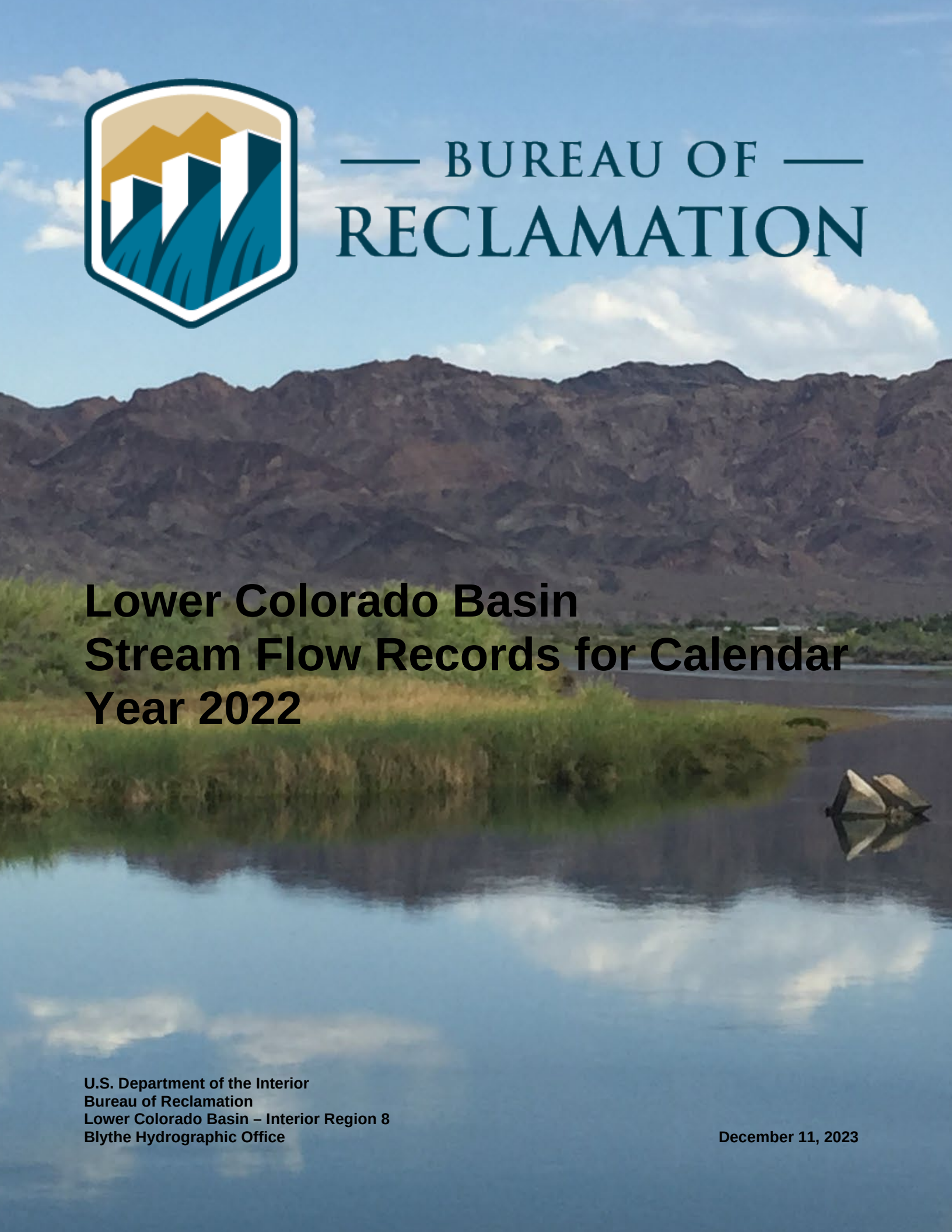


BUREAU OF RECLAMATION

Lower Colorado Basin Stream Flow Records for Calendar Year 2022

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

December 11, 2023

Cover:

Photograph taken of a placid Colorado River near river mile 159 with the Turtle Mountains in the background. The photograph was captured during a routine water quality sampling run near Poston, AZ on August 19, 2016. The Bureau of Reclamation photograph was taken by John Weiss.

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

Table of Contents

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.

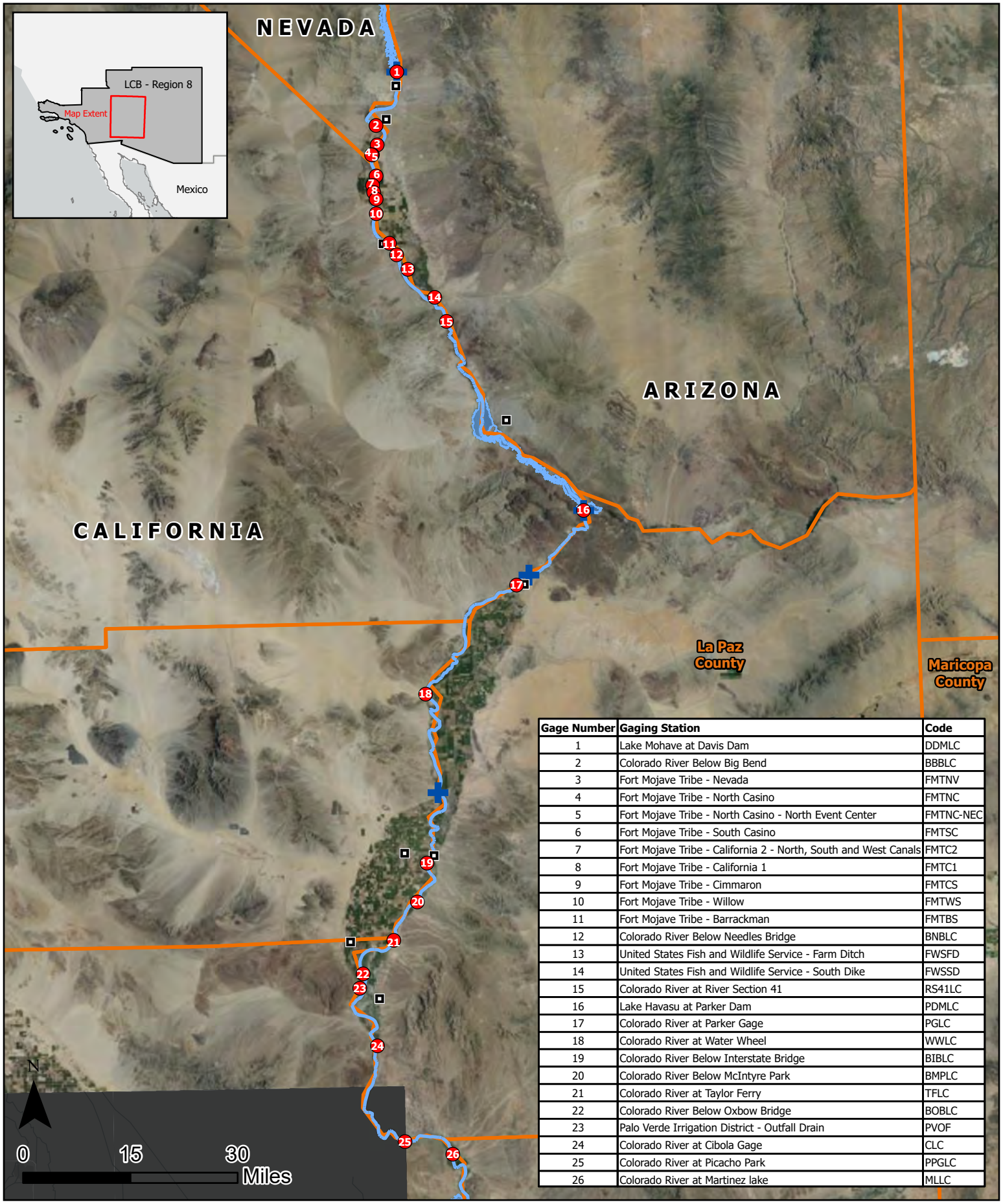
Stage values throughout this report will be referenced as either gage-height or stage, where no vertical datum is used, or as an elevation which references sea level using the National Geodetic Vertical Datum of 1929.

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.

BUREAU OF RECLAMATION

Lower Colorado River
Gaging Stations Operated and Reported by The Blythe Hydrographic Office



Gage 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 Canals	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	Colorado River Below Needles Bridge	BNBLC
13	United States Fish and Wildlife Service - Farm Ditch	FWSFD
14	United States Fish and Wildlife Service - South Dike	FWSSD
15	Colorado River at River Section 41	RS41LC
16	Lake Havasu at Parker Dam	PDMLC
17	Colorado River at Parker Gage	PGLC
18	Colorado River at Water Wheel	WWLC
19	Colorado River Below Interstate Bridge	BIBLC
20	Colorado River Below McIntyre Park	BMPLC
21	Colorado River at Taylor Ferry	TFLC
22	Colorado River Below Oxbow Bridge	BOBLC
23	Palo Verde Irrigation District - Outfall Drain	PVOF
24	Colorado River at Cibola Gage	CLC
25	Colorado River at Picacho Park	PPGLC
26	Colorado River at Martinez lake	MLLC

Map Revision: 12/8/2023

Map Pathway: DOI\Projects\LCRO\Programs_Projects\BCOO\Gaging Station Map\Exports\Gaging_Stations.pdf

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.

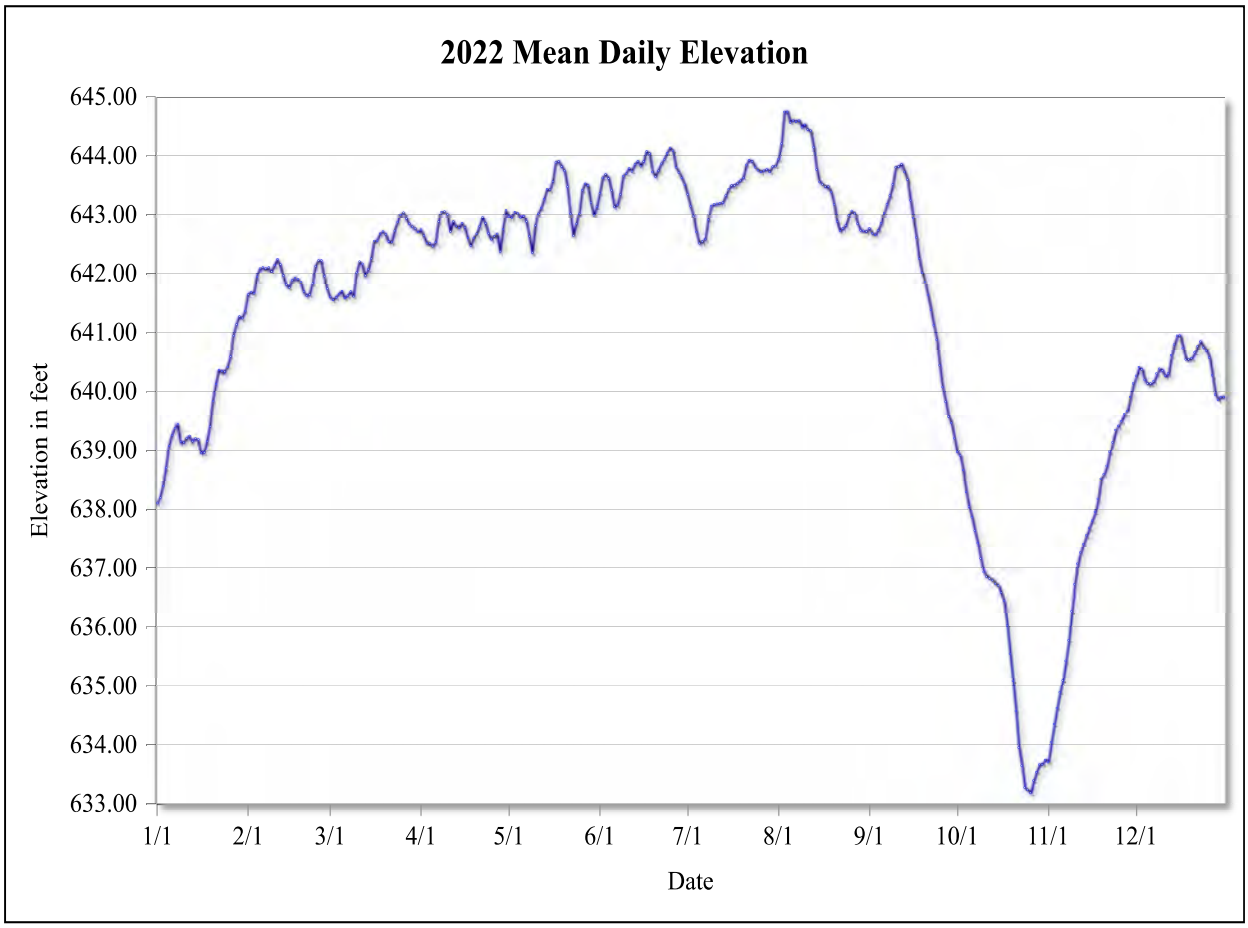
Drainage Area—171,200 mi².

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—None.



Lake Mohave at Davis Dam

Mean daily elevation, in feet, Calendar Year 2022

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	638.11	641.65	641.61	642.75	642.97	643.37	643.35	643.95	642.77	638.98	633.71	640.27
2	638.20	641.69	641.56	642.65	642.95	643.63	643.15	644.21	642.69	638.92	634.05	640.42
3	638.40	641.67	641.60	642.52	643.05	643.69	642.98	644.75	642.66	638.67	634.36	640.38
4	638.71	641.95	641.66	642.52	643.03	643.62	642.71	644.75	642.74	638.30	634.63	640.20
5	639.08	642.09	641.71	642.47	642.95	643.42	642.52	644.57	642.86	638.05	634.90	640.14
6	639.26	642.11	641.59	642.54	642.98	643.14	642.55	644.60	643.03	637.87	635.10	640.14
7	639.38	642.09	641.63	642.89	642.89	643.17	642.59	644.58	643.18	637.64	635.43	640.18
8	639.45	642.11	641.70	643.05	642.64	643.35	642.92	644.60	643.33	637.43	635.78	640.31
9	639.15	642.04	641.62	643.06	642.36	643.66	643.15	644.49	643.52	637.17	636.27	640.39
10	639.14	642.15	642.02	643.01	642.82	643.70	643.18	644.53	643.81	636.94	636.73	640.36
11	639.21	642.25	642.21	642.72	643.02	643.79	643.19	644.45	643.82	636.86	637.08	640.27
12	639.25	642.16	642.17	642.89	643.12	643.74	643.20	644.43	643.86	636.83	637.27	640.31
13	639.16	641.97	641.97	642.81	643.27	643.86	643.21	644.15	643.73	636.80	637.41	640.62
14	639.21	641.82	642.08	642.78	643.44	643.91	643.33	643.77	643.60	636.74	637.56	640.80
15	639.19	641.77	642.26	642.86	643.43	643.83	643.44	643.56	643.25	636.71	637.69	640.95
16	638.96	641.89	642.56	642.79	643.57	643.91	643.50	643.52	642.95	636.59	637.81	640.95
17	638.97	641.93	642.56	642.61	643.89	644.08	643.50	643.48	642.62	636.45	637.96	640.74
18	639.16	641.91	642.68	642.48	643.91	644.04	643.54	643.48	642.26	636.03	638.18	640.55
19	639.41	641.86	642.72	642.61	643.82	643.73	643.58	643.39	642.02	635.55	638.52	640.55
20	639.84	641.70	642.67	642.68	643.75	643.65	643.63	643.18	641.86	635.09	638.60	640.57
21	640.13	641.63	642.55	642.81	643.48	643.75	643.85	642.89	641.64	634.58	638.74	640.67
22	640.37	641.65	642.54	642.96	643.02	643.87	643.93	642.73	641.39	633.96	638.98	640.77
23	640.35	641.84	642.73	642.86	642.65	643.94	643.91	642.77	641.13	633.65	639.14	640.85
24	640.34	642.13	642.88	642.69	642.85	644.05	643.81	642.82	640.88	633.28	639.35	640.75
25	640.42	642.23	643.00	642.59	643.02	644.14	643.76	642.99	640.45	633.24	639.42	640.70
26	640.60	642.23	643.04	642.64	643.42	644.09	643.73	643.07	640.08	633.19	639.50	640.58
27	640.95	641.96	642.94	642.68	643.53	643.81	643.75	643.03	639.83	633.40	639.62	640.28
28	641.14	641.75	642.85	642.38	643.50	643.72	643.77	642.85	639.58	633.54	639.67	639.95
29	641.28		642.80	642.76	643.21	643.63	643.73	642.74	639.47	633.67	639.91	639.86
30	641.25		642.77	643.08	642.99	643.51	643.82	642.73	639.21	633.67	640.14	639.91
31	641.37		642.71		643.14		643.83	642.72		633.75		639.91
Mean	639.66	641.94	642.30	642.74	643.18	643.73	643.39	643.67	642.14	635.92	637.45	640.43
Max	641.37	642.25	643.04	643.08	643.91	644.14	643.93	644.75	643.86	638.98	640.14	640.95
Min	638.11	641.63	641.56	642.38	642.36	643.14	642.52	642.72	639.21	633.19	633.71	639.86

Calendar Year Summary

Annual Mean 641.37 Daily Max 644.75 Daily Min 633.19

Maximum Elevation			Minimum Elevation		
Date	Time	Elev	Date	Time	Elev
Aug. 4	01:00	644.94	Oct. 26	20:00	633.00

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.

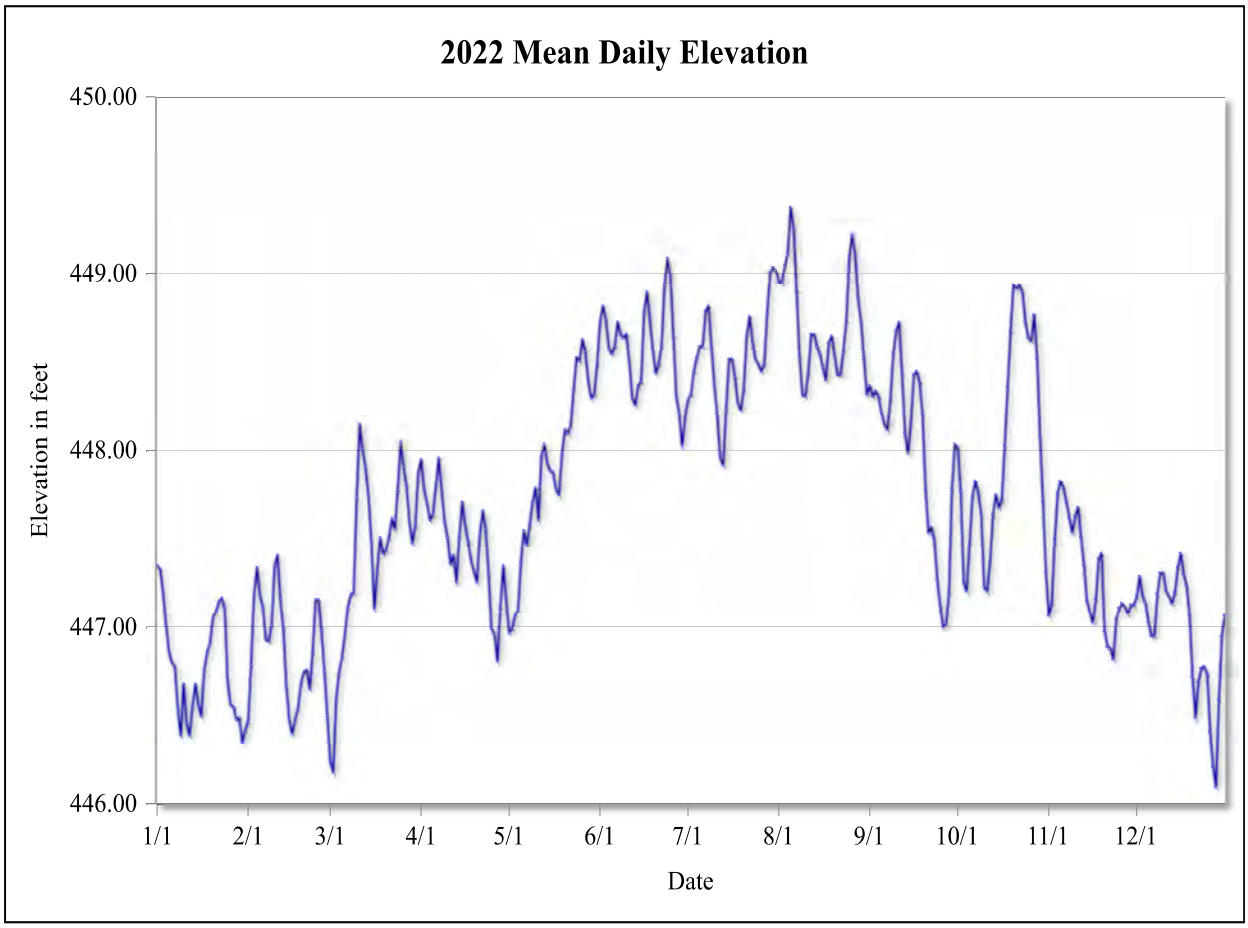
Drainage Area—180,800 mi².

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 2022

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	447.35	446.47	446.24	447.95	446.97	448.73	448.29	448.96	448.37	448.02	447.07	447.18
2	447.33	446.79	446.18	447.78	446.99	448.82	448.32	448.95	448.31	447.77	447.14	447.29
3	447.20	447.19	446.59	447.70	447.07	448.74	448.45	449.05	448.34	447.26	447.50	447.18
4	447.01	447.34	446.75	447.61	447.10	448.58	448.53	449.12	448.31	447.21	447.76	447.14
5	446.86	447.19	446.83	447.64	447.37	448.55	448.59	449.38	448.21	447.47	447.83	447.03
6	446.80	447.12	446.96	447.80	447.55	448.59	448.59	449.26	448.15	447.74	447.79	446.95
7	446.78	446.93	447.12	447.96	447.47	448.73	448.79	448.91	448.12	447.83	447.71	446.95
8	446.54	446.92	447.19	447.77	447.58	448.66	448.82	448.54	448.29	447.76	447.62	447.19
9	446.39	447.01	447.20	447.60	447.71	448.64	448.59	448.32	448.55	447.64	447.54	447.31
10	446.68	447.35	447.74	447.51	447.79	448.66	448.37	448.31	448.68	447.23	447.63	447.31
11	446.46	447.41	448.15	447.36	447.61	448.50	448.19	448.44	448.73	447.21	447.68	447.21
12	446.39	447.16	448.01	447.41	447.97	448.30	447.96	448.66	448.43	447.37	447.51	447.18
13	446.55	446.99	447.91	447.26	448.04	448.26	447.92	448.66	448.10	447.64	447.35	447.14
14	446.68	446.67	447.75	447.52	447.93	448.37	448.24	448.59	447.99	447.75	447.15	447.20
15	446.56	446.48	447.49	447.71	447.89	448.39	448.52	448.55	448.16	447.68	447.09	447.34
16	446.50	446.40	447.11	447.58	447.88	448.78	448.52	448.47	448.43	447.72	447.03	447.42
17	446.76	446.48	447.32	447.49	447.78	448.90	448.42	448.40	448.45	448.03	447.16	447.30
18	446.86	446.54	447.51	447.38	447.75	448.74	448.27	448.61	448.39	448.36	447.39	447.24
19	446.91	446.68	447.42	447.32	447.98	448.57	448.23	448.65	448.20	448.68	447.42	447.07
20	447.06	446.75	447.44	447.26	448.12	448.44	448.35	448.54	447.78	448.94	446.98	446.72
21	447.09	446.76	447.51	447.53	448.10	448.49	448.65	448.43	447.54	448.92	446.89	446.49
22	447.15	446.65	447.62	447.66	448.14	448.60	448.76	448.43	447.57	448.94	446.88	446.69
23	447.17	446.86	447.56	447.56	448.35	448.94	448.62	448.57	447.50	448.90	446.82	446.77
24	447.11	447.16	447.78	447.30	448.53	449.09	448.52	448.74	447.27	448.73	447.05	446.78
25	446.69	447.16	448.05	446.99	448.51	448.99	448.49	449.10	447.13	448.64	447.11	446.74
26	446.56	446.98	447.91	446.96	448.63	448.65	448.45	449.22	447.00	448.62	447.14	446.41
27	446.55	446.75	447.80	446.81	448.56	448.31	448.49	449.11	447.02	448.77	447.12	446.21
28	446.48	446.50	447.60	447.12	448.39	448.21	448.78	448.86	447.20	448.52	447.08	446.10
29	446.49		447.48	447.35	448.30	448.03	449.01	448.73	447.78	448.08	447.13	446.59
30	446.35		447.58	447.16	448.32	448.19	449.04	448.52	448.04	447.71	447.13	446.95
31	446.42		447.88		448.49		449.02	448.32		447.31		447.07
Mean	446.77	446.88	447.41	447.47	447.90	448.58	448.51	448.72	448.00	448.01	447.29	446.97
Max	447.35	447.41	448.15	447.96	448.63	449.09	449.04	449.38	448.73	448.94	447.83	447.42
Min	446.35	446.40	446.18	446.81	446.97	448.03	447.92	448.31	447.00	447.21	446.82	446.10

Calendar Year Summary

Annual Mean 447.71 Daily Max 449.38 Daily Min 446.10

Maximum Elevation			Minimum Elevation		
Date	Time	Elev	Date	Time	Elev
Aug. 5	12:00	449.53	Dec. 28	07:00	445.98

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.

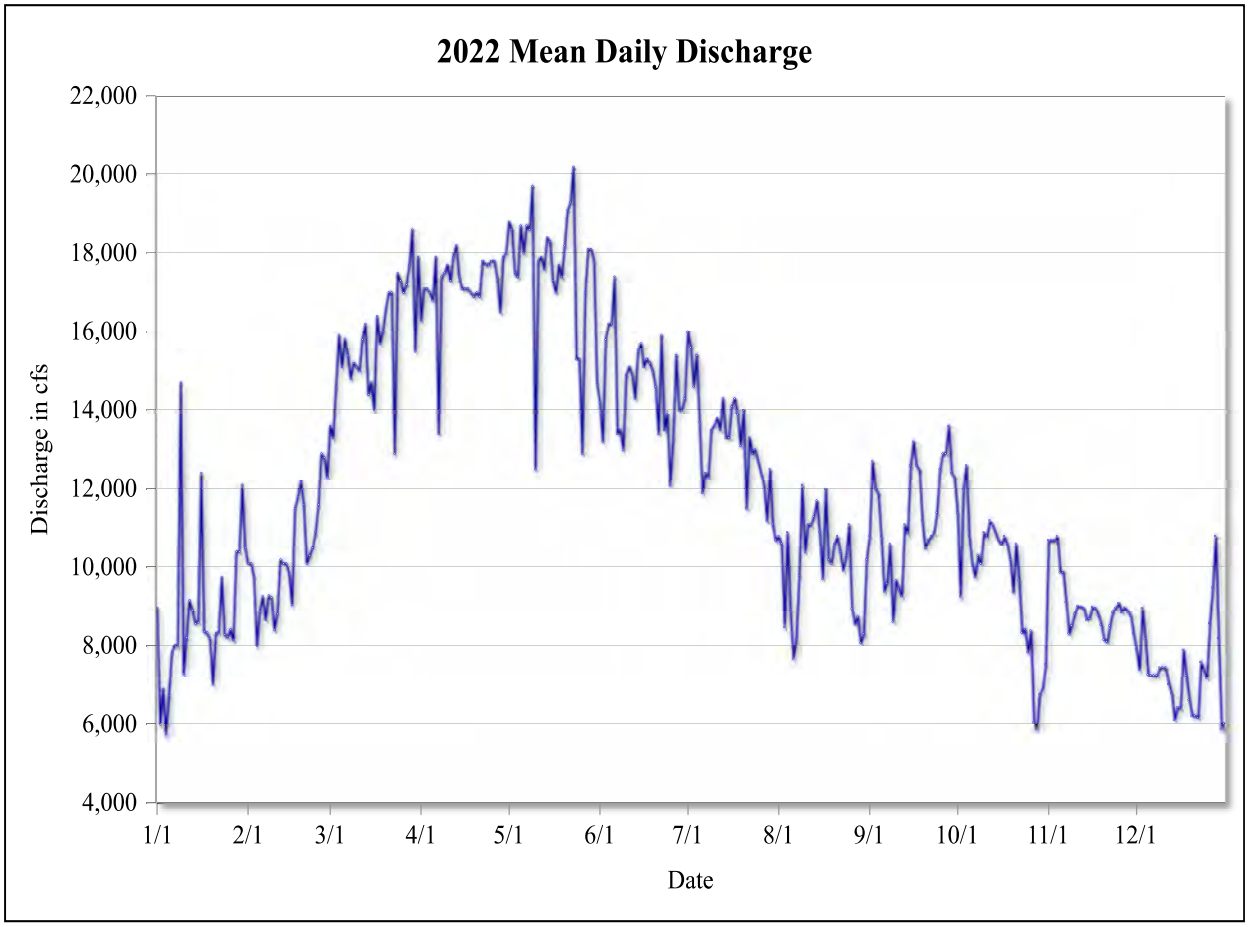
Drainage Area—171,300 mi².

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, 1,956 cfs, Aug. 16, 2022 at 17:00.

Remarks—None.



Colorado River Below Big Bend

Mean daily discharge, in cubic-feet per second, Calendar Year 2022

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	8,970	10,100	13,600	16,300	18,800	14,200	16,000	10,800	10,800	11,400	10,700	7,910
2	6,000	10,100	13,300	17,100	18,600	13,200	15,600	10,600	12,700	9,260	10,700	7,400
3	6,900	9,760	14,600	17,100	17,500	15,800	14,600	8,480	12,000	12,000	10,700	8,960
4	5,760	8,000	15,900	17,000	17,400	16,200	15,400	10,900	11,900	12,600	10,800	8,180
5	6,730	8,880	15,100	16,800	18,700	16,200	13,700	8,920	10,800	10,800	9,870	7,270
6	7,840	9,260	15,800	17,900	18,000	17,400	11,900	7,680	9,390	10,100	9,880	7,250
7	8,020	8,660	15,400	13,400	18,700	13,400	12,400	8,180	9,590	9,750	9,120	7,240
8	8,000	9,280	14,800	17,400	18,600	13,500	12,300	9,790	10,600	10,300	8,320	7,250
9	14,700	9,230	15,200	17,500	19,700	13,000	13,500	12,100	8,620	10,100	8,520	7,450
10	7,290	8,410	15,100	17,700	12,500	14,900	13,600	10,400	9,660	10,900	8,820	7,450
11	8,210	8,820	15,000	17,300	17,800	15,100	13,800	11,100	9,450	10,800	9,020	7,450
12	9,160	10,200	15,800	17,900	17,900	14,900	13,500	11,100	9,270	11,200	8,990	7,030
13	8,910	10,100	16,200	18,200	17,600	14,300	14,300	11,300	11,100	11,100	8,960	6,790
14	8,570	10,100	14,400	17,400	18,400	15,500	13,300	11,700	10,900	10,900	8,670	6,120
15	8,600	9,830	14,700	17,100	18,300	15,700	13,300	10,900	12,600	10,700	8,700	6,430
16	12,400	9,050	14,000	17,100	17,300	15,100	14,100	9,710	13,200	10,600	8,990	6,420
17	8,370	11,500	16,400	17,100	17,000	15,300	14,300	12,000	12,600	10,800	8,960	7,900
18	8,340	11,800	15,700	17,000	17,700	15,200	13,900	10,200	12,500	10,600	8,780	7,240
19	8,190	12,200	16,000	16,900	17,400	15,000	13,100	10,100	11,200	10,200	8,540	6,630
20	7,020	11,600	16,600	17,000	18,200	14,600	14,000	10,600	10,500	9,370	8,160	6,220
21	8,330	10,100	17,000	16,900	19,100	13,400	11,500	10,800	10,700	10,600	8,110	6,220
22	8,350	10,300	17,000	17,800	19,300	15,900	13,300	10,400	10,800	9,680	8,520	6,170
23	9,740	10,500	12,900	17,700	20,200	13,500	12,900	9,920	10,900	8,340	8,870	7,590
24	8,290	10,900	17,500	17,700	15,300	13,900	13,000	10,300	11,400	8,430	8,970	7,380
25	8,230	11,600	17,300	17,800	15,300	12,100	12,700	11,100	12,500	7,840	9,090	7,190
26	8,420	12,900	17,000	17,800	12,900	13,300	12,400	8,950	12,900	8,390	8,860	8,580
27	8,150	12,800	17,200	17,400	17,000	15,400	12,100	8,550	12,900	6,050	8,970	9,490
28	10,400	12,300	17,700	16,500	18,100	14,000	11,200	8,740	13,600	5,880	8,880	10,800
29	10,400		18,600	17,900	18,100	14,000	12,500	8,080	12,400	6,770	8,770	8,200
30	12,100		15,500	18,000	17,800	14,300	11,100	8,310	12,300	6,880	8,320	5,890
31	10,500		17,900		14,700		10,700	10,200		7,530		6,020
Total	270,903	288,246	488,918	516,464	543,622	438,321	410,150	312,120	339,954	299,900	272,491	228,077
Mean	8,739	10,290	15,770	17,220	17,540	14,610	13,230	10,070	11,330	9,674	9,083	7,357
Max	14,700	12,900	18,600	18,200	20,200	17,400	16,000	12,100	13,600	12,600	10,800	10,800
Min	5,760	8,000	12,900	13,400	12,500	12,100	10,700	7,680	8,620	5,880	8,110	5,890
Ac-ft	537,328	571,729	969,755	1,024,392	1,078,258	869,397	813,521	619,081	674,289	594,843	540,478	452,384

Calendar Year Summary

Annual Total 4,409,166 Annual Mean 12,080 Daily Max 20,200 Daily Min 5,760 Annual Ac-ft 8,745,453

Maximum Discharge				Minimum Discharge			
Date	Time	Elev	Discharge	Date	Time	Elev	Discharge
Sep. 29	23:00	489.06	25,612	Aug. 16	17:00	478.43	1,956

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.

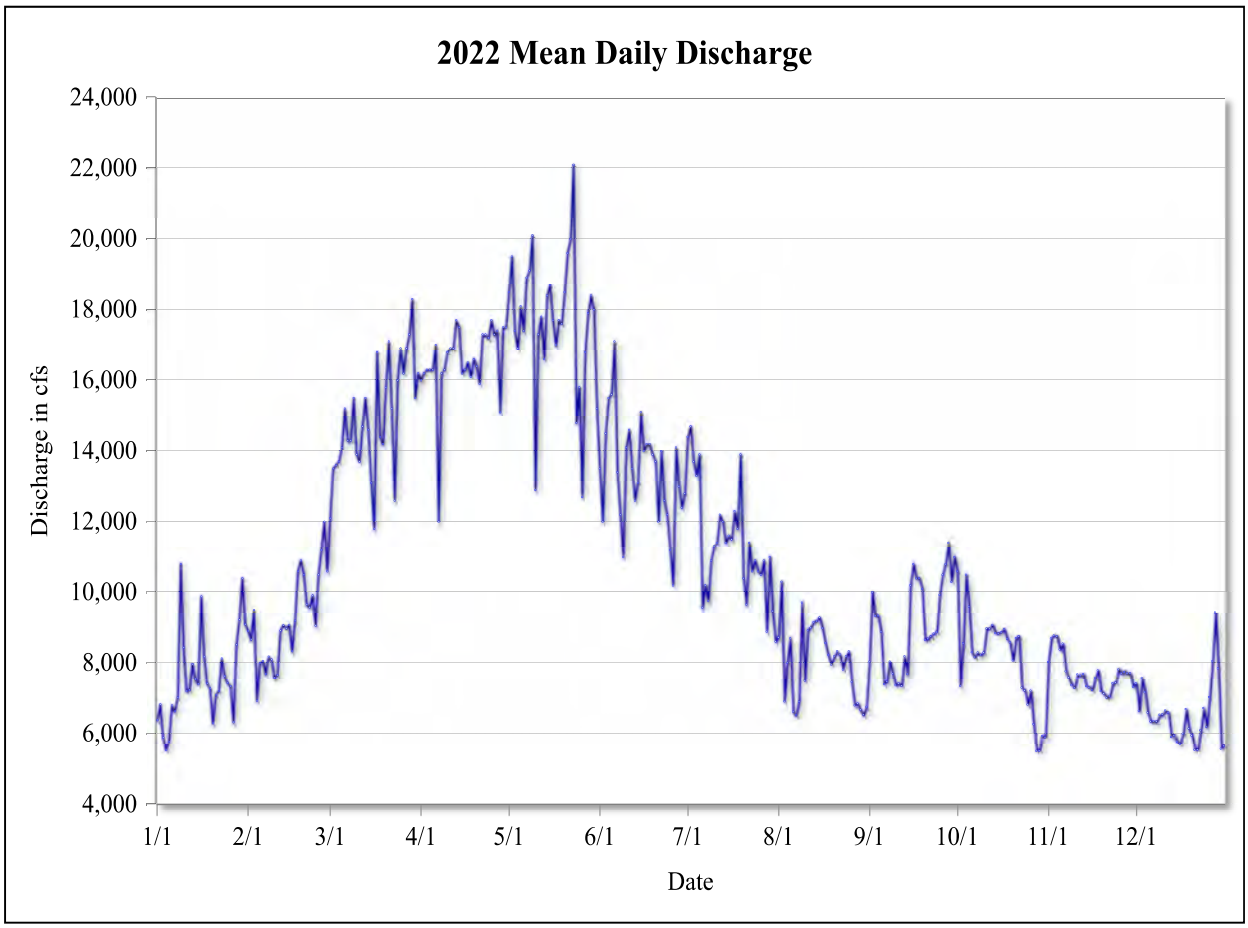
Drainage Area—171,700 mi².

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 2022

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	6,390	8,910	12,100	16,000	18,500	13,500	14,400	8,730	8,040	10,600	8,030	7,430
2	6,830	8,670	13,500	16,200	19,500	12,000	14,700	10,300	10,000	7,360	8,700	6,650
3	5,890	9,500	13,600	16,300	17,400	14,500	13,700	6,920	9,340	8,560	8,780	7,580
4	5,540	6,940	13,700	16,300	16,900	15,500	13,300	8,010	9,340	10,500	8,760	7,180
5	5,770	8,000	14,100	16,300	18,100	15,600	13,900	8,700	8,890	9,600	8,390	6,600
6	6,800	8,060	15,200	17,000	17,400	17,100	9,570	6,630	7,410	8,310	8,550	6,350
7	6,640	7,690	14,300	12,000	18,900	13,400	10,200	6,530	7,480	8,170	7,770	6,360
8	7,030	8,180	14,300	16,200	19,100	12,200	9,760	6,910	8,040	8,300	7,590	6,350
9	10,800	8,100	15,500	16,300	20,100	11,000	10,900	9,710	7,700	8,230	7,380	6,540
10	8,440	7,580	13,900	16,800	12,900	14,100	11,300	7,510	7,380	8,300	7,300	6,550
11	7,210	7,660	13,700	16,900	17,300	14,600	11,400	8,930	7,430	8,980	7,680	6,660
12	7,240	8,920	14,700	16,900	17,800	13,500	12,200	9,000	7,360	8,970	7,640	6,600
13	7,970	9,070	15,500	17,700	16,600	12,600	12,000	9,160	8,190	9,080	7,690	5,910
14	7,550	8,980	14,600	17,500	18,400	13,100	11,400	9,190	7,690	8,850	7,350	5,950
15	7,410	9,080	13,100	16,200	18,700	15,100	11,600	9,290	10,200	8,840	7,310	5,770
16	9,880	8,340	11,800	16,300	17,700	14,000	11,500	8,990	10,800	8,870	7,240	5,710
17	8,180	9,200	16,800	16,500	17,000	14,200	12,300	8,570	10,400	8,960	7,580	6,000
18	7,430	10,600	14,400	16,100	17,700	14,200	11,800	8,230	10,400	8,690	7,790	6,700
19	7,290	10,900	14,200	16,600	17,600	13,900	13,900	7,960	10,100	8,590	7,210	6,150
20	6,300	10,500	15,800	16,400	18,500	13,700	10,400	8,190	8,660	8,080	7,140	5,950
21	7,100	9,660	17,100	15,900	19,600	12,000	9,660	8,330	8,690	8,710	7,020	5,550
22	7,210	9,580	15,200	17,300	20,000	14,000	11,400	8,240	8,760	8,760	7,070	5,550
23	8,130	9,910	12,600	17,300	22,100	12,600	10,600	7,820	8,830	7,310	7,430	6,100
24	7,630	9,060	16,000	17,200	14,800	12,200	10,900	8,190	8,880	7,230	7,450	6,730
25	7,440	10,500	16,900	17,700	15,800	11,200	10,600	8,330	9,930	6,830	7,820	6,200
26	7,350	11,200	16,200	17,300	12,700	10,200	10,500	7,470	10,500	7,220	7,710	7,040
27	6,330	12,000	16,900	17,400	16,800	14,100	10,900	6,810	10,800	6,270	7,750	8,050
28	8,520	10,600	17,300	15,100	17,900	13,000	8,890	6,860	11,400	5,520	7,710	9,430
29	9,230		18,300	17,500	18,400	12,400	11,000	6,680	10,300	5,520	7,710	7,850
30	10,400		15,500	17,500	18,000	12,800	9,470	6,540	11,000	5,940	7,330	5,580
31	9,100		16,200		15,200		8,610	6,760		5,900		5,660
Total	234,931	257,477	463,010	496,733	547,436	402,377	352,962	249,479	274,005	251,110	230,886	202,706
Mean	7,578	9,196	14,940	16,560	17,660	13,410	11,390	8,048	9,133	8,100	7,696	6,539
Max	10,800	12,000	18,300	17,700	22,100	17,100	14,700	10,300	11,400	10,600	8,780	9,430
Min	5,540	6,940	11,800	12,000	12,700	10,200	8,610	6,530	7,360	5,520	7,020	5,550
Ac-ft	465,978	510,697	918,366	985,255	1,085,824	798,102	700,090	494,835	543,481	498,070	457,955	402,061

Calendar Year Summary

Annual Total 3,963,110 Annual Mean 10,860 Daily Max 22,100 Daily Min 5,520 Annual Ac-ft 7,860,714

Maximum Discharge				Minimum Discharge			
Date	Time	Elev	Discharge	Date	Time	Elev	Discharge
May 23	14:00	461.38	24,204	Dec. 17	00:00	451.77	3,945

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.

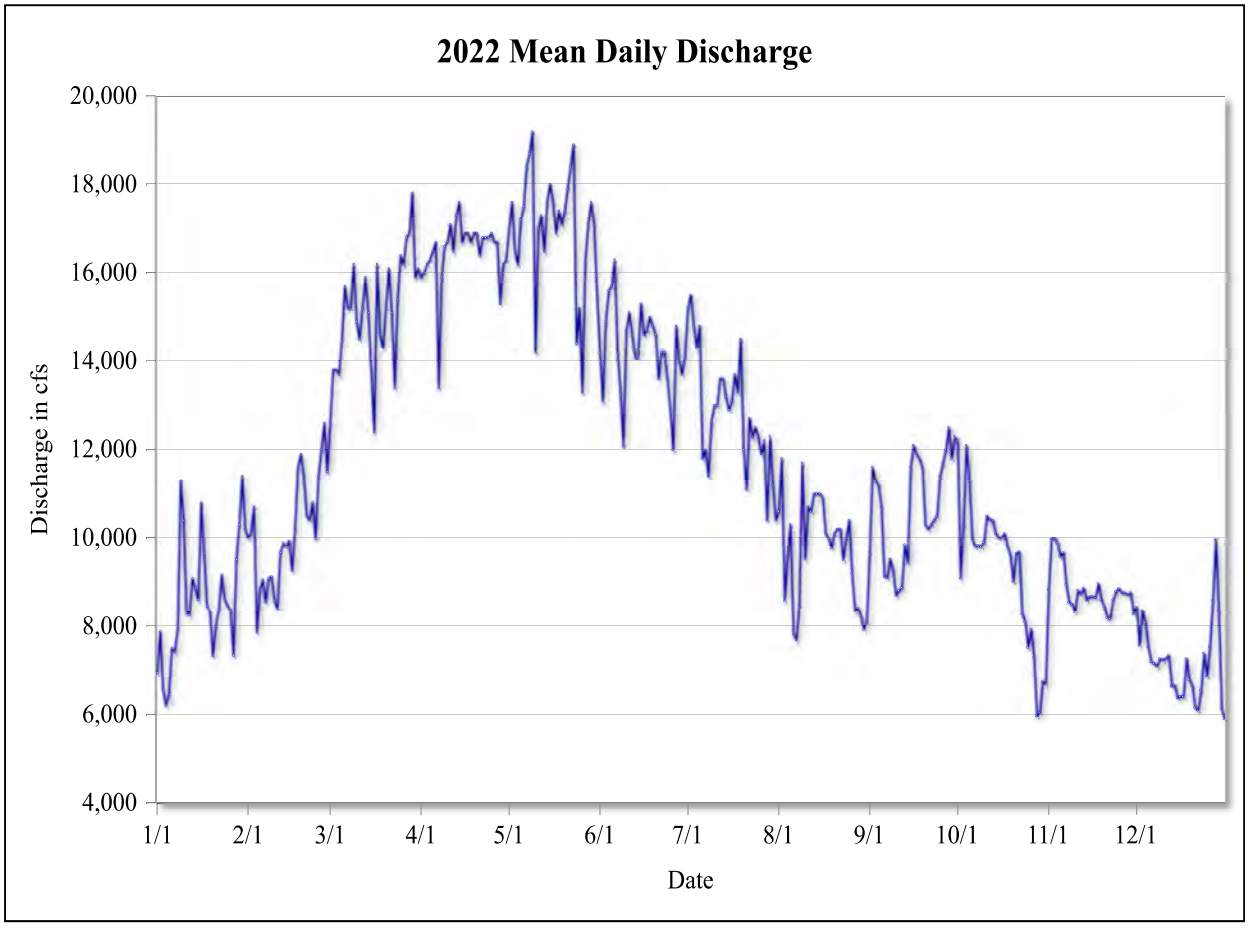
Drainage Area—174,300 mi².

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—The discharge record was estimated from Aug. 1, 2022 at 7:00 to Aug. 1, 2022 at 13:00, Aug. 14, 2022 at 21:00 to Aug. 15, 2022 at 08:00, Aug. 25, 2022 at 00:00 to Aug. 25, 2022 at 06:00, and Sep. 12, 2022 at 15:00 to Sep. 12, 2022 at 22:00, due to elevated sediment in the stream from rain events.



Colorado River at River Section 41

Mean daily discharge, in cubic-feet per second, Calendar Year 2022

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	6,950	10,000	12,600	15,900	17,000	14,200	15,200	**10,600**	9,680	12,200	8,830	8,430
2	7,880	10,100	13,800	16,000	17,600	13,100	15,500	11,800	11,600	9,090	9,980	7,570
3	6,550	10,700	13,800	16,200	16,500	14,900	14,800	8,580	11,300	10,300	9,990	8,350
4	6,220	7,860	13,700	16,300	16,200	15,600	14,300	9,590	11,200	12,100	9,900	8,080
5	6,460	8,820	14,500	16,500	17,200	15,700	14,800	10,300	10,700	11,300	9,580	7,530
6	7,500	9,050	15,700	16,700	17,500	16,300	11,800	7,820	9,130	9,980	9,670	7,200
7	7,420	8,550	15,200	13,400	18,400	14,200	12,000	7,690	9,100	9,810	8,950	7,160
8	7,940	9,080	15,200	15,900	18,700	13,300	11,400	8,480	9,520	9,830	8,540	7,100
9	11,300	9,120	16,200	16,600	19,200	12,100	12,600	11,700	9,250	9,810	8,500	7,270
10	10,400	8,590	14,900	16,700	14,200	14,700	13,000	9,530	8,700	9,900	8,330	7,240
11	8,300	8,390	14,500	17,100	17,000	15,100	13,000	10,700	8,810	10,500	8,820	7,270
12	8,260	9,670	15,200	16,500	17,300	14,600	13,600	10,600	**8,880**	10,400	8,730	7,340
13	9,080	9,880	15,900	17,300	16,500	14,100	13,600	11,000	9,850	10,400	8,870	6,640
14	8,870	9,810	15,100	17,600	17,600	14,100	13,200	**11,000**	9,440	10,100	8,590	6,660
15	8,600	9,930	13,800	16,700	18,000	15,300	12,900	**11,000**	11,600	10,000	8,670	6,380
16	10,800	9,260	12,400	16,900	17,600	14,600	13,100	10,900	12,100	10,000	8,670	6,410
17	9,650	10,200	16,200	16,900	16,900	14,700	13,700	10,100	11,900	10,100	8,650	6,410
18	8,450	11,600	14,600	16,700	17,400	15,000	13,300	9,990	11,800	9,820	8,970	7,270
19	8,320	11,900	14,300	16,900	17,100	14,800	14,500	9,780	11,600	9,610	8,600	6,790
20	7,330	11,400	15,200	16,900	17,400	14,600	12,000	10,100	10,300	9,020	8,440	6,650
21	8,000	10,500	16,100	16,400	17,900	13,600	11,100	10,200	10,200	9,650	8,200	6,160
22	8,380	10,400	15,100	16,800	18,400	14,200	12,700	10,200	10,300	9,690	8,170	6,100
23	9,160	10,800	13,400	16,800	18,900	14,200	12,300	9,510	10,400	8,280	8,600	6,550
24	8,620	9,980	15,400	16,800	14,400	13,600	12,500	9,990	10,500	8,100	8,790	7,390
25	8,460	11,400	16,400	16,900	15,200	12,900	12,300	10,400	11,400	7,520	8,860	6,870
26	8,360	12,000	16,200	16,700	13,300	12,000	11,900	**9,190**	11,700	7,930	8,760	7,540
27	7,340	12,600	16,800	16,700	16,300	14,800	12,200	8,340	12,000	7,290	8,760	8,580
28	9,510	11,500	16,900	15,300	17,100	14,000	10,400	8,410	12,500	5,960	8,710	9,950
29	10,300		17,800	16,200	17,600	13,700	12,300	8,230	11,800	6,050	8,760	8,350
30	11,400		15,900	16,300	17,100	14,100	11,200	7,930	12,300	6,750	8,290	6,140
31	10,200		16,100		15,500		10,400	8,120		6,690		5,910
Total	265,814	282,973	468,526	494,551	526,844	427,981	397,694	301,614	319,406	288,236	265,167	223,281
Mean	8,575	10,110	15,110	16,490	16,990	14,270	12,830	9,729	10,650	9,298	8,839	7,203
Max	11,400	12,600	17,800	17,600	19,200	16,300	15,500	11,800	12,500	12,200	9,990	9,950
Min	6,220	7,860	12,400	13,400	13,300	12,000	10,400	7,690	8,700	5,960	8,170	5,910
Ac-ft	527,234	561,269	929,307	980,928	1,044,980	848,888	788,815	598,243	633,533	571,708	525,951	442,871

Calendar Year Summary

Annual Total 4,262,087 Annual Mean 11,680 Daily Max 19,200 Daily Min 5,910 Annual Ac-ft 8,453,727

Maximum Discharge				Minimum Discharge			
Date	Time	Elev	Discharge	Date	Time	Elev	Discharge
May 22	11:00	454.47	20,820	Jan. 5	01:00	448.50	4,259

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

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.

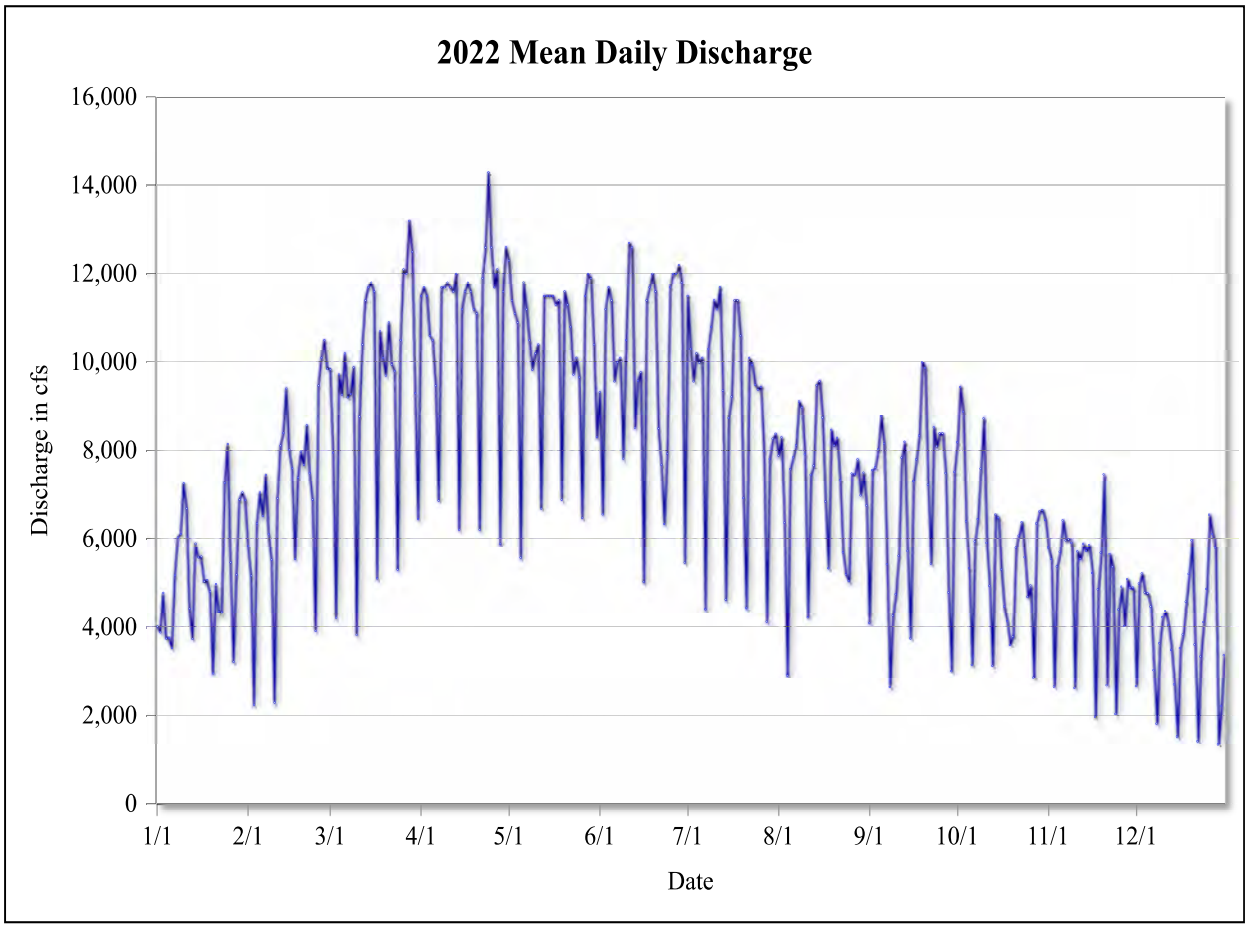
Drainage Area—181,000 mi².

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, Jun. 20, 2018 at 07:00.

Remarks—None.



Colorado River at Parker Gage

Mean daily discharge, in cubic-feet per second, Calendar Year 2022

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	4,020	5,840	9,840	11,500	12,300	9,320	11,500	7,890	4,100	8,190	5,810	2,670
2	3,890	5,170	7,950	11,700	11,400	6,560	10,300	8,300	7,560	9,440	5,550	4,990
3	4,780	2,250	4,220	11,500	11,100	11,200	9,570	6,370	7,620	8,880	2,660	5,220
4	3,750	6,350	9,720	10,600	10,900	11,700	10,200	2,910	8,030	6,400	5,380	4,790
5	3,760	7,050	9,270	10,500	5,580	11,400	9,990	7,580	8,780	5,340	5,710	4,770
6	3,530	6,520	10,200	9,470	11,800	9,570	10,100	7,850	8,160	3,150	6,420	4,470
7	5,180	7,450	9,210	6,870	11,200	10,000	4,410	8,120	5,430	5,940	5,970	3,030
8	6,030	6,110	9,280	11,700	10,500	10,100	10,300	9,110	2,650	6,450	5,990	1,820
9	6,110	5,530	9,880	11,700	9,830	7,820	10,800	8,980	4,270	7,590	5,910	3,640
10	7,260	2,300	3,830	11,800	10,200	10,500	11,400	7,920	4,750	8,730	2,630	4,230
11	6,690	6,920	8,770	11,700	10,400	12,700	11,200	4,230	5,620	5,910	5,720	4,370
12	4,420	8,110	10,400	11,600	6,690	12,600	11,700	7,450	7,840	4,940	5,550	4,050
13	3,740	8,400	11,400	12,000	11,500	8,520	9,360	7,660	8,200	3,130	5,890	3,490
14	5,890	9,400	11,700	6,210	11,500	9,580	4,630	9,480	5,730	6,550	5,730	2,710
15	5,590	8,020	11,800	11,200	11,500	9,770	8,740	9,570	3,750	6,480	5,860	1,530
16	5,600	7,600	11,600	11,600	11,500	5,030	9,220	8,750	7,310	5,310	5,230	3,530
17	5,040	5,550	5,110	11,800	11,300	11,400	11,400	6,850	7,800	4,470	1,970	3,840
18	5,070	7,390	10,700	11,600	11,400	11,700	11,400	5,340	8,340	4,140	4,860	4,580
19	4,810	7,980	10,100	11,200	6,890	12,000	10,600	8,470	10,000	3,600	5,690	5,210
20	2,960	7,680	9,700	11,100	11,600	11,600	6,930	8,120	9,870	3,790	7,460	5,970
21	4,980	8,570	10,900	6,210	11,300	8,500	4,440	8,290	7,230	5,810	2,690	3,610
22	4,350	7,490	9,950	11,900	10,800	7,680	10,100	7,330	5,440	6,070	5,660	1,420
23	4,340	6,890	9,800	12,600	9,720	6,340	9,940	5,700	8,530	6,380	5,370	3,340
24	7,270	3,920	5,310	14,300	10,100	7,930	9,490	5,200	8,100	5,590	2,040	4,120
25	8,150	9,470	10,500	12,600	9,660	11,700	9,380	5,050	8,390	4,690	4,400	4,870
26	5,470	10,100	12,100	11,700	6,480	12,000	9,440	7,480	8,390	4,950	4,920	6,550
27	3,220	10,500	12,000	12,100	11,500	12,000	7,990	7,470	7,490	2,860	4,030	6,110
28	5,190	9,850	13,200	5,890	12,000	12,200	4,130	7,800	4,790	6,350	5,090	5,810
29	6,890		12,500	11,600	11,900	11,800	7,810	6,990	3,010	6,620	4,900	1,350
30	7,050		9,300	12,600	10,400	5,470	8,270	7,500	7,520	6,650	4,900	2,220
31	6,880		6,450		8,310		8,380	6,760		6,430		3,370
Total	161,890	198,372	296,658	328,602	321,299	298,806	282,932	226,506	204,740	180,849	149,980	121,703
Mean	5,222	7,085	9,570	10,950	10,360	9,960	9,127	7,307	6,825	5,834	4,999	3,926
Max	8,150	10,500	13,200	14,300	12,300	12,700	11,700	9,570	10,000	9,440	7,460	6,550
Min	2,960	2,250	3,830	5,890	5,580	5,030	4,130	2,910	2,650	2,860	1,970	1,350
Ac-ft	321,104	393,465	588,413	651,773	637,287	592,673	561,187	449,268	406,096	358,709	297,481	241,394

Calendar Year Summary

Annual Total 2,772,338 Annual Mean 7,595 Daily Max 14,300 Daily Min 1,350 Annual Ac-ft 5,498,852

Maximum Discharge				Minimum Discharge			
Date	Time	Elev	Discharge	Date	Time	Elev	Discharge
Oct. 2	22:00	345.86	19,658	Aug. 31	12:00	339.26	368

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.

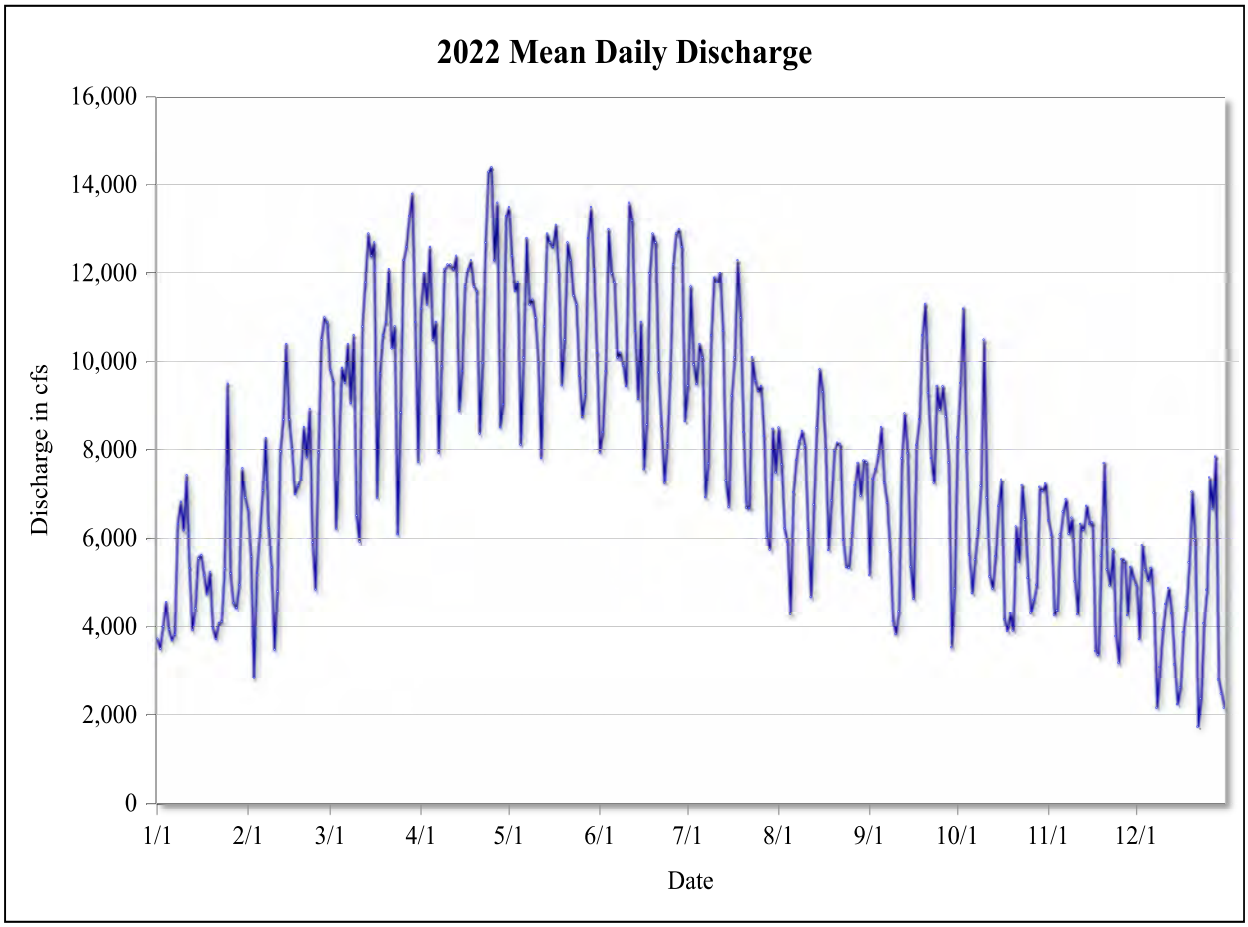
Drainage Area—181,600 mi².

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 2022

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	3,730	6,670	9,810	11,200	13,500	7,950	9,460	8,510	5,170	8,290	6,410	4,950
2	3,510	5,590	9,580	12,000	12,400	8,410	11,700	7,680	7,350	9,520	6,080	3,730
3	4,010	2,850	6,230	11,300	11,600	9,790	9,940	6,230	7,570	11,200	4,280	5,850
4	4,560	5,220	8,070	12,600	11,800	13,000	9,500	5,920	7,880	7,970	4,370	5,290
5	3,940	6,120	9,860	10,500	8,130	12,000	10,400	4,300	8,520	5,640	6,090	5,040
6	3,700	7,090	9,530	10,900	10,100	11,800	10,100	7,050	7,270	4,770	6,610	5,330
7	3,830	8,270	10,400	7,940	12,800	10,100	6,940	7,780	6,810	5,520	6,890	4,320
8	6,330	6,240	9,070	9,900	11,300	10,200	7,700	8,200	5,700	6,200	6,110	2,170
9	6,830	5,350	10,600	12,100	11,400	9,910	10,600	8,430	4,130	7,200	6,470	3,090
10	6,190	3,490	6,520	12,200	11,000	9,450	11,900	8,100	3,840	10,500	5,030	3,940
11	7,430	4,800	5,930	12,200	10,000	13,600	11,800	6,200	4,350	6,930	4,290	4,520
12	5,330	7,970	10,800	12,100	7,820	13,200	12,000	4,680	7,810	5,140	6,330	4,880
13	3,930	8,690	11,800	12,400	10,800	10,700	10,700	6,770	8,830	4,870	6,200	4,310
14	4,420	10,400	12,900	8,900	12,900	9,160	7,310	8,510	7,930	5,600	6,740	3,150
15	5,550	8,690	12,400	9,790	12,700	10,900	6,720	9,830	5,360	6,740	6,330	2,250
16	5,620	8,030	12,700	11,700	12,600	7,570	9,230	9,320	4,640	7,330	6,360	2,630
17	5,170	7,010	6,930	12,100	13,100	8,580	10,100	8,030	8,120	4,170	3,450	3,880
18	4,740	7,200	9,740	12,300	12,000	12,000	12,300	5,740	8,700	3,910	3,370	4,440
19	5,230	7,370	10,600	11,700	9,470	12,900	11,000	6,860	10,600	4,310	5,610	5,460
20	3,970	8,520	10,900	11,600	10,500	12,700	8,410	7,990	11,300	3,920	7,710	7,060
21	3,730	7,840	12,100	8,380	12,700	9,760	6,700	8,170	9,300	6,270	5,300	5,950
22	4,080	8,930	10,300	9,970	12,300	8,540	6,690	8,130	7,820	5,470	4,940	1,740
23	4,120	5,910	10,800	12,700	11,500	7,270	10,100	5,970	7,270	7,210	5,750	2,380
24	5,320	4,850	6,100	14,300	11,300	8,150	9,570	5,360	9,450	6,430	3,790	4,080
25	9,500	7,940	8,850	14,400	9,680	9,720	9,340	5,340	8,920	5,110	3,190	4,840
26	5,210	10,500	12,300	12,300	8,750	12,200	9,450	6,120	9,440	4,320	5,530	7,380
27	4,540	11,000	12,600	13,600	9,260	12,900	8,320	7,210	8,760	4,610	5,480	6,680
28	4,430	10,900	13,300	8,520	12,800	13,000	6,020	7,710	7,720	4,950	4,270	7,850
29	4,950		13,800	9,040	13,500	12,600	5,750	6,970	3,540	7,170	5,350	2,810
30	7,590		10,900	13,300	12,100	8,660	8,480	7,760	4,870	7,080	5,100	2,490
31	6,930		7,740		10,200		7,500	7,720		7,250		2,170
Total	158,408	203,507	313,116	342,103	349,984	316,728	285,816	222,582	219,020	195,628	163,451	134,679
Mean	5,110	7,268	10,100	11,400	11,290	10,560	9,220	7,180	7,301	6,311	5,448	4,344
Max	9,500	11,000	13,800	14,400	13,500	13,600	12,300	9,830	11,300	11,200	7,710	7,850
Min	3,510	2,850	5,930	7,940	7,820	7,270	5,750	4,300	3,540	3,910	3,190	1,740
Ac-ft	314,199	403,650	621,056	678,550	694,184	628,220	566,908	441,484	434,420	388,022	324,200	267,131

Calendar Year Summary

Annual Total 2,905,021 Annual Mean 7,959 Daily Max 14,400 Daily Min 1,740 Annual Ac-ft 5,762,026

Maximum Discharge				Minimum Discharge			
Date	Time	Elev	Discharge	Date	Time	Elev	Discharge
Sep. 20	04:00	305.17	19,140	Feb. 4	01:00	296.71	1,241

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.

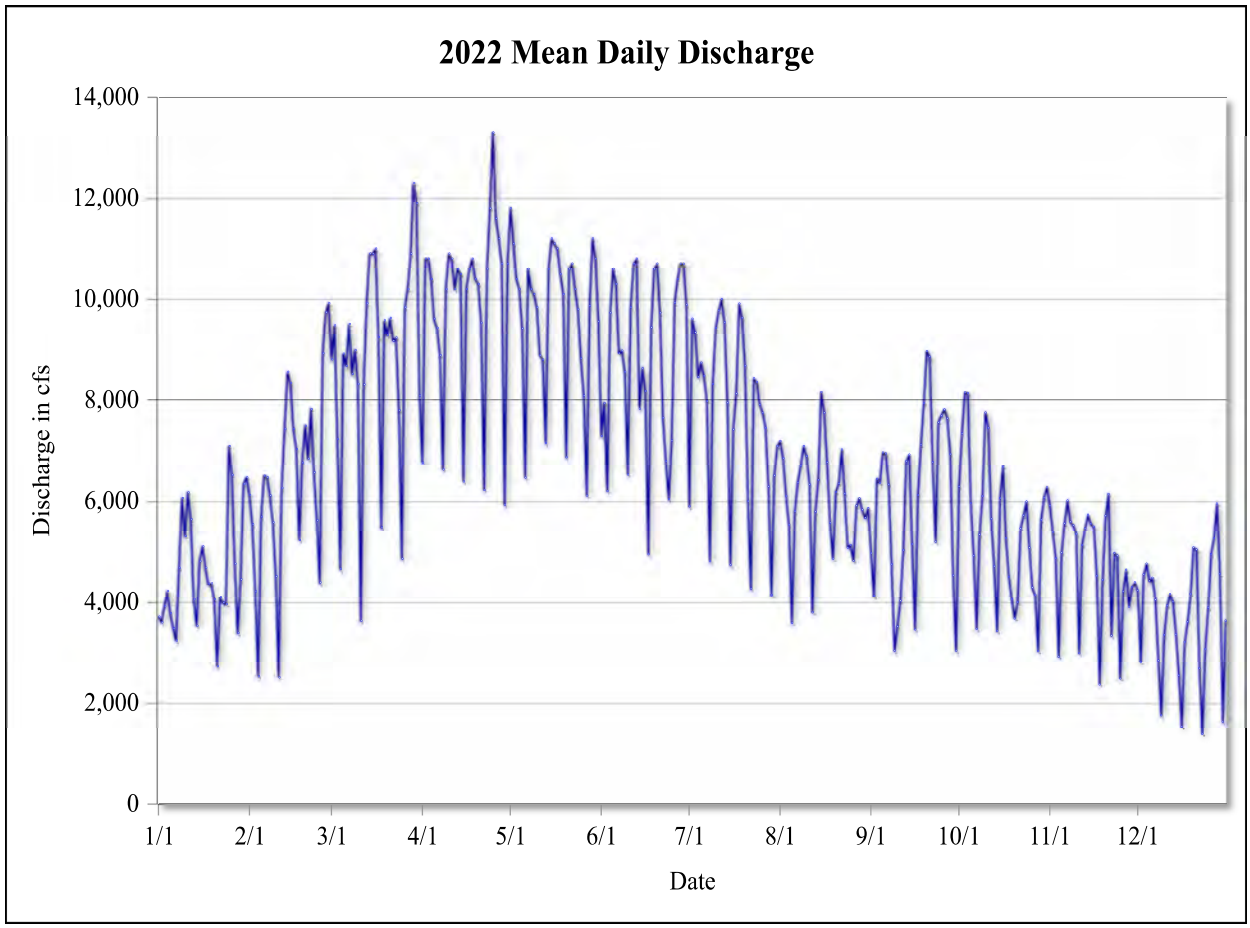
Drainage Area—184,300 mi².

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. 9, 2022 at 10:00 to Dec. 9, 2022 at 13:00, Dec. 16, 2022 at 09:00 to Dec. 16, 2022 at 16:00, and Dec. 23, 2022 at 13:00 to Dec. 23, 2022 at 21:00, 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 2022

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	3,710	6,120	8,810	6,760	11,800	7,290	5,900	7,190	4,970	6,290	5,910	4,230
2	3,600	5,540	9,480	10,800	11,100	7,940	9,610	6,850	4,120	7,340	5,390	2,810
3	3,920	4,210	7,230	10,800	10,400	6,200	9,340	6,100	6,440	8,150	4,870	4,550
4	4,220	2,530	4,660	10,400	10,200	9,730	8,460	5,530	6,360	8,140	2,920	4,760
5	3,780	5,690	8,920	9,610	9,420	10,600	8,740	3,590	6,960	5,960	4,980	4,420
6	3,480	6,500	8,680	9,430	6,470	10,300	8,480	5,800	6,940	4,920	5,560	4,480
7	3,240	6,470	9,510	8,890	10,600	8,930	7,980	6,370	6,330	3,470	6,010	4,050
8	4,680	6,110	8,520	6,630	10,200	8,980	4,810	6,700	4,750	5,340	5,590	2,840
9	6,060	5,580	8,990	10,200	10,100	8,560	8,320	7,090	3,040	6,100	5,520	1,760
10	5,310	4,510	8,320	10,900	9,840	6,530	9,430	6,890	3,520	7,750	5,350	3,350
11	6,170	2,510	3,630	10,800	8,890	9,840	9,780	6,330	4,030	7,450	2,990	3,930
12	5,640	6,260	8,310	10,200	8,800	10,700	10,000	3,800	5,030	5,650	5,130	4,160
13	4,060	7,430	9,920	10,600	7,150	10,800	9,540	5,790	6,790	4,710	5,460	4,010
14	3,530	8,560	10,900	10,500	10,600	7,830	7,950	6,420	6,920	3,430	5,730	3,360
15	4,810	8,340	10,900	6,390	11,200	8,630	4,740	8,160	5,150	6,060	5,550	2,550
16	5,100	7,430	11,000	10,200	11,100	8,180	7,420	7,750	3,460	6,680	5,490	1,530
17	4,680	7,030	9,250	10,600	11,000	4,950	8,130	6,770	6,120	5,270	4,520	3,210
18	4,360	5,230	5,480	10,800	10,500	9,440	9,910	5,570	7,120	4,500	2,370	3,610
19	4,370	6,760	9,580	10,400	10,100	10,600	9,630	4,860	7,940	4,060	4,440	4,160
20	4,060	7,490	9,290	10,300	6,870	10,700	8,680	6,180	8,970	3,680	5,710	5,080
21	2,730	6,840	9,630	9,530	10,600	9,730	6,000	6,350	8,860	4,000	6,140	5,040
22	4,100	7,820	9,180	6,220	10,700	7,650	4,270	7,020	6,770	5,460	3,340	2,690
23	3,990	6,570	9,240	10,600	10,200	6,790	8,430	6,150	5,200	5,720	4,970	1,390
24	3,960	5,620	7,800	11,800	9,800	6,040	8,360	5,080	7,560	5,990	4,920	3,070
25	7,090	4,390	4,860	13,300	8,830	7,200	7,910	5,130	7,690	5,080	2,490	3,890
26	6,520	8,930	9,840	11,600	8,090	9,930	7,750	4,820	7,810	4,290	4,210	4,950
27	4,760	9,740	10,200	11,200	6,110	10,400	7,450	5,910	7,640	4,140	4,640	5,270
28	3,390	9,920	10,900	10,700	9,870	10,700	6,290	6,050	6,930	3,030	3,910	5,950
29	4,450		12,300	5,930	11,200	10,700	4,140	5,830	4,530	5,630	4,300	4,560
30	6,340		11,900	10,700	10,800	9,890	6,510	5,670	3,040	6,070	4,390	1,630
31	6,470		8,090		9,560		7,090	5,860		6,270		3,630
Total	142,626	180,125	275,352	296,736	302,319	265,578	241,035	187,609	180,998	170,627	142,820	114,898
Mean	4,601	6,433	8,882	9,891	9,752	8,853	7,775	6,052	6,033	5,504	4,761	3,706
Max	7,090	9,920	12,300	13,300	11,800	10,800	10,000	8,160	8,970	8,150	6,140	5,950
Min	2,730	2,510	3,630	5,930	6,110	4,950	4,140	3,590	3,040	3,030	2,370	1,390
Ac-ft	282,895	357,273	546,152	588,567	599,641	526,766	478,086	372,116	359,005	338,434	283,279	227,897

Calendar Year Summary

Annual Total 2,500,723 Annual Mean 6,851 Daily Max 13,300 Daily Min 1,390 Annual Ac-ft 4,960,111

Maximum Discharge				Minimum Discharge			
Date	Time	Elev	Discharge	Date	Time	Elev	Discharge
Apr. 25	12:00	251.20	14,070	Dec. 23	19:00	244.29	1,322

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.

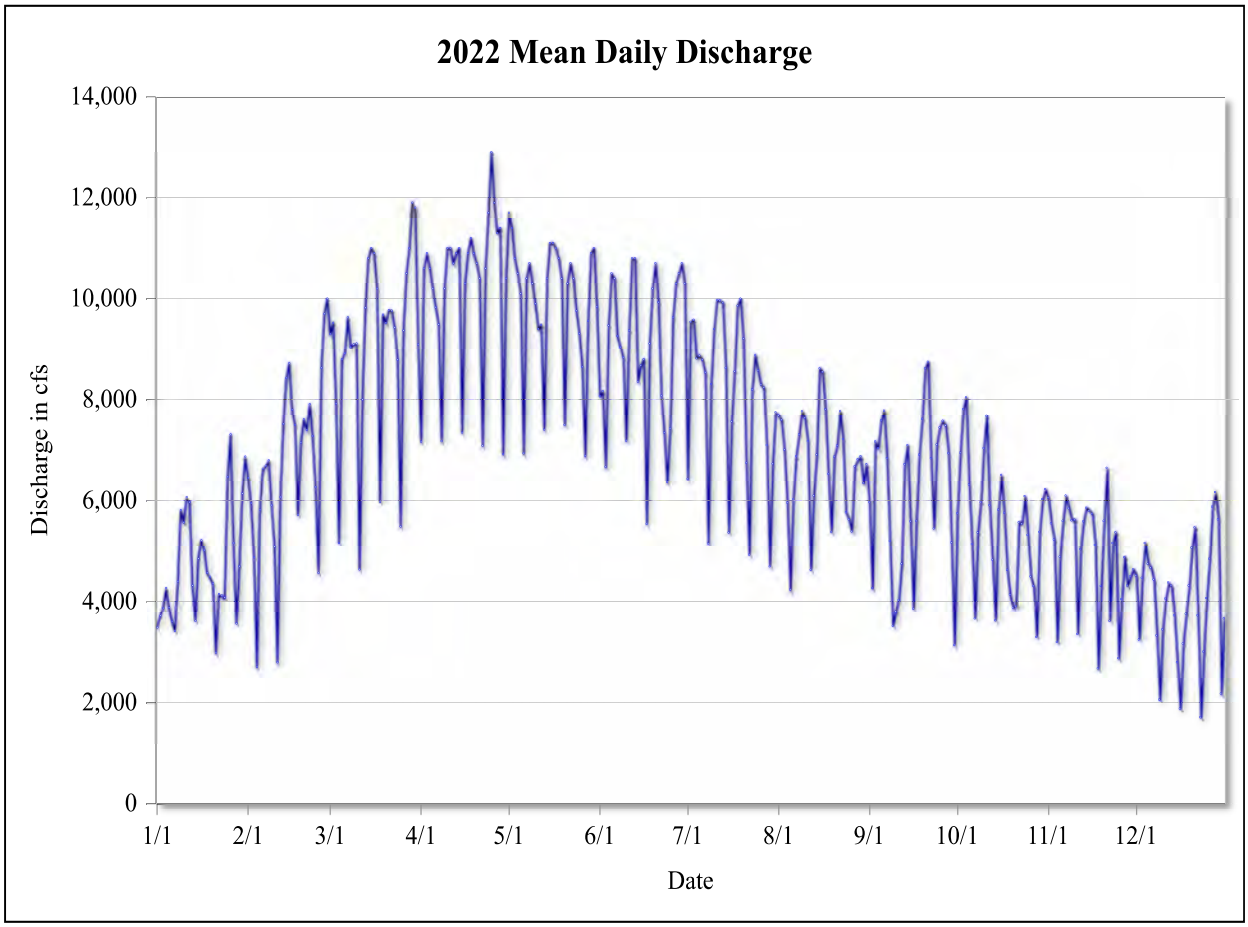
Drainage Area—184,400 mi².

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—Stage and discharge data were downgraded on Jun. 24, 2022 at 08:00 thru Sep. 14, 2022 at 09:00 and Dec. 7, 2022 at 08:00 thru Dec. 31, 2022 at 23:00, due to unexplained changes in the stage data.



Colorado River Below McIntyre Park

Mean daily discharge, in cubic-feet per second, Calendar Year 2022

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	3,490	6,450	9,300	7,170	11,700	8,070	6,430	7,690	5,970	5,750	6,060	4,520
2	3,720	5,950	9,520	10,600	11,400	8,170	9,540	7,600	4,270	6,950	5,550	3,250
3	3,870	4,880	7,920	10,900	10,800	6,670	9,580	7,010	7,170	7,810	5,230	4,470
4	4,270	2,710	5,160	10,600	10,500	9,470	8,820	5,960	7,040	8,050	3,200	5,160
5	3,880	5,820	8,800	10,200	10,100	10,500	8,870	4,240	7,590	6,320	4,890	4,750
6	3,610	6,630	8,920	9,830	6,940	10,400	8,790	6,030	7,780	5,140	5,600	4,670
7	3,420	6,690	9,630	9,490	10,400	9,260	8,540	6,880	6,840	3,670	6,100	4,440
8	4,400	6,800	9,040	7,180	10,700	9,040	5,150	7,310	5,200	5,370	5,850	3,330
9	5,810	5,910	9,090	10,200	10,300	8,840	8,310	7,770	3,520	5,970	5,610	2,060
10	5,570	5,090	9,110	11,000	9,900	7,190	9,400	7,640	3,800	7,040	5,620	3,450
11	6,070	2,800	4,640	11,000	9,400	9,370	9,970	7,180	4,030	7,680	3,360	4,060
12	5,970	6,070	8,000	10,700	9,480	10,800	9,960	4,630	4,750	5,910	5,040	4,380
13	4,320	7,520	9,820	10,900	7,410	10,800	9,920	6,100	6,720	4,830	5,590	4,320
14	3,620	8,430	10,800	11,000	10,400	8,360	8,630	6,910	7,100	3,630	5,860	3,730
15	4,850	8,720	11,000	7,350	11,100	8,680	5,370	8,620	5,590	5,820	5,800	2,800
16	5,210	7,800	10,900	10,300	11,100	8,800	7,570	8,550	3,860	6,510	5,740	1,880
17	5,020	7,500	10,200	10,900	11,000	5,540	8,560	7,810	5,600	5,760	5,120	3,170
18	4,570	5,720	5,980	11,200	10,800	9,110	9,860	6,530	6,910	4,630	2,680	3,760
19	4,490	7,150	9,680	10,900	10,400	10,200	10,000	5,380	7,620	4,140	4,310	4,320
20	4,360	7,610	9,520	10,700	7,500	10,700	9,210	6,870	8,620	3,880	5,600	5,070
21	2,990	7,400	9,770	10,400	10,300	9,930	6,750	7,090	8,750	3,910	6,650	5,470
22	4,150	7,910	9,760	7,090	10,700	8,080	4,930	7,770	6,840	5,570	3,620	3,730
23	4,120	7,280	9,430	10,600	10,400	7,350	8,200	7,220	5,450	5,540	5,160	1,710
24	4,080	6,270	8,790	11,700	9,760	6,370	8,880	5,770	7,110	6,090	5,370	3,010
25	6,470	4,570	5,490	12,900	9,310	7,430	8,580	5,630	7,450	5,320	2,880	4,070
26	7,310	8,630	9,370	11,900	8,650	9,630	8,300	5,390	7,580	4,500	4,050	4,850
27	5,160	9,700	10,500	11,300	6,890	10,300	8,240	6,680	7,490	4,310	4,880	5,880
28	3,570	10,000	11,000	11,400	9,560	10,500	7,100	6,820	6,940	3,300	4,320	6,170
29	4,700		11,900	6,920	10,900	10,700	4,700	6,880	5,170	5,380	4,500	5,630
30	6,140		11,800	10,400	11,000	10,300	6,730	6,350	3,140	6,030	4,640	2,180
31	6,870		9,090		9,840		7,750	6,720		6,230		3,670
Total	146,079	188,010	283,907	306,548	308,630	270,646	252,676	209,019	185,905	171,018	148,884	123,970
Mean	4,712	6,715	9,158	10,220	9,956	9,022	8,151	6,743	6,197	5,517	4,963	3,999
Max	7,310	10,000	11,900	12,900	11,700	10,800	10,000	8,620	8,750	8,050	6,650	6,170
Min	2,990	2,710	4,640	6,920	6,890	5,540	4,700	4,240	3,140	3,300	2,680	1,710
Ac-ft	289,744	372,912	563,121	608,029	612,158	536,819	501,175	414,584	368,738	339,209	295,307	245,890

Calendar Year Summary

Annual Total 2,595,292 Annual Mean 7,110 Daily Max 12,900 Daily Min 1,710 Annual Ac-ft 5,147,687

Maximum Discharge				Minimum Discharge			
Date	Time	Elev	Discharge	Date	Time	Elev	Discharge
Apr. 25	15:00	242.28	13,376	Dec. 23	20:00	235.06	1,502

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.

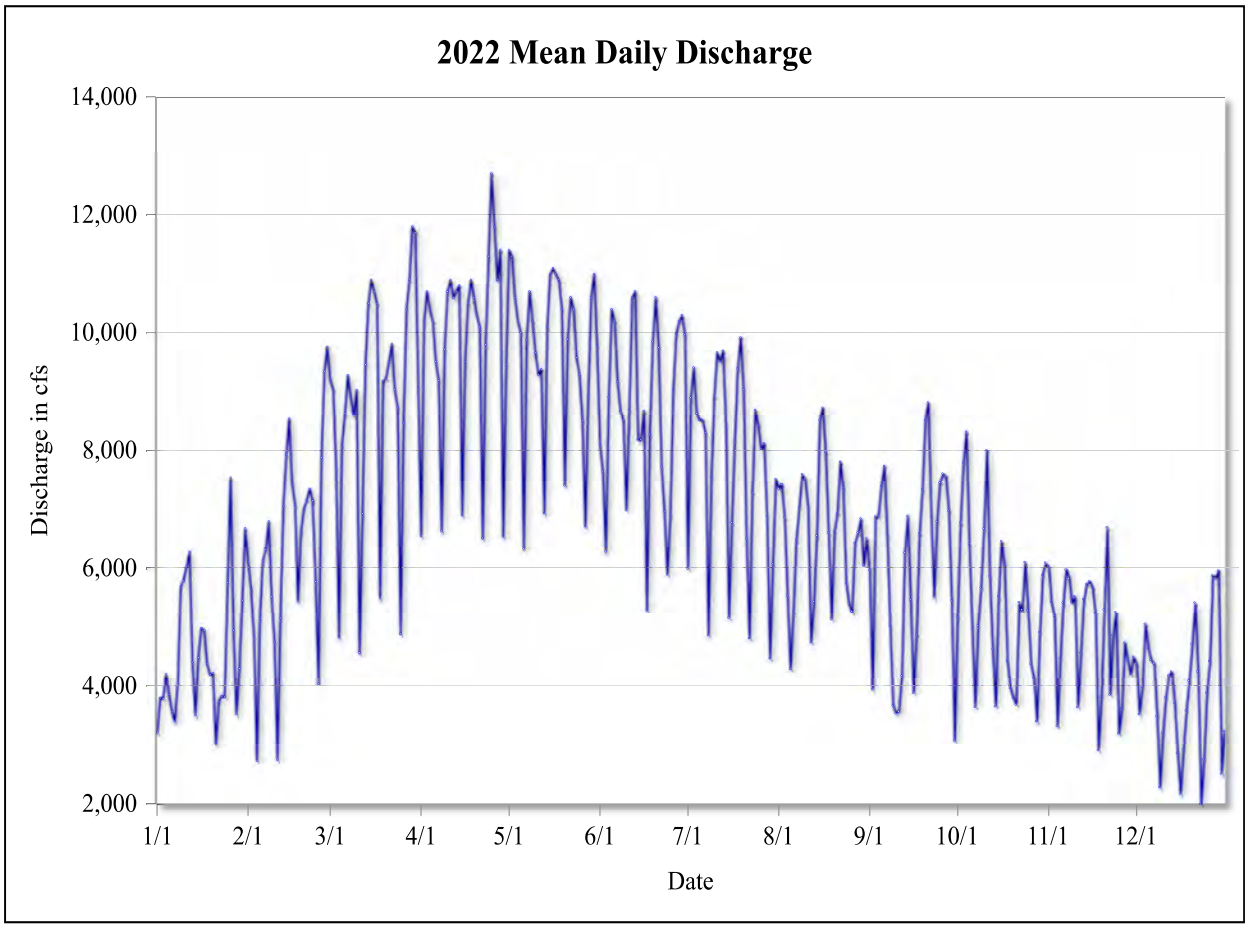
Drainage Area—184,400 mi².

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 2022

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	3,220	6,110	9,200	6,560	11,400	8,110	6,000	7,360	5,970	5,180	6,040	4,380
2	3,800	5,650	9,060	10,200	11,300	7,640	8,900	7,430	3,950	6,780	5,430	3,530
3	3,790	4,840	7,720	10,700	10,600	6,290	9,410	6,870	6,880	7,800	5,200	3,990
4	4,200	2,740	4,830	10,400	10,200	8,910	8,630	5,540	6,890	8,320	3,330	5,060
5	3,860	5,150	8,110	10,200	10,000	10,400	8,520	4,300	7,400	6,420	4,480	4,650
6	3,570	6,140	8,630	9,510	6,340	10,200	8,520	5,280	7,740	4,980	5,420	4,450
7	3,410	6,320	9,280	9,190	9,880	9,170	8,310	6,490	6,580	3,650	5,980	4,390
8	4,060	6,800	8,910	6,640	10,700	8,670	4,870	7,040	5,020	5,030	5,830	3,490
9	5,700	5,520	8,600	9,720	10,200	8,520	7,550	7,600	3,670	5,680	5,430	2,290
10	5,790	4,750	9,030	10,700	9,660	7,000	8,930	7,520	3,540	6,680	5,530	3,210
11	6,040	2,750	4,570	10,900	9,290	8,690	9,670	7,050	3,570	8,010	3,650	3,810
12	6,280	5,160	6,930	10,600	9,380	10,600	9,520	4,750	4,180	5,870	4,570	4,180
13	4,410	7,060	9,460	10,700	6,940	10,700	9,700	5,440	6,270	4,630	5,480	4,250
14	3,510	7,930	10,500	10,800	10,100	8,200	8,400	6,560	6,890	3,660	5,730	3,720
15	4,490	8,540	10,900	6,910	11,000	8,190	5,170	8,520	5,470	5,530	5,780	2,870
16	4,990	7,450	10,700	9,510	11,100	8,670	6,780	8,730	3,890	6,460	5,680	2,180
17	4,950	7,080	10,500	10,500	11,000	5,310	8,180	7,980	4,880	6,070	5,240	2,930
18	4,380	5,460	5,510	10,900	10,900	8,280	9,400	6,610	6,600	4,430	2,920	3,590
19	4,200	6,620	9,180	10,600	10,400	9,850	9,920	5,150	7,340	3,970	3,820	4,100
20	4,220	7,010	9,220	10,300	7,410	10,600	9,040	6,630	8,520	3,800	5,300	4,720
21	3,020	7,160	9,510	10,100	9,890	9,750	6,510	6,940	8,820	3,690	6,700	5,420
22	3,740	7,350	9,810	6,520	10,600	7,730	4,820	7,810	6,880	5,430	3,860	4,250
23	3,830	7,150	9,040	9,800	10,400	6,970	7,290	7,370	5,530	5,300	4,870	2,000
24	3,820	5,780	8,740	11,300	9,580	5,900	8,690	5,750	6,800	6,110	5,260	2,760
25	5,760	4,050	4,890	12,700	9,290	6,920	8,430	5,410	7,460	5,290	3,200	3,890
26	7,540	7,880	8,470	11,800	8,510	9,030	8,040	5,270	7,610	4,380	3,630	4,430
27	4,950	9,340	10,400	10,900	6,720	9,980	8,130	6,430	7,570	4,140	4,740	5,880
28	3,530	9,760	10,900	11,400	8,940	10,200	6,890	6,610	6,980	3,410	4,440	5,830
29	4,300		11,800	6,550	10,600	10,300	4,480	6,850	5,460	4,920	4,210	5,960
30	5,460		11,700	9,460	11,000	9,970	6,080	6,060	3,080	5,890	4,500	2,520
31	6,680		9,080		9,790		7,520	6,510		6,100		3,240
Total	141,510	177,563	275,133	295,870	303,114	260,747	242,311	203,892	181,418	167,631	146,280	121,978
Mean	4,565	6,342	8,875	9,862	9,778	8,692	7,816	6,577	6,047	5,407	4,876	3,935
Max	7,540	9,760	11,800	12,700	11,400	10,700	9,920	8,730	8,820	8,320	6,700	5,960
Min	3,020	2,740	4,570	6,520	6,340	5,310	4,480	4,300	3,080	3,410	2,920	2,000
Ac-ft	280,681	352,190	545,719	586,850	601,217	517,183	480,617	404,413	359,837	332,491	290,142	241,940

Calendar Year Summary

Annual Total 2,517,446 Annual Mean 6,897 Daily Max 12,700 Daily Min 2,000 Annual Ac-ft 4,993,281

Maximum Discharge				Minimum Discharge			
Date	Time	Elev	Discharge	Date	Time	Elev	Discharge
Apr. 25	17:00	233.81	13,294	Dec. 23	23:00	225.58	1,810

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.

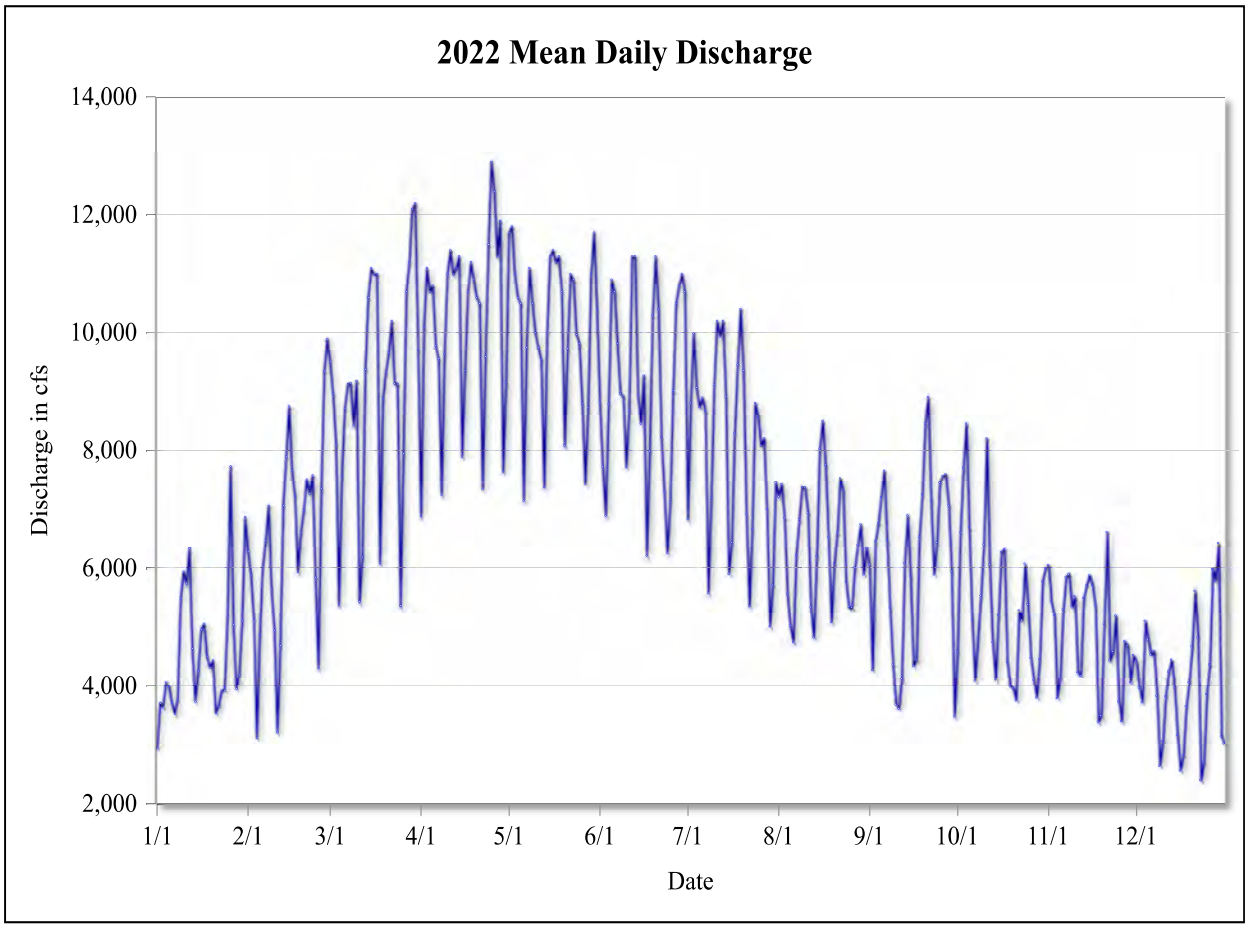
Drainage Area—184,700 mi².

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 2022

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	2,950	6,290	9,510	6,890	11,700	8,820	6,840	7,220	6,070	4,590	6,060	4,430
2	3,710	5,890	8,970	10,100	11,800	7,730	8,810	7,430	4,280	6,610	5,440	3,980
3	3,640	5,140	8,130	11,100	11,000	6,900	9,990	6,860	6,460	7,710	5,210	3,730
4	4,060	3,130	5,390	10,700	10,600	8,790	9,070	5,570	6,770	8,460	3,800	5,110
5	4,000	4,870	7,570	10,800	10,500	10,900	8,740	5,030	7,210	6,700	4,160	4,790
6	3,720	6,030	8,720	9,780	7,150	10,700	8,900	4,750	7,660	5,130	5,300	4,540
7	3,530	6,470	9,130	9,560	9,750	9,820	8,670	6,230	6,480	4,100	5,850	4,600
8	3,770	7,060	9,140	7,250	11,100	8,970	5,590	6,830	5,330	4,820	5,900	3,840
9	5,490	5,650	8,430	9,640	10,500	8,930	7,200	7,380	4,370	5,540	5,360	2,650
10	5,940	4,950	9,180	11,000	10,000	7,730	9,120	7,370	3,690	6,410	5,530	3,070
11	5,740	3,220	5,440	11,400	9,750	8,680	10,200	6,950	3,620	8,210	4,240	3,830
12	6,340	4,690	6,190	11,000	9,550	11,300	9,940	5,340	4,130	6,070	4,180	4,250
13	4,640	7,070	9,380	11,100	7,380	11,300	10,200	4,830	6,090	4,750	5,500	4,450
14	3,740	7,900	10,600	11,300	10,000	8,950	8,920	6,210	6,900	4,120	5,710	3,980
15	4,260	8,750	11,100	7,900	11,300	8,460	5,910	8,030	5,870	5,210	5,880	3,180
16	4,960	7,660	11,000	9,360	11,400	9,270	6,440	8,500	4,350	6,280	5,720	2,570
17	5,060	7,230	11,000	10,700	11,200	6,220	8,300	7,760	4,450	6,330	5,370	2,830
18	4,510	5,940	6,100	11,200	11,300	7,990	9,460	6,530	6,540	4,410	3,400	3,660
19	4,320	6,610	8,880	10,900	10,700	10,300	10,400	5,090	7,260	4,000	3,500	4,070
20	4,440	6,980	9,330	10,600	8,090	11,300	9,360	6,090	8,460	3,970	5,060	4,680
21	3,540	7,510	9,670	10,500	9,730	10,400	6,920	6,610	8,910	3,760	6,620	5,620
22	3,660	7,270	10,200	7,350	11,000	8,230	5,370	7,530	7,150	5,290	4,440	4,830
23	3,920	7,580	9,140	9,600	10,900	7,310	6,670	7,330	5,900	5,120	4,590	2,410
24	3,930	5,850	9,130	11,500	9,970	6,270	8,810	5,770	6,440	6,080	5,200	2,710
25	5,190	4,310	5,370	12,900	9,820	7,120	8,570	5,350	7,460	5,390	3,740	3,870
26	7,730	7,360	7,950	12,400	8,800	9,020	8,090	5,340	7,570	4,480	3,410	4,370
27	5,050	9,350	10,700	11,300	7,440	10,500	8,210	6,020	7,600	4,110	4,760	5,990
28	3,960	9,890	11,200	11,900	8,730	10,800	7,010	6,400	7,070	3,810	4,690	5,790
29	4,190		12,100	7,650	11,000	11,000	5,020	6,750	5,950	4,460	4,070	6,430
30	5,110		12,200	9,160	11,700	10,700	5,720	5,900	3,490	5,780	4,530	3,150
31	6,870		9,710		10,400		7,460	6,350		6,000		3,030
Total	141,994	180,661	280,456	306,444	314,177	274,296	249,874	199,344	183,551	167,697	147,204	126,442
Mean	4,580	6,452	9,047	10,210	10,130	9,143	8,060	6,430	6,118	5,410	4,907	4,079
Max	7,730	9,890	12,200	12,900	11,800	11,300	10,400	8,500	8,910	8,460	6,620	6,430
Min	2,950	3,130	5,370	6,890	7,150	6,220	5,020	4,750	3,490	3,760	3,400	2,410
Ac-ft	281,641	358,336	556,277	607,824	623,161	544,057	495,617	395,393	364,067	332,622	291,975	250,795

Calendar Year Summary

Annual Total 2,572,140 Annual Mean 7,047 Daily Max 12,900 Daily Min 2,410 Annual Ac-ft 5,101,764

Maximum Discharge				Minimum Discharge			
Date	Time	Elev	Discharge	Date	Time	Elev	Discharge
Apr. 25	20:00	222.97	13,569	Dec. 24	03:00	216.26	2,158

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.

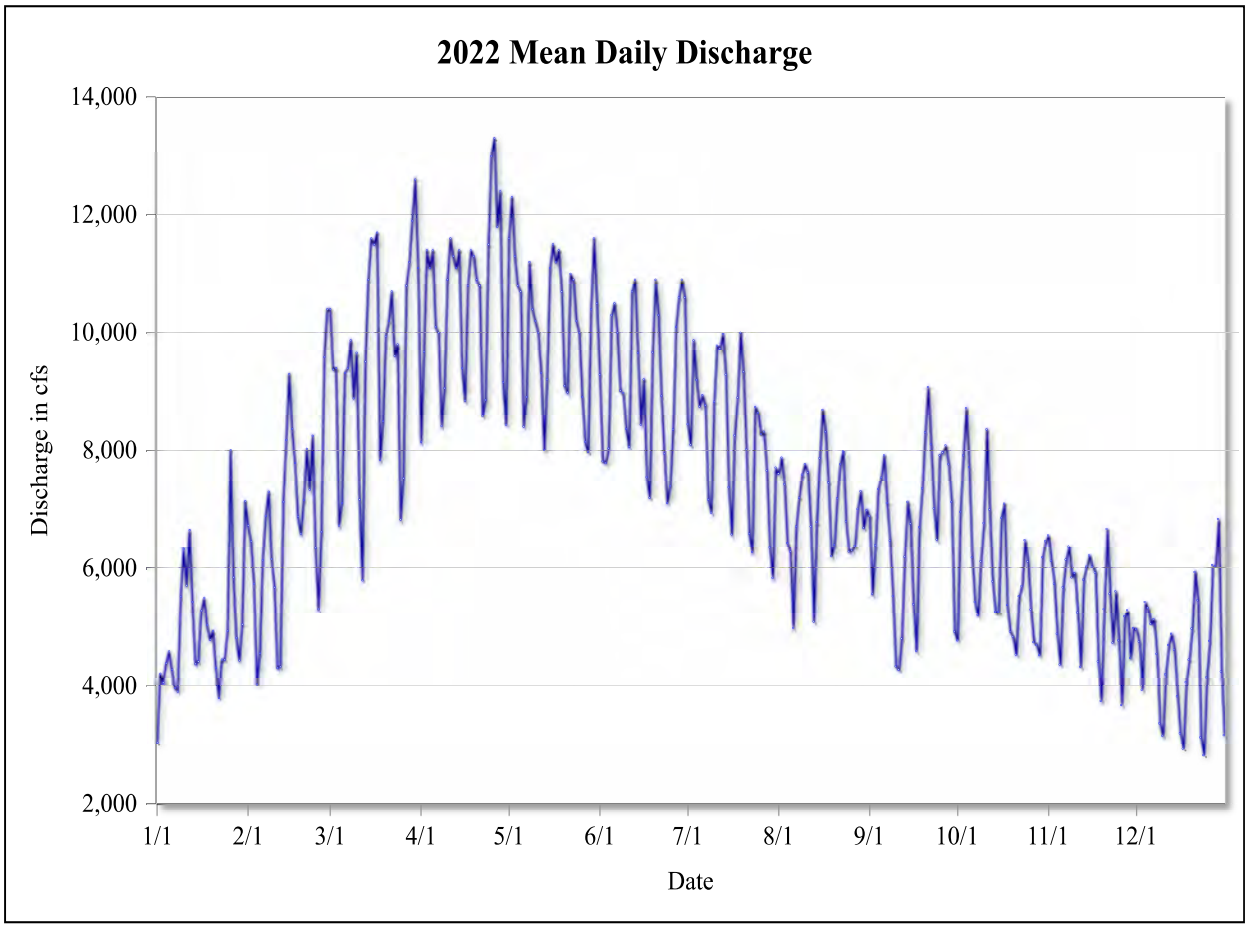
Drainage Area—185,100 mi².

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 2022

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	3,040	6,730	10,400	8,150	11,600	9,290	8,450	7,610	6,890	4,780	6,560	4,970
2	4,210	6,460	9,380	9,680	12,300	7,820	8,100	7,880	5,570	6,960	6,130	4,760
3	4,060	5,740	9,400	11,400	11,300	7,790	9,870	7,430	6,390	7,920	5,740	3,940
4	4,390	4,030	6,730	11,100	10,800	8,040	9,200	6,430	7,350	8,720	4,890	5,430
5	4,590	4,560	7,110	11,400	10,700	10,300	8,750	6,290	7,540	7,720	4,370	5,330
6	4,280	6,140	9,320	10,100	8,410	10,500	8,940	4,990	7,920	6,190	5,680	5,060
7	3,970	6,890	9,400	10,000	8,910	10,000	8,770	6,710	7,110	5,430	6,150	5,140
8	3,910	7,300	9,870	8,420	11,200	9,020	7,170	7,200	6,470	5,210	6,370	4,550
9	5,520	6,160	8,890	9,060	10,400	8,980	6,950	7,590	5,530	6,120	5,850	3,370
10	6,330	5,680	9,660	10,900	10,200	8,370	8,830	7,770	4,340	6,770	5,920	3,160
11	5,710	4,310	7,170	11,600	10,000	8,070	9,780	7,630	4,280	8,360	5,250	4,200
12	6,650	4,330	5,800	11,300	9,320	10,700	9,730	6,710	4,810	7,000	4,330	4,700
13	5,430	7,130	9,510	11,100	8,010	10,900	9,980	5,100	6,200	5,780	5,810	4,890
14	4,380	8,180	10,900	11,400	9,210	9,660	9,290	6,790	7,130	5,260	6,030	4,620
15	4,420	9,300	11,600	9,400	11,100	8,440	7,380	7,870	6,760	5,260	6,220	3,830
16	5,280	8,370	11,500	8,850	11,500	9,210	6,580	8,690	5,390	6,860	6,030	3,200
17	5,500	7,790	11,700	10,800	11,200	7,550	8,260	8,320	4,600	7,100	5,930	2,940
18	5,040	6,880	7,840	11,400	11,400	7,200	8,900	7,460	6,700	5,380	4,420	4,070
19	4,790	6,590	8,500	11,300	10,700	9,670	10,000	6,210	7,360	4,930	3,750	4,450
20	4,940	7,160	9,940	10,900	9,100	10,900	9,340	6,400	8,310	4,840	5,310	4,980
21	4,310	8,030	10,200	10,800	8,990	10,300	8,020	7,190	9,080	4,540	6,670	5,940
22	3,800	7,340	10,700	8,590	11,000	8,930	6,590	7,770	8,110	5,530	5,570	5,460
23	4,450	8,250	9,610	8,860	10,900	7,950	6,280	7,990	7,020	5,700	4,740	3,130
24	4,450	6,350	9,800	11,500	10,200	7,110	8,740	6,800	6,490	6,480	5,610	2,830
25	4,940	5,310	6,830	13,000	10,000	7,400	8,640	6,290	7,920	6,120	4,780	4,150
26	8,010	6,620	7,530	13,300	8,910	8,360	8,280	6,310	7,970	5,300	3,680	4,770
27	5,850	9,590	10,800	11,800	8,150	10,100	8,320	6,380	8,090	4,750	5,190	6,060
28	4,820	10,400	11,200	12,400	7,980	10,600	7,660	7,010	7,770	4,700	5,290	6,040
29	4,440		11,900	9,160	10,400	10,900	6,360	7,310	7,130	4,530	4,480	6,840
30	5,050		12,600	8,440	11,600	10,600	5,840	6,690	4,930	6,190	4,990	4,250
31	7,140		11,100		10,500		7,710	6,990		6,460		3,170
Total	153,662	191,677	296,825	316,228	315,990	274,489	256,692	217,811	201,168	186,901	161,755	140,239
Mean	4,957	6,846	9,575	10,540	10,190	9,150	8,280	7,026	6,706	6,029	5,392	4,524
Max	8,010	10,400	12,600	13,300	12,300	10,900	10,000	8,690	9,080	8,720	6,670	6,840
Min	3,040	4,030	5,800	8,150	7,980	7,110	5,840	4,990	4,280	4,530	3,680	2,830
Ac-ft	304,783	380,186	588,744	627,230	626,757	544,440	509,141	432,022	399,010	370,713	320,836	278,160

Calendar Year Summary

Annual Total 2,713,437 Annual Mean 7,434 Daily Max 13,300 Daily Min 2,830 Annual Ac-ft 5,382,023

Maximum Discharge				Minimum Discharge			
Date	Time	Elev	Discharge	Date	Time	Elev	Discharge
Apr. 26	01:00	209.70	14,061	Dec. 24	09:00	205.06	2,449

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.

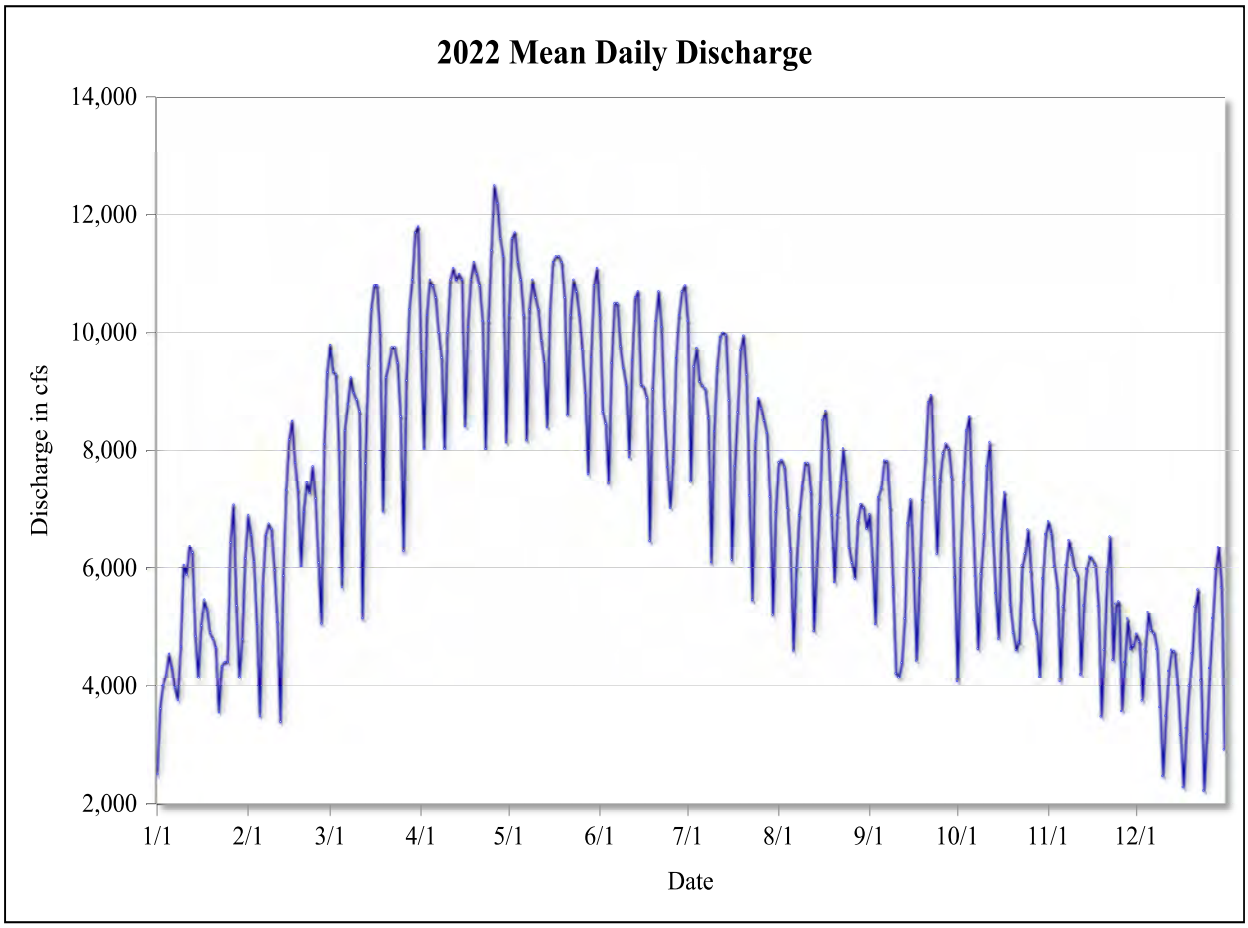
Drainage Area—185,900 mi².

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 2022

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	2,510	6,900	9,790	9,670	10,300	10,300	10,200	7,800	6,920	4,090	6,800	4,890
2	3,620	6,570	9,340	8,040	11,600	8,660	7,480	7,840	6,110	6,170	6,590	4,760
3	4,020	6,120	9,290	10,300	11,700	8,460	9,430	7,720	5,060	7,460	6,040	3,760
4	4,190	5,060	8,010	10,900	11,200	7,450	9,740	7,030	7,210	8,340	5,670	4,630
5	4,550	3,500	5,690	10,800	10,900	9,490	9,170	6,290	7,370	8,570	4,090	5,260
6	4,310	5,700	8,340	10,600	10,300	10,500	9,100	4,610	7,830	7,050	5,350	4,950
7	3,980	6,570	8,790	10,000	8,180	10,500	9,050	6,010	7,820	5,870	6,060	4,900
8	3,770	6,760	9,240	9,580	10,400	9,770	8,550	6,900	7,030	4,640	6,480	4,630
9	4,670	6,670	8,980	8,040	10,900	9,400	6,110	7,400	5,690	5,910	6,230	3,650
10	6,060	5,970	8,870	10,000	10,600	9,110	8,330	7,790	4,220	6,580	5,980	2,480
11	5,900	5,090	8,660	10,900	10,400	7,890	9,410	7,780	4,150	7,740	5,870	3,500
12	6,380	3,400	5,160	11,100	9,870	9,540	9,930	7,300	4,400	8,140	4,200	4,260
13	6,270	5,880	7,780	10,900	9,510	10,600	10,000	4,940	5,150	6,620	5,370	4,620
14	4,850	7,330	9,440	11,000	8,400	10,700	9,960	6,110	6,770	5,580	5,990	4,590
15	4,150	8,190	10,400	10,900	10,400	9,120	8,850	7,090	7,170	4,810	6,200	4,020
16	5,030	8,500	10,800	8,420	11,200	9,080	6,150	8,520	5,950	6,670	6,160	3,180
17	5,470	7,800	10,800	10,100	11,300	8,900	7,740	8,670	4,440	7,290	6,070	2,290
18	5,310	7,330	9,990	10,900	11,300	6,470	8,650	8,020	5,840	6,460	5,360	3,290
19	4,910	6,040	6,970	11,200	11,200	9,040	9,710	6,900	7,160	5,380	3,490	4,010
20	4,810	6,960	9,240	11,000	10,600	10,200	9,950	5,770	7,870	4,910	4,620	4,560
21	4,660	7,460	9,470	10,800	8,600	10,700	9,290	6,910	8,820	4,620	5,940	5,350
22	3,560	7,280	9,750	10,200	10,300	10,100	7,240	7,400	8,940	4,750	6,540	5,640
23	4,340	7,730	9,750	8,030	10,900	8,680	5,470	8,040	7,560	6,050	4,450	4,100
24	4,410	7,190	9,490	10,200	10,700	7,720	8,160	7,490	6,250	6,250	5,400	2,230
25	4,410	6,100	8,580	11,400	10,300	7,030	8,890	6,350	7,510	6,660	5,440	3,190
26	6,440	5,070	6,300	12,500	9,720	7,860	8,720	6,100	7,950	5,940	3,580	4,310
27	7,080	8,110	9,190	12,200	8,980	9,570	8,510	5,830	8,120	5,130	4,410	5,160
28	5,370	9,330	10,400	11,600	7,610	10,300	8,300	6,810	8,040	4,890	5,150	5,990
29	4,150		10,900	11,300	9,590	10,700	7,220	7,090	7,550	4,160	4,640	6,360
30	4,800		11,700	8,150	10,800	10,800	5,220	7,030	5,850	5,830	4,690	5,680
31	6,170		11,800		11,100		6,960	6,680		6,580		2,930
Total	150,165	184,616	282,757	310,916	318,642	278,752	261,550	216,233	200,777	189,139	162,845	133,163
Mean	4,844	6,593	9,121	10,360	10,280	9,292	8,437	6,975	6,693	6,101	5,428	4,296
Max	7,080	9,330	11,800	12,500	11,700	10,800	10,200	8,670	8,940	8,570	6,800	6,360
Min	2,510	3,400	5,160	8,030	7,610	6,470	5,220	4,610	4,150	4,090	3,490	2,230
Ac-ft	297,849	366,181	560,841	616,692	632,018	552,897	518,778	428,893	398,236	375,151	322,999	264,124

Calendar Year Summary

Annual Total 2,689,557 Annual Mean 7,369 Daily Max 12,500 Daily Min 2,230 Annual Ac-ft 5,334,658

Maximum Discharge				Minimum Discharge			
Date	Time	Elev	Discharge	Date	Time	Elev	Discharge
Apr. 26	20:00	193.11	12,765	Dec. 24	18:00	187.72	2,030

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.

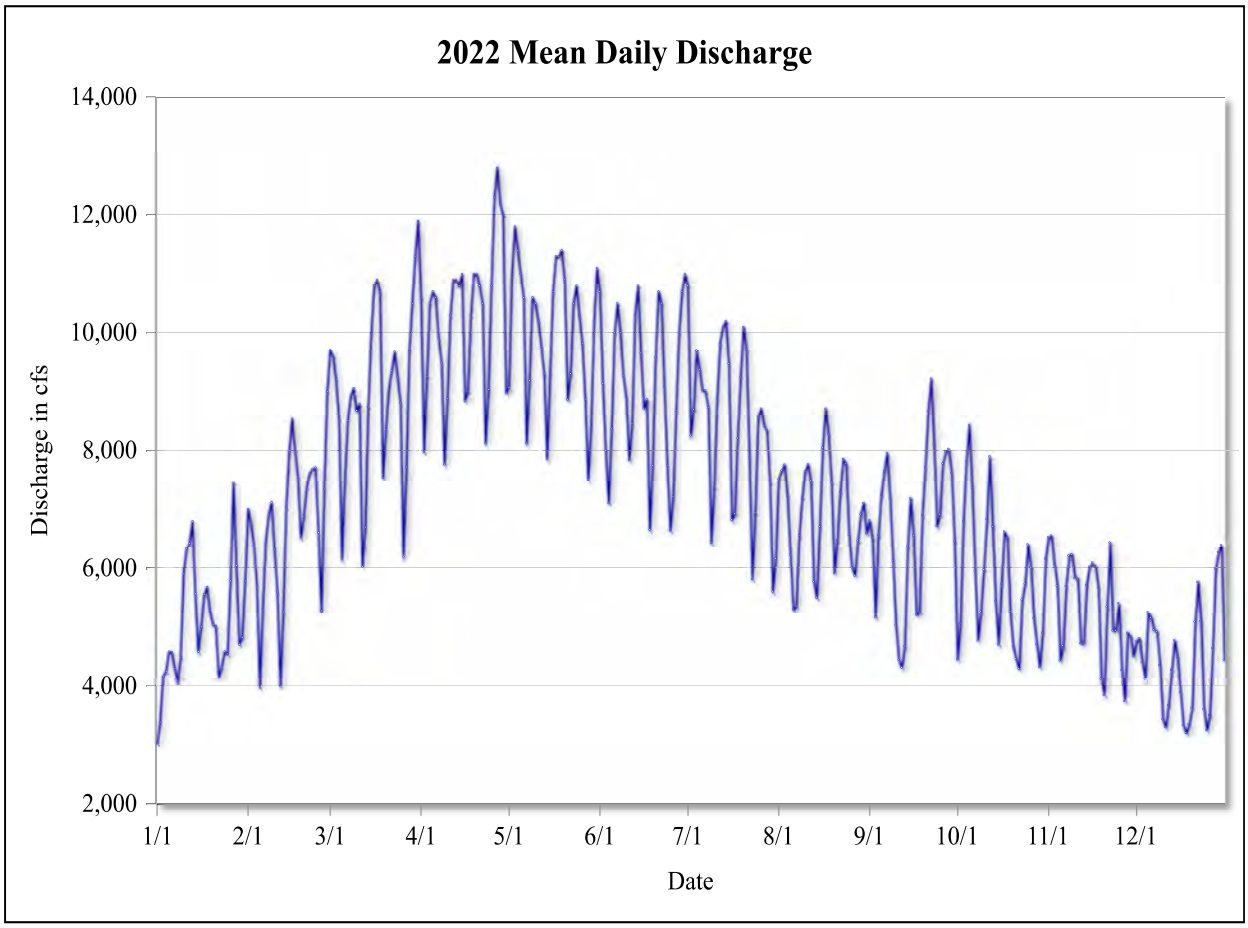
Drainage Area—186,200 mi².

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—None.



Colorado River at Martinez Lake

Mean daily discharge, in cubic-feet per second, Calendar Year 2022

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	3,020	7,010	9,710	10,600	9,070	10,700	10,800	7,520	6,820	4,460	6,530	4,760
2	3,390	6,770	9,610	7,980	11,000	9,140	8,260	7,660	6,520	5,070	6,560	4,810
3	4,160	6,400	9,210	9,260	11,800	8,000	8,700	7,760	5,180	6,800	6,080	4,410
4	4,250	5,720	8,540	10,500	11,400	7,110	9,700	7,230	6,570	7,820	5,710	4,130
5	4,590	3,980	6,170	10,700	11,000	8,370	9,380	6,240	7,250	8,430	4,440	5,260
6	4,580	5,280	7,500	10,600	10,600	10,000	9,030	5,310	7,650	7,370	4,690	5,170
7	4,300	6,450	8,510	9,910	8,130	10,500	9,020	5,360	7,960	5,960	5,700	4,960
8	4,070	6,910	8,930	9,490	9,190	10,000	8,730	6,560	7,190	4,780	6,220	4,930
9	4,490	7,120	9,060	7,770	10,600	9,270	6,440	7,200	6,130	5,270	6,240	4,360
10	5,910	6,330	8,680	8,880	10,500	8,910	7,380	7,650	5,040	5,980	5,840	3,440
11	6,340	5,600	8,790	10,300	10,200	7,840	8,890	7,770	4,450	6,840	5,820	3,310
12	6,420	4,000	6,030	10,900	9,770	8,460	9,830	7,490	4,320	7,900	4,730	3,680
13	6,800	5,260	6,700	10,900	9,310	10,300	10,100	5,780	4,680	6,710	4,730	4,280
14	5,570	7,040	8,740	10,800	7,860	10,800	10,200	5,510	6,380	5,450	5,720	4,780
15	4,590	7,960	9,980	11,000	9,300	9,660	9,480	6,710	7,190	4,710	6,030	4,500
16	5,010	8,540	10,800	8,850	10,700	8,720	6,830	8,050	6,560	5,740	6,100	3,900
17	5,560	8,010	10,900	9,010	11,300	8,870	6,930	8,710	5,220	6,630	6,040	3,340
18	5,680	7,560	10,700	10,300	11,300	6,660	8,210	8,280	5,260	6,530	5,670	3,210
19	5,290	6,530	7,540	11,000	11,400	7,750	9,250	7,470	6,910	5,270	4,130	3,360
20	5,050	6,880	8,360	11,000	10,900	9,590	10,100	5,920	7,720	4,680	3,850	3,630
21	5,020	7,380	9,030	10,800	8,870	10,700	9,710	6,480	8,670	4,470	5,350	5,100
22	4,150	7,620	9,360	10,500	9,310	10,500	7,880	7,300	9,220	4,300	6,440	5,770
23	4,320	7,690	9,680	8,130	10,500	9,080	5,820	7,860	8,110	5,470	4,950	5,110
24	4,590	7,710	9,250	9,040	10,800	7,750	6,950	7,780	6,720	5,740	4,950	3,610
25	4,550	6,610	8,810	10,800	10,300	6,650	8,560	6,570	6,920	6,410	5,410	3,260
26	5,790	5,280	6,200	12,300	9,820	7,220	8,710	6,020	7,780	6,020	4,280	3,510
27	7,450	7,350	7,720	12,800	8,870	8,680	8,430	5,880	7,980	5,160	3,750	4,650
28	6,050	9,000	9,710	12,200	7,510	10,000	8,350	6,470	8,030	4,720	4,910	6,000
29	4,710		10,500	12,000	8,400	10,700	7,470	6,920	7,620	4,330	4,840	6,280
30	4,830		11,300	8,990	10,200	11,000	5,610	7,110	6,470	4,910	4,520	6,400
31	5,790		11,900		11,100		6,170	6,600		6,170		4,450
Total	156,309	188,023	278,002	307,195	310,974	272,862	260,895	215,142	202,516	180,086	160,254	138,398
Mean	5,042	6,715	8,968	10,240	10,030	9,095	8,416	6,940	6,751	5,809	5,342	4,464
Max	7,450	9,000	11,900	12,800	11,800	11,000	10,800	8,710	9,220	8,430	6,560	6,400
Min	3,020	3,980	6,030	7,770	7,510	6,650	5,610	5,310	4,320	4,300	3,750	3,210
Ac-ft	310,035	372,937	551,409	609,312	616,808	541,214	517,477	426,727	401,684	357,196	317,859	274,509

Calendar Year Summary

Annual Total 2,670,655 Annual Mean 7,317 Daily Max 12,800 Daily Min 3,020 Annual Ac-ft 5,297,167

Maximum Discharge				Minimum Discharge			
Date	Time	Elev	Discharge	Date	Time	Elev	Discharge
Apr. 27	06:00	187.34	12,888	Jan. 2	01:00	182.62	2,921

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.

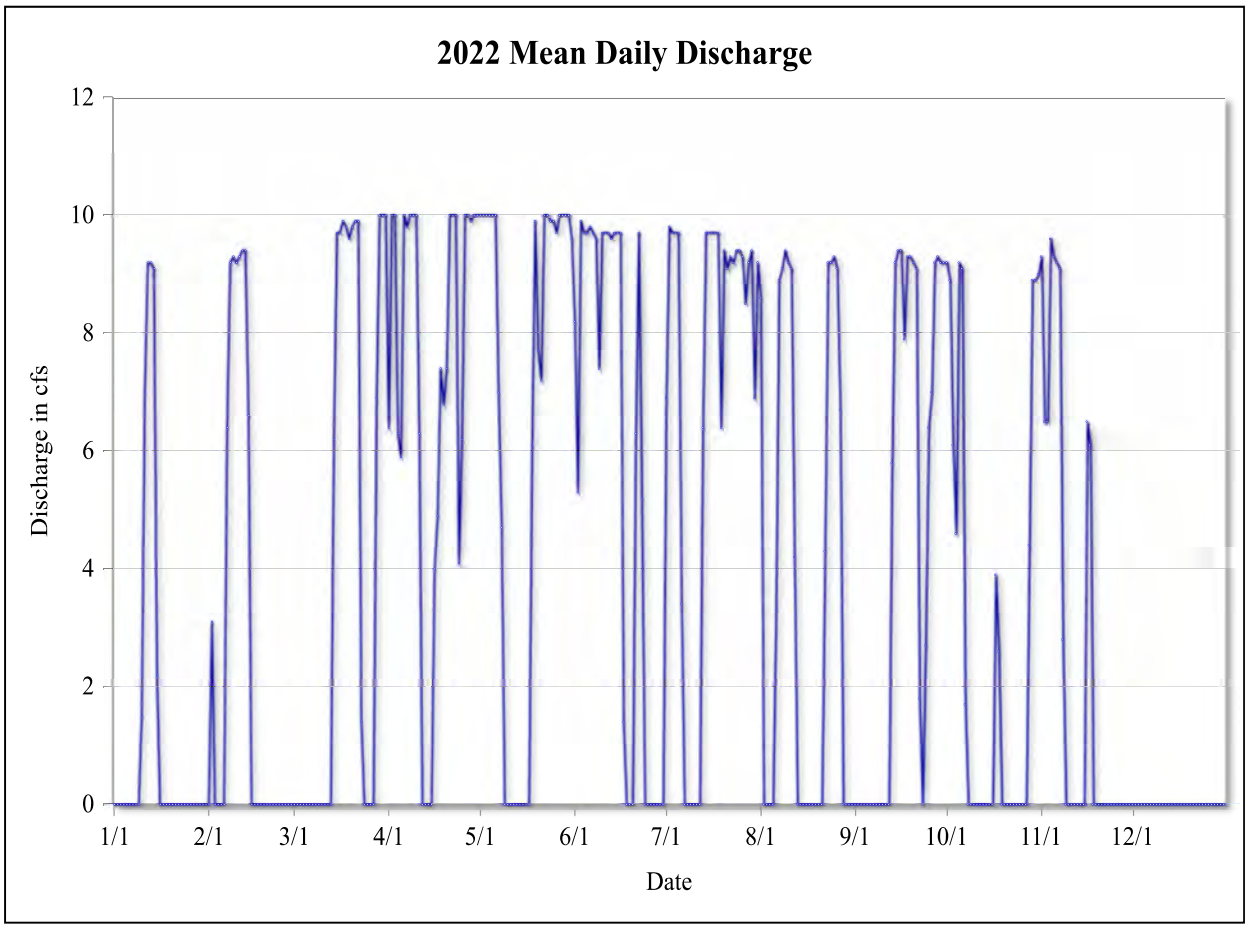
Drainage Area—Not applicable.

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—None.



Fort Mojave Tribe-Nevada

Mean daily discharge, in cubic-feet per second, Calendar Year 2022

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0	**0**	6.4	10	8.2	6.9	8.6	0	9.2	9.3	0
2	0	3.1	**0**	10	10	5.3	9.8	0	0	8.9	6.5	0
3	0	0	**0**	10	10	9.9	9.7	0	0	6.1	6.5	0
4	0	0	**0**	6.3	10	9.7	9.7	0	**0**	4.6	9.6	0
5	0	0	**0**	5.9	10	9.7	9.7	0	**0**	9.2	9.3	0
6	0	0	**0**	10	10	9.8	3.4	3.3	**0**	9.1	9.2	0
7	**0**	6.4	**0**	9.8	7.0	9.7	0	8.9	**0**	1.7	9.1	0
8	**0**	9.2	**0**	10	4.7	9.6	0	9.1	0	0	2.8	0
9	**0**	9.3	0	10	0	7.4	0	9.4	0	0	0	0
10	**1.5**	9.2	0	10	0	9.7	0	9.2	0	0	0	0
11	7.0	9.3	0	6.3	0	9.7	0	9.1	0	0	0	0
12	9.2	9.4	0	0	0	9.7	0	4.2	0	0	0	0
13	9.2	9.4	0	0	0	9.6	6.4	0	5.8	0	0	0
14	9.1	6.6	6.2	0	0	9.7	9.7	0	9.2	0	0	0
15	2.2	0	9.7	0	0	9.7	9.7	0	9.4	**0**	0	0
16	0	0	9.7	4.0	0	9.7	9.7	0	9.4	**0**	6.5	0
17	0	0	9.9	4.9	0	1.4	9.7	0	7.9	**3.9**	6.1	0
18	0	0	9.8	7.4	6.1	0	9.7	0	9.3	2.6	0	0
19	0	0	9.6	6.8	9.9	0	6.4	0	9.3	0	0	0
20	0	0	9.8	7.4	7.7	0	9.4	0	9.2	0	0	0
21	0	**0**	9.9	10	7.2	6.3	9.1	**0**	9.1	0	0	0
22	0	**0**	9.9	10	10	9.7	9.3	**4.3**	1.8	0	0	0
23	0	**0**	1.4	10	10	5.2	9.2	9.2	0	0	0	0
24	0	**0**	0	4.1	9.9	0	9.4	9.2	2.7	**0**	0	0
25	0	**0**	0	6.2	9.9	0	9.4	9.3	6.4	**0**	0	0
26	0	**0**	0	10	9.7	0	9.3	9.1	7.0	**0**	0	0
27	0	**0**	0	10	10	0	8.5	6.7	9.2	**0**	0	0
28	0	**0**	6.9	9.9	10	0	9.2	0	9.3	**4.4**	0	0
29	0		10	10	10	0	9.4	0	9.2	8.9	0	0
30	0		10	10	10	0	6.9	0	9.2	8.9	0	0
31	0		10		9.6		9.2	0		9.0		0
Total	38.2	71.9	123.2	217.5	204.0	169.8	218.5	109.7	133.4	86.4	74.9	0
Mean	1.23	2.57	3.97	7.25	6.58	5.66	7.05	3.54	4.45	2.79	2.50	0
Max	9.2	9.4	10	10	10	9.9	9.8	9.4	9.4	9.2	9.6	0
Min	0	0	0	0	0	0	0	0	0	0	0	0
Ac-ft	76	143	244	431	405	337	433	218	265	171	149	0

Calendar Year Summary

Annual Total 1,447.5 Annual Mean 3.97 Daily Max 10 Daily Min 0 Annual Ac-ft 2,871

Maximum Discharge				Minimum Discharge			
Date	Time	GH	Discharge	Date	Time	GH	Discharge
Mar. 29	06:00	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.

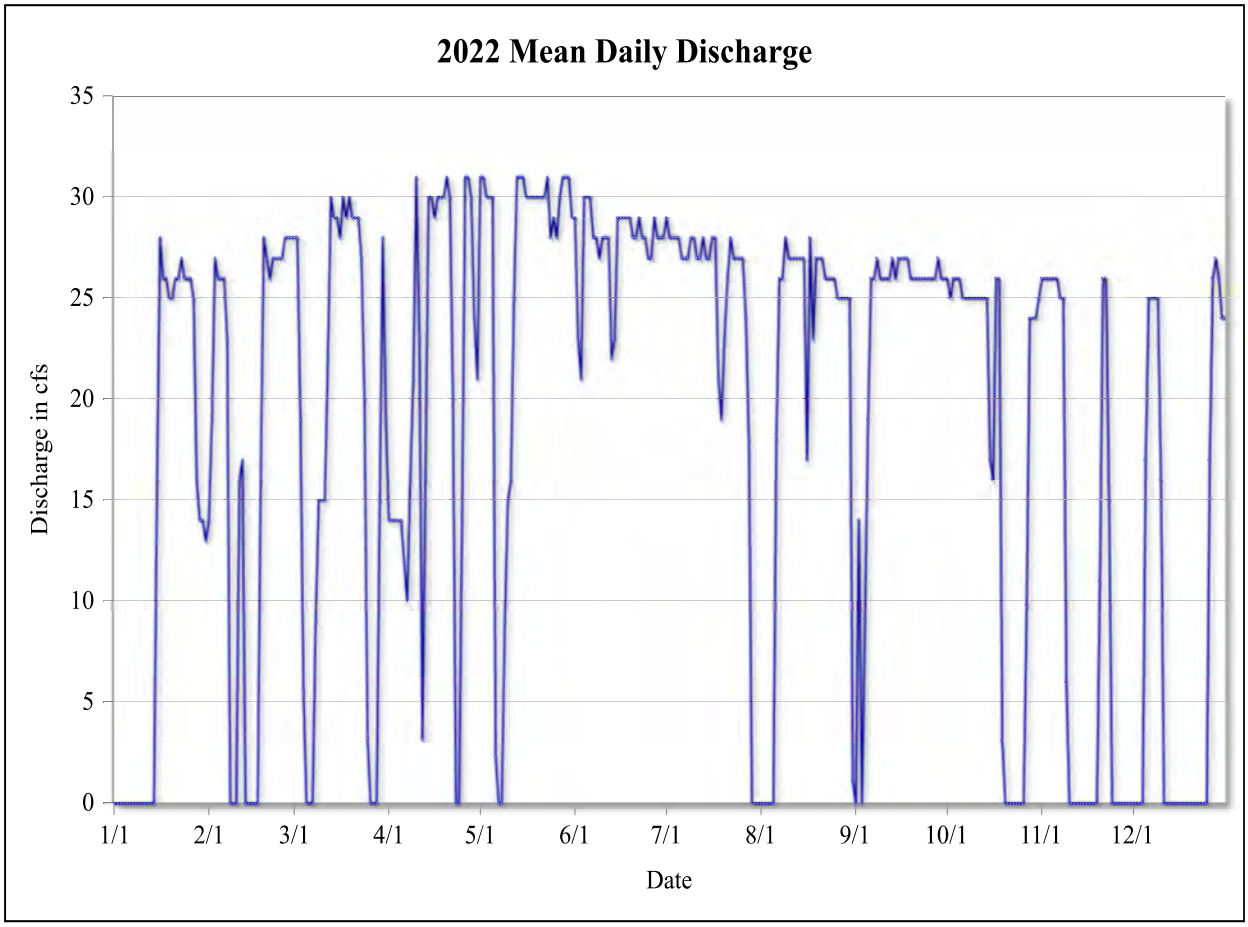
Drainage Area—Not applicable.

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 2022

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	14	28	14	31	29	29	0	0	26	26	0
2	0	19	28	14	31	23	28	0	14	25	26	0
3	0	27	19	14	30	21	28	0	0	26	26	0
4	0	26	5.5	14	30	30	28	0	9.1	26	26	0
5	0	26	0	14	30	30	28	0	19	26	26	17
6	0	26	0	12	2.3	30	27	18	26	25	26	25
7	0	23	0	10	0	28	27	26	26	25	25	25
8	0	0	9.0	16	0	28	27	26	27	25	25	25
9	0	0	15	21	9.0	27	28	28	26	25	6.0	25
10	0	0	15	31	15	28	28	27	26	25	0	16
11	0	16	15	23	16	28	27	27	26	25	0	0
12	0	17	22	3.2	25	28	27	27	26	25	0	0
13	0	0	30	16	31	22	28	27	27	25	0	0
14	0	0	29	30	31	23	27	27	26	25	0	0
15	16	0	29	30	31	29	27	27	27	17	0	0
16	28	0	28	29	30	29	28	17	27	16	0	0
17	26	0	30	30	30	29	28	28	27	26	0	0
18	26	16	29	30	30	29	21	23	27	26	0	0
19	25	28	30	30	30	29	19	27	26	3.1	0	0
20	25	27	29	31	30	28	23	27	26	0	11	0
21	26	26	29	30	30	28	26	27	26	0	26	0
22	26	27	29	20	30	29	28	26	26	0	26	0
23	27	27	27	0	31	28	27	26	26	0	15	0
24	26	27	20	0	28	28	27	26	26	0	0	0
25	26	27	3.2	14	29	27	27	26	26	0	0	0
26	26	28	0	31	28	27	27	25	26	0	0	17
27	25	28	0	31	30	29	24	25	26	9.8	0	26
28	16	28	0	30	31	28	18	25	27	24	0	27
29	14		15	24	31	28	0	25	26	24	0	26
30	14		28	21	31	28	0	25	26	24	0	24
31	13		19		29		0	1.1		25		24
Total	383	482	560.5	612.8	789.5	826	736	639.8	699.4	550.6	290.3	277
Mean	12.4	17.2	18.1	20.4	25.5	27.5	23.7	20.6	23.3	17.8	9.68	8.94
Max	28	28	30	31	31	30	29	28	27	26	26	27
Min	0	0	0	0	0	21	0	0	0	0	0	0
Ac-ft	760	956	1,112	1,215	1,566	1,638	1,460	1,269	1,387	1,092	576	550

Calendar Year Summary

Annual Total 6,847.2 Annual Mean 18.8 Daily Max 31 Daily Min 0 Annual Ac-ft 13,581

Maximum Discharge				Minimum Discharge			
Date	Time	GH	Discharge	Date	Time	GH	Discharge
Apr. 18	02:00	2.75	33	Jan. 1	01:00	0.00	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.

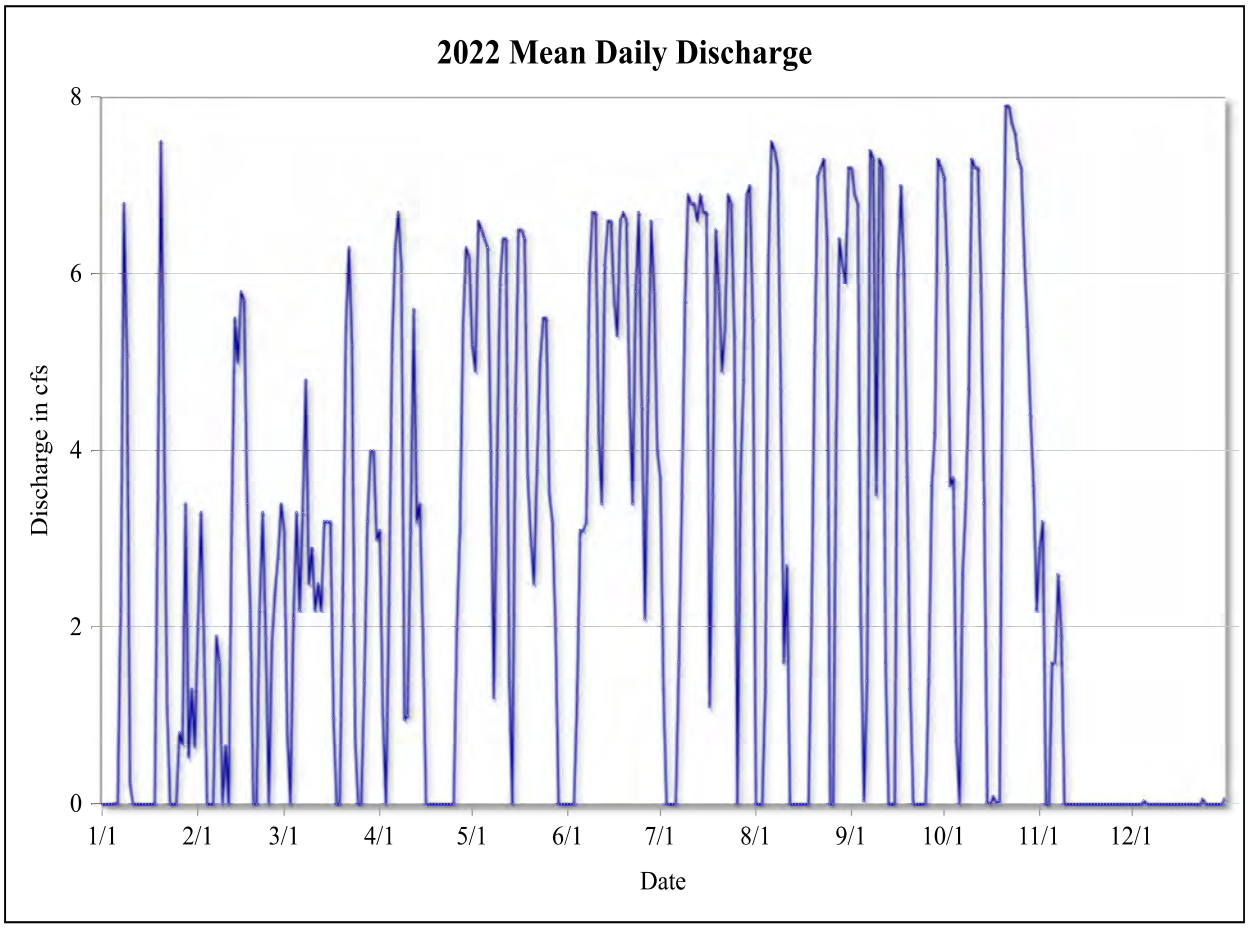
Drainage Area—Not applicable.

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, 7.9 cfs, Oct. 21, 2022; 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 2022

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	2.0	3.1	3.1	5.2	0	3.7	0	7.2	7.1	2.9	0
2	0	3.3	0.79	0.98	4.9	0	1.3	0	6.9	6.1	3.2	0
3	0	1.8	0	0	6.6	0	0	0	6.8	3.6	0	0
4	0	0	2.1	2.3	6.5	1.2	0	1.3	2.0	3.7	0	0
5	0.01	0	3.3	5.2	6.4	3.1	0	6.2	0.04	0.71	1.6	0.04
6	0	0	2.2	6.3	6.3	3.1	0	7.5	1.4	0	1.6	0
7	2.3	1.9	3.3	6.7	4.0	3.2	1.6	7.4	7.4	2.6	2.6	0
8	6.8	1.6	4.8	6.1	1.2	6.0	3.5	7.2	7.3	3.4	1.9	0
9	5.1	0	2.5	0.96	3.7	6.7	5.7	4.7	3.5	4.7	0	0
10	0.23	0.66	2.9	1.0	5.9	6.7	6.9	1.6	7.3	7.3	0	0
11	0	0	2.2	3.1	6.4	4.2	6.8	2.7	7.2	7.2	0	0
12	0	3.3	2.5	5.6	6.4	3.4	6.8	0	1.6	7.2	0	0
13	0	5.5	2.2	3.2	1.4	6.1	6.6	0	0	5.8	0	0
14	0	5.0	3.2	3.4	0	6.6	6.9	0	0	3.4	0	0
15	0	5.8	3.2	1.9	4.5	6.6	6.7	0	0	0.02	0	0
16	0	5.7	3.2	0	6.5	5.7	6.7	0	6.0	0	0	0
17	0	3.4	0.97	0	6.5	5.3	1.1	0	7.0	0.09	0	0
18	0	2.2	0	0	6.4	6.6	3.5	0	6.0	0.01	0	0
19	3.5	0	0	0	3.7	6.7	6.5	2.1	3.7	0.04	0	0
20	7.5	0	2.4	0	3.0	6.6	5.8	5.1	1.3	5.5	0	0
21	4.5	2.2	5.4	0	2.5	4.6	4.9	7.1	0	7.9	0	0
22	1.1	3.3	6.3	0	3.8	3.4	5.4	7.2	0	7.9	0	0
23	0	1.9	5.2	0	5.0	5.8	6.9	7.3	0	7.7	0	0
24	0	0	0.74	0	5.5	6.7	6.8	6.4	0	7.6	0	0.06
25	0	1.8	0	0	5.5	4.5	5.3	0	0	7.3	0	0
26	0.81	2.4	0	2.0	3.5	2.1	0	0	1.4	7.2	0	0
27	0.68	2.8	1.4	3.1	3.2	4.6	3.7	4.2	3.6	6.2	0	0
28	3.4	3.4	3.2	5.4	2.0	6.6	4.8	6.4	4.2	5.4	0	0
29	0.53		4.0	6.3	0	5.8	6.9	6.1	7.3	4.4	0	0
30	1.3		4.0	6.2	0	4.0	7.0	5.9	7.2	3.6	0	0
31	0.65		3.0		0		5.5	7.2		2.2		0.06
Total	38.38	59.61	78.00	72.83	126.2	136.2	137.5	103.7	106.12	136.02	13.7	0.16
Mean	1.24	2.13	2.52	2.43	4.07	4.54	4.43	3.35	3.54	4.39	0.46	0.005
Max	7.5	5.8	6.3	6.7	6.6	6.7	7.0	7.5	7.4	7.9	3.2	0.06
Min	0	0	0	0	0	0	0	0	0	0	0	0
Ac-ft	76	118	155	144	250	270	273	206	210	270	27	0.3

Calendar Year Summary

Annual Total 1,008.43 Annual Mean 2.76 Daily Max 7.9 Daily Min 0 Annual Ac-ft 2,000

Maximum Discharge				Minimum Discharge			
Date	Time	GH	Discharge	Date	Time	GH	Discharge
Oct. 20	09:00	N/A	8.0	Jan. 30	02:00	N/A	-0.15

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.

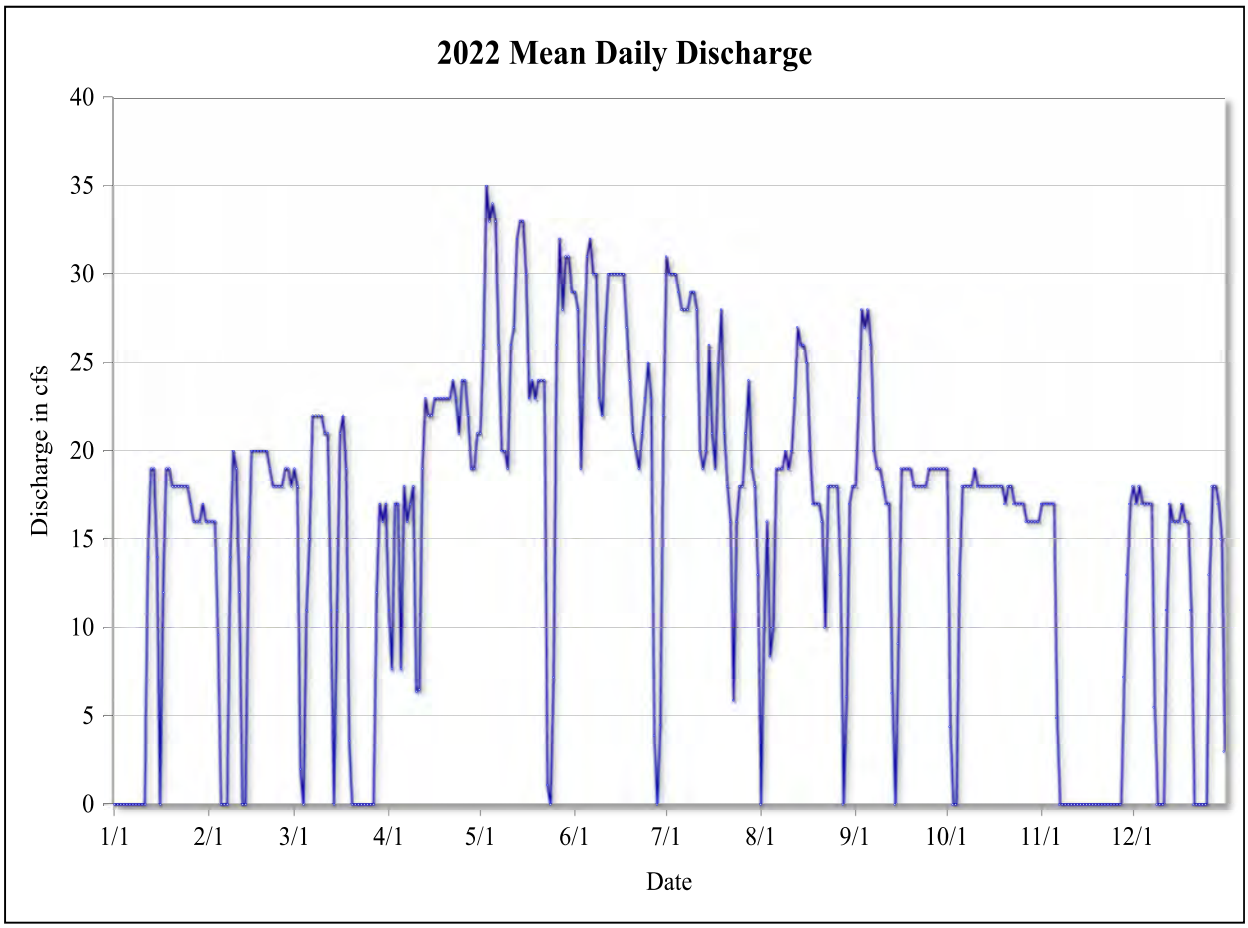
Drainage Area—Not applicable.

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 2022

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	16	19	11	21	29	31	0	18	19	17	18
2	0	16	18	7.7	26	28	30	10	23	4.4	17	17
3	0	16	2.0	17	35	19	30	16	28	0	17	18
4	0	9.6	0	17	33	26	30	8.4	27	0	17	17
5	0	0	11	7.7	34	31	29	10	28	13	17	17
6	0	0	15	18	33	32	28	19	26	18	4.9	17
7	0	0	22	16	26	30	28	19	20	18	0	17
8	0	14	22	17	20	30	28	19	19	18	0	5.5
9	0	20	22	18	20	23	29	20	19	18	0	0
10	0	19	22	6.4	19	22	29	19	18	19	0	0
11	0	12	21	6.5	26	27	28	20	17	18	0	0
12	14	0	21	19	27	30	20	23	17	18	0	11
13	19	0	11	23	32	30	19	27	6.3	18	0	17
14	19	14	0	22	33	30	20	26	0	18	0	16
15	14	20	11	22	33	30	26	26	9.1	18	0	16
16	0	20	21	23	30	30	21	25	19	18	0	16
17	12	20	22	23	23	30	19	20	19	18	0	17
18	19	20	19	23	24	27	25	17	19	18	0	16
19	19	20	3.6	23	23	24	28	17	19	18	0	16
20	18	20	0	23	24	21	21	17	18	17	0	11
21	18	19	0	23	24	20	18	16	18	18	0	0
22	18	18	0	24	24	19	16	10	18	18	0	0
23	18	18	0	23	1.1	21	5.9	18	18	17	0	0
24	18	18	0	21	0	23	16	18	18	17	0	0
25	18	18	0	24	7.2	25	18	18	19	17	0	0
26	17	19	0	24	26	23	18	18	19	17	0	13
27	16	19	0	22	32	3.9	21	13	19	16	0	18
28	16	18	12	19	28	0	24	0	19	16	7.2	18
29	16		17	19	31	4.5	19	6.1	19	16	13	17
30	17		16	21	31	22	18	17	19	16	17	15
31	16		17		29		13	18		16		3.0
Total	321	405.7	344.5	561.3	774.6	711.6	705.4	509.7	554.7	493.2	127.7	346.5
Mean	10.4	14.5	11.1	18.7	25.0	23.7	22.8	16.4	18.5	15.9	4.26	11.2
Max	19	20	22	24	35	32	31	27	28	19	17	18
Min	0	0	0	6.4	0	0	5.9	0	0	0	0	0
Ac-ft	637	805	683	1,113	1,536	1,411	1,399	1,011	1,100	978	253	687

Calendar Year Summary

Annual Total 5,856.0 Annual Mean 16.0 Daily Max 35 Daily Min 0 Annual Ac-ft 11,615

Maximum Discharge				Minimum Discharge			
Date	Time	GH	Discharge	Date	Time	GH	Discharge
May 3	00:00	1.45	39	Jan. 1	01:00	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.

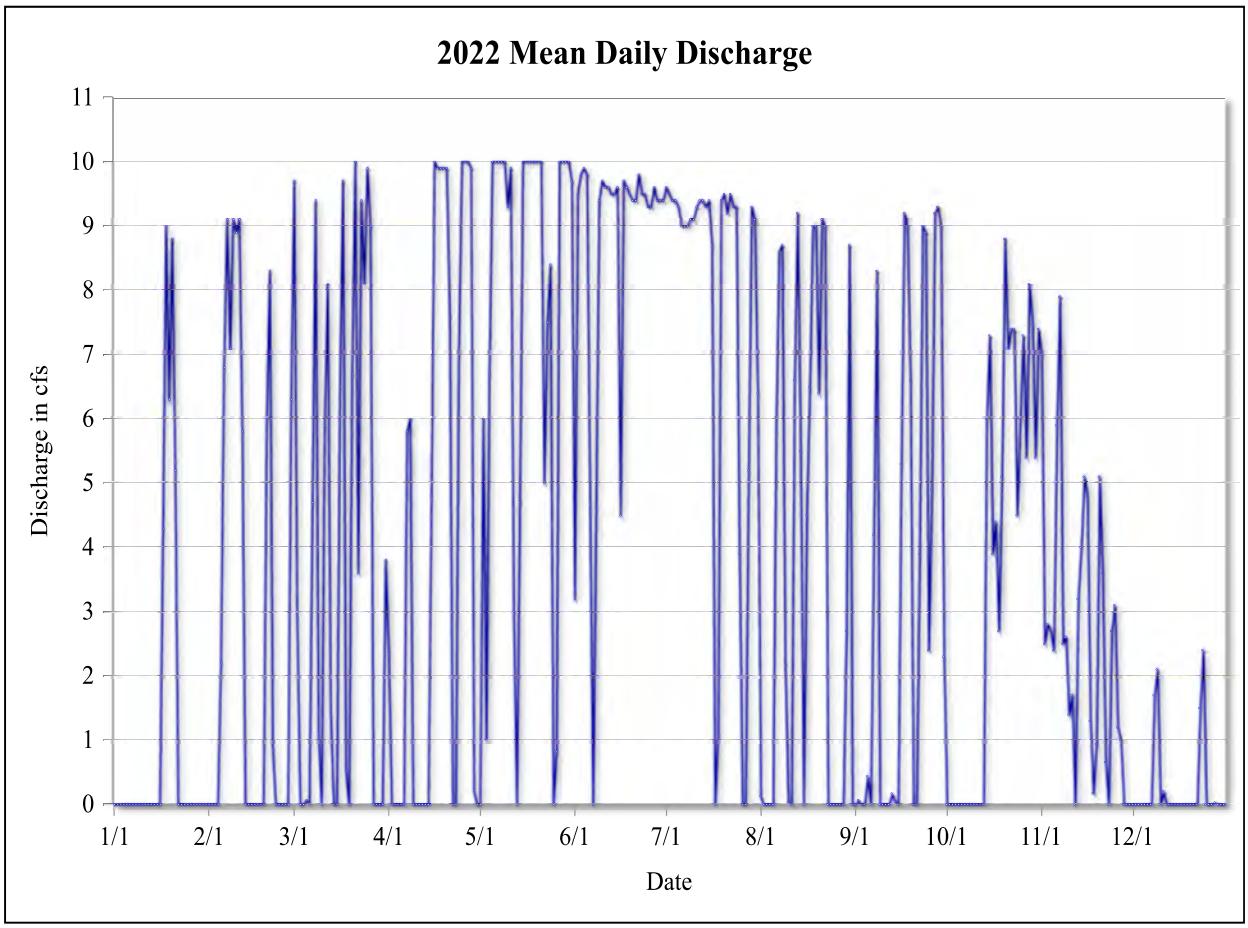
Drainage Area—Not applicable.

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—The discharge record was estimated from Mar. 13, 2022 at 10:00 to Mar. 16, 2022 at 09:00 and Oct. 10, 2022 at 22:00 to Oct. 12, 2022 at 08:00 due to gage malfunction.



Fort Mojave Tribe-California 2 (North)

Mean daily discharge, in cubic-feet per second, Calendar Year 2022

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0	9.7	2.4	0	3.2	9.6	0.13	0	0	7.0	0
2	0	0	2.9	0	6.0	9.5	9.5	0	0.07	0	2.5	0
3	0	0	0	0	1.0	9.8	9.4	0	0	0	2.8	0
4	0	0	0	0	6.7	9.9	9.4	0	0	0	2.7	0
5	0	2.2	0.07	0	10	9.8	9.3	0	0.44	0	2.4	0
6	0	6.8	0.01	0	10	4.6	9.0	5.8	0	0	5.9	0
7	0	9.1	4.7	5.8	10	0	9.0	8.6	4.2	0	7.9	0
8	0	7.1	9.4	6.0	10	4.6	9.0	8.7	8.3	0	2.5	1.7
9	0	9.1	1.1	0	10	9.4	9.1	2.2	0	0	2.6	2.1
10	0	8.9	0	0	9.3	9.7	9.1	0.04	0	**0**	1.4	0
11	0	9.1	5.9	0	9.9	9.6	9.3	0	0	**0**	1.7	0.21
12	0	5.8	8.1	0	3.0	9.6	9.4	6.6	0	**0**	0	0
13	0	0	**1.4**	0	0	9.5	9.4	9.2	0.17	0	3.2	0
14	0	0	**0**	0	4.7	9.5	9.3	5.5	0.05	6.0	4.0	0
15	0	0	**0**	4.8	10	9.6	9.4	0	0	7.3	5.1	0
16	0	0	**6.5**	10	10	4.5	8.7	4.5	5.3	3.9	4.8	0
17	4.3	0	9.7	9.9	10	9.7	0	6.5	9.2	4.4	1.3	0
18	9.0	0	0.52	9.9	10	9.6	1.1	9.0	9.0	2.7	0.18	0
19	6.3	0	0	9.9	10	9.5	9.4	9.0	6.6	5.1	0.94	0
20	8.8	6.0	6.7	9.9	10	9.4	9.5	6.4	0	8.8	5.1	0
21	5.2	8.3	10	7.6	10	9.4	9.2	9.1	0	7.1	3.6	0
22	0	0.88	3.6	0	5.0	9.8	9.5	9.0	3.9	7.4	0.66	0
23	0	0	9.4	0	7.5	9.5	9.3	0	9.0	7.4	0	1.5
24	0	0	8.1	7.1	8.4	9.5	9.3	0	8.9	4.5	2.7	2.4
25	0	0	9.9	10	0	9.3	3.9	0	2.4	6.0	3.1	0
26	0	0	9.0	10	0.82	9.3	0	0	4.9	7.3	1.2	0
27	0	0	0	10	10	9.6	0	0	9.2	5.4	1.0	0
28	0	6.3	0	9.9	10	9.4	5.2	0	9.3	8.1	0	0.03
29	0		0	0.22	10	9.4	9.3	2.7	9.0	7.5	0	0
30	0		0	0	10	9.4	9.1	8.7	2.3	5.4	0	0
31	0		3.8		9.7		6.4	0		7.4		0
Total	33.6	79.69	120.53	123.78	233.81	255.5	238.9	111.74	102.19	111.5	76.47	7.97
Mean	1.08	2.85	3.89	4.13	7.54	8.52	7.71	3.60	3.41	3.60	2.55	0.26
Max	9.0	9.1	10	10	10	9.9	9.6	9.2	9.3	8.8	7.9	2.4
Min	0	0	0	0	0	0	0	0	0	0	0	0
Ac-ft	67	158	239	246	464	507	474	222	203	221	152	16

Calendar Year Summary

Annual Total 1,495.69 Annual Mean 4.10 Daily Max 10 Daily Min 0 Annual Ac-ft 2,967

Maximum Discharge				Minimum Discharge			
Date	Time	GH	Discharge	Date	Time	GH	Discharge
May 22	06:00	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-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.

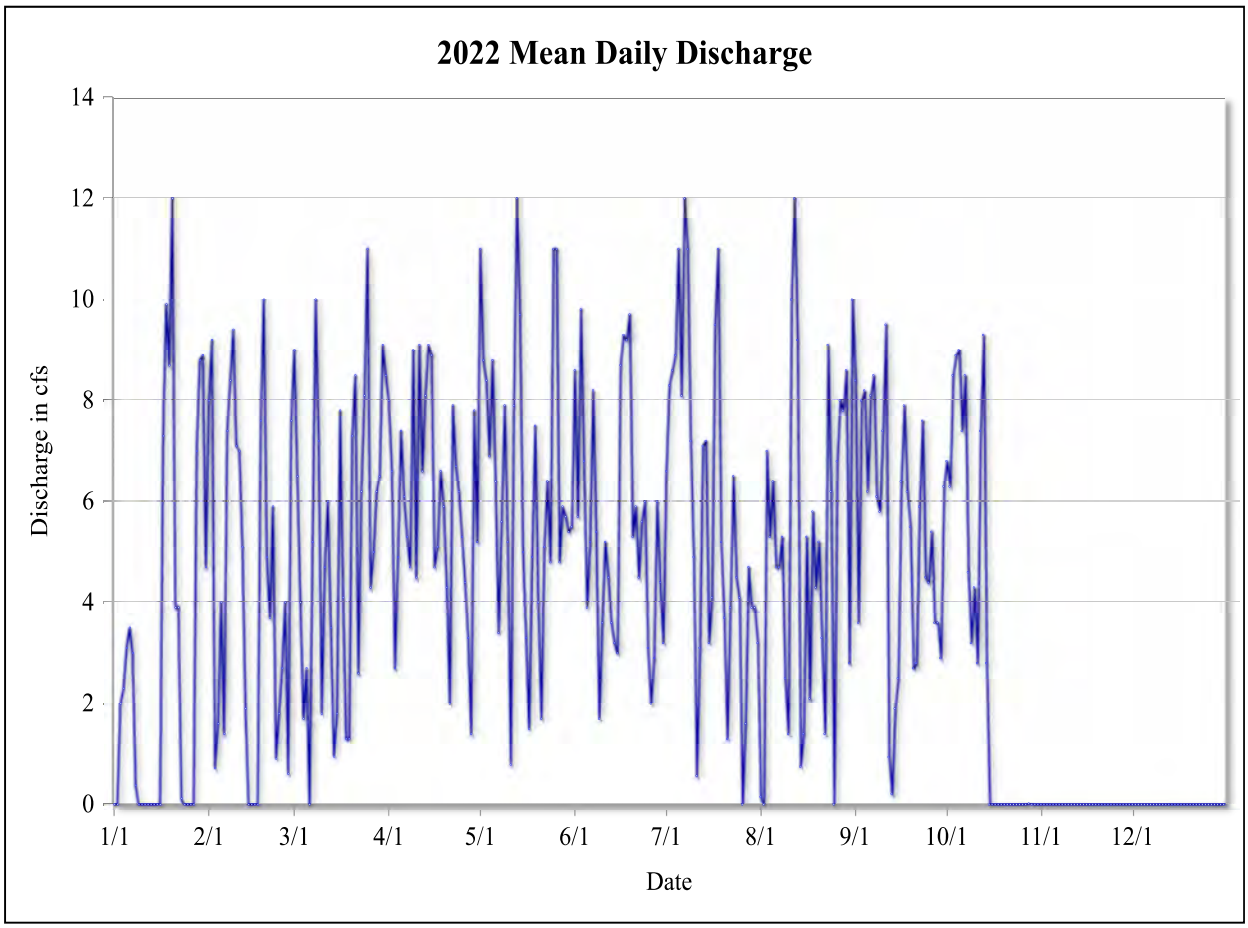
Drainage Area—Not applicable.

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—The discharge record was estimated from Mar. 13, 2022 at 10:00 to Mar. 16, 2022 at 09:00 and Oct. 11, 2022 at 05:00 to Oct. 12, 2022 at 08:00 due to gage malfunction.



Fort Mojave Tribe-California 2 (West)

Mean daily discharge, in cubic-feet per second, Calendar Year 2022

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	8.0	9.0	8.0	11	8.6	6.6	0.15	8.4	6.8	0	0
2	0	9.2	6.5	6.6	8.8	5.7	8.3	0	3.6	6.3	0	0
3	2.0	0.72	4.0	2.7	8.4	9.8	8.6	7.0	8.0	8.5	0	0
4	2.3	1.6	1.7	4.9	6.9	6.8	8.9	5.3	8.2	8.9	0	0
5	3.1	4.0	2.7	7.4	8.8	3.9	11	6.4	6.2	9.0	0	0
6	3.5	1.4	0	6.1	6.4	5.2	8.1	4.7	8.1	7.4	0	0
7	3.0	7.4	5.2	5.3	3.4	8.2	12	4.7	8.5	8.5	0	0
8	0.38	8.4	10	4.7	5.6	5.4	11	5.3	6.1	4.6	0	0
9	0	9.4	7.2	9.0	7.9	1.7	7.2	2.5	5.8	3.2	0	0
10	0	7.1	1.8	4.5	5.2	3.6	4.9	1.4	7.4	4.3	0	0
11	0	7.0	4.7	9.1	0.79	5.2	0.57	10	9.5	**2.8**	0	0
12	0	5.1	6.0	6.6	7.9	4.5	3.1	12	0.94	**7.4**	0	0
13	0	1.9	**3.5**	8.1	12	3.6	7.1	9.2	0.21	9.3	0	0
14	0	0	**0.95**	9.1	9.7	3.2	7.2	0.75	1.9	2.8	0	0
15	0	0	**1.8**	8.9	5.0	3.0	3.2	1.4	2.5	0	0	0
16	0	0	**7.8**	4.7	3.3	8.7	4.1	5.3	6.4	0	0	0
17	7.3	0	4.1	5.1	1.5	9.3	9.5	2.1	7.9	0	0	0
18	9.9	7.6	1.3	6.6	4.9	9.2	11	5.8	6.2	0	0	0
19	8.7	10	1.3	5.9	7.5	9.7	5.2	4.3	5.5	0	0	0
20	12	4.9	7.3	4.3	4.0	5.3	3.7	5.2	2.7	0	0	0
21	3.9	3.7	8.5	2.0	1.7	5.9	1.3	3.3	2.8	0	0	0
22	3.9	5.9	2.6	7.9	5.1	4.5	3.9	1.4	5.9	0	0	0
23	0.12	0.91	6.2	6.7	6.4	5.6	6.5	9.1	7.6	0	0	0
24	0	1.8	8.1	6.2	4.8	6.0	4.5	6.2	4.5	0	0	0
25	0	2.7	11	5.3	11	3.1	4.1	0	4.4	0	0	0
26	0	4.0	4.3	4.4	11	2.0	0	6.8	5.4	0	0	0
27	0	0.61	5.0	3.3	4.8	2.9	1.6	8.0	3.6	0	0	0
28	7.0	7.6	6.2	1.4	5.9	6.0	4.7	7.8	3.6	0.02	0	0
29	8.8		6.5	7.8	5.7	4.4	3.9	8.6	2.9	0	0	0
30	8.9		9.1	5.2	5.4	3.2	3.9	2.8	6.3	0	0	0
31	4.7		8.5		5.5		3.2	10		0		0
Total	89.16	120.83	162.35	177.6	196.57	164.2	178.25	157.56	161.15	89.93	0	0
Mean	2.88	4.32	5.24	5.92	6.34	5.47	5.75	5.08	5.37	2.90	0	0
Max	12	10	11	9.1	12	9.8	12	12	9.5	9.3	0	0
Min	0	0	0	1.4	0.79	1.7	0	0	0.21	0	0	0
Ac-ft	177	240	322	352	390	326	354	313	320	178	0	0

Calendar Year Summary

Annual Total 1,497.60 Annual Mean 4.10 Daily Max 12 Daily Min 0 Annual Ac-ft 2,970

Maximum Discharge				Minimum Discharge			
Date	Time	GH	Discharge	Date	Time	GH	Discharge
May 14	03:00	N/A	14	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-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.

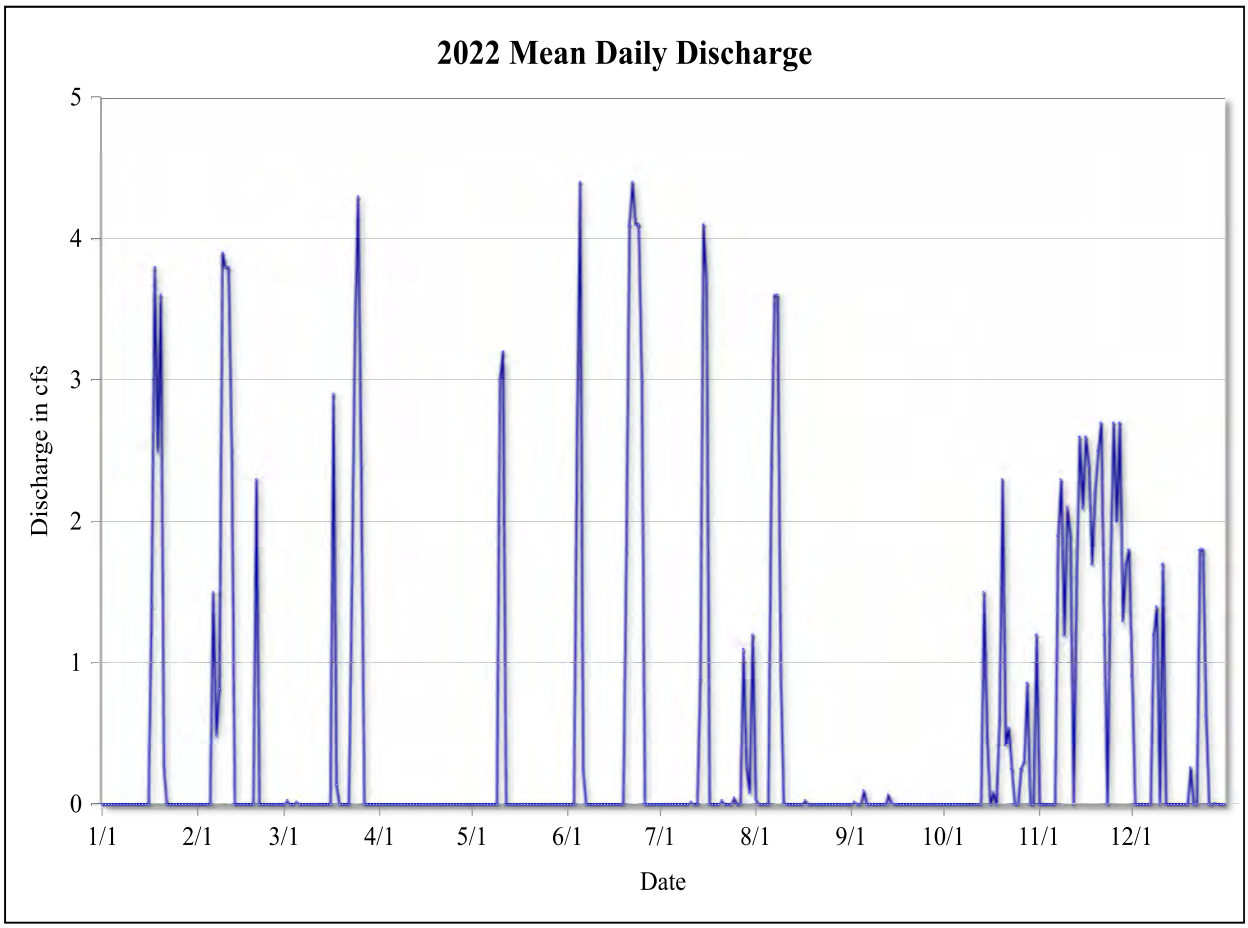
Drainage Area—Not applicable.

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—The discharge record was estimated from Oct. 10, 2022 at 22:00 to Oct. 12, 2022 at 08:00 due to gage malfunction.



Fort Mojave Tribe-California 2 (South)

Mean daily discharge, in cubic-feet per second, Calendar Year 2022

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0	0	0	0	0	0	0.04	0	0	0	0.91
2	0	0	0.03	0	0	0	0	0	0.02	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	2.6	0	0	0	0	0	0
5	0	0	0.02	0	0	4.4	0	0	0.10	0	0	0
6	0	1.5	0	0	0	0.24	0	2.4	0	0	0	0
7	0	0.49	0	0	0	0	0	3.6	0	0	1.9	0
8	0	0.82	0	0	0	0	0	3.6	0	0	2.3	1.2
9	0	3.9	0	0	0	0	0	0.95	0	0	1.2	1.4
10	0	3.8	0	0	3.0	0	0	0.01	0	**0**	2.1	0
11	0	3.8	0	0	3.2	0	0.02	0	0	**0**	1.9	1.7
12	0	2.5	0	0	0	0	0	0	0	**0**	0	0
13	0	0	0	0	0	0	0	0	0.07	0	1.6	0
14	0	0	0	0	0	0	0.89	0	0.01	1.5	2.6	0
15	0	0	0	0	0	0	4.1	0	0	0.47	2.1	0
16	0	0	0	0	0	0	3.7	0	0	0	2.6	0
17	1.4	0	2.9	0	0	0	0	0.03	0	0.09	2.4	0
18	3.8	0	0.14	0	0	0	0	0	0	0	1.7	0
19	2.5	0	0	0	0	0	0	0	0	0.60	2.2	0
20	3.6	2.3	0	0	0	1.8	0	0	0	2.3	2.5	0.26
21	0.26	0	0	0	0	4.1	0.03	0	0	0.42	2.7	0
22	0	0	0	0	0	4.4	0	0	0	0.54	1.2	0
23	0	0	1.6	0	0	4.1	0	0	0	0.25	0	1.8
24	0	0	3.4	0	0	4.1	0	0	0	0	1.7	1.8
25	0	0	4.3	0	0	3.0	0.05	0	0	0	2.7	0.63
26	0	0	2.4	0	0	0	0	0	0	0.25	2.0	0
27	0	0	0	0	0	0	0	0	0	0.30	2.7	0
28	0	0	0	0	0	0	1.1	0	0	0.86	1.3	0.01
29	0		0	0	0	0	0.26	0	0	0	1.7	0
30	0		0	0	0	0	0.09	0	0	0	1.8	0
31	0		0		0		1.2	0		1.2		0
Total	11.57	19.14	14.75	0	6.2	28.73	11.47	10.60	0.20	8.68	45.0	9.69
Mean	0.37	0.68	0.48	0	0.20	0.96	0.37	0.34	0.007	0.28	1.50	0.31
Max	3.8	3.9	4.3	0	3.2	4.4	4.1	3.6	0.10	2.3	2.7	1.8
Min	0	0	0	0	0	0	0	0	0	0	0	0
Ac-ft	23	38	29	0	12	57	23	21	0.4	17	89	19

Calendar Year Summary

Annual Total 166.03 Annual Mean 0.45 Daily Max 4.4 Daily Min 0 Annual Ac-ft 329

Maximum Discharge				Minimum Discharge			
Date	Time	GH	Discharge	Date	Time	GH	Discharge
Jun. 5	02:00	N/A	5.0	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-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.

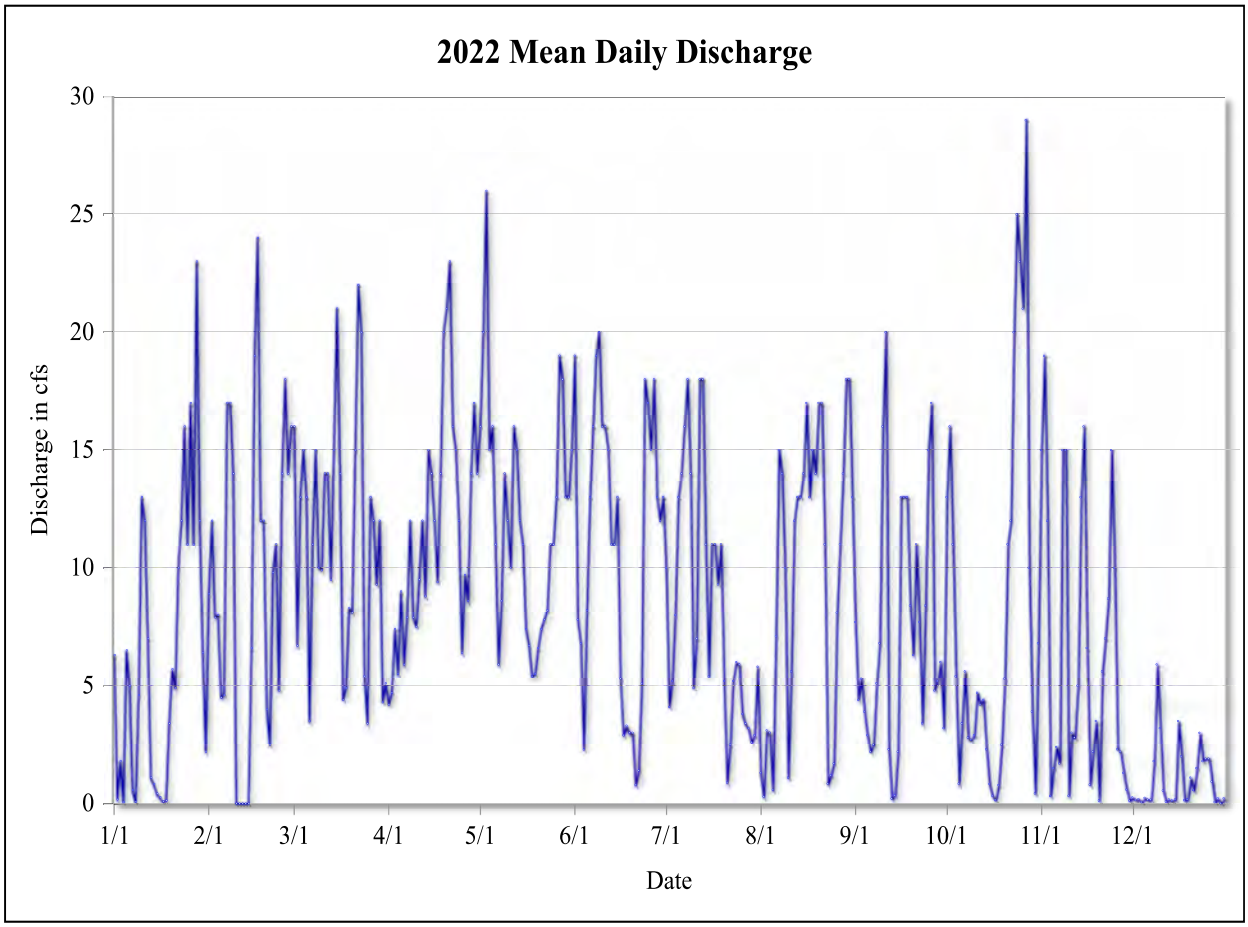
Drainage Area—Not applicable.

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 Mar. 18, 2022 at 07:00 to Mar 21, 2022 at 12:00, Mar. 25, 2022 at 21:00 to Mar. 28, 2022 at 09:00, Apr. 26, 2022 at 13:00 to May 2, 2022 at 10:00, May 28, 2022 at 07:00 to May 29, 2022 at 12:00, May 29, 2022 at 19:00 to May 30, 2022 at 10:00, Jun. 24, 2022 at 03:00 to Jun. 27, 2022 at 07:00, Jun. 27, 2022 at 14:00 to Jun. 30, 2022 at 11:00, and Jul. 5, 2022 at 04:00 to Jul. 6, 2022 at 07:00 due to equipment failure.



Fort Mojave Tribe-California 1

Mean daily discharge, in cubic-feet per second, Calendar Year 2022

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	6.3	8.9	16	4.2	**16**	19	10	1.3	7.7	13	15	0.26
2	0.18	12	6.7	4.7	**20**	7.8	4.1	0.29	4.4	16	19	0.15
3	1.8	7.9	13	7.4	26	6.8	5.2	3.1	5.3	11	12	0.19
4	0.06	8.0	15	5.5	15	2.3	8.0	3.0	3.9	5.4	0.32	0.06
5	6.5	4.5	13	9.0	16	8.2	**13**	0.58	2.9	0.84	1.5	0.24
6	5.0	4.6	3.5	5.9	11	13	**14**	7.1	2.2	3.4	2.4	0.16
7	0.57	17	11	7.9	5.9	16	16	15	2.5	5.6	1.7	0.16
8	0.08	17	15	12	8.6	19	18	14	5.1	2.8	15	1.8
9	4.6	14	10	7.9	14	20	14	10	6.8	2.7	15	5.9
10	13	0	9.9	7.5	12	16	4.9	1.1	16	2.9	0.33	3.2
11	12	0	14	9.5	10	16	7.0	5.6	20	4.7	3.0	0.55
12	7.0	0	14	12	16	15	18	12	2.3	4.2	2.8	0.08
13	1.1	0	9.5	8.8	15	11	18	13	0.21	4.4	5.0	0.17
14	0.83	0	15	15	12	11	11	13	0.35	2.3	13	0.12
15	0.42	6.6	21	14	11	13	5.4	14	2.2	0.83	16	0.17
16	0.27	19	14	12	7.4	5.3	11	17	13	0.33	6.6	3.5
17	0.09	24	4.4	9.4	6.7	2.9	11	13	13	0.15	0.80	2.0
18	0.13	12	**4.9**	14	5.4	3.3	9.3	15	13	0.78	2.2	0.14
19	3.4	12	**8.3**	20	5.5	3.0	11	14	8.4	2.5	3.5	0.18
20	5.7	4.0	**8.1**	21	6.6	3.0	5.2	17	6.3	5.3	0.13	1.1
21	4.9	2.5	**15**	23	7.4	0.79	0.89	17	11	11	5.6	0.57
22	10	9.8	22	16	7.8	1.4	2.5	11	7.7	12	7.0	1.5
23	12	11	20	15	8.2	5.1	5.2	0.84	3.4	20	8.7	3.0
24	16	4.8	5.4	12	11	**18**	6.0	1.2	8.4	25	15	1.8
25	11	14	**3.4**	6.4	11	**17**	5.9	1.7	15	23	10	1.9
26	17	18	**13**	**9.7**	13	**15**	3.8	8.1	17	21	2.3	1.9
27	11	14	**12**	**8.6**	19	**18**	3.4	11	4.8	29	2.2	0.93
28	23	16	**9.3**	**14**	**18**	**13**	3.2	14	5.2	10	1.3	0.06
29	12		12	**17**	**13**	**12**	2.6	18	6.0	3.9	0.59	0.22
30	6.4		4.3	**14**	**13**	**13**	2.9	18	3.2	0.43	0.12	0.01
31	2.2		5.1		15		5.8	13		6.8		0.22
Total	195.51	260.6	347.0	344.2	375.3	324.45	256.40	302.36	216.43	251.40	188.85	32.33
Mean	6.31	9.31	11.2	11.5	12.1	10.8	8.27	9.75	7.21	8.11	6.29	1.04
Max	23	24	22	23	26	20	18	18	20	29	19	5.9
Min	0.06	0	3.4	4.2	5.4	0.79	0.89	0.29	0.21	0.15	0.12	0.01
Ac-ft	388	517	688	683	744	644	509	600	429	499	375	64

Calendar Year Summary

Annual Total 3,094.90 Annual Mean 8.48 Daily Max 29 Daily Min 0 Annual Ac-ft 6,139

Maximum Discharge				Minimum Discharge			
Date	Time	GH	Discharge	Date	Time	GH	Discharge
Mar. 1	14:00	2.73	42	Jul. 21	19:00	1.54	-2.0

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

Fort Mojave Tribe-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.

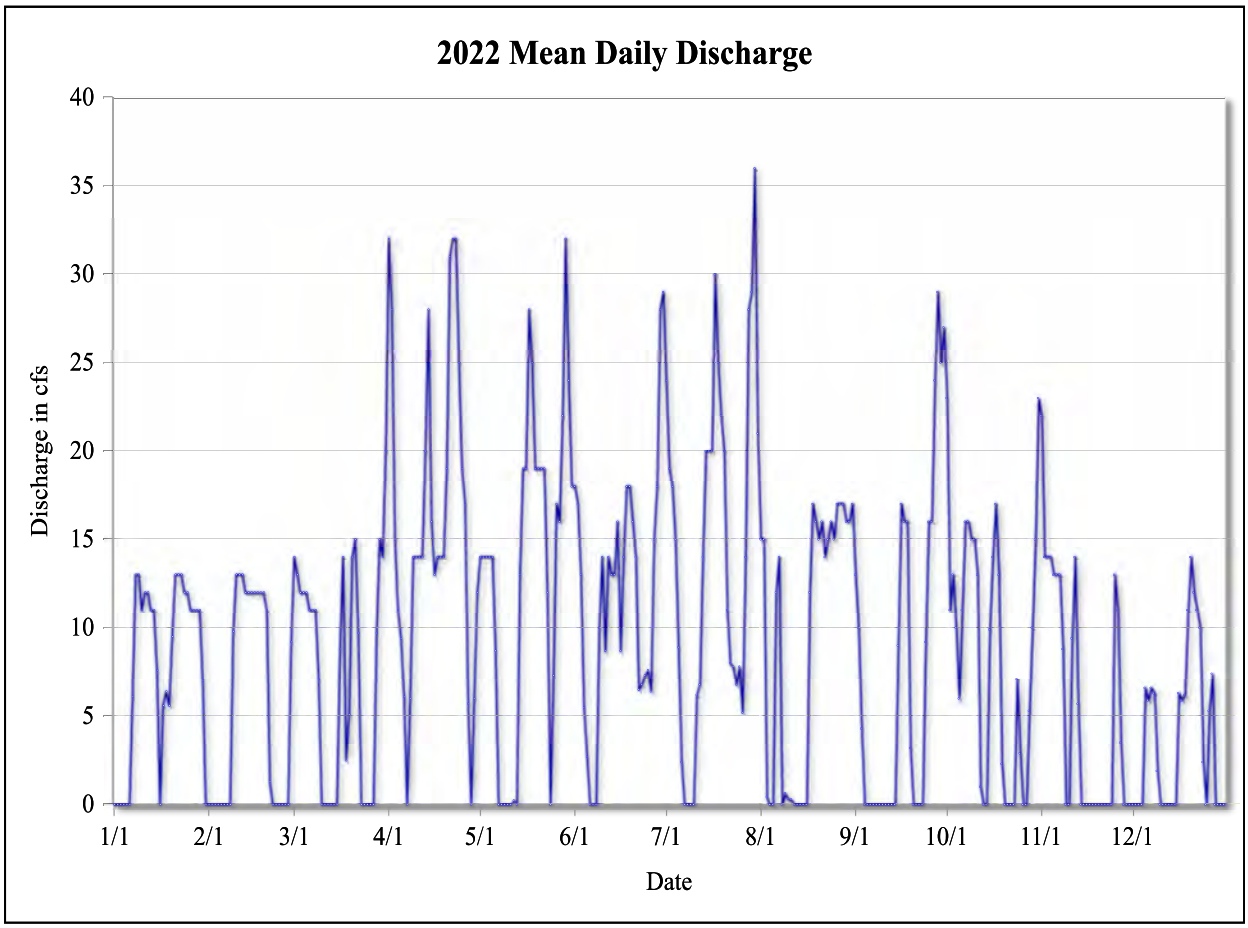
Drainage Area—Not applicable.

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 2022

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0	14	32	14	18	24	15	13	23	22	0
2	0	0	13	28	14	17	19	15	10	11	14	0
3	0	0	12	15	14	13	18	0.42	4.3	13	14	0
4	0	0	12	11	14	5.5	15	0	0	10	14	0
5	0	0	12	9.4	14	2.7	8.9	0	0	6.0	13	6.6
6	0	0	11	6.1	8.7	0	2.4	12	0	11	13	5.9
7	6.1	0	11	0	0	0	0	14	0	16	13	6.6
8	13	0	11	6.0	0	0	0	0	0	16	8.8	6.3
9	13	9.8	7.1	14	0	10	0	0.65	0	15	0	1.9
10	11	13	0	14	0	14	0	0.32	0	15	0	0
11	12	13	0	14	0	8.7	6.2	0.29	0	13	9.4	0
12	12	13	0	14	0.23	14	6.8	0	0	1.0	14	0
13	11	12	0	20	0	13	14	0	0	0	5.7	0
14	11	12	0	28	13	13	20	0	0	0	0	0
15	7.6	12	0	16	19	16	20	0	9.0	9.9	0	0
16	0	12	8.8	13	19	8.7	20	0	17	14	0	6.3
17	5.6	12	14	14	28	14	30	12	16	17	0	5.9
18	6.4	12	2.5	14	25	18	25	17	16	13	0	6.2
19	5.6	12	5.1	14	19	18	22	16	3.2	2.3	0	11
20	9.5	11	14	19	19	16	20	15	0	0	0	14
21	13	1.3	15	31	19	14	11	16	0	0	0	12
22	13	0	9.7	32	19	6.5	8.0	14	0	0	0	11
23	13	0	0	32	12	6.8	7.8	15	0	0	0	10
24	12	0	0	25	0	7.3	6.8	16	9.2	7.1	0	2.4
25	12	0	0	19	7.3	7.6	7.8	15	16	2.9	13	0
26	11	0	0	17	17	6.4	5.2	17	16	0	11	5.3
27	11	0	0	5.7	16	15	14	17	24	0	3.5	7.4
28	11	9.2	9.7	0	22	18	28	17	29	5.3	0	0
29	11		15	6.0	32	28	29	16	25	10	0	0
30	7.0		14	12	24	29	36	16	27	15	0	0
31	0		20		18		21	17		23		0
Total	236.8	154.1	230.3	481.1	404.67	357.8	445.2	292.80	235.1	269.4	167.2	118.9
Mean	7.64	5.50	7.43	16.0	13.1	11.9	14.4	9.45	7.84	8.69	5.57	3.84
Max	13	13	20	32	32	29	36	17	29	23	22	14
Min	0	0	0	0	0	0	0	0	0	0	0	0
Ac-ft	470	306	457	954	803	710	883	581	466	534	332	236

Calendar Year Summary

Annual Total 3,393.57 Annual Mean 9.30 Daily Max 36 Daily Min 0 Annual Ac-ft 6,731

Maximum Discharge				Minimum Discharge			
Date	Time	GH	Discharge	Date	Time	GH	Discharge
Jul. 29	00:00	1.05	40	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.

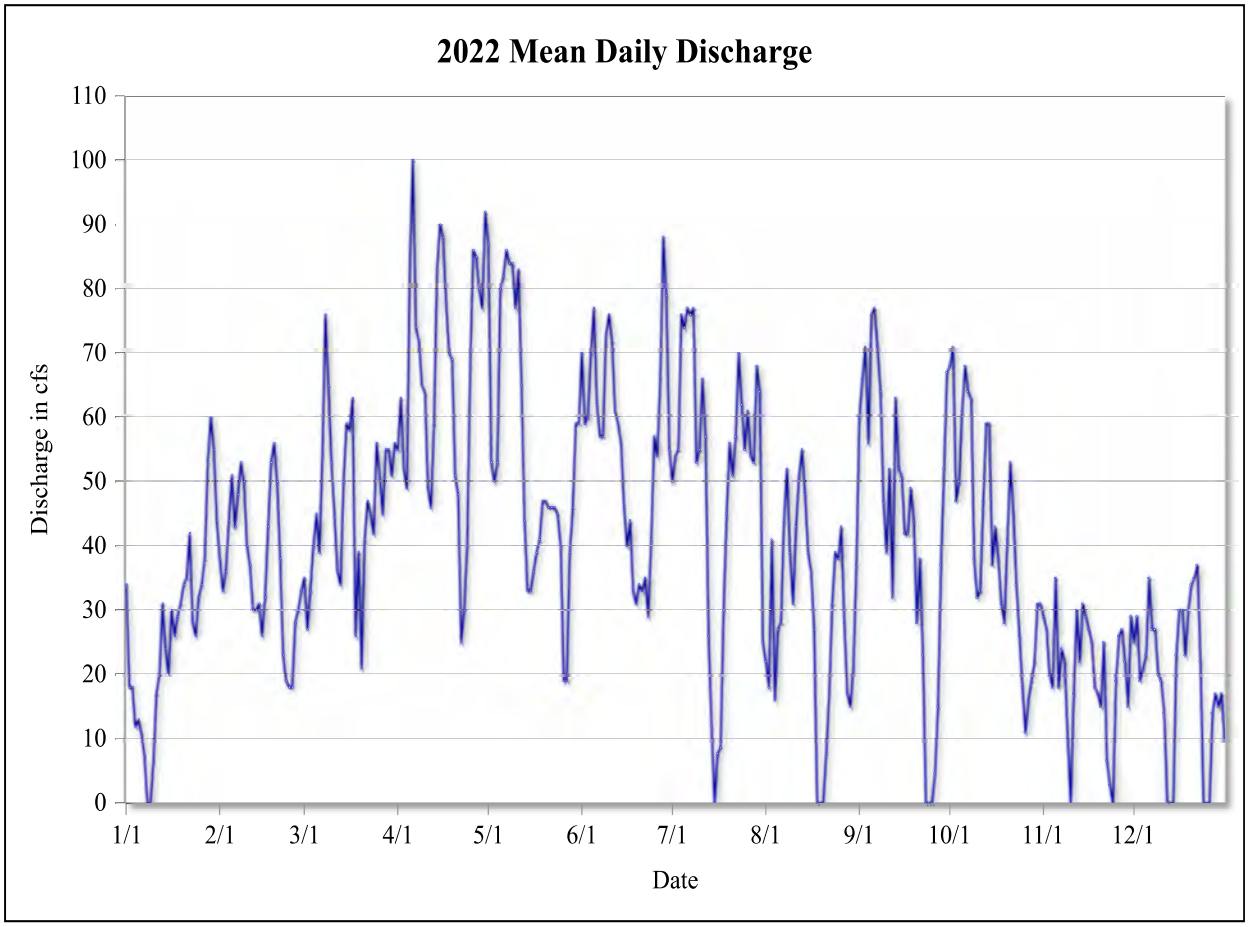
Drainage Area—Not applicable.

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-IQ Plus 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 2022

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	34	38	35	55	87	70	50	22	60	68	29	25
2	18	33	27	63	53	59	54	18	66	71	27	29
3	18	36	33	52	50	60	55	41	71	47	20	19
4	12	44	40	49	53	70	76	16	56	50	18	21
5	13	51	45	84	80	77	74	27	76	61	35	23
6	11	43	39	100	82	62	77	28	77	68	18	35
7	7.4	48	54	74	86	57	76	44	71	64	24	27
8	-0.01	53	76	72	84	57	77	52	64	63	22	27
9	-0.01	50	65	65	84	73	53	39	47	38	10	20
10	6.4	40	53	64	77	76	55	31	39	32	-0.01	19
11	17	37	45	49	83	72	66	43	52	33	17	14
12	20	30	36	46	65	61	57	51	32	47	30	0.23
13	31	30	34	59	44	59	26	55	63	59	22	-0.01
14	24	31	50	83	33	56	12	48	52	59	31	-0.01
15	20	26	59	90	33	46	-0.01	39	51	37	29	23
16	30	32	58	88	36	40	7.7	36	42	43	27	30
17	26	43	63	78	39	44	8.6	27	42	38	25	30
18	29	53	26	70	41	33	30	0.03	49	31	18	23
19	31	56	39	69	47	31	45	-0.01	44	28	17	30
20	34	50	21	51	47	34	56	-0.01	28	41	15	34
21	35	38	41	48	46	33	51	7.7	38	53	25	35
22	42	23	47	25	46	35	57	17	23	45	6.6	37
23	28	19	45	30	46	29	70	31	0	34	2.8	22
24	26	18	42	40	45	41	62	39	0	26	-0.01	-0.01
25	32	18	56	68	40	57	55	38	0	18	19	-0.01
26	34	28	51	86	19	54	61	43	4.6	11	26	-0.01
27	38	30	45	85	19	66	54	28	15	16	27	14
28	53	33	55	80	39	88	53	17	37	19	22	17
29	60		55	77	46	79	68	15	52	22	15	15
30	55		51	92	59	55	64	21	67	31	29	17
31	44		56		59		25	37		31		9.7
Total	828.33	1,029	1,440	1,994	1,668	1,675	1,578.26	908.81	1,320.6	1,282	607.84	595.55
Mean	26.7	36.7	46.5	66.5	53.8	55.8	50.9	29.3	44.0	41.4	20.3	19.2
Max	60	56	76	100	87	88	77	55	77	71	35	37
Min	-0.01	18	21	25	19	29	-0.01	-0.01	0	11	-0.01	-0.01
Ac-ft	1,643	2,040	2,857	3,955	3,308	3,322	3,130	1,803	2,619	2,543	1,206	1,181

Calendar Year Summary

Annual Total 14,927.49 Annual Mean 40.9 Daily Max 100 Daily Min -0.01 Annual Ac-ft 29,608

Maximum Discharge				Minimum Discharge			
Date	Time	GH	Discharge	Date	Time	GH	Discharge
Apr. 6	05:00	3.72	108	Oct. 26	07:00	2.80	-0.11

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.

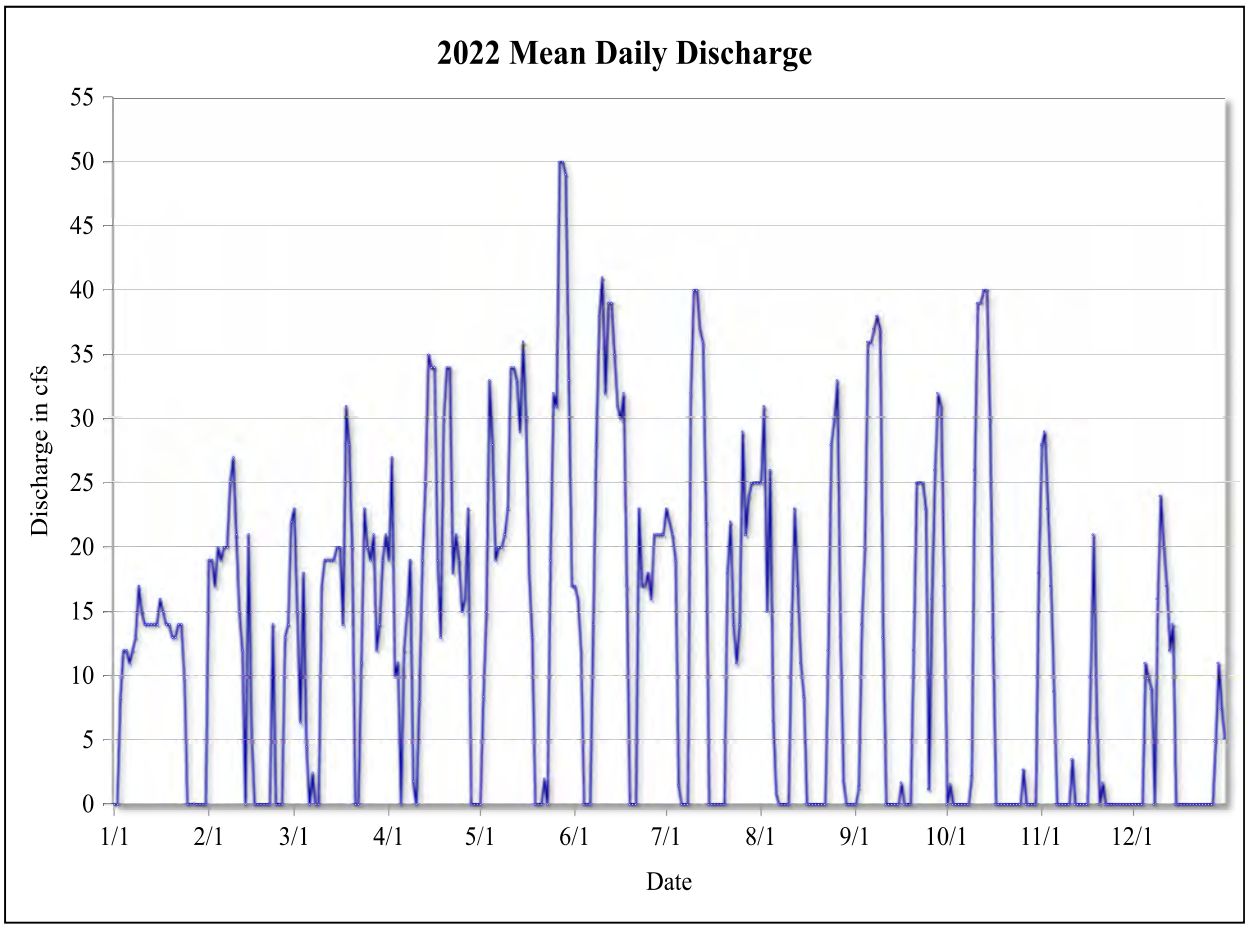
Drainage Area—Not applicable.

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, 50 cfs, May 27, 2022; minimum daily discharge, no diversion at times; maximum hourly discharge, 53 cfs, May 27, 2022 at 05:00; minimum hourly discharge, no diversion at times.

Remarks—None.



Fort Mojave Tribe-Barrackman

Mean daily discharge, in cubic-feet per second, Calendar Year 2022

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	19	23	19	0	17	23	25	0	0	28	0
2	0	19	15	27	8.4	16	22	31	1.4	1.6	29	0
3	8.3	17	6.4	10	15	12	21	15	14	0	23	0
4	12	20	18	11	33	0	19	26	20	0	17	0
5	12	19	4.5	0	28	0	1.5	6.5	36	0	8.8	11
6	11	20	0	12	19	0	0	0.83	36	0	0	9.8
7	12	20	2.4	15	20	14	0	0	37	0	0	9.0
8	13	25	0	19	20	28	0	0	38	0	0	0
9	17	27	0	1.8	21	38	32	0	37	2.2	0	16
10	15	21	17	0	23	41	40	0	13	26	0	24
11	14	15	19	8.0	34	32	40	14	0	39	3.5	20
12	14	12	19	19	34	39	37	23	0	39	0	17
13	14	0	19	25	33	39	36	17	0	40	0	12
14	14	21	19	35	29	35	22	11	0	40	0	14
15	14	5.8	20	34	36	31	0	8.4	0	30	0	**0**
16	16	0	20	34	30	30	0	0	1.7	13	0	**0**
17	15	0	14	19	18	32	0	0	0	0	9.9	0
18	14	0	31	13	13	17	0	0	0	0	21	0
19	14	0	28	30	0	0	0	0	0	0	6.7	0
20	13	0	20	34	0	0	0	0	12	0	0	0
21	13	0	0	34	0	0	18	0	25	0	1.7	0
22	14	14	0	18	2.0	23	22	0	25	0	0	0
23	14	0	11	21	0	17	14	12	25	0	0	0
24	9.7	0	23	19	19	17	11	28	23	0	0	0
25	0	0	20	15	32	18	14	30	1.2	0	0	0
26	0.03	13	19	16	31	16	29	33	16	2.7	0	0
27	0.06	14	21	23	50	21	21	13	26	0	0	0
28	0	22	12	0.01	50	21	24	1.8	32	0	0	4.9
29	0		14	0	49	21	25	0	31	0	0	11
30	0		19	0	33	21	25	0	17	0	0	7.4
31	0		21		17		25	0		18		5.1
Total	290.70	323.7	454.7	511.96	697.1	595	520.9	294.70	466.9	252.0	149.1	160.5
Mean	9.38	11.6	14.7	17.1	22.5	19.8	16.8	9.51	15.6	8.13	4.97	5.18
Max	17	27	31	35	50	41	40	33	38	40	29	24
Min	0	0	0	0	0	0	0	0	0	0	0	0
Ac-ft	577	642	902	1,015	1,383	1,181	1,033	585	926	500	296	318

Calendar Year Summary

Annual Total 4,717.38 Annual Mean 12.9 Daily Max 50 Daily Min 0 Annual Ac-ft 9,357

Maximum Discharge				Minimum Discharge			
Date	Time	GH	Discharge	Date	Time	GH	Discharge
May 27	05:00	1.04	53	Jan. 1	01:00	0.00	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.

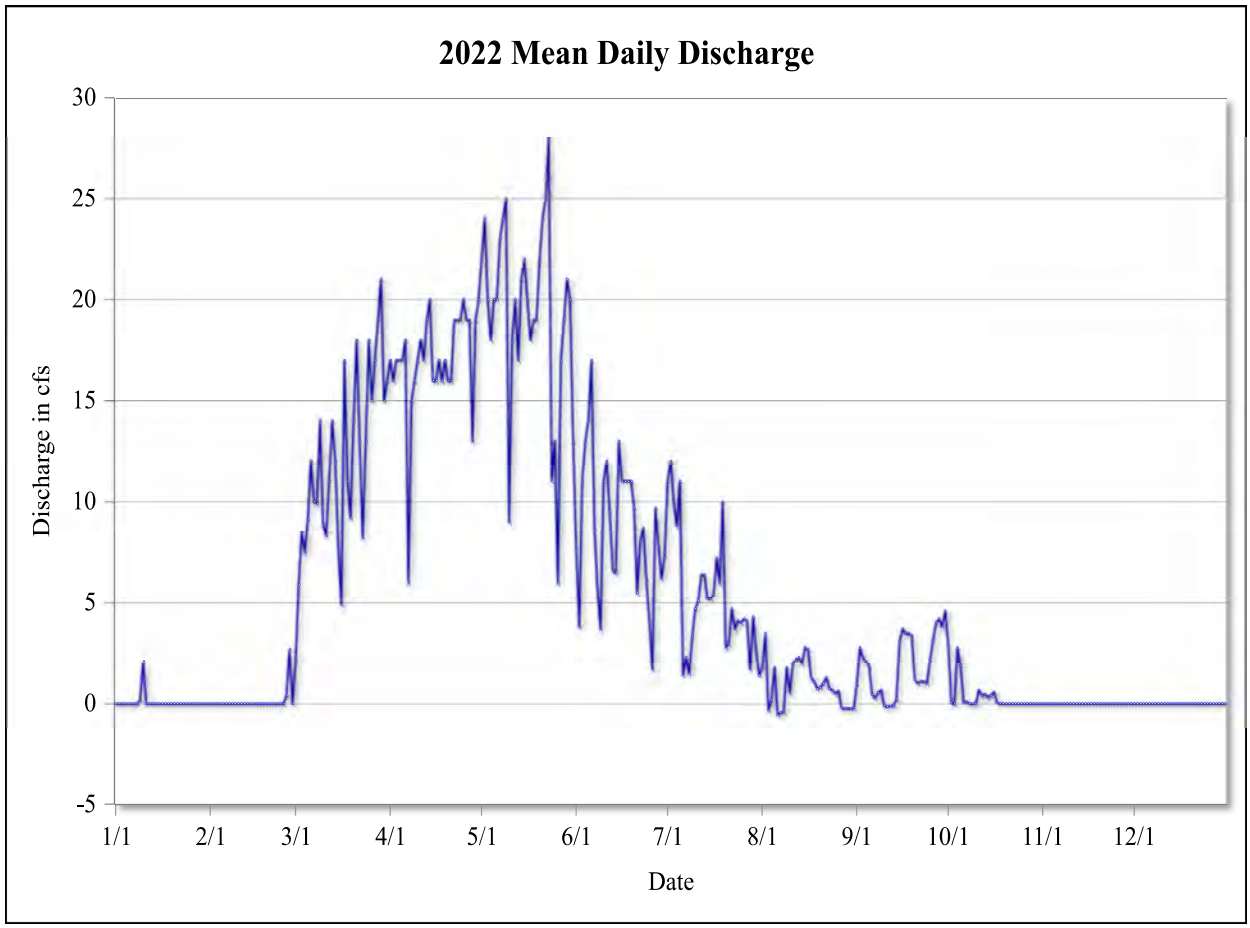
Drainage Area—Not applicable.

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.



United States Fish and Wildlife Service-Farm Ditch

Mean daily discharge, in cubic-feet per second, Calendar Year 2022

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0	2.1	17	22	7.7	11	1.8	0.98	2.9	0	0
2	0	0	5.9	16	24	3.8	12	3.5	2.8	0.05	0	0
3	0	0	8.5	17	20	11	10	-0.32	2.3	-0.01	0	0
4	0	0	7.5	17	18	13	8.8	0.19	2.1	2.8	0	0
5	0	0	9.1	17	20	14	11	1.8	1.9	1.9	0	0
6	0	0	12	18	20	17	1.4	-0.55	0.44	0.08	0	0
7	0	0	10	6.0	23	8.7	2.3	-0.44	0.28	0.11	0	0
8	0	0	9.9	15	24	5.7	1.5	-0.42	0.55	0	0	0
9	0.21	0	14	16	25	3.7	3.3	1.8	0.67	0	0	0
10	2.1	0	8.9	17	9.0	11	4.7	0.53	-0.10	0	0	0
11	0	0	8.3	18	18	12	5.1	2.0	-0.14	0.67	0	0
12	0	0	11	17	20	9.5	6.4	2.2	-0.12	0.40	0	0
13	0	0	14	19	17	6.6	6.4	2.3	-0.08	0.46	0	0
14	0	0	12	20	21	6.5	5.2	2.0	0.24	0.31	0	0
15	0	0	7.7	16	22	13	5.2	2.8	3.1	0.40	0	0
16	0	0	4.9	16	20	11	5.4	2.7	3.7	0.58	0	0
17	0	0	17	17	18	11	7.2	1.3	3.5	0.07	0	0
18	0	0	11	16	19	11	6.0	1.1	3.5	0	0	0
19	0	0	9.2	17	19	11	10	0.74	3.4	0	0	0
20	0	0	14	16	22	9.7	2.8	0.79	1.2	0	0	0
21	0	0	18	16	24	5.5	3.0	1.0	0.99	0	0	0
22	0	0	13	19	25	8.0	4.7	1.3	1.1	0	0	0
23	0	0	8.2	19	28	8.7	3.7	0.73	1.1	0	0	0
24	0	0	13	19	11	6.2	4.1	0.67	1.0	0	0	0
25	0	0	18	20	13	4.1	4.0	0.48	2.2	0	0	0
26	0	0.40	15	19	6.0	1.7	4.2	0.63	3.2	0	0	0
27	0	2.7	17	19	17	9.7	4.1	-0.21	4.0	0	0	0
28	0	0	19	13	19	7.8	1.7	-0.24	4.2	0	0	0
29	0		21	19	21	6.2	4.3	-0.22	3.8	0	0	0
30	0		15	20	20	7.3	2.6	-0.24	4.6	0	0	0
31	0		16		13		1.4	-0.21		0		0
Total	2.27	3.12	371.8	512.0	598.9	261.1	163.6	29.43	56.40	10.73	0	0
Mean	0.073	0.11	12.0	17.1	19.3	8.70	5.28	0.95	1.88	0.35	0	0
Max	2.1	2.7	21	20	28	17	12	3.5	4.6	2.9	0	0
Min	0	0	2.1	6.0	6.0	1.7	1.4	-0.55	-0.14	-0.01	0	0
Ac-ft	4.5	6.2	737	1,015	1,188	518	324	58	112	21	0	0

Calendar Year Summary

Annual Total 2,009.29 Annual Mean 5.50 Daily Max 28 Daily Min -0.55 Annual Ac-ft 3,985

Maximum Discharge				Minimum Discharge			
Date	Time	GH	Discharge	Date	Time	GH	Discharge
May 23	16:00	N/A	33	Jun. 9	13:00	N/A	-4.0

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.

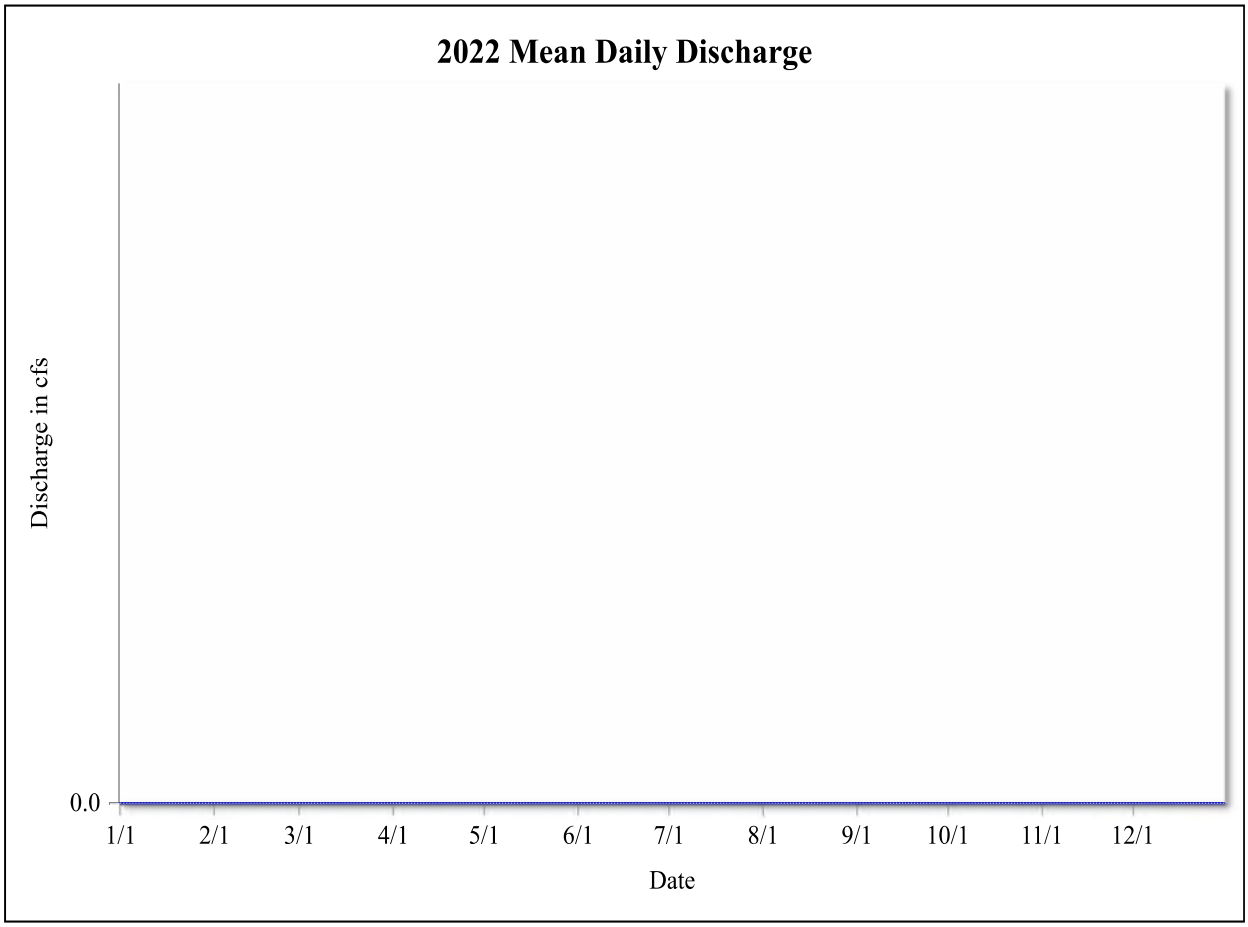
Drainage Area—Undetermined.

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

Gage—A Sutron Xlite datalogger (Model 9210-0000-2B) records river and marsh elevation with Sutron stage discharge recorder shaft encoders (Model SDR-001) and gate elevation with Sutron multiple interface shaft encoder (Model 56-0540-400-DTR). 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—The discharge record was estimated from Apr. 16, 2022 at 05:00 to Apr. 18, 2022 at 09:00, and Sep. 7, 2022 at 09:00 to Sep. 7, 2022 at 16:00 due to equipment failure.



United States Fish and Wildlife Service-South Dike

Mean daily discharge, in cubic-feet per second, Calendar Year 2022

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	Elev	Discharge	Date	Time	Elev	Discharge
Jan. 1	01:00	453.52	0	Jan. 1	01:00	453.52	0

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.

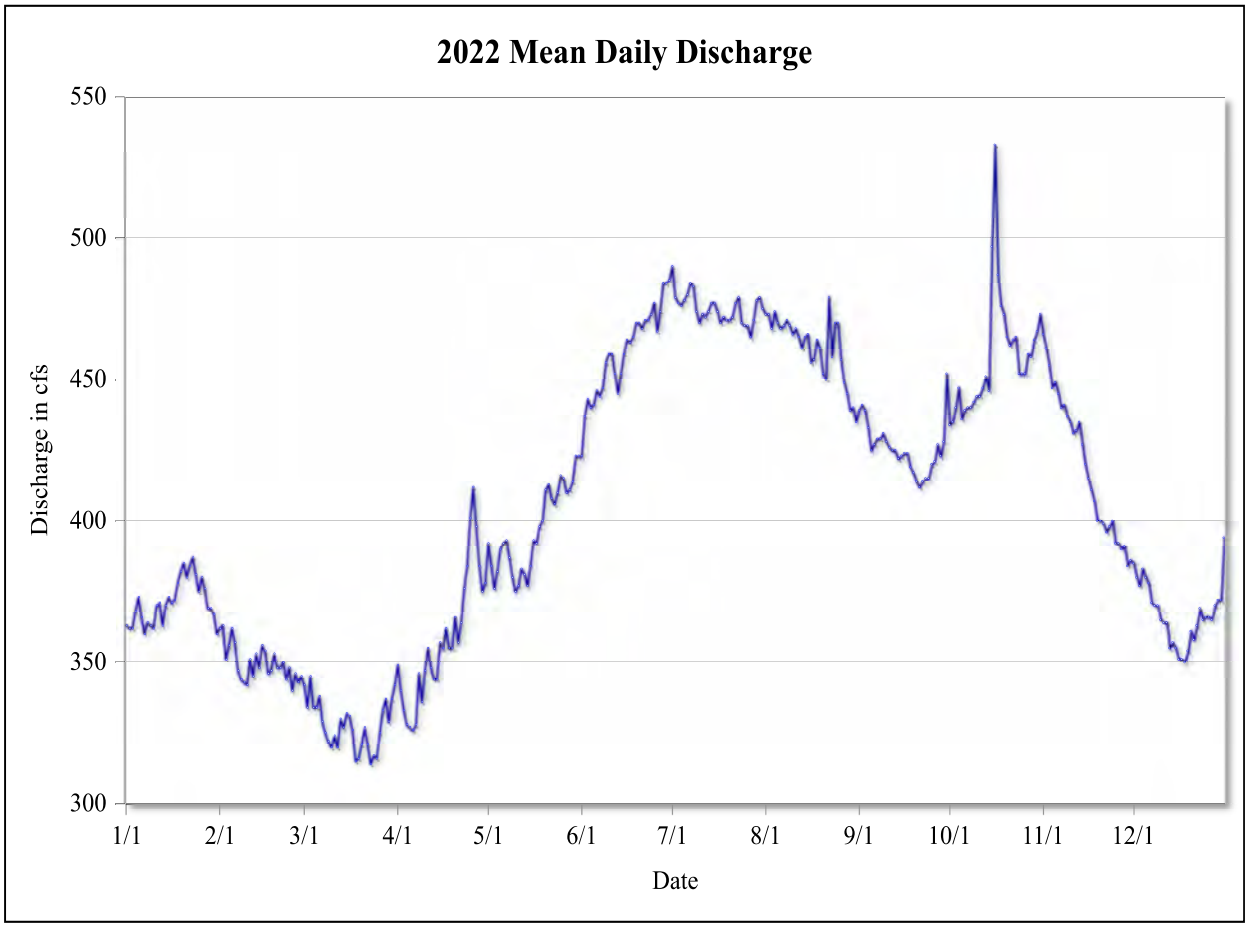
Drainage Area—Undetermined.

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 2022

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	363	362	342	349	392	423	490	473	439	434	466	385
2	362	363	334	340	384	437	479	473	441	435	461	380
3	362	351	345	333	376	443	477	468	439	440	455	377
4	368	356	334	328	382	440	476	474	433	447	447	383
5	373	362	334	327	390	441	478	470	425	436	449	380
6	366	357	338	326	392	446	480	468	427	439	445	378
7	360	347	329	328	393	444	484	469	429	440	440	371
8	364	344	325	346	387	447	483	471	429	440	441	370
9	363	343	322	336	380	456	474	469	431	442	437	370
10	362	342	320	347	375	459	470	466	428	444	435	365
11	370	351	324	355	377	459	473	468	426	444	431	364
12	371	345	320	348	383	452	472	465	425	447	432	364
13	363	353	330	344	381	445	474	461	425	451	435	355
14	370	348	327	344	377	452	477	465	422	446	427	357
15	373	356	332	357	384	459	477	466	423	497	420	355
16	371	354	331	355	393	464	474	456	424	533	415	351
17	372	346	326	362	392	463	470	457	424	487	411	351
18	378	347	315	355	398	465	472	464	419	476	407	350
19	382	353	316	355	400	470	471	461	417	473	400	354
20	385	348	321	366	411	470	471	452	414	465	400	361
21	380	348	327	357	413	468	472	450	412	462	399	358
22	384	350	321	364	408	471	477	479	414	464	396	363
23	387	344	314	376	406	471	479	458	415	465	398	369
24	381	348	317	384	410	473	470	470	415	452	400	365
25	375	340	316	401	416	477	469	470	420	452	392	366
26	380	346	325	412	415	467	469	457	421	452	392	366
27	376	343	333	398	410	474	465	449	427	459	390	365
28	369	345	337	384	411	484	471	445	423	458	391	370
29	369		329	375	414	484	478	439	428	464	384	372
30	367		337	378	423	485	479	440	452	467	386	372
31	360		342		423		475	435		473		394
Total	11,507	9,792	10,161	10,733	12,297	13,788	14,725	14,310	12,768	14,184	12,581	11,379
Mean	371	350	328	358	397	460	475	462	426	458	419	367
Max	387	363	345	412	423	485	490	479	452	533	466	394
Min	360	340	314	326	375	423	465	435	412	434	384	350
Ac-ft	22,823	19,422	20,154	21,289	24,391	27,348	29,207	28,382	25,325	28,134	24,954	22,571

Calendar Year Summary

Annual Total 148,225 Annual Mean 406 Daily Max 533 Daily Min 314 Annual Ac-ft 294,000

Maximum Discharge				Minimum Discharge			
Date	Time	Elev	Discharge	Date	Time	Elev	Discharge
Oct. 15	22:00	217.72	638	Mar. 23	11:00	214.42	309

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