3,220	3,370	3,220	3,670	4,790	5,640	4,300	4,300	3,520	.....	.....	.....
22.....	3,220	3,370	3,220	3,670	4,620	5,300	4,140	4,620	3,520	.....	.....	.....
23.....	3,220	3,370	3,220	3,670	4,460	4,960	4,300	4,960	3,520	.....	.....	.....
24.....	3,150	3,370	3,220	4,620	4,300	4,960	4,300	4,790	3,370	.....	.....	.....
25.....	3,150	3,370	3,220	11,900	4,300	4,790	4,300	4,960	3,370	.....	.....	.....
26.....	3,150	3,370	3,220	13,900	4,140	4,620	4,140	5,820	3,370	.....	.....	.....
27.....	3,150	3,220	3,220	9,170	3,980	4,620	4,140	3,640	3,370	.....	.....	.....
28.....	3,150	3,220	3,220	6,740	3,980	4,460	4,140	5,300	3,370	.....	.....	.....
29.....	3,150	3,220	3,220	6,000	3,980	4,300	5,640	5,130	3,370	.....	.....	.....
30.....	3,150	3,220	3,220	5,470	.....	4,300	7,320	4,960	3,370	.....	.....	.....
31.....	3,150	.....	3,220	4,620	.....	4,300	.....	4,790	.....	.....	.....	.....

NOTE.—Daily discharge 1910-12 determined from a well-defined rating curve.

Monthly discharge of Pit River near Ydalpom, Cal., for 1910-1912.

[Drainage area, 6,350 square miles. <sup>a</sup>]

Month.	Discharge in second-feet.				Run-off.		Accuracy.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inch. s on drainage area.	Total in acre-feet.	
1910-11.							
November 16-30.....	4,960	3,120	3,710	0.584	0.33	110,000	A.
December.....	8,960	3,520	5,090	.802	.92	313,000	A.
January.....	15,400	3,440	5,410	.852	.98	333,000	A.
February.....	17,700	4,620	8,420	1.33	1.38	468,000	A.
March.....	20,600	4,620	12,200	1.92	2.21	750,000	A.
April.....	18,600	7,020	10,600	1.67	1.86	631,000	A.
May.....	10,900	5,300	6,600	1.04	1.20	406,000	A.
June.....	5,300	3,670	4,500	.709	.79	268,000	A.
July.....	3,670	3,300	3,550	.659	.64	218,000	A.
August.....	3,300	3,030	3,150	.496	.57	194,000	A.
September.....	3,080	3,030	3,080	.485	.54	183,000	A.
The period.....						3,870,000	
1911-12.							
October.....	3,220	3,080	3,170	.499	.58	195,000	A.
November.....	3,440	3,150	3,300	.520	.58	196,000	A.
December.....	3,220	3,220	3,220	.507	.58	198,000	A.
January.....	13,900	3,220	4,760	.750	.86	293,000	A.
February.....	6,000	3,820	4,560	.718	.77	262,000	A.
March.....	8,120	3,820	5,270	.830	.96	324,000	A.
April.....	7,320	3,980	4,440	.699	.78	264,000	A.
May.....	8,340	3,980	5,270	.830	.96	324,000	A.
June.....	4,620	3,370	3,680	.580	.65	219,000	A.
The period.....						2,280,000	

<sup>a</sup> Includes Goose Lake drainage basin—1,090 square miles.

COTTONWOOD CREEK NEAR LAKEVIEW, OREG.

Cottonwood Creek is tributary to Goose Lake. This station, which is located at a site for a storage dam in sec. 29, T. 38 S., R. 19 E., about 10 miles west of Lakeview, was established November 22, 1908. A dam at this site will store about 30,000 acre-feet of water and in connection with the proposed dam on Drews Creek will afford water sufficient to irrigate about 60,000 acres of land.

A 10-foot Cippoletti weir was installed at the dam site in November, 1908, and a gage was placed above it to measure the head. On January 19, 1909, the weir was lengthened to 15 feet, a footbridge was installed about 1,000 feet below it, and an inclined gage was set on the left bank. Measurements were made by a current meter from the bridge, as the weir had been so damaged by a flood that the abutments leaked. The damage was, however, repaired and comparative readings on both gages were made during most of 1909.

A small channel to the right of the measuring section carries water at high stages; both banks are wooded and are overflowed at flood times. The channel at the lower station is evidently permanent and a good discharge rating curve has been developed. As far as available the records derived from observations of the lower gage have been used in constructing the curve. The weir records used for the earlier period are somewhat uncertain, as the weir may have leaked.

The relation between gage height and discharge is affected by ice during extremely cold weather but evidently only for short periods so that the accuracy of the determinations of the yearly run-off is not materially impaired.

The creek shows large, diurnal fluctuations during the spring, and, as the gage has been read only once or twice daily, the records for the spring season are subject to considerable error.

The station is maintained in cooperation with the Oregon Valley Land Co., which has furnished the weir data and gage heights.

*Discharge measurements of Cottonwood Creek near Lakeview, Oreg., in 1909-1912.*

Date.	Hydrographer.	Gage height.	Discharge.	Date.	Hydrographer.	Gage height.	Discharge.
1909. May 7	R. B. Post .....	<i>Feet.</i> 1.88	<i>Sec.-ft.</i> 118	1911. May 4	R. W. Davenport.....	<i>Feet.</i> 1.58	<i>Sec.-ft.</i> 95
1910. May 17	L. R. Allen .....	.85	32	1912. Jan. 20	W. O. Harmon.....	.25	4.31
Sept. 28	Allen and Davenport..	.15	2.1	Feb. 24	.....do.....	.38	8.38
				Apr. 26	.....do.....	.73	25.4

Daily gage height, in feet, and discharge, in second-feet, of Cottonwood Creek at weir near Lakeview, Oreg., for 1908-9.

[O. W. Theis, observer.]

Day.	1908				1909		Day.	1908				1909	
	Nov.		Dec.		Jan.			Nov.		Dec.		Jan.	
	Gage height.	Discharge	Gage height.	Discharge	Gage height.	Discharge.		Gage height.	Discharge.	Gage height.	Discharge.	Gage height.	Discharge.
1.			0.20	3.0	0.20	3.0	16.			0.17	2.4	2.65	145
2.			.19	2.8	.22	3.5	17.			.17	2.4	2.35	133
3.			.14	1.9	.32	6.1	18.			.16	2.0	2.20	121
4.			.19	2.8	.30	5.5	19.			.15	2.0		
5.			.24	4.1	.28	5.0	20.			.15	2.0		
6.			.25	4.2	.32	6.1	21.			.16	2.0		
7.			.20	3.0	.38	7.9	22.	0.30	5.5	.17	2.4		
8.			.22	3.6	.30	5.5	23.	.29	5.2	.16	2.0		
9.			.22	3.6	.30	5.5	24.	.25	4.2	.16	2.0		
10.			.22	3.2	.30	5.5	25.	.24	3.9	.16	2.0		
11.			.20	3.0	.26	4.5	26.	.19	2.7	.19	2.7		
12.			.26	4.2	.29	5.3	27.	.20	3.0	.20	3.0		
13.			.19	3.0	.30	5.5	28.	.27	4.5	.20	3.0		
14.			.16	2.2	.31	5.8	29.	.21	3.3	.20	3.0		
15.			.18		1.04	35.7	30.	.22	3.6	.18	2.6		
							31.			.20	3.0		

NOTE.—Crest of weir 10 feet long Nov. 22, 1908, to Jan. 16, 1909, and 11 feet long Jan. 17 to 18, 1909. As no allowance was made for probable leakage through weir, values may be somewhat too small.

Daily gage height, in feet, of Cottonwood Creek near Lakeview, Oreg., for 1909-1912.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909.												
1.					0.60	0.79	1.75	1.65	1.65	0.72	0.32	
2.					.60	.89	1.80	1.80	1.80	.72		
3.					.55	1.03	1.68	2.00	1.85	.72		
4.					.60	1.62	1.41	2.20	1.85	.63	.30	0.15
5.					.60	.96	1.40	2.25	1.82	.65		.15
6.					.60	.82	1.48	1.95	1.70	.65		.15
7.					.55	.83	1.40	1.88	1.52	.70		
8.					.52	.72	1.45	1.80	1.52	.62	.25	
9.					.48	.65	1.60	1.85	1.42	.62	.25	
10.					.50	.66	1.48	1.75	1.35	.60	.25	
11.					.50	.65	1.65	1.60	1.30	.60	.22	.10
12.					.55	.62	1.65	1.55	1.30	.55	.20	.10
13.					.64	.80	2.00	1.50	1.22	.50	.20	.12
14.					.55	1.12	2.00	1.45	1.25	.52	.20	.12
15.					.58	1.62	1.92	1.45	1.20	.50	.20	.12
16.					.82	1.54		1.45	1.22	.48		.12
17.					1.88	1.49	2.10	1.42	1.20	.48		.12
18.					1.22	1.26	2.05	1.40	1.15	.45	.18	.10
19.				2.50	1.12	1.15	1.90	1.38	1.28	.45		.10
20.				2.98	1.00	1.05	1.80	1.42	1.20	.42		.10
21.				3.10	.75	1.05	1.72	1.40	1.10	.40		.12
22.				2.12	1.02	1.02	1.72	1.40	1.00	.42	.15	.15
23.				1.62	1.00	.92	1.68	1.38	.98	.40		.15
24.				1.41	.62	.96	1.65		.90	.38		.15
25.				1.18	.59	1.06	1.72	1.40	.88	.40	.15	.20
26.				1.08	.65	1.16	2.00	1.40	.82	.40		.20
27.				1.10	.65	1.20	2.08	1.60	.80			.20
28.				1.22	.66	1.28	1.90	1.60	.80	.35		.22
29.				1.65		1.22	1.80	1.50	.82	.35	.15	.22
30.				1.50		1.22	1.75	1.42	.80	.32		.22
31.				1.00		1.87		1.40		.32	.15	

Daily gage height, in feet, of Cottonwood Creek near Lakeview, Oreg., for 1909-1912—Con.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909-10.												
1.	0.20	0.25	0.85	0.68	0.50	.....	1.42	1.35	0.60	0.48	0.10	0.20
2.	.20	.25	.80	.45	1.00	2.60	1.43	1.32	.60	.42	.12	.20
3.	.25	.30	.85	.60	1.60	2.45	1.50	1.35	.60	.40	.10	.13
4.	.22	.25	1.10	.75	1.65	2.28	1.65	1.30	.55	.33	.10	.13
5.	.20	.25	1.00	.62	1.00	2.25	1.70	1.15	.50	.38	.12	.18
6.	.13	.25	.90	.80	.80	2.00	1.42	1.10	.58	.38	.12	.20
7.	.13	.25	.80	.75	.70	1.70	1.43	1.10	.55	.35	.12	.13
8.	.13	.22	.75	.60	.65	1.52	1.50	1.08	.53	.35	.15	.20
9.	.15	.25	.75	.50	.55	1.50	1.65	1.10	.55	.35	.15	.20
10.	.15	.25	.70	.50	.55	1.85	1.72	1.08	.55	.35	.18	.20
11.	.15	.35	.65	.40	.52	1.85	1.62	1.05	.52	.30	.20	.13
12.	.15	.35	.65	.40	.55	1.95	1.78	1.02	.55	.25	.12	.13
13.	.12	.35	.62	.42	.62	2.10	1.65	1.02	.52	.25	.13	.13
14.	.12	.60	.45	.45	.....	2.20	1.72	1.00	.52	.22	.15	.20
15.	.12	.78	.....	.....	.50	.....	1.65	1.02	.55	.22	.18	.20
16.	.12	.83	.55	.....	.48	2.00	1.62	1.02	.55	.22	.18	.20
17.	.12	.50	.52	.45	.43	2.10	1.72	1.05	.52	.22	.18	.20
18.	.15	.52	.50	.42	.45	2.40	1.75	.98	.50	.22	.15	.22
19.	.20	.70	.50	.45	.43	2.60	1.70	.92	.50	.20	.18	.25
20.	.20	1.90	.52	.32	.50	2.50	1.68	.88	.52	.20	.18	.28
21.	.18	2.00	.60	.35	.42	2.00	1.60	.80	.52	.20	.15	.28
22.	.13	2.00	.65	.95	.45	1.50	1.62	.75	.55	.18	.18	.25
23.	.15	3.40	.68	2.00	.43	1.55	1.65	.80	.52	.15	.15	.25
24.	.15	3.00	.70	1.80	.50	1.40	1.62	.78	.50	.15	.12	.25
25.	.15	1.60	.75	1.50	.50	1.30	1.65	.72	.50	.12	.18	.25
26.	.15	1.20	.70	1.30	.55	1.30	1.60	.72	.48	.12	.15	.25
27.	.15	1.00	.70	1.00	.55	1.28	1.68	.70	.48	.10	.18	.20
28.	.20	.90	.60	.....	1.45	1.20	1.45	.68	.45	.10	.15	.20
29.	.20	.90	.55	.....	.....	1.22	1.40	.72	.42	.10	.20	.13
30.	.22	.....	.50	.65	.....	1.20	1.42	.68	.40	.10	.19	.20
31.	.22	.....	.90	.65	.....	1.18	.....	.65	.....	.10	.18	.....
1910-11.												
1.	.20	.22	.48	.45	1.25	.48	2.6	1.65	1.60	.72	.42	.20
2.	.20	.25	.48	.50	.80	.52	2.45	2.05	1.90	.72	.42	.13
3.	.22	.28	1.12	.48	.70	.38	2.45	1.60	1.80	.70	.40	.13
4.	.25	.30	.75	.40	.58	1.20	2.45	1.85	1.95	.70	.40	.20
5.	.22	.35	.78	.38	.40	.90	2.5	1.95	1.70	.70	.40	.22
6.	.22	.30	.90	.35	.48	.80	2.6	1.90	1.80	.70	.42	.22
7.	.22	.35	.80	.35	.90	.62	2.5	1.90	2.10	.68	.40	.25
8.	.20	.32	1.60	.35	1.25	.52	2.25	1.85	1.85	.65	.38	.22
9.	.20	.30	1.20	.32	1.15	.52	2.20	1.90	2.00	.65	.38	.22
10.	.18	.30	1.52	.32	1.20	.55	1.85	1.90	1.90	.65	.38	.20
11.	.20	.32	1.45	.30	1.20	.50	1.60	1.85	1.75	.62	.38	.20
12.	.40	.38	1.58	.30	1.10	.48	1.65	1.75	1.70	.62	.38	.18
13.	.35	.35	1.50	.32	1.10	.52	1.50	1.65	1.70	.60	.35	.18
14.	.32	.35	.92	.28	1.00	.52	1.60	1.70	1.60	.58	.35	.18
15.	.28	.38	.80	.38	1.20	.50	1.50	1.70	1.65	.58	.32	.15
16.	.28	.30	.70	.32	1.15	.52	1.55	1.80	1.60	.58	.30	.15
17.	.25	.28	.65	.30	1.10	.72	1.45	1.70	1.50	.55	.30	.13
18.	.25	.32	.95	.32	1.20	.95	1.55	1.75	1.45	.55	.28	.15
19.	.28	.25	.90	.38	1.25	1.20	1.25	1.75	1.40	.55	.25	.12
20.	.28	.28	.85	.30	.80	1.50	1.25	1.70	1.20	.52	.28	.15
21.	.30	.28	.90	.28	.65	1.80	1.30	1.42	1.50	.52	.28	.12
22.	.30	.25	.84	.28	.62	2.5	1.40	1.70	1.25	.50	.25	.12
23.	.30	.65	.62	.28	.60	2.6	2.05	1.45	1.00	.50	.28	.15
24.	.28	.75	.60	.42	.68	2.45	2.10	1.50	1.00	.50	.25	.15
25.	.28	.55	.60	.32	.60	2.6	2.00	1.60	.98	.48	.22	.18
26.	.28	.42	.58	.30	.58	2.35	2.05	1.50	.92	.48	.22	.35
27.	.28	.40	.55	.42	.52	2.20	2.40	1.45	.85	.48	.22	.30
28.	.25	.48	.55	.48	.50	2.35	2.45	1.50	.78	.45	.20	.25
29.	.25	.42	.52	.48	.....	2.00	2.00	1.45	.70	.45	.25	.25
30.	.28	.50	.50	.52	.....	2.6	1.80	1.50	.75	.42	.25	.28
31.	.20	.....	.45	.95	.....	2.6	.....	1.50	.....	.42	.22	.....

Daily gage height, in feet, of Cottonwood Creek near Lakeview, Oreg., for 1909-1912—Con.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1911-12.												
1.....	0.28	0.20	0.38	0.37	0.55	0.62	1.10	1.55	1.65			
2.....	.25	.20	.35	.34	.46	.80	1.20	1.45	1.55			
3.....	.25	.18	.32	.32	.45	.60	1.15	1.15	1.55			
4.....	.28	.15	.32	.30	.50	.71	1.20	.84	1.55			
5.....	.30	.18	.30	.37	.52	.65	1.20	1.35	1.50			
6.....	.28	.20	.35	.45	.49	2.15	1.25	1.25	1.40			
7.....	.25	.22	.38	.40	.68	2.5	1.15	1.05	1.35			
8.....	.25	.25	.35	.34	1.00	2.40	1.00	1.55	1.35			
9.....	.28	.25	.35	.32	.65	.65	1.35	2.15	1.50			
10.....	.25	.28	.32	.30	.62	.79	1.20	2.10	1.45			
11.....	.22	.28	.35	.30	.60	.76	1.00	1.60	1.45			
12.....	.18	.25	.30	.30	1.00	1.05	1.00	1.95	1.45			
13.....	.15	.22	.30	.55	.83	1.00	1.00	1.65	1.50			
14.....	.25	.30	.32	.60	.68	.83	1.05	1.90	1.40			
15.....	.22	.45	.42	.96	.62	.70	1.05	1.50	1.25			
16.....	.22	.55	.40	.70	2.6	.62	.78	2.30	1.05			
17.....	.22	.55	.40	.65	2.9	.52	.88	2.35	.96			
18.....	.22	.50	.38	.60	1.60	.37	.91	1.65	.91			
19.....	.20	.52	.32	.50	1.25	.50	.70	1.95	.44			
20.....	.20	.55	.40	.49	1.55	.50	.84	2.00	.36			
21.....	.18	.55	.45	.43	.88	.47	.81	1.90	.41			
22.....	.22	.52	.50	.42	.70	.54	.86	1.85	.44			
23.....	.25	.52	.45	.34	.58	.59	.78	1.95	.88			
24.....	.22	.50	.60	.40	.50	1.75	.84	1.85	.78			
25.....	.20	.50	.90	.52	.50	1.50	.46	1.70	.76			
26.....	.20	.48	.88	.70	.55	1.40	.94	1.65	.68			
27.....	.22	.42	.58	.68	.55	2.10	.91	1.65	.66			
28.....	.25	.42	.35	.56	.55	1.80	1.30	1.55	.66			
29.....	.22	.40	.30	.60	.49	.78	1.15	1.55	.64			
30.....	.20	.40	.25	.58		1.15	1.10	1.60	.61			
31.....	.18		.22	.56				1.60				

NOTE.—Ice probably existed at this station from about Jan. 1 to Mar. 10, 1911; effect on the relation of gage height to discharge was not great during January, but was considerable during February and March. There was also ice at station from Dec. 20, 1911, to Jan. 13, 1912. Corrections have been applied on many of the gage readings from Mar. 17 to May 17, 1911, and Mar. 24 to May 28, 1912, to allow for diurnal fluctuation of stage.

Daily discharge, in second-feet, of Cottonwood Creek near Lakeview, Oreg., for 1909-1912

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909.												
1.....					18	29	109	99	99	25	7	2
2.....					18	35	114	114	114	25	7	2
3.....					16	45	102	135	119	25	6	2
4.....					18	96	76	158	119	23	6	2
5.....					18	40	75	164	116	21	6	2
6.....					18	31	82	130	104	21	5	2
7.....					16	32	75	122	86	24	4	2
8.....					14	25	80	114	86	19	4	2
9.....					12	21	94	119	77	19	4	1
10.....					13	22	82	109	70	18	4	1
11.....					13	21	99	94	66	18	4	1
12.....					16	19	99	89	66	16	3	1
13.....					20	30	135	84	60	13	3	2
14.....					16	52	135	80	62	14	3	2
15.....					17	95	126	80	58	13	3	2
16.....					31	88	136	80	60	12	3	2
17.....					122	83	146	77	58	12	3	2
18.....					60	63	140	75	54	11	3	1
19.....				196	52	54	124	73	64	11	3	1
20.....				267	43	46	114	77	58	10	3	1
21.....				286	27	46	106	75	50	9	2	2
22.....				148	44	44	106	75	43	10	2	2
23.....				96	43	37	102	73	42	9	2	2
24.....				76	19	40	99	74	36	8	2	2
25.....				56	18	47	106	75	35	9	2	3

Daily discharge, in second-feet, of Cottonwood Creek near Lakview, Oreg., for 1909-1912—  
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909.												
26.				49	21	55	135	75	31	9	2	3
27.				50	21	58	144	94	30	8	2	3
28.				60	22	64	124	94	30	8	2	4
29.				99		60	114	84	31.	8	2	4
30.				84		60	109	77	30	7	2	4
31.				43		121		75		7	2	
1909-10.												
1.	3	4	33	23	13	230	77	70	18	12	1	3
2.	3	4	30	11	43	210	82	68	18	10	2	3
3.	4	6	33	18	94	190	84	70	18	9	1	3
4.	4	4	50	27	99	168	99	66	16	8	3	3
5.	3	4	43	19	43	164	104	54	13	8	2	3
6.	3	4	36	30	30	135	77	50	17	8	2	3
7.	3	4	30	27	24	104	82	50	16	8	2	3
8.	3	4	27	18	21	86	84	49	17	8	2	3
9.	2	4	27	13	16	84	99	50	16	8	3	3
10.	2	4	24	13	16	119	106	49	16	8	3	3
11.	2	8	21	9	14	119	96	46	14	6	3	3
12.	2	8	21	9	16	130	112	44	16	4	2	3
13.	2	8	19	10	19	146	99	44	14	4	3	3
14.	2	18	11	11	16	158	106	43	14	4	2	3
15.	2	29	14	11	13	146	99	44	16	4	3	3
16.	2	35	16	11	12	135	96	44	16	4	3	3
17.	2	13	14	11	12	146	106	46	14	4	3	3
18.	2	14	13	10	11	183	109	42	13	4	2	3
19.	3	24	13	11	12	210	104	37	13	3	3	4
20.	3	124	14	7	13	196	102	35	14	3	3	5
21.	3	135	18	8	10	135	94	30	14	3	2	5
22.	3	135	21	40	11	84	96	27	16	3	3	4
23.	2	337	23	135	12	89	99	30	14	2	2	4
24.	2	270	24	114	13	75	96	29	13	2	2	4
25.	2	94	27	84	13	66	99	25	13	2	3	4
26.	2	58	24	66	16	66	94	25	12	2	2	4
27.	2	43	24	43	16	64	92	24	12	1	3	4
28.	3	36	18	36	80	58	80	23	11	1	2	3
29.	3	36	16	28		60	75	25	10	1	3	3
30.	4	34	13	21		58	77	23	9	1	3	3
31.	4		36	16		56		21		1	3	
1910-11.												
1.	3	4	12	11		5	210	99	94	25	10	3
2.	3	4	12	13		5	190	140	124	25	10	3
3.	4	5	52	12		8	190	94	114	24	9	3
4.	4	6	27	9		8	190	119	130	24	9	3
5.	4	8	29	8		8	196	130	104	24	9	4
6.	4	6	36	8		10	210	124	114	24	10	4
7.	4	8	30	8		10	196	124	146	23	9	4
8.	3	7	94	8		10	164	119	119	21	8	4
9.	3	6	58	7		10	158	124	135	21	8	4
10.	3	6	86	7		10	119	124	124	21	8	3
11.	3	7	80	6		13	94	119	109	19	8	3
12.	8	8	92	6		12	89	109	104	19	8	3
13.	9	8	84	7		14	84	99	104	18	8	3
14.	7	8	37	5		14	94	104	94	17	8	3
15.	5	8	30	8		13	84	104	99	17	7	2
16.	5	6	24	7		14	89	114	94	17	6	2
17.	4	5	21	6		25	80	104	84	16	6	3
18.	4	7	40	7		40	89	109	80	16	5	2
19.	5	4	36	8		58	62	109	75	16	4	2
20.	5	5	33	6		84	62	104	58	14	5	2
21.	6	5	36	5		114	66	77	84	14	5	2
22.	6	4	32	5		196	75	104	62	13	4	2
23.	6	21	19	5		210	140	80	43	13	5	2
24.	5	27	18	10		190	146	84	43	13	4	2
25.	5	16	18	7		210	135	94	42	12	4	3
26.	5	10	17	6		176	140	84	37	12	4	8
27.	5	9	16	10		158	183	80	33	12	4	6
28.	4	12	16	12		176	190	84	29	11	3	4
29.	4	10	14	12		135	135	80	24	11	4	4
30.	5	13	13	14		210	114	84	27	10	4	5
31.	3		11	10		210		84		10	4	

Daily discharge, in second-feet, of Cottonwood Creek near Lakeview, Oreg., for 1909-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1911-12.												
1.....	5	3	8	2	16	19	50	89	99	.....	.....	.....
2.....	4	3	8	2	11	30	58	80	89	.....	.....	.....
3.....	4	3	7	2	11	18	54	54	89	.....	.....	.....
4.....	5	2	7	2	13	25	58	32	89	.....	.....	.....
5.....	6	3	6	2	14	21	58	70	84	.....	.....	.....
6.....	5	3	8	2	13	152	62	62	75	.....	.....	.....
7.....	4	4	8	2	23	196	54	46	70	.....	.....	.....
8.....	4	4	8	2	43	183	43	89	70	.....	.....	.....
9.....	5	4	8	2	21	21	70	152	84	.....	.....	.....
10.....	4	5	7	2	19	29	58	146	80	.....	.....	.....
11.....	4	5	8	2	18	28	43	94	80	.....	.....	.....
12.....	3	4	6	2	43	46	43	130	80	.....	.....	.....
13.....	2	4	6	5	32	43	43	99	84	.....	.....	.....
14.....	4	6	7	18	23	32	46	124	75	.....	.....	.....
15.....	4	11	10	40	19	24	46	84	62	.....	.....	.....
16.....	4	16	9	24	210	19	29	170	46	.....	.....	.....
17.....	4	16	9	21	254	14	35	176	40	.....	.....	.....
18.....	4	13	8	13	94	8	37	99	37	.....	.....	.....
19.....	3	14	7	13	62	13	24	130	11	.....	.....	.....
20.....	3	16	6	13	89	13	32	135	8	.....	.....	.....
21.....	3	16	6	10	35	12	31	124	9	.....	.....	.....
22.....	4	14	5	10	24	15	34	119	11	.....	.....	.....
23.....	4	14	5	7	17	13	28	130	35	.....	.....	.....
24.....	4	13	4	9	13	100	32	119	29	.....	.....	.....
25.....	3	13	4	14	13	84	11	104	28	.....	.....	.....
26.....	3	12	4	24	16	75	39	99	23	.....	.....	.....
27.....	4	10	3	23	16	146	37	99	22	.....	.....	.....
28.....	4	10	3	16	16	114	66	89	22	.....	.....	.....
29.....	4	9	3	18	13	29	54	89	20	.....	.....	.....
30.....	3	9	2	17	.....	54	50	94	19	.....	.....	.....
31.....	3	.....	2	16	.....	52	.....	94	.....	.....	.....	.....

NOTE.—Daily discharge 1909-12 determined from a rating curve fairly well defined below 150 second-feet; no reduction on account of ice Jan. 1 to 30, 1911; discharge Jan. 31, 1911, and Dec. 20, 1911, to Jan. 13, 1912, estimated because of ice; discharge Mar. 1, 1910, estimated by comparison with Drews Creek; discharge interpolated on all other days of missing gage height.

Monthly discharge of Cottonwood Creek near Lakeview, Oreg., for 1908-1912.

[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.	
1908-9.							
November 22-30.....	5.5	2.7	3.99	0.133	0.04	71	C.
December.....	4.2	1.9	2.76	.092	.11	170	C.
January.....	286	3	65.1	2.17	2.50	4,000	C.
February.....	122	12	27.4	.913	.95	1,520	B.
March.....	121	19	50.3	1.63	1.94	3,080	B.
April.....	146	75	110	3.67	4.10	6,550	C.
May.....	164	73	95.0	3.17	3.66	5,840	B.
June.....	119	30	65.1	2.17	2.42	3,870	B.
July.....	25	7	14.3	.477	.55	879	B.
August.....	7	1	3.4	.113	.13	269	B.
September.....	4	1	2.1	.070	.08	125	C.
The period.....	.....	.....	.....	.....	.....	26,300	.....

Monthly discharge of Cottonwood Creek near Lakeview, Oreg., for 1908-1912—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.	
1909-10.							
October.....	4	2	2.6	.087	.10	160	B.
November.....	337	4	50.0	1.67	1.86	2,980	B.
December.....	50	11	23.6	.787	.91	1,450	C.
January.....	135	7	28.7	.957	1.10	1,760	C.
February.....	99	10	25.3	.843	.88	1,410	C.
March.....	<sup>a</sup> 230	56	125	4.17	4.81	7,990	C.
April.....	112	75	94.2	3.14	3.50	5,610	B.
May.....	70	21	41.4	1.38	1.59	2,550	B.
June.....	18	9	14.4	.480	.54	857	B.
July.....	12	1	4.7	.157	.18	289	B.
August.....	3	1	2.4	.080	.09	148	C.
September.....	5	3	3.3	.110	.12	196	B.
The year.....	337	1	34.6	1.15	15.68	25,100	
1910-11.							
October.....	9	3	4.6	0.153	0.18	283	B.
November.....	27	4	8.2	.273	.30	488	B.
December.....	92	11	36.2	1.21	1.40	2,230	B.
January.....	14	5	8.2	.273	.31	504	D.
February.....	.....	.....	<sup>a</sup> 5.0	.167	.17	278	D.
March.....	210	.....	76.0	2.53	2.92	4,670	B.
April.....	210	62	132	4.40	4.91	7,860	B.
May.....	140	77	103	3.43	3.95	6,330	B.
June.....	146	24	84.3	2.81	3.14	5,020	B.
July.....	25	10	17.2	.573	.66	1,060	C.
August.....	10	3	6.5	.217	.25	400	D.
September.....	8	2	3.3	.110	.12	196	D.
The year.....	210	2	40.4	1.35	18.31	29,300	
1911-12.							
October.....	6	2	3.9	.130	.15	240	.....
November.....	16	2	8.6	.287	.32	512	.....
December.....	10	.....	6.2	.207	.24	381	.....
January.....	40	.....	11.0	.367	.42	676	C.
February.....	254	11	41.1	1.37	1.48	2,360	B.
March.....	196	8	53.0	1.77	2.04	3,260	B.
April.....	70	11	44.2	1.47	1.64	2,630	B.
May.....	178	32	104	3.47	4.00	6,400	B.
June.....	99	8	52.3	1.74	1.94	3,110	B.
The period.....	.....	.....	.....	.....	.....	19,600	

<sup>a</sup> Estimated.

NOTE.—Discharge Jan. 31 to Mar. 10, 1911, corrected for effect of ice; mean discharge Mar. 1 to 10, 1911, estimated at about 8 second-feet; discharge Dec. 20, 1911, to Jan. 13, 1912, estimated. The accuracy rating of the records at this station is lowered by the diurnal fluctuations in stage.

DREWS CREEK NEAR LAKEVIEW, OREG.

Drews Creek is tributary to Goose Lake. This station, which is located at a highway bridge below the proposed dam site of the Oregon Valley Land Co., about 23 miles west of Lakeview, in sec. 5, T. 40 S., R. 18 E., was established March 1, 1910. The point is below all important tributaries and is designated as station No. 3, as two other sites near by had previously been used. Station No. 1, located at the dam site, was established January 16, 1909. The gage was an inclined staff and discharge measurements were made from a footbridge near by. This gage was read until May 31, 1909. Station

No. 2 was located at a dump-car bridge 100 feet below the dam site and was used from November 20, 1909, to February 28, 1910, when it was abandoned in favor of the present site, which affords conditions more favorable for good results.

The gage has been read twice daily part of the time and the readings indicate that the diurnal fluctuation is not strongly marked except at extreme high stages. Some ice forms occasionally during the winter. The stream bed is usually dry for two or three months; no records have been obtained during the summer, for which period the discharge has been estimated.

Practically all records for this station have been collected by the Oregon Valley Land Co. Final computations have been made and the results prepared for publication by the engineers of the United States Geological Survey.

*Discharge measurements of Drews Creek near Lakeview, Oreg., in 1909-1911.*

**Station No. 1.**

Date.	Hydrographer.	Gage height.	Discharge.	Date.	Hydrographer.	Gage height.	Discharge.
		<i>Feet.</i>	<i>Sec.-ft.</i>			<i>Feet.</i>	<i>Sec.-ft.</i>
1909.				1909.			
Feb. 15	J. G. Allen	0.98	162	Mar. 9	R. F. Stripling	0.66	108
16	do	3.93	830	14	do	1.16	194
17	do	3.55	717	17	do	2.90	547
18	do	2.96	536	22	do	1.41	224
19	do	1.37	213	27	do	1.80	312
21	do	1.07	164	29	do	2.06	356
22	do	1.14	180	Apr. 1	do	2.67	489
26	do	.68	100	3	C. C. Gott	3.45	679
28	R. F. Stripling	1.00	156	9	do	2.77	516
Mar. 3	do	1.65	269	10	R. F. Stripling	3.20	621
4	do	2.60	433	25	J. G. Allen	2.00	308
6	do	1.10	165	May 6	R. B. Post	1.40 <sup>a</sup>	230
8	do	1.10	167				

**Station No. 2.**

1909.				1910.			
Nov. 23	C. W. Watson	9.00	1,110	Jan. 25	W. J. Archer	8.36	1,330
24	W. J. Archer	7.00	706				
26	do	4.25	229				
Dec. 9	do	3.50	72				

**Station No. 3.**

1910.				1911.			
Mar. 21	W. J. Archer	5.00	692	Feb. 10	H. W. Frain		12.3
30	do	3.75	285	20	do	3.94	346
Apr. 7	do	3.60	264	24	B. H. Page	5.90	1,060
19	do	3.10	150	May 5	R. W. Davenport	3.69	266
25	do	2.85	86	11	H. W. Frain	3.30	190
May 17 <sup>a</sup>	L. R. Allen	2.25	25.8	Aug. 23	R. W. Davenport	1.54	2.05
17	W. J. Archer	2.26	28.5	Dec. 14 <sup>a</sup>	W. O. Harmon	1.79	1.4
Dec. 11	H. W. Frain	4.28	440				
12	do	3.58	270				

<sup>a</sup> Measurement made by wading.

<sup>b</sup> Estimated.

STREAM MEASUREMENTS IN SACRAMENTO BASIN.

Daily gage height, in feet, of Drews Creek near Lakeview, Oreg., for 1909-1911.

Day.	Jan.	Feb.	Mar.	Apr.	May.	Day.	Jan.	Feb.	Mar.	Apr.	May.
1909.						1909.					
1		0.9	1.45	2.7	1.6	16	8.3	3.2	2.4	3.4	0.65
2		1.1	1.75	2.95	1.55	17	6.5	3.9	2.65	3.5	.7
3		1.35	1.95	3.3	1.6	18	5.1	2.8	1.8	3.2	.55
4		.95	2.6	2.55	1.55	19	5.2	1.5	1.8	3.1	.55
5		.6	1.45	2.2	1.55	20	6.65	1.15	1.4	2.7	.4
6		.8	1.5	2.0	1.55	21	7.3	1.1	1.35	2.4	.55
7		.6	1.0	2.0	1.35	22	2.0	.7	1.4	2.2	.6
8		.5	1.1	2.25	1.2	23	3.05	1.0	1.35	2.1	.6
9		.4	.5	2.75	1.2	24	2.45	1.0	1.4	1.95	.45
10		.45		3.1	1.05	25	2.2	.85	1.35	2.0	.3
11		.4		2.85	1.0	26	1.6	.7	1.45	2.05	.25
12		.5	.6	3.05	.9	27	1.25		1.85	2.15	.5
13		.8	.75	3.5	.85	28	2.25	1.0	2.05	2.2	.7
14		.85	1.25	3.5	.7	29	1.5		2.05	1.9	.75
15		1.0	1.75	3.5	.7	30	1.1		1.5	1.8	.55
						31	.85		2.0		.45

NOTE.—Gage heights, Jan. 16 to May 31, 1909, observed at station No. 1. Creek dry from about Aug. 1 to Oct. 1, 1909.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909-10. <sup>a</sup>												
1			4.4	2.9	3.55	7.5	4.0	2.9	2.0			
2			3.85	2.9	3.5			2.9				
3			3.55	2.9	3.5	6.8		2.9				
4			3.15	2.8	3.4	5.55	3.8	3.0				
5				2.8	3.0	5.45	3.75	3.0				
6			3.15	2.7	3.0	4.9	3.75	2.9	1.8			
7			3.0	2.6	3.0	4.85	3.7	2.75				
8			3.1	2.65	3.0	4.7	3.7	2.65				
9			3.4	2.65	3.0	4.6	3.7	2.6				
10			3.5	2.65	3.0	4.8	3.7	2.6				
11			4.5	2.65	3.0	4.75	3.7	2.6				
12			4.45	2.65	3.0	4.9	3.55	2.6				
13			4.5	2.65	3.1	6.4	3.35	2.55				
14			3.55	2.65	3.4	5.3	3.3	2.4				
15			3.2	2.65	3.25	5.8	3.2	2.4				
16			3.1	2.65	3.1		3.2	2.3				
17			3.0	2.65	3.1	5.6	3.2	2.25				
18			2.95	2.65	3.1	5.6	3.15	2.25				
19			2.95	2.65	3.05	6.8	3.1	2.2				
20		3.0	2.9	2.65	3.0	5.4	3.1	2.2				
21		7.0	2.8	2.65	3.0	5.05		2.2				
22		7.0	2.8	3.4	3.0	4.95	3.0	2.15				
23		9.0	2.65	4.4	3.0	4.85	2.95	2.1				
24		7.0		5.35	4.35	4.45	2.9	2.1				
25		5.15		8.9	4.6	4.2	2.85	2.1				
26		4.3	2.75	4.2	4.2	4.3	2.8	2.1				
27		3.45	2.65	3.65	4.0	4.0	2.8	2.05				
28		3.85	2.65	3.6	6.4	3.95	2.8	2.05				
29			2.65				2.9					
30		4.1	2.7	3.65		3.8	2.9	2.0				
31			2.9	3.65		3.8		2.0				
1910-11. <sup>b</sup>												
1					2.0		6.4	3.8	3.0	2.0		
2										2.0		
3					2.3		6.05		3.0	2.0		
4							5.7		2.9			
5							5.8	3.9		1.9		
6						1.8			3.0	1.9		
7							4.9	3.7		1.9		
8			4.15				4.9		3.1	1.9		
9			5.2		1.8	1.8	5.15	3.5				
10			4.85					3.3	2.7	1.8		

<sup>a</sup> Gage heights, Nov. 20, 1909, to Feb. 28, 1910, observed at station No. 2; subsequent to Feb. 28, 1910, gage heights observed at station No. 3. Creek dry about July 1 to Oct. 1, 1910.

<sup>b</sup> Relation of gage height to discharge more or less affected by ice from Jan. 1 to Mar. 19, 1911. Channel dry from about July 24 to end of September, 1911.

Daily gage height, in feet, of Drews Creek near Lakeview, Oreg., for 1909-1911—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
11.			4.3	1.8			4.0	3.3	2.7	1.8		
12.			3.7	1.9	1.7	2.15	3.9		2.9	1.8		
13.			3.05	1.9			3.8	3.35	2.6	1.8		
14.			2.8	1.9			3.75		2.7	1.7		
15.			2.5	1.9			3.7	3.4	2.6	1.7		
16.			2.4	1.85					2.6	1.7		
17.			2.0	1.9			4.2	3.3	2.0	1.8		
18.				1.9					2.5	1.8		
19.				1.9			4.1	3.3	2.5	1.8		
20.				1.85	1.7	3.95		3.2	2.5	1.7		
21.				1.9		4.5	4.05	3.0	2.4	1.7		
22.				1.9		5.2		2.9	2.4	1.6		
23.				1.9		6.4	4.2		2.3	1.6		
24.				1.9		6.0			2.3	1.5		
25.				1.85		5.6	4.4		2.2	1.5		
26.				1.8		5.7	4.15		2.2	1.5		
27.				1.8	1.6	4.8	4.2		2.1	1.5		
28.				1.8		6.0	4.0		2.1	1.5		
29.				1.8		6.0			2.0	1.5		
30.				1.85		5.85	3.9		2.0	1.5		
31.				1.9		6.2			2.0	1.5		

Daily discharge, in second-feet, of Drews Creek near Lakeview, Oreg., for 1909-1911.

Day.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.
1909.									
1.			10	140	229	482	256		
2.			10	172	283	547	247		
3.			10	212	320	640	256		
4.			10	148	458	446	247		
5.			10	98	229	370	247		
6.			10	126	238	330	247		
7.			10	98	156	330	212		
8.			10	86	172	380	188		
9.			10	74	86	495	188		
10.			10	80	90	586	164		
11.			10	74	94	521	156		
12.			10	86	98	573	140		
13.			10	126	119	696	133		
14.			50	133	196	696	112		
15.			500	156	283	696	112		
16.			2,730	612	412	668	105		
17.			1,830	818	470	696	112		
18.			1,240	508	292	612	92		
19.			1,280	238	292	586	92		
20.			1,900	180	220	482	74		
21.			2,230	172	212	412	92		
22.			330	112	220	370	98		
23.			573	156	212	350	98		
24.			423	156	220	320	80		
25.			370	133	212	330	62		
26.			256	112	229	340	57		
27.			196	134	301	300	86		
28.			380	156	340	370	112		
29.			238		340	310	119		
30.			172		238	292	92		
31.			133		330		80		
1909-10.									
1.		228	28	90	1,850	370	106	12	
2.		135	28	83	1,680	351	106		
3.		90	28	83	1,500	333	106		
4.		45	22	70	910	314	124		
5.		45	22	34	870	300	124		
6.			45	17	34	656	300	106	
7.			34	13	34	639	286	82	5
8.			41	15	34	590	286	68	
9.			70	15	34	558	286	62	
10.			83	15	34	622	286	62	

Daily discharge, in second-feet, of Drews Creek near Lakeview, Oreg., for 1909-1911—Con.

Day.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.
1909-10.									
11.....		277	15	34	606	286	62		
12.....		266	15	34	656	247	62		
13.....		277	15	41	1,300	199	56		
14.....		90	15	70	810	188	41		
15.....		49	15	54	1,010	166	41		
16.....		41	15	41	970	166	32		
17.....		34	15	41	930	165	28		
18.....		31	15	41	930	155	28		
19.....	4	31	15	38	1,500	144	24		
20.....	34	28	15	34	850	144	24		
21.....	710	22	15	34	710	134	24		
22.....	710	22	70	34	673	124	20		
23.....	1,110	15	256	34	639	115	17		
24.....	710	16	470	246	510	106	17		
25.....	357	18	1,510	298	430	98	17		
26.....	211	20	214	214	462	90	17		
27.....	76	15	105	172	370	90	14		
28.....	135	15	97	742	356	90	14		
29.....	156	15	101		314	106	13		
30.....	177	17	105		314	106	12		
31.....		28	105		314		12		
1910-11.									
1.....		10	8	12	3	1,300	314	124	12
2.....		20	8	22	4	1,210	321	124	12
3.....		30	8	32	4	1,120	328	124	12
4.....		50	8	20	4	970	335	106	10
5.....		70	8	16	5	1,010	342	115	8
6.....		100	6	12	5	834	314	124	8
7.....		200	6	9	5	656	286	134	8
8.....		415	6	7	5	656	260	144	8
9.....		770	6	5	5	750	234	110	6
10.....		639	6	12	10	560	188	75	5
11.....		462	5	8	15	370	188	75	5
12.....		286	8	3	20	342	194	106	5
13.....		134	8	3	30	314	199	62	5
14.....		90	8	3	40	300	204	75	3
15.....		51	8	3	60	286	210	62	3
16.....		41	6	3	90	358	199	62	3
17.....		12	8	3	120	430	188	62	5
18.....		10	8	3	150	415	188	51	5
19.....		10	8	3	250	400	188	51	5
20.....		10	6	3	356	392	166	51	3
21.....		10	8	3	526	385	124	41	3
22.....		8	8	3	770	408	106	41	1
23.....		8	8	3	1,300	430	100	32	1
24.....		8	8	3	1,100	462	100	32	0
25.....		8	6	2	930	494	100	24	0
26.....		8	5	2	970	415	100	24	0
27.....		8	5	2	622	430	100	17	0
28.....		8	5	3	1,100	370	100	17	0
29.....		8	5		1,100	356	100	12	0
30.....		8	6		1,030	342	100	12	0
31.....		8	8		1,200		100		0

NOTE.—Daily discharge computed by engineers of United States Geological Survey chiefly from data furnished by the Oregon Valley Land Co. Discharge Jan. 1-15, 1909, estimated by a comparison with Cottonwood Creek records. Discharge Jan. 16-May 31, 1909 (station No. 1), determined from discharge rating curve well defined between 100 and 900 second-feet.

Discharge Nov. 19 to Dec. 3, 1910 (station No. 2), determined from a curve fairly well defined between 500 and 1,200 second-feet; uncertain below 500 second-feet.

Discharge Dec. 4, 1909, to Feb. 28, 1910 (station No. 2), obtained from a curve fairly well defined between 70 and 1,500 second-feet; approximate below 50 second-feet.

Daily discharge Mar. 1, 1910, to July, 1911, determined from a rating curve well defined below 1,200 second-feet. Daily discharge for days on which gage was not read interpolated or roughly estimated from the record of discharge of Cottonwood Creek.

No correction for effect of ice.

## Monthly discharge of Drews Creek near Lakeview, Oreg., for 1909-1911.

[Drainage area, 211 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.....	2,730	10	483	2.29	2.64	29,700	C.
February.....	818	74	189	.896	.93	10,500	B.
March.....	470	86	245	1.16	1.34	15,100	B.
April.....	696	292	476	2.26	2.52	28,300	B.
May.....	256	57	141	.668	.77	8,670	B.
June.....			45.0	.213	.24	2,680	
July.....		0	4.0	.019	.02	246	
August.....	0	0	.0	.000	.00	0	
September.....	0	0	.0	.000	.00	0	
The period.....						95,200	
1909-10.							
October.....			2.0	.0095	.01	123	
November.....	1,110	4	148	.701	.78	8,810	C.
December.....	277	15	69.1	.327	.38	4,250	C.
January.....	1,510	15	110	.521	.60	6,760	D.
February.....	742	34	97.6	.463	.48	5,420	C.
March.....	1,853	314	791	3.75	4.32	48,600	C.
April.....	370	90	201	.953	1.06	12,000	B.
May.....	124	12	49.1	.233	.27	3,020	B.
June.....	12	0	4.1	.019	.02	244	
July.....	0	0	.0	.000	.00	0	
August.....	0	0	.0	.000	.00	0	
September.....	0	0	.0	.000	.00	0	
The year.....	1,850	0	123	.581	7.92	89,200	
1910-11.							
October.....			5.0	.024	.03	307	
November.....			10.0	.047	.05	595	
December.....	770		113	.536	.62	6,950	C.
January.....	8	5	6.9	.033	.04	424	D.
February.....	32	2	7.2	.034	.04	400	D.
March.....	1,300	3	382	1.81	2.09	23,500	B.
April.....	1,300	286	559	2.65	2.96	33,300	B.
May.....	342	100	193	.915	1.05	11,900	B.
June.....	144	12	69.6	.330	.37	4,140	B.
July.....	12	0	4.4	.022	.03	271	B.
August.....	0	0	.0	.000	.00	0	
September.....	0	0	.0	.000	.00	0	
The year.....	1,300	0	113	.536	7.28	81,800	

NOTE.—Monthly means for low-water periods in 1909 and 1910 estimated by comparison with Cottonwood Creek records. They are only approximate but do not introduce any appreciable error in the yearly total.

Accuracy rating lowered by diurnal fluctuations.

## SOUTH FORK OF PIT RIVER NEAR IVY, CAL.

This station, which was located about 3 miles west of Ivy post office, below the outlet of Jess Valley, was established January 11, 1904, and discontinued November 15, 1905. West Valley Creek enters the South Fork from the south about 6 miles below the station.

The gage was a vertical plank fastened to a tree on the left bank 50 feet above the station, and was read only at times when discharge measurements were made, as it was impossible to get an observer on account of its isolated location.

Discharge measurements were made from a cable and car.

The channel is straight for 200 feet above and 80 feet below the station. The current is sluggish at low water stage. The right bank is low and subject to overflow in high water. The bed of the stream is composed of earth and is filled with vegetation at low-water stage.

During the winter there is some ice in the river. Monthly estimates based on the measurements have been computed for 1904 and 1905 and give a rough approximation of the run-off. They should be used with caution.

*Discharge measurements of South Fork of Pit River near Ivy, Cal., in 1904-5.*

Date.	Hydrographer.	Gage height.	Dis-charge.
1904.		<i>Feet.</i>	<i>Sec.-feet.</i>
Jan. 11	J. S. Evans.....	3.60	44
Feb. 3	do.....	3.30	26
16	do.....	5.70	202
25	do.....	5.20	158
Mar. 18	do.....	4.20	60
Apr. 2	do.....	4.25	69
May 7	do.....	5.60	197
24	do.....	7.80	573
June 14	Bennett and Evans.....	5.80	222
Sept. 3	J. Y. Toler.....	4.00	29
16	do.....	4.15	31
24	do.....	4.22	37
Oct. 1	do.....	4.20	38
12	do.....	4.65	75
20	Clapp and Toler.....	4.35	48
24	J. Y. Toler.....	4.24	33
Nov. 6	do.....	4.23	43
18	do.....	4.23	39
30	do.....	4.20	32
Dec. 15	do.....	4.20	33
1905.			
Jan. 1	J. Y. Toler.....	4.90	58
13	do.....	3.80	23
Feb. 1	do.....	4.18	49
17	do.....	4.00	42
Mar. 4	do.....	4.05	44
17	do.....	4.72	93
30	do.....	4.30	60
pr. 13	do.....	4.60	86
22	do.....	4.60	85
May 12	do.....	5.33	158
13	do.....	5.33	155
25	do.....	5.40	158
26	do.....	5.44	165
June 5	do.....	5.68	195
6	do.....	5.50	165
17	do.....	5.05	106
19	do.....	5.00	100
July 1	do.....	4.15	41
13	do.....	4.05	35
14	do.....	4.00	32
26	do.....	4.00	32
27	do.....	4.00	32
Aug. 15	do.....	4.10	28
16	do.....	4.10	28
24	do.....	3.70	20
Sept. 5	do.....	3.20	12
14	do.....	3.30	17
Oct. 3	do.....	3.20	14
12	do.....	3.20	14
13	do.....	3.20	14
21	do.....	3.20	14
Nov. 1	do.....	3.20	15
2	do.....	3.20	17
14	do.....	3.20	18
15	do.....	3.20	16

*Monthly discharge of South Fork of Pit River near Ivy, Cal., for 1904-5.*

[Drainage area, 91 square miles.]

Month.	Discharge in second-feet.		Run-off.	
	Mean.	Per square mile.	Depth in inches on drainage area.	Total in acre-feet.
1904.				
January.....	α 30	0.330	0.38	1,840
February.....	76	.835	.90	4,370
March.....	82	.901	1.04	5,040
April.....	90	.989	1.10	5,360
May.....	372	4.09	4.72	22,900
June.....	234	2.57	2.87	13,900
July.....	85	.934	1.08	5,230
August.....	46	.505	.58	2,830
September.....	35	.385	.43	2,080
The period.....				63,600
1904-5.				
October.....	47	.516	.59	2,890
November.....	41	.451	.50	2,440
December.....	39	.429	.49	2,400
January.....	38	.418	.48	2,340
February.....	44	.484	.50	2,440
March.....	66	.725	.84	4,060
April.....	90	.989	1.10	5,360
May.....	150	1.65	1.90	9,220
June.....	120	1.32	1.47	7,140
July.....	34	.374	.43	2,090
August.....	25	.275	.32	1,540
September.....	15	.165	.18	893
The year.....	59.1	.649	8.80	42,800
1905.				
October.....	14	.154	.18	861
November.....	20	.220	.25	1,190
December.....	30	.330	.38	1,840

α Mean of 21 days. Assumed as mean for entire month.

NOTE.—These values were obtained by interpolation between discharge measurements and by hydrograph comparison with other Pit River stations. They are only an approximate estimate of the monthly flow and should be used with caution.

## WEST VALLEY CREEK NEAR LIKELY, CAL.

This station, which was located 7 miles east of Likely, Cal., at the outlet of West Valley just above its confluence with the South Fork of Pit River, was established January 7, 1904, and discontinued December 31, 1905.

Discharge measurements were made by a car and cable. Favorable measuring conditions existed, but owing to the inaccessibility of the cable gage a rod gage was placed 2 miles upstream near a ranch house, where an observer could be obtained. Numerous springs and swamps appear in the valley between the section and this upper gage, so this gage, as read, is not considered a satisfactory index of the flow at the cable. It, however, gives a general idea of the fluctuations in the flow of the stream.

After July 1, 1905, measurements were made at the ranch house near the upper gage. They give a smaller discharge than at the regular station. The gage datum remained unchanged.

Monthly estimates have been computed from the measurements for 1904 and 1905 and are considered as only roughly approximate. They should be used with caution.

*Discharge measurements of West Valley Creek near Likely, Cal., in 1904-5.*

Date.	Hydrographer.	Gage height.	Dis-charge.
1904.		<i>Feet.</i>	<i>Sec.-feet.</i>
Jan. 7	J. S. Evans.....	3.18	21
Feb. 2	do.....	3.30	20
16	do.....	4.95	200
25	do.....	3.75	74
Mar. 18	do.....	3.70	74
Apr. 2	do.....	3.50	51
May 24	do.....	4.30	138
June 6	do.....	3.90	70
June 14	S. G. Bennett.....	3.50	36
Sept. 2	J. Y. Toler.....	2.90	10
17	do.....	3.04	16
24	do.....	3.15	15
30	do.....	3.20	16
Oct. 12	do.....	3.35	20
19	Clapp and Toler.....	3.30	29
29	J. Y. Toler.....	3.25	26
Nov. 5	do.....	3.25	15
17	do.....	3.30	17
29	do.....	3.29	29
Dec. 14	do.....	3.30	??
31	do.....	3.35	30
1905.			
Jan. 12	do.....	3.30	28
31	do.....	3.20	22
Feb. 2	do.....	3.20	20
16	do.....	3.22	26
Mar. 4	do.....	3.20	24
5	do.....	3.20	24
16	do.....	3.22	25
17	do.....	3.70	69
29	do.....	3.30	30
31	do.....	3.30	30
Apr. 13	do.....	3.25	26
22	do.....	3.20	22
May 12	do.....	3.32	35
13	do.....	3.35	38
25	do.....	3.22	22
26	do.....	3.19	21
June 4	do.....	3.50	47
5	do.....	3.40	39
6	do.....	3.30	32
17	do.....	3.20	26
19	do.....	3.15	24
July 1	do.....	3.10	17
13	do.....	3.20	17
14	do.....	3.20	17
26	do.....	3.15	16
Aug. 15	do.....	3.15	17
24	do.....	3.00	10
Sept. 5	do.....	3.10	13
6	do.....	3.10	14
14	do.....	3.10	11
15	do.....	3.10	12
Oct. 3	do.....	3.10	14
12	do.....	3.20	17
13	do.....	3.20	18
21	do.....	3.10	13
22	do.....	3.10	14
Nov. 1	do.....	3.20	14
14	do.....	3.20	14
15	do.....	3.20	14

NOTE.—After July 1, 1905, gagings were made near upper gage.

## Daily gage height, in feet, of West Valley Creek near Likely, Cal., for 1905.

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	3.3	3.2	3.2	4.5	3.15	3.2	3.2	3.2	3.0	.....	3.15	3.1
2.....	3.3	3.2	3.2	3.4	3.15	3.2	3.2	3.2	3.0	.....	3.15	3.1
3.....	3.25	3.2	3.2	3.3	3.15	3.2	3.2	3.2	3.0	3.1	3.15	3.15
4.....	3.25	3.2	3.15	3.3	3.15	3.2	3.2	3.2	3.1	.....	3.2	3.15
5.....	3.25	3.2	3.15	3.3	3.15	3.6	3.2	3.2	3.1	.....	3.2	3.15
6.....	3.2	3.2	.....	3.3	3.15	3.5	3.2	3.2	3.1	.....	3.2	3.15
7.....	3.2	3.2	.....	3.25	3.15	3.45	3.2	3.2	3.1	.....	3.2	3.15
8.....	3.2	3.2	.....	3.25	3.3	3.55	3.2	3.2	3.1	.....	3.2	3.1
9.....	3.2	3.2	.....	3.25	3.2	3.55	3.15	3.2	3.1	.....	3.2	3.15
10.....	3.2	3.2	.....	3.25	3.4	3.3	3.15	3.2	3.1	.....	3.2	3.15
11.....	3.2	3.2	3.1	3.25	3.3	3.3	3.15	3.2	3.1	.....	3.2	3.1
12.....	3.2	3.2	3.1	3.25	3.25	3.25	3.15	3.2	3.2	3.2	3.2	3.15
13.....	3.2	3.2	3.15	3.25	3.2	3.25	3.15	3.2	3.2	3.2	3.2	3.1
14.....	3.2	3.2	3.2	3.25	3.2	3.2	3.15	3.0	3.2	.....	3.2	3.25
15.....	3.2	3.2	3.2	3.3	3.2	3.2	3.15	3.0	3.2	.....	3.2	3.15
16.....	3.2	3.2	3.2	3.3	3.2	3.2	3.15	3.0	3.2	.....	3.2	3.1
17.....	3.25	3.2	3.65	3.3	3.2	3.2	3.15	3.0	.....	.....	3.2	3.15
18.....	3.25	3.2	3.4	3.25	3.2	3.2	3.15	3.0	.....	.....	3.2	3.1
19.....	3.3	3.2	3.5	3.2	3.2	3.2	3.15	3.0	.....	.....	3.2	3.1
20.....	3.3	3.2	3.35	3.2	3.2	3.2	3.15	3.0	.....	.....	3.6	3.15
21.....	3.3	3.2	3.5	3.2	3.2	3.2	3.15	3.0	.....	3.1	3.4	3.1
22.....	3.25	3.2	3.5	3.2	3.2	3.2	3.15	3.0	.....	3.1	3.8	3.1
23.....	3.2	3.2	3.35	3.2	3.2	3.2	3.15	3.0	.....	3.1	3.25	3.15
24.....	3.2	3.2	3.3	3.2	3.2	3.2	3.15	3.0	.....	3.1	3.1	3.1
25.....	3.2	3.2	3.3	3.2	3.2	3.2	3.15	3.0	.....	3.1	3.1	3.15
26.....	3.2	3.2	3.4	3.15	3.2	3.2	3.15	3.0	.....	3.1	3.1	3.1
27.....	3.2	3.2	3.7	3.15	3.2	3.2	3.15	3.0	.....	3.1	3.15	3.1
28.....	3.2	3.2	3.4	3.15	3.2	3.2	3.15	3.0	.....	3.1	3.2	3.1
29.....	3.2	.....	3.35	3.15	3.2	3.2	3.15	3.0	.....	3.1	3.1	3.15
30.....	3.2	.....	3.4	3.15	3.2	3.2	3.15	3.0	.....	3.1	3.1	3.1
31.....	3.2	.....	3.5	.....	3.2	.....	3.2	3.0	.....	3.1	.....	3.6

## Daily discharge, in second-feet, of West Valley Creek near Likely, Cal., for 1905.

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.
1.....	28	21	24	188	22	23	20	20	10	16	12
2.....	28	20	24	38	22	23	20	20	9	15	12
3.....	25	20	24	30	22	24	20	20	9	14	12
4.....	25	20	24	30	22	24	19	20	13	14	14
5.....	25	21	24	30	23	57	19	20	13	14	14
6.....	22	21	21	30	23	47	19	20	14	15	14
7.....	22	21	21	26	23	43	18	20	14	15	14
8.....	22	22	21	26	32	52	18	20	13	16	14
9.....	22	22	19	26	26	52	16	20	13	16	15
10.....	22	22	19	26	42	32	16	20	12	16	15
11.....	22	23	19	26	33	32	15	20	12	17	15
12.....	22	23	19	26	30	29	15	20	26	17	15
13.....	22	24	21	26	27	29	15	20	26	18	14
14.....	22	24	24	26	27	26	15	11	26	18	14
15.....	22	25	25	30	27	26	15	11	26	17	14
16.....	22	26	25	30	26	26	15	11	26	16	14
17.....	25	26	63	30	26	26	15	10	26	16	14
18.....	25	26	38	26	26	26	15	10	25	15	14
19.....	28	26	48	23	24	26	16	10	24	14	14
20.....	28	26	34	23	24	26	16	10	24	14	.....
21.....	28	26	48	23	24	25	16	10	23	13	.....
22.....	25	26	48	23	23	25	16	10	22	14	.....
23.....	22	25	34	23	23	24	16	10	21	14	.....
24.....	22	25	30	23	21	24	16	10	21	13	.....
25.....	22	25	30	23	21	23	16	10	20	13	.....
26.....	22	25	38	21	21	23	17	10	20	12	.....
27.....	22	25	69	21	21	22	17	10	19	12	.....
28.....	22	25	38	21	21	22	17	10	18	11	.....
29.....	22	.....	34	21	22	17	10	18	11	.....	.....
30.....	22	.....	38	21	22	21	17	10	17	10	.....
31.....	22	.....	48	.....	23	.....	20	10	.....	10	.....

NOTE.—Daily discharge obtained by indirect method for shifting channels.  
Discharges November 20-30, 1905, estimated as 20 second-feet per day.

Monthly discharge of West Valley Creek near Likely, Cal., for 1904-5.

Month.	Mean discharge in second-feet.	Run-off (total in acre-feet).	Month.	Mean discharge in second-feet.	Run-off (total in acre-feet).
1904. <sup>a</sup>			1904-5. <sup>b</sup>		
January.....	20	1,230	January.....	23.5	1,440
February.....	100	5,750	February.....	23.6	1,310
March.....	70	4,300	March.....	32	1,970
April.....	75	4,460	April.....	31.2	1,860
May.....	115	7,070	May.....	24.8	1,520
June.....	50	2,980	June.....	29.3	1,740
July.....	20	1,230	July.....	16.8	1,030
August.....	20	1,230	August.....	14.3	879
September.....	12	714	September.....	18.7	1,110
The period.....		29,000	The year.....	23.7	17,100
1904-5. <sup>b</sup>			1905. <sup>b</sup>		
October.....	20	1,230	October.....	14.4	885
November.....	20	1,190	November.....	16.1	958
December.....	30	1,840	December.....	25	1,540

<sup>a</sup> The gage heights recorded in 1904 were unreliable and have not been republished. Monthly estimates of flow for 1904 are based on the discharge measurements and are only approximate. They should be used with caution.

<sup>b</sup> Monthly estimates for 1905 are better than for 1904. Accuracy value for 1905 may be classed as follows: January to August, B; September and October, C; November and December, D.

ASH CREEK AT ADIN, CAL.

This station, which was originally located one-fourth mile above the town of Adin, was established March 13, 1904 and discontinued December 31, 1905. During the first summer the closing of waste gates in the dam at Adin above the gage interfered with the discharge to such an extent that on August 15, 1904, the gage was moved to a point 100 feet below the wagon bridge in the town of Adin, which was about 500 feet below the dam.

The gage is a vertical plank fastened to a tree on the left bank of the stream and was read daily. Discharge measurements are made from a suspension footbridge. The channel is straight for 200 feet above and below the gage. The left bank is high but the right bank is subject to overflow from a side channel, which in flood diverts water from above. The bed of the stream is gravelly and not subject to change.

Discharge measurements of Ash Creek at Adin, Cal., in 1904-5.

[By J. S. Evans and J. Y. Toler.]

Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.
1904.			1904.		
Mar. 13.....	<i>Feet.</i> 4.50	<i>Sec.-ft.</i> 471	Sept. 27.....	<i>Feet.</i> 1.98	<i>Sec.-ft.</i> 45
Apr. 5.....	4.70	540	Oct. 8.....	1.85	38
Apr. 15.....	5.80	714	Oct. 14.....	1.80	37
May 3.....	6.10	1,120	Oct. 22.....	1.75	29
May 17.....	4.10	447	Nov. 2.....	1.77	33
June 2.....	2.10	140	Nov. 10.....	1.75	33
June 12.....	1.10	54	Nov. 24.....	1.78	42
Aug. 30.....	1.80	26	Dec. 7.....	1.75	36
Sept. 13.....	1.80	30	Dec. 21.....	1.83	41
Sept. 20.....	2.01	36	Dec. 28.....	1.85	42

## Discharge measurements of Ash Creek at Adin, Cal., in 1904-5—Continued.

Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.
1905.			1905.		
	<i>Feet.</i>	<i>Sec.-ft.</i>		<i>Feet.</i>	<i>Sec.-ft.</i>
Jan. 7.....	1.96	45	June 10.....	1.80	30
21.....	2.40	85	11.....	1.75	28
25.....	2.89	124	13.....	1.70	25
Feb. 25.....	3.00	126	July 6.....	1.65	20
8.....	2.30	69	18.....	1.65	21
11.....	2.80	115	21.....	1.70	23
12.....	2.50	99	Aug. 8.....	1.60	20
23.....	3.30	170	10.....	1.60	20
26.....	2.90	134	17.....	1.65	20
Mar. 10.....	2.30	72	20.....	1.60	18
12.....	2.30	74	29.....	1.50	15
13.....	2.35	79	30.....	1.50	14
25.....	3.60	145	Sept. 10.....	1.60	19
Apr. 5.....	3.95	231	11.....	1.70	22
8.....	3.55	183	20.....	1.00	a 2.3
8.....	3.40	171	21.....	1.70	24
16.....	2.80	119	Oct. 8.....	1.70	32
18.....	2.70	106	9.....	1.70	29
May 2.....	2.70	106	17.....	1.70	27
3.....	2.20	59	18.....	1.80	32
4.....	2.10	68	26.....	1.80	31
17.....	1.90	48	28.....	2.00	50
18.....	1.90	46	Nov. 8.....	1.80	32
19.....	1.85	42	9.....	1.90	44
20.....	1.80	40			

a Water held back by dam above station.

## Daily gage height, in feet, of Ash Creek at Adin, Cal., for 1904-5.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1904.												
1.....							4.4	5.8	3.5			1.8
2.....							4.5	6.0	2.0			1.8
3.....							4.6	6.1	(a)			1.8
4.....							4.9	6.2				1.8
5.....							4.9	6.0				1.8
6.....							4.9	5.0				1.8
7.....							4.7	5.1				1.8
8.....							4.6	5.0				1.8
9.....							4.5	4.3				1.8
10.....							4.6	4.1				1.8
11.....							4.9	4.2				1.8
12.....							5.2	4.2	1.1			1.8
13.....						4.5	5.3	4.0				1.8
14.....						4.6	4.8	4.0			1.7	1.8
15.....						5.65	5.8	4.1			1.7	1.8
16.....						5.35	5.2	4.0			1.7	1.8
17.....						5.75	5.2	4.2			1.8	1.8
18.....						5.7	4.8	4.2			1.8	1.8
19.....						8.3	4.4	4.1			1.8	1.9
20.....						7.7	4.5	4.1			1.8	2.0
21.....						5.85	4.4	4.0			1.8	1.9
22.....						5.05	4.3	4.0			1.8	1.9
23.....						4.85	4.2	4.0			1.8	1.9
24.....						4.50	4.0	4.0			1.8	1.9
25.....						4.4	4.0	4.0			1.8	1.95
26.....						4.5	4.1	4.0			1.8	2.0
27.....						4.9	4.3	4.0			1.8	2.0
28.....						6.0	4.6	3.9			1.8	1.8
29.....						6.85	5.2	3.7			1.8	1.8
30.....						5.6	5.7	3.5			1.8	1.8
31.....						4.7		3.6			1.8	
1904-5.												
1.....	1.8	1.8	1.8	2.5	3.4	2.5	4.1	2.3	1.9	1.7	1.5	1.6
2.....	1.8	1.8	1.8	2.4	5.9	2.5	6.0	2.2	1.9	1.7	1.6	1.7
3.....	1.8	1.8	1.8	2.2	3.5	2.5	6.0	2.1	1.9	1.7	1.6	1.7
4.....	1.8	1.9	1.8	1.9	3.4	2.5	4.6	2.1	1.9	1.6	1.6	1.7
5.....	1.8	1.9	1.8	1.9	3.4	2.5	4.6	2.1	1.9	1.5	1.6	1.7

a Dam put in creek at Adin Mill,  $\frac{1}{4}$  mile below station.

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

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1904-5.												
6.....	1.8	1.8	1.8	1.9	3.4	2.5	4.0	2.1	1.8	1.5	1.6	1.8
7.....	1.8	1.8	1.8	1.9	3.4	2.5	3.7	2.1	1.8	1.5	1.6	1.8
8.....	1.8	1.8	1.8	1.9	3.2	2.5	3.7	2.1	1.8	1.5	1.6	1.8
9.....	1.8	1.8	1.8	1.9	2.5	2.4	3.2	2.1	1.8	1.5	1.6	1.8
10.....	1.8	1.8	1.9	1.9	2.4	2.4	3.2	2.2	1.8	1.5	1.6	1.9
11.....	1.9	1.8	1.9	1.9	2.3	2.4	3.1	2.2	1.8	1.5	1.6	1.9
12.....	2.0	1.8	1.9	1.9	2.3	2.4	3.1	2.2	1.8	1.5	1.6	1.8
13.....	1.8	1.8	1.9	2.0	2.2	2.4	3.0	2.2	1.8	1.5	1.6	1.8
14.....	1.8	1.9	1.9	2.0	2.1	2.4	3.0	2.2	1.8	1.5	1.6	1.8
15.....	1.8	1.9	1.9	2.0	2.1	2.4	3.0	2.1	1.8	1.5	1.6	1.8
16.....	1.8	1.9	1.9	4.0	2.1	2.4	3.0	2.1	1.8	1.5	1.6	1.8
17.....	1.8	1.8	1.9	2.5	2.2	3.1	2.8	2.1	1.8	1.5	1.6	1.7
18.....	1.8	1.8	1.8	2.0	3.1	5.1	2.8	2.2	1.8	1.5	1.6	1.7
19.....	1.8	1.8	1.8	2.8	5.9	2	2.8	2.2	1.8	1.5	1.6	1.7
20.....	1.8	1.8	1.8	2.4	6.0	4.3	2.8	2.3	1.8	1.5	1.6	1.6
21.....	1.8	1.8	1.8	2.4	3.4	4.6	2.8	2.3	1.7	1.5	1.6	1.6
22.....	1.75	1.8	1.8	4.1	3.3	4.6	2.8	2.3	1.7	1.5	1.6	1.6
23.....	1.8	1.8	1.8	4.6	3.3	3.8	2.7	2.1	1.7	1.5	1.6	1.6
24.....	1.8	1.8	1.8	4.6	2.6	5.4	2.7	2.1	1.7	1.5	1.6	1.6
25.....	1.8	1.8	1.8	3.0	2.6	3.6	2.7	1.9	1.7	1.5	1.7	1.6
26.....	1.8	1.8	1.8	2.4	2.3	9.0	2.7	1.9	1.7	1.5	1.7	1.6
27.....	1.8	1.8	1.8	2.3	2.3	4.6	2.7	1.9	1.7	1.5	1.7	1.6
28.....	1.8	1.8	1.8	2.3	2.5	4.1	2.8	1.9	1.7	1.5	1.6	1.6
29.....	1.8	1.8	1.9	2.3	.....	4.2	2.8	1.9	1.7	1.5	1.6	1.6
30.....	1.9	1.8	5.6	4.5	.....	4.2	2.8	1.9	1.7	1.5	1.6	1.6
31.....	1.8	.....	5.4	4.5	.....	4.1	.....	1.9	.....	1.5	1.6	.....

Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.
1905.				1905.			
1.....	1.7	1.9	1.8	16.....	1.9	1.8	1.8
2.....	1.7	1.9	1.8	17.....	1.7	1.8	1.8
3.....	1.7	1.9	1.8	18.....	1.7	1.8	1.8
4.....	1.7	1.9	1.8	19.....	1.7	1.8	1.8
5.....	1.7	1.9	1.8	20.....	1.7	1.8	1.8
6.....	1.7	1.9	1.8	21.....	1.7	1.8	1.8
7.....	1.7	1.9	1.8	22.....	1.7	1.8	1.8
8.....	1.7	1.9	1.8	23.....	1.7	1.8	1.8
9.....	1.7	1.9	1.8	24.....	1.7	1.8	1.8
10.....	1.8	1.9	1.8	25.....	1.7	1.8	1.8
11.....	1.8	1.9	1.8	26.....	1.7	1.8	1.8
12.....	1.9	1.9	1.8	27.....	1.8	1.8	1.8
13.....	1.9	1.9	1.8	28.....	1.8	1.8	1.8
14.....	1.9	1.9	1.8	29.....	1.8	1.8	1.8
15.....	1.9	1.9	1.8	30.....	1.8	1.8	1.8
				31.....	1.9	.....	1.8

Daily discharge, in second-feet, of Ash Creek at Adin, Cal., for 1904-5.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1904-5.												
1.....							488	785	335	45	30	31
2.....							506	835	138	45	30	31
3.....							524	800	130	45	30	31
4.....							580	885	120	45	30	31
5.....							580	835	110	45	30	31
6.....							580	600	100	45	30	31
7.....							542	622	90	45	30	31
8.....							524	600	80	45	30	31
9.....							506	470	70	45	30	31
10.....							524	434	60	45	30	31
11.....							580	452	55	40	28	31
12.....							644	452	54	40	28	31
13.....							506	666	54	40	28	31
14.....							524	560	416	54	40	28
15.....							748	785	434	54	40	28

\* Discharges estimated for days in June, July, and August, 1904, when gage was not read.

Daily discharge, in second-feet, of Ash Creek at Adin, Cal., for 1904-5—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1904.												
16.						677	644	416	54	40	28	31
17.						772	644	452	54	40	31	31
18.						760	560	452	54	40	31	31
19.						1,470	488	434	54	40	31	36
20.						1,290	506	434	54	40	31	42
21.						798	488	416	50	35	31	36
22.						611	470	416	50	35	31	36
23.						570	452	416	50	35	31	36
24.						506	416	416	50	35	31	36
25.						488	416	416	50	35	31	39
26.						506	434	416	50	35	31	42
27.						580	470	416	50	35	31	42
28.						835	524	398	50	35	31	31
29.						1,050	644	365	50	35	31	31
30.						735	760	335	50	35	31	31
31.						542		350		35	31	31
1904-5.												
1.	31	31	31	88	174	88	250	72	41	27	14	20
2.	31	31	31	80	510	88	526	64	41	27	20	27
3.	31	31	31	64	184	88	526	56	41	27	20	27
4.	31	36	31	41	174	88	314	56	41	20	20	27
5.	31	36	31	41	174	88	314	56	41	14	20	27
6.	31	31	31	41	174	88	238	56	34	14	20	34
7.	31	31	31	41	174	88	205	56	34	14	20	34
8.	31	31	31	41	164	88	205	56	34	14	20	34
9.	31	31	31	41	88	80	154	56	34	14	20	34
10.	31	31	36	41	80	80	154	64	34	14	20	41
11.	36	31	36	41	72	80	144	64	34	14	20	41
12.	42	31	36	41	72	80	144	64	34	14	20	34
13.	31	31	36	48	64	80	134	64	34	14	20	34
14.	31	36	36	48	56	80	134	64	34	14	20	34
15.	31	36	36	48	56	80	134	56	34	14	20	34
16.	31	36	36	238	56	80	134	56	34	14	20	34
17.	31	31	36	88	64	144	115	56	34	14	20	27
18.	31	31	31	48	144	385	115	64	34	14	20	27
19.	31	31	31	115	510	560	115	64	34	14	20	27
20.	31	31	31	80	526	274	115	72	34	14	20	20
21.	31	31	31	80	174	314	115	72	27	14	20	20
22.	29	31	31	250	164	314	115	72	27	14	20	20
23.	31	31	31	314	164	216	106	56	27	14	20	20
24.	31	31	31	314	97	430	106	56	27	14	20	20
25.	31	31	31	134	97	194	106	41	27	14	27	20
26.	31	31	31	80	72	1,120	106	41	27	14	27	20
27.	31	31	31	72	72	314	106	41	27	14	27	20
28.	31	31	31	72	88	254	115	41	27	14	20	20
29.	31	31	36	72		262	115	41	27	14	20	20
30.	36	31	a 400	300		262	115	41	27	14	20	26
31.	31		a 375	300		250		41		14	20	

Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.
1905.				1905.			
1.				16.			
2.	27	41	34	17.	27	34	34
3.	27	41	34	18.	27	34	34
4.	27	41	34	19.	27	34	34
5.	27	41	34	20.	27	34	34
6.	27	41	34	21.	27	34	34
7.	27	41	34	22.	27	34	34
8.	27	41	34	23.	27	34	34
9.	27	41	34	24.	27	34	34
10.	34	41	34	25.	27	34	34
				26.	27	34	34
11.	34	41	34	27.	34	34	34
12.	41	41	34	28.	34	34	34
13.	41	41	34	29.	34	34	34
14.	41	41	34	30.	34	34	34
15.	41	41	34	31.	41		34

a Estimated.

NOTE.—Daily discharge for 1904-5, except as noted, determined from rating curves applicable as follows: Mar. 13-June 12, 1904, fairly well defined between 47 and 700 second-feet; Aug. 14-Dec. 31, 1904, not well defined; Jan. 1-Dec. 31, 1905, well defined between 14 and 240 second-feet. Above this the curve is all rough approximation.

Monthly discharge of Ash Creek at Adin, Cal., for 1904-5.

[Drainage area, 260 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.	
1904.							
March 13-31.....	1,470	488	735	2.83	2.00	27,700	A.
April.....	785	416	550	2.12	2.36	32,700	A.
May.....	885	335	505	1.94	2.24	31,100	A.
June.....	335	50	75.8	.292	.33	4,510	B.
July.....	45	35	39.8	.153	.18	2,450	C.
August.....	31	28	30.1	.116	.13	1,850	C.
September.....	42	31	33.2	.128	.14	1,980	C.
The period.....						102,000	
1904-5.							
October.....	42	29	31.6	.122	.14	1,940	C.
November.....	36	31	31.8	.122	.14	1,890	C.
December.....	400	31	55.5	.213	.25	3,410	C.
January.....	314	41	107	.412	.48	6,580	A.
February.....	526	56	158	.608	.63	8,730	A.
March.....	1,120	80	214	.823	.95	13,500	A.
April.....	526	106	176	.677	.76	10,500	A.
May.....	72	41	56.7	.218	.25	3,490	A.
June.....	41	27	32.8	.126	.14	1,950	B.
July.....	27	14	15.5	.060	.07	953	B.
August.....	27	14	20.5	.079	.09	1,260	B.
September.....	41	20	27.2	.105	.12	1,620	B.
The year.....	1,120	14	77.2	.297	4.02	55,600	
1905.							
October.....	41	27	31.1	.120	.14	1,910	B.
November.....	41	34	37.5	.144	.16	2,230	B.
December.....	34	34	34.0	.131	.15	2,090	B.

FALL RIVER AT FALL RIVER MILLS, CAL.

This station, which is located at Fall River Mills, in sec. 31, T. 37 N., R. 5 E., about 600 feet above the junction with Pit River, was established January 19, 1912.

The gage is a vertical staff fastened to the downstream end of the left abutment of the bridge.

Discharge measurements are made from the upstream side of the bridge or by wading.

Estimates of discharge are withheld until additional measurements are available.

Discharge measurements of Fall River at Fall River Mills, Cal., in 1912.

Date.	Hydrographer.	Gage height.	Discharge.
June 19	Lasley Lee.....	<i>Fect.</i> 2.03	<i>Sec.-ft.</i> 1,540
May 13	.....do.....	2.07	1,430
14	.....do.....	2.00	1,360

*Daily gage height, in feet, of Fall River at Fall River Mills, Cal., for 1912.*

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	Day.	Jan.	Feb.	Mar.	Apr.	May.	June.
1.....		2.1	2.1	2.1	2.2	2.05	16.....		2.1	2.1	2.15	2.1	2.1
2.....		2.1	2.1	2.1	2.2	2.05	17.....		2.1	2.15	2.15	2.1	2.1
3.....		2.1	2.1	2.1	2.2	2.05	18.....		2.1	2.15	2.1	2.05	2.1
4.....		2.1	2.1	2.1	2.2	2.05	19.....	2.05	2.15	2.15	2.1	2.1	2.1
5.....		2.1	2.1	2.1	2.2	2.05	20.....	2.0	2.15	2.1	2.1	2.1	2.1
6.....		2.1	2.1	2.1	2.2	2.05	21.....	2.0	2.1	2.1	2.1	2.1	2.1
7.....		2.1	2.1	2.1	2.2	2.05	22.....	2.0	2.1	2.1	2.1	2.1	2.1
8.....		2.1	2.1	2.1	.....	2.05	23.....	2.0	2.1	2.1	2.1	2.1	2.1
9.....		2.1	2.1	2.1	.....	2.05	24.....	2.0	2.1	2.1	2.1	2.1	2.1
10.....		2.1	2.1	2.1	.....	2.05	25.....	2.0	2.1	2.1	2.1	2.1	2.1
11.....		2.1	2.1	2.15	2.1	2.05	26.....	2.0	2.1	2.1	2.1	2.1	2.1
12.....		2.1	2.1	2.15	2.1	2.05	27.....	2.05	2.1	2.1	2.1	2.1	2.1
13.....		2.15	2.1	2.15	2.05	2.05	28.....	2.2	2.1	2.1	2.15	2.1	2.1
14.....		2.1	2.15	2.15	2.05	2.1	29.....	2.15	2.05	2.1	2.15	2.1	2.1
15.....		2.1	2.1	2.15	2.1	2.1	30.....	2.1	.....	2.1	2.15	2.05	2.1
							31.....	2.1	.....	2.1	.....	2.05	.....

#### HAT CREEK AT HAWKINS RANCH, NEAR HAT CREEK, CAL.

This station, which is located at Hawkins ranch, in sec. 5, T. 33 N., R. 5 E., 6 miles above the town of Hat Creek, was established August 15, 1911.

The irrigation canal, which heads about half a mile above the gage and diverts about 40 second-feet of water at irregular intervals, is the only important diversion for irrigation above the station.

The vertical staff gage is attached to the right support of the footbridge near the ranch house.

The channel is fairly smooth and probably permanent.

Discharge measurements are made from the downstream side of the bridge.

*Discharge measurements of Hat Creek at Hawkins ranch, near Hat Creek, Cal., in 1912.*

Date.	Hydrographer.	Gage height.	Discharge.
1912.		<i>Feet.</i>	<i>Sec.-ft.</i>
Jan. 17	Lasley Lee.....	2.61	183
May 12	.....do.....	2.48	152

*Daily gage height, in feet, of Hat Creek at Hawkins ranch, near Hat Creek, Cal., for 1911-12.*

Day.	Aug.	Sept.	Day.	Aug.	Sept.	Day.	Aug.	Sept.
1911.			1911.			1911.		
1.....		2.60	11.....		2.62	21.....	2.52	2.42
2.....		2.60	12.....		2.50	22.....	2.50	2.42
3.....		2.60	13.....		2.52	23.....	2.35	2.60
4.....		2.60	14.....		2.50	24.....	2.35	2.65
5.....		2.58	15.....	2.35	2.50	25.....	2.35	2.65
6.....		2.60	16.....	2.35	2.42	26.....	2.33	2.70
7.....		2.62	17.....	2.50	2.42	27.....	2.30	2.70
8.....		2.65	18.....	2.50	2.42	28.....	2.30	2.65
9.....		2.60	19.....	2.52	2.50	29.....	2.30	2.60
10.....		2.60	20.....	2.52	2.50	30.....	2.35	2.60
						31.....	2.50	.....

Daily gage height, in feet, of Hat Creek at Hawkins ranch, near Hat Creek, Cal., for 1911-12—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.									
1.....	2.55	2.70	2.70	2.62	2.58	2.55	2.52	2.55	2.55
2.....	2.52	2.70	2.70	2.62	2.58	2.55	2.52	2.55	2.55
3.....	2.58	2.70	2.70	2.62	2.58	2.55	2.52	2.55	2.55
4.....	2.70	2.70	2.70	2.62	2.60	2.55	2.52	2.55	2.58
5.....	2.70	2.70	2.70	2.62	2.60	2.55	2.52	2.42	2.58
6.....	2.72	2.70	2.70	2.62	2.60	2.55	2.52	2.45	2.58
7.....	2.75	2.70	2.65	2.62	2.58	2.55	2.52	2.45	2.55
8.....	2.70	2.70	2.65	2.62	2.58	2.55	2.52	2.50	2.55
9.....	2.70	2.70	2.65	2.62	2.58	2.52	2.55	2.55	2.55
10.....	2.65	2.70	2.65	2.62	2.58	2.52	2.55	2.55	2.58
11.....	2.65	2.70	2.65	2.62	2.60	2.52	2.55	2.55	2.58
12.....	2.65	2.70	2.65	2.62	2.60	2.52	2.55	2.60	2.60
13.....	2.65	2.70	2.62	2.62	2.60	2.55	2.52	2.60	2.60
14.....	2.68	2.70	2.62	2.62	2.60	2.55	2.52	2.58	2.60
15.....	2.68	2.70	2.60	2.62	2.55	2.55	2.55	2.58	2.60
16.....	2.65	2.70	2.60	2.62	2.55	2.55	2.55	2.58	2.60
17.....	2.65	2.70	2.60	2.60	2.55	2.55	2.55	2.58	2.62
18.....	2.65	2.70	2.60	2.60	2.55	2.55	2.55	2.55	2.62
19.....	2.68	2.70	2.60	2.60	2.55	2.52	2.55	2.55	2.68
20.....	2.70	2.70	2.60	2.60	2.55	2.55	2.55	2.55	2.70
21.....	2.70	2.70	2.60	2.60	2.55	2.55	2.55	2.58	2.75
22.....	2.70	2.70	2.60	2.60	2.55	2.58	2.55	2.58	2.80
23.....	2.70	2.70	2.60	2.60	2.55	2.55	2.55	2.55	2.80
24.....	2.70	2.70	2.60	2.60	2.55	2.55	2.55	2.55	2.85
25.....	2.70	2.70	2.60	2.60	2.55	2.55	2.55	2.58	2.90
26.....	2.70	2.70	2.60	2.60	2.55	2.52	2.55	2.58	2.95
27.....	2.70	2.70	2.60	2.60	2.55	2.55	2.55	2.58	2.55
28.....	2.70	2.70	2.60	2.60	2.55	2.55	2.55	2.60	2.52
29.....	2.70	2.70	2.60	2.60	2.55	2.52	2.55	2.62	2.50
30.....	2.70	2.70	2.62	2.60	.....	2.52	2.55	2.70	2.50
31.....	2.70	.....	2.62	2.60	.....	2.52	.....	2.72	.....

NOTE.—Rise in gage height Aug. 17, Sept. 1, and Sept. 23, 1911, caused by shutting water out of irrigation ditch above the station; fall in gage heights Aug. 23 and Sept. 12 caused by turning water into irrigation ditch above station.

HAT CREEK AT HAT CREEK, CAL.

This station, which is located at the private bridge on Morris ranch in the SE. ¼ sec. 10, T. 34 N., R. 4 E., about 300 yards north of Hat Creek post office, in Lassen National Forest, was established September 21, 1910.

The gage is a vertical staff fastened to the right abutment near the downstream end of the bridge.

Discharge measurements are made from the bridge.

This station is maintained in cooperation with the United States Forest Service.

Discharge measurements of Hat Creek at Hat Creek, 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>
Sept. 21	W. V. Hardy.....	.....	136	Jan. 17	Lasley Lee.....	2.52	160
Nov. 11	F. G. Wood.....	2.43	154	19	do.....	2.53	170
				20	do.....	2.52	166
1911.				May 12	do.....	2.21	104
Mar. 27	G. T. Peekema.....	2.40	150	14	do.....	2.12	88
May 13	Peekema and Seaborn..	2.35	133				
Aug. 14	J. E. Stewart.....	2.02	76				

Daily gage height, in feet, of Hat Creek at Hat Creek, Cal., for 1910-1912.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.												
1			2.45				2.45		2.32	2.50	2.03	2.18
2				2.42	2.50				2.52			
3		2.41	2.55	2.42					2.68			
4				2.42	2.50		2.50	2.32			2.05	
5		2.41		2.42						2.70	2.00	2.25
6			2.46				2.50	2.33	2.70	2.73		2.27
7				2.43	2.41		2.49					2.32
8			2.52					2.40		2.61	2.05	2.25
9		2.42			2.45	2.38		2.42	2.75			2.25
10			2.80	2.41						2.60		
11		2.45			2.46	2.40	2.49	2.39				2.27
12		2.44						2.33	2.82		2.04	
13							2.44	2.35	2.69			2.28
14					2.40	2.38	2.44				2.02	2.20
15		2.42	2.50	2.47			2.44		2.70		2.03	
16			2.49	2.43	2.41	2.40		2.12				
17			2.47	2.45								
18					2.41		2.47	2.26		2.63		
19		2.41	2.42	2.54								
20		2.41	2.42			2.38	2.47	2.16	2.75			2.15
21				2.42	2.41				2.63			2.25
22							2.47					
23				2.47	2.40			2.20			2.09	2.30
24			2.47	2.49		2.40						
25		2.47				2.40		2.17				2.33
26		2.45		2.45							2.00	2.30
27			2.49			2.40	2.47		2.40	2.30		
28	2.55	2.44	2.41	2.47	2.40	2.40		2.24				2.26
29	2.42	2.42	2.43				2.43		2.50		1.95	2.25
30	2.42	2.43							2.48			2.25
31			2.43	2.48		2.45					2.17	
1911-12.												
1	2.37	2.52		2.51	2.52				2.32			
2		2.52	2.50	2.52			2.48	2.40				
3	2.37			2.56	2.53			2.40	2.43			
4		2.52		2.54			2.47					
5	2.50	2.53				2.49	2.47	2.35				
6				2.51			2.42					
7		2.53	2.50		2.52	2.47						
8			2.50	2.56	2.52	2.47	2.41					
9	2.52	2.53	2.50		2.53	2.46		2.30				
10		2.53			2.50	2.47	2.40		2.36			
11	2.50	2.53	2.50	2.57		2.47	2.40		2.38			
12	2.51					2.49						
13	2.50	2.53			2.50		2.40					
14	2.52	2.52	2.50		2.50	2.47		2.20				
15							2.40	2.10	2.47			
16	2.52	2.52	2.50		2.50	2.44	2.20	2.08	2.40			
17				2.52	2.50	2.46	2.30		2.30			
18	2.52	2.50	2.51				2.30					
19	2.52	2.51		2.53		2.43						
20		2.50	2.50	2.52	2.49		2.23					
21	2.47					2.45						
22								2.32				
23			2.52	2.54		2.46	2.21		2.33			
24								2.20	2.29			
25				2.08			2.26		2.25			
26	2.50		2.52	2.58	2.45	2.47			2.27			
27				2.51	2.48			2.35				
28		2.51				2.47						
29	2.50			2.51	2.48	2.48			2.20			
30	2.52	2.50					2.39	2.40	2.20			
31	2.52		2.51	2.52		2.45		2.30				

RISING RIVER NEAR CASSEL, CAL.

Rising River is a spring-fed stream about 2 miles long which joins Hat Creek from the east just south of Cassel.

The gaging station, which is located at the highway bridge in sec. 8, T. 35 N., R. 4 E., 1 1/4 miles south of Cassel and about half a mile above the mouth of the stream, was established August 15, 1911. The record shows the natural flow of the stream.

A vertical staff gage is fastened to the downstream side of the bridge pier near the left bank.

The channel is composed of sand and gravel and is fairly permanent.

Discharge measurements are made from the upstream side of the bridge.

*Discharge measurements of Rising River near Cassel, Cal., for 1911-12.*

Date.	Hydrographer.	Gage height.	Discharge.
1911. Aug. 15	J. E. Stewart.....	Feet. 1.60	Sec.-ft. 459
1912. Jan. 18	Lasley Lee.....	1.44	394
May 13	.....do.....	1.25	315

*Daily gage height, in feet, of Rising River near Cassel, Cal., for 1911-12.*

Day.	Aug.	Sept.	Day.	Aug.	Sept.	Day.	Aug.	Sept.
1911.			1911.			1911.		
1.....		1.59	11.....		1.60	21.....	1.60	1.59
2.....		1.59	12.....		1.60	22.....	1.60	1.59
3.....		1.59	13.....		1.60	23.....	1.60	1.59
4.....		1.60	14.....		1.59	24.....	1.60	1.59
5.....		1.60	15.....	1.60	1.59	25.....	1.60	1.59
6.....		1.60	16.....	1.65	1.59	26.....	1.60	1.60
7.....		1.60	17.....	1.60	1.59	27.....	1.59	1.60
8.....		1.60	18.....	1.60	1.59	28.....	1.59	1.60
9.....		1.60	19.....	1.60	1.59	29.....	1.59	1.60
10.....		1.60	20.....	1.60	1.59	30.....	1.59	1.60
						31.....	1.59	1.60

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.									
1.....	1.60	1.53	1.50	1.48	1.42	1.37	1.30	1.29	1.31
2.....	1.60	1.53	1.50	1.47	1.42	1.37	1.30	1.29	1.31
3.....	1.60	1.53	1.50	1.45	1.42	1.37	1.30	1.29	1.32
4.....	1.60	1.52	1.50	1.43	1.42	1.37	1.30	1.29	1.32
5.....	1.60	1.52	1.49	1.43	1.42	1.40	1.30	1.29	1.33
6.....	1.59	1.50	1.49	1.45	1.42	1.40	1.30	1.29	1.33
7.....	1.59	1.50	1.49	1.45	1.42	1.39	1.30	1.29	1.40
8.....	1.59	1.50	1.49	1.50	1.40	1.39	1.30	1.28	1.39
9.....	1.59	1.50	1.49	1.55	1.40	1.37	1.30	1.27	1.39
10.....	1.59	1.50	1.49	1.55	1.40	1.37	1.30	1.26	1.39
11.....	1.59	1.50	1.49	1.50	1.40	1.37	1.31	1.26	1.30
12.....	1.59	1.50	1.49	1.47	1.40	1.37	1.30	1.25	1.30
13.....	1.59	1.50	1.49	1.45	1.40	1.35	1.30	1.25	1.40
14.....	1.55	1.50	1.49	1.45	1.40	1.35	1.30	1.25	1.40
15.....	1.55	1.50	1.49	1.43	1.40	1.35	1.30	1.25	1.42
16.....	1.55	1.50	1.49	1.44	1.40	1.35	1.30	1.26	1.45
17.....	1.55	1.50	1.49	1.45	1.40	1.35	1.30	1.26	1.45
18.....	1.55	1.50	1.49	1.44	1.40	1.34	1.30	1.30	1.37
19.....	1.55	1.50	1.49	1.44	1.40	1.33	1.30	1.30	1.35
20.....	1.55	1.50	1.49	1.43	1.40	1.32	1.29	1.31	1.35

Daily gage height, in feet, of Rising River near Cassel, Cal., for 1911-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June
1911-12.									
21.....	1.50	1.50	1.49	1.42	1.40	1.32	1.29	1.31	1.35
22.....	1.50	1.50	1.48	1.42	1.40	1.32	1.29	1.31	1.40
23.....	1.50	1.50	1.47	1.42	1.40	1.32	1.29	1.31	1.40
24.....	1.53	1.50	1.47	1.42	1.40	1.32	1.29	1.31	1.40
25.....	1.55	1.50	1.47	1.55	1.39	1.32	1.29	1.31	1.39
26.....	1.54	1.50	1.48	1.55	1.39	1.32	1.29	1.31	1.39
27.....	1.55	1.50	1.48	1.50	1.39	1.32	1.29	1.31	1.39
28.....	1.55	1.50	1.48	1.47	1.39	1.31	1.29	1.31	1.39
29.....	1.55	1.50	1.48	1.45	1.37	1.31	1.29	1.31	1.40
30.....	1.52	1.50	1.48	1.44	.....	1.31	1.29	1.31	1.39
31.....	1.52	.....	1.48	1.43	.....	1.31	.....	1.31	.....

Daily discharge, in second-feet, of Rising River near Cassel, Cal., for 1911-12.

Day.	Aug.	Sept.	Day.	Aug.	Sept.	Day.	Aug.	Sept.
1911.			1911.			1911.		
1.....		460	11.....		465	21.....	465	460
2.....		460	12.....		465	22.....	465	460
3.....		460	13.....		465	23.....	465	460
4.....		465	14.....		460	24.....	465	460
5.....		465	15.....	465	460	25.....	465	460
6.....	465	16.....	16.....	490	460	26.....	465	465
7.....	465	17.....	17.....	465	460	27.....	460	465
8.....	465	18.....	18.....	465	460	28.....	460	465
9.....	465	19.....	19.....	465	460	29.....	460	465
10.....	465	20.....	20.....	465	460	30.....	460	465
						31.....	460	465

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.									
1.....	465	431	418	408	381	361	333	329	337
2.....	465	431	418	404	381	361	333	329	337
3.....	465	431	418	395	381	361	333	329	341
4.....	465	426	418	385	381	361	333	329	341
5.....	465	426	413	385	381	373	333	329	345
6.....	460	418	413	395	381	373	333	329	345
7.....	460	418	413	395	381	369	333	329	373
8.....	460	418	413	418	373	369	533	325	369
9.....	460	418	413	440	373	361	333	321	369
10.....	460	418	413	440	373	361	333	318	369
11.....	460	418	413	418	373	361	337	318	333
12.....	460	418	413	404	373	361	333	315	333
13.....	460	418	413	395	373	353	333	315	373
14.....	440	418	413	395	373	353	333	315	373
15.....	440	418	413	385	373	353	333	315	381
16.....	440	418	413	390	373	353	333	318	395
17.....	440	418	413	395	373	353	333	318	395
18.....	440	418	413	390	373	349	333	333	361
19.....	440	418	413	390	373	345	333	333	353
20.....	440	418	413	385	373	341	329	337	353
21.....	418	418	413	381	373	341	329	337	353
22.....	418	418	408	381	373	341	329	337	373
23.....	418	418	404	381	373	341	329	337	373
24.....	431	418	404	381	373	341	329	337	373
25.....	440	418	404	440	369	341	329	337	369
26.....	436	418	408	440	369	341	329	337	369
27.....	440	418	408	418	369	341	329	337	369
28.....	440	418	408	404	369	337	329	337	369
29.....	440	418	408	395	361	337	329	337	373
30.....	426	418	408	390	.....	337	329	337	369
31.....	426	.....	408	385	.....	337	.....	337	.....

NOTE.—Daily discharge determined from a well-defined rating curve.

Monthly discharge of Rising River near Cassel, Cal., for 1911-12.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1911.					
August 15-31.....	490	460	465	15,700	A.
September.....	465	460	462	27,500	A.
1911-12.					
October.....	465	418	446	27,400	A.
November.....	431	418	420	25,000	A.
December.....	418	404	412	25,300	A.
January.....	440	381	400	25,600	A.
February.....	381	361	374	21,600	A.
March.....	373	337	352	21,600	A.
April.....	357	329	332	19,800	A.
May.....	337	315	329	20,200	A.
June.....	373	337	362	21,500	A.
The period.....				207,000	

BURNEY CREEK NEAR BURNEY, CAL.

This station, which is located at the highway bridge three-fourths of a mile southwest of Burney, in the SW. ¼ sec. 19, T. 35 N., R. 3 E., 3 miles above Goose Creek and 10 miles above the junction with Pit River, was established August 14, 1911.

Two miles above the station about 2 second-feet of water are diverted during the summer months and 0.5 second-foot during the remainder of the year.

A vertical staff gage is fastened to the upstream end of the center bridge pier.

The channel is composed of gravel and sand and is probably permanent.

Low-stage measurements are made by wading; at ordinary and high stages discharge measurements are made from the bridge.

Discharge measurements of Burney Creek near Burney, Cal., in 1911-12.

Date.	Hydrographer.	Gage height.	Dis-charge.
		Feet.	Sec. ft.
1911.			
Aug. 14	J. E. Stewart.....	1.01	24
1912.			
Jan. 16	Lasley Lee.....	1.34	31
20	do.....	1.23	24
May 11	do.....	2.48	100
15	do.....	2.42	90

Daily gage height, in feet, of Burney Creek near Burney, Cal., for 1911-12.

Day.	Aug.	Sept.	Day.	Aug.	Sept.	Day.	Aug.	Sept.
1911.			1911.			1911.		
1.....		0.85	11.....		0.98	21.....	0.92	0.92
2.....		.85	12.....		.98	22.....	.80	.95
3.....		.88	13.....		.95	23.....	.80	.95
4.....		.90	14.....	1.00	.92	24.....	.80	.95
5.....		.92	15.....	1.00	.92	25.....	.80	.95
6.....		.98	16.....	1.00	.95	26.....	.80	1.00
7.....		.98	17.....	1.00	.92	27.....	.80	1.00
8.....		.95	18.....	.98	.92	28.....	.80	1.00
9.....		.95	19.....	.98	.92	29.....	.80	1.00
10.....		.95	20.....	.95	.92	30.....	.85	1.00
						31.....	.85	

Daily gage height, in feet, of Burney Creek near Burney, Cal., for 1911-12—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.									
1.....	1.00	1.10	1.08	1.0	1.9	1.55	1.85	3.0	2.25
2.....	1.02	1.10	1.08	1.0	1.8	1.9	1.9	2.55	2.15
3.....	1.02	1.10	1.05	1.0	1.75	1.7	2.0	2.45	2.1
4.....	1.18	1.10	1.05	1.0	1.5	1.7	2.0	2.45	2.0
5.....	1.10	1.10	1.05	1.0	1.5	2.15	2.0	2.4	1.9
6.....	1.08	1.10	1.20	1.0	1.4	2.5	2.0	2.4	1.9
7.....	1.05	1.10	1.15	1.0	-----	2.25	2.0	2.45	1.8
8.....	1.05	1.08	1.10	1.0	-----	2.1	2.0	2.5	1.7
9.....	1.28	1.08	1.10	1.0	-----	2.0	2.0	2.5	1.7
10.....	1.18	1.60	1.00	1.0	-----	1.9	2.2	2.55	1.6
11.....	1.12	1.20	1.00	1.1	1.9	1.85	2.1	2.5	1.5
12.....	1.12	1.15	1.00	1.1	1.85	1.9	1.95	2.4	1.5
13.....	1.12	1.15	1.00	1.1	1.8	1.7	1.9	2.4	1.7
14.....	1.12	1.12	1.00	1.1	1.8	1.7	1.8	2.4	1.75
15.....	1.12	1.35	1.00	1.1	1.8	2.3	1.9	2.4	1.6
16.....	1.12	1.22	1.00	1.35	1.75	1.9	1.9	2.3	1.5
17.....	1.10	1.18	1.10	1.35	2.8	1.85	1.9	2.3	1.4
18.....	1.10	1.15	1.10	1.35	2.95	1.7	1.8	2.3	1.3
19.....	1.10	1.12	1.10	1.2	2.3	1.7	1.8	2.2	1.2
20.....	1.10	1.12	1.10	1.2	2.15	1.65	1.7	2.2	1.1
21.....	1.10	1.12	1.10	1.2	2.1	1.6	1.7	2.4	1.4
22.....	1.10	1.12	1.10	1.2	1.9	1.6	1.7	2.6	1.4
23.....	1.10	1.10	1.10	1.3	1.8	1.6	1.65	2.6	1.9
24.....	1.10	1.10	1.00	1.2	1.7	1.7	1.95	2.6	1.8
25.....	1.08	1.10	1.00	1.4	1.65	1.7	2.1	2.8	1.5
26.....	1.10	1.10	1.00	1.5	1.6	1.8	2.2	2.8	1.35
27.....	1.10	-----	1.00	2.4	1.55	1.8	2.1	2.8	1.2
28.....	1.10	-----	1.00	2.2	1.5	1.9	2.0	2.55	1.1
29.....	1.08	-----	1.00	2.0	1.5	2.05	2.45	2.5	1.1
30.....	1.10	1.08	1.00	2.0	-----	1.85	2.85	2.45	1.1
31.....	1.10	-----	1.00	1.9	-----	1.8	-----	2.35	-----

Daily discharge, in second-feet, of Burney Creek near Burney, Cal., for 1911-12.

Day.	Aug.	Sept.	Day.	Aug.	Sept.	Day.	Aug.	Sept.
1911.								
1.....		17	11.....		20	21.....	18	18
2.....		17	12.....		20	22.....	16	19
3.....		18	13.....		19	23.....	16	19
4.....		18	14.....	20	18	24.....	16	19
5.....		18	15.....	20	18	25.....	16	19
6.....		20	16.....	20	19	26.....	16	20
7.....		20	17.....	20	18	27.....	16	20
8.....		19	18.....	20	18	28.....	16	20
9.....		19	19.....	20	18	29.....	16	20
10.....		19	20.....	19	18	30.....	17	20
						31.....	17	-----

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.									
1.....	20	23	22	20	56	39	54	147	78
2.....	21	23	22	20	51	56	56	104	72
3.....	21	23	22	20	48	46	62	94	68
4.....	25	23	22	20	37	46	62	94	62
5.....	23	23	22	20	37	72	62	90	56
6.....	22	23	26	20	33	99	62	90	56
7.....	22	23	24	20	37	78	62	94	51
8.....	22	22	23	20	41	68	62	99	46
9.....	28	22	23	20	46	62	62	99	46
10.....	25	41	20	20	51	56	75	104	41
11.....	24	26	20	23	56	54	68	99	37
12.....	24	24	20	23	54	56	59	90	37
13.....	24	24	20	23	51	46	56	90	46
14.....	24	24	20	23	51	46	51	90	48
15.....	24	31	20	23	51	82	56	90	41
16.....	24	27	20	31	48	56	56	82	37
17.....	23	25	23	31	127	54	56	82	33
18.....	23	24	23	31	142	46	51	82	29
19.....	23	24	23	26	82	46	51	75	26
20.....	23	24	23	26	72	44	46	75	23

Daily discharge, in second-feet, of Burney Creek near Burney, Cal., for 1911-12—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
21.....	23	24	23	26	68	41	46	90	33
22.....	23	24	23	26	56	41	46	108	33
23.....	23	23	23	29	51	41	44	108	56
24.....	23	23	20	26	46	46	59	108	51
25.....	22	23	20	33	44	46	68	127	37
26.....	23	23	20	37	41	51	75	127	31
27.....	23	23	20	90	39	51	68	127	26
28.....	23	23	20	75	37	56	62	104	23
29.....	22	22	20	62	37	65	94	99	23
30.....	23	22	20	62	.....	54	132	94	23
31.....	23	.....	20	56	.....	51	.....	86	.....

NOTE.—Daily discharge determined from a rather poorly defined rating curve.

Monthly discharge of Burney Creek near Burney, Cal., for 1911-12.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1911.					
August 14-31.....	20	16	17.7	632	C.
September.....	20	17	18.8	1,120	C.
1911-12.					
October.....	28	20	23.1	1,420	C.
November.....	41	22	24.3	1,450	C.
December.....	26	20	21.5	1,320	C.
January.....	90	20	31.7	1,950	C.
February.....	142	33	54.8	3,150	C.
March.....	99	39	54.7	3,360	C.
April.....	132	44	62.1	3,700	B.
May.....	147	75	98.3	6,040	A.
June.....	78	23	42.3	2,520	C.
The period.....				24,900	

KOSK CREEK NEAR HENDERSON, CAL.

This station, which is located at the highway bridge on the Holm ranch in sec. 12, T. 37 N., R. 1 W., 4 miles north of Henderson, one-fourth mile above the mouth of Baker Creek, and about 3½ miles above its junction with Pit River, in the Shasta National Forest, was established September 27, 1910.

The gage is a vertical staff on an alder tree on the left bank.

Discharge measurements are made from the bridge 100 feet below the gage or by wading.

This station is maintained in cooperation with the United States Forest Service.

Discharge measurements of Kosk Creek near Henderson, Cal., in 1910-1912.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1910.		Feet.	Sec.-ft.	1911.		Feet.	Sec.-ft.
Sept. 27	W. V. Hardy.....	.....	28	Aug. 12	J. E. Stewart.....	3.16	.....
Nov. 13	F. G. Wood.....	2.96	34				
1911.				1912.			
Mar. 26	G. T. Peekema.....	5.35	788	Jan. 14	Lasley Lee.....	3.40	80
May 10	.....do.....	4.80	521	May 10	.....do.....	4.66	414
				May 16	.....do.....	4.27	266



Daily discharge, in second-feet, of Kosk Creek near Henderson, Cal., for 1910-1912.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.												
1.	28	30	70				1,200	540	398	132	56	45
2.	28	30	60				1,350	500	372	129	56	44
3.	29	30	720				1,300	630	356	126	56	43
4.	32	30	206				1,250	864	340	107	56	42
5.	31	30	161				2,300	1,000	326	106	56	42
6.	30	30	116				1,810	900	312	106	56	42
7.	29	30	80				1,500	800	298	106	56	42
8.	29	30	220				1,250	664	283	105	56	42
9.	29	37	1,000				1,050	570	283	104	56	42
10.	29	36	1,500				1,210	510	283	102	54	42
11.	35	35	1,000				1,120	558	283	100	54	42
12.	39	35	500				950	530	259	99	52	42
13.	37	34	300				788	501	235	98	52	42
14.	34	32	200				790	470	226	96	52	42
15.	31	31	200				770	450	217	94	52	42
16.	31	30	150				759	530	208	92	51	42
17.	31	29	150				600	200	89	89	51	42
18.	31	28	150				780	1,200	192	85	51	42
19.	30	27	100				790	950	184	82	51	42
20.	30	26	98				805	748	175	80	51	42
21.	30	25	94				810	630	166	78	51	42
22.	31	24	89				817	600	157	76	51	42
23.	31	22	85				822	620	153	73	51	42
24.	31	293	83				843	637	150	70	50	42
25.	31	180	80				864	584	146	67	49	42
26.	31	100	77			805	1,000	570	143	64	48	42
27.	31	80	75				850	558	141	62	48	42
28.	30	120	75				720	470	138	59	47	42
29.	30	100	75				650	400	136	56	46	42
30.	30	90	70				584	400	134	56	46	42
31.	30		70					400		56	45	
1911-12.												
1.	41	33	33					843				
2.	38	33	32				220					
3.	36	33	32									
4.	34	33	32									
5.	33	33	31					476	234			
6.	33	33	31									
7.	33	33	31				220	432				
8.	33	33	31					432				
9.	33	33	31									
10.	33	33	31					411	180			
11.	33	33	31									
12.	33	33	31									
13.	33	33	31									
14.	33	33	31					312				
15.	33	33	31						159			
16.	33	33	30					278				
17.	33	33	30									
18.	33	33	30					248				
19.	33	33	30									
20.	33	33	30									
21.	33	33	30						134			
22.	33	33	29									
23.	33	33	29				166	263				
24.	33	33	29									
25.	33	33	29						119			
26.	33	33	29									
27.	33	33	29						114			
28.	33	33	29									
29.	33	33	29									
30.	33	33	29					350				
31.	33		29									

NOTE.—Daily discharge determined from a fairly well defined rating curve; discharge Nov. 26 to 29, Dec. 1, 2, 7, and 9 to 19, 1910, estimated from records of discharge of Pit River near Ydalpom, and precipitation records.

For days on which gage was not read during April and May, 1911, the discharge was determined from hydrographic comparison with McCloud River at Baird. Daily discharge interpolated for other days on which gage was not read.

Estimates of daily discharge for days on which gage was not read are roughly approximate and should be used with caution.

*Monthly discharge of Kosk Creek near Henderson, Cal., for 1910-11.*

[Drainage area, 51.9 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.	
1910-11.							
October.....	39	28	30.9	0.595	0.69	1,900	B.
November.....	293	22	55.1	1.06	1.18	3,280	C.
December.....	1,500	60	253	4.87	5.62	15,600	C.
April.....	2,300	584	1,020	19.7	21.98	60,700	B.
May.....	1,200	400	625	12.0	13.83	38,400	B.
June.....	398	134	230	4.43	4.94	13,700	B.
July.....	132	56	88.9	1.71	1.97	5,470	B.
August.....	56	45	51.8	1.00	1.15	3,190	B.
September.....	45	42	42.2	.813	.91	2,510	B.
1911.							
October.....	41	33	33.5	.645	.74	2,060	B.
November.....	33	33	33	.636	.71	1,960	B.
December.....	33	29	30.3	.584	.67	1,860	B.

## MONTGOMERY CREEK AT MONTGOMERY CREEK, CAL.

This station, which is located just below the highway bridge in sec. 36, T. 35 N., R. 1 W., at Montgomery Creek post office and 2 miles above its junction with Sacramento River, was established August 11, 1911.

About 5 miles above the station water is diverted from this creek to Little Cow Creek by the Terry Lumber Co. During the logging season—June to December—the quantity diverted is 8 to 10 second-feet; for the remainder of the year the amount is reduced to about 6 second-feet.

The gage is a vertical staff attached to a large alder tree on the left bank 70 feet below the bridge.

The bed of the stream is composed of boulders and gravel and is rough.

Discharge measurements are made by wading or from upstream side of highway bridge.

*Discharge measurements of Montgomery Creek at Montgomery Creek, Cal., 1911-12.*

Date.	Hydrographer.	Gage height.	Dis- charge.
1911.		<i>Feet.</i>	<i>Sec.-ft.</i>
Aug. 11	J. E. Stewart.....	0.74	23
1912.			
Jan. 13	Lasley Lee.....	1.24	52
15	do.....	1.08	40
21	do.....	.99	35
May 8	do.....	1.46	76
17	do.....	1.26	51

Daily gage height, in feet, of Montgomery Creek at Montgomery Creek, Cal., for 1911-12.

Day.	Aug.	Sept.	Day.	Aug.	Sept.	Day.	Aug.	Sept.
1911.			1911.			1911.		
1.....		0.64	11.....	0.72	0.60	21.....	0.69	0.68
2.....		.63	12.....	.72	.60	22.....	.69	.62
3.....		.62	13.....	.71	.61	23.....	.69	.60
4.....		.61	14.....	.69	.62	24.....	.69	.60
5.....		.61	15.....	.70	.62	25.....	.69	.61
6.....		.61	16.....	.69	.62	26.....	.69	.72
7.....		.62	17.....	.69	.62	27.....	.69	.70
8.....		.60	18.....	.69	.61	28.....	.69	.64
9.....		.61	19.....	.69	.68	29.....	.68	.68
10.....		.61	20.....	.70	.62	30.....	.67	.64
						31.....	.62	.....

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1911-12.												
1.....	0.70	0.66	0.62	0.76	1.17	1.08	1.27	1.75	1.38	.....	.....	.....
2.....	.65	.66	.64	.76	1.14	1.09	1.27	1.65	1.36	.....	.....	.....
3.....	.65	.66	.64	.75	1.12	1.06	1.26	1.60	1.32	.....	.....	.....
4.....	.70	.72	.65	.76	1.10	1.09	1.24	1.60	1.28	.....	.....	.....
5.....	.66	.68	.67	.72	1.08	1.35	1.26	1.55	1.26	.....	.....	.....
6.....	.64	.64	.64	.78	1.06	1.75	1.25	1.50	1.24	.....	.....	.....
7.....	.65	.65	.62	.80	1.10	1.49	1.23	1.49	1.22	.....	.....	.....
8.....	.71	.68	.62	.79	1.40	1.46	1.21	1.49	1.22	.....	.....	.....
9.....	.78	.69	.64	1.10	1.34	1.38	1.21	1.46	1.22	.....	.....	.....
10.....	.70	.75	.62	1.32	1.50	1.32	1.39	1.43	1.20	.....	.....	.....
11.....	.70	.68	.62	1.12	1.36	1.31	1.38	1.41	1.20	.....	.....	.....
12.....	.70	.68	.62	1.38	1.29	1.40	1.31	1.39	1.32	.....	.....	.....
13.....	.70	.68	.62	1.22	1.29	1.40	1.34	1.37	1.25	.....	.....	.....
14.....	.70	.68	.62	1.13	1.26	1.48	1.30	1.36	1.21	.....	.....	.....
15.....	.71	.80	.62	1.08	1.20	1.72	1.31	1.34	1.20	.....	.....	.....
16.....	.68	.69	.64	1.15	1.19	1.49	1.31	1.31	1.12	.....	.....	.....
17.....	.69	.68	.66	1.01	1.50	1.42	1.29	1.27	1.12	.....	.....	.....
18.....	.66	.68	.66	1.20	1.55	1.38	1.29	1.28	1.12	.....	.....	.....
19.....	.66	.68	.63	1.10	1.39	1.34	1.28	1.26	1.10	.....	.....	.....
20.....	.66	.66	.64	1.04	1.34	1.32	1.26	1.45	1.11	.....	.....	.....
21.....	.66	.65	.66	.98	1.29	1.29	1.24	1.41	1.11	.....	.....	.....
22.....	.69	.64	.71	.98	1.24	1.28	1.22	1.45	1.10	.....	.....	.....
23.....	.68	.65	.67	1.00	1.21	1.26	1.20	1.55	1.28	.....	.....	.....
24.....	.66	.64	.64	1.58	1.18	1.28	1.25	1.49	1.18	.....	.....	.....
25.....	.68	.64	.65	3.50	1.16	1.29	1.22	1.60	1.10	.....	.....	.....
26.....	.68	.66	.68	2.35	1.12	1.29	1.35	1.65	1.04	.....	.....	.....
27.....	.69	.66	.72	1.80	1.12	1.31	1.30	1.65	1.02	.....	.....	.....
28.....	.68	.64	.82	1.55	1.10	1.32	1.28	1.55	1.01	.....	.....	.....
29.....	.69	.64	.88	1.44	1.08	1.35	1.70	1.50	1.01	.....	.....	.....
30.....	.68	.64	.72	1.34	.....	1.31	1.60	1.46	1.00	.....	.....	.....
31.....	.66	.....	.81	1.24	.....	1.29	.....	1.42	.....	.....	.....	.....

Daily discharge, in second-feet, of Montgomery Creek at Montgomery Creek, Cal., for 1911-12.

Day.	Aug.	Sept.	Day.	Aug.	Sept.	Day.	Aug.	Sept.
1911.			1911.			1911.		
1.....		21	11.....	23	20	21.....	22	22
2.....		21	12.....	23	20	22.....	22	20
3.....		20	13.....	22	20	23.....	22	20
4.....		20	14.....	22	20	24.....	22	20
5.....		20	15.....	22	20	25.....	22	20
6.....		20	16.....	22	20	26.....	22	23
7.....		20	17.....	22	20	27.....	22	20
8.....		20	18.....	22	20	28.....	22	21
9.....		20	19.....	22	22	29.....	22	22
10.....		20	20.....	22	20	30.....	21	21
						31.....	20	.....

Daily discharge, in second-feet, of Montgomery Creek at Montgomery Creek, Cal., for 1911-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.									
1.....	22	21	20	24	47	40	55	110	66
2.....	21	21	21	24	44	40	55	97	64
3.....	21	21	21	24	43	38	54	91	60
4.....	22	23	21	24	41	40	53	91	56
5.....	21	22	21	23	40	63	54	85	54
6.....	21	21	21	24	38	110	54	79	53
7.....	21	21	20	25	41	78	52	78	51
8.....	22	22	20	25	68	75	50	78	51
9.....	24	22	21	41	62	66	50	75	51
10.....	22	24	20	60	79	60	67	71	49
11.....	22	22	20	43	64	59	66	69	49
12.....	22	22	20	66	57	68	59	67	60
13.....	22	22	20	51	57	68	62	65	54
14.....	22	22	20	43	54	77	58	64	50
15.....	22	25	20	40	49	106	59	62	49
16.....	22	22	21	45	48	78	59	59	43
17.....	22	22	21	35	79	70	57	55	43
18.....	21	22	21	49	85	66	57	56	43
19.....	21	22	21	41	67	62	56	54	41
20.....	21	21	21	37	62	60	54	74	42
21.....	21	21	21	33	57	57	53	69	42
22.....	22	21	22	33	53	56	51	74	41
23.....	22	21	21	34	50	54	49	85	56
24.....	21	21	21	89	47	56	54	78	47
25.....	21	21	21	542	46	57	51	91	41
26.....	22	21	22	210	43	57	63	97	37
27.....	22	21	23	116	43	59	58	97	35
28.....	22	21	26	85	41	60	56	85	35
29.....	22	21	28	72	40	63	103	79	35
30.....	22	21	23	62	.....	59	91	75	34
31.....	21	.....	25	53	.....	57	.....	70	.....

NOTE.—Daily discharge determined from a well-defined rating curve.

Monthly discharge of Montgomery Creek at Montgomery Creek, Cal., for 1911-12.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1911.					
August 11-31 .....	23	20	22.0	914	B.
September.....	23	20	20.4	1,210	B.
1911-12.					
October.....	24	21	21.7	1,330	B.
November.....	25	21	21.7	1,290	B.
December.....	28	20	21.4	1,320	B.
January.....	542	23	66.9	4,110	A.
February.....	85	38	53.3	3,070	A.
March.....	110	38	63.2	3,890	A.
April.....	103	49	58.7	3,490	A.
May.....	110	54	76.8	4,720	A.
June.....	66	34	47.7	2,840	A.
The period.....	.....	.....	.....	26,100	.....

SQUAW CREEK NEAR YDALPOM, CAL.

This station, which is located at the highway bridge three-fourths of a mile southwest of Ydalpom (Copper City), in sec. 29, T. 34 N., R. 3 W., was established October 4, 1911.

The gage is a vertical staff on the upstream end of the right pier of the bridge.

Discharge measurements are made from the bridge or by wading.

The channel, which is composed of gravel and cobblestones, shifts slightly at high stages.

One small ditch diverts water for irrigation above the station.

*Discharge measurements of Squaw Creek near Ydalpom, Cal., in 1910-1912.*

Date.	Hydrographer.	Gage height.	Discharge.
1910. Nov. 17	F. G. Wood.....	<i>Feet.</i> 2.08	<i>Sec.-ft.</i> 23
1911. Apr. 2	G. T. Peekema.....	3.71	557
Oct. 4	.....do.....	1.61	35
1912. Jan. 24	Lasley Lee.....	2.81	282
Mar. 9	.....do.....	4.18	772

*Daily gage height, in feet, of Squaw Creek near Ydalpom, Cal., for 1911-12.*

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1.....		1.6	1.6	1.7	3.0	2.5	2.8	6.1	3.0
2.....		1.6	1.6	1.6	2.7	2.6	2.8	4.9	3.0
3.....		1.6	1.6	1.7	2.5	2.4	2.7	4.0	2.9
4.....	1.6	1.6	1.6	1.7	2.6	2.4	2.7	4.0	2.8
5.....	1.6	1.6	1.9	1.7	2.5	3.0	2.6	3.9	2.7
6.....	1.6	1.6	1.8	1.7	2.4	5.2	2.6	3.7	2.6
7.....	1.5	1.6	1.7	1.6	2.4	4.8	2.6	3.4	2.6
8.....	1.5	1.6	1.6	1.7	3.0	4.5	2.5	3.2	2.6
9.....	1.5	1.6	1.6	1.9	3.2	4.1	2.5	3.1	2.6
10.....	1.5	2.1	1.6	2.3	3.4	3.8	3.4	3.0	2.5
11.....	1.9	1.8	1.6	2.3	3.3	3.6	3.7	3.0	2.5
12.....	1.8	1.7	1.6	2.5	3.1	4.0	3.5	2.9	2.9
13.....	1.7	1.6	1.7	2.4	3.0	3.9	3.2	2.8	2.8
14.....	1.5	1.6	1.7	2.3	3.0	4.1	3.0	2.8	2.5
15.....	1.6	2.0	1.6	2.3	3.0	6.0	2.9	2.7	2.5
16.....	1.6	1.8	1.6	2.2	3.1	5.5	2.9	2.7	2.4
17.....	1.6	1.7	1.6	2.1	3.7	4.7	2.8	2.6	2.4
18.....	1.6	1.7	1.6	3.8	3.5	4.1	2.8	2.6	2.4
19.....	1.6	1.7	1.6	3.3	3.7	4.0	2.7	2.6	2.4
20.....	1.6	1.6	1.6	3.6	3.5	3.9	2.7	4.1	2.3
21.....	1.6	1.6	1.6	3.2	3.3	3.7	2.6	3.0	2.3
22.....	1.6	1.6	1.6	2.0	3.1	3.5	2.6	3.1	2.3
23.....	1.6	1.6	1.6	2.3	2.9	3.4	2.6	3.0	3.0
24.....	1.6	1.6	1.5	3.0	3.0	3.3	2.6	2.9	2.5
25.....	1.6	1.6	1.5	7.5	3.2	3.3	2.6	3.2	2.3
26.....	1.7	1.6	1.5	8.2	3.4	3.2	2.5	3.1	2.3
27.....	1.6	1.6	1.6	5.6	3.6	3.1	2.5	4.5	2.3
28.....	1.6	1.6	1.6	4.2	2.6	3.0	2.5	4.0	2.2
29.....	1.6	1.6	1.7	4.0	2.5	3.0	6.1	3.7	2.2
30.....	1.6	1.6	1.7	3.6		2.9	4.8	3.5	2.2
31.....	1.6		1.8	3.2		2.8		3.2	

## Daily discharge, in second-feet, of Squaw Creek near Ydulpom, Cal., for 1911-12.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1.....		34	34	46	330	200	274	1,970	330
2.....		34	34	34	248	224	274	1,140	330
3.....		34	34	46	200	178	248	690	302
4.....	34	34	34	46	224	178	248	690	274
5.....	34	34	76	46	200	330	224	646	248
6.....	34	34	60	46	178	1,320	224	564	224
7.....	24	34	46	34	178	1,090	224	456	224
8.....	24	34	34	46	330	930	200	390	224
9.....	24	34	34	76	390	736	200	360	224
10.....	24	114	34	156	456	604	456	330	200
11.....	76	60	34	156	422	526	564	330	200
12.....	60	46	34	200	360	690	490	302	302
13.....	46	34	46	178	330	646	390	274	274
14.....	24	34	46	156	330	736	330	274	200
15.....	34	94	34	156	330	1,890	302	248	200
16.....	34	60	34	135	360	1,520	302	248	178
17.....	34	46	34	114	564	1,030	274	224	178
18.....	34	46	34	604	490	736	274	224	178
19.....	34	46	34	422	564	690	248	224	178
20.....	34	34	34	526	490	646	248	736	156
21.....	34	34	34	390	422	564	224	330	156
22.....	34	34	34	94	360	490	224	360	156
23.....	34	34	34	156	302	456	224	330	330
24.....	34	34	24	330	330	422	224	302	200
25.....	34	34	24	3,190	390	422	224	390	156
26.....	46	34	24	3,850	456	390	200	360	156
27.....	34	34	34	1,590	526	360	200	930	156
28.....	34	34	34	753	224	330	200	690	135
29.....	34	34	46	690	200	330	1,970	564	135
30.....	34	34	46	526	-----	302	1,090	490	135
31.....	34	-----	60	390	-----	274	-----	390	-----

NOTE.—Daily discharge determined from a rating curve well defined between 250 and 1,000 second-feet and not well defined outside these limits.

## Monthly discharge of Squaw Creek near Ydulpom, Cal., for 1911-12.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
October 4-31.....	76	24	35.5	1,970	C.
November.....	114	34	42.0	2,500	C.
December.....	76	24	38.0	2,340	C.
January.....	3,850	34	491	30,200	A.
February.....	564	178	351	20,200	A.
March.....	1,890	178	621	38,200	A.
April.....	1,970	200	359	21,400	A.
May.....	1,970	224	499	30,700	A.
June.....	330	135	211	12,600	B.
The period.....				160,000	

M'CLOUD RIVER NEAR GREGORY, CAL.

This station, which is located at St. John's camp, near Hirze Mountain, by road about 14 miles east of Gregory post office, which is on the upper Sacramento, just opposite Baird railroad station, was established March 23, 1902, in cooperation with the McCloud River Electric Co. The gaging station is 12 or 15 miles above the United States fishery at Baird post office, near the mouth of the river. It is about one-fourth mile below the mouth of Nosoni Creek. The station was discontinued June 30, 1908. Additional gage heights were observed from September 12 to 30, 1908, because of extreme low-water conditions.

No important tributaries enter below the station, which is only about 15 miles above the mouth, and no diversions have been made either above or below. Filings on water for power development and applications for rights of way over public lands have been made, and conflicting rights are still unadjudicated. The flow is not affected by artificial conditions above or below the station.

The channel is straight, the banks are high, and the river swift at all stages. The bed of the stream is composed of limestone covered with large river gravel and boulders.

The location and the datum of the staff gage remained unchanged. Discharge measurements were made from a car and cable. The results at moderate stages are reasonably accurate. No discharge measurements were made during 1907 or 1908.

The maximum crest discharge was 55,000 second-feet for a gage height of 17.2 feet, February 16, 1904. The lowest discharge recorded is 1,180 second-feet, September 12 to 16, 1908. No records were kept during the early part of the month, but it is probable that this stage lasted at least 10 days.

*Discharge measurements of McCloud River near Gregory, Cal., in 1902-1906.*

Date.	Hydrographer.	Gage height.	Discharge.	Date.	Hydrographer.	Gage height.	Discharge.
1902.		<i>Feet.</i>	<i>Sec.-feet.</i>	1905.		<i>Feet.</i>	<i>Sec.-ft.</i>
Sept. 23	S. G. Bennett.....	1.45	1,270	Feb. 22 <sup>a</sup>	Peterson and Ackerson.....	3.95	4,160
Nov. 9	J. D. Schuyler.....	6.00	9,070	22	O. W. Peterson.....	3.98	4,120
1903.				Aug. 6	Peterson and Lee..	1.63	1,390
July 31	S. G. Bennett.....	1.50	1,450	1906.			
1904.				Jan. 16 <sup>a</sup>	F. P. Ackerson.....	6.05	8,780
Jan. 25	W. B. Newhall.....	1.85	1,900	16 <sup>a</sup>	do.....	7.40	12,400
Aug. 8	W. B. Clapp.....	1.90	1,650	Feb. 12	R. S. Hawley.....	1.90	1,580
Oct. 30	O. W. Peterson.....	1.75	1,600	Apr. 12	do.....	3.07	2,910
1905.				May 17	do.....	2.45	2,360
Feb. 21	O. W. Peterson.....	4.58	5,340	Oct. 10	do.....	1.56	1,340

<sup>a</sup> Measured by floats.

Daily gage height, in feet, of McCloud River near Gregory, Cal., for 1902-1908.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1902-3. <sup>a</sup>												
1.....	1.5	1.45	1.9	2.35	2.9	2.45	4.9	2.5	1.95	1.7	1.52	1.45
2.....	1.5	1.45	1.85	2.3	2.7	2.4	4.4	2.5	1.95	1.6	1.52	1.45
3.....	1.45	1.45	1.8	2.2	2.6	2.6	3.95	2.5	1.95	1.7	1.52	1.45
4.....	1.45	1.45	1.8	2.1	2.5	2.6	3.7	2.6	1.9	1.6	1.52	1.45
5.....	1.45	1.45	1.9	2.1	2.45	2.5	3.55	2.55	1.9	1.7	1.52	1.45
6.....	1.4	1.5	1.85	2.1	2.4	2.45	3.4	2.55	1.9	1.6	1.52	1.45
7.....	1.35	1.6	2.9	2.0	2.45	2.4	3.2	2.5	1.9	1.7	1.48	1.45
8.....	1.4	3.8	3.45	2.0	2.3	2.5	3.2	2.4	1.85	1.6	1.48	1.45
9.....	1.4	7.5	3.4	2.0	2.3	2.4	3.2	2.4	1.85	1.6	1.48	1.45
10.....	1.4	6.4	4.6	1.95	2.25	2.4	3.1	2.4	1.85	1.6	1.48	1.45
11.....	1.4	3.7	4.85	1.95	2.3	2.7	3.0	2.4	1.85	1.5	1.48	1.45
12.....	1.4	3.2	4.3	1.9	2.35	4.05	2.9	2.35	1.85	1.6	1.48	1.45
13.....	1.4	3.1	3.75	1.9	2.3	4.05	2.85	2.35	1.85	1.5	1.48	1.45
14.....	1.45	3.0	3.2	1.85	2.3	4.85	2.8	2.3	1.8	1.6	1.48	1.45
15.....	1.45	2.8	2.9	1.85	2.2	4.25	2.7	2.3	1.8	1.5	1.45	1.45
16.....	1.45	2.75	2.75	1.8	2.15	3.75	2.7	2.2	1.8	1.5	1.45	1.45
17.....	1.4	3.15	2.6	1.85	2.1	3.5	2.7	2.2	1.8	1.5	1.45	1.45
18.....	1.4	3.7	2.5	1.8	2.1	3.05	2.65	2.2	1.8	1.5	1.45	1.45
19.....	1.4	3.6	2.4	1.8	2.1	2.9	2.6	2.1	1.8	1.5	1.45	1.45
20.....	1.4	2.95	2.3	1.8	2.1	2.75	2.6	2.1	1.75	1.5	1.45	1.45
21.....	1.5	2.65	2.25	2.1	2.1	2.65	2.6	2.1	1.7	1.5	1.45	1.45
22.....	1.6	2.5	2.25	3.0	2.2	2.65	2.65	2.05	1.7	1.5	1.45	1.45
23.....	1.65	2.4	2.3	3.5	2.65	2.6	2.7	2.1	1.7	1.5	1.45	1.45
24.....	2.1	2.3	2.4	5.3	2.7	2.7	2.7	2.0	1.7	1.5	1.45	1.4
25.....	1.95	2.2	2.5	8.0	2.65	3.1	2.7	2.0	1.7	1.5	1.45	1.4
26.....	1.8	2.1	3.2	5.5	2.6	3.5	2.7	2.0	1.7	1.5	1.45	1.4
27.....	1.6	2.0	3.15	4.6	2.5	3.75	2.65	2.0	1.7	1.5	1.45	1.4
28.....	1.6	2.0	2.85	3.9	2.45	6.0	2.6	2.0	1.7	1.5	1.45	1.4
29.....	1.5	1.9	2.65	3.5	.....	7.2	2.6	2.0	1.7	1.5	1.45	1.4
30.....	1.5	1.9	2.5	3.3	.....	6.5	2.6	1.95	1.7	1.5	1.45	1.45
31.....	1.5	.....	2.4	3.1	.....	5.8	.....	1.95	.....	1.5	1.45	.....
1903-4.												
1.....	1.45	1.4	2.4	2.1	1.8	5.9	4.3	3.8	3.15	2.2	1.9	1.75
2.....	1.48	1.4	2.22	2.0	1.8	7.1	4.0	3.95	2.95	2.2	1.9	1.75
3.....	1.52	1.52	2.0	1.9	1.7	6.0	4.8	3.8	2.9	2.2	1.9	1.75
4.....	1.5	1.6	1.92	1.9	1.9	5.9	4.85	3.8	2.9	2.2	1.9	1.75
5.....	1.45	1.48	1.9	1.9	1.9	5.1	4.35	3.8	2.85	2.2	1.9	1.75
6.....	1.4	1.45	1.8	1.9	1.9	4.75	4.3	3.7	2.8	2.2	1.9	1.75
7.....	1.4	1.45	1.68	1.85	1.85	8.0	4.25	3.8	2.8	2.15	1.9	1.7
8.....	1.4	1.45	1.72	1.8	1.8	14.5	4.35	3.8	2.8	2.15	1.9	1.7
9.....	1.4	1.45	1.78	1.8	1.8	9.0	4.3	3.7	2.75	2.15	1.9	1.7
10.....	1.4	1.5	1.78	1.8	1.8	9.15	4.75	3.7	2.7	2.15	1.9	1.7
11.....	1.6	1.65	1.7	1.9	1.9	5.75	4.9	3.8	2.7	2.15	1.9	1.7
12.....	1.95	1.8	1.7	1.9	2.9	5.0	5.1	3.9	2.65	2.1	1.9	1.7
13.....	1.65	1.95	1.78	1.8	2.8	4.8	5.1	4.05	2.6	2.1	1.85	1.7
14.....	1.45	6.05	1.85	1.85	2.65	5.0	4.85	4.1	2.6	2.1	1.85	1.7
15.....	1.45	3.75	1.95	1.9	7.5	5.5	5.35	4.15	2.55	2.1	1.85	1.7
16.....	1.45	1.9	2.2	2.15	14.2	5.9	5.5	4.1	2.5	2.05	1.85	1.75
17.....	1.45	1.82	2.55	2.3	7.5	6.0	5.15	3.95	2.5	2.05	1.85	1.7
18.....	1.45	1.8	2.38	2.4	4.35	6.1	4.7	3.8	2.5	2.05	1.85	1.7
19.....	1.45	2.35	2.22	2.25	3.75	6.3	5.1	3.6	2.5	2.05	1.8	1.7
20.....	1.45	4.5	2.6	2.3	3.1	6.65	5.45	3.6	2.45	2.05	1.8	1.7
21.....	1.4	8.1	2.45	2.2	3.25	6.8	4.95	3.55	2.4	2.0	1.8	1.7
22.....	1.4	7.25	2.62	2.0	6.75	6.9	4.75	3.65	2.4	2.0	1.8	1.8
23.....	1.4	6.2	2.52	1.9	6.8	5.7	4.45	3.7	2.3	2.0	1.8	2.15
24.....	1.4	4.95	2.5	1.9	5.95	4.1	4.1	3.7	2.3	2.0	1.8	2.05
25.....	1.4	4.6	2.48	1.8	5.5	3.5	4.0	3.6	2.25	2.0	1.8	1.9
26.....	1.4	4.1	2.42	1.8	4.75	3.5	4.1	3.5	2.25	1.95	1.8	1.8
27.....	1.4	3.7	2.42	1.75	6.1	3.5	4.5	3.5	2.2	1.9	1.8	1.8
28.....	1.4	2.65	2.32	1.8	5.9	4.05	4.1	3.45	2.2	1.9	1.8	1.75
29.....	1.4	2.55	2.28	1.8	5.8	5.95	4.05	3.4	2.2	1.9	1.75	1.75
30.....	1.4	2.5	2.2	1.8	.....	5.00	3.95	3.35	2.2	1.9	1.75	1.75
31.....	1.4	.....	2.12	1.8	.....	4.45	.....	3.3	.....	1.9	1.75	.....

<sup>a</sup> The following gage heights were recorded in Sept., 1902: Sept. 23, 1.45 feet; Sept. 24, 1.5 feet; Sept. 25, 1.5 feet; Sept. 26, 1.5 feet; Sept. 27, 1.45 feet; Sept. 28, 1.5 feet; Sept. 29, 1.5 feet; Sept. 30, 1.45 feet.

<sup>b</sup> Maximum recorded gage height Feb. 16, 1904, was 17.20 feet, 8 a. m.

Daily gage height, in feet, of McCloud River near Gregory, Cal., for 1902-1908—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1904-5.												
1.....	1.75	1.9	1.95	2.9	3.85	2.9	3.4	2.8	2.1	1.8	1.65	1.55
2.....	1.75	1.9	1.9	2.6	4.5	2.8	3.3	2.7	2.2	1.8	1.65	1.55
3.....	1.75	1.9	1.9	2.45	3.85	2.8	3.25	2.65	2.1	1.8	1.65	1.55
4.....	1.75	1.9	1.9	2.3	3.7	2.75	3.2	2.6	2.1	1.8	1.65	1.55
5.....	1.75	1.85	1.9	2.2	3.6	2.7	3.1	2.5	2.1	1.8	1.6	1.55
6.....	1.75	1.8	1.9	2.2	3.6	2.7	3.0	2.6	2.05	1.8	1.65	1.55
7.....	1.9	1.8	1.95	2.15	3.5	2.65	2.9	2.7	2.05	1.8	1.6	1.55
8.....	1.9	1.8	1.95	2.1	3.3	2.65	2.85	2.8	2.0	1.8	1.6	1.55
9.....	2.65	1.8	2.0	2.0	3.2	2.6	2.8	2.7	2.0	1.8	1.6	1.55
10.....	2.8	1.75	2.1	2.0	3.1	2.6	2.7	2.7	2.0	1.8	1.6	1.55
11.....	6.45	1.75	2.0	2.0	3.0	2.7	2.7	2.7	2.0	1.8	1.6	1.55
12.....	5.85	1.75	2.0	1.95	2.95	3.05	2.6	2.6	2.0	1.75	1.6	1.55
13.....	5.3	1.75	2.0	2.05	2.7	4.6	2.6	2.6	1.95	1.75	1.6	1.55
14.....	4.9	1.75	2.0	3.1	2.6	6.8	2.55	2.55	1.95	1.75	1.6	1.55
15.....	4.3	1.85	2.0	3.25	2.5	5.25	2.6	2.5	1.9	1.75	1.6	1.55
16.....	3.85	1.85	2.0	3.3	2.5	4.6	2.8	2.5	1.9	1.7	1.6	1.55
17.....	3.3	2.5	1.95	3.1	2.4	4.15	2.6	2.5	1.9	1.7	1.6	1.55
18.....	3.1	2.5	1.95	3.0	2.5	4.0	2.75	2.5	1.9	1.7	1.6	1.55
19.....	2.0	2.1	1.9	3.0	3.4	4.4	2.9	2.4	1.9	1.7	1.6	1.55
20.....	2.0	2.0	1.9	2.95	5.3	4.7	2.85	2.4	1.9	1.7	1.6	1.55
21.....	1.95	2.0	1.9	4.1	4.7	5.2	2.8	2.3	1.85	1.7	1.6	1.55
22.....	1.9	2.0	1.85	8.05	3.9	4.7	2.8	2.25	1.85	1.7	1.6	1.55
23.....	1.9	1.95	1.9	7.4	3.6	4.35	2.7	2.3	1.85	1.7	1.6	1.55
24.....	1.9	1.95	2.4	6.2	3.35	4.0	2.7	2.2	1.85	1.7	1.6	1.55
25.....	1.9	1.9	2.15	6.6	3.1	3.8	2.7	2.2	1.85	1.7	1.6	1.55
26.....	1.9	1.9	2.0	5.15	3.1	4.3	2.7	2.2	1.85	1.65	1.6	1.55
27.....	1.85	2.0	2.0	4.25	3.0	4.0	2.7	2.2	1.8	1.65	1.55	1.55
28.....	1.8	2.0	1.95	3.8	2.9	3.9	2.6	2.2	1.8	1.65	1.55	1.55
29.....	1.8	1.95	2.05	3.45	.....	3.9	2.6	2.2	1.8	1.65	1.55	1.55
30.....	1.9	2.0	4.2	3.25	.....	3.6	2.7	2.2	1.8	1.65	1.55	1.55
31.....	1.85	.....	3.9	3.25	.....	3.6	.....	2.1	.....	1.65	1.55	.....
1905-6.												
1.....	1.55	1.5	1.55	1.6	1.85	3.3	5.6	2.85	3.6	2.3	1.8	1.6
2.....	1.55	1.5	1.55	1.6	1.85	3.3	4.6	2.8	3.6	2.25	1.8	1.6
3.....	1.55	1.5	1.55	1.55	1.85	3.55	4.15	2.8	4.65	2.25	1.8	1.6
4.....	1.55	1.5	1.55	1.55	1.8	3.3	3.75	2.8	6.5	2.2	1.8	1.6
5.....	1.55	1.5	1.55	1.55	1.8	3.0	3.5	2.75	5.65	2.2	1.8	1.6
6.....	1.55	1.5	1.55	1.55	1.8	2.75	3.4	2.7	5.35	2.15	1.8	1.6
7.....	1.6	1.5	1.55	1.55	1.75	2.8	3.3	2.7	4.6	2.2	1.8	1.6
8.....	1.55	1.5	1.55	1.55	1.75	2.85	3.3	2.7	4.1	2.15	1.8	1.6
9.....	1.55	1.5	1.55	1.55	1.8	2.9	3.3	2.65	3.9	2.1	1.75	1.6
10.....	1.55	1.5	1.55	1.6	1.9	2.85	3.3	2.65	3.8	2.1	1.75	1.6
11.....	1.55	1.5	1.55	1.7	1.9	2.9	3.2	2.65	3.6	2.05	1.7	1.6
12.....	1.55	1.5	1.55	2.8	1.9	3.9	3.05	2.6	3.45	2.0	1.7	1.6
13.....	1.55	1.5	1.55	2.25	2.0	3.5	2.95	2.5	3.3	2.0	1.7	1.6
14.....	1.55	1.5	1.55	2.1	3.2	3.15	2.9	2.75	3.15	2.0	1.7	1.6
15.....	1.55	1.5	1.55	2.55	3.95	2.95	2.9	2.85	3.15	2.0	1.7	1.6
16.....	1.55	1.5	1.55	6.15	3.35	2.7	2.9	2.6	3.1	1.95	1.7	1.6
17.....	1.55	1.5	1.55	3.1	2.85	2.6	2.9	2.5	2.95	1.95	1.7	1.6
18.....	1.55	1.55	1.55	5.95	3.2	2.55	2.9	2.4	2.85	1.95	1.7	1.6
19.....	1.55	1.55	1.6	5.35	3.6	2.5	2.9	2.4	2.8	1.9	1.7	1.6
20.....	1.55	1.55	1.55	3.35	3.55	2.5	2.9	2.35	2.65	1.9	1.7	1.6
21.....	1.55	1.55	1.55	3.15	4.45	3.4	2.9	2.3	2.6	1.9	1.7	1.6
22.....	1.55	1.55	1.55	3.1	3.95	4.4	2.9	2.3	2.55	1.85	1.7	1.6
23.....	1.55	1.55	1.55	3.0	3.65	4.15	3.05	2.25	2.5	1.85	1.7	1.6
24.....	1.55	1.5	1.55	2.9	3.8	6.5	3.05	2.2	2.4	1.85	1.7	1.6
25.....	1.55	1.55	1.55	2.7	3.4	6.45	3.1	2.25	2.4	1.85	1.65	1.6
26.....	1.55	1.55	1.55	2.6	3.2	6.3	3.0	6.6	2.4	1.85	1.65	1.6
27.....	1.55	1.55	1.55	2.4	3.6	5.2	2.95	6.25	2.45	1.8	1.65	1.6
28.....	1.55	1.55	1.55	2.2	3.4	4.4	2.95	5.3	2.4	1.8	1.65	1.6
29.....	1.55	1.55	1.55	2.1	.....	4.0	2.9	4.5	2.35	1.8	1.65	1.6
30.....	1.55	1.55	1.55	2.0	.....	5.25	2.9	4.1	2.3	1.8	1.65	1.6
31.....	1.5	.....	1.55	1.9	.....	7.4	.....	3.7	.....	1.8	1.65	.....

Daily gage height, in feet, of McCloud River near Gregory, Cal., for 1902-1908—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1906-7.												
1.	1.6	1.55	1.55	2.6	7.35	3.35	3.9	2.9	2.4	1.9	1.7	1.6
2.	1.6	1.6	1.55	2.4	9.1	3.15	4.2	2.8	2.4	1.9	1.7	1.6
3.	1.6	1.7	1.55	2.55	7.6	2.95	4.05	2.8	2.35	1.9	1.7	1.6
4.	1.6	2.35	1.55	4.4	7.6	2.8	4.0	2.75	2.35	1.9	1.7	1.6
5.	1.6	1.75	1.5	3.2	6.9	2.9	4.05	2.75	2.35	1.9	1.7	1.6
6.	1.6	1.6	1.5	2.95	6.7	3.05	4.3	2.75	2.35	1.9	1.7	1.6
7.	1.6	1.6	1.5	2.9	5.15	2.9	4.55	2.7	2.3	1.9	1.7	1.6
8.	1.6	1.55	1.65	2.55	4.4	2.9	4.45	2.7	2.3	1.85	1.7	1.6
9.	1.6	1.55	2.0	2.15	4.0	3.05	4.5	2.7	2.2	1.85	1.75	1.6
10.	1.55	1.55	3.45	2.0	3.65	3.3	4.6	2.7	2.2	1.85	1.7	1.6
11.	1.55	1.55	3.75	2.0	3.35	3.65	4.6	2.95	2.5	1.85	1.7	1.6
12.	1.55	1.55	2.45	2.0	3.2	3.4	4.65	2.8	2.45	1.8	1.7	1.6
13.	1.55	1.55	2.05	2.0	3.1	3.15	4.55	2.6	2.3	1.8	1.7	1.6
14.	1.55	1.55	1.9	2.0	2.5	2.95	4.5	2.6	2.2	1.8	1.65	1.6
15.	1.55	1.55	1.85	1.9	2.9	2.8	4.3	2.55	2.2	1.8	1.65	1.6
16.	1.55	1.55	1.85	1.9	2.8	2.8	4.05	2.5	2.15	1.8	1.65	1.6
17.	1.55	1.55	1.8	1.85	2.9	4.0	3.7	2.55	2.1	1.8	1.65	1.6
18.	1.55	1.55	1.7	1.85	2.9	9.4	3.7	2.55	2.05	1.8	1.65	1.6
19.	1.55	1.55	1.7	1.85	2.8	12.0	3.7	3.0	2.05	1.8	1.65	1.6
20.	1.55	1.55	1.7	1.8	2.7	10.65	3.6	2.9	2.05	1.8	1.65	1.6
21.	1.55	1.55	1.7	1.75	2.7	7.5	3.5	2.7	2.0	1.8	1.65	1.6
22.	1.55	1.55	1.7	1.7	2.95	5.9	3.4	2.7	2.0	1.8	1.65	1.6
23.	1.55	1.55	1.7	1.7	3.15	5.5	3.4	2.5	2.0	1.75	1.65	1.6
24.	1.55	1.55	1.7	1.8	3.5	4.9	3.4	2.5	2.0	1.75	1.65	1.6
25.	1.55	1.55	2.7	2.0	5.1	4.55	3.3	2.45	2.0	1.75	1.6	1.6
26.	1.55	1.55	4.7	2.0	4.5	3.95	3.3	2.4	2.0	1.75	1.6	1.6
27.	1.55	1.55	4.35	2.2	3.85	3.8	3.2	2.4	1.95	1.75	1.6	1.55
28.	1.55	1.55	3.45	4.2	3.6	3.8	3.2	2.4	1.95	1.7	1.6	1.55
29.	1.55	1.55	2.9	6.2	.....	3.75	3.0	2.4	1.95	1.7	1.6	1.55
30.	1.55	1.55	3.1	4.9	.....	3.7	2.9	2.4	1.95	1.7	1.6	1.55
31.	1.55	.....	2.85	8.65	.....	3.7	.....	2.4	.....	1.7	1.6	.....
1907-8.												
1.	1.55	1.6	1.55	3.0	2.1	2.7	2.2	2.5	2.0	.....	.....	.....
2.	1.55	1.55	1.55	2.6	2.1	2.75	2.1	2.5	2.0	.....	.....	.....
3.	1.55	1.55	1.55	2.3	2.1	2.65	2.1	2.4	2.0	.....	.....	.....
4.	1.55	1.55	1.6	2.4	2.15	2.4	2.2	2.4	1.9	.....	.....	.....
5.	1.55	1.55	1.55	2.25	2.35	2.3	2.2	2.3	1.95	.....	.....	.....
6.	1.55	1.55	1.7	2.1	3.5	2.2	2.2	2.25	1.95	.....	.....	.....
7.	1.55	1.55	2.1	1.9	4.25	2.2	2.2	2.35	1.95	.....	.....	.....
8.	1.55	1.55	2.7	1.9	3.75	2.1	2.15	2.3	1.95	.....	.....	.....
9.	1.55	1.55	2.6	1.9	4.1	2.1	2.2	2.3	1.9	.....	.....	.....
10.	1.55	1.55	2.7	1.9	3.6	2.25	2.3	2.2	1.9	.....	.....	.....
11.	1.55	1.55	2.2	1.85	3.1	2.4	2.4	2.1	1.9	.....	.....	.....
12.	1.55	1.55	1.9	1.85	2.8	2.45	2.5	2.1	1.9	.....	.....	1.2
13.	1.55	1.55	2.2	1.95	2.55	2.45	2.6	2.1	1.9	.....	.....	1.2
14.	1.55	1.55	1.8	2.95	2.4	2.5	2.5	2.3	1.9	.....	.....	1.2
15.	1.55	1.55	1.8	2.8	2.4	2.65	2.8	2.2	1.9	.....	.....	1.2
16.	1.55	1.55	1.7	2.35	2.3	2.85	2.9	2.2	1.9	.....	.....	1.2
17.	1.55	1.55	1.7	2.2	2.2	3.05	2.8	2.1	1.8	.....	.....	1.3
18.	1.55	1.55	1.6	2.55	2.15	2.95	2.6	2.25	1.8	.....	.....	1.3
19.	1.55	1.55	1.6	3.4	2.1	2.75	2.7	2.3	1.8	.....	.....	1.35
20.	1.55	1.55	1.6	4.95	2.1	2.6	2.85	2.2	1.85	.....	.....	1.35
21.	1.55	1.55	1.6	4.6	2.1	2.6	2.8	2.2	1.8	.....	.....	1.3
22.	1.55	1.55	1.6	3.2	2.1	2.6	2.75	2.2	1.8	.....	.....	1.3
23.	1.55	1.55	1.6	2.75	2.05	2.6	2.8	2.15	1.75	.....	.....	1.3
24.	1.55	1.55	1.6	2.75	2.0	2.6	2.8	2.15	1.7	.....	.....	1.3
25.	1.55	1.55	1.6	2.6	2.0	2.55	2.8	2.2	1.7	.....	.....	1.3
26.	1.6	1.55	2.35	2.5	2.05	2.55	2.7	2.15	1.7	.....	.....	1.3
27.	1.65	1.55	2.2	2.4	2.2	2.4	2.6	2.15	1.7	.....	.....	1.3
28.	1.6	1.55	1.9	2.25	2.35	2.4	2.5	2.1	1.6	.....	.....	1.3
29.	1.6	1.55	1.95	2.2	2.5	2.3	2.5	2.1	1.6	.....	.....	1.3
30.	1.65	1.55	2.4	2.1	.....	2.3	2.5	2.1	1.6	.....	.....	1.3
31.	1.6	.....	3.1	2.05	.....	2.25	.....	2.0	.....	.....	.....	1.3

Daily discharge, in second-feet, of McCloud River near Gregory, Cal., for 1902-1908.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1902-3. <sup>a</sup>												
1.....	1,340	1,310	1,610	2,000	2,580	2,090	6,060	2,140	1,650	1,470	1,350	1,310
2.....	1,340	1,310	1,580	1,950	2,350	2,040	4,990	2,140	1,650	1,400	1,350	1,310
3.....	1,310	1,310	1,540	1,860	2,240	2,240	4,120	2,140	1,650	1,470	1,350	1,310
4.....	1,310	1,310	1,540	1,770	2,140	2,240	3,700	2,240	1,610	1,400	1,350	1,310
5.....	1,310	1,310	1,610	1,770	2,090	2,140	3,460	2,190	1,610	1,470	1,350	1,310
6.....	1,280	1,340	1,580	1,770	2,040	2,090	3,230	2,190	1,610	1,400	1,350	1,310
7.....	1,260	1,400	2,580	1,690	2,090	2,040	2,960	2,140	1,610	1,470	1,330	1,310
8.....	1,280	3,860	3,300	1,690	1,950	2,140	2,960	2,040	1,580	1,400	1,330	1,310
9.....	1,280	13,000	3,230	1,690	1,950	2,040	2,960	2,040	1,580	1,400	1,330	1,310
10.....	1,280	9,790	5,410	1,650	1,900	2,040	2,820	2,040	1,580	1,400	1,330	1,310
11.....	1,280	4,000	5,950	1,650	1,950	2,350	2,700	2,040	1,580	1,340	1,330	1,310
12.....	1,280	2,960	4,780	1,610	2,000	4,300	2,580	2,000	1,580	1,400	1,330	1,310
13.....	1,280	2,820	3,780	1,610	1,950	4,300	2,520	2,000	1,580	1,340	1,330	1,310
14.....	1,310	2,700	2,960	1,580	1,950	5,950	2,460	1,950	1,540	1,400	1,330	1,310
15.....	1,310	2,460	2,580	1,580	1,860	4,680	2,350	1,950	1,540	1,340	1,310	1,310
16.....	1,310	2,400	2,400	1,540	1,810	3,780	2,350	1,860	1,540	1,340	1,310	1,310
17.....	1,280	2,890	2,240	1,580	1,770	3,380	2,350	1,800	1,540	1,340	1,310	1,310
18.....	1,280	4,000	2,140	1,540	1,770	2,760	2,300	1,860	1,540	1,340	1,310	1,310
19.....	1,280	3,540	2,040	1,540	1,770	2,580	2,240	1,770	1,540	1,340	1,310	1,310
20.....	1,280	2,640	1,950	1,540	1,770	2,400	2,240	1,770	1,500	1,340	1,310	1,310
21.....	1,340	2,300	1,900	1,770	1,770	2,300	2,240	1,770	1,470	1,340	1,310	1,310
22.....	1,400	2,140	1,900	2,700	1,860	2,300	2,300	1,730	1,470	1,340	1,310	1,310
23.....	1,440	2,040	1,950	3,380	2,300	2,240	2,350	1,770	1,470	1,340	1,310	1,310
24.....	1,770	1,950	2,040	6,960	2,350	2,350	2,350	1,690	1,470	1,340	1,310	1,280
25.....	1,650	1,860	2,140	14,600	2,300	2,820	2,350	1,690	1,470	1,340	1,310	1,280
26.....	1,540	1,770	2,960	7,440	2,240	3,380	2,350	1,690	1,470	1,340	1,310	1,280
27.....	1,400	1,690	2,890	5,410	2,140	3,780	2,300	1,690	1,470	1,340	1,310	1,280
28.....	1,400	1,690	2,520	4,030	2,090	8,700	2,240	1,690	1,470	1,340	1,310	1,280
29.....	1,340	1,610	2,300	3,380	.....	12,100	2,240	1,690	1,470	1,340	1,310	1,280
30.....	1,340	1,610	2,140	3,090	.....	10,100	2,240	1,650	1,470	1,340	1,310	1,280
31.....	1,340	.....	2,040	2,820	.....	8,180	.....	1,650	.....	1,340	1,310	.....
1903-4.												
1.....	1,310	1,280	2,040	1,770	1,540	8,440	4,780	3,860	2,890	1,860	1,610	1,500
2.....	1,330	1,280	1,880	1,690	1,540	11,800	4,210	4,120	2,640	1,860	1,610	1,500
3.....	1,350	1,350	1,690	1,610	1,470	8,700	5,840	3,860	2,580	1,860	1,610	1,500
4.....	1,340	1,400	1,630	1,610	1,610	8,440	5,960	3,860	2,580	1,860	1,610	1,500
5.....	1,310	1,330	1,610	1,610	1,610	6,500	4,890	3,860	2,520	1,860	1,610	1,500
6.....	1,280	1,310	1,540	1,610	1,610	5,730	4,780	3,700	2,460	1,860	1,610	1,500
7.....	1,280	1,310	1,460	1,580	1,580	14,600	4,680	3,800	2,460	1,820	1,610	1,470
8.....	1,280	1,310	1,480	1,540	1,540	41,500	4,890	3,800	2,460	1,820	1,610	1,470
9.....	1,280	1,310	1,520	1,540	1,540	18,000	4,780	3,700	2,400	1,820	1,610	1,470
10.....	1,280	1,340	1,520	1,540	1,540	18,500	5,730	3,700	2,350	1,820	1,610	1,470
11.....	1,400	1,440	1,470	1,610	1,610	8,060	6,060	3,860	2,350	1,820	1,610	1,470
12.....	1,650	1,540	1,470	1,610	2,580	6,280	6,500	4,030	2,300	1,770	1,610	1,470
13.....	1,440	1,650	1,520	1,540	2,460	5,840	6,500	4,300	2,240	1,770	1,580	1,470
14.....	1,310	8,840	1,580	1,580	2,300	6,280	5,950	4,400	2,240	1,770	1,580	1,470
15.....	1,310	3,780	1,650	1,610	13,000	7,440	7,080	4,490	2,190	1,770	1,580	1,470
16.....	1,310	1,610	1,860	1,820	40,000	8,440	7,440	4,400	2,140	1,730	1,580	1,500
17.....	1,310	1,550	2,190	1,950	13,000	8,700	6,620	4,120	2,140	1,730	1,580	1,470
18.....	1,310	1,540	2,020	2,040	4,890	8,970	5,620	3,860	2,140	1,730	1,580	1,470
19.....	1,310	2,000	1,880	1,900	3,780	9,510	6,500	3,540	2,140	1,730	1,540	1,470
20.....	1,310	5,200	2,240	1,950	2,830	10,500	7,320	3,540	2,090	1,730	1,540	1,470
21.....	1,280	14,900	2,090	1,860	3,020	10,900	6,170	3,460	2,040	1,690	1,540	1,470
22.....	1,280	12,200	2,260	1,690	10,800	11,200	5,730	3,620	2,040	1,690	1,540	1,540
23.....	1,280	9,240	2,160	1,610	10,900	7,930	5,100	3,700	1,950	1,690	1,540	1,540
24.....	1,280	6,170	2,140	1,610	8,570	4,400	4,400	3,700	1,950	1,690	1,540	1,540
25.....	1,280	8,120	2,120	1,540	7,440	3,380	4,210	3,540	1,900	1,690	1,540	1,610
26.....	1,280	4,400	2,060	1,540	5,730	3,380	4,400	3,380	1,900	1,650	1,540	1,540
27.....	1,280	3,700	2,060	1,500	8,970	3,380	5,200	3,380	1,860	1,610	1,540	1,540
28.....	1,280	2,300	1,970	1,540	8,440	4,300	4,400	3,300	1,800	1,610	1,540	1,500
29.....	1,280	2,190	1,930	1,540	8,180	8,570	4,300	3,230	1,860	1,610	1,500	1,500
30.....	1,280	.....	1,860	1,540	.....	6,280	4,120	3,160	1,860	1,610	1,500	1,500
31.....	1,280	.....	1,790	1,540	.....	5,100	.....	3,090	.....	1,610	1,500	.....

<sup>a</sup> The following discharges were recorded in Sept., 1902: Sept. 23, 1,310 sec.-ft.; Sept. 24, 1,340 sec.-ft.; Sept. 25, 1,340 sec.-ft.; Sept. 26, 1,340 sec.-ft.; Sept. 27, 1,310 sec.-ft.; Sept. 28, 1,340 sec.-ft.; Sept. 29, 1,340 sec.-ft.; Sept. 30, 1,310 sec.-ft.

Daily discharge, in second-feet, of McCloud River near Gregory, Cal., for 1902-1908—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1904-5.												
1.....	1,500	1,610	1,650	2,580	3,940	2,580	3,230	2,460	1,770	1,540	1,440	1,370
2.....	1,500	1,610	1,610	2,240	5,200	2,460	3,090	2,350	1,860	1,540	1,440	1,370
3.....	1,500	1,610	1,610	2,090	3,940	2,460	3,020	2,300	1,770	1,540	1,440	1,370
4.....	1,500	1,610	1,610	1,950	3,730	2,400	2,900	2,240	1,770	1,540	1,440	1,370
5.....	1,500	1,580	1,610	1,860	3,540	2,350	2,820	2,140	1,770	1,540	1,400	1,370
6.....	1,500	1,540	1,610	1,860	3,540	2,350	2,700	2,240	1,730	1,540	1,440	1,370
7.....	1,610	1,540	1,650	1,820	3,380	2,300	2,580	2,350	1,730	1,540	1,400	1,370
8.....	1,610	1,540	1,650	1,770	3,090	2,300	2,520	2,400	1,690	1,540	1,400	1,370
9.....	2,300	1,540	1,690	1,690	2,900	2,240	2,400	2,300	1,690	1,540	1,400	1,370
10.....	2,460	1,500	1,770	1,690	2,820	2,240	2,350	2,350	1,690	1,540	1,400	1,370
11.....	9,930	1,500	1,690	1,690	2,700	2,350	2,350	2,350	1,690	1,540	1,400	1,370
12.....	8,310	1,500	1,690	1,650	2,640	2,760	2,240	2,240	1,690	1,500	1,400	1,370
13.....	6,960	1,500	1,690	1,730	2,350	5,410	2,240	2,240	1,650	1,500	1,400	1,370
14.....	6,060	1,500	1,690	2,820	2,240	10,900	2,190	2,100	1,650	1,500	1,400	1,370
15.....	4,780	1,580	1,690	3,020	2,140	6,840	2,240	2,140	1,610	1,500	1,400	1,370
16.....	3,940	1,580	1,690	3,090	2,140	5,410	2,460	2,140	1,610	1,470	1,400	1,370
17.....	3,090	2,140	1,650	2,820	2,040	4,490	2,240	2,140	1,610	1,470	1,400	1,370
18.....	2,820	2,140	1,650	2,700	2,140	4,210	2,400	2,140	1,610	1,470	1,400	1,370
19.....	1,690	1,770	1,610	2,700	3,230	4,990	2,580	2,040	1,610	1,470	1,400	1,370
20.....	1,690	1,690	1,610	2,640	6,960	5,620	2,520	2,040	1,610	1,470	1,400	1,370
21.....	1,650	1,690	1,610	4,400	5,630	6,730	2,460	1,950	1,580	1,470	1,400	1,370
22.....	1,610	1,690	1,580	14,800	4,030	5,620	2,400	1,900	1,580	1,470	1,400	1,370
23.....	1,610	1,650	1,610	12,700	3,540	4,890	2,350	1,950	1,580	1,470	1,400	1,370
24.....	1,610	1,650	2,040	9,240	3,160	4,210	2,350	1,860	1,580	1,470	1,400	1,370
25.....	1,610	1,610	1,820	10,400	2,820	3,860	2,350	1,860	1,580	1,470	1,400	1,370
26.....	1,610	1,610	1,690	6,620	2,820	4,780	2,350	1,860	1,580	1,440	1,400	1,370
27.....	1,580	1,690	1,690	4,680	2,700	4,210	2,350	1,860	1,540	1,440	1,370	1,370
28.....	1,540	1,690	1,650	3,860	2,580	4,030	2,240	1,860	1,540	1,440	1,370	1,370
29.....	1,540	1,650	1,730	3,300	.....	4,030	2,240	1,860	1,540	1,440	1,370	1,370
30.....	1,610	1,690	4,580	3,020	.....	3,540	2,350	1,860	.....	1,440	1,370	1,370
31.....	1,580	.....	4,030	3,020	.....	3,540	.....	1,770	.....	1,440	1,370	.....
1905-6.												
1.....	1,370	1,340	1,370	1,400	1,580	3,090	7,680	2,520	3,540	1,950	1,540	1,400
2.....	1,370	1,340	1,370	1,400	1,580	3,090	5,410	2,460	3,540	1,900	1,540	1,400
3.....	1,370	1,340	1,370	1,370	1,580	3,460	4,490	2,460	5,520	1,900	1,540	1,400
4.....	1,370	1,340	1,370	1,370	1,540	3,090	3,780	2,460	10,100	1,860	1,540	1,400
5.....	1,370	1,340	1,370	1,370	1,540	2,700	3,380	2,400	7,800	1,860	1,540	1,400
6.....	1,370	1,340	1,370	1,370	1,540	2,410	3,230	2,350	7,080	1,820	1,540	1,400
7.....	1,400	1,340	1,370	1,370	1,500	2,460	3,090	2,350	5,410	1,800	1,540	1,400
8.....	1,370	1,340	1,370	1,370	1,500	2,520	3,090	2,350	4,400	1,820	1,540	1,400
9.....	1,370	1,340	1,370	1,370	1,540	2,580	3,090	2,300	4,030	1,770	1,500	1,400
10.....	1,370	1,340	1,370	1,400	1,610	2,520	3,090	2,300	3,860	1,770	1,500	1,400
11.....	1,370	1,340	1,370	1,470	1,610	2,580	2,960	2,300	3,540	1,730	1,470	1,400
12.....	1,370	1,340	1,370	2,460	1,610	4,030	2,760	2,240	3,300	1,690	1,470	1,400
13.....	1,370	1,340	1,370	1,900	1,690	3,380	2,640	2,140	3,090	1,690	1,470	1,400
14.....	1,370	1,340	1,370	1,770	2,960	2,890	2,580	2,400	2,890	1,690	1,470	1,400
15.....	1,370	1,340	1,370	2,190	4,120	2,640	2,580	2,520	2,890	1,690	1,470	1,400
16.....	1,370	1,340	1,370	9,100	3,160	2,350	2,580	2,240	2,820	1,650	1,470	1,400
17.....	1,370	1,340	1,370	2,820	2,520	2,240	2,580	2,140	2,640	1,650	1,470	1,400
18.....	1,370	1,370	1,370	8,570	2,960	2,190	2,580	2,040	2,520	1,650	1,470	1,400
19.....	1,370	1,370	1,400	7,080	3,540	2,140	2,580	2,040	2,460	1,610	1,470	1,400
20.....	1,370	1,370	1,370	3,160	3,460	2,140	2,580	2,000	2,300	1,610	1,470	1,400
21.....	1,370	1,370	1,370	2,890	5,100	3,230	2,580	1,950	2,240	1,610	1,470	1,400
22.....	1,370	1,370	1,370	2,820	4,120	4,990	2,580	1,950	2,190	1,580	1,470	1,400
23.....	1,370	1,370	1,370	2,700	3,620	4,490	2,760	1,900	2,140	1,580	1,470	1,400
24.....	1,370	1,340	1,370	2,580	3,860	7,440	2,760	1,860	2,040	1,580	1,470	1,400
25.....	1,370	1,370	1,370	2,350	3,230	9,930	2,820	1,900	2,040	1,580	1,440	1,400
26.....	1,370	1,370	1,370	2,240	2,960	9,510	2,700	1,400	2,040	1,580	1,440	1,400
27.....	1,370	1,370	1,370	2,040	3,540	6,730	2,640	9,380	2,090	1,540	1,440	1,400
28.....	1,370	1,370	1,370	1,860	3,230	4,990	2,640	6,960	2,040	1,540	1,440	1,400
29.....	1,370	1,370	1,370	1,770	.....	4,210	2,580	5,200	2,000	1,540	1,440	1,400
30.....	1,370	1,370	1,370	1,690	.....	6,840	2,580	4,400	1,950	1,540	1,440	1,400
31.....	1,340	.....	1,370	1,610	.....	12,700	.....	3,700	.....	1,540	1,440	.....

Daily discharge, in second-feet, of McCloud River near Gregory, Cal., for 1902-1908—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1906-7.												
1.	1,400	1,370	1,370	2,240	12,600	3,160	4,030	2,580	2,040	1,610	1,470	1,400
2.	1,400	1,400	1,370	2,040	18,400	2,890	4,580	2,460	2,040	1,610	1,470	1,400
3.	1,400	1,470	1,370	2,190	13,300	2,640	4,300	2,460	2,000	1,610	1,470	1,400
4.	1,400	2,000	1,370	4,990	13,300	2,460	4,210	2,400	2,000	1,610	1,470	1,400
5.	1,400	1,500	1,340	2,960	11,200	2,580	4,300	2,400	2,000	1,610	1,470	1,400
6.	1,400	1,400	1,340	2,640	10,600	2,760	4,780	2,400	2,000	1,610	1,470	1,400
7.	1,400	1,400	1,340	2,580	6,620	2,580	5,300	2,350	1,950	1,610	1,470	1,400
8.	1,400	1,370	1,440	2,190	4,990	2,580	5,100	2,350	1,950	1,580	1,470	1,400
9.	1,400	1,370	1,690	1,820	4,210	2,760	5,200	2,350	1,860	1,580	1,500	1,400
10.	1,370	1,370	3,300	1,690	3,620	3,090	5,410	2,350	1,860	1,580	1,470	1,400
11.	1,370	1,370	3,780	1,690	3,160	3,620	5,410	2,640	2,140	1,580	1,470	1,400
12.	1,370	1,370	2,090	1,690	2,960	3,230	5,520	2,460	2,030	1,540	1,470	1,400
13.	1,370	1,370	1,730	1,690	2,820	2,890	5,300	2,240	1,950	1,540	1,470	1,400
14.	1,370	1,370	1,610	1,690	2,140	2,640	5,200	2,240	1,860	1,540	1,440	1,400
15.	1,370	1,370	1,580	1,610	2,580	2,460	4,780	2,190	1,860	1,540	1,440	1,400
16.	1,370	1,370	1,580	1,610	2,460	2,460	4,300	2,140	1,820	1,540	1,440	1,400
17.	1,370	1,370	1,540	1,580	2,580	4,210	3,860	2,190	1,770	1,540	1,440	1,400
18.	1,370	1,370	1,470	1,580	2,580	19,400	3,700	2,190	1,730	1,540	1,440	1,400
19.	1,370	1,370	1,470	1,580	2,460	30,000	3,700	2,700	1,730	1,540	1,440	1,400
20.	1,370	1,370	1,470	1,540	2,350	24,300	3,540	2,580	1,730	1,540	1,440	1,400
21.	1,370	1,370	1,470	1,500	2,350	13,000	3,380	2,350	1,690	1,540	1,440	1,400
22.	1,370	1,370	1,470	1,470	2,640	8,440	3,230	2,350	1,690	1,540	1,440	1,400
23.	1,370	1,370	1,470	1,470	3,890	7,440	3,230	2,140	1,690	1,500	1,440	1,400
24.	1,370	1,370	1,470	1,540	3,380	6,060	3,230	2,140	1,690	1,500	1,440	1,400
25.	1,370	1,370	2,350	1,690	6,500	5,300	3,090	2,090	1,690	1,500	1,400	1,400
26.	1,370	1,370	5,620	1,690	5,200	4,120	3,090	2,040	1,690	1,500	1,400	1,400
27.	1,370	1,370	4,890	1,860	3,940	3,860	2,960	2,040	1,650	1,500	1,400	1,370
28.	1,370	1,370	3,300	4,580	3,580	3,860	2,960	2,040	1,650	1,470	1,400	1,370
29.	1,370	1,370	2,580	9,140	.....	3,780	2,700	2,040	1,650	1,470	1,400	1,370
30.	1,370	1,370	2,820	6,060	.....	3,700	2,580	2,040	1,650	1,470	1,400	1,370
31.	1,370	.....	2,520	16,800	.....	3,700	.....	2,040	.....	1,470	1,400	.....
1907-8.												
1.	1,370	1,400	1,370	2,700	1,770	2,350	1,880	2,140	1,690	.....	.....	.....
2.	1,370	1,370	1,370	2,240	1,770	2,400	1,770	2,140	1,690	.....	.....	.....
3.	1,370	1,370	1,370	1,950	1,770	2,300	1,770	2,040	1,690	.....	.....	.....
4.	1,370	1,370	1,400	2,040	1,820	2,140	1,860	2,040	1,610	.....	.....	.....
5.	1,370	1,370	1,370	1,900	2,000	1,950	1,860	1,950	1,650	.....	.....	.....
6.	1,370	1,370	1,470	1,770	3,380	1,860	1,860	1,900	1,650	.....	.....	.....
7.	1,370	1,370	1,770	1,610	4,680	1,860	1,860	2,000	1,650	.....	.....	.....
8.	1,370	1,370	2,350	1,610	3,780	1,770	1,820	1,950	1,650	.....	.....	.....
9.	1,370	1,370	2,240	1,610	4,400	1,770	1,860	1,950	1,610	.....	.....	.....
10.	1,370	1,370	2,350	1,610	3,540	1,900	1,950	1,860	1,610	.....	.....	.....
11.	1,370	1,370	1,860	1,580	2,820	2,040	2,040	1,770	1,610	.....	.....	.....
12.	1,370	1,370	1,610	1,580	2,460	2,090	2,140	1,770	1,610	.....	.....	1,180
13.	1,370	1,370	1,860	1,650	2,190	2,090	2,240	1,770	1,610	.....	.....	1,180
14.	1,370	1,370	1,540	2,640	2,040	2,140	2,300	1,950	1,610	.....	.....	1,180
15.	1,370	1,370	1,540	2,460	2,040	2,300	2,460	1,860	1,610	.....	.....	1,180
16.	1,370	1,370	1,470	2,000	1,950	2,520	2,580	1,860	1,610	.....	.....	1,180
17.	1,370	1,370	1,470	1,860	1,860	2,760	2,460	1,770	1,540	.....	.....	1,230
18.	1,370	1,370	1,400	2,190	1,820	2,640	2,240	1,900	1,540	.....	.....	1,230
19.	1,370	1,370	1,400	3,230	1,770	2,400	2,350	1,950	1,540	.....	.....	1,260
20.	1,370	1,370	1,400	6,170	1,770	2,240	2,520	1,860	1,580	.....	.....	1,260
21.	1,370	1,370	1,400	5,410	1,770	2,240	2,460	1,860	1,540	.....	.....	1,230
22.	1,370	1,370	1,400	2,960	1,770	2,240	2,400	1,860	1,540	.....	.....	1,230
23.	1,370	1,370	1,400	2,400	1,730	2,240	2,460	1,820	1,500	.....	.....	1,230
24.	1,370	1,370	1,400	2,400	1,690	2,240	2,460	1,820	1,470	.....	.....	1,230
25.	1,370	1,370	1,400	2,240	1,690	2,190	2,460	1,860	1,470	.....	.....	1,230
26.	1,400	1,370	2,000	2,140	1,730	2,190	2,350	1,820	1,470	.....	.....	1,230
27.	1,440	1,370	1,860	2,040	1,860	2,040	2,240	1,820	1,470	.....	.....	1,230
28.	1,400	1,370	1,610	1,900	2,000	2,040	2,140	1,770	1,400	.....	.....	1,230
29.	1,400	1,370	1,650	1,860	2,140	1,950	2,140	1,770	1,400	.....	.....	1,230
30.	1,440	1,370	2,040	1,770	.....	1,950	2,140	1,770	1,400	.....	.....	1,230
31.	1,400	.....	2,820	1,730	.....	1,900	.....	1,690	.....	.....	.....	1,230

NOTE.—Daily discharge 1902 to 1906 determined from a rating curve fairly well defined between 1,300 and 8,700 second-feet. Above 8,700 second-feet the curve is an extension and is only approximate.

## Monthly discharge of McCloud River near Gregory, Cal., for 1902-8.

[Drainage area, 608 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.	
1902-3.							
October.....	1,770	1,260	1,350	2.22	2.56	83,000	B.
November.....	13,000	1,310	2,830	4.65	5.19	168,000	B.
December.....	5,950	1,540	2,570	4.23	4.88	158,000	B.
January.....	14,600	1,540	2,880	4.74	5.46	177,000	B.
February.....	2,580	1,770	2,040	3.36	3.50	113,000	B.
March.....	12,100	2,040	3,740	6.15	7.09	230,000	B.
April.....	6,060	2,240	2,810	4.62	5.16	167,000	B.
May.....	2,240	1,650	1,910	3.14	3.62	117,000	B.
June.....	1,650	1,470	1,540	2.53	2.82	91,600	B.
July.....	1,470	1,340	1,370	2.25	2.59	84,200	B.
August.....	1,350	1,310	1,320	2.17	2.50	81,200	B.
September.....	1,310	1,280	1,300	2.14	2.39	77,400	B.
The year.....	14,600	1,260	2,140	3.52	47.76	1,550,000	
1903-4.							
October.....	1,650	1,280	1,320	2.17	2.50	81,200	B.
November.....	14,900	1,280	3,430	5.64	6.29	204,000	B.
December.....	2,260	1,460	1,830	3.01	3.47	113,000	R.
January.....	2,040	1,500	1,650	2.71	3.12	101,000	B.
February.....	40,000	1,470	6,000	9.87	10.64	345,000	A.
March.....	41,500	3,380	9,390	15.4	17.75	577,000	A.
April.....	7,440	4,120	5,470	9.00	10.04	325,000	A.
May.....	4,490	3,090	3,760	6.18	7.12	231,000	A.
June.....	2,890	1,860	2,220	3.65	4.07	132,000	B.
July.....	1,860	1,610	1,750	2.88	3.32	108,000	B.
August.....	1,610	1,500	1,570	2.58	2.97	96,500	B.
September.....	1,820	1,470	1,510	2.43	2.77	89,800	B.
The year.....	41,500	1,280	3,320	5.46	74.06	2,400,000	
1904-5.							
October.....	9,930	1,500	2,700	4.44	5.12	166,000	B.
November.....	2,140	1,500	1,640	2.70	3.01	97,600	B.
December.....	4,580	1,580	1,840	3.03	3.49	113,000	B.
January.....	14,800	1,650	3,890	6.40	7.38	239,000	A.
February.....	6,960	2,040	3,280	5.39	5.61	182,000	A.
March.....	10,900	2,240	4,070	6.69	7.71	250,000	A.
April.....	3,230	2,190	2,490	4.10	4.57	148,000	A.
May.....	2,460	1,770	2,110	3.47	4.00	130,000	A.
June.....	1,860	1,540	1,600	2.63	2.93	95,200	A.
July.....	1,540	1,440	1,490	2.45	2.82	91,600	A.
August.....	1,440	1,370	1,400	2.30	2.65	86,100	A.
September.....	1,370	1,370	1,370	2.25	2.51	81,500	A.
The year.....	14,800	1,370	2,320	3.82	51.80	1,680,000	
1905-6.							
October.....	1,400	1,340	1,370	2.25	2.64	84,200	A.
November.....	1,370	1,340	1,350	2.22	2.48	80,300	A.
December.....	1,400	1,370	1,370	2.25	2.64	84,200	A.
January.....	9,100	1,370	2,540	4.18	4.82	156,000	A.
February.....	5,100	1,500	2,600	4.28	4.46	144,000	A.
March.....	12,700	2,140	4,180	6.88	7.93	257,000	A.
April.....	7,680	2,580	3,110	5.12	5.71	185,000	A.
May.....	10,400	1,860	3,080	5.07	5.84	189,000	A.
June.....	10,100	1,950	3,480	5.72	6.38	207,000	A.
July.....	1,950	1,540	1,690	2.78	3.20	104,000	B.
August.....	1,540	1,440	1,480	2.43	2.80	91,000	B.
September.....	1,400	1,400	1,400	2.30	2.57	83,300	B.
The year.....	12,700	1,340	2,300	3.79	51.47	1,660,000	
1906-7.							
October.....	1,400	1,370	1,380	2.27	2.62	84,800	B.
November.....	2,000	1,370	1,400	2.30	2.57	83,300	B.
December.....	5,620	1,340	2,070	3.40	3.92	127,000	B.
January.....	16,800	1,470	2,880	4.74	5.46	177,000	A.
February.....	18,400	2,140	5,510	9.06	9.43	306,000	A.
March.....	30,000	2,460	6,000	9.87	11.4	369,000	A.
April.....	5,520	2,580	4,100	6.74	7.52	244,000	A.

Monthly discharge of McCloud River near Gregory, Cal., for 1902-8—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.							
May.....	2,640	2,040	2,290	3.77	4.35	141,000	A.
June.....	2,140	1,650	1,840	3.03	3.38	109,000	A.
July.....	1,610	1,470	1,550	2.55	2.94	95,300	A.
August.....	1,500	1,400	1,440	2.37	2.73	88,500	A.
September.....	1,400	1,370	1,400	2.30	2.57	83,300	A.
The year.....	30,000	1,370	2,660	4.37	58.89	1,910,000	
1907-8.							
October.....	1,440	1,370	1,380	2.27	2.62	84,800	A.
November.....	1,400	1,370	1,370	2.25	2.51	81,500	A.
December.....	2,820	1,370	1,660	2.73	3.15	102,000	A.
January.....	6,170	1,580	2,300	3.78	4.36	141,000	A.
February.....	4,680	1,690	2,280	3.75	4.04	131,000	A.
March.....	2,760	1,770	2,150	3.54	4.08	132,000	A.
April.....	2,580	1,770	2,170	3.57	3.98	129,000	A.
May.....	2,140	1,690	1,880	3.09	3.56	116,000	A.
June.....	1,690	1,400	1,570	2.58	2.88	93,400	A.
September 12-30.....	1,260	1,180	1,220	2.01	1.42	46,000	A.

NOTE.—Stationed discontinued June 30, 1908. September gage heights taken on account of extreme low-water conditions.

M' CLOUD RIVER AT BAIRD, CAL.

This station, which is located at the United States fishery at Baird, in the NW. ¼ sec. 23, T. 34 N., R. 4 W., about 2,000 feet below the mouth of Bailey Creek and about 2,000 feet above the mouth of Johns Creek, and about 2 miles above the mouth of the McCloud, was established December 22, 1910.

The discharge at this station plus the discharge of Pit River near Ydalpom, represents the discharge of Pit River at its mouth.

The gage is a vertical staff fastened to an alder tree on the right bank about 600 feet above the hatchery. The gage records are furnished by Capt. G. H. Lambson, superintendent of the fishery.

Discharge measurements are made from a boat about 100 feet below the gage until September 27, 1911, when a car and cable were installed at the gage.

Discharge measurements of McCloud River at Baird, 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. 17	W. V. Hardy.....		1,100	Sept. 27	G. T. Peekema.....	2.00	1,270
Dec. 22	F. G. Wood.....	2.13	1,320				
1911.				1912.			
April 1	G. T. Peekema.....	5.02	4,270	Jan. 25	Lasley Lee.....	8.00	9,260
May 23	.....do.....	4.57	3,260	Mar. 10	.....do.....	3.59	2,390

Daily gage height, in feet, of McCloud River at Baird, Cal., for 1910-1912.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.												
1.				1.97	6.85	2.60	5.05	4.20	4.30	2.90	2.43	2.30
2.				1.95	6.50	2.62	5.15	4.19	4.30	2.87	2.41	2.30
3.				1.94	6.52	2.59	5.10	4.40	4.20	2.85	2.40	2.29
4.				1.91	6.52	2.79	5.00	4.90	4.22	2.83	2.40	2.28
5.				1.91	5.00	4.40	7.60	5.02	4.18	2.85	2.39	2.27
6.				1.91	4.90	7.45	7.00	4.80	4.08	2.85	2.39	2.26
7.				1.91	4.40	9.40	6.10	4.40	4.00	2.83	2.39	2.26
8.				1.91	4.10	7.45	5.65	4.39	3.92	2.78	2.38	2.26
9.				1.93	3.75	6.25	5.60	4.29	3.88	2.78	2.37	2.26
10.				1.94	3.60	5.40	5.85	4.10	3.80	2.75	2.37	2.27
11.				2.54	5.20	4.80	5.50	4.08	3.80	2.71	2.36	2.27
12.				2.12	5.30	4.50	5.15	4.09	3.80	2.70	2.36	2.27
13.				2.09	5.00	4.30	4.85	4.10	3.72	2.70	2.36	2.27
14.				2.09	4.30	4.10	4.60	4.01	3.72	2.69	2.36	2.27
15.				2.35	3.90	4.10	4.40	3.97	3.70	2.67	2.36	2.27
16.				2.29	3.60	4.09	4.30	4.10	3.62	2.65	2.36	2.26
17.				2.70	3.35	4.09	4.25	4.28	3.50	2.65	2.35	2.25
18.				2.29	3.25	4.05	4.15	5.30	3.50	2.68	2.35	2.24
19.				4.30	3.10	4.11	4.25	4.95	3.42	2.65	2.33	2.25
20.				5.20	2.95	4.19	4.18	4.60	3.38	2.65	2.32	2.25
21.				3.31	3.00	4.30	4.20	4.70	3.30	2.59	2.32	2.25
22.			2.13	3.10	2.90	4.50	4.25	4.70	3.27	2.57	2.32	2.24
23.			2.13	2.75	2.90	4.60	4.40	4.72	3.18	2.55	2.31	2.23
24.			2.10	2.30	2.82	4.90	4.50	4.54	3.18	2.52	2.31	2.21
25.			2.05	2.93	2.80	4.70	4.70	4.41	3.12	2.54	2.31	2.22
26.			2.03	3.52	2.78	4.45	4.90	4.30	3.08	2.51	2.31	2.29
27.			2.01	4.72	2.71	4.25	4.75	4.19	3.05	2.49	2.31	2.27
28.			2.00	5.80	2.68	4.15	4.45	4.10	3.00	2.47	2.30	2.25
29.			2.00	4.72	.....	4.10	4.30	4.10	2.98	2.45	2.30	2.22
30.			2.00	5.90	.....	4.60	4.21	4.12	2.95	2.45	2.30	2.20
31.			1.98	6.80	.....	4.90	.....	4.15	.....	2.45	2.30	.....
1911-12.												
1.	2.28	2.18	2.08	2.0	2.9	2.4	2.9	7.8	3.6	.....	.....	.....
2.	2.27	2.18	2.08	2.0	2.8	2.4	2.9	6.1	3.5	.....	.....	.....
3.	2.25	2.17	2.08	2.0	2.7	2.4	2.8	4.9	3.4	.....	.....	.....
4.	2.23	2.15	2.08	2.0	2.6	2.4	2.8	4.5	3.4	.....	.....	.....
5.	2.20	2.15	2.08	2.0	2.6	2.6	2.7	4.2	3.3	.....	.....	.....
6.	2.20	2.15	2.28	2.0	2.5	4.6	2.7	4.0	3.2	.....	.....	.....
8.	2.21	2.15	2.15	2.0	2.5	4.6	2.7	3.9	3.2	.....	.....	.....
8.	2.21	2.15	2.12	2.0	2.9	4.2	2.6	3.8	3.0	.....	.....	.....
9.	2.41	2.16	2.08	2.0	2.9	3.8	2.6	3.7	3.0	.....	.....	.....
10.	2.21	2.17	2.08	2.2	3.1	3.6	2.9	3.6	2.9	.....	.....	.....
11.	2.21	2.18	2.08	2.2	3.2	3.4	3.1	3.5	2.9	.....	.....	.....
12.	2.18	2.18	2.08	2.3	3.0	3.4	3.0	3.5	3.0	.....	.....	.....
13.	2.20	2.19	2.08	2.7	3.1	3.4	3.0	3.4	3.0	.....	.....	.....
14.	2.21	2.20	2.08	2.4	3.0	3.4	2.9	3.4	2.9	.....	.....	.....
15.	2.21	2.40	2.08	2.3	2.9	4.2	2.9	3.4	2.8	.....	.....	.....
16.	2.19	2.26	2.04	2.4	2.8	4.4	2.8	3.3	2.7	.....	.....	.....
17.	2.15	2.22	2.04	2.4	3.1	4.0	2.8	3.3	2.6	.....	.....	.....
18.	2.15	2.22	2.04	2.5	3.5	3.8	2.8	3.2	2.6	.....	.....	.....
19.	2.24	2.20	2.04	2.9	3.4	3.6	2.8	3.2	2.5	.....	.....	.....
20.	2.16	2.17	2.04	2.7	3.2	3.5	2.7	3.5	2.5	.....	.....	.....
21.	2.22	2.17	2.02	2.5	3.0	3.4	2.7	3.4	2.4	.....	.....	.....
22.	2.26	2.17	2.02	2.4	2.9	3.2	2.6	3.3	2.5	.....	.....	.....
23.	2.28	2.16	2.00	2.4	2.8	3.1	2.6	3.4	2.7	.....	.....	.....
24.	2.37	2.18	2.00	2.9	2.7	3.1	2.7	3.4	2.5	.....	.....	.....
25.	2.22	2.16	2.00	8.0	2.6	3.1	2.6	3.4	2.6	.....	.....	.....
26.	2.23	2.14	2.00	8.5	2.6	3.2	2.6	4.5	2.4	.....	.....	.....
27.	2.22	2.12	2.00	5.8	2.6	3.1	2.6	5.2	2.4	.....	.....	.....
28.	2.26	2.08	2.00	4.4	2.5	3.1	2.6	4.8	2.4	.....	.....	.....
29.	2.18	2.08	2.00	3.7	2.5	3.1	4.8	4.3	2.4	.....	.....	.....
30.	2.18	2.07	2.00	3.4	.....	3.0	5.9	4.0	2.3	.....	.....	.....
31.	2.18	.....	2.00	3.1	.....	2.9	.....	3.8	.....	.....	.....	.....

Daily discharge, in second-feet, of McCloud River at Baird, Cal., for 1910-1912.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.												
1				1,260	7,020	1,600	4,120	3,040	3,160	1,810	1,500	1,420
2				1,260	6,350	1,610	4,260	3,030	3,100	1,800	1,450	1,420
3				1,260	6,390	1,590	4,190	3,280	3,040	1,780	1,480	1,410
4				1,240	6,390	1,730	4,050	3,910	3,000	1,700	1,400	1,410
5				1,240	4,050	3,280	8,500	4,080	3,020	1,780	1,470	1,400
6				1,240	3,910	8,200	7,300	3,780	2,910	1,780	1,470	1,400
7				1,240	3,280	12,600	5,670	3,280	2,820	1,700	1,470	1,400
8				1,240	2,930	8,200	4,980	3,270	1,730	1,730	1,470	1,400
9				1,200	2,550	5,920	4,900	3,150	2,690	1,730	1,460	1,400
10				1,250	2,400	4,610	5,280	2,930	2,600	1,700	1,460	1,400
11				1,560	4,330	3,780	4,750	2,910	2,600	1,680	1,460	1,400
12				1,320	4,470	3,400	4,260	2,920	2,000	1,670	1,460	1,400
13				1,310	4,050	3,160	3,840	2,930	2,520	1,670	1,400	1,400
14				1,310	3,160	2,930	3,520	2,830	2,520	1,600	1,400	1,400
15				1,450	2,710	2,930	3,280	2,790	2,500	1,650	1,460	1,400
16				1,410	2,400	2,920	3,160	2,930	2,420	1,640	1,460	1,400
17				1,360	2,100	2,920	3,100	3,140	2,300	1,640	1,400	1,390
18				1,410	2,080	2,880	3,540	2,930	2,300	1,600	1,450	1,380
19				3,160	1,900	2,940	3,100	3,980	2,230	1,640	1,440	1,390
20				4,330	1,840	3,030	3,020	3,520	2,190	1,640	1,430	1,390
21				2,130	1,880	3,160	3,040	3,400	2,120	1,590	1,430	1,390
22			1,320	1,900	1,810	3,400	3,100	3,400	2,100	1,580	1,430	1,380
23			1,320	1,700	1,810	3,520	3,280	3,420	2,000	1,570	1,430	1,380
24			1,310	1,420	1,750	3,910	3,400	3,450	2,020	1,550	1,430	1,370
25			1,290	1,830	1,740	3,650	3,650	3,290	1,980	1,560	1,430	1,370
26			1,280	2,320	1,730	3,340	3,910	3,160	1,940	1,550	1,430	1,410
27			1,270	3,420	1,680	3,100	3,720	3,030	1,920	1,530	1,430	1,400
28			1,270	5,200	1,660	2,980	3,340	2,930	1,880	1,520	1,420	1,390
29			1,270	3,680	.....	2,930	3,100	2,930	1,870	1,510	1,420	1,370
30			1,270	5,350	.....	3,520	3,650	2,900	1,840	1,510	1,420	1,360
31			1,260	6,920	.....	3,910	.....	2,980	.....	1,510	1,420	.....
1911-12.												
1	1,410	1,350	1,300	1,270	1,810	1,480	1,810	8,900	2,400	.....	.....	.....
2	1,400	1,350	1,300	1,270	1,740	1,480	1,810	5,670	2,300	.....	.....	.....
3	1,390	1,340	1,300	1,270	1,670	1,480	1,740	3,910	2,210	.....	.....	.....
4	1,380	1,340	1,300	1,270	1,600	1,480	1,740	3,400	2,210	.....	.....	.....
5	1,360	1,340	1,300	1,270	1,600	1,600	1,670	3,040	2,120	.....	.....	.....
6	1,360	1,340	1,410	1,270	1,540	3,520	1,670	2,820	2,040	.....	.....	.....
7	1,370	1,340	1,340	1,270	1,540	3,520	1,670	2,710	2,040	.....	.....	.....
8	1,370	1,340	1,320	1,270	1,810	3,040	1,600	2,600	1,880	.....	.....	.....
9	1,490	1,340	1,300	1,270	1,810	2,600	1,600	2,500	1,880	.....	.....	.....
10	1,370	1,340	1,300	1,360	1,960	2,400	1,810	2,400	1,810	.....	.....	.....
11	1,370	1,350	1,300	1,360	2,040	2,210	1,960	2,300	1,810	.....	.....	.....
12	1,350	1,350	1,300	1,420	1,880	2,200	1,880	2,300	1,880	.....	.....	.....
13	1,360	1,360	1,300	1,670	1,960	2,210	1,880	2,210	1,880	.....	.....	.....
14	1,370	1,360	1,300	1,480	1,880	2,210	1,810	2,210	1,810	.....	.....	.....
15	1,370	1,480	1,300	1,420	1,810	3,040	1,810	2,210	1,740	.....	.....	.....
16	1,360	1,400	1,290	1,480	1,740	3,280	1,740	2,120	1,670	.....	.....	.....
17	1,340	1,370	1,290	1,480	1,960	2,820	1,740	2,120	1,600	.....	.....	.....
18	1,340	1,370	1,290	1,540	2,300	2,600	1,740	2,040	1,600	.....	.....	.....
19	1,380	1,370	1,290	1,810	2,210	2,400	1,740	2,040	1,540	.....	.....	.....
20	1,340	1,340	1,290	1,670	2,040	2,300	1,670	2,300	1,540	.....	.....	.....
21	1,370	1,340	1,280	1,540	2,120	2,210	1,670	2,210	1,480	.....	.....	.....
22	1,400	1,340	1,280	1,480	1,810	2,040	1,600	2,120	1,540	.....	.....	.....
23	1,410	1,340	1,270	1,480	1,740	1,960	1,600	2,210	1,670	.....	.....	.....
24	1,460	1,370	1,270	1,810	1,670	1,960	1,670	2,210	1,540	.....	.....	.....
25	1,370	1,340	1,270	9,300	1,600	1,960	1,600	2,210	1,600	.....	.....	.....
26	1,380	1,330	1,270	10,400	1,600	2,040	1,600	3,400	1,480	.....	.....	.....
27	1,370	1,320	1,270	5,200	1,600	1,960	1,600	4,330	1,480	.....	.....	.....
28	1,400	1,300	1,270	3,280	1,540	1,960	1,600	3,780	1,480	.....	.....	.....
29	1,350	1,300	1,270	2,500	1,540	1,960	3,780	3,160	1,480	.....	.....	.....
30	1,350	1,300	1,270	2,210	.....	1,880	5,350	2,820	1,420	.....	.....	.....
31	1,350	.....	1,270	1,960	.....	1,810	.....	2,600	.....	.....	.....	.....

NOTE.—Daily discharge determined from a well-defined rating curve.

## Monthly discharge of McCloud River at Baird, Cal., for 1910-1912.

[Drainage area, 665 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 22-31.....	1,320	1,260	1,290	1.94	0.72	25,600	A.
January.....	6,920	1,240	2,160	3.25	3.75	133,000	A.
February.....	7,020	1,660	3,160	4.75	4.95	176,000	A.
March.....	12,600	1,590	3,800	5.71	6.58	234,000	A.
April.....	8,500	2,980	4,060	6.11	6.82	242,000	A.
May.....	4,470	2,790	3,260	4.90	5.65	200,000	A.
June.....	3,160	1,840	2,440	3.67	4.10	145,000	A.
July.....	1,810	1,510	1,650	2.48	2.86	101,000	A.
August.....	1,500	1,420	1,450	2.18	2.51	89,200	B.
September.....	1,420	1,360	1,390	2.09	2.33	82,700	B.
The period.....						1,430,000	
1911-12.							
October.....	1,490	1,340	1,380	2.08	2.40	84,800	B.
November.....	1,480	1,300	1,350	2.03	2.26	80,300	B.
December.....	1,410	1,270	1,290	1.94	2.24	79,300	B.
January.....	10,400	1,270	2,230	3.35	3.86	137,000	A.
February.....	2,300	1,540	1,800	2.71	2.92	104,000	A.
March.....	3,520	1,480	2,250	3.38	3.90	138,000	A.
April.....	5,350	1,600	1,910	2.87	3.20	114,000	A.
May.....	8,900	2,040	2,930	4.41	5.08	180,000	A.
June.....	2,400	1,420	1,770	2.66	3.00	105,000	A.
The period.....						1,020,000	

## CLEAR CREEK NEAR SHASTA, CAL.

This station, which is located just below the suspension bridge in the NE.  $\frac{1}{4}$  SE.  $\frac{1}{4}$  sec. 17, T. 32 N., R. 6 W., at Whiskeytown and about 1,000 feet above Brandy and Whiskey creeks, and 5 miles northwest of Shasta, was established August 31, 1911.

Several small ditches divert water above the station.

The gage is a vertical staff on the right bank and is in three sections. The low-water section is fastened to a large rock 60 feet below the bridge; the medium and high-water sections are attached to an alder tree 30 feet below the bridge.

The bed of the stream is composed of rock and boulders and is permanent.

At medium and high stages discharge measurements are made from the bridge; low-stage measurements are made by wading.

## Discharge measurements of Clear Creek near Shasta, Cal., in 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>
Aug. 30	G. T. Peekema.....	2.98	21	Mar. 4	Lasley Lee.....	3.59	112
Sept. 27	.....do.....	3.18	43	May 7	.....do.....	5.04	722
				May 19	.....do.....	4.04	243
1912.							
Feb. 8	H. J. Tompkins.....	4.00	249				

Daily gage height, in feet, of Clear Creek near Shasta, Cal., for 1911-12.

Day.	Aug.	Sept.	Day.	Aug.	Sept.	Day.	Aug.	Sept.
1911.			1911.			1911.		
1.....		2.8	11.....		2.9	21.....		2.8
2.....		3.0	12.....		3.0	22.....		2.8
3.....		2.8	13.....		2.9	23.....		2.8
4.....		2.8	14.....		2.9	24.....		2.8
5.....		2.8	15.....		2.9	25.....		2.9
6.....		2.9	16.....		2.9	26.....		2.9
7.....		2.9	17.....		2.9	27.....		2.9
8.....		3.0	18.....		2.9	28.....		2.8
9.....		3.0	19.....		2.9	29.....		2.8
10.....		2.9	20.....		2.8	30.....	3.0	2.8
						31.....	3.0	.....

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.									
1.....	2.8	2.8	2.8	3.65	3.85	3.55	4.1	5.05	4.5
2.....	2.8	2.8	2.8	3.45	3.8	3.5	4.1	4.8	4.4
3.....	2.8	2.8	2.8	3.55	3.7	3.5	4.1	5.3	4.35
4.....	2.8	2.8	2.8	3.6	3.6	3.6	4.1	5.1	4.25
5.....	2.8	2.8	2.8	3.7	3.55	3.85	4.0	4.9	4.25
6.....	2.8	2.8	3.1	3.45	3.55	5.55	4.0	4.7	4.25
7.....	2.8	2.8	3.0	3.5	3.58	5.0	4.0	4.6	4.2
8.....	2.8	2.8	2.8	3.45	3.7	4.6	4.0	4.5	4.15
9.....	2.8	2.8	2.8	3.55	3.85	4.5	3.95	4.35	4.1
10.....	2.8	2.8	2.8	3.6	4.0	4.4	4.1	4.3	4.0
11.....	2.8	2.8	2.8	3.55	4.0	4.35	4.9	4.25	4.0
12.....	2.8	2.8	2.8	3.7	3.8	5.35	4.4	4.25	4.0
13.....	2.8	2.8	2.8	3.9	4.0	4.9	4.35	4.25	4.05
14.....	2.8	2.8	2.8	3.6	3.8	4.6	4.3	4.15	4.0
15.....	2.8	2.8	2.8	3.5	3.85	4.7	4.3	4.25	3.95
16.....	2.8	2.8	2.8	3.6	3.9	4.65	4.5	4.25	4.0
17.....	2.8	2.8	2.8	3.6	4.1	4.5	4.6	4.2	4.0
18.....	2.8	2.8	2.8	3.75	4.15	4.4	4.6	4.2	4.0
19.....	2.8	2.8	2.8	3.9	4.0	4.3	4.5	4.05	3.99
20.....	2.8	2.8	2.8	3.6	3.9	4.2	4.4	4.8	4.05
21.....	2.8	2.8	2.8	3.55	3.8	4.15	4.4	4.35	4.05
22.....	2.8	2.8	2.8	3.5	3.7	4.1	4.2	4.35	4.05
23.....	2.8	2.8	2.8	3.6	3.6	4.0	4.2	4.25	4.05
24.....	2.8	2.8	2.8	4.2	3.65	4.3	4.2	4.2	4.05
25.....	2.8	2.8	2.8	6.0	3.7	4.3	4.25	4.35	4.0
26.....	2.8	2.8	2.8	7.0	3.7	4.35	4.3	5.7	4.05
27.....	2.8	2.8	3.2	5.0	3.65	4.4	4.3	5.8	4.0
28.....	2.8	2.8	3.2	4.7	3.6	4.35	4.2	5.3	4.0
29.....	2.8	2.8	3.4	4.3	3.55	4.25	6.2	5.0	4.0
30.....	2.8	2.8	3.5	3.9	.....	4.2	5.05	4.8	4.0
31.....	2.8	.....	3.6	3.8	.....	4.1	.....	4.6	.....

NOTE.—The accuracy of the gage readings is doubtful.

Daily discharge, in second-feet, of Clear Creek near Shasta, Cal., for 1911-12.

Day.	Aug.	Sept.	Day.	Aug.	Sept.	Day.	Aug.	Sept.
1911.			1911.			1911.		
1.....		10	11.....		15	21.....		10
2.....		23	12.....		23	22.....		10
3.....		10	13.....		25	23.....		10
4.....		10	14.....		15	24.....		10
5.....		10	15.....		15	25.....		15
6.....		15	16.....		15	26.....		15
7.....		15	17.....		15	27.....		15
8.....		23	18.....		15	28.....		10
9.....		23	19.....		15	29.....		10
10.....		15	20.....		10	30.....	23	10
						31.....	23	.....

Daily discharge, in second-feet, of Clear Creek near Shasta, Cal., for 1911-12—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.									
1.....	10	10	10	134	186	111	263	730	426
2.....	10	10	10	90	172	100	263	582	380
3.....	10	10	10	111	146	100	263	900	359
4.....	10	10	10	122	122	122	263	760	318
5.....	10	10	10	146	111	186	230	640	318
6.....	10	10	33	90	115	1,100	230	527	318
7.....	10	10	23	100	118	700	230	475	299
8.....	10	10	10	90	146	475	230	426	281
9.....	10	10	10	111	186	426	215	359	263
10.....	10	10	10	122	230	380	230	338	230
11.....	10	10	10	111	230	359	640	318	230
12.....	10	10	10	146	172	940	380	318	230
13.....	10	10	10	200	230	640	359	318	246
14.....	10	10	10	122	172	475	338	281	230
15.....	10	10	10	100	186	527	338	318	215
16.....	10	10	10	122	200	501	426	318	230
17.....	10	10	10	122	263	426	475	299	230
18.....	10	10	10	159	281	380	475	299	230
19.....	10	10	10	200	230	338	426	246	227
20.....	10	10	10	122	200	299	380	582	246
21.....	10	10	10	111	172	281	380	359	246
22.....	10	10	10	100	146	263	299	359	246
23.....	10	10	10	122	122	230	299	318	246
24.....	10	10	10	299	134	338	299	299	246
25.....	10	10	10	1,470	146	338	318	359	230
26.....	10	10	10	2,400	146	359	338	1,220	246
27.....	10	10	46	700	134	380	338	1,300	230
28.....	10	10	46	527	122	359	299	900	230
29.....	10	10	80	338	111	318	1,650	700	230
30.....	10	10	100	200	200	299	730	582	230
31.....	10	.....	122	172	.....	263	.....	475	.....

NOTE.—Daily discharge determined from a well-defined rating curve.

Monthly discharge of Clear Creek near Shasta, Cal., for 1911-12.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1911.					
September.....	23	10	14.1	839	C.
1911-12.					
October.....	10	10	10.0	615	C.
November.....	10	10	10.0	595	C.
December.....	122	10	22.3	1,370	C.
January.....	2,400	90	289	17,800	A.
February.....	281	111	170	9,780	A.
March.....	1,100	100	388	23,900	A.
April.....	1,650	215	387	23,000	A.
May.....	1,300	246	513	31,500	A.
June.....	426	215	263	15,600	A.
The period.....	.....	.....	.....	125,000	.....

#### COW CREEK AT MILLVILLE, CAL.

This station, which is located at the highway bridge in the NW.  $\frac{1}{4}$  sec. 14, T. 31 N., R. 3 W., in Millville and three-fourths of a mile above the mouth of Clover Creek, was established August 10, 1911.

Several small irrigation ditches divert water above the station.

The gage is a vertical staff attached to a large oak tree on the right bank 6 feet below the bridge.

The bed of the stream is composed of gravel and small boulders and the channel will shift at high stages.

High-water measurements are made from the bridge; low-water measurements are made by wading about 500 feet below the bridge.

*Discharge measurements of Cow Creek at Millville, 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. 10	J. E. Stewart.....	0.75	63	Mar. 5	Lasley Lee.....	1.19	143
18	do.....	.75	63	6	do.....	4.31	1,420
1912.				May 31	do.....	1.75	275
Jan. 12	Lasley Lee.....	1.62	220	June 3	do.....	1.66	246
22	do.....	1.10	108				

*Daily gage height, in feet, of Cow Creek at Millville, Cal., for 1911-12.*

Day.	Aug.	Sept.	Day.	Aug.	Sept.	Day.	Aug.	Sept.
1911.			1911.			1911.		
1		0.72	11	0.80	0.88	21	0.75	0.80
2		.70	12	.80	.74	22	.80	.82
3		.72	13	.80	.78	23	.75	.84
4		.70	14	.75	.76	24	.75	.81
5		.70	15	.75	.75	25	.75	.82
6		.72	16	.80	.75	26	.70	1.00
7		.74	17	.80	.75	27	.70	.84
8		.72	18	.70	.75	28	.65	.85
9		.72	19	.70	.78	29	.65	.85
10	0.75	.75	20	.70	.78	30	.70	.85
						31	.70	

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.									
1	0.85	0.90	1.00	1.1	1.15	1.0	1.2	1.75	1.7
3	.90	.90	1.00	1.2	1.1	1.0	1.15	1.75	1.6
4	.85	.95	1.00	1.2	1.05	1.0	1.2	1.6	1.6
3	.85	.90	1.00	1.2	1.05	1.1	1.2	1.5	1.6
5	.85	.95	1.10	1.2	1.0	1.75	1.3	1.5	1.55
6	.85	.95	1.10	1.1	1.0	4.3	1.2	1.6	1.45
7	.85	.95	1.00	1.0	1.2	2.05	1.15	1.6	1.35
8	.88	.85	1.00	1.25	1.3	2.1	1.2	1.6	1.3
9	1.2	.88	1.00	1.9	1.4	1.7	1.2	1.6	1.3
10	1.00	1.25	1.00	3.0	1.4	1.45	1.3	1.65	1.25
11	.95	.98	1.00	1.7	1.2	2.6	1.35	1.65	1.2
12	.92	.94	1.00	1.6	1.2	3.0	1.3	1.6	1.2
13	.92	1.00	1.00	1.5	1.2	1.8	1.5	1.6	1.25
14	.90	1.50	1.00	1.3	1.2	2.7	1.4	1.6	1.25
15	.90	1.05	1.00	1.2	1.2	1.9	1.3	1.6	1.2
16	.90	1.06	1.10	1.6	1.15	1.6	1.2	1.6	1.05
17	.60	1.25	1.02	1.35	1.65	1.45	1.25	1.6	1.0
18	.90	1.00	1.00	1.2	1.75	1.4	1.25	1.6	.98
19	.90	1.00	1.00	1.6	1.5	1.35	1.15	1.65	.95
20	.90	1.00	.90	1.3	1.3	1.25	1.25	1.9	.95
21	.90	1.00	1.00	1.1	1.3	1.2	1.15	1.8	1.1
22	.90	1.00	1.00	1.1	1.2	1.2	1.1	1.9	1.1
23	.90	1.00	1.00	1.1	1.2	1.2	1.1	2.2	1.1
24	.90	1.00	1.00	2.0	1.1	1.2	1.3	1.8	1.2
25	.90	1.00	.90	5.2	1.1	1.2	1.25	2.0	1.0
26	.90	1.00	.90	3.2	1.0	1.2	1.35	1.9	1.0
27	.90	1.00	1.05	3.0	1.0	1.2	1.3	2.0	1.0
28	.90	1.00	1.10	1.55	1.0	1.2	1.3	1.95	1.0
29	.90	1.00	1.00	1.45	1.0	1.2	1.95	1.9	1.0
30	.90	1.00	1.00	1.3		1.2	1.6	1.9	.95
31	.90		1.10	1.2		1.2		1.75	

Daily discharge, in second-feet, of Cow Creek at Millville, Cal., for 1911-12.

Day.	Aug.	Sept.	Day.	Aug.	Sept.	Day.	Aug.	Sept.
1911.			1911.			1911.		
1.		62	11.	72	83	21.	66	72
2.		59	12.	72	64	22.	72	75
3.		62	13.	72	69	23.	66	78
4.		59	14.	66	67	24.	66	73
5.		59	15.	66	66	25.	66	75
6.		59	16.	72	66	26.	59	101
7.		64	17.	72	66	27.	59	78
8.		62	18.	59	66	28.	53	79
9.		62	19.	59	69	29.	53	79
10.	66	66	20.	59	69	30.	59	79
						31.	59	

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.									
1.	79	86	101	117	126	101	135	266	252
2.	86	86	101	135	117	101	126	266	225
3.	79	94	101	135	109	101	135	225	225
4.	79	86	101	135	109	117	135	200	225
5.	79	94	117	135	101	166	155	200	212
6.	79	94	117	117	101	1,420	135	225	188
7.	79	94	101	101	135	362	126	225	166
8.	83	94	101	145	155	380	135	225	155
9.	155	98	101	312	177	252	135	225	155
10.	101	145	101	752	177	188	155	238	145
11.	94	98	101	252	135	576	166	238	135
12.	89	92	101	225	135	752	155	225	135
13.	89	101	101	200	135	281	200	225	145
14.	86	155	101	155	135	618	177	225	145
15.	86	109	101	135	135	312	155	225	135
16.	86	109	117	225	126	225	135	225	109
17.	86	145	101	166	238	188	145	225	101
18.	86	101	101	135	266	177	145	225	98
19.	86	101	101	225	200	166	126	238	94
20.	86	101	86	155	155	145	145	312	94
21.	86	101	101	117	155	135	126	281	117
22.	86	101	101	117	135	135	117	312	117
23.	86	101	101	117	135	135	117	416	117
24.	68	101	101	345	117	135	155	281	135
25.	86	101	86	1,930	117	135	145	345	101
26.	86	101	86	848	101	135	166	312	101
27.	86	101	109	752	101	135	155	345	101
28.	86	101	117	212	101	135	155	328	101
29.	86	101	101	188	101	135	328	312	101
30.	86	101	101	155		135	225	312	94
31.	86		117	135		135		266	

NOTE.—Daily discharge determined from a well-defined rating curve.

Monthly discharge of Cow Creek at Millville, Cal., for 1911-12.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1911.					
Aug. 10-31.	72	53	64.2	2,800	B.
September.	101	59	69.6	4,140	B.
1911-12.					
October.	155	79	87.7	5,390	B.
November.	155	86	103	6,130	B.
December.	117	86	102	6,270	B.
January.	1,930	101	236	17,600	B.
February.	266	101	139	8,000	A.
March.	1,420	101	262	16,100	A.
April.	328	117	154	9,160	A.
May.	416	200	263	16,200	A.
June.	252	94	141	8,390	A.
The period.				93,240	

CLOVER CREEK AT MILLVILLE, CAL.

This station, which is located at the highway bridge in the SE. 1/4 sec. 10, T. 31 N., R. 3 W., in Millville and one-fourth mile above its junction with Cow Creek, was established August 10, 1911.

Water is diverted for irrigation above the station.

The gage is a vertical staff on the bridge pier near the left bank.

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

Discharge measurements are made from the bridge or by wading.

Discharge measurements of Clover Creek at Millville, Cal., for 1911-12.

Date.	Hydrographer.	Gage height.	Discharge.	Date.	Hydrographer.	Gage height.	Discharge.
1911. Aug. 10	J. E. Stewart.....	Feet. 1.90	Sec.-ft. 5.7	1912. Mar. 5	Lasley Lee.....	Feet. 2.81	83
1912. Jan. 11	Lasley Lee.....	3.00	117	6	.....do.....	4.25	495
22	.....do.....	2.35	33	30	.....do.....	2.59	56
				31	.....do.....	2.55	52

Daily gage height, in feet, of Clover Creek at Millville, Cal., for 1911-12.

Day.	Aug.	Sept.	Day.	Aug.	Sept.	Day.	Aug.	Sept.
1911.			1911.			1911.		
1.....		1.95	11.....	1.90	2.00	21.....	1.95	1.92
2.....		1.92	12.....	1.90	2.00	22.....	1.92	1.92
3.....		1.92	13.....	2.0	2.00	23.....	1.92	1.92
4.....		1.95	14.....	1.92	2.00	24.....	1.92	1.95
5.....		1.92	15.....	1.92	2.02	25.....	1.92	1.98
6.....		1.95	16.....	1.95	2.00	26.....	1.92	2.15
7.....		1.93	17.....	1.98	2.00	27.....	1.92	2.12
8.....		2.00	18.....	2.00	2.00	28.....	1.95	2.10
9.....		1.95	19.....	1.95	1.90	29.....	1.95	2.10
10.....	1.90	1.98	20.....	1.95	1.90	30.....	1.92	2.10
						31.....	1.95	.....

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.									
1.....	2.10	2.10	2.15	2.30	2.40	2.30	2.35	3.2	2.55
2.....	2.15	2.10	2.15	2.20	2.40	2.20	2.38	2.80	2.50
3.....	2.10	2.10	2.15	2.30	2.35	2.40	2.38	2.70	2.45
4.....	2.10	2.10	2.15	2.20	2.30	2.35	2.38	2.60	2.40
5.....	2.12	2.10	2.15	2.20	2.30	2.35	2.40	2.55	2.30
6.....	2.10	2.10	2.15	2.10	2.30	4.25	2.38	2.50	2.28
7.....	2.10	2.10	2.18	2.25	2.30	3.35	2.38	2.50	2.25
8.....	2.08	2.10	2.18	2.28	2.70	3.25	2.34	2.50	2.22
9.....	2.50	2.10	2.18	3.2	2.80	2.95	2.35	2.50	2.20
10.....	2.20	2.10	2.18	3.75	3.7	2.90	2.40	2.50	2.18
11.....	2.18	2.10	2.18	3.1	2.85	2.80	2.65	2.50	2.15
12.....	2.18	2.15	2.13	3.0	2.70	3.55	2.70	2.55	2.18
13.....	2.12	2.15	2.13	2.85	2.60	4.05	2.60	2.55	2.25
14.....	2.12	2.15	2.15	2.65	2.55	3.3	2.60	2.50	2.25
15.....	2.10	2.18	2.15	2.50	2.50	3.2	2.52	2.50	2.25
16.....	2.10	2.28	2.18	2.80	2.45	3.2	2.50	2.50	2.25
17.....	2.10	2.20	2.28	2.58	2.45	3.0	2.50	2.50	2.15
18.....	2.08	2.20	2.25	2.40	3.0	2.90	2.50	2.40	2.18
19.....	2.08	2.18	2.25	2.80	2.70	2.75	2.45	2.40	2.10
20.....	2.08	2.18	2.25	2.58	2.65	2.70	2.40	2.72	2.02
21.....	2.10	2.15	2.25	2.40	2.50	2.60	2.40	2.60	2.12
22.....	2.10	2.20	2.25	2.35	2.45	2.60	2.38	2.60	2.10
23.....	2.10	2.20	2.25	2.32	2.40	2.55	2.38	3.2	2.15
24.....	2.10	2.15	2.15	2.62	2.40	2.50	2.38	2.70	2.30
25.....	2.10	2.18	2.15	4.6	2.40	2.50	2.50	2.60	2.18
26.....	2.10	2.15	2.15	3.5	2.35	2.45	2.45	2.75	2.15
27.....	2.10	2.18	2.15	3.6	2.35	2.45	2.50	3.0	2.15
28.....	2.10	2.18	2.15	2.90	2.35	2.45	2.45	2.70	2.12
29.....	2.10	2.18	2.22	2.70	2.30	2.45	2.50	2.65	2.08
30.....	2.10	2.18	2.22	2.30	.....	2.40	2.90	2.60	2.05
31.....	2.10	.....	2.30	2.50	.....	2.40	.....	2.60	.....

Daily discharge, in second-feet, of Clover Creek at Millville, Cal., for 1911-12.

Day.	Aug.	Sept.	Day.	Aug.	Sept.	Day.	Aug.	Sept.
1911.			1911.			1911.		
1		8	11	6	9	21	8	7
2		7	12	6	9	22	7	7
3		7	13	9	9	23	7	7
4		8	14	7	9	24	7	8
5		7	15	7	10	25	7	8
6		8	16	8	9	26	7	17
7		8	17	8	9	27	7	15
8		9	18	9	9	28	8	14
9		8	19	8	6	29	8	14
10	6	8	20	8	6	30	7	14
						31	8	

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.									
1	14	14	17	27	36	27	32	151	52
2	17	14	17	20	36	20	34	84	46
3	14	14	17	27	32	36	34	70	41
4	14	14	17	20	27	32	34	57	36
5	15	14	17	20	27	92	36	52	27
6	14	14	17	14	27	494	34	46	26
7	14	14	19	24	27	184	34	46	24
8	13	14	19	23	70	162	34	43	21
9	46	14	19	151	84	107	32	43	20
10	20	14	19	196	279	99	36	46	19
11	19	14	19	132	92	84	64	46	17
12	19	17	19	115	70	234	70	52	19
13	15	17	19	92	57	436	57	52	24
14	15	17	17	64	52	172	57	43	24
15	14	19	17	46	46	151	48	46	24
16	14	26	19	84	41	151	46	46	24
17	14	20	19	55	41	115	46	46	17
18	13	20	24	36	115	99	46	36	19
19	13	19	24	84	70	77	41	36	14
20	13	19	24	55	52	70	36	73	10
21	14	17	24	36	46	57	36	57	15
22	14	20	24	32	41	57	34	57	14
23	14	20	24	29	36	52	34	151	17
24	14	17	17	60	36	46	34	70	27
25	14	19	17	677	36	46	46	57	19
26	14	17	17	220	32	41	41	77	17
27	14	19	17	248	32	41	46	115	17
28	14	19	17	99	32	41	41	70	15
29	14	19	21	70	27	41	46	64	13
30	14	19	21	27		36	99	57	12
31	14		27	46		36		57	

NOTE.—Daily discharge determined from a well-defined rating curve.

Monthly discharge of Clover Creek at Millville, Cal., for 1911-12.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1911.					
August 10-31	9	6	7.4	323	D.
September	17	6	9.1	541	D.
1911-12.					
October	46	13	15.6	959	C.
November	26	14	17.1	1,020	C.
December	27	17	19.5	1,200	C.
January	677	14	91.4	5,620	A.
February	279	27	55.1	3,170	A.
March	494	20	107	6,580	A.
April	99	32	43.6	2,590	A.
May	151	36	63.1	3,880	A.
June	52	10	22.3	1,330	C.
The period				26,300	

LITTLE COW CREEK AT PALO CEDRO, CAL.

This station, which is located at the highway bridge in sec. 5, T. 31 N., R. 3 W., one-fourth mile east of Palo Cedro, was established August 9, 1911.

A small amount of water is pumped from this stream for irrigation, and the stream receives water from the Terry Lumber Co.'s flume which takes water from Montgomery Creek. From June to December the flume delivers to the creek 8 to 10 second-feet of water; during the remainder of the year this quantity is reduced to about 6 second-feet.

The gage is a vertical staff on the bridge pier near the right bank.

The bed of the stream is composed of gravel and cobblestones and the channel may shift slightly at high stages.

Low-water measurements are made by wading; at medium and high stages measurements are made from the bridge.

Discharge measurements of Little Cow Creek at Palo Cedro, Cal., in 1911-12.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1911. Aug. 9	J. E. Stewart.....	<i>Feet.</i> 1.62	<i>Sec.-ft.</i> 87	1912. Mar. 5	Lasley Lee.....	<i>Feet.</i> 2.72	<i>Sec.-ft.</i> 126
				6	.....do.....	5.17	1,000
				11	.....do.....	3.00	186
1912. Jan. 10	Lasley Lee.....	3.13	185	May 30	.....do.....	3.13	243
22	.....do.....	2.52	84	31	.....do.....	2.94	179

Daily gage height, in feet, of Little Cow Creek at Palo Cedro, Cal., for 1911-12.

Day.	Aug.	Sept.	Day.	Aug.	Sept.	Day.	Aug.	Sept.
1911			1911			1911		
1.....		1.5	11.....	1.6	1.65	21.....	1.5	1.6
2.....		1.6	12.....	1.5	1.6	22.....	1.65	1.65
3.....		1.5	13.....	1.58	1.65	23.....	1.55	1.6
4.....		1.5	14.....	1.48	1.65	24.....	1.6	1.6
5.....		1.55	15.....	1.5	1.6	25.....	1.6	1.7
6.....		1.55	16.....	1.6	1.6	26.....	1.55	1.75
7.....		1.55	17.....	1.6	1.6	27.....	1.55	1.8
8.....		1.6	18.....	1.6	1.55	28.....	1.6	1.75
9.....	1.6	1.6	19.....	1.6	1.55	29.....	1.6	1.75
10.....	1.65	1.65	20.....	1.6	1.5	30.....	1.6	1.65
						31.....	1.55	.....

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.									
1.....	1.70	1.90	1.90	2.00	2.75	2.50	2.60	3.8	2.90
2.....	1.75	1.85	1.95	2.10	2.60	2.50	2.50	3.45	2.60
3.....	1.80	1.90	1.95	1.90	2.50	2.30	2.40	3.3	2.60
4.....	1.80	1.90	1.95	1.90	2.55	2.35	2.40	3.15	2.60
5.....	1.80	1.85	1.95	2.00	2.40	2.75	2.40	3.0	2.45
6.....	1.80	1.90	1.90	2.03	2.40	5.7	2.35	2.90	2.30
7.....	1.75	1.90	2.00	2.10	2.40	4.2	2.30	2.90	2.30
8.....	1.75	1.90	1.90	.....	4.8	3.9	2.30	2.90	2.30
9.....	1.80	1.90	1.95	3.5	3.8	3.5	2.30	2.80	2.30
10.....	1.85	1.90	1.95	3.2	5.1	3.3	2.40	2.90	2.15

Daily gage height, in feet, of Little Cow Creek at Palo Cedro, Cal., for 1911-12—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.									
11.....	1.85	1.95	1.90	3.5	3.7	3.05	3.4	2.90	2.15
12.....	1.85	1.95	1.90	3.1	3.3	5.0	3.5	2.70	2.20
13.....	1.85	1.95	1.90	3.2	3.2	5.5	3.2	2.70	3.15
14.....	1.85	1.95	1.90	3.2	3.1	4.2	3.0	2.70	2.20
15.....	1.80	2.00	1.90	2.70	3.05	4.0	2.90	2.50	2.10
16.....	1.80	2.10	1.95	2.70	2.90	4.8	2.75	2.50	2.15
17.....	1.80	2.10	1.95	2.80	3.0	4.2	2.65	2.50	2.20
18.....	1.80	2.00	1.90	3.5	3.9	3.8	2.50	2.50	2.10
19.....	1.80	1.95	2.00	4.2	3.45	3.5	2.50	2.45	1.85
20.....	1.80	1.90	2.00	3.2	3.0	3.1	2.50	2.55	1.80
21.....	1.80	1.90	2.00	2.80	3.0	3.0	2.50	2.50	1.80
22.....	1.80	1.95	2.00	2.55	2.80	2.90	2.40	3.4	1.80
23.....	1.80	1.95	2.00	2.55	2.70	2.90	2.40	4.3	1.85
24.....	1.80	1.90	2.00	3.6	2.62	2.80	2.40	3.2	2.20
25.....	1.90	1.90	1.90	6.7	2.50	2.80	2.50	3.2	1.90
26.....	1.85	1.90	1.90	5.4	2.50	2.70	2.50	3.95	2.00
27.....	1.80	1.95	1.90	5.6	2.55	2.70	2.50	3.95	1.90
28.....	1.80	1.95	1.90	3.9	2.40	2.55	2.50	3.5	1.90
29.....	1.85	1.90	2.00	3.4	2.40	2.50	3.2	3.2	1.90
30.....	1.90	1.95	2.00	3.0	.....	2.60	3.7	3.0	1.70
31.....	1.90	.....	2.00	2.90	.....	2.45	.....	3.0	.....

Daily discharge, in second-feet, of Little Cow Creek at Palo Cedro, Cal., for 1911-12.

Day.	Aug.	Sept.	Day.	Aug.	Sept.	Day.	Aug.	Sept.
1911.								
1.....		5.0	11.....	8.0	9.5	21.....	5.0	8.0
2.....		8.0	12.....	5.0	8.0	22.....	9.5	9.5
3.....		5.0	13.....	7.4	9.5	23.....	6.5	8.0
4.....		5.0	14.....	4.6	9.5	24.....	8.0	8.0
5.....		6.5	15.....	5.0	8.0	25.....	8.0	11.0
6.....		6.5	16.....	8.0	8.0	26.....	6.5	13.0
7.....		6.5	17.....	8.0	8.0	27.....	6.5	15.0
8.....		8.0	18.....	8.0	6.5	28.....	8.0	13.0
9.....	8.0	8.0	19.....	8.0	6.5	29.....	8.0	13.0
10.....	9.5	9.5	20.....	8.0	5.0	30.....	8.0	9.5
						31.....	6.5	.....

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.									
1.....	11	20	20	26	128	80	98	437	162
2.....	13	18	23	33	98	80	80	316	98
3.....	15	20	23	20	80	51	64	269	98
4.....	15	20	23	20	89	58	64	228	98
5.....	15	18	23	26	64	128	- 64	186	72
6.....	15	20	20	28	64	1,390	58	162	51
7.....	13	20	26	33	64	606	51	162	51
8.....	13	20	20	40	900	476	51	162	51
9.....	15	20	23	332	437	332	51	139	41
10.....	18	20	23	240	1,050	269	64	162	37
11.....	18	23	20	332	400	199	300	162	37
12.....	18	23	20	212	269	1,000	332	118	41
13.....	18	23	20	240	240	1,270	240	118	226
14.....	18	23	20	240	212	606	186	118	41
15.....	15	26	20	118	199	518	162	80	33
16.....	15	33	23	118	162	900	128	80	37
17.....	15	33	23	139	186	606	108	80	41
18.....	15	26	20	332	476	437	80	80	33
19.....	15	23	26	606	316	332	80	72	18
20.....	15	20	26	240	186	212	80	89	15
21.....	15	20	26	139	186	186	80	80	15
22.....	15	23	26	89	139	162	64	300	15
23.....	15	23	26	89	118	162	64	653	18
24.....	15	20	26	365	102	139	64	240	41
25.....	20	20	20	2,030	80	139	80	240	20
26.....	18	20	20	1,210	80	118	80	497	26
27.....	15	23	20	1,330	89	118	80	497	20
28.....	15	23	20	476	64	89	80	332	20
29.....	18	20	24	300	64	80	240	240	15
30.....	20	23	24	186	.....	98	400	186	11
31.....	20	.....	26	162	.....	72	.....	186	.....

NOTE.—Daily discharge determined from a fairly well defined rating curve.

Monthly discharge of Little Cow Creek at Palo Cedro, Cal., for 1911-12.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accuracy.
	Maximum.	Minimum.	Mean.		
1911.					
August 9-31 .....	9.5	4.6	7.30	333	D.
September .....	15	5	8.43	505	D.
1911-12.					
October .....	20	11	15.8	972	D.
November .....	33	18	22.1	1,320	D.
December .....	26	20	22.7	1,400	D.
January .....	2,030	20	315	19,400	B.
February .....	1,050	64	226	13,000	B.
March .....	1,390	51	352	21,600	B.
April .....	400	51	119	7,050	B.
May .....	653	72	215	13,200	B.
June .....	226	11	49.4	2,940	C.
The period .....				80,900	

BEAR CREEK NEAR MILLVILLE, CAL.

This station, which is located at the highway bridge in sec. 36, T. 31 N., R. 3 W., about 4 miles southeast of Millville and 5 miles above the junction with Sacramento River, was established August 19, 1911.

The gage is a vertical staff on the upstream side of the bridge pier near the left bank.

The bed of the stream is composed of small bowlders and is rough.

Discharge measurements are made by wading at a point 50 feet above the gage, except at high stages, when they are made from the bridge.

Discharge measurements of Bear Creek near Millville, Cal., in 1911-12.

Date.	Hydrographer.	Gage height.	Discharge.	Date.	Hydrographer.	Gage height.	Discharge.
		<i>Feet.</i>	<i>Sec.-ft.</i>			<i>Feet.</i>	<i>Sec.-ft.</i>
1911.				1912.			
Aug. 19	J. E. Stewart .....	0.67	33	Jan. 22	Lasley Lee .....	1.75	55
				Mar. 6	do .....	3.48	525
1912.				May 30	do .....	1.44	77
Jan. 11	Lasley Lee .....	2.08	101	June 2	do .....	1.21	53

Daily gage height, in feet, of Bear Creek near Millville, Cal., for 1911-12.

Day.	Aug.	Sept.	Day.	Aug.	Sept.	Day.	Aug.	Sept.
1911								
1.		0.68	11.		0.75	21.	0.68	0.78
2.		.68	12.		.75	22.	.68	.78
3.		.68	13.		.78	23.	.68	.78
4.		.70	14.		.78	24.	.68	.78
5.		.70	15.		.78	25.	.68	.80
6.			16.		.78	26.	.68	.88
7.		.70	17.		.78	27.	.68	.88
8.		.70	18.		.78	28.	.68	.86
9.		.70	19.	0.68	.78	29.	.68	.85
10.		.75	20.	.68	.78	30.	.68	.85
						31.	.68	

Daily gage height, in feet, of Bear Creek near Millville, Cal., for 1911-12—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.									
1. ....	0.85	1.00	1.80	1.7	1.7	1.42	1.42	2.3	1.25
2. ....	.85	1.00	1.80	1.85	1.65	1.45	1.40	1.7	1.22
3. ....	.85	1.00	1.80	2.0	1.6	1.45	1.40	1.6	1.20
4. ....	.85	1.00	1.80	2.0	1.55	1.45	1.40	1.6	1.00
5. ....	.88	1.00	1.80	2.05	1.55	1.6	1.40	1.30	.95
6. ....	.88	1.00	1.80	1.8	1.55	3.7	1.40	1.25	.80
7. ....	.88	1.00	1.80	1.65	1.55	2.6	1.35	1.25	.75
8. ....	.88	1.00	1.80	1.65	1.8	2.5	1.30	1.20	.60
9. ....	1.38	1.00	1.80	1.9	1.7	2.1	1.25	1.10	.55
10. ....	1.40	1.75	1.80	2.2	1.7	2.1	1.45	1.00	.52
11. ....	.98	1.75	1.80	2.2	1.7	1.95	2.0	.90	.50
12. ....	.98	1.75	1.80	2.2	1.6	2.5	1.7	.85	1.00
13. ....	.98	1.75	1.75	1.95	1.6	3.45	1.7	.80	.90
14. ....	.98	1.75	1.75	1.8	1.8	2.4	1.7	.75	.85
15. ....	.98	1.75	1.75	1.8	1.7	2.1	1.45	.70	.75
16. ....	.92	1.80	1.75	2.0	1.8	2.5	1.32	.70	.70
17. ....	.92	1.80	1.80	1.9	1.75	2.2	1.30	.70	.65
18. ....	.92	1.80	1.75	1.9	1.75	2.1	1.28	.65	.60
19. ....	.92	1.80	1.75	2.1	1.7	1.95	1.28	.55	.50
20. ....	.92	1.80	1.75	1.9	1.6	1.95	1.28	1.25	.65
21. ....	.92	1.80	1.75	1.8	1.55	2.0	1.28	1.25	.65
22. ....	.95	1.80	1.70	1.75	1.55	1.8	1.28	1.8	.70
23. ....	.95	1.80	1.70	1.7	1.55	1.75	1.20	2.4	.75
24. ....	.98	1.80	1.65	1.9	1.55	1.75	1.20	1.7	.72
25. ....	1.00	1.80	1.65	4.6	1.5	1.65	1.40	2.0	.78
26. ....	1.00	1.80	1.65	3.4	1.5	1.6	1.20	1.8	.78
27. ....	1.00	1.80	1.65	3.0	1.45	1.6	1.40	1.7	.70
28. ....	1.00	1.80	1.65	2.5	1.45	1.55	1.6	1.6	.70
29. ....	1.00	1.80	1.65	2.0	1.45	1.55	1.9	1.6	.68
30. ....	1.00	1.80	1.65	1.9	.....	1.55	1.8	1.35	.65
31. ....	1.00	.....	1.65	1.8	.....	1.5	.....	.....	.....

#### NORTH FORK OF COTTONWOOD CREEK AT ONO, CAL.

This station, which is located at the highway bridge one-fourth mile west of Ono in sec. 11, T. 30, N., R. 7 W., was established October 27, 1907.

The gage is a staff fastened to the middle pier of the bridge near the upstream side; its datum has not been changed.

Byron Creek enters just above and Eagle Creek about 1 mile below the gage.

The channel is rough and subject to slight change; at high stages the current is swift and is somewhat obstructed by the center bridge pier.

Discharge measurements are made from the downstream side of the bridge at high water and by wading at low water.

The maximum recorded discharge of this creek—4,040 second-feet (gage height 9.8 feet)—occurred February 2, 1909; the minimum flow, .3 second-feet, occurred during the period August 17, to September 3, 1908.

Several small ditches divert water from the creek above the gaging station.

In September, 1908, they carried a total of 14 second-feet. Acquired water rights greatly exceed the low-water flow.

The following miscellaneous discharge measurements were made of ditches which divert water from North Fork of Cottonwood Creek above the gaging station at Ono.

*Miscellaneous discharge measurements of ditches diverting water from Cottonwood Creek.*

Date.	Ditch.	Locality.	Discharge.
1908.			<i>Second-feet.</i>
Sept. 26	Bee Creek Ditch Co.....	1 mile below intake.....	1.3
27	Happy Valley Land & Water Co.....	1½ miles below intake.....	6.2
27	Jerusalem.....	¾ mile below intake.....	2.1
27	Marina Gold Mining Co.....	¾ mile below intake.....	4.1

a This water is used for power development and is returned to creek channel.

*Discharge measurements of North Fork of Cottonwood Creek at Ono, Cal., in 1907-1912\**

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1907.		<i>Feet.</i>	<i>Sec.-ft.</i>	1910.		<i>Feet.</i>	<i>Sec.-ft.</i>
Oct. 28	W. A. Lamb.....	4.45	13	Jan. 26	J. E. Stewart.....	5.57	242
1908.				Mar. 19	.....do.....	5.54	245
Feb. 1	W. A. Lamb.....	5.45	246	July 8	.....do.....	4.45	14
20	.....do.....	5.31	212	Aug. 9	.....do.....	4.12	3.8
Mar. 12	.....do.....	5.30	206	Dec. 20	H. D. McGlashan..	4.81	47
Apr. 22	.....do.....	5.10	124	1911.			
Sept. 26	W. V. Hardy.....	4.20	5.3	Mar. 8	H. D. McGlashan..	6.30	813
Dec. 19	W. F. Martin.....	4.59	28	Oct. 11	J. E. Stewart.....	4.36	11
1909.				1912.			
Feb. 1	W. F. Martin.....	6.70	1,170	Jan. 23	Lasley Lee.....	4.80	46
May 28	.....do.....	5.00	87				
Aug. 10	.....do.....	4.20	6				
Nov. 16	W. V. Hardy.....	4.53	22				

*Daily gage height, in feet, of North Fork of Cottonwood Creek at Ono, Cal., for 1907-1912.*

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1907-8.												
1.....		4.4	4.4	5.35	5.45	5.4	5.2	5.1	4.75	4.4	4.1	4.0
2.....		4.5	4.4	5.3	6.1	5.3	5.2	5.2	4.7	4.4	4.1	4.05
3.....		4.4	4.4	5.25	5.6	5.3	5.15	5.1	4.7	4.35	4.1	4.05
4.....		4.4	4.5	5.3	5.5	5.3	5.15	5.1	4.7	4.35	4.1	4.1
5.....		4.4	4.5	5.2	5.65	5.3	5.15	5.05	4.7	4.35	4.1	4.1
6.....		4.4	4.55	5.15	5.95	5.3	5.15	5.05	4.7	4.35	4.1	4.1
7.....		4.4	5.15	5.1	5.95	5.3	5.1	5.05	4.7	4.35	4.1	4.1
8.....		4.4	4.8	5.1	6.05	5.3	5.1	5.0	4.65	4.35	4.1	4.1
9.....		4.4	4.7	5.1	7.05	5.25	5.1	5.0	4.65	4.3	4.1	4.1
10.....		4.4	5.5	5.1	6.15	5.25	5.1	5.0	4.6	4.25	4.1	4.1
11.....		4.4	4.95	5.1	5.85	5.25	5.1	5.0	4.6	4.3	4.1	4.1
12.....		4.4	5.15	5.1	5.7	5.3	5.15	5.0	4.6	4.3	4.1	4.1
13.....		4.4	5.2	5.35	5.6	5.3	5.15	5.0	4.6	4.3	4.1	4.1
14.....		4.4	4.95	5.35	5.55	5.3	5.15	5.0	4.6	4.3	4.2	4.15
15.....		4.4	4.9	5.25	5.5	5.3	5.2	5.0	4.55	4.3	4.2	4.15
16.....		4.4	4.8	5.2	5.5	5.35	5.2	5.0	4.55	4.3	4.1	4.2
17.....		4.4	4.8	5.2	5.45	5.4	5.2	5.0	4.55	4.25	4.05	4.4
18.....		4.4	4.8	5.75	5.4	5.4	5.15	5.0	4.5	4.25	4.05	4.3
19.....		4.4	5.15	5.6	5.4	5.4	5.15	5.0	4.55	4.2	4.0	4.3
20.....		4.4	4.95	5.9	5.3	5.3	5.15	5.0	4.55	4.2	4.0	4.3
21.....		4.4	4.8	5.7	5.3	5.3	5.1	4.95	4.55	4.2	4.0	4.25
22.....		4.45	4.8	5.55	5.3	5.3	5.2	4.9	4.55	4.2	4.0	4.2
23.....		4.45	4.8	5.5	5.3	5.3	5.3	4.9	4.5	4.15	4.0	4.2
24.....		4.4	4.8	6.55	5.3	5.3	5.25	4.9	4.5	4.2	4.0	4.2
25.....		4.4	4.85	5.75	5.3	5.3	5.25	4.9	4.5	4.1	4.0	4.2

*Daily gage height, in feet, of North Fork of Cottonwood Creek at Ono, Cal., for 1907-1912--*  
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1907-8.												
26	-----	4.4	6.4	5.6	5.35	5.3	5.2	4.85	4.5	4.1	4.0	4.2
27	-----	4.4	5.45	5.5	5.4	5.25	5.15	4.8	4.5	4.1	4.0	4.2
28	4.4	4.4	5.25	5.5	5.4	5.25	5.1	4.7	4.4	4.1	4.05	4.2
29	4.4	4.4	5.2	5.4	5.4	5.2	5.1	4.7	4.4	4.1	4.0	4.2
30	4.4	4.4	5.3	5.4	-----	5.2	5.1	4.75	4.4	4.1	4.0	4.2
31	4.4	-----	5.75	5.4	-----	5.2	-----	4.75	-----	4.1	4.0	-----
1908-9.												
1	4.2	4.4	4.5	4.9	6.75	5.8	5.8	5.45	4.9	4.6	4.25	4.15
2	4.2	4.4	4.5	5.2	5.8	5.8	5.8	5.4	4.9	4.55	4.25	4.2
3	4.2	4.4	4.5	5.5	8.1	6.0	5.8	5.4	4.9	4.5	4.25	4.2
4	4.2	4.4	4.7	5.1	7.2	6.1	5.8	5.4	4.85	4.5	4.3	4.2
5	4.2	4.4	4.7	5.85	6.75	6.0	5.8	5.35	4.85	4.5	4.3	4.2
6	4.2	4.4	4.6	5.85	6.5	5.95	5.7	5.3	4.85	4.5	4.25	4.2
7	4.2	4.4	4.6	6.3	6.4	5.9	5.7	5.3	4.8	4.5	4.25	4.2
8	4.2	4.4	4.6	6.9	6.15	5.9	5.7	5.3	4.8	4.5	4.25	4.2
9	4.2	4.4	4.85	5.9	6.2	5.8	5.7	5.3	4.8	4.5	4.25	4.2
10	4.2	4.4	4.7	5.65	6.1	5.8	5.7	5.3	4.7	4.5	4.2	4.2
11	4.3	4.4	4.65	5.45	6.05	5.8	5.7	5.25	4.7	4.5	4.2	4.2
12	4.3	4.4	4.6	5.4	7.1	5.8	5.7	5.2	4.7	4.5	4.2	4.2
13	4.3	4.4	4.6	5.4	6.5	5.8	5.7	5.2	4.7	4.4	4.2	4.2
14	4.55	4.4	4.6	6.9	6.35	5.8	5.7	5.2	4.7	4.4	4.2	4.2
15	4.6	4.4	4.6	6.9	6.4	5.8	5.7	4.2	4.8	4.4	4.2	4.2
16	4.5	4.4	4.6	7.0	6.45	5.8	5.7	5.15	4.8	4.3	4.2	4.1
17	4.4	4.4	4.55	6.85	6.3	5.8	5.7	5.15	4.8	4.3	4.25	4.1
18	4.4	4.4	4.55	6.45	6.35	5.8	5.7	5.1	4.8	4.3	4.15	4.1
19	4.4	4.4	4.55	7.75	6.2	5.8	5.7	5.1	4.8	4.3	4.15	4.1
20	4.4	4.6	4.55	7.5	6.2	5.8	5.7	5.1	4.8	4.3	4.1	4.1
21	4.4	4.6	4.55	7.3	6.1	5.8	5.6	5.2	4.75	4.3	4.1	4.1
22	4.4	4.7	4.55	6.7	6.0	5.8	5.6	5.1	4.75	4.3	4.1	4.15
23	4.4	4.65	4.6	6.35	6.0	5.7	5.6	5.1	4.7	4.3	4.1	4.15
24	4.4	4.6	4.55	6.35	6.0	5.7	5.55	5.1	4.7	4.3	4.1	4.2
25	4.4	4.75	4.55	6.9	5.95	5.7	5.5	5.0	4.6	4.3	4.15	4.5
26	4.4	4.6	4.55	6.6	5.9	5.7	5.5	5.0	4.65	4.3	4.15	4.55
27	4.4	4.5	4.55	6.25	5.8	5.7	5.5	5.0	4.6	4.25	4.15	4.4
28	4.4	4.5	4.55	6.05	5.8	5.8	5.5	5.0	4.6	4.3	4.15	4.3
29	4.4	4.5	4.55	6.0	-----	5.9	5.5	5.0	4.6	4.25	4.15	4.7
30	4.55	4.5	4.55	6.95	-----	5.9	5.5	5.0	4.6	4.25	4.15	4.5
31	4.5	-----	4.55	6.8	-----	5.9	-----	4.95	-----	4.25	4.15	-----
1909-10.												
1	4.6	4.55	4.9	5.0	5.3	5.7	5.65	5.2	4.75	4.5	4.2	4.1
2	4.5	4.5	4.8	5.0	5.3	5.7	5.6	5.2	4.8	4.5	4.2	4.1
3	4.5	4.5	4.8	4.95	5.3	5.7	5.6	5.2	4.8	4.5	4.2	4.1
4	4.5	4.55	4.8	4.95	5.25	5.7	5.6	5.2	4.7	4.5	4.2	4.1
5	4.45	4.55	4.9	4.95	5.2	5.65	5.55	5.2	4.65	4.5	4.2	4.15
6	4.4	4.55	4.9	4.9	5.2	5.6	5.55	5.15	4.7	4.5	4.15	4.15
7	4.4	4.55	5.0	4.9	5.2	5.6	5.5	5.15	4.7	4.45	4.15	4.15
8	4.4	4.6	5.95	4.9	5.2	5.55	5.5	5.15	4.7	4.45	4.1	4.15
9	4.4	4.75	6.3	4.9	5.4	5.55	5.5	5.15	4.7	4.4	4.1	4.15
10	4.4	4.7	5.7	4.9	5.3	5.5	5.5	5.15	4.7	4.4	4.15	4.15
11	4.4	4.6	5.4	4.9	5.25	5.5	5.65	5.1	4.7	4.5	4.15	4.15
12	4.4	4.6	5.35	4.9	5.25	5.5	5.5	5.1	4.7	4.4	4.15	4.2
13	4.4	4.6	5.2	5.0	5.25	5.5	5.5	5.05	4.7	4.35	4.15	4.2
14	4.4	4.55	5.2	5.0	5.25	5.5	5.5	5.05	4.7	4.35	4.15	4.2
15	4.4	4.55	5.2	5.1	5.2	5.5	5.45	5.05	4.7	4.35	4.15	4.25
16	4.4	4.55	5.2	5.0	5.2	5.5	5.45	5.0	4.7	4.35	4.15	4.25
17	4.4	4.55	5.15	5.0	5.2	5.45	5.45	5.0	4.7	4.3	4.15	4.25
18	4.4	4.5	5.15	4.95	5.25	5.4	5.4	5.0	4.7	4.3	4.2	4.25
19	5.15	4.7	5.1	4.95	5.25	5.5	5.4	5.0	4.7	4.3	4.2	4.3
20	4.65	5.4	5.1	4.95	5.25	5.7	5.4	5.0	4.6	4.3	4.2	4.3
21	4.6	5.25	5.05	5.05	5.2	6.05	5.4	4.95	4.6	4.3	4.2	4.3
22	4.55	5.2	5.0	5.1	5.6	6.75	5.35	4.95	4.6	4.25	4.2	4.3
23	4.5	5.35	5.0	5.6	5.45	6.1	5.35	4.95	4.6	4.2	4.1	4.3
24	4.5	5.3	5.0	5.9	6.6	5.95	5.3	4.95	4.6	4.2	4.1	4.3
25	4.5	5.15	5.0	5.65	5.9	5.8	5.3	4.95	4.5	4.25	4.1	4.3

α Maximum recorded gage height, 9.8 feet at 5 p. m.

Daily gage height, in feet, of North Fork of Cottonwood Creek at Ono, Cal., for 1907-1912—  
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909-10.												
26	4.5	5.0	5.0	5.6	5.75	6.2	5.3	4.95	4.5	4.3	4.1	4.3
27	4.5	4.9	5.0	5.5	5.7	5.9	5.3	4.9	4.5	4.25	4.15	4.3
28	4.5	4.9	5.0	5.4	5.7	5.8	5.25	4.9	4.5	4.2	4.15	4.3
29	4.55	4.9	4.95	5.4	5.7	5.7	5.25	4.85	4.5	4.2	4.1	4.25
30	4.5	4.9	5.0	5.4	5.7	5.7	5.2	4.8	4.5	4.2	4.1	4.25
31	4.6		5.0	5.4	5.7	5.7		4.8		4.2	4.1	
1910-11.												
1	4.25	4.5	4.8	4.70	5.70	5.20	5.65	5.45	5.10	4.75	4.32	4.25
2	4.25	4.5	4.8	4.65	5.70	5.20	5.65	5.45	5.05	4.68	4.30	4.22
3	4.3	4.5	5.0	4.60	5.70	5.50	5.65	5.42	5.05	4.62	4.30	4.28
4	4.3	4.5	5.0	4.62	5.68	6.50	5.72	5.40	5.02	4.65	4.28	4.22
5	4.3	4.5	4.9	4.65	5.62	6.85	5.55	5.40	5.00	4.58	4.25	4.20
6	4.3	4.5	4.85	4.65	5.52	7.75	5.95	5.35	5.00	4.58	4.25	4.22
7	4.3	4.5	4.8	4.65	5.42	6.90	5.85	5.55	5.02	4.58	4.25	4.25
8	4.3	4.65	5.15	4.65	5.40	6.30	5.85	5.35	5.00	4.52	4.25	4.20
9	4.3	4.6	5.0	4.65	5.30	5.95	5.80	5.32	5.00	4.52	4.25	4.22
10	4.3	4.55	5.3	4.60	5.55	5.90	5.80	5.30	5.00	4.52	4.25	4.28
11	4.65	4.55	5.2	4.85	5.58	5.80	5.75	5.30	4.92	4.51	4.25	4.30
12	5.45	4.55	5.1	4.72	5.85	5.80	5.70	5.28	4.92	4.51	4.25	4.30
13	4.95	4.55	5.0	4.78	5.70	5.75	5.65	5.25	4.88	4.51	4.25	4.30
14	4.75	4.55	4.95	4.85	5.50	5.75	5.60	5.25	4.88	4.51	4.25	4.30
15	4.7	4.55	4.9	4.85	5.48	5.70	5.60	5.25	4.88	4.49	4.25	4.30
16	4.65	4.55	4.9	4.80	5.42	5.70	5.55	5.30	4.85	4.49	4.25	4.25
17	4.6	4.55	4.9	4.80	5.38	5.70	5.55	5.35	4.82	4.46	4.25	4.25
18	4.6	4.6	4.85	4.85	5.32	5.70	5.55	5.35	4.82	4.50	4.25	4.25
19	4.6	4.55	4.85	6.75	5.30	5.70	5.62	5.30	4.82	4.45	4.25	4.25
20	4.6	4.55	4.8	5.80	5.30	5.70	5.50	5.30	4.78	4.45	4.25	4.25
21	4.55	4.55	4.8	5.35	5.30	5.70	5.60	5.25	5.78	4.45	4.25	4.25
22	4.55	4.55	4.8	5.20	5.28	5.70	5.50	5.25	4.78	4.45	4.25	4.25
23	4.55	4.7	4.8	5.12	5.25	5.70	5.50	5.25	4.78	4.45	4.22	4.25
24	4.55	4.9	4.75	5.15	5.25	5.70	5.50	5.22	4.78	4.45	4.20	4.25
25	4.55	4.8	4.75	5.15	5.22	5.70	5.50	5.20	4.78	4.45	4.20	4.35
26	4.55	4.7	4.75	5.15	5.20	5.65	5.52	5.20	4.75	4.40	4.20	4.45
27	4.55	5.0	4.75	5.5	5.20	5.65	5.50	5.20	4.72	4.35	4.20	4.40
28	4.55	4.85	4.75	5.95	5.20	5.65	5.50	5.15	4.72	4.35	4.20	4.38
29	4.5	4.8	4.7	5.85		5.65	5.45	5.12	4.72	4.35	4.20	4.35
30	4.5	4.8	4.7	5.80		5.65	5.45	5.10	4.78	4.35	4.20	4.35
31	4.5		4.7	5.80		5.65		5.10		4.35	4.25	
1911-12.												
1	4.38	4.50	4.45	4.60	5.20	4.92	5.20	5.85	5.48			
2	4.40	4.45	4.40	4.60	5.16	4.91	5.20	5.72	5.42			
3	4.40	4.42	4.40	4.62	5.12	4.90	5.20	5.62	5.32			
4	4.40	4.40	4.40	4.65	5.10	4.91	5.20	5.59	5.31			
5	4.35	4.40	4.45	4.65	5.08	5.16	5.15	5.55	5.31			
6	4.38	4.40	4.78	4.65	5.02	5.31	5.15	5.51	5.38			
7	4.35	4.38	4.55	4.70	5.08	5.21	5.15	5.50	5.28			
8	4.38	4.40	4.50	4.62	5.39	5.19	5.15	5.48	5.26			
9	4.40	4.40	4.45	4.72	5.25	5.14	5.12	5.45	5.21			
10	4.35	4.40	4.45	4.70	5.19	5.11	5.70	5.41	5.21			
11	4.35	4.40	4.45	4.70	5.14	5.10	6.20	5.39	5.21			
12	4.35	4.40	4.45	4.65	5.10	6.10	5.65	5.38	5.21			
13	4.35	4.40	4.45	4.78	5.10	5.49	5.82	5.35	5.39			
14	4.40	4.40	4.45	4.70	5.08	5.48	5.50	5.34	5.21			
15	4.40	4.60	4.45	4.70	5.10	5.75	5.52	5.31	5.16			
16	4.50	4.60	4.50	4.90	5.06	5.50	5.50	5.28	5.16			
17	4.50	4.60	4.48	4.72	5.14	5.44	5.50	5.24	5.11			
18	4.50	4.48	4.45	4.98	5.10	5.38	5.45	5.24	5.06			
19	4.45	4.45	4.45	5.00	5.09	5.36	5.45	5.21	5.01			
20	4.45	4.45	4.45	4.92	5.06	5.34	5.40	5.60	5.00			
21	4.45	4.45	4.45	4.85	5.04	5.31	5.36	5.42	5.02			
22	4.45	4.45	4.45	4.80	5.02	5.30	5.34	5.62	5.04			
23	4.45	4.45	4.45	4.82	5.00	5.30	5.32	5.50	5.18			
24	4.45	4.45	4.45	5.29	5.00	5.30	5.31	5.50	5.09			
25	4.48	4.45	4.45	7.20	4.99	5.32	5.30	5.60	5.02			
26	4.50	4.45	4.45	6.10	4.96	5.30	5.31	5.90	5.00			
27	4.50	4.45	4.52	5.75	4.95	5.30	5.30	5.80	4.98			
28	4.50	4.45	4.60	5.50	4.94	5.30	5.30	5.72	4.98			
29	4.50	4.45	4.60	5.42	4.92	5.30	5.75	5.60	4.98			
30	4.50	4.45	4.60	5.32		5.28	5.78	5.58	4.92			
31	4.50		4.60	5.24		5.22		5.49				

Daily discharge, in second-feet, of North Fork of Cottonwood Creek at Ono, Cal., for 1907-1912.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1907-8.												
1.....		11	11	210	252	230	154	124	49	11	4	3
2.....		18	11	190	630	190	154	154	41	11	4	3
3.....		11	11	172	325	190	139	124	41	9	4	3
4.....		11	18	190	275	190	139	124	41	9	4	4
5.....		11	18	154	352	190	139	111	41	9	4	4
6.....		11	23	139	527	190	139	111	41	9	4	4
7.....		11	139	124	527	190	124	111	41	9	4	4
8.....		11	57	124	595	190	124	98	34	9	4	4
9.....		11	41	124	1,560	172	124	98	34	7	4	4
10.....		11	275	124	667	172	124	98	28	6	4	4
11.....		11	87	124	465	172	124	98	28	7	4	4
12.....		11	139	124	380	190	139	98	28	7	4	4
13.....		11	154	210	325	190	139	98	28	7	4	4
14.....		11	87	210	300	190	139	98	28	7	5	4
15.....		11	76	172	275	190	154	98	23	7	5	4
16.....		11	57	154	275	210	154	98	23	7	4	5
17.....		11	57	154	252	230	154	98	23	6	3	11
18.....		11	57	407	230	230	139	98	18	6	3	7
19.....		11	139	325	230	230	139	98	23	5	3	7
20.....		11	87	495	190	190	139	98	23	5	3	7
21.....		11	57	380	190	190	124	87	23	5	3	6
22.....		14	57	300	190	190	154	76	23	5	3	5
23.....		14	57	275	190	190	190	76	18	4	3	5
24.....		11	57	1,010	190	190	172	76	18	5	3	5
25.....		11	66	407	190	190	172	76	18	4	3	5
26.....		11	870	325	210	190	154	66	18	4	3	5
27.....		11	252	275	230	172	139	57	18	4	3	5
28.....	11	11	172	275	230	172	124	41	11	4	3	5
29.....	11	11	154	230	230	154	124	41	11	4	3	5
30.....	11	11	190	230	.....	154	124	49	11	4	3	5
31.....	11	.....	407	230	.....	154	.....	49	.....	4	3	.....
1908-9.												
1.....	5	11	18	76	1,220	435	435	252	76	28	6	4.5
2.....	5	11	18	154	4,040	435	435	230	76	23	6	5
3.....	5	11	18	275	2,920	560	435	230	76	18	6	5
4.....	5	11	41	124	1,740	630	435	230	66	18	7	5
5.....	5	11	41	465	1,220	560	435	210	66	18	7	5
6.....	5	11	28	465	960	528	380	190	66	18	6	5
7.....	5	11	28	785	870	495	380	190	57	18	6	5
8.....	5	11	28	1,380	668	495	380	190	57	18	6	5
9.....	5	11	66	495	705	435	380	190	57	18	6	5
10.....	5	11	41	352	630	435	380	190	41	18	5	5
11.....	7	11	34	252	595	435	380	172	41	18	5	5
12.....	7	11	28	230	1,620	435	380	154	41	18	5	5
13.....	7	11	28	230	960	435	380	154	41	11	5	5
14.....	23	11	28	1,380	828	435	380	154	41	11	5	5
15.....	28	11	28	1,380	870	435	380	154	57	11	5	5
16.....	18	11	28	1,500	915	435	380	139	57	7	5	4
17.....	11	11	23	1,370	785	435	380	139	57	7	6	4
18.....	11	11	23	915	870	435	380	124	57	7	4.5	4
19.....	11	11	23	2,460	705	435	380	124	57	7	4.5	4
20.....	11	28	23	2,130	705	435	380	124	57	7	4	4
21.....	11	28	23	1,870	630	435	325	154	49	7	4	4
22.....	11	41	23	1,160	560	435	325	124	49	7	4	4.5
23.....	11	34	28	828	560	380	325	124	41	7	4	4.5
24.....	11	28	23	828	560	380	300	124	41	7	4	5
25.....	11	49	23	1,380	528	380	275	98	28	7	4.5	18
26.....	11	28	23	1,060	495	380	275	98	34	7	4.5	23
27.....	11	18	23	745	435	380	275	98	28	6	4.5	11
28.....	11	18	23	595	435	435	275	98	28	7	4.5	7
29.....	11	18	23	560	.....	495	275	98	28	6	4.5	41
30.....	23	18	23	1,440	.....	495	275	98	28	6	4.5	18
31.....	18	.....	23	1,270	.....	495	.....	87	.....	6	4.5	.....
1909-10.												
1.....	28	28	76	90	175	349	324	143	43	17	5	3.5
2.....	18	18	57	90	175	349	298	143	50	17	5	3.5
3.....	18	18	57	79	175	349	298	143	50	17	5	3.5
4.....	18	23	57	79	159	349	298	143	36	17	5	3.5
5.....	24	23	76	79	143	324	275	143	30	17	5	4.2

Daily discharge, in second-feet, of North Fork of Cottonwood Creek at Ono, Cal., for 1907-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909-10.												
6.	11	23	76	68	143	298	275	129	36	17	4.2	4.2
7.	11	23	98	68	143	298	252	129	36	14	4.2	4.2
8.	11	23	528	68	143	275	252	129	36	14	3.5	4.2
9.	11	49	785	68	211	275	252	129	36	12	3.5	4.2
10.	11	41	380	68	175	252	252	129	36	12	4.2	4.2
11.	11	28	230	68	159	252	324	115	36	17	4.2	4.2
12.	11	28	210	68	159	252	252	115	36	12	4.2	5
13.	11	28	154	90	159	252	252	102	36	10	4.2	5
14.	11	23	154	90	159	252	252	102	36	10	4.2	5
15.	11	23	154	115	143	252	232	102	36	10	4.2	6.5
16.	11	23	154	90	143	252	232	90	36	10	4.2	6.5
17.	11	23	139	90	143	232	232	90	36	8	4.2	6.5
18.	11	18	139	79	159	211	211	90	36	8	5	6.5
19.	139	41	124	79	159	252	211	90	36	8	5	8
20.	34	230	124	79	159	349	211	90	25	8	5	8
21.	28	172	111	102	143	572	211	79	25	8	5	8
22.	23	154	98	115	298	1,230	198	79	25	6.5	5	8
23.	18	210	98	298	232	609	198	79	25	5	3.5	8
24.	18	190	98	467	1,000	501	175	79	25	5	3.5	8
25.	18	139	98	324	467	405	175	79	17	6.5	3.5	8
26.	18	98	98	298	377	689	175	79	17	8	3.5	8
27.	18	76	98	252	349	467	175	68	17	6.5	4.2	8
28.	18	76	98	211	349	405	159	68	17	5	4.2	8
29.	23	76	87	211	.....	349	159	59	17	5	3.5	6.5
30.	18	76	98	211	.....	349	143	50	17	5	3.5	6.5
31.	28	.....	98	211	.....	349	.....	50	.....	5	3.5	.....
1910-11.												
1.	6.5	17	50	36	349	143	324	231	115	43	8.8	6.5
2.	6.5	17	50	30	349	143	324	231	102	34	8.0	5.6
3.	8	17	90	25	349	252	324	219	102	27	8.0	7.4
4.	8	17	90	27	339	900	360	211	95	30	7.4	5.0
5.	8	17	68	30	308	1,320	275	211	90	23	6.5	5.0
6.	8	17	59	30	261	2,460	501	198	90	23	6.5	5.6
7.	8	17	90	30	219	1,380	436	198	95	23	6.5	6.5
8.	8	30	129	30	211	770	436	198	90	19	6.5	5.0
9.	8	25	90	30	175	501	405	182	90	19	6.5	5.6
10.	8	21	175	25	275	467	405	175	90	19	6.5	7.4
11.	30	21	143	58	289	405	377	175	72	18	6.5	8.0
12.	232	21	115	39	436	405	349	169	72	18	6.5	8.0
13.	79	21	90	47	349	377	324	159	64	18	6.5	8.0
14.	43	21	79	58	252	377	298	159	64	18	6.5	8.0
15.	36	21	79	58	244	349	298	159	64	16	6.5	8.0
16.	30	21	79	50	219	349	275	175	59	16	6.5	6.5
17.	25	21	79	50	204	349	275	198	54	15	6.5	6.5
18.	25	25	59	58	182	349	275	198	54	17	6.5	6.5
19.	25	21	59	1,220	175	349	261	175	54	14	6.5	6.5
20.	25	21	50	405	175	349	252	175	47	14	6.5	6.5
21.	21	21	50	198	175	349	252	159	47	14	6.5	6.5
22.	21	21	50	143	169	349	252	159	47	14	6.5	6.5
23.	21	21	36	50	121	159	349	252	47	14	5.6	6.5
24.	21	21	68	43	129	159	349	252	47	14	5.0	6.5
25.	21	21	50	43	129	149	349	252	47	14	5.0	10
26.	21	36	43	129	143	324	261	143	43	12	5.0	14
27.	21	21	90	43	252	324	252	143	39	10	5.0	12
28.	21	59	43	501	143	324	252	129	39	10	5.0	11
29.	17	50	36	436	.....	324	231	120	39	10	5.0	10
30.	17	50	36	405	.....	324	231	115	47	10	5.0	10
31.	17	.....	36	405	.....	324	.....	115	.....	10	6.5	.....
1911-12.												
1.	11	17	14	25	141	68	141	436	244	.....	.....	.....
2.	12	14	12	25	129	65	141	360	219	.....	.....	.....
3.	12	13	12	27	118	63	141	308	181	.....	.....	.....
4.	12	12	12	30	112	65	141	293	178	.....	.....	.....
5.	12	12	14	30	107	129	126	275	178	.....	.....	.....
6.	11	12	47	30	91	178	126	257	178	.....	.....	.....
7.	10	11	21	34	107	144	126	252	167	.....	.....	.....
8.	11	12	17	27	207	138	126	244	161	.....	.....	.....
9.	12	12	14	36	158	124	118	232	144	.....	.....	.....
10.	10	12	14	34	138	115	349	215	144	.....	.....	.....

Daily discharge, in second-feet, of North Fork of Cottonwood Creek at Ono, Cal., for 1907-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1911-12.												
11.	10	12	14	34	124	112	685	207	144			
12.	10	12	14	30	112	610	324	204	144			
13.	10	12	14	44	112	248	261	192	207			
14.	12	12	14	34	107	244	252	186	144			
15.	12	25	14	34	112	377	261	178	129			
16.	17	25	17	63	102	252	252	167	129			
17.	17	17	16	36	124	227	252	154	115			
18.	17	16	14	81	112	204	232	154	102			
19.	14	14	14	86	109	196	232	144	89			
20.	14	14	14	68	102	189	211	298	86			
21.	14	14	14	54	96	178	196	219	91			
22.	14	14	14	46	91	174	189	308	96			
23.	14	14	14	49	86	174	181	252	135			
24.	14	14	14	171	96	174	178	252	109			
25.	16	14	14	1,740	84	181	174	298	91			
26.	17	14	14	610	77	174	178	467	86			
27.	17	14	19	377	74	174	174	405	81			
28.	17	14	25	252	72	174	174	360	81			
29.	17	14	25	219	68	174	377	298	81			
30.	17	14	25	181		167	394	289	68			
31.	17		25	154		148		248				

NOTE.—Daily discharge determined from rating curves applicable as follows: Nov., 1907, to Dec. 31, 1909, well defined between 5 and 1,200 second-feet; Jan. 1, 1910, to Dec. 31, 1910, well defined below and fairly well defined above 500 second-feet; Jan. 1, 1911, to June 30, 1912, well defined below 1,500 second-feet.

Monthly discharge of North Fork of Cottonwood Creek at Ono, Cal., for 1907-1912.

[Drainage area, 52 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.	
1907-8.							
November	18	11	11.4	0.219	0.24	678	A.
December	870	11	125	2.40	2.68	7,090	A.
January	1,010	124	254	4.88	5.63	15,000	A.
February	1,500	190	361	6.94	7.48	20,800	A.
March	230	154	189	3.63	4.18	11,000	A.
April	190	124	142	2.73	3.05	8,450	A.
May	154	41	91.2	1.75	2.02	5,010	A.
June	49	11	26.8	.515	.57	1,980	A.
July	11	4	6.5	.125	.14	400	A.
August	5	3	3.6	.069	.08	221	A.
September	11	3	4.8	.092	.10	286	A.
The period						72,900	
1908-9.							
October	28	5	10.5	.202	.23	646	A.
November	49	11	17.2	.331	.37	1,020	A.
December	66	18	27.5	.529	.61	1,690	A.
January	2,400	76	907	17.4	20.06	55,800	A.
February	4,040	435	1,000	19.2	19.99	55,500	A.
March	630	380	453	8.71	10.04	27,900	A.
April	435	275	360	6.92	7.72	21,400	A.
May	252	87	153	2.94	3.39	9,410	A.
June	76	28	49.9	.960	1.07	2,970	B.
July	28	6	12.0	.231	.27	738	B.
August	7	4	5.08	.098	.11	312	B.
September	41	4	7.68	.148	.17	457	B.
The year	4,040	4	250	4.81	64.03	178,000	

Monthly discharge of North Fork of Cottonwood Creek at Ono, Cal., for 1907-1912—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.	
1909-10.							
October.....	139	11	20.6	0.396	0.46	1,270	B.
November.....	230	18	66.9	1.29	1.44	3,980	B.
December.....	785	57	157	3.02	3.48	9,650	A.
January.....	467	68	139	2.67	3.08	8,650	A.
February.....	1,050	143	231	4.45	4.33	12,800	A.
March.....	1,230	211	374	7.20	8.30	23,000	B.
April.....	324	143	231	4.45	4.96	13,700	A.
May.....	143	50	105	2.02	2.33	6,460	A.
June.....	50	17	32	.615	.69	1,900	A.
July.....	17	5	10.3	.198	.23	633	A.
August.....	5	3.5	4.26	.082	.09	262	A.
September.....	8	3.5	5.91	.114	.12	352	A.
The year.....	1,230	3.5	115	2.21	29.81	82,600	
1910-11.							
October.....	232	6.5	27.3	.525	.60	1,680	A.
November.....	90	17	29.7	.571	.64	1,770	A.
December.....	175	36	69.6	1.34	1.54	4,280	A.
January.....	1,220	25	167	3.21	3.70	10,300	A.
February.....	349	143	236	4.54	4.73	13,100	A.
March.....	2,460	143	508	9.77	11.26	31,200	A.
April.....	501	231	309	5.94	6.63	18,400	A.
May.....	231	115	171	3.29	3.79	10,500	A.
June.....	115	39	66.7	1.28	1.44	3,970	A.
July.....	43	10	17.9	.344	.40	1,100	B.
August.....	8.8	5	6.33	.122	.14	389	C.
September.....	14	5	7.50	.144	.16	446	C.
The year.....	2,460	5	135	2.60	35.03	97,100	
1911-12.							
October.....	17	10	13.5	.260	.30	830	B.
November.....	25	11	14.2	.273	.30	845	B.
December.....	47	12	16.9	.325	.37	1,040	B.
January.....	1,740	25	150	2.88	3.32	9,220	A.
February.....	207	68	109	2.10	2.26	6,270	A.
March.....	610	63	182	3.50	4.04	11,200	A.
April.....	685	118	224	4.31	4.81	13,300	A.
May.....	467	144	263	5.06	5.83	16,200	A.
June.....	244	68	133	2.56	2.86	7,910	A.
The period.....						66,800	

NOTE.—Several small canals divert water from Cottonwood Creek above gaging station. Discharge measurements made during September, 1908, show a total of 14 second-feet diverted.

MILL CREEK NEAR LOS MOLINOS, CAL.

Mill Creek rises in Shasta County just south of Lassen Peak, at an altitude of about 8,000 feet above sea level, and flows in a general southwesterly direction to its junction with Sacramento River, 1½ miles above Los Molinos.

The drainage basin lies east of Sacramento River and between the drainage basins of Antelope and Deer creeks.

The gaging station was established September 28, 1909, by the Los Molinos Land Co., by which it is maintained. It is located one-fourth mile east of the company's dam, one-fourth mile west of the north-east corner of sec. 1, T. 25 N., R. 2 W., 4½ miles northeast of Los Molinos, and 5 miles east of Tehama, Cal.

No water is diverted from the creek above the station. At the dam below the station water is diverted by the company for use on its project in the vicinity of Los Molinos.

The gage is an inclined staff on the right bank. Only an occasional gage height has been obtained at this station as no regular observer is available.

The channel, which is composed of cemented gravel and boulders, is practically permanent. The current is swift at medium and high stages. Both banks are high and will not overflow.

Discharge measurements are made from the footbridge at the gage or by wading.

*Discharge measurements of Mill Creek near Los Molinos, Cal., in 1909-1912.*

[By the United States Geological Survey.]

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>
Aug. 9	W. F. Martin.....	1.08	199	Aug. 23	J. E. Stewart.....	0.85	170
Sept. 28	Martin and Barnes.	.96	162	Oct. 10	.....do.....	.82	157
1910.				19	G. T. Peekema.....	.69	123
Jan. 23	J. E. Stewart.....	1.98	460	Dec. 8	.....do.....	.69	124
Mar. 17	.....do.....	1.92	479	1912			
May 24	W. B. Clapp.....	1.70	404	Jan. 29	Lasley Lee.....	1.18	234
July 6	J. E. Stewart.....	.86	162	Mar. 31	.....do.....	1.21	222
Aug. 6	.....do.....	.65	125				
Sept. 13	W. V. Hardy.....	.63	119				

*Discharge measurements of Mill Creek near Los Molinos, Cal., in 1909-1911.*

[By Los Molinos Land Co.]

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1909.		<i>Feet.</i>	<i>Sec.-ft.</i>	1910.		<i>Feet.</i>	<i>Sec.-ft.</i>
Oct. 9	Barnes and Wallace	0.86	148	July 25	Sayles and Jones...	0.73	148
16	.....do.....	.91	141	30	Sayles and Sayles..	.70	140
25	A. Wallace.....	.90	137	Aug. 20	W. D. Sayles.....	.65	125
30	Barnes and Wallace	1.02	167	30	.....do.....	.63	129
Nov. 6	.....do.....	.98	162	Sept. 10	.....do.....	.65	129
13	.....do.....	1.02	181	Oct. 1	.....do.....	.63	129
27	.....do.....	1.72	349	Nov. 3	.....do.....	.50	134
Dec. 4	.....do.....	1.70	359	14	.....do.....	.59	144
11	.....do.....	1.90	467	22	.....do.....	.72	157
1910.				26	.....do.....	1.00	212
Feb. 23	Barnes and Sayles	1.80	421	Dec. 16	.....do.....	1.10	229
June 25	Ricketts and Sayles	.90	185	30	.....do.....	.79	154
July 1	.....do.....	.90	166	1911.			
9	.....do.....	.87	158	Jan. 17	W. D. Sayles.....	1.02	196
10	.....do.....	.87	154	26	.....do.....	2.20	602



Daily discharge, in second-feet, of Mill Creek near Los Molinos, Cal., for 1911-12.

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1911.									
1					650	750	468	204	146
2					650	850	458	201	147
3					700	798	448	198	148
4					752	775	438	195	149
5					800	752	428	192	151
6					700	747	418	189	149
7					618	742	408	186	147
8					600	738	398	183	145
9					600	733	388	180	143
10					600	729	378	177	142
11					600	764	368	174	142
12					600	798	360	171	141
13					580	786	352	168	140
14					580	775	344	167	139
15					580	763	336	166	139
16					580	752	328	165	139
17	190				580	740	320	164	138
18					370	729	312	162	137
19					596	717	304	160	137
20					590	706	296	159	136
21			513		640	670	288	157	137
22					706	635	280	156	137
23				618	750	599	272	154	136
24					700	564	264	154	136
25					660	528	256	153	148
26	533			752	640	493	248	151	160
27					610	490	240	149	150
28				596	590	486	232	147	149
29					580	482	224	145	139
30					580	478	216	145	138
31					650		208	146	
Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.									
1	140	129	128						
2	142	128	129						485
3	144	128	130						
4	145	128	131	130					533
5	142	128	132						
6	138	128	134			1,250	233		
7	136	130	132			493			
8	140	131	130					368	
9	144	132	131						
10	149	133	130					437	368
11	144	134	129						455
12	139	135	128			320			474
13	134	136	127	154					419
14	134	138	126						
15	133	139	126				208		474
16	131	141	126		164				
17	130	142	126			276			320
18	129	139	126						
19	128	136	126						
20	128	134	126						
21	129	133	126					233	247
22	129	131	126				174		
23	130	130	126						
24	130	130	126				208	233	
25	132	130	126						
26	133	130	126				208		
27	132	129	131						
28	130	128	136					533	
29	130	128	136	233		276	208		
30	130	128	135						
31	130		134						

NOTE.—Daily discharge determined from a fairly well defined rating curve; discharge for days on which gage was not read from May 1 to June 2, 1911, estimated from record of discharge of Feather River at Oroville; discharge interpolated June 4 to Dec. 31, 1911; estimated and interpolated figures roughly approximate.

Monthly discharge of Mill Creek near Los Molinos, Cal., for 1911-12.

[Drainage area, 173 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.	
1911.							
May.....	800	570	633	3.66	4.22	38,900	C.
June.....	850	478	686	3.96	4.42	40,800	C.
July.....	468	208	332	1.92	2.21	20,400	C.
August.....	204	145	168	.971	1.12	10,300	C.
September.....	160	136	143	.827	.92	8,510	C.
October.....	149	128	135	.780	.90	8,300	C.
November.....	142	128	132	.763	.85	7,860	C.
December.....	136	126	129	.746	.86	7,930	C.
The period.....						143,000	

DEER CREEK NEAR VINA, CAL.

This station, which is located 2½ miles northeast of Roberts's ranch house and 9½ miles northeast of Vina, in the NW. ¼ sec. 23, T. 25 N., R. 1 W., was established October 17, 1911.

The gage is a vertical staff fastened to a sycamore tree on the left bank, one-fourth of a mile above a sheep bridge.

Discharge measurements are made by wading or from a car and cable located 100 feet below the gage.

The station is maintained in cooperation with the Ora Electric Co.

Discharge measurements of Deer Creek near Vina, Cal., in 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>
Aug. 24	J. E. Stewart.....	2.32	156	Jan. 28	Lasley Lee.....	2.90	282
Oct. 18	G. T. Peckema.....	2.32	131	Feb. 9	H. J. Tompkins.....	2.60	190
Dec. 7	.....do.....	2.33	134	Apr. 1	Lasley Lee.....	2.68	215

Daily gage height, in feet, of Deer Creek near Vina, Cal., for 1911-12.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.									
1.....		2.32	2.30	2.35	2.5	2.39	2.65	3.6	2.75
2.....		2.32	2.30	2.30	2.43	2.45	2.7	3.45	2.7
3.....		2.30	2.30	2.30	2.45	2.40	2.7	3.2	2.65
4.....		2.30	2.30	2.30	2.43	2.40	2.7	3.1	.....
5.....		2.30	2.30	2.30	2.43	2.5	2.7	3.05	.....
6.....		2.30	2.33	2.30	2.43	5.1	2.65	3.05	.....
7.....		2.30	2.33	2.33	2.43	3.6	2.7	3.05	.....
8.....		2.30	2.30	2.40	2.43	3.15	2.65	3.0	2.55
9.....		2.32	2.30	2.40	2.55	3.0	2.7	3.05	2.5
10.....		2.42	2.30	2.43	2.6	2.85	2.75	3.05	2.49
11.....		2.45	2.30	2.9	2.6	2.75	2.75	3.05	2.45
12.....		2.35	2.30	2.5	2.55	3.3	2.7	2.95	2.43
13.....		2.32	2.30	2.45	2.49	3.15	2.65	2.95	.....
14.....		2.35	2.30	2.47	2.5	2.95	2.6	2.9	.....
15.....		2.37	2.27	2.45	2.5	2.9	2.55	2.9	.....

*Daily gage height, in feet, of Deer Creek near Vina, Cal., for 1911-12—Continued.*

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.									
16	.....	2.55	2.27	2.47	2.45	3.25	2.55	2.9	2.39
17	.....	2.32	2.40	2.33	2.45	2.5	2.6	.....	2.37
18	.....	2.32	2.35	2.32	2.42	2.95	2.9	.....	2.35
19	.....	.....	2.32	2.32	2.55	2.85	2.95	2.55	2.32
20	.....	.....	2.32	2.32	2.47	2.65	2.95	2.5	2.30
21	.....	2.32	2.30	2.30	2.43	2.55	2.75	2.5	.....
22	.....	2.32	.....	2.30	2.5	2.7	2.5	2.95	2.35
23	.....	.....	.....	2.30	2.37	2.47	2.7	2.48	3.05
24	.....	.....	.....	2.30	2.27	2.37	2.7	2.5	3.0
25	.....	.....	.....	2.32	2.27	2.45	2.7	2.48	2.40
26	.....	.....	.....	.....	3.8	2.42	2.75	.....	2.35
27	.....	2.30	2.30	4.7	2.42	2.75	2.53	3.1	2.30
28	.....	2.30	2.32	3.4	2.39	2.85	2.6	3.05	.....
29	.....	2.30	2.33	2.9	2.37	2.85	2.5	2.95	.....
30	.....	2.27	2.32	2.8	2.38	2.9	2.8	2.9	.....
31	.....	2.27	2.27	2.6	.....	2.8	3.2	2.8	2.27
.....	2.32	.....	2.32	2.55	.....	2.7	.....	2.8	.....

#### STONY CREEK NEAR FRUTO, CAL.

This station, which is located at Julian's ranch, about 7 miles northwest of Fruto, and  $1\frac{1}{4}$  miles above the Mill Site dam site, in the SW.  $\frac{1}{4}$  N. E.  $\frac{1}{2}$  sec. 14, T. 21 N., R. 6 W., Mount Diablo base and meridian, was established January 30, 1901, to determine the quantity of water available for storage at the dam site below.

The only important tributary near the gaging station is Grindstone Creek, which has a drainage area of 173 square miles and which enters from the west  $1\frac{1}{4}$  miles above the station. Salt, Elk, and Briscoe Creeks enter the creek some distance above the station from the south. North Fork of Stony Creek, which has a drainage area of about 90 square miles, enters about 12 miles below.

The gage is in two sections 100 feet above the present cable. The high-water portion is a vertical staff. A sloping section, bolted to rock, is used for low water. The gage datum has remained unchanged. Measurements are made from a car and cable or by wading.

The channel is composed of gravel which shifts more or less during the high water, when the current is very swift and the stream is several hundred feet wide. The creek is not liable to overflow until the 15-foot stage is reached. Gage heights have been compared with the original books and corrected when necessary. The records are fair except for very high stages. Estimates for flood flow are more or less approximate.

The greatest recorded crest discharge is 36,000 second-feet for a gage height of 16.3 feet, 5 p. m., February 2, 1909.

The lowest recorded discharge is 0.5 second-foot, August 21 to September 4, 1910.

Discharge measurements of Stony Creek near Fruto, Cal., in 1900-1912.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1900.		<i>Feet.</i>	<i>Sec.-ft.</i>	1906.		<i>Feet.</i>	<i>Sec.-ft.</i>
Nov. 11	Burt Cole.....	.....	62	Oct. 5 <sup>b</sup>	R. S. Hawley.....	3.65	18
				14 <sup>b</sup>	S. G. Bennett.....	3.65	18
1901.				1907.			
Feb. 19 <sup>a</sup>	Burt Cole.....	14.00	18,000	Feb. 11	R. S. Hawley.....	6.35	1,430
27	do.....	6.90	2,580	Apr. 26	W. G. Steward.....	5.95	895
Mar. 9	do.....	5.60	933	June 12	L. F. Hendricks.....	5.05	274
Apr. 10	S. G. Bennett.....	4.90	382	Aug. 1	T. H. Humphreys.....	4.30	27
Sept. 3 <sup>b</sup>	do.....	3.17	3	Sept. 12	W. A. Lamb.....	4.25	19
Nov. 21	H. E. Green.....	4.30	165	1908.			
1902.				Jan. 2	W. A. Lamb.....	5.68	615
Jan. 26	S. G. Bennett.....	3.90	126	11	do.....	5.65	621
Feb. 28	do.....	10.00	7,340	14	do.....	6.65	1,710
May 8	do.....	5.33	1,080	Feb. 4	do.....	6.10	1,360
Sept. 24	do.....	3.00	14	7	do.....	6.75	2,520
1903.				10	do.....	7.25	2,870
Jan. 30	S. G. Bennett.....	7.65	3,370	19	do.....	5.75	890
May 14	do.....	4.15	322	26	do.....	5.83	986
Aug. 1	do.....	3.10	10	Mar. 1	do.....	6.35	1,560
Oct. 30	do.....	3.20	13	3	do.....	5.90	925
1904.				11	do.....	5.73	770
Jan. 27	W. B. Newhall.....	4.25	321	June 3	J. L. Rhead.....	4.78	225
Feb. 10	F. W. Huber.....	4.2	293	6	do.....	4.71	164
18	W. B. Newhall.....	7.25	2,510	10	do.....	4.70	166
25	F. W. Huber.....	10.15	7,000	1909.			
26	do.....	8.85	5,390	Feb. 6	O. W. Peterson.....	8.90	3,240
Apr. 8	A. C. Lootz.....	11.35	12,400	May 29	Martin and Curf- man.....	5.15	350
8	do.....	6.6	2,050	Oct. 15	R. A. Boehringer.....	3.95	22
9	do.....	6.6	2,010	20	do.....	4.05	39
10	do.....	6.6	1,940	Dec. 12	T. C. Johnson.....	5.80	696
11	do.....	6.5	1,990	1910.			
June 15	O. W. Peterson.....	4.2	2,070	Jan. 25	T. C. Johnson.....	6.72	1,460
July 13	do.....	3.63	202	28	J. E. Stewart.....	5.92	968
Aug. 9	do.....	3.3	63	Mar. 22	T. C. Johnson.....	8.60	5,050
Oct. 3	do.....	3.5	16	23	do.....	7.60	3,110
1905.				June 13	do.....	4.20	53
Feb. 16	O. W. Peterson.....	5.13	684	14	do.....	4.20	52
June 23	do.....	3.90	128	30	do.....	4.00	26
Aug. 4	Peterson and Lee.....	3.30	28	July 6	do.....	4.00	24
Sept. 8	C. H. Lee.....	3.22	16	20	do.....	3.85	4.0
14	W. B. Clapp.....	3.20	14	27	do.....	3.85	4.2
Oct. 4	Lee and Hawley.....	3.24	18	1911.			
1906.				Jan. 20	J. E. Stewart.....	7.50	2,960
Feb. 8 <sup>c</sup>	R. S. Hawley.....	5.70	476	May 1	do.....	6.00	686
24	F. R. S. Buttemer.....	7.10	2,280	June 6	M. E. Ready.....	5.70	507
Mar. 8	do.....	6.40	1,680	July 10	do.....	5.05	121
16	do.....	6.00	1,280	Aug. 29	do.....	4.95	126
16	do.....	6.00	1,280	Oct. 15	do.....	5.03	124
May 2	R. S. Hawley.....	5.52	789	Oct. 14	J. E. Stewart.....	4.94	109
18	do.....	5.02	497	1912.			
June 13	do.....	5.03	491	Mar. 3	Lasley Lee.....	4.86	87
Sept. 20 <sup>b</sup>	S. G. Bennett.....	3.65	18	13	do.....	5.56	372

<sup>a</sup> Measured by floats.

<sup>b</sup> Made by wading.

<sup>c</sup> During the high water of January 18, 1906, the channel at the cable was raised by a deposit of gravel, which was gradually removed during the two or three months following. This measurement was made before the channel had assumed its normal condition.

Daily gage height, in feet, of Stony Creek near Fruto, Cal., for 1901-1912.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1901.												
1					5.9	6.7	5.0	5.2	4.4	3.1	3.3	3.2
2					5.8	6.4	5.0	5.2	4.4	3.1	3.3	3.2
3					5.7	6.2	5.1	5.1	4.3	3.1	3.3	3.2
4					5.7	6.0	5.1	5.1	4.3	3.1	3.2	3.2
5					5.9	5.9	5.0	5.1	4.3	3.0	3.2	3.2
6					5.7	5.8	5.1	5.0	4.2	3.0	3.2	3.2
7					5.6	5.7	5.0	4.9	4.2	3.0	3.2	3.2
8					5.6	5.6	5.0	4.9	4.1	3.0	3.2	3.2
9					5.5	5.6	4.9	4.9	4.0	2.9	3.2	3.2
10					5.5	5.7	4.8	4.8	4.0	2.9	3.2	3.2
11					5.4	5.8	4.8	4.8	3.9	2.8	3.2	3.2
12					5.4	5.7	4.7	4.8	3.8	2.8	3.2	3.2
13					5.8	5.6	4.7	4.8	3.8	2.8	3.2	3.2
14					6.5	5.5	4.8	4.8	3.7	3.4	3.2	3.2
15					6.0	5.5	4.9	4.8	3.7	3.4	3.2	3.3
16					7.5	5.5	4.9	4.7	3.6	3.4	3.2	3.3
17					7.0	5.5	4.8	4.7	3.6	3.4	3.2	3.3
18					6.7	5.5	4.8	4.7	3.5	3.4	3.1	3.3
19					10.5	5.4	4.7	4.6	3.5	3.4	3.1	3.3
20					9.5	5.3	4.7	4.6	3.4	3.4	3.1	3.3
21					8.25	5.3	4.7	4.7	3.4	3.4	3.1	3.3
22					7.5	5.3	4.6	4.7	3.4	3.3	3.1	3.4
23					8.75	5.2	4.6	4.7	3.3	3.3	3.1	3.4
24					7.8	5.2	4.5	4.7	3.3	3.3	3.1	3.4
25					7.25	5.2	4.5	4.8	3.3	3.3	3.1	3.5
26					7.2	5.2	4.5	4.7	3.2	3.3	3.1	3.5
27					7.0	5.2	4.5	4.7	3.2	3.3	3.1	3.5
28					6.8	5.2	4.5	4.7	3.2	3.3	3.1	3.5
29					6.0	5.1	5.3	4.6	3.2	3.3	3.1	4.5
30				6.0	5.1	5.2	4.6	4.6	3.2	3.3	3.1	5.4
31				6.0	5.0	5.0	4.5	4.5	3.3	3.1	3.1	5.4
1901-2.												
1	4.7	3.7	4.8	4.0	3.9	9.25	5.4	5.1	4.6	2.9	2.7	2.8
2	4.6	3.6	6.0	4.1	4.0	9.75	5.5	5.0	4.5	2.9	2.7	2.8
3	4.6	3.6	5.3	4.0	4.0	8.35	5.6	4.9	4.4	2.9	2.7	2.8
4	4.5	3.6	7.5	4.0	3.9	7.9	5.7	4.9	4.4	2.9	2.7	2.8
5	4.5	3.6	6.0	4.0	4.0	7.3	5.8	4.8	4.4	2.9	2.7	2.8
6	4.5	3.6	5.8	3.9	4.65	7.55	6.5	4.8	4.3	2.8	2.7	2.8
7	4.4	3.6	5.0	3.9	6.9	7.65	8.5	5.3	4.3	2.7	2.7	2.8
8	4.3	3.6	5.0	3.9	7.5	8.75	7.6	5.5	4.3	2.7	2.7	2.8
9	4.2	2.6	4.9	3.9	7.5	8.35	7.3	5.4	4.2	2.7	2.7	2.8
10	4.2	3.7	4.8	3.9	7.9	7.55	7.0	5.3	4.2	2.7	2.7	2.9
11	4.1	3.7	4.8	3.9	8.75	7.3	6.8	5.2	4.1	2.7	2.7	2.9
12	4.0	3.7	4.6	3.9	7.5	7.0	6.5	5.3	4.1	2.7	2.7	2.9
13	3.9	3.7	4.5	3.9	7.0	7.0	6.0	5.3	4.1	2.7	2.7	2.9
14	3.9	3.7	4.4	3.9	7.25	7.0	6.05	5.3	4.0	2.7	2.7	2.9
15	3.8	3.9	4.3	3.9	8.25	7.0	6.1	5.1	4.0	2.7	2.7	2.9
16	3.7	4.0	4.3	3.9	7.5	7.0	6.0	5.0	3.9	2.7	2.7	2.9
17	3.6	3.8	4.2	3.9	7.4	6.9	5.95	5.0	3.8	2.7	2.7	2.9
18	3.5	3.9	4.2	3.9	6.7	6.8	5.0	5.0	3.8	2.7	2.7	2.9
19	3.4	3.9	4.2	3.9	6.7	6.6	5.7	4.9	3.7	2.7	2.7	2.9
20	3.4	4.3	4.1	3.9	6.85	6.6	5.6	4.8	3.6	2.7	2.7	2.9
21	3.3	4.3	4.1	3.9	7.65	6.5	5.7	4.8	3.5	2.7	2.7	2.9
22	3.2	4.8	4.0	4.0	8.3	6.5	5.5	4.7	3.4	2.7	2.7	2.9
23	3.2	4.8	3.9	4.0	10.8	5.6	5.55	4.7	3.4	2.7	2.7	2.9
24	3.1	4.7	3.9	4.0	13.35	5.6	5.55	4.6	3.3	2.7	2.7	3.0
25	3.0	4.5	4.0	3.9	13.0	5.5	5.55	4.6	3.3	2.7	2.7	3.0
26	3.0	4.4	4.0	3.9	11.25	5.5	5.4	4.6	3.2	2.7	2.8	3.0
27	4.6	4.4	4.1	3.9	12.35	5.4	5.3	4.5	2.8	2.7	2.8	3.0
28	4.7	4.4	4.1	3.9	10.1	5.4	5.3	4.5	2.8	2.7	2.8	3.0
29	4.8	5.8	4.0	3.9	5.4	5.2	4.4	4.4	2.8	2.7	2.8	3.0
30	4.8	5.3	4.0	3.9	5.4	5.1	4.5	4.5	2.8	2.7	2.8	3.0
31	3.8	4.0	4.0	3.9	5.4	5.4	4.6	4.6	2.7	2.8	2.8	3.0
1902-3.												
1	3.5	3.9	5.9	5.5	6.1	5.3	6.6	4.7	3.5	3.1	3.1	3.0
2	3.5	3.9	5.9	5.5	5.85	5.2	6.2	4.7	3.4	3.1	3.1	3.0
3	3.5	3.9	5.8	5.4	5.65	5.2	6.2	4.7	3.4	3.1	3.1	3.0
4	3.5	3.9	5.7	5.4	5.5	5.2	6.1	4.6	3.3	3.1	3.1	3.0
5	3.5	3.9	7.1	5.3	5.5	5.4	5.9	4.6	3.2	3.1	3.1	3.0

a Maximum at 8 p. m. was 14.0 feet.

Daily gage height, in feet, of Stony Creek near Fruto, Cal., for 1901-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1902-3.												
6.....	3.5	4.0	5.7	5.3	5.5	5.4	5.7	4.6	3.2	3.1	3.1	3.0
7.....	3.5	4.0	5.6	5.3	6.45	5.3	5.7	4.6	3.2	3.1	3.1	3.0
8.....	3.6	4.85	5.5	5.2	6.3	5.2	5.6	4.5	3.2	3.1	3.1	3.0
9.....	3.6	9.55	5.55	5.2	5.8	5.2	5.5	4.5	3.2	3.0	3.1	3.0
10.....	3.6	7.75	5.7	5.1	5.8	5.2	5.4	4.5	3.2	3.0	3.1	3.0
11.....	3.6	6.75	5.7	5.1	5.7	5.1	5.3	4.5	3.1	3.0	3.1	3.0
12.....	3.6	6.1	5.6	5.1	5.6	5.1	5.2	4.4	3.1	3.0	3.1	3.0
13.....	3.6	6.0	5.6	5.1	5.5	7.0	5.2	4.4	3.1	3.0	3.1	3.0
14.....	3.7	5.9	5.6	5.0	5.5	7.15	5.2	4.3	3.1	3.0	3.1	3.0
15.....	3.7	5.9	5.5	5.0	5.5	7.6	5.2	4.2	3.1	3.0	3.1	3.0
16.....	3.7	5.9	5.5	5.0	5.4	7.3	5.1	4.2	3.1	3.0	3.1	3.0
17.....	3.7	6.0	5.5	5.0	5.4	6.75	5.1	4.2	3.1	2.9	3.1	3.0
18.....	3.7	7.15	5.5	5.0	5.3	6.25	5.2	4.2	3.1	2.9	3.1	3.0
19.....	3.7	7.75	5.4	5.0	5.3	6.2	5.2	4.1	3.1	2.9	3.1	3.0
20.....	3.7	7.15	5.4	4.9	5.3	6.1	5.2	4.1	3.1	2.9	3.1	3.0
21.....	3.7	6.7	5.3	4.9	5.2	6.0	5.1	4.1	3.1	2.9	3.1	3.0
22.....	3.8	6.6	5.2	5.65	5.2	5.8	5.1	4.1	3.1	2.9	3.1	3.0
23.....	3.8	6.5	5.2	6.25	5.8	5.8	5.0	4.0	3.1	2.9	3.1	3.0
24.....	4.2	6.5	5.1	7.1	5.6	6.0	5.0	4.0	3.1	2.9	3.1	3.1
25.....	4.3	6.4	5.35	8.6	5.5	6.0	4.9	3.9	3.1	2.9	3.1	3.1
26.....	4.2	6.4	6.15	8.0	5.4	5.9	4.9	3.8	3.1	3.1	3.1	3.1
27.....	4.1	6.3	5.8	7.8	5.4	6.05	4.8	3.7	3.1	3.1	3.1	3.1
28.....	4.0	6.2	5.8	7.3	5.3	9.15	4.8	3.7	3.1	3.1	3.1	3.1
29.....	4.0	6.1	5.8	6.65	.....	7.2	4.8	3.6	3.1	3.1	3.1	3.1
30.....	4.0	6.0	5.7	7.9	.....	7.4	4.7	3.6	3.1	3.1	3.0	3.1
31.....	3.9	.....	5.6	6.7	.....	6.95	.....	3.5	.....	3.1	3.0	.....
1903-4.												
1.....	3.1	3.2	4.1	4.2	4.1	7.2	7.35	5.5	4.5	3.5	3.3	3.2
2.....	3.1	3.2	4.1	4.2	4.1	7.2	7.25	5.5	4.5	3.5	3.3	3.2
3.....	3.1	3.2	4.1	4.2	4.1	7.1	7.0	5.5	4.5	3.5	3.3	3.2
4.....	3.2	3.2	4.0	4.2	4.1	7.05	6.8	5.5	4.4	3.5	3.3	3.2
5.....	3.2	3.2	4.0	4.2	4.6	6.75	6.7	5.4	4.4	3.5	3.3	3.2
6.....	3.2	3.2	3.9	4.2	4.35	6.85	6.6	5.4	4.4	3.5	3.3	3.2
7.....	3.2	3.2	3.9	4.2	4.3	7.55	6.5	5.4	4.3	3.5	3.3	3.2
8.....	3.2	3.2	3.9	4.2	4.3	7.65	6.6	5.3	4.3	3.5	3.3	3.2
9.....	3.2	3.2	3.9	4.2	4.3	7.25	6.6	5.3	4.3	3.5	3.3	3.2
10.....	3.2	3.2	3.9	4.2	4.2	13.25	6.6	5.3	4.2	3.5	3.3	3.2
11.....	3.2	3.2	3.9	4.4	4.2	9.25	6.6	5.3	4.2	3.5	3.3	3.2
12.....	3.2	4.3	3.9	4.3	9.0	7.85	6.5	5.3	4.1	3.5	3.3	3.2
13.....	3.2	4.75	3.9	4.2	6.25	7.35	6.4	5.3	4.1	3.5	3.3	3.2
14.....	3.2	6.95	4.0	4.2	5.45	8.65	6.3	5.2	4.0	3.5	3.3	3.2
15.....	3.2	5.25	4.0	4.2	8.25	8.0	6.2	5.2	4.0	3.5	3.3	3.2
16.....	3.2	4.45	7.45	4.2	12.25	7.6	6.0	5.2	3.9	3.5	3.3	3.2
17.....	3.2	4.1	6.9	4.4	8.25	10.5	5.9	5.1	3.9	3.4	3.3	3.2
18.....	3.2	3.65	5.8	4.4	7.2	9.75	5.8	5.1	3.9	3.4	3.3	3.2
19.....	3.2	4.9	4.85	4.4	6.65	8.85	6.1	5.1	3.8	3.4	3.3	3.2
20.....	3.3	6.9	4.8	4.4	5.85	8.9	5.8	5.0	3.8	3.4	3.3	3.2
21.....	3.3	8.15	4.7	4.3	7.85	8.0	5.7	5.0	3.8	3.4	3.2	3.2
22.....	3.3	6.75	4.7	4.3	11.75	7.45	5.7	4.9	3.7	3.4	3.2	3.3
23.....	3.3	5.8	4.6	4.3	8.85	7.2	5.6	4.9	3.7	3.4	3.2	3.4
24.....	3.3	5.35	4.5	4.3	13.5	6.95	5.5	4.9	3.6	3.3	3.2	3.4
25.....	3.2	4.9	4.5	4.3	10.0	6.8	5.5	4.8	3.6	3.3	3.2	3.6
26.....	3.2	4.55	4.3	4.3	10.0	6.65	5.5	4.8	3.5	3.3	3.2	3.6
27.....	3.2	4.4	4.3	4.2	9.05	8.35	5.6	4.8	3.5	3.3	3.2	3.6
28.....	3.2	4.3	4.3	4.2	7.9	10.5	5.6	4.8	3.5	3.3	3.2	3.5
29.....	3.2	4.3	4.2	4.2	7.4	9.35	5.6	4.7	3.5	3.3	3.2	3.5
30.....	3.2	4.2	4.2	4.2	.....	8.55	5.6	4.7	3.5	3.3	3.2	3.4
31.....	3.2	.....	4.2	4.2	.....	7.3	.....	4.6	.....	3.3	3.2	.....
1904-5.												
1.....	3.4	3.5	3.9	7.0	10.0	5.2	6.1	4.7	4.6	3.7	3.2	3.1
2.....	3.4	3.5	3.9	6.8	8.75	5.2	6.0	5.0	4.5	3.6	3.2	3.1
3.....	3.5	3.5	3.9	6.6	7.35	5.1	6.0	5.0	4.5	3.6	3.2	3.2
4.....	3.5	3.5	3.9	6.3	6.7	5.1	5.9	5.0	4.6	3.6	3.2	3.2
5.....	3.5	3.5	3.9	6.2	6.2	5.0	5.9	4.9	4.5	3.6	3.2	3.2
6.....	3.5	3.5	3.9	6.1	6.0	5.0	5.8	4.8	4.5	3.5	3.2	3.2
7.....	3.5	3.5	3.9	5.0	5.8	5.0	5.8	6.3	4.4	3.5	3.2	3.2
8.....	3.5	3.5	3.9	4.9	5.6	4.9	5.7	5.75	4.4	3.5	3.2	3.2
9.....	3.6	3.5	4.1	4.9	5.5	4.9	5.6	5.5	4.3	3.5	3.2	3.2
10.....	3.6	3.5	4.2	4.8	5.4	4.9	5.5	5.5	4.3	3.5	3.2	3.2

Daily gage height, in feet, of Stony Creek near Fruto, Cal., for 1901-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1904-5.												
11.....	6.55	3.5	4.3	4.8	5.4	4.8	5.4	5.4	4.2	3.5	3.2	3.2
12.....	5.5	3.5	4.3	4.8	5.3	6.4	5.3	5.4	4.2	3.4	3.2	3.2
13.....	5.0	3.5	4.5	4.7	5.3	8.25	5.3	5.3	4.2	3.4	3.2	3.2
14.....	4.0	3.5	4.5	9.5	5.2	7.75	5.2	5.3	4.1	3.4	3.2	3.2
15.....	3.8	3.6	4.3	7.75	5.2	8.5	5.2	5.2	4.1	3.4	3.2	3.2
16.....	3.8	3.6	4.2	8.5	5.1	8.5	5.3	5.2	4.1	3.3	3.2	3.2
17.....	3.7	3.7	4.1	7.8	5.5	7.7	5.3	5.1	4.1	3.3	3.2	3.2
18.....	3.7	3.7	4.0	7.7	5.8	7.15	5.3	5.0	4.1	3.3	3.2	3.2
19.....	3.7	3.7	4.0	7.4	5.7	9.25	5.2	4.9	4.0	3.3	3.2	3.2
20.....	3.6	3.7	4.0	6.8	6.0	8.25	5.2	4.9	4.0	3.3	3.1	3.2
21.....	3.6	3.7	3.9	6.8	5.8	7.3	5.0	4.8	4.0	3.3	3.1	3.2
22.....	3.6	3.7	3.9	9.75	5.6	6.75	5.0	4.8	3.9	3.3	3.1	3.2
23.....	3.6	3.7	3.9	9.25	5.5	6.55	5.0	4.7	3.9	3.3	3.1	3.2
24.....	3.5	3.7	4.3	9.5	5.4	7.25	4.9	4.7	3.9	3.3	3.1	3.2
25.....	3.5	3.7	4.2	7.7	5.4	6.6	4.9	4.6	3.8	3.3	3.1	3.2
26.....	3.5	3.7	4.2	6.9	5.3	6.55	4.9	4.6	3.8	3.3	3.1	3.2
27.....	3.5	4.1	4.2	6.45	5.3	6.3	4.8	5.25	3.8	3.3	3.1	3.2
28.....	3.5	4.0	4.1	6.3	5.2	6.1	4.8	4.8	3.7	3.3	3.1	3.2
29.....	3.5	3.9	4.1	6.1	.....	7.35	4.8	4.8	3.7	3.3	3.1	3.2
30.....	3.5	3.9	9.35	6.0	.....	6.5	4.7	4.7	3.7	3.2	3.1	3.2
31.....	3.5	.....	7.4	6.0	.....	6.15	.....	4.6	.....	3.2	3.1	.....
1905-6.												
1.....	3.2	3.3	3.6	3.8	5.8	6.75	7.85	5.4	5.3	4.5	3.8	3.6
2.....	3.2	3.3	3.6	3.8	5.8	6.95	7.4	5.4	5.3	4.5	3.8	3.6
3.....	3.2	3.3	3.6	3.8	5.8	9.35	7.05	5.3	5.3	4.4	3.8	3.6
4.....	3.2	3.3	3.6	3.8	5.8	7.25	6.75	5.3	5.4	4.4	3.8	3.6
5.....	3.2	3.3	3.6	3.8	5.8	6.7	6.55	5.3	5.3	4.3	3.8	3.6
6.....	3.2	3.3	3.6	3.8	5.7	6.5	6.4	5.2	5.3	4.3	3.8	3.6
7.....	3.2	3.3	3.6	3.8	5.7	6.5	6.3	5.2	5.3	4.2	3.8	3.6
8.....	3.2	3.3	3.6	3.8	5.7	6.4	6.2	5.2	5.2	4.2	3.8	3.6
9.....	3.2	3.3	3.6	3.8	5.7	6.4	6.1	5.2	5.2	4.2	3.8	3.6
10.....	3.2	3.3	3.6	3.8	5.8	6.3	6.1	5.2	5.1	4.2	3.8	3.6
11.....	3.2	3.3	3.6	3.8	6.0	6.95	6.0	5.1	5.1	4.2	3.8	3.6
12.....	3.2	3.3	3.6	6.15	6.1	6.65	6.0	5.1	5.0	4.1	3.7	3.6
13.....	3.2	3.3	3.6	6.6	6.0	6.45	6.0	5.1	5.0	4.1	3.7	3.6
14.....	3.2	3.3	3.6	7.25	7.85	6.25	5.9	5.1	5.0	4.1	3.7	3.6
15.....	3.2	3.3	3.6	8.0	7.35	6.05	5.9	5.1	5.0	4.1	3.7	3.6
16.....	3.2	3.3	3.6	12.5	6.9	6.0	5.8	5.1	5.1	4.1	3.7	3.6
17.....	3.2	3.3	3.6	7.6	7.25	6.0	5.7	5.0	5.0	4.1	3.7	3.6
18.....	3.2	3.3	3.6	14.5	7.05	5.9	5.6	5.0	5.0	4.1	3.7	3.6
19.....	3.2	3.3	3.6	11.0	8.0	5.8	5.6	5.0	5.0	4.1	3.7	3.6
20.....	3.2	3.3	3.6	8.65	7.5	5.8	5.5	5.0	4.9	4.1	3.7	3.6
21.....	3.2	3.3	3.6	7.65	7.45	6.9	5.5	5.0	4.9	4.1	3.7	3.6
22.....	3.2	3.3	3.6	7.1	7.25	6.65	5.4	5.0	4.9	4.0	3.7	3.6
23.....	3.2	3.3	3.6	6.75	7.15	8.0	5.5	5.0	4.8	4.0	3.7	3.7
24.....	3.3	3.3	3.6	6.55	7.1	7.6	5.5	5.1	4.8	4.0	3.7	3.7
25.....	3.3	3.4	3.6	6.35	7.0	8.25	5.5	5.2	4.8	3.9	3.7	3.7
26.....	3.3	3.4	3.6	6.25	6.8	7.65	5.4	5.3	4.8	3.9	3.6	3.7
27.....	3.3	3.4	3.8	6.1	7.15	7.45	5.4	5.5	4.8	3.9	3.6	3.7
28.....	3.3	3.4	3.8	6.1	7.05	7.25	5.5	5.95	4.8	3.9	3.6	3.7
29.....	3.3	3.6	3.8	6.0	.....	7.05	5.5	5.65	4.7	3.8	3.6	3.7
30.....	3.3	3.6	3.8	5.9	.....	11.0	5.5	5.5	4.6	3.8	3.6	3.7
31.....	3.3	.....	3.8	5.8	.....	8.35	.....	5.4	.....	3.8	3.6	.....
1906-7.												
1.....	3.7	3.7	3.8	4.8	9.85	6.0	7.35	5.6	5.2	4.6	4.2	4.2
2.....	3.7	3.7	3.8	4.8	12.4	5.9	7.2	5.6	5.1	4.6	4.2	4.2
3.....	3.7	3.8	3.8	4.8	11.35	5.8	7.1	5.6	5.1	4.5	4.2	4.2
4.....	3.7	3.8	3.8	9.45	11.0	5.7	7.0	5.5	5.1	4.5	4.2	4.2
5.....	3.7	3.9	3.8	6.35	10.0	7.6	6.9	5.5	5.1	4.5	4.2	4.2
6.....	3.7	3.9	3.8	6.1	9.3	7.4	7.15	5.5	5.1	4.4	4.2	4.2
7.....	3.7	3.9	3.2	6.0	8.6	6.75	7.25	5.5	5.1	4.4	4.2	4.2
8.....	3.7	3.9	4.2	6.35	8.2	6.5	7.2	5.5	5.1	4.4	4.2	4.2
9.....	3.7	3.9	4.3	9.15	7.4	7.15	7.05	5.5	5.1	4.4	4.2	4.2
10.....	3.7	3.9	5.6	9.0	6.75	6.75	6.9	5.4	6.0	4.4	4.2	4.2
11.....	3.7	3.9	5.6	7.1	6.5	6.5	6.8	5.4	5.0	4.4	4.2	4.2
12.....	3.7	3.9	5.0	6.3	6.4	6.4	6.7	5.4	5.0	4.4	4.2	4.2
13.....	3.7	3.9	4.8	5.8	6.3	6.3	6.6	5.4	5.0	4.4	4.2	4.2
14.....	3.7	3.9	4.7	5.55	6.3	6.2	6.5	5.4	5.1	4.4	4.2	4.2
15.....	3.7	3.9	4.6	5.4	6.2	6.1	6.6	5.4	5.0	4.4	4.2	4.2

Daily gage height, in feet, of Stony Creek near Fruto, Cal., for 1901-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1906-7.												
16.	3.7	3.9	4.5	5.4	6.1	6.0	6.5	5.4	5.0	4.4	4.2	4.2
17.	3.7	3.9	4.5	5.6	6.2	9.45	6.5	5.3	4.9	4.3	4.2	4.2
18.	3.7	3.9	4.4	5.55	6.1	14.25	6.5	5.3	4.9	4.3	4.2	4.2
19.	3.7	3.9	4.4	5.65	6.1	13.15	6.5	5.4	4.9	4.3	4.2	4.2
20.	3.7	3.9	4.3	6.0	6.0	11.8	6.4	5.4	4.9	4.3	4.2	4.2
21.	3.7	3.9	4.3	6.65	6.0	9.8	6.4	5.4	4.9	4.3	4.2	4.2
22.	3.7	3.9	4.2	6.8	6.25	7.75	6.3	5.4	4.9	4.3	4.2	4.2
23.	3.7	3.9	4.2	6.8	6.4	11.55	6.3	5.3	4.8	4.3	4.2	4.3
24.	3.7	3.9	4.2	6.7	6.3	8.7	6.2	5.3	4.8	4.3	4.2	4.3
25.	3.7	3.8	4.2	6.7	6.2	8.15	6.1	5.3	4.8	4.3	4.2	4.3
26.	3.7	3.8	9.0	6.8	6.35	7.75	6.0	5.3	4.7	4.3	4.2	4.3
27.	3.7	3.8	7.8	8.15	6.1	7.45	5.9	5.3	4.7	4.3	4.2	4.3
28.	3.7	3.8	6.3	7.65	6.0	7.25	5.8	5.2	4.7	4.3	4.2	4.3
29.	3.7	3.8	5.65	7.2	.....	7.25	5.7	5.2	4.7	4.3	4.2	4.3
30.	3.7	3.8	5.2	6.85	.....	7.35	5.6	5.2	4.6	4.3	4.2	4.3
31.	3.7	.....	4.9	7.6	.....	7.35	.....	5.2	.....	4.3	4.2	.....
1907-8.												
1.	4.3	4.3	4.4	5.85	6.55	6.8	5.4	5.2	5.0	4.4	4.1	3.9
2.	4.3	4.3	4.4	5.65	8.8	6.15	5.4	5.2	5.0	4.4	4.1	3.9
3.	4.3	4.3	4.4	5.55	6.8	5.9	5.4	5.2	4.9	4.4	4.1	3.9
4.	4.3	4.3	4.4	5.65	6.15	5.8	5.4	5.2	4.9	4.4	4.1	3.9
5.	4.3	4.3	4.4	5.5	6.65	5.7	5.4	5.2	4.9	4.3	4.1	3.9
6.	4.3	4.3	4.8	5.4	7.55	5.7	5.4	5.2	4.9	4.3	4.1	3.9
7.	4.3	4.3	4.6	5.3	6.7	5.7	5.4	5.2	4.9	4.3	4.1	3.9
8.	4.3	4.3	4.5	5.2	6.5	5.8	5.4	5.2	4.9	4.3	4.1	3.9
9.	4.3	4.3	4.5	6.25	10.15	5.8	5.4	5.2	4.9	4.3	4.1	3.9
10.	4.3	4.4	5.5	6.0	7.1	5.9	5.4	5.2	4.8	4.3	4.1	3.9
11.	4.3	4.4	5.2	5.9	6.7	5.9	5.4	5.2	4.8	4.3	4.1	3.9
12.	4.3	4.4	5.1	5.8	6.35	5.95	5.3	5.2	4.8	4.3	4.1	3.9
13.	4.3	4.4	5.6	5.7	6.15	5.95	5.3	5.2	4.8	4.3	4.1	3.9
14.	4.3	4.4	5.2	6.6	6.0	6.05	5.3	5.2	4.8	4.3	4.1	3.9
15.	4.3	4.4	5.1	6.05	5.9	6.05	5.3	5.2	4.8	4.3	4.1	3.9
16.	4.3	4.4	5.0	5.85	5.9	6.15	5.3	5.2	4.7	4.2	4.0	4.0
17.	4.3	4.4	5.0	5.65	5.8	6.1	5.3	5.2	4.7	4.2	4.0	4.0
18.	4.3	4.4	4.9	5.75	5.8	6.1	5.3	5.2	4.7	4.2	4.0	4.0
19.	4.3	4.4	4.9	5.55	5.8	6.1	5.3	5.2	4.7	4.2	4.0	4.0
20.	4.3	4.4	5.2	7.9	5.7	6.0	5.3	5.2	4.7	4.2	4.0	4.0
21.	4.3	4.4	5.1	6.85	5.7	6.0	5.3	5.2	4.6	4.2	4.0	4.0
22.	4.3	4.4	5.0	6.75	5.7	5.9	5.3	5.1	4.6	4.2	4.0	4.0
23.	4.3	4.4	4.9	6.65	5.6	5.9	5.3	5.1	4.6	4.2	4.0	4.0
24.	4.3	4.4	4.9	7.8	5.5	5.8	5.3	5.1	4.6	4.2	4.0	4.0
25.	4.3	4.4	4.8	6.9	5.5	5.8	5.3	5.1	4.6	4.2	4.0	4.0
26.	4.3	4.4	7.5	6.35	5.4	5.7	5.3	5.1	4.5	4.2	4.0	4.0
27.	4.3	4.4	6.85	6.05	5.4	5.7	5.3	5.1	4.5	4.2	4.0	4.0
28.	4.3	4.4	6.4	5.9	5.4	5.6	5.3	5.1	4.5	4.2	4.0	4.0
29.	4.3	4.4	6.5	5.8	5.4	5.6	5.3	5.0	4.5	4.2	4.0	4.0
30.	4.3	4.4	7.65	5.7	.....	5.5	5.3	5.0	4.5	4.2	4.0	4.1
31.	4.3	.....	7.0	5.6	.....	5.5	.....	5.0	.....	4.2	4.0	.....
1908-9.												
1.	4.1	4.3	4.5	4.85	9.25	6.95	6.1	5.8	4.9	4.2	4.0	3.7
2.	4.1	4.3	4.5	5.8	15.4	6.8	6.2	5.8	4.9	4.2	4.0	3.7
3.	4.1	4.3	4.5	8.0	13.35	7.9	6.15	5.8	4.9	4.2	4.0	3.7
4.	4.1	4.3	4.6	5.75	11.6	7.55	6.15	5.7	4.9	4.2	4.0	3.7
5.	4.1	4.3	5.4	7.65	9.9	7.25	6.15	5.7	4.8	4.2	4.0	3.7
6.	4.1	4.3	5.1	8.95	9.0	6.95	6.25	5.7	4.7	4.2	4.0	3.7
7.	4.1	4.3	5.0	7.55	9.05	6.9	6.25	5.6	4.7	4.2	4.0	3.7
8.	4.1	4.3	5.0	13.0	9.0	6.8	6.3	5.6	4.7	4.2	3.9	3.7
9.	4.1	4.4	5.0	9.7	8.2	6.7	6.3	5.6	4.7	4.2	3.9	3.8
10.	4.1	4.4	5.1	8.75	8.1	6.5	6.3	5.6	4.7	4.2	3.9	3.8
11.	4.2	4.4	5.2	7.85	9.35	6.4	6.3	5.5	4.6	4.1	3.8	3.8
12.	4.2	4.4	5.1	7.4	9.35	6.4	6.3	5.5	4.6	4.1	3.8	3.8
13.	4.2	4.4	5.0	7.25	9.15	6.3	6.3	5.5	4.6	4.1	3.8	3.8
14.	4.2	4.4	4.9	14.3	9.1	6.3	6.25	5.5	4.6	4.1	3.8	3.8
15.	4.2	4.4	4.8	13.4	9.25	6.3	6.2	5.5	4.6	4.0	3.8	3.8
16.	4.2	4.4	4.7	13.85	9.3	6.3	6.2	5.5	4.6	4.0	3.8	3.8
17.	4.2	4.5	4.7	11.0	9.5	6.2	6.2	5.4	4.6	4.0	3.8	3.8
18.	4.2	4.5	4.6	10.15	9.4	6.2	6.2	5.4	4.6	4.0	3.8	3.8
19.	4.2	4.5	4.6	9.6	9.05	6.1	6.1	5.3	4.5	4.0	3.8	3.8
20.	4.2	4.5	4.6	10.65	8.65	6.1	6.1	5.2	4.5	4.0	3.8	3.8

a Maximum 16.3.

Daily gage height, in feet, of Stony Creek near Fruto, Cal., for 1901-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1908-9.												
21.....	4.2	4.75	4.6	12.45	8.25	6.1	6.1	5.2	4.5	4.0	3.8	3.8
22.....	4.2	4.6	4.6	11.25	8.1	6.3	6.0	5.2	4.4	4.0	3.7	3.8
23.....	4.2	4.5	4.6	9.4	7.85	6.2	6.0	5.2	4.4	4.0	3.7	3.8
24.....	4.2	4.5	4.6	9.5	7.55	6.25	6.1	5.1	4.3	4.0	3.7	3.8
25.....	4.2	4.5	4.5	9.7	7.45	6.2	6.0	5.1	4.3	4.0	3.7	3.8
26.....	4.3	4.5	4.5	9.75	7.35	6.2	5.9	5.1	4.3	4.0	3.7	3.9
27.....	4.3	4.5	4.5	9.25	7.2	6.2	5.9	5.0	4.3	4.0	3.7	3.9
28.....	4.3	4.5	4.5	8.8	7.05	6.2	5.9	5.0	4.2	4.0	3.7	3.9
29.....	4.3	4.5	4.5	9.0	.....	6.2	5.8	5.0	4.2	4.0	3.7	3.9
30.....	4.3	4.5	4.5	9.0	.....	6.1	5.8	5.0	4.2	4.0	3.7	3.9
31.....	4.3	.....	4.5	9.0	.....	6.1	.....	5.0	.....	4.0	3.7	.....
1909-10.												
1.....	3.9	4.1	5.5	5.5	5.7	6.5	6.4	5.1	4.5	4.0	3.7	3.6
2.....	4.0	4.1	5.6	5.5	5.6	6.4	6.2	5.1	4.5	4.0	3.7	3.6
3.....	4.2	4.1	5.5	5.6	5.5	6.4	6.0	5.1	4.5	4.0	3.7	3.6
4.....	4.3	4.1	5.5	5.6	5.4	6.3	6.0	5.0	4.5	4.1	3.7	3.6
5.....	4.4	4.1	5.6	5.5	5.3	6.3	5.9	5.0	4.4	4.1	3.7	3.7
6.....	4.4	4.1	5.6	5.4	5.3	6.2	5.8	5.0	4.4	4.0	3.7	3.7
7.....	4.3	4.1	5.8	5.3	5.7	6.2	5.7	5.0	4.4	4.0	3.7	3.7
8.....	4.2	4.1	5.9	5.2	5.7	6.2	5.6	5.0	4.4	4.0	3.7	3.7
9.....	4.1	4.2	7.5	5.2	5.6	6.1	5.6	5.0	4.4	4.0	3.7	3.7
10.....	4.1	4.4	6.9	5.3	5.7	6.1	5.6	5.0	4.4	4.0	3.7	3.7
11.....	4.1	4.4	6.5	5.4	5.5	6.0	5.8	5.0	4.4	4.0	3.7	3.7
12.....	4.0	4.3	5.8	5.4	5.4	6.0	5.8	5.0	4.3	3.9	3.7	3.7
13.....	4.0	4.3	5.7	5.5	5.3	6.0	5.8	5.0	4.3	3.9	3.7	3.7
14.....	4.0	4.2	5.6	5.6	5.2	6.0	5.7	5.0	4.3	3.9	3.7	3.7
15.....	4.0	4.2	5.5	5.8	5.2	5.9	5.7	4.9	4.3	3.8	3.7	3.7
16.....	4.0	4.2	5.5	5.8	5.2	5.8	5.7	4.9	4.3	3.8	3.7	3.8
17.....	4.0	4.2	5.5	5.7	5.1	5.7	5.6	4.8	4.3	3.8	3.7	3.8
18.....	4.0	4.2	5.4	5.6	5.1	5.7	5.6	4.8	4.3	3.8	3.7	3.8
19.....	4.1	4.3	5.4	5.5	6.1	5.7	5.5	4.7	4.2	3.8	3.7	3.8
20.....	4.2	5.8	5.3	5.4	6.0	6.4	5.5	4.7	4.2	3.8	3.7	3.8
21.....	4.2	7.1	5.2	5.4	6.0	10.5	5.5	4.7	4.1	3.8	3.6	3.8
22.....	4.2	6.15	5.2	5.75	5.9	8.85	5.5	4.6	4.1	3.8	3.6	3.8
23.....	4.1	6.3	5.2	6.25	6.2	7.6	5.4	4.6	4.1	3.8	3.6	3.8
24.....	4.1	6.6	5.1	8.25	7.5	7.0	5.4	4.6	4.0	3.7	3.6	3.8
25.....	4.1	6.0	5.2	7.5	7.3	6.7	5.3	4.6	4.0	3.7	3.6	3.8
26.....	4.1	5.8	5.5	7.0	7.0	6.5	5.3	4.6	4.0	3.7	3.6	3.8
27.....	4.1	5.7	5.5	6.7	6.8	8.15	5.3	4.6	4.4	3.7	3.6	3.8
28.....	4.1	5.6	5.4	6.1	6.5	7.6	5.2	4.6	4.4	3.7	3.6	3.8
29.....	4.1	5.5	5.4	5.9	.....	7.2	5.2	4.5	4.3	3.7	3.6	3.8
30.....	4.1	5.4	5.3	5.8	.....	6.8	5.2	4.5	4.1	3.7	3.6	3.8
31.....	4.1	.....	5.6	5.8	.....	6.5	.....	4.5	.....	3.7	3.6	.....
1910-11.												
1.....	3.8	3.9	4.4	4.5	7.0	6.2	6.95	6.0	5.7	5.0	5.1	5.1
2.....	3.8	3.9	4.4	4.4	7.1	6.6	7.0	6.1	5.7	5.0	5.1	5.0
3.....	3.8	3.9	4.8	4.4	7.0	10.4	7.0	6.0	5.7	4.9	5.1	5.0
4.....	3.8	3.9	5.1	4.4	6.5	11.75	7.0	6.0	5.7	4.9	5.1	5.0
5.....	3.8	3.9	5.2	4.4	6.2	10.1	7.4	6.0	5.7	4.9	5.1	5.0
6.....	3.8	3.9	5.3	4.4	5.9	12.6	7.75	5.9	5.7	4.9	5.1	5.0
7.....	3.8	3.9	5.3	4.4	5.6	10.75	7.2	5.9	5.9	4.9	5.1	5.0
8.....	3.8	3.9	5.3	4.3	5.4	10.15	7.0	5.8	6.2	4.9	5.1	5.0
9.....	3.9	3.9	5.3	4.3	5.2	8.6	7.0	5.8	6.0	5.1	5.1	5.0
10.....	3.9	3.9	5.4	4.3	5.0	7.8	7.0	5.9	6.0	5.1	5.1	5.0
11.....	3.9	3.9	5.5	4.3	5.2	7.6	7.0	5.9	6.0	5.0	5.1	5.0
12.....	3.9	3.9	5.5	4.4	5.6	7.5	6.9	5.9	6.0	5.0	5.1	5.0
13.....	3.9	4.0	5.4	4.5	5.6	7.5	6.8	5.8	5.9	4.9	5.1	5.0
14.....	3.9	4.0	5.4	4.6	5.5	7.5	6.8	5.8	5.9	4.9	5.1	5.0
15.....	3.9	4.0	5.3	5.0	5.3	7.65	6.8	5.8	5.8	4.9	5.1	5.0
16.....	3.9	4.0	5.3	5.0	5.2	7.6	6.7	5.8	5.8	5.0	5.1	5.0
17.....	3.9	4.0	5.3	5.0	5.2	7.45	6.5	5.8	5.7	5.0	5.1	5.0
18.....	3.9	4.0	5.2	5.5	5.2	7.5	6.4	5.8	5.6	5.0	5.1	5.0
19.....	3.9	4.0	5.2	7.25	5.2	7.55	6.3	5.8	5.6	5.0	5.1	5.0
20.....	3.9	4.0	5.1	7.75	5.2	7.6	6.3	5.8	5.5	5.0	5.1	5.0
21.....	3.9	4.1	5.0	6.5	5.1	7.8	6.3	5.7	5.5	5.0	5.1	5.0
22.....	3.9	4.1	4.9	6.0	5.1	7.75	6.3	5.7	5.4	5.0	5.1	5.0
23.....	3.9	4.1	4.8	6.0	5.1	8.0	6.1	5.7	5.4	5.0	5.1	5.0
24.....	3.9	4.2	4.7	6.4	5.1	8.0	6.0	5.7	5.4	5.0	5.1	5.0
25.....	3.9	4.8	4.7	6.2	5.0	8.0	5.9	5.7	5.3	5.0	5.1	5.0

Daily gage height, in feet, of Stony Creek near Fruto, Cal., for 1901-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.												
26.....	3.9	4.7	4.7	6.3	5.0	7.75	6.0	5.7	5.3	5.0	5.1	5.0
27.....	3.9	4.6	4.6	6.5	5.0	7.3	6.2	5.8	5.3	5.0	5.1	5.0
28.....	3.9	4.5	4.6	7.25	5.45	7.1	6.1	5.8	5.2	5.0	5.1	5.0
29.....	3.9	4.5	4.6	7.9	.....	6.65	6.0	5.8	5.2	5.0	5.1	5.0
30.....	3.9	4.5	4.5	7.2	.....	6.95	6.0	5.7	5.1	5.0	5.1	5.0
31.....	3.9	.....	4.5	7.35	.....	7.1	.....	5.7	.....	5.0	5.1	.....
1911-12.												
1.....	5.0	4.8	4.5	4.7	5.2	4.9	5.3	6.4	5.5	.....	.....	.....
2.....	5.0	4.8	4.5	4.7	5.1	4.9	5.35	6.2	5.5	.....	.....	.....
3.....	5.0	4.8	4.5	4.6	5.0	4.9	5.35	6.0	5.45	.....	.....	.....
4.....	5.0	4.8	4.6	4.6	5.0	4.9	5.3	5.9	5.45	.....	.....	.....
5.....	5.0	4.7	4.6	4.6	5.0	5.0	5.25	5.9	5.4	.....	.....	.....
6.....	4.9	4.7	4.6	4.6	5.0	5.25	5.25	5.9	5.4	.....	.....	.....
7.....	4.9	4.7	4.6	4.6	5.0	5.2	5.25	5.9	5.3	.....	.....	.....
8.....	4.9	4.5	4.6	4.7	5.1	5.2	5.25	5.8	5.25	.....	.....	.....
9.....	4.9	4.5	4.6	4.8	5.3	5.2	5.25	5.8	5.2	.....	.....	.....
10.....	4.9	4.5	4.6	4.9	5.2	5.1	5.7	5.75	5.2	.....	.....	.....
11.....	4.9	4.6	4.6	4.9	5.2	5.1	5.8	5.75	5.2	.....	.....	.....
12.....	4.9	4.6	4.6	4.9	5.1	6.2	5.55	5.65	5.15	.....	.....	.....
13.....	4.9	4.6	4.5	5.0	5.1	5.55	5.45	5.6	5.1	.....	.....	.....
14.....	4.95	4.6	4.5	5.0	5.1	5.4	5.4	5.55	5.1	.....	.....	.....
15.....	4.95	4.6	4.5	4.9	5.0	5.4	5.4	5.55	5.0	.....	.....	.....
16.....	4.9	4.6	4.5	5.0	5.0	5.5	5.5	5.5	4.9	.....	.....	.....
17.....	4.9	4.7	4.6	5.0	5.4	5.4	5.5	5.5	4.9	.....	.....	.....
18.....	4.9	4.6	4.6	5.0	5.7	5.35	5.4	5.45	4.9	.....	.....	.....
19.....	4.9	4.6	4.6	5.0	5.3	5.45	5.35	5.4	4.9	.....	.....	.....
20.....	4.85	4.6	4.6	4.9	5.2	5.45	5.3	5.4	4.9	.....	.....	.....
21.....	4.85	4.6	4.6	4.9	5.2	5.4	5.3	5.4	5.0	.....	.....	.....
22.....	4.8	4.6	4.5	4.9	5.2	5.35	5.25	5.4	5.0	.....	.....	.....
23.....	4.8	4.6	4.5	4.9	5.1	5.35	5.25	5.35	5.1	.....	.....	.....
24.....	4.8	4.6	4.5	4.9	5.0	5.45	5.2	5.35	5.25	.....	.....	.....
25.....	4.8	4.6	4.5	5.5	5.0	5.4	5.2	5.75	5.1	.....	.....	.....
26.....	4.8	4.6	4.5	6.8	4.9	5.4	5.2	5.85	5.0	.....	.....	.....
27.....	4.8	4.6	4.5	5.9	5.0	5.4	5.15	5.85	4.9	.....	.....	.....
28.....	4.8	4.5	4.6	5.65	5.0	5.4	5.15	5.8	4.9	.....	.....	.....
29.....	4.8	4.5	4.6	5.5	4.9	5.5	5.55	5.7	4.9	.....	.....	.....
30.....	4.8	4.5	4.6	5.35	.....	5.4	5.9	5.7	5.0	.....	.....	.....
31.....	4.8	.....	4.6	5.2	.....	5.35	.....	5.6	.....	.....	.....	.....

Daily discharge, in second-feet, of Stony Creek near Fruto, Cal., for 1901-1912.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1901.												
1.....	.....	.....	.....	.....	1,150	2,040	435	565	195	2	10	5
2.....	.....	.....	.....	.....	1,050	1,690	435	565	195	2	10	5
3.....	.....	.....	.....	.....	960	1,470	495	495	165	2	10	5
4.....	.....	.....	.....	.....	960	1,250	495	495	165	2	5	5
5.....	.....	.....	.....	.....	1,150	1,150	435	495	165	0	5	5
6.....	.....	.....	.....	.....	960	1,050	495	435	140	0	5	5
7.....	.....	.....	.....	.....	870	960	435	385	140	0	5	5
8.....	.....	.....	.....	.....	870	870	435	385	117	0	5	5
9.....	.....	.....	.....	.....	790	870	385	385	97	0	5	5
10.....	.....	.....	.....	.....	790	960	340	340	97	0	5	5
11.....	.....	.....	.....	.....	710	1,050	340	340	77	0	5	5
12.....	.....	.....	.....	.....	710	960	300	340	62	0	5	5
13.....	.....	.....	.....	.....	1,050	870	300	340	62	0	5	5
14.....	.....	.....	.....	.....	1,800	790	340	340	47	15	5	5
15.....	.....	.....	.....	.....	1,250	790	385	340	47	15	5	10
16.....	.....	.....	.....	.....	3,020	790	385	300	35	15	5	10
17.....	.....	.....	.....	.....	2,400	790	340	300	35	15	5	10
18.....	.....	.....	.....	.....	2,040	790	340	300	25	15	2	10
19.....	.....	.....	.....	.....	8,560	710	300	260	25	15	2	10
20.....	.....	.....	.....	.....	6,200	635	300	260	15	15	2	10
21.....	.....	.....	.....	.....	4,060	635	300	300	15	15	2	10
22.....	.....	.....	.....	.....	3,020	635	260	300	15	10	2	15
23.....	.....	.....	.....	.....	4,840	565	260	300	10	10	2	15
24.....	.....	.....	.....	.....	3,410	565	225	300	10	10	2	15
25.....	.....	.....	.....	.....	2,720	565	225	340	10	10	2	25

Daily discharge, in second-feet, of Stony Creek near Fruto, Cal., for 1901-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1901.												
26.....					2,640	565	225	300	5	10		25
27.....					2,400	565	225	300	5	10		25
28.....					2,160	565	225	300	5	10		25
29.....						495	635	260	5	10		25
30.....				1,250		495	565	260	5	10		710
31.....				1,250		435		225		10	2	
1901-2.												
1.....	300	47	340	150	120	6,010	1,120	870	515	8	2	4
2.....	260	35	1,250	180	150	6,950	1,210	790	455	8	2	4
3.....	260	35	635	150	150	4,540	1,300	715	405	8	2	4
4.....	225	35	3,020	150	120	3,890	1,390	715	405	8	2	4
5.....	225	35	1,400	150	150	3,110	1,480	645	405	8	2	4
6.....	225	35	1,220	120	425	3,420	2,200	645	355	4	2	4
7.....	195	35	620	120	2,310	3,540	4,770	1,030	355	2	2	4
8.....	165	35	620	120	3,020	5,160	3,480	1,210	355	2	2	4
9.....	140	35	560	120	3,020	4,540	3,110	1,120	310	2	2	4
10.....	140	47	500	120	3,550	3,420	2,750	1,030	310	2	2	8
11.....	117	47	500	120	4,840	3,110	2,530	950	270	2	2	8
12.....	97	47	400	120	3,020	2,750	2,200	1,030	270	2	2	8
13.....	77	47	350	120	2,420	2,750	1,680	1,030	270	2	2	8
14.....	77	47	300	120	2,720	2,750	1,730	1,030	230	2	2	8
15.....	62	77	250	120	4,060	2,750	1,780	870	230	2	2	8
16.....	47	97	250	120	3,020	2,750	1,680	790	200	2	2	8
17.....	35	62	210	120	2,900	2,640	1,630	790	170	2	2	8
18.....	25	77	210	120	2,090	2,530	1,480	790	170	2	2	8
19.....	15	77	210	120	2,090	2,310	1,390	715	140	2	2	8
20.....	15	165	180	120	2,260	2,310	1,300	645	115	2	2	8
21.....	10	165	180	120	3,220	2,200	1,390	645	90	2	2	8
22.....	5	340	150	150	4,130	2,200	1,210	580	70	2	2	8
23.....	5	340	120	150	9,480	1,300	1,260	580	70	2	2	8
24.....	2	300	120	150	21,300	1,300	1,260	515	50	2	2	14
25.....	0	225	150	120	19,200	1,210	1,260	515	50	2	2	14
26.....	0	195	150	120	11,200	1,210	1,120	515	35	2	4	14
27.....	260	195	180	120	16,000	1,120	1,030	455	4	2	4	14
28.....	300	195	180	120	7,520	1,120	1,030	455	4	2	4	14
29.....	340	1,050	150	120		1,120	950	405	4	2	4	14
30.....	340	635	150	120		1,120	870	455	4	2	4	14
31.....	62		150	120		1,120		515		2	4	
1902-3.												
1.....	90	200	1,580	1,210	1,780	1,030	2,310	580	66	9	9	5
2.....	90	200	1,580	1,210	1,530	950	1,880	580	45	9	9	5
3.....	90	200	1,480	1,120	1,340	950	1,880	580	45	9	9	5
4.....	90	200	1,390	1,120	1,210	950	1,780	515	27	9	9	5
5.....	90	200	2,870	1,030	1,210	1,120	1,580	515	15	9	9	5
6.....	90	230	1,390	1,030	1,210	1,120	1,390	515	15	9	9	5
7.....	90	230	1,300	1,030	2,140	1,030	1,390	515	15	9	9	5
8.....	115	680	1,210	950	1,980	950	1,300	455	15	9	9	5
9.....	115	6,580	1,260	950	1,480	950	1,210	455	15	5	9	5
10.....	115	3,680	1,390	870	1,480	950	1,120	455	15	5	9	5
11.....	115	2,480	1,390	870	1,390	870	1,030	455	9	5	9	5
12.....	115	1,780	1,300	870	1,300	870	950	405	9	5	9	5
13.....	115	1,680	1,300	870	1,210	2,750	950	405	9	5	9	5
14.....	140	1,580	1,300	790	1,210	2,930	950	355	9	5	9	5
15.....	140	1,580	1,210	790	1,210	3,480	950	310	9	5	9	5
16.....	140	1,580	1,210	790	1,120	3,230	870	310	9	5	9	5
17.....	140	1,680	1,210	790	1,120	2,480	870	310	9	3	9	5
18.....	140	2,930	1,210	790	1,030	1,330	950	310	9	3	9	5
19.....	140	3,680	1,120	790	1,030	1,880	950	270	9	3	9	5
20.....	140	2,930	1,120	715	1,030	1,780	950	270	9	3	9	5
21.....	140	2,420	1,030	715	950	1,680	870	270	9	3	9	5
22.....	170	2,310	950	1,340	950	1,480	870	270	9	3	9	5
23.....	170	2,200	950	1,930	1,480	1,480	790	230	9	3	9	5
24.....	310	2,200	870	2,870	1,300	1,680	790	230	9	3	9	9
25.....	355	2,090	1,080	4,920	1,210	1,680	715	192	9	3	9	9
26.....	310	2,090	1,830	4,030	1,120	1,580	715	156	9	9	9	9
27.....	270	1,980	1,480	3,750	1,120	1,730	645	123	9	9	9	9
28.....	230	1,880	1,480	3,110	1,030	5,830	645	123	9	9	9	9
29.....	230	1,780	1,480	2,860		2,990	645	93	9	9	9	9
30.....	230	1,680	1,390	3,890		3,230	580	93	9	9	9	9
31.....	200		1,390	2,420		2,700		66		9	5	

Daily discharge, in second-feet, of Stony Creek near Fruto, Cal., for 1901-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1903-4.												
1.....	9	15	270	310	270	2,990	2,840	980	350	45	16	9
2.....	9	15	270	310	270	2,990	2,720	980	350	45	16	9
3.....	9	15	270	310	270	2,870	2,420	980	350	45	16	9
4.....	15	15	230	310	270	2,810	2,200	980	300	45	16	9
5.....	15	15	230	310	515	2,480	2,090	905	300	45	16	9
6.....	15	15	192	310	380	2,580	1,980	905	300	45	16	9
7.....	15	15	192	310	355	3,420	1,880	905	250	45	16	9
8.....	15	15	192	310	355	3,540	1,980	830	250	45	16	9
9.....	15	15	192	310	355	3,050	1,980	830	250	45	16	9
10.....	15	15	192	310	310	20,700	1,980	830	210	45	16	9
11.....	15	15	192	405	310	5,720	1,980	830	210	45	16	9
12.....	15	355	192	355	5,560	3,450	1,880	830	180	45	16	9
13.....	15	612	192	310	1,930	2,840	1,780	830	180	45	16	9
14.....	15	2,700	230	310	1,160	4,680	1,680	755	150	45	16	9
15.....	15	990	230	310	4,400	3,690	1,580	755	150	45	16	9
16.....	15	430	3,290	310	15,400	3,150	1,400	755	120	45	16	9
17.....	15	270	2,640	405	4,400	8,500	1,310	685	120	30	16	9
18.....	15	108	1,450	405	2,990	6,700	1,220	685	120	30	16	9
19.....	15	715	680	405	2,360	5,020	1,490	685	100	30	16	9
20.....	27	2,640	645	405	1,530	5,100	1,220	620	100	30	16	9
21.....	27	4,240	580	355	3,820	3,690	1,140	620	100	30	9	9
22.....	27	2,470	580	355	13,200	2,960	1,140	560	80	30	9	16
23.....	27	1,480	515	355	5,320	2,660	1,060	560	80	30	9	30
24.....	27	1,080	455	355	22,200	2,360	980	560	60	30	9	30
25.....	15	715	455	355	7,500	2,200	980	500	60	16	9	60
26.....	15	485	355	355	7,500	2,040	980	500	45	16	9	60
27.....	15	405	355	310	5,650	4,200	1,060	500	45	16	9	60
28.....	15	355	355	310	3,890	8,560	1,060	500	45	16	9	45
29.....	15	355	310	310	3,230	5,900	1,060	450	45	16	9	45
30.....	15	310	310	310	-----	4,520	1,060	450	45	16	9	30
31.....	15	-----	310	310	-----	2,780	-----	400	-----	16	9	-----
1904-5.												
1.....	30	45	120	2,420	7,280	755	1,490	450	400	80	14	10
2.....	30	45	120	2,200	4,840	755	1,400	620	350	62	14	10
3.....	45	45	120	1,980	2,840	685	1,400	620	350	62	14	14
4.....	45	45	120	1,680	2,090	685	1,310	620	400	62	14	14
5.....	45	45	120	1,580	1,580	620	1,310	560	350	62	14	14
6.....	45	45	120	1,490	1,400	620	1,220	500	350	47	14	14
7.....	45	45	120	620	1,220	620	1,220	1,680	300	47	14	14
8.....	45	45	120	560	1,060	560	1,140	1,180	300	47	14	14
9.....	60	45	180	560	980	560	1,060	980	250	47	14	14
10.....	60	45	210	500	905	560	980	980	250	47	14	14
11.....	1,930	45	250	500	905	500	905	905	210	47	14	14
12.....	980	45	250	500	830	1,780	830	905	210	34	14	14
13.....	620	45	350	450	830	4,060	830	830	210	34	14	14
14.....	150	45	350	6,200	755	3,340	755	830	180	34	14	14
15.....	100	60	250	3,340	755	4,440	755	755	180	34	14	14
16.....	100	60	210	4,440	685	4,440	830	755	180	23	14	14
17.....	80	80	180	3,410	980	3,280	830	685	180	23	14	14
18.....	80	80	150	3,280	1,220	2,600	830	620	180	23	14	14
19.....	80	80	150	2,900	1,140	5,720	755	560	150	23	14	14
20.....	60	80	150	2,200	1,400	4,060	755	560	150	23	10	14
21.....	60	80	120	2,200	1,220	2,780	620	500	150	23	10	14
22.....	60	80	120	6,700	1,060	2,140	620	500	120	23	10	14
23.....	60	80	120	5,720	980	1,930	620	450	120	23	10	14
24.....	45	80	250	6,200	905	2,720	560	450	120	23	10	14
25.....	45	80	210	3,280	905	1,980	560	400	100	23	10	14
26.....	45	80	210	2,310	830	1,930	560	400	100	23	10	14
27.....	45	180	210	1,830	830	1,680	500	792	100	23	10	14
28.....	45	150	180	1,680	755	1,490	500	500	80	23	10	14
29.....	45	120	180	1,490	-----	2,840	500	500	80	23	10	14
30.....	45	120	5,900	1,400	-----	1,880	450	450	80	14	10	14
31.....	45	-----	2,900	1,400	-----	1,540	-----	400	-----	14	10	-----
1905-6.												
1.....	14	23	62	100	500	1,920	3,480	705	640	250	48	13
2.....	14	23	62	100	500	1,750	2,890	705	640	250	48	13
3.....	14	23	62	100	500	5,450	2,450	640	640	213	48	13
4.....	14	23	62	100	500	2,600	2,080	640	705	213	48	13
5.....	14	23	62	100	500	1,980	1,850	640	640	179	48	13

Daily discharge, in second-feet, of Stony Creek near Fruto, Cal., for 1901-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1905-6.												
6.	14	23	62	100	480	1,750	1,680	580	640	179	48	12
7.	14	23	62	100	480	1,750	1,570	580	640	149	48	13
8.	14	23	62	100	480	1,680	1,460	580	580	149	48	13
9.	14	23	62	100	480	1,680	1,360	580	580	149	48	13
10.	14	23	62	100	500	1,570	1,360	580	530	149	48	13
11.	14	23	62	100	820	2,330	1,250	530	530	149	48	13
12.	14	23	62	1,540	900	1,960	1,250	530	480	119	29	13
13.	14	23	62	1,980	820	1,740	1,250	530	480	119	29	13
14.	14	23	62	2,720	2,830	1,520	1,150	530	480	119	29	13
15.	14	23	62	3,690	2,360	1,300	1,150	530	480	119	29	13
16.	14	23	62	12,200	1,830	1,250	1,050	530	530	119	29	13
17.	14	23	62	1,980	2,240	1,250	955	480	480	119	29	13
18.	14	23	62	22,200	2,000	1,150	865	480	480	119	29	13
19.	14	23	62	7,280	3,320	1,050	865	480	480	119	29	13
20.	14	23	62	3,220	2,680	1,050	780	480	430	119	29	13
21.	14	23	62	2,040	2,620	2,260	780	480	430	119	29	13
22.	14	23	62	1,490	2,360	1,960	705	480	430	93	29	13
23.	14	23	62	1,180	2,350	3,690	780	480	380	93	29	13
24.	23	23	62	1,020	2,280	3,150.	780	530	380	93	29	29
25.	23	34	62	868	2,170	4,060	780	580	380	70	29	29
26.	23	34	62	792	1,930	3,220	705	640	380	70	13	29
27.	23	34	100	685	2,400	2,960	705	780	380	70	13	29
28.	23	34	100	685	2,280	2,700	780	1,200	380	70	13	29
29.	23	62	100	620	.....	2,450	780	910	335	48	13	29
30.	23	62	100	560	.....	10,200	780	780	290	48	13	29
31.	23	.....	100	500	.....	4,200	.....	705	.....	48	13	.....
1906-7.												
1.	29	29	48	380	6,940	950	2,650	580	350	110	15	15
2.	29	29	48	380	16,300	850	2,440	580	300	110	15	15
3.	29	48	48	380	11,600	750	2,300	580	300	80	15	15
4.	29	48	48	6,100	10,200	660	2,160	510	300	80	15	15
5.	29	70	48	1,620	7,280	3,000	2,030	510	300	80	15	15
6.	29	70	48	1,350	5,770	2,720	2,370	510	300	50	15	15
7.	29	70	149	1,250	4,520	1,840	2,510	510	300	50	15	15
8.	29	70	149	1,620	3,880	1,520	2,440	510	300	50	15	15
9.	29	70	179	5,540	2,720	2,370	2,230	510	300	50	15	15
10.	29	70	865	5,270	1,840	1,840	2,030	450	255	50	15	15
11.	29	70	865	2,520	1,520	1,520	1,900	450	255	50	15	15
12.	29	70	480	1,570	1,400	1,400	1,770	450	255	50	15	15
13.	29	70	380	1,070	1,280	1,280	1,640	450	255	50	15	15
14.	29	70	335	822	1,280	1,170	1,520	450	300	50	15	15
15.	29	70	290	705	1,170	1,060	1,640	450	255	50	15	15
16.	29	70	250	705	1,060	950	1,520	450	255	50	15	15
17.	29	70	250	865	1,170	6,080	1,520	400	215	30	15	15
18.	29	70	213	822	1,060	26,500	1,520	400	215	30	15	15
19.	29	70	213	910	1,060	20,000	1,520	450	215	30	15	15
20.	29	70	1,250	1,060	13,500	1,400	1,400	450	215	30	15	15
21.	29	70	179	1,960	1,060	6,820	1,400	450	215	30	15	15
22.	29	70	149	2,140	1,220	3,210	1,280	450	215	30	15	15
23.	29	70	149	2,140	1,400	12,400	1,280	400	175	30	15	30
24.	29	70	149	2,020	1,280	4,690	1,170	400	175	30	15	30
25.	29	48	149	2,020	1,170	3,800	1,060	400	175	30	15	30
26.	29	48	5,270	2,140	1,340	3,210	950	400	140	30	15	30
27.	29	48	3,410	3,900	1,060	2,790	850	400	140	30	15	30
28.	29	48	1,570	3,220	950	2,510	750	350	140	30	15	30
29.	29	48	910	2,640	.....	2,510	660	350	140	30	15	30
30.	29	48	580	2,200	.....	2,650	580	350	110	30	15	30
31.	29	.....	430	3,150	.....	2,650	.....	350	.....	30	15	.....
1907-8.												
1.	30	30	50	760	1,920	2,210	500	385	285	78	20	3
2.	30	30	50	615	5,500	1,300	500	385	285	78	20	3
3.	30	30	50	510	2,310	990	500	385	245	78	20	3
4.	30	30	50	580	1,430	870	500	385	245	78	20	3
5.	30	30	50	470	2,180	760	500	385	245	55	20	3
6.	30	30	175	410	3,690	760	500	385	245	55	20	3
7.	30	30	110	360	2,430	760	500	385	245	55	20	3
8.	30	30	80	310	2,030	870	500	385	245	55	20	3
9.	30	30	80	1,240	7,800	870	500	385	245	55	20	3
10.	30	30	510	930	2,660	990	500	385	205	55	20	3

Daily discharge, in second-feet, of Stony Creek near Fruto, Cal., for 1901-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1907-8.												
11.....	30	50	350	815	2,070	990	500	385	205	55	20	3
12.....	30	50	900	700	1,580	1,050	440	385	205	55	20	3
13.....	30	50	580	600	1,300	1,050	440	385	205	55	20	3
14.....	30	50	350	1,690	1,110	1,180	440	385	205	55	20	3
15.....	30	50	300	970	990	1,180	440	385	205	55	20	3
16.....	30	50	255	765	990	1,300	440	385	170	35	10	10
17.....	30	50	255	600	870	1,240	440	385	170	35	10	10
18.....	30	50	215	700	870	1,240	440	385	170	35	10	10
19.....	30	50	215	635	870	1,240	440	385	170	35	10	10
20.....	30	50	350	3,600	760	1,110	440	385	170	35	10	10
21.....	30	50	300	2,170	760	1,110	440	385	135	35	10	10
22.....	30	50	255	2,010	760	990	440	335	135	35	10	10
23.....	30	50	215	1,900	660	990	440	335	135	35	10	10
24.....	30	50	215	3,490	575	870	440	335	135	35	10	10
25.....	30	50	175	2,320	575	870	440	335	135	35	10	10
26.....	30	50	2,860	1,570	500	760	440	335	105	35	10	10
27.....	30	50	1,900	1,180	500	760	440	335	105	35	10	10
28.....	30	50	1,400	990	500	660	440	335	105	35	10	10
29.....	30	50	1,520	900	500	660	440	285	105	35	10	10
30.....	30	50	3,070	810	.....	575	440	285	105	35	10	20
31.....	30	.....	2,160	720	.....	575	.....	285	.....	35	10	.....
1908-9.												
1.....	20	55	105	232	4,760	1,760	940	720	250	59	30	8
2.....	20	55	105	720	29,300	1,590	1,020	720	250	59	30	8
3.....	20	55	105	2,980	16,900	2,850	980	720	250	59	30	8
4.....	20	55	135	888	9,920	2,430	980	655	250	59	30	8
5.....	20	55	500	2,550	5,950	2,080	980	655	213	59	30	8
6.....	20	55	335	4,280	4,360	1,760	1,060	655	178	59	30	8
7.....	20	55	285	2,430	4,440	1,700	1,060	595	178	59	30	8
8.....	20	55	285	15,200	4,360	1,590	1,110	595	178	59	20	8
9.....	20	78	285	5,570	3,240	1,490	1,110	595	178	59	20	13
10.....	20	78	335	3,990	3,110	1,290	1,110	595	178	59	20	13
11.....	35	78	385	2,790	4,940	1,200	1,110	535	148	43	13	13
12.....	35	78	335	2,250	4,940	1,200	1,110	535	148	43	13	13
13.....	35	78	285	2,080	4,600	1,110	1,110	535	148	43	13	13
14.....	35	78	245	22,100	4,520	1,110	1,060	535	148	43	13	13
15.....	35	78	205	17,100	4,760	1,110	1,020	535	148	30	13	13
16.....	35	78	170	19,500	4,850	1,110	1,020	535	148	30	13	13
17.....	35	105	170	8,310	5,200	1,020	1,020	485	148	30	13	13
18.....	35	105	135	6,450	5,020	1,020	1,020	485	148	30	13	13
19.....	35	105	135	5,380	4,440	940	940	435	122	30	13	13
20.....	35	105	135	7,500	3,850	940	940	385	122	30	13	13
21.....	35	187	135	12,900	3,300	940	940	385	122	30	13	13
22.....	35	135	135	8,950	3,110	1,110	860	385	99	30	8	13
23.....	35	105	135	5,020	2,790	1,020	860	385	99	30	8	13
24.....	35	105	135	5,200	2,430	1,060	940	335	78	30	8	13
25.....	35	105	105	5,570	2,310	1,020	860	335	78	30	8	13
26.....	55	105	105	5,660	2,200	1,020	790	335	78	30	8	20
27.....	55	105	105	4,760	2,030	1,020	790	290	78	30	8	20
28.....	55	105	105	4,060	1,860	1,020	790	290	59	30	8	20
29.....	55	105	105	4,360	.....	1,020	720	290	59	30	8	20
30.....	55	105	105	4,360	.....	940	720	290	59	30	8	20
31.....	55	.....	105	4,360	.....	940	.....	290	.....	30	8	.....
1909-10.												
1.....	20	43	535	480	775	1,580	1,460	370	118	23	1	0.5
2.....	30	43	595	480	695	1,460	1,220	370	118	23	1	.5
3.....	59	43	535	540	620	1,460	1,030	370	118	23	1	.5
4.....	78	43	535	540	550	1,340	1,030	315	118	38	1	.5
5.....	99	43	595	480	485	1,340	940	315	93	38	1	1
6.....	99	43	595	425	485	1,220	855	315	93	23	1	1
7.....	78	43	720	370	775	1,220	775	315	93	23	1	1
8.....	59	43	790	320	775	1,220	695	315	93	23	1	1
9.....	43	59	2,370	320	695	1,120	695	315	93	23	1	1
10.....	43	99	1,700	370	775	1,120	695	315	93	23	1	1
11.....	43	99	1,290	425	620	1,030	855	315	93	23	1	1
12.....	30	78	720	425	550	1,030	855	315	72	11	1	1
13.....	30	78	655	480	485	1,030	855	315	72	11	1	1
14.....	30	59	595	540	425	1,030	775	315	72	11	1	1
15.....	30	59	535	690	425	940	775	265	72	2	1	1

Daily discharge, in second-feet, of Stony Creek near Fruto, Cal. for 1901-12—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909-10.												
16.....	30	59	535	690	425	855	775	265	72	2	1	2
17.....	30	59	535	610	370	775	695	220	72	2	1	2
18.....	30	59	485	540	370	775	695	220	72	2	1	2
19.....	43	78	485	480	1,120	775	620	180	54	2	1	2
20.....	59	720	435	425	1,030	1,460	620	180	54	2	1	2
21.....	59	1,920	385	425	1,030	9,010	620	180	38	2	.5	2
22.....	59	980	385	650	940	5,360	620	145	38	2	.5	2
23.....	43	1,110	385	1,120	1,220	3,120	550	145	38	2	.5	2
24.....	43	1,390	335	3,840	2,960	2,210	550	145	23	1	.5	2
25.....	43	860	385	2,750	2,640	1,830	485	145	23	1	.5	2
26.....	43	720	535	2,100	2,210	1,580	485	145	23	1	.5	2
27.....	43	655	535	1,750	1,960	4,050	485	145	93	1	.5	2
28.....	43	595	485	1,120	1,580	3,120	425	145	93	1	.5	2
29.....	43	535	485	940	.....	2,490	425	118	72	1	.5	2
30.....	43	485	435	855	.....	1,960	425	118	38	1	.5	2
31.....	43	.....	595	855	.....	1,580	.....	118	.....	1	.5	.....
1910-11.												
1.....	2	11	93	118	2,210	1,220	1,650	690	465	125	161	161
2.....	2	11	93	93	2,340	1,700	1,710	770	465	125	161	125
3.....	2	11	220	93	2,210	8,760	1,710	690	465	95	161	125
4.....	2	11	370	93	1,580	12,500	1,710	690	465	95	161	125
5.....	2	11	425	93	1,220	8,040	2,250	690	465	95	161	125
6.....	2	11	485	93	940	15,400	2,790	610	465	95	161	125
7.....	2	11	485	93	695	9,620	1,960	610	610	95	161	125
8.....	2	11	485	72	550	8,020	1,710	535	860	95	161	125
9.....	11	11	485	72	425	4,330	1,710	535	690	161	161	125
10.....	11	11	550	72	315	2,870	1,710	610	690	161	161	125
11.....	11	11	620	72	425	2,550	1,710	610	690	125	161	125
12.....	11	11	620	93	695	2,400	1,590	610	690	125	161	125
13.....	11	23	550	118	695	2,400	1,480	535	610	95	161	125
14.....	11	23	550	145	620	2,400	1,480	535	610	95	161	125
15.....	11	23	485	315	485	2,630	1,480	535	535	95	161	125
16.....	11	23	485	315	425	2,550	1,370	535	535	125	161	125
17.....	11	23	485	315	425	2,320	1,150	535	465	125	161	125
18.....	11	23	425	620	425	2,400	1,050	535	405	125	161	125
19.....	11	23	425	2,560	425	2,480	950	535	405	125	161	125
20.....	11	23	370	3,360	425	2,550	950	535	350	125	161	125
21.....	11	38	315	1,580	370	2,870	950	465	350	125	161	125
22.....	11	38	265	1,030	370	2,790	950	465	300	125	161	125
23.....	11	38	220	1,030	370	3,200	770	465	300	125	161	125
24.....	11	54	180	1,460	370	3,200	690	465	300	125	161	125
25.....	11	220	180	1,220	315	3,200	610	465	250	125	161	125
26.....	11	180	180	1,340	315	2,790	690	465	250	125	161	125
27.....	11	145	145	1,580	315	2,100	860	535	250	125	161	125
28.....	11	118	145	2,560	585	1,830	770	535	203	125	161	125
29.....	11	118	145	3,610	.....	1,320	690	535	203	125	161	125
30.....	11	118	118	2,490	.....	1,650	690	465	161	125	161	125
31.....	11	.....	118	2,720	.....	1,830	.....	465	.....	125	161	.....
1911-12.												
1.....	125	68	15	45	203	95	250	1,050	350	.....	.....	.....
2.....	125	68	15	45	161	95	275	860	350	.....	.....	.....
3.....	125	68	15	27	125	95	275	690	325	.....	.....	.....
4.....	125	68	27	27	125	95	250	610	325	.....	.....	.....
5.....	125	45	27	27	125	125	226	610	300	.....	.....	.....
6.....	95	45	27	27	125	226	226	610	300	.....	.....	.....
7.....	95	45	27	27	125	203	226	610	250	.....	.....	.....
8.....	95	15	27	45	161	203	226	535	226	.....	.....	.....
9.....	95	15	27	68	250	203	226	535	203	.....	.....	.....
10.....	95	15	27	95	203	161	465	500	203	.....	.....	.....
11.....	95	27	27	95	203	161	535	500	203	.....	.....	.....
12.....	95	27	27	95	161	860	378	435	182	.....	.....	.....
13.....	95	27	15	125	161	378	325	405	161	.....	.....	.....
14.....	110	27	15	125	161	300	300	378	161	.....	.....	.....
15.....	110	27	15	95	125	300	300	378	125	.....	.....	.....
16.....	95	27	15	125	125	350	350	350	95	.....	.....	.....
17.....	95	45	27	125	300	300	350	350	95	.....	.....	.....
18.....	95	27	27	125	465	275	300	325	95	.....	.....	.....
19.....	95	27	27	125	250	325	275	300	95	.....	.....	.....
20.....	82	27	27	95	203	325	250	300	95	.....	.....	.....

Daily discharge, in second-feet, of Stony Creek near Fruto, Cal., for 1901-1912—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1911-12.												
21	82	27	27	95	203	300	250	300	125			
22	68	27	15	95	203	275	226	300	125			
23	68	27	15	95	161	275	226	275	161			
24	68	27	15	95	125	325	203	275	226			
25	68	27	15	350	125	300	203	500	161			
26	68	27	15	1,480	95	300	203	572	125			
27	68	27	15	610	125	300	182	572	95			
28	68	15	27	435	125	300	182	535	95			
29	68	15	27	350	95	350	378	465	95			
30	68	15	27	275		300	610	465	125			
31	68		27	203		275		405				

NOTE.—Daily discharge, 1901 to 1912, determined from rating curves that are in general fairly well defined, and which are applicable as follows: Jan. 30 to Dec. 4, 1901; Dec. 5, 1901, to Feb. 24, 1902, and Mar. 11, 1904, to Dec. 31, 1904; Feb. 25, 1902, to Mar. 28, 1903; Mar. 29, 1903, to Mar. 10, 1904; Jan. 1, 1905, to Jan. 15, 1906; Jan. 16 to Mar. 7, 1906 (the indirect method for shifting channels used); Mar. 8 to Feb. 1, 1907; Feb. 2 to Dec. 31, 1907; Jan. 1 to Feb. 9, 1908 (the indirect method for shifting channels used); Feb. 10 to Dec. 31, 1908, and Jan. 1 to Dec. 31, 1909; Jan. 1 to Jan. 24, 1910; Jan. 25 to 27, 1910 (the indirect method for shifting channels used); Jan. 28, 1910, to Mar. 6, 1911; Mar. 7, 1911, to June 30, 1912. Discharge June 27-29, 1910, increased by water from East Park Reservoir.

Monthly discharge of Stony Creek River near Fruto, Cal., for 1901-1912.

[Drainage area, 601 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.	
1901.							
February	8,560	710	2,230	3.71	3.86	124,000	B.
March	2,040	435	857	1.43	1.65	52,700	B.
April	635	225	362	.602	.67	21,500	B.
May	565	225	350	.582	.67	21,500	B.
June	195	5	66.4	.110	.12	3,950	B.
July	15	0	7.4	.012	.01	455	D.
August	10	2	4.1	.0068	.008	252	D.
September	710	5	34.0	.056	.06	2,020	C.
The period						226,000	
1901-2.							
October	340	0	130	.216	.25	7,990	B.
November	1,050	35	159	.265	.30	9,460	B.
December	3,020	120	474	.789	.91	29,100	B.
January	180	120	129	.215	.25	7,930	B.
February	21,300	120	4,800	7.99	8.32	267,000	B.
March	6,980	1,120	2,780	4.63	5.34	171,000	A.
April	4,770	870	1,720	2.86	3.19	102,000	A.
May	1,210	405	743	1.24	1.43	45,700	A.
June	515	4	211	.351	.39	12,600	B.
July	8	2	3.0	.0050	.006	184	D.
August	4	2	2.4	.0040	.005	148	D.
September	14	4	8.2	.014	.02	488	C.
The year	21,300	0	930	1.55	20.41	654,000	
1902-3.							
October	355	90	159	.265	.31	9,780	B.
November	6,580	200	1,830	3.04	3.39	109,000	A.
December	2,870	870	1,350	2.25	2.59	83,000	A.
January	4,920	715	1,610	2.68	3.09	99,000	A.
February	2,140	950	1,290	2.15	2.24	71,600	A.
March	5,830	870	1,880	3.13	3.61	116,000	A.
April	2,310	580	1,080	1.80	2.01	64,300	B.
May	580	66	336	.559	.64	20,700	B.
June	66	9	15.1	.025	.03	898	C.
July	9	3	6.2	.010	.01	381	C.
August	9	5	8.7	.014	.02	535	C.
September	9	5	5.9	.010	.01	351	C.
The year	6,580	5	798	1.33	17.95	576,000	

a Drainage area revised.

## Monthly discharge of Stony Creek River near Fruto, 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.	
1903-4.							
October.....	27	9	16.4	0.027	0.03	1,010	C.
November.....	4,240	15	696	1.16	1.29	41,400	B.
December.....	3,290	192	535	.890	1.03	32,900	B.
January.....	405	310	335	.557	.64	20,600	B.
February.....	22,200	270	3,990	6.64	7.16	230,000	A.
March.....	20,700	2,040	4,460	7.42	8.55	274,000	A.
April.....	2,840	980	1,600	2.66	2.97	95,200	A.
May.....	980	400	715	1.19	1.37	44,000	A.
June.....	350	45	165	.275	.31	9,820	B
July.....	45	16	34.1	.057	.07	2,100	C.
August.....	16	9	13.5	.022	.03	830	C.
September.....	60	9	18.8	.031	.03	1,120	C.
The year.....	22,200	9	1,050	1.74	23.48	753,000	
1904-5.							
October.....	1,930	30	167	.278	.32	10,300	B.
November.....	180	45	70.7	.118	.13	4,210	B.
December.....	5,900	120	453	.754	.87	27,900	B.
January.....	6,700	450	2,420	4.03	4.65	149,000	A.
February.....	7,280	685	1,470	2.45	2.55	81,600	A.
March.....	5,720	500	2,050	3.41	3.93	126,000	A.
April.....	1,490	450	870	1.45	1.62	51,800	A.
May.....	1,680	400	675	1.12	1.29	41,500	B.
June.....	400	80	206	.343	.38	12,300	B.
July.....	80	14	35.4	.059	.07	2,180	C.
August.....	14	10	12.4	.021	.02	762	C.
September.....	14	10	13.7	.023	.03	815	C.
The year.....	7,280	10	704	1.17	15.86	508,000	
1905-6.							
October.....	23	14	16.3	.027	.03	1,000	C.
November.....	62	23	27.1	.045	.05	1,610	C.
December.....	100	62	68.1	.113	.13	4,190	C.
January.....	22,200	100	2,200	3.66	4.22	135,000	B.
February.....	3,320	480	1,540	2.56	2.67	85,500	B.
March.....	10,200	1,050	2,500	4.16	4.80	154,000	B.
April.....	3,480	705	1,280	2.13	2.38	76,200	B.
May.....	1,200	480	610	1.01	1.16	37,500	B.
June.....	705	290	495	.824	.92	29,500	B.
July.....	250	48	127	.211	.24	7,800	C.
August.....	48	13	32.6	.054	.06	2,000	C.
September.....	29	13	17.3	.029	.03	1,030	C.
The year.....	22,200	13	743	1.24	16.69	535,000	
1906-7.							
October.....	29	29	29.0	.048	.06	1,780	C.
November.....	70	29	61.4	.102	.11	3,650	C.
December.....	5,270	48	582	.968	1.12	35,800	B.
January.....	6,100	380	2,020	3.36	3.87	124,000	C.
February.....	16,300	950	3,310	5.51	5.74	184,000	C.
March.....	26,500	660	4,430	7.37	8.50	272,000	C.
April.....	2,650	580	1,640	2.73	3.05	97,600	B.
May.....	580	350	450	.749	.86	27,700	B.
June.....	350	110	236	.393	.44	14,000	B.
July.....	110	30	47.1	.078	.09	2,900	B.
August.....	15	15	15.0	.025	.03	922	C.
September.....	30	15	19.0	.032	.04	1,130	C.
The year.....	26,500	15	1,070	1.78	23.91	765,000	
1907-8.							
October.....	30	30	30.0	.050	.06	1,840	C.
November.....	50	30	44.0	.073	.08	2,620	C.
December.....	3,070	50	597	.993	1.14	36,700	B.
January.....	3,600	310	1,140	1.90	2.19	70,100	B.
February.....	7,800	500	1,680	2.80	3.02	96,600	B.
March.....	2,210	575	993	1.65	1.90	61,100	B.
April.....	500	400	525	.874	.98	31,200	B.
May.....	385	285	364	.606	.70	22,400	B.
June.....	285	105	186	.309	.34	11,100	B.
July.....	78	35	47.6	.079	.09	2,900	C.
August.....	20	10	14.8	.025	.03	910	D.
September.....	20	3	6.83	.011	.01	406	D.
The year.....	7,800	3	469	.780	10.54	338,000	

Monthly discharge of Stony Creek River near Fruto, 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.	
1908-9.							
October.....	55	20	34.0	0.057	0.07	2,090	C.
November.....	187	55	88.2	.147	.16	5,250	C.
December.....	500	105	192	.379	.44	11,800	B.
January.....	22,100	222	6,360	10.6	12.22	391,000	B.
February.....	29,300	1,860	5,480	9.12	9.50	304,000	B.
March.....	2,850	940	1,300	2.16	2.49	79,900	B.
April.....	1,110	720	966	1.61	1.80	57,500	B.
May.....	720	290	488	.812	.97	30,000	B.
June.....	250	59	145	.241	.24	8,630	B.
July.....	59	30	41.0	.068	.08	2,520	C.
August.....	30	8	15.9	.026	.03	978	C.
September.....	20	8	12.8	.021	.02	762	C.
The year.....	29,300	8	1,260	2.10	28.02	894,000	
1909-10.							
October.....	99	20	47.4	.079	.09	2,910	B.
November.....	1,920	43	370	.616	.69	22,000	B.
December.....	2,370	335	651	1.08	1.24	40,000	C.
January.....	3,840	320	840	1.40	1.61	51,600	B.
February.....	2,960	370	964	1.60	1.67	53,500	C.
March.....	9,010	775	1,910	3.18	3.67	117,000	C.
April.....	1,460	425	733	1.22	1.36	43,600	B.
May.....	370	118	240	.399	.46	14,800	B.
June.....	118	23	73.8	.123	.14	4,390	B.
July.....	38	1	11.0	.018	.02	676	D.
August.....	1	.5	1.82	.0014	.002	50	D.
September.....	2	.5	1.43	.0024	.003	85	D.
The year.....	9,010	.5	487	.810	10.955	351,000	
1910-11.							
October.....	11	2	8.68	.014	.02	534	C.
November.....	220	11	46.1	.077	.09	2,740	D.
December.....	620	93	346	.576	.66	21,300	C.
January.....	3,610	72	949	1.58	1.82	58,400	C.
February.....	2,340	315	734	1.22	1.27	40,800	C.
March.....	15,400	1,220	4,000	6.66	7.68	246,000	C.
April.....	2,790	610	1,330	2.21	2.47	79,100	B.
May.....	770	465	557	.927	1.07	34,200	B.
June.....	860	161	450	.749	.84	26,800	B.
July.....	161	95	119	.198	.23	7,320	B.
August.....	161	161	161	.268	.31	9,900	B.
September.....	161	125	126	.210	.23	7,500	B.
The year.....	15,400	2	736	1.22	16.69	535,000	
1911-12.							
October.....	125	68	91.2	.152	.18	5,610	B.
November.....	68	15	32.5	.054	.06	1,930	C.
December.....	27	15	22.0	.037	.04	1,350	C.
January.....	1,480	27	182	.303	.35	11,200	B.
February.....	465	95	173	.288	.31	9,950	B.
March.....	860	95	270	.449	.52	16,600	B.
April.....	610	182	289	.481	.54	17,200	B.
May.....	1,050	275	484	.805	.93	29,800	B.
June.....	350	95	182	.303	.34	10,800	B.
The period.....						104,000	

LITTLE STONY CREEK NEAR LODOGA, CAL.

This station was originally established in March, 1907, by the United States Reclamation Service at the East Park dam site, 3½ miles northeast of Lodoga, in the NW. ¼ NE. ¼ sec. 3, T. 17 N., R. 6 W., M. D. B. and M., a short distance below the mouth of Indian Creek, about 4 miles above the junction with Stony Creek, to determine the quantity of flood water available for storage in the East Park reservoir for use on the Orland project.<sup>1</sup>

<sup>1</sup> For details of investigations made see Cole, Burt, Storage reservoirs on Stony Creek, California: Water-Supply Paper U. S. Geol. Survey No. 86, 1903, also Ninth Ann. Rept. U. S. Recl. Service, 1909-10, pp. 83-89.

The construction of the East Park reservoir, which is a concrete structure of the gravity type, built on an arch plan, was commenced in November, 1908, and was completed in June, 1910. The reservoir has a capacity of 46,000 acre-feet. It is planned to irrigate 14,000 acres of land on both sides of Stony Creek, in the vicinity of Orland.

The gage datum was changed in the fall of 1907, and on June 1, 1909, the gage was moved half a mile downstream to a point a quarter of a mile below the reservoir, in sec. 34, T. 18 N., R. 6 W., M. D. B. and M., and installed at a different datum. Beginning December 1, 1910, the record is taken from the gage at the reservoir. The records at the former locations are only fair, owing to changes in channel.

Discharge measurements were made from a car and cable.

The highest daily discharge is 7,060 second-feet for a mean gage height of 11.8 feet, February 2, 1909.

The creek goes practically dry during the summer of low-water years.

Records have been furnished by the United States Reclamation Service, which maintained the gaging station.

*Discharge measurements of Little Stony Creek near Lodoga, Cal., in 1907-1910.*

[By United States Reclamation Service engineers.]

Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.
1907.			1907.		
Feb. 20.	<i>Feet.</i> 3.50	<i>Sec.-feet.</i> 96	Mar. 21.	<i>Feet.</i> 6.15	<i>Sec.-feet.</i> 906
Mar. 5.	4.25	314	22.	5.60	707
6.	3.87	198	22.	5.60	698
7.	3.80	156	23.	7.80	1,580
8.	3.70	149	24.	6.65	1,050
9.	4.00	189	June 11.	3.20	28
9.	4.70	387	July 28.	2.90	2 4
9.	5.03	609	Nov. 27.	2.80	1
9.	5.63	471	Dec. 8.	3.10	15
10.	4.40	275	27.	3.46	76
10.	4.30	264	1908.		
11.	4.15	222	Feb. 1.	3.94	171
12.	4.00	186	7.	4.87	605
13.	3.85	162	7.	4.92	648
14.	3.75	145	9 <sup>a</sup> .	5.87	1,260
15.	3.70	132	9 <sup>a</sup> .	6.50	1,810
16.	3.80	160	17.	3.51	143
17.	7.80	1,380	Mar. 21.	3.40	100
17.	8.25	1,420	June 2.	2.65	8 4
17.	11.15	3,210	1909.		
17.	12.40	4,030	Feb. 5 <sup>b</sup> .	4.90	866
18.	12.50	3,830	23.	4.50	397
18.	13.10	3,940	24.	4.55	412
18.	12.85	3,370	24.	6.55	52
18.	12.00	2,850	May 5.	3.95	16. 2
18.	12.30	2,700	June 5.	3.15	7. 5
18.	12.40	3,290	30.	3.00	6. 4
19.	8.95	2,280	30 <sup>c</sup> .	3.00	34
19.	8.65	2,300	Nov. 24.	3.40	380
19.	8.50	2,080	Dec. 9.	4.50	
19.	8.45	2,250	1910.		
19.	8.00	2,330	Jan. 24.	5.45	1,190
20.	7.55	1,630	28.	3.88	175
20.	6.95	1,500	Mar. 16.	3.55	61
20.	7.35	1,570			
21.	6.45	1,010			

<sup>a</sup> Measured by floats. <sup>b</sup> Float measurement at dam site. <sup>c</sup> Measurements in flume at dam site.

NOTE.—Beginning June 5, 1909, gage heights refer to gage at new location one-quarter mile below dam site at different datum. See description.

Daily gage height, in feet, of Little Stony Creek near Lodoga, Cal., for 1908-1911.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1908. <sup>a</sup>												
1.				4.1	4.0	4.3	3.2	3.0	2.7	2.5	2.4	2.3
2.				3.5	4.3	3.9	3.2	3.0	2.7	2.5	2.4	2.3
3.				3.4	4.2	3.8	3.2	2.9	2.7	2.5	2.4	2.3
4.				3.4	4.2	3.7	3.1	2.9	2.7	2.5	2.4	2.3
5.				3.4	5.6	3.6	3.1	2.9	2.7	2.4	2.4	2.3
6.				3.3	5.7	3.5	3.1	2.9	2.7	2.4	2.4	2.3
7.				3.3	5.0	3.5	3.1	2.9	2.7	2.4	2.4	2.3
8.				3.3	4.6	3.4	3.0	2.9	2.7	2.4	2.4	2.3
9.				3.5	6.3	3.4	3.0	2.9	2.6	2.4	2.4	2.3
10.				3.3	4.8	3.4	3.0	2.9	2.6	2.4	2.4	2.3
11.				3.3	4.3	3.4	3.0	2.9	2.6	2.4	2.4	2.3
12.				3.3	4.0	3.4	3.0	2.9	2.6	2.4	2.4	2.3
13.				3.3	3.9	3.4	3.0	2.9	2.6	2.4	2.4	2.3
14.				3.7	3.8	3.5	3.0	2.9	2.6	2.4	2.4	2.3
15.				3.5	3.7	3.5	3.0	2.9	2.6	2.4	2.4	2.3
16.				3.5	3.7	3.5	3.0	2.9	2.6	2.4	2.4	2.3
17.				3.5	3.5	3.5	3.0	2.9	2.6	2.4	2.4	2.3
18.				3.6	3.5	3.5	3.0	2.9	2.6	2.4	2.4	2.3
19.				3.6	3.5	3.5	3.0	2.9	2.6	2.4	2.4	2.3
20.				4.3	3.5	3.4	3.0	2.9	2.6	2.4	2.4	2.2
21.				4.1	3.4	3.4	3.0	2.9	2.6	2.4	2.4	2.1
22.				4.1	3.4	3.4	3.0	2.9	2.6	2.4	2.4	2.1
23.				3.9	3.4	3.4	3.0	2.9	2.6	2.4	2.4	.....
24.				4.5	3.4	3.4	3.0	2.9	2.5	2.4	2.4	.....
25.				4.1	3.4	3.4	3.0	2.9	2.5	2.4	2.4	.....
26.				3.9	3.4	3.3	3.0	2.9	2.5	2.4	2.4	.....
27.				3.8	3.5	3.3	3.0	2.9	2.5	2.4	2.4	.....
28.				3.7	3.5	3.2	3.0	2.9	2.5	2.4	2.4	.....
29.				3.6	3.5	3.2	3.0	2.9	2.5	2.4	2.4	.....
30.				3.6	.....	3.2	3.0	2.9	2.5	2.4	2.4	.....
31.				3.6	.....	3.2	.....	2.8	.....	2.4	2.4	.....
1908-9. <sup>b</sup>												
1.			2.3	3.35	5.95	4.2	4.1	3.6	3.15	3.0	2.9	2.85
2.			2.3	4.1	11.8	4.2	4.1	3.6	3.15	3.0	2.9	2.85
3.			2.3	4.65	6.2	4.2	4.1	3.5	3.15	3.0	2.9	3.85
4.			2.3	3.6	4.95	4.3	4.1	3.5	3.15	3.0	2.9	2.85
5.			3.0	4.05	4.95	4.3	4.1	3.4	3.15	3.0	2.9	2.8
6.			2.8	5.3	5.25	4.3	4.0	3.4	3.15	2.95	2.9	2.8
7.			2.7	4.55	5.25	4.3	4.0	3.3	3.15	3.0	2.9	2.8
8.			2.7	10.65	4.8	4.2	4.0	3.3	3.15	3.0	2.9	2.8
9.			3.2	4.9	4.6	4.2	4.0	3.3	3.15	3.0	2.9	2.8
10.			3.2	4.15	4.35	4.2	4.0	3.3	3.15	3.0	2.9	2.8
11.			3.0	3.75	5.7	4.2	4.0	3.2	3.15	2.95	2.9	2.8
12.			2.9	3.75	6.45	4.2	3.9	3.2	3.15	2.95	2.9	2.8
13.			2.8	3.75	5.25	4.2	3.9	3.2	3.15	2.95	2.85	2.8
14.			2.8	8.75	4.7	4.2	3.8	3.2	3.15	2.95	2.85	2.8
15.			2.8	8.6	4.95	4.2	3.8	3.2	3.15	2.95	2.85	2.8
16.			2.7	8.95	5.2	4.2	3.8	3.2	3.15	3.0	2.85	2.8
17.			2.7	5.35	4.95	4.2	3.8	3.2	3.2	3.0	2.85	2.8
18.			2.7	5.05	4.8	4.1	3.8	3.1	3.3	2.95	2.85	2.8
19.			2.7	4.95	4.7	4.1	3.8	3.1	3.2	2.95	2.85	2.8
20.			2.7	6.75	5.5	4.1	3.8	3.1	3.15	2.9	2.85	2.8
21.			2.7	7.0	4.7	4.15	3.7	3.1	3.15	2.9	2.85	2.75
22.			2.0	2.7	5.8	4.55	4.2	3.7	3.1	3.15	2.9	2.85
23.			2.1	2.7	5.3	4.45	4.2	3.7	3.1	3.15	2.9	2.85
24.			2.1	2.7	5.75	4.4	4.5	3.7	3.1	3.15	2.9	2.85
25.			2.1	2.7	6.5	4.4	4.3	3.7	3.0	3.15	2.9	2.85
26.		2.4	2.7	6.9	4.3	4.2	3.7	3.0	3.15	2.9	2.85	2.75
27.		2.4	2.7	5.7	4.3	4.2	3.6	3.0	3.0	2.9	2.85	2.75
28.		2.4	2.7	5.4	4.3	4.2	3.6	3.0	3.0	2.9	2.85	2.8
29.		2.3	2.7	5.0	.....	4.2	3.6	3.0	3.0	2.9	2.85	2.8
30.		2.3	2.7	5.7	.....	4.1	3.6	3.15	3.0	2.9	2.85	2.8
31.			2.7	5.95	.....	4.1	.....	3.15	.....	2.9	2.85	.....

<sup>a</sup> Creek dry and water standing in pools Sept. 23-30, 1908.

<sup>b</sup> Creek dry and water standing in pools Oct. 1 to Nov. 21, 1908.

Daily gage height, in feet, of Little Stony Creek near Lodoga, Cal., for 1908-1911—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909-10.												
1	2.8	2.8	3.15	3.34	3.77	3.75	3.90	3.30	3.00	2.90	2.76	.....
2	2.8	2.8	3.15	3.31	3.70	3.75	3.82	3.30	2.90	2.90	2.76	.....
3	2.8	2.8	3.15	3.29	3.65	3.74	3.75	3.30	2.70	2.90	2.76	.....
4	2.8	2.8	3.1	3.27	3.60	3.74	3.70	3.30	2.70	2.90	2.76	.....
5	2.8	2.8	3.25	3.06	3.58	3.74	3.68	3.30	2.78	2.90	2.76	.....
6	2.8	2.8	3.4	2.94	3.57	3.70	3.64	3.28	2.78	2.90	2.76	.....
7	2.75	2.8	3.5	2.86	3.55	3.65	3.62	3.26	2.78	2.90	2.76	.....
8	2.75	2.8	3.6	2.87	3.58	3.62	3.60	3.24	2.78	2.88	2.76	.....
9	2.75	2.95	4.5	2.88	3.75	3.62	3.58	3.20	2.78	2.86	2.76	.....
10	2.75	3.1	4.1	2.89	3.80	3.80	3.57	3.20	2.78	2.84	2.76	.....
11	2.75	3.1	3.9	2.99	3.78	3.72	3.55	3.10	2.78	2.82	2.76	.....
12	2.75	3.05	3.85	3.01	3.76	3.62	3.60	3.10	2.68	2.80	2.76	.....
13	2.75	3.05	3.75	3.12	3.70	3.62	3.60	3.10	2.68	2.78	2.76	.....
14	2.75	3.0	3.75	3.21	3.68	3.58	3.58	3.10	2.68	2.78	2.76	.....
15	2.75	3.0	3.7	3.36	3.66	3.55	3.55	3.10	2.68	2.78	2.70	.....
16	2.75	3.0	3.55	3.59	3.60	3.55	3.53	3.10	2.68	2.78	2.68	.....
17	2.75	3.0	3.45	3.62	3.55	3.55	3.51	3.10	2.68	2.78	2.66	.....
18	2.75	3.0	3.4	3.64	3.52	3.55	3.50	2.70	2.68	2.78	2.64	.....
19	2.75	3.1	3.35	3.62	3.55	3.55	3.48	2.70	2.68	2.78	2.62	.....
20	2.75	3.15	3.3	3.61	3.55	3.55	3.46	2.70	2.68	2.76	2.60	.....
21	2.75	3.2	3.3	3.60	3.55	4.19	3.43	2.90	2.68	2.76	2.58	.....
22	2.75	3.25	3.3	3.61	3.58	4.82	3.40	3.05	2.68	2.76	2.56	.....
23	2.75	3.3	3.25	3.78	3.55	4.60	3.38	3.05	2.94	2.76	2.54	.....
24	2.75	3.4	3.25	3.55	3.58	4.28	3.36	3.05	2.95	2.76	2.52	.....
25	2.75	3.35	3.25	4.16	3.60	4.12	3.35	3.05	3.28	2.76	2.50	.....
26	2.75	3.25	3.25	4.09	3.75	4.00	3.34	3.05	3.30	2.76	.....	.....
27	2.75	3.2	3.25	3.93	3.75	4.31	3.33	3.03	2.62	2.76	.....	.....
28	2.75	3.2	3.25	3.83	3.75	4.40	3.32	3.00	2.90	2.76	.....	.....
29	2.8	3.15	3.25	3.69	.....	4.15	3.31	3.00	2.90	2.76	.....	.....
30	2.8	3.15	3.3	3.66	.....	4.08	3.30	3.00	2.90	2.76	.....	.....
31	2.8	.....	3.3	3.60	.....	3.90	.....	3.00	.....	2.76	.....	.....
1910-11.												
1	.....	.....	11.73	20.4	56.4	67.1	75.6	80.6	82.3	82.6	79.2	73.6
2	.....	.....	11.75	20.5	58.0	67.4	75.9	80.7	82.4	82.6	79.0	73.5
3	.....	.....	11.79	20.6	59.1	68.5	76.1	80.8	82.4	82.6	78.8	73.3
4	.....	.....	11.82	20.7	60.0	72.4	76.3	80.9	82.4	82.6	78.7	73.1
5	.....	.....	12.05	20.8	60.8	76.3	76.6	81.0	82.5	82.5	78.5	72.9
6	.....	.....	12.50	20.9	61.3	80.2	77.0	81.0	82.5	82.5	78.3	72.7
7	.....	.....	13.10	21.0	61.8	85.8	77.4	81.1	82.5	82.5	78.1	72.5
8	.....	.....	13.50	21.1	62.2	85.9	77.7	81.2	82.6	82.4	78.0	72.3
9	.....	.....	13.90	21.2	62.5	85.2	77.9	81.3	82.6	82.3	77.8	72.1
10	.....	.....	14.30	21.3	62.7	84.9	78.1	81.3	82.6	82.2	77.6	71.9
11	.....	.....	15.20	21.6	63.5	84.5	78.3	81.4	82.6	82.1	77.5	71.7
12	.....	.....	16.20	23.5	63.7	83.9	78.5	81.4	82.7	82.0	77.3	71.5
13	.....	.....	16.70	24.3	64.2	83.4	78.7	81.5	82.7	81.9	77.1	71.3
14	.....	.....	17.20	24.9	64.5	83.3	78.8	81.6	82.7	81.8	76.9	71.1
15	.....	.....	17.50	25.6	64.8	82.9	78.9	81.6	82.7	81.7	76.8	70.9
16	.....	.....	17.80	26.2	65.1	82.4	79.1	81.6	82.7	81.6	76.6	70.7
17	.....	.....	18.10	26.5	65.3	81.9	79.2	81.7	82.7	81.5	76.4	70.5
18	.....	.....	18.30	27.1	65.5	81.4	79.3	81.7	82.7	81.3	76.2	70.3
19	.....	.....	18.50	28.4	65.7	80.7	79.4	81.8	82.7	81.2	76.0	70.1
20	.....	.....	18.70	36.0	65.9	79.8	79.5	81.8	82.7	81.0	75.8	69.9
21	.....	.....	18.90	37.7	66.0	79.0	79.6	81.9	82.7	80.9	75.7	69.7
22	.....	.....	19.10	38.1	66.1	78.3	79.7	81.9	82.7	80.7	75.5	69.5
23	.....	.....	19.30	38.4	66.3	77.6	79.8	82.0	82.7	80.6	75.3	69.3
24	.....	.....	19.50	38.9	66.4	76.9	79.9	82.0	82.7	80.4	75.1	69.1
25	.....	.....	19.70	40.0	66.5	76.1	80.0	82.1	82.7	80.3	74.9	68.9
26	.....	.....	19.80	41.0	66.6	75.2	80.1	82.1	82.6	80.1	74.7	68.7
27	.....	.....	19.90	41.8	66.7	74.9	80.2	82.2	82.6	80.0	74.5	68.6
28	.....	.....	20.00	45.6	66.9	74.9	80.3	82.2	82.6	79.8	74.3	68.4
29	.....	.....	20.10	50.3	.....	75.0	80.4	82.2	82.6	79.7	74.2	68.2
30	.....	.....	20.20	53.4	.....	75.2	80.5	82.3	82.6	79.5	74.0	68.0
31	.....	.....	20.30	55.3	.....	75.4	.....	82.3	.....	79.4	73.8	.....

Daily gage height, in feet, of Little Stony Creek near Lodoga, Cal., for 1908-1911—Contd.

Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.
1911.											
1.....	67.8	63.1	62.5	11.....	65.9	62.6	62.6	21.....	64.3	62.5	62.6
2.....	67.6	63.0	62.5	12.....	65.8	62.6	62.6	22.....	64.2	62.5	62.6
3.....	67.4	62.9	62.5	13.....	65.6	62.6	62.6	23.....	64.0	62.5	62.6
4.....	67.2	62.8	62.6	14.....	65.4	62.6	62.6	24.....	63.9	62.5	62.6
5.....	67.0	62.7	62.6	15.....	65.3	62.5	62.6	25.....	63.8	62.5	62.6
6.....	66.8	62.7	62.6	16.....	65.1	62.5	62.6	26.....	63.7	62.5	62.6
7.....	66.6	62.6	62.6	17.....	64.9	62.5	62.6	27.....	63.6	62.5	62.6
8.....	66.4	62.6	62.6	18.....	64.7	62.5	62.6	28.....	63.5	62.5	62.7
9.....	66.3	62.6	62.6	19.....	64.6	62.5	62.6	29.....	63.4	62.5	62.7
10.....	66.0	62.6	62.6	20.....	64.4	62.5	62.6	30.....	63.3	62.5	62.7
								31.....	63.2	62.5	62.7

NOTE.—Gage heights June 1, 1909, to Nov. 30, 1910, refer to new location and datum, one-quarter mile below reservoir. Gage heights after Dec. 1, 1910, are from the gage at the East Park reservoir.

Daily discharge, in second-feet, of Little Stony Creek near Lodoga, Cal., for 1908-1911.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1908.												
1.....				259	230	330	64	38	13	5	3	1.5
2.....				116	330	204	64	38	13	5	3	1.5
3.....				97	292	180	64	28	13	5	3	1.5
4.....				97	292	157	50	28	13	5	3	1.5
5.....				97	1,070	136	50	28	13	3	3	1.5
6.....				80	1,140	116	50	28	13	3	3	1.5
7.....				80	680	116	50	28	13	3	3	1.5
8.....				80	465	97	38	28	13	3	3	1.5
9.....				116	1,630	97	38	28	8	3	3	1.5
10.....				80	568	97	38	28	8	3	3	1.5
11.....				80	330	97	38	28	8	3	3	1.5
12.....				80	230	97	38	28	8	3	3	1.5
13.....				80	204	97	38	28	8	3	3	1.5
14.....				157	180	116	38	28	8	3	3	1.5
15.....				116	157	116	38	28	8	3	3	1.5
16.....				116	157	116	38	28	8	3	3	1.5
17.....				116	116	116	38	28	8	3	3	1.5
18.....				136	116	116	38	28	8	3	3	1.5
19.....				136	116	116	38	28	8	3	3	1.5
20.....				330	116	97	38	28	8	3	3	.5
21.....				259	97	97	38	28	8	3	3	0
22.....				259	97	97	38	28	8	3	3	0
23.....				204	97	97	38	28	8	3	3	0
24.....				417	97	97	38	28	5	3	3	0
25.....				259	97	97	38	28	5	3	3	0
26.....				204	97	80	38	28	5	3	3	0
27.....				180	116	80	38	28	5	3	3	0
28.....				157	116	64	38	28	5	3	3	0
29.....				136	116	64	38	28	5	3	3	0
30.....				136		64	38	28	5	3	3	0
31.....				136		64		20		3	3	
1908-9.												
1.....	0	0	1.5	88	1,340	275	239	98	14	7	3	2
2.....	0	0	1.5	259	7,060	275	239	98	14	7	3	2
3.....	0	0	1.5	490	1,520	275	239	78	14	7	3	2
4.....	0	0	1.5	136	616	313	239	78	14	7	3	2
5.....	0	0	38	244	616	313	239	60	14	7	3	1
6.....	0	0	20	866	794	313	206	60	14	5	3	1
7.....	0	0	13	441	794	313	206	46	14	7	3	1
8.....	0	0	13	5,910	535	275	206	46	14	7	3	1
9.....	0	0	64	623	439	275	206	46	14	7	3	1
10.....	0	0	64	276	333	275	206	46	14	7	3	1
11.....	0	0	38	168	1,110	275	206	34	14	5	3	1
12.....	0	0	28	168	1,750	275	175	34	14	5	3	1
13.....	0	0	20	168	794	275	175	34	14	5	2	1
14.....	0	0	20	4,010	485	275	146	34	14	5	2	1
15.....	0	0	20	3,860	616	275	146	34	14	5	2	1

Daily discharge, in second-feet, of Little Stony Creek near Lodoga, Cal., for 1908-1911—Con.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1908-9.												
16.....	0	0	13	4,210	762	275	146	34	14	7	2	1
17.....	0	0	13	899	616	275	146	34	18	7	2	1
18.....	0	0	13	710	535	239	146	24	26	5	2	1
19.....	0	0	13	652	485	239	146	24	18	5	2	1
20.....	0	0	13	2,040	960	239	146	24	14	3	2	1
21.....	0	0	13	2,280	485	257	120	24	14	3	2	0.5
22.....	0	0	13	1,220	417	275	120	24	14	3	2	.5
23.....	0	0	13	866	374	275	120	24	14	3	2	.5
24.....	0	0	13	1,180	353	395	120	24	14	3	2	.5
25.....	0	0	13	1,800	353	313	120	16	14	3	2	.5
26.....	0	3	13	2,180	313	275	120	16	14	3	2	.5
27.....	0	3	13	1,140	313	275	98	16	7	3	2	.5
28.....	0	3	13	932	313	275	98	16	7	3	2	1.0
29.....	0	1.5	13	680	.....	275	98	16	7	3	2	1
30.....	0	1.5	13	1,140	.....	239	98	14	7	3	2	1
31.....	0	.....	13	1,340	.....	239	.....	14	.....	3	2	.....
1909-10.												
1.....	1	1	14	31	112	106	155	27	7	3	0.8	.....
2.....	1	1	14	28	92	106	127	27	3	3	.8	.....
3.....	1	1	14	26	80	103	106	27	.5	3	.8	.....
4.....	1	1	11	24	69	103	92	27	.5	3	.8	.....
5.....	1	1	22	9.7	65	103	87	27	.9	3	.8	.....
6.....	1	1	37	4.6	64	92	78	25	.9	3	.8	.....
7.....	.5	1	50	2.2	60	80	74	23	.9	3	.8	.....
8.....	.5	1	66	2.4	65	74	69	22	.9	2.6	.8	.....
9.....	.5	5	380	2.6	106	74	65	18	.9	2.2	.8	.....
10.....	.5	11	195	2.8	120	120	64	15	.9	1.8	.8	.....
11.....	.5	11	131	6.6	114	98	60	11.5	.9	1.4	.8	.....
12.....	.5	9	118	7.4	109	74	69	11.5	.4	1.0	.8	.....
13.....	.5	9	95	12.8	92	74	69	11.5	.4	.9	.8	.....
14.....	.5	7	95	19	87	65	65	11.5	.4	.9	.6	.....
15.....	.5	7	84	33	83	60	60	11.5	.4	.9	.5	.....
16.....	.5	7	58	67	69	60	56	11.5	.4	.9	.4	.....
17.....	.5	7	44	74	60	60	53	11.5	.4	.9	.4	.....
18.....	.5	7	37	78	55	60	51	.5	.4	.9	.3	.....
19.....	.5	11	32	74	60	60	48	.5	.4	.9	.3	.....
20.....	.5	14	26	71	60	60	45	.5	.4	.8	.2	.....
21.....	.5	18	26	69	60	281	41	3	.4	.8	.2	.....
22.....	.5	22	26	71	65	671	37	9.2	.4	.8	.1	.....
23.....	.5	26	22	114	60	522	35	9.2	4.6	.8	.1	.....
24.....	.5	37	22	1,280	65	331	33	9.2	5	.8	.0	.....
25.....	.5	32	22	266	69	247	32	9.2	25	.8	.0	.....
26.....	.5	22	22	232	106	192	31	9.2	27	.8	.....	.....
27.....	.5	18	22	166	106	343	30	8.4	3.8	.8	.....	.....
28.....	.5	18	22	130	106	400	29	7	3	.8	.....	.....
29.....	1	14	22	90	.....	262	28	7	3	.8	.....	.....
30.....	1	14	26	83	.....	228	27	7	3	.8	.....	.....
31.....	1	.....	26	69	.....	155	.....	7	.....	.8	.....	.....
1910-11.												
1.....	.....	.....	1.0	3	396	100	106	80	44	18	16	11
2.....	.....	.....	1.0	3	599	150	217	78	46	20	16	10
3.....	.....	.....	1.2	4	421	575	136	78	48	18	16	10
4.....	.....	.....	1.2	3	351	2,220	136	78	48	18	17	10
5.....	.....	.....	1.4	3	362	2,580	224	90	49	18	17	11
6.....	.....	.....	4.0	3	237	2,820	290	40	44	18	14	11
7.....	.....	.....	5.5	3	227	4,980	282	40	47	18	16	11
8.....	.....	.....	4.5	2	186	2,450	217	78	44	16	16	11
9.....	.....	.....	4.5	3	141	1,450	144	78	46	16	16	11
10.....	.....	.....	4.0	3	91	1,250	152	40	44	18	14	11
11.....	.....	.....	11.0	8	378	935	144	40	44	18	16	10
12.....	.....	.....	23.0	57	101	800	146	46	44	17	16	11
13.....	.....	.....	8.0	31	232	780	152	46	15	15	16	11
14.....	.....	.....	5.5	30	146	700	71	78	17	17	16	10
15.....	.....	.....	5.0	34	141	675	68	31	17	17	16	11
16.....	.....	.....	5.0	30	146	600	152	31	20	19	16	11
17.....	.....	.....	5.0	30	96	600	76	32	20	16	16	11
18.....	.....	.....	4.0	32	101	600	73	40	20	14	15	11
19.....	.....	.....	3.5	80	96	575	88	40	20	17	17	11
20.....	.....	.....	3.5	709	93	545	83	40	20	17	15	11

Daily discharge, in second-feet, of Little Stony Creek near Lodoga, Cal., for 1908-1911—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.												
21.....			3.0	230	50	525	88	40	17	17	15	9
22.....			3.0	59	50	550	83	46	17	17	11	9
23.....			3.0	43	101	500	88	46	20	17	11	9
24.....			3.0	71	50	500	75	40	20	17	11	9
25.....			3.0	104	50	425	68	40	20	14	9	9
26.....			3.0	181	50	400	78	40	13	16	11	9
27.....			2.0	146	50	375	90	40	11	16	11	9
28.....			1.5	760	101	300	75	31	11	16	10	8
29.....			3.0	1,140		235	73	31	18	16	10	7
30.....			2.5	907		200	83	32	18	14	11	7
31.....			2.5	637		150		31		14	11	.....

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

NOTE.—Daily discharge determined from rating curves applicable as follows: Jan. 1, 1908, to Feb. 1, 1909, fairly well defined between discharge of 10 and 1,800 second-feet; Feb. 2 to May 29, 1909, fairly well defined between discharges of 46 and 1,800 second-feet; May 30 to Dec. 31, 1909, well defined below a discharge of 380 second-feet; Jan. 1 to Aug. 25, 1910, fairly well defined below a discharge of 1,200 second-feet; record of discharge after Dec. 1, 1910, furnished by the United States Reclamation Service.

Monthly discharge of Little Stony Creek near Lodoga, Cal., for 1908-1912.

[Drainage area, 102 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.....	417	80	155	1.52	1.75	9,530	C.
February.....	1,630	97	322	3.16	3.41	18,500	C.
March.....	330	64	113	1.11	1.28	6,950	C.
April.....	64	38	42.2	.414	.46	2,510	C.
May.....	38	20	28.4	.278	.32	1,750	C.
June.....	13	5	8.6	.084	.09	512	C.
July.....	5	3	3.3	.032	.04	203	D.
August.....	3	3	3.0	.029	.03	184	D.
September.....	1.5	0	1.0	.0098	.01	60	D.
The period.....						40,200	
1908-9.							
October.....	0	0	0.0	0.00	0.00	0	D.
November.....	3	0	.4	.0039	.004	24	D.
December.....	64	1.5	17.8	.175	.20	1,090	C.
January.....	5,910	88	132.0	12.9	14.87	81,200	B.
February.....	7,060	313	896	8.78	9.14	49,800	B.
March.....	395	239	279	2.74	3.16	17,200	C.
April.....	239	98	16.4	1.61	1.80	9,760	C.
May.....	98	14	37.7	.370	.43	2,320	C.
June.....	26	7	13.7	.134	.15	815	C.
July.....	7	3	4.9	.048	.06	301	D.
August.....	3	2	2.4	.024	.03	148	D.
September.....	2	.5	1.02	.010	.01	61	D.
The year.....	7,060	0	216	2.12	29.854	163,000	

## Monthly discharge of Little Stony Creek near Lodoga, Cal., for 1908-1912—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.	
1909-10.							
October.....	1	0.5	0.65	0.0064	0.007	40	D.
November.....	37	1	11.1	.109	.12	660	C.
December.....	380	11	57.5	.564	.65	3,540	C.
January.....	1,280	2.2	101	.990	1.14	6,210	B.
February.....	120	55	80.7	.791	.82	4,480	B.
March.....	671	60	170	1.67	1.92	10,500	B.
April.....	155	27	60.5	.583	.66	3,600	B.
May.....	27	.5	13.2	.129	.15	812	B.
June.....	27	.4	3.20	.031	.03	190	C.
July.....	3	.8	1.48	.015	.02	91	C.
August.....	0.8	0	.44	.0043	.005	27	C.
September.....	0	0	.00	.0000	.000	0	
The year.....	1,280	0	41.5	.408	5.522	30,200	
1910-11.							
December.....	23	1	4.24	0.0041	0.005	261	
January.....	1,140	2	174.	1.71	1.97	10,700	
February.....	599	50	180	1.76	1.83	10,000	
March.....	4,980	100	952	9.33	10.76	58,500	
April.....	290	68	125	1.23	1.37	7,440	
May.....	90	31	49.1	.481	.55	3,020	
June.....	49	11	28.7	.281	.31	1,710	
July.....	20	14	16.7	.164	.19	1,030	
August.....	17	9	14.1	.138	.16	867	
September.....	11	7	10.0	.098	.11	595	
The period.....						94,100	
1911.							
October.....	7	2	5.3	0.052	0.06	326	
November.....	3	2	2.8	.028	.03	167	
December.....	7	6	6.5	.063	.07	400	

NOTE.—Creek was dry during the greater part of September, October, and November, 1910. No accuracy given for estimates after Dec. 1, 1910, as the discharge was furnished by the United States Reclamation Service.

## NORTH FORK OF FEATHER RIVER ABOVE PRATTVILLE, CAL.

This station which was established June 12, 1905, to determine the availability of the North Fork for power development, is located 3 miles east of Prattville and about 1,300 feet above the junction with Hamilton Branch. The drainage area above the station is 245 square miles. This station was discontinued July 1, 1907.

The channel has a shale bottom subject to slight change. At low water it is about 65 feet wide and 5 feet deep; at high water there is a diversion overflow around the station, leaving the main stream about  $1\frac{1}{2}$  miles above the point of measurement.

A staff gage was nailed to a willow stump about 15 feet above the measuring section. The gage was read daily until October 16, 1905, and about once a week after that date.

The greatest discharge during the flood of 1907 is estimated as 3,900 second-feet, March 19.

The minimum weekly flow of 317 second-feet occurred December 8 to 14, 1905.

No discharge measurements have been furnished since 1906.

The following record of gage heights and discharge measurements was furnished by Viele, Blackwell & Buck for the Great Western Power Co., which maintained the station from the date of its establishment.

*Discharge measurements of North Fork of Feather River above Prattville, Cal., in 1905-6.*

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>
June 12	R. W. Armstrong	2.33	890	Feb. 28	L. J. Bevan	1.82	669
22	W. E. Spear	1.79	620	Apr. 12	do	2.77	1,046
July 1	do	1.48	520	May 15	do	3.83	1,524
15	R. W. Armstrong	1.23	407	July 7	do	2.48	929
28	W. E. Spear	1.09	399	Aug. 8	do	1.34	502
Aug. 15	L. J. Bevan	.99	370				
Sept. 4	do	.90	345				
Dec. 17	do	.80	330				

*Daily gage height, in feet, of North Fork of Feather River above Prattville, Cal., for 1905-1907.*

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1905.												
1.										1.50	1.05	0.90
2.										1.48	1.06	.91
3.										1.47	1.05	.90
4.										1.46	1.05	.90
5.										1.39	1.05	.90
6.										1.40	1.04	.....
7.										1.35	1.02	.88
8.										1.33	1.01	.87
9.										1.32	1.02	.90
10.										1.31	1.01	.90
11.										1.29	1.00	.87
12.										1.27	.99	.86
13.										1.26	.99	.86
14.										1.24	.99	.89
15.										1.23	.99	.89
16.										1.22	.97	.90
17.										2.08	.95	.88
18.										1.18	.....	.95
19.										1.97	1.18	.94
20.										1.90	1.18	.94
21.										1.86	1.16	.95
22.										1.80	1.15	.97
23.										1.78	1.14	.96
24.										1.76	1.16	.98
25.										1.69	1.15	.95
26.										1.67	1.14	.90
27.										1.59	1.14	.94
28.										1.55	1.09	.92
29.										1.53	1.10	.91
30.										1.51	1.07	.90
31.										1.06	.90	.....
1905-6.												
1.	0.88											1.12
2.	.85											.....
3.	.84											.....
4.	.84									2.83		.....
5.	.85	0.82									1.40	.....
6.	.85			0.76	1.19							.....
7.	.90											.....
8.	.90						2.51					.....
9.	.88									2.48		.....
10.											1.34	1.04
11.	.87										1.34	.....
12.	.87											.....
13.	.86		0.75						4.15			.....
14.	.86			.88								.....
15.	.87						2.60			2.06		.....
								3.83				1.06

Daily gage height, in feet, of North Fork of Feather River above Prattville, Cal., for 1905-1907—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1905-6.												
16.	0.86	0.83							3.30			
17.			0.80		1.55	1.55						
18.											1.20	
19.		.82		1.68				2.90				
20.												.96
21.			.81							1.80		
22.												.96
23.					1.55	2.59			3.32			
24.											1.18	
25.												
26.												
27.												
28.		.87			1.82					1.48		
29.	.85							3.18				.94
30.									2.57			
31.			.87			2.04						
1906-7.												
1.									3.17			
2.					2.76	1.81						
3.		1.00										
4.							2.50	3.88				
5.				1.04								
6.												
7.	.90											
8.												
9.			.94		2.50	1.76						
10.												
11.		.95						3.93				
12.				1.02			3.53					
13.												
14.	.89											
15.			.95									
16.					1.55	1.43						
17.		.98										
18.								3.98				
19.				1.00								
20.												
21.	.88											
22.			3.97									
23.					2.25							
24.		.96										
25.								3.12				
26.				1.02								
27.												
28.	.86											
29.			2.54						2.55			
30.												
31.												

Daily discharge, in second-feet, of North Fork of Feather River above Prattville, Cal., for 1905-1907.

Day.	June.	July.	Aug.	Sept.	Day.	June.	July.	Aug.	Sept.
1905.					1905.				
1.		515	382	345	16.		431	362	345
2.		409	385	348	17.	732	425	358	341
3.		506	384	345	18.	710	422	358	339
4.		503	382	345	19.	688	419	355	337
5.		482	382	345	20.	660	419	355	335
6.		485	380	343	21.	644	413	358	333
7.		470	375	341	22.	620	410	362	329
8.		464	372	339	23.	613	407	360	329
9.		461	375	345	24.	606	413	365	333
10.		458	372	345	25.	582	410	358	335
11.		452	370	339	26.	574	407	345	333
12.		446	368	337	27.	546	407	355	339
13.		443	368	337	28.	532	392	350	345
14.		437	368	343	29.	526	395	348	358
15.		434	368	343	30.	518	388	345	345
					31.		385	345	

Daily discharge, in second-feet, of North Fork of Feather River above Prattville, Cal., for 1905-1907—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1905-6.												
1.....	341	334	334	340	450	655	695	1,020	1,100	960	530	430
2.....	335	332	332	340	450	620	695	1,140	1,070	950	520	430
3.....	333	330	330	340	450	585	655	1,240	1,100	950	520	430
4.....	333	329	326	340	450	585	655	1,420	1,240	940	515	420
5.....	335	329	324	340	450	550	655	1,580	1,190	930	510	420
6.....	335	329	322	340	448	550	815	1,620	1,140	930	500	420
7.....	345	329	320	340	450	550	939	1,620	1,100	927	497	410
8.....	345	330	319	350	480	585	935	1,620	1,100	900	494	410
9.....	341	330	318	350	480	620	895	1,660	1,100	875	494	410
10.....	340	330	317	360	515	655	895	1,660	1,140	850	494	410
11.....	339	330	316	360	550	695	935	1,660	1,190	825	494	410
12.....	339	330	315	370	585	735	935	1,690	1,190	800	490	410
13.....	337	330	317	370	620	775	975	1,660	1,240	775	480	410
14.....	337	331	319	370	655	695	975	1,560	1,240	759	470	415
15.....	339	331	320	400	695	620	975	1,530	1,280	740	460	415
16.....	337	331	322	450	695	585	975	1,420	1,380	420	450	410
17.....	337	330	325	500	568	568	975	1,240	1,320	700	450	410
18.....	337	330	325	575	568	550	975	1,140	1,420	680	450	400
19.....	337	329	326	613	568	515	1,020	1,100	1,460	670	450	400
20.....	337	330	326	585	568	515	1,020	1,100	1,420	660	450	390
21.....	337	331	327	550	568	585	1,020	1,140	1,370	655	450	390
22.....	337	332	328	550	568	655	1,020	1,240	1,320	640	450	390
23.....	336	333	329	515	568	895	1,060	1,320	1,290	630	450	390
24.....	336	334	330	515	568	971	1,060	1,320	1,280	610	450	390
25.....	336	335	331	480	590	935	1,060	1,280	1,140	590	445	390
26.....	336	336	332	480	620	855	1,020	1,280	1,100	570	440	385
27.....	336	338	333	550	640	735	1,020	1,240	1,060	550	440	385
28.....	335	339	336	550	663	735	975	1,240	1,020	543	440	385
29.....	335	338	338	515	.....	695	935	1,230	975	540	440	385
30.....	335	336	339	515	.....	695	935	1,190	963	530	440	380
31.....	335	.....	340	450	.....	751	.....	1,140	.....	530	440	.....
1906-7.												
1.....	380	400	390	600	815	695	1,020	1,600	1,220	.....	.....	.....
2.....	380	400	390	515	1,040	659	975	1,600	1,220	.....	.....	.....
3.....	380	400	390	480	1,600	655	975	1,600	1,220	.....	.....	.....
4.....	375	425	390	450	2,400	695	935	1,560	1,220	.....	.....	.....
5.....	375	475	390	410	2,000	695	935	1,580	1,220	.....	.....	.....
6.....	375	500	390	425	1,600	655	975	1,580	1,220	.....	.....	.....
7.....	375	475	390	425	1,400	655	1,020	1,580	1,220	.....	.....	.....
8.....	375	425	385	425	1,200	655	1,100	1,580	1,220	.....	.....	.....
9.....	375	400	385	425	935	641	1,140	1,580	1,220	.....	.....	.....
10.....	375	390	385	425	855	620	1,240	1,580	1,220	.....	.....	.....
11.....	375	388	385	425	775	585	1,320	1,580	1,220	.....	.....	.....
12.....	375	390	385	405	735	585	1,380	1,580	1,280	.....	.....	.....
13.....	375	390	385	375	695	550	1,460	1,580	1,320	.....	.....	.....
14.....	372	390	385	375	620	550	1,520	1,580	1,370	.....	.....	.....
15.....	372	390	388	375	585	515	1,600	1,580	1,320	.....	.....	.....
16.....	372	395	400	375	568	526	2,400	1,580	1,280	.....	.....	.....
17.....	370	395	425	375	585	2,000	2,200	1,580	1,240	.....	.....	.....
18.....	370	395	430	400	620	3,300	2,000	1,600	1,190	.....	.....	.....
19.....	370	395	435	400	735	3,900	1,800	1,650	1,140	.....	.....	.....
20.....	370	395	440	400	775	3,000	1,600	1,700	1,100	.....	.....	.....
21.....	370	395	450	400	775	3,500	1,600	1,600	1,060	.....	.....	.....
22.....	370	395	455	400	815	3,000	1,600	1,500	1,020	.....	.....	.....
23.....	370	390	500	400	835	2,500	1,600	1,400	975	.....	.....	.....
24.....	365	390	600	400	855	1,600	1,600	1,300	975	.....	.....	.....
25.....	365	390	700	400	895	1,100	1,600	1,200	975	.....	.....	.....
26.....	365	390	800	405	935	1,060	1,600	1,200	975	.....	.....	.....
27.....	365	390	900	400	855	1,060	1,600	1,200	975	.....	.....	.....
28.....	365	390	900	425	775	1,020	1,600	1,200	975	.....	.....	.....
29.....	370	390	951	450	.....	1,020	1,600	1,200	955	.....	.....	.....
30.....	380	390	800	515	.....	975	1,600	1,200	955	.....	.....	.....
31.....	390	.....	700	585	.....	975	.....	1,200	.....	.....	.....	.....

NOTE.—Daily discharge for 1905-1907 was obtained from rating curves applicable as follows: 1905, well defined between 325 and 740 second-feet; 1906-7 well defined between 480 and 1,700 second-feet. Discharge for days on which gage height was not read interpolated or estimated by aid of a hydrograph comparison with the station below Prattville, where daily observations were made most of the time. See note at end of monthly discharge table.

Base data furnished by the Great Western Power Co.

*Monthly discharge of North Fork of Feather River above Prattville, Cal., for 1905-1907.*

[Drainage area, 245 square miles.]

Month.	Discharge in second-feet.				Run-off.		Accu- racy.
	Maximum.	Minimum.	Mean.	Per square miles.	Depth in inches on drainage area.	Total in acre-feet.	
1905.							
June 17-30.....	732	518	611	2.49	1.30	17,000	A.
July.....	515	385	436	1.78	2.05	26,800	A.
August.....	385	345	365	1.49	1.72	22,400	A.
September.....	358	329	341	1.39	1.55	20,300	A.
1905-6.							
October.....	345	333	338	1.38	1.59	20,800	A.
November.....	339	329	332	1.36	1.52	19,800	A.
December.....	340	315	326	1.33	1.53	20,000	A.
January.....	613	340	442	1.80	2.08	27,200	B.
February.....	695	448	553	2.26	2.35	30,700	B.
March.....	971	515	668	2.73	3.15	41,100	B.
April.....	1,060	655	923	3.77	4.21	54,900	B.
May.....	1,690	1,020	1,360	5.55	6.40	83,600	A.
June.....	1,460	963	1,200	4.90	5.47	71,400	A.
July.....	960	530	730	2.98	3.44	44,900	A.
August.....	530	440	471	1.92	2.21	29,000	B.
September.....	430	380	404	1.65	1.84	24,000	B.
The year.....	1,690	315	646	2.64	35.79	467,000	
1906-7.							
October.....	390	365	373	1.52	1.75	22,900	B.
November.....	500	388	404	1.65	1.84	24,000	B.
December.....	951	385	506	2.07	2.39	31,100	B.
January.....	600	375	428	1.75	2.02	26,300	B.
February.....	2,400	568	974	3.98	4.14	54,100	A.
March.....	3,900	515	1,290	5.27	6.08	79,300	C.
April.....	2,400	935	1,450	5.92	6.60	86,300	B.
May.....	1,700	1,200	1,490	6.08	7.01	91,600	A.
June.....	1,370	955	1,150	4.69	5.23	68,400	B.
The period.....						484,000	

NOTE.—Computed by the United States Geological Survey from data furnished by the Great Western Power Co. The sum of the monthly means for this station and the one on Hamilton Branch has been compared with those for the station below Prattville and the ratios indicate that the values as a whole are good.

## NORTH FORK OF FEATHER RIVER BELOW PRATTVILLE, CAL.

This station, which is located in the canyon at the proposed dam site of the Great Western Power Co., about 3 miles below the Meadow View bridge crossing on the Prattville-Greenville road about 5 miles southeast of Prattville at  $\frac{1}{4}$  sec. corner on south line of sec. 21, T. 27 N., R. 8 E., was established by the power company June 13, 1905.

Butt Creek enters from the west about 5 miles below the station and Indian Creek from the east about 15 miles below; North Fork and Hamilton Branch unite about 5 miles above. The Great Western Power Co. probably owns all the water rights above this station.

The bed of the stream is rocky and is unlikely to change materially; the current is swift at high stages but moderate at other times. At low water the river is about 60 feet wide and its maximum depth is 9 feet. Thin sheet ice forms occasionally but does not affect the relation of gage height to discharge.

Discharge measurements were made from a boat until November 22, 1905, since which time they have been made from a cable and car.

The staff gage is about 700 feet above the cable. The record is kept by an automatic gage at the staff gage site; its datum has remained unchanged.

The highest recorded daily discharge—9,850 second-feet—occurred March 19, 1907; the lowest flow recorded for any week was 567 second-feet, December 17 to 23, 1908.

Records at this station are very good.

Station maintained by the Great Western Power Co.

*Discharge measurements of North Fork of Feather River below Prattville, Cal., in 1905-1908.*

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1905.		<i>Feet.</i>	<i>Sec.-feet.</i>	1906.		<i>Feet.</i>	<i>Sec.-feet.</i>
June 13	R. W. Armstrong..	3.45	1,260	June 26 <sup>a</sup>	L. J. Bevan.....	4.82	1,920
21	W. E. Spear.....	3.00	1,060	26	W. V. Hardy.....	4.82	1,830
July 1	.....do.....	2.58	869	July 2	.....do.....	4.26	1,520
10	R. W. Armstrong..	2.40	761	3	L. J. Bevan.....	4.21	1,610
17	W. E. Spear.....	2.32	739	9	.....do.....	3.83	1,370
Aug. 10	.....do.....	2.10	668	12	W. V. Hardy.....	3.53	1,200
14	L. J. Bevan.....	2.11	663	21	.....do.....	3.05	1,020
26	.....do.....	2.06	649	24	L. J. Bevan.....	2.93	1,020
Oct. 18	.....do.....	2.01	621	31	W. V. Hardy.....	2.75	933
Nov. 25	.....do.....	1.96	602	Aug. 3	L. J. Bevan.....	2.71	870
25	Hawley and Bevan.	1.96	601	4	W. V. Hardy.....	2.65	908
1906.				16	.....do.....	2.50	826
Jan. 20	L. J. Bevan.....	4.19	1,510	29	.....do.....	2.25	787
24	.....do.....	3.12	1,060	Sept. 6	.....do.....	2.15	741
Feb. 22	.....do.....	4.26	1,600	19	L. J. Bevan.....	2.25	700
Mar. 7	.....do.....	2.97	1,010	Oct. 21	.....do.....	2.13	692
26	.....do.....	6.50	2,850	1907.			
Apr. 11	.....do.....	5.47	2,120	Jan. 22	L. J. Bevan.....	2.22	722
May 5	.....do.....	6.87	3,140	Apr. 22	.....do.....	7.64	3,680
30	Hardy and Hawley.	5.80	2,540	July 23	.....do.....	3.30	1,130
June 2 <sup>a</sup>	L. J. Bevan.....	5.17	2,070	Aug. 27	.....do.....	2.77	900
2	.....do.....	5.17	2,170	1908.			
11	W. V. Hardy.....	5.55	2,440	Aug. 17	L. J. Bevan.....	2.23	701
19 <sup>a</sup>	L. J. Bevan.....	5.73	2,380				
19	.....do.....	5.73	2,570				

<sup>a</sup> 45-pound boiler weight used as anchor for meter and the meter moved up and down on a wire attached to the boiler weight.

*Daily gage height, in feet, of North Fork of Feather River below Prattville, Cal., for 1905-1909.*

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1905.												
1.										2.59	.....	2.06
2.										2.57	2.16	.....
3.										2.55	.....	2.04
4.										2.53	2.17	.....
5.										2.48	2.17	.....
6.										2.50	2.16	.....
7.										2.49	2.17	2.04
8.										2.43	2.14	2.04
9.										2.42	2.14	2.05
10.										2.42	2.09	2.03
11.										2.39	2.11	2.03
12.										2.40	2.16	2.04
13.										3.45	2.39	2.04
14.										2.38	2.11	2.05
15.										2.39	2.11	2.04
16.										2.34	2.12	2.05
17.										2.33	2.11	2.03
18.										3.17	.....	2.03
19.										3.05	2.32	2.03
20.										3.01	2.31	2.09

Daily gage height, in feet, of North Fork of Feather River below Prattville, Cal., for 1905-1909—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1905.												
21.									3.01	2.32	2.11	2.01
22.									2.90	2.28	2.14	2.06
23.									2.87	2.26	2.14	1.96
24.									2.83	2.33	2.14	2.01
25.									2.78	2.29	2.11	2.01
26.									2.77	2.26	2.06	2.00
27.									2.69	2.24	2.08	2.02
28.									2.66	2.22	2.07	2.16
29.									2.61	2.23	2.06	2.11
30.									2.58	2.22	2.05	2.06
31.										2.21	2.06	
1905-6.												
1.	2.02		2.15			3.60	5.95	5.85	5.30	4.22	2.76	2.17
2.	2.01					3.45	5.15	6.05	5.19	4.23	2.72	
3.	2.00			1.91	2.98	3.35	4.70	6.23	5.29	4.22	2.68	
4.		1.98				3.15	4.50	6.60	5.58	4.18	2.66	
5.	2.00	1.98	1.85			3.12	4.40	6.93	6.00	4.14	2.63	
6.	2.00			1.93	2.91	3.05	4.45	7.10	5.92	4.04	2.63	
7.	2.04			1.92	2.87	3.01	4.60	7.20	5.59	3.98	2.62	
8.	2.03			1.90	2.85	3.00	4.77	7.18	5.25	3.92	2.60	2.10
9.	2.02			1.94	2.86	3.08	5.08	7.17	5.18	3.83	2.58	
10.				1.94	2.90	3.24	5.46	7.27	5.37	3.73	2.56	
11.	2.01			2.03	2.97	3.75	5.45	7.56	5.65	3.60	2.57	
12.	2.01		1.83	2.11	3.07	4.35	5.38	7.68	5.60	3.52	2.59	
13.	2.01			2.15	3.11		5.12	7.15	5.52	3.50	2.56	2.08
14.	2.01		1.93	2.35	3.53		5.05	6.73	5.40	3.47	2.53	
15.	2.01			2.20	3.85		5.10	6.80	5.33	3.43	2.51	2.20
16.	2.01	1.99	2.01	2.80	3.79		5.19	6.65	5.60	3.45	2.50	
17.	2.01			3.12	3.68	3.60	5.36	6.05	6.28	3.28	2.47	
18.				4.25	4.00	3.45	5.48	6.16	6.05	3.24	2.47	
19.		1.99		4.65	4.27	3.33	5.50	5.50	5.73	3.20		
20.				4.30	4.31	3.30	5.58	5.45	5.58	3.13		2.25
21.		1.98	1.81	3.80	4.28	3.90	5.88	5.45	5.50	3.08		2.22
22.		1.96		3.74	4.15	4.65	6.18	5.40	5.40	3.01		2.20
23.		1.98	1.84	3.32	3.74	5.15	6.40	5.32	5.20	2.96		2.21
24.		1.97		3.28	3.70	5.85	6.35	5.18	5.02	2.94		2.23
25.		1.97	1.91	3.13	3.62	6.30	6.00	5.27	4.86	2.90	2.25	2.22
26.				3.17	3.45	6.47	5.65	5.90	4.80	2.87		2.20
27.				3.32	3.65	5.90	5.50	6.36	4.68	2.84		2.19
28.		2.01			3.80	5.25	5.60	6.33	4.52	2.83		2.19
29.	2.00					4.80	5.55	6.17	4.35	2.80		2.18
30.			2.00			5.15	5.69	5.78	4.25	2.78		2.17
31.						6.35		5.48		2.76		
1906-7.												
1.	2.17	2.13	1.99	3.20	4.20	4.25	5.60	7.25	6.80	4.40	3.10	2.65
2.	2.17	2.15	2.00	2.90	6.50	4.05	5.55	7.10	6.85	4.25	3.05	2.65
3.	2.16	2.25	2.01	2.80	8.35	3.95	5.50	7.10	6.85	4.20	3.05	2.65
4.	2.16	2.62	2.01	2.50	9.45	3.90	5.45	7.50	6.80	4.15	3.05	2.65
5.	2.16	2.88	2.02	2.40	9.30	4.00	5.50	7.00	6.70	4.10	3.00	2.65
6.	2.16	2.65	2.05	2.50	9.10	4.05	5.55	6.95	6.50	4.05	3.00	2.65
7.	2.16	2.42	2.07	2.50	8.10	3.85	5.70	6.95	6.50	4.00	3.00	2.65
8.	2.16	2.30	2.17	2.50	6.80	3.68	5.80	6.85	6.30	3.90	3.00	2.65
9.	2.15	2.24	2.25	2.50	5.60	3.70	5.80	6.90	6.00	3.85	2.95	2.60
10.	2.15	2.20	2.44	2.50	5.18	3.70	5.85	7.00	5.75	3.80	2.95	2.60
11.	2.15	2.18	2.18	2.50	4.85	3.65	6.50	7.25	6.30	3.75	2.95	2.60
12.	2.15	2.17	2.10	2.50	4.60	3.45	7.25	7.25	7.25	3.70	2.90	2.55
13.	2.15	2.16	2.18	2.45	4.40	3.35	7.65	7.30	7.05	3.65	2.90	2.55
14.		2.15	2.24	2.45	4.22	3.30	8.55	6.85	6.90	3.60	2.90	2.55
15.		2.16	2.29	2.40	4.15	3.40	9.50	6.85	6.80	3.60	2.85	2.55
16.		2.24	2.35	2.35	4.15	4.50	8.85	6.90	6.70	3.55	2.85	2.55
17.		2.21	2.44	2.30	4.10	8.40	8.15	7.00	6.60	3.50	2.85	2.55
18.		2.16	2.33	2.27	4.25	13.00	8.00	7.00	6.50	3.45	2.80	2.55
19.		2.10	2.33	2.25	4.25	16.00	7.90	7.20	6.40	3.45	2.80	2.55
20.	2.13	2.10	2.33	2.26	4.25	14.60	8.25	7.50	6.30	3.40	2.80	2.50
21.	2.13	2.11	2.31	2.30	4.25	12.00	7.90	7.40	6.20	3.35	2.75	2.50
22.	2.13	2.10	2.30	2.30	4.35	8.50	7.64	7.30	6.10	3.30	2.75	2.50
23.	2.13	2.02	2.38	2.34	4.40	6.40	7.60	7.20	6.00	3.25	2.75	2.45
24.	2.13	2.04	2.48	2.35	4.50	6.30	7.70	7.10	4.95	3.25	2.75	2.45
25.	2.13	2.05	3.42	2.35	4.80	6.30	7.85	7.05	4.85	3.20	2.75	2.45

α Estimated.

Daily gage height, in feet, of North Fork of Feather River below Prattville, Cal., for 1905-1909—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1906-7.												
26	2.12	2.04	4.40	2.40	4.75	6.25	7.50	7.00	4.80	3.20	2.75	2.40
27	2.11	2.02	4.57	2.45	4.43	6.10	7.40	6.90	4.70	3.15	2.75	2.40
28	2.11	2.01	4.65	2.55	4.20	6.00	7.40	6.80	4.70	3.15	2.70	2.45
29	2.10	1.97	4.35	2.73	.....	5.90	7.55	6.70	4.60	3.15	2.70	2.45
30	2.10	2.01	3.95	2.80	.....	5.75	7.40	6.65	4.30	3.10	2.70	2.45
31	2.13	.....	3.60	3.25	.....	5.70	.....	6.60	.....	3.10	2.70	.....
1907-8.												
1	2.45	2.55	2.35	2.27	2.45	2.18	3.46	4.17	.....	2.56	a 2.05	1.99
2	2.45	2.55	2.35	2.57	2.10	2.24	3.42	4.44	.....	2.58	.....	1.95
3	2.45	2.50	2.35	2.43	2.23	2.48	3.52	4.38	.....	2.54	.....	1.96
4	2.45	2.45	2.40	2.48	2.50	2.38	3.70	4.13	.....	2.50	.....	1.98
5	2.45	2.40	2.45	2.48	2.45	2.39	3.86	3.92	.....	2.49	.....	1.98
6	2.45	2.40	2.55	2.45	2.47	2.33	3.88	3.85	3.38	2.47	a 2.04	1.98
7	2.40	2.35	3.20	2.44	2.51	2.34	3.68	3.96	3.40	2.44	.....	1.99
8	2.40	2.35	3.25	2.45	2.50	2.34	3.51	4.16	3.45	2.40	.....	1.90
9	2.40	2.35	3.20	2.43	2.43	2.40	3.52	3.91	3.42	2.37	.....	1.95
10	2.40	2.40	3.20	2.42	2.42	2.45	3.60	3.75	3.40	2.40	.....	1.95
11	2.40	2.40	3.45	2.45	2.43	2.50	3.71	3.76	3.42	2.36	a 2.03	1.94
12	2.40	2.35	3.25	2.45	2.40	2.60	3.84	3.95	3.44	2.36	.....	1.95
13	2.40	2.35	3.25	2.50	2.35	2.66	4.02	3.84	3.45	2.33	.....	1.98
14	2.60	2.35	3.00	2.77	2.34	2.84	4.14	3.88	3.50	2.30	.....	1.98
15	2.55	2.35	2.80	2.91	2.33	3.03	4.25	4.24	3.54	2.27	.....	1.96
16	2.55	2.30	2.70	2.91	2.32	3.26	4.36	4.33	3.45	2.25	a 2.07	2.02
17	2.50	2.30	2.65	2.89	2.35	3.57	4.34	4.22	3.32	2.22	.....	2.03
18	2.45	2.40	2.55	2.97	2.30	3.95	4.33	4.20	3.20	2.18	.....	2.00
19	2.40	2.40	2.50	3.15	2.29	4.14	4.23	4.31	3.08	2.18	.....	1.98
20	2.40	2.35	2.40	3.30	2.30	4.17	4.38	4.23	3.02	1.16	.....	1.98
21	2.40	2.30	2.40	3.32	2.30	4.15	4.58	4.00	3.08	2.13	a 2.00	1.95
22	2.45	2.30	2.47	2.37	2.32	4.17	4.62	3.90	3.11	2.14	.....	1.94
23	2.45	2.35	2.55	3.32	2.37	4.18	4.50	3.89	2.98	2.11	.....	1.93
24	2.45	2.35	2.57	3.38	2.41	4.21	4.32	3.92	2.86	2.10	.....	1.93
25	2.40	2.35	2.57	3.17	2.46	4.41	4.33	4.00	2.77	2.10	.....	1.96
26	2.45	2.35	3.10	3.02	2.53	4.33	4.25	4.07	2.73	.....	.....	1.93
27	2.50	2.30	4.05	2.90	2.70	4.11	4.15	4.02	2.68	.....	.....	1.84
28	2.50	2.30	4.00	2.77	2.73	3.88	4.13	3.87	2.65	.....	.....	1.94
29	2.50	2.30	3.00	2.64	2.58	3.72	4.16	3.89	2.61	a 2.07	2.00	1.93
30	2.60	2.25	2.25	2.60	.....	3.70	4.11	3.96	2.58	.....	2.00	1.93
31	2.70	.....	2.30	2.52	.....	3.58	.....	.....	.....	.....	2.00	.....
1908-9.												
1	1.93	2.07	1.99	1.95	3.74	3.42	3.64	6.08	5.51	3.60	2.65	2.35
2	1.93	2.02	2.00	2.43	3.80	3.53	3.78	6.25	5.80	3.55	2.60	2.35
3	1.93	2.00	2.03	2.33	4.35	3.78	4.03	6.38	5.98	3.45	2.60	2.35
4	1.93	1.98	2.30	2.33	4.25	4.62	4.30	6.60	6.01	3.40	2.60	2.35
5	1.93	1.98	2.30	3.24	3.88	4.63	4.29	6.70	5.96	3.35	2.60	2.35
6	1.92	1.96	2.28	3.59	3.72	4.42	4.19	6.74	5.88	3.30	2.60	2.35
7	1.92	1.95	2.15	3.78	3.34	4.13	4.17	6.78	5.72	3.20	2.60	2.35
8	1.93	1.98	2.12	4.55	3.20	3.90	4.20	6.84	5.56	3.15	2.55	2.35
9	1.93	1.98	2.08	4.47	3.14	3.70	4.28	6.80	5.40	3.10	2.50	2.30
10	1.93	1.98	2.02	3.70	3.07	3.54	4.48	6.77	5.20	3.10	2.50	2.30
11	1.95	1.97	1.93	3.13	3.08	3.43	4.63	6.60	5.08	3.10	2.50	2.30
12	1.95	1.97	1.98	3.02	3.40	3.45	4.68	6.27	5.02	3.10	2.50	2.30
13	1.94	1.96	1.96	3.20	3.46	3.46	4.86	6.07	4.97	3.10	2.50	2.30
14	1.97	1.96	1.96	6.40	3.43	3.53	5.06	5.95	4.88	3.05	2.50	2.30
15	2.58	1.95	1.88	9.45	3.54	3.68	5.28	7.90	4.77	3.05	2.45	2.30
16	2.46	1.95	1.87	13.20	3.80	3.89	5.48	5.91	4.75	3.00	2.45	2.25
17	2.18	1.94	1.86	11.95	4.60	4.09	5.68	5.65	4.78	2.95	2.45	2.25
18	2.10	1.94	1.83	10.12	4.93	4.11	5.92	5.55	4.80	2.90	2.45	2.25
19	2.07	1.94	1.83	9.41	4.78	4.02	6.46	5.54	4.80	2.85	2.40	2.25
20	2.05	2.05	1.84	9.64	4.30	3.97	6.58	5.58	4.74	2.85	2.40	2.25
21	2.02	2.40	1.83	9.87	4.09	3.79	6.22	5.69	4.56	2.80	2.40	2.25
22	1.99	2.46	1.85	7.94	3.84	3.84	6.00	5.86	4.38	2.80	2.40	2.20
23	1.98	2.50	1.86	7.02	3.73	3.75	5.76	5.62	4.28	2.75	2.40	2.20
24	1.98	2.35	1.86	6.24	3.67	3.65	5.73	5.40	4.22	2.75	2.40	2.20
25	1.98	2.23	1.86	5.53	3.52	3.52	5.73	5.32	4.22	2.70	2.40	2.25
26	1.98	2.10	1.86	5.09	3.43	3.54	5.80	5.34	4.16	2.70	2.45	2.35
27	1.97	2.02	.....	4.75	3.37	3.77	6.03	5.54	.....	2.70	2.40	2.35
28	1.97	2.00	.....	4.56	3.35	3.68	6.28	5.95	.....	2.70	2.40	2.35
29	1.99	1.99	.....	4.35	.....	3.73	6.17	5.75	.....	2.70	2.35	2.35
30	2.14	1.99	.....	4.00	.....	3.68	6.08	5.54	.....	2.65	2.35	2.40
31	2.13	.....	.....	3.74	.....	3.59	.....	5.39	.....	2.65	2.35	.....

a Estimated.

Daily gage height, in feet, of North Fork of Feather River below Prattville, Cal., for 1905-1909—Continued.

Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.
1909.				1909.				1909.			
1	2.35	2.40	3.60	11	2.20	2.50	3.80	21	2.40	5.40	2.20
2	2.40	2.45	4.40	12	2.20	2.40	3.65	22	2.30	6.30	2.20
3	2.40	2.40	3.05	13	2.20	2.40	3.55	23	2.30	6.25	2.20
4	2.45	2.35	3.35	14	2.20	2.45	3.40	24	2.30	6.35	2.25
5	2.40	2.30	3.05	15	2.20	2.35	3.30	25	2.25	6.05	2.40
6	2.30	2.30	2.75	16	2.20	2.25	3.10	26	2.20	4.90	2.40
7	2.25	2.30	2.80	17	2.20	2.30	2.90	27	2.20	4.25	2.35
8	2.25	2.25	3.05	18	2.20	2.35	2.60	28	2.25	3.70	2.30
9	2.25	2.45	3.80	19	2.25	2.50	2.40	29	2.40	3.35	2.40
10	2.20	2.55	3.85	20	2.50	3.50	2.20	30	2.45	3.25	2.30
								31	2.45	.....	3.00

Daily discharge, in second-feet, of North Fork of Feather River below Prattville, Cal. for 1905-1910.

Day.	June.	July.	Aug.	Sept.	Day.	June.	July.	Aug.	Sept.
1905.					1905.				
1		842	692	647	16	1,130	748	668	643
2		835	683	643	17	1,110	744	665	636
3		827	684	639	18	1,080	742	661	636
4		819	686	639	19	1,030	740	661	636
5		800	686	639	20	1,010	737	657	629
6		808	683	639	21	1,010	740	665	629
7		804	686	639	22	964	726	675	625
8		781	675	639	23	952	726	675	621
9		778	675	643	24	936	744	675	629
10		778	657	636	25	916	729	665	629
11		766	665	636	26	912	719	647	625
12		770	683	639	27	880	711	654	632
13	1,210	766	674	639	28	869	704	650	633
14	1,180	763	665	643	29	850	708	647	665
15	1,160	766	665	639	30	838	704	643	647
					31	.....	701	647	.....

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1905-6.												
1	632	622	679	609	1,040	1,280	2,530	2,470	2,160	1,590	908	686
2	629	620	652	601	1,020	1,210	2,070	2,590	2,100	1,590	892	682
3	625	619	625	593	998	1,160	1,830	2,700	2,150	1,590	876	679
4	625	618	598	595	988	1,070	1,730	2,940	2,220	1,570	869	675
5	625	618	571	597	978	1,060	1,680	3,150	2,560	1,550	857	672
6	625	618	570	600	968	1,030	1,700	3,260	2,520	1,500	857	668
7	639	619	569	596	952	1,010	1,780	3,330	2,320	1,470	854	665
8	636	619	568	599	944	1,010	1,870	3,320	2,130	1,440	846	661
9	632	619	567	603	948	1,040	2,040	3,310	2,090	1,400	833	660
10	630	619	566	603	964	1,110	2,250	3,380	2,200	1,350	831	658
11	629	620	565	636	993	1,360	2,240	3,580	2,360	1,280	835	657
12	629	620	564	665	1,040	1,650	2,200	3,660	2,330	1,250	842	655
13	629	620	582	679	1,050	1,580	2,060	3,300	2,280	1,240	831	654
14	629	620	600	752	1,270	1,500	2,020	3,020	2,210	1,220	819	675
15	629	621	614	697	1,410	1,430	2,050	3,070	2,180	1,200	812	697
16	629	621	629	924	1,380	1,350	2,100	2,970	2,330	1,210	808	704
17	629	621	615	1,060	1,320	1,280	2,190	2,590	2,740	1,180	797	701
18	629	621	600	1,600	1,480	1,210	2,200	2,660	2,590	1,110	797	708
19	628	621	586	1,810	1,610	1,150	2,270	2,270	2,400	1,090	785	711
20	628	620	571	1,630	1,630	1,140	2,320	2,240	2,320	1,060	774	715
21	628	618	557	1,380	1,620	1,430	2,490	2,240	2,270	1,040	762	704
22	627	611	562	1,260	1,550	1,810	2,670	2,210	2,210	1,010	750	697
23	627	618	567	1,150	1,350	2,070	2,820	2,170	2,100	989	738	701
24	627	614	580	1,130	1,330	2,470	2,780	2,090	2,000	981	727	708
25	626	614	593	1,060	1,290	2,750	2,560	2,140	1,920	964	715	704
26	626	619	599	1,080	1,210	2,870	2,360	2,500	1,880	952	711	697
27	626	624	606	1,150	1,310	2,500	2,270	2,790	1,820	940	707	693

Daily discharge, in second-feet, of North Fork of Feather River below Prattville, Cal., for 1905-1910—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1905-6.												
28.....	625	629	612	1,130	1,380	2,130	2,330	2,770	1,740	936	703	693
29.....	625	646	619	1,110	.....	1,880	2,300	2,670	1,650	924	698	690
30.....	624	662	625	1,080	.....	2,070	2,380	2,430	1,600	916	694	686
31.....	623	.....	617	1,060	.....	2,780	.....	2,260	.....	908	690	.....
1906-7.												
1.....	686	672	621	1,094	1,577	1,602	2,327	3,364	3,067	1,677	1,049	865
2.....	686	679	625	964	2,874	1,502	2,298	3,264	3,100	1,602	1,027	865
3.....	683	715	629	924	4,130	1,452	2,270	3,264	3,100	1,577	1,027	865
4.....	683	854	629	808	4,892	1,428	2,242	3,534	3,067	1,552	1,027	865
5.....	683	956	632	770	4,768	1,477	2,270	3,198	3,002	1,527	1,006	865
6.....	683	865	643	808	4,639	1,502	2,298	3,165	2,874	1,502	1,006	865
7.....	683	778	650	808	3,952	1,404	2,385	3,165	2,874	1,477	1,006	865
8.....	683	733	686	808	3,067	1,321	2,444	3,100	2,748	1,428	1,006	865
9.....	679	711	715	808	2,327	1,331	2,444	3,132	2,564	1,404	985	846
0.....	679	697	785	808	2,091	1,331	2,474	3,198	2,414	1,380	985	846
11.....	679	690	690	808	1,912	1,307	2,874	3,364	2,748	1,356	985	846
12.....	679	686	661	808	1,780	1,212	3,364	3,364	3,364	1,331	964	827
13.....	679	683	690	789	1,677	1,164	3,638	3,398	3,231	1,307	964	827
14.....	678	679	711	789	1,587	1,140	4,200	3,100	3,132	1,283	964	827
15.....	677	683	729	770	1,552	1,188	4,927	3,100	3,067	1,283	944	827
16.....	676	711	752	751	1,552	1,728	4,471	3,132	3,002	1,250	944	827
17.....	675	701	785	733	1,527	4,166	3,987	3,198	2,938	1,236	944	827
18.....	674	683	744	720	1,602	7,495	3,900	3,198	2,874	1,212	924	827
19.....	673	661	744	715	1,602	9,847	3,813	3,331	2,821	1,212	924	827
20.....	672	661	744	718	1,602	8,732	4,058	3,534	2,748	1,188	924	808
21.....	672	665	737	733	1,602	6,743	3,813	3,466	2,686	1,164	904	808
22.....	672	661	733	733	1,652	4,238	3,831	3,398	2,625	1,140	904	808
23.....	672	632	763	747	1,677	2,821	3,603	3,331	2,564	1,117	904	789
24.....	672	639	800	751	1,728	2,748	3,673	3,264	1,966	1,117	904	789
25.....	672	643	1,200	751	1,885	2,748	3,778	3,231	1,912	1,094	904	789
26.....	668	639	1,680	770	1,859	2,717	3,534	3,198	1,885	1,094	904	770
27.....	665	632	1,700	789	1,698	2,625	3,466	3,132	1,832	1,071	904	770
28.....	665	629	1,810	827	1,577	2,564	3,466	3,067	1,832	1,071	884	789
29.....	661	614	1,650	896	.....	2,504	3,569	3,002	1,780	1,071	884	789
30.....	661	629	1,450	924	.....	2,414	3,466	2,970	1,627	1,049	884	789
31.....	672	.....	1,280	1,117	.....	2,385	.....	2,938	.....	1,049	884	.....
1907-8.												
1.....	789	827	751	721	790	790	1,215	1,562	1,400	831	643	621
2.....	789	827	751	836	660	711	1,197	1,698	1,320	839	643	606
3.....	789	808	751	784	708	800	1,244	1,667	1,280	823	643	610
4.....	789	789	770	800	810	763	1,333	1,543	1,240	810	639	617
5.....	789	770	789	800	790	767	1,412	1,439	1,200	805	639	617
6.....	789	770	827	790	798	743	1,420	1,406	1,178	798	639	617
7.....	770	751	1,094	786	812	747	1,322	1,400	1,188	786	639	621
8.....	770	751	1,117	790	810	747	1,240	1,553	1,211	770	639	610
9.....	770	751	1,094	782	783	770	1,244	1,436	1,198	759	636	606
10.....	770	770	1,094	778	778	790	1,283	1,357	1,190	770	636	606
11.....	770	770	1,212	790	783	810	1,338	1,361	1,198	755	636	602
12.....	770	751	1,117	790	770	847	1,400	1,453	1,207	755	636	606
13.....	770	751	1,117	810	751	869	1,488	1,400	1,211	743	636	617
14.....	846	751	1,006	912	747	940	1,548	1,420	1,235	733	650	617
15.....	827	751	924	966	743	1,018	1,602	1,598	1,254	721	650	610
16.....	827	733	884	966	740	1,128	1,657	1,642	1,211	715	650	632
17.....	808	733	865	960	751	1,269	1,647	1,588	1,152	704	650	656
18.....	789	770	827	993	733	1,454	1,642	1,578	1,096	689	650	625
19.....	770	770	808	1,073	730	1,548	1,592	1,633	1,040	689	625	617
20.....	770	751	770	1,142	733	1,562	1,667	1,592	1,013	683	625	617
21.....	770	733	770	1,150	733	1,553	1,770	1,479	1,040	672	625	606
22.....	789	733	797	1,128	741	1,562	1,790	1,430	1,053	675	625	602
23.....	789	751	827	1,150	759	1,567	1,730	1,426	998	965	625	602
24.....	789	751	835	1,132	773	1,583	1,638	1,440	948	961	625	598
25.....	770	751	835	1,181	794	1,683	1,642	1,479	912	961	625	598
26.....	789	751	1,049	1,013	820	1,592	1,602	1,512	896	660	625	598
27.....	808	733	1,502	964	1,885	1,535	1,553	1,489	878	660	625	602
28.....	808	733	1,477	912	896	1,421	1,644	1,415	866	650	625	602
29.....	808	733	1,006	862	839	1,342	1,558	1,426	851	650	625	598
30.....	846	715	1,115	847	.....	1,333	1,534	1,479	839	650	625	598
31.....	884	.....	733	816	.....	1,073	.....	1,450	.....	640	625	.....

Daily discharge, in second-feet, of North Fork of Feather River below Prattville, Cal., for 1905-1910—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1908-9.												
1.....	598	650	621	607	1,351	1,198	1,302	2,613	2,276	1,283	865	751
2.....	598	633	625	781	1,380	1,250	1,370	2,717	2,444	1,250	846	751
3.....	598	625	636	744	1,652	1,370	1,492	2,806	2,552	1,212	846	751
4.....	598	618	733	744	1,602	1,790	1,627	2,938	2,570	1,188	846	751
5.....	598	618	733	1,112	1,418	1,796	1,622	3,002	2,540	1,164	846	751
6.....	595	610	726	1,276	1,341	1,687	1,572	3,028	2,492	1,140	846	751
7.....	595	606	679	1,370	1,159	1,542	1,562	3,054	2,397	1,094	846	751
8.....	598	618	668	1,754	1,094	1,428	1,577	3,093	2,304	1,071	827	751
9.....	598	618	653	1,731	1,067	1,331	1,617	3,067	2,214	1,049	818	733
10.....	598	618	636	1,313	1,036	1,255	1,718	3,048	2,102	1,049	818	733
11.....	606	613	598	1,062	1,040	1,202	1,796	2,938	2,036	1,049	818	733
12.....	606	613	621	1,014	1,188	1,212	1,822	2,729	2,004	1,049	818	733
13.....	602	610	610	1,094	1,217	1,217	1,912	2,607	1,977	1,049	818	733
14.....	613	610	610	2,821	1,202	1,250	2,025	2,534	1,928	1,027	818	733
15.....	840	606	582	4,891	1,255	1,321	2,147	2,504	1,869	1,027	789	733
16.....	794	606	578	7,648	1,380	1,423	2,259	2,510	1,859	1,006	789	715
17.....	690	602	574	6,706	1,780	1,522	2,373	2,356	1,875	985	789	715
18.....	661	602	562	5,369	1,955	1,532	2,516	2,298	1,885	964	789	715
19.....	650	602	562	4,864	1,875	1,487	2,853	2,292	1,885	944	770	715
20.....	643	643	567	5,026	1,627	1,462	2,925	2,315	1,854	944	770	715
21.....	632	771	562	5,190	1,522	1,375	2,698	2,379	1,759	924	770	715
22.....	621	794	571	3,841	1,399	1,319	2,564	2,480	1,667	924	770	697
23.....	617	809	574	3,211	1,346	1,356	2,420	2,339	1,617	904	770	697
24.....	617	751	574	2,711	1,317	1,307	2,402	2,214	1,587	904	770	697
25.....	617	709	574	2,175	1,246	1,246	2,402	2,169	1,587	884	770	715
26.....	617	761	574	2,042	1,202	1,255	2,444	2,180	1,557	884	789	751
27.....	613	633	575	1,859	1,174	1,366	2,582	2,292	1,500	884	770	751
28.....	613	625	600	1,759	1,164	1,321	2,736	2,534	1,450	884	770	751
29.....	621	621	600	1,652	.....	1,346	2,668	2,414	1,390	884	751	751
30.....	675	621	600	1,477	.....	1,321	2,613	2,292	1,330	865	751	770
31.....	671	.....	600	1,351	.....	1,276	.....	2,208	.....	865	751	.....
1909-10.												
1.....	751	770	1,283	927	862	1,253	1,608	1,690	880	685	620	595
2.....	770	789	1,677	899	797	1,331	1,652	1,620	873	685	616	592
3.....	770	770	1,502	829	800	1,467	1,660	1,585	857	679	615	592
4.....	789	751	1,164	797	812	1,806	1,660	1,590	842	679	609	607
5.....	770	733	1,027	804	812	2,147	1,635	1,536	830	679	609	609
6.....	733	733	904	812	827	2,176	1,646	1,452	819	675	613	607
7.....	715	733	924	819	837	2,170	1,677	1,392	815	671	613	602
8.....	715	715	1,027	808	837	2,176	1,715	1,376	804	671	613	602
9.....	715	789	1,380	819	837	2,242	1,770	1,397	797	679	609	602
10.....	697	827	1,404	819	830	2,280	1,810	1,440	783	682	607	602
11.....	697	818	1,380	804	857	2,230	1,912	1,457	778	679	609	609
12.....	697	770	1,307	797	875	2,197	1,865	1,415	770	679	609	609
13.....	697	770	1,250	789	918	2,200	1,780	1,366	770	682	607	616
14.....	697	789	1,188	741	960	2,216	1,748	1,342	763	675	602	620
15.....	697	751	1,140	808	918	2,186	1,728	1,322	759	671	599	635
16.....	697	715	1,049	800	873	2,064	1,720	1,298	755	664	595	688
17.....	697	733	964	800	862	2,064	1,745	1,188	755	656	592	664
18.....	697	751	846	800	869	2,230	1,793	1,148	751	652	595	652
19.....	715	818	770	800	865	2,760	1,850	1,121	747	656	595	649
20.....	818	1,236	697	800	910	3,368	1,930	1,121	741	671	592	643
21.....	770	2,214	697	800	924	3,468	1,939	1,049	737	667	595	639
22.....	733	2,748	697	827	931	3,220	1,896	1,106	737	653	595	635
23.....	733	2,717	697	924	910	2,817	1,880	1,066	733	648	595	635
24.....	733	2,784	715	1,015	1,053	2,444	1,896	1,040	726	649	595	628
25.....	715	2,594	770	1,001	1,167	2,158	1,896	1,018	719	646	595	625
26.....	697	1,939	770	939	1,070	1,945	1,885	980	715	643	599	625
27.....	697	1,602	751	906	1,075	1,859	1,868	948	708	639	589	625
28.....	715	1,331	733	887	1,140	1,745	1,806	944	697	635	595	625
29.....	770	1,164	733	880	.....	1,647	1,733	927	688	632	595	625
30.....	789	1,117	770	850	.....	1,590	1,684	910	685	628	595	625
31.....	789	.....	1,006	850	.....	1,585	.....	892	.....	625	595	.....

Daily discharge, in second-feet, of North Fork of Feather River below Prattville, Cal., for 1905-1910—Continued.

Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.
1910.				1910.				1910.			
1.....	612	616	755	11.....	643	698	2,004	21.....	616	645	733
2.....	630	616	877	12.....	667	698	1,810	22.....	616	660	697
3.....	620	625	914	13.....	652	688	1,405	23.....	616	665	688
4.....	632	625	975	14.....	639	660	1,153	24.....	616	810	637
5.....	635	625	857	15.....	639	660	988	25.....	616	922	667
6.....	628	625	751	16.....	635	642	910	26.....	616	945	635
7.....	628	625	712	17.....	628	642	808	27.....	616	810	616
8.....	625	660	745	18.....	625	667	783	28.....	616	810	607
9.....	625	733	1,254	19.....	620	667	759	29.....	616	810	607
10.....	625	678	1,800	20.....	616	652	745	30.....	616	810	602
								31.....	616	.....	607

NOTE.—Daily discharge 1905-1907 computed by the United States Geological Survey from a rating table furnished by the Great Western Power Co. The rating curve is well defined between 590 and 3,700 second-feet.

Daily discharge 1908-9-10 computed by the Great Western Power Co. and published as submitted. Daily discharge June 27-30, 1909, estimated by the Engineers of United States Geological Survey to make the year complete. Daily discharge for Jan. 16-21, 1910, and Sept. 25-29, 1910, estimated.

Monthly discharge of North Fork of Feather River below Prattville, Cal., for 1905-1910.

[Drainage area, 506 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 13-30.....	1,210	838	1,000	1.98	1.33	35,700	A.
July.....	842	701	759	1.50	1.73	46,700	A.
August.....	692	643	668	1.32	1.52	41,100	A.
September.....	683	621	639	1.26	1.41	38,000	A.
1905-6.							
October.....	639	623	628	1.24	1.43	38,600	A.
November.....	662	611	622	1.23	1.37	37,000	B.
December.....	679	557	594	1.17	1.35	36,500	B.
January.....	1,810	589	936	1.85	2.13	57,600	A.
February.....	1,630	944	1,220	2.41	2.51	67,800	A.
March.....	2,870	1,010	1,590	3.14	3.62	97,800	A.
April.....	2,820	1,680	2,200	4.35	4.85	131,000	A.
May.....	3,660	2,090	2,780	5.49	6.35	171,000	A.
June.....	2,740	1,600	2,180	4.31	4.81	130,000	A.
July.....	1,590	908	1,210	2.39	2.76	74,400	A.
August.....	908	690	794	1.57	1.81	48,800	B.
September.....	715	654	685	1.35	1.51	40,800	B.
The year.....	3,660	557	1,290	2.54	34.48	931,000	
1906-7.							
October.....	686	661	676	1.34	1.54	41,600	A.
November.....	956	614	696	1.38	1.54	41,400	A.
December.....	1,810	621	894	1.77	2.04	55,000	A.
January.....	1,120	715	814	1.61	1.86	50,100	A.
February.....	4,890	1,530	2,300	4.55	4.74	128,000	A.
March.....	9,850	1,140	2,800	5.53	6.38	172,000	A.
April.....	4,930	2,240	3,290	6.50	7.25	196,000	A.
May.....	3,530	2,940	3,230	6.38	7.36	199,000	A.
June.....	3,360	1,630	2,650	5.24	5.85	158,000	A.
July.....	1,680	1,050	1,280	2.53	2.92	78,700	A.
August.....	1,050	884	951	1.88	2.17	58,500	A.
September.....	865	770	826	1.63	1.82	49,200	A.
The year.....	9,850	614	1,700	3.36	45.47	1,230,000	

Monthly discharge of North Fork of Feather River below Prattville, Cal., for 1905-1910—  
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.	
1907-8.							
October.....	884	770	794	1.57	1.81	48,800	A.
November.....	827	715	758	1.50	1.67	45,100	A.
December.....	1,500	715	939	1.86	2.14	57,700	A.
January.....	1,180	721	917	1.81	2.09	56,400	A.
February.....	1,880	660	809	1.60	1.73	46,500	A.
March.....	1,680	711	1,140	2.25	2.59	70,100	A.
April.....	1,790	1,200	1,500	2.06	3.30	89,300	A.
May.....	1,700	1,360	1,500	2.06	3.41	92,200	A.
June.....	1,400	839	1,110	2.19	2.44	66,000	A.
July.....	839	640	723	1.43	1.65	44,500	A.
August.....	650	625	635	1.25	1.44	39,000	C.
September.....	636	598	610	1.21	1.35	36,300	C.
The year.....	1,880	598	953	1.88	25.62	692,000	
1908-9.							
October.....	840	595	632	1.25	1.44	38,900	A.
November.....	809	602	647	1.28	1.43	38,500	A.
December.....	733	562	612	1.21	1.40	37,600	A.
January.....	7,650	607	2,550	5.04	5.81	157,000	A.
February.....	1,960	1,040	1,310	2.59	2.70	72,800	A.
March.....	1,800	1,200	1,380	2.73	3.15	84,800	A.
April.....	2,320	1,300	2,120	4.19	4.68	126,000	A.
May.....	3,090	2,170	2,580	5.10	5.88	159,000	A.
June.....	2,570	1,330	1,950	3.85	4.30	116,000	A.
July.....	1,280	865	1,010	2.00	2.31	62,100	A.
August.....	865	751	800	1.53	1.82	49,200	B.
September.....	770	697	734	1.45	1.62	43,700	B.
The year.....	7,650	562	1,360	2.69	36.54	986,000	
1909-10.							
October.....	818	697	731	1.44	1.66	44,900	B.
November.....	2,780	715	1,200	2.37	2.64	71,400	A.
December.....	1,680	697	1,010	2.00	2.31	62,100 <sup>1</sup>	A.
January.....	1,015	741	844	1.67	1.92	51,900	
February.....	1,167	797	908	1.79	1.86	50,400	
March.....	3,468	1,253	2,160	4.27	4.92	133,000	
April.....	1,939	1,608	1,780	3.52	3.93	106,000	
May.....	1,690	892	1,250	2.47	2.85	76,900	
June.....	880	685	768	1.52	1.70	45,700	
July.....	685	625	662	1.31	1.51	40,700	
August.....	620	589	602	1.19	1.37	37,000	
September.....	688	592	623	1.23	1.37	37,100	
The year.....	3,468	589	1,040	2.06	28.04	757,000	
1910.							
October.....	667	612	625	1.24	1.43	38,400	
November.....	922	616	696	1.33	1.54	41,400	
December.....	2,004	602	908	1.79	2.06	55,800	

NOTE.—Monthly estimates for 1908-1910 are based on daily discharges furnished by the Great Western Power Co. No accuracy is given for 1910, as no base data was furnished to the United States Geological Survey.

NORTH FORK OF FEATHER RIVER AT BIG BEND, NEAR OROVILLE, CAL.<sup>1</sup>

This station, which was established June 13, 1905, to determine the availability of the North Fork for power development, is located about 300 feet above the head of Big Bend tunnel at Intake, a station on the Western Pacific Railway, and about 15 miles northeast of Oroville, in SE.  $\frac{1}{4}$  sec. 36, T. 22 N., R. 4 E.

<sup>1</sup> Formerly known as "near Big Bend."

No important tributaries enter for many miles above the station. West Branch enters from the west about 10 miles below the station by river, and Middle Fork comes in from the east about 11 miles below.

The datum of the staff gage remained unchanged from 1905 to 1907.

During 1908 the gage was changed several times, owing to construction work about the head of Big Bend tunnel.

On account of construction work at the station during 1909 no gage height record was kept, but estimates of daily discharge for the last half of the year have been furnished by the Great Western Power Co., which has maintained the station since its establishment.

The stream has a rock channel which is practically permanent. At low water the stream is about 85 feet wide and 19 feet deep and has a sluggish, but uniform current.

Discharge measurements are made by means of a boat when the stage is below 11.0 feet. For higher stages float measurements are made at this point and check measurements are made 2 miles down stream from the cable of the Golden State Power Co.

The highest recorded flood occurred at 1 a. m., March 19, 1907, when at a gage height of 36 feet the discharge is estimated at 118,000 second-feet. The lowest weekly flow was 971 second-feet, September 10 to September 16, 1908.

*Discharge measurements of North Fork of Feather River at Big Bend, near Oroville, Cal., in 1905-1908.*

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1905.		<i>Feet.</i>	<i>Sec.-ft.</i>	1907.		<i>Feet.</i>	<i>Sec.-ft.</i>
June 13	W. E. Spear.....	4. 15	3, 750	Mar. 18 <sup>a</sup>	L. J. Bevan.....	31. 00	91, 000
July 13	.....do.....	2. 75	1, 352	July 5	.....do.....	4. 99	3, 267
Aug. 20	L. J. Bevan.....	2. 14	1, 048	Aug. 13	.....do.....	3. 18	1, 750
Sept. 16	.....do.....	2. 07	1, 003	Oct. 21	.....do.....	2. 96	1, 654
Oct. 22	.....do.....	2. 15	1, 038	Oct. 9	.....do.....	2. 66	1, 364
Dec. 5	.....do.....	2. 25	1, 101				
1906.				1908.			
Feb. 2	L. J. Bevan.....	4. 79	3, 017	July 14	L. J. Bevan.....	<sup>b</sup> 1. 82	1, 418
Mar. 13	.....do.....	12. 25	13, 230	22	.....do.....	<sup>b</sup> 1. 40	1, 181
Apr. 18	.....do.....	10. 24	9, 962	Sept. 8	.....do.....	<sup>b</sup> 1. 00	1, 005
Apr. 28	.....do.....	8. 98	8, 052	Oct. 15	.....do.....	<sup>b</sup> 2. 28	1, 741
June 6	.....do.....	9. 55	8, 655				
June 7	.....do.....	9. 08	8, 332				
July 13	.....do.....	4. 73	3, 081				
Aug. 12	.....do.....	3. 03	1, 677				
Oct. 11	.....do.....	2. 44	1, 269				

<sup>a</sup> Float measurement.

<sup>b</sup> New gage since 1907.

Daily gage height, in feet, of North Fork of Feather River at Big Bend, near Oroville, Cal., for 1905-1907.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1905.												
1												
2											2.26	2.06
3												
4											2.06	2.06
5												
6												
7											2.24	2.07
8											2.21	2.06
9												2.06
10											2.17	
11												2.05
12											2.16	
13										2.75	2.16	2.65
14												
15										2.66	2.17	2.08
16												2.07
17										2.62	2.15	
18												2.06
19										2.60	2.13	
20										2.10		2.06
21										2.55	2.13	
22												
23										2.50	2.20	
24												
25										2.46	2.14	2.05
26											2.11	
27										2.35		2.07
28											2.07	
29										2.34		2.35
30											2.06	2.25
31										2.28		
1905-6.												
1		2.17	2.32	2.24					10.65		3.25	2.62
2	2.18				4.80	7.65	11.80	9.85	8.95	6.25	3.20	
3	2.15	2.17	2.27	2.24								2.58
4	2.10		2.31		4.65	7.30	9.55	10.60		6.23	3.12	2.58
5	2.08	2.17	2.25	2.30					11.20			
6			2.27	2.31	4.54	6.58	8.76	11.20	9.55	5.85	3.08	2.58
7	2.10	2.18	2.25			6.50			9.15			2.58
8				2.35	4.50		9.60	11.25		5.50	3.00	
9	2.12		2.21			6.46			9.05			2.55
10				2.30	4.65		10.70	11.85		5.25	2.97	2.53
11	2.11	2.17	2.11			7.35			9.00			
12				2.96	4.79	13.45	9.85	11.20		4.85	3.03	2.52
13	2.13	2.18	2.18		4.81	12.25			8.90	4.73	3.01	
14			2.22	2.46		10.06	9.75	10.05	8.75	4.60		2.60
15	2.12	2.17			8.15	8.85					2.90	
16			2.26	13.23			10.30	9.40	9.30	4.38		2.58
17	2.11	2.18	2.27		6.51	7.85						
18				18.48			10.25	8.85	8.85	4.22	2.85	2.58
19	2.10	2.18	2.66	19.90	7.75	6.74	10.22					2.56
20	2.12			12.22	8.20			8.40	8.40	3.90	2.78	2.55
21		2.27	2.44			7.54	10.85					2.55
22	2.15	2.37	2.36	7.15	8.97	10.35		8.00	7.90	3.68		
23		2.19					11.10				2.75	
24			2.24	5.88	8.10	14.00		7.50	7.30	3.60	2.73	
25	2.18	2.18					10.65					
26			2.29	5.56	8.75	14.70		7.90	6.95	3.53	2.66	
27	2.20	2.57	2.36					8.40				
28				5.25	9.80	12.10	9.00	11.05	6.68	3.45		
29	2.19	2.37	2.26					10.45				
30	2.18			5.10		12.34	8.40		6.39	3.35	2.65	
31				4.88				9.35				
1906-7.												
1			2.45	5.85	12.60	8.50		10.90	9.20	5.50	3.60	2.96
2		2.40		5.35	20.95	8.50		10.65	9.30	5.40	3.55	2.96
3		3.02	2.50	5.25	19.85	8.00		10.60	9.20	5.30	3.50	2.96
4		5.90		6.00	17.50	8.00		10.30	9.10	5.20	3.45	2.96
5		4.60	2.50	6.35	16.50	8.50		10.20	8.70	5.05	3.35	2.96

Daily gage height, in feet, of North Fork of Feather River at Big Bend, near Oroville, Cal., for 1905-1907—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1906-7.												
6.				5.65	15.50	8.50		9.95	8.50	5.00	3.30	2.95
7.		3.40	2.50	5.15	13.00	8.00		9.80	8.30	4.90	3.30	2.95
8.				4.85	11.50	7.50		9.80	8.20	4.80	3.25	2.90
9.		3.00	3.20	4.70	10.50	8.50		9.80	7.70	4.70	3.20	2.85
10.				4.85	9.00	8.00		10.00	7.60	4.60	3.20	2.80
11.	2.44	2.80	6.20	4.70	9.00	7.50		10.70	9.60	4.55	3.20	2.80
12.				4.55	8.50	7.00		10.45	8.60	4.45	3.15	2.80
13.		2.75	5.10	4.45	8.00	6.50		9.95	8.50	4.35	3.15	2.77
14.	2.44			4.30	7.50	6.10		9.60	8.30	4.20	3.15	2.77
15.		2.75	3.10	4.35	8.05	6.55		9.50	7.70	4.15	3.10	2.75
16.				4.15	8.50	6.60		9.40	7.30	4.15	3.05	2.75
17.		2.83	3.80	4.10	9.00	13.00		9.10	6.90	4.10	3.05	2.77
18.				4.10	9.05	31.00		9.70	6.80	4.05	3.05	2.80
19.		2.73	3.60	4.00	8.50	24.50		11.30	6.70	4.00	3.07	2.80
20.				3.95	8.50	28.00		10.60	6.70	3.90	2.97	2.80
21.		2.67	3.50	3.90	8.05	22.00	13.45	10.30	5.60	3.85	2.97	2.75
22.				3.90	9.50	18.00	13.37	9.70	6.50	3.80	2.95	2.72
23.		2.65	3.80	3.90	9.50	15.00	13.20	9.10	6.50	3.75	2.95	2.70
24.				3.95	9.05	12.00		8.80	6.40	3.70	2.95	2.70
25.		2.60	8.80	4.40	9.80	10.00		8.80	6.20	3.70	2.95	2.70
26.			15.40	4.55	9.05			8.70	6.10	3.65	2.95	2.70
27.		2.55	13.00	4.90	8.50			8.80	5.90	3.65	2.95	2.70
28.			9.55	7.30	8.00			8.80	5.95	3.65	2.95	2.70
29.	2.40	2.50		8.05				8.90	5.80	3.65	2.95	2.70
30.				7.50			11.10	8.90	5.80	3.65	2.95	2.70
31.				8.65				9.10		3.65	2.95	.....

Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.
1907.											
1.	2.70	3.28	2.85	11.	2.87	2.90	6.15	21.	2.85	2.91	3.42
2.	2.72	3.18	2.86	12.	2.90	2.94	4.70	22.	2.85	2.92	3.38
3.	2.72	3.25	2.85	13.	2.87	2.85	4.82	23.	2.85	2.94	3.45
4.	2.72	3.02	2.95	14.	2.85	2.85	4.58	24.	2.90	2.98	3.48
5.	2.72	2.92	3.00	15.	2.82	2.82	4.12	25.	2.95	2.98	3.48
6.	2.72	2.90	3.50	16.	2.80	2.85	3.95	26.	3.05	2.98	6.10
7.	2.75	2.90	6.30	17.	2.80	2.90	3.68	27.	3.05	2.90	7.60
8.	2.75	2.90	5.45	18.	2.80	2.95	3.58	28.	3.05	2.94	6.85
9.	2.75	2.90	4.60	19.	2.80	2.95	3.52	29.	2.98	2.95	.....
10.	2.80	2.86	5.35	20.	2.80	2.94	3.50	30.	3.30	2.89	.....
								31.	3.28	.....	.....

a The highest crest stage of 36.0 feet occurred at 1 a. m. March 19, 1907.

Daily discharge, in second-feet, of North Fork of Feather River at Big Bend, near Oroville, Cal., for 1905-1910.

Day.	July.	Aug.	Sept.	Day.	July.	Aug.	Sept.	Day.	July.	Aug.	Sept.
1905.											
1.		1,140	1,020	11.		1,080	1,020	21.	1,310	1,060	1,020
2.		1,140	1,020	12.		1,080	1,020	22.	1,340	1,040	1,020
3.		1,130	1,020	13.		1,440	1,080	23.	1,280	1,100	1,020
4.		1,020	1,020	14.		1,410	1,080	24.	1,270	1,080	1,020
5.		1,070	1,020	15.		1,380	1,080	25.	1,260	1,060	1,020
6.		1,120	1,030	16.		1,360	1,080	26.	1,120	1,050	1,020
7.		1,160	1,020	17.		1,350	1,070	27.	1,190	1,040	1,030
8.		1,110	1,020	18.		1,340	1,060	28.	1,180	1,030	1,010
9.		1,100	1,020	19.		1,340	1,060	29.	1,180	1,020	1,190
10.		1,080	1,020	20.		1,320	1,040	30.	1,160	1,020	1,130
								31.	1,150	1,020	.....

NOTE.—Discharge interpolated for days when gage was not read. See footnote at end of 1909 table.

Daily discharge, in second-feet, of North Fork of Feather River at Big Bend, near Oroville, Cal., for 1905-1910—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1905-6.												
1	1,110	1,080	1,170	1,120	3,180	7,820	13,200	9,090	10,800	4,160	1,800	1,350
2	1,090	1,080	1,160	1,120	3,150	6,300	12,900	9,420	8,100	4,600	1,760	1,340
3	1,070	1,080	1,140	1,120	3,080	6,070	10,900	10,100	9,000	4,590	1,730	1,330
4	1,040	1,080	1,170	1,140	3,010	5,840	8,980	10,700	10,000	4,580	1,700	1,330
5	1,030	1,080	1,130	1,160	2,960	5,400	8,400	11,200	11,800	4,380	1,690	1,330
6	1,040	1,080	1,140	1,170	2,910	4,960	7,820	11,800	8,980	4,180	1,680	1,330
7	1,040	1,090	1,130	1,180	2,890	4,870	8,440	11,800	8,390	4,050	1,650	1,330
8	1,040	1,090	1,120	1,190	2,870	4,850	9,060	11,900	8,320	3,830	1,620	1,320
9	1,050	1,090	1,110	1,080	2,940	4,830	9,980	12,400	8,240	3,750	1,600	1,310
10	1,050	1,080	1,080	1,160	3,010	5,370	10,900	13,000	8,200	3,580	1,590	1,300
11	1,050	1,080	1,050	1,380	3,080	5,910	10,200	12,400	8,170	3,390	1,620	1,290
12	1,060	1,080	1,070	1,590	3,140	15,500	9,430	11,800	8,030	3,200	1,640	1,290
13	1,060	1,090	1,090	1,420	3,160	13,900	9,360	10,800	7,890	3,090	1,620	1,320
14	1,050	1,080	1,110	1,260	5,060	9,660	9,280	9,740	7,820	2,960	1,580	1,340
15	1,050	1,080	1,120	8,730	6,970	7,960	9,720	9,250	8,420	2,860	1,540	1,340
16	1,050	1,080	1,140	10,200	5,920	7,260	10,200	8,760	8,610	2,760	1,530	1,330
17	1,050	1,090	1,140	24,400	4,880	6,560	10,100	8,360	8,280	2,690	1,520	1,330
18	1,050	1,090	1,200	32,000	5,060	5,860	10,100	7,960	7,960	2,620	1,510	1,330
19	1,040	1,090	1,380	38,400	6,430	5,150	10,000	7,640	7,640	2,480	1,480	1,320
20	1,050	1,120	1,310	13,500	7,040	5,650	10,600	7,320	7,320	2,340	1,460	1,310
21	1,060	1,140	1,240	9,700	7,090	6,150	11,100	7,040	6,980	2,240	1,450	1,300
22	1,070	1,200	1,200	5,600	8,140	10,200	11,400	6,760	6,630	2,150	1,440	1,300
23	1,070	1,090	1,160	4,900	7,520	14,300	11,600	6,430	6,240	2,120	1,450	1,300
24	1,080	1,090	1,120	4,210	6,900	18,300	11,200	6,100	5,850	2,080	1,420	1,290
25	1,090	1,090	1,040	4,050	7,360	19,300	10,800	6,360	5,620	2,050	1,400	1,290
26	1,100	1,200	1,150	3,890	7,820	20,300	9,750	6,630	5,400	2,020	1,380	1,290
27	1,100	1,360	1,200	3,740	8,580	16,900	8,700	7,320	5,240	1,990	1,380	1,280
28	1,100	1,260	1,170	3,580	9,350	13,500	8,170	11,500	5,080	1,960	1,380	1,280
29	1,090	1,200	1,140	3,500	.....	13,800	7,740	10,400	4,400	1,920	1,370	1,280
30	1,030	1,190	1,140	3,430	.....	14,000	7,320	9,550	3,720	1,880	1,370	1,280
31	1,080	.....	1,140	3,220	.....	13,500	.....	8,700	.....	1,840	1,300	.....
1906-7.												
1	1,270	1,220	1,250	4,170	14,640	7,460	.....	11,225	8,470	3,820	2,080	1,580
2	1,270	1,220	1,260	3,690	43,800	7,460	.....	10,675	8,620	3,730	2,040	1,580
3	1,270	1,630	1,280	3,590	38,600	6,760	.....	10,675	8,470	3,630	2,000	1,580
4	1,260	4,230	1,280	4,830	29,200	6,760	.....	10,150	8,320	3,530	1,960	1,580
5	1,260	2,960	1,280	4,700	25,900	7,460	.....	9,975	7,750	3,365	1,880	1,580
6	1,260	2,440	1,280	3,980	22,700	7,460	.....	9,575	7,460	3,340	1,840	1,580
7	1,250	1,920	1,280	3,490	15,600	6,760	.....	9,350	7,180	3,240	1,840	1,580
8	1,250	1,790	1,520	3,200	12,300	6,100	.....	9,350	7,040	3,150	1,800	1,545
9	1,250	1,620	1,760	3,050	10,500	7,460	.....	9,350	6,360	3,060	1,765	1,505
10	1,250	1,540	3,160	3,200	8,170	6,760	.....	9,650	6,230	2,960	1,765	1,470
11	1,240	1,470	4,550	3,060	8,170	6,100	.....	10,850	9,060	2,915	1,765	1,470
12	1,240	1,660	3,990	2,915	7,460	5,470	.....	10,500	7,600	2,825	1,730	1,470
13	1,240	1,440	3,430	2,825	6,760	4,870	.....	9,650	7,460	2,735	1,730	1,449
14	1,240	1,440	2,060	2,690	6,100	4,440	.....	7,180	2,600	1,730	1,449	.....
15	1,240	1,440	1,690	2,735	6,760	4,925	.....	8,910	6,360	2,555	1,690	1,435
16	1,240	1,470	1,970	2,555	7,460	4,980	.....	8,760	5,850	2,555	1,655	1,435
17	1,240	1,500	2,250	2,618	8,170	15,600	.....	8,320	5,340	2,510	1,655	1,449
18	1,230	1,460	2,160	2,510	8,170	90,800	.....	9,200	5,220	2,465	1,655	1,470
19	1,230	1,420	2,080	2,420	7,460	109,300	.....	11,970	5,100	2,420	1,615	1,470
20	1,230	1,400	2,040	2,380	7,460	75,700	.....	10,675	5,100	2,335	1,594	1,470
21	1,230	1,320	2,000	2,335	6,760	47,900	16,800	10,150	4,980	2,295	1,594	1,435
22	1,230	1,380	2,120	2,335	8,910	30,900	16,630	9,200	4,870	2,250	1,580	1,417
23	1,230	1,370	2,250	2,335	8,910	21,200	16,140	8,320	4,870	2,210	1,580	1,405
24	1,230	1,360	5,120	2,880	8,170	13,300	.....	7,890	4,760	2,165	1,580	1,405
25	1,220	1,340	7,980	2,780	9,350	9,650	.....	7,890	4,550	2,165	1,580	1,405
26	1,220	1,320	22,400	2,915	8,170	9,350	.....	7,750	4,440	2,125	1,580	1,405
27	1,220	1,310	15,600	3,240	7,460	9,060	.....	7,890	4,230	2,125	1,580	1,405
28	1,220	1,300	8,980	5,850	6,760	8,760	.....	7,890	4,285	2,125	1,580	1,405
29	1,220	1,280	8,000	6,760	.....	8,470	.....	8,030	4,130	2,125	1,580	1,405
30	1,220	1,270	6,000	6,100	.....	8,320	11,590	8,030	4,130	2,125	1,580	1,405
31	1,220	.....	4,000	7,660	.....	8,170	.....	8,170	.....	2,125	1,580	.....

NOTE.—Discharge interpolated for days when gage was not read.

Discharge estimated Mar. 26 to 31, 1907.

Daily discharge, 1905 to 1907, determined from a rating curve well defined between 995 and 16,000 second-feet. It is defined above this by one float measurement at discharge 91,000 second-feet, gage height 31 feet.

Daily discharge, in second-feet, of North Fork of Feather River at Big Bend, near Oroville, Cal., for 1905-1910—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1907-8.												
1.	1,405	1,820	1,505	3,730	3,010	3,530	4,550	5,540	4,815	2,290	1,030	980
2.	1,417	1,748	1,518	3,480	3,060	3,480	4,285	5,535	4,815	2,280	1,020	980
3.	1,417	1,805	1,505	2,910	3,430	3,340	4,130	5,280	4,760	2,250	1,020	970
4.	1,417	1,635	1,580	2,960	3,340	3,530	4,390	.....	4,180	2,250	1,009	970
5.	1,417	1,562	1,615	2,870	3,290	3,480	4,705	5,040	4,080	2,210	1,009	970
6.	1,417	1,545	2,014	2,690	3,240	2,915	.....	4,815	4,080	2,120	1,000	980
7.	1,435	1,545	4,675	2,360	3,340	2,825	5,040	4,760	4,180	2,080	998	1,006
8.	1,435	1,545	3,780	2,380	3,480	2,825	4,650	.....	4,080	2,080	998	1,006
9.	1,435	1,545	2,965	2,870	3,730	2,825	4,695	4,815	3,980	2,040	994	980
10.	1,470	1,512	3,710	2,650	3,530	2,915	4,925	4,705	3,880	.....	994	980
11.	1,521	1,545	4,500	2,560	3,390	3,010	5,535	4,705	3,980	.....	1,000	970
12.	1,545	1,570	3,055	2,600	3,200	3,010	5,915	4,760	4,080	.....	1,006	970
13.	1,521	1,505	3,172	3,100	3,200	3,195	6,490	4,705	4,080	.....	1,006	970
14.	1,505	1,505	2,940	5,250	2,830	3,290	6,690	.....	.....	.....	1,070	970
15.	1,484	1,488	2,528	4,500	2,830	3,565	6,830	5,410	4,080	.....	1,060	980
16.	1,470	1,505	2,395	4,140	2,740	5,785	7,690	5,505	3,880	.....	1,060	960
17.	1,470	1,545	2,145	3,630	2,740	6,425	4,925	5,160	3,980	.....	1,030	1,040
18.	1,470	1,580	2,060	3,730	2,640	6,190	6,425	5,285	3,880	.....	1,060	1,050
19.	1,470	1,580	2,020	4,280	2,550	6,555	6,165	5,285	3,780	.....	1,050	1,030
20.	1,470	1,570	2,000	5,230	2,400	6,425	6,040	5,535	3,580	.....	1,060	1,006
21.	1,505	1,554	1,940	5,940	2,460	6,165	6,830	5,535	3,580	.....	990	1,006
22.	1,505	1,562	1,900	6,100	2,420	6,100	6,830	5,160	3,480	1,170	980	1,006
23.	1,505	1,578	1,960	5,340	2,560	6,165	6,690	5,280	3,290	1,170	980	980
24.	1,545	1,598	1,980	5,400	2,560	6,000	6,105	5,10	3,105	.....	980	980
25.	1,580	1,598	1,980	4,760	2,460	6,425	6,040	5,160	2,915	.....	980	970
26.	1,655	1,600	4,640	4,290	2,740	6,330	5,980	5,220	2,735	.....	980	970
27.	1,655	1,545	6,235	3,880	2,640	6,285	5,785	5,160	2,465	1,098	980	980
28.	1,655	1,570	5,290	3,630	3,430	4,695	5,535	5,040	.....	1,010	980	980
29.	1,600	1,580	4,980	3,400	3,480	5,345	5,405	4,980	.....	1,020	980	980
30.	1,842	1,538	4,925	3,200	.....	4,925	5,535	5,040	2,380	1,008	980	980
31.	1,820	.....	4,870	2,960	.....	4,705	.....	4,925	.....	1,025	980	.....
1908-9.												
1.	980	1,540	.....	.....	.....	.....	.....	.....	.....	2,695	1,513	1,169
2.	980	1,180	.....	.....	.....	.....	.....	.....	.....	2,650	1,538	1,219
3.	980	1,180	.....	.....	.....	.....	.....	.....	.....	2,575	1,528	1,204
4.	980	1,190	.....	.....	.....	.....	.....	.....	.....	2,660	1,483	1,170
5.	990	1,130	.....	.....	.....	.....	.....	.....	.....	2,465	1,405	1,179
6.	990	1,088	.....	.....	.....	.....	.....	.....	.....	2,373	1,410	1,089
7.	990	1,096	1,580	.....	.....	.....	.....	.....	.....	2,301	1,405	1,129
8.	980	1,096	.....	.....	.....	.....	.....	.....	.....	2,235	1,395	1,092
9.	980	1,088	.....	.....	.....	.....	.....	.....	.....	2,265	1,385	1,080
10.	980	1,088	.....	.....	.....	.....	.....	.....	.....	2,075	1,343	1,139
11.	980	1,088	.....	.....	.....	.....	.....	.....	.....	2,050	1,306	1,142
12.	980	1,096	.....	.....	.....	.....	.....	.....	.....	2,038	1,296	1,124
13.	980	1,096	.....	.....	.....	.....	.....	.....	.....	1,989	1,371	1,239
14.	990	1,088	.....	.....	.....	.....	.....	.....	.....	1,989	1,314	1,184
15.	2,510	1,088	.....	.....	.....	.....	.....	.....	.....	1,984	1,245	1,194
16.	1,830	1,088	.....	.....	.....	.....	.....	.....	.....	1,910	1,210	1,190
17.	1,400	1,096	.....	.....	.....	.....	.....	.....	.....	1,882	1,260	1,199
18.	1,300	1,088	.....	.....	.....	.....	.....	.....	.....	1,778	1,130	1,314
19.	1,220	1,090	.....	.....	.....	.....	.....	.....	.....	1,758	1,174	1,222
20.	1,180	1,182	.....	.....	.....	.....	.....	.....	.....	1,768	1,079	1,224
21.	1,130	1,540	1,175	.....	.....	.....	.....	.....	.....	1,703	1,099	1,170
22.	1,130	2,650	.....	.....	.....	.....	.....	.....	.....	1,637	1,223	1,117
23.	1,100	2,370	1,165	.....	.....	.....	.....	.....	.....	1,647	1,291	1,104
24.	1,100	2,060	1,172	.....	.....	.....	.....	.....	.....	1,632	1,321	1,209
25.	1,100	1,683	1,165	.....	.....	.....	.....	.....	.....	1,552	1,200	1,317
26.	1,088	1,427	1,096	.....	.....	.....	.....	.....	.....	1,587	1,195	1,344
27.	1,088	1,290	1,233	.....	.....	.....	.....	.....	.....	1,507	1,175	1,427
28.	1,085	1,240	1,047	.....	.....	.....	.....	.....	.....	1,527	1,188	1,085
29.	1,040	.....	1,126	.....	.....	.....	.....	.....	.....	1,527	1,208	1,301
30.	1,580	.....	1,100	.....	.....	.....	.....	.....	.....	1,522	1,131	1,328
31.	1,560	.....	1,119	.....	.....	.....	.....	.....	.....	1,527	1,170	.....

NOTE.—Discharge estimated Dec. 29 to 31, 1907.

The daily discharges for 1908-9 were computed and furnished by the Great Western Power Co. Discharges have been interpolated for missing days in computing monthly means.

Daily discharge, in second-feet, of North Fork of Feather River at Big Bend, near Oroville, Cal., for 1905-1910—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909-10.												
1.....	1,389	1,900	3,870	5,910	3,079	6,342	6,813	6,020	2,161	1,295	1,026	957
2.....	1,489	1,575	4,415	4,110	2,759	7,295	7,212	5,527	2,050	1,315	1,033	948
3.....	1,527	1,575	4,115	3,098	2,580	8,000	7,375	5,712	1,984	1,279	1,030	948
4.....	1,566	1,540	3,140	2,785	2,598	8,700	7,888	5,214	1,844	1,279	1,017	948
5.....	1,512	1,385	2,619	2,430	2,605	8,948	6,901	4,818	1,717	1,279	1,011	942
6.....	1,370	1,450	2,635	2,455	2,625	8,850	6,915	4,820	1,705	1,264	1,005	942
7.....	1,237	1,670	2,650	2,732	2,732	8,677	6,942	4,640	1,745	1,256	996	939
8.....	1,468	1,511	6,162	2,642	2,656	8,480	7,113	4,648	1,690	1,249	988	940
9.....	1,191	1,965	12,053	2,393	2,610	8,370	7,352	5,300	1,670	1,219	984	940
10.....	1,390	2,050	8,367	2,437	2,851	8,532	7,540	5,460	1,640	1,204	981	942
11.....	1,327	1,928	6,010	2,290	2,579	8,675	7,957	5,040	1,620	1,189	975	942
12.....	1,257	1,885	4,579	2,192	2,575	8,660	7,270	5,050	1,600	1,175	978	945
13.....	1,290	1,560	4,264	2,250	2,689	8,755	6,950	4,778	1,575	1,176	978	955
14.....	1,189	1,730	3,965	2,275	2,800	8,760	6,740	5,110	1,550	1,161	978	964
15.....	1,355	1,540	3,265	2,422	3,260	8,475	6,597	4,363	1,535	1,161	969	1,053
16.....	1,327	1,505	3,003	2,252	3,065	8,282	6,547	4,072	1,520	1,149	963	1,158
17.....	1,269	1,438	2,850	2,192	2,882	8,180	6,823	3,449	1,505	1,131	957	1,132
18.....	1,246	1,403	2,743	2,100	2,837	8,255	7,352	3,371	1,490	1,125	954	1,124
19.....	1,823	1,977	2,700	2,118	3,125	12,165	7,685	3,419	1,475	1,126	954	1,059
20.....	1,772	1,322	2,499	2,195	3,473	13,473	7,695	3,178	1,465	1,137	954	1,056
21.....	1,640	9,261	2,400	2,163	3,181	14,555	7,670	3,111	1,452	1,138	940	1,044
22.....	1,404	8,920	2,286	2,377	3,108	12,925	7,530	3,016	1,459	1,101	951	1,038
23.....	1,572	7,783	2,160	3,075	3,532	11,848	7,445	3,100	1,444	1,086	951	1,020
24.....	1,511	8,773	2,035	5,165	4,194	10,498	7,465	3,019	1,429	1,071	945	1,015
25.....	1,495	6,708	2,009	6,462	8,485	9,265	7,292	2,899	1,399	1,071	954	1,012
26.....	1,511	4,765	2,025	3,810	8,299	8,307	7,095	2,813	1,369	1,071	966	1,005
27.....	1,500	3,430	1,905	3,734	6,259	7,690	6,625	2,582	1,339	1,071	960	1,011
28.....	1,895	2,897	2,035	3,480	6,138	7,118	6,407	2,384	1,309	1,071	948	998
29.....	1,805	2,790	1,982	3,330	.....	6,730	5,815	2,435	1,309	1,054	943	978
30.....	1,835	2,638	2,285	3,090	.....	6,515	5,707	2,447	1,309	1,040	942	972
31.....	1,754	.....	5,300	3,003	.....	6,555	.....	2,173	.....	1,035	947	.....

Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.
1910.											
1.....	375	1,017	1,350	11.....	1,074	1,245	5,573	21.....	1,014	1,031	1,545
2.....	984	1,011	1,320	12.....	1,169	1,416	4,325	22.....	1,008	1,143	1,530
3.....	987	1,005	3,640	13.....	1,089	1,281	3,400	23.....	1,003	1,494	1,502
4.....	991	1,005	3,460	14.....	1,014	1,173	2,860	24.....	1,002	2,184	1,475
5.....	996	1,002	2,195	15.....	999	1,125	2,452	25.....	1,005	2,397	1,475
6.....	996	1,005	1,890	16.....	993	1,098	2,115	26.....	1,011	1,839	1,406
7.....	984	1,011	1,690	17.....	990	1,077	1,861	27.....	1,002	1,584	1,330
8.....	984	1,113	2,335	18.....	987	1,206	1,795	28.....	1,002	1,494	1,240
9.....	975	1,177	4,510	19.....	990	1,221	1,675	29.....	1,005	1,407	1,225
10.....	975	1,149	5,045	20.....	1,005	1,155	1,590	30.....	1,004	1,344	1,217
								31.....	1,017	.....	1,320

NOTE.—Daily discharge for 1910 furnished by the Great Western Power Co.

Monthly discharge of North Fork of Feather River at Big Bend, near Oroville, Cal., for 1905-1910.

[Drainage area, 1,940 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.							
July 13-31.....	1,440	1,120	1,280	0.660	0.47	48,200	A.
August.....	1,160	1,020	1,080	.557	.64	66,400	A.
September.....	1,190	1,010	1,090	.531	.59	61,300	A.
1905-6.							
October.....	1,110	1,030	1,060	0.546	0.63	65,200	A.
November.....	1,320	1,080	1,120	.577	.64	66,600	A.
December.....	1,350	1,040	1,150	.593	.68	70,700	A.
January.....	38,400	1,120	6,490	3.35	3.86	399,000	A.
February.....	9,350	2,870	5,150	2.65	2.76	286,000	A.
March.....	20,300	4,830	9,680	4.99	5.75	595,000	A.
April.....	13,200	7,320	9,910	5.11	5.70	590,000	A.
May.....	13,000	6,100	9,430	4.86	5.60	580,000	A.
June.....	11,800	3,720	7,570	3.90	4.35	450,000	A.
July.....	4,600	1,840	2,980	1.54	1.78	183,000	A.
August.....	1,800	1,360	1,540	.794	.92	94,700	A.
September.....	1,350	1,280	1,310	.675	.75	78,000	A.
The year.....	38,400	1,030	4,780	2.467	33.42	3,460,000	
1906-7.							
October.....	1,270	1,220	1,240	0.639	0.74	76,200	A.
November.....	4,230	1,220	1,610	.830	.93	95,800	A.
December.....	22,400	1,250	4,070	2.10	2.42	250,000	A.
January.....	7,660	2,340	3,510	1.81	2.09	216,000	A.
February.....	43,800	6,100	12,900	6.65	6.92	716,000	A.
March.....	109,000	4,440	18,300	9.43	10.87	1,130,000	B.
April.....			13,800	7.11	7.93	821,000	B.
May.....	12,000	7,750	9,330	4.81	5.54	574,000	A.
June.....	9,060	4,130	6,250	3.22	3.59	372,000	A.
July.....	3,830	2,120	2,700	1.39	1.60	166,000	A.
August.....	2,080	1,580	1,720	.887	1.02	106,000	A.
September.....	1,580	1,400	1,470	.758	.85	87,500	A.
The year.....			6,410	3.30	44.50	4,610,000	
1907-8.							
October.....	1,840	1,400	1,520	0.784	0.90	93,500	A.
November.....	1,820	1,490	1,580	.814	.91	94,000	A.
December.....	6,240	1,500	2,980	1.64	1.78	183,000	A.
January.....	6,100	2,360	3,770	1.94	2.24	232,000	A.
February.....	3,730	2,400	2,990	1.64	1.66	172,000	A.
March.....	6,560	2,820	4,590	2.37	2.73	282,000	A.
April.....	7,690	4,130	5,660	2.92	3.26	337,000	A.
May.....	5,540	4,705	5,130	2.64	3.04	315,000	A.
June.....	4,820	2,380	3,700	1.91	2.13	220,000	A.
July.....	2,290	1,010	1,590	.820	.95	97,800	A.
August.....	1,070	980	1,010	.521	.60	62,100	A.
September.....	1,050	960	987	.509	.57	58,700	A.
The year.....	7,690	960	2,960	1.53	20.77	2,150,000	
1908-9.							
October.....	2,510	980	1,190	0.613	0.71	73,200	A.
November.....	2,650	1,060	1,310	.675	.75	78,000	A.
December.....	1,580	1,050	1,300	.670	.77	79,900	A.
January.....	2,700	1,520	1,820	.938	1.08	112,000	
August.....	1,510	1,060	1,290	.665	.77	79,300	
September.....	1,430	1,080	1,200	.619	.69	71,400	

α Estimated.

*Monthly discharge of North Fork of Feather River at Big Bend, near Oroville, Cal., for 1905-1910—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.	
1909-10.							
October.....	1,900	1,190	1,480	0.763	0.88	91,000	
November.....	9,260	1,380	3,230	1.66	1.85	192,000	
December.....	12,100	1,900	3,620	1.87	2.16	223,000	
January.....	6,462	2,100	2,990	1.54	1.78	184,000	
February.....	8,485	2,575	3,560	1.84	1.92	198,000	
March.....	14,555	6,342	9,000	4.64	5.35	553,000	
April.....	7,957	5,707	7,060	3.64	4.06	420,000	
May.....	6,020	2,173	4,000	2.06	2.38	246,000	
June.....	2,161	1,309	1,580	.814	.91	94,000	
July.....	1,315	1,035	1,160	.598	.69	71,300	
August.....	1,033	940	973	.502	.58	59,800	
September.....	1,158	939	998	.514	.57	59,400	
The year.....	14,555	939	3,300	1.70	23.13	2,390,000	
1910.							
October.....	1,169	975	1,010	0.521	0.60	62,100	
November.....	2,397	1,002	1,280	.660	.74	76,200	
December.....	5,573	1,217	2,240	1.15	1.33	138,000	

NOTE.—Accuracy values for 1909 and 1910 are not published, as the data on which these estimates were based was not furnished the United States Geological Survey.

#### FEATHER RIVER AT OROVILLE, CAL.

This station, which is located about 6 miles below the junction of North and Middle forks and about 30 miles above the mouth of Yuba River, which enters at Marysville, was originally established January 1, 1902, at the Oroville highway bridge, to obtain data for use in studies of flood and reclamation problems in Sacramento Valley. No other important tributaries enter near the station.

No diversions are made immediately above the station. All acquired water rights are probably for power development.

The United States Weather Bureau gage, located at the bridge, was read from 1902 to 1905. All gage heights for those years published herewith refer to a datum 2.0 feet lower than that used by the United States Weather Bureau in order to avoid minus readings. Discharge measurements were made from a boat about 500 feet above the bridge.

In December, 1905, the station was moved about 1,000 feet above the bridge, a staff gage installed on the left bank, and a cable erected near the gage. The bridge gage was read from January 1 to February 28, 1906, and from September 5 to December 31, 1906; the cable gage from March 1 to July 24, 1906. No readings were made from July 25 to September 4, 1906. All gage heights for 1906 were reduced to the datum of the cable gage by means of a table of comparative readings on the two gages. The station was completely destroyed by the flood of March, 1907, which took away the gage

and the cable. From March 19 to April 7, 1907, the United States Weather Bureau gage on the bridge was read and the readings corrected to the datum of the cable gage.

A new staff gage, referred to the old datum, was put in on April 8, 1907, 1,000 feet above the highway bridge and read until December 31, 1910. A new cable was placed across the river October 10, 1907, about 125 feet below the old one and 20 feet below the new gage.

Beginning January 1, 1911 the United States weather gage has been used, the station at the cable having been discontinued.

It was hoped that when the station on the Feather River was established at the new location above the Oroville Bridge that a fairly permanent section was found, but measurements made during the past three years show changes in the gaging section or in the stream channel below the gaging section which have made it impossible to obtain a permanent rating curve. The flood of March, 1907, brought down an immense amount of heavy débris and deposited it at a point about a quarter of a mile below the gaging section. This resulted in much higher gage heights during the following months for the same discharge than during the previous year. This débris deposit gradually moved out and the relation of gage height to discharge at the gage section began to assume conditions which existed prior to the March, 1907, flood. The construction of the Western Pacific Railway through the canyon of the Feather River resulted in the wasting of large amounts of heavy débris into the river channel. Undoubtedly this débris is constantly being brought down the river during periods of flood discharge.

Conditions at this station differ from those on the Yuba River station. The channel at this station is fairly permanent except during flood stages, whereas that of Yuba River is constantly deepening, and the records show increase in discharge with the same gage height.

At low water the stream is about 280 feet wide and from 15 to 20 feet deep, and the current is sluggish.

There are many uncertainties in the records on account of the washing out of gages, unreliable observers, and shifting channel conditions. The record is also more or less affected by power regulation above the station. Periods of unreliable record, as nearly as can be determined, are covered by suitable footnotes in the following tables.

The maximum recorded stage is a reading of 30.2 feet at the bridge gage, March 19, 1907. This corresponds to a reading of 39.3 feet on the gage at the cable and to a discharge of 187,000 second-feet. The maximum stage at the cable was estimated from high-water mark as 38.5 feet, giving 182,000 second-feet. The lowest recorded discharge is 940 second-feet, which occurred October 25, 1910.

## Discharge measurements of Feather River at Oroville, Cal., in 1902-1912.

Date.	Hydrographer.	Gage height.	Discharge.	Date.	Hydrographer.	Gage height.	Discharge.
		<i>Feet.</i>	<i>Sec.-ft.</i>			<i>Feet.</i>	<i>Sec.-ft.</i>
1902.				1906.			
Jan. 29	S. G. Bennett.....	1.85	1,960	July 26	R. S. Hawley.....	3.10	2,860
Mar. 1 <sup>a</sup>	do.....	8.70	15,200	Sept. 5	do.....	1.90	1,760
May 7	do.....	8.75	15,500	Oct. 12	do.....	1.73	1,620
Sept. 4	C. A. Miller.....	.96	1,380	Nov. 1	do.....	1.73	1,610
10	do.....	.92	1,390	Dec. 10	do.....	3.05	3,270
Dec. 18	S. G. Bennett.....	3.65	3,300				
				1907.			
1903.				Feb. 9	R. S. Hawley.....	12.15	19,900
Jan. 27 <sup>a</sup>	S. G. Bennett.....	12.20	31,300	22	do.....	10.50	16,900
May 8	do.....	8.07	12,000	Mar. 8	do.....	9.18	13,400
Nov. 3	do.....	1.48	1,290	Oct. 11	W. A. Lamb.....	6.00	1,630
Dec. 19	do.....	4.80	5,760	24	do.....	6.02	1,650
				1908.			
1904.				Jan. 19	W. A. Lamb.....	8.73	8,400
Jan. 20	W. B. Newhall....	3.42	3,400	Feb. 2	do.....	8.30	7,340
Feb. 19	S. G. Bennett.....	10.70	18,700	21	do.....	7.02	3,810
Mar. 31 <sup>a</sup>	Murphy, Bennett, and Clapp.....	13.40	34,000	Apr. 6	do.....	8.62	7,980
May 30	Watson and Tarish.	9.20	12,800	13	do.....	9.80	11,700
June 8	C. W. McConaughy.	7.60	9,320	21	do.....	10.10	13,000
10	William Watson....	7.20	9,190	Sept. 23	W. V. Hardy.....	4.85	1,180 <sup>d</sup>
18	McConaughy and Tarish.....	5.70	6,370	Dec. 17	W. F. Martin.....	5.31	1,790
23	McConaughy and Carr.....	4.90	5,270				
30	C. W. McConaughy.	4.00	4,130	1909.			
July 15	do.....	2.95	2,860	Jan. 28	W. F. Martin.....	11.14	18,800
Aug. 12	O. W. Peterson....	1.90	1,940	May 26	do.....	9.41	10,700
Sept. 25	do.....	4.65	4,680	July 26	W. V. Hardy.....	4.95	2,190
Nov. 1	do.....	2.75	2,520	Aug. 7	W. F. Martin.....	4.58	1,890
				Sept. 4	W. V. Hardy.....	4.14	1,630
				Nov. 13	do.....	5.25	2,740
				27	do.....	8.38	8,080
1905.				1910.			
Feb. 11	O. W. Peterson....	6.45	7,620	Jan. 22	J. E. Stewart.....	6.87	5,260
18	do.....	6.10	6,910	Mar. 16	do.....	10.12	15,400
May 16	W. B. Clapp.....	6.65	8,510	May 25	do.....	6.78	4,740
June 26	O. W. Peterson....	2.75	2,740	July 5	do.....	4.46	2,080
Aug. 1	Peterson and Lee.	1.28	1,500	Aug. 5	do.....	3.52	1,150
Sept. 2	C. H. Lee.....	.86	1,240	Oct. 29	do.....	3.79	1,410
Oct. 7	Hawley and Lee....	.90	1,210	Dec. 16	do.....	5.66	3,500
Nov. 17	R. S. Hawley.....	.92	1,210				
1906. <sup>b</sup>				1911. <sup>c</sup>			
Feb. 16	R. S. Hawley.....	9.00	11,500	Jan. 26	J. E. Stewart.....	6.15	10,800
28	do.....	11.35	19,600	30	do.....	11.50	57,300
Mar. 15	do.....	10.90	18,400	31	do.....	11.72	58,900
22	do.....	12.72	23,000	30	do.....	12.80	67,400
25	do.....	17.00	48,600	Mar. 24	do.....	7.68	20,700
Apr. 11	W. C. Sawyer.....	11.25	18,400	May 26	do.....	7.52	18,200
16	do.....	11.14	18,100	July 11	do.....	4.01	4,730
25	do.....	10.61	17,000	Oct. 6	do.....	1.70	1,960
25	do.....	10.42	16,600				
May 2	do.....	10.88	18,800	1912.			
11	do.....	11.95	22,100	Mar. 6	J. E. Stewart.....	5.72	9,060
17	do.....	9.30	12,600	May 16	do.....	5.21	7,560
July 6	R. S. Hawley.....	6.25	7,190	July 16	Lesley Lee.....	.80	1,100

<sup>a</sup> Made by floats.<sup>b</sup> Beginning with 1906, the gage heights refer to the staff gage at the cable.<sup>c</sup> Gage heights beginning Jan. 1, 1911, refer to U. S. Weather Bureau gage.

Daily gage height, in feet, of Feather River at Oroville, Cal., for 1902-1912.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1902. <sup>a</sup>												
1				2.0	2.0	10.75	6.5	8.6	7.5	2.9	1.4	1.0
2				2.5	2.0	10.5	7.0	7.5	7.0	3.0	1.4	1.0
3				2.5	2.0	9.5	8.0	7.2	6.5	3.0	1.4	1.0
4				2.0	2.0	8.75	10.0	7.1	6.3	3.0	1.35	.9
5				2.0	3.0	8.5	13.0	7.0	6.2	3.0	1.3	.9
6				2.0	3.5	8.35	14.0	8.0	6.2	2.9	1.3	.9
7				2.0	9.0	8.1	14.0	8.5	6.0	2.7	1.3	.9
8				2.0	10.25	8.25	12.25	8.4	6.0	2.5	1.3	.9
9				2.0	11.25	8.75	11.2	8.4	5.9	2.5	1.3	.9
10				2.0	10.5	8.45	10.6	8.4	5.8	2.4	1.3	.9
11				2.0	9.75	8.45	9.2	8.3	5.8	2.4	1.3	.9
12				2.0	9.8	7.45	8.9	8.7	5.7	2.3	1.3	.8
13				2.0	8.25	6.9	8.7	9.0	5.5	2.2	1.3	.8
14				2.0	7.25	6.65	8.6	8.8	5.4	2.2	1.3	.8
15				2.0	11.75	6.45	9.9	8.5	4.7	2.1	1.3	.8
16				2.0	11.25	6.4	11.5	8.4	5.0	2.0	1.3	.8
17				2.0	12.5	6.5	11.0	8.3	4.8	1.9	1.3	.8
18				2.0	10.25	6.7	10.5	7.8	4.5	1.9	1.3	.8
19				2.0	9.0	6.6	9.5	7.5	4.3	1.8	1.3	.8
20				2.0	8.5	6.8	9.4	7.3	4.3	1.8	1.3	.8
21				2.0	9.0	6.8	9.8	7.0	4.1	1.7	1.3	.8
22				2.0	9.75	6.5	9.0	6.9	4.1	1.8	1.2	.8
23				2.0	9.5	6.5	9.5	6.8	4.0	1.7	1.2	.8
24				2.0	13.5	6.4	8.2	6.8	4.0	1.7	1.2	.8
25				2.0	13.0	6.3	7.8	7.5	3.8	1.6	1.1	.8
26				2.0	13.75	6.2	7.5	8.0	3.5	1.6	1.1	.8
27				2.0	13.75	6.1	7.4	7.9	3.4	1.6	1.1	.8
28				2.0	12.25	6.0	7.3	7.8	3.3	1.5	1.1	.8
29				2.0	6.0	6.0	8.0	7.5	3.2	1.5	1.0	.8
30				2.0	5.9	5.9	7.8	7.3	3.0	1.5	1.0	.8
31				2.0	5.9	5.9	7.0	7.0	2.8	1.4	1.0	.8
1902-3. <sup>b</sup>												
1	0.8	1.2	1.3	4.0	6.9	4.0	14.6	.....	5.75	2.85	1.9	1.5
2	.8	1.2	1.5	3.8	6.3	4.0	13.5	.....	5.6	2.75	1.9	1.5
3	.8	1.2	1.8	3.5	6.9	5.0	12.8	.....	5.35	2.65	1.9	1.5
4	.8	1.2	2.0	3.5	6.5	4.5	11.5	.....	5.1	2.6	1.9	1.5
5	.8	1.2	2.6	3.6	6.0	4.5	10.8	.....	5.0	2.55	1.9	1.4
6	.8	1.4	3.0	3.8	5.0	4.5	10.2	.....	4.9	2.45	1.8	1.4
7	.8	2.0	3.8	3.8	5.2	4.5	10.2	8.4	4.85	2.45	1.8	1.4
8	.8	3.3	3.8	3.9	5.5	4.5	10.2	8.15	4.75	2.45	1.8	1.4
9	.8	3.9	4.2	4.0	5.0	4.5	10.2	8.1	4.65	2.45	1.8	1.4
10	.8	5.5	7.8	4.0	4.8	4.5	10.2	8.05	4.55	2.45	1.8	1.4
11	.8	5.3	10.0	3.9	4.8	4.5	10.2	7.95	4.45	2.45	1.8	1.4
12	.8	3.8	9.0	3.7	4.8	4.5	10.2	8.05	4.35	2.35	1.7	1.4
13	.8	3.3	8.5	3.5	4.6	6.25	10.2	7.85	4.45	2.3	1.7	1.4
14	.8	3.5	6.3	3.5	4.6	8.2	10.2	7.65	3.95	2.25	1.7	1.4
15	.8	3.4	5.2	3.3	4.3	7.2	.....	7.35	3.85	2.2	1.7	1.4
16	.8	3.4	4.5	3.3	4.3	7.1	.....	7.5	3.85	2.2	1.7	1.4
17	.8	4.0	4.0	3.3	4.0	6.0	.....	6.95	3.85	2.2	1.7	1.5
18	.8	5.5	3.5	3.1	4.0	6.0	.....	6.75	3.75	2.2	1.6	1.5
19	.8	6.5	3.3	3.1	4.0	5.8	.....	6.45	3.55	2.2	1.6	1.5
20	.8	5.5	3.3	3.0	3.8	5.5	.....	6.1	3.45	2.1	1.6	1.5
21	1.3	4.5	3.2	3.0	3.8	5.5	.....	6.05	3.4	2.1	1.6	1.4
22	1.8	3.2	3.1	6.15	3.8	5.4	.....	6.05	3.3	2.1	1.6	1.4
23	1.9	3.1	3.1	7.05	4.0	6.0	.....	5.95	3.25	2.1	1.6	1.4
24	3.35	3.1	3.0	9.1	4.0	6.0	.....	5.8	3.15	2.05	1.6	1.4
25	3.35	2.9	3.0	12.5	4.0	5.5	.....	5.55	3.05	2.0	1.6	1.4
26	1.2	2.5	4.0	11.25	4.0	6.2	.....	5.45	2.95	2.0	1.6	1.4
27	1.2	2.1	11.0	12.25	4.0	7.7	.....	5.45	2.9	2.0	1.6	1.4
28	1.2	1.9	8.0	9.25	4.0	9.1	.....	5.45	2.95	2.0	1.6	1.4
29	1.2	1.7	7.2	7.85	.....	12.0	.....	5.5	3.05	2.0	1.6	1.4
30	1.2	1.5	5.0	7.9	.....	20.25	.....	5.55	2.95	1.95	1.6	1.5
31	1.2	.....	4.5	7.2	.....	17.15	.....	5.65	.....	1.9	1.6	.....

<sup>a</sup> Gage heights for Jan. 1, Jan. 4 to Feb. 4, 1902, are unreliable. The river stage was probably below the zero of the Weather Bureau gage. (See description.) The observer recorded gage heights to the nearest half foot until Mar. 1, 1902. Gage heights Jan. 1 to Mar. 1 have since been adjusted, but the revised values are only approximate.

<sup>b</sup> Gage washed out Apr. 14, 1903, New gage set May 7, 1903, at presumably the same datum

Daily gage height, in feet, of Feather River at Oroville, Cal., for 1902-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1903-4. <sup>a</sup>												
1.	1.6	1.5	4.5	4.3	3.0	11.65	12.35	9.35	8.8	3.95	-----	1.8
2.	1.6	1.5	4.4	4.6	3.1	11.95	11.95	9.25	8.65	3.85	-----	1.8
3.	1.6	1.5	4.4	4.0	3.05	12.15	12.0	9.25	8.65	3.8	-----	1.75
4.	1.6	1.65	4.3	3.75	3.1	13.05	11.9	9.5	8.55	3.85	-----	1.7
5.	1.6	2.1	4.3	3.3	3.85	12.55	11.65	9.9	8.25	3.75	-----	1.7
6.	1.6	1.9	4.05	3.2	3.65	12.0	11.8	9.95	8.1	3.65	-----	1.7
7.	1.6	1.9	3.7	3.1	3.45	12.05	11.75	10.25	7.9	3.6	2.1	1.6
8.	1.6	5.2	3.6	3.0	3.4	15.35	11.55	10.45	7.65	3.45	2.05	1.6
9.	1.8	7.3	3.55	3.0	3.3	14.7	11.75	10.55	7.4	3.36	2.0	1.5
10.	2.45	9.85	3.45	3.1	3.2	15.65	11.9	10.75	7.95	3.3	2.1	1.5
11.	2.35	11.5	3.35	3.45	3.25	14.3	12.45	11.25	6.9	3.2	1.95	1.5
12.	2.05	13.85	3.25	3.45	9.0	12.35	12.75	11.55	6.75	3.15	1.9	1.5
13.	1.9	17.35	3.15	3.3	7.15	11.95	13.2	11.8	6.55	3.05	2.0	1.5
14.	1.75	19.25	3.0	3.25	5.05	11.85	14.3	11.65	6.4	3.0	2.0	1.4
15.	1.65	16.8	3.2	3.1	11.65	12.2	14.2	11.65	6.25	3.1	2.0	1.45
16.	1.65	12.3	3.6	3.2	20.35	11.75	13.3	11.3	6.15	3.0	1.9	1.4
17.	1.6	6.65	7.1	3.45	16.75	15.8	12.7	11.2	5.95	3.0	1.9	1.4
18.	1.6	5.0	5.2	3.75	11.85	20.45	11.9	11.05	5.75	2.95	1.8	1.35
19.	1.6	6.15	4.85	3.8	10.45	19.75	12.5	10.4	5.5	2.8	1.85	1.4
20.	1.6	14.9	4.6	3.45	9.55	19.15	11.95	10.25	5.35	2.75	1.8	1.5
21.	1.6	19.1	4.45	3.3	9.65	16.7	11.3	10.0	5.25	2.7	1.8	1.6
22.	1.5	14.0	4.3	3.45	17.8	14.7	10.9	10.75	5.15	2.65	1.8	2.0
23.	1.5	11.3	4.0	3.45	16.4	13.55	10.4	10.85	4.95	2.6	1.8	4.2
24.	1.5	8.5	3.9	3.35	21.5	12.8	10.3	10.6	4.75	-----	1.8	4.8
25.	1.5	5.95	3.8	3.25	18.7	12.0	10.15	10.55	4.55	-----	1.9	4.7
26.	1.5	4.5	3.6	3.15	17.15	11.65	10.05	10.7	4.45	-----	1.9	4.05
27.	1.5	4.05	3.55	3.1	16.05	11.5	9.95	9.65	4.25	-----	1.95	3.8
28.	1.5	4.8	3.45	3.0	13.9	13.75	9.95	9.5	4.05	-----	1.9	2.8
29.	1.5	4.6	3.35	3.0	12.55	16.7	9.7	9.05	4.0	-----	1.8	2.55
30.	1.5	4.5	3.2	2.9	-----	15.1	9.5	9.0	4.05	-----	1.8	2.2
31.	1.5	-----	3.55	2.95	-----	13.4	-----	8.9	-----	-----	1.8	-----
1904-5.												
1.	2.15	2.7	3.8	10.0	9.5	6.9	8.3	7.15	5.4	2.1	1.3	0.95
2.	2.1	3.15	3.5	8.5	11.3	6.9	8.05	7.05	5.25	2.1	1.25	.9
3.	2.05	2.95	3.4	7.4	10.25	6.95	8.15	6.95	5.2	2.1	1.25	.9
4.	2.0	2.8	3.2	6.65	9.05	7.5	8.1	6.85	5.2	2.05	1.2	.9
5.	1.9	2.7	2.9	5.8	8.9	7.75	8.05	6.75	5.15	2.0	1.15	.9
6.	1.9	2.7	2.65	5.5	8.95	7.4	8.0	6.55	5.0	2.0	1.15	.95
7.	2.05	2.6	2.6	5.5	7.85	7.0	8.0	6.45	4.95	1.95	1.15	.95
8.	2.3	2.5	2.6	5.1	7.4	6.8	8.05	6.35	4.95	1.9	1.1	1.0
9.	4.2	2.4	2.4	4.5	6.95	6.75	8.0	6.25	4.9	1.9	1.1	1.0
10.	7.8	2.3	3.35	4.2	6.7	6.6	7.9	6.15	4.8	1.85	1.05	1.0
11.	12.25	2.5	3.35	3.4	6.5	6.7	7.8	6.1	4.7	1.8	1.05	1.0
12.	7.0	2.8	3.3	3.3	6.25	7.85	7.7	6.0	4.6	1.8	1.05	.95
13.	5.3	2.7	3.1	3.2	5.9	10.25	7.5	5.85	4.45	1.75	1.05	.95
14.	4.4	2.6	3.05	10.15	5.6	9.95	7.5	5.9	4.2	1.75	1.0	.9
15.	4.4	2.8	2.95	10.25	5.4	9.45	7.5	6.15	4.1	1.7	1.0	.9
16.	4.5	3.4	2.8	7.65	5.4	8.8	7.4	6.45	3.9	1.7	1.0	.9
17.	4.2	2.95	2.7	5.6	6.35	8.4	7.4	6.6	3.8	1.65	1.05	.85
18.	3.95	2.9	2.55	5.5	6.35	8.9	7.45	6.5	3.7	1.65	1.05	.85
19.	3.9	2.9	2.55	7.4	6.1	12.5	7.55	6.45	3.6	1.6	1.05	.85
20.	4.05	2.7	2.7	6.65	7.8	11.35	7.35	6.4	3.45	1.6	1.1	.9
21.	3.45	2.6	2.8	7.35	8.25	11.35	6.95	6.4	3.2	1.6	1.1	.9
22.	2.8	2.7	3.05	11.8	7.75	10.95	6.7	6.3	3.15	1.55	1.1	.9
23.	2.7	2.6	3.85	11.95	7.4	10.8	6.8	6.3	3.05	1.5	1.2	.95
24.	2.7	2.5	4.7	10.5	7.3	10.7	6.95	6.3	3.0	1.5	1.2	.95
25.	2.6	2.4	4.5	9.8	7.2	9.95	7.15	6.25	2.9	1.5	1.1	.9
26.	2.5	2.4	4.1	8.65	7.1	9.3	7.3	6.2	2.8	1.45	1.0	.9
27.	2.5	2.7	3.9	7.9	7.1	9.05	7.45	-----	2.6	1.45	1.0	.9
28.	2.25	3.1	3.6	7.45	7.0	9.5	7.5	6.0	2.5	1.4	1.0	1.7
29.	2.25	3.2	3.25	7.1	-----	10.65	7.4	5.95	2.4	1.4	.95	1.3
30.	2.35	3.3	17.7	6.85	-----	10.05	7.3	5.85	2.3	1.35	1.0	1.0
31.	2.5	-----	12.8	6.75	-----	8.95	-----	5.65	-----	1.35	1.0	-----

<sup>a</sup> July 24 to Aug. 6, 1904, gage not read. New gage put in Aug. 11, 1904.

Daily gage height, in feet, of Feather River at Oroville, Cal., for 1902-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1905-6. <sup>a</sup>												
1.....	1.0	1.0	1.4	0.95	5.45	10.4	14.7	10.65	10.7	6.1	.....	.....
2.....	1.0	1.0	1.35	.95	5.0	9.5	13.3	10.95	10.35	6.0	.....	.....
3.....	.95	1.0	1.2	.9	4.7	9.5	13.1	11.85	11.1	6.8	.....	.....
4.....	.95	1.0	1.15	.95	4.7	9.4	12.6	11.5	13.0	6.55	.....	.....
5.....	.85	.95	1.1	.85	4.75	9.6	12.1	12.0	11.7	6.45	.....	1.9
6.....	1.0	.95	1.0	.85	5.2	8.4	12.2	12.05	11.3	6.65	.....	1.9
7.....	1.0	.95	1.0	.85	5.3	8.3	10.35	12.2	10.6	6.55	.....	1.9
8.....	1.0	.95	.95	.85	5.35	8.3	10.15	12.05	9.6	6.4	.....	1.9
9.....	1.1	.9	.95	.9	5.45	8.15	10.15	12.1	10.45	6.3	.....	1.85
10.....	1.05	.9	.95	1.0	5.6	8.1	11.4	12.05	9.95	6.1	.....	1.85
11.....	1.05	.85	.95	1.3	5.65	8.3	11.1	11.7	10.25	6.1	.....	1.85
12.....	1.0	.85	1.0	4.3	5.75	8.4	11.4	11.45	10.3	5.6	.....	1.85
13.....	1.0	.85	1.0	8.2	5.85	11.2	10.75	10.75	11.1	5.45	.....	1.85
14.....	.95	.85	1.1	9.45	8.5	10.3	10.85	10.25	10.8	5.35	.....	1.9
15.....	.95	.9	1.2	9.35	9.9	10.85	11.1	11.55	9.75	5.6	.....	1.9
16.....	.95	.9	1.15	18.1	9.1	10.4	11.1	10.35	9.55	5.8	.....	1.9
17.....	.95	.9	.....	13.4	8.35	9.6	11.15	9.45	10.5	5.9	.....	1.9
18.....	.95	.9	.....	24.9	10.65	9.55	11.1	9.9	9.8	4.0	.....	1.9
19.....	1.0	.9	.....	21.7	11.4	9.4	11.15	9.4	9.6	4.2	.....	1.9
20.....	1.0	1.0	.....	14.75	11.0	11.2	11.45	9.05	9.25	4.5	.....	1.85
21.....	1.0	1.4	.....	12.2	11.05	11.3	11.4	9.4	9.75	4.5	.....	1.8
22.....	1.0	1.3	.....	10.1	11.15	11.35	11.75	8.65	8.75	4.65	.....	1.8
23.....	1.0	1.3	.....	8.9	10.9	13.0	12.05	8.65	8.7	4.8	.....	1.8
24.....	1.0	1.25	1.1	8.1	10.65	17.1	11.75	8.45	7.85	4.8	.....	1.8
25.....	.95	1.2	1.15	7.4	10.9	17.1	11.0	9.0	7.8	.....	.....	1.85
26.....	.95	1.2	1.15	7.0	10.55	17.95	10.6	12.1	7.7	.....	.....	1.8
27.....	.95	1.1	1.2	6.2	11.2	15.55	10.1	12.25	7.6	.....	.....	1.8
28.....	.95	1.1	1.2	6.25	11.6	14.75	10.25	12.85	7.1	.....	.....	1.8
29.....	1.0	1.3	1.3	6.2	.....	13.6	9.95	11.7	6.9	.....	.....	1.8
30.....	1.0	1.4	1.35	6.2	.....	15.8	10.0	11.0	6.75	.....	.....	1.8
31.....	1.0	.....	.....	6.0	.....	17.65	.....	.....	.....	.....	.....	.....
1906-7. <sup>b</sup>												
1.....	1.8	1.8	1.9	6.2	11.5	9.0	13.0	12.8	11.3	8.5	7.0	6.0
2.....	1.8	1.8	1.9	5.8	17.5	9.55	13.0	12.7	11.0	8.4	7.0	6.0
3.....	1.8	2.5	1.9	5.65	22.1	10.75	13.25	12.7	10.6	8.3	7.0	6.0
4.....	1.8	6.95	1.9	9.0	19.0	11.4	13.0	12.6	10.5	8.2	6.8	6.1
5.....	1.8	5.25	1.9	7.0	17.5	12.5	13.0	13.0	10.7	8.2	6.7	6.1
6.....	1.8	3.5	1.9	6.0	15.5	10.1	12.9	12.9	10.7	8.1	6.6	6.1
7.....	1.8	2.5	1.9	7.5	14.0	9.4	12.9	12.8	10.7	8.1	6.6	6.1
8.....	1.8	2.0	.....	6.0	12.8	8.0	13.5	12.8	10.8	8.1	6.6	6.1
9.....	1.8	2.0	4.7	5.7	11.8	8.4	13.3	12.7	10.8	8.1	6.6	6.5
10.....	1.8	2.0	6.65	5.3	11.0	9.45	13.2	12.6	11.0	8.1	6.5	6.3
11.....	1.8	2.0	9.85	6.8	10.0	9.1	13.2	12.6	11.0	8.0	6.5	6.2
12.....	1.8	2.0	6.65	6.2	9.0	9.0	13.4	12.4	11.1	8.0	6.5	6.2
13.....	1.8	2.0	5.65	5.8	7.8	8.35	13.6	12.1	13.0	7.9	6.5	6.2
14.....	1.8	2.0	5.25	5.65	7.5	7.95	13.7	12.0	12.2	7.9	6.5	6.2
15.....	1.8	2.0	4.15	9.0	7.3	7.6	14.0	11.9	11.8	7.8	6.5	6.1
16.....	1.8	2.0	4.15	7.0	7.0	7.5	14.5	11.6	11.0	7.8	6.5	6.1
17.....	1.8	2.0	3.3	6.0	10.0	14.7	15.7	11.5	11.1	7.8	6.4	6.1
18.....	1.8	2.0	3.3	5.85	9.5	32.4	15.6	11.5	11.0	7.8	6.4	6.1
19.....	1.8	2.0	3.05	5.0	9.0	39.3	16.0	12.0	10.6	7.8	6.4	6.1
20.....	1.8	2.0	2.95	4.7	8.6	28.65	15.3	13.5	10.2	7.7	6.4	6.1
21.....	1.8	2.0	2.85	4.3	8.3	24.3	14.6	13.5	9.8	7.6	6.4	6.1
22.....	1.8	2.0	3.4	4.0	8.3	19.95	14.1	13.4	9.85	7.5	6.3	6.1
23.....	1.8	2.0	4.05	4.2	10.6	18.75	13.8	13.2	9.7	7.5	6.3	6.1
24.....	.....	2.0	4.05	4.35	9.3	15.65	13.3	13.0	9.6	7.5	6.2	6.1
25.....	1.8	.....	10.95	5.0	10.5	14.55	13.05	12.5	9.5	7.4	6.2	6.1
26.....	.....	1.95	16.25	6.0	10.05	13.85	13.0	12.0	9.4	7.4	6.2	6.1
27.....	1.8	1.95	12.45	8.0	9.2	13.35	13.0	12.1	9.2	7.3	6.2	6.1
28.....	1.8	1.95	9.55	9.3	8.6	13.15	13.0	12.1	9.1	7.5	6.2	6.1
29.....	1.8	1.95	7.95	9.0	.....	13.15	13.0	12.0	9.0	7.2	6.2	6.1
30.....	.....	1.9	7.4	8.5	.....	13.0	12.90	11.8	8.8	7.2	6.1	6.1
31.....	1.8	.....	7.2	9.0	.....	13.0	.....	11.7	.....	7.1	6.1	.....

<sup>a</sup> Gage heights for 1906 refer to datum of cable gage. See description.

<sup>b</sup> The gage was washed out Mar. 19, 1907, and a new gage installed at same datum Apr. 8, 1907. Gage heights observed on the Geological Survey gage for 1907 were evidently in error. Gage heights for these periods have been estimated from the Weather Bureau gage on Oroville bridge. The maximum stage at the cable was estimated from high-water marks at 38.5 feet; this is somewhat uncertain and the value of 39.3 feet obtained from the bridge reading is used.

Daily gage height, in feet, of Feather River at Oroville, Cal., for 1902-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1907-8.												
1.	6.1	6.4	6.0	7.6	9.0	8.0	8.0	9.0	8.1	6.5	5.6	4.9
2.	6.1	6.3	6.0	7.0	10.5	7.9	8.0	8.8	8.0	6.4	5.6	4.9
3.	6.1	6.3	6.0	7.0	11.0	7.8	7.9	8.6	8.0	6.3	5.6	4.9
4.	6.1	6.2	6.0	6.8	10.4	7.7	7.7	8.5	8.1	6.1	5.5	4.9
5.	6.1	6.2	6.1	6.5	9.0	7.7	7.6	8.4	8.1	6.0	5.5	4.9
6.	6.1	6.1	6.2	6.0	8.5	7.5	7.8	8.4	8.2	6.0	5.5	4.9
7.	6.1	6.1	8.6	6.0	8.0	7.4	8.0	8.4	7.9	6.0	5.5	4.9
8.	6.1	6.1	8.3	6.2	7.9	7.5	8.0	8.3	7.9	6.0	5.4	4.9
9.	6.1	6.0	7.3	6.4	7.9	7.5	8.3	8.3	7.8	6.0	5.3	4.9
10.	6.1	6.0	8.0	6.8	7.8	7.5	8.4	8.3	7.7	5.9	5.2	4.9
11.	6.1	6.0	8.0	6.9	7.8	7.5	8.5	8.3	7.7	5.9	5.0	4.9
12.	6.1	6.0	8.7	7.0	7.7	7.5	8.7	8.4	7.6	5.9	5.0	4.9
13.	6.1	6.0	7.6	7.2	7.5	7.5	9.0	8.5	7.6	5.9	5.0	4.9
14.	6.1	6.0	7.0	10.3	7.4	8.1	9.5	8.5	7.5	5.8	5.0	4.9
15.	6.0	6.0	7.4	8.4	7.4	8.6	10.0	8.5	7.5	5.8	5.0	4.9
16.	6.0	6.0	8.0	8.0	7.3	8.8	10.5	8.6	7.5	5.8	5.0	4.9
17.	6.0	6.1	8.0	7.9	7.2	9.0	10.0	8.7	7.5	5.8	5.0	4.9
18.	6.0	6.1	7.9	7.9	7.1	9.4	9.8	8.8	7.5	5.7	5.0	4.9
19.	6.0	6.0	8.1	8.5	7.0	9.6	9.5	8.9	7.6	5.7	5.0	4.9
20.	6.0	6.0	8.8	10.5	7.0	9.5	9.4	8.9	7.6	5.7	5.0	4.9
21.	6.0	6.0	9.0	11.0	7.1	9.0	9.6	9.0	7.6	5.7	5.0	4.9
22.	6.0	6.0	8.6	10.0	7.2	9.0	9.8	9.0	7.5	5.7	5.0	4.9
23.	6.0	6.0	8.6	9.5	7.2	8.9	10.0	9.0	7.4	5.6	5.0	4.9
24.	6.0	6.0	8.7	9.1	7.3	8.9	9.7	9.7	7.4	5.6	5.0	4.9
25.	6.0	6.0	8.0	9.0	7.3	8.8	9.5	9.2	7.3	5.6	5.0	4.9
26.	6.2	6.0	7.6	8.7	7.5	8.7	9.2	9.0	7.2	5.6	5.0	4.9
27.	6.2	6.0	7.6	9.0	7.6	8.6	9.0	8.8	7.0	5.5	5.0	4.9
28.	6.2	6.0	8.0	8.6	7.8	8.6	9.0	8.7	6.9	5.5	4.9	4.9
29.	6.2	6.0	8.8	8.0	8.0	8.5	9.0	8.5	6.7	5.5	4.9	4.9
30.	6.5	6.0	9.1	7.7	7.7	8.3	9.1	8.4	6.6	5.5	4.9	4.9
31.	6.4	.....	8.6	7.5	.....	8.1	.....	8.3	.....	5.5	4.9	.....
1908-9.												
1.	4.9	5.3	5.3	5.5	10.3	9.8	9.5	10.7	9.5	7.0	4.8	4.2
2.	4.9	5.2	5.3	9.8	10.3	9.7	9.5	10.9	9.6	6.9	4.8	4.2
3.	4.9	5.1	5.5	13.0	11.3	10.1	9.7	11.1	9.7	6.8	4.7	4.2
4.	4.9	5.1	5.9	9.1	10.8	12.2	10.0	11.2	9.7	6.7	4.7	4.2
5.	4.9	5.0	7.2	10.0	10.8	11.5	9.9	11.3	9.5	6.6	4.6	4.4
6.	4.9	5.0	6.4	14.4	10.4	11.2	9.8	11.1	9.4	6.5	4.6	4.6
7.	4.9	5.0	6.1	11.3	11.1	10.7	9.7	11.0	9.3	6.3	4.6	4.3
8.	4.9	5.0	5.8	20.2	10.3	10.4	9.8	11.0	9.1	6.2	4.6	4.4
9.	4.9	5.0	5.8	15.4	10.1	10.1	9.8	10.9	9.0	6.1	4.7	4.4
10.	4.9	5.0	5.7	11.8	10.0	9.8	10.0	10.8	8.9	6.0	4.8	4.1
11.	4.9	5.0	5.6	10.3	10.4	9.6	10.1	10.5	8.8	5.9	4.6	4.3
12.	4.9	4.9	5.5	9.1	15.0	9.5	10.2	10.1	8.7	5.8	4.4	4.4
13.	4.9	4.9	5.5	10.9	13.1	9.4	10.3	10.0	8.6	5.8	4.3	4.4
14.	4.9	4.9	5.5	27.5	11.6	9.5	10.7	9.9	8.5	5.7	4.3	4.2
15.	7.6	4.9	5.3	29.5	11.3	9.6	11.0	9.9	8.5	5.6	4.3	4.3
16.	6.6	4.9	5.2	430.5	11.2	9.7	11.2	9.8	8.4	5.5	4.2	4.4
17.	5.8	4.9	5.3	21.5	13.2	9.9	11.4	9.6	8.4	5.5	4.2	4.3
18.	5.5	4.9	5.2	18.7	13.4	10.0	11.6	9.6	8.3	5.5	4.2	4.3
19.	5.3	4.9	5.1	16.6	12.5	9.9	11.7	9.6	8.3	5.5	4.3	4.5
20.	5.2	5.1	5.0	19.5	12.2	9.8	11.6	9.6	8.2	5.5	4.4	4.6
21.	5.1	6.0	4.9	21.8	11.4	9.8	11.5	9.7	8.1	5.4	4.2	4.1
22.	5.1	7.2	5.0	17.9	10.8	9.7	11.2	9.5	8.0	5.3	4.2	4.2
23.	5.1	6.9	5.2	14.8	10.6	9.5	11.0	9.3	8.0	5.2	4.1	4.2
24.	5.1	6.4	5.5	13.2	10.5	9.4	10.8	9.2	7.9	5.1	4.1	4.5
25.	5.1	5.9	5.3	12.6	10.3	9.3	10.6	9.3	7.8	5.0	4.3	4.5
26.	5.1	5.6	5.3	12.2	10.0	9.2	10.8	9.4	7.7	5.0	4.3	4.7
27.	5.0	5.5	5.3	11.6	9.9	9.3	11.0	9.3	7.6	5.0	4.2	4.9
28.	5.0	5.4	5.3	11.1	9.8	9.3	11.0	9.5	7.4	5.0	4.2	5.0
29.	5.0	5.4	5.2	10.8	.....	8.8	10.9	9.4	7.3	4.9	4.1	5.3
30.	5.0	5.3	5.2	10.7	.....	9.6	10.8	9.3	7.1	4.9	4.2	4.7
31.	5.6	.....	5.2	10.5	.....	9.4	.....	9.3	.....	4.9	4.2	.....

a Gage height approximate. Water over gage.

Daily gage height, in feet, of Feather River at Oroville, Cal., for 1902-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1900-10.												
1.....	5.1	4.7	9.1	9.0	7.6	10.0	9.4	8.7	5.9	4.3	3.9	3.3
2.....	4.7	5.0	9.1	8.3	7.5	10.3	9.6	8.6	5.8	4.2	4.0	3.4
3.....	5.3	4.9	8.4	7.8	7.4	10.8	9.7	8.6	5.7	4.0	3.8	3.4
4.....	5.1	4.8	7.7	7.5	7.2	10.9	9.5	8.3	5.6	4.3	3.7	3.5
5.....	4.6	4.7	7.6	7.2	7.0	10.9	9.4	8.1	5.5	4.2	3.6	3.5
6.....	4.4	4.1	7.2	7.3	7.0	10.9	9.5	8.0	5.3	4.1	3.7	3.5
7.....	4.2	4.3	8.5	7.3	7.7	10.9	9.5	8.0	5.5	4.1	3.7	3.4
8.....	4.1	4.6	11.0	7.1	7.3	10.7	9.5	8.1	5.4	4.1	3.8	3.4
9.....	4.1	6.5	14.0	7.2	7.5	10.5	9.7	8.2	5.3	4.2	3.8	3.4
10.....	4.1	5.9	10.5	7.0	7.3	10.6	9.8	8.5	5.0	4.0	3.8	3.4
11.....	4.1	5.8	9.4	6.8	7.1	10.6	10.0	8.3	5.1	3.8	3.6	3.4
12.....	4.1	5.3	9.0	6.7	7.1	10.5	9.6	8.1	5.0	3.9	3.8	3.5
13.....	4.1	5.0	8.5	6.6	7.0	10.4	9.4	8.0	5.0	4.2	3.8	3.5
14.....	4.1	5.3	8.2	7.1	7.5	10.4	9.3	7.9	5.0	4.1	3.8	3.7
15.....	4.1	5.0	7.9	7.7	7.5	10.2	9.3	7.8	5.0	4.1	3.9	3.8
16.....	4.1	4.8	7.6	7.7	7.3	10.0	9.4	.....	4.9	4.0	3.7	3.7
17.....	4.1	4.7	7.4	7.0	7.2	10.1	9.5	7.6	4.9	4.2	3.6	3.6
18.....	4.1	4.6	7.3	6.8	7.2	10.4	9.5	7.5	4.8	4.1	3.6	3.6
19.....	4.9	5.4	7.1	6.7	8.1	12.3	9.7	7.4	4.8	4.0	3.7	3.6
20.....	5.3	10.2	6.9	6.7	7.7	12.5	9.7	7.3	4.8	4.0	3.8	3.6
21.....	4.9	10.4	6.8	6.5	7.5	12.7	9.6	7.2	4.8	3.9	3.8	3.5
22.....	4.5	10.7	6.7	6.9	8.1	12.4	9.5	7.2	4.7	3.9	3.9	3.5
23.....	4.5	9.8	6.5	7.6	8.3	11.9	9.5	7.0	4.6	3.8	3.8	3.5
24.....	4.4	11.1	6.3	10.0	9.5	11.1	9.5	6.9	4.6	3.9	3.8	3.5
25.....	4.3	10.0	6.3	8.5	11.3	10.5	9.5	6.7	4.3	3.9	3.8	3.5
26.....	4.5	8.9	6.3	8.5	10.2	10.1	9.5	6.6	4.4	3.9	3.7	3.6
27.....	4.7	8.1	6.2	8.1	9.5	9.9	9.3	6.5	4.5	3.9	3.8	3.6
28.....	5.2	7.7	6.1	7.9	9.5	9.5	9.2	6.4	4.5	3.8	3.7	3.5
29.....	5.1	7.4	6.1	7.7	.....	9.4	9.0	6.3	4.4	3.8	3.6	3.5
30.....	5.4	7.0	6.5	7.6	.....	9.2	8.9	6.1	4.3	3.8	3.4	3.5
31.....	5.0	.....	10.0	7.5	.....	9.1	.....	6.0	.....	3.8	3.3	.....
1910-11. <sup>a</sup>												
1.....	3.6	3.9	4.2	1.6	9.6	4.1	9.3	8.0	7.7	4.9	2.0	1.0
2.....	3.5	3.8	4.2	1.6	8.3	4.6	9.8	8.0	8.0	4.7	1.9	1.0
3.....	3.5	3.7	6.3	1.6	8.1	4.6	10.0	8.0	8.1	4.7	1.9	1.1
4.....	3.6	3.7	6.0	1.6	7.2	5.8	10.0	8.7	8.1	4.6	1.8	1.0
5.....	3.5	3.7	5.8	1.6	6.8	6.1	10.2	9.1	8.0	4.5	1.8	1.0
6.....	3.6	3.6	5.1	1.6	6.4	7.1	12.4	9.0	8.0	4.4	1.7	1.1
7.....	3.5	3.6	5.0	1.6	6.2	10.2	10.9	8.5	8.0	4.3	1.7	1.1
8.....	3.6	4.3	5.1	1.5	5.9	8.3	10.0	8.2	8.0	4.2	1.7	1.1
9.....	3.4	4.1	8.2	1.5	5.6	7.3	9.7	8.0	7.6	4.0	1.6	1.1
10.....	3.4	4.0	8.1	2.0	5.5	6.9	9.6	7.9	7.6	4.0	1.6	1.0
11.....	3.5	4.1	8.1	2.1	6.3	6.5	8.8	7.9	7.6	3.8	1.6	1.0
12.....	4.6	4.4	7.8	2.5	5.6	6.2	8.1	8.0	7.6	3.6	1.6	1.0
13.....	4.4	4.4	7.1	3.5	6.0	6.0	7.6	8.1	7.5	3.5	1.4	1.1
14.....	4.2	4.2	6.5	4.8	5.5	5.9	7.3	8.0	7.5	3.4	1.3	1.1
15.....	3.5	4.0	5.9	4.1	5.2	5.9	7.0	7.9	7.2	3.3	1.3	1.1
16.....	3.8	3.5	5.5	2.8	4.9	5.9	7.0	7.8	7.0	3.2	1.5	1.2
17.....	3.8	3.9	5.2	2.4	4.8	6.0	7.2	7.5	7.0	3.2	1.3	1.1
18.....	3.5	4.5	5.1	2.2	4.8	6.1	7.5	7.4	6.9	3.2	1.3	1.0
19.....	3.3	4.2	5.0	2.0	4.7	6.2	8.0	7.6	6.8	3.0	1.3	1.0
20.....	3.45	4.1	4.8	7.4	4.6	6.4	8.0	7.5	6.6	3.0	1.5	.9
21.....	3.55	4.0	4.9	5.1	4.6	6.6	8.0	7.6	6.5	2.8	1.5	.9
22.....	3.3	4.1	4.7	4.9	4.4	7.0	8.1	8.0	6.1	2.7	1.4	1.0
23.....	3.5	4.0	4.6	4.3	4.4	7.2	8.5	8.3	5.8	2.5	1.3	1.0
24.....	3.4	5.4	4.5	6.2	4.4	7.7	9.0	8.4	5.6	2.5	1.3	1.1
25.....	3.2	6.5	4.5	7.8	4.3	7.8	9.5	8.0	5.4	2.5	1.6	1.0
26.....	3.6	5.4	4.4	6.8	4.2	7.7	9.8	7.7	5.4	2.3	1.2	.9
27.....	3.6	4.9	4.3	5.8	4.1	7.7	9.5	7.6	5.3	2.3	1.2	1.5
28.....	3.3	4.5	4.3	7.3	4.0	7.8	9.0	7.6	5.1	2.2	1.1	1.0
29.....	3.9	4.5	4.3	6.2	.....	8.1	8.3	7.7	5.0	2.1	1.1	1.0
30.....	3.9	4.3	4.2	9.2	.....	8.6	8.0	7.7	5.0	2.0	1.1	1.1
31.....	3.9	.....	4.3	13.3	.....	9.0	.....	7.9	.....	2.0	1.0	.....

<sup>a</sup> Beginning Jan. 1, 1911, gage heights refer to U. S. Weather Bureau gage.

Daily gage height, in feet, of Feather River at Oroville, Cal., for 1902-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1911-12.												
1.....	0.9	1.0	1.0	1.6	3.2	1.9	3.0	5.4	5.3	.....	.....	.....
2.....	1.0	1.2	1.0	1.6	3.2	2.3	3.0	5.2	5.3	.....	.....	.....
3.....	1.0	1.2	1.0	1.5	2.7	2.1	3.7	5.2	5.2	.....	.....	.....
4.....	1.0	1.3	1.0	1.6	2.7	2.1	3.7	5.0	5.1	.....	.....	.....
5.....	1.1	1.2	.9	1.5	2.6	2.5	3.9	5.0	5.0	.....	.....	.....
6.....	1.0	1.4	1.1	1.5	2.7	6.1	3.9	5.0	4.9	.....	.....	.....
7.....	1.0	.7	1.1	1.3	2.6	5.2	3.9	5.4	4.5	.....	.....	.....
8.....	1.0	.8	1.2	1.4	2.9	4.5	3.9	5.6	4.1	.....	.....	.....
9.....	1.3	1.0	1.1	1.4	2.9	4.0	4.3	5.7	4.0	.....	.....	.....
10.....	1.3	2.0	1.2	1.9	2.7	3.9	4.5	5.8	3.9	.....	.....	.....
11.....	1.2	2.3	1.1	2.6	2.9	3.8	4.5	5.8	4.0	.....	.....	.....
12.....	1.1	1.6	1.1	2.5	2.9	3.3	4.0	5.8	4.0	.....	.....	.....
13.....	1.0	1.5	1.1	2.6	2.7	4.3	3.7	5.7	4.0	.....	.....	.....
14.....	1.1	1.6	1.1	2.4	2.9	3.9	3.6	5.7	3.9	.....	.....	.....
15.....	1.0	1.5	1.2	2.3	2.9	3.3	3.5	5.7	3.8	.....	.....	.....
16.....	1.0	2.0	1.2	2.5	2.6	3.1	3.5	5.6	3.6	.....	.....	.....
17.....	1.0	1.6	1.4	2.9	2.6	2.9	3.5	5.4	3.5	.....	.....	.....
18.....	1.0	1.5	1.3	2.9	2.7	3.1	3.6	5.3	3.5	.....	.....	.....
19.....	.9	1.5	1.3	3.6	2.6	3.1	3.3	5.2	3.4	.....	.....	.....
20.....	.8	1.7	1.3	3.6	2.3	3.1	3.2	5.1	3.3	.....	.....	.....
21.....	.8	1.4	1.2	3.6	2.3	3.0	3.2	5.4	3.1	.....	.....	.....
22.....	1.2	1.3	1.3	3.4	2.1	3.0	3.4	5.2	2.6	.....	.....	.....
23.....	1.0	1.3	1.3	1.9	2.1	3.0	2.9	5.1	2.4	.....	.....	.....
24.....	1.5	1.3	1.3	1.9	2.2	3.0	2.8	5.0	2.4	.....	.....	.....
25.....	1.2	1.1	1.2	2.0	2.0	3.0	3.3	5.0	2.3	.....	.....	.....
26.....	1.2	1.3	1.2	7.1	2.0	3.3	3.8	5.7	2.1	.....	.....	.....
27.....	1.1	1.2	1.2	6.4	2.2	3.6	3.3	5.9	1.9	.....	.....	.....
28.....	1.1	1.0	1.4	4.0	2.3	3.8	3.3	5.6	1.7	.....	.....	.....
29.....	1.1	1.0	1.4	3.6	2.0	4.0	3.8	5.6	1.6	.....	.....	.....
30.....	1.1	1.2	1.4	3.4	.....	4.0	5.1	5.6	1.4	.....	.....	.....
31.....	1.2	.....	1.5	3.4	.....	3.3	.....	5.4	.....	.....	.....	.....

NOTE.—Gage heights from about August to December, 1911, liable to error.

Daily discharge, in second-feet, of Feather River at Oroville, Cal., for 1902-1912.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1902.												
1				2,040	2,040	20,000	7,920	12,600	9,940	2,900	1,570	1,230
2				2,490	2,040	18,900	5,880	9,940	8,880	3,010	1,570	1,230
3				2,490	2,040	15,200	11,100	9,280	7,920	3,010	1,570	1,230
4				2,040	2,040	13,000	17,000	9,080	7,560	3,010	1,540	1,230
5				2,040	3,010	12,400	31,100	8,880	7,380	3,010	1,500	1,230
6				2,040	3,560	12,000	38,100	11,100	7,380	2,900	1,500	1,230
7				2,040	13,700	11,300	38,100	12,400	7,040	2,690	1,500	1,230
8				2,040	18,000	11,700	26,900	12,100	7,040	2,490	1,500	1,230
9				2,040	22,100	13,000	21,900	12,100	6,880	2,490	1,500	1,230
10				2,040	18,900	12,200	19,300	12,100	6,720	2,400	1,500	1,230
11				2,040	16,100	12,200	14,300	11,800	6,720	2,400	1,500	1,230
12				2,040	16,300	9,830	13,400	12,900	6,560	2,310	1,500	1,170
13				2,040	11,700	8,680	12,900	13,700	6,250	2,220	1,500	1,170
14				2,040	9,400	8,200	12,600	13,200	6,100	2,220	1,500	1,170
15				2,040	24,400	7,830	16,800	12,400	5,080	2,130	1,500	1,170
16				2,040	22,100	7,740	23,200	12,100	5,500	2,040	1,500	1,170
17				2,040	28,200	7,920	21,000	11,800	5,220	1,960	1,500	1,170
18				2,040	18,000	8,300	18,900	10,600	4,810	1,960	1,500	1,170
19				2,040	13,700	8,110	15,200	9,940	4,550	1,880	1,500	1,170
20				2,040	12,400	8,490	14,900	9,500	4,550	1,880	1,500	1,170
21				2,040	13,700	8,490	16,300	8,880	4,290	1,800	1,500	1,170
22				2,040	16,100	7,920	13,700	8,680	4,290	1,880	1,430	1,170
23				2,040	15,200	7,920	15,200	8,490	4,160	1,800	1,430	1,170
24				2,040	34,600	7,740	11,600	8,490	4,160	1,800	1,430	1,170
25				2,040	31,100	7,500	10,600	9,940	3,920	1,720	1,360	1,170
26				2,040	36,400	7,380	9,940	11,100	3,560	1,720	1,360	1,170
27				2,040	36,400	7,210	9,720	10,900	3,450	1,720	1,360	1,170
28				2,040	26,900	7,040	9,500	10,600	3,340	1,640	1,360	1,170
29				2,040		7,040	11,100	9,940	3,230	1,640	1,290	1,170
30				2,040		6,880	10,600	9,500	3,010	1,640	1,290	1,170
31				2,040		6,880		8,880		1,570	1,290	
1902-3.												
1	1,170	1,430	1,500	4,160	8,680	4,160	42,600	13,700	6,640	2,840	1,960	1,640
2	1,170	1,430	1,640	3,920	7,560	4,160	34,600	13,700	6,400	2,740	1,960	1,640
3	1,170	1,430	1,880	3,560	8,680	5,500	29,900	13,400	6,020	2,640	1,960	1,640
4	1,170	1,430	2,040	3,560	7,920	4,810	23,200	13,200	5,650	2,590	1,960	1,640
5	1,170	1,430	2,590	3,680	7,040	4,810	20,200	12,600	5,500	2,540	1,960	1,640
6	1,170	1,570	3,010	3,920	5,500	4,810	17,800	12,600	5,360	2,440	1,880	1,570
7	1,170	2,040	3,920	3,920	5,800	4,800	17,800	12,100	5,290	2,440	1,880	1,570
8	1,170	3,340	3,920	4,040	6,260	4,810	17,800	11,500	5,150	2,440	1,880	1,570
9	1,170	4,040	4,420	4,160	5,500	4,810	17,800	11,300	5,010	2,440	1,880	1,570
10	1,170	12,400	10,600	4,160	5,220	4,810	17,800	11,200	4,880	2,440	1,880	1,570
11	1,170	5,950	17,000	4,040	5,220	4,810	17,800	11,000	4,740	2,440	1,880	1,570
12	1,170	3,920	13,700	3,800	5,220	4,610	17,800	11,200	4,620	2,360	1,800	1,570
13	1,170	3,340	12,400	3,560	4,940	7,470	17,800	10,700	4,740	2,310	1,800	1,570
14	1,170	3,560	7,560	3,560	4,940	11,600	17,800	10,300	4,100	2,260	1,800	1,570
15	1,170	3,450	5,800	3,340	4,550	9,290	17,800	9,610	3,980	2,220	1,800	1,570
16	1,170	3,450	4,810	3,340	4,550	9,080	17,800	9,940	3,980	2,220	1,800	1,570
17	1,170	4,160	4,160	3,340	4,160	7,040	17,400	8,780	3,980	2,220	1,800	1,640
18	1,170	6,250	3,560	3,120	4,160	7,040	17,000	8,400	3,860	2,220	1,720	1,640
19	1,170	7,920	3,340	3,120	4,160	6,720	16,600	7,830	3,620	2,220	1,720	1,640
20	1,170	6,250	3,340	3,010	3,920	6,250	16,300	7,210	3,520	2,130	1,720	1,640
21	1,500	4,810	3,230	3,010	3,920	6,250	16,300	7,120	3,450	2,130	1,720	1,570
22	1,880	3,230	3,120	7,300	3,920	6,100	15,900	7,120	3,340	2,130	1,720	1,570
23	1,960	3,120	3,010	8,980	4,160	7,040	15,900	6,960	3,280	2,130	1,720	1,570
24	3,400	3,120	3,120	14,000	4,160	7,040	15,600	6,720	3,180	2,080	1,720	1,570
25	3,400	2,900	3,010	28,200	4,160	6,250	15,600	6,320	3,060	2,040	1,720	1,570
26	1,430	2,490	4,160	22,100	4,160	7,380	15,200	6,180	2,960	2,040	1,720	1,570
27	1,430	2,130	21,000	26,900	4,160	10,400	14,900	6,180	2,900	2,040	1,720	1,570
28	1,430	1,960	11,100	14,400	4,160	14,000	14,600	6,180	2,960	2,040	1,720	1,570
29	1,430	1,800	9,290	10,700		25,600	14,300	6,250	3,060	2,040	1,720	1,570
30	1,430	1,640	5,500	10,900		93,000	14,000	6,320	2,960	2,000	1,720	1,640
31	1,430		4,810	9,290		63,400		6,480		1,960	1,720	

NOTE.—Discharge estimated Apr. 15 to May 6, 1903.

Daily discharge, in second-feet, of Feather River at Oroville, Cal., for 1902-1912—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1903-4.												
1.	1,720	1,640	4,810	4,550	3,010	23,900	27,400	14,800	13,200	4,100	2,220	1,880
2.	1,720	1,640	4,680	4,940	3,120	25,400	25,400	14,400	12,700	3,980	2,220	1,880
3.	1,720	1,640	4,680	4,160	3,060	26,400	25,600	14,400	12,700	3,920	2,220	1,840
4.	1,720	1,760	4,550	3,860	3,120	31,400	25,100	15,200	12,500	3,980	2,180	1,800
5.	1,720	2,130	4,550	3,340	3,980	28,500	23,900	16,600	11,700	3,860	2,180	1,800
6.	1,720	1,960	4,220	3,230	3,740	25,600	24,600	16,800	11,300	3,740	2,130	1,800
7.	1,720	1,960	3,800	3,120	3,500	25,800	24,400	18,000	10,900	3,680	2,130	1,720
8.	1,720	5,800	3,680	3,010	3,450	48,400	23,500	18,700	10,300	3,500	2,000	1,720
9.	1,880	9,500	3,620	3,010	3,340	43,400	24,400	19,100	9,720	3,400	2,040	1,640
10.	2,440	16,400	3,200	3,120	3,230	50,800	25,100	20,000	8,980	3,340	2,130	1,640
11.	2,360	23,200	3,400	3,500	3,280	40,400	27,900	22,100	8,680	3,230	2,000	1,640
12.	2,080	37,000	3,280	3,500	13,700	27,400	29,600	23,500	8,400	3,180	2,040	1,640
13.	1,960	65,200	3,180	3,340	9,180	25,400	32,500	24,600	8,020	3,060	1,960	1,640
14.	1,840	83,060	3,010	3,280	6,960	24,900	40,400	23,900	7,740	3,010	2,040	1,670
15.	1,760	60,400	3,230	3,120	23,900	26,600	39,600	23,900	7,470	3,120	2,040	1,600
16.	1,760	27,100	3,680	3,230	94,000	24,400	33,200	22,300	7,300	3,010	1,960	1,570
17.	1,720	8,200	9,080	3,500	60,000	52,000	29,300	21,900	6,960	3,010	1,960	1,570
18.	1,720	5,500	5,800	3,860	24,900	95,000	25,100	21,200	6,640	2,960	1,880	1,540
19.	1,720	7,300	5,290	3,920	18,700	88,000	28,200	18,500	6,250	2,790	1,920	1,570
20.	1,720	44,800	4,940	3,500	15,400	82,000	25,400	18,000	6,020	2,740	1,880	1,640
21.	1,720	81,500	4,740	3,340	15,800	59,600	22,300	17,000	5,880	2,690	1,880	1,720
22.	1,640	38,100	4,550	3,500	69,300	43,400	20,600	20,000	5,720	2,640	1,880	2,040
23.	1,640	22,300	4,160	3,500	57,000	35,000	18,500	20,400	5,430	2,590	1,880	4,420
24.	1,640	12,400	4,040	3,400	106,000	29,900	18,100	19,300	5,150	2,640	1,880	5,220
25.	1,640	6,960	3,920	3,280	77,800	25,600	17,600	19,100	4,880	2,490	1,960	5,080
26.	1,640	4,810	3,680	3,180	63,400	23,900	17,200	19,700	4,740	2,440	1,960	4,220
27.	1,640	4,220	3,620	3,120	54,000	23,200	16,800	16,800	4,480	2,400	2,000	3,920
28.	1,640	5,220	3,500	3,010	37,400	36,400	16,800	15,200	4,220	2,360	1,960	2,790
29.	1,640	4,940	3,400	3,010	28,500	59,600	15,900	13,800	4,160	2,310	1,880	2,540
30.	1,640	4,810	3,230	2,900	.....	46,400	15,200	13,700	4,220	2,260	1,880	2,220
31.	1,640	.....	3,620	2,960	.....	33,900	.....	13,400	.....	2,260	1,880	.....
1904-5.												
1.	2,180	2,690	3,920	17,000	15,200	8,680	11,800	9,180	6,100	2,130	1,500	1,260
2.	2,130	3,180	3,560	11,800	22,300	8,680	11,200	8,980	5,880	2,130	1,460	1,230
3.	2,080	2,960	3,450	9,720	18,000	8,780	11,500	8,780	5,800	2,130	1,460	1,230
4.	2,040	2,790	3,230	8,200	13,800	9,940	11,300	8,580	5,800	2,080	1,430	1,230
5.	2,690	2,690	2,900	6,720	13,400	10,500	11,200	8,400	5,720	2,040	1,400	1,230
6.	1,960	2,690	2,640	6,250	13,600	9,720	11,100	8,020	5,500	2,040	1,400	1,260
7.	2,080	2,590	2,590	6,250	10,700	8,880	11,100	7,830	5,430	2,000	1,400	1,260
8.	2,310	2,490	2,490	5,650	9,720	8,490	11,200	7,650	5,430	1,960	1,360	1,290
9.	4,420	2,400	2,400	4,810	8,780	8,400	11,100	7,470	5,360	1,960	1,360	1,290
10.	10,600	2,310	3,400	4,420	8,300	8,110	10,900	7,300	5,220	1,920	1,320	1,290
11.	26,900	2,540	3,400	3,450	7,920	8,300	10,600	7,210	5,080	1,880	1,320	1,290
12.	8,880	2,790	3,340	3,340	7,470	10,700	10,400	7,040	4,940	1,880	1,320	1,260
13.	5,950	2,690	3,120	3,230	6,880	18,000	9,940	6,800	4,740	1,840	1,320	1,260
14.	4,680	2,590	3,060	17,600	6,400	16,800	9,940	6,880	4,420	1,840	1,290	1,230
15.	4,680	2,790	2,960	18,000	6,100	15,100	9,940	7,300	4,290	1,800	1,290	1,230
16.	4,810	3,450	2,790	10,300	6,100	13,200	9,720	7,830	4,040	1,800	1,290	1,230
17.	4,420	2,960	2,690	6,400	7,650	12,100	9,720	8,110	3,920	1,760	1,320	1,200
18.	4,100	2,900	2,540	6,250	7,650	13,400	9,830	7,920	3,800	1,760	1,320	1,200
19.	4,040	2,900	2,540	9,720	7,210	28,200	10,000	7,830	3,680	1,720	1,320	1,200
20.	2,690	2,690	2,690	8,200	10,600	22,600	9,610	7,740	3,500	1,720	1,360	1,230
21.	3,500	2,590	2,790	9,610	11,700	22,600	8,780	7,740	3,230	1,720	1,360	1,230
22.	2,790	2,690	3,060	24,600	10,500	20,800	8,300	7,560	3,180	1,680	1,360	1,230
23.	2,690	2,590	3,980	9,720	20,200	8,490	7,560	3,060	3,060	1,640	1,430	1,260
24.	2,690	2,490	5,080	18,900	9,500	19,700	8,780	7,560	3,010	1,640	1,430	1,260
25.	2,590	2,400	4,810	16,300	9,290	16,800	9,180	7,470	2,900	1,640	1,430	1,230
26.	2,490	2,400	4,290	12,700	9,080	14,600	9,500	7,380	2,790	1,600	1,290	1,230
27.	2,490	2,490	4,040	10,900	9,080	13,800	9,830	7,210	2,590	1,600	1,290	1,230
28.	2,260	3,120	3,680	9,830	8,880	15,200	9,940	7,040	2,490	1,570	1,290	1,800
29.	2,260	3,230	3,280	9,080	.....	19,500	9,720	6,960	2,400	1,570	1,260	1,500
30.	2,360	3,340	68,400	8,580	.....	17,200	9,500	6,800	2,310	1,540	1,290	1,290
31.	2,490	.....	29,900	8,400	.....	13,600	.....	6,480	.....	1,540	1,290	.....

NOTE.—Discharge estimated July 24 to Aug. 6, 1904.

Daily discharge, in second-feet, of Feather River at Oroville, Cal., for 1902-1912—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1905-6.												
1	1,290	1,290	1,570	1,330	5,600	15,500	34,800	16,300	16,500	6,390	2,910	2,100
2	1,290	1,290	1,540	1,330	5,060	12,900	27,500	17,400	15,300	6,260	2,860	2,060
3	1,260	1,290	1,430	1,300	4,730	12,900	26,500	20,900	18,000	7,330	2,860	2,060
4	1,260	1,290	1,400	1,330	4,730	12,600	24,200	19,600	26,000	6,980	2,810	2,020
5	1,260	1,260	1,360	1,240	4,780	13,200	22,000	21,500	20,300	6,840	2,760	1,990
6	1,290	1,260	1,290	1,240	5,300	10,200	22,400	21,700	18,800	7,120	2,760	1,990
7	1,290	1,260	1,290	1,240	5,420	10,000	15,300	22,400	16,200	6,980	2,720	1,990
8	1,290	1,260	1,260	1,240	5,480	10,000	14,700	21,700	13,200	6,780	2,670	1,990
9	1,360	1,230	1,260	1,300	5,600	9,740	14,700	22,000	15,600	6,650	2,670	1,990
10	1,320	1,230	1,260	1,360	5,780	9,640	19,200	21,700	14,100	6,390	2,620	1,960
11	1,320	1,200	1,260	1,570	5,840	10,000	18,000	20,300	15,000	6,390	2,580	1,960
12	1,290	1,200	1,290	4,290	5,960	10,200	19,500	19,400	15,200	5,780	2,580	1,960
13	1,290	1,200	1,290	9,830	6,080	18,400	16,700	16,700	18,000	5,600	2,540	1,960
14	1,260	1,200	1,360	12,800	10,400	15,200	17,000	15,000	16,900	5,480	2,540	1,990
15	1,260	1,230	1,430	12,500	14,000	17,000	18,000	19,700	13,600	5,780	2,490	1,990
16	1,260	1,230	1,400	54,100	11,800	15,500	18,000	15,300	13,000	6,020	2,490	1,990
17	1,260	1,230	1,400	28,000	10,100	13,200	18,200	12,800	15,800	6,140	2,440	1,990
18	1,260	1,230	1,400	96,300	16,300	13,000	18,000	14,000	13,700	3,990	2,440	1,990
19	1,290	1,230	1,400	76,100	19,200	12,600	18,200	12,600	13,200	4,180	2,400	1,990
20	1,290	1,290	1,400	35,100	17,600	18,400	19,400	11,700	12,200	4,510	2,400	1,960
21	1,290	1,570	1,360	22,400	17,800	18,800	19,200	12,600	13,600	4,510	2,360	1,920
22	1,290	1,500	1,360	14,600	18,200	19,000	20,200	10,700	11,000	4,680	2,310	1,920
23	1,290	1,500	1,360	11,400	17,200	26,000	21,700	10,700	10,800	4,840	2,310	1,920
24	1,290	1,460	1,360	9,640	16,300	48,100	20,500	10,300	9,170	4,840	2,260	1,920
25	1,260	1,430	1,400	8,360	17,200	48,100	17,600	11,600	9,080	4,840	2,260	1,960
26	1,260	1,430	1,400	7,640	16,000	53,200	16,200	22,000	8,900	3,910	2,220	1,920
27	1,260	1,360	1,430	6,520	18,400	39,500	14,600	22,600	8,720	3,060	2,220	1,920
28	1,260	1,360	1,430	6,580	19,900	35,100	15,000	25,300	7,820	3,060	2,180	1,920
29	1,290	1,500	1,500	6,520	.....	29,000	14,100	20,300	7,480	3,010	2,180	1,920
30	1,290	1,570	1,540	6,520	.....	40,900	14,300	17,600	7,260	2,960	2,140	1,920
31	1,290	.....	1,540	6,260	.....	51,400	.....	17,000	.....	2,960	2,140	.....
1906-7.												
1	1,920	1,920	1,990	6,520	19,600	11,600	26,000	25,100	18,300	8,000	3,890	1,650
2	1,920	1,920	1,990	6,020	50,500	13,100	26,000	24,600	17,000	7,700	3,890	1,650
3	1,920	2,490	1,990	5,840	78,500	16,800	27,200	24,600	15,400	7,400	3,890	1,650
4	1,920	7,560	1,990	11,600	59,500	19,200	26,000	24,100	15,000	7,110	3,410	1,850
5	1,920	5,360	1,990	7,640	50,500	23,800	26,000	26,000	15,800	7,110	3,170	1,850
6	1,920	3,460	1,990	6,260	39,200	14,600	25,600	25,500	15,800	6,820	2,940	1,850
7	1,920	2,490	1,990	8,540	31,000	12,700	25,600	25,100	15,800	6,820	2,940	1,850
8	1,920	2,060	3,260	6,260	25,100	9,450	28,600	25,100	16,200	6,820	2,940	1,850
9	1,920	2,060	4,730	5,900	20,700	10,300	27,500	24,600	16,200	6,820	2,940	1,850
10	1,920	2,060	7,120	5,420	17,600	12,800	27,000	24,100	17,000	6,820	2,710	2,270
11	1,920	2,060	13,800	7,330	14,300	11,800	27,000	24,100	17,000	6,530	2,710	2,060
12	1,920	2,060	7,120	6,520	11,600	11,600	28,000	23,200	17,400	6,530	2,710	2,060
13	1,920	2,060	5,840	6,020	9,090	10,100	29,100	21,800	26,000	6,250	2,710	2,060
14	1,920	2,060	5,360	5,840	8,540	9,350	29,600	21,300	22,200	6,250	2,710	2,060
15	1,920	2,060	4,120	11,600	8,180	8,720	31,100	20,900	20,400	5,970	2,710	1,850
16	1,920	2,060	4,120	7,640	7,640	8,540	33,800	19,600	17,000	5,970	2,710	1,850
17	1,920	2,060	3,260	6,260	14,300	34,800	40,400	19,200	17,400	5,970	2,490	1,850
18	1,920	2,060	3,260	6,080	12,900	144,000	39,800	19,200	17,000	5,970	2,490	1,850
19	1,920	2,060	3,010	5,060	11,600	187,000	42,000	21,300	15,400	5,970	2,490	1,850
20	1,920	2,060	2,910	4,730	10,700	120,000	38,200	28,600	13,900	5,700	2,490	1,850
21	1,920	2,060	2,810	4,290	10,100	92,500	34,300	28,600	12,400	5,430	2,490	1,850
22	1,920	2,060	3,360	3,960	10,100	65,200	31,600	28,000	12,600	5,160	2,270	1,850
23	1,920	2,060	4,010	4,400	16,300	58,000	30,100	27,000	12,000	5,160	2,270	1,850
24	1,920	2,060	4,010	4,340	12,400	40,100	27,500	26,000	11,700	5,160	2,060	1,850
25	1,920	2,060	17,400	5,060	15,900	34,000	26,300	23,600	11,300	4,900	2,060	1,850
26	1,920	2,020	43,400	6,260	14,400	30,200	26,000	21,300	11,000	4,900	2,060	1,850
27	1,920	2,020	23,500	9,450	15,100	27,800	26,000	21,800	10,300	4,640	2,060	1,850
28	1,920	2,020	13,000	12,400	10,700	26,800	26,000	21,800	9,920	5,160	2,060	1,850
29	1,920	2,020	9,360	11,600	.....	26,800	26,000	21,300	9,590	4,390	2,060	1,850
30	1,920	1,990	8,360	10,500	.....	26,000	25,500	20,400	8,940	4,390	1,850	1,850
31	1,920	.....	8,000	11,600	.....	26,000	.....	17,000	.....	4,140	1,850	.....

NOTE.—Discharge estimated Dec. 17 to 23, 1905, and July 25 to Sept. 4, 1906. Discharge interpolated for other days when gage was not read.

Daily discharge, in second-feet, of Feather River at Oroville, Cal., for 1902-1912—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1907-8.												
1.....	1,850	2,490	1,650	5,260	9,210	6,330	6,330	9,210	6,590	3,200	2,040	1,250
2.....	1,850	2,270	1,650	3,770	14,400	6,060	6,330	8,610	6,320	3,060	2,040	1,250
3.....	1,850	2,270	1,650	3,770	16,300	5,790	6,060	8,020	6,320	2,920	2,040	1,250
4.....	1,850	2,060	1,650	3,310	14,000	5,520	5,520	7,750	6,590	2,660	1,920	1,250
5.....	1,850	2,060	1,850	2,650	9,210	5,520	5,260	7,440	6,590	2,530	1,920	1,250
6.....	1,850	1,850	2,060	1,640	7,730	5,000	5,790	7,440	6,870	2,530	1,920	1,250
7.....	1,850	1,850	8,310	1,640	6,330	4,750	6,330	7,440	6,060	2,530	1,920	1,250
8.....	1,850	1,850	7,400	2,030	6,060	5,000	6,330	7,160	6,060	2,530	1,800	1,250
9.....	1,850	1,650	4,640	2,440	6,060	5,000	7,160	7,160	5,810	2,530	1,680	1,250
10.....	1,850	1,650	6,530	3,310	5,790	5,000	7,440	7,160	5,570	2,400	1,570	1,250
11.....	1,850	1,650	6,530	3,540	5,790	5,000	7,730	7,160	5,570	2,400	1,350	1,250
12.....	1,850	1,850	6,620	3,770	5,520	5,000	8,310	7,440	5,340	2,400	1,350	1,250
13.....	1,850	1,650	5,430	4,250	5,000	5,000	9,210	7,730	5,340	2,400	1,350	1,250
14.....	1,850	1,650	6,820	13,700	4,750	6,600	10,800	7,730	5,110	2,280	1,300	1,250
15.....	1,650	1,650	4,900	7,440	4,750	8,020	12,600	7,730	5,110	2,280	1,350	1,250
16.....	1,650	1,650	6,530	6,330	4,500	8,610	14,400	8,020	5,110	2,280	1,350	1,250
17.....	1,650	1,850	6,530	6,060	4,250	9,210	12,600	8,310	5,110	2,280	1,350	1,250
18.....	1,650	1,850	6,250	6,060	4,010	10,500	11,800	8,610	5,110	2,160	1,350	1,250
19.....	1,650	1,650	6,820	7,730	3,770	11,200	10,800	8,910	5,340	2,160	1,350	1,250
20.....	1,650	1,650	8,940	14,400	3,770	10,800	10,500	8,910	5,340	2,160	1,350	1,250
21.....	1,650	1,650	9,590	16,300	4,010	9,210	11,200	9,210	5,340	2,160	1,350	1,250
22.....	1,650	1,650	8,310	12,600	4,250	9,210	11,800	9,210	5,110	2,160	1,350	1,250
23.....	1,650	1,650	8,310	10,800	4,250	8,910	12,600	9,210	4,890	2,040	1,350	1,250
24.....	1,650	1,650	8,920	9,520	4,500	8,910	11,500	9,520	4,890	2,040	1,350	1,250
25.....	1,650	1,650	6,530	9,210	4,500	8,610	10,800	9,840	4,670	2,040	1,350	1,250
26.....	2,060	1,650	5,430	8,310	5,000	8,310	9,840	9,210	4,460	2,040	1,350	1,250
27.....	2,060	2,060	5,430	9,210	5,260	8,020	9,210	8,610	4,050	1,920	1,350	1,250
28.....	2,060	1,650	6,530	8,020	5,790	8,020	9,210	8,310	3,860	1,920	1,250	1,250
29.....	2,060	1,650	8,940	6,330	6,330	7,730	9,210	7,730	3,510	1,920	1,250	1,250
30.....	2,710	1,650	9,920	5,520	.....	7,160	9,520	7,440	3,350	1,920	1,250	1,250
31.....	2,490	.....	8,310	5,000	.....	6,600	.....	7,160	.....	1,920	1,250	.....
1908-9.												
1.....	1,250	1,680	1,680	1,920	14,800	13,000	12,000	16,300	12,000	5,250	2,150	1,640
2.....	1,250	1,570	1,680	13,000	14,800	12,700	12,000	17,000	12,300	5,060	2,550	1,640
3.....	1,250	1,460	1,920	26,000	18,600	14,100	12,700	17,800	12,700	4,870	2,050	1,640
4.....	1,250	1,460	2,400	10,700	16,600	22,400	13,700	18,200	12,700	4,690	2,650	1,640
5.....	1,250	1,350	4,460	13,700	16,600	19,400	13,400	18,600	12,000	4,510	1,960	1,790
6.....	1,250	1,350	3,060	33,200	15,100	18,200	13,000	17,800	11,700	4,340	1,960	1,960
7.....	1,250	1,350	2,660	18,600	17,800	16,300	12,700	17,400	11,400	4,020	1,960	1,710
8.....	1,250	1,350	2,280	66,700	14,800	15,100	13,000	17,400	10,700	3,860	1,960	1,790
9.....	1,250	1,350	2,280	38,700	14,100	14,100	13,000	17,000	10,400	3,710	2,050	1,790
10.....	1,250	1,350	2,160	20,700	13,700	13,000	13,700	16,600	10,100	3,560	2,150	1,570
11.....	1,250	1,350	2,040	14,800	15,100	12,300	14,100	15,500	9,800	3,420	1,960	1,710
12.....	1,250	1,250	1,920	10,700	36,500	12,000	14,400	14,100	9,500	3,290	1,960	1,500
13.....	1,250	1,250	1,920	17,000	26,500	11,700	14,800	13,700	9,200	3,290	1,710	1,790
14.....	1,250	1,250	1,920	118,000	19,800	12,000	16,300	13,400	8,900	3,160	1,710	1,640
15.....	5,340	1,250	1,680	131,000	18,600	12,300	17,400	13,400	8,900	3,040	1,710	1,710
16.....	3,350	1,250	1,570	137,000	18,200	12,700	18,200	13,000	8,600	2,920	1,640	1,790
17.....	2,280	1,250	1,680	74,800	27,000	13,400	19,000	12,300	8,600	2,920	1,640	1,710
18.....	1,920	1,250	1,570	57,700	28,000	13,700	19,800	12,300	8,320	2,920	1,640	1,710
19.....	1,680	1,250	1,460	45,300	23,800	13,400	20,200	12,300	8,320	2,920	1,710	1,870
20.....	1,570	1,460	1,350	62,500	22,400	13,000	19,800	12,300	8,040	2,920	1,790	1,960
21.....	1,460	2,530	1,250	76,700	19,000	13,000	19,400	12,700	7,760	2,800	1,640	1,570
22.....	1,460	4,460	1,350	52,900	16,600	12,700	18,200	12,000	7,500	2,680	1,640	1,640
23.....	1,460	3,860	1,570	35,400	15,900	12,000	17,400	11,400	7,500	2,570	1,570	1,640
24.....	1,460	3,060	1,920	27,000	15,500	11,700	16,600	11,000	7,250	2,460	1,570	1,870
25.....	1,460	2,400	1,680	24,200	14,800	11,400	15,900	11,400	7,010	2,350	1,710	1,870
26.....	1,460	2,040	1,680	22,400	13,700	11,000	16,600	11,700	6,770	2,350	1,710	2,050
27.....	1,350	1,920	1,680	19,800	13,400	11,400	17,400	11,400	6,530	2,350	1,640	2,250
28.....	1,350	1,800	1,680	17,800	13,000	11,400	17,400	12,000	6,080	2,350	1,640	2,350
29.....	1,350	1,800	1,570	16,600	.....	13,000	17,000	11,700	5,570	2,250	1,570	2,680
30.....	2,530	1,680	1,570	16,300	.....	12,300	16,600	11,400	5,450	2,250	1,640	2,050
31.....	2,040	.....	1,570	15,500	.....	11,700	.....	11,400	.....	2,250	1,640	.....

Daily discharge, in second-feet, of Feather River at Oroville, Cal., for 1902-1912—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909-10.												
1.	2,460	2,050	10,700	10,800	6,780	14,700	12,300	9,830	3,730	1,880	1,500	1,010
2.	2,050	2,350	10,700	8,620	6,550	16,000	13,100	9,510	3,600	1,780	1,590	1,080
3.	2,680	2,250	8,600	7,280	6,320	18,400	13,500	9,510	3,470	1,590	1,400	1,080
4.	2,460	2,150	6,770	6,550	5,890	19,000	12,700	8,620	3,340	1,880	1,320	1,160
5.	1,960	2,050	6,530	5,890	5,490	19,000	12,300	8,060	3,220	1,780	1,240	1,160
6.	1,790	1,570	5,660	6,100	5,490	19,000	12,700	7,800	2,960	1,680	1,320	1,160
7.	1,640	1,710	8,900	6,100	7,020	19,000	12,700	7,800	3,220	1,680	1,320	1,080
8.	1,570	1,960	17,400	5,690	6,100	18,000	12,700	8,060	3,100	1,680	1,400	1,080
9.	1,570	4,340	31,000	5,890	6,550	17,000	13,560	8,340	2,960	1,780	1,400	1,080
10.	1,570	3,420	15,500	5,490	6,100	17,400	13,900	9,200	2,620	1,590	1,400	1,080
11.	1,570	3,290	11,700	5,120	5,690	17,400	14,700	8,620	2,740	1,400	1,240	1,080
12.	1,570	2,680	10,400	4,940	5,690	17,000	13,100	8,060	2,620	1,500	1,400	1,160
13.	1,570	2,350	8,900	4,770	5,490	16,500	12,300	7,800	2,620	1,780	1,400	1,160
14.	1,570	2,680	8,040	5,690	6,550	16,500	11,900	7,540	2,620	1,680	1,400	1,220
15.	1,570	2,350	7,250	7,020	6,550	15,600	11,900	7,280	2,620	1,680	1,500	1,400
16.	1,570	2,150	6,530	7,020	6,100	14,700	12,300	7,020	2,510	1,590	1,320	1,320
17.	1,570	2,050	6,080	5,490	5,890	15,200	12,700	6,780	2,510	1,780	1,240	1,240
18.	1,570	1,960	5,870	5,120	5,890	16,500	12,700	6,550	2,400	1,680	1,240	1,240
19.	2,250	2,800	5,450	4,940	8,060	26,600	13,500	6,320	2,400	1,590	1,320	1,240
20.	2,680	14,400	5,060	4,940	7,020	27,900	13,500	6,100	2,400	1,590	1,400	1,240
21.	2,250	15,100	4,870	4,610	6,550	29,200	13,100	5,890	2,400	1,500	1,400	1,160
22.	1,870	16,300	4,690	5,300	8,060	27,200	12,700	5,890	2,290	1,500	1,500	1,160
23.	1,870	13,000	4,420	6,780	8,620	24,300	12,700	5,490	2,180	1,400	1,400	1,160
24.	1,790	17,800	4,030	14,700	12,700	20,000	12,700	5,300	2,180	1,500	1,400	1,160
25.	1,710	13,700	4,020	9,200	21,000	17,000	12,700	4,940	1,880	1,500	1,400	1,160
26.	1,870	10,100	4,020	9,200	15,600	15,200	12,700	4,770	1,960	1,500	1,320	1,240
27.	2,050	7,760	3,860	8,060	12,700	14,300	11,900	4,610	2,080	1,500	1,400	1,240
28.	2,570	6,770	3,710	7,540	12,700	12,700	11,600	4,450	2,080	1,400	1,320	1,160
29.	2,460	6,080	3,710	7,020	12,300	10,800	10,800	4,300	1,980	1,400	1,240	1,160
30.	2,800	5,250	4,340	6,780	11,600	10,500	4,000	1,880	1,880	1,400	1,080	1,160
31.	2,350	13,700	6,550	11,200	11,200	3,860	1,400	1,010	1,400	1,010	1,010	1,010
1910-11.												
1.	1,240	1,500	1,780	1,750	35,000	4,880	33,200	22,000	19,900	6,680	2,100	1,270
2.	1,160	1,400	1,780	1,750	24,400	5,930	37,700	22,000	22,000	6,170	2,010	1,270
3.	1,160	1,320	4,300	1,750	22,800	5,930	39,500	22,000	22,800	6,170	2,010	1,350
4.	1,240	1,320	3,860	1,750	17,000	9,580	39,500	27,800	22,800	5,930	1,920	1,270
5.	1,160	1,320	3,600	1,750	14,600	10,900	41,500	31,400	22,000	6,700	1,920	1,270
6.	1,240	1,240	2,740	1,750	12,400	16,400	65,100	30,500	22,000	5,480	1,830	1,350
7.	1,160	1,240	2,620	1,750	11,400	41,500	48,500	26,200	22,000	5,270	1,830	1,350
8.	1,240	1,880	2,740	1,670	10,000	24,400	39,500	23,600	22,000	5,070	1,830	1,350
9.	1,080	1,680	8,340	1,670	8,800	17,500	36,800	22,000	19,300	4,700	1,750	1,350
10.	1,080	1,590	8,060	2,100	8,450	15,200	35,900	21,200	19,300	4,700	1,750	1,270
11.	1,160	1,680	8,060	2,200	11,900	13,000	28,700	21,200	19,300	4,360	1,750	1,270
12.	2,180	1,980	7,280	2,640	8,800	11,400	22,800	22,000	19,300	4,050	1,750	1,270
13.	1,980	1,980	5,690	3,900	10,400	10,400	19,300	22,800	18,700	3,900	1,590	1,350
14.	1,780	1,780	4,610	6,420	8,450	10,000	17,500	22,000	18,700	3,760	1,510	1,350
15.	1,160	1,590	3,730	4,880	7,520	10,000	15,800	21,200	17,000	3,620	1,510	1,350
16.	1,400	1,160	3,220	2,990	6,680	10,000	15,800	20,600	15,800	3,490	1,670	1,430
17.	1,400	1,500	2,860	2,530	6,420	10,400	17,000	18,700	15,800	3,490	1,510	1,350
18.	1,160	2,080	2,740	2,310	6,420	10,900	15,700	18,100	15,200	3,490	1,510	1,270
19.	1,010	1,780	2,620	2,100	6,170	11,400	22,000	19,300	14,600	3,230	1,510	1,270
20.	1,120	1,680	2,400	18,160	5,990	12,400	22,000	18,700	13,500	3,230	1,670	1,200
21.	1,200	1,590	2,510	7,230	5,930	13,500	22,000	19,300	13,000	2,990	1,670	1,200
22.	1,010	1,680	2,290	6,680	5,450	15,800	22,800	22,000	10,900	2,870	1,590	1,270
23.	1,160	1,590	2,180	5,270	5,480	17,000	26,200	24,400	9,580	2,640	1,510	1,270
24.	1,080	3,100	2,080	11,400	5,480	19,900	30,500	25,300	8,800	2,640	1,510	1,350
25.	940	4,610	2,080	20,600	5,270	20,600	35,000	22,000	8,130	2,640	1,750	1,270
26.	1,240	3,100	1,880	14,600	5,070	19,900	37,700	19,900	8,130	2,420	1,490	1,200
27.	1,240	2,510	1,980	9,580	4,880	19,900	35,000	10,300	7,520	2,420	1,490	1,670
28.	1,010	2,080	1,880	17,500	4,700	20,600	30,500	19,300	7,230	2,310	1,350	1,270
29.	1,500	2,080	1,880	11,400	4,700	22,800	24,400	19,900	6,950	2,200	1,590	1,270
30.	1,500	1,880	1,780	32,300	4,700	27,000	22,000	19,900	6,950	2,100	1,350	1,350
31.	1,500	1,500	1,880	75,400	30,500	30,500	21,200	21,200	2,100	1,270	1,270	1,270

Daily discharge, in second-feet, of Feather River at Oroville, Cal., for 1902-1912—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1911-12.												
1.....	1,200	1,270	1,270	1,750	3,490	2,010	3,230	8,130	7,820			
2.....	1,270	1,430	1,270	1,750	3,490	2,420	3,230	7,520	7,820			
3.....	1,270	1,430	1,270	1,670	2,870	2,200	4,200	7,520	7,520			
4.....	1,270	1,510	1,270	1,750	2,870	2,200	4,200	6,950	7,230			
5.....	1,350	1,430	1,200	1,670	2,750	2,640	4,530	6,950	6,950			
6.....	1,270	1,590	1,350	1,670	2,870	10,900	4,530	6,950	6,680			
7.....	1,270	1,060	1,350	1,510	2,750	7,520	4,530	8,130	5,700			
8.....	1,270	1,130	1,430	1,590	3,110	5,700	4,530	8,800	4,880			
9.....	1,510	1,270	1,350	1,590	3,110	4,700	5,270	9,180	4,700			
10.....	1,510	2,100	1,430	2,010	2,870	4,530	5,700	9,580	4,530			
11.....	1,430	2,420	1,350	2,750	3,110	4,360	5,700	9,580	4,700			
12.....	1,350	1,750	1,350	2,640	3,110	3,620	4,530	9,580	4,700			
13.....	1,270	1,670	1,350	2,750	2,870	5,270	4,200	9,180	4,700			
14.....	1,350	1,750	1,350	2,530	3,110	4,530	4,050	9,180	4,530			
15.....	1,270	1,670	1,430	2,420	3,110	3,620	3,900	9,180	4,360			
16.....	1,270	2,100	1,430	2,640	2,750	3,360	3,900	8,800	4,050			
17.....	1,270	1,750	1,590	3,110	2,750	3,110	3,900	8,130	3,900			
18.....	1,270	1,670	1,510	3,110	2,870	3,360	4,050	7,820	3,960			
19.....	1,200	1,670	1,510	4,050	2,750	3,360	3,620	7,520	3,760			
20.....	1,130	1,830	1,510	4,050	2,420	3,360	3,490	7,230	3,620			
21.....	1,130	1,590	1,430	4,050	2,420	3,230	3,490	8,130	3,360			
22.....	1,510	1,510	1,510	3,760	2,200	3,230	3,760	7,520	2,750			
23.....	1,270	1,510	1,510	2,010	2,200	3,230	3,110	7,230	2,530			
24.....	1,670	1,510	1,510	2,010	2,310	3,230	2,990	6,950	2,530			
25.....	1,430	1,350	1,430	2,100	2,100	3,230	3,620	6,950	2,420			
26.....	1,430	1,510	1,430	16,400	2,100	3,620	4,360	9,180	2,200			
27.....	1,350	1,430	1,430	12,400	2,310	4,050	3,620	10,000	2,010			
28.....	1,350	1,270	1,590	4,700	2,420	4,360	3,620	8,800	1,830			
29.....	1,350	1,270	1,590	4,050	2,100	4,700	4,360	8,800	1,750			
30.....	1,350	1,430	1,590	3,760	.....	4,700	7,230	8,800	1,590			
31.....	1,430	.....	1,670	3,760	.....	3,620	.....	8,130	.....			

NOTE.—Daily discharge 1902 to 1912 determined from well-defined rating curves applicable as follows: Jan. 1, 1902, to Dec. 31, 1905; Jan. 1, 1906, to Mar. 25, 1907; Mar. 26 to Dec. 31, 1907; Jan. 1 to May 31, 1908; June 1, 1908, to Jan. 1, 1909; Jan. 2 to Dec. 31, 1909; Jan. 1 to Dec. 31, 1910; and Jan. 1, 1911, to June 30, 1912.

Monthly discharge of Feather River at Oroville, Cal., for 1902-1912.

[Drainage area, 3,640 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.....	2,490	2,040	1,980	0.544	0.63	122,000	C.
February.....	36,400	2,040	16,800	4.62	4.81	933,000	B.
March.....	20,000	6,880	9,970	2.74	3.16	593,000	B.
April.....	38,100	7,920	16,700	4.59	5.12	994,000	B.
May.....	13,700	8,490	10,700	2.94	3.39	658,000	B.
June.....	9,940	3,010	5,650	1.55	1.73	336,000	B.
July.....	3,010	1,570	2,190	.602	.69	135,000	B.
August.....	1,570	1,290	1,410	.387	.45	86,700	C.
September.....	1,290	1,170	1,200	.330	.37	71,400	C.
The period.....						3,930,000	
1902-3.							
October.....	3,400	1,170	1,420	.390	.45	87,300	C.
November.....	12,400	1,430	3,530	.970	1.08	210,000	B.
December.....	21,000	1,500	5,890	1.62	1.87	362,000	B.
January.....	28,200	3,010	7,390	2.03	2.34	454,000	C.
February.....	8,680	3,920	5,240	1.44	1.50	201,000	B.
March.....	93,000	4,180	11,900	3.27	3.77	732,000	B.
April.....	42,600	α14,000	18,900	5.19	5.79	1,120,000	B.
May.....	α13,700	6,180	9,430	2.59	2.99	580,000	C.
June.....	6,640	2,900	4,270	1.17	1.30	254,000	B.
July.....	2,840	1,900	2,280	.626	.72	140,000	B.
August.....	1,960	1,720	1,810	.497	.57	111,000	C.
September.....	1,640	1,570	1,590	.437	.49	94,600	C.
The year.....	93,000	1,170	6,140	1.69	22.87	4,440,000	

α Estimated.

Monthly discharge of Feather River at Oroville, 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.	
<b>1903-4.</b>							
October	2,440	1,640	1,770	0.486	0.56	109,000	C.
November	83,000	1,640	19,700	5.41	6.04	1,170,000	B.
December	9,080	3,010	4,180	1.15	1.33	257,000	B.
January	4,940	2,900	3,430	.942	1.09	211,000	A.
February	94,000	3,010	28,000	7.69	8.29	1,610,000	B.
March	95,000	23,200	39,800	10.9	12.57	2,450,000	B.
April	40,400	15,200	24,700	6.79	7.58	1,470,000	B.
May	24,600	13,400	18,600	5.11	5.89	1,140,000	B.
June	13,200	4,160	7,880	2.16	2.41	469,000	A.
July	4,100	α 2,260	3,050	.838	.97	188,000	A.
August	α 2,220	1,880	2,010	.552	.64	124,000	B.
September	5,220	1,540	2,260	.621	.69	134,000	B.
The year	95,000	1,540	12,900	3.55	48.06	9,330,000	
<b>1904-5.</b>							
October	26,900	1,960	4,290	1.18	1.36	264,000	B.
November	3,450	2,310	2,750	.755	.84	164,000	B.
December	68,400	2,400	6,230	1.71	1.97	383,000	A.
January	25,400	3,230	10,400	2.86	3.30	640,000	A.
February	22,300	6,100	10,200	2.80	2.92	566,000	A.
March	28,200	8,110	14,300	3.93	4.53	879,000	A.
April	11,800	5,300	10,100	2.77	3.09	601,000	A.
May	9,180	6,480	7,630	2.10	2.42	469,000	A.
June	6,100	2,310	4,220	1.16	1.29	251,000	A.
July	2,130	1,540	1,810	.497	.57	111,000	B.
August	1,500	1,260	1,350	.371	.43	83,000	B.
September	1,800	1,200	1,270	.349	.39	75,600	B.
The year	68,400	1,200	6,210	1.71	23.11	4,490,000	
<b>1905-6.</b>							
October	1,360	1,260	1,280	.352	.41	78,700	B.
November	1,570	1,200	1,320	.363	.40	78,600	B.
December	1,570	1,260	1,390	.382	.44	85,500	B.
January	96,300	1,240	14,500	3.98	4.59	892,000	A.
February	19,900	4,730	11,100	3.05	3.18	616,000	A.
March	53,200	9,640	21,600	5.93	6.84	1,330,000	A.
April	34,800	14,100	19,200	5.27	5.88	1,140,000	A.
May	25,300	10,300	17,500	4.81	5.54	1,080,000	A.
June	26,000	7,260	13,800	3.79	4.23	821,000	A.
July	7,330	α 2,960	5,240	1.44	1.66	322,000	A.
August			α 2,490	.684	.79	153,000	C.
September	α 2,100	1,920	1,970	.541	.60	117,000	C.
The year			9,280	2.55	34.56	6,710,000	
<b>1906-7.</b>							
October	1,920	1,920	1,920	.527	.61	118,000	C.
November	7,560	1,920	2,410	.662	.74	143,000	C.
December	43,400	1,990	7,070	1.94	2.24	435,000	B.
January	12,400	3,960	7,130	1.96	2.26	438,000	B.
February	78,500	7,640	21,500	5.91	6.15	1,190,000	B.
March	187,000	8,540	36,900	10.10	11.64	2,270,000	C.
April	42,000	25,500	29,500	8.10	9.04	1,760,000	B.
May	28,600	17,000	23,400	6.43	7.41	1,440,000	B.
June	26,000	8,940	15,200	4.18	4.66	904,000	B.
July	8,000	4,140	6,000	1.65	1.90	369,000	C.
August	3,890	1,850	2,650	.728	.84	163,000	C.
September	2,710	1,650	1,900	.522	.58	113,000	C.
The year	187,000	1,650	13,000	3.56	48.07	9,340,000	
<b>1907-8.</b>							
October	2,710	1,650	1,850	.508	.59	114,000	C.
November	2,490	1,650	1,780	.489	.55	106,000	C.
December	9,920	1,650	6,060	1.66	1.91	373,000	C.
January	16,300	1,640	6,610	1.82	2.10	406,000	C.
February	16,300	3,770	6,380	1.75	1.89	367,000	B.
March	11,200	4,750	7,250	1.99	2.29	446,000	B.
April	14,400	5,260	9,210	2.53	2.82	548,000	B.
May	9,840	7,160	8,170	2.24	2.58	502,000	B.
June	6,870	3,350	5,310	1.46	1.63	316,000	B.
July	3,200	1,920	2,320	.637	.73	143,000	B.
August	2,040	1,250	1,510	.415	.48	92,800	B.
September	1,250	1,250	1,250	.343	.38	74,400	C.
The year	16,300	1,250	4,810	1.32	17.95	3,490,000	

α Estimated.

## Monthly discharge of Feather River at Oroville, 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.	
1908-9.							
October.....	5,340	1,250	1,650	0.453	0.52	101,000	C.
November.....	4,460	1,250	1,750	.481	.54	104,000	C.
December.....	4,460	1,250	1,910	.525	.61	117,000	C.
January.....	137,000	1,920	39,900	11.0	12.7	2,450,000	B.
February.....	36,500	11,000	18,400	5.05	5.26	1,020,000	B.
March.....	22,400	11,000	13,400	3.68	4.24	824,000	B.
April.....	20,200	12,000	15,900	4.37	4.88	946,000	B.
May.....	18,600	11,000	14,000	3.85	4.44	861,000	B.
June.....	12,700	5,450	9,060	2.49	2.78	539,000	B.
July.....	5,250	2,250	3,270	.898	1.04	201,000	A.
August.....	2,150	1,570	1,800	.495	.57	111,000	A.
September.....	2,680	1,500	1,820	.500	.56	108,000	A.
The year.....	36,500	1,250	10,200	2.81	26.71	7,380,000	
1909-10.							
October.....	2,800	1,570	1,960	.538	.62	121,000	A.
November.....	17,800	1,570	5,750	1.58	1.76	342,000	B.
December.....	31,000	3,710	8,140	2.24	2.58	501,000	B.
January.....	14,700	4,610	6,750	1.85	2.13	415,000	A.
February.....	21,000	5,490	7,970	2.19	2.28	443,000	A.
March.....	29,200	11,200	17,900	4.92	5.67	1,100,000	A.
April.....	14,700	10,500	12,600	3.46	3.86	750,000	A.
May.....	9,830	3,860	6,850	1.88	2.17	421,000	A.
June.....	3,730	1,880	2,620	.720	.80	156,000	A.
July.....	1,880	1,400	1,600	.440	.51	98,400	A.
August.....	1,590	1,010	1,350	.371	.43	83,000	A.
September.....	1,400	1,010	1,170	.321	.36	69,600	A.
The year.....	29,200	1,010	6,220	1.71	23.17	4,500,000	
1910-11.							
October.....	2,180	940	1,200	.330	.38	73,800	A.
November.....	4,610	1,160	1,860	.511	.57	111,000	A.
December.....	8,340	1,780	3,400	.934	1.08	209,000	A.
January.....	75,400	1,670	8,960	2.46	2.84	551,000	
February.....	35,900	4,700	10,200	2.80	2.92	566,000	
March.....	41,500	4,880	15,800	4.34	5.00	972,000	
April.....	65,100	15,800	30,100	8.27	9.23	1,790,000	
May.....	31,400	18,100	22,100	6.07	7.00	1,360,000	
June.....	22,800	6,950	15,600	4.29	4.79	928,000	
July.....	6,680	2,100	3,870	1.06	1.22	238,000	
August.....	2,100	1,270	1,650	.453	.52	101,000	
September.....	1,670	1,200	1,310	.360	.40	78,000	
The year.....	75,400	940	9,670	2.66	35.95	6,980,000	
1911-12.							
October.....	1,670	1,130	1,330	.365	.42	81,800	
November.....	2,420	1,060	1,560	.429	.48	92,800	
December.....	1,670	1,200	1,430	.393	.45	87,900	
January.....	16,400	1,510	3,420	.940	1.08	210,000	
February.....	3,490	2,100	2,730	.750	.81	157,000	
March.....	10,900	2,010	4,000	1.10	1.27	246,000	
April.....	7,230	2,990	4,190	1.15	1.28	249,000	
May.....	10,000	6,950	8,270	2.27	2.62	508,000	
June.....	7,820	1,590	4,300	1.18	1.32	256,000	
The period.....						1,800,000	

NOTE.—During the summer of 1903 the gage was washed out and later replaced at presumably the same datum. The low-water measurement made Nov. 3, 1903, plots small of the revised curve. It is questionable whether the gage heights of this measurement is in error or not. Computations have been made on the basis of the revised curve, as it fits better the low-water measurements made in 1902 and after 1903. Monthly estimates for April, 1903, to about January, 1904, are liable to be too large. Possibly those given in Water-Supply Paper 100, p. 274, are better for this period.

HAMILTON BRANCH OF FEATHER RIVER NEAR PRATTVILLE, CAL.

This station, which was established June 12, 1905, to obtain data for studies of power available on North Fork of Feather River, is about 3 miles east of Prattville and 1¼ miles above the junction with North Fork. The drainage area above the station is 230 square miles. This station was discontinued July 1, 1907.

The channel is straight and has a shale bottom subject to slight change.

Discharge measurements are made from a boat. The datum of the staff gage remained unchanged.

The highest daily discharge is estimated from the records below Prattville as 4,100 second-feet, March 19, 1907. The lowest weekly flow recorded was 168 second-feet in December, 1905, and January 1 to 7, 1906, but the stage was probably lower in 1908.

The following records of discharge measurements and gage heights were furnished by Viele, Blackwell & Buck for the Great Western Power Co., which maintained the station since its establishment.

*Discharge measurements of Hamilton Branch of Feather River near Prattville, Cal., in 1905-6.*

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>
June 12	R. W. Armstrong..	3.08	394	Jan. 19	L. J. Bevan.....	3.60	567
23	W. F. Spear.....	2.74	243	Feb. 28	.....do.....	3.92	745
July 3	.....do.....	2.62	215	Apr. 12	.....do.....	4.43	1,017
28	.....do.....	2.56	209	May 15	.....do.....	5.21	1,494
Aug. 15	L. J. Bevan.....	2.56	211	July 7	.....do.....	3.19	439
Sept. 4	.....do.....	2.55	210	Aug. 8	.....do.....	2.77	294
Dec. 17	.....do.....	2.40	177				

*Daily gage height, in feet, of Hamilton Branch of Feather River near Prattville, Cal., for 1905-1907.*

Day.	June.	July.	Aug.	Sept.	Day.	June.	July.	Aug.	Sept.
1905.					1905.				
1.....		2.66	2.56	2.55	16.....	2.58	2.57	2.53	2.53
2.....		2.64	2.56	2.55	17.....	2.91	2.58	2.56	2.53
3.....		2.64	.....	2.55	18.....	.....	.....	2.57	2.53
4.....		2.63	2.56	2.55	19.....	2.84	2.58	2.58	2.53
5.....		2.62	2.55	2.55	20.....	2.82	2.58	2.57	2.52
6.....		2.63	2.56	.....	21.....	2.80	2.60	2.58	2.52
7.....		2.61	2.56	2.54	22.....	2.76	2.58	2.59	2.52
8.....		2.60	2.55	2.54	23.....	2.74	2.59	2.58	2.52
9.....		2.59	2.56	2.54	24.....	2.72	2.62	2.58	2.52
10.....		2.59	2.56	2.54	25.....	2.70	2.61	2.56	2.52
11.....		2.58	2.55	2.53	26.....	2.70	2.60	2.56	2.52
12.....		2.58	2.56	2.53	27.....	2.67	2.60	2.57	2.50
13.....		2.58	2.56	2.53	28.....	2.67	2.57	2.56	2.54
14.....		2.57	2.55	2.53	29.....	2.65	2.56	2.55	2.54
15.....		2.57	2.56	2.53	30.....	2.62	2.56	2.55	2.52
					31.....	.....	2.56	2.56	.....



Daily discharge, in second-feet, of Hamilton Branch of Feather River near Prattville, Cal., for 1905-1907.

Day.	June.	July.	Aug.	Sept.	Day.	June.	July.	Aug.	Sept.
1905.					1905.				
1.....		237	210	207	16.....		215	212	202
2.....		232	210	207	17.....	315	215	210	202
3.....		232	210	207	18.....	304	215	212	202
4.....		229	210	207	19.....	293	215	215	202
5.....		226	207	207	20.....	286	215	212	199
6.....		229	210	206	21.....	280	220	215	199
7.....		223	210	204	22.....	268	215	217	199
8.....		220	207	204	23.....	261	217	215	199
9.....		217	210	204	24.....	255	226	215	199
10.....		217	210	204	25.....	249	223	210	199
11.....		215	207	202	26.....	249	220	210	199
12.....		215	210	202	27.....	240	220	212	194
13.....		215	210	202	28.....	240	212	210	204
14.....		212	207	202	29.....	234	210	207	204
15.....		212	210	202	30.....	226	210	207	199
					31.....		210	210	.....

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1905-6.												
1.....	204	188	175	168	417	672	1,360	1,110	992	501	264	243
2.....	202	187	175	168	417	624	1,110	1,120	892	480	264	240
3.....	202	186	174	168	417	577	992	1,230	936	460	264	240
4.....	194	186	174	168	417	534	881	1,360	992	440	264	240
5.....	189	186	172	168	417	493	774	1,470	1,050	420	265	235
6.....	189	186	172	165	424	417	722	1,490	1,050	420	265	235
7.....	194	186	171	168	417	417	707	1,550	1,050	417	265	235
8.....	194	185	170	168	417	454	722	1,620	992	400	271	234
9.....	194	185	169	168	417	493	774	1,680	936	400	270	236
10.....	192	185	169	194	417	534	827	1,750	881	390	270	238
11.....	191	185	168	194	417	577	881	1,820	881	380	268	240
12.....	191	184	168	194	454	624	936	1,850	881	370	260	242
13.....	191	184	168	194	534	722	936	1,750	992	360	260	244
14.....	189	184	168	220	624	774	936	1,620	1,110	346	260	246
15.....	191	184	168	249	672	774	992	1,490	1,110	340	250	246
16.....	189	184	168	280	672	624	1,050	1,360	870	330	250	240
17.....	189	183	168	346	629	564	1,050	1,230	827	320	250	230
18.....	189	183	168	493	672	454	1,110	1,110	827	310	252	230
19.....	189	181	168	577	722	417	1,110	1,020	827	300	250	225
20.....	189	181	168	493	774	346	1,170	1,050	774	300	250	225
21.....	189	180	168	493	774	774	1,300	1,000	774	296	250	220
22.....	189	178	170	534	774	1,360	1,230	900	774	290	240	220
23.....	189	178	170	534	722	1,300	1,170	700	774	290	240	220
24.....	189	178	172	534	738	1,280	1,170	700	722	280	240	220
25.....	189	178	172	493	672	1,110	1,170	900	672	280	243	220
26.....	189	178	174	493	672	992	1,170	1,000	624	280	243	220
27.....	189	178	174	493	672	881	1,170	1,100	577	275	243	220
28.....	189	178	176	493	732	774	1,170	1,200	534	274	243	220
29.....	189	176	176	454	.....	1,110	1,110	1,330	534	270	243	217
30.....	189	176	178	454	.....	1,300	1,110	1,300	534	270	243	217
31.....	189	.....	178	417	.....	1,480	.....	1,110	.....	270	243	.....
1906-7.												
1.....	216	220	217	534	881	1,300	1,100	1,680	953	.....	.....	.....
2.....	216	224	217	454	1,590	1,200	1,100	1,620	953	.....	.....	.....
3.....	216	226	217	381	2,000	1,170	1,50	1,600	953	.....	.....	.....
4.....	216	220	217	346	2,500	1,170	1,050	1,600	953	.....	.....	.....
5.....	216	218	217	343	2,100	1,170	1,100	1,600	881	.....	.....	.....
6.....	216	216	217	312	1,800	1,170	1,170	1,600	900	.....	.....	.....
7.....	215	215	217	212	1,500	1,100	1,230	1,600	1,000	.....	.....	.....
8.....	215	215	217	280	1,200	1,100	1,300	1,600	1,100	.....	.....	.....
9.....	215	214	220	280	1,120	1,130	1,360	1,600	1,100	.....	.....	.....
10.....	215	212	220	280	1,100	1,050	1,490	1,600	1,200	.....	.....	.....
11.....	215	212	220	280	1,000	992	1,620	1,630	1,300	.....	.....	.....
12.....	215	212	220	255	900	881	1,750	1,620	1,200	.....	.....	.....
13.....	212	214	220	249	800	827	1,800	1,680	1,100	.....	.....	.....
14.....	212	216	220	220	700	774	2,000	1,680	1,050	.....	.....	.....
15.....	212	218	220	220	600	600	2,500	1,750	1,050	.....	.....	.....

Daily discharge, in second feet, of Hamilton Branch of Feather River near Prattville, Cal., for 1905-1907—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1906-7.												
16.....	212	220	220	194	577	468	2,400	1,750	992	.....	.....	.....
17.....	212	220	225	194	624	1,000	2,300	1,820	936	.....	.....	.....
18.....	212	220	230	220	722	2,000	2,200	1,820	881	.....	.....	.....
19.....	215	220	235	234	827	4,100	2,100	1,820	827	.....	.....	.....
20.....	215	220	240	220	1,050	3,000	2,000	1,890	827	.....	.....	.....
21.....	215	220	250	220	1,230	3,000	2,000	1,800	722	.....	.....	.....
22.....	210	220	255	220	1,300	2,000	1,960	1,500	672	.....	.....	.....
23.....	208	220	300	220	1,390	1,000	1,960	1,200	672	.....	.....	.....
24.....	206	220	400	220	1,390	1,360	1,890	1,000	624	.....	.....	.....
25.....	204	220	500	249	1,360	1,200	1,200	908	624	.....	.....	.....
26.....	200	220	600	246	1,360	1,200	1,890	908	577	.....	.....	.....
27.....	197	220	700	280	1,300	1,170	1,820	908	577	.....	.....	.....
28.....	200	220	800	312	1,300	1,170	1,820	908	577	.....	.....	.....
29.....	204	220	843	346	.....	1,100	1,750	908	556	.....	.....	.....
30.....	210	220	800	417	.....	1,100	1,750	908	556	.....	.....	.....
31.....	215	.....	750	493	.....	1,100	.....	908	.....	.....	.....	.....

NOTE.—Daily discharge for 1905-1907 computed from data furnished by the Great Western Power Co. and are based on a rating curve well defined between 170 and 1,500 second-feet. Discharge for days on which gage was not read determined by a hydrographic comparison with the station on Feather River below Prattville.

Monthly discharge of Hamilton Branch of Feather River near Prattville, Cal., for 1905-1907.

[Drainage area, 230 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.		
1905.								
June 17-30.....		315	226	264	1.15	0.60	7,330	A.
July.....		237	210	219	.952	1.10	13,500	A.
August.....		217	207	211	.917	1.06	13,000	A.
September.....		207	194	202	.878	.98	12,000	A.
1905-6.								
October.....		204	189	191	.830	.96	11,700	A.
November.....		188	176	182	.791	.88	10,800	A.
December.....		178	168	171	.743	.85	10,500	A.
January.....		577	165	333	1.45	1.67	20,500	B.
February.....		774	417	575	2.50	2.60	31,900	A.
March.....		1,480	346	757	3.29	3.79	46,500	B.
April.....		1,360	707	1,030	4.48	5.00	61,300	B.
May.....		1,850	700	1,290	5.61	6.47	79,300	A.
June.....		1,110	534	846	3.68	4.11	50,300	A.
July.....		501	270	347	1.51	1.74	21,300	A.
August.....		271	240	254	1.10	1.27	15,600	A.
September.....		246	217	231	1.00	1.12	13,700	A.
The year.....		1,850	165	517	2.25	30.47	373,000	
1906-7.								
October.....		216	197	212	.922	1.06	13,000	A.
November.....		226	212	218	.948	1.06	13,000	A.
December.....		843	217	343	1.49	1.72	21,100	A.
January.....		534	194	288	1.25	1.44	17,700	A.
February.....		2,500	577	1,220	5.30	5.52	67,800	A.
March.....		4,100	468	1,340	5.83	6.72	82,400	B.
April.....		2,500	1,050	1,710	7.43	8.29	102,000	B.
May.....		1,890	908	1,460	6.35	7.32	89,800	B.
June.....		1,300	556	877	3.81	4.25	52,200	B.
The period.....							459,000	

NOTE.—Computed by the United States Geological Survey from data furnished by the Great Western Power Co. The sum of the monthly means for this station and the one on North Fork above Prattville have been compared with those for the station below Prattville, and the ratios indicate that the values as a whole are good.

BUTT CREEK AT BUTTE VALLEY, CAL.

Butt Creek rises in the extreme western part of Plumas County and flows eastward, discharging into North Fork of Feather River about 9 miles south of Prattville. The creek is about 25 miles long, and its drainage area comprises 74 square miles. It has an approximate fall of 3,000 feet, and is well adapted for power development.

The gaging station was established June 14, 1905, about 2 miles above the mouth of the creek and 100 feet below the footbridge at the lower end of Butte Valley. The bottom of the channel is composed of coarse gravel and shifts somewhat during extreme floods.

Measurements are made by wading at low stages and from the footbridge at high water. The staff gage is nailed to a post 15 feet below the measuring section. Its datum has remained unchanged.

No discharge measurements were furnished since 1908.

Records are good, as the changes in channel conditions have been well covered by measurements.

The highest recorded daily discharge is 1,640 second-feet, January 16, 1909. The lowest recorded discharge for one week is 21.3 second-feet, August 2 to 8, 1908.

The following data have been furnished by Viele, Blackwell & Buck for the Great Western Power Co., which has maintained the station since its establishment.

*Discharge measurements of Butt Creek at Butte Valley, Cal., in 1905-1908.*

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>
June 14	R. W. Armstrong..	2.84	76	June 21	L. J. Bevan.....	3.54	179
July 18	.....do.....	2.51	42	July 24	.....do.....	2.68	57
Aug. 19	.....do.....	2.39	35	Aug. 30	W. V. Hardy.....	a 2.58	42
Sept. 9	W. E. Spear.....	2.38	30				
				1907.			
1906.				July 22	L. J. Bevan.....	2.63	61
Mar. 2	L. J. Bevan.....	3.16	136				
Apr. 27	.....do.....	4.54	365	1908.			
	.....do.....	4.75	426	Aug. 18	L. J. Bevan.....	2.18	29.4

a Interpolated between readings of observer.

NOTE.—About 5 second-feet are diverted 6 miles above this station from Butt Creek into Yellow Creek watershed.

*Daily gage height, in feet, of Butt Creek at Butte Valley, Cal., for 1905-1909.*

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1905-6. <sup>a</sup>												
1		2.38	2.55	2.85	2.7	3.42	5.15	4.3	3.94	3.06	2.61	2.57
2		2.38	2.63	2.88	2.68	3.31	4.5	4.33	3.99	3.13	2.61	
3		2.38	2.63	2.91	2.68	3.28	4.17	4.53	4.02	3.02	2.61	
4		2.38	2.61	2.94	2.68	3.25	4.02	4.65	4.42	2.98	2.60	
5		2.38	2.65	2.96	2.69	3.17	3.96	4.8	4.2	2.93	2.59	
6	2.38	2.38	2.65	2.99	2.69	3.15	4.06	4.72	4.22	2.9	2.59	
7	2.38	2.38	2.64	3.03	2.69	3.16	4.3	4.78	4.24	2.89	2.59	
8		2.38	2.63	3.03	2.71	3.24	4.38	4.7	3.87	2.87	2.59	2.57
9	2.37	2.38	2.65	3.07	2.71	3.34	4.7	4.72	3.83	2.83	2.59	
10	2.37	2.38	2.74	3.1	2.94	3.46	4.72	4.76	3.83	2.81	2.58	
11	2.38	2.38	2.77	2.76	2.95	3.73	4.35	4.65	3.79	2.79	2.6	
12	2.38	2.38	2.6	2.83	2.95	5.75	4.45	4.48	3.92	2.77	2.61	
13	2.38	2.38	2.76	2.85	2.97	5.15	4.42	4.33	3.75	2.8	2.61	2.63
14	2.38	2.38	2.77	2.93	3.25	4.3	4.41	4.34	3.68	2.78	2.61	2.61
15	2.38	2.38	2.77	2.98	3.65	4.02	4.58	4.37	3.65	2.77		2.62
16	2.38	2.38	2.72	4.66	3.3	3.78	4.7	4.0	4.18	2.75		
17	2.38	2.38	2.59	5.14	3.24	3.47	4.57	3.83	3.87	2.74		
18	2.38	2.38	2.51	7.09	3.6	3.35	4.53	3.7	3.71	2.74		
19	2.38	2.38	2.51	6.72	4.09	3.27	4.56	3.72	3.64	2.72		
20	2.38	2.45	2.59	5.45	3.75	3.27	4.73	3.7	3.39	2.72		
21	2.38	2.42	2.76	5.15	3.95	3.42	4.88	3.71	3.55	2.71		
22	2.38	2.42	2.76	5.53	3.65	4.22	4.87	3.68	3.47	2.71		2.59
23	2.38	2.44	2.73	3.16	3.55	4.4	4.63	3.67	3.4	2.69		
24	2.38	2.43	2.73	3.0	3.42	4.9	4.43	3.68	3.33	2.69		
25	2.38	2.43	2.73	2.9	3.35	4.9	4.25	3.84	3.3	2.68	2.6	
26	2.38	2.43	2.76	2.82	3.3	4.56	4.13	4.55	3.27	2.68		
27	2.38	2.44	2.71	2.81	4.09	5.54	4.12	4.5	3.22	2.67		
28	2.38	2.43	2.68	2.75	4.1	4.2	4.22	4.38	3.21	2.66		
29	2.38	2.43	2.68	2.72		4.1	4.2	4.2	3.12	2.64		2.56
30	2.38	2.45	2.67	2.7		5.0	4.28	4.1	3.09	2.62		
31	2.38		2.78	2.7		6.0		3.97		2.61		
1906-7.												
1				3.0	4.32	3.7	3.98	4.9	4.11	2.88	2.46	2.39
2				3.02	6.5	3.38	3.98	4.85	4.05	2.85	2.46	2.39
3				2.9	6.18	3.38	3.88	4.78	4.0	2.84	2.45	2.39
4				3.0	5.93	3.38	3.88	5.07	3.92	2.82	2.45	2.41
5		2.93		3.01	5.44	3.36	3.88	4.65	3.82	2.8	2.45	2.4
6	2.54			3.02	4.71	3.35	3.93	4.5	3.72	2.78	2.45	2.39
7		2.65		3.02	4.33	3.34	4.13	4.45	3.7	2.79	2.44	2.38
8			2.43	3.01	4.03	3.27	4.33	4.43	3.75	2.77	2.44	2.38
9				3.03	3.8	3.28	4.58	4.5	3.63	2.8	2.43	2.37
10		2.61	2.63	3.0	3.7	3.38	5.33	4.6	3.42	2.79	2.43	2.36
11			2.67	2.9	3.7	3.23	5.38	4.78	4.08	2.76	2.43	2.35
12			3.13	2.78	3.62	3.26	5.5	4.75	4.22	2.75	2.43	2.34
13	2.55		3.13	2.8	3.63	3.12	5.58	4.35	3.79	2.74	2.42	2.34
14			3.13	2.85	3.57	3.06	5.73	4.25	3.6	2.72	2.41	2.34
15			3.1	3.1	3.51	3.06	5.86	4.32	3.48	2.68	2.4	2.34
16			3.1	3.12	3.61	3.13	5.7	4.3	3.35	2.65	2.4	2.34
17		2.58	3.11	3.08	3.72	4.78	5.48	4.28	3.3	2.63	2.4	2.34
18			2.68	3.04	3.68	8.15	5.43	4.28	3.38	2.6	2.39	2.35
19			2.63	3.0	3.68	8.5	5.68	4.65	3.22	2.59	2.39	2.35
20	2.55		2.63	2.96	3.7	7.36	5.68	4.6	3.22	2.57	2.39	2.34
21			2.61	2.92	3.8	6.37	5.5	4.24	3.22	2.56	2.39	2.34
22			2.6	2.9	3.88	5.91	5.45	4.08	3.35	2.55	2.39	2.33
23			2.67	2.84	3.81	4.68	5.6	4.02	3.25	2.56	2.39	2.33
24			2.72	2.81	3.93	4.78	5.7	3.97	3.15	2.55	2.39	2.32
25			3.28	2.75	4.08	5.04	5.55	3.96	3.1	2.55	2.39	2.32
26			4.43	2.75	3.94	4.61	5.45	3.94	3.05	2.54	2.39	2.32
27	2.55		4.33	2.72	3.61	4.41	5.4	3.91	3.01	2.53	2.39	2.32
28			3.42	2.91	3.55	3.97	5.3	3.94	2.95	2.55	2.4	2.32
29		2.45	3.1	3.11		3.82	5.15	3.95	2.92	2.56	2.4	2.32
30				3.02		3.81	5.0	3.97	2.9	2.52	2.4	2.32
31				3.51		3.82		4.04		2.5	2.4	

<sup>a</sup>The following gage heights were also observed in 1905: June 14, 2.84 feet; Aug. 19, 2.39 feet; July 18, 2.51 feet; Sept. 9, 2.38 feet.

Daily gage height, in feet, of Butt Creek at Butte Valley, Cal., for 1905-1909—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1907-8.												
1.	2.31	2.46	2.29	3.02	2.53	2.71	3.0	3.28	2.95	2.33	2.07	2.1
2.	2.31	2.5	2.29	2.9	2.64	2.91	3.0	3.36	2.92	2.31	2.04	2.1
3.	2.31	2.49	2.3	2.8	2.53	2.86	3.07	3.26	2.86	2.29	2.01	2.1
4.	2.31	2.48	2.3	2.68	2.69	2.82	3.12	3.15	2.84	2.29	2.0	2.09
5.	2.31	2.46	2.36	2.7	2.69	2.7	3.21	3.12	2.82	2.28	2.0	2.09
6.	2.31	2.44	2.52	2.75	2.68	2.74	3.3	3.12	2.82	2.28	2.0	2.09
7.	2.31	2.43	3.28	2.72	2.67	2.75	3.15	3.14	2.82	2.27	2.0	2.12
8.	2.31	2.43	3.05	2.7	2.7	2.73	3.12	3.15	2.8	2.26	2.0	2.11
9.	2.31	2.44	2.98	2.65	2.66	2.7	3.31	3.12	2.75	2.24	2.1	2.1
10.	2.31	2.45	3.05	2.62	2.62	2.65	3.45	3.15	2.74	2.24	2.1	2.16
11.	2.32	2.45	3.21	2.61	2.65	2.7	3.62	3.11	2.73	2.23	2.1	2.16
12.	2.35	2.45	2.71	2.58	2.58	2.75	3.77	3.16	2.74	2.24	2.1	2.17
13.	2.32	2.45	2.79	2.64	2.55	2.8	3.8	3.16	2.71	2.25	2.1	2.18
14.	2.33	2.4	2.94	2.91	2.62	2.85	3.72	3.16	2.68	2.21	2.1	2.18
15.	2.32	2.38	2.6	2.81	2.58	2.95	3.8	3.36	2.66	2.18	2.1	2.19
16.	2.31	2.38	2.55	2.73	2.56	3.23	3.75	3.25	2.61	2.17	2.1	2.22
17.	2.31	2.38	2.54	2.69	2.55	3.35	3.6	3.12	2.59	2.17	2.1	2.23
18.	2.31	2.34	2.51	2.74	2.55	3.45	3.6	3.22	2.57	2.18	2.11	2.22
19.	2.31	2.32	2.52	2.74	2.55	3.33	3.58	3.45	2.55	2.18	2.11	2.2
20.	2.31	2.32	2.55	2.82	2.55	3.28	3.7	3.22	2.53	2.18	2.11	2.18
21.	2.31	2.32	2.53	2.84	2.55	3.25	3.63	3.2	2.63	2.15	2.11	2.1
22.	2.31	2.32	2.52	3.05	2.55	3.22	3.55	3.15	2.52	2.15	2.11	2.1
23.	2.32	2.32	2.53	2.9	2.59	3.23	3.5	3.11	2.47	2.15	2.11	2.1
24.	2.32	2.32	2.55	2.92	2.61	3.32	3.4	3.11	2.43	2.15	2.11	2.1
25.	2.33	2.31	2.52	2.8	2.65	3.52	3.4	3.12	2.4	2.14	2.11	2.1
26.	2.35	2.3	3.02	2.8	2.7	3.29	3.3	3.12	2.39	2.14	2.11	2.1
27.	2.35	2.3	4.25	2.72	2.72	3.23	3.29	3.08	2.37	2.13	2.11	2.1
28.	2.34	2.3	3.9	2.68	2.75	3.12	3.27	3.07	2.36	2.13	2.11	2.1
29.	2.32	2.3	3.7	2.63	2.8	3.1	3.3	3.07	2.35	2.13	2.1	2.1
30.	2.41	2.3	3.6	2.63	.....	3.15	3.33	3.0	2.34	2.11	2.1	2.1
31.	2.45	.....	3.8	2.53	.....	3.03	.....	2.98	.....	2.09	2.1	.....
1908-9.												
1.	2.1	2.13	2.13	2.21	3.2	3.05	3.3	4.13	3.4	2.5	2.27	2.22
2.	2.1	2.12	2.15	2.6	3.5	3.05	3.4	4.18	3.45	2.48	2.27	2.22
3.	2.1	2.11	2.18	3.5	3.95	3.32	3.55	4.25	3.45	2.46	2.27	2.22
4.	2.1	2.1	2.3	3.05	3.5	4.25	3.65	4.35	3.4	2.45	2.27	2.22
5.	2.1	2.1	2.32	3.75	3.45	3.8	3.48	4.45	3.35	2.43	2.27	2.22
6.	2.09	2.1	2.25	4.45	3.1	3.62	3.45	4.45	3.3	2.42	2.27	2.22
7.	2.09	2.1	2.2	4.05	3.34	3.40	3.5	4.25	3.2	2.41	2.27	2.22
8.	2.1	2.1	2.19	5.85	3.55	3.23	3.55	4.2	3.14	2.4	2.26	2.23
9.	2.1	2.1	2.18	4.8	3.35	3.05	3.62	4.15	3.07	2.39	2.26	2.22
10.	2.1	2.1	2.17	4.65	3.05	3.2	3.65	4.12	3.05	2.38	2.26	2.22
11.	2.1	2.1	2.19	4.52	3.3	3.15	3.7	4.0	3.0	2.37	2.26	2.21
12.	2.1	2.1	2.2	3.0	3.7	3.15	3.82	3.9	2.98	2.37	2.26	2.21
13.	2.1	2.1	2.21	3.5	3.7	3.15	4.1	3.76	2.95	2.37	2.25	2.21
14.	2.15	2.1	2.2	6.55	3.45	3.2	4.3	3.75	2.93	2.37	2.25	2.21
15.	2.53	2.1	2.19	7.90	3.45	3.3	4.45	3.73	2.88	2.37	2.25	2.2
16.	2.29	2.1	2.2	8.9	3.65	3.45	4.45	3.55	2.88	2.36	2.25	2.2
17.	2.2	2.1	2.2	5.85	3.4	3.62	4.5	3.49	2.88	2.36	2.25	2.2
18.	2.13	2.1	2.2	6.0	4.02	3.6	4.57	3.49	2.95	2.36	2.25	2.2
19.	2.13	2.1	2.2	5.85	3.85	3.48	5.05	3.49	2.9	2.36	2.25	2.2
20.	2.12	2.2	2.21	6.7	3.65	3.43	4.63	3.49	2.85	2.35	2.25	2.2
21.	2.11	2.47	2.2	6.85	3.65	3.45	4.25	3.51	2.8	2.35	2.24	2.21
22.	2.11	2.38	2.19	5.9	3.53	3.45	4.2	3.58	2.75	2.34	2.24	2.22
23.	2.11	2.48	2.14	5.1	3.6	3.3	4.17	3.45	2.73	2.34	2.24	2.23
24.	2.11	2.35	2.14	4.1	3.25	3.2	4.15	3.4	2.68	2.33	2.24	2.24
25.	2.1	2.2	2.14	4.25	3.25	3.18	4.2	3.35	2.67	2.33	2.24	2.25
26.	2.1	2.14	2.14	4.16	3.12	3.18	4.31	3.4	2.65	2.32	2.24	2.26
27.	2.1	2.1	2.14	3.75	3.02	3.17	4.4	3.65	2.62	2.31	2.23	2.27
28.	2.1	2.1	2.14	3.55	3.02	3.16	4.28	3.54	2.58	2.3	2.23	2.3
29.	2.12	2.1	2.14	3.43	.....	3.38	4.2	3.4	2.55	2.28	2.23	2.4
30.	2.27	2.12	2.15	3.47	.....	3.17	4.13	3.27	2.53	2.28	2.23	2.37
31.	2.14	.....	2.16	3.53	.....	3.25	.....	3.35	.....	2.28	2.23	.....

Daily gage height, in feet, of Butt Creek at Butte Valley, Cal., for 1905-1909—Continued.

Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.
1909.			1909.				1909.				
1.....	2.38	2.47	3.1	11.....	2.27	2.48	3.35	21.....	2.61	4.85	2.59
2.....	2.45	2.45	2.32	12.....	2.26	2.43	3.3	22.....	2.42	3.40	2.58
3.....	2.45	2.44	2.8	13.....	2.25	2.43	3.1	23.....	2.47	3.35	2.57
4.....	2.45	2.43	2.9	14.....	2.24	2.44	2.78	24.....	2.44	3.75	2.56
5.....	2.44	2.40	2.95	15.....	2.23	2.45	2.7	25.....	2.3	3.2	2.55
6.....	2.43	2.42	3.2	16.....	2.21	2.45	2.7	26.....	2.37	2.85	2.55
7.....	2.42	2.45	3.1	17.....	2.22	2.45	2.7	27.....	2.37	2.74	2.55
8.....	2.3	2.43	3.35	18.....	2.22	2.43	2.6	28.....	2.45	2.68	2.6
9.....	2.39	2.45	3.85	19.....	2.35	2.55	2.6	29.....	2.5	2.65	2.65
10.....	2.28	2.55	3.3	20.....	2.67	3.25	2.59	30.....	2.52	2.63	2.75
								31.....	2.47	.....	2.85

NOTE.—Observations furnished by Great Western Power Co.

Daily discharge, in second-feet, of Butt Creek at Butte Valley, Cal., for 1905-1910.<sup>a</sup>

Day.	June.	July.	Aug.	Sept.	Day.	June.	July.	Aug.	Sept.
1905.					1905.				
1.....		61	38	32	16.....	75	46	33	32
2.....		60	37	32	17.....	74	44	32	32
3.....		59	37	32	18.....	73	42	32	32
4.....		58	37	32	19.....	72	42	32	32
5.....		57	36	32	20.....	71	42	32	32
6.....		56	36	32	21.....	70	41	32	32
7.....		55	36	32	22.....	69	41	32	32
8.....		54	35	32	23.....	68	41	32	32
9.....		53	35	32	24.....	67	40	32	32
10.....		52	35	32	25.....	66	40	32	32
11.....		51	34	32	26.....	65	40	32	32
12.....		50	34	32	27.....	64	39	32	32
13.....		49	34	32	28.....	63	39	32	32
14.....		79	48	33	29.....	62	39	32	32
15.....		77	47	33	30.....	61	38	32	32
					31.....		38	32	.....

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1905-6.												
1.....	32	32	46	80	57	170	508	326	261	110	47	43
2.....	32	32	53	84	55	152	366	332	270	121	47	43
3.....	32	32	53	88	55	147	304	372	276	103	47	43
4.....	32	32	51	93	55	142	276	398	350	97	46	43
5.....	32	32	56	95	56	128	265	431	290	89	45	43
6.....	32	32	56	100	56	124	283	413	312	84	45	43
7.....	32	32	54	106	56	126	323	427	315	83	45	43
8.....	32	32	53	106	58	140	342	409	249	80	45	43
9.....	32	32	56	112	58	140	409	413	241	74	45	44
10.....	32	32	66	117	90	177	413	422	241	71	44	45
11.....	32	32	69	68	92	223	336	398	234	69	46	47
12.....	32	32	50	77	92	656	356	362	256	66	47	48
13.....	32	32	68	80	95	508	350	332	227	70	47	49
14.....	32	32	69	91	142	326	348	334	215	67	47	47
15.....	32	32	69	98	210	276	383	340	210	66	47	48
16.....	32	32	63	400	150	232	409	272	304	64	47	48
17.....	32	32	49	506	140	179	381	241	249	62	47	48
18.....	32	32	42	1,240	201	158	372	218	220	62	47	47
19.....	32	32	42	921	288	145	379	222	208	60	47	47
20.....	32	37	49	580	227	145	416	218	165	60	46	46
21.....	32	35	68	508	263	170	449	220	192	58	46	46
22.....	32	35	68	600	210	412	447	215	179	58	46	45
23.....	32	36	65	128	192	346	394	211	167	56	46	45
24.....	32	35	65	100	170	453	352	213	155	56	46	45
25.....	32	35	65	84	158	453	317	243	150	55	46	44

<sup>a</sup> See note, p. 229.

Daily discharge, in second-feet, of Butt Creek at Butte Valley, Cal., for 1905-1910—Contd.

Day.	Oct	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1905-6.												
26.....	32	35	68	73	150	378	295	376	145	55	46	44
27.....	32	36	62	71	288	602	294	366	136	54	46	43
28.....	32	35	59	64	290	308	412	342	135	53	45	43
29.....	32	35	59	60	.....	290	308	308	119	50	45	42
30.....	32	37	58	57	.....	475	322	290	114	48	44	42
31.....	32	.....	71	57	.....	722	.....	267	.....	47	44	.....
1906-7.												
1.....	42	67	32	100	330	218	268	453	292	91	47	42
2.....	42	73	32	103	860	164	268	442	281	88	47	42
3.....	41	78	32	84	771	164	250	427	272	86	46	42
4.....	41	84	30	100	703	164	250	490	258	84	46	44
5.....	41	89	30	102	578	160	250	398	240	81	46	43
6.....	40	70	30	103	411	158	259	366	222	79	46	42
7.....	40	52	30	103	332	157	295	356	218	80	46	42
8.....	40	50	30	102	277	145	332	352	227	77	46	42
9.....	40	49	40	105	236	147	383	366	206	81	45	41
10.....	41	47	49	100	218	164	551	387	170	80	45	40
11.....	41	47	54	84	218	138	563	427	286	76	45	40
12.....	41	47	121	67	204	143	592	420	312	75	45	39
13.....	41	46	121	70	206	119	612	336	234	74	44	39
14.....	41	46	121	77	196	110	651	317	201	71	44	39
15.....	41	45	116	116	186	110	685	330	181	67	43	39
16.....	41	45	116	119	203	121	643	326	160	64	43	39
17.....	41	44	118	113	222	427	587	322	152	62	43	39
18.....	41	43	55	106	215	1,390	575	322	164	59	42	40
19.....	41	42	49	100	215	1,500	638	398	140	58	42	40
20.....	41	41	49	94	218	1,130	638	387	140	56	42	39
21.....	41	40	47	87	236	824	592	315	140	55	42	39
22.....	41	39	46	84	250	698	580	286	160	54	42	38
23.....	41	38	54	76	238	405	617	276	144	55	42	38
24.....	41	37	60	71	259	427	643	267	130	54	42	37
25.....	41	36	147	64	286	484	604	265	122	54	42	37
26.....	41	35	352	64	261	389	580	261	115	54	42	37
27.....	41	34	332	60	203	348	568	256	109	53	42	37
28.....	46	33	170	86	192	267	544	261	101	54	43	37
29.....	51	32	116	118	.....	240	508	263	97	55	43	37
30.....	57	32	111	103	.....	238	475	267	94	52	43	37
31.....	62	.....	105	186	.....	240	.....	279	.....	50	43	.....
1907-8.												
1.....	37	47	35	111	53	70	108	149	101	38	24	25
2.....	37	50	35	94	63	95	108	161	97	37	23	25
3.....	37	49	36	81	85	89	118	146	89	35	21	25
4.....	37	49	36	67	68	84	125	130	86	35	21	25
5.....	37	47	40	69	68	69	138	125	84	35	21	25
6.....	37	46	52	75	67	74	152	125	84	35	21	25
7.....	37	45	149	71	66	75	130	128	84	34	21	26
8.....	37	45	115	69	69	75	125	130	81	34	21	26
9.....	37	46	105	64	65	69	154	125	75	32	25	25
10.....	37	46	115	61	61	64	176	130	74	32	25	28
11.....	37	46	138	60	64	69	204	124	73	32	25	28
12.....	46	46	70	57	57	75	231	131	74	32	25	28
13.....	37	46	80	63	54	81	226	131	70	33	25	29
14.....	38	43	100	95	61	88	222	131	67	31	25	29
15.....	37	42	59	82	57	101	236	161	65	29	25	30
16.....	37	42	54	73	55	142	227	144	60	28	25	31
17.....	37	42	54	68	54	160	201	125	58	28	25	32
18.....	37	39	51	74	54	176	201	140	56	29	26	31
19.....	37	37	52	74	54	156	198	176	54	29	26	30
20.....	37	37	54	84	54	149	218	140	53	29	26	29
21.....	37	37	53	86	54	144	206	137	62	28	26	25
22.....	37	37	52	115	54	140	192	130	52	28	26	25
23.....	37	37	53	94	58	142	184	124	48	28	26	25
24.....	37	37	54	97	60	155	167	124	45	28	26	25
25.....	38	37	52	81	64	187	167	125	43	27	26	25
26.....	40	36	111	81	69	150	152	125	42	27	26	25
27.....	40	36	317	71	71	142	150	119	41	26	26	25
28.....	39	36	254	67	75	125	148	118	40	26	26	25
29.....	37	36	218	62	81	122	152	118	40	26	25	25
30.....	44	36	201	62	.....	130	156	108	39	26	25	25
31.....	46	.....	236	62	.....	112	.....	105	.....	25	25	.....

Daily discharge, in second-feet, of Butt Creek at Butte Valley, Cal., for 1905-1910—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	
1908-9.													
1.....	25	26	26	31	137	115	152	295	167	50	34	31	
2.....	25	26	28	59	184	115	167	304	176	49	34	31	
3.....	25	26	29	184	263	155	192	317	176	47	34	31	
4.....	25	25	36	115	184	317	210	336	167	46	34	31	
5.....	25	25	37	227	176	236	181	356	160	45	34	31	
6.....	25	25	33	356	122	204	176	356	152	44	34	31	
7.....	25	25	30	281	158	167	184	317	137	44	34	31	
8.....	25	25	30	682	192	142	192	308	128	43	34	32	
9.....	25	25	29	431	160	115	204	299	118	42	34	31	
10.....	25	25	28	398	115	137	210	294	115	42	34	31	
11.....	25	25	30	370	152	130	218	272	108	41	34	31	
12.....	25	25	30	108	218	130	240	254	105	41	34	31	
13.....	25	25	31	184	218	130	290	229	101	41	33	31	
14.....	28	25	30	874	176	137	326	227	98	41	33	31	
15.....	53	25	30	1,300	176	152	356	223	91	41	33	30	
16.....	35	25	30	1,640	210	176	356	192	91	40	33	30	
17.....	30	25	30	682	167	204	366	182	91	40	33	30	
18.....	26	25	30	722	276	201	381	182	101	40	33	30	
19.....	26	25	30	682	245	181	486	182	94	40	33	30	
20.....	26	30	31	918	210	172	394	182	88	40	33	30	
21.....	26	48	30	964	210	176	317	186	81	40	32	31	
22.....	26	42	30	695	189	176	308	198	75	39	32	31	
23.....	26	49	27	497	201	152	303	176	73	39	32	32	
24.....	26	40	27	290	144	137	299	167	67	38	32	32	
25.....	25	30	27	317	144	134	308	160	66	38	32	33	
26.....	25	27	27	301	125	134	328	167	64	37	32	34	
27.....	25	25	27	227	111	132	346	210	61	37	32	34	
28.....	25	25	27	192	111	131	322	191	57	36	32	36	
29.....	26	25	27	172	.....	.....	164	308	167	54	35	32	43
30.....	34	26	28	179	.....	.....	132	295	148	53	35	32	41
31.....	27	.....	28	189	.....	.....	144	.....	160	.....	35	.....	.....
1909-10. <sup>a</sup>													
1.....	42	48	122	88	59	157	172	111	35	27.6	25.4	26	
2.....	46	46	37	87	58	188	179	94	34.5	27.8	25.6	25.6	
3.....	46	46	81	81	55	204	182	108	34	27.6	25.6	25.4	
4.....	46	45	94	79	54	204	179	107	33.8	27.6	25.6	25.4	
5.....	46	43	101	77	52	195	179	101	33	27.6	25.6	25.4	
6.....	45	44	137	75	53	185	181	87	33	27.4	25.6	25.4	
7.....	44	46	122	74	57	179	181	81	33	27.4	25.6	25.6	
8.....	36	45	160	73	60	179	185	75	32.8	27.2	25.6	25.6	
9.....	42	46	245	71	62	191	187	77	32.5	27.1	25.6	25.4	
10.....	35	54	152	70	55	200	187	88	32.5	27.1	25.6	25.4	
11.....	34	49	160	70	57	200	232	76	32.3	26.5	26	25.4	
12.....	34	45	152	63	61	204	187	74	32.3	26.5	26	25.6	
13.....	33	45	122	64	62	220	178	71	32	26	26	26	
14.....	32	46	79	64	65	232	170	66	31.7	26	26.5	26	
15.....	32	46	69	63	65	210	161	61	31.2	26.5	26.5	26.1	
16.....	31	46	60	66	68	191	167	58	30.8	26	26.5	28.6	
17.....	41	46	69	66	69	211	169	55	30.4	25.6	26.5	28.5	
18.....	31	45	59	66	64	255	173	52	30	25.6	26.5	27.4	
19.....	40	54	59	62	60	417	173	50	29.3	25.6	27.1	27.1	
20.....	66	144	58	58	60	475	176	49	29.3	25.6	27.1	27.1	
21.....	60	442	58	58	62	334	172	48	29.3	25.4	27.1	26.5	
22.....	44	167	57	57	71	365	162	47	28.9	25.4	26.5	26.5	
23.....	48	160	56	53	61	272	155	44	28.9	25.4	27.1	26.5	
24.....	46	227	55	49	94	212	148	46	28.5	25.4	27.1	26	
25.....	36	137	54	49	204	206	134	45	28.5	25.4	27.1	26	
26.....	41	88	54	51	132	180	124	41	28.1	25.4	26.5	26.5	
27.....	41	74	54	55	108	165	120	41	28.1	25.4	26.5	27.1	
28.....	46	67	59	58	112	153	117	41	28.1	25.4	26.5	26.5	
29.....	50	64	64	62	.....	.....	154	45	28.1	25.6	26.5	26	
30.....	52	62	75	65	.....	.....	158	38	27.8	25.4	26.5	25.6	
31.....	48	.....	88	60	.....	.....	167	37	.....	25.4	26.5	.....	

<sup>a</sup> Daily discharge for 1910 furnished by the Great Western Power Co.

Daily discharge, in second-feet, of Butt Creek at Butte Valley, Cal., for 1905-1910—Contd.

Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.
1910.			1910.			1910.					
1.....	26.1	26	34	11.....	27.8	32	140	21.....	26.2	30	37
2.....	26.1	26	33	12.....	28	35	94	22.....	26.2	31	36
3.....	26.1	26	81	13.....	28	29	52	23.....	26.1	32	36
4.....	26.1	26	58	14.....	27.2	28	65	24.....	26.1	67	36
5.....	26.1	26	44	15.....	26.1	28	42	25.....	26.1	85	34
6.....	26.1	26	39	16.....	26.1	29	41	26.....	26.1	65	33
7.....	26.1	26	37	17.....	26.1	30	40	27.....	26.1	47	33
8.....	26.1	27	44	18.....	26.2	32	39	28.....	26.1	46	32
9.....	26.1	29	167	19.....	26.2	29	37	29.....	26.1	34	33
10.....	27	29	132	20.....	26.2	30	37	30.....	26.2	34	34
								31.....	26.2		34

NOTE.—Daily discharge for 1905 to 1909 determined from rating curves applicable as follows: June 14, 1905, to Jan. 18, 1906 (well defined between 33 and 430 second-feet); Jan. 19, 1906, to Mar. 18, 1907 (well defined between 41 and 430 second-feet); Mar. 19, 1907, to Dec. 31, 1909 (fairly well defined between 25 and 430 second-feet). Discharge interpolated for days when gage was not read.

Monthly discharge of Butt Creek near Butte Valley, Cal., for 1905-1910.

[Drainage area, 73 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 14-30.....	79	61	69.2	0.948	0.60	2,330	B.
July.....	61	38	47.2	.647	.75	2,900	B.
August.....	38	32	33.6	.460	.53	2,070	B.
September.....	32	32	32.0	.438	.49	1,900	B.
1905-6.							
October.....	32	32	32.0	.438	.50	1,970	A.
November.....	37	32	33.3	.456	.51	1,980	A.
December.....	71	42	58.8	.805	.93	3,620	A.
January.....	1,240	57	221	3.03	3.49	13,600	A.
February.....	290	55	141	1.93	2.01	7,830	A.
March.....	722	124	287	3.93	4.53	17,600	A.
April.....	508	265	360	4.93	5.50	21,400	A.
May.....	431	211	320	4.38	5.05	19,700	A.
June.....	350	114	220	3.01	3.36	13,100	A.
July.....	121	47	69.3	.949	1.09	4,260	A.
August.....	47	44	45.9	.629	.73	2,820	A.
September.....	49	42	44.9	.615	.69	2,670	A.
The year.....	1,240	32	153	2.09	28.39	111,000	
1906-7.							
October.....	62	40	42.6	.584	.67	2,620	A.
November.....	89	32	48.7	.667	.74	2,900	A.
December.....	352	30	90.2	1.24	1.43	5,550	A.
January.....	186	60	95.1	1.30	1.50	5,850	A.
February.....	860	186	312	4.27	4.45	17,300	A.
March.....	1,500	110	367	5.03	5.80	22,600	A.
April.....	685	250	500	6.85	7.64	29,800	A.
May.....	490	256	343	4.70	5.42	21,100	A.
June.....	312	94	186	2.55	2.84	11,100	A.
July.....	91	50	67.1	.919	1.06	4,130	A.
August.....	47	42	43.8	.600	.69	2,690	A.
September.....	44	37	39.6	.542	.60	2,360	A.
The year.....	1,500	30	178	2.44	32.84	128,000	

## Monthly discharge of Butt Creek near Butte Valley, Cgl., for 1905-1910—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.....	46	37	37.9	0.519	0.60	2,330	A.
November.....	50	36	41.8	.573	.64	2,490	A.
December.....	317	35	97.8	1.34	1.54	6,010	A.
January.....	115	57	76.5	1.05	1.21	4,700	A.
February.....	81	53	62.6	.858	.93	3,600	A.
March.....	187	64	113	1.55	1.79	6,950	A.
April.....	236	108	173	2.37	2.64	10,300	A.
May.....	176	105	132	1.81	2.09	8,120	A.
June.....	101	39	64.6	.885	.99	3,840	A.
July.....	38	25	30.4	.416	.48	1,870	A.
August.....	26	21	24.5	.336	.39	1,510	A.
September.....	32	25	26.7	.366	.41	1,590	A.
The year.....	317	21	73.4	1.01	13.71	53,300	
1908-9.							
October.....	53	25	27.1	.371	.43	1,670	A.
November.....	49	25	28.2	.386	.43	1,680	A.
December.....	37	26	29.5	.404	.47	1,810	A.
January.....	1,640	31	460	6.30	7.26	28,300	A.
February.....	276	111	178	2.44	2.54	9,890	A.
March.....	317	115	159	2.18	2.51	9,780	A.
April.....	486	152	280	3.84	4.28	16,700	A.
May.....	356	148	233	3.19	3.68	14,300	A.
June.....	176	53	104	1.42	1.58	6,190	A.
July.....	50	35	40.8	.559	.64	2,510	A.
August.....	34	32	33.0	.452	.52	2,030	A.
September.....	41	30	32.1	.440	.49	1,910	A.
The year.....	1,640	25	134	1.83	24.83	96,800	
1909-10.							
October.....	66	31	42.1	.577	.67	2,590	A.
November.....	442	43	83.9	1.15	1.28	4,990	A.
December.....	245	37	91.0	1.25	1.44	5,600	A.
January.....	88	49	65.5	.898	1.04	4,030	
February.....	204	52	72.9	.999	1.04	4,050	
March.....	475	153	221	3.03	3.49	13,600	
April.....	232	111	165	2.26	2.52	9,820	
May.....	111	37	65.0	.890	1.03	4,000	
June.....	35	27.8	30.9	.423	.47	1,840	
July.....	27.8	25.4	26.3	.360	.42	1,620	
August.....	27.1	25.4	26.3	.360	.42	1,620	
September.....	28.6	25.4	26.2	.359	.40	1,560	
The year.....	475	25.4	76.3	1.05	14.22	55,300	
1910.							
October.....	28	26.1	26.4	.362	.42	1,620	
November.....	85	26	34.7	.475	.53	2,060	
December.....	167	32	52.7	.722	.83	3,240	

NOTE.—Accuracy values for 1910 are not published as the data on which these estimates were based were not furnished the U. S. Geological Survey.

## INDIAN CREEK NEAR CRESCENT MILLS, CAL.

This station, which is located about  $1\frac{1}{2}$  miles below Crescent Mills, on the Greenville-Taylorville road and about 2,000 feet below the Arlington bridge, in the SW.  $\frac{1}{4}$  sec. 25, T. 26 N., R. 9 E., was established December 14, 1905, discontinued December 31, 1909, and reestablished September 10, 1911.

The station is at the lower end of Indian Valley, above which point nearly all the important tributaries enter. Spanish Creek joins In-

dian Creek about 4 miles below the station. Water is diverted for irrigation above the station.

The bed of the stream is practically permanent at low stages. The creek is deep and the current is very sluggish.

The gage is a vertical staff; its datum has remained unchanged.

At high stages discharge measurements were made from a cable and car about 20 feet below the gage. The cable was washed out in the flood of March, 1907. Since that time measurements are made from the bridge above the gage. Low-stage measurements are made by wading.

No discharge measurements were made at this station from September 9, 1906, to September 10, 1911. The station was not visited during this time, and the accuracy of the determinations of daily and monthly discharge from 1907 to 1909 is dependent on the permanency of conditions of flow and the constancy of the elevation of the gage.

The river was over the top of the gage March 18, 1907, 6.30 a. m. The highest recorded crest gage height is 20.2 feet, 6.30 a. m., March 19, 1907; estimated discharge, 11,700 second-feet. The river was again over the top of the gage January 16, 1909. During the day the water had subsided and the observer recorded a gage height of 17 feet. It is not known which of the two crests was the higher.

The lowest weekly discharge of 12 second-feet occurred August 9 to 15, 1908.

*Discharge measurements of Indian Creek near Crescent Mills, Cal., in 1905-6.*

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>
Dec. 14	R. S. Hawley.....	1.35	76	July 3	W. V. Hardy.....	3.32	367
				11	.....do.....	2.45	268
1906.				20	.....do.....	1.70	129
May 29	Hawley and Hardy.	6.25	1,940	30	.....do.....	1.35	77
31	W. V. Hardy.....	5.56	1,580	Aug. 6	.....do.....	1.12	50
June 9	.....do.....	4.87	1,120	17	.....do.....	1.20	55
18	.....do.....	4.69	1,020	27	.....do.....	1.05	40
25	.....do.....	3.80	608	Sept. 9	.....do.....	1.10	44

*Discharge measurements of Indian Creek near Crescent Mills, 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. 10	H. D. McGlashan...	1.38	57	Feb. 1	Lasley Lee.....	2.20	174
Oct. 23	G. T. Peekema.....	1.57	85	Mar. 9	J. E. Stewart.....	2.95	279
				May 6	Lasley Lee.....	4.31	745

NOTE.—These measurements were made at different sections.

Daily gage height, in feet, of Indian Creek near Crescent Mills, Cal., for 1906-1909, 1911-12.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1906.												
1.				1.45	3.15	5.75	8.45	6.4	5.4	3.3	1.25	1.1
2.				1.5	3.0	5.15	7.35	6.5	5.4	3.3	1.15	1.1
3.				1.5	3.0	5.15	6.7	6.8	5.3	3.3	1.1	1.15
4.				1.5	2.95	4.95	6.3	6.95	5.5	3.25	1.1	1.15
5.				1.5	2.95	4.7	5.95	7.1	5.5	3.1	1.1	1.15
6.				1.5	2.95	4.45	6.0	7.0	5.35	3.0	1.1	1.15
7.				1.5	2.95	4.45	6.5	6.9	5.15	2.9	1.1	1.15
8.				1.45	2.95	4.6	7.0	6.8	4.95	2.8	1.4	1.15
9.				1.5	2.95	5.0	7.5	6.7	4.9	2.7	1.3	1.1
10.				1.5	3.0	5.3	7.7	6.75	4.9	2.6	1.2	1.1
11.				1.6	3.0	5.8	7.6	6.8	4.9	2.4	1.2	1.1
12.				2.3	3.0	7.8	7.3	6.8	4.95	2.3	1.15	1.15
13.				2.0	3.05	8.0	7.1	6.4	4.95	2.3	1.25	1.15
14.				3.95	3.4	6.9	7.1	6.2	4.8	2.2	1.35	1.15
15.				2.8	3.6	6.1	7.3	6.1	4.7	2.2	1.25	1.2
16.				7.1	4.6	5.6	7.5	5.8	4.75	2.0	1.2	1.25
17.				7.1	4.3	5.3	7.7	5.4	4.8	1.9	1.2	1.25
18.				9.22	4.35	5.0	7.6	5.1	4.65	1.9	1.2	1.25
19.				10.08	5.1	4.7	7.5	4.9	4.5	1.8	1.15	1.25
20.				7.5	5.5	4.6	7.6	4.9	4.4	1.7	1.15	1.2
21.				5.45	6.1	4.9	7.7	4.8	4.35	1.6	1.05	1.15
22.				4.5	5.7	5.9	7.8	4.7	4.25	1.55	1.05	1.15
23.				4.15	5.2	6.95	7.65	4.6	4.0	1.5	1.05	1.15
24.				3.8	4.9	8.1	7.25	4.5	3.85	1.5	1.05	1.2
25.				3.45	4.65	8.85	6.8	4.5	3.8	1.5	1.1	1.25
26.				3.4	4.5	8.9	6.35	5.1	3.75	1.45	1.2	1.3
27.				3.3	5.5	8.58	6.1	5.75	3.7	1.45	1.2	1.3
28.				3.3	6.6	7.85	6.1	6.25	3.6	1.4	1.05	1.35
29.				3.3		7.35	6.15	6.15	3.5	1.35	1.05	1.4
30.				3.2		7.25	6.3	5.75	3.4	1.35	1.1	1.4
31.				3.1		8.58		5.55		1.35	1.1	
1906-7.												
1.	1.5	1.45	1.45	3.6	6.05	5.0	7.65	7.55	5.6	3.2	1.9	1.35
2.	1.5	1.45	1.45	3.3	9.15	5.15	8.15	7.45	5.7	3.1	1.8	1.35
3.	1.45	1.55	1.5	3.4	10.2	5.15	8.1	7.35	5.7	3.0	1.75	1.4
4.	1.45	2.2	1.5	4.3	9.55	5.2	7.75	7.25	5.6	2.9	1.7	1.45
5.	1.45	2.8	1.5	4.4	9.3	5.15	7.6	7.0	5.4	2.8	1.7	1.5
6.	1.45	2.35	1.5	3.5	8.8	5.45	7.2	6.85	5.2	2.7	1.65	1.5
7.	1.45	2.0	1.55	3.25	7.9	5.35	7.4	6.75	5.05	2.65	1.6	1.5
8.	1.45	1.85	1.75	3.15	7.0	5.05	7.9	6.65	5.05	2.6	1.55	1.45
9.	1.5	1.8	1.9	3.1	6.4	4.9	8.3	6.7	4.8	2.6	1.5	1.45
10.	1.5	1.7	3.5	3.05	6.05	5.15	8.85	6.75	4.6	2.5	1.45	1.4
11.	1.5	1.65	3.5	2.95	5.8	5.0	9.6	6.9	4.75	2.45	1.45	1.4
12.	1.5	1.65	4.2	2.85	5.7	5.0	10.2	7.05	5.4	2.4	1.45	1.35
13.	1.5	1.6	3.6	2.8	5.5	4.7	10.25	6.9	5.35	2.3	1.45	1.35
14.	1.5	1.6	3.3	2.8	5.3	4.5	10.4	6.6	5.15	2.2	1.45	1.4
15.	1.5	1.6	3.0	2.75	5.2	4.4	11.6	6.3	4.85	2.2	1.4	1.4
16.	1.5	1.7	2.8	2.75	5.2	4.45	11.5	6.35	4.7	2.15	1.35	1.4
17.	1.5	1.75	2.65	2.7	5.3	7.1	10.55	6.4	4.5	2.1	1.3	1.4
18.	1.5	1.7	2.55	2.7	5.4	17.0	9.95	6.4	4.3	2.1	1.3	1.4
19.	1.5	1.6	2.45	2.65	5.4	19.7	9.7	6.55	4.15	2.0	1.3	1.4
20.	1.5	1.6	2.4	2.6	5.3	17.9	9.55	6.8	4.05	2.0	1.3	1.4
22.	1.5	1.6	2.35	2.55	5.3	14.7	9.3	6.6	4.0	1.95	1.3	1.45
23.	1.5	1.6	2.35	2.5	5.4	10.95	8.9	6.3	4.0	1.9	1.3	1.45
24.	1.5	1.6	2.5	2.5	5.45	9.0	8.8	5.95	4.0	1.85	1.3	1.45
24.	1.5	1.55	2.75	2.55	2.25	7.8	8.9	5.7	3.95	1.8	1.3	1.45
25.	1.5	1.55	4.6	2.75	5.45	7.7	8.85	5.6	3.8	1.8	1.3	1.5
26.	1.45	1.55	6.9	3.1	5.8	7.5	8.75	5.5	3.65	1.75	1.3	1.5
27.	1.45	1.5	6.85	3.25	5.5	7.3	8.55	5.45	3.55	1.8	1.3	1.5
28.	1.45	1.5	5.4	4.5	5.0	7.0	8.35	5.4	3.45	1.95	1.3	1.5
29.	1.45	1.5	4.6	4.95		6.85	8.1	5.4	3.4	2.0	1.3	1.5
30.	1.4	1.5	4.1	4.75		6.75	7.8	5.5	3.3	2.1	1.3	1.5
31.	1.4		4.2	5.15		7.15		5.5		2.0	1.35	

<sup>a</sup> Water over top of gage 6.30 a. m. During day observer recorded a gage height of 17 feet (top of gage), which is taken for mean for day. Not very reliable.

<sup>b</sup> The 6.30 a. m. reading was 20.2 feet. River height falling.

Daily gage height, in feet, of Indian Creek near Crescent Mills, Cal., for 1906-1909, 1911-12—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1907-8.												
1.....	1.5	1.8	1.7	3.5	2.8	3.4	4.4	3.95	3.4	1.75	0.8	0.8
2.....	1.5	1.8	1.7	3.3	2.75	3.35	4.15	4.05	3.35	1.7	.8	.8
3.....	1.5	1.8	1.7	3.0	2.9	3.35	4.05	4.05	3.3	1.5	.8	.8
4.....	1.55	1.8	1.8	3.1	3.1	3.3	4.3	3.9	3.25	1.45	.8	.8
5.....	1.55	1.75	2.0	2.9	3.0	3.2	4.55	3.7	3.15	1.45	.8	.8
6.....	1.5	1.75	2.5	2.65	3.0	3.15	4.8	3.6	3.05	1.45	.8	.8
7.....	1.5	1.75	3.5	2.55	3.1	3.05	4.9	3.65	3.0	1.6	.8	.8
8.....	1.45	1.75	3.3	2.65	3.25	3.0	4.45	3.7	2.95	1.55	.8	.8
9.....	1.45	1.7	2.8	3.0	3.35	3.0	4.35	3.7	2.9	1.5	.75	.8
10.....	1.45	1.7	3.3	2.85	3.3	3.05	4.7	3.6	2.8	1.45	.75	.8
11.....	1.45	1.7	3.7	2.75	3.15	3.25	4.9	3.65	2.8	1.45	.75	.8
12.....	1.6	1.7	3.1	2.7	3.0	3.45	5.2	3.85	2.7	1.45	.75	.8
13.....	1.75	1.7	3.1	2.9	2.8	3.8	5.4	3.95	2.7	1.4	.75	.8
14.....	1.7	1.7	2.8	3.3	2.7	4.2	5.5	3.95	2.8	1.4	.75	.8
15.....	1.65	1.7	2.6	3.5	2.7	4.7	5.45	4.0	2.9	1.4	.75	.8
16.....	1.6	1.7	2.5	3.4	2.7	5.3	5.45	4.1	2.8	1.4	.8	.85
17.....	1.55	1.75	2.35	3.25	2.65	5.7	5.3	3.9	2.6	1.4	.8	.9
18.....	1.55	1.8	2.25	3.35	2.65	6.0	5.0	3.8	2.45	1.35	.8	.95
19.....	1.6	1.8	2.3	3.4	2.6	6.2	4.85	4.2	2.35	1.35	.8	.95
20.....	1.6	1.75	2.3	3.65	2.55	5.8	4.9	4.5	2.35	1.3	.8	.95
21.....	1.6	1.75	2.3	3.95	2.5	5.55	5.0	4.35	2.35	1.25	.8	.95
22.....	1.6	1.75	2.3	4.25	2.5	5.5	4.95	4.2	2.2	1.2	.8	.95
23.....	1.6	1.8	2.25	4.15	2.5	5.3	4.7	4.1	2.25	1.15	.8	.95
24.....	1.6	1.8	2.25	4.05	2.5	5.3	4.5	4.0	2.15	1.05	.8	.95
25.....	1.65	1.8	2.2	3.9	2.6	5.5	4.35	3.9	1.95	.95	.8	.95
26.....	1.7	1.8	3.2	3.7	2.7	5.75	4.2	3.85	1.9	.9	.8	.95
27.....	1.75	1.8	5.2	3.5	2.9	5.3	4.1	3.7	1.85	.9	.8	.95
28.....	1.75	1.75	4.8	3.3	3.25	5.05	4.0	3.65	1.8	.85	.8	.95
29.....	1.8	1.75	3.8	3.1	3.5	4.7	4.0	3.6	1.8	.85	.8	.95
30.....	1.8	1.7	3.5	3.0	.....	4.6	3.9	3.55	1.75	.85	.8	1.0
31.....	1.8	.....	3.8	2.9	.....	4.7	.....	3.5	.....	.85	.8	.....
1908-9.												
1.....	1.0	1.4	1.5	1.9	4.9	4.5	4.8	7.4	5.4	3.2	1.4	1.0
2.....	1.0	1.4	1.5	3.65	5.0	4.6	5.3	7.35	5.5	3.1	1.35	1.0
3.....	.95	1.35	1.7	4.15	5.3	4.75	5.75	7.4	5.55	3.0	1.3	1.0
4.....	.95	1.35	1.9	3.8	5.1	5.5	6.35	7.5	5.55	2.9	1.25	1.0
5.....	1.0	1.3	2.35	4.4	4.95	5.8	6.5	7.7	5.45	2.85	1.2	1.05
6.....	1.0	1.3	2.1	6.0	4.8	5.5	6.1	7.7	5.3	2.8	1.15	1.05
7.....	1.0	1.3	1.9	6.0	5.1	5.3	5.9	7.5	5.2	2.75	1.05	1.05
8.....	1.0	1.3	1.8	7.75	4.75	5.0	5.9	7.4	5.1	2.7	1.0	1.05
9.....	1.0	1.3	1.8	8.15	4.45	4.9	5.9	7.3	4.95	2.65	1.0	1.05
10.....	1.0	1.3	1.7	6.2	4.45	4.7	6.2	7.2	4.8	2.6	1.0	1.05
11.....	1.0	1.3	1.65	4.85	4.45	4.6	6.5	6.0	4.7	2.55	.95	1.05
12.....	1.0	1.3	1.6	4.1	5.5	4.5	6.3	6.7	4.6	2.5	.95	1.0
13.....	1.0	1.3	1.6	3.8	5.95	4.45	6.4	6.5	4.5	2.45	.95	1.0
14.....	1.0	1.3	1.6	8.7	5.5	4.6	6.75	6.3	4.4	2.4	.9	1.0
15.....	1.2	1.3	1.6	14.0	5.3	4.8	7.1	6.1	4.3	2.35	.9	1.0
16.....	1.6	1.3	1.55	a17.0	5.4	5.1	8.3	5.0	4.25	2.3	.9	1.0
17.....	1.55	1.3	1.5	14.5	6.95	5.55	8.4	5.9	4.2	2.25	.85	1.0
18.....	1.45	1.3	1.45	11.6	7.2	5.85	8.5	5.85	4.25	2.2	.85	1.0
19.....	1.4	1.3	1.45	9.85	6.85	5.6	8.7	5.8	4.45	2.15	.85	1.0
20.....	1.35	1.5	1.45	10.25	6.2	5.5	8.75	5.75	4.55	2.0	.8	1.0
21.....	1.3	1.7	1.45	11.25	5.8	5.4	8.2	5.75	4.45	1.95	.8	1.0
22.....	1.3	1.9	1.5	11.35	5.3	5.25	7.85	5.75	4.25	1.9	.8	1.0
23.....	1.3	2.1	1.55	8.7	5.1	5.0	7.6	5.7	4.1	1.85	.85	1.0
24.....	1.3	1.95	1.6	7.5	5.05	4.9	7.5	5.6	4.0	1.8	.85	1.0
25.....	1.3	1.8	1.6	6.95	4.95	4.75	7.5	5.5	3.85	1.75	.9	1.0
26.....	1.3	1.7	1.65	6.6	4.75	4.7	7.5	5.4	3.7	1.7	.95	1.0
27.....	1.3	1.6	1.7	6.1	4.6	4.9	7.7	5.4	3.55	1.65	1.0	1.0
28.....	1.3	1.5	1.7	5.6	4.55	4.9	7.9	5.55	3.5	1.6	1.0	1.05
29.....	1.3	1.5	1.7	5.35	.....	4.9	7.75	5.6	3.4	1.55	1.0	1.05
30.....	1.4	1.5	1.65	5.15	.....	4.9	7.55	5.45	3.3	1.5	1.0	1.1
31.....	1.45	.....	1.65	5.1	.....	4.7	.....	5.4	.....	1.45	1.0	.....

a Water over top of gage in the morning. Observer recorded a gage height of 17 feet for this day. It has been taken as mean for day.

Daily gage height, in feet, of Indian Creek near Crescent Mills, Cal., for 1906-1909, 1911-12—Continued.

Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.
1909.				1909.				1909.			
1.....	1.2	1.8	3.3	11.....	1.4	2.3	4.5	21.....	1.75	5.1	2.65
2.....	1.3	1.8	4.0	12.....	1.4	2.1	4.1	22.....	1.7	5.0	2.6
3.....	1.4	1.8	3.55	13.....	1.4	2.0	3.7	23.....	1.6	4.2	2.55
4.....	1.45	1.75	3.0	14.....	1.4	2.0	3.5	24.....	1.6	4.1	2.4
5.....	1.45	1.75	2.9	15.....	1.4	2.0	3.25	25.....	1.6	3.95	2.5
6.....	1.4	1.9	2.75	16.....	1.4	1.9	3.1	26.....	1.6	3.7	2.4
7.....	1.4	1.9	2.9	17.....	1.4	1.9	2.95	27.....	1.6	3.3	2.3
8.....	1.4	1.85	3.45	18.....	1.45	1.9	2.8	28.....	1.6	3.15	2.3
9.....	1.4	2.35	5.4	19.....	1.5	2.5	2.75	29.....	1.75	2.85	2.25
10.....	1.4	2.45	5.5	20.....	1.65	3.0	2.7	30.....	1.9	2.8	2.5
								31.....	1.9		3.9

Day.	Sept.	Day.	Sept.	Day.	Sept.
1911.		1911.		1911.	
1.....		11.....	1.38	21.....	1.30
2.....		12.....	1.38	22.....	1.30
3.....		13.....	1.38	23.....	1.30
4.....		14.....	1.38	24.....	1.35
5.....		15.....	1.35	25.....	1.35
6.....		16.....	1.35	26.....	1.40
7.....		17.....	1.35	27.....	1.45
8.....		18.....	1.35	28.....	1.45
9.....		19.....	1.30	29.....	1.45
10.....	1.38	20.....	1.30	30.....	1.45

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.									
1.....	1.45	1.60	1.90	1.75	2.25	2.15	3.0	4.2	3.4
2.....	1.45	1.60	1.90	1.75	2.2	2.25	3.1	4.4	3.4
3.....	1.45	1.60	1.90	1.75	2.2	2.2	3.2	4.2	3.3
4.....	1.50	1.60	1.90	1.75	2.15	2.2	3.2	4.2	3.2
5.....	1.55	1.60	1.90	1.75	2.15	2.8	3.1	4.3	2.95
6.....	1.60	1.60	1.90	1.75	2.15	3.4	3.1	4.3	2.95
7.....	1.60	1.65	1.90	1.80	2.15	3.6	3.1	4.4	2.9
8.....	1.60	1.70	1.90	1.95	2.15	3.2	3.2	4.4	2.7
9.....	1.60	1.70	1.90	2.15	2.15	2.9	3.2	4.4	2.6
10.....	1.55	2.00	1.85	2.25	2.2	2.75	3.2	4.2	2.5
11.....	1.55	2.00	1.85	2.4	2.3	2.7	3.1	4.2	2.4
12.....	1.55	1.95	1.85	4.45	2.3	2.7	2.95	4.2	2.3
13.....	1.55	1.95	1.80	2.55	2.3	2.7	2.8	4.2	2.2
14.....	1.55	2.00	1.80	2.45	2.3	2.6	2.75	4.0	2.1
15.....	1.55	2.10	1.80	2.35	2.3	2.6	2.7	3.9	2.0
16.....	1.55	2.15	1.80	2.35	2.3	2.75	2.7	3.8	1.90
17.....	1.55	2.20	1.80	2.3	2.3	2.8	2.7	3.7	1.80
18.....	1.55	2.20	1.80	2.3	2.95	2.8	2.7	3.6	1.70
19.....	1.55	2.15	1.80	2.3	3.0	2.85	2.7	3.5	1.70
20.....	1.55	2.10	1.80	2.3	2.7	2.9	2.65	3.7	1.65
21.....	1.55	2.05	1.80	2.2	2.55	2.8	2.6	3.8	1.70
22.....	1.55	2.00	1.80	2.1	2.45	2.7	2.6	3.8	1.75
23.....	1.55	2.00	1.80	2.05	2.3	2.65	2.55	3.7	1.90
24.....	1.55	2.00	1.75	2.05	2.2	2.65	2.7	3.6	1.90
25.....	1.55	1.95	1.75	2.1	2.15	2.7	2.8	3.6	1.90
26.....	1.55	1.95	1.75	3.1	2.1	2.8	2.85	3.6	1.85
27.....	1.55	1.90	1.75	3.0	2.1	2.9	2.9	3.6	1.80
28.....	1.55	1.90	1.75	2.6	2.1	3.0	2.95	3.6	1.70
29.....	1.60	1.90	1.75	2.5	2.1	3.2	3.4	3.6	1.70
30.....	1.60	1.90	1.75	2.35		3.2	3.8	3.6	1.70
31.....	1.60		1.75	2.3		3.1		3.5	

Daily discharge, in second-feet, of Indian Creek near Crescent Mills, Cal., for 1906-1909 and 1911.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1906.												
1.				91	434	1,630	3,520	2,080	1,420	475	64	46
2.				98	395	1,270	2,740	2,150	1,420	475	52	46
3.				98	395	1,270	2,290	2,360	1,360	475	46	52
4.				98	382	1,160	2,010	2,460	1,480	462	46	52
5.				98	382	1,030	1,760	2,570	1,480	421	46	52
6.				98	382	905	1,800	2,500	1,390	395	46	52
7.				98	382	905	2,150	2,430	1,270	369	46	52
8.				91	382	980	2,500	2,360	1,160	345	84	46
9.				98	382	1,180	2,850	2,290	1,130	321	71	46
10.				98	395	1,360	2,990	2,320	1,130	299	58	46
11.				113	395	1,660	2,920	2,360	1,130	258	58	46
12.				238	395	3,060	2,710	2,360	1,160	238	52	52
13.				369	408	3,200	2,570	2,080	1,160	238	64	52
14.				682	502	2,430	2,570	1,940	1,080	219	78	52
15.				345	500	1,870	2,710	1,870	1,030	219	64	58
16.					980	1,540	2,850	1,660	1,060	182	58	64
17.					2,570	830	1,360	2,990	1,420	1,080	164	58
18.					4,050	855	1,180	2,920	1,240	1,000	164	58
19.					5,080	1,240	1,030	2,850	1,130	930	146	52
20.					2,850	1,480	980	2,920	1,130	880	129	52
21.					1,450	1,870	1,130	2,990	1,080	855	113	40
22.					930	1,600	1,730	3,060	1,030	807	106	40
23.					762	1,300	2,460	2,960	980	700	98	40
24.					630	1,130	3,270	2,680	930	648	98	40
25.					516	1,000	3,800	2,360	930	630	98	46
26.					502	930	3,830	2,040	1,240	612	92	58
27.					475	1,480	3,610	1,870	1,630	595	91	58
28.					475	2,220	3,100	1,870	1,980	560	84	40
29.					475	.....	2,740	1,900	1,900	530	78	40
30.					448	.....	2,680	2,010	1,630	502	78	46
31.					421	.....	3,610	.....	1,510	.....	78	46
1906-7.												
1.	98	91	91	560	1,840	1,180	2,960	2,880	1,540	448	164	77
2.	98	91	91	475	4,000	1,270	3,300	2,820	1,600	421	146	77
3.	91	106	98	502	4,740	1,270	3,270	2,740	1,600	395	137	84
4.	91	219	98	830	8,280	1,300	3,020	2,680	1,540	369	129	91
5.	91	345	98	880	4,110	1,270	2,920	2,500	1,420	345	129	98
6.	91	248	98	530	3,760	1,450	2,640	2,400	1,300	321	121	98
7.	91	182	106	462	3,130	1,390	2,780	2,320	1,200	310	113	98
8.	91	155	138	434	2,500	1,210	3,130	2,260	1,200	299	106	91
9.	98	146	164	421	2,080	1,130	3,410	2,290	1,080	299	98	91
10.	98	129	530	408	1,840	1,270	3,800	2,320	980	278	91	84
11.	98	121	530	382	1,660	1,180	4,320	2,430	1,060	268	91	84
12.	98	121	785	357	1,600	1,180	4,740	2,540	1,420	258	91	77
13.	98	113	560	345	1,480	1,030	4,780	2,430	1,390	238	91	77
14.	98	113	475	345	1,360	930	4,880	2,220	1,270	219	91	84
15.	98	113	395	333	1,300	880	5,720	2,010	1,100	219	84	84
16.	98	129	345	333	1,300	905	5,650	2,040	1,030	210	77	84
17.	98	138	310	321	1,360	2,570	4,980	2,080	930	200	71	84
18.	98	129	288	321	1,420	9,500	4,660	2,080	830	200	71	84
19.	98	113	268	310	1,420	11,400	4,390	2,180	760	182	71	84
20.	98	113	258	299	1,360	10,100	4,280	2,660	720	182	71	84
21.	98	113	248	288	1,360	7,890	4,110	2,220	700	173	71	91
22.	98	113	248	278	1,420	5,260	3,830	2,010	700	164	71	91
23.	98	113	278	278	1,450	3,900	3,760	1,760	700	155	71	91
24.	98	106	333	288	1,330	3,060	3,830	1,600	683	146	71	91
25.	98	106	980	333	1,450	2,990	3,800	1,540	630	146	71	98
26.	91	106	2,430	421	1,700	2,850	3,720	1,480	578	137	71	98
27.	91	98	2,400	462	1,480	2,710	3,680	1,450	545	146	71	98
28.	91	98	1,420	930	1,180	2,500	3,440	1,420	516	173	71	98
29.	91	98	980	1,160	.....	2,400	3,270	1,420	502	182	71	98
30.	84	98	740	1,060	.....	2,320	3,060	1,480	475	200	71	98
31.	84	.....	785	1,270	.....	2,610	.....	1,480	.....	182	77	.....

Daily discharge, in second-feet, of Indian Creek near Crescent Mills, Cal., for 1906-1909 and 1911—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1907-8.												
1.....	98	146	129	530	345	502	880	682	502	137	16	16
2.....	98	146	129	475	333	488	762	720	488	129	16	16
3.....	98	146	129	395	369	488	720	720	475	98	16	16
4.....	106	146	146	421	421	475	830	665	461	91	16	16
5.....	106	137	182	369	395	448	955	595	434	91	16	16
6.....	98	137	278	310	395	434	1,080	560	408	91	16	16
7.....	98	137	530	288	421	408	1,130	577	395	113	16	16
8.....	91	175	475	310	461	395	905	595	382	105	16	16
9.....	91	129	345	395	488	395	855	595	369	98	12	16
10.....	91	129	475	357	475	408	1,030	560	345	91	12	16
11.....	91	129	595	333	434	461	1,130	577	345	91	12	16
12.....	113	129	421	321	395	516	1,300	647	321	91	12	16
13.....	137	129	421	369	345	630	1,420	682	321	84	12	16
14.....	129	129	345	475	321	785	1,480	682	345	84	12	16
15.....	121	129	299	530	321	1,030	1,450	700	369	84	12	16
16.....	113	129	278	502	321	1,360	1,450	740	345	84	16	20
17.....	106	137	248	461	310	1,600	1,360	665	299	84	16	25
18.....	106	146	228	488	310	1,800	1,180	630	268	77	16	30
19.....	113	146	238	502	299	1,940	1,100	785	248	77	16	30
20.....	113	137	238	577	288	1,660	1,130	930	248	71	16	30
21.....	113	137	238	682	278	1,510	1,180	855	248	64	16	30
22.....	113	137	238	808	278	1,480	1,160	785	219	58	16	30
23.....	113	146	228	762	278	1,360	1,030	740	228	52	16	30
24.....	113	146	228	720	278	1,360	930	700	209	40	16	30
25.....	121	146	219	665	299	1,480	855	665	173	30	16	30
26.....	129	146	448	595	321	1,630	785	647	164	25	16	30
27.....	137	146	1,300	530	369	1,360	740	595	155	25	16	30
28.....	137	137	1,080	475	461	1,210	700	577	146	20	16	30
29.....	146	137	630	421	530	1,080	700	560	146	20	16	30
30.....	146	129	530	395	.....	980	665	545	137	20	16	35
31.....	146	.....	630	369	.....	1,030	.....	530	.....	20	16	.....
1908-9.												
1.....	35	84	98	164	1,130	930	1,080	2,780	1,420	448	84	35
2.....	35	84	98	578	1,180	980	1,360	2,740	1,480	421	78	35
3.....	30	77	129	762	1,360	1,060	1,630	2,780	1,510	395	71	35
4.....	30	77	164	630	1,240	1,480	2,040	2,850	1,510	369	64	35
5.....	35	71	248	880	1,160	1,660	2,150	2,990	1,450	357	58	40
6.....	35	71	200	1,800	1,060	1,480	1,870	2,990	1,360	345	52	40
7.....	35	71	164	1,800	1,240	1,360	1,730	2,850	1,300	333	40	40
8.....	35	71	146	3,020	1,060	1,180	1,730	2,780	1,240	321	35	40
9.....	35	71	146	3,300	905	1,130	1,730	2,710	1,160	310	35	40
10.....	35	71	129	1,940	905	1,030	1,940	2,640	1,080	299	35	40
11.....	35	71	121	1,700	905	980	2,150	1,800	1,030	288	30	40
12.....	35	71	113	740	1,480	930	2,010	2,290	980	278	30	35
13.....	35	71	113	630	1,760	905	2,060	2,150	930	268	30	35
14.....	35	71	113	3,690	1,480	980	2,320	2,010	880	258	25	35
15.....	58	71	113	7,400	1,360	1,080	2,570	1,870	830	248	25	35
16.....	113	71	105	9,500	1,420	1,240	3,410	1,180	808	238	25	35
17.....	105	71	98	7,750	2,460	1,510	3,480	1,730	785	228	20	35
18.....	91	71	91	5,720	2,640	1,700	3,550	1,700	808	219	20	35
19.....	84	71	91	4,500	2,400	1,540	3,690	1,660	905	210	20	35
20.....	77	98	91	4,780	1,940	1,480	3,720	1,630	955	182	16	35
21.....	71	129	91	5,480	1,660	1,420	3,340	1,630	905	173	16	35
22.....	71	164	98	5,540	1,360	1,330	3,100	1,630	808	164	16	35
23.....	71	200	105	3,690	1,240	1,180	2,920	1,600	740	155	20	35
24.....	71	173	113	2,850	1,210	1,130	2,850	1,540	700	146	20	35
25.....	71	146	113	2,460	1,160	1,060	2,850	1,480	648	138	25	35
26.....	71	129	121	2,220	1,060	1,030	2,850	1,420	595	129	30	35
27.....	71	113	129	1,870	980	1,130	2,990	1,420	545	121	35	35
28.....	71	98	129	1,540	955	1,130	3,130	1,510	530	113	35	40
29.....	71	98	129	1,390	.....	1,130	3,020	1,540	502	106	35	40
30.....	84	98	121	1,270	.....	1,130	2,880	1,450	475	98	35	46
31.....	91	.....	121	1,240	.....	1,030	.....	1,420	.....	91	35	.....

Daily discharge, in second-feet, of Indian Creek near Crescent Mills, Cal., for 1906, 1909, and 1911—Continued.

Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.	Day.	Oct.	Nov.	Dec.
1909.			1909.			1909.					
1.....	58	146	475	11.....	84	238	930	21.....	138	1,240	310
2.....	71	146	700	12.....	84	200	740	22.....	129	1,180	299
3.....	84	146	545	13.....	84	182	595	23.....	113	785	288
4.....	91	138	395	14.....	84	182	530	24.....	113	720	258
5.....	91	138	369	15.....	84	182	462	25.....	113	682	278
6.....	84	164	333	16.....	84	164	421	26.....	113	595	258
7.....	84	164	399	17.....	84	164	382	27.....	113	475	238
8.....	84	155	516	18.....	91	164	345	28.....	113	434	238
9.....	84	248	1,420	19.....	98	278	333	29.....	138	357	228
10.....	84	268	1,480	20.....	121	395	321	30.....	164	345	278
								31.....	164		666

Day.	Sept.	Oct.	Nov.	Dec.	Day.	Sept.	Oct.	Nov.	Dec.	Day.	Sept.	Oct.	Nov.	Dec.
1911.			1911.			1911.								
1.....		67	89	137	11.....	57	82	155	128	21.....	47	82	164	120
2.....		67	89	137	12.....	57	82	146	128	22.....	47	82	155	120
3.....		67	89	137	13.....	57	82	146	120	23.....	47	82	155	120
4.....		74	89	137	14.....	57	82	155	120	24.....	54	82	155	112
5.....		82	89	137	15.....	54	82	174	120	25.....	54	82	146	112
6.....		89	89	137	16.....	54	82	184	120	26.....	60	82	146	112
7.....		89	96	137	17.....	54	82	194	120	27.....	67	82	137	112
8.....		89	104	137	18.....	54	82	194	120	28.....	67	82	137	112
9.....		89	104	137	19.....	47	82	184	120	29.....	67	89	137	112
10.....	57	82	155	128	20.....	47	82	174	120	30.....	67	89	137	112
										31.....		89		112

Note.—Daily discharge for 1906-1909 determined from a discharge rating curve well defined below 1,900 second-feet.

Daily discharge for 1911 determined from a fairly well defined rating curve.

Discharge for 1912 is withheld until further discharge measurements can be obtained.

Monthly discharge of Indian Creek near Crescent Mills, Cal., for 1906-1909 and 1911.

[Drainage area, 740 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.....	5,080	91	868	1.17	1.35	53,400	B.
February.....	2,220	382	824	1.11	1.16	45,800	B.
March.....	3,830	905	2,000	2.70	3.11	123,000	A.
April.....	3,520	1,760	2,550	3.45	3.85	152,000	A.
May.....	2,570	930	1,790	2.42	2.79	110,000	A.
June.....	1,490	502	1,010	1.36	1.62	60,100	B.
July.....	475	78	228	.305	.35	13,900	B.
August.....	84	40	53.1	.072	.06	3,260	A.
September.....	84	46	57.9	.078	.09	3,450	A.
The period.....						565,000	
1906-7.							
October.....	98	84	94.8	.128	.15	5,830	B.
November.....	345	91	132	.178	.20	7,860	B.
December.....	2,430	91	534	.722	.83	32,800	B.
January.....	1,270	278	504	.681	.79	31,000	B.
February.....	8,280	1,180	2,210	2.99	3.11	123,000	A.
March.....	11,400	880	2,930	3.96	4.66	180,000	B.
April.....	5,720	2,640	3,860	5.22	5.82	230,000	B.
May.....	2,880	1,420	2,110	2.85	3.29	130,000	A.
June.....	1,600	475	1,000	1.35	1.51	59,500	B.
July.....	448	137	241	.326	.38	14,800	B.
August.....	164	71	91.3	.123	.14	5,610	B.
September.....	98	77	88.9	.120	.13	5,290	B.
The year.....	11,400	71	1,150	1.55	20.91	826,000	

## Monthly discharge of Indian Creek near Crescent Mills, Cal., for 1906-1909 and 1911—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.....	146	91	114	0.154	0.18	7,010	B.
November.....	146	129	139	.188	.21	8,270	B.
December.....	1,300	129	384	.519	.60	23,600	B.
January.....	808	288	478	.646	.74	29,400	B.
February.....	530	278	363	.491	.53	20,900	B.
March.....	1,940	395	989	1.34	1.54	60,800	B.
April.....	1,480	665	1,030	1.39	1.55	61,300	B.
May.....	930	530	661	.893	1.03	40,600	B.
June.....	502	137	306	.414	.46	18,200	B.
July.....	137	20	72.4	.098	.11	4,450	B.
August.....	16	12	15.1	.020	.02	923	C.
September.....	35	16	22.7	.031	.03	1,350	C.
The year.....	1,940	12	381	.515	7.00	277,000	
1908-9.							
October.....	113	30	58.8	.080	.09	3,620	B.
November.....	200	71	94.4	.128	.14	5,620	B.
December.....	248	91	124	.168	.19	7,620	B.
January.....	9,500	164	2,910	3.93	4.53	179,000	B.
February.....	2,640	905	1,380	1.86	1.94	76,600	B.
March.....	1,700	905	1,200	1.62	1.87	73,800	B.
April.....	3,720	1,080	2,540	3.43	3.83	151,000	B.
May.....	2,990	1,180	2,020	2.73	3.15	124,000	B.
June.....	1,510	475	962	1.30	1.45	57,200	B.
July.....	448	91	240	.324	.37	14,800	B.
August.....	84	16	35.3	.048	.06	2,170	C.
September.....	46	35	36.9	.050	.06	2,200	C.
The year.....	9,500	16	967	1.31	17.68	698,000	
1909.							
October.....	164	58	101	.136	.16	6,210	B.
November.....	1,240	138	356	.481	.54	21,200	B.
December.....	1,480	228	484	.654	.75	29,800	B.
1911.							
September 10-30.....	67	47	55.8	.075	.06	2,320	B.
October.....	89	67	81.9	.111	.13	5,040	B.
November.....	194	89	139	.188	.21	8,270	B.
December.....	137	112	124	.168	.19	7,620	B.

NOTE.—No discharge measurements have been made from 1906 to 1911, and the estimates for accuracy for 1907, 1908, and 1909 are dependent on the permanency of conditions of flow and the constancy of the elevation of the gage. Estimates for 1912 are withheld until further discharge measurements can be obtained.

## SPANISH CREEK AT KEDDIE, CAL.

This station, which is located at the highway bridge at Keddie, in the SW.  $\frac{1}{4}$  sec. 22, T. 25 N., R. 9 E., was established October 22, 1911.

The main gage is painted on the left abutment of the bridge. A vertical low-water section is fastened to a stump on the left bank 20 feet below the bridge.

Discharge measurements are made from the downstream side of the bridge or by wading.

Water is diverted above the station to irrigate the American Valley.

## Discharge measurements of Spanish Creek at Keddie, Cal., in 1911-12.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1911.				1912.			
Oct. 22	G. T. Peekema.....	Feet. 1.71	Sec.-ft. 69	Mar. 9	J. E. Stewart.....	Feet. 2.48	Sec.-ft. 183
				May 5	Lasley Lee.....	3.10	365
1912.				7	.....do.....	3.13	373
Feb. 1	Lasley Lee.....	2.05	123				
4	.....do.....	1.97	107				

Daily gage height, in feet, of Spanish Creek at Keddie, Cal., for 1911-12.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.									
1.....		1.71	1.78	1.90	2.05	2.0	2.5	3.25	2.65
2.....		1.71	1.78	1.80	2.0	1.98	2.5	3.3	2.65
3.....		1.71	1.78	1.70	1.95	1.95	2.5	3.05	2.6
4.....		1.71	1.80	2.1	2.0	2.0	2.5	3.05	2.55
5.....		1.72	1.80	2.0	1.95	2.9	2.5	3.1	2.5
6.....		1.72	1.81	2.1	1.90	4.0	2.5	3.05	2.5
7.....		1.72	1.83	2.2	1.85	3.0	2.5	3.0	4.5
8.....		1.73	1.81	2.2	1.95	2.7	2.5	3.0	2.35
9.....		1.73	1.80	2.3	2.0	2.5	2.5	3.0	2.25
10.....		1.75	1.80	2.4	2.05	2.45	2.5	3.0	2.2
11.....		1.76	1.78	2.4	2.05	2.4	2.5	2.9	2.2
12.....		1.78	1.78	2.3	2.0	2.4	2.45	2.9	2.1
13.....		1.81	1.80	2.3	2.0	2.4	2.4	2.9	2.05
14.....		1.86	1.79	2.1	2.05	2.3	2.3	2.8	2.05
15.....		1.88	1.78	2.0	2.0	2.4	2.3	2.8	2.0
16.....		1.91	1.78	2.1	2.0	2.4	2.3	2.75	2.0
17.....		1.90	1.80	2.2	2.1	2.35	2.3	2.75	1.95
18.....		1.88	1.80	2.2	2.15	2.35	2.3	2.7	1.90
19.....		1.85	1.79	2.4	2.15	2.35	2.3	2.7	1.85
20.....		1.84	1.79	2.2	2.15	2.35	2.25	2.75	1.80
21.....		1.82	1.78	2.1	2.15	2.35	2.25	2.9	1.80
22.....	1.71	1.75	1.78	2.0	2.15	2.3	2.2	2.95	1.82
23.....	1.71	1.74	1.78	2.0	2.1	2.25	2.2	2.95	1.90
24.....	1.70	1.72	1.79	2.0	2.1	2.4	2.2	2.9	2.0
25.....	1.70	1.73	1.79	2.4	1.90	2.4	2.3	2.9	1.90
26.....	1.71	1.76	1.80	4.0	1.86	2.4	2.4	2.9	1.82
27.....	1.71	1.77	1.80	2.9	2.0	2.45	2.4	2.95	1.80
28.....	1.70	1.77	1.82	2.5	2.0	2.45	2.4	3.0	1.80
29.....	1.71	1.78	1.82	2.3	2.0	2.5	3.0	2.95	1.76
30.....	1.72	1.77	1.80	2.2		2.5	3.1	2.85	1.74
31.....	1.72		1.81	2.1				2.8	

Daily discharge, in second-feet, of Spanish Creek near Keddie, Cal., for 1911-12.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.									
1.....		69	78	93	114	107	198	415	234
2.....		69	78	80	107	104	198	432	234
3.....		69	78	68	100	100	198	349	221
4.....		69	80	122	107	107	198	349	230
5.....		70	80	107	100	302	198	365	198
6.....		70	81	122	93	715	198	349	198
7.....		70	84	138	86	333	198	333	955
8.....		72	81	138	100	246	198	333	166
9.....		72	80	156	107	198	198	333	147
10.....		74	80	176	114	187	198	333	138
11.....		75	78	176	114	176	198	302	138
12.....		78	78	156	107	176	187	302	122
13.....		81	80	156	107	176	176	302	114
14.....		88	79	122	114	156	156	273	114
15.....		90	78	107	107	176	156	273	107
16.....		94	78	122	107	176	156	260	107
17.....		93	80	138	122	166	156	260	100
18.....		90	80	138	130	166	156	246	93
19.....		86	79	176	130	166	156	246	86
20.....		85	79	138	130	166	147	260	80
21.....		83	78	122	130	166	147	302	80
22.....	69	74	78	107	130	156	138	318	83
23.....	69	73	78	107	122	147	138	318	93
24.....	68	70	79	107	122	176	138	302	107
25.....	68	72	79	176	93	176	156	302	93
26.....	69	75	80	715	88	176	176	302	83
27.....	69	76	80	302	107	187	176	318	80
28.....	68	76	83	198	107	187	176	333	80
29.....	69	78	83	156	107	198	333	318	75
30.....	70	76	80	138		198	365	288	73
31.....	70		81	122		198		273	

NOTE.—Daily discharge determined from a fairly well defined rating curve.

*Monthly discharge of Spanish Creek at Keddie, Cal., for 1911-12.*

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
October 22-31.....	70	68	68.9	1,370	B.
November.....	94	69	77.2	4,590	B.
December.....	84	78	79.6	4,890	B.
January.....	715	68	157	9,650	B.
February.....	130	86	110	6,330	B.
March.....	715	100	196	12,100	A.
April.....	365	138	186	11,100	A.
May.....	432	246	313	19,200	A.
June.....	955	73	154	9,160	B.
The period.....				78,400	

## MIDDLE FORK OF FEATHER RIVER AT CROMBERG, CAL.

This station, which is located in the N.  $\frac{1}{2}$  sec. 24, T. 23 N., R. 11 E. at the California White Pine Co.'s log chute, 600 feet west of the post office at Cromberg, about 4 miles below the mouth of Jamison Creek and half a mile above the mouth of Jackson Creek, was established November 3, 1910.

No water is diverted in the vicinity of the station.

The gage is a vertical staff fastened to a pier of the log chute near the left bank.

On October 27, 1911, a car and cable were installed about 200 feet above the gage. Low-water measurements are made by wading.

The drainage area above the station is well forested.

The station is maintained in cooperation with the United States Forest Service.

Estimates of discharge are withheld until additional measurements are secured.

*Discharge measurements of Middle Fork of Feather River at Cromberg, Cal., in 1910-12.*

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1910.		<i>Feet.</i>	<i>Sec.-ft.</i>	1912.		<i>Feet.</i>	<i>Sec.-ft.</i>
Nov. 3	F. G. Wood .....	2.45	54	Feb. 3	Lasley Lee .....	2.92	189
				Mar. 10	J. E. Stewart .....	3.29	243
1911.				10	do .....	3.27	259
Oct. 28	G. T. Peekema .....	2.54	89	May 5	Lasley Lee .....	4.27	748

Daily gage height, in feet, of Middle Fork of Feather River at Cromberg, Cal., for 1910-1912.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.												
1.							10.3					
2.												
3.		2.45	3.8				10.8					
4.							10.5					2.5
5.					5.1		10.45					2.5
6.						4.0	11.0					
7.							13.0			4.0		
8.					4.0					4.0	3.05	2.5
9.			4.0			4.2				4.0	3.05	2.5
10.												2.5
11.									5.3		2.95	
12.						4.1	7.0		5.3		2.95	
13.					3.2					3.9		
14.												2.5
15.						4.2						2.5
16.						4.2		6.0		3.85		
17.												2.5
18.												2.5
19.			2.9									2.5
20.					2.85			5.25			2.9	2.5
21.										3.2	2.9	
22.		2.75				6.4				3.2	2.85	2.5
23.												2.5
24.				5.4	2.75	7.5						
25.						7.8				3.2	2.6	2.5
26.		3.45				8.0					2.6	
27.						8.3					2.6	2.55
28.					2.55	8.5			4.5	3.1		2.6
29.		2.9				9.3			4.5			2.6
30.			2.8	6.2		10.0						
31.						10.0		5.8				
1911-12.												
1.		2.6			3.15	2.90	3.2	3.75	3.9			
2.	2.6	2.6			3.15	2.90		3.9	3.95			
3.	2.6		2.9		2.92			3.8	3.9			
4.	2.6	2.6	2.9	3.0				3.75				
5.		2.6	2.9			3.15		4.3				
6.	2.6	2.6	2.9		3.2				3.8			
7.	2.6	2.6	2.9			3.2		4.0	3.75			
8.	2.6		2.9			3.2			3.75			
9.	2.6		2.85						3.9			
10.			2.85	3.0		3.3	3.25					
11.	2.6			3.0		3.25	3.25					
12.		2.7					3.25	4.0	3.9			
13.		2.7				3.2	3.25		3.9			
14.				2.90	3.5	3.15	3.2	3.9				
15.				2.90	3.45			4.0				
16.			2.85	2.90	3.45	3.15		3.9				
17.			2.85	3.0	3.45	3.2		3.9				
18.			2.85	3.1	3.4	3.35		3.9	3.0			
19.			2.85	3.45	3.4	3.3		3.85	3.0			
20.				3.45	3.4	3.3		4.0	3.05			
21.	2.6			3.5	3.4	3.15	2.90		2.95			
22.			2.8	3.5		3.0		4.0				
23.			2.8			3.05		4.05				
24.		2.9		3.4	3.4	3.0		3.7				
25.	2.6	2.9		3.4	3.0			3.8				
26.	2.6	2.9		3.4	2.85			3.9				
27.	2.6	2.9			2.90		3.05	3.9	2.75			
28.				3.2	2.90	3.1	3.05		2.75			
29.		2.9		3.15	2.90	3.2	3.25		2.70			
30.	2.6	2.9		3.15		3.2	3.6	3.95				
31.	2.6			3.15		3.2		3.9				

## MIDDLE FORK OF FEATHER RIVER NEAR OROVILLE, CAL.

This station, which is located at Bidwell Bar, 2 miles above the junction with the North Fork and about 10 miles northeast of Oroville, in the NW.  $\frac{1}{4}$  sec. 32, T. 26 N., R. 5 E., was established October 7, 1911.

South Fork enters  $1\frac{1}{4}$  miles above and Canyon Creek three-fourths of a mile below the station.

The gage is a staff in three sections. The high-water section is fastened to the lower end of the bridge pier near the left bank. The remainder of the gage is fastened to a sycamore tree on the left bank 100 feet above the bridge.

Discharge measurements are made from a car and cable half a mile below the bridge.

The channel is composed of bowlders and gravel.

*Discharge measurements of Middle Fork of Feather River near Oroville, Cal., in 1911-12.*

Date.	Hydrographer.	Gage height.	Discharge.
1911.			
Dec. 15	F. C. Ebert.....	Feet. 2.90	Sec.-ft. 368
1912.			
Jan. 31	Lasley Lee.....	3.97	875
Mar. 7	J. E. Stewart.....	5.35	1,900
8	do.....	4.97	1,530
May 17	do.....	6.22	2,730

*Daily gage height, in feet, of Middle Fork of Feather River near Oroville, Cal., for 1911-12.*

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1.....		2.8	2.9	3.1	3.9	3.5	4.6	6.6	6.1
2.....		2.75	2.9	2.9	3.8	3.7	4.7	6.2	5.9
3.....		2.75	2.9	2.9	3.75	3.5	4.9	5.9	5.9
4.....		2.8	2.9	2.75	3.7	3.45	4.9	5.8	5.8
5.....		2.8	2.9	2.8	3.65	4.4	4.8	6.0	5.7
6.....		2.8	2.9	2.9	3.6	7.0	4.9	6.1	5.5
7.....	2.8	2.8	2.95	3.0	3.6	5.7	5.0	6.3	5.4
8.....	2.8	2.8	2.95	3.2	3.8	5.0	5.2	6.7	5.2
9.....	2.9	2.85	2.95	3.35	4.0	4.7	5.2	6.7	4.9
10.....	2.9	4.6	2.9	3.6	4.0	4.5	5.3	6.8	4.8
11.....	2.9	3.8	2.95	4.1	4.0	4.4	5.1	6.8	4.6
12.....	2.85	3.25	2.95	3.65	3.9	4.4	4.8	6.8	4.6
13.....	2.85	3.15	2.85	3.5	3.95	4.7	4.7	6.8	5.0
14.....	2.8	3.0	2.85	3.45	4.1	4.5	4.6	6.6	4.6
15.....	2.8	3.05	2.85	3.3	4.0	4.3	4.6	6.6	4.4
16.....	2.75	3.2	2.88	3.5	3.95	4.5	4.6	6.6	4.2
17.....	2.75	3.25	3.02	3.75	3.9	4.3	4.8	6.4	4.1
18.....	2.75	3.1	2.92	3.5	4.6	4.5	4.8	6.2	4.0
19.....	2.7	3.15	2.85	4.2	4.6	4.4	4.6	6.2	4.0
20.....	2.7	3.1	2.85	4.0	4.2	4.4	4.6	6.2	3.8
21.....	2.7	3.1	2.82	3.8	4.1	4.3	4.5	6.2	3.8
22.....	2.75	3.0	2.72	3.7	4.0	4.2	4.4	5.8	3.8
23.....	2.75	3.0	2.82	3.7	3.85	4.2	4.4	5.7	3.9
24.....	2.7	3.0	2.92	3.7	3.8	4.2	4.5	5.6	3.9
25.....	2.7	3.0	2.70	3.7	3.7	4.2	4.6	5.8	3.8
26.....	2.8	3.0	2.65	6.2	3.6	4.3	4.8	6.6	3.6
27.....	2.9	3.0	2.70	5.2	3.6	4.4	4.8	6.8	3.6
28.....	2.8	2.95	3.10	4.6	3.6	4.6	4.8	6.5	3.5
29.....	2.8	2.95	2.95	4.2	3.55	4.9	5.5	6.5	3.4
30.....	2.8	2.95	2.92	4.1	.....	4.8	6.1	6.4	3.4
31.....	2.8	.....	2.92	3.95	.....	4.6	.....	6.2	.....

Daily discharge, in second feet, of Middle Fork of Feather River near Oroville, Cal., for 1911-12.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1.....		340	360	415	790	575	1,270	3,130	2,610
2.....		330	360	360	730	675	1,350	2,710	2,410
3.....		330	360	360	702	575	1,510	2,410	2,410
4.....		340	360	330	675	552	1,510	2,310	2,310
5.....		340	360	340	650	1,120	1,430	2,510	2,210
6.....		340	360	360	650	3,570	1,510	2,610	2,030
7.....	340	340	372	385	650	2,210	1,590	2,810	1,940
8.....	340	340	372	450	730	1,590	1,760	3,240	1,760
9.....	360	350	372	510	850	1,350	1,760	3,240	1,510
10.....	360	1,270	360	625	850	1,190	1,850	3,350	1,430
11.....	360	730	372	915	850	1,120	1,670	3,350	1,270
12.....	350	470	372	650	790	1,120	1,430	3,350	1,270
13.....	350	432	350	575	820	1,350	1,350	3,350	1,590
14.....	340	385	350	552	915	1,190	1,270	3,130	1,270
15.....	340	400	350	490	850	1,050	1,270	3,130	1,120
16.....	330	450	360	575	820	1,190	1,270	3,130	980
17.....	330	470	385	702	790	1,050	1,430	2,910	915
18.....	330	415	360	575	1,270	1,190	1,430	2,710	850
19.....	320	432	350	980	1,270	1,120	1,270	2,710	850
20.....	320	415	350	850	980	1,120	1,270	2,710	730
21.....	320	415	340	730	915	1,050	1,190	2,710	730
22.....	330	385	320	675	850	980	1,120	2,310	730
23.....	330	385	340	675	760	980	1,120	2,210	790
24.....	320	385	360	675	730	980	1,190	2,120	790
25.....	320	385	320	675	675	980	1,270	2,310	730
26.....	340	385	312	2,710	625	1,050	1,430	3,130	625
27.....	360	385	320	1,760	625	1,120	1,430	3,350	625
28.....	340	372	415	1,270	625	1,270	1,430	3,020	575
29.....	340	372	372	980	600	1,510	2,030	3,020	530
30.....	340	372	360	915	.....	1,430	2,610	2,910	530
31.....	340	.....	360	820	.....	1,270	.....	2,710	.....

NOTE.—Daily discharge determined from a well-defined rating curve.

Monthly discharge of Middle Fork of Feather River near Oroville, Cal., for 1911-12.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accuracy.
	Maximum.	Minimum.	Mean.		
October 7-31.....	360	320	330	16,800	A J
November.....	1,270	330	425	25,300	A.
December.....	415	312	357	22,000	A.
January.....	2,710	330	738	45,400	A.
February.....	1,270	600	794	45,700	A.
March.....	3,570	552	1,210	74,400	A.
April.....	2,610	1,120	1,470	87,500	A.
May.....	3,350	2,120	2,860	176,000	A.
June.....	2,610	530	1,270	75,600	A.
The period.....				569,000	

GRIZZLY CREEK NEAR BECKWITH, CAL.

Grizzly Creek is tributary to the Middle Fork of Feather River, which enters Feather River above Thermalito, Cal.

The station, which was located at Reno Camp, about 4 miles west of Beckwith and 1 mile above Willow Glen Hotel, was established December 17, 1905, and discontinued on account of lack of an observer September 30, 1906. It was maintained to determine the amount of water available for storage in the Grizzly Valley reservoir, a short distance above, under investigation by the United States Reclamation Service.

The staff gage was nailed to a large cottonwood tree about 800 feet above cable.

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

The current is rather sluggish at low water but swift at high stages. The right bank is high and rocky, the left bank is low and overgrown with cottonwoods near the water's edge, and may be overflowed at high water. The bed of the stream is rocky and not subject to material change.

The results are only fairly reliable.

*Discharge measurements of Grizzly Creek near Beckwith, Cal., in 1905-6.*

Date.	Hydrographer.	Gage height.	Discharge.
1905.			
Dec. 17 <sup>a</sup>	R. S. Hawley.....	Feet. 0.55	Sec.-ft. 3.1
1906.			
May 26	Hawley and Hardy.....	2.50	211
June 6	W. V. Hardy.....	2.30	201
14	do.....	1.70	96
22	do.....	1.48	65
28	do.....	1.30	43
July 7	do.....	.92	24
16 <sup>b</sup>	do.....	.42	5.1
25 <sup>b</sup>	do.....	.41	3.2
Aug. 8 <sup>b</sup>	do.....	.22	.7
12 <sup>b</sup>	do.....	.40	3.2

<sup>a</sup> Ice 5 inches thick at the gage.

<sup>b</sup> Made by wading.

*Daily gage height, in feet, of Grizzly Creek near Beckwith, Cal., for 1906.*

Day.	Jan.	Feb.	Már.	Apr.	May.	June.	July.	Aug.	Sept.
1	0.55	1.9	1.6	3.1			1.1	0.34	0.15
2	.55	2.1	1.6	2.8			1.1	.33	.15
3	.55	2.3	1.65	2.35			1.05	.32	.15
4	.55	1.65	1.65	2.45			1.0	.3	.15
5	.55	1.85	1.5	2.5			1.0	.26	.15
6	.55	1.85	1.5	2.5		2.3	1.0	.26	.15
7	.55	1.9	1.65	2.9		2.4	.9	.25	.15
8	.55	2.0	1.65	3.6		1.8	.9	.25	.15
9	.7	2.15	1.65	3.6		1.7	.9	.25	.15
10	.7	2.1	1.65	3.85		1.7	.8	.25	.15
11	.9	2.0	1.95	3.8		1.75	.75	.25	.15
12	.8	2.0	2.45	3.8		1.7	.7	.2	.2
13	1.0	1.8	2.3	3.9		1.7	.6	.2	.2
14	1.0	1.8	2.15	4.1		1.7	.5	.2	.25
15	.8	1.75	1.85	4.1		2.3	.5	.2	.2
16	1.0	1.8	1.85	4.2		1.6	.5	.2	.2
17	1.6	1.85	1.85	4.4		1.7	.45	.2	.2
18	1.8	1.85	1.8	4.1		1.65	.42	.2	.2
19	2.0	1.85	1.85	4.1		1.6	.42	.3	.2
20	1.4	1.85	1.85	4.0		1.5	.42	.2	.2
21	1.0	1.85	1.9	3.6		1.4	.42	.15	.2
22	.7	1.75	2.15	3.6		1.4	.42	.15	.2
23	.9	1.75	2.2	3.4		1.4	.41	.15	.2
24	.9	1.85	2.65	3.4		1.4	.41	.15	.2
25	1.2	1.95	2.6	3.8		1.4	.41	.15	.25
26	1.1	1.8	2.6		2.5	1.35	.41	.15	.25
27	1.55	1.65	2.65			1.8	.41	.15	.25
28	1.4	1.65	2.7			1.2	.4	.15	.25
29	1.4		2.8			1.2	.4	.15	.25
30	1.9		2.85			1.15	.36	.15	.25
31	2.4		3.1				.34	.15	

Daily discharge, in second-feet, of Grizzly Creek near Beckwith, Cal., for 1906.

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1.....	7	110	77	369	470	196	34	2.2	0.2
2.....	7	141	77	297	460	192	34	2.0	.2
3.....	7	179	82	190	450	188	31	1.9	.2
4.....	7	82	82	213	440	185	28	1.6	.2
5.....	7	104	67	225	430	182	28	1.1	.2
6.....	7	104	67	225	420	179	28	1.1	.2
7.....	7	110	82	321	410	202	22	1.0	.2
8.....	7	124	82	439	400	98	22	1.0	.2
9.....	13	150	82	439	390	87	22	1.0	.2
10.....	13	141	82	549	380	87	17	1.0	.2
11.....	22	124	117	537	370	92	15	1.0	.2
12.....	17	124	213	537	360	87	13	.5	.5
13.....	28	98	179	561	350	87	9	.5	.5
14.....	28	98	150	609	340	87	5.5	.5	1.0
15.....	17	92	104	609	330	179	5.5	.5	.5
16.....	28	98	104	633	320	77	5.5	.5	.5
17.....	77	104	104	681	310	87	4.2	.5	.5
18.....	98	104	98	609	300	82	3.6	.5	.5
19.....	124	104	104	609	290	77	3.6	1.6	.5
20.....	58	104	104	585	280	67	3.6	.5	.5
21.....	28	104	110	489	270	58	3.6	.2	.5
22.....	13	92	150	489	260	58	3.6	.2	.5
23.....	22	92	159	441	250	58	3.4	.2	.5
24.....	22	104	261	441	240	58	3.4	.2	.5
25.....	42	117	249	537	230	58	3.4	.2	1.0
26.....	34	98	249	520	225	54	3.4	.2	1.0
27.....	72	82	261	510	220	50	3.4	.2	1.0
28.....	58	82	273	500	215	42	3.2	.2	1.0
29.....	58	.....	297	490	210	42	3.2	.2	1.0
30.....	110	.....	309	480	205	38	2.5	.2	1.0
31.....	202	.....	369	.....	200	.....	2.2	.2	.....

NOTE.—Daily discharge determined from a rating curve well defined between 0.5 and 225 second-feet. Discharges April 26 to May 25 and May 27 to June 5 interpolated.

Monthly discharge of Grizzly Creek near Beckwith, Cal., for 1906.

[Drainage area, 51 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.	
January.....	202	7	40.0	0.784	0.90	2,460	C.
February.....	179	82	110	2.16	2.25	6,110	B.
March.....	369	67	153	3.00	3.46	9,410	B.
April.....	681	190	474	9.29	10.36	28,200	B.
May.....	.....	.....	323	6.33	7.30	19,900	C.
June.....	.....	.....	101	1.98	2.21	6,010	B.
July.....	34	2.2	11.9	.234	.27	732	C.
August.....	2.2	.2	.73	.014	.02	45	D.
September.....	1.0	.2	.51	.010	.01	30	D.
The period.....	.....	.....	.....	.....	.....	72,900	.....

NOTE.—Daily discharge interpolated Apr. 26 to May 25 and May 27 to June 5 in order to obtain the approximate total for the period.

## SOUTH FORK OF FEATHER RIVER AT ENTERPRISE, CAL.

This station, which is located half a mile above the highway bridge at Enterprise and 700 feet above the mouth of McCabe Creek, in the NE.  $\frac{1}{4}$  sec. 1, T. 19 N., R. 6 E., was established October 8, 1911.

The gage is a vertical staff in two sections on the left bank, half a mile above the bridge.

Discharge measurements are made from the bridge or by wading.

The channel is composed of gravel and small bowlders.

The diversion dam of the Palermo Land & Water Co.'s canal is located 1 mile above the station. The discharge of the canal must be added to that of this station to obtain the total run-off from this drainage.

*Discharge measurements of South Fork of Feather River at Enterprise, Cal., in 1911-12.*

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1911.		<i>Fect.</i>	<i>Sec.-ft.</i>	1912.		<i>Fect.</i>	<i>Sec.-ft.</i>
Oct. 8	J. E. Stewart.....	0.87	6.0	Jan. 30	Lasley Lee.....	2.10	178
Dec. 17	F. C. Ebert.....	1.40	44	Mar. 7	J. E. Stewart.....	3.22	503
				May 17	.....do.....	3.29	492

*Daily gage height, in feet, of South Fork of Feather River at Enterprise, Cal., in 1911-12.*

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.									
1.....		1.1	1.3	1.62	2.1	1.70	2.5	3.9	3.1
2.....		1.0	1.3	1.48	2.1	1.82	2.6	3.4	3.1
3.....		1.0	1.3	1.40	1.84	1.74	2.7	3.4	2.8
4.....		1.1	1.2	1.42	1.80	1.74	2.7	3.2	2.8
5.....		1.1	1.2	1.38	1.80	2.9	2.65	3.2	2.8
6.....		1.05	1.2	1.45	1.80	4.5	2.7	3.3	2.65
7.....		1.05	1.2	1.44	1.80	3.4	2.75	3.2	2.55
8.....	0.85	1.05	1.2	1.65	1.80	2.8	2.8	3.4	2.4
9.....	1.0	1.05	1.2	1.65	1.90	2.6	2.95	3.5	2.2
10.....	1.2	2.4	1.2	1.68	1.93	2.55	3.0	3.6	2.1
11.....	1.1	1.65	1.2	2.2	2.0	2.3	3.0	3.6	2.15
12.....	1.05	1.4	1.2	1.85	1.96	2.5	2.65	3.6	2.25
13.....	1.05	1.3	1.2	1.80	2.0	2.6	2.6	3.5	2.0
14.....	1.05	1.3	1.2	1.70	2.1	2.6	2.5	3.5	1.93
15.....	1.0	1.3	1.2	1.70	2.05	2.8	2.55	3.5	.....
16.....	1.0	1.6	1.49	2.1	1.90	2.45	2.55	3.3	1.82
17.....	1.0	1.45	1.33	2.0	1.90	2.45	2.6	3.3	1.75
18.....	.95	1.35	1.31	1.80	2.5	2.3	2.7	3.2	1.68
19.....	.75	1.25	1.31	2.4	2.3	2.3	2.6	3.0	1.62
20.....	.75	1.2	1.31	2.0	2.2	2.3	2.5	3.3	1.62
21.....	.75	1.3	1.32	1.88	2.1	2.3	2.5	3.2	1.56
22.....	.75	1.3	1.35	1.80	2.1	2.3	2.4	3.3	1.59
23.....	.75	1.3	1.35	1.80	2.0	2.3	2.4	3.0	1.73
24.....	.75	1.3	1.32	1.80	1.80	2.3	2.4	2.9	1.68
25.....	.85	1.3	1.32	1.80	1.80	2.3	2.4	3.1	1.55
26.....	1.0	1.3	1.32	2.4	1.78	2.3	2.8	3.4	1.48
27.....	1.2	1.3	1.43	3.0	1.78	2.5	2.6	3.6	1.45
28.....	1.2	1.3	1.49	2.4	1.78	2.6	2.8	3.5	1.41
29.....	1.2	1.3	1.49	2.4	1.78	2.65	3.5	3.5	1.39
30.....	1.2	1.3	1.45	2.1	.....	2.55	3.5	3.3	1.33
31.....	1.1	.....	1.51	2.1	.....	2.5	.....	3.3	.....

Daily discharge, in second-feet, of South Fork of Feather River at Enterprise, Cal., for 1911-12.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1.		17	33	75	170	89	270	714	448
2.		12	33	54	170	111	298	545	448
3.		12	33	44	115	96	326	545	355
4.		17	24	47	107	96	326	480	355
5.		17	24	42	107	385	312	480	355
6.		14	24	50	107	938	326	512	312
7.		14	24	49	107	545	340	480	284
8.		14	24	80	107	355	355	545	244
9.	5.7	14	24	80	127	298	400	578	194
10.	12	14	24	86	133	284	416	611	170
	24	244	24						
11.	17	80	24	194	148	219	416	611	182
12.	14	44	24	117	140	270	312	611	206
13.	14	33	24	107	148	298	298	578	148
14.	14	33	24	89	170	298	270	578	133
15.	12	33	24	89	159	355	284	578	122
16.	12	72	56	170	127	257	284	512	111
17.	12	50	36	148	127	257	298	512	98
18.	9.6	38	34	107	270	219	326	480	86
19.	3.5	28	34	244	219	219	298	416	75
20.	3.5	24	34	148	194	219	270	512	75
21.	3.5	33	35	123	170	219	270	480	66
22.	3.5	33	38	107	170	219	244	512	71
23.	3.5	33	38	107	148	219	244	416	94
24.	3.5	33	35	107	107	219	244	385	86
25.	5.7	33	35	107	107	219	244	448	64
26.	12	33	35	244	103	219	355	545	54
27.	24	33	48	416	103	270	298	611	50
28.	24	33	56	244	103	298	355	578	45
29.	24	33	56	244	103	312	578	578	43
30.	24	33	50	170		284	578	512	36
31.	17		58	170		270		512	

NOTE.—Daily discharge determined from a rating curve which is well defined below 150 second-feet and fairly well defined above.

Monthly discharge of South Fork of Feather River at Enterprise, Cal., for 1911-12.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
October 8-31.....	24	3.5	12.4	590	A.
November.....	244	12	38.0	2,260	A.
December.....	58	24	34.4	2,120	A.
January.....	416	42	131	8,060	A.
February.....	270	103	140	8,060	A.
March.....	938	89	276	17,000	B.
April.....	578	244	328	19,000	B.
May.....	714	385	531	32,600	B.
June.....	448	36	167	9,940	A.
The period.....				100,000	

PALERMO LAND & WATER CO.'S CANAL AT ENTERPRISE, CAL.

This station, which is located above the footbridge at Enterprise, in the NE. ¼ sec. 1, T. 19 N., R. 6 E., was established October 8, 1911.

The gage is a vertical staff fastened to a post on the right bank, 15 feet above the footbridge.

Discharge measurements are made from the footbridge or by wading.

The channel is composed of gravel and sand.

This canal furnishes water for irrigation below Oroville.

*Discharge measurements of Palermo Land & Water Co.'s canal at Enterprise, 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. 8	J. E. Stewart.....	1.30	37	Jan. 30	Lasley Lee.....	.40	a 1.0
Dec. 17	F. C. Ebert.....	.36	12	Mar. 7	J. E. Stewart.....	.61	14
				May 17	do.....	1.32	34

a Estimated.

*Daily gage height, in feet, of Palermo Land & Water Co.'s canal at Enterprise, Cal., in 1911-12.*

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1.....		0.95	0.7	0.45	0.14	0.78	0.78	0.80	1.44
2.....		.95	.7	.43	.24	.78	.78	.80	1.44
3.....		.95	.7	.47	.60	.78	.78	.79	1.45
4.....		.95	.7	.81	.60	.78	.77	1.00	1.47
5.....		.95	.7	.83	.60	.70	.78	1.00	1.47
6.....		.95	.7	.83	.60	.60	.79	1.00	1.47
7.....		.95	.7	.63	.60	.61	.80	1.00	1.45
8.....	1.3	.95	.7	.40	.60	.61	.79	1.01	1.45
9.....	1.3	1.0	.7	.42	.60	.61	.79	1.00	1.43
10.....	1.2	1.0	.7	.42	.60	.58	.38	1.01	1.42
11.....	1.05	.9	.7	.45	.63	.58	.59	1.02	1.46
12.....	1.15	.9	.7	.47	.20	.58	.58	1.04	1.47
13.....	1.1	.9	.7	.45	.74	.40	.58	1.15	1.50
14.....	.95	.9	.7	.43	.80	.58	.59	1.15	1.48
15.....	1.05	.9	.7	.43	.24	.58	.55	1.27	1.45
16.....	1.05	.9	.7	.20	.78	.58	.63	1.32	1.43
17.....	1.05	.9	.36	.42	.78	.58	.68	1.32	1.48
18.....	1.05	.9	.40	.42	.80	.24	.69	1.32	1.45
19.....	1.3	.9	.40	.42	.80	.26	.96	1.30	1.49
20.....	1.3	.7	.40	.45	.80	.75	.96	1.03	1.48
21.....	1.3	.7	.39	.44	.80	.75	.97	1.02	1.50
22.....	1.3	.7	.39	.44	.80	.75	.97	1.02	1.47
23.....	1.3	.7	.43	.44	.80	.73	.94	1.02	1.42
24.....	1.3	.7	.42	.44	.78	.75	.96	1.17	1.40
25.....	1.3	.7	.51	.42	.78	.75	.96	1.18	1.42
26.....	1.3	.7	.62	.30	.80	.74	.97	1.23	1.44
27.....	1.2	.7	.52	.28	.80	.82	.98	1.37	1.45
28.....	1.1	.7	.45	.43	.80	.82	.98	1.42	1.44
29.....	1.0	.7	.45	14	.80	.78	1.01	1.39	1.44
30.....	1.0	.7	.43	.18	.....	.78	.78	1.46	1.43
31.....	.95	.....	.43	.20	.....	.79	.....	1.46	.....

NOTE.—On Jan. 29, 30, 31; Feb. 1, 2, 12, 15; and Mar. 18, 19, 27, and 28, the water was turned out of the canal during a portion of the day, which accounts for the low mean gage height. On Apr. 10 and May 20 the observer noted: "Water turned out on account of heavy rain."

Daily discharge, in second-feet, of Palermo Land & Water Co.'s canal at Enterprise, Cal., for 1911-12.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1.....		27	20	14	7.4	18.5	18.5	19	37
2.....		27	20	18.5	6.1	18.5	18.5	19	37
3.....		27	20	14.5	14	18.5	18.5	18.5	37
4.....		27	20	23	14	18.5	18	24	38
5.....		27	20	24	14	16.5	18.5	24	38
6.....		27	20	24	14	14	18.5	24	38
7.....		27	20	18.5	14	14	19	24	37
8.....	37	27	20	13	14	14	18.5	25	37
9.....	37	28	20	13.5	14	14	18.5	24	37
10.....	34	28	20	13.5	14	13.5	8.9	25	36
11.....	30	25	20	14	14.5	13.5	13.5	25	37
12.....	32	25	20	14.5	5.6	13.5	13.5	25	38
13.....	31	25	20	14	17.5	9.3	13.5	29	39
14.....	27	25	20	13.5	19	13.5	13.5	29	38
15.....	30	25	20	13.5	6.1	13.5	12.5	32	37
16.....	30	25	20	8.6	18.5	13.5	14.5	33	37
17.....	30	25	12	13.5	18.5	13.5	16	33	38
18.....	30	25	13	13.5	19	6.1	16	33	37
19.....	37	25	13	13.5	19	6.5	23	33	38
20.....	37	20	13	14	19	17.5	23	25	38
21.....	37	20	12.5	14	19	17.5	23	25	39
22.....	37	20	12.5	14	19	17.5	23	25	38
23.....	37	20	13.5	14	19	17	22	25	36
24.....	37	20	13.5	14	18.5	17.5	23	29	36
25.....	37	20	15.5	13.5	18.5	17.5	23	29	36
26.....	37	20	18	10.5	19	17.5	23	31	37
27.....	34	20	16	10	19	7.7	24	35	37
28.....	31	20	14	13.5	19	7.7	24	36	37
29.....	28	20	14	7.4	19	18.5	25	35	37
30.....	28	20	13.5	8.2	19	18.5	18.5	37	37
31.....	27	.....	13.5	8.6	.....	18.5	.....	37	.....

NOTE.—Daily discharge determined from two somewhat poorly defined curves applicable Oct. 8, 1911, to Feb. 1, 1912, and Feb. 2 to June 30, 1912.

Monthly discharge of Palermo Land & Water Co.'s canal at Enterprise, Cal., for 1911-12.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accuracy.
	Maximum.	Minimum.	Mean.		
October 8-31.....	37	27	33.0	1,570	A.
November.....	28	20	23.9	1,420	B.
December.....	20	12	17.0	1,050	B.
January.....	24	7.4	13.9	855	B.
February.....	19	5.6	15.6	897	B.
March.....	18.5	6.1	14.7	904	B.
April.....	25	8.9	18.8	1,120	B.
May.....	37	18.5	28.0	1,720	A.
June.....	39	36	37.3	2,220	A.
The period.....				11,800	

MIDDLE FORK OF YUBA RIVER AT FREEMAN'S BRIDGE, NEAR NORTH SAN JUAN, CAL.<sup>1</sup>

This station was established July 3, 1900, at Freeman's bridge, about 1½ miles northeast of North San Juan, Cal., in cooperation with the California Water and Forest Association, for the purpose

<sup>1</sup> This stream is locally known as Middle Yuba River.

of ascertaining the low-water flow during the midsummer season. This information was used in a reconnaissance of Yuba River and its tributaries.<sup>1</sup> The station was discontinued October 13, 1900. It was located a half mile below Oregon Creek and about three-fourths of a mile above Moonshine Creek, both of which enter the river from the north. It was about 4 miles above the junction with the North Fork.

There were no reservoirs storing water on the Middle Fork in 1900. The only site of any importance is that of the Renyard or English reservoir, which has not been in use since the failure of the dam in June, 1883. The drainage area of the Middle Fork above the mouth of North Fork is 218 square miles.

The channel is composed of sand and gravel recently built up by débris from the mines above and is subject to change during floods. The precipitation during the wet season preceding the gagings was about two-thirds to three-fourths the mean annual rainfall; that during the two preceding wet seasons was still further below the normal. The records show, therefore, the low-water flow on this stream during a period of abnormally low rainfall.

*Discharge measurements of Middle Fork of Yuba River at Freeman's bridge, near North San Juan, Cal., in 1900.*

[By H. D. H. Connick.]

Date.	Gage height.	Discharge.	Date.	Gage height.	Discharge.
	<i>Feet.</i>	<i>Sec.-feet.</i>		<i>Feet.</i>	<i>Sec.-feet.</i>
July 1.....	2.40	101	Aug. 11.....	2.17	79
3.....	2.35	180	12.....	2.15	78
4.....	2.30	185	29.....	2.20	69
7.....	2.57	162	30.....	2.20	68
29.....	2.30	109	Sept. 18.....	2.15	64

*Daily gage height, in feet, of Middle Fork of Yuba River at Freeman's bridge, near North San Juan, Cal., for 1900.*

Day.	July.	Aug.	Sept.	Oct.	Day.	July.	Aug.	Sept.	Oct.
1.....	2.40	2.20	2.10	2.00	16.....	2.35	2.15	2.20	.....
2.....	2.38	2.18	2.08	2.00	17.....	2.35	2.15	2.15	.....
3.....	2.35	2.15	2.00	2.45	18.....	2.32	2.15	2.15	.....
4.....	2.32	2.15	2.00	2.45	19.....	2.42	2.15	2.15	.....
5.....	2.40	2.15	2.05	3.00	20.....	2.35	2.15	2.10	.....
6.....	2.52	2.15	2.05	2.50	21.....	2.38	2.15	2.05	.....
7.....	2.60	2.15	2.08	2.40	22.....	2.38	2.15	2.00	.....
8.....	2.52	2.15	2.05	2.25	23.....	2.40	2.12	2.00	.....
9.....	2.45	2.15	2.05	2.20	24.....	2.38	2.10	2.00	.....
10.....	2.42	2.20	2.00	2.18	25.....	2.38	2.10	2.00	.....
11.....	2.40	2.15	2.02	2.08	26.....	2.35	2.10	2.00	.....
12.....	2.40	2.15	2.05	2.08	27.....	2.38	2.10	2.00	.....
13.....	2.30	2.15	2.25	2.00	28.....	2.34	2.10	2.00	.....
14.....	2.30	2.15	2.30	.....	29.....	2.32	2.10	2.00	.....
15.....	2.30	2.15	2.20	.....	30.....	2.28	2.10	2.00	.....
					31.....	2.20	2.10	.....	.....

<sup>1</sup> See Water-Supply Paper U. S. Geol. Survey No. 46, 1901.

Daily discharge, in second-feet, of Middle Fork of Yuba River at Freeman's bridge, near North San Juan, Cal., for 1900.

Day.	July.	Aug.	Sept.	Oct.	Day.	July.	Aug.	Sept.	Oct.
1.....	191	80	68	60	16.....	110	75	80	.....
2.....	189	79	65	60	17.....	110	75	75	.....
3.....	180	75	60	130	18.....	108	75	64	.....
4.....	185	75	60	130	19.....	125	75	75	.....
5.....	190	75	65	360	20.....	110	75	70	.....
6.....	150	75	65	140	21.....	119	75	65	.....
7.....	162	75	68	120	22.....	119	75	60	.....
8.....	150	75	65	90	23.....	120	72	60	.....
9.....	130	75	65	80	24.....	119	70	60	.....
10.....	125	80	60	78	25.....	119	70	60	.....
11.....	120	79	62	68	26.....	110	70	60	.....
12.....	120	78	65	68	27.....	119	70	60	.....
13.....	100	75	90	60	28.....	110	70	60	.....
14.....	100	75	100	.....	29.....	109	69	60	.....
15.....	100	75	80	.....	30.....	90	68	60	.....
					31.....	80	68	.....	.....

NOTE.—Daily discharge determined by indirect method for shifting channels.

Monthly discharge of Middle Fork of Yuba River at Freeman's bridge, near North San Juan, Cal., for 1900.

[Drainage area, 206 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.	
July.....	191	80	128	0.621	0.72	7,870	C.
August.....	80	68	74.1	.360	.42	4,560	C.
September.....	100	60	66.9	.325	.36	3,980	C.
October 1-13.....	360	60	111	.539	.29	2,860	C.

MIDDLE FORK OF YUBA RIVER NEAR NORTH SAN JUAN, CAL.<sup>1</sup>

This station, which is located one-fourth mile below the highway bridge at Freeman's Crossing, 1¼ miles northeast of North San Juan, in the N. ½ NW. ¼ sec. 23, T. 18 N., R. 8 E., in the Tahoe National Forest, was established October 27, 1910.

Oregon Creek enters three-fourths mile above and Moonshine Creek one-fourth mile below the station. The North Fork joins the Middle Fork about 4 miles below Freeman's Crossing.

The gage is a vertical staff wedged between two large boulders on the right bank, one-fourth mile below the bridge.

A car and cable were installed on November 7, 1911, 200 feet above the gage. Prior to this date high-water measurements were made from the highway bridge. Low-water measurements are made by wading.

Estimates of discharge are withheld until additional measurements at the cable section can be secured. Measurements made from the bridge are not considered reliable.

<sup>1</sup> This stream is locally known as Middle Yuba River.

Discharge measurements of Middle Fork of Yuba River near North San Juan, Cal., in 1910-1912.

Date.	Hydrographer.	Gage height.	Discharge.	Date.	Hydrographer.	Gage height.	Discharge.
1910.		<i>Feet.</i>	<i>Sec.-ft.</i>	1911.		<i>Feet.</i>	<i>Sec.-ft.</i>
Sept. 12	T. W. Norcross.....		41	June 14	G. T. Peekema.....	7.05	2,710
Oct. 27	McGlashan & Wood....	4.26	72	Nov. 9	do.....	4.32	78
Dec. 6	F. G. Wood.....	4.80	178				
1911.				1912.			
Apr. 25	G. T. Peekema.....	7.15	2,800	May 21	J. E. Stewart.....	5.92	722

Daily gage height, in feet, of Middle Fork of Yuba River near North San Juan, Cal., for 1910-1912.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.												
1.....					7.5							
2.....					7.15	5.3					4.6	4.3
3.....					6.8		7.0					4.3
4.....					6.7	6.3						4.2
5.....		4.27	5.00		6.7	6.6						4.2
6.....						7.0		6.85				4.3
7.....						7.9			7.3	5.7		4.3
8.....						7.3						4.3
9.....					6.0	6.95						4.3
10.....			4.95		5.8	6.6						4.3
11.....		5.05	6.15		6.0	6.5						4.3
12.....					5.8			6.8				4.3
13.....					5.9							4.3
14.....									7.05	5.2		4.3
15.....					5.5	6.3						4.2
16.....						6.3						4.2
17.....						6.2	7.05		6.9			4.2
18.....					5.5	5.8						4.2
19.....		4.35	5.95	5.3	5.4			6.75				4.2
20.....				8.0								4.2
21.....					6.5						4.4	4.2
22.....					5.8						4.4	4.2
23.....					5.4						4.4	4.2
24.....					7.7			6.9		4.9	4.3	4.2
25.....					7.6		7.15	6.9			4.3	4.2
26.....					6.5				6.1		4.3	4.3
27.....	4.26				6.0	5.4					4.3	4.3
28.....	4.26				6.2						4.3	4.4
29.....					7.8				6.1		4.3	4.4
30.....					9.25						4.3	4.4
31.....			5.00	9.5		7.2					4.3	
1911-12												
1.....	4.3	4.3	4.4	4.3	4.8	4.6	4.9	6.4	6.3			
2.....	4.4	4.3	4.4	4.4	4.7	4.6	5.1	6.1	6.3			
3.....	4.3	4.3	4.4	4.4	4.7	4.6	5.1	5.8	6.3			
4.....	4.3	4.3	4.4	4.6	4.7	4.6	5.1	5.8	6.2			
5.....	4.4	4.3	4.3	4.7	4.6	5.1	5.1	5.8	6.2			
6.....	4.5	4.3	4.3	4.6	4.6	6.1	5.1	5.7	6.1			
7.....	4.4	4.3	4.4	4.5	4.6	5.5	5.3	6.0	6.1			
8.....	4.4	4.3	4.4	4.7	4.6	5.2	5.3	6.2	5.9			
9.....	4.4	4.3	4.4	4.9	4.7	5.1	5.3	6.1	5.7			
10.....	4.5	5.2	4.3	5.0	4.6	5.0	5.3	6.2	5.6			
11.....	4.5	4.6	4.3	4.9	4.7	4.9	5.2	6.3	5.6			
12.....	4.4	4.4	4.3	4.8	4.6	4.9	5.1	6.1	5.6			
13.....	4.3	4.4	4.3	4.7	4.6	5.0	5.0	6.1	5.7			
14.....	4.4	4.4	4.3	4.6	4.6	4.9	5.0	6.3	5.5			
15.....	4.5	4.4	4.3	4.5	4.6	4.9	5.0	6.3	5.4			
16.....	4.4	4.8	4.3	5.0	4.6	5.0	5.1	6.3	5.2			
17.....	4.4	4.5	4.4	4.8	4.6	5.0	5.1	6.3	5.2			
18.....	4.4	4.5	4.3	4.7	5.1	4.9	5.1	6.3	5.1			
19.....	4.4	4.5	4.3	5.0	4.9	5.0	5.1	6.2	5.1			
20.....	4.4	4.5	4.3	4.8	4.8	5.1	5.0	6.3	5.1			

Daily gage height, in feet, of Middle Fork of Yuba River near North San Juan, Cal., for 1910-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1911-12.												
21.....	4.3	4.4	4.3	4.8	4.8	5.0	5.0	5.9	5.0	.....	.....	.....
22.....	4.8	4.4	4.3	4.7	4.7	4.9	5.0	5.8	5.0	.....	.....	.....
23.....	4.3	4.4	4.3	4.6	4.7	4.9	5.0	5.7	5.0	.....	.....	.....
24.....	4.3	4.4	4.3	4.6	4.6	4.9	5.1	5.7	5.0	.....	.....	.....
25.....	4.4	4.4	4.4	4.7	4.6	5.0	5.2	6.1	4.9	.....	.....	.....
26.....	4.4	4.4	4.6	6.0	4.6	5.0	5.3	6.5	4.9	.....	.....	.....
27.....	4.4	4.3	4.3	5.3	4.6	5.0	5.2	6.8	4.8	.....	.....	.....
28.....	4.4	4.3	4.4	5.1	4.6	5.1	5.2	6.3	4.8	.....	.....	.....
29.....	4.4	4.4	4.4	4.9	4.6	5.1	6.3	6.5	4.8	.....	.....	.....
30.....	4.4	4.4	4.3	4.8	.....	5.1	6.1	6.4	4.7	.....	.....	.....
31.....	4.4	.....	4.3	4.8	.....	5.1	.....	6.8	.....	.....	.....	.....

NOTE.—Previous to Aug. 21, 1911, gage heights were furnished by the United States Forest Service.

YUBA RIVER NEAR SMARTSVILLE, CAL.

This station, which is located 1 mile north of Smartsville, at a point in the foothills called The Narrows in sec. 22, T. 16 N., R. 6 E., was established June 2, 1903.<sup>1</sup> The data are very valuable in connection with flood and reclamation problems of Sacramento Valley. It is about 20 miles above Marysville, Cal., 13 miles below the mouth of the North Fork, and 6½ miles below the mouth of the South Fork.

Deer Creek enters from the east about a mile above the station. Its drainage area is about 89.6 square miles. South Fork of Yuba (draining 360 square miles) and North Fork of Yuba (draining 492 square miles) enter from the east about 8 and 15 miles, respectively, above the station. Dry Creek enters from the north about 7 miles below the station. Its drainage area is 106 square miles.

No diversions are made immediately above the station. Extensive water rights have been acquired throughout this basin and practically the entire flow of the South Fork has been preempted by filings.

At the point of measurement the channel is straight for several hundred feet and is filled to a great depth with gravel and sand, tailings from hydraulic mining, which are continually shifting, alternately filling and scouring. On this account frequent discharge measurements are made in order to estimate the discharge closely. The banks are high and rocky and confine the river at all stages; the current is swift.

After the rains of 1904 it was found that the bed of the stream had been lowered for an average depth of 2 feet.

Discharge measurements are made from a car and cable.

Conditions for obtaining accurate discharge data are poor, owing to the shifting of the bed and the torrential nature of the stream. At high stages only float velocities can be taken.

<sup>1</sup> For a report of a reconnaissance of the Yuba River, see Water-Supply Paper U. S. Geol. Survey No. 46, 1901.

Water is diverted for power and irrigation above the station. Several small glacial lakes near the headwaters of the South Fork are utilized as storage reservoirs.

The staff gage which is at the cable is made in two sections and is read daily. The low-water portion is bolted to a rock wall on the left bank; the high-water portion is bolted to the wall on the right bank. (See Pl. VIII.) During recent years the bed of the stream has been lowering and on August 1, 1906, the gage datum was lowered 10.00 feet.

The maximum recorded daily discharge is 111,000 second-feet, for a mean daily gage height of 28.3 feet, January 15, 1909. The lowest discharge is 295 second-feet August 22, to September 14, 1910.

*Discharge measurements of Yuba River near Smartsville, Cal., in 1903-1912.*

Date.	Hydrographer.	Gage height.	Discharge.	Date.	Hydrographer.	Gage height.	Discharge.
1903.		<i>Feet.</i>	<i>Sec.-feet.</i>	1905.		<i>Feet.</i>	<i>Sec.-feet.</i>
Nov. 4	S. G. Bennett.....	3.80	570	Aug. 7	J. R. McKeel.....	1.50	525
17	J. R. McKeel.....	6.80	3,200	15	do.....	1.40	476
30	do.....	6.20	2,450	21	do.....	1.50	532
Dec. 4	do.....	5.50	1,480	28	do.....	1.30	442
28	do.....	5.60	1,590	Sept. 5	do.....	1.30	439
1904.				25	do.....	1.20	402
Jan. 11	J. R. McKeel.....	6.30	2,590	Oct. 8	Hawley and Lee...	1.45	395
18	do.....	5.90	2,020	20	J. R. McKeel.....	1.40	456
29	do.....	5.50	1,700	30	do.....	1.35	444
Feb. 8	do.....	6.00	2,160	Nov. 9	do.....	1.30	420
25	A. C. Lootz.....	13.50	23,400	16	do.....	1.20	403
May 10	J. R. McKeel.....	10.30	10,800	23	do.....	1.35	438
23	do.....	11.20	15,900	30	do.....	2.20	830
28	do.....	9.30	8,860	Dec. 6	do.....	1.60	533
June 13	do.....	8.30	6,710	13	do.....	1.50	486
23	do.....	7.20	4,340	29	do.....	1.90	661
July 11	do.....	5.10	1,470	1906.			
17	O. W. Peterson.....	4.40	1,050	Jan. 4	J. R. McKeel.....	1.70	590
25	J. R. McKeel.....	4.10	849	11	do.....	1.80	601
Aug. 6	do.....	3.80	669	25	do.....	6.30	3,650
13	O. W. Peterson.....	3.70	625	30	do.....	5.70	2,680
28	J. R. McKeel.....	3.50	495	Feb. 4	do.....	5.40	2,270
Sept. 11	do.....	3.40	444	9	F. R. S. Buttemer..	5.32	1,930
23	O. W. Peterson.....	4.90	1,530	11	J. R. McKeel.....	5.50	2,460
25	J. R. McKeel.....	5.45	2,260	15	R. S. Hawley.....	8.00	8,990
Oct. 27	do.....	4.70	968	Mar. 9	do.....	6.85	5,340
Nov. 13	do.....	4.50	787	10	do.....	6.90	5,550
28	do.....	5.15	1,520	23	do.....	9.80	17,400
Dec. 26	do.....	5.20	1,540	24	do.....	12.20	29,500
27	do.....	5.00	1,390	Apr. 10	Hawley and Sawyer	7.20	8,280
1905.				17	W. C. Sawyer.....	7.20	8,100
Jan. 20	J. R. McKeel.....	6.70	3,500	18	do.....	7.20	8,270
Feb. 12	do.....	6.30	3,150	26	do.....	6.65	6,600
13	O. W. Peterson.....	6.25	2,920	May 3	do.....	7.70	11,500
26	J. R. McKeel.....	7.00	5,400	4	do.....	7.70	10,300
Mar. 5	do.....	6.60	4,510	5	do.....	8.15	13,200
15	do.....	6.90	5,910	18	do.....	6.07	6,420
Apr. 8	do.....	7.00	6,960	July 10	R. S. Hawley.....	2.47	4,440
24	do.....	6.30	6,420	11	do.....	2.23	4,020
May 4	do.....	5.80	5,220	24	do.....	.95	1,870
13	do.....	5.50	5,130	25	do.....	.75	1,580
28	do.....	5.75	5,570	Aug. 6 <sup>a</sup>	J. R. McKeel.....	9.80	1,000
June 4	do.....	5.00	3,960	20	do.....	9.45	701
16	do.....	4.50	3,320	30	do.....	9.35	661
July 7	do.....	2.40	1,020	Sept. 9	do.....	9.25	548
20	do.....	2.00	697	16	do.....	9.30	577
29	do.....	1.60	634	Oct. 24	do.....	9.20	575
31	Peterson and Lee..	1.64	463	Oct. 25	R. S. Hawley.....	9.10	422
					do.....	9.10	423

<sup>a</sup> Zero of gage was lowered 10 feet on Aug. 1, 1906.



A. EQUIPMENT.



B. GENERAL VIEW.

GAGING STATION ON YUBA RIVER AT SMARTSVILLE.



Discharge measurements of Yuba River near Smartsville, Cal., in 1903-1912—Contd.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1907.		<i>Feet.</i>	<i>Sec.-feet.</i>	1908.		<i>Feet.</i>	<i>Sec.-feet.</i>
Jan. 22	J. R. McKeel.....	10.10	2,030	Nov. 1	J. R. McKeel.....	7.30	463
Feb. 5	do.....	17.50	21,100	Dec. 6	do.....	8.40	1,520
8	R. S. Hawley.....	15.40	10,800	15	do.....	7.20	651
11	J. R. McKeel.....	14.65	8,180	20	do.....	7.00	567
16	do.....	14.20	6,370				
27	do.....	14.50	6,340	1909.			
Mar. 7	do.....	14.60	6,750	Feb. 21	J. R. McKeel.....	12.05	8,730
12	do.....	14.40	6,320	28	do.....	10.70	5,230
14	do.....	14.00	5,900	Mar. 7	do.....	11.00	6,480
22	do.....	15.85	13,700	21	do.....	10.00	4,750
Apr. 4	Hawley and Steward.....			Apr. 11	do.....	10.50	6,080
8	J. R. McKeel.....	13.80	9,520	25	do.....	11.00	7,610
23	do.....	14.00	9,550	May 25	W. F. Martin.....	9.70	6,900
27	do.....	15.00	14,500	June 26	J. R. McKeel.....	8.60	4,120
May 3	W. G. Steward.....	14.80	11,900	July 18	do.....	5.60	1,000
8	J. R. McKeel.....	13.80	8,460	Sept. 20	do.....	4.70	411
16	do.....	14.20	7,330	Oct. 10	do.....	4.90	428
20	do.....	14.95	8,940	Nov. 7	do.....	5.30	677
26	do.....	14.10	10,900	14	do.....	5.80	1,029
29	do.....	14.65	8,630	28	do.....	10.20	4,170
June 6	do.....	14.25	10,500	Dec 19	do.....	9.20	3,190
14	do.....	13.00	8,950				
20	do.....	13.05	5,440	1910.			
26	do.....	12.80	6,260	Jan. 17	J. R. McKeel.....	8.50	3,350
July 7	W. F. Martin.....	11.50	5,990	21	J. E. Stewart.....	9.40	2,600
13	J. R. McKeel.....	11.05	4,180	27	J. R. McKeel.....	9.40	5,230
21	do.....	11.05	3,640	30	do.....	8.60	4,300
28	do.....	10.00	2,100	Feb. 6	do.....	8.00	3,140
Aug. 11	do.....	9.35	1,430	13	do.....	8.10	3,280
Sept. 1	do.....	8.70	713	20	do.....	8.50	4,190
Oct. 20	do.....	8.40	583	27	do.....	9.20	5,870
Nov. 3	W. A. Lamb.....	8.20	408	Mar. 15	do.....	9.50	6,770
16	J. R. McKeel.....	8.22	427	May 2	J. E. Stewart.....	9.55	6,530
26	do.....	8.30	531	June 5	J. R. McKeel.....	8.90	5,720
Dec. 2	do.....	8.10	427	June 30	do.....	7.40	2,960
11	do.....	8.20	476	July 5	do.....	6.40	1,720
23	do.....	8.10	437	July 12	do.....	5.90	1,210
		10.50	2,790	July 31	do.....	4.70	483
		8.70	881	Aug. 14	do.....	4.50	381
1908.				28	do.....	4.30	317
Jan. 6	J. R. McKeel.....	9.80	2,370	Sept. 4	do.....	4.20	299
7	do.....	9.40	1,670	do.....	do.....	4.20	292
16	do.....	10.20	2,760	Oct. 23	do.....	4.40	364
21	W. A. Lamb.....	13.10	8,440	28	J. E. Stewart.....	4.36	357
27	J. R. McKeel.....	10.50	3,220	Nov. 5	J. R. McKeel.....	4.40	349
Feb. 3	do.....	11.40	4,050	20	do.....	4.80	527
11	do.....	10.00	2,620	Dec. 27	do.....	5.00	645
18	do.....	9.50	1,680				
24	do.....	9.20	1,570	1911.			
Mar. 9	do.....	9.80	2,420	Jan. 17	J. R. McKeel.....	6.60	1,810
14	do.....	10.80	3,580	Feb. 19	do.....	8.00	3,180
18	do.....	11.80	5,100	Apr. 30	do.....	9.50	8,360
23	do.....	10.90	4,180	May 29	do.....	9.90	10,600
Apr. 7	W. A. Lamb.....	10.50	3,130	July 9	do.....	7.20	3,460
18	do.....	11.75	5,300	Sept. 23	do.....	5.30	1,280
20	do.....	12.90	8,410	Aug. 20	do.....	4.40	544
May 17	J. R. McKeel.....	11.40	4,490	Sept. 3	do.....	4.30	462
24	do.....	12.05	6,100	Oct. 5	J. E. Stewart.....	4.43	547
June 7	do.....	10.90	4,530	Dec. 19	J. R. McKeel.....	4.45	538
14	do.....	10.50	4,320				
21	do.....	10.20	3,870	1912.			
Aug. 9	do.....	6.80	363	Feb. 11	J. R. McKeel.....	5.10	969
23	do.....	6.90	328	Mar. 3	do.....	4.80	766
Sept. 6	do.....	6.80	286	Apr. 3	do.....	6.14	2,250
13	do.....	6.80	293	May 4	Lasley Lee.....	6.18	2,270
20	do.....	6.85	303		J. R. McKeel.....	7.28	4,090

Daily gage height, in feet, of Yuba River near Smartsville, Cal., for 1903-1912.

Day.	June.	July.	Aug.	Sept.	Day.	June.	July.	Aug.	Sept.
1903.					1903.				
1.		5.2	3.8	3.5	16.	6.2		3.6	3.5
2.	8.2	5.1	3.8	3.5	17.	5.9		3.6	3.5
3.	7.8	5.0	3.8	3.5	18.	5.7		3.6	3.5
4.	7.5	5.0	3.8	3.5	19.	5.9		3.6	3.5
5.	7.5	(a)	3.8	3.5	20.	5.7		3.5	3.5
6.	7.7		3.7	3.5	21.	5.5		3.5	3.5
7.	7.8		3.7	3.5	22.	5.5		3.5	3.5
8.	7.5		3.7	3.5	23.	5.5		3.5	3.5
9.	7.3		3.7	3.4	24.	5.3		3.5	3.5
10.	7.4		3.7	3.5	25.	5.2		3.5	3.5
11.	7.0		3.7	3.5	26.	5.2		3.5	3.5
12.	6.8		3.7	3.5	27.	5.1		3.5	3.5
13.	6.7		3.7	3.5	28.	5.1	3.9	3.5	3.5
14.	6.6		3.6	3.5	29.	5.2	3.9	3.5	3.5
15.	6.3		3.6	3.5	30.	5.3	3.9	3.5	3.5
					31.		3.8	3.5	

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1903-4.												
1.	3.6	3.6	6.1	6.1	5.5	10.0	9.6	9.3	8.5	5.9	3.9	3.5
2.	3.6	3.6	6.0	5.8	5.5	9.6	9.5	9.2	8.3	5.7	3.8	
3.	3.6	3.6	5.9	5.7	5.5	10.0	9.5	8.8	8.7	5.8	3.8	3.5
4.	3.6	3.8	5.9	6.3	5.9	10.9	9.5	9.1	8.5	5.7	3.8	
5.	3.6	3.9	5.8	5.7	6.1	10.9	9.4	9.3	8.3	5.6	3.8	3.4
6.	3.6	3.8	5.8	5.7	5.9	10.2	9.6	9.8	8.3	5.4	3.8	
7.	3.6	4.1	5.7	5.6	5.9	10.6	9.7	9.8	8.2	5.3	3.8	3.4
8.	3.6	4.0	5.7	5.6	6.0	12.5	9.8	10.1	10.2	8.2	5.2	3.7
9.	3.6	3.9	5.6	5.5	5.8	11.1	10.3	10.2	8.1	5.1	3.7	3.4
10.	4.2	3.8	5.5	5.6	5.7	13.1	10.5	10.2	8.1	5.0	3.7	
11.	4.7	3.8	5.5	6.3	5.7	11.1	10.8	10.2	8.2	4.9	3.7	3.4
12.	4.0	8.3	5.4	5.9	5.9	10.5	10.8	10.3	8.2	4.9	3.7	
13.	3.9	8.6	5.5	5.7	8.5	9.8	11.2	10.4	8.1	4.8	3.7	3.4
14.	3.8	10.4	5.5	5.7	7.5	10.7	11.4	11.2	8.0	4.7		
15.	3.7	10.0	5.5	5.6	9.5	10.6	11.4	10.2	7.7	4.6	3.7	3.4
16.	3.6	7.4	5.8	5.7	20.0	10.5	11.1	10.2	7.4			
17.	3.6	6.8	7.5	5.7		14.8	10.3	9.8	7.3	4.4	3.7	3.4
18.	3.6	6.5	6.9	5.9		15.5	9.9	9.7	7.2	4.3		
19.	3.6	6.5	6.4	6.1		15.1	11.3	9.5	7.2	4.8	3.6	3.4
20.	3.6	11.0	6.5	5.8		13.3	9.9	9.3	7.0	4.3	3.6	
21.	3.7	16.0	6.3	5.7		10.8	9.3	10.1	6.7	4.2		3.4
22.	3.7	11.0	6.1	5.6	20.3	10.3	9.1	11.2	6.8	4.2	3.6	3.4
23.	3.7	9.0	5.9	5.8	14.3	9.1	8.9	11.1	7.0	4.2		5.0
24.	3.7	8.3	5.7	5.7	20.3	9.3	9.2	11.0	6.5	4.1	3.6	5.5
25.	3.7	7.5	5.7	5.7	13.5	9.1	8.9	11.1	6.4	4.1		5.5
26.	3.7	7.0	5.6	5.6	12.4	8.7	9.7	9.3	6.4	4.1	3.6	4.9
27.	3.7	6.7	5.6	5.6	11.2	9.0	9.2	9.4	6.4	4.0		4.5
28.	3.6	6.5	5.6	5.5	10.6	14.8	9.3	9.2	6.2	4.0	3.5	4.1
29.	3.6	6.3	5.5	5.5	10.3	13.3	8.9	9.5	6.1	4.0		4.0
30.	3.6	6.2	5.5	5.5		11.1	8.5	9.0	5.9	3.9	3.5	3.8
31.	3.6		5.7	5.5		10.2		8.8		3.9		
1904-5.												
1.	3.8	4.9	5.5	9.0	7.5	6.7	7.0	6.5	5.5	2.7		1.3
2.	3.8	5.3	5.1	8.4	9.4	6.7	7.0	6.3	5.2	2.7	1.6	1.3
3.	3.7	5.0	5.0	7.6	8.5	6.6	7.1	6.1	5.1	2.6	1.6	
4.	3.7	4.8	4.9	7.2	7.9	6.7	7.1	5.8	5.0		1.6	1.3
5.	3.7	4.8	4.8	6.9	8.5	6.6	7.0	5.7	4.8	2.5	1.6	1.3
6.	3.7	4.7	4.8	6.8	7.6	6.6	7.1	5.7	4.9	2.4		1.3
7.	3.9	4.7	4.7	6.4	7.2	6.5	7.3	5.6	5.0	2.4	1.5	1.3
8.	4.4	4.7	4.7	6.4	7.0	6.5	7.0	6.0	4.9	2.3	1.5	1.3
9.	6.0	4.7	4.8	6.3	6.8	6.4	6.9	6.2	4.9	2.3	1.5	1.3
10.	6.5	4.6	5.0	6.2	6.6	6.4	6.9	5.7	4.9	2.2	1.5	
11.	11.5	4.6	4.8	6.1	6.6	6.3	6.5	5.7	5.2	2.2	1.5	1.3
12.	7.5	4.5	4.8	6.1	6.3	6.4	6.3	5.5	5.0	2.2	1.5	1.2
13.	6.1	4.5	5.0	6.1	6.2	7.3	6.3	5.5	5.0	2.1		1.2
14.	5.7	4.5	4.9	8.2	6.1	7.7	6.2		4.7	2.1	1.5	1.2
15.	5.9	5.4	4.8	7.7	6.1	6.9	6.2	6.1	4.7	2.1	1.4	1.2

a On July 5, 1903, the water fell below gage.

Daily gage height, in feet, of Yuba River near Smartsville, Cal., for 1903-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1904-5.												
16.	5.7	5.0	4.8	7.3	6.0	6.8	6.4	6.9	4.5	2.1	1.4	1.2
17.	5.4	4.7	4.7	6.9	7.0	6.6	6.0	7.0	4.5	2.0	1.4	1.2
18.	5.2	4.7	4.7	6.3	7.0	7.3	7.2	6.9	4.3	2.0	1.4	1.2
19.	5.1	4.8	4.7	.....	6.9	11.3	6.3	6.9	4.2	2.0	1.4	1.2
20.	5.0	4.7	4.7	6.7	8.5	8.8	6.0	6.8	4.0	2.0	.....	1.2
21.	4.9	4.7	4.6	7.5	7.4	9.4	6.0	7.0	3.8	1.9	1.4	1.2
22.	4.9	4.7	4.6	10.4	7.1	8.5	6.0	6.3	3.6	1.9	1.5	1.2
23.	4.9	4.6	4.7	10.0	6.9	7.9	6.1	6.2	3.4	1.8	1.4	1.2
24.	4.8	4.6	6.5	8.9	6.8	8.4	6.3	6.0	3.3	1.8	1.4	1.2
25.	.....	4.6	5.5	8.2	6.9	8.0	6.6	6.2	3.2	1.8	1.4	1.2
26.	4.7	4.5	5.2	7.8	7.0	8.1	7.0	6.5	3.1	1.7	1.4	1.2
27.	4.7	4.8	5.0	7.4	6.9	8.0	7.4	5.8	3.0	1.7	.....	1.5
28.	4.7	5.2	4.9	7.1	6.8	7.5	7.1	5.7	2.9	1.7	1.3	1.5
29.	4.7	4.9	4.9	6.9	.....	8.4	7.0	5.6	2.8	1.6	1.3	1.4
30.	4.9	5.6	12.0	6.8	.....	8.0	7.1	5.5	2.8	1.6	1.3	1.4
31.	4.8	.....	11.4	6.7	.....	7.3	.....	5.5	.....	1.6	1.3	.....
1905-6.												
1.	1.4	1.4	2.0	1.8	5.5	7.4	9.7	7.1	6.3	3.5	10.0	9.4
2.	1.4	1.4	1.7	1.7	5.5	7.0	8.7	7.5	6.4	3.8	9.9	9.3
3.	1.4	1.4	1.7	1.7	5.5	7.5	8.0	7.9	6.7	4.0	9.9	9.3
4.	1.4	1.4	1.7	1.7	5.4	7.3	7.5	8.0	10.0	3.7	9.8	9.3
5.	1.4	.....	1.6	1.7	5.4	6.9	7.3	8.1	8.0	3.5	.....	9.3
6.	1.3	1.4	1.6	1.7	5.4	6.7	7.2	8.0	7.0	3.2	9.8	9.3
7.	1.3	1.4	1.6	1.7	5.3	6.8	7.2	8.0	6.5	3.0	9.8	9.3
8.	1.4	1.3	1.6	1.7	5.3	6.8	7.3	8.0	6.1	2.8	9.7	9.3
9.	.....	1.3	1.5	1.6	5.3	6.8	7.3	8.2	6.3	2.6	9.7	9.2
10.	1.4	1.3	.....	1.8	5.6	6.9	7.3	8.1	.....	2.5	9.7	9.2
11.	1.4	1.3	1.5	1.8	5.5	7.0	7.1	8.4	7.0	2.1	9.7	9.2
12.	1.4	.....	1.5	4.7	5.4	12.0	7.0	7.6	8.6	2.4	.....	9.2
13.	1.4	1.3	1.5	9.7	5.3	8.8	7.1	7.0	6.6	2.3	9.6	9.2
14.	1.4	1.3	1.5	8.5	5.4	8.8	7.0	.....	5.7	2.2	9.6	9.2
15.	.....	1.3	1.5	11.0	8.3	8.1	7.2	7.3	5.7	1.8	9.6	9.3
16.	1.3	1.2	1.6	11.0	6.7	7.5	7.2	6.3	7.0	1.7	9.6	9.3
17.	1.3	1.2	1.6	9.7	6.1	7.2	7.3	6.2	5.8	1.6	9.5	9.2
18.	1.4	1.2	2.0	17.0	6.4	.....	7.3	6.1	5.0	1.6	9.5	9.2
19.	1.4	.....	2.0	13.0	8.5	6.7	7.4	6.2	6.2	1.4	9.5	9.2
20.	1.4	1.5	2.4	8.9	7.0	6.6	7.5	6.3	5.9	1.2	9.5	9.2
21.	1.4	1.6	2.0	8.0	8.4	7.1	7.5	6.2	5.3	1.1	9.5	9.2
22.	.....	1.4	1.8	7.4	7.4	9.6	7.5	6.1	5.0	1.0	9.5	9.2
23.	1.4	1.4	1.6	7.0	7.7	10.0	7.3	5.9	5.1	1.0	9.5	9.2
24.	1.4	1.3	1.6	6.7	7.7	12.2	7.0	5.5	4.3	.9	9.5	9.2
25.	1.4	1.4	1.6	6.3	7.8	11.6	6.7	6.6	4.2	.8	9.5	9.2
26.	1.5	.....	1.6	6.1	7.4	12.4	6.8	8.8	4.0	.7	.....	9.2
27.	1.4	1.8	1.6	6.0	8.5	9.5	6.6	8.7	3.8	.6	9.4	9.2
28.	.....	1.6	1.8	.....	8.0	8.6	6.4	9.0	3.7	.5	9.4	9.2
29.	.....	1.8	1.9	5.8	.....	8.0	6.7	7.7	3.5	.....	9.2	9.2
30.	1.4	2.2	1.8	5.7	.....	9.4	6.8	6.7	3.5	.3	9.4	9.1
31.	1.4	.....	1.8	5.6	.....	14.0	.....	6.3	.....	.2	9.4	.....
1906-7.												
1.	9.1	9.0	9.3	11.8	21.0	15.3	13.8	14.4	14.6	12.6	9.2	8.4
2.	9.1	9.1	9.3	11.3	27.0	14.6	14.4	.....	15.1	12.2	9.2	.....
3.	9.1	9.1	9.3	11.3	20.5	14.3	14.0	14.3	14.3	12.4	9.1	8.4
4.	9.1	12.7	9.3	14.5	19.5	14.3	13.7	14.2	14.3	.....	9.0	8.4
5.	9.1	10.6	9.3	12.4	17.5	14.7	13.9	14.0	14.2	12.0	8.9	8.3
6.	9.0	10.0	9.3	11.8	16.8	15.0	14.0	13.9	14.3	11.8	8.9	.....
7.	9.0	9.7	9.3	11.2	16.0	14.6	14.0	13.8	14.1	11.5	8.8	8.3
8.	9.0	9.5	10.9	11.3	15.5	14.4	14.0	13.8	.....	11.4	8.8	.....
9.	9.0	9.5	10.2	11.2	15.1	15.6	14.3	14.0	13.6	11.3	8.7	.....
10.	9.0	9.4	10.9	10.9	14.9	14.8	14.7	14.1	13.2	11.2	.....	8.3
11.	9.0	9.4	17.0	10.6	14.7	15.2	15.0	14.3	15.0	11.2	8.7	8.3
12.	9.0	9.4	12.7	10.5	14.5	14.4	15.4	14.0	14.0	11.2	8.7	8.2
13.	9.0	9.4	11.7	10.5	14.3	14.1	15.7	13.8	.....	11.0	8.6	.....
14.	9.0	9.4	11.0	10.7	14.2	14.0	16.2	13.8	13.0	10.9	8.6	.....
15.	9.0	9.4	10.8	10.6	14.1	14.0	16.4	14.1	12.6	10.7	.....	8.2
16.	9.0	9.6	10.7	10.5	14.2	14.3	15.5	14.2	12.3	10.6	8.5	8.2
17.	9.1	9.5	10.6	10.4	14.3	24.0	15.1	14.7	12.4	10.5	8.5	.....
18.	9.1	9.4	10.5	10.3	14.4	27.9	15.2	15.0	12.7	10.5	.....	8.2
19.	9.1	9.3	10.4	10.2	14.2	29.2	15.4	15.3	13.1	10.4	8.5	8.3
20.	9.1	9.3	10.4	10.1	14.2	24.0	15.3	15.0	13.1	10.3	8.5	8.2

<sup>a</sup> Datum of the gage lowered 10 feet Aug. 1, 1906.

Daily gage height, in feet, of Yuba River near Smartsville, Cal., for 1903-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1906-7.												
21.....	9.1	9.3	10.4	10.1	14.2	18.5	15.2	14.7	13.7	10.0	8.5	.....
22.....	9.1	9.3	10.4	10.1	14.8	15.9	15.1	14.4	13.0	9.9	8.4	8.2
23.....	9.1	9.3	11.4	10.3	.....	16.4	15.0	13.7	12.3	9.8	8.4	8.2
24.....	9.0	9.3	11.4	10.4	14.4	15.0	15.0	14.3	12.4	9.7	.....	8.2
25.....	9.0	9.3	15.4	11.3	15.6	14.5	15.0	.....	12.6	9.6	.....	.....
26.....	9.0	9.3	18.9	12.1	15.0	14.1	14.9	14.1	12.6	9.6	8.4	8.3
27.....	9.0	9.3	13.8	11.7	14.5	13.8	14.8	14.2	12.7	9.5	.....	8.3
28.....	9.0	9.3	12.8	16.8	14.2	13.6	14.7	14.2	12.6	9.4	8.4	8.3
29.....	9.0	9.2	11.8	15.0	.....	13.4	14.6	14.7	12.5	9.3	.....	.....
30.....	9.0	9.3	12.4	13.5	.....	13.2	14.5	14.5	.....	9.3	8.4	8.3
31.....	9.0	.....	12.4	19.0	.....	13.4	.....	14.5	.....	9.2	8.4	.....
1907-8.												
1.....	8.2	8.4	8.1	10.1	10.1	10.3	10.0	12.3	11.2	8.2	7.0	.....
2.....	8.2	8.4	8.1	10.1	10.5	10.9	10.1	12.7	10.8	8.2	.....	6.9
3.....	8.2	8.3	8.1	9.8	11.4	10.7	10.3	12.0	10.0	8.1	6.9	.....
4.....	8.3	8.3	8.1	10.1	10.5	10.2	10.6	11.0	9.9	8.0	6.9	6.8
5.....	8.3	8.2	8.2	9.7	10.4	10.2	.....	11.1	10.2	.....	6.9	.....
6.....	.....	8.2	8.7	9.5	10.4	10.0	10.8	11.3	10.5	7.9	6.9	6.8
7.....	8.2	8.3	12.1	9.4	10.2	9.9	10.5	12.2	10.9	7.8	6.9	.....
8.....	8.2	8.3	10.3	9.4	10.1	.....	10.2	.....	10.8	7.8	6.8	.....
9.....	8.3	8.3	9.4	9.5	10.4	9.8	10.5	10.9	10.8	7.7	.....	6.8
10.....	.....	8.3	9.0	9.4	10.2	10.0	11.0	10.8	10.7	7.7	6.8	.....
11.....	.....	.....	10.5	9.4	10.0	10.1	11.6	10.7	10.6	7.6	6.9	6.8
12.....	8.3	8.2	9.6	9.6	9.9	10.3	11.9	10.8	10.6	.....	6.9	.....
13.....	.....	8.2	10.0	9.9	9.8	10.5	12.3	10.7	10.5	7.5	6.9	6.8
14.....	8.3	8.2	9.7	12.1	9.8	10.8	12.0	11.0	10.4	7.5	.....	.....
15.....	8.3	8.2	9.4	10.8	9.7	11.1	11.6	11.5	10.0	7.5	6.9	6.8
16.....	8.2	8.1	9.1	10.4	9.6	11.5	11.3	11.2	9.9	7.4	.....	6.9
17.....	8.2	8.2	8.9	10.2	9.6	11.6	11.2	11.4	9.7	7.4	6.9	6.9
18.....	8.2	8.2	8.8	10.1	9.5	11.8	11.6	12.0	9.5	7.3	.....	.....
19.....	8.2	.....	8.8	10.4	9.5	11.6	12.2	13.0	9.4	.....	6.9	6.9
20.....	8.2	8.1	8.7	12.2	9.4	11.3	12.9	12.0	9.3	7.2	.....	6.9
21.....	8.2	8.2	8.7	13.0	9.4	.....	12.6	11.9	10.2	7.2	6.9	.....
22.....	8.2	.....	12.9	9.3	11.0	12.2	11.8	9.2	7.2	.....	.....	.....
23.....	.....	8.2	8.7	11.8	.....	10.9	11.7	11.8	9.0	7.1	6.9	6.8
24.....	8.2	8.2	8.7	12.1	9.2	10.8	11.4	12.1	8.9	7.1	.....	6.8
25.....	8.3	8.2	8.7	11.3	9.3	10.9	11.3	12.2	8.8	7.1	6.9	6.8
26.....	8.4	8.2	11.5	10.8	9.5	11.0	11.6	12.0	8.7	.....	.....	.....
27.....	8.6	8.0	10.6	10.5	9.4	10.8	11.7	11.7	8.6	7.1	.....	6.8
28.....	8.6	7.8	10.0	10.3	9.6	10.5	12.0	11.8	8.5	7.1	6.9	6.8
29.....	8.5	8.0	10.3	10.2	10.0	.....	12.0	11.7	8.4	7.0	.....	.....
30.....	8.4	.....	10.4	10.0	.....	10.4	12.0	11.6	8.3	7.0	6.9	.....
31.....	8.4	.....	11.4	9.8	.....	10.3	.....	.....	7.0	.....	.....	.....
1908-9.												
1.....	6.8	7.3	7.1	7.2	10.5	10.6	9.6	11.8	11.5	7.8	.....	4.8
2.....	.....	7.3	7.1	10.6	10.4	10.6	10.0	11.8	.....	7.6	5.3	.....
3.....	6.8	7.2	7.5	13.5	11.1	10.8	10.4	11.8	12.0	.....	5.2	4.8
4.....	.....	7.2	8.3	10.6	11.0	12.7	.....	12.0	11.8	7.3	.....	.....
5.....	6.8	7.1	9.8	10.6	11.0	11.7	10.3	12.1	11.4	6.9	5.2	4.8
6.....	.....	.....	8.4	16.0	10.9	11.7	10.2	12.5	11.1	6.7	.....	.....
7.....	6.8	7.0	7.9	13.9	13.0	11.0	10.1	12.5	11.0	6.5	5.2	4.7
8.....	.....	.....	7.7	20.5	11.9	10.8	10.2	12.4	.....	6.3	.....	.....
9.....	6.8	7.0	7.8	17.0	11.3	10.7	10.4	.....	10.4	6.2	5.1	.....
10.....	.....	.....	7.5	14.4	11.2	10.5	10.5	11.9	10.0	6.1	.....	4.7
11.....	6.8	7.0	7.4	13.6	13.4	10.3	10.5	11.8	10.0	6.0	5.1	.....
12.....	.....	.....	7.3	13.1	18.0	10.3	10.5	10.8	9.8	6.0	.....	4.7
13.....	.....	7.0	7.3	17.0	14.3	.....	10.8	10.6	.....	5.9	5.1	.....
14.....	6.8	.....	7.3	27.8	13.3	.....	11.0	10.5	9.5	5.8	5.0	.....
15.....	10.2	7.1	7.2	28.3	12.7	10.1	11.4	10.3	9.4	5.8	.....	4.7
16.....	8.4	7.1	7.1	23.5	12.6	10.1	11.6	10.1	9.3	5.7	5.0	4.7
17.....	7.8	.....	7.1	17.4	14.0	10.2	11.8	10.0	9.2	5.7	5.0	.....
18.....	7.4	7.1	7.0	17.0	14.0	10.3	11.9	10.3	9.2	5.6	.....	4.7
19.....	7.4	.....	7.0	15.0	13.0	10.2	11.9	10.5	9.0	5.6	5.0	.....
20.....	7.3	7.1	7.0	16.5	13.0	10.1	11.6	10.8	8.7	5.5	4.9	4.7
21.....	7.3	7.7	7.0	19.4	12.1	10.0	11.5	10.7	8.8	5.5	.....	.....
22.....	7.2	8.3	7.2	16.0	.....	9.9	10.7	9.7	10.0	5.5	4.9	4.7
23.....	7.2	8.6	7.1	14.5	11.7	9.8	10.8	9.4	9.7	5.4	.....	.....
24.....	7.2	8.0	7.6	13.5	11.6	9.7	10.9	9.2	9.5	5.4	4.9	4.7
25.....	.....	7.6	7.3	12.8	11.3	9.5	11.0	9.7	8.9	5.4	.....	4.8

Daily gage height, in feet, of Yuba River near Smartsville, Cal., for 1903-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1908-9.												
26.....	7.1	7.3	7.2	12.2	11.1	9.6	11.5	10.2	8.6	.....	4.9	.....
27.....	.....	.....	.....	11.5	10.9	9.5	11.7	10.3	.....	5.4	4.8	4.8
28.....	7.1	7.1	.....	11.1	10.7	9.4	11.8	10.7	8.3	5.3	.....	.....
29.....	.....	.....	7.1	11.0	.....	10.4	11.8	10.5	8.1	.....	4.8	4.9
30.....	7.3	7.0	7.1	10.8	.....	9.8	11.8	10.6	7.9	5.3	.....	4.9
31.....	7.4	.....	7.1	10.8	.....	9.6	.....	10.2	.....	5.3	4.8	.....
1909-10.												
1.....	5.0	5.4	15.2	12.8	9.0	9.5	9.4	9.1	7.3	5.2	.....	4.2
2.....	5.3	.....	13.7	11.5	8.4	9.7	9.9	8.9	7.0	5.2	4.5	.....
3.....	5.2	5.3	11.8	10.4	8.3	10.0	9.75	8.9	6.9	5.1	.....	4.2
4.....	5.2	5.3	10.8	9.7	8.2	10.0	9.6	8.5	6.6	5.1	4.5	4.2
5.....	5.1	.....	10.3	9.2	8.1	9.9	9.6	8.4	6.4	5.1	.....	.....
6.....	4.9	5.4	10.1	8.9	8.0	9.7	9.6	8.4	6.3	.....	4.4	4.2
7.....	4.9	5.3	10.0	8.8	9.0	9.5	9.6	8.3	6.3	.....	.....	.....
8.....	4.9	5.3	12.0	8.7	8.4	9.5	9.8	9.1	6.2	5.0	4.4	4.2
9.....	.....	6.8	18.0	8.7	8.2	9.6	10.2	9.5	6.1	.....	.....	.....
10.....	4.9	6.4	13.4	8.5	8.1	9.9	10.4	9.7	6.0	4.9	4.4	4.2
11.....	4.9	6.2	12.1	8.3	8.1	9.9	10.6	9.4	6.0	4.9	.....	.....
12.....	4.8	6.0	11.5	8.1	8.0	9.9	9.7	8.9	5.9	.....	4.3	4.2
13.....	.....	5.8	10.9	8.0	8.1	9.9	9.8	9.0	5.9	4.8	.....	.....
14.....	4.8	5.8	10.4	8.9	8.3	10.0	9.7	9.0	5.8	4.8	4.3	4.2
15.....	.....	5.6	10.0	8.8	8.1	9.6	9.5	.....	5.9	.....	.....	4.5
16.....	4.8	5.5	9.7	9.2	8.0	9.2	9.8	8.6	5.8	4.7	4.3	5.9
17.....	4.8	5.4	9.4	8.5	7.9	9.2	10.4	8.6	5.7	4.7	.....	5.1
18.....	.....	5.4	9.3	8.3	8.0	10.2	10.7	8.5	5.6	.....	4.3	4.8
19.....	4.8	5.5	9.2	8.1	9.2	13.0	11.0	8.4	.....	4.7	.....	4.6
20.....	5.9	10.5	9.1	8.0	8.5	13.5	11.0	8.2	5.6	.....	4.3	4.5
21.....	5.4	18.0	9.0	8.0	8.3	12.9	10.7	8.1	5.6	4.7	.....	4.5
22.....	5.2	.....	8.9	8.2	9.1	12.5	10.5	8.1	5.5	.....	4.2	.....
23.....	5.1	12.9	8.7	9.1	8.5	11.5	10.4	8.3	5.5	4.6	.....	4.5
24.....	5.0	14.4	8.5	13.9	8.9	10.8	10.45	8.3	5.5	.....	4.2	4.5
25.....	5.0	13.6	8.4	10.9	11.6	10.5	10.5	8.2	5.4	4.6	4.2	4.4
26.....	4.9	12.4	8.3	.....	10.2	9.8	10.6	8.0	.....	.....	.....	.....
27.....	4.9	11.0	8.1	9.4	9.2	9.5	10.5	7.7	5.3	4.6	4.2	4.4
28.....	5.2	10.2	8.0	9.0	9.0	9.3	10.5	7.6	5.3	4.5	4.2	.....
29.....	5.8	9.7	7.9	8.8	.....	9.1	9.8	7.5	5.2	.....	.....	4.4
30.....	5.5	9.5	8.2	8.6	.....	9.0	9.4	7.4	5.2	4.5	4.2	.....
31.....	5.4	.....	16.5	8.5	.....	9.3	.....	7.4	.....	4.5	.....	.....
1910-11.												
1.....	4.4	4.4	4.9	.....	14.2	7.5	11.9	9.7	10.0	7.9	4.8	4.3
2.....	4.4	.....	4.8	4.9	13.7	7.5	12.5	9.5	10.3	8.0	4.8	.....
3.....	.....	.....	6.5	4.9	13.1	8.6	12.4	9.7	10.6	7.8	4.8	4.3
4.....	4.4	4.4	7.9	4.8	13.1	11.2	12.1	10.8	11.7	.....	4.8	.....
5.....	.....	4.4	6.6	.....	12.5	10.9	13.6	11.8	11.9	7.5	4.7	.....
6.....	4.4	.....	5.9	4.8	11.9	12.1	15.0	10.7	11.2	7.6	4.7	4.3
7.....	.....	4.4	5.7	4.8	11.4	15.1	13.4	10.5	10.9	7.5	.....	.....
8.....	4.4	4.5	5.6	4.8	10.5	13.6	12.5	9.7	10.5	7.3	4.7	4.3
9.....	4.3	5.0	5.6	5.0	9.9	11.7	12.4	9.6	10.4	7.2	4.6	.....
10.....	4.3	4.8	6.4	6.0	9.4	11.2	11.6	9.4	10.6	7.1	4.6	4.3
11.....	4.5	4.6	10.4	5.6	9.9	10.6	10.8	9.7	11.6	6.9	4.6	.....
12.....	5.1	5.8	7.4	9.8	.....	10.1	10.0	10.0	10.9	6.8	4.6	.....
13.....	4.9	5.2	6.5	8.8	9.9	9.6	9.6	10.2	10.7	6.8	4.6	4.3
14.....	4.7	4.9	6.2	12.5	9.2	9.4	9.2	9.7	10.5	6.6	4.5	.....
15.....	4.6	4.7	6.0	8.8	8.8	9.2	8.9	9.4	10.4	6.6	4.5	.....
16.....	4.6	4.6	5.9	6.9	8.3	9.2	.....	9.4	10.3	6.7	4.5	4.3
17.....	4.6	4.6	5.8	6.6	8.2	9.3	9.1	8.9	10.5	6.6	4.5	4.3
18.....	4.5	4.8	5.7	6.5	8.2	9.2	9.2	9.6	10.9	6.5	4.5	.....
19.....	4.5	5.0	5.6	6.5	8.0	9.3	9.5	9.0	10.1	6.2	4.5	4.2
20.....	4.5	4.8	5.5	14.0	7.9	9.5	9.4	9.1	10.0	5.9	4.4	.....
21.....	4.5	4.7	5.4	11.5	7.8	9.7	9.4	9.7	9.8	5.7	.....	4.2
22.....	4.4	4.7	5.3	8.3	7.7	9.9	9.7	10.2	9.3	5.5	4.4	.....
23.....	4.4	4.7	5.2	7.7	7.6	9.9	10.3	10.6	8.8	5.3	4.4	4.2
24.....	4.4	6.0	5.1	15.0	7.5	10.0	10.6	10.1	8.4	5.3	4.4	.....
25.....	4.4	7.4	.....	13.8	7.4	10.1	11.5	9.8	8.2	5.2	.....	4.2
26.....	4.4	5.9	5.0	12.0	7.2	9.9	11.9	9.5	8.1	5.1	4.4	4.3
27.....	4.4	5.3	5.0	10.3	7.3	9.6	11.0	9.6	8.6	5.0	.....	4.4
28.....	4.4	5.2	5.0	10.5	7.1	9.8	10.0	.....	8.5	5.0	4.3	4.3
29.....	4.4	5.0	5.0	13.0	.....	10.3	9.4	10.0	8.2	4.9	.....	4.3
30.....	.....	4.9	5.0	18.0	.....	11.0	9.5	10.0	8.0	.....	4.3	4.3
31.....	4.4	.....	4.9	19.0	.....	11.6	.....	10.1	.....	4.9	.....	.....

Daily gage height, in feet, of Yuba River near Smartsville, Cal., for 1903-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1911-12.												
1.....	4.3	4.3	4.4	4.5	5.2	4.75	5.8	8.6	8.6	.....	.....	.....
2.....	4.3	.....	4.35	4.55	5.1	4.8	6.0	7.8	8.8	.....	.....	.....
3.....	.....	4.25	4.35	4.45	5.1	4.8	6.2	7.4	8.9	.....	.....	.....
4.....	4.3	4.2	.....	4.3	5.0	4.75	6.2	7.3	8.8	.....	.....	.....
5.....	4.43	.....	4.35	4.4	5.0	5.6	6.2	7.4	8.4	.....	.....	.....
6.....	4.4	4.2	.....	4.4	4.9	9.0	6.2	7.4	8.2	.....	.....	.....
7.....	4.35	.....	4.35	4.6	4.9	7.2	6.5	7.8	8.2	.....	.....	.....
8.....	.....	4.2	.....	4.9	4.8	6.5	6.6	8.3	7.8	.....	.....	.....
9.....	4.4	4.2	4.35	5.4	4.9	6.1	6.5	8.4	7.3	.....	.....	.....
10.....	4.45	6.4	.....	5.6	5.0	5.8	6.8	8.6	7.1	.....	.....	.....
11.....	4.4	4.95	4.3	5.8	5.1	5.5	6.4	8.6	6.8	.....	.....	.....
12.....	4.35	4.6	4.25	5.4	5.0	5.6	6.3	8.8	7.0	.....	.....	.....
13.....	4.3	4.5	.....	5.1	5.0	6.2	6.2	9.0	7.9	.....	.....	.....
14.....	4.3	4.5	4.25	5.0	5.1	5.9	5.8	8.6	6.9	.....	.....	.....
15.....	.....	4.5	.....	5.6	5.2	5.6	5.8	8.9	6.5	.....	.....	.....
16.....	4.3	5.2	4.2	5.8	5.0	6.4	5.8	9.0	6.1	.....	.....	.....
17.....	.....	4.7	4.45	5.6	4.9	5.8	6.0	8.6	5.8	.....	.....	.....
18.....	4.3	4.6	4.35	5.2	5.4	5.7	6.0	8.5	5.5	.....	.....	.....
19.....	4.3	4.5	4.45	5.1	5.8	5.7	5.9	8.6	5.8	.....	.....	.....
20.....	.....	.....	4.4	5.1	5.4	5.9	5.7	8.1	5.5	.....	.....	.....
21.....	4.25	4.5	4.35	5.1	5.2	5.8	5.6	7.8	5.4	.....	.....	.....
22.....	.....	.....	.....	5.0	5.1	5.6	5.5	7.6	5.2	.....	.....	.....
23.....	4.2	4.4	4.3	4.9	5.0	5.6	5.4	7.2	5.3	.....	.....	.....
24.....	.....	.....	.....	4.9	5.0	5.6	5.6	7.2	5.2	.....	.....	.....
25.....	4.2	4.4	4.3	4.9	4.9	5.6	6.0	7.9	5.15	.....	.....	.....
26.....	4.25	.....	.....	8.8	4.9	5.7	5.9	8.9	5.1	.....	.....	.....
27.....	4.5	4.4	4.4	7.1	4.8	5.8	6.1	8.5	5.0	.....	.....	.....
28.....	4.35	4.4	4.6	6.1	4.7	6.0	6.1	8.6	4.9	.....	.....	.....
29.....	.....	.....	4.5	5.7	4.7	6.1	7.4	8.9	4.85	.....	.....	.....
30.....	4.3	4.4	4.5	5.5	.....	6.2	8.2	8.4	4.8	.....	.....	.....
31.....	4.3	.....	4.5	5.3	.....	5.9	.....	8.6	.....	.....	.....	.....

Daily discharge, in second-feet, of Yuba River near Smartsville, Cal., for 1903-1912.

Day.	June.	July.	Aug.	Sept.	Day.	June.	July.	Aug.	Sept.
1903.					1903.				
1.....	5,800	1,350	570	480	16.....	2,350	880	510	480
2.....	5,800	1,270	570	480	17.....	2,000	880	510	480
3.....	5,100	1,200	570	480	18.....	1,790	830	510	480
4.....	4,340	1,200	570	480	19.....	2,000	830	510	480
5.....	4,340	1,130	570	480	20.....	1,790	780	480	480
6.....	4,900	1,130	540	480	21.....	1,600	730	480	480
7.....	5,000	1,060	540	480	22.....	1,600	730	480	480
8.....	4,430	1,060	540	480	23.....	1,600	690	480	480
9.....	4,060	1,060	540	460	24.....	1,430	690	480	480
10.....	4,240	1,060	540	480	25.....	1,350	650	480	480
11.....	.....	.....	.....	.....	26.....	1,350	650	480	480
12.....	3,530	1,060	540	480	27.....	1,270	610	480	480
13.....	3,200	1,000	540	480	28.....	1,270	610	480	480
14.....	3,040	1,000	540	480	29.....	1,350	610	480	480
15.....	2,890	940	510	480	30.....	1,430	610	480	480
.....	2,480	940	510	480	31.....	.....	570	480	.....

Daily discharge, in second-feet, of Yuba River near Smartsville, Cal., for 1903-1912—Con.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1903-4.												
1.....	510	510	2,230	2,230	1,600	10,800	9,720	8,960	7,050	2,310	730	495
2.....	510	510	2,110	1,890	1,600	9,720	9,460	8,710	6,590	2,070	670	495
3.....	510	510	2,000	1,790	1,600	10,800	9,460	7,740	7,510	2,190	670	495
4.....	510	570	2,000	2,480	2,000	13,700	9,460	8,460	7,050	2,070	670	470
5.....	510	610	1,890	1,790	2,230	13,700	9,210	8,960	6,590	1,960	670	445
6.....	510	570	1,890	1,790	2,000	11,400	9,720	10,200	6,590	1,760	670	445
7.....	510	690	1,790	1,690	2,000	12,700	9,980	10,200	6,370	1,670	670	445
8.....	510	650	1,790	1,690	2,110	19,900	11,100	11,400	6,370	1,580	610	445
9.....	510	610	1,690	1,600	1,890	14,400	11,700	11,400	6,150	1,500	610	445
10.....	730	570	1,600	1,690	1,790	22,400	12,300	11,400	6,150	1,430	610	445
11.....	1,000	570	1,600	2,480	1,790	14,400	13,400	11,400	6,370	1,360	610	445
12.....	650	6,000	1,510	2,000	11,700	12,300	13,400	11,700	6,370	1,360	610	445
13.....	610	6,610	1,600	1,790	6,400	10,200	14,800	12,000	6,150	1,300	610	445
14.....	570	11,400	1,600	1,790	4,430	13,000	15,600	14,800	5,930	1,230	610	445
15.....	540	10,200	1,600	1,690	8,800	12,700	15,600	11,400	5,290	1,160	610	445
16.....	510	4,240	1,890	1,790	58,000	12,300	14,400	11,400	4,690	1,100	610	445
17.....	510	3,200	4,430	1,790	41,000	30,000	11,700	10,200	4,500	1,040	610	445
18.....	510	2,750	3,360	2,000	17,900	33,500	10,500	9,980	4,320	970	580	445
19.....	510	2,750	2,610	2,230	12,300	31,500	15,200	9,460	4,320	970	550	445
20.....	510	13,300	2,750	1,890	9,460	23,200	10,500	8,960	3,960	970	550	445
21.....	540	34,600	2,480	1,790	9,460	13,400	8,960	11,100	3,440	910	550	445
22.....	540	13,300	2,230	1,690	59,800	11,700	8,460	14,800	3,610	910	550	445
23.....	540	7,500	2,000	1,890	27,700	8,460	7,980	14,400	3,960	910	550	1,640
24.....	540	6,000	1,790	1,790	59,800	8,960	8,710	14,100	3,130	850	550	2,330
25.....	540	4,430	1,790	1,790	24,100	8,460	7,980	14,400	2,980	850	550	2,330
26.....	540	3,530	1,690	1,690	19,500	7,510	9,980	8,960	2,980	850	550	1,630
27.....	540	3,040	1,690	1,690	14,800	8,220	8,710	9,210	2,980	790	522	1,280
28.....	510	2,750	1,690	1,600	12,700	30,000	8,960	8,710	2,700	790	495	1,000
29.....	510	2,480	1,600	1,600	11,700	23,200	7,980	9,460	2,570	790	495	940
30.....	510	2,350	1,600	1,600	.....	14,400	7,050	8,220	2,310	730	495	890
31.....	510	.....	1,790	1,600	.....	11,400	.....	7,740	.....	730	495	.....
1904-5.												
1.....	830	1,100	1,840	8,500	5,200	4,750	6,730	6,840	4,920	1,240	515	435
2.....	830	1,380	1,460	7,000	10,000	4,750	6,730	6,440	4,400	1,240	515	435
3.....	780	1,120	1,380	5,120	7,650	4,550	7,060	6,040	4,220	1,140	515	435
4.....	780	950	1,300	4,300	6,150	4,750	7,060	5,470	4,060	1,060	515	435
5.....	780	950	1,230	3,750	7,680	4,510	6,850	5,280	3,740	1,060	515	435
6.....	780	890	1,230	3,570	5,500	4,510	7,160	5,280	3,900	980	515	435
7.....	880	890	1,160	2,920	4,670	4,460	7,600	5,100	4,060	980	480	435
8.....	1,200	890	1,160	2,920	4,310	4,460	6,960	5,850	3,900	905	480	435
9.....	2,930	890	1,230	2,770	3,950	4,400	6,750	6,240	3,900	905	480	435
10.....	3,700	840	1,380	2,630	3,600	4,650	6,900	5,280	3,900	835	480	435
11.....	15,900	840	1,230	2,510	3,650	4,400	6,160	5,280	4,400	835	480	435
12.....	4,430	790	1,230	2,510	3,150	4,700	5,770	4,920	4,060	835	480	415
13.....	2,230	790	1,380	2,510	2,920	6,700	5,900	4,920	4,060	770	480	415
14.....	1,790	790	1,300	6,500	2,780	7,850	5,700	5,470	3,600	770	480	415
15.....	2,000	1,500	1,230	5,350	2,780	5,910	5,800	6,040	3,600	770	455	415
16.....	1,790	1,230	1,230	4,500	2,750	5,710	6,190	7,700	3,300	770	455	415
17.....	1,510	1,040	1,160	3,850	4,550	5,420	5,520	7,920	3,300	710	455	415
18.....	1,350	1,040	1,160	2,850	4,650	6,800	8,000	7,700	3,020	710	455	415
19.....	1,270	1,100	1,160	3,160	4,500	17,400	6,200	7,700	2,880	710	455	415
20.....	1,200	1,040	1,160	3,500	8,400	10,300	5,620	7,480	2,620	710	455	415
21.....	1,120	1,040	1,090	5,040	5,800	11,800	5,720	7,920	2,380	650	455	415
22.....	1,120	1,060	1,090	12,800	5,250	9,700	5,720	6,440	2,140	650	480	415
23.....	1,120	1,010	1,160	11,600	4,920	8,350	6,030	6,240	1,930	600	455	415
24.....	1,050	1,020	3,130	8,520	4,800	9,500	6,420	5,850	1,820	600	455	415
25.....	1,010	1,030	1,840	6,750	5,060	8,700	7,060	6,240	1,720	600	455	415
26.....	970	-970	1,550	5,800	5,400	8,900	7,920	6,840	1,620	555	455	415
27.....	970	1,230	1,380	4,950	5,150	8,700	8,800	5,470	1,520	555	455	480
28.....	970	1,550	1,300	4,350	4,950	7,800	8,140	5,280	1,420	555	435	480
29.....	970	1,300	1,300	4,000	.....	9,720	7,920	5,100	1,320	515	435	455
30.....	1,100	1,950	17,900	3,820	.....	8,800	8,140	4,920	1,320	515	435	455
31.....	1,030	.....	15,600	3,650	.....	7,350	.....	4,920	.....	515	435	.....

Daily discharge, in second-feet, of Yuba River near Smartsville, Cal., for 1903-1912—Con.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1905-6.												
1	455	455	710	600	2,390	6,810	18,100	9,000	8,900	5,200	1,040	620
2	455	455	555	555	2,390	5,550	13,500	10,500	9,350	6,000	920	560
3	455	455	555	555	2,390	7,150	11,700	12,400	10,500	6,600	920	560
4	455	455	555	555	2,250	6,480	9,100	11,600	25,600	6,000	860	560
5	455	455	515	555	2,250	5,260	8,600	13,000	16,500	5,800	860	560
6	435	455	515	555	2,250	4,730	8,900	12,500	12,200	5,300	860	560
7	435	455	515	555	2,120	4,990	8,350	12,500	10,400	5,000	860	560
8	455	435	515	555	2,120	4,990	8,700	12,500	9,200	4,800	800	560
9	455	435	480	515	2,120	4,990	8,700	13,600	10,100	4,550	800	500
10	455	435	480	600	2,540	5,260	8,600	13,200	11,700	4,520	800	500
11	455	435	480	600	2,390	5,550	8,000	14,400	13,100	3,720	800	500
12	455	435	480	3,590	2,250	28,400	7,700	11,400	18,000	4,320	740	500
13	455	435	480	16,900	2,120	12,500	7,950	8,600	11,700	4,120	740	500
14	455	435	480	11,500	2,250	12,500	7,500	9,300	8,700	3,920	740	500
15	435	435	480	13,900	10,200	9,400	8,100	10,000	8,800	3,130	740	560
16	435	415	515	18,900	4,730	7,150	8,100	6,950	14,100	2,950	740	560
17	435	415	515	16,900	3,400	6,160	8,500	6,700	9,450	2,780	680	500
18	455	415	710	48,000	4,010	5,260	8,500	6,500	7,200	2,780	680	500
19	455	435	710	33,000	11,100	4,730	8,900	6,800	11,700	2,450	680	500
20	455	480	980	13,000	5,550	4,480	9,200	7,200	10,300	2,160	680	500
21	455	515	710	9,000	10,700	5,850	9,200	7,150	8,400	2,030	680	500
22	455	455	600	6,810	6,810	16,400	9,200	7,000	8,200	1,900	680	500
23	455	455	515	5,550	7,850	18,400	8,600	6,500	8,100	1,900	680	500
24	455	435	515	4,730	7,850	29,400	7,650	5,750	6,100	1,880	680	500
25	455	455	515	3,800	8,230	26,400	6,860	8,900	6,000	1,760	680	500
26	480	515	515	3,400	6,810	30,400	7,050	18,700	5,700	1,650	620	500
27	455	600	515	3,210	11,100	15,900	7,000	18,200	5,400	1,540	620	500
28	455	515	600	3,840	9,000	11,600	6,450	20,100	5,300	1,440	620	500
29	455	600	650	2,060	.....	.....	7,350	13,700	5,000	1,340	620	500
30	455	835	600	2,700	.....	15,400	7,800	10,000	5,100	1,250	620	440
31	455	.....	600	2,540	.....	40,600	.....	8,800	.....	1,170	620	.....
1906-7.												
1	440	380	560	4,100	41,000	8,100	9,200	9,200	8,800	5,730	1,220	570
2	440	440	560	3,500	78,000	6,700	11,200	9,200	10,700	5,130	1,220	570
3	440	440	560	3,500	38,400	6,200	10,000	8,500	8,700	5,430	1,120	570
4	440	5,000	560	8,900	32,400	6,200	9,500	8,200	8,800	5,130	1,630	570
5	440	1,540	560	4,900	21,000	6,900	9,800	7,700	8,700	4,820	940	520
6	380	1,040	560	4,100	17,300	7,500	10,000	7,500	9,100	4,550	940	520
7	380	800	560	3,400	13,200	6,800	9,800	7,300	8,600	4,130	850	520
8	380	680	1,880	3,500	11,400	6,500	9,600	7,300	7,800	3,990	850	520
9	380	680	1,170	3,400	9,700	9,000	10,600	7,700	7,100	3,850	770	520
10	380	520	1,880	3,100	9,000	7,200	12,000	7,900	6,200	3,710	770	520
11	380	520	16,800	2,800	8,200	8,100	13,500	8,600	10,400	3,710	770	520
12	380	520	5,850	2,700	7,800	6,300	15,100	8,000	7,800	3,710	770	470
13	380	520	4,100	2,700	7,000	5,560	16,500	7,600	6,300	3,430	700	470
14	380	520	3,100	2,900	6,800	5,000	19,000	7,800	5,460	3,290	700	470
15	380	520	2,850	2,800	6,400	6,000	20,700	8,700	4,900	3,010	700	470
16	380	740	2,700	2,700	6,400	6,600	16,000	8,900	4,700	2,880	630	470
17	440	680	2,600	2,600	6,500	56,000	14,400	10,300	4,500	2,750	630	470
18	440	520	2,500	2,500	6,600	85,000	15,000	11,400	4,700	2,750	630	470
19	440	560	2,350	2,400	6,200	100,000	16,000	12,300	5,100	2,620	630	520
20	440	560	2,350	2,300	6,200	60,000	15,600	11,400	6,000	2,490	630	470
21	440	560	2,350	2,300	6,100	27,000	15,400	10,300	6,000	2,110	630	470
22	440	560	2,350	2,300	7,200	14,000	15,000	9,400	7,300	1,990	570	470
23	440	560	3,700	2,500	6,700	16,500	14,500	7,700	5,800	1,870	570	470
24	380	560	3,700	2,600	6,300	11,000	14,500	9,200	5,300	1,870	570	470
25	380	560	11,300	3,500	8,900	9,900	14,500	8,900	5,500	1,650	570	470
26	380	560	22,800	4,500	7,500	8,900	13,300	8,600	5,700	1,650	570	520
27	380	560	8,000	4,000	6,300	8,400	12,000	8,500	5,700	1,540	570	520
28	380	560	6,000	17,700	6,000	8,000	11,300	7,800	5,800	1,430	570	520
29	380	500	4,300	10,400	.....	7,700	10,600	8,500	5,700	1,320	570	520
30	380	560	5,300	6,700	.....	7,500	9,800	8,400	5,500	1,320	570	520
31	380	.....	5,300	29,400	.....	8,000	.....	8,600	.....	1,220	570	.....

Daily discharge, in second-feet, of Yuba River near Smartsville, Cal., for 1903-1912—Con.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1907-8.												
1.	470	570	430	2,650	2,300	3,000	2,600	6,720	4,800	1,280	400	350
2.	470	570	430	2,650	2,700	3,900	2,700	7,800	4,100	1,280	400	350
3.	470	520	430	2,370	4,050	3,600	3,000	5,950	2,900	1,180	350	350
4.	520	520	430	2,650	2,700	2,900	3,400	4,070	2,780	1,100	350	320
5.	520	470	470	2,100	2,690	2,900	3,500	4,200	3,270	1,100	350	320
6.	520	470	770	1,830	2,720	2,600	3,600	4,600	3,780	1,000	350	320
7.	470	520	4,980	1,670	2,590	2,500	3,130	6,350	4,530	920	350	320
8.	470	520	2,490	1,700	2,500	2,400	2,700	4,810	4,400	920	320	320
9.	520	520	1,430	1,830	3,000	2,420	3,100	3,500	4,500	840	320	320
10.	520	520	1,030	1,700	2,800	2,630	3,900	3,470	4,400	840	320	320
11.	520	470	2,750	1,700	2,620	2,750	5,000	3,320	4,300	760	350	320
12.	520	470	1,650	1,960	2,440	2,980	5,600	3,500	4,350	760	350	320
13.	520	470	2,110	2,370	2,240	3,150	6,400	3,320	4,250	700	350	320
14.	520	470	1,760	6,240	2,200	3,580	5,800	3,800	4,140	700	350	320
15.	520	470	1,430	3,720	2,020	4,020	5,000	4,720	3,600	700	350	320
16.	470	430	1,120	3,080	1,860	4,680	4,400	4,200	3,430	630	350	350
17.	470	470	940	2,800	1,810	4,800	4,250	4,490	3,140	630	350	350
18.	470	470	850	2,650	1,680	5,100	5,000	5,950	2,870	560	350	350
19.	470	430	850	3,090	1,670	4,870	6,500	8,000	2,720	560	350	350
20.	470	430	770	6,460	1,620	4,500	8,410	5,700	2,600	500	350	350
21.	470	470	770	8,210	1,680	4,470	7,550	5,500	3,880	500	350	350
22.	470	470	770	8,000	1,620	4,250	6,450	5,500	2,450	500	350	320
23.	470	470	770	5,610	1,520	4,180	5,200	5,500	2,200	450	350	320
24.	470	470	770	6,250	1,570	4,030	4,500	6,200	2,080	450	350	320
25.	520	470	770	4,630	1,700	4,180	4,300	6,400	1,940	450	350	320
26.	570	470	4,130	3,720	1,900	4,250	4,960	6,100	1,820	450	350	320
27.	700	400	2,880	3,220	1,800	3,900	5,200	5,580	1,700	450	350	320
28.	700	350	2,110	2,820	2,060	3,400	5,940	5,800	1,580	450	350	320
29.	630	400	2,490	2,640	2,530	3,250	5,940	5,580	1,490	400	350	320
30.	570	400	2,620	2,300	.....	3,170	5,940	5,500	1,380	400	350	320
31.	570	.....	3,990	2,010	.....	3,000	.....	5,100	.....	400	350	.....
1908-9.												
1.	320	470	400	700	5,300	5,100	4,300	9,900	10,400	3,130	790	470
2.	320	470	400	4,200	5,100	5,300	4,950	9,900	11,000	2,890	790	470
3.	320	430	560	10,600	6,500	5,700	5,700	9,900	11,800	2,780	720	470
4.	320	430	1,000	4,200	6,300	10,200	5,800	10,700	11,200	2,560	720	470
5.	320	400	2,500	4,200	6,300	7,700	5,600	11,000	10,100	2,140	720	470
6.	320	400	1,530	19,600	6,100	8,000	5,400	12,300	9,340	1,940	720	470
7.	320	370	1,100	11,800	11,300	6,480	5,250	12,300	9,080	1,760	720	410
8.	320	370	940	41,000	8,400	6,050	5,400	12,000	8,310	1,580	720	410
9.	320	370	1,010	24,200	7,000	5,850	5,900	11,300	7,580	1,490	650	410
10.	320	370	810	13,300	6,800	5,500	6,100	10,800	6,660	1,400	650	410
11.	320	370	750	10,800	12,600	5,100	6,100	10,500	6,660	1,320	650	410
12.	320	370	700	9,400	33,200	5,100	6,100	7,900	6,200	1,320	650	410
13.	320	370	700	24,000	15,800	5,000	6,700	7,500	5,990	1,240	650	410
14.	320	370	700	106,000	12,300	5,000	7,250	7,200	5,600	1,160	590	410
15.	3,500	400	640	111,000	10,500	4,850	8,200	6,800	5,420	1,160	590	410
16.	1,100	400	600	71,000	10,200	4,850	8,700	6,600	5,250	1,080	590	410
17.	700	400	600	30,000	14,600	5,100	9,300	6,400	5,080	1,080	590	410
18.	520	400	550	28,000	14,600	5,300	9,600	7,000	5,080	1,000	590	410
19.	520	400	550	18,500	11,300	5,100	9,600	7,500	4,740	1,000	590	410
20.	480	400	550	25,400	11,300	4,900	8,800	8,200	4,260	930	530	410
21.	480	600	550	41,600	8,800	4,750	8,700	7,950	4,410	930	530	410
22.	440	1,000	650	23,000	8,400	4,600	6,800	5,990	6,660	930	530	410
23.	440	1,220	600	16,500	7,900	4,400	7,000	5,420	5,990	860	530	410
24.	440	820	880	12,900	7,600	4,400	7,400	5,080	5,600	860	530	390
25.	440	600	700	10,800	6,900	4,100	7,600	5,990	4,570	860	530	450
26.	400	480	650	9,100	6,400	4,250	8,800	7,120	4,120	860	530	450
27.	400	440	650	7,400	5,900	4,100	9,300	7,350	3,900	860	470	450
28.	400	400	600	6,500	5,280	3,900	9,000	8,310	3,730	790	470	450
29.	430	400	600	6,300	.....	5,700	9,900	7,820	3,490	790	470	480
30.	470	370	600	5,900	.....	4,600	9,900	8,060	3,250	790	470	480
31.	520	.....	600	5,900	.....	4,300	.....	7,120	.....	790	470	.....

Daily discharge, in second-feet, of Yuba River near Smartsville, Cal., for 1903-1912—Con.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909-10.												
1.	540	740	17,800	10,300	4,900	6,600	6,400	5,800	2,830	730	390	295
2.	740	700	12,600	7,650	3,850	7,000	7,410	5,400	2,430	730	390	295
3.	670	670	7,400	5,550	3,700	7,620	7,100	5,400	2,300	675	390	295
4.	640	670	5,300	4,400	3,550	7,620	6,800	4,640	1,940	675	390	295
5.	570	710	4,450	3,650	3,400	7,210	6,800	4,460	1,720	675	372	295
6.	450	740	4,150	3,270	3,250	7,000	6,800	4,460	1,610	625	355	295
7.	450	670	4,100	3,150	4,900	6,600	6,800	4,300	1,610	625	355	295
8.	450	670	8,100	3,050	3,850	6,600	7,200	5,800	1,510	625	355	295
9.	430	1,890	32,000	3,050	3,550	6,800	8,060	6,600	1,410	600	355	295
10.	490	1,530	12,000	2,870	3,400	7,410	8,500	7,000	1,310	575	355	295
11.	430	1,350	8,300	2,670	3,400	7,410	8,960	6,400	1,310	575	338	295
12.	380	1,190	7,100	2,450	3,250	7,410	7,000	5,400	1,220	550	320	295
13.	380	1,030	5,900	4,400	3,400	7,410	7,200	5,600	1,220	525	320	295
14.	380	1,030	4,900	3,750	3,700	7,620	7,000	5,600	1,140	525	320	295
15.	380	880	4,250	5,300	3,400	6,800	6,600	5,200	1,220	502	320	390
16.	380	810	3,800	4,300	3,250	6,000	7,200	4,820	1,140	480	320	1,220
17.	380	740	3,450	3,350	3,120	6,000	8,500	4,820	1,060	480	320	675
18.	380	740	3,300	3,070	3,250	8,060	9,190	4,640	990	480	320	525
19.	380	810	3,200	2,800	5,250	14,800	9,980	4,460	990	480	320	435
20.	6,550	1,110	6,050	2,700	4,050	16,100	9,890	4,150	990	480	320	390
21.	740	37,000	2,950	2,670	3,800	14,600	9,190	4,000	990	480	306	390
22.	600	22,000	2,850	3,020	5,300	13,600	8,730	4,000	915	458	295	300
23.	540	11,900	2,600	4,500	4,350	11,100	8,500	4,300	915	435	295	390
24.	480	16,000	2,400	13,000	5,120	9,420	8,620	4,300	915	435	295	390
25.	480	13,100	2,300	8,000	10,500	8,730	8,730	4,150	850	435	295	355
26.	430	9,500	2,200	6,600	7,800	7,200	8,960	3,850	790	435	295	390
27.	430	5,600	1,950	5,230	6,000	6,600	8,730	3,400	790	435	295	355
28.	600	4,200	1,850	4,700	5,600	6,200	8,730	3,250	790	390	295	355
29.	1,030	3,500	1,750	4,550	.....	5,800	7,200	3,110	730	390	295	355
30.	810	3,200	2,080	4,200	.....	5,600	6,400	2,970	730	390	295	355
31.	740	.....	25,000	4,050	.....	6,200	.....	2,970	.....	390	295	.....
1910-11.												
1.	355	355	575	541	19,700	2,460	13,400	7,900	9,140	4,800	795	465
2.	355	355	525	507	17,900	2,460	15,200	7,400	10,000	5,000	795	465
3.	355	355	1,830	507	15,800	4,180	14,900	7,900	10,800	4,610	795	465
4.	355	355	3,700	466	15,800	9,970	14,000	10,800	14,000	4,340	795	465
5.	355	355	1,940	466	13,700	9,190	18,600	13,700	14,600	4,060	720	465
6.	355	355	1,220	466	11,900	12,500	23,400	10,500	12,600	4,240	720	465
7.	355	355	1,060	466	10,500	23,000	18,000	10,000	11,700	4,060	720	465
8.	355	390	990	466	8,190	18,400	15,200	7,900	10,500	3,720	720	465
9.	320	625	990	550	6,800	12,600	15,200	7,660	10,200	3,560	650	465
10.	320	525	1,720	1,220	5,730	11,200	12,800	7,150	10,800	3,400	650	465
11.	390	435	8,500	895	6,800	9,480	10,500	8,140	13,700	3,100	650	465
12.	675	1,140	2,970	7,160	6,000	8,190	8,400	8,900	11,700	2,960	650	465
13.	575	730	1,830	5,110	6,800	7,000	7,400	9,460	11,100	2,960	650	465
14.	480	575	1,510	14,100	5,320	6,500	6,500	8,140	10,800	2,680	585	465
15.	435	480	1,310	5,110	4,545	6,070	5,800	7,400	10,500	2,680	585	465
16.	435	435	1,220	3,660	6,070	6,070	6,020	7,400	10,200	2,820	585	465
17.	435	435	1,140	1,810	3,490	6,280	6,250	6,200	10,800	2,680	585	465
18.	390	525	1,060	1,700	3,490	6,070	6,500	7,900	12,000	2,540	585	438
19.	390	625	990	1,700	3,170	6,280	7,150	6,500	9,700	2,160	585	410
20.	390	525	915	19,000	3,020	6,750	6,900	6,700	9,400	1,810	525	410
21.	390	480	850	11,200	2,870	7,200	6,900	8,140	8,880	1,600	525	410
22.	355	480	790	4,200	2,730	7,770	7,650	9,460	7,660	1,400	525	410
23.	355	480	730	3,240	2,590	7,770	9,150	10,600	6,460	1,210	525	410
24.	355	1,310	675	22,600	2,460	8,130	10,000	9,200	5,600	1,210	525	410
25.	355	2,970	675	18,300	2,340	8,450	12,800	8,400	5,200	1,120	525	410
26.	355	1,220	625	12,600	2,110	7,900	14,000	7,640	5,000	1,040	525	465
27.	355	790	625	8,270	2,220	7,160	11,400	7,900	6,000	950	495	425
28.	355	730	625	8,730	2,000	7,640	8,640	8,520	5,800	950	465	465
29.	355	625	625	15,600	.....	9,000	7,150	9,140	5,200	870	465	465
30.	355	575	625	34,800	.....	10,800	7,400	9,140	4,800	870	465	465
31.	355	.....	575	39,000	.....	12,600	.....	9,420	.....	870	465	.....

Daily discharge, in second-feet, of Yuba River near Smartsville, Cal., for 1903-1912—Con.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1911-12.												
1.....	465	465	525	585	1,120	758	1,750	6,740	6,740	.....	.....	.....
2.....	465	452	495	618	1,040	795	2,020	5,070	7,180	.....	.....	.....
3.....	465	438	495	555	1,040	795	2,300	4,290	7,400	.....	.....	.....
4.....	465	410	495	465	950	758	2,300	4,110	7,180	.....	.....	.....
5.....	543	410	495	525	950	1,520	2,300	4,290	6,310	.....	.....	.....
6.....	525	410	495	525	870	7,630	2,300	4,290	5,890	.....	.....	.....
7.....	495	410	495	650	870	3,930	2,750	5,070	5,890	.....	.....	.....
8.....	510	410	495	870	795	2,750	2,910	6,100	5,070	.....	.....	.....
9.....	525	410	495	1,310	870	2,160	2,750	6,310	4,110	.....	.....	.....
10.....	555	2,410	480	1,520	950	1,750	3,230	6,740	3,750	.....	.....	.....
11.....	525	910	465	1,750	1,040	1,410	2,600	6,740	3,230	.....	.....	.....
12.....	495	650	438	1,310	950	1,520	2,450	7,180	3,570	.....	.....	.....
13.....	465	585	438	1,040	950	2,300	2,300	7,630	5,270	.....	.....	.....
14.....	465	585	438	950	1,040	1,880	1,750	6,740	3,400	.....	.....	.....
15.....	465	585	424	1,520	1,120	1,520	1,750	7,400	2,750	.....	.....	.....
16.....	465	1,120	410	1,750	950	2,600	1,750	7,630	2,160	.....	.....	.....
17.....	465	720	555	1,520	870	1,750	2,020	6,740	1,750	.....	.....	.....
18.....	465	650	495	1,120	1,310	1,630	2,020	6,520	1,410	.....	.....	.....
19.....	465	585	555	1,040	1,750	1,630	1,880	6,740	1,750	.....	.....	.....
20.....	452	585	525	1,040	1,310	1,880	1,630	5,680	1,410	.....	.....	.....
21.....	438	585	495	1,040	1,120	1,750	1,520	5,070	1,310	.....	.....	.....
22.....	424	555	480	950	1,040	1,520	1,410	4,670	1,120	.....	.....	.....
23.....	410	525	465	870	950	1,520	1,310	3,930	1,210	.....	.....	.....
24.....	410	525	465	870	950	1,520	1,520	3,930	1,120	.....	.....	.....
25.....	410	525	465	870	870	1,520	2,020	5,270	1,080	.....	.....	.....
26.....	438	525	495	7,180	870	1,630	1,880	7,400	1,040	.....	.....	.....
27.....	585	525	525	3,750	795	1,750	2,160	6,520	950	.....	.....	.....
28.....	495	525	650	2,160	720	2,020	2,160	6,740	870	.....	.....	.....
29.....	480	525	585	1,630	720	2,160	4,290	7,400	832	.....	.....	.....
30.....	465	525	585	1,410	.....	2,300	5,890	6,310	795	.....	.....	.....
31.....	465	.....	585	1,210	.....	1,880	.....	6,740	.....	.....	.....	.....

NOTE.—Daily discharge for 1903 to 1912 determined by use of the indirect method for shifting channels and from numerous rating tables covering short periods of time. During low-water stages the river remains fairly permanent and rating curves are applicable.

Discharge estimated or interpolated for days on which gage was not read.

Monthly discharge of Yuba River near Smartsville, Cal., for 1903-1912.

[Drainage area, 1,220 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.	
1903.							
June.....	5,800	1,270	2,910	2.39	2.67	173,000	B.
July.....	1,350	570	897	.735	.85	55,200	C.
August.....	570	480	516	.423	.49	31,700	C.
September.....	480	460	479	.393	.44	28,500	C.
1903-4.							
October.....	1,000	510	550	.451	.52	33,800	C.
November.....	34,600	510	4,890	4.01	4.47	291,000	B.
December.....	4,430	1,510	2,010	1.65	1.90	124,000	B.
January.....	2,480	1,600	1,830	1.50	1.73	113,000	B.
February.....	59,800	1,600	14,800	12.1	13.05	851,000	B.
March.....	33,500	7,510	15,400	12.6	14.53	947,000	B.
April.....	15,600	7,050	10,700	8.77	9.78	637,000	B.
May.....	14,800	7,740	10,600	8.69	10.02	652,000	B.
June.....	7,510	2,310	4,970	4.07	4.54	296,000	B.
July.....	2,310	730	1,260	1.03	1.19	77,500	B.
August.....	730	495	591	.484	.56	36,300	B.
September.....	2,330	445	732	.600	.67	43,600	B.
The year.....	59,800	445	5,690	4.67	62.96	4,100,000	

## Monthly discharge of Yuba River near Smartsville, Cal., for 1903-1912—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.	
1904-5.							
October.....	15,900	780	1,880	1.54	1.78	116,000	B.
November.....	1,950	790	1,070	.877	.98	63,700	B.
December.....	17,900	1,090	2,350	1.93	2.22	144,000	B.
January.....	12,800	2,510	4,900	4.02	4.64	301,000	C.
February.....	10,000	2,750	5,010	4.11	4.28	278,000	C.
March.....	17,400	4,400	7,110	5.83	6.72	437,000	C.
April.....	8,800	5,520	6,750	5.53	6.17	402,000	C.
May.....	7,920	4,920	6,070	4.98	5.74	373,000	B.
June.....	4,920	1,320	3,100	2.54	2.83	184,000	B.
July.....	1,240	515	782	.641	.74	48,100	B.
August.....	515	435	471	.386	.44	29,000	B.
September.....	480	415	429	.352	.39	25,500	B.
The year.....	17,900	415	3,330	2.73	36.93	2,400,000	
1905-6.							
October.....	480	435	453	.371	.43	27,900	B.
November.....	835	415	474	.389	.43	28,200	B.
December.....	980	480	566	.464	.54	34,800	B.
January.....	48,000	515	7,560	6.20	7.15	465,000	B.
February.....	11,100	2,120	4,970	4.07	4.24	276,000	B.
March.....	40,600	4,480	12,000	9.84	11.30	738,000	B.
April.....	18,100	6,450	8,770	7.19	8.02	522,000	B.
May.....	20,100	5,750	10,800	8.85	10.20	664,000	C.
June.....	25,600	5,000	10,000	8.20	9.15	595,000	B.
July.....	6,600	1,170	3,350	2.75	3.17	206,000	B.
August.....	1,040	620	744	.610	.70	45,700	B.
September.....	620	440	520	.426	.48	30,900	B.
The year.....	48,000	415	5,020	4.11	55.81	3,630,000	
1906-7.							
October.....	440	380	403	.330	.38	24,800	B.
November.....	5,000	380	757	.620	.69	45,000	B.
December.....	22,800	560	4,130	3.39	3.91	254,000	B.
January.....	29,400	2,300	4,990	4.09	4.72	307,000	B.
February.....	78,000	6,000	14,100	11.6	12.08	783,000	B.
March.....	100,000	5,000	17,300	14.2	16.37	1,060,000	B.
April.....	20,700	9,200	13,100	10.7	11.94	780,000	B.
May.....	12,300	7,300	8,750	7.17	8.27	538,000	B.
June.....	10,700	4,500	6,750	5.53	6.17	402,000	B.
July.....	5,730	1,220	3,060	2.51	2.89	188,000	B.
August.....	1,220	570	736	.603	.70	45,300	B.
September.....	570	470	505	.414	.46	30,000	B.
The year.....	100,000	380	6,220	5.10	68.58	4,560,000	
1907-8.							
October.....	700	470	517	.424	.49	31,800	B.
November.....	570	350	472	.387	.43	28,100	B.
December.....	4,980	430	1,590	1.30	1.50	97,800	B.
January.....	8,210	1,670	3,380	2.77	3.19	208,000	C.
February.....	4,050	1,520	2,230	1.83	1.97	128,000	C.
March.....	5,100	2,400	3,590	2.94	3.39	221,000	C.
April.....	8,410	2,600	4,800	3.93	4.38	286,000	C.
May.....	8,000	3,320	5,200	4.26	4.91	320,000	C.
June.....	4,800	1,380	3,180	2.61	2.91	189,000	C.
July.....	1,280	400	705	.578	.67	43,300	C.
August.....	400	320	350	.287	.33	21,500	C.
September.....	350	320	329	.270	.30	19,600	C.
The year.....	8,410	320	2,200	1.80	24.47	1,590,000	
1908-9.							
October.....	3,500	320	521	.427	.49	32,000	C.
November.....	1,000	370	478	.392	.44	28,400	C.
December.....	2,500	400	764	.626	.72	47,000	C.
January.....	111,000	700	23,000	18.9	21.79	1,410,000	C.
February.....	33,200	5,100	9,740	7.98	8.31	541,000	C.
March.....	10,200	3,900	5,330	4.37	5.04	328,000	B.
April.....	9,900	4,300	7,340	6.02	6.72	437,000	B.
May.....	12,300	5,080	8,450	6.93	7.99	520,000	B.
June.....	11,800	3,250	6,520	5.34	5.96	388,000	B.
July.....	3,130	790	1,360	1.11	1.28	83,600	B.

Monthly discharge of Yuba River near Smartsville, Cal., for 1903-1912—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.							
August.....	790	470	605	0.496	0.57	37,200	B.
September.....	480	390	431	.353	.39	25,600	B.
The year.....	111,000	320	5,380	4.41	59.70	3,880,000	
1909-10.							
October.....	1,110	380	543	.445	.51	33,400	B.
November.....	37,000	670	5,010	4.11	4.59	298,000	C.
December.....	32,000	1,750	6,550	5.37	6.19	403,000	C.
January.....	13,000	2,400	4,520	3.70	4.27	278,000	B.
February.....	10,500	3,120	4,390	3.60	3.75	244,000	B.
March.....	16,100	5,600	8,170	6.70	7.72	502,000	B.
April.....	9,890	6,400	7,900	6.48	7.23	470,000	B.
May.....	7,000	2,970	4,690	3.84	4.43	288,000	A.
June.....	2,830	730	1,280	1.05	1.17	76,200	A.
July.....	730	390	525	.430	.50	32,300	A.
August.....	390	295	328	.269	.31	20,200	A.
September.....	1,220	295	383	.314	.35	22,800	A.
The year.....	37,000	295	3,690	3.03	41.02	2,670,000	
1910-11.							
October.....	675	320	388	.318	.37	23,900	A.
November.....	2,970	355	653	.535	.60	38,900	A.
December.....	8,500	525	1,400	1.15	1.33	86,100	A.
January.....	39,000	466	7,840	6.43	7.41	482,000	B.
February.....	19,700	2,000	6,840	5.61	5.84	380,000	B.
March.....	23,000	2,460	8,680	7.11	8.20	534,000	C.
April.....	23,400	5,800	10,900	8.93	9.96	649,000	C.
May.....	13,700	6,200	8,560	7.02	8.09	526,000	B.
June.....	14,600	4,800	9,490	7.78	8.68	565,000	B.
July.....	5,000	870	2,590	2.12	2.44	159,000	B.
August.....	795	465	608	.498	.57	37,400	A.
September.....	525	410	453	.371	.41	27,000	A.
The year.....	39,000	320	4,870	4.00	53.90	3,510,000	
1911-12.							
October.....	585	410	476	.390	.45	29,300	A.
November.....	2,410	410	618	.507	.57	36,800	A.
December.....	650	410	500	.410	.47	30,700	A.
January.....	7,180	465	1,370	1.12	1.29	84,200	A.
February.....	1,750	720	992	.813	.88	57,100	A.
March.....	7,630	758	1,950	1.60	1.84	120,000	A.
April.....	5,890	1,310	2,300	1.89	2.11	137,000	A.
May.....	7,630	3,930	6,000	4.92	5.67	369,000	A.
June.....	7,400	795	3,220	2.64	2.94	192,000	A.
The period.....						1,060,000	

YUBA RIVER AT PARKS BAR BRIDGE, NEAR SMARTSVILLE, CAL.

This station was established June 28, 1900, at Parks Bar Bridge, 2 miles northwest of Smartsville, Cal., in cooperation with the California Water and Forest Association, to obtain data for a reconnaissance of Yuba River and its tributaries.<sup>1</sup> It was discontinued October 14, 1900. The river at this point emerges from the confines of the steep valley above and spreads out below the station into numerous wide, shifting channels and sloughs that meander through the broad and gently sloping ranch lands to join the Feather River at Marysville. The channel at the bridge has been filled with

<sup>1</sup> See Water-Supply Paper U. S. Geol. Survey No. 46, 1901.

sand, gravel, and débris brought down from hydraulic mining camps in the mountains above, and shifts during high stages.

The data on the stream flow in this vicinity have been collected from 1903 to 1912 at the Narrows station, about 3 miles above Parks Bar Bridge.

*Discharge measurements of Yuba River at Parks Bar Bridge, near Smartsville, Cal., in 1900.*

[By H. D. H. Connick.]

Date.	Gage height.	Discharge.	Date.	Gage height.	Discharge.
	<i>Feet.</i>	<i>Sec.-ft.</i>		<i>Feet.</i>	<i>Sec.-ft.</i>
June 28.....	3.15	1,210	July 24.....	2.50	673
29.....	2.95	1,090	Aug. 7.....	2.23	537
July 11.....	2.65	821	8.....	2.30	571
12.....	2.65	811	14.....	2.25	534
13.....	2.60	774	28.....	2.20	474
22.....	2.42	622	Sept. 14.....	2.60	736
23.....	2.50	686			

*Daily gage height, in feet, of Yuba River at Parks Bar Bridge, near Smartsville, Cal., for 1900.*

Day.	June.	July.	Aug.	Sept.	Oct.	Day.	June.	July.	Aug.	Sept.	Oct.
1.....		2.85	2.3	2.1	2.0	16.....		2.45	2.2	2.35	
2.....		2.9	2.25	2.1	2.0	17.....		2.45	2.1	2.2	
3.....		3.0	2.2	2.1	3.1	18.....		2.45	2.15	2.2	
4.....		2.75	2.2	2.15	4.05	19.....		2.4	2.15	2.2	
5.....		2.75	2.2	2.4	4.6	20.....		2.35	2.25	2.15	
6.....		2.65	2.2	2.3	4.1	21.....		2.35	2.3	2.1	
7.....		2.7	2.25	2.2	3.65	22.....		2.4	2.35	2.1	
8.....		2.7	2.25	2.2	3.5	23.....		2.45	2.25	2.0	
9.....		2.6	2.25	2.15	3.5	24.....		2.45	2.25	2.0	
10.....		2.6	2.15	2.1	3.45	25.....		2.45	2.15	2.0	
11.....		2.65	2.2	2.25	3.4	26.....		2.35	2.1	2.1	
12.....		2.6	2.15	2.25	3.5	27.....		2.35	2.15	2.0	
13.....		2.6	2.25	2.4	3.4	28.....	3.15	2.35	2.1	2.0	
14.....		2.55	2.25	2.6	3.4	29.....	3.0	2.35	2.1	2.0	
15.....		2.55	2.15	2.4		30.....	3.05	2.35	2.2	2.0	
						31.....		2.3	2.15		

*Daily discharge, in second-feet, of Yuba River at Parks Bar Bridge, near Smartsville, Cal., for 1900.*

Day.	June.	July.	Aug.	Sept.	Oct.	Day.	June.	July.	Aug.	Sept.	Oct.
1.....		948	560	455	410	16.....		648	505	588	
2.....		990	532	455	410	17.....		648	455	505	
3.....		1,080	505	455	1,180	18.....		648	480	505	
4.....		865	505	480	2,210	19.....		615	480	505	
5.....		865	505	615	2,910	20.....		598	532	480	
6.....		788	505	560	2,270	21.....		588	560	455	
7.....		825	532	505	1,740	22.....		615	588	455	
8.....		825	532	505	1,580	23.....		648	532	410	
9.....		750	532	480	1,580	24.....		648	532	410	
10.....		750	480	455	1,530	25.....		648	480	410	
11.....		788	505	532	1,480	26.....		588	455	455	
12.....		750	480	532	1,580	27.....		588	480	410	
13.....		750	532	615	1,480	28.....	1,230	588	455	410	
14.....		715	532	750	1,480	29.....	1,080	588	455	410	
15.....		715	480	615		30.....	1,130	588	505	410	
						31.....		560	480		

NOTE.—Daily discharge determined from a rating curve fairly well defined between 490 and 1,200 second-feet. Above 1,200 second-feet the curve is an extension and is only approximate.

Monthly discharge of Yuba River at Parks Bar Bridge, near Smartsville, Cal., for 1900.

[Drainage area, 1,230 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.	
July.....	1,080	560	716	0.582	0.67	44,000	B.
August.....	588	455	506	.411	.47	31,100	B.
September.....	750	410	494	.402	.45	29,400	B.
October 1-14.....	2,910	410	1,560	1.27	.66	43,300	C.

OREGON CREEK NEAR NORTH SAN JUAN, CAL.

This station, which is located 150 feet below the highway bridge, one-half mile above Freeman's Crossing, 2 miles northeast of North San Juan, in the N. ½ SE. ¼ sec. 28, T. 18 N., R. 8 E., in the Tahoe National Forest, was established October 28, 1910.

The gage is a vertical staff, fastened to an alder on the right bank, 150 feet below the bridge and about 500 feet above the mouth of the stream.

A car and cable were installed on November 8, 1911, 30 feet below the gage, as the section at the bridge is very rough. Low-water measurements are made by wading.

Discharge estimates are withheld until high-water measurements are secured at the cable section.

Discharge measurements of Oregon Creek near North San Juan, 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. 28	McGlashan and Wood .	3.73	8.4	June 13.	G. T. Peekema .....	4.40	51
Dec. 6	F. G. Wood .....	3.99	20	Nov. 8	.....do .....	4.01	8.9
11	.....do .....	4.81	139	1912.			
1911.				May 21	J. E. Stewart.....	4.66	66
Apr. 25	G. T. Peekema .....	5.25	291				

Daily gage height, in feet, of Oregon Creek near San Juan, Cal., for 1910-1912.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.												
1					6.0							
2					5.7	4.5					3.9	3.8
3					5.5		7.5					3.8
4					5.5	5.0						3.8
5		3.7	4.1		5.4	5.4						3.8
6						5.8		5.15				3.8
7					5.3	6.1			4.7	4.1		3.8
8						5.8						3.8
9					4.9	5.6						3.8
10						5.5						3.8
11		5.1			4.9	5.5						3.8
12					4.8							3.8
13					4.9			5.1	4.4			3.8
14										4.0		3.8
15					4.7	5.3						3.8
16						5.2						3.8
17						5.2	5.4		4.3			3.8
18					4.6	5.0						3.8
19			5.1	4.3	4.6			6.05				3.8
20		3.9		6.6								3.8
21				5.5	4.5						3.9	3.8
22				5.0	4.5						3.9	3.8
23				4.7							3.9	3.8
24				6.4				5.8		3.9	3.9	3.8
25				6.2			5.25	5.8			3.9	3.8
26				5.5					4.2		3.9	3.9
27				5.2	4.4						3.9	3.9
28	3.73			5.3							3.9	3.9
29				6.1					4.2		3.9	3.9
30				6.85							3.9	3.9
31			4.1	6.75		5.5					3.8	
1911-12.												
1	3.9	3.9	4.0	4.0	4.4	4.2	4.6	4.6	4.6			
2	3.9	3.9	4.0	4.0	4.3	4.2	4.6	4.6	4.5			
3	3.9	3.9	4.0	4.0	4.3	4.2	4.5	4.5	4.4			
4	3.9	3.9	4.0	4.0	4.3	4.2	4.5	4.5	4.4			
5	4.0	3.9	3.9	4.1	4.2	4.8	4.5	4.5	4.4			
6	4.0	3.9	3.9	4.0	4.2	5.8	4.5	4.5	4.3			
7	3.9	3.9	4.0	4.0	4.2	5.1	4.5	4.5	4.3			
8	3.9	3.9	3.9	4.1	4.3	4.9	4.5	4.5	4.3			
9	3.9	4.1	3.9	4.4	4.3	4.8	4.5	4.5	4.3			
10	4.0	4.7	3.9	4.6	4.3	4.7	4.7	4.7	4.3			
11	3.9	4.2	3.9	4.6	4.3	4.6	4.6	4.6	4.2			
12	3.9	4.1	3.9	4.5	4.2	4.6	4.5	4.5	4.2			
13	3.9	4.0	3.9	4.4	4.3	4.7	4.5	4.5	4.4			
14	3.9	4.1	3.9	4.4	4.3	4.6	4.5	4.5	4.3			
15	3.9	4.1	3.9	4.3	4.3	4.6	4.5	4.5	4.2			
16	3.9	4.3	3.9	4.8	4.2	4.7	4.6	4.6	4.2			
17	3.9	4.0	4.0	4.5	4.2	4.6	4.6	4.6	4.2			
18	3.9	4.1	4.0	4.4	4.6	4.6	4.6	4.6	4.2			
19	3.9	4.1	4.0	4.9	4.5	4.7	4.6	4.6	4.2			
20	3.9	4.0	4.0	4.6	4.4	4.8	4.5	4.5	4.1			
21	3.9	4.0	4.0	4.6	4.3	4.7	4.5	4.5	4.1			
22	3.9	4.0	4.0	4.4	4.3	4.6	4.5	4.5	4.1			
23	3.9	4.0	4.0	4.3	4.3	4.6	4.5	4.5	4.2			
24	3.9	4.0	4.0	4.3	4.2	4.6	4.6	4.6	4.1			
25	3.9	4.0	3.9	4.4	4.2	4.6	4.6	4.7	4.1			
26	3.9	4.0	3.9	5.4	4.2	4.6	4.6	4.8	4.1			
27	4.0	3.9	3.9	4.9	4.2	4.6	4.6	4.8	4.1			
28	3.9	3.9	4.0	4.7	4.2	4.6	4.6	4.7	4.1			
29	3.9	3.9	4.0	4.5	4.2	4.7	4.7	5.1	4.1			
30	3.9	4.0	4.0	4.4		4.7	4.7	5.3	4.1			
31	3.9		4.0	4.4		4.7						

NOTE.—Prior to Aug. 21, 1911, gage heights were furnished by the United States Forest Service.

NORTH FORK OF YUBA RIVER <sup>1</sup> NEAR SIERRA CITY, CAL.

This station, which is located at a footbridge 1½ miles below Sierra City and about 3 miles below the junction of North and South Forks of North Fork of Yuba River, was established November 1, 1911.

The gage is a vertical staff fastened to the upstream end of the left abutment of the footbridge.

The channel is composed of bowlders and gravel.

The record for this station is furnished by the United States Forest Service.

The following discharge measurement was made from the footbridge by G. T. Peekema:

November 1, 1911: Gage height, 1.95 feet; discharge, 89 second-feet.

*Daily gage height, in feet, of North Fork of Yuba River near Sierra City, Cal., for 1911-12.*

Day.	Oct.	Nov.	Dec.	Apr.	May.	June.	Day.	Oct.	Nov.	Dec.	Apr.	May.	June.
1		1.95				3.65	16						
2			2.0		2.6		17				2.4		
3							18					3.95	
4			2.1				19						3.5
5		2.3					20						
6					3.0		21					3.6	
7				2.2		3.75	22						
8					3.8		23						3.0
9							24						
10		2.0					25		2.3				
11						3.5	26						2.9
12				2.25			27						
13		2.75			4.1	3.8	28						
14							29				2.5	3.55	2.75
15							30		2.35				
							31						

<sup>1</sup> Known locally as North Yuba River

NORTH FORK OF YUBA RIVER<sup>1</sup> AT GOODYEAR BAR, CAL.

This station, which is located at the highway bridge at Goodyear Bar, in the E.  $\frac{1}{2}$  SW.  $\frac{1}{4}$  sec. 5, T. 19 N., R. 10 E., was established October 31, 1910.

The first important tributary above the station is the North Fork of the North Fork, 4 miles upstream. Rock Creek enters about one-eighth mile and Goodyear Creek about one-fourth mile below the station.

In the early days Goodyear Bar and Downieville were large placer-mining camps. At Downieville the entire low-water flow of the North Fork was diverted into a flume which extended along the side of the canyon for several miles. Each miner connected with this enterprise was allotted 30 feet of the river channel, which was carefully worked to bedrock. This section of the North Yuba was one of the richest placer districts in California. There is now considerable activity in quartz mining in this district.

The gage at this station is a vertical staff in two sections on the left bank: The low-water section is fastened to the old piling under the bridge, and the upper section is fastened to the left pier.

Discharge measurements are made from the bridge.

This station is maintained in cooperation with the United States Forest Service.

*Discharge measurements of North Fork of Yuba River at Goodyear Bar, Cal., in 1910-11.*

Date.	Hydrographer.	Gage height.	Discharge.
1910.		<i>Feet.</i>	<i>Sec.-ft.</i>
Sept. 14	T. W. Norcross.....	3.41	143
Oct. 31	McGlashan and Wood.....	3.39	146
Dec. 8	F. G. Wood.....	3.85	330
9	.....do.....	4.66	826
1911.			
Jan. 13	F. G. Wood.....	3.98	390
23	.....do.....	3.97	395
25	.....do.....	5.12	1,200
26	.....do.....	4.45	697
27	.....do.....	4.25	507
Apr. 23	G. T. Peekema.....	5.78	1,940
June 15	.....do.....	6.80	3,170
Nov. 3	.....do.....	3.46	173

<sup>1</sup> This stream is locally known as North Yuba River.

Daily gage height, in feet, of North Fork of Yuba River at Goodyear Bar, Cal., for 1910-1912.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.												
1.		3.4	.....	3.5	7.1	3.7	6.0	5.8	6.6	5.7	4.0	3.6
2.		3.4	.....	3.5	6.8	3.6	6.5	5.8	6.8	5.5	4.0	3.6
3.		3.4	5.2	3.5	6.2	3.8	6.7	6.1	7.0	5.6	3.95	3.6
4.		3.4	.....	3.5	5.8	4.0	6.5	6.2	6.9	5.45	3.9	3.6
5.		3.4	.....	3.5	4.6	4.0	6.6	6.4	.....	5.55	3.9	3.6
6.		3.45	3.8	3.5	4.0	4.0	6.7	6.0	.....	5.4	3.9	.....
7.		.....	3.8	3.65	3.8	4.3	6.5	5.9	7.1	5.3	3.9	3.6
8.		3.48	4.0	3.7	3.5	4.3	6.5	5.85	7.2	5.25	3.85	.....
9.		3.55	4.6	3.8	3.5	4.3	6.0	5.8	7.3	5.15	.....	3.6
10.		3.5	4.7	3.7	3.6	4.9	6.0	5.75	7.8	5.0	3.8	3.6
11.		3.5	5.3	3.65	3.5	5.0	5.9	6.0	7.2	5.0	3.8	3.6
12.		3.5	4.5	3.7	3.5	5.2	5.7	6.1	7.5	4.9	3.8	3.6
13.		3.5	4.0	4.0	3.5	5.0	6.1	6.0	7.7	4.85	3.8	3.6
14.		3.5	4.0	3.8	3.6	4.6	5.8	5.9	7.6	4.8	3.8	3.55
15.		3.5	3.9	3.6	3.5	4.6	5.5	5.85	7.4	.....	3.8	3.55
16.		3.5	3.9	3.5	3.5	4.3	5.5	5.8	7.6	4.8	3.8	3.5
17.		3.55	3.9	3.6	3.7	4.3	5.4	.....	.....	4.7	3.75	3.5
18.		3.55	3.9	3.8	3.6	4.6	5.4	5.75	.....	4.6	3.75	.....
19.		3.6	3.85	3.7	3.5	4.6	5.5	5.6	7.5	4.6	3.75	3.5
20.		3.6	3.85	4.8	3.5	4.6	5.5	5.9	7.1	4.5	.....	3.5
21.		.....	3.6	3.85	4.5	3.5	4.9	5.5	6.2	6.8	4.8	.....
22.		.....	3.6	3.8	3.8	3.5	5.0	5.5	6.3	6.5	.....	3.5
23.		.....	4.2	3.8	4.0	3.5	5.0	5.8	6.9	6.2	4.4	3.7
24.		.....	.....	3.8	4.6	3.5	5.1	5.9	6.4	6.0	4.3	.....
25.		.....	.....	3.75	4.3	3.5	5.1	6.0	6.2	5.85	4.25	3.7
26.		.....	.....	3.7	3.8	3.5	5.2	6.1	6.1	6.3	4.2	3.7
27.		.....	3.6	3.7	4.15	3.6	5.5	6.0	6.2	6.1	4.2	.....
28.		.....	.....	3.75	4.5	3.5	5.8	6.0	6.3	6.0	4.1	.....
29.		.....	.....	3.7	7.5	.....	5.8	6.2	6.6	5.9	4.1	3.7
30.		.....	3.4	3.7	7.5	.....	6.0	6.0	6.4	5.8	4.1	3.65
31.	3.39	.....	3.7	7.6	.....	6.0	.....	6.3	.....	4.0	.....	3.5
1911-12.												
1.	3.5	3.45	.....	3.4	3.6	3.55	3.85	4.65	6.0	.....	.....	.....
2.	3.5	3.45	3.45	3.4	3.6	3.6	3.95	4.4	6.1	.....	.....	.....
3.	3.5	3.45	3.45	3.45	3.55	3.55	4.05	4.3	5.9	.....	.....	.....
4.	3.6	3.45	3.45	3.45	3.55	3.6	4.05	4.35	5.9	.....	.....	.....
5.	.....	3.45	.....	3.45	3.55	3.8	4.0	4.45	6.0	.....	.....	.....
6.	3.55	3.45	3.4	3.4	3.55	4.2	4.05	4.5	5.8	.....	.....	.....
7.	3.55	3.45	3.4	3.5	3.55	3.9	4.1	4.7	5.7	.....	.....	.....
8.	3.55	3.45	3.4	3.45	3.55	3.8	4.15	5.15	5.3	.....	.....	.....
9.	3.55	3.55	3.4	3.65	3.6	3.75	4.2	5.3	5.1	.....	.....	.....
10.	3.55	4.0	3.4	3.65	3.6	3.7	4.2	5.2	5.0	.....	.....	.....
11.	.....	3.55	3.4	3.6	3.6	3.7	4.1	5.6	4.9	.....	.....	.....
12.	3.5	.....	3.4	3.55	3.6	3.75	4.1	5.8	5.4	.....	.....	.....
13.	3.5	3.5	3.4	3.5	3.6	3.7	3.95	5.7	.....	.....	.....	.....
14.	3.5	3.5	3.4	3.5	3.6	3.7	4.0	5.7	4.85	.....	.....	.....
15.	3.5	3.7	3.4	3.5	3.6	3.75	4.0	6.0	4.6	.....	.....	.....
16.	3.5	3.65	3.4	3.7	3.65	3.7	4.0	5.8	4.5	.....	.....	.....
17.	.....	3.55	3.4	3.6	3.65	3.65	3.95	5.9	4.4	.....	.....	.....
18.	3.5	3.5	3.4	3.65	3.95	3.65	4.0	5.5	4.35	.....	.....	.....
19.	3.5	3.5	3.4	3.6	3.8	3.7	3.9	5.4	4.3	.....	.....	.....
20.	3.5	3.55	3.35	3.55	3.7	3.7	3.9	5.3	4.3	.....	.....	.....
21.	.....	3.5	3.35	3.55	3.65	3.65	3.9	5.0	4.3	.....	.....	.....
22.	.....	3.5	3.35	3.5	3.6	3.65	3.85	4.8	4.3	.....	.....	.....
23.	.....	3.5	3.45	3.35	3.5	3.6	3.65	.....	4.85	.....	.....	.....
24.	.....	3.5	3.45	.....	3.5	3.55	3.65	3.85	4.9	.....	.....	.....
25.	.....	3.5	3.45	3.3	3.65	3.5	3.7	3.95	5.3	4.15	.....	.....
26.	.....	3.45	3.3	4.1	.....	3.75	4.0	5.5	4.1	.....	.....	.....
27.	.....	3.45	3.45	3.8	3.5	3.8	4.0	5.6	4.1	.....	.....	.....
28.	.....	3.5	3.5	3.7	3.5	3.85	4.05	5.9	4.0	.....	.....	.....
29.	.....	3.5	3.45	3.7	3.5	3.9	4.7	5.7	4.0	.....	.....	.....
30.	.....	3.45	3.45	3.65	.....	3.85	4.5	5.7	4.0	.....	.....	.....
31.	.....	3.45	3.45	3.6	.....	3.85	.....	5.8	.....	.....	.....	.....

Daily discharge, in second-feet, of North Fork of Yuba River at Goodyear Bar, Cal., for 1910-1912.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.												
1.		150	567	184	3,580	260	2,170	1,930	2,920	1,820	405	220
2.		150	983	184	3,180	220	2,790	1,930	3,180	1,600	405	220
3.		150	1,300	184	2,410	305	3,050	2,290	3,440	1,710	380	220
4.		150	969	184	1,930	405	2,790	2,410	3,310	1,550	355	220
5.		150	637	184	790	405	2,920	2,660	3,400	1,660	355	220
6.		167	305	184	405	405	3,050	2,170	3,490	1,500	355	220
7.		172	305	240	305	580	2,790	2,050	3,580	1,400	355	220
8.		177	405	260	184	580	2,790	1,990	3,720	1,350	330	220
9.		202	790	305	184	580	2,170	1,930	3,860	1,260	318	220
10.		184	865	260	220	1,030	2,170	1,880	4,570	1,120	305	220
11.		184	1,400	240	184	1,120	2,050	2,170	3,720	1,120	305	220
12.		184	715	260	184	1,300	1,820	2,290	4,140	1,030	305	220
13.		184	405	405	184	1,120	2,290	2,170	4,420	988	305	220
14.		184	405	305	220	790	1,930	2,050	4,280	945	305	202
15.		184	355	220	184	790	1,600	1,990	4,000	945	305	202
16.		184	355	184	184	580	1,600	1,930	4,280	945	305	184
17.		202	355	220	260	580	1,500	1,900	4,230	865	282	184
18.		202	355	305	220	790	1,500	1,880	4,190	790	282	184
19.		220	330	260	184	790	1,600	1,710	4,140	790	282	184
20.		220	330	945	184	790	1,600	2,050	3,580	715	276	184
21.		220	330	715	184	1,030	1,600	2,410	3,180	945	270	184
22.		220	305	305	184	1,120	1,600	2,530	2,790	790	265	184
23.		520	305	405	184	1,120	1,930	3,310	2,410	645	260	184
24.		445	305	790	184	1,210	2,050	2,060	2,170	580	260	184
25.		370	282	580	184	1,210	2,170	2,410	1,990	550	260	184
26.		295	260	305	184	1,300	2,290	2,290	2,530	520	260	202
27.		220	260	490	220	1,600	2,170	2,410	2,590	520	260	220
28.		197	282	715	184	1,930	2,170	2,530	2,170	460	260	202
29.		178	260	4,140		1,930	2,410	2,920	2,050	460	260	184
30.		150	260	4,140		2,170	2,170	2,060	1,930	460	240	184
31.	149		260	4,280		2,170		2,530		405	230	
1911-12.												
1.	184	167	167	150	220	202	330	828	2,170			
2.	184	167	167	150	220	220	380	645	2,290			
3.	184	167	167	167	202	202	432	580	2,050			
4.	220	167	167	167	202	220	432	612	2,050			
5.	211	167	158	167	202	305	405	680	2,170			
6.	202	167	150	150	202	520	432	715	1,930			
7.	202	167	150	184	202	355	460	865	1,820			
8.	202	167	150	167	202	305	490	1,260	1,400			
9.	202	202	150	240	220	282	520	1,400	1,210			
10.	202	405	150	240	220	260	520	1,300	1,120			
11.	193	202	150	220	220	260	460	1,710	1,030			
12.	184	193	150	202	220	282	460	1,930	1,500			
13.	184	184	150	184	220	260	380	1,820	1,240			
14.	184	184	150	184	220	560	405	1,820	988			
15.	184	260	150	184	220	282	405	2,170	790			
16.	184	240	150	260	240	260	405	1,930	715			
17.	184	202	150	220	240	240	380	2,050	645			
18.	184	184	150	240	380	240	405	1,600	612			
19.	184	184	150	220	305	260	355	1,500	580			
20.	184	202	135	202	260	260	355	1,400	580			
21.	184	184	135	202	240	240	355	1,120	580			
22.	184	184	135	184	220	240	330	945	580			
23.	184	167	135	184	220	240	330	988	580			
24.	184	167	128	164	202	240	330	1,030	520			
25.	184	167	120	240	184	260	380	1,400	490			
26.	167	167	120	460	184	282	405	1,600	460			
27.	167	167	167	305	184	305	405	1,710	460			
28.	167	184	187	260	184	330	432	2,050	405			
29.	167	184	167	260	184	355	865	1,870	405			
30.	167	167	167	240		330	715	1,820	405			
31.	167		167	220		330		1,930				

NOTE.—Daily discharge 1910-1912 determined from a well defined rating curve. Discharge interpolated for days on which gage was not read.

Monthly discharge of North Fork of Yuba River at Goodyear Bar, Cal., for 1910-1912.

[Drainage area, 214 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.	
1910-11.							
November.....	520	150	214	1.00	1.12	12,700	A.
December.....	1,400	260	482	2.25	2.59	29,600	A.
January.....	4,280	184	725	3.38	3.90	44,500	A.
February.....	3,580	184	596	2.79	2.90	33,100	A.
March.....	2,170	220	975	4.56	5.26	60,000	A.
April.....	3,050	1,500	2,160	10.1	11.27	129,000	A.
May.....	3,310	1,710	2,260	10.6	12.22	139,000	A.
June.....	4,570	1,930	3,330	15.6	17.40	198,000	A.
July.....	1,820	405	982	4.59	5.29	60,400	A.
August.....	405	230	301	1.41	1.63	18,500	A.
September.....	220	184	203	.949	1.06	12,100	A.
The period.....						737,000	
1911-12.							
October.....	220	167	186	.869	1.00	11,400	A.
November.....	405	167	191	.893	1.00	11,400	A.
December.....	184	120	151	.706	.81	9,280	A.
January.....	460	150	214	1.00	1.15	13,200	A.
February.....	380	184	221	1.03	1.11	12,700	A.
March.....	520	202	278	1.30	1.50	17,100	A.
April.....	865	330	432	2.02	2.25	25,700	A.
May.....	2,170	580	1,390	6.50	7.49	85,500	A.
June.....	2,290	405	1,060	4.95	5.52	63,100	A.
The period.....						249,000	

NORTH FORK OF YUBA RIVER NEAR NORTH SAN JUAN, CAL.

This station was established July 3, 1900, above the Yuba Power Co.'s dam, about 1½ miles above the confluence of North Fork and Middle Fork and about 2 miles northwest of North San Juan, Cal., in cooperation with the California Water and Forest Association, for the purpose of obtaining the low-water flow during the midsummer season. The data were used in a reconnaissance of the power possibilities of the Yuba and its tributaries.<sup>1</sup> It is below all large tributaries. The river at this point runs in a deep, wide canyon, whose channel is irregular, composed of gravel, sand, and clay, and which is subject to change during floods. The drainage area of the North Fork at its mouth is 492 square miles.

The precipitation during the wet season preceding the gagings was about two-thirds to three-fourths of the mean annual rainfall. Precipitation during the two preceding wet seasons was still further below the normal. The records show, therefore, the low-water flow on this stream during the period of abnormally low rainfall.

<sup>1</sup> See Water-Supply Paper U. S. Geol. Survey No. 46, 1901.

*Discharge measurements of North Fork of Yuba River near North San Juan, Cal., in 1900.*

[By H. D. H. Connick.]

Date.	Gage height.	Dis-charge.	Date.	Gage height.	Dis-charge.
	<i>Fect.</i>	<i>Sec.-fect.</i>		<i>Fect.</i>	<i>Sec.-fect.</i>
July 3.....	2.05	606	July 31.....	1.60	364
6.....	1.95	567	Aug. 9.....	1.55	328
17.....	1.70	438	10.....	1.57	322
18.....	1.65	419	29.....	1.48	282
27.....	1.65	366	30.....	1.48	285
29.....	1.60	371			

*Daily gage height, in feet, of North Fork of Yuba River near North San Juan, Cal., for 1900.*

Day.	July.	Aug.	Sept.	Oct.	Day.	July.	Aug.	Sept.	Oct.
1.....	2.07	1.60	1.46	1.46	16.....	1.75	1.52	1.50	.....
2.....	2.06	1.55	1.46	1.49	17.....	1.70	1.50	1.49	.....
3.....	2.05	1.55	1.46	2.20	18.....	1.70	1.50	1.48	.....
4.....	2.03	1.55	1.46	2.04	19.....	1.70	1.50	1.47	.....
5.....	2.00	1.55	1.48	2.69	20.....	1.65	1.50	1.46	.....
6.....	2.00	1.55	1.50	2.04	21.....	1.65	1.50	1.46	.....
7.....	2.00	1.55	1.50	1.80	22.....	1.68	1.50	1.45	.....
8.....	1.95	1.55	1.49	1.69	23.....	1.70	1.50	1.44	.....
9.....	1.88	1.55	1.48	1.71	24.....	1.68	1.50	1.44	.....
10.....	1.82	1.55	1.47	1.68	25.....	1.65	1.50	1.46	.....
11.....	1.80	1.55	1.48	1.65	26.....	1.65	1.50	1.48	.....
12.....	1.75	1.55	1.49	1.67	27.....	1.65	1.49	1.48	.....
13.....	1.75	1.55	1.53	1.66	28.....	1.60	1.48	1.48	.....
14.....	1.75	1.55	1.60	1.64	29.....	1.60	1.48	1.47	.....
15.....	1.75	1.55	1.52	.....	30.....	1.60	1.47	1.46	.....
					31.....	1.60	1.47	.....	.....

*Daily discharge, in second-feet, of North Fork of Yuba River near North San Juan, Cal., for 1900.*

Day.	July.	Aug.	Sept.	Oct.	Day.	July.	Aug.	Sept.	Oct.
1.....	634	355	280	280	16.....	438	311	300	.....
2.....	627	328	280	295	17.....	410	300	295	.....
3.....	620	328	280	725	18.....	410	300	290	.....
4.....	606	328	280	613	19.....	410	300	285	.....
5.....	585	328	290	1,110	20.....	382	300	280	.....
6.....	585	328	300	613	21.....	382	300	280	.....
7.....	585	328	300	465	22.....	399	300	275	.....
8.....	555	328	295	404	23.....	410	300	270	.....
9.....	513	328	290	416	24.....	399	300	270	.....
10.....	477	328	285	399	25.....	382	300	280	.....
11.....	465	328	290	382	26.....	382	300	290	.....
12.....	438	328	295	394	27.....	382	295	290	.....
13.....	438	328	316	388	28.....	355	290	290	.....
14.....	438	328	355	377	29.....	355	290	285	.....
15.....	438	328	311	.....	30.....	355	285	280	.....
					31.....	355	285	.....	.....

NOTE.—Daily discharge determined from a rating curve that is fairly well defined between 250 and 720 second-feet.

Monthly discharge of North Fork of Yuba River near North San Juan, Cal., for 1900.

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.	
July.....	634	355	458	0.935	1.08	28,200	A.
August.....	355	285	313	.639	.74	19,200	A.
September.....	355	270	290	.592	.66	17,300	A.
October 1-14.....	1,110	280	490	1.00	.52	13,600	B.

NORTH FORK OF NORTH FORK OF YUBA RIVER AT DOWNIEVILLE, CAL.<sup>1</sup>

This station, which is located in the NE.  $\frac{1}{4}$  NW.  $\frac{1}{4}$  sec. 35, T. 20 N., R. 10 E., in the Tahoe National Forest, at upper highway bridge in Downieville, 500 feet above the dam and one-fourth mile above the mouth of the river, was established November 1, 1910.

The principal tributaries of this stream are Rattlesnake Creek, Middle Fork, and East Fork, all of which enter above the station.

A small ditch, which furnishes water for domestic uses at Downieville, heads above the station.

The gage is a vertical staff fastened to the left face of the right pier of the highway bridge.

Discharge measurements are made from this bridge and also from the bridge near the mouth.

The gage-height record is furnished by John T. Mason.

*Discharge measurements of North Fork of North Fork of Yuba River at Downieville, Cal., in 1910-11.*

Date.	Hydrographer.	Gage height.	Dis-charge.
1910.		<i>Feet.</i>	<i>Sec.-ft.</i>
Sept. 16	T. W. Norcross.....		189
Nov. 1	McGlashan & Wood.....	2.67	48
Dec. 9	F. G. Wood.....	3.64	440
1911.			
Jan. 16	F. G. Wood.....	2.91	107
20	do.....	3.74	541
21	do.....	3.30	241
22	do.....	3.11	172
Apr. 2	G. T. Peekema.....	4.28	930
June 15	do.....	4.60	1,260
Nov. 2	do.....	2.73	69

<sup>1</sup> This stream is locally known as the North Fork of North Yuba River.

Daily gage height, in feet, of North Fork of North Fork of Yuba River at Downieville, Cal., for 1910-1912.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.												
1		2.67	2.70	2.75	3.85	3.0	4.55	4.0	4.4	3.8	3.2	2.8
2		2.67	2.70	2.75	3.8	3.0	4.7	4.0	4.55	3.7	3.1	2.8
3		2.70	3.75	2.7	3.6	3.1	4.65	4.05	4.75	3.7	3.1	2.8
4		2.70	3.25	2.7	3.6	3.05	4.45	4.45	4.65	3.7	3.1	2.8
5		2.65	3.05	2.7	3.6	3.45	4.6	4.45	4.8	3.7	3.1	2.8
6		2.67	3.00	2.7	3.6	3.55	4.85	4.35	4.55	3.7	3.0	2.8
7		2.67	3.00	2.7	3.6	3.7	4.45	4.25	4.6	3.6	3.0	2.8
8		2.80	3.35	2.7	3.5	3.65	4.4	4.1	4.6	3.6	3.0	2.8
9		2.74	3.62	2.9	3.4	3.6	4.4	4.1	4.6	3.6	3.0	2.8
10		2.70	3.55	2.85	3.3	3.4	4.2	4.05	4.75	3.5	3.0	2.8
11		2.80	3.80	2.75	3.3	3.5	4.0	4.2	4.95	3.5	3.0	2.8
12		2.98	3.40	2.7	3.2	3.4	3.9	4.25	4.75	3.5	3.0	2.8
13		2.75	3.20	3.1	3.15	3.4	3.8	4.3	4.7	3.4	3.0	2.8
14		2.65	3.15	3.0	3.0	3.4	3.75	4.05	4.55	3.4	3.0	2.8
15		2.65	3.05	3.0	2.9	3.4	3.7	4.05	4.5	3.5	3.0	2.8
16		2.68	3.05	2.9	3.0	3.4	3.7	4.0	4.6	3.3	2.9	2.8
17		2.60	3.05	2.9	3.1	3.4	3.7	4.05	4.5	3.4	2.9	2.8
18		2.87	3.03	2.85	3.1	3.4	3.75	4.0	4.8	3.4	2.9	2.8
19		2.73	3.00	2.9	3.1	3.55	3.9	4.0	4.8	3.4	2.9	2.8
20		2.60	2.90	3.7	3.1	3.6	3.8	4.0	4.5	3.4	2.9	2.8
21		2.60	2.90	3.2	3.1	3.6	3.85	4.15	4.4	3.4	2.9	2.8
22		2.60	2.90	3.1	3.05	3.65	3.95	4.35	4.2	3.2	2.9	2.8
23		3.50	2.85	3.05	3.05	3.7	4.1	4.55	4.1	3.2	2.9	2.8
24		3.00	2.85	3.4	3.05	3.75	4.35	4.3	4.1	3.2	2.9	2.8
25		3.10	2.85	3.5	3.0	3.8	4.45	4.25	4.0	3.2	2.9	2.8
26		3.00	2.83	3.4	3.0	3.8	4.5	4.1	4.2	3.2	2.9	2.8
27		2.80	2.80	3.2	3.0	3.8	4.35	4.3	4.2	3.2	2.9	2.8
28		2.70	2.80	3.1	3.0	3.8	4.15	4.3	4.0	3.2	2.9	2.8
29		2.70	2.80	3.9	3.9	3.9	4.05	4.4	4.0	3.2	2.9	2.8
30		2.70	2.80	5.4	4.05	4.05	4.1	4.4	4.0	3.2	2.9	2.8
31			2.77	4.55		4.25		4.35		3.2	2.8	
1911-12.												
1	2.8	2.75	2.65	2.65	2.8	2.8	3.1	3.4	4.05			
2	2.75	2.74	2.67	2.7	2.8	2.8	3.2	3.3	3.95			
3	2.75	2.75	2.6	2.7	2.8	2.8	3.2	3.3	4.05			
4	2.85	2.75	2.65	2.7	2.8	2.9	3.2	3.3	3.95			
5	2.8	2.75	2.67	2.7	2.8	3.0	3.2	3.3	3.85			
6	2.8	2.75	2.67	2.7	2.8	3.3	3.25	3.6	3.90			
7	2.8	2.75	2.7	2.8	2.8	3.0	3.25	3.70	3.65			
8	2.8	2.75	2.7	2.7	2.8	3.0	3.3	3.85	3.65			
9	2.8	2.8	2.7	2.9	2.8	3.0	3.3	3.80	3.55			
10	2.8	2.8	2.7	2.8	2.8	2.9	3.3	3.80	3.55			
11	2.8	2.8	2.6	2.8	2.8	2.9	3.2	3.85	3.52			
12	2.8	2.8	2.65	2.8	2.8	3.0	3.1	4.2	3.70			
13	2.8	2.7	2.65	2.8	2.8	2.9	3.05	3.90	3.65			
14	2.8	2.7	2.65	2.8	2.8	2.9	3.05	3.95	3.52			
15	2.8	2.8	2.65	2.8	2.8	2.9	3.1	4.05	3.52			
16	2.75	2.7	2.65	2.8	2.8	3.0	3.1	3.90	3.30			
17	2.75	2.75	2.65	2.8	2.85	2.9	3.2	3.95	3.30			
18	2.75	2.75	2.65	2.85	3.25	2.9	3.2	3.90	3.30			
19	2.75	2.75	2.65	2.85	3.1	2.9	3.2	3.80	3.20			
20	2.75	2.8	2.65	2.85	3.1	2.9	3.1	3.70	3.20			
21	2.75	2.8	2.65	2.8	3.0	2.9	3.0	3.60	3.20			
22	2.75	2.8	2.65	2.8	2.9	2.9	3.0	3.50	3.20			
23	2.75	2.8	2.65	2.8	2.9	2.9	3.0	3.45	3.20			
24	2.75	2.75	2.63	2.8	2.8	2.9	3.1	3.50	3.20			
25	2.75	2.7	2.6	2.9	2.8	3.0	3.0	3.60	3.10			
26	2.75	2.7	2.6	3.2	2.8	3.1	3.1	3.90	3.10			
27	2.75	2.7		3.0	2.8	3.0	3.1	3.90	3.10			
28	2.75	2.67	2.6	2.9	2.8	3.0	3.1	4.0	3.00			
29	2.75	2.65	2.65	2.85	2.8	3.1	3.5	4.0	3.00			
30	2.75	2.65	2.65	2.8	2.8	3.2	3.35	3.90	3.00			
31	2.75		2.65	2.8		3.1		3.90				

Daily discharge, in second-feet, of North Fork of North Fork of Yuba River at Downieville, Cal., for 1910-1912.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.												
1.		52	57	68	585	130	1,200	690	1,050	550	205	78
2.		52	57	68	550	130	1,380	690	1,200	480	165	78
3.		57	515	57	415	165	1,320	730	1,440	480	165	78
4.		57	228	57	415	148	1,100	1,100	1,320	480	165	78
5.		50	148	57	415	328	1,260	1,100	1,500	480	165	78
6.		52	130	57	415	385	1,560	1,000	1,200	480	130	78
7.		52	130	57	415	480	1,100	905	1,260	415	130	78
8.		65	275	57	355	448	1,050	770	1,260	415	130	78
9.		65	428	103	300	415	1,050	770	1,260	415	130	78
10.		57	385	90	250	300	860	730	1,440	355	130	78
11.		78	550	68	250	355	690	860	1,680	355	130	78
12.		125	300	57	205	300	620	905	1,440	355	130	78
13.		68	205	165	185	300	550	950	1,380	300	120	78
14.		50	185	130	130	300	415	730	1,200	300	130	78
15.		50	148	130	103	300	480	730	1,150	355	130	78
16.		54	148	103	130	300	480	690	1,260	250	103	78
17.		42	148	103	165	300	480	730	1,150	300	103	78
18.		96	140	90	165	300	415	690	1,500	300	103	78
19.		63	130	103	165	385	620	690	1,500	300	103	78
20.		42	103	480	165	415	550	690	1,150	300	103	78
21.		42	103	205	165	415	585	815	1,050	300	103	78
22.		42	103	165	148	448	655	1,000	860	205	103	78
23.		355	90	148	148	480	770	1,200	770	205	103	78
24.		130	90	300	148	515	1,000	950	770	205	103	78
25.		165	90	355	130	550	1,100	905	690	205	103	78
26.		130	86	300	130	550	1,150	770	860	205	103	78
27.		78	78	205	130	550	1,000	950	860	205	103	78
28.		57	78	165	130	550	815	950	690	205	103	78
29.		57	78	620	.....	730	730	1,050	690	205	103	78
30.		57	78	2,290	.....	730	770	1,050	690	205	103	78
31.		.....	72	1,200	.....	905	.....	1,000	.....	205	78	.....
1911-12.												
1.	78	68	50	50	78	78	165	300	730	.....	.....	.....
2.	68	65	52	57	78	78	205	250	655	.....	.....	.....
3.	68	68	42	57	78	78	205	250	730	.....	.....	.....
4.	90	68	50	57	78	103	205	250	655	.....	.....	.....
5.	78	68	52	57	78	130	205	250	585	.....	.....	.....
6.	78	68	52	57	78	250	228	415	620	.....	.....	.....
7.	78	68	57	78	78	130	228	480	448	.....	.....	.....
8.	78	68	57	57	78	130	250	585	448	.....	.....	.....
9.	78	78	57	103	78	130	250	550	385	.....	.....	.....
10.	78	78	57	78	78	103	250	550	385	.....	.....	.....
11.	78	78	42	78	78	103	205	585	367	.....	.....	.....
12.	78	78	50	78	78	130	165	860	480	.....	.....	.....
13.	78	57	50	78	78	103	148	620	448	.....	.....	.....
14.	78	57	50	78	78	103	148	655	367	.....	.....	.....
15.	78	78	50	78	78	103	165	730	367	.....	.....	.....
16.	68	57	50	78	78	130	165	620	250	.....	.....	.....
17.	68	68	50	78	90	103	205	655	250	.....	.....	.....
18.	68	68	50	90	228	103	205	620	250	.....	.....	.....
19.	68	68	50	90	165	103	205	550	205	.....	.....	.....
20.	68	78	50	90	165	103	165	480	205	.....	.....	.....
21.	68	78	50	78	130	103	130	415	205	.....	.....	.....
22.	68	78	50	78	103	103	130	355	205	.....	.....	.....
23.	68	78	50	78	103	103	130	328	205	.....	.....	.....
24.	68	68	46	78	78	103	165	355	205	.....	.....	.....
25.	68	57	42	103	78	130	130	415	165	.....	.....	.....
26.	68	57	42	205	78	165	165	620	165	.....	.....	.....
27.	68	57	42	130	78	130	165	620	165	.....	.....	.....
28.	68	52	42	103	78	130	165	690	130	.....	.....	.....
29.	68	50	50	90	78	165	355	690	130	.....	.....	.....
30.	68	50	50	78	.....	205	275	620	130	.....	.....	.....
31.	68	.....	50	78	.....	165	.....	620	.....	.....	.....	.....

NOTE.—Daily discharge determined from a well-defined rating curve.

Monthly discharge of North Fork of North Fork of Yuba River at Downieville, Cal.,  
for 1910-1912.

[Drainage area, 71.2 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.	
1910-11.							
November.....	355	42	78.4	1.10	1.23	4,670	A.
December.....	551	57	173	2.43	2.80	10,600	A.
January.....	2,290	57	260	3.65	4.21	16,000	A.
February.....	585	103	247	3.47	3.61	13,700	A.
March.....	905	130	403	5.66	6.52	24,800	A.
April.....	1,560	415	858	12.1	13.50	51,100	A.
May.....	1,200	690	864	12.1	13.95	53,100	A.
June.....	1,680	690	1,140	16.0	17.85	67,800	A.
July.....	550	205	323	4.54	5.23	19,900	A.
August.....	205	78	122	1.71	1.97	7,500	A.
September.....	78	78	78.0	1.10	1.23	4,640	A.
The period.....						274,000	
1911-12.							
October.....	90	68	72.6	1.02	1.18	4,460	A.
November.....	78	50	67.0	.941	1.05	3,990	A.
December.....	57	42	49.4	.694	.80	3,040	A.
January.....	205	50	82.8	1.16	1.34	5,090	A.
February.....	228	78	93.1	1.31	1.41	5,360	A.
March.....	250	78	122	1.71	1.97	7,500	A.
April.....	355	130	193	2.71	3.02	11,500	A.
May.....	860	250	516	7.26	8.37	31,700	A.
June.....	730	130	351	4.93	5.50	20,900	A.
The period.....						93,500	

ROCK CREEK AT GOODYEAR BAR, CAL.

This station, which is located near the footbridge at Goodyear Bar 600 feet above its junction with North Fork of Yuba River, in the W.  $\frac{1}{2}$  SW.  $\frac{1}{4}$  sec. 5, T. 19 N., R. 10 E., in the Tahoe National Forest, was established October 30, 1910.

The principal tributary is Woodruff Creek, which enters 350 feet above the station and about 600 feet above the mouth.

Three small ditches, having a total capacity of about 10 second-feet, head above the station. Two of these, Paul Bachel's ditch and Williams' ditch, divert water from Woodruff Creek about one-fourth mile above its junction with Rock Creek. The intake of the Kennedy ditch is about three-fourths mile above the mouth of Rock Creek. Paul Bachel's ditch, which supplies water for domestic use in the town of Goodyear Bar, carried 0.69 second-foot on October 31 and 0.96 second-foot on December 8, 1910.

The gage is a vertical staff fastened to an alder on the right bank.

Discharge measurements are made from the bridge 40 feet above the gage or by wading.

This station is maintained in cooperation with the United States Forest Service.

*Discharge measurements of Rock Creek at Goodyear Bar, Cal., in 1910-1912.*

Date.	Hydrographer.	Gage height.	Discharge.	Date.	Hydrographer.	Gage height.	Discharge.
1910.		<i>Feet.</i>	<i>Sec.-ft.</i>	1911.		<i>Feet.</i>	<i>Sec.-ft.</i>
Sept. 14	T. W. Norcross .....		0.6	Jan. 25	F. G. Wood .....	4.32	182
Oct. 31	McGlashan and Wood .....	2.36	2.0	26	.....do .....	3.70	106
Dec. 8	F. G. Wood .....	2.48	4.9	27	.....do .....	3.89	52
				Apr. 23	G. T. Peekema .....	3.79	112
1911.				June 14	.....do .....	3.15	43
Jan. 13	F. G. Wood .....	3.06	29	Nov. 3	.....do .....	2.20	1.7

Daily gage height, in feet, of Rock Creek at Goodyear Bar, Cal., for 1910-1912.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.												
1.		2.37		2.5	5.4	2.6	4.2	4.2	3.5	2.55	2.2	2.0
2.		2.37		2.5	5.2	2.7	4.6	3.9	3.55	2.6	2.05	2.0
3.		2.37	3.4	2.45	5.0	2.9	4.9	3.8	3.6	2.5	2.05	2.05
4.		2.4		2.45	4.5	3.0	4.6	3.7	3.5	2.45	2.1	2.05
5.		2.4		2.4	3.6	3.0	4.6	4.0		2.5	2.1	2.1
6.		2.4	2.5	2.4	2.8	3.0	4.7	3.8		2.45	2.1	
7.		2.4	2.5	2.4	2.5	3.2	4.5	3.7	3.5	2.45	2.15	2.1
8.		2.5	2.5	2.7	2.5	3.4	4.2	3.7	3.45	2.4	2.1	
9.		2.55	2.6	2.6	2.5	3.4	4.0	3.7	3.4	2.4		2.05
10.		2.6	2.7	2.7	2.6	3.8	4.1	3.6	3.4	2.45	2.05	2.05
11.		2.6	3.3	2.55	2.5	3.8	4.0	3.7	3.3	2.4	2.05	
12.		2.55	2.9	2.75	2.5	4.0	4.0	3.8	3.3	2.4	2.05	2.05
13.		2.55	2.9	3.2	2.6	3.6	4.3	3.7	3.3	2.4	2.05	2.05
14.		2.55	2.8	2.9	2.6	3.5	4.0	3.65	3.2	2.3	2.0	2.05
15.		2.55	2.8	2.8	2.5	3.2	3.9	3.6	3.1		2.0	2.1
16.		2.55	2.7	2.7	2.6	3.0	3.8	3.55	3.05	2.25	2.0	2.1
17.		2.6	2.7	2.8	2.6	3.0	3.7			2.3	2.0	2.1
18.		2.6	2.7	2.8	2.6	3.1	3.7	3.7		2.25	2.0	
19.		2.6	2.65	2.9	2.5	2.9	3.8	3.6	2.9	2.25	2.0	2.1
20.		2.6	2.65	4.2	2.5	2.9	4.0	3.7	2.8			2.05
21.		2.6	2.65	3.8	2.5	2.9	4.4	3.8	2.8	2.25		2.05
22.		2.6	2.6	3.4	2.5	3.0	4.7	3.7	2.75			2.1
23.		2.5	2.6	2.8	2.6	3.0	4.9	3.8	2.75	2.25	2.0	2.1
24.			2.6	5.0	2.5	2.8	5.0	3.7	2.75	2.3		2.1
25.			2.55	4.8	2.5	2.8	5.4	3.6	2.7	2.3	2.0	2.1
26.			2.5	4.3	2.5	3.0	5.9	3.55	2.7	2.25	2.0	2.2
27.		2.4	2.5	4.0	2.5	3.1	5.4	3.5	2.6	2.2		2.25
28.			2.5	3.8	2.6	3.3	5.0	3.5	2.65	2.3		2.2
29.			2.5	6.0		3.6	4.7	3.6	2.65	2.2	2.0	2.2
30.	2.37	2.3	2.5	6.0		4.0	4.6	3.5	2.6	2.3	2.0	2.2
31.	2.37		2.5	5.8		4.2		3.5		2.2		
1911-12.												
1.	2.2	2.2		2.25	2.58	2.45	2.80	3.55	3.05			
2.	2.2	2.2	2.3	2.25	2.55	2.50	2.82	3.40	3.00			
3.	2.2	2.2	2.25	2.25	2.52	2.45	2.82	3.40	2.90			
4.	2.3	2.2	2.25	2.25	2.50	2.52	2.80	3.30	2.90			
5.		2.2		2.28	2.50	3.00	2.80	3.25	2.90			
6.	2.3	2.2	2.25	2.28	2.50	3.5	2.80	3.30	2.80			
7.	2.3	2.2	2.25	2.35	2.50	3.05	2.85	3.20	2.80			
8.	2.25	2.2	2.25	2.30	2.50	2.90	2.90	3.35	2.75			
9.	2.25	2.3	2.2	2.80	2.50	2.80	2.90	3.40	2.75			
10.	2.25	2.8	2.2	2.80	2.50	2.75	2.95	3.40	2.70			
11.		2.35	2.2	2.75	2.50	2.70	2.85	3.40	2.65			
12.	2.2	2.2	2.2	2.55	2.50	2.75	2.85	3.40	2.80			
13.	2.2	2.3	2.2	2.50	2.50	2.70	2.80	3.40				
14.	2.2	2.3	2.25	2.50	2.50	2.70	2.80	3.35	2.65			
15.	2.2	2.65	2.25	2.50	2.50	2.70	2.82	3.30	2.60			
16.	2.2	2.45	2.25	2.70	2.50	2.70	2.90	3.30	2.60			
17.		2.85	2.25	2.55	2.55	2.70	2.85	3.30	2.55			
18.	2.2	2.3	2.25	2.60	2.70	2.70	2.85	3.20	2.55			
19.	2.2	2.3	2.25	2.70	2.60	2.70	2.80	3.20	2.50			
20.	2.2	2.35	2.25	2.55	2.52	2.75	2.80	3.20	2.50			
21.	2.2	2.3	2.25	2.55	2.50	2.70	2.80	3.20	2.50			
22.	2.2	2.3	2.25	2.50	2.50	2.70	2.75	3.20	2.50			
23.	2.2	2.25	2.25	2.48	2.50	2.70		3.15	2.55			
24.	2.2	2.3		2.48	2.50	2.70	2.80	3.15	2.50			
25.	2.2		2.2	2.70	2.50	2.72	2.85	3.40	2.50			
26.	2.2	2.3	2.25	3.25	2.50	2.75	2.95	3.40	2.50			
27.		2.3	2.3	2.90	2.45	2.80	2.95	3.40	2.50			
28.		2.3	2.3	2.75	2.42	2.80	2.95	3.30	2.45			
29.		2.3	2.25	2.70	2.42	2.80	3.7	3.20	2.40			
30.	2.2	2.3	2.25	2.65		2.80	3.45	3.20	2.40			
31.	2.2		2.25	2.60		2.80		3.10				

Daily discharge, in second-feet, of Rock Creek at Goodyear Bar, Cal., for 1910-1912.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.												
1.....		3.2	2.5	5	399	7	168	168	72	6	1.7	0.5
2.....		3.2	2.5	5	354	10	235	122	78	7	.8	.5
3.....		3.2	62	4.2	312	19	291	108	83	5	.8	.8
4.....		3.5	43	4.2	218	26	235	95	72	4.2	1.0	.8
5.....		3.5	24	3.5	83	26	235	137	72	5	1.0	1.0
6.....		3.5	5	3.5	14	26	253	108	72	4.2	1.0	1.0
7.....		3.5	5	3.5	5	43	218	95	72	4.2	1.4	1.0
8.....		5	5	10	5	62	168	95	67	3.5	1.0	.9
9.....		6	7	7	5	62	137	95	62	4.2	.9	.8
10.....		7	10	10	7	108	152	83	62	4.2	.8	.8
11.....		7	52	6	5	108	137	95	52	3.5	.8	.8
12.....		6	19	12	5	137.	108	108	52	3.5	.8	.8
13.....		6	19	43	7	83	184	95	52	3.5	.8	.8
14.....		6	14	19	7	72	137	89	43	2.5	.5	.8
15.....		6	14	14	5	43	122	83	34	2.3	.5	1.0
16.....		6	10	10	7	26	108	78	30	2.1	.5	1.0
17.....		7	10	14	7	26	95	86	26	2.5	.5	1.0
18.....		7	10	14	7	34	95	95	22	2.1	.5	1.0
19.....		7	8.5	19	5	19	108	83	19	2.1	.5	1.0
20.....		7	8.5	168	5	19	137	95	14	2.1	.5	.8
21.....		7	8.5	108	5	19	201	108	14	2.1	.5	.8
22.....		7	7	62	5	26	253	95	12	2.1	.5	1.0
23.....		5	7	14	7	26	291	108	12	2.1	.5	1.0
24.....		4	7	312	5	14	312	95	12	2.5	.5	1.0
25.....		4	6	272	5	14	399	83	10	2.5	.5	1.0
26.....		4	5	184	5	26	520	78	10	2.1	.5	1.7
27.....		3.5	5	137	5	34	399	72	7	1.7	.5	2.1
28.....		3	5	108	7	52	312	72	8.5	2.5	.5	1.7
29.....		3	5	545	.....	83	253	83	8.5	1.7	.5	1.7
30.....	3.2	2.5	5	545	.....	137	235	72	7	2.5	.5	1.7
31.....	3.2	5	5	495	.....	168	.....	72	.....	1.7	.5	.....
1911-12.												
1.....	1.7	1.7	2.5	2.1	6.6	4.2	14	78	30	.....	.....	.....
2.....	1.7	1.7	2.5	2.1	6	5	15	62	26	.....	.....	.....
3.....	1.7	1.7	2.1	2.1	5.4	4.2	15	62	19	.....	.....	.....
4.....	2.5	1.7	2.1	2.1	5	5.4	14	52	19	.....	.....	.....
5.....	2.5	1.7	2.1	2.3	5	26	14	48	19	.....	.....	.....
6.....	2.5	1.7	2.1	2.3	5	72	14	52	14	.....	.....	.....
7.....	2.5	1.7	2.1	3.0	5	30	16	43	14	.....	.....	.....
8.....	2.1	1.7	2.1	2.5	5	19	19	57	12	.....	.....	.....
9.....	2.1	2.5	1.7	14	5	14	19	62	12	.....	.....	.....
10.....	2.1	14	1.7	14	5	12	22	62	10	.....	.....	.....
11.....	1.9	3.0	1.7	12	5	10	16	62	8.5	.....	.....	.....
12.....	1.7	2.8	1.7	6	5	12	16	62	14	.....	.....	.....
13.....	1.7	2.5	1.7	5	5	10	14	62	11	.....	.....	.....
14.....	1.7	2.5	2.1	5	5	10	14	57	8.5	.....	.....	.....
15.....	1.7	8.5	2.1	5	5	10	15	52	7	.....	.....	.....
16.....	1.7	4.2	2.1	10	5	10	19	52	7	.....	.....	.....
17.....	1.7	16	2.1	6	6	10	16	52	6	.....	.....	.....
18.....	1.7	2.5	2.1	7	10	10	16	43	6	.....	.....	.....
19.....	1.7	2.5	2.1	10	7	10	14	43	5	.....	.....	.....
20.....	1.7	3.0	2.1	6	5.4	12	14	43	5	.....	.....	.....
21.....	1.7	2.5	2.1	6	5	10	14	43	5	.....	.....	.....
22.....	1.7	2.5	2.1	5	5	10	12	43	5	.....	.....	.....
23.....	1.7	2.1	2.1	4.7	5	10	13	38	6	.....	.....	.....
24.....	1.7	2.5	1.9	4.7	5	10	14	38	5	.....	.....	.....
25.....	1.7	2.5	1.7	10	5	11	16	62	5	.....	.....	.....
26.....	1.7	2.5	2.1	48	5	12	22	62	5	.....	.....	.....
27.....	1.7	2.5	2.5	19	4.2	14	22	62	5	.....	.....	.....
28.....	1.7	2.5	2.5	12	3.8	14	22	52	4.2	.....	.....	.....
29.....	1.7	2.5	2.1	10	3.8	14	95	43	3.5	.....	.....	.....
30.....	1.7	2.5	2.1	8.5	.....	14	67	43	3.5	.....	.....	.....
31.....	1.7	.....	2.1	7	.....	14	.....	34	.....	.....	.....	.....

NOTE.—Daily discharge 1910-1912 determined from a rating curve well defined below 300 second-feet. Discharge interpolated for days on which gage was not read; discharge Dec. 1 and 2, 1910, estimated.

## Monthly discharge of Rock Creek at Goodyear Bar, Cal., for 1910-1912.

[Drainage area, 10.8 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.							
November.....	7	2.5	4.99	0.462	0.52	297	D.
December.....	62	2.5	12.8	1.19	1.37	787	C.
January.....	545	3.5	102	9.44	10.88	6,270	B.
February.....	399	5	53.8	4.98	5.19	2,990	B.
March.....	168	7	50.2	4.65	5.36	3,090	B.
April.....	520	95	218	20.2	22.54	13,000	B.
May.....	168	72	95.2	8.81	10.16	5,850	B.
June.....	83		38.6	3.57	3.98	2,300	C.
July.....	7	1.7	3.14	.291	.34	193	D.
August.....	1.7	.5	.70	.065	.07	43	D.
September.....	2.1	.5	1.03	.095	.11	61	D.
The period.....						34,900	
1911-12.							
October.....	2.5	1.7	1.85	.171	.20	114	D.
November.....	16	1.7	3.41	.316	.35	203	D.
December.....	2.5	1.7	2.07	.192	.22	127	D.
January.....	48	2.1	8.17	.756	.87	502	D.
February.....	10	3.8	5.28	.489	.53	304	D.
March.....	72	4.2	13.8	1.28	1.48	848	D.
April.....	95	12	20.4	1.89	2.11	1,210	C.
May.....	78	34	52.5	4.86	5.60	3,230	B.
June.....	30	3.5	10.0	.926	1.03	595	D.
The period.....						7,130	

## GOODYEAR CREEK AT GOODYEAR BAR, CAL.

This station, which is located at the trail bridge, about half a mile north of Goodyear Bar in the W.  $\frac{1}{2}$  SW.  $\frac{1}{4}$  sec. 5, T. 19 N., R. 10 E., in the Tahoe National Forest, was established October 30, 1910.

Although only about 300 feet above the mouth of the creek, the gage is believed to be above backwater from the North Yuba.

Three small ditches, having a total maximum capacity of about  $7\frac{1}{2}$  second-feet, head above the station. One of these, Andrew Bachel's ditch, diverts water from the main creek about 1 mile above the mouth. Of the others, the Moran-Casserly ditch takes water from Eureka Creek,  $3\frac{1}{2}$  miles above its mouth, and the Casserly ditch from Collins Ravine,  $2\frac{1}{2}$  miles above its mouth.

The gage is a vertical staff, fastened to an alder on the left bank.

Discharge measurements are made from the bridge, 200 feet below the gage or by wading.

This station is maintained in cooperation with the United States Forest Service.

## Discharge measurements of Goodyear Creek at Goodyear Bar, Cal., in 1910-11.

Date.	Hydrographer.	Gage height.	Discharge.	Date.	Hydrographer.	Gage height.	Discharge.
1910.		<i>Feet.</i>	<i>Sec.-ft.</i>	1911.		<i>Feet.</i>	<i>Sec.-ft.</i>
Oct. 31	H. D. McGlashan .....	1.60	5.8	Jan. 26	F. G. Wood.....	2.65	102
Dec. 8	F. G. Wood .....	1.75	14	Jan. 27	.....do.....	2.37	68
				Apr. 23	G. T. Peekema .....	3.15	167
1911.				June 15	.....do.....	2.25	54
Jan. 13	F. G. Wood .....	1.98	30	Nov. 3	.....do.....	1.51	7
25	.....do.....	3.20	174				

Daily gage height, in feet, of Goodyear Creek at Goodyear Bar, Cal., for 1910-1912.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.												
1.		1.6	.....	1.6	5.0	3.5	3.8	3.0	2.75	1.75	1.55	1.5
2.		1.6	.....	1.6	4.8	3.9	3.9	3.0	2.85	1.8	1.55	1.5
3.		1.6	3.2	1.6	4.2	4.1	4.2	2.8	2.8	1.8	1.55	1.5
4.		1.6	.....	1.6	4.0	4.8	4.0	2.7	2.7	1.75	1.55	1.5
5.		1.6	.....	1.6	3.8	5.0	3.9	3.4	.....	1.75	1.55	1.5
6.		1.6	1.8	1.6	3.0	5.0	3.9	3.1	.....	1.7	1.5	.....
7.		1.6	1.8	1.6	2.9	5.2	3.6	3.05	2.7	1.7	1.5	1.5
8.		1.65	1.8	1.7	2.8	5.2	3.5	3.0	2.75	1.75	1.5	.....
9.		1.7	1.9	1.9	2.8	5.0	3.4	3.0	2.7	1.75	.....	1.5
10.		1.7	2.0	1.9	2.8	4.9	3.5	3.35	2.7	1.7	1.5	1.5
11.		1.65	2.5	1.9	2.4	4.9	3.4	3.65	2.45	1.7	1.5	1.5
12.		1.65	2.1	1.9	2.4	5.0	3.5	3.15	2.5	1.7	1.5	1.5
13.		1.65	2.1	1.9	2.6	5.0	3.7	3.1	2.4	1.7	1.5	1.5
14.		1.65	2.0	2.0	2.6	4.2	3.5	3.0	2.3	1.65	1.55	1.5
15.		1.6	2.0	.....	2.6	4.0	3.2	2.9	2.35	.....	1.5	1.5
16.		1.6	1.9	.....	2.6	3.7	3.2	2.8	2.2	1.6	1.5	1.5
17.		1.6	1.9	1.9	2.6	3.7	3.0	.....	.....	1.6	1.5	1.5
18.		1.6	1.9	2.0	3.0	3.7	2.9	3.7	.....	1.6	1.5	.....
19.		1.65	1.9	2.2	3.2	3.5	3.1	2.9	2.1	1.6	1.5	1.5
20.		1.65	1.85	2.4	3.0	3.5	3.0	3.1	1.95	.....	.....	1.5
21.		1.65	1.85	3.0	2.7	3.5	3.1	3.3	1.9	1.6	.....	1.5
22.		1.65	1.9	2.9	2.7	3.0	3.2	3.1	1.9	.....	.....	1.5
23.		1.9	1.85	3.0	2.8	2.9	3.4	3.3	1.9	1.6	1.5	1.5
24.		.....	1.8	4.0	3.0	2.9	3.5	3.1	1.95	1.6	.....	1.5
25.		.....	1.8	3.2	3.0	2.9	3.9	2.9	1.9	1.55	1.5	1.5
26.		.....	1.75	2.65	3.0	3.1	4.3	2.85	1.9	1.55	1.5	1.5
27.		1.7	1.75	3.2	3.1	3.3	4.1	2.9	1.85	1.6	.....	1.5
28.		.....	1.7	3.6	3.0	3.3	3.8	2.8	1.85	1.55	.....	1.5
29.		.....	1.7	5.5	.....	3.4	3.3	2.9	1.8	1.55	1.5	1.5
30.	1.6	1.6	1.7	6.4	.....	3.7	3.3	2.8	1.8	1.55	1.5	1.5
31.	1.6	.....	1.7	5.2	.....	3.9	.....	2.75	.....	1.55	.....	.....
1911-12.												
1.	1.5	1.5	.....	1.50	1.80	1.75	1.95	2.8	2.20	.....	.....	.....
2.	1.5	1.5	1.5	1.50	1.80	1.75	2.15	2.65	2.15	.....	.....	.....
3.	1.45	1.5	1.5	1.50	1.75	1.75	2.20	2.7	2.00	.....	.....	.....
4.	1.5	1.5	1.5	1.50	1.72	1.80	2.20	2.6	1.95	.....	.....	.....
5.	.....	1.5	.....	1.50	1.72	2.10	2.20	2.55	1.95	.....	.....	.....
6.	1.5	1.5	1.5	1.50	1.72	2.65	2.22	2.65	1.90	.....	.....	.....
7.	1.5	1.5	1.5	1.60	1.72	2.25	2.25	2.7	1.90	.....	.....	.....
8.	1.5	1.5	1.5	1.55	1.75	2.10	2.30	2.7	1.85	.....	.....	.....
9.	1.5	1.55	1.5	1.80	1.80	2.05	2.30	2.7	1.90	.....	.....	.....
10.	1.5	2.05	1.5	1.90	1.80	2.00	2.30	2.65	1.90	.....	.....	.....
11.	.....	1.6	1.5	1.75	1.80	1.95	2.20	2.65	1.85	.....	.....	.....
12.	1.5	.....	1.5	1.70	1.75	2.00	2.20	2.6	2.10	.....	.....	.....
13.	1.5	1.55	1.5	1.68	1.75	1.95	2.10	2.55	.....	.....	.....	.....
14.	1.5	1.55	1.5	1.68	1.75	1.90	2.10	2.45	1.80	.....	.....	.....
15.	1.5	1.85	1.5	1.68	1.80	1.90	2.10	2.40	1.80	.....	.....	.....
16.	1.5	1.6	1.5	1.85	1.80	1.95	2.15	2.40	1.80	.....	.....	.....
17.	.....	1.6	1.5	1.70	1.90	1.90	2.15	2.30	1.80	.....	.....	.....
18.	.....	1.65	1.5	1.75	2.20	1.90	2.10	2.25	1.80	.....	.....	.....
19.	1.5	1.5	1.5	1.80	1.90	1.90	2.10	2.25	1.80	.....	.....	.....
20.	1.5	1.5	1.5	1.70	1.85	1.90	2.10	2.35	1.75	.....	.....	.....
21.	1.5	1.45	1.5	1.70	1.80	1.90	2.05	2.35	1.75	.....	.....	.....
22.	1.5	1.5	1.5	1.65	1.80	1.90	2.00	2.30	1.75	.....	.....	.....
23.	1.5	1.5	1.5	1.65	1.80	1.90	.....	2.30	1.75	.....	.....	.....
24.	1.5	1.5	.....	1.65	1.80	1.90	2.10	2.35	1.75	.....	.....	.....
25.	1.5	.....	1.45	1.90	1.75	1.95	2.20	2.6	1.75	.....	.....	.....
26.	1.5	1.5	1.45	2.40	.....	2.00	2.25	2.6	1.70	.....	.....	.....
27.	.....	1.5	1.5	1.95	1.70	2.15	2.25	2.6	1.70	.....	.....	.....
28.	.....	1.5	1.6	1.92	1.70	2.20	2.25	2.45	1.65	.....	.....	.....
29.	.....	1.5	1.5	1.85	1.70	2.22	2.55	2.35	1.65	.....	.....	.....
30.	1.5	1.5	1.5	1.80	.....	2.20	2.6	2.30	1.65	.....	.....	.....
31.	1.5	.....	1.5	1.80	.....	2.15	.....	2.25	.....	.....	.....	.....

Daily discharge, in second-feet, of Goodyear Creek at Goodyear Bar, Cal., for 1910-1912.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.												
1		7	7	7	610	222	280	145	112	14	6	4
2		7	7	7	545	300	300	145	124	17	6	4
3		7	174	7	375	350	375	118	118	17	6	4
4		7	122	7	325	545	325	105	105	14	6	4
5		7	70	7	280	610	300	205	105	14	6	4
6		7	17	7	145	610	300	159	105	11	4	4
7		7	17	7	131	680	240	152	105	11	4	4
8		9	17	11	118	680	222	145	112	14	4	4
9		11	24	24	118	610	205	145	105	14	4	4
10		11	32	24	118	575	222	197	105	11	4	4
11		9	81	24	70	575	205	250	76	11	4	4
12		9	40	24	70	610	222	166	81	11	4	4
13		9	40	24	93	610	260	159	70	11	4	4
14		9	32	32	93	375	222	145	59	9	6	4
15		7	32	30	93	325	174	131	64	8	4	4
16		7	24	27	93	260	174	118	49	7	4	4
17		7	24	24	93	260	145	189	46	7	4	4
18		7	24	32	145	260	131	260	43	7	4	4
19		9	24	49	174	222	159	131	40	7	4	4
20		9	20	70	145	222	145	159	28	7	4	4
21		9	20	145	105	222	159	189	24	7	4	4
22		9	24	131	105	145	174	159	24	7	4	4
23		24	20	145	18	131	205	189	24	7	4	4
24		21	17	325	145	131	222	159	28	7	4	4
25		18	17	174	145	131	300	131	24	6	4	4
26		15	14	99	145	159	400	124	24	6	4	4
27		11	14	174	159	189	350	131	20	7	4	4
28		10	11	240	145	189	280	118	20	6	4	4
29		9	11	790	205	189	131	17	6	4	4	4
30		7	7	1,180	260	189	118	17	6	4	4	4
31		7	11	680	300	112	112	6	4	4	4	4
1911-12.												
1	4	4	4	4	17	14	28	118	49			
2	4	4	4	4	17	14	44	99	44			
3	4	4	4	4	14	14	49	105	32			
4	4	4	4	4	12	17	49	93	28			
5	4	4	4	4	12	40	49	87	28			
6	4	4	4	4	12	99	51	99	24			
7	4	4	4	7	12	54	54	105	24			
8	4	4	4	5.5	14	40	59	105	20			
9	4	6	4	17	17	36	59	105	24			
10	4	36	4	24	17	32	59	99	24			
11	4	7	4	14	17	28	49	99	20			
12	4	6	4	11	14	32	49	93	40			
13	4	6	4	10	14	28	40	87	28			
14	4	6	4	10	14	24	40	76	17			
15	4	20	4	10	17	24	40	70	17			
16	4	7	4	20	17	28	44	70	17			
17	4	7	4	11	24	24	44	59	17			
18	4	9	4	14	49	24	40	54	17			
19	4	4	4	17	24	24	40	54	17			
20	4	4	4	11	20	24	40	64	14			
21	4	4	4	11	17	24	36	64	14			
22	4	4	4	9	17	24	32	59	14			
23	4	4	4	9	17	24	36	59	14			
24	4	4	3	9	17	24	40	64	14			
25	4	4	3	24	14	28	49	93	14			
26	4	3	3	70	12	32	54	93	11			
27	4	4	4	28	11	44	54	93	11			
28	4	4	7	26	11	49	54	76	9			
29	4	4	4	20	11	51	87	64	9			
30	4	4	4	17		49	93	59	9			
31	4		4	17		44	54	54				

NOTE.—Daily discharge 1910-1912 determined from a rating curve well defined below 300 second-feet. Discharge interpolated for days on which gage was not read except for Dec. 1 and 2, 1910, which was estimated.

Monthly discharge of Goodyear Creek at Goodyear Bar, Cal., for 1910-1912.

[Drainage area, 12.2 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.		
1910-11.								
November.....	24	7	9.8	0.803	0.90	583	C.	
December.....	174	7	32.2	2.64	3.04	1,980	B.	
January.....	1,180	7	146	12.0	13.83	8,980	C.	
February.....	610	70	175	14.3	14.89	9,720	A.	
March.....	680	131	354	29.0	33.43	21,800	B.	
April.....	400	131	236	19.3	21.53	14,000	B.	
May.....	260	105	154	12.6	14.53	9,470	A.	
June.....	124	17	62.5	5.12	5.71	3,720	A.	
July.....	17	6	9.5	.779	.90	584	C.	
August.....	6	4	4.4	.361	.42	270	D.	
September.....	4	4	4.0	.328	.37	238	D.	
The period.....							71,300	
1911-12.								
October.....	4	3	4.0	.328	.38	246	D.	
November.....	36	3	6.3	.516	.58	375	D.	
December.....	7	3	4.0	.328	.38	246	D.	
January.....	70	4	14.4	1.18	1.36	885	C.	
February.....	49	11	16.6	1.36	1.47	955	C.	
March.....	99	14	32.7	2.68	3.09	2,010	B.	
April.....	93	28	48.7	3.99	4.45	2,900	A.	
May.....	118	54	81.3	6.66	7.68	5,000	A.	
June.....	49	9	20.7	1.70	1.90	1,230	B.	
The period.....							13,800	

BEAR RIVER NEAR COLFAX, CAL.

This station, which is located at the Pacific Gas & Electric Co.'s dam, half a mile below the mouth of Greenhorn River, in sec. 22, T. 15 N., R. 9 E., and about 3 miles north of Colfax, was established August 14, 1911.

Three gages at different locations and datums have been used. The first was a vertical staff installed at a highway bridge below the dam. This gage was read from August 14 to October 31, 1911. On October 20, 1911, a second gage was installed about 500 feet above the dam and read from November 1 to December 31, 1911. A third gage in three sections was installed December 9, 1911, on the left bank about 50 feet above the dam. This gage was read beginning January 1, 1912. The heights observed at the first gage were taken once daily and are not a true index of the 24-hour discharge, owing to regulation at the dam and at storage reservoirs above the station. Because of their unreliability these heights are not published. The second gage was above the backwater influence of the dam, but records at this point were affected by shifting channel conditions. The third gage is within the influence of the dam, which serves as a control for the gage heights. The crest of the dam is at an elevation of 5.21 feet on this gage.

Discharge measurements have been made by wading either above or below the dam, or from a cable, installed December 9, 1911, at the site of the second gage.

The channel at the bridge below the dam is composed of large boulders and gravel. The channel above the dam is largely filled in with tailings from hydraulic mining and is quite shifting.

The Pacific Gas & Electric Co.'s power canal diverts water at the dam. The company has obtained records of the flow in the canal, the gage and gaging section being located in a flume about 750 feet below the headgate.

The flow at the station will have to be considered in two parts—the flow over the dam and the flow in the power canal. Sufficient data and information to make reliable estimates are not yet available. Only river gage heights and discharge measurements of canal and river are published herewith.

Water is diverted into this drainage from South Fork of Yuba River. Storage has also been developed on the headwaters of this stream.

The station is maintained in cooperation with the Pacific Gas & Electric Co.

*Discharge measurements of Bear River near Colfax, Cal., in 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>
Aug. 15	F. C. Ebert.....	1.39	12	Jan. 26	J. E. Stewart.....	6.18	6.12
Sept. 28	.....do.....	1.60	18	Mar. 26	Lasley Lee.....	5.43	133
Oct. 20	J. E. Stewart.....	.99	2.1	May 2	.....do.....	6.20	616
20	.....do.....	1.41	38	22	J. E. Stewart.....	5.72	298
Dec. 9	F. C. Ebert.....	1.38	34				

NOTE.—Gage heights for the first three measurements refer to the temporary gage below the dam. Gage heights for measurements 4 and 5 refer to the gage at the cable installed Oct. 20, 1911. Gage heights for 1912 refer to gage 50 feet above the dam installed Dec. 9, 1911. The gage at the cable read as follows: Jan. 26, 3.32 feet; May 2, 3.02 feet; May 22, 2.49 feet.

*Daily gage height, in feet, of Bear River near Colfax, Cal., for 1911-12.*

Day.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1.....	1.41	1.44	5.4	5.5	5.30	5.30	6.20	5.70
2.....	1.42	1.38	5.35	5.45	5.35	5.40	6.20	5.75
3.....	1.42	1.35	5.30	5.40	5.30	5.45	6.10	5.60
4.....	1.47	1.36	.....	5.45	5.35	5.50	5.90	5.55
5.....	1.71	1.35	.....	5.40	5.40	5.45	5.90	5.50
6.....	1.72	1.36	.....	5.30	6.00	5.40	5.95	5.45
7.....	1.43	1.34	5.30	5.45	5.80	5.50	5.95	5.40
8.....	1.42	1.30	5.40	5.40	5.50	5.55	5.70	5.45
9.....	1.50	1.34	5.55	5.35	5.45	5.50	5.75	5.50
10.....	2.40	1.33	5.70	5.40	5.50	5.50	5.60	5.45
11.....	1.60	1.34	5.80	5.30	5.45	5.55	5.65	5.40
12.....	1.62	1.30	5.50	5.35	5.40	5.50	5.50	5.50
13.....	1.61	1.33	5.45	5.40	5.50	5.55	5.45	5.45
14.....	1.60	1.30	5.40	5.35	5.50	5.50	5.45	5.55
15.....	1.63	1.32	5.45	5.40	5.45	5.55	5.50	5.45
16.....	1.85	1.33	5.60	5.35	5.60	5.50	5.45	5.40
17.....	1.60	1.45	5.55	5.30	5.55	5.45	5.40	5.45
18.....	1.61	1.33	5.53	5.35	5.50	5.40	5.55	5.50
19.....	1.60	1.32	5.60	5.35	5.50	5.45	5.60	5.55
20.....	1.50	1.30	5.50	5.30	5.45	5.45	5.55	5.50
21.....	1.49	1.19	5.50	5.35	5.40	5.40	5.70	5.55
22.....	1.50	1.24	5.55	5.35	5.40	5.45	5.75	5.50
23.....	1.49	1.35	5.40	5.30	5.45	5.40	5.60	5.55
24.....	1.48	1.30	5.45	5.30	5.50	5.45	5.65	5.56
25.....	1.48	1.20	5.35	5.25	5.50	5.40	5.60	5.56
26.....	1.47	1.30	6.20	5.30	5.45	5.45	5.85	5.55
27.....	1.49	1.32	5.70	5.35	5.40	5.45	5.80	5.50
28.....	1.47	1.40	5.50	5.30	5.50	5.40	5.70	5.50
29.....	1.48	1.65	5.45	5.30	5.45	6.30	5.75	5.50
30.....	1.45	1.60	5.50	.....	5.40	6.55	5.75	5.35
31.....	.....	1.51	5.50	.....	5.45	.....	5.70	.....

NOTE.—Gage heights Nov. 1 to Dec. 31, 1911, refer to gage at cable. After Jan. 1, 1912, they refer to gage 50 feet above the dam.

Discharge measurements of Pacific Gas & Electric Co.'s power canal near Colfax, Cal., in 1911-12.

Date.	Hydrographer.	Dis-charge.
1911. Sept. 28	F. C. Ebert.....	Sec.-feet. 46
1912. May 2	Lasley Lee.....	37.4

Daily gage height, in feet, and discharge, in second feet, of the Pacific Gas & Electric Co.'s power canal near Colfax, Cal., for 1912.

Day.	January.		February.		March.		April.		May.	
	Gage height.	Dis-charge.								
1.....	2.19	30.9	2.00	26.5	2.17	30.4	2.12	29.3	2.20	31.1
2.....	2.20	31.1	1.95	25.4	2.16	30.2	2.10	28.8	2.30	33.5
3.....	2.19	30.9	2.00	26.5	2.17	30.4	2.11	29.1	2.35	34.7
4.....	2.17	30.4	2.10	28.8	2.18	30.7	2.12	29.3	2.40	35.8
5.....	2.20	31.1	2.10	28.8	2.17	30.4	2.10	28.8	2.45	37.0
6.....	2.20	31.1	2.15	30.0	2.10	28.8	2.11	29.1	2.70	42.9
7.....	2.20	31.1	2.16	30.2	2.10	28.8	2.12	29.3	2.80	45.5
8.....	2.19	30.9	2.16	30.2	2.10	28.8	2.11	29.1	2.85	46.4
9.....	2.20	31.1	2.15	30.0	2.11	29.1	2.12	29.3	2.95	49.1
10.....	2.17	30.4	2.17	30.4	.....	0	2.10	28.8	3.00	50.5
11.....	2.10	28.8	2.17	30.4	.....	0	2.10	28.8	3.00	50.5
12.....	2.15	30.0	2.17	30.4	.....	0	2.12	29.3	3.00	50.5
13.....	2.12	29.3	2.16	30.2	.....	0	2.12	29.3	3.00	50.5
14.....	2.14	27.7	2.15	30.0	.....	0	2.11	29.1	3.00	50.5
15.....	2.15	30.0	2.17	30.4	.....	0	2.10	28.8	3.00	50.5
16.....	2.18	30.7	2.16	30.2	.....	0	2.12	29.3	3.00	50.5
17.....	2.17	30.4	2.15	30.0	.....	0	2.12	29.3	3.00	50.5
18.....	2.16	30.2	2.17	30.4	.....	0	2.11	29.1	3.00	50.5
19.....	2.10	28.8	2.16	30.2	.....	0	2.12	29.3	3.00	50.5
20.....	2.18	30.7	2.17	30.4	2.10	28.8	2.11	29.1	3.00	50.5
21.....	2.15	30.0	2.17	30.4	2.11	29.1	2.12	29.3	2.60	40.5
22.....	2.16	30.2	2.16	30.2	2.10	28.8	2.10	28.8	2.70	42.9
23.....	2.12	29.3	2.15	30.0	2.11	29.1	2.12	29.3	2.80	45.5
24.....	2.15	30.0	2.17	30.4	2.12	29.3	2.12	29.3	2.70	42.9
25.....	2.14	29.7	2.16	30.2	2.11	29.1	2.12	29.3	2.80	45.5
26.....	1.50	16.0	2.16	30.2	2.10	28.8	2.12	29.3	2.70	42.9
27.....	1.90	24.3	2.17	30.4	2.10	28.8	2.12	29.3	2.85	46.4
28.....	1.95	25.4	2.17	30.4	2.12	29.3	2.20	31.1	3.00	50.5
29.....	2.05	27.7	2.16	30.2	2.11	29.1	2.20	31.1	3.00	50.5
30.....	2.07	28.1	.....	.....	2.10	28.8	2.12	29.3	3.00	50.5
31.....	2.00	2.65	.....	.....	2.12	29.3	.....	.....	3.00	50.5

BEAR RIVER AT VAN TRENT,<sup>1</sup> CAL.

This station, which is located about 500 feet below the highway bridge at McCourtney crossing 1 mile below Van Trent post office, and 8 miles above Wheatland, was established October 8, 1904, in the SE. ¼ sec. 2, T. 14 N., R. 6 E.

No important tributaries enter near the station. Wolf Creek, tributary from the north about 30 miles above, drains an area comprising 76 square miles. Rock Creek, a very small stream, enters

<sup>1</sup>Referred to in earlier water-supply papers as "above Wheatland." Van Trent is a new post office.

about three-quarters of a mile below. No diversions are made immediately above the station.

The gage is a staff in five sections on the left bank below the bridge; its datum has remained unchanged.

The bed of the stream is solid rock, boulders, and gravel, and the current is swift at all stages.

Discharge measurements have been made from a cable and car 300 feet below the gage, except at low water, when they are made by wading. The cable equipment was removed in November, 1909. High-water measurements may be made from the bridge. The station is inaccessible at extreme high stages. Only float velocities can be taken in flood.

There are diversions above the station for power and irrigation. Storage is also developed in the headwaters of the stream.

The maximum gage height recorded is 18.9 feet at 8 a. m. January 14, 1909; crest discharge, 29,600 second-feet. A crest discharge of 28,200 second-feet for crest stage of 18.5 feet occurred February 2, 1907. The minimum recorded weekly flow was 10 second-feet, November 13 to 19, 1905.

In general, conditions for determining discharge are poor, because of the rough channel and torrential nature of the stream.

*Discharge measurements of Bear River at Van Trent, Cal., 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>
Aug. 14	Clapp and Peterson	(a)	30	Apr. 5	Steward and Hamilton	5.70	1,700
Oct. 9	O. W. Peterson	4.90	771	30	F. M. Hamilton	3.60	621
31	do	3.70	176	May 2	W. G. Steward	3.65	591
1905.				19	F. M. Hamilton	3.20	374
Feb. 8	F. R. S. Buttemer	5.10	948	22	W. G. Steward	3.05	324
13	do	4.57	598	June 6	F. M. Hamilton	2.75	220
19	do	4.66	629	27	W. F. Martin	2.65	185
24	do	4.50	528	Sept. 6	W. A. Lamb	1.80	40
June 27	O. W. Peterson	3.42	89	Oct. 21	do	1.75	35
July 30	Peterson and Lee	3.10	37	1908.			
Sept. 3	C. H. Lee	3.24	63	Jan. 23	W. A. Lamb	4.00	902
Oct. 10	Hawley and Lee	3.00	43	Apr. 9	do	2.70	223
1906.				18	do	2.85	315
Feb. 10	F. R. S. Buttemer	4.55	337	Sept. 21	W. V. Hardy	1.65	35
26	do	6.10	1,430	Dec. 16	W. F. Martin	2.12	123
Mar. 10	do	4.97	862	1909.			
18	do	5.60	1,330	Jan. 27	W. F. Martin	5.80	1,900
Apr. 12	W. C. Sawyer	5.34	981	May 24	do	1.73	153
19	do	4.83	650	July 25	W. V. Hardy	.90	31
27	do	4.85	664	Sept. 4	do	.96	33
27	do	5.22	979	Nov. 12	do	1.65	130
May 19	do	4.02	274	1910.			
July 12	R. S. Hawley	3.57	168	Aug. 4	J. E. Stewart	.96	26
24	do	3.30	73	1911.			
25	do	3.28	64	May 25	J. E. Stewart	2.04	234
Oct. 3	do	3.06	31	Oct. 4	do	1.11	40
1907.							
Feb. 7	R. S. Hawley	6.70	1,930				
21	do	4.90	734				

<sup>a</sup> Measurement made before gage was established.

Daily gage height, in feet, of Bear River at Van Trent, Cal., for 1904-1912.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1904-5.												
1.		5.5	4.5	5.0	5.6	4.3				3.2	3.1	3.2
2.		4.8	4.0	4.8	7.0	4.2	5.3			3.2	3.1	3.2
3.		4.3	3.8	4.3	4.9	4.2	5.0	4.5		3.2	3.1	3.2
4.		3.7	3.8	4.2	6.7	4.2	4.9	4.2		3.2	3.1	3.2
5.		3.7	3.7	4.2	7.0	4.2	4.8			3.2	3.1	3.4
6.		3.6	3.7	4.1	5.5	4.2	4.7			3.2	3.1	3.2
7.		3.6	3.6	4.0	5.1	4.2	4.6	4.6		3.1	3.1	3.2
8.	3.75	3.6	3.6	3.9	5.2	4.1	4.5			3.1	3.1	3.2
9.	4.8	3.6	3.8	4.4	5.0	4.0	4.4	4.8		3.1	3.1	3.2
10.	4.1	3.6	3.9	4.2	4.8	4.0	4.4			3.1	3.1	3.1
11.	9.0	3.6	3.8	4.0	4.9	4.0	4.4			3.1	3.1	3.1
12.	4.7	3.6	3.7	3.9	4.6	4.2	4.4			3.1	3.1	3.1
13.	4.0	3.6	3.9	3.8	4.5	4.7	4.3			3.1	3.35	3.1
14.	3.9	3.6	3.8	5.0	4.4	4.6	4.3			3.1	3.1	3.1
15.	5.1	4.4	3.8	4.5	4.3	4.4	4.3			3.2	3.4	3.1
16.	3.8	4.0	3.7	4.8	4.7	4.4	4.5			3.1	3.1	3.1
17.	3.8	3.8	3.7	4.4	5.0	4.4	4.4			3.1	3.1	3.1
18.	3.8	3.6	3.6	4.3	4.8	4.9	4.9			3.2	3.1	3.0
19.	3.7	3.6	3.6	4.9	4.7	10.5	4.9			3.1	3.1	3.0
20.	3.6	3.5	3.6	4.6	5.1	6.8	4.6			3.1	3.1	3.0
21.	3.6	3.5	3.5	6.5	4.9	6.8	4.7			3.1	3.1	3.0
22.	3.6	3.5	3.5	8.5	4.7	5.9	4.7			3.1	3.1	3.0
23.	3.6	3.5	3.8	7.5	4.6	5.4	4.5			3.1	3.1	3.0
24.	3.6	3.5	5.5	5.7	4.5	5.9	4.4			3.1	3.1	3.0
25.	3.5	3.4	4.4	5.2	4.5	5.3	4.3			3.1	3.1	3.2
26.	3.5	3.4	4.0	5.0	4.4	5.5	4.2			3.1	3.1	3.1
27.	3.5	3.7	3.9	5.8	4.4	5.7		3.5		3.1	3.1	3.1
28.	3.4	3.6	3.8	5.6	4.3	5.4		3.5		3.1	3.1	3.1
29.	3.4	3.5	3.8	5.5		7.0		3.4		3.1	3.1	3.2
30.	3.6	3.5	5.8	5.5		6.2	4.1		3.3	3.1	3.3	3.1
31.	3.7		8.8	5.8		5.6				3.1	3.2	
1905-6.												
1.	3.1	3.1	3.4	3.2	4.6	6.0	8.7	4.5	5.2	3.9	3.2	3.0
2.	3.1	3.0	3.3	3.1	4.6	5.7	7.3	4.6	5.0	3.9	3.2	3.0
3.	3.1	3.0	3.2	3.1	4.5	6.5	6.8	4.5	5.0	3.8	3.1	3.0
4.	3.1	3.0	3.2	3.1	4.5	6.5	6.4	4.4	6.0	3.8	3.1	3.0
5.	3.1	3.0	3.2	3.0	4.5	5.8	6.2	4.4	5.4	3.7	3.1	3.0
6.	3.1	3.0	3.1	3.0	4.4	5.5	6.0	4.4	5.7	3.7	3.1	3.0
7.	3.1	3.0	3.1	3.1	4.4	5.3	5.8	4.3	5.2	3.7	3.1	3.0
8.	3.1	3.0	3.1	3.0	4.4	5.1	5.6	4.3	5.0	3.7	3.1	3.0
9.	3.1	3.0	3.1	3.0	4.5	5.0	5.4	4.3	4.8	3.6	3.1	3.0
10.	3.1	3.0	3.0	3.0	4.6	4.9	5.5	4.3	4.7	3.6	3.1	3.0
11.	3.1	3.0	3.0	3.0	4.7	4.8	5.7	4.4	4.6	3.6	3.1	3.0
12.	3.1	3.0	3.0	3.9	4.5	7.55	5.4	4.4	4.7	3.5	3.1	3.0
13.	3.1	2.9	3.0	10.35	4.5	6.3	5.2	4.3	4.5	3.5	3.0	3.0
14.	3.1	2.9	3.0	6.8	4.4	7.6	5.1	4.2	4.5	3.5	3.0	3.1
15.	3.1	2.9	3.0	10.5	6.4	8.7	5.0	4.6	4.4	3.4	3.0	3.1
16.	3.1	2.9	3.0	11.65	5.4	6.6	5.0	4.3	4.9	3.4	3.0	3.1
17.	3.1	2.9	3.0	8.5	5.1	6.1	4.9	4.2	4.5	3.4	3.1	3.1
18.	3.1	2.9	3.1	14.55	4.9	5.7	4.9	4.2	4.4	3.3	3.0	3.1
19.	3.1	2.9	3.2	12.25	6.9	5.4	4.8	4.1	4.3	3.3	3.0	3.1
20.	3.1	3.0	3.4	9.5	5.9	5.2	4.8	4.1	4.3	3.3	3.0	3.1
21.	3.1	3.1	3.3	6.5	7.7	5.7	4.8	4.1	4.2	3.3	3.0	3.0
22.	3.1	3.0	3.2	6.0	6.7	7.2	4.7	4.1	4.2	3.3	3.0	3.0
23.	3.0	3.0	3.1	5.7	7.3	6.8	4.75	4.0	4.2	3.2	3.0	3.0
24.	3.1	3.0	3.0	5.4	6.5	11.7	4.85	4.0	4.2	3.3	3.0	3.1
25.	3.1	3.0	3.0	5.2	6.9	10.5	5.1	4.45	4.1	3.3	3.0	3.1
26.	3.1	3.0	3.0	5.0	6.1	12.3	4.8	5.6	4.1	3.2	3.0	3.1
27.	3.0	3.35	3.0	4.9	6.55	8.3	4.9	6.85	4.1	3.2	3.0	3.1
28.	3.1	3.2	3.0	4.8	7.0	7.2	5.0	6.65	4.1	3.2	3.0	3.1
29.	3.1	3.2	3.4	4.7		6.8	4.7	6.6	4.0	3.2	3.0	3.1
30.	3.1	3.5	3.2	4.7		7.4	4.7	5.9	4.0	3.2	3.0	3.1
31.	3.1		3.3	4.6		15.25		5.4		3.2	3.0	
1906-7.												
1.	3.0	3.1	3.3	5.4	10.75	6.9	6.4	3.7	3.0	2.6	1.9	1.8
2.	3.0	3.1	3.3	5.0	17.75	6.1	6.2	3.6	2.9	2.5	1.9	1.8
3.	3.0	3.2	3.3	4.8	10.5	5.5	5.9	3.5	2.8	2.5	1.9	1.7
4.	3.0	4.45	3.3	6.15	9.7	5.3	5.6	3.5	2.8	2.6	1.9	1.8
5.	3.0	3.9	3.3	6.8	8.2	6.1	6.0	3.5	2.8	2.4	1.8	1.8

a Maximum recorded stage 15.2 feet at 8 a. m.  
 b Maximum recorded stage, 15.5 feet at 8 a. m.

c Maximum recorded stage, 18.5 feet, 9 a. m.

Daily gage height, in feet, of Bear River at Van Trent, Cal., for 1904-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1906-7.												
6.....	3.0	3.6	3.3	5.5	7.3	6.5	5.7	3.4	2.8	2.4	1.8	1.8
7.....	3.0	3.5	3.3	5.2	6.8	5.6	5.5	3.4	2.9	2.4	1.8	1.8
8.....	3.0	3.4	4.65	5.85	6.5	5.4	5.4	3.4	2.9	2.3	1.8	1.7
9.....	3.0	3.3	3.9	5.4	6.1	5.8	5.3	3.3	2.9	2.3	1.8	1.7
10.....	3.0	3.3	3.9	5.3	5.6	6.8	5.3	3.3	2.7	2.3	1.8	1.7
11.....	3.0	3.3	11.9	5.1	5.4	7.0	5.2	3.3	3.2	2.2	1.7	1.7
12.....	3.0	3.3	9.2	4.9	5.4	6.3	5.2	3.4	3.4	2.2	1.7	1.7
13.....	3.1	3.3	6.6	4.9	5.3	5.6	5.1	3.4	3.4	2.2	1.7	1.7
14.....	3.1	3.3	4.6	5.3	5.3	5.2	5.55	3.2	3.3	2.2	1.7	1.7
15.....	3.0	3.3	4.2	5.1	5.2	4.9	6.3	3.2	3.1	2.1	1.7	1.8
16.....	3.0	3.4	4.0	5.0	5.1	4.9	5.1	3.1	3.0	2.2	1.7	1.8
17.....	3.1	3.3	3.9	5.2	5.3	13.95	4.8	3.1	2.9	2.2	1.7	1.7
18.....	3.1	3.3	3.8	5.4	5.3	12.75	4.5	3.1	2.9	2.2	1.7	1.7
19.....	3.1	3.3	3.8	5.1	5.0	17.8	4.4	3.2	2.8	2.1	1.7	1.8
20.....	3.1	3.3	3.8	4.9	4.9	13.6	4.3	3.2	2.9	2.1	1.7	1.8
21.....	3.1	3.3	3.7	4.8	4.8	9.6	4.2	3.2	2.8	2.1	1.7	1.8
22.....	3.1	3.3	3.7	4.9	6.0	8.8	4.2	3.1	3.2	2.1	1.7	1.7
23.....	3.1	3.3	4.7	4.9	5.4	13.2	4.1	3.1	2.9	2.1	2.0	1.7
24.....	3.1	3.3	4.2	5.0	5.0	9.7	4.1	3.2	2.8	2.1	1.9	1.7
25.....	3.1	3.3	6.45	5.7	7.3	9.4	4.0	3.1	2.8	2.1	1.9	1.8
26.....	3.1	3.2	10.75	6.0	5.9	8.1	3.9	3.1	2.8	2.1	1.9	1.8
27.....	3.1	3.2	8.50	5.6	5.3	7.3	3.9	3.0	2.7	2.1	1.8	1.8
28.....	3.1	3.3	6.0	9.5	5.1	6.9	3.8	3.0	2.7	2.0	1.8	1.8
29.....	3.0	3.3	5.3	7.3	.....	6.5	3.8	3.0	2.6	2.0	1.8	1.9
30.....	3.1	3.3	4.9	6.1	.....	6.3	3.7	2.9	2.7	2.0	1.8	1.8
31.....	3.1	.....	7.0	7.5	.....	6.4	.....	3.0	.....	1.9	1.9	.....
1907-8.												
1.....	1.8	2.1	2.1	4.5	3.3	4.15	2.8	2.4	2.4	1.8	1.6	1.6
2.....	1.8	2.2	1.9	3.5	4.1	4.5	2.8	2.95	2.4	1.8	1.6	1.6
3.....	1.8	2.1	1.9	3.2	5.5	4.05	2.8	2.75	2.4	1.8	1.6	1.6
4.....	1.8	2.0	1.9	4.1	4.1	3.8	2.8	2.5	2.4	1.8	1.6	1.6
5.....	1.8	2.2	2.4	3.3	4.1	3.6	2.8	2.5	2.4	1.7	1.6	1.6
6.....	1.8	2.0	2.4	3.0	3.7	2.7	2.7	2.5	2.4	1.7	1.6	1.6
7.....	1.7	2.1	4.15	3.0	3.5	3.6	2.8	2.5	2.4	1.7	1.6	1.6
8.....	1.8	2.0	3.3	2.9	3.4	3.5	2.7	2.6	2.4	1.7	1.6	1.5
9.....	1.9	2.0	2.7	3.0	3.5	3.4	2.7	2.5	2.4	1.7	1.6	1.6
10.....	1.8	2.1	2.5	2.9	3.6	3.4	2.7	2.6	2.4	1.8	1.6	1.6
11.....	1.8	1.9	3.75	2.9	3.4	3.45	2.7	2.75	2.3	1.7	1.6	1.6
12.....	1.8	2.1	2.9	2.9	3.3	3.45	2.7	2.8	2.3	1.7	1.6	1.6
13.....	1.8	1.9	3.0	2.9	3.2	3.5	2.9	2.7	2.3	1.7	1.6	1.6
14.....	1.8	1.9	2.8	4.4	3.2	3.5	2.9	2.7	2.2	1.7	1.6	1.6
15.....	1.8	1.9	2.7	3.8	3.1	3.5	2.85	3.2	2.2	1.7	1.6	1.6
16.....	1.8	1.9	2.8	3.4	3.1	3.5	3.0	3.0	2.2	1.7	1.6	1.6
17.....	1.8	2.0	2.7	3.2	3.0	3.4	3.05	2.8	2.1	1.7	1.6	1.6
18.....	1.8	1.9	2.6	3.1	2.9	3.4	2.95	2.7	2.1	1.7	1.6	1.7
19.....	1.9	1.9	2.5	3.3	2.9	3.3	2.8	2.7	2.1	1.7	1.6	1.7
20.....	1.9	2.0	3.1	5.6	2.9	3.3	2.8	3.1	2.1	1.7	1.6	1.7
21.....	1.8	2.0	2.7	6.5	2.8	3.3	2.8	2.9	2.4	1.7	1.6	1.7
22.....	1.8	1.9	2.6	5.1	2.8	3.2	2.8	2.8	2.2	1.7	1.6	1.6
23.....	1.8	1.9	2.5	4.1	2.8	3.1	2.8	2.7	2.2	1.7	1.6	1.6
24.....	1.8	1.9	2.4	5.0	2.7	3.0	3.0	2.7	2.2	1.7	1.6	1.6
25.....	1.9	1.9	2.5	4.4	2.7	3.0	2.8	2.6	2.1	1.7	1.6	1.6
26.....	2.0	1.9	3.8	3.9	2.8	3.0	2.7	2.6	2.0	1.7	1.6	1.6
27.....	2.1	2.0	5.15	3.6	2.7	2.9	2.7	2.5	2.0	1.6	1.6	1.7
28.....	2.1	2.0	3.5	3.4	2.7	2.9	2.6	2.5	1.9	1.6	1.6	1.6
29.....	2.1	1.9	3.2	3.3	3.7	2.9	2.6	2.5	1.9	1.6	1.6	1.7
30.....	2.1	1.9	3.0	3.2	.....	2.8	2.5	2.5	1.9	1.6	1.6	1.6
31.....	2.2	.....	6.5	3.2	.....	2.9	.....	2.5	.....	1.6	1.6	.....
1908-9.												
1.....	1.6	1.6	1.8	2.0	5.3	3.7	3.4	2.1	1.7	1.2	1.0	1.0
2.....	1.7	1.6	1.8	2.5	5.1	3.6	3.2	2.1	1.6	1.2	1.0	1.0
3.....	1.6	1.6	1.8	4.4	6.9	3.6	3.1	2.0	1.6	1.1	1.0	1.0
4.....	1.6	1.6	2.4	3.1	5.8	5.3	3.1	2.0	1.5	1.1	1.0	1.0
5.....	1.6	1.6	3.8	3.15	6.7	4.6	3.0	2.0	1.5	1.1	1.0	1.0
6.....	1.6	1.6	2.8	6.6	5.6	4.8	3.0	1.9	1.5	1.1	1.0	1.0
7.....	1.6	1.6	2.5	4.2	8.2	5.0	2.9	1.9	1.4	1.1	1.0	1.0
8.....	1.6	1.6	2.3	11.9	6.7	4.4	2.9	1.9	1.6	1.1	1.0	1.0
9.....	1.5	1.5	2.3	8.3	5.4	4.2	2.9	1.8	1.4	1.1	1.0	1.0
10.....	1.5	1.6	2.4	5.4	5.1	4.0	2.9	1.8	1.4	1.1	1.0	1.0

a 7 a. m. only one reading.

Daily gage height, in feet, of Bear River at Van Trent, Cal., for 1904-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1908-9.												
11.....	1.5	1.6	2.3	4.3	6.6	3.8	2.9	1.8	1.4	1.1	1.0	1.0
12.....	1.5	1.6	2.2	3.9	12.35	3.6	2.8	1.7	1.3	1.1	1.0	1.0
13.....	1.4	1.6	2.1	11.0	8.5	3.4	2.8	1.7	1.3	1.1	1.0	1.0
14.....	1.4	1.6	2.2	17.65	6.7	3.3	2.8	1.7	1.3	1.1	1.0	1.0
15.....	2.95	1.6	2.2	16.75	5.9	3.2	2.8	1.7	1.3	1.1	1.0	1.0
16.....	2.4	1.6	2.1	13.8	5.6	3.2	2.8	1.8	1.3	1.1	1.0	1.0
17.....	2.1	1.6	2.1	8.6	6.1	3.2	2.8	1.8	1.3	1.1	.9	1.0
18.....	1.9	1.6	2.1	8.2	5.4	3.2	2.8	1.8	1.5	1.1	.9	1.0
19.....	1.8	1.7	2.1	7.0	5.5	3.1	2.7	1.8	1.6	1.1	.9	1.0
20.....	1.8	1.7	2.1	12.4	5.7	3.1	2.7	1.8	1.4	1.1	1.0	1.0
21.....	1.7	1.9	2.1	12.0	5.4	3.4	2.7	1.7	1.4	1.1	1.0	1.0
22.....	1.7	2.25	2.1	9.6	4.8	3.2	2.6	1.8	1.4	1.1	1.0	1.0
23.....	1.7	2.4	2.1	7.9	4.5	3.1	2.5	1.7	1.3	1.1	1.0	.9
24.....	1.6	2.4	2.2	6.9	4.75	3.0	2.5	1.7	1.3	1.1	1.0	.9
25.....	1.6	2.1	2.1	7.1	4.5	2.9	2.5	1.7	1.3	1.1	1.0	1.0
26.....	1.6	2.0	2.1	6.5	4.2	2.9	2.4	1.7	1.3	1.0	1.0	1.0
27.....	1.6	1.9	2.0	6.0	4.0	2.9	2.3	1.7	1.3	1.0	1.0	1.1
28.....	1.6	1.8	2.0	5.7	3.8	2.9	2.2	2.0	1.3	1.0	1.0	1.1
29.....	1.6	1.9	2.0	5.4	.....	4.75	2.2	1.9	1.2	1.0	1.0	1.2
30.....	1.7	1.7	2.0	5.2	.....	3.9	2.2	1.8	1.2	1.0	1.0	1.3
31.....	1.6	.....	2.0	5.7	.....	3.6	.....	1.7	.....	1.0	1.0	.....
1909-10.												
1.....	1.0	1.2	3.4	6.9	4.2	3.6	2.9	2.0	1.3	1.0	0.9	0.8
2.....	1.2	1.2	5.8	5.5	3.4	3.5	2.8	2.0	1.3	1.0	.8	.8
3.....	1.4	1.2	3.2	3.8	3.3	3.4	2.8	1.9	1.3	1.0	.9	.8
4.....	1.1	1.1	2.7	3.5	3.2	3.4	2.7	2.0	1.3	1.0	.9	.8
5.....	1.1	1.1	2.8	3.3	3.1	3.3	2.7	1.9	1.3	1.0	.9	.8
6.....	1.1	1.1	2.7	3.2	3.0	3.3	2.6	1.9	1.3	1.0	.9	.8
7.....	1.0	1.1	3.6	3.2	3.2	3.2	2.6	1.8	1.2	.9	.9	.8
8.....	1.0	1.4	5.5	3.1	3.3	3.1	2.5	1.7	1.2	.9	.9	.8
9.....	1.0	2.05	12.1	3.1	3.2	3.1	2.5	1.7	1.2	.9	.9	.8
10.....	1.0	1.9	5.1	3.3	3.5	3.1	2.5	1.9	1.2	.9	.9	.8
11.....	1.0	2.1	4.1	3.2	3.3	3.1	3.0	1.7	1.2	.9	.9	.8
12.....	1.0	1.7	3.7	3.1	3.2	3.0	2.6	1.7	1.2	.9	.9	.8
13.....	1.0	1.6	3.4	3.0	3.1	3.0	2.5	1.6	1.2	.9	.9	.8
14.....	1.0	1.9	3.2	4.1	3.2	3.0	2.4	1.6	1.2	.9	.9	.8
15.....	1.0	1.6	3.1	5.2	3.2	3.0	2.4	1.5	1.2	.9	.9	.9
16.....	1.0	1.5	3.0	4.7	3.1	2.9	2.3	1.6	1.1	.9	.8	1.35
17.....	1.0	1.5	2.9	4.1	3.0	2.9	2.3	1.5	1.1	.9	.9	1.2
18.....	1.0	1.5	2.8	3.6	2.9	2.9	2.3	1.4	1.1	.9	.9	1.0
19.....	1.0	1.5	2.8	3.4	5.3	3.3	2.2	1.4	1.1	.9	.9	.9
20.....	1.3	2.6	2.8	3.2	4.1	4.8	2.2	1.4	1.1	.9	.9	.9
21.....	1.3	6.15	2.7	3.1	3.6	7.0	2.1	1.4	1.1	.9	.9	.9
22.....	1.3	3.1	2.7	3.2	3.4	5.3	2.1	1.5	1.1	.9	.9	.9
23.....	1.1	2.9	2.7	3.6	4.0	7.1	2.1	1.4	1.1	.9	.8	.9
24.....	1.1	2.7	2.6	7.45	3.7	4.9	2.0	1.4	1.1	.9	.9	.9
25.....	1.1	3.5	2.5	5.2	5.1	4.1	1.9	1.3	1.1	.9	.9	.9
26.....	1.1	3.0	2.5	4.4	4.3	3.7	1.9	1.5	1.0	.9	.8	.9
27.....	1.1	2.5	2.5	4.1	3.9	3.4	1.9	1.3	1.0	.9	.8	.9
28.....	1.1	2.4	2.4	3.8	3.7	3.3	2.35	1.3	1.0	.8	.8	.9
29.....	1.6	2.0	2.4	3.6	.....	3.1	2.2	1.3	1.0	.9	.8	.9
30.....	1.6	1.9	2.4	3.5	.....	3.0	2.0	1.3	1.0	.9	.8	.9
31.....	1.4	.....	7.65	3.4	.....	2.9	.....	1.3	.....	.9	.8	.....
1910-11.												
1.....	0.9	1.0	1.1	1.2	8.6	4.25	4.0	2.6	1.9	1.3	1.0	1.0
2.....	.9	1.1	1.1	1.2	7.2	5.1	4.1	2.6	1.9	1.3	1.0	1.0
3.....	.9	1.1	1.2	1.2	6.5	5.0	4.0	2.6	1.9	1.4	1.0	1.0
4.....	.9	1.1	2.3	1.2	6.3	8.2	3.9	2.6	1.8	1.3	1.0	1.1
5.....	.9	1.1	1.5	1.2	6.3	7.0	5.9	2.6	1.7	1.3	1.2	1.1
6.....	.9	1.1	1.4	1.2	6.8	9.8	6.4	2.8	1.7	1.3	1.1	1.1
7.....	.9	1.0	1.3	1.2	5.7	13.0	4.8	2.6	1.9	1.2	1.1	1.1
8.....	.9	1.0	1.3	1.2	5.2	8.5	4.3	2.5	2.0	1.2	1.2	1.1
9.....	.9	1.2	1.3	1.2	5.0	6.7	4.1	2.5	1.9	1.2	1.1	1.1
10.....	.9	1.2	1.3	2.5	4.8	6.5	4.2	2.5	1.8	1.2	1.1	1.1
11.....	.9	1.1	3.8	1.8	6.9	5.7	3.8	2.4	1.7	1.2	1.1	1.1
12.....	1.4	1.1	2.1	7.75	5.3	5.3	3.6	2.3	1.7	1.2	1.1	1.1
13.....	1.4	1.1	1.7	7.1	7.2	4.9	3.5	2.3	1.7	1.2	1.1	1.1
14.....	1.2	1.1	1.6	12.7	5.6	4.7	3.3	2.3	1.7	1.1	1.1	1.0
15.....	1.1	1.1	1.5	7.2	4.9	4.5	3.1	2.3	1.6	1.1	1.1	1.0

c Maximum 18.9 feet at 8 a. m.

Daily gage height, in feet, of Bear River at Van Trent, Cal., for 1904-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.												
16.....	1.1	1.1	1.4	4.0	4.6	4.4	3.0	2.3	1.6	1.1	1.1	1.0
17.....	1.1	1.1	1.4	3.4	4.4	4.3	2.9	2.2	1.6	1.1	1.1	1.0
18.....	1.1	1.1	1.4	3.0	4.3	4.2	2.9	2.2	1.6	1.1	1.1	1.0
19.....	1.1	1.3	1.3	2.8	4.2	4.2	2.9	2.4	1.6	1.0	1.1	1.0
20.....	1.1	1.2	1.3	13.7	4.1	4.2	2.9	2.2	1.5	1.0	1.1	1.0
21.....	1.1	1.1	1.3	7.2	4.0	4.2	2.8	2.2	1.5	1.0	1.1	1.0
22.....	1.1	1.1	1.3	4.9	3.9	4.1	2.8	2.1	1.5	1.0	1.1	.9
23.....	1.1	1.1	1.3	4.3	3.8	4.1	2.8	2.1	1.4	1.0	1.1	.9
24.....	1.0	1.1	1.3	11.95	3.8	4.1	2.8	2.1	1.4	1.0	1.1	.9
25.....	1.0	1.2	1.3	10.9	3.7	4.1	2.9	2.1	1.4	1.0	1.1	1.0
26.....	1.0	1.5	1.2	8.2	3.7	4.0	2.9	2.0	1.4	1.0	1.1	1.0
27.....	1.0	1.2	1.2	6.3	3.7	3.9	2.9	2.0	1.4	1.0	1.1	1.0
28.....	1.0	1.2	1.2	9.3	3.9	3.9	2.9	2.0	1.4	1.0	1.1	1.0
29.....	1.0	1.2	1.2	9.1	3.9	3.9	2.8	1.9	1.4	1.0	1.1	1.0
30.....	1.0	1.1	1.2	13.5	4.0	2.7	1.9	1.3	1.0	1.0	1.0	1.0
31.....	1.0		1.2	16.7		4.0		1.9		1.0	1.0	
1911-12.												
1.....	1.1	1.2	1.2	1.4	2.0	1.3	1.9	3.3	2.0			
2.....	1.1	1.1	1.2	1.5	1.9	1.3	1.9	3.9	2.0			
3.....	1.1	1.0	1.1	1.3	1.9	1.3	1.9	3.2	1.9			
4.....	1.1	1.0	1.1	1.2	1.9	1.3	1.9	2.9	1.9			
5.....	1.1	1.3	1.0	1.1	1.8	1.5	1.9	2.8	1.9			
6.....	1.3	1.3	1.1	1.2	1.7	3.9	1.8	2.6	1.7			
7.....	1.3	1.2	1.1	1.2	1.7	3.5	1.8	2.5	1.6			
8.....	1.2	1.1	1.0	1.7	1.8	2.7	1.8	2.6	1.5			
9.....	1.1	1.0	1.0	1.7	1.7	2.4	2.0	2.4	1.4			
10.....	1.3	1.85	1.0	2.8	1.7	2.3	2.3	2.3	1.4			
11.....	1.3	1.8	1.0	2.6	1.6	2.2	2.8	2.2	1.4			
12.....	1.3	1.3	1.0	2.3	1.5	2.2	2.5	2.1	1.4			
13.....	1.3	1.3	1.0	1.9	1.5	2.9	2.4	2.1	1.8			
14.....	1.2	1.1	1.0	1.8	1.6	2.8	2.3	2.1	1.7			
15.....	1.2	1.1	1.0	1.7	1.6	2.5	2.2	2.0	1.5			
16.....	1.1	1.8	.9	1.7	1.5	3.4	2.1	2.0	1.4			
17.....	1.1	1.6	.9	2.3	1.5	2.8	2.1	1.9	1.3			
18.....	1.0	1.5	1.1	1.9	1.5	2.6	2.1	1.9	1.2			
19.....	1.0	1.4	1.1	2.0	1.5	2.5	2.1	1.9	1.1			
20.....	1.0	1.3	1.0	2.1	1.6	2.4	2.0	2.0	1.1			
21.....	.9	1.3	1.0	1.9	1.5	2.3	2.0	2.7	1.1			
22.....	.9	1.2	.9	1.6	1.5	2.1	2.0	2.6	1.1			
23.....	1.0	1.3	.9	1.6	1.5	2.0	2.0	2.5	1.1			
24.....	1.0	1.2	.9	1.6	1.5	2.0	2.0	2.3	1.3			
25.....	1.2	1.1	.9	1.5	1.5	2.0	2.2	2.3	1.2			
26.....	1.1	1.1	1.0	3.7	1.4	2.0	2.2	2.6	1.1			
27.....	1.3	1.1	1.0	3.8	1.4	2.0	2.4	2.5	1.1			
28.....	1.5	1.1	1.0	2.7	1.4	2.0	2.2	2.3	1.0			
29.....	1.4	1.1	1.1	2.3	1.4	2.0	2.95	2.2	1.0			
30.....	1.3	1.2	1.1	2.1		2.0	4.3	2.5	1.0			
31.....	1.2		1.2	2.0		1.9		2.2				

Daily discharge, in second-feet, of Bear River at Van Trent, Cal., for 1904-1912.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1904-5, <sup>a</sup>												
1.....		1,130	530	820	1,200	425	1,100	328	328	49	33	49
2.....		700	285	700	2,370	375	1,000	375	328	49	33	49
3.....			425	210	425	760	375	820	530	328	49	33
4.....			177	210	375	2,060	375	760	375	328	49	33
5.....			177	177	375	2,370	375	700	475	328	49	33
6.....		146	177	328	1,130	375	640	530	285	49	33	49
7.....		146	146	285	880	375	585	585	285	33	33	49
8.....		194	146	146	246	940	328	530	640	210	33	33
9.....		710	146	210	475	820	285	475	700	210	33	33
10.....		328	146	246	375	700	285	475	640	210	33	33

<sup>a</sup> Discharge interpolated Apr. 1, 27-29, May 1, 2, 5, 6, 8, 1905; discharge estimated by a hydrograph comparison with adjoining streams, May 10 to June 26, 1905.

Daily discharge, in second-feet, of Bear River at Van Trent, Cal., for 1904-1912—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1904-5.												
11.....	4,830	146	210	285	760	285	475	640	210	33	33	33
12.....	640	146	177	248	585	375	475	640	210	33	33	33
13.....	285	146	246	210	530	640	425	640	210	33	80	33
14.....	246	146	210	820	475	585	425	640	210	33	33	33
15.....	930	475	210	530	425	475	425	830	210	49	92	33
16.....	210	285	177	700	640	475	530	1,130	146	33	33	33
17.....	210	210	177	475	820	475	475	1,130	146	33	33	33
18.....	210	146	146	425	700	760	760	940	146	49	33	20
19.....	177	146	146	760	640	6,930	760	820	146	33	33	20
20.....	146	118	146	585	880	2,160	585	820	146	33	33	20
21.....	146	118	118	1,870	760	2,160	640	700	146	33	33	20
22.....	146	118	118	4,160	640	1,400	640	585	146	33	33	20
23.....	146	118	210	2,930	585	1,060	530	530	118	33	33	20
24.....	146	118	1,130	1,200	530	1,400	475	475	118	33	33	20
25.....	118	92	475	940	530	1,000	425	425	118	33	33	49
26.....	118	92	285	820	475	1,130	375	425	118	33	33	33
27.....	118	177	246	1,330	475	1,260	375	375	118	33	33	33
28.....	92	146	210	1,200	425	1,060	375	375	118	33	33	33
29.....	92	118	210	1,130	.....	2,370	328	375	92	33	33	49
30.....	146	118	1,330	1,130	.....	1,620	328	375	69	33	69	33
31.....	177	.....	4,550	1,330	.....	1,200	.....	375	.....	33	49	.....
1905-6.												
1.....	33	33	92	49	585	1,470	4,420	530	940	246	49	20
2.....	33	20	69	33	585	1,260	2,700	585	820	246	49	20
3.....	33	20	49	33	530	1,130	2,160	530	820	210	33	20
4.....	33	20	49	33	530	1,870	1,780	475	1,470	210	33	20
5.....	33	20	49	20	530	1,330	1,620	475	1,060	177	33	20
6.....	33	20	33	20	475	1,130	1,470	475	1,260	177	33	20
7.....	33	20	33	33	475	1,060	1,330	425	940	177	33	20
8.....	33	20	33	20	475	880	1,200	425	820	177	33	20
9.....	33	20	33	20	530	820	1,060	425	700	146	33	20
10.....	33	20	20	20	585	760	1,130	425	640	146	33	20
11.....	33	20	20	20	640	700	1,260	475	585	146	33	20
12.....	33	20	20	246	530	2,990	1,060	475	640	118	33	20
13.....	33	10	20	6,690	530	1,700	940	425	530	118	20	20
14.....	33	10	20	2,160	475	3,050	880	375	530	118	20	33
15.....	33	10	20	6,930	1,780	4,420	820	585	475	92	20	33
16.....	33	10	20	9,030	1,060	1,960	820	425	760	92	20	33
17.....	33	10	20	4,160	880	1,540	760	375	530	92	33	33
18.....	33	10	33	16,000	700	1,260	760	375	475	69	20	33
19.....	33	10	49	10,300	2,200	1,060	700	328	425	69	20	33
20.....	33	20	92	5,480	1,400	940	700	328	425	69	20	33
21.....	33	33	69	1,870	3,170	1,260	700	328	375	69	20	20
22.....	33	20	49	1,470	2,060	2,590	640	328	375	69	20	20
23.....	20	20	33	1,260	2,700	2,160	670	285	375	49	20	20
24.....	33	20	20	1,060	1,870	9,130	730	285	375	69	20	33
25.....	33	20	20	940	2,260	6,930	880	502	328	69	20	33
26.....	33	20	20	820	1,540	10,400	700	1,200	328	49	20	33
27.....	20	80	20	760	1,920	3,900	760	2,210	328	49	20	33
28.....	33	20	20	700	2,370	2,590	820	4,360	328	49	20	33
29.....	33	20	92	640	.....	2,160	640	1,960	285	49	20	33
30.....	33	118	49	640	.....	2,810	640	1,400	285	49	20	33
31.....	33	.....	69	585	.....	17,900	.....	1,060	.....	49	20	.....
1906-7.												
1.....	20	33	69	1,060	7,390	2,280	2,280	600	310	180	45	40
2.....	20	33	69	820	25,700	1,540	2,120	555	275	150	45	40
3.....	20	49	69	700	6,970	1,130	1,910	510	240	150	45	35
4.....	20	502	69	1,580	5,750	1,000	1,700	510	240	180	45	40
5.....	20	246	69	2,160	3,770	1,540	1,980	510	240	120	40	40
6.....	20	146	69	1,130	2,700	1,870	1,770	465	240	120	40	40
7.....	20	118	69	940	2,160	1,200	1,630	465	275	120	40	40
8.....	20	92	612	1,360	1,870	1,060	1,560	465	275	95	40	35
9.....	20	69	246	1,060	1,540	1,330	1,500	425	275	95	40	35
10.....	20	69	246	1,000	1,200	2,160	1,500	425	210	95	40	35
11.....	20	69	9,540	880	1,060	2,370	1,440	425	385	75	35	35
12.....	20	69	5,090	760	1,060	1,700	1,440	465	465	75	35	35
13.....	33	69	1,960	760	1,000	1,200	1,370	465	465	75	35	35
14.....	33	69	585	1,000	1,000	940	1,660	385	425	75	35	35
15.....	20	69	375	880	940	760	2,200	385	345	60	35	40

Daily discharge, in second-feet, of Bear River at Van Trent, Cal., for 1904-1912—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1906-7.												
16.....	20	92	285	820	880	760	1,370	345	310	75	35	40
17.....	33	69	246	940	1,000	14,400	1,190	345	275	75	35	35
18.....	33	69	210	1,060	1,000	11,400	1,020	345	275	75	35	35
19.....	33	69	210	880	820	25,800	960	385	240	60	35	40
20.....	33	69	210	760	760	13,500	905	385	275	60	35	40
21.....	33	69	177	700	700	5,620	850	385	240	60	35	40
22.....	33	69	177	760	1,470	4,550	850	345	385	60	35	35
23.....	33	69	640	760	1,060	12,500	800	345	275	60	50	35
24.....	33	69	375	820	820	5,750	800	385	240	60	45	35
25.....	33	69	1,820	1,260	2,700	5,350	750	345	240	60	45	40
26.....	33	49	7,360	1,470	1,400	3,740	700	345	240	60	45	40
27.....	33	49	4,160	1,200	1,000	3,000	700	310	210	60	40	40
28.....	33	69	1,470	5,480	880	2,670	650	310	210	50	40	40
29.....	20	69	1,000	2,700	-----	2,350	650	310	180	50	40	45
30.....	33	69	760	1,540	-----	2,200	600	275	210	50	40	40
31.....	33	-----	2,370	2,930	-----	2,280	-----	310	-----	45	45	-----
1907-8.												
1.....	40	60	60	1,090	520	915	320	185	185	55	30	30
2.....	40	75	45	610	890	1,090	320	380	185	55	30	30
3.....	40	60	45	480	1,660	865	320	302	185	55	30	30
4.....	40	50	45	890	890	745	320	215	185	55	30	30
5.....	40	75	120	520	890	655	320	215	185	40	30	30
6.....	40	50	120	400	700	700	285	215	185	40	30	30
7.....	35	60	825	400	610	655	320	215	185	40	30	30
8.....	40	50	425	360	565	610	285	250	185	40	30	25
9.....	45	50	210	400	610	565	285	215	185	40	30	30
10.....	40	60	150	360	655	565	285	250	185	55	30	30
11.....	40	45	625	360	565	587	285	302	160	40	30	30
12.....	40	60	275	360	520	587	285	320	160	40	30	30
13.....	40	45	310	360	490	610	360	285	160	40	30	30
14.....	40	45	240	1,040	480	610	360	285	135	40	30	30
15.....	40	45	210	745	440	610	340	480	135	40	30	30
16.....	40	45	240	565	440	610	400	400	135	40	30	30
17.....	40	50	210	480	400	565	420	320	110	40	30	40
18.....	40	45	180	440	360	565	380	285	110	40	30	40
19.....	45	45	150	520	360	520	320	285	110	40	30	40
20.....	45	50	345	1,720	360	520	320	440	110	40	30	40
21.....	40	50	210	2,350	320	520	320	360	185	40	30	30
22.....	40	45	180	1,420	320	480	320	320	135	40	30	30
23.....	40	45	150	890	320	440	320	285	135	40	30	30
24.....	40	45	120	1,360	285	400	400	285	135	40	30	30
25.....	45	45	150	1,040	285	400	320	250	110	40	30	30
26.....	50	45	650	790	320	400	285	250	90	40	30	30
27.....	60	50	1,400	655	285	360	285	215	90	30	30	40
28.....	60	50	510	565	285	360	250	215	70	30	30	30
29.....	60	45	385	520	700	360	250	215	70	30	30	40
30.....	60	45	310	480	-----	320	215	215	70	30	30	30
31.....	75	-----	2,350	480	-----	360	-----	215	-----	30	30	-----
1908-9.												
1.....	30	30	55	90	1,540	749	632	228	140	60	38	38
2.....	40	30	55	215	1,430	709	557	228	122	60	38	38
3.....	30	30	55	1,040	2,670	709	521	205	122	48	38	38
4.....	30	30	185	440	1,850	1,540	521	205	105	48	38	38
5.....	30	30	745	460	2,510	1,160	486	205	105	48	38	38
6.....	30	30	320	2,430	1,720	1,260	486	182	105	48	38	38
7.....	30	30	215	971	3,860	1,370	452	182	88	48	38	38
8.....	30	30	160	9,540	2,510	1,060	452	182	122	48	38	38
9.....	25	25	160	3,960	1,600	971	452	160	88	48	38	38
10.....	25	30	185	1,600	1,430	880	452	160	88	48	38	38
11.....	25	30	160	1,020	2,430	791	452	160	88	48	38	38
12.....	25	30	135	835	10,500	709	420	140	73	48	38	38
13.....	20	30	110	7,800	4,180	632	420	140	73	48	38	38
14.....	20	30	135	25,300	2,510	594	420	140	73	48	38	38
15.....	380	30	135	22,400	1,920	557	420	140	73	48	38	38
16.....	185	30	110	14,000	1,720	557	420	160	73	48	38	38
17.....	110	30	110	4,300	2,060	557	420	160	73	48	30	38
18.....	70	30	110	3,860	1,600	557	420	160	105	48	30	38
19.....	55	40	110	2,750	1,660	521	390	160	122	48	30	38
20.....	55	40	110	10,600	1,790	521	390	160	88	48	38	38

Daily discharge, in second-feet, of Bear River at Van Trent, Cal., for 1904-1912—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1908-9.												
21.....	40	70	110	9,750	1,600	632	390	140	88	48	38	38
22.....	40	137	110	5,580	1,260	557	361	160	88	48	38	38
23.....	40	185	110	3,550	1,110	521	332	140	73	48	38	30
24.....	30	185	135	2,670	1,240	486	332	140	73	48	38	30
25.....	30	110	110	2,830	1,110	452	332	140	73	48	38	38
26.....	30	90	110	2,360	971	452	304	140	73	38	38	38
27.....	30	70	90	1,990	880	452	277	140	73	38	38	48
28.....	30	55	90	1,790	791	452	252	205	73	38	38	48
29.....	30	70	90	1,600	.....	1,240	252	182	60	38	38	60
30.....	40	40	90	1,480	.....	835	252	160	60	38	38	73
31.....	30	.....	90	1,790	.....	709	.....	140	.....	38	38	.....
1909-10.												
1.....	38	60	632	2,670	971	709	452	201	66	32	23	16
2.....	60	60	1,850	1,660	632	670	420	201	66	32	16	16
3.....	88	60	557	791	594	632	420	178	66	32	23	16
4.....	48	48	390	670	557	632	390	201	66	32	23	16
5.....	48	48	420	594	521	594	390	178	66	32	23	16
6.....	48	48	390	557	486	594	361	178	66	32	23	16
7.....	38	48	709	557	557	557	361	156	53	23	23	16
8.....	38	88	1,660	521	594	521	332	135	53	23	23	16
9.....	38	216	9,960	521	557	521	332	135	53	23	23	16
10.....	38	182	1,430	594	670	521	332	178	53	23	23	16
11.....	38	228	925	557	594	521	486	135	53	23	23	16
12.....	38	140	749	521	557	486	361	135	53	23	23	16
13.....	38	122	632	486	521	486	332	115	53	23	23	16
14.....	38	182	557	925	557	486	303	115	53	23	23	16
15.....	38	122	521	1,480	557	486	303	97	53	23	23	23
16.....	38	105	486	1,210	521	452	276	115	42	23	16	74
17.....	38	105	452	925	486	452	276	97	42	23	23	53
18.....	38	105	420	709	452	452	276	81	42	23	23	32
19.....	38	105	420	632	1,540	594	250	81	42	23	23	23
20.....	73	361	420	557	925	1,260	250	81	42	23	23	23
21.....	73	2,100	390	521	709	2,750	225	81	42	23	23	23
22.....	73	521	390	557	632	1,540	225	97	42	23	23	23
23.....	48	452	390	709	890	2,830	225	81	42	23	16	23
24.....	48	390	361	3,140	749	1,320	201	81	42	23	23	23
25.....	48	670	332	1,480	1,430	925	178	66	42	23	23	23
26.....	48	486	332	1,060	1,020	749	178	97	32	23	16	23
27.....	48	332	332	925	835	632	178	66	32	23	16	23
28.....	48	304	304	791	749	594	290	66	32	16	16	23
29.....	122	205	304	709	.....	521	250	66	32	23	16	23
30.....	122	182	304	670	.....	486	201	66	32	23	16	23
31.....	88	.....	3,320	632	.....	452	.....	66	.....	23	16	.....
1910-11.												
1.....	23	32	42	53	4,300	994	880	361	178	66	32	32
2.....	23	42	42	53	2,910	1,430	925	361	178	66	32	32
3.....	23	42	53	53	2,350	1,370	880	361	178	81	32	32
4.....	23	42	276	53	2,200	3,860	835	361	156	66	32	42
5.....	23	42	97	53	2,200	2,750	1,920	361	135	66	53	42
6.....	23	42	81	53	2,590	5,860	2,280	420	135	66	42	42
7.....	23	32	66	53	1,790	12,000	1,260	361	178	53	42	42
8.....	23	32	66	53	1,480	4,180	1,020	332	201	53	53	42
9.....	23	53	66	53	1,370	2,510	925	332	178	53	42	42
10.....	23	53	66	332	1,260	2,350	971	332	156	53	42	42
11.....	23	42	791	156	2,670	1,790	791	303	135	53	42	42
12.....	81	42	225	3,440	1,540	1,540	709	276	135	53	42	42
13.....	81	42	135	2,830	2,910	1,320	670	276	135	53	42	42
14.....	53	42	115	11,300	1,720	1,210	594	276	135	42	42	32
15.....	42	42	97	2,910	1,330	1,110	521	276	115	42	42	32
16.....	42	42	81	880	1,160	1,060	486	276	115	42	42	32
17.....	42	42	81	632	1,060	1,020	452	250	115	42	42	32
18.....	42	42	81	486	1,020	971	452	250	115	42	42	32
19.....	42	66	66	420	971	971	452	303	115	32	42	32
20.....	42	53	66	13,700	925	971	452	250	97	32	42	32
21.....	42	42	66	2,910	880	971	420	250	97	32	42	32
22.....	42	42	66	1,320	835	925	420	225	97	32	42	23
23.....	42	42	66	1,020	791	925	420	225	81	32	42	23
24.....	32	42	66	9,640	791	925	420	225	81	32	42	28
25.....	32	53	66	7,620	749	925	452	225	81	32	42	32

Daily discharge, in second-feet, of Bear River at Van Trent, Cal., for 1904-1912—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.												
26.....	32	97	53	3,860	749	880	452	201	81	32	42	32
27.....	32	53	53	2,200	749	835	452	201	81	32	42	32
28.....	32	53	53	5,160	835	835	452	201	81	32	42	32
29.....	32	53	53	4,900	.....	835	420	178	81	32	42	32
30.....	32	42	53	13,200	.....	880	390	178	66	32	32	32
31.....	32	.....	53	22,200	.....	880	.....	178	.....	32	32	.....
1911-12.												
1.....	42	53	53	81	201	66	178	594	201	.....	.....	.....
2.....	42	42	53	97	178	66	178	835	201	.....	.....	.....
3.....	42	32	42	66	178	66	178	557	178	.....	.....	.....
4.....	42	32	42	53	156	66	178	452	178	.....	.....	.....
5.....	42	66	32	42	156	97	178	420	178	.....	.....	.....
6.....	66	66	42	53	135	835	156	361	135	.....	.....	.....
7.....	66	53	42	53	135	670	156	332	115	.....	.....	.....
8.....	53	42	32	135	156	390	156	361	97	.....	.....	.....
9.....	42	32	32	135	135	303	201	303	81	.....	.....	.....
10.....	66	167	32	420	135	276	276	276	81	.....	.....	.....
11.....	66	156	32	361	115	250	420	250	81	.....	.....	.....
12.....	66	66	32	276	97	250	332	225	81	.....	.....	.....
13.....	66	66	32	178	97	452	303	225	156	.....	.....	.....
14.....	53	42	32	156	115	420	276	225	135	.....	.....	.....
15.....	53	42	32	135	115	332	250	201	97	.....	.....	.....
16.....	42	156	23	135	97	632	225	201	81	.....	.....	.....
17.....	42	115	23	276	97	420	225	178	66	.....	.....	.....
18.....	32	97	42	178	97	361	225	178	53	.....	.....	.....
19.....	32	81	42	201	97	332	225	178	42	.....	.....	.....
20.....	32	66	32	225	115	303	201	201	42	.....	.....	.....
21.....	23	66	32	178	97	276	201	390	42	.....	.....	.....
22.....	23	53	23	115	97	225	201	361	42	.....	.....	.....
23.....	32	66	23	115	97	201	201	332	42	.....	.....	.....
24.....	32	53	23	115	97	201	201	276	66	.....	.....	.....
25.....	53	42	23	97	97	201	250	276	53	.....	.....	.....
26.....	42	42	32	749	81	201	250	361	42	.....	.....	.....
27.....	66	42	32	791	81	201	303	332	42	.....	.....	.....
28.....	97	42	32	390	81	201	250	276	32	.....	.....	.....
29.....	81	42	42	276	81	201	469	250	32	.....	.....	.....
30.....	66	53	42	225	.....	.....	1,020	332	32	.....	.....	.....
31.....	53	.....	53	201	.....	178	.....	250	.....	.....	.....	.....

NOTE.—The daily discharges for 1904 to 1909 are based on rating curves applicable as follows: Oct. 8, 1904, to Mar. 25, 1907, well defined below 2,100 second-feet; Mar. 26, to Dec. 31, 1907, well defined between 35 and 2,000 second-feet; Jan. 1, 1908, to Jan. 5, 1909, well defined between 25 and 840 second-feet; Jan. 6, 1909, to June 30, 1912, fairly well defined below 2,000 second-feet and not at all defined above that discharge.

Monthly discharge of Bear River at Van Trent, Cal., for 1904-1912.

[Drainage area, 263 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.		
1904-5.								
October 8-31.....	4,830	92	440	1.67	1.49	20,900	A.	
November.....	1,130	92	217	.825	.92	12,900	A.	
December.....	4,550	118	421	1.60	1.84	25,900	A.	
January.....	4,160	210	888	3.38	3.90	54,600	A.	
February.....	2,370	425	861	3.27	3.40	47,800	A.	
March.....	6,930	285	1,040	3.95	4.55	64,000	A.	
April.....	1,100	328	564	2.14	2.39	33,600	A.	
May.....	1,130	328	596	2.27	2.62	36,600	C.	
June.....	328	69	193	.734	.82	11,500	C.	
July.....	49	33	37.1	.141	.16	2,280	C.	
August.....	92	33	38.1	.145	.17	2,340	C.	
September.....	92	20	37.3	.142	.16	2,220	C.	
The period.....							315,000	

Monthly discharge of Bear River at Van Trent, Cal., for 1904-1912—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.	
1905-6.							
October.....	33	20	32.2	0.122	0.14	1,980	C.
November.....	118	10	23.8	.090	.10	1,420	C.
December.....	92	20	39.8	.151	.17	2,450	C.
January.....	16,000	20	2,320	8.82	10.17	143,000	B.
February.....	3,170	475	1,200	4.56	4.75	66,600	A.
March.....	17,900	700	3,000	11.4	13.14	184,000	A.
April.....	4,420	640	1,180	4.49	5.01	70,200	A.
May.....	4,360	285	737	2.80	3.23	45,300	A.
June.....	1,470	285	608	2.31	2.58	36,200	A.
July.....	246	49	113	.430	.50	6,950	A.
August.....	49	20	26.5	.101	.12	1,630	C.
September.....	33	20	26.1	.099	.11	1,550	C.
The year.....	17,900	10	776	2.95	40.02	561,000	
1906-7.							
October.....	33	20	26.7	.102	.12	1,640	C.
November.....	502	33	90.7	.345	.38	5,400	B.
December.....	9,540	69	1,310	4.98	5.74	80,600	A.
January.....	5,480	700	1,300	4.94	5.70	79,900	C.
February.....	25,700	700	2,810	10.7	11.10	156,000	C.
March.....	25,800	760	4,450	16.9	19.50	274,000	C.
April.....	2,280	600	1,300	4.94	5.51	77,400	C.
May.....	600	275	404	1.54	1.78	24,800	B.
June.....	465	180	282	1.07	1.19	16,800	B.
July.....	180	45	84.7	.322	.37	5,210	B.
August.....	50	35	39.7	.151	.17	2,440	B.
September.....	45	35	38.0	.144	.16	2,260	B.
The year.....	25,800	20	1,010	3.84	51.72	726,000	
1907-8.							
October.....	75	35	44.5	.169	.19	2,740	B.
November.....	75	45	51.0	.194	.22	3,030	B.
December.....	2,350	45	363	1.38	1.59	23,300	C.
January.....	2,350	360	731	2.78	3.20	44,900	B.
February.....	1,660	285	535	2.03	2.19	30,800	C.
March.....	1,090	320	553	2.10	2.42	34,000	C.
April.....	420	215	316	1.20	1.34	18,800	C.
May.....	480	185	280	1.06	1.22	17,200	C.
June.....	185	70	142	.540	.60	8,450	C.
July.....	55	30	40.8	.155	.18	2,510	C.
August.....	30	30	30.0	.114	.13	1,840	C.
September.....	40	25	31.8	.121	.14	1,890	C.
The year.....	2,350	25	260	.988	13.42	188,000	
1908-9.							
October.....	380	20	52.1	.198	.23	3,200	C.
November.....	185	25	54.2	.206	.23	3,230	C.
December.....	745	55	145	.551	.64	8,920	C.
January.....	25,300	205	4,820	18.3	21.10	296,000	C.
February.....	10,500	791	2,160	8.21	8.55	120,000	A.
March.....	1,540	452	748	2.84	3.27	46,000	B.
April.....	632	252	409	1.56	1.74	24,300	A.
May.....	228	140	166	.631	.73	10,200	A.
June.....	140	60	88.7	.337	.38	5,280	B.
July.....	60	38	46.8	.178	.21	2,880	B.
August.....	38	30	37.2	.141	.16	2,290	B.
September.....	73	30	40.0	.152	.17	2,380	B.
The year.....	25,300	20	731	2.78	37.41	525,000	
1909-10.							
October.....	122	38	53.6	.204	.24	3,300	B.
November.....	2,100	48	269	1.02	1.14	16,000	A.
December.....	9,960	304	979	3.72	4.29	60,200	B.
January.....	3,140	521	914	3.48	4.01	56,200	B.
February.....	1,540	452	709	2.70	2.81	39,400	B.
March.....	2,830	450	788	3.00	3.46	48,500	B.
April.....	486	178	302	1.15	1.28	18,000	A.
May.....	201	66	117	.445	.51	7,190	A.
June.....	66	32	48.4	.184	.21	2,880	A.
July.....	32	16	24.5	.093	.11	1,510	B.
August.....	23	16	21.0	.080	.09	1,290	B.
September.....	74	16	22.7	.086	.10	1,350	B.
The year.....	9,960	16	354	1.35	18.25	256,000	

## Monthly discharge of Bear River at Van Trent, Cal., for 1904-1912—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.	
1910-11.							
October.....	81	23	35.5	0.135	0.16	2,180	A.
November.....	87	32	46.2	.176	.20	2,750	A.
December.....	781	42	105	.399	.46	6,460	A.
January.....	22,200	53	3,600	13.70	15.79	221,000	C.
February.....	4,300	749	1,580	6.01	6.26	87,800	C.
March.....	12,000	835	1,910	7.26	8.37	117,000	C.
April.....	2,280	390	726	2.76	3.08	43,200	B.
May.....	420	178	278	1.06	1.22	17,100	B.
June.....	178	66	124	.471	.53	7,380	B.
July.....	81	32	45.4	.173	.20	2,790	C.
August.....	83	32	40.8	.155	.18	2,510	C.
September.....	42	23	34.4	.131	.15	2,050	C.
The year.....	22,200	23	710	2.70	36.60	512,000	
1911-12.							
October.....	97	23	50.2	1.91	.22	3,090	C.
November.....	167	32	65.8	.250	.28	3,920	C.
December.....	83	23	34.9	.133	.15	2,150	C.
January.....	791	42	210	.799	.92	12,900	C.
February.....	201	81	118	.449	.48	6,790	C.
March.....	835	66	286	1.09	1.26	17,600	C.
April.....	1,020	156	262	.996	1.11	15,600	C.
May.....	835	178	322	1.22	1.41	19,800	C.
June.....	201	32	90.1	.342	.38	5,360	C.
The period.....						87,200	

## NORTH FORK OF AMERICAN RIVER NEAR COLFAX, CAL.

This station, which is located at the bridge on the Colfax-Forest Hill road in the SW.  $\frac{1}{4}$  sec. 19, T. 14 N., R. 10 E., 150 feet below the mouth of Shirrtail Canyon Creek and 5 miles southeast of Colfax, was established August 16, 1911.

The gage is a vertical staff in three sections on the right bank, 50 feet below the bridge.

The bed of the stream is composed of gravel and small boulders—tailings from placer mining—and will shift at high stages.

Discharge measurements are made from the bridge above the gage or by wading.

## Discharge measurements of North Fork of American River near Colfax, Cal., in 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>
Aug. 16	F. C. Ebert.....	3.29	122	Jan. 26	J. E. Stewart.....	4.61	779
Dec. 10	Lasley Lee.....	3.10	75	Mar. 26	Lasley Lee.....	3.92	370
				May 3	do.....	5.12	1,090
				20	J. E. Stewart.....	5.46	1,360

Daily gage height, in feet, of North Fork of American River near Colfax, Cal., for 1911-12.

Day.	Aug.	Sept.	Day.	Aug.	Sept.	Day.	Aug.	Sept.
1911.			1911.			1911.		
1.....		3.2	11.....		3.2	21.....	3.3	3.2
2.....		3.2	12.....		3.2	22.....	3.3	3.2
3.....		3.2	13.....		3.2	23.....	3.3	3.2
4.....		3.2	14.....		3.2	24.....	3.2	3.2
5.....		3.2	15.....		3.2	25.....	3.2	3.2
6.....		3.2	16.....	3.3	3.2	26.....	3.2	3.2
7.....		3.2	17.....	3.3	3.2	27.....	3.2	3.2
8.....		3.2	18.....	3.3	3.2	28.....	3.2	3.2
9.....		3.2	19.....	3.3	3.2	29.....	3.2	3.2
10.....		3.2	20.....	3.3	3.2	30.....	3.2	3.2
						31.....	3.2	3.2

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.									
1.....	3.25	3.10	3.18	3.10	3.58	3.30	4.1		
2.....	3.25	3.10	3.18	3.10	3.58	3.30	4.3		5.6
3.....	3.25	3.10	3.15	3.10	3.52	3.30	4.45	5.1	5.7
4.....	3.25	3.10	3.18	3.10	3.52	3.38	4.4	5.3	5.6
5.....	3.25	3.10	3.15	3.10	3.48	3.70	4.3	5.1	5.5
6.....	3.25	3.10	3.18	3.10	3.48	4.8	4.3	5.0	5.2
7.....	3.25	3.10	3.15	3.10	3.48	4.4	4.5	5.4	5.2
8.....	3.25	3.10	3.15	3.10	3.48	4.05	4.55	5.6	5.0
9.....	3.28	3.10	3.18	3.10	3.48	3.95	4.7	5.6	5.0
10.....	3.25	3.75	3.10	3.75	3.48	3.85	4.65	5.6	4.7
11.....	3.22	3.75	3.10	3.88	3.48	3.75	4.4	5.6	4.7
12.....	3.25	3.20	3.10	3.48	3.48	3.82	4.3	5.7	4.75
13.....	3.18	3.22	3.10	3.45	3.40	3.85	4.15	5.0	5.1
14.....	3.18	3.15	3.10	3.42	3.40	3.85	4.2	5.6	4.65
15.....	3.05	3.22	3.10	3.50	3.40	4.15	4.3	5.6	4.5
16.....	3.10	3.35	3.10	3.75	3.40	4.20	4.15	5.6	4.2
17.....	3.10	3.20	3.15	3.72	3.48	3.95	4.15	5.6	4.2
18.....	3.12	3.20	3.10	3.75	3.85	3.98	4.4	5.5	4.1
19.....	3.12	3.18	3.10	3.48	3.85	4.0	4.2	5.5	4.1
20.....	3.15	3.18	3.15	3.48	3.55	3.98	4.15	5.6	4.1
21.....	3.15	3.18	3.10	3.42	3.50	3.95	4.15	5.2	3.89
22.....	3.12	3.18	3.10	3.40	3.48	3.88	4.1	4.95	3.85
23.....	3.12	3.18	3.12	3.40	3.42	3.90	3.98	4.9	3.96
24.....	3.12	3.18	3.10	3.32	3.40	3.98	4.3	5.0	3.8
25.....	3.10	3.18	3.10	3.32	3.40	3.95	4.25	4.7	3.78
26.....	3.10	3.12	3.10	4.5	3.40	3.98	4.5	6.0	3.72
27.....	3.10	3.12	3.10	4.1	3.38	4.1	4.5	5.4	3.71
28.....	3.10	3.12	3.18	3.68	3.30	4.15	4.5	5.8	3.68
29.....	3.10	3.18	3.15	3.62	3.30	4.3	5.65	5.7	3.64
30.....	3.10	3.18	3.15	3.62		4.3	5.4	5.8	3.6
31.....	3.30		3.15	3.52		4.05		5.5	

Daily discharge, in second feet, of North Fork of American River near Colfax Cal., for 1911-12.

Day.	Aug.	Sept.	Day.	Aug.	Sept.	Day.	Aug.	Sept.
1911.			1911.			1911.		
1.....	100		11.....		100	21.....	127	100
2.....	100		12.....		100	22.....	127	100
3.....	100		13.....		100	23.....	127	100
4.....	100		14.....		100	24.....	100	100
5.....	100		15.....		100	25.....	100	100
6.....	100		16.....	127	100	26.....	100	100
7.....	100		17.....	127	100	27.....	100	100
8.....	100		18.....	127	100	28.....	100	100
9.....	100		19.....	127	100	29.....	100	100
10.....	100		20.....	127	100	30.....	100	100
						31.....	100	

Daily discharge, in second-feet, of North Fork of American River near Colfax, Cal., for 1911-12—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.									
1.....	114	77	95	77	222	127	465	1,230	1,420
2.....	114	77	95	77	222	127	575	1,160	1,460
3.....	114	77	88	77	199	127	665	1,090	1,530
4.....	114	77	95	77	199	152	635	1,230	1,460
5.....	114	77	88	77	185	269	575	1,090	1,380
6.....	114	77	95	77	185	885	575	1,020	1,160
7.....	114	77	88	77	185	635	695	1,300	1,160
8.....	114	77	88	77	185	438	725	1,460	1,020
9.....	122	77	95	77	185	384	820	1,460	1,020
10.....	114	290	77	290	185	336	788	1,460	820
11.....	105	290	77	350	185	290	635	1,460	820
12.....	114	100	77	185	185	321	575	1,530	852
13.....	95	105	77	175	158	336	492	1,460	1,090
14.....	95	88	77	165	158	336	520	1,460	788
15.....	68	105	77	192	158	492	575	1,460	695
16.....	77	142	77	290	158	520	492	1,460	520
17.....	77	100	88	278	185	384	492	1,460	520
18.....	82	100	77	290	336	400	635	1,380	465
19.....	82	95	77	185	336	410	520	1,380	465
20.....	88	95	88	185	210	400	492	1,460	465
21.....	88	95	77	165	192	384	492	1,160	354
22.....	82	95	77	158	185	350	465	985	336
23.....	82	95	82	158	165	359	400	950	390
24.....	82	95	77	133	158	400	575	1,020	312
25.....	77	95	77	133	158	384	548	820	303
26.....	77	82	77	695	158	400	695	1,760	278
27.....	77	82	77	465	152	465	695	1,300	273
28.....	77	82	95	261	127	492	695	1,600	261
29.....	77	95	88	237	127	575	1,490	1,530	245
30.....	77	95	88	237	.....	575	1,300	1,600	229
31.....	127	.....	88	199	.....	438	.....	1,380	.....

NOTE.—Daily discharge determined from a well-defined rating curve. Discharge interpolated May 1 to 2 and June 1.

Monthly discharge of North Fork of American River near Colfax, Cal., for 1911-12.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1911.					
August 16-31.....	127	100	114	3,620	A.
September.....	100	100	100	5,950	A.
1911-12.					
October.....	127	68	95.3	5,860	A.
November.....	290	77	104	6,190	A.
December.....	95	77	83.8	5,150	A.
January.....	695	77	197	12,100	A.
February.....	336	127	188	10,800	A.
March.....	885	127	392	24,200	A.
April.....	1,490	400	643	38,300	A.
May.....	1,760	820	1,330	81,800	A.
June.....	1,530	229	736	43,800	A.
The period.....	.....	.....	.....	228,000	.....

#### AMERICAN RIVER AT FAIROAKS, CAL.

This station, which is located at the Fair Oaks highway bridge about 1,500 feet north of the railroad station, was established November 3, 1904, to obtain data for use in connection with studies of flood problems in the Sacramento Valley. The old bridge was destroyed

by flood March 19, 1907, after which time measurements were made from a temporary bridge until the end of 1908. This temporary bridge washed out January 13, 1909. A new steel bridge was completed early in 1909 and measurements are now made from it except at extreme low water, when wading measurements can be made.

No important tributaries enter American River above or below Fair Oaks, except the South Fork, which joins the main stream about 3 miles above Folsom and about 10 miles above the station.

Some water is diverted for power and for irrigation at points above the station, but the quantity is not known. Water is also stored.

The present gage is located at the bridge section. A low-water staff gage is fastened to a pile 10 feet below the concrete pier on the right bank. This gage is graduated from 0 to 6 feet. The concrete pier on the left bank is graduated from 5 to 40 feet. The gage is read twice daily. The position of the gage has been changed several times during the life of the station, but no change has been made in the datum.

The conditions for obtaining accurate discharge data are poor. The stream is torrential and has a changeable bed; the current is sluggish at low, and very swift at moderate, stages; the flow is disturbed by bars at low water and by concrete piers at other stages, and the channel conditions near the right bank are disturbed by a large eddy, which is very objectionable at all stages except the lowest.

The maximum crest discharge of 119,000 second-feet with a gage height of 30.4 feet occurred March 19, 1907. The lowest discharge is uncertain. Some extremely low stages reported for the last part of December, 1908, have been discarded, and it is believed that the mean of 104 second-feet for the week of November 14 to 20, 1908, represents minimum conditions.

*Discharge measurements of American River at Fair Oaks, Cal., in 1904-1912.*

Date.	Hydrographer.	Gage height.	Discharge.	Date.	Hydrographer.	Gage height.	Discharge.
1904.		<i>Feet.</i>	<i>Sec.-ft.</i>	1906.		<i>Feet.</i>	<i>Sec.-ft.</i>
Oct. 29	O. W. Peterson.....	2.60	887	May 21	W. C. Sawyer.....	7.80	11,500
Nov. 3	.....do.....	2.80	1,120	May 21	.....do.....	7.90	11,800
1905.				June 11	.....do.....	10.50	20,600
Jan. 26	F. R. S. Buttemer..	4.52	3,970	18	.....do.....	9.00	15,800
Jan. 26	.....do.....	4.49	3,990	26	.....do.....	8.35	13,200
Feb. 2	.....do.....	7.55	12,600	July 7	.....do.....	7.90	12,100
Feb. 11	.....do.....	4.08	3,150	16	.....do.....	5.40	5,340
17	.....do.....	4.22	3,380	27	.....do.....	4.00	2,780
22	.....do.....	4.90	4,740	Aug. 8	Sawyer and Martin.	2.68	1,350
May 17	W. B. Clapp.....	7.35	12,300	Sept. 3	W. F. Martin.....	1.75	564
June 28	O. W. Peterson.....	2.88	1,520	Nov. 26	.....do.....	1.64	476
July 29	Peterson and Lee...	1.46	392	27	R. S. Hawley.....	1.45	402
Sept. 2	C. H. Lee.....	.88	119	1907.			
1906.				Feb. 5	R. S. Hawley.....	11.60	24,800
Feb. 13	F. R. S. Buttemer..	3.66	2,090	20	.....do.....	6.00	6,340
Mar. 3	.....do.....	5.95	6,480	5	.....do.....	7.10	9,590
Apr. 6	R. S. Hawley.....	7.30	9,670	14	.....do.....	6.50	8,370
13	W. C. Sawyer.....	7.26	9,970	May 10	W. G. Steward.....	8.35	12,900
23	.....do.....	8.54	13,800	20	.....do.....	9.00	16,800
30	.....do.....	7.24	9,420	June 24	W. F. Martin.....	6.41	7,690
30	.....do.....	7.15	10,200	Sept. 17	W. A. Lamb.....	2.50	412
				Nov. 2	.....do.....	2.70	736

## Discharge measurements of American River at Fair Oaks, Cal., in 1904-1912—Continued.

Date.	Hydrographer.	Gage height.	Discharge.	Date.	Hydrographer.	Gage height.	Discharge.
1908.		<i>Feet.</i>	<i>Sec.-ft.</i>	1910.		<i>Feet.</i>	<i>Sec.-ft.</i>
Jan. 24	W. A. Lamb	5.70	7,260	Mar. 10	J. E. Stewart	6.65	8,660
Feb. 14	do	3.40	1,660	24	do	8.60	15,000
Mar. 16	do	4.95	5,380	May 23	do	5.60	6,010
Apr. 11	do	4.95	5,680	July 1	do	2.70	898
11	do	5.52	6,660	12	do	2.35	572
25	do	4.60	4,460	Aug. 7	W. V. Hardy	1.71	184
Sept. 19	W. V. Hardy	1.50	149	Oct. 25	J. E. Stewart	2.01	332
Oct. 6	do	1.63	178				
Dec. 15	W. F. Martin	2.21	694	1911.			
1909.				Jan. 12	H. D. McGlashan	12.90	35,000
Jan. 24	W. F. Martin	9.60	17,400	29	do	9.35	17,500
Feb. 12	do	13.10	33,900	29	do	9.95	21,000
Mar. 23	W. B. Clapp	5.60	5,770	30	do	19.90	72,700
May 22	W. F. Martin	6.20	7,840	31	do	21.90	78,000
July 24	W. V. Hardy	2.70	903	Mar. 22	J. E. Stewart	7.38	9,530
Aug. 6	W. F. Martin	2.30	585	May 6	do	8.54	14,200
Sept. 3	W. V. Hardy	1.70	196	July 8	do	5.48	4,880
Nov. 9	do	2.65	774	Oct. 3	do	2.58	361
22	do	7.30	10,200	1912.			
26	do	6.80	8,590	Jan. 22	J. E. Stewart	3.26	768
29	do	4.40	3,290	Mar. 30	Lasley Lee	4.26	2,290
Dec. 18	do	4.50	3,520	June 9	do	5.75	6,100
1910.				July 12	do	3.11	802
Jan. 17	J. E. Stewart	5.58	6,020				

## Daily gage height, in feet, of American River at Fair Oaks, Cal., for 1904-1912.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1904-5.												
1.			3.05	6.1	4.25	4.6	5.95	6.0	4.6			
2.			3.3	5.25	7.6	4.6	6.15	6.1	4.55			
3.			3.1	3.95	5.85	4.6	5.95	5.9	4.45			
4.			2.75	2.65	3.65	5.05	4.55	6.0	5.6	4.55		0.9
5.			2.7	2.7	3.5	6.65	4.6	6.15	5.55	4.45		.85
6.		2.7	2.55	3.35	5.5	4.6	6.0	5.5	5.1			.9
7.		2.6	2.55	3.6	4.9	4.6	6.15	5.6	5.15			.9
8.		2.5	2.6	3.6	4.45	4.6	5.75	5.55	5.2			.9
9.		2.5	2.55	3.9	4.25	4.5	5.65	5.8	5.35			.85
10.		2.4	2.55	3.1	4.2	4.3	5.8	5.5	4.6			.9
11.			2.6	3.0	4.1	4.45	5.5	5.2	4.7			.9
12.			2.65	3.0	4.05	4.6	5.65	5.2	4.6			.85
13.		2.45	2.70	2.95	3.85	4.8	4.85	5.0	4.35			.9
14.		2.6	2.55	3.5	3.7	5.1	5.25	5.55	4.1			.9
15.		2.65	2.5	4.65	3.6	5.15	5.1	6.15	4.2			.9
16.		2.75	2.55	4.55	3.4	4.55	4.85	6.7	4.0			1.0
17.		2.7	2.7	3.9	4.35	4.75	4.7	6.95	3.85			.95
18.		2.5	2.6	3.85	4.25	4.9	4.55	6.65	3.8			1.0
19.		2.65	2.4	3.95	4.15	10.5	4.65	6.5	3.8			.9
20.		2.6	2.65	3.9	6.15	7.45	4.9	6.4	3.8			.95
21.		2.55	2.65	4.1	5.2	7.1	5.4	5.95	3.85			.95
22.		2.5	2.9	4.8	4.85	6.7	6.5	5.3	3.55			.9
23.		2.55	2.7	6.85	4.6	6.1	7.4	5.5	3.7			.95
24.		2.55	2.65	6.4	4.5	6.55	8.85	5.7	3.3			.95
25.		2.65	2.7	5.4	4.55	6.3	7.65	6.1	3.15			.9
26.		2.6	2.55	4.45	4.9	6.5	7.1	5.9	3.1			.9
27.		2.6	2.5	4.25	4.7	6.8	6.6	5.5	2.9			.95
28.		2.7	2.4	3.9	4.75	6.4	6.7	5.35	2.8			.95
29.		2.7	2.6	3.8		6.85	6.8	4.75	2.75	1.45		.95
30.		3.05	3.7	3.75		6.35	6.75	4.5	2.7			.95
31.			7.85	3.85		5.95		4.15				
1905-6.												
1.	0.95		1.35	1.5	3.65	6.8	10.4	7.6	9.1	7.45	3.35	1.8
2.	.9		1.25	1.4	3.55	6.4	9.6	8.45	9.45	8.35	3.15	1.75
3.	.95		1.2	1.4	3.7	7.9	8.8	8.45	10.3	8.25	3.2	1.8
4.	.95		1.25	1.5	3.6	7.65	8.25	9.2	9.75	8.0	3.1	1.7
5.	.95		1.1	1.2	3.65	6.3	7.4	10.4	9.1	8.15	2.95	1.8

Daily gage height, in feet, of American River at Fair Oaks, Cal., for 1904-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1905-6.												
6	0.95		1.15	1.2	3.75	5.95	7.1	9.85	8.7	7.4	2.75	1.65
7	.95		1.2	1.5	3.7	5.95	7.15	10.3	9.0	7.25	2.7	1.6
8	.9		1.15	1.2	3.75	5.95	7.6	10.25	9.25	7.05	2.75	1.6
9	.95		1.15	1.4	3.8	6.1	7.35	9.6	9.25	6.9	2.7	1.6
10	.9	1.0	1.15	1.2	4.1	6.15	7.65	9.75	9.75	6.2	2.65	1.5
11	.95	1.0	1.0	1.4	3.85	6.45		10.1	10.8	6.0	2.7	1.5
12	.95	1.0	1.0	1.75	3.7	9.25		9.85	11.0	5.85	2.7	1.5
13	.95	1.0	.9	5.85	3.75	9.7	7.2	8.7	9.95	5.8	2.45	1.5
14	.95	.95	.95	8.35	4.2	12.85	7.2	8.0	9.1	5.9	2.4	1.5
15	1.0	.95	1.0	6.75	6.05	11.35	7.65	8.05	8.9	5.65	2.4	1.6
16	.95	1.0	1.1	9.3	6.05	8.85	8.0	7.75	9.8	5.45	2.25	1.7
17	.95	1.05	1.1	10.55	6.0	8.3	8.0	7.5	9.85	5.3	2.2	1.6
18	.95	.9	1.15	15.45	5.3	6.65	8.1	7.7	9.45	5.0	2.15	1.5
19	.95	1.0	1.2	15.5	8.35	6.2	7.85	7.35	8.25	4.8	2.1	1.5
20	.95	1.05	1.1	9.85	6.6	6.0	7.7	7.25	8.8	4.6	2.1	1.4
21	.95	1.0	1.05	6.85	9.35	6.0	7.6	7.7	9.7	4.6	2.1	1.4
22	.95	1.15	1.05	6.25	8.35	8.1	8.2	7.6	10.25	4.4	2.15	1.3
23	.95	1.0	1.2	5.2	7.0	9.95	8.7	7.4	10.25	4.35	2.1	1.3
24	.95	1.15	1.3	5.05	6.65	13.35	8.5	7.15	9.4	4.35	2.0	1.3
25	1.0	1.0	1.2	4.9	7.0	12.65	7.95	7.1	8.35	4.4	2.0	1.35
26	.95	1.1	1.3	4.4	6.5	12.00	7.65	9.75	8.1	4.35	1.85	1.3
27	.95	1.0	1.4	4.05	6.5	10.45	8.3	9.7	7.1	4.15	1.9	1.35
28	1.0	1.4	1.4	4.25	7.8	9.15	8.45	11.53	6.85	3.95	1.7	1.4
29	.95	1.75	1.55	4.0		7.85	8.2	11.25	6.85	3.95	1.7	1.3
30	.95	1.5	1.7	3.7		8.45	7.6	8.85	6.65	3.7	1.7	1.35
31			1.45	3.65		9.25		8.6		3.5	1.75	
1906-7.												
1	1.3	1.35	1.5	5.0	9.65	5.75	8.55	8.1	9.1	6.85	4.05	2.9
2	1.4	1.4	1.5	4.1	22.75	6.6	9.05	8.1	9.45	7.0	4.0	2.75
3	1.35	1.55	1.5	4.0	15.15	6.25	8.5	8.05	8.85	6.95	3.95	2.7
4	1.3	1.95	1.5	4.05	14.55	6.2	8.4	8.05	8.7	6.9	3.7	2.8
5	1.3	3.4	1.5	5.95	12.3	6.75	8.5	7.9	8.6	7.15	3.5	2.7
6	1.3	2.75	1.5	4.75	10.0	6.9	8.1	7.75	8.5	6.75	3.3	2.7
7	1.3	2.25	1.5	4.45	8.7	6.5	8.0	7.45	8.4	6.1	3.25	2.7
8	1.3	1.9	2.15	4.45	8.1	6.25	8.0	7.1	7.8	6.3	3.45	2.7
9	1.3	1.75	2.75	4.35	7.55	5.6	8.5	7.8	7.3	6.05	3.5	2.7
10	1.3	1.6	2.45	4.15	7.25	8.4	9.0	8.15	7.2	6.0	3.35	2.8
11	1.3	1.6	10.25	3.85	7.0	8.2	9.2	8.8	8.8	6.0	3.4	2.7
12	1.25	1.55	7.15	3.6	6.7	7.75	9.6	8.3	9.3	5.9	3.3	2.7
13	1.2	1.6	4.65	3.8	6.5	6.85	9.95	7.6	8.5	5.65	3.35	2.7
14	1.25	1.6	3.7	3.85	6.4	4.45	10.25	7.1	7.3	5.4	3.3	2.8
15	1.2	1.6	3.3	4.05	6.25	6.15	10.45	7.4	6.15	5.2	3.25	2.7
16	1.2	1.7	2.85	3.85	6.3	6.1	9.4	8.0	6.0	4.85	3.0	2.65
17	1.25	1.8	2.65	3.85	6.35	13.4	9.2	8.25	5.9	5.05	3.0	2.45
18	1.2	1.7	2.55	4.15	6.4	20.6	9.3	8.65	6.5	5.0	3.05	2.5
19	1.25	1.6	2.5	3.75	6.15	(a)	9.65	9.45	6.8	5.0	3.05	2.55
20	1.3	1.6	2.45	3.7	6.0		9.9	9.3	7.3	4.9	3.15	2.55
21	1.3	1.6	2.4	3.65	6.0		9.45	8.1	7.7	4.85	3.1	2.5
22	1.3	1.6	2.8	3.6	6.8		9.05	8.0	7.45	4.55	3.0	2.5
23	1.3	1.6	3.65	3.6	6.5	13.5	9.05	7.2	6.9	4.4	3.0	2.5
24	1.3	1.6	3.55	3.65	6.1	13.25	9.2	7.15	6.4	4.4	3.0	2.4
25	1.3	1.6	5.7	4.1	6.75	12.3	9.25	7.55	6.55	4.4	2.9	2.35
26	1.3	1.6	9.95	4.9	6.7	11.5	8.95	7.8	7.1	4.5	3.0	2.4
27	1.3	1.5	9.45	4.8	6.25	10.2	8.85	8.0	7.25	4.25	2.95	2.5
28	1.35	1.5	6.25	8.65	5.95	9.2	8.8	8.3	7.4	4.3	3.0	2.45
29	1.4	1.5	5.15	8.7		8.75	8.6	8.45	7.55	4.3	3.0	1.45
30	1.35	1.5	5.5	6.9		8.55	8.55	8.35	7.3	4.25	3.05	2.4
31	1.4		5.8	6.1		8.5		8.2		4.25	2.95	
1907-8.												
1	2.4	2.7	2.6	4.2	3.5	4.05	4.0	5.6	4.4	3.3	2.0	1.4
2	2.4	2.7	2.6	3.5	3.8	4.3	4.0	5.55	4.45	3.25	2.0	1.5
3	2.4	2.6	2.6	3.5	4.65	4.6	3.8	5.8	4.15	3.25	2.0	1.5
4	2.4	2.7	2.6	3.55	4.7	4.3	4.0	4.8	4.15	3.25	2.0	1.4
5	2.4	2.7	2.6	3.5	4.4	4.0	4.2	4.75	4.05	3.2	1.9	1.5
6	2.4	2.7	2.75	3.3	3.8	3.95	4.2	4.9	4.15	3.1	1.95	1.4
7	2.4	2.7	3.5	3.25	3.7	3.8	4.2	4.75	4.05	3.1	1.9	1.4
8	2.4	2.7	3.6	3.3	3.6	3.8	4.0	4.7	4.35	3.0	1.9	1.5
9	2.4	2.6	3.45	3.2	3.7	3.8	4.0	4.6	4.35	2.95	1.8	1.5
10	2.4	2.6	4.1	3.2	3.7	3.7	4.0	4.5	4.55	2.95	1.8	1.5

° Maximum 30.4 feet, 5 a. m. Bridge went out about 1 a. m.

Daily gage height, in feet, of American River at Fair Oaks, Cal., for 1904-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1907-8.												
11.....	2.4	2.6	4.2	3.2	3.6	3.8	5.2	4.25	4.4	2.9	1.7	1.4
12.....	2.4	2.6	3.6	3.65	3.5	3.8	6.0	4.6	4.55	2.95	1.7	1.4
13.....	2.4	2.6	3.3	3.8	3.5	3.95	5.65	4.6	4.35	2.85	1.7	1.5
14.....	2.3	2.6	3.3	4.0	3.5	4.4	6.1	4.5	4.35	2.7	1.7	1.5
15.....	2.4	2.6	3.25	3.7	3.45	4.6	5.75	5.25	4.25	2.7	1.6	1.5
16.....	2.4	2.6	2.95	3.55	3.4	5.05	5.75	5.05	4.15	2.65	1.6	1.5
17.....	2.4	2.6	2.9	3.5	3.4	5.0	5.0	4.9	4.1	2.6	1.6	1.5
18.....	2.4	2.6	2.8	3.5	3.4	5.0	5.0	4.95	3.9	2.5	1.6	1.4
19.....	2.4	2.6	2.8	3.5	3.35	5.0	5.4	5.1	3.8	2.5	1.6	1.5
20.....	2.4	2.6	2.75	3.9	3.3	4.95	6.05	5.0	3.7	2.4	1.5	1.5
21.....	2.4	2.6	2.7	5.5	3.3	4.85	5.9	5.2	4.2	2.3	1.5	1.5
22.....	2.4	2.6	2.7	5.55	3.25	4.75	5.5	5.35	3.8	2.3	1.5	1.5
23.....	2.4	2.6	2.7	5.9	3.2	4.6	5.15	5.2	3.7	2.2	1.5	1.5
24.....	2.4	2.6	2.6	5.75	3.1	4.5	4.8	5.25	3.5	2.2	1.5	1.5
25.....	2.4	2.6	2.6	5.0	3.2	5.0	6.65	5.5	3.6	2.2	1.5	1.5
26.....	2.8	2.6	2.7	4.45	3.3	4.8	4.8	5.4	3.6	2.2	1.5	1.5
27.....	2.85	2.6	6.7	4.1	3.4	4.5	4.7	5.55	3.45	2.1	1.5	1.5
28.....	2.7	2.6	4.4	4.0	3.55	4.3	5.5	5.1	3.4	2.0	1.5	1.5
29.....	2.7	2.6	3.75	3.7	4.0	4.3	5.4	5.05	3.4	2.0	1.5	1.5
30.....	2.7	2.6	4.35	3.7	.....	4.3	5.55	5.1	3.2	2.0	1.4	1.5
31.....	2.7	.....	5.5	3.55	.....	4.1	.....	4.95	.....	2.0	1.5	.....
1908-9. a												
1.....	1.5	1.9	2.3	.....	7.2	6.1	5.3	7.6	7.8	5.0	2.5	2.0
2.....	1.5	1.9	2.3	.....	7.3	6.15	5.3	7.2	7.8	5.1	2.7	.....
3.....	1.5	1.9	2.6	2.5	7.3	6.15	5.4	7.8	7.9	5.0	2.1	.....
4.....	1.5	1.8	2.9	2.85	7.3	6.1	5.6	8.3	8.0	5.2	3.0	2.0
5.....	1.5	1.8	3.5	5.7	7.4	6.3	5.4	7.9	7.8	5.2	3.2	.....
6.....	1.5	1.8	3.8	6.7	8.6	6.35	5.7	7.8	7.6	4.8	3.2	.....
7.....	1.5	1.8	3.5	7.4	10.75	6.5	5.8	7.7	7.3	4.7	3.0	.....
8.....	1.5	1.8	3.15	9.4	11.55	6.25	5.6	7.8	6.8	4.4	3.0	.....
9.....	1.5	1.7	2.85	9.4	11.9	6.45	5.8	8.3	7.1	4.5	2.9	.....
10.....	1.5	1.6	2.8	6.8	12.4	6.3	5.9	7.9	6.7	4.3	2.6	.....
11.....	1.5	1.6	2.6	6.8	12.55	6.15	5.9	8.1	6.2	4.0	2.5	1.9
12.....	1.5	1.6	2.5	(b)	13.25	6.05	6.0	7.7	6.5	3.0	2.4	.....
13.....	1.5	1.5	2.3	.....	10.85	6.1	6.1	7.3	6.2	3.0	2.3	1.9
14.....	1.6	1.5	2.2	.....	10.15	6.1	5.9	7.5	6.3	3.9	2.2	1.8
15.....	1.8	1.4	2.15	.....	9.5	6.2	5.9	7.1	6.0	3.8	2.1	1.8
16.....	3.75	1.4	2.2	.....	9.15	5.85	6.3	7.0	6.2	3.7	2.1	1.9
17.....	2.9	1.4	2.1	.....	8.95	5.85	6.2	6.8	5.6	3.5	2.0	1.9
18.....	2.6	1.4	2.0	.....	8.6	5.65	6.8	6.4	5.7	3.4	2.0	1.8
19.....	2.6	1.4	1.9	.....	8.35	5.55	6.2	6.1	5.5	3.2	2.1	1.8
20.....	2.5	1.4	1.8	.....	8.1	5.6	6.9	6.4	6.2	3.3	2.0	2.0
21.....	2.3	2.9	1.75	.....	7.8	5.5	7.0	6.3	5.8	3.2	2.0	1.8
22.....	2.2	3.2	1.6	.....	7.3	5.6	7.4	6.0	5.9	3.2	.....	2.1
23.....	2.1	3.0	.....	.....	7.2	5.5	7.7	5.7	5.2	3.2	2.0	1.9
24.....	2.1	3.0	.....	9.75	7.05	5.3	7.5	5.5	5.4	3.2	2.0	1.9
25.....	2.0	2.9	.....	8.9	6.8	5.5	7.8	5.5	5.1	3.2	2.0	1.7
26.....	2.0	2.8	.....	8.35	6.65	5.4	7.4	5.8	5.6	3.2	2.0	1.6
27.....	2.0	2.6	.....	7.95	6.35	5.3	7.6	6.3	5.6	2.8	.....	1.8
28.....	2.0	2.5	.....	7.65	6.1	5.4	6.7	5.4	2.6	.....	.....	1.7
29.....	2.0	2.4	.....	7.35	.....	5.3	7.6	6.9	5.2	2.6	2.0	1.7
30.....	2.0	2.3	.....	7.2	.....	5.4	7.4	7.5	4.5	2.5	2.0	1.9
31.....	1.9	.....	.....	7.0	.....	5.4	.....	7.7	.....	2.4	2.0	.....
1909-10. c												
1.....	1.8	2.6	7.2	9.8	5.3	6.4	6.7	6.8	5.5	2.5	2.0	1.7
2.....	1.7	2.5	d 16.0	9.7	5.2	6.2	6.9	6.7	5.3	2.5	2.0	1.7
3.....	1.9	2.6	.....	8.7	5.3	6.4	6.8	6.5	5.2	2.6	1.9	1.7
4.....	2.2	2.6	.....	8.3	5.4	6.6	6.8	6.4	5.0	3.6	1.8	1.7
5.....	2.1	2.7	.....	7.9	6.3	6.6	6.7	6.2	4.8	2.5	1.8	1.7
6.....	1.9	2.6	.....	7.5	6.2	6.5	6.7	6.0	4.6	2.4	1.8	1.7
7.....	2.0	2.6	.....	7.3	5.4	6.5	6.8	6.0	4.3	2.2	1.8	1.7
8.....	2.1	2.6	.....	6.9	5.2	6.4	7.0	6.1	4.2	2.3	1.7	1.8
9.....	2.2	2.6	.....	5.9	5.0	6.6	7.4	6.2	3.9	2.2	1.7	1.8
10.....	2.2	3.1	.....	5.3	4.8	6.6	7.7	6.4	3.7	2.3	1.8	1.7

a Gage heights from Dec. 23, 1908, to Jan. 2, 1909, are unreliable and are not published. Gage and temporary bridge washed out Jan. 13, 1909. Gage replaced at same datum at new bridge Jan. 24, 1909.

b Water above gage.

c Gage and bridge washed out Dec. 2, 1909, and replaced at same location and datum Dec. 17, 1909.

d Approximate.

Daily gage height, in feet, of American River at Fair Oaks, Cal., for 1904-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909-10.												
11.....	2.1	3.0	.....	4.8	4.7	6.8	7.9	6.5	3.6	2.3	1.8	1.7
12.....	2.1	2.8	.....	4.6	4.6	6.7	6.9	6.6	3.6	2.2	1.7	1.7
13.....	2.2	2.7	.....	4.5	4.5	6.8	6.7	6.6	3.6	2.3	1.7	1.8
14.....	2.1	2.7	.....	4.4	4.5	6.9	6.9	6.7	3.5	2.3	1.7	1.7
15.....	2.0	2.6	.....	4.9	4.6	6.6	7.2	6.7	3.5	2.3	1.8	1.7
16.....	2.2	2.6	.....	5.9	4.7	6.4	7.4	6.8	3.5	2.2	1.8	1.8
17.....	2.3	2.6	4.65	6.5	4.6	6.1	7.5	6.8	3.4	2.3	1.8	1.7
18.....	2.0	2.5	4.5	5.3	5.6	6.8	7.6	6.8	3.3	2.3	1.7	1.7
19.....	2.2	2.5	4.4	4.8	5.5	9.1	7.7	6.8	3.2	2.2	1.7	1.7
20.....	2.1	3.9	4.3	5.4	5.4	10.3	7.7	6.7	3.2	2.2	1.8	1.7
21.....	2.3	14.75	4.2	5.8	5.1	10.1	7.9	6.6	3.1	2.2	1.7	1.7
22.....	2.4	7.3	4.1	6.3	5.1	9.7	7.8	6.7	3.1	2.2	1.7	1.7
23.....	2.3	7.8	4.1	8.1	5.2	9.3	7.7	6.7	3.0	2.3	1.8	1.8
24.....	2.5	8.3	4.4	9.5	5.3	8.5	7.7	6.5	3.0	2.3	1.7	1.8
25.....	2.6	8.0	4.6	6.5	5.6	7.3	7.6	6.2	2.8	2.2	1.8	1.8
26.....	2.4	6.8	4.5	6.3	5.6	7.1	7.8	6.1	2.7	2.2	1.7	1.8
27.....	2.5	6.4	3.25	5.8	5.7	6.9	7.7	6.0	2.6	2.3	1.8	1.8
28.....	2.6	4.6	3.0	5.5	6.6	6.8	7.3	5.8	2.6	2.1	1.7	1.8
29.....	2.5	5.2	4.05	5.5	.....	6.6	7.0	5.7	2.5	2.1	1.7	1.9
30.....	2.6	5.9	3.1	5.6	.....	6.5	6.8	5.6	2.5	2.0	1.7	1.9
31.....	2.6	.....	3.3	5.5	.....	6.7	.....	5.6	.....	2.0	1.8	.....
1910-11. <sup>a</sup>												
1.....	1.8	2.2	2.5	2.3	13.7	5.2	9.6	8.0	8.7	6.9	3.7	2.5
2.....	1.9	2.2	2.5	2.3	10.6	6.3	9.8	8.1	8.8	6.8	3.6	2.5
3.....	1.9	2.3	2.5	2.3	9.85	7.1	9.8	8.1	8.8	6.7	3.5	2.5
4.....	1.9	2.3	2.9	2.3	9.3	10.0	9.0	8.1	9.0	6.6	3.4	2.6
5.....	2.0	2.3	5.0	2.2	8.9	10.2	10.3	8.1	9.1	6.5	3.5	2.5
6.....	2.1	2.2	5.1	2.2	8.1	9.1	11.8	8.1	9.3	6.4	3.5	2.5
7.....	2.0	2.2	4.5	2.2	7.5	14.2	10.0	8.0	9.7	6.6	3.5	2.5
8.....	2.1	2.3	4.0	2.1	7.3	12.6	9.8	8.0	9.6	6.3	3.5	2.5
9.....	2.0	2.3	3.8	2.1	6.9	9.7	9.5	7.9	9.6	6.1	3.5	2.6
10.....	1.9	2.3	3.2	3.75	6.3	9.2	9.0	7.7	9.5	6.0	2.7	2.5
11.....	1.9	2.2	3.4	5.95	8.3	8.6	8.2	7.7	9.4	5.8	2.7	2.5
12.....	1.9	2.2	3.7	11.0	9.5	7.8	8.2	7.8	9.3	5.7	2.7	2.5
13.....	2.0	2.2	3.6	11.2	8.2	7.5	8.0	7.8	9.1	5.5	2.8	2.5
14.....	1.9	2.2	3.5	11.6	7.9	7.2	7.6	7.9	8.9	5.5	2.7	2.5
15.....	2.0	2.3	3.4	9.6	7.5	7.0	7.1	7.9	8.7	5.3	2.8	2.5
16.....	2.1	2.3	3.4	6.05	7.5	6.9	6.8	7.9	8.5	5.3	2.7	2.5
17.....	2.1	2.3	3.3	5.2	7.2	6.9	6.8	8.0	8.3	5.1	2.7	2.5
18.....	2.1	2.3	3.2	4.9	7.0	7.0	7.0	8.2	8.2	5.0	2.7	2.5
19.....	2.2	2.3	3.2	4.8	6.7	7.0	7.3	8.4	7.9	4.9	2.6	2.5
20.....	2.1	2.4	3.1	9.8	6.1	7.0	8.4	8.6	7.6	4.8	2.6	2.5
21.....	2.0	2.4	3.1	8.0	5.5	7.0	8.7	8.7	7.3	4.6	2.6	2.4
22.....	2.0	2.4	3.0	6.5	5.5	7.2	8.8	8.8	7.2	4.6	2.6	2.4
23.....	2.0	2.4	2.9	6.7	5.2	7.4	9.0	8.7	7.0	4.5	2.5	2.4
24.....	1.9	2.4	2.8	10.15	5.1	7.6	9.1	8.6	6.7	4.2	2.6	2.4
25.....	1.9	2.4	2.7	12.3	5.0	7.7	9.3	8.9	6.3	4.2	2.5	2.4
26.....	2.0	2.4	2.6	10.4	5.1	7.8	9.7	8.7	6.1	4.1	2.7	2.4
27.....	2.1	2.4	2.5	8.5	5.0	7.9	9.4	8.8	6.2	4.2	2.5	2.5
28.....	2.1	2.4	2.5	8.3	5.1	8.0	9.3	9.0	6.4	4.0	2.6	2.5
29.....	2.2	2.4	2.4	10.5	.....	8.1	8.7	8.8	6.9	3.9	2.6	2.5
30.....	2.2	2.5	2.4	19.05	.....	8.5	8.5	8.7	7.2	3.9	2.6	2.5
31.....	2.2	.....	2.3	19.7	.....	9.0	.....	8.6	.....	3.8	2.5	.....
1911-12.												
1.....	.....	.....	.....	3.0	3.3	3.25	4.0	5.7	7.0	.....	.....	.....
2.....	.....	.....	.....	3.0	3.3	3.35	4.1	5.9	7.8	.....	.....	.....
3.....	2.58	.....	.....	2.8	3.15	3.35	4.4	5.6	7.2	.....	.....	.....
4.....	.....	.....	.....	2.8	3.1	3.25	4.6	5.4	7.6	.....	.....	.....
5.....	.....	.....	.....	2.6	3.0	3.5	4.6	5.4	7.4	.....	.....	.....
6.....	.....	.....	.....	2.9	3.0	4.5	4.5	5.4	6.8	.....	.....	.....
7.....	.....	.....	.....	3.0	3.15	5.3	4.5	5.5	6.1	.....	.....	.....
8.....	.....	.....	.....	3.0	3.15	4.4	4.8	6.0	6.0	.....	.....	.....
9.....	.....	.....	.....	3.4	3.1	4.2	4.8	6.3	5.6	.....	.....	.....
10.....	.....	.....	.....	3.6	3.0	4.5	5.0	6.2	5.6	.....	.....	.....
11.....	.....	.....	.....	4.0	3.0	4.0	4.9	6.5	5.5	.....	.....	.....
12.....	.....	.....	.....	4.6	3.0	4.1	4.7	7.1	5.6	.....	.....	.....
13.....	.....	.....	.....	3.8	3.0	4.0	4.6	6.6	6.7	.....	.....	.....
14.....	.....	.....	.....	4.0	3.0	4.2	4.5	6.4	5.5	.....	.....	.....
15.....	.....	.....	.....	3.6	3.0	4.4	4.6	6.5	5.2	.....	.....	.....

<sup>a</sup> Gage heights May 1 to Aug. 9, 1911, considered unreliable and have been corrected by comparison with the record at Folsom. The corrected values are contained in the following table.

Daily gage height, in feet, of American River at Fair Oaks, Cal., for 1904-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1911-12.												
16.				3.6	3.0	4.2	4.4	6.8	5.0			
17.				3.4	3.0	4.1	4.5	6.4	4.6			
18.				3.0	3.15	4.0	4.4	6.6	5.0			
19.				3.0	3.45	4.0	4.2	7.4	4.5			
20.				3.0	3.6	3.95	4.0	7.2	4.5			
21.				3.5	3.55	4.0	4.0	6.4	4.4			
22.				3.25	3.5	3.95	4.0	5.9	4.0			
23.				3.2	3.4	3.8	4.0	5.6	4.0			
24.				3.15	3.3	3.9	4.2	5.6	4.1			
25.				3.1	3.2	3.8	4.5	5.7	4.0			
26.				3.65	3.3	3.85	4.6	6.6	4.0			
27.				4.9	3.25	3.9	4.6	6.8	4.0			
28.				4.0	3.0	4.0	4.4	6.5	3.8			
29.				3.8	3.0	4.2	5.2	6.6	3.8			
30.				3.55		4.2	6.5	6.8	3.8			
31.				3.35		4.2		6.6				

Corrected daily gage height, in feet, of American River at Fair Oaks, Cal., for May 1 to Aug. 9, 1911.

Day.	May.	June.	July.	Aug.	Day.	May.	June.	July.	Aug.
1.	8.2	9.0	6.0	3.0	16.	8.1	10.6	4.8	
2.	8.4	9.5	6.0	3.0	17.	7.8	10.6	4.7	
3.	8.5	10.1	6.0	2.9	18.	7.5	10.6	4.6	
4.	8.9	10.5	5.9	2.9	19.	7.6	10.5	4.4	
5.	9.8	10.7	5.8	2.9	20.	7.9	9.9	4.2	
6.	8.6	10.9	5.8	2.9	21.	8.4	9.2	4.1	
7.	8.4	10.6	5.7	2.8	22.	9.2	8.3	3.9	
8.	8.4	10.5	5.5	2.8	23.	10.2	7.5	3.7	
9.	8.4	10.5	5.2	2.8	24.	10.6	6.9	3.6	
10.	8.3	10.6	5.0		25.	8.9	6.5	3.6	
11.	8.5	10.9	5.0		26.	8.6	6.3	3.6	
12.	8.9	11.2	4.9		27.	8.7	6.6	3.5	
13.	9.0	11.0	4.9		28.	9.0	7.3	3.3	
14.	8.7	10.8	4.9		29.	9.2	6.9	3.2	
15.	8.4	10.7	4.8		30.	9.4	6.5	3.2	
					31.	9.7		3.1	

NOTE.—Gage heights corrected by a comparison with Folsom gage heights and were used in determining the daily discharges for this period.

Daily discharge, in second-feet, of American River at Fair Oaks, Cal., for 1904-1912.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1904-5.												
1.			1,360	7,030	3,200	3,820	6,680	6,800	3,820	1,170	355	148
2.			1,680	5,120	10,900	3,820	7,140	7,030	3,730	1,170	355	148
3.			1,410	2,740	6,460	3,820	6,680	6,570	3,550	1,080	355	148
4.		1,040	940	2,320	4,700	3,730	6,800	5,890	3,730	1,080	355	130
5.		990	990	2,120	8,340	3,820	7,140	5,780	3,550	1,000	328	115
6.		990	840	1,940	5,670	3,820	6,800	5,670	4,810	1,000	328	130
7.		890	840	2,250	4,400	3,820	7,140	5,890	4,920	920	328	130
8.		790	890	2,250	3,550	3,820	6,220	5,780	5,020	920	328	130
9.		790	840	2,660	3,200	3,640	6,000	6,340	5,340	840	300	115
10.		700	840	1,660	3,120	3,290	6,340	5,670	3,820	840	300	130
11.		700	890	1,650	2,960	3,550	5,670	5,020	4,010	770	300	130
12.		700	940	1,550	2,880	3,820	6,000	5,020	3,820	770	300	115
13.		745	990	1,500	2,590	4,200	4,300	4,600	3,380	700	300	130
14.		890	840	2,120	2,380	4,810	5,120	5,780	2,960	700	275	130
15.		940	790	3,920	2,250	4,920	4,810	7,140	3,120	640	275	130
16.		1,040	840	3,730	2,000	3,730	4,300	8,460	2,810	640	275	165
17.		990	990	2,660	3,380	4,100	4,010	9,080	2,590	640	275	148
18.		790	890	2,590	3,200	4,400	3,730	8,340	2,520	580	275	165
19.		940	700	2,740	3,040	21,200	3,920	7,980	2,520	580	250	130
20.		890	940	2,660	7,140	10,400	4,400	7,740	2,520	580	250	148

Daily discharge, in second-feet, of American River at Fairoaks, Cal., for 1904-1912—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1904-5.												
21.		840	940	2,960	5,020	9,470	5,450	6,680	2,590	520	250	148
22.		790	1,190	4,200	4,300	8,460	7,980	5,230	2,180	520	250	130
23.		840	990	8,820	3,820	7,030	10,300	5,670	2,380	520	250	148
24.		840	940	7,740	3,640	8,100	14,900	6,110	1,880	465	205	148
25.		940	990	5,450	3,730	7,500	11,000	7,030	1,720	465	205	130
26.		890	840	3,550	4,400	7,980	9,470	6,570	1,660	465	205	130
27.		890	790	3,200	4,010	8,700	8,220	5,670	1,450	410	205	148
28.		990	700	2,660	4,100	7,740	8,460	5,340	1,350	410	205	148
29.		990	890	2,520	.....	8,820	8,700	4,100	1,300	382	165	148
30.		1,360	2,210	2,450	.....	7,620	8,580	3,640	1,260	382	165	148
31.		.....	11,600	2,590	.....	6,680	.....	3,040	.....	382	165	.....
1905-6.												
1.	148	148	328	410	2,320	8,700	20,800	10,900	15,800	10,400	1,940	580
2.	130	148	275	355	2,180	7,740	17,600	13,500	17,000	13,200	1,720	550
3.	148	148	250	355	2,380	11,800	14,700	13,500	20,400	12,900	1,770	580
4.	148	148	275	410	2,250	11,000	12,900	16,100	18,200	12,100	1,660	520
5.	148	148	205	250	2,320	7,500	10,300	20,800	15,800	12,600	1,500	580
6.	148	165	228	250	2,450	6,680	9,470	18,600	14,400	10,300	1,300	492
7.	148	165	250	410	2,380	6,680	9,600	20,400	15,400	9,880	1,260	465
8.	130	165	228	250	2,450	6,680	10,900	20,200	16,300	9,340	1,300	465
9.	148	165	228	355	2,520	7,030	10,200	17,600	16,300	8,950	1,260	465
10.	130	165	228	250	2,960	7,140	11,000	18,200	18,200	7,260	1,220	410
11.	148	165	165	355	2,590	7,860	10,600	19,600	22,500	6,800	1,260	410
12.	148	165	165	550	2,380	16,300	10,200	18,600	23,300	6,460	1,260	410
13.	148	165	130	6,460	2,450	18,000	9,740	14,400	19,000	6,340	1,040	410
14.	148	148	148	13,200	3,120	31,600	9,740	12,100	15,800	6,570	1,000	410
15.	165	148	165	8,580	6,920	24,800	11,000	12,300	15,000	6,000	1,000	465
16.	148	165	205	16,500	6,920	14,900	12,100	11,300	18,400	5,560	880	520
17.	148	185	205	21,400	6,800	13,000	12,100	10,600	18,600	5,230	840	465
18.	148	130	228	44,200	5,230	8,340	12,400	11,200	17,000	4,600	805	410
19.	148	165	250	44,500	13,200	7,260	11,600	10,200	12,900	4,200	770	410
20.	148	185	205	18,600	8,220	6,800	11,200	9,880	14,700	3,820	770	355
21.	148	165	185	8,820	16,700	6,800	10,900	11,200	18,000	3,820	770	355
22.	148	228	185	7,380	13,200	12,400	12,700	10,900	20,200	3,460	805	300
23.	148	165	250	5,020	9,200	19,000	14,400	10,300	20,200	3,380	770	300
24.	148	228	300	4,700	8,340	34,000	13,700	9,600	16,900	3,380	700	300
25.	165	165	250	4,400	9,200	30,700	11,900	9,470	13,200	3,460	700	328
26.	148	205	300	3,460	7,980	27,700	11,000	18,200	12,400	3,380	610	300
27.	148	165	355	2,880	7,980	21,000	13,000	18,000	9,470	2,040	640	328
28.	148	355	355	3,200	11,500	15,900	13,500	26,600	8,820	2,740	520	300
29.	148	550	438	2,810	.....	11,600	12,700	24,400	8,820	2,740	520	300
30.	148	410	520	2,320	.....	13,500	10,900	14,900	8,340	2,380	520	328
31.	148	.....	382	2,320	.....	16,300	.....	14,000	.....	2,120	550	.....
1906-7.												
1.	300	328	410	4,600	17,800	6,220	13,900	12,400	15,800	8,820	2,650	1,080
2.	355	355	410	2,960	80,800	8,220	15,600	12,400	17,000	9,200	2,560	935
3.	328	438	410	2,810	42,800	7,380	13,700	12,300	14,900	9,080	2,480	890
4.	300	670	410	2,880	39,800	7,260	13,400	12,300	14,400	8,950	2,060	980
5.	300	2,000	410	6,680	29,100	8,580	13,700	11,800	14,000	9,600	1,770	890
6.	300	1,300	410	4,100	19,200	8,950	12,400	11,300	13,700	8,580	1,520	890
7.	300	880	410	3,550	14,400	7,980	12,100	10,400	13,400	7,030	1,460	890
8.	300	640	805	3,550	12,400	7,380	12,100	9,470	11,500	7,500	1,700	890
9.	300	550	1,300	3,380	10,700	8,220	13,700	11,500	10,000	6,920	1,770	890
10.	300	465	1,040	3,040	9,880	13,400	15,400	12,600	9,740	6,800	1,580	890
11.	300	465	20,200	2,590	9,200	13,700	16,100	14,700	14,700	6,800	1,640	890
12.	275	438	9,600	2,250	8,460	11,300	17,600	13,000	16,500	6,570	1,520	890
13.	250	465	3,920	2,520	7,980	8,820	19,000	10,900	13,700	6,030	1,580	890
14.	275	465	2,380	2,590	7,440	7,860	20,200	9,470	10,000	5,420	1,520	890
15.	250	465	1,880	2,880	7,380	7,140	21,000	10,300	7,140	4,960	1,460	890
16.	250	520	1,400	2,590	7,500	7,030	16,900	12,100	6,800	4,180	1,180	845
17.	275	580	1,220	2,590	7,620	34,200	16,100	12,900	6,570	4,620	1,180	680
18.	250	520	1,120	3,040	7,740	70,000	16,500	14,200	7,980	4,500	1,240	720
19.	275	465	1,080	2,450	7,140	105,000	17,800	17,000	8,700	4,500	1,240	760
20.	300	465	1,040	2,380	6,800	86,000	18,800	16,500	10,000	4,290	1,340	760
21.	300	465	1,000	2,320	6,800	72,500	17,000	12,400	11,200	4,180	1,290	720
22.	300	465	1,350	2,250	8,700	59,000	15,600	12,100	10,400	3,580	1,180	720
23.	300	465	2,320	2,250	7,980	34,700	15,600	9,740	8,950	3,290	1,180	720
24.	300	465	2,180	2,320	7,030	33,500	16,100	9,600	7,740	3,290	1,180	640
25.	300	465	6,110	2,960	8,580	29,100	16,300	10,700	8,100	3,290	1,080	600

Daily discharge, in second-feet, of American River at Fair Oaks, Cal., for 1904-1912—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1906-7.												
26.....	300	465	19,000	4,400	8,460	25,500	15,200	11,500	9,470	3,480	1,180	640
27.....	300	410	17,000	4,200	7,380	20,000	14,900	12,100	9,880	3,010	1,139	720
28.....	328	410	7,380	14,200	6,680	16,100	14,700	13,000	10,300	3,100	1,180	680
29.....	355	410	4,920	14,400	.....	14,500	14,000	13,500	10,700	3,100	1,180	680
30.....	328	410	5,670	8,950	.....	13,900	13,900	13,200	10,000	3,010	1,240	640
31.....	355	.....	6,340	7,030	.....	13,700	.....	12,700	.....	3,010	1,130	.....
1907-8.												
1.....	640	890	800	2,920	1,770	2,650	2,560	5,880	3,290	1,520	350	100
2.....	640	890	800	1,770	2,220	3,100	2,560	5,760	3,380	1,460	350	130
3.....	640	890	800	1,770	3,780	3,680	2,220	6,340	2,830	1,460	350	130
4.....	640	890	800	1,840	3,880	3,100	2,560	4,080	2,830	1,460	350	100
5.....	640	890	800	1,770	3,290	2,560	2,920	3,980	2,650	1,400	290	130
6.....	640	890	935	1,520	2,220	2,480	2,920	4,290	2,830	1,290	320	100
7.....	640	890	1,770	1,460	2,060	2,220	2,920	3,980	2,650	1,290	290	100
8.....	640	890	1,910	1,520	1,910	2,220	2,560	3,880	3,200	1,180	290	130
9.....	640	800	1,700	1,520	2,060	2,220	2,560	3,680	3,200	1,130	240	130
10.....	640	800	2,740	1,400	2,060	2,060	2,560	3,480	3,580	1,130	240	130
11.....	640	800	2,920	1,400	1,910	2,220	4,960	3,010	3,290	1,080	200	100
12.....	640	800	1,910	1,980	1,770	2,220	6,800	3,680	3,580	1,130	200	100
13.....	640	800	1,520	2,220	1,770	2,480	6,000	3,680	3,200	1,030	200	130
14.....	560	800	1,520	2,560	1,770	3,290	7,030	3,480	3,200	890	200	130
15.....	640	800	1,460	2,060	1,700	3,680	6,220	5,080	3,010	890	160	130
16.....	640	800	1,130	1,840	1,640	4,620	6,220	4,620	2,830	845	160	130
17.....	640	800	1,080	1,770	1,640	4,500	4,500	4,290	2,740	800	160	130
18.....	640	800	980	1,770	1,640	4,500	4,500	4,400	2,390	720	160	100
19.....	640	800	980	1,770	1,580	4,500	5,420	4,730	2,220	720	160	130
20.....	640	800	935	2,390	1,520	4,400	6,920	4,500	2,060	640	130	130
21.....	640	800	890	5,650	1,520	4,180	6,570	4,960	2,920	560	130	130
22.....	640	800	890	5,760	1,460	3,980	5,650	5,300	2,220	560	130	130
23.....	640	800	890	6,570	1,400	3,650	4,840	4,960	2,060	490	130	130
24.....	640	800	800	6,220	1,290	3,480	4,080	5,080	1,770	490	130	130
25.....	640	800	800	4,500	1,400	4,500	3,780	5,650	1,910	490	130	130
26.....	980	800	890	3,380	1,520	4,080	4,080	5,420	1,910	490	130	130
27.....	1,030	800	8,460	2,740	1,640	3,480	3,880	5,760	1,700	420	130	130
28.....	890	800	3,290	2,560	1,840	3,100	5,650	4,730	1,640	350	130	130
29.....	890	800	2,140	2,060	2,560	3,100	5,420	4,620	1,640	350	130	130
30.....	890	800	3,200	2,060	.....	3,100	5,760	4,730	1,400	350	100	130
31.....	890	.....	5,650	1,840	.....	2,740	.....	4,400	.....	350	130	.....
1908-9.												
1.....	130	290	560	160	9,740	7,030	5,190	10,900	11,500	4,500	720	350
2.....	130	290	560	160	10,000	7,140	5,190	9,740	11,500	4,730	890	350
3.....	130	290	800	720	10,000	7,140	5,420	11,500	11,800	4,500	420	350
4.....	130	240	1,080	1,030	10,000	7,030	5,880	13,000	12,100	4,960	1,180	350
5.....	130	240	1,770	6,110	10,300	7,500	5,420	11,800	11,500	4,960	1,400	340
6.....	130	240	2,220	8,460	14,000	7,620	6,110	11,500	10,900	4,080	1,400	330
7.....	130	240	1,770	10,300	22,200	7,980	6,340	11,200	10,000	3,880	1,180	320
8.....	130	240	1,340	16,900	25,700	7,380	5,880	11,500	8,700	3,290	1,180	320
9.....	130	200	1,030	16,900	27,200	7,860	6,340	13,000	9,470	3,480	1,080	310
10.....	130	160	980	8,700	29,500	7,500	6,570	11,800	8,670	3,100	800	300
11.....	130	160	800	8,700	30,200	7,140	6,570	12,400	7,260	2,560	720	290
12.....	130	160	720	15,400	33,500	6,920	6,800	11,200	7,980	1,180	640	290
13.....	130	150	560	23,300	22,700	7,030	7,030	10,000	7,260	1,180	560	290
14.....	160	130	490	98,000	19,800	7,140	6,570	10,600	7,500	2,390	490	240
15.....	240	100	455	86,000	17,200	7,260	6,570	9,470	6,800	2,220	420	240
16.....	2,140	100	490	77,500	15,900	6,460	7,500	9,200	7,260	2,060	420	290
17.....	1,080	100	420	50,000	15,200	6,460	7,260	8,700	5,880	1,770	350	240
18.....	800	100	350	40,000	14,000	6,000	8,700	7,740	6,110	1,640	350	290
19.....	800	100	290	28,600	13,200	5,760	9,740	7,030	5,650	1,400	420	240
20.....	720	100	240	33,700	12,400	5,880	8,950	7,740	7,260	1,520	350	350
21.....	590	1,080	220	62,500	11,500	5,650	9,200	7,500	6,340	1,400	350	240
22.....	490	1,400	160	33,200	10,000	5,880	10,300	6,800	6,570	1,400	350	420
23.....	420	1,180	160	28,200	9,740	5,650	11,200	6,110	4,960	1,400	350	290
24.....	420	1,180	160	18,200	9,340	5,190	10,600	5,650	5,420	1,400	350	290
25.....	350	1,080	160	15,000	8,700	5,650	11,500	5,650	4,730	1,400	350	200
26.....	350	980	160	13,200	8,340	5,420	10,300	6,340	5,880	1,400	350	160
27.....	350	800	160	11,900	7,620	5,190	10,900	7,500	5,880	980	350	240
28.....	350	720	160	11,000	7,030	5,420	10,600	8,460	5,420	800	350	200
29.....	350	640	160	10,200	.....	5,190	10,900	8,950	4,960	800	350	290
30.....	359	560	160	9,740	.....	5,420	10,300	10,600	4,500	720	350	200
31.....	290	.....	160	9,200	.....	5,420	.....	11,200	.....	640	350	.....

Daily discharge, in second-feet, of American River at Fairoaks, Cal., for 1904-1912—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909-10.												
1.	240	800	9,740	19,600	5,320	7,950	8,780	9,060	5,780	690	330	180
2.	200	720	47,000	19,200	5,100	7,450	9,340	8,780	5,320	690	330	180
3.	290	800	14,400	15,300	5,320	7,950	9,060	8,220	5,100	780	275	180
4.	490	800	7,740	13,800	5,550	8,500	9,060	7,950	4,660	780	225	180
5.	420	890	6,800	12,400	7,700	8,500	8,780	7,450	4,220	690	225	180
6.	290	800	5,420	11,100	7,450	8,220	8,780	6,970	3,800	605	225	180
7.	350	800	5,650	10,500	5,550	8,220	9,060	6,970	3,220	455	225	180
8.	420	800	8,460	9,340	5,100	7,950	9,620	7,210	3,040	525	180	225
9.	490	800	33,200	6,730	4,660	8,500	10,800	7,450	2,520	455	180	225
10.	490	1,290	20,400	5,320	4,220	8,500	11,800	7,950	2,200	525	225	180
11.	420	1,180	10,300	4,220	4,000	9,060	12,400	8,220	2,050	525	225	180
12.	420	980	7,950	3,800	3,800	8,780	9,340	8,500	2,050	455	180	180
13.	490	890	6,340	3,600	3,600	9,060	8,780	8,500	2,050	525	180	225
14.	420	890	5,420	3,410	3,600	9,340	9,340	8,780	1,900	525	180	180
15.	420	800	4,290	4,440	3,800	8,500	10,200	8,780	1,900	525	225	180
16.	490	800	3,880	6,730	4,000	7,950	10,800	9,060	1,900	455	225	225
17.	500	800	3,780	8,220	3,800	7,210	11,100	9,060	1,750	525	225	180
18.	350	720	3,480	5,320	6,010	9,060	11,500	9,060	1,600	525	180	180
19.	490	720	3,290	4,220	5,780	16,800	11,800	9,060	1,460	455	180	180
20.	420	2,390	3,100	5,550	5,550	21,700	11,800	8,780	1,460	455	225	180
21.	500	40,800	2,920	6,490	4,880	20,800	12,400	8,500	1,340	455	180	180
22.	640	19,000	2,740	7,700	4,880	19,200	12,100	8,780	1,340	455	180	180
23.	500	11,500	2,740	13,100	5,100	17,690	11,800	8,780	1,220	525	225	225
24.	720	13,000	3,290	18,400	5,320	14,500	11,800	8,220	1,220	525	180	225
25.	800	12,100	3,680	8,220	6,010	10,500	11,500	7,450	985	455	225	225
26.	640	8,700	3,480	7,700	6,010	9,920	12,100	7,210	875	455	180	225
27.	720	7,740	1,460	6,490	6,250	9,340	11,800	6,970	780	525	225	225
28.	800	3,680	1,180	5,780	8,500	9,060	10,500	6,970	780	390	180	225
29.	720	4,960	2,050	5,780	.....	8,500	9,620	6,250	690	390	180	225
30.	800	6,570	1,290	6,010	.....	8,220	9,060	6,010	690	330	180	275
31.	800	.....	1,520	5,780	.....	8,780	.....	6,010	.....	330	225	.....
1910-11.												
1.	225	455	690	525	37,300	4,120	18,000	12,400	15,500	5,930	720	310
2.	275	455	690	525	22,400	6,690	18,900	13,200	17,600	5,930	720	310
3.	275	525	690	525	19,100	8,930	18,900	13,500	20,200	5,930	615	310
4.	275	525	1,100	525	16,700	19,700	15,500	15,100	21,900	5,690	615	370
5.	330	525	4,660	455	15,100	20,600	21,100	18,900	22,800	5,450	615	310
6.	390	455	4,880	455	12,100	15,900	28,000	13,900	23,800	5,450	615	310
7.	330	455	3,600	455	10,200	39,800	19,700	13,200	22,400	5,210	520	310
8.	390	525	2,690	390	9,530	31,900	18,900	13,200	21,900	4,760	520	310
9.	330	525	2,360	390	8,340	18,400	17,600	13,200	21,900	4,120	520	370
10.	275	525	1,460	2,280	6,690	16,300	15,500	12,800	22,400	3,720	440	310
11.	275	455	1,750	6,850	12,800	13,900	12,400	13,500	23,800	3,720	440	310
12.	275	455	2,200	24,800	17,600	11,100	12,400	15,100	25,200	3,530	440	310
13.	330	455	2,050	25,700	12,400	10,200	11,800	15,500	24,200	3,530	520	310
14.	275	455	1,900	27,500	11,400	9,230	10,500	14,300	23,300	3,530	440	310
15.	330	525	1,750	18,800	10,200	8,630	8,930	13,200	22,800	3,340	520	310
16.	390	525	1,750	7,090	10,200	8,340	8,050	12,100	22,400	3,340	440	310
17.	390	525	1,600	5,100	9,230	8,340	8,050	11,100	22,400	3,160	440	310
18.	390	525	1,460	4,440	8,630	8,630	8,630	10,200	22,400	2,980	440	310
19.	455	525	1,460	4,220	7,770	8,630	9,530	10,500	21,900	2,640	370	310
20.	390	605	1,340	19,600	6,180	8,630	13,200	11,400	19,300	2,320	370	310
21.	330	605	1,340	12,800	4,760	8,630	14,300	13,200	16,300	2,160	370	260
22.	330	605	1,220	8,220	4,760	9,230	14,700	16,300	12,800	1,850	370	260
23.	330	605	1,100	8,750	4,120	9,340	15,500	20,600	10,200	1,560	310	260
24.	275	605	985	21,100	3,920	10,500	15,900	22,400	8,340	1,420	370	260
25.	275	605	875	30,700	3,720	10,800	16,700	15,100	7,220	1,420	310	260
26.	330	605	780	12,200	3,920	11,100	18,400	13,900	6,690	1,420	440	260
27.	390	605	690	14,500	3,720	11,400	17,200	14,300	7,490	1,300	310	310
28.	390	605	690	13,800	3,920	11,800	16,700	15,500	9,530	1,050	370	310
29.	455	605	605	22,600	.....	12,100	14,300	16,300	8,340	935	370	310
30.	455	690	605	65,500	.....	13,500	13,500	17,200	7,220	935	370	310
31.	455	.....	525	69,100	.....	15,500	.....	18,400	.....	825	310	.....
1911-12.												
1.	.....	.....	.....	600	910	855	1,840	5,210	8,630	.....	.....	.....
2.	.....	.....	.....	600	910	965	2,010	5,690	11,100	.....	.....	.....
3.	858	.....	.....	450	750	965	2,560	4,980	9,230	.....	.....	.....
4.	.....	.....	.....	450	700	855	2,910	4,540	9,230	.....	.....	.....
5.	.....	.....	.....	340	600	1,140	2,910	4,540	9,840	.....	.....	.....

Daily discharge, in second-feet, of American River at Fairoaks, Cal., for 1904-1912—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1911-12.												
6				520	600	2,730	2,730	4,540	8,050			
7				600	750	4,320	2,730	4,760	6,180			
8				600	750	2,550	3,280	5,930	5,430			
9				1,020	700	2,190	3,280	6,690	4,980			
10				1,260	600	2,730	3,680	6,430	4,980			
11				1,840	600	1,840	3,480	7,220	4,760			
12				2,910	600	2,010	3,090	8,930	4,980			
13				1,530	600	1,840	2,910	7,490	7,770			
14				1,840	600	2,190	2,730	6,930	4,760			
15				1,260	600	2,550	2,910	7,220	4,100			
16				1,260	600	2,190	2,550	8,050	3,680			
17				1,020	600	2,010	2,730	6,950	3,680			
18				600	750	1,840	2,550	7,490	2,910			
19				600	1,080	1,840	2,190	9,840	2,730			
20				600	1,260	1,760	1,840	9,230	2,730			
21				1,140	1,200	1,840	1,840	6,950	2,550			
22				855	1,140	1,760	1,840	5,690	1,840			
23				800	1,020	1,530	1,840	4,980	1,840			
24				750	910	1,680	2,190	4,980	2,010			
25				700	800	1,530	2,730	5,210	1,840			
26				1,320	910	1,600	2,910	7,490	1,840			
27				3,480	855	1,680	2,910	8,050	1,840			
28				1,840	600	1,840	2,550	7,220	1,530			
29				1,530	600	2,190	4,100	7,490	1,530			
30				1,200		2,190	7,220	8,050	1,530			
31				965		2,190		7,490				

NOTE.—Daily discharges, 1904-1909, are determined from rating curves applicable as follows, except as indicated: Nov. 4 to Dec. 30, 1904, not well defined; Dec. 31, 1904, to Mar. 19, 1907, fairly well defined between 130 and 33,000 second-feet; Mar. 20, 1907, to Dec. 31, 1907, fairly well defined between 130 and 33,000 second-feet; Jan. 1, 1910, to Jan. 31, 1911, well defined; Feb. 1 to Sept. 30, 1911, well defined. Discharge, Jan. 15 to 23, Dec. 3 to 16, 1909, and May 1 to Aug. 9, 1911, obtained from a gage height relation determined from the United States Weather Bureau gage heights at Folsom, Cal. Discharge for other days when gage heights have not been given are estimated or interpolated.

Monthly discharge of American River at Fairoaks, Cal., for 1904-1912.

[Drainage area, 1,910 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.	
1904-5.							
November 4-30	1,360	700	896	0.469	0.47	48,000	B.
December	11,600	700	1,000	.523	.60	61,500	B.
January	8,820	1,500	3,270	1.71	1.97	201,000	B.
February	10,900	2,000	4,230	2.21	2.30	235,000	B.
March	21,200	3,290	6,150	3.22	3.71	378,000	B.
April	14,900	3,730	6,880	3.60	4.02	409,000	B.
May	9,080	3,040	6,120	3.20	3.69	376,000	C.
June	5,340	1,260	3,010	1.58	1.76	179,000	B.
July	1,170	382	695	.364	.42	42,700	C.
August	355	165	270	.141	.16	16,600	C.
September	165	115	138	.072	.08	8,210	C.
The period						1,960,000	
1905-6.							
October	165	130	147	.077	.09	9,040	C.
November	550	130	194	.102	.11	11,500	C.
December	520	130	254	.133	.15	15,600	C.
January	44,500	250	7,290	3.80	4.38	446,000	B.
February	16,700	2,180	5,930	3.10	3.23	329,000	B.
March	34,000	6,680	14,200	7.43	8.57	873,000	A.
April	20,800	9,470	12,100	6.34	7.07	730,000	A.
May	26,900	9,880	15,100	7.91	9.12	928,000	A.
June	23,300	8,340	16,000	8.38	9.35	952,000	A.

Monthly discharge of American River at Fairoaks, Cal., for 1904-1912—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.	
1905-6.							
July.....	13,200	2,120	6,340	3.32	3.83	390,000	A.
August.....	1,940	520	1,020	.534	.62	62,700	A.
September.....	580	300	419	.219	.24	24,900	B.
The year.....	44,500	130	6,580	3.45	46.76	4,762,000	
1906-7.							
October.....	355	250	298	.156	.18	18,300	B.
November.....	2,000	328	563	.295	.33	33,500	B.
December.....	20,200	410	3,970	2.08	2.40	244,000	A.
January.....	14,400	2,250	4,150	2.17	2.50	255,000	A.
February.....	80,800	6,680	14,800	7.75	8.07	822,000	A.
March.....	105,000	6,220	24,700	12.9	14.87	1,520,000	B.
April.....	21,000	12,100	15,600	8.17	9.12	928,000	A.
May.....	17,000	9,470	12,200	6.39	7.37	750,000	A.
June.....	17,000	6,570	11,100	5.81	6.48	660,000	A.
July.....	9,600	3,010	5,510	2.88	3.32	339,000	A.
August.....	2,650	1,080	1,500	.785	.90	92,200	A.
September.....	1,080	600	813	.426	.48	48,400	B.
The year.....	105,000	250	7,930	4.15	56.02	5,710,000	
1907-8.							
October.....	1,030	560	693	.363	.42	42,600	B.
November.....	890	800	821	.430	.48	48,900	B.
December.....	8,460	800	1,790	.937	1.08	110,000	A.
January.....	6,570	1,400	2,600	1.36	1.57	160,000	A.
February.....	3,880	1,290	1,960	1.03	1.11	113,000	A.
March.....	4,620	2,060	3,290	1.72	1.98	202,000	A.
April.....	7,030	2,220	4,490	2.35	2.62	267,000	A.
May.....	6,340	3,010	4,590	2.40	2.77	232,000	A.
June.....	3,580	1,400	2,600	1.36	1.52	155,000	A.
July.....	1,520	350	870	.455	.52	53,500	B.
August.....	350	100	200	.105	.12	12,300	B.
September.....	130	100	123	.064	.07	7,320	B.
The year.....	8,460	100	2,000	1.05	14.26	1,450,000	
1908-9.							
October.....	2,140	130	384	.201	.23	23,600	B.
November.....	1,400	100	441	.231	.26	26,200	B.
December.....	2,220	160	576	.302	.35	35,400	B.
January.....	98,000	160	24,300	12.7	14.64	1,490,000	B.
February.....	33,500	7,030	15,500	8.12	8.46	861,000	A.
March.....	7,980	5,190	6,460	3.38	3.90	397,000	A.
April.....	11,500	5,190	7,990	4.18	4.66	475,000	A.
May.....	13,000	5,650	9,510	4.98	5.74	585,000	A.
June.....	12,100	4,500	7,650	4.01	4.47	455,000	A.
July.....	4,960	640	2,310	1.21	1.40	142,000	A.
August.....	1,400	350	607	.318	.37	37,300	B.
September.....	420	160	287	.150	.17	17,100	B.
The year.....	98,000	100	6,330	3.32	44.65	4,540,000	
1909-10.							
October.....	800	200	511	.268	.31	31,400	B.
November.....	40,800	720	4,590	2.40	2.68	273,000	B.
December.....	47,000	1,180	7,670	4.02	4.64	472,000	B.
January.....	19,600	3,410	8,520	4.46	5.14	524,000	A.
February.....	8,500	3,600	5,240	2.74	2.85	291,000	A.
March.....	21,700	7,210	10,500	5.50	6.34	646,000	A.
April.....	12,400	8,780	10,500	5.50	6.14	625,000	A.
May.....	9,060	6,010	7,950	4.16	4.80	489,000	A.
June.....	5,780	690	2,260	1.18	1.32	134,000	A.
July.....	780	330	516	.270	.31	31,700	A.
August.....	330	180	213	.112	.13	13,100	A.
September.....	275	180	201	.105	.12	12,000	A.
The year.....	47,000	180	4,900	2.56	34.78	3,540,000	
1910-11.							
October.....	455	225	342	.179	.21	21,000	A.
November.....	690	455	538	.282	.31	32,000	A.
December.....	4,880	525	1,600	.838	.97	98,400	A.
January.....	69,100	390	13,900	7.28	8.39	855,000	B.

## Monthly discharge of American River at Fairoaks, Cal., for 1904-1912—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.	
1910-11.							
February.....	37,300	3,720	10,600	5.55	5.78	589,000	B.
March.....	39,800	4,120	13,000	6.81	7.85	799,000	B.
April.....	28,000	8,050	15,100	7.91	8.82	898,000	B.
May.....	22,400	10,200	14,500	7.59	8.75	892,000	B.
June.....	25,200	6,690	17,700	9.27	10.34	1,050,000	C.
July.....	5,930	825	3,200	1.68	1.92	197,000	C.
August.....	720	310	459	.240	.28	28,200	C.
September.....	370	260	304	.159	.18	18,100	C.
The year.....	69,100	225	7,600	3.98	53.80	6,480,000	
1911-12.							
October.....			350	.183	.21	21,500	C.
November.....			430	.225	.25	25,600	C.
December.....			400	.209	.24	24,600	C.
January.....	3,480	340	1,110	.581	.67	68,200	B.
February.....	1,260	600	779	.408	.44	44,800	B.
March.....	4,320	855	1,920	1.01	1.16	118,000	B.
April.....	7,220	1,840	2,830	1.48	1.65	168,000	B.
May.....	9,840	4,540	6,650	3.48	4.01	409,000	B.
June.....	11,100	1,530	4,660	2.44	2.72	277,000	B.
The period.....						1,160,000	

NOTE.—Mean discharge October, November, and December, 1911, is the combined discharge (preliminary estimates) of North Fork of American River near Colfax, Middle Fork of American River near East Auburn, and South Fork of American River near Placerville, plus an assumed inflow of from 20 to 30 second-feet.

## MIDDLE FORK OF AMERICAN RIVER NEAR EAST AUBURN, CAL.

This station, which is located at the Mountain Quarry Co.'s plant, about 1½ miles above the junction with North Fork of American River and 3½ miles northeast of Auburn, was established October 22, 1911.

The gage is a staff in two sections located on the left bank at the pump house.

Discharge measurements are made by wading or from a car and cable 300 feet below the gage.

The channel is composed of gravel and small bowlders and will shift at high stages.

## Discharge measurements of Middle Fork of American River near East Auburn, Cal., in 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>
Oct. 19	J. E. Stewart.....	1.60	105	Jan. 27	J. E. Stewart.....	3.48	888
Dec. 11	F. C. Ebert.....	1.88	161	Mar. 25	Lasley Lee.....	3.10	640
1912.				May 2	.....do.....	5.21	2,410
Jan. 25	J. E. Stewart.....	2.21	220	June 5	.....do.....	6.42	3,910

Daily gage height, in feet, of Middle Fork of American River near East Auburn, Cal., for 1911-12.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1.		1.7	1.7	.....	2.6	2.1	3.6	5.4	6.9
2.		1.7	1.7	1.9	2.6	2.1	3.6	5.2	7.0
3.		1.7	1.7	1.9	2.6	2.1	3.9	5.2	6.4
4.		1.7	1.7	1.9	2.4	2.2	3.8	5.1	6.8
5.		1.7	1.7	1.9	2.4	3.6	3.6	5.0	6.6
6.		1.7	1.7	1.9	2.4	4.8	3.5	5.1	5.9
7.		1.7	1.9	2.0	2.4	3.7	3.7	6.3	5.9
8.		1.7	2.0	2.1	2.4	3.4	3.7	6.3	5.4
9.		1.7	1.9	2.9	2.3	3.4	4.4	6.4	5.3
10.		2.4	1.9	2.4	2.3	3.2	4.3	6.8	5.3
11.		2.3	1.9	2.3	2.3	3.2	3.9	6.4	5.0
12.		2.0	1.8	2.2	2.3	3.2	3.8	7.0	5.0
13.		1.9	1.8	2.1	2.3	3.3	3.6	6.9	4.8
14.		1.9	1.8	2.2	2.3	3.4	3.4	7.0	4.6
15.		1.9	1.8	2.2	2.3	3.4	3.4	6.8	4.4
16.		2.0	1.8	2.7	2.3	3.4	3.4	6.8	4.0
17.		2.0	1.9	2.7	2.3	3.3	3.5	7.0	3.9
18.		1.8	1.9	2.4	2.3	3.3	3.6	7.2	3.7
19.	1.6	1.8	1.9	2.3	2.3	3.3	3.6	7.0	3.7
20.		1.8	1.9	2.3	2.3	3.3	3.5	6.8	3.7
21.		1.8	1.9	2.3	3.2	3.3	3.5	5.2	3.5
22.	1.6	1.7	1.9	2.3	3.1	3.2	3.3	5.2	3.3
23.	1.6	1.7	1.9	2.2	3.0	3.2	3.2	5.4	3.5
24.	1.6	1.7	1.9	2.2	2.7	3.1	3.2	5.9	3.4
25.	1.7	1.7	1.9	2.1	2.6	3.1	3.6	6.0	3.3
26.	1.9	1.7	1.9	3.8	2.5	3.1	3.6	6.8	3.3
27.	1.8	1.7	1.9	3.6	2.4	3.2	3.7	6.8	3.2
28.	1.7	1.7	1.9	3.0	2.3	3.6	3.9	6.9	3.2
29.	1.7	1.7	1.9	2.9	2.2	3.8	4.6	7.2	3.1
30.	1.7	1.7	2.1	2.8	.....	3.6	5.9	7.4	3.1
31.	1.7	.....	2.2	2.7	.....	3.3	.....	6.9	.....

Daily discharge, in second-feet, of Middle Fork of American River near East Auburn, Cal., for 1911-12.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1.		118	118	198	391	203	955	2,620	4,600
2.		118	118	153	391	203	955	2,400	4,750
3.		118	118	153	391	203	1,170	2,400	3,870
4.		118	118	153	307	234	1,100	2,290	4,450
5.		118	118	153	307	955	955	2,180	4,150
6.		118	118	153	307	1,980	890	2,290	3,210
7.		118	153	176	307	1,020	1,020	3,730	3,210
8.		118	176	203	307	825	1,020	3,730	2,620
9.		118	153	269	269	825	1,590	3,870	2,510
10.		307	153	307	269	705	1,500	4,450	2,510
11.		269	153	269	269	705	1,170	3,870	2,180
12.		176	134	234	269	705	1,100	4,750	2,180
13.		153	134	203	269	765	955	4,600	1,980
14.		153	134	234	269	825	825	4,750	1,780
15.		153	134	234	269	825	825	4,450	1,590
16.		176	134	436	269	825	825	4,450	1,240
17.		176	153	436	269	765	890	4,750	1,170
18.		134	153	307	269	765	955	5,050	1,020
19.	105	134	153	269	269	765	955	4,750	1,020
20.	105	134	153	269	269	765	890	4,450	1,020
21.	105	134	153	269	705	765	890	2,400	890
22.	105	118	153	269	645	705	765	2,400	765
23.	105	118	153	234	590	705	705	2,620	890
24.	105	118	153	234	436	645	705	3,210	825
25.	118	118	153	203	391	645	955	3,340	765
26.	153	118	153	1,100	348	645	955	4,450	765
27.	134	118	153	955	307	705	1,020	4,450	505
28.	118	118	153	590	269	955	1,170	4,600	705
29.	118	118	153	535	234	1,100	1,780	5,050	645
30.	118	118	203	484	.....	955	3,210	5,350	645
31.	118	.....	234	436	.....	765	.....	4,600	.....

NOTE.—Daily discharge determined from a well-defined rating curve. Discharge interpolated Oct. 20-21, 1911, and Jan. 1, 1912.

Monthly discharge of Middle Fork of American River near East Auburn, Cal., for 1911-12.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
October 19-31.....	153	105	116	2,990	A.
November.....	307	118	141	8,390	A.
December.....	234	118	148	9,100	A.
January.....	1,100	153	326	20,000	A.
February.....	705	234	340	19,600	A.
March.....	1,980	203	757	46,500	A.
April.....	3,210	705	1,090	64,900	A.
May.....	5,350	2,180	3,820	235,000	A.
June.....	4,750	645	1,960	117,000	A.
The period.....				523,000	

#### RUBICON RIVER AT RUBICON SPRINGS, CAL.

This station is located in the SE.  $\frac{1}{4}$  sec. 31, T. 14 N., R. 16 E., at Rubicon Springs, about three-fourths of a mile above mouth of Miller Creek.

A staff gage is used. Discharge measurements are made from car and cable.

The channel is composed of sand and gravel and is fairly permanent. The drainage area above the station is 31.6 square miles.

During the winter the determination of discharge is rendered somewhat uncertain by the presence of ice. Results for the remainder of the year are excellent.

The following record was furnished by the Stone & Webster Engineering Corporation:

Daily discharge, in second-feet, of Rubicon River at Rubicon Springs, Cal., for 1910-11.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910.												
1.....					72	304	142	249	492	79	12	1
2.....					67	316	142	208	179	70	12	1
3.....					72	281	115	281	218	61	6	0
4.....					67	270	124	189	198	61	6	1
5.....					62	142	142	124	170	61	6	0
6.....					67	124	151	238	142	61	6	0
7.....					67	88	151	328	133	61	6	0
8.....					62	97	238	406	133	70	6	0
9.....					62	106	238	522	133	61	6	0
10.....					62	106	238	675	151	52	3	0
11.....					62	124	218	392	170	52	3	0
12.....					67	160	160	448	133	52	3	0
13.....					72	142	170	448	151	52	3	0
14.....					83	142	198	568	124	43	3	0
15.....					67	97	198	420	124	43	3	0
16.....					67	70	228	341	115	43	3	115
17.....					72	106	218	354	115	43	3	115
18.....					67	88	208	366	124	43	3	97
19.....					62	801	406	292	124	61	3	34
20.....					62	353	420	379	124	43	1	6
21.....					62	160	316	434	88	43	1	6
22.....					72	106	304	477	88	34	1	3
23.....					72	106	392	568	70	34	1	3
24.....					67	79	379	598	79	34	1	3
25.....					88	61	392	341	97	26	1	3
26.....					72	61	434	316	97	26	1	1
27.....					72	70	406	366	97	18	1	1
28.....					67	43	434	316	79	18	1	1
29.....						61	249	420	97	18	1	1
30.....						88	353	477	88	12	1	1
31.....						106		492		12	1	



## RUBICON RIVER NEAR QUINTETTE, CAL.

This station is located in the NW.  $\frac{1}{4}$  SW.  $\frac{1}{4}$  sec. 24, T. 13 N., R. 13 E., about a mile below the mouth of Little South Rubicon River, half a mile above the trail crossing to Ellicott, and 11 $\frac{1}{2}$  miles northeast of Quintette.

A staff gage is used and discharge measurements are made from a car and cable. The drainage area above the station is 198 square miles. The channel is in solid rock and results are considered excellent.

The following record was furnished by the Stone & Webster Engineering Corporation:

*Daily discharge, in second-feet, of Rubicon River near Quintette, Cal., for 1909-1911*

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909-10.												
1			6,660	1,250	452	888	1,190	1,385	1,132	168	40	7
2			2,570	888	420	980	1,460	1,250	1,028	150	40	7
3			1,350	674	452	1,028	1,190	1,500	888	150	31	7
4			934	593	420	1,250	1,132	1,190	758	133	31	7
5			844	554	388	1,078	1,250	980	715	133	31	7
6			758	554	420	1,028	1,250	1,078	633	116	23	7
7			715	518	420	934	1,315	1,315	593	116	23	7
8			844	484	388	934	1,580	1,839	554	116	23	7
9			2,312	484	388	1,078	1,840	2,140	518	133	23	7
10			1,132	452	388	1,132	2,010	2,312	554	133	23	7
11			844	420	388	1,190	2,010	1,753	518	116	19	7
12			758	358	420	1,315	1,385	1,668	484	116	19	5
13			715	388	452	1,250	1,580	1,753	484	100	16	5
14			674	388	518	1,385	1,670	1,753	420	89	16	5
15			593	388	420	1,132	1,580	1,582	358	100	16	11
16			554	420	420	980	1,750	1,582	420	89	13	49
17			484	388	452	1,078	2,010	1,190	388	89	13	150
18			452	388	420	1,190	2,398	1,190	388	78	13	68
19			420	388	388	1,385	2,226	1,250	388	89	11	49
20			388	358	388	1,750	2,226	1,190	358	187	11	40
21		7,560	358	358	388	2,100	2,097	1,250	300	116	11	31
22		6,270	388	484	452	1,580	2,183	1,315	250	89	11	23
23		4,000	328	934	452	1,315	2,312	1,250	250	78	11	23
24		2,200	274	980	420	1,078	2,484	1,385	228	78	9	19
25		1,385	250	758	554	934	2,398	1,315	250	68	9	16
26		888	274	633	452	888	2,312	1,190	274	58	9	16
27		758	274	554	452	800	2,183	1,190	274	58	9	13
28		934	274	554	420	758	3,000	1,132	274	58	9	13
29		934	274	554		758	2,010	1,078	207	49	7	13
30		1,200	328	518		888	2,312	1,132	187	49	7	11
31			3,000	518		934		1,190		49	7	
1910-11.												
1	12	12	148	97	1,828	352	2,624	1,901	2,714	1,320	248	
2	12	9	148	97	1,438	324	2,537	1,768	3,831	1,320	225	
3	12	9	2,900	82	1,102	352	2,452	2,286	4,060	1,378	225	
4	12	9	735	82	956	569	1,901	2,806	4,420	1,320	204	
5	12	9	414	82	821	529	2,537	2,996	4,298	1,320	204	
6	12	9	297	82	735	499	2,368	1,901	3,504	1,378	185	
7	12	9	778	82	651	610	1,975	1,768	3,944	1,208	166	
8	12	9	489	82	569	569	1,901	1,975	3,296	1,052	166	
9	12	15	569	130	569	499	1,901	1,901	3,831	910	166	
10	12	10	735	185	569	610	1,498	1,901	4,673	956	148	
11	20	54	1,690	204	569	569	1,263	2,127	4,545	956	148	
12	25	297	735	225	489	529	1,154	2,286	4,298	910	130	
13	30	166	489	248	489	529	1,003	2,286	4,420	910	130	
14	20	113	324	272	382	529	956	2,050	4,060	865	130	
15	15	113	297	272	414	569	956	1,901	3,504	865	113	
16	15	97	272	225	382	610	1,102	1,828	4,178	865	113	
17	68	68	248	225	450	651	1,320	1,498	3,831	821	113	
18	68	68	225	225	414	735	1,768	1,561	3,504	735	113	
19	54	82	225	382	414	821	1,768	1,690	3,720	693	113	
20	34	82	204	778	414	910	1,498	2,205	3,296	569	97	

Daily discharge, in second-feet, of Rubicon River near Quintette, Cal., for 1909-1911—Con.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.												
21.....	27	82	185	569	382	1,003	1,690	2,900	2,900	450	82	.....
22.....	20	82	166	414	382	1,052	2,050	3,504	2,286	414	82	.....
23.....	20	910	148	352	382	1,263	2,537	4,673	1,768	382	82	.....
24.....	15	450	130	778	382	1,320	2,900	2,996	1,438	414	82	.....
25.....	15	414	130	735	352	1,320	3,094	2,205	1,378	382	82	.....
26.....	12	248	130	450	324	1,208	2,806	2,127	2,050	352	82	.....
27.....	12	204	113	382	352	1,320	2,127	2,368	2,368	324	68	.....
28.....	12	148	113	352	324	1,378	1,561	2,624	1,901	324	68	.....
29.....	12	148	113	1,263	.....	1,768	1,498	2,452	1,561	297	68	.....
30.....	12	148	113	5,766	.....	2,127	1,768	3,296	1,378	297	54	.....
31.....	12	.....	113	3,504	.....	2,205	.....	2,537	.....	272	54	.....

NOTE.—Daily discharge Nov. 23, 24, and 30, 1909, estimated by engineers of the United States Geological Survey from records of discharge at adjacent stations.

Monthly discharge of Rubicon River near Quintette, Cal., for 1909-1911.

[Drainage area, 198 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.
1909-10.						
November 21-30.....	7,560	758	2,610	13.2	4.91	51,800
December.....	6,660	250	968	4.89	5.64	59,500
January.....	1,250	358	554	2.80	3.23	34,100
February.....	554	388	428	2.16	2.25	23,800
March.....	2,100	758	1,130	5.71	6.58	69,500
April.....	3,000	1,130	1,880	9.49	10.60	112,000
May.....	2,310	980	1,400	7.07	8.15	86,100
June.....	1,130	187	469	2.37	2.64	27,900
July.....	187	49	102	.515	.59	6,270
August.....	40	7	17.2	.087	.10	1,060
September.....	150	5	21.2	.107	.12	1,260
The period.....						479,000
1910-11.						
October.....	68	10	20.5	0.104	0.12	1,260
November.....	910	9	137	.692	.77	8,150
December.....	2,900	113	431	2.18	2.51	26,500
January.....	5,770	82	601	3.04	3.50	37,000
February.....	1,830	324	591	2.98	3.10	32,800
March.....	2,200	324	881	4.45	5.13	54,200
April.....	3,090	956	1,880	9.49	10.59	112,000
May.....	4,670	1,500	2,330	11.8	13.60	143,000
June.....	4,670	1,380	3,230	16.3	18.19	192,000
July.....	1,380	272	783	3.95	4.55	48,100
August.....	248	54	127	.641	.74	7,810
The period.....						663,000

LITTLE RUBICON RIVER NEAR RUBICON SPRINGS, CAL.

This station is located at the trail crossing one-fourth mile below Buck Island Lake, in the NW.  $\frac{1}{4}$  NW.  $\frac{1}{4}$  sec. 6, T. 13 N., R. 16 E., about a mile southwest of Rubicon Springs.

A staff gage is used and discharge measurements are made from a footbridge. The channel is solid granite and results are excellent, except during the winter season, when the flow is affected by ice.



LITTLE SOUTH FORK OF RUBICON RIVER AT SOUTH FORK SAWMILL,  
NEAR QUINTETTE, CAL.

The station is located in the NW.  $\frac{1}{4}$  NW.  $\frac{1}{4}$  sec. 24, T. 13 N., R. 14 E., at South Fork sawmill, about half a mile above mouth of Gerle Creek, and 15 miles northeast of Quintette.

A staff gage is used and discharge measurements are made from a car and cable. The channel is compact gravel and results are excellent, except during the winter, when the flow is affected by ice. The drainage area above this station is 16.6 square miles.

The following record was furnished by the Stone & Webster Engineering Corporation.

*Daily discharge, in second-feet, of Little South Fork of Rubicon River at South Fork sawmill, near Quintette, Cal., for 1910-11.*

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910.												
1.....					74	74	106	106	49	7		
2.....					161	74	117	117	42	2		
3.....					150	84	117	117	35	2		
4.....					95	95	106	95	35	2		
5.....					65	95	117	84	35	2		
6.....					57	84	128	95	30	2		
7.....					49	84	128	161	42	2		
8.....					42	84	128	161	25	2		
9.....					42	106	172	150	16	2		
10.....					42	106	161	172	20	2		
11.....					35	117	150	128	16	.7		
12.....					42	117	139	139	16	.7		
13.....					42	106	150	117	16	.7		
14.....					42	106	150	139	16	.7		0.3
15.....					74	95	183	128	13	.7		.3
16.....					42	95	161	106	16	.7		4
17.....					49	106	183	84	13	.7		2
18.....					35	128	205	95	13	.7		2
19.....					35	328	205	95	10	.7		.3
20.....					35	183	194	84	10	13		.3
21.....					30	139	161	74	10	.7		.3
22.....					35	117	172	74	7	.7		.3
23.....					35	95	183	74	7	.7		.3
24.....					35	84	172	74	7	.7		.3
25.....					49	84	183	74	7	.3		.3
26.....					42	65	205	65	10	.3		.3
27.....					49	42	227	57	10	.3		.3
28.....					65	106	239	49	10	.3		.3
29.....						65	161	57	7	.3		.3
30.....						84	128	65	7	.3		.3
31.....						106		49		.0		
1910-11.												
1.....	0.3	0.5	5	15	309	28	225	185	330	61	5	
2.....	.3	.5	5	15	166	28	225	185	351	61	5	
3.....	.3	.5	185	15	128	37	205	309	395	61	5	
4.....	.3	.5	28	9	92	48	147	395	417	48	5	
5.....	.3	.5	21	9	76	37	225	246	395	48	5	
6.....	.3	.5	15	9	37	37	225	205	351	48	5	
7.....	.3	.5	28	9	76	37	185	185	351	61	5	
8.....	.3	2	28	9	61	37	166	225	330	48	5	
9.....	.3	5	48	21	48	37	166	205	351	48	5	
10.....	.3	2	61	25	48	48	128	246	463	48	5	
11.....	2	5	110	25	48	48	92	288	440	48	5	
12.....	4	9	37	37	48	37	92	288	351	28	5	
13.....	2	9	28	33	48	37	76	246	417	48	5	
14.....	2	5	21	29	48	37	76	225	330	28	5	
15.....	1	5	15	21	48	37	92	205	309	28	2	

*Daily discharge, in second-feet, of Little South Fork of Rubicon River at South Fork sawmill, near Quintette, Cal., for 1910-11—Continued.*

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.												
16.....	1	5	15	21	48	37	110	166	309	28	2	.....
17.....	6	5	15	21	48	48	147	147	309	28	2	.....
18.....	6	5	9	25	37	61	185	166	288	21	2	.....
19.....	6	5	9	71	37	61	166	225	288	21	2	.....
20.....	6	5	9	53	37	61	147	288	246	21	2	.....
21.....	6	5	9	45	37	76	185	395	185	9	2	.....
22.....	3	5	9	41	37	76	246	440	147	9	2	.....
23.....	3	48	9	71	48	92	288	509	128	9	2	.....
24.....	1	21	9	62	37	92	309	246	110	9	2	.....
25.....	1	15	9	53	28	92	330	205	110	9	2	.....
26.....	1	9	9	37	37	92	267	225	147	9	2	.....
27.....	1	9	15	33	25	92	185	267	147	9	2	.....
28.....	0	9	15	80	28	128	147	246	92	9	2	.....
29.....	0	9	9	80	.....	147	147	267	76	5	2	.....
30.....	0	5	9	492	.....	166	185	509	61	5	2	.....
31.....	0	.....	9	345	.....	185	.....	267	.....	5	2	.....

NOTE.—The river was dry July 31 to Sept. 13, 1910.

*Monthly discharge of Little South Fork of Rubicon River at South Fork sawmill, near Quintette, Cal., for 1910-11.*

[Drainage area, 16.6 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.
1910.						
February.....	161	30	55.3	3.33	3.47	3,070
March.....	328	42	105	6.33	7.30	6,460
April.....	239	106	161	9.70	10.82	9,580
May.....	172	49	99.5	5.99	6.91	6,120
June.....	49	7	18.3	1.10	1.23	1,090
July.....	13	0	1.58	.095	.11	97.2
August.....	0	0	.00	.000	.00	0
September.....	4	0	.41	.025	.03	24.4
The period.....						35,200
1910-11.						
October.....	6	0.0	1.77	.107	.12	109
November.....	48	.5	6.85	.413	.46	408
December.....	185	5	25.9	1.56	1.80	1,590
January.....	492	9	58.4	3.52	4.06	3,590
February.....	309	25	63.0	3.80	3.96	3,500
March.....	185	28	67.0	4.04	4.66	4,120
April.....	330	76	179	10.8	12.05	10,700
May.....	509	147	265	16.0	18.45	16,300
June.....	463	61	274	16.5	18.41	16,300
July.....	61	5	29.6	1.78	2.05	1,820
August.....	5	2	3.4	.205	.24	209
The period.....						58,600

LITTLE SOUTH FORK OF RUBICON RIVER BELOW GERLE CREEK, NEAR QUINTETTE, CAL.

This station is located in the SE.  $\frac{1}{4}$  SE.  $\frac{1}{4}$  sec. 21, T. 13 N., R. 14 E., about one-fourth mile below Gerle Creek, 1 mile below South Fork sawmill, and 15 miles northeast of Quintette.

A staff gage is used and discharge measurements are made from a car and cable. The channel is composed of gravel and bowlders and

appears permanent. The drainage area above the station is 49.6 square miles.

Water is diverted from Gerle Creek (see records on Little South Fork ditch at sawmill) about 1½ miles above the mouth and discharged into Pilot Creek above Uncle Tom's Cabin. Results are excellent except during the winter months, when the flow is affected by ice.

The following record was furnished by the Stone & Webster Engineering Corporation.

Daily discharge, in second-feet, of Little South Fork of Rubicon River below Gerle Creek, near Quintette, Cal., for 1910-11.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910.												
1.					195	257	303	375	92	10	5	5
2.					125	280	327	375	92	5	3	5
3.					215	303	327	375	83	5	3	5
4.					125	327	303	327	83	5	5	5
5.					112	327	327	280	83	5	5	5
6.					112	303	351	303	55	5	5	5
7.					112	303	327	424	50	5	5	5
8.					112	303	375	424	33	5	5	5
9.					102	351	472	424	23	5	5	5
10.					102	351	448	472	27	5	5	5
11.					102	375	448	351	23	5	5	5
12.					102	375	375	351	23	5	5	5
13.					112	375	424	327	18	5	5	5
14.					112	375	424	327	23	5	5	7
15.					125	327	424	303	18	5	5	7
16.					125	327	424	235	18	5	5	13
17.					112	351	472	215	18	5	5	10
18.					102	424	568	215	14	5	5	10
19.					92	880	568	195	14	5	5	13
20.					92	568	544	175	14	5	5	5
21.					69	496	472	175	10	5	5	5
22.					83	424	472	175	10	5	5	5
23.					75	351	520	155	10	5	5	5
24.					102	327	496	155	10	5	5	5
25.					112	303	544	155	10	5	5	5
26.					102	257	592	125	10	5	5	5
27.					112	175	616	125	10	5	5	5
28.					215	351	640	112	10	5	5	5
29.						257	520	112	10	5	5	5
30.						215	472	112	18	5	5	5
31.						280		102		5	5	
1910-11.												
1.	5	2	20	32	589	94	702	520	923	146	10	
2.	5	2	20	28	425	94	702	487	1,028	146	10	
3.	5	2	487	24	371	106	663	785	1,078	132	10	
4.	5	2	132	20	320	161	520	923	1,025	132	10	
5.	5	2	94	20	296	146	625	663	1,025	119	10	
6.	5	2	65	20	251	132	663	520	875	106	10	
7.	5	2	119	20	231	119	589	487	973	106	10	
8.	5	5	106	20	231	94	554	625	923	94	10	
9.	5	7	132	57	212	106	554	589	923	84	10	
10.	5	5	177	43	194	146	425	663	1,132	74	10	
11.	7	10	320	37	177	132	371	785	1,025	74	10	
12.	7	24	161	37	177	132	320	785	923	49	9	
13.	7	16	132	70	146	132	296	702	923	65	9	
14.	5	13	106	70	132	119	296	663	829	49	9	
15.	7	10	84	65	161	132	320	625	743	49	9	
16.	5	10	74	48	177	146	371	554	743	43	9	
17.	49	10	65	47	132	177	455	487	743	37	9	
18.	43	10	57	48	119	194	554	554	702	37	9	
19.	32	13	49	59	119	212	554	702	702	32	9	
20.	20	10	49	170	119	231	487	875	589	28	9	

Daily discharge, in second-feet, of Little South Fork of Rubicon River below Gerle Creek, near Quintette, Cal., for 1910-11—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.												
21.....	16	10	43	146	119	251	554	1,078	487	16	9	.....
22.....	10	10	37	123	106	273	663	1,132	425	16	9	.....
23.....	7	49	37	111	119	320	829	1,300	273	16	9	.....
24.....	5	32	37	155	106	320	875	829	212	16	7	.....
25.....	5	37	32	133	106	345	829	702	212	16	7	.....
26.....	3	28	32	100	132	320	702	743	251	12	7	.....
27.....	3	24	32	88	106	345	487	829	251	13	7	.....
28.....	3	28	32	78	94	398	371	829	194	12	7	.....
29.....	3	28	24	219	.....	487	398	785	177	10	7	.....
30.....	2	20	24	1,360	.....	554	487	1,300	146	12	7	.....
31.....	2	.....	28	785	.....	589	.....	785	.....	13	7	.....

Monthly discharge of Little South Fork of Rubicon River below Gerle Creek, near Quintette, Cal., for 1910-11.

[Drainage area, 49.6 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.
1910.						
February.....	215	69	116	2.34	2.44	6,440
March.....	880	175	352	7.10	8.19	21,600
April.....	640	303	452	9.11	10.16	26,900
May.....	472	102	257	5.18	5.97	15,800
June.....	92	10	30.4	.613	.68	1,810
July.....	10	5	5.2	.105	.12	300
August.....	5	3	4.9	.099	.11	301
September.....	13	5	6.0	.121	.14	357
The period.....	.....	.....	.....	.....	.....	73,500
1910-11.						
October.....	49	2	9.4	.190	.22	578
November.....	49	2	14.1	.284	.32	839
December.....	487	20	90.5	1.82	2.10	5,560
January.....	1,360	20	137	2.76	3.18	8,420
February.....	589	94	195	3.93	4.09	10,800
March.....	589	94	226	4.56	5.26	13,900
April.....	875	296	541	10.9	12.16	32,200
May.....	1,300	487	752	15.2	17.52	46,200
June.....	1,130	146	682	13.8	15.40	40,600
July.....	146	10	56.6	1.14	1.31	3,480
August.....	10	7	8.8	.177	.20	541
The period.....	.....	.....	.....	.....	.....	163,000

#### LITTLE SOUTH FORK OF RUBICON RIVER AT MOUTH, NEAR QUINTETTE, CAL.

This station is located in the SE.  $\frac{1}{4}$  sec. 13, T. 13 N., R. 13 E., about one-fourth mile above the mouth of the river and 13 miles northeast of Quintette.

A staff gage is used and discharge measurements are made from a car and cable. The channel, which is composed of boulders, is rough and somewhat shifting. The drainage area above the station is 57.8 square miles. Results are good.

The following record was furnished by the Stone & Webster Engineering Corporation:

Daily discharge, in second-feet, of Little South Fork of Rubicon River at mouth, near Quintette, Cal., for 1909-1911.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909-10.												
1.			760	415	196	309	405	433	155	12	5	5
2.			501	316	183	324	423	397	142	12	3	5
3.			340	248	183	354	380	405	118	8	3	6
4.			278	225	175	380	389	362	111	8	3	6
5.			234	204	169	371	405	347	88	8	5	6
6.			196	196	169	354	423	332	77	8	5	7
7.			183	190	175	347	441	362	66	8	5	7
8.			211	183	162	347	458	405	61	8	5	7
9.			595	183	162	380	492	423	61	5	5	8
10.			527	175	162	380	527	433	56	5	5	8
11.			450	169	155	405	492	397	51	5	5	8
12.			380	149	149	415	467	362	47	5	5	8
13.			340	149	140	433	458	354	47	5	5	8
14.			332	142	155	450	450	332	42	5	5	8
15.			316	150	136	397	433	316	37	5	5	10
16.			219	150	136	354	458	292	37	5	5	16
17.			196	150	142	397	475	255	42	5	5	11
18.			183	150	142	423	492	255	37	5	3	10
19.			169	150	136	458	475	248	33	5	3	9
20.			155	150	136	501	484	234	28	5	3	8
21.			149	150	142	552	467	225	24	5	3	7
22.			136	183	142	492	475	225	16	5	3	6
23.			111	278	149	450	525	219	16	5	3	6
24.			94	285	142	397	501	204	16	5	3	6
25.			82	255	162	354	535	190	16	5	3	6
26.			77	248	149	324	578	183	12	5	3	6
27.			82	225	142	285	595	183	12	5	3	6
28.			88	219	225	240	616	175	16	5	3	6
29.		211	88	211		248	501	169	12	5	3	6
30.		255	94	211		300	467	169	12	5	3	6
31.			509	211		362		162			3	
1910-11.												
1.	6	3	16	16	811	127	848	675	943			
2.	6	3	16	16	620	127	890	616	1,050			
3.	6	3	562	23	511	141	848	830	1,170			
4.	6	2	214	23	439	199	712	992	1,230			
5.	6	2	113	23	370	184	848	901	1,170			
6.	6	2	99	23	330	169	890	675	992			
7.	6	2	199	23	295	169	777	588	1,050			
8.	6	2	141	23	262	169	712	735	992			
9.	6	9	155	23	246	155	744	705	1,110			
10.	8	9	155	73	246	214	562	766	1,170			
11.	8	11	562	86	230	199	511	798	1,110			
12.	8	39	214	86	199	184	463	830	992			
13.	8	24	169	127	199	169	416	830	901			
14.	6	14	141	113	184	169	416	798	830			
15.	8	14	113	99	155	184	416	766	798			
16.	6	11	99	73	141	199	463	705	798			
17.	49	11	99	73	155	230	536	616	705			
18.	60	11	86	73	155	246	650	675	705			
19.	39	11	86	86	155	278	681	766	735			
20.	31	11	73	246	155	312	590	864	645			
21.	18	11	61	184	141	349	681	1,110	561			
22.	14	11	50	155	141	370	777	1,170	485			
23.	11	14	40	141	141	416	937	1,410	312			
24.	9	49	40	246	141	439	1,110	901	258			
25.	7	60	40	214	127	439	1,110	830	242			
26.	6	31	40	184	113	439	890	798	258			
27.	6	31	31	127	127	439	650	864	275			
28.	6	24	31	113	141	487	511	943	214			
29.	4	18	31	278		590	511	830	199			
30.	4	14	23	1,710		712	620	1,170	184			
31.	3		23	1,230		744		901				

NOTE.—Daily discharge Jan. 15 to 21 and Apr. 23, 1910, estimated by engineers of United States Geological Survey from record of discharge of Little South Fork of Rubicon River below Gerle Creek, near Quintette.

Monthly discharge of Little South Fork of Rubicon River at mouth, near Quintette, Cal., for 1909-1911.

[Drainage area, 57.8 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.
1909-10.						
December.....	760	77	260	4.50	5.19	16,000
January.....	415	142	204	3.53	4.07	12,500
February.....	225	136	158	2.73	2.84	8,780
March.....	552	240	380	6.57	7.57	23,400
April.....	616	380	476	8.24	9.19	28,300
May.....	433	162	292	5.05	5.82	18,000
June.....	155	12	49.6	.858	.96	2,950
July.....	12	5	5.9	.102	.12	363
August.....	5	3	3.9	.067	.08	240
September.....	16	5	7.4	.128	.14	440
The period.....						111,000
1910-11.						
October.....	60	3	12.0	.208	.24	738
November.....	60	2	15.2	.263	.29	904
December.....	562	16	120	2.08	2.40	7,380
January.....	1,710	16	191	3.30	3.80	11,700
February.....	811	113	248	4.29	4.47	13,800
March.....	744	127	298	5.16	5.95	18,300
April.....	1,110	416	692	12.0	13.39	41,200
May.....	1,410	588	841	14.6	16.83	51,700
June.....	1,230	184	736	12.7	14.17	43,800
The period.....						190,000

#### GERLE CREEK NEAR RUBICON SPRINGS, CAL.

This station is located at the outlet of Loon Lake, in the SE.  $\frac{1}{4}$  NE.  $\frac{1}{4}$  sec. 5, T. 13 N., R. 15 E.,  $3\frac{3}{4}$  miles southwest of Rubicon Springs.

A staff gage is used and discharge measurements are made from a car and cable. The drainage area above the station is 9 square miles. The channel is solid granite and results are excellent except during the winter season, when flow is affected by ice.

The following record was furnished by the Stone & Webster Engineering Corporation:

Daily discharge, in second-feet, of Gerle Creek near Rubicon Springs, Cal., for 1910-11.

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

Daily discharge, in second-feet, of Gerle Creek near Rubicon Springs, Cal., for 1910-11—  
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.												
1.....	15	3	18	5	92	15	92	3	147	5	16	.....
2.....	15	2	21	4	88	15	92	3	147	5	16	.....
3.....	15	1	24	4	69	20	92	3	147	5	16	.....
4.....	15	3	27	4	50	27	92	3	147	5	16	.....
5.....	15	3	31	4	41	20	93	3	147	5	16	.....
6.....	15	4	34	4	20	20	94	3	147	5	16	.....
7.....	17	4	37	4	41	20	95	3	147	5	17	.....
8.....	17	4	40	4	35	20	96	27	147	6	18	.....
9.....	16	4	43	5	27	20	97	48	147	6	18	.....
10.....	16	5	48	7	27	27	98	53	147	6	18	.....
11.....	16	5	52	6	27	27	95	56	147	6	18	.....
12.....	15	5	56	8	27	20	92	59	147	6	18	.....
13.....	15	4	59	10	27	20	89	66	147	6	22	.....
14.....	15	4	42	12	27	20	86	97	147	5	24	.....
15.....	15	4	35	11	27	20	83	115	147	5	24	.....
16.....	41	3	31	11	27	20	80	119	147	4	24	.....
17.....	60	3	27	11	27	27	77	122	147	4	24	.....
18.....	52	3	23	11	20	33	74	126	147	4	24	.....
19.....	44	4	20	26	20	35	76	126	147	4	24	.....
20.....	36	5	18	29	20	37	78	126	137	4	24	.....
21.....	28	5	16	24	20	39	80	130	126	4	24	.....
22.....	20	6	14	42	20	40	84	135	82	4	24	.....
23.....	17	7	12	38	27	43	89	137	22	4	24	.....
24.....	16	8	11	33	20	45	93	149	6	4	24	.....
25.....	14	8	9	29	15	49	38	151	6	4	24	.....
26.....	12	7	8	20	20	49	3	147	5	4	24	.....
27.....	10	6	7	17	15	49	3	147	5	4	24	.....
28.....	8	9	7	40	15	69	3	147	5	4	24	.....
29.....	6	12	6	40	.....	76	3	147	5	11.5	24	.....
30.....	5	15	6	40	.....	84	3	147	5	16	24	.....
31.....	4	.....	5	56	.....	92	.....	147	.....	16	24	.....

Monthly discharge of Gerle Creek near Rubicon Springs, Cal., for 1910-11.

[Drainage area, 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.
1910.						
July 12-31.....	14	7	12.8	1.42	1.06	508
August.....	20	14	17.8	1.98	2.28	1,090
September.....	20	16	18.1	2.01	2.24	1,080
1910-11.						
October.....	60	4	19.5	2.17	2.50	1,200
November.....	15	1	5.2	.578	.64	309
December.....	59	5	25.4	2.82	3.25	1,560
January.....	56	4	18.0	2.00	2.31	1,110
February.....	92	15	31.8	3.53	3.68	1,770
March.....	92	15	35.4	3.93	4.53	2,180
April.....	98	3	72.3	8.03	8.96	4,300
May.....	151	3	88.5	9.83	11.33	5,440
June.....	147	5	107	11.9	13.28	6,370
July.....	16	4	5.69	.632	.73	350
August.....	24	16	21.2	2.36	2.72	1,300
The period.....						25,900

## LITTLE SOUTH FORK DITCH AT SAWMILL NEAR QUINTETTE, CAL.

This station is located at the flume across Little South Fork of Rubicon River about half a mile above sawmill, and 15 miles north-east of Quintette.

The intake of this canal is on Gerle Creek about  $1\frac{3}{4}$  miles above the mouth. The course of the ditch is south until it crosses the Little South Rubicon; it then follows down the valley to a point in the main Rubicon Canyon, where a tunnel carries it into the Pilot Creek drainage area—a total distance of about 10 miles.

The following record was furnished by the Stone & Webster Engineering Corporation:

*Daily discharge, in second-feet, of Little South Fork ditch at sawmill near Quintette, Cal., for 1910-11.*

Day.	June.	July.	Aug.	Sept.	Day.	June.	July.	Aug.	Sept.
1910.					1910.				
1.....		6	8	13.4	16.....	16	8	12	13.4
2.....		8	8	13.4	17.....	16	8	12	12.0
3.....		8	8	13.4	18.....	14	8	12	9.9
4.....		8	12	13.4	19.....	14	10	12	13.4
5.....		6	12	13.4	20.....	14	10	12	13.4
6.....		6	12	13.4	21.....	14	10	12	12
7.....	8	6	12	13.4	22.....	12	10	12	12
8.....	14	6	12	13.4	23.....	12	10	12	12
9.....	18	6	12	13.4	24.....	10	10	12	12
10.....	18	6	12	13.4	25.....	10	8	12	12
11.....	18	4	12	13.4	26.....	10	8	12	12
12.....	18	4	12	13.4	27.....	8	8	12	12
13.....	16	4	12	13.4	28.....	8	8	12	12
14.....	18	4	12	13.4	29.....	8	8	14	12
15.....	16	8	12	13.4	30.....	8	8	14	12
					31.....		8	14	.....
Day.	Oct.	Nov.	July.	Aug.	Day.	Oct.	Nov.	July.	Aug.
1910-11.					1910-11.				
1.....	12	1.7	.....	14	16.....	9.9	.....	12.2	14
2.....	12	1.7	.....	12.2	17.....	15.2	.....	10.5	14
3.....	12	.7	.....	12.2	18.....	15.2	.....	8.7	14
4.....	12	.3	.....	12.2	19.....	15.2	.....	8.7	14
5.....	12	.7	.....	10.5	20.....	15.2	.....	7	14
6.....	9.9	.7	.....	10.5	21.....	15.2	.....	14	14
7.....	9.9	.7	12.2	10.5	22.....	13.4	.....	14	14
8.....	9.9	.7	12.2	10.5	23.....	12	.....	12.2	14
9.....	9.9	.....	12.2	10.5	24.....	12	.....	12.2	14
10.....	9.9	.....	12.2	12.2	25.....	9.9	.....	12.2	14
11.....	12	.....	12.2	12.2	26.....	8.2	.....	10.5	14
12.....	12	.....	12.2	12.2	27.....	4.9	.....	10.5	14
13.....	9.9	.....	14.0	10.5	28.....	3.9	.....	8.7	12.2
14.....	9.9	.....	12.2	14	29.....	2.5	.....	8.7	12.2
15.....	9.9	.....	12.2	14	30.....	2.5	.....	15.7	12.2
					31.....	2.5	.....	15.7	12.2

NOTE.—Discharge July 6, 1910, interpolated by engineers of United States Geological Survey. Ditch dry Nov. 9, 1910, to July 6, 1911.

Monthly discharge of Little South Fork ditch at sawmill near Quintette, Cal., for 1910-11.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).
	Maximum.	Minimum.	Mean.	
1910.				
June 7-30.....	18	8	13.2	628
July.....	10	4	7.4	455
August.....	14	8	11.8	726
September.....	13.4	12	12.8	782
1910-11.				
October.....	15.2	2.5	10.4	640
November.....	1.7	.0	.24	14
December.....	.0	.0	.00	0
January.....	.0	.0	.00	0
February.....	.0	.0	.00	0
March.....	.0	.0	.00	0
April.....	.0	.0	.00	0
May.....	.0	.0	.00	0
June.....	.0	.0	.00	0
July.....	15.7	.0	9.5	584
August.....	14.0	10.5	12.7	781
The period.....				2,020

PILOT CREEK NEAR QUINTETTE, CAL.

This station is located at the Bacchi road crossing in the NW.  $\frac{1}{4}$  NW.  $\frac{1}{4}$  sec. 10, T. 12 N., R. 12 E., about three-fourths of a mile southwest of Bacchi and 4 miles east of Quintette.

A staff gage is used and discharge measurements are made from car and cable. The drainage area above the station is 18.7 square miles.

The flow of Pilot Creek ditch must be added to determine total run-off from the drainage area. The natural run-off from the Pilot Creek basin is increased by water diverted from Gerle Creek.

The channel is compact gravel and results are excellent.

The following record was furnished by the Stone & Webster Engineering Corporation:

Daily discharge, in second-feet, of Pilot Creek near Quintette, Cal., for 1910-11.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910.												
1.....						76	116	47	15	7	7	6
2.....						76	132	47	15	7	7	4
3.....						88	132	41	11	7	7	4
4.....						101	150	47	11	7	7	4
5.....						116	150	41	11	7	7	4
6.....						116	150	41	11	7	7	4
7.....						116	150	41	11	7	7	4
8.....						116	132	35	11	7	7	4
9.....						132	132	35	11	7	7	4
10.....						132	132	35	11	7	7	4
11.....						132	150	35	11	7	7	4
12.....						132	132	35	11	7	7	4
13.....						150	116	30	7	7	7	6
14.....						150	116	30	7	7	7	6
15.....						150	101	30	7	7	7	8
16.....						132	101	30	7	7	7	36
17.....						132	101	25	7	7	7	16
18.....						170	101	25	7	7	7	12
19.....						261	101	25	7	7	7	12
20.....						343	88	25	7	7	7	12

Daily discharge, in second-feet, of Pilot Creek near Quintette, Cal., for 1910-11—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910.												
21						300	88	25	7	7	7	12
22						278	76	25	7	7	7	12
23						261	76	20	7	7	7	12
24					35	212	76	20	7	7	7	8
25					76	191	66	20	7	7	7	8
26					66	170	55	20	7	7	7	8
27					66	150	47	20	7	7	7	6
28					66	132	66	20	7	7	7	6
29						116	55	20	7	7	7	6
30						116	55	20	7	7	7	6
31						101		15		7	7	
1910-11.												
1	6	4	4	4	370	44	244	144	84	22	6	
2	6	4	4	6	268	44	268	144	84	22	6	
3	6	4	36	6	220	44	268	144	84	22	6	
4	6	4	28	8	200	72	244	144	72	22	6	
5	6	4	12	4	160	72	584	180	72	12	6	
6	6	4	8	4	144	84	506	160	72	12	6	
7	6	4	12	4	112	112	402	144	72	12	6	
8	6	4	8	4	112	160	316	144	72	12	6	
9	6	4	8	8	96	144	316	128	62	12	6	
10	6	4	8	22	84	144	292	128	62	12	6	
11	8	6	36	12	84	128	268	128	44	12	6	
12	12	8	16	62	72	128	220	128	44	12	6	
13	12	4	12	96	72	112	200	128	44	12	6	
14	8	4	8	200	72	112	180	112	44	12	6	
15	8	4	8	72	62	112	180	112	36	8	6	
16	8	4	6	84	52	112	160	112	36	8	6	
17	8	4	6	72	52	112	160	96	36	8	6	
18	12	6	6	28	52	112	180	112	36	8	6	
19	12	4	6	22	52	112	200	96	36	8	6	
20	12	4	6	112	52	128	200	96	28	8	6	
21	12	4	6	128	52	128	200	96	28	8	6	
22	12	4	6	72	52	144	200	112	28	8	6	
23	12	4	4	62	44	144	220	112	28	8	6	
24	8	4	4	244	44	160	220	96	28	8	6	
25	8	16	4	316	44	160	244	96	28	8	6	
26	6	6	4	180	44	160	220	84	28	8	6	
27	6	6	4	128	44	160	200	84	22	8	6	
28	4	6	4	112	44	180	180	84	22	8	6	
29	4	4	4	200		200	160	84	22	8	6	
30	4	4	4	784		200	160	96	22	8	6	
31	4		4	744		220		96		6	6	

NOTE.—Discharge Dec. 31, 1910, interpolated by engineers of United States Geological Survey.

Monthly discharge of Pilot Creek near Quintette, Cal., for 1910-11.

[Drainage area, 18.7 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.
1910.						
February 24-28	76	35	61.8	3.30	0.61	613
March	343	76	156	8.34	9.62	9,590
April	150	47	105	5.62	6.27	6,250
May	47	15	29.8	1.59	1.83	1,830
June	15	7	8.9	.476	.53	530
July	7	7	7	.374	.43	430
August	7	7	7	.374	.43	430
September	36	4	8.1	.433	.48	482
The period						20,200

Monthly discharge of Pilot Creek near Quintette, Cal., for 1910-11—Continued.

Month.	Discharge in second-feet.				Run-off.	
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.	Total in acre-feet.
1910-11.						
October.....	12	4	7.7	0.412	0.48	473
November.....	16	4	4.9	.262	.29	292
December.....	36	4	9.2	.492	.57	566
January.....	784	4	123	6.58	7.59	7,560
February.....	370	44	98.4	5.26	5.48	5,460
March.....	220	44	127	6.79	7.83	7,810
April.....	584	160	246	13.2	14.73	14,600
May.....	180	84	117	6.26	7.22	7,190
June.....	84	22	45.9	2.45	2.73	2,730
July.....	22	6	11	.588	.68	676
August.....	6	6	6	.321	.37	369
The period.....						47,700

PILOT CREEK DITCH NEAR QUINTETTE, CAL.

The station on Pilot Creek ditch is located just south of the gaging station on Pilot Creek. The amount diverted by the ditch should be added to the flow at the Bacchi road crossing in order to determine total run-off from drainage area above this point.

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

Daily discharge, in second-feet, of Pilot Creek ditch near Quintette, Cal., for 1910-11.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910.												
1.....						11	11	13	11	9	8	11
2.....						11	11	13	11	11	8	11
3.....						11	11	13	14	11	8	11
4.....						11	0	13	14	11	8	14
5.....						11	0	13	14	11	9	14
6.....						11	0	13	14	11	9	11
7.....						11	0	13	14	9	9	14
8.....						11	8	13	14	9	9	14
9.....						13	6	11	14	9	9	14
10.....						13	6	13	13	8	9	14
11.....						13	8	11	13	8	9	14
12.....						13	6	11	13	8	9	14
13.....						13	6	13	13	8	9	14
14.....						13	6	13	13	6	9	14
15.....						13	5	13	13	6	9	17
16.....						13	5	13	13	8	9	14
17.....						13	5	13	13	8	9	11
18.....						13	5	13	11	8	9	11
19.....						13	5	13	11	8	9	9
20.....						15	5	13	11	9	9	9
21.....						13	5	13	11	9	9	9
22.....						11	5	13	11	9	9	9
23.....						11	5	13	11	9	9	9
24.....						11	4	13	11	9	9	9
25.....					11	11	4	13	11	9	9	11
26.....					11	9	13	13	9	9	9	11
27.....					11	11	13	13	9	9	9	14
28.....					11	11	13	13	9	9	9	14
29.....					11	11	13	13	9	9	9	14
30.....					11	11	13	13	9	8	9	14
31.....					11	11	13	13	8	9	9	.....

Daily discharge, in second-feet, of Pilot Creek ditch near Quintette, Cal., for 1910-11—  
Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.												
1.....	14	5	7	4	.....	.....	.....	.....	.....	7	9	.....
2.....	14	5	7	5	.....	.....	.....	.....	.....	7	9	.....
3.....	14	4	14	4	.....	.....	.....	.....	.....	7	9	.....
4.....	14	4	11	3	.....	.....	.....	.....	.....	7	9	.....
5.....	14	4	11	5	.....	.....	.....	.....	.....	11	9	.....
6.....	14	4	9	5	.....	.....	.....	.....	.....	11	9	.....
7.....	14	4	9	5	.....	.....	.....	.....	.....	11	9	.....
8.....	14	4	7	5	.....	.....	.....	.....	.....	11	9	.....
9.....	14	7	7	11	.....	.....	.....	.....	.....	11	9	.....
10.....	14	5	7	11	.....	.....	.....	.....	.....	11	9	.....
11.....	17	5	14	9	.....	.....	.....	.....	9	14	9	.....
12.....	17	11	9	14	.....	.....	.....	.....	9	14	9	.....
13.....	14	7	9	.....	.....	.....	.....	.....	9	11	9	.....
14.....	14	7	9	.....	.....	.....	.....	.....	9	11	9	.....
15.....	14	5	9	.....	.....	.....	.....	.....	9	14	9	.....
16.....	14	5	7	.....	.....	.....	.....	.....	9	11	9	.....
17.....	14	5	7	.....	.....	.....	.....	.....	9	11	9	.....
18.....	14	7	7	.....	.....	.....	.....	.....	9	11	9	.....
19.....	14	7	7	.....	.....	.....	.....	.....	7	11	7	.....
20.....	14	7	7	.....	.....	.....	.....	.....	7	11	7	.....
21.....	14	5	7	.....	.....	.....	.....	.....	7	11	7	.....
22.....	14	5	7	.....	.....	.....	.....	.....	7	11	7	.....
23.....	14	7	7	.....	.....	.....	.....	.....	7	11	7	.....
24.....	14	5	7	.....	.....	.....	.....	.....	7	11	7	.....
25.....	14	14	7	.....	.....	.....	.....	.....	7	11	7	.....
26.....	11	9	5	.....	.....	.....	.....	.....	7	11	7	.....
27.....	11	9	5	.....	.....	.....	.....	.....	7	11	7	.....
28.....	9	7	4	.....	.....	.....	.....	.....	7	9	7	.....
29.....	7	7	5	.....	.....	.....	.....	.....	7	9	7	.....
30.....	7	7	5	.....	.....	.....	.....	.....	7	9	7	.....
31.....	5	.....	4	.....	.....	.....	.....	.....	.....	9	5	.....

NOTE.—Ditch dry Jan. 13 to June 10, 1911.

Monthly discharge of Pilot Creek ditch near Quintette, Cal., for 1910-11.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).
	Maximum.	Minimum.	Mean.	
1910.				
March.....	15	9	11.8	726
April.....	13	0	6.6	393
May.....	13	11	12.8	787
June.....	14	9	11.9	708
July.....	11	6	8.8	541
August.....	9	8	8.9	547
September.....	17	9	12.3	732
The period.....	.....	.....	.....	4,430
1910-11.				
October.....	17	5	13.1	806
November.....	14	4	6.2	389
December.....	14	4	7.6	467
January.....	14	0	2.6	180
February.....	0	0	.0	0
March.....	0	0	.0	0
April.....	0	0	.0	0
May.....	0	0	.0	0
June.....	9	0	5.2	309
July.....	14	7	10.5	646
August.....	9	5	8.1	498
The period.....	.....	.....	.....	3,260

SOUTH FORK OF AMERICAN RIVER AT KYBURZ, CAL.

This station was located at Nielson's ranch (Kyburz post office), in the NE.  $\frac{1}{4}$  sec. 28, T. 11 N., R. 15 E., half a mile above the junction with Silver Fork and half a mile below Slippery Ford.

The gage was a vertical staff on the right bank. Discharge measurements were made from a car and cable at the gage. Flow was practically controlled by storage at Echo Lake. The channel is composed of sand and gravel and fairly smooth. Results are good.

The following record was furnished by Duryea, Haehl & Gilman, of San Francisco, Cal.

Daily discharge, in second-feet, of South Fork of American River at Kyburz, Cal., for 1906-7.

Day.	Apr.	May.	June.	July.	Aug.	Sept.	Day.	Apr.	May.	June.	July.	Aug.	Sept.
1906.							1906.						
1.....		284	465	1,800	198	171	16.....	230	520	1,690	715	176	.....
2.....		375	503	1,530	202	.....	17.....	<sup>a</sup> 270	520	1,630	560	176	.....
3.....		531	520	1,260	196	.....	18.....	260	606	1,670	512	176	.....
4.....		560	920	2,360	189	.....	19.....	271	695	1,890	460	176	.....
5.....		912	795	1,750	<sup>a</sup> 190	.....	20.....	<sup>a</sup> 250	695	1,660	445	176	.....
6.....		795	670	970	190	.....	21.....	359	695	2,010	<sup>a</sup> 425	176	.....
7.....		770	<sup>a</sup> 606	1,250	189	.....	22.....	500	645	1,740	<sup>a</sup> 405	174	.....
8.....		795	542	986	183	.....	23.....	360	520	1,530	385	173	.....
9.....		814	1,370	935	187	.....	24.....	285	560	1,750	389	173	.....
10.....		907	1,330	868	186	.....	25.....	240	585	1,240	386	172	.....
11.....	199	1,040	1,800	823	182	.....	26.....	240	570	1,240	325	171	.....
12.....	190	670	1,750	935	181	.....	27.....	260	585	1,000	314	172	.....
13.....	191	625	1,270	729	180	.....	28.....	240	464	986	259	172	.....
14.....	195	740	1,550	832	179	.....	29.....	<sup>a</sup> 250	416	1,060	<sup>a</sup> 234	172	.....
15.....	<sup>a</sup> 230	645	1,130	628	178	.....	30.....	260	403	880	209	172	.....
							31.....	.....	425	.....	202	172	.....

Day.	Sept.	Oct.	Nov.	Dec.	Day.	Sept.	Oct.	Nov.	Dec.
1907.					1907.				
1.....	58	<sup>a</sup> 26	44	30	16.....	39	<sup>a</sup> 20	20	.....
2.....	58	<sup>a</sup> 25	40	20	17.....	40	<sup>a</sup> 20	20	.....
3.....	55	25	32	32	18.....	38	20	20	.....
4.....	<sup>a</sup> 56	23	32	<sup>a</sup> 31	19.....	<sup>a</sup> 36	23	20	.....
5.....	<sup>a</sup> 57	23	30	<sup>a</sup> 31	20.....	<sup>a</sup> 33	35	<sup>a</sup> 20	.....
6.....	58	23	<sup>a</sup> 28	30	21.....	<sup>a</sup> 30	28	<sup>a</sup> 21	.....
7.....	62	20	<sup>a</sup> 25	52	22.....	28	40	21	.....
8.....	60	20	23	38	23.....	28	<sup>a</sup> 41	22	.....
9.....	56	<sup>a</sup> 25	23	30	24.....	28	42	20	.....
10.....	55	30	20	<sup>a</sup> 80	25.....	28	52	20	.....
11.....	<sup>a</sup> 51	23	20	<sup>a</sup> 70	26.....	28	44	20	.....
12.....	<sup>a</sup> 46	23	20	<sup>a</sup> 60	27.....	28	60	<sup>a</sup> 19	.....
13.....	42	20	<sup>a</sup> 20	60	28.....	<sup>a</sup> 28	72	<sup>a</sup> 19	.....
14.....	40	20	<sup>a</sup> 20	30	29.....	28	<sup>a</sup> 65	18	.....
15.....	40	<sup>a</sup> 20	20	.....	30.....	26	<sup>a</sup> 58	19	.....
					31.....	.....	<sup>a</sup> 51	.....	.....

<sup>a</sup> Discharge estimated or interpolated by engineers of United States Geological Survey from records of discharge of American River at Fair Oaks and South Fork of American River near Kyburz.

*Monthly discharge of South Fork of American River at Kyburz, Cal., for 1906-7.*

Month.	Discharge in second-feet.			Run-off (total in acre-feet).
	Maximum.	Minimum.	Mean.	
1906.				
April 11-30.....	500	190	264	10,500
May.....	1,040	284	625	38,400
June.....	2,010	465	1,240	73,800
July.....	2,360	202	770	47,300
August.....	202	171	180	11,100
1907.				
September.....	62	26	42.0	2,500
October.....	72	20	32.8	2,020
November.....	44	18	23.2	1,380
December 1-14.....	80	20	42.4	1,180

SOUTH FORK OF AMERICAN RIVER BELOW SILVER FORK, AT KYBURZ,  
CAL.

This station was located at the bridge just below the mouth of Silver Fork and directly above the intake of the Eldorado Canal, about half a mile below Kyburz post office.

The gage was a vertical staff on the right pier of the bridge from which discharge measurements were made. The flow was partly regulated by storage at Echo and Silver lakes. The channel contains boulders and is rough. Results are fair.

The following record was furnished by Duryea, Haehl, & Gilman, of San Francisco, Cal.

*Daily discharge, in second-feet, of South Fork of American River below Silver Fork, at Kyburz, Cal., for 1906.*

Day.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.
1.....		191	612	1,190	1,590	3,200	516
2.....		α 208	478	1,300	1,380	α 2,720	470
3.....		225	492	1,850	1,820	2,240	490
4.....		α 206	390	1,750	2,500	2,940	459
5.....		α 187	350	2,560	2,220	2,540	.....
6.....		168	469	2,010	1,680	1,900	.....
7.....		234	478	2,010	1,590	2,610	.....
8.....		307	612	2,100	1,640	α 2,000	.....
9.....		350	711	2,500	3,510	1,840	.....
10.....		345	670	2,260	3,540	1,700	.....
11.....		α 488	676	2,500	4,880	1,630	.....
12.....		632	565	1,820	4,840	1,780	.....
13.....		478	670	2,070	3,200	1,850	.....
14.....		375	740	2,070	3,280	1,580	.....
15.....		α 355	1,020	2,100	2,940	1,180	.....
16.....		α 335	1,020	1,600	4,040	1,220	.....
17.....		α 315	1,080	1,750	3,800	1,140	.....
18.....		296	1,060	1,850	4,060	1,030	.....
19.....		275	α 1,080	2,310	4,630	958	.....
20.....		239	α 1,050	1,900	3,770	α 958	.....
21.....		286	1,370	1,900	4,200	α 958	.....
22.....		386	α 1,800	1,750	3,380	α 958	.....
23.....		442	1,600	1,590	2,600	958	.....
24.....		652	860	1,540	2,700	923	.....
25.....	267	670	728	1,820	2,710	882	.....
26.....	238	612	728	1,600	2,620	845	.....
27.....		531	790	1,900	1,820	825	.....
28.....	239	442	670	1,360	1,640	667	.....
29.....		472	α 730	1,260	1,690	α 623	.....
30.....		478	790	1,280	1,750	679	.....
31.....		750	.....	1,360	.....	534	.....

α Discharge estimated or interpolated by engineers of United States Geological Survey from records of discharge of American River at Fair Oaks and South Fork of American River at Kyburz.

Monthly discharge of South Fork of American River below Silver Fork, at Kyburz, Cal., for 1906.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).
	Maximum.	Minimum.	Mean.	
March.....	750	168	385	23,700
April.....	1,800	350	810	48,200
May.....	2,560	1,190	1,830	113,000
June.....	4,880	1,380	2,870	171,000
July.....	3,200	534	1,480	91,000

SOUTH FORK OF AMERICAN RIVER NEAR KYBURZ, CAL.

This station was located about half a mile below the intake of the Eldorado canal and the mouth of Silver Fork, and 1 mile below Kyburz post office.

A recording gage was installed on the left bank and discharge measurements made from a car and cable.

The flow was partly regulated by storage at Echo and Silver lakes. The Eldorado canal, which supplies water for irrigation and mining, carried about 60 second-feet during the irrigation season (June 15 to September 30) and about 30 second-feet during the remainder of the year. Results are good.

The following record was furnished by Duryea, Haehl & Gilman, of San Francisco, Cal.:

Daily discharge, in second-feet, of South Fork of American River near Kyburz, Cal., for 1907.

Day.	Aug.	Sept.	Oct.	Nov.	Dec.	Day.	Aug.	Sept.	Oct.	Nov.	Dec.
1.....		85	α 43	48	20	16.....		40	α 19	42	
2.....		80	α 37	40	20	17.....		38	α 18	42	
3.....		α 86	30	35	20	18.....		32	18	42	
4.....		α 92	20	30	α 20	19.....		α 29	20	42	
5.....		98	α 20	28	α 20	20.....		α 26	35	α 42	
6.....		89	20	α 37	70	21.....		α 23	30	α 41	
7.....		82	20	α 46	88	22.....		20	40	41	
8.....		80	20	55	70	23.....		20	α 42	41	
9.....		75	α 25	53	50	24.....		16	45	38	
10.....		75	30	50	α 120	25.....		15	63	40	
11.....		α 71	20	50	α 90	26.....		50	52	38	
12.....		α 66	20	48	70	27.....		50	65	α 36	
13.....		62	20	α 47	80	28.....		α 50	78	α 32	
14.....		56	20	α 46	35	29.....		49	α 71	30	
15.....		55	α 20	45		30.....		50	α 63	30	
						31.....	93		α 55		

α Discharge estimated or interpolated by engineers of United States Geological Survey from record of discharge of American River at Fair Oaks, and of South Fork of American River at Kyburz.

*Monthly discharge of South Fork of American River near Kyburz, Cal., for 1907.*

Month.	Discharge in second-feet.			Run-off (total in acre-feet).
	Maximum.	Minimum.	Mean.	
September.....	98	15	55.3	3,290
October.....	78	18	34.0	2,140
November.....	55	23	41.2	2,450
December 1-14.....	120	20	55.2	1,530

## SOUTH FORK OF AMERICAN RIVER NEAR PLACERVILLE, CAL.

This station, which is located below the highway bridge at Chilli Bar, in the SE.  $\frac{1}{4}$  sec. 26, T. 11 N., R. 10 E., about 1,000 feet below Big Canyon Creek and 3 miles northwest of Placerville, was established August 11, 1911.

Just below the mouth of Silver Fork water is diverted for irrigation mining, and municipal supply for Placerville. Power is developed near the mouth of Rock Creek by the Western States Gas & Electric Co. Echo and Silver lakes are used as storage reservoirs.

The gage is a vertical staff, in two sections, on the right bank, 1,000 feet below the bridge. A high-water section is painted on the rocks above the staff gage.

The channel is composed of boulders and gravel.

Discharge measurements are made from the downstream side of the bridge, above the gage.

*Discharge measurements of South Fork of American River near Placerville, 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. 11	F. C. Ebert .....	4.58	307	Mar. 6	H. D. McGlashan..	7.46	1,770
Sept 24	.....do.....	3.68	98	Mar. 8	.....do.....	5.68	722
1912.				Mar. 28	Lasley Lee.....	5.26	535
Jan. 24	J. E. Stewart.....	4.48	233	June 7	.....do.....	8.76	2,910

Daily gage height, in feet, of South Fork of American River near Placerville, Cal., for 1911-12.

Day.	Aug.	Sept.	Day.	Aug.	Sept.	Day.	Aug.	Sept.
1911.			1911.			1911.		
1.		3.9	11.	4.6	3.8	21.	4.5	3.65
2.		3.9	12.	4.55	3.8	22.	4.15	3.05
3.		3.9	13.	4.5	3.75	23.	4.05	3.7
4.		3.85	14.	4.45	3.75	24.	4.05	3.7
5.		3.85	15.	4.4	3.7	25.	4.05	3.7
6.		3.85	16.	4.4	3.7	26.	4.0	3.8
7.		3.65	17.	4.35	3.7	27.	4.15	3.8
8.		3.85	18.	4.3	3.7	28.	4.0	3.7
9.		3.8	19.	4.2	3.7	29.	3.95	3.65
10.		3.8	20.	4.2	3.7	30.	3.95	3.75
						31.	3.95	

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.									
1.	3.75	3.8	4.0	4.3	4.55	4.3	5.2	7.5	10.4
2.	3.8	3.8	4.0	4.3	4.5	4.5	5.4	7.5	10.6
3.	3.85	3.75	4.0	4.15	4.5	4.5	5.6	7.2	10.7
4.	3.85	3.75	4.0	4.1	4.45	4.3	5.7	6.9	10.4
5.	3.9	3.75	4.0	4.1	4.45	4.9	5.7	7.0	10.0
6.	3.9	3.75	4.0	4.2	4.4	6.7	5.5	6.9	9.4
7.	3.9	3.8	4.0	4.3	4.4	6.4	5.7	7.4	9.2
8.	3.85	3.85	4.0	4.55	4.4	5.7	6.1	7.9	9.2
9.	3.9	3.85	4.0	4.45	4.4	5.35	6.1	8.3	8.5
10.	4.0	4.6	4.0	5.3	4.45	5.2	6.3	8.4	8.6
11.	3.95	4.75	3.95	5.5	4.45	5.2	6.1	8.7	8.3
12.	3.95	4.2	3.95	4.9	4.45	5.0	5.9	9.0	8.1
13.	3.9	4.2	3.95	4.65	4.4	5.2	5.7	9.3	9.7
14.	3.9	4.15	3.95	4.55	4.5	5.15	5.7	9.2	8.2
15.	3.85	4.1	3.95	4.5	4.5	5.05	5.6	9.4	7.7
16.	3.85	4.45	3.9	4.7	4.45	5.5	5.6	10.0	7.2
17.	3.85	4.3	4.1	5.1	4.45	5.2	5.5	9.8	6.9
18.	3.8	4.2	4.0	4.6	4.5	5.05	5.6	10.1	6.9
19.	3.75	4.1	3.9	4.7	4.8	5.05	5.6	10.0	7.0
20.	3.75	4.1	3.9	4.65	4.7	5.1	5.55	8.7	7.0
21.	3.75	4.1	3.9	4.0	4.7	5.1	5.45	8.0	6.5
22.	3.7	4.1	3.85	4.5	4.55	4.9	5.4	7.5	6.2
23.	3.7	4.05	3.85	4.5	4.4	4.9	5.3	7.3	6.0
24.	3.7	4.05	4.2	4.5	4.45	4.95	5.3	7.4	6.0
25.	3.75	4.05	3.9	4.45	4.25	5.1	5.9	7.9	5.7
26.	3.75	4.05	3.9	5.4	4.15	5.2	5.9	9.0	5.6
27.	3.85	4.0	3.9	5.7	4.25	5.3	6.0	8.4	5.6
28.	3.9	4.0	4.25	5.05	4.25	5.3	5.8	9.1	5.6
29.	3.85	4.0	4.2	4.8	4.25	5.4	6.4	10.1	5.6
30.	3.8	4.0	4.2	4.65		5.5	7.6	10.2	5.5
31.	3.8		4.2	4.6		5.3		9.9	

Daily discharge, in second feet, of South Fork of American River near Placerville, Cal., for 1911-12.

Day.	Aug.	Sept.	Day.	Aug.	Sept.	Day.	Aug.	Sept.
1911.			1911.			1911.		
1.		123	11.	220	114	21.	260	95
2.		123	12.	275	114	22.	172	95
3.		123	13.	250	103	23.	153	101
4.		121	14.	246	103	24.	153	101
5.		121	15.	232	101	25.	153	101
6.		121	16.	232	101	26.	140	114
7.		121	17.	219	101	27.	172	114
8.		121	18.	206	101	28.	144	101
9.		114	19.	183	101	29.	136	95
10.		114	20.	183	101	30.	136	108
						31.	136	

Daily discharge, in second feet, of South Fork of American River near Placerville, Cal., for 1911-12—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
1911-12.									
1.....	108	114	144	206	275	206	512	1,820	4,440
2.....	114	114	144	206	260	260	596	1,820	4,640
3.....	121	108	144	172	260	260	685	1,600	4,740
4.....	121	108	144	162	246	206	730	1,410	4,440
5.....	128	108	144	162	246	393	730	1,480	4,040
6.....	128	108	144	183	232	1,280	640	1,410	3,450
7.....	128	114	144	206	232	1,100	730	1,740	3,260
8.....	121	121	144	275	232	730	925	2,120	3,260
9.....	128	121	144	246	232	575	925	2,460	2,640
10.....	144	290	144	554	246	512	1,040	2,540	2,720
11.....	136	339	136	640	246	512	925	2,820	2,460
12.....	136	183	136	393	246	432	825	3,080	2,280
13.....	128	183	136	306	232	512	730	3,360	3,740
14.....	128	172	136	275	260	492	730	3,260	2,370
15.....	121	162	136	260	260	452	685	3,450	1,960
16.....	121	246	128	322	246	640	685	4,040	1,600
17.....	121	206	162	472	246	512	640	3,840	1,410
18.....	114	183	144	290	260	452	685	4,140	1,410
19.....	108	162	128	322	356	452	685	4,040	1,480
20.....	108	162	128	306	322	472	662	2,820	1,480
21.....	108	162	128	290	322	472	618	2,200	1,160
22.....	101	162	121	260	275	393	596	1,820	980
23.....	101	153	121	260	232	393	554	1,680	875
24.....	101	153	183	260	246	412	554	1,740	875
25.....	108	153	128	246	194	472	825	2,120	730
26.....	108	153	128	596	172	512	825	3,080	685
27.....	121	144	128	730	194	554	875	2,540	685
28.....	128	144	194	452	194	554	775	3,180	685
29.....	121	144	183	356	194	596	1,100	4,140	685
30.....	114	144	183	306	.....	640	1,890	4,240	640
31.....	114	.....	183	290	.....	554	.....	3,940	.....

NOTE.—Daily discharge determined from a well-defined rating curve.

Monthly discharge of South Fork of American River near Placerville, Cal., for 1911-12.

Month.	Discharge in second-feet.			Run-off (total in acre-feet).	Accu- racy.
	Maximum.	Minimum.	Mean.		
1911.					
August 11-31.....	290	136	194	8,090	A.
September.....	128	95	110	6,550	A.
1911-12.					
October.....	144	101	119	7,320	A.
November.....	339	108	161	9,580	A.
December.....	194	121	145	8,920	A.
January.....	730	162	323	19,900	A.
February.....	356	172	247	14,200	A.
March.....	1,280	206	516	31,700	A.
April.....	1,890	512	779	46,400	A.
May.....	4,240	1,410	2,710	167,000	A.
June.....	4,740	640	2,190	130,000	A.
The period.....	.....	.....	.....	435,000	.....

#### CLEAR LAKE IN LAKE COUNTY, CAL.

In 1889 the United States Geological Survey made a topographic survey of Clear Lake and its outlet. A datum plane was taken 1.27 feet above the low-water mark of 1873 and called 100. Mr. Wm. Ham. Hall compiled a number of tables for his report on this survey, one of which is given herewith.

In the following table is given the mean monthly and annual level of the surface of Clear Lake. The records up to 1888 were given to

Mr. Hall by Capt. Floyd, of Kono Tayee. The later records were obtained in 1900 from Mr. F. H. Porter, of Kono Tayee, and from Capt. Rumsey and Capt. Atherton, of Lakeport.

*Mean monthly and annual level of Clear Lake, 1874-1900.*

Month.	1874	1875	1876	1877	1878	1879	1880
January.....	102.87	102.96	102.73	102.04	102.42	.....	103.03
February.....	105.13	104.07	105.64	102.91	107.60	101.81	103.48
March.....	105.95	103.67	108.39	103.36	109.37	104.07	104.02
April.....	105.85	103.10	107.64	102.86	.....	105.73	106.19
May.....	104.99	102.40	106.23	102.28	.....	104.98	107.11
June.....	104.06	101.78	105.19	101.63	.....	.....	105.69
July.....	103.13	101.21	104.52	101.19	.....	103.13	104.56
August.....	102.31	100.55	104.04	100.71	.....	102.40	103.40
September.....	101.66	99.98	103.74	100.13	.....	101.90	102.51
October.....	101.23	99.58	103.16	99.62	.....	101.50	102.04
November.....	101.65	99.82	102.61	99.52	.....	101.24	101.64
December.....	102.04	100.75	102.02	99.56	.....	102.47	102.85
Mean.....	103.406	101.656	104.663	101.308	106.463	102.923	103.879

Month.	1881	1882	1883	1884	1885	1886	1887
January.....	104.88	101.24	100.37	99.13	102.43	105.16	.....
February.....	107.15	101.92	.....	99.68	102.73	106.14	101.75
March.....	106.88	103.11	100.77	100.83	102.54	105.35	102.89
April.....	105.75	103.71	101.23	101.88	102.23	108.30	.....
May.....	104.84	.....	101.58	103.01	101.79	105.19	102.50
June.....	104.16	.....	101.31	102.74	101.26	103.86	.....
July.....	103.08	.....	.....	102.20	100.81	102.73	.....
August.....	.....	.....	100.18	101.47	100.29	.....	100.77
September.....	101.26	100.27	99.73	100.98	99.65	.....	100.20
October.....	100.93	100.08	99.29	100.66	99.23	.....	.....
November.....	100.76	101.21	99.15	100.36	100.56	.....	.....
December.....	100.95	100.27	.....	101.19	102.87	100.83	99.48
Mean.....	103.695	101.476	100.401	101.178	101.366	104.32	101.265

Month.	1888	1889	1890	1891	1892	1893	1894
January.....	99.83	.....	111.31	101.08	101.35	104.56	104.40
February.....	101.73	.....	.....	102.81	101.73	106.52	105.33
March.....	102.45	.....	.....	104.02	101.73	107.35	106.31
April.....	102.27	103.53	.....	104.09	102.15	.....	.....
May.....	101.96	.....	.....	103.52	102.33	104.73	.....
June.....	101.36	.....	.....	102.37	.....	103.46	.....
July.....	.....	.....	.....	101.56	.....	104.48	.....
August.....	100.08	.....	.....	100.81	.....	.....	.....
September.....	99.84	.....	101.86	.....	100.16	.....	.....
October.....	99.57	100.53	101.48	100.23	99.73	100.93	.....
November.....	99.34	.....	101.07	100.01	100.23	100.54	100.15
December.....	99.83	.....	100.97	100.56	104.47	101.40	.....
Mean.....	100.751	102.03	103.34	101.91	101.54	103.77	104.05

Month.	1895	1896	1897	1898	1899	1900	Monthly mean.
January.....	109.90	100.56	102.62	100.20	98.66	102.00	102.74
February.....	109.00	105.40	104.73	100.54	99.32	102.09	103.72
March.....	106.96	.....	105.63	101.00	99.45	102.94	104.12
April.....	105.73	104.98	105.52	100.73	100.40	102.92	103.81
May.....	.....	.....	104.35	100.40	99.54	102.29	103.32
June.....	.....	104.50	103.15	99.98	99.69	101.57	102.66
July.....	.....	103.46	102.32	99.46	99.42	100.82	102.24
August.....	.....	102.34	101.42	98.73	98.88	99.88	101.08
September.....	.....	101.36	100.73	98.20	98.25	99.40	101.24
October.....	.....	100.88	100.20	97.84	97.92	.....	100.32
November.....	100.23	100.59	99.96	97.75	98.21	.....	100.30
December.....	.....	101.32	100.09	97.86	99.57	.....	100.92
Mean.....	106.36	102.54	102.56	99.39	99.13	101.55	102.51

• Twenty-six years.

## CACHE CREEK AT LOWER LAKE, CAL.

This station was established January 1, 1901, to determine the outflow of Clear Lake. The gage and measuring section were originally located at the wagon bridge just below the outlet of Clear Lake, about 1 mile from Lower Lake, Cal., and below Seigler Creek. On March 26, 1903, a cable was installed 300 feet above the bridge and above Seigler Creek, and a new staff gage was set 100 feet above the cable on the left bank. On March 26, 1903, when this gage was set, the reading was 5.7 feet, the old gage reading being 4.4 feet. The gage is read daily. The gage datum has remained unchanged.

No tributaries enter above the station except those which come into Clear Lake. Seigler Creek enters about 300 feet below the station. North Fork joins the main creek about 14 miles below the lake.

The flow at the station is regulated by Clear Lake, which diminishes the intensity of floods and prolongs the summer flow.

Conditions at this station are peculiar. The stream bed at this point forms a gravel bar which controls the outlet of Clear Lake. The grade of the creek down to Seigler Creek is small. When Cache Creek is low and Seigler Creek high, the current of Cache Creek may be reversed, and part of the water from Seigler Creek finds its way up stream into Clear Lake, the rest flowing down stream into Cache Creek. This phenomenon happens at extreme flood stages and causes backwater at the gage above the cable. The flow from Seigler Creek is very small, except at these flood periods, which are usually of short duration.

The reading of the gage is believed to be at all times an index of the discharges below Seigler Creek.

In computing the revised estimates, measurement showing reduced discharges have been discarded. The values as given are therefore directly comparable with those obtained at the original location of the station at the bridge.

The channel is subject to only slight changes. The station is well rated and results as a rule are excellent.

The maximum recorded gage height of 13.8 feet, crest discharge of 4,340 second-feet occurred February 20, 1909.

The lowest weekly flow is 3.71 second-feet, November 21 to November 27, 1910.

Discharge measurements of Cache Creek at Lower Lake, Cal., in 1901-1911.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1901.				1904.			
Jan. 25	S. G. Bennett.....	Feet. 3.60	Sec.-ft. 675	Jan. 2	J. R. Anderson.....	Feet. 3.5	Sec.-ft. 194
Apr. 13	do.....	3.80	673	9	do.....	3.6	206
June 17	Shafter Mathews.....	2.85	333	16	do.....	3.6	210
July 15	do.....	2.45	236	23	do.....	3.7	238
Aug. 13	do.....	2.05	144	31	do.....	3.7	239
Sept. 4	J. R. Anderson.....	1.72	88	Feb. 6	do.....	3.8	250
Oct. 5	do.....	1.45	34	12	do.....	4.48	277
Nov. 9	do.....	1.20	20	13	do.....	4.3	363
29	do.....	1.60	69	21	do.....	5.3	633
Dec. 30	do.....	1.60	67	24	do.....	7.58	281
				27	do.....	7.4	1,110
				Mar. 5	do.....	7.9	1,290
1902.				12	do.....	10.5	2,410
Jan. 29	J. R. Anderson.....	1.6	70	19	do.....	11.4	2,760
Feb. 13	do.....	2.5	260	23	do.....	11.6	3,280
Mar. 3	do.....	6.5	1,150	26	do.....	11.5	3,010
19	do.....	7.7	1,870	28	do.....	12.0	2,700
Apr. 5	do.....	6.5	1,400	Apr. 17	do.....	10.5	2,630
24	do.....	5.9	1,210	24	do.....	10.0	2,360
May 3	S. G. Bennett.....	5.2	1,040	May 2	do.....	9.5	2,010
19	J. R. Anderson.....	4.5	853	7	do.....	8.8	1,770
31	do.....	4.0	720	14	do.....	8.2	1,550
June 14	do.....	3.6	629	20	do.....	7.2	1,240
July 12	do.....	3.1	422	28	do.....	6.55	1,030
26	do.....	2.8	345	June 4	do.....	6.15	924
Aug. 9	do.....	2.7	289	11	do.....	5.8	842
22	do.....	2.5	246	18	do.....	5.6	780
Sept. 6	do.....	2.3	193	27	do.....	5.3	678
20	do.....	2.2	156	July 4	do.....	5.1	598
Oct. 4	do.....	2.1	108	9	do.....	4.85	500
20	do.....	2.0	83	16	do.....	4.7	473
Nov. 4	do.....	2.1	118	23	do.....	4.5	419
19	do.....	2.8	245	30	do.....	4.35	407
Dec. 19	S. G. Bennett.....	2.8	300	Aug. 6	do.....	4.2	359
				13	do.....	4.1	325
1903.				20	do.....	3.9	282
Jan. 13	J. R. Anderson.....	2.9	344	21	W. B. Clapp.....	3.9	287
29	do.....	3.5	575	Feb. 5	J. R. Anderson.....	3.8	260
Feb. 5	do.....	4.0	747	12	do.....	3.6	231
12	do.....	4.4	830	20	do.....	3.55	201
20	do.....	4.3	847	28	do.....	3.45	180
Mar. 6	do.....	4.2	775	Mar. 6	do.....	3.35	160
14	do.....	4.2	776	14	do.....	3.4	166
21	do.....	4.5	831	Oct. 1	do.....	3.4	149
27	do.....	a 4.4	773	8	do.....	3.3	149
		b 5.63	752	15	do.....	3.5	191
Apr. 2	J. R. Anderson.....	5.9	808	23	do.....	3.4	168
8	do.....	5.8	795	30	do.....	3.4	164
15	do.....	5.6	732	Nov. 5	do.....	3.3	145
May 4	do.....	5.2	608	13	do.....	3.25	137
12	do.....	5.0	562	20	do.....	3.3	142
20	do.....	4.8	501	26	do.....	3.2	128
27	do.....	4.6	429	Dec. 4	do.....	3.25	129
June 4	do.....	4.4	409	11	do.....	3.25	122
12	do.....	4.2	363	17	do.....	3.3	130
19	do.....	4.0	333				
26	do.....	3.9	293	1905.			
July 7	do.....	3.7	247	Jan. 1	J. R. Anderson.....	4.1	257
14	do.....	3.5	213	7	do.....	4.2	300
21	do.....	3.4	188	14 <sup>c</sup>	do.....	4.5	331
30	do.....	3.3	171	15	do.....	4.5	373
Aug. 6	do.....	3.1	137	22	do.....	4.9	467
14	do.....	3.0	124	23 <sup>c</sup>	do.....	5.6	299
22	do.....	2.9	106	24	do.....	5.4	589
29	do.....	2.8	86	26	do.....	5.6	673
Sept. 5	do.....	2.7	68	31	do.....	5.8	748
12	do.....	2.6	75	Feb. 1 <sup>c</sup>	do.....	6.48	562
19	do.....	2.45	39	2 <sup>c</sup>	do.....	6.2	790
26	do.....	2.4	32	9	do.....	6.4	965
Oct. 4	do.....	2.35	29	15	do.....	6.2	848
10	do.....	2.35	25	21	do.....	6.3	888
17	do.....	2.3	23	27	do.....	6.2	864
25	do.....	2.3	19	Mar. 5	do.....	6.1	828
Nov. 4	do.....	2.3	18	11	do.....	5.8	757
11	do.....	2.2	16	13 <sup>c</sup>	do.....	6.68	625
21	do.....	2.85	83	14	do.....	6.08	814
27	do.....	3.15	132	20	do.....	6.52	955
Dec. 6	do.....	3.1	130	25	do.....	6.9	1,092
12	do.....	3.1	129	31	do.....	7.1	1,159
19	do.....	3.4	174	Apr. 7	do.....	7.0	1,108
27	do.....	3.5	191	15	do.....	6.6	984

a Old gage.

b New gage. Old gage read 4.4 feet.

c Backwater from Seigler Creek.

Discharge measurements of Cache Creek at Lower Lake, Cal., in 1901-1911—Continued

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>
Apr. 22	J. R. Anderson . . . . .	6.35	886	Mar. 7	R. S. Hawley . . . . .	6.8	999
29	.....do.....	6.1	829				
May 6	.....do.....	5.8	755	1907.			
July 11	O. W. Peterson . . . . .	4.3	387	Sept. 7			
Sept. 29	C. H. Lee . . . . .	2.83	80	Sept. 20	W. A. Lamb . . . . .	3.45	158
Oct. 8	J. R. Anderson . . . . .	2.7	63				
14	.....do.....	2.7	60	1909.			
21	.....do.....	2.6	48	Aug. 13	W. F. Martin . . . . .	3.87	244
Nov. 5	.....do.....	2.5	31				
11	.....do.....	2.45	28	1911.			
22	.....do.....	2.4	24	Oct. 30	E. O. Christensen . . . . .	2.61	39
27	.....do.....	2.3	20	Dec. 2	S. C. Whipple . . . . .	2.43	25

Daily gage height, in feet, of Cache Creek at Lower Lake, Cal., for 1901-1912.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1901.												
1				2.25	3.6	4.75	4.0	3.5	3.05	2.6	2.15	1.8
2				2.2	3.6	4.75	3.9	3.5	3.0	2.55	2.15	1.7
3				3.1	3.6	4.7	3.9	3.45	3.0	2.55	2.15	1.7
4				3.0	4.0	4.7	3.9	3.45	3.0	2.5	2.15	1.7
5				3.0	3.7	4.65	3.9	3.45	3.0	2.5	2.1	1.7
6				3.1	3.7	4.65	3.9	3.4	3.0	2.5	2.1	1.7
7				3.1	3.7	4.6	3.8	3.4	3.0	2.5	2.1	1.65
8				3.1	3.7	4.6	3.8	3.4	2.95	2.5	2.1	1.65
9				3.1	3.7	4.5	3.8	3.4	2.95	2.45	2.1	1.6
10				3.1	3.7	4.6	3.8	3.35	2.9	2.45	2.1	1.6
11				3.1	3.7	4.7	3.75	3.35	2.9	2.4	2.05	1.6
12				3.2	3.7	4.6	3.7	3.35	2.85	2.4	2.05	1.55
13				3.25	3.75	4.6	3.7	3.3	2.85	2.4	2.0	1.55
14				3.25	3.8	4.5	3.7	3.3	2.8	2.4	2.0	1.5
15				3.3	3.8	4.4	3.65	3.3	2.8	2.4	2.0	1.5
16				3.3	3.8	4.5	3.65	3.3	2.8	2.35	1.95	1.5
17				3.3	3.8	4.5	3.65	3.25	2.8	2.35	1.95	1.5
18				3.3	3.8	4.4	3.6	3.25	2.8	2.35	1.95	1.45
19				3.3	6.05	4.4	3.6	3.2	2.8	2.35	1.9	1.45
20				3.3	4.5	4.4	3.6	3.2	2.75	2.3	1.9	1.4
21				3.65	4.4	4.4	3.6	3.2	2.75	2.3	1.9	1.4
22				3.6	4.4	4.35	3.55	3.2	2.75	2.3	1.9	1.4
23				3.5	4.7	4.3	3.55	3.15	2.7	2.3	1.85	1.4
24				3.5	4.7	4.3	3.5	3.15	2.7	2.3	1.8	1.4
25				3.5	4.7	4.3	3.5	3.1	2.7	2.25	1.8	1.4
26				3.6	4.7	4.2	3.5	3.1	2.7	2.25	1.8	1.4
27				3.6	4.75	4.15	3.45	3.1	2.65	2.25	1.8	1.4
28				3.6	4.75	4.1	3.45	3.1	2.65	2.2	1.8	1.4
29				3.6	.....	4.1	3.45	3.1	2.65	2.2	1.8	1.5
30				3.6	.....	4.1	3.5	3.05	2.6	2.2	1.8	1.5
31				3.6	.....	4.0	.....	3.05	.....	2.2	1.8	.....
1901-2.												
1	1.45	1.2	1.5	1.6	1.6	5.9	6.5	5.4	4.0	3.3	2.85	2.4
2	1.45	1.2	1.4	1.6	1.6	6.6	6.5	5.3	4.0	3.3	2.7	2.4
3	1.4	1.2	1.5	1.6	1.6	6.5	6.5	5.3	3.9	3.2	2.7	2.35
4	1.4	1.2	1.6	1.6	1.65	6.5	6.5	5.2	3.9	3.2	2.7	2.35
5	1.45	1.2	1.7	1.6	1.75	6.5	6.5	5.1	3.9	3.2	2.7	2.3
6	1.45	1.2	1.7	1.6	1.75	7.2	6.95	5.0	3.8	3.2	2.7	2.3
7	1.4	1.2	1.65	1.6	1.95	7.0	6.9	5.1	3.8	3.2	2.7	2.3
8	1.4	1.15	1.7	1.6	2.0	8.0	6.8	5.1	3.8	3.2	2.7	2.3
9	1.35	1.1	1.7	1.6	2.1	8.0	6.8	5.0	3.8	3.15	2.7	2.3
10	1.35	1.1	1.7	1.6	2.1	8.1	6.8	5.0	3.7	3.1	2.6	2.3
11	1.3	1.15	1.65	1.6	3.15	8.0	6.8	4.9	3.7	3.1	2.6	2.3
12	1.3	1.15	1.65	1.6	2.45	8.0	6.7	4.7	3.7	3.1	2.6	2.3
13	1.3	1.15	1.6	1.6	2.5	8.2	6.6	4.7	3.7	3.1	2.6	2.3
14	1.3	1.2	1.6	1.6	2.55	8.0	6.6	4.8	3.6	3.1	2.6	2.25
15	1.3	1.2	1.6	1.6	2.65	7.9	6.5	4.7	3.6	3.0	2.6	2.2
16	1.25	1.2	1.6	1.6	2.6	7.8	6.5	4.7	3.6	3.0	2.6	2.2
17	1.25	1.2	1.6	1.65	2.75	7.8	6.5	4.7	3.6	3.0	2.55	2.2
18	1.2	1.2	1.6	1.5	2.7	7.7	6.5	4.6	3.5	3.0	2.5	2.2
19	1.2	1.2	1.6	1.65	2.7	7.7	6.5	4.5	3.5	3.0	2.5	2.2
20	1.2	1.3	1.6	1.5	2.8	7.6	6.3	4.5	3.5	3.0	2.5	2.2

Daily gage height, in feet, of Cache Creek at Lower Lake, Cal., for 1901-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1901-2.												
21.....	1.2	1.3 <sup>a</sup>	1.6	1.6	3.3	7.4	6.2	4.4	3.5	3.0	2.5	2.2
22.....	1.2	1.3	1.6	1.7	3.1	7.4	6.0	4.3	3.5	2.95	2.5	2.2
23.....	1.2	1.3	1.6	1.55	5.75	7.5	5.9	4.3	3.45	2.9	2.5	2.2
24.....	1.2	1.3	1.6	1.75	4.4	7.2	5.9	4.2	3.4	2.9	2.45	2.2
25.....	1.15	1.35	1.6	1.75	6.9	7.2	5.8	4.2	3.4	2.9	2.45	2.2
26.....	1.15	1.3	1.6	1.7	5.05	7.1	5.8	4.1	3.4	2.8	2.4	2.2
27.....	1.2	1.3	1.5	1.6	5.5	7.0	5.7	4.1	3.4	2.8	2.4	2.2
28.....	1.5	1.3	1.5	1.6	5.4	6.8	5.5	4.1	3.35	2.8	2.4	2.15
29.....	1.3	1.6	1.5	1.6	.....	6.7	5.5	4.1	3.3	2.8	2.4	2.1
30.....	1.2	1.3	1.6	1.6	.....	6.6	5.4	4.0	3.3	2.8	2.4	2.1
31.....	1.2	.....	1.6	1.6	.....	6.5	.....	4.0	.....	2.8	2.4	.....
1902-3.												
1.....	2.1	2.1	2.7	2.9	3.8	4.2	5.9	5.4	4.5	3.9	3.2	2.7
2.....	2.1	2.1	2.7	2.9	3.8	4.2	5.9	5.4	4.4	3.8	3.2	2.7
3.....	2.1	2.1	2.7	2.9	3.9	4.2	5.9	5.3	4.4	3.8	3.2	2.7
4.....	2.1	2.1	2.7	2.9	4.0	4.1	5.9	5.3	4.4	3.8	3.2	2.7
5.....	2.1	2.0	2.7	2.9	4.0	4.2	5.8	5.3	4.4	3.8	3.2	2.7
6.....	2.1	2.0	2.7	2.9	4.0	4.2	5.8	5.2	4.3	3.7	3.1	2.7
7.....	2.1	2.05	2.7	2.9	4.6	4.1	5.8	5.2	4.3	3.7	3.1	2.7
8.....	2.1	2.25	2.7	2.9	4.4	4.1	5.8	5.1	4.3	3.7	3.1	2.6
9.....	2.1	3.7	2.7	2.9	4.3	4.1	5.8	5.1	4.3	3.6	3.1	2.6
10.....	2.1	2.8	2.8	2.9	4.3	4.1	5.8	5.1	4.2	3.6	3.1	2.6
11.....	2.1	2.8	2.8	2.9	4.4	4.1	5.7	5.0	4.2	3.6	3.0	2.6
12.....	2.1	2.8	2.8	2.9	4.4	4.1	5.7	5.0	4.2	3.6	3.0	2.6
13.....	2.1	2.8	2.8	2.9	4.4	5.2	5.7	5.0	4.2	3.5	3.0	2.6
14.....	2.1	2.8	2.8	2.9	4.4	4.5	5.7	4.9	4.1	3.5	3.0	2.6
15.....	2.1	2.8	2.8	2.9	4.4	4.4	5.6	5.0	4.1	3.5	3.0	2.5
16.....	2.1	2.8	2.8	2.9	4.3	4.4	5.6	5.0	4.1	3.5	3.0	2.5
17.....	2.05	2.8	2.8	2.9	4.3	4.4	5.6	4.8	4.1	3.5	3.0	2.5
18.....	2.05	2.8	2.8	2.9	4.3	4.4	5.6	4.8	4.0	3.5	2.9	2.5
19.....	2.0	2.8	2.8	2.9	4.3	4.4	5.5	4.8	4.0	3.5	2.9	2.4
20.....	2.0	2.8	2.8	2.9	4.3	4.4	5.5	4.8	4.0	3.4	2.9	2.5
21.....	2.0	2.8	2.8	2.9	4.3	4.4	5.5	4.8	4.0	3.4	2.9	2.4
22.....	2.0	2.8	2.8	2.9	4.3	4.4	5.5	4.7	4.0	3.4	2.9	2.4
23.....	2.1	2.8	2.8	3.0	4.3	4.4	5.5	4.7	4.0	3.4	2.9	2.4
24.....	2.2	2.7	2.8	3.0	4.3	4.4	5.4	4.7	4.0	3.3	2.8	2.4
25.....	2.1	2.7	2.8	3.2	4.3	4.4	5.5	4.6	4.0	3.3	2.8	2.4
26.....	2.1	2.7	2.9	3.2	4.2	a 5.7	5.4	4.6	3.9	3.3	2.8	2.4
27.....	2.1	2.7	2.9	4.2	4.2	5.6	5.4	4.6	3.9	3.3	2.8	2.4
28.....	2.1	2.7	2.9	3.5	4.2	6.0	5.4	4.6	3.9	3.3	2.8	2.4
29.....	2.1	2.7	2.9	3.5	.....	5.8	5.4	4.6	3.9	3.3	2.8	2.4
30.....	2.1	2.7	2.9	3.9	.....	5.8	5.4	4.5	3.9	3.3	2.8	2.4
31.....	2.1	.....	2.9	3.8	.....	5.9	.....	4.5	.....	3.2	2.7	.....
1903-4.												
1.....	2.4	2.2	3.1	3.5	3.7	7.8	12.1	9.5	6.3	5.15	4.3	3.7
2.....	2.4	2.2	3.1	3.5	3.7	7.9	12.1	9.4	6.25	5.15	4.25	3.65
3.....	2.4	2.2	3.2	3.5	3.7	7.95	12.0	9.3	6.3	5.1	4.25	3.65
4.....	2.3	2.3	3.1	3.6	3.8	7.95	11.9	9.2	6.15	5.1	4.2	3.6
5.....	2.4	2.3	3.1	3.55	3.75	b 7.9	11.85	9.15	6.1	5.05	4.2	3.6
6.....	2.3	2.2	3.1	3.55	3.8	8.05	11.7	9.0	6.2	5.05	4.2	3.6
7.....	2.3	2.3	3.1	3.55	3.8	8.1	11.6	8.8	6.1	5.0	4.2	3.6
8.....	2.3	2.2	3.2	3.55	3.85	8.45	11.45	8.75	6.0	5.0	4.15	3.6
9.....	2.3	2.2	3.1	3.6	3.8	8.2	11.4	8.65	6.0	4.9	4.15	3.55
10.....	2.4	2.2	3.1	3.55	3.8	10.15	11.25	8.55	5.9	4.85	4.1	3.55
11.....	2.4	2.2	3.1	3.6	3.8	10.25	11.2	8.5	5.8	4.85	4.1	3.55
12.....	2.3	2.2	3.1	3.55	b 4.55	10.5	11.1	8.4	5.8	4.8	4.1	3.5
13.....	2.3	2.2	3.1	3.55	4.3	10.6	10.95	8.30	5.7	4.8	4.1	3.5
14.....	2.3	2.4	3.2	3.6	4.4	10.75	10.8	8.2	5.7	4.8	4.05	3.5
15.....	2.3	2.3	3.2	3.6	5.1	10.8	10.75	8.1	5.7	4.75	4.05	3.5
16.....	2.3	2.3	3.4	3.6	5.0	10.75	10.6	7.9	5.65	4.7	4.0	3.45
17.....	2.3	2.3	3.4	3.7	5.0	11.0	10.5	7.7	5.6	4.65	4.0	3.45
18.....	2.3	2.3	3.4	3.65	5.05	11.2	10.35	7.7	5.55	4.65	4.0	3.4
19.....	2.3	2.4	3.4	3.7	5.1	b 11.40	10.5	7.4	5.5	4.6	3.9	3.4
20.....	2.3	2.6	3.4	3.7	5.2	11.65	10.45	7.25	5.5	4.6	3.9	3.4
21.....	2.3	2.8	3.5	3.7	5.3	11.55	10.25	7.1	5.5	4.55	3.9	3.4
22.....	2.3	2.9	3.5	3.7	5.45	11.6	10.3	7.0	5.5	4.55	3.9	3.4
23.....	2.3	2.9	3.5	3.7	5.6	11.6	10.1	6.9	5.4	4.5	3.85	3.4
24.....	2.3	3.0	3.5	3.7	b 7.1	11.8	10.0	6.9	5.35	4.5	3.85	3.35
25.....	2.3	3.0	3.5	3.7	6.45	11.65	9.85	6.8	5.35	4.5	3.8	3.45

<sup>a</sup> New gage located 400 feet above old gage and above Seigler Creek. Old gage read 4.4 feet.  
<sup>b</sup> Gage height increased by backwater.

Daily gage height, in feet, of Cache Creek at Lower Lake, Cal., for 1901-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1903-4.												
26.....	2.2	3.1	3.5	3.7	a7.4	a11.5	9.85	6.7	5.3	4.5	3.8	3.45
27.....	2.3	3.1	3.5	3.7	7.4	11.6	9.7	6.65	5.3	4.45	3.8	3.45
28.....	2.2	3.2	3.5	3.7	7.6	a12.8	9.7	6.55	5.25	4.45	3.8	3.45
29.....	2.2	3.2	3.5	3.7	7.7	12.0	9.6	6.5	5.2	4.4	3.75	3.4
30.....	2.2	3.2	3.5	3.7	.....	12.0	9.55	6.5	5.2	4.35	3.75	3.4
31.....	2.2	.....	3.6	3.7	.....	12.0	.....	6.4	.....	4.3	3.7	.....
1904-5.												
1.....	3.4	3.3	3.3	4.1	6.5	6.2	7.3	5.9	5.3	4.5	3.8	3.25
2.....	3.4	3.3	3.3	4.1	6.2	6.15	7.1	6.0	5.3	4.5	3.8	3.2
3.....	3.4	3.3	3.3	4.15	6.25	6.15	7.05	6.0	5.25	4.45	3.75	3.2
4.....	3.35	3.3	3.25	4.2	6.25	6.1	7.0	5.95	5.25	4.4	3.75	3.2
5.....	3.35	3.3	3.25	4.2	6.35	6.1	7.0	5.90	5.2	4.4	3.7	3.2
6.....	3.4	3.3	3.25	4.2	6.4	6.1	7.0	5.8	5.2	4.4	3.7	3.15
7.....	3.3	3.35	3.25	4.2	6.4	6.05	7.0	6.05	5.15	4.4	3.7	3.15
8.....	3.3	3.35	3.25	4.2	6.4	6.0	7.0	6.0	5.15	4.4	3.7	3.15
9.....	3.35	3.35	3.25	4.2	6.4	6.0	6.9	5.9	5.1	4.35	3.7	3.1
10.....	3.35	3.3	3.25	4.2	6.4	5.9	6.8	5.85	5.1	4.35	3.7	3.1
11.....	3.55	3.3	3.25	4.2	6.3	5.8	6.8	5.8	5.05	4.3	3.65	3.1
12.....	3.5	3.25	3.25	4.2	6.3	6.2	6.85	5.8	5.0	4.3	3.65	3.05
13.....	3.45	3.25	3.25	4.3	6.3	6.45	6.75	5.8	4.95	4.25	3.65	3.05
14.....	3.4	3.35	3.3	4.5	6.3	6.2	6.6	5.75	4.95	4.25	3.6	3.05
15.....	3.5	3.3	3.3	4.5	6.2	6.2	6.65	5.75	4.9	4.2	3.6	3.05
16.....	3.5	3.25	3.3	4.7	6.2	6.3	6.55	5.8	4.9	4.15	3.6	3.0
17.....	3.45	3.25	3.3	4.75	6.3	6.4	6.45	5.7	4.85	4.15	3.55	3.0
18.....	3.45	3.25	3.3	4.75	6.3	6.3	6.4	5.7	4.85	4.1	3.55	3.0
19.....	3.45	3.25	3.3	4.8	7.0	6.6	6.5	5.7	4.8	4.1	3.5	2.95
20.....	3.4	3.25	3.3	4.8	6.3	6.55	6.3	5.6	4.8	4.1	3.5	2.95
21.....	3.4	3.25	3.3	4.9	6.3	6.7	6.35	5.6	4.75	4.05	3.5	2.9
22.....	3.4	3.25	3.3	5.85	6.35	6.8	6.35	5.5	4.75	4.05	3.45	2.9
23.....	3.4	3.25	3.3	5.55	6.35	6.8	6.3	5.5	4.75	4.0	3.45	2.9
24.....	3.4	3.25	3.4	5.7	6.3	6.95	6.25	5.5	4.7	4.0	3.45	2.9
25.....	3.35	3.2	3.3	5.65	6.25	6.95	6.25	5.45	4.7	4.0	3.4	2.9
26.....	3.35	3.2	3.3	5.65	6.25	7.1	6.2	5.4	4.65	4.0	3.4	2.9
27.....	3.35	3.3	3.3	5.75	6.2	6.95	6.2	5.4	4.6	4.0	3.35	2.9
28.....	3.35	3.3	3.25	5.8	6.2	6.75	6.15	5.4	4.6	3.95	3.35	2.85
29.....	3.35	3.3	3.3	5.8	.....	7.2	6.1	5.4	4.55	3.9	3.35	2.85
30.....	3.4	3.35	5.3	5.8	.....	7.2	6.05	5.45	4.5	3.9	3.3	2.8
31.....	3.35	.....	4.1	5.8	.....	7.1	.....	5.4	.....	3.85	3.3	.....
1905-6.												
1.....	2.8	2.5	2.5	2.5	5.35	6.35	8.9	7.0	5.85	5.1	4.35	3.65
2.....	2.8	2.5	2.5	2.5	5.3	6.25	8.9	6.9	5.85	5.1	4.3	3.6
3.....	2.8	2.5	2.45	2.5	5.3	7.2	8.95	6.9	5.8	5.05	4.3	3.6
4.....	2.8	2.5	2.45	2.5	5.3	6.75	8.9	6.8	5.8	5.05	4.3	3.6
5.....	2.8	2.5	2.45	2.5	5.3	6.8	8.9	6.75	5.75	5.0	4.25	3.6
6.....	2.8	2.5	2.4	2.5	5.3	6.8	8.85	6.65	5.75	5.0	4.25	3.55
7.....	2.75	2.45	2.4	2.45	5.25	6.8	8.85	6.6	5.7	4.95	4.25	3.55
8.....	2.75	2.45	2.4	2.5	5.25	6.8	8.8	6.55	5.7	4.95	4.25	3.55
9.....	2.75	2.45	2.4	2.45	5.25	6.8	8.8	6.5	5.65	4.9	4.2	3.55
10.....	2.7	2.45	2.35	2.5	5.25	6.8	8.75	6.45	5.6	4.85	4.2	3.4
11.....	2.7	2.45	2.35	2.5	5.25	6.8	8.55	6.5	5.6	4.85	4.15	3.4
12.....	2.7	2.45	2.35	2.75	5.2	7.1	8.45	6.35	5.55	4.8	4.15	3.45
13.....	2.7	2.4	2.35	2.9	5.2	7.1	8.35	6.35	5.5	4.8	4.1	3.5
14.....	2.7	2.4	2.35	3.05	6.1	7.3	8.3	6.5	5.5	4.8	4.1	3.45
15.....	2.7	2.4	2.45	3.2	5.4	7.0	8.4	6.35	5.45	4.75	4.05	3.4
16.....	2.7	2.4	2.45	4.75	5.4	7.0	8.2	6.3	5.45	4.7	4.0	3.35
17.....	2.65	2.4	2.35	4.0	5.4	7.0	8.0	6.25	5.5	4.7	3.95	3.35
18.....	2.65	2.4	2.45	5.18	5.5	6.9	7.9	6.2	5.4	4.65	3.95	3.35
19.....	2.6	2.4	2.5	5.2	5.6	6.8	7.75	6.15	5.4	4.65	3.9	3.3
20.....	2.6	2.5	2.5	5.3	5.9	7.2	7.65	6.1	5.45	4.6	3.85	3.3
21.....	2.6	2.35	2.45	5.3	5.8	7.3	7.6	6.05	5.4	4.6	3.85	3.3
22.....	2.6	2.4	2.4	5.1	5.9	7.2	7.4	6.0	5.35	4.55	3.85	3.25
23.....	2.6	2.25	2.5	5.4	6.1	7.5	7.4	5.9	5.3	4.55	3.8	3.35
24.....	2.6	2.3	2.5	5.4	6.2	5.6	7.35	5.85	5.3	4.4	3.8	3.35
25.....	2.6	2.3	2.5	5.45	6.2	7.75	7.3	5.9	5.25	4.5	3.8	3.25
26.....	2.6	2.35	2.5	5.4	6.2	8.05	7.25	5.95	5.25	4.45	3.75	3.25
27.....	2.6	2.3	2.45	5.4	6.4	8.1	7.5	6.0	5.25	4.45	3.75	3.25
28.....	2.55	2.65	2.4	5.4	6.5	8.1	7.2	5.95	5.2	4.4	3.7	3.25
29.....	2.55	2.5	2.4	5.4	.....	8.1	7.1	5.95	5.15	4.4	3.7	3.2
30.....	2.55	2.5	2.5	5.4	.....	8.8	7.0	5.9	5.1	4.4	3.7	3.2
31.....	2.5	.....	2.55	5.35	.....	9.3	.....	5.9	.....	4.35	3.65	.....

a Gage height increased by backwater.

Daily gage height, in feet, of Cache Creek at Lower Lake, Cal., for 1901-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1906-7.												
1.....	3.2	2.9	2.7	3.9	5.25	6.2	11.5	9.0	6.4	5.35	4.45	3.7
2.....	3.25	2.85	2.75	3.85	5.55	6.2	11.4	8.9	6.35	5.35	4.4	3.65
3.....	3.25	2.85	2.75	3.9	5.9	6.15	11.3	8.75	6.3	5.25	4.4	3.65
4.....	3.2	2.85	2.75	4.2	6.0	6.15	11.2	8.6	6.25	5.25	4.35	3.65
5.....	3.2	2.85	2.7	4.2	6.1	6.35	11.15	8.4	6.2	5.2	4.35	3.65
6.....	3.15	2.9	2.7	4.2	6.2	6.25	11.1	8.4	6.15	5.2	4.3	3.65
7.....	3.15	2.9	2.7	4.2	6.2	6.25	11.0	8.35	6.2	5.25	4.3	3.65
8.....	3.15	2.9	2.7	4.25	6.25	6.3	10.95	8.3	6.2	5.1	4.25	3.6
9.....	3.15	2.9	2.8	4.5	6.3	6.5	10.9	8.25	6.05	5.05	4.25	3.6
10.....	3.15	2.9	3.15	4.5	6.25	6.5	10.8	8.25	6.0	5.05	4.2	3.6
11.....	3.2	2.9	3.35	4.45	6.25	6.7	10.7	8.5	6.0	5.0	4.15	3.6
12.....	3.2	2.95	3.3	4.6	6.25	6.55	10.6	8.3	5.95	4.95	4.1	3.6
13.....	3.15	2.95	3.3	4.45	6.2	6.6	10.5	8.2	5.9	4.95	4.1	3.55
14.....	3.1	2.95	3.3	4.6	6.2	6.6	10.4	8.0	5.85	4.9	4.1	3.55
15.....	3.1	2.95	3.35	4.5	6.2	6.6	10.3	7.9	5.8	4.9	4.05	3.55
16.....	3.15	2.9	3.4	4.5	6.2	6.65	10.2	7.8	5.8	4.85	4.05	3.5
17.....	3.1	3.0	3.4	4.6	6.2	7.9	10.15	7.75	5.75	4.85	4.05	3.5
18.....	3.1	2.9	3.4	4.7	6.2	8.9	10.3	7.5	5.75	4.8	4.0	3.5
19.....	3.0	2.85	3.4	4.7	6.2	9.7	10.2	7.4	5.7	4.8	4.0	3.45
20.....	3.0	2.85	3.4	4.65	6.15	10.1	10.1	7.3	5.7	4.75	4.0	3.45
21.....	2.95	2.95	3.4	4.65	6.15	10.45	10.05	7.2	5.75	4.75	3.95	3.45
22.....	2.9	2.8	3.4	4.65	6.2	10.5	10.0	7.0	5.6	4.7	3.9	3.45
23.....	2.9	2.8	3.35	4.6	6.15	11.25	9.9	6.9	5.6	4.7	3.9	3.4
24.....	2.9	2.85	3.35	4.7	6.1	11.55	9.8	6.85	5.55	4.65	3.9	3.4
25.....	2.9	2.85	3.4	4.75	6.3	11.75	9.6	6.7	5.5	4.65	3.85	3.4
26.....	2.9	2.8	3.75	4.8	6.2	11.75	9.4	6.8	5.5	4.6	3.85	3.4
27.....	2.9	2.75	3.7	4.9	6.2	11.75	9.4	6.6	5.45	4.55	3.8	3.45
28.....	2.9	2.75	3.75	4.9	6.2	11.7	9.3	6.5	5.45	4.55	3.8	3.5
29.....	2.9	2.8	3.8	4.9	.....	11.65	9.2	6.5	5.4	4.5	3.8	3.35
30.....	2.9	2.75	3.9	4.95	.....	11.6	9.1	6.5	5.4	4.5	3.75	3.35
31.....	2.9	.....	4.0	5.15	.....	11.55	.....	6.4	.....	4.45	3.75	.....
1907-8.												
1.....	3.6	3.2	3.05	3.7	4.6	5.75	5.55	4.7	4.15	3.5	3.05	2.6
2.....	3.3	3.15	3.0	3.7	5.55	5.85	5.45	4.9	4.1	3.45	3.05	2.6
3.....	3.3	3.15	3.0	3.8	5.0	5.8	5.4	4.75	4.05	3.45	3.05	2.6
4.....	3.25	3.15	3.1	3.8	5.0	5.8	5.45	4.7	4.0	3.45	3.05	2.6
5.....	3.25	3.15	3.0	3.8	5.0	5.8	5.45	4.7	4.0	3.45	3.0	2.6
6.....	3.25	3.15	3.2	3.85	5.0	5.8	5.4	4.7	3.95	3.4	3.0	2.6
7.....	3.25	3.15	3.2	3.85	5.2	5.8	5.3	4.65	3.95	3.4	3.0	2.55
8.....	3.2	3.1	3.1	3.85	5.1	5.8	5.3	4.6	3.95	3.4	3.0	2.55
9.....	3.2	3.15	3.1	3.9	5.65	5.75	5.25	4.6	3.95	3.35	3.0	2.5
10.....	3.2	3.15	3.25	3.9	5.5	5.75	5.25	4.55	3.9	3.35	3.0	2.5
11.....	3.2	3.1	3.2	3.9	5.5	5.75	5.25	4.55	3.85	3.35	3.0	2.4
12.....	3.25	3.1	3.2	3.9	5.55	5.75	5.25	4.5	3.85	3.35	3.0	2.45
13.....	3.2	3.2	3.2	3.9	5.6	5.8	5.25	4.5	3.8	3.35	2.95	2.5
14.....	3.2	3.1	3.25	4.05	5.6	5.8	5.25	4.5	3.8	3.3	2.95	2.5
15.....	3.2	3.1	3.3	4.0	5.6	5.8	5.2	4.4	3.8	3.3	2.9	2.5
16.....	3.2	3.15	3.3	4.0	5.6	5.75	5.25	4.4	3.8	3.3	2.9	2.5
17.....	3.2	3.0	3.3	4.0	5.6	5.75	5.2	4.35	3.8	3.3	2.9	2.45
18.....	3.2	3.1	3.3	4.0	5.6	5.7	5.2	4.35	3.75	3.3	2.9	2.4
19.....	3.2	3.15	3.4	4.05	5.5	5.7	5.1	4.4	3.75	3.25	2.9	2.4
20.....	3.2	3.1	3.3	4.2	5.5	5.7	5.05	4.35	3.7	3.25	2.85	2.4
21.....	3.2	3.0	3.3	4.2	5.5	5.65	5.0	4.3	3.7	3.25	2.85	2.35
22.....	3.2	3.0	3.3	4.25	5.5	5.65	5.0	4.3	3.65	3.25	2.85	2.35
23.....	3.2	3.0	3.35	4.25	5.45	5.65	4.95	4.3	3.65	3.2	2.8	2.3
24.....	3.15	3.0	3.3	4.3	5.45	5.65	4.95	4.3	3.6	3.2	2.8	2.35
25.....	3.1	3.0	3.35	4.4	5.45	5.6	4.9	4.25	3.6	3.2	2.75	2.35
26.....	3.15	2.95	3.5	4.4	5.5	5.65	4.9	4.25	3.55	3.2	2.75	2.3
27.....	3.2	2.95	3.5	4.45	5.5	5.7	4.85	4.2	3.5	3.15	2.7	2.3
28.....	3.2	2.95	3.5	4.45	5.5	5.6	4.85	4.2	3.5	3.15	2.7	2.3
29.....	3.2	2.95	3.4	4.45	5.6	5.55	4.85	4.2	3.5	3.15	2.65	2.3
30.....	3.2	3.0	3.6	4.5	.....	5.6	4.8	4.2	3.5	3.1	2.65	2.25
31.....	3.2	.....	3.7	4.5	.....	5.6	.....	4.2	.....	3.1	2.6	.....
1908-9.												
1.....	2.4	1.95	2.05	2.25	10.9	12.9	10.35	7.3	5.7	4.9	4.15	3.5
2.....	2.3	2.0	2.05	2.5	11.65	12.7	10.3	7.2	5.7	4.85	4.1	3.5
3.....	2.2	1.95	2.05	2.6	12.7	12.5	10.3	7.5	5.65	4.8	4.05	3.5
4.....	2.2	2.0	2.1	2.8	12.7	12.55	10.4	7.1	5.65	4.8	4.05	3.45
5.....	2.2	2.0	2.2	2.8	12.9	12.3	10.2	7.0	5.6	4.8	4.0	3.45

Daily gage height, in feet, of Cache Creek at Lower Lake, Cal., for 1901-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1908-9.												
6.....	2.2	2.0	2.2	3.2	12.95	12.4	9.9	6.85	5.55	4.75	4.0	3.45
7.....	2.15	2.0	2.15	3.3	13.35	12.3	9.8	6.9	5.55	4.7	4.0	3.45
8.....	2.15	1.95	2.1	4.2	13.0	12.4	9.7	6.9	5.5	4.7	3.95	3.45
9.....	2.2	1.95	2.25	4.3	12.95	12.05	9.6	6.8	5.5	4.7	3.95	3.45
10.....	2.2	2.0	2.25	4.3	12.8	11.95	9.5	6.7	5.45	4.7	3.95	3.45
11.....	2.15	2.0	2.3	4.35	13.0	11.8	9.4	6.65	5.45	4.65	3.9	3.35
12.....	2.15	1.95	2.25	4.4	13.3	11.7	9.25	6.45	5.4	4.6	3.9	3.3
13.....	2.2	1.95	2.35	4.55	13.4	11.6	9.2	6.5	5.35	4.6	3.9	3.3
14.....	2.15	1.95	2.3	5.3	13.65	11.45	9.1	6.4	5.4	4.55	3.9	3.3
15.....	2.2	1.95	2.4	6.05	13.6	11.35	9.0	6.45	5.3	4.55	3.85	3.3
16.....	2.1	1.9	2.3	6.4	13.6	11.3	9.0	6.4	5.25	4.5	3.85	3.3
17.....	2.1	1.9	2.25	6.8	13.5	11.3	8.85	6.35	5.2	4.5	3.8	3.25
18.....	2.1	1.9	2.3	7.2	13.45	11.0	8.75	6.25	5.2	4.45	3.75	3.25
19.....	2.1	2.0	2.3	7.4	13.45	11.35	8.7	6.25	5.2	4.45	3.75	3.25
20.....	2.1	2.0	2.25	8.2	13.8	10.9	8.7	6.2	5.2	4.4	3.75	3.2
21.....	2.05	1.9	2.3	8.9	13.65	10.9	8.25	6.1	5.15	4.35	3.7	3.2
22.....	2.0	1.95	2.3	9.1	13.5	10.8	8.35	6.5	5.1	4.3	3.7	3.2
23.....	2.0	2.3	2.3	9.3	13.4	10.8	8.3	6.0	5.1	4.3	3.65	3.15
24.....	2.0	2.2	2.3	9.75	13.4	10.75	8.1	6.0	5.1	4.3	3.65	3.15
25.....	2.0	2.1	2.3	10.0	13.4	10.75	8.0	6.0	5.1	4.3	3.65	3.1
26.....	2.0	2.1	2.3	10.2	13.25	10.7	8.1	5.95	5.05	4.25	3.65	3.15
27.....	1.95	2.1	2.3	10.35	13.15	10.7	8.5	6.05	4.95	4.2	3.6	3.1
28.....	1.95	2.1	2.25	10.35	13.0	10.6	7.7	5.85	4.9	4.2	3.6	3.15
29.....	1.9	2.05	2.3	10.3	.....	10.5	7.4	5.8	4.9	4.15	3.6	3.15
30.....	1.95	2.05	2.25	10.55	.....	10.4	7.3	5.75	4.9	4.15	3.55	3.15
31.....	1.95	.....	2.2	10.7	.....	10.45	.....	5.7	.....	4.15	3.55	.....
1909-10.												
1.....	3.1	3.0	3.1	3.6	4.7	5.05	5.45	4.85	4.15	3.6	3.05	2.5
2.....	3.1	2.95	3.1	3.6	4.6	5.05	5.45	4.85	4.15	3.55	3.05	2.5
3.....	3.1	2.95	3.2	3.55	4.5	5.05	5.4	4.8	4.15	3.55	3.05	2.5
4.....	3.1	3.0	3.25	3.55	4.6	5.1	5.4	4.8	4.15	3.5	3.0	2.5
5.....	3.1	2.95	3.2	3.55	4.6	5.1	5.4	4.75	4.1	3.45	3.0	2.5
6.....	3.1	2.95	3.3	3.6	4.55	5.05	5.4	4.75	4.05	3.45	3.0	2.5
7.....	3.1	2.95	3.35	3.6	4.6	5.1	5.35	4.75	4.0	3.45	3.0	2.45
8.....	3.05	3.0	3.4	3.55	4.7	5.05	5.35	4.75	4.0	3.4	2.95	2.45
9.....	3.05	3.0	3.45	3.5	4.75	5.05	5.3	4.7	4.0	3.4	2.95	2.45
10.....	3.05	3.0	3.5	3.55	4.75	5.0	5.2	4.7	3.95	3.4	2.95	2.4
11.....	3.05	3.05	3.5	3.55	4.8	5.0	5.25	4.65	3.95	3.4	2.95	2.4
12.....	3.1	2.95	3.55	3.55	4.8	5.0	5.35	4.65	4.0	3.35	2.9	2.35
13.....	3.05	3.0	3.6	3.35	4.8	4.95	5.3	4.65	4.0	3.35	2.9	2.3
14.....	3.05	2.95	3.6	3.6	4.85	5.0	5.25	4.6	3.9	3.3	2.9	2.25
15.....	3.05	2.95	3.55	3.8	4.8	4.95	5.25	4.55	3.9	3.3	2.9	2.35
16.....	3.05	2.95	3.55	3.8	4.8	4.95	5.2	4.5	3.85	3.3	2.85	2.3
17.....	3.0	2.95	3.6	3.85	4.8	4.95	5.2	4.5	3.85	3.25	2.85	2.25
18.....	3.0	2.95	3.6	3.85	4.8	4.95	5.2	4.5	3.85	3.25	2.8	2.2
19.....	3.05	2.95	3.55	3.85	4.8	4.95	5.15	4.5	3.8	3.25	2.8	2.25
20.....	3.05	3.0	3.55	3.9	4.8	5.0	5.15	4.4	3.8	3.2	2.8	2.25
21.....	3.0	3.0	3.6	3.9	4.8	5.05	5.1	4.4	3.8	3.2	2.8	2.2
22.....	3.0	3.05	3.55	3.95	4.9	5.3	5.1	4.4	3.75	3.2	2.8	2.2
23.....	3.0	3.05	3.6	4.0	4.85	5.25	5.05	4.35	3.75	3.15	2.75	2.2
24.....	3.0	3.1	3.55	4.35	4.85	5.25	5.0	4.35	3.7	3.15	2.75	2.2
25.....	3.0	3.15	3.55	4.3	4.9	5.25	5.05	4.3	3.7	3.15	2.75	2.2
26.....	3.0	3.1	3.5	4.4	4.9	5.2	5.0	4.3	3.65	3.1	2.75	2.2
27.....	3.0	3.1	3.5	4.5	5.0	5.65	4.95	4.3	3.7	3.1	2.7	2.15
28.....	2.95	3.05	3.5	4.55	5.05	5.4	4.95	4.25	3.65	3.1	2.65	2.15
29.....	3.0	3.05	3.5	4.6	.....	5.4	4.95	4.25	3.6	3.1	2.6	2.15
30.....	3.0	3.1	3.55	4.6	.....	5.4	4.9	4.25	3.6	3.1	2.55	2.15
31.....	3.0	.....	3.55	4.6	.....	5.4	.....	4.2	.....	3.1	2.5	.....
1910-11.												
1.....	2.2	1.9	1.85	1.85	3.85	4.65	6.8	5.8	5.0	4.25	3.7	3.1
2.....	2.15	1.9	1.9	1.9	4.1	4.65	6.8	5.8	5.0	4.25	3.65	3.1
3.....	2.15	1.9	1.9	1.85	4.1	5.55	6.75	5.75	4.95	4.25	3.65	3.1
4.....	2.1	1.9	1.95	1.85	4.15	5.1	6.6	5.75	4.9	4.2	3.6	3.1
5.....	2.1	1.9	1.95	1.85	4.2	5.65	6.75	5.75	4.9	4.2	3.6	3.05
6.....	2.05	1.9	1.9	1.85	4.25	7.4	6.75	5.75	4.9	4.15	3.55	3.0
7.....	2.05	1.9	1.9	1.9	4.25	7.8	6.7	5.75	4.85	4.15	3.55	3.0
8.....	2.1	1.9	1.9	1.9	4.25	7.9	6.6	5.7	4.85	4.15	3.5	3.0
9.....	2.05	1.9	1.9	2.1	4.3	7.65	6.6	5.6	4.8	4.1	3.5	2.95
10.....	2.1	1.9	1.9	1.8	4.3	7.8	6.6	5.55	4.8	4.1	3.5	2.9

a High gage height caused by heavy wind on lake.

Daily gage height, in feet, of Cache Creek at Lower Lake, Cal., for 1901-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.												
11.....	1.9	1.9	1.95	2.0	4.4	7.8	6.75	5.5	4.75	4.1	3.45	2.9
12.....	1.95	1.95	1.95	1.95	4.45	7.75	6.5	5.6	4.75	4.05	3.45	2.9
13.....	2.05	1.9	1.95	2.05	4.7	7.75	6.4	5.5	4.75	4.0	3.4	2.85
14.....	2.05	1.95	1.95	2.05	4.6	7.8	6.35	5.45	4.7	4.0	3.4	2.9
15.....	2.05	1.85	2.0	2.1	4.65	7.85	6.35	5.5	4.7	4.0	3.35	2.9
16.....	2.05	1.85	2.0	2.15	4.65	7.75	6.4	5.4	4.7	4.0	3.4	2.85
17.....	2.0	1.85	1.95	2.15	4.75	7.65	6.3	5.35	4.65	4.0	3.35	2.85
18.....	2.0	1.9	1.9	2.15	4.7	7.6	6.3	5.4	4.65	3.95	3.35	2.85
19.....	1.95	1.9	1.9	2.3	4.7	7.5	6.2	5.3	4.65	3.9	3.3	2.8
20.....	1.95	1.85	1.9	2.5	4.7	7.45	6.15	5.25	4.6	3.9	3.3	2.8
21.....	2.0	1.8	1.95	2.55	4.7	7.4	6.1	5.25	4.55	3.9	3.25	2.8
22.....	2.0	1.85	1.9	2.55	4.7	7.35	6.05	5.2	4.55	3.85	3.25	2.8
23.....	1.95	1.8	1.9	2.55	4.75	7.35	6.05	5.25	4.5	3.8	3.2	2.8
24.....	1.95	1.8	1.9	2.6	4.75	7.4	6.0	5.25	4.5	3.8	3.2	2.75
25.....	1.95	1.95	1.9	2.7	4.8	7.25	5.95	5.2	4.45	3.8	3.2	5.72
26.....	1.95	1.85	1.9	2.7	4.7	7.15	6.0	5.1	4.4	3.75	3.15	2.75
27.....	1.95	1.8	1.9	3.25	4.65	7.1	5.95	5.1	4.4	3.75	3.15	2.75
28.....	1.95	1.85	1.9	3.45	4.6	7.0	5.9	5.05	4.4	3.75	3.15	2.75
29.....	1.95	1.85	1.85	3.6	.....	6.95	5.85	5.1	4.35	3.7	3.1	2.75
30.....	1.95	1.85	1.9	3.8	.....	6.9	5.85	5.1	4.3	3.7	3.1	2.85
31.....	1.95	.....	1.9	3.8	.....	6.8	.....	5.0	.....	3.7	3.1	.....
1911-12.												
1.....	2.75	2.60	2.50	2.50	2.90	2.90	3.6	3.5	3.18	.....	.....	.....
2.....	2.75	2.60	2.45	2.50	2.90	2.90	3.6	3.5	3.18	.....	.....	.....
3.....	2.8	2.60	2.45	2.48	2.90	2.90	3.55	3.45	3.20	.....	.....	.....
4.....	2.7	2.60	2.45	2.50	2.90	2.82	3.5	3.48	3.20	.....	.....	.....
5.....	2.7	2.58	2.40	2.55	2.85	3.00	3.5	3.45	3.20	.....	.....	.....
6.....	2.7	2.58	2.55	2.55	2.85	3.10	3.45	3.42	3.15	.....	.....	.....
7.....	2.7	2.65	2.55	2.58	2.85	3.08	3.40	3.42	3.20	.....	.....	.....
8.....	2.65	2.60	2.50	2.52	2.90	3.08	3.45	3.42	3.20	.....	.....	.....
9.....	2.75	2.55	2.50	2.52	2.95	3.10	3.40	3.45	3.18	.....	.....	.....
10.....	2.7	2.80	2.50	2.52	2.95	3.20	3.40	3.42	3.18	.....	.....	.....
11.....	2.65	2.55	2.45	2.52	2.98	3.00	3.5	3.40	3.10	.....	.....	.....
12.....	2.65	2.52	2.45	2.52	2.95	3.35	3.5	3.38	3.10	.....	.....	.....
13.....	2.7	2.50	2.45	2.58	2.90	3.32	3.40	3.38	3.10	.....	.....	.....
14.....	2.7	2.52	2.45	2.55	3.00	3.32	3.40	3.38	3.10	.....	.....	.....
15.....	2.65	2.60	2.45	2.55	3.00	3.48	3.40	3.35	3.10	.....	.....	.....
16.....	2.65	2.55	2.50	2.60	3.00	3.40	3.45	3.30	3.05	.....	.....	.....
17.....	2.65	2.55	2.50	2.50	3.05	3.48	3.45	3.30	3.05	.....	.....	.....
18.....	2.65	2.55	2.50	2.48	3.00	3.5	3.45	3.25	3.00	.....	.....	.....
19.....	2.65	2.55	2.52	2.50	2.90	3.5	3.5	3.22	3.00	.....	.....	.....
20.....	2.65	2.52	2.48	2.60	2.95	3.5	3.40	3.28	3.12	.....	.....	.....
21.....	2.6	2.52	2.45	2.55	2.95	3.5	3.40	3.28	3.02	.....	.....	.....
22.....	2.65	2.52	2.45	2.55	2.95	3.55	3.30	3.25	2.92	.....	.....	.....
23.....	2.65	2.52	2.45	2.40	2.98	3.55	3.32	3.20	2.90	.....	.....	.....
24.....	2.65	2.50	2.45	2.60	3.00	3.55	3.40	3.22	2.90	.....	.....	.....
25.....	2.7	2.50	2.42	2.55	2.95	3.5	3.35	3.20	2.90	.....	.....	.....
26.....	2.6	2.52	2.40	2.90	2.95	3.6	3.30	3.22	2.90	.....	.....	.....
27.....	2.6	2.52	2.52	2.85	2.98	3.55	3.35	3.20	2.90	.....	.....	.....
28.....	2.6	2.55	2.48	2.88	2.95	3.6	3.30	3.20	2.90	.....	.....	.....
29.....	2.6	2.52	2.40	2.88	2.90	3.5	3.38	3.28	2.95	.....	.....	.....
30.....	2.6	2.50	2.45	2.90	.....	3.5	3.32	3.22	3.05	.....	.....	.....
31.....	2.62	.....	2.50	3.00	.....	3.5	.....	3.20	.....	.....	.....	.....

Daily discharge, in second-feet, of Cache Creek at Lower Lake, Cal., for 1901-1912.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1901.												
1.....	.....	.....	.....	182	562	930	690	530	395	270	165	94
2.....	.....	.....	.....	170	562	930	658	530	380	258	165	78
3.....	.....	.....	.....	410	562	914	658	515	380	258	165	78
4.....	.....	.....	.....	380	690	914	658	515	380	245	165	78
5.....	.....	.....	.....	380	594	898	658	515	380	245	150	78
6.....	.....	.....	.....	410	594	898	658	500	380	245	150	78
7.....	.....	.....	.....	410	594	882	626	500	350	245	150	71
8.....	.....	.....	.....	410	594	882	626	500	365	245	150	71
9.....	.....	.....	.....	410	594	850	626	500	365	232	150	64
10.....	.....	.....	.....	410	594	882	626	485	360	232	150	64

Daily discharge, in second-feet, of Cache Creek at Lower Lake, Cal., for 1901-1912—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1901.												
11.				410	594	914	610	485	350	220	140	64
12.				440	594	882	594	485	335	220	140	57
13.				455	610	882	594	470	335	220	130	57
14.				455	626	850	594	470	320	220	130	50
15.				470	626	818	578	470	320	220	130	50
16.				470	626	850	578	470	320	208	121	50
17.				470	626	850	578	455	320	208	121	50
18.				470	626	818	562	455	320	208	121	44
19.				470	1,350	818	562	440	320	208	112	44
20.				470	850	818	562	440	308	195	112	38
21.				578	818	818	562	440	308	195	112	38
22.				562	818	802	546	440	303	195	112	38
23.				530	914	786	546	425	295	195	103	38
24.				530	914	786	530	425	295	195	94	38
25.				530	914	786	530	410	295	182	94	38
26.				562	914	754	530	410	295	182	94	38
27.				562	930	738	515	410	282	182	94	38
28.				562	980	722	515	410	282	170	94	38
29.				562		722	515	410	282	170	94	50
30.				562		722	530	395	270	170	94	50
31.				562		690		395		170	94	
1901-2.												
1.	44	20	50	64	64	1,300	1,490	1,140	690	470	335	220
2.	44	20	38	64	64	1,520	1,490	1,110	690	470	295	220
3.	38	20	50	64	64	1,490	1,490	1,110	658	440	295	208
4.	38	20	64	64	71	1,490	1,490	1,070	658	440	295	208
5.	44	20	78	64	86	1,490	1,490	1,040	658	440	295	195
6.	44	20	78	64	86	1,710	1,630	1,010	626	440	295	195
7.	38	20	71	64	121	1,650	1,620	1,040	626	440	295	195
8.	38	16	78	64	130	1,970	1,590	1,040	626	440	295	195
9.	33	13	78	64	150	1,970	1,590	1,010	626	425	295	195
10.	33	13	78	64	150	2,000	1,590	1,010	594	410	270	195
11.	28	16	71	64	425	1,970	1,590	978	594	410	270	195
12.	28	16	71	64	232	1,970	1,550	914	594	410	270	195
13.	23	16	64	64	245	2,030	1,520	914	594	410	270	195
14.	23	20	64	64	258	1,970	1,520	946	562	410	270	182
15.	28	20	64	64	282	1,940	1,490	914	562	380	270	170
16.	24	20	64	64	270	1,910	1,490	914	562	380	270	170
17.	24	20	64	57	308	1,910	1,490	914	562	380	258	170
18.	20	20	64	50	295	1,870	1,490	882	530	380	245	170
19.	20	20	64	57	295	1,870	1,490	850	530	380	245	170
20.	20	28	64	50	320	1,840	1,430	850	530	380	245	170
21.	20	28	64	64	470	1,780	1,390	818	530	380	245	170
22.	20	28	64	78	410	1,780	1,330	786	530	365	245	170
23.	20	28	64	57	1,250	1,810	1,300	786	515	350	245	170
24.	20	28	64	86	818	1,710	1,300	754	500	350	232	170
25.	16	33	64	86	1,620	1,710	1,270	754	500	350	232	170
26.	16	28	64	78	1,030	1,680	1,270	722	500	320	220	170
27.	20	28	50	64	1,170	1,650	1,230	722	500	320	220	170
28.	50	28	50	64	1,140	1,590	1,170	722	485	320	220	160
29.	23	64	50	64		1,550	1,170	722	470	320	220	150
30.	20	28	64	64		1,520	1,140	690	470	320	220	150
31.	20		64	64		1,490		690		320	220	
1902-3.												
1.	150	150	295	350	626	754	820	670	425	285	147	72
2.	150	150	295	350	626	754	820	670	400	265	147	72
3.	150	150	295	350	658	754	820	640	400	265	147	72
4.	150	150	295	350	690	722	820	640	400	265	147	72
5.	150	130	295	350	690	754	790	640	400	265	147	72
6.	150	130	295	350	690	754	790	610	375	245	130	72
7.	150	140	295	350	866	722	790	610	375	245	130	65
8.	150	182	295	350	818	722	790	580	375	245	130	58
9.	150	594	295	350	786	722	790	580	375	225	130	58
10.	150	320	320	350	786	722	790	580	350	225	130	58
11.	150	320	320	350	818	722	760	550	350	225	115	58
12.	150	320	320	350	818	722	760	550	350	225	115	58
13.	150	320	320	350	818	1,070	760	550	350	205	115	58
14.	150	320	320	350	818	834	760	525	325	205	115	51
15.	150	320	320	350	818	818	730	538	325	205	115	45

Daily discharge, in second-feet, of Cache Creek at Lower Lake, Cal., for 1901-1912—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1902-3.												
16.....	150	320	320	350	786	818	730	550	325	205	108	45
17.....	140	320	320	350	786	818	730	500	325	205	108	45
18.....	140	320	320	350	786	818	730	500	305	205	108	38
19.....	130	320	320	350	786	818	700	500	305	205	100	38
20.....	130	320	320	350	786	818	700	500	305	185	100	38
21.....	130	320	320	350	786	818	700	500	305	185	100	32
22.....	130	320	320	350	786	818	700	475	305	185	100	32
23.....	150	320	320	380	786	818	700	475	305	185	93	32
24.....	170	295	320	380	786	818	670	475	305	165	86	32
25.....	150	295	320	440	786	760	700	450	305	165	86	32
26.....	150	295	350	440	754	760	670	450	285	165	86	32
27.....	150	295	350	738	754	730	670	450	285	165	86	32
28.....	150	295	350	530	754	835	670	450	285	165	86	32
29.....	150	295	350	530	.....	790	670	450	285	165	86	32
30.....	150	295	350	914	.....	790	670	425	285	165	79	32
31.....	150	.....	350	626	.....	805	.....	425	.....	147	72	.....
1903-4.												
1.....	32	15	138	205	245	1,430	3,360	2,040	940	595	375	231
2.....	32	15	138	205	245	1,460	3,360	2,000	925	595	332	220
3.....	26	15	147	205	245	1,480	3,300	1,960	940	580	362	220
4.....	26	20	130	225	265	1,480	3,245	1,920	895	580	350	210
5.....	32	18	130	215	255	1,460	3,220	1,900	880	565	350	210
6.....	20	15	130	215	265	1,520	3,140	1,850	910	565	350	210
7.....	20	20	130	215	265	1,540	3,080	1,780	880	550	350	210
8.....	20	15	138	215	275	1,660	3,000	1,760	850	550	338	210
9.....	20	15	130	225	265	1,570	2,970	1,730	850	525	338	200
10.....	26	15	130	215	265	2,340	2,890	1,690	820	512	325	200
11.....	26	15	130	225	265	2,380	2,860	1,680	790	512	325	200
12.....	20	15	130	215	438	2,510	2,810	1,640	790	500	325	189
13.....	20	15	130	215	375	2,560	2,740	1,660	760	500	325	189
14.....	20	32	147	225	400	2,640	2,660	1,570	760	500	312	189
15.....	20	26	147	225	580	2,660	2,640	1,540	760	488	312	189
16.....	20	20	185	225	550	2,680	2,560	1,460	745	475	300	178
17.....	20	20	185	245	550	2,760	2,510	1,400	730	462	300	178
18.....	20	20	185	235	565	2,860	2,440	1,400	715	462	300	168
19.....	20	26	185	245	580	2,970	2,510	1,290	700	450	276	168
20.....	20	65	185	245	610	3,110	2,480	1,240	700	450	276	168
21.....	20	86	205	245	640	3,050	2,380	1,180	700	438	276	168
22.....	20	100	205	245	685	3,080	2,410	1,150	700	438	276	168
23.....	20	108	205	245	730	3,080	2,310	1,120	670	425	264	168
24.....	20	108	205	245	1,180	3,190	2,260	1,120	655	425	264	158
25.....	20	115	205	245	985	3,110	2,190	1,090	655	425	253	178
26.....	18	130	205	245	1,290	3,020	2,190	1,060	640	425	253	178
27.....	18	130	205	245	1,290	3,080	2,120	1,040	640	412	253	178
28.....	18	138	205	245	1,360	3,300	2,120	1,040	625	412	253	178
29.....	15	138	205	245	1,400	3,300	2,080	1,000	610	400	242	168
30.....	15	138	205	245	.....	3,300	2,060	1,000	610	388	242	168
31.....	15	.....	225	245	.....	3,300	.....	970	.....	375	231	.....
1904-5.												
1.....	168	147	145	303	967	872	1,220	780	603	395	242	136
2.....	168	147	145	303	872	856	1,160	810	603	395	242	128
3.....	168	147	145	314	886	856	1,140	810	593	383	232	128
4.....	158	147	136	325	886	841	1,130	795	589	371	232	128
5.....	158	147	136	325	919	841	1,130	780	575	371	222	128
6.....	168	147	136	325	935	841	1,130	750	575	371	222	120
7.....	147	158	136	325	935	826	1,130	826	556	371	222	120
8.....	147	158	136	325	935	810	1,130	810	556	371	222	120
9.....	158	158	136	325	935	810	1,100	780	547	360	222	112
10.....	158	147	136	325	935	780	1,060	765	547	360	222	112
11.....	158	147	136	325	903	750	1,060	750	534	348	212	112
12.....	189	136	136	325	903	872	1,000	750	520	348	212	104
13.....	178	136	136	348	903	951	1,000	750	507	336	212	104
14.....	168	158	145	395	903	872	999	735	507	336	202	104
15.....	189	147	145	395	872	872	1,020	735	494	325	202	104
16.....	189	136	145	444	872	903	983	750	494	314	202	97
17.....	178	136	145	456	903	935	951	720	482	314	192	97
18.....	178	136	145	456	903	903	935	720	482	303	192	97
19.....	178	136	145	469	1,130	999	967	720	469	303	183	90
20.....	168	136	145	469	903	983	903	690	469	303	183	90

Daily discharge, in second-feet, of Cache Creek at Lower Lake, Cal., for 1901-1912—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1904-5.												
21.	168	136	145	494	903	1,030	919	690	456	292	183	84
22.	168	136	145	765	919	1,060	919	660	456	292	174	84
23.	168	136	145	675	919	1,060	903	660	456	282	174	84
24.	168	136	164	720	919	1,110	888	660	444	282	174	84
25.	158	126	145	705	888	1,110	888	646	444	282	164	84
26.	158	126	145	705	888	1,160	872	631	432	282	164	84
27.	158	145	145	735	872	1,110	872	631	419	282	154	84
28.	158	145	136	750	872	1,050	856	631	419	272	154	78
29.	158	145	145	750	.....	1,190	841	631	407	262	154	78
30.	168	154	603	750	.....	1,190	826	646	395	262	145	71
31.	158	.....	303	750	.....	1,160	.....	631	.....	252	145	.....
1905-6.												
1.	71	37	37	37	619	919	1,800	1,130	765	547	360	212
2.	71	37	37	37	903	888	1,800	1,100	765	547	348	202
3.	71	37	32	37	903	1,190	1,820	1,100	750	534	348	202
4.	71	37	32	37	903	1,050	1,800	1,060	750	534	348	202
5.	71	37	32	37	903	1,060	1,800	1,050	735	520	336	202
6.	71	37	27	37	603	1,060	1,780	1,020	735	520	336	192
7.	65	32	27	32	589	1,060	1,780	999	720	507	336	192
8.	65	32	27	37	589	1,060	1,780	953	720	507	336	192
9.	65	32	27	32	589	1,060	1,700	967	705	494	325	192
10.	59	32	22	37	589	1,060	1,740	951	690	482	325	164
11.	59	32	22	37	589	1,060	1,670	967	690	482	314	164
12.	59	32	22	65	575	1,160	1,630	919	675	469	314	174
13.	59	27	22	84	575	1,160	1,590	919	660	469	303	183
14.	59	27	22	104	841	1,220	1,570	967	660	469	303	174
15.	59	27	32	128	631	1,130	1,610	919	646	456	292	164
16.	59	27	32	456	631	1,130	1,540	903	646	444	282	154
17.	54	27	22	282	631	1,130	1,460	888	660	444	272	154
18.	54	27	32	569	660	1,100	1,430	872	631	432	272	154
19.	48	27	37	575	690	1,060	1,380	856	631	432	262	145
20.	48	37	37	603	780	1,190	1,340	841	646	419	252	145
21.	48	22	32	603	750	1,220	1,320	826	631	419	252	145
22.	48	27	27	631	780	1,190	1,260	810	617	407	252	136
23.	48	15	37	631	841	1,290	1,260	780	603	407	242	154
24.	48	18	37	631	872	1,320	1,240	765	603	371	242	154
25.	48	18	37	646	872	1,380	1,220	780	589	395	242	136
26.	48	22	37	631	872	1,480	1,210	795	589	383	232	136
27.	48	18	32	631	935	1,500	1,290	810	589	383	232	136
28.	42	54	27	631	967	1,500	1,190	795	575	371	222	136
29.	42	37	27	631	.....	1,500	1,160	795	561	371	222	128
30.	42	37	37	631	.....	1,760	1,130	780	547	371	222	128
31.	37	.....	42	617	.....	1,960	.....	780	.....	360	212	.....
1906-7.												
1.	128	84	59	262	589	872	3,020	1,840	935	617	382	208
2.	136	78	65	252	675	872	2,970	1,800	919	617	369	198
3.	136	78	65	262	780	856	2,920	1,740	903	589	369	198
4.	128	78	65	325	810	856	2,860	1,690	888	589	356	198
5.	128	78	59	325	841	919	2,840	1,610	872	575	356	198
6.	120	84	59	325	872	888	2,810	1,610	856	575	344	198
7.	120	84	59	325	872	888	2,760	1,590	872	589	344	198
8.	120	84	59	336	888	903	2,740	1,570	872	547	332	188
9.	120	84	71	395	903	967	2,710	1,560	826	534	332	188
10.	120	84	120	395	888	967	2,660	1,560	810	534	320	188
11.	128	84	154	383	888	1,030	2,610	1,650	810	520	308	188
12.	128	90	145	419	888	983	2,560	1,570	795	507	296	188
13.	120	90	145	383	872	999	2,510	1,540	780	507	296	178
14.	112	90	145	419	872	999	2,460	1,460	765	494	296	178
15.	112	90	154	395	872	999	2,410	1,430	750	494	284	178
16.	120	84	164	395	872	1,020	2,360	1,390	750	482	284	169
17.	112	97	164	419	872	1,430	2,340	1,380	735	482	284	169
18.	112	84	164	444	872	1,800	2,410	1,290	735	469	273	169
19.	97	78	164	444	872	2,120	2,360	1,260	720	469	273	160
20.	97	78	164	432	856	2,310	2,310	1,220	720	456	273	160
21.	90	90	164	432	856	2,480	2,280	1,190	735	456	262	160
22.	84	71	164	432	872	2,510	2,260	1,130	690	444	251	160
23.	84	71	154	419	856	2,890	2,220	1,100	690	444	251	150
24.	84	78	154	444	841	3,050	2,170	1,080	675	432	251	150
25.	84	78	164	456	903	3,160	2,080	1,030	660	432	240	150

Daily discharge, in second-feet, of Cache Creek at Lower Lake, Cal., for 1901-1912—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1906-7.												
26.....	84	71	232	469	872	3,160	2,000	1,060	660	419	240	150
27.....	84	65	222	494	872	3,160	2,000	999	646	406	229	160
28.....	84	65	232	494	872	3,140	1,960	967	646	406	229	169
29.....	84	71	242	494	.....	3,110	1,920	967	631	394	229	141
30.....	84	65	262	507	.....	3,080	1,880	967	631	394	218	141
31.....	84	.....	282	561	.....	3,050	.....	935	.....	382	218	.....
1907-8.												
1.....	188	115	92	208	419	735	675	444	308	169	92	39
2.....	132	107	85	208	675	765	646	494	296	160	92	39
3.....	132	107	85	229	520	750	631	456	284	160	92	39
4.....	124	107	99	229	520	750	646	444	273	160	92	39
5.....	124	107	85	229	520	750	646	444	273	160	85	39
6.....	124	107	115	240	520	750	631	444	262	150	85	39
7.....	124	107	115	240	575	750	603	432	262	150	85	34
8.....	115	99	99	240	547	750	603	419	262	150	85	34
9.....	115	107	99	251	705	735	589	419	262	141	85	30
10.....	115	107	124	251	660	735	589	406	262	141	85	30
11.....	115	99	115	251	660	735	589	406	240	141	85	22
12.....	124	99	115	251	675	735	589	394	240	141	85	26
13.....	115	115	115	251	690	750	589	394	229	141	78	30
14.....	115	99	124	284	690	750	589	394	229	132	78	30
15.....	115	99	132	273	690	750	575	369	229	132	72	30
16.....	115	107	132	273	690	735	589	369	229	132	72	30
17.....	115	85	132	273	690	735	575	356	229	132	72	26
18.....	115	99	132	273	690	720	575	356	218	132	72	22
19.....	115	107	150	284	660	720	547	369	218	124	72	22
20.....	115	99	132	320	660	720	534	356	208	124	66	22
21.....	115	85	132	320	660	705	520	344	208	124	66	19
22.....	115	85	132	332	660	705	520	344	198	124	66	19
23.....	115	85	141	332	646	705	507	344	198	115	60	16
24.....	107	85	132	344	646	705	507	344	188	115	60	16
25.....	99	85	141	369	646	690	494	332	188	115	54	16
26.....	107	78	169	369	660	705	494	332	178	115	54	16
27.....	115	78	169	382	660	720	482	320	169	107	49	16
28.....	115	78	169	382	660	690	482	320	169	107	49	16
29.....	115	78	150	382	690	675	482	320	169	107	44	16
30.....	115	85	188	394	.....	690	469	320	169	99	44	14
31.....	115	.....	208	394	.....	690	.....	320	.....	99	39	.....
1908-9.												
1.....	22	6	8	14	2,710	3,800	2,440	1,220	720	494	308	169
2.....	16	7	8	30	3,110	3,680	2,410	1,190	720	482	296	169
3.....	12	6	8	39	3,680	3,580	2,410	1,180	605	469	284	169
4.....	12	7	9	60	3,680	3,600	2,460	1,160	605	469	284	160
5.....	12	7	12	60	3,800	3,460	2,360	1,130	690	469	273	160
6.....	12	7	12	115	3,830	3,520	2,220	1,080	675	456	273	160
7.....	10	7	10	132	4,070	3,460	2,170	1,100	675	444	273	160
8.....	10	6	9	320	3,860	3,520	2,130	1,100	660	444	262	160
9.....	12	6	14	344	3,830	3,320	2,080	1,060	660	444	262	160
10.....	12	7	14	344	3,740	3,270	2,040	1,030	646	444	262	160
11.....	10	7	16	356	3,860	3,190	2,000	1,020	646	432	251	141
12.....	10	6	14	369	4,040	3,140	1,940	951	631	419	251	132
13.....	12	6	19	406	4,100	3,080	1,920	967	617	419	251	132
14.....	10	6	16	603	4,250	3,000	1,880	935	631	406	251	132
15.....	12	6	22	826	4,220	2,940	1,840	951	603	406	240	132
16.....	9	5	16	935	4,220	2,920	1,840	935	589	394	240	132
17.....	9	5	14	1,060	4,160	2,920	1,780	919	575	394	229	124
18.....	9	5	16	1,190	4,130	2,760	1,740	888	575	382	218	124
19.....	9	7	16	1,260	4,130	2,940	1,730	888	575	382	218	124
20.....	9	30	14	1,540	4,340	2,710	1,730	872	575	369	218	115
21.....	8	5	16	1,800	4,250	2,710	1,560	841	561	356	208	115
22.....	7	6	16	1,880	4,160	2,660	1,590	967	547	344	208	115
23.....	7	16	16	1,960	4,100	2,660	1,570	810	547	344	198	107
24.....	7	12	16	2,150	4,100	2,640	1,500	810	547	344	198	107
25.....	7	9	16	2,260	4,100	2,640	1,460	810	547	344	198	99
26.....	7	9	16	2,360	4,010	2,610	1,500	795	534	332	198	107
27.....	6	9	16	2,440	3,950	2,610	1,650	826	507	320	188	99
28.....	6	9	14	2,440	3,860	2,560	1,360	765	494	320	188	107
29.....	5	8	16	2,410	.....	2,510	1,260	750	494	308	188	107
30.....	6	8	14	2,540	.....	2,460	1,220	735	494	308	178	107
31.....	6	.....	12	2,610	.....	2,480	.....	720	.....	308	178	.....

Daily discharge, in second-feet, of Cache Creek at Lower Lake, Cal., for 1901-1912—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1900-10.												
1.....	99	85	99	188	444	534	645	482	308	188	92	30
2.....	99	78	99	188	419	534	645	482	303	178	92	30
3.....	99	78	115	178	394	534	631	469	308	178	92	30
4.....	99	85	124	178	419	547	631	469	308	169	85	30
5.....	99	78	115	178	419	547	631	456	296	160	85	30
6.....	99	78	132	188	406	534	631	456	284	160	85	30
7.....	99	78	141	188	419	547	617	456	273	160	85	26
8.....	92	85	150	178	444	534	617	456	273	170	78	26
9.....	92	85	160	169	456	534	673	444	273	170	78	26
10.....	92	85	169	178	456	520	575	444	262	150	78	22
11.....	92	92	169	178	469	520	589	431	262	150	78	22
12.....	99	78	178	178	469	570	617	431	273	141	72	19
13.....	92	85	188	141	469	507	603	431	273	141	72	16
14.....	92	78	188	188	482	520	589	419	251	132	72	14
15.....	92	78	178	229	469	507	589	456	251	132	72	19
16.....	92	78	178	229	469	507	575	394	240	132	66	16
17.....	85	78	188	240	469	507	575	394	240	124	66	14
18.....	85	78	188	240	469	507	575	394	240	124	60	12
19.....	92	78	178	240	469	507	561	394	229	174	60	14
20.....	85	85	178	251	469	520	561	369	229	115	60	14
21.....	85	85	188	251	469	534	547	369	279	115	60	12
22.....	85	92	178	262	494	673	547	369	218	115	60	12
23.....	85	92	188	273	482	589	534	356	218	107	54	12
24.....	85	99	178	356	482	589	520	356	208	107	54	12
25.....	85	107	178	344	494	589	534	344	208	107	54	12
26.....	85	99	169	369	494	575	520	344	198	99	54	12
27.....	85	99	169	394	520	705	507	344	208	99	49	10
28.....	78	92	169	406	534	631	507	332	198	99	44	10
29.....	85	92	169	419	.....	631	507	332	188	99	39	10
30.....	85	99	178	419	.....	631	494	332	188	99	34	10
31.....	85	.....	178	419	.....	631	.....	320	.....	99	30	.....
1910-11.												
1.....	12	5	4	4	240	432	1,060	750	520	332	208	99
2.....	10	5	5	5	266	432	1,060	750	520	332	198	99
3.....	10	5	5	4	296	675	1,050	735	506	332	198	99
4.....	9	5	6	4	308	547	999	735	494	320	188	99
5.....	9	5	6	4	320	705	1,050	735	494	320	188	92
6.....	8	5	5	4	332	1,260	1,070	735	494	308	178	85
7.....	8	5	5	5	332	1,360	1,030	735	482	308	178	85
8.....	9	5	5	5	332	1,430	999	720	482	308	169	85
9.....	8	5	5	9	344	1,340	999	690	469	296	169	78
10.....	9	5	5	3	344	1,390	999	675	469	296	169	72
11.....	5	5	6	7	369	1,390	1,050	660	456	296	160	72
12.....	6	6	6	6	382	1,380	967	690	456	284	160	72
13.....	8	5	6	8	444	1,380	935	660	456	273	150	66
14.....	8	6	6	8	419	1,390	919	646	444	273	150	72
15.....	8	4	7	9	432	1,410	919	660	444	273	141	72
16.....	8	4	7	10	432	1,380	903	631	444	273	150	66
17.....	7	4	6	10	456	1,340	903	617	432	273	141	66
18.....	7	5	5	10	444	1,320	903	631	432	262	141	66
19.....	6	5	5	16	444	1,250	872	603	432	251	132	60
20.....	6	4	5	30	444	1,270	858	589	419	251	132	60
21.....	7	3	6	34	444	1,260	841	589	406	251	124	60
22.....	7	4	5	34	444	1,240	826	575	406	240	124	60
23.....	6	3	5	34	456	1,240	826	589	395	229	115	60
24.....	6	3	5	39	456	1,260	810	589	395	229	115	54
25.....	6	6	5	49	469	1,210	795	575	382	229	115	54
26.....	6	4	5	49	444	1,180	810	547	369	218	107	54
27.....	6	3	5	124	432	1,160	795	547	369	218	107	54
28.....	6	4	5	160	419	1,130	780	534	369	218	107	54
29.....	6	4	4	188	.....	1,110	765	547	356	208	99	54
30.....	6	4	5	229	.....	1,100	765	547	344	208	99	66
31.....	6	.....	5	229	.....	1,060	.....	520	.....	208	99	.....
1911-12.												
1.....	54	39	30	30	72	72	188	169	112	.....	.....	.....
2.....	54	39	26	30	72	72	188	169	112	.....	.....	.....
3.....	60	39	26	28	72	72	178	160	115	.....	.....	.....
4.....	49	39	26	30	72	62	169	165	115	.....	.....	.....
5.....	49	37	22	34	66	85	169	160	115	.....	.....	.....

Daily discharge, in second-feet, of Cache Creek at Lower Lake, Cal., for 1901-1912—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1911-12.												
6.....	49	37	34	34	66	99	160	154	107	.....	.....	.....
7.....	49	44	34	37	66	96	150	154	115	.....	.....	.....
8.....	44	39	30	32	72	96	160	154	115	.....	.....	.....
9.....	54	34	30	32	78	99	150	160	112	.....	.....	.....
10.....	49	60	30	32	78	115	150	154	112	.....	.....	.....
11.....	44	34	26	32	82	85	169	150	99	.....	.....	.....
12.....	44	32	26	32	78	141	169	146	99	.....	.....	.....
13.....	49	30	26	37	72	136	150	146	99	.....	.....	.....
14.....	49	32	26	34	85	136	150	146	99	.....	.....	.....
15.....	44	39	26	34	85	165	150	141	99	.....	.....	.....
16.....	44	34	30	39	85	150	160	132	92	.....	.....	.....
17.....	44	34	30	30	92	165	165	132	92	.....	.....	.....
18.....	44	34	30	28	85	169	160	124	85	.....	.....	.....
19.....	44	34	32	30	72	169	169	118	85	.....	.....	.....
20.....	44	32	28	39	78	169	150	129	102	.....	.....	.....
21.....	39	32	26	34	78	169	150	129	88	.....	.....	.....
22.....	44	32	26	34	78	178	132	124	75	.....	.....	.....
23.....	44	32	26	22	82	178	136	115	72	.....	.....	.....
24.....	44	30	26	39	85	178	150	118	72	.....	.....	.....
25.....	49	30	24	34	78	169	141	115	72	.....	.....	.....
26.....	39	32	22	72	78	188	132	118	72	.....	.....	.....
27.....	39	32	32	66	82	178	141	115	72	.....	.....	.....
28.....	39	34	28	70	78	188	132	115	72	.....	.....	.....
29.....	39	32	22	70	72	169	146	129	78	.....	.....	.....
30.....	39	30	26	72	.....	169	136	115	92	.....	.....	.....
31.....	41	.....	30	85	.....	169	.....	115	.....	.....	.....	.....

NOTE.—Daily discharge for 1901 to 1912, determined from fairly well defined curves, applicable as follows: Jan. 1, 1901, to Mar. 24, 1903; Mar. 25, 1903, to Feb. 11, 1904; Feb. 12 to Nov. 26, 1904; Nov. 27, 1904, to July 26, 1907; and July 27, 1907, to June 30, 1912.

Monthly discharge of Cache Creek at Lower Lake, Cal., for 1901-1912.

[Drainage area, 500 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.....	.....	170	460	0.920	1.06	28,300	C.
February.....	1,350	562	722	1.44	1.50	40,100	B.
March.....	930	690	832	1.66	1.91	51,200	B.
April.....	690	515	587	1.17	1.30	34,900	B.
May.....	530	395	461	.922	1.06	28,300	B.
June.....	395	270	330	.660	.74	19,600	B.
July.....	270	170	213	.426	.49	13,100	B.
August.....	165	94	126	.252	.29	7,750	B.
September.....	94	38	55.4	.111	.12	3,300	B.
The period.....	.....	.....	.....	.....	.....	227,000	
1901-2.							
October.....	50	16	28.8	.058	.07	1,770	B.
November.....	64	13	23.3	.047	.05	1,390	B.
December.....	78	38	63.8	.128	.15	3,920	B.
January.....	86	50	64.7	.129	.15	3,980	B.
February.....	1,620	64	422	.844	.88	23,400	A.
March.....	2,030	1,300	1,750	5.50	4.04	108,000	A.
April.....	1,630	1,140	1,440	2.88	3.21	85,700	A.
May.....	1,140	690	897	1.79	2.06	55,200	A.
June.....	690	470	569	1.14	1.27	33,900	A.
July.....	470	320	389	.778	.90	23,900	A.
August.....	335	220	261	.522	.60	16,000	A.
September.....	220	150	182	.364	.41	10,800	A.
The year.....	2,030	13	508	1.02	13.79	368,000	

## Monthly discharge of Cache Creek at Lower Lake, 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.	
1902-3.							
October.....	170	130	147	0.294	0.34	9,040	B.
November.....	594	130	277	.554	.62	16,500	C.
December.....	350	295	319	.698	.74	19,600	C.
January.....	914	350	409	.818	1.94	25,100	B.
February.....	866	626	766	1.53	1.59	42,500	B.
March.....	1,070	722	786	1.57	1.81	48,300	B.
April.....	820	670	740	1.48	1.65	44,000	A.
May.....	670	425	533	1.07	1.23	32,800	A.
June.....	425	285	336	.672	.75	20,000	A.
July.....	285	147	208	.416	.48	12,800	A.
August.....	147	72	111	.222	.26	6,820	A.
September.....	72	32	48.8	.098	.11	2,900	A.
The year.....	1,070	32	390	.780	10.52	280,000	
1903-4.							
October.....	32	15	21.3	.043	.05	1,310	A.
November.....	138	15	53.6	1.07	.12	3,190	A.
December.....	225	130	168	.336	.39	10,300	A.
January.....	245	205	230	.460	.53	14,100	A.
February.....	1,400	245	588	1.18	1.27	33,800	A.
March.....	3,300	1,430	2,510	5.02	5.79	154,000	B.
April.....	3,360	2,060	2,660	5.32	5.94	168,000	B.
May.....	2,040	970	1,460	2.92	3.37	89,800	A.
June.....	940	610	762	1.52	1.70	45,300	A.
July.....	595	375	483	.966	1.11	29,700	A.
August.....	375	231	302	.604	.70	18,600	A.
September.....	231	158	188	.376	.42	11,200	A.
The year.....	3,360	15	786	1.57	21.39	569,000	
1904-5.							
October.....	189	147	166	.332	.38	10,200	A.
November.....	158	126	143	.286	.32	8,510	A.
December.....	603	136	162	.324	.37	9,960	A.
January.....	765	303	486	.972	1.12	29,900	A.
February.....	1,130	872	913	1.83	1.91	50,700	A.
March.....	1,190	750	955	1.81	2.20	58,700	A.
April.....	1,220	826	1,000	2.00	2.23	59,500	A.
May.....	826	631	721	1.44	1.66	44,300	A.
June.....	603	395	501	1.00	1.12	29,800	A.
July.....	395	252	323	.646	.74	19,900	A.
August.....	242	145	195	.390	.45	12,000	B.
September.....	136	71	102	.204	.23	6,070	B.
The year.....	1,220	71	472	.944	12.73	340,000	
1905-6.							
October.....	71	37	56.0	.112	.13	3,440	A.
November.....	54	15	30.3	.061	.07	1,800	B.
December.....	42	22	30.7	.061	.07	1,890	B.
January.....	646	32	328	.656	.76	20,200	A.
February.....	967	575	696	1.39	1.45	38,700	A.
March.....	1,960	888	1,220	2.44	2.81	75,000	B.
April.....	1,820	1,130	1,510	3.02	3.37	89,800	B.
May.....	1,130	765	907	1.81	2.09	55,800	A.
June.....	765	547	659	1.32	1.47	39,200	A.
July.....	547	360	450	.900	1.04	27,700	A.
August.....	360	212	285	.570	.66	17,500	A.
September.....	212	128	165	.330	.37	9,820	A.
The year.....	1,960	15	528	1.06	14.29	381,000	
1906-7.							
October.....	136	84	107	.214	.25	6,580	A.
November.....	97	65	80.2	160	.18	4,770	B.
December.....	282	59	146	.292	.34	8,980	A.
January.....	561	252	404	.808	.93	24,800	A.
February.....	903	589	850	1.70	1.77	47,200	A.
March.....	3,160	856	1,790	3.58	4.13	110,000	A.
April.....	3,020	1,880	2,450	4.90	5.47	146,000	A.
May.....	1,840	935	1,360	2.72	3.14	83,600	A.
June.....	935	631	766	1.53	1.71	45,600	A.
July.....	617	382	466	.932	1.07	28,700	A.
August.....	382	218	290	.580	.67	17,800	A.
September.....	208	141	174	.348	.39	10,400	A.
The year.....	3,160	59	740	1.48	20.05	534,000	

Monthly discharge of Cache Creek at Lower Lake, 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.	
1907-8.							
October.....	188	99	119	0.238	0.27	7,320	A.
November.....	115	78	96.7	.193	.22	5,750	A.
December.....	208	85	129	.258	.30	7,930	A.
January.....	394	208	292	.584	.67	18,000	A.
February.....	705	419	634	1.27	1.37	36,500	A.
March.....	765	675	726	1.45	1.67	44,600	A.
April.....	675	469	566	1.13	1.26	33,700	A.
May.....	494	320	381	.762	.88	23,400	A.
June.....	308	169	228	.456	.51	13,600	A.
July.....	169	99	132	.264	.30	8,120	A.
August.....	92	39	71.5	.143	.16	4,400	A.
September.....	39	14	26.2	.052	.06	1,560	B.
The year.....	765	14	283	.566	7.67	205,000	
1908-9.							
October.....	22	5	9.7	.019	.02	596	D.
November.....	30	5-	8.0	.016	.02	476	D.
December.....	22	8	14.0	.028	.03	861	C.
January.....	2,610	14	1,120	2.24	2.58	68,900	A.
February.....	4,340	2,710	3,940	7.88	8.21	219,000	B.
March.....	3,800	2,460	3,010	6.02	6.94	185,000	B.
April.....	2,460	1,220	1,860	3.72	4.15	111,000	A.
May.....	1,220	720	949	1.90	2.19	58,400	A.
June.....	720	494	598	1.20	1.34	35,600	A.
July.....	494	308	395	.790	.91	24,300	A.
August.....	308	178	235	.470	.54	14,400	A.
September.....	169	99	133	.266	1.30	7,910	A.
The year.....	4,340	5	1,020	2.04	27.23	726,000	
1909-10.							
October.....	99	78	90.4	.181	.21	5,560	A.
November.....	107	78	86.0	.172	.19	5,120	A.
December.....	188	99	163	.326	.38	10,000	A.
January.....	419	141	253	.506	.58	15,600	A.
February.....	534	394	462	.924	.96	25,700	A.
March.....	705	507	555	1.11	1.28	34,100	A.
April.....	645	494	576	1.15	1.28	34,300	A.
May.....	482	320	402	.804	.93	24,700	A.
June.....	308	188	248	.496	.55	14,800	A.
July.....	188	99	132	.264	.30	8,120	A.
August.....	92	30	66.5	.133	.15	4,090	A.
September.....	30	10	18.4	.037	.04	1,090	C.
The year.....	705	10	254	.508	6.85	183,000	
1910-11.							
October.....	12	5	7.4	.015	.02	455	D.
November.....	6	3	4.5	.009	.01	268	D.
December.....	7	4	5.3	.011	.01	326	D.
January.....	229	3	42.9	.086	.10	2,640	A.
February.....	469	240	392	.784	.82	21,800	A.
March.....	1,430	432	1,160	2.32	2.68	71,300	A.
April.....	1,060	765	918	1.84	2.05	54,600	A.
May.....	750	520	639	1.28	1.48	39,300	A.
June.....	520	344	438	.876	.98	26,100	A.
July.....	332	208	268	.536	.62	16,500	A.
August.....	208	99	146	.292	.34	8,980	A.
September.....	99	54	71.2	.142	.16	4,240	A.
The year.....	1,430	3	341	.682	9.27	247,000	
1911-12.							
October.....	60	39	45.7	.091	.10	2,810	A.
November.....	60	30	35.3	.071	.08	2,100	A.
December.....	34	22	27.6	.055	.06	1,700	A.
January.....	85	22	40.4	.081	.09	2,480	A.
February.....	92	66	77.2	.154	.17	4,440	A.
March.....	188	62	138	.276	.32	8,480	A.
April.....	188	132	155	.310	.35	9,220	A.
May.....	169	115	138	.276	.32	5,480	A.
June.....	115	72	94.9	.190	.21	5,650	A.
The period.....						45,400	

## CACHE CREEK AT YOLO, CAL.

This station was established January 1, 1903, at the old wagon bridge on the road from Woodland to Yolo, about 1,000 feet above the railroad bridge, for the purpose of obtaining general statistical and comparative data regarding the flow of Cache Creek. The data are useful in connection with power and irrigation development and in studies of flood prevention in Sacramento Valley. In the fall of 1904 a new bridge was constructed, and the gage record interrupted from September 11 to October 1, 1904.

No important tributaries enter within 12 or 15 miles of the station.

Many diversions are made from Cache Creek above the station, water being used for irrigation around Yolo and Woodland. The irrigating ditches usually take all the late summer flow. All available water in this basin has been filed upon, and all lands embraced within storage reservoirs are held in private ownership.

The original staff gage was nailed to the up-stream side of the right abutment of the old wagon bridge and read twice each day. On October 2, 1904, a new gage was installed. The gage at the new location is in four sections, three of which are above the bridge and the fourth is bolted to the face of the concrete abutment on the right bank. The datum remained the same as before and has been unchanged during the life of the station. Discharge measurements have been made from the down stream side of the bridge.

A landslide occurred in Cache Creek canyon above the station, on May 2, 1906, damming the flow. This dam was overtopped on May 7, when the creek rose to the maximum gage height of 20.8 feet.

The records are good, considered as a whole. The bed of the stream is composed of earth gravel and is subject to some change. The banks are steep and well wooded and their height has been increased by levees, which are overtopped at extremely high water. The current is swift at moderate and high stages. The maximum crest discharge was 20,800 second-feet for a gage height of 27.8 feet, February 3, 1909. The creek is dry at the station almost every summer or fall.

*Discharge measurements of Cache Creek at Yolo, Cal., in 1902-1912.*

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1902.		<i>Feet.</i>	<i>Sec.-ft.</i>	1904.		<i>Feet.</i>	<i>Sec.-ft.</i>
Dec. 19	S. G. Bennett.....	2.80	437	Feb. 17	F. W. Huber.....	8.25	4,120
				18	do.....	6.35	3,510
1903.				19	do.....	5.55	2,770
Jan. 25	S. G. Bennett.....	4.80	1,520	Mar. 11	S. G. Bennett.....	17.80	8,300
May 13	do.....	3.05	675	12	do.....	12.10	5,200
Aug. 3	do.....	1.00	22	Apr. 9	W. B. Newhall.....	8.20	3,710
				June 17	O. W. Peterson....	3.75	724
1904.				July 13	do.....	2.90	435
Jan. 28	W. B. Newhall....	2.40	283	Aug. 10	do.....	2.30	210
Feb. 10	F. W. Huber.....	2.50	371	Oct. 4	do.....	1.80	111
16	do.....	14.25	8,770	Dec. 4	do.....	2.05	148
17	do.....	9.65	4,780	10	do.....	2.05	150

Discharge measurements of Cache Creek at Yolo, Cal., in 1902-1912—Continued.

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1905.		<i>Feet.</i>	<i>Sec.-ft.</i>	1907.		<i>Feet.</i>	<i>Sec.-ft.</i>
Feb. 2	O. W. Peterson	11.75	7,620	Aug. 19	W. F. Martin	1.90	147
3	do	8.30	4,860	Sept. 13	W. A. Lamb	1.39	55
3	do	8.80	5,230	Oct. 4	do	1.32	38
4	do	7.05	3,800	14	do	1.19	18
15	do	4.85	1,520	29	do	1.60	91
May 16	W. B. Clapp	4.05	1,030				
June 5	Peterson and Rodman	3.40	699	1908.			
24	O. W. Peterson	2.60	358	Jan. 3	W. A. Lamb	3.00	626
Aug. 3	do	1.79	129	29	do	3.35	828
Sept. 7	C. H. Lee	1.26	13.0	Feb. 6	do	6.32	2,910
13	W. B. Clapp	1.15	4.7	11	do	5.85	2,400
Oct. 3	Lee and Hawley	1.09	.4	17	do	4.33	1,280
				25	do	3.90	975
1906.				Mar. 4	do	4.75	1,640
Feb. 5	F. R. S. Buttemer	3.88	850	10	do	4.15	1,210
16	do	5.15	1,660	Apr. 5	do	3.30	791
20	do	5.79	2,090	23	do	2.85	580
Mar. 5	do	6.60	2,680	June 23	W. B. Clapp	1.10	35
13	do	6.85	2,640				
Apr. 13	R. S. Hawley	6.05	2,090	1909.			
24	W. C. Sawyer	5.36	1,810	Feb. 5	W. F. Martin	14.50	9,380
May 1	do	4.95	1,520	Mar. 21	W. B. Clapp	7.35	3,800
6	do	2.25	254	May 31	W. F. Martin	3.08	666
7a	do	19.95	11,800	Aug. 11	do	1.44	90
7b	do	19.72	10,900	Sept. 5	W. V. Hardy	1.08	15
7c	do	20.40	12,100	Nov. 18	do	.90	6.7
7d	do	20.43	11,800	27	do	1.65	130
7e	do	20.65	12,000				
15	do	4.99	1,540	1910.			
July 13	R. S. Hawley	4.49	1,240	Jan. 29	J. E. Stewart	3.88	1,020
30	do	2.50	321	Mar. 8	do	3.31	794
Oct. 4	do	2.10	224	22	do	7.84	3,910
	do	1.90	3.3	May 26	do	1.88	185
				July 9	do	.65	1.1
1907.							
Feb. 12	R. S. Hawley	5.10	1,520	1911.			
25	do	4.48	1,270	Jan. 16	J. E. Stewart	2.03	256
Mar. 9	do	4.60	1,390	25	do	3.87	1,180
15	do	5.15	1,850	Mar. 20	do	5.45	1,890
21b	do	12.25	6,220	May 8	do	3.38	814
30	W. G. Steward	9.70	5,630	July 10	do	1.84	150
Apr. 1	do	9.45	5,120	Oct. 11	do	.40	c 0
27	do	6.00	2,360	Dec. 5	F. C. Ebert		d 0
May 6	do	5.20	1,880				
17	do	4.60	1,270	1912.			
June 21	W. F. Martin	3.22	695	Jan. 29	J. E. Stewart	2.15	230
				Mar. 12	Lasley Lee	2.06	216

a A landslide occurred in Cache Creek canyon, above the station, on May 2, 1906, damming the flow. This dam was overtopped on May 7, when the creek rose to a maximum gage height of 20.8 feet. The measurements of this date were made at the crest of the flood.

b The measurement on Mar. 21, 1907, was made just after the big flood and was possibly affected by backwater from the Yolo basin.

c Water standing in pools.

d Creek dry.

Daily gage height, in feet, of Cache Creek at Yolo, Cal., for 1903-1912.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1903.												
1				2.9	6.0	3.9	5.7	3.4	2.6	1.7	0.9	.....
2				2.8	5.4	3.9	5.2	3.4	2.5	1.7	.9	.....
3				2.8	5.1	3.9	5.0	3.4	2.5	1.7	.8	.....
4				2.8	4.7	3.9	4.7	3.3	2.5	1.6	.8	.....
5				2.8	4.4	3.9	4.7	3.3	2.5	1.6	.8	.....
6				2.8	4.4	3.9	4.6	3.3	2.4	1.6	.8	.....
7				2.7	4.3	3.8	4.5	3.3	2.4	1.5	.7	.....
8				2.7	10.2	3.8	4.4	3.3	2.4	1.5	.7	.....
9				2.7	5.8	3.8	4.3	3.2	2.4	1.5	(a)	.....
10				2.7	5.2	3.8	4.3	3.2	2.3	1.4		.....
11				2.6	4.9	3.8	4.1	3.1	2.3	1.4		.....
12				2.6	4.8	3.8	4.0	3.1	2.3	1.4		.....
13				2.6	4.7	4.8	4.0	3.1	2.3	1.4		.....
14				2.6	4.5	7.7	3.9	3.1	2.2	1.3		.....
15				2.6	4.5	5.8	3.9	3.0	2.3	1.3		.....

a Aug. 9 to Nov. 19, 1903, no discharge. Gage height 0.6 foot; water standing in pools.

Daily gage height, in feet, of Cache Creek at Yolo, Cal., for 1903-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1903.												
16.				2.6	4.4	5.2	3.8	3.0	2.3	1.3		
17.				2.5	4.4	5.0	3.8	3.0	2.3	1.3		
18.				2.5	4.3	4.8	3.8	2.9	2.3	1.2		
19.				2.5	4.3	4.7	3.7	2.9	2.2	1.2		
20.				2.5	4.3	4.5	3.7	2.9	2.2	1.2		
21.				2.5	4.2	4.4	3.6	2.9	2.1	1.2		
22.				2.5	4.1	4.4	3.6	2.8	2.1	1.2		
23.				2.5	4.1	4.3	3.6	2.8	2.0	1.1		
24.				3.7	4.1	4.2	3.5	2.8	2.0	1.1		
25.				5.2	4.0	4.1	3.5	2.7	1.9	1.1		
26.				5.5	4.0	4.0	3.5	2.7	1.9	1.1		
27.				8.0	4.0	4.0	3.5	2.7	1.8	1.0		
28.				10.2	4.0	4.3	3.5	2.7	1.8	1.0		
29.				6.0		5.9	3.5	2.7	1.8	1.0		
30.				5.7		5.1	3.4	2.6	1.8	.9		
31.				8.1		5.3		2.6		.9		
1903-4.												
1.			2.1	2.1	2.3	7.85	9.7	6.5	4.3	3.0	2.2	1.5
2.			2.0	2.1	2.35	7.3	9.45	6.4	4.2	3.0	2.2	1.5
3.			1.9	2.1	2.45	7.05	9.15	6.35	4.15	3.0	2.1	1.5
4.			1.9	2.1	2.5	6.85	8.9	6.3	4.1	2.95	2.1	1.5
5.			1.8	2.1	2.6	6.65	8.65	6.2	4.0	2.9	2.1	1.5
6.			1.8	2.1	2.6	6.45	8.45	6.15	3.95	2.9	2.0	1.5
7.			1.8	2.1	2.6	6.35	8.3	6.05	3.9	2.9	2.0	1.5
8.			1.7	2.1	2.55	6.3	8.2	6.0	3.8	2.9	2.0	1.5
9.			1.7	2.1	2.5	6.2	8.1	5.85	3.75	2.8	2.0	1.5
10.			1.6	2.1	2.5	14.75	8.0	5.8	3.7	2.8	1.9	1.5
11.			1.6	2.1	2.5	20.75	7.9	5.7	3.6	2.8	1.9	(b)
12.			1.5	2.1	5.95	12.0	7.8	5.65	3.55	2.8	1.9	
13.			1.5	2.1	9.25	10.75	7.7	5.6	3.5	2.7	1.9	
14.			1.5	2.1	5.5	10.6	7.6	5.5	3.5	2.7	1.8	
15.			1.5	2.1	5.25	10.5	7.5	5.4	3.5	2.65	1.8	
16.			5.4	2.1	16.75	10.4	7.4	5.35	3.4	2.6	1.8	
17.			3.8	2.1	8.75	11.65	7.4	5.3	3.4	2.6	1.7	
18.			3.3	2.1	7.0	16.5	7.3	5.2	3.4	2.6	1.7	
19.			3.0	2.5	5.8	11.75	7.2	5.15	3.4	2.55	1.7	
20.		(c)	4.0	2.8	2.4	5.1	10.55	7.1	5.1	3.3	2.5	1.7
21.			9.3	2.8	2.4	4.9	10.25	7.0	5.0	3.3	2.5	1.7
22.			5.6	2.6	2.4	11.0	10.1	6.9	4.95	3.3	2.4	1.7
23.			4.3	2.6	2.4	14.75	11.0	6.85	4.9	3.2	2.4	1.7
24.			3.5	2.4	2.3	16.5	9.8	6.8	4.8	3.2	2.4	1.7
25.			3.3	2.4	2.3	7.5	9.8	6.8	4.75	3.2	2.4	1.7
26.			2.9	2.2	2.3	13.0	9.65	6.7	4.7	3.2	2.35	1.7
27.			2.5	2.2	2.3	16.5	9.5	6.7	4.6	3.1	2.3	1.7
28.			2.3	2.2	2.3	9.6	16.75	6.6	4.55	3.1	2.3	1.7
29.			2.2	2.2	2.3	8.6	14.5	6.6	4.5	3.1	2.3	1.6
30.			2.2	2.1	2.2		11.7	6.5	4.4	3.1	2.3	1.6
31.				2.1	2.2		10.4		4.35		2.2	1.6
1904-5.												
1.		2.0	2.15	5.0	6.0	4.7	5.9	4.2	3.6	2.55	1.8	1.4
2.	1.8	2.0	2.1	4.05	12.4	4.6	5.8	4.2	3.6	2.5	1.8	1.4
3.	1.8	2.0	2.1	3.65	9.05	4.6	5.7	4.2	3.5	2.5	1.75	1.4
4.	1.8	1.9	2.1	3.45	7.35	4.5	5.6	4.15	3.5	2.5	1.75	1.35
5.	1.8	1.9	2.05	3.25	6.4	4.5	5.5	4.15	3.45	2.45	1.7	1.3
6.	1.8	1.9	2.05	3.1	6.0	4.45	5.4	4.15	3.4	2.45	1.7	1.3
7.	1.7	1.9	2.05	3.1	5.6	4.4	5.3	4.1	3.35	2.4	1.7	1.25
8.	1.7	1.9	2.05	3.05	5.35	4.4	5.2	4.75	3.3	2.4	1.75	1.25
9.	1.7	1.9	2.05	3.0	5.2	4.35	5.2	4.5	3.25	2.4	1.8	1.2
10.	3.0	1.9	2.05	3.0	5.1	4.35	5.1	4.4	3.2	2.35	1.8	1.15
11.	5.05	1.8	2.05	3.0	5.0	4.3	5.1	4.3	3.15	2.3	1.75	1.15
12.	4.1	1.8	2.15	2.95	4.95	4.3	5.05	4.25	3.1	2.25	1.75	1.1
13.	3.45	1.8	2.15	3.2	4.9	5.65	5.0	4.2	3.1	2.2	1.7	1.1
14.	3.0	1.8	2.15	3.95	4.8	6.05	5.0	4.2	3.05	2.2	1.7	1.1
15.	2.65	1.8	2.1	6.4	4.8	5.85	4.9	4.15	3.05	2.15	1.56	1.15

<sup>a</sup> Highest gage height reached during the March flood was 28.2 feet, on night of Mar. 10, 1904. Back-water conditions caused by flood on Sacramento River.

<sup>b</sup> Gage destroyed.

<sup>c</sup> Aug. 9 to Nov. 19, 1903, no discharge. Gage height 0.6 foot; water standing in pools.

Daily gage height, in feet, of Cache Creek at Yolo, Cal., for 1903-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1904-5.												
16.....	2.45	1.7	2.1	5.3	4.75	6.4	4.9	4.15	3.0	2.15	1.65	1.1
17.....	2.3	1.7	2.1	7.4	5.3	6.2	4.85	4.1	3.0	2.1	1.65	1.1
18.....	2.3	1.7	2.1	7.0	5.25	5.7	4.8	4.1	3.0	2.1	1.6	1.1
19.....	2.2	1.7	2.1	6.55	5.2	6.0	4.75	4.1	2.95	2.0	1.6	1.15
20.....	2.2	1.7	2.1	5.3	5.1	6.0	4.7	4.05	2.9	2.0	1.6	1.15
21.....	2.2	1.7	2.1	5.05	5.0	5.95	4.65	4.05	2.9	1.95	1.6	1.1
22.....	2.1	1.7	2.1	8.25	5.0	5.9	4.6	4.0	2.85	1.9	1.65	1.1
23.....	2.1	1.7	2.15	15.55	4.95	6.3	4.55	4.0	2.8	1.9	1.55	1.05
24.....	2.1	1.9	2.15	8.8	4.9	6.2	4.5	3.95	2.8	1.85	1.55	1.05
25.....	2.1	1.9	2.15	9.25	4.85	6.1	4.45	3.95	2.75	1.8	1.55	1.05
26.....	2.1	1.9	2.1	7.0	4.8	6.05	4.4	3.9	2.7	1.8	1.5	1.05
27.....	2.1	1.9	2.1	6.2	4.8	6.0	4.35	3.9	2.7	1.75	1.5	1.05
28.....	2.0	1.9	2.1	5.8	4.7	5.9	4.3	3.8	2.65	1.75	1.5	1.05
29.....	2.0	2.2	2.05	5.4	.....	7.1	4.25	3.8	2.6	1.6	1.45	1.0
30.....	2.0	2.2	2.3	5.15	.....	6.85	4.2	3.7	2.6	1.6	1.45	1.0
31.....	2.0	.....	15.2	5.0	.....	6.1	.....	3.7	.....	1.6	1.4	.....
1905-6.												
1.....	1.0	.....	.....	.....	4.05	5.5	10.0	5.0	4.3	3.1	2.15	1.65
2.....	1.0	.....	.....	.....	4.0	5.2	8.6	4.55	4.2	3.1	2.1	1.65
3.....	1.0	.....	.....	.....	3.95	5.55	8.0	2.95	4.15	3.05	2.0	1.6
4.....	1.1	.....	.....	.....	3.95	8.5	7.6	2.6	4.1	3.0	2.0	1.6
5.....	1.1	.....	.....	.....	3.9	6.7	7.3	2.25	4.1	3.0	2.0	1.6
6.....	1.1	.....	.....	.....	3.85	6.15	7.0	2.2	4.05	2.8	1.95	1.6
7.....	1.1	.....	.....	.....	3.85	5.85	6.8	12.1	4.0	2.65	1.95	1.5
8.....	1.1	.....	.....	.....	3.8	5.6	6.7	5.1	3.95	2.6	1.95	1.5
9.....	1.1	.....	.....	.....	3.75	5.5	6.6	4.7	3.9	2.6	1.95	1.5
10.....	1.05	.....	.....	.....	3.75	5.4	6.4	4.6	3.85	2.6	2.0	1.5
11.....	1.05	.....	.....	.....	3.7	5.3	6.35	4.6	3.8	2.5	2.0	1.5
12.....	1.05	.....	.....	.....	3.7	9.3	6.3	4.55	3.8	2.5	2.0	1.5
13.....	1.1	.....	.....	4.35	3.7	7.25	6.1	4.6	3.8	2.5	2.0	1.45
14.....	1.1	.....	.....	6.3	3.7	6.45	6.0	4.5	3.75	2.5	2.0	1.45
15.....	1.1	.....	.....	4.45	6.85	6.0	5.9	4.45	3.7	2.45	2.0	1.45
16.....	1.1	.....	.....	9.9	5.2	5.8	5.8	4.4	3.65	2.45	2.0	1.45
17.....	(a)	.....	.....	14.0	4.7	5.6	5.7	4.35	3.65	2.45	1.95	1.45
18.....	.....	.....	.....	14.05	5.45	5.5	5.75	4.3	3.65	2.4	1.95	1.45
19.....	.....	.....	.....	25.7	6.65	5.4	5.65	4.3	3.6	2.35	1.95	1.45
20.....	.....	.....	.....	10.25	5.8	5.3	5.55	4.25	3.5	2.3	1.8	1.35
21.....	.....	.....	.....	6.75	7.8	7.25	5.45	4.2	3.4	2.3	1.7	1.3
22.....	.....	.....	.....	5.8	7.25	7.0	5.4	4.15	3.4	2.3	1.7	1.3
23.....	.....	.....	.....	5.35	6.4	6.7	5.4	4.1	3.35	2.35	1.65	1.3
24.....	.....	.....	.....	5.05	8.3	10.7	5.3	4.05	3.3	2.3	1.7	1.25
25.....	.....	.....	.....	4.8	7.45	9.95	5.25	4.2	3.25	2.3	1.75	1.25
26.....	.....	.....	.....	5.6	6.0	11.0	5.2	4.55	3.2	2.25	1.75	1.2
27.....	.....	.....	.....	4.4	5.65	9.25	5.15	4.7	3.2	2.2	1.7	1.15
28.....	.....	.....	.....	4.3	5.8	7.95	5.3	4.85	3.2	2.2	1.7	1.15
29.....	.....	.....	.....	4.2	.....	7.3	5.2	4.7	3.2	2.2	1.65	1.1
30.....	.....	.....	.....	4.15	.....	9.65	5.1	4.45	3.15	2.15	1.65	1.1
31.....	.....	.....	.....	4.1	.....	15.85	.....	4.35	.....	2.15	1.65	.....
1906-7.												
1.....	1.1	0.85	.....	2.7	10.2	4.8	9.4	5.7	3.85	2.95	2.35	1.4
2.....	1.1	.85	.....	2.75	12.6	4.8	9.3	5.5	3.85	2.9	2.3	1.35
3.....	1.95	.85	.....	2.7	10.85	4.65	9.3	5.5	3.8	2.9	2.3	1.35
4.....	1.9	.8	.....	3.2	8.25	4.6	9.2	5.55	3.8	2.9	2.3	1.35
5.....	1.05	.8	.....	7.3	6.5	4.55	9.1	5.4	3.8	2.85	2.25	1.4
6.....	1.0	.8	.....	4.35	6.7	5.3	9.0	5.3	3.75	2.85	2.2	1.5
7.....	1.0	.8	.....	3.95	6.25	4.9	8.75	5.3	3.75	2.85	2.2	1.5
8.....	1.0	.8	.....	4.4	5.8	4.7	8.6	5.2	3.7	2.8	2.15	1.45
9.....	1.0	.8	.....	8.1	5.6	4.8	8.4	5.1	3.7	2.8	2.1	1.45
10.....	1.0	.8	.....	15.65	5.5	6.05	8.15	5.0	3.6	2.8	2.1	1.4
11.....	1.0	.8	5.75	6.65	5.3	5.65	8.0	4.9	3.6	2.75	2.05	1.4
12.....	1.0	.75	3.3	5.4	5.1	5.5	7.9	4.9	3.55	2.75	2.05	1.35
13.....	1.0	.75	2.7	4.75	5.0	5.35	7.7	4.85	3.5	2.75	2.05	1.35
14.....	.95	.75	2.5	4.45	4.9	5.15	7.5	4.8	3.5	2.7	2.0	1.35
15.....	.95	.75	2.45	4.25	4.8	4.9	7.4	4.7	3.45	2.7	2.0	1.35

<sup>a</sup> Creek dry Oct. 17, 1905, to Jan. 12, 1906. Gage height for May 7, 1906, is the mean of a large number of readings taken at short intervals.

Daily gage height, in feet, of Cache Creek at Yolo, Cal., for 1903-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1906-7.												
16.....	0.95	0.7	2.45	4.0	4.7	5.0	7.2	4.6	3.45	2.65	1.95	1.3
17.....	.9	(a)	2.45	4.55	4.65	6.8	7.1	4.5	3.4	2.65	1.95	1.3
18.....	.9		2.4	4.3	4.9	19.45	6.95	4.4	3.35	2.55	1.9	1.3
19.....	.9		2.4	3.95	4.9	25.9	6.8	4.35	3.35	2.6	1.9	1.25
20.....	.9		2.4	3.85	4.7	18.2	6.7	4.3	3.3	2.6	1.9	1.25
21.....	.9		2.4	3.85	4.65	12.65	6.6	4.2	3.25	2.6	1.85	1.2
22.....	.9		2.4	3.8	4.6	12.0	6.55	4.1	3.2	2.55	1.85	1.2
23.....	.9		2.4	3.8	4.55	20.85	6.4	4.1	3.2	2.55	1.8	1.2
24.....	.9		2.4	3.9	4.5	19.3	6.3	4.1	3.15	2.5	1.8	1.15
25.....	.85		2.4	4.05	4.7	16.15	6.2	4.0	3.1	2.5	1.75	1.15
26.....	.85		4.2	4.3	5.0	12.55	6.1	4.0	3.1	2.5	1.7	1.15
27.....	.85		7.55	4.4	4.8	11.0	6.0	3.95	3.0	2.45	1.65	1.1
28.....	.85		3.95	7.1	4.65	10.35	6.0	3.95	3.0	2.45	1.65	1.1
29.....	.85		3.3	6.3		10.0	5.9	3.9	2.95	2.4	1.5	1.1
30.....	.85		3.1	5.05		9.65	3.8	3.9	2.95	2.4	1.4	1.1
31.....	.85		2.8	5.15		9.5		3.9		2.35	1.4	
1907-8.												
1.....	1.2	1.5	1.4	4.45	3.65	7.4	3.4	2.55	1.75	.85	.5	
2.....	1.2	1.55	1.4	3.65	6.5	6.0	3.4	2.5	1.7	.85	.45	
3.....	1.3	1.6	1.4	3.2	10.2	5.05	3.35	2.55	1.7	.85	(d)	
4.....	1.3	1.6	1.35	3.0	6.7	4.75	3.35	2.5	1.6	.85		
5.....	1.3	1.55	1.35	3.05	5.5	4.5	3.3	2.45	1.5	.85		
6.....	1.25	1.55	1.35	3.7	6.2	4.3	3.3	2.5	1.4	.8		
7.....	1.25	1.5	1.3	2.5	5.5	4.25	3.3	2.4	1.4	.8		
8.....	1.25	1.5	1.35	2.45	5.25	4.2	3.25	2.35	1.3	.75		
9.....	1.2	1.5	1.4	2.45	8.75	4.2	3.2	2.3	1.3	.7		
10.....	1.2	1.5	1.5	2.7	7.7	4.15	3.2	2.3	1.5	.7		
11.....	1.2	1.5	1.8	2.6	5.9	4.15	3.15	2.25	1.4	.65		
12.....	1.2	1.5	2.1	2.5	5.3	4.15	3.15	2.2	1.35	.65		
13.....	1.2	1.5	2.0	2.45	4.95	4.15	3.1	2.2	1.3	.65		
14.....	1.2	1.5	1.9	2.8	4.7	4.2	3.1	2.2	1.3	.65		
15.....	1.2	1.5	2.0	3.3	4.6	4.2	3.05	2.15	1.25	.6		
16.....	1.2	1.5	1.95	3.05	4.45	4.15	3.05	2.15	1.4	.6		
17.....	1.2	1.5	1.9	2.85	4.3	4.15	3.0	2.15	1.35	.6		
18.....	1.15	1.5	1.85	2.7	4.25	4.1	3.0	2.15	1.3	.6		
19.....	1.15	1.5	1.8	3.05	4.2	4.0	2.95	2.1	1.25	.6		
20.....	1.15	1.5	1.8	3.25	4.1	3.9	2.95	2.2	1.25	.6		
21.....	1.15	1.45	1.9	4.65	4.0	3.85	2.9	2.2	1.2	.65		
22.....	1.5	1.4	2.0	4.05	3.95	3.8	2.9	2.1	1.15	.65		
23.....	1.5	1.4	1.9	3.8	3.9	3.8	2.9	2.0	1.05	.65		
24.....	1.5	1.4	1.85	3.85	3.85	3.75	2.85	1.95	.9	.55		
25.....	1.55	1.4	1.85	4.65	3.9	3.65	2.85	1.9	.9	.5		
26.....	1.6	1.4	1.85	4.0	3.9	3.6	2.85	1.9	.9	.5		
27.....	1.6	1.45	2.1	3.75	3.85	3.55	2.8	1.9	.85	.55		
28.....	1.55	1.45	2.6	3.6	3.85	3.5	2.7	1.9	.85	.55		
29.....	1.5	1.45	2.4	3.45	4.15	3.5	2.65	1.85	.85	.5		
30.....	1.5	1.4	2.4	3.4		3.45	2.6	1.85	.85	.5		
31.....	1.5		4.5	3.2		3.45		1.75		.5		
1908-9.												
1.....					10.8	9.75	6.8	4.45	3.05	2.3	1.7	1.15
2.....					13.1	9.5	6.7	4.3	3.05	2.25	1.7	1.15
3.....				4.4	27.0	9.3	6.65	4.25	3.0	2.25	1.65	1.1
4.....				4.1	17.25	9.35	6.6	4.2	3.0	2.2	1.65	1.1
5.....				2.8	14.15	9.5	6.5	4.1	2.95	2.2	1.6	1.05
6.....				5.65	12.2	9.15	6.4	4.1	2.95	2.15	1.6	1.05
7.....				5.5	14.2	9.25	6.2	4.05	2.95	2.15	1.6	1.0
8.....				3.45	12.6	9.1	6.1	4.0	2.9	2.15	1.55	1.0
9.....				14.35	11.65	8.85	6.0	3.9	2.9	2.1	1.55	1.0
10.....				6.45	11.0	8.6	5.9	3.9	2.85	2.1	1.55	.95
11.....				4.9	16.0	8.4	5.8	3.85	2.8	2.1	1.55	.95
12.....				4.35	17.85	8.2	5.7	3.8	2.8	2.1	1.55	.9
13.....				4.25	18.2	8.1	5.65	3.7	2.75	2.05	1.5	.9
14.....				7.85	13.8	8.0	5.6	3.6	2.75	2.05	1.5	.9
15.....				23.0	12.7	7.9	5.55	3.5	2.75	2.0	1.5	.85

a Little or no flow from Oct. 17, to Dec. 10, 1906.

b Crest gage height 27.1 feet at 4.30 a. m. Gage heights from about Mar. 19 to Mar. 29, 1907, are probably affected by backwater from the Yojo basin, which had been flooded by water from Sacramento River.

c Crest gage height 27.2 feet at 4.30 p. m.

d The creek was dry, the water standing in pools, from Aug. 2, 1908, to Jan. 2, 1909.

e Maximum 27.8.

Mean daily gage height, in feet, of Cache Creek at Yolo, Cal., for 1903-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1908-9.												
16.				23.45	12.5	7.75	5.5	3.45	2.7	2.0	1.5	0.85
17.				13.25	11.95	7.6	5.4	3.45	2.7	2.0	1.5	.8
18.				9.4	11.7	7.5	5.35	3.45	2.7	2.0	1.5	.8
19.				8.0	11.5	7.4	5.3	3.45	2.65	1.95	1.45	.75
20.				10.85	11.35	7.35	5.2	3.4	2.65	1.95	1.4	.75
21.				17.85	14.0	7.4	5.1	3.4	2.65	1.9	1.4	.75
22.				13.95	11.55	7.3	5.05	3.35	2.6	1.9	1.35	.7
23.				10.1	11.05	7.2	5.0	3.35	2.55	1.9	1.3	.7
24.				8.9	10.95	7.35	4.9	3.35	2.5	1.85	1.3	.7
25.				11.55	10.9	7.1	4.8	3.3	2.45	1.85	1.3	.65
26.				17.55	10.5	7.0	4.75	3.3	2.4	1.85	1.25	.65
27.				13.2	10.25	6.95	4.7	3.25	2.4	1.8	1.25	.65
28.				10.05	9.95	7.0	4.65	3.25	2.35	1.8	1.2	.65
29.				9.3		7.65	4.6	3.2	2.3	1.75	1.2	.65
30.				9.15		7.2	4.5	3.15	2.3	1.75	1.2	.65
31.				10.7		6.9		3.1		1.75	1.15	
1909-10.												
1.	1.0	1.1	1.5	2.1	3.5	3.8	3.8	2.7	1.6	0.8		
2.	1.3	1.1	1.5	2.05	3.4	3.7	3.75	2.7	1.5	.75		
3.	1.25	1.1	1.55	2.05	3.3	3.6	3.7	2.7	1.45	.75		
4.	1.2	1.1	1.7	2.0	3.3	3.55	3.7	2.65	1.4	.75		
5.	1.2	1.05	1.9	2.0	3.25	3.5	3.6	2.6	1.35	.75		
6.	1.2	1.05	1.9	1.95	3.2	3.45	3.5	2.55	1.3	.75		
7.	1.2	1.05	1.9	1.95	3.9	3.4	3.5	2.55	1.25	.7		
8.	1.15	1.05	2.0	1.95	4.1	3.3	3.45	2.5	1.25	.7		
9.	1.15	1.0	6.3	1.95	3.6	3.25	3.4	2.45	1.2	.7		
10.	1.15	1.0	4.65	1.95	4.1	3.2	3.35	2.45	1.2	.7		
11.	1.1	1.0	3.4	1.95	3.9	3.15	3.35	2.4	1.2	.7		
12.	1.1	.95	2.9	1.9	3.7	3.15	3.45	2.35	1.15	(a)		
13.	1.1	.95	2.7	1.9	3.6	3.15	3.4	2.35	1.15			
14.	1.1	.95	2.5	2.35	3.55	3.1	3.35	2.3	1.15			
15.	1.05	.95	2.45	3.45	3.5	3.1	3.3	2.25	1.15			
16.	1.05	.95	2.4	4.3	3.45	3.05	3.25	2.25	1.15			
17.	1.05	.9	2.3	3.75	3.4	3.05	3.2	2.2	1.1			
18.	1.05	.9	2.2	3.2	3.35	3.1	3.2	2.15	1.1			
19.	1.0	.9	2.15	2.9	3.4	3.1	3.15	2.1	1.1			
20.	1.0	.9	2.1	2.8	3.6	3.15	3.1	2.1	1.05			
21.	1.0	.9	2.05	2.75	3.5	3.7	3.1	2.05	1.0			
22.	1.0	.9	2.05	2.7	3.4	7.6	3.05	2.0	1.0			
23.	.95	.9	2.0	3.2	3.5	5.6	3.0	2.0	.95			
24.	.95	1.25	2.0	8.15	3.5	4.75	3.0	1.95	.95			
25.	.95	1.5	2.0	6.6	4.0	4.3	2.95	1.9	.9			
26.	.9	1.7	1.95	5.2	4.3	4.0	2.9	1.85	.85			
27.	.9	1.6	1.95	4.4	4.0	4.0	2.85	1.85	.85			
28.	.9	1.6	1.95	4.0	3.8	5.1	2.8	1.8	.85			
29.	.9	1.55	1.9	3.8		4.3	2.75	1.75	.8			
30.	1.0	1.5	2.0	3.7		4.05	2.75	1.75	.8			
31.	1.1		2.0	3.6		3.9		1.7				
1910-11.												
1.					6.0	3.95	4.55	3.55	2.7	1.95	1.35	0.9
2.					5.5	4.4	4.5	3.5	2.65	1.95	1.35	.9
3.					5.7	7.8	4.45	3.5	2.65	1.9	1.3	.9
4.					5.0	9.95	4.4	3.5	2.6	1.9	1.3	.9
5.					4.6	17.1	4.5	3.45	2.55	1.9	1.25	(b)
6.					4.4	17.5	5.4	3.45	2.55	1.9	1.25	
7.					4.1	25.0	4.8	3.4	2.7	1.85	1.2	
8.					3.9	16.6	4.55	3.4	2.65	1.8	1.2	
9.					3.65	10.55	4.45	3.35	2.6	1.75	1.2	
10.					3.5	8.9	4.4	3.3	2.55	1.75	1.2	
11.					3.9	7.8	4.4	3.3	2.5	1.7	1.15	1.15
12.					4.6	7.1	4.3	3.25	2.45	1.7	1.15	1.15
13.					4.5	6.7	4.2	3.2	2.45	1.7	1.15	1.15
14.				2.15	4.4	6.35	4.15	3.1	2.4	1.7	1.1	1.1
15.				2.4	4.15	6.1	4.1	3.0	2.4	1.65	1.1	1.1
16.				2.1	3.95	6.0	4.1	2.95	2.35	1.65	1.1	1.1
17.				1.85	3.85	5.8	4.0	2.9	2.35	1.65	1.1	1.1
18.				1.6	3.75	5.7	3.95	2.9	2.3	1.65	1.05	1.1
19.				1.5	3.7	5.6	3.9	2.9	2.25	1.65	1.05	1.1
20.				4.9	3.65	5.5	3.85	2.85	2.25	1.6	1.05	1.1

a Creek dry, water standing in pools July 12, 1910, to Jan. 13, 1911.

b Creek dry Sept. 5 to 10, 1911.

c Gage heights, May 12 to first part of July, 1911, are subject to an error of from 0.1 to 0.2 foot.

Mean daily gage height, in feet, of Cache Creek at Yolo, Cal., for 1903-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.												
21.				3.85	3.5	5.4	3.8	2.85	2.2	1.6	1.0	1.1
22.				2.7	3.45	5.2	3.75	2.85	2.2	1.6	1.0	1.1
23.				2.25	3.4	5.15	3.75	2.85	2.15	1.6	1.0	1.1
24.				2.2	3.35	5.1	3.7	2.85	2.1	1.6	1.0	1.05
25.				3.85	3.3	5.0	3.7	2.8	2.1	1.55	1.0	1.05
26.				3.4	3.3	4.9	3.7	2.8	2.05	1.55	.95	1.05
27.				3.3	3.25	4.8	3.65	2.8	2.0	1.5	.95	1.0
28.				10.4	3.2	4.75	3.65	2.8	2.0	1.45	.95	1.0
29.				12.45		4.7	3.6	2.75	1.95	1.45	.95	.95
30.				8.35		4.65	3.6	2.75	1.95	1.4	.9	.95
31.				9.15		4.6		2.7		1.4	.9	
1911-12.												
1.	0.9				1.78		2.0	2.4	1.10			
2.	.9				1.72		1.95	2.6	1.05			
3.					1.68		1.95	2.65	1.00			
4.					1.65		1.90	2.35	.88			
5.					1.62		1.90	2.1	.80			
6.					1.60	1.30	1.88	1.98	.75			
7.					1.60	2.7	1.78	1.85				
8.					1.58	2.8	1.75	1.78				
9.					1.55	2.2	1.75	1.65				
10.					1.55	2.1	1.75	1.48				
11.					1.55	2.05	1.80	1.38				
12.					1.55	2.1	1.78	1.30				
13.					1.55	3.6	1.70	1.25				
14.					1.50	2.9	1.70	1.20				
15.					1.50	2.9	1.70	1.15				
16.					1.45	2.8	1.70	1.10				
17.					1.38	3.1	1.70	1.10				
18.					1.22	2.85	1.70	1.10				
19.					1.15	2.7	1.70	1.05				
20.					1.10	2.65	1.70	1.05				
21.					1.10	2.6	1.70	1.00				
22.					1.10	2.5	1.70	1.00				
23.					1.10	2.4	1.70	1.00				
24.					1.10	2.35	1.62	1.00				
25.					1.00	2.3	1.52	1.10				
26.					.92	2.3	1.50	1.10				
27.				3.0	.75	2.2	1.45	1.10				
28.				2.55	.60	2.1	1.40	1.10				
29.				2.25		2.05	1.40	1.10				
30.				2.0		2.05	1.40	1.10				
31.				1.88		2.0		1.10				

Daily discharge, in second-feet, of Cache Creek at Yolo, Cal., for 1903-1912.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1903.												
1.				467	2,620	1,140	2,380	860	435	180	10	
2.				430	2,140	1,140	1,990	860	445	180	10	
3.				430	1,880	1,140	1,820	860	445	180	3	
4.				430	1,640	1,140	1,680	810	445	152	3	
5.				430	1,470	1,140	1,640	810	445	152	3	
6.				430	1,440	1,140	1,570	810	410	152	3	
7.				395	1,380	1,080	1,500	810	410	125		
8.				395	6,340	1,080	1,440	810	410	125		
9.				395	2,460	1,080	1,410	760	410	125		
10.				395	1,990	1,080	1,350	760	375	99		
11.				361	1,820	1,080	1,260	710	375	99		
12.				361	1,710	1,080	1,200	710	375	99		
13.				361	1,600	1,680	1,200	710	375	99		
14.				361	1,600	4,080	1,140	710	340	76		
15.				361	1,500	2,420	1,140	660	375	76		
16.				361	1,440	2,020	1,080	660	375	76		
17.				328	1,440	1,820	1,080	660	375	76		
18.				328	1,380	1,710	1,080	615	375	55		
19.				328	1,380	1,600	1,020	615	340	55		
20.				328	1,380	1,500	1,020	615	340	55		

Daily discharge, in second-feet, of Cache Creek at Yolo, Cal., for 1903-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1903.												
21.				328	1,320	1,440	960	615	340	55		
22.				328	1,260	1,410	960	570	305	55		
23.				328	1,260	1,380	960	570	305	37		
24.				815	1,260	1,320	910	570	270	37		
25.				1,740	1,200	1,260	910	570	270	37		
26.				1,960	1,200	1,200	910	525	240	37		
27.				4,300	1,200	1,200	910	525	240	22		
28.				6,340	1,200	1,410	910	525	210	22		
29.				2,620		2,580	910	525	210	22		
30.				2,380		1,920	860	465	210	10		
31.				4,390		2,020		485		10		
1903-4.												
1.			206	206	265	3,340	4,760	2,360	1,030	445	190	40
2.			178	206	280	2,920	4,560	2,290	980	445	190	40
3.			151	206	312	2,740	4,320	2,260	955	445	165	40
4.			151	206	328	2,600	4,120	2,220	930	428	165	40
5.			125	206	361	2,460	3,940	2,160	880	410	165	40
6.			125	206	361	2,320	3,790	2,130	858	410	140	40
7.			125	266	361	2,260	3,680	2,060	835	410	140	40
8.			112	206	344	2,220	3,600	2,030	790	410	140	40
9.			100	206	328	2,160	3,520	1,930	768	375	140	40
10.			76	206	328	6,600	3,450	1,900	745	375	115	40
11.			76	206	328	9,900	3,380	1,840	700	375	115	40
12.			53	206	2,280	5,100	3,300	1,800	678	375	115	40
13.			53	206	5,020	4,440	3,220	1,770	655	340	115	40
14.			53	206	1,960	4,350	3,150	1,700	655	340	95	40
15.			53	206	1,780	4,300	3,080	1,640	655	325	95	40
16.			1,880	206	11,200	4,250	3,000	1,620	610	310	95	40
17.			890	206	4,010	4,860	3,000	1,580	610	310	75	40
18.			640	206	2,700	7,600	2,920	1,520	610	310	75	40
19.			528	328	1,900	4,970	2,850	1,500	610	295	75	40
20.		1,200	448	296	1,460	4,500	2,780	1,460	565	280	75	40
21.		5,020	430	296	1,350	4,300	2,700	1,400	565	280	75	40
22.		2,020	378	296	5,900	4,200	2,630	1,380	565	250	75	55
23.		1,170	344	296	9,280	4,800	2,600	1,350	525	250	75	75
24.		740	312	265	11,000	4,400	2,560	1,300	525	250	75	75
25.		618	280	265	3,080	4,400	2,560	1,270	525	250	75	115
26.		467	250	265	7,700	4,400	2,490	1,240	525	235	75	115
27.		344	235	265	11,000	4,300	2,490	1,180	485	220	75	115
28.		265	235	265	4,680	9,500	2,420	1,160	485	220	75	95
29.		235	235	265	3,900	8,000	2,420	1,130	485	220	55	95
30.		220	220	235		6,100	2,360	1,080	485	220	55	95
31.			206	235		5,200		1,060		190	55	
1904-5.												
1.	95	140	178	1,400	2,320	1,420	2,240	1,110	790	344	125	32
2.	95	140	165	905	8,200	1,350	2,170	1,110	790	328	125	32
3.	95	140	165	722	5,020	1,350	2,100	1,110	740	328	112	32
4.	95	115	165	635	3,410	1,290	2,020	1,080	740	328	112	24
5.	95	115	152	545	2,620	1,290	1,960	1,080	715	312	100	17
6.	95	115	152	485	2,320	1,260	1,880	1,080	690	312	100	17
7.	75	115	152	485	2,020	1,230	1,820	1,060	665	296	100	12
8.	75	115	152	465	1,850	1,230	1,740	1,450	640	296	112	7
9.	75	115	152	445	1,740	1,200	1,740	1,290	618	296	125	7
10.	445	115	152	445	1,680	1,200	1,680	1,230	595	280	125	4
11.	1,440	95	152	445	1,610	1,170	1,680	1,170	572	265	112	4
12.	930	95	178	428	1,580	1,170	1,640	1,140	550	250	112	1
13.	632	95	178	525	1,540	2,060	1,610	1,110	550	235	100	1
14.	445	95	178	4,960	1,480	2,360	1,610	1,110	528	235	100	1
15.	325	95	165	2,290	1,480	2,210	1,540	1,080	528	220	88	4
16.	265	75	165	1,580	1,450	2,620	1,540	1,080	505	220	88	1
17.	220	75	165	3,000	1,820	2,470	1,510	1,060	505	206	88	1
18.	220	75	165	2,700	1,780	2,100	1,480	1,060	505	206	76	1
19.	190	75	165	2,390	1,740	2,320	1,450	1,060	486	178	76	4
20.	190	75	165	1,580	1,680	2,320	1,420	1,030	467	178	76	4
21.	190	75	165	1,440	1,610	2,280	1,380	1,030	467	164	76	1
22.	165	75	165	3,640	1,610	2,240	1,350	1,000	448	151	64	1
23.	165	75	178	10,300	1,580	2,540	1,320	1,000	430	151	64	0
24.	165	115	178	4,600	1,540	2,470	1,290	972	430	138	64	0
25.	165	115	178	5,020	1,510	2,400	1,260	972	412	125	64	0

Daily discharge, in second-feet, of Cache Creek at Yolo, Cal., for 1903-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1904-5.												
26	165	115	165	3,110	1,480	2,360	1,230	945	395	125	53	0
27	165	115	165	2,470	1,480	2,320	1,200	945	395	112	53	0
28	140	115	165	2,170	1,420	2,240	1,170	890	378	112	53	0
29	140	190	152	1,880	.....	3,200	1,140	890	361	76	42	0
30	140	190	220	1,710	.....	2,980	1,110	840	361	76	42	0
31	140	.....	9,700	1,610	.....	2,400	.....	840	.....	76	32	.....
1905-6.												
1	0	.....	.....	.....	969	1,870	5,550	1,540	1,110	530	229	115
2	0	.....	.....	.....	941	1,670	4,360	1,260	1,050	530	217	115
3	0	.....	.....	.....	914	1,910	3,850	473	1,020	510	193	105
4	1	.....	.....	.....	914	4,280	3,510	358	997	491	193	105
5	1	.....	.....	.....	887	2,760	3,260	257	997	491	193	105
6	1	.....	.....	.....	860	2,320	3,000	243	969	420	181	105
7	1	.....	.....	.....	860	2,110	2,840	7,340	941	373	181	85
8	1	.....	.....	.....	835	1,940	2,760	1,600	914	358	181	85
9	1	.....	.....	.....	810	1,870	2,680	1,340	887	358	181	85
10	0	.....	.....	.....	810	1,800	2,520	1,280	860	358	193	85
11	0	.....	.....	.....	785	1,740	2,480	1,280	835	328	193	85
12	0	.....	.....	.....	785	4,960	2,440	1,260	835	328	193	85
13	1	.....	.....	1,140	785	3,210	2,280	1,280	835	328	193	75
14	1	.....	.....	2,440	785	2,560	2,210	1,230	810	328	193	75
15	1	.....	.....	1,200	2,880	2,210	2,140	1,200	785	313	193	75
16	1	.....	.....	5,460	1,670	2,070	2,070	1,170	761	313	193	75
17	.....	.....	.....	8,950	1,340	1,940	2,010	1,140	761	313	181	75
18	.....	.....	.....	8,990	1,840	1,870	2,040	1,110	761	299	181	75
19	.....	.....	.....	18,900	2,720	1,800	1,970	1,110	737	285	181	75
20	.....	.....	.....	5,760	2,070	1,740	1,910	1,080	692	271	145	56
21	.....	.....	.....	2,800	3,680	3,210	1,840	1,050	650	271	125	48
22	.....	.....	.....	2,070	3,210	3,000	1,800	1,020	650	271	125	48
23	.....	.....	.....	1,770	2,520	2,760	1,800	997	630	285	115	48
24	.....	.....	.....	1,570	4,100	6,140	1,740	969	610	271	125	40
25	.....	.....	.....	1,400	3,380	5,510	1,700	1,050	590	271	135	40
26	.....	.....	.....	1,940	2,210	6,400	1,670	1,260	570	257	135	32
27	.....	.....	.....	1,170	1,970	4,910	1,640	1,340	570	243	125	25
28	.....	.....	.....	1,110	2,070	3,800	1,740	1,440	570	243	125	25
29	.....	.....	.....	1,050	.....	3,260	1,670	1,340	570	243	115	17
30	.....	.....	.....	1,020	.....	5,250	1,600	1,200	550	229	115	17
31	.....	.....	.....	997	.....	10,500	.....	1,140	.....	229	115	.....
1906-7.												
1	17	.....	.....	430	5,860	1,500	5,180	2,130	953	530	310	50
2	17	.....	.....	450	7,900	1,500	5,100	1,990	953	510	290	45
3	181	.....	.....	430	6,410	1,410	5,100	1,990	925	510	290	45
4	169	.....	.....	635	4,200	1,380	5,010	2,020	925	510	290	45
5	10	.....	.....	3,410	2,770	1,350	4,920	1,920	925	490	275	50
6	3	.....	.....	1,230	2,930	1,850	4,840	1,850	900	490	260	70
7	3	.....	.....	1,010	2,570	1,570	4,630	1,850	900	490	260	70
8	3	.....	.....	1,260	2,210	1,440	4,500	1,780	875	470	245	60
9	3	.....	.....	4,080	2,060	1,500	4,330	1,710	875	470	230	60
10	3	.....	.....	10,500	1,990	2,410	4,120	1,640	825	470	230	50
11	3	.....	.....	2,040	2,890	2,100	3,990	1,570	825	450	215	50
12	3	.....	.....	610	1,920	1,710	3,900	1,570	800	450	215	45
13	3	.....	.....	388	1,470	1,040	1,880	3,740	775	450	215	45
14	1	.....	.....	328	1,290	1,570	1,740	3,570	775	430	200	45
15	1	.....	.....	313	1,170	1,500	1,570	3,490	750	430	200	45
16	1	.....	.....	313	1,040	1,440	1,640	3,330	750	410	185	35
17	.....	.....	.....	313	1,350	1,410	3,010	3,250	725	410	185	35
18	.....	.....	.....	299	1,200	1,570	13,700	3,130	702	410	170	35
19	.....	.....	.....	299	1,010	1,570	19,200	3,010	702	395	170	28
20	.....	.....	.....	299	953	1,440	12,700	2,930	680	395	170	28
21	.....	.....	.....	299	953	1,410	7,940	2,850	657	395	160	20
22	.....	.....	.....	299	925	1,380	7,390	2,810	635	380	160	20
23	.....	.....	.....	299	925	1,350	14,900	2,690	635	380	145	20
24	.....	.....	.....	299	980	1,320	13,600	2,610	612	360	145	15
25	.....	.....	.....	299	1,060	1,440	10,900	2,530	590	360	130	15
26	.....	.....	.....	1,050	1,200	1,640	7,860	2,450	590	360	120	15
27	.....	.....	.....	3,470	1,260	1,500	6,540	2,370	1,010	550	110	10
28	.....	.....	.....	914	3,250	1,410	5,990	2,370	1,010	550	110	10
29	.....	.....	.....	610	2,610	.....	5,690	2,290	980	530	325	70
30	.....	.....	.....	530	1,680	.....	5,390	2,210	980	530	325	50
31	.....	.....	.....	420	1,740	.....	5,260	.....	980	310	50	.....

Daily discharge, in second-feet, of Cache Creek at Yolo, Cal., for 1903-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1907-8.												
1.....	20	70	50	1,400	935	3,710	815	451	167	10	1	.....
2.....	20	82	50	935	2,980	2,580	815	431	153	10	.....	.....
3.....	35	95	50	725	6,080	1,830	792	451	153	10	.....	.....
4.....	35	95	42	639	3,140	1,610	792	431	127	10	.....	.....
5.....	35	82	42	660	2,180	1,440	770	411	104	10	.....	.....
6.....	28	82	42	960	2,740	1,300	770	431	84	8	.....	.....
7.....	28	70	35	431	2,180	1,270	770	391	84	8	.....	.....
8.....	28	70	42	411	1,980	1,240	747	371	66	6	.....	.....
9.....	20	70	50	411	4,830	1,240	725	352	66	5	.....	.....
10.....	20	70	70	513	3,950	1,210	725	352	104	5	.....	.....
11.....	20	70	145	471	2,500	1,210	703	333	84	4	.....	.....
12.....	20	70	230	431	2,020	1,210	703	315	75	4	.....	.....
13.....	20	70	200	411	1,760	1,210	681	315	66	4	.....	.....
14.....	20	70	170	555	1,580	1,240	681	315	66	4	.....	.....
15.....	20	70	200	770	1,500	1,240	660	297	58	3	.....	.....
16.....	20	70	185	660	1,400	1,210	660	297	84	3	.....	.....
17.....	20	70	170	576	1,300	1,210	639	297	75	3	.....	.....
18.....	15	70	158	513	1,270	1,180	639	297	66	3	.....	.....
19.....	15	70	145	660	1,240	1,120	618	280	58	3	.....	.....
20.....	15	70	145	747	1,180	1,060	618	315	58	3	.....	.....
21.....	15	60	170	1,540	1,120	1,040	597	315	50	4	.....	.....
22.....	70	50	200	1,150	1,090	1,010	597	280	42	4	.....	.....
23.....	70	50	170	1,010	1,060	1,010	597	246	28	4	.....	.....
24.....	70	50	158	1,040	1,040	985	576	229	13	2	.....	.....
25.....	82	50	158	1,540	1,060	935	576	213	13	1	.....	.....
26.....	95	50	158	1,120	1,060	910	576	213	13	1	.....	.....
27.....	95	60	230	985	1,040	886	555	213	10	2	.....	.....
28.....	82	60	395	910	1,040	862	513	213	10	2	.....	.....
29.....	70	60	325	838	1,210	862	492	197	10	1	.....	.....
30.....	70	50	325	815	.....	838	471	197	10	1	.....	.....
31.....	70	.....	1,320	725	.....	838	.....	167	.....	1	.....	.....
1908-9.												
1.....	.....	.....	.....	.....	6,370	5,480	3,010	1,320	632	340	145	27
2.....	.....	.....	.....	.....	8,320	5,260	2,930	1,240	632	322	145	27
3.....	.....	.....	.....	1,300	20,100	5,100	2,890	1,220	610	322	132	20
4.....	.....	.....	.....	1,130	11,900	5,140	2,850	1,180	610	305	132	20
5.....	.....	.....	.....	530	9,220	5,260	2,770	1,130	590	305	120	15
6.....	.....	.....	.....	2,100	7,560	4,970	2,690	1,130	590	288	120	15
7.....	.....	.....	.....	1,990	9,260	5,050	2,530	1,100	590	288	120	10
8.....	.....	.....	.....	812	7,900	4,920	2,450	1,080	570	288	108	10
9.....	.....	.....	.....	9,390	7,090	4,710	2,370	1,020	570	270	108	10
10.....	.....	.....	.....	2,730	6,540	4,500	2,290	1,020	550	270	108	8
11.....	.....	.....	.....	1,590	10,800	4,330	2,220	1,000	530	270	108	8
12.....	.....	.....	.....	1,270	12,400	4,160	2,140	975	530	270	108	6
13.....	.....	.....	.....	1,210	12,700	4,080	2,100	925	510	252	95	6
14.....	.....	.....	.....	3,860	8,920	3,990	2,060	880	510	252	95	6
15.....	.....	.....	.....	16,700	7,480	3,900	2,030	835	510	235	95	4.5
16.....	.....	.....	.....	17,100	7,900	3,780	1,990	812	490	235	95	4.5
17.....	.....	.....	.....	8,450	7,350	3,650	1,920	812	490	235	95	3
18.....	.....	.....	.....	5,180	7,140	3,570	1,880	812	490	235	95	3
19.....	.....	.....	.....	3,990	6,960	3,490	1,850	812	470	220	83	2
20.....	.....	.....	.....	6,410	6,840	3,450	1,780	790	470	220	71	2
21.....	.....	.....	.....	12,400	9,090	3,490	1,720	790	470	205	71	2
22.....	.....	.....	.....	9,050	7,010	3,410	1,680	768	450	205	61	1
23.....	.....	.....	.....	5,780	6,580	3,330	1,650	768	430	205	51	1
24.....	.....	.....	.....	4,760	6,500	3,450	1,590	768	410	190	51	1
25.....	.....	.....	.....	7,010	6,460	3,250	1,530	745	392	190	51	.5
26.....	.....	.....	.....	12,100	6,120	3,170	1,500	745	375	190	42	.5
27.....	.....	.....	.....	8,410	5,900	3,130	1,470	722	375	175	42	.5
28.....	.....	.....	.....	5,740	5,650	3,170	1,440	722	358	175	34	.5
29.....	.....	.....	.....	5,100	.....	3,690	1,410	700	340	160	34	.5
30.....	.....	.....	.....	4,970	.....	3,330	1,350	678	340	160	34	.5
31.....	.....	.....	.....	6,280	.....	3,090	.....	655	.....	160	27	.....
1909-10.												
1.....	10	20	95	270	835	975	975	490	120	3	.....	.....
2.....	51	20	95	252	790	925	950	490	95	2	.....	.....
3.....	42	20	108	252	745	880	925	490	83	2	.....	.....
4.....	34	20	145	235	745	858	925	470	71	2	.....	.....
5.....	34	15	205	235	722	835	880	450	61	2	.....	.....

Daily discharge, in second-feet, of Cache Creek at Yolo, Cal., for 1903-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909-10.												
6.....	34	15	205	220	700	812	835	430	51	2	.....	.....
7.....	34	15	205	220	1,020	790	835	430	42	1	.....	.....
8.....	27	15	235	220	1,130	745	812	410	42	1	.....	.....
9.....	27	10	2,610	220	880	722	790	392	34	1	.....	.....
10.....	27	10	1,440	220	1,130	700	768	392	34	1	.....	.....
11.....	20	10	790	220	1,020	678	768	375	34	.....	.....	.....
11.....	20	8	570	205	925	678	812	358	27	.....	.....	.....
13.....	20	8	490	205	850	678	790	358	27	.....	.....	.....
14.....	20	8	410	358	858	655	768	340	27	.....	.....	.....
15.....	15	8	392	812	835	655	745	322	27	.....	.....	.....
16.....	15	8	375	1,240	812	632	722	322	27	.....	.....	.....
17.....	15	6	340	950	790	632	700	305	20	.....	.....	.....
18.....	15	6	305	700	768	655	700	288	20	.....	.....	.....
19.....	10	6	288	570	790	655	678	270	20	.....	.....	.....
20.....	10	6	270	530	880	678	655	270	15	.....	.....	.....
21.....	10	6	252	510	825	925	655	252	10	.....	.....	.....
22.....	10	6	252	490	790	3,650	632	235	10	.....	.....	.....
23.....	8	6	235	700	835	2,060	610	235	8	.....	.....	.....
24.....	8	42	235	4,120	835	1,500	610	220	8	.....	.....	.....
25.....	8	95	235	2,850	1,080	1,240	590	205	6	.....	.....	.....
26.....	6	145	220	1,780	1,240	1,080	570	190	4.5	.....	.....	.....
27.....	6	120	220	1,300	1,080	1,080	550	190	4.5	.....	.....	.....
28.....	6	120	220	1,080	975	1,720	530	175	4.5	.....	.....	.....
29.....	6	108	205	975	.....	1,240	510	160	3	.....	.....	.....
30.....	10	95	235	925	.....	1,100	510	160	3	.....	.....	.....
31.....	20	.....	235	880	.....	1,020	.....	145	.....	.....	.....	.....
1910-11.												
1.....	.....	.....	.....	.....	2,370	1,050	1,380	850	450	180	36	1
2.....	.....	.....	.....	.....	1,990	1,300	1,350	825	430	180	36	1
3.....	.....	.....	.....	.....	2,140	3,820	1,320	825	430	165	27	1
4.....	.....	.....	.....	.....	1,650	5,650	1,300	825	410	165	27	1
5.....	.....	.....	.....	.....	1,410	11,700	1,350	800	390	165	20	0
6.....	.....	.....	.....	.....	1,300	12,100	1,920	800	390	165	20	0
7.....	.....	.....	.....	.....	1,130	18,400	1,530	775	450	152	14	0
8.....	.....	.....	.....	.....	1,020	11,300	1,380	775	430	138	14	0
9.....	.....	.....	.....	.....	902	6,160	1,320	750	410	125	14	0
10.....	.....	.....	.....	.....	835	4,760	1,300	725	390	125	14	0
11.....	.....	.....	.....	.....	1,020	3,820	1,300	725	370	112	10	10
12.....	.....	.....	.....	.....	1,410	3,250	1,240	700	350	112	10	10
13.....	.....	.....	.....	.....	1,350	2,930	1,180	675	350	112	10	10
14.....	.....	.....	.....	288	1,300	2,650	1,160	630	330	112	7	7
15.....	.....	.....	.....	375	1,160	2,450	1,130	585	330	100	7	7
16.....	.....	.....	.....	270	1,050	2,370	1,130	562	312	100	7	7
17.....	.....	.....	.....	190	1,000	2,220	1,080	540	312	100	7	7
18.....	.....	.....	.....	120	960	2,140	1,050	540	295	100	5	7
19.....	.....	.....	.....	95	925	2,060	1,020	540	278	100	5	7
20.....	.....	.....	.....	1,590	902	1,990	1,000	518	278	88	5	7
21.....	.....	.....	.....	1,000	835	1,920	975	518	260	88	3	7
22.....	.....	.....	.....	490	812	1,780	950	518	260	88	3	7
23.....	.....	.....	.....	322	790	1,750	950	518	242	88	3	7
24.....	.....	.....	.....	305	768	1,720	925	518	225	88	3	5
25.....	.....	.....	.....	1,000	745	1,650	925	495	225	77	3	5
26.....	.....	.....	.....	790	745	1,590	925	495	210	77	2	5
27.....	.....	.....	.....	745	722	1,530	902	495	195	66	2	3
28.....	.....	.....	.....	6,030	700	1,500	902	495	195	56	2	3
29.....	.....	.....	.....	7,770	.....	1,470	880	472	180	56	2	2
30.....	.....	.....	.....	4,290	.....	1,440	880	472	180	45	1	2
31.....	.....	.....	.....	4,970	.....	1,410	.....	450	.....	45	1	.....
1911-12.												
1.....	1	.....	.....	.....	133	0	195	330	7	.....	.....	.....
2.....	1	.....	.....	.....	117	0	180	410	5	.....	.....	.....
3.....	.....	.....	.....	.....	107	0	180	430	3	.....	.....	.....
4.....	.....	.....	.....	.....	100	0	165	312	1	.....	.....	.....
5.....	.....	.....	.....	.....	93	0	165	225	.....	.....	.....	.....
6.....	.....	.....	.....	.....	88	27	160	189	.....	.....	.....	.....
7.....	.....	.....	.....	.....	88	450	133	152	.....	.....	.....	.....
8.....	.....	.....	.....	.....	84	495	125	133	.....	.....	.....	.....
9.....	.....	.....	.....	.....	77	260	125	100	.....	.....	.....	.....
10.....	.....	.....	.....	.....	77	225	125	62	.....	.....	.....	.....

Daily discharge, in second-feet, of Cache Creek at Yolo, Cal., for 1903-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1911-12.												
11.					77	210	138	41				
12.					77	225	133	27				
13.					77	875	112	20				
14.					66	540	112	14				
15.					66	540	112	10				
16.					56	495	112	7				
17.					41	630	112	7				
18.					17	518	112	7				
19.					10	450	112	5				
20.					7	430	112	5				
21.					7	410	112	3				
22.					7	370	112	3				
23.					7	330	112	3				
24.					7	312	93	3				
25.					3	295	70	7				
26.					1	295	66	7				
27.				585	0	260	56	7				
28.				390	0	225	45	7				
29.				278	0	210	45	7				
30.				195		210	45	7				
31.				160		195		7				

NOTE.—Daily discharge 1903 to 1912 determined from several rating curves applicable as follows: Jan. 1 to 26, 1903; Nov. 21, 1903, to Feb. 15, 1904, and Jan. 23 to Dec. 31, 1905, fairly well defined; Jan. 27 to Nov. 20, 1903, not well defined. Feb. 16 to Mar. 9, 1904, and Apr. 1, 1904, to Jan. 22, 1905, poorly defined for first period, but well defined below 5,000 second-feet for second period; Mar. 10 to 19, 1904, not well defined; 1906, 1907, and 1908 all well defined; Jan. 1, 1909, to Apr. 30, 1911, fairly well defined; May 1 to Dec. 31, 1911, fairly well defined; Jan. 1 to Jan. 30, 1912, well defined. The creek was dry or water standing in pools Aug. 7 to Nov. 19, 1903; Oct. 17, 1905, to Jan. 12, 1906; Oct. 17 to Dec. 10, 1906; Aug. 2, 1908 to Jan. 3, 1909; July 12, 1910, to Jan. 13, 1911; Sept. 5 to 10, 1911; Oct. 3, 1911, to Jan. 27, 1912; and June 5 to 30, 1912. Discharge estimated Mar. 20 to 31 and Sept. 11 to 30, 1904. Discharge May 12 to about July 15, 1911, subject to 5 to 20 per cent error.

Monthly discharge of Cache Creek at Yolo, Cal., for 1903-1912.

[Drainage area, 1,230 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.	
1903.							
January	6,340	328	1,070	0.870	1.00	65,800	B.
February	6,340	1,200	1,730	1.41	1.47	96,100	B.
March	4,080	1,080	1,530	1.24	1.43	94,100	B.
April	2,380	860	1,240	1.01	1.13	73,800	B.
May	860	465	670	.545	.63	41,200	B.
June	485	210	351	.285	.32	20,900	B.
July	180	10	83.2	.068	.08	5,120	C.
August	10	0	1.0	.00081	.0009	61	D.
September	0	0	.0	.00	.00	0	
The period						397,000	
1903-4.							
October	0	0	0.0	.00	.00	0	
November	5,020	0	410	.333	.37	24,400	C.
December	1,880	53	295	.240	.28	18,100	B.
January	328	206	235	.191	.22	14,400	B.
February	11,200	265	3,230	2.63	2.84	186,000	C.
March	9,900	2,160	4,630	3.76	4.34	285,000	C.
April	4,760	2,360	3,190	2.59	2.89	190,000	A.
May	2,360	1,060	1,660	1.35	1.56	102,000	B.
June	1,030	485	676	.550	.61	40,200	A.
July	445	190	323	.263	.30	19,900	A.
August	190	55	105	.085	.10	6,460	A.
September	115	40	55.8	.045	.05	3,320	B.
The year	11,200	0	1,230	1.00	13.56	890,000	

## Monthly discharge of Cache Creek at Yolo, Cal., for 1903-1912—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.	
1904-5.							
October.....	1,440	75	253	0.206	0.24	15,600	A.
November.....	190	75	108	.088	.10	6,430	A.
December.....	9,700	152	474	.385	.44	29,100	A.
January.....	10,300	428	2,080	1.69	1.95	128,000	B.
February.....	8,200	1,420	2,130	1.73	1.80	118,000	B.
March.....	3,200	1,170	1,970	1.60	1.84	121,000	A.
April.....	2,240	1,110	1,580	1.28	1.43	94,000	A.
May.....	1,450	840	1,060	.862	.99	65,200	A.
June.....	790	361	542	.441	.49	32,300	A.
July.....	344	76	214	.174	.20	13,200	A.
August.....	125	32	85.8	.070	.08	5,280	A.
September.....	32	0	6.9	.0056	.0065	411	B.
The year.....	10,300	0	875	.711	9.57	629,000	
1905-6.							
October.....	1	0	.32	.00026	.0003	20	C.
November.....	0	0	.0	.00	.00	0	
December.....	0	0	.0	.00	.00	0	
January.....	18,900	0	2,250	1.83	2.11	138,000	B.
February.....	4,100	785	1,700	1.38	1.44	94,400	A.
March.....	10,500	1,670	3,270	2.66	3.07	201,000	B.
April.....	5,550	1,600	2,440	1.98	2.21	145,000	A.
May.....	7,340	243	1,300	1.06	1.22	79,900	A.
June.....	1,110	550	784	.638	.71	46,700	A.
July.....	530	229	333	.271	.31	20,500	A.
August.....	229	115	166	.135	.16	10,200	A.
September.....	115	17	69.4	.056	.06	4,130	A.
The year.....	18,900	0	1,030	.834	11.29	740,000	
1906-7.							
October.....	181	0	13.6	.011	.01	836	B.
November.....	0	0	0	.00	.00	0	
December.....	3,470	299	652	.335	.39	27,200	C.
January.....	10,500	430	1,750	1.42	1.64	108,000	C.
February.....	7,900	1,320	2,360	1.92	2.00	131,000	C.
March.....	19,200	1,350	5,380	4.37	5.04	331,000	C.
April.....	5,180	2,210	3,580	2.91	3.25	213,000	B.
May.....	2,130	980	1,430	1.16	1.34	87,900	B.
June.....	953	530	747	.607	.68	44,400	B.
July.....	530	310	421	.342	.39	25,900	B.
August.....	310	50	189	.154	.18	11,600	B.
September.....	70	10	36.0	.029	.03	2,140	B.
The year.....	19,200	0	1,380	1.12	14.95	983,000	
1907-8.							
October.....	95	15	40.1	.033	.04	2,470	B.
November.....	95	50	67.5	.055	.06	4,020	B.
December.....	1,320	35	188	.153	.18	1,160	A.
January.....	1,540	411	792	.644	.74	48,700	B.
February.....	6,080	955	1,950	1.59	1.71	112,000	A.
March.....	3,710	838	1,270	1.03	1.19	78,100	A.
April.....	815	471	662	.538	.60	39,400	A.
May.....	451	167	310	.252	.29	19,100	A.
June.....	167	10	66.6	.054	.06	3,960	B.
July.....	10	1	4.48	.0036	.004	275	D.
August.....	1	0	.03	.00	.00	2	D.
September.....	0	0	.0	.00	.00	0	
The year.....	6,080	0	446	.363	4.87	309,000	
1908-9.							
October.....	0	0	0.0	.00	.00	0	
November.....	9	0	.0	.00	.00	0	
December.....	0	0	.0	.00	.00	0	
January.....	17,100	0	5,390	4.38	5.05	331,000	B.
February.....	20,100	5,650	8,450	6.87	7.15	469,000	B.
March.....	5,480	3,090	4,040	3.28	3.78	248,000	A.
April.....	3,010	1,350	2,070	1.68	1.87	123,000	A.
May.....	1,320	655	908	.738	.85	55,800	A.
June.....	632	340	496	.403	.45	29,500	A.

<sup>a</sup> Discharges for the high-water period in March, 1907, may be too large, as measurement made March 21, 1907, gave results 18 per cent smaller than the rating curve.

Monthly discharge of Cache Creek at Yolo, Cal., for 1903-1912—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.	
1908-9.							
July.....	340	160	240	0.195	0.22	14,800	A.
August.....	145	27	86.3	.070	.08	5,310	A.
September.....	27	.5	7.17	.0058	.006	427	B.
The year.....	20,100	0	1,810	1.47	19.46	1,280,000	
1909-10.							
October.....	51	6	18.6	.015	.02	1,140	B.
November.....	145	6	32.6	.027	.03	1,940	A.
December.....	2,610	95	391	.318	.37	24,000	A.
January.....	4,120	205	766	.623	.72	47,100	A.
February.....	1,240	700	890	.724	.75	49,400	A.
March.....	3,650	632	1,010	.821	.95	62,100	A.
April.....	975	510	727	.591	.66	43,300	A.
May.....	490	145	317	.258	.30	19,500	B.
June.....	120	3	31.3	.025	.03	1,860	B.
July.....	3	0	.58	.00047	.0005	36	C.
August.....	0	0	.00	.000	.00	0	B.
September.....	0	0	.00	.000	.00	0	C.
The year.....	4,120	0	349	.284	3.83	250,000	
1910-11.							
October.....	0	0	0	.000	.00	0	
November.....	0	0	0	.000	.00	0	
December.....	0	0	0	.000	.00	0	
January.....	7,770	0	988	.803	.93	60,800	B.
February.....	2,370	700	1,140	.927	.97	63,300	B.
March.....	18,400	1,050	3,870	3.15	3.63	238,000	C.
April.....	1,920	880	1,160	.943	1.05	69,000	C.
May.....	850	450	626	.509	.59	38,500	B.
June.....	450	180	319	.259	.29	18,900	C.
July.....	180	45	109	.089	.10	6,700	C.
August.....	36	1	10.3	.0084	.01	633	D.
September.....	10	0	4.3	.0035	.004	256	D.
The year.....	18,400	0	786	.639	7.574	496,000	
1911-12.							
October.....	1	0	.1	.000	.000	4	D.
November.....	0	0	.0	.000	.00	0	
December.....	0	0	.0	.000	.00	0	
January.....	585	0	51.9	.042	.05	3,190	C.
February.....	133	0	51.4	.042	.05	2,960	A.
March.....	875	0	306	.249	.29	18,800	C.
April.....	195	45	116	.094	.10	6,900	B.
May.....	430	3	82.2	.067	.08	5,050	B.
June.....	7	0	.5	.00043	.0005	32	D.
The period.....						36,900	

NOTE.—Creek dry, water standing in pools; Aug. 9, 1903, to Nov. 19, 1903; Oct., 1905, to Jan. 12, 1906; Oct. 17, 1906, to Dec. 10, 1906; Aug. 2, 1908, to Jan. 2, 1909, and July 12, 1910, to Jan. 13, 1911.

PUTAH CREEK NEAR GUENOC, CAL.

This station was established February 12, 1904, at the Guenoc dam site, about 2 miles below the old town of Guenoc, near the Asbill ranch house, to determine the amount of water available for storage in the proposed reservoir near Guenoc. The nearest post office is in Middletown, Cal. The station was discontinued July 31, 1906.

The gaging section was located in a narrow gorge at the lower end of a long, flat valley, which is flooded during high water. The channel will not allow the water to run off through the gorge fast enough

to prevent backwater forming during flood periods. The bed of the stream is gravelly with a few boulders above and below the section. Bed rock is laid bare on the right side of the channel. The banks are not liable to overflow, but at extreme high water the right bank broadens out into a wide bench, increasing the section considerably. Meter measurements during high water are made from a car and cable. The cable was located directly opposite the ranch house at first, but on November 15, 1904, it was moved to a more favorable location, about 1,000 feet below. During low water measurements were made by wading. The gage established near the old section was read once a day during ordinary stages and twice a day during high water. It is a vertical staff in two sections. The low-water section was about 600 feet up stream from the high-water section. An auxiliary staff gage was installed near the new cable location. The gage datum has remained unchanged.

The highest crest discharge recorded is 24,600 second-feet for a gage height of 20.1 feet, 11 a. m., March 10, 1904. The creek reached a minimum of 4 second-feet August 14 to 19, 1905.

*Discharge measurements of Putah Creek near Guenoc, Cal., in 1904-1906.*

Date.	Hydrographer.	Gage height.	Dis-charge.	Date.	Hydrographer.	Gage height.	Dis-charge.
1904.		<i>Feet.</i>	<i>Sec.-ft.</i>	1906.		<i>Feet.</i>	<i>Sec.-ft.</i>
Feb. 12	S. G. Bennett.....	12.00	12,700	Jan. 15 <sup>a</sup>	S. Asbill.....	10.55	8,250
12	do.....	13.70	14,500	16 <sup>a</sup>	do.....	14.25	12,500
July 12 <sup>b</sup>	W. B. Clapp.....	3.62	14.7	23	do.....	8.60	3,640
Aug. 22 <sup>b</sup>	do.....	3.50	9.5	23	do.....	8.00	2,930
Nov. 15	O. W. Peterson....	4.27	107	24	do.....	7.80	3,280
1905.				24	do.....	7.90	3,070
Jan. 1	F. R. S. Buttemer.	5.58	592	Feb. 15	do.....	6.25	830
1	do.....	5.42	530	15	do.....	6.35	943
2	do.....	5.14	386	Mar. 6	R. S. Hawley.....	5.59	479
2a	do.....	5.12	359	7	do.....	5.50	405
3	do.....	4.94	289	19	do.....	5.48	379
4	do.....	4.82	247	20	do.....	7.00	1,950
14	do.....	7.04	1,830	21	do.....	6.52	1,230
15	do.....	5.96	876	Apr. 7	do.....	5.00	175
16	Asbill and Butte-mer.	5.86	875	18	do.....	4.99	168
16	F. R. S. Buttemer.	5.98	972	May 7 <sup>b</sup>	do.....	4.84	118
July 8 <sup>b</sup>	O. W. Peterson....	3.72	19	do.....	do.....	4.82	108
Sept. 29 <sup>b</sup>	C. H. Lee.....	3.56	6.8	July 27 <sup>b</sup>	do.....	4.29	18.2
				28 <sup>b</sup>	do.....	4.28	18.1

<sup>a</sup> Float measurement.

<sup>b</sup> Made by wading.

*Daily gage height, in feet, of Putah Creek near Guenoc, Cal., for 1904-1906.*

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1904.												
1.....						5.7	5.65	4.6	3.9	3.7	.....	.....
2.....						5.55	5.45	4.5	.....	3.7	3.6	3.5
3.....						5.35	5.35	4.5	3.9	3.7	3.6	3.5
4.....						5.15	5.2	4.5	3.9	.....	.....	3.5
5.....						5.1	5.1	4.4	3.9	3.7	3.6	3.5
6.....						5.05	5.0	4.4	.....	3.7	.....	3.5
7.....						5.15	4.9	4.3	.....	.....	3.6	3.5
8.....						5.45	4.8	4.3	3.9	3.7	.....	3.5
9.....						5.35	4.8	4.3	3.8	3.7	3.5	.....
10.....						16.65	4.7	4.2	3.8	3.6	.....	3.5

<sup>a</sup> 18.8 feet at 9 a. m.; 20.1 feet at 11 a. m.

Daily gage height, in feet, of Putah Creek near Guenoc, Cal., for 1904-1906—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1904.												
11.						7.75	4.7	4.2		3.6		3.5
12.					9.2	6.45	4.6	4.2	3.8		3.5	
13.					6.5	5.85	4.6	4.2		3.6	3.5	3.5
14.					5.8	7.2	4.7	4.2	3.8	3.6		3.5
15.					a14.40	6.2	4.7	4.1		3.7		3.5
16.					9.1	5.65	4.6	4.1	3.7	3.6		3.5
17.					6.6	9.7	4.6	4.1	3.7	3.6		3.5
18.					5.85	7.85		4.1		3.6		3.5
19.					5.5	8.75	5.6	4.0	3.7	3.6		3.5
20.					5.25	6.9	5.1	4.0	3.7	3.6		3.5
21.					5.3	6.2	4.8	4.0	3.7	3.6		3.5
22.					6.95	6.0	4.8	4.0	3.7	3.6	3.5	3.5
23.					5.75	6.35	4.7	4.0		3.6	3.5	3.5
24.					b13.35	6.05	4.6	4.0		3.6		3.8
25.					6.85	5.8	4.6	4.0	3.7		3.5	3.9
26.					9.25	5.95	4.7		3.7		3.5	3.8
27.					7.45	6.8	4.7			3.6	3.5	3.6
28.					6.25	9.1	4.8	4.0		3.6	3.5	3.6
29.					6.0	7.25	4.7	4.0	3.7			
30.						6.25	4.6	4.0	3.7	3.6	3.5	3.6
31.						5.85		4.0		3.6	3.5	
1904-5.												
1.	3.6	3.7	3.9	6.8	7.0	4.5	5.2	4.3		3.6	3.6	3.6
2.	3.6	3.7	4.0		6.5	4.4	5.2	4.3	4.0	3.7	3.6	3.6
3.	3.6	3.8	4.0		6.2	4.3	5.2	4.3	3.9	3.7	3.6	3.6
4.	3.6	3.8	4.1	4.8	6.0	4.2	5.1	4.4	5.4	3.7	3.6	3.6
5.	3.5	3.8	4.1	4.7	6.3	4.4	5.1	4.3	5.6	3.7	3.6	3.6
6.	3.5	3.9	4.1	4.4	6.0	4.4	5.1	4.3	5.0	3.7	3.6	3.6
7.	3.5	3.9	4.0	4.4	5.8	4.3	5.0	5.0	4.2	3.7	3.6	3.6
8.	3.7	3.8	4.0	4.5	5.5	4.3	5.0	5.2	4.2	3.7	3.6	
9.	4.7	3.8	3.9	4.7	5.4	4.2	5.1	4.8	4.1	3.7	3.6	3.6
10.	5.4	3.8	3.9	4.6	5.1	4.2	5.1	4.6	4.1	3.7		3.6
11.	5.0	3.8	3.9	4.5	5.0	4.2	5.0	4.4	4.0	3.7	3.6	3.6
12.	4.5	3.8	3.9	4.5	4.9	4.5	5.0	4.4	4.0	3.7	3.6	
13.	4.3	3.8	4.0	4.1	4.8	5.5	5.0	4.4	3.9	3.7	3.6	3.6
14.	4.2	3.8	4.0	7.45	4.7	6.5	5.0	4.4	3.9	3.7	3.5	3.6
15.	4.2	4.2	4.0	5.9	4.6	6.0	5.1	4.3	3.9	3.6	3.5	3.6
16.	4.2	4.1	3.9	5.9	4.9	6.2	5.2	4.3	3.9	3.6	3.5	3.6
17.	4.2	4.0	3.9	4.4	5.1	6.0	5.2	4.3	3.9	3.6	3.5	3.6
18.	4.2	4.0	3.9	4.5	5.4	6.5	5.1	4.2	3.8	3.6	3.5	
19.	4.1	4.0	4.0	6.45	6.3	6.85	5.0	4.2	3.8	3.5	3.5	3.6
20.	4.1	3.9	4.0	5.4	6.0	6.1	4.9	4.2	3.8	3.5	3.6	3.6
21.	4.1	3.9	4.0	6.8	5.9	5.9	4.9	4.2	3.8	3.5		3.6
22.	4.0	3.9	4.1	c14.1	5.7	5.8	4.8	4.1	3.8	3.5	3.6	3.6
23.	4.0	3.9	4.1	8.9	5.4	5.8	4.8	4.1	3.8	3.5	3.6	3.6
24.	3.9	3.8	4.1	7.2	5.2	5.7	4.7	4.1	3.8	3.6	3.6	3.6
25.	3.9	3.8	4.1	6.7	5.0	5.4	4.6	4.1	3.7	3.6	3.6	3.6
26.	3.8	3.8	4.2	6.0	4.8	5.0	4.5	4.0	3.7	3.6	3.6	3.6
27.	3.8	3.8	4.2	5.9	4.7	5.8	4.4	4.0	3.7		3.6	3.6
28.	3.8	3.8	4.2	5.7	4.6	5.8	4.3	4.0	3.7	3.6	3.6	3.6
29.	3.8	3.8	4.2	5.6		7.5	4.3	4.0	3.7	3.6	3.6	3.6
30.	3.8	3.9	13.8	5.4		5.8		4.0	3.6	3.6	3.6	3.6
31.	3.7		6.8	5.8		5.5				3.6	3.6	
1905-6.												
1.	3.7	3.6	3.6	3.7	4.9	5.5	6.3	4.9	5.0	4.6		
2.	3.7	3.6	3.6	3.7	4.9	6.0	6.1	4.9	5.2	4.6		
3.	3.7	3.6	3.6	3.7	4.9	6.65	6.0	4.9	5.9	4.6		
4.	3.7	3.6	3.6	3.7	4.9	6.35	5.8	4.8	5.4	4.6		
5.	3.7	3.6	3.6	3.7	4.8	5.8	5.7	4.8	5.1	4.5		
6.	3.7	3.6	3.6	3.7	4.8	5.4	5.6	4.8	5.1	4.5		
7.	3.7	3.6	3.6	3.7	5.0	5.4	5.6	4.8	5.0	4.5		
8.	3.7	3.6	3.6	3.7	4.9	5.3	5.6	4.8	5.0	4.4		
9.	3.7	3.6	3.6	3.7	4.9	5.3	5.5	4.8	5.0	4.4		
10.	3.7	3.6	3.6	3.7	4.8	5.3	5.5	4.8	5.0	4.4		
11.	3.7	3.6	3.6	4.0	7.0	5.3	5.4	4.8	5.5	4.4		
12.	3.7	3.6	3.6	8.5	6.9	5.2	5.4	4.8	5.3			
13.	3.7	3.6	3.6	9.2	6.45	5.4	5.4	4.8	5.2			
14.	3.7		3.6	10.5	6.35	5.6	5.3	4.8	5.1			
15.		3.6	3.7	10.0	5.55	5.5	5.2	4.8	5.0	4.3		

a Maximum 19 feet at night.

b Maximum about 15 feet at 10 a. m.

c Maximum 15.4 feet at 12 m.

Daily gage height, in feet, of Putah Creek near Guenoc, Cal., for 1904-1906—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1905-6.												
16.	3.7	3.6	3.8	13.05	5.4	5.4	5.1	4.8	5.0	4.3	.....	.....
17.	3.7	3.6	3.8	9.55	5.7	5.4	5.0	4.8	4.9	4.3	.....	.....
18.	3.7	3.6	3.8	13.25	6.2	5.5	4.9	.....	4.9	4.3	.....	.....
19.	3.7	3.6	3.8	8.25	6.5	5.5	4.9	4.8	4.8	4.3	.....	.....
20.	3.7	3.6	3.8	6.15	6.6	6.4	4.9	4.8	4.8	4.3	.....	.....
21.	3.6	3.6	3.7	5.7	6.45	6.35	4.8	4.8	4.8	4.3	.....	.....
22.	3.6	3.6	3.7	5.6	6.6	6.35	4.9	4.8	.....	4.3	.....	.....
23.	3.6	3.6	3.7	5.45	7.15	7.4	5.1	4.8	4.7	4.3	.....	.....
24.	3.6	3.6	4.0	5.35	7.4	8.1	5.1	4.8	4.7	4.3	.....	.....
25.	3.6	3.6	4.1	5.25	6.5	7.8	5.0	6.8	4.7	4.3	.....	.....
26.	3.6	3.6	3.9	5.2	6.1	7.5	5.0	6.6	4.7	4.2	.....	.....
27.	3.6	3.6	3.9	5.2	5.8	6.3	5.0	5.65	4.7	4.2	.....	.....
28.	3.6	3.6	.....	5.1	5.65	6.3	5.0	5.4	4.6	4.2	.....	.....
29.	3.6	3.6	3.8	5.05	.....	6.3	4.9	5.25	4.6	4.2	.....	.....
30.	3.6	.....	3.8	5.0	.....	6.4	4.9	5.1	4.6	4.2	.....	.....
31.	3.6	.....	3.7	5.0	.....	7.8	.....	5.0	.....	4.2	.....	.....

a Maximum gage height 17 feet from 12 m. to 3 p. m.

Daily discharge, in second-feet, of Putah Creek near Guenoc, Cal., for 1904-1906.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1904.												
1.	.....	.....	.....	.....	.....	695	660	180	47	22	14	9.5
2.	.....	.....	.....	.....	.....	592	530	155	47	22	14	9.5
3.	.....	.....	.....	.....	.....	472	472	155	47	22	14	9.5
4.	.....	.....	.....	.....	.....	372	395	155	47	22	14	9.5
5.	.....	.....	.....	.....	.....	350	350	130	47	22	14	9.5
6.	.....	.....	.....	.....	.....	330	310	130	47	22	14	9.5
7.	.....	.....	.....	.....	.....	372	275	110	47	22	14	9.5
8.	.....	.....	.....	.....	.....	530	240	110	47	22	11.8	9.5
9.	.....	.....	.....	.....	.....	472	240	110	34	22	9.5	9.5
10.	.....	.....	.....	.....	18,100	210	90	.....	34	14	9.5	9.5
11.	.....	.....	.....	.....	2,700	210	90	34	14	9.5	9.5	9.5
12.	.....	.....	.....	5,000	1,320	180	90	34	14	9.5	9.5	9.5
13.	.....	.....	.....	1,360	810	180	90	34	14	9.5	9.5	9.5
14.	.....	.....	.....	770	2,040	210	90	34	14	9.5	9.5	9.5
15.	.....	.....	.....	14,400	1,090	210	75	22	14	9.5	9.5	9.5
16.	.....	.....	.....	4,820	660	180	75	22	14	9.5	9.5	9.5
17.	.....	.....	.....	1,450	5,900	180	75	22	14	9.5	9.5	9.5
18.	.....	.....	.....	810	2,830	402	75	22	14	9.5	9.5	9.5
19.	.....	.....	.....	560	4,220	625	60	22	14	9.5	9.5	9.5
20.	.....	.....	.....	420	1,740	350	60	22	14	9.5	9.5	9.5
21.	.....	.....	.....	445	1,090	240	60	22	14	9.5	9.5	9.5
22.	.....	.....	.....	1,790	930	240	60	22	14	9.5	9.5	9.5
23.	.....	.....	.....	732	1,220	210	60	22	14	9.5	9.5	9.5
24.	.....	.....	.....	12,500	970	180	60	22	14	9.5	34	.....
25.	.....	.....	.....	1,690	770	180	60	22	14	9.5	47	.....
26.	.....	.....	.....	5,090	890	210	60	22	14	9.5	34	.....
27.	.....	.....	.....	2,320	1,640	210	60	22	14	9.5	14	.....
28.	.....	.....	.....	1,140	4,820	240	60	22	14	9.5	14	.....
29.	.....	.....	.....	930	2,100	210	60	22	14	9.5	14	.....
30.	.....	.....	.....	1,140	180	60	22	14	9.5	14	.....	.....
31.	.....	.....	.....	810	.....	60	.....	14	9.5	.....	.....	.....
1904-5.												
1.	14	22	47	1,640	1,840	156	395	112	58	10	10	10
2.	14	22	60	930	1,360	133	395	112	58	18	10	10
3.	14	34	60	500	1,090	112	395	112	42	18	10	10
4.	14	34	75	238	930	93	350	133	500	18	10	10
5.	9.5	34	75	208	1,180	133	350	112	625	18	10	10
6.	9.5	47	75	133	930	133	350	112	310	18	10	10
7.	9.5	47	60	133	770	112	310	310	93	18	10	10
8.	22	34	60	156	560	112	310	395	93	18	10	10
9.	210	34	47	208	500	93	350	238	75	18	10	10
10.	500	34	47	181	350	93	350	181	75	18	10	10
11.	310	34	47	156	310	93	310	133	58	18	10	10
12.	155	34	47	156	272	156	310	133	58	18	10	10
13.	110	34	60	1,010	238	560	310	133	42	18	10	10
14.	90	34	60	2,320	208	1,360	310	133	42	18	4	10
15.	90	90	60	850	181	930	350	112	42	10	4	10

Daily discharge, in second-feet, of Putah Creek near Guenoc, Cal., for 1904-1906—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1904-5.												
16.....	90	75	47	850	272	1,090	395	112	42	10	4	10
17.....	90	60	47	133	350	930	395	112	42	10	4	10
18.....	90	60	47	156	500	1,360	350	93	28	10	4	10
19.....	75	60	60	1,320	1,180	1,690	310	93	28	4	4	10
20.....	75	47	60	500	930	1,010	272	93	28	4	10	10
21.....	75	47	60	1,640	850	850	272	93	28	4	10	10
22.....	60	47	75	13,800	695	770	238	75	28	4	10	10
23.....	60	47	75	4,470	500	770	238	75	28	4	10	10
24.....	47	34	75	2,040	395	695	208	75	28	10	10	10
25.....	47	34	75	1,540	310	500	181	75	18	10	10	10
26.....	34	34	90	930	238	310	156	58	18	10	10	10
27.....	34	34	90	850	208	770	133	58	18	10	10	10
28.....	34	34	90	695	181	770	112	58	18	10	10	10
29.....	34	34	90	625	.....	2,380	112	58	18	10	10	10
30.....	34	47	13,300	500	.....	770	112	58	10	10	10	10
31.....	22	.....	1,640	770	.....	560	.....	58	.....	10	10	.....
1905-6.												
1.....	18	10	10	18	129	365	940	129	155	63	.....	.....
2.....	18	10	10	18	129	680	760	129	230	63	.....	.....
3.....	18	10	10	18	129	1,300	680	129	610	63	.....	.....
4.....	18	10	10	18	129	985	540	105	315	63	.....	.....
5.....	18	10	10	18	105	540	480	105	190	43	.....	.....
6.....	18	10	10	18	105	315	420	105	190	43	.....	.....
7.....	18	10	10	18	155	315	420	105	155	43	.....	.....
8.....	18	10	10	18	129	270	420	105	155	29	.....	.....
9.....	18	10	10	18	129	270	365	105	155	29	.....	.....
10.....	18	10	10	18	105	270	365	105	155	29	.....	.....
11.....	18	10	10	58	1,720	270	315	105	365	29	.....	.....
12.....	18	10	10	3,810	1,600	230	315	105	270	29	.....	.....
13.....	18	10	10	5,000	1,080	315	315	105	230	24	.....	.....
14.....	18	10	10	7,340	985	420	270	105	190	19	.....	.....
15.....	18	10	18	6,440	390	365	230	105	155	19	.....	.....
16.....	18	10	28	11,900	315	315	190	105	155	19	.....	.....
17.....	18	10	28	5,630	480	315	155	105	129	19	.....	.....
18.....	18	10	28	12,200	850	365	129	105	129	19	.....	.....
19.....	18	10	28	3,420	1,140	365	129	105	105	19	.....	.....
20.....	18	10	28	805	1,240	1,040	129	105	105	19	.....	.....
21.....	10	10	18	480	1,080	985	105	105	105	19	.....	.....
22.....	10	10	18	420	1,240	985	129	105	93	19	.....	.....
23.....	10	10	18	340	1,900	2,200	190	105	83	19	.....	.....
24.....	10	10	58	290	2,200	3,190	190	105	83	19	.....	.....
25.....	10	10	75	250	1,140	2,760	155	1,480	83	19	.....	.....
26.....	10	10	42	230	760	2,340	155	1,240	83	9	.....	.....
27.....	10	10	42	230	540	940	155	450	83	9	.....	.....
28.....	10	10	35	190	450	940	155	315	63	9	.....	.....
29.....	10	10	28	170	.....	940	129	250	63	9	.....	.....
30.....	10	10	28	155	.....	1,040	129	190	63	9	.....	.....
31.....	10	.....	18	155	.....	2,760	.....	155	.....	9	.....	.....

NOTE.—Daily discharges determined from rating curves applicable as follows: Feb. 12 to Dec. 31, 1904, fairly well defined; Jan. 1, 1905, to Jan. 17, 1906, fairly well defined; Jan. 18 to July 31, 1906, well defined; Discharge interpolated for days on which gage height was not recorded.

Monthly discharge of Putah Creek near Guenoc, Cal., for 1904-1906.

[Drainage area, 91 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.								
February 12 to 29.....	14,400	420	3,120	34.3	22.96	111,000	A.	
March.....	18,100	330	2,000	22.0	25.38	123,000	A.	
April.....	660	180	284	3.12	3.48	16,900	A.	
May.....	180	60	89.2	.980	1.13	5,480	A.	
June.....	47	22	31.1	.342	.38	1,850	B.	
July.....	22	14	16.3	.179	.21	1,000	B.	
August.....	14	9.5	10.6	.116	.13	652	B.	
September.....	47	9.5	13.0	.143	.16	774	B.	
The period.....							261,000	

Monthly discharge of Putah Creek near Guenoc, Cal., for 1904-1906—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.	
1904-5.							
October.....	500	9.5	79.8	0.877	1.01	4,910	B.
November.....	90	22	42.1	.463	.52	2,510	A.
December.....	13,300	47	542	5.96	6.87	33,300	A.
January.....	13,800	133	1,280	14.1	16.26	78,700	A.
February.....	1,840	181	619	6.80	7.08	34,400	A.
March.....	2,380	93	629	6.91	7.97	38,700	A.
April.....	395	112	288	3.16	3.53	17,100	A.
May.....	395	58	120	1.32	1.52	7,380	A.
June.....	625	10	85.0	.934	1.04	5,060	A.
July.....	18	4	12.4	.136	.16	762	B.
August.....	10	4	8.8	.097	.11	541	C.
September.....	10	10	10.0	.110	.12	595	C.
The year.....	13,800	4	310	3.40	46.19	224,000	
1905-6.							
October.....	18	10	15.2	0.167	0.19	935	C.
November.....	10	10	10.0	.110	.12	595	C.
December.....	75	10	21.9	.241	.28	1,350	B.
January.....	12,200	18	1,930	21.2	24.44	119,000	B.
February.....	2,200	105	727	7.99	8.32	40,400	A.
March.....	3,190	230	916	10.1	11.64	56,300	A.
April.....	940	105	302	3.32	3.70	18,000	A.
May.....	1,480	105	215	2.36	2.72	13,200	A.
June.....	365	63	165	1.81	2.02	9,820	A.
July.....	63	9	26.8	.294	.34	1,650	B.
The period.....						261,000	

#### PUTAH CREEK AT WINTERS, CAL.

This station, which is located 600 feet below the Southern Pacific Co.'s bridge at Winters, was established September 26, 1905, to determine the amount of water available for storage in the proposed reservoir near Winters. The data are very valuable for irrigation and power projects and for use in connection with any plan for flood prevention in the Sacramento Valley.

No important tributaries enter the creek within several miles of the station.

No water is diverted above the station, but a small quantity is diverted at the station for irrigation by pumping. Recent filings have been made on water in this basin and all reservoir sites are embraced within lands held by private ownership.

The channel is straight, and the main portion is clear for the most part. At very high flood stages the water spreads out over the left bank for about 150 feet, reaching nearly to the foot of the left cable support. At ordinary stages, however, the water remains within the high banks.

The records are good except at very low stages, when, owing to the width of channel and its tendency to shift somewhat, gage heights are not a reliable index of the flow.

The staff gage was originally installed on the south (right) channel. On August 15, 1906, a new staff gage, in five sections, was installed in the north (left) channel at the same datum. Owing to sand bars at the station, the elevation of the water levels in the two channels did not read the same. Most of the water at medium and low water flows in the south (right) channel. All gage heights prior to 1911 have been

adjusted to refer to the gage in the north (left) channel for which the rating curve applies. Beginning January 1, 1911, each channel has been rated separately. (See footnotes to gage heights.)

In the summer of 1911 and also in 1912 a temporary dam was built across the creek 500 feet below the gages. The pond created was used for recreation and extended from half to three-quarters of a mile upstream. The dams go out at the first high water. The gage heights during most of the period, May 17 to October 2, 1911, have been omitted, as frequent changes in the dam rendered them useless as an index of the discharge. The dam installed May 15, 1912, again affected the gage heights and a temporary gage was installed below the dam on June 10 for use during the summer.

Discharge measurements are made from a car and cable at the regular gage location or by wading at low water.

The maximum recorded crest discharge is 37,000 second-feet for a gage height of 29.0 feet, March 23, 1907. The lowest discharge was 1 second-foot September 10 and 11, 1910.

Discharge measurements of Putah Creek at Winters, Cal., in 1905-1912.

Date.	Hydrographer.	Gage height.	Discharge.	Date.	Hydrographer.	Gage height.	Discharge.
		<i>Feet.</i>	<i>Sec.-ft.</i>			<i>Feet.</i>	<i>Sec.-ft.</i>
1905.				1908.			
Sept. 12	W. B. Clapp	.....	8.7	Jan. 4	W. A. Lamb	5.52	554
26	Hawley and Lee	4.39	8.5	28	do.	5.75	602
15	R. S. Hawley	4.42	11.7	Feb. 5	do.	7.40	1,900
1906.				13	do.	6.45	1,010
Jan. 20	R. S. Hawley	9.90	3,820	24	do.	5.50	352
Feb. 3	F. R. S. Buttemer	5.10	326	28	do.	5.40	311
15	do.	10.55	4,660	Mar. 28	do.	6.85	1,450
22	do.	8.50	2,950	9	do.	5.88	578
Mar. 6	do.	7.02	1,460	13	do.	5.60	421
14	do.	8.15	2,430	Apr. 4	do.	5.05	162
May 4	R. S. Hawley	6.00	390	23	do.	4.88	116
15	do.	5.80	287	June 23	W. B. Clapp	4.35	19
June 8	do.	5.78	325	Dec. 22	W. F. Martin	4.68	64
July 5	do.	4.90	107	1909.			
26	do.	4.75	31	Feb. 6	W. F. Martin	9.75	3,890
27	do.	4.75	34	June 1	do.	4.90	106
Aug. 14	do.	4.62	22	Aug. 11	do.	4.27	12
15	do.	a 4.79	19.3	Sept. 5	W. V. Hardy	4.27	10
Sept. 8	do.	4.70	14.5	Nov. 19	do.	4.40	30
1907.				28	do.	4.90	111
Jan. 9	R. S. Hawley	17.35	13,000	1910.			
9	do.	17.70	13,200	Jan. 31	J. E. Stewart	5.82	612
9	do.	18.10	13,900	Mar. 9	do.	5.05	306
10	do.	13.35	7,370	22	do.	9.52	3,570
10	do.	14.40	8,150	23	do.	8.68	2,760
10	do.	12.85	7,110	May 26	do.	4.31	57
10	do.	12.20	6,290	July 10	do.	3.91	8.9
Feb. 12	do.	6.80	802	Aug. 3	W. V. Hardy	3.85	4.8
26	do.	6.50	619	Oct. 2	W. B. Clapp	3.75	2.4
Mar. 12	do.	7.90	1,820	27	W. V. Hardy	3.82	3.7
19	do.	22.15	22,500	1911.			
19	do.	21.20	18,000	Jan. 17	J. E. Stewart	b 5.79	604
20	do.	16.90	10,000	25	do.	b 9.83	3,690
20	do.	15.60	8,130	Mar. 21	do.	b 6.19	848
28	do.	8.85	3,260	May 8	do.	b 4.73	212
Apr. 28	W. G. Steward	5.30	386	31	do.	c 8.98	95
May 7	do.	5.05	281	July 10 <sup>d</sup>	do.	e 9.81	21
23	do.	4.75	201	Oct. 17	do.	e 4.59	8.2
June 22	W. F. Martin	4.28	85	1912.			
July 8	do.	4.10	54	Jan. 20	J. E. Stewart	d 5.86	307
Aug. 20	do.	3.90	21	Jan. 20	do.	d 5.76	277
Sept. 14	W. A. Lamb	3.90	17	Mar. 1	Lasley Lee	e 5.05	44
Oct. 5	do.	3.90	17	June 10	do.	e 5.83	28.5
30	do.	3.96	23				

a New gage; old gage reading 4.60 feet.  
 b Referred to the north channel gage.  
 c Referred to the south channel gage.

d Affected by back water from temporary dam.  
 e Referred to temporary gage below the dam.

Daily gage height, in feet, of Putah Creek at Winters, Cal., for 1905-1912.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1905-6.												
1.	4.4	4.4	4.6	4.6	5.28	6.58	10.0	.....	6.0	4.95	4.7	4.75
2.	4.4	4.4	4.65	4.61	5.2	6.35	8.85	.....	5.8	4.9	4.7	4.75
3.	4.4	4.4	4.6	4.62	5.1	11.2	8.0	.....	5.75	4.9	4.7	4.75
4.	4.4	4.4	4.6	4.62	5.05	10.1	7.8	6.0	5.8	4.85	4.75	4.8
5.	4.4	4.4	4.6	4.63	5.0	7.62	7.5	.....	6.0	4.8	4.75	4.75
6.	4.4	4.4	4.6	4.64	4.95	7.0	7.35	5.95	5.9	4.8	4.75	4.75
7.	4.4	4.4	4.55	4.64	4.93	6.88	7.15	5.9	5.8	4.75	4.8	4.7
8.	4.4	4.4	4.55	4.63	4.9	6.6	7.05	5.9	5.8	4.75	4.8	4.7
9.	4.4	4.4	4.55	4.64	4.87	6.45	6.95	5.85	5.7	4.65	4.8	4.7
10.	4.4	4.4	4.5	4.64	4.85	.....	6.85	5.8	5.6	4.65	4.8	4.7
11.	4.4	4.4	4.5	4.66	4.9	6.2	6.75	5.8	5.6	4.65	4.75	4.7
12.	4.4	4.45	4.5	4.85	5.0	11.4	6.7	5.8	5.55	4.6	4.85	4.7
13.	4.4	4.45	4.55	10.76	4.9	9.05	6.6	.....	5.7	4.6	4.8	.....
14.	4.4	4.45	4.55	13.0	4.9	8.28	6.5	5.8	5.55	4.6	4.75	4.7
15.	4.4	4.45	4.55	10.75	12.5	7.9	6.5	5.8	5.5	4.6	4.8	4.7
16.	4.4	4.45	4.55	21.6	7.33	7.38	6.5	5.85	5.5	4.6	4.75	4.7
17.	4.4	4.45	4.55	12.2	6.6	7.12	6.4	5.8	5.45	4.55	.....	4.7
18.	4.4	4.45	4.6	22.85	7.15	6.85	6.3	5.7	5.4	4.55	4.7	4.65
19.	4.4	4.45	4.6	24.0	8.26	7.75	6.3	5.7	5.35	4.8	4.75	4.7
20.	4.4	4.45	4.6	10.8	7.1	7.6	6.3	5.7	5.2	4.7	4.75	4.65
21.	4.4	4.45	4.6	8.45	10.08	11.09	6.3	5.65	5.2	4.7	4.75	.....
22.	4.4	4.45	4.6	7.4	8.6	8.75	6.25	5.6	5.1	4.75	4.75	4.7
23.	4.4	4.5	4.6	6.91	7.55	9.65	6.3	5.6	5.1	4.75	4.7	4.7
24.	4.4	4.5	4.6	6.7	8.9	13.5	6.3	5.6	5.15	4.7	4.7	4.7
25.	4.4	4.5	4.6	6.35	.....	11.8	6.25	5.6	5.2	4.75	4.7	4.7
26.	4.4	4.5	4.6	6.0	7.1	11.85	6.2	6.6	5.1	4.75	4.75	4.7
27.	4.4	4.5	4.6	5.82	6.75	9.7	6.2	.....	5.3	4.75	4.7	4.7
28.	4.4	4.5	4.6	5.7	6.88	8.5	6.2	7.0	5.0	4.75	4.75	.....
29.	4.4	4.6	4.6	5.55	.....	7.88	.....	6.5	5.1	4.75	.....	4.7
30.	4.4	4.6	4.6	5.45	.....	8.5	.....	6.15	5.0	4.7	4.75	4.7
31.	4.4	.....	4.6	5.35	.....	15.5	.....	6.05	.....	4.7	4.7	.....
1906-7.												
1.	4.7	4.75	4.9	6.25	15.5	6.3	7.5	5.2	4.5	4.2	3.95	3.9
2.	4.7	4.7	4.9	.....	16.3	.....	7.15	5.15	4.5	4.2	3.95	3.9
3.	4.7	4.75	4.9	5.85	11.5	6.25	7.05	5.1	4.5	4.15	3.95	3.9
4.	4.65	4.85	.....	11.9	9.95	6.2	7.5	5.1	4.45	4.15	3.95	3.9
5.	4.65	4.9	4.9	9.0	8.8	6.2	7.4	5.1	4.45	4.15	3.95	3.9
6.	4.65	4.9	4.9	7.25	8.2	8.0	7.3	5.1	4.4	4.15	3.95	3.9
7.	4.65	4.9	.....	7.75	7.8	7.1	7.1	5.05	4.4	4.15	3.9	.....
8.	4.65	4.95	5.0	7.5	7.5	6.7	6.95	5.05	4.4	4.1	3.95	3.9
9.	4.65	4.95	4.9	14.3	7.2	6.6	6.75	5.0	4.4	4.1	3.9	3.9
10.	.....	4.9	5.2	14.95	7.1	8.15	6.55	5.0	4.4	4.1	3.9	3.9
11.	4.70	4.9	10.7	9.7	6.9	7.85	6.4	4.95	4.4	4.1	3.9	3.85
12.	4.75	4.9	6.95	8.35	6.8	8.05	6.25	4.95	4.4	4.05	3.9	3.9
13.	.....	4.85	6.3	8.0	6.7	7.4	6.15	4.9	4.45	4.05	3.9	3.9
14.	4.75	4.85	6.0	7.4	6.6	7.1	6.05	4.9	4.5	4.0	3.9	3.9
15.	4.7	4.85	5.75	7.65	6.5	6.95	6.05	4.85	4.5	4.0	3.9	3.9
16.	4.7	4.85	5.7	7.1	6.45	7.5	5.95	4.85	4.4	4.0	3.9	3.9
17.	4.7	4.85	5.6	8.05	6.4	15.3	5.85	4.8	4.5	4.0	3.9	3.9
18.	4.7	4.85	5.5	7.9	6.35	21.6	5.7	4.8	4.45	4.0	3.9	3.9
19.	4.7	4.85	5.4	7.2	6.3	23.65	5.6	4.75	4.45	4.0	3.9	3.9
20.	4.7	4.85	5.35	7.1	6.25	16.15	5.7	4.75	4.4	4.0	3.9	3.9
21.	.....	4.65	4.85	5.3	.....	6.2	12.35	5.55	4.75	4.4	4.0	3.9
22.	.....	4.65	4.85	5.3	6.85	.....	11.9	5.5	4.75	4.4	4.0	3.9
23.	.....	4.7	.....	5.35	6.8	6.8	26.6	5.5	4.75	4.4	4.0	3.9
24.	.....	4.7	4.85	.....	6.75	6.5	15.6	5.45	4.75	4.4	4.0	3.9
25.	.....	4.7	4.85	5.35	6.8	6.4	14.75	5.4	4.7	4.35	4.0	3.9
26.	.....	4.7	4.85	13.9	7.0	6.7	11.4	5.4	4.7	4.3	3.95	3.9
27.	.....	.....	4.9	10.0	7.2	6.4	10.0	5.35	4.65	4.25	3.95	3.9
28.	.....	4.7	4.9	7.35	14.35	6.3	9.15	5.3	4.65	4.25	3.95	3.9
29.	.....	4.75	4.9	6.75	9.95	.....	8.35	5.3	4.6	4.2	3.95	3.9
30.	.....	4.75	4.9	6.4	8.4	.....	7.85	5.25	4.55	4.2	3.95	3.85
31.	.....	4.75	.....	6.4	7.8	.....	7.7	.....	4.55	.....	3.95	3.85
1907-8.												
1.	3.95	3.95	4.0	7.4	5.4	8.75	5.1	4.75	4.55	4.2	4.05	4.0
2.	3.95	3.95	4.0	6.45	14.25	8.4	5.1	4.75	4.55	4.15	4.05	4.0
3.	3.95	3.95	4.0	5.65	10.6	7.75	5.1	4.75	4.5	4.2	4.05	4.0
4.	3.95	3.95	4.0	5.4	7.2	7.2	5.05	4.75	4.5	4.2	4.05	4.0
5.	3.95	3.95	4.0	5.6	7.25	6.55	5.05	4.75	4.5	4.2	4.05	3.9

α Maximum 29 feet at 12 m.

NOTE.—The following additional gage heights were observed in September, 1905: Sept. 26, 4.4 feet; Sept. 27, 4.4 feet; Sept. 28, 4.4 feet; Sept. 29, 4.45 feet; Sept. 30, 4.4 feet.

Daily gage height, in feet, of Putah Creek at Winters, Cal., for 1905-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1907-8.												
6.	3.95	3.95	4.0	5.3	7.0	6.3	5.05	-----	4.5	4.1	4.1	3.9
7.	3.9	3.95	4.1	5.1	6.9	6.15	5.05	4.7	4.5	4.15	4.1	3.9
8.	3.9	3.95	4.1	4.9	6.95	6.0	5.0	4.7	4.5	4.2	4.1	3.9
9.	3.9	3.95	4.2	4.95	9.85	5.9	5.0	4.7	4.5	4.15	4.1	4.05
10.	3.9	3.95	4.2	4.85	8.5	5.8	5.0	4.7	4.5	4.15	4.1	3.95
11.	3.9	3.95	4.3	4.8	7.35	5.75	4.95	4.7	4.5	4.15	4.1	3.95
12.	3.9	3.95	5.0	4.7	6.75	5.65	4.95	4.7	4.45	4.15	4.15	3.95
13.	3.9	3.95	4.6	4.7	6.45	5.6	4.95	4.7	4.45	4.15	4.15	3.95
14.	3.9	3.95	4.55	4.7	6.2	5.6	4.9	4.7	4.45	4.15	4.15	3.95
15.	3.9	3.95	4.55	5.8	6.05	5.55	4.9	4.7	4.4	4.2	4.15	4.0
16.	3.9	3.95	4.65	5.3	5.95	5.5	4.9	4.7	4.4	4.2	4.1	4.0
17.	3.9	3.95	4.45	5.05	5.85	5.45	4.9	4.7	4.4	4.1	4.1	4.0
18.	3.9	3.95	4.55	4.95	5.8	5.4	4.9	4.7	4.4	4.1	4.0	4.0
19.	3.9	4.0	4.45	5.25	5.75	5.35	4.9	4.7	4.4	4.1	4.05	4.0
20.	3.9	3.95	4.4	5.45	5.7	5.3	4.9	4.7	4.4	4.1	4.0	4.0
21.	3.9	3.95	4.4	8.0	5.6	5.3	4.85	4.75	4.4	4.1	4.0	3.95
22.	3.9	3.95	4.4	8.0	5.55	5.25	4.85	4.75	4.4	4.1	4.0	3.95
23.	3.9	4.0	4.44	7.5	5.5	5.2	4.85	4.7	4.35	4.1	4.0	3.95
24.	3.9	4.0	4.35	8.75	5.5	5.2	4.85	4.65	4.35	4.05	4.0	3.95
25.	3.9	3.95	4.3	7.5	5.45	5.2	4.85	4.65	4.3	4.05	4.0	3.9
26.	3.95	4.0	4.6	6.45	5.45	5.15	4.85	4.6	4.4	4.05	4.0	3.9
27.	3.95	4.0	4.6	6.15	5.4	5.15	4.85	4.6	4.25	4.1	4.0	3.9
28.	3.95	4.0	5.1	5.8	5.35	5.2	4.8	4.55	4.25	4.1	4.05	3.9
29.	3.95	4.0	4.75	5.6	5.6	5.15	4.8	4.55	4.2	4.1	4.05	3.9
30.	3.95	4.0	4.65	5.5	-----	5.15	4.75	4.55	4.2	4.1	4.0	3.9
31.	3.95	-----	8.35	5.45	-----	5.1	-----	-----	-----	4.1	4.0	-----
1908-9.												
1.	3.9	4.0	4.2	4.65	10.3	7.2	6.3	5.2	4.9	4.55	4.3	4.25
2.	3.9	4.0	4.3	4.7	18.0	6.9	6.2	5.15	4.9	4.5	4.3	4.25
3.	3.9	4.05	4.3	12.35	19.75	6.8	6.1	5.15	4.9	4.5	4.3	4.25
4.	3.9	4.0	4.3	7.65	12.8	7.4	5.95	5.15	4.85	4.5	4.3	4.25
5.	3.9	4.0	4.5	6.3	11.2	7.2	5.9	5.1	4.85	4.5	4.3	4.25
6.	3.95	4.0	5.8	9.35	10.1	7.0	5.85	5.1	4.85	4.5	4.3	4.25
7.	3.9	4.0	5.25	8.65	11.6	8.1	5.85	5.05	4.85	4.5	4.25	4.25
8.	3.9	4.0	5.0	c22.0	10.7	7.4	5.75	5.1	4.8	4.5	4.25	4.25
9.	3.9	4.0	5.9	16.8	9.6	7.0	5.75	5.0	4.8	4.45	4.3	4.25
10.	3.95	4.0	5.0	9.2	8.8	6.85	5.7	5.0	4.8	4.45	4.3	4.25
11.	3.95	4.05	5.8	8.3	15.4	6.7	5.7	5.0	4.8	4.45	4.25	4.25
12.	3.95	4.05	5.5	7.1	19.85	6.5	5.65	5.0	4.75	4.4	4.3	4.25
13.	4.0	4.05	5.1	7.0	15.3	6.4	5.65	5.0	4.75	4.4	4.3	4.2
14.	4.0	4.05	5.05	b21.25	11.5	6.3	5.6	5.0	4.7	4.4	4.3	4.2
15.	4.0	4.05	4.95	c25.5	10.1	6.2	5.6	5.0	4.7	4.4	4.3	4.25
16.	4.0	4.05	4.85	20.25	9.6	6.15	5.55	5.0	4.7	4.4	4.3	4.25
17.	4.0	4.05	4.8	13.2	9.2	-----	5.5	5.0	4.7	4.4	4.25	4.25
18.	4.0	4.05	4.75	11.4	8.6	6.05	5.5	5.0	4.7	-----	4.25	4.25
19.	3.95	4.05	4.7	9.3	8.7	6.0	5.45	5.0	4.75	-----	4.25	4.25
20.	4.0	4.05	4.7	16.3	8.2	5.9	5.45	4.95	4.75	4.4	-----	4.25
21.	3.95	4.05	4.7	22.0	11.6	6.2	5.45	4.95	4.75	4.4	4.25	4.2
22.	3.95	4.2	4.7	13.8	9.1	6.55	5.45	4.95	4.75	4.35	4.25	4.2
23.	3.95	-----	4.65	10.5	8.5	6.2	5.45	4.95	4.7	4.35	4.25	4.2
24.	4.0	4.2	4.65	9.4	8.2	6.15	5.4	4.95	4.65	4.35	4.25	4.2
25.	4.0	4.2	4.65	13.0	8.0	6.35	5.4	4.95	4.6	4.35	4.25	4.3
26.	4.0	4.35	4.7	16.2	7.8	6.1	5.35	4.95	4.6	4.35	4.25	4.3
27.	4.0	4.3	4.7	12.5	7.5	6.0	5.35	4.9	4.6	4.3	4.25	4.3
28.	4.0	4.2	4.7	10.0	7.2	5.95	5.3	4.9	4.6	4.3	4.25	4.3
29.	4.0	4.2	4.7	8.9	-----	6.2	5.3	4.9	4.55	4.3	4.25	4.3
30.	4.0	4.2	4.65	8.2	-----	7.4	5.3	4.9	4.55	4.3	4.2	4.3
31.	4.0	-----	4.65	10.0	-----	7.6	-----	4.9	-----	4.3	4.25	-----
1909-10.												
1.	4.3	4.3	4.8	5.4	5.7	5.7	5.75	4.7	4.2	4.0	3.9	3.75
2.	4.35	4.3	-----	5.2	5.55	5.6	5.65	4.7	4.2	4.0	3.85	3.75
3.	4.35	4.3	5.3	5.05	5.45	5.45	5.6	4.7	4.2	3.95	3.85	3.8
4.	4.3	4.3	5.0	5.0	5.4	5.35	5.5	4.6	4.2	3.95	3.85	3.8
5.	4.3	4.3	5.3	4.9	5.3	5.3	5.4	4.6	4.2	3.95	3.9	3.8
6.	4.3	4.3	4.8	4.9	5.2	5.2	5.4	4.6	4.2	3.95	3.85	3.8
7.	-----	4.3	5.35	4.85	5.9	5.2	5.3	4.6	4.1	3.9	3.9	3.8
8.	4.25	-----	6.9	4.85	7.1	5.1	5.25	4.6	4.15	3.9	3.9	3.75
9.	4.3	4.4	17.4	4.85	6.2	5.1	5.2	4.55	4.15	3.9	3.9	3.75
10.	4.3	4.4	7.9	4.85	6.8	5.0	5.1	4.55	4.15	3.9	3.9	3.7

a Maximum 27.5 feet at 2.30 p. m.

b Maximum 27 feet at 8 p. m.

c Maximum 26 feet at 7 a. m.

Daily gage height, in feet, of Putah Creek at Winters, Cal., for 1905-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1909-10.												
11.....	4.3	4.5	6.2	4.9	6.2	4.9	5.2	4.55	4.1	3.9	3.9	3.7
12.....	4.3	4.5	5.75	4.9	5.9	4.9	5.4	4.5	4.1	3.9	3.9	3.8
13.....	4.3	4.5	5.6	4.85	5.7	.....	5.3	4.5	4.1	3.85	3.9	3.8
14.....	4.25	4.5	5.45	6.4	5.6	4.9	5.2	4.5	4.1	3.85	3.9	3.8
15.....	4.25	4.45	5.4	7.5	5.45	4.9	.....	4.5	4.1	3.85	3.85	3.8
16.....	4.25	4.4	5.3	7.8	5.35	4.8	5.10	4.4	4.1	3.9	3.85	3.75
17.....	4.25	4.4	5.3	7.2	5.3	4.8	5.0	4.4	4.1	3.9	3.85	3.75
18.....	4.3	4.4	5.2	6.3	5.2	4.7	5.0	4.4	4.1	3.85	3.85	3.8
19.....	4.3	4.4	5.2	5.9	5.2	4.7	4.95	4.35	4.1	3.85	3.85	3.8
20.....	4.3	4.45	5.2	5.6	5.3	4.9	4.9	4.35	4.1	3.8	3.9	3.8
21.....	4.3	4.45	5.2	5.4	5.2	6.4	4.9	4.35	4.1	3.8	3.8	3.8
22.....	4.3	5.1	5.1	5.35	5.1	10.9	4.9	4.35	4.1	3.75	3.8	3.8
23.....	4.3	5.0	5.1	5.4	5.5	9.55	4.85	4.35	4.1	3.75	3.8	3.8
24.....	4.3	5.0	5.1	16.8	5.5	7.3	4.8	4.3	4.05	3.9	3.75	3.8
25.....	4.25	5.3	5.05	9.7	8.0	6.2	4.8	4.3	4.05	3.9	3.75	3.8
26.....	4.25	4.8	5.05	.....	6.9	6.2	4.75	4.3	4.0	3.9	3.75	3.8
27.....	4.25	4.8	5.05	7.2	6.2	6.2	4.7	4.3	4.0	3.9	3.75	3.8
28.....	4.3	4.9	5.1	6.65	5.95	7.7	4.7	4.3	4.0	3.9	3.75	3.8
29.....	4.3	4.9	5.05	6.4	.....	6.5	4.7	4.3	4.0	3.9	3.75	3.8
30.....	4.3	4.8	5.05	6.0	.....	6.15	4.7	.....	4.0	3.9	3.8	3.8
31.....	4.3	.....	5.1	5.85	.....	.....	.....	4.2	.....	3.9	3.75	.....
1910-11.												
1.....	3.78	3.85	3.92	4.06	9.57	6.26	5.26	4.85	.....	.....	.....	.....
2.....	3.76	3.86	3.94	4.06	8.88	6.32	5.23	4.84	.....	.....	.....	.....
3.....	3.76	3.88	4.02	4.06	9.08	10.60	5.21	4.84	.....	.....	.....	.....
4.....	3.76	3.88	4.04	4.06	8.18	9.30	5.14	4.83	.....	.....	.....	.....
5.....	3.76	3.89	4.01	4.06	7.38	17.15	6.12	4.75	.....	.....	.....	.....
6.....	3.76	3.89	4.4	4.06	7.58	18.80	7.57	4.74	.....	.....	.....	.....
7.....	3.78	3.89	4.3	4.06	7.03	26.22	6.54	4.74	.....	.....	.....	.....
8.....	3.78	3.9	4.22	4.06	6.72	15.30	6.16	4.74	.....	.....	.....	.....
9.....	3.78	3.9	4.19	4.06	6.44	12.20	.....	4.74	.....	.....	.....	.....
10.....	3.78	3.9	4.2	4.07	6.25	9.20	6.44	4.75	.....	.....	.....	.....
11.....	3.8	3.9	4.2	4.13	9.88	9.00	6.09	4.84	.....	.....	.....	.....
12.....	3.89	3.9	4.2	4.24	7.98	8.27	5.89	4.79	.....	.....	.....	.....
13.....	3.91	3.9	4.2	7.78	9.38	7.67	5.74	4.76	.....	.....	.....	.....
14.....	3.89	3.9	4.3	10.58	7.98	7.38	5.59	4.76	.....	.....	.....	.....
15.....	3.82	3.9	4.28	9.38	7.28	7.13	5.52	4.74	.....	.....	.....	.....
16.....	3.82	3.9	4.25	6.44	6.74	6.99	5.44	4.74	.....	.....	.....	.....
17.....	3.81	3.9	4.21	5.79	6.54	6.76	5.37	.....	.....	.....	.....	.....
18.....	3.81	3.9	4.2	5.45	6.34	6.68	5.32	.....	.....	.....	.....	.....
19.....	3.81	3.9	4.2	5.35	6.22	6.44	.....	.....	.....	.....	.....	.....
20.....	3.81	3.91	4.18	15.20	6.07	6.29	5.15	.....	.....	.....	.....	.....
21.....	3.8	.....	4.18	7.97	5.94	6.14	5.14	.....	.....	.....	.....	.....
22.....	3.81	3.91	4.18	6.60	5.83	6.04	5.08	.....	.....	.....	.....	.....
23.....	3.81	3.91	4.17	6.04	5.76	5.94	5.04	.....	.....	.....	.....	.....
24.....	3.81	3.9	4.15	7.83	5.66	5.76	5.04	.....	.....	.....	.....	.....
25.....	3.81	3.91	4.15	9.38	5.62	5.72	4.99	.....	.....	.....	.....	.....
26.....	3.81	3.91	4.15	8.38	5.54	5.64	4.96	.....	.....	.....	.....	.....
27.....	3.81	3.91	4.15	8.38	5.49	5.56	4.94	.....	.....	.....	.....	.....
28.....	3.81	3.91	4.14	17.30	5.47	5.53	4.94	.....	.....	.....	.....	.....
29.....	3.81	3.91	4.12	15.30	.....	5.44	4.94	.....	.....	.....	.....	.....
30.....	3.81	3.92	4.12	12.48	.....	5.42	4.94	.....	.....	.....	.....	.....
31.....	3.81	.....	4.12	13.30	.....	5.33	.....	.....	.....	.....	.....	.....
1911-12.												
1.....	.....	4.58	4.67	4.87	5.5	5.0	4.95	5.9	8.2	.....	.....	.....
2.....	.....	4.58	4.66	4.87	5.45	5.0	4.92	6.0	7.9	.....	.....	.....
3.....	4.67	4.57	4.65	4.87	5.45	5.0	4.9	5.8	7.7	.....	.....	.....
4.....	4.67	4.57	4.67	4.87	5.4	5.0	4.9	5.7	7.6	.....	.....	.....
5.....	4.67	4.57	4.72	4.86	5.35	5.15	4.89	5.65	7.5	.....	.....	.....
6.....	4.62	4.57	4.76	4.86	5.3	8.5	4.85	5.6	7.4	.....	.....	.....
7.....	4.62	4.57	4.75	4.86	5.3	7.2	4.82	.....	7.3	.....	.....	.....
8.....	4.57	4.57	4.75	4.87	5.3	6.7	4.8	5.5	7.1	.....	.....	.....
9.....	4.77	4.62	4.75	4.87	5.25	6.2	5.4	5.4	7.2	.....	.....	.....
10.....	4.57	4.67	4.72	4.87	5.25	6.0	5.4	5.4	5.85	.....	.....	.....
11.....	4.57	4.67	4.72	4.87	5.25	5.9	5.45	5.35	5.8	.....	.....	.....
12.....	4.57	4.77	4.72	4.87	5.2	6.4	5.55	5.3	5.8	.....	.....	.....
13.....	4.52	4.82	4.72	4.87	5.2	7.5	5.55	5.45	5.7	.....	.....	.....
14.....	4.52	4.82	4.72	4.9	5.2	6.5	5.5	5.4	5.8	.....	.....	.....
15.....	4.47	4.77	4.72	4.97	5.2	6.3	5.4	6.6	5.7	.....	.....	.....

Daily gage height, in feet, of Putah Creek at Winters, Cal., for 1905-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1911-12.												
16.....	4.47	4.66	4.72	5.05	5.2	7.6	5.4	8.4	5.7	.....	.....	.....
17.....	4.52	4.66	4.72	5.05	5.2	6.6	5.35	.....	5.7	.....	.....	.....
18.....	4.52	4.66	4.72	5.15	5.2	6.1	5.35	8.5	5.7	.....	.....	.....
19.....	4.47	4.57	4.72	5.35	5.2	5.85	5.3	5.2	5.7	.....	.....	.....
20.....	4.47	4.57	4.72	5.8	5.2	5.7	5.3	5.2	5.65	.....	.....	.....
21.....	4.47	.....	4.69	5.4	5.2	5.65	5.25	6.0	5.6	.....	.....	.....
22.....	4.47	4.67	4.69	5.3	5.15	5.4	5.25	7.2	5.6	.....	.....	.....
23.....	4.47	4.67	4.74	5.1	5.1	5.35	5.2	7.0	5.75	.....	.....	.....
24.....	4.57	4.67	4.74	5.0	5.1	5.3	5.2	8.6	5.7	.....	.....	.....
25.....	4.62	4.67	4.75	5.0	5.1	5.2	5.2	7.2	5.7	.....	.....	.....
26.....	4.62	4.67	4.75	10.9	5.1	5.15	5.2	7.2	5.65	.....	.....	.....
27.....	4.62	4.67	4.77	6.8	5.05	5.1	5.2	7.2	5.65	.....	.....	.....
28.....	4.62	4.67	4.77	6.1	5.05	5.1	5.2	8.4	5.7	.....	.....	.....
29.....	4.62	4.67	4.77	5.6	5.05	5.05	5.25	7.9	5.7	.....	.....	.....
30.....	4.62	4.67	4.77	5.4	.....	5.0	6.2	7.5	5.65	.....	.....	.....
31.....	4.60	.....	4.87	5.2	.....	5.0	.....	8.3	.....	.....	.....	.....

NOTE.—Gage heights Apr. 6 to May 31 and Nov. 22 to Dec. 31, 1909, have been adjusted to refer to the normal water level of the permanent gage in the north channel. Gage heights observed on north channel gage Jan. 1 to May 22, 1911 (except Mar. 12 and 13, which were the same on both gages), and June 19 to 24, 1911. Gage heights observed on south gage May 23 to June 18 and June 25 to Dec. 31, 1911. Gage heights about May 17 to Dec. 31, 1911, affected by backwater from temporary dam constructed about 500 feet below the station to form a boating and swimming pond. The gage heights during most of the period May 17 to Oct. 2, 1911, were between 8 and 10 feet and are omitted, since frequent changes in the dam render them useless as an index of the discharge. There was relatively little backwater Oct. 3 to Dec. 31, 1911, and the relation of gage height to discharge was stable. Gage heights Mar. 5 to 7, 1911, determined from hydrograph.

Daily discharge, in second-feet, of Putah Creek at Winters, Cal., for 1905-1912.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1905-6.												
1.....	10	10	22	22	390	1,160	3,600	430	440	125	28	18
2.....	10	10	26	22	360	960	2,540	430	340	120	28	18
3.....	10	10	22	22	325	5,350	1,830	405	310	120	28	18
4.....	10	10	22	22	305	4,280	1,670	380	340	110	32	23
5.....	10	10	22	26	290	2,020	1,430	380	440	107	32	18
6.....	10	10	22	26	270	1,440	1,310	358	390	90	32	18
7.....	10	10	18	26	265	1,360	1,150	335	340	80	35	14
8.....	10	10	18	26	255	1,140	1,070	335	340	67	35	14
9.....	10	10	18	26	245	1,030	990	312	300	50	30	14
10.....	10	10	15	26	240	920	910	290	260	50	30	14
11.....	10	10	15	26	255	880	835	290	280	50	26	14
12.....	10	10	12	46	290	5,540	800	290	260	40	32	14
13.....	10	10	12	4,900	255	3,320	730	290	330	37	28	14
14.....	10	10	12	7,200	255	2,600	660	290	270	37	22	14
15.....	10	10	12	4,900	6,700	2,170	660	290	250	34	23	14
16.....	10	10	12	18,200	1,800	1,770	660	312	260	30	18	14
17.....	10	10	12	6,400	1,170	1,560	600	290	240	25	16	14
18.....	10	10	12	22,800	1,600	1,350	540	250	220	25	14	10
19.....	10	10	12	25,400	2,600	2,140	540	250	210	60	18	14
20.....	10	10	12	4,950	1,570	2,000	540	250	160	35	18	10
21.....	10	10	12	2,770	4,250	5,140	540	230	100	35	18	14
22.....	10	10	12	1,850	2,900	3,040	510	210	135	42	18	14
23.....	10	10	15	22	1,440	1,960	3,860	540	210	135	42	14
24.....	10	10	15	22	1,280	3,200	7,740	540	210	150	25	14
25.....	10	10	15	22	1,020	2,360	5,950	510	210	180	32	14
26.....	10	10	15	790	1,600	6,000	480	740	145	32	18	14
27.....	10	10	15	680	1,260	3,900	480	900	215	32	14	14
28.....	10	10	15	610	1,380	2,800	480	1,150	130	32	18	14
29.....	10	10	22	530	.....	2,240	455	700	150	32	18	14
30.....	10	10	22	480	.....	2,800	465	500	130	28	18	14
31.....	10	.....	22	430	.....	10,200	.....	470	.....	28	14	.....
1906-7.												
1.....	14	18	35	515	10,100	540	1,890	340	131	70	22	15
2.....	14	14	35	660	11,300	540	1,580	322	131	70	22	15
3.....	14	18	35	355	5,130	515	1,500	304	131	60	22	15
4.....	10	29	35	5,570	3,550	490	1,890	304	120	60	22	15
5.....	10	35	35	2,660	2,480	490	1,800	304	120	60	22	15

Daily discharge, in second-feet, of Putah Creek at Winters, Cal., for 1905-1912—Contd.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1906-7.												
6.....	10	35	35	1,230	1,990	1,830	1,710	304	110	60	22	15
7.....	10	35	42	1,630	1,670	1,110	1,540	287	110	60	15	15
8.....	10	42	50	1,470	1,430	800	1,420	287	110	50	22	15
9.....	10	42	35	8,510	1,190	730	1,260	270	110	50	15	15
10.....	12	35	90	9,360	1,110	1,950	1,220	270	110	50	15	15
11.....	14	35	4,300	3,300	950	1,710	1,020	254	110	50	15	10
12.....	18	35	990	2,110	870	1,870	915	254	110	41	15	15
13.....	18	29	540	1,830	800	1,350	850	238	120	41	15	15
14.....	18	29	380	1,350	730	1,110	790	238	131	32	15	15
15.....	14	29	270	1,550	660	990	790	223	131	32	15	15
16.....	14	29	250	1,110	630	1,430	730	223	110	32	15	15
17.....	14	29	210	1,870	600	9,840	670	208	131	32	15	15
18.....	14	29	174	1,750	570	20,200	580	208	120	32	15	15
19.....	14	29	142	1,190	540	25,400	530	194	120	32	15	15
20.....	14	29	128	1,110	515	8,900	580	194	110	32	15	15
21.....	10	29	114	1,030	490	4,850	505	194	110	32	15	15
22.....	10	29	114	910	660	4,600	480	194	110	32	15	15
23.....	14	29	128	870	870	30,000	480	194	110	32	15	15
24.....	14	29	128	835	660	9,450	455	194	110	32	15	15
25.....	14	29	128	870	600	9,000	430	180	100	32	15	15
26.....	14	29	7,500	1,030	800	5,200	430	180	90	22	15	15
27.....	14	35	3,600	1,190	600	4,050	405	167	80	22	15	15
28.....	14	35	1,310	8,580	540	3,660	380	167	80	22	15	15
29.....	18	35	835	3,550	.....	2,740	380	154	70	22	15	15
30.....	18	35	600	2,150	.....	2,230	360	142	70	22	10	22
31.....	18	.....	600	1,670	.....	2,080	.....	142	.....	22	10	.....
1907-8.												
1.....	22	22	32	1,860	450	3,040	185	78	43	10	5	4
2.....	22	22	32	1,080	8,600	2,730	185	78	43	8	5	4
3.....	22	22	32	582	4,740	2,150	185	78	36	10	5	4
4.....	22	22	32	450	1,680	1,680	167	78	36	10	5	4
5.....	22	22	32	555	1,720	1,130	167	78	36	10	5	3
6.....	22	22	32	405	1,520	930	167	67	36	6	6	3
7.....	15	22	50	320	1,430	810	167	67	36	8	6	3
8.....	15	22	50	250	1,470	690	150	67	36	10	6	3
9.....	15	22	70	267	4,040	610	150	67	36	8	6	5
10.....	15	22	70	232	2,820	540	150	67	36	8	6	3.5
11.....	15	22	90	215	1,810	510	135	67	36	8	6	3.5
12.....	15	22	270	185	1,300	450	135	67	30	8	8	3.5
13.....	15	22	154	185	1,050	420	135	67	30	8	8	3.5
14.....	15	22	142	185	850	420	120	67	30	8	8	3.5
15.....	15	22	142	670	730	395	120	67	25	10	8	4
16.....	15	22	167	405	650	370	120	67	25	10	6	4
17.....	15	22	120	302	575	345	120	67	25	6	6	4
18.....	15	22	142	267	540	320	120	67	25	6	6	4
19.....	15	32	120	382	510	295	120	67	25	6	5	4
20.....	15	22	110	475	480	270	120	67	25	6	4	4
21.....	15	22	110	2,370	420	270	105	78	25	6	4	3.5
22.....	15	22	110	2,370	395	247	105	78	25	6	4	3.5
23.....	15	32	110	1,940	370	225	105	67	20	6	4	3.5
24.....	15	32	100	3,040	370	225	105	58	20	5	4	3.5
25.....	15	22	90	1,940	345	225	105	58	16	5	4	3
26.....	22	32	154	10,800	345	205	105	50	25	5	4	3
27.....	22	32	154	887	320	205	105	50	13	6	4	3
28.....	22	32	304	670	295	225	90	43	13	6	5	3
29.....	22	32	194	555	420	205	90	43	10	6	5	3
30.....	22	32	167	500	.....	205	78	43	10	6	4	3
31.....	22	.....	2,740	475	.....	185	.....	43	.....	6	4	.....
1908-9.												
1.....	3	4	10	56	4,440	1,680	921	203	106	40	13	10
2.....	3	4	16	64	13,800	1,430	838	184	106	33	13	10
3.....	3	5	16	6,530	16,600	1,340	758	184	106	33	13	10
4.....	3	4	16	2,070	7,000	1,860	642	184	94	33	13	10
5.....	3	4	36	921	5,340	1,680	604	165	94	33	13	10
6.....	3.5	4	540	3,580	4,260	1,520	568	165	94	33	13	10
7.....	3	4	247	2,960	5,740	2,460	568	149	94	33	10	10
8.....	3	4	150	21,000	4,840	1,860	500	165	83	33	10	10
9.....	3	4	610	12,000	3,810	1,520	500	133	83	28	13	10
10.....	3.5	4	150	3,450	3,090	1,390	464	133	83	28	13	10

Daily discharge, in second-feet, of Putah Creek at Winters, Cal., for 1905-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1908-9.												
11	3.5	5	540	2,640	10,000	1,260	468	133	83	28	10	10
12	3.5	5	370	1,600	16,800	1,090	438	133	74	22	13	10
13	4	5	185	1,520	9,890	1,000	438	133	74	22	13	6
14	4	5	167	19,500	5,640	921	408	133	64	22	13	6
15	4	5	135	28,800	4,260	838	408	133	64	22	13	10
16	4	5	105	17,000	3,810	798	380	133	64	22	13	11
17	4	5	90	7,440	3,450	758	352	133	64	22	10	11
18	4	5	78	5,540	2,910	719	352	133	64	22	10	11
19	3.5	5	67	3,540	3,000	680	322	133	74	22	10	11
20	4	5	67	11,200	2,550	604	322	120	74	22	10	11
21	3.5	5	67	21,000	5,740	838	322	120	74	22	10	8
22	3.5	10	67	8,100	3,360	1,130	322	120	74	18	10	8
23	3.5	10	58	4,640	2,820	838	322	120	64	18	10	8
24	4	10	58	3,630	2,550	798	298	120	56	18	10	8
25	4	10	58	7,220	2,370	963	298	120	47	18	10	15
26	4	20	67	11,100	2,200	758	272	120	47	18	10	15
27	4	16	67	6,680	1,940	680	272	106	47	13	10	15
28	4	10	67	4,170	1,680	642	246	106	47	13	10	15
29	4	10	67	3,180	.....	838	246	106	40	13	10	15
30	4	10	58	2,550	.....	1,860	246	106	40	13	6	15
31	4	.....	58	4,170	.....	2,020	.....	106	.....	13	10	.....
1909-10.												
1	15	18	89	298	560	560	585	150	38	15	8	2
2	19	18	168	203	485	510	535	150	38	15	5.5	2
3	19	18	246	152	437	437	510	150	38	12	5.5	3
4	15	18	137	137	414	392	460	122	38	12	5.5	3
5	17	18	246	111	370	370	414	122	38	12	8	3
6	17	18	89	111	328	328	414	122	38	12	5.5	3
7	17	18	272	100	664	328	370	122	25	8	8	3
8	13	23	1,430	100	1,440	289	349	122	32	8	8	2
9	17	28	12,900	100	838	289	328	109	32	8	8	2
10	17	28	2,280	100	1,210	252	289	109	32	8	8	1
11	17	41	838	111	838	216	328	109	25	8	8	1
12	17	41	500	111	664	216	414	96	25	8	8	3
13	17	41	408	100	560	216	370	96	25	5.5	8	3
14	13	41	325	1,000	510	216	328	96	25	5.5	8	3
15	13	36	298	1,940	437	216	308	96	25	5.5	5.5	3
16	13	30	246	2,200	392	182	289	73	25	8	5.5	2
17	13	30	246	1,680	370	182	252	73	25	8	5.5	2
18	17	30	203	921	328	150	252	73	25	5.5	5.5	3
19	17	30	203	604	328	150	234	64	25	5.5	5.5	3
20	17	36	203	408	370	182	216	64	25	3	8	3
21	17	36	203	298	328	956	216	64	25	3	3	3
22	17	168	165	272	289	4,900	216	64	25	2	3	3
23	17	137	165	298	460	3,570	199	64	25	2	3	3
24	18	137	165	12,000	460	1,580	182	54	20	8	2	3
25	14	246	149	3,710	2,150	838	182	54	20	8	2	3
26	14	89	149	2,700	1,280	838	166	54	15	8	2	3
27	14	89	149	1,510	838	838	150	54	15	8	2	3
28	18	111	165	1,110	692	1,900	150	54	15	8	2	3*
29	18	111	149	956	.....	1,020	150	54	15	8	2	3
30	18	89	149	720	.....	808	150	46	15	8	3	3
31	18	.....	165	637	.....	695	.....	38	.....	8	2	.....
1910-11.												
1	1.6	5.5	9.4	28	3,590	889	389	245	.....	.....	.....	.....
2	1.2	6	11	28	2,950	928	377	242	.....	.....	.....	.....
3	1.2	7	17	28	3,130	4,600	369	242	.....	.....	.....	.....
4	1.2	7	19	28	2,340	1,340	344	239	.....	.....	.....	.....
5	1.2	7.4	16	28	1,680	12,500	807	218	.....	.....	.....	.....
6	1.2	7.4	73	28	1,840	15,000	1,830	215	.....	.....	.....	.....
7	1.6	7.4	54	28	1,420	28,300	1,070	215	.....	.....	.....	.....
8	1.6	8	41	28	1,200	9,960	831	215	.....	.....	.....	.....
9	1.6	8	36	28	1,010	6,280	920	215	.....	.....	.....	.....
10	1.6	8	38	29	882	3,240	1,010	218	.....	.....	.....	.....
11	3	8	38	36	3,890	3,060	790	242	.....	.....	.....	.....
12	7.4	8	38	53	2,170	2,410	680	228	.....	.....	.....	.....
13	8.7	8	38	2,000	3,410	1,910	605	220	.....	.....	.....	.....
14	7.4	8	54	4,580	2,170	1,680	530	220	.....	.....	.....	.....
15	4	8	51	3,410	1,600	1,490	499	215	.....	.....	.....	.....

Daily discharge, in second-feet, of Putah Creek at Winters, Cal., for 1905-1912—Continued.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.
1910-11.												
16.	4	8	46	1, 010	1, 210	1, 390	463	215				
17.	3.5	8	40	604	1, 070	1, 250	438					
18.	3.5	8	38	432	941	1, 170	413					
19.	3.5	8	38	388	863	1, 010	390					
20.	3.5	8.7	35	9, 830	767	908	348					
21.	3	8.7	35	2, 160	689	819	344					
22.	3.5	8.7	35	1, 120	676	762	323					
23.	3.5	8.7	34	749	588	707	309					
24.	3.5	8	32	2, 040	535	615	309					
25.	3.5	8.7	32	3, 410	515	595	292					
26.	3.5	8.7	32	2, 510	475	555	281					
27.	3.5	8.7	32	2, 510	450	517	274					
28.	3.5	8.7	30	12, 800	442	504	274					
29.	3.5	8.7	28	9, 960	463	463	274					
30.	3.5	9.4	28	6, 590	454	454	274					
31.	3.5		28	7, 490	417	417						
1911-12.												
1.	20	9	17	26	140	38	43	284				
2.	20	9	16	26	126	38	39	327				
3.	17	8	15	26	126	38	36	243				
4.	17	8	17	26	113	38	36	205				
5.	17	8	22	25	101	60	35	188				
6.	12	8	27	25	89	2, 180	30	171				
7.	12	8	26	25	89	1, 060	27	156				
8.	8	8	26	26	89	705	25	140				
9.	28	12	26	26	78	420	113	113				
10.	8	17	22	26	78	327	113	113	32			
11.	8	17	22	26	78	284	126	101	25			
12.	8	28	22	26	68	525	156	89	25			
13.	5	35	22	26	68	1, 300	156		15			
14.	5	35	22	28	68	580	140		25			
15.	3	28	22	35	68	470	113		15			
16.	3	16	22	44	68	1, 380	113		15			
17.	5	16	22	44	68	655	101		15			
18.	5	16	22	60	68	410	101		15			
19.	3	8	22	101	68	304	89	68	15			
20.	3	8	22	243	68	246	89	68	12			
21.	3	12	19	113	68	228	78		8			
22.	3	17	19	89	60	144	78		8			
23.	3	17	25	51	51	130	68		20			
24.	8	17	25	38	51	115	68		15			
25.	12	17	26	38	51	90	68		15			
26.	12	17	26	4, 530	51	79	68		12			
27.	12	17	28	775	44	68	68		12			
28.	12	17	28	410	44	68	68		15			
29.	12	17	28	210	44	59	78		15			
30.	12	17	28	144		50	420		12			
31.	10		41	90		50						

NOTE.—Daily discharges 1905 to 1911, determined from rating curves, that are for the most part, fairly well defined and are applicable as follows: Sept. 26, 1905, to Jan. 12, 1906; Jan. 13 to Mar. 31, and May 26 to Aug. 14, 1906 (the indirect method for shifting channels used); Apr. 1 to May 25, 1906; Aug. 15 to Dec. 31, 1906; Jan. 1 to Mar. 19, 1907; Mar. 20 to 27 (the indirect method for shifting channels used); Mar. 28 to Dec. 31, 1907; Jan. 1 to Feb. 1, 1908; Feb. 2 to Dec. 31, 1908; Jan. 1 to Sept. 15, 1909; Sept. 16 to Nov. 10, 1909 (the indirect method for shifting channels used); Nov. 11, 1909, to Jan. 24, 1910; Jan. 25 to Dec. 31, 1910; Jan. 1 to Mar. 20, 1911; Mar. 21 to May 16, 1911; Oct. 1, 1911, to Jan. 25, 1912; Jan. 26 to 31; Feb. 1 to Mar. 15; Mar. 16 to Apr. 8; Apr. 9 to May 12; May 19 to 20; and June 10 to 30, 1912. Discharge interpolated for days when gage was not read.

Monthly discharge of Putah Creek at Winters, Cal., for 1905-1912.

[Drainage area, 805 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.	
1905-6.							
October.....	10	10	10.0	0.012	0.01	615	B.
November.....	22	10	12.5	.016	.02	744	B.
December.....	26	15	20.4	.025	.03	1,250	B.
January.....	25,400	22	3,450	4.29	4.95	212,000	C.
February.....	6,700	240	1,370	1.70	1.77	76,100	C.
March.....	10,200	880	3,120	3.88	4.47	192,000	C.
April.....	3,600	455	935	1.16	1.29	55,600	B.
May.....	1,150	210	387	.481	.55	23,800	B.
June.....	440	130	250	.311	.35	14,900	B.
July.....	125	25	53.3	.066	.08	3,280	C.
August.....	35	14	22.7	.028	.03	1,400	C.
September.....	23	14	14.7	.018	.02	875	C.
The year.....	25,400	10	804	.999	13.57	583,000	
1906-7.							
October.....	18	10	13.7	.017	.02	842	C.
November.....	42	14	30.6	.038	.04	1,820	C.
December.....	7,500	35	738	.917	1.06	45,400	B.
January.....	9,360	355	2,320	2.88	3.32	143,000	B.
February.....	11,300	490	1,860	2.31	2.40	103,000	B.
March.....	30,000	490	5,150	6.40	7.38	317,000	C.
April.....	1,890	360	919	1.14	1.27	54,700	B.
May.....	340	142	230	.286	.33	14,100	A.
June.....	131	70	110	.137	.15	6,550	A.
July.....	70	22	39.9	.050	.06	2,450	A.
August.....	22	10	16.3	.020	.02	1,000	A.
September.....	22	10	15.1	.019	.02	898	A.
The year.....	30,000	10	954	1.18	16.07	691,000	
1907-8.							
October.....	22	15	17.7	.022	.03	1,090	A.
November.....	32	22	24.7	.031	.03	1,470	A.
December.....	2,740	32	197	.245	.28	12,100	B.
January.....	3,040	185	808	1.00	1.15	49,700	B.
February.....	8,600	295	1,390	1.73	1.87	80,000	B.
March.....	3,040	185	662	.822	.95	40,700	B.
April.....	185	78	130	.161	.18	7,740	B.
May.....	78	43	64.7	.080	.09	3,980	B.
June.....	43	10	27.6	.034	.04	1,640	B.
July.....	10	5	7.32	.0091	.01	450	B.
August.....	8	4	5.35	.0066	.008	329	B.
September.....	5	3	3.55	.0044	.005	211	B.
The year.....	8,600	3	278	.346	4.64	199,000	
1908-9.							
October.....	4	3	3.61	.0045	.005	222	B.
November.....	20	4	6.73	.0084	.009	400	B.
December.....	610	10	138	.171	.20	8,480	B.
January.....	28,800	56	7,370	9.16	10.56	453,000	B.
February.....	16,800	1,680	5,500	6.83	7.11	305,000	A.
March.....	2,460	604	1,180	1.47	1.70	72,600	B.
April.....	921	246	437	.543	.61	26,000	B.
May.....	203	106	137	.170	.20	8,420	B.
June.....	106	40	72.6	.090	.10	4,320	B.
July.....	40	13	23.5	.029	.03	1,440	B.
August.....	13	6	11.1	.014	.02	682	C.
September.....	15	6	10.6	.013	.01	631	C.
The year.....	28,800	3	1,240	1.54	20.55	881,000	
1909-10.							
October.....	19	13	16.2	.020	.02	996	C.
November.....	246	18	59.1	.073	.08	3,520	B.
December.....	12,900	89	745	.925	1.07	45,800	B.
January.....	12,000	100	1,120	1.39	1.60	68,900	B.
February.....	2,150	289	644	.800	.83	35,800	A.
March.....	4,900	150	762	.947	1.09	46,900	A.
April.....	585	150	300	.373	.42	17,900	A.
May.....	150	38	87.7	.109	.13	5,390	A.
June.....	38	15	26.3	.033	.04	1,560	A.

## Monthly discharge of Putah Creek at Winters, Cal., for 1905-1912—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.	
1909-10.							
July.....	15	2	7.85	0.0098	0.01	483	A.
August.....	8	2	5.27	.0066	.008	324	A.
September.....	3	1	2.67	.0033	.004	159	B.
The year.....	12,000	1	3.14	.391	5.30	228,000	
1910-11.							
October.....	8.7	1.2	3.24	.0040	.005	199	B.
November.....	9.4	5.5	7.98	.0099	.01	475	A.
December.....	73	9.4	34.7	.043	.06	2,130	A.
January.....	12,800	28	2,390	2.97	3.42	147,000	C.
February.....	3,890	442	1,520	1.89	1.97	81,600	B.
March.....	28,300	417	3,470	4.31	4.97	213,000	C.
April.....	1,830	274	535	.665	.74	31,800	C.
May 1-16.....	245	215	225	.280	.17	7,140	C.
The period.....						483,000	
1911-12.							
October.....	28	3	9.9	.012	.01	609	D.
November.....	35	8	15.6	.019	.02	898	D.
December.....	41	15	23.5	.029	.03	1,440	D.
January.....	4,530	25	238	.296	.34	14,600	C.
February.....	140	44	75.3	.094	.10	4,330	B.
March.....	2,180	38	392	.487	.56	24,100	C.
April.....	420	25	91.4	.114	.13	5,440	B.
May 1-12.....	327	89	178	.221	.10	4,240	B.
June 10-30.....	32	8	16.2	.020	.02	675	B.

## MISCELLANEOUS MEASUREMENTS.

The following miscellaneous measurements have been made on the Sacramento and its tributaries:

*Miscellaneous measurements of Sacramento River and minor tributaries.*

Date.	Stream.	Locality.	Discharge.
Apr. 6, 1879	Sacramento River.....	Butte City.....	<i>Sec.-ft.</i> 31,140
Aug. 2, 1878	.....do.....	Colusa, sec. 18.....	4,620
Aug. 5, 1878	.....do.....	Colusa, sec. 24.....	30,280
Apr. 4, 1879	.....do.....	Downstream side of highway bridge at Colusa.....	6,470
Oct. 15, 1911	.....do.....	Butte Slough.....	4,440
Aug. 13, 1878	.....do.....	Brannan Slough.....	12,000
Aug. 14, 1878	.....do.....	Moon's Ferry.....	5,020
Jan. 24, 1879	.....do.....	Jellys Ferry.....	4,152
Aug. 15, 1878	.....do.....	.....do.....	4,087
Aug. 17, 1878	.....do.....	.....do.....	4,105
Sept. 13, 1898	.....do.....	Iron Canyon, 4 miles above Red Bluff.....	5,187
Sept. 13, 1899	.....do.....	Balls Ferry bridge.....	4,455
Sept. 20, 1900	.....do.....	.....do.....	5,530
Oct. 2, 1901	.....do.....	Knights Landing, sec. 4.....	18,180
Sept. 14, 1902	.....do.....	.....do.....	18,860
Aug. 28, 1878	.....do.....	.....do.....	10,520
Aug. 31, 1878	.....do.....	.....do.....	4,970
Feb. 18, 1879	.....do.....	Knights Landing, sec. 29.....	6,100
Feb. 19, 1879	.....do.....	.....do.....	6,450
Apr. 1, 1879	.....do.....	.....do.....	6,100
May 12, 1879	.....do.....	.....do.....	6,450
Aug. 31, 1878	.....do.....	Grafton.....	6,100
Sept. 2, 1878	.....do.....	.....do.....	6,450
Oct. 16, 1911	.....do.....	.....do.....	6,100
Dec. 19, 1911	.....do.....	.....do.....	6,450
Oct. 16, 1911	.....do.....	.....do.....	6,100
Dec. 19, 1911	.....do.....	.....do.....	6,450

Miscellaneous measurements of Sacramento River and minor tributaries—Continued.

Date.	Stream.	Locality.	Discharge.
Jan. 30, 1912	Sacramento River	Grafton	Sec. ft.
Mar. 2, 1912	do	do	16,000
Mar. 27, 1912	do	do	8,800
Sept. 20, 1878	do	do	12,600
Sept. 23, 1878	do	Above mouth of Feather River	5,430
Sept. 25, 1878	do	do	do
Sept. 26, 1878	do	Below mouth of Feather River	6,180
Feb. 13, 1879	do	do	do
Feb. 15, 1879	do	Gray and Shaws	43,500
Feb. 17, 1879	do	do	40,550
May 16, 1879	do	do	39,730
Nov. 7, 1878	do	Above mouth of American River	7,410
Jan. 30, 1879	do	do	14,960
Feb. 1, 1879	do	do	do
May 21, 1879	do	do	26,000
July 14, 1879	do	do	13,000
Feb. 25, 1879	do	Freeport	45,360
Feb. 26, 1879	do	do	43,540
Mar. 1, 1879	do	do	43,530
Mar. 3, 1879	do	do	40,000
Mar. 10, 1879	do	do	58,080
Mar. 11, 1879	do	do	do
Mar. 13, 1879	do	do	70,620
Mar. 14, 1879	do	do	59,130
Mar. 18, 1879	do	do	57,480
Mar. 19, 1879	do	do	54,960
Mar. 20, 1879	do	do	56,000
Mar. 28, 1879	do	do	49,290
May 26, 1879	do	do	35,010
Oct. 9, 1878	do	Sacramento	6,425
May 22, 1879	do	do	39,000
July 14, 1879	do	do	15,000
Sept. 26, 1902	do	do	5,843
July 16, 1879	do	Sacramento Slough	7,000
Sept. 10, 1901	Sacramento River, Upper	1 mile above mouth of Pit River	242
Sept. 22, 1902	do	Bairds station	286
Aug. 9, 1904	do	do	429
Aug. 28, 1905	do	do	352
Oct. 9, 1906	do	do	315
Oct. 9, 1910	do	Bridge on wagon road from Sisson to Brown's ranch, sec. 29, T. 40 N., R. 4 W.	11
Aug. 13, 1904	Antelope Creek	Above all diversions near Red Bluff	53
Aug. 31, 1905	do	Near Red Bluff	45
Sept. 17, 1910	do	do	56
Aug. 22, 1911	do	do	50
Oct. 9, 1911	do	1/4 mile above dam, sec. 1, T. 29 N., R. 3 W.	83
Sept. 13, 1902	Battle Creek	Near mouth of canyon near Red Bluff	313
Aug. 11, 1904	do	Bridge near Balls Ferry	423
Aug. 29, 1905	do	do	329
Sept. 18, 1910	do	do	396
Oct. 4, 1910	do	do	405
Aug. 19, 1911	do	do	352
Sept. 29, 1911	Bear Creek	5 miles southeast of Balls Ferry	480
Sept. 19, 1910	do	2 miles north of Balls Ferry, sec. 15, T. 30 N., R. 3 W.	45
Oct. 3, 1910	do	do	38
Sept. 1, 1905	Canal, Millrace	Near Tehama	90
May 19, 1912	Brandy Creek	1/4 mile above mouth	34
Aug. 12, 1904	Canal, Stanford	Headwork near Vina	58
May 19, 1905	Canal, Valley Counties Power Co.'s	Centerville	23
Aug. 18, 1911	Canal	Sec. 20, T. 32 N., R. 1 W., near Basin Hollow	12
May 31, 1912	Churn Creek	NW 1/4 sec. 9, T. 31 N., R. 4 W.	12
Aug. 26, 1911	Clear Creek	500 feet above mouth of Brandy Creek, Stella post office	39
Do	Clover Creek	Above junction with Cow Creek, at Millville	3.1
Oct. 3, 1910	do	do	9.0
Oct. 12, 1911	Cottonwood Creek	7 miles above Cottonwood	28
Oct. 28, 1905	Cottonwood Creek, Middle Fork	Above junction of North and Middle Forks	9.1
Do	Cottonwood Creek, North Fork	do	5.9
Aug. 26, 1905	Cow Creek	Above Clover Creek, at Millville	61
Aug. 27, 1905	do	Below junction with Little Cow Creek, near Palo Cedro	61
Sept. 29, 1905	do	1 mile east of Millville, sec. 14, T. 31 N., R. 3 W.	70
Oct. 3, 1910	do	do	65

## Miscellaneous measurements of Sacramento River and minor tributaries—Continued.

Date.	Stream.	Locality.	Dis-charge.
Aug. 27, 1905	Cow Creek, Little.....	East of Palo Cedro.....	<i>Sec.-ft.</i> 4.5
Aug. 10, 1911	.....do.....	Bridge on stage road crossing on road from Oak Run to Buzzards Roost, sec. 4, T. 33 N., R. 1 W.	7
Oct. 2, 1910	.....do.....	.....do.....	12
Oct. 3, 1910	.....do.....	.....do.....	13
Aug. 18, 1911	Cow Creek, North Fork.....	Near Basin Hollow, sec. 16, T. 32 N., R. 3 W.	54
Sept. 19, 1910	.....do.....	.....do.....	42
Oct. 21, 1907	Cow Creek, Old.....	Sec. 12, T. 32 N., R. 1 W.	35.8
Sept. 20, 1910	.....do.....	.....do.....	4.5
June 24, 1907	Cow Creek, South Fork.....	Sec. 32, T. 32 N., R. 1 W.	88.8
Oct. 21, 1907	.....do.....	.....do.....	34.6
Aug. 12, 1904	Deer Creek.....	Below heading of Stanford Canal, near Vina.....	69
Sept. 1, 1905	.....do.....	4 miles from Vina.....	83
Aug. 24, 1911	.....do.....	8 miles northeast of Vina, sec. 23, T. 25 N., R. 1 W.	156
Sept. 12, 1910	.....do.....	.....do.....	116
Sept. 14, 1902	Ditch, Battle Creek.....	Balls Ferry Flour Mills.....	27
Aug. 27, 1905	Ditch, Clover Creek.....	3 miles above Millville.....	2.4
Aug. 29, 1905	Ditch, Mill.....	Near Balls Ferry.....	26
Aug. 11, 1911	Flume, Terry Lumber Co.'s.....	$\frac{1}{2}$ mile above Buzzards Roost.....	19
Aug. 12, 1904	Mill Creek.....	Above all diversions, near Tehama.....	160
Sept. 1, 1905	.....do.....	300 feet above head gate of Los Molinas ditch.....	122
Oct. 3, 1910	Oak Run Creek.....	Sec. 3, T. 31 N., R. 3 W.....	2.2
May 31, 1912	.....do.....	.....do.....	13
Sept. 23, 1900	Putah Creek.....	Devils Gate, 6 miles above Winters.....	4.4
May 31, 1912	Stillwater Creek.....	NW $\frac{1}{4}$ sec. 11, T. 31 N., R. 4 W.....	
Sept. 22, 1902	Soda Creek.....	Castle Crags.....	15
Oct. 9, 1910	Wagon Creek.....	Wagon road from Sisson to Brown's ranch, sec. 29, T. 40 N., R. 4 W.	38

## Miscellaneous measurements in Pit River drainage basin.

Date.	Stream.	Locality.	Dis-charge.
Sept. 9, 1901	Pit River.....	Silverthorn Ferry, near Copper City.....	<i>Sec.-ft.</i> 2,682
Sept. 27, 1902	.....do.....	.....do.....	2,508
Aug. 25, 1905	.....do.....	Near Copper City.....	3,107
Sept. 9, 1901	.....do.....	Pecks Bridge, sec. 21, T. 37 N., R. 3 E.....	2,230
Sept. 15, 1902	.....do.....	.....do.....	2,350
Sept. 9, 1903	.....do.....	.....do.....	2,617
Sept. 23, 1910	.....do.....	.....do.....	2,770
Sept. 15, 1902	.....do.....	Burney, $\frac{1}{2}$ mile below falls.....	209
Sept. 17, 1902	.....do.....	Bridge, above mouth of Fall River.....	208
Sept. 11, 1903	.....do.....	Pittville.....	30
Jan. 7, 1904	.....do.....	County bridge, Alturas.....	81
June 13, 1905	.....do.....	Bridge on county road east of Lookout.....	155
July 7, 1905	.....do.....	.....do.....	57
July 20, 1905	.....do.....	.....do.....	29
Aug. 19, 1905	.....do.....	.....do.....	9.9
Aug. 16, 1911	.....do.....	400 feet above highway bridge at Pittville, sec. 18, T. 37 N., R. 5 E.	36
Sept. 24, 1910	.....do.....	Bridge 300 feet south of Pittville, sec. 18, T. 37 N., R. 6 E.	31
Apr. 5, 1904	Ash Creek.....	Ash Valley.....	194
May 5, 1904	.....do.....	.....do.....	189
June 4, 1904	.....do.....	.....do.....	30
June 10, 1904	.....do.....	.....do.....	27
Sept. 27, 1910	Baker Creek.....	Near Henderson, sec. 24, T. 37 N., R. 1 W.....	16
Sept. 9, 1901	Burney Creek.....	.....do.....	177
Sept. 9, 1903	.....do.....	Lower end of Burney Valley, below Burney Falls.....	210
Sept. 25, 1910	.....do.....	$\frac{1}{2}$ miles above Burney post office.....	20
Do.....	.....do.....	Near junction with Pit River.....	246
Sept. 23, 1910	Cayton Creek.....	Near Cayton Valley.....	4.6
Sept. 24, 1910	Clark Creek.....	Near mouth.....	8.9
Sept. 14, 1904	Canyon Creek.....	Near Centerville.....	3.8
Aug. 15, 1911	Canal, Irrigation.....	Diverts from Hat Creek, above Hawkins ranch near Hat Creek.....	39.4
June 28, 1905	Cottonwood Creek.....	10 miles above Lakeview, Oreg.....	7.3
Aug. 16, 1904	Davis Creek.....	Near Davis Creek post office.....	2.4
May 13, 1911	Ditch, Anderson et al.....	At intake, Hat Creek.....	9.6
Do.....	.....do.....	.....do.....	7.4
Do.....	Ditch, Anderson et al., O. R. L. lateral.....	.....do.....	2.2

Miscellaneous measurements in Pit River drainage basin—Continued.

Date.	Stream.	Locality.	Dis-charge.
Sept. 17, 1904	Ditch, Corporation	Near Likely	Sec.-ft. 30
June 7, 1905	do	2 miles east of Likely	23
June 20, 1905	do	do	24
Sept. 6, 1905	do	do	29
Sept. 17, 1904	Ditch, Duke's	Near Likely	3.3
Sept. 23, 1904	do	do	8.7
June 7, 1905	do	do	13.9
June 20, 1905	do	do	9.8
June 8, 1905	Ditch, Ganstad's	2 miles east of Likely	6.9
July 2, 1905	do	do	8.7
June 13, 1905	Ditch, Gooch's	Above bridge at Lookout	12
May 13, 1911	Ditch, P. M. Honn	Crossing of Hat Creek road	4.8
Aug. 27, 1904	Ditch, M. Hugh's	Near Alturas	3
Do	Ditch, E. Lauer's	do	1.4
May 23, 1905	do	XL ranch, 9 miles north of Alturas	1.42
May 13, 1911	Ditch, H. Morris	300 feet below intake at Hat Creek	12.2
Do	Ditch, Olive Opdyke	600 feet below intake at Hat Creek	5.0
Do	Ditch, M. A. Reives	900 feet below intake at Hat Creek	12
Do	Ditch, L. H. Sullivan	300 feet below intake at Hat Creek	8.3
June 8, 1905	Ditch, Von Loam's	2 miles east of Likely	35
June 20, 1905	do	do	25
May 13, 1911	Ditch, H. M. Wilcox	Intake, Hat Creek	49
Sept. 9, 1901	Fall River	Fall River Bridge, near mouth	1,447
Sept. 16, 1902	do	do	1,543
Sept. 11, 1903	do	do	1,510
Sept. 23, 1910	do	Near Fall River Mills	1,470
Sept. 15, 1904	Fitz Hugh Creek	Near Alturas	2.7
July 2, 1905	do	Doten's ranch, 10 miles south of Alturas	1.8
July 25, 1905	do	do	1.4
Sept. 7, 1905	do	do	1.8
Sept. 16, 1905	do	do	2.8
Sept. 9, 1901	Hat Creek	Near mouth, at bridge near Carbon post office	627
Sept. 16, 1902	do	do	583
Sept. 10, 1903	do	do	657
Sept. 22, 1910	do	do	701
May 12, 1912	do	do	199
Sept. 8, 1903	Hatchet Creek	12 miles north of Hat Creek	10
Aug. 11, 1911	do	Near Montgomery	40
Sept. 25, 1910	do	Near Montgomery, sec. 24, T. 35 N., R. 1 W.	19
Sept. 26, 1910	do	On road from Burney to Montgomery Creek	37
May 17, 1912	do	On road from Henderson to Montgomery Creek	95
Sept. 7, 1903	Montgomery Creek	do	18
Sept. 26, 1910	do	Montgomery Creek post office	22
Aug. 12, 1911	Nelson Creek	½ mile above Henderson, sec. 31, T. 37 N., R. 1 E.	30
Sept. 27, 1910	do	do	23
May 16, 1912	do	do	76
Aug. 26, 1904	Pine Creek	Near Pine Creek post office	7
Aug. 5, 1904	do	do	22
Aug. 11, 1905	Pine Creek	7 miles east of Alturas	12.4
Aug. 22, 1905	do	do	11.3
Sept. 21, 1910	Rising River	Near Cassel post office	421
Oct. 1, 1905	do	do	12.2
Aug. 11, 1911	Roaring Creek	Near Montgomery, sec. 14, T. 35 N., R. 1 W.	18
Sept. 26, 1910	do	do	15
May 17, 1912	do	Upper road from Montgomery Creek to Henderson, sec. 6, T. 35 N., R. 1 E.	21
Do	Burgess Creek	do	7.9
Do	Richardson Creek	On upper road, sec. 7, T. 35 N., R. 1 E.	1.6
Do	Butter Creek	do	7
May 7, 1912	Hall Creek	On upper road, sec. 18, T. 35 N., R. 1 E.	2.5
Do	Spring Creek	do	1.2
June 12, 1904	Kush Creek	Round Valley	12
Aug. 30, 1904	do	do	7.6
July 18, 1905	do	do	5.6
Sept. 22, 1905	do	do	* 5.8
Sept. 23, 1902	Squaw Creek	Hirze Mountain	1,272
Sept. 26, 1902	do	Baird post office	1,356
May 25, 1911	do	½ mile above Winthrop	270
Nov. 17, 1910	do	Near Ydalpom	23
Apr. 2, 1911	do	do	557
Oct. 16, 1910	do	do	19
Nov. 17, 1910	do	do	23
Aug. 29, 1904	Willow Creek	Near Adin	5.6
Sept. 20, 1904	do	do	5
July 19, 1905	do	do	5.7
Sept. 21, 1905	do	do	4.4

*Miscellaneous measurements in McCloud River drainage basin.*

Date.	Stream.	Locality.	Dis-charge.
			<i>Sec.-ft.</i>
Sept. 9, 1901	McCloud River.....	$\frac{1}{2}$ mile above United States fishery.....	1096
Sept. 24, 1902	.....do.....	Vanardsdale clubhouse 1 mile above Squaw Creek.....	1325
Sept. 9, 1901	Squaw Creek.....	Copper City bridge.....	23
Sept. 24, 1902	.....do.....	Bridge, Vanardsville road.....	68
Sept. 27, 1902	.....do.....	Near mouth, Copper City.....	37
Aug. 26, 1905	.....do.....	500 feet below Copper City bridge.....	20

*Miscellaneous measurements in Stony Creek drainage basin.*

Date.	Stream.	Locality.	Dis-charge.
			<i>Sec.-ft.</i>
Sept. 21, 1900	Stony Creek.....	Near Stony Fork.....	20
Sept. 22, 1900	.....do.....	1 mile below Elk Creek.....	7.7
Sept. 18, 1906	.....do.....	Just above junction with Little Stony Creek.....	26
Oct. 13, 1906	.....do.....	.....do.....	21
June 12, 1907	.....do.....	.....do.....	157
June 3, 1908	.....do.....	.....do.....	106
June 9, 1908	.....do.....	.....do.....	82
Do.....	.....do.....	Rockville.....	88
June 10, 1908	.....do.....	.....do.....	99
June 12, 1907	Little Stony Creek.....	Above junction with Stony Creek.....	22
June 3, 1908	.....do.....	.....do.....	8.5
June 9, 1908	.....do.....	.....do.....	8.5
Nov. 21, 1901	Briscoe Creek.....	Above proposed dam site.....	10.4
June 12, 1907	.....do.....	1 mile above Elk Creek post office.....	12
June 3, 1908	.....do.....	.....do.....	4.0
June 10, 1908	.....do.....	.....do.....	3.1
June 12, 1907	Elk Creek.....	Above junction with Stony Creek.....	7.7
June 3, 1908	.....do.....	.....do.....	1.8
June 10, 1908	.....do.....	.....do.....	7
June 12, 1907	Salt Creek.....	2 miles below Elk Creek.....	2.4
June 3, 1908	.....do.....	.....do.....	.91
June 10, 1908	.....do.....	.....do.....	.25
Nov. 22, 1901	Grindstone Creek.....	.....do.....	38
June 12, 1907	.....do.....	$\frac{1}{2}$ mile above junction with Stony Creek.....	94
June 3, 1908	.....do.....	.....do.....	78
June 10, 1908	.....do.....	.....do.....	64
Sept. 1, 1899	Thomas Creek.....	Richfield Station.....	3.25
Aug. 3, 1900	Ditch, Hall.....	.....do.....	1.7
Sept. 30, 1900	.....do.....	100 feet above headgate.....	1.4
July 28, 1900	Ditch, Orland.....	.....do.....	2.3
Aug. 3, 1900	.....do.....	.....do.....	1.7
Sept. 30, 1900	.....do.....	.....do.....	1.3
Sept. 21, 1901	Ditch, Brown.....	.....do.....	13.8
Sept. 21, 1900	Ditch, Laux.....	.....do.....	.3
Sept. 26, 1900	Ditch, Stony Ford.....	Head gate.....	6.2
Sept. 21, 1900	Ditch, Welton.....	.....do.....	.3

*Miscellaneous measurements in Feather River drainage basin.*

Date.	Stream.	Locality.	Dis-charge.
			<i>Sec.-ft.</i>
Feb. 18, 1879	Feather River.....	Hennesseys.....	21,000
May 13, 1879	.....do.....	.....do.....	15,000
Feb. 19, 1879	.....do.....	Burts Ferry.....	12,000
Aug. 31, 1879	.....do.....	.....do.....	1,200
Nov. 12, 1879	.....do.....	.....do.....	2,700
Mar. 6, 1879	.....do.....	Marysville.....	56,000
Sept. 1, 1879	.....do.....	.....do.....	1,200
July 16, 1879	.....do.....	Near mouth.....	1,900
Aug. 27, 1879	.....do.....	Oroville.....	1,200
Sept. 1, 1879	.....do.....	Below mouth of Yuba River.....	1,800
Sept. 18, 1900	.....do.....	$\frac{1}{2}$ mile above Oroville Bridge.....	1,123
Sept. 7, 1901	.....do.....	500 feet above Oroville Bridge.....	1,220
June 11, 1905	.....do.....	2 miles below Bidwell Bar, above junction with North Fork.....	1,525
July 25, 1905	.....do.....	.....do.....	410

Miscellaneous measurements in Feather River drainage basin—Continued.

Date.	Stream.	Locality.	Dis-charge.
Aug. 19, 1905	Feather River.....	2 miles below Bidwell Bar, above junction with North Fork.	Sec.-ft. 256
Sept. 17, 1905	do.....	do.....	279
Sept. 25, 1905	do.....	Lower end of Big Meadows near Prattville.	601
Sept. 7, 1901	Feather River, North Fork.....	Huffs Bar in Big Bend.	946
Sept. 9, 1902	do.....	do.....	595
Sept. 5, 1902	do.....	Bridge, lower end of Indian Valley.	220
Do.....	do.....	Iron bridge, 1/4 mile below junction of east and west branches.	109
Sept. 8, 1902	do.....	Bidwell's sawmill, lower end of Big Meadows.	669
Sept. 29, 1905	do.....	Bridge on Prattville-Red Bluff road.	52
Aug. 2, 1905	do.....	do.....	17.4
Aug. 30, 1905	do.....	do.....	12.4
Oct. 4, 1905	do.....	do.....	11.4
May 23, 1906	do.....	do.....	91
July 10, 1906	do.....	do.....	117
June 30, 1905	do.....	Olsen's ranch, 8 miles northwest of Prattville.	286
Aug. 4, 1905	do.....	do.....	188
Aug. 29, 1905	do.....	do.....	146
Oct. 3, 1905	do.....	do.....	128
Mar. 1, 1906	do.....	do.....	164
May 22, 1906	do.....	do.....	805
July 10, 1906	do.....	do.....	647
Aug. 30, 1905	do.....	Above junction with Warner Creek.	84
Oct. 3, 1905	do.....	do.....	64
May 23, 1906	do.....	do.....	506
July 11, 1906	do.....	do.....	323
Sept. 29, 1910	do.....	do.....	766
Sept. 7, 1901	Feather River, North Fork, West Branch of.	1/2 mile above Ganzners. Cherokee Pipe Crossing, near Cherokee.	33
Sept. 4, 1902	do.....	300 feet above Yankee Hill Bridge.	27
Sept. 9, 1902	do.....	1/4 mile below bridge, Bunnell Hotel, Prattville.	327
Sept. 8, 1902	Feather River, North Fork, East Branch of.	Hamilton Bridge, Big Meadows.	163
Sept. 9, 1902	Feather River, North Fork, Big Spring Branch of.	1 mile below boathouse, Big Meadows.	64
June 13, 1905	do.....	Near mouth.	56
July 5, 1905	do.....	do.....	65
Aug. 8, 1905	do.....	do.....	69
Sept. 1, 1905	do.....	do.....	50
Dec. 16, 1905	do.....	do.....	61
June 1, 1906	do.....	do.....	150
July 6, 1906	do.....	do.....	56
Aug. 7, 1906	do.....	do.....	61
July 5, 1905	Feather River, North Fork, Hamilton Branch of.	Below junction with Clear Creek.	108
Aug. 8, 1905	do.....	do.....	79
Sept. 1, 1905	do.....	do.....	93
Oct. 2, 1905	do.....	do.....	83
Dec. 15, 1905	do.....	do.....	74
June 1, 1906	do.....	do.....	498
July 6, 1906	do.....	do.....	250
Aug. 7, 1906	do.....	do.....	139
June 23, 1905	do.....	Below junction with Rock Creek.	169
Sept. 1, 1906	do.....	do.....	232
June 12, 1905	Feather River, North Fork, Prattville Branch of.	800 feet above junction with North Fork.	186
July 7, 1905	do.....	do.....	196
Aug. 14, 1905	do.....	do.....	180
Sept. 2, 1905	do.....	do.....	179
Jan. 5, 1906	do.....	do.....	147
June 29, 1906	do.....	do.....	303
Aug. 3, 1906	do.....	do.....	227
July 7, 1905	Feather River, North Fork, Chester Branch of.	Wagon bridge at Chester.	35
Aug. 5, 1905	do.....	do.....	23
Aug. 31, 1905	do.....	do.....	21
Oct. 4, 1905	do.....	do.....	23
Mar. 1, 1906	do.....	do.....	48
June 23, 1906	do.....	do.....	95
July 11, 1906	do.....	do.....	70
Sept. 5, 1906	do.....	do.....	45
Sept. 4, 1902	Feather River, Middle Fork.	Above mouth of Nelson Creek.	59
Sept. 6, 1902	do.....	Mouth.	215
Aug. 12, 1905	do.....	1/2 mile above junction with Grizzly Creek.	5
Sept. 10, 1905	do.....	Just above mouth of Mohawk Creek.	1.5
Sept. 20, 1910	do.....	Opposite Langhorsts.	64
Oct. 3, 1910	do.....	1/2 mile above Little North Fork.	184
Oct. 4, 1910	do.....	Western Pacific Railroad bridge.	230
Sept. 18, 1910	do.....	Bidwells Bar.	439
Sept. 3, 1902	Feather River, South Fork.	Little Grass Valley.	1

*Miscellaneous measurements in Feather River drainage basin—Continued.*

Date.	Stream.	Locality.	Dis-charge.
Sept. 6, 1902	Feather River, South Fork.	Bidwell Bar	Sec.-ft. 216
Do.	do.	Enterprise	1
June 11, 1905	do.	Near Enterprise	246
July 25, 1905	do.	do.	64
Aug. 18, 1905	do.	do.	48
Sept. 17, 1905	do.	do.	34
Sept. 18, 1911	do.	Near Enterprise, sec. 1, T. 19 N., R. 6 E.	2.2
Sept. 18, 1910	do.	Enterprise	13
Sept. 19, 1910	do.	Little Grass Valley	3
July 31, 1905	Bailey Creek	Near Prattville, just above mouth	2.6
May 23, 1906	do.	do.	50
Sept. 5, 1906	do.	do.	3.3
Sept. 11, 1906	Berry Creek	Bridge at Berrycreek P. O.	8
Sept. 27, 1910	do.	60 feet above mouth	5
Sept. 7, 1902	Butt Valley Creek	Near Butt Valley Hotel	27
July 11, 1905	Butt Creek	Bridge on Prattville-Sterling road	21
Mar. 27, 1906	do.	do.	156
June 21, 1906	do.	do.	142
July 20, 1906	do.	do.	54
Sept. 24, 1910	Bucks Creek	Near mouth	19
Sept. 6, 1902	Canal, Palermo.	Enterprise	30
Sept. 18, 1911	do.	do.	37
Sept. 18, 1910	do.	do.	34
July 5, 1905	Clear Creek	Just above mouth	29
Aug. 8, 1905	do.	do.	28
Sept. 1, 1905	do.	do.	27
Sept. 25, 1910	Camp Creek	At wagon bridge	5
Sept. 24, 1910	Chip Creek	At mouth	22
Sept. 9, 1902	Dotta Spring	Near mouth, Big Meadows	109
June 12, 1905	do.	do.	50
July 3, 1905	do.	do.	99
Aug. 5, 1905	do.	do.	84
Sept. 2, 1905	do.	do.	89
Oct. 18, 1905	do.	do.	90
Dec. 14, 1905	do.	do.	77
June 21, 1906	do.	do.	122
Aug. 3, 1906	do.	do.	94
Aug. 21, 1906	Ditch, Flournoy	Near Genesee	9.5
Aug. 20, 1906	Ditch, Horselkus	Near Genesee, 1½ miles southwest	5
Sept. 27, 1910	French Creek	Near railroad bridge	28
Dec. 17, 1905	Grizzly Creek	2½ miles west of Beckwith	3.1
Sept. 26, 1910	do.	200 feet above mouth	18
Aug. 20, 1906	Grizzly Creek, Little	1½ miles southwest of Genesee	14.7
June 28, 1905	Hot Springs Valley Creek	Just above junction with Warner Creek	44
Aug. 2, 1905	do.	do.	30
Aug. 30, 1905	do.	do.	28
Oct. 4, 1905	do.	do.	25
May 26, 1906	do.	do.	117
July 11, 1906	do.	do.	80
Sept. 4, 1906	do.	do.	35
June 16, 1905	Indian Creek	Just above mouth	326
Sept. 8, 1906	do.	do.	101
Dec. 14, 1906	do.	1½ miles below Crescent Mills	76
Aug. 21, 1906	do.	Above junction with Red Clover Creek	3.8
Sept. 11, 1911	do.	Taylorville	52
Sept. 23, 1910	do.	At ford near mouth	212
Do.	do.	150 yards above mouth	224
Sept. 29, 1910	do.	At mouth	204
Sept. 21, 1910	do.	Near Crescent Mills	67
June 28, 1905	King Creek	½ mile above junction with Warner Creek	66
Aug. 2, 1905	do.	do.	29
Aug. 30, 1905	do.	do.	18
Oct. 4, 1905	do.	do.	12.6
May 22, 1906	do.	do.	151
July 11, 1906	do.	do.	117
Oct. 3, 1910	Little North Fork	At mouth	23
Sept. 11, 1911	Mill race, Taylorville	500 feet below intake at Taylorville	33
Sept. 22, 1910	Mill Creek	Above wagon bridge	9
Sept. 24, 1910	Milk Ranch Creek	Below wagon bridge	5
Sept. 10, 1905	Mohawk Creek	Just above junction with Middle Fork of Feather River	20
Sept. 4, 1902	Nelson Creek	Just above mouth	33
Sept. 20, 1910	do.	Above wagon bridge	51
Aug. 22, 1906	North Arm Creek	1½ miles north of Taylorville	5.1
Aug. 21, 1906	Red Clover Creek	Above diversion of Flournoy's ditch	21
June 24, 1905	Rock Creek	Bridge on Prattville-Susanville road	12
July 5, 1905	do.	do.	7.4
Aug. 8, 1905	do.	do.	5
Sept. 1, 1905	do.	do.	2.1
Oct. 2, 1905	do.	do.	1.5
Dec. 15, 1905	do.	do.	0.5

*Miscellaneous measurements in Feather River drainage basin—Continued.*

Date.	Stream.	Locality.	Dis-charge.
June 1, 1906	Rock Creek .....	Bridge on Prattville-Susanville road.....	<i>Sec.-ft.</i> 85
July 6, 1906	do.....	do.....	25
Aug. 7, 1906	do.....	do.....	25
Sept. 25, 1910	do.....	At mouth.....	5.5
Sept. 4, 1902	Spanish Creek.....	"Pocket Bridge," near Quincy.....	28
Sept. 9, 1906	do.....	do.....	44
Sept. 21, 1910	do.....	do.....	41
Oct. 22, 1911	do.....	Near Keddle.....	69
Aug. 21, 1906	Squaw Queen Creek.....	500 feet above junction with Clover Creek.....	2.3
Sept. 12, 1902	Tunnel, Big Bend.....	Above Huff Bar.....	315
Aug. 22, 1906	Ward Creek.....	1½ miles above junction with Indian Creek.....	8.1
June 30, 1905	Warner Creek.....	Bridge on Prattville-Red Bluff road.....	140
Aug. 5, 1905	do.....	do.....	81
Aug. 29, 1905	do.....	do.....	63
Oct. 3, 1905	do.....	do.....	61
May 23, 1906	do.....	do.....	320
July 10, 1906	do.....	do.....	268
Sept. 4, 1906	do.....	do.....	95
June 29, 1905	Willow Creek.....	Ford on Prattville-Red Bluff road.....	4.1
Aug. 2, 1905	do.....	do.....	4
Oct. 4, 1905	do.....	do.....	2.5
May 23, 1906	do.....	do.....	40
Aug. 23, 1906	Wolf Creek.....	Above junction with North Canyon.....	1.8
Sept. 23, 1910	Yellow Creek.....	Near mouth.....	106

*Miscellaneous measurements in Yuba River drainage basin.*

Date.	Stream.	Locality.	Dis-charge.
Oct. 7, 1898	Yuba River.....	.....	<i>Sec.-ft.</i> 0
Sept. 1, 1902	do.....	Above bridge 4 miles below Smartville.....	487
July 3, 1900	Yuba River, North Fork.....	Above Yuba Power Co.'s dam.....	606
July 6, 1900	do.....	do.....	567
July 17, 1900	do.....	do.....	438
July 18, 1900	do.....	do.....	419
July 27, 1900	do.....	do.....	366
July 29, 1900	do.....	do.....	371
July 31, 1900	do.....	do.....	364
Aug. 9, 1900	do.....	do.....	328
Aug. 10, 1900	do.....	do.....	322
Aug. 29, 1900	do.....	do.....	282
Aug. 30, 1900	do.....	do.....	285
Sept. 16, 1910	do.....	Downieville.....	421
Sept. 12, 1910	do.....	Bullards Bar.....	195
Sept. 1, 1902	do.....	Below Bay Counties Power Co.'s dam.....	2
Sept. 5, 1905	do.....	Bridge at Goodyears Bar.....	149
Sept. 6, 1905	do.....	100 yards above junction with Middle Fork.....	6.70
Do.....	do.....	30 yards below junction with Middle Fork.....	27
Do.....	do.....	Wagon bridge at Downieville.....	139
Do.....	Yuba River, North Fork of North Fork.....	10 yards above junction with North Fork of Yuba River.....	40
Sept. 7, 1905	do.....	½ mile above junction with South Fork of North Fork.....	23
Do.....	Yuba River, South Fork of North Fork.....	½ mile above junction with North Fork of North Fork.....	1.70
Sept. 6, 1905	Yuba River, East Fork of North Fork.....	10 yards above junction with North Fork of North Fork.....	17
July 1, 1900	Yuba River, Middle Fork... ..	Freemans Bridge.....	191
July 3, 1900	do.....	do.....	180
July 4, 1900	do.....	do.....	185
July 7, 1900	do.....	do.....	162
July 29, 1900	do.....	do.....	109
Aug. 11, 1900	do.....	do.....	79
Aug. 12, 1900	do.....	do.....	78
Aug. 29, 1900	do.....	do.....	69
Aug. 30, 1900	do.....	do.....	68
Sept. 18, 1900	do.....	do.....	64
Sept. 12, 1910	do.....	do.....	41
Aug. 30, 1902	do.....	½ mile below Delhi mine.....	52
Sept. 1, 1902	do.....	300 feet below Freemans Bridge.....	64
Sept. 4, 1905	do.....	½ mile above Freemans Bridge, near Nevada City.....	64
Aug. 29, 1902	Yuba River, South Fork.....	Edwards Bridge.....	59
Aug. 30, 1902	do.....	Bridgeport Bridge.....	55
Aug. 18, 1911	do.....	Emigrant Gap.....	2

*Miscellaneous measurements in Yuba River drainage basin—Continued.*

Date.	Stream.	Locality.	Dis-charge.
Sept. 10, 1910	Yuba River, South Fork	Washington	<i>Sec.-ft.</i> 41
Sept. 1, 1902	Flume	Below Bay Counties Power Co.'s dam	221
Sept. 3, 1905	do	do	69
Aug. 30, 1902	Eureka Lake Co.'s ditch	North Columbia	9
Do	Excelsior Mining & Irrigation Co.'s canal	Pleasant Valley	32
Do	North Bloomfield ditch	North Columbia	7
Dec. 9, 1910	Davis ditch	Downieville	3.5
Sept. 6, 1905	do	Below head gate near Downieville	2.8
Do	Wheeler flume	Head gate near Downieville	4.4
Sept. 14, 1910	Rock Creek	Wading, above foot bridge below junction of Woodruff Creek, near Goodyear Bar, Cal.	.6
Oct. 31, 1910	Woodruff Creek	Wading, about 50 feet above mouth, near Goodyear Bar, Cal.	.7
Sept. 14, 1910	Goodyear Creek	Wading, at Goodyear Bar, Cal.	7.1
Willow Creek	Mouth, at Bullards Bar, Cal.	.4	
Do	Little Oregon Creek	do	2.5
Sept. 7, 1905	Mining Co.'s flume	Near Sierra City	23

*Miscellaneous measurements in Bear River drainage basin.*

Date.	Stream.	Locality.	Dis-charge.
Dec. 16, 1878	Bear River	Wire bridge	<i>Sec.-ft.</i> 10
Feb. 22, 1879	do	do	6,500
Sept. 6, 1879	do	do	15
Oct. 20, 1879	do	1 mile below wire bridge	12
Sept. 6, 1879	do	Wheatland	15
Sept. 17, 1900	do	1 mile south of Wheatland	12
Aug. 25, 1902	do	Below dam of South Yuba Water Co.	16
Sept. 1, 1905	do	$\frac{1}{2}$ mile below intake of South Yuba Mining Co.'s canal, near Colfax	26
Do	do	100 yards above mouth of Green Horn River near Colfax	43
Sept. 28, 1911	Canal, Bear River	Near Colfax, sec. 22, T. 15 N., R. 9 E.	46
Aug. 25, 1902	Ditch, old mining	$\frac{1}{2}$ mile below headworks of South Yuba Water Co.'s dam	33
Aug. 26, 1902	do	Near Auburn	23
Sept. 1, 1905	South Yuba Mining Co.'s ditch	2 $\frac{1}{2}$ miles east of Colfax	30
Do	Green Horn River	75 yards above junction with Bear River	6.8

*Miscellaneous measurements in Cache Creek drainage basin.*

Date.	Stream.	Locality.	Dis-charge.
June 25, 1900	Cache Creek	Rumsey	<i>Sec.-ft.</i> 189
June 29, 1900	do	do	187
July 20, 1900	do	do	92.6
Aug. 27, 1900	do	do	27.6
Sept. 23, 1900	do	Rumsey road bridge	3.8
June 27, 1900	do	Bear Creek	156
June 28, 1900	do	Capay	162
July 21, 1900	do	do	88.1
June 29, 1900	do	North Fork	161
Do	do	Tancred	168
July 20, 1900	do	do	89.4
June 29, 1900	do	5 miles above Capay	174
June 30, 1900	do	Esparto	153
Do	do	Madison bridge	141
July 23, 1900	do	do	54.6
July 3, 1900	do	Stevens' bridge	75.8
July 24, 1900	do	do	20.4
July 3, 1900	do	Nelson's bridge	53
Do	do	Cache Creek Sink	51.3
July 17, 1900	do	Clear Lake	107
Aug. 20, 1900	do	do	39.6

Miscellaneous measurements in Cache Creek drainage basin—Continued.

Date.	Stream.	Locality.	Dis-charge.
July 23, 1900	Cache Creek	Moore's dam	Sec.-ft. 69
Sept. 24, 1900	do.	Road bridge crossing near Lower Lake	4.7
Sept. 25, 1902	do.	Yolo bridge, 5 miles from Woodlands	56
June 29, 1900	Cache Creek, North Fork	Mouth	5.1
June 30, 1900	do.	Above Long Valley Creek	6.4
July 2, 1900	do.	Above Bartlett Creek	3.3
July 8, 1900	do.	Little Indian Valley	2.8
July 2, 1900	Bartlett Creek	Mouth	1.4
June 27, 1900	Bear Creek	do.	1.8
July 3, 1900	Canal, Tule	Opposite Woodland	29.7
July 12, 1905	Clover Creek	1/4 mile above Upper Lake	2.7
July 11, 1905	Cole Creek	1/4 mile below Kelseyville	4.3
July 23, 1900	Ditch, Adams	do.	6.8
July 19, 1905	Ditch, Capay	Head of ditch	61
Do.	do.	do.	33
June 30, 1900	Ditch, Moore	do.	60.5
July 24, 1900	do.	do.	49.4
June 3, 1905	do.	Walker bridge, near Woodland	80
Do.	do.	do.	172
June 17, 1905	do.	do.	60
Do.	do.	do.	101
Do.	do.	do.	162
June 21, 1905	do.	do.	122
Aug. 2, 1905	do.	do.	99
July 16, 1900	Kelsey Creek	2 miles above Kelseyville	4.6
July 11, 1905	do.	3/4 miles above Kelseyville	11.6
Oct. 29, 1911	do.	Kelseyville	0.0
June 30, 1900	Long Valley Creek	Mouth	2.9
July 12, 1905	Middle Creek	1 1/2 miles above Upper Lake	4.0
July 12, 1900	Middle and Clover Creeks	Upper Lake	1.5
Do.	do.	do.	0.5
Oct. 30, 1911	Scotts Creek	8 miles above Clear Lake	.25
July 2, 1900	Seigler Creek	Mouth at Lower Lake	1.5
June 30, 1900	Stanton Creek	Mouth	.5
Do.	Wolf Creek	1 mile above mouth	

Miscellaneous measurements in American River drainage basin.

Date.	Stream.	Locality.	Dis-charge.
Dec. 28, 1878	American River	4 miles above Folsom	Sec.-ft. 570
July 14, 1879	do.	do.	4,000
Jan. 24, 1979	do.	Sacramento	13,000
Feb. 23, 1879	do.	Near mouth	10,000
May 21, 1879	do.	do.	10,000
Sept. 7, 1898	do.	Folsom	34.5
Oct. 7, 1898	American River, North Fork	Head of North Fork ditch	16
Sept. 16, 1899	do.	1 mile above junction with South Fork	86.1
Sept. 14, 1900	do.	do.	235
Aug. 21, 1902	do.	5 miles above junction with South Fork	204
Aug. 23, 1902	do.	do.	145
Aug. 27, 1902	do.	do.	121
Aug. 25, 1902	do.	Below junction with Middle Fork	188
Do.	do.	200 feet above Iowa Hill road bridge	59
Do.	do.	2 1/2 miles above Auburn	78
Aug. 26, 1902	do.	300 feet above junction with Rubicon	18
Sept. 14, 1904	do.	200 feet above junction with Middle Fork	25
Aug. 21, 1905	do.	500 feet above junction with Middle Fork	69
Sept. 14, 1900	American River, South Fork	400 yards above junction with Middle Fork	65
Sept. 14, 1901	do.	Iron road bridge near mouth	80.5
Aug. 21, 1902	do.	Near mouth	40
Aug. 23, 1902	do.	do.	87
Sept. 13, 1901	do.	2 miles above mouth	102
Sept. 18, 1901	do.	Riverton	25
Aug. 22, 1902	do.	do.	16
Sept. 19, 1901	do.	100 feet above Riverton stone bridge	11
Aug. 21, 1902	do.	Mosquito Bar	69
Do.	do.	Chilli Bar	105
Aug. 20, 1905	do.	Chilli Bar Bridge, 3 miles from Placerville	100
Sept. 12, 1904	do.	do.	76
Aug. 25, 1905	do.	Morman Island Bridge, 4 miles above Folsom	82
Oct. 24, 1912	do.	1/2 mile above Silver Fork	34
Aug. 25, 1902	American River, Middle Fork	1 mile northwest of Pacific	11
Aug. 21, 1905	do.	Just above mouth	110
Do.	do.	400 yards above mouth	98

*Miscellaneous measurements in American River drainage basin—Continued.*

Date.	Stream.	Locality.	Dis-charge.
			<i>Sec.-ft.</i>
Sept. 14, 1904	American River, Middle Fork	$\frac{1}{2}$ mile above Auburn bridge . . . . .	130
Aug. 24, 1905	American River, Silver Fork.	Near mouth . . . . .	19.64
Aug. 21, 1902	Big Canyon . . . . .	Junction with South Fork of American River . . . . .	5
May 12, 1903	Canal, Folsom . . . . .	500 feet below heading . . . . .	1,406
Aug. 22, 1902	Canal, Negro Hill . . . . .	Below dam at Salmon Falls . . . . .	8
Aug. 26, 1902	Canal, North Fork . . . . .	Near Folsom . . . . .	14
Aug. 25, 1902	Canal, South Yuba Water Co.'s power.	$\frac{1}{2}$ mile northwest of Colfax . . . . .	35
Sept. 18, 1901	Ditch El Dorado . . . . .	Above Riverton . . . . .	23
Aug. 24, 1905	. . do . . . . .	Heading . . . . .	56
Aug. 26, 1902	Ditch, mining . . . . .	Takes water from North Fork of Middle Fork . . . . .	11
Sept. 16, 1899	Ditch, Natoma . . . . .	. . . . .	20
Sept. 14, 1900	. . do . . . . .	3 miles above Folsom . . . . .	35
Aug. 19, 1902	. . do . . . . .	Blue Ravine mine . . . . .	40
. . do . . . . .	. . do . . . . .	Natoma Vineyard Co.'s lateral . . . . .	8
Aug. 22, 1902	. . do . . . . .	Below dam at Salmon Falls . . . . .	29
Sept. 16, 1899	Ditch, North Fork . . . . .	2 $\frac{1}{2}$ miles above Folsom . . . . .	19.6
Sept. 14, 1900	. . do . . . . .	. . do . . . . .	11.8
Jan. 6, 1904	. . do . . . . .	. . do . . . . .	32
Aug. 23, 1902	Ditch, Placerville . . . . .	1 mile from Pacific post office . . . . .	30
Aug. 26, 1902	Rubicon . . . . .	300 feet above junction with Middle Fork . . . . .	42
Aug. 22, 1902	Silver Creek . . . . .	150 feet above junction with South Fork of Silver Creek . . . . .	30
Aug. 26, 1905	. . do . . . . .	. . do . . . . .	14.9
Sept. 13, 1901	Silver Creek, South Fork . . . . .	. . do . . . . .	28
Aug. 22, 1902	. . do . . . . .	300 feet above mouth . . . . .	12
Aug. 26, 1905	. . do . . . . .	200 feet above mouth . . . . .	6.3

## INDEX.

A.	Page.	American River (North Fork)—Continued.	Page.
Accuracy of measurements, degree of.....	34-35	(near) Colfax, Cal.:	
Acknowledgments to those aiding.....	9-10	description.....	300
Acre-foot, definition of.....	32	discharge.....	300
Adin, Cal.,		discharge, daily.....	301-302
Ash Creek at:		discharge, monthly.....	302
description.....	107	gage heights.....	301
discharge.....	107-108	(at) Iowa Hill bridge:	
discharge, daily.....	109-110	discharge.....	393
discharge, monthly.....	111	(near) Middle Fork:	
gage heights.....	108-109	discharge.....	393
Willow Creek near:		(at) Rubicon River:	
discharge.....	387	discharge.....	393
Alturas, Cal.,		(near) South Fork:	
ditches near:		discharge.....	393
discharge.....	387	American River (South Fork)—	
Fitz Hugh Creek near:		(at) Chilli Bar:	
discharge.....	387	discharge.....	393
Pine Creek near:		(at) Kyburz, Cal.:	
discharge.....	387	description.....	333
Pit River at:		discharge, daily.....	333
discharge.....	386	discharge, monthly.....	334
American Basin, location and flood capacity of.....	13-14	(at) Kyburz, Cal. (below Silver Fork):	
American River, basin of, miscellaneous measurements.....	393-394	description.....	334
description of.....	24-25	discharge, daily.....	334
Sacramento River at:		discharge, monthly.....	335
discharge.....	385	(near) Kyburz, Cal.:	
American River—		description.....	335
(at) Fair Oaks, Cal.:		discharge, daily.....	336
description.....	302-303	(at) Mormon Island Bridge, Cal.:	
discharge.....	303-304	discharge.....	393
discharge, daily.....	308-312	(at) Mosquito Bar, Cal.:	
discharge, monthly.....	312-314	discharge.....	393
gage heights.....	304-308	(near) mouth:	
(near) Folsom, Cal.:		discharge.....	393
discharge.....	393	(near) Pacific, Cal.:	
(near) mouth:		discharge.....	393
discharge.....	393	(near) Placerville, Cal.:	
(at) Sacramento, Cal.:		description.....	336
discharge.....	393	discharge.....	336
American River (Middle Fork)—		discharge, daily.....	337-338
(near) Auburn, Cal.:		discharge, monthly.....	338
discharge.....	394	gage heights.....	337
(near) East Auburn, Cal.:		(at) Riverton, Cal.:	
description.....	314	discharge.....	393
discharge.....	314	(near) Silver Fork, Cal.:	
discharge, daily.....	315	discharge.....	393
discharge, monthly.....	316	Antelope Creek—	
gage heights.....	315	(near) Red Bluff, Cal.:	
(at) mouth:		discharge.....	385
discharge.....	393	Antler, Cal.,	
American River (North Fork)—		Sacramento River at:	
(near) Auburn, Cal.:		description.....	42
discharge.....	393	discharge.....	42
		discharge, daily.....	43
		discharge, monthly.....	44
		gage heights.....	42-43

Ash Creek—			
(at) Adin, Cal.:	Page.		
description .....	107		
discharge .....	107-108		
discharge, daily .....	109-110		
discharge, monthly .....	111		
gage heights .....	108-109		
(at) Ash Valley, Cal.:			
discharge .....	386		
Auburn, Cal.,			
American River (Middle Fork) near:			
discharge .....	394		
American River (North Fork) at:			
discharge .....	393		
ditch near:			
discharge .....	392		
	B.		
Bailey Creek—			
(near) Prattville, Cal.:			
discharge .....	390		
Baird, Cal.,			
McCloud River at:			
description .....	135		
discharge .....	135		
discharge, daily .....	137		
discharge, monthly .....	138		
gage heights .....	136		
Squaw Creek at:			
discharge .....	387		
Sacramento River at:			
discharge .....	385		
Baker Creek—			
(near) Henderson, Cal.:			
discharge .....	386		
Balls Ferry, Cal.,			
Battle Creek near:			
discharge .....	385		
Battle Creek ditch near:			
discharge .....	386		
Bear Creek near:			
discharge .....	385		
Sacramento River near:			
discharge .....	384		
Bartlett Creek, Cal.,			
Cache Creek (North Fork) at:			
discharge .....	393		
Bartlett Creek—			
(at) mouth:			
discharge .....	393		
Basin Hollow, Cal.,			
Cow Creek (North Fork) near:			
discharge .....	386		
North Fork canal near:			
discharge .....	385		
Battle Creek—			
(near) Balls Ferry, Cal.:			
discharge .....	385		
Battle Creek ditch—			
(near) Balls Ferry, Cal.:			
discharge .....	386		
Bay Counties Power Co. dam, Cal.,			
flume of:			
discharge .....	392		
Yuba River (North Fork) at:			
discharge .....	391		
Bear Creek, Cal.,			
Cache Creek at:	Page.		
discharge .....	392		
Bear Creek (of Cache Creek basin)—			
(at) mouth:			
discharge .....	393		
Bear Creek (of Sacramento River basin)—			
(near) Balls Ferry, Cal.:			
discharge .....	385		
(at) Millville, Cal.:			
description .....	147		
discharge .....	147		
gage heights .....	147-148		
Bear River, basin of, miscellaneous measure-			
ments .....	392		
description of .....	24		
(at or near) bridge:			
discharge .....	392		
(near) Colfax, Cal.:			
description .....	287-288		
discharge .....	288, 392		
gage heights .....	288		
(near) South Yuba Co. dam:			
discharge .....	392		
(at) Van Trent, Cal.:			
description .....	289-290		
discharge .....	290		
discharge, daily .....	294-298		
discharge, monthly .....	298-300		
gage heights .....	291-294		
(at or near) Wheatland, Cal.:			
discharge .....	392		
Beckwith, Cal.,			
Grizzly Creek near:			
description .....	243-244		
discharge .....	244, 390		
discharge, daily .....	245		
discharge, monthly .....	245		
gage heights .....	244		
Bennett, S. G., work of .....	10		
Berry Creek—			
(at) Berry Creek, Cal.:			
discharge .....	390		
(at) mouth:			
discharge .....	390		
Bidwell Bar, Cal.,			
Feather River at or near:			
discharge .....	388-389		
Feather River (Middle Fork) at:			
discharge .....	389		
Feather River (South Fork) at:			
discharge .....	390		
Bieber, Cal.,			
Pit River near:			
description .....	79		
discharge .....	79-80		
discharge, daily .....	83-85		
discharge, monthly .....	85-86		
gage heights .....	80-82		
Big Bend (near Oroville), Cal.,			
Feather River (North Fork) at:			
description .....	194-195		
discharge .....	195, 389		
discharge, daily .....	197-200		
discharge, monthly .....	201-202		
gage heights .....	196-197		
power dam, view of .....	20		

<b>Big Canyon—</b>	
(near) mouth:	Page.
discharge.....	394
<b>Big Meadows, Cal.,</b>	
Dotta Spring at:	
discharge.....	390
Feather River (North Fork) at:	
discharge.....	389
Feather River (North Fork), Big Spring	
Branch of, near:	
discharge.....	389
Feather River (North Fork), East	
Branch of, at:	
discharge.....	389
Big Spring Branch of North Fork of Feather	
River. See Feather River (North	
Fork), Big Spring Branch.	
<b>Blue Ravine mine,</b>	
ditch of:	
discharge.....	394
<b>Brandy Creek—</b>	
near mouth:	
discharge.....	385
<b>Brannan Slough, Cal.,</b>	
Sacramento River at:	
discharge.....	384
<b>Bridge, stream measurement from, view of..</b>	31
<b>Bridgeport, Cal.:</b>	
Yuba River (South Fork) at:	
discharge.....	391
<b>Briscoe Creek—</b>	
(near) dam site:	
discharge.....	388
(near) Elk Creek, Cal.:	
discharge.....	388
<b>Bucks Creek—</b>	
(near) mouth:	
discharge.....	390
<b>Bullards Bar, Cal.,</b>	
Willow Creek, at:	
discharge.....	392
Yuba River (North Fork) at:	
discharge.....	391
<b>Burgess Creek, discharge.....</b>	387
<b>Burney, Cal.,</b>	
Hatchet Creek near:	
discharge.....	387
Pit River at:	
discharge.....	386
<b>Burney Creek—</b>	
(at or near) Burney, Cal.:	
description.....	117
discharge.....	117, 386
discharge, daily.....	118-119
discharge, monthly.....	119
gage heights.....	117-118
<b>Burts Ferry, Cal.,</b>	
Feather River at:	
discharge.....	388
<b>Butt Creek—</b>	
(at) Butte Valley, Cal.:	
description.....	223
discharge.....	223, 390
discharge, daily.....	226-229
discharge, monthly.....	229-230
gage heights.....	224-226

<b>Butt Creek—Continued.</b>	
(near) Pit River:	Page.
discharge.....	386
Butte Basin, location and flood capacity of..	13-14
Butte City, Cal.,	
Sacramento River at:	
discharge.....	384
Butter Creek, discharge.....	387
Butte Slough, Cal.,	
Sacramento River at:	
discharge.....	384
Butte Valley, Cal.,	
Butt Creek at:	
description.....	223
discharge.....	223
discharge, daily.....	226-229
discharge, monthly.....	229-230
gage heights.....	224-226
Buzzards Roost, Cal.,	
Little Cow Creek near:	
discharge.....	386
Ferry Lumber Co. flume near:	
discharge.....	386

C.

<b>Cache Creek, basin of, miscellaneous measure-</b>	
ments.....	392-393
description of.....	18-20
<b>Cache Creek—</b>	
(at) Bear Creek, Cal.:	
discharge.....	392
(at) Cache Creek Sink, Cal.:	
discharge.....	392
(at) Capay, Cal.:	
discharge.....	392
(at) Clear Lake, Cal.:	
discharge.....	392
(at) Esparto, Cal.:	
discharge.....	392
(at and near) Lower Lake, Cal.:	
description.....	340
discharge.....	341-342, 393
discharge, daily.....	347-353
discharge, monthly.....	353-355
gage heights.....	342-347
(at) Madison Bridge, Cal.:	
discharge.....	392
(at) Moore's dam, Cal.:	
discharge.....	393
(at) Nelsons Bridge, Cal.:	
discharge.....	392
(at) North Fork, Cal.:	
discharge.....	392
(at) Rumsey, Cal.:	
discharge.....	392
(at) Stevens Bridge, Cal.:	
discharge.....	392
(at) Tancred, Cal.:	
discharge.....	392
(at) Yolo, Cal.:	
description.....	356
discharge.....	356-357
discharge, daily.....	362-367
discharge, monthly.....	367-369
gage heights.....	357-362

Cache Creek (North Fork):		Chip Creek—	
(at) Bartlett Creek:	Page.	(at) mouth:	Page.
discharge.....	393	discharge.....	390
(at) Little Indian Valley, Cal.:		Churn Creek, discharge.....	385
discharge.....	393	Clapp, W. B., work of.....	10, 11
(at) Long Valley Creek, Cal.:		Clark Creek—	
discharge.....	393	(near) mouth, Cal.:	
(at) mouth:		discharge.....	386
discharge.....	393	Clear Creek, Cal.,	
Cache Creek Sink, Cal.:		Hamilton Branch near:	
Cache Creek, at:		discharge.....	389
discharge.....	392	Clear Creek—	
California, northern, map of.....	10	(at) mouth:	
California State Board of Control, duties of..	9	discharge.....	390
Camp Creek—		(near) Shasta, Cal.:	
(at) bridge:		description.....	138
discharge.....	390	discharge.....	138
Canby, Cal.,		discharge, daily.....	139-140
Pit River near:		discharge, monthly.....	140
description.....	74	gage heights.....	139
discharge.....	75	(at) Stella, Cal.:	
discharge, daily.....	77-78	discharge.....	385
discharge, monthly.....	78	Clear Lake, Cal.,	
gage heights.....	75-76	Cache Creek at:	
Canyon Creek—		discharge.....	392
(near) Centerville, Cal.:		Scotts Creek near:	
discharge.....	386	discharge.....	393
Capay, Cal.,		Clear Lake—	
Cache Creek at:		(in) Lake County, Cal.:	
discharge.....	392	description.....	338-339
Carbon, Cal.,		mean monthly and annual level.....	339
Hat Creek near:		Climate, character of.....	26-29
discharge.....	387	Clover Creek—	
Cassel, Cal.,		(at) Millville, Cal.:	
Rising River near:		description.....	143
description.....	115	discharge.....	143, 385
discharge.....	115, 387	discharge, daily.....	144
discharge, daily.....	116	discharge, monthly.....	145
discharge, monthly.....	117	gage heights.....	143
gage heights.....	115-116	(near) Upper Lake, Cal.:	
Castello, Cal.,		discharge.....	393
Sacramento River at:		Clover Creek ditch—	
description.....	39	near Millville, Cal.:	
discharge.....	39	discharge.....	386
discharge, daily.....	40-41	Clover Creek mouth, Cal.,	
discharge, monthly.....	41	Squaw Queen Creek at:	
gage heights.....	39-40	discharge.....	391
Castle Crags, Cal.,		Cole Creek—	
Soda Creek at:		near Kelseyville, Cal.:	
discharge.....	386	discharge.....	393
Cayton Creek—		Colfax, Cal.,	
(near) Cayton Valley, Cal.:		American River (North Fork) near:	
discharge.....	386	description.....	300
Centerville, Cal.,		discharge.....	300
Canyon Creek near:		discharge, daily.....	301-302
discharge.....	386	discharge, monthly.....	302
Valley Counties Power Co. canal at:		gage heights.....	301
discharge.....	385	Bear River near:	
Cherokee, Cal.,		description.....	287-288
Feather River (North Fork), West		discharge.....	288, 392
Branch of, near:		gage heights.....	288
discharge.....	389	ditch near:	
Chester Branch—		discharge.....	392
(at) Chester, Cal.:		Pacific Gas & Electric Co., canal near:	
discharge.....	389	description.....	288
Chilli Bar, Cal.,		discharge.....	289
American River (South Fork) at:		discharge, daily.....	289
discharge.....	393	gage heights.....	289

	Page.		Page.
Cofax, Cal.—Continued.		Davis A. P., work of.....	10
South Yuba Water Co. canal near:		Davis Creek—	
discharge.....	394	(near) Davis Creek, Cal.:	
Collinsville, Cal.,		discharge.....	386
Sacramento River at:		Dean, H. J., work of.....	10
description.....	72	Deer Creek—	
discharge, monthly.....	73-74	(near) Vina, Cal.:	
Colusa, Cal.,		description.....	159
Sacramento River at:		discharge.....	159, 386
discharge.....	384	gage heights.....	159-160
Colusa Basin, location and flood capacity of..	13-14	Definition of terms used.....	31-32
Cooperation, details of.....	8-9	Delhi mine, Cal.,	
Copper City, Cal.,		Yuba River (Middle Fork) at:	
Pit River near:		discharge.....	391
discharge.....	386	Discharge, definition of.....	31-32
Squaw Creek near:		measurement of.....	32-34
discharge.....	388	accuracy of.....	34-35
Cottonwood Creek, description.....	16-17	Dotta Spring—	
Cottonwood Creek—		(at) Big Meadows, Cal.:	
(near) Cottonwood, Cal.:		discharge.....	390
discharge.....	385	Downieville, Cal.,	
(near) Lakeview, Oreg.:		ditches at:	
description.....	91	discharge.....	392
discharge.....	91, 386	Yuba River (North Fork) at:	
discharge, daily.....	94-96	description.....	277
discharge, monthly.....	96-97	discharge.....	277, 391
gage heights.....	91-94	discharge, daily.....	279
Cottonwood Creek (Middle Fork), discharge..	385	discharge, monthly.....	280
Cottonwood Creek (North Fork), discharge..	385	gage heights.....	278
Cottonwood Creek (North Fork)—		Drainage, description of.....	12-26
(at) Ono, Cal.:		Drews Creek—	
description.....	148	(near) Lakeview, Oreg.:	
discharge.....	149	description.....	97-98
discharge, daily.....	152-154	discharge.....	98
discharge, monthly.....	154-155	discharge, daily.....	100-101
gage heights.....	149-151	discharge, monthly.....	102
Cow Creek—		gage heights.....	99-100
(at or near) Millville, Cal.:			
description.....	140-141	E.	
discharge.....	141, 385	East Auburn, Cal.,	
discharge, daily.....	142	American River (Middle Fork) near:	
discharge, monthly.....	142	description.....	314
gage heights.....	141	discharge.....	314
Cow Creek (North Fork)—		discharge, daily.....	315
(near) Basin Hollow, Cal.:		discharge, monthly.....	316
discharge.....	386	gage heights.....	315
Cow Creek (South Fork), discharge.....	386	East Park dam site, view of.....	18
Crescent Mills, Cal.,		Edwards Bridge, Cal.,	
Indian Creek near:		Yuba River (South Fork) at:	
description.....	230-231	discharge.....	391
discharge.....	231, 390	Elk Creek, Cal.,	
discharge, daily.....	235-237	Briscoe Creek near:	
discharge, monthly.....	237-238	discharge.....	388
gage heights.....	232-234	Salt Creek near:	
Cromberg, Cal.,		discharge.....	388
Feather River (Middle Fork) at:		Stony Creek near:	
description.....	240	discharge.....	388
discharge.....	240	Elk Creek—	
gage heights.....	240	near Stony Creek, Cal.:	
Current meters, view of.....	30	discharge.....	388
D.		Emigrant Gap, Cal.,	
Data, accuracy of.....	34-35	Yuba River (South Fork) at:	
explanation of.....	32-34	discharge.....	391
field methods for collection of.....	31	Engineering, State department of, personnel of	9

<b>Enterprise, Cal.,</b>			<b>Feather River—Continued.</b>	
<b>Feather River (South Fork) at:</b>	<b>Page.</b>		(near) Prattville, Cal.:	<b>Page.</b>
description .....	246		discharge.....	389
discharge.....	246,390		(below) Yuba River, Cal.:	
discharge, daily.....	247		discharge.....	388
discharge, monthly.....	247		<b>Feather River (Middle Fork)—</b>	
gage heights.....	246		(at) Bidwells Bar, Cal.:	
<b>Palermo Land &amp; Water Co. canal at:</b>			discharge.....	389
description.....	247-248		(at) Cromberg, Cal.:	
discharge.....	248,390		description.....	240
discharge, daily.....	249		discharge.....	240
discharge, monthly.....	249		gage heights.....	241
gage heights.....	248		(near) Grizzly Creek:	
<b>Equivalents, table of.....</b>	<b>35-37</b>		discharge.....	389
<b>Esparto, Cal.,</b>			(at) Langhorsts, Cal.:	
<b>Cache Creek at:</b>			discharge.....	389
discharge.....	392		(near) Little North Fork, Cal.:	
<b>Excelsior Mining &amp; Irrigation Co. canal—</b>			discharge.....	389
(in) Pleasant Valley, Cal.:			(at) Mohawk Creek, Cal.:	
discharge.....	392		discharge.....	389
			(at) mouth:	
			discharge.....	389
			(near) Nelson Creek, Cal.:	
			discharge.....	389
			(near) Oroville, Cal.:	
			description.....	242
			discharge.....	242
			discharge, daily.....	243
			discharge, monthly.....	243
			gage heights.....	242
			<b>Feather River (North Fork)—</b>	
			(at) Big Bend (near Oroville), Cal.:	
			description.....	194-195
			discharge.....	195,389
			discharge, daily.....	197-200
			discharge, monthly.....	201-202
			gage heights.....	196-197
			power dam, view of.....	20
			(at) Big Meadows, Cal.:	
			discharge.....	389
			(near) Ganzners, Cal.:	
			discharge.....	389
			(in) Indian Valley, Cal.:	
			discharge.....	389
			(above) Prattville, Cal.:	
			description.....	182-183
			discharge.....	183
			discharge, daily.....	184-185
			discharge, monthly.....	186
			gage heights.....	183-184
			(below) Prattville, Cal.:	
			description.....	186-187
			discharge.....	187
			discharge, daily.....	190-193
			discharge, monthly.....	193-194
			gage heights.....	187-190
			(near) Prattville, Cal.:	
			discharge.....	389
			(near) Red Bluff, Cal.:	
			discharge.....	389
			(near) Warner Creek, Cal.:	
			discharge.....	389
			<b>Feather River (North Fork), Big Spring</b>	
			Branch of—	
			(near) Big Meadows, Cal.:	
			discharge.....	389
			(near) mouth:	
			discharge.....	389

## F.

## Fair Oaks, Cal.,

**American River at:**

description.....	302-303
discharge.....	303-304
discharge, daily.....	308-312
discharge, monthly.....	312-314
gage heights.....	304-308

## Fall River—

## (at) Fall River Mills, Cal.:

description.....	111
discharge.....	111,387
gage heights.....	112
(near) mouth:	
discharge.....	387

## Fall River Mills, Cal.,

**Fall River at:**

description.....	111
discharge.....	111,387
gage heights.....	112

## Fall River mouth, Cal.,

**Pit River above:**

discharge.....	386
----------------	-----

## Feather River, basin of, miscellaneous meas-

**urements.....**

description of.....	20-22
---------------------	-------

**Sacramento River at:**

discharge.....	385
tributaries of, description of.....	22-24

## Feather River—

## (at or near) Bidwell Bar, Cal.:

discharge.....	388-389
----------------	---------

## (at) Burt's Ferry, Cal.:

discharge.....	388
----------------	-----

## (at) Hennesseys, Cal.:

discharge.....	388
----------------	-----

## (at) Marysville, Cal.:

discharge.....	388
----------------	-----

## (near) mouth:

discharge.....	388
----------------	-----

## (at or near) Oroville, Cal.:

description.....	202-203
discharge.....	204,388
discharge, daily.....	210-216
discharge, monthly.....	216-218
gage heights.....	205-210

Page.	Page.
Feather River (North Fork), Chester Branch. <i>See</i> Chester Branch.	
Feather River (North Fork), East Branch of— (at) Big Meadows, Cal.: discharge.....	389
Feather River (North Fork), Hamilton Branch. <i>See</i> Hamilton Branch.	
Feather River (North Fork), Prattville Branch. <i>See</i> Prattville Branch.	
Feather River (North Fork), West Branch of— (near) Cherokee, Cal.: discharge.....	389
Prattville, Cal.: discharge.....	389
Yankee Hill, Cal.: discharge.....	389
Feather River (South Fork)— (at) Bidwell Bar, Cal.: discharge.....	390
Feather River (South Fork)— (at or near) Enterprise, Cal.: description..... discharge..... discharge, daily..... discharge, monthly..... gage heights.....	246 246, 390 247 247 246
Feather River (South Fork)— (at) Little Grass Valley, Cal.: discharge.....	389, 390
Field methods, accuracy of..... description of.....	34-35 31
Fitz Hugh Creek— (near) Alturas, Cal.: discharge.....	387
Floods, occurrence of.....	11
Folsom, Cal., American River near: discharge..... ditches at: discharge.....	393 394
Forests, character of.....	30
Freeman's bridge (near North San Juan), Cal., Yuba River (Middle Fork) at or near: description..... discharge..... discharge, daily..... discharge, monthly..... gage heights.....	249-250 250, 391 251 251 250
Freeport, Cal., Sacramento River at: discharge.....	385
French Creek— near bridge: discharge.....	390
Fruto, Cal., Stony Creek, near: description..... discharge..... discharge, daily..... discharge, monthly..... gage heights..... gaging station, view of.....	160 161 167-173 173-175 162-167 18
G.	
Gage, automatic, view of.....	32
Gage heights, readings of.....	33
Gaging car, views of.....	32, 56
Gaging stations, description of..... list of..... views of.....	31 37-38 31, 32, 56, 254
Ganzners, Cal., Feather River (North Fork) near: discharge.....	389
Genesee, Cal., ditches at: discharge..... Little Grizzly Creek near: discharge.....	390 390
Gerle Creek— (near) Rubicon Springs, Cal.: description..... discharge, daily..... discharge, monthly.....	323 323-327 327
Gerle Creek (near Quintette), Cal., Rubicon River (Little South Fork) near: description..... discharge, daily..... discharge, monthly.....	322-323 323-324 324
Gold, discovery of, due to water development.....	7
Goodyear Bar, Cal., Goodyear Creek at: description..... discharge..... discharge, daily..... discharge, monthly..... gage heights.....	284 284, 392 286 287 285
Rock Creek at: description..... discharge..... discharge, daily..... discharge, monthly..... gage heights.....	281 281, 392 283 284 282
Woodruff Creek at: discharge.....	392
Yuba River (North Fork) at: description..... discharge..... discharge, daily..... discharge, monthly..... gage heights.....	272 272 274 275 273
Goodyear Creek— (at) Goodyear Bar, Cal.: description..... discharge..... discharge, daily..... discharge, monthly..... gage heights.....	284 284, 392 286 286 285
Grafton, Cal., Sacramento River at: discharge.....	384-385
Greenhorn River— (at) mouth: discharge.....	392
Gregory, Cal., McCloud River near: description..... discharge..... discharge, daily..... discharge, monthly..... gage heights.....	127 127 131-133 134-135 128-130
Grindstone Creek, discharge..... (near) Stony Creek, Cal.: discharge.....	388 388

Grizzly Creek—	Page.	Henderson, Cal.—Continued.	Page.
(near) Beckwith, Cal.:		Roaring Creek near:	
description.....	243-244	discharge.....	387
discharge.....	244, 390	Hennesseys, Cal.,	
discharge, daily.....	245	Feather River at:	
discharge, monthly.....	245	discharge.....	388
gage heights.....	244	Hirze Mountain, Cal.,	
Grizzly Creek, Cal.,		Squaw Creek at:	
Feather River (Middle Fork) at:		discharge.....	387
discharge.....	389	Hot Springs Valley Creek—	
Grunsky, C. E., work of.....	9	(near) Warner Creek, Cal.:	
Guenoce, Cal.,		discharge.....	390
Putah Creek near:		Huff Bar, Cal.,	
description.....	369-370	Big Bend tunnel at:	
discharge.....	370	discharge.....	391
discharge, daily.....	372-373		
discharge, monthly.....	373-374	I.	
gage heights.....	370-372	Indian Creek, description of.....	23-24
H.		Ward Creek near:	
Hall Creek, discharge.....	387	discharge.....	391
Hamilton Branch—		Indian Creek—	
(near) Clear Creek, Cal.:		(near) Crescent Mills, Cal.:	
discharge.....	389	description.....	230-231
(near) Prattville, Cal.:		discharge.....	231, 390
description.....	219	discharge, daily.....	235-237
discharge.....	219	discharge, monthly.....	237-238
discharge, daily.....	221-222	gage heights.....	232-234
discharge, monthly.....	222	(near) mouth:	
gage heights.....	219-220	discharge.....	390
(near) Rock Creek, Cal.:		(near) Red Clover Creek, Cal.:	
discharge.....	389	discharge.....	390
Hatchet Creek—		(near) Taylorsville, Cal.:	
(near) Burney, Cal.:		discharge.....	390
discharge.....	387	Indian Valley, Cal.,	
(near) Henderson, Cal.:		Feather River (North Fork) in:	
discharge.....	387	discharge.....	389
(near) Montgomery, Cal.:		Iowa Hill bridge, Cal.,	
discharge.....	387	American River (North Fork) at:	
Hat Creek—		discharge.....	393
(near) Carbon, Cal.:		Iron Canyon, Cal.,	
discharge.....	387	Sacramento River at:	
ditches from:		discharge.....	384
discharge.....	386, 387	Ivy, Cal.,	
(at) Hat Creek, Cal.:		Pit River (South Fork) near:	
description.....	113	description.....	102-103
discharge.....	113	discharge.....	103
gage heights.....	113	discharge, monthly.....	104
(near) Hat Creek, Cal.:		J.	
description.....	112	Jellys Ferry, Cal.,	
discharge.....	112, 386, 387	Sacramento River at:	
gage heights.....	112-113	description.....	44-45
Henderson, Cal.,		discharge.....	45, 384
Baker Creek near:		discharge, daily.....	50-53
discharge.....	386	discharge, monthly.....	53-55
Hatchet Creek near:		gage heights.....	45-49
discharge.....	387	K.	
Kosk Creek near:		Keddie, Cal.,	
description.....	119	Spanish Creek at or near:	
discharge.....	119	description.....	238
discharge, daily.....	121	discharge.....	238, 391
discharge, monthly.....	122	discharge, daily.....	239
gage heights.....	120	discharge, monthly.....	240
Nelson Creek near:		gage height.....	239
discharge.....	387	Kelsey Creek—	
Pit River near:		(at and near) Kelseyville, Cal.:	
description.....	86-87	discharge.....	339
discharge.....	87	Kelseyville, Cal.,	
gage heights.....	87	Cole Creek near:	
		discharge.....	393



<b>M.</b>		Page.	<b>Millville, Cal.—Continued.</b>		Page.
McCloud River, basin of, miscellaneous measurements.....		388	Cow Creek at or near:		
McCloud River—			description.....		140-141
(at) Baird, Cal.:			discharge.....		141, 386
description.....		135	discharge, daily.....		142
discharge.....		135	discharge, monthly.....		142
discharge, daily.....		137	gage heights.....		141
discharge, monthly.....		138	Miner's inch, definition of.....		32
gage heights.....		136	Miscellaneous measurements in:		
McCloud River—			American River basin.....		393-394
(near) Gregory, Cal.:			Bear River basin.....		392
description.....		127	Cache Creek basin.....		392-393
discharge.....		127	Feather River basin.....		388-391
discharge, daily.....		131-133	McCloud River basin.....		388
discharge, monthly.....		134-135	Pet River basin.....		386-387
gage heights.....		128-130	Sacramento River (main) basin.....		384-386
(near) Squaw Creek:			Stony Creek basin.....		388
discharge.....		385	Yuba River basin.....		391-392
(near) United States fishery:			Mohawk Creek, Cal.,		
discharge.....		388	Feather River (Middle Fork) at:		
McGlashan, H. D., work of.....		10	discharge.....		389
Madison Bridge, Cal.,			Mohawk Creek—		
Cache Creek at:			(at) mouth:		
discharge.....		392	discharge.....		390
Map of northern California.....		10	Montgomery, Cal.,		
Martin, W. F., work of.....		10, 11	Hatchet Creek near:		
Marysville, Cal.,			discharge.....		387
Feather River at:			Roaring Creek near:		
discharge.....		388	discharge.....		387
Middle Creek—			Montgomery Creek—		
(near) Upper Lake:			(at) Montgomery, Cal.:		
discharge.....		393	description.....		122
Middle Fork, Cal.,			discharge.....		122, 387
American River (North Fork) near:			discharge, daily.....		123-124
discharge.....		373	discharge, monthly.....		124
Middle Yuba River. <i>See</i> Yuba River (Middle Fork).			gage heights.....		123
Milk Ranch Creek—			Moons Ferry, Cal.,		
(at) bridge:			Sacramento River at:		
discharge.....		390	discharge.....		384
Mill Creek—			Moore's dam, Cal.,		
(at) bridge:			Cache Creek at:		
discharge.....		390	discharge.....		393
(near) Los Molinos, Cal.:			Mormon Island Bridge, Cal.,		
description.....		155-156	American River (South Fork) at:		
discharge.....		156	discharge.....		393
discharge, daily.....		158	Mosquito Bar, Cal.:		
discharge, monthly.....		159	American River (South Fork) at:		
gage heights.....		157	discharge.....		393
view.....		20	Municipal supplies, conveyance of.....		7
(near) Tehama, Cal.:			Murphy, E. C., work of.....		11
discharge.....		386			
Millville, Cal.,			N.		
Bear Creek near:			Nelson Bridge, Cal.,		
description.....		147	Cache Creek at:		
discharge.....		147	discharge.....		392
gage heights.....		147-148	Nelson Creek, Cal.,		
Clover Creek at:			Feather River (Middle Fork) at:		
description.....		143	discharge.....		389
discharge.....		143-385	Nelson Creek—		
discharge, daily.....		144	(near) Henderson, Cal.:		
discharge, monthly.....		145	discharge.....		387
gage heights.....		143	(at) mouth:		
Clover Creek ditch near:			discharge.....		390
discharge.....		386	Newell, F. H., work of.....		10
			North Arm Creek—		
			(near) Taylorsville, Cal.:		
			discharge.....		390

North Canyon Creek, Cal., Wolf Creek near: discharge.....	Page. 391
North Columbia, Cal., ditches at: discharge.....	392
North Fork Canal— (near) Basin Hollow, Cal.: discharge.....	385
North San Juan, Cal., Oregon Creek near: description..... discharge..... gage heights.....	269 269 270
Yuba River (Middle Fork) near: description..... discharge..... gage heights.....	251 252 252-253
Yuba River (North Fork) near: description..... discharge..... discharge, daily..... discharge, monthly..... gage heights.....	275 276 276 277 276
<i>See also</i> Freeman's bridge.	
O.	
Oak Run, Cal., Little Cow Creek near: discharge.....	386
Oak Run Creek, discharge.....	386
Old Cow Creek, discharge.....	386
Ono, Cal., Cottonwood Creek (North Fork) at: description..... discharge..... discharge, daily..... discharge, monthly..... gage heights.....	148 149 152-154 154-155 149-151
Oregon Creek— (near) North San Juan, Cal.: description..... discharge..... gage heights.....	269 269 270
Oroville, Cal., Feather River at or near: description..... discharge..... discharge, daily..... discharge, monthly..... gage heights.....	202-203 204, 388 210-216 216-218 205-210
Feather River (Middle Fork) near: description..... discharge..... discharge, daily..... discharge, monthly..... gage heights.....	242 242 243 243 242
<i>See also</i> Big Bend.	
Overflow basins, location and character of...	13-14
P.	
Pacific, Cal., American River (South Fork) near: discharge..... ditches near: discharge.....	393 394

Pacific Gas & Electric Co. canal— (near) Colfax, Cal.: description..... discharge..... discharge, daily..... gage heights.....	Page. 288 289 289 289
Palermo Land & Water Co. canal— (at) Enterprise, Cal.: description..... discharge..... discharge, daily..... discharge, monthly..... gage heights.....	247-248 248, 390 249 249 248
Palo Cedro, Cal., Little Cow Creek at and near: description..... discharge..... discharge, daily..... discharge, monthly..... gage heights.....	145 145, 385 146 147 145-146
Parks Bar Bridge (near Smartsville), Cal., Yuba River at: description..... discharge..... discharge, daily..... discharge, monthly..... gage heights.....	267-268 268 268 269 268
Pecks Bridge, Cal., Pit River at: discharge.....	386
Pilot Creek— (near) Quintette, Cal.: description..... discharge, daily..... discharge, monthly.....	329 329-330 330-331
Pilot Creek ditch— (near) Quintette, Cal.: description..... discharge, daily..... discharge, monthly.....	331 331-332 332
Pine Creek— (near) Alturas, Cal.: discharge..... (near) Pine Creek, Cal.: discharge.....	387 387
Pit River, basin of, miscellaneous measurements..... description of.....	386-387 14-16
Burney Creek near: discharge.....	386
Sacramento River near: discharge.....	385
Pit River— (at) Alturas, Cal.: discharge..... (near) Bieber, Cal.: description..... discharge..... discharge, daily..... discharge, monthly..... gage heights..... (at) Burney, Cal.: discharge..... (near) Canby, Cal.: description..... discharge..... discharge, daily.....	386 386 79 79-80 83-85 85-86 80-82 386 74 75 77-78



Red Bluff, Cal.—Continued.

Sacramento River at:	Page.
description.....	71-72
discharge.....	72
gaging station, views of.....	56
Sacramento River near:	
description.....	55-56
discharge.....	56-57, 384
discharge, daily.....	64-69
discharge, monthly.....	69-71
gage heights.....	57-62
Warner Creek near:	
discharge.....	391
Willow Creek near:	
discharge.....	391
Red Clover Creek, Cal.,	
Indian Creek near:	
discharge.....	390
Red Clover Creek—	
(above) diversions:	
discharge.....	390
Rice, R. C., work of.....	10
Richardson Creek, discharge.....	387
Richfield, Cal.,	
Thomas Creek at:	
discharge.....	388
Rising River near—	
Cassel, Cal.:	
description.....	115
discharge.....	115, 387
discharge, daily.....	116
discharge, monthly.....	117
gage heights.....	115-116
Riverton, Cal.,	
American River (South Fork) at:	
discharge.....	393
ditches near:	
discharge.....	394
Roaring Creek—	
(near) Henderson, Cal.:	
discharge.....	387
(near) Montgomery, Cal.:	
discharge.....	387
Rock Creek, Cal.,	
Hamilton Branch near:	
discharge.....	389
Rock Creek—	
(at) Goodyear Bar, Cal.:	
description.....	281
discharge.....	281, 392
discharge, daily.....	283
discharge, monthly.....	284
gage heights.....	282
(at) mouth:	
discharge.....	391
(near) Prattville, Cal.:	
discharge.....	390-391
(near) Susanville, Cal.:	
discharge.....	390-391
Rockville, Cal.,	
Stony Creek at:	
discharge.....	388
Round Valley, Cal.,	
Rush Creek at:	
discharge.....	387
Rubicon River, Cal.,	
American River (North Fork) at:	
discharge.....	393

Rubicon River—

(near) Middle Fork:	Page.
discharge.....	394
(near) Quintette, Cal.:	
description.....	318
discharge, daily.....	318-319
discharge, monthly.....	319
(at) Rubicon Springs, Cal.:	
description.....	316
discharge, daily.....	316-317
discharge, monthly.....	317
Rubicon River (Little South Fork)—	
(near) Gerle Creek, near Quintette, Cal.:	
description.....	322-323
discharge, daily.....	323-324
discharge, monthly.....	324
(at) mouth, near Quintette, Cal.:	
description.....	324
discharge, daily.....	325
discharge, monthly.....	326
(near) South Fork sawmill, near Quintette, Cal.:	
description.....	321
discharge, daily.....	321-322
discharge, monthly.....	322
Rubicon Springs, Cal.,	
Gerle Creek near:	
description.....	326
discharge, daily.....	326-327
discharge, monthly.....	327
Little Rubicon River at:	
description.....	319-320
discharge, daily.....	320
discharge, monthly.....	320
Rubicon River at:	
description.....	316
discharge, daily.....	316-317
discharge, monthly.....	317
Rumsey, Cal.,	
Cache Creek at:	
discharge.....	392
Run-off, definition of.....	31-32
Rush Creek—	
(at) Round Valley, Cal.:	
discharge.....	387
S.	
Sacramento, Cal.,	
American River at:	
discharge.....	393
Sacramento River at:	
discharge.....	385
Sacramento Basin, location and flood capacity of.....	13-14
Sacramento River, distances and elevations along.....	13
floods on.....	11, 13
main stream of, description of.....	12-14
miscellaneous measurements on.....	384-385
overflow basins of.....	13-14
tributaries of, description of.....	14-26
miscellaneous measurements on.....	385-386
Sacramento River—	
(at) Antler, Cal.:	
description.....	42
discharge.....	42
discharge, daily.....	43
discharge, monthly.....	44
gage heights.....	42-43

## Sacramento River—Continued.

	Page.
(at) Bairds, Cal.:	
discharge.....	385
(at) Balls Ferry bridge:	
discharge.....	384, 385
(at) Brannan Slough:	
discharge.....	384
(at) Butte City:	
discharge.....	384
(at) Butte Slough:	
discharge.....	384
(at) Castello, Cal.:	
description.....	39
discharge.....	39
discharge, daily.....	40-41
discharge, monthly.....	41
gage heights.....	39-40
(at) Collinsville, Cal.:	
description.....	72
discharge, monthly.....	73-74
(at) Colusa, Cal.:	
discharge.....	284
(at) Grafton, Cal.:	
discharge.....	384-385
(at) Feather River, Cal.:	
discharge.....	385
(at) Freeport, Cal.:	
discharge.....	385
(at) Iron Canyon, Cal.:	
discharge.....	384
(at) Jellys Ferry, Cal.:	
description.....	44-45
discharge.....	45, 384
discharge, daily.....	50-53
discharge, monthly.....	53-55
gage heights.....	45-49
rating table.....	49
(at) Knights Landing, Cal.:	
discharge.....	384
(at) Moons Ferry, Cal.:	
discharge.....	385
(near) Pit River, Cal.:	
discharge.....	385
(at) Red Bluff, Cal.:	
description.....	71-72
discharge.....	72
gaging station, views of.....	56
(near) Red Bluff, Cal.:	
description.....	55-56
discharge.....	56-57, 384
discharge, daily.....	64-69
discharge, monthly.....	69-71
gage heights.....	57-62
(at) Sacramento, Cal.:	
discharge.....	385
(at) Sacramento Slough, Cal.:	
discharge.....	385
Salmon Falls, Cal.:	
ditches near:	
discharge.....	394
Salt Creek—	
(near) Elk Creek, Cal.:	
discharge.....	388
Scotts Creek—	
(near) Clear Lake, Cal.:	
discharge.....	393
Second-foot, definition of.....	32

## Seigler Creek—

	Page.
(at) Lower Lake, Cal.:	
discharge.....	393
Shasta, Cal.—	
Clear Creek near:	
description.....	138
discharge.....	138
discharge, daily.....	139-140
discharge, monthly.....	140
gage heights.....	139
Sierra City, Cal.—	
flume near:	
discharge.....	392
Yuba River (North Fork) near:	
description.....	271
discharge.....	271
gage heights.....	271
Silver Creek—	
(near) mouth:	
discharge.....	394
Silver Creek (South Fork)—	
(at) mouth:	
discharge.....	394
Silver Fork—	
(near) mouth:	
discharge.....	394
Silver Fork, American River near. <i>See</i> Ky-	
burz.	
Sisson, Cal.,	
Wagon Creek near:	
discharge.....	386
Smartsville, Cal.,	
Yuba River near:	
description.....	253-254
discharge.....	254-255, 391
discharge, daily.....	260-265
discharge, monthly.....	265-267
gage heights.....	256-260
gaging station, view.....	254
<i>See also</i> Parks Bar Bridge.	
Snowfall. <i>See</i> Precipitation.	
Soda Creek—	
(at) Castle Crags, Cal.:	
discharge.....	386
Southern California, development of, due to	
irrigation.....	7
South Fork, Cal.,	
American River (North Fork) near:	
discharge.....	393
South Fork sawmill near Quintette, Cal.—	
Rubicon River (Little South Fork) at:	
description.....	321
discharge, daily.....	321-322
discharge, monthly.....	322
South Yuba Co. dam, Cal.,	
Bear River near:	
discharge.....	392
ditches of and near:	
discharge.....	392, 394
Spanish Creek—	
(at or near) Keddle, Cal.:	
description.....	238
discharge.....	238, 391
discharge, daily.....	239
discharge, monthly.....	240
gage heights.....	239
(near) Quincy, Cal.:	
discharge.....	391

	Page.		Page.
Spring Creek, discharge.....	387	Tables, explanation of.....	32-34
Squaw Creek, Cal.,		Tancred, Cal.,	
McCloud River near:		Cache Creek at:	
discharge.....	388	discharge.....	392
Squaw Creek—		Taylorville, Cal.,	
(at) Baird, Cal.:		Indian Creek at:	
discharge.....	387	discharge.....	390
(at) Hirze Mountain, Cal.:		millrace at:	
discharge.....	387	discharge.....	390
(at) Copper City:		North Arm Creek near:	
discharge.....	388	discharge.....	390
(near) Winthrop, Cal.:		Tehama, Cal.,	
discharge.....	387	Mill Creek near:	
(at or near) Ydalpom, Cal.:		discharge.....	386
description.....	125	millrace near:	
discharge.....	125, 387	discharge.....	385
discharge, daily.....	126	Temperature, chart showing.....	29
discharge, monthly.....	126	records of.....	29
gage heights.....	125	Terms used, definitions of.....	31-32
Squaw Queen Creek—		Terry Lumber Co. flume—	
(at) mouth of Clover Creek:		(near) Buzzards Roost, Cal.:	
discharge.....	391	discharge.....	386
Stanford Canal—		Thomas Creek—	
(near) Vina, Cal.:		(at) Richfield, Cal.:	
discharge.....	385	discharge.....	388
Stanton Creek—		Topography, outlines of.....	10-12
(at) mouth:		Tule canal—	
discharge.....	393	(at) Woodland, Cal.:	
Stella, Cal.,		discharge.....	393
Clear Creek at:			
discharge.....	385	U.	
Stevens Bridge, Cal.,		Upper Lake, Cal.,	
Cache Creek at:		Clover Creek near:	
discharge.....	392	discharge.....	393
Stillwater Creek, discharge.....	386	Middle Creek near:	
Stony Creek, basin of, miscellaneous measure-		discharge.....	393
ments.....	388	V.	
description of.....	17-18	Valley Counties Power Co. canal—	
Elk Creek near:		(at) Centerville, Cal.:	
discharge.....	388	discharge.....	385
Grindstone Creek near:		Van Trent, Cal.,	
discharge.....	388	Bear River at:	
Little Stony Creek near:		description.....	289-290
discharge.....	388	discharge.....	290
Stony Creek—		discharge, daily.....	294-298
(near) Elk Creek, Cal.:		discharge, monthly.....	298-300
discharge.....	388	gage heights.....	291-394
(near) Fruto, Cal.:		Vegetation, character of.....	30
description.....	160	Vina, Cal.,	
discharge.....	161	Deer Creek near:	
discharge, daily.....	167-173	description.....	159
discharge, monthly.....	173-175	discharge.....	159, 386
gage heights.....	162-167	gage heights.....	159-160
gaging station, view of.....	18	Stamford canal near:	
(near) Rockville, Cal.:		discharge.....	385
discharge.....	388	W.	
(near) Stony Fork, Cal.:		Wading, stream measurement by, view of... 31	
discharge.....	388	Wagon Creek—	
Stony Fork, Cal.,		(near) Sisson, Cal.:	
Stony Creek near:		discharge.....	386
discharge.....	388	Ward Creek—	
Stream-flow data, importance of.....	7	(near) Indian Creek, Cal.:	
progress in accumulation of.....	7-8	discharge.....	391
publications on.....	8	Warner Creek, Cal.,	
Stream gaging, progress of.....	9	Feather River (North Fork) near:	
Susanville, Cal.,		discharge.....	389
Rock Creek near:			
discharge.....	390-391		
Sutter Basin, location and flood capacity of. 13-14			



Yuba River (North Fork)—Continued.

(at) Goodyear Bar, Cal.:	Page.
description.....	272
discharge.....	272, 391
discharge, daily.....	274
discharge, monthly.....	275
gage heights.....	273
(near) Middle Fork:	
discharge.....	391
(near) North San Juan, Cal.:	
description.....	275
discharge.....	276
discharge, daily.....	276
discharge, monthly.....	277
gage heights.....	276
(near) Sierra City, Cal.:	
description.....	271
discharge.....	271
gage heights.....	271
(at) Yuba Power Co. dam:	
discharge.....	391
Yuba River (North Fork), East Fork of—	
(at) North Fork of North Fork:	
discharge.....	391

Yuba River (North Fork), North Fork of—	
(near) mouth:	Page.
discharge.....	391
(near) South Fork of North Fork:	
discharge.....	391
Yuba River (North Fork), South Fork of—	
(near) North Fork of North Fork:	
discharge.....	391
Yuba River (South Fork)—	
(at) Bridgeport, Cal.:	
discharge.....	391
(at) Edwards Bridge, Cal.:	
discharge.....	391
(at) Emigrant Gap, Cal.:	
discharge.....	391
(at) Washington, Cal.:	
discharge.....	392
Yuba Power Co. dam, Cal.,	
Yuba River (North Fork) at:	
discharge.....	391
Yuba River mouth,	
Feather River at:	
discharge.....	388











