UNITED STATES DEPARTMENT OF THE INTERIOR

SURFACE WATER SUPPLY *of the* UNITED STATES 1932

PART 9
COLORADO RIVER BASIN

Prepared in cooperation with the States of
ARIZONA, NEW MEXICO, UTAH, and WYOMING

GEOLOGICAL SURVEY WATER-SUPPLY PAPER 734

UNITED STATES DEPARTMENT OF THE INTERIOR
HAROLD L. ICKES, Secretary
GEOLOGICAL SURVEY
W. C. MENDENHALL, Director

Water-Supply Paper 734

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1932

PART 9

COLORADO RIVER BASIN

NATHAN C. GROVER, Chief Hydraulic Engineer
W. E. DICKINSON, ROBERT FOLLANSBEE, BERKELEY JOHNSON
and A. B. PURTON, District Engineers

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ILLUSTRATION

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FIGURE 1. Typical river-measurement station showing concrete well and house for water-stage recorder and staff gages, cable, and car- 3

SURFACE WATER SUPPLY OF THE COLORADO RIVER BASIN, 1932

AUTHORIZATION AND SCOPE OF WORK

This volume is one of a series of 14 reports presenting records of measurements of flow made on streams in the United States during the year ending September 30, 1932.

The data presented in these reports were collected by the United States Geological Survey under the following authority contained in the organic law (20 Stat.L., p. 394):

Provided, That this officer [the director] shall have the direction of the Geological Survey and the classification of public lands and examination of the geological structure, mineral resources, and products of the national domain.

The work was begun in 1888 in connection with special studies relating to irrigation. Since the fiscal year ending June 30, 1895, successive appropriation bills passed by Congress have carried the following items:

For gaging the streams and determining the water supply of the United States and for the investigation of underground currents and artesian wells and for the preparation of reports upon the best methods of utilizing the water resources.

Annual appropriations for the fiscal years ending June 30, 1895–1933

1895	$12,500.00	1911–17	$150,000.00	1928	$147,000.00
1896	24,500.00	1918	175,000.00	1929	270,500.00
1897–99	50,000.00	1919	148,244.10	1930	275,000.00
1900	70,000.00	1920	175,000.00	1931	565,000.00
1901–2	100,000.00	1921–23	180,000.00	1932	711,000.00
1903–6	200,000.00	1924–25	170,000.00	1933	600,000.00
1907	150,000.00	1926	165,000.00		
1908–10	100,000.00	1927	151,000.00		

In the execution of the work many private and State organizations have cooperated, either by furnishing data or by assisting in collecting data. Acknowledgments for cooperation of the first kind are made in connection with the description of each station affected; cooperation of the second kind is acknowledged on page 10.

Measurements of stream flow have been made at about 6,590 points in the United States and also at many points in Alaska and the Hawaiian Islands. In July 1932, 2,790 gaging stations were being maintained by the Geological Survey and the cooperating organizations. Many miscellaneous discharge measurements were made at

other points. In connection with this work, data were also collected in regard to precipitation, evaporation, storage reservoirs, river profiles, and water power in many sections of the country and will be made available in water-supply papers from time to time.

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 that represent a rate of flow, as second-feet, gallons per minute, miner's inches, and discharge in second-feet per square mile, and (2) those that represent the actual quantity of water, as run-off in inches, acre-feet, and millions of cubic feet. The principal terms used in this series of reports are second-feet, second-feet per square mile, run-off in inches, and acre-feet. They may be defined as follows:

"Second-feet" is an abbreviation for "cubic feet per second." A second-foot is the rate of discharge of water flowing in a channel of rectangular cross section 1 foot wide and 1 foot deep at an average velocity of 1 foot per second. It is generally used as a fundamental unit from which others are computed.

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

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

An "acre-foot," equivalent to 43,560 cubic feet, 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.

The following terms not in common use are here defined:

"Stage-discharge relation," an abbreviation for the term "relation of gage height to discharge."

"Control," a term used to designate the natural section or stretch of the channel or artificial structure below the gage which determines the stage-discharge relation at the gage.

EXPLANATION OF DATA

The data presented in this report cover the year beginning October 1, 1931, and ending September 30, 1932. At the beginning of January in most parts of the United States much of the precipitation in the preceding 3 months is stored in the form of snow or ice, or in

ponds, lakes, and swamps, or as underground water, and this stored water passes off in the streams during the spring break-up. At the end of September, on the other hand, the only stored water available for run-off is possibly a small quantity in the ground; therefore the run-off for the year beginning October 1 is practically all derived from the precipitation within that year.

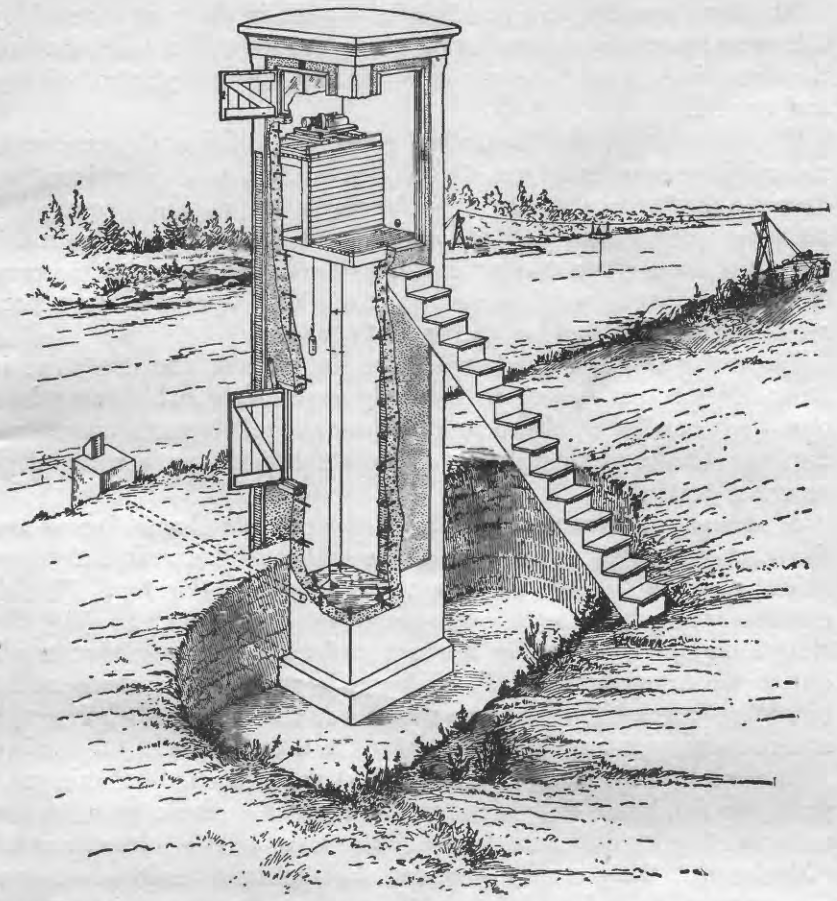

FIGURE 1.—Typical river-measurement station showing concrete well and house for water-stage recorder and staff gages, cable, and car.

The base data collected at gaging stations consist of records of stage, measurements of discharge, and general information used to supplement the gage heights and discharge measurements in determining the daily flow. The records of stage are obtained either from direct readings on a staff or chain gage or from a water-stage recorder that gives a continuous record of the fluctuations. Measurements of discharge are made with a current meter by the general methods

outlined in standard textbooks on the measurement of river discharge. A typical gaging station, equipped with water-stage recorder and measuring cable and car, is shown in figure 1.

Rating tables giving the discharge for any stage are prepared from the discharge measurements. The application of the daily gage height to these rating tables gives the daily discharge from which the monthly and yearly mean discharge is computed.

The data presented for each gaging station in the area covered by this report comprise a description of the station and a table showing the daily discharge of the stream and the monthly and yearly discharge and run-off.

The description of the station gives, in addition to statements regarding location and type of gage, information as to diversions that decrease the flow at the gage, artificial regulation, maximum and minimum recorded stages, and the accuracy of the records. The maximum discharge given under "Extremes" does not represent the crest discharge unless a water-stage recorder was in operation or a nonrecording gage was read at the time of the crest.

The table of daily discharge gives, in general, the discharge in second-feet corresponding to the daily gage height, which may be a once-daily reading or the mean of twice-daily readings of a nonrecording gage, or the mean daily gage height obtained from a water-stage recorder graph.

At stations on streams subject to sudden or rapid diurnal fluctuation the discharge obtained from the rating table and the mean daily gage height may not be the true mean discharge for the day. If such stations are equipped with water-stage recorders, the mean daily discharge may be obtained by averaging discharge at regular intervals during the day or by using the discharge integrator, an instrument for obtaining mean daily discharge from a continuous gage-height graph and containing as an essential element the rating curve of the station.

In the table of monthly discharge the column headed "Maximum" gives the maximum daily discharge and not the discharge when the water surface was at crest height. Likewise, in the column headed "Minimum" the quantity given is the minimum daily discharge. The column headed "Mean" is the average flow in cubic feet per second during the month. On this average flow are based computations recorded in the remaining columns, which are defined on page 2.

ACCURACY OF FIELD DATA AND COMPUTED RESULTS

The accuracy of stream-flow data depends primarily (1) on the permanency of the stage-discharge relation, and (2) on the accuracy of observation of stage, measurements of flow, and interpretation of records.

The station description gives a statement in regard to the general accuracy of the records. "Excellent" indicates that records are accurate within 5 percent; "good" within 10 percent; "fair" within 15 percent; and "poor," within 20 percent or more.

The monthly means for any station may represent with high accuracy the quantity of water flowing past the gage, but the figures showing discharge per square mile and run-off in inches may be subject to gross errors caused by the inclusion of large noncontributing districts in the measured drainage area, by lack of information concerning water diverted for irrigation or other use, or by inability to interpret the effect of artificial regulation of the flow of the river above the station. "Second-feet per square mile" and "run-off in inches" are therefore not computed if such errors appear probable. The computations are also omitted for stations on streams draining areas in which the annual rainfall is less than 20 inches.

The table of monthly discharge gives a general idea of the flow at the station. The table of daily discharge allows more detailed studies of the variation in flow. It should be borne in mind, however, that the observations in each succeeding year may be expected to throw new light on data previously published.

Many gaging stations on streams in the irrigated areas of the United States are situated above most of the diversions from those streams, and the discharge recorded does not show the water supply available for further development, as prior appropriations below the stations must first be satisfied.

PUBLICATIONS

Investigation of water resources by the United States Geological Survey has consisted in large part of measurements of the volume of flow of streams and studies of the conditions affecting that flow, but it has comprised also investigation of such closely allied subjects as irrigation, water storage, water power, underground waters, and quality of waters. Most of the results of these investigations have been published in the series of water-supply papers, but some have appeared in the bulletins, professional papers, monographs, and annual reports.

The results of stream-flow measurements are now published annually in 12 parts, each part covering an area whose boundaries coincide with natural drainage features as indicated below:

Part 1. North Atlantic slope basins (St. John River to York River).
2. South Atlantic slope and eastern Gulf of Mexico basins (James River to the Mississippi River).
3. Ohio River Basin.
4. St. Lawrence River Basin.
5. Hudson Bay and Upper Mississippi River Basins.

Part 6. Missouri River Basin.
7. Lower Mississippi River Basin.
8. Western Gulf of Mexico basins.
9. Colorado River Basin.
10. The Great Basin.
11. Pacific slope basins of California.
12. North Pacific slope basins, in three parts:
A, Pacific slope basins in Washington and upper Columbia River Basin.
B, Snake River Basin.
C, Pacific slope basins in Oregon and lower Columbia River Basin.

Water-supply papers and other publications of the United States Geological Survey containing data in regard to the water resources of the United States may be obtained or consulted as indicated below.

1. Copies may be purchased at nominal cost from the Superintendent of Documents, Government Printing Office, Washington, D.C., who will, on application, furnish lists giving prices.

2. Sets of the reports may be consulted in the libraries of the principal cities in the United States.

3. Sets are available for consultation in the local offices of the water-resources branch of the Geological Survey, as follows:

Augusta, Maine, State House.
Boston, Mass., 2500 Customhouse.
Hartford, Conn., 203 Federal Building.
Albany, N.Y., 603 State Public Works Building.
Trenton, N.J., 228 Federal Building.
Harrisburg, Pa., 492 Education Building.
Charlottesville, Va., Brooks Museum, University of Virginia.
South Charleston, W.Va., Naval Ordnance Plant.
Asheville, N.C., 220 Post Office Building.
Columbia, S.C., 801 National Loan & Exchange Bank Building.
Ocala, Fla., Post Office Building.
Montgomery, Ala., Post Office Building.
Chattanooga, Tenn., 630 Power Building.
Columbus, Ohio, Engineering Experiment Station, Ohio State University.
Indianapolis, Ind., 319 Federal Building.
Urbana, Ill., 302 University New Agricultural Building.
Madison, Wis., 337N State Capitol.
St. Paul, Minn., 632 State Office Building.
Iowa City, Iowa, 402 Hydraulic Laboratory, University of Iowa.
Topeka, Kans., State House.
Rolla, Mo., Rolla Building, Missouri School of Mines and Metallurgy.
Fort Smith, Ark., Post Office Building.
Austin, Tex., State Highway Building.
Santa Fe, N.Mex., State Capitol.
Tucson, Ariz., 210 Post Office Building.
Denver, Colo., 403 Post Office Building.
Salt Lake City, Utah, 303 Federal Building.
Idaho Falls, Idaho, 228 Federal Building.
Boise, Idaho, 429 Federal Building.
Helena, Mont., 421 New Federal Building.
Tacoma, Wash., 406 Federal Building.

Portland, Oreg., 606 Post Office Building.
San Francisco, Calif., 303 Customhouse.
Los Angeles, Calif., 510 Eighth and Figueroa Building.
Honolulu, Hawaii, 225 Federal Building.

A list of the Geological Survey publications may be obtained by applying to the Director of the United States Geological Survey, Washington, D.C.

Stream-flow records have been obtained at about 6,590 points in the United States, and the data obtained have been published in the reports tabulated as follows:

Stream-flow data in reports of the United States Geological Survey

[A=Annual Report; B=Bulletin; W=Water-Supply Paper]

Report	Character of data	Year
10th A, pt. 2	Descriptive information only	
11th A, pt. 2	Monthly discharge and descriptive information	1884 to Sept. 1890.
12th A, pt. 2	do	1884 to June 30, 1891.
13th A, pt. 3	Mean discharge in second-feet	1884 to Dec. 31, 1892.
14th A, pt. 2	Monthly discharge (long-time records, 1871 to 1893)	1888 to Dec. 31, 1893.
B 131	Descriptions, measurements, gage heights, and ratings	1893–94.
18th A, pt. 2	Descriptive information only	
B 140	Descriptions, measurements, gage heights, ratings, and monthly discharge (also many data covering earlier years).	1895.
W 11	Gage heights (also gage heights for earlier years)	1896.
18th A, pt. 4	Descriptions, measurements, ratings, and monthly discharge (also similar data for some earlier years).	1895–96.
W 15	Descriptions, measurements, and gage heights, eastern United States, eastern Mississippi River, and Missouri River above junction with Kansas River.	1897.
W 16	Descriptions, measurements, and gage heights, western Mississippi River below junction of Missouri and Platte Rivers, and western United States.	1897.
19th A, pt. 4	Descriptions, measurements, ratings, and monthly discharge (also some long-time records).	1897.
W 27	Measurements, ratings, and gage heights, eastern United States, eastern Mississippi River, and Missouri River.	1898.
W 28	Measurements, ratings, and gage heights, Arkansas River and western United States.	1898.
20th A, pt. 4	Monthly discharge (also for many earlier years)	1898.
W 35 to 39	Descriptions, measurements, gage heights, and ratings	1899.
21st A, pt. 4	Monthly discharge	1899.
W 47 to 52	Descriptions, measurements, gage heights, and ratings	1900.
22d A, pt. 4	Monthly discharge	1900.
W 65, 66	Descriptions, measurements, gage heights, and ratings	1901.
W 75	Monthly discharge	1901.
W 82 to 85	Complete data	1902.
W 97 to 100	do	1903.
W 124 to 135	do	1904.
W 165 to 178	do	1905.
W 201 to 214	do	1906.
W 241 to 252	do	1907–8.
W 261 to 272	do	1909.
W 281 to 292	do	1910.
W 301 to 312	do	1911.
W 321 to 332	do	1912.
W 351 to 362	do	1913.
W 381 to 394	do	1914.
W 401 to 414	do	1915.
W 431 to 444	do	1916.
W 451 to 464	do	1917.
W 471 to 484	do	1918.
W 501 to 514	do	1919–20.
W 521 to 534	do	1921.
W 541 to 554	do	1922.
W 561 to 574	do	1923.
W 581 to 594	do	1924.
W 601 to 614	do	1925.
W 621 to 634	do	1926.
W 641 to 654	do	1927.
W 661 to 674	do	1928.
W 681 to 694	do	1929.
W 696 to 709	do	1930.
W 711 to 724	do	1931.
W 726 to 739	do	1932.

The records at most of the stations discussed in these reports extend over a series of years. Miscellaneous measurements at many points other than regular gaging stations have been made each year, and are published under "Miscellaneous measurements" at the end of each report in the same relative order as the regular gaging stations. An index of the reports containing records obtained prior to 1904 has been published in Water-Supply Paper 119.

The following table gives, by years and drainage basins, the numbers of the papers on surface-water supply published from 1899 to 1932. The data for any particular station will as a rule be found in the reports covering the years during which the station was maintained For example, data from 1910 to 1920 for any station in the area covered by part 3 are published in Water-Supply Papers 283, 303, 323, 353, 383, 403, 433, 453, 473, and 503, which contain records for the Ohio River Basin for those years.

Numbers of water-supply papers containing results of stream measurements, 1899–1932

[For basins included, see p. 5]

Year	1	2	3	4	5	6	7	8	9	10	11	12-A	12-B	12-C
1899 [a]	35	[b] 35, 36	36	36	36	[c] 36, 37	37	37	[d] 37, 38	38, [e] 39	38, [f] 39	38	38	38
1900 [g]	47, [h] 48	48	48, [i] 49	49	49	49, [j] 50	50	50	50	51	51	51	51	51
1901	65, 75	65, 75	65, 75	65, 75	[k] 65, 66, 75	66, 75	[k] 65, 66, 75	66, 75	66, 75	66, 75	66, 75	66, 75	66, 75	66, 75
1902	82	[b] 82, 83	83	[l] 82, 83	[k] 83, 85	84	[k] 83, 84	84	85	85	85	85	85	85
1903	97	[b] 97, 98	98	97	[k] 98, 99, [m] 100	99	[k] 98, 99	99	100	100	100	100	100	100
1904	[n] 124, [o] 125, [p] 126	[p] 126, 127	128	129	[k] 128, 130	130, [q] 131	[k] 128, 131	132	133	133, [r] 134	134	135	135	135
1905	[n] 165, [o] 166, [p] 167	[p] 167, 168	169	170	171	172	[k] 169, 173	174	175, [s] 177	176, [r] 177	177	178	178	[t] 177, 178
1906	[n] 201, [o] 202, [p] 203	[p] 203, 204	205	206	207	208	[k] 205, 209	210	211, [s] 213	212, [r] 213	213	214	214	214
1907–8	241	242	243	244	245	246	247	248	249	250, [r] 251	251	252	252	252
1909	261	262	263	264	265	266	267	268	269	270, [r] 271	271	272	272	272
1910	281	282	283	284	285	286	287	288	289	290	291	292	292	292
1911	301	302	303	304	305	306	307	308	309	310	311	312	312	312
1912	321	322	323	324	325	326	327	328	329	330	331	332-A	332-B	332-C
1913	351	352	353	354	355	356	357	358	359	360	361	362-A	362-B	362-C
1914	381	382	383	384	385	386	387	388	389	390	391	392	393	394
1915	401	402	403	404	405	406	407	408	409	410	411	412	413	414
1916	431	432	433	434	435	436	437	438	439	440	441	432	443	444
1917	451	452	453	454	455	456	457	458	459	460	461	462	463	464
1918	471	472	473	474	475	476	477	478	479	480	481	482	483	484
1919–20	501	502	503	504	505	506	507	508	509	510	511	512	513	514
1921	521	522	523	524	525	526	527	528	529	530	531	532	533	534
1922	541	542	543	544	545	546	547	548	549	550	551	552	553	554
1923	561	562	563	564	565	566	567	568	569	570	571	572	573	574
1924	581	582	583	584	585	586	587	588	589	590	591	592	593	594
1925	601	602	603	604	605	606	607	608	609	610	611	612	613	614
1926	621	622	623	624	625	626	627	628	629	630	631	632	633	634
1927	641	642	643	644	645	646	647	648	649	650	651	652	653	654
1928	661	662	663	664	665	666	667	668	669	670	671	672	673	674
1929	681	682	683	684	685	686	687	688	689	690	691	692	693	694
1930	696	697	698	699	700	701	702	703	704	705	706	707	708	709
1931	711	712	713	714	715	716	717	718	719	720	721	722	723	724
1932	726	727	728	729	730	731	732	733	734	735	736	737	738	739

[a] Rating tables and index to Water-Supply Papers 35–39 contained in Water-Supply Paper 39. Tables of monthly discharge for 1899 in Twenty-first Annual Report, part 4.
[b] James River only.
[c] Gallatin River.
[d] Green and Gunnison Rivers and Colorado River above Gunnison River.
[e] Mohave River only.
[f] Kings and Kern Rivers and south Pacific slope basins.
[g] Rating tables and index to Water-Supply Papers 47–52 and data on precipitation, wells, and irrigation in California and Utah contained in Water-Supply Paper 52. Tables of monthly discharge for 1900 in Twenty-second Annual Report, part 4.
[h] Wissahickon and Schuylkill Rivers to James River.
[i] Scioto River.
[j] Loup and Platte Rivers near Columbus, Nebr., and all tributaries below junction with Platte River.
[k] Tributaries of Mississippi River from east.
[l] Lake Ontario and tributaries to St. Lawrence River proper.
[m] Hudson Bay only.
[n] New England rivers only.
[o] Hudson River to Delaware River, inclusive.
[p] Susquehanna River to Yadkin River, inclusive.
[q] Platte and Kansas Rivers.
[r] The Great Basin in California, except Truckee and Carson River Basins.
[s] Below junction with Gila River.
[t] Rogue, Umpqua, and Siletz Rivers only.

COOPERATION

The work in the several States was done under cooperative agreements as follows: In Arizona with the office of the State water commissioner, Frank P. Trott; in New Mexico with the office of the State engineer, George M. Neel; in Utah with the office of the State engineer, George M. Bacon; and in Wyoming with the office of the State engineer, John A. Whiting.

Assistance in collecting the records was rendered by the following organizations and corporations: In Arizona by the United States Indian Service; in Colorado by the State, through M. C. Hinderlider, State engineer, and by R. D. Webb; in New Mexico by the United States Indian Service; in Utah by the National Park Service, Utah Power & Light Co., and Price River Irrigation District; and in Wyoming by the United States Weather Bureau and the Rock Springs Water Co.

DIVISION OF WORK

The data for the stations in the several States were collected and prepared for publication as follows: In Arizona, except for the station on the Virgin River at Littlefield, Ariz., by W. E. Dickinson, district engineer, assisted by D. H. Barber, J. S. Gatewood, J. A. Baumgartner, R. E. Marsh, R. E. Cook, W. S. Eisenlohr, Jr., W. L. Heckler, H. S. Leak, D. D. Lewis, C. C. McDonald, J. M. Meier, R. H. Monroe, M. B. Scott, E. J. Tripp, O. R. Clark, J. E. Klohr, C. T. Pynchon, and Miss Alberta Phelps; in Colorado, except the station on the Los Pinos River at Ignacio, Colo., and in Wyoming and for the stations on Green River near Linwood, Utah, and Henrys Fork at Linwood, Utah, by Robert Follansbee, district engineer, assisted by J. H. Baily, H. P. Eisenhuth, D. S. Jenkins, L. F. Hanks, M. C. Boyer, S. C. Moore, F. M. Roush, Miss Nellie L. Esterly, and Mrs. Elsie L. Yeatman; in New Mexico and for the station on the Los Pinos River at Ignacio, Colo., by Berkeley Johnson, district engineer, assisted by E. L. Barrows, H. G. Neel, W. G. Bratschi, T. E. Yates, W. C. Smith, Miss G. C. Haskell, and Mrs. Jean Teague; in Utah, except the stations mentioned above, and for the station on the Virgin River at Littlefield, Ariz., by A. B. Purton, district engineer, assisted by M. T. Wilson, F. M. Bell, F. N. Hansen, B. M. Tanner, V. R. Bennion, and Miss Lysle Christensen.

The records were reviewed and manuscript assembled by K. B. Nelson and Harry C. Bolon.

GAGING-STATION RECORDS

COLORADO RIVER BASIN

COLORADO RIVER AND TRIBUTARIES ABOVE GREEN RIVER

COLORADO RIVER AT GLENWOOD SPRINGS, COLO.

LOCATION.—Water-stage recorder in sec. 9, T. 6 S., R. 89 W., at Glenwood Springs, half a mile above mouth of Roaring Fork. Zero of gage is 5,720.71 feet above mean sea level.

DRAINAGE AREA.—4,560 square miles.

RECORDS AVAILABLE.—January 1900 to September 1932. May to July 1899 at point just above Roaring Fork.

EXTREMES.—Maximum discharge during year, 17,300 second-feet May 24 (gage height, 9.64 feet); minimum, 85 second-feet Dec. 22 (gage height, 1.59 feet).

1900–1932: Maximum discharge, 30,100 second-feet June 14, 15, 1918 (gage height, 12.55 feet); minimum, 80 second-feet Feb. 6, 1921 (gage height, 1.6 feet).

REMARKS.—Records good. Discharge estimated Oct. 23, 24, Nov. 30, Dec. 1, 2, Jan. 1. Diversions for irrigation above station. During low-water period flow is regulated by Shoshone power plant 6 miles upstream.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,010	547	500	568	536	926	1,040	2,300	9,550	8,780	3,340	1,570
2	1,190	971	462	520	423	784	1,090	2,450	9,320	8,200	3,300	1,500
3	980	664	436	446	574	657	1,350	3,220	9,260	7,880	3,090	1,450
4	971	827	427	484	423	563	1,740	4,050	9,880	7,440	2,870	1,390
5	944	699	446	489	563	531	1,740	4,480	10,300	7,150	2,570	1,320
6	1,000	692	432	489	574	614	1,790	4,870	10,200	6,660	2,270	1,240
7	990	706	450	465	526	614	1,850	4,530	9,750	5,430	2,120	1,190
8	899	792	427	494	446	579	1,450	4,310	10,100	4,970	2,000	1,170
9	890	720	446	479	568	547	1,340	4,330	10,800	4,750	1,830	1,160
10	944	845	520	479	574	590	1,300	4,820	10,900	4,570	1,750	1,070
11	863	736	547	470	531	602	1,250	6,100	10,200	4,640	1,640	1,030
12	881	836	568	474	563	526	1,170	7,690	9,920	5,000	1,530	971
13	800	728	515	484	494	505	1,300	8,680	10,200	5,070	1,590	863
14	818	800	338	460	515	574	2,060	9,880	10,900	5,100	1,470	971
15	792	706	396	455	446	614	2,570	10,900	11,200	4,660	1,440	908
16	752	644	376	465	596	692	2,860	10,500	12,600	4,330	1,470	854
17	602	632	396	436	671	671	3,320	10,500	13,200	4,440	1,450	809
18	836	614	418	436	455	632	3,650	11,000	12,500	4,640	1,430	908
19	809	579	455	455	460	836	3,370	11,900	11,000	4,310	1,530	720
20	776	568	515	465	614	1,060	3,120	12,500	10,600	3,860	1,500	720
21	644	563	505	470	306	1,120	3,650	12,500	10,700	3,460	1,540	644
22	579	620	446	465	465	917	4,920	13,000	10,800	3,320	1,720	678
23	700	526	563	474	465	890	4,700	15,000	11,500	3,140	1,830	626
24	800	446	515	436	474	863	3,900	15,800	11,900	3,000	1,740	650
25	971	450	470	414	602	863	2,920	14,800	12,100	3,000	1,610	818
26	872	396	432	450	596	800	2,750	12,900	12,100	2,880	1,530	971
27	650	432	620	460	620	720	2,870	10,800	11,700	2,720	1,530	744
28	650	563	531	460	692	706	2,630	9,040	10,900	2,560	1,570	1,070
29	650	547	736	436	614	854	2,660	8,650	10,500	2,480	1,740	800
30	650	553	678	460	-------	720	2,440	9,680	9,490	2,860	1,740	744
31	602	-------	614	505	-------	608	-------	10,100	-------	3,180	1,630	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	1,190	579	824	50,700
November	971	396	647	38,500
December	736	338	490	30,100
January	568	414	469	28,800
February	692	306	531	30,500
March	1,120	505	715	44,000
April	4,920	1,040	2,430	145,000
May	15,800	2,300	8,750	538,000
June	13,200	9,260	10,800	643,000
July	8,780	2,480	4,660	287,000
August	3,340	1,440	1,880	116,000
September	1,570	626	985	58,600
The year	15,800	306	2,770	2,010,000

COLORADO RIVER NEAR PALISADE, COLO.

LOCATION.—Chain gage in sec. 3 T. 11 S., R. 98 W., 2½ miles above Palisade and 2 miles below mouth of Plateau Creek.

DRAINAGE AREA.—8,790 square miles.

RECORDS AVAILABLE.—March to September 1932. From April 1902 to November 1931 station located 4 miles downstream; records comparable.

EXTREMES.—Maximum discharge during year, 30,800 second-feet May 23 (gage height, 9.3 feet); minimum, 380 second-feet Sept. 17 (gage height, 0.50 foot). 1902–32: Maximum discharge, 52,400 second-feet June 16, 1921 (gage height, 24.4 feet); minimum, 178 second-feet Sept. 10, 1931 (gage height, 10.7 feet).

REMARKS.—Discharge estimated Dec. 1 to Feb. 29. Diversions for power and irrigation above station. Complete records furnished by United States Bureau of Reclamation.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	958	1,030	1,450	1,450	4,160	17,400	19,100	6,250	2,360
2	1,770	850	1,450	1,880	4,480	17,400	18,000	5,160	2,120
3	1,370	850	1,250	2,120	5,160	16,900	16,500	5,160	2,120
4	1,220	886	1,010	2,670	7,010	17,400	15,400	4,810	2,120
5	1,220	994	1,010	2,120	10,000	18,000	14,400	4,480	1,880
6	1,140	1,140	1,250	2,940	10,500	18,000	12,800	3,810	1,880
7	1,140	1,320	1,250	2,360	10,000	17,400	11,400	3,510	1,660
8	1,100	922	1,250	2,120	9,090	16,900	10,500	2,940	1,660
9	1,100	1,140	1,250	1,660	11,000	19,100	10,000	2,360	1,450
10	994	1,180	1,250	1,880	11,000	19,700	9,090	1,880	1,660
11	1,030	1,220	1,450	1,880	12,900	19,100	9,600	1,880	1,450
12	1,220	1,180	1,660	2,120	16,900	20,300	10,000	1,800	1,250
13	1,180	1,270	1,250	2,360	19,100	19,700	10,500	1,660	1,010
14	1,220	1,320	1,250	3,220	20,300	22,000	9,600	1,450	690
15	1,140	1,320	1,250	3,810	22,600	21,400	9,090	1,450	840
16	1,140	1,320	1,250	4,160	24,500	24,500	8,240	1,250	550
17	1,070	1,320	2,120	3,810	24,500	25,100	7,830	1,450	380
18	994	1,320	1,880	4,810	25,800	22,600	7,420	1,880	550
19	958	1,270	1,880	6,620	27,700	20,300	6,620	1,660	690
20	1,100	1,220	2,120	4,810	26,400	18,500	6,250	2,120	690
21	1,140	1,180	2,120	7,420	26,400	20,300	6,250	2,360	550
22	1,140	1,140	2,120	6,620	28,400	21,400	5,880	2,120	690
23	1,140	1,100	1,660	8,660	30,800	23,300	5,520	1,880	840
24	1,180	1,070	1,660	7,420	30,100	23,900	5,520	2,120	690
25	1,140	1,070	1,660	6,620	28,400	25,100	5,160	3,810	1,250
26	1,100	1,070	1,660	5,520	24,500	25,800	5,520	4,480	1,250
27	1,070	1,030	2,120	4,810	20,300	24,500	5,160	5,160	1,010
28	886	1,030	1,660	4,160	17,400	22,600	5,520	4,480	1,010
29	742	1,030	1,250	4,160	18,500	20,800	4,820	3,510	840
30	706	1,030	1,250	4,160	20,300	20,200	5,520	2,940	690
31	706	------	2,120	------	18,500	------	6,250	2,670	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	1,770	706	1,100	67,600
November	1,320	850	1,130	67,200
December	----------	----------	1,000	61,500
January	----------	----------	950	58,400
February	----------	----------	1,100	63,300
March	2,120	1,010	1,540	94,700
April	8,660	1,450	3,940	234,000
May	30,800	4,160	18,300	1,130,000
June	25,800	16,900	20,700	1,230,000
July	19,100	4,820	9,140	562,000
August	6,250	1,250	2,990	184,000
September	2,360	380	1,190	70,800
The year	30,800	380	5,260	3,820,000

COLORADO RIVER NEAR CISCO, UTAH

LOCATION.—Water-stage recorder in NW¼ sec. 17, T. 23 S., R. 24 E., 11 miles south of Cisco and 1 mile below mouth of Dolores River.

DRAINAGE AREA.—24,100 square miles.

RECORDS AVAILABLE.—November 1914 to September 1917; October 1922 to September 1932. October 1913 to November 1914 at Moab, 30 miles downstream; flow about same at both places.

EXTREMES.—Maximum discharge during year, 50,100 second-feet May 24 (gage height, 14.60 feet); minimum daily discharge (estimated), 1,300 second-feet Dec. 16.

1914–17, 1922–32: Maximum discharge, 76,800 second-feet June 19, 1917 (gage height, 19.7 feet); minimum, 838 second-feet Aug. 27, 1931 (gage height, 0.68 foot).

REMARKS.—Records good except those estimated for period Dec. 12 to Feb. 21, which are fair. Diversions for irrigation and power above station.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3,030	2,780	2,530	1,900	1,900	3,790	3,400	14,400	29,000	23,600	9,600	4,840
2	4,090	2,950	2,450	1,950	2,000	3,790	3,890	16,300	26,900	22,800	9,300	4,620
3	9,000	2,610	2,220	2,000	2,000	3,400	5,620	18,700	24,800	21,900	8,700	4,300
4	5,280	2,950	2,060	1,950	1,900	3,040	6,820	19,900	24,800	20,700	7,520	3,890
5	4,400	2,700	2,060	1,900	1,800	2,610	8,400	22,300	25,200	19,900	6,540	3,500
6	3,890	2,780	2,220	1,950	1,750	2,700	9,000	24,800	25,600	18,700	5,760	3,310
7	3,790	2,700	1,990	2,000	1,800	2,780	8,400	24,000	24,400	15,900	5,060	2,950
8	3,310	2,700	2,060	2,100	2,100	2,950	7,240	22,800	23,200	14,100	4,400	2,610
9	3,310	3,130	1,990	2,200	2,800	3,040	7,240	21,900	23,600	13,400	3,990	2,370
10	3,130	2,860	2,370	2,250	3,800	3,040	6,960	24,000	25,200	12,300	3,790	2,290
11	3,040	2,860	2,700	2,300	4,500	2,950	7,240	26,500	26,500	13,000	3,600	2,370
12	3,040	4,620	2,400	2,300	4,000	2,860	8,100	29,400	26,500	13,700	3,130	2,290
13	2,950	3,310	2,000	2,250	3,300	2,700	9,920	34,600	26,500	14,400	2,860	2,220
14	2,950	3,130	1,700	2,200	3,200	2,450	12,300	39,500	28,200	14,100	2,530	2,140
15	2,860	3,040	1,500	2,100	3,100	2,290	14,400	42,200	30,700	13,700	2,450	1,990
16	2,780	2,950	1,300	2,000	3,000	2,530	15,900	45,900	29,400	12,600	2,220	2,060
17	2,780	2,780	1,400	1,900	3,000	2,700	18,300	45,000	32,900	11,900	2,220	1,990
18	2,700	2,860	1,500	1,800	3,100	2,860	19,900	45,000	32,900	12,300	2,530	1,840
19	2,700	2,780	1,600	1,700	3,200	2,860	19,900	46,800	31,200	11,900	2,610	1,850
20	3,130	2,780	1,800	1,700	3,500	3,130	19,100	46,800	32,000	10,900	2,950	1,820
21	2,780	2,780	2,000	1,750	4,200	3,990	19,500	43,100	29,900	9,920	2,860	1,740
22	3,130	2,780	2,200	1,800	4,090	4,400	19,900	45,900	27,700	8,700	3,040	1,770
23	3,310	2,610	2,300	1,750	3,790	3,990	19,100	46,800	28,200	7,520	3,310	1,740
24	3,040	2,530	2,400	1,700	3,500	3,500	16,700	49,600	30,300	6,820	3,400	1,920
25	3,220	2,370	2,450	1,650	3,600	3,220	14,100	46,800	31,200	6,270	3,310	2,140
26	3,130	2,140	2,500	1,600	3,600	3,220	12,300	43,100	33,300	6,010	2,950	2,290
27	3,040	2,140	2,550	1,550	3,790	3,600	13,700	36,800	33,700	5,640	6,270	2,450
28	2,950	2,370	2,550	1,600	3,500	3,500	15,200	31,200	31,600	5,170	11,900	2,530
29	2,950	2,530	2,550	1,650	3,600	3,130	13,000	26,500	28,600	4,950	7,660	2,450
30	2,780	2,530	2,300	1,700	------	3,220	13,000	28,200	26,400	6,140	6,010	2,610
31	2,700	------	2,000	1,800	------	3,690	------	30,700	------	8,100	5,280	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	9,000	2,700	3,390	208,000
November	4,620	2,140	2,800	167,000
December	2,700	1,300	2,120	130,000
January	2,300	1,550	1,900	117,000
February	4,500	1,750	3,080	177,000
March	4,400	2,290	3,160	194,000
April	19,900	3,400	12,300	732,000
May	49,600	14,400	33,500	2,060,000
June	33,700	23,200	28,300	1,680,000
July	23,600	4,950	12,500	769,000
August	11,900	2,220	4,770	293,000
September	4,840	1,740	2,560	152,000
The year	49,600	1,300	9,210	6,680,000

COLORADO RIVER AT LEES FERRY, ARIZ.

LOCATION.—Water-stage recorder in NE¼SE¼ sec. 13, T. 40 N., R. 7 E., at head of Marble Gorge, at Lees Ferry, a short distance above mouth of Paria River. Zero of gage is 3,106.35 feet above mean sea level.

DRAINAGE AREA.—108,000 square miles.

RECORDS AVAILABLE.—June 1921 to September 1932.

EXTREMES.—Maximum discharge during year, 102,000 second-feet May 26 (gage height, 18.3 feet); minimum, about 1,750 second-feet Dec. 20 (backwater from ice).

1921–32: Maximum discharge, about 190,000 second-feet June 18, 1921 (gage height, 26.5 feet); minimum, 750 second-feet Dec. 27, 1924 (gage height, 4.2 feet).

Elevation of flood of 1884, at mouth of Paria River, 3,137.1 feet above mean sea level.

REMARKS.—Records excellent. Stage-discharge relation affected by ice and discharge estimated Dec. 6, 7, 13–24, 31, Jan. 1–9, 17–31. Diversions for irrigation above station.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6,890	5,420	3,720	5,800	3,630	10,200	12,400	27,300	68,300	63,700	15,800	22,300
2	6,750	5,450	4,240	5,200	3,660	10,800	11,700	26,000	66,400	6[illegible],400	16,000	17,600
3	10,400	5,630	4,020	4,900	4,220	10,800	12,300	28,000	60,200	56,400	19,100	15,100
4	14,900	5,750	3,990	4,750	4,740	11,600	14,400	30,000	56,900	55,700	19,200	13,300
5	16,200	5,540	4,040	4,700	4,990	11,100	16,500	33,700	57,000	52,800	17,400	11,700
6	15,700	5,570	3,550	4,450	6,190	10,100	19,300	40,700	56,400	49,700	16,500	11,000
7	11,500	5,540	3,200	4,150	5,840	8,960	23,300	45,100	55,300	46,800	15,200	10,300
8	9,270	5,360	3,280	4,000	5,720	8,080	29,100	46,200	53,700	44,100	13,600	9,410
9	8,110	5,510	3,320	4,350	13,600	7,640	28,500	45,700	51,300	39,300	12,500	8,880
10	7,440	5,910	3,550	4,320	24,100	7,720	25,800	43,800	50,100	34,900	11,700	8,360
11	7,130	6,220	3,400	4,450	20,700	8,880	24,200	44,000	51,800	31,900	10,600	7,640
12	7,400	6,030	5,020	4,420	16,400	10,600	23,800	45,700	53,500	29,800	10,100	7,090
13	7,720	6,520	5,450	4,790	17,400	10,600	22,100	49,500	54,100	34,100	9,560	6,450
14	6,680	9,230	4,900	4,900	15,000	9,780	22,200	54,300	53,900	36,800	8,440	6,260
15	5,970	9,380	4,600	4,790	11,700	9,340	24,300	60,900	55,400	34,300	7,790	6,000
16	5,840	8,180	4,150	4,820	9,110	8,700	28,400	69,800	58,900	32,000	7,160	5,750
17	5,720	6,850	3,700	4,650	8,660	8,260	30,800	77,100	63,900	29,100	6,850	5,420
18	5,600	6,350	2,800	4,600	8,440	8,180	31,200	80,900	65,000	26,000	6,480	5,160
19	5,630	6,160	2,200	4,400	8,360	8,330	34,800	84,800	66,700	24,800	6,450	4,900
20	6,450	5,880	1,800	4,300	8,100	8,810	38,800	87,800	67,100	24,300	7,260	4,820
21	12,000	6,060	2,150	4,100	8,810	9,580	38,200	92,300	64,800	24,400	7,790	4,680
22	10,800	5,880	2,400	4,100	9,040	11,500	37,700	92,100	62,400	23,600	13,700	4,470
23	9,000	5,910	2,950	4,200	8,700	13,000	39,500	88,200	62,800	22,100	16,200	4,370
24	7,260	5,940	4,200	4,000	8,700	16,000	39,200	90,600	63,200	20,000	12,600	4,770
25	6,220	5,810	4,390	3,750	8,620	16,300	37,300	99,800	63,900	18,000	11,000	5,880
26	6,030	5,330	4,710	3,800	8,730	15,700	34,100	98,900	66,800	16,800	10,500	8,220
27	6,060	4,470	5,630	3,950	8,660	14,500	31,800	96,500	67,800	15,800	11,600	6,850
28	5,910	3,970	6,000	4,000	8,700	14,300	30,800	93,500	70,800	14,900	21,200	5,720
29	5,840	3,680	6,060	4,200	9,340	14,100	32,000	86,200	69,000	14,600	40,800	6,260
30	5,630	3,340	6,190	4,190	-------	12,700	30,800	77,600	66,300	15,300	49,500	6,030
31	5,600	-------	6,450	3,600	-------	12,400	-------	67,300	-------	19,500	34,200	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	16,200	5,600	8,120	499,000
November	9,380	3,340	5,900	351,000
December	6,450	1,800	4,070	250,000
January	5,800	3,600	4,400	271,000
February	24,100	3,630	9,650	555,000
March	15,300	7,640	10,900	672,000
April	39,500	11,700	27,500	1,640,000
May	99,800	26,000	64,700	3,980,000
June	70,800	50,100	60,800	3,620,000
July	63,700	14,600	32,700	2,010,000
August	49,500	6,450	15,100	926,000
September	22,300	4,370	8,160	485,000
The year	99,800	1,800	21,000	15,300,000

COLORADO RIVER AT BRIGHT ANGEL CREEK, NEAR GRAND CANYON, ARIZ.

LOCATION.—Water-stage recorder at Kaibab Bridge, a quarter of a mile above Bright Angel Creek and 11 miles by trail northeast of Grand Canyon, Coconino County. Zero of gage is 2,420.3 feet above mean sea level.

DRAINAGE AREA.—139,000 square miles.

RECORDS AVAILABLE.—October 1922 to September 1932.

EXTREMES.—Maximum discharge during year, 102,000 second-feet May 26 (gage height, 26.1 feet); minimum, 2,080 second-feet Dec. 21 (gage height, 0.74 foot).

1922–32: Maximum discharge, 127,000 second-feet July 2, 1927 (gage height, 29.25 feet); minimum, 700 second-feet Dec. 28, 1924 (gage height, −0.70 foot).

REMARKS.—Records excellent. Diversions for irrigation above station.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7,910	5,880	3,710	7,160	4,170	12,100	15,700	29,700	66,900	65,300	18,600	31,200
2	7,470	5,760	4,160	6,170	4,190	13,300	15,300	27,000	66,800	62,200	16,200	20,600
3	7,730	5,820	4,740	5,680	4,380	15,200	14,300	27,200	62,700	59,700	18,100	17,300
4	15,300	6,090	4,600	5,410	4,830	16,100	15,900	29,300	58,600	57,200	20,100	14,800
5	15,900	6,010	4,610	5,230	5,810	16,300	18,500	32,000	57,200	54,500	19,300	12,800
6	18,200	5,810	4,430	5,190	6,450	14,400	20,400	37,100	56,100	50,500	17,400	11,500
7	13,900	5,810	4,010	4,970	7,120	12,200	23,300	43,500	55,200	47,200	16,500	10,800
8	10,800	5,740	3,530	4,620	6,720	10,600	29,200	45,900	54,300	44,800	15,000	10,000
9	9,230	5,690	3,720	4,450	9,310	9,670	31,400	46,100	52,100	41,200	13,500	9,380
10	8,390	6,030	3,910	4,770	23,600	9,580	29,100	44,300	49,900	36,900	13,000	8,920
11	7,670	6,160	4,130	4,730	45,900	10,900	26,700	44,000	50,200	33,900	11,800	8,380
12	7,340	6,520	4,000	5,040	33,000	12,500	26,300	45,200	51,800	31,100	10,700	7,870
13	7,970	7,960	5,550	5,130	23,800	13,300	24,800	47,700	53,600	31,000	9,940	7,360
14	7,440	9,950	5,620	5,410	22,700	12,800	23,800	52,100	54,000	39,000	9,100	6,790
15	6,860	10,500	5,170	5,450	17,300	11,500	24,800	58,800	54,900	34,100	8,440	6,480
16	6,410	10,300	4,950	5,380	14,200	10,700	27,600	68,000	57,700	33,400	7,940	6,170
17	6,290	8,670	4,560	5,270	12,100	10,200	32,100	74,400	62,700	30,800	7,500	5,940
18	6,010	7,310	4,080	5,010	11,200	10,100	32,400	79,700	64,000	27,900	7,150	5,630
19	5,800	6,830	3,150	4,910	10,900	10,700	34,500	83,500	67,000	25,500	6,750	5,430
20	6,010	6,650	2,520	4,900	10,600	11,000	38,200	85,900	67,900	24,500	7,000	5,200
21	7,500	6,500	2,160	4,830	9,700	12,500	39,200	91,800	66,500	24,000	7,620	5,090
22	13,300	6,680	2,560	4,610	10,700	14,400	38,600	94,000	63,000	23,900	8,650	4,960
23	11,200	6,440	2,850	4,600	10,300	15,900	40,100	91,600	62,100	23,300	16,100	4,810
24	9,230	6,310	3,430	4,680	10,200	17,300	40,500	90,300	63,100	21,600	17,200	4,690
25	7,800	6,290	4,740	4,450	9,800	19,200	39,400	97,500	63,400	19,500	13,600	5,120
26	6,820	6,100	4,900	4,220	9,650	18,600	36,700	101,000	65,900	17,900	11,400	6,240
27	6,550	5,600	5,330	4,320	9,670	17,700	33,900	99,100	67,800	16,700	11,500	9,000
28	6,480	4,860	6,200	4,470	9,650	18,400	32,000	95,900	69,700	15,500	18,600	6,970
29	6,170	4,390	6,550	4,490	10,600	17,900	32,300	89,400	71,200	14,800	32,100	6,280
30	6,030	4,020	6,900	4,700	------	16,700	32,100	78,400	68,600	15,700	49,800	6,870
31	5,920	------	7,010	4,360	------	15,800	------	70,700	------	18,300	43,900	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	18,200	5,800	8,700	535,000
November	10,500	4,020	6,560	390,000
December	7,010	2,160	4,440	273,000
January	7,160	4,220	4,990	307,000
February	45,900	4,170	12,700	731,000
March	19,200	9,580	13,800	848,000
April	40,500	14,300	29,000	1,720,000
May	101,000	27,000	64,600	3,970,000
June	71,200	49,900	60,800	3,620,000
July	65,300	14,800	33,600	2,070,000
August	49,800	6,750	15,600	961,000
September	31,200	4,690	9,090	541,000
The year	101,000	2,160	22,000	16,000,000

COLORADO RIVER NEAR TOPOCK, ARIZ.

LOCATION.—Water-stage recorder in NW¼ sec. 13, T. 15 N., R. 21 W., at lower end of Mohave Canyon, 3 miles southeast of Topock. Zero of gage is 423.2 feet above mean sea level.

DRAINAGE AREA.—174,000 square miles.

RECORDS AVAILABLE.—February 1917 to September 1932.

EXTREMES.—Maximum discharge during year, 97,100 second-feet May 30 (gage height, 23.75 feet); minimum discharge, 2,760 second-feet Dec. 26; minimum gage height, 5.75 feet Sept. 28.

1917–32: Maximum discharge, 174,000 second-feet June 22, 1921; minimum, 1,800 second-feet Jan. 4, 1925.

REMARKS.—Records excellent. Discharge estimated Feb. 21–23. Diversions for irrigation above station.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	12,800	6,570	5,680	7,080	4,760	11,600	17,300	32,700	86,000	65,600	15,000	39,800
2	10,900	6,330	5,120	7,140	4,810	11,500	16,900	33,000	78,200	65,900	15,300	43,700
3	9,170	6,220	4,710	7,440	5,100	12,600	16,500	31,500	71,000	65,500	17,800	32,600
4	8,430	5,960	4,510	7,290	4,860	13,000	16,200	28,900	69,500	63,700	17,500	25,200
5	7,760	6,020	4,150	7,140	4,760	13,600	16,300	28,200	67,800	59,800	16,200	19,600
6	7,320	5,990	4,300	6,480	4,780	16,000	15,200	28,900	62,400	57,400	18,200	17,600
7	13,400	6,100	4,860	6,100	4,780	17,200	16,500	31,500	57,300	55,200	19,600	15,000
8	16,000	6,330	4,970	5,740	5,040	17,000	19,600	35,600	56,500	51,900	18,000	13,000
9	18,100	6,050	5,490	5,540	7,170	14,200	22,400	41,500	54,500	49,700	16,600	11,900
10	13,900	6,100	5,150	5,460	15,500	12,700	27,200	44,800	53,800	46,400	15,900	11,000
11	11,100	6,630	4,840	5,120	36,400	11,300	32,200	45,400	51,800	44,400	14,100	10,400
12	9,640	7,260	4,340	4,910	29,700	11,000	31,700	44,000	50,800	39,600	13,000	9,780
13	8,490	6,300	4,390	4,710	44,300	10,100	28,200	43,300	50,200	37,500	12,700	9,370
14	7,920	6,600	4,560	5,020	39,400	10,900	27,000	44,400	51,100	34,600	11,600	8,880
15	7,720	7,080	4,710	5,250	27,000	12,800	26,800	45,800	52,000	31,000	10,600	8,270
16	7,350	7,380	4,660	5,460	24,700	13,200	25,300	48,500	52,900	35,600	10,100	7,820
17	8,080	9,610	5,940	5,570	20,300	13,000	25,300	52,200	53,400	36,200	9,130	7,050
18	6,900	10,700	5,910	5,800	16,900	12,200	27,000	58,800	55,000	35,300	8,460	6,780
19	6,450	10,700	5,460	5,770	13,700	11,200	31,800	65,600	56,000	33,200	8,110	6,480
20	6,420	8,880	5,380	5,770	12,100	10,300	33,400	72,000	58,800	29,400	7,530	6,050
21	6,190	8,140	5,020	5,820	11,500	10,300	34,200	76,800	61,700	27,600	7,320	5,820
22	6,160	7,140	4,580	5,570	11,200	11,100	38,300	80,900	63,900	25,200	6,870	5,570
23	5,820	6,870	3,910	5,460	10,800	12,100	39,000	84,100	64,400	24,600	6,390	5,430
24	6,840	7,110	3,390	5,280	10,000	12,900	39,400	85,400	64,200	24,200	7,260	5,120
25	12,800	6,720	3,100	5,020	11,400	14,900	39,800	91,500	62,500	23,600	7,920	5,280
26	11,400	6,690	2,840	4,780	10,700	17,000	40,900	90,200	61,600	22,800	16,300	4,890
27	9,370	6,690	3,150	4,860	10,700	18,600	40,200	87,400	60,700	20,800	15,200	4,840
28	8,170	6,600	3,430	5,070	10,400	19,700	38,400	90,900	61,400	18,600	17,000	4,940
29	7,380	6,960	5,460	4,940	10,500	19,600	35,900	95,400	63,000	17,100	17,900	5,410
30	6,690	6,570	5,360	4,810	-------	18,200	33,300	96,300	64,200	16,400	14,400	7,720
31	6,420	-------	5,710	4,760	-------	18,100	-------	90,800	-------	15,300	24,600	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	18,100	5,820	9,200	565,000
November	10,700	5,960	7,080	421,000
December	5,940	2,840	4,680	288,000
January	7,440	4,710	5,650	347,000
February	44,300	4,760	14,600	840,000
March	19,700	10,100	13,800	849,000
April	40,900	15,200	28,400	1,690,000
May	96,300	28,200	58,900	3,620,000
June	86,000	50,200	60,600	3,600,000
July	65,900	15,300	37,900	2,330,000
August	24,600	6,390	13,400	826,000
September	43,700	4,840	12,200	725,000
The year	96,300	2,840	22,200	16,100,000

COLORADO RIVER AT YUMA, ARIZ.

LOCATION.—Water-stage recorder 1,000 feet below highway bridge at Yuma and 5 miles below Gila River. Zero of gage is 102.79 feet above mean sea level.

DRAINAGE AREA.—245,000 square miles.

RECORDS AVAILABLE.—April 1878 to September 1932. Gage heights only prior to January 1902.

EXTREMES.—Maximum discharge during year, 90,800 second-feet June 5 (gage height, 28.56 feet); minimum discharge, 1,090 second-feet Dec. 28; minimum gage height, 17.02 feet Aug. 24.

1902–32: Maximum daily mean discharge, 240,000 second-feet Jan. 22, 1916; minimum discharge, 58 second-feet Sept. 23, 1931.

REMARKS.—Records for river station excellent; for canal and wasteway fair. Many diversions for irrigation from Colorado River and tributaries. Considerable water diverted around river station on account of power development on main canal of Yuma reclamation project. Water not required for irrigation returned to river below river station. Supplementing the records of discharge at river station are records of diversion to Yuma main canal at Laguna Dam, 14 miles upstream, and discharge of wasteway, which returns water from this canal to river half a mile downstream from river station. Daily-discharge records for canal and wasteway furnished by United States Bureau of Reclamation.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	9,000	4,230	4,590	5,170	2,290	13,800	15,700	33,600	75,600	59,700	14,500	14,300
2	11,000	3,900	4,140	4,140	2,410	12,300	15,400	31,200	79,200	58,600	13,100	25,200
3	8,680	3,870	3,480	4,960	2,590	12,400	15,200	30,300	83,500	59,800	12,100	35,500
4	7,370	3,510	3,080	4,890	2,530	13,200	14,300	29,500	89,000	59,400	13,900	34,900
5	5,730	3,450	2,530	5,050	2,740	13,300	14,500	28,000	89,100	60,600	16,500	26,000
6	5,170	3,420	2,390	5,050	2,890	15,400	14,200	25,400	84,400	60,800	14,000	19,900
7	4,380	3,220	2,140	5,030	2,800	17,000	13,100	25,200	81,300	62,000	14,200	16,000
8	4,360	3,450	2,130	4,780	2,680	16,700	13,600	27,400	71,500	59,400	16,400	13,700
9	11,200	3,300	2,760	3,790	2,590	16,200	14,900	29,000	67,400	55,600	16,800	12,200
10	12,500	3,520	2,830	3,700	10,500	16,100	17,600	31,600	61,400	52,100	15,100	10,400
11	14,500	3,450	3,620	3,120	31,600	13,600	20,100	33,000	57,500	47,700	14,100	9,700
12	10,400	3,420	3,360	3,230	34,000	11,200	24,900	36,200	53,200	45,600	13,300	8,770
13	8,460	3,860	3,080	2,870	33,000	10,000	26,600	39,000	51,500	42,100	11,500	8,340
14	6,260	4,420	2,920	2,580	31,600	9,320	27,100	39,300	49,900	38,800	11,000	7,180
15	5,460	3,890	3,560	2,520	44,200	9,900	25,100	39,200	48,300	35,500	10,500	6,790
16	4,850	3,780	3,200	2,790	52,900	10,300	23,700	39,200	47,700	32,300	9,950	6,760
17	4,360	4,110	2,920	2,840	34,000	11,700	22,100	40,500	48,700	32,300	8,600	5,730
18	4,850	4,420	2,700	3,260	28,000	12,000	22,800	39,400	48,600	34,300	7,760	5,440
19	4,710	6,660	3,260	3,170	25,200	11,000	22,600	41,100	48,700	33,000	7,180	4,910
20	4,460	8,170	3,950	3,290	24,700	10,400	23,700	43,300	49,600	32,000	6,260	4,760
21	3,900	7,920	3,500	3,460	18,900	8,950	27,800	44,300	50,600	29,600	6,110	3,900
22	3,740	6,690	3,400	3,390	17,700	8,550	29,200	47,300	52,400	26,600	5,290	3,810
23	3,710	5,680	2,830	3,450	18,400	8,080	29,700	49,300	54,500	24,300	5,240	3,650
24	3,380	5,360	2,750	2,990	16,900	9,040	31,200	53,300	55,500	23,100	4,500	3,390
25	3,340	4,480	2,440	2,800	15,500	9,950	33,200	56,000	56,200	22,100	4,420	3,160
26	3,950	4,560	1,910	3,020	15,100	11,600	34,700	59,500	57,400	21,500	4,330	3,290
27	8,820	4,630	1,530	2,880	14,500	13,400	35,800	62,500	59,100	20,300	5,540	3,050
28	8,080	4,520	1,220	2,750	13,400	14,800	36,200	65,600	61,100	19,600	13,900	2,580
29	6,860	4,690	1,270	2,720	13,500	16,800	37,200	70,300	59,000	19,100	11,700	2,590
30	5,590	4,440	1,710	2,660	-------	16,800	35,000	73,400	59,000	17,700	14,500	2,760
31	4,380	-------	3,330	2,620	-------	16,200	-------	74,700	-------	15,400	13,700	-------

Month	Maximum	Minimum	Mean	Run-off acre-feet
October	14,500	3,340	6,560	404,000
November	8,170	3,220	4,500	268,000
December	4,590	1,220	2,860	176,000
January	5,170	2,520	3,520	216,000
February	52,900	2,290	17,800	1,030,000
March	17,000	8,080	12,600	774,000
April	37,200	13,100	23,900	1,420,000
May	74,700	25,200	43,100	2,650,000
June	89,100	47,700	61,700	3,670,000
July	62,000	15,400	38,700	2,380,000
August	16,800	4,330	10,800	666,000
September	35,500	2,580	10,300	612,000
The year	89,100	1,220	19,700	14,300,000

Discharge, in second-feet, of Yuma main canal at Laguna Dam, near Yuma, Ariz., 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,920	1,930	1,620	1,580	1,900	1,700	1,620	1,910	2,000	1,580	2,060	1,940
2	1,600	2,050	1,870	1,820	1,560	1,920	1,880	2,070	1,900	1,890	1,660	1,590
3	1,860	1,670	1,930	1,920	1,800	2,000	1,910	1,710	1,630	1,900	1,890	1,870
4	1,920	1,900	1,580	1,980	1,860	1,630	2,100	1,880	1,860	1,900	1,910	1,910
5	2,060	1,980	1,780	1,640	1,820	1,840	1,730	1,910	1,900	1,730	1,590	1,920
6	1,680	1,630	1,840	1,900	1,850	1,910	1,970	1,580	2,070	2,050	1,850	1,750
7	1,940	1,880	1,870	1,960	1,870	2,060	2,020	1,850	1,700	2,030	1,920	2,020
8	1,930	1,960	1,520	1,610	1,860	1,710	1,640	1,900	1,920	1,610	2,110	2,010
9	1,600	2,010	1,780	1,840	1,620	1,940	1,900	2,050	1,910	1,880	1,740	1,600
10	1,880	1,640	1,880	1,920	1,910	1,920	1,900	1,670	1,590	1,910	1,950	1,840
11	1,930	1,890	1,640	1,940	1,920	1,590	2,080	1,900	1,840	2,080	1,960	1,920
12	2,070	1,940	1,650	1,610	1,570	1,840	1,730	1,950	1,900	1,730	1,640	2,080
13	1,680	1,620	1,860	1,780	1,830	1,910	1,900	1,610	2,070	1,980	1,980	1,720
14	1,940	1,880	1,660	1,840	1,870	2,070	1,910	1,870	1,740	1,990	1,950	1,920
15	1,980	1,930	1,620	1,790	1,870	1,690	1,600	1,890	1,970	1,960	2,060	1,920
16	1,630	1,990	1,800	1,850	1,610	1,940	1,870	2,070	1,980	1,900	1,710	1,520
17	1,840	1,640	1,800	1,860	1,870	1,970	1,920	1,690	1,640	1,900	1,920	1,900
18	1,920	1,860	1,470	1,940	1,880	1,650	2,090	1,940	1,880	2,070	1,920	1,900
19	2,040	1,930	1,780	1,600	1,580	1,900	1,730	1,900	1,900	1,740	1,570	1,950
20	1,660	1,600	1,910	1,870	1,830	1,930	1,940	1,580	2,070	1,980	1,800	1,530
21	1,880	1,860	1,950	1,920	1,930	2,070	1,950	1,850	1,730	1,970	1,840	1,880
22	1,950	1,920	1,560	1,890	1,930	1,720	1,600	1,890	1,960	1,600	1,890	1,890
23	1,610	1,980	1,760	1,900	1,700	1,940	1,860	2,060	1,930	1,700	1,580	1,560
24	1,850	1,620	1,820	1,880	1,820	1,970	1,890	1,700	1,590	1,900	1,760	1,800
25	1,920	1,880	1,480	1,920	1,920	1,620	2,070	1,950	1,870	2,110	1,770	1,850
26	2,020	1,920	1,650	1,560	1,600	1,840	1,700	1,990	1,900	1,760	1,750	1,910
27	1,640	1,600	1,690	1,820	1,840	1,890	1,880	1,600	2,090	1,900	1,840	1,490
28	1,880	1,860	1,730	1,870	1,960	2,060	1,910	1,850	1,730	1,920	1,910	1,900
29	1,940	1,920	1,440	1,840	2,060	1,720	1,590	1,900	1,980	1,460	2,090	1,870
30	1,620	2,010	1,620	1,850	-------	1,980	1,860	1,900	1,940	1,590	1,740	1,550
31	1,870	-------	1,850	1,850	-------	1,970	-------	1,720	-------	1,920	1,960	------

Month	Maximum	Minimum	Mean	Run-off acre-feet
October	2,070	1,600	1,850	114,000
November	2,050	1,600	1,850	110,000
December	1,950	1,440	1,720	106,000
January	1,980	1,560	1,820	112,000
February	2,060	1,560	1,820	104,000
March	2,070	1,590	1,870	115,000
April	2,100	1,590	1,860	111,000
May	2,070	1,580	1,850	114,000
June	2,090	1,590	1,880	112,000
July	2,110	1,460	1,860	114,000
August	2,110	1,570	1,850	114,000
September	2,080	1,490	1,820	108,000
The year	2,110	1,440	1,840	1,330,000

Discharge, in second-feet, of Yuma main canal wasteway at Yuma, Ariz., 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,210	1,760	1,260	1,290	1,310	1,080	1,260	1,740	1,020	1,030	1,230	1,220
2	1,170	1,330	1,270	1,440	1,200	1,110	1,540	1,190	1,210	1,320	1,120	1,120
3	1,210	1,210	1,440	1,720	1,220	1,280	1,760	1,050	1,200	1,860	1,140	1,320
4	1,440	1,220	1,340	1,430	1,410	1,170	1,220	1,080	1,370	1,720	1,230	1,580
5	1,260	1,390	1,530	1,320	1,390	1,280	1,050	1,280	1,720	982	1,220	1,540
6	1,080	1,300	1,730	1,330	1,530	1,430	1,140	1,170	1,150	981	1,490	1,050
7	1,120	1,250	1,310	1,460	1,740	1,140	1,260	1,540	1,010	1,120	1,760	968
8	1,300	1,400	1,220	1,310	1,350	947	1,140	1,780	1,080	1,050	1,150	1,100
9	1,230	1,280	1,200	1,350	1,150	1,030	1,280	1,200	1,180	1,220	988	1,120
10	1,470	1,160	1,410	1,770	1,200	1,240	1,400	1,030	1,100	1,740	1,050	1,420
11	1,770	1,190	1,220	1,400	1,450	1,160	1,230	1,100	1,310	1,100	1,180	1,520
12	1,290	1,420	1,510	1,310	1,400	1,220	1,090	1,230	1,700	939	1,250	1,260
13	1,100	1,300	1,720	1,300	1,430	1,340	1,170	1,140	1,040	931	1,470	1,120
14	1,150	1,320	1,080	1,460	1,550	1,110	1,340	1,430	910	1,190	1,480	1,100
15	1,300	1,440	1,190	1,430	1,400	950	1,240	1,710	960	1,180	1,220	1,200
16	1,250	1,340	1,410	1,570	1,170	1,090	1,520	1,140	1,080	1,280	1,030	1,010
17	1,490	1,210	1,410	1,740	1,320	1,210	1,730	975	1,020	1,350	1,030	1,340
18	1,790	1,270	1,300	1,400	1,460	1,110	1,220	1,030	1,340	1,150	1,220	1,520
19	1,250	1,380	1,490	1,230	1,350	1,410	1,090	1,190	1,760	1,020	1,120	1,130
20	1,120	1,280	1,720	1,230	1,580	1,770	1,110	1,070	1,190	1,130	1,300	772
21	1,200	1,360	1,380	1,430	1,900	1,180	1,270	1,200	966	1,270	1,670	1,000
22	1,420	1,530	1,210	1,400	1,510	1,020	1,200	1,760	1,010	1,170	1,030	1,120
23	1,350	1,380	1,220	1,610	1,290	1,080	1,450	1,140	1,080	1,320	846	991
24	1,400	1,250	1,510	1,730	1,160	1,260	1,770	982	1,010	1,720	819	1,010
25	1,710	1,280	1,620	1,380	1,340	1,160	1,220	1,000	1,080	1,120	1,030	1,300
26	1,290	1,440	1,530	1,240	1,260	1,420	1,100	1,150	1,260	978	1,150	1,040
27	1,220	1,340	1,550	1,210	1,390	1,780	1,220	1,070	1,040	1,080	1,400	780
28	1,230	1,460	1,100	1,380	1,820	1,220	1,300	1,320	834	1,210	1,520	910
29	1,390	1,760	962	1,350	1,270	1,080	1,200	1,760	846	1,140	1,190	1,010
30	1,260	1,360	958	1,540	-------	1,140	1,410	1,320	978	1,140	1,030	916
31	1,450	-------	1,290	1,720	-------	1,260	-------	1,060	-------	1,730	1,120	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	1,790	1,080	1,320	81,200
November	1,760	1,160	1,350	80,500
December	1,730	958	1,360	83,500
January	1,770	1,210	1,430	88,200
February	1,900	1,150	1,400	80,400
March	1,780	947	1,220	74,700
April	1,770	1,050	1,300	77,200
May	1,780	975	1,250	77,000
June	1,760	834	1,150	68,300
July	1,860	931	1,230	75,700
August	1,760	819	1,210	74,500
September	1,580	772	1,150	68,400
The year	1,900	772	1,280	930,000

BLUE RIVER AT DILLON, COLO.

LOCATION.—Water-stage recorder in sec. 18, T. 5 S., R. 77 W., on edge of Dillon, a short distance above mouths of Snake River and Tenmile Creek.

DRAINAGE AREA.—129 square miles.

RECORDS AVAILABLE.—October 1910 to September 1932.

EXTREMES.—Maximum discharge during year, 499 second-feet May 23 (gage height, 2.84 feet); minimum occurred during winter.

1910–32: Maximum discharge, 1,180 second-feet June 14, 1924 (gage height, 3.6 feet); minimum, 14 second-feet Jan. 30, Feb. 9, 1915 (gage height, 1.10 feet).

REMARKS.—Records excellent except those for period Nov. 15 to Apr. 16, which were estimated on basis of four discharge measurements and temperature records. Discharge estimated Sept. 26. Practically no diversions above station which are not returned to river.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	51	30						51	337	336	215	91
2	49	29						60	319	318	207	85
3	49	29					30	70	349	307	184	78
4	49	29						82	336	307	167	75
5	49	29						92	336	294	155	75
6	51	30						98	336	262	140	74
7	51	30						94	314	241	130	74
8	48	30	20				25	91	311	235	122	73
9	46	30						97	315	230	115	69
10	46	30						118	337	228	112	68
11	46	30						151	349	244	108	68
12	46	30		20				176	379	278	105	66
13	44	30					40	202	311	340	102	65
14	44	30						230	374	322	102	64
15	42	28				23		265	396	262	100	62
16	41				21		50	265	455	247	100	61
17	42						56	265	440	268	103	57
18	41	28					53	290	406	314	106	56
19	41						53	353	374	271	108	54
20	41						56	344	315	244	98	56
21	41						64	311	370	222	106	56
22	40						70	370	333	209	115	52
23	38	22					66	466	415	191	122	53
24	38						62	455	406	189	117	60
25	38						57	434	396	186	108	61
26	38						56	410	401	176	100	58
27	38						56	353	410	162	98	54
28	37	24					49	318	372	153	100	53
29	37						48	344	370	151	102	53
30	37						47	353	337	191	100	53
31	35							353		225	96	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	51	35	43.0	2,640
November	30		27.1	1,610
December			22	1,350
January			19	1,170
February			22	1,270
March			24	1,480
April	70		43.9	2,610
May	466	51	244	15,000
June	455	336	375	22,300
July	340	151	245	15,100
August	215	96	121	7,440
September	91	52	64.1	3,810
The year	466		104	75,800

SNAKE RIVER AT DILLON, COLO.

LOCATION.—Water-stage recorder in sec. 18, T. 5 S., R. 77 W., at highway bridge 100 yards above mouth of river at Dillon.

DRAINAGE AREA.—92 square miles.

RECORDS AVAILABLE.—October 1910 to September 1919; December 1929 to September 1932.

EXTREMES.—Maximum discharge during year, 635 second-feet June 15 (gage height, 3.55 feet); minimum probably occurred during winter.

1910–19, 1929–32: Maximum discharge, 1,170 second-feet June 15, 1918; minimum, 3 second-feet Nov. 9, 1912.

REMARKS.—Records good except those for period Oct. 30 to Apr. 16, which were estimated on basis of four discharge measurements and temperature records. Snake River Ditch diverts about 30 second-feet above station for power development.

Discharge, in second-feet, 1931–32

Day	Oct.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	14						26	227	315	80	26
2	15						39	231	320	65	24
3	15					20	48	250	292	55	22
4	15						50	239	284	49	22
5	15						42	239	246	44	21
6	15						31	246	190	40	21
7	15						32	292	157	39	20
8	13	7				18	35	306	144	38	20
9	13						40	275	138	46	20
10	13						51	263	141	35	19
11	13						55	279	144	34	17
12	13		7				62	310	180	33	16
13	13					26	73	310	242	34	15
14	12						105	358	163	33	15
15	12				16		91	462	141	33	15
16	12			14		35	91	489	144	33	14
17	12					41	112	430	144	34	13
18	12					31	138	378	130	34	13
19	12					31	144	378	112	31	13
20	12					40	130	398	107	31	13
21	12					54	173	404	88	37	14
22	12					59	267	462	78	37	15
23	12					36	288	468	81	36	15
24	12					36	263	451	80	34	15
25	12					37	242	462	72	33	12
26	12					34	183	473	66	33	11
27	12					31	144	451	56	33	11
28	12					30	130	398	59	36	11
29	12					24	187	383	70	35	11
30	10					24	227	333	105	30	11
31	10						208		92	28	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	15	10	12.7	781
November			9	536
December			8	492
January			7	430
February			14	805
March			15	922
April	59		28.8	1,710
May	288	26	120	7,380
June	489	227	355	21,100
July	320	56	148	9,100
August	80	28	38.5	2,370
September	26	11	16.2	964
The year	489		64.1	46,600

TENMILE CREEK AT DILLON, COLO.

LOCATION.—Water-stage recorder in sec. 18, T. 5 S., R. 77 W., at highway bridge 300 yards above mouth at Dillon.

DRAINAGE AREA.—113 square miles.

RECORDS AVAILABLE.—October 1910 to September 1919; April 1930 to September 1932.

EXTREMES.—Maximum discharge during year, 1,080 second-feet May 22 (gage height, 4.93 feet); minimum occurred during winter.

1910–19, 1930–32: Maximum discharge, 1,630 second-feet June 16, 1917; minimum, 2 second-feet Feb. 15–17, 1918.

REMARKS.—Records good except those for Oct. 28 to Apr. 25, which were estimated on basis of five discharge measurements and temperature records. Small diversions for irrigation above station. No regulation.

Discharge, in second-feet, 1931–32

Day	Oct.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	32						84	452	315	154	63
2	35						84	488	298	137	61
3	44					24	77	5[illegible]	298	120	58
4	44						86	5[illegible]2	287	109	56
5	42						102	5[illegible]8	257	104	55
6	40						104	470	222	93	54
7	39						93	536	212	86	54
8	38	16				18	98	574	206	82	53
9	37						126	536	196	79	52
10	38						158	482	218	77	50
11	38						209	440	209	79	49
12	38		11				253	5[illegible]4	225	75	49
13	38					30	344	5[illegible]4	257	75	49
14	36						390	5[illegible]4	199	68	48
15	35				13		381	638	179	70	47
16	35			15		36	372	630	176	72	46
17	35					44	425	5[illegible]4	260	70	46
18	34					55	506	4[illegible]2	206	70	46
19	35					72	536	476	182	72	45
20	35					80	395	482	163	68	45
21	36					95	464	470	149	95	44
22	36					94	758	5[illegible]2	140	98	45
23	36					92	678	500	137	82	47
24	36					90	616	4[illegible]8	140	74	53
25	36					95	554	506	133	67	58
26	37					107	420	470	124	65	50
27	34					86	327	470	115	75	46
28	34					82	340	420	115	79	46
29	34					79	494	372	118	86	46
30	34					67	548	3[illegible]4	140	74	46
31	34						430		144	67	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	44	32	36.7	2,260
November			25	1,490
December			16	984
January			12	738
February			14	805
March			15	922
April	107		51.1	3,040
May	758	77	337	20,700
June	638	344	499	29,700
July	315	115	194	11,900
August	154	65	84.6	5,200
September	63	44	50.2	2,990
The year	758		111	80,700

LAKE FORK AT LAKE CITY, COLO.

LOCATION.—Water-stage recorder in sec. 34, T. 44 N., R. 4 W., at Lake City, just above Wade Gulch.

DRAINAGE AREA.—123 square miles.

RECORDS AVAILABLE.—October 1931 to September 1932. From April 1918 to September 1924 and December 1928 to July 1930 station maintained 600 feet downstream and below Wade Gulch.

EXTREMES.—Maximum discharge during year, 734 second-feet June 26 (gage height, 3.15 feet); minimum, 5.7 second-feet Mar. 10 (discharge measurement). 1918–24, 1928–30, 1931–32: Maximum discharge, 1,560 second-feet June 12, 15, 1921; minimum, that of Mar. 10, 1932.

REMARKS.—Records good except those estimated Oct. 1–11, which are fair, and those for period Nov. 14 to Apr. 16, which were estimated on basis of 13 discharge measurements and temperature records. Flow naturally regulated by Lake San Cristobal, 4 miles upstream.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	56	29						50	433	501	205	101
2	56	29						59	463	450	185	91
3	56	30	15	8	7	14	16	128	507	433	163	80
4	56	30						172	463	463	144	76
5	57	30						146	395	463	128	72
6	57	28						139	334	405	116	67
7	57	25			8			130	299	375	107	63
8	58	24	12	9		14	20	132	334	368	96	60
9	58	25			8			156	395	341	91	58
10	57	25			9	6	21	180	467	348	83	52
11	56	24	13	10				182	507	368	77	44
12	56	24	14	12				192	552	375	69	41
13	55	23	13		10	8	30	251	619	388	67	40
14	53	23	12	9				361	658	354	66	38
15	50	23	11					371	622	321	67	37
16	46						50	395	633	292	69	37
17	42				12		63	429	608	308	73	32
18	41	22	12	9		12	69	511	597	315	73	33
19	40				15		76	565	565	296	74	33
20	41			10	12	10	79	473	590	267	73	31
21	41						82	450	612	244	83	31
22	40						82	601	604	217	193	30
23	40	17	14	9	14	14	72	594	594	198	190	29
24	39						63	579	572	226	94	29
25	38						55	579	666	220	88	29
26	36						52	490	680	198	85	31
27	34				14		56	419	612	175	197	29
28	33	15	12	7		14	51	456	558	168	158	29
29	31				14		48	518	558	185	158	27
30	30					8	48	552	518	192	136	25
31	29			8		14		460		208	116	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	58	29	46.4	2,850
November	30		22.1	1,320
December			12.9	793
January			8.6	529
February			10.9	627
March			12.2	750
April	82		42.6	2,530
May	601	50	346	21,300
June	680	299	534	31,800
July	501	168	312	19,200
August	205	66	105	6,460
September	101	25	45.8	2,730
The year	680		125	90,900

HENSON CREEK AT LAKE CITY, COLO.

LOCATION.—Water-stage recorder in sec. 33, T. 44 N., R. 4 W., 1¼ miles southwest of Lake City.

DRAINAGE AREA.—82 square miles.

RECORDS AVAILABLE.—December 1928 to July 1930; October 1931 to September 1932. From April 1918 to September 1919 at station 1 mile downstream.

EXTREMES.—Maximum discharge during year, 1,200 second-feet June 24 (gage height, 3.94 feet); minimum occurred during winter.

1918–19, 1928–30, 1931–32: Maximum discharge, 2,510 second-feet July 25, 1929; minimum, 9.6 second-feet Dec. 22, 1928.

REMARKS.—Records good except those estimated for Oct. 1–10, 19, and those for period Nov. 13 to Apr. 16, which were estimated on basis of 13 discharge measurements and temperature records.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	43	26						72	443	575	243	87
2	43	24						118	495	522	208	82
3	43	24	22	19	20	17	25	144	495	552	185	77
4	42	24						171	427	602	166	74
5	42	22						190	363	530	152	71
6	42	22						164	319	462	142	70
7	42	22	23		12	15		144	303	422	132	66
8	45	23		19			22	162	411	402	125	63
9	45	22	23		14			196	497	394	120	60
10	43	21	23		16	15		217	509	414	115	57
11	42	22		19				190	551	426	111	55
12	38	23		18				230	634	422	108	54
13	35		22		14	13	35	391	750	438	103	52
14	32	23		21				463	755	362	99	51
15	31							443	768	343	98	50
16	30						80	479	678	340	96	48
17	30			24	14	16	106	531	647	386	96	47
18	31	23	22				91	584	611	343	95	47
19	31				14		91	511	588	321	98	47
20	32			25	14	18	104	383	652	283	91	46
21	32		24				88	507	701	253	131	45
22	33		25				70	598	710	216	113	44
23	33	21	13	19	16	16	56	539	706	203	95	44
24	34		30				48	535	827	208	85	49
25	32		23				46	491	958	198	87	47
26	32						53	403	863	176	87	42
27	27				18	17	48	339	764	168	152	40
28	28	21	23	22			42	459	701	176	154	39
29	28				18		40	507	696	216	129	39
30	24			21	------	17	43	503	647	267	110	38
31	26	------		19	------	18	------	423	------	237	98	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	45	24	35.2	2,160
November	26	------	22.3	1,330
December	------	------	22.5	1,380
January	------	------	20.5	1,260
February	------	------	15.8	909
March	------	------	15.8	972
April	106	------	47.2	2,810
May	598	72	358	22,000
June	958	303	615	36,600
July	602	168	350	21,500
August	243	85	123	7,560
September	87	38	54.4	3,240
The year	958	------	140	102,000

UNCOMPAHGRE RIVER NEAR COLONA, COLO.

LOCATION.—Water-stage recorder in NE¼ sec. 32, T. 47 N., R. 8 W., 3 miles south of Colona and short distance below mouth of Billy Creek.
DRAINAGE AREA.—419 square miles.
RECORDS AVAILABLE.—April 1917 to September 1932.
EXTREMES.—Maximum discharge during year, 958 second-feet June 16 (gage height, 2.72 feet); minimum occurred during winter.
1917–32: Maximum discharge, 4,080 second-feet June 13, 14, 1921; minimum, 16 second-feet Sept. 3, 1918.
REMARKS.—Few small diversions above station. Records of daily discharge furnished by Uncompahgre Valley Water Users' Association.

Discharge, in second-feet, 1931–32

Day	Oct.	Apr.	May	June	July	Aug.	Sept.
1	136	151	395	717	864	415	164
2	145	196	571	748	830	36[illegible]	145
3	300	157	599	851	878	33[illegible]	136
4	220	203	627	858	980	317	120
5	191	226	637	760	878	28[illegible]	110
6	190	205	548	627	686	23[illegible]	104
7	170	169	480	543	599	19[illegible]	104
8	168	183	500	673	571	15[illegible]	102
9	165	170	582	748	571	14[illegible]	100
10	175	151	610	760	599	13[illegible]	98
11	162	159	615	824	686	12[illegible]	94
12	150	226	791	899	779	11[illegible]	82
13	140	343	974	1,220	810	10[illegible]	82
14	138	430	933	1,300	627	9[illegible]	82
15	135	420	650	1,150	627	9[illegible]	82
16	138	510	912	1,140	627	10[illegible]	79
17	122	555	1,030	1,140	748	12[illegible]	79
18	128	460	1,150	1,060	686	11[illegible]	81
19	130	460	1,120	927	627	11[illegible]	77
20	182	475	878	1,080	543	112	71
21	287	435	1,040	1,150	465	15[illegible]	69
22	178	376	1,150	1,280	415	17[illegible]	71
23	170	338	1,150	1,340	390	16[illegible]	72
24	160	305	1,120	1,420	376	147	77
25	108	284	1,080	1,510	343	145	100
26	110	338	748	1,240	309	16[illegible]	92
27	110	355	627	1,050	296	26[illegible]	82
28	112	313	748	878	296	32[illegible]	76
29	108	326	844	810	347	25[illegible]	74
30	108	338	946	779	440	19[illegible]	71
31	112	------	686	------	455	172	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	300	108	156	9,590
April	555	151	309	18,400
May	1,150	395	798	49,100
June	1,510	543	983	58,500
July	980	296	592	36,400
August	415	96	187	11,500
September	164	69	92.5	5,500

GREEN RIVER BASIN

GREEN RIVER AT WARREN BRIDGE, NEAR DANIEL, WYO.

LOCATION.—Water-stage recorder in sec. 8, T. 35 N., R. 111 W., at Warren Bridge, 12 miles north of Daniel.

DRAINAGE AREA.—468 square miles.

RECORDS AVAILABLE.—October 1931 to September 1932.

EXTREMES.—Maximum discharge during year, 3,260 second-feet June 26 (gage height, 5.08 feet); minimum occurred during winter.

REMARKS.—Records fair. Discharge estimated Oct. 1–12 on basis of comparison with Green River near Daniel. No record Nov. 13 to June 8. Flow regulated by natural lakes in Green River Basin.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Jan.	Feb.	Apr.	May	June	July	Aug.	Sept.
1	125	125						2,720	942	450
2	130	122						2,610	960	392
3	135	119						2,500	846	349
4	130	116						2,370	734	313
5	125	113						2,050	668	293
6	120	113						1,650	640	270
7	120	110						1,360	614	260
8	130	107						1,310	588	247
9	132	107					1,090	1,400	556	238
10	135	70					996	1,490	536	234
11	130	90					924	1,670	562	234
12	122	80	104	109			960	1,870	594	229
13	122						1,040	2,050	614	225
14	122					1,100	1,190	2,100	568	221
15	122						1,510	2,080	523	213
16	119						1,820	1,950	492	208
17	116						1,980	1,550	486	200
18	116						1,930	1,310	480	200
19	119						1,830	1,260	480	200
20	116						1,720	1,350	492	200
21	116						1,700	1,370	486	196
22	116						1,920	1,230	468	189
23	131						2,200	1,070	462	177
24	166						2,560	960	456	173
25	162						2,810	906	427	177
26	148				286		3,100	870	398	173
27	155						3,220	838	381	170
28	131						3,040	822	376	166
29	131						2,860	814	392	162
30	128						2,790	806	498	162
31	122							888	474	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	166	116	129	7,930
November 1–12	125		106	2,520
June 9–30	3,220		1,960	85,500
July	2,720	806	1,520	93,500
August	960	376	555	34,100
September	450	162	231	13,700

GREEN RIVER NEAR DANIEL, WYO.

LOCATION.—Chain gage near line between Tps. 32 and 33 N., R. 110 W., 6 miles southeast of Daniel.
DRAINAGE AREA.—932 square miles.
RECORDS AVAILABLE.—April 1915 to November 1932 (discontinued).
EXTREMES.—Maximum discharge during year ending Sept. 30, 1932, 3,780 second-feet June 27 (gage height, 45.7 feet); minimum occurred during winter.
1915–32: Maximum discharge, 8,750 second-feet June 16, 1918 (gage height, 7.0 feet); minimum occurred during winter.
REMARKS.—Records good. No records for period Dec. 1 to Apr. 15. Diversion for irrigation above station. Flow regulated by natural lakes in Green River Basin.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.
1	163	178	-------	510	1,050	3,010	698	405	163	160
2	173	163	-------	582	982	2,810	770	370	165	156
3	181	154	-------	634	900	2,510	762	357	171	163
4	173	142	-------	940	842	2,250	714	352	169	169
5	163	139	-------	1,140	920	1,970	626	344	163	163
6	150	146	-------	1,110	1,120	1,740	575	330	160	151
7	152	152	-------	982	1,270	1,290	554	317	167	146
8	163	142	-------	1,030	1,350	1,080	534	292	174	141
9	178	136	-------	1,230	1,200	971	540	280	186	136
10	189	127	-------	1,230	1,000	1,040	528	261	192	132
11	183	119	-------	1,320	1,150	1,170	510	250	183	126
12	168	113	-------	1,490	1,270	1,430	522	240	177	123
13	160	106	-------	1,640	1,390	1,640	547	233	173	129
14	168	102	-------	1,710	1,490	1,770	547	226	171	133
15	158	108	-------	1,870	1,580	1,640	504	219	169	144
16	150	113	366	1,710	1,740	1,740	474	210	176	154
17	144		486	1,550	1,910	1,580	458	204	192	165
18	140	100	425	1,490	2,020	1,180	442	207	208	171
19	146		492	1,550	1,910	1,050	415	204	207	178
20	154		547	1,710	2,150	971	420	198	192	186
21	152		464	1,940	1,970	1,030	430	204	173	194
22	146		420	2,180	1,910	1,070	442	210	163	186
23	154	95	375	2,560	2,250	982	425	204	167	176
24	163		344	2,150	2,560	880	395	210	174	167
25	158		352	1,690	3,010	788	357	207	181	160
26	168		410	1,430	3,420	730	370	198	192	155
27	183		492	1,130	3,710	706	370	192	197	155
28	207	90	474	880	3,360	690	380	201	189	160
29	216		442	779	3,090	714	395	195	181	160
30	201		469	842	2,890	698	425	186	174	160
31	186	-------	-------	960	-------	674	442	-------	167	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
1931-32				
October	216	140	167	10,300
November	178	----------	116	6,900
April 16-30	547	344	437	13,000
May	2,560	510	1,350	83,000
June	3,710	842	1,850	110,000
July	3,010	674	1,350	83,000
August	770	357	502	30,900
September	405	186	250	14,900
1932				
October	208	160	178	10,900
November	194	123	157	9,340

GREEN RIVER AT GREEN RIVER, WYO.

LOCATION.—Chain gage in sec. 22, T. 18 N., R. 107 W., 100 feet below railroad bridge at Green River. Zero of gage is 6,071.06 feet above mean sea level.

DRAINAGE AREA.—7,670 square miles.

RECORDS AVAILABLE.—May 1895 to October 1906; March 1915 to September 1932.

EXTREMES.—Maximum discharge during year, 12,000 second-feet June 29 (gage height, 5.37 feet); minimum occurred during winter.

1895–1906, 1915–32: Maximum discharge, 22,200 second-feet June 19, 1918 (gage height, 12.3 feet); minimum, 160 second-feet Nov. 17, 1898.

REMARKS.—Records good except those for periods Nov. 18 to Mar. 27, Apr. 2–4, which were estimated on basis of two discharge measurements and temperature records. Diversions for irrigation above station.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	341	470				891	1,430	3,990	9,820	2,080	1,200
2	348	454				1,200	1,240	3,940	9,060	2,010	1,180
3	355	454			600	1,650	1,360	3,890	8,560	2,040	1,080
4	355	462				2,500	1,600	3,820	8,040	2,040	1,000
5	341	438				2,220	1,720	3,140	6,960	1,970	930
6	335	462		245		1,520	1,850	2,950	6,340	1,850	852
7	334	462				1,270	2,010	3,520	5,570	1,700	776
8	348	462			500	1,250	1,840	4,160	4,410	1,670	752
9	369	446	248			1,130	1,680	4,270	3,850	1,650	680
10	383	454				1,080	1,720	4,130	3,630	1,540	669
11	414	430				972	1,900	3,740	3,520	1,480	625
12	446	438				1,060	2,010	3,460	3,600	1,410	636
13	462	414			350	1,080	2,080	3,430	3,740	1,350	614
14	446	390				1,180	2,170	3,570	3,990	1,320	603
15	430	327				1,300	2,380	3,770	4,160	1,320	581
16	438	334				1,510	2,690	4,130	4,080	1,270	592
17	422	334				1,520	2,760	5,050	3,940	1,200	560
18	422				600	1,590	2,920	6,540	3,710	1,180	520
19	398					1,730	3,160	6,990	3,430	1,140	520
20	406					1,770	3,630	6,850	3,220	1,120	510
21	422	320				1,680	3,910	6,750	2,970	1,100	520
22	398					1,650	4,440	6,540	2,790	1,030	520
23	406				1,000	1,480	5,570	6,750	2,690	1,080	500
24	414					1,400	7,600	7,270	2,640	1,080	530
25	422					1,190	6,880	8,490	2,540	986	520
26	438				1,080	1,080	5,950	10,100	2,360	944	560
27	430				1,060	986	4,990	11,100	2,200	891	560
28	446	310			1,040	1,120	4,300	11,600	2,130	865	581
29	462				1,040	1,330	3,850	11,900	2,090	826	560
30	462				1,250	1,360	3,430	10,900	2,060	972	560
31	480				878	------	3,540	------	2,060	1,000	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	480	334	406	25,000
November	470	------	378	22,500
December	------	------	290	17,800
January	------	------	250	15,400
February	------	------	300	17,300
March	1,250	------	697	42,900
April	------	891	1,390	82,700
May	7,600	1,240	3,120	192,000
June	11,900	2,950	5,870	349,000
July	9,820	2,060	4,200	258,000
August	2,080	826	1,360	83,600
September	1,200	500	676	40,200
The year	11,900	------	1,580	1,150,000

GREEN RIVER NEAR LINWOOD, UTAH

LOCATION.—Water-stage recorder installed Oct. 21, 1930, in SW¼ sec. 29, T. 3 N., R. 21 E., 2 miles south of Wyoming-Utah line and 5 miles southeast of Linwood. Henrys Fork enters a quarter of a mile downstream. Prior to Oct. 21, 1930, water-stage recorder at a point three quarters of a mile upstream from present location.

DRAINAGE AREA.—14,300 square miles.

RECORDS AVAILABLE.—October 1928 to September 1932.

EXTREMES.—Maximum discharge during year, 10,800 second-feet June 30 (gage height, 7.72 feet); minimum, 242 second-feet Jan. 8 (discharge measurement).

1928–32: Maximum discharge, 13,400 second-feet Aug. 15, 1930 (gage height, 7.45 feet, at old gage); minimum, that of Jan. 8, 1932.

REMARKS.—Records good except those for period Oct. 1 to Nov. 15, which were based on frequent gage readings and comparison with Green River at Green River, and period Nov. 16 to Mar. 30, which were estimated on basis of two discharge measurements and temperature records. Diversions for irrigation above station.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	350	458				1,810	2,410	4,700	10,200	2,090	1,800
2	350	441				2,080	2,510	5,060	9,250	2,040	1,390
3	353	424			1,000	2,460	2,250	5,020	3,540	2,050	1,320
4	360	440				3,300	2,190	4,850	7,900	2,080	1,290
5	350	470		266		3,090	2,370	4,430	7,110	2,070	1,190
6	346	465				2,840	2,400	4,160	6,400	2,020	1,120
7	340	458				2,480	2,540	4,350	5,800	1,870	1,050
8	345	460	242		800	2,190	2,820	5,060	5,200	1,800	970
9	353	460				2,040	2,760	5,610	4,430	1,690	890
10	360	450				1,870	2,600	5,600	3,970	1,610	825
11	380	450				1,730	2,600	5,190	3,600	1,620	780
12	400	450				1,570	2,820	4,810	3,480	1,570	748
13	437	445			550	1,540	3,160	4,570	3,460	1,540	740
14	460	441				1,590	3,480	4,460	3,620	1,490	700
15	445	400				1,700	3,860	4,710	3,910	1,460	679
16	430					1,840	4,300	5,010	4,050	1,480	651
17	425					1,980	4,780	5,610	4,010	1,440	624
18	420	360			1,100	2,030	4,940	6,820	3,870	1,420	604
19	420					2,050	5,040	7,820	3,740	1,360	591
20	400					2,260	5,340	7,900	3,350	1,400	591
21	420					2,370	5,730	7,800	3,110	1,260	584
22	708					2,380	6,150	7,700	2,840	1,220	584
23	1,040	340			1,650	2,380	6,680	7,620	2,740	1,170	584
24	651					2,280	8,030	7,880	2,720	1,280	584
25	630					2,060	9,180	8,620	2,770	1,270	578
26	610					1,840	7,980	9,520	2,620	1,210	572
27	572					1,620	7,020	10,100	2,530	1,140	572
28	516	320			1,600	1,620	5,960	10,400	2,370	1,090	565
29	496					1,650	5,310	10,600	2,250	1,130	565
30	476					2,500	4,140	10,700	2,190	1,440	560
31	480				1,620		4,500		2,170	1,860	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	1,040	340	462	28,400
November	470		394	23,400
December			300	18,400
January			260	16,000
February			350	20,100
March			1,130	69,500
April	3,300	1,540	2,100	125,000
May	9,180	2,190	4,380	269,000
June	10,700	4,160	6,560	390,000
July	10,200	2,170	4,330	266,000
August	2,090	1,090	1,550	95,300
September	1,800	560	810	48,200
The year	10,700		1,890	1,370,000

GREEN RIVER AT GREEN RIVER, UTAH

LOCATION.—Water-stage recorder in NW¼SW¼ sec. 15, T. 21 S., R. 16 E., 1 mile southeast of Green River and 22 miles above San Rafael River.

DRAINAGE AREA.—40,600 square miles.

RECORDS AVAILABLE.—October 1894 to October 1899; February 1905 to December 1911; June 1924 to September 1932. December 1910 to June 1924 at Little Valley, 7 miles downstream.

EXTREMES.—Maximum discharge during year, 38,200 second-feet May 27 (gage height, 12.40 feet); minimum, 255 second-feet Nov. 26 (gage height, 4.17 feet).

1894–99; 1905–32: Maximum discharge, 68,800 second-feet May 29, 1897; minimum, that of Nov. 26, 1931.

REMARKS.—Records good except those estimated for period Nov. 28 to Feb. 27, which are fair. Diversions for irrigation above station.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,770	1,700	650	1,100	1,260	1,950	4,900	8,800	20,000	24,800	5,220	3,840
2	1,830	1,700	600	1,200	1,350	1,950	4,900	9,220	20,000	24,100	4,740	3,560
3	1,700	1,720	600	1,300	1,400	2,000	4,900	9,900	19,400	22,000	5,560	3,560
4	1,530	1,700	600	1,300	1,350	2,010	4,740	12,700	18,200	20,600	5,060	3,560
5	1,420	1,670	700	1,250	1,300	2,260	8,460	11,900	18,200	18,200	4,580	3,560
6	1,360	1,670	800	1,200	1,300	2,620	10,600	11,600	17,600	17,600	4,430	3,420
7	1,350	1,630	700	1,200	1,400	3,300	11,400	12,700	18,200	15,800	4,280	3,040
8	1,340	1,630	700	1,200	1,500	3,530	10,200	14,200	19,400	14,900	4,130	2,810
9	1,290	1,640	800	1,250	1,600	3,530	9,450	14,800	19,400	13,400	3,980	2,660
10	1,250	1,650	900	1,300	1,680	3,530	8,200	14,500	18,200	11,800	3,700	2,410
11	1,300	1,950	1,000	1,340	1,650	3,530	6,860	14,800	18,200	10,800	3,420	2,290
12	1,310	1,840	900	1,400	1,650	3,420	5,950	15,400	18,200	11,000	3,290	2,210
13	1,270	1,820	700	1,400	1,600	3,300	5,600	16,600	18,200	11,000	3,160	2,080
14	1,290	1,890	500	1,400	1,600	2,940	5,250	20,500	18,200	9,800	2,920	2,030
15	1,300	1,920	400	1,350	1,580	2,830	5,080	23,300	18,800	8,520	2,740	1,920
16	1,310	1,900	400	1,300	1,550	2,720	5,250	26,100	19,400	8,120	2,620	1,890
17	1,300	1,890	450	1,250	1,500	2,830	6,500	28,200	20,600	7,740	2,490	1,780
18	1,340	1,860	550	1,200	1,500	2,720	8,000	28,900	20,600	7,740	2,470	1,750
19	1,400	1,830	600	1,200	1,550	3,420	8,800	31,000	22,000	8,120	2,740	1,720
20	1,530	1,840	600	1,300	1,600	4,740	10,200	31,000	22,700	8,120	2,700	1,640
21	1,530	1,800	800	1,400	1,650	6,500	11,200	31,800	23,400	7,740	3,060	1,590
22	1,510	1,680	1,100	1,400	1,700	7,620	10,600	32,600	23,400	7,170	2,920	1,580
23	1,490	1,340	1,300	1,350	1,750	8,400	9,900	33,400	22,700	6,800	2,770	1,580
24	1,440	798	1,400	1,350	1,800	8,200	10,900	36,600	23,400	6,440	3,140	1,700
25	1,440	580	1,400	1,350	1,800	7,430	12,400	35,000	23,400	5,730	2,850	1,640
26	1,470	465	1,400	1,350	1,800	5,950	12,400	36,600	24,800	5,390	2,510	1,560
27	1,490	590	1,400	1,350	1,850	5,420	10,400	35,000	24,800	5,060	4,010	1,540
28	1,630	800	1,400	1,300	1,860	5,080	8,600	31,800	24,800	4,900	6,180	1,540
29	2,090	750	1,300	1,250	1,940	4,740	8,000	26,200	26,200	4,740	6,980	1,590
30	1,980	700	1,200	1,200	-------	4,740	8,000	22,700	25,500	4,900	5,730	1,580
31	1,770	-------	1,100	1,200	-------	4,740	--------	20,600	--------	5,060	5,390	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	2,090	1,250	1,480	91,000
November	1,950	465	1,500	89,300
December	1,400	400	869	53,400
January	1,400	1,100	1,290	79,300
February	1,940	1,260	1,590	91,500
March	8,400	1,950	4,130	254,000
April	12,400	4,740	8,250	491,000
May	36,600	8,800	22,500	1,380,000
June	26,200	17,600	20,900	1,240,000
July	24,800	4,740	10,900	670,000
August	6,980	2,470	3,860	237,000
September	3,840	1,540	2,250	134,000
The year	36,600	400	6,640	4,810,000

HORSE CREEK NEAR DANIEL, WYO.

LOCATION.—Water-stage recorder in sec. 10, T. 34 N., R. 112 W., 12 miles northwest of Daniel.
DRAINAGE AREA.—124 square miles.
RECORDS AVAILABLE.—October 1931 to September 1932.
EXTREMES.—Maximum discharge during year, 754 second-feet June 16 (gage height, 2.23 feet); minimum occurred during winter.
REMARKS.—Records good except those for periods Oct. 1–13, 27–31, May 16, 21, 22, 24–27, 30, 31, June 12–14, Aug. 19, Sept. 18–22, which were estimated. No records Nov. 8 to May 9. Small diversions for irrigation above station.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	May	June	July	Aug.	Sept.
1	8	10	-------	245	163	37	21
2	8	11	-------	250	122	31	20
3	8	11	-------	245	108	19	20
4	8	10	-------	240	93	19	20
5	8	10	-------	522	71	11	17
6	9	10	-------	538	52	15	17
7	9	10	-------	305	34	17	16
8	9	-------	-------	210	17	13	15
9	9	-------	-------	200	12	13	15
10	9	-------	186	163	12	13	14
11	10	-------	215	172	23	13	14
12	10	-------	300	200	25	15	14
13	10	-------	347	250	25	13	14
14	10	-------	353	360	20	13	14
15	10	-------	365	560	14	15	14
16	10	-------	390	650	11	13	14
17	10	-------	417	560	11	15	14
18	10	-------	515	545	10	14	14
19	10	-------	582	545	11	23	14
20	10	-------	500	472	9	34	14
21	10	-------	440	508	10	51	16
22	11	-------	400	538	11	38	16
23	11	-------	359	605	14	27	16
24	11	-------	320	598	17	23	15
25	11	-------	280	522	16	20	15
26	13	-------	220	458	14	20	15
27	11	-------	180	384	13	23	16
28	11	-------	146	323	14	21	16
29	11	-------	163	245	21	24	18
30	10	-------	180	191	32	30	23
31	10	-------	210	-------	40	25	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	13	8	9.8	603
November 1–7	11	10	10.3	143
May 10–31	582	146	321	14,000
June	650	163	387	23,000
July	163	9	33.7	2,070
August	51	11	21.9	1,350
September	23	14	16.0	952

COTTONWOOD CREEK NEAR BIG PINEY, WYO.

LOCATION.—Water-stage recorder on south channel and staff gage on north channel established Oct. 8, 1931, in sec. 21, T. 32 N., R. 111 W., 14 miles north of Big Piney. Station maintained previously on south channel was about a quarter of a mile downstream from new location. Station on north channel at site of station used in 1919, at different datum.

DRAINAGE AREA.—241 square miles.

RECORDS AVAILABLE.—April 1916 to September 1919; October 1931 to November 1932 (discontinued).

EXTREMES.—North channel, maximum discharge during year ending Sept. 30, 1932, 240 second-feet June 28 (gage height, 1.96 feet); minimum not recorded. South channel, maximum discharge during year, 141 second-feet June 27 (gage height, 2.28 feet); minimum not recorded.

1916–19, 1931–32: North channel, maximum discharge, 590 second-feet June 23, 24, 1917 (gage height, 3.65 feet, former datum); no flow parts of July, August, September 1919. South channel, maximum discharge, 355 second-feet June 17, 1918 (gage height, 5.0 feet, at old gage); no flow parts of July, August, September 1919.

REMARKS.—Records good. North channel, no record for period Dec. 1 to Apr. 16. South channel, no record Oct. 1 to Apr. 20. Diversions for irrigation above station.

Discharge, in second-feet, of Cottonwood Creek (south channel) near Big Piney, Wyo., 1932

Day	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.
1	------	33	62	79	------	9	5.4	16
2	------	41	61	77	------	8	5.1	14
3	------	60	53	66	------	6	4.5	13
4	------	80	45	56	------	6	3.6	18
5	------	73	46	46	------	5	3.3	16
6	------	54	63	39	------	5	3.3	12
7	------	37	84	30	------	5	3.6	17
8	------	30	92	21	------	5	3.6	17
9	------	31	71	17	------	4	4.2	12
10	------	40	70	17	------	4	4.8	14
11	------	45	80	30	------	4	5.1	15
12	------	43	99	37	------	4	5.7	10
13	------	45	118	39	------	3	5.7	7.6
14	------	50	95	29	------	4	5.7	9.2
15	------	a 50	90	23	------	3	5.4	12
16	------	50	102	16	------	3	4.2	9.2
17	------	46	117	16	------	2	3.6	8.4
18	------	50	114	16	------	2	5.4	8.8
19	------	58	113	15	------	2	7.2	15
20	------	58	131	13	------	2	6.8	15
21	61	60	113	12	------	2	8.4	16
22	a 50	71	101	11	------	2	10	14
23	a 30	93	105	10	------	3	14	13
24	21	74	111	16	------	3	14	7.2
25	19	62	129	21	------	3	10	5.4
26	32	53	125	20	2	3	12	5.7
27	32	49	137	18	3	5	17	3.9
28	39	56	124	18	4	5	14	3.9
29	a 30	48	101	24	6	4	12	3.9
30	a 32	45	88	25	9	4	10	4.5
31	------	55	------	28	10	------	14	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
April 21–30	61	19	34.6	686
May	93	30	52.9	3,250
June	137	45	94.7	5,640
July	79	10	28.5	1,750
August	------	------	a 6	369
September	9	2	4.0	238
October	17	3.3	7.47	459
November	18	3.9	11.2	666

a Estimated.

Discharge, in second-feet, of Cottonwood Creek (north channel) near Big Piney, Wyo., 1931–32

Day	Oct.	Nov.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.
1	a 2	2	------	46	54	100	------	a 16	4	
2	a 2	2	------	44	46	92	------	a 14	4	
3	a 2	2	------	87	49	62	------	a 11	4	11
4	a 2	2	------	106	49	64	------	11	4	15
5	a 2	2	------	106	56	54	------	11	4	26
6	a 2	2	------	70	68	32	------	11	4	16
7	a 2	2	------	38	98	23	------	10	4	16
8	2	2	------	34	90	13	------	8	4	24
9	1	2	------	32	61	6	------	10	4	18
10	2	3	------	40	64	8	------	7	4	20
11	2	3	------	38	67	15	------	8	5	21
12	2	3	------	33	80	37	------	10	5	18
13	2	6	------	40	128	35	------	6	5	28
14	2	2	------	46	102	28	------	4	5	46
15	2	2	------	43	83	21	------	5	4	44
16	2	2	------	36	102	17	------	10	4	18
17	2	3	156	38	142	10	------	9	4	21
18	2	2	172	34	136	11	------	6	4	21
19	2	2	172	48	122	18	------	5	6	25
20	2	2	158	46	167	22	------	5	7	25
21	2	2	118	56	142	22	------	5	6	29
22	2	2	98	54	146	21	------	5	5	27
23	2	2	56	72	163	20	------	5	7	32
24	2	2	36	61	178	24	------	5	5	29
25	2	2	29	53	210	33	------	5	6	27
26	2	2	25	43	217	32	------	4	6	25
27	2	2	32	37	222	32	6	4	8	25
28	2	2	36	43	222	30	------	6	8	29
29	2	a 2	31	36	158	25	------	5	6	33
30	2	a 2	44	38	132	34	------	5	4	34
31	2	------	------	43	------	33	------	------	4	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
1931–32				
October	2	1	2.0	123
November	6	2	2.3	137
April 17-30	172	25	83.1	2,310
May	106	32	49.7	3,060
June	222	46	118	7,020
July	100	6	31.4	1,930
August	------	------	a 10	615
September	16	4	7.5	446
1932				
October	8	4	5.0	307
November	46	7	24.0	1,430

a Estimated.

EAST FORK RIVER AT NEWFORK, WYO.

LOCATION.—Staff gage in sec. 33, T. 32 N., R. 108 W., a quarter of a mile south of Newfork.

DRAINAGE AREA.—348 square miles.

RECORDS AVAILABLE.—April 1905 to October 1906; May 1915 to September 1924; April 1931 to October 1932 (discontinued).

EXTREMES.—Maximum discharge during year ending Sept. 30, 1932, 2,120 second-feet May 22 (gage height, 5.82 feet); minimum occurred during winter.

1905–6, 1915–24, 1931–32: Maximum discharge, 2,940 second-feet June 9, 1917 (gage height, 6.7 feet); minimum, 25 second-feet Apr. 4, 1920.

REMARKS.—Records good except those for period Nov. 18 to Apr. 22, which were estimated on basis of two discharge measurements and temperature records. Diversion above station. Flow partly regulated by small lakes on headwaters.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Jan.	Feb.	Apr.	May	June	July	Aug.	Sept.	Oct.
1	36	39				62	586	515	81	72	62
2	36	39				61	464	425	80	72	61
3	36	39			55	58	383	390	77	68	61
4	36	39				57	413	395	77	67	59
5	36	39				61	582	275	77	65	59
6	36	38				62	773	171	77	64	58
7	36	38				58	687	136	75	64	58
8	37	38			50	56	527	113	75	63	56
9	38	38				55	434	106	75	62	57
10	38	38				55	398	104	74	62	55
11	40	36				58	404	106	74	64	55
12	40	36				68	431	108	75	64	54
13	39	36			60	107	488	111	75	62	53
14	39	38		49		226	647	104	74	62	53
15	39	40	39			344	1,060	104	74	62	51
16	38	37				371	1,340	99	73	62	50
17	38	37				443	1,350	101	72	62	52
18	38				55	735	1,060	94	71	62	54
19	38	36				854	915	88	70	62	54
20	39					1,100	818	86	68	62	51
21	40				58	1,620	868	85	69	62	53
22	41				59	2,120	1,000	84	68	62	51
23	42	35			59	1,760	1,080	86	68	62	51
24	42				58	940	1,230	86	67	62	52
25	40				56	782	1,180	86	63	62	63
26	41				56	755	985	87	64	62	51
27	40				56	565	751	82	65	62	51
28	40				61	443	711	81	65	62	51
29	39	35			58	515	632	83	73	62	50
30	39				57	910	568	81	75	61	51
31	39					755		81	74		48

Month	Maximum	Minimum	Mean	Run-off in acre-feet
1931–32				
October	42	36	38.6	2,370
November	40		36.7	2,180
December			35	2,150
January			40	2,460
February			45	2,590
March			50	3,070
April			55.9	3,330
May	2,120	55	518	31,900
June	1,350	383	759	45,200
July	515	81	144	8,850
August	81	63	72.4	4,450
September	72	61	63.4	3,770
The year	2,120		155	112,000
1932				
October	63	48	54.4	3,340

NEW FORK NEAR BOULDER, WYO.

LOCATION.—Staff gage in about sec. 8, T. 32 N., R. 108 W., 1 mile west of Boulder and an eighth of a mile above Boulder Creek.

DRAINAGE AREA.—578 square miles.

RECORDS AVAILABLE.—May 1915 to September 1932.

EXTREMES.—Maximum discharge during year, 4,690 second-feet June 27 (gage height, 6.56 feet); minimum probably occurred during winter.

1915–32: Maximum discharge, 12,300 second-feet June 17, 1918 (gage height, 8.7 feet); minimum, 42 second-feet Dec. 15–17, 1915.

REMARKS.—Records good except those for period Nov. 22 to Mar. 31, which were estimated on basis of two discharge measurements and temperature records. Diversions for irrigation above station.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Jan.	Feb.	Apr.	May	June	July	Aug.	Sept.
1	66	77	------	------	500	150	696	3,040	€40	179
2	62	77	------	------	556	150	709	2,920	€10	172
3	62	77	------	------	490	142	676	2,750	€10	169
4	66	73	------	------	500	140	646	2,370	550	163
5	68	73	------	------	484	145	634	2,030	490	156
6	72	73	------	------	259	140	761	1,730	484	150
7	72	70	------	------	114	135	828	1,490	468	148
8	68	70	------	------	128	135	970	1,320	446	145
9	66	70	------	------	102	128	926	1,220	420	135
10	68	66	------	------	107	118	877	1,190	390	125
11	77	73	------	------	125	109	787	1,220	380	125
12	75	73	------	------	130	96	761	1,280	365	123
13	73	81	------	------	172	96	722	1,350	345	120
14	70	77	77	70	247	104	742	1,300	326	116
15	66	62	------	------	210	135	828	1,270	308	111
16	66	81	------	------	210	206	1,060	1,200	304	111
17	66	85	------	------	196	263	1,380	1,120	295	107
18	66	94	------	------	189	331	1,540	1,090	283	107
19	66	81	------	------	189	440	1,630	1,040	271	107
20	66	73	------	------	179	562	1,600	970	271	104
21	68	62	------	------	172	722	1,670	905	271	102
22	66	75	------	------	166	985	1,860	884	244	102
23	70				148	1,220	2,150	870	247	102
24	66				140	1,260	2,870	856	228	102
25	70				150	1,040	3,630	814	210	102
26	73	70	------	------	153	842	4,020	787	192	102
27	73				156	742	4,480	748	189	102
28	73				150	658	4,220	735	189	98
29	73				163	586	3,570	768	192	100
30	73				169	574	3,260	735	232	102
31	77	------	------	------	------	634	------	683	200	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	77	62	69.1	4,250
November	94	----------	73.9	4,400
December	----------	----------	70	4,300
January	----------	----------	75	4,610
February	----------	----------	80	4,600
March	----------	----------	150	9,220
April	556	102	222	13,200
May	1,260	96	419	25,800
June	4,480	634	1,680	100,000
July	3,040	683	1,310	80,600
August	640	189	344	21,200
September	179	98	123	7,320
The year	4,480	----------	385	280,000

PINE CREEK AT PINEDALE, WYO.

LOCATION.—Water-stage recorder in sec. 4, T. 33 N., R. 109 W., at Pinedale, 3 miles above mouth. Zero of gage is 7,164.3 feet above mean sea level.
DRAINAGE AREA.—128 square miles.
RECORDS AVAILABLE.—May 1915 to September 1932.
EXTREMES.—Maximum discharge during year, 1,680 second-feet June 26 (gage height, 4.28 feet); minimum probably occurred during winter.
1915–32: Maximum discharge, 2,310 second-feet June 17, 1918 (gage height, 5.0 feet); minimum, 2 second-feet Apr. 1–26, May 6–8, 1931.
REMARKS.—Records good except those for period Nov. 18 to Mar. 27, which were estimated on basis of two discharge measurements and temperature records. Discharge estimated Aug. 7, 9–13, 28, Sept. 25, 26. Diversions for irrigation above station. Flow regulated by Fremont Lake.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	11	6				25	20	172	1,460	227	60
2	11	6				25	20	178	1,410	218	56
3	11	6			25	26	19	182	1,310	209	55
4	11	6				46	20	178	1,190	198	55
5	10	6				26	21	182	1,070	195	53
6	10	6				45	22	195	940	185	52
7	10	6				37	22	200	810	178	49
8	10	6			15	38	17	230	700	170	48
9	10	6				42	19	230	582	166	39
10	10	6				39	18	222	570	160	33
11	10	6				24	18	212	576	155	33
12	10	6				23	18	227	588	150	33
13	9	6	9	21	15	23	20	257	624	145	33
14	9	6				24	22	267	624	145	30
15	9	6				24	27	316	618	140	29
16	9	6				24	31	420	570	136	28
17	8	4				23	37	554	515	133	27
18	7				20	24	44	644	460	131	27
19	7	4				24	53	693	425	126	27
20	7					25	76	658	415	124	27
21	7					27	109	749	402	111	25
22	7					29	150	877	374	87	25
23	7	5			22	28	224	1,150	342	79	24
24	7					28	274	1,420	326	74	24
25	7					27	254	1,590	326	72	24
26	7					24	27	230	1,660	309	70	24
27	8					24	27	221	1,640	288	68	24
28	7	6				24	27	198	1,590	270	69	24
29	7					24	25	178	1,550	254	70	25
30	7					60	21	175	1,510	248	70	26
31	6					23		172		245	64	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	11	6	8.6	529
November			5.6	333
December			8	492
January			12	738
February			20	1,150
March	60		21.4	1,320
April	46	21	28.4	1,690
May	274	17	88.0	5,410
June	1,660	172	665	39,600
July	1,460	245	608	37,400
August	227	64	133	8,180
September	60	24	34.6	2,060
The year	1,660		136	98,900

BOULDER CREEK NEAR BOULDER, WYO.

LOCATION.—Chain gage in sec. 4, T. 32 N., R. 108 W., 2 miles northwest of Boulder.

DRAINAGE AREA.—112 square miles.

RECORDS AVAILABLE.—April 1904 to October 1906; May 1915 to October 1924; May 1931 to November 1932 (discontinued).

EXTREMES.—Maximum discharge during year ending Sept. 30, 1932. 2,140 second-feet June 24, 25 (gage height, 5.58 feet); minimum, 1 second-foot Nov. 29, 30.

1904–6, 1915–24, 1931–32: Maximum discharge, 3,240 second-feet June 14, 1918 (gage height, 6.8 feet); minimum, 0.9 second-foot Aug. 31, 1915.

REMARKS.—Records good except those estimated Dec. 1 to Apr. 19. Flow regulated by dam at Boulder Lake. Diversion for irrigation above station.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Jan.	Feb.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.
1	3	3				37	708	1,190	43	25	9	19
2	3	3				5	580	1,140	59	24	9	19
3	3	3			60	4	446	1,020	76	20	9	19
4	3	3				3	404	798	74	20	6.6	14
5	3	3				4	488	610	71	20	6.6	16
6	3	3				3	690	454	69	20	6.6	16
7	3	3				3	756	129	69	18	6.6	16
8	3	4			50	3	672	118	52	23	6.6	16
9	3	4				3	660	100	53	23	6.6	16
10	3	4				3	450	92	48	22	6.6	16
11	3	4				3	387	81	55	21	5.8	16
12	3	4				3	371	94	52	21	5.8	20
13	3	4	32		60	3	478	108	58	20	5.8	18
14	3	4		28		3	544	118	53	19	6.6	21
15	3	4				3	894	156	52	5	6.6	24
16	3	2				110	1,470	163	46	5	6.6	16
17	3	2			40	132	1,570	151	48	5	6.6	16
18	3	2				112	1,460	125	44	16	6.6	17
19	3	3			4	129	1,340	123	46	14	6.6	21
20	3	3			4	184	1,290	114	44	12	6.6	14
21	3	4			4	666	1,360	112	42	11	6.6	20
22	4	4			4	1,460	1,570	110	39	11	6.6	15
23	4	4			4	1,620	1,900	96	35	11	6.6	16
24	3	5			4	1,250	2,130	92	35	11	5.8	16
25	3	4			4	966	2,140	71	35	10	5.8	16
26	3	4			4	678	1,970	48	32	10	5.8	17
27	3	4			4	565	1,740	61	32	10	14	17
28	3	2			4	446	1,590	64	32	9	14	18
29	3	1			4	600	1,460	56	27	9	15	18
30	3	1			51	894	1,340	53	27	9	18	18
31	3					852		43	27		18	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
1931–32				
October	4	3	3.1	191
November	5	1	3.3	196
December			20	1,230
January			30	1,840
February			35	2,010
March			40	2,460
April		4	35.5	2,110
May	1,620	3	347	21,300
June	2,140	371	1,100	65,500
July	1,190	43	248	15,200
August	76	27	47.6	2,930
September	25	5	15.1	898
The year	2,140	1	159	116,000
1932				
October	18	5.8	8.16	502
November	24	14	17.4	1,040

NORTH PINEY CREEK NEAR MASON, WYO.

LOCATION.—Water-stage recorder in sec. 19, T. 31 N., R. 113 W., 18 miles northwest of Big Piney and 4 miles northeast of Mason. Same site and at datum 1.05 feet higher than station on North Piney Creek near Marbleton, Wyo., maintained 1915–16.

DRAINAGE AREA.—58 square miles.

RECORDS AVAILABLE.—May 1915 to October 1916; October 1931 to September 1932.

EXTREMES.—Maximum discharge during year, 450 second-feet June 24 (by comparison with neighboring stations); minimum occurred during winter.

1915–16, 1931–32: Maximum discharge, 613 second-feet June 19, 1916 (gage height, 3.93 feet, present datum); minimum probably occurred during winter.

REMARKS.—Records good except those estimated. No record Nov. 8 to Apr. 30. Small diversions above station.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Apr.	May	June	July	Aug.	Sept.
1	a 17	a 17	------	17	144	a 360	85	39
2	a 17	a 16	------	20	a 132	a 340	81	36
3	a 17	16	------	24	a 122	326	69	36
4	a 17	17	------	30	a 150	a 300	69	33
5	a 17	17	------	29	a 180	a 280	67	32
6	a 18	16	------	a 32	210	a 260	63	31
7	a 18	17	------	a 36	a 190	a 240	60	30
8	a 18	------	------	38	a 170	a 220	58	29
9	a 18	------	------	38	a 150	a 200	55	29
10	a 18	------	------	41	a 135	a 180	52	29
11	a 19	------	------	107	a 140	155	51	29
12	19	------	------	112	a 145	a 145	50	28
13	19	------	------	109	a 160	a 135	48	28
14	19	------	------	97	206	a 125	48	28
15	19	------	------	115	a 350	120	48	27
16	18	------	------	116	a 390	a 114	50	27
17	18	------	------	121	a 370	a 108	48	27
18	a 18	------	------	129	a 350	102	48	27
19	a 17	------	------	152	a 330	a 102	45	27
20	17	------	------	a 170	308	a 100	44	27
21	18	------	------	a 180	a 320	a 100	43	27
22	18	------	------	a 210	a 380	a 98	39	27
23	19	------	------	185	a 420	a 102	36	28
24	20	------	------	166	a 450	102	36	27
25	19	------	20	148	436	89	39	27
26	18	------	------	140	a 430	86	38	27
27	17	------	------	131	a 420	92	40	27
28	18	------	------	139	a 410	103	40	27
29	18	------	------	148	392	95	44	26
30	18	------	------	147	a 380	93	46	26
31	18	------	------	145	------	95	42	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	20	17	18.0	1,110
November 1–7	17	16	16.6	230
May	210	17	106	6,520
June	450	122	279	16,600
July	360	86	160	9,840
August	85	36	51.0	3,140
September	39	26	28.9	1,720

a Estimated.

MIDDLE PINEY CREEK NEAR BIG PINEY, WYO.

LOCATION.—Staff gage in NW¼ SW¼ sec. 30, T. 30 N., R. 113 W., 15 miles west of Big Piney.

DRAINAGE AREA.—46 square miles.

RECORDS AVAILABLE.—April 1915 to September 1918; April 1931 to December 1932 (discontinued).

EXTREMES.—Maximum discharge during year ending Sept. 30, 1932, 157 second-feet June 29 (gage height, 2.06 feet); minimum occurred during winter.

1915–18, 1931–32: Maximum discharge, 282 second-feet June 16–18, 1918 (gage height, 2.65 feet); minimum probably occurred during winter.

REMARKS.—Records good. Discharge estimated Nov. 29, 30, 1931, Aug. 27, 28, 1932. No records for period Dec. 1 to Feb. 29. Small diversions above station.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	2	2	0.3	3	5	19	131	40	15	6	8	6
2	2	2	.3	6	5	18	123	39	14	5	7	6
3	2	2	.3	6	5	16	115	38	14	5	6	6
4	2	2	.3	6	5	14	107	38	14	5	6	6
5	2	2	.3	7	6	14	95	38	7	5	6	6
6	2	2	.3	7	6	14	85	38	7	5	6	6
7	2	2	.3	7	6	15	74	35	7	5	6	6
8	2	2	.3	6	7	15	64	33	7	5	6	6
9	2	2	.3	6	7	15	61	33	8	4	6	6
10	2	2	.3	6	7	16	60	34	9	4	6	6
11	2	2	.3	6	9	18	57	34	9	6	6	------
12	2	2	.3	7	9	18	57	33	9	6	6	------
13	2	2	.3	10	6	18	55	33	9	6	6	------
14	2	2	.3	12	7	19	50	33	9	6	6	------
15	2	2	.3	12	7	33	41	33	8	6	6	------
16	2	3	.3	13	9	54	44	31	9	6	6	------
17	2	3	.3	12	10	50	36	30	8	6	6	------
18	2	3	.3	10	12	54	34	29	8	6	6	------
19	2	3	.3	9	13	63	31	27	8	5	6	------
20	2	3	.3	8	16	62	28	26	8	5	5	------
21	2	3	.3	6	22	67	31	23	7	4	4	------
22	2	3	.4	6	28	74	34	22	7	4	4	------
23	2	3	.6	6	27	93	34	19	7	3	3	------
24	2	3	.7	6	23	115	53	18	7	3	3	------
25	2	3	.7	6	20	128	54	18	6	3	2	------
26	2	3	.7	6	17	144	54	18	6	3	2	------
27	2	3	.9	6	16	146	52	18	6	4	2	------
28	2	3	.9	6	16	139	53	18	6	5	3	------
29	2	2	1	6	17	149	54	18	6	6	4	------
30	2	2	1	6	19	139	50	18	6	9	5	------
31	2	------	2	------	19	------	45	16	------	9	------	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
1931–32				
October	2	2	2.0	123
November	3	2	2.4	143
March	2	.3	.49	30
April	13	3	7.3	434
May	28	5	12.3	756
June	149	14	58.0	3,450
July	131	28	60.1	3,700
August	40	16	28.4	1,750
September	15	6	8.4	500
1932				
October	9	3	5.2	314
November	8	2	5.1	303
December 1–10	6	6	6	119

LABARGE CREEK NEAR TULSA, WYO.

LOCATION.—Water-stage recorder in sec. 17, T. 26 N., R. 112 W., 2 miles south of Tulsa.

DRAINAGE AREA.—193 square miles.

RECORDS AVAILABLE.—April to September 1932.

EXTREMES.—Maximum discharge during year, 410 second-feet May 15 (estimate based on comparison with neighboring stations); minimum, 3 second-feet July 21 (gage height, 0.48 foot).

REMARKS.—Records good except those estimated Apr. 28 to May 2, May 11–20, 29–31, June 1–4, Aug. 16, 25–27, Sept. 6–10, 27, 29, 30. Diversions for irrigation above station.

Discharge, in second-feet, 1932

Day	Apr.	May	June	July	Aug.	Sept.
1	------	76	215	137	30	60
2	------	76	200	123	28	58
3	------	78	175	119	32	56
4	------	113	170	115	27	56
5	------	119	205	108	24	52
6	------	100	214	89	20	52
7	------	119	209	61	20	54
8	------	155	171	40	25	56
9	------	181	159	30	25	60
10	------	222	195	28	24	62
11	------	240	159	27	24	65
12	------	310	169	14	25	63
13	------	350	179	12	22	63
14	------	380	179	7	22	63
15	------	410	275	6	22	60
16	------	360	274	5	30	51
17	------	300	222	6	38	51
18	------	320	272	7	61	47
19	------	320	275	7	63	47
20	78	290	277	5	65	49
21	83	300	179	3	67	49
22	81	306	171	4	69	45
23	79	310	183	4	67	49
24	76	256	177	9	67	51
25	72	230	179	44	63	52
26	74	209	177	54	60	54
27	74	197	201	47	56	57
28	76	199	171	42	54	61
29	72	180	189	38	58	58
30	74	185	153	35	70	56
31	------	220	------	35	67	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
April 20–30	83	72	76.3	1,660
May	410	76	229	14,100
June	222	153	190	11,300
July	137	4	40.7	2,500
August	70	20	42.7	2,630
September	65	45	55.2	3,280
The period				35,500

NOTE.—Current-meter measurements made previous to beginning record: Oct. 8, 1931, discharge, 9.4 second-feet; Jan. 11, 1932, discharge, 33.0 second-feet; Feb. 9, 1932, discharge, 26.5 second-feet.

FONTENELLE CREEK NEAR FONTENELLE, WYO.

LOCATION.—Staff gage in sec. 3, T. 24 N., R. 113 W., 6 miles west of Fontenelle.
DRAINAGE AREA.—224 square miles.
RECORDS AVAILABLE.—May 1915 to September 1919; October 1931 to September 1932.
EXTREMES.—Maximum discharge during year, 470 second-feet May 14 (gage height, 2.40 feet); minimum probably occurred during winter.
1915–1919, 1931–32: Maximum discharge, 900 second-feet May 22, 1917 (gage height, 2.7 feet); minimum 1 second-foot July 19–22, 28, Aug. 1 to Sept 2, 1919.
REMARKS.—Records good except those for period Oct. 1–14, which were estimated, and those for period Nov. 22 to Mar. 26, which were estimated on basis of two discharge measurements and temperature records. Diversions for irrigation above station.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	18	29				143	110	219	130	48	46
2	18	29				145	179	204	114	48	43
3	18	27			30	60	219	182	101	43	41
4	18	26				55	250	171	94	41	39
5	18	27				51	266	193	90	39	40
6	18	26				55	193	219	84	38	39
7	19	24				38	174	250	75	39	37
8	19	24			25	38	201	196	66	41	36
9	19	24		14		55	234	176	60	41	35
10	19	23				56	250	166	56	39	35
11	20	26	13			62	266	169	56	36	35
12	20	23				78	318	182	54	34	35
13	20	26			10	87	355	198	56	35	35
14	20	31				132	420	204	54	35	35
15	21	34				166	445	250	50	35	36
16	21	38				166	375	250	41	34	31
17	21	28				234	318	250	42	35	29
18	21	27			40	234	335	250	44	33	29
19	21	24				171	335	234	42	34	31
20	22	27				196	300	234	42	33	32
21	23	27				190	318	234	38	33	33
22	24					143	375	234	39	33	33
23	26	25			80	101	355	204	42	31	31
24	32					90	300	201	42	31	33
25	32					89	266	204	42	32	31
26	27				110	101	234	182	42	35	29
27	28				120	92	234	204	41	37	29
28	29	20			114	92	219	204	42	37	30
29	29				124	92	201	159	44	37	29
30	29				139	96	204	143	49	48	30
31	29				141		234		51	50	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	32	18	22.5	1,380
November	38		25.7	1,530
December			15	922
January			12	738
February			17	978
March	141		54.0	3,320
April	234	38	110	6,550
May	445	110	274	16,800
June	250	143	206	12,300
July	130	38	58.8	3,620
August	50	31	37.6	2,310
September	46	29	34.2	2,040
The year	445		72.3	52,500

BIG SANDY CREEK NEAR FARSON, WYO.

LOCATION.—Water-stage recorder in sec. 18, T. 27 N., R. 106 W., half a mile above head gate of Eden Canal and 18 miles north of Farson.

DRAINAGE AREA.—322 square miles.

RECORDS AVAILABLE.—May 1915 to September 1917; April 1921 to October 1924; May 1927 to September 1932.

EXTREMES.—Maximum discharge during year, 846 second-feet May 23 (gage height, 4.99 feet); minimum occurred during winter.

1915–17, 1921–24, 1927–32: Maximum discharge, 1,330 second-feet Aug. 14, 1930 (gage height, 5.96 feet); minimum, 1 second-foot Sept. 16–21, 1931.

REMARKS.—Records fair. No records for period Nov. 9 to Apr. 30. Discharge estimated Oct. 20–30, May 1–6, Sept. 12–30. Diversions for irrigation above station. No regulation.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	May	June	July	Aug.	Sept.
1	10	14	63	278	468	101	38
2	10	15	62	260	426	88	38
3	10	16	59	228	396	79	35
4	10	16	58	210	357	72	32
5	10	16	62	238	300	67	29
6	10	17	63	302	245	59	26
7	8	17	59	325	202	52	23
8	8	18	64	282	188	50	17
9	7	------	70	250	185	48	14
10	8	------	82	222	188	47	13
11	11	------	87	210	188	46	12
12	11	------	98	192	192	48	12
13	9	------	118	192	205	52	12
14	8	------	176	220	182	46	12
15	8	------	282	330	170	41	12
16	8	------	290	520	162	36	12
17	7	------	333	562	149	34	12
18	6	------	375	460	129	32	12
19	6	------	438	464	126	30	12
20	6	------	457	392	126	29	12
21	6	------	538	411	123	26	12
22	7	------	684	524	118	23	12
23	7	------	723	646	111	25	12
24	8	------	450	706	105	25	12
25	8	------	369	692	97	21	12
26	9	------	318	618	92	17	12
27	10	------	292	583	91	16	12
28	10	------	242	548	84	15	12
29	12	------	210	516	82	16	12
30	12	------	285	496	82	26	12
31	16	------	393	------	84	27	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	16	6	8.9	547
November 1–8	18	14	16.1	255
May	723	58	252	15,500
June	706	192	396	23,600
July	468	82	182	11,200
August	101	15	41.7	2,560
September	38	12	16.8	1,000

HAMS FORK AT DIAMONDVILLE, WYO.

LOCATION.—Staff gage in SW¼ sec. 24, T. 21 N., R. 116 W., at Diamondville.
DRAINAGE AREA.—386 square miles.
RECORDS AVAILABLE.—May 1918 to September 1932.
EXTREMES.—Maximum discharge during year, 1,930 second-feet May 15 (gage height, 3.77 feet); minimum occurred during winter.
1918–32: Maximum discharge, 3,250 second-feet May 11, 1923 (gage height, 4.55 feet); no flow Aug. 29–31, 1919, Aug. 25 to Sept. 30, 1931.
REMARKS.—Records good except those for period Nov. 15 to Mar. 29, which were estimated on basis of two discharge measurements and temperature records. Diversions for irrigation above station. No regulation.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7	18	------	------		23	300	655	300	68	35
2	6	15	------	------		46	432	673	255	61	30
3	7	14	------	------	16	58	516	594	222	58	24
4	7	14	------	------		61	745	562	198	49	22
5	7	14	------	------		84	772	562	174	46	20
6	6	15	------	------		61	602	691	158	40	18
7	6	14	------	------		60	570	800	138	39	17
8	7	15	------	12	14	61	673	718	121	34	15
9	7	16	------	------		61	745	637	107	32	14
10	10	16	------	------		58	870	578	74	31	14
11	12	14	13	------		50	978	554	99	31	14
12	12	10	------	------		125	1,180	530	103	30	14
13	13	7	------	------	8	125	1,370	562	107	25	13
14	12	8	------	------		150	1,560	578	103	28	13
15	10	5	------	------		168	1,830	628	88	26	14
16	10		------	------		187	1,680	682	82	32	14
17	10		------	------		240	1,240	727	72	30	14
18	10	8	------	------	12	280	1,170	691	66	26	14
19	10		------	------		230	1,280	637	60	26	14
20	10		------	------		348	1,310	655	53	30	14
21	9		------	------		372	1,270	637	52	24	14
22	10		------	------		330	1,270	602	49	22	17
23	14	7	------	------	14	240	1,440	586	44	18	19
24	14		------	------		190	1,350	570	46	16	18
25	16		------	------		187	890	578	46	14	17
26	21		------	------		250	820	546	44	16	18
27	22		------	------		255	727	562	37	19	17
28	23	7	------	------	16	230	691	546	42	22	15
29	24		------	------		206	637	481	52	30	14
30	18		------	------	17	240	637	390	58	43	18
31	17	------	------	------	20	------	655	------	60	53	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	24	6	11.8	726
November	18	----------	10.2	607
December	----------	----------	8	492
January	----------	----------	10	615
February	----------	----------	14	805
March	20	----------	13.6	836
April	372	23	166	9,880
May	1,830	300	975	60,000
June	800	390	607	36,100
July	300	37	100	6,150
August	68	14	32.9	2,020
September	35	13	17.1	1,020
The year	1,830	6	164	119,000

HENRYS FORK AT LINWOOD, UTAH

LOCATION.—Staff gage in sec. 23, T. 12 N., R. 109 W., at Wyoming-Utah State line at Linwood. Zero of gage is 5,992.57 feet above mean sea level.

DRAINAGE AREA.—531 square miles.

RECORDS AVAILABLE.—October 1928 to September 1932.

EXTREMES.—Maximum discharge during year, 908 second-feet May 22 (gage height, 3.35 feet); minimum, 0.3 second-foot Oct. 1 (gage height, 0.60 foot).

1928–32: Maximum discharge, 2,590 second-feet Aug. 13, 1930 (gage height, 4.8 feet); minimum, 0.1 second-foot July 25, Aug. 14, Sept. 12, 14, 15, 20, 1931 (gage height, 0.54 foot).

REMARKS.—Records good except those for period Nov. 23 to Mar. 25, which were estimated on basis of two discharge measurements and temperature records. Diversions for irrigation above station.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.3	15				140	135	282	180	72	57
2	.8	16				161	124	172	180	53	49
3	.9	18			80	183	117	166	166	38	44
4	.8	17				143	80	195	135	31	41
5	2	18		22		67	84	222	102	20	38
6	1	20				80	95	304	87	17	36
7	2	21				80	84	336	72	14	35
8	2	25	23		70	65	67	268	61	11	32
9	3	28				60	65	219	55	9	28
10	1	26				61	70	172	39	11	23
11	.9	24				65	71	145	37	12	23
12	1	28				64	74	127	56	10	22
13	2	26			40	63	80	202	61	10	18
14	3	28				67	124	232	52	10	19
15	3	39				63	201	276	59	10	17
16	3	35				62	180	336	51	12	14
17	3	31				67	225	355	47	12	14
18	2	33			90	68	260	385	49	11	14
19	3	37				63	395	276	57	15	14
20	2	36				57	510	219	45	30	13
21	3	37				70	601	222	32	32	11
22	6	34				71	770	250	20	32	12
23	10				110	63	675	276	10	32	14
24	9	30				70	450	340	11	28	15
25	8					72	428	350	34	17	16
26	7				166	77	406	365	46	17	17
27	7				153	79	355	504	32	24	17
28	8	26			127	90	280	385	26	25	18
29	9				90	117	242	322	32	28	17
30	7				109	183	253	255	58	47	15
31	10				114		232		90	74	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	10	0.3	3.89	239
November	39	15	27.1	1,610
December			22	1,350
January			20	1,230
February			30	1,730
March	166		87.4	5,370
April	183	57	85.7	5,100
May	770	65	249	15,300
June	504	127	272	16,200
July	180	10	63.9	3,930
August	74	9	24.6	1,510
September	57	11	23.4	1,390
The year	770	.3	75.8	55,000

BURNT FORK AT BURNTFORK, WYO.

LOCATION.—Chain gage in sec. 11. T. 12 N., R. 112 W., a quarter of a mile west of Burntfork and 1 mile above mouth. Zero of gage is 7,094.82 feet above mean sea level.

DRAINAGE AREA.—73 square miles.

RECORDS AVAILABLE.—July 1929 to September 1932.

EXTREMES.—Maximum discharge during year, 133 second-feet May 22 (gage height, 3.82 feet); minimum, 0.2 second-foot Oct. 2–4 (gage height, 2.54 feet).

1929–32: Maximum discharge, 445 second-feet Aug. 10, 1930 (gage height, 4.7 feet); minimum, that of Oct. 2–4, 1932.

REMARKS.—Records fair. No records for period Dec. 13 to Mar. 12. Diversions for irrigation above station.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.4	1	2	-------	3	5	20	14	2	11
2	.2	1	2	-------	3	6	18	7	3	10
3	.2	1	2	-------	3	5	12	6	2	10
4	.2	1	2	-------	3	5	17	5	4	10
5	.3	1	2	-------	4	4	21	4	4	10
6	.4	1	2	-------	4	4	23	3	4	10
7	.4	1	2	-------	5	4	21	3	5	10
8	.8	1	2	-------	5	4	22	3	5	10
9	.8	1	2	-------	5	4	19	3	4	8
10	1	1	2	-------	4	6	10	3	4	8
11	1	1	3	-------	5	6	10	3	4	8
12	1	1	3	-------	5	8	8	7	3	8
13	1	1	-------	3	5	14	8	5	2	7
14	.8	1	-------	3	5	53	7	5	2	6
15	.8	1	-------	3	5	38	15	5	2	6
16	.8	2	-------	3	5	42	19	4	2	5
17	.8	2	-------	3	5	75	16	5	3	5
18	.8	2	-------	3	5	92	12	5	3	5
19	.8	2	-------	5	5	109	12	5	2	3
20	.8	2	-------	3	5	114	13	3	3	3
21	.9	2	-------	3	5	112	14	3	4	3
22	1	2	-------	3	6	132	24	3	4	3
23	1	2	-------	3	6	124	31	3	4	3
24	1	2	-------	3	6	71	53	3	4	3
25	1	2	-------	3	6	74	44	3	3	3
26	1	2	-------	3	6	53	44	3	3	3
27	1	2	-------	3	6	44	49	3	4	3
28	1	2	-------	3	6	37	48	2	4	3
29	1	2	-------	3	6	37	26	2	9	4
30	1	2	-------	3	6	37	14	2	13	4
31	1	-------	-------	3	-------	35	-------	2	12	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	1	0.2	0.78	48
November	2	1	1.5	89
December 1–12	3	2	2.2	52
March 13–31	5	3	3.1	117
April	6	3	4.9	292
May	132	4	43.7	2,690
June	53	7	21.7	1,290
July	14	2	4.1	252
August	13	2	4.1	252
September	11	3	6.2	369

ASHLEY CREEK NEAR VERNAL, UTAH

LOCATION.—Water-stage recorder in sec. 1, T. 3 S., R. 20 E., three quarters of a mile above heading of Utah Power & Light Co.'s canal and 12 miles northwest of Vernal.

DRAINAGE AREA.—101 square miles.

RECORDS AVAILABLE.—June 1914 to September 1932. Fragmentary records March 1900 to December 1904 at station below mouth of Dry Fork and October 1911 to June 1914 at power plant.

EXTREMES.—Maximum discharge during year, 1,340 second-feet May 21; minimum recorded, 27 second-feet Mar. 28.

1911–32: Maximum discharge, 2,050 second-feet May 29, 1921; minimum discharge, 25 second-feet Mar. 11, 1927.

REMARKS.—Records good. No diversions above station.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	31	33						38	32[illegible]	181	112	74
2	31	33		29		29		42	30[illegible]	193	105	80
3	33	33	31				a 28	54	33[illegible]	174	101	86
4	32	33			29			70	40[illegible]	162	99	
5	32	33						84	41[illegible]	152	99	
6	32	33					29	80	39[illegible]	145	98	a 80
7	33	31					29	80	33[illegible]	139		
8	33	31					29	89	291	131		
9	32	31		29			23	114	287	131	a 95	
10	32	32			29		28	172	284	133		
11	33	33				28	29	236	284	154		78
12	32	33	31				29	284	291	183	92	
13	32	33					30	409	324	152	92	a 75
14	31	33					32	480	364	158	92	
15	31	33				28		530	39[illegible]	141	92	75
16	31	33					a 35	580	39[illegible]	129	91	
17	30	31	30	29				650	33[illegible]	127	91	
18	30	31						780	305	127	92	a 70
19	31	31			29			850	284	125	94	
20	32	30					a 40	885	31[illegible]	119	94	
21	33	32						990	301	114	87	69
22	34	32	30				39	885	29[illegible]	114	82	a 69
23	35	32					39	588	294	112	80	a 69
24	34						38	560	281	117	78	69
25	34				29		37	504	25[illegible]	121	78	66
26	33	a 31					38	360	23[illegible]	112	76	65
27	33						40	320	22[illegible]	108	78	a 66
28	33			29		27	40	360	24[illegible]	108	75	66
29	33						39	452	211	117	72	68
30	33						38	462	18[illegible]	123	105	70
31	32							339		114	82	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	35	30	32.3	1,990
November	33		31.9	1,900
December			a 30	1,840
January			a 29	1,780
February			a 29	1,670
March			a 28	1,720
April			33.9	2,020
May	990	38	398	24,500
June	418	188	307	18,300
July	193	108	136	8,360
August	112	72	90.7	5,580
September	86	65	73.5	4,370
The year	990		102	74,000

a Estimated.

NORTH FORK OF DUCHESNE RIVER AT PROVO RIVER TRAIL, NEAR HANNA, UTAH

LOCATION.—Water-stage recorder in SE¼ sec. 27, T. 3 N., R. 9 W. Uinta meridian, 400 feet below Provo River trail bridge, 7 miles above Hades Creek, and 12 miles northwest of Hanna.
DRAINAGE AREA.—39 square miles.
RECORDS AVAILABLE.—July 1929 to September 1932.
EXTREMES.—Maximum discharge during year, 888 second-feet probably on June 24 (gage height, 3.68 feet); minimum not recorded.
1929–32: Maximum discharge, that of June 24, 1932; minimum (estimated), 1 second-foot Aug. 30, 31, 1931.
REMARKS.—Records good. Discharge estimated Oct. 27–31, May 23, 24, June 22–30, July 1, 3–10, Aug. 11, 12, Sept. 8–30. No records Nov. 1 to May 20.

Discharge, in second-feet, 1931–32

Day	Oct.	May	June	July	Aug.	Sept.
1	5		251	180	30	22
2	6		229	170	26	19
3	6		277		24	18
4	6		360		22	17
5	6		372		21	16
6	5		348	120	20	15
7	5		257		19	15
8	5		212		19	
9	5		198		19	
10	5		206		20	
11	6		284	85	19	11
12	6		396	78	17	
13	5		550	78	16	
14	5		610	74	16	
15	5		665	61	16	
16	5		600	63	16	
17	5		525	63	16	
18	5		462	55	15	
19	5		488	50	15	
20	5		545	43	17	
21	6	465	585	40	16	
22	6	510		40	15	
23	6	420		38	14	11
24	6	360		40	12	
25	5	312		36	12	
26	5	284	600	34	16	
27		235		32	26	
28		257		34	18	
29	5	352		36	24	
30		372		34	36	
31		294		33	29	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	6		5.3	326
May 21–31	510	235	351	7,660
June	665	198	461	27,400
July		32	76.0	4,670
August	36	12	19.4	1,190
September	22		12.5	744

DUCHESNE RIVER NEAR TABIONA, UTAH

LOCATION.—Staff gage in SW¼ sec. 17, T. 2 S., R. 6 W. Uinta meridian, 5½ miles above Rock Creek and 8 miles southeast of Tabiona.

DRAINAGE AREA.—352 square miles.

RECORDS AVAILABLE.—January 1919 to September 1932.

EXTREMES.—Maximum discharge during year, 1,100 second-feet May 22 (gage height, 6.62 feet); minimum, 51 second-feet several times in October (gage height, 3.56 feet).

1919–32: Maximum discharge, about 2,500 second-feet June 13, 1921; minimum, 37 second-feet July 13, 1931.

REMARKS.—Records good. Discharge estimated during periods of ice effect, Nov. 23, 24, 26–30, Dec. 1–9, 13–23, Jan. 1 to Feb. 7. Small diversions for irrigation above station.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	57	81				92	109	163	745	462	134	138
2	59	84				81	115	193	708	510	125	134
3	62	86				86	118	206	672	392	112	134
4	59	84				94	121	211	690	363	100	131
5	57	86	105		100	94	121	211	717	323	94	128
6	55	86				92	109	221	726	292	89	121
7	57	89				92	109	231	708	286	83	118
8	55	89			100	89	118	226	627	275	81	115
9	55	92			100	86	118	241	573	258	81	115
10	53	95	104		99	92	115	311	618	263	112	109
11	53	98	101		100	83	115	330	582	280	103	112
12	55	92	104		97	86	121	349	600	292	86	106
13	55	98			106	81	141	385	855	298	94	106
14	53	101			106	83	145	555	925	269	92	103
15	53	101			103	81	152	582	1,080	258	92	100
16	51	101		100	109	86	159	600	1,070	247	89	103
17	51	104			103	92	193	672	1,000	269	94	103
18	53	104	105		97	92	193	681	915	258	131	103
19	55	101			103	94	206	708	845	221	118	97
20	51	104			109	89	206	735	875	216	106	94
21	55	101			106	97	197	765	865	206	134	92
22	57	107			109	94	180	1,100	825	206	92	94
23	62	105			103	94	163	845	825	202	71	94
24	62	105	104		100	92	159	708	845	184	66	94
25	64	104	104		97	92	148	591	815	180	66	92
26	62		101		94	89	145	430	708	171	68	89
27	66		101		94	92	152	407	690	163	76	86
28	81	105	98		94	97	159	438	627	159	86	86
29	81		98		94	100	163	478	519	167	180	112
30	86		104		------	100	156	618	564	180	141	86
31	86	------	104		------	106	------	690	------	159	141	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	86	51	60.0	3,690
November	107	81	97.4	5,800
December	------	------	104	6,400
January	------	------	100	6,150
February	109	94	101	5,810
March	106	81	90.9	5,590
April	206	109	147	8,750
May	1,100	163	480	29,500
June	1,080	519	761	45,300
July	510	159	258	15,900
August	180	66	101	6,210
September	138	86	106	6,310
The year	1,100	51	200	145,000

DUCHESNE RIVER AT DUCHESNE, UTAH

LOCATION.—Staff gage in NE ¼ NW ¼ sec. 1, T. 4 S., R. 5 W. Uinta meridian, in Duchesne, 1 mile above mouth of Strawberry River.
DRAINAGE AREA.—660 square miles.
RECORDS AVAILABLE.—December 1917 to September 1932.
EXTREMES.—Maximum discharge during year, 3,460 second-feet June 17 (gage height, 3.60 feet); minimum, 74 second-feet Oct. 17 (gage height, 1.00 foot).
1917–32: Maximum discharge, 4,420 second-feet June 10, 1922 (gage height, 8.65 feet); minimum, 15 second-feet July 11, 1931.
REMARKS.—Records fair. Discharge estimated for period of ice effect, Nov. 18 to Mar. 20. Diversions for irrigation above and below station.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept
1	84	134					173	255	1,220	1,070	249	348
2	90	127					173	278	1,150	1,010	226	292
3	95	134					173	306	1,150	956	215	266
4	95	134					173	306	1,290	901	215	266
5	95	134					173	320	1,440	796	206	255
6	90	134					173	306	1,400	650	196	243
7	90	134					173	278	1,250	604	161	220
8	84	134					173	278	1,050	560	131	211
9	79	142					173	334	1,050	517	131	182
10	84	134					192	426	1,050	475	138	165
11	79	150				165	182	525	1,060	623	138	157
12	84	142					201	613	1,260	669	226	165
13	84	150					220	613	1,740	623	161	165
14	90	150					255	650	2,420	669	138	157
15	79	150					278	912	2,630	534	131	150
16	79	150	170	170	165		278	945	3,340	451	131	142
17	74	157					306	1,110	3,460	451	131	134
18	95						348	1,300	2,860	483	131	127
19	95						348	1,460	2,860	467	138	114
20	100						379	1,490	2,630	434	161	114
21	95					173	348	1,740	2,740	387	169	114
22	95					173	306	2,150	2,740	341	206	114
23	90					165	278	1,810	2,860	327	169	107
24	90	160				165	278	1,440	2,860	285	131	127
25	90					173	255	1,380	2,630	313	134	120
26	95					173	266	1,260	2,210	272	131	120
27	100					165	278	1,120	1,920	249	261	114
28	107					165	266	1,120	1,760	237	285	134
29	107					165	255	1,180	1,350	299	1,220	127
30	114				-------	173	255	1,410	1,130	313	1,720	142
31	127	-------			-------	173	-------	1,340	-------	249	483	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	127	74	92.1	5,660
November	----------	127	149	8,870
December	----------	----------	170	10,500
January	----------	----------	170	10,500
February	----------	----------	165	9,490
March	----------	----------	167	10,300
April	379	173	244	14,500
May	2,150	255	924	56,800
June	3,460	1,050	1,950	116,000
July	1,070	237	523	32,200
August	1,720	131	267	16,400
September	348	107	170	10,100
The year	3,460	74	415	301,000

DUCHESNE RIVER AT MYTON, UTAH

LOCATION.—Chain gage in NW¼ sec. 25, T. 3 S., R. 2 W. Uinta meridian, at Myton, 3 miles below mouth of Lake Fork.

DRAINAGE AREA.—2,750 square miles.

RECORDS AVAILABLE.—October 1899 to November 1910; July 1911 to September 1932.

EXTREMES.—Maximum discharge during year, 3,750 second-feet May 23; minimum, 4 second-feet several days in October.

1899–1932: Maximum discharge, 12,800 second-feet June 10, 1922 (gage height, 7.94 feet); minimum, less than 1 second-foot on July 16, 1931.

REMARKS.—Records fair. Discharge estimated for period of ice effect, Nov. 29 to Mar. 27. Gage not read on Sunday; discharge interpolated. Large diversions for irrigation above station. Flow affected by storage in reservoir on Strawberry River.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4	122					340	358	1,640	1,080	258	503
2	4	131					350	376	1,590	1,060	244	340
3	4	150					370	386	1,440	940	193	330
4	5	131					392	515	1,440	820	193	270
5	7	124					381	527	1,830	796	188	218
6	5	131					340	546	2,210	621	118	218
7	4	150					340	546	2,270	558	90	209
8	4	144					291	546	1,550	469	59	201
9	9	138					281	546	1,600	457	59	128
10	9	150					290	570	1,160	435	72	92
11	11	168					300	708	1,270	413	81	110
12	13	168					291	722	1,360	424	118	124
13	13	150					281	1,020	1,570	796	114	89
14	11	131					291	1,040	1,700	820	75	64
15	10	140					366	1,400	1,830	527	37	62
16	11	150	300	330	350	375	381	1,760	2,180	527	37	64
17	11	168					400	1,860	1,370	900	37	69
18	8	168					418	1,920	3,300	1,430	34	65
19	7	176					446	2,260	2,700	1,330	21	62
20	9	168					457	2,500	2,120	539	10	62
21	69	164					469	2,800	2,570	509	300	57
22	69	186					457	3,300	2,730	320	600	50
23	75	209					515	3,750	2,930	310	627	62
24	69	188					430	3,540	3,770	270	108	64
25	84	253					350	2,560	3,530	227	64	70
26	98	231					325	2,320	2,900	209	124	89
27	98	276					350	1,980	2,270	146	138	89
28	108	276				376	340	2,000	1,830	164	300	84
29	105	300				392	350	2,000	1,640	184	463	62
30	131	300				315	340	1,980	1,620	218	474	89
31	114	------				325	------	1,810	------	240	509	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	131	4	38.0	2,340
November	300	122	178	10,600
December	------	------	300	18,400
January	------	------	330	20,300
February	------	------	350	20,100
March	------	------	372	22,900
April	515	281	364	21,700
May	3,750	358	1,550	95,300
June	3,740	1,160	2,120	126,000
July	1,430	146	572	35,200
August	660	10	187	11,500
September	503	50	133	7,910
The year	3,750	4	541	392,000

STRAWBERRY RIVER AT DUCHESNE, UTAH

LOCATION.—Staff gage in SW¼NE¼ sec. 2, T. 4 S., R. 5 W. Uinta meridian, three quarters of a mile west of Duchesne and 1½ miles above mouth.

DRAINAGE AREA.—1,040 square miles.

RECORDS AVAILABLE.—June 1908 to November 1910; March 1914 to September 1932.

EXTREMES.—Maximum discharge during year, 1,030 second-feet Aug. 22 (gage height, 8.70 feet); minimum discharge, 22 second-feet Aug. 14 (gage height, 5.45 feet).

1908–32: Maximum discharge, 3,230 second-feet May 27, 1922 (gage height, 7.7 feet); minimum discharge, 1 second-foot during several days in July 1931.

REMARKS.—Records good except those estimated for period of ice effect, Nov. 21 to Mar. 22, which are fair. Diversions for irrigation above station. Flow affected by storage in Strawberry Valley Reservoir, which is diverted to the Great Salt Lake Basin.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	26	44					95	157	395	123	57	85
2	28	44					95	202	378	119	51	82
3	26	44					110	218	367	107	45	64
4	30	44					110	253	360	103	40	57
5	30	44					110	299	328	89	32	64
6	30	44					100	324	378	85	25	64
7	30	44					95	324	367	85	25	57
8	30	44					91	332	328	78	25	57
9	30	44					91	341	322	70	25	57
10	32	44					106	366	292	70	25	55
11	41	44					106	420	270	78	25	57
12	34	44				90	110	561	270	245	25	57
13	34	48					128	620	270	119	25	57
14	34	48					137	685	270	85	22	57
15	39	50					152	700	270	85	25	51
16	37	50	60	70	80		157	722	265	70	25	51
17	39	50					180	722	248	141	32	51
18	41	56					192	790	243	119	30	51
19	48	56					212	790	222	94	32	45
20	50	56					225	768	217	70	43	45
21	39						291	745	217	60	298	45
22	39						218	790	197	57	548	45
23	39					121	186	680	192	70	156	45
24	39					91	157	580	187	57	134	55
25	39					110	157	540	168	57	82	51
26	39	55				91	157	508	168	55	67	51
27	44					91	157	465	168	45	197	57
28	39					91	157	430	168	40	204	57
29	41					91	157	430	150	67	465	57
30	41					83	157	423	134	123	141	57
31	44					83		412		57	99	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	50	26	36.5	2,240
November		44	49.7	2,960
December			60	3,690
January			70	4,300
February			80	4,600
March			91.4	5,620
April	291	91	147	8,750
May	790	157	503	30,900
June	395	134	260	15,500
July	245	40	87.8	5,400
August	548	22	97.6	6,000
September	85	45	56.1	3,340
The year	790	22	129	92,300

WEST FORK OF LAKE FORK NEAR MOUNTAIN HOME, UTAH

LOCATION.—Water-stage recorder in NE¼ sec. 19, T. 2 N., R. 5 W. Uinta meridian, half a mile below Moon Lake and 13 miles northwest of Mountain Home.
DRAINAGE AREA.—108 square miles.
RECORDS AVAILABLE.—September 1921 to September 1932 (fragmentary).
EXTREMES.—1921–32: Maximum discharge recorded, 2,000 second-feet Sept. 9, 1927 (gage height 3.85 feet); minimum not determined.
REMARKS.—Records fair. No diversions above station. Flow slightly regulated by storage in Brown Duck Lake Reservoir. Station not operated during winter months.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Apr.	May	June	July	Aug.	Sept.
1	36	31	------	a 60	432	480	149	168
2	36	31	------	a 60	392	460	139	153
3	37	31	------	70	418	423		139
4	37	31	------	80	470	414		126
5	37	31	------	84	533	363		117
6	35	31	------	84	528	344	a 175	113
7	34	31	------	80	441			109
8	32	31	------	78	367			108
9	32		------	80	332	a 325		a 105
10	32		------	95	317			a 100
11	33		------	119	376			a 95
12	34		------	158	511	309		a 90
13	34		------	202	687	298	a 200	84
14	33		------	252	849	309		81
15	33	a 29	56	298	1,070	270		81
16	32		------	344	900	233		80
17	32		------	410	914	217		76
18	32		------	506	698	217		75
19	35		------	591	573	220		a 70
20	38		------	660	687	205	a 160	63
21	39	27	------	865	870	182		
22	39		------	1,070	922	158		
23	39		------	788	1,050	149	124	
24	38		------	701	1,120	163	113	
25	38		------	687	937	176	106	
26	37	a 26	------		795	163	108	a 55
27	35		------	a 550	701	151	128	
28	34		------		628	151	139	
29	32		------	a 400	522	168	163	
30	32		------	a 450	490	163	190	
31	32	------	------	490	------	153	187	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	39	32	34.8	2,140
November	31	----------	28.6	1,700
April	----------	----------	a 50	2,980
May	1,070	60	368	22,600
June	1,120	317	648	38,600
July	480	149	263	16,200
August	----------	106	163	10,000
September	168	----------	86.1	5,120

a Estimated.

LAKE FORK NEAR MYTON, UTAH

LOCATION.—Staff gage at highway bridge in sec. 21, T. 3 S., R. 2 W. Uinta meridian, half a mile above mouth and 3½ miles northwest of Myton.

DRAINAGE AREA.—468 square miles.

RECORDS AVAILABLE.—July 1900 to December 1903; June 1907 to September 1932.

EXTREMES.—Maximum discharge during year, 1,070 second-feet June 16 (gage height, 4.82 feet); minimum not recorded.

1900–1903, 1907–32: Maximum discharge, 5,600 second-feet Nov. 24, 1927; probably no flow July 24, 1916, and Aug. 15, 1931.

REMARKS.—Records fair. Discharge estimated Oct. 1–18, for period of ice effect, Nov. 21 to Mar. 13, and for Sundays, when gage was not read. Diversions for irrigation above station.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		20					127	12	100	112	11	36
2		19					106	12	65	70	13	23
3		16					95	12	87	60	9	25
4		12					87	11	142	48	10	25
5		11					73	10	200	39	7	25
6		10					48	12	334	31	13	21
7		8				100	12	11	298	27	12	17
8		8					12	11	177	21	11	18
9		8					13	12	76	15	9	17
10	3	9					12	12	68	350	6	14
11		8					11	13	84	675	10	14
12		7					10	12	200	244	18	14
13		7			108		9	16	374	112	6	13
14		8				103	9	21	535	63	6	16
15		8				90	8	20	906	29	6	10
16		8	75	90		110	6	18	1,070	10	5	14
17		8				103	6	16	1,010	12	9	14
18		10				120	7	19	615	13	6	16
19	5	11				110	10	177	580	15	8	17
20	6	11				115	12	472	551	11	11	20
21	10					120	18	687	639	15	10	17
22	16					103	26	600	780	15	10	21
23	19					120	25	482	1,060	6	11	23
24	24					110	25	165	960	8	9	25
25	24					124	24	181	780	10	11	24
		20										
26	24					120	21	341	750	9	10	23
27	24					110	21	202	735	11	177	21
28	22					103	18	100	448	10	25	23
29	24					103	16	130	198	11	39	25
30	22					93	12	169	153	13	98	17
31	24					87		134		12	56	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	24		9.6	590
November		7	13.6	809
December			75	4,610
January			90	5,530
February			105	6,040
March	124	87	105	6,460
April	127	6	29.3	1,740
May	687	10	132	8,120
June	1,070	65	466	27,700
July	675	6	67.0	4,120
August	177	5	20.7	1,270
September	36	10	19.6	1,170
The year	1,070		93.9	68,200

UINTA RIVER NEAR NEOLA, UTAH

LOCATION.—Water-stage recorder in SW¼ sec. 25, T. 2 N., R. 2 W. Uinta meridian, 100 feet below bridge, 1 mile above mouth of Pole Creek, and 7 miles north of Neola.

DRAINAGE AREA.—181 square miles.

RECORDS AVAILABLE.—July 1921 to September 1927 (fragmentary) and September 1929 to September 1932.

EXTREMES.—Maximum discharge during year, 1,390 second-feet May 21 (gage height, 2.80 feet); minimum discharge recorded, 40 second-feet Feb. 24 (gage height 0.36 foot).

1929–32: Maximum discharge, that of May 21, 1932; minimum not recorded.

REMARKS.—Records good except those for Nov. 18 to Jan. 31 (ice effect) and Feb. 1 to Apr. 13, which are fair. Water diverted from Pole Creek and used at Uinta Power & Light Co.'s power plant enters stream 500 feet above gage. Summer flow slightly regulated by storage in several small mountain lakes and reservoirs.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	80	69				49		84	408	491	246	220
2	82	69					e 110	91	414	516	224	196
3	84	69						111	461	449	220	184
4	86	69					119	116	523	419	204	177
5	86	69						119	574	347	192	170
6	82	69				43		109	519	316	184	160
7	80	69						103	425	311	177	163
8	80	71						103	363	302	170	160
9	78	71					e 105	119	363	297	166	152
10	78	67			47			152	352	287	177	149
11	82	78						180	385	379	177	146
12	82	73						216	473	437	160	140
13	78	67				43		282	561	385	246	140
14	75	67					98	342	646	385	282	137
15	73	71					93	408	736	316	278	134
16	73	67	e 50	e 45			98	529	715	292	278	125
17	71	66					111	715	667	282	282	125
18	75						106	1,030	535	326	302	122
19	82						98	1,000	479	337	302	122
20	86					73	101	1,060	535	321	332	122
21	96						103	1,200	626	259	342	122
22	91						91	1,060	752	242	302	122
23	86						82	743	795	233	224	125
24	84	e 65			40	86	82	757	835	273	184	128
25	82						80	757	764	278	166	116
26	82						82	620	687	242	166	116
27	71						86	535	633	228	208	116
28	73						84	504	580	237	196	119
29	73						82	580	510	250	246	131
30	67						82	620	401	255	302	131
31	69							473		278	250	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	96	67	79.6	4,890
November	78		67.5	4,020
December			e 50	3,070
January			e 45	2,770
February			e 45	2,590
March			e 65	4,000
April		80	98.4	5,860
May	1,200	84	475	29,200
June	835	352	559	33,300
July	516	228	322	19,800
August	342	160	232	14,300
September	220	116	142	8,450
The year	1,200		182	132,000

e Estimated.

WHITEROCKS RIVER NEAR WHITEROCKS, UTAH

LOCATION.—Water-stage recorder in SW¼ sec. 18, T. 2 N., R. 1 E. Uinta meridian 25 feet below bridge, three quarters of a mile above heading of United States Whiterocks and Farm Creek Canals, and 6½ miles north of Whiterocks.

DRAINAGE AREA.—115 square miles.

RECORDS AVAILABLE.—August 1921 to September 1928; February 1930 to September 1932. September 1899 to August 1904 and April 1907 to November 1910 near present site. November 1917 to June 1921 below diversion of United States Whiterocks Canal and above Farm Creek Canal.

EXTREMES.—Maximum discharge during year, 1,840 second-feet May 21; minimum, 26 second-feet Mar. 10.

1918–32: Maximum discharge recorded, 2,570 second-feet June 21, 1922; minimum, less than 14 second-feet during winter 1920–21.

REMARKS.—Records fair. Discharge estimated Nov. 16 to Feb. 21 (ice effect) and Apr. 25 to May 4. Station above main diversions. Flow slightly regulated by storage in small mountain lakes.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	47	45				31	36		378	270	193	121
2	48	44				34	42		424	274	196	106
3	50	41				29	44	65	451	256	170	96
4	50	41				33	41		505	237	167	91
5	54	41				33	39	78	532	211	162	85
6	52	40				29	35	66	465	196	162	80
7	50	39				29	34	61	366	184	138	80
8	49	39				27	36	63	305	176	133	77
9	47	39				27	36	77	316	167	129	72
10	46	36				27	34	118	313	162	141	71
11	50	43			30	28	38	151	328	205	138	70
12	50	42				33	41	203	394	260	124	68
13	48	37				39	44	273	438	221	119	68
14	47	38				34	49	362	538	211	121	68
15	45	40				28	47	438	625	182	117	68
16	44		36	32		29	50	577	607	170	115	65
17	44					29	58	835	510	156	117	65
18	45					30	54	1,040	446	187	111	64
19	49					31	52	1,150	374	196	113	64
20	51					31	54	1,170	374	162	102	63
21	60					30	55	1,500	424	143	106	61
22	56				29	33	52	1,270	460	133	111	63
23	51	40			29	32	49	775	490	136	98	65
24	50				29	31	53	782	510	187	96	68
25	50				29	29		704	510	199	98	63
26	49				29	29		500	460	179	98	61
27	46				30	32	50	411	424	173	102	61
28	46				30	30		446	354	170	102	59
29	45				30	30		644	309	176	117	58
30	45					31		651	274	187	199	55
31	44					32		442		211	154	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	60	44	48.6	2,990
November	45		40.2	2,390
December			36	2,210
January			32	1,970
February			29.8	1,710
March	39	27	30.6	1,880
April	58	34	45.8	2,730
May	1,500		485	29,800
June	625	274	430	25,600
July	274	133	193	11,900
August	199	96	131	8,060
September	121	55	71.9	4,280
The year	1,500	27	132	95,500

FISH CREEK ABOVE RESERVOIR NEAR SCOFIELD, UTAH

LOCATION.—Water-stage recorder in SE¼ sec. 18, T. 12 S., R. 7 E., at mouth of canyon, 500 feet above bridge and 4 miles north of Scofield.
DRAINAGE AREA.—62 square miles.
RECORDS AVAILABLE.—June 1931 to September 1932 (fragmentary).
EXTREMES.—1931–32: Maximum discharge, 673 second-feet May 19, 1932; minimum not determined.
REMARKS.—Records good. Discharge estimated Oct. 14–20, June 8, and Sept. 8. No records Nov. 1 to Apr. 23. Gage-height record and results of several discharge measurements furnished by Price River Water Conservation District.

Discharge, in second-feet, 1931–32

Day	Oct.	Apr.	May	June	July	Aug.	Sept.
1	5	------	55	186	42	16	11
2	5	------	87	173	40	16	10
3	5	------	118	164	39	15	10
4	5	------	118	153	37	15	9
5	4	------	116	175	35	14	8
6	5	------	98	158	33	13	8
7	4	------	103	134	31	13	8
8	4	------	128	125	30	13	8
9	4	------	168	118	28	13	8
10	5	------	216	111	28	13	8
11	6	------	243	106	30	12	8
12	6	------	299	104	30	12	8
13	5	------	322	100	28	12	8
14		------	375	98	27	12	8
15		------	400	93	26	13	8
16		------	400	88	26	13	8
17	5	------	412	84	53	12	7
18		------	430	81	36	12	7
19		------	495	75	30	11	7
20		------	509	70	27	10	7
21	5	------	509	65	24	10	7
22	6	------	430	63	23	10	8
23	6	------	350	60	22	10	8
24	6	49	318	58	22	10	8
25	6	49	303	56	20	9	7
26	6	54	274	54	18	10	7
27	6	49	252	51	17	15	7
28	6	44	238	47	17	13	8
29	6	41	238	45	17	13	7
30	6	43	224	44	17	17	6
31	6	------	204	------	17	14	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	6	4	5.3	326
April 24–30	54	41	47.0	653
May	509	55	272	16,700
June	186	44	98.0	5,830
July	53	17	28.1	1,730
August	17	9	12.6	775
September	11	6	7.9	470

PRICE RIVER NEAR HELPER, UTAH

LOCATION.—Chain gage in SE¼ sec. 36, T. 13 S., R. 9 E., three quarters of a mile above diversion dam of Price River Irrigation Co. and 2 miles south of Helper.
DRAINAGE AREA.—530 square miles.
RECORDS AVAILABLE.—February 1904 to September 1932.
EXTREMES.—Maximum discharge during year, about 1,570 second-feet Aug. 28 (gage height, 11.81 feet); minimum discharge, about 3 second-feet Oct. 17–18. 1904–32: Maximum discharge, between 9,000 and 10,000 second-feet during floods early in September 1927; minimum, 2 second-feet Nov. 18, 1930.
REMARKS.—Records fair. Stage-discharge relation affected by ice Nov. 21 to Jan. 31. Main irrigation diversions are below station. Flow affected by storage in reservoir on Fish Creek.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6				6	28	58	84	227	163	124	70
2	6				6	23	80	86	202	187	104	52
3	6				6	22	80	169	224	149	104	40
4	6				6	21	89	178	233	158	109	54
5	6	a 4		8	6	21	80	196	224	158	106	50
6	6				8	18	80	196	243	158	104	46
7	10				a 15	22	80	202	249	178	104	43
8	8				27	23	80	a 180	230	190	104	40
9	6	6			11	26	80	155	233	190	160	36
10	4	7			22	21	80	190	205	187	146	58
11	4	26			15	18	80	218	202	249	130	58
12	4	14		10	11	18	106	243	193	221	119	64
13	4	18			11	21	111	259	193	227	114	77
14	4	23	8		10	23	132	275	187	146	114	89
15	6	26			11	26	132	282	190	106	135	89
16	6	21			14	19	132	272	190	119	135	89
17	3	26			15	22	138	262	193	435	136	89
18	3	26			15	24	138	249	187	130	152	84
19	23	26			17	30	132	249	175	143	130	84
20	14	23			17	40	127	236	166	111	130	104
21	14	14			24	46	111	249	163	103	130	104
22	13	14			33	46	98	187	158	101	130	104
23	9	16			40	40	80	175	135	104	117	116
24	8	16			27	43	75	175	119	114	104	104
25	8	18			27	33	58	175	104	130	104	80
26	7				27	24	68	181	130	130	117	68
27	7				26	27	58	187	140	146	321	58
28	7	a 15			31	24	54	187	140	246	790	56
29	6				34	24	50	236	155	246	161	58
30	6					24	56	249	163	181	84	58
31	6					24		236		140	75	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	23	3	7.3	449
November	26		14.2	845
December			a 8	492
January			a 10	615
February	40	6	17.8	1,020
March	46	18	26.5	1,630
April	138	50	90.8	5,400
May	282	84	207	12,700
June	249	104	185	11,000
July	435	101	169	10,400
August	790	75	146	8,980
September	116	36	70.7	4,210
The year	790	3	79.6	57,700

a Estimated.

HUNTINGTON CREEK NEAR HUNTINGTON, UTAH

LOCATION.—Water-stage recorder in SE¼ sec. 6, T. 17 S., R. 8 E., about 1 mile above Fish Creek and 7 miles northwest of Huntington.

DRAINAGE AREA.—188 square miles.

RECORDS AVAILABLE.—May 1909 to September 1932.

EXTREMES.—Maximum discharge during year, 1,060 second-feet May 21 (gage height, 3.75 feet); minimum discharge not recorded.

1909–32: Maximum discharge, about 2,500 second-feet Aug. 2 or 3, 1930 (gage height, 7.5 feet); probably no flow Nov. 5, 1926.

REMARKS.—Records fair. Stage-discharge relation affected by ice Nov. 26 to Feb. 29. Small irrigation diversions above station. Flow slightly regulated by small storage reservoirs.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	26	19			a 30	a 35	74	276	138	101	a 40
2	26				31	a 40	107	238	136	99	31
3	24					45	134	236	132	99	31
4	24						130	236	130	99	30
5	25	a 25					127	300	117	101	29
6	24				a 30	a 65	113	314	115	99	28
7	24						115	218	134	89	27
8	25						132	210	132	62	27
9	28	28					175	216	127	65	27
10	25				30	82	225	232	123	71	27
11	24			30	29		304	214	a 178	63	27
12	24		21		29		336	300	158	61	27
13	24	a 25			27		440	318	143	58	27
14	24						390	318	130	59	26
15	24					a 110	300	312	117	63	26
16	24						340	236	117	51	a 26
17	24						440	210	119	50	a 25
18	24	25			a 27		500	238	141	54	25
19	25						440	234	127	54	25
20	27					134	700	214	113	55	24
21	25					113	794	232	107	55	24
22	24					99	700	218	105	53	24
23	23					74	440	218	105	48	28
24	22	a 30				66	390	272	103	45	25
25	20					62	395	239	103	47	23
26	19					69	320	216	101	74	a 25
27					a 25	65	316	170	99	61	a 25
28						59	312	138	101	69	a 25
29	a 19					58	332	152	127	48	27
30						58	328	138	115	55	a 25
31							296		105	45	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	28		23.3	1,430
November			26.9	1,600
December			a 30	1,840
January			a 25	1,540
February			a 30	1,730
March			27.6	1,700
April	134	35	81.3	4,840
May	794	74	327	20,100
June	316	138	260	15,500
July	178	99	123	7,560
August	101	45	66.2	4,070
September	40	23	26.9	1,600
The year	794		87.4	63,500

a Estimated.

COTTONWOOD CREEK NEAR ORANGEVILLE, UTAH

LOCATION., Water-stage recorder in SW¼ sec. 10, T. 18 S., R. 7 E., 2 miles upstream from Grimes Wash and 5 miles northwest of Orangeville.

DRAINAGE AREA.—200 square miles.

RECORDS AVAILABLE.—May 1909 to September 1927 (fragmentary); May to September 1932.

EXTREMES.—Maximum mean daily discharge during period, 735 second-feet May 21–22; minimum, 21 second-feet several days in September.

1909–27: Maximum discharge, about 2,500 second-feet Aug. 22, 1922, Sept. 9, 1927; maximum gage height, 9.2 feet Sept. 9, 1927; minimum discharge, 5 second-feet Sept. 21, 1910.

REMARKS.—Records fair. Discharge estimated May 1–4, May 23 to June 7, July 11, 18, 23–25, Aug. 21–28. Small diversions for irrigation above station.

Discharge, in second-feet, 1931–32

Day	May	June	July	Aug.	Sept.	Day	May	June	July	Aug.	Sept.
1			171	48	34	16	450	534	90	57	21
2			154	46	34	17	520	464	108	43	22
3	90		147	46	33	18	590	438	216	40	22
4		280	132	44	33	19	625	390	150	44	21
5	88		113	45	32	20	660	396	90	46	21
6	86		106	43	32	21	735	396	78		21
7	84		92	40	31	22	735	402	75		21
8	86	265	88	39	29	23	700	408			42
9	101	286	82	39	27	24	650	390	65		24
10	132	336	86	39	25	25	600	360		50	24
11	185	420	175	37	23	26		319	60		24
12	213	506	101	34	21	27		286	58		26
13	255	555	92	34	21	28		255	57		27
14	360	590	84	33	22	29	300	221	61	38	28
15	414	590	74	60	21	30		193	60	48	21
						31			53	40	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
May	735	84	336	20,700
June	590	193	365	21,700
July	216	53	98.3	6,040
August	60	33	44.6	2,740
September	42	21	26.1	1,550
The period				52,700

BECK CREEK NEAR EPHRAIM, UTAH

LOCATION.—Water-stage recorder in NE¼NW¼ sec. 24, T. 17 S., R. 4 E., in canyon three quarters of a mile below highway crossing, 1 mile northeast of Seeley Creek ranger station, and 10 miles southeast of Ephraim. Staff gage at same site used in 1931.

DRAINAGE AREA.—5 square miles.

RECORDS AVAILABLE.—May to July 1931, May to July 1932.

REMARKS.—Records fair for 1931 and good for 1932. Station established in cooperation with Ephraim Water Users and Utah Water Storage Commission to determine available water supply for a proposed transmountain diversion project. This project contemplates a tunnel at an elevation of about 9,700 feet under Beck Ridge, through which water collected by intercepting canals from Beck Creek and the several forks of Seeley Creek will be diverted from the Colorado River Basin into the Great Basin. The estimated run-off from forks of Seeley Creek is given in footnote to table of daily and monthly discharge.

Discharge, in second-feet, 1931–32

Day	1931			1932			Day	1931			1932		
	May	June	July	May	June	July		May	June	July	May	June	July
1	-------	e 19	2	e 2	30	8	16	e 110	e 6	-------	43	31	5
2	-------	19	e 2	e 2	32	8	17	125	5	-------	55	25	6
3	-------	e 17	2	e 2	38	8	18	e 80	e 5	-------	60	23	6
4	-------	15	e 2	e 2	41	7	19	35	4	-------	53	24	5
5	-------	e 14	e 2	e 2	37	6	20	e 30	e 4	-------	65	24	e 4
6	-------	12	2	e 2	29	6	21	23	4	-------	92	23	3
7	-------	e 11	e 2	e 2	22	6	22	e 30	e 4	-------	70	22	
8	-------	e 10	e 2	e 2	20	5	23	36	3	-------	44	21	
9	-------	10	e 2	4	23	5	24	e 35	e 3	-------	34	20	
10	-------	e 9	e 2	5	26	5	25	e 30	3	-------	29	18	
11	-------	8	2	8	32	5	26	e 25	e 3	-------	26	16	e 3
12	-------	e 8	2	11	42	5	27	20	3	-------	26	14	
13	-------	e 7	e 2	18	44	5	28	e 20	e 3	-------	29	12	
14	-------	e 7	e 2	25	46	5	29	e 20	e 3	-------	34	10	
15	92	6	e 2	33	40	5	30	20	3	-------	33	10	
							31	e 20	-------	-------	36	-------	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
1931				
May 15–31	125	20	44.2	1,490
June	19	3	7.6	452
July 1–15	2	2	2.0	60
The period				2,000
1932				
May	92	2	27.4	1,680
June	46	10	26.5	1,580
July	8	-------	4.8	295
The period				3,560

e Estimated.

NOTE.—Records on the several forks of Seeley Creek based on miscellaneous discharge measurements and frequent gage heights near the proposed points of diversion in NE¼ sec. 26 indicate a total available run-off of about 270 acre-feet May 15 to July 15, 1931, and about 900 acre-feet May 1 to July 31, 1932.

SAN JUAN RIVER BASIN

SAN JUAN RIVER AT ROSA, N. MEX.

LOCATION.—Water-stage recorder in sec. 21, T. 32 N., R. 5 W., at Rosa, about 300 yards above highway bridge and about a quarter of a mile below mouth of Piedra River.

DRAINAGE AREA.—1,990 square miles.

RECORDS AVAILABLE.—October 1930 to September 1932. Records for 1920 to 1930 published by State engineer.

EXTREMES.—Maximum discharge during year ending Sept. 30, 1931, 3,740 second-feet May 18 (gage height, 4.43 feet); minimum recorded, 109 second-feet Jan. 26.

Maximum discharge during year ending Sept. 30, 1932, 9,050 second-feet Apr. 17 and May 20; maximum gage height, 7.19 feet May 20; minimum discharge (estimated), 200 second-feet Nov. 22.

REMARKS.—Records good except those estimated, which are fair. Stage-discharge relation affected by ice Nov. 21 to Dec. 31, 1930, Jan. 1 to Feb. 17, Dec. 11–31, 1931, Jan. 1 to about Feb. 25, 1932. Diversions for irrigation above station.

Discharge, in second-feet, 1930–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1930–31												
1	347	176			a 140	137	437	1,440	2,830	a1,450	a 800	a 150
2	305	171	a 120		a 150	128	661	1,420	2,670	a1,100	365	a 160
3	245	171			a 180	137	814	1,600	2,910	a 900	329	a 170
4	214	171			a 230	149	598	2,280	2,910	a1,200	353	a 170
5	199	176	a 140		a 230	204	548	1,980	2,510	a1,100	a 460	a 160
6	190	171			a 220	167	643	1,740	2,590	a 800	a 570	a 160
7	181	162	140		a 200	204	935	1,850	2,670	a 600	680	a 150
8	176	158		a 120	a 190	209	1,130	2,100	2,750	a 500	598	a 150
9	171	158	a 140		a 190	224	1,110	1,880	2,510	a 450	616	a 160
10	171	153			a 190	145	1,050	1,620	2,210	410	625	a 170
11	323	153			a 210	158	1,180	1,420	1,840	398	572	a 170
12	493	153			a 270	185	1,310	1,400	1,870	378	516	a 170
13	353	145	a 130		a 310	235	1,280	1,590	1,980	347	a 430	a 180
14	329	149			a 330	235	1,260	1,980	1,910	305	a 360	a 350
15	305	181			a 320	240	1,210	2,280	1,830	266	a 330	a 500
16	294	158			a 290	272	1,130	2,670	1,800	261	a 310	a 600
17	278	181			a 240	335	1,050	2,910	1,740	294	323	a 560
18	261	272	a 140	a 110	199	417	1,050	3,240	1,520	347	372	a 530
19	250	240			190	479	1,210	3,070	1,370	a 410	372	a 800
20	245	190			167	465	1,350	2,280	a1,150	a 400	384	a1,100
21	240	a 180			171	437	1,280	1,830	a 970	a 320	323	a1,000
22	235	a 170			158	493	1,180	1,520	a 900	a 250	a 230	a 940
23	224	a 160		a 100	153	589	1,280	1,600	a 840	a 220	a 230	a 920
24	224				141	493	1,390	2,020	a 820	a 210	a 150	a1,500
25	214		a 130		137	532	1,350	2,590	a 780	a 200	a 130	1,400
26	204	a 150		109	145	451	1,270	2,750	a 740	a 210	a 120	1,060
27	199			a 110	141	391	1,070	2,510	a 680	a 240	a 120	979
28	185			a 120	149	359	1,300	2,100	625	a 240	a 120	770
29	185			a 120	-------	378	1,500	2,120	589	a 240	a 120	730
30	181			a 130	-------	391	1,500	2,440	670	a 280	a 120	a 700
31	176	-------		a 130	-------	365	-------	2,670	-------	a 500	a 130	-------

a Estimated by hydrographic comparison.

Discharge in second-feet, of San Juan River at Rosa, N.Mex., 1930–32—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1931–32												
1	a800	a330	a280				a3,500	a2,700	5,130	3,460	1,770	851
2	a1,250	a320	a270				a4,500	3,620	5,130	3,540	1,410	738
3	a1,500	a300	a280		a350	a2,400	a6,000	4,300	5,130	3,380	1,150	650
4	a1,400	a290	a290				a5,600	4,750	4,570	3,300	990	575
5	a1,250	a270	a300	a250			a6,000	4,940	4,120	a3,200	950	520
6	a1,050	a260	a290				a5,800	4,840	3,540	2,980	a820	494
7	a960	a250	a280				a4,300	4,040	3,300	a2,600	a740	494
8	a880	a250	a280	262	a450		a4,400	3,960	3,620	a2,400	a660	501
9	a840	a260	a270				a4,700	4,480	4,040	a2,300	a620	457
10	a880	a360	a260				a4,200	4,480	4,390	a2,300	a580	451
11	a800	a480				a1,300	a4,500	4,840	4,480	a2,500	554	a420
12	a680	a600					a5,100	5,330	4,660	3,060	508	a390
13	a640	a500	a250				a6,000	5,960	5,330	3,140	463	a360
14	a560	a440					a6,800	6,410	5,740	3,060	445	a330
15	a530	a380					5,740	5,740	5,740	2,040	494	a300
16	a480	a390			a800		6,890	6,650	5,960	1,970	527	270
17	a440	a400					7,400	6,650	5,530	1,770	650	260
18	a410	a380	a230				6,410	7,140	5,130	1,640	642	250
19	a450	a360				a2,800	6,180	7,930	4,750	2,040	642	250
20	a520	a300		a250			6,180	7,930	4,840	1,600	806	245
21	a570	a250				2,360	5,130	6,650	4,840	1,390	1,340	240
22	a520	a200					5,130	7,660	5,130	1,270	970	235
23	a490	a220	a250		a1,200	a1,700	a4,500	8,200	5,740	1,220	1,170	240
24	a450	a250					a4,000	6,890	5,530	1,130	806	290
25	a420	a320					a3,500	6,890	5,130	1,160	762	457
26	a400	a400				a2,600	a3,200	5,960	4,940	1,030	603	445
27	384	a350			a1,600	a1,800	a3,000	5,330	4,570	950	1,070	344
28	a370	a300	a220				a2,900	5,530	4,390	1,100	2,390	306
29	a360	a290					a3,100	5,960	3,960	1,900	2,180	285
30	a340	a280				a2,100	a2,800	6,410	3,780	2,110	1,310	270
31	a330	-------			-------		-------	5,330	-------	2,390	1,010	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
1930–31				
October	493	171	245	15,100
November	272	----------	168	10,000
December	----------	----------	132	8,130
January	----------	----------	115	7,080
February	330	137	201	11,200
March	589	128	310	19,000
April	1,500	437	1,100	65,600
May	3,240	1,400	2,090	129,000
June	2,910	589	1,710	102,000
July	1,450	200	478	29,400
August	800	120	360	22,100
September	1,500	150	552	32,800
The year	3,240	----------	623	451,000
1931–32				
October	1,500	330	676	41,600
November	600	200	333	19,800
December	300	----------	251	15,400
January	----------	----------	250	15,400
February	----------	----------	841	48,400
March	----------	----------	1,890	116,000
April	7,400	2,800	4,920	292,000
May	8,200	2,700	5,730	352,000
June	5,960	3,300	4,770	284,000
July	3,540	950	2,190	135,000
August	2,390	445	937	57,600
September	851	235	397	23,600
The year	8,200	----------	1,930	1,400,000

a Estimated by hydrographic comparison.

SAN JUAN RIVER NEAR BLANCO, N.MEX.

LOCATION.—Water-stage recorder in sec. 18, T. 29 N., R. 9 W., half a mile above highway bridge, 1 mile above mouth of Canyon Largo, and 1½ miles east of Blanco.

DRAINAGE AREA.—3,320 square miles.

RECORDS AVAILABLE.—December 1908 to October 1910; October 1930 to September 1932. Records for 1927 to 1930 published by State engineer.

EXTREMES.—Maximum discharge during year ending Sept. 30, 1931, 5,010 second-feet May 18 (gage height, 4.70 feet); minimum, 28 second-feet Sept. 1. Maximum discharge during year ending Sept. 30, 1932, 17,500 second-feet Aug. 21 (gage height, 7.65 feet); minimum, 143 second-feet Nov. 22.

REMARKS.—Records good except those estimated. Diversions for irrigation above station.

Discharge, in second-feet, 1930–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1930–31												
1	178	183	278		216	216	540	2,000	3,360	2,430	1,270	28
2	446	170	222		206	165	674	1,860	3,240	1,920	770	46
3	345	170	264		234	165	945	2,100	3,360	1,380	374	94
4	270	165	270		264	196	870	2,550	3,420	1,850	275	99
5	222	196	292		456	246	660	2,520	3,030	1,820	230	53
6	210	216	315		372	278	674	2,230	2,920	1,240	579	41
7	216	196	322		363	246	840	2,260	3,150	958	899	36
8	165	188	345		363	206	1,100	2,570	3,240	790	579	52
9	158	192	354	[a] 220	345	192	1,270	2,570	3,000	664	496	69
10	170	183	292		315	188	1,120	2,230	2,600	570	534	53
11	196	158	[a] 260		363	292	1,100	2,030	2,240	488	592	39
12	600	148	[a] 250		345	315	1,370	1,960	2,050	412	378	70
13	636	154	[a] 240		390	372	1,390	2,100	2,160	372	336	123
14	508	144			477	408	1,370	2,490	2,120	301	265	149
15	446	151	[a] 240		498	399	1,250	2,740	2,040	226	226	312
16	381	165			456	381	1,150	3,180	2,050	191	197	958
17	322	178			390	426	1,170	3,830	2,020	149	198	682
18	300	252	[a] 250		308	488	1,100	4,090	1,800	200	328	509
19	270	390			285	600	1,150	3,990	1,540	265	334	619
20	252	381	[a] 240	[a] 210	315	674	1,370	3,060	1,340	394	276	1,920
21	240	372			270	624	1,430	2,330	1,150	250	[a] 260	1,870
22	240	322			252	624	1,330	1,980	1,040	191	[a] 220	1,270
23	252	216			240	754	1,390	1,740	945	160	[a] 190	1,070
24	206	201		208	240	810	1,600	2,230	921	118	[a] 140	958
25	192	201		[a] 190	240	754	1,560	2,890	888	96	96	2,470
26	183	222	[a] 230	[a] 170	258	870	1,580	3,300	844	110		1,590
27	174	278		158	258	636	1,370	3,090	790	179		1,360
28	170	285		174	222	612	1,390	2,570	720	101	[a] 50	1,230
29	174	322		206	-------	576	1,960	2,260	1,030	126		994
30	196	308		188	-------	588	1,930	2,600	1,190	149		855
31	188	-------		192	-------	576	-------	2,940	-------	265		-------

[a] Estimated by hydrographic comparison.

Discharge, in second-feet, of San Juan River near Blanco, N.Mex., 1930–32—Con.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1931-32												
1	750	406	[a] 350			2,560	3,920	3,440	6,580	4,570	2,420	1,400
2	844	394	345			2,740	6,180	3,990	6,580	4,420	1,940	1,200
3	[a] 2,700	378	[a] 350		[a] 400	3,560	7,760	5,040	6,760	4,570	1,520	1,030
4	[a] 2,350	372	[a] 450			2,810	7,480	5,870	6,040	4,270	1,260	920
5	[a] 1,650	356	[a] 370			2,000	7,840	6,220	5,200	4,270	1,110	812
6	1,500	345	347			1,660	7,570	6,480	4,570	3,720	996	740
7	1,380	328	[a] 340		[a] 500	1,360	5,960	5,700	3,990	3,360	860	684
8	1,220	318	[a] 330			1,340	6,100	5,200	3,990	3,040	758	700
9	1,060	334	[a] 330			1,680	6,420	5,530	4,420	2,900	636	588
10	[a] 2,000	430	[a] 320		655	2,250	5,830	5,870	5,200	2,790	573	552
11	[a] 1,200	1,040			899	2,230	6,140	6,400	5,360	2,830	531	482
12	[a] 1,100	1,270			1,730	2,020	6,820	6,580	5,700	3,560	496	447
13	1,020	740	[a] 280		1,260	1,550	7,720	7,720	6,580	3,640	422	416
14	970	570			946	1,420	8,530	8,530	7,520	3,340	386	392
15	866	488			910	1,300	7,520	8,120	7,520	2,650	392	375
16	822	418		300	994	1,480	8,320	8,740	7,920	2,290	496	350
17	740	442			1,040	2,160	8,950	9,160	7,720	2,170	573	330
18	700	424	[a] 260		958	2,590	8,120	10,000	6,950	1,920	604	315
19	646	412			844	3,170	7,720	10,700	6,400	2,070	1,360	295
20	740	394			866	5,170	7,920	11,000	6,400	2,050	1,580	285
21	800	340			1,030	4,110	6,950	9,160	6,400	1,640	5,620	266
22	760	250			1,330	2,670	6,760	10,000	6,580	1,460	2,460	258
23	780	[a] 270	[a] 280		1,420	2,040	6,040	11,000	7,140	1,330	2,170	258
24	740	290			1,530	1,920	5,040	10,500	7,920	1,240	1,430	399
25	700	[a] 430			1,530	2,490	4,270	10,300	6,950	1,250	1,190	812
26	637	[a] 480			1,680	3,390	3,990	11,000	7,140	1,200	963	716
27	602	[a] 430			2,040	2,470	3,860	7,330	6,400	1,080	1,030	559
28	546	[a] 400	[a] 260		2,000	2,350	3,720	7,330	5,870	1,190	6,220	392
29	502	[a] 370			2,360	3,020	3,860	7,920	5,360	2,070	4,880	355
30	488	[a] 360			------	2,740	3,640	8,740	5,040	2,520	3,460	340
31	454	------			------	2,770	------	7,720	------	3,160	1,850	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
1930-31				
October	636	158	274	16,900
November	390	144	224	13,300
December	354	------	256	15,800
January	------	158	209	12,800
February	498	206	319	17,700
March	870	165	448	27,500
April	1,960	540	1,220	72,700
May	4,090	1,740	2,590	159,000
June	3,420	720	2,010	119,000
July	2,430	96	592	36,400
August	1,270	------	322	19,800
September	2,470	28	654	38,900
The year	4,090	------	760	550,000
1931-32				
October	2,700	454	1,010	62,000
November	1,270	250	449	26,700
December	------	------	297	18,200
January	------	------	300	18,400
February	2,360	------	1,040	59,500
March	5,170	1,300	2,120	149,000
April	8,950	3,640	6,360	379,000
May	11,000	3,440	7,780	478,000
June	7,920	3,990	6,210	369,000
July	4,570	1,080	2,660	164,000
August	6,220	386	1,620	99,500
September	1,400	258	556	33,100
The year	11,000	------	2,560	1,860,000

[a] Estimated by hydrographic comparison.

SAN JUAN RIVER AT FARMINGTON, N.MEX.

LOCATION.—Water-stage recorder in NE¼NE¼ sec. 20, T. 29 N., R. 13 W., 1,500 feet below mouth of Animas River and 1 mile southwest of Farmington.

DRAINAGE AREA.—6,580 square miles.

RECORDS AVAILABLE.—June 1904 to September 1906; September 1912 to December 1914; October 1930 to September 1932. Records for 1915–18, 1921–30 published by State engineer.

EXTREMES.—Maximum discharge during year ending Sept. 30, 1931, about 7,760 second-feet June 2; maximum gage height, 4.42 feet June 8; minimum discharge (estimated), 30 second-feet Sept. 1; minimum recorded gage height, 2.16 feet July 29.

Maximum discharge during year ending Sept. 30, 1932, 18,600 second-feet May 23 (gage height, 6.06 feet); minimum probably occurred during ice period; minimum recorded gage height, 1.16 feet Sept. 22.

REMARKS.—Records for year ending Sept. 30, 1931, poor; those for 1932 are fair except those estimated, which are poor. Stage-discharge relation affected by ice Nov. 22 to Dec. 31, 1930, Jan. 1–31, Feb. 1, 3–8, 1931, Jan. 1 to Feb. 9, 1932. Diversions for irrigation above station.

Discharge, in second-feet, 1930–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1930-31												
1	a360	a460			a520	462	a840	a2,450	5,620	4,700	a4,870	a30
2	a400	a450			556	462	a1,000	a2,600	a5,500	3,830	a2,750	a50
3	a580	a450			a600	400	a1,170	2,710	5,620	2,580	650	a70
4	a510	a440			a760	410	a1,100	a2,900	5,890	3,110	514	a60
5	a460	449			a840	501	a930	3,260	5,450	3,490	540	a50
6	a440	a450			a750	488	950	3,640	4,700	2,060	1,390	a40
7	449	a450			a650	501	1,000	3,490	5,290	1,650	1,830	a40
8	410	a440			a620	423	1,520	3,110	5,620	1,450	1,690	a50
9	400	a440			604	410	1,790	3,440	5,070	1,450	a1,730	a60
10	410	a440			556	423	1,210	3,210	4,290	1,150	a1,750	a50
11	423	a410			488	368	1,760	2,980	3,490	780	a1,630	a40
12	423	a410			636	501	1,940	a2,850	2,840	636	1,330	a100
13	1,020	a420			684	652	1,650	a2,700	3,690	475	810	157
14	840	a430			800	a700	1,980	3,020	3,640	400	438	228
15	820	a450			925	a650	1,550	3,780	3,300	a300	378	368
16	604	a460	a460	a420	a850	a640	1,550	4,290	3,540	a240	378	800
17	a590	475			a700	a680	1,760	5,560	3,490	a210	347	a1,520
18	a570	668			a600	760	1,720	6,000	3,110	a260	636	a1,000
19	a550	820			514	a900	1,620	6,000	2,620	a330	538	a1,500
20	a540	820			514	a940	1,720	5,560	2,420	a500	572	2,580
21	a530	760			540	a820	1,720	5,400	1,900	a340	540	3,070
22	a520	a660			410	a800	a1,670	3,300	1,790	a250	262	a2,300
23	a510	a500				950	a1,750	2,670	1,650	a200	178	a1,550
24	a490	a450				a1,100	1,870	a3,500	1,650	a150	171	1,520
25	a470	a460				a1,150	2,090	a4,400	a1,600	a120	a100	3,210
26	a460	a470			a420	a1,200	1,760	a4,900	a1,550	a150	a60	2,380
27		a510				a1,000	1,720	a4,400	a1,530	a190	a50	1,790
28		a530				a880	1,690	a3,800	1,720	a160	a50	2,020
29	a450	a560				a840	1,940	3,440	2,060	358	a40	1,760
30		a550				a870	2,420	4,340	3,350	1,720	a40	a1,500
31						880		5,180		1,000	a40	

a Estimated by hydrographic comparison.

Discharge, in second-feet, of San Juan River at Farmington, N.Mex., 1930–32—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1931–32												
1	1,830	a610				4,860	5,840	6,830	10,100	8,770	4,100	2,390
2	3,590	a600	a580			5,670	7,610	7,780	10,100	8,520	3,180	2,000
3	5,240	a580		a540	a700	3,590	9,010	9,280	10,300	8,270	2,350	1,680
4	3,830	a550				a3,800	9,410	10,300	9,800	8,020	2,020	1,460
5	a3,300	a520	604			a2,800	9,670	11,400	8,270	8,020	1,980	1,320
6	a2,850	a510				a2,500	10,200	11,400	7,300	7,060	1,600	1,310
7	a2,550	a500		547	a1,200	a2,200	8,570	10,800	6,380	5,720	1,330	1,260
8	a2,300	a500	a560			a2,200	7,980	10,100	6,380	5,100	1,230	a1,200
9	a2,100	a570				a2,800	8,550	10,300	7,540	4,640	a1,100	a1,100
10	a3,300	a680			3,260	a3,400	8,070	10,800	8,770	4,410	a1,000	a1,000
11	a2,000	a1,600			2,380	a3,300	8,280	11,100	9,020	4,670	a900	a940
12	a1,800	2,500			1,450	a3,100	9,020	11,600	9,800	6,160	a750	892
13	a1,650	1,080			1,050	a2,400	10,100	13,300	10,800	6,600	a650	820
14	a1,500	a900			1,100	a2,200	11,600	14,600	12,500	6,160	a600	780
15	a1,300	a760			1,330	a2,100	11,100	14,400	13,300	4,900	a550	716
16	a1,150	a720			1,080	a2,400	11,100	14,100	13,600	4,020	a550	676
17	a1,050	a740			1,050	a3,200	12,200	15,200	13,600	3,570	a800	625
18	a980	a720			1,300	a3,800	11,900	15,800	12,500	3,000	1,190	584
19	a1,100	a690		a580	1,550	a4,600	10,800	15,800	11,400	2,770	1,730	597
20	a1,300	a660			2,290	a6,900	11,100	16,300	10,800	3,070	4,080	584
21	a1,100	a640	a520		2,580	a5,800	10,600	13,800	11,100	2,290	7,840	578
22	a1,000	a620			2,580	a4,000	10,100	14,900	11,600	2,060	3,730	572
23	1,100	a640			2,800	a3,200	9,800	17,500	12,200	1,910	2,800	625
24	925	a680			2,580	2,890	8,520	a15,000	13,300	1,830	2,330	660
25	1,080	a760			2,760	4,280	7,540	a13,000	12,700	2,620	2,040	1,040
26	1,100	a860			3,540	5,660	7,060	13,600	13,300	1,830	1,680	1,260
27	a900	a820			3,980	4,000	7,300	11,600	11,900	1,700	1,870	1,210
28	740	a700			4,600	3,410	7,060	10,800	10,800	1,780	11,900	982
29	a700	a580			4,440	4,760	7,060	11,900	9,380	2,440	9,280	865
30	a660	a550			-------	4,890	6,830	13,300	9,220	2,820	5,100	820
31	a620	-------			-------	4,540	-------	12,500	-------	4,900	3,240	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
1930–31				
October	1,020	360	517	31,800
November	820	410	509	30,300
December	----------	----------	460	28,300
January	----------	----------	420	25,800
February	925	----------	594	33,000
March	1,200	368	702	43,200
April	2,420	840	1,580	94,000
May	6,000	2,450	3,830	236,000
June	5,890	1,530	3,470	206,000
July	4,700	120	1,100	67,900
August	4,870	40	856	52,600
September	3,210	30	996	59,300
The year	6,000	30	1,250	908,000
1931–32				
October	5,240	620	1,760	108,000
November	2,500	500	761	45,300
December	----------	----------	537	33,000
January	----------	----------	571	35,100
February	4,600	----------	1,930	111,000
March	6,900	2,100	3,720	229,000
April	12,200	5,840	9,130	543,000
May	17,500	6,830	12,600	772,000
June	13,600	6,380	10,600	631,000
July	8,770	1,700	4,480	276,000
August	11,900	550	2,690	166,000
September	2,390	572	1,020	60,600
The year	17,500	----------	4,150	3,010,000

a Estimated by hydrographic comparison.

SAN JUAN RIVER AT SHIPROCK, N.MEX.

LOCATION.—Water-stage recorder in sec. 25, T. 30 N., R. 18 W., at highway bridge a quarter of a mile south of Shiprock and 3 miles below mouth of Chaco River.

DRAINAGE AREA.—12,800 square miles (revised).

RECORDS AVAILABLE.—January to October 1911; October 1930 to September 1931; 1931–32, miscellaneous measurements only, see page 132. Records for 1911 and 1915–30 published by State engineer.

EXTREMES.—Maximum discharge during year, about 11,700 second-feet July 3 (gage height, 3.80 feet); minimum discharge (estimated), 90 second-feet Sept. 1; minimum recorded gage height, −0.17 foot July 26.

REMARKS.—Records poor. Stage-discharge relation affected by ice Dec. 10 to Feb. 3. Diversions for irrigation above station.

Discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	500	a530	a610		a600	535	a920	2,160	6,230	6,230	a5,000	a90
2	535	a520	a570		a680	560	a1,200	2,380	5,840	5,840	3,650	a140
3	728	a520	a600		a760	560	a1,350	2,840	5,650	6,040	1,270	a180
4	a600	a510	a630		825	598	a1,300	3,240	6,040	3,080	714	a180
5	a570	a550	a640		962	700	a1,200	3,420	5,840	3,710	660	a130
6	a530	a570	a650		1,110	622	a1,300	a3,850	4,800	a2,500	3,200	a120
7	a500	560	a660		754	a580	a1,500	a3,700	5,460	a2,000	3,140	a110
8	a480	540	687		687	535	a1,900	a3,750	5,650	a1,700	1,850	a130
9	a470	a530	610		a660	524	a2,000	a3,850	5,650	a1,650	1,810	a140
10	550	a530			a640	687	a1,550	3,910	4,620	a1,400	1,850	119
11	a600	a520			a570	648	a1,950	3,840	4,070	a950	1,660	86
12	728	a510			a700	754	a2,100	3,360	3,270	a900	1,200	113
13	1,030	a530			800	795	a1,850	3,110	3,710	a750	994	149
14	1,080	a550			915	795	a2,150	3,240	a3,800	a700	500	610
15	810	a570			994	840	1,640	3,610	a3,600	a550	a450	610
16	754	a570		a500	945	782	1,710	4,420	a3,700	a350	a400	855
17	a700	600			795	a750	1,850	5,020	a3,650	a300	478	1,620
18	a660	795			782	a800	1,830	6,230	a3,350	a470	360	1,200
19	a630	825			660	a1,000	1,780	5,840	a2,900	a600	728	994
20	a600	962	a530		a610	a1,050	1,900	5,650	a2,700	a450	765	2,130
21	a580	930			a635	a950	1,950	4,480	a2,300	a350	610	3,360
22	a600	687			660	a900	2,000	3,520	a2,100	a300	524	2,130
23	a630	a570			648	a1,100	1,830	3,680	a2,000	a250	a300	1,810
24	a600	a530			512	a1,250	2,000	3,710	a1,800	a230	a250	1,350
25	a550	a540			520	a1,350	2,130	4,520	a1,800	a250	a200	2,490
26	a530	a540			530	a1,400	2,110	5,280	a1,800	a300	a120	3,240
27	a520	a560			548	a1,250	1,880	5,650	a1,800	119	a110	2,580
28	a520	a600			610	a1,000	1,730	4,210	a1,800	215	a100	2,490
29	a540	650			-------	a920	2,270	3,390	4,380	390	a100	2,130
30	a550	a660			-------	a930	2,270	3,490	4,950	a1,800	a100	2,110
31	a540	-------			-------	a940	------	4,310	-------	a1,700	a100	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	1,080	470	621	38,200
November	962	510	602	35,800
December	----------	----------	559	34,300
January	----------	----------	500	30,700
February	1,110	512	718	39,900
March	1,400	524	842	51,800
April	2,270	920	1,770	105,000
May	6,230	2,160	3,990	245,000
June	6,230	1,800	3,840	229,000
July	6,230	119	1,490	91,400
August	5,000	100	1,070	66,000
September	3,360	90	1,110	66,200
The year	6,230	90	1,430	1,030,000

a Estimated by hydrographic comparison.

SAN JUAN RIVER NEAR BLUFF, UTAH

LOCATION.—Water-stage recorder in SE¼ sec. 7, T. 42 S., R. 19 E., 2,000 feet below Gypsum Wash and 20 miles southwest of Bluff.

DRAINAGE AREA.—24,000 square miles.

RECORDS AVAILABLE.—October 1914 to September 1917; March 1927 to September 1932.

EXTREMES.—Maximum discharge during year, 21,300 second-feet Aug. 29 (gage height, 17.2 feet); minimum discharge, 120 second-feet Nov. 26.

1915–17; 1927–32: Maximum discharge, about 70,000 second-feet Sept. 10, 1927 (gage height, 32.0 feet); minimum, 56 second-feet Sept. 6, 1931.

REMARKS.—Records good. Discharge estimated Dec. 7, 8 Diversions for irrigation above station.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,440	872	925	674	508	4,230	5,160	4,680	11,700	7,500	4,680	4,230
2	5,800	850	720	469	649	4,530	4,530	4,680	9,350	7,140	4,680	3,380
3	6,120	720	625	565	858	5,320	6,460	5,000	9,350	7,140	3,660	2,860
4	6,120	707	344	668	1,220	4,230	8,220	6,120	9,730	6,460	2,990	2,490
5	5,160	707	249	595	1,220	2,920	8,590	7,320	9,350	6,120	2,310	2,080
6	3,520	700	220	583	850	2,310	8,970	8,220	8,040	6,120	2,030	1,870
7	2,730	688	300	553	1,060	1,980	8,970	8,400	7,140	5,480	1,720	1,620
8	2,310	694	400	643	10,500	1,920	7,680	7,500	5,960	4,840	1,480	1,350
9	1,980	1,100	553	776	15,700	2,310	6,630	6,460	5,480	4,230	1,300	1,300
10	1,720	1,440	589	748	11,900	3,250	7,320	6,630	6,120	3,940	1,220	1,220
11	3,660	1,100	1,670	694	8,220	3,250	6,970	7,500	7,140	3,940	1,010	1,060
12	2,250	4,080	1,350	681	5,480	2,990	7,140	8,040	7,860	3,940	880	996
13	1,820	4,380	902	835	3,520	2,250	8,220	8,780	8,220	4,680	769	932
14	1,620	2,730	643	762	3,060	2,030	9,350	10,300	9,540	5,320	707	850
15	1,480	1,580	480	583	2,550	1,820	10,500	11,500	11,100	5,160	655	805
16	1,350	1,220	339	524	2,490	1,980	10,100	11,500	11,700	4,530	547	776
17	1,260	1,020	294	571	2,250	2,490	10,100	11,700	11,700	3,940	688	734
18	1,220	940	228	458	2,030	2,920	11,300	12,900	11,700	3,660	940	707
19	1,870	988	298	513	1,720	3,250	11,100	13,700	10,500	3,520	1,100	668
20	6,800	910	380	513	3,520	4,080	9,920	15,300	9,730	3,060	3,180	619
21	4,840	940	447	480	2,670	5,800	10,100	15,300	9,350	3,250	8,040	553
22	3,940	1,020	607	535	2,670	5,800	9,730	14,700	9,540	2,800	9,160	541
23	1,620	902	842	571	2,430	4,080	8,780	14,100	9,540	2,370	4,680	910
24	1,260	688	980	607	2,490	3,120	8,220	16,100	9,920	2,140	3,250	3,380
25	1,140	245	1,260	625	2,430	2,610	6,630	15,300	10,900	1,980	3,060	4,840
26	1,100	192	1,220	625	2,430	3,120	5,480	14,500	10,500	1,980	2,490	2,310
27	1,060	217	1,140	553	3,060	4,530	5,480	13,300	10,500	2,080	3,520	2,250
28	996	269	1,060	452	3,380	3,940	5,480	10,700	9,730	1,920	4,230	1,400
29	964	812	1,350	294	3,660	3,180	5,160	9,350	8,780	1,870	16,500	1,180
30	902	1,350	1,480	145	-------	3,660	5,000	10,700	7,980	4,230	10,900	948
31	880	-------	1,060	425	-------	4,080	-------	12,500	-------	3,520	5,800	-----

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	6,800	880	2,550	157,000
November	4,380	192	1,140	67,800
December	1,670	220	740	45,500
January	835	145	572	35,200
February	15,700	508	3,600	207,000
March	5,800	1,820	3,350	206,000
April	11,300	4,530	7,910	471,000
May	16,100	4,680	10,400	640,000
June	11,700	5,480	9,270	552,000
July	7,500	1,870	4,160	256,000
August	16,500	547	3,490	215,000
September	4,840	541	1,630	97,000
The year	16,500	145	4,060	2,950,000

LOS PINOS RIVER AT IGNACIO, COLO.

LOCATION.—Water-stage recorder in sec. 5, T. 33 N., R. 7 W., three quarters of a mile above Ignacio and about 2 miles above Rock Creek.

DRAINAGE AREA.—448 square miles.

RECORDS AVAILABLE.—April 1899 to October 1903; September 1910 to December 1914; October 1930 to September 1932. Records for 1915–30 published by State engineer of New Mexico.

EXTREMES.—Maximum discharge during year ending Sept. 30, 1931, 1,340 second-feet May 18 (gage height 3.73 feet); minimum, 7.5 second-feet Sept. 10.

Maximum discharge during year ending Sept. 30, 1932, 5,570 second-feet Aug. 27 (gage height 6.19 feet); minimum, 14 second-feet Aug. 14.

REMARKS.—Records good except those estimated, which are poor. Stage-discharge relation affected by ice Dec. 19–31, 1930, Jan. 1 to Mar. 1, Nov. 21 to Dec. 31, 1931, Jan. 1 to Feb. 21, 1932. Diversions for irrigation above station.

Discharge, in second-feet, 1930–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1930–32												
1	17	63	e94			e30	116	333	934	874	104	9.8
2	21	62	e94			26	133	374	792	468	34	9.8
3	19	59	93			e35	131	419	824	346	22	11
4	15	58	100			e50	122	538	857	840	17	9.0
5	13	55	108	e80	e70	e60	120	589	657	451	18	8.5
6	24	53	112			69	127	502	760	268	27	9.8
7	46	55	112			e66	140	538	857	174	34	11
8	46	56	110			e64	159	615	925	122	38	9.8
9	40	56	108			62	164	550	1,160	91	42	9.0
10	44	56	104			62	154	445	508	58	51	8.5
11	69	58	102			65	152	369	346	49	44	12
12	84	59	100	e70		71	190	342	408	43	42	11
13	71	58	98		e80	76	211	374	484	39	33	15
14	74	59	98			60	220	514	414	27	24	21
15	76	62	98			72	226	602	434	19	21	58
16	87	60	102			79	230	816	440	15	19	87
17	89	66	108			86	237	832	403	15	18	46
18	87	87	112		e60	91	223	1,090	316	14	22	38
19	84	89				95	237	984	254	14	27	66
20	82	86				93	284	678	193	15	25	280
21	79	87		e60		95	291	473	144	13	25	208
22	80	91	e100			98	291	342	104	9.8	22	171
23	77	96				100	280	398	95	8.0	23	140
24	63	96				96	337	570	82	8.0	23	220
25	72	95			e50	102	342	792	77	8.5	18	351
26	76	93		48		98	320	840	76	9.0	15	217
27	76	95				93	303	563	63	9.8	11	208
28	69	95				86	312	333	247	11	11	171
29	69	95	e90	e60	-------	95	320	355	365	12	9 8	152
30	68	e94			-------	93	308	520	596	15	9 0	129
31	66	-------			-------	95	-------	692	-------	60	9 0	-------

Discharge, in second-feet, of Los Pinos River at Ignacio, Colo., 1930–32—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1931–32												
1	120	116	a150			337	602	608	1,480	857	93	520
2	199	112	a140		a120	346	784	752	1,590	832	77	398
3	643	106	139			312	891	925	1,670	857	71	324
4	445	100	a140			261	908	1,110	1,200	824	68	280
5	365	95	a150	a100		214	993	1,230	960	745	63	230
6	337	93	a140			226	916	1,210	768	608	62	196
7	287	91	a130			233	730	1,050	622	538	52	174
8	247	89	a120	99		265	784	993	657	484	40	152
9	226	106	a110			308	792	1,090	792	434	37	138
10	268	104	a100			308	776	1,090	1,020	408	32	133
11	257	122				268	808	1,120	1,140	a450	27	116
12	226	129				233	908	1,190	1,470	a650	20	104
13	211	118	a100		a150	230	1,150	1,590	1,730	664	15	89
14	193	114				261	1,190	1,730	1,920	556	15	87
15	188	100				291	1,140	1,510	1,730	502	15	76
16	190	95				337	1,280	1,920	1,920	424	15	71
17	177	98				393	1,500	2,040	1,670	280	16	69
18	169	87	a80			456	1,320	2,390	1,580	240	25	69
19	180	82				608	1,320	2,460	1,380	211	44	68
20	196	87		a100		722	1,380	1,980	1,480	174	459	60
21	196	a80				526	1,220	1,920	1,490	147	708	59
22	188	a70			159	408	1,150	2,540	1,480	122	636	59
23	177	a80	a100		a160	303	1,000	2,690	1,610	104	484	60
24	166	a90			159	329	866	2,690	1,590	104	393	79
25	159	a150			a180	468	730	2,690	1,670	98	308	93
26	147	a200			a200	502	730	2,040	1,730	93	265	82
27	144	a180			214	403	700	1,790	1,370	89	2,170	72
28	140	a170			291	445	664	1,980	1,200	84	2,690	69
29	144	a160	a80		316	520	615	2,180	1,150	110	1,370	65
30	142	a150				429	608	2,320	950	120	1,010	65
31	122					473		1,530		149	692	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
1930–31				
October	89	13	60.7	3,730
November	96	53	73.1	4,350
December			99.8	6,130
January			67.4	4,140
February			64.3	3,570
March	102	26	76.2	4,690
April	342	116	223	13,200
May	1,090	333	561	34,500
June	1,160	63	460	27,400
July	874	8.0	132	8,140
August	104	9.0	27.0	1,660
September	351	8.5	89.9	5,350
The year	1,160	8.0	161	117,000
1931–32				
October	643	120	221	13,600
November	200	70	112	6,690
December	150		103	6,350
January			100	6,150
February	316		163	9,400
March	722	214	368	22,600
April	1,500	602	948	56,400
May	2,690	608	1,690	104,000
June	1,920	622	1,370	81,400
July	857	84	386	23,700
August	2,690	15	386	23,700
September	520	59	135	8,050
The year	2,690	15	499	362,000

a Estimated by hydrographic comparison.

Discharge, in second-feet, of La Plata River at La Plata, N. Mex., 1930–32—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1931-32												
1	0.2	0.6	5.4			25	116	a 2.5	10	4.7	6.6	a35
2	.2	.6	4.7			27	143	2.5	12	5.0	6.6	
3	4.6	.8	5.4		a 10	28	195	3.9	12	2.8	6.2	3.3
4	.4	.9	5.8			26	207	12	14	2.8	6.2	2.5
5	.4	.8	5.8			24	210	24	16	3.3	5.4	2.5
6	.4	.9	5.0			26	212	24	.8	5.8	a 5	2.5
7	.4	1.2	5.0			31	170	13	5.4	6.2	4.7	2.5
8	.4	3.0	5.4			30	139	7.0	6.2	3.9	4.7	
9	14	3.9				32	137	6.6	6.2	3.0	5.0	
10	1.7	2.0				32	134	5.8	4.2	3.0	4.7	
11	1.9	4.2				30	141	6.6	4.2	1.7	4.7	a 2
12	.4	5.8				27	164	7.0	5.0	1.9	4.4	
13	.2	6.2				26	185	6.6	7.8	1.6	4.7	
14	.2	6.2				29	189	30	6.2	1.6	3.9	
15	.2	6.2				30	150	51	5.0	1.9	3.9	.9
16	.1	6.2		a 10	a 15	30	118	96	4.7	2.0	5.4	1.7
17	.1	12				31	130	121	3.9	2.0	9.0	2.0
18	.1	7.8	a 7			34	100	164	3.6	2.8	3.9	2.0
19	.2	6.6				42	51	145	4.4	4.2	3.6	
20	.6	5.8				83		109	5.8	4.4	4.2	
21	.6	5.4				91	a35	60	7.4	5.8	7.8	a 1.5
22	.6	5.0				66		118	4.7	2.0	3.6	
23	.6	5.4				63		139	10	1.7	1.9	
24	.2	5.4				73	7.4	105	23	1.2	5.4	
25	.1	6.2				116		88	32	1.2	22	
26	.4	7.0				134		58	6.2	1.6	6.2	a 5
27	.4	4.7	8.2		19	100	a 3.0	36	2.5	1.4	55	
28	.4	4.7	8.6		19	110		28	2.2	10	a150	
29	.6	4.7	8.2		23	136		24	2.5	7.0	109	a 2
30	.6	6.2	5.8		-------	132		22	5.0	32	a75	
31	.6	-------	7.8		-------	110	-------	8.6	-------	10		-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
1930-31				
October	12	0.9	2.39	147
November	21	.8	7.99	476
December	26	----------	16.5	1,010
January	----------	1	4.8	296
February	17	7.8	12.3	684
March	12	.5	5.67	349
April	8.2	.2	1.08	64
May	14	.2	2.34	144
June	3.9	.4	.74	44
July	42	.4	2.63	162
August	18	0	2.05	126
September	1.6	.2	.65	39
The year	42	0	4.89	3,540
1931-32				
October	14	.1	1.03	63
November	12	.6	4.55	271
December	----------	----------	6.68	411
January	----------	----------	10.0	615
February	----------	----------	14.7	845
March	136	24	57.2	3,520
April	212	----------	102	6,060
May	164	2.5	49.2	3,020
June	32	.8	7.76	462
July	32	1.2	4.47	275
August	150	1.9	19.8	1,220
September	----------	----------	4.58	273
The year	212	.1	23.5	17,000

a Estimated by hydrographic comparison.

ANIMAS RIVER AT FARMINGTON, N.MEX.

LOCATION.—Water-stage recorder in sec. 21, T. 29 N., R. 13 W., a quarter of a mile above confluence with San Juan River and three quarters of a mile south of Farmington.

DRAINAGE AREA.—1,360 square miles.

RECORDS AVAILABLE.—September 1912 to December 1914; October 1930 to September 1932. Records for 1915–30 published by State engineer.

EXTREMES.—Maximum discharge during year ending Sept. 30, 1931, 2,500 second-feet June 8 (gage height, 4.13 feet); minimum recorded, 10 second-feet Aug. 30, 31.

Maximum discharge during year ending Sept. 30, 1932, 7,530 second-feet Aug. 28 (gage height, 6.41 feet); minimum, 142 second-feet Aug. 16.

REMARKS.—Records fair except those estimated, which are poor. Stage-discharge relation affected by ice Dec. 15–31, 1930, Jan. 1 to Feb. 7, Dec. 1–31, 1931, Jan. 1 to Feb. 3, 1932. Diversions for irrigation above station.

Discharge, in second-feet, 1930–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1930–31												
1	245	294	238		a 260	200	217	442	1,770	1,720	490	13
2	277	294			a 270	192	210	502	1,830	1,370	425	18
3	269	294	a 230		a 280	189	196	669	1,830	1,360	290	24
4	257	290			a 290	200	189	718	1,960	1,390	238	20
5	249	298	220	a 260	a 310	210	186	776	1,770	1,230	178	14
6	238	294	203		a 260	206	182	776	1,550	1,000	238	15
7	234	290	203		a 240	192	186	784	1,770	800	326	15
8	234	285	206		224	178	189	952	1,960	a 550	466	17
9	253	285	182	266	220	178	200	1,050	1,830	a 450	544	18
10	265	294	178		228	189	192	944	1,450	a 400	a 550	16
11	273	290	192		231	192	196	816	1,220	345	a 400	18
12	294	303	189		238	214	217	732	1,080	273	a 250	25
13	312	321	192		257	220	242	725	1,300	273	a 180	39
14	294	330	203		303	214	234	824	1,300	273	a 130	60
15	298	340			340	206	217	1,120	1,230	242	90	110
16	303	350		a 270	330	192	217	1,370	1,340	a 60	28	169
17	303	316			298	192	249	1,600	1,340	a 65	206	269
18	308	308			273	200	234	1,770	1,180	a 70	a 220	253
19	308	340	a 220		249	214	214	1,890	1,020	76	a 220	277
20	303	340			238	203	238	1,500	952	100	a 140	508
21	298	316			182	192	281	1,200	896	a 80	a 70	490
22	298	294			203	186	277	a 700	880	a 70	a 40	a 450
23	303	273			196	189	335	711	760	a 65	a 30	a 420
24	290	265			186	192	390	992	776	a 60	a 25	490
25	285	269		277	186	220	395	a 1,250	768	a 60	a 20	613
26	285	261	a 240	a 250	182	269	380	a 1,300	725	a 60	a 20	711
27	285	253		a 230	192	245	345	a 1,000	776	a 65	a 15	662
28	290	245		a 230	196	234	395	a 850	824	72	a 10	704
29	285	242		a 240	-------	234	472	864	1,010	67	a 10	634
30	290	245		a 240	-------	242	448	912	1,300	64	10	578
31	290	-------		a 250	-------	217	-------	1,550	-------	145	10	------

a Estimated by hydrographic comparison.

Discharge, in second-feet, of Animas River at Farmington, N.Mex., 1930–32—Con.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1931–32												
1	520	294				760	1,060	1,170	3,430	2,740	1,550	1,260
2	711	269				808	1,280	1,380	3,590	2,740	1,370	1,060
3	1,210	257				648	1,550	1,770	3,830	2,500	1,080	936
4	1,240	249			420	557	1,550	2,080	3,730	2,430	880	816
5	1,070	234			405	508	1,660	2,360	3,170	2,500	718	697
6	944	228			340	508	1,720	2,360	2,910	2,220	564	613
7	832	214			410	550	1,450	2,290	2,020	1,890	472	550
8	800	210			380	655	1,320	1,890	2,000	1,720	415	538
9	760	228		209	472	784	1,390	1,770	2,500	1,600	370	478
10	840	242			514	746	1,440	1,890	3,000	1,550	330	425
11	648	298			496	697	1,450	1,960	3,430	1,660	290	390
12	613	430			380	669	1,660	2,080	3,730	2,220	265	375
13	e 560	385			340	544	1,960	2,740	4,310	2,220	245	355
14	e 510	308			360	550	2,290	3,360	5,180	1,960	186	330
15	e 460	303			395	578	2,220	3,260	5,720	1,720	163	321
16	e 405	298			395	606	2,150	3,260	5,580	1,550	154	294
17	e 355	290			370	655	2,580	3,860	5,310	1,500	288	290
18	303	290			355	760	2,660	4,430	4,690	1,450	214	277
19	308	281			365	840	2,360	5,180	4,000	1,400	588	265
20	355	281			436	1,020	2,430	4,920	3,730	e 1,300	832	257
21	415	273			484	984	2,430	4,080	4,200	e 1,100	1,520	249
22	e 405	273			442	792	2,290	5,180	4,310	920	1,090	234
23	e 395	290			442	e 600	1,960	6,750	4,430	904	992	249
24	e 385	321			430	e 700	1,660	6,300	4,550	880	888	308
25	375	355			472	896	1,500	5,860	4,690	912	690	478
26	355	380			526	968	1,340	5,180	5,130	784	599	410
27	340	370			578	920	1,370	3,650	4,430	697	896	355
28	316	e 335			627	936	1,340	3,450	3,550	676	6,000	330
29	312	303			655	960	1,270	4,200	3,070	976	3,650	321
30	303	298			-------	976	1,160	4,920	2,910	1,140	2,220	321
31	303	-------			-------	968	-------	4,680	-------	1,550	1,600	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
1930–31				
October	312	234	281	17,300
November	350	242	294	17,500
December	----------	178	220	13,500
January	----------	----------	262	16,100
February	340	182	245	13,600
March	269	178	206	12,700
April	472	182	264	15,700
May	1,890	442	1,010	62,100
June	1,960	725	1,280	76,200
July	1,720	60	415	25,500
August	550	10	189	11,600
September	711	13	255	15,200
The year	1,960	10	410	297,000
1931–32				
October	1,240	303	560	34,400
November	430	210	293	17,400
December	----------	----------	197	12,100
January	----------	----------	200	12,300
February	655	----------	427	24,600
March	1,020	508	747	45,900
April	2,660	1,060	1,750	104,000
May	6,750	1,170	3,490	215,000
June	5,720	2,020	3,920	233,000
July	2,740	676	1,590	98,000
August	6,000	154	1,000	61,700
September	1,260	234	459	27,300
The year	6,750	154	1,220	886,000

e Estimated by hydrographic comparison.

LA PLATA RIVER AT LA PLATA, N.MEX.

LOCATION.—Water-stage recorder in sec. 3, T. 31 N., R. 13 W., 1,900 feet southeast of La Plata and 15 miles above mouth.

DRAINAGE AREA.—335 square miles.

RECORDS AVAILABLE.—May 1905 to July 1911; September 1912 to December 1914; October 1930 to September 1932. Records for 1915–30 published by State engineer.

EXTREMES.—Maximum discharge during year ending Sept. 30, 1931, about 825 second-feet July 30 (gage height, 4.82 feet); no flow Aug. 23.

Maximum discharge during year ending September 30, 1932, 430 second-feet Aug. 25 (gage height, 4.15 feet); no flow during several periods.

REMARKS.—Records poor for year ending Sept. 30, 1931, and fair for 1932. Stage-discharge relation affected by ice Dec. 22–31, 1930, Jan. 1 to Feb. 4, Dec. 9–26, 1931, Jan. 1 to Feb. 26, 1932. Diversions for irrigation above station.

Discharge, in second-feet, 1930–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1930-31												
1	12	0.8	15		e 12	9.5	0.8	0.2	2.0	e 1.1	0.6	0.3
2	5.8	.8	16		e 12	10	2.0	.3	.4	e .6	.4	.3
3	5.4	.8	15		e 14	10	3.0	.3	.4	8.6	.9	.3
4	3.3	.8	16		e 14	10	8.2	.4	.4	e .6	.6	.3
5	3.0	.9	15	e 8	14	12	2.2	.4	.4	e .4	16	.3
6	2.8	.9	14		17	12	3.0	.4	.4	.5	14	.5
7	2.2	.8	14		15	10	1.7	.4	.4	.6	.8	.4
8	2.0	.8	14		14	10	.6	.8	.4	.6	.4	.4
9	1.9	1.6	16		13	9.0	.6	.4	.4	.9	.4	.4
10	1.9	2.0	15	e 4	8.2	6.6	.6	.4	.4	1.2	.6	.4
11	1.6	2.0	15	e 3	7.8	2.5	.5	.4	.5	1.6	.8	.4
12	1.6	2.0	16	e 2	8.2	2.5	.5	.6	.6	1.6	.8	.6
13	1.6	4.4	15	e 1	8.6	3.3	.5	.6	3.9	1.4	.6	.8
14	1.6	3.3	17	e 1	9.0	3.6	.5	.6	.6	.9	.6	e .9
15	1.4	3.3	20	e 2	15	3.3	.6	.8	.9	.9	.6	e 1.0
16	1.4	4.4	23	e 3	16	6.2	.6	2.0	.9	.8	.5	e 1.1
17	1.6	5.4	20	e 4	12	12	.6	1.7	.8	.8	e 2.5	e 1.3
18	1.4	10	17	e 5	14	12	.6	1.9	.6	.8	e .5	e 1.4
19	1.6	9.0	26	e 6	14	8.6	.6	3.9	.5	.8	e .4	e 1.5
20	1.9	7.8	22	e 5	14	2.8	.6	2.0	.6	.9	e .2	1.6
21	1.7	9.0	20	e 1	15	2.0	.5	1.9	.6	.6	e 18	1.4
22	1.7	14		e 1	17	1.6	.5	1.9	.9	.6	e .4	1.1
23	1.9	19		e 2	15	.6	.5	2.2	.6	.6	0	.9
24	1.7	20		e 7	12	.5	.4	6.6	.4	.6	.4	.4
25	1.7	20		e 3	8.2	1.7	.4	14	.5	.8	.4	.3
26	1.9	21	e 15	e 4	8.2	2.8	.4	9.5	.6	.6	.5	.2
27	1.9	20		e 3	8.2	2.5	.4	2.8	.6	.4	.4	.2
28	1.9	17		e 4	9.5	1.9	.4	4.7	.6	.4	.3	.3
29	1.6	19		e 5		3.0	.4	3.0	e 1.1	.4	.3	.3
30	1.1	19		e 7		2.5	.2	3.6	e .9	9.0	.3	.3
31	.9			e 9		.9		3.9		42	.3	

e Estimated by hydrographic comparison.

Discharge, in second-feet, of La Plata River at La Plata, N. Mex., 1930–32—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1931-32												
1	0.2	0.6	5.4			25	116	e 2.5	10	4.7	6.6	e35
2	.2	.6	4.7			27	143	2.5	12	5.0	6.6	
3	4.6	.8	5.4		e 10	28	195	3.9	12	2.8	6.2	3.3
4	.4	.9	5.8			26	207	12	14	2.8	6.2	2.5
5	.4	.8	5.8			24	210	24	16	3.3	5.4	2.5
6	.4	.9	5.0			26	212	24	.8	5.8	e 5	2.5
7	.4	1.2	5.0			31	170	13	5 4	6.2	4.7	2.5
8	.4	3.0	5.4			30	139	7.0	6.2	3.9	4.7	
9	14	3.9				32	137	6.6	6.2	3.0	5.0	
10	1.7	2.0				32	134	5.8	4 2	3.0	4.7	
11	1.9	4.2				30	141	6.6	4 2	1.7	4.7	e 2
12	.4	5.8				27	164	7.0	5 0	1.9	4.4	
13	.2	6.2				26	185	6.6	7.8	1.6	4.7	
14	.2	6.2				29	189	30	6.2	1.6	3.9	
15	.2	6.2				30	150	51	5 0	1.9	3.9	.9
16	.1	6.2		e 10	e 15	30	118	96	4 7	2.0	5.4	1.7
17	.1	12				31	130	121	3 9	2.0	9.0	2.0
18	.1	7.8	e 7			34	100	164	3 6	2.8	3.9	2.0
19	.2	6.6				42	51	145	4 4	4.2	3.6	
20	.6	5.8				83		109	5 8	4.4	4.2	
21	.6	5.4				91	e35	60	7.4	5.8	7.8	e 1.5
22	.6	5.0				66		118	4 7	2.0	3.6	
23	.6	5.4				63		139	10	1.7	1.9	
24	.2	5.4				73	7.4	105	23	1.2	5.4	
25	.1	6.2				116		88	32	1.2	22	
26	.4	7.0				134		58	6 2	1.6	6.2	e 5
27	.4	4.7	8.2		19	100	e 3.0	36	2.5	1.4	55	
28	.4	4.7	8.6		19	110		28	2.2	10	e150	
29	.6	4.7	8.2		23	136		24	2.5	7.0	109	e 2
30	.6	6.2	5.8			132		22	5 0	32	e75	
31	.6		7.8			110		8.6		10		

Month	Maximum	Minimum	Mean	Run-off in acre-feet
1930-31				
October	12	0.9	2.39	147
November	21	.8	7.99	476
December	26		16.5	1,010
January		1	4.8	296
February	17	7.8	12.3	684
March	12	.5	5.67	349
April	8.2	.2	1.08	64
May	14	.2	2.34	144
June	3.9	.4	.74	44
July	42	.4	2.63	162
August	18	0	2.05	126
September	1.6	.2	.65	39
The year	42	0	4.89	3,540
1931-32				
October	14	.1	1.03	63
November	12	.6	4.55	271
December			6.68	411
January			10.0	615
February			14.7	845
March	136	24	57.2	3,520
April	212		102	6,060
May	164	2.5	49.2	3,020
June	32	.8	7.76	462
July	32	1.2	4.47	275
August	150	1.9	19.8	1,220
September			4.58	273
The year	212	.1	23.5	17,000

e Estimated by hydrographic comparison.

PARIA RIVER BASIN

PARIA RIVER AT LEES FERRY, ARIZ.

LOCATION.—Water-stage recorder in NW¼NE¼ sec. 13, T. 40 N., R. 7 E., half a mile above mouth and 1 mile northwest of Lees Ferry. Zero of gage is 3,123.6 feet above mean sea level.

DRAINAGE AREA.—1,520 square miles.

RECORDS AVAILABLE.—November 1923 to September 1932.

EXTREMES.—Maximum discharge during year, 10,500 second-feet Aug. 28 (gage height, 13.0 feet); minimum discharge, 0.3 second-foot Jan. 23; minimum gage height, 3.76 feet June 30.

1923–32: Maximum discharge, 16,100 second-feet Oct. 5, 1925 (gage height, 17.5 feet); no flow several times in December and January of many years.

REMARKS.—Records good except those estimated for periods of ice effect, Nov. 24, 25, Dec. 1–3, 6, 7, 11–25, 31, Jan. 1–14, 20–30, which are fair. Diversions for irrigation above station.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	12	13	7	20	20	200	27	6	2	2	52	24
2	17	13	6	14	20	85	40	5	2	66	22	24
3	59	14	8	13	15	55	50	4	3	50	14	19
4	36	12	8	10	19	49	46	4	4	15	11	15
5	21	12	7	12	23	30	35	4	4	9	9	13
6	22	13	5	20	25	36	34	6	4	5	8	12
7	18	12	4	21	25	71	27	44	13	4	7	12
8	13	10	9	18	55	103	21	42	16	2	5	10
9	10	100	10	19	1,370	113	20	21	10	2	75	10
10	8	40	10	20	638	75	20	15	7	3	389	9
11	8	20	9	18	371	54	19	13	5	35	38	8
12	8	21	9	16	167	44	19	10	4	65	15	7
13	8	23	3	20	78	39	19	10	3	1,110	9	6
14	9	20	2	19	73	31	18	10	2	81	8	5
15	9	20	4	22	87	32	19	10	2	31	5	6
16	9	19	5	21	54	38	19	9	2	33	5	6
17	9	22	6	22	45	43	17	8	2	30	5	6
18	9	22	6	22	45	53	13	6	2	42	4	6
19	10	20	7	19	62	69	10	5	3	156	192	7
20	143	12	8	10	94	125	7	4	3	47	52	7
21	40	14	8	10	71	106	4	4	2	20	199	7
22	25	16	10	8	56	46	10	3	2	11	414	8
23	30	6	11	4	63	33	13	3	2	7	46	9
24	18	3	14	6	75	28	12	4	2	6	66	54
25	14	6	22	5	87	38	10	3	2	15	21	45
26	14	7	19	7	121	55	7	2	2	12	18	23
27	12	7	24	10	139	45	6	2	2	8	577	16
28	12	15	22	9	182	25	7	2	2	6	4,890	10
29	12	22	22	9	205	31	8	2	2	7	248	26
30	12	6	7	15	-------	42	7	2	2	7	55	353
31	14	-------	5	29	-------	28	-------	2	-------	132	35	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	143	8	20.7	1,270
November	100	3	18.0	1,070
December	24	2	9.6	589
January	29	4	15.1	928
February	1,370	15	148	8,500
March	200	25	58.8	3,610
April	50	4	18.8	1,120
May	44	2	8.5	526
June	16	2	3.8	224
July	1,110	2	65.1	4,000
August	4,890	4	237	14,600
September	353	5	25.4	1,510
The year	4,890	2	52.2	37,900

LITTLE COLORADO RIVER BASIN

LITTLE COLORADO RIVER AT ST. JOHNS, ARIZ.

LOCATION.—Water-stage recorder in sec. 27, T. 13 N., R. 28 E., at highway bridge at eastern edge of St. Johns.

DRAINAGE AREA.—938 square miles.

RECORDS AVAILABLE.—April 1906 to December 1909; May 1929 to September 1932.

EXTREMES.—Maximum discharge during year, 750 second-feet July 28 (gage height, 2.67 feet); no flow on many days.

1929–32: Maximum discharge, 1,410 second-feet Aug. 26, 1929 (gage height, 3.65 feet); no flow on many days each year.

REMARKS.—Records good. Stage-discharge relation affected by ice Nov. 22 to Feb. 4. Diversions for irrigation above station. Regulation by numerous storage reservoirs and by operation of St. Johns hydroelectric plant a short distance upstream.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	20	13	a 6	13	8	7	9	50	10	5	14	17
2	15	10	a 8	a 8	8	7	9	47	9	5	8	13
3	30	11	a 7	a 8	8	7	13	43	6	3	7	12
4	7	12	a 8	a 8	a 8	7	19	36	4	2	5	9
5	5	8	a 9	a 7	7	7	20	27	1	2	a 2	8
6	5	8	a 9	a 8	9	3	18	19	0	1	0	8
7	5	11	a 7	7	6	7	17	8	0	1	0	7
8	5	6	a 8	a 8	8	7	52	3	1	2	0	6
9	5	7	a 8	a 8	8	7	221	4	1	40	2	2
10	5	7	a 8	6	9	7	301	6	4	33	2	0
11	5	8	a 8	a 8	8	6	328	2	0	10	1	0
12	4	9	a 8	7	8	6	351	1	0	8	0	0
13	5	11	a 7	a 8	8	3	343	1	1	11	0	0
14	5	11	a 7	a 8	4	6	355	3	7	31	0	0
15	6	13	a 7	a 8	6	7	347	4	4	76	0	0
16	4	6	a 8	a 9	6	7	a 320	4	3	124	0	0
17	4	4	a 7	a 8	7	6	a 290	6	3	21	0	0
18	5	5	a 8	a 9	7	6	a 260	10	2	59	0	0
19	5	5	a 10	a 9	7	6	a 240	10	4	a 20	1	0
20	5	6	a 9	a 8	6	4	a 210	12	3	a 15	51	0
21	5	5	a 14	a 8	3	3	180	11	3	a 15	55	0
22	5	10	a 10	8	6	8	167	13	4	a 15	a 20	0
23	5	a 7	a 10	9	6	7	143	13	5	15	a 15	2
24	5	a 6	a 10	a 8	6	7	113	16	4	33	13	1
25	5	a 6	a 11	a 6	6	8	82	20	2	44	4	1
26	5	a 6	a 9	8	7	11	73	17	3	13	3	1
27	5	a 6	a 9	a 10	7	4	60	17	2	15	27	2
28	7	a 7	a 9	a 9	3	9	62	17	2	56	68	5
29	9	a 7	a 9	a 8	7	9	57	19	2	51	25	7
30	7	a 3	a 10	a 9	-------	10	54	16	4	19	16	7
31	9	-------	a 7	5	-------	9	-------	11	-------	42	11	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	30	4	7.0	430
November	13	3	7.8	464
December	14	6	8.5	526
January	13	5	8.1	498
February	9	3	6.8	391
March	11	3	6.7	413
April	355	9	157	9,350
May	50	1	15.0	924
June	10	0	3.1	186
July	124	1	25.4	1,560
August	55	0	11.3	694
September	17	0	3.6	214
The year	355	0	21.6	15,600

a Estimated.

LITTLE COLORADO RIVER NEAR HUNT, ARIZ.

LOCATION.—Water-stage recorder in sec. 4, T. 14 N., R. 25 E., 3 miles below Zuni River and 5 miles northwest of Hunt.

DRAINAGE AREA.—7,240 square miles.

RECORDS AVAILABLE.—May 1929 to September 1932.

EXTREMES.—Maximum discharge during year, 1,200 second-feet Aug. 2[illegible] (gage height, 7.83 feet); minimum, 0.1 second-foot July 5.

1929–32: Maximum discharge, 8,000 second-feet July 28, 1929 (gage height, 19.0 feet); no flow on various days from May to July 1929 and April to July 1931.

REMARKS.—Records good except those estimated for periods of ice effect, Nov. 23–30, Dec. 1–4, 6–20, 27–31, Jan. 1–12, 14–31, Feb. 1, 3–5, and for Oct. 8–10, Mar. 12–19, June 6 to July 5, which are fair. Diversions for irrigation above station. Some regulation by reservoirs upstream.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	85	7	5	6	16	105	140	60	3	0	150	60
2	996	7	5	5	40	292	160	50	3	0	80	40
3	723	7	4	5	30	348	174	40	3	0	60	35
4	273	7	3	6	20	294	157	35	3	0	45	30
5	106	8	3	7	20	201	124	33	3	0	35	25
6	73	8	3	8	90	158	95	33	3	0	31	24
7	40	9	5	8	379	135	75	32	3	0	24	22
8	35	8	8	7	516	120	56	30	3	0	22	21
9	30	10	9	6	473	130	50	26	3	19	18	20
10	25	10	10	6	473	169	67	24	3	14	16	19
11	20	11	9	6	462	174	108	21	3	3	14	17
12	19	10	8	10	343	150	176	19	3	4	13	16
13	18	10	7	8	300	110	226	14	2	4	12	15
14	16	11	6	6	250	80	395	4	2	10	10	13
15	14	11	5	5	177	60	302	3	2	3	10	13
16	14	10	4	5	127	60	268	3	2	3	37	12
17	13	10	4	5	99	70	264	3	2	9	24	12
18	12	10	4	7	79	90	266	3	2	10	12	11
19	12	9	5	10	70	110	264	3	2	5	15	11
20	20	10	7	16	68	180	253	1	2	3	84	11
21	11	8	13	12	70	384	230	1	1	2	80	11
22	10	12	13	10	73	317	212	2	1	2	550	11
23	10	7	14	10	35	250	196	2	1	2	200	12
24	9	5	14	8	29	180	181	3	1	12	130	39
25	9	3	17	8	22	100	158	3	1	95	180	26
26	9	4	16	7	20	170	123	3	1	30	170	26
27	7	5	16	7	17	420	104	3	1	40	150	19
28	8	5	17	6	15	242	96	3	0	30	420	14
29	7	5	20	6	14	232	86	3	0	60	840	15
30	7	5	13	5	------	294	75	3	0	351	310	12
31	7	------	7	10	------	194	------	3	------	230	125	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	996	7	85.1	5,230
November	12	3	8.1	480
December	20	3	8.8	543
January	16	5	7.5	458
February	516	14	149	8,580
March	420	60	188	11,500
April	395	50	169	10,100
May	60	1	15.0	924
June	3	0	2.0	117
July	351	0	30.4	1,870
August	840	10	125	7,670
September	60	11	20.4	1,210
The year	996	0	67.1	48,700

LITTLE COLORADO RIVER NEAR WOODRUFF, ARIZ.

LOCATION.—Water-stage recorder in sec. 7, T. 16 N., R. 22 E., 4 miles below Silver Creek and 1½ miles northwest of Woodruff.

DRAINAGE AREA.—9,040 square miles.

RECORDS AVAILABLE.—March 1905 to December 1908; December 1915 to December 1919 (fragmentary); April 1929 to September 1932.

EXTREMES.—Maximum discharge during year, 10,200 second-feet Feb. 10 (gage height, 12.1 feet); no flow on several days in June.

1929–32: Maximum discharge, 10,700 second-feet July 21, 1929 (gage height, 12.45 feet); no flow on some days during spring or summer of each year.

A maximum discharge of 25,000 second-feet was recorded Dec. 5, 1919.

REMARKS.—Records good except those estimated for periods of ice effect, Nov. 23–25, 27–30, Dec. 1–6, 8–20, 23–31, Jan. 1–4, 6–18, 20–31, Feb. 1, 3–5 and for May 14–16, which are fair. Diversions for irrigation above station. Some regulation by reservoirs upstream.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	159	10	18	32	40	851	168	85	0	1	342	83
2	907	10	17	33	93	1,080	168	68	1	1	136	48
3	1,080	10	16	32	140	985	203	50	2	1	92	38
4	433	11	16	25	60	768	197	35	6	2	63	33
5	187	12	16	24	56	485	144	37	4	1	54	27
6	119	12	24	22	129	349	110	30	1	1	41	24
7	85	14	22	22	324	394	88	30	1	1	35	21
8	68	18	27	22	903	414	69	30	1	1	24	20
9	58	23	32	26	4,660	466	60	25	1	690	21	18
10	48	24	36	26	5,570	433	56	26	1	421	61	16
11	38	203	36	23	2,640	398	88	90	1	30	33	15
12	30	104	32	26	1,470	311	131	43	0	11	19	14
13	25	87	24	27	1,030	299	173	33	1	8	23	11
14	23	41	16	22	785	203	309	26	0	8	15	11
15	22	33	14	17	587	168	433	18	1	6	33	10
16	22	30	12	23	466	189	311	11	1	1	89	10
17	21	27	11	24	336	214	281	4	0	19	19	8
18	19	23	16	25	276	197	281	6	0	12	32	8
19	17	22	22	32	318	238	281	3	1	14	26	7
20	28	23	26	41	462	276	270	2	1	10	405	6
21	73	25	29	37	355	394	224	1	6	2	550	8
22	32	30	33	37	276	536	214	1	6	1	396	8
23	25	22	46	29	270	336	192	0	1	1	490	10
24	22	14	68	26	258	293	173	1	0	71	219	135
25	19	11	68	24	318	192	163	1	0	29	148	117
26	15	11	92	31	426	167	140	1	0	66	270	41
27	13	12	119	37	498	446	125	1	0	30	615	37
28	11	14	102	29	549	432	110	1	0	276	205	30
29	11	20	95	25	686	258	94	1	0	201	1,060	30
30	10	19	68	26	------	328	85	1	0	400	635	38
31	10	------	35	29	------	302	------	0	------	531	203	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	1,080	10	117	7,200
November	203	10	30.5	1,810
December	119	11	38.3	2,360
January	41	17	27.5	1,690
February	5,570	40	827	47,600
March	1,080	167	400	24,600
April	433	56	178	10,600
May	85	0	21.3	1,310
June	6	0	1.2	73
July	690	1	91.8	5,650
August	1,060	15	205	12,600
September	135	6	29.4	1,750
The year	5,570	0	161	117,000

LITTLE COLORADO RIVER AT GRAND FALLS, ARIZ.

LOCATION.—Water-stage recorder in T. 24 N., R. 11 E., unsurveyed, on Navajo Indian Reservation at Grand Falls, 38 miles northeast of Flagstaff. Zero of gage is about 4,440 feet above mean sea level.

DRAINAGE AREA.—22,100 square miles.

RECORDS AVAILABLE.—November 1925 to September 1932.

EXTREMES.—Maximum discharge during year, 31,000 second-feet Feb. 10 (gage height, 23.8 feet); no flow on many days.

1925–32: Maximum discharge, 50,500 second-feet Apr. 5, 1929 (gage height, 30.0 feet); no flow during periods of each year.

A discharge of about 120,000 second-feet occurred on Sept. 19, 1923 (gage height, 47.0 feet).

REMARKS.—Records good except those estimated Nov. 23 to Feb. 7 (ice effect), and those for Oct. 27 to Nov. 2, May 24–26, Sept. 15–18, which are fair. Diversions for irrigation above station.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	July	Aug.	Sept.
1	177	5	85	150	180	2,420	2,230	510	0	873	524
2	228	5	80	150	185	3,660	1,900	480	0	471	300
3	1,000	5	80	160	190	4,240	2,390	440	0	249	120
4	3,070	4	80	170	225	3,730	2,550	399	0	131	80
5	923	3	75	175	250	2,670	2,480	368	0	80	53
6	376	5	50	160	250	1,840	2,310	336	0	59	35
7	206	7	50	150	250	1,200	2,020	306	0	35	24
8	128	8	60	140	2,000	1,240	1,590	256	0	20	15
9	80	9	80	125	2,310	1,670	1,440	210	0	10	10
10	60	10	100	125	16,300	2,460	1,320	180	0	5	7
11	44	62	125	125	19,800	2,560	1,210	150	42	2	4
12	37	2,580	100	125	8,620	2,330	1,050	140	337	0	2
13	30	1,870	90	125	5,070	2,010	1,120	356	79	0	1
14	24	1,210	75	125	3,480	1,590	1,190	213	38	0	0
15	22	574	50	125	2,560	1,280	1,190	113	15	0	0
16	20	329	25	125	1,950	1,270	1,360	80	5	0	0
17	18	284	25	125	1,580	1,620	1,580	60	2	0	0
18	15	212	25	125	1,220	2,010	1,340	55	1	0	0
19	13	165	25	125	1,200	2,340	1,190	34	0	0	0
20	13	200	50	150	1,080	3,040	970	27	25	0	0
21	56	187	100	175	920	3,890	900	17	90	0	0
22	234	179	125	200	1,040	3,140	880	10	46	986	0
23	176	150	150	190	900	2,470	740	2	18	1,070	0
24	60	100	200	180	790	1,920	600	0	11	895	0
25	30	75	210	175	687	1,670	554	0	8	549	0
26	20	50	220	175	666	2,020	471	0	7	340	71
27	15	60	225	175	751	3,130	539	0	5	753	28
28	10	75	250	175	1,260	2,770	850	0	32	805	103
29	8	90	300	175	1,790	2,620	682	0	13	995	107
30	7	90	250	175	-------	2,610	530	0	37	2,190	72
31	6	-------	200	175	-------	2,580	-------	0	870	1,670	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	3,070	6	229	14,100
November	2,580	3	287	17,100
December	300	25	115	7,060
January	200	125	153	9,420
February	19,800	180	2,670	154,000
March	4,240	1,200	2,390	147,000
April	2,550	471	1,310	77,700
May	510	0	153	9,410
July	870	0	54.2	3,330
August	2,190	0	393	24,200
September	524	0	51.9	3,090
The year	19,800	0	642	466,000

NOTE.—No flow during June.

SILVER CREEK NEAR WOODRUFF, ARIZ.

LOCATION.—Water-stage recorder in sec. 32, T. 16 N., R. 22 E., half a mile above mouth and 3 miles south of Woodruff.

DRAINAGE AREA.—942 square miles.

RECORDS AVAILABLE.—April 1929 to September 1932.

EXTREMES.—Maximum discharge during year, 9,900 second-feet Feb. 9 (gage height, 11.35 feet); no flow on several days in May and June.

1929–32: Maximum discharge, 12,100 second-feet July 21, 1929 (gage height 11.67 feet); no flow on several days in spring and summer of each year.

REMARKS.—Records good except those estimated, which are fair. Stage-discharge relation affected by ice Nov. 29, 30, Dec. 1–5, 7, 8, 10, 13–24, 27, 29–31, Jan. 1, 3, 4, 14–18, 24–26, Feb. 6. Diversions for irrigation above station. Woodruff Canal diverts above control for this station.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	21	4	a 13	a 27	28	837	33	24	0	1	40	2
2	134	4	a 13	30	22	804	36	15	1	1	18	2
3	40	4	a 12	a 28	24	530	28	7	1	3	13	2
4	36	4	a 12	a 21	21	387	26	7	1	2	13	2
5	36	4	a 12	21	19	202	18	4	1	1	8	1
6	28	4	16	16	a 22	195	17	1	2	1	6	1
7	21	5	a 14	16	24	254	13	1	2	1	4	1
8	19	6	a 17	18	608	289	10	3	1	0	2	2
9	15	9	21	19	4,280	335	7	1	1	464	2	1
10	13	9	a 24	24	4,850	289	7	3	1	109	34	1
11	12	161	24	19	2,110	230	6	7	1	7	20	2
12	9	71	21	13	1,070	150	3	13	1	4	7	2
13	6	49	a 15	21	708	171	1	9	1	3	10	1
14	4	22	a 9	a 18	495	113	1	8	1	2	4	1
15	6	19	a 8	a 14	354	101	1	5	1	1	65	1
16	6	16	a 7	a 18	277	133	1	5	0	3	50	1
17	6	15	a 6	a 20	222	150	2	4	0	15	2	1
18	6	15	a 12	a 21	206	122	0	3	0	6	1	1
19	4	12	a 18	26	275	143	0	1	0	2	6	1
20	5	12	a 24	30	370	158	1	1	1	2	3	1
21	6	9	a 26	26	262	160	1	0	4	1	31	2
22	8	13	a 24	26	212	103	1	0	3	1	7	3
23	10	9	a 26	26	206	77	1	0	1	1	14	6
24	10	8	a 28	a 22	206	65	2	0	1	1	36	6
25	9	8	28	a 20	278	56	5	0	1	2	15	19
26	6	9	32	a 25	386	67	19	1	1	1	13	12
27	5	10	a 34	30	435	78	22	1	0	1	7	9
28	4	9	32	26	472	65	22	1	1	59	12	10
29	4	a 14	a 31	21	615	48	15	0	1	114	7	13
30	4	a 14	a 29	21	------	48	10	0	1	239	6	19
31	4	------	a 28	26	------	33	------	0	------	75	4	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	134	4	16.0	986
November	161	4	18.3	1,090
December	34	6	19.9	1,220
January	30	13	22.2	1,370
February	4,850	19	657	37,800
March	837	33	206	12,700
April	36	0	10.3	613
May	24	0	4.0	248
June	4	0	1.0	61
July	464	0	36.2	2,230
August	65	1	14.8	912
September	19	1	4.2	250
The year	4,850	0	81.9	59,500

a Estimated.

CHEVELON FORK NEAR WINSLOW, ARIZ.

LOCATION.—Water-stage recorder in sec. 27, T. 18 N., R. 17 E., 3 miles above mouth and 12 miles southeast of Winslow.

DRAINAGE AREA.—1,010 square miles.

RECORDS AVAILABLE.—December 1905 to December 1908; December 1915 to December 1919; March 1929 to September 1932.

EXTREMES.—Maximum discharge during year, 3,100 second-feet Feb. 10 (gage height 8.58 feet); minimum discharge, 1 second-foot June 3; minimum gage height, 1.89 feet May 22.

1929–32: Maximum discharge, 16,100 second-feet Apr. 4, 1929 (gage height, 17.8 feet); minimum, 1 second-foot Jan. 10, 1930, Sept. 20, 1931, June 3, 1932.

REMARKS.—Records good except those estimated, which are fair. Stage-discharge relation affected by ice Nov. 23 to Feb. 5. No diversions above station. One diversion below station.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5	3	a 47	a 51	33	361	533	124	3	6	5	11
2	4	3	a 46	a 52	31	531	758	96	3	7	4	12
3	4	3	a 46	a 53	36	604	733	80	3	6	4	9
4	4	3	45	54	29	490	621	69	3	5	4	7
5	4	3	a 33	53	27	305	529	a 59	4	5	4	5
6	3	3	a 36	38	28	192	448	a 49	3	4	4	5
7	3	3	40	28	40	186	352	a 41	4	4	4	4
8	3	4	40	40	50	198	305	a 34	4	4	4	4
9	3	4	40	40	502	361	285	a 28	4	11	4	4
10	3	4	40	44	2,280	497	266	a 23	5	9	5	4
11	3	4	43	36	1,230	408	219	a 18	5	4	5	4
12	3	10	35	26	758	328	217	a 13	5	3	5	4
13	4	38	a 29	41	494	271	210	a 9	4	3	5	4
14	4	168	a 24	41	386	208	192	a 7	4	4	5	4
15	3	135	a 24	35	302	203	186	a 6	2	4	5	4
16	3	100	a 24	28	219	325	a 172	5	3	4	4	4
17	4	84	a 35	34	162	421	a 158	5	4	4	4	4
18	3	79	a 46	a 33	162	476	a 144	5	4	22	4	4
19	3	84	56	32	163	728	a 130	5	6	13	4	4
20	4	80	a 58	38	140	953	a 115	5	6	5	12	4
21	4	75	a 60	43	117	794	a 101	5	7	4	10	4
22	4	64	a 62	41	103	438	a 87	4	5	4	7	4
23	3	a 52	66	47	108	364	73	4	4	4	9	4
24	3	a 40	66	a 44	101	349	74	4	4	4	7	4
25	3	a 28	62	a 46	103	593	75	4	5	4	7	4
26	3	a 38	a 61	a 48	120	958	170	4	5	4	9	4
27	3	a 47	a 59	a 50	152	851	150	4	6	4	13	4
28	3	57	58	a 42	184	671	111	4	6	5	7	4
29	3	a 52	58	a 35	232	766	101	4	5	5	5	4
30	3	a 48	54	a 38	-------	724	143	3	5	4	4	5
31	a 3	-------	a 50	41	-------	542	-------	4	-------	5	4	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	5	3	3.4	208
November	168	3	43.9	2,610
December	66	24	46.6	2,860
January	54	26	41.0	2,520
February	2,280	27	286	16,400
March	958	186	487	29,900
April	758	73	255	15,200
May	124	3	23.4	1,440
June	7	2	4.4	260
July	22	3	5.6	345
August	13	4	5.7	351
September	12	4	4.9	290
The year	2,280	2	99.8	72,400

a Estimated.

CLEAR CREEK NEAR WINSLOW, ARIZ.

LOCATION.—Water-stage recorder in SE¼ sec. 9, T. 18 N., R. 16 E., 1½ miles above mouth and 5 miles southeast of Winslow. Control for station is crest of dam 1,000 feet downstream.

DRAINAGE AREA.—607 square miles.

RECORDS AVAILABLE.—March 1929 to September 1932. June 1906 to January 1909 at station 3 miles upstream.

EXTREMES.—Maximum discharge during year, 6,100 second-feet Feb. 10 (height over dam crest, 4.38 feet); no flow on many days.

1929–32: Maximum discharge, 39,000 second-feet Apr. 4, 1929 (height over dam crest, 13.4 feet); no flow on many days of each year.

REMARKS.—Records good except those estimated, which are fair. Stage-discharge relation affected by ice Nov. 23 to Feb. 7. Water diverted above station for municipal and industrial use.

Discharge, in second-feet, 1931–32

Day	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	0	a 27	a 69	a 52	475	1,090	282	1
2	0	a 26	a 69	a 49	573	1,570	336	0
3	0	a 26	a 70	a 45	733	1,710	359	0
4	0	25	71	a 42	730	1,710	343	0
5	0	a 12	53	a 39	536	1,630	320	0
6	0	a 14	45	a 50	375	1,450	274	0
7	0	16	39	a 61	335	1,160	232	0
8	0	a 24	a 38	72	318	1,050	186	0
9	0	31	a 37	466	493	997	143	0
10	0	39	a 37	4,690	659	997	138	0
11	0	a 32	a 36	2,390	639	909	133	0
12	0	a 24	a 35	1,290	573	1,010	138	0
13	0	a 18	a 34	804	518	1,020	113	0
14	0	a 17	a 34	619	417	1,010	98	0
15	23	a 16	a 33	501	409	1,100	89	0
16	125	a 16	a 32	377	543	1,080	86	0
17	107	a 25	a 32	287	601	997	78	0
18	129	a 34	31	294	639	921	71	0
19	129	42	36	287	1,070	825	63	0
20	103	a 46	a 52	240	1,570	704	56	0
21	94	a 50	48	196	1,600	632	46	0
22	83	60	a 42	161	974	683	40	0
23	64	64	a 37	185	815	518	30	0
24	a 42	71	a 32	160	740	375	27	0
25	a 18	79	a 35	156	979	343	18	0
26	a 24	79	a 40	173	1,540	392	15	0
27	a 29	79	a 46	208	1,600	424	12	0
28	a 34	79	a 37	267	1,270	367	8	0
29	a 31	79	a 29	339	1,390	289	6	0
30	a 28	a 71	a 36	------	1,530	274	3	0
31	------	a 68	a 44	------	1,240	------	2	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
November	129	0	35.4	2,110
December	79	12	41.6	2,560
January	71	29	42.2	2,600
February	4,690	39	500	28,800
March	1,600	346	837	51,400
April	1,710	274	908	54,000
May	359	2	121	7,430
June	1	0	.03	2
The year	4,690	0	205	149,000

a Estimated.

NOTE.—No flow during months omitted.

MOENKOPI WASH NEAR TUBA CITY, ARIZ.

LOCATION.—Water-stage recorder in T. 31 N., R. 10 E., unsurveyed, on Navajo Indian Reservation, at highway bridge 5 miles southwest of Tuba City and 17 miles above mouth.

DRAINAGE AREA.—2,270 square miles.

RECORDS AVAILABLE.—July 1926 to September 1932.

EXTREMES.—Maximum discharge during year, 5,300 second-feet Aug. 2? (gage height, 9.22 feet); no flow on several days.

1926–32: Maximum discharge, 15,100 second-feet Aug. 4, 1929 (gage height, 15.4 feet); no flow on several days each year.

REMARKS.—Records good. Stage-discharge relation affected by ice Nov. 21 to Jan. 31. Diversions for irrigation above station; none below station.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4	5	5	5	7	5	0.1	0	0.1	0	4	0.3
2	169	4	4	5	9	5	.1	0	.4	0	2	.1
3	110	3	4	6	7	7	0	.1	.4	0	2	.1
4	22	4	4	6	7	7	0	.1	2	0	.1	0
5	7	4	4	6	7	5	.9	.1	4	0	0	0
6	5	5	4	6	15	5	2	0	.1	0	0	.1
7	3	4	4	6	82	5	2	0	0	0	0	.3
8	2	7	4	6	116	5	.1	0	0	0	0	.4
9	0.5	6	5	6	140	4	1	0	0	0	0	.3
10	3	6	8	5	465	4	.1	4	0	0	0	.8
11	2	6	6	5	205	4	.1	10	0	.6	0	.6
12	1	7	6	5	106	4	.1	5	0	0	0	.2
13	3	25	5	6	52	3	1	2	0	0	0	.2
14	3	11	5	7	40	4	.5	.3	0	0	0	.2
15	3	7	4	6	33	4	.9	0	0	0	0	.2
16	3	4	4	6	20	4	.4	.1	0	0	0	.8
17	3	4	3	4	18	4	2	.1	0	0	.3	.5
18	5	4	3	5	16	3	.6	0	0	0	3	.2
19	3	5	3	6	30	2	.7	.1	0	0	3	.3
20	4	4	3	6	19	3	2	.1	0	0	82	1
21	49	7	3	5	14	.3	.7	0	0	0	16	.6
22	30	11	5	5	9	.2	.7	0	0	0	7	.6
23	11	5	5	5	7	.3	.1	0	0	0	13	2
24	6	3	4	5	7	.3	.3	0	0	0	23	96
25	5	3	6	4	7	2	.1	0	0	0	17	60
26	5	4	6	4	6	4	0	0	0	0	8	26
27	4	4	6	4	5	2	0	0	0	0	33	10
28	4	7	6	5	5	.6	0	0	0	171	546	6
29	5	7	13	5	4	.6	0	0	0	165	31	6
30	5	6	7	6	------	.4	0	0	0	24	9	6
31	5	------	7	6	------	.2	------	.1	------	6	4	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	169	0.5	15.6	961
November	25	3	6.1	361
December	13	3	5.0	309
January	7	4	5.4	331
February	465	4	50.3	2,890
March	7	.2	3.16	194
April	2	0	.55	33
May	10	0	.71	44
June	4	0	.23	14
July	171	0	11.8	727
August	546	0	25.9	1,590
September	96	0	7.33	436
The year	546	0	10.9	7,890

BRIGHT ANGEL CREEK BASIN

BRIGHT ANGEL CREEK NEAR GRAND CANYON, ARIZ.

LOCATION.—Staff gage a quarter of a mile above mouth and 11 miles by trail from Grand Canyon, Coconino County. Zero gage is 2,460.0 feet above mean sea level.

DRAINAGE AREA.—100 square miles.

RECORDS AVAILABLE.—October 1923 to September 1932.

EXTREMES.—Maximum discharge during year, 500 second-feet Feb. 9 (gage height, 3.5 feet); minimum, 17 second-feet Oct. 4 (gage height, 0.54 foot).

1923–32: Maximum discharge, about 1,000 second-feet July 27, 1926, and Sept. 16, 1927; minimum discharge, 14 second-feet Aug. 18, 1930.

REMARKS.—Records good. Minor diversions for irrigation above station. Some fluctuation in discharge caused by operation of power plant 9 miles upstream; no regulation by storage.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	20	20	20	21	20	41	74	127	105	30	25	24
2	21	20	20	21	21	34	79	194	92	30	26	24
3	20	19	20	22	21	33	116	241	89	32	27	22
4	20	19	20	21	20	29	124	259	86	32	25	23
5	20	19	20	21	20	28	140	236	75	30	24	23
6	20	19	20	21	20	28	137	226	67	30	24	22
7	20	19	20	21	21	28	122	185	63	29	24	23
8	20	20	21	21	173	28	125	154	62	29	24	23
9	19	21	25	21	384	30	133	158	59	29	27	22
10	19	20	22	21	86	30	142	226	56	29	24	22
11	20	22	21	20	38	28	162	302	55	28	26	22
12	19	21	22	21	32	28	200	342	54	28	24	22
13	19	21	21	21	28	28	244	373	52	29	26	22
14	19	20	21	21	27	27	270	336	51	29	24	23
15	19	20	20	21	27	27	292	345	50	29	25	23
16	19	22	20	21	25	27	295	333	51	32	26	23
17	19	21	20	20	25	27	320	327	49	30	24	22
18	19	21	20	20	25	28	314	304	47	28	24	22
19	20	21	20	21	27	32	317	293	46	28	23	23
20	20	20	20	21	24	44	323	273	44	26	22	22
21	20	24	20	21	24	39	259	251	42	26	24	24
22	20	22	20	21	24	34	207	244	40	26	24	24
23	19	21	20	21	24	33	146	225	38	24	24	27
24	19	20	20	21	27	33	124	202	38	25	24	26
25	19	20	20	20	27	36	125	182	38	25	24	24
26	19	20	21	20	28	41	135	161	37	26	26	23
27	20	20	21	20	33	44	125	152	34	26	28	22
28	20	20	21	20	37	47	106	149	32	26	26	22
29	19	20	22	20	37	58	90	138	30	26	25	26
30	20	20	22	20	------	64	90	126	29	25	26	22
31	20	------	21	20	------	64	------	114	------	26	24	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	21	19	19.6	1,200
November	24	19	20.4	1,210
December	25	20	20.7	1,270
January	22	20	20.7	1,270
February	384	20	45.7	2,630
March	64	27	35.4	2,180
April	323	74	178	10,600
May	373	114	232	14,200
June	105	29	53.7	3,200
July	32	24	28.0	1,720
August	28	22	24.8	1,530
September	27	22	23.1	1,370
The year	384	19	58.4	42,400

VIRGIN RIVER BASIN

VIRGIN RIVER AT VIRGIN, UTAH

LOCATION.—Chain gage in SE¼ sec. 22, T. 41 S., R. 12 W., at east edge of Virgin, half a mile below North Creek.

DRAINAGE AREA.—990 square miles.

RECORDS AVAILABLE.—April 1909 to September 1932 (fragmentary).

EXTREMES.—Maximum discharge during year (estimated), 9,000 second-feet Feb. 9 (gage height, 9.2 feet); minimum, 32 second-feet Oct. 1.

1909–32: Maximum discharge (estimated), 12,000 second-feet Oct. 27, 1912 (gage height, 11.6 feet); minimum, 23 second-feet Sept. 30, 1931.

REMARKS.—Records fair Oct. 1 to Apr. 15; poor thereafter. Discharge estimated Nov. 9, Feb. 8–11, Apr. 16, to June 6, June 9 to Aug. 27. Diversions for irrigation above station.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	32	55	64	69	74	419	435					100
2	64	55	69	74	93	228	542					93
3	64	55	69	74	64	216	600	1,000		120	70	80
4	55	50	64	64	64	114	560		600			74
5	50	55	74	74	69	156	560					80
6	50	55	64	64	74	184	419					74
7	55	50	64	80	106	239	386		496	90		74
8	55	64	64	64	700	276	402	750	477		65	74
9	46	1,200	122	80	7,000	276	419					64
10	60	69	74	74	2,000	250	468			1,500		69
11	50	100	69	69	600	263	620		330	2,500		64
12	50	130	74	74	250	184	650			3,000		69
13	50	60	69	64	216	130	660	800				74
14	50	60	74	69	314	146	794			200		74
15	50	60	100	64	250	165	942					69
16	46	184	64	69	194	205					70	74
17	50	64	55	69	184	239						74
18	46	64	69	69	216	250	1,100	1,500	260	140		74
19	250	74	64	69	276	276						69
20	130	69	80	74	228	542						69
21	74	100	74	64	239	239						80
22	64	74	156	64	250	205						74
23	60	64	106	60	228	184	550	1,400	200	70		87
24	64	60	74	64	239	194					75	106
25	60	64	80	60	250	372						93
26	64	74	122	87	263	328						93
27	60	69	80	74	288	239					3,500	87
28	60	93	69	100	402	288	500	800	150	80	794	80
29	60	74	100	69	386	402					156	106
30	55	69	46	74	------	301					106	239
31	60	------	46	74	------	314	------		------		106	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	250	32	64.0	3,940
November	1,200	50	110	6,550
December	156	46	77.4	4,760
January	100	60	70.9	4,360
February	7,000	64	535	30,800
March	542	114	252	15,500
April	----------	386	640	38,100
May	----------	----------	1,030	63,300
June	----------	----------	331	19,700
July	3,000	----------	325	20,000
August	3,500	----------	209	12,900
September	239	64	84.6	5,030
The year	7,000	32	310	225,000

VIRGIN RIVER AT LITTLEFIELD, ARIZ.

LOCATION.—Staff gage in SE¼ sec. 5, T. 40 N., R. 15 W., about half a mile below Beaver Dam Wash and about the same distance above Littlefield.
DRAINAGE AREA.—4,400 square miles.
RECORDS AVAILABLE.—October 1929 to September 1932.
EXTREMES.—Maximum discharge during year (estimated), 25,000 second-feet Aug. 27; minimum not determined.
1929–32: Maximum discharge (estimated), that of Aug. 27, 1932; minimum, 27 second-feet July 5, 7, 13, 1930.
REMARKS.—Records poor. Discharge estimated Nov. 8–11, Feb. 9–23, June 19 to Aug. 31, Sept. 25–30. No diversions in Arizona above this point except a few second-feet from Beaver Dam Springs. Mesquite Canal diverts water a few miles downstream for irrigation in Nevada.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	65	84	196	209	222	931	614	866	781			338
2	65	87	175	217	240	983	627	939	917			338
3	69	84	183	217	258	953	627	902	939			322
4	69	90	137	196	179	910	614	1,090	1,070			156
5	65	90	137	179	175	895	608	866	845	50		137
6	65	90	137	164	175	754	601	1,090	733			117
7	61	90	134	137	167	781	601	939	576			114
8	58	110	137	137	250	781	608	976	436			114
9	56	900	156	137	15,000	795	608	1,010	397			98
10	56	900	179	145	10,000	781	601	998	402	800		90
11	56	375	217	167	4,000	726	532	1,030	397	3,500	60	82
12	76	354	175	175	2,200	706	595	939	392	2,000		82
13	82	354	167	164	1,500	514	608	1,090	397	1,500		72
14	76	364	167	137	1,000	454	660	1,090	328	1,100		67
15	76	263	171	137	750	397	866	1,130	297	700		67
16	72	263	171	156	550	386	880	1,170	245	400		65
17	82	226	175	152	450	431	1,170	1,540	160	200		67
18	84	263	171	137	400	538	1,090	1,460	101	150		65
19	104	322	175	137	380	538	1,090	1,240		100		65
20	196	364	175	148	360	679	1,120	1,210				63
21	148	364	179	156	340	706	1,350	1,220				63
22	137	254	217	156	320	754	1,220	1,150				65
23	120	283	268	137	300	620	1,010	1,030			200	63
24	120	263	263	134	471	620	939	983				63
25	114	258	263	137	570	640	924	880	75	75		
26	114	288	245	130	640	601	653	873			300	65
27	90	317	240	130	726	634	582	816			20,000	
28	90	297	240	134	845	608	471	859			10,000	
29	84	288	263	137	1,010	614	595	838			1,500	100
30	84	263	217	141	-------	627	666	845			400	500
31	84	-------	222	175	-------	627	-------	845	-------		350	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	196	56	87.7	5,390
November	900	84	285	17,000
December	268	134	192	11,800
January	217	130	155	9,530
February	15,000	167	1,500	86,300
March	983	386	677	41,600
April	1,350	471	771	45,900
May	1,540	816	1,030	63,300
June	1,070	----------	344	20,500
July	3,500	----------	381	23,400
August	20,000	----------	1,120	68,900
September	500	63	121	7,200
The year	20,000	----------	552	401,000

MUKUNTUWEAP RIVER NEAR SPRINGDALE, UTAH

LOCATION.—Staff gage near center of sec. 15, T. 41 S., R. 10 W., near south entrance to Zion National Park, a quarter of a mile above Pine Creek, and 3 miles northeast of Springdale.

RECORDS AVAILABLE.—June to November 1923; April 1925 to September 1931; February to September 1932.

EXTREMES.—Maximum discharge during year, about 1,500 second-feet (estimated) Aug. 27; minimum not determined.

1925–32: Maximum discharge (estimated), about 3,000 second-feet Aug. 3, 1929 (gage height, 11.0 feet); minimum, 24 second-feet Dec. 17, 31, 1928.

REMARKS.—Records poor. Estimated discharges Feb. 1–7, Apr. 19–22, June 16, July 24, 25, Aug. 1, Aug. 21 to Sept. 30 were based on comparison with flow of Virgin River at Virgin, Utah.

Discharge, in second-feet, 1932

Day	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		92	108	440	417	90	60	
2		84	116	610	398	82	56	
3		84	214	610	281	82	56	
4		40	269	610	328	75	56	
5	50	40	269	655	312	75	56	
6		57	227	950	497	75	56	
7		76	214	476	436	75	50	
8	214	92	227	560	417	75	50	
9	610	92	214	476	328	68	48	
10	241	92	331	497	296	211	48	
11	134	92	348	456	281	800	50	
12	108	76	348	518	252	266	50	
13	76	76	440	510	238	142	50	
14	92	84	522	628	224	123	50	
15	92	76	547	700	211	106	50	50
16	76	84	564	1,050	204	90	50	
17	63	84	655	1,100	198	90	50	
18	63	92	564	1,080	186	90	50	
19	63	92	500	1,100	186	82	50	
20	63	241	450	1,050	174	75	50	
21	70	76	400	1,280	163	68	50	
22	63	84	350	1,160	142	68	50	
23	66	84	299	1,130	132	68	50	
24	70	92	331	1,190	123	66	50	
25	76	100	348	750	123	64	100	
26	84	116	331	605	123	62	75	
27	84	108	315	605	114	62	1,500	
28	100	116	315	582	106	62	300	
29	116	116	284	560	98	65	75	
30	------	108	331	650	98	68	65	
31	------	116	------	582	------	64	60	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
February	610	----------	103	5,920
March	241	40	92.3	5,680
April	655	108	348	20,700
May	1,280	440	747	45,900
June	497	98	236	14,000
July	800	62	113	6,950
August	1,500	48	110	6,760
September	----------	----------	50	2,980
The period	----------	----------	----------	109,000

WILLIAMS RIVER BASIN

WILLIAMS RIVER AT PLANET, ARIZ.

LOCATION.—Water-stage recorder in NE¼ sec. 36, T. 11 N., R. 17 W., 12 miles above mouth and 1 mile west of Planet. Zero of gage is 556.56 feet above mean sea level.

DRAINAGE AREA.—5,140 square miles.

RECORDS AVAILABLE.—September 1910 to December 1915 (fragmentary); October 1928 to September 1932.

EXTREMES.—Maximum discharge during year, 51,000 second-feet Feb. 9 (gage height, 9.2 feet); minimum discharge, 9 second-feet Sept. 14; minimum gage height, 2.75 feet Oct. 4.

1928–32: Maximum discharge, 55,500 second-feet Aug. 5, 1931 (gage height 12.3 feet); minimum, 9 second-feet Sept. 5, 1930, July 21, 1931, Sept. 14, 1932.

REMARKS.—Records good except those for Feb. 9–11, which are fair. Minor diversions above station for irrigation.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	19	24	27	398	19	1,780	41	18	20	16	18	20
2	20	24	20	290	20	1,920	30	18	18	24	19	19
3	19	20	27	240	20	1,410	34	15	19	18	14	19
4	16	20	24	210	233	930	27	17	19	24	16	18
5	19	19	24	182	210	494	27	17	19	18	18	17
6	19	19	30	134	190	582	19	16	17	18	18	17
7	19	19	27	99	174	338	20	19	16	19	18	17
8	18	19	24	77	904	338	24	17	16	27	17	16
9	18	17	20	82	30,800	326	27	15	15	27	19	15
10	19	18	197	66	23,400	314	27	15	16	27	30	15
11	24	17	408	60	8,180	290	30	15	14	20	27	16
12	20	18	174	52	3,530	250	30	17	17	17	18	13
13	24	18	220	44	3,350	260	24	17	14	15	19	11
14	27	18	158	44	3,600	220	20	17	16	12	24	10
15	27	20	72	44	4,660	200	20	19	13	13	20	10
16	34	18	41	44	3,640	174	27	19	12	17	18	13
17	30	16	20	41	2,530	166	27	19	15	15	17	12
18	27	19	16	44	6,660	166	19	20	16	17	20	14
19	24	20	15	44	9,250	142	19	24	14	17	27	16
20	20	19	18	38	3,970	110	19	18	12	17	19	17
21	24	18	171	27	3,430	82	24	19	17	19	18	16
22	24	24	302	24	3,180	88	24	20	19	16	17	14
23	27	19	508	20	3,750	77	27	18	18	12	17	16
24	27	20	694	30	3,580	82	24	16	18	11	19	19
25	24	20	452	34	3,490	94	19	17	17	12	24	19
26	27	19	338	24	3,250	72	15	15	16	18	38	18
27	24	19	240	17	3,620	72	24	15	16	20	27	18
28	24	20	230	15	3,430	60	20	20	16	19	55	17
29	24	18	458	18	2,690	48	17	18	15	19	55	17
30	20	20	1,430	18	------	34	18	20	16	18	27	17
31	20	------	566	17	------	30	------	18	------	14	24	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	34	1(	22.8	1,400
November	24	1(	19.3	1,150
December	1,430	15	224	13,800
January	398	1(	79.9	4,910
February	30,800	1(	4,680	269,000
March	1,920	3(	360	22,100
April	41	15	24.1	1,430
May	24	15	17.7	1,090
June	20	1(	16.2	964
July	27	11	17.9	1,100
August	55	1(	23.1	1,420
September	20	1(	15.9	944
The year	30,800	1(	440	319,000

GILA RIVER BASIN

GILA RIVER NEAR GILA, N.MEX.

LOCATION.—Water-stage recorder in sec. 30, T. 14 S., R. 16 W., at Hooker dam site, 1 mile above mouth of Mogollon Creek, and 7 miles northeast of Gila. Prior to Dec. 31, 1928, this station was located 3 miles upstream at a point about a quarter of a mile below mouth of Turkey Creek.

DRAINAGE AREA.—1,780 square miles.

RECORDS AVAILABLE.—April to December 1914; October 1930 to September 1932. Records for 1927 to 1930 published by State engineer.

EXTREMES.—Maximum discharge for year ending Sept. 30, 1931, 1,050 second-feet Aug. 10 (gage height, 5.61 feet); minimum, 43 second-feet Dec. 24.

Maximum discharge for year ending Sept. 30, 1932, 2,310 second-feet Feb. 11 (gage height, 7.40 feet); minimum, 43 second-feet July 21.

REMARKS.—Records good. Discharge estimated May 2–5, 1931. One small diversion for irrigation above station.

Discharge, in second-feet, 1930–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1930–31												
1	66	72	89	50	70	194	270	692	117	87	87	83
2	64	72	85	50	76	183	301	650	117	78	12[illegible]	70
3	63	72	81	55	74	180	341	550	112	106	14[illegible]	64
4	61	72	85	59	74	183	333	500	112	143	24[illegible]	61
5	64	72	83	55	96	190	305	450	106	106	39[illegible]	66
6	68	72	81	52	117	208	277	403	102	85	28[illegible]	76
7	66	72	76	54	104	205	258	370	94	72	216	81
8	63	72	74	52	102	187	242	341	96	64	223	109
9	61	72	72	54	99	176	235	333	92	66	263	112
10	61	72	81	57	96	169	227	321	92	70	669	89
11	64	72	81	59	92	160	216	293	89	104	474	72
12	66	72	74	57	143	153	205	270	85	109	329	64
13	66	72	72	55	428	150	201	250	78	72	242	61
14	68	72	66	54	581	156	190	239	76	68	187	109
15	66	94	64	55	805	180	183	231	74	89	153	126
16	63	87	59	57	736	187	187	242	68	99	123	254
17	63	81	57	57	487	187	223	258	66	120	134	277
18	64	89	55	54	374	187	325	262	64	89	212	220
19	64	112	52	54	317	190	341	242	59	109	173	470
20	64	99	50	50	254	220	317	223	55	126	173	487
21	64	87	52	50	231	216	293	205	55	99	153	560
22	63	81	50	52	205	205	289	187	55	94	151	362
23	64	76	50	54	194	205	374	176	55	83	216	270
24	64	76	50	55	183	212	499	156	55	72	123	262
25	68	76	50	55	173	223	419	143	55	64	103	220
26	72	76	52	57	176	262	345	137	55	61	87	173
27	70	76	52	59	190	250	309	137	54	54	10[illegible]	186
28	70	83	54	59	198	220	474	134	54	52	8[illegible]	153
29	72	102	52	61	-------	235	851	128	66	52	8[illegible]	194
30	72	94	52	63	-------	273	669	123	89	57	8[illegible]	285
31	72	-------	52	64	-------	273	-------	117	-------	64	87	-------

Discharge, in second-feet, of Gila River near Gila, N.Mex., 1930–32—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1931–32												
1	254	89	74	81	94	1,170	394	193	126	66	193	203
2	231	87	76	81	96	1,200	390	190	111	72	196	166
3	190	87	74	83	96	1,000	413	198	103	76	140	138
4	160	85	70	87	94	875	429	214	99	71	109	118
5	140	85	68	89	87	705	437	225	97	62	101	103
6	134	83	68	87	94	665	441	231	94	62	94	92
7	126	83	74	76	104	655	425	220	90	56	111	84
8	117	85	76	72	266	640	406	198	83	56	118	76
9	112	89	78	74	390	640	383	178	79	62	105	69
10	109	85	94	78	1,060	620	360	180	78	53	135	66
11	104	87	96	83	1,850	591	342	180	74	62	140	60
12	104	85	87	81	1,140	558	328	193	69	63	103	57
13	99	85	81	85	732	522	328	183	66	64	83	54
14	99	83	74	120	567	487	328	171	63	63	103	54
15	99	81	70	106	487	462	342	173	60	60	107	53
16	94	85	72	94	458	450	346	183	58	64	109	51
17	92	87	72	92	417	458	350	190	60	68	96	50
18	92	83	72	85	398	445	357	198	58	60	92	49
19	92	81	74	85	417	474	342	203	57	56	90	49
20	96	76	76	92	492	531	339	206	56	53	163	48
21	99	74	78	96	483	558	332	212	53	51	178	48
22	99	76	83	96	450	522	353	198	51	51	203	50
23	96	92	85	96	413	479	328	188	54	82	222	66
24	96	94	87	94	406	437	279	183	58	168	328	83
25	94	85	87	94	406	417	245	171	57	96	295	79
26	92	89	87	87	437	433	228	156	53	109	282	72
27	89	89	89	87	513	474	220	149	49	105	220	68
28	89	85	89	92	558	487	222	140	50	163	209	63
29	92	83	96	94	670	487	212	131	83	193	474	69
30	89	78	99	85	------	470	203	124	79	228	360	71
31	89	------	92	87	------	433	------	120	------	193	263	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
1930–31				
October	72	61	65.7	4,040
November	112	72	79.9	4,750
December	89	50	64.6	3,970
January	64	50	55.5	3,410
February	805	70	238	13,200
March	273	150	201	12,300
April	851	183	323	19,200
May	692	117	283	17,400
June	117	54	78.2	4,660
July	143	52	84.3	5,180
August	669	81	199	12,200
September	560	61	186	11,100
The year	851	50	154	111,000
1931–32				
October	254	89	115	7,080
November	94	74	84.5	5,030
December	99	68	80.6	4,950
January	120	72	88.4	5,430
February	1,850	87	472	27,100
March	1,200	417	592	36,400
April	441	203	337	20,000
May	231	120	183	11,300
June	126	49	72.3	4,300
July	228	51	86.7	5,330
August	474	83	175	10,800
September	203	48	77.0	4,580
The year	1,850	48	196	142,000

GILA RIVER NEAR RED ROCK, N. MEX.

LOCATION.—Water-stage recorder in sec. 23, T. 18 S. R. 18 W., 4 miles northeast of Red Rock and 11 miles below mouth of Mangas Creek.
DRAINAGE AREA.—2,840 square miles (revised).
RECORDS AVAILABLE.—May 1908 to December 1914; October 1930 to September 1932. Records for 1915 to 1930 published by State engineer.
EXTREMES.—Maximum discharge during year ending Sept. 30, 1931, about 12,600 second-feet July 3 (gage height, 11.46 feet); minimum, 14 second-feet June 30.

Maximum discharge during year ending Sept. 30, 1932, 4,800 second-feet Aug. 9 (gage height, 9.91 feet); minimum, 32 second-feet June 22.
REMARKS.—Records good except those estimated, which are fair.

Discharge, in second-feet, 1930–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1930–31												
1	65	87	103	80	82	290	404	a980	114	31	285	98
2	63	87	102	79	85	284	436	a920	112	51	190	95
3	63	90	100	82	89	278	485	a900	108	1,190	247	98
4	64	87	96	85	87	281	528	a800	100	a330	544	103
5	77	87	96	83	93	295	492	a680	90	a180	963	96
6	78	87	96	82	103	313	436	556	75	a150	a550	105
7	79	86	95	80	114	322	362	512	85	a110	a490	120
8	79	86	95	80	114	301	319	469	93	a95	a330	205
9	75	85	92	80	114	272	298	418	93	85	a670	192
10	77	85	95	80	108	256	284	398	95	83	970	157
11	74	87	96	80	103	242	275	356	92	75	726	125
12	77	87	98	80	114	234	a260	a340	83	96	a530	120
13	80	86	98	80	328	228	a250	a320	80	98	a350	114
14	79	86	95	79	556	231	a260	a300	80	72	231	118
15	79	90	92	78	970	242	a270	a290	80	64	234	512
16	82	95	90	79	1,070	261	a240	a290	77	83	202	552
17	85	93	86	79	702	270	a280	a300	77	79	175	536
18	85	95	82	79	572	267	352	a310	75	77	215	a600
19	85	116	80	78	481	278	481	a300	68	110	210	742
20	85	123	79	77	422	298	440	a290	59	157	247	940
21	85	114	80	79	388	310	391	a260	51	112	234	940
22	82	105	83	78	334	304	359	a230	47	96	270	679
23	79	102	82	78	298	310	443	a190	40	77	400	504
24	82	100	80	79	275	316	622	a170	53	71	a250	a420
25	83	100	80	80	253	325	585	a150	46	68	a130	a350
26	82	100	82	82	247	365	450	144	22	66	a150	a300
27	82	95	83	82	267	401	a400	133	19	65	a140	a280
28	83	102	80	79	287	375	a500	129	18	65	116	261
29	82	107	82	80	-------	368	a880	123	15	65	102	275
30	86	108	83	80	-------	388	a1,050	121	15	85	92	307
31	86	-------	82	80	-------	401	-------	118	-------	77	102	-------

a Estimated by hydrographic comparison.

Discharge, in second-feet, of Gila River near Red Rock, N.Mex., 1930–32—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1931–32												
1	316	110	120	125	a150	1,030	478	249	139	90	a400	a220
2	275	112	118	118	a155	1,230	460	234	137	94	278	a170
3	261	112	118	118	a155	1,100	430	208	129	88	240	a140
4	239	114	116	121	a155	1,030	430	212	123	87	195	a120
5	a200	110	110	123	a145	910	430	214	121	166	178	a100
6	178	110	108	125	146	800	445	236	120	126	172	a80
7	164	112	112	121	159	800	430	260	115	180	189	60
8	152	114	116	114	264	800	415	245	114	129	214	53
9	144	118	120	112	391	800	400	224	108	156	702	54
10	135	118	142	114	970	800	394	200	104	126	a800	53
11	123	118	146	116	2,540	750	386	202	98	124	a200	53
12	a120	120	142	120	1,500	700	380	230	94	120	a130	50
13	a120	121	131	121	1,100	678	375	236	92	115	a120	44
14	a120	121	120	148	828	678	369	216	90	112	a120	42
15	a120	120	107	159	655	678	367	202	84	109	a200	45
16	a110	121	105	144	610	632	358	212	78	127	a140	45
17	a105	123	107	133	570	610	356	210	73	123	a110	43
18	a105	121	107	129	512	632	353	214	69	118	a100	42
19	a110	116	107	127	512	632	345	222	67	114	a120	40
20	a120	116	108	125	570	632	342	212	a55	109	a200	36
21	a125	114	112	a140	678	725	335	214	a45	102	a220	34
22	a120	114	112	a150	632	700	330	226	33	92	a230	35
23	a115	125	114	a150	570	678	325	212	35	120	a300	40
24	a115	133	116	a150	550	655	318	195	51	151	365	85
25	a110	131	118	a140	530	655	315	180	53	200	356	135
26	a110	125	120	a140	530	632	306	174	54	163	348	106
27	a105	127	121	a140	590	632	301	167	48	158	a250	100
28	a110	125	125	a140	678	530	296	152	55	209	a250	97
29	a110	125	125	146	700	530	282	146	70	262	610	96
30	a110	123	133	a150	------	530	262	144	81	495	478	96
31	110	------	133	a150	------	495	------	137	------	478	a300	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
1930–31				
October	86	63	78.8	4,850
November	123	85	95.3	5,670
December	103	79	89.1	5,480
January	85	77	79.9	4,910
February	1,070	82	309	17,200
March	401	228	300	18,500
April	1,050	240	428	25,500
May	980	118	371	22,800
June	114	15	68.7	4,090
July	1,190	31	131	8,060
August	970	92	332	20,400
September	940	95	331	19,700
The year	1,190	15	217	157,000
1931–32				
October	316	105	144	8,840
November	133	110	119	7,080
December	146	105	119	7,320
January	159	112	133	8,150
February	2,540	145	605	34,800
March	1,230	495	732	45,000
April	478	262	367	21,800
May	260	137	206	12,700
June	139	33	84.5	5,030
July	495	87	156	9,610
August	800	100	275	16,900
September	220	34	77.1	4,590
The year	2,540	33	250	182,000

a Estimated by hydrographic comparison.

GILA RIVER AT FULLER'S RANCH, NEAR DUNCAN, ARIZ.

LOCATION.—Water-stage recorder in SE¼SW¼ sec. 18, T. 19 S., R. 19 W., N.Mex., at head of canyon immediately downstream from Fuller's Ranch, 16 miles east of Duncan. Zero of gage is approximately 3,875 feet above mean sea level.

DRAINAGE AREA.—3,140 square miles.

RECORDS AVAILABLE.—June 1931 to September 1932. May 1914 to September 1915 at station 6 miles downstream, above intake of Sunset Canal; January 1923 to September 1926 at station 8 miles downstream; and October 1926 to September 1931 at station at Virden Bridge, 8½ miles downstream, last two below intake of Sunset Canal.

EXTREMES.—Maximum discharge during year, 7,300 second-feet July 31 (gage height, 12.35 feet); minimum, 13 second-feet June 21 (gage height, 4.14 feet).

1931–32: Maximum discharge, 9,100 second-feet Aug. 3, 1931 (gage height, 13.6 feet); minimum, that of June 21, 1932.

REMARKS.—Records good. Diversions for irrigation above station. Station is above all diversions for Duncan Valley.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	326	110	127	140	162	1,070	484	243	133	89	492	243
2	284	108	127	130	166	1,470	459	234	124	137	251	183
3	260	108	127	130	166	1,280	466	209	102	157	217	146
4	238	110	127	133	162	1,110	490	194	99	105	172	121
5	221	108	130	140	166	948	496	194	102	195	143	108
6	209	108	124	143	166	800	490	213	105	132	127	92
7	190	110	124	143	169	739	478	251	99	215	133	77
8	179	116	127	133	225	739	459	247	94	137	241	60
9	172	118	127	133	388	753	441	229	92	190	172	47
10	159	121	149	133	674	781	435	194	89	108	1,110	42
11	152	121	155	136	2,470	753	417	236	84	97	209	42
12	149	116	149	136	1,700	726	388	256	80	94	152	40
13	143	116	133	140	1,130	705	388	243	64	89	132	39
14	140	113	124	155	941	658	370	229	51	80	133	37
15	136	110	121	169	744	631	365	206	46	72	247	35
16	136	116	121	155	678	598	365	209	32	83	118	35
17	127	121	121	149	618	604	382	213	28	102	82	37
18	124	121	121	143	578	604	394	217	23	82	72	35
19	121	121	121	136	566	611	370	229	20	66	140	37
20	127	121	124	136	578	671	365	221	17	53	255	35
21	127	127	124	152	671	753	354	217	15	46	265	32
22	130	127	121	159	644	739	376	221	14	34	238	44
23	130	136	121	162	598	678	406	213	18	104	346	41
24	127	143	121	162	553	585	370	194	16	180	382	51
25	124	143	124	155	534	496	342	169	18	257	394	125
26	121	140	124	152	540	484	305	166	27	159	388	84
27	118	140	127	149	592	515	269	162	27	151	300	84
28	110	136	130	155	658	553	274	149	26	275	238	82
29	110	136	133	152	698	553	269	146	40	551	673	82
30	108	133	136	152	------	546	260	140	60	1,580	528	87
31	110	------	140	155	------	528	------	133	------	647	348	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	326	108	158	9,730
November	143	108	122	7,250
December	155	121	128	7,890
January	169	130	146	8,960
February	2,470	162	619	35,600
March	1,470	484	732	45,000
April	496	260	391	23,300
May	256	133	206	12,600
June	133	14	58.2	3,460
July	1,580	34	202	12,400
August	1,110	72	281	17,300
September	243	32	73.4	4,370
The year	2,470	14	259	188,000

GILA RIVER NEAR CLIFTON, ARIZ.

LOCATION.—Water-stage recorder in SE¼ sec. 25, T. 5 S., R. 29 E. (erroneously published prior to 1931 as in SW¼ sec. 30, T. 5 S., R. 30 E.), at highway bridge 7 miles south of Clifton and 5 miles above San Francisco River.

DRAINAGE AREA.—4,040 square miles.

RECORDS AVAILABLE.—March 1928 to September 1932. November 1910 to July 1918 at station 4 miles upstream, published as "Gila River at Guthrie, Ariz."

EXTREMES.—Maximum discharge during year, 4,500 second-feet July 9 (gage height, 11.15 feet); minimum, 19 second-feet July 22.

1928–32: Maximum discharge, 9,500 second-feet July 30, 1929 (gage height, 14.5 feet); minimum, 12 second-feet June 26, 1929.

REMARKS.—Records good. Diversions for irrigation above station. Station is below all diversions from Gila River above San Francisco River.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	491	86	153	153	141	775	431	187	66	87	550	275
2	523	83	151	143	139	1,190	405	187	59	47	350	209
3	309	82	146	139	130	1,200	393	148	50	68	260	141
4	269	82	141	155	139	1,100	405	128	47	64	207	92
5	222	86	146	146	141	992	405	114	44	72	152	72
6	190	81	141	141	148	855	427	105	43	204	99	56
7	163	83	151	141	146	765	405	108	43	139	74	48
8	160	86	148	139	146	745	379	136	39	184	80	42
9	148	100	146	135	228	705	344	159	38	895	815	38
10	135	104	176	135	474	710	347	144	35	162	735	35
11	116	99	176	135	1,400	695	327	122	34	113	394	34
12	116	107	171	146	1,940	641	292	150	35	85	182	33
13	111	109	163	146	1,270	617	277	176	35	63	110	32
14	107	111	160	155	970	584	268	157	33	57	80	32
15	106	113	151	160	790	535	245	143	32	49	221	30
16	104	118	139	171	631	488	232	138	29	39	164	29
17	102	118	135	171	602	463	237	138	29	34	98	29
18	107	116	135	165	557	439	268	129	29	30	71	28
19	120	118	135	165	521	451	257	118	29	33	68	28
20	113	116	133	173	521	475	248	108	29	27	88	27
21	128	113	130	158	607	561	254	105	24	23	148	27
22	118	124	133	153	660	589	262	99	26	20	192	27
23	113	126	128	165	631	566	324	114	25	88	215	42
24	113	126	128	168	570	517	351	114	25	38	283	43
25	113	133	135	168	543	424	314	99	26	150	345	186
26	109	137	143	168	539	372	257	85	27	235	387	60
27	97	137	143	173	565	379	234	78	27	201	318	50
28	94	135	143	171	665	416	209	80	27	143	264	49
29	97	141	146	163	705	435	216	78	27	863	398	52
30	92	146	146	160	------	435	194	75	28	2,190	510	49
31	88	------	151	151	------	435	------	68	------	994	373	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	523	88	157	9,670
November	146	81	111	6,580
December	176	128	146	8,970
January	173	135	155	9,540
February	1,940	130	570	32,800
March	1,200	372	631	38,800
April	431	194	307	18,300
May	187	68	122	7,520
June	66	24	34.6	2,060
July	2,190	20	239	14,700
August	815	68	266	16,300
September	275	27	63.2	3,760
The year	2,190	20	233	169,000

GILA RIVER BELOW BONITA CREEK, NEAR SOLOMONSVILLE, ARIZ.

LOCATION. Water-stage recorder in SE¼ sec. 21, T. 6 S., R. 28 E., unsurveyed, three eighths of a mile below Bonita Creek and 10 miles northeast of Solomonsville.

DRAINAGE AREA.—7,900 square miles.

RECORDS AVAILABLE.—February to September 1932.

EXTREMES.—Maximum discharge during period, 24,000 second-feet Feb. 10 (gage height, 19.6 feet); minimum, 71 second-feet June 30 (gage height, 4.79 feet).

REMARKS.—Records good. Discharge estimated July 19–22. Diversions for irrigation above station. Station is above all diversions for Safford Valley.

Discharge, in second-feet, 1932

Day	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	-------	3,820	1,280	497	171	78	1,780	543
2	-------	4,330	1,220	472	167	200	1,070	414
3	-------	3,730	1,220	456	151	192	592	312
4	-------	3,360	1,240	433	136	176	443	244
5	-------	2,740	1,240	441	132	149	336	206
6	-------	2,360	1,260	425	126	130	252	180
7	-------	1,990	1,190	410	124	566	257	159
8	-------	2,000	1,120	396	120	234	322	167
9	-------	2,040	1,080	403	111	910	883	146
10	[a]24,000	1,880	1,000	382	109	273	2,250	130
11	-------	1,920	939	364	109	368	920	119
12	-------	1,720	979	371	107	284	410	113
13	-------	1,600	806	422	106	228	272	109
14	-------	1,500	776	392	102	205	204	105
15	-------	1,430	762	368	94	200	394	102
16	-------	1,340	762	364	91	185	348	101
17	-------	1,280	752	360	86	223	300	101
18	-------	1,260	796	350	85	220	220	99
19	-------	1,360	781	340	83	210	438	98
20	-------	1,510	743	331	82	190	272	97
21	-------	1,780	752	331	80	170	587	97
22	-------	1,690	810	305	79	150	592	97
23	-------	1,600	894	299	76	149	572	115
24	-------	1,400	840	302	76	194	810	143
25	-------	1,290	767	276	75	341	891	345
26	-------	1,310	649	250	73	487	995	231
27	-------	1,430	591	231	72	476	679	204
28	1,850	1,420	591	215	73	399	612	169
29	2,060	1,440	573	205	75	849	858	152
30	-------	1,440	526	198	72	3,540	948	146
31	-------	1,340	-------	185	-------	2,420	727	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
March	4,330	1,260	1,910	118,000
April	1,280	526	898	53,400
May	497	185	348	21,400
June	171	72	101	6,040
July	3,540	78	464	28,600
August	2,250	204	653	40,200
September	543	97	175	10,400
The period				278,000

[a] Discharge measurement.

GILA RIVER NEAR SOLOMONSVILLE, ARIZ.

LOCATION.—Water-stage recorder in NE¼ sec. 31, T. 6 S., R. 2? E., 8 miles northeast of Solomonsville (erroneously published prior to 1931 as 10 miles east of Solomonsville) and 11 miles below San Francisco River.

DRAINAGE AREA.—7,950 square miles.

RECORDS AVAILABLE.—April 1914 to September 1932 (discontinued).

EXTREMES.—Maximum discharge during year, 24,000 second-feet Feb. 10 (gage height, 11.05 feet); minimum, 71 second-feet June 30.

1914–32: Maximum discharge, about 100,000 second-feet Jan. 19, 1916 (gage height, 15.0 feet, present datum); minimum, 26 second-feet July 4, 1923.

REMARKS.—Records good. Discharge estimated July 19–23. Diversions for irrigation above station. Station is above all diversions for Safford Valley except Brown Canal.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,400	195	423	423	313	3,720	1,280	519	166	74	1,730	519
2	1,600	195	364	416	331	4,120	1,240	490	15?	196	1,220	385
3	831	199	349	393	331	3,630	1,250	457	148	169	696	293
4	713	185	337	393	319	3,180	1,280	438	13?	153	505	228
5	665	185	319	408	313	2,690	1,250	425	136	126	373	185
6	544	192	331	379	325	2,210	1,240	419	12?	116	288	160
7	450	188	356	331	337	2,070	1,160	419	12?	529	250	139
8	386	195	401	337	468	2,010	1,090	419	116	300	281	139
9	349	220	441	337	1,320	2,010	1,030	425	10?	832	954	121
10	301	236	1,330	331	11,600	2,040	972	413	10?	270	2,170	114
11	274	232	742	337	10,400	1,960	936	390	102	310	992	106
12	245	232	494	343	5,760	1,810	870	408	10?	220	425	102
13	232	240	423	371	3,740	1,770	837	451	9?	188	270	96
14	224	245	401	401	2,760	1,680	837	396	9?	182	220	93
15	199	245	401	432	2,240	1,600	816	368	91	185	381	87
16	203	255	379	386	1,980	1,500	796	368	87	178	305	85
17	192	260	386	379	1,770	1,450	786	357	82	210	275	85
18	185	260	379	343	1,810	1,400	806	342	81	213	225	85
19	185	269	393	343	2,360	1,440	786	326	81	200	490	87
20	224	264	441	349	2,550	1,540	746	316	81	180	260	87
21	240	264	476	364	2,140	1,750	736	321	78	160	607	89
22	255	652	494	386	1,900	1,650	796	293	78	140	615	87
23	236	737	503	416	1,740	1,480	848	283	77	120	571	104
24	228	494	476	386	1,620	1,400	848	288	78	162	853	126
25	232	371	441	379	1,580	1,340	786	265	77	283	874	316
26	236	432	432	356	1,570	1,360	654	244	74	120	1,020	220
27	224	494	423	337	1,620	1,430	579	232	72	438	663	199
28	207	468	441	331	1,730	1,440	579	213	74	373	603	178
29	207	564	459	331	2,100	1,430	563	199	72	814	853	160
30	203	503	441	325	------	1,380	533	188	72	3,470	936	145
31	195	------	432	319	------	1,290	------	178	------	2,490	708	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	2,400	185	415	25,500
November	737	185	316	18,800
December	1,330	319	455	28,000
January	432	319	367	22,500
February	11,600	313	2,310	133,000
March	4,120	1,290	1,930	119,000
April	1,280	533	898	53,400
May	519	178	350	21,500
June	166	72	99.5	5,920
July	3,470	74	432	26,600
August	2,170	220	665	40,900
September	519	85	161	9,560
The year	11,600	72	695	505,000

GILA RIVER NEAR ASHURST, ARIZ.

LOCATION.—In sec. 30, T. 5 S., R. 24 E., at Eden Crossing, 1½ miles southeast of Ashurst.
DRAINAGE AREA.—10,900 square miles.
RECORDS AVAILABLE.—December 1920 to September 1932 (discharge measurements only).
REMARKS.—Below all diversions in Safford Valley.

Discharge measurements, in second-feet, 1932

May 26	20.0	July 22	3.1
June 9	6.9	Sept. 17	2.7
June 23	5.1	Sept. 30	1.7
July 8	46.6		

GILA RIVER AT CALVA, ARIZ.

LOCATION.—Water-stage recorder in sec. 5, T. 3 S., R. 21 E., unsurveyed, on San Carlos Indian Reservation, at railroad bridge at head of San Carlos Reservoir 1½ miles northwest of Calva.

DRAINAGE AREA.—11,500 square miles.

RECORDS AVAILABLE.—March 1929 to September 1932.

EXTREMES.—Maximum discharge during year, 21,500 second-feet Feb. 12 (gage height, 9.7 feet; minimum, 10 second-feet Sept. 30.

1929–32: Maximum discharge, that of Feb. 12, 1932; no flow July 4–7, 1930.

REMARKS.—Records good. Discharge interpolated July 16–19. Diversions for irrigation above station.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3,240	164	509	399	305	2,990	920	360	51	17	1,370	390
2	3,990	160	460	407	247	5,090	818	352	49	21	950	285
3	1,740	142	399	390	260	4,790	832	304	48	27	700	228
4	1,070	142	425	381	267	4,070	832	261	48	22	550	198
5	849	138	399	416	247	3,600	890	228	49	16	350	150
6	686	127	381	381	247	2,780	890	194	48	14	210	120
7	509	116	358	416	254	2,240	905	185	46	14	145	90
8	416	109	358	390	247	2,000	905	167	43	12	107	70
9	381	131	381	381	291	1,860	804	163	40	156	483	50
10	343	138	798	351	2,510	1,880	748	176	39	279	1,050	40
11	313	142	1,430	358	10,400	1,880	672	160	37	125	1,000	35
12	286	187	879	343	13,800	1,840	590	163	37	128	500	32
13	247	203	663	335	5,230	1,750	495	160	35	92	340	30
14	230	198	605	320	3,390	1,710	432	130	35	76	229	25
15	203	219	530	351	2,460	1,440	432	121	35	65	121	23
16	187	230	520	381	2,050	1,310	441	134	32	56	92	21
17	178	230	460	381	1,860	1,220	432	145	32	48	78	19
18	178	236	416	373	1,620	1,180	423	118	32	39	65	17
19	182	225	407	335	2,120	1,080	405	99	30	31	59	16
20	187	230	381	320	2,420	1,110	390	96	28	23	58	15
21	187	241	373	320	2,490	1,360	360	92	25	19	89	31
22	178	499	366	313	2,360	1,460	398	85	24	16	54	17
23	192	651	399	299	2,070	1,320	568	80	23	15	76	14
24	182	605	407	320	1,840	1,130	568	76	22	73	99	14
25	187	560	425	335	1,660	980	624	70	19	35	168	14
26	192	460	407	320	1,620	905	486	68	16	90	396	12
27	192	425	425	320	1,600	875	398	67	16	89	533	12
28	187	451	416	292	1,750	1,040	398	63	16	460	368	12
29	169	469	407	292	2,120	1,100	375	59	17	456	395	11
30	169	520	434	305	------	1,060	368	59	23	2,330	537	10
31	164	------	425	305	------	1,030	------	59	------	3,480	548	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	3,990	164	562	34,500
November	651	109	278	16,600
December	1,430	358	492	30,200
January	416	292	349	21,500
February	13,800	247	2,340	134,000
March	5,090	875	1,870	115,000
April	920	360	593	35,300
May	360	59	145	8,910
June	51	16	33.2	1,970
July	3,480	12	269	16,500
August	1,370	54	378	23,200
September	390	10	66.7	3,970
The year	13,800	10	609	442,000

SAN CARLOS RESERVOIR AT COOLIDGE DAM, ARIZ.

LOCATION.—In NW¼ sec. 17, T. 3 S., R. 18 E., unsurveyed, at Coolidge Dam.
DRAINAGE AREA.—12,900 square miles.
RECORDS AVAILABLE.—November 1928 to September 1932.
EXTREMES.—Maximum contents during year, 444,200 acre-feet Apr. 5, 6 (elevation, 2,471.56 feet); minimum, 147,100 acre-feet Oct. 1 (elevation, 2,430.66 feet).

1928–32: Maximum contents, that of Apr. 5, 6, 1932; water below outlet gates in 1928 and several months in 1929.

REMARKS.—Lowest outlet in dam at elevation 2,383.00 feet. For sea-level elevation of water surface add 2,000.00 feet to gage heights in table. Reservoir capacity, 1,195,000 acre-feet at spillway elevation of 2,523.00 feet. Records of daily gage heights and contents furnished by United States Indian Service. Records published for every other day only.

Gage height, in feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	430.66	434.78	437.73	442.90	446.32	463.71	471.51	470.90	467.85	463.95	461.03	459.07
3	432.97	434.79	438.02	443.14	446.47	465.11	471.54	470.85	467.59	463.68	461.48	458.91
5	433.68	434.81	438.25	443.39	446.61	466.54	471.56	470.79	467.35	463.41	461.45	458.64
7	434.14	434.78	438.48	443.61	446.73	467.52	471.55	470.63	467.15	463.17	461.21	458.24
9	434.42	434.80	438.65	443.82	446.86	468.23	471.55	470.43	466.95	462.98	461.09	457.86
11	434.60	434.81	439.54	444.08	450.09	468.87	471.55	470.21	466.77	462.81	461.25	457.46
13	434.74	434.92	440.26	444.24	455.20	469.42	471.52	470.02	466.60	462.57	461.35	457.02
15	434.79	435.04	440.69	444.54	456.92	469.85	471.45	469.83	466.35	462.24	461.18	456.57
17	434.77	435.22	440.97	444.82	457.98	470.17	471.34	469.66	466.08	461.90	460.95	456.18
19	434.71	435.33	441.22	445.07	458.85	470.43	471.21	469.47	465.81	461.54	460.71	455.77
21	434.69	435.49	441.48	445.32	460.24	470.60	471.09	469.25	465.53	461.16	460.34	455.39
23	434.65	436.27	441.73	445.52	461.34	470.85	471.00	469.01	465.24	460.78	460.00	455.03
25	434.68	436.67	442.00	445.73	462.06	471.08	470.96	468.77	464.93	460.43	459.64	454.66
27	434.70	436.96	442.27	445.91	462.66	471.24	470.93	468.51	464.58	460.08	459.39	454.32
29	434.75	437.38	442.53	446.09	463.34	471.36	470.94	468.25	464.25	459.88	459.26	453.95
31	434.77	------	442.77	446.24	------	471.47	------	467.98	------	460.44	459.13	------

Contents, in acre-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	147,100	168,100	185,000	214,400	235,100	370,400	443,700	438,000	409,300	372,600	347,900	332,200
3	157,900	168,200	186,600	215,800	236,100	383,500	444,000	437,500	406,800	370,100	351,500	330,900
5	161,900	168,300	187,900	217,300	237,000	397,000	444,200	436,900	404,600	367,600	351,300	328,700
7	164,500	168,100	189,200	218,700	237,700	406,200	444,100	435,400	402,700	365,300	349,300	325,500
9	166,100	168,300	190,200	219,900	238,600	412,900	444,100	433,500	400,800	363,500	348,400	322,500
11	167,100	168,300	195,300	221,400	260,200	418,900	444,100	431,500	399,100	362,200	349,700	319,300
13	167,900	168,900	199,400	222,300	301,100	424,000	443,800	429,700	397,500	360,300	350,500	315,700
15	168,200	169,600	201,800	224,000	314,900	428,100	443,100	427,900	395,200	357,600	349,100	312,100
17	168,100	170,000	203,400	225,500	323,400	431,100	442,100	426,300	392,700	354,900	347,300	309,000
19	167,700	171,300	204,900	227,000	330,400	433,500	440,900	424,500	390,100	352,000	345,300	305,700
21	167,600	172,200	206,300	228,600	341,600	435,100	439,700	422,400	387,500	348,900	342,400	302,700
23	167,600	176,600	207,800	229,900	350,400	437,500	438,900	420,200	384,800	345,900	339,600	299,800
25	167,700	178,900	209,300	231,200	356,200	439,700	438,500	417,900	381,800	343,100	336,800	296,800
27	167,700	180,600	210,800	232,400	361,000	441,200	438,200	415,500	378,600	340,300	334,700	294,100
29	168,000	183,000	212,300	233,600	366,900	442,300	438,300	413,000	375,400	338,700	333,700	291,100
31	168,100	------	213,700	234,600	------	443,300	------	410,500	------	343,200	332,700	------

GILA RIVER AT COOLIDGE DAM, ARIZ.

LOCATION.—Water-stage recorder in SW¼ sec. 17, T. 3 S., R. 18 E., unsurveyed, 1,200 feet below Coolidge Dam (formerly erroneously published as 600 feet below Coolidge Dam). Zero of gage is 2,309.5 feet above mean sea level.

DRAINAGE AREA.—12,900 square miles.

RECORDS AVAILABLE.—April 1914 to September 1932. July 1899 to November 1905 at station 8 miles upstream, below San Carlos River. August 1910 to February 1911 at station 9 miles upstream, above San Carlos River.

EXTREMES.—Maximum discharge during year, 980 second-feet July 24 (gage height, 5.94 feet); no flow on various days.

1914–28: Maximum discharge, 130,000 second-feet Jan. 27, 1916; no flow for various periods.

1929–32: Maximum discharge, 1,020 second-feet July 20, 1931; no flow various days of each year.

REMARKS.—Records good. Discharge regulated by Coolidge Dam after Nov. 15, 1928.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	96	83	1	0	1	51	597	424	597	746	6	683
2	48	92	0	0	0	88	614	413	620	694	186	671
3	4	103	0	0	0	89	631	371	620	648	452	620
4	4	122	0	0	0	92	631	382	574	569	580	637
5	3	128	0	0	0	98	637	530	513	603	563	782
6	3	134	0	0	4	94	648	524	507	603	558	793
7	3	134	0	0	3	98	648	586	457	603	552	787
8	3	136	0	1	3	101	643	637	403	591	541	787
9	3	141	0	2	0	105	631	643	413	614	546	787
10	3	143	0	1	1	101	608	631	413	603	419	793
11	3	127	0	0	0	99	614	631	408	597	333	858
12	51	57	0	0	0	101	620	586	513	654	356	900
13	91	0	0	1	1	213	620	586	535	758	418	900
14	91	0	1	0	1	276	620	591	569	799	563	858
15	152	0	0	0	1	297	626	591	614	799	574	787
16	139	0	0	1	1	342	626	591	603	799	580	776
17	173	1	0	2	1	338	631	591	620	782	586	776
18	194	0	0	2	1	333	660	591	614	793	591	752
19	183	0	0	1	1	333	683	591	706	805	648	735
20	176	0	0	0	1	452	683	597	723	793	846	735
21	186	0	0	0	1	496	677	597	711	799	846	735
22	200	8	0	0	1	496	660	620	683	805	840	740
23	159	1	0	0	1	502	603	631	677	846	846	746
24	128	0	0	1	1	477	569	631	683	918	852	677
25	112	0	0	1	1	496	580	631	688	930	805	654
26	118	0	0	0	1	496	546	631	758	882	764	671
27	103	0	0	1	1	462	418	631	793	787	700	677
28	69	0	0	2	1	462	408	631	782	717	671	654
29	63	0	0	2	1	479	430	637	805	597	671	454
30	64	0	0	1	------	474	413	626	782	403	677	220
31	64	------	0	0	------	574	------	631	------	259	677	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	200	3	86.7	5,330
November	143	0	47.0	2,800
December	1	0	.1	4
January	2	0	.6	38
February	4	0	1.0	58
March	574	51	294	18,100
April	683	413	599	35,700
May	643	371	580	35,700
June	805	403	613	36,500
July	930	259	703	43,200
August	852	6	589	36,200
September	900	220	722	42,900
The year	930	0	353	257,000

GILA RIVER AT WINKELMAN, ARIZ.

LOCATION.—In NW¼ sec. 24, T. 5 S., R. 15 E., at highway bridge at Winkelman, 1 mile above San Pedro River.
DRAINAGE AREA.—13,300 square miles.
RECORDS AVAILABLE.—September 1917 to June 1918. Discharge measurements only, December 1928 to September 1932.
REMARKS.—Principal discharge regulated at Coolidge Dam, 30 miles upstream.

Discharge measurements, in second-feet, 1931–32

Oct. 6	13.0	Jan. 19	25.7
Nov. 10	152	Feb. 2	15.0
Nov. 30	18.4	Feb. 25	45.0
Dec. 21	18.1	Mar. 9	120
Jan. 5	20.4		

GILA RIVER AT KELVIN, ARIZ.

LOCATION.—Water-stage recorder in NW¼ sec. 12, T. 4 S., R. 13 E., at Kelvin, 15 miles below San Pedro River and 15 miles above Ashurst-Hayden Dam.

DRAINAGE AREA.—18,300 square miles.

RECORDS AVAILABLE.—January 1911 to September 1932.

EXTREMES.—Maximum discharge during year, 12,800 second-feet Oct. 2 (gage height, 7.5 feet); minimum, 48 second-feet Nov. 20.

1911–32: Maximum discharge, about 132,000 second-feet Jan. 20, 1916 (gage height, 19.5 feet); discharge, less than 1 second-foot in summer of various years prior to 1929.

REMARKS.—Records good. Diversions for irrigation above station. Discharge largely regulated by storage in San Carlos Reservoir after Nov. 15, 1928.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	348	100	144	109	104	216	695	474	617	984	961	707
2	3,580	96	134	96	114	312	695	457	573	1,100	422	707
3	910	104	144	96	114	319	695	448	603	742	380	683
4	477	109	144	149	96	612	683	387	617	595	661	661
5	312	139	124	160	88	551	661	430	553	514	803	719
6	213	160	109	134	88	402	672	524	533	563	755	829
7	184	166	96	100	84	326	661	494	52[illegible]	595	755	843
8	172	178	100	84	84	291	661	584	43[illegible]	628	719	829
9	144	207	124	84	200	271	661	584	393	695	765	803
10	124	178	3,090	92	3,400	239	650	595	40[illegible]	628	1,770	829
11	104	213	1,250	88	2,570	219	661	573	40[illegible]	628	1,480	829
12	81	207	326	104	690	201	650	573	40[illegible]	672	743	895
13	65	144	219	139	330	172	639	543	49[illegible]	755	595	909
14	144	114	149	226	219	283	639	553	533	909	595	909
15	166	100	149	291	207	394	650	524	563	869	719	816
16	226	80	154	402	394	425	628	543	58[illegible]	843	672	755
17	226	80	160	394	434	442	628	563	59[illegible]	803	661	779
18	264	70	160	291	386	442	628	573	58[illegible]	803	628	743
19	284	65	154	251	581	442	672	573	573	803	617	743
20	284	55	149	226	590	442	695	533	63[illegible]	791	719	707
21	271	386	144	189	495	541	695	524	63[illegible]	779	816	743
22	277	970	134	160	340	541	731	553	65[illegible]	791	843	731
23	271	451	124	139	226	551	731	595	672	856	791	719
24	251	251	124	134	226	551	731	606	65[illegible]	978	895	719
25	189	201	109	129	195	532	617	606	65[illegible]	1,010	1,040	628
26	160	245	104	114	184	541	628	606	628	1,100	882	628
27	149	251	96	119	124	541	617	606	767	1,020	843	672
28	144	291	96	109	114	541	504	606	755	1,150	683	661
29	100	291	100	84	119	561	494	617	743	1,150	695	584
30	96	184	160	88	------	571	494	617	743	2,290	639	380
31	104	------	160	88	------	571	------	617	------	2,140	695	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	3,580	65	333	20,500
November	970	55	203	12,100
December	3,090	96	272	16,700
January	402	84	157	9,660
February	3,400	84	441	25,400
March	612	172	421	25,900
April	731	494	649	38,600
May	617	387	551	33,900
June	767	396	584	34,800
July	2,290	514	909	55,900
August	1,770	380	782	48,100
September	909	380	739	44,000
The year	3,580	55	503	366,000

GILA RIVER AT ASHURST-HAYDEN DAM, NEAR FLORENCE, ARIZ.

LOCATION.—Water-stage recorder installed Apr. 12, 1932, in sec. 8, T. 4 S., R. 11 E., at Ashurst-Hayden Dam, 10 miles northeast of Florence. Prior to Apr. 12, 1932, a chain gage set to same datum was used at same location.

DRAINAGE AREA.—18,600 square miles.

RECORDS AVAILABLE.—July 1923 to September 1932, gage heights only.

EXTREMES.—Maximum stage during year, 2.5 feet Oct. 2; no flow over dam on many days.

1923–32; Maximum stage, 8.0 feet Sept. 28, 1926; no flow over dam on many days each year.

REMARKS.—Florence-Casa Grande Canal diverts water at this dam. Other diversions for irrigation upstream. Flow largely regulated by storage in San Carlos Reservoir. A considerable quantity of water is passed through sluice gates in dam. Gage-height record furnished by United States Indian Service.

Gage height, in feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	July	Aug.	Sept.
1								0.53	
2	1.15						0.19	.15	
3	.60						.12	.01	0.01
4	.40					0.35	.04	.04	
5	.20					.25	.02	.01	
6						.10	.01	.01	.01
7						[a].05		.04	
8							.01		
9							.04	.01	
10			1.10		1.10			.53	
11			.75		1.10			.53	
12			.55		.60			.06	
13			.40		.50				
14			.35	0.05	.35		.01	.01	
15			.25	.15	.25			.01	
16			[a].20	.15	.40				.01
17				.30	.35				
18					.30		.02	.02	
19					.40				
20					.45				
21		[a]0.35			.40				
22		.60			.30				
23		.45			.25			.08	
24		.35			.15			.10	
25		.30			[a].10			.40	
26		.25					.19	.53	
27		.25					.23	.53	.01
28		.30					.14	.16	
29		.30					.26	.06	.06
30		[a].25					.35	.04	
31							.42	.01	

[a] Mean height for part of day only; water not over crest of dam full 24 hours.

NOTE.—Record prior to Apr. 9 is computed from two or more chain-gage readings a day. Record after Apr. 9 is computed from recorder graph. Except as noted figures show mean height of water over crest of dam for 24 hours, although on many days water was below crest for part of day. Water below crest during months omitted and on days for which no height is shown.

Record furnished by United States Indian Service.

GILA RIVER AT GILLESPIE DAM, ARIZ.

LOCATION.—Water-stage recorder in SE¼NE¼ sec. 28, T. 2 S., R. 5 W., at Gillespie Dam, 8 miles below Hassayampa River. Zero of present gage is 5 feet below average elevation of crest of dam and is 748.8 feet above mean sea level. Zero of gage lowered 5.00 feet July 23.

DRAINAGE AREA.—49,700 square miles.

RECORDS AVAILABLE.—August 1921 to September 1932.

EXTREMES.—Maximum discharge during year, 44,500 second-feet Feb. 11 (height over crest of dam, 4.47 feet); no flow on many days.

1921–32: Maximum discharge, 70,000 second-feet Dec. 28, 1923 (height over crest of dam, 6.0 feet); no flow for various periods each year.

REMARKS.—Records good. Gillespie Canal diverts water at this dam and is not included in this record. Other diversions for irrigation above station. Water passed through sluice gates is included in this record. During periods when water level is below crest of dam a small quantity not included in this record is released through a gate. Discharge partly regulated by storage reservoirs.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	Aug.
1	0	0	110	600	60	3,750	130	0	15
2	0	0	90	450	38	4,270	75	0	395
3	480	0	75	245	7	6,380	60	0	110
4	873	0	60	195	18	5,270	60	0	2
5	320	0	35	150	12	3,480	25	0	0
6	130	0	45	90	0	2,180	10	0	0
7	62	0	75	75	0	1,410	0	0	0
8	8	0	60	75	0	960	0	0	0
9	58	0	75	75	0	600	0	0	0
10	0	0	150	60	5,020	1,080	27	0	0
11	0	0	1,970	60	30,400	1,800	75	0	0
12	0	64	2,310	41	32,400	1,640	15	0	0
13	0	903	1,180	60	15,300	1,280	2	17	9
14	0	242	720	75	6,020	1,020	0	0	0
15	0	75	540	60	5,080	750	0	0	0
16	0	45	420	60	4,940	510	0	0	0
17	0	35	266	75	4,710	345	0	0	0
18	0	35	220	60	3,950	330	0	0	0
19	0	25	195	45	6,390	288	0	0	0
20	0	8	170	35	8,910	643	0	0	0
21	0	19	170	14	7,230	1,200	0	0	0
22	0	117	208	10	5,090	2,750	15	0	0
23	0	818	270	7	4,120	1,590	23	0	0
24	0	1,290	320	11	3,530	799	0	0	0
25	0	860	425	45	3,200	434	0	0	0
26	0	480	510	35	2,490	270	1	0	0
27	0	252	450	35	2,490	220	0	0	0
28	0	170	320	26	2,720	579	0	0	0
29	0	130	220	50	3,160	630	0	0	0
30	0	110	150	75	-------	345	0	0	0
31	0	-------	150	60	-------	135	-------	0	0

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	873	0	62.3	3,830
November	1,290	0	189	11,300
December	2,310	35	386	23,700
January	600	7	95.3	5,860
February	32,400	0	5,420	312,000
March	6,380	195	1,520	93,400
April	130	0	17.3	1,030
May	17	0	.5	34
August	395	0	17.1	1,050
The year	32,400	0	623	452,000

NOTE.—No flow during months omitted.

GILA RIVER NEAR DOME, ARIZ.

LOCATION.—Water-stage recorder in SW¼ sec. 4, T. 8 S., R. 21 W., 3 miles west of Dome and 18 miles above mouth of Gila River.

DRAINAGE AREA.—58,100 square miles.

RECORDS AVAILABLE.—May 1929 to September 1932. October 1903 to December 1906 at a station 4 miles upstream.

EXTREMES.—Maximum discharge during year, 20,700 second-feet Feb. 15 (gage height, 16.75 feet); no flow during part of year.

1929–32: Maximum discharge, that of Feb. 15, 1932; no flow during part of each year.

Maximum mean daily discharge (estimated), 200,000 second-feet Jan. 22, 1916.

REMARKS.—Records good. Diversions for irrigation above station. Regulation by storage reservoirs upstream.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	0	0	78	110	0	1,840	297	7	1
2	0	0	40	73	0	1,890	402	6	1
3	0	0	15	49	0	2,060	358	6	1
4	0	0	2	31	0	2,510	281	6	1
5	0	0	0	47	0	2,970	243	6	1
6	0	0	0	160	0	4,430	202	5	1
7	0	0	0	94	0	3,590	176	5	1
8	0	7	0	60	0	2,700	152	5	1
9	0	17	0	38	0	2,020	129	4	1
10	0	0	0	22	0	1,530	107	4	1
11	0	0	0	13	0	1,200	93	4	1
12	0	0	0	6	0	945	78	3	1
13	1	0	0	1	1,350	783	68	3	1
14	1	0	232	0	5,780	945	62	3	1
15	0	0	747	0	16,800	1,320	55	3	1
16	0	0	531	0	12,200	1,180	46	3	1
17	0	0	376	0	4,510	949	40	2	1
18	0	0	283	0	4,060	805	36	2	0
19	0	0	219	0	3,840	694	32	2	0
20	0	0	175	0	3,560	564	28	2	0
21	0	0	115	0	3,120	463	25	2	0
22	0	0	65	0	4,730	399	22	2	0
23	0	0	43	0	5,760	339	18	2	0
24	0	0	28	0	4,640	339	15	2	0
25	0	0	17	0	3,730	716	13	2	0
26	0	0	8	0	3,390	1,210	10	2	0
27	0	36	2	0	2,950	981	9	2	0
28	0	298	27	0	2,500	712	8	2	0
29	0	204	57	0	2,020	573	8	2	0
30	0	131	119	0	------	439	8	2	0
31	0	------	143	0	------	339	------	2	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	1	0	0.1	4
November	298	0	23.1	1,370
December	747	0	107	6,590
January	160	0	22.7	1,400
February	16,800	0	2,930	168,000
March	4,430	339	1,340	82,200
April	402	8	101	5,990
May	7	2	3.3	204
June	1	0	.6	34
The year	16,800	0	367	266,000

NOTE.—No flow during months omitted.

SAN FRANCISCO RIVER NEAR GLENWOOD, N.MEX.

LOCATION.—Water-stage recorder in SW¼SW¼ sec. 35, T. 11 S., R. 20 W., 1½ miles south of Glenwood and 1¾ miles below mouth of Whitewater Creek.

RECORDS AVAILABLE—October 1930 to February 1932. Records for 1927 to 1930 published by State engineer.

EXTREMES.—Maximum discharge during year ending Sept. 30, 1931, about 4,400 second-feet Sept. 16 (gage height, 8.16 feet); minimum, 16 second-feet Dec. 31.

Maximum discharge during year ending Sept. 30, 1932, about 4,100 second-feet (gage height, about 7.0 feet); minimum not determined.

REMARKS.—Records fair except those estimated, which are poor.

Discharge, in second-feet, 1930–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1930-31												
1	24	26	29	19	e 27	32	65	e 380	31	32	164	63
2	24	26	29	20	e 28	29	69	e 350	30	22	95	46
3	23	25	28	26	e 29	29	76	e 320	30	105	93	41
4	23	24	30	26	e 30	29	72	e 270	29	150	194	35
5	23	24	29	21	e 31	28	67	e 210	28	39	186	38
6	24	25	26	19	32	26	66	189	28	31	107	281
7	23	25	28	19	e 30	26	63	169	28	29	162	67
8	23	25	26	20	e 30	25	65	149	27	24	e 200	76
9	23	25	27	21	e 30	26	62	135	26	24	e 300	66
10	24	25	29	26	e 30	26	58	116	26	22	262	62
11	28	25	26	24	e 30	26	54	98	25	21	164	53
12	29	24	24	21	e 70	26	54	90	25	21	154	46
13	28	24	24	21	e 200	28	53	84	24	20	152	40
14	26	26	24	21	e 400	28	60	80	24	20	122	62
15	25	30	24	22	e 450	29	65	81	24	21	142	79
16	24	30	22	24	e 280	29	55	90	24	29	144	356
17	24	29	21	23	e 210	30	70	81	23	62	144	181
18	24	33	21	23	e 170	31	110	74	23	34	159	165
19	26	40	18	21	e 100	33	170	67	23	38	233	552
20	25	32	18	21	34	37	150	58	23	35	105	137
21	25	28	18	21	35	38	130	47	22	40	100	e 120
22	25	29	18	21	35	40	120	41	23	30	147	e 120
23	25	30	18	22	35	43	230	38	22	29	97	e 110
24	26	31	18	24	33	46	200	41	22	27	95	e 110
25	26	32	18	26	32	51	150	43	22	43	79	e 110
26	27	31	18	27	33	59	130	44	21	38	66	e 100
27	28	31	22	26	32	60	180	41	21	34	54	e 100
28	27	34	24	29	32	59	360	37	21	33	48	e 120
29	26	38	20	29	-------	61	460	34	23	62	42	e 150
30	26	33	21	27	-------	63	420	31	40	83	45	e 200
31	26	-------	19	26	-------	65	-------	31	-------	130	54	-------

e Estimated by hydrographic comparison.

Discharge, in second-feet, of San Francisco River near Glenwood, N.Mex., 1930–32—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Aug.	Sept.
1931–32											
1	a 130	36	48	47	54				45	a 120	
2	a 100	35	48	49	68				40	118	
3	a 80	35	46	53	62				38	86	
4	a 70	36	40	60	50				38	57	
5	a 65	37	39	63	46				37	68	
6	62	37	38	51	59				34	50	
7	59	37	44	48	90				33	53	
8	54	40	52	47	517				30	103	
9	51	45	60	49	740				30	108	
10	51	45	90	56	a 1,000				28	71	33
11	48	44	72	57	a 1,500				28	61	
12	47	42	59	54	a 1,000				28	50	
13	48	43	48	54	552				27	48	
14	48	43	41	a 80	552				27	77	
15	48	40	32	a 70	561				27	53	
16	48	40	35	a 65	500				27	58	
17	47	44	40	a 55	405				26	46	
18	47	40	46	46	429				26	44	
19	48	39	50	46	496				26		
20	53	39	59	53	666				26		
21	61	37	72	53					25		
22	54	108	72	50							
23	49	84	83	47		449					
24	46	48	68	38	a 450						
25	44	48	62	33							
26	41	65	62	26					a 30		
27	39	65	62	28				63			
28	38	84	63	33	a 600		194	60			
29	38	92	68	32				59			
30	37	56	66	32				54			
31	38		52	35				48			

Month	Maximum	Minimum	Mean	Run-off in acre-feet
1930–31				
October	29	23	25.2	1,550
November	40	24	28.7	1,710
December	30	18	23.1	1,420
January	29	19	23.1	1,420
February	450	27	89.6	4,970
March	65	25	37.4	2,300
April	460	53	129	7,700
May	380	31	114	6,980
June	40	21	25.3	1,500
July	150	20	42.8	2,630
August	300	42	133	8,150
September	552	35	123	7,310
The year	552	18	65.8	47,600
1931–32				
October	130	37	54.5	3,350
November	108	35	49.5	2,940
December	90	32	55.4	3,410
January	80	26	48.7	3,000
February	1,500	46	471	27,100
June	45		30.5	1,820

a Estimated by hydrographic comparison.

NOTE.—No records during July 1932.

SAN FRANCISCO RIVER AT CLIFTON, ARIZ.

LOCATION.—Water-stage recorder in SW¼SE¼ sec. 30, T. 4 S., R. 30 E., at Railroad Boulevard Bridge, at Clifton. Zero of gage is ? 432.3 feet above mean sea level.

DRAINAGE AREA.—2,790 square miles.

RECORDS AVAILABLE.—July 1927 to September 1932. Fragmentary record October 1910 to July 1918 at several different points within 2 miles upstream.

EXTREMES.—Maximum discharge during year, 8,100 second-feet Feb. 10 (gage height, 12.0 feet); minimum, 40 second-feet June 29 (gage height, 2.24 feet).

1927–32: Maximum discharge, that of Feb. 10, 1932; minimum, 15 second-feet June 24, 1929 (gage height, 2.74 feet).

Minimum known discharge, 2 second-feet June 29, 1917.

REMARKS.—Records good. Diversions for irrigation and municipal supply above station.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,350	80	175	161	125	2,860	770	258	94	51	540	170
2	771	80	153	151	144	2,530	742	253	88	79	461	145
3	556	78	147	151	151	1,950	776	263	83	69	199	122
4	437	78	142	163	149	1,700	804	279	79	57	148	105
5	326	78	132	163	138	1,370	798	286	78	52	130	94
6	265	78	129	147	136	1,160	776	292	74	51	106	89
7	224	77	140	136	155	1,100	737	279	72	63	109	81
8	196	82	157	127	342	1,070	683	253	67	69	162	79
9	177	97	163	127	1,030	1,090	624	230	65	61	800	73
10	159	100	712	131	5,630	1,090	567	219	64	93	1,000	70
11	144	100	487	131	5,370	1,000	518	224	60	201	223	66
12	127	98	297	131	2,590	900	485	228	58	130	160	63
13	118	100	222	134	1,680	843	462	221	57	102	130	61
14	109	102	181	179	1,360	781	458	209	54	95	111	59
15	104	97	169	175	1,150	742	467	213	52	114	185	58
16	102	95	155	149	1,090	704	471	217	49	141	122	58
17	93	97	151	136	969	704	476	211	48	169	108	58
18	92	100	151	134	1,130	704	471	211	48	150	102	59
19	98	93	161	131	1,340	872	449	209	48	100	88	59
20	107	88	175	144	1,630	1,090	433	209	47	95	134	57
21	125	90	192	157	1,340	1,170	433	205	46	90	401	56
22	118	473	212	155	1,100	1,050	513	188	45	83	397	66
23	104	379	217	149	981	917	499	176	47	80	334	68
24	97	232	214	147	923	792	405	167	47	179	577	121
25	92	186	196	142	934	776	355	153	44	249	460	130
26	90	217	190	129	1,040	843	342	141	42	180	593	114
27	85	235	188	123	1,190	912	329	132	43	173	281	94
28	82	235	183	123	1,290	883	320	122	41	141	242	79
29	80	248	188	122	1,660	889	306	112	44	219	580	74
30	80	212	194	120	-------	872	279	106	44	726	286	78
31	80	-------	175	125	-------	804	-------	101	-------	528	210	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	1,350	80	213	13,100
November	473	77	144	8,540
December	712	129	205	12,600
January	179	120	142	8,710
February	5,630	125	1,270	72,900
March	2,860	704	1,100	67,800
April	804	279	525	31,200
May	292	101	205	12,600
June	94	41	57.6	3,430
July	726	51	148	9,100
August	1,000	88	303	18,600
September	170	56	83.5	4,970
The year	5,630	41	363	264,000

BROWN CANAL NEAR SOLOMONSVILLE, ARIZ.

LOCATION.—Water-stage recorder in SE¼SE¼ sec. 30, T. 6 S., R. 28 E., a quarter of a mile below intake and 8 miles northeast of Solomonsville (formerly erroneously published as 10 miles east of Solomonsville).

RECORDS AVAILABLE.—June 1914 to September 1915, December 1920 to September 1932 (discontinued).

REMARKS.—Records good. Discharge estimated Oct. 11–21, Dec. 20–26, Apr. 15–17, July 31, Aug. 1–7, 21–24, 26–29. Intake on right side of Gila River in SE¼ sec. 30, T. 6 S., R. 28 E. Water used for irrigation east of Solomonsville.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		4.0	0.7	5.1	5.9	0.8	19	12	7.0	2.5	13	13
2		4.1	1.2	5.2	6.2	.3	19	11	7.0	9.1	12	13
3		4.2	.7	5.4	6.7	11	14	12	7.4	17	11	13
4		4.1	.7	4.9	6.7	19	15	14	8.0	18	10	11
5		4.0	2.6	3.1	6.5	20	15	12	8.1	16	9	11
6	0	4.2	6.7	3.1	6.2	14	14	11	7.8	13	8	21
7		4.2	8.5	3.0	6.4	8.1	13	9.1	7.6	23	10	26
8		4.5	12	2.8	8.1	7.2	16	7.8	7.2	11	15	27
9		5.1	13	2.9	9.1	6.9	18	9.8	6.7	11	20	26
10		5.0	16	3.2	18	7.6	19	11	5.4	5.1	14	18
11		4.7	4.3	3.7	13	6.9	20	11	4.7	8.4	27	17
12		4.5	5.0	4.5	.2	5.3	17	11	5.3	14	7.9	15
13		4.6	5.5	5.8	0	4.2	21	15	5.8	17	9.6	14
14		4.6	3.9	3.5	0	3.8	26	16	4.1	11	16	15
15		4.7	3.6	1.2	0	4.2	20	15	2.4	9	25	16
16	4	5.2	4.9	.6	0	3.4	20	15	2.4	10	12	15
17		5.3	3.1	.2	0	3.8	15	14	2.3	20	23	15
18		5.1	2.4	.1	0	4.5	15	15	3.0	17	20	15
19		4.7	4.7	.1	0	1.8	14	16	2.8	16	19	15
20		4.7	4	0	.1	0	15	14	2.6	16	14	15
21		5.3	4	.7	.2	0	11	12	2.4	16	15	14
22	4.0	9.1	4	3.0	.2	6.1	13	12	3.0	6.2	10	13
23	4.1	.8	4	3.2	.9	16	13	11	3.3	9.9	10	14
24	3.9	1.7	4	4.5	.8	15	12	12	3.0	13	15	14
25	3.9	1.0	4	5.3	.7	11	12	9.1	3.6	17	15	16
26	4.0	1.2	4	5.0	.6	11	12	8.1	2.6	15	15	5.7
27	3.8	9.1	4.5	5.2	.7	14	12	8.1	3.1	11	15	9.5
28	3.6	19	4.6	5.7	1.0	16	13	8.1	2.3	12	10	8.7
29	3.7	19	4.7	5.3	.4	17	13	8.0	2.9	21	10	8.4
30	3.8	9.0	5.1	5.4	------	17	14	7.4	2.2	17	20	6.7
31	3.8	------	5.1	5.9	------	18	------	7.3	------	14	18	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	4.1	0	2.66	164
November	19	.8	5.53	331
December	16	.7	4.89	300
January	5.9	0	3.47	213
February	18	0	3.40	196
March	20	0	8.84	543
April	26	11	15.7	932
May	16	7.3	11.4	704
June	8.1	2.2	4.53	270
July	23	2.5	13.4	826
August	27	7.9	14.5	890
September	27	5.7	14.7	875
The year	27	0	8.60	6,240

SAN SIMON CREEK NEAR SAN SIMON, ARIZ.

LOCATION.—Water-stage recorder in SW¼ sec. 10, T. 14 S., R. 31 E., 4½ miles southeast of San Simon.

DRAINAGE AREA.—803 square miles.

RECORDS AVAILABLE.—June 1931 to September 1932. August 1919 to September 1925 at a station 3½ miles downstream.

EXTREMES.—Maximum discharge during year, 1,000 second-feet July 25 (gage height, 7.3 feet); no flow during most of year.

1919–25, 1931–32: Maximum discharge, 5,350 second-feet July 21, 1923; no flow greater part of each year.

REMARKS.—Records fair. Discharge estimated Oct. 1. Diversions for irrigation above station.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	July	Aug.	Sept.
1	6	0.1	0	0	0	0	0.6	4	0
2	0	.1	0	0	0	0	30	0	0
3	0	.1	0	0	0	0	0	0	0
4	0	.1	0	0	0	3	0	12	0
5	0	.2	0	.5	0	3	0	2	0
6	0	.2	0	.2	0	2	0	2	0
7	0	.1	0	.1	0	.9	0	.3	0
8	0	0	0	0	0	0	0	.1	0
9	0	.1	0	0	0	0	.1	21	0
10	0	.2	.2	0	0	0	0	3	0
11	0	.2	.1	0	0	0	0	.8	0
12	0	.3	0	0	0	0	0	0	0
13	0	.3	0	0	0	0	0	0	0
14	0	.2	0	.3	0	0	0	9	0
15	0	.2	0	.2	0	0	0	.5	0
16	0	.2	0	.2	0	0	0	0	0
17	0	.2	0	0	0	0	0	0	0
18	0	.2	0	0	0	0	0	0	0
19	0	.2	0	0	.3	0	0	0	0
20	0	.2	0	0	.1	0	0	0	0
21	0	.2	0	0	0	0	0	0	0
22	0	.3	0	0	0	0	3	0	0
23	0	.2	0	0	0	0	3	40	0
24	0	.2	0	0	0	0	16	1	.9
25	0	.2	0	0	0	0	48	0	0
26	0	.1	0	0	0	0	2	0	0
27	0	0	0	0	0	0	0	0	.1
28	.1	0	0	0	0	0	0	0	0
29	.2	0	0	0	0	0	55	0	0
30	.1	0	0	0	------	0	4	0	0
31	0	------	0	0	------	0	0	0	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	6	0	0.21	12.7
November	.3	0	.15	9.1
December	.2	0	.01	.6
January	.5	0	.05	3.0
February	.3	0	.01	.8
March	3	0	.29	17.7
July	55	0	5.22	321
August	40	0	3.09	190
September	.9	0	.03	2.0
The period	55	0	.77	557

NOTE.—No flow during months omitted.

SAN SIMON CREEK NEAR SOLOMONSVILLE, ARIZ.

LOCATION.—Water-stage recorder in NW¼NE¼ sec. 25, T. 7 S., R. 26 E., 1 mile southwest of Solomonsville and 2½ miles above mouth. Zero of gage is 2,960.3 feet above mean sea level.

DRAINAGE AREA.—2,280 square miles.

RECORDS AVAILABLE.—June 1931 to September 1932.

EXTREMES.—Maximum discharge during year, 8,800 second-feet July 30 (gage height, 14.5 feet); no flow on many days.

1931–32: Maximum discharge, 27,500 second-feet Aug. 9, 1931 (gage height, 19.0 feet); no flow on many days each year.

REMARKS.—Records good. Discharge estimated Aug. 17. Diversions for irrigation above station. Most of low flow is waste water from San Jose Canal.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,610	22	0	1	5	13	5	13	0	0	0	1
2	363	15	0	1	6	8	8	13	0	0	0	1
3	14	11	0	0	4	8	12	6	0	0	0	2
4	1	13	0	0	7	10	15	3	0	0	0	0
5	2	14	0	0	9	6	12	9	0	0	2	0
6	5	13	0	0	10	15	10	15	1	25	2	0
7	8	12	0	0	18	8	6	12	0	2	0	1
8	7	10	1	0	21	2	6	14	0	1	503	0
9	10	8	0	0	25	2	1	20	0	389	45	0
10	12	9	14	0	17	4	8	41	0	16	8	0
11	12	11	8	0	17	6	4	39	1	13	15	0
12	10	12	1	0	20	10	1	34	0	5	2	0
13	8	9	0	0	20	12	4	23	0	0	9	0
14	10	6	0	1	29	5	13	23	0	0	4	0
15	9	7	0	3	31	3	11	22	0	0	1	0
16	8	8	0	1	29	1	6	13	0	0	5	0
17	8	8	0	0	14	2	15	5	0	0	1	0
18	8	10	0	0	5	2	13	4	0	0	0	0
19	7	8	0	0	25	2	12	5	0	0	0	0
20	2	9	2	0	10	3	6	5	0	0	0	0
21	0	8	2	0	8	3	10	3	0	0	0	0
22	1	10	0	0	8	0	17	6	0	0	1	0
23	0	6	0	0	2	1	9	3	0	0	7	0
24	7	0	0	0	3	4	14	1	0	0	10	0
25	8	0	0	0	6	9	14	1	0	319	0	0
26	10	0	0	0	13	8	20	0	0	70	13	0
27	9	0	0	1	12	1	17	0	0	20	28	0
28	7	0	0	5	13	0	8	0	0	524	23	0
29	9	0	0	8	14	5	7	1	0	368	8	0
30	17	0	0	7	------	10	7	1	0	1,160	11	0
31	19	------	1	7	------	8	------	0	------	80	7	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	1,610	0	71.0	4,370
November	22	0	8.0	474
December	14	0	.9	58
January	8	0	1.1	69
February	31	2	13.8	795
March	15	0	5.5	339
April	20	1	9.7	577
May	41	0	10.8	664
June	1	0	.1	4
July	1,160	0	96.5	5,930
August	503	0	22.7	1,400
September	2	0	.2	10
The year	1,610	0	20.2	14,700

SAN CARLOS RIVER NEAR PERIDOT, ARIZ.

LOCATION.—Water-stage recorder in sec. 7, T. 2 S., R. 19 E., unsurveyed, on San Carlos Indian Reservation, at railroad bridge at head of San Carlos Reservoir, 2 miles south of Peridot.

DRAINAGE AREA.—1,070 square miles.

RECORDS AVAILABLE.—March 1929 to September 1932. Fragmentary record August 1910 to January 1911 and April 1914 to September 1915 at a station 5½ miles downstream.

EXTREMES.—Maximum discharge during year, 12,000 second-feet Feb. 10 (gage height, 8.3 feet); minimum, 0.5 second-foot June 30.

1929–32: Maximum discharge, that of Feb. 10, 1932; no flow on several days of some years.

REMARKS.—Records good. Discharge estimated Aug. 8–17, 25–31. Minor diversions for irrigation above station.

Discharge, in second-feet, 1932–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	26	10	54	34	22	83	13	11	2	1	55	3
2	76	9	38	27	20	105	14	9	2	1	15	2
3	13	9	34	28	20	99	13	9	2	1	7	2
4	13	10	28	26	18	121	13	9	2	1	5	2
5	13	10	24	28	22	148	12	8	2	1	4	2
6	9	10	21	27	21	86	8	7	2	3	170	2
7	8	10	24	24	20	80	9	7	2	154	270	2
8	7	10	22	26	23	70	9	7	2	139	15	2
9	8	9	27	26	866	67	9	8	2	12	150	2
10	8	8	1,450	24	6,740	59	9	9	2	7	40	2
11	8	9	570	22	2,670	49	9	8	2	6	20	2
12	6	10	200	18	580	47	9	7	2	5	10	2
13	6	13	122	21	319	36	9	7	2	4	8	2
14	7	12	99	108	195	32	11	7	2	4	6	2
15	7	13	74	128	133	32	10	8	2	4	5	2
16	7	15	72	80	140	27	10	8	2	4	4	2
17	9	15	67	102	246	27	10	8	2	3	3	1
18	9	13	56	89	186	26	9	7	2	3	8	1
19	9	11	56	89	588	26	8	7	2	3	16	1
20	16	13	59	115	895	26	6	7	2	2	4	1
21	13	567	72	89	264	26	7	6	2	2	3	1
22	11	400	89	54	188	24	13	6	1	2	20	1
23	10	89	99	43	122	21	12	6	2	18	45	1
24	10	64	92	38	99	20	11	5	1	10	5	1
25	10	54	69	32	80	18	10	4	1	2	5	1
26	9	67	61	32	72	18	9	4	1	2	5	2
27	9	122	51	28	64	18	10	4	1	2	5	2
28	9	330	40	27	69	14	12	4	1	2	5	2
29	9	178	36	27	69	13	12	4	1	50	4	2
30	9	74	45	26	------	14	12	3	1	70	4	2
31	10	------	49	24	------	14	------	3	------	145	3	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	76	6	12.1	742
November	567	8	72.1	4,290
December	1,450	21	123	7,540
January	128	18	47.2	2,900
February	6,740	18	509	29,300
March	148	13	46.6	2,870
April	14	6	10.3	611
May	11	3	6.7	411
June	2	1	1.7	103
July	154	1	21.4	1,320
August	270	3	29.6	1,820
September	3	1	1.7	103
The year	6,740	1	71.6	52,000

SAN PEDRO RIVER AT PALOMINAS, ARIZ.

LOCATION.—Water-stage recorder in SE¼ sec. 33, T. 23 S., R. 22 E., at bridge half a mile east of Palominas, 4 miles downstream from the international boundary, and 12 miles southwest of Bisbee.

DRAINAGE AREA.—991 square miles.

RECORDS AVAILABLE.—May 1930 to September 1932.

EXTREMES.—Maximum discharge during year, 6,000 second-feet Aug. 9; maximum gage height, 8.3 feet July 29; minimum discharge, 2 second-feet June 19, 25–28.

1930–32: Maximum discharge, 9,400 second-feet Aug. 7, 1930 (gage height, 9.75 feet); no flow June 29 and July 1, 1930.

REMARKS.—Records good. Discharge estimated Aug. 3, 4, 6–8, Sept. 5–8. No diversions above station in Arizona and probably none in Mexico.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	964	8	16	15	28	39	14	8	4	7	150	15
2	280	8	16	17	26	37	15	8	3	21	120	13
3	80	8	17	18	26	33	14	8	3	21	30	10
4	45	8	16	21	26	37	15	8	4	16	25	10
5	41	8	16	25	24	28	12	8	4	12	160	9
6	38	8	16	22	24	22	10	8	4	9	40	8
7	32	10	15	21	22	24	11	9	4	8	25	6
8	29	14	15	20	21	22	11	9	5	144	30	5
9	24	16	13	17	19	22	11	8	5	225	1,650	4
10	21	14	178	17	27	22	13	8	5	44	340	4
11	20	12	141	17	39	20	11	8	5	25	78	5
12	19	11	65	15	32	20	9	8	4	20	47	5
13	18	13	37	17	25	19	8	8	4	20	33	5
14	19	14	22	403	22	17	8	9	3	10	26	5
15	16	13	20	239	25	18	8	8	3	8	26	5
16	15	15	19	84	27	19	8	8	3	20	24	6
17	13	15	19	67	28	19	8	8	3	8	20	6
18	11	15	15	60	24	16	8	6	3	7	18	6
19	10	16	14	50	28	14	8	6	2	38	19	6
20	10	15	15	41	32	14	7	6	3	16	15	7
21	15	15	14	41	30	15	7	6	3	10	12	7
22	15	16	13	30	28	15	8	6	3	10	10	7
23	11	20	13	30	26	11	9	6	3	12	8	7
24	15	21	12	33	22	10	8	6	3	9	139	6
25	13	18	13	36	22	10	8	6	2	24	28	7
26	12	19	13	37	25	10	8	6	2	106	21	8
27	10	19	13	34	25	9	8	5	2	223	86	8
28	8	18	15	29	24	9	9	5	2	50	32	8
29	8	17	16	32	28	10	10	5	3	807	22	8
30	7	17	16	28	------	11	9	5	3	800	20	7
31	8	------	15	28	------	12	------	4	------	350	19	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	964	7	58.9	3,620
November	21	8	14.0	835
December	178	12	27.0	1,660
January	403	15	49.8	3,060
February	39	19	26.0	1,500
March	39	9	18.8	1,160
April	15	7	9.8	581
May	9	4	7.0	430
June	5	2	3.3	198
July	807	7	99.4	6,110
August	1,650	8	106	6,490
September	15	4	7.1	422
The year	1,650	2	35.9	26,100

SAN PEDRO RIVER AT CHARLESTON, ARIZ.

LOCATION.—Water-stage recorder in SW¼ sec. 35, T. 20 S., R. 21 E., unsurveyed, in Spanish land grant of San Juan de las Boquillas y Nogales, at Charleston dam site, 6 miles above Babocomari River and three quarters of a mile north of Charleston. Zero of gage is 3,923.0 feet above mean sea level.

DRAINAGE AREA.—1,480 square miles.

RECORDS AVAILABLE.—May 1928 to September 1932. Several stations have been maintained at various locations both upstream and downstream 1904–06, 1910–28.

EXTREMES.—Maximum discharge during year, 7,000 second-feet Aug. 9 (gage height, 7.5 feet); minimum, 5 second-feet Sept. 17.

1928–32: Maximum discharge, 24,500 second-feet Aug. 9, 1931 (gage height, 12.0 feet); minimum, 2 second-feet July 12, 1928, June 12, 1931.

Maximum stage known, 21.9 feet Sept. 28, 1926 (discharge, about 98,000 second-feet).

REMARKS.—Records good. Discharge estimated Dec. 12–29, Aug. 3, 4, 30, 31, Sept. 1–8. Diversions for irrigation above station.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,370	8	12	35	22	68	9	15	10	25	430	25
2	703	15	22	42	20	61	18	15	9	15	340	20
3	218	20	25	42	22	54	18	22	12	22	100	15
4	100	18	22	68	20	35	20	25	18	22	130	13
5	68	28	18	42	25	61	20	25	20	20	396	12
6	61	22	18	61	28	35	20	18	10	15	160	11
7	54	22	18	61	25	42	10	12	8	12	115	10
8	68	42	12	54	25	61	9	22	8	15	42	9
9	61	48	25	74	28	48	9	22	9	491	1,720	8
10	42	42	130	80	32	54	12	18	9	200	889	9
11	35	32	645	74	35	61	18	12	9	68	132	7
12	30	35	150	61	68	48	12	12	9	30	85	7
13	28	30	70	54	28	42	18	10	8	30	68	8
14	30	22	50	406	30	35	15	10	8	18	55	8
15	25	28	40	717	25	32	28	10	8	186	46	6
16	22	35	40	330	30	42	15	10	8	86	38	7
17	28	42	40	200	30	48	15	12	8	32	29	7
18	25	30	40	150	22	42	22	9	8	18	22	8
19	25	18	35	100	25	32	22	7	12	20	19	8
20	20	32	35	74	30	30	22	8	9	114	21	9
21	20	35	35	54	32	30	22	8	8	35	15	9
22	25	25	35	48	15	32	30	7	7	25	15	12
23	30	25	35	61	12	32	32	9	8	20	56	15
24	28	32	35	68	25	25	30	9	8	35	122	15
25	28	25	35	32	30	12	30	8	8	216	70	18
26	25	9	35	28	15	12	28	9	8	171	53	22
27	22	9	35	32	22	15	28	10	8	491	118	22
28	28	8	35	25	35	9	20	9	8	110	94	15
29	30	9	35	30	42	9	22	12	8	377	48	12
30	22	20	35	35	-------	9	20	18	7	1,540	35	12
31	20	-------	35	22	-------	18	-------	15	-------	588	30	-------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	1,370	20	106	6,530
November	48	8	25.5	1,520
December	645	12	59.1	3,630
January	717	22	102	6,270
February	68	12	27.5	1,580
March	68	9	36.6	2,250
April	32	9	19.8	1,180
May	25	7	13.2	809
June	20	7	9.3	551
July	1,540	12	163	10,000
August	1,720	15	177	10,900
September	25	6	12.0	712
The year	1,720	6	63.3	45,900

SAN PEDRO RIVER NEAR MAMMOTH, ARIZ.

LOCATION.—Water-stage recorder in NE¼ sec. 18, T. 8 S., R. 17 E., at highway bridge 1½ miles north of Mammoth.

DRAINAGE AREA.—3,850 square miles.

RECORDS AVAILABLE.—May 1931 to September 1932.

EXTREMES.—Maximum discharge during year, 19,400 second-feet Oct. 2 (gage height, 11.1 feet); no flow during part of year.

1931–32: Maximum discharge, that of Oct. 2, 1931; no flow during part of each year.

REMARKS.—Records fair. Discharge estimated Nov. 11–21, Dec. 2–9, Aug. 17–19, 28–31, Sept. 1. Diversions for irrigation above station.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	July	Aug.	Sept.
1	252	20	35	60	60	141	16	2	573	5
2	3,630	21	30	47	71	105	12	1	460	2
3	672	22	30	37	60	94	14	11	272	1
4	471	24	25	53	57	166	8	0	138	0
5	293	21	25	57	57	133	18	0	7	0
6	124	20	25	77	53	110	11	0	384	0
7	116	18	20	57	40	105	21	0	126	0
8	88	30	20	71	44	77	18	0	55	0
9	60	25	20	60	34	71	8	7	136	0
10	44	25	1,150	71	704	50	6	0	1,660	0
11	37	22	355	57	890	44	5	99	813	0
12	21	20	262	60	300	53	5	57	252	0
13	16	20	175	47	200	37	5	84	57	0
14	18	20	110	132	160	53	7	25	37	0
15	15	20	110	249	140	44	3	15	34	0
16	15	25	116	796	140	22	8	9	16	0
17	15	25	105	385	150	30	7	70	13	0
18	15	25	88	180	140	34	6	19	12	0
19	12	20	66	141	130	44	5	9	9	0
20	22	20	57	133	185	34	1	7	7	0
21	26	20	53	116	133	26	6	1	3	0
22	22	844	50	99	116	21	9	0	7	0
23	21	175	53	88	105	21	7	0	46	0
24	21	110	37	88	82	14	3	25	35	0
25	20	124	40	82	82	16	6	247	107	0
26	20	105	47	70	60	14	4	415	158	0
27	20	77	44	70	71	18	5	210	120	0
28	20	94	44	70	71	21	4	666	50	0
29	20	57	57	60	88	20	1	914	30	0
30	20	47	44	60	------	18	0	2,100	10	0
31	21	------	60	60	------	15	------	1,030	5	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	3,630	12	199	12,200
November	844	18	69.9	4,160
December	1,150	20	108	6,650
January	796	37	117	7,210
February	890	34	153	8,770
March	166	14	53.3	3,270
April	21	0	7.6	454
July	2,100	0	194	11,900
August	1,660	3	182	11,200
September	5	0	.3	16
The year	3,630	0	90.8	65,800

NOTE.—No flow during months omitted.

SAN PEDRO RIVER AT WINKELMAN, ARIZ.

LOCATION.—In SW¼ sec. 23, T. 5 S., R. 15 E., at mouth, 1 mile west of Winkelman.

DRAINAGE AREA.—4,720 square miles.

RECORDS AVAILABLE.—December 1928 to September 1932, discharge measurements only. April to August 1890, monthly discharge, published as "San Pedro River at Dudleyville, Ariz."

REMARKS.—Diversions for irrigation above station.

Discharge measurements, in second-feet, 1931–32

Oct. 26	39.2	May 9	12.6
Oct. 29	45.4	May 23	.9
Nov. 10	49.6	June 6	.5
Dec. 21	90.9	July 5	5.3
Jan. 18	196	July 18	24.8
Mar. 9	78.5	Aug. 20	53.0
Mar. 14	64.4	Sept. 2	25.8
Mar. 28	34.2	Sept. 13	1.3
Apr. 12	14.3	Sept. 27	119
Apr. 25	20.7		

ARAVAIPA CREEK NEAR FELDMAN, ARIZ.

LOCATION.—Water-stage recorder in NW¼ sec. 9, T. 7 S., R. 17 E., 6 miles above mouth and 6 miles southeast of Feldman.

DRAINAGE AREA.—535 square miles.

RECORDS AVAILABLE.—May 1931 to September 1932. April 1919 to September 1921 at station 5¾ miles downstream.

EXTREMES.—Maximum discharge during year, 6,300 second-feet Oct. 1 (gage height, 9.0 feet); minimum, 3 second-feet Sept. 2.

1931–32: Maximum discharge, that of Oct. 1, 1931; minimum, 3 second-feet July 24, 1931, Sept. 2, 1932.

A maximum discharge of 20,000 second-feet occurred Aug. 2, 1919.

REMARKS.—Records good. Diversions for irrigation above station.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	504	10	40	35	20	68	14	14	12	7	44	4
2	31	10	34	35	19	38	17	14	11	10	22	3
3	23	10	30	35	19	33	19	12	12	12	13	4
4	17	10	28	34	19	38	19	11	14	12	25	4
5	16	10	28	32	18	146	19	14	14	12	12	5
6	12	10	27	26	17	73	17	14	14	12	12	5
7	9	10	27	23	17	56	17	14	14	10	8	5
8	9	12	28	23	17	47	17	14	13	10	27	6
9	9	15	39	22	107	41	14	14	11	11	213	6
10	10	13	1,260	22	1,940	38	14	14	12	10	113	6
11	10	14	289	22	1,010	35	15	14	12	11	25	7
12	11	21	125	22	278	34	18	15	10	11	19	7
13	10	17	57	24	84	31	17	14	10	10	17	8
14	10	16	38	29	53	29	18	14	9	10	16	8
15	10	16	35	31	40	25	18	13	9	10	16	8
16	12	19	32	30	162	21	18	13	9	10	15	8
17	12	17	30	33	75	22	17	11	8	10	13	8
18	12	14	27	28	45	20	16	10	7	10	14	8
19	12	14	25	25	107	19	16	9	7	9	29	8
20	17	14	24	24	156	19	15	9	7	9	22	8
21	16	122	22	23	56	19	18	8	6	8	13	23
22	14	221	20	22	35	19	27	9	6	7	17	10
23	12	91	19	22	34	17	20	10	6	36	10	14
24	12	66	19	22	34	17	20	12	6	42	10	43
25	11	102	19	21	33	16	19	10	7	101	38	17
26	10	116	19	20	32	15	18	12	7	24	23	16
27	12	125	18	20	31	14	27	13	7	16	25	16
28	12	164	17	20	30	13	22	13	6	210	5	16
29	12	116	53	20	32	14	19	13	6	267	5	16
30	10	61	75	20	------	14	15	12	6	71	4	16
31	10	------	46	20	------	14	------	11	------	134	4	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	504	9	28.6	1,760
November	221	10	48.5	2,890
December	1,260	17	82.3	5,060
January	35	20	25.3	1,560
February	1,940	17	156	8,970
March	146	13	32.4	1,990
April	27	14	18.0	1,070
May	15	8	12.3	754
June	14	6	9.3	551
July	267	7	36.2	2,230
August	213	4	26.7	1,640
September	43	3	10.4	621
The year	1,940	3	40.1	29,100

SANTA CRUZ RIVER NEAR NOGALES, ARIZ.

LOCATION.—Water-stage recorder in NW¼ sec. 18, T. 24 S., R. 15 E., unsurveyed, on Spanish land grant of Buena Vista, 5½ miles east of Nogales and three quarters of a mile downstream from the international boundary.

DRAINAGE AREA.—473 square miles.

RECORDS AVAILABLE.—May 1930 to September 1932. Fragmentary records March to November 1907, April 1909 to June 1920 at station 5¼ miles downstream. April 1921 to June 1922 at station 6 miles downstream.

EXTREMES.—Maximum discharge during year, 8,300 second-feet July 8 (gage height, 9.5 feet); no flow on parts of several days.

1930–32: Maximum discharge, that of July 8, 1932; no flow on several days or parts of days of each year.

REMARKS.—Records good. Minor diversions for irrigation above station.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	93	20	23	25	43	46	13	4	0	61	60	47
2	55	18	24	25	42	43	13	5	0	4	46	39
3	48	17	24	28	44	39	11	4	0	17	43	31
4	41	22	24	27	43	39	11	3	1	3	42	23
5	41	23	23	23	43	35	10	4	1	1	42	18
6	41	22	24	23	39	34	10	3	1	2	124	13
7	36	22	22	24	42	33	9	2	0	147	173	11
8	33	25	23	21	42	32	8	2	0	888	142	9
9	31	27	23	20	40	31	8	2	0	153	1,050	8
10	30	23	91	22	48	27	8	2	0	38	208	8
11	28	23	115	23	42	26	8	2	0	18	97	7
12	30	23	70	21	37	24	8	2	0	13	68	43
13	27	21	48	88	38	23	7	3	0	10	54	21
14	27	21	33	2,140	38	23	8	3	0	17	46	16
15	24	22	31	451	35	23	8	2	0	10	43	9
16	25	22	28	220	42	23	8	2	0	12	40	6
17	25	20	30	147	43	23	8	1	0	6	47	4
18	24	18	28	104	42	22	7	1	0	5	42	5
19	23	20	28	85	58	22	7	1	0	3	35	4
20	22	20	30	68	72	22	7	1	0	2	25	6
21	23	21	27	59	64	20	8	1	0	2	22	5
22	24	48	27	54	53	21	8	1	0	2	22	4
23	22	103	27	53	48	18	8	1	0	24	34	4
24	22	41	24	50	42	16	8	0	0	12	161	4
25	21	28	27	48	39	17	7	1	0	11	112	5
26	20	25	28	48	37	17	6	1	0	152	284	5
27	20	23	24	47	33	16	5	1	0	86	239	6
28	21	24	27	46	33	14	5	0	0	18	109	7
29	18	23	27	44	38	13	3	0	0	472	78	12
30	21	25	25	44	------	13	3	1	2	367	65	8
31	20	------	25	44	------	13	------	0	------	166	56	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	93	18	30.2	1,860
November	103	17	26.3	1,570
December	115	22	33.2	2,040
January	2,140	20	133	8,180
February	72	33	43.4	2,500
March	46	13	24.8	1,520
April	13	3	7.9	472
May	5	0	1.8	111
June	26	0	1.0	58
July	888	1	87.8	5,400
August	1,050	22	116	7,160
September	47	4	12.9	770
The year	2,140	0	43.6	31,600

SANTA CRUZ RIVER AT TUCSON, ARIZ.

LOCATION.—Water-stage recorder in NE¼ sec. 14, T. 14 S., R. 13 E., at Congress Street Bridge, in Tucson.
DRAINAGE AREA.—2,100 square miles.
RECORDS AVAILABLE.—October 1905 to September 1932.
EXTREMES.—Maximum discharge during year, 4,200 second-feet July 30 (gage height, 9.27 feet); no flow during greater part of year.
1905–32: Maximum discharge, 11,400 second-feet Sept. 28, 1926 (gage height, 12.2 feet); no flow during greater part of each year.
REMARKS.—Records good. Diversions for irrigation above station.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Jan.	July	Aug.	Day	Oct.	Nov.	Jan.	July	Aug.
1	a 1	0	0	0	187	16	0	0	179	0	0
2	a 1	0	0	0	a 0	17	0	0	155	0	0
3	0	0	0	0	0	18	0	0	68	0	0
4	0	0	0	0	0	19	0	0	29	0	0
5	0	0	0	0	0	20	0	0	5	0	0
6	0	0	0	0	a 0	21	0	11	0	0	0
7	0	0	0	0	a 3	22	0	422	0	0	0
8	0	0	0	64	14	23	0	209	0	0	0
9	0	0	0	1,020	503	24	0	a 20	0	0	a 5
10	0	0	0	a 3	533	25	0	a 2	0	0	a 1
11	0	0	0	0	a 15	26	0	0	0	a 55	a 3
12	0	0	0	0	a 0	27	0	0	0	a 70	246
13	0	0	0	0	0	28	0	0	0	220	a 25
14	0	0	400	0	0	29	0	0	0	568	a 2
15	0	0	990	0	0	30	0	0	0	1,330	0
						31	0		0	70	0

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	1	0	0.1	4
November	422	0	22.1	1,320
January	990	0	58.9	3,620
July	1,330	0	110	6,740
August	533	0	49.6	3,050
The year	1,330	0	20.3	14,700

a Estimated.

NOTE.—No flow during months omitted.

NOGALES WASH AT NOGALES, ARIZ.

LOCATION.—Water-stage recorder in NE¼ sec. 8, T. 24 S., R. 14 E., 0.4 mile north of Nogales city limits, 2 miles north of the international boundary, and 7 miles upstream from mouth.

DRAINAGE AREA.—30 square miles.

RECORDS AVAILABLE.—April to September 1932.

EXTREMES.—Maximum discharge during period, 3,250 second-feet Aug. 26 (gage height, 12.64 feet); no flow on many days.

A maximum discharge of 4,400 second-feet occurred July 29 or Aug. 15, 1931 (gage height, 13.8 feet).

REMARKS.—Records good. Discharge interpolated Sept. 7–9, 11–22. No diversions above station.

Discharge, in second-feet, 1932

Day	June	July	Aug.	Sept.	Day	June	July	Aug.	Sept.
1	0	7	0	6	16	0	0	0	4
2	0	0	0	7	17	0	0	2	4
3	0	0	0	7	18	0	0	0	4
4	0	0	0	6	19	0	0	0	4
5	0	0	0	6	20	0	0	0	4
6	0	0	39	7	21	0	0	0	4
7	0	0	0	7	22	0	0	0	4
8	0	135	0	6	23	0	0	5	4
9	0	0	59	5	24	0	0	2	5
10	0	0	0	4	25	0	0	25	4
11	0	0	0	4	26	0	39	157	4
12	0	0	0	4	27	0	0	25	4
13	0	0	0	4	28	0	0	7	4
14	0	0	0	4	29	2	95	5	4
15	0	0	0	4	30	0	29	6	4
					31		0	6	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
June	2	0	0.1	4
July	135	0	9.8	605
August	157	0	10.9	670
September	7	4	4.7	282
The period				1,560

NOTE.—No flow during April and May.

SONOITA CREEK NEAR PATAGONIA, ARIZ.

LOCATION.—Water-stage recorder in sec. 20, T. 22 S., R. 15 E., unsurveyed, in Spanish land grant of San Jose de Sonoita, 5½ miles downstream from Patagonia.

DRAINAGE AREA.—210 square miles.

RECORDS AVAILABLE.—June 1930 to September 1932.

EXTREMES.—Maximum discharge during year, 1,700 second-feet July 26 (gage height, 6.75 feet); minimum, 1 second-foot July 6.

1930–32: Maximum discharge, 2,600 second-feet Aug. 7, 1930 (gage height, 7.3 feet); minimum, 1 second-foot July 4, 1930, May 24, 1931, July 6, 1932.

REMARKS.—Records good. Minor diversions for irrigation and mining above station.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	15	7	9	12	8	6	7	6	4	8	14	7
2	12	8	11	12	8	8	7	6	5	6	11	7
3	12	9	9	13	11	6	8	7	5	4	9	6
4	9	12	8	12	11	6	8	6	6	4	8	6
5	9	12	8	11	11	6	8	7	6	4	23	6
6	8	12	8	11	11	6	8	7	5	3	11	7
7	8	11	9	9	12	7	8	6	5	3	11	6
8	7	14	11	9	12	7	9	6	4	38	13	6
9	7	12	11	9	8	6	9	6	4	8	11	6
10	8	12	17	11	11	6	9	6	4	4	11	5
11	7	12	17	9	13	6	8	6	4	4	9	6
12	6	14	15	11	13	6	7	6	4	4	7	7
13	6	13	13	13	13	6	9	6	4	7	8	5
14	5	11	13	62	9	6	7	6	4	6	9	6
15	5	9	12	20	9	7	6	6	4	15	13	6
16	6	14	11	13	7	7	6	6	4	11	11	6
17	6	12	9	8	8	8	6	6	4	9	11	6
18	6	9	9	6	8	8	6	6	4	8	18	6
19	7	9	11	6	11	9	6	6	4	7	8	6
20	7	11	11	6	12	11	7	6	4	7	7	7
21	6	12	12	6	13	9	9	6	3	7	8	6
22	6	28	11	8	11	11	11	6	3	8	8	7
23	7	17	9	8	11	9	8	5	4	13	9	6
24	7	11	7	8	9	8	8	5	4	11	13	6
25	8	12	6	8	6	8	7	4	3	17	6	6
26	9	13	6	8	6	8	8	4	2	173	40	5
27	8	12	6	7	5	7	7	4	3	21	7	5
28	8	12	7	7	6	7	7	4	4	43	7	5
29	8	12	7	8	8	8	7	4	4	288	8	5
30	8	12	7	9	------	8	6	4	4	133	6	5
31	6	------	8	9	------	8	------	4	------	33	7	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	15	5	7.6	470
November	28	7	12.1	722
December	17	6	9.9	611
January	62	6	11.3	692
February	13	5	9.7	557
March	11	6	7.4	454
April	11	6	7.6	450
May	7	4	5.6	343
June	6	2	4.1	242
July	288	3	29.3	1,800
August	40	6	11.0	678
September	7	5	6.0	355
The year	288	2	10.2	7,370

RILLITO CREEK NEAR TUCSON, ARIZ.

LOCATION.—Water-stage recorder in sec. 23, T. 13 S., R. 13 E., at Oracle Road bridge 4 miles above confluence with Santa Cruz River and 4 miles north of Tucson.

DRAINAGE AREA.—903 square miles.

RECORDS AVAILABLE.—January 1911 to September 1932.

EXTREMES.—Maximum discharge during year, 7,200 second-feet July 29 (gage height, 8.7 feet); no flow during greater part of year.

1911–32: Maximum discharge, 24,000 second-feet Sept. 23, 1929; no flow during greater part of each year.

REMARKS.—Records good. Discharge estimated Dec. 13, 20, 31. Diversions for irrigation above station

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	July	Aug.
1	0	0	0	0	0	214	2	29
2	40	0	0	0	0	130	1	0
3	0	0	0	0	0	87	0	0
4	0	0	0	0	0	112	0	0
5	0	0	0	0	0	99	0	0
6	0	0	0	0	0	66	0	0
7	0	0	0	0	0	47	0	0
8	0	0	0	0	0	27	75	0
9	0	0	0	0	24	21	7	56
10	0	0	417	0	961	16	0	12
11	0	0	167	0	428	10	0	0
12	0	0	16	0	176	4	0	0
13	0	0	2	0	98	2	0	0
14	0	0	0	64	58	1	0	0
15	0	0	0	80	39	0	0	0
16	0	2	0	20	42	0	4	0
17	0	6	0	3	72	0	0	0
18	0	0	0	2	52	0	0	0
19	0	0	0	4	130	0	0	0
20	0	0	2	13	98	0	0	0
21	0	0	3	10	87	0	0	0
22	0	1,020	1	7	61	0	0	0
23	0	83	1	0	47	0	0	0
24	0	21	1	0	34	0	0	0
25	0	35	0	0	27	0	0	0
26	0	31	0	0	11	0	9	0
27	0	2	0	0	18	0	30	0
28	0	3	0	0	24	0	26	0
29	0	2	0	0	152	0	1,420	0
30	0	0	34	0	------	0	178	0
31	0	------	1	0	------	0	65	0

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	40	0	1.3	79
November	1,020	0	40.2	2,390
December	417	0	20.8	1,280
January	80	0	6.5	403
February	961	0	90.9	5,230
March	214	0	27.0	1,660
July	1,420	0	58.6	3,600
August	56	0	3.1	192
The year	1,420	0	20.4	14,800

NOTE.—No flow during months omitted.

SABINO CREEK NEAR TUCSON, ARIZ.

LOCATION.—Water-stage recorder in E½ sec. 9, T. 13 S., R. 15 E., half a mile north of Coronado National Forest boundary and 12 miles northeast of Tucson.
DRAINAGE AREA.—35 square miles.
RECORDS AVAILABLE.—June to September 1932.
EXTREMES.—Maximum discharge during period, 700 second-feet July 15 (gage height, 5.4 feet); minimum, 0.01 second-foot June 28 (gage height, 1.03 feet).
REMARKS.—Records excellent. No diversions above station.

Discharge, in second-feet, 1932

Day	June	July	Aug.	Sept.	Day	June	July	Aug.	Sept.
1		0.09	85	1.5	16		108	5.7	.09
2		.06	36	1.2	17		20	4.8	.07
3		.06	22	.9	18		10	4.0	.06
4		.06	16	.7	19		6.3	3.5	.06
5		.05	12	.4	20		4.2	3.2	.05
6		.05	20	.3	21		2.8	3.2	.05
7		.05	14	.3	22		2.3	3.7	.04
8		.1	12	.2	23		1.6	4.2	.04
9		24	45	.2	24		1.3	3.0	.04
10		7.0	30	.2	25		1.2	26	.03
11		2.8	16	.1	26		63	20	.04
12		1.3	11	.1	27	0.03	34	8.8	.04
13		.9	9.1	.09	28	.03	39	5.1	.2
14		.7	7.4	.2	29	.04	64	3.5	.09
15		88	6.0	.09	30	.03	176	2.5	.06
					31		105	1.9	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
June 27–30	0.04	0.03	0.03	0.3
July	176	.05	24.6	1,520
August	85	1.9	14.3	882
September	1.5	.03	.25	14.8
The period				2,420

SALT RIVER NEAR CHRYSOTILE, ARIZ.

LOCATION.—Water-stage recorder in sec. 5, T. 5 N., R. 18 E., unsurveyed, 1,200 feet above highway bridge site on San Carlos Indian Reservation, near Chrysotile, and 8 miles above Cibecue Creek. Zero of gage is about 3,406.2 feet above mean sea level.

DRAINAGE AREA.—2,830 square miles.

RECORDS AVAILABLE.—September 1924 to September 1932.

EXTREMES.—Maximum discharge during year, 36,000 second-feet Feb. 10 (gage height, 13.3 feet); minimum, 180 second-feet Sept. 22 (gage height, 1.69 feet). 1924–32: Maximum discharge, that of Feb. 10, 1932; minimum, 103 second-feet June 29, 1929, and Dec. 23, 1930 (gage height, 1.45 feet).

REMARKS.—Records excellent except those estimated, Oct. 8–26, which are good. Minor diversions above station.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,740	310	522	560	415	4,150	3,130	1,480	634	276	614	724
2	3,480	304	509	580	458	4,470	3,540	1,400	594	293	614	612
3	3,500	298	471	574	548	3,890	4,050	1,420	567	654	534	522
4	2,680	287	434	574	502	3,510	4,340	1,460	554	403	440	453
5	2,020	276	403	574	397	2,940	4,490	1,470	548	326	373	421
6	1,620	276	385	471	422	2,670	4,550	1,420	522	304	350	378
7	1,310	266	415	440	574	2,610	4,290	1,350	490	271	385	354
8	1,100	261	496	440	2,230	2,610	4,000	1,240	465	298	321	337
9	980	293	560	452	11,200	2,810	3,770	1,120	440	350	376	310
10	880	338	828	458	27,700	2,900	3,440	1,050	428	261	785	294
11	780	379	1,030	458	11,600	2,680	3,200	1,040	409	276	409	269
12	680	557	781	422	5,810	2,380	3,170	1,060	403	276	391	250
13	640	502	677	471	3,910	2,190	3,130	1,040	391	271	321	235
14	580	397	541	515	3,130	1,990	3,100	973	391	246	282	226
15	540	385	458	452	2,620	1,960	2,990	964	385	319	279	213
16	500	428	477	391	2,510	1,980	2,870	973	379	338	316	213
17	470	446	458	434	2,460	2,060	2,870	1,000	373	302	383	209
18	450	397	477	385	2,210	2,180	2,770	1,030	362	266	475	209
19	460	397	515	403	3,470	2,620	2,580	1,040	338	266	438	200
20	470	391	567	554	5,050	3,190	2,430	1,050	326	256	440	191
21	540	420	670	641	2,620	3,300	2,460	1,050	315	231	453	187
22	560	1,240	820	600	2,030	2,900	2,640	1,030	304	217	659	183
23	520	655	1,080	548	1,790	2,600	2,330	992	287	217	1,040	264
24	460	458	1,040	465	1,770	2,410	2,080	964	282	276	1,320	269
25	410	440	869	446	1,900	2,650	1,960	894	271	582	1,170	245
26	390	554	820	434	2,150	3,280	1,780	836	266	536	928	260
27	373	614	796	397	2,500	3,660	1,670	796	256	362	976	245
28	350	1,010	720	422	2,800	3,740	1,620	766	241	367	801	226
29	332	1,080	781	379	3,170	3,940	1,690	728	236	541	1,150	217
30	326	684	982	350	------	3,880	1,670	698	261	1,390	1,130	209
31	321	------	720	367	------	3,350	------	670	------	938	891	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	3,500	321	950	58,400
November	1,240	261	478	28,400
December	1,080	385	655	40,300
January	641	350	473	29,100
February	27,700	397	3,720	214,000
March	4,470	1,960	2,950	181,000
April	4,550	1,620	2,950	176,000
May	1,480	670	1,060	65,500
June	634	236	391	23,200
July	1,390	217	384	23,600
August	1,320	279	614	37,800
September	724	183	297	17,700
The year	27,700	183	1,230	895,000

SALT RIVER NEAR ROOSEVELT, ARIZ.

LOCATION.—Staff gage in sec. 5, T. 3 N., R. 14 E., near diversion dam for power canal, 3 miles above upper end of Roosevelt Reservoir, and 13 miles east of Roosevelt.

DRAINAGE AREA.—4,310 square miles.

RECORDS AVAILABLE.—October 1913 to September 1932.

EXTREMES.—Maximum daily mean discharge during year, 35,200 second-feet Feb. 11; minimum, 258 second-feet June 28, July 24.

1913–32: Maximum daily mean discharge, 79,200 second-feet Jan. 19, 1916; minimum, 97 second-feet July 1, 1929.

REMARKS.—Minor diversions above station. Daily-discharge record furnished by Salt River Valley Water Users' Association.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,700	337	1,180	1,280	415	4,580	3,610	1,800	757	324	1,350	1,310
2	2,720	330	900	932	462	5,820	3,540	1,660	710	400	917	1,080
3	4,340	319	712	858	515	5,630	3,830	1,560	660	375	847	917
4	3,850	299	655	872	550	5,150	4,500	1,560	623	670	772	837
5	2,660	293	573	850	585	4,530	4,670	1,560	615	537	690	760
6	2,350	289	510	808	470	3,710	4,720	1,560	622	428	477	665
7	1,720	282	461	683	475	3,550	4,680	1,510	598	385	685	589
8	1,300	278	468	625	648	3,400	4,420	1,430	547	407	553	491
9	1,130	286	527	627	9,000	3,630	4,330	1,340	505	778	427	509
10	1,020	291	1,210	623	34,200	3,700	3,970	1,230	485	715	658	470
11	910	356	1,780	610	35,200	3,600	3,750	1,180	461	390	1,040	447
12	865	1,180	1,860	600	16,900	3,320	3,500	1,180	460	365	507	468
13	745	1,230	1,450	565	9,300	2,980	3,530	1,200	445	327	495	400
14	680	923	1,200	715	6,450	2,680	3,260	1,160	420	303	423	377
15	630	622	962	747	4,650	2,490	3,190	1,100	416	297	382	358
16	575	508	755	673	4,250	2,350	3,110	1,040	416	353	358	350
17	522	695	760	600	3,850	2,410	3,050	1,060	399	360	415	340
18	483	707	718	612	3,350	2,280	2,900	1,100	375	372	410	338
19	465	525	812	533	3,500	2,560	2,750	1,080	365	305	510	333
20	481	463	1,150	595	7,350	2,950	2,680	1,100	320	300	660	329
21	590	455	1,190	865	7,250	3,550	2,440	1,100	320	300	550	321
22	573	705	1,400	1,060	3,090	3,460	2,660	1,080	314	294	542	318
23	577	1,960	1,590	960	2,800	3,120	2,680	1,080	308	294	1,060	317
24	560	625	1,850	800	2,610	2,760	2,290	1,080	306	258	1,300	365
25	492	585	1,620	633	2,580	2,600	1,960	1,040	302	309	1,650	421
26	435	597	1,330	617	2,620	2,850	1,850	975	267	598	1,560	403
27	415	717	1,200	568	2,800	3,300	1,720	920	263	825	1,230	449
28	393	853	1,120	547	2,960	3,780	1,620	900	258	610	1,100	423
29	374	1,430	1,010	545	3,110	3,750	1,530	878	300	522	928	398
30	345	1,450	1,480	513	-------	3,930	1,560	852	295	850	1,380	369
31	332	-------	1,430	460	-------	3,730	-------	830	-------	1,640	1,420	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	4,340	332	1,100	67,700
November	1,960	278	653	38,900
December	1,860	461	1,090	67,200
January	1,280	460	709	43,600
February	35,200	415	5,930	341,000
March	5,820	2,280	3,490	215,000
April	4,720	1,530	3,140	187,000
May	1,800	830	1,200	73,700
June	757	258	438	26,000
July	1,640	258	480	29,500
August	1,650	358	816	50,200
September	1,310	317	505	30,100
The year	35,200	258	1,610	1,170,000

TONTO CREEK NEAR ROOSEVELT, ARIZ.

LOCATION.—Staff gage in sec. 14, T. 6 N., R. 10 E., 6 miles above upper end of Roosevelt Reservoir and 15 miles northwest of Roosevelt.
DRAINAGE AREA.—813 square miles.
RECORDS AVAILABLE.—October 1913 to September 1932.
EXTREMES.—Maximum daily mean discharge during year, 8,000 second-feet Feb. 10; minimum, 4 second-feet June 20–23.
1913–32: Maximum daily mean discharge, 20,000 second-feet Dec. 28, 1923; no flow Sept. 4–10, 1924.
REMARKS.—Minor diversions above station. Daily-discharge record furnished by Salt River Valley Water Users' Association.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	18	8	580	460	200	600	250	75	12	5	72	60
2	25	8	280	435	190	550	250	70	10	155	46	92
3	40	12	250	374	190	600	275	70	10	62	33	34
4	30	12	230	374	150	700	275	55	12	35	24	20
5	20	12	200	348	200	500	275	50	12	25	18	12
6	20	8	190	335	240	450	250	50	12	14	17	12
7	18	12	190	287	290	400	210	50	14	14	13	10
8	15	12	190	390	315	400	195	50	14	12	11	10
9	15	12	175	276	1,150	400	175	45	12	17	9	8
10	10	8	520	276	8,000	450	190	40	12	30	295	6
11	10	200	850	282	7,000	350	140	50	10	40	18	8
12	10	520	950	268	5,500	350	155	40	10	27	61	8
13	8	500	850	256	3,000	350	155	35	10	17	33	8
14	7	220	450	348	3,000	325	140	35	10	14	28	8
15	15	225	500	318	3,200	325	140	35	8	12	22	8
16	12	250	420	297	3,500	325	140	35	8	12	18	8
17	15	225	400	287	3,000	325	140	40	10	30	15	8
18	15	260	340	287	3,300	325	140	40	8	25	7	8
19	15	170	420	297	3,500	325	110	30	8	17	19	8
20	15	170	900	318	2,500	350	110	30	4	12	7	8
21	15	170	950	348	2,000	400	75	30	4	8	11	8
22	12	750	900	348	1,800	325	90	25	4	6	319	8
23	15	700	725	276	1,600	325	90	25	4	6	118	8
24	10	340	850	268	850	300	75	25	7	6	319	8
25	10	385	625	256	850	300	75	20	7	20	84	8
26	8	315	450	230	700	325	90	18	7	30	154	8
27	10	325	390	215	550	350	90	16	7	45	83	8
28	8	600	340	215	550	325	140	16	5	55	170	6
29	8	800	340	205	600	350	110	15	5	35	61	10
30	8	750	1,000	205	------	320	90	15	5	140	46	6
31	8	------	580	195	------	300	------	15	------	250	35	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	40	7	14.4	883
November	800	8	266	15,800
December	1,000	175	517	31,800
January	460	195	299	18,400
February	8,000	150	2,000	115,000
March	700	300	388	23,800
April	275	75	155	9,200
May	75	15	36.9	2,270
June	14	4	8.7	518
July	250	5	37.9	2,330
August	319	7	69.9	4,300
September	92	6	14.1	837
The year	8,000	4	310	225,000

VERDE RIVER ABOVE CAMP CREEK, NEAR McDOWELL, ARIZ.

LOCATION.—Water-stage recorder in sec. 17, T. 5. N., R. 7 E., 500 feet above mouth of Camp Creek and 10 miles north of McDowell.

DRAINAGE AREA.—6,240 square miles.

RECORDS AVAILABLE.—February 1925 to September 1932. August to September 1889; April 1897 to November 1899; January 1901 to February 1925, at a point three quarters of a mile above mouth of Verde River.

EXTREMES.—Maximum daily mean discharge during year, 41,500 second-feet Feb. 11; minimum, 100 second-feet July 25.

1897–1932: Maximum daily mean discharge, 61,500 second-feet Nov. 27, 1905; minimum, 32 second-feet July 19, 20, 1904.

REMARKS.—Minor diversions above station. Daily-discharge record furnished by Salt River Valley Water User's Association.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	184	211	431	1,080	357	6,080	2,750	327	140	134	406	162
2	188	221	394	745	338	6,850	1,820	373	145	310	306	157
3	181	218	369	630	381	7,550	1,940	320	144	243	268	151
4	180	213	357	567	427	5,600	1,920	271	145	225	240	142
5	260	190	336	524	404	3,550	1,660	240	153	235	212	140
6	223	190	329	507	416	2,500	1,540	233	155	258	250	144
7	220	189	323	463	422	2,250	1,280	210	144	234	193	138
8	191	201	327	435	467	2,000	950	194	152	205	215	134
9	194	227	296	430	6,930	3,150	812	214	157	187	167	128
10	190	233	3,040	419	38,000	4,250	735	215	151	180	523	126
11	189	522	2,350	413	41,500	3,320	674	211	144	431	332	125
12	192	1,050	1,060	379	17,700	3,450	605	202	148	425	425	125
13	243	1,460	900	408	9,750	3,350	575	200	143	332	345	127
14	194	1,240	815	465	6,150	2,620	503	199	143	218	271	121
15	211	882	706	480	4,680	2,040	464	197	145	179	240	120
16	209	627	626	454	4,980	2,320	429	186	144	155	190	117
17	214	1,010	573	438	3,800	3,300	412	179	140	139	160	117
18	194	1,360	547	429	3,500	3,500	388	180	139	136	148	118
19	212	990	584	408	5,250	3,960	351	172	136	132	140	122
20	206	738	790	430	5,850	4,580	324	167	134	127	225	116
21	213	597	1,100	488	4,280	6,350	296	158	127	118	210	120
22	225	970	1,390	515	3,380	5,050	290	154	129	106	172	126
23	242	975	1,420	485	3,120	2,730	296	150	128	109	205	130
24	251	700	1,480	470	2,850	2,280	325	149	128	108	248	124
25	235	578	1,420	440	3,200	2,000	303	155	122	100	238	129
26	235	432	1,080	409	3,620	2,980	280	158	116	106	262	145
27	228	408	950	406	4,520	3,910	348	158	116	126	214	144
28	233	400	834	390	5,200	3,100	380	150	116	150	247	145
29	214	455	702	377	5,680	2,630	348	152	117	120	219	164
30	227	512	1,540	367	------	2,780	316	151	123	1,170	199	163
31	227	------	2,320	357	------	2,810	------	148	------	249	177	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	260	180	213	13,100
November	1,460	189	600	35,700
December	3,040	323	948	58,300
January	1,080	357	478	29,400
February	41,500	338	6,450	371,000
March	7,550	2,000	3,640	224,000
April	2,750	280	777	46,200
May	373	148	199	12,200
June	157	116	137	8,180
July	1,170	100	224	13,800
August	523	140	247	15,200
September	164	116	134	7,970
The year	41,500	100	1,150	835,000

WILLOW CREEK NEAR PRESCOTT, ARIZ.

LOCATION.—Water-stage recorder in SE¼NW¼ sec. 12, T. 14 N., R. 2 W., three eighths of a mile above mouth and 5 miles north of Prescott.
DRAINAGE AREA.—22 square miles.
RECORDS AVAILABLE.—June to September 1932.
EXTREMES.—Maximum discharge during period, 450 second-feet Aug. 21 (gage height, 6.4 feet); minimum, 0.4 second-foot July 19 (gage height, 2.98 feet).
REMARKS.—Records good. Discharge estimated June 1–16. No diversions above station; small diversion for irrigation below station.

Discharge, in second-feet, 1932

Day	May	June	July	Aug.	Sept.	Day	May	June	July	Aug.	Sept.
1		0.6	0.8	0.6	0.6	16		.8	.6	.6	.9
2		.6	.7	.6	.6	17		.8	.6	.6	.9
3		.6	.6	.6	.6	18		.8	.6	.6	.7
4		1.0	.6	.6	.6	19		.7	.6	.6	.6
5		.9	.6	.6	.6	20		.7	.6	4.7	.6
6		.8	.6	8.7	.6	21		.7	.6	10	.6
7		.8	.6	.9	.8	22		.7	.6	.6	.6
8		.8	.6	1.1	.8	23		.6	.6	.7	.7
9		.8	.6	.6	.6	24		.7	.6	.9	.9
10		.8	.8	.6	.6	25		.7	.6	1.1	.9
11		.8	.6	.6	.6	26	0.8	.6	.6	.9	.9
12		.8	.6	.7	.7	27		.6	.7	.8	1.0
13		.8	.6	.7	.9	28		.6	.7	.9	1.2
14		.8	.6	.6	.8	29		.6	.7	.9	.9
15		.8	.6	.6	.9	30		1.0	.6	.8	.8
						31			.6	.8	

Month	Maximum	Minimum	Mean	Run-off in acre-feet
June	1.0	0.6	0.74	44
July	.8	.6	.63	38
August	10	.6	1.41	86
September	1.2	.6	.75	45
The period				213

WHITEWATER BASIN

WHITEWATER DRAW NEAR DOUGLAS, ARIZ.

LOCATION.—Water-stage recorder in SW¼SE¼ sec. 10, T. 24 S., R. 27 E., at highway bridge 2 miles west of Douglas and 1½ miles upstream from international boundary.

DRAINAGE AREA.—1,020 square miles.

RECORDS AVAILABLE.—August 1911 to April 1922 and June 1930 to September 1932.

EXTREMES.—Maximum discharg deuring year, 1,800 second-feet July 31 (gage height, 9.54 feet); minimum, 0.6 second-foot June 27.

1930–32: Maximum discharge, 3,450 second-feet Aug. 10, 1931 (gage height, 12.15 feet); minimum, less than half a second-foot several days in 1930 and 1931.

Maximum known discharge, 4,050 second-feet (estimated) July 28, 1919.

REMARKS.—Records good. Diversions for irrigation above station.

Discharge, in second-feet, 1931–32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	257	1.9	1.5	1.7	1.3	2.3	1.5	1.1	0.7	108	262	1.6
2	63	1.9	1.7	1.5	1.3	2.1	1.5	1.1	1.2	13	2[illegible]	1.6
3	39	1.9	1.5	1.5	1.3	2.1	1.4	1.1	1.2	82	2[illegible]	1.7
4	7.9	1.7	1.5	1.5	1.3	1.9	1.4	1.1	1.3	12	7	1.5
5	4.0	1.9	1.7	1.7	1.4	2.1	1.2	1.2	1.2	3	4	1.6
6	3.0	1.7	1.4	1.4	1.4	2.1	1.1	.9	1.3	2	3	1.4
7	2.8	1.7	1.5	1.3	1.3	1.9	1.1	.9	1.2	2	4	1.4
8	2.8	2.3	1.9	1.3	1.3	1.9	1.2	.9	1.1	29	8	1.3
9	2.7	1.9	1.3	1.3	1.4	1.9	1.2	1.2	1.2	6	130	1.6
10	2.3	1.5	1.9	1.2	1.5	1.9	1.1	.9	1.3	2	184	1.6
11	2.3	1.5	1.3	1.2	1.3	1.7	1.1	1.3	1.3	20	15	93
12	2.8	1.7	1.2	1.3	1.4	1.7	1.1	1.3	1.2	37	5.6	4.6
13	2.7	1.7	1.2	1.9	1.5	1.7	.9	1.2	1.1	3	2.9	2.4
14	2.5	1.4	1.3	2.3	1.5	1.5	1.1	1.2	1.2	2	2.7	2.3
15	2.5	1.4	1.2	1.7	1.4	1.7	1.2	1.1	1.1	9	2.3	2.2
16	2.3	1.3	1.3	1.5	1.5	1.7	1.1	1.2	.9	11	1.9	1.9
17	2.5	1.8	1.3	1.4	1.8	1.7	.8	.8	1.2	10	1.9	1.7
18	1.9	1.8	1.3	1.4	1.9	1.7	.9	1.1	1.2	4	1.9	1.6
19	1.9	.9	1.4	1.4	2.1	1.8	.9	1.2	1.1	5	1.9	1.5
20	2.1	1.1	1.4	1.4	2.1	1.5	.8	1.2	1.2	8	1.9	1.6
21	2.3	1.1	1.5	1.4	1.7	1.3	.8	1.2	1.1	2	1.7	1.6
22	2.5	1.4	1.5	1.4	1.7	1.5	1.2	1.1	1.2	1	2.7	1.4
23	2.3	2.3	1.5	1.4	1.8	1.4	1.1	1.3	1.1	1	5.1	1.3
24	2.3	1.7	1.5	1.4	1.8	1.5	1.1	1.0	1.1	120	16	4.6
25	2.1	1.8	1.4	1.3	1.8	1.4	1.2	1.3	1.1	129	5	1.7
26	1.9	1.7	1.5	1.3	1.8	1.2	.9	1.3	.9	148	3[illegible]	1.5
27	2.3	1.4	1.4	1.3	1.8	1.2	1.1	1.3	1.0	17	31	1.5
28	2.1	1.4	1.5	1.2	1.9	1.2	1.1	1.1	1.2	12	55	1.4
29	2.1	1.3	1.5	1.3	2.7	1.5	1.1	1.2	13	624	6.8	1.5
30	1.9	1.9	1.7	1.3	------	1.7	1.1	1.1	3	307	2.2	1.6
31	1.9	------	1.5	1.3	------	1.7	------	1.2	------	457	1.7	------

Month	Maximum	Minimum	Mean	Run-off in acre-feet
October	257	1.9	13.9	856
November	2.3	.9	1.63	97
December	1.9	1.2	1.46	90
January	2.3	1.2	1.44	88
February	2.7	1.3	1.62	93
March	2.3	1.2	1.69	104
April	1.5	.8	1.11	66
May	1.3	.8	1.33	70
June	13	.7	1.60	95
July	624	1	70.5	4,340
August	262	1.7	27.4	1,690
September	93	1.3	4.87	290
The year	624	.7	10.8	7,880

MISCELLANEOUS DISCHARGE MEASUREMENTS

Discharge measurements of streams in the Colorado River Basin at points other than regular gaging stations are listed in the following table:

Miscellaneous discharge measurements in Colorado River Basin during the years ending Sept. 30, 1931[a] and 1932

Date	Stream	Tributary to or diverting from—	Locality	Gage height	Discharge
1932				*Feet*	*Sec.-ft.*
Apr. 13	Utah Power & Light Co.'s tailrace.	Ashley Creek	NW¼ sec. 18. T. 3 S., R. 21 E., at former gaging station "Utah Power & Light Co.'s tailrace near Vernal, Utah."	4.12	22.6
May 9	Price River	Green River	SW¼ sec. 12, T. 13 S., R. 9 E., at water commissioner's gaging station at Heiner, Utah.	.60	162
June 10	do	do	do	.68	204
May 6	Fish Creek	Price River	Sec. 10, T. 125., R. 7 E., 5½ miles northeast of Scofield, Utah.	3.88	6.5
27	do	do	do	5.48	168
June 9	do	do	do	5.38	152
Aug. 5	do	do	do	[b] 2.00	108
May 19	Pondton Creek	Fish Creek	NE¼ sec. 18, T. 12 S., R. 7 E., above Pleasant Valley Reservoir, near Scofield, Utah.	1.95	32.0
June 9	do	do	do	.99	10.2
7	Goosebury Creek	do	SW¼ sec. 6, T. 13 S., R. 6 E., 300 feet below old Mammoth Dam, 7 miles west of Scofield, Utah	.57	23.2
Aug. 31	do	do	do	.27	5.5
May 23	North Fork of Seeley Creek.	Seeley Creek	Extreme northwest corner NE¼NE¼ sec. 26, T. 17 S., R. 4 E., about a quarter of a mile west of Seeley Creek ranger station, Utah.	.96	2.49
26	do	do	do	.96	2.28
31	do	do	do	.99	2.89
June 2	do	do	do	1.01	4.18
3	do	do	do	1.81	6.89
5	do	do	do	1.85	7.53
9	do	do	do	1.76	5.27
13	do	do	do	1.90	6.98
17	do	do	do	1.80	6.06
23	do	do	do	1.77	5.49
28	do	do	do	1.70	5.14
July 7	do	do	do	1.52	3.46
13	do	do	do	1.48	3.00
June 13	Small Creek	North Fork of Seeley Creek.	SE¼SE¼ sec. 23, T. 17 S., R. 4 E., about 100 yards above junction with North Fork of Seeley Creek, Utah.	1.78	2.54
17	do	do	do	1.69	1.59
23	do	do	do	1.70	1.45
28	do	do	do	1.68	1.21
July 7	do	do	do	1.65	.25
13	do	do	do	1.64	.17
June 1	South Fork of Seeley Creek.	Seeley Creek	Near center of S½NE¼ sec. 26, T. 17 S., R. 4 E., about half a mile southwest of Seeley Creek ranger station, Utah.	1.49	1.94
3	do	do	do	1.51	2.23
5	do	do	do	1.55	3.06
9	do	do	do	1.51	2.14
13	do	do	do	1.74	5.33
17	do	do	do	1.52	2.60
23	do	do	do	1.51	2.20
28	do	do	do	1.47	1.62
July 7	do	do	do	1.41	.81
13	do	do	do	1.41	.85

[a] Includes miscellaneous discharge measurements for year ending Sept. 30, 1931, for New Mexico only.
[b] Auxiliary gage.

Miscellaneous discharge measurements in Colorado River Basin during the years ending Sept. 30, 1931 and 1932—Continued

Date	Stream	Tributary to or diverting from—	Locality	Gage height	Discharge
1932				*Feet*	*Sec.-ft.*
June 14	Wasatch Canal	Diverts from Beck Creek into Great Basin.	Near center of N½SW¼ sec. 23, T. 17 S., R. 4 E., where canal crosses divide, Utah.		3.49
23	Madsen Canal	Diverts from Seeley Creek into Great Basin.	Near center of N½SW¼ sec. 23, T. 17 S., R. 4 E., at measuring weir, Utah.		4.89
29	do	do	do		1.65
July 8	do	do	do		1.30
June 1	Larson Canal	Diverts from Beck Creek into Great Basin.	SE¼SW¼ sec. 11, T. 17 S., R. 4 E., at upper end of Larson Tunnel, Utah.	1.94	8.11
3	do	do	do	2.05	11.0
11	do	do	do		13.4
24	do	do	do		14.1
July 1	do	do	do		4.47
8	do	do	do		2.96
June 15	John August Ditch	Diverts from Johns Lake into Great Basin.	SE¼NW¼ sec. 35, T. 17 S., R. 4 E., near point where ditch crosses divide, Utah.		2.14
22	do	do	do		6.47
29	do	do	do		1.62
July 7	do	do	do		1.25
1930					
Nov. 6	San Juan River	Colorado River	Sec. 25, T. 30 N., R. 9 W., above Pump Canyon, 7 miles northeast of Blanco, N.Mex.		300
6	do	do	Sec. 26, T. 29 N., R. 10 W., three quarters of a mile below mouth of Canyon Largo, 2½ miles southwest of Blanco, N.Mex.		235
Oct. 14	do	do	Sec. 27, T. 29 N., R. 11 W., at highway bridge at Bloomfield, N.Mex.	4.88	476
Nov. 6	do	do	do	4.78	286
Dec. 6	do	do	do	4.77	245
1931					
Jan. 8	do	do	do	4.75	162
24	do	do	do	4.02	171
Feb. 15	do	do	do	4.87	425
Mar. 8	do	do	do	4.85	245
30	do	do	do	5.16	549
Apr. 29	do	do	do	5.54	1,520
May 24	do	do	do	5.00	2,230
June 10	do	do	do	5.39	2,150
25	do	do	do	4.69	991
July 12	do	do	do	4.60	489
Aug. 1	do	do	do	5.72	1,840
15	do	do	do		279
Sept. 23	do	do	do	4.92	1,260
Oct. 24	do	do	do		778
Dec. 9	do	do	do	4.03	460
1932					
Jan. 6	do	do	do	4.08	412
Feb. 14	do	do	do	4.58	1,070
Mar. 19	do	do	do	6.11	4,350
Apr. 13	do	do	do	7.80	8,430
16	do	do	do	8.42	10,400
May 21	do	do	do	8.78	9,460
27	do	do	do	8.40	7,620
June 3	do	do	do	8.17	6,650
1930					
Nov. 7	do	do	Sec. 12, T. 29 N., R. 14 W., 300 feet below mouth of La Plata River and 3 miles west of Farmington, N.Mex.		442
7	do	do	Sec. 10, T. 29 N., R. 15 W., 1 mile northwest of Fruitland, N.Mex.		506
7	do	do	Sec. 9, T. 29 N., R. 16 W., half a mile above the Hogback and 8½ miles southeast of Shiprock, N.Mex.		495

Miscellaneous discharge measurements in Colorado River Basin during the years ending Sept. 30, 1931 and 1932—Continued

Date	Stream	Tributary to or diverting from—	Locality	Gage height	Discharge
				Feet	*Sec.-ft.*
1930					
Nov. 7	San Juan River	Colorado River	Sec. 8, T. 29 N., R. 16 W., a quarter of a mile below the Hogback, and 8½ miles southeast of Shiprock, N.Mex.		535
Dec. 4	do	do	do		526
1931					
Oct. 22	do	do	Sec. 25, T. 30 N., R. 18 W., at highway bridge, a quarter of a mile south of Shiprock, N.Mex.	0.80	1,270
Dec. 2	do	do	do	.22	697
1932					
Jan. 5	do	do	do	.21	777
9	do	do	do	2.43	557
Feb. 12	do	do	do	1.50	2,340
Mar. 18	do	do	do	1.68	2,830
Apr. 11	do	do	do	2.25	7,230
19	do	do	do	3.00	9,170
May 19	do	do	do	4.26	16,900
25	do	do	do	5.00	14,500
28	do	do	do	3.45	10,900
June 2	do	do	do	3.70	10,000
9	do	do	do	2.65	6,370
July 10	do	do	do	1.50	4,510
14	do	do	do	2.25	6,330
Aug. 19	do	do	do	1.52	2,770
23	do	do	do	1.65	3,830
Sept. 12	do	do	do	1.30	1,060
18	do	do	do	1.14	688
1930					
Nov. 6	Citizens Ditch	San Juan River	Sec. 4, T. 29 N., R. 9 W., 4 miles northeast of Blanco, N.Mex.		58.9
6	do	do	Sec. 23, T. 29 N., R. 10 W., 1½ miles southwest of Blanco, N.Mex.		53.8
1931					
July 29	Animas River	do	Sec. 10, T. 32 N., R. 10 W., at Colorado-New Mexico State line, 5 miles northeast of Cedar Hill, N.Mex.		300
30	Riverside Ditch	Animas River	Sec. 10, T. 32 N., R. 10 W., 5 miles northeast of Cedar Hill, N.Mex.		10.5
29	East Side Ditch	do	do		13.0
29	Cedar Ditch	do	Sec. 8, T. 32 N., R. 10 W., 1½ miles north of Cedar Hill, N.Mex.		12.1
29	Inca Ditch	do	Sec. 33, T. 32 N., R. 10 W., three quarters of a mile northeast of Cedar Hill, N.Mex.		23.1
30	Stacey Ditch	do	Sec. 4, T. 31 N., R. 10 W., 1 mile west of Cedar Hill, N.Mex.		15.3
31	Aztec Ditch	do	Sec. 8, T. 31 N., R. 10 W., 8 miles northeast of Aztec, N.Mex.		52.6
30	Dunning Ditch	do	Sec. 23, T. 31 N., R. 11 W., 4½ miles northeast of Aztec, N.Mex.		3.08
30	Lower Animas Ditch	do	Sec. 26, T. 31 N., R. 11 W., 4 miles northeast of Aztec, N.Mex.		48.1
30	Farmers Ditch	do	Sec. 34, T. 31 N., R. 11 W., 3½ miles northeast of Aztec, N.Mex.		48.4
30	Trew Mill Ditch	do	Sec. 8, T. 30 N., R. 11 W., at Aztec, N.Mex.		19.0
31	Kelo-Blanchet Ditch	do	Sec. 17, T. 30 N., R. 11 W., at Aztec, N.Mex.		11.8
31	Halford-Independent Ditch.	do	Sec. 13, T. 30 N., R. 12 W., 3 miles southwest of Aztec, N.Mex.		61.7
31	Terrell Ditch	do	Sec. 23, T. 30 N., R. 12 W., 1½ miles northeast of Flora Vista, N.Mex.		[b] 4.0

[b] Auxiliary gage.

Miscellaneous discharge measurements in Colorado River Basin during the years ending Sept. 30, 1931 and 1932—Continued

Date	Stream	Tributary to or diverting from—	Locality	Gage height	Discharge
				Feet	*Sec.-ft.*
1931					
July 31	Star Ditch	Animas River	Sec. 31, T. 30 N., R. 12 W., 5 miles northeast of Farmington, N.Mex.		32.3
31	Echo Ditch	do	Sec. 12, T. 29 N., R. 13 W., 3 miles east of Farmington, N.Mex.		33.8
31	McHenery Ditch	do	Sec. 12, T. 29 N., R. 13 W., 3 miles east of Farmington, N.Mex.		11.4
31	North Farmington Ditch.	do	Sec. 11, T. 29 N., R. 13 W., 2 miles northeast of Farmington, N.Mex.		17.8
31	Wright-Liggett Ditch	do	Sec. 15, T. 29 N., R. 13 W., at Farmington, N.Mex.		13.8
1930					
Nov. 6	Farmers Mutual Ditch.	do	Sec. 21, T. 29 N., R. 13 W., at head, 1 mile southwest of Farmington, N.Mex.		97.2
6	do	do	Sec. 20, T. 29 N., R. 13 W., a half a mile below head, 1 mile west of Farmington, N.Mex.		69.3
1931					
Aug. 4	do	do	do		82.2
4	do	do	Sec. 12, T. 29 N., R. 14 W., 3 miles west of Farmington, N.Mex.		74.5
July 11	La Plata River	San Juan River	Sec. 14, T. 35 N., R. 11 W., a quarter of a mile north west of Hesperus railroad station and about 200 yards above highway bridge at Hesperus, Colo.	0.31	17.1
Aug. 16	do	do	do	.22	8.10
Sept. 24	do	do	do	.40	31.4
Oct. 26	do	do	do	.31	16.2
1932					
May 23	do	do	do	1.19	373
30	do	do	do	.94	250
June 6	do	do	do	.46	49.2
July 11	do	do	do	.46	55.6
Aug. 22	do	do	do	.40	39.4
Sept. 15	do	do	do	.30	15.5
1931					
Feb. 16	do	do	Sec. 34, T. 33 N., R. 13 W., 2 miles above Colorado-New Mexico State line, and 6 miles north of La Plata, N.Mex.		15.9
1930					
Nov. 8	do	do	Sec. 10, T. 32 N., R. 13 W., 300 feet south of Colorado-New Mexico State line, and 4 miles north of La Plata, N.Mex.	1.02	11.9
1931					
Feb. 16	do	do	do	1.15	14.4
Mar. 7	do	do	do	1.17	17.6
Apr. 4	do	do	do	1.00	10.5
30	do	do	do	.80	[b] 3.34
May 25	do	do	do	2.26	129
June 11	do	do	do	.53	[b] .02
27	do	do	do	1.22	20.2
July 11	do	do	do	.79	3.79
Aug. 3	do	do	do	.36	[b] .3
16	do	do	do	.62	2.07
Sept. 24	do	do	do	.55	1.74
Oct. 26	do	do	do	.86	6.61
Dec. 3	do	do	do	1.42	6.51
1932					
Jan. 7	do	do	do		[b] 7
Mar. 20	do	do	do	1.95	105
Apr. 14	do	do	do	2.70	214
May 23	do	do	do	2.68	207
30	do	do	do	1.88	86.1
June 6	do	do	do	1.09	18.3
July 11	do	do	do	.94	9.82
Aug. 22	do	do	do	.63	6.28
Sept. 15	do	do	do	.48	4.46

[b] Auxiliary gage.

Miscellaneous discharge measurements in Colorado River Basin during the years ending Sept. 30, 1931 and 1932—Continued

Date	Stream	Tributary to or diverting from—	Locality	Gage height	Discharge
1931				*Feet*	*Sec.-ft.*
Feb. 16	La Plata River	San Juan River	Sec. 22, T. 32 N., R. 13 W., 250 feet above highway bridge and 2 miles north of La Plata, N.Mex.		18.1
16	do	do	Sec. 23, T. 31 N., R. 13 W., at East Cunningham schoolhouse, 2½ miles south of La Plata, N.Mex.		12.7
17	do	do	Sec. 32, T. 31 N., R. 13 W., above Barkers Arroyo and 5 miles south of La Plata, N.Mex.		19.4
17	do	do	Sec. 16, T. 30 N., R. 13 W., 5½ miles north of Farmington, N.Mex.		22.2
17	do	do	Sec. 31, T. 30 N., R. 13 W., 3 miles northwest of Farmington, N.Mex.		21.6
17	do	do	Sec. 7, T. 29 N., R. 13 W., at highway bridge, 2½ miles northwest of Farmington, N.Mex.		22.3
16	Cunningham Ditch	La Plata River	Sec. 34, T. 32 N., R. 13 W., 1½ miles north of La Plata, N.Mex.		6.70
16	McDermott Ditch	do	Sec. 3, T. 31 N., R. 13 W., half a mile north of La Plata, N.Mex.		2.64
17	Barkers Arroyo	La Plata River	Sec. 32, T. 31 N., R. 13 W., at mouth, 5 miles south of La Plata, N.Mex.		e.3
1930					
Nov. 7	Hogback Canal	San Juan River	Sec. 8, T. 29 N., R. 16 W., 9 miles southeast of Shiprock, N.Mex.		58.7
1932					
Mar. 5	Woodruff Canal	Silver Creek	At diversion dam which is control for station "Silver Creek near Woodruff, Ariz."		83.1
20	do	do	do		2.3
July 28	do	do	do		12.8
May 16	Chevelon Irrigation Co.'s canal.	Chevelon Fork	At diversion dam 2 miles below station "Chevelon Fork near Winslow, Ariz."		1.9
1931					
Dec. 7	Santa Fe Canal	Clear Creek	At diversion dam which is control for station "Clear Fork near Winslow, Ariz."		6.1
1932					
Feb. 10	Eagle Creek	Gila River	At Morenci pumping station near Morenci, Ariz.		13,000
10	Bonita Creek	do	2 miles above mouth of creek, near Solomonsville, Ariz.		1,100
Mar. 20	do	do	At mouth, near Solomonsville, Ariz.		3.5
Apr. 26	Mineral Creek	do	At mouth at Kelvin, Ariz.		3.5
Mar. 21	Animas Creek	Closed Basin	S½ sec. 15, T. 31 S., R. 20 W., at road ford 13½ miles north of Clovedale, N.Mex.		1.66

e Estimated.

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