BUREAU OF RECLAMATION

Lower Colorado Basin Stream Flow Records for Calendar Year 2021

U.S. Department of the Interior
Bureau of Reclamation
Lower Colorado Basin – Interior Region 8
Blythe Hydrographic Office

December 15, 2022

Cover:

The photograph captures the mineral deposits visible on the walls of the Black Canyon indicating the historical height of water in Lake Mead. The Bureau of Reclamation photograph was taken by Jarrett Peters on May 12, 2021, looking North from the Hoover Dam.

Abbreviated Terms and Symbols

The following abbreviated terms and symbols are found in the text, map, tables, and graphs contained within this report.

ac-ft	acre-foot/feet
cfs	cubic-feet per second
°	degrees
E	east
elev	elevation
ft	feet
gh	gage-height
gps	global positioning system
id	identification
max	maximum
mi	mile (miles)
mi^2	square mile (miles)
min	minimum
'	minutes
N	north
NE	northeast
NW	northwest
R	range
S	south
SE	southeast
SW	southwest
T	township
W	west

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Explanation of Records

The Bureau of Reclamation, Blythe Hydrographic Office is responsible for collecting surface water records along the Lower Colorado River between Hoover Dam and the Southern International Boundary with Mexico. The data in this report does not include all the data collection efforts of the Lower Colorado Region but is limited to the data collection responsibilities of the Operations Support Group of the Boulder Canyon Operations Office.

Data Collection and Computation

The data collected consist of records of stage, velocity, and discharge values and empirical measurements of discharge of streams or canals. Records of stage, velocity-index, and/or discharge-index are obtained from digital dataloggers that measure electronic sensors at programmed time intervals and calculate mean hourly values. The recorded values are transmitted via telemetry to the Lower Colorado River Hydrologic Database in Boulder City, Nevada and are also downloaded from gaging station field locations by Reclamation hydrologic technicians with a laptop computer. Electronic sensor selection is dependent on the parameters required to measure water level or a component of discharge and vary by gaging station. Measurements of discharge are made with a mechanical current meter, an acoustic Doppler velocimeter, or an acoustic Doppler current profiler. Measurement techniques comply with standards established by the United States Geological Survey and follow guidelines set forth by the Blythe Hydrographic Office draft quality assurance and quality control plan.

For stream-gaging discharge record stations, discharge rating tables for an appropriate range of stage are prepared from stage-discharge curves. Rating curves are extended to compute discharge values outside of the minimum and maximum measured values by plotting regressions generated from linear, logarithmic, or power equations. Hourly mean discharge values are computed from hourly mean gage-heights applied to rating tables. Monthly and yearly mean discharges are computed from mean daily discharge values. Stage-shifting and velocity-shifting methods are applied to rating curves when continual or temporal physical changes impact the discharge relationship. Dynamic physical conditions may include changes in control or channel geometry caused by migrating sandbars on the channel bottom, seasonal variations in aquatic growth, lack of bank line stability, and side wash ephemeral flows. Shift adjustments may be prorated with time, stage, or time and stage.

The use of velocity-index or discharge-index techniques may be used at gaging stations where stage-discharge relationships are not accurate due to backwater effect caused by downstream ponding in reservoirs, variations in downstream gate configurations, or other situations where no artificial or natural controls are present. The velocity indexing method consists of using an index velocity to calculate an average velocity for the flow in the stream. This average velocity along with a stage-area relationship is used to calculate discharge. Gaging stations that utilize pipe meter devices to measure discharge often require correction through the use of a discharge-index relationship. The discharge indexing method consists of using an index discharge to calculate stream discharge by direct correlation.

For some gaging stations, there are periods when no data are available or data are in error and cannot be used to compute hourly discharge. This condition occurs when the datalogger or connected sensors malfunction due to failure, drift, or fouling. For such periods, discharge is computed from an estimated independent variable using various techniques including, but not limited to, interpolation, projecting from surrounding data, or a hydrologic relation developed with another stream gage.

Data Presentation

Records published for each continuous-record station consist of three parts: (1) station manuscript; (2) hydrograph; and (3) a summary of the daily mean values for the current year. Times provided reference Mountain Standard Time.

Station Manuscript

The station manuscript provides descriptive information such as station location, period of record, historical extremes, and other remarks pertinent to station operation. The following descriptions detail the type of information included in each section.

Location—Information on the location is obtained from the Global Positioning System referencing the World Geodetic System of 1984, including reference to physical features in the vicinity. Township, range, section, and meridian descriptions are obtained from USGS topographical maps. The grid system is not available in several locations of the Fort Mojave Indian Reservation. In these locations, the grid system has been projected to obtain the required information. Descriptions of distance between a gaging station, and a nearby town are provided as a linear distance, not a driving distance. Distances downstream of dams are provided in river miles between the upstream dam, and the gaging station.

Drainage Area—Drainage areas were computed in 2014 using United States Geological Survey Hydrologic Unit Code boundaries. Computed values are reduced by non-contributing areas above the gage. Gaging stations with drainage areas listed as “not applicable” indicate a stream or canal that is not impacted by runoff. Drainage areas listed as “undetermined” indicate a drainage area that has not been outlined and/or measured by Reclamation.

Period of Record—The period for which there are published records for the station or for an equivalent station. An equivalent station is one that was in operation at a time when the present station was not in operation and the location was such that records from it can reasonably be considered equivalent with records from the present station. Calendar year 2005 was the first year that a final record was published by the Blythe Hydrographic Office. In many cases, the gaging stations mentioned in this publication have been in operation for some time prior to 2005. However, the records have not been finalized or published for any gage prior to 2005.

Gage—A description of the gage used during the reporting year including the gage equipment and the technique used to compute the record.

Extremes—Extreme discharge values are listed as minimum and maximum hourly, and daily mean values for the record period listed in the period of record section.

Remarks—Periods of estimated hourly discharge record will be identified in this paragraph if the method used to estimate the record was non-standard. The paragraph is also used to present information relative to the record that may include details regarding special methods of computation, conditions that affect flow at the station, information on system outages, and other pertinent items.

Hydrograph, Data Table, and Summary Data

The discharge hydrograph displays mean daily discharge in a graphical format. The data table page that follows each station manuscript provides mean daily discharge values presented in tabular format. Basic statistical information is provided near the bottom of the table summarizing each month, including total,

mean, maximum, and minimum discharge values in cubic-feet per second for the month and total volume expressed in acre-feet. In addition, annual discharge in cubic-feet per second, and volume in acre-feet are provided for the year along with the annual mean, maximum, and minimum daily discharges. Maximum and minimum hourly discharge values located on the bottom of the table indicate the date, time, stage, and discharge that the hourly extremes occurred during the year.

The stage hydrograph displays mean daily stage values in a graphical format. The data table that follows each manuscript provides mean daily stage values presented in tabular format. Basic statistical information is provided near the bottom of the table summarizing each month, including mean, maximum, and minimum values for the month. In addition, annual mean, maximum, and minimum daily values are provided. Maximum and minimum stage values located on the bottom of the table indicate the date, time, and stage that the hourly extremes occurred during the year.

Stage values throughout this report will be referenced as either gage-height or stage, where no vertical datum is used, or as an elevation which references sea level using the National Geodetic Vertical Datum of 1929.

Document Layout

The hydrographs and data tables are grouped by entity and gage type. The report begins with lakes, then Colorado River gaging stations, and concludes with Colorado River diversions and returns. Each grouping is presented geographically beginning with the northern most gage.

Lower Colorado River
Gaging Stations Operated And Reported By The Blythe Hydrographic Office

Number	Gaging Station	Code
1	Lake Mohave at Davis Dam	DDMLC
2	Colorado River Below Big Bend	BBBLC
3	Fort Mojave Tribe - Nevada	FMTNV
4	Fort Mojave Tribe - North Casino	FMTNC
5	Fort Mojave Tribe - North Casino - North Event Center	FMTNC-NEC
6	Fort Mojave Tribe - South Casino	FMTSC
7	Fort Mojave Tribe - California 2 - North, South and West Pumps	FMTC2
8	Fort Mojave Tribe - California 1	FMTC1
9	Fort Mojave Tribe - Cimmaron	FMTCS
10	Fort Mojave Tribe - Willow	FMTWS
11	Fort Mojave Tribe - Barrackman	FMTBS
12	Fort Mojave Tribe - Refuge - Fort Mojave Tribe and Vanderslice Pumps	FMTRS
13	Colorado River Below Needles Bridge	BNBLC
14	United States Fish and Wildlife Service - Farm Ditch	FWSFD
15	United States Fish and Wildlife Service - South Dike	FWSSD
16	Colorado River at River Section 41	RS41LC
17	Lake Havasu at Parker Dam	PDMLC
18	Colorado River at Parker	PGLC
19	Colorado River at Water Wheel	WWLC
20	Palo Verde Irrigation District - Main Canal	PVC
21	Colorado River Below Interstate Bridge	BIBLC
22	Colorado River Below McIntyre Park	BMPLC
23	Colorado River at Taylor Ferry	TFLC
24	Colorado River Below Oxbow Bridge	BOBLC
25	Palo Verde Irrigation District - Outfall Drain	PVOF
26	Colorado River at Cibola	CLC
27	Colorado River at Picacho Park	PPGLC
28	Colorado River at Martinez Lake	MLLC

Lake Gaging Stations

Lake Mohave at Davis Dam

Location—Latitude 35° 11.765', longitude -114° 34.189', in the NW¼ NW¼ of Section 19, T. 21 N., R. 21 W., Gila-Salt River meridian, Mohave County, Arizona, Hydrologic Unit 15030101, river mi 275.9, 55.7 mi south of Boulder City, Nevada, 2.0 mi north of Laughlin, Nevada, and 66.3 river mi downstream of Hoover Dam.

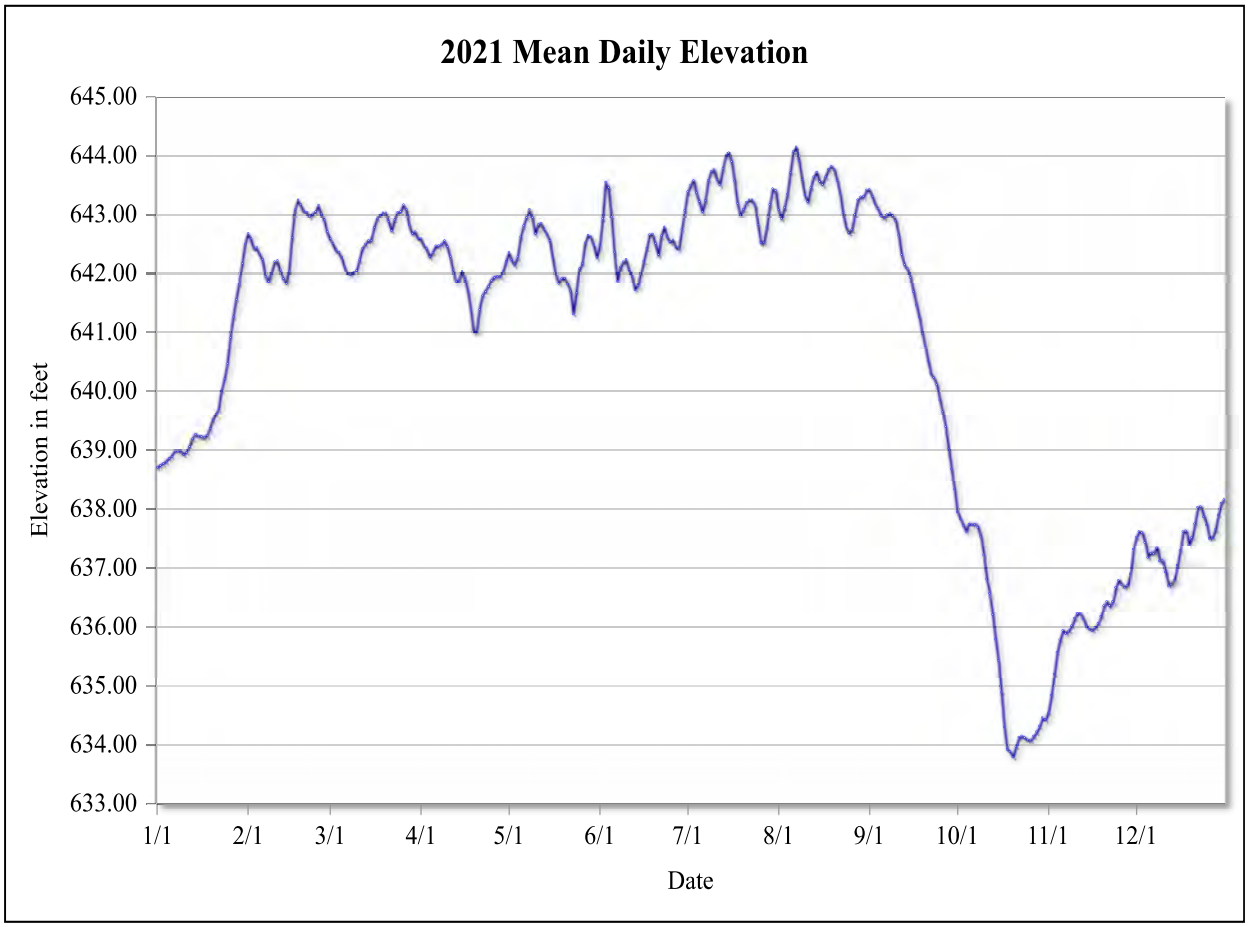
Drainage Area—171,200 mi².

Period of Record—January 1, 2011 to current year.

Gage—A Sutron Xlite datalogger (Model 9210-0000-2B) records water elevation measured with a Sutron multiple interface shaft encoder (Model 56-0540-400-DTR).

Extremes—Maximum daily elevation, 645.63 ft, Mar. 18, 2020; minimum daily elevation, 630.74 ft, Nov. 1, 2012; maximum hourly elevation, 645.73 ft, Mar. 18, 2020 at 00:00; minimum hourly elevation, 630.60 ft, Nov. 1, 2012 at 16:00.

Remarks—The elevation record was estimated from Sep. 21, 2021 at 03:00 to Sep. 22, 2021 at 10:00 due to equipment failure.



Lake Mohave at Davis Dam

Mean daily elevation, in feet, Calendar Year 2021

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	638.71	642.68	642.59	642.59	642.36	642.48	643.39	643.08	643.43	637.95	634.54	637.52
2	638.74	642.59	642.51	642.48	642.23	642.93	643.50	642.93	643.31	637.83	634.84	637.62
3	638.77	642.43	642.40	642.42	642.16	643.55	643.58	643.12	643.18	637.72	635.20	637.60
4	638.80	642.44	642.36	642.29	642.29	643.46	643.37	643.35	643.10	637.62	635.57	637.43
5	638.86	642.33	642.28	642.36	642.62	642.96	643.22	643.71	642.98	637.74	635.78	637.18
6	638.89	642.24	642.11	642.47	642.81	642.36	643.05	644.07	642.94	637.73	635.94	637.25
7	638.98	641.95	642.00	642.47	642.95	641.87	643.24	644.15	643.00	637.74	635.89	637.24
8	638.98	641.86	641.98	642.50	643.09	642.11	643.58	643.91	643.02	637.69	635.93	637.34
9	638.99	642.00	642.02	642.56	642.95	642.20	643.73	643.59	642.98	637.54	636.02	637.12
10	638.92	642.20	642.05	642.46	642.68	642.24	643.76	643.33	642.89	637.22	636.15	637.13
11	638.96	642.22	642.23	642.29	642.83	642.07	643.59	643.22	642.65	636.81	636.23	636.93
12	639.06	642.06	642.43	642.06	642.85	641.94	643.51	643.46	642.32	636.57	636.22	636.70
13	639.19	641.91	642.50	641.86	642.75	641.72	643.78	643.64	642.15	636.21	636.13	636.72
14	639.27	641.83	642.56	641.87	642.67	641.79	644.00	643.72	642.09	635.79	636.01	636.79
15	639.24	642.04	642.56	642.04	642.56	642.00	644.05	643.56	641.93	635.43	635.96	637.05
16	639.23	642.61	642.78	641.90	642.26	642.21	643.90	643.51	641.69	634.89	635.94	637.30
17	639.22	643.08	642.93	641.70	641.98	642.43	643.57	643.64	641.46	634.30	635.99	637.62
18	639.25	643.25	642.99	641.38	641.83	642.66	643.19	643.77	641.26	633.92	636.06	637.63
19	639.37	643.17	643.03	641.00	641.91	642.67	642.99	643.82	640.98	633.88	636.18	637.39
20	639.51	643.06	643.03	641.00	641.92	642.51	643.09	643.76	640.77	633.79	636.36	637.52
21	639.61	643.04	642.88	641.39	641.82	642.32	643.21	643.58	**640.51**	633.97	636.43	637.75
22	639.70	642.97	642.73	641.62	641.70	642.64	643.25	643.36	**640.29**	634.13	636.36	638.03
23	640.01	643.01	642.91	641.69	641.31	642.79	643.25	643.03	640.23	634.15	636.43	638.04
24	640.21	643.05	643.04	641.78	641.67	642.62	643.16	642.79	640.11	634.12	636.67	637.87
25	640.47	643.16	643.05	641.88	642.08	642.54	642.83	642.69	639.85	634.08	636.79	637.73
26	640.91	643.01	643.17	641.93	642.17	642.57	642.52	642.74	639.65	634.08	636.72	637.50
27	641.26	642.91	643.09	641.95	642.52	642.45	642.53	643.00	639.40	634.15	636.67	637.51
28	641.56	642.71	642.82	641.94	642.65	642.43	642.79	643.25	639.02	634.22	636.70	637.65
29	641.82		642.68	642.04	642.62	642.75	643.17	643.30	638.68	634.32	636.90	637.90
30	642.17		642.71	642.21	642.48	643.07	643.44	643.31	638.34	634.46	637.32	638.10
31	642.50		642.60		642.28		643.41	643.42		634.43		638.16
Mean	639.71	642.56	642.61	642.00	642.36	642.48	643.34	643.41	641.47	635.63	636.13	637.46
Max	642.50	643.25	643.17	642.59	643.09	643.55	644.05	644.15	643.43	637.95	637.32	638.16
Min	638.71	641.83	641.98	641.00	641.31	641.72	642.52	642.69	638.34	633.79	634.54	636.70

Calendar Year Summary

Annual Mean 640.75 Daily Max 644.15 Daily Min 633.79

Maximum Elevation			Minimum Elevation		
Date	Time	Elev	Date	Time	Elev
Aug. 7	00:00	644.34	Oct. 20	20:00	633.65

Bold values indicate the daily value was derived from hourly data that contained 6 or more consecutive hours of estimated record.

Lake Havasu at Parker Dam

Location—Latitude 34° 17.784', longitude -114° 08.311', in the NW¼ NW¼ of Section 3, T. 2 N., R. 27 E., San Bernardino meridian, San Bernardino County, California, Hydrologic Unit 15030101, river mi 192.0, 16.6 mi south of Lake Havasu City, Arizona, 13.3 mi north of Parker, Arizona, and 83.9 river mi downstream of Davis Dam.

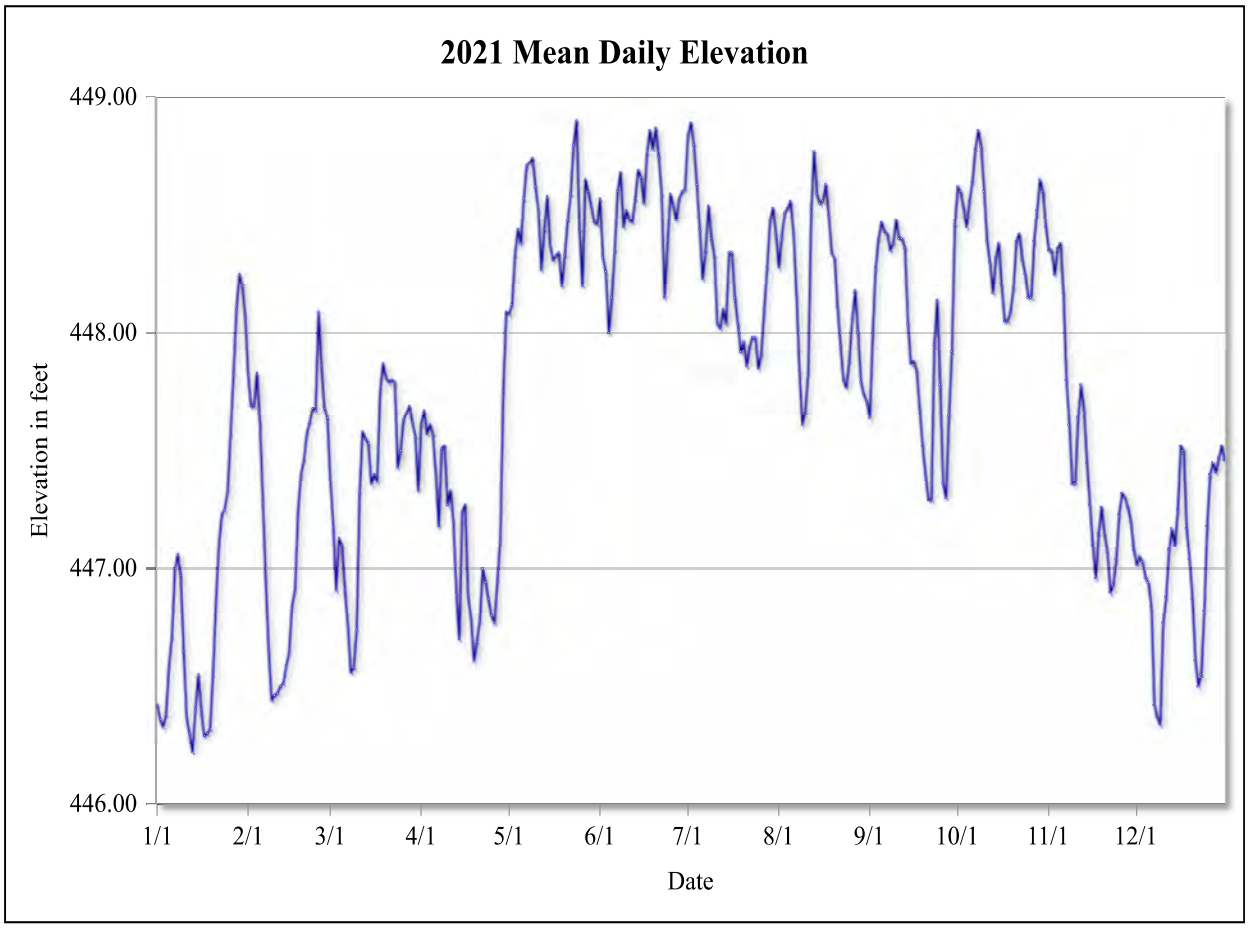
Drainage Area—180,800 mi².

Period of Record—January 1, 2011 to current year.

Gage—A Sutron Xpert datalogger (Model 8080-0000-2B) records water elevation measured with a Sutron stage discharge recorder shaft encoder (Model SDR-0001).

Extremes—Maximum daily elevation, 449.65 ft, Aug. 28, 2013; minimum daily elevation, 444.78 ft, Dec. 19, 2013; maximum hourly elevation, 449.76 ft, Aug. 29, 2013 at 23:00; minimum hourly elevation, 444.69 ft, Dec. 19, 2013 at 10:00.

Remarks—None.



Lake Havasu at Parker Dam

Mean daily elevation, in feet, Calendar Year 2021

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	446.42	447.82	447.38	447.61	448.08	448.57	448.84	448.28	447.64	448.62	448.35	447.02
2	446.36	447.69	447.19	447.67	448.12	448.32	448.89	448.41	448.00	448.60	448.35	447.05
3	446.33	447.69	446.91	447.57	448.33	448.26	448.80	448.51	448.28	448.53	448.25	447.03
4	446.38	447.83	447.13	447.61	448.44	448.00	448.63	448.53	448.40	448.45	448.36	446.96
5	446.59	447.62	447.10	447.57	448.38	448.15	448.44	448.56	448.47	448.56	448.38	446.94
6	446.71	447.29	446.91	447.40	448.57	448.35	448.23	448.42	448.43	448.64	448.17	446.84
7	447.00	446.95	446.76	447.18	448.71	448.60	448.35	448.16	448.42	448.78	447.80	446.42
8	447.06	446.65	446.56	447.51	448.72	448.68	448.54	447.84	448.35	448.86	447.61	446.37
9	446.97	446.44	446.58	447.52	448.74	448.45	448.40	447.61	448.38	448.79	447.36	446.34
10	446.65	446.46	446.74	447.27	448.62	448.52	448.33	447.67	448.48	448.60	447.36	446.77
11	446.37	446.47	447.32	447.33	448.52	448.48	448.04	447.83	448.40	448.39	447.64	446.88
12	446.30	446.50	447.58	447.20	448.27	448.47	448.02	448.51	448.40	448.30	447.78	447.08
13	446.22	446.51	447.55	446.90	448.44	448.57	448.10	448.77	448.36	448.17	447.67	447.17
14	446.40	446.59	447.53	446.70	448.58	448.69	448.04	448.59	448.04	448.32	447.45	447.10
15	446.55	446.65	447.36	447.24	448.37	448.66	448.34	448.55	447.87	448.38	447.27	447.25
16	446.40	446.85	447.40	447.27	448.31	448.55	448.34	448.56	447.88	448.20	447.10	447.52
17	446.29	446.91	447.37	446.89	448.33	448.76	448.15	448.63	447.84	448.05	446.96	447.50
18	446.30	447.24	447.75	446.79	448.34	448.86	448.04	448.50	447.68	448.05	447.15	447.17
19	446.32	447.40	447.87	446.61	448.20	448.78	447.92	448.34	447.52	448.09	447.26	447.04
20	446.55	447.46	447.81	446.69	448.33	448.87	447.96	448.32	447.40	448.19	447.15	446.87
21	446.86	447.57	447.79	446.78	448.48	448.75	447.86	448.11	447.29	448.39	447.07	446.61
22	447.10	447.62	447.80	447.00	448.59	448.59	447.94	447.95	447.29	448.42	446.90	446.50
23	447.23	447.68	447.79	446.94	448.80	448.15	447.98	447.80	447.95	448.31	446.93	446.55
24	447.25	447.67	447.43	446.87	448.90	448.37	447.98	447.77	448.14	448.25	447.04	446.82
25	447.33	448.09	447.50	446.80	448.44	448.59	447.85	447.88	447.78	448.15	447.23	447.18
26	447.57	447.86	447.63	446.77	448.20	448.54	447.91	448.06	447.36	448.15	447.32	447.40
27	447.83	447.68	447.66	446.95	448.65	448.48	448.10	448.18	447.30	448.39	447.30	447.45
28	448.10	447.64	447.69	447.13	448.60	448.57	448.28	448.00	447.65	448.52	447.26	447.41
29	448.25		447.62	447.75	448.54	448.60	448.48	447.79	447.92	448.65	447.20	447.47
30	448.20		447.56	448.09	448.47	448.61	448.53	447.74	448.46	448.60	447.08	447.52
31	448.07		447.33		448.46		448.42	447.71		448.45		447.46
Mean	446.90	447.24	447.37	447.19	448.47	448.53	448.25	448.18	447.98	448.41	447.49	447.02
Max	448.25	448.09	447.87	448.09	448.90	448.87	448.89	448.77	448.48	448.86	448.38	447.52
Min	446.22	446.44	446.56	446.61	448.08	448.00	447.85	447.61	447.29	448.05	446.90	446.34

Calendar Year Summary

Annual Mean 447.76 Daily Max 448.90 Daily Min 446.22

Maximum Elevation			Minimum Elevation		
Date	Time	Elev	Date	Time	Elev
May 24	11:00	449.04	Jan. 13	05:00	446.10

Colorado River Gaging Stations

Colorado River Below Big Bend

Location—Latitude 35° 05.303', longitude -114° 37.458', in the SW¼ NW¼ of Section 10, T. 33 S., R. 66 E., Mount Diablo meridian, Clark County, Nevada, Hydrologic Unit 15030101, river mi 264.7, 2.4 mi southwest of Bullhead City, Arizona, 17.2 mi north of Needles, California, and 11.1 river mi downstream of Davis Dam.

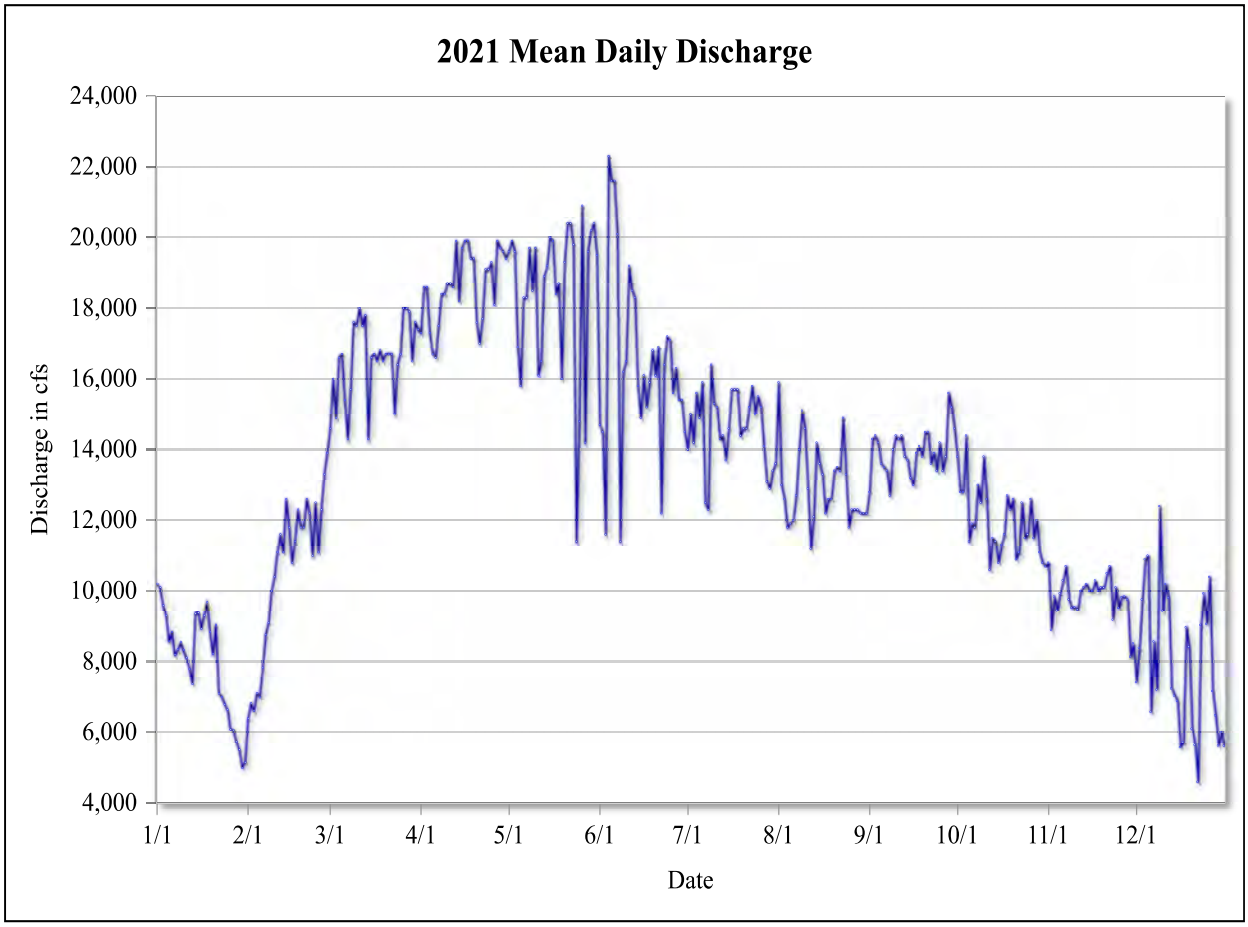
Drainage Area—171,300 mi².

Period of Record—January 1, 2008 to current year.

Gage—A Sutron Xlite datalogger (Model 9210-0000-2B) records water elevation measured with a Sutron Accubar constant flow bubbler system (Model 56-0133-25-1). Discharge is calculated using a stage-discharge relationship.

Extremes—Maximum daily discharge, 25,500 cfs, Mar. 3, 2009; minimum daily discharge, 2,420 cfs, Dec. 8, 2019; maximum hourly discharge, 27,100 cfs, Apr. 1, 2010 at 22:00; minimum hourly discharge, 2,045 cfs, Mar. 20, 2020 at 17:00.

Remarks—None.



Colorado River Below Big Bend

Mean daily discharge, in cubic-feet per second, Calendar Year 2021

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	10,200	6,390	14,600	17,300	19,600	14,700	14,000	15,900	12,800	13,800	10,800	7,420
2	10,100	6,820	16,000	18,600	19,900	14,500	15,000	13,000	14,300	12,800	8,900	8,390
3	9,590	6,610	14,900	18,600	19,600	11,600	14,200	12,600	14,400	12,800	9,840	9,760
4	9,310	7,100	16,600	17,300	16,900	22,300	15,600	11,800	14,200	14,400	9,450	10,900
5	8,580	6,990	16,700	16,700	15,800	21,600	14,900	11,900	13,600	11,400	9,930	11,000
6	8,840	7,830	15,400	16,600	18,300	21,600	15,900	12,000	13,500	11,900	10,300	6,580
7	8,200	8,760	14,300	17,500	18,300	20,100	12,500	12,700	13,400	11,800	10,700	8,570
8	8,350	9,100	15,700	18,400	19,700	11,400	12,300	14,000	12,700	13,000	9,760	7,210
9	8,560	10,000	17,600	18,400	18,500	16,200	16,400	15,100	14,000	12,500	9,520	12,400
10	8,330	10,400	17,500	18,700	19,700	16,500	15,300	14,600	14,400	13,800	9,540	9,440
11	8,110	11,100	18,000	18,700	16,100	19,200	15,200	12,900	14,300	12,600	9,470	10,200
12	7,790	11,600	17,500	18,600	16,500	18,500	14,300	11,200	14,400	10,600	10,000	9,810
13	7,370	11,100	17,800	19,900	18,900	18,300	14,400	12,100	13,800	11,500	10,100	7,240
14	9,360	12,600	14,300	18,200	19,200	15,800	13,700	14,200	13,700	11,400	10,200	7,040
15	9,390	11,800	16,600	19,700	20,000	14,900	14,600	13,600	13,200	10,800	10,000	6,890
16	8,930	10,800	16,700	19,900	19,900	16,100	15,700	13,300	13,000	11,300	10,000	5,580
17	9,310	11,400	16,500	19,900	18,400	15,200	15,700	12,200	13,900	11,600	10,300	5,720
18	9,680	12,300	16,800	19,400	18,700	15,900	15,700	12,600	14,100	12,700	10,000	8,970
19	8,840	11,800	16,500	19,400	16,000	16,800	14,400	12,600	13,800	12,300	10,100	8,420
20	8,220	11,800	16,700	17,600	19,300	16,100	14,600	13,400	14,500	12,600	10,100	6,100
21	9,040	12,600	16,700	17,000	20,400	16,900	14,600	13,500	14,500	10,900	10,500	5,650
22	7,100	12,200	16,700	17,700	20,400	12,200	15,200	13,400	13,600	11,100	10,700	4,600
23	7,000	11,000	15,000	19,100	19,800	16,400	15,800	14,900	13,900	12,500	9,190	9,040
24	6,790	12,500	16,400	19,100	11,400	17,200	15,000	13,300	13,400	11,500	10,100	9,930
25	6,640	11,100	16,700	19,300	14,800	17,100	15,500	11,800	14,200	11,600	9,520	9,070
26	6,080	12,300	18,000	18,100	20,900	15,600	15,200	12,300	13,400	12,600	9,820	10,400
27	6,060	13,300	18,000	19,900	14,200	16,300	14,100	12,300	13,800	11,500	9,840	7,170
28	5,730	13,900	17,900	19,700	19,600	15,400	13,100	12,300	15,600	12,000	9,760	6,480
29	5,510		16,500	19,600	20,200	15,400	12,900	12,200	15,200	11,100	8,140	5,630
30	4,990		17,600	19,400	20,400	14,500	13,400	12,200	14,600	10,800	8,520	6,010
31	5,150		17,400		19,500		13,600	12,200		10,700		5,620
Total	247,171	295,179	513,512	558,391	570,766	494,476	452,642	402,085	418,120	371,678	295,006	247,262
Mean	7,973	10,540	16,560	18,610	18,410	16,480	14,600	12,970	13,940	11,990	9,834	7,976
Max	10,200	13,900	18,000	19,900	20,900	22,300	16,400	15,900	15,600	14,400	10,800	12,400
Min	4,990	6,390	14,300	16,600	11,400	11,400	12,300	11,200	12,700	10,600	8,140	4,600
Ac-ft	490,257	585,480	1,018,536	1,107,552	1,132,097	980,778	897,802	797,524	829,328	737,212	585,136	490,437

Calendar Year Summary

Annual Total 4,866,286 Annual Mean 13,330 Daily Max 22,300 Daily Min 4,600 Annual Ac-ft 9,652,137

Maximum Discharge				Minimum Discharge			
Date	Time	Elev	Discharge	Date	Time	Elev	Discharge
Sep. 20	23:00	489.12	26,119	Dec. 29	18:00	478.87	2,365

Colorado River Below Needles Bridge

Location—Latitude 34° 49.504', longitude -114° 34.870', in the SW¼ SE¼ of Section 33, T. 9 N., R. 23 E., San Bernardino meridian, San Bernardino County, California, Hydrologic Unit 15030101, river mi 243.5, 2.0 mi east of Needles, California, 20.1 mi south of Bullhead City, Arizona, and 32.4 river mi downstream of Davis Dam.

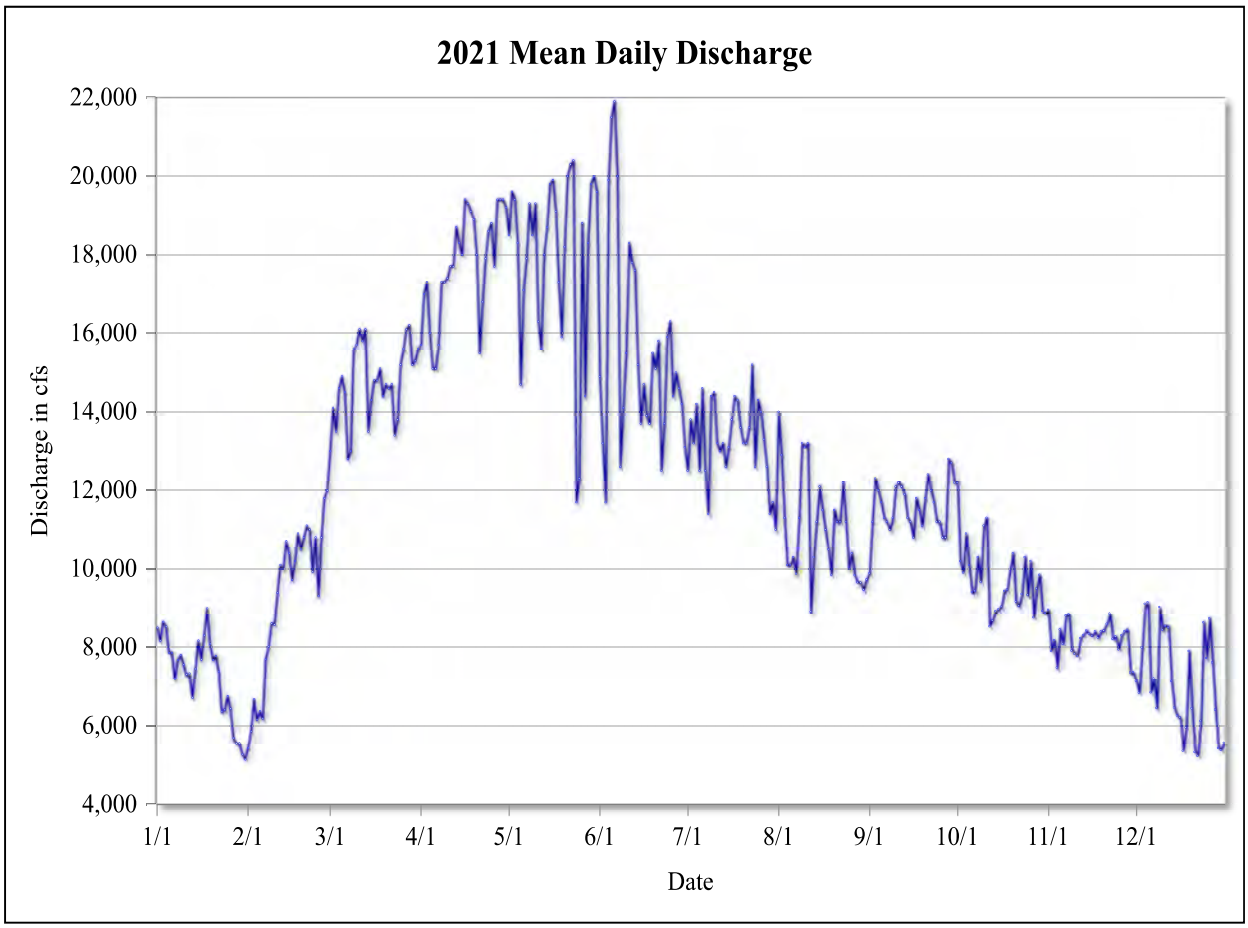
Drainage Area—171,700 mi².

Period of Record—January 1, 2008 to current year.

Gage—A Sutron Xlite datalogger (Model 9210-0000-2B) records water elevation measured with a Sutron submersible pressure sensor (Model 6661-1200-5). Discharge is calculated using a stage-discharge relationship.

Extremes—Maximum daily discharge, 24,100 cfs, Apr. 24, 2009; minimum daily discharge, 3,620 cfs, Dec. 8, 2019; maximum hourly discharge, 24,557 cfs, Jun. 6, 2021 at 04:00; minimum hourly discharge, 3,513 cfs, Dec. 9, 2019 at 08:00.

Remarks—The stage record is estimated good. Discharge record is estimated poor due to the lack of stream stability during the record period.



Colorado River Below Needles Bridge

Mean daily discharge, in cubic-feet per second, Calendar Year 2021

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	8,500	5,440	13,000	15,700	18,500	14,900	12,500	14,000	9,890	12,200	8,960	7,150
2	8,170	5,860	14,100	17,000	19,600	13,200	13,800	12,900	11,200	10,200	7,910	6,850
3	8,650	6,680	13,500	17,300	19,400	11,700	13,200	11,300	12,300	9,910	8,190	8,000
4	8,530	6,160	14,600	16,000	18,300	19,900	14,200	10,100	12,000	10,900	7,490	9,110
5	7,860	6,380	14,900	15,100	14,700	21,500	12,500	10,100	11,700	10,100	8,460	9,150
6	7,860	6,190	14,500	15,100	17,100	21,900	14,600	10,300	11,300	9,410	8,090	6,860
7	7,200	7,700	12,800	15,700	17,900	20,000	12,500	9,880	11,200	9,440	8,820	7,210
8	7,680	8,020	13,000	17,300	19,300	12,600	11,400	11,300	11,000	10,300	8,850	6,460
9	7,800	8,610	15,600	17,300	18,500	14,100	14,400	13,200	11,300	9,670	7,920	9,030
10	7,560	8,580	15,700	17,400	19,300	15,500	14,500	13,100	12,100	11,100	7,840	8,450
11	7,310	9,390	16,100	17,700	16,300	18,300	13,200	13,200	12,200	11,300	7,780	8,550
12	7,330	10,100	15,800	17,700	15,600	17,800	13,000	8,910	12,100	8,540	8,240	8,510
13	6,720	10,000	16,100	18,700	18,000	17,600	13,200	10,300	11,900	8,690	8,320	7,150
14	7,450	10,700	13,500	18,300	18,700	15,200	12,600	11,200	11,300	8,920	8,430	6,470
15	8,170	10,400	14,300	18,000	19,800	13,700	13,100	12,100	11,200	8,970	8,350	6,270
16	7,690	9,720	14,800	19,400	19,900	14,700	13,800	11,500	10,800	9,040	8,300	6,220
17	8,310	10,200	14,800	19,300	19,100	13,900	14,400	11,000	11,800	9,440	8,410	5,370
18	8,990	10,900	15,100	19,100	17,300	13,700	14,300	10,500	11,500	9,470	8,250	5,960
19	8,090	10,500	14,400	18,900	15,900	15,500	13,600	9,850	11,100	9,990	8,410	7,910
20	7,680	10,800	14,700	18,000	18,200	15,100	13,200	11,500	11,800	10,400	8,430	6,450
21	7,780	11,100	14,600	15,500	20,000	15,800	13,200	11,200	12,400	9,170	8,600	5,340
22	7,380	11,000	14,700	16,800	20,300	12,500	13,600	11,200	12,000	9,060	8,860	5,240
23	6,370	9,930	13,400	17,900	20,400	13,700	15,200	12,200	11,700	9,360	8,220	6,130
24	6,410	10,800	13,800	18,600	11,700	15,900	12,600	11,200	11,200	10,300	8,280	8,640
25	6,760	9,310	15,200	18,800	12,300	16,300	14,300	10,000	11,200	9,340	7,950	7,730
26	6,440	10,800	15,600	17,700	18,800	14,400	14,000	10,400	10,800	10,200	8,310	8,740
27	5,690	11,800	16,100	19,400	14,400	15,000	13,300	9,840	10,800	8,770	8,410	7,620
28	5,550	12,000	16,200	19,400	18,300	14,600	12,600	9,660	12,800	9,500	8,450	6,420
29	5,550		15,200	19,400	19,800	14,200	11,400	9,650	12,700	9,850	7,360	5,440
30	5,280		15,300	19,200	20,000	13,100	11,700	9,470	12,200	8,930	7,370	5,390
31	5,150		15,600		19,600		11,000	9,730		8,870		5,570
Total	225,902	258,992	457,228	531,557	557,181	466,234	410,834	340,944	347,647	301,211	247,236	219,379
Mean	7,287	9,250	14,750	17,720	17,970	15,540	13,250	11,000	11,590	9,716	8,241	7,077
Max	8,990	12,000	16,200	19,400	20,400	21,900	15,200	14,000	12,800	12,200	8,960	9,150
Min	5,150	5,440	12,800	15,100	11,700	11,700	11,000	8,910	9,890	8,540	7,360	5,240
Ac-ft	448,070	513,703	906,898	1,054,327	1,105,153	924,761	814,878	676,253	689,547	597,444	490,385	435,131

Calendar Year Summary

Annual Total 4,364,344 Annual Mean 11,960 Daily Max 21,900 Daily Min 5,150 Annual Ac-ft 8,656,550

Maximum Discharge				Minimum Discharge			
Date	Time	Elev	Discharge	Date	Time	Elev	Discharge
Jun. 6	04:00	461.62	24,557	Dec. 17	23:00	451.78	3,952

Colorado River at River Section 41

Location—Latitude 34° 41.255', longitude -114° 27.759', in the SW¼ NW¼ of Section 13, T. 15 N., R. 21 W., Gila-Salt River meridian, Mohave County, Arizona, Hydrologic Unit 15030101, at river mi 231.0, 13.5 mi south of Needles, California, 16.2 mi north of Lake Havasu City, Arizona, and 44.9 river mi downstream of Davis Dam.

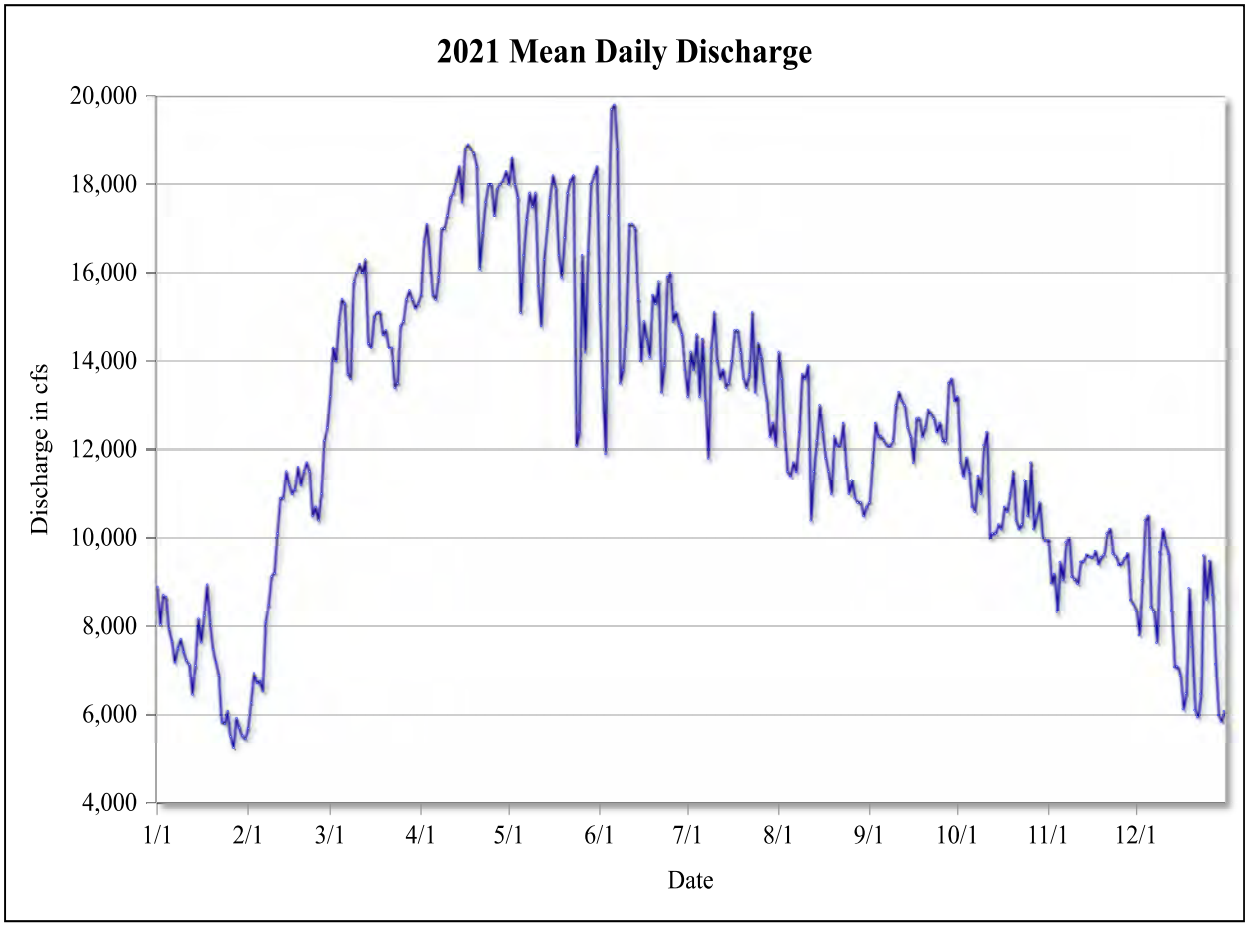
Drainage Area—174,300 mi².

Period of Record—June 29, 2006 to current year.

Gage—A Sutron Xlite datalogger (Model 9210-0000-2B) records water elevation and velocity measured with a SonTek/YSI Argonaut-SL current meter. Discharge is calculated using a velocity-index relationship.

Extremes—Maximum daily discharge, 23,300 cfs, Apr. 24, 2009; minimum daily discharge, 2,880 cfs, Dec. 7, 2019; maximum hourly discharge, 23,610 cfs, Apr. 24, 2009 at 12:00; minimum hourly discharge, 2,745 cfs, Dec. 9, 2019 at 03:00.

Remarks—None.



Colorado River at River Section 41

Mean daily discharge, in cubic-feet per second, Calendar Year 2021

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	8,890	5,690	13,200	15,500	18,000	15,300	13,200	14,200	10,800	13,200	9,960	8,350
2	8,040	6,270	14,300	16,700	18,600	13,400	14,200	13,600	11,700	11,700	8,980	7,800
3	8,700	6,930	14,000	17,100	18,000	11,900	13,800	12,400	12,600	11,400	9,180	9,040
4	8,660	6,720	14,900	16,400	17,700	17,300	14,600	11,500	12,300	11,800	8,330	10,400
5	7,930	6,760	15,400	15,500	15,100	19,700	13,200	11,400	12,300	11,500	9,450	10,500
6	7,660	6,530	15,300	15,400	16,400	19,800	14,500	11,700	12,200	10,700	9,050	8,430
7	7,190	8,100	13,700	15,900	17,200	18,800	13,100	11,500	12,100	10,600	9,900	8,330
8	7,500	8,480	13,600	17,000	17,800	13,500	11,800	12,400	12,100	11,400	10,000	7,630
9	7,700	9,130	15,800	17,000	17,500	13,800	14,300	13,700	12,200	11,000	9,120	9,680
10	7,420	9,200	16,000	17,300	17,800	14,800	15,100	13,600	13,000	12,100	9,060	10,200
11	7,220	10,100	16,200	17,700	15,700	17,100	14,000	13,900	13,300	12,400	8,970	9,830
12	7,130	10,900	16,000	17,800	14,800	17,100	13,600	10,400	13,100	9,990	9,460	9,640
13	6,460	10,900	16,300	18,100	16,300	17,000	13,800	11,500	13,000	10,100	9,470	8,350
14	7,110	11,500	14,400	18,400	17,000	15,400	13,400	12,200	12,500	10,100	9,620	7,080
15	8,170	11,200	14,300	17,600	17,700	14,000	13,500	13,000	12,300	10,300	9,570	7,090
16	7,640	11,000	15,000	18,800	18,200	14,900	14,000	12,400	11,700	10,200	9,550	6,890
17	8,240	11,100	15,100	18,900	17,900	14,500	14,700	11,800	12,700	10,700	9,700	6,130
18	8,940	11,600	15,100	18,800	16,400	14,100	14,700	11,500	12,700	10,600	9,410	6,480
19	8,090	11,200	14,600	18,700	15,900	15,500	14,200	11,000	12,300	11,000	9,560	8,860
20	7,480	11,500	14,700	18,400	16,800	15,300	13,600	12,300	12,500	11,500	9,620	7,530
21	7,190	11,700	14,300	16,100	17,800	15,800	13,400	12,100	12,900	10,400	10,100	6,100
22	6,890	11,500	14,300	16,900	18,100	13,300	13,700	12,100	12,800	10,200	10,200	5,950
23	5,830	10,500	13,400	17,600	18,200	13,900	15,100	12,600	12,700	10,300	9,650	6,470
24	5,790	10,700	13,500	18,000	12,100	15,900	13,300	11,600	12,400	11,300	9,580	9,600
25	6,080	10,400	14,800	18,000	12,400	16,000	14,400	11,000	12,600	10,500	9,390	8,610
26	5,500	11,000	14,900	17,300	16,400	14,900	14,100	11,300	12,200	11,700	9,420	9,480
27	5,250	12,200	15,400	17,900	14,200	15,100	13,500	10,900	12,200	10,200	9,540	8,710
28	5,920	12,500	15,600	18,000	16,500	14,800	13,100	10,800	13,500	10,500	9,650	7,140
29	5,700		15,400	18,100	18,000	14,600	12,300	10,800	13,600	10,800	8,590	5,990
30	5,520		15,200	18,300	18,200	13,800	12,600	10,500	13,100	10,000	8,500	5,850
31	5,450		15,300		18,400		12,100	10,700		9,930		6,080
Total	221,301	275,283	459,970	523,320	521,033	461,227	424,836	370,408	375,438	338,258	282,537	248,211
Mean	7,139	9,832	14,840	17,440	16,810	15,370	13,700	11,950	12,510	10,910	9,418	8,007
Max	8,940	12,500	16,300	18,900	18,600	19,800	15,100	14,200	13,600	13,200	10,200	10,500
Min	5,250	5,690	13,200	15,400	12,100	11,900	11,800	10,400	10,800	9,930	8,330	5,850
Ac-ft	438,945	546,016	912,337	1,037,990	1,033,453	914,830	842,650	734,693	744,670	670,925	560,404	492,320

Calendar Year Summary

Annual Total 4,501,821 Annual Mean 12,330 Daily Max 19,800 Daily Min 5,250 Annual Ac-ft 8,929,232

Maximum Discharge				Minimum Discharge			
Date	Time	Elev	Discharge	Date	Time	Elev	Discharge
Jun. 5	05:00	454.63	21,331	Jan. 27	11:00	449.46	3,973

Colorado River at Parker Gage

Location—Latitude 34° 08.934', longitude -114° 18.468', in the NW¼ SE¼ of Section 2, T. 9 N., R. 20 W., Gila-Salt River meridian, La Paz County, Arizona, Hydrologic Unit 15030104, river mi 175.0, 1.1 mi west of Parker, Arizona, 40.4 mi north of Blythe, California, and 17.0 river mi downstream of Parker Dam.

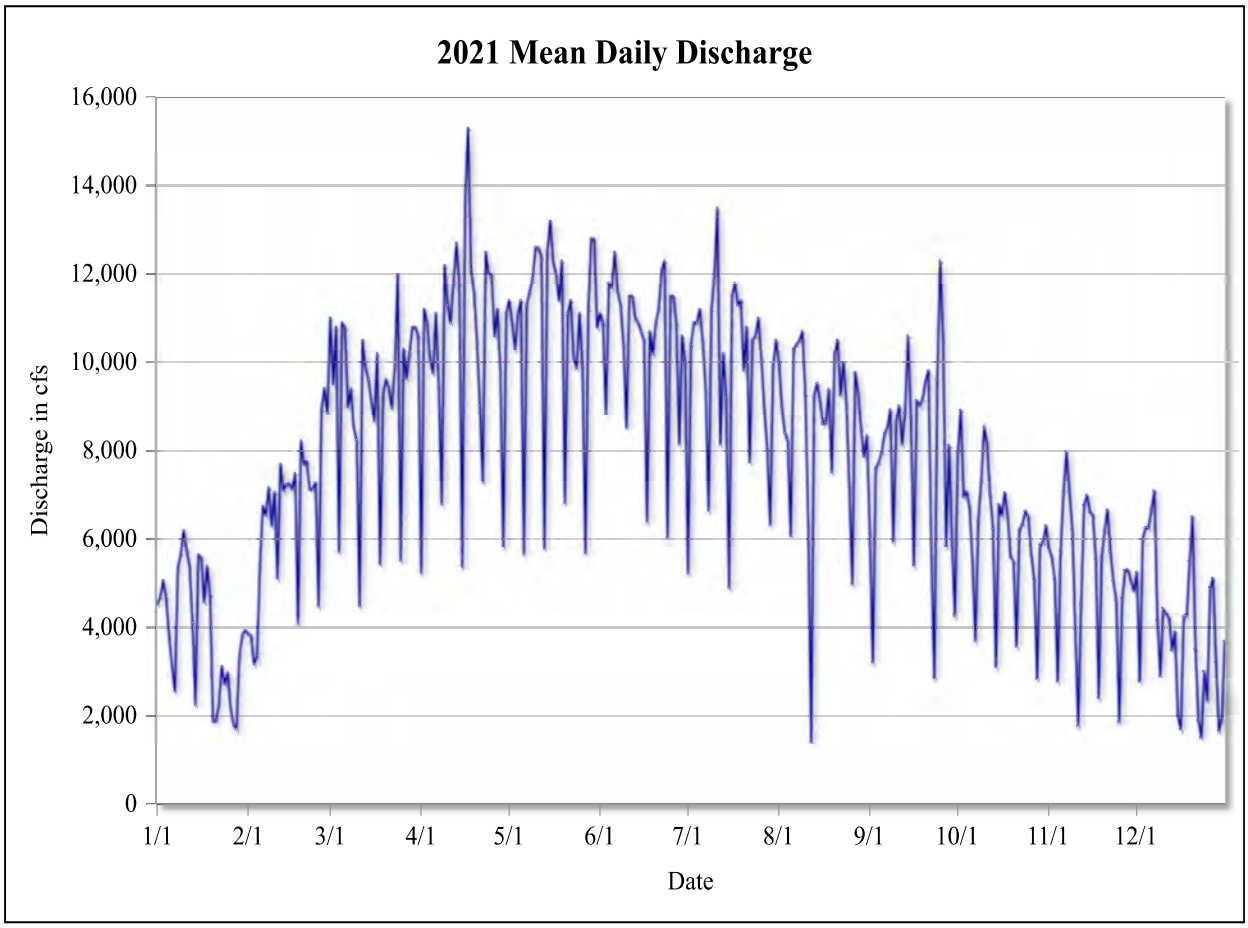
Drainage Area—181,000 mi².

Period of Record—January 1, 2005 to current year.

Gage—A Sutron Xlite datalogger (Model 9210-0000-2B) records water elevation measured with a Sutron Accubar constant flow bubbler (Model 56-0133-25-1). Discharge is calculated using a stage-discharge relationship.

Extremes—Maximum daily discharge, 19,000 cfs, Mar. 25, 2014; minimum daily discharge, 967 cfs, Dec. 22, 2017; maximum hourly discharge, 21,600 cfs, Apr. 16, 2011 at 22:00; minimum hourly discharge, 111 cfs, June 20, 2018 at 07:00.

Remarks—None.



Colorado River at Parker Gage

Mean daily discharge, in cubic-feet per second, Calendar Year 2021

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	4,550	3,850	11,000	5,250	11,400	11,100	5,240	10,000	6,130	7,980	5,800	5,250
2	4,710	3,800	9,510	11,200	10,900	10,900	10,400	8,990	3,220	8,920	5,600	2,780
3	5,070	3,180	10,800	10,900	10,300	8,840	10,900	8,410	7,600	6,960	5,090	6,000
4	4,700	3,360	5,720	10,100	11,100	11,800	10,900	8,250	7,730	7,070	2,780	6,260
5	3,820	5,410	10,900	9,750	11,400	11,700	11,200	6,080	7,970	6,720	5,730	6,260
6	3,140	6,740	10,800	11,100	5,670	12,500	10,500	10,300	8,390	5,490	7,070	6,670
7	2,560	6,550	8,990	9,420	11,300	11,600	9,400	10,400	8,520	3,700	7,990	7,090
8	5,340	7,160	9,390	6,800	11,600	11,300	6,650	10,500	8,930	6,410	7,080	4,170
9	5,670	6,300	8,510	12,200	11,900	10,400	11,200	10,700	5,950	7,340	6,220	2,910
10	6,190	7,050	8,250	11,300	12,600	8,540	12,000	9,290	8,660	8,540	3,960	4,440
11	5,750	5,120	4,510	10,900	12,600	11,500	13,500	6,300	9,020	8,150	1,780	4,320
12	5,410	7,700	10,500	11,800	12,400	11,500	8,160	1,420	8,160	7,010	4,520	4,230
13	4,110	7,100	9,870	12,700	5,800	11,000	10,200	9,250	8,850	6,240	6,770	3,490
14	2,260	7,230	9,610	11,800	12,500	10,900	9,200	9,520	10,600	3,120	6,990	3,890
15	5,650	7,250	9,130	5,380	13,200	10,700	4,920	9,150	8,760	6,780	6,620	2,010
16	5,590	7,130	8,680	13,700	12,300	10,500	11,500	8,610	5,410	6,540	6,550	1,700
17	4,600	7,490	10,200	15,300	12,000	6,400	11,800	8,640	9,140	7,050	5,550	4,250
18	5,380	4,110	5,440	12,100	11,400	10,700	11,300	9,380	9,030	6,530	2,410	4,270
19	4,760	8,230	9,270	11,600	12,300	10,200	11,400	7,530	9,180	5,600	5,580	5,500
20	1,880	7,700	9,610	10,500	6,820	10,900	9,810	10,200	9,570	5,510	6,190	6,510
21	1,880	7,760	9,400	9,020	11,100	11,200	10,800	10,500	9,800	3,570	6,660	3,510
22	2,260	7,120	8,970	7,300	11,400	12,100	7,750	9,270	5,600	6,210	5,720	1,900
23	3,120	7,130	9,890	12,500	10,100	12,300	10,500	10,000	2,850	6,340	5,060	1,520
24	2,720	7,270	12,000	12,000	9,870	6,030	10,600	9,070	9,620	6,630	4,620	3,010
25	2,970	4,500	5,520	12,000	11,100	11,500	11,000	7,180	12,300	6,510	1,870	2,370
26	2,190	8,940	10,300	10,600	9,920	11,500	10,100	5,000	10,500	5,630	4,660	4,910
27	1,790	9,410	9,630	11,200	5,700	10,900	8,960	9,770	5,840	5,090	5,300	5,120
28	1,710	8,860	10,200	9,790	11,200	8,170	8,070	9,300	8,130	2,840	5,310	3,220
29	3,350		10,800	5,840	12,800	10,600	6,330	8,510	6,000	5,870	5,070	1,670
30	3,820		10,800	11,100	12,800	10,000	9,900	7,880	4,270	5,930	4,850	1,940
31	3,930		10,600		10,800		10,500	8,340		6,300		3,680
Total	120,889	183,467	288,724	315,169	336,077	317,332	304,775	267,954	235,708	192,574	159,397	124,843
Mean	3,900	6,552	9,314	10,510	10,840	10,580	9,831	8,644	7,857	6,212	5,313	4,027
Max	6,190	9,410	12,000	15,300	13,200	12,500	13,500	10,700	12,300	8,920	7,990	7,090
Min	1,710	3,180	4,510	5,250	5,670	6,030	4,920	1,420	2,850	2,840	1,780	1,520
Ac-ft	239,780	363,902	572,676	625,128	666,599	629,419	604,512	531,479	467,521	381,965	316,159	247,623

Calendar Year Summary

Annual Total 2,846,909 Annual Mean 7,800 Daily Max 15,300 Daily Min 1,420 Annual Ac-ft 5,646,762

Maximum Discharge				Minimum Discharge			
Date	Time	Elev	Discharge	Date	Time	Elev	Discharge
Aug. 8	23:00	345.94	20,056	Aug. 5	07:00	339.41	460

Colorado River at Water Wheel

Location—Latitude 33° 55.914', longitude -114° 32.108', in the NW¼ SW¼ of Section 22, T. 7 N., R. 22 W., Gila-Salt meridian, La Paz County, Arizona, Hydrologic Unit 15030104, river mi 151.6, 20.7 mi south of Parker, Arizona, 22.3 mi north of Blythe, California, and 40.4 river mi downstream of Parker Dam.

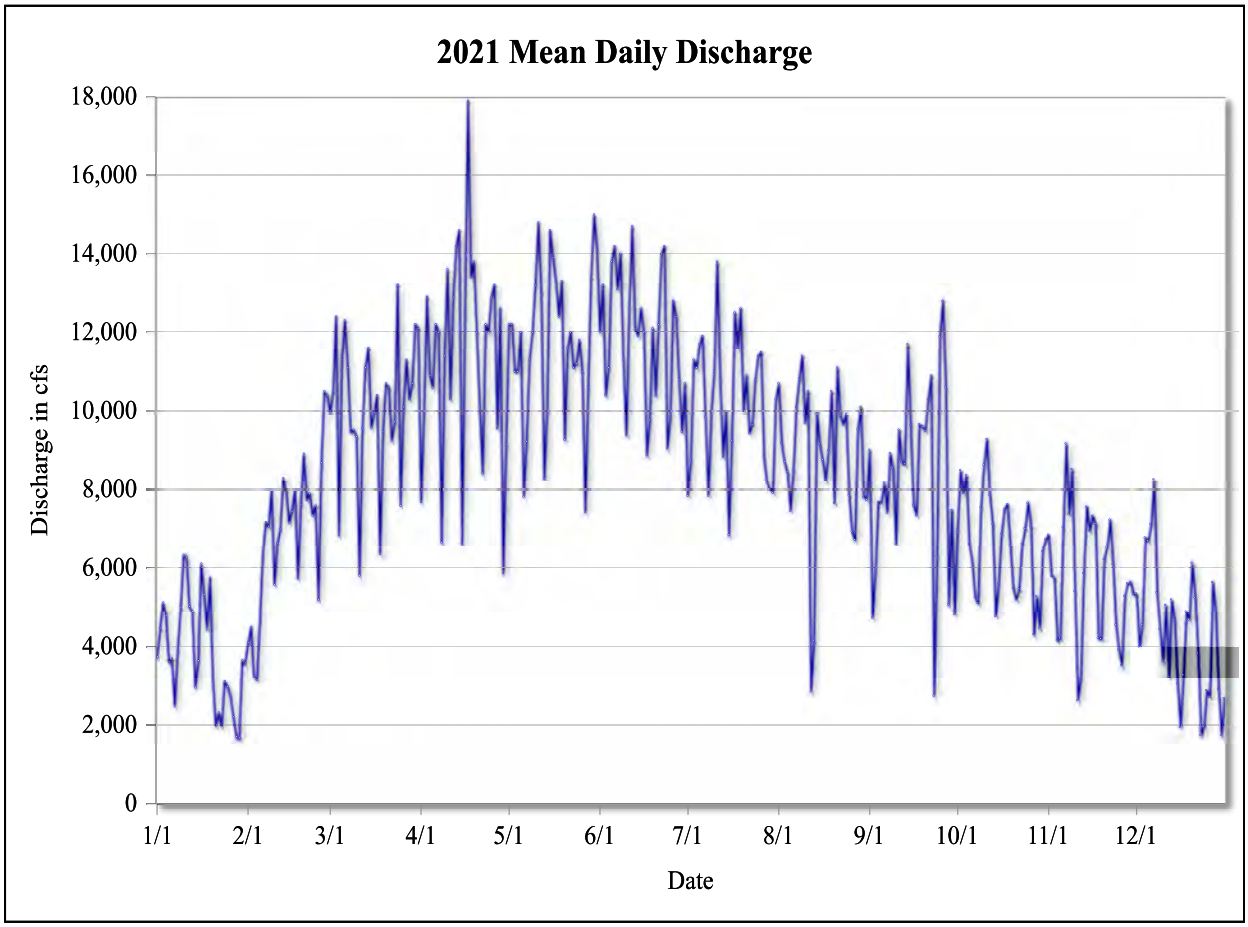
Drainage Area—181,600 mi².

Period of Record—January 1, 2005 to current year.

Gage—A Sutron Xlite datalogger (Model 9210-0000-2B) records water elevation measured with a Sutron multiple interface shaft encoder (Model 56-0540-400-DTR). Discharge is calculated using a stage-discharge relationship.

Extremes—Maximum daily discharge, 19,200 cfs, Mar. 26, 2014; minimum daily discharge, 1,320 cfs, Jan. 8, 2019; maximum hourly discharge, 20,402 cfs, Apr. 22, 2015 at 03:00; minimum hourly discharge, 1,053 cfs, Dec. 4, 2020 at 02:00.

Remarks—The stage record is estimated good. Discharge record is estimated fair due to the lack of stream stability during the record period.



Colorado River at Water Wheel

Mean daily discharge, in cubic-feet per second, Calendar Year 2021

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	3,740	4,100	9,960	7,680	12,200	12,000	7,840	10,700	9,010	6,980	6,850	5,350
2	4,470	4,500	10,500	9,970	12,200	13,200	8,750	9,180	4,740	8,490	5,800	4,000
3	5,120	3,250	12,400	12,900	11,000	10,400	11,300	8,710	5,940	7,910	5,750	4,560
4	4,790	3,160	6,840	10,900	11,000	11,100	11,100	8,450	7,680	8,370	4,160	6,780
5	3,610	4,620	11,300	10,600	12,000	13,800	11,700	7,460	7,650	6,610	4,220	6,690
6	3,700	6,300	12,300	12,200	7,820	14,200	11,900	8,510	8,170	6,160	7,040	7,120
7	2,500	7,170	11,100	12,000	9,220	13,100	9,850	10,100	7,410	5,260	9,170	8,260
8	3,910	7,060	9,460	6,650	11,300	14,000	7,840	10,800	8,930	5,110	7,370	5,380
9	4,990	8,000	9,520	11,400	12,000	11,300	9,970	11,400	8,550	7,550	8,520	4,450
10	6,320	5,580	9,350	13,600	13,200	9,390	11,000	9,700	6,610	8,630	5,410	3,640
11	6,270	6,630	5,810	10,300	14,800	12,600	13,800	10,500	9,520	9,280	2,640	5,060
12	5,020	6,990	9,560	12,900	13,000	14,700	10,800	2,860	8,700	7,860	3,200	3,230
13	4,890	8,290	11,100	14,200	8,280	12,100	8,850	4,160	8,650	7,120	5,870	5,200
14	2,960	7,970	11,600	14,600	9,980	11,900	10,000	9,980	11,700	4,780	7,560	4,680
15	3,640	7,160	9,580	6,610	14,600	12,600	6,850	9,160	9,640	5,610	6,960	3,060
16	6,110	7,440	9,950	12,600	13,900	12,000	9,250	8,760	7,590	6,870	7,320	1,950
17	5,320	8,000	10,400	17,900	13,300	8,880	12,500	8,240	7,340	7,490	7,130	3,280
18	4,460	5,740	6,360	13,400	12,400	9,770	11,600	9,000	9,660	7,620	4,230	4,890
19	5,750	7,610	9,480	13,800	13,300	12,100	12,600	10,500	9,600	6,570	4,200	4,690
20	3,140	8,910	10,700	12,000	9,270	10,400	10,000	7,650	9,500	5,490	6,230	6,130
21	1,980	7,730	10,600	10,100	11,600	12,200	10,900	11,100	10,300	5,210	6,540	5,250
22	2,320	7,890	9,250	8,420	12,000	14,000	9,440	9,880	10,900	5,470	7,230	3,830
23	1,980	7,340	9,720	12,200	11,100	14,200	9,650	9,660	2,750	6,610	6,100	1,750
24	3,120	7,580	13,200	12,000	11,200	9,050	10,800	9,920	6,300	7,010	4,560	1,960
25	2,980	5,200	7,590	12,900	11,800	9,840	11,400	7,850	11,900	7,660	3,920	2,890
26	2,740	8,680	10,100	13,200	11,000	12,800	11,500	6,930	12,800	7,070	3,530	2,720
27	2,210	10,500	11,300	9,560	7,430	12,400	8,820	6,720	10,600	4,320	5,290	5,640
28	1,710	10,400	10,300	12,600	10,600	10,800	8,180	9,530	5,070	5,280	5,610	4,920
29	1,670		10,700	5,870	13,400	9,470	8,020	10,100	7,470	4,480	5,640	2,920
30	3,650		12,200	9,140	15,000	10,700	7,920	7,800	4,830	6,430	5,340	1,750
31	3,580		12,100		14,100		10,300	7,740		6,730		2,680
Total	118,652	193,800	314,314	342,142	363,876	354,878	314,489	273,097	249,474	206,040	173,378	134,720
Mean	3,827	6,921	10,140	11,400	11,740	11,830	10,140	8,810	8,316	6,646	5,779	4,346
Max	6,320	10,500	13,200	17,900	15,000	14,700	13,800	11,400	12,800	9,280	9,170	8,260
Min	1,670	3,160	5,810	5,870	7,430	8,880	6,850	2,860	2,750	4,320	2,640	1,750
Ac-ft	235,344	384,397	623,432	678,629	721,737	703,890	623,779	541,680	494,824	408,675	343,890	267,214

Calendar Year Summary

Annual Total 3,038,860 Annual Mean 8,326 Daily Max 17,900 Daily Min 1,670 Annual Ac-ft 6,027,491

Maximum Discharge				Minimum Discharge			
Date	Time	Elev	Discharge	Date	Time	Elev	Discharge
Sep. 26	06:00	305.18	19,780	Jan. 1	01:00	297.40	1,426

Colorado River Below Interstate Bridge

Location—Latitude 33° 35.362', longitude -114° 32.559', in the NW¼, lot 11 of Section 21, T. 3 N., R. 22 W., San Bernardino meridian, Riverside County, California, Hydrologic Unit 15030104, river mi 120.1, 2.8 mi southeast of Blythe, California, 61.6 mi north of Yuma, Arizona, and 91.9 river mi downstream of Parker Dam.

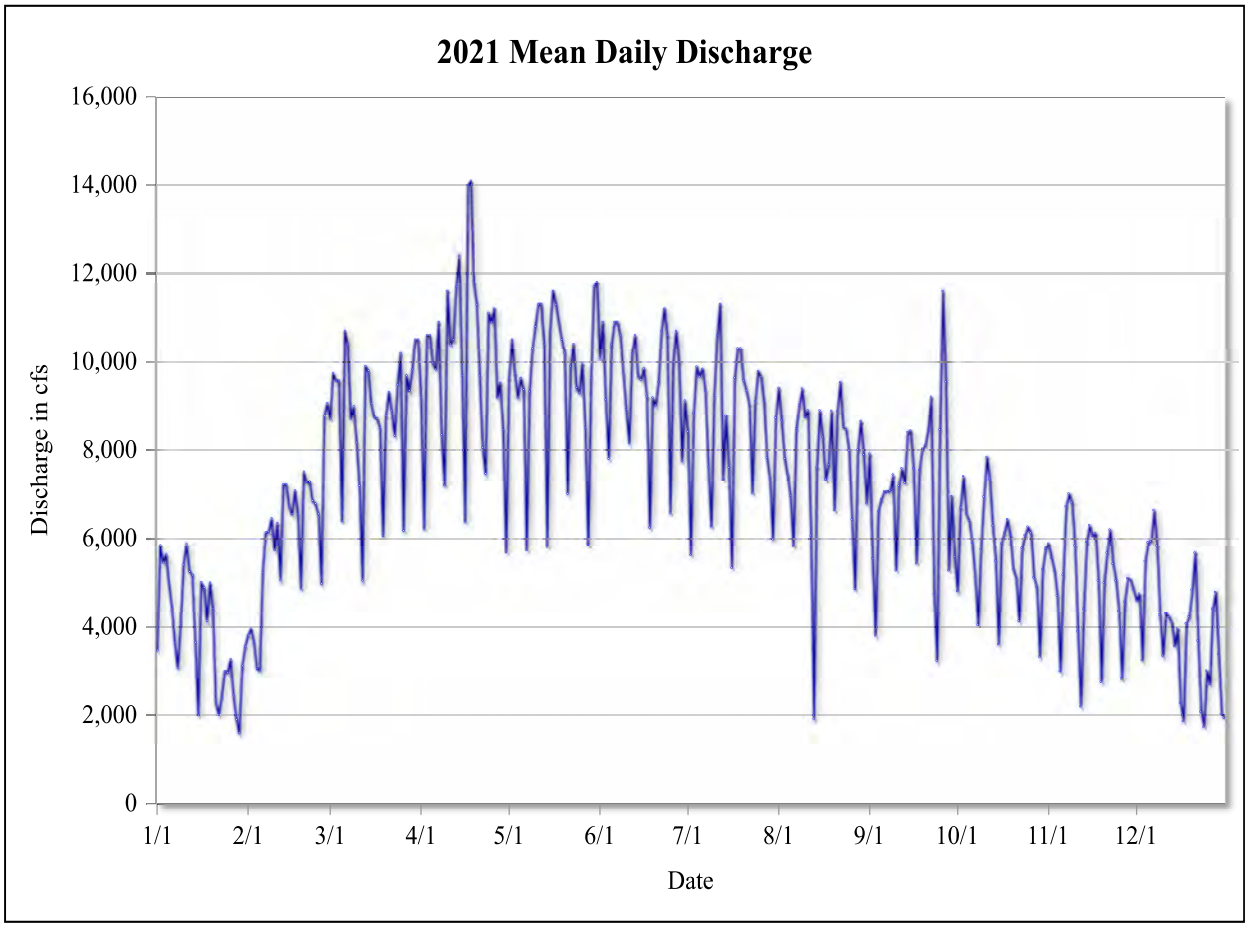
Drainage Area—184,300 mi².

Period of Record—January 1, 2011 to current year.

Gage—A Sutron Xlite datalogger (Model 9210-0000-2B) records water elevation measured with a Sutron stage discharge recorder shaft encoder (Model SDR-0001). Discharge is calculated using a stage-discharge relationship.

Extremes—Maximum daily discharge, 16,800 cfs, Mar. 26, 2014; minimum daily discharge, 1,340 cfs, Dec. 23, 2015; maximum hourly discharge, 17,541 cfs, Mar. 27, 2014 at 07:00; minimum hourly discharge, 916 cfs, Dec. 23, 2013 at 19:00.

Remarks—The record was downgraded from Dec. 17, 2021 at 15:00 to Dec. 17, 2021 at 17:00 due to the elevation dropping below the bottom of the stilling well.



Colorado River Below Interstate Bridge

Mean daily discharge, in cubic-feet per second, Calendar Year 2021

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	3,470	3,810	8,720	9,190	9,640	10,100	8,420	9,410	7,920	4,810	5,880	4,600
2	5,840	3,960	9,740	6,230	10,500	10,900	5,630	8,680	5,550	6,700	5,560	4,750
3	5,460	3,660	9,570	10,600	9,730	9,140	8,840	7,810	3,810	7,410	5,270	3,250
4	5,630	3,060	9,570	10,600	9,200	7,810	9,890	7,460	6,620	6,570	4,710	5,490
5	4,990	3,020	6,400	9,970	9,630	10,400	9,670	6,970	6,890	6,410	3,000	5,910
6	4,450	5,230	10,700	9,830	9,370	10,900	9,840	5,830	7,070	5,900	5,180	5,940
7	3,650	6,140	10,400	10,900	5,740	10,900	9,340	8,490	7,070	5,130	6,730	6,640
8	3,080	6,150	8,720	8,350	9,320	10,600	7,610	9,010	7,090	4,050	7,020	5,840
9	4,070	6,460	8,990	7,210	10,300	9,740	6,280	9,390	7,450	5,760	6,820	4,280
10	5,410	5,740	8,180	11,600	10,800	8,920	9,240	8,750	5,280	6,950	5,840	3,350
11	5,870	6,350	7,200	10,400	11,300	8,160	10,600	8,900	7,200	7,840	3,900	4,310
12	5,250	5,060	5,050	10,500	11,300	10,200	11,300	6,060	7,590	7,350	2,200	4,230
13	5,170	7,230	9,900	11,700	10,400	10,600	7,350	1,920	7,270	6,290	4,410	4,120
14	3,650	7,230	9,800	12,400	5,820	9,680	8,780	7,620	8,410	5,500	5,920	3,570
15	2,000	6,730	9,050	9,690	10,700	9,600	7,610	8,900	8,440	3,610	6,300	3,960
16	5,010	6,560	8,750	6,390	11,600	9,850	5,340	8,300	7,590	5,880	6,060	2,280
17	4,890	7,090	8,720	14,000	11,300	9,220	9,640	7,340	5,440	6,130	6,120	1,870
18	4,140	6,560	8,510	14,100	10,900	6,250	10,300	7,670	7,550	6,440	5,050	4,080
19	5,000	4,870	6,060	11,800	10,500	9,190	10,300	8,890	8,030	6,080	2,760	4,240
20	4,420	7,510	8,780	11,300	10,200	9,020	9,580	6,650	8,110	5,300	5,000	4,840
21	2,280	7,280	9,320	9,680	7,020	9,540	9,350	8,880	8,470	5,100	5,680	5,680
22	2,010	7,290	8,890	8,060	9,900	10,700	9,040	9,540	9,210	4,140	6,200	3,690
23	2,410	6,860	8,330	7,470	10,400	11,200	7,040	8,530	4,740	5,790	5,430	2,080
24	3,000	6,790	9,490	11,100	9,420	10,600	9,110	8,470	3,240	6,080	5,050	1,740
25	2,970	6,560	10,200	10,900	9,310	6,590	9,790	7,990	8,470	6,270	4,360	3,010
26	3,270	4,980	6,180	11,200	9,960	10,000	9,660	6,430	11,600	6,130	2,830	2,710
27	2,460	8,780	9,690	9,200	8,510	10,700	9,110	4,860	9,550	5,120	4,570	4,410
28	1,900	9,070	9,350	9,520	5,850	10,000	7,830	8,010	5,280	4,900	5,100	4,790
29	1,600		9,830	8,460	9,640	7,760	7,370	8,660	6,960	3,330	5,060	3,390
30	3,120		10,500	5,690	11,700	9,120	5,980	7,900	5,590	5,300	4,850	2,030
31	3,550		10,500		11,800		8,740	6,800		5,770		1,940
Total	120,022	170,031	274,997	297,956	301,575	287,370	268,503	240,163	213,514	178,036	152,870	123,002
Mean	3,872	6,073	8,871	9,932	9,728	9,579	8,661	7,747	7,117	5,743	5,096	3,968
Max	5,870	9,070	10,700	14,100	11,800	11,200	11,300	9,540	11,600	7,840	7,020	6,640
Min	1,600	3,020	5,050	5,690	5,740	6,250	5,340	1,920	3,240	3,330	2,200	1,740
Ac-ft	238,060	337,251	545,450	590,987	598,165	569,990	532,568	476,357	423,499	353,130	303,214	243,971

Calendar Year Summary

Annual Total 2,628,040 Annual Mean 7,200 Daily Max 14,100 Daily Min 1,600 Annual Ac-ft 5,212,641

Maximum Discharge				Minimum Discharge			
Date	Time	Elev	Discharge	Date	Time	Elev	Discharge
Apr. 18	03:00	252.06	16,691	Dec. 17	17:00	244.30	1,334

Colorado River Below McIntyre Park

Location—Latitude 33° 30.659', longitude -114° 34.090', in the SE¼, lot 18 of Section 18, T. 2 N., R. 22 W., San Bernardino meridian, Riverside County, California, Hydrologic Unit 15030104, river mi 113.3, 6.9 mi southeast of Blythe, California, 56.1 mi north of Yuma, Arizona, and 78.7 river mi downstream of Parker Dam.

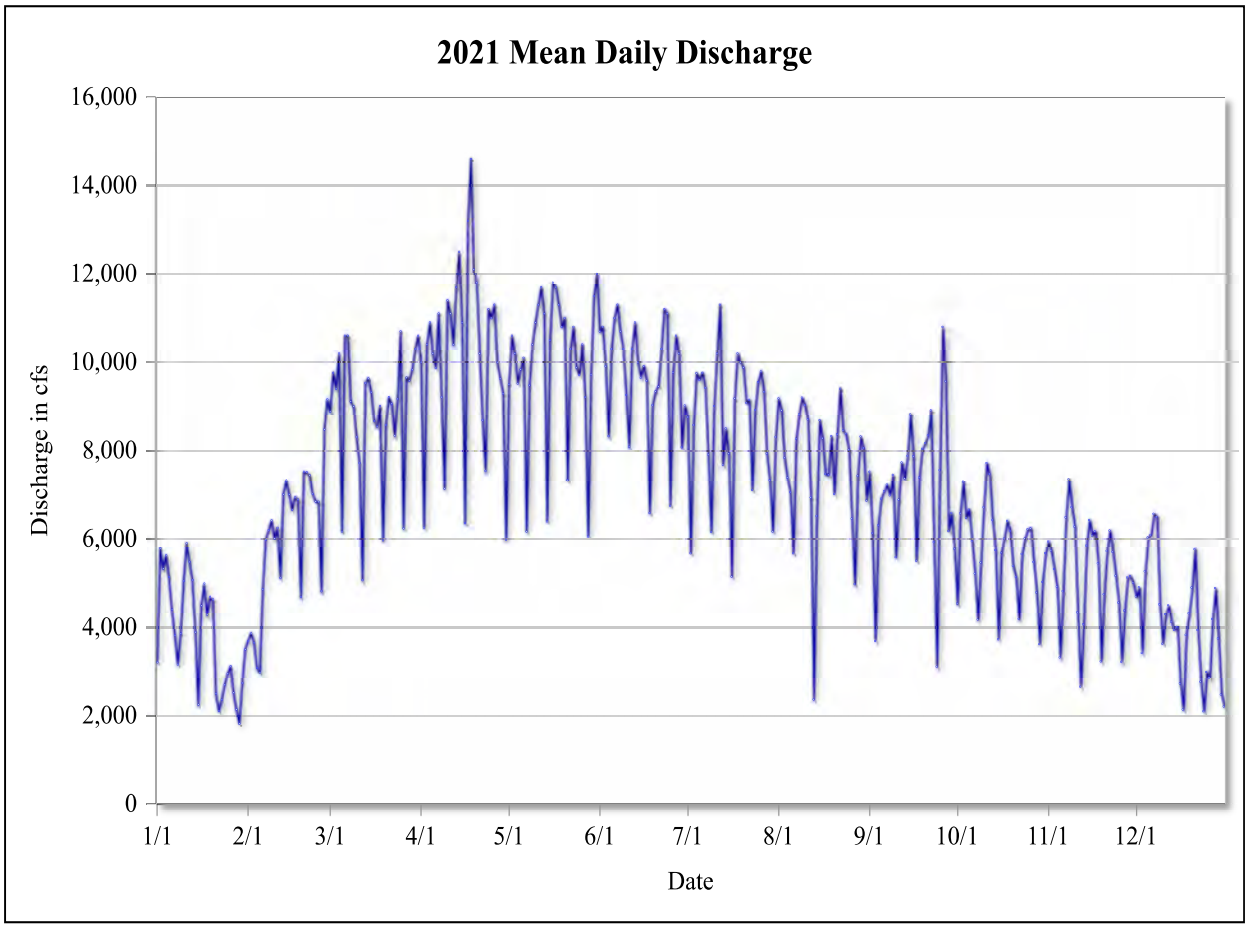
Drainage Area—184,400 mi².

Period of Record—January 1, 2011 to current year.

Gage—A Sutron Xlite datalogger (Model 9210-0000-2B) records water elevation measured with a Sutron stage discharge recorder shaft encoder (Model SDR-0001). Discharge is calculated using a stage-discharge relationship.

Extremes—Maximum daily discharge, 17,200 cfs, Mar. 26, 2014; minimum daily discharge, 1,620 cfs, Dec. 22, 2018; maximum hourly discharge, 17,801 cfs, Mar. 27, 2014 at 10:00; minimum hourly discharge, 1,039 cfs, Dec. 23, 2013 at 22:00.

Remarks—None.



Colorado River Below McIntyre Park

Mean daily discharge, in cubic-feet per second, Calendar Year 2021

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	3,210	3,690	8,880	10,000	9,500	10,700	8,760	9,180	7,520	4,540	5,940	4,700
2	5,790	3,860	9,760	6,260	10,600	10,800	5,680	8,910	6,130	6,580	5,740	4,910
3	5,330	3,650	9,400	10,400	10,200	9,910	8,580	7,840	3,690	7,300	5,320	3,420
4	5,630	3,080	10,200	10,900	9,520	8,330	9,750	7,390	6,310	6,480	4,920	5,270
5	5,140	2,980	6,170	10,200	9,840	10,300	9,600	7,060	6,910	6,660	3,320	6,030
6	4,400	4,860	10,600	9,870	10,100	11,000	9,760	5,680	7,080	5,950	4,820	6,090
7	3,820	5,980	10,600	11,100	6,170	11,300	9,420	8,270	7,230	5,220	6,490	6,570
8	3,160	6,200	9,110	9,210	9,480	10,700	7,910	8,820	6,990	4,180	7,350	6,500
9	3,860	6,420	9,000	7,140	10,400	10,300	6,160	9,200	7,450	5,470	6,720	4,520
10	5,050	6,010	8,310	11,400	10,900	9,260	9,010	9,030	5,590	6,720	6,280	3,630
11	5,900	6,250	7,720	11,100	11,300	8,090	10,200	8,710	6,890	7,720	4,340	4,300
12	5,480	5,120	5,070	10,400	11,700	10,300	11,300	6,940	7,730	7,470	2,660	4,500
13	5,070	7,010	9,530	11,700	11,100	10,900	7,680	2,370	7,370	6,430	4,070	4,130
14	3,890	7,320	9,630	12,500	6,400	10,000	8,500	6,520	7,880	5,750	5,850	3,940
15	2,250	7,010	9,320	10,900	10,500	9,650	7,930	8,690	8,820	3,730	6,430	4,010
16	4,490	6,660	8,670	6,360	11,800	9,910	5,150	8,280	7,870	5,690	6,080	2,730
17	4,990	6,940	8,550	13,200	11,700	9,580	9,180	7,470	5,510	6,010	6,170	2,140
18	4,290	6,890	9,010	14,600	11,300	6,590	10,200	7,450	7,390	6,410	5,450	3,830
19	4,690	4,690	5,970	12,100	10,800	9,030	10,000	8,330	8,040	6,180	3,230	4,320
20	4,630	7,520	8,580	11,800	11,000	9,340	9,880	7,020	8,170	5,390	4,750	4,900
21	2,500	7,510	9,210	10,200	7,330	9,450	9,080	8,370	8,350	5,140	5,730	5,770
22	2,110	7,440	9,060	8,690	10,300	10,300	9,150	9,400	8,910	4,190	6,190	3,940
23	2,360	7,020	8,340	7,540	10,800	11,200	7,110	8,460	5,930	5,660	5,710	2,770
24	2,700	6,850	9,170	11,200	9,880	11,100	8,920	8,380	3,110	6,010	5,170	2,100
25	2,950	6,840	10,700	11,000	9,710	6,750	9,550	8,020	7,560	6,220	4,560	2,990
26	3,120	4,820	6,240	11,300	10,400	9,770	9,790	6,460	10,800	6,240	3,220	2,860
27	2,520	8,480	9,650	10,000	9,210	10,600	9,330	4,980	9,570	5,480	4,380	4,190
28	2,140	9,160	9,580	9,630	6,060	10,200	7,930	7,430	6,180	4,790	5,130	4,890
29	1,820		9,830	9,290	9,720	8,080	7,330	8,320	6,590	3,620	5,160	3,750
30	2,740		10,300	5,980	11,500	9,020	6,170	8,060	5,780	5,030	5,010	2,480
31	3,500		10,600		12,000		8,310	6,870		5,680		2,210
Total	119,536	170,246	276,835	306,177	311,246	292,310	267,314	237,913	213,350	177,928	156,209	128,396
Mean	3,856	6,080	8,930	10,210	10,040	9,744	8,623	7,675	7,112	5,740	5,207	4,142
Max	5,900	9,160	10,700	14,600	12,000	11,300	11,300	9,400	10,800	7,720	7,350	6,570
Min	1,820	2,980	5,070	5,980	6,060	6,590	5,150	2,370	3,110	3,620	2,660	2,100
Ac-ft	237,096	337,678	549,094	607,294	617,348	579,788	530,209	471,894	423,174	352,914	309,836	254,670

Calendar Year Summary

Annual Total 2,657,460 Annual Mean 7,281 Daily Max 14,600 Daily Min 1,820 Annual Ac-ft 5,270,995

Maximum Discharge				Minimum Discharge			
Date	Time	Elev	Discharge	Date	Time	Elev	Discharge
Apr. 18	06:00	243.13	16,199	Jan. 30	01:00	235.03	1,660

Colorado River at Taylor Ferry

Location—Latitude 33° 26.063', longitude -114° 37.567', in the SE¼, lot 4 of Section 10, T. 1 N., R. 23 W., Gila-Salt River meridian, La Paz County, Arizona, Hydrologic Unit 15030104, river mi 106.3, 12.4 mi south of Blythe, California, 50.8 mi north of Yuma, Arizona, and 85.7 river mi downstream of Parker Dam.

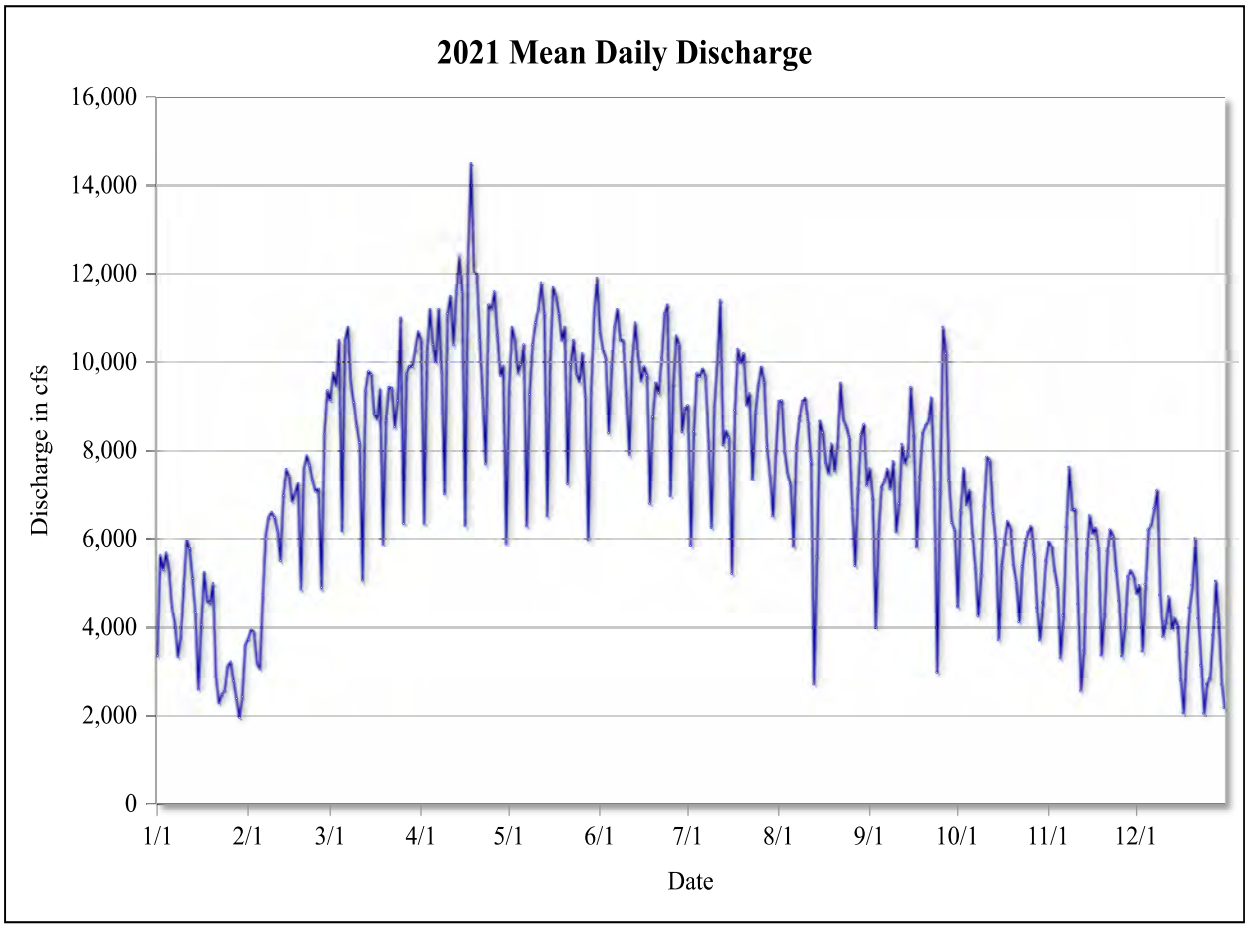
Drainage Area—184,400 mi².

Period of Record—January 1, 2005 to current year.

Gage—A Sutron Xlite datalogger (Model 9210-0000-2B) records water elevation with a Sutron multiple interface shaft encoder (Model 56-0540-400-DTR). Discharge is calculated using a stage-discharge relationship.

Extremes—Maximum daily discharge, 16,400 cfs, Mar. 26, 2014; minimum daily discharge, 1,700 cfs, Dec. 23, 2011; maximum hourly discharge, 16,805 cfs, Mar. 27, 2014 at 11:00; minimum hourly discharge, 1,468 cfs, Dec. 24, 2014 at 08:00.

Remarks—None.



Colorado River at Taylor Ferry

Mean daily discharge, in cubic-feet per second, Calendar Year 2021

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	3,360	3,730	9,150	10,500	9,370	10,700	9,020	9,120	7,600	4,480	5,930	4,780
2	5,630	3,950	9,750	6,350	10,800	10,300	5,850	9,130	6,910	6,650	5,840	4,960
3	5,310	3,890	9,470	10,200	10,500	10,100	8,430	7,970	4,000	7,600	5,270	3,460
4	5,690	3,190	10,500	11,200	9,750	8,410	9,740	7,490	6,150	6,770	4,920	4,970
5	5,300	3,070	6,180	10,400	9,950	9,890	9,670	7,240	7,180	7,100	3,310	6,210
6	4,460	4,720	10,500	10,000	10,400	10,800	9,850	5,830	7,320	6,120	4,270	6,320
7	4,100	6,090	10,800	11,200	6,290	11,200	9,660	8,120	7,590	5,340	6,270	6,690
8	3,340	6,500	9,530	9,780	9,270	10,500	8,220	8,720	7,140	4,270	7,630	7,100
9	3,760	6,610	9,090	7,020	10,400	10,500	6,260	9,120	7,760	5,210	6,660	4,730
10	4,930	6,490	8,560	11,100	10,900	9,230	8,990	9,190	6,160	6,750	6,670	3,790
11	5,990	6,200	8,180	11,500	11,200	7,910	10,000	8,660	6,800	7,860	4,530	4,140
12	5,790	5,510	5,070	10,400	11,800	10,100	11,400	7,750	8,150	7,780	2,570	4,700
13	5,110	6,980	9,350	11,600	11,100	10,900	8,140	2,720	7,720	6,580	3,480	3,970
14	4,330	7,580	9,790	12,400	6,520	10,100	8,450	5,610	7,920	5,920	5,670	4,220
15	2,600	7,420	9,720	11,600	9,950	9,570	8,290	8,670	9,430	3,720	6,530	4,040
16	4,070	6,850	8,810	6,310	11,700	9,900	5,220	8,410	8,330	5,400	6,130	2,820
17	5,250	7,040	8,710	12,400	11,500	9,700	8,910	7,720	5,820	5,950	6,250	2,060
18	4,620	7,260	9,380	14,500	11,100	6,800	10,300	7,490	7,400	6,400	5,760	3,440
19	4,560	4,880	5,890	12,100	10,500	8,770	9,980	8,160	8,390	6,250	3,370	4,440
20	5,000	7,600	8,680	12,000	10,800	9,530	10,200	7,550	8,570	5,410	4,300	4,960
21	2,900	7,890	9,430	10,500	7,250	9,310	9,030	8,160	8,660	5,010	5,730	6,010
22	2,290	7,660	9,410	9,190	9,950	10,100	9,290	9,520	9,200	4,130	6,210	4,210
23	2,480	7,310	8,540	7,700	10,500	11,100	7,360	8,700	7,170	5,380	6,060	3,140
24	2,560	7,080	9,130	11,300	9,730	11,300	8,860	8,550	2,980	5,910	5,280	2,050
25	3,130	7,130	11,000	11,200	9,550	6,970	9,490	8,300	7,080	6,160	4,600	2,720
26	3,220	4,900	6,350	11,600	10,200	9,510	9,890	6,700	10,800	6,290	3,350	2,850
27	2,790	8,380	9,730	10,600	9,210	10,600	9,540	5,400	10,200	5,650	4,000	3,830
28	2,390	9,360	9,910	9,700	5,980	10,400	8,070	7,150	7,320	4,440	5,150	5,050
29	1,960		9,900	9,900	9,320	8,430	7,420	8,370	6,370	3,710	5,290	4,120
30	2,430		10,300	5,900	11,100	8,960	6,520	8,590	6,210	4,560	5,160	2,710
31	3,600		10,700		11,900		8,000	7,210		5,510		2,180
Total	122,943	175,302	281,567	310,151	308,514	291,593	270,006	241,316	222,256	178,277	156,189	130,670
Mean	3,966	6,261	9,083	10,340	9,952	9,720	8,710	7,784	7,409	5,751	5,206	4,215
Max	5,990	9,360	11,000	14,500	11,900	11,300	11,400	9,520	10,800	7,860	7,630	7,100
Min	1,960	3,070	5,070	5,900	5,980	6,800	5,220	2,720	2,980	3,710	2,570	2,050
Ac-ft	243,854	347,706	558,479	615,175	611,928	578,366	535,549	478,644	440,838	353,608	309,797	259,179

Calendar Year Summary

Annual Total 2,688,783 Annual Mean 7,367 Daily Max 14,500 Daily Min 1,960 Annual Ac-ft 5,333,124

Maximum Discharge				Minimum Discharge			
Date	Time	Elev	Discharge	Date	Time	Elev	Discharge
Apr. 18	08:00	234.95	15,573	Dec. 17	22:00	225.55	1,788

Colorado River Below Oxbow Bridge

Location—Latitude 33° 22.060', longitude -114° 42.195', in the NE¼ NE¼ of Section 25, T. 9 S., R. 21 E., San Bernardino meridian, Imperial County, California, Hydrologic Unit 15030104, river mi 98.5, 18.0 mi south of Blythe, California, 46.3 mi north of Yuma, Arizona, and 93.5 river mi downstream of Parker Dam.

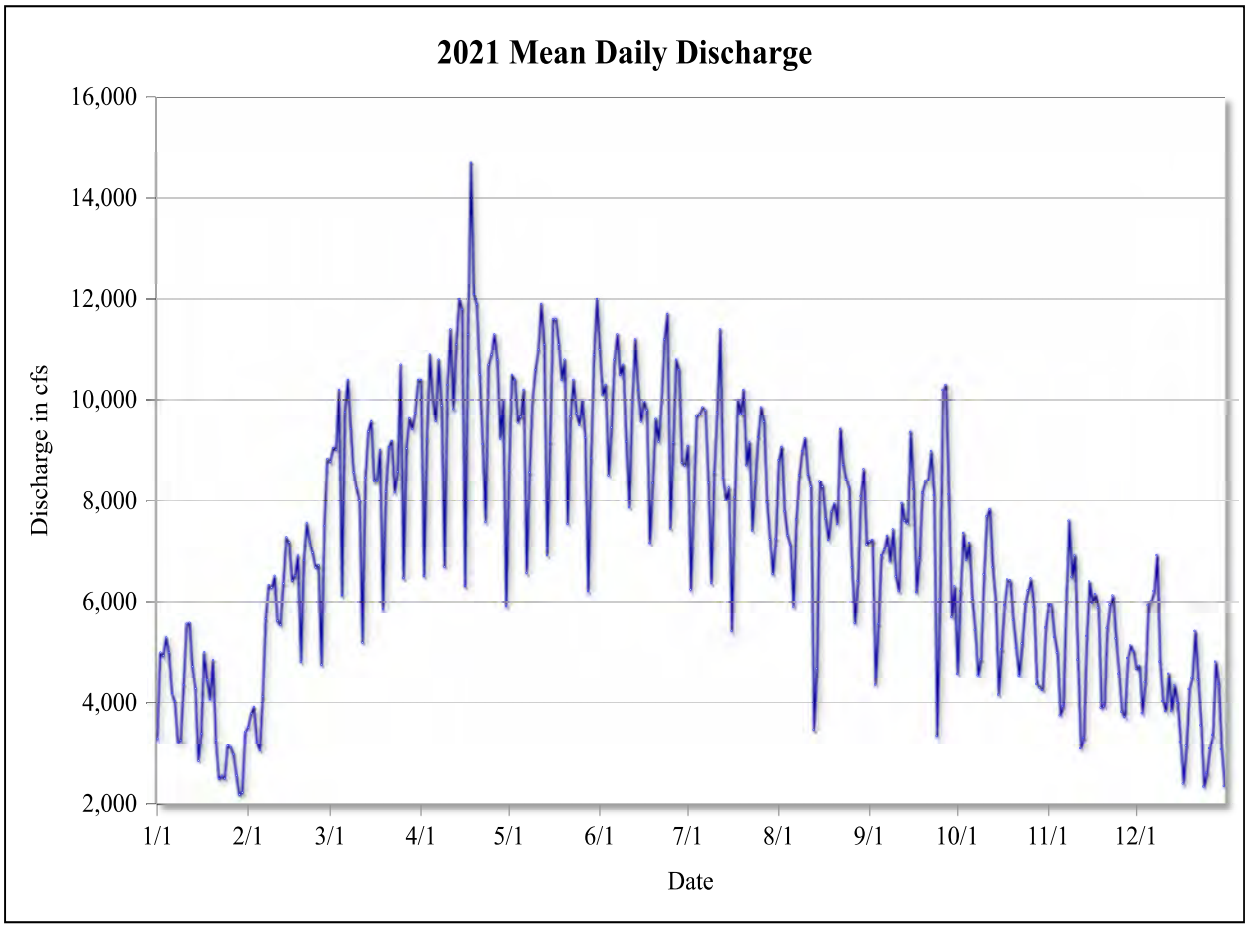
Drainage Area—184,700 mi².

Period of Record—January 1, 2011 to current year.

Gage—A Sutron Xlite datalogger (Model 9210-0000-2B) records water elevation measured with a Sutron stage discharge recorder shaft encoder (Model SDR-0001). Discharge is calculated using a stage-discharge relationship.

Extremes—Maximum daily discharge, 17,100 cfs, Mar. 27, 2014; minimum daily discharge, 1,200 cfs, Dec. 24, 2015; maximum hourly discharge, 17,439 cfs, Mar. 27, 2014 at 15:00; minimum hourly discharge, 1,017 cfs, Dec. 24, 2015 at 08:00.

Remarks—None.



Colorado River Below Oxbow Bridge

Mean daily discharge, in cubic-feet per second, Calendar Year 2021

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	3,290	3,520	8,780	10,400	8,600	11,000	9,090	8,810	7,200	4,580	5,970	4,680
2	5,000	3,790	9,050	6,520	10,500	10,100	6,250	9,070	7,230	6,220	5,940	4,740
3	4,940	3,920	9,020	9,230	10,400	10,300	7,990	7,800	4,370	7,370	5,310	3,800
4	5,300	3,230	10,200	10,900	9,560	8,510	9,690	7,320	5,570	6,840	5,000	4,420
5	5,000	3,070	6,140	10,000	9,670	9,460	9,710	7,130	6,930	7,170	3,760	5,940
6	4,200	4,130	9,760	9,590	10,200	10,800	9,850	5,910	7,040	6,070	3,940	6,010
7	4,040	5,670	10,400	10,800	6,580	11,300	9,790	7,640	7,310	5,450	6,020	6,220
8	3,230	6,340	9,430	9,890	8,570	10,500	8,370	8,510	6,810	4,550	7,610	6,930
9	3,260	6,290	8,570	6,700	10,000	10,700	6,390	8,990	7,440	4,870	6,500	4,820
10	4,360	6,520	8,260	10,300	10,600	9,180	8,570	9,240	6,510	6,550	6,920	4,040
11	5,570	5,630	8,010	11,400	11,000	7,880	9,760	8,520	6,220	7,700	4,860	3,840
12	5,590	5,550	5,200	9,820	11,900	9,960	11,400	8,290	7,960	7,840	3,110	4,580
13	4,720	6,370	8,460	11,100	11,100	11,200	8,460	3,470	7,610	6,690	3,310	3,850
14	4,290	7,280	9,380	12,000	6,930	10,200	8,020	4,680	7,560	6,020	5,330	4,350
15	2,860	7,180	9,580	11,800	9,170	9,580	8,270	8,390	9,370	4,170	6,410	4,010
16	3,390	6,430	8,400	6,320	11,600	9,970	5,430	8,290	8,240	5,070	5,980	3,230
17	5,010	6,520	8,400	11,300	11,600	9,800	8,080	7,650	6,200	5,940	6,160	2,410
18	4,460	6,920	9,010	14,700	11,100	7,170	10,000	7,230	6,880	6,450	5,890	3,160
19	4,080	4,820	5,860	12,100	10,400	8,360	9,720	7,790	8,170	6,430	3,910	4,280
20	4,850	6,830	8,190	11,900	10,800	9,630	10,200	7,950	8,390	5,650	3,940	4,500
21	3,260	7,560	9,070	10,500	7,550	9,180	8,710	7,550	8,420	5,090	5,490	5,430
22	2,510	7,190	9,190	9,130	9,680	10,000	9,160	9,430	8,990	4,540	5,950	4,470
23	2,560	6,980	8,180	7,590	10,400	11,200	7,420	8,720	8,120	5,180	6,130	3,560
24	2,510	6,690	8,580	10,700	9,740	11,700	8,400	8,430	3,350	5,960	5,280	2,350
25	3,160	6,730	10,700	10,900	9,510	7,460	9,270	8,280	6,060	6,230	4,580	2,620
26	3,130	4,760	6,480	11,300	10,000	9,160	9,850	6,690	10,200	6,470	3,830	3,110
27	2,990	7,510	9,040	10,800	9,260	10,800	9,580	5,590	10,300	5,900	3,730	3,370
28	2,570	8,830	9,640	9,240	6,220	10,600	7,980	6,420	8,140	4,380	4,890	4,820
29	2,190		9,430	10,000	8,850	8,760	7,240	8,100	5,710	4,310	5,140	4,380
30	2,230		9,740	5,920	10,900	8,710	6,560	8,630	6,310	4,260	5,030	3,090
31	3,430		10,400		12,000		7,250	7,140		5,500		2,360
Total	117,982	166,273	270,536	303,058	304,464	293,071	266,406	237,658	218,646	179,462	155,931	129,363
Mean	3,806	5,938	8,727	10,100	9,821	9,769	8,594	7,666	7,288	5,789	5,198	4,173
Max	5,590	8,830	10,700	14,700	12,000	11,700	11,400	9,430	10,300	7,840	7,610	6,930
Min	2,190	3,070	5,200	5,920	6,220	7,170	5,430	3,470	3,350	4,170	3,110	2,350
Ac-ft	234,013	329,799	536,600	601,108	603,895	581,299	528,409	471,388	433,677	355,957	309,284	256,588

Calendar Year Summary

Annual Total 2,642,850 Annual Mean 7,241 Daily Max 14,700 Daily Min 2,190 Annual Ac-ft 5,242,017

Maximum Discharge				Minimum Discharge			
Date	Time	Elev	Discharge	Date	Time	Elev	Discharge
Apr. 18	11:00	223.77	15,483	Jan. 30	10:00	216.20	2,060

Colorado River at Cibola Gage

Location—Latitude 33° 13.256', longitude -114° 40.354', in the NE¼ SW¼ of Section 30, T. 2 S., R. 23 W., Gila-Salt River meridian, La Paz County, Arizona, Hydrologic Unit 15030104, river mi 86.9, 27.4 mi south of Blythe, California, 36.2 mi north of Yuma, Arizona, and 105.1 river mi downstream of Parker Dam.

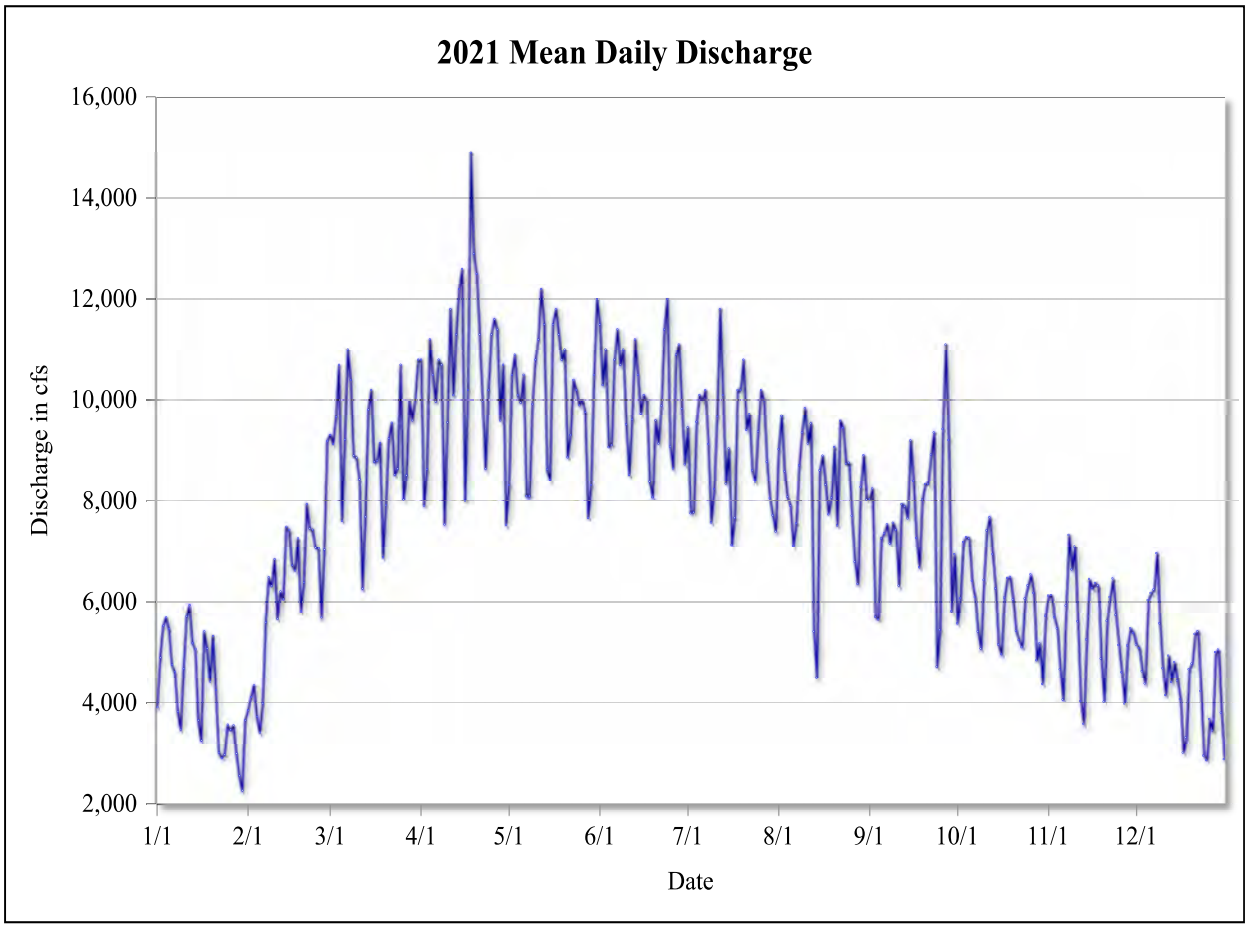
Drainage Area—185,100 mi².

Period of Record—January 1, 2005 to current year.

Gage—A Sutron Xlite datalogger (Model 9210-0000-2B) records water elevation measured with a Sutron multiple interface shaft encoder (Model 56-0540-400-DTR). Discharge is calculated using a stage-discharge relationship.

Extremes—Maximum daily discharge, 17,300 cfs, Mar. 27, 2014; minimum daily discharge, 2,110 cfs, Jan. 9, 2019; maximum hourly discharge, 17,615 cfs, Mar. 27, 2014 at 19:00; minimum hourly discharge, 1,978 cfs, Jan. 9, 2019 at 18:00.

Remarks—None.



Colorado River at Cibola Gage

Mean daily discharge, in cubic-feet per second, Calendar Year 2021

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	3,920	3,860	9,310	10,800	8,320	11,500	9,460	9,030	8,040	5,580	6,130	5,160
2	4,900	4,120	9,130	7,910	10,500	10,300	7,760	9,690	8,250	6,080	6,140	5,090
3	5,530	4,350	9,670	8,630	10,900	11,000	7,780	8,590	5,710	7,190	5,700	4,630
4	5,700	3,730	10,700	11,200	10,100	9,070	9,570	8,090	5,660	7,290	5,480	4,390
5	5,470	3,420	7,610	10,500	9,950	9,110	10,100	7,910	7,260	7,260	4,670	6,040
6	4,760	3,990	9,220	9,970	10,500	10,800	10,000	7,110	7,360	6,420	4,070	6,180
7	4,620	5,600	11,000	10,800	8,100	11,400	10,200	7,560	7,540	6,100	5,930	6,250
8	3,830	6,490	10,400	10,700	8,100	10,700	9,130	8,710	7,160	5,420	7,330	6,970
9	3,480	6,320	8,900	7,540	9,920	11,000	7,580	9,360	7,570	5,080	6,650	5,580
10	4,680	6,850	8,860	9,560	10,800	9,520	8,240	9,840	7,430	6,440	7,100	4,690
11	5,720	5,670	8,430	11,800	11,200	8,520	9,680	9,140	6,330	7,420	5,620	4,160
12	5,940	6,210	6,270	10,100	12,200	9,620	11,800	9,540	7,940	7,680	4,040	4,940
13	5,190	6,060	7,690	11,300	11,500	11,200	10,100	5,420	7,900	6,950	3,590	4,420
14	5,070	7,490	9,810	12,200	8,630	10,500	8,350	4,500	7,660	6,270	5,260	4,810
15	3,660	7,430	10,200	12,600	8,420	9,730	9,040	8,610	9,200	5,160	6,460	4,450
16	3,260	6,730	8,780	8,010	11,500	10,100	7,130	8,900	8,400	4,970	6,280	4,080
17	5,420	6,630	8,800	10,200	11,800	10,000	7,670	8,330	7,270	6,090	6,380	3,020
18	5,080	7,260	9,150	14,900	11,300	8,390	10,200	7,740	6,690	6,480	6,330	3,320
19	4,430	5,820	6,890	12,900	10,800	8,080	10,200	8,070	8,030	6,500	4,880	4,670
20	5,330	6,390	7,920	12,500	11,000	9,600	10,800	9,070	8,340	6,050	4,030	4,780
21	4,260	7,940	9,240	11,300	8,870	9,140	9,410	7,520	8,340	5,430	5,630	5,370
22	3,020	7,460	9,550	9,980	9,310	9,890	9,720	9,590	8,920	5,250	6,100	5,420
23	2,910	7,430	8,520	8,640	10,400	11,400	8,610	9,450	9,360	5,110	6,470	4,240
24	2,980	7,080	8,640	10,200	10,200	12,000	8,390	8,740	4,720	6,070	5,750	2,960
25	3,570	7,070	10,700	11,300	9,900	9,080	9,380	8,760	5,450	6,330	5,150	2,870
26	3,470	5,700	8,030	11,600	10,000	8,650	10,200	7,710	9,430	6,550	4,610	3,680
27	3,560	7,040	8,510	11,400	9,760	10,900	9,990	6,800	11,100	6,180	3,990	3,460
28	3,000	9,190	10,000	9,600	7,670	11,100	8,780	6,360	9,210	4,850	5,140	5,010
29	2,560		9,600	10,700	8,320	9,830	8,060	8,280	5,820	5,180	5,480	5,060
30	2,270		10,000	7,530	10,500	8,730	7,720	8,910	6,950	4,380	5,390	3,810
31	3,660		10,800		12,000		7,400	8,030		5,730		2,890
Total	131,246	173,334	282,326	316,508	312,403	300,885	282,416	255,345	229,088	187,518	165,757	142,406
Mean	4,234	6,190	9,107	10,550	10,080	10,030	9,110	8,237	7,636	6,049	5,525	4,594
Max	5,940	9,190	11,000	14,900	12,200	12,000	11,800	9,840	11,100	7,680	7,330	6,970
Min	2,270	3,420	6,270	7,530	7,670	8,080	7,130	4,500	4,720	4,380	3,590	2,870
Ac-ft	260,323	343,803	559,986	627,784	619,643	596,796	560,163	506,470	454,390	371,936	328,775	282,458

Calendar Year Summary

Annual Total 2,779,232 Annual Mean 7,614 Daily Max 14,900 Daily Min 2,270 Annual Ac-ft 5,512,527

Maximum Discharge				Minimum Discharge			
Date	Time	Elev	Discharge	Date	Time	Elev	Discharge
Apr. 18	16:00	210.14	15,770	Jan. 30	19:00	204.96	2,179

Colorado River at Picacho Park

Location—Latitude 33° 01.522', longitude -114° 36.692', in the SE ¼ of Section 24, T. 13 S., R. 22 E., Gila-Salt River meridian, Imperial County, California, Hydrologic Unit 15030104, river mi 67.8, 40.3 mi south of Blythe, California, 22.5 mi northeast of Yuma, Arizona, and 124.2 mi downstream of Parker Dam.

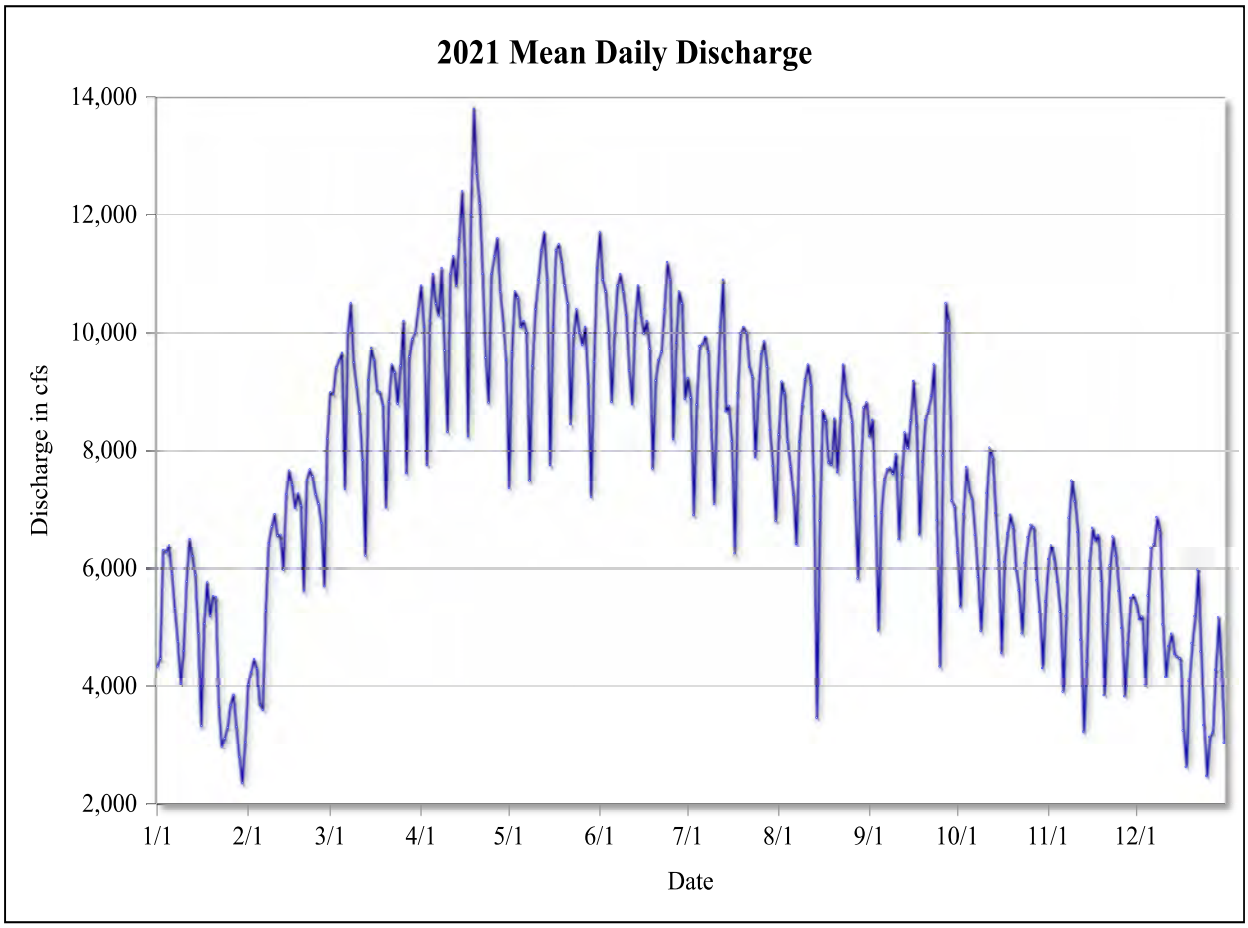
Drainage Area—185,900 mi².

Period of Record—March 27, 2012 to current year.

Gage—A Sutron Xlite datalogger (Model 9210-0000-2B) records water elevation measured with a Sutron multiple interface shaft encoder (Model 56-0540-400-DTR). Discharge is calculated using a stage-discharge relationship.

Extremes—Maximum daily discharge, 16,000 cfs, Mar. 28, 2014; minimum daily discharge, 1,810 cfs, Dec. 23, 2018; maximum hourly discharge, 16,111 cfs, Mar. 28, 2014 at 08:00; minimum hourly discharge 1,740 cfs, Dec. 24, 2013 at 22:00.

Remarks—None.



Colorado River at Picacho Park

Mean daily discharge, in cubic-feet per second, Calendar Year 2021

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	4,340	4,030	8,990	10,800	7,370	11,700	9,230	8,270	8,250	6,270	6,160	5,410
2	4,470	4,240	8,960	10,100	9,680	10,900	8,900	9,170	8,520	5,360	6,390	5,140
3	6,310	4,460	9,410	7,760	10,700	10,700	6,910	8,980	6,890	6,920	6,160	5,180
4	6,280	4,300	9,540	10,200	10,600	10,000	8,780	8,150	4,950	7,720	5,770	4,020
5	6,390	3,680	9,660	11,000	10,100	8,830	9,770	7,730	6,950	7,310	5,270	5,540
6	5,910	3,600	7,350	10,500	10,200	10,000	9,810	7,250	7,510	7,180	3,910	6,350
7	5,320	5,290	10,000	10,300	10,000	10,800	9,930	6,420	7,680	6,570	5,190	6,410
8	4,760	6,430	10,500	11,100	7,490	11,000	9,670	8,150	7,710	5,860	6,860	6,870
9	4,050	6,710	9,500	9,700	9,440	10,700	8,350	8,780	7,610	4,940	7,490	6,660
10	4,600	6,920	9,080	8,320	10,400	10,300	7,100	9,210	7,940	6,040	7,140	5,050
11	5,780	6,560	8,660	11,000	10,900	9,360	9,000	9,460	6,500	7,280	6,620	4,160
12	6,500	6,570	7,840	11,300	11,400	8,790	10,100	9,110	7,590	8,050	4,790	4,680
13	6,210	5,980	6,220	10,800	11,700	10,200	10,900	7,230	8,310	7,890	3,230	4,890
14	5,890	7,260	9,200	11,600	10,900	10,800	8,670	3,470	8,050	6,940	4,420	4,550
15	4,900	7,660	9,740	12,400	7,760	10,300	8,760	6,810	8,510	6,140	6,130	4,500
16	3,330	7,420	9,540	11,200	10,100	9,990	8,160	8,680	9,180	4,570	6,690	4,470
17	5,060	7,030	9,010	8,250	11,400	10,200	6,260	8,510	8,430	6,110	6,480	3,250
18	5,760	7,270	8,990	12,000	11,500	9,730	8,980	7,800	6,580	6,590	6,570	2,630
19	5,200	7,070	8,770	13,800	11,200	7,700	9,990	7,760	7,810	6,910	5,790	4,090
20	5,530	5,630	7,040	12,700	10,800	9,190	10,100	8,540	8,520	6,700	3,850	4,730
21	5,510	7,500	8,830	12,200	10,500	9,540	10,000	7,640	8,680	5,970	5,060	5,190
22	3,650	7,680	9,460	11,000	8,450	9,680	9,420	8,550	8,930	5,630	6,050	5,980
23	2,980	7,560	9,330	9,580	9,940	10,400	9,260	9,460	9,460	4,900	6,540	4,590
24	3,110	7,260	8,800	8,820	10,400	11,200	7,890	8,960	6,820	6,090	6,210	3,340
25	3,300	7,100	9,440	11,000	10,000	10,900	8,960	8,830	4,340	6,530	5,620	2,480
26	3,680	6,770	10,200	11,300	9,800	8,200	9,640	8,480	7,920	6,740	4,990	3,140
27	3,850	5,700	7,620	11,600	10,100	9,830	9,850	7,160	10,500	6,700	3,830	3,210
28	3,310	8,200	9,600	10,700	9,130	10,700	9,430	5,830	10,200	5,800	4,740	4,280
29	2,800		9,890	10,200	7,220	10,500	8,350	7,740	7,150	5,260	5,500	5,170
30	2,360		10,000	9,540	9,510	8,880	7,740	8,730	7,050	4,310	5,550	4,270
31	3,050		10,400		11,100		6,810	8,820		5,440		3,040
Total	144,196	175,889	281,571	320,786	309,730	301,212	276,706	249,673	234,498	194,703	168,953	143,283
Mean	4,651	6,282	9,083	10,690	9,991	10,040	8,926	8,054	7,817	6,281	5,632	4,622
Max	6,500	8,200	10,500	13,800	11,700	11,700	10,900	9,460	10,500	8,050	7,490	6,870
Min	2,360	3,600	6,220	7,760	7,220	7,700	6,260	3,470	4,340	4,310	3,230	2,480
Ac-ft	286,009	348,871	558,488	636,270	614,341	597,446	548,838	495,220	465,119	386,187	335,113	284,197

Calendar Year Summary

Annual Total 2,801,199 Annual Mean 7,675 Daily Max 13,800 Daily Min 2,360 Annual Ac-ft 5,556,098

Maximum Discharge				Minimum Discharge			
Date	Time	Elev	Discharge	Date	Time	Elev	Discharge
Apr. 19	09:00	193.65	14,138	Jan. 31	03:00	187.52	2,211

Colorado River at Martinez Lake

Location—Latitude 32° 59.847', longitude -114° 29.821', in the NW¼ NE¼ of Section 14, T. 5 S., R. 22 W., Gila-Salt River meridian, Yuma County, Arizona, Hydrologic Unit 15030104, river mi 59.4, 42.6 mi south of Blythe, California, 21.9 mi north of Yuma, Arizona, and 132.6 mi downstream of Parker Dam.

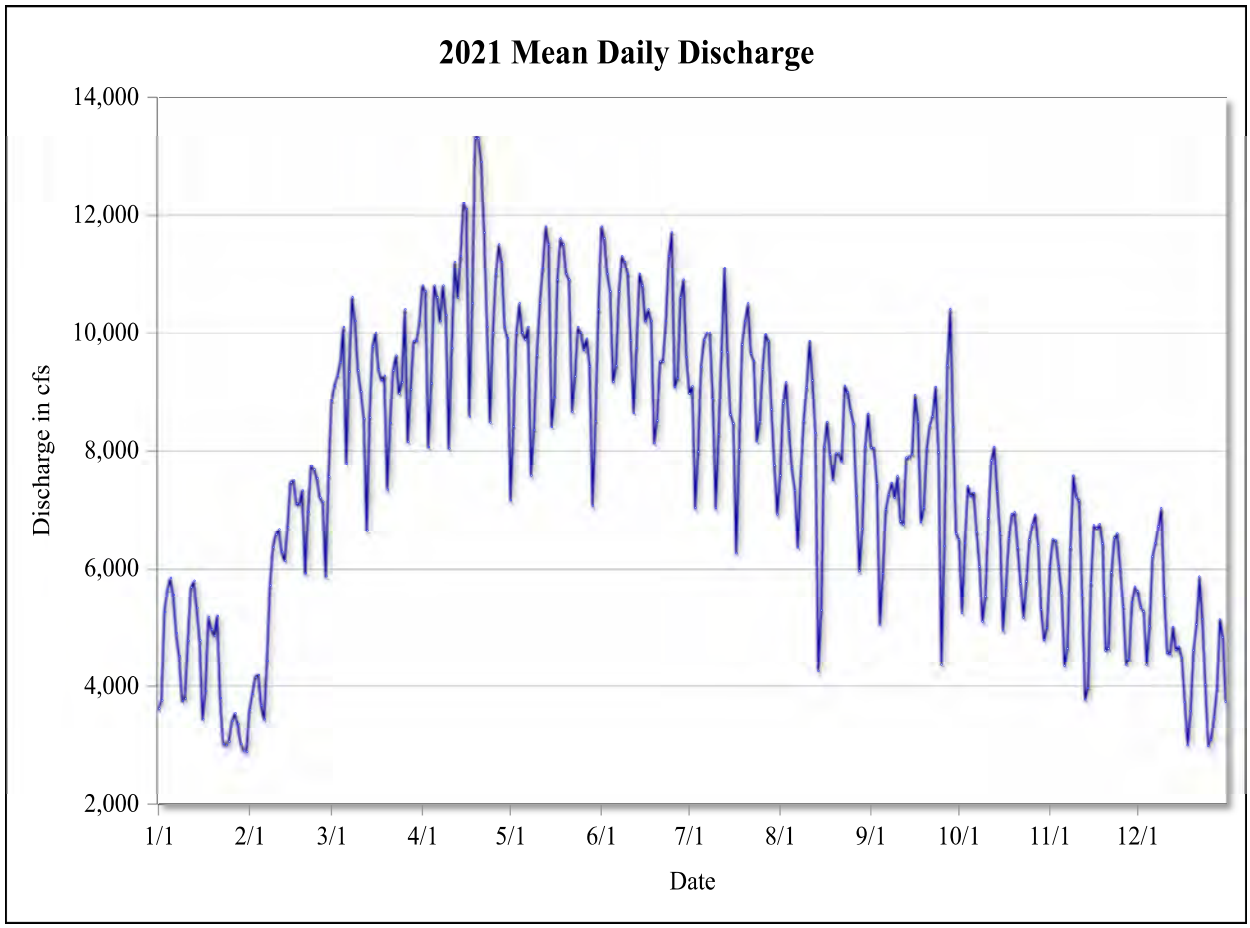
Drainage Area—186,200 mi².

Period of Record—January 1, 2012 to current year.

Gage—A Sutron Xlite datalogger (Model 9210-0000-2B) records water elevation measured with a Sutron multiple interface shaft encoder (Model 56-0540-400-DTR). Discharge is calculated using a stage-discharge relationship.

Extremes—Maximum daily discharge, 14,500 cfs, Mar. 28, 2014; minimum daily discharge, 2,040 cfs, Dec. 29, 2018; maximum hourly discharge, 14,628 cfs, Mar. 28, 2014 at 17:00; minimum hourly discharge 1,987 cfs, Dec. 30, 2018 at 17:00.

Remarks—The discharge record was rated poor from Jan. 16, 2021 at 22:00 to Jan. 17, 2021 at 03:00, Jan. 23, 2021 at 06:00 to Jan. 25, 2021 at 17:00, and Jan. 30, 2021 at 01:00 to Jan. 31, 2021 at 18:00 as visual observation indicates the stilling well was no longer connected to the channel at low water.



Colorado River at Martinez Lake

Mean daily discharge, in cubic-feet per second, Calendar Year 2021

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	3,620	3,600	8,840	10,800	7,160	11,800	8,970	7,580	8,050	6,490	6,040	5,610
2	3,760	3,870	9,100	10,700	8,410	11,600	9,090	8,800	8,040	5,250	6,490	5,340
3	5,260	4,150	9,270	8,060	10,000	11,000	7,030	9,160	7,440	6,430	6,470	5,270
4	5,650	4,190	9,500	9,140	10,500	10,700	7,980	8,340	5,050	7,390	6,040	4,370
5	5,840	3,670	10,100	10,800	10,000	9,170	9,420	7,690	5,910	7,230	5,580	5,020
6	5,550	3,440	7,780	10,600	9,890	9,440	9,880	7,320	7,000	7,280	4,350	6,200
7	4,900	4,430	9,340	10,200	10,100	10,700	10,000	6,360	7,250	6,620	4,640	6,430
8	4,510	5,710	10,600	10,800	7,580	11,300	10,000	7,570	7,450	6,030	6,360	6,710
9	3,750	6,360	10,200	10,300	8,350	11,200	8,880	8,500	7,200	5,100	7,570	7,020
10	3,790	6,580	9,360	8,040	9,620	11,000	7,030	9,070	7,560	5,520	7,210	5,540
11	4,770	6,660	9,000	9,740	10,500	9,870	8,280	9,860	6,800	6,850	7,150	4,570
12	5,680	6,280	8,540	11,200	11,100	8,640	9,680	9,190	6,750	7,830	5,550	4,550
13	5,790	6,130	6,640	10,600	11,800	9,740	11,100	8,300	7,880	8,060	3,780	5,000
14	5,330	6,700	8,560	11,300	11,500	11,000	9,670	4,260	7,890	7,310	3,970	4,620
15	4,780	7,460	9,770	12,200	8,400	10,800	8,610	5,290	7,940	6,600	5,760	4,670
16	3,440	7,490	10,000	12,100	8,910	10,200	8,460	8,060	8,940	4,950	6,730	4,480
17	3,920	7,100	9,380	8,580	10,900	10,400	6,260	8,480	8,490	5,670	6,680	3,730
18	5,170	7,090	9,200	10,500	11,600	10,200	8,020	7,930	6,790	6,510	6,750	3,000
19	4,960	7,320	9,270	13,300	11,500	8,130	9,800	7,500	7,030	6,920	6,420	3,580
20	4,860	5,920	7,340	13,300	11,000	8,510	10,200	7,950	8,030	6,950	4,610	4,610
21	5,190	6,960	8,470	12,900	10,900	9,510	10,500	7,950	8,420	6,350	4,640	5,050
22	3,800	7,740	9,360	11,700	8,660	9,510	9,650	7,820	8,580	5,740	5,930	5,860
23	3,020	7,680	9,610	10,100	9,260	10,200	9,520	9,100	9,080	5,170	6,520	5,140
24	3,000	7,530	8,970	8,480	10,100	11,300	8,160	8,990	7,970	5,780	6,590	4,030
25	3,060	7,200	9,160	10,000	10,000	11,700	8,490	8,680	4,370	6,490	5,990	2,990
26	3,410	7,130	10,400	11,000	9,710	9,080	9,380	8,450	6,380	6,740	5,350	3,090
27	3,540	5,870	8,150	11,500	9,900	9,230	9,980	7,230	9,450	6,910	4,370	3,480
28	3,360	7,560	9,040	11,200	9,430	10,600	9,860	5,960	10,400	6,390	4,460	3,950
29	3,020		9,860	10,100	7,070	10,900	8,700	6,670	8,400	5,300	5,430	5,130
30	2,900		9,860	9,910	8,500	9,590	7,750	8,060	6,590	4,790	5,690	4,830
31	2,890		10,200		10,400		6,920	8,620		4,990		3,740
Total	132,517	171,831	284,813	319,455	302,683	306,935	277,271	244,743	227,139	195,642	173,120	147,611
Mean	4,275	6,137	9,188	10,650	9,764	10,230	8,944	7,895	7,571	6,311	5,771	4,762
Max	5,840	7,740	10,600	13,300	11,800	11,800	11,100	9,860	10,400	8,060	7,570	7,020
Min	2,890	3,440	6,640	8,040	7,070	8,130	6,260	4,260	4,370	4,790	3,780	2,990
Ac-ft	262,844	340,821	564,919	633,630	600,364	608,796	549,958	485,441	450,524	388,050	343,379	292,781

Calendar Year Summary

Annual Total 2,783,760 Annual Mean 7,627 Daily Max 13,300 Daily Min 2,890 Annual Ac-ft 5,521,507

Maximum Discharge				Minimum Discharge			
Date	Time	Elev	Discharge	Date	Time	Elev	Discharge
Apr. 19	19:00	187.56	13,583	Jan. 31	15:00	182.58	2,776

Diversion and Return Gaging Stations

Fort Mojave Tribe-Nevada

Location—Latitude 35° 02.940', longitude -114° 37.360', in the NW¼ NW¼ of Section 27, T. 33 S., R. 66 E., Mount Diablo meridian, Clark County, Nevada, Hydrologic Unit 15030101, river mi 261.0, 4.8 mi south of Bullhead City, Arizona, 14.5 mi north of Needles, California, and 14.9 river mi downstream of Davis Dam.

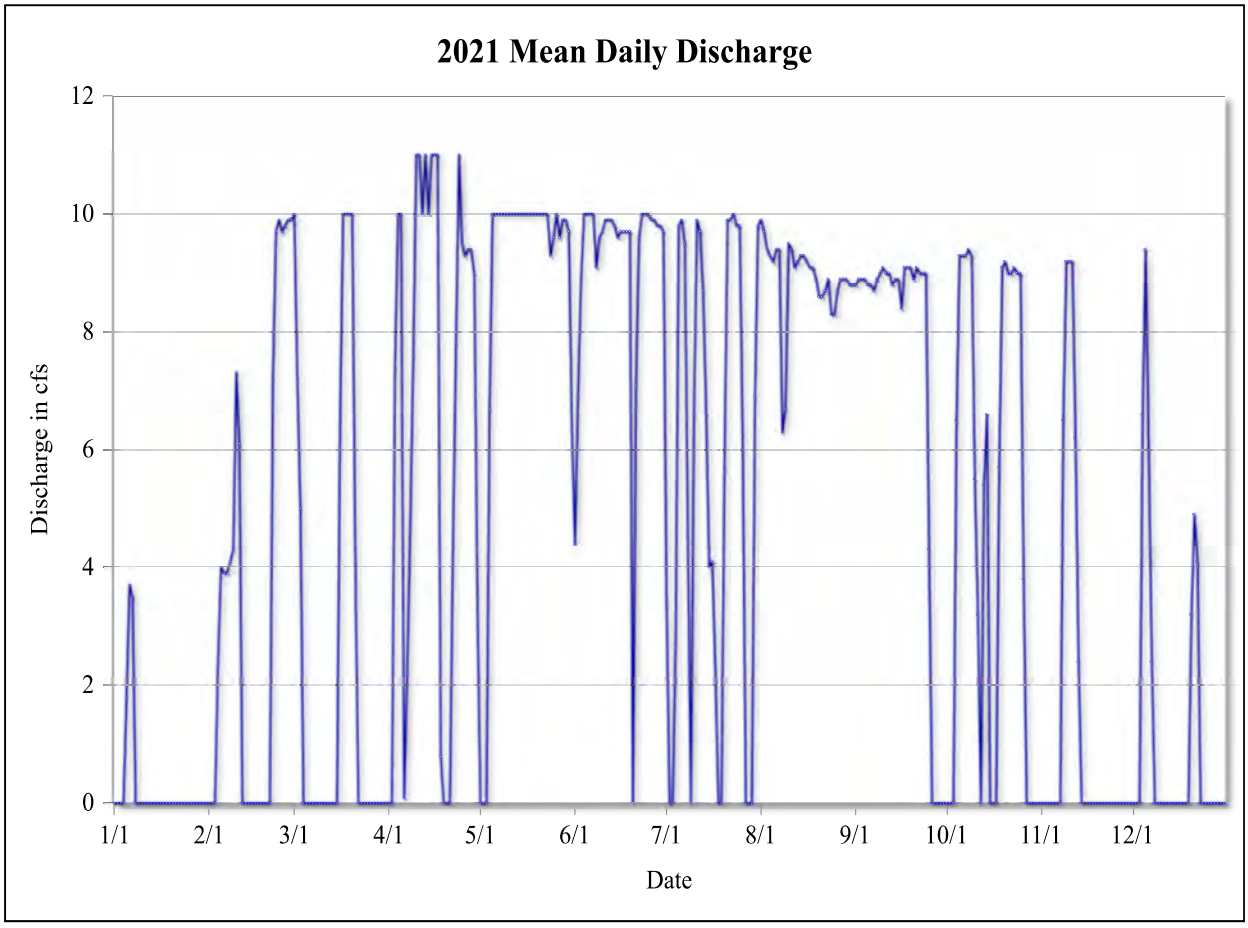
Drainage Area—Not applicable.

Period of Record—January 1, 2006 to current year.

Gage—A Sutron Xlite datalogger (Model 9210-0000-2B) records discharge values measured with a SeaMetrics insertion magnetic flow meter (Model EX-201-S) mounted in the discharge side of the diversion pipe. Discharge is calculated using a discharge-index relationship.

Extremes—Maximum daily discharge, 15 cfs, Apr. 15, 2008; minimum daily discharge, no diversion at times; maximum hourly discharge, 16 cfs, Feb. 14, 2008 at 13:00; minimum hourly discharge, no diversion at times.

Remarks—The discharge record was estimated from Sep. 14, 2021 at 18:00 to Sep. 15, 2021 at 07:00 due to gage malfunction.



Fort Mojave Tribe-Nevada

Mean daily discharge, in cubic-feet per second, Calendar Year 2021

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0	10	0	0	4.4	3.4	9.9	8.8	**0**	0	**0**
2	0	0	7.2	0	0	6.9	0	9.7	8.9	0	**0**	**0**
3	0	0	5.0	7.4	0	8.9	0	9.4	8.9	0	**0**	**0**
4	0	2.4	0	10	6.7	10	2.7	9.3	8.9	6.5	0	**6.6**
5	1.8	4.0	0	10	10	10	9.8	9.2	8.8	9.3	0	9.4
6	3.7	3.9	0	0.09	10	10	9.9	9.4	8.8	9.3	0	**6.0**
7	3.5	3.9	0	2.2	10	10	9.5	9.4	8.7	9.3	0	**2.4**
8	0	4.1	0	4.7	10	9.1	4.5	6.3	8.9	9.4	6.5	**0**
9	0	4.3	0	7.6	10	9.6	0	6.7	9.0	9.3	9.2	**0**
10	0	7.3	0	11	10	9.7	6.6	9.5	9.1	5.5	9.2	0
11	0	6.1	0	11	10	9.9	9.9	9.4	9.0	3.2	9.2	0
12	0	0	0	10	10	9.9	9.7	9.1	9.0	0	6.2	0
13	0	0	0	11	10	9.9	8.7	9.2	8.8	5.4	2.4	**0**
14	0	0	0	10	10	9.8	6.6	9.3	**8.9**	6.6	0	**0**
15	0	0	0	11	10	9.6	4.0	9.3	**8.9**	0	0	**0**
16	0	0	6.5	11	10	9.7	4.1	9.2	8.4	0	0	**0**
17	0	0	10	11	10	9.7	2.3	9.1	9.1	0	0	**0**
18	0	0	10	0.79	10	9.7	0	9.1	9.1	5.7	**0**	**0**
19	0	0	10	0	10	9.7	0	8.9	9.1	9.1	**0**	**0**
20	0	0	10	0	10	0.01	5.7	8.6	8.9	9.2	**0**	**3.2**
21	0	0	4.1	0	10	7.1	9.9	8.6	9.1	9.0	**0**	4.9
22	**0**	7.2	0	4.4	10	9.6	9.9	8.7	9.0	9.0	**0**	4.1
23	**0**	9.7	0	7.8	10	10	10	8.9	9.0	9.1	**0**	0
24	**0**	9.9	0	11	9.3	10	9.8	8.3	9.0	9.0	**0**	0
25	**0**	9.7	0	9.5	9.6	10	9.8	8.3	4.3	9.0	**0**	0
26	**0**	9.8	0	9.3	10	9.9	6.0	8.7	0	3.8	**0**	0
27	**0**	9.9	0	9.4	9.6	9.9	0	8.9	0	0	**0**	0
28	**0**	9.9	0	9.4	9.9	9.8	0	8.9	0	0	**0**	0
29	0		0	9.0	9.9	9.8	0	8.9	0	0	**0**	0
30	0		0	3.5	9.7	9.7	6.9	8.8	**0**	0	**0**	0
31	0		0		6.3		9.8	8.8		0		0
Total	9.0	102.0	73.7	200.75	275.9	273.79	169.4	275.5	218.4	146.8	42.8	36.6
Mean	0.29	3.64	2.38	6.69	8.90	9.13	5.46	8.89	7.28	4.73	1.43	1.18
Max	3.7	9.9	10	11	10	10	10	9.9	9.1	9.4	9.2	9.4
Min	0	0	0	0	0	0.01	0	6.3	0	0	0	0
Ac-ft	18	202	146	398	547	543	336	546	433	291	85	73

Calendar Year Summary

Annual Total 1,824.54 Annual Mean 5.00 Daily Max 11 Daily Min 0 Annual Ac-ft 3,619

Maximum Discharge				Minimum Discharge			
Date	Time	GH	Discharge	Date	Time	GH	Discharge
Apr. 25	00:00	N/A	11	Jan. 1	01:00	N/A	0

Bold values indicate the daily value was derived from hourly data that contained 6 or more consecutive hours of estimated record.

Fort Mojave Tribe-North Casino

Location—Latitude 35° 01.749', longitude -114° 38.101', in the SE¼ SE¼ of Section 17, T. 19 N., R. 22 W., Gila-Salt River meridian, Mohave County, Arizona, Hydrologic Unit 15030101, river mi 259.4, 6.3 mi south of Bullhead City, Arizona, 13.1 mi north of Needles, California, and 16.5 river mi downstream of Davis Dam.

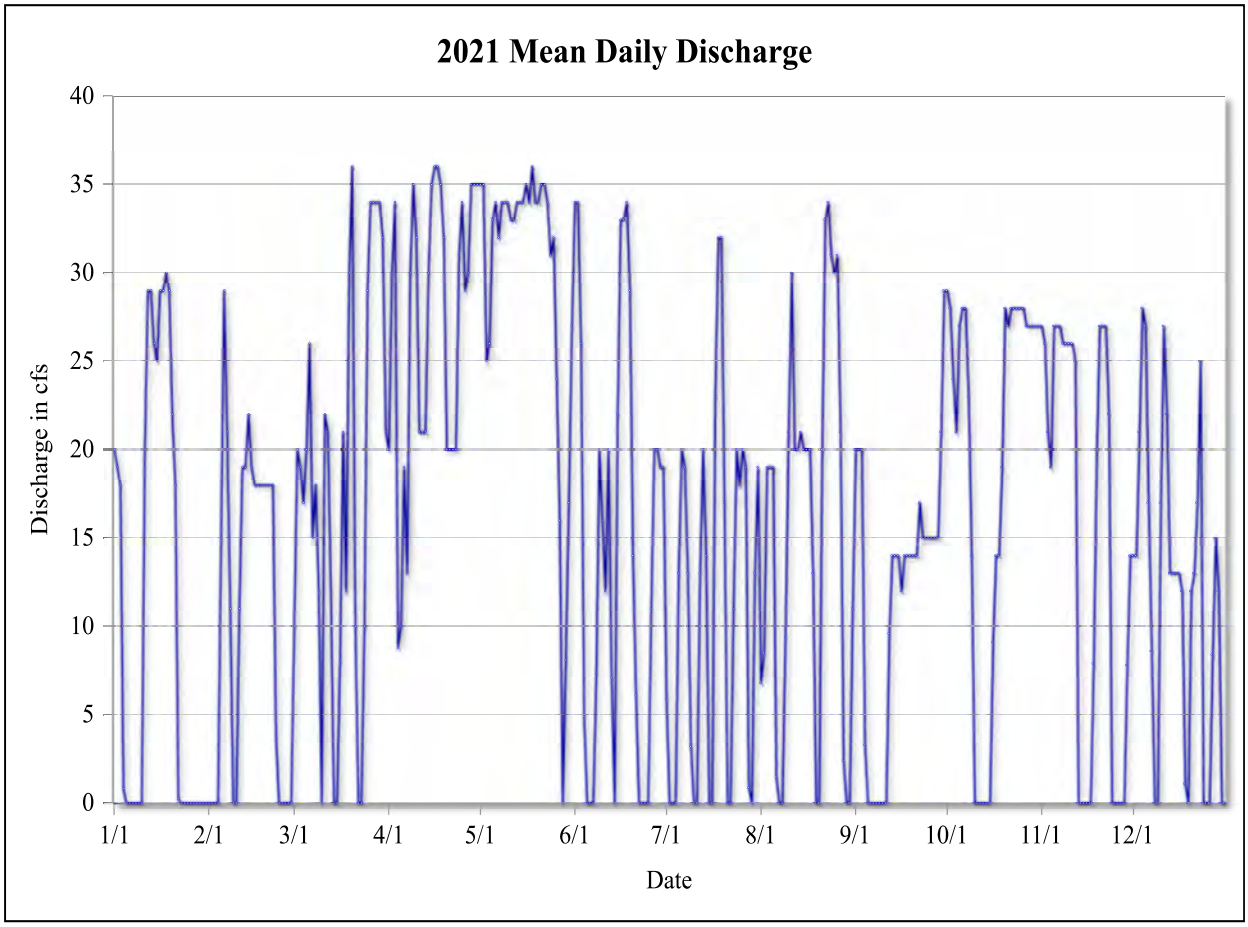
Drainage Area—Not applicable.

Period of Record—February 23, 2006 to current year.

Gage—A Sutron Xlite datalogger (Model 9210-0000-2B) records water stage and velocity measured with a SonTek/YSI Argonaut-SW current meter. Discharge is calculated using a velocity-index relationship.

Extremes—Maximum daily discharge, 48 cfs, Mar. 25, 2014; minimum daily discharge, no diversion at times; maximum hourly discharge, 51 cfs, Apr. 23, 2014 at 18:00; minimum hourly discharge, no diversion at times.

Remarks—None.



Fort Mojave Tribe-North Casino

Mean daily discharge, in cubic-feet per second, Calendar Year 2021

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	20	0	10	20	35	34	5.9	6.8	20	29	27	14
2	19	0	20	30	35	34	0	8.5	20	28	26	14
3	18	0	19	34	25	26	0	19	20	24	21	21
4	0.82	0	17	8.8	26	4.9	0	19	3.3	21	19	28
5	0	15	20	10	33	0	13	19	0	27	27	27
6	0	29	26	19	34	0	20	1.5	0	28	27	17
7	0	21	15	13	32	0	19	0	0	28	27	8.6
8	0	11	18	30	34	7.3	13	0	0	23	26	0
9	0	0	12	35	34	20	3.2	9.4	0	14	26	0
10	0	0	0	32	34	16	0	21	0	0	26	17
11	20	11	22	21	33	12	0	30	0	0	26	27
12	29	19	21	21	33	20	13	20	9.6	0	25	22
13	29	19	12	21	34	7.1	20	20	14	0	0	13
14	26	22	0	30	34	0	14	21	14	0	0	13
15	25	19	0	35	34	22	0	20	14	0	0	13
16	29	18	8.1	36	35	33	0	20	12	9.1	0	13
17	29	18	21	36	34	33	23	20	14	14	0	12
18	30	18	12	35	36	34	32	13	14	14	7.9	1.1
19	29	18	30	32	34	29	32	0	14	19	20	0
20	22	18	36	20	34	14	17	0	14	28	27	12
21	18	18	10	20	35	6.1	0	20	14	27	27	13
22	0.24	18	0	20	35	0	0	33	17	28	27	17
23	0	3.8	0	20	34	0	11	34	15	28	22	25
24	0	0	10	31	31	0	20	31	15	28	0	0
25	0	0	29	34	32	0	18	30	15	28	0	0
26	0	0	34	29	24	11	20	31	15	28	0	0
27	0	0	34	30	16	20	19	21	15	27	0	8.4
28	0	0	34	35	0	20	0.87	2.4	15	27	0	15
29	0		34	35	8.1	19	0	0	21	27	7.8	12
30	0		32	35	17	19	13	0	29	27	14	0
31	0		21		27		19	11		27		0
Total	345.50	297.9	556.1	807.3	923.5	440.7	344.21	480.9	350.7	608.7	454.3	363.1
Mean	11.1	10.6	17.9	26.9	29.8	14.7	11.1	15.5	11.7	19.6	15.1	11.7
Max	30	29	36	36	36	34	32	34	29	29	27	28
Min	0	0	0	8.8	0	0	0	0	0	0	0	0
Ac-ft	685	591	1,103	1,601	1,832	874	683	954	696	1,207	901	720

Calendar Year Summary

Annual Total 5,972.79 Annual Mean 16.4 Daily Max 36 Daily Min 0 Annual Ac-ft 11,847

Maximum Discharge				Minimum Discharge			
Date	Time	GH	Discharge	Date	Time	GH	Discharge
May 31	22:00	3.22	37	Jan. 4	02:00	1.64	0

Fort Mojave Tribe-North Casino (North Event Center)

Location—Latitude 35° 01.749', longitude -114° 38.101', in the SE¼ SE¼ of Section 17, T. 19 N., R. 22 W., Gila-Salt River meridian, Mohave County, Arizona, Hydrologic Unit 15030101, river mi 259.4, 6.3 mi south of Bullhead City, Arizona, 13.1 mi north of Needles, California, and 16.5 river mi downstream of Davis Dam.

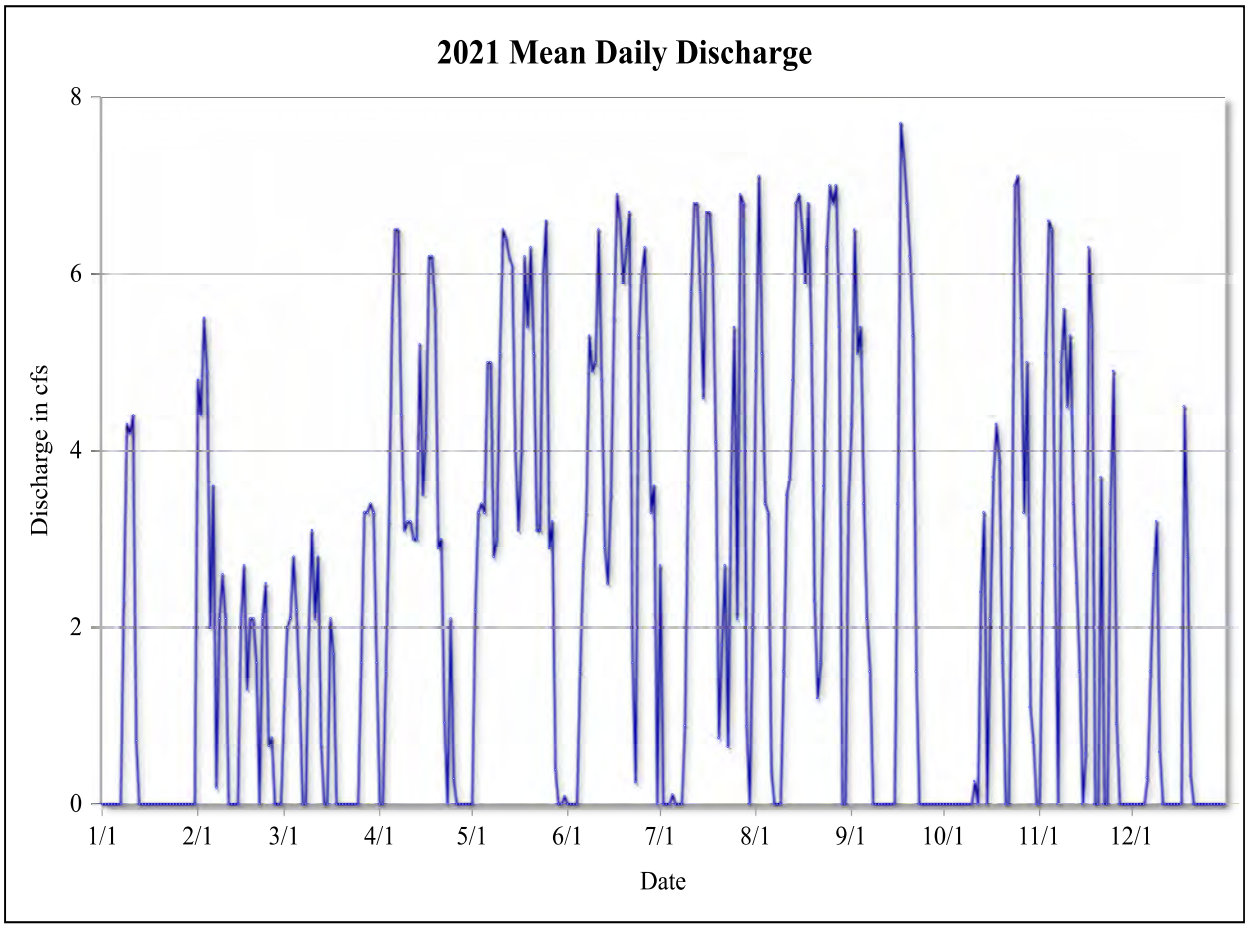
Drainage Area—Not applicable.

Period of Record—September 9, 2011 to current year.

Gage—A Sutron Xlite datalogger (Model 9210-0000-2B) records discharge measured with a Mace Series 3 FloPro flow meter mounted in the discharge side of the diversion pipe. Discharge is calculated using a discharge-index relationship.

Extremes—Maximum daily discharge, 7.8 cfs, Apr. 23, 2020; minimum daily discharge, no diversion at times; maximum hourly discharge, 9.8 cfs, Oct. 22, 2011 at 23:00; minimum hourly discharge, -0.17 cfs, May 9, 2021 at 20:00.

Remarks—None.



Fort Mojave Tribe-North Casino (North Event Center)

Mean daily discharge, in cubic-feet per second, Calendar Year 2021

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	4.8	1.1	0	0	0	2.7	4.9	4.3	0	0	0
2	0	4.4	2.0	0	2.2	0	0	7.1	6.5	0	2.5	0
3	0	5.5	2.1	1.5	3.3	0	0	5.1	5.1	0	5.1	0
4	0	4.9	2.8	3.2	3.4	0	0	3.4	5.4	0	6.6	0
5	0	2.0	2.2	5.5	3.3	1.5	0.11	3.3	3.4	0	6.5	0
6	0	3.6	1.3	6.5	5.0	2.7	0	0.37	2.1	0	2.7	0.30
7	0	0.19	0	6.5	5.0	3.3	0	0	1.5	0	0	1.5
8	2.3	2.1	0	4.4	2.8	5.3	0	0	0	0	5.0	2.6
9	4.3	2.6	2.0	3.1	3.0	4.9	0.89	0	0	0	5.6	3.2
10	4.2	2.1	3.1	3.2	5.1	5.0	3.6	1.5	0	0	4.5	0.59
11	4.4	0	2.1	3.2	6.5	6.5	5.8	3.5	0	0.26	5.3	0
12	0.72	0	2.8	3.0	6.4	4.8	6.8	3.7	0	0	3.4	0
13	0	0	0.67	3.0	6.2	2.9	6.8	4.8	0	2.4	2.5	0
14	0	0	0	5.2	6.1	2.5	5.8	6.8	0	3.3	1.5	0
15	0	2.1	0	3.5	4.0	3.5	4.6	6.9	0	0	0	0
16	0	2.7	2.1	4.2	3.1	5.5	6.7	6.5	3.4	2.1	0.57	0
17	0	1.3	1.7	6.2	4.0	6.9	6.7	5.9	7.7	3.7	6.3	0
18	0	2.1	0	6.2	6.2	6.6	6.1	6.8	7.3	4.3	5.4	4.5
19	0	2.1	0	5.6	5.4	5.9	4.1	5.2	6.8	3.9	0	2.8
20	0	1.6	0	2.9	6.3	6.3	0.75	2.3	6.2	1.6	0	0.32
21	0	0	0	3.0	5.1	6.7	1.8	1.2	5.3	0	3.7	0
22	0	2.1	0	0.92	3.1	1.6	2.7	1.6	1.5	0	0	0
23	0	2.5	0	0	3.1	0.25	0.65	3.6	0	2.9	0	0
24	0	0.66	0	2.1	6.0	5.3	3.7	6.3	0	7.0	3.4	0
25	0	0.75	0	0.29	6.6	6.0	5.4	7.0	0	7.1	4.9	0
26	0	0	1.6	0	2.9	6.3	2.1	6.8	0	5.5	0.91	0
27	0	0	3.3	0	3.2	4.9	6.9	7.0	0	3.3	0	0
28	0	0	3.3	0	0.39	3.3	6.8	5.4	0	5.0	0	0
29	0		3.4	0	0	3.6	0.88	0	0	1.1	0	0
30	0		3.3	0	0	0	0	0	0	0.70	0	0
31	0		1.6		0.09		2.0	3.4		0		0
Total	15.88	50.11	42.52	83.29	117.86	112.14	94.39	120.42	66.5	54.25	76.55	15.96
Mean	0.51	1.79	1.37	2.78	3.80	3.74	3.04	3.88	2.22	1.75	2.55	0.51
Max	4.4	5.5	3.4	6.5	6.6	6.9	6.9	7.1	7.7	7.1	6.6	4.5
Min	0	0	0	0	0	0	0	0	0	0	0	0
Ac-ft	31	99	84	165	234	222	187	239	132	108	152	32

Calendar Year Summary

Annual Total 849.87 Annual Mean 2.33 Daily Max 7.7 Daily Min 0 Annual Ac-ft 1,686

Maximum Discharge				Minimum Discharge			
Date	Time	GH	Discharge	Date	Time	GH	Discharge
Jan. 9	10:00	N/A	8.0	May 9	20:00	N/A	-0.17

Fort Mojave Tribe-South Casino

Location—Latitude 34° 59.160', longitude -114° 37.622', in the SE¼ SW¼ of Section 33, T. 19 N., R. 22 W., Gila-Salt River meridian, Mohave County, Arizona, Hydrologic Unit 15030101, river mi 256.3, 9.1 mi south of Bullhead City, Arizona, 10.1 mi north of Needles, California, and 19.6 river mi downstream of Davis Dam.

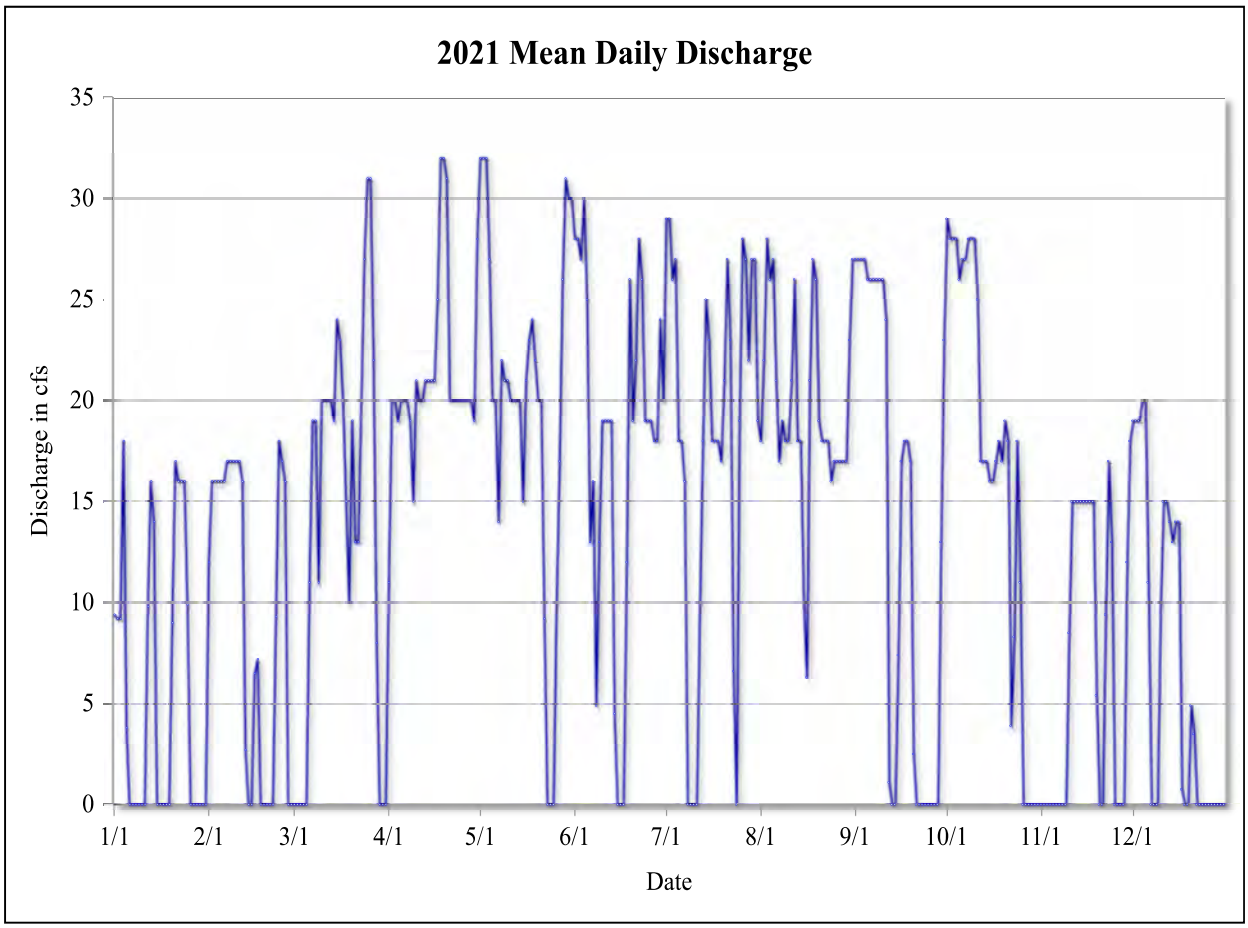
Drainage Area—Not applicable.

Period of Record—April 10, 2006 to current year.

Gage—Sutron Xlite datalogger (Model 9210-0000-2B) records water stage measured with a Sutron AccuBubble self-contained bubbler system (Model 5600-0131-4) upstream of a fixed abrupt-expansion type, long-throated flume. Discharge is calculated using a stage-discharge relationship.

Extremes—Maximum daily discharge, 39 cfs, Jul. 26, 2010; minimum daily discharge, no diversion at times; maximum hourly discharge, 41 cfs, Jul. 25, 2010 at 20:00; minimum hourly discharge, no diversion at times.

Remarks—None.



Fort Mojave Tribe-South Casino

Mean daily discharge, in cubic-feet per second, Calendar Year 2021

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	9.4	12	0	11	32	28	29	18	27	29	0	19
2	9.2	16	0	20	32	28	29	22	27	28	0	19
3	9.2	16	0	20	32	27	26	28	27	28	0	19
4	18	16	0	19	27	30	27	26	27	28	0	20
5	3.8	16	0	20	20	25	18	27	26	26	0	20
6	0	16	11	20	20	13	18	21	26	27	0	11
7	0	17	19	20	14	16	16	17	26	27	0	0
8	0	17	19	19	22	4.9	0.01	19	26	28	0	0
9	0	17	11	15	21	13	0	18	26	28	0	0
10	0	17	20	21	21	19	0	18	26	28	8.5	10
11	0	17	20	20	20	19	0	21	24	25	15	15
12	9.8	16	20	20	20	19	10	26	1.1	17	15	15
13	16	2.7	20	21	20	19	18	18	0	17	15	14
14	14	0	19	21	20	4.5	25	18	0	17	15	13
15	0	0	24	21	15	0	23	10	7.4	16	15	14
16	0.01	6.5	23	21	21	0	18	6.3	17	16	15	14
17	0	7.2	20	25	23	0	18	21	18	17	15	0.75
18	0	0	15	32	24	12	18	27	18	18	15	0
19	0	0	10	32	22	26	17	26	17	17	5.4	0
20	9.0	0	19	31	20	19	21	19	2.5	19	0	4.9
21	17	0	13	20	20	22	27	18	0	18	0	3.5
22	16	0	13	20	9.2	28	23	18	0	3.9	9.4	0
23	16	9.3	20	20	0	26	6.6	18	0	8.3	17	0
24	16	18	27	20	0	19	0	16	0	18	13	0
25	9.9	17	31	20	0	19	19	17	0	11	0	0
26	0	16	31	20	10	19	28	17	0	0	0	0
27	0	0	22	20	17	18	27	17	0	0	0	0
28	0	0	8.0	20	26	18	22	17	0	0	0	0
29	0		0	19	31	24	27	17	13	0	12	0
30	0		0	28	30	20	27	23	23	0	18	0
31	0		0		30		19	27		0		0
Total	172.52	270.2	434.7	635	622.2	537.0	557.75	610.3	403.8	514.3	202.7	213.01
Mean	5.57	9.65	14.0	21.2	20.1	17.9	18.0	19.7	13.5	16.6	6.76	6.87
Max	18	18	31	32	32	30	29	28	27	29	18	20
Min	0	0	0	11	0	0	0	6.3	0	0	0	0
Ac-ft	342	536	862	1,259	1,234	1,065	1,106	1,211	801	1,020	402	422

Calendar Year Summary

Annual Total 5,173.27 Annual Mean 14.2 Daily Max 32 Daily Min 0 Annual Ac-ft 10,261

Maximum Discharge				Minimum Discharge			
Date	Time	GH	Discharge	Date	Time	GH	Discharge
May 3	00:00	1.34	34	Jan. 5	14:00	0.00	0

Fort Mojave Tribe-California 2 (North)

Location—Latitude 34° 58.022', longitude -114° 38.173', in the NE¼ NW¼ of Section 13, T. 10 N., R. 22 E., San Bernardino meridian, San Bernardino County, California, Hydrologic Unit 15030101, river mi 254.9, 10.4 mi south of Bullhead City, Arizona, 8.9 mi north of Needles, California, and 21.0 river mi downstream of Davis Dam.

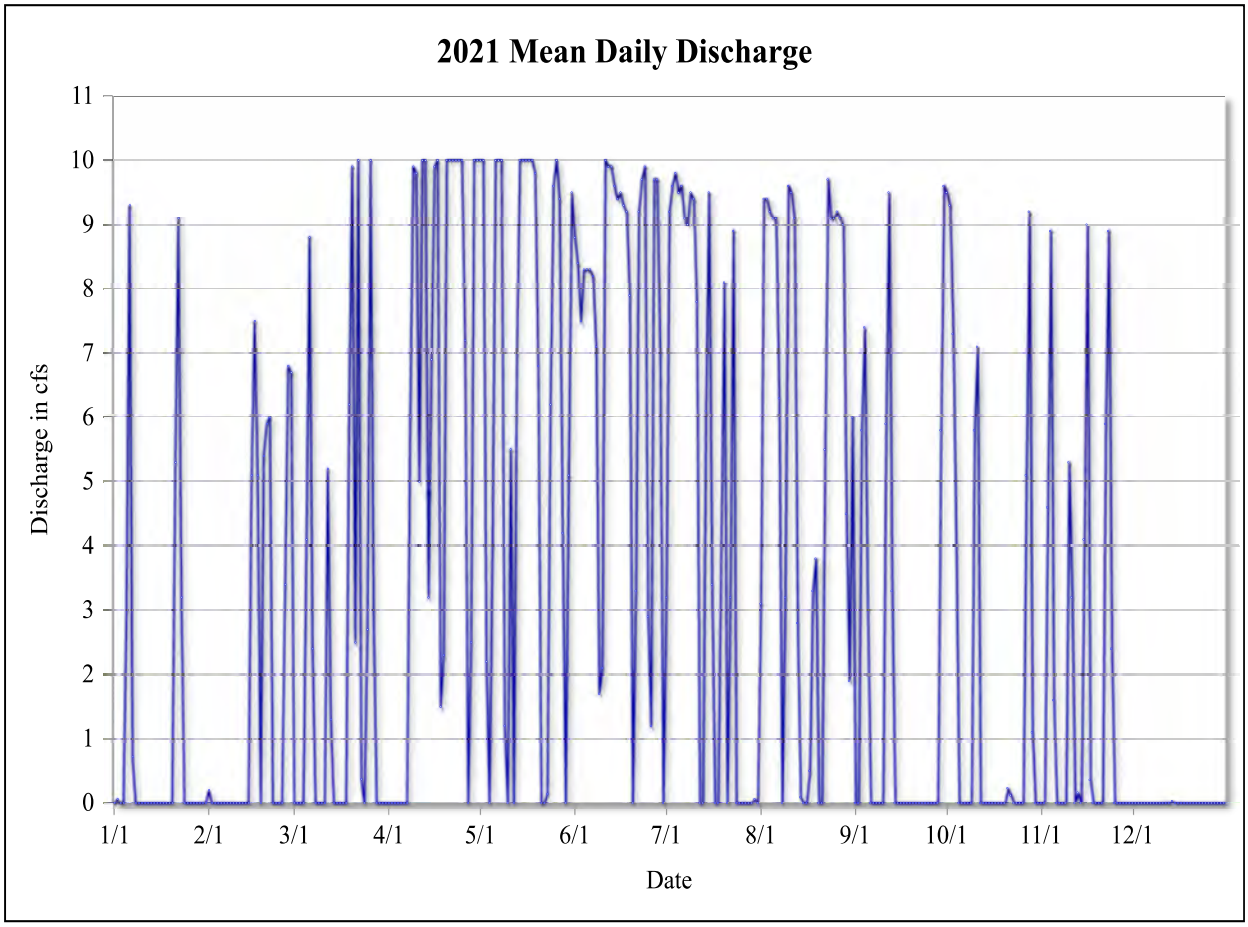
Drainage Area—Not applicable.

Period of Record—January 1, 2006 to current year.

Gage—A Sutron Xlite datalogger (Model 9210-0000-2B) records discharge measured using a Mace Series3 FloPro flow meter mounted in the discharge side of the diversion pipe. Discharge is calculated using a discharge-index relationship.

Extremes—Maximum daily discharge, 14 cfs, Apr. 27, 2007; minimum daily discharge, no diversion at times; maximum hourly discharge, 26 cfs, Sep. 21, 2006 at 08:00; minimum hourly discharge, no diversion at times.

Remarks—None.



Fort Mojave Tribe-California 2 (North)

Mean daily discharge, in cubic-feet per second, Calendar Year 2021

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0.20	0	0	10	8.8	3.2	3.1	0	9.5	0	0
2	0.06	0	0	0	10	8.4	9.2	9.4	0	9.3	0	0
3	0	0	0	0	2.2	7.5	9.6	9.4	5.8	7.3	4.6	0
4	0	0	0	0	0	8.3	9.8	9.2	7.4	4.0	8.9	0
5	3.0	0	4.1	0	4.0	8.3	9.5	9.1	3.0	0	1.6	0
6	9.3	0	8.8	0	10	8.3	9.6	9.1	0	0	0	0
7	0.72	0	2.4	0	10	8.2	9.1	6.3	0	0	0	0
8	0	0	0	6.0	10	7.1	9.0	0	0	0	0	0
9	0	0	0	9.9	1.2	1.7	9.5	3.2	0	0	0	0
10	0	0	0	9.8	0	2.1	9.4	9.6	0	5.8	5.3	0
11	0	0	0	5.0	5.5	10	7.8	9.5	5.9	7.1	3.2	0
12	0	0	5.2	10	0	9.9	0	9.1	9.5	0	0	0
13	0	0	1.3	10	7.0	9.9	0	2.8	3.3	0	0.16	0
14	0	0	0	3.2	10	9.6	6.1	0.09	0	0	0	0.03
15	0	5.1	0	6.9	10	9.4	9.5	0	0	0	4.1	0
16	0	7.5	0	9.9	10	9.5	3.4	0	0	0	9.0	0
17	0	5.1	0	10	10	9.3	0	0.50	0	0	0.36	0
18	0	0	0	1.5	10	9.2	0	3.3	0	0	0	0
19	0	5.4	6.2	2.3	9.8	7.9	4.0	3.8	0	0	0	0
20	0	5.9	9.9	10	6.8	0	8.1	0	0	0	0	0
21	5.3	6.0	2.5	10	0	3.3	0	0	0	0.23	0	0
22	9.1	0	10	10	0	9.2	3.2	5.5	0	0.12	5.9	0
23	3.2	0	0.37	10	0.14	9.7	8.9	9.7	0	0	8.9	0
24	0	0	0	10	6.2	9.9	0	9.1	0	0	2.4	0
25	0	0	2.7	10	9.6	2.9	0	9.1	0	0	0	0
26	0	3.4	10	7.2	10	1.2	0	9.2	0	0	0	0
27	0	6.8	3.0	0	9.4	9.7	0	9.1	0	5.1	0	0
28	0	6.7	0	2.5	4.2	9.7	0	9.0	0	9.2	0	0
29	0		0	10	0	7.0	0	4.5	5.8	1.1	0	0
30	0		0	10	5.1	0	0.06	1.9	9.6	0	0	0
31	0		0		9.5		0	6.0		0		0
Total	30.54	51.99	66.56	176.4	193.19	215.9	138.90	170.36	50.2	58.79	54.44	0.03
Mean	0.99	1.86	2.15	5.88	6.23	7.20	4.48	5.50	1.67	1.90	1.81	0.001
Max	9.3	7.5	10	10	10	10	9.8	9.7	9.6	9.5	9.0	0.03
Min	0	0	0	0	0	0	0	0	0	0	0	0
Ac-ft	61	103	132	350	383	428	276	338	100	117	108	0.1

Calendar Year Summary

Annual Total 1,207.38 Annual Mean 3.31 Daily Max 10 Daily Min 0 Annual Ac-ft 2,395

Maximum Discharge				Minimum Discharge			
Date	Time	GH	Discharge	Date	Time	GH	Discharge
May 26	22:00	N/A	11	Jan. 1	01:00	N/A	0

Fort Mojave Tribe-California 2 (West)

Location—Latitude 34° 58.022', longitude -114° 38.173', in the NE¼ NW¼ of Section 13, T. 10 N., R. 22 E., San Bernardino meridian, San Bernardino County, California, Hydrologic Unit 15030101, river mi 254.9, 10.4 mi south of Bullhead City, Arizona, 8.9 mi north of Needles, California, and 21.0 river mi downstream of Davis Dam.

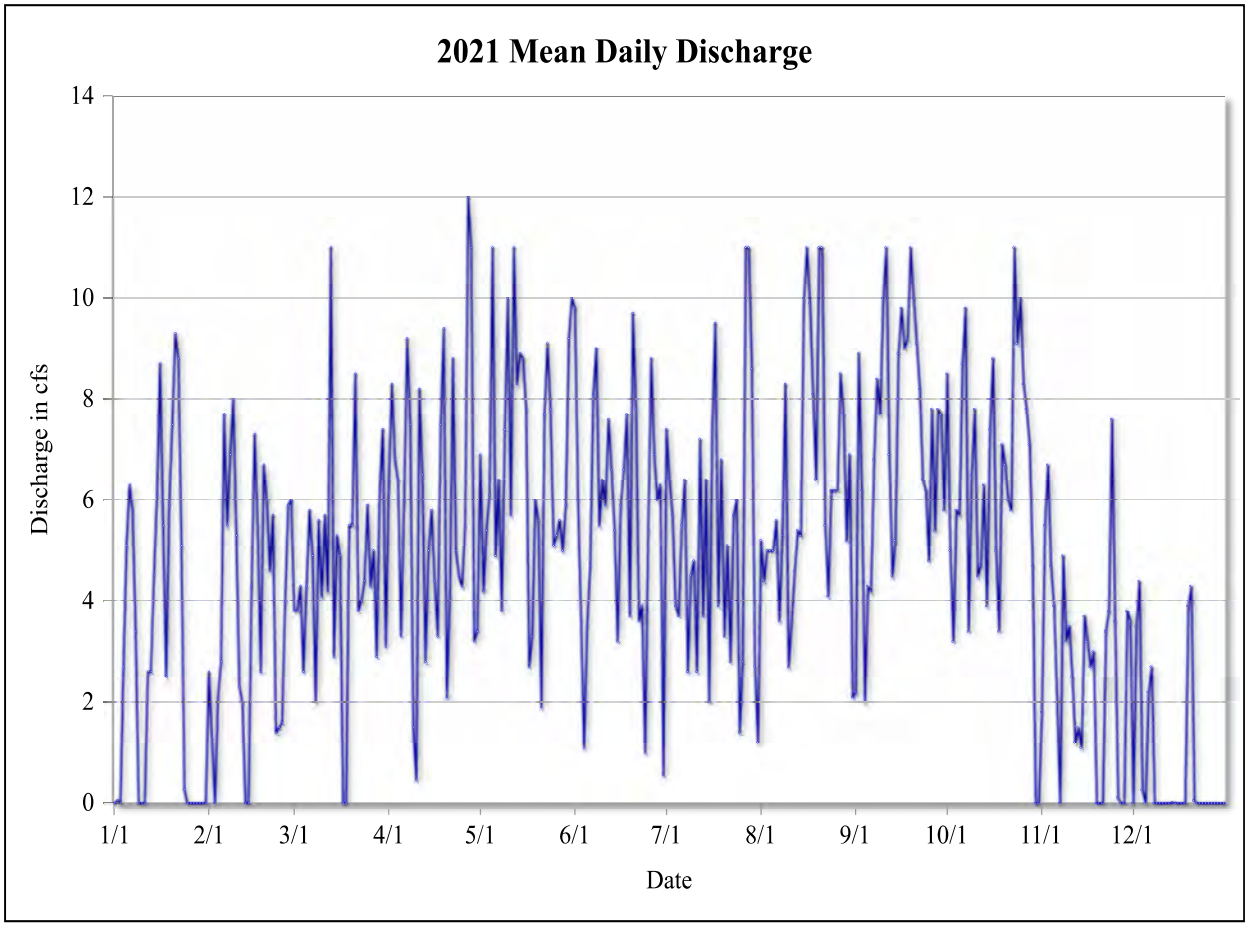
Drainage Area—Not applicable.

Period of Record—January 1, 2006 to current year.

Gage—A Sutron Xlite datalogger (Model 9210-0000-2B) records discharge measured using a Mace Series3 FloPro flow meter mounted in the discharge side of the diversion pipe. Discharge is calculated using a discharge-index relationship.

Extremes—Maximum daily discharge, 13 cfs, Jul. 12, 2008; minimum daily discharge, no diversion at times; maximum hourly discharge, 20 cfs, Sep. 20, 2006 at 13:00; minimum hourly discharge, no diversion at times.

Remarks—None.



Fort Mojave Tribe-California 2 (West)

Mean daily discharge, in cubic-feet per second, Calendar Year 2021

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	2.6	3.8	6.4	6.9	9.8	7.4	5.2	2.2	8.5	1.8	0
2	0.06	1.3	3.8	8.3	4.2	6.0	6.4	4.4	8.9	5.0	5.5	3.5
3	0	0	4.3	6.8	5.4	3.6	5.7	5.0	6.2	3.2	6.7	4.4
4	2.7	2.1	2.6	6.4	6.1	1.1	3.9	5.0	2.0	5.8	4.7	0.26
5	5.1	2.8	4.3	3.3	11	3.5	3.7	5.0	4.3	5.7	3.9	0
6	6.3	7.7	5.8	6.0	4.9	4.7	5.5	5.6	4.2	8.7	2.0	2.2
7	5.8	5.5	4.9	9.2	6.4	8.1	6.4	3.6	6.8	9.8	0	2.7
8	3.4	6.9	2.0	7.5	3.8	9.0	2.6	5.3	8.4	3.4	4.9	0
9	0	8.0	5.6	1.5	7.4	5.5	4.5	8.3	7.7	6.5	3.2	0
10	0	5.3	4.1	0.47	10	6.4	4.8	2.7	10	7.8	3.5	0
11	0	2.3	5.7	8.2	5.7	5.9	2.6	3.6	11	4.5	2.5	0
12	2.6	2.0	4.2	6.5	11	7.6	7.2	4.6	6.9	4.7	1.2	0
13	2.6	0	11	2.8	8.3	6.6	3.7	5.4	4.5	6.3	1.5	0
14	4.5	0	2.9	5.0	8.9	5.4	6.4	5.3	5.2	3.9	1.1	0.02
15	6.1	4.3	5.3	5.8	8.8	3.2	2.0	10	8.9	7.4	3.7	0
16	8.7	7.3	4.9	4.4	7.8	5.9	7.4	11	9.8	8.8	3.2	0
17	5.5	5.5	0	3.3	2.7	6.6	9.5	9.9	9.0	5.0	2.7	0
18	2.5	2.6	0	7.5	3.3	7.7	3.9	8.1	9.2	3.4	3.0	0
19	5.9	6.7	5.5	9.4	6.0	3.7	6.8	6.4	11	7.1	0	3.9
20	7.5	6.0	5.5	2.1	5.6	9.7	3.3	11	10	6.7	0	4.3
21	9.3	4.6	8.5	4.1	1.9	7.8	5.1	11	9.1	6.0	0	0.05
22	8.8	5.7	3.8	8.8	7.7	3.6	2.8	5.5	8.2	5.8	3.4	0
23	5.1	1.4	4.0	5.0	9.1	3.9	5.7	4.1	6.4	11	3.8	0
24	0.27	1.5	4.4	4.5	7.8	1.0	6.0	6.2	6.2	9.1	7.6	0
25	0	1.6	5.9	4.3	5.1	5.4	1.4	6.2	4.8	10	3.6	0
26	0	4.0	4.3	5.5	5.3	8.8	2.8	6.2	7.8	8.3	0.11	0
27	0	5.9	5.0	12	5.6	6.9	11	8.5	5.4	7.8	0	0
28	0	6.0	2.9	11	5.0	6.0	11	7.7	7.8	7.1	0	0
29	0		6.2	3.2	5.9	6.3	8.6	5.2	7.7	4.7	3.8	0
30	0		7.4	3.4	9.2	0.56	2.7	6.9	5.8	0	3.6	0
31	0		3.1		10		1.2	2.1		0		0
Total	92.65	109.7	141.8	172.67	207.1	170.32	162.5	195.0	216.0	191.8	81.05	21.29
Mean	2.99	3.92	4.58	5.76	6.68	5.68	5.24	6.29	7.20	6.19	2.70	0.69
Max	9.3	8.0	11	12	11	9.8	11	11	11	11	7.6	4.4
Min	0	0	0	0.47	1.9	0.56	1.2	2.1	2.0	0	0	0
Ac-ft	184	218	281	342	411	338	322	387	428	380	161	42

Calendar Year Summary

Annual Total 1,761.89 Annual Mean 4.83 Daily Max 12 Daily Min 0 Annual Ac-ft 3,495

Maximum Discharge				Minimum Discharge			
Date	Time	GH	Discharge	Date	Time	GH	Discharge
Apr. 15	08:00	N/A	14	Jan. 1	01:00	N/A	0

Fort Mojave Tribe-California 2 (South)

Location—Latitude 34° 58.022', longitude -114° 38.173', in the NE¼ NW¼ of Section 13, T. 10 N., R. 22 E., San Bernardino meridian, San Bernardino County, California, Hydrologic Unit 15030101, river mi 254.9, 10.4 mi south of Bullhead City, Arizona, 8.9 mi north of Needles, California, and 21.0 river mi downstream of Davis Dam.

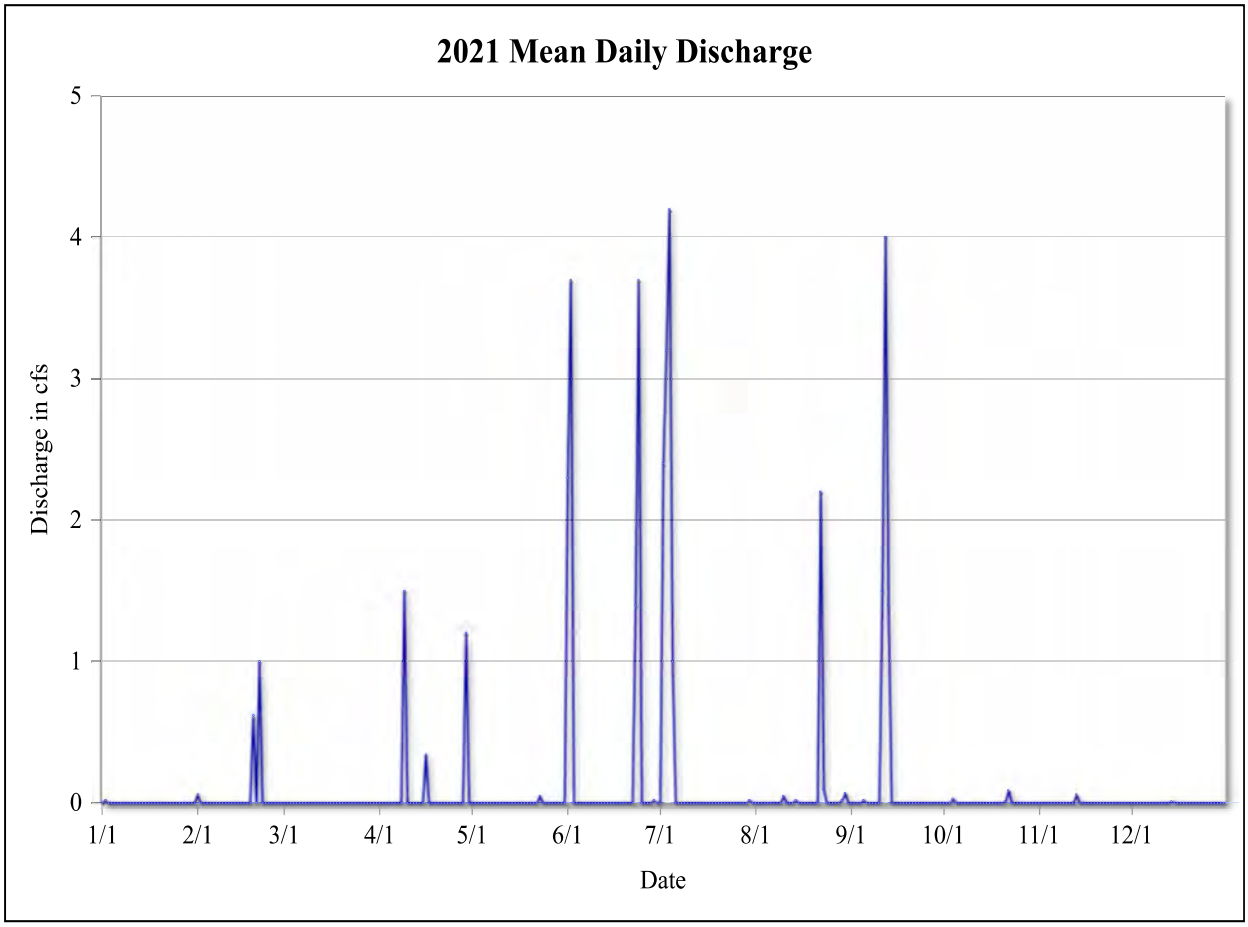
Drainage Area—Not applicable.

Period of Record—January 1, 2006 to current year.

Gage—Sutron Xlite datalogger (Model 9210-0000-2B) records discharge measured with a Mace Series 3 FloPro flow meter mounted in the discharge side of the diversion pipe. Discharge is calculated using a discharge-index relationship.

Extremes—Maximum daily discharge, 5.8 cfs, May 30, 2012; minimum daily discharge, no diversion at times; maximum hourly discharge, 13 cfs, May 26, 2006 at 05:00; minimum hourly discharge, no diversion at times.

Remarks—None.



Fort Mojave Tribe-California 2 (South)

Mean daily discharge, in cubic-feet per second, Calendar Year 2021

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0.06	0	0	0	2.3	0	0	0	0	0	0
2	0.02	0	0	0	0	3.7	2.4	0	0	0	0	0
3	0	0	0	0	0	0	3.2	0	0	0	0	0
4	0	0	0	0	0	0	4.2	0	0	0.03	0	0
5	0	0	0	0	0	0	1.0	0	0.02	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	1.5	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0.05	0	0	0	0
11	0	0	0	0	0	0	0	0	1.5	0	0	0
12	0	0	0	0	0	0	0	0	4.0	0	0	0
13	0	0	0	0	0	0	0	0	1.4	0	0.06	0
14	0	0	0	0	0	0	0	0.02	0	0	0	0.01
15	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0.34	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0.62	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0
21	0	1.0	0	0	0	0	0	0	0	0.01	0	0
22	0	0	0	0	0	0	0	2.2	0	0.09	0	0
23	0	0	0	0	0.05	1.4	0	0.10	0	0	0	0
24	0	0	0	0	0	3.7	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0
29	0		0	1.2	0	0.02	0	0.02	0	0	0	0
30	0		0	0	0	0	0.02	0.07	0	0	0	0
31	0		0		0		0	0		0		0
Total	0.02	1.71	0	3.11	0.05	11.25	10.77	2.46	6.95	0.13	0.06	0.01
Mean	0.001	0.061	0	0.10	0.002	0.37	0.35	0.079	0.23	0.004	0.002	0
Max	0.02	1.0	0	1.5	0.05	3.7	4.2	2.2	4.0	0.09	0.06	0.01
Min	0	0	0	0	0	0	0	0	0	0	0	0
Ac-ft	0.0	3.4	0	6.2	0.1	22	21	4.9	14	0.3	0.1	0.0

Calendar Year Summary

Annual Total 36.52 Annual Mean 0.10 Daily Max 4.2 Daily Min 0 Annual Ac-ft 72

Maximum Discharge				Minimum Discharge			
Date	Time	GH	Discharge	Date	Time	GH	Discharge
Jun. 24	01:00	N/A	5.0	Jan. 1	01:00	N/A	0

Fort Mojave Tribe-California 1

Location—Latitude 34° 57.171', longitude -114° 38.037', in the NW¼ NE¼ of Section 24, T. 10 N., R. 22 E., San Bernardino meridian, San Bernardino County, California, Hydrologic Unit 15030101, river mi 253.9, 11.4 mi south of Bullhead City, Arizona, 7.9 mi north of Needles, California, and 22.0 river mi downstream of Davis Dam.

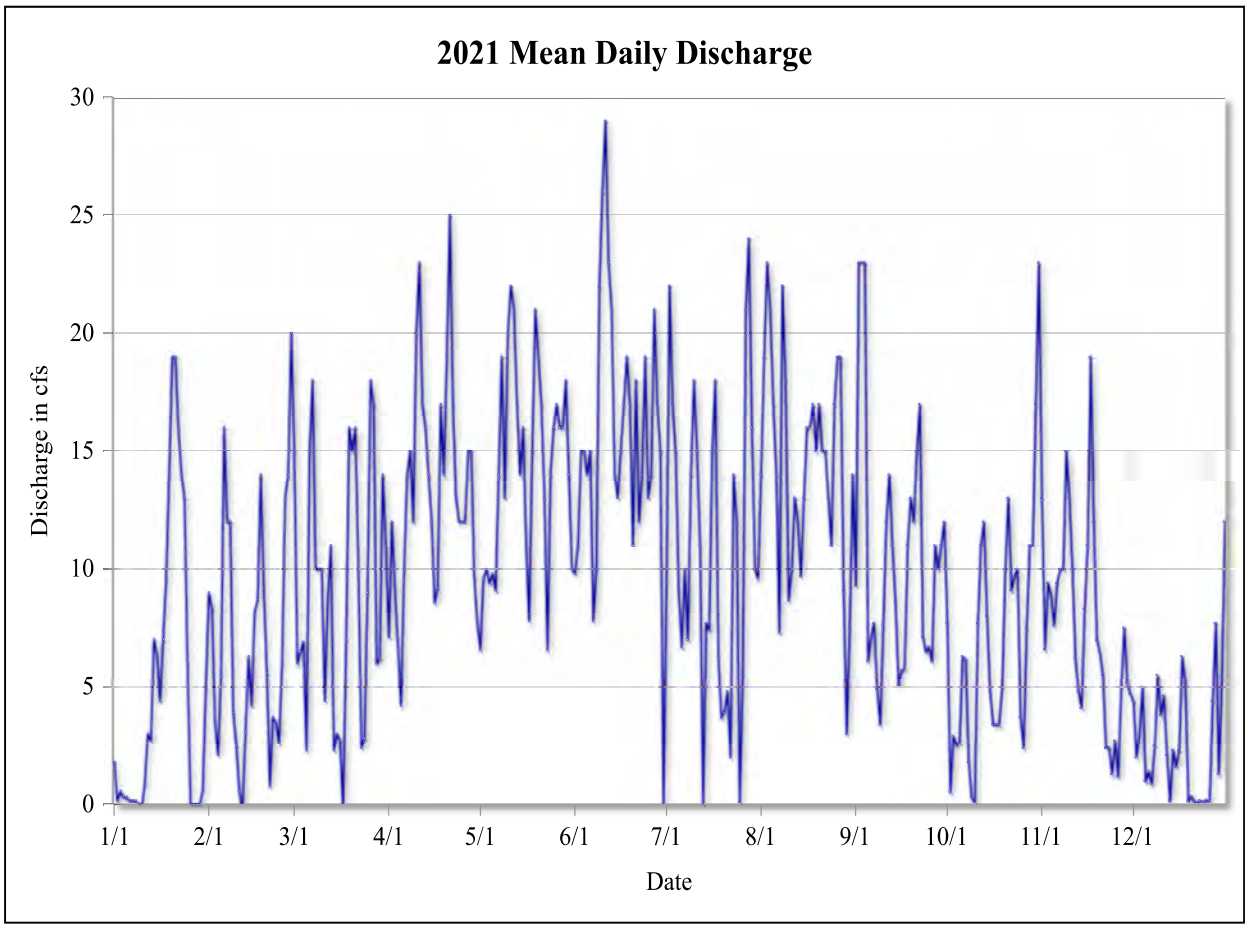
Drainage Area—Not applicable.

Period of Record—January 1, 2006 to current year.

Gage—A Sutron Xlite datalogger (Model 9210-0000-2B) records water stage and velocity measured with a SonTek/YSI Argonaut-IQ Plus current meter. Discharge is calculated using a velocity-index relationship.

Extremes—Maximum daily discharge, 58 cfs, Jun. 12, 2007; minimum daily discharge, -0.23 cfs, Feb. 12, 2021; maximum hourly discharge, 64 cfs, Jun. 30, 2007 at 20:00; minimum hourly discharge, -2.1 cfs, Jul. 24, 2020 at 17:00.

Remarks—The discharge record was estimated from May 22, 2021 at 16:00 to May 26, 2021 at 13:00 and Jul. 12, 2021 at 11:00 to Jul. 15, 2021 at 11:00 due to sensor failure.



Fort Mojave Tribe-California 1

Mean daily discharge, in cubic-feet per second, Calendar Year 2021

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	1.8	9.0	15	7.1	6.6	9.8	9.5	14	9.3	7.7	13	4.4
2	0.19	8.4	6.0	12	9.6	11	22	19	23	0.55	6.6	2.0
3	0.59	3.5	6.5	9.1	10	15	17	23	23	2.9	9.4	3.0
4	0.34	2.1	6.9	6.7	9.4	15	15	21	23	2.5	8.9	5.0
5	0.33	5.5	2.3	4.2	9.8	14	9.1	17	6.1	2.6	7.6	1.0
6	0.19	16	15	10	9.1	15	6.7	14	7.1	6.3	9.4	1.4
7	0.19	12	18	14	14	7.8	10	7.3	7.7	6.2	10	0.90
8	0.17	12	10	15	19	10	7.0	22	4.9	1.8	10	2.5
9	0.04	3.9	10	12	13	22	14	18	3.4	0.32	15	5.5
10	-0.13	2.5	10	20	20	26	18	8.7	7.6	0.10	13	3.8
11	0.94	0.58	4.4	23	22	29	15	10	12	7.7	10	4.6
12	3.0	-0.23	8.8	17	21	23	**11**	13	14	11	6.2	2.1
13	2.7	3.1	11	16	17	21	**0**	12	11	12	4.8	0.16
14	7.0	6.3	2.3	14	14	14	**7.7**	9.7	8.6	8.0	4.1	2.3
15	6.4	4.2	3.0	12	16	13	**7.4**	13	5.1	4.8	8.3	1.6
16	4.4	8.2	2.7	8.6	11	15	15	16	5.7	3.4	11	2.3
17	7.0	8.7	-0.15	9.2	7.8	17	18	16	5.8	3.4	19	6.3
18	9.6	14	7.0	17	15	19	6.3	17	11	3.4	12	5.2
19	14	9.2	16	14	21	17	3.7	15	13	5.0	7.0	0.16
20	19	5.6	15	19	19	11	3.9	17	12	10	6.5	0.38
21	19	0.81	16	25	17	18	4.8	15	15	13	5.5	0.13
22	16	3.7	10	17	**13**	12	2.0	15	17	9.1	2.4	0.12
23	14	3.5	2.4	13	**6.6**	14	14	13	7.1	9.7	2.4	0.18
24	13	2.6	2.8	12	**14**	19	12	11	6.5	10	1.3	0.14
25	6.0	6.0	9.0	12	**16**	13	0.10	17	6.7	3.7	2.7	0.20
26	0.01	13	18	12	**17**	14	5.5	19	6.1	2.4	1.2	0.19
27	0	14	17	15	16	21	21	19	11	7.5	5.0	4.4
28	0	20	6.0	15	16	17	24	9.1	10	11	7.5	7.7
29	0		6.2	9.7	18	15	16	3.0	11	11	5.2	1.3
30	0.63		14	7.7	14	-0.02	10	7.5	12	17	4.7	5.4
31	4.9		11		10		9.6	14		23		12
Total	150.73	198.75	283.75	396.1	441.8	466.80	336.24	446.7	316.2	216.30	230.3	86.24
Mean	4.86	7.10	9.15	13.2	14.3	15.6	10.8	14.4	10.5	6.98	7.68	2.78
Max	19	20	18	25	22	29	24	23	23	23	19	12
Min	-0.13	-0.23	-0.15	4.2	6.6	-0.02	0	3.0	3.4	0.10	1.2	0.12
Ac-ft	299	394	563	786	876	926	667	886	627	429	457	171

Calendar Year Summary

Annual Total 3,570.00 Annual Mean 9.78 Daily Max 29 Daily Min -0.23 Annual Ac-ft 7,081

Maximum Discharge				Minimum Discharge			
Date	Time	GH	Discharge	Date	Time	GH	Discharge
Jun. 11	18:00	2.45	45	Jan. 31	05:00	1.38	-1.8

Bold values indicate the daily value was derived from hourly data that contained 6 or more consecutive hours of estimated record.

Fort Mojave Tribe-Cimmaron

Location—Latitude 34° 56.347', longitude -114° 37.699', in the SE¼ SW¼ of Section 16, T. 18 N., R. 22 W., Gila-Salt River meridian, Mohave County, Arizona, Hydrologic Unit 15030101, river mi 252.9, 12.3 mi south of Bullhead City, Arizona, 6.9 mi north of Needles, California, and 23.0 river mi downstream of Davis Dam.

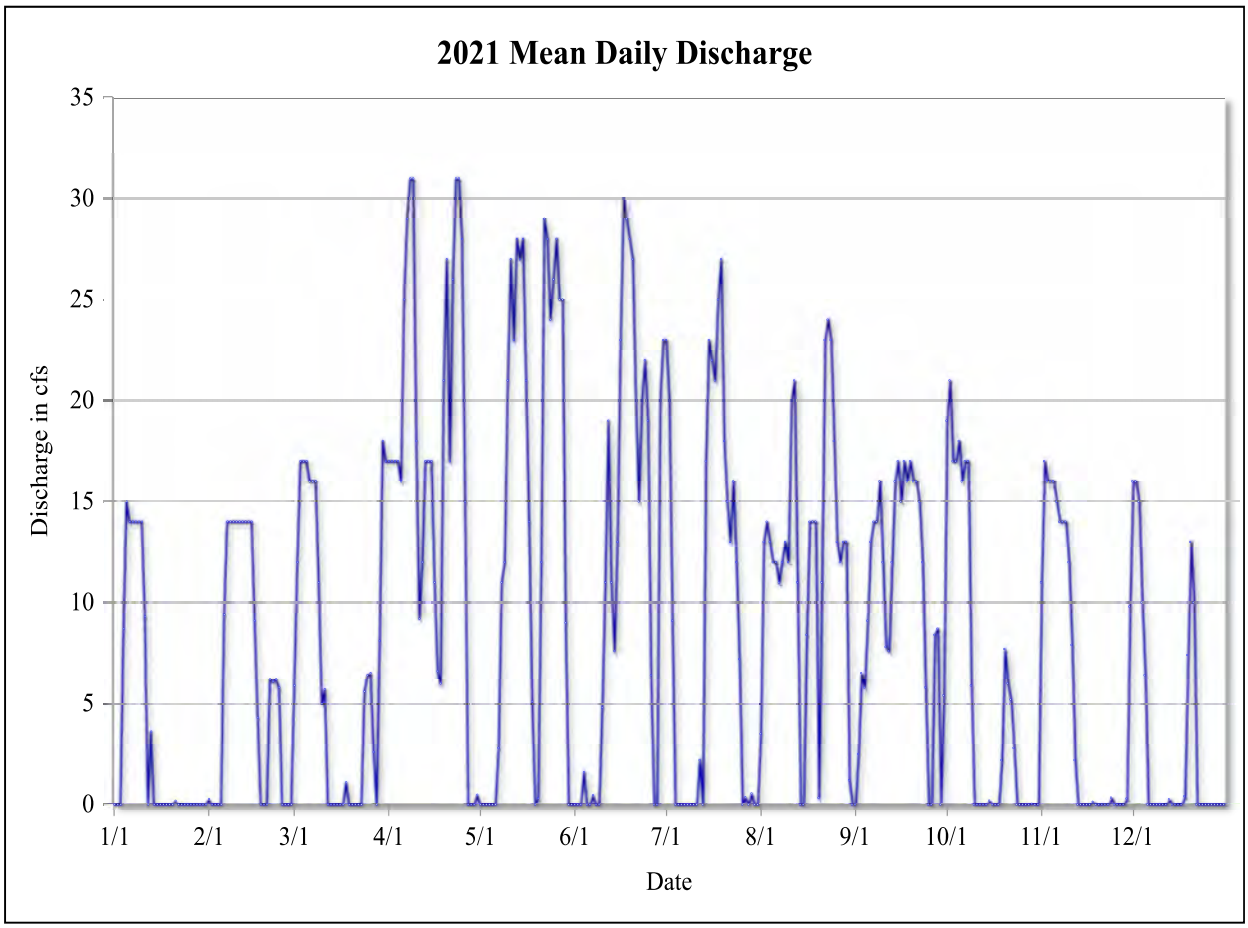
Drainage Area—Not applicable.

Period of Record—April 10, 2006 to current year.

Gage—A Sutron Xlite datalogger (Model 9210-0000-2B) records water stage measured with a Sutron AccuBubble self-contained bubbler system (Model 56-0133-25-1) upstream of a fixed abrupt-expansion type, long-throated flume. Discharge is calculated using a stage-discharge relationship.

Extremes—Maximum daily discharge, 41 cfs, Jun. 15, 2007; minimum daily discharge, no diversion at times; maximum hourly discharge, 52 cfs, Jun. 12, 2007 at 17:00; minimum hourly discharge, no diversion at times.

Remarks—None.



Fort Mojave Tribe-Cimmaron

Mean daily discharge, in cubic-feet per second, Calendar Year 2021

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0.27	5.9	17	0	0	23	3.5	0	19	11	16
2	0	0	12	17	0	0	20	13	2.5	21	17	16
3	0	0	17	17	0	0	9.1	14	6.5	17	16	15
4	8.7	0	17	17	0	1.6	0	13	5.8	17	16	10
5	15	0	17	16	0	0	0	12	9.1	18	16	6.4
6	14	9.4	16	25	0	0	0	12	13	16	15	0
7	14	14	16	29	2.8	0.46	0	11	14	17	14	0
8	14	14	16	31	11	0	0	12	14	17	14	0
9	14	14	11	31	12	0	0	13	16	5.9	14	0
10	14	14	5.0	18	21	4.8	0	12	12	0	12	0
11	9.3	14	5.7	9.2	27	11	0	20	7.8	0	7.9	0
12	0	14	0	12	23	19	2.2	21	7.6	0	2.2	0
13	3.6	14	0	17	28	11	0	11	12	0	0	0.26
14	0	14	0	17	27	7.6	17	0	16	0	0	0
15	0	14	0	17	28	13	23	0	17	0.19	0	0
16	0	9.1	0	11	21	23	22	8.4	15	0	0	0
17	0	4.3	0	6.6	14	30	21	14	17	0	0	0
18	0	0	1.1	6.0	5.1	29	25	14	16	0	0.13	0.41
19	0	0	0	21	0	28	27	14	17	2.2	0	7.4
20	0	0	0	27	0.31	27	18	0.33	16	7.7	0	13
21	0.18	6.2	0	17	12	20	15	11	16	6.0	0	10
22	0	6.1	0	26	29	15	13	23	15	5.2	0	0
23	0	6.2	0	31	28	20	16	24	12	2.8	0	0
24	0	5.8	5.6	31	24	22	12	23	5.8	0	0.34	0
25	0	0	6.4	28	26	19	7.2	18	0	0	0	0
26	0	0	6.5	15	28	6.4	0	13	0	0	0	0
27	0	0	2.6	0	25	0	0.36	12	8.4	0	0	0
28	0	0	0	0	25	0	0	13	8.7	0	0	0
29	0		8.1	0	9.0	20	0.54	13	0	0.03	0.29	0
30	0		18	0.48	0	23	0	1.2	5.4	0	9.8	0
31	0		17		0		0	0		0		0
Total	106.63	174.94	204.0	510.47	427.72	350.94	271.23	370.09	304.9	171.93	165.92	95.91
Mean	3.44	6.25	6.58	17.0	13.8	11.7	8.75	11.9	10.2	5.55	5.53	3.09
Max	15	14	18	31	29	30	27	24	17	21	17	16
Min	0	0	0	0	0	0	0	0	0	0	0	0
Ac-ft	211	347	405	1,012	848	696	538	734	605	341	329	190

Calendar Year Summary

Annual Total 3,154.72 Annual Mean 8.64 Daily Max 31 Daily Min 0 Annual Ac-ft 6,257

Maximum Discharge				Minimum Discharge			
Date	Time	GH	Discharge	Date	Time	GH	Discharge
Jun. 17	11:00	1.04	36	Jan. 1	01:00	0.00	0

Fort Mojave Tribe-Willow

Location—Latitude 34° 54.572', longitude -114° 37.733', in the SW¼ SW¼ of Section 28, T. 18 N., R. 22 W., Gila-Salt River meridian, Mohave County, Arizona, Hydrologic Unit 15030101, river mi 250.8, 14.3 mi south of Bullhead City, Arizona, 4.9 mi north of Needles, California, and 25.1 mi downstream of Davis Dam.

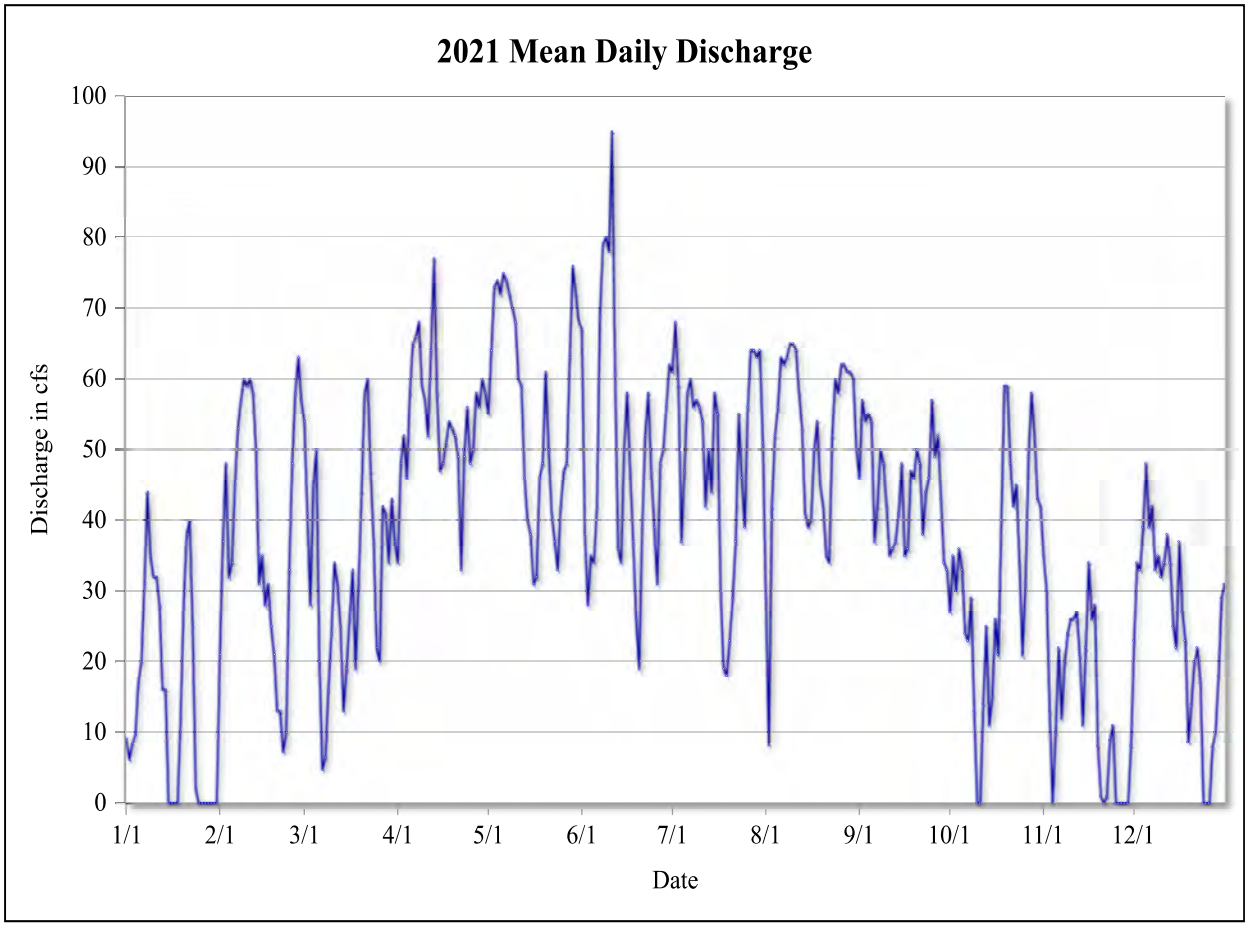
Drainage Area—Not applicable.

Period of Record—July 12, 2006 to current year.

Gage—A Sutron Xlite datalogger (Model 9210-0000-2B) records water stage and velocity measured by a SonTek/YSI Argonaut-SW current meter. Discharge is calculated using a velocity-index relationship.

Extremes—Maximum daily discharge, 104 cfs, May 23, 2017; minimum daily discharge, no diversion at times; maximum hourly discharge, 117 cfs, May 23, 2017 at 02:00; minimum hourly discharge, no diversion at times.

Remarks—None.



Fort Mojave Tribe-Willow

Mean daily discharge, in cubic-feet per second, Calendar Year 2021

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	9.0	21	54	34	55	67	61	29	46	27	35	23
2	6.1	37	41	48	64	38	68	8.2	57	35	30	34
3	8.4	48	28	52	73	28	59	42	54	30	13	33
4	9.6	32	45	46	74	35	37	52	55	36	0	39
5	17	34	50	58	72	34	47	56	54	33	10	48
6	20	45	20	65	75	42	58	63	37	24	22	39
7	31	53	4.7	66	74	69	60	62	42	23	12	42
8	44	57	6.4	68	72	79	56	63	50	29	20	33
9	35	60	16	59	70	80	57	65	48	13	24	35
10	32	59	24	57	68	78	56	65	42	0	26	32
11	32	60	34	52	60	95	54	64	35	0	26	34
12	28	58	31	64	59	61	42	58	36	14	27	38
13	16	50	25	77	46	36	50	53	37	25	21	34
14	16	31	13	58	40	34	44	41	41	11	11	25
15	0	35	19	47	38	50	58	39	48	15	22	22
16	0	28	26	48	31	58	55	40	35	26	34	37
17	0	31	33	51	32	47	30	50	36	21	26	27
18	0	25	19	54	46	37	19	54	47	40	28	23
19	12	21	31	53	48	26	18	45	46	59	8.1	8.6
20	28	13	44	52	61	19	23	42	50	59	0.96	14
21	38	13	58	49	50	39	29	35	48	48	0	20
22	40	7.2	60	33	41	52	37	34	38	42	0.98	22
23	25	10	47	49	37	58	55	52	44	45	8.9	17
24	2.1	33	37	56	33	47	46	60	46	34	11	0
25	0	48	22	48	42	39	39	58	57	21	0	0
26	0	58	20	50	47	31	56	62	49	31	0	0
27	0	63	42	58	48	48	64	62	52	49	0	7.9
28	0	57	41	56	63	50	64	61	43	58	0	10
29	0		34	60	76	56	63	61	34	52	0	18
30	0		43	58	72	62	64	60	33	43	8.1	29
31	0		37		68		51	50		42		31
Total	449.7	1,085.7	1,006.4	1,628	1,734	1,493	1,518	1,584.7	1,339	985	423.76	778.1
Mean	14.5	38.8	32.5	54.3	55.9	49.8	49.0	51.1	44.6	31.8	14.1	25.1
Max	44	63	60	77	76	95	68	65	57	59	35	48
Min	0	7.2	4.7	33	31	19	18	8.2	33	0	0	0
Ac-ft	892	2,153	1,996	3,229	3,440	2,962	3,011	3,143	2,655	1,954	841	1,543

Calendar Year Summary

Annual Total 14,025.57 Annual Mean 38.4 Daily Max 95 Daily Min 0 Annual Ac-ft 27,819

Maximum Discharge				Minimum Discharge			
Date	Time	GH	Discharge	Date	Time	GH	Discharge
Jun. 12	00:00	3.61	101	Jan. 3	16:00	0.06	-0.01

Fort Mojave Tribe-Barrackman

Location—Latitude 34° 50.931', longitude -114° 35.892', in the NE¼ NE¼ of Section 22, T. 17 N., R. 22 W., Gila-Salt River meridian, Mohave County, Arizona, Hydrologic Unit 15030101, river mi 245.4, 1.0 mi east of Needles, California, 18.4 mi south of Bullhead City, Arizona, and 30.5 river mi downstream of Davis Dam.

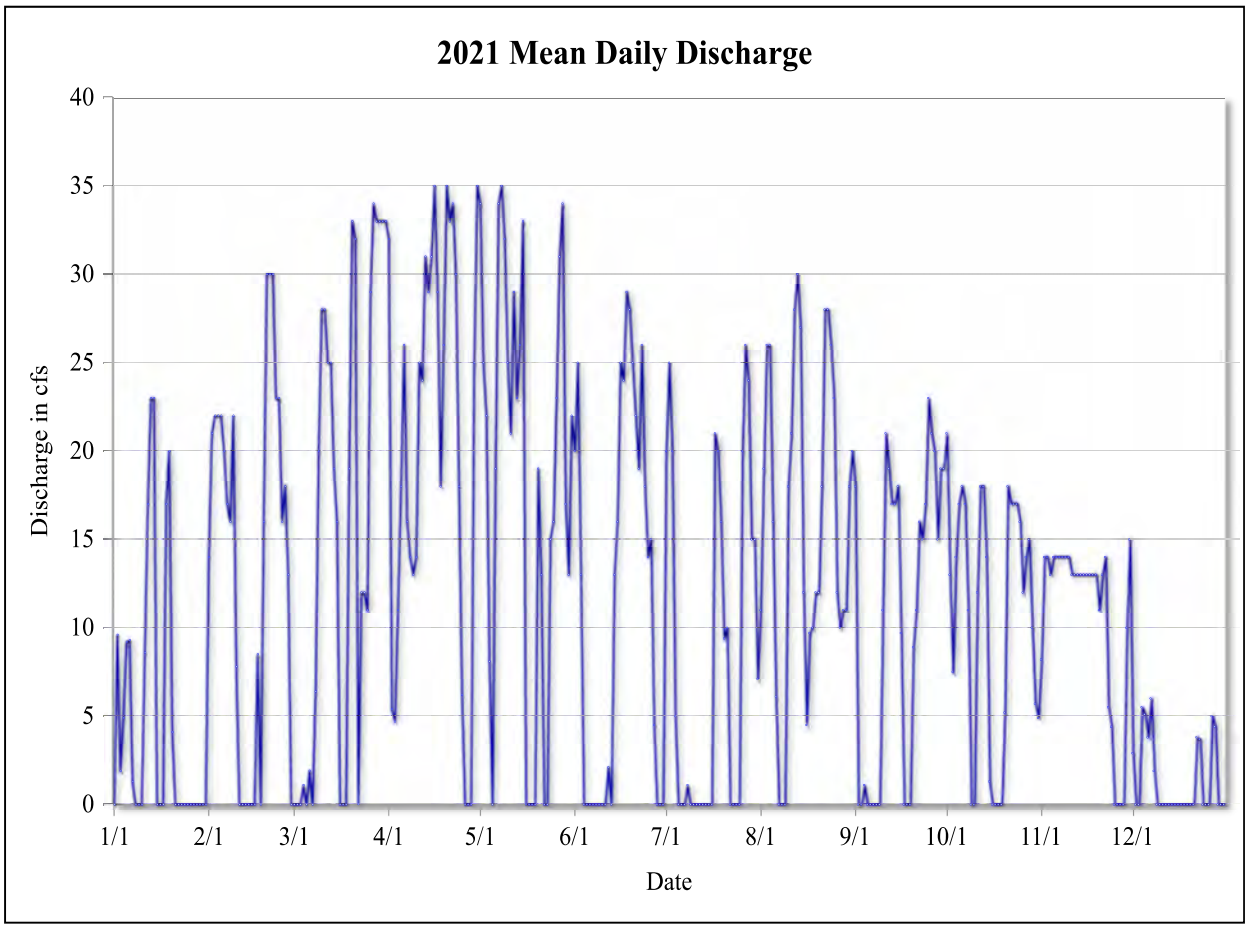
Drainage Area—Not applicable.

Period of Record—April 21, 2006 to current year.

Gage—A Sutron Xlite datalogger (Model 9210-0000-2B) records water stage measured with a Sutron multiple interface shaft encoder (Model 56-0540-400-DTR) upstream from a fixed abrupt-expansion type, long-throated flume. Discharge is calculated using a stage-discharge relationship.

Extremes—Maximum daily discharge, 41 cfs, Jun. 15, 2017; minimum daily discharge, no diversion at times; maximum hourly discharge, 47 cfs, May 9, 2006 at 12:00; minimum hourly discharge, no diversion at times.

Remarks—None.



Fort Mojave Tribe-Barrackman

Mean daily discharge, in cubic-feet per second, Calendar Year 2021

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	14	0	32	34	20	20	11	18	21	8.2	2.9
2	9.6	21	0	5.4	25	25	25	19	0	13	14	0
3	1.9	22	0	4.7	22	13	20	26	0	7.5	14	0
4	4.9	22	1.1	11	8.1	0	5.0	26	1.1	14	13	5.5
5	9.2	22	0	18	0	0	0	16	0	17	14	5.1
6	9.3	20	1.9	26	19	0	0	6.1	0	18	14	3.8
7	1.3	17	0	16	34	0	0	0	0	17	14	6.0
8	0	16	6.4	14	35	0	1.1	0	0	11	14	1.9
9	0	22	20	13	32	0	0	0	0	0	14	0
10	0	7.8	28	14	25	0	0	18	11	0	14	0
11	8.6	0	28	25	21	0	0	21	21	12	13	0
12	17	0	25	24	29	2.1	0	28	19	18	13	0
13	23	0	25	31	23	0	0	30	17	18	13	0
14	23	0	19	29	26	13	0	27	17	14	13	0
15	0	0	16	31	33	16	0	12	18	1.3	13	0
16	0	0	0	35	0.01	25	0	4.5	9.7	0	13	0
17	0	8.5	0	29	0	24	21	9.7	0	0	13	0
18	17	0	0	18	0	29	20	10	0	0	13	0
19	20	16	19	26	0	28	16	12	0	0	13	0
20	4.1	30	33	35	19	25	9.4	12	8.9	5.2	11	0
21	0	30	32	33	13	22	10	18	11	18	13	0
22	0	30	0.02	34	0	19	0	28	16	17	14	3.8
23	0	23	12	30	0	26	0	28	15	17	5.5	3.7
24	0	23	12	18	15	18	0	26	17	17	4.4	0
25	0	16	11	6.2	16	14	0	23	23	16	0	0
26	0	18	29	0	23	15	20	12	21	12	0	0
27	0	13	34	0	31	4.5	26	10	20	14	0	5.0
28	0	0	33	0	34	0	24	11	15	15	0	4.4
29	0		33	25	17	0	15	11	19	10	10	0
30	0		33	35	13	0	15	18	19	5.7	15	0
31	0		33		22		7.1	20		4.9		0
Total	148.6	389.9	484.11	617.5	568.27	338.5	253.1	493.7	317.5	332.6	322.8	42.2
Mean	4.79	13.9	15.6	20.6	18.3	11.3	8.16	15.9	10.6	10.7	10.8	1.36
Max	23	30	34	35	35	29	26	30	23	21	15	6.0
Min	0	0	0	0	0	0	0	0	0	0	0	0
Ac-ft	295	773	960	1,225	1,127	671	502	979	630	660	640	84

Calendar Year Summary

Annual Total 4,308.74 Annual Mean 11.8 Daily Max 35 Daily Min 0 Annual Ac-ft 8,546

Maximum Discharge				Minimum Discharge			
Date	Time	GH	Discharge	Date	Time	GH	Discharge
May 27	00:00	0.83	37	Jan. 1	01:00	0.00	0

Fort Mojave Tribe-Refuge (Fort Mojave Tribe)

Location—Latitude 34° 50.286', longitude -114° 34.237', in the SW¼ SE¼ of Section 24, T. 17 N., R. 22 W., Gila-Salt River meridian, Mohave County, Arizona, Hydrologic Unit 15030101, 19.2 mi south of Bullhead City, Arizona, 2.9 mi east of Needles, California, and 31.5 river mi downstream of Davis Dam.

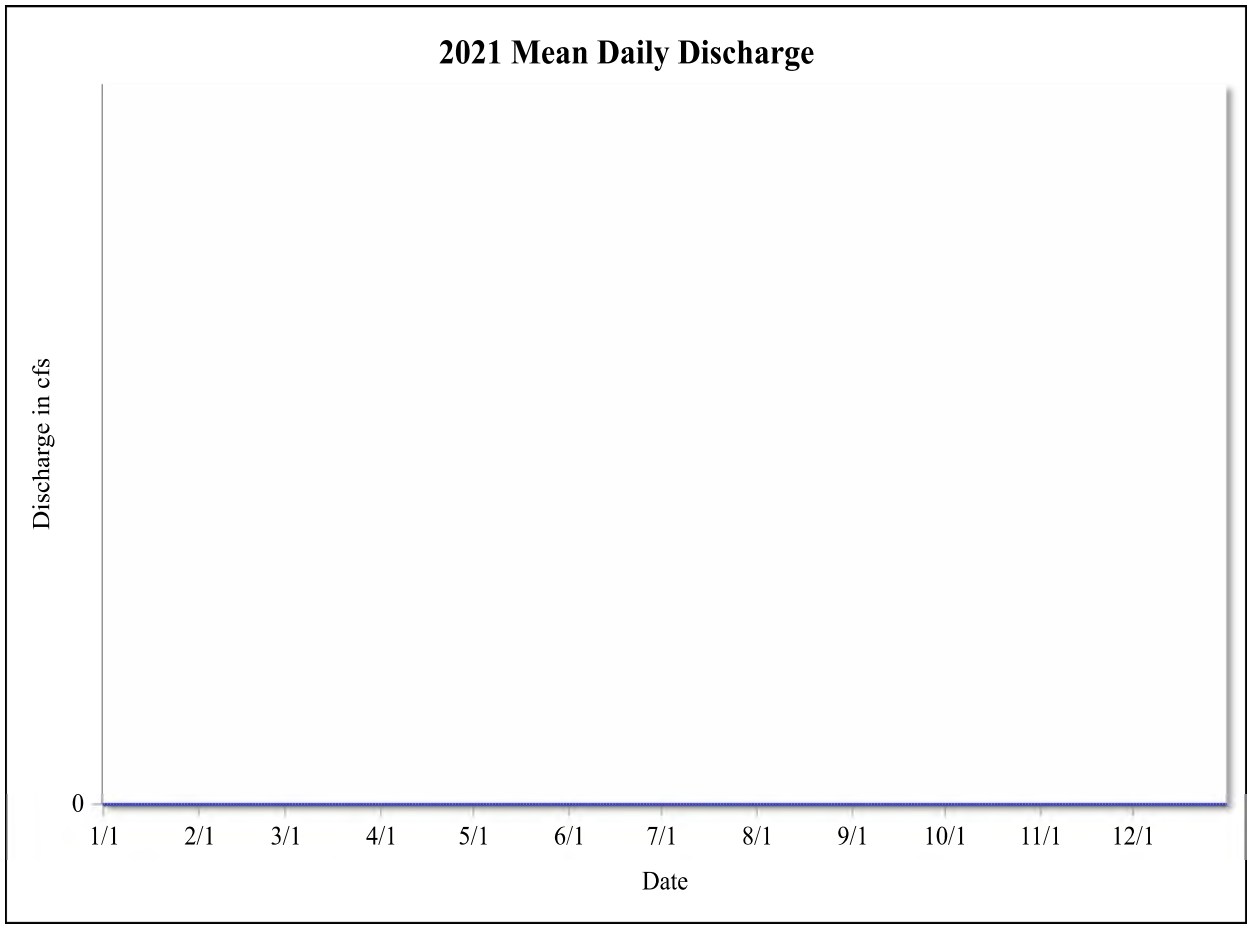
Drainage Area—Not applicable.

Period of Record—January 27, 2006 to current year.

Gage—A Sutron Xlite datalogger (Model 9210-0000-2B) records discharge measured with a SeaMetrics insertion magnetic flow meter (Model EX-201-S) mounted in the discharge side of the diversion pipe. Discharge is calculated using a discharge-index relationship.

Extremes—Maximum daily discharge, 20 cfs, Apr. 26, 2008; minimum daily discharge, no diversion at times; maximum hourly discharge, 27 cfs, Jul. 21, 2006 at 14:00; minimum hourly discharge, no diversion at times.

Remarks—The diversion pump was not operated this record period. Due to low water operations in the Lower Colorado River, flows into the Inlet Canal were too low for irrigation purposes, resulting in zero run days.



Mean daily discharge, in cubic-feet per second, Calendar Year 2021

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0	**0**	0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
2	0	0	0	0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
3	0	0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
4	0	0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
5	0	0	0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
6	0	0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
7	0	0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
8	0	0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
9	0	0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
10	0	0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
11	0	0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
12	0	0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
13	0	0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
14	0	0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
15	0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
16	0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
17	0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
18	0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
19	0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
20	0	**0**	0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
21	0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
22	0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
23	0	**0**	0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
24	0	0	0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
25	0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
26	0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
27	0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
28	0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
29	0		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
30	0		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
31	0		0		**0**		**0**	**0**		**0**		**0**
Total	0	0	0	0	0	0	0	0	0	0	0	0
Mean	0	0	0	0	0	0	0	0	0	0	0	0
Max	0	0	0	0	0	0	0	0	0	0	0	0
Min	0	0	0	0	0	0	0	0	0	0	0	0
Ac-ft	0	0	0	0	0	0	0	0	0	0	0	0

Calendar Year Summary

Annual Total 0 Annual Mean 0 Daily Max 0 Daily Min 0 Annual Ac-ft 0

Maximum Discharge				Minimum Discharge			
Date	Time	GH	Discharge	Date	Time	GH	Discharge
Jan. 1	01:00	N/A	0	Jan. 1	01:00	N/A	0

Bold values indicate the daily value was derived from hourly data that contained 6 or more consecutive hours of estimated record.

Fort Mojave Tribe-Refuge (Vanderslice Farms)

Location—Latitude 34° 50.286', longitude -114° 34.237', in the SW¼ SE¼ of Section 24, T. 17 N., R. 22 W., Gila-Salt River meridian, Mohave County, Arizona, Hydrologic Unit 15030101, 19.2 mi south of Bullhead City, Arizona, 2.9 mi east of Needles, California, and 31.5 river mi downstream of Davis Dam.

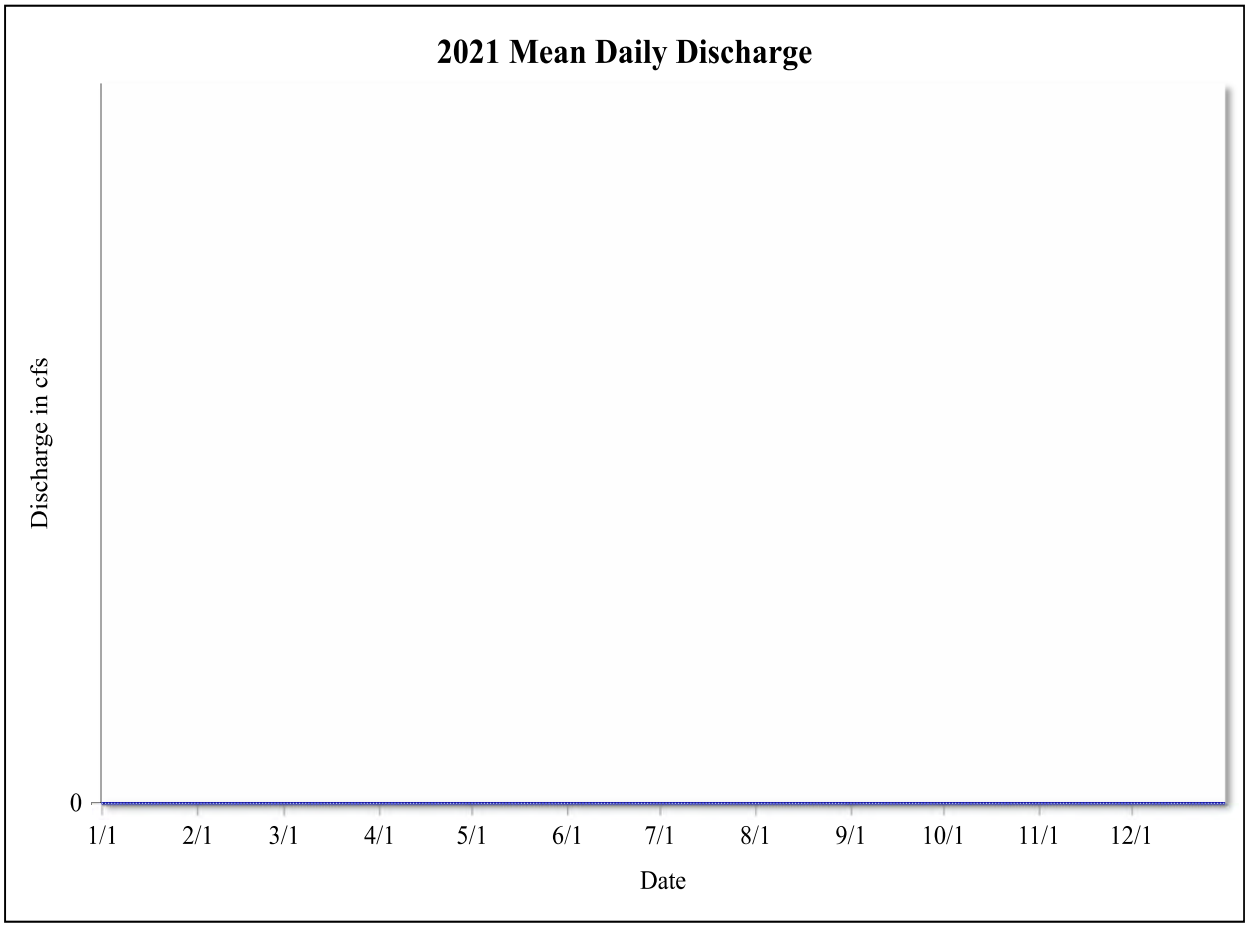
Drainage Area—Not applicable.

Period of Record—January 27, 2006 to current year.

Gage—Sutron Xlite datalogger (Model 9210-0000-2B) records discharge measured with a SeaMetrics insertion magnetic flow meter (Model EX-201-S) mounted in the discharge side of the diversion pipe. Discharge is calculated using a discharge-index relationship.

Extremes—Maximum daily discharge, 16 cfs, Aug. 16, 2006; minimum daily discharge, no diversion at times; maximum hourly discharge, 18 cfs, Aug. 2, 2006 at 11:00; minimum hourly discharge, no diversion at times.

Remarks—There were many periods of estimated data this record period due to equipment failure and vandalism. The equipment was removed on Sep. 22, 2021 and the remainder of the record was estimated as the diversion pump was decommissioned.



Fort Mojave Tribe-Refuge (Vanderslice Farms)

Mean daily discharge, in cubic-feet per second, Calendar Year 2021

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0	**0**	0	0	0	0	**0**	**0**	**0**	**0**	**0**
2	0	0	0	0	0	0	0	**0**	**0**	**0**	**0**	**0**
3	0	0	**0**	**0**	0	0	0	**0**	**0**	**0**	**0**	**0**
4	0	0	**0**	**0**	0	0	0	**0**	**0**	**0**	**0**	**0**
5	0	0	0	**0**	0	0	0	**0**	**0**	**0**	**0**	**0**
6	0	0	**0**	**0**	0	0	0	**0**	**0**	**0**	**0**	**0**
7	0	0	**0**	0	0	0	0	**0**	**0**	**0**	**0**	**0**
8	0	0	**0**	0	0	0	0	**0**	**0**	**0**	**0**	**0**
9	0	0	**0**	0	0	0	0	**0**	**0**	**0**	**0**	**0**
10	0	0	**0**	0	0	0	0	**0**	**0**	**0**	**0**	**0**
11	0	0	**0**	0	0	0	0	**0**	**0**	**0**	**0**	**0**
12	0	0	**0**	0	0	0	0	**0**	**0**	**0**	**0**	**0**
13	0	0	**0**	0	0	0	0	**0**	**0**	**0**	**0**	**0**
14	0	0	**0**	0	0	0	0	**0**	**0**	**0**	**0**	**0**
15	0	**0**	**0**	0	0	0	0	**0**	**0**	**0**	**0**	**0**
16	0	**0**	0	0	0	0	0	**0**	**0**	**0**	**0**	**0**
17	0	**0**	**0**	0	0	0	0	**0**	**0**	**0**	**0**	**0**
18	0	**0**	**0**	0	0	0	0	**0**	**0**	**0**	**0**	**0**
19	0	**0**	**0**	0	0	0	0	**0**	**0**	**0**	**0**	**0**
20	0	**0**	0	0	0	0	0	**0**	**0**	**0**	**0**	**0**
21	0	**0**	**0**	0	0	0	0	**0**	**0**	**0**	**0**	**0**
22	0	**0**	**0**	0	0	0	0	**0**	**0**	**0**	**0**	**0**
23	0	**0**	0	0	0	0	0	**0**	**0**	**0**	**0**	**0**
24	0	0	0	0	0	0	0	**0**	**0**	**0**	**0**	**0**
25	0	0	**0**	0	0	0	**0**	**0**	**0**	**0**	**0**	**0**
26	0	**0**	**0**	0	0	0	0	**0**	**0**	**0**	**0**	**0**
27	0	**0**	**0**	0	0	0	0	**0**	**0**	**0**	**0**	**0**
28	0	**0**	**0**	0	0	0	0	**0**	**0**	**0**	**0**	**0**
29	0		**0**	0	0	0	0	**0**	**0**	**0**	**0**	**0**
30	0		**0**	0	0	0	0	**0**	**0**	**0**	**0**	**0**
31	0		0		0		0	**0**		**0**		**0**
Total	0	0	0	0	0	0	0	0	0	0	0	0
Mean	0	0	0	0	0	0	0	0	0	0	0	0
Max	0	0	0	0	0	0	0	0	0	0	0	0
Min	0	0	0	0	0	0	0	0	0	0	0	0
Ac-ft	0	0	0	0	0	0	0	0	0	0	0	0

Calendar Year Summary

Annual Total 0 Annual Mean 0 Daily Max 0 Daily Min 0 Annual Ac-ft 0

Maximum Discharge				Minimum Discharge			
Date	Time	GH	Discharge	Date	Time	GH	Discharge
Jan. 1	01:00	N/A	0	Jan. 1	01:00	N/A	0

Bold values indicate the daily value was derived from hourly data that contained 6 or more consecutive hours of estimated record.

United States Fish and Wildlife Service-Farm Ditch

Location—Latitude 34° 47.711', longitude -114° 33.275', in the SE¼ SE¼ of Section 1, T. 16 N., R. 22 W., Gila-Salt River meridian, Mohave County, Arizona, Hydrologic Unit 15030101, 22.2 mi south of Bullhead City, Arizona, and 4.5 mi southeast of Needles, California.

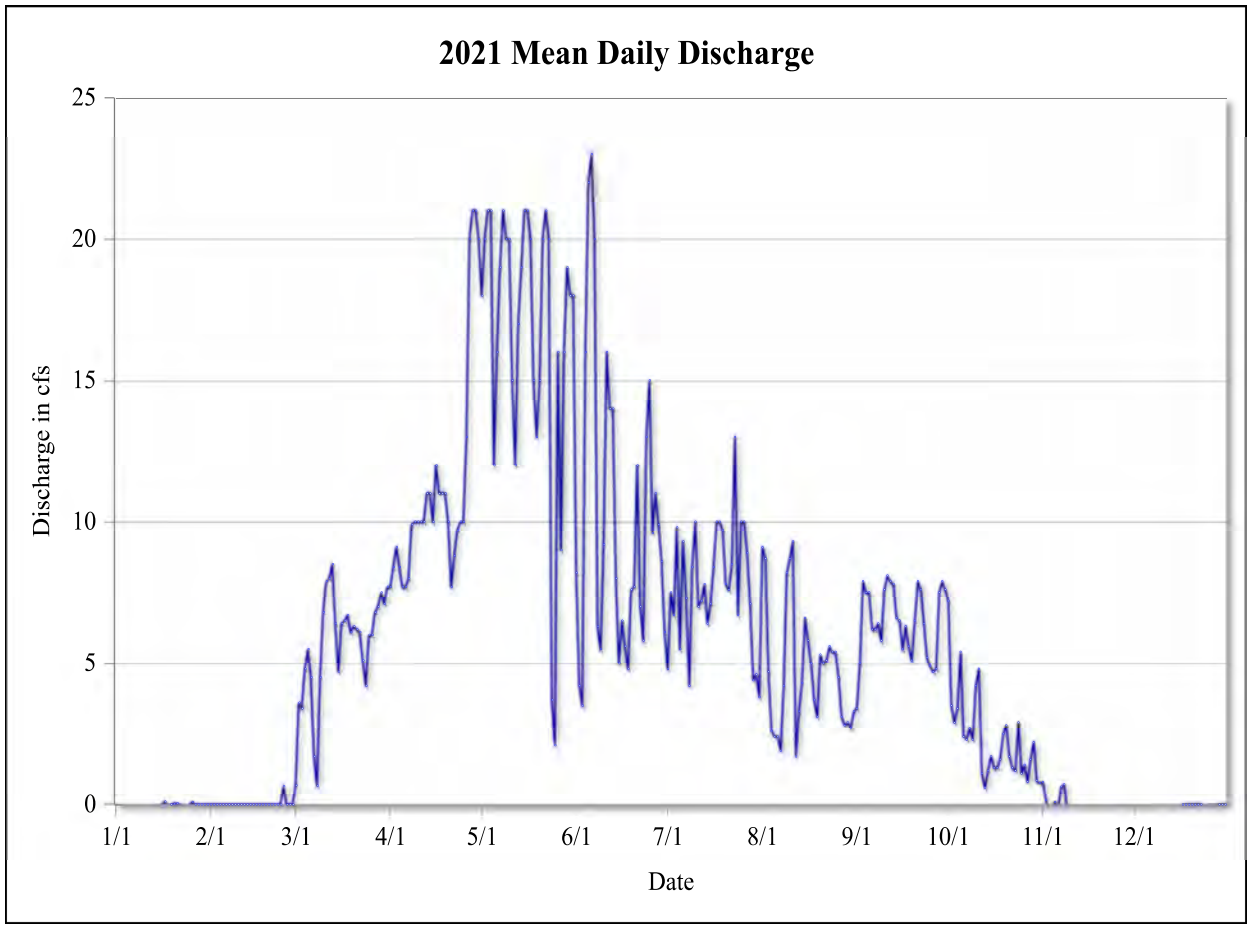
Drainage Area—Not applicable.

Period of Record—January 1, 2005 to current year.

Gage—A Sutron Xlite datalogger (Model 9210-0000-2B) records water velocity measured with a SonTek/YSI Argonaut-SW current meter. Discharge is calculated using a velocity-index relationship.

Extremes—Maximum daily discharge, 42 cfs, Mar. 14, 2015; minimum daily discharge, -4.1 cfs, May 19, 2017; maximum hourly discharge, 47 cfs, Mar. 15, 2015 at 15:00; minimum hourly discharge, -9.2 cfs, May 2, 2012 at 18:00.

Remarks—None.



Mean daily discharge, in cubic-feet per second, Calendar Year 2021

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	-0.09	0	0.68	7.7	18	8.2	4.8	9.1	3.4	7.2	0.80	-0.20
2	-0.12	0	3.6	8.4	20	4.2	7.5	8.7	5.0	3.5	0.16	-0.23
3	-0.19	0	3.4	9.1	21	3.5	6.7	4.7	7.9	2.9	-0.22	-0.23
4	-0.15	0	4.8	8.4	21	16	9.8	2.6	7.5	3.4	-0.27	-0.24
5	-0.16	0	5.5	7.7	12	22	5.5	2.4	7.5	5.4	0.09	-0.28
6	-0.16	0	4.5	7.7	16	23	9.3	2.4	6.2	2.4	-0.15	-0.25
7	-0.15	0	1.7	8.0	19	20	7.3	1.9	6.2	2.3	0.63	-0.22
8	-0.14	0	0.67	9.9	21	6.3	4.2	4.2	6.4	2.7	0.71	-0.28
9	-0.06	0	4.5	10	20	5.5	8.4	8.2	5.8	2.3	-0.23	-0.25
10	-0.14	0	6.8	10	20	9.2	10	8.7	7.6	4.2	-0.24	-0.18
11	-0.12	0	7.9	10	15	16	7.0	9.3	8.1	4.8	-0.24	-0.17
12	-0.16	0	8.0	10	12	14	7.2	1.7	7.9	1.1	-0.24	-0.26
13	-0.11	0	8.5	11	17	14	7.8	3.3	7.8	0.60	-0.23	-0.25
14	-0.06	0	6.4	11	19	8.0	6.4	4.3	6.6	1.2	-0.23	-0.24
15	-0.03	0	4.7	10	21	5.0	7.1	6.6	6.5	1.7	-0.24	-0.22
16	-0.08	0	6.4	12	21	6.5	8.4	5.8	5.5	1.3	-0.24	-0.25
17	0.10	0	6.5	11	20	5.6	10	5.0	6.3	1.3	-0.25	0
18	-0.06	0	6.7	11	15	4.8	10	3.7	5.6	1.6	-0.24	0
19	0	0	6.1	11	13	7.6	9.7	3.1	5.1	2.5	-0.23	0
20	0.02	0	6.3	10	15	7.7	7.8	5.3	6.5	2.8	-0.25	0
21	0.05	0	6.2	7.7	20	12	7.6	5.0	7.9	1.7	-0.29	0
22	-0.03	0	6.1	8.8	21	7.0	8.5	5.1	7.6	1.3	-0.16	0
23	-0.04	0	5.1	9.7	20	5.8	13	5.6	6.4	1.2	-0.15	0
24	-0.05	0	4.2	10	3.7	13	6.7	5.4	5.2	2.9	-0.13	-0.09
25	-0.07	0.65	6.0	10	2.1	15	10	5.4	4.9	1.1	-0.17	-0.04
26	0.09	0	6.0	13	16	9.6	10	4.5	4.7	1.4	-0.29	-0.01
27	0	0	6.8	20	9.0	11	8.9	3.1	4.8	0.81	-0.26	-0.02
28	0	0	7.0	21	16	9.9	7.1	2.8	7.5	1.6	-0.28	-0.03
29	0		7.5	21	19	8.6	4.4	2.9	7.9	2.2	-0.24	0
30	0		7.1	20	18	6.1	4.6	2.7	7.6	0.85	-0.26	0
31	0		7.7		18		3.8	3.3		0.76		0
Total	-1.91	0.65	173.19	337.6	520.6	304.1	240.5	146.7	193.6	71.03	-3.33	-3.93
Mean	-0.062	0.023	5.59	11.3	16.8	10.1	7.76	4.73	6.45	2.29	-0.11	-0.13
Max	0.10	0.65	8.5	21	21	23	13	9.3	8.1	7.2	0.80	0
Min	-0.19	0	0.67	7.7	2.1	3.5	3.8	1.7	3.4	0.60	-0.29	-0.28
Ac-ft	-3.8	1.3	344	670	1,033	603	477	291	384	141	-6.6	-7.8

Calendar Year Summary

Annual Total 1,978.90 Annual Mean 5.42 Daily Max 23 Daily Min -0.29 Annual Ac-ft 3,925

Maximum Discharge				Minimum Discharge			
Date	Time	GH	Discharge	Date	Time	GH	Discharge
Jun. 6	06:00	N/A	27	Jun. 15	20:00	N/A	-5.3

United States Fish and Wildlife Service-South Dike

Location—Latitude 34° 44.214', longitude -114° 29.407', in the SW¼ SE¼ of Section 27, T. 16 N., R. 21 W., Gila-Salt River meridian, Mohave County, Arizona, Hydrologic Unit 15030101, 26.8 mi south of Bullhead City, Arizona, and 9.9 mi southeast of Needles, California.

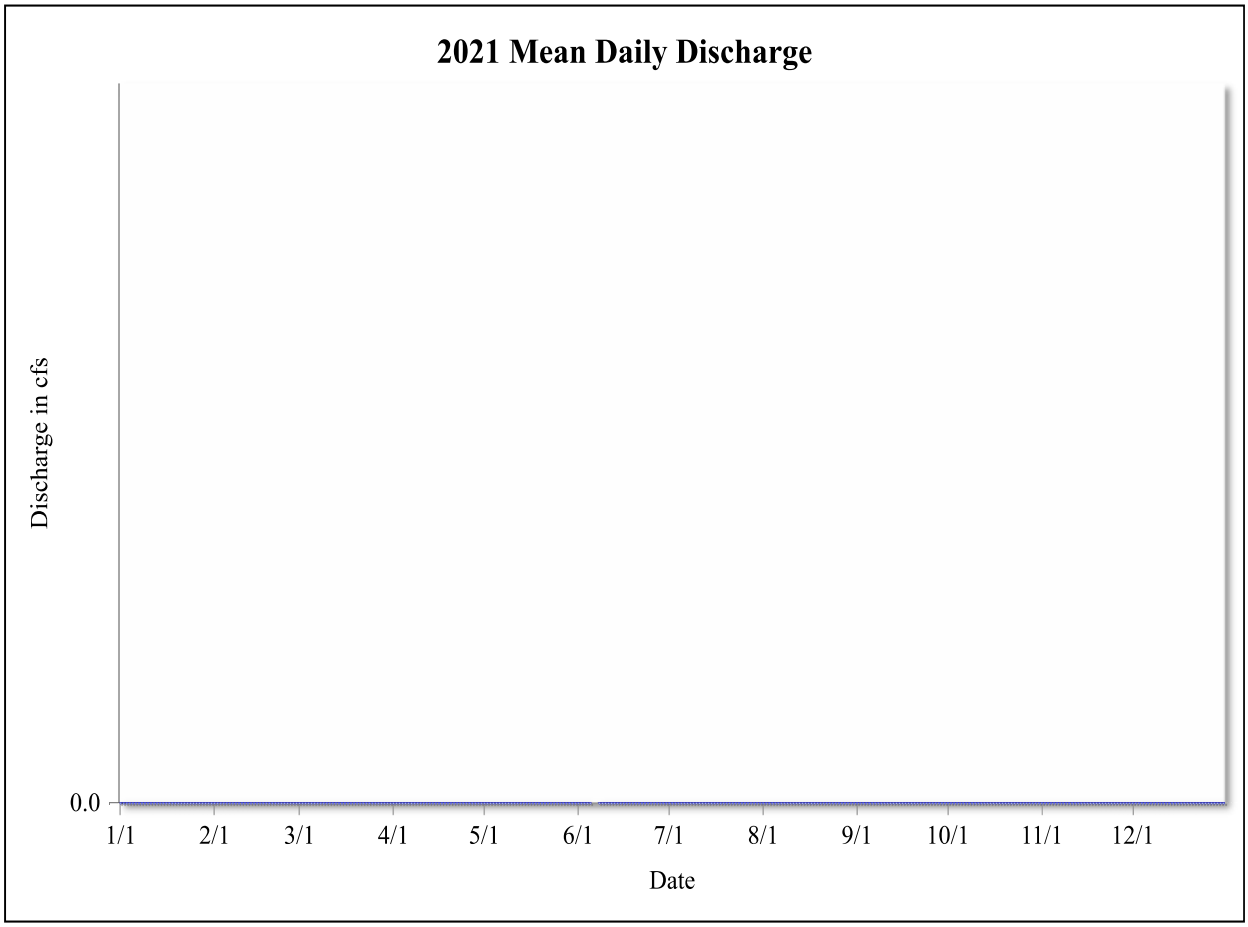
Drainage Area—Undetermined.

Period of Record—June 16, 2005 to current year.

Gage—A Sutron Xlite datalogger (Model 9210-0000-2B) records river and gate elevation measured with Sutron multiple interface shaft encoders (Model 56-0540-400-DTR) and marsh with Sutron SDI-12 submersible pressure sensor (Model 56-114). Discharge over the bi-fold lateral gate is computed by applying two theoretical and two empirical weir equations. Four flow conditions exist; forward free flow, forward submerged, reverse free flow, and reverse submerged. Forward free flow uses the manufacturers equation. Reverse submerged flow was developed with 13 discharge measurements. Forward submerged and reverse free flow are theoretical. The transitions between equations do not appear smooth and therefore the data should be considered poor.

Extremes—Maximum daily discharge, 9.1 cfs on Aug. 5, 2005; minimum daily discharge, -88 cfs on Apr. 8, 2011; maximum hourly discharge, 39 cfs on Apr. 27, 2011 at 18:00; minimum hourly discharge, -92 cfs on Apr. 7, 2011 at 23:00.

Remarks—Flows were estimated as zero for the following periods; Feb. 01, 2021 at 05:00 to Mar. 11, 2021 at 17:00, Dec. 2, 2021 at 08:00 to Dec. 15, 2021 at 13:00, and Dec. 30, 2021 at 04:00 to Dec. 30, 2021 at 10:00 due to gage failure.



United States Fish and Wildlife Service-South Dike

Mean daily discharge, in cubic-feet per second, Calendar Year 2021

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	**0**	**0**	0	0	0	0	0	0	0	0	0
2	0	**0**	**0**	0	0	0	0	0	0	0	0	**0**
3	0	**0**	**0**	0	0	0	0	0	0	0	0	**0**
4	0	**0**	**0**	0	0	0	0	0	0	0	0	**0**
5	0	**0**	**0**	0	0	0	0	0	0	0	0	**0**
6	0	**0**	**0**	0	0	-0.01	0	0	0	0	0	**0**
7	0	**0**	**0**	0	0	-0.03	0	0	0	0	0	**0**
8	0	**0**	**0**	0	0	0	0	0	0	0	0	**0**
9	0	**0**	**0**	0	0	0	0	0	0	0	0	**0**
10	0	**0**	**0**	0	0	0	0	0	0	0	0	**0**
11	0	**0**	**0**	0	0	0	0	0	0	0	0	**0**
12	0	**0**	0	0	0	0	0	0	0	0	0	**0**
13	0	**0**	0	0	0	0	0	0	0	0	0	**0**
14	0	**0**	0	0	0	0	0	0	0	0	0	**0**
15	0	**0**	0	0	0	0	0	0	0	0	0	**0**
16	0	**0**	0	0	0	0	0	0	0	0	0	0
17	0	**0**	0	0	0	0	0	0	0	0	0	0
18	0	**0**	0	0	0	0	0	0	0	0	0	0
19	0	**0**	0	0	0	0	0	0	0	0	0	0
20	0	**0**	0	0	0	0	0	0	0	0	0	0
21	0	**0**	0	0	0	0	0	0	0	0	0	0
22	0	**0**	0	0	0	0	0	0	0	0	0	0
23	0	**0**	0	0	0	0	0	0	0	0	0	0
24	0	**0**	0	0	0	0	0	0	0	0	0	0
25	0	**0**	0	0	0	0	0	0	0	0	0	0
26	0	**0**	0	0	0	0	0	0	0	0	0	0
27	0	**0**	0	0	0	0	0	0	0	0	0	0
28	0	**0**	0	0	0	0	0	0	0	0	0	0
29	0		0	0	0	0	0	0	0	0	0	0
30	0		0	0	0	0	0	0	0	0	0	**0**
31	0		0		0		0	0		0		0
Total	0	0	0	0	0	-0.04	0	0	0	0	0	0
Mean	0	0	0	0	0	-0.001	0	0	0	0	0	0
Max	0	0	0	0	0	0	0	0	0	0	0	0
Min	0	0	0	0	0	-0.03	0	0	0	0	0	0
Ac-ft	0	0	0	0	0	-0.1	0	0	0	0	0	0

Calendar Year Summary

Annual Total -0.04 Annual Mean 0 Daily Max 0 Daily Min -0.03 Annual Ac-ft -0.1

Maximum Discharge				Minimum Discharge			
Date	Time	Elev	Discharge	Date	Time	Elev	Discharge
Jan. 1	01:00	453.70	0	Jun. 7	06:00	455.72	-0.18

Bold values indicate the daily value was derived from hourly data that contained 6 or more consecutive hours of estimated record.

Palo Verde Irrigation District-Outfall Drain

Location—Latitude 33° 20.308', longitude -114° 42.734', in the SW¼ NE¼ of Section 1, T. 10 S., R. 21 E., San Bernardino meridian, Imperial County, California, Hydrologic Unit 15030104, 20.2 mi south of Blythe, California, and 44.4 mi north of Yuma, Arizona.

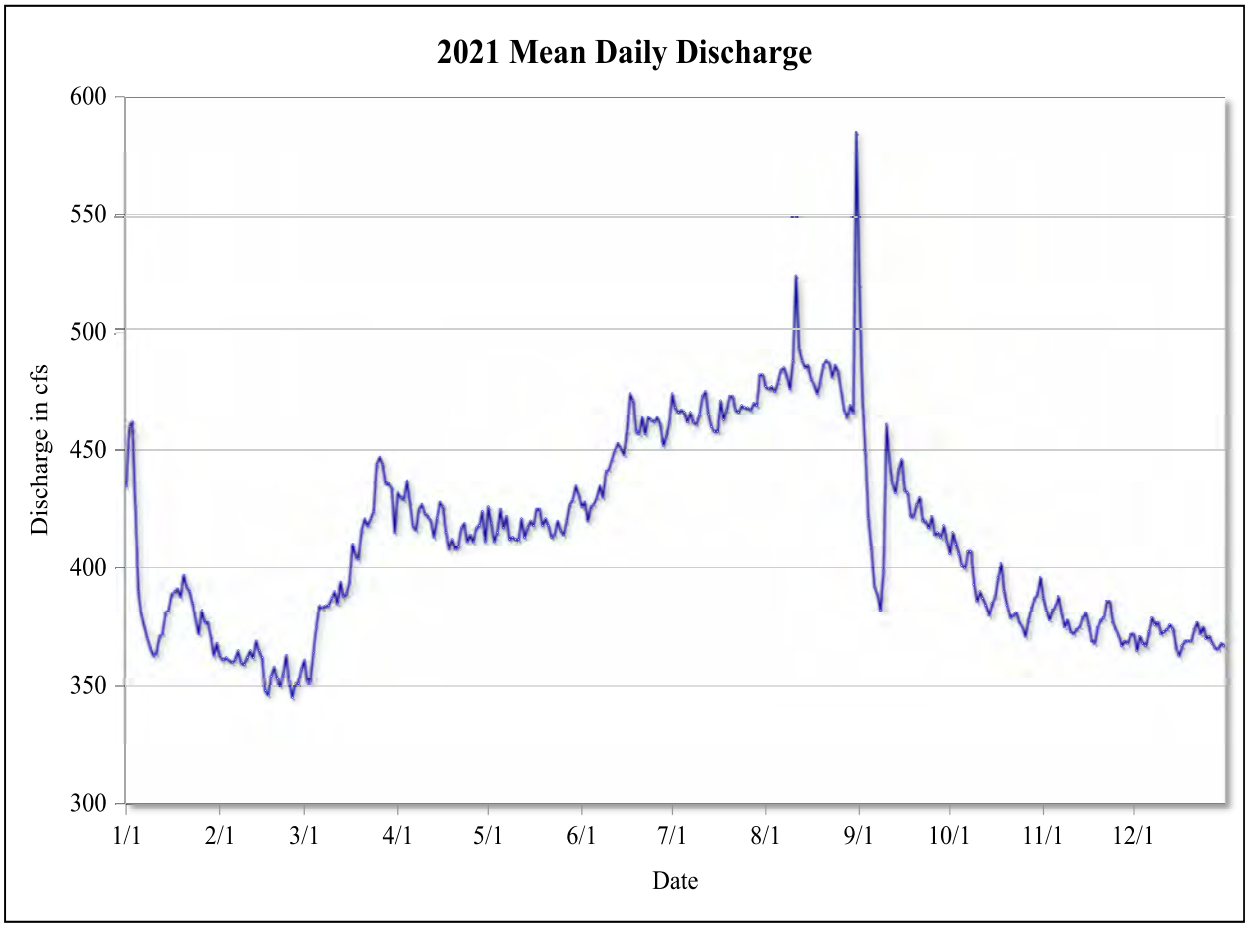
Drainage Area—Undetermined.

Period of Record—January 1, 2005 to current year.

Gage—A Sutron Xlite datalogger (Model 9210-0000-2B) records water elevation and velocity measured with a SonTek/YSI Argonaut-SL current meter. Discharge is calculated using a velocity-index relationship.

Extremes—Maximum daily discharge, 1,200 cfs, Aug. 10, 2005; minimum daily discharge, 299 cfs, Jan. 10, 2017; maximum hourly discharge, 3,230 cfs (estimated), Aug. 9, 2005 at 23:00, caused by an overbank condition created from significant side wash inflow; minimum hourly discharge, 225 cfs, Nov. 29, 2006 at 15:00.

Remarks—None.



Palo Verde Irrigation District-Outfall Drain

Mean daily discharge, in cubic-feet per second, Calendar Year 2021

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	435	363	361	432	426	426	474	477	520	406	387	372
2	460	361	352	430	419	428	468	476	473	415	382	365
3	462	362	352	429	411	420	466	477	449	410	378	371
4	426	361	364	437	415	426	467	475	421	406	382	368
5	390	360	375	428	425	427	466	479	408	401	384	367
6	380	361	384	418	417	430	462	484	392	400	388	373
7	375	365	383	416	422	435	466	485	389	407	381	379
8	370	360	384	425	412	430	462	481	382	407	375	376
9	366	359	384	427	413	441	461	476	399	393	378	377
10	363	362	387	423	412	442	465	488	461	386	373	372
11	364	365	390	422	412	446	473	524	445	390	372	373
12	371	362	385	420	421	450	475	493	436	387	374	374
13	372	369	394	413	413	453	465	488	432	384	375	376
14	381	365	388	421	417	451	460	485	442	380	379	374
15	382	362	389	428	420	448	458	486	446	385	381	366
16	389	348	394	426	418	458	458	480	433	388	376	363
17	390	346	410	415	425	474	471	478	432	396	369	367
18	391	354	405	408	425	471	463	474	422	402	368	369
19	388	358	404	412	418	458	467	479	422	390	375	369
20	397	353	416	408	421	457	473	486	427	384	378	369
21	392	350	421	409	418	464	473	488	430	379	379	374
22	390	355	418	417	413	457	467	487	420	380	386	377
23	385	363	421	419	414	464	466	481	420	381	386	372
24	378	352	424	411	420	463	469	486	417	377	377	375
25	372	345	444	414	416	462	468	483	422	375	374	370
26	382	351	447	411	414	464	468	475	414	371	371	371
27	377	351	444	417	420	461	467	467	415	378	367	368
28	377	357	436	418	427	452	470	464	413	383	369	366
29	371		436	424	429	456	469	469	418	387	368	366
30	363		434	411	435	462	482	466	411	389	372	368
31	368		415		431		482	585		396		367
Total	12,009	10,018	12,445	12,590	13,001	13,478	14,503	15,022	12,813	12,110	11,305	11,492
Mean	387	358	401	420	419	449	468	485	427	391	377	371
Max	462	369	447	437	435	474	482	585	520	415	388	379
Min	363	345	352	408	411	420	458	464	382	371	367	363
Ac-ft	23,819	19,871	24,685	24,973	25,786	26,734	28,766	29,795	25,413	24,021	22,424	22,794

Calendar Year Summary

Annual Total 150,786 Annual Mean 413 Daily Max 585 Daily Min 345 Annual Ac-ft 299,080

Maximum Discharge				Minimum Discharge			
Date	Time	Elev	Discharge	Date	Time	Elev	Discharge
Aug. 31	15:00	220.35	993	Feb. 16	23:00	214.60	337

Glossary

Acre-foot/feet (**ac-ft**)—The quantity of water required to cover one acre to a depth of one foot, the equivalent of 43,560 cubic-feet or about 326,000 gallons.

Control—Channel features downstream of a gage which determine the stage-discharge relation at the gage. Controls can be either artificial or natural. Artificial controls consist of man-made structures like weirs and flumes, while natural controls consist of channel constrictions, outcroppings, rock or gravel beds, and uniform stretches of channel.

Cubic-Feet per Second (**cfs**)—The rate of discharge representing a volume of one cubic foot passing a given point during one second, the equivalent of approximately 7.48 gallons per second or 448.8 gallons per minute.

Data—Characteristic observations, often represented as numbers, made over specific points in time.

Datalogger—An electronic device that records data in time sequence with related events. Dataloggers take measurements from sensors and/or transducers located at a gaging station.

Datum—Any numerical quantity that serves as a reference or base for another comparable quantity.

Discharge—The volume of water that passes a given point within a given period of time.

Discharge-Index Relationship—The relationship between an indicator discharge and a volume of water flowing in a channel or pipe.

Drainage Area—The area of the associated drainage basin expressed in square miles.

Elevation—The height of water at a gage measured in reference to mean sea level.

Estimated Data or Record—Data that has been estimated to replace missing or erroneous gage data by a method of prediction that includes averaging, interpolation, or correlation.

Extremes—The maximum and minimum hourly and daily discharges recorded in the date range listed in the period of record.

Final Data— Data that have been reviewed and corrected based on field observations.

Gage—An instrument or device used to measure a medium's magnitude or position, such as water elevation or velocity.

Gage-Height (gh)—The height of water at a gage with no vertical datum reference applied.

Gaging Station—A particular location in a stream, canal, lake, pipe, or reservoir where systematic observations of hydrologic data are obtained.

Global Positioning System (**gps**)—A system of orbiting satellites and receiving devices used to compute positions on the earth.

Hydrologic Unit Code (huc)—A geographic area representing part or all of a surface drainage basin or distinct hydrologic feature that is represented as an eight digit number.

Latitude—The angular distance north or south of the earth's equator, measured in degrees along a meridian, as on a map or globe.

Longitude—The angular distance on the earth's surface, measured east or west from the prime meridian at Greenwich, England, to the meridian passing through a position, measured in degrees.

Location—The location of the gaging station with respect to physical features in the vicinity, and with respect to the reference plane mentioned in the station name.

Meridian—Lines measuring the distance east and west around the earth at right angles to the equator. Meridians are great circles of the earth passing through both poles also known as lines of *Longitude*.

Maximum Discharge—The maximum reported hourly or daily discharge for the calendar year.

Minimum Discharge—The minimum reported hourly or daily discharge for the calendar year.

Negative Discharge—The volume of water flowing in the opposite direction of normal flow. A negative discharge is subtracted from discharge and acre-feet totals.

Period of Record—A period for which published records exist for a gaging station.

Provisional Data—Data collected in real-time that have received little or no review. Inaccuracies in data may be present because of instrument malfunctions or physical changes at the measurement location. Significant revisions to the data may result upon review and computation of final data record.

Quarter-quarter—A method used to subdivide *section*s; each section is divided into four quarter sections: southeast, southwest, northeast, and northwest. Each subdivided section is then divided again into four quarter sections giving a total of 16 quadrants per section.

Real-Time Data—Provisional data that have been computed, and made available immediately.

River Mile—The curvilinear distance, in miles, measured upstream from the beginning of the stream along the path of the stream.

Section—A unit of land area, generally equal to one square mile or 640 acres. The section is part of a description of the location of land using the Public Land Survey System (PLSS) of the United States Government.

Sensor—Any device that senses a change in a physical or chemical quantity, and provides an electrical output for measurement by a datalogger.

Stage—The height of water above stream bed or an arbitrary datum.

Stage-Discharge Relationship—The relationship between gage height and the volume of water flowing in a channel.

Township—A territorial subdivision, generally considered six miles long, six miles wide, and containing 36 *sections*. The township designation is part of a description of the location of land using the PLSS, and includes the 40-acre subdivision within a *quarter*, *section*, township, and range. The PLSS is based on the concept of a township as a square parcel of land six miles on each side. Its location is established as being

so many six-mile units east of a north-south line (called a meridian), and so many six-mile units north or south of an east-west line (called the baseline). The township is described by township and range (e.g., T. 4 N., R. 23 E.). Each township is further divided into 36 parts called sections, each approximately one mile square in area. A lot consists of an expanse of land of no particular size, often irregular in form.

Transducer—Any device that converts energy from one form to another, as from acoustic energy to electric or mechanical energy.

Velocity-Index—Continuous velocity measurements made from an in-situ velocity sensor that measures a sample volume of a stream. Velocity-Index measurements are required when the channel has poor control or experiences backwater conditions.

Velocity-Index Relationship—The relationship between an index velocity and the mean stream velocity flowing in a channel.

World Geodetic System of 1984 —The World Geodetic System of 1984 is the datum that is used by the GPS. The datum is defined and maintained by the United States National Geospatial-Intelligence Agency.

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Disclaimer

The equipment manufacturer trade names mentioned in this report do not indicate endorsement by the United States Department of the Interior or the Bureau of Reclamation.

Notes