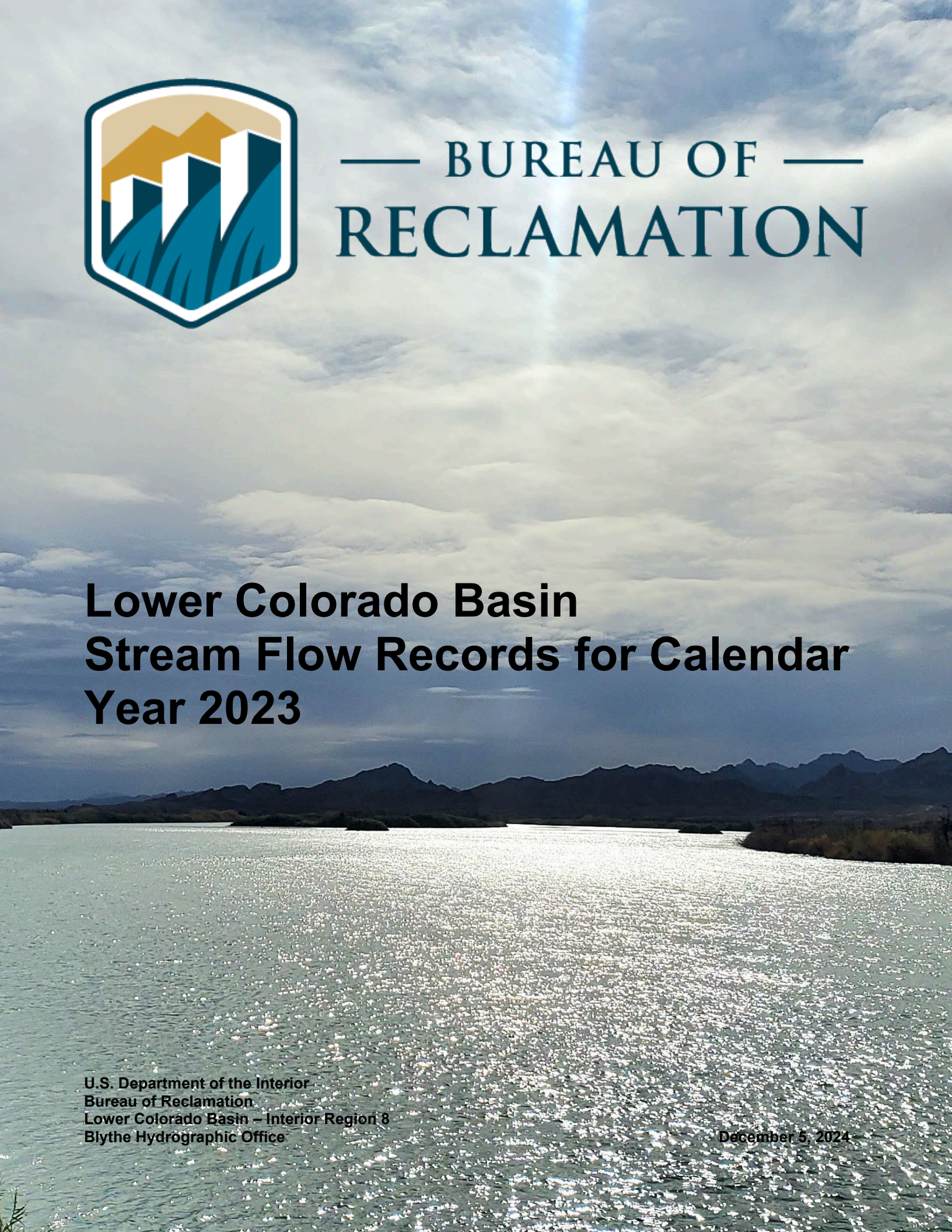

BUREAU OF RECLAMATION

Lower Colorado Basin Stream Flow Records for Calendar Year 2023

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

December 5, 2024

Cover:

The photograph captures the Colorado River downstream of the Cibola Gage, a remote sensing gaging station located approximately 27 miles south of Blythe, California. The Bureau of Reclamation photograph was taken by Jarrett Peters during a routine site visit on January 31, 2023.

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 Southerly International Boundary with Mexico. The data in this report does not include all the data collection efforts of the Lower Colorado Region and 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 Aquarius Time-Series Database in 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 an acoustic Doppler velocimeter, an acoustic Doppler current profiler, or clamp-on acoustic pipe meter. Measurement techniques comply with standards established by the United States Geological Survey and follow internal guidelines.

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 bankline 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 using 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, when no redundant source of data is available, hourly values are estimated 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) a station manuscript; (2) a 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 presented 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.

Datum— This section declares the vertical datum in use for each specific gaging station. Stage data for lakes and mainstem river gages are presented as elevations and will list the applicable vertical datum, whereas gaging stations not represented in mean sea level will reference Gage Datum.

Extremes—Extreme discharge values are listed as minimum and maximum hourly, and daily mean values for the record period are listed in the period of record section. Extreme values exclude periods of data which have been qualified as estimated.

Remarks—Periods of estimated hourly discharge record will be identified in this paragraph if the method used to estimate the record was non-standard and if the period spanned 6 or more continuous hours. 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. Minimum and maximum values of hourly and daily data exclude any values qualified as estimated.

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. Minimum and maximum values of hourly and daily data exclude any values qualified as estimated.

Stage values throughout this report will be presented as either gage-height or stage, where no vertical datum is used, or as an elevation when the gage is tied into a vertical datum through a control network. The mainstem river gages generate mean sea level values which reference the National Geodetic Vertical Datum of 1929 (NGVD29); however, the Colorado River at Lake Mohave and Lake Havasu reference Reclamation project datums and require individual offsets to align with NGVD29.

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 northernmost gage.

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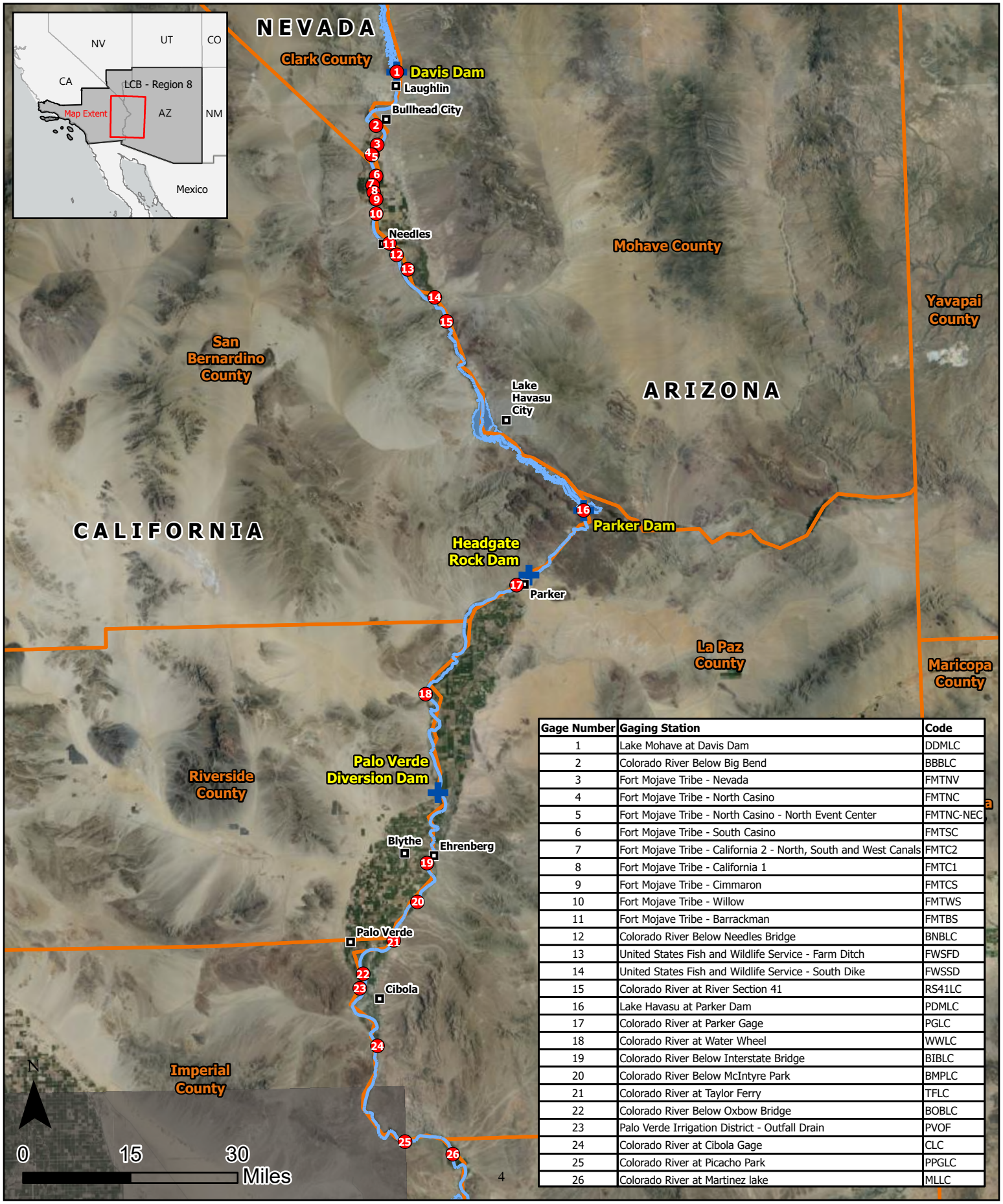
Lower Colorado River
Gaging Stations Operated and Reported by The Blythe Hydrographic Office



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.

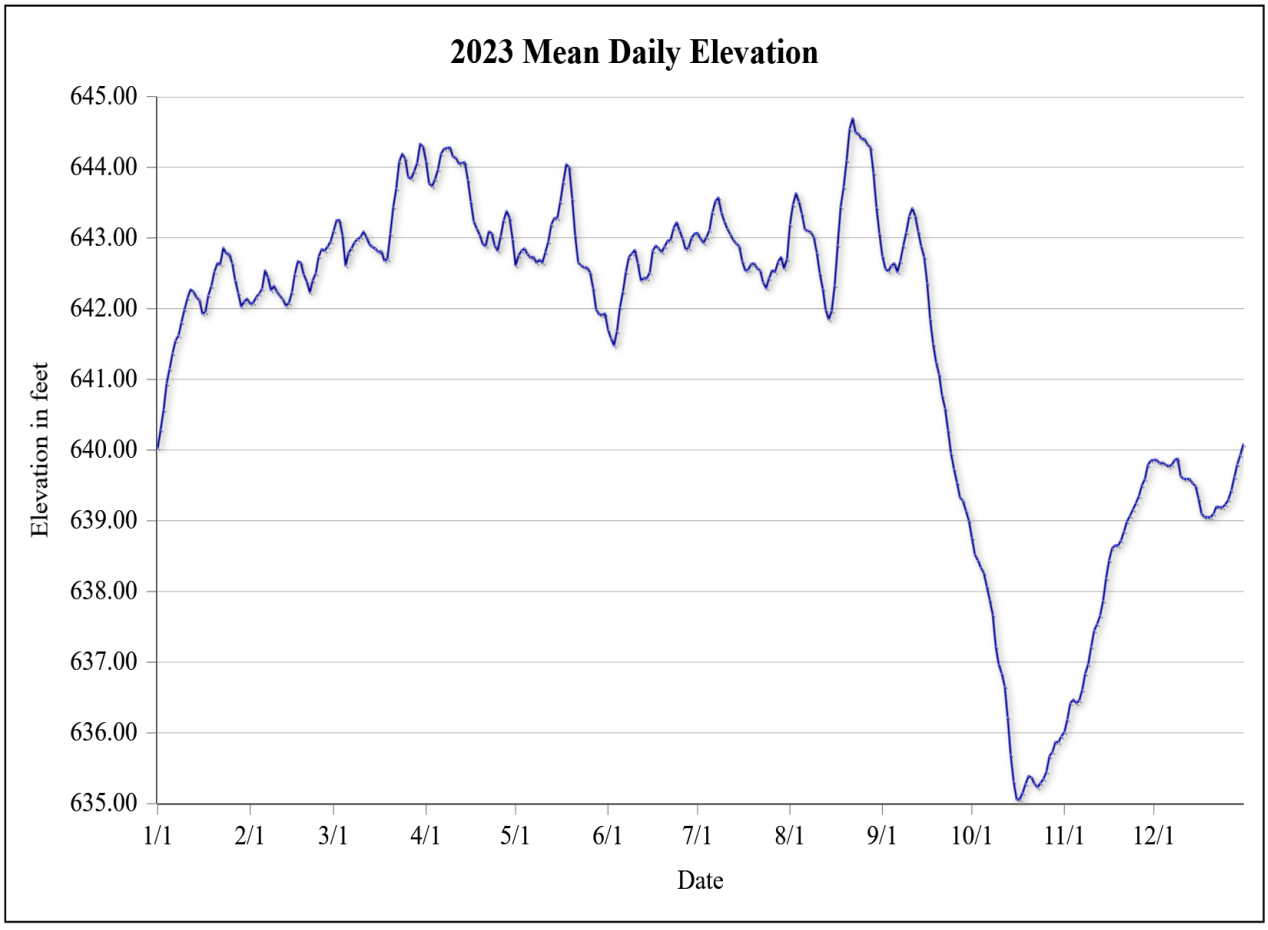
Period of Record—January 1, 2011 to current year.

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).

Datum—Reclamation Project Vertical Datum, add 0.779' for conversion to the National Geodetic Vertical Datum of 1929.

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—Elevation data are estimated from Jan. 31, 2023 at 12:00 thru Feb. 1, 2023 at 08:00, due to gage malfunction.



Lake Mohave at Davis Dam

Mean daily forebay elevation, in feet, Calendar Year 2023

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	640.03	**642.07**	643.10	644.08	642.61	641.70	643.07	643.19	642.74	638.76	636.01	639.86
2	640.29	642.08	643.25	643.77	642.75	641.58	642.99	643.47	642.56	638.52	636.19	639.86
3	640.57	642.16	643.25	643.73	642.82	641.48	642.93	643.63	642.53	638.44	636.42	639.81
4	640.94	642.21	643.03	643.83	642.85	641.68	643.01	643.51	642.61	638.34	636.47	639.82
5	641.15	642.28	642.61	643.97	642.77	642.02	643.11	643.34	642.64	638.26	636.42	639.79
6	641.37	642.54	642.79	644.19	642.72	642.24	643.36	643.12	642.52	638.07	636.46	639.77
7	641.55	642.44	642.85	644.26	642.73	642.52	643.52	643.10	642.67	637.88	636.61	639.79
8	641.62	642.26	642.94	644.27	642.65	642.73	643.57	643.08	642.89	637.67	636.84	639.86
9	641.81	642.32	642.98	644.28	642.69	642.78	643.36	643.01	643.08	637.22	636.97	639.88
10	641.99	642.24	643.01	644.15	642.65	642.83	643.23	642.79	643.31	636.97	637.22	639.63
11	642.15	642.18	643.09	644.13	642.80	642.64	643.13	642.50	643.42	636.84	637.45	639.59
12	642.27	642.13	643.01	644.05	642.95	642.40	643.05	642.28	643.31	636.66	637.54	639.59
13	642.24	642.04	642.91	644.06	643.19	642.43	642.97	641.98	643.09	636.22	637.66	639.59
14	642.16	642.08	642.87	644.07	643.28	642.43	642.92	641.85	642.88	635.69	637.87	639.53
15	642.12	642.23	642.85	643.82	643.28	642.51	642.88	641.97	642.73	635.31	638.19	639.49
16	641.93	642.49	642.80	643.51	643.51	642.82	642.67	642.33	642.36	635.06	638.44	639.31
17	641.95	642.67	642.81	643.23	643.79	642.89	642.54	642.90	641.85	635.06	638.61	639.10
18	642.19	642.65	642.68	643.13	644.04	642.85	642.55	643.44	641.50	635.15	638.65	639.05
19	642.32	642.48	642.70	643.04	644.00	642.80	642.63	643.72	641.24	635.28	638.65	639.05
20	642.52	642.38	643.06	642.91	643.55	642.88	642.64	644.10	641.07	635.39	638.72	639.05
21	642.64	642.23	643.44	642.89	643.03	642.96	642.57	644.54	640.77	635.37	638.85	639.10
22	642.63	642.40	643.70	643.09	642.65	642.97	642.54	644.69	640.59	635.28	638.99	639.20
23	642.86	642.50	644.08	643.07	642.61	643.14	642.37	644.49	640.28	635.23	639.07	639.19
24	642.78	642.74	644.19	642.89	642.58	643.22	642.29	644.47	639.95	635.29	639.16	639.19
25	642.77	642.84	644.12	642.82	642.58	643.10	642.43	644.40	639.73	635.35	639.25	639.23
26	642.64	642.82	643.86	643.02	642.51	642.99	642.54	644.40	639.54	635.45	639.35	639.30
27	642.40	642.88	643.84	643.25	642.29	642.84	642.52	644.32	639.33	635.67	639.50	639.43
28	642.22	642.95	643.94	643.38	641.99	642.86	642.66	644.28	639.28	635.73	639.59	639.62
29	642.03		644.06	643.28	641.92	643.00	642.73	643.92	639.14	635.87	639.79	639.80
30	642.10		644.33	642.98	641.91	643.06	642.57	643.43	639.00	635.87	639.85	639.93
31	**642.14**		644.29		641.93		642.70	643.06		635.95		640.08
Mean	641.95	642.40	643.31	643.57	642.83	642.61	642.84	643.40	641.62	636.38	638.03	639.53
Max	642.86	642.95	644.33	644.28	644.04	643.22	643.57	644.69	643.42	638.76	639.85	640.08
Min	640.03	642.04	642.61	642.82	641.91	641.48	642.29	641.85	639.00	635.06	636.01	639.05

Calendar Year Summary

Annual Mean 641.53 Daily Max 644.69 Daily Min 635.06

Maximum Elevation (Excludes Estimates)			Minimum Elevation (Excludes Estimates)		
Date	Time	Elev	Date	Time	Elev
Aug. 22	02:00	644.87	Oct. 16	17:00	634.86

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

Lake Havasu at Parker Dam

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

Drainage Area—180,800 mi².

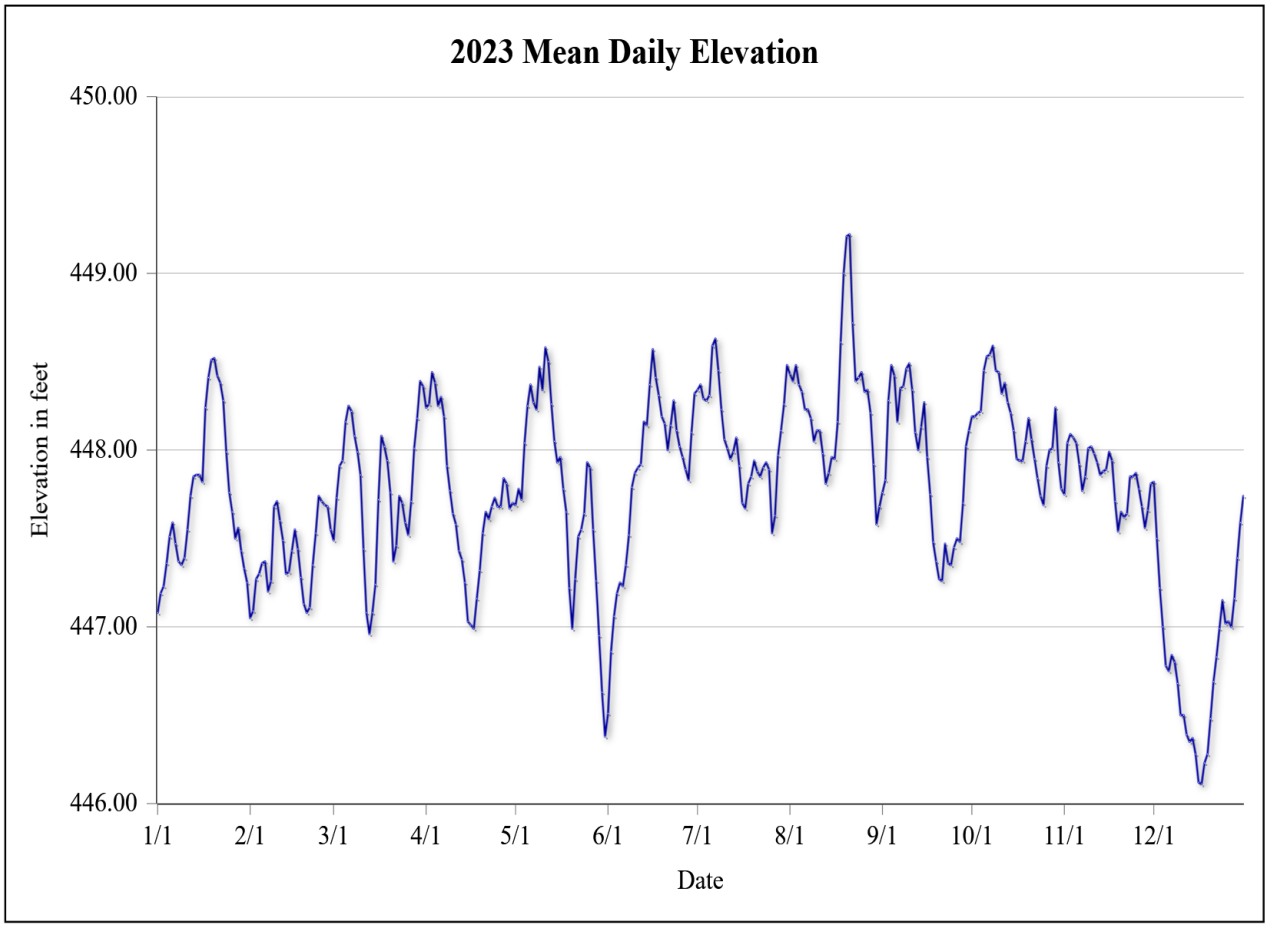
Period of Record—January 1, 2011 to current year.

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

Datum—Reclamation Project Vertical Datum, add 0.57' for conversion to the National Geodetic Vertical Datum of 1929.

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 forebay elevation, in feet, Calendar Year 2023

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	447.08	447.05	447.49	448.24	447.69	446.51	448.34	448.43	447.76	448.19	447.75	447.82
2	447.19	447.09	447.73	448.26	447.78	446.86	448.37	448.39	447.83	448.19	448.04	447.50
3	447.23	447.27	447.91	448.44	447.72	447.06	448.29	448.48	448.28	448.21	448.09	447.22
4	447.36	447.30	447.94	448.38	448.04	447.19	448.28	448.37	448.48	448.22	448.07	447.00
5	447.51	447.36	448.16	448.25	448.25	447.25	448.31	448.33	448.42	448.45	448.04	446.78
6	447.59	447.37	448.25	448.30	448.37	447.23	448.59	448.23	448.16	448.53	447.92	446.75
7	447.47	447.20	448.22	448.19	448.27	447.35	448.63	448.23	448.35	448.54	447.77	446.84
8	447.37	447.26	448.08	447.91	448.23	447.52	448.45	448.18	448.36	448.59	447.85	446.80
9	447.35	447.68	447.99	447.77	448.47	447.79	448.23	448.05	448.46	448.45	448.01	446.68
10	447.39	447.71	447.86	447.64	448.34	447.87	448.06	448.11	448.49	448.44	448.02	446.50
11	447.55	447.60	447.44	447.58	448.58	447.90	448.01	448.11	448.34	448.32	447.98	446.50
12	447.74	447.49	447.08	447.43	448.50	447.92	447.95	447.98	448.10	448.38	447.93	446.39
13	447.85	447.30	446.96	447.38	448.26	448.16	447.99	447.81	448.00	448.27	447.86	446.35
14	447.86	447.31	447.08	447.25	448.05	448.14	448.07	447.87	448.13	448.21	447.88	446.37
15	447.86	447.43	447.24	447.03	447.93	448.37	447.91	447.96	448.27	448.11	447.89	446.28
16	447.82	447.55	447.72	447.01	447.96	448.57	447.70	447.95	447.96	447.95	447.99	446.12
17	448.24	447.44	448.08	446.99	447.78	448.41	447.67	448.16	447.75	447.94	447.94	446.11
18	448.41	447.28	448.02	447.16	447.65	448.31	447.81	448.61	447.48	447.94	447.71	446.23
19	448.51	447.13	447.94	447.32	447.22	448.19	447.85	449.00	447.37	448.05	447.54	446.28
20	448.52	447.08	447.76	447.53	446.99	448.15	447.94	449.21	447.27	448.18	447.65	446.48
21	448.42	447.11	447.37	447.65	447.27	448.00	447.88	449.22	447.26	448.06	447.62	446.69
22	448.38	447.35	447.46	447.61	447.51	448.14	447.85	448.72	447.47	447.95	447.64	446.83
23	448.28	447.53	447.74	447.68	447.55	448.28	447.90	448.39	447.36	447.84	447.85	446.99
24	447.99	447.74	447.70	447.73	447.64	448.11	447.93	448.41	447.35	447.74	447.85	447.15
25	447.76	447.71	447.59	447.68	447.93	448.02	447.89	448.44	447.45	447.69	447.87	447.02
26	447.65	447.69	447.52	447.68	447.90	447.96	447.53	448.33	447.50	447.91	447.78	447.03
27	447.50	447.68	447.71	447.84	447.55	447.89	447.63	448.34	447.48	448.00	447.68	447.00
28	447.56	447.55	448.01	447.81	447.26	447.83	447.97	448.21	447.70	448.01	447.56	447.16
29	447.43		448.18	447.67	446.95	448.10	448.11	447.92	448.02	448.24	447.66	447.39
30	447.33		448.39	447.70	446.63	448.32	448.26	447.58	448.11	447.93	447.81	447.59
31	447.25		448.36		446.38		448.48	447.68		447.78		447.74
Mean	447.72	447.40	447.77	447.70	447.76	447.85	448.06	448.28	447.90	448.14	447.84	446.83
Max	448.52	447.74	448.39	448.44	448.58	448.57	448.63	449.22	448.49	448.59	448.09	447.82
Min	447.08	447.05	446.96	446.99	446.38	446.51	447.53	447.58	447.26	447.69	447.54	446.11

Calendar Year Summary

Annual Mean 447.77 Daily Max 449.22 Daily Min 446.11

Maximum Elevation (Excludes Estimates)			Minimum Elevation (Excludes Estimates)		
Date	Time	Elev	Date	Time	Elev
Aug. 21	15:00	449.37	Dec. 16	11:00	446.04

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.

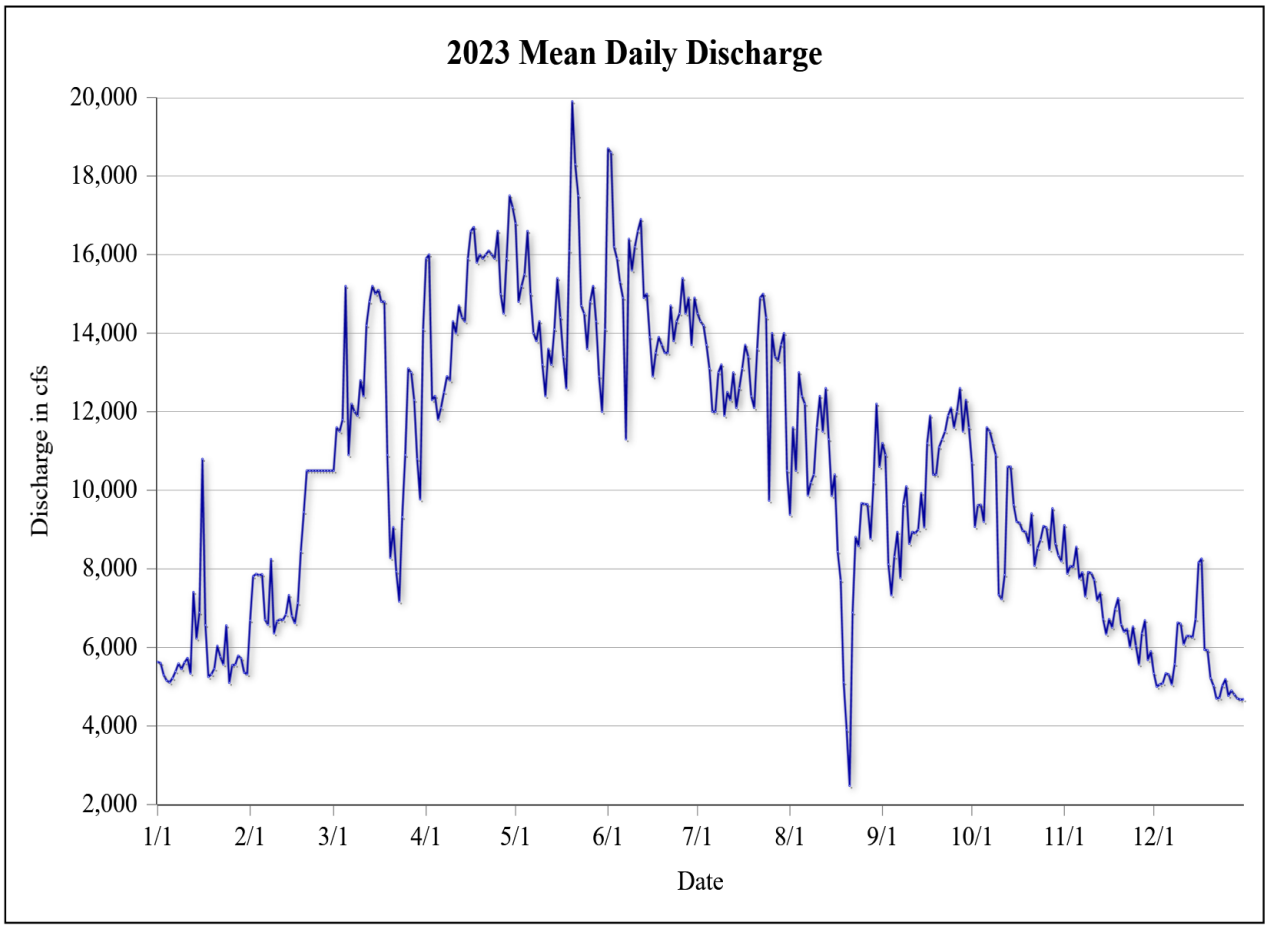
Period of Record—January 1, 2008 to current year.

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.

Datum—National Geodetic Vertical Datum of 1929.

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 2023

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	5,630	6,690	10,500	15,900	16,800	18,700	14,500	9,380	11,200	10,700	9,110	5,340
2	5,600	7,810	11,600	16,000	14,800	18,600	14,300	11,600	10,900	9,070	7,880	5,000
3	5,300	7,870	11,500	12,300	15,200	16,200	14,200	10,500	8,120	9,620	8,070	5,060
4	5,160	7,840	11,800	12,400	15,500	15,900	13,700	13,000	7,330	9,630	8,050	5,090
5	5,110	7,860	15,200	11,800	16,600	15,300	13,100	12,400	8,310	9,200	8,560	5,340
6	5,220	6,700	10,900	12,100	15,000	14,900	12,000	12,200	8,940	11,600	7,760	5,310
7	5,390	6,580	12,200	12,500	14,000	11,300	12,000	9,870	7,770	11,500	7,910	5,060
8	5,590	8,250	12,000	12,900	13,800	16,400	13,000	10,200	9,640	11,200	7,300	5,580
9	5,450	6,360	11,900	12,800	14,300	15,600	13,200	10,400	10,100	10,900	7,920	6,630
10	5,620	6,670	12,800	14,300	13,200	16,200	11,900	11,600	8,640	7,340	7,890	6,600
11	5,730	6,710	12,400	14,000	12,400	16,600	12,500	12,400	8,940	7,230	7,720	6,080
12	5,340	6,700	14,200	14,700	13,600	16,900	12,300	11,500	8,910	7,850	7,200	6,290
13	7,410	6,840	14,800	14,400	13,200	14,900	13,000	12,600	9,000	10,600	7,390	6,290
14	6,230	7,330	15,200	14,300	14,100	15,000	12,100	11,300	9,930	10,600	6,720	6,260
15	6,890	6,800	15,000	15,900	15,400	13,900	12,600	9,860	9,060	9,630	6,340	6,720
16	10,800	6,620	15,100	16,600	14,400	12,900	13,100	10,400	11,200	9,200	6,720	8,160
17	6,570	7,130	14,800	16,700	13,400	13,500	13,700	8,440	11,900	9,170	6,510	8,260
18	5,250	8,450	14,800	15,800	12,600	13,900	13,400	7,710	10,400	8,970	6,980	5,940
19	5,320	9,450	10,900	16,000	16,100	13,700	12,400	5,110	10,400	8,940	7,250	5,930
20	5,460	10,500	8,280	15,900	19,900	13,500	12,100	3,900	11,100	8,660	6,590	5,220
21	6,040	10,500	9,060	16,000	18,300	13,500	13,600	2,480	11,300	9,410	6,400	5,030
22	5,760	10,500	7,930	16,100	17,500	14,700	14,900	6,890	11,500	8,080	6,470	4,700
23	5,570	10,500	7,170	16,000	14,700	13,800	15,000	8,810	11,900	8,530	6,010	4,720
24	6,560	10,500	9,320	15,900	14,500	14,300	14,400	8,580	12,100	8,740	6,530	5,030
25	5,100	10,500	10,900	16,600	13,600	14,500	9,740	9,670	11,600	9,090	6,040	5,190
26	5,550	10,500	13,100	15,000	14,800	15,400	14,000	9,650	12,000	9,050	5,570	4,770
27	5,560	10,500	13,000	14,500	15,200	14,500	13,400	9,640	12,600	8,490	6,360	4,900
28	5,790	10,500	12,300	15,900	14,300	14,900	13,300	8,770	11,500	9,540	6,690	4,800
29	5,720		10,800	17,500	12,900	13,700	13,700	10,200	12,300	8,640	5,680	4,700
30	5,360		9,770	17,200	12,000	14,900	14,000	12,200	11,600	8,340	5,900	4,670
31	5,320		14,100		14,100		10,500	10,600		8,200		4,680
Total	181,435	233,065	373,133	448,241	456,063	448,227	405,561	302,042	310,181	287,666	211,538	173,342
Mean	5,853	8,324	12,040	14,940	14,710	14,940	13,080	9,743	10,340	9,280	7,051	5,592
Max	10,800	10,500	15,200	17,500	19,900	18,700	15,000	13,000	12,600	11,600	9,110	8,260
Min	5,100	6,360	7,170	11,800	12,000	11,300	9,740	2,480	7,330	7,230	5,570	4,670
Ac-ft	359,871	462,277	740,099	889,073	904,587	889,046	804,418	599,091	615,234	570,577	419,579	343,819

Calendar Year Summary

Annual Total 3,830,493 Annual Mean 10,490 Daily Max 19,900 Daily Min 2,480 Annual Ac-ft 7,597,672

Maximum Discharge (Excludes Estimates)				Minimum Discharge (Excludes Estimates)			
Date	Time	Elev	Discharge	Date	Time	Elev	Discharge
Jun. 12	00:00	488.97	24,938	Aug. 22	02:00	479.01	2,411

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.

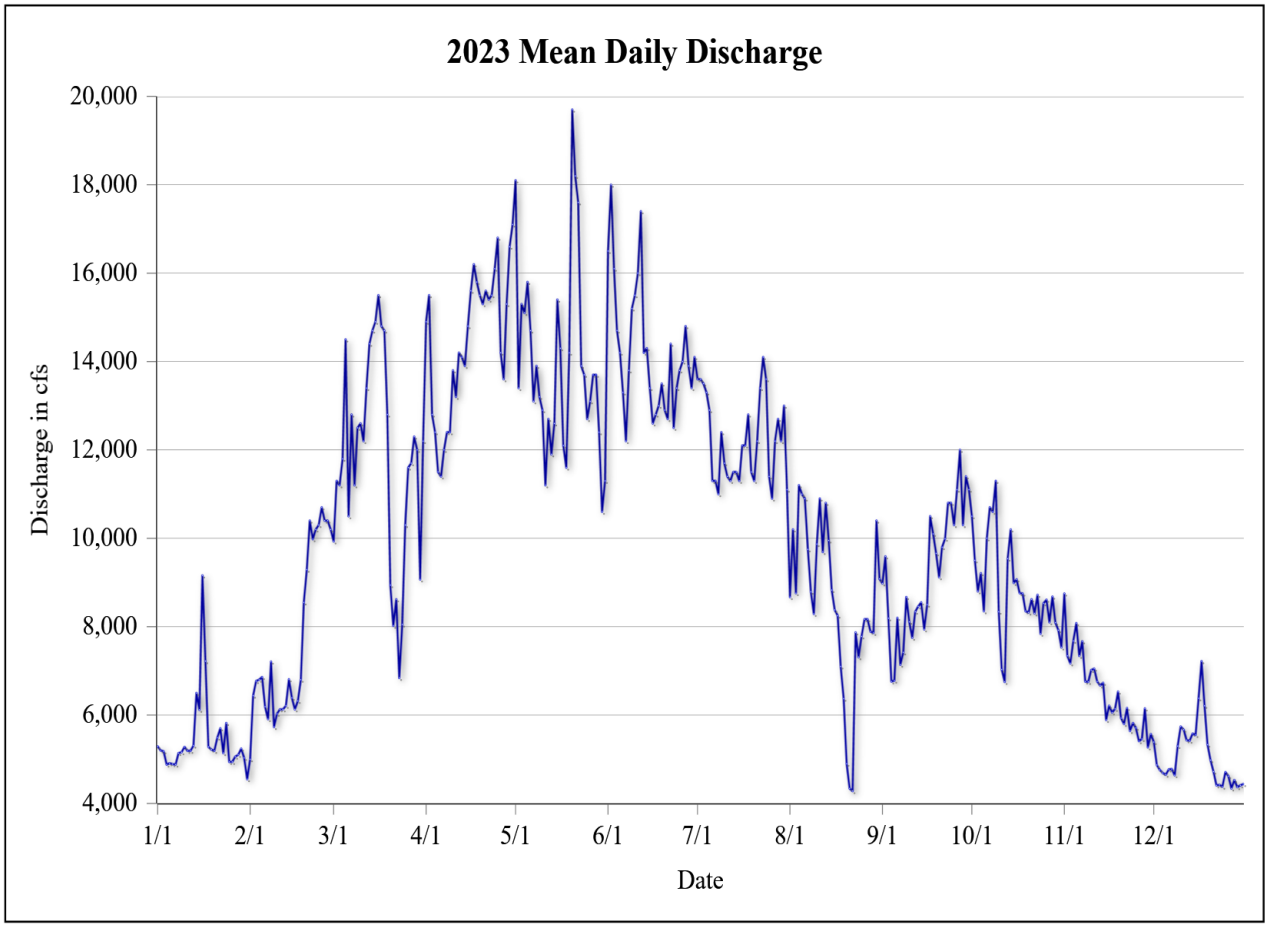
Period of Record—January 1, 2008 to current year.

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.

Datum—National Geodetic Vertical Datum of 1929.

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 as good however the discharge record is estimated as poor, due to the lack of stream stability spanning the record period.



Colorado River Below Needles Bridge

Mean daily discharge, in cubic-feet per second, Calendar Year 2023

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	5,290	5,000	9,930	14,900	18,100	16,500	13,600	8,670	8,980	10,500	8,750	5,390
2	5,200	6,440	11,300	15,500	13,400	18,000	13,600	10,200	9,590	9,500	7,340	4,870
3	5,180	6,770	11,200	12,800	15,300	16,100	13,500	8,760	8,190	8,800	7,170	4,760
4	4,880	6,800	11,800	12,400	15,100	14,700	13,300	11,200	6,760	9,210	7,680	4,690
5	4,910	6,860	14,500	11,500	15,800	14,200	12,900	11,000	6,780	8,350	8,080	4,650
6	4,890	6,190	10,500	11,400	14,700	13,300	11,300	10,900	8,200	10,000	7,340	4,770
7	4,880	5,910	12,800	12,000	13,100	12,200	11,300	9,750	7,140	10,700	7,670	4,780
8	5,140	7,210	11,200	12,400	13,900	13,800	11,000	8,790	7,420	10,600	6,760	4,640
9	5,160	5,730	12,500	12,400	13,200	15,200	12,400	8,290	8,670	11,300	6,750	5,300
10	5,280	6,030	12,600	13,800	12,900	15,500	11,700	9,870	8,110	8,340	7,020	5,740
11	5,190	6,130	12,200	13,200	11,200	16,000	11,400	10,900	7,750	7,030	7,050	5,670
12	5,190	6,130	13,400	14,200	12,700	17,400	11,300	9,690	8,340	6,750	6,760	5,430
13	5,310	6,210	14,400	14,100	11,900	14,200	11,500	10,800	8,460	9,540	6,670	5,420
14	6,500	6,810	14,700	13,900	12,600	14,300	11,500	9,950	8,550	10,200	6,730	5,580
15	6,120	6,390	14,900	14,800	15,400	13,400	11,300	8,830	7,940	8,990	5,890	5,550
16	9,160	6,130	15,500	15,600	14,300	12,600	12,100	8,380	8,500	9,070	6,210	6,380
17	7,220	6,320	14,800	16,200	12,100	12,800	12,100	8,250	10,500	8,760	6,060	7,220
18	5,280	6,800	14,700	15,800	11,600	13,000	12,800	7,100	10,100	8,750	6,140	6,210
19	5,220	8,550	12,800	15,500	14,200	13,500	11,500	6,370	9,660	8,350	6,530	5,330
20	5,190	9,290	8,940	15,300	19,700	12,900	11,300	4,900	9,120	8,320	5,930	4,980
21	5,490	10,400	8,020	15,600	18,200	12,700	12,200	4,340	9,800	8,620	5,800	4,720
22	5,700	9,980	8,620	15,400	17,600	14,400	13,400	4,280	9,990	8,300	6,160	4,410
23	5,140	10,200	6,840	15,500	13,900	12,500	14,100	7,870	10,800	8,720	5,640	4,420
24	5,820	10,300	8,050	16,100	13,700	13,400	13,600	7,310	10,800	7,840	5,820	4,380
25	4,940	10,700	10,300	16,800	12,700	13,800	11,400	7,780	10,300	8,530	5,710	4,710
26	4,940	10,400	11,600	14,200	13,100	14,000	10,900	8,170	11,100	8,610	5,410	4,620
27	5,060	10,400	11,700	13,600	13,700	14,800	12,200	8,170	12,000	8,100	5,460	4,340
28	5,100	10,200	12,300	15,300	13,700	13,900	12,700	7,890	10,300	8,680	6,150	4,530
29	5,240		12,000	16,600	12,400	13,400	12,200	7,860	11,400	8,090	5,270	4,370
30	5,030		9,070	17,100	10,600	14,100	13,000	10,400	11,100	7,920	5,570	4,410
31	4,550		12,200		11,300		11,100	9,080		7,530		4,440
Total	168,184	214,158	365,166	433,769	432,346	426,551	378,166	265,571	276,302	273,921	195,533	156,705
Mean	5,425	7,648	11,780	14,460	13,950	14,220	12,200	8,567	9,210	8,836	6,518	5,055
Max	9,160	10,700	15,500	17,100	19,700	18,000	14,100	11,200	12,000	11,300	8,750	7,220
Min	4,550	5,000	6,840	11,400	10,600	12,200	10,900	4,280	6,760	6,750	5,270	4,340
Ac-ft	333,588	424,776	724,295	860,369	857,546	846,051	750,082	526,753	548,038	543,315	387,834	310,820

Calendar Year Summary

Annual Total 3,586,373 Annual Mean 9,826 Daily Max 19,700 Daily Min 4,280 Annual Ac-ft 7,113,466

Maximum Discharge (Excludes Estimates)				Minimum Discharge (Excludes Estimates)			
Date	Time	Elev	Discharge	Date	Time	Elev	Discharge
May 20	11:00	461.24	23,307	Aug. 22	11:00	451.62	3,798

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.

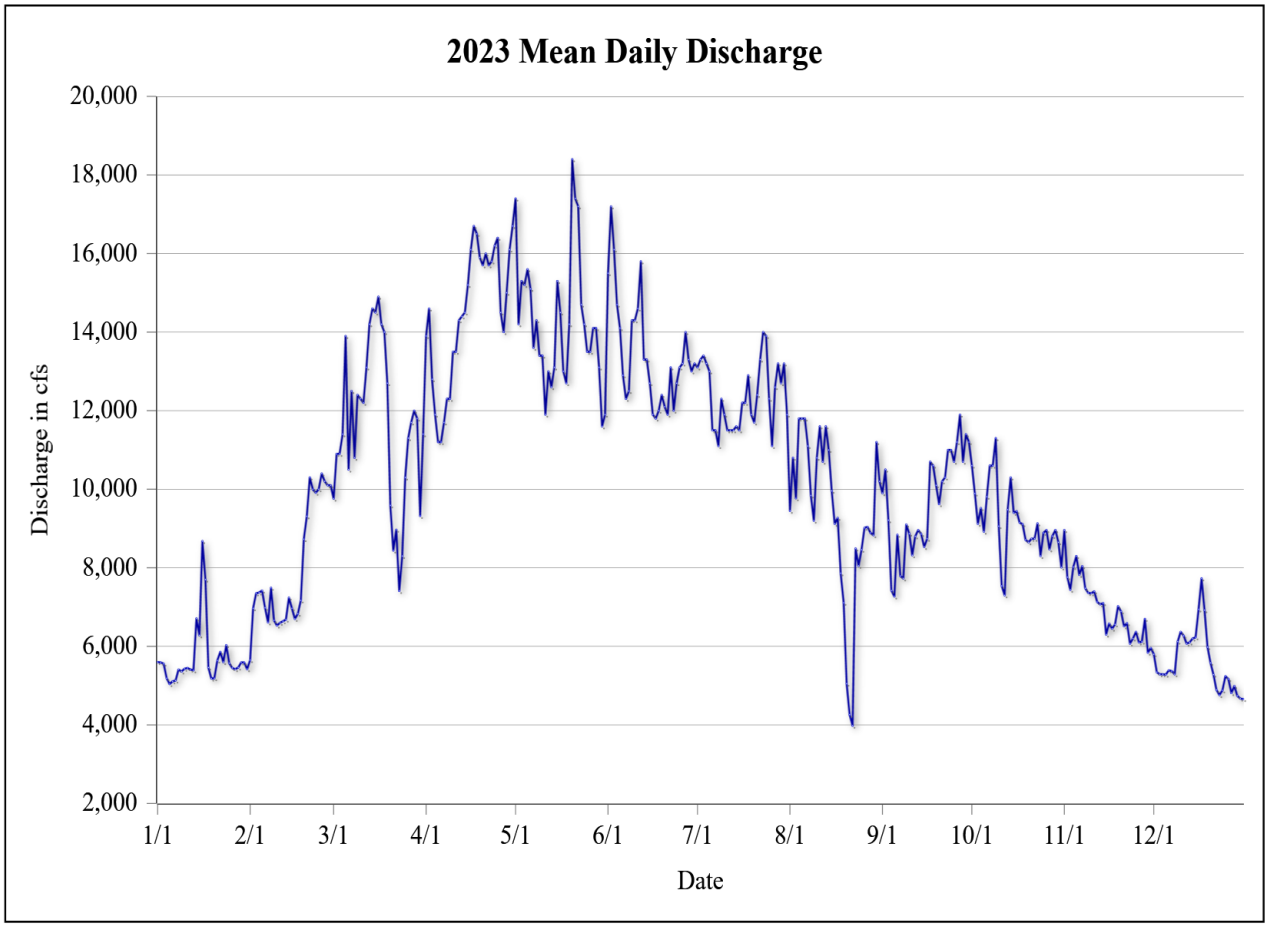
Period of Record—June 29, 2006 to current year.

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.

Datum—National Geodetic Vertical Datum of 1929.

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 Jan. 1, 2023 at 17:00 to Jan. 4, 2023 at 11:00, due to a equipment failure, Mar. 15, 2023 at 18:00 to Mar. 15, 2023 at 03:00, due to heavy sediment transport from a rain event, May 23, 2023 at 14:00 to May 24, 2023 at 10:00, due to equipment failure, and Aug. 20, 2023 at 18:00 to Aug. 21, 2023 at 01:00, due to heavy sediment transport from a rain event.



Colorado River at River Section 41

Mean daily discharge, in cubic-feet per second, Calendar Year 2023

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	**5,600**	5,650	9,760	13,900	17,400	15,500	13,100	9,450	9,900	10,600	8,960	5,800
2	**5,590**	6,970	10,900	14,600	14,200	17,200	13,300	10,800	10,500	9,890	7,760	5,340
3	**5,560**	7,350	10,900	12,800	15,300	16,100	13,400	9,770	9,210	9,120	7,440	5,290
4	**5,190**	7,370	11,400	11,900	15,200	14,700	13,200	11,800	7,420	9,520	8,020	5,290
5	5,040	7,420	13,900	11,200	15,600	14,100	13,000	11,800	7,270	8,920	8,300	5,280
6	5,110	6,980	10,500	11,200	15,100	12,900	11,500	11,800	8,840	9,810	7,820	5,390
7	5,130	6,610	12,500	11,700	13,600	12,300	11,500	11,100	7,790	10,600	8,040	5,370
8	5,410	7,490	10,800	12,300	14,300	12,500	11,100	9,840	7,730	10,600	7,480	5,290
9	5,360	6,660	12,400	12,300	13,400	14,300	12,300	9,200	9,100	11,300	7,360	6,120
10	5,430	6,530	12,300	13,500	13,400	14,300	11,900	10,800	8,870	9,060	7,350	6,370
11	5,450	6,600	12,200	13,500	11,900	14,600	11,500	11,600	8,320	7,540	7,400	6,270
12	5,410	6,640	13,100	14,300	13,000	15,800	11,500	10,700	8,800	7,300	7,130	6,070
13	5,390	6,680	14,200	14,400	12,600	13,300	11,500	11,600	8,960	9,480	7,070	6,100
14	6,710	7,240	14,600	14,500	13,100	13,300	11,600	11,000	8,860	10,300	7,100	6,200
15	6,280	6,970	**14,500**	15,200	15,300	12,700	11,500	9,960	8,530	9,400	6,300	6,230
16	8,680	6,700	14,900	16,100	14,500	11,900	12,200	9,120	8,740	9,440	6,580	6,940
17	7,700	6,830	14,200	16,700	13,000	11,800	12,200	9,270	10,700	9,150	6,450	7,730
18	5,460	7,170	14,000	16,500	12,700	12,000	12,900	7,860	10,600	9,110	6,560	6,920
19	5,180	8,730	12,700	15,900	14,200	12,400	11,900	7,110	10,100	8,710	7,020	5,980
20	5,190	9,310	9,590	15,700	18,400	12,100	11,700	**5,050**	9,620	8,650	6,890	5,580
21	5,640	10,300	8,440	16,000	17,400	11,900	12,400	4,260	10,200	8,740	6,510	5,280
22	5,860	10,000	8,970	15,700	17,200	13,100	13,300	3,980	10,300	8,740	6,590	4,890
23	5,600	9,910	7,410	15,800	**14,700**	12,000	14,000	8,490	11,000	9,130	6,070	4,760
24	6,030	10,000	8,300	16,200	**14,200**	12,700	13,900	8,050	11,000	8,300	6,200	4,880
25	5,570	10,400	10,300	16,400	13,500	13,100	12,300	8,460	10,700	8,890	6,370	5,240
26	5,450	10,200	11,300	14,500	13,500	13,200	11,100	9,020	11,200	8,960	6,100	5,170
27	5,420	10,100	11,700	14,000	14,100	14,000	12,600	9,040	11,900	8,470	6,120	4,810
28	5,460	10,100	12,000	15,000	14,100	13,300	13,200	8,890	10,700	8,810	6,700	4,990
29	5,590		11,800	16,100	13,100	13,000	12,700	8,830	11,400	8,960	5,840	4,740
30	5,590		9,320	16,700	11,600	13,200	13,200	11,200	11,200	8,650	5,960	4,670
31	5,420		11,400		11,900		11,900	10,200		8,010		4,660
Total	176,505	222,946	360,248	434,551	441,640	403,433	383,265	289,973	289,450	284,094	209,488	173,649
Mean	5,694	7,962	11,620	14,490	14,250	13,450	12,360	9,354	9,648	9,164	6,983	5,602
Max	8,680	10,400	14,900	16,700	18,400	17,200	14,000	11,800	11,900	11,300	8,960	7,730
Min	5,040	5,650	7,410	11,200	11,600	11,800	11,100	3,980	7,270	7,300	5,840	4,660
Ac-ft	350,093	442,207	714,542	861,919	875,979	800,197	760,195	575,152	574,115	563,493	415,514	344,429

Calendar Year Summary

Annual Total 3,669,242 Annual Mean 10,050 Daily Max 18,400 Daily Min 3,980 Annual Ac-ft 7,277,835

Maximum Discharge (Excludes Estimates)				Minimum Discharge (Excludes Estimates)			
Date	Time	Elev	Discharge	Date	Time	Elev	Discharge
May 20	13:00	454.23	21,102	Aug. 22	07:00	449.82	3,336

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.

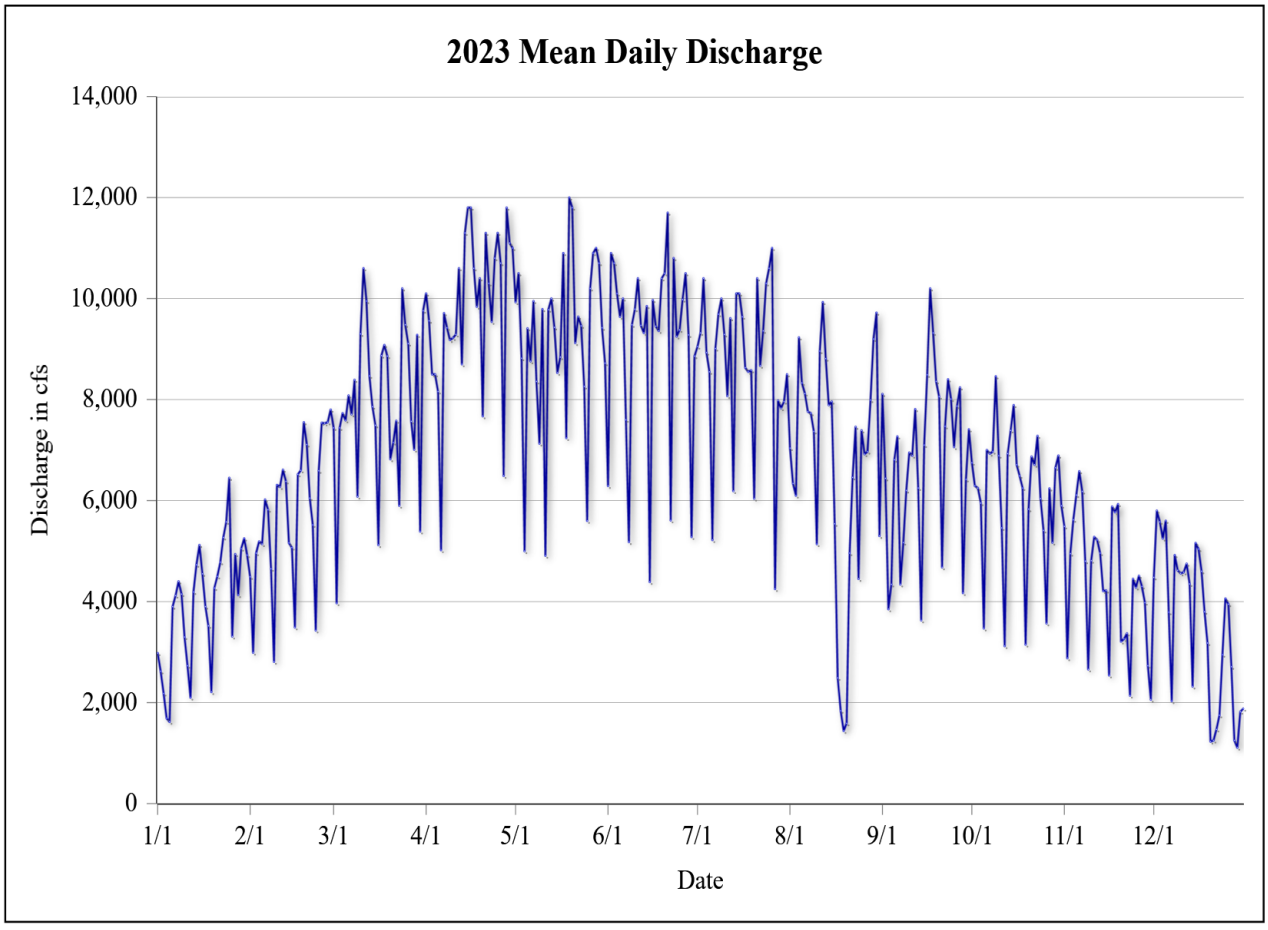
Period of Record—January 1, 2005 to current year.

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.

Datum—National Geodetic Vertical Datum of 1929.

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 2023

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	2,980	4,490	7,440	10,100	9,930	6,290	9,050	7,040	8,110	6,750	5,490	4,480
2	2,620	2,990	3,970	9,560	10,500	10,900	9,320	6,340	6,440	6,290	2,880	5,800
3	2,180	4,960	7,440	8,500	8,820	10,700	10,400	6,100	3,850	6,250	4,950	5,580
4	1,690	5,190	7,730	8,500	5,000	10,100	8,930	9,230	4,340	5,950	5,620	5,250
5	1,620	5,140	7,590	8,160	9,410	9,640	8,550	8,330	6,810	3,470	6,110	5,600
6	3,900	6,020	8,080	5,020	8,760	10,000	5,220	8,120	7,270	7,000	6,580	3,790
7	4,120	5,820	7,710	9,710	9,950	7,600	9,010	7,760	4,340	6,930	6,180	2,030
8	4,400	4,650	8,390	9,420	8,360	5,180	9,690	7,730	5,170	6,970	4,800	4,920
9	4,150	2,810	6,080	9,180	7,130	9,480	10,000	7,370	6,200	8,460	2,660	4,620
10	3,300	6,310	9,300	9,220	9,790	9,790	9,290	5,140	6,950	6,890	4,810	4,560
11	2,730	6,270	10,600	9,290	4,910	10,400	8,070	8,960	6,890	5,460	5,280	4,580
12	2,100	6,610	9,950	10,600	9,780	9,470	9,610	9,930	7,810	3,120	5,220	4,750
13	4,190	6,380	8,470	8,700	10,000	9,320	6,190	8,810	6,250	6,930	4,960	4,350
14	4,730	5,160	7,860	11,300	9,430	9,850	10,100	7,890	3,630	7,390	4,210	2,320
15	5,120	5,070	7,490	11,800	8,530	4,390	10,100	7,960	7,100	7,890	4,220	5,160
16	4,550	3,490	5,120	11,800	8,840	9,970	9,640	5,540	8,490	6,710	2,540	5,040
17	3,900	6,520	8,870	10,600	10,900	9,450	8,630	2,490	10,200	6,490	5,880	4,600
18	3,520	6,600	9,080	9,840	7,240	9,360	8,550	1,840	9,320	6,250	5,770	3,800
19	2,210	7,550	8,860	10,400	12,000	10,400	8,580	1,440	8,360	3,150	5,930	3,180
20	4,270	7,110	6,820	7,670	11,800	10,500	6,040	1,590	8,060	5,830	3,210	1,230
21	4,500	6,050	7,150	11,300	9,120	11,700	10,400	4,960	4,680	6,870	3,260	1,250
22	4,780	5,520	7,580	10,300	9,640	5,610	8,670	6,460	7,470	6,710	3,370	1,470
23	5,270	3,430	5,900	9,540	9,460	10,800	9,360	7,460	8,400	7,280	2,140	1,750
24	5,580	6,590	10,200	10,800	8,260	9,250	10,300	4,450	8,010	6,040	4,450	2,950
25	6,450	7,540	9,480	11,300	5,600	9,380	10,600	7,390	7,060	5,410	4,280	4,060
26	3,310	7,530	9,110	10,700	10,200	9,980	11,000	6,920	7,870	3,570	4,510	3,950
27	4,940	7,550	7,570	6,490	10,900	10,500	4,250	6,970	8,240	6,240	4,300	2,710
28	4,130	7,800	7,010	11,800	11,000	9,280	7,980	7,990	4,170	5,170	3,980	1,250
29	5,050		9,280	11,100	10,700	5,280	7,830	9,200	6,420	6,650	2,730	1,110
30	5,250		5,390	11,000	9,420	8,860	7,960	9,720	7,410	6,890	2,060	1,820
31	4,920		9,760		8,720		8,500	5,300		5,900		1,880
Total	122,463	161,157	245,262	293,826	284,217	273,322	271,767	206,446	205,327	190,918	132,368	109,820
Mean	3,950	5,756	7,912	9,794	9,168	9,111	8,767	6,660	6,844	6,159	4,412	3,543
Max	6,450	7,800	10,600	11,800	12,000	11,700	11,000	9,930	10,200	8,460	6,580	5,800
Min	1,620	2,810	3,970	5,020	4,910	4,390	4,250	1,440	3,630	3,120	2,060	1,110
Ac-ft	242,903	319,651	486,471	582,796	563,737	542,126	539,041	409,479	407,259	378,680	262,549	217,824

Calendar Year Summary

Annual Total 2,496,893 Annual Mean 6,841 Daily Max 12,000 Daily Min 1,110 Annual Ac-ft 4,952,516

Maximum Discharge (Excludes Estimates)				Minimum Discharge (Excludes Estimates)			
Date	Time	Elev	Discharge	Date	Time	Elev	Discharge
Sep. 17	23:00	345.70	18,795	Feb. 7	17:00	339.77	717

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.

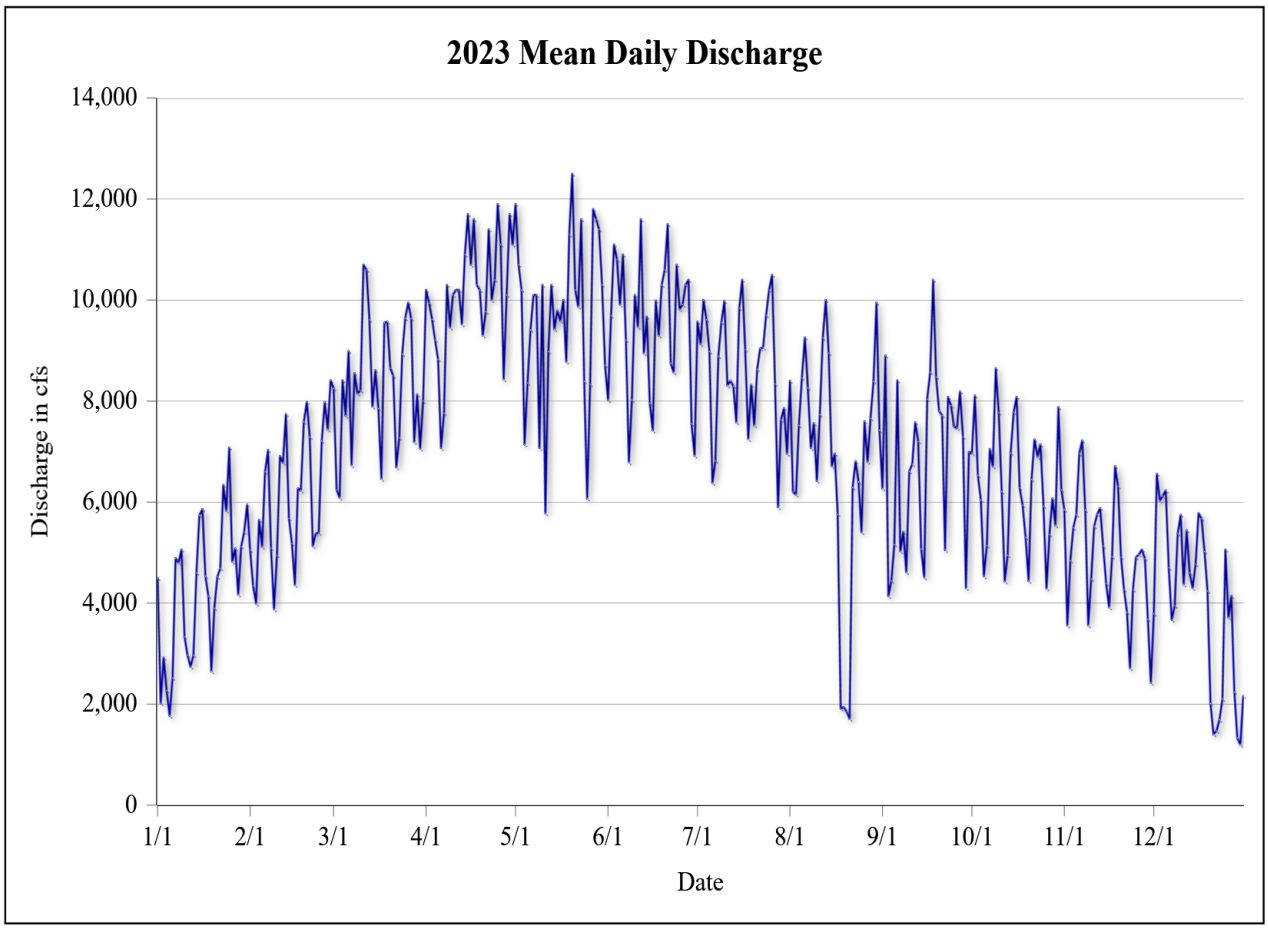
Period of Record—January 1, 2005 to current year.

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.

Datum—National Geodetic Vertical Datum of 1929.

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 2023

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	4,490	5,050	8,250	10,200	11,900	8,020	9,570	8,400	6,270	6,970	5,850	3,790
2	2,020	4,340	6,240	9,940	10,700	9,690	9,130	6,200	8,900	8,110	3,560	6,560
3	2,920	3,990	6,090	9,620	10,200	11,100	10,000	6,150	4,140	6,530	4,840	6,030
4	2,270	5,650	8,410	9,210	7,140	10,800	9,610	7,520	4,440	6,040	5,490	6,120
5	1,770	5,120	7,710	8,830	8,360	9,910	8,980	8,460	5,160	4,530	5,750	6,230
6	2,520	6,600	8,990	7,070	9,410	10,900	6,380	9,260	8,410	5,140	6,960	4,700
7	4,890	7,030	6,730	7,760	10,100	9,210	6,820	8,260	5,030	7,050	7,220	3,670
8	4,800	5,090	8,550	10,300	10,100	6,790	8,890	7,070	5,410	6,710	5,840	3,950
9	5,060	3,880	8,150	9,460	7,070	8,020	9,560	7,560	4,610	8,650	3,560	5,380
10	3,330	4,950	8,210	10,100	10,300	10,100	9,980	6,420	6,610	7,770	4,480	5,750
11	2,970	6,910	10,700	10,200	5,780	9,470	8,310	7,730	6,750	6,210	5,520	4,370
12	2,740	6,780	10,600	10,200	8,980	11,600	8,400	9,250	7,580	4,430	5,760	5,440
13	2,970	7,740	9,610	9,520	10,300	8,950	8,300	10,000	7,200	4,950	5,880	4,600
14	4,600	5,680	7,890	10,900	9,420	9,670	7,580	8,950	5,070	6,970	5,130	4,300
15	5,740	5,180	8,610	11,700	9,790	7,960	9,840	6,710	4,510	7,780	4,390	4,770
16	5,860	4,360	7,850	10,700	9,590	7,420	10,400	6,960	8,040	8,080	3,920	5,780
17	4,530	6,270	6,460	11,600	10,000	9,990	9,020	5,760	8,570	6,280	4,920	5,670
18	4,140	6,230	9,550	10,300	8,780	9,300	7,250	1,910	10,400	5,940	6,710	5,020
19	2,650	7,590	9,570	10,200	11,300	10,300	8,320	1,940	8,480	5,300	6,310	4,240
20	3,900	7,980	8,650	9,300	12,500	10,600	7,520	1,850	7,800	4,440	4,910	2,010
21	4,520	7,290	8,500	9,770	10,200	11,500	8,630	1,710	7,720	6,450	4,270	1,400
22	4,690	5,130	6,690	11,400	9,870	8,750	9,040	6,290	5,050	7,240	3,820	1,470
23	6,340	5,380	7,270	10,000	11,600	8,570	9,060	6,810	8,080	6,900	2,710	1,690
24	5,830	5,390	8,930	10,400	8,390	10,700	9,700	6,400	7,910	7,140	4,270	2,100
25	7,080	7,210	9,640	11,900	6,070	9,820	10,200	5,400	7,490	5,920	4,910	5,060
26	4,820	7,980	9,950	11,100	8,330	9,910	10,500	7,600	7,470	4,290	4,960	3,720
27	5,080	7,440	9,630	8,430	11,800	10,300	8,340	6,800	8,190	5,360	5,060	4,140
28	4,170	8,410	7,190	10,100	11,600	10,400	5,900	7,660	7,290	6,070	4,880	2,240
29	5,120		8,130	11,700	11,400	7,550	7,630	8,390	4,300	5,540	3,680	1,330
30	5,410		7,060	11,100	10,300	6,920	7,860	9,950	6,990	7,880	2,420	1,200
31	5,950		8,000		8,710		6,960	7,420		6,240		2,160
Total	133,186	170,680	257,835	303,235	299,887	284,178	267,721	210,833	203,906	196,925	147,996	124,895
Mean	4,296	6,096	8,317	10,110	9,674	9,473	8,636	6,801	6,797	6,352	4,933	4,029
Max	7,080	8,410	10,700	11,900	12,500	11,600	10,500	10,000	10,400	8,650	7,220	6,560
Min	1,770	3,880	6,090	7,070	5,780	6,790	5,900	1,710	4,140	4,290	2,420	1,200
Ac-ft	264,171	338,539	511,408	601,459	594,817	563,659	531,017	418,182	404,441	390,594	293,546	247,725

Calendar Year Summary

Annual Total 2,601,278 Annual Mean 7,127 Daily Max 12,500 Daily Min 1,200 Annual Ac-ft 5,159,559

Maximum Discharge (Excludes Estimates)				Minimum Discharge (Excludes Estimates)			
Date	Time	Elev	Discharge	Date	Time	Elev	Discharge
May 20	14:00	304.61	15,484	Dec. 30	04:00	296.72	1,062

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.

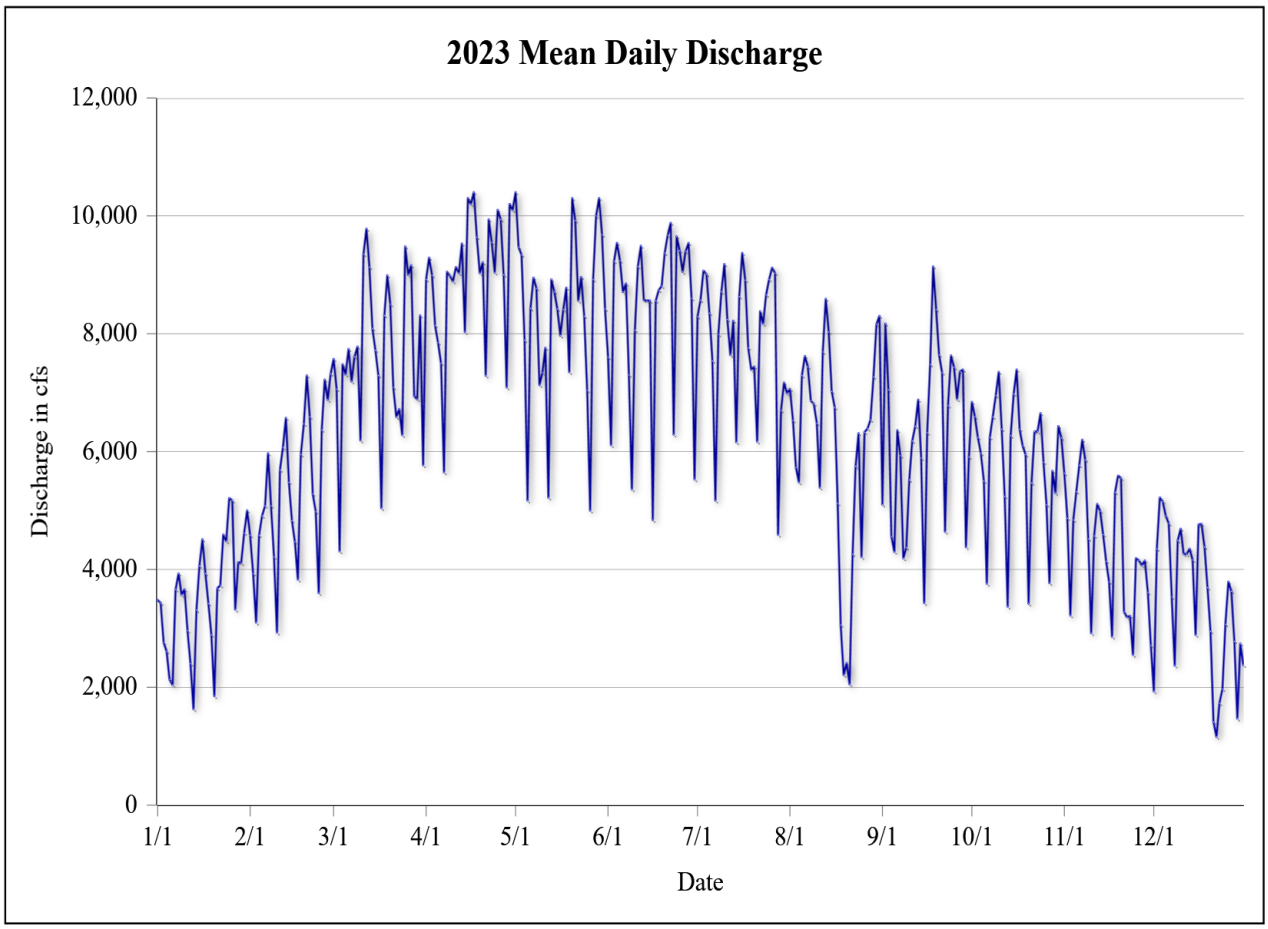
Period of Record—January 1, 2011 to current year.

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.

Datum—National Geodetic Vertical Datum of 1929.

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 estimated from Dec. 21, 2023 at 10:00 to Dec. 23, 2023 at 01:00 and Dec. 29, 2023 at 11:00 to Dec. 30, 2023 at 09:00, 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 2023

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	3,480	4,580	7,570	8,920	10,400	7,600	8,290	7,060	5,100	6,840	5,630	1,930
2	3,430	3,930	7,060	9,290	9,470	6,110	8,570	6,530	8,170	6,590	4,870	4,350
3	2,760	3,100	4,310	8,990	9,340	9,230	9,070	5,730	7,050	6,240	3,220	5,220
4	2,610	4,580	7,480	8,140	7,890	9,540	9,010	5,480	4,560	5,970	4,840	5,150
5	2,130	4,910	7,310	7,850	5,170	9,240	8,350	7,290	4,300	5,500	5,320	4,910
6	2,040	5,080	7,740	7,500	8,430	8,710	7,540	7,620	6,360	3,760	5,770	4,780
7	3,660	5,970	7,190	5,650	8,950	8,850	5,170	7,440	5,930	6,240	6,200	3,530
8	3,930	5,080	7,610	9,050	8,770	7,300	7,990	6,860	4,190	6,590	5,860	2,370
9	3,570	4,210	7,780	8,980	7,130	5,360	8,710	6,810	4,370	6,950	4,520	4,490
10	3,660	2,930	6,190	8,890	7,340	8,060	9,180	6,480	5,520	7,350	2,920	4,690
11	2,960	5,690	9,350	9,130	7,760	9,140	8,240	5,390	6,180	6,380	4,570	4,260
12	2,400	6,070	9,780	9,030	5,220	9,490	7,640	7,690	6,430	5,240	5,110	4,260
13	**1,630**	6,570	9,130	9,530	8,920	8,570	8,220	8,590	6,880	3,370	4,990	4,350
14	3,310	5,480	8,090	8,030	8,710	8,560	6,160	8,030	5,890	6,270	4,590	4,160
15	4,060	4,830	7,720	10,300	8,420	8,560	8,630	7,020	3,430	6,980	4,140	2,890
16	4,510	4,470	7,290	10,200	7,970	4,840	9,370	6,750	6,320	7,390	3,790	4,760
17	3,930	3,830	5,040	10,400	8,410	8,560	8,910	5,120	7,480	6,380	2,860	4,770
18	3,420	5,950	8,310	9,640	8,780	8,740	7,760	3,060	9,140	6,100	5,310	4,380
19	2,890	6,470	8,990	9,030	7,350	8,810	7,390	**2,210**	8,410	5,950	5,590	3,690
20	1,850	7,290	8,500	9,210	10,300	9,370	7,440	2,410	7,640	3,420	5,550	2,950
21	3,680	6,590	7,090	7,290	9,920	9,670	6,170	2,050	7,340	5,470	3,280	**1,410**
22	3,730	5,280	6,590	9,940	8,560	9,880	8,380	4,260	4,640	6,340	3,190	**1,160**
23	4,590	4,980	6,720	9,550	8,960	6,290	8,170	5,750	6,780	6,340	3,210	1,730
24	4,480	3,600	6,280	9,040	8,300	9,650	8,660	6,310	7,630	6,650	2,550	1,970
25	5,210	6,370	9,480	10,100	7,040	9,410	8,920	4,210	7,430	5,820	4,190	3,070
26	5,170	7,220	9,000	9,940	5,000	9,050	9,120	6,330	6,890	5,100	4,150	3,790
27	3,320	6,880	9,160	9,000	8,920	9,400	9,030	6,390	7,360	3,770	4,070	3,630
28	4,120	7,320	6,940	7,090	10,000	9,540	4,590	6,540	7,390	5,670	4,150	2,780
29	4,110		6,890	10,200	10,300	8,600	6,700	7,270	4,380	5,300	3,610	**1,470**
30	4,620		8,310	10,100	9,680	5,530	7,170	8,160	5,910	6,430	2,710	**2,740**
31	5,000		5,770		8,420		6,990	8,300		6,230		2,380
Total	110,253	149,278	234,645	270,028	259,804	251,641	245,491	189,137	189,076	182,610	130,764	108,032
Mean	3,557	5,331	7,569	9,001	8,381	8,388	7,919	6,101	6,303	5,891	4,359	3,485
Max	5,210	7,320	9,780	10,400	10,400	9,880	9,370	8,590	9,140	7,390	6,200	5,220
Min	1,630	2,930	4,310	5,650	5,000	4,840	4,590	2,050	3,430	3,370	2,550	1,160
Ac-ft	218,684	296,088	465,412	535,592	515,313	499,123	486,924	375,148	375,026	362,202	259,367	214,277

Calendar Year Summary

Annual Total 2,320,758 Annual Mean 6,358 Daily Max 10,400 Daily Min 1,730 Annual Ac-ft 4,603,157

Maximum Discharge (Excludes Estimates)				Minimum Discharge (Excludes Estimates)			
Date	Time	Elev	Discharge	Date	Time	Elev	Discharge
May 21	00:00	250.51	11,789	Dec. 23	16:00	244.29	1,544

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

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.

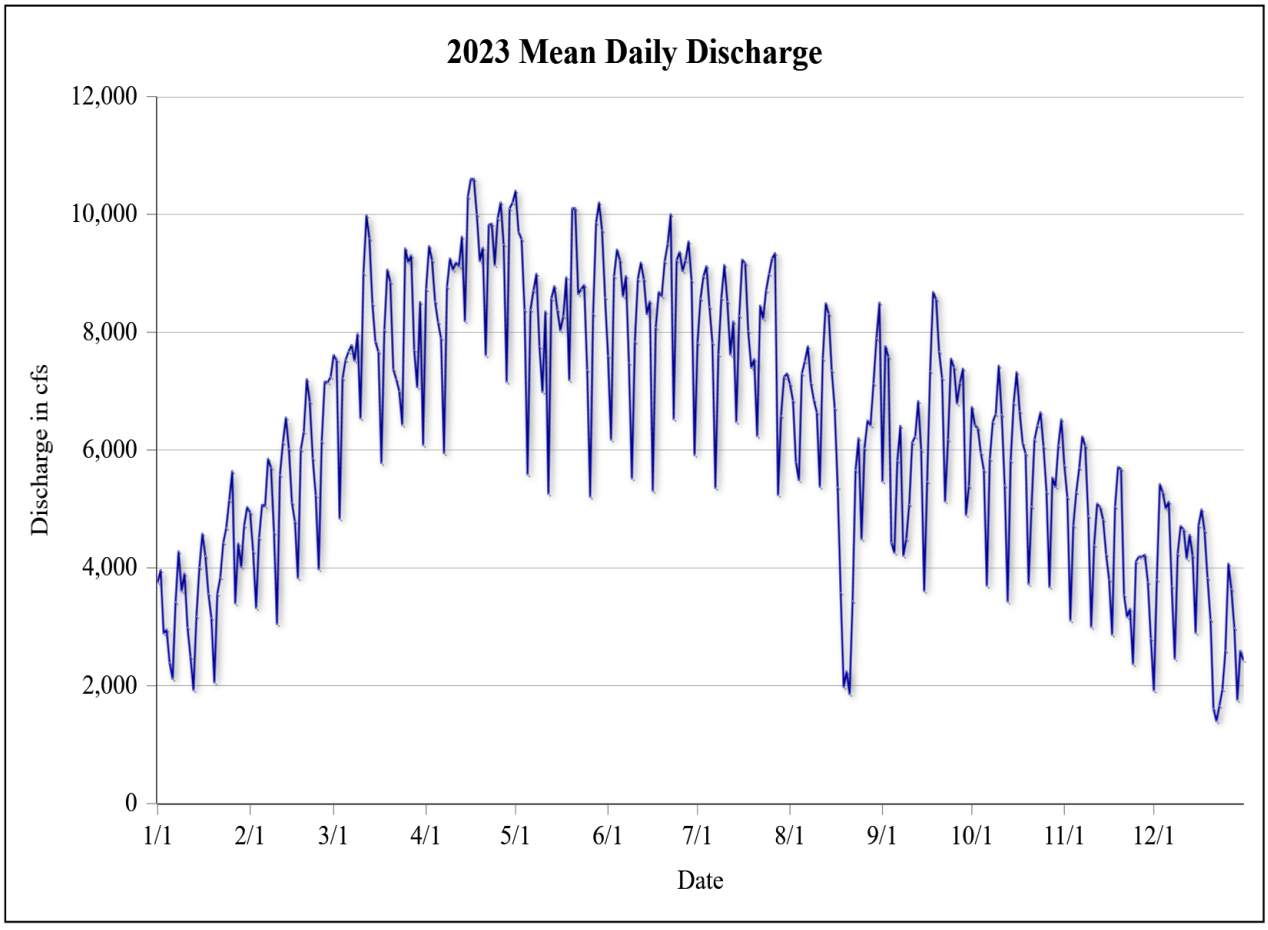
Period of Record—January 1, 2011 to current year.

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.

Datum—National Geodetic Vertical Datum of 1929.

Extremes—Maximum daily discharge, 17,200 cfs, Mar. 26, 2014; minimum daily discharge, 1,400 cfs, Dec. 22, 2023; maximum hourly discharge, 17,801 cfs, Mar. 27, 2014 at 10:00; minimum hourly discharge, 964 cfs, Dec. 21, 2023 at 19:00.

Remarks—Discharge data were estimated from Jan. 16, 2023 at 18:00 thru Jan. 17, 2023 at 09:00, due to gage malfunction.



Colorado River Below McIntyre Park

Mean daily discharge, in cubic-feet per second, Calendar Year 2023

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	3,760	4,940	7,610	8,730	10,400	7,600	7,820	7,120	5,470	6,730	5,740	1,920
2	3,960	4,280	7,530	9,460	9,700	6,180	8,570	6,840	7,760	6,420	5,200	3,800
3	2,890	3,320	4,840	9,220	9,580	8,950	8,950	5,790	7,580	6,370	3,110	5,420
4	2,950	4,510	7,220	8,520	8,380	9,400	9,120	5,490	4,430	5,950	4,720	5,280
5	2,390	5,070	7,530	8,170	5,590	9,220	8,430	7,300	4,260	5,660	5,290	5,010
6	2,120	5,050	7,670	7,900	8,380	8,610	7,820	7,510	5,820	3,700	5,700	5,120
7	3,420	5,850	7,780	5,950	8,710	8,950	5,360	7,760	6,410	5,850	6,230	3,690
8	4,280	5,700	7,520	8,770	8,990	7,480	7,620	7,140	4,210	6,480	6,070	2,460
9	3,610	4,600	7,970	9,250	7,760	5,520	8,580	6,850	4,490	6,610	4,880	4,240
10	3,900	3,050	6,540	9,060	6,990	7,840	9,140	6,640	5,080	7,430	3,000	4,710
11	2,990	5,580	9,000	9,180	8,350	8,900	8,520	5,380	6,130	6,600	4,390	4,650
12	2,490	6,130	9,980	9,120	5,260	9,180	7,620	7,550	6,230	5,400	5,090	4,160
13	1,930	6,550	9,590	9,620	8,570	8,900	8,180	8,490	6,830	3,430	5,030	4,560
14	3,180	6,020	8,480	8,190	8,780	8,310	6,480	8,310	6,000	5,820	4,820	4,210
15	4,010	5,110	7,840	10,300	8,380	8,520	8,280	7,350	3,610	6,800	4,230	2,900
16	**4,580**	4,790	7,670	10,600	8,030	5,310	9,230	6,710	5,470	7,320	3,800	4,720
17	**4,200**	3,830	5,780	10,600	8,270	8,080	9,170	5,370	7,340	6,660	2,870	4,990
18	3,560	6,010	8,040	10,000	8,930	8,680	8,020	3,580	8,680	6,120	5,040	4,630
19	3,150	6,310	9,060	9,210	7,190	8,610	7,400	1,980	8,560	5,940	5,710	3,830
20	2,060	7,200	8,850	9,430	10,100	9,200	7,540	2,240	7,670	3,730	5,680	3,120
21	3,560	6,820	7,370	7,610	10,100	9,500	6,240	1,860	7,220	5,040	3,540	1,610
22	3,840	5,860	7,200	9,820	8,650	10,000	8,450	3,440	5,130	6,180	3,170	1,400
23	4,430	5,230	7,000	9,840	8,730	6,530	8,230	5,660	6,180	6,420	3,300	1,660
24	4,680	3,980	6,430	9,140	8,800	9,220	8,710	6,200	7,550	6,640	2,370	1,940
25	5,150	6,150	9,420	9,930	7,360	9,360	8,990	4,490	7,400	6,060	4,110	2,600
26	5,640	7,160	9,190	10,200	5,210	9,040	9,250	6,030	6,790	5,290	4,190	4,070
27	3,400	7,150	9,300	9,490	8,310	9,220	9,340	6,500	7,140	3,680	4,190	3,640
28	4,410	7,240	7,700	7,160	9,860	9,540	5,240	6,420	7,380	5,530	4,220	2,980
29	4,020		7,070	10,100	10,200	8,880	6,580	7,130	4,900	5,380	3,760	1,760
30	4,720		8,510	10,200	9,730	5,920	7,240	7,900	5,390	6,080	2,800	2,590
31	5,030		6,090		8,590		7,300	8,500		6,520		2,440
Total	114,328	153,487	241,809	274,704	261,959	250,704	247,416	189,487	187,119	181,832	132,250	110,103
Mean	3,688	5,482	7,800	9,157	8,450	8,357	7,981	6,112	6,237	5,866	4,408	3,552
Max	5,640	7,240	9,980	10,600	10,400	10,000	9,340	8,500	8,680	7,430	6,230	5,420
Min	1,930	3,050	4,840	5,950	5,210	5,310	5,240	1,860	3,610	3,430	2,370	1,400
Ac-ft	226,766	304,437	479,620	544,868	519,588	497,264	490,742	375,843	371,145	360,658	262,313	218,386

Calendar Year Summary

Annual Total 2,345,196 Annual Mean 6,425 Daily Max 10,600 Daily Min 1,400 Annual Ac-ft 4,651,629

Maximum Discharge (Excludes Estimates)				Minimum Discharge (Excludes Estimates)			
Date	Time	Elev	Discharge	Date	Time	Elev	Discharge
Apr. 16	04:00	241.42	11,674	Dec. 21	19:00	234.52	964

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

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.

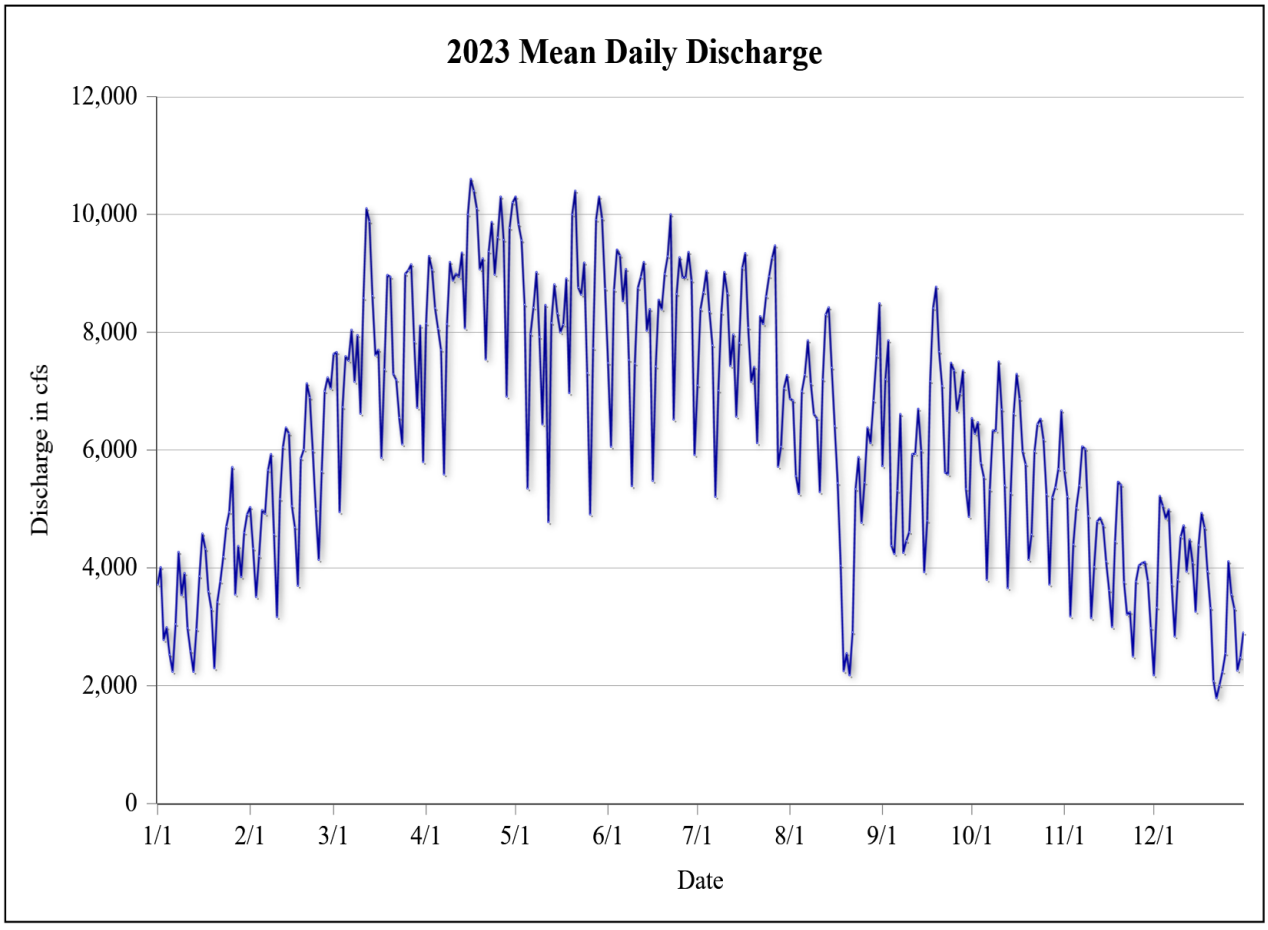
Period of Record—January 1, 2005 to current year.

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.

Datum—National Geodetic Vertical Datum of 1929.

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 2023

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	3,720	5,030	7,630	8,150	10,300	7,480	7,100	6,870	5,730	6,540	5,650	2,180
2	4,010	4,330	7,660	9,290	9,830	6,060	8,390	6,840	7,200	6,280	5,210	3,330
3	2,780	3,510	4,950	9,060	9,560	8,720	8,680	5,560	7,860	6,470	3,180	5,220
4	2,990	4,200	6,730	8,410	8,470	9,400	9,040	5,260	4,380	5,780	4,400	5,050
5	2,530	4,980	7,590	8,060	5,350	9,300	8,350	7,000	4,240	5,540	5,020	4,840
6	2,240	4,920	7,520	7,700	7,970	8,530	7,780	7,280	5,310	3,800	5,400	4,990
7	3,050	5,660	8,040	5,590	8,420	9,070	5,210	7,860	6,610	5,330	6,060	3,720
8	4,270	5,930	7,160	8,140	9,020	7,530	7,010	7,130	4,260	6,330	6,020	2,840
9	3,540	4,570	7,950	9,190	7,920	5,390	8,330	6,610	4,460	6,330	4,880	3,800
10	3,910	3,170	6,620	8,880	6,440	7,470	9,020	6,540	4,610	7,500	3,150	4,530
11	2,980	5,170	8,580	8,990	8,460	8,750	8,660	5,290	5,930	6,690	4,020	4,720
12	2,590	6,050	10,100	8,940	4,780	8,940	7,430	7,200	5,940	5,400	4,790	3,940
13	2,240	6,380	9,880	9,350	8,160	9,190	7,960	8,300	6,700	3,660	4,850	4,480
14	2,960	6,280	8,620	8,070	8,810	8,030	6,570	8,420	5,990	5,270	4,720	4,090
15	3,860	5,050	7,610	10,000	8,320	8,390	7,820	7,400	3,930	6,620	4,110	3,260
16	4,580	4,690	7,700	10,600	8,000	5,480	9,090	6,410	4,800	7,290	3,620	4,390
17	4,320	3,700	5,870	10,400	8,130	7,420	9,340	5,440	7,170	6,870	3,000	4,930
18	3,600	5,860	7,370	10,100	8,910	8,550	8,080	4,040	8,410	5,980	4,450	4,680
19	3,300	6,010	8,970	9,070	6,970	8,390	7,160	2,250	8,770	5,760	5,460	3,940
20	2,300	7,130	8,940	9,250	10,000	8,990	7,410	2,550	7,670	4,140	5,410	3,320
21	3,420	6,890	7,290	7,540	10,400	9,290	6,120	2,180	7,090	4,570	3,760	2,080
22	3,770	5,990	7,190	9,370	8,760	10,000	8,270	2,910	5,620	5,980	3,210	1,790
23	4,190	5,000	6,550	9,870	8,640	6,520	8,140	5,340	5,590	6,440	3,250	2,010
24	4,700	4,140	6,100	8,980	9,180	8,650	8,610	5,880	7,480	6,530	2,500	2,240
25	4,950	5,640	8,990	9,610	7,310	9,270	8,950	4,770	7,350	6,180	3,770	2,550
26	5,710	7,000	9,050	10,300	4,910	8,930	9,260	5,450	6,670	5,250	4,040	4,110
27	3,550	7,230	9,150	9,570	7,730	8,930	9,470	6,380	6,960	3,720	4,080	3,550
28	4,370	7,050	7,840	6,910	9,910	9,360	5,720	6,120	7,350	5,200	4,100	3,310
29	3,850		6,720	9,770	10,300	8,880	6,060	6,840	5,340	5,370	3,780	2,260
30	4,600		8,110	10,200	9,930	5,920	7,050	7,600	4,870	5,680	2,980	2,480
31	4,910		5,800		8,740		7,270	8,490		6,670		2,900
Total	113,818	151,539	238,319	269,352	259,692	246,843	243,342	186,241	184,277	179,163	128,880	111,538
Mean	3,672	5,412	7,688	8,978	8,377	8,228	7,850	6,008	6,143	5,779	4,296	3,598
Max	5,710	7,230	10,100	10,600	10,400	10,000	9,470	8,490	8,770	7,500	6,060	5,220
Min	2,240	3,170	4,950	5,590	4,780	5,390	5,210	2,180	3,930	3,660	2,500	1,790
Ac-ft	225,754	300,573	472,699	534,252	515,091	489,606	482,662	369,404	365,508	355,364	255,630	221,233

Calendar Year Summary

Annual Total 2,313,003 Annual Mean 6,337 Daily Max 10,600 Daily Min 1,790 Annual Ac-ft 4,587,774

Maximum Discharge (Excludes Estimates)				Minimum Discharge (Excludes Estimates)			
Date	Time	Elev	Discharge	Date	Time	Elev	Discharge
May 21	05:00	233.07	11,782	Dec. 21	22:00	225.15	1,528

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.

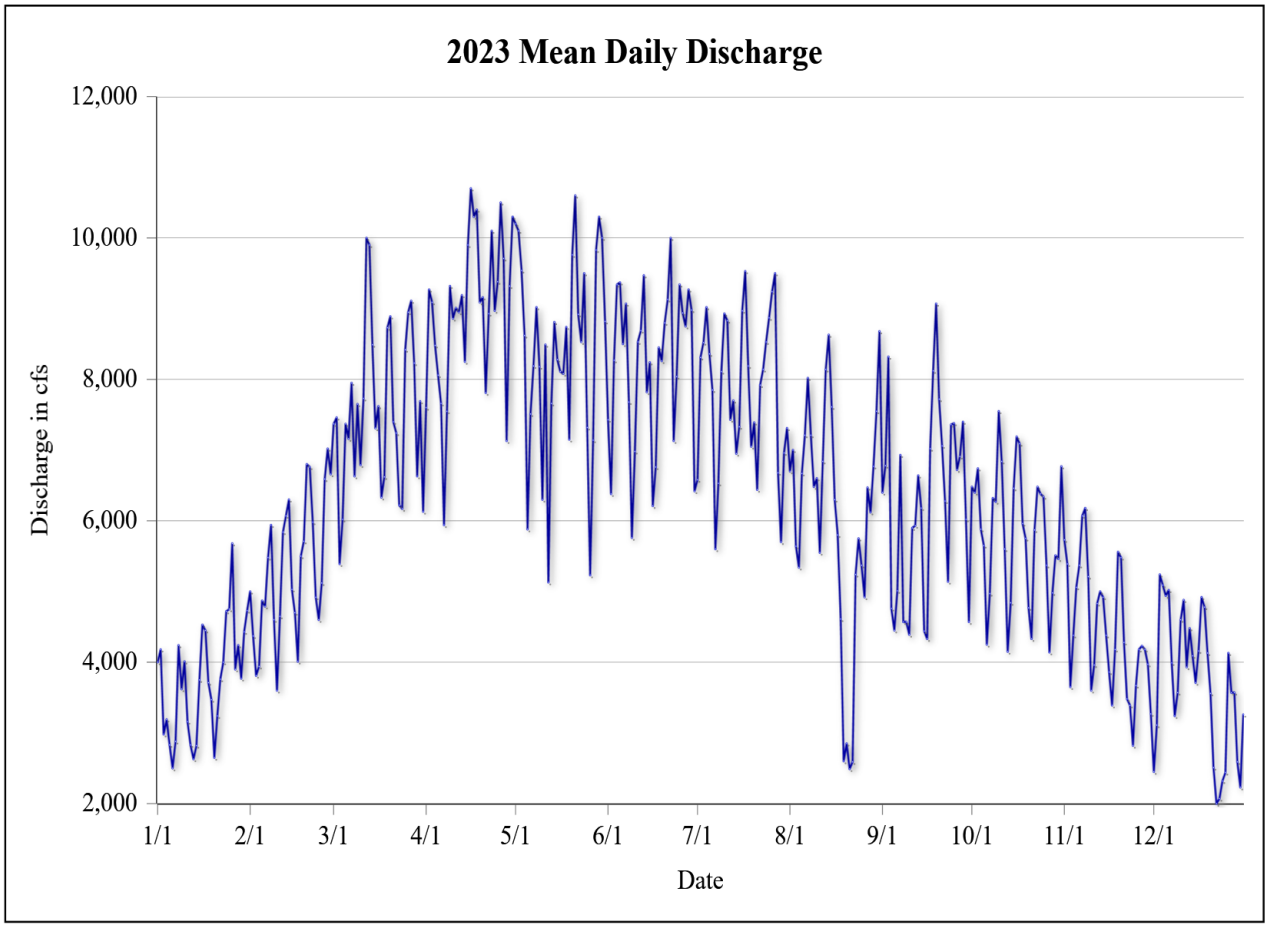
Period of Record—January 1, 2011 to current year.

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.

Datum—National Geodetic Vertical Datum of 1929.

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 2023

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	4,000	5,000	7,370	7,600	10,200	7,430	6,580	6,700	6,400	6,480	5,730	2,450
2	4,180	4,370	7,460	9,270	10,100	6,380	8,310	7,000	6,780	6,400	5,390	3,110
3	2,980	3,810	5,390	9,090	9,540	8,270	8,520	5,640	8,320	6,740	3,650	5,240
4	3,190	3,940	6,020	8,480	8,620	9,340	9,020	5,340	4,760	5,880	4,380	5,090
5	2,830	4,870	7,370	8,060	5,880	9,370	8,360	6,670	4,450	5,650	5,060	4,940
6	2,500	4,790	7,160	7,660	7,510	8,500	7,850	7,210	5,010	4,250	5,370	5,020
7	2,880	5,480	7,950	5,940	8,190	9,070	5,600	8,020	6,930	4,970	6,070	3,990
8	4,240	5,940	6,630	7,550	9,020	7,680	6,530	7,210	4,570	6,320	6,180	3,240
9	3,620	4,600	7,650	9,320	8,180	5,760	8,110	6,480	4,570	6,270	5,210	3,570
10	4,010	3,600	6,790	8,860	6,300	6,980	8,930	6,600	4,390	7,550	3,600	4,600
11	3,160	4,650	7,730	9,010	8,490	8,530	8,830	5,550	5,900	6,840	3,960	4,880
12	2,830	5,840	10,000	8,950	5,130	8,690	7,430	6,840	5,930	5,600	4,830	3,930
13	2,630	6,070	9,900	9,190	7,660	9,470	7,700	8,140	6,640	4,150	5,000	4,480
14	2,820	6,300	8,490	8,250	8,810	7,820	6,950	8,630	6,180	4,840	4,920	4,090
15	3,750	5,030	7,310	9,900	8,280	8,240	7,330	7,610	4,440	6,460	4,380	3,710
16	4,530	4,700	7,620	10,700	8,110	6,210	8,970	6,300	4,330	7,190	3,860	4,160
17	4,450	4,010	6,330	10,300	8,080	6,760	9,530	5,800	7,020	7,090	3,390	4,920
18	3,710	5,500	6,620	10,400	8,740	8,450	8,190	4,610	8,120	5,960	4,180	4,780
19	3,470	5,710	8,730	9,090	7,150	8,260	7,050	2,600	9,070	5,750	5,560	4,130
20	2,650	6,800	8,890	9,160	9,760	8,800	7,390	2,850	7,720	4,770	5,480	3,560
21	3,240	6,760	7,400	7,810	10,600	9,130	6,440	2,490	7,060	4,330	4,280	2,510
22	3,760	5,980	7,240	8,930	8,920	10,000	7,920	2,590	6,280	5,870	3,480	2,000
23	4,000	4,920	6,220	10,100	8,530	7,130	8,140	5,240	5,140	6,480	3,390	2,070
24	4,720	4,600	6,170	8,970	9,500	8,040	8,530	5,750	7,360	6,380	2,820	2,320
25	4,750	5,120	8,420	9,380	7,320	9,340	8,870	5,370	7,380	6,340	3,670	2,440
26	5,680	6,590	8,950	10,500	5,230	8,940	9,240	4,920	6,720	5,370	4,180	4,130
27	3,900	7,020	9,110	9,710	7,140	8,750	9,500	6,470	6,910	4,140	4,230	3,570
28	4,240	6,660	8,230	7,130	9,830	9,270	6,680	6,120	7,400	4,980	4,180	3,570
29	3,770		6,630	9,320	10,300	8,980	5,700	6,770	6,020	5,510	3,970	2,590
30	4,430		7,690	10,300	10,000	6,420	6,960	7,550	4,570	5,460	3,270	2,230
31	4,730		6,130		8,820		7,310	8,680		6,770		3,260
Total	115,627	148,663	233,586	268,892	260,060	246,038	242,468	187,768	186,361	180,790	133,652	114,565
Mean	3,730	5,309	7,535	8,963	8,389	8,201	7,822	6,057	6,212	5,832	4,455	3,696
Max	5,680	7,020	10,000	10,700	10,600	10,000	9,530	8,680	9,070	7,550	6,180	5,240
Min	2,500	3,600	5,390	5,940	5,130	5,760	5,600	2,490	4,330	4,140	2,820	2,000
Ac-ft	229,343	294,869	463,311	533,340	515,821	488,010	480,928	372,432	369,641	358,592	265,095	227,236

Calendar Year Summary

Annual Total 2,318,470 Annual Mean 6,352 Daily Max 10,700 Daily Min 2,000 Annual Ac-ft 4,598,619

Maximum Discharge (Excludes Estimates)				Minimum Discharge (Excludes Estimates)			
Date	Time	Elev	Discharge	Date	Time	Elev	Discharge
May 21	08:00	222.24	11,863	Dec. 22	05:00	216.14	1,973

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.

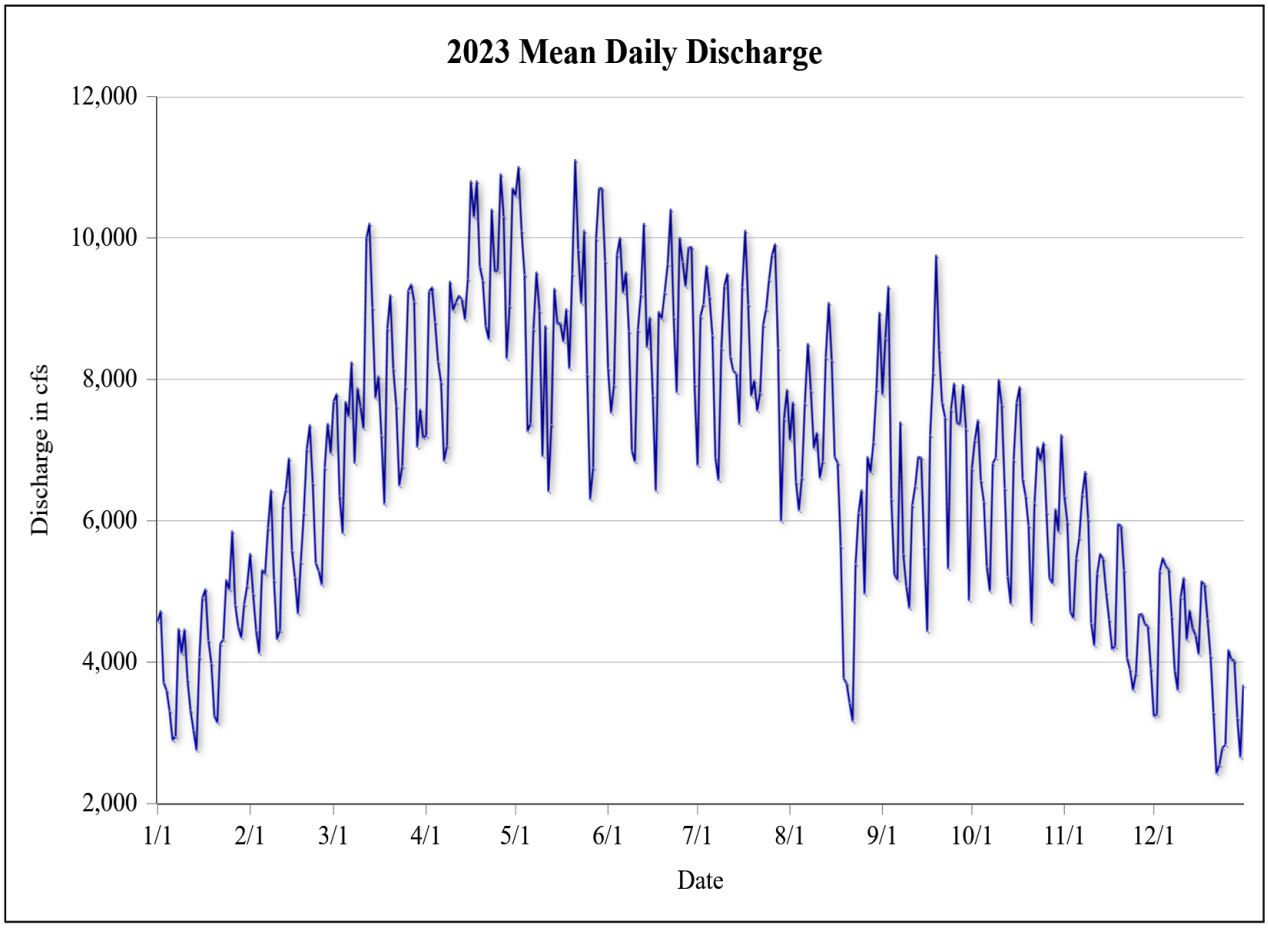
Period of Record—January 1, 2005 to current year.

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.

Datum—National Geodetic Vertical Datum of 1929.

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 2023

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	4,580	5,530	7,690	7,200	10,600	8,160	6,790	7,150	7,790	6,740	6,350	3,240
2	4,720	4,970	7,790	9,240	11,000	7,530	8,890	7,670	8,580	7,140	5,980	3,260
3	3,710	4,450	6,350	9,300	10,100	7,920	9,060	6,550	9,310	7,420	4,710	5,290
4	3,600	4,130	5,830	8,810	9,480	9,760	9,600	6,150	6,310	6,570	4,630	5,470
5	3,310	5,300	7,680	8,250	7,270	10,000	9,170	6,610	5,240	6,270	5,470	5,360
6	2,900	5,250	7,480	7,960	7,370	9,230	8,620	7,660	5,170	5,350	5,760	5,310
7	2,950	5,900	8,240	6,850	8,710	9,510	6,890	8,500	7,390	5,010	6,370	4,640
8	4,470	6,430	6,820	7,060	9,510	8,680	6,580	7,840	5,530	6,810	6,690	3,880
9	4,130	5,160	7,870	9,380	8,970	6,990	8,440	7,030	5,070	6,890	6,020	3,610
10	4,460	4,330	7,610	8,980	6,920	6,840	9,320	7,240	4,770	7,990	4,550	4,920
11	3,750	4,450	7,310	9,090	8,750	8,700	9,490	6,610	6,220	7,640	4,240	5,190
12	3,320	6,210	10,000	9,180	6,420	9,200	8,320	6,840	6,490	6,460	5,250	4,320
13	3,040	6,440	10,200	9,130	7,360	10,200	8,120	8,310	6,900	5,210	5,530	4,730
14	2,760	6,880	9,010	8,850	9,280	8,460	8,080	9,080	6,890	4,830	5,460	4,480
15	4,070	5,580	7,740	9,420	8,790	8,870	7,370	8,270	5,630	6,860	4,990	4,380
16	4,910	5,200	8,040	10,800	8,790	7,770	9,300	6,900	4,440	7,670	4,600	4,120
17	5,030	4,690	7,210	10,300	8,540	6,430	10,100	6,820	7,210	7,890	4,190	5,140
18	4,310	5,420	6,240	10,800	8,990	8,950	9,060	5,640	8,090	6,590	4,220	5,100
19	3,980	6,110	8,720	9,590	8,160	8,860	7,770	3,770	9,750	6,350	5,950	4,610
20	3,240	7,010	9,190	9,400	9,490	9,230	7,980	3,700	8,410	5,930	5,930	4,090
21	3,150	7,350	8,150	8,750	11,100	9,630	7,560	3,420	7,670	4,560	5,300	3,290
22	4,260	6,530	7,620	8,570	9,830	10,400	7,810	3,170	7,460	6,250	4,060	2,430
23	4,320	5,400	6,500	10,400	9,080	8,880	8,770	5,390	5,330	7,040	3,900	2,550
24	5,160	5,290	6,770	9,530	10,100	7,820	8,990	6,110	7,570	6,860	3,610	2,790
25	5,030	5,100	7,890	9,540	8,070	10,000	9,410	6,430	7,940	7,100	3,840	2,830
26	5,850	6,750	9,250	10,900	6,310	9,660	9,760	4,970	7,380	6,120	4,670	4,170
27	4,810	7,370	9,340	10,300	6,750	9,320	9,910	6,900	7,370	5,190	4,680	4,040
28	4,500	6,960	9,100	8,300	9,990	9,860	8,440	6,690	7,920	5,120	4,540	4,020
29	4,350		7,050	9,040	10,700	9,870	6,000	7,110	7,300	6,160	4,510	3,210
30	4,820		7,570	10,700	10,700	7,930	7,440	7,860	4,880	5,850	3,910	2,660
31	5,080		7,180		9,670		7,850	8,940		7,210		3,670
Total	128,585	160,192	243,475	275,708	276,715	264,689	260,877	205,331	206,008	199,079	149,899	126,785
Mean	4,148	5,721	7,854	9,190	8,926	8,823	8,415	6,624	6,867	6,422	4,997	4,090
Max	5,850	7,370	10,200	10,900	11,100	10,400	10,100	9,080	9,750	7,990	6,690	5,470
Min	2,760	4,130	5,830	6,850	6,310	6,430	6,000	3,170	4,440	4,560	3,610	2,430
Ac-ft	255,045	317,736	482,925	546,859	548,855	525,004	517,442	407,268	408,610	394,868	297,321	251,475

Calendar Year Summary

Annual Total 2,497,343 Annual Mean 6,842 Daily Max 11,100 Daily Min 2,430 Annual Ac-ft 4,953,407

Maximum Discharge (Excludes Estimates)				Minimum Discharge (Excludes Estimates)			
Date	Time	Elev	Discharge	Date	Time	Elev	Discharge
May 21	13:00	209.04	11,932	Dec. 22	09:00	204.97	2,202

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.

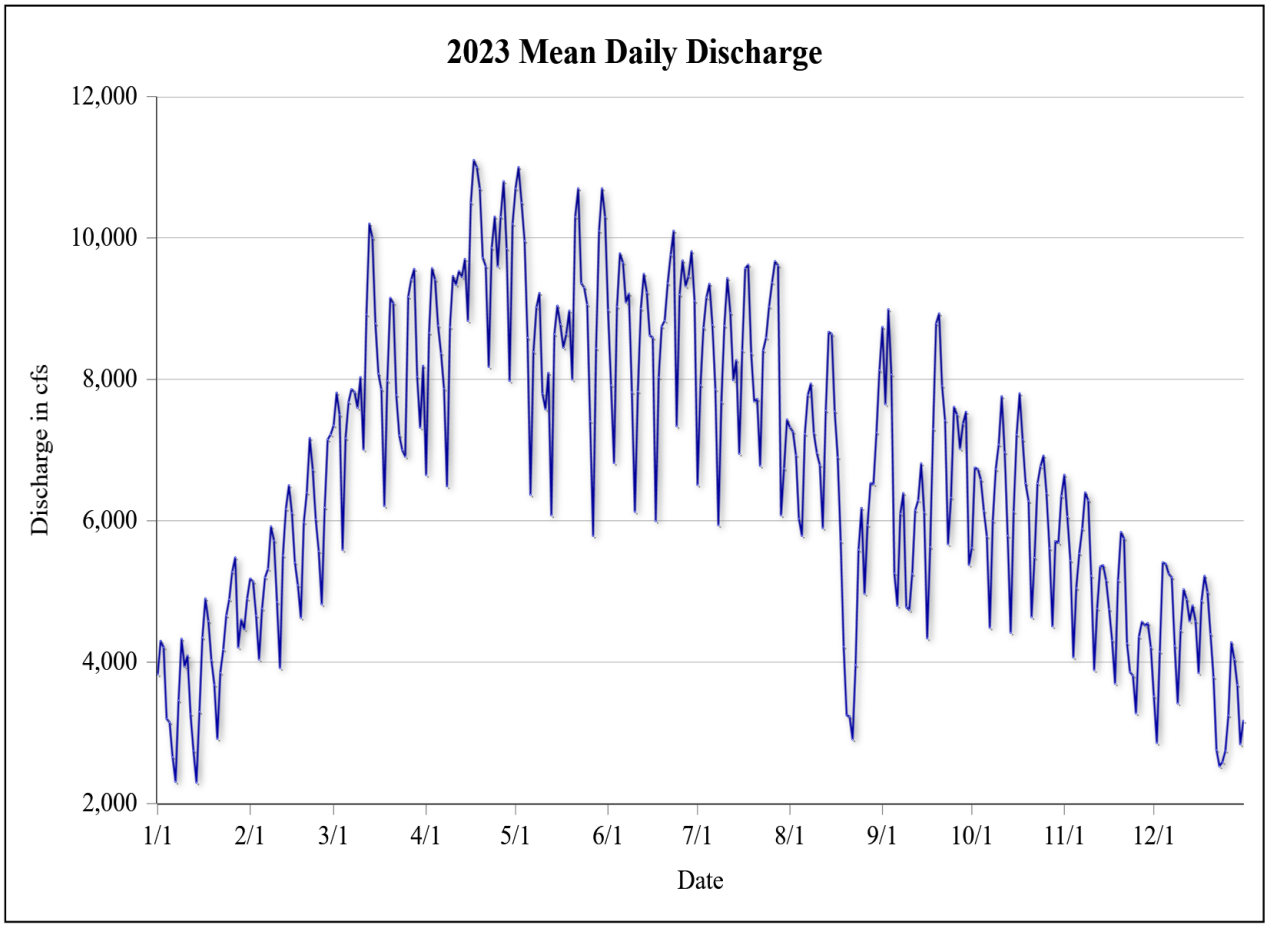
Period of Record—March 27, 2012 to current year.

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.

Datum—National Geodetic Vertical Datum of 1929.

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 2023

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	3,830	5,180	7,350	6,650	10,700	8,980	6,510	7,320	8,740	5,620	6,650	3,520
2	4,300	5,140	7,810	8,660	11,000	7,920	7,920	7,260	7,650	6,750	6,060	2,860
3	4,210	4,660	7,500	9,570	10,500	6,820	8,730	6,930	8,990	6,730	5,440	4,150
4	3,200	4,040	5,590	9,410	9,960	9,030	9,160	6,030	8,070	6,580	4,070	5,410
5	3,150	4,760	7,170	8,760	8,590	9,780	9,350	5,790	5,260	6,140	5,050	5,390
6	2,660	5,200	7,680	8,370	6,370	9,650	8,770	7,230	4,800	5,780	5,540	5,250
7	2,310	5,320	7,860	7,870	8,390	9,090	7,860	7,780	6,100	4,490	5,890	5,200
8	3,460	5,920	7,820	6,490	9,020	9,210	5,940	7,940	6,390	6,000	6,400	4,230
9	4,330	5,720	7,600	8,740	9,220	7,820	7,680	7,240	4,780	6,730	6,290	3,420
10	3,940	4,850	8,030	9,460	7,800	6,130	8,760	6,960	4,740	7,080	5,220	4,450
11	4,090	3,920	7,010	9,340	7,580	7,830	9,430	6,790	5,250	7,760	3,890	5,030
12	3,270	5,510	8,920	9,530	8,090	9,000	8,940	5,900	6,150	6,970	4,760	4,890
13	2,750	6,170	10,200	9,450	6,080	9,490	7,990	7,560	6,290	5,790	5,350	4,580
14	2,300	6,500	10,000	9,700	8,640	9,230	8,270	8,670	6,810	4,420	5,370	4,800
15	3,300	6,110	8,790	8,830	9,040	8,620	6,950	8,640	6,120	6,130	5,160	4,580
16	4,350	5,410	8,080	10,500	8,780	8,590	8,410	7,550	4,340	7,220	4,750	3,850
17	4,900	5,090	7,860	11,100	8,450	6,000	9,570	6,900	5,630	7,800	4,310	4,870
18	4,580	4,630	6,210	11,000	8,640	8,030	9,620	5,710	7,300	7,150	3,700	5,220
19	4,030	5,980	7,980	10,700	8,970	8,750	8,370	4,220	8,790	6,530	5,160	4,990
20	3,680	6,400	9,150	9,720	8,000	8,830	7,690	3,250	8,930	6,280	5,840	4,400
21	2,920	7,170	9,080	9,600	10,300	9,360	7,720	3,230	7,910	4,640	5,750	3,790
22	3,850	6,720	7,780	8,180	10,700	9,760	6,780	2,910	7,420	5,480	4,270	2,760
23	4,180	6,020	7,210	9,860	9,360	10,100	8,410	3,960	5,670	6,530	3,860	2,530
24	4,660	5,570	7,000	10,300	9,300	7,340	8,590	5,590	6,330	6,770	3,810	2,590
25	4,890	4,820	6,910	9,600	9,060	9,200	9,030	6,180	7,610	6,920	3,280	2,750
26	5,280	6,190	9,170	10,300	7,410	9,680	9,370	4,970	7,500	6,390	4,360	3,250
27	5,480	7,150	9,410	10,800	5,790	9,320	9,670	5,940	7,020	5,610	4,570	4,280
28	4,210	7,220	9,560	9,850	8,440	9,460	9,610	6,530	7,370	4,510	4,520	4,040
29	4,600		8,040	7,980	10,100	9,810	6,080	6,520	7,540	5,710	4,550	3,680
30	4,470		7,320	10,200	10,700	9,110	6,740	7,250	5,380	5,690	4,210	2,840
31	4,900		8,190		10,300		7,430	8,130		6,350		3,170
Total	122,075	157,373	248,359	280,418	275,364	261,948	255,347	196,905	200,868	192,526	148,105	126,766
Mean	3,938	5,620	8,012	9,347	8,883	8,732	8,237	6,352	6,696	6,211	4,937	4,089
Max	5,480	7,220	10,200	11,100	11,000	10,100	9,670	8,670	8,990	7,800	6,650	5,410
Min	2,300	3,920	5,590	6,490	5,790	6,000	5,940	2,910	4,340	4,420	3,280	2,530
Ac-ft	242,132	312,145	492,614	556,202	546,176	519,565	506,473	390,556	398,416	381,869	293,761	251,436

Calendar Year Summary

Annual Total 2,466,053 Annual Mean 6,756 Daily Max 11,100 Daily Min 2,300 Annual Ac-ft 4,891,345

Maximum Discharge (Excludes Estimates)				Minimum Discharge (Excludes Estimates)			
Date	Time	Elev	Discharge	Date	Time	Elev	Discharge
Apr. 18	22:00	192.38	11,343	Jan. 14	18:00	187.64	2,026

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.

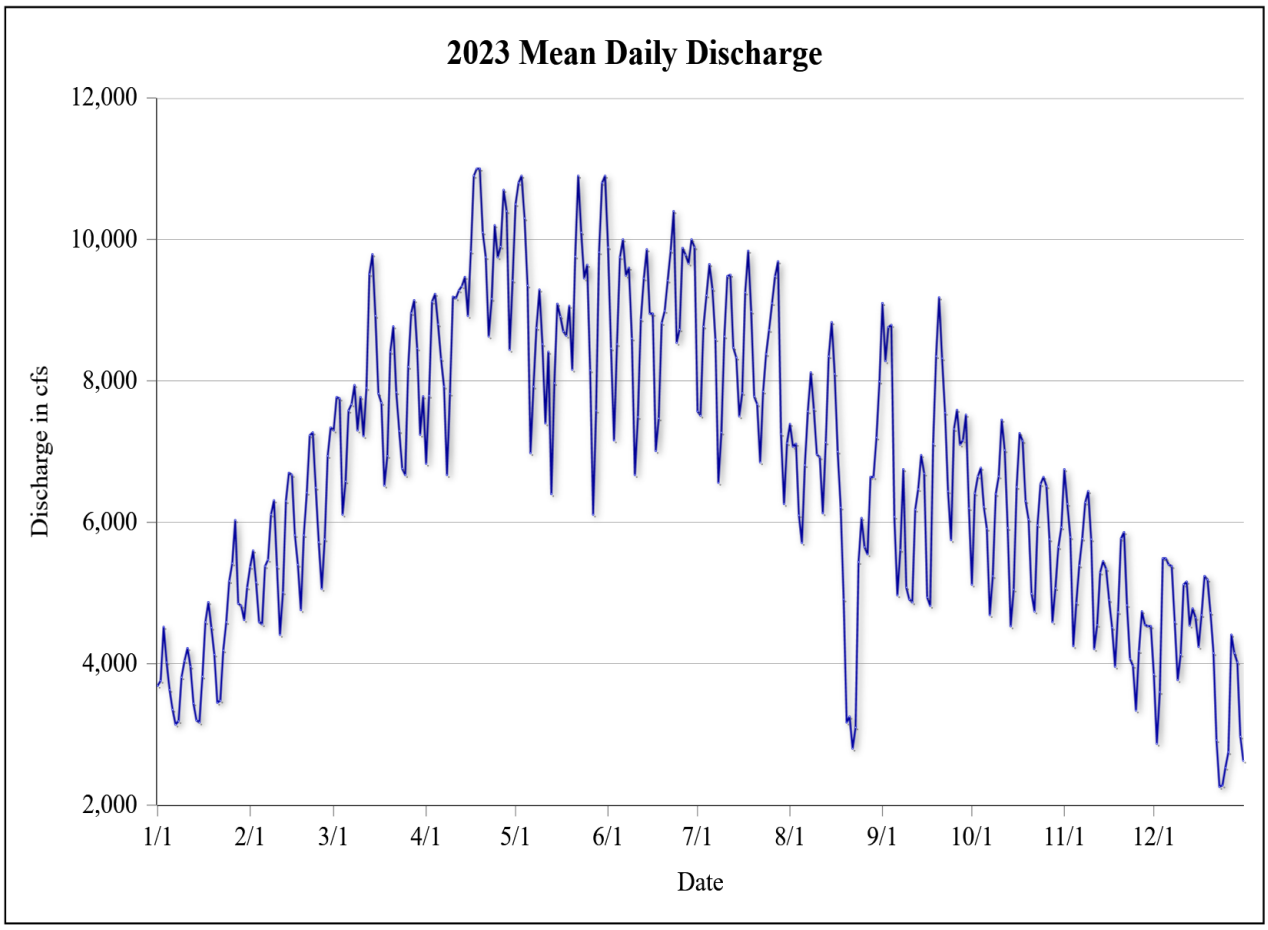
Period of Record—January 1, 2012 to current year.

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.

Datum—National Geodetic Vertical Datum of 1929.

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

Remarks—The gage became disconnected from the river many times when the river elevation dropped below approximately 183.80 feet. Discharge values were estimated to complete this record however many of the periods are considered poor.



Colorado River at Martinez Lake

Mean daily discharge, in cubic-feet per second, Calendar Year 2023

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	3,690	5,370	7,300	6,830	10,500	9,890	7,570	7,390	9,100	5,120	6,750	**3,850**
2	3,760	5,600	7,770	7,790	10,800	8,460	7,510	7,070	8,280	6,410	6,260	**2,870**
3	4,520	5,150	7,750	9,120	10,900	7,160	8,770	7,110	8,760	6,650	5,790	**3,600**
4	4,020	4,590	6,110	9,230	10,300	8,520	9,210	6,100	8,790	6,770	**4,250**	**5,490**
5	3,630	4,560	6,580	8,800	9,350	9,750	9,650	5,710	6,080	6,220	**4,860**	5,490
6	3,350	5,380	7,580	8,310	6,980	10,000	9,300	6,810	**4,970**	5,910	5,390	5,400
7	3,140	5,470	7,670	7,920	7,920	9,490	8,590	7,570	5,610	**4,690**	5,770	5,380
8	3,190	6,110	7,940	6,670	8,750	9,600	6,560	8,120	**6,750**	5,240	6,280	**4,590**
9	3,810	6,310	7,300	7,820	9,290	8,600	7,270	7,600	**5,080**	6,400	6,440	**3,770**
10	4,040	5,370	7,770	9,190	8,520	6,670	8,630	6,960	**4,910**	6,650	5,760	**4,130**
11	4,220	4,410	7,220	9,170	7,400	7,490	9,480	6,920	**4,870**	7,450	**4,210**	**5,120**
12	3,960	5,010	7,900	9,280	8,410	8,870	9,500	6,130	6,180	7,020	**4,550**	5,160
13	3,440	6,300	9,510	9,340	6,400	9,450	8,470	7,130	6,470	5,920	**5,290**	4,540
14	3,200	6,700	9,790	9,470	7,970	9,860	8,330	8,350	6,950	**4,530**	5,450	4,780
15	3,170	6,670	8,920	8,920	9,090	8,950	7,500	8,830	6,690	**5,050**	5,340	**4,650**
16	3,820	5,820	7,820	9,830	8,910	8,950	7,830	8,100	**4,940**	6,500	4,900	**4,240**
17	4,590	5,400	7,690	10,900	8,700	7,010	9,250	7,000	**4,820**	7,260	**4,510**	**4,690**
18	4,870	4,760	6,520	11,000	8,640	7,470	9,840	6,210	**7,110**	7,150	**3,960**	5,240
19	4,510	5,820	6,940	11,000	9,060	8,820	8,980	**4,910**	8,350	6,300	**4,730**	5,190
20	4,130	6,420	8,410	10,100	8,160	8,990	7,780	**3,170**	9,180	6,040	5,770	**4,720**
21	3,450	7,230	8,770	9,750	9,760	9,420	7,670	**3,250**	8,320	**4,990**	5,860	**4,150**
22	3,480	7,270	7,840	8,630	10,900	9,840	6,850	**2,800**	7,550	**4,740**	**4,830**	**2,920**
23	4,190	6,490	7,290	9,160	10,100	10,400	7,850	**3,100**	6,440	5,960	**4,070**	**2,260**
24	4,590	5,720	6,760	10,200	9,450	8,540	8,380	**5,440**	5,750	6,540	**3,970**	**2,280**
25	5,170	5,060	6,670	9,750	9,640	8,730	8,720	6,060	7,320	6,640	**3,340**	**2,530**
26	5,420	5,760	8,200	9,900	8,150	9,880	9,100	5,650	7,590	6,510	**4,180**	**2,750**
27	6,030	6,940	8,960	10,700	6,110	9,780	9,480	5,550	7,100	5,760	**4,740**	**4,410**
28	4,850	7,340	9,140	10,400	7,580	9,660	9,690	6,640	7,160	**4,590**	4,550	**4,150**
29	4,820		8,460	8,440	9,820	10,000	7,250	6,640	7,520	5,070	4,530	**4,020**
30	4,620		7,240	9,420	10,800	9,890	6,260	7,200	6,200	5,650	**4,530**	**2,970**
31	5,080		7,780		10,900		7,120	7,990		5,930		**2,630**
Total	128,775	163,033	241,612	276,960	279,197	270,228	258,367	197,501	204,817	185,678	150,849	127,946
Mean	4,154	5,823	7,794	9,232	9,006	9,008	8,334	6,371	6,827	5,990	5,028	4,127
Max	6,030	7,340	9,790	11,000	10,900	10,400	9,840	8,830	9,180	7,450	6,750	5,490
Min	3,140	4,410	6,110	6,670	6,110	6,670	6,260	2,800	4,820	4,530	3,340	2,260
Ac-ft	255,422	323,372	479,230	549,342	553,779	535,990	512,464	391,738	406,249	368,286	299,205	253,777

Calendar Year Summary

Annual Total 2,484,964 Annual Mean 6,808 Daily Max 11,000 Daily Min 3,140 Annual Ac-ft 4,928,855

Maximum Discharge (Excludes Estimates)				Minimum Discharge (Excludes Estimates)			
Date	Time	Elev	Discharge	Date	Time	Elev	Discharge
Apr. 19	06:00	186.65	11,213	Jan. 8	07:00	182.70	3,036

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

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.

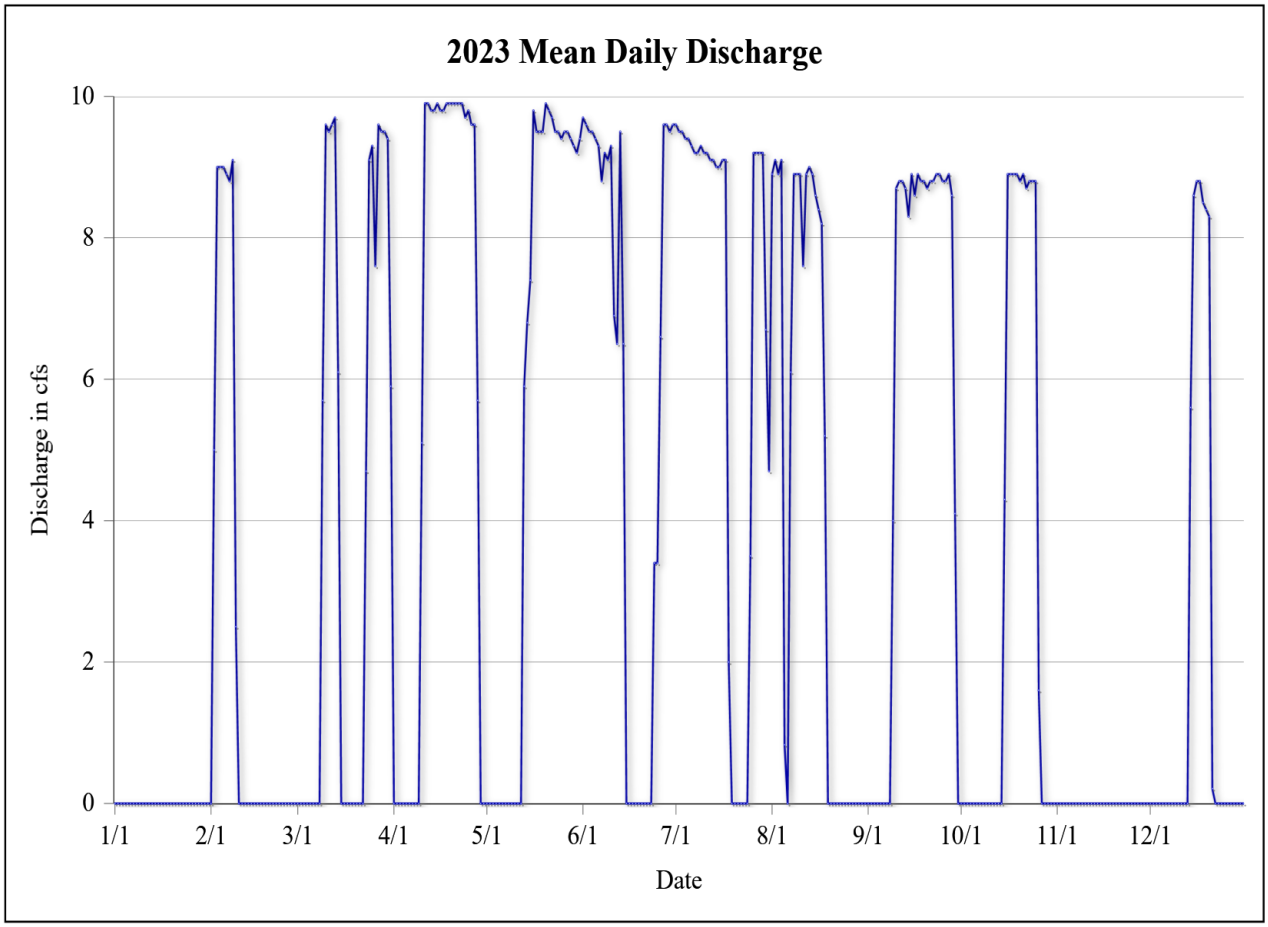
Period of Record—January 1, 2006 to current year.

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.

Datum—Not applicable.

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 2023

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0	0	0	0	9.7	9.6	8.9	0	0	0	0
2	0	5.0	0	0	0	9.6	9.5	9.1	0	0	0	0
3	0	9.0	0	0	0	9.5	9.5	8.9	0	0	0	0
4	0	9.0	0	0	0	9.5	9.4	9.1	0	0	0	0
5	0	9.0	0	0	0	9.4	9.4	0.83	0	0	0	0
6	0	8.9	0	0	0	9.3	9.3	0	0	0	0	0
7	0	8.8	0	0	0	8.8	9.2	6.1	0	0	0	0
8	0	9.1	0	0	0	9.2	9.2	8.9	0	0	0	0
9	0	2.5	5.7	0	0	9.1	9.3	8.9	4.0	0	0	0
10	0	0	9.6	5.1	0	9.3	9.2	8.9	8.7	0	0	0
11	0	0	9.5	9.9	0	6.9	9.2	7.6	8.8	0	0	0
12	0	0	9.6	9.9	0	6.5	9.1	8.9	8.8	0	0	0
13	0	0	9.7	9.8	5.9	9.5	9.1	9.0	8.7	0	0	0
14	0	0	6.1	9.8	6.8	6.5	9.0	8.9	8.3	0	0	5.6
15	0	0	0	9.9	7.4	0	9.0	8.6	8.9	4.3	0	8.6
16	0	0	0	9.8	9.8	0	9.1	8.4	8.6	8.9	0	8.8
17	0	0	0	9.8	9.5	0	9.1	8.2	8.9	8.9	0	8.8
18	0	0	0	9.9	9.5	0	2.0	5.2	8.8	8.9	0	8.5
19	0	0	0	9.9	9.5	0	0	0	8.8	8.9	0	8.4
20	0	0	0	9.9	9.9	0	0	0	8.7	8.8	0	8.3
21	0	0	0	9.9	9.8	0	0	0	8.8	8.9	0	0.21
22	0	0	0	9.9	9.7	0	0	0	8.8	8.7	0	0
23	0	0	4.7	9.9	9.5	0	0	0	8.9	8.8	0	0
24	0	0	9.1	9.7	9.5	3.4	0	0	8.9	8.8	0	0
25	0	0	9.3	9.8	9.4	3.4	3.5	0	8.8	8.8	0	0
26	0	0	7.6	9.6	9.5	6.6	9.2	0	8.8	1.6	0	0
27	0	0	9.6	9.6	9.5	9.6	9.2	0	8.9	0	0	0
28	0	0	9.5	5.7	9.4	9.6	9.2	0	8.6	0	0	0
29	0		9.5	0	9.3	9.5	9.2	0	4.1	0	0	0
30	0		9.4	0	9.2	9.6	6.7	0	0	0	0	0
31	0		5.9		9.4		4.7	0		0		0
Total	0	61.3	124.7	177.8	172.5	174.4	210.7	134.58	174.7	94.4	0	57.11
Mean	0	2.19	4.02	5.93	5.56	5.81	6.80	4.34	5.82	3.04	0	1.84
Max	0	9.1	9.7	9.9	9.9	9.7	9.6	9.1	8.9	8.9	0	8.8
Min	0	0	0	0	0	0	0	0	0	0	0	0
Ac-ft	0	121	247	353	342	346	418	267	347	187	0	113

Calendar Year Summary

Annual Total 1,382.13 Annual Mean 3.79 Daily Max 9.9 Daily Min 0 Annual Ac-ft 2,741

Maximum Discharge (Excludes Estimates)				Minimum Discharge (Excludes Estimates)			
Date	Time	GH	Discharge	Date	Time	GH	Discharge
Apr. 12	01:00	N/A	11	Jan. 1	01:00	N/A	0

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.

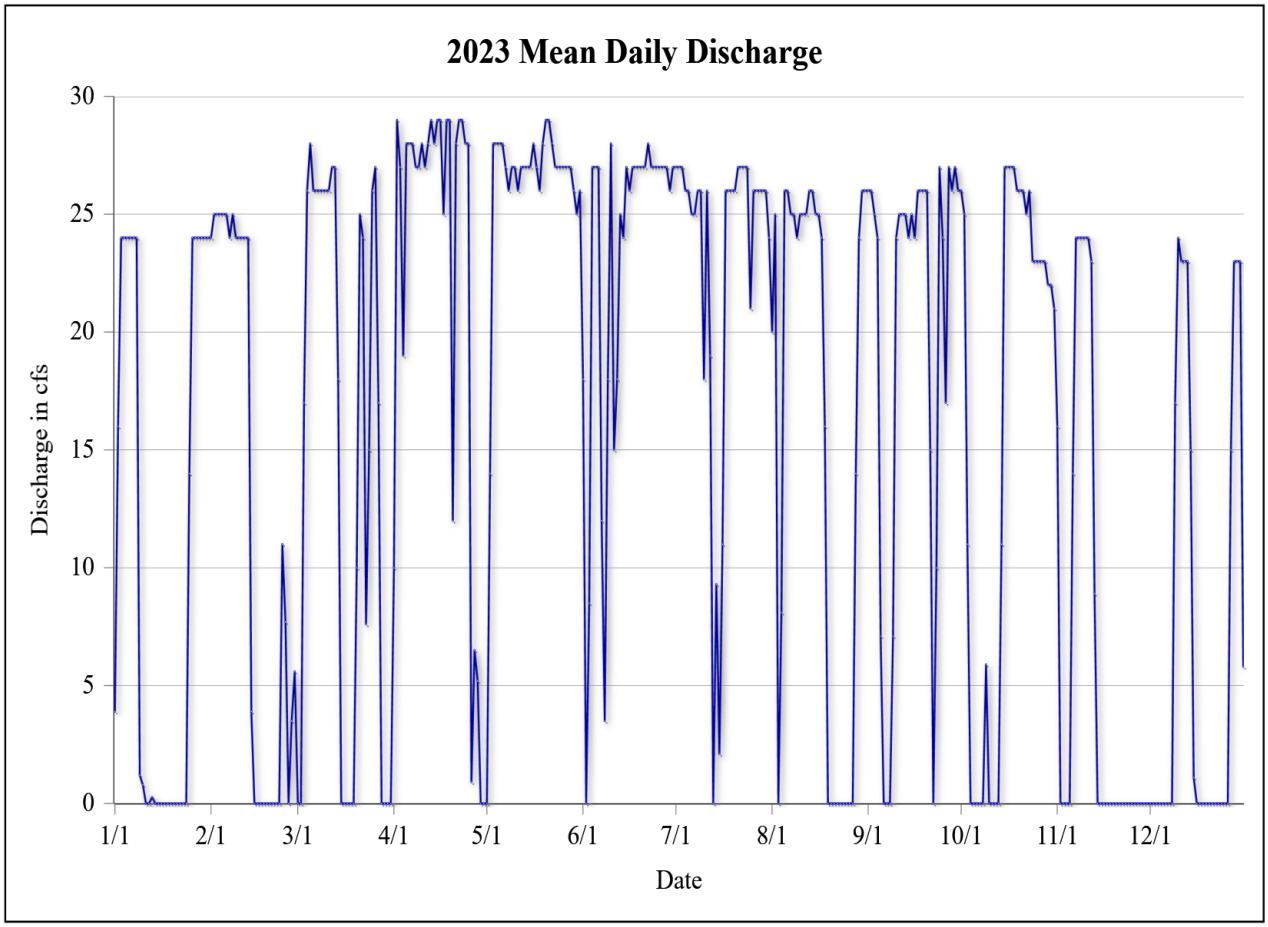
Period of Record—February 23, 2006 to current year.

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.

Datum—Gage Datum.

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—The discharge record was estimated from Feb. 25, 2023 at 08:00 to Feb. 27, 2023 at 11:00, due to gage malfunction.



Fort Mojave Tribe-North Casino

Mean daily discharge, in cubic-feet per second, Calendar Year 2023

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	3.9	24	0	10	0	18	27	20	26	26	16	0
2	16	25	0	29	14	0	27	25	26	25	0	0
3	24	25	17	27	28	8.5	27	0	25	11	0	0
4	24	25	26	19	28	27	26	8.1	24	0	0	0
5	24	25	28	28	28	27	26	26	7.1	0	0	0
6	24	25	26	28	28	27	25	26	0	0	14	0
7	24	24	26	28	27	12	25	25	0	0	24	0
8	24	25	26	27	26	3.5	26	25	0	0	24	0
9	1.2	24	26	27	27	18	26	24	7.1	5.9	24	17
10	0.79	24	26	28	27	28	18	25	24	0	24	24
11	0	24	26	27	26	15	26	25	25	0	24	23
12	0	24	27	28	27	18	19	25	25	0	23	23
13	0.27	24	27	29	27	25	0	26	25	0	8.9	23
14	0	3.9	18	28	27	24	9.3	26	24	11	0	15
15	0	0	0	29	27	27	2.1	25	25	27	0	1.1
16	0	0	0	29	28	26	11	25	24	27	0	0
17	0	0	0	25	27	27	26	24	26	27	0	0
18	0	0	0	29	26	27	26	16	26	27	0	0
19	0	0	0	29	28	27	26	0	26	26	0	0
20	0	0	10	12	29	27	26	0	26	26	0	0
21	0	0	25	28	29	27	27	0	15	26	0	0
22	0	0	24	29	28	28	27	0	0	25	0	0
23	0	0	7.6	29	27	27	27	0	10	26	0	0
24	0	11	15	28	27	27	27	0	27	23	0	0
25	14	**7.7**	26	28	27	27	21	0	24	23	0	0
26	24	**0**	27	0.91	27	27	26	0	17	23	0	0
27	24	**3.5**	17	6.5	27	27	26	0	27	23	0	15
28	24	5.6	0	5.2	27	27	26	14	26	23	0	23
29	24		0	0	26	26	26	24	27	22	0	23
30	24		0	0	25	27	26	26	26	22	0	23
31	24		0		26		24	26		21		5.8
Total	323.54	349.5	450.7	671.66	799	681.7	707.5	484.3	589.1	494.5	181.2	216.6
Mean	10.4	12.5	14.5	22.4	25.8	22.7	22.8	15.6	19.6	16.0	6.04	6.99
Max	24	25	28	29	29	28	27	26	27	27	24	24
Min	0	0	0	0	0	0	0	0	0	0	0	0
Ac-ft	642	693	894	1,332	1,584	1,352	1,403	961	1,168	981	359	430

Calendar Year Summary

Annual Total 5,949.00 Annual Mean 16.3 Daily Max 29 Daily Min 0 Annual Ac-ft 11,800

Maximum Discharge (Excludes Estimates)				Minimum Discharge (Excludes Estimates)			
Date	Time	GH	Discharge	Date	Time	GH	Discharge
Apr. 3	01:00	2.37	32	Jan. 1	05:00	0.41	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 (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.

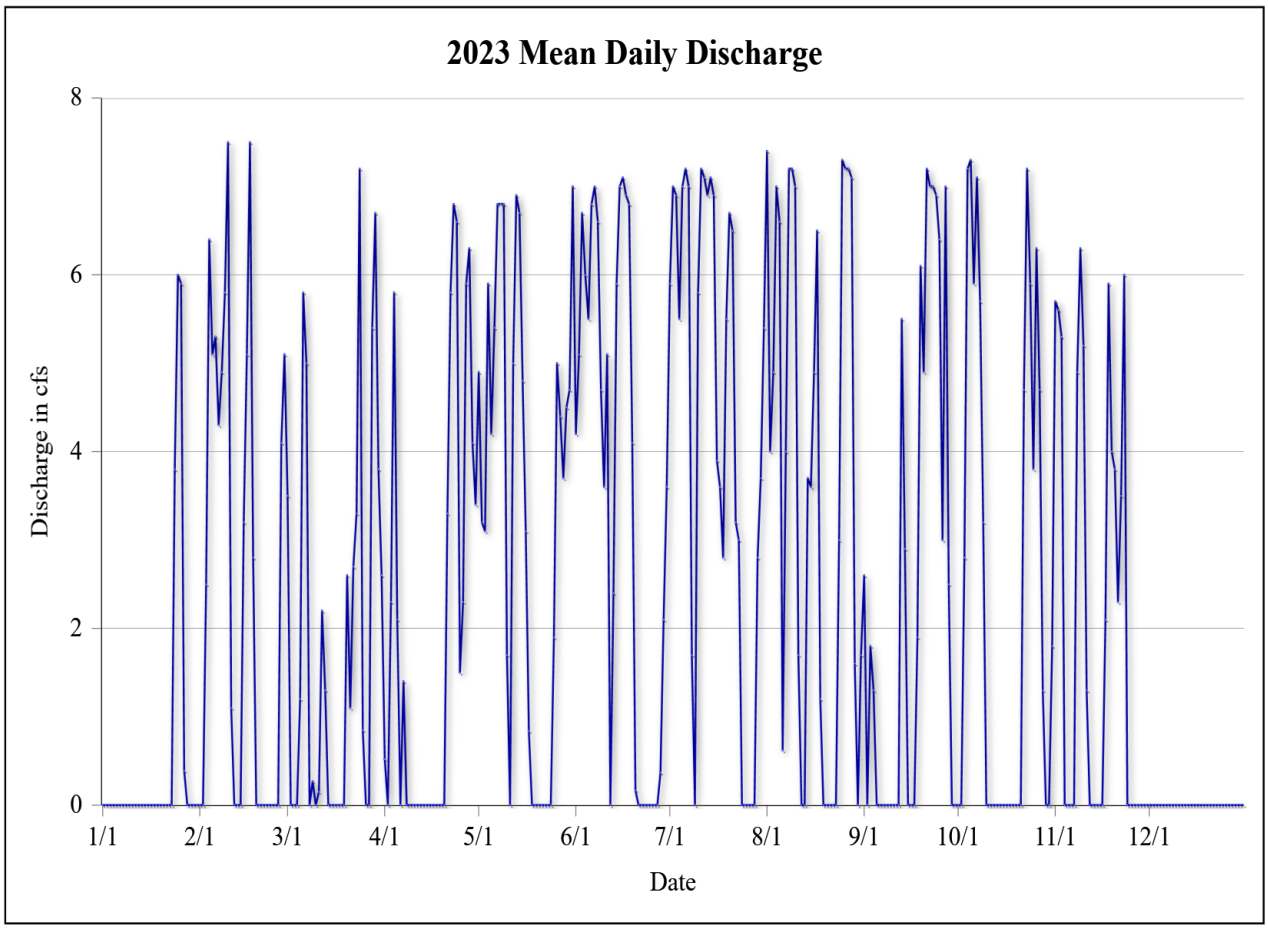
Period of Record—September 9, 2011 to current year.

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.

Datum—Not applicable.

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—The discharge record was estimated as zero from Apr. 12, 2023 to Apr. 21, 2023 while the diversion pump was removed for maintenance.



Fort Mojave Tribe-North Casino (North Event Center)

Mean daily discharge, in cubic-feet per second, Calendar Year 2023

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0	3.5	0.52	4.9	4.2	5.9	7.4	2.6	0	5.7	0
2	0	0	0	0	3.2	5.1	7.0	4.0	0	0	5.6	0
3	0	2.5	0	2.3	3.1	6.7	6.9	4.9	1.8	2.8	5.3	0
4	0	6.4	0	5.8	5.9	6.0	5.5	7.0	1.3	7.2	0	0
5	0	5.1	1.2	2.1	4.2	5.5	7.0	6.6	0	7.3	0	0
6	0	5.3	5.8	0	5.4	6.8	7.2	0.62	0	5.9	0	0
7	0	4.3	5.0	1.4	6.8	7.0	7.0	4.0	0	7.1	0	0
8	0	4.9	0	0	6.8	6.6	1.7	7.2	0	5.7	4.9	0
9	0	5.8	0.27	0	6.8	4.7	0	7.2	0	3.2	6.3	0
10	0	7.5	0	0	1.7	3.6	5.8	7.0	0	0	5.2	0
11	0	1.1	0.15	0	0	5.1	7.2	1.7	0	0	1.3	0
12	0	0	2.2	**0**	5.0	0	7.1	0	0	0	0	0
13	0	0	1.3	**0**	6.9	2.4	6.9	0	5.5	0	0	0
14	0	0	0	**0**	6.7	5.9	7.1	3.7	2.9	0	0	0
15	0	3.2	0	**0**	4.8	7.0	6.9	3.6	0	0	0	0
16	0	5.1	0	**0**	3.1	7.1	3.9	4.9	0	0	0	0
17	0	7.5	0	**0**	0.84	6.9	3.6	6.5	0	0	2.1	0
18	0	2.8	0	**0**	0	6.8	2.8	1.2	1.9	0	5.9	0
19	0	0	0	**0**	0	4.1	5.5	0	6.1	0	4.0	0
20	0	0	2.6	**0**	0	0.17	6.7	0	4.9	0	3.8	0
21	0	0	1.1	**3.3**	0	0	6.5	0	7.2	0	2.3	0
22	0	0	2.7	5.8	0	0	3.2	0	7.0	4.7	3.5	0
23	0	0	3.3	6.8	0	0	3.0	0	7.0	7.2	6.0	0
24	3.8	0	7.2	6.6	0	0	0	3.0	6.9	5.9	0	0
25	6.0	0	0.85	1.5	1.9	0	0	7.3	6.4	3.8	0	0
26	5.9	0	0	2.3	5.0	0	0	7.2	3.0	6.3	0	0
27	0.39	4.1	0	5.9	4.4	0	0	7.2	7.0	4.7	0	0
28	0	5.1	5.4	6.3	3.7	0.37	0	7.1	2.5	1.3	0	0
29	0		6.7	4.1	4.5	2.1	2.8	1.6	0	0	0	0
30	0		3.8	3.4	4.7	3.6	3.7	0	0	0	0	0
31	0		2.6		7.0		5.4	1.7		1.8		0
Total	16.13	70.7	55.63	58.10	107.44	107.79	136.4	112.64	73.9	74.9	62.0	0
Mean	0.52	2.52	1.79	1.94	3.47	3.59	4.40	3.63	2.46	2.42	2.07	0
Max	6.0	7.5	7.2	6.8	7.0	7.1	7.2	7.4	7.2	7.3	6.3	0
Min	0	0	0	0	0	0	0	0	0	0	0	0
Ac-ft	32	140	110	115	213	214	271	223	147	149	123	0

Calendar Year Summary

Annual Total 875.77 Annual Mean 2.40 Daily Max 7.5 Daily Min 0 Annual Ac-ft 1,737

Maximum Discharge (Excludes Estimates)				Minimum Discharge (Excludes Estimates)			
Date	Time	GH	Discharge	Date	Time	GH	Discharge
Feb. 15	13:00	N/A	8.0	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-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.

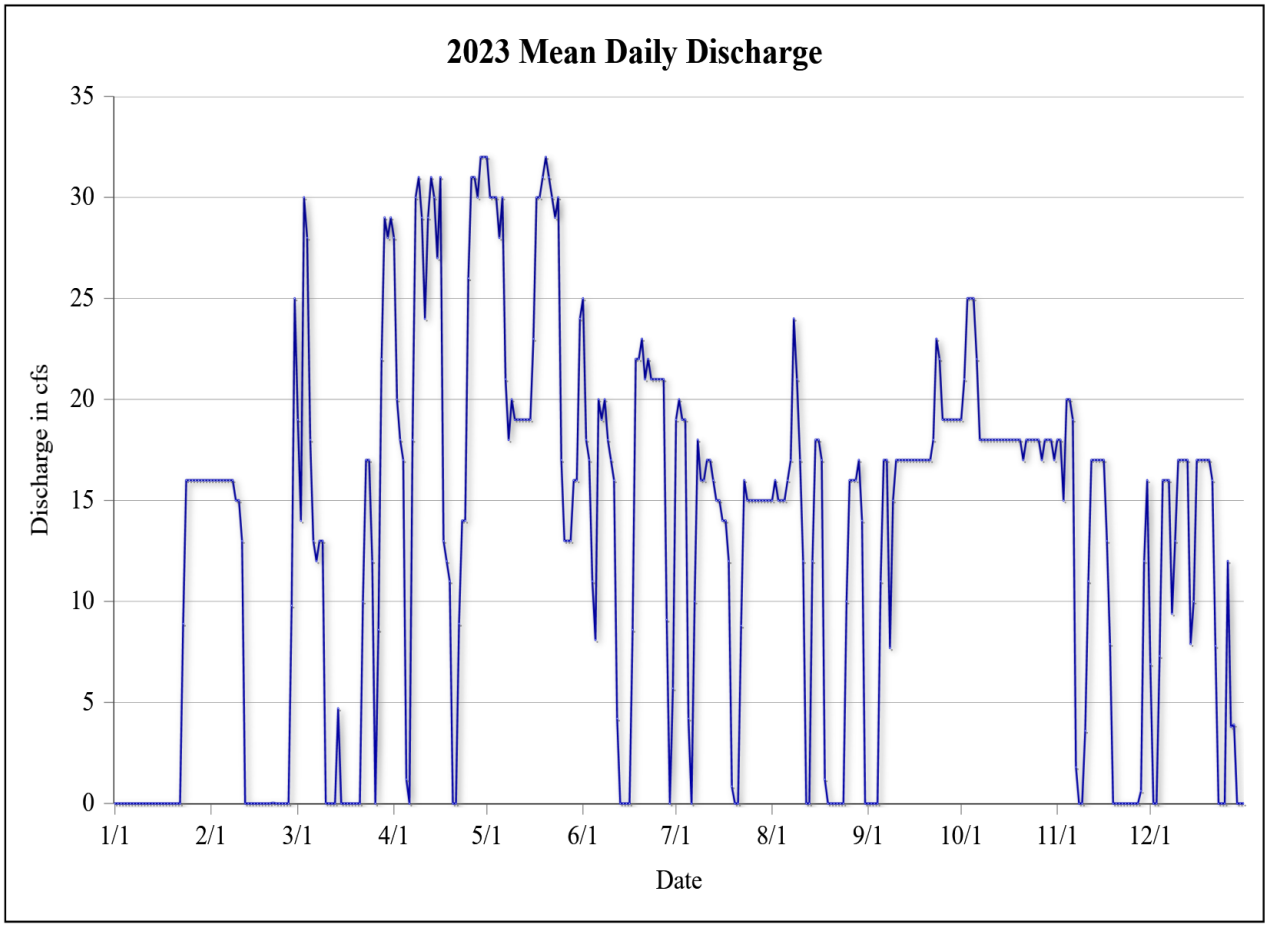
Period of Record—April 10, 2006 to current year.

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.

Datum—Gage Datum.

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 2023

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	16	19	28	32	25	19	15	0	19	18	6.9
2	0	16	14	20	30	18	20	16	0	21	18	0
3	0	16	30	18	30	17	19	15	0	25	15	0
4	0	16	28	17	30	11	19	15	0	25	20	7.3
5	0	16	18	1.2	28	8.1	4.2	15	11	25	20	16
6	0	16	13	0	30	20	0	16	17	22	19	16
7	0	16	12	18	21	19	10	17	17	18	1.8	16
8	0	16	13	30	18	20	18	24	7.7	18	0	9.4
9	0	15	13	31	20	18	16	21	15	18	0	13
10	0	15	0.01	29	19	17	16	17	17	18	3.6	17
11	0	13	0	24	19	16	17	12	17	18	11	17
12	0	0	0	29	19	4.2	17	0	17	18	17	17
13	0	0	0	31	19	0	16	0	17	18	17	17
14	0	0	4.7	30	19	0	15	12	17	18	17	7.9
15	0	0	0	27	19	0	15	18	17	18	17	10
16	0	0	0	31	23	0	14	18	17	18	17	17
17	0	0	0	13	30	8.6	14	17	17	18	13	17
18	0	0	0	12	30	22	12	1.2	17	18	7.9	17
19	0	0	0	11	31	22	0.85	0	17	18	0	17
20	0	0	0	0	32	23	0	0	17	18	0	17
21	0	0.03	0	0	31	21	0	0	17	17	0	16
22	0	0	10	8.9	30	22	8.8	0	18	18	0	7.8
23	8.9	0	17	14	29	21	16	0	23	18	0	0
24	16	0	17	14	30	21	15	0	22	18	0	0
25	16	0	12	26	17	21	15	10	19	18	0	0
26	16	0	0	31	13	21	15	16	19	18	0	12
27	16	9.8	8.6	31	13	21	15	16	19	17	0	3.8
28	16	25	22	30	13	9.1	15	16	19	18	0.62	3.9
29	16		29	32	16	0	15	17	19	18	12	0
30	16		28	32	16	5.7	15	14	19	18	16	0
31	16		29		24		15	0		17		0
Total	137.0	207.75	337.08	620.8	731	429.9	407.16	335.9	447.8	584	259.57	297.9
Mean	4.42	7.42	10.9	20.7	23.6	14.3	13.1	10.8	14.9	18.8	8.65	9.61
Max	16	25	30	32	32	25	20	24	23	25	20	17
Min	0	0	0	0	13	0	0	0	0	17	0	0
Ac-ft	272	412	669	1,231	1,450	853	808	666	888	1,158	515	591

Calendar Year Summary

Annual Total 4,795.87 Annual Mean 13.1 Daily Max 32 Daily Min 0 Annual Ac-ft 9,512

Maximum Discharge (Excludes Estimates)				Minimum Discharge (Excludes Estimates)			
Date	Time	GH	Discharge	Date	Time	GH	Discharge
May 20	08:00	1.36	34	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.

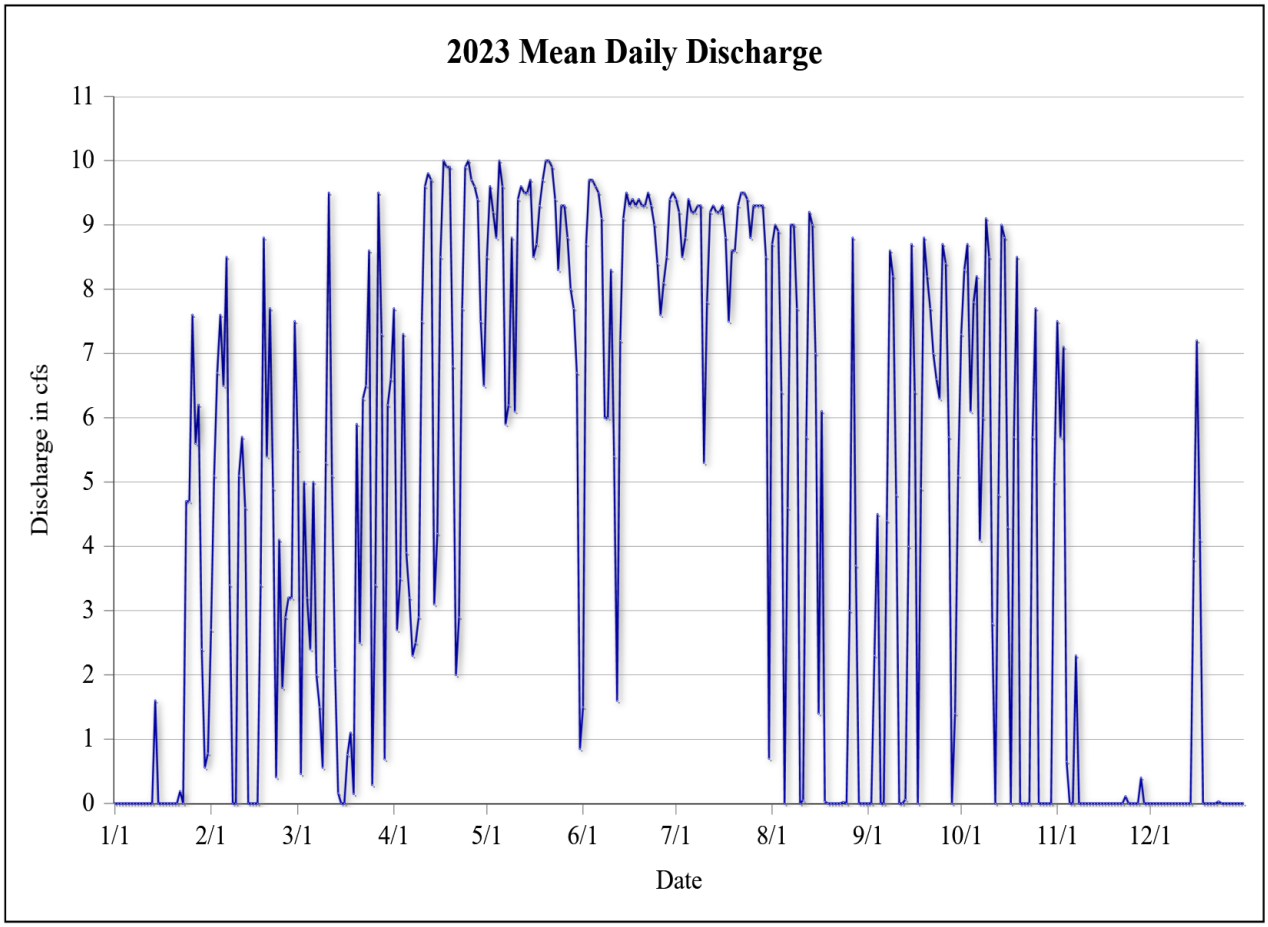
Period of Record—January 1, 2006 to current year.

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.

Datum—Not applicable.

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. 2, 2023 at 19:00 to Mar. 3, 2023 at 10:00, Mar. 6, 2023 at 06:00 to Mar. 7, 2023 at 14:00, and Jun. 26, 2023 at 09:00 to Jun. 28, 2023 at 09:00, due to gage malfunction.



Fort Mojave Tribe-California 2 (North)

Mean daily discharge, in cubic-feet per second, Calendar Year 2023

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	2.7	5.5	7.7	8.5	1.5	9.4	8.7	0	7.3	7.5	0
2	0	5.1	**0.46**	2.7	9.6	8.7	9.2	9.0	0	8.3	5.7	0
3	0	6.7	**5.0**	3.5	9.2	9.7	8.5	8.9	2.3	8.7	7.1	0
4	0	7.6	3.2	7.3	8.8	9.7	8.8	6.4	4.5	6.1	0.65	0
5	0	6.5	2.4	3.9	10	9.6	9.4	0	0	7.8	0	0
6	0	8.5	**5.0**	3.2	9.6	9.5	9.2	4.6	0	8.2	0	0
7	0	3.4	**2.0**	2.3	5.9	9.1	9.2	9.0	4.4	4.1	2.3	0
8	0	0	1.5	2.5	6.2	6.0	9.3	9.0	8.6	6.0	0	0
9	0	0	0.56	2.9	8.8	6.0	9.3	7.7	8.2	9.1	0	0
10	0	5.1	5.3	7.5	6.1	8.3	5.3	0	4.8	8.5	0	0
11	0	5.7	9.5	9.6	9.4	5.4	7.8	0.05	0	2.8	0	0
12	0	4.6	5.1	9.8	9.6	1.6	9.2	5.7	0	0	0	0
13	0	0	2.1	9.7	9.5	7.2	9.3	9.2	0.06	4.8	0	0
14	1.6	0	0.16	3.1	9.5	9.1	9.2	9.0	4.0	9.0	0	0
15	0	0	0	4.2	9.7	9.5	9.2	7.0	8.7	8.8	0	3.8
16	0	0	0	8.5	8.5	9.3	9.3	1.4	6.4	4.3	0	7.2
17	0	3.4	0.76	10	8.7	9.4	8.8	6.1	0	0	0	4.1
18	0	8.8	1.1	9.9	9.3	9.3	7.5	0.03	4.9	5.7	0	0
19	0	5.4	0.15	9.9	9.7	9.4	8.6	0	8.8	8.5	0	0
20	0	7.7	5.9	6.8	10	9.3	8.6	0	8.2	0	0	0
21	0	4.9	2.5	2.0	10	9.3	9.3	0	7.7	0	0	0
22	0.19	0.41	6.3	2.9	9.9	9.5	9.5	0	7.0	0	0	0
23	0	4.1	6.5	7.7	9.4	9.3	9.5	0	6.6	0	0.11	0.03
24	4.7	1.8	8.6	9.9	8.3	9.0	9.4	0.02	6.3	5.7	0	0
25	4.7	2.9	0.29	10	9.3	8.4	8.8	0	8.7	7.7	0	0
26	7.6	3.2	3.4	9.7	9.3	**7.6**	9.3	3.0	8.4	0	0	0
27	5.6	3.2	9.5	9.6	8.8	**8.1**	9.3	8.8	5.7	0	0	0
28	6.2	7.5	7.3	9.4	8.0	**8.5**	9.3	3.7	0	0	0.40	0
29	2.4		0.69	7.5	7.7	9.4	9.3	0	1.4	0	0	0
30	0.56		6.2	6.5	6.7	9.5	8.5	0	5.1	0	0	0
31	0.78		6.6		0.85		0.70	0		5.0		0
Total	34.32	109.34	113.69	200.3	265.38	246.2	268.29	117.23	130.64	136.2	23.80	15.18
Mean	1.11	3.90	3.67	6.68	8.56	8.21	8.65	3.78	4.35	4.39	0.79	0.49
Max	7.6	8.8	9.5	10	10	9.7	9.5	9.2	8.8	9.1	7.5	7.2
Min	0	0	0	2.0	0.85	1.5	0.70	0	0	0	0	0
Ac-ft	68	217	225	397	526	488	532	233	259	270	47	30

Calendar Year Summary

Annual Total 1,660.63 Annual Mean 4.55 Daily Max 10 Daily Min 0 Annual Ac-ft 3,294

Maximum Discharge (Excludes Estimates)				Minimum Discharge (Excludes Estimates)			
Date	Time	GH	Discharge	Date	Time	GH	Discharge
May 20	07:00	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.

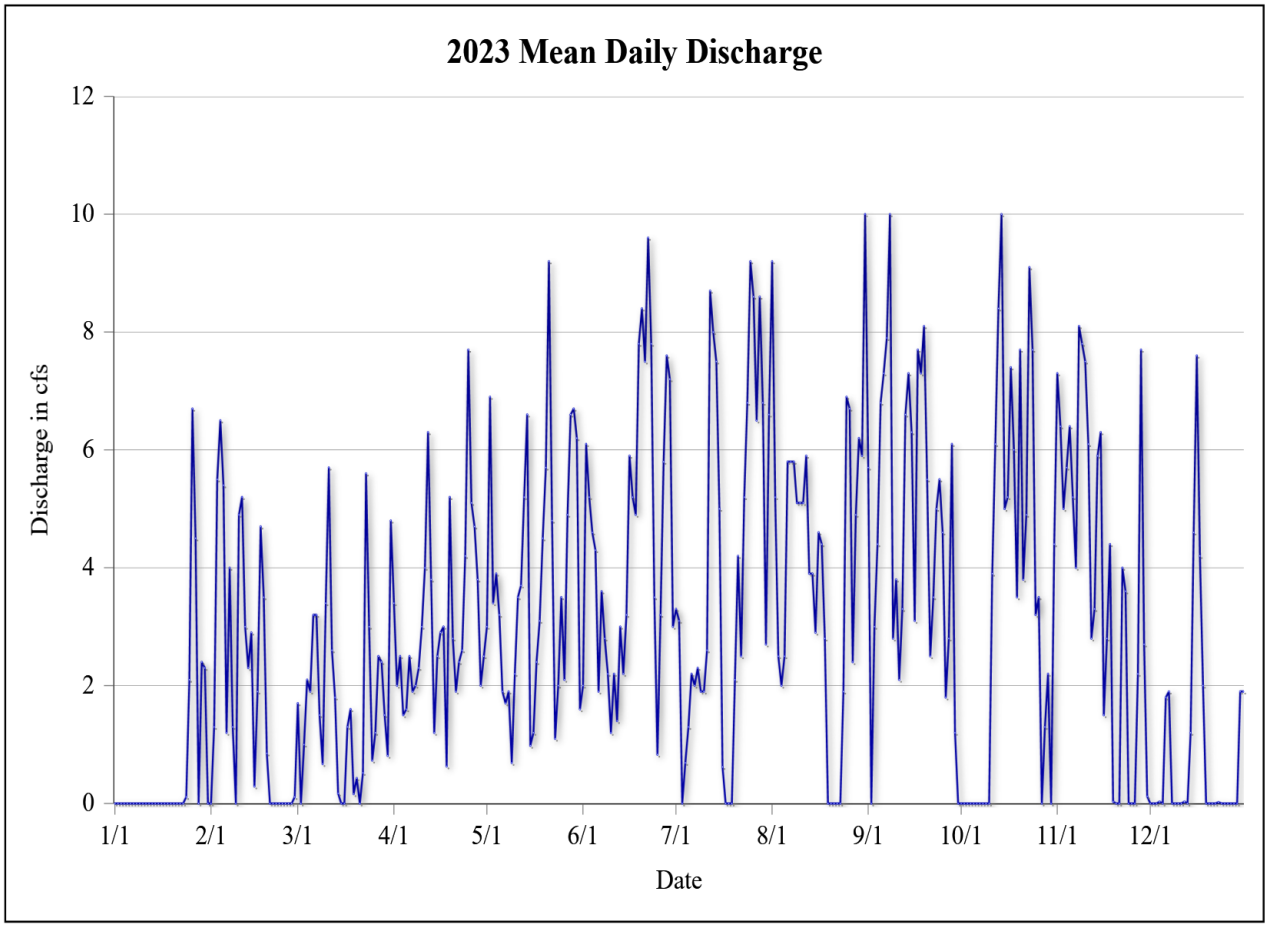
Period of Record—January 1, 2006 to current year.

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.

Datum—Not applicable.

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. 2, 2023 at 23:00 to Mar. 3, 2023 at 10:00, Mar. 6, 2023 at 13:00 to Mar. 7, 2023 at 14:00, and Jun. 26, 2023 at 09:00 to Jun. 28, 2023 at 09:00, due to gage malfunction.



Fort Mojave Tribe-California 2 (West)

Mean daily discharge, in cubic-feet per second, Calendar Year 2023

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0	1.7	3.4	3.0	2.0	3.3	9.2	5.7	0	7.3	0
2	0	1.3	**0**	2.0	6.9	6.1	3.1	5.2	0	0	6.4	0
3	0	5.5	**1.0**	2.5	3.4	5.2	0	2.5	3.0	0	5.0	0
4	0	6.5	2.1	1.5	3.9	4.6	0.69	2.0	4.4	0	5.7	0.03
5	0	5.4	1.9	1.6	3.2	4.3	1.3	2.5	6.8	0	6.4	0
6	0	1.2	**3.2**	2.5	1.9	1.9	2.2	5.8	7.3	0	5.2	1.8
7	0	4.0	**3.2**	1.9	1.7	3.6	2.0	5.8	7.9	0	4.0	1.9
8	0	1.3	1.5	2.0	1.9	2.8	2.3	5.8	10	0	8.1	0
9	0	0	0.67	2.3	0.69	2.2	1.9	5.1	2.8	0	7.8	0
10	0	4.9	3.4	3.0	2.2	1.2	1.9	5.1	3.8	0	7.5	0
11	0	5.2	5.7	4.0	3.5	2.2	2.6	5.1	2.1	3.9	6.1	0
12	0	3.0	2.6	6.3	3.7	1.4	8.7	5.9	3.3	6.1	2.8	0.03
13	0	2.3	1.8	3.8	5.2	3.0	8.0	3.9	6.6	8.4	3.3	0
14	0	2.9	0.17	1.2	6.6	2.2	7.5	3.9	7.3	10	5.9	1.2
15	0	0.29	0	2.5	0.98	3.2	5.0	2.9	6.3	5.0	6.3	4.6
16	0	1.9	0	2.9	1.2	5.9	0.62	4.6	3.1	5.2	1.5	7.6
17	0	4.7	1.3	3.0	2.4	5.2	0	4.4	7.7	7.4	2.8	4.2
18	0	3.5	1.6	0.63	3.1	4.9	0	2.8	7.3	6.0	4.4	2.0
19	0	0.85	0.16	5.2	4.5	7.8	0	0	8.1	3.5	0.03	0
20	0	0	0.43	2.8	5.7	8.4	2.1	0	5.5	7.7	0	0
21	0	0	0	1.9	9.2	7.5	4.2	0	2.5	3.8	0	0
22	0	0	0.52	2.4	4.8	9.6	2.5	0	3.5	4.9	4.0	0
23	0	0	5.6	2.6	1.1	7.8	5.2	0	5.0	9.1	3.6	0.02
24	0.11	0	3.0	4.2	2.0	3.5	6.8	1.9	5.5	7.7	0	0
25	2.1	0	0.73	7.7	3.5	0.83	9.2	6.9	4.6	3.2	0	0
26	6.7	0	1.2	5.1	2.1	**3.2**	8.6	6.7	1.8	3.5	0	0
27	4.5	0	2.5	4.7	4.9	**5.8**	6.5	2.4	2.8	0	2.2	0
28	0	0.11	2.4	3.8	6.6	**7.6**	8.6	4.9	6.1	1.3	7.7	0
29	2.4		1.5	2.0	6.7	7.2	6.8	6.2	1.2	2.2	2.7	0
30	2.3		0.81	2.5	6.2	3.0	2.7	5.9	0	0	0.12	1.9
31	0		4.8		1.6		6.6	10		4.4		1.9
Total	18.01	54.88	55.77	92.15	114.48	134.39	120.84	127.6	142.2	103.6	117.04	27.07
Mean	0.58	1.96	1.80	3.07	3.69	4.48	3.90	4.12	4.74	3.34	3.90	0.87
Max	6.7	6.5	5.7	7.7	9.2	9.6	9.2	10	10	10	8.1	7.6
Min	0	0	0	0.63	0.69	0.83	0	0	0	0	0	0
Ac-ft	36	109	111	183	227	267	240	253	282	206	232	54

Calendar Year Summary

Annual Total 1,108.02 Annual Mean 3.04 Daily Max 10 Daily Min 0 Annual Ac-ft 2,198

Maximum Discharge (Excludes Estimates)				Minimum Discharge (Excludes Estimates)			
Date	Time	GH	Discharge	Date	Time	GH	Discharge
Jun. 23	04:00	N/A	13	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.

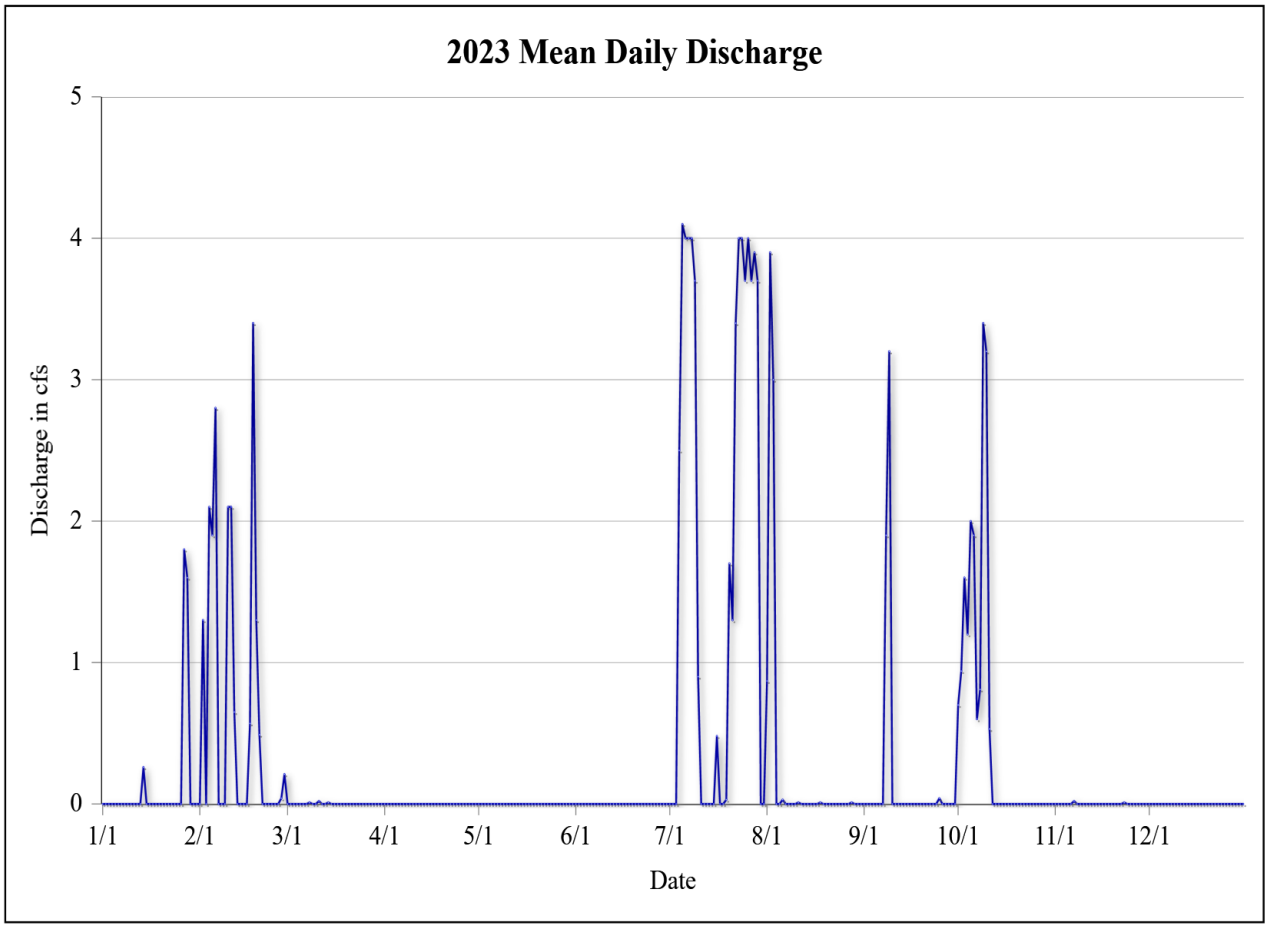
Period of Record—January 1, 2006 to current year.

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.

Datum—Not applicable.

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

Remarks—None.



Fort Mojave Tribe-California 2 (South)

Mean daily discharge, in cubic-feet per second, Calendar Year 2023

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0	0	0	0	0	0	0.87	0	0.70	0	0
2	0	1.3	0	0	0	0	0	3.9	0	0.94	0	0
3	0	0	0	0	0	0	0	3.0	0	1.6	0	0
4	0	2.1	0	0	0	0	2.5	0	0	1.2	0	0
5	0	1.9	0	0	0	0	4.1	0	0	2.0	0	0
6	0	2.8	0	0	0	0	4.0	0.03	0	1.9	0	0
7	0	0	0	0	0	0	4.0	0	0	0.60	0.02	0
8	0	0	0.01	0	0	0	4.0	0	1.9	0.81	0	0
9	0	0	0	0	0	0	3.7	0	3.2	3.4	0	0
10	0	2.1	0	0	0	0	0.90	0	0	3.2	0	0
11	0	2.1	0.02	0	0	0	0	0.01	0	0.53	0	0
12	0	0.65	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0
14	0.26	0	0.01	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	0.48	0	0	0	0	0
17	0	0.57	0	0	0	0	0	0	0	0	0	0
18	0	3.4	0	0	0	0	0	0.01	0	0	0	0
19	0	1.3	0	0	0	0	0.03	0	0	0	0	0
20	0	0.49	0	0	0	0	1.7	0	0	0	0	0
21	0	0	0	0	0	0	1.3	0	0	0	0	0
22	0	0	0	0	0	0	3.4	0	0	0	0	0
23	0	0	0	0	0	0	4.0	0	0	0	0.01	0
24	0	0	0	0	0	0	4.0	0	0	0	0	0
25	0	0	0	0	0	0	3.7	0	0.04	0	0	0
26	0	0	0	0	0	0	4.0	0	0	0	0	0
27	1.8	0.04	0	0	0	0	3.7	0	0	0	0	0
28	1.6	0.21	0	0	0	0	3.9	0.01	0	0	0	0
29	0		0	0	0	0	3.7	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	3.64	18.98	0.03	0	0	0	57.07	7.84	5.18	16.87	0.03	0
Mean	0.12	0.68	0.001	0	0	0	1.84	0.25	0.17	0.54	0.001	0
Max	1.8	3.4	0.02	0	0	0	4.1	3.9	3.2	3.4	0.02	0
Min	0	0	0	0	0	0	0	0	0	0	0	0
Ac-ft	7.2	38	0.1	0	0	0	113	16	10	33	0.1	0.0

Calendar Year Summary

Annual Total 109.63 Annual Mean 0.30 Daily Max 4.1 Daily Min 0 Annual Ac-ft 217

Maximum Discharge (Excludes Estimates)				Minimum Discharge (Excludes Estimates)			
Date	Time	GH	Discharge	Date	Time	GH	Discharge
Jul. 27	01:00	N/A	4.5	Mar. 10	09:00	N/A	-0.07

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.

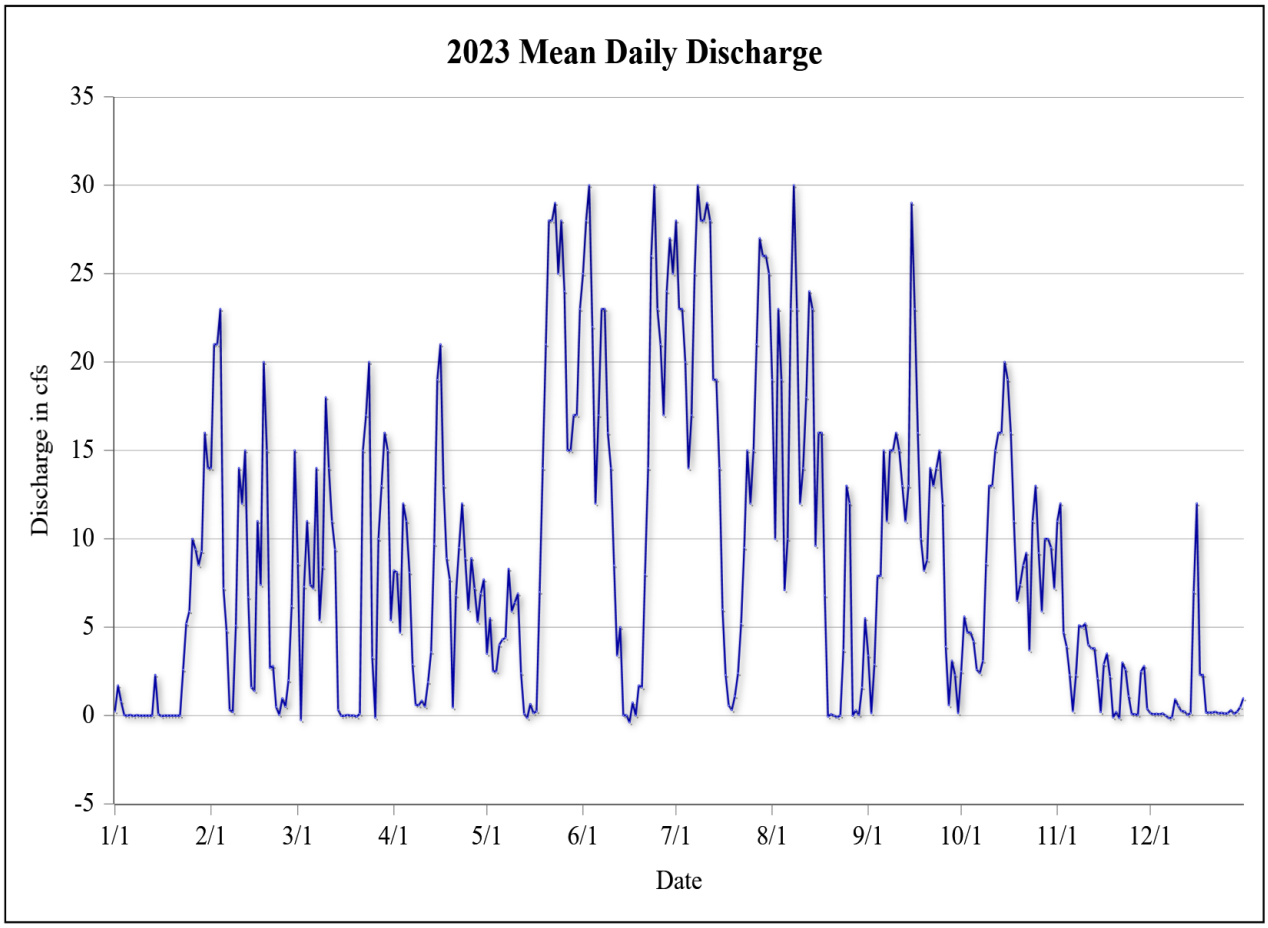
Period of Record—January 1, 2006 to current year.

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.

Datum—Gage Datum.

Extremes—Maximum daily discharge, 58 cfs, Jun. 12, 2007; minimum daily discharge, -0.38 cfs, Jun. 16, 2023; maximum hourly discharge, 64 cfs, Jun. 30, 2007 at 20:00; minimum hourly discharge, -10 cfs, Apr. 22, 2023 at 22:00.

Remarks—None.



Fort Mojave Tribe-California 1

Mean daily discharge, in cubic-feet per second, Calendar Year 2023

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0.24	14	8.6	8.2	3.5	25	28	19	3.4	2.5	11	0.14
2	1.7	21	-0.25	8.1	5.5	28	23	10	0.14	5.6	12	0.07
3	0.79	21	7.3	4.7	2.5	30	23	23	2.9	4.7	4.7	0.10
4	0.02	23	11	12	2.5	22	20	19	7.9	4.7	3.9	0.07
5	0	7.2	7.4	11	4.0	12	14	7.1	7.9	4.2	2.3	0.12
6	0.03	4.8	7.2	8.1	4.3	17	17	10	15	2.6	0.25	-0.01
7	-0.02	0.32	14	2.9	4.4	23	25	23	11	2.4	2.3	-0.15
8	0.02	0.20	5.4	0.61	8.3	23	30	30	15	3.1	5.1	-0.10
9	0	5.1	8.4	0.58	5.9	16	28	23	15	8.6	5.0	0.92
10	0	14	18	0.84	6.4	14	28	12	16	13	5.2	0.55
11	0	12	14	0.52	6.9	8.5	29	14	15	13	4.0	0.26
12	0	15	11	1.9	2.4	3.4	28	18	13	15	3.8	0.23
13	0	6.7	9.4	3.6	0.10	5.0	19	24	11	16	3.8	0.04
14	2.3	1.6	0.32	9.7	-0.13	0.01	19	23	13	16	2.1	0.14
15	0.08	1.4	-0.02	19	0.65	0.02	14	9.6	29	20	0.20	7.0
16	-0.03	11	-0.01	21	0.14	-0.38	6.0	16	23	19	2.9	12
17	0	7.4	0.03	13	0.25	0.73	2.3	16	16	16	3.5	2.3
18	0	20	0	8.9	7.0	0.01	0.57	6.8	10	11	2.2	2.3
19	0	15	0.01	7.7	14	1.7	0.32	-0.05	8.2	6.5	-0.10	0.17
20	0	2.7	-0.06	0.46	21	1.6	1.1	0.07	8.8	7.4	0.20	0.17
21	0	2.8	0.10	6.8	28	8.0	2.4	-0.01	14	8.5	-0.13	0.17
22	0	0.49	15	9.5	28	14	5.2	-0.09	13	9.2	3.0	0.21
23	2.6	0.05	17	12	29	26	9.5	0	14	3.7	2.6	0.13
24	5.2	0.97	20	8.9	25	30	15	3.7	15	11	1.1	0.15
25	5.9	0.51	3.3	6.0	28	23	12	13	12	13	0.09	0.11
26	10	2.0	-0.12	8.9	24	21	15	12	3.9	9.2	0.07	0.13
27	9.4	6.2	10	7.2	15	17	21	0	0.59	5.9	0.04	0.31
28	8.5	15	13	5.3	15	24	27	0.29	3.1	10	2.5	0.10
29	9.3		16	6.9	17	27	26	0.04	2.3	10	2.8	0.22
30	16		15	7.7	17	25	26	1.6	0.14	9.5	0.37	0.48
31	14		5.4		23		25	5.5		7.2		0.97
Total	85.51	230.96	237.58	221.62	348.49	445.68	538.38	340.22	318.99	289.5	86.87	29.16
Mean	2.76	8.25	7.66	7.39	11.2	14.9	17.4	11.0	10.6	9.34	2.90	0.94
Max	16	23	20	21	29	30	30	30	29	20	12	12
Min	-0.03	0.05	-0.25	0.46	-0.13	-0.38	0.32	-0.09	0.14	2.4	-0.13	-0.15
Ac-ft	170	458	471	440	691	884	1,068	675	633	574	172	58

Calendar Year Summary

Annual Total 3,172.98 Annual Mean 8.69 Daily Max 30 Daily Min -0.38 Annual Ac-ft 6,294

Maximum Discharge (Excludes Estimates)				Minimum Discharge (Excludes Estimates)			
Date	Time	GH	Discharge	Date	Time	GH	Discharge
Jul. 1	23:00	2.36	44	Apr. 20	22:00	2.37	-10

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.

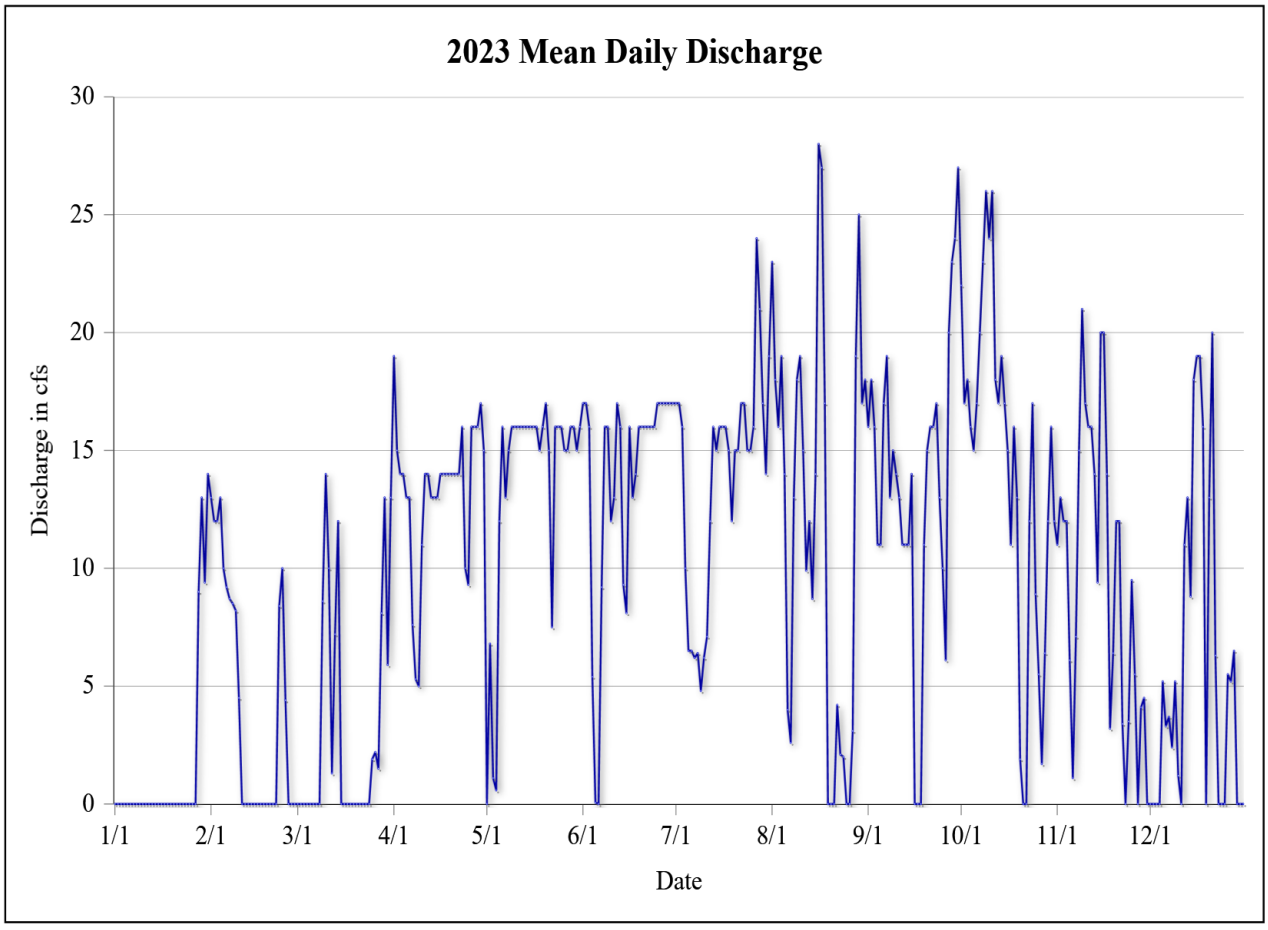
Period of Record—April 10, 2006 to current year.

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.

Datum—Gage Datum.

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—The discharge record was estimated from Mar. 24, 2023 at 06:00 to Mar. 27, 2023 at 14:00, due to gage malfunction.



Fort Mojave Tribe-Cimmaron

Mean daily discharge, in cubic-feet per second, Calendar Year 2023

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	13	0	19	0	17	17	23	16	22	11	0
2	0	12	0	15	6.8	17	17	18	18	17	13	0
3	0	12	0	14	1.1	16	16	16	16	18	12	0
4	0	13	0	14	0.58	5.4	10	19	11	16	12	0
5	0	10	0	13	12	0.06	6.5	14	11	15	6.1	5.2
6	0	9.2	0	13	16	0	6.5	4.0	17	17	1.1	3.3
7	0	8.7	0	7.6	13	9.2	6.2	2.6	19	20	7.1	3.7
8	0	8.5	0	5.3	15	16	6.4	13	13	23	15	2.4
9	0	8.2	8.6	5.0	16	16	4.8	18	15	26	21	5.2
10	0	4.5	14	11	16	12	6.2	19	14	24	17	1.2
11	0	0	10	14	16	13	7.1	15	13	26	16	0
12	0	0	1.3	14	16	17	12	9.9	11	18	16	11
13	0	0	7.2	13	16	16	16	12	11	17	14	13
14	0	0	12	13	16	9.3	15	8.7	11	19	9.4	8.8
15	0	0	0	13	16	8.1	16	14	14	17	20	18
16	0	0	0	14	16	16	16	28	0	15	20	19
17	0	0	0	14	16	13	16	27	0	11	14	19
18	0	0	0	14	15	14	15	17	0	16	3.2	16
19	0	0	0	14	16	16	12	0	11	13	6.4	0
20	0	0	0	14	17	16	15	0	15	1.9	12	13
21	0	0	0	14	15	16	15	0	16	0	12	20
22	0	0	0	14	7.5	16	17	4.2	16	0	3.4	6.3
23	0	8.4	0	16	16	16	17	2.1	17	12	0	0
24	0	10	**0**	10	16	16	15	2.0	13	17	3.5	0
25	0	4.4	**1.9**	9.3	16	17	15	0	10	8.9	9.5	0
26	0	0	**2.2**	16	15	17	16	0	6.1	5.5	5.5	5.5
27	0	0	**1.5**	16	15	17	24	3.1	20	1.7	0	5.2
28	9.0	0	8.1	16	16	17	21	19	23	6.4	4.1	6.5
29	13		13	17	16	17	17	25	24	12	4.5	0
30	9.4		5.9	15	15	17	14	17	27	16	0	0
31	14		13		16		19	18		12		0
Total	45.1	122.5	98.6	394.8	420.18	410.53	424.7	368.2	406.4	444.1	288.9	180.4
Mean	1.46	4.38	3.18	13.2	13.6	13.7	13.7	11.9	13.5	14.3	9.63	5.82
Max	14	13	14	19	17	17	24	28	27	26	21	20
Min	0	0	0	5.0	0	0	4.8	0	0	0	0	0
Ac-ft	90	243	196	783	833	814	842	730	806	881	573	358

Calendar Year Summary

Annual Total 3,604.57 Annual Mean 9.88 Daily Max 28 Daily Min 0 Annual Ac-ft 7,150

Maximum Discharge (Excludes Estimates)				Minimum Discharge (Excludes Estimates)			
Date	Time	GH	Discharge	Date	Time	GH	Discharge
Aug. 29	05:00	1.21	44	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.

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.

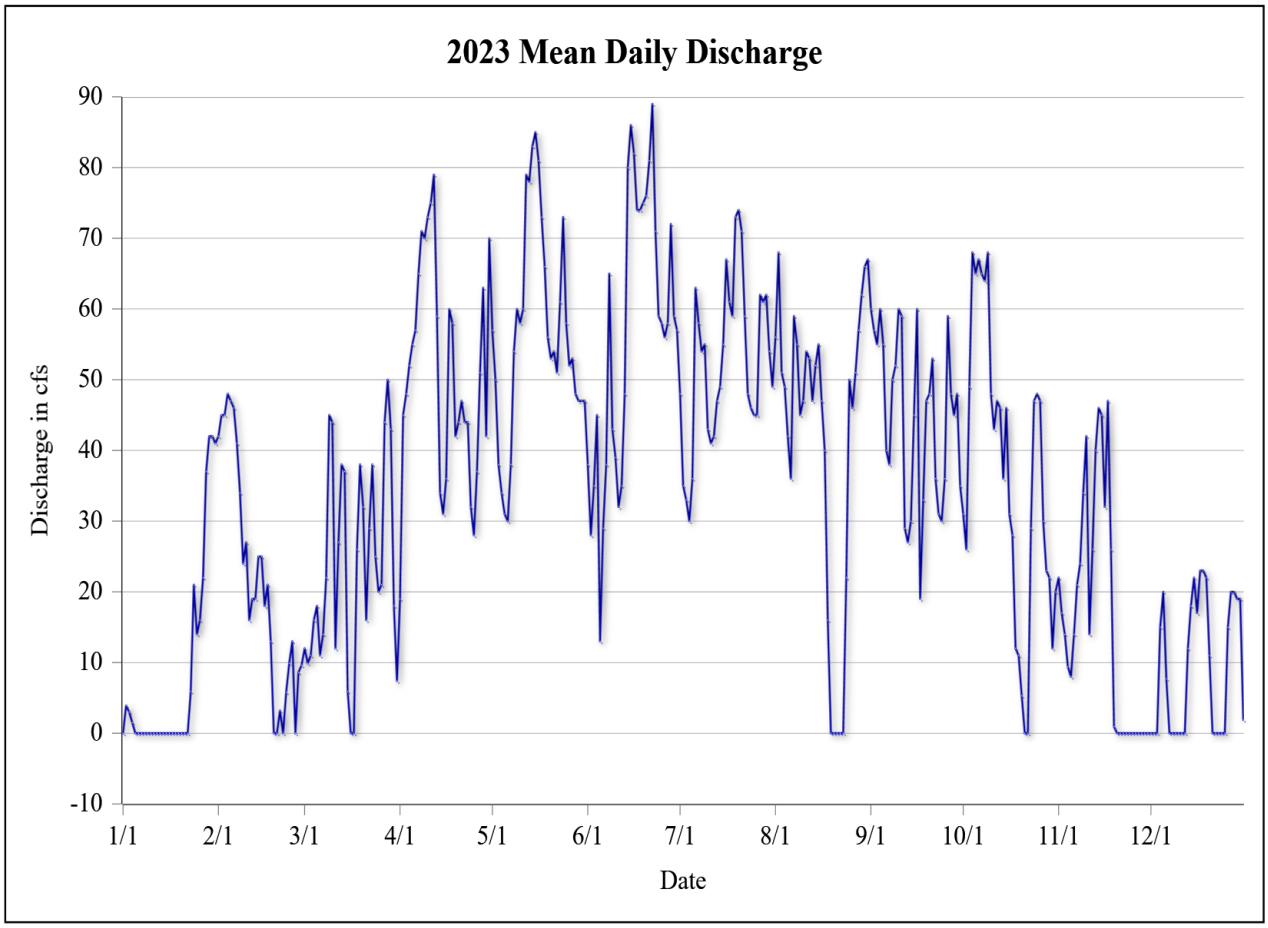
Period of Record—July 12, 2006 to current year.

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.

Datum—Gage Datum.

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 2023

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	-0.01	42	12	19	57	38	48	56	60	31	22	0
2	3.9	45	9.9	45	50	28	35	68	57	26	17	0
3	3.0	45	11	48	38	35	33	51	55	49	14	0
4	1.5	48	16	52	34	45	30	49	60	68	9.4	15
5	0	47	18	55	31	13	36	42	55	65	8.0	20
6	0	46	11	57	30	29	63	36	40	67	14	7.7
7	0	41	14	65	38	38	58	59	38	65	21	0
8	0	34	22	71	54	65	54	55	50	64	24	0
9	0	24	45	70	60	43	55	45	52	68	34	0
10	0	27	44	73	58	39	43	47	60	48	42	0
11	0	16	12	75	60	32	41	54	59	43	14	0
12	0	19	27	79	79	35	42	53	29	47	26	0
13	0	19	38	59	78	48	47	47	27	46	40	12
14	0	25	37	34	83	80	49	52	30	36	46	18
15	0	25	5.9	31	85	86	55	55	45	46	45	22
16	0	18	0	36	81	82	67	47	60	31	32	17
17	0	21	0	60	73	74	61	40	19	28	47	23
18	0	13	26	58	66	74	59	16	33	12	26	23
19	0	0	38	42	56	75	73	0	47	11	0.92	22
20	0	0	32	44	53	76	74	0	48	5.3	0	11
21	0	3.2	16	47	54	81	71	0	53	0	0	0
22	0	0	29	44	51	89	59	0	36	0	0	0
23	5.9	5.8	38	44	61	71	48	0	31	29	0	0
24	21	9.9	25	32	73	59	46	22	30	47	0	0
25	14	13	20	28	58	58	45	50	36	48	0	0
26	16	0	21	37	52	56	45	46	59	47	0	15
27	22	8.6	44	51	53	58	62	51	48	30	0	20
28	37	9.6	50	63	48	72	61	57	45	23	0	20
29	42		43	42	47	59	62	62	48	22	0	19
30	42		18	70	47	57	54	66	35	12	0	19
31	41		7.4		47		49	67		20		1.9
Total	249.03	605.2	732.6	1,532	1,752	1,691	1,627	1,291	1,346	1,135.0	483.68	284.8
Mean	8.03	21.6	23.6	51.1	56.5	56.4	52.5	41.6	44.9	36.6	16.1	9.19
Max	42	48	50	79	85	89	74	68	60	68	47	23
Min	-0.01	0	0	19	30	13	30	0	19	0	0	0
Ac-ft	494	1,200	1,453	3,039	3,476	3,354	3,227	2,560	2,669	2,251	959	565

Calendar Year Summary

Annual Total 12,729.30 Annual Mean 34.9 Daily Max 89 Daily Min -0.01 Annual Ac-ft 25,248

Maximum Discharge (Excludes Estimates)				Minimum Discharge (Excludes Estimates)			
Date	Time	GH	Discharge	Date	Time	GH	Discharge
Jun. 14	20:00	4.11	97	Jan. 1	01:00	0.09	-0.01

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

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.

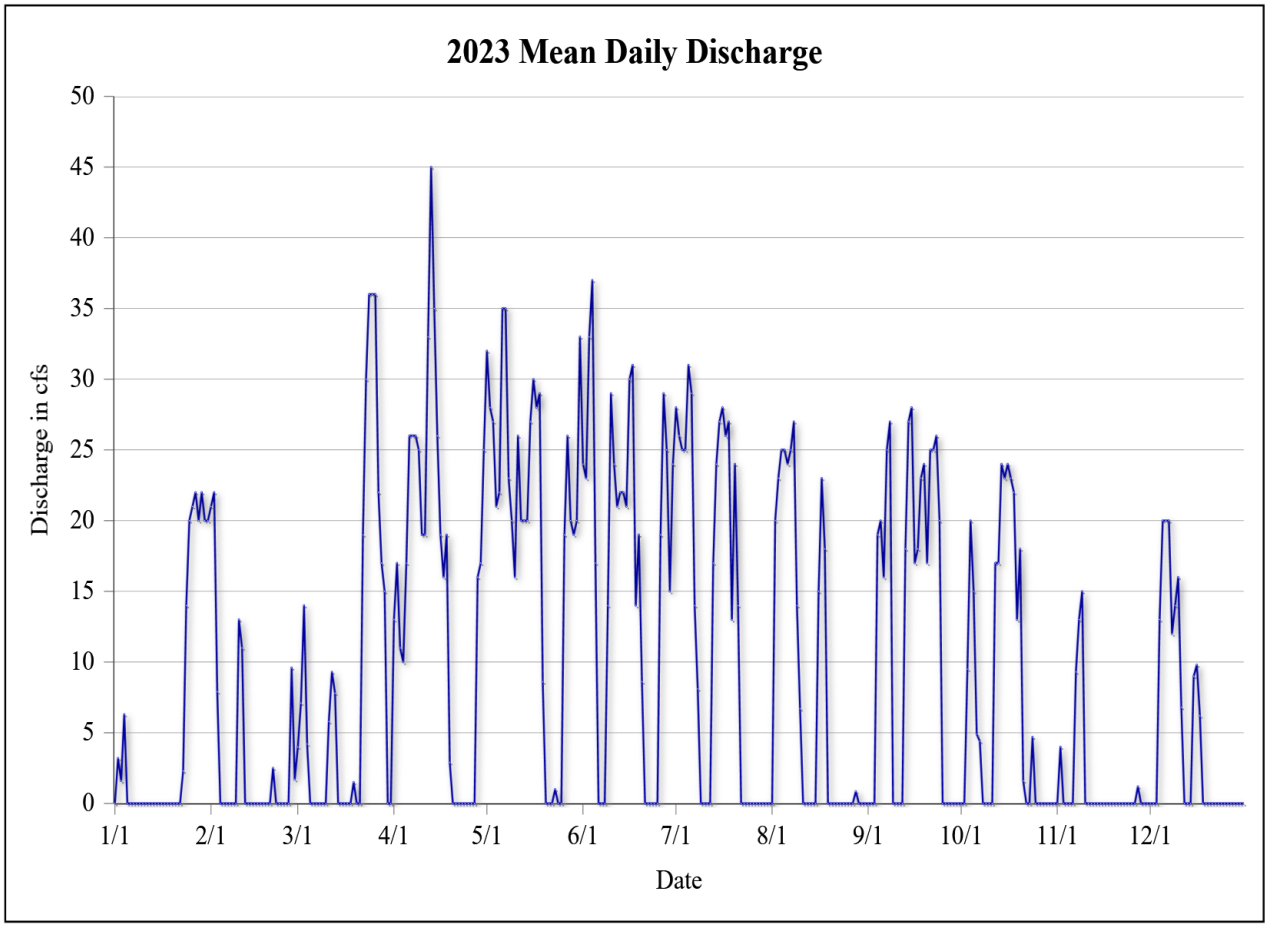
Period of Record—April 21, 2006 to current year.

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.

Datum—Gage Datum.

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—The discharge record was estimated from Jan. 1, 2023 at 15:00 to Jan. 3, 2023 at 11:00, due to gage malfunction.



Fort Mojave Tribe-Barrackman

Mean daily discharge, in cubic-feet per second, Calendar Year 2023

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	**0**	21	4.0	13	32	24	28	0	0	0	0	0
2	**3.2**	22	7.1	17	28	23	26	20	0	0	4.0	0
3	**1.6**	7.9	14	11	27	33	25	23	0	9.5	0	0
4	6.3	0	4.2	10	21	37	25	25	19	20	0	13
5	0	0	0	17	22	17	31	25	20	15	0	20
6	0	0	0	26	35	0	29	24	16	4.9	0	20
7	0	0	0	26	35	0	14	25	25	4.4	9.3	20
8	0	0	0	26	23	0	8.1	27	27	0	13	12
9	0	0	0	25	20	14	0	14	0	0	15	14
10	0	13	0	19	16	29	0	6.7	0	0	0.02	16
11	0	11	5.8	19	26	24	0	0	0	0	0	6.8
12	0	0	9.3	33	20	21	0	0	0	17	0	0
13	0	0	7.8	45	20	22	17	0	18	17	0	0
14	0	0	0	35	20	22	24	0	27	24	0	0
15	0	0	0	26	27	21	27	0	28	23	0	9.0
16	0	0	0	19	30	30	28	15	17	24	0	9.8
17	0	0	0	16	28	31	26	23	18	23	0	6.2
18	0	0	0	19	29	14	27	18	23	22	0	0
19	0	0	1.5	2.9	8.6	19	13	0	24	13	0	0
20	0	0	0	0	0	8.6	24	0	17	18	0	0
21	0	2.5	0	0	0	0	14	0	25	1.6	0	0
22	0	0	19	0	0	0	0	0	25	0	0	0
23	2.3	0	30	0	1.0	0	0	0	26	0	0	0
24	14	0	36	0	0	0	0	0	20	4.7	0	0
25	20	0	36	0	0	0	0	0	0	0	0	0
26	21	0	36	0	19	19	0	0	0	0	0	0
27	22	9.6	22	0	26	29	0	0	0	0	1.2	0
28	20	1.7	17	16	20	25	0	0.85	0	0	0	0
29	22		15	17	19	15	0	0	0	0	0	0
30	20		0	25	20	24	0	0	0	0	0	0
31	20		0		33		0	0		0		0
Total	173.6	88.1	263.1	464.9	605.8	501.3	384.9	247.12	375	241.9	43.09	146.1
Mean	5.60	3.15	8.49	15.5	19.5	16.7	12.4	7.97	12.5	7.80	1.44	4.71
Max	22	22	36	45	35	37	31	27	28	24	15	20
Min	0	0	0	0	0	0	0	0	0	0	0	0
Ac-ft	344	175	522	922	1,202	994	763	490	743	480	85	290

Calendar Year Summary

Annual Total 3,534.63 Annual Mean 9.68 Daily Max 45 Daily Min 0 Annual Ac-ft 7,011

Maximum Discharge (Excludes Estimates)				Minimum Discharge (Excludes Estimates)			
Date	Time	GH	Discharge	Date	Time	GH	Discharge
Jun. 4	07:00	0.98	48	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.

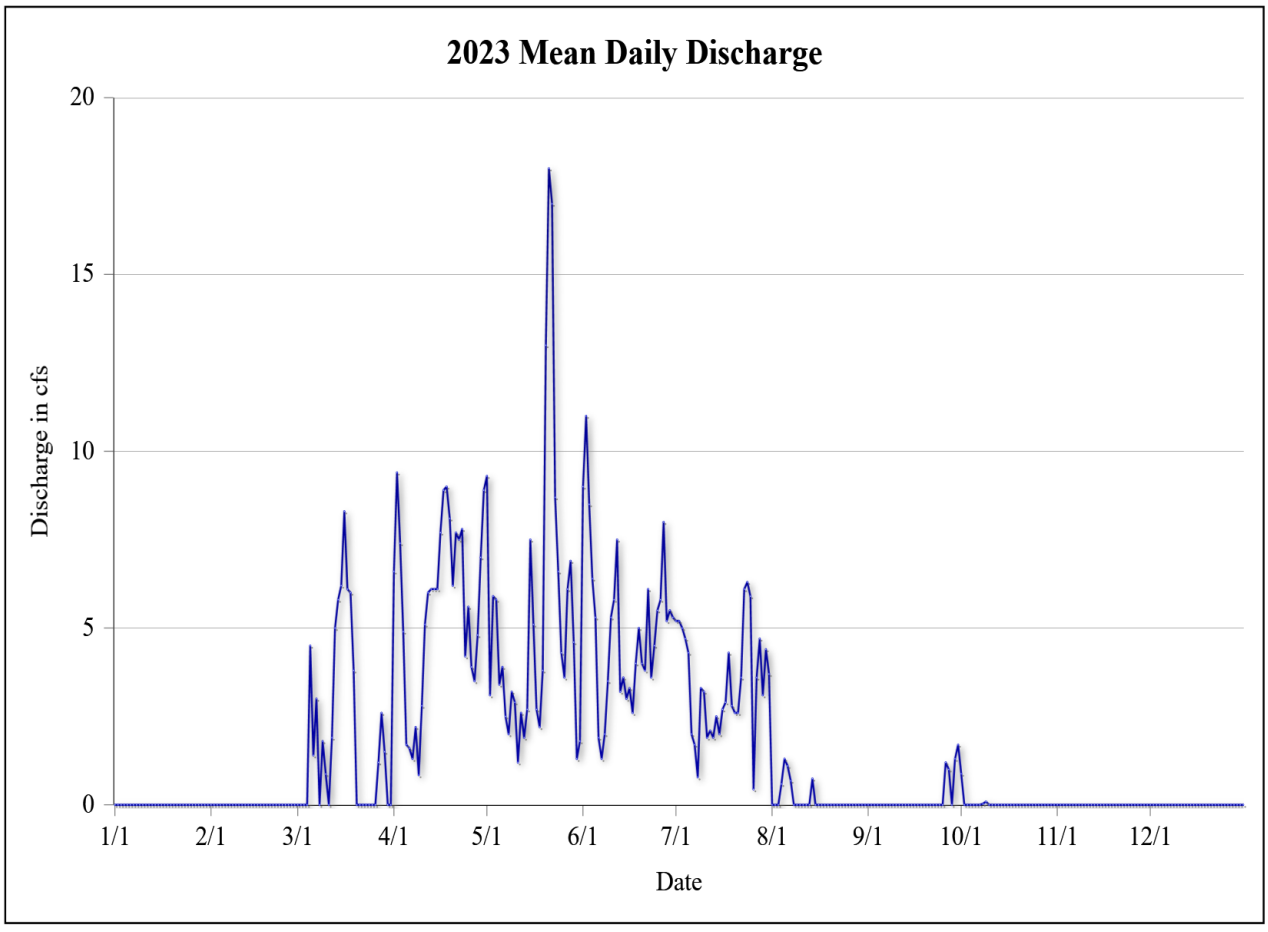
Period of Record—January 1, 2005 to current year.

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.

Datum—Not applicable.

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—The discharge record was estimated from Apr. 15, 2023 at 02:00 to Apr. 18, 2023 at 12:00, due to gage failure. The canal is gravity fed therefore it cannot flow when river elevations are low, which occurred in greater frequency this record period.



United States Fish and Wildlife Service-Farm Ditch

Mean daily discharge, in cubic-feet per second, Calendar Year 2023

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0	0	6.6	9.3	9.0	5.2	0	0	0.88	0	0
2	0	0	0	9.4	3.1	11	5.2	0	0	0	0	0
3	0	0	0	7.4	5.9	8.5	5.0	0	0	0	0	0
4	0	0	0	4.9	5.8	6.4	4.7	0.59	0	0	0	0
5	0	0	4.5	1.7	3.4	5.3	4.3	1.3	0	0	0	0
6	0	0	1.4	1.6	3.9	1.9	2.0	1.1	0	0	0	0
7	0	0	3.0	1.3	2.5	1.3	1.7	0.68	0	0	0	0
8	0	0	0	2.2	2.0	2.0	0.78	0	0	0.03	0	0
9	0	0	1.8	0.84	3.2	3.5	3.3	0	0	0.09	0	0
10	0	0	0.87	2.8	2.9	5.3	3.2	0	0	0	0	0
11	0	0	0	5.1	1.2	5.8	1.9	0	0	0	0	0
12	0	0	1.9	6.0	2.6	7.5	2.1	0	0	0	0	0
13	0	0	5.0	6.1	1.9	3.2	1.9	0	0	0	0	0
14	0	0	5.8	6.1	2.7	3.6	2.5	0.74	0	0	0	0
15	0	0	6.2	**6.1**	7.5	3.0	2.0	0	0	0	0	0
16	0	0	8.3	**7.7**	5.1	3.3	2.7	0	0	0	0	0
17	0	0	6.1	**8.9**	2.7	2.6	2.9	0	0	0	0	0
18	0	0	6.0	**9.0**	2.2	4.0	4.3	0	0	0	0	0
19	0	0	3.8	8.1	3.8	5.0	2.8	0	0	0	0	0
20	0	0	0	6.2	13	4.0	2.6	0	0	0	0	0
21	0	0	0	7.7	18	3.8	2.6	0	0	0	0	0
22	0	0	0	7.5	17	6.1	3.6	0	0	0	0	0
23	0	0	0	7.8	8.7	3.6	6.1	0	0	0	0	0
24	0	0	0	4.2	6.6	4.5	6.3	0	0	0	0	0
25	0	0	0	5.6	4.3	5.5	5.9	0	0	0	0	0
26	0	0	0	3.9	3.6	5.8	0.44	0	1.2	0	0	0
27	0	0	1.2	3.5	6.1	8.0	3.6	0	1.0	0	0	0
28	0	0	2.6	4.8	6.9	5.2	4.7	0	0	0	0	0
29	0		1.5	7.0	4.6	5.5	3.1	0	1.3	0	0	0
30	0		0	8.9	1.3	5.3	4.4	0	1.7	0	0	0
31	0		0		1.8		3.7	0		0		0
Total	0	0	59.98	169.12	163.0	149.1	105.49	4.44	5.2	1.00	0	0
Mean	0	0	1.93	5.64	5.26	4.97	3.40	0.14	0.17	0.032	0	0
Max	0	0	8.3	9.4	18	11	6.3	1.3	1.7	0.88	0	0
Min	0	0	0	0.84	1.2	1.3	0.44	0	0	0	0	0
Ac-ft	0	0	119	335	323	296	209	8.8	10	2.0	0	0

Calendar Year Summary

Annual Total 657.29 Annual Mean 1.80 Daily Max 18 Daily Min 0 Annual Ac-ft 1,304

Maximum Discharge (Excludes Estimates)				Minimum Discharge (Excludes Estimates)			
Date	Time	GH	Discharge	Date	Time	GH	Discharge
May 20	16:00	N/A	25	Jun. 16	21:00	N/A	-2.1

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-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.

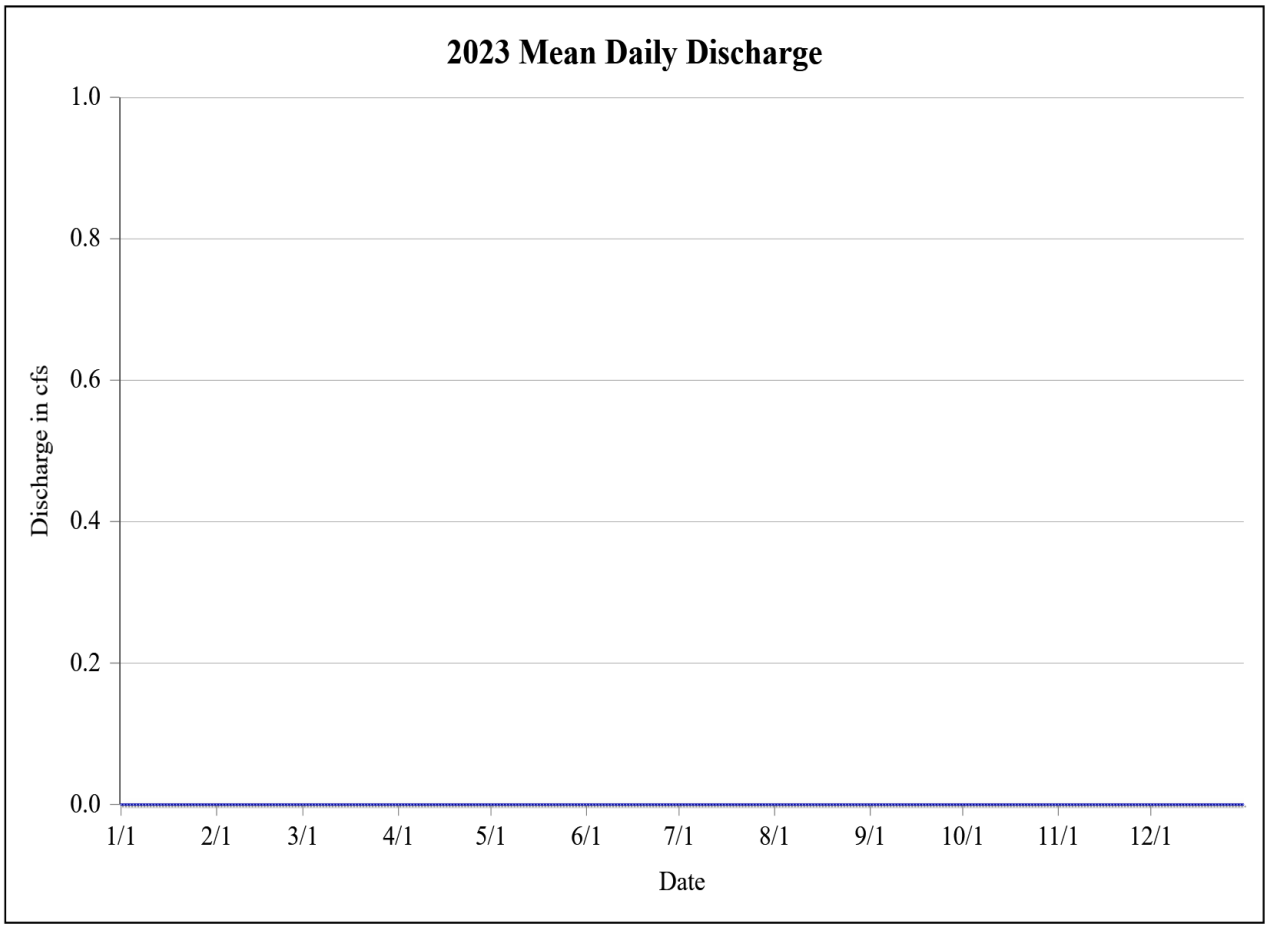
Period of Record—June 16, 2005 to current year.

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.

Datum—National Geodetic Vertical Dam of 1929.

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—Historically low water elevations were observed this record period. For maintenance purposes, an earthen dam was constructed downstream of the tailbay gage on Sep. 29, 2023 and upstream of the forebay gage on Nov. 17, 2023, disconnecting the gages from the lake and river. The elevation data should not be used during this period.



United States Fish and Wildlife Service-South Dike

Mean daily discharge, in cubic-feet per second, Calendar Year 2023

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 (Excludes Estimates)				Minimum Discharge (Excludes Estimates)			
Date	Time	Elev	Discharge	Date	Time	Elev	Discharge
Jan. 1	01:00	452.40	0	Jan. 1	01:00	452.40	0

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.

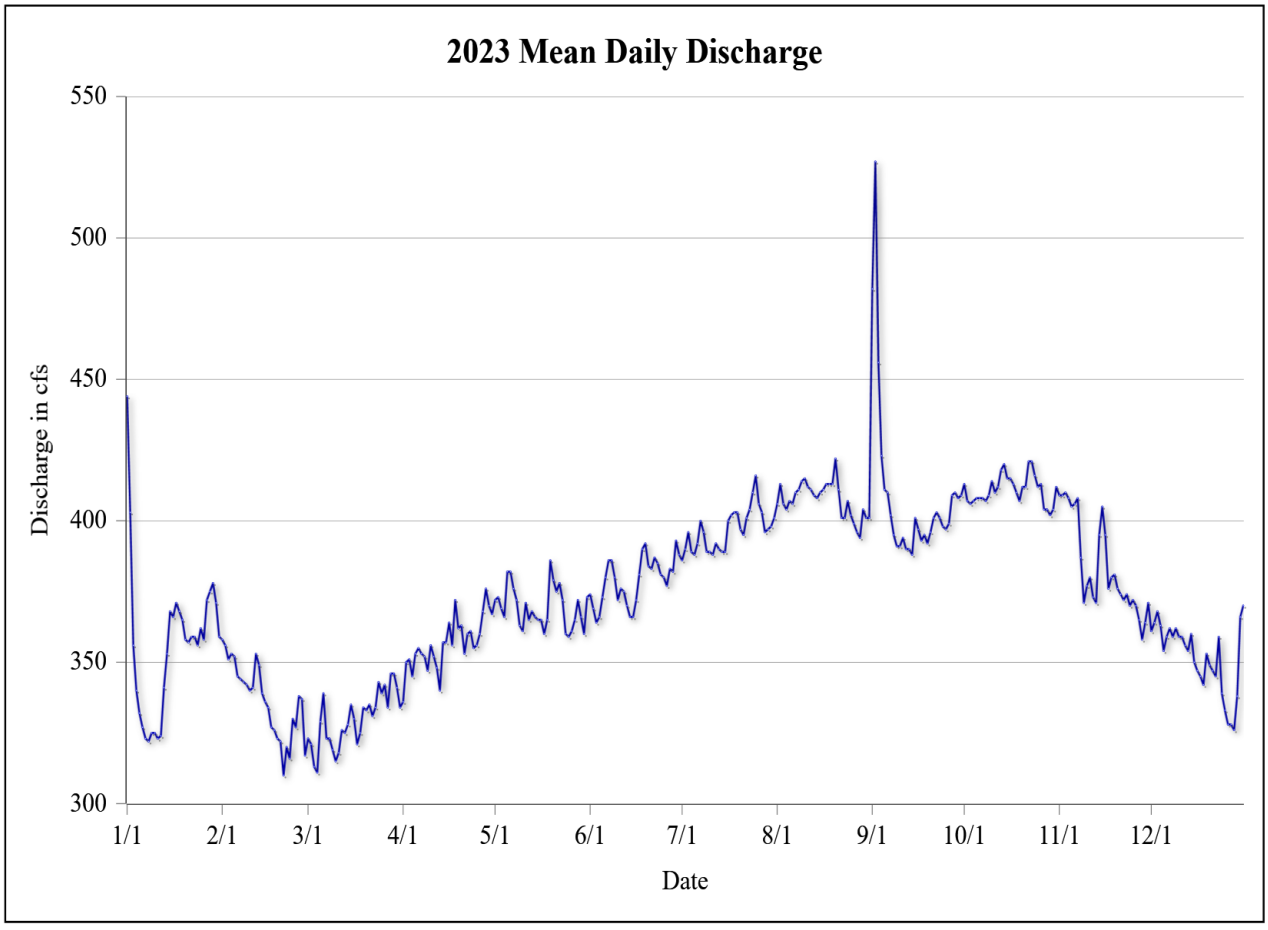
Period of Record—January 1, 2005 to current year.

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.

Datum—National Geodetic Vertical Datum of 1929.

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—The discharge record was furnished by the Palo Verde Irrigation District from Nov. 14, 2023 at 02:00 to Nov. 16, 2023 at 15:00 and was estimated from Dec. 20, 2023 at 06:00 to Dec. 20, 2023 at 12:00, due to gage malfunction.



Palo Verde Irrigation District-Outfall Drain

Mean daily discharge, in cubic-feet per second, Calendar Year 2023

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	444	358	323	336	372	374	386	406	482	413	409	361
2	403	356	321	350	373	369	390	413	527	407	409	364
3	356	351	313	351	369	364	396	406	456	406	410	368
4	340	353	311	345	366	366	389	404	423	407	408	363
5	332	352	329	353	382	373	388	407	411	408	405	354
6	327	345	339	355	382	380	392	406	410	408	406	359
7	323	344	323	353	376	386	400	410	402	408	408	362
8	322	343	323	352	372	386	396	411	395	407	387	359
9	325	342	319	347	363	380	389	414	391	409	371	362
10	325	340	315	356	361	372	389	415	391	414	377	359
11	323	341	318	352	371	376	388	412	394	410	380	359
12	324	353	326	348	365	375	392	411	390	412	373	356
13	341	349	325	340	368	370	390	409	390	418	371	354
14	353	339	328	357	366	366	389	408	388	420	395	360
15	368	336	335	357	365	366	389	410	401	415	405	350
16	366	334	330	364	365	372	400	411	397	415	395	347
17	371	327	321	356	360	381	402	413	393	413	376	345
18	368	326	325	372	365	390	403	413	395	410	380	342
19	365	323	334	362	386	392	403	413	392	407	381	353
20	358	322	333	363	379	384	397	422	396	412	376	**349**
21	357	310	335	353	375	383	395	411	401	412	374	347
22	359	320	331	360	378	387	401	401	403	421	372	345
23	359	316	334	361	372	385	404	401	401	421	374	359
24	356	330	343	355	360	381	410	407	398	416	370	339
25	362	327	339	356	359	380	416	402	397	412	372	333
26	358	338	342	360	361	377	406	399	399	413	370	328
27	372	337	334	368	365	383	403	396	409	404	365	328
28	375	317	346	376	372	382	396	394	410	404	358	326
29	378		346	370	366	393	397	404	408	402	364	338
30	371		341	367	360	388	398	401	409	404	371	366
31	359		334		373		401	401		412		370
Total	11,042	9,430	10,216	10,696	11,450	11,362	12,294	12,634	12,258	12,738	11,510	10,904
Mean	356	337	330	357	369	379	397	408	409	411	384	352
Max	444	358	346	376	386	393	416	422	527	421	410	370
Min	322	310	311	336	359	364	386	394	388	402	358	326
Ac-ft	21,902	18,704	20,264	21,216	22,711	22,536	24,385	25,059	24,313	25,266	22,829	21,627

Calendar Year Summary

Annual Total 136,534 Annual Mean 374 Daily Max 527 Daily Min 310 Annual Ac-ft 270,812

Maximum Discharge (Excludes Estimates)				Minimum Discharge (Excludes Estimates)			
Date	Time	Elev	Discharge	Date	Time	Elev	Discharge
Sep. 1	22:00	219.38	660	Feb. 21	14:00	215.11	303

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

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.

For more information contact:

Bureau of Reclamation
Blythe Hydrographic Office
Attention: John Weiss
P.O. Box 1119
Blythe, California 92226

Phone: 760-922-3611, extension 1001
FAX: 760-922-3214
E-Mail: jweiss@usbr.gov

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