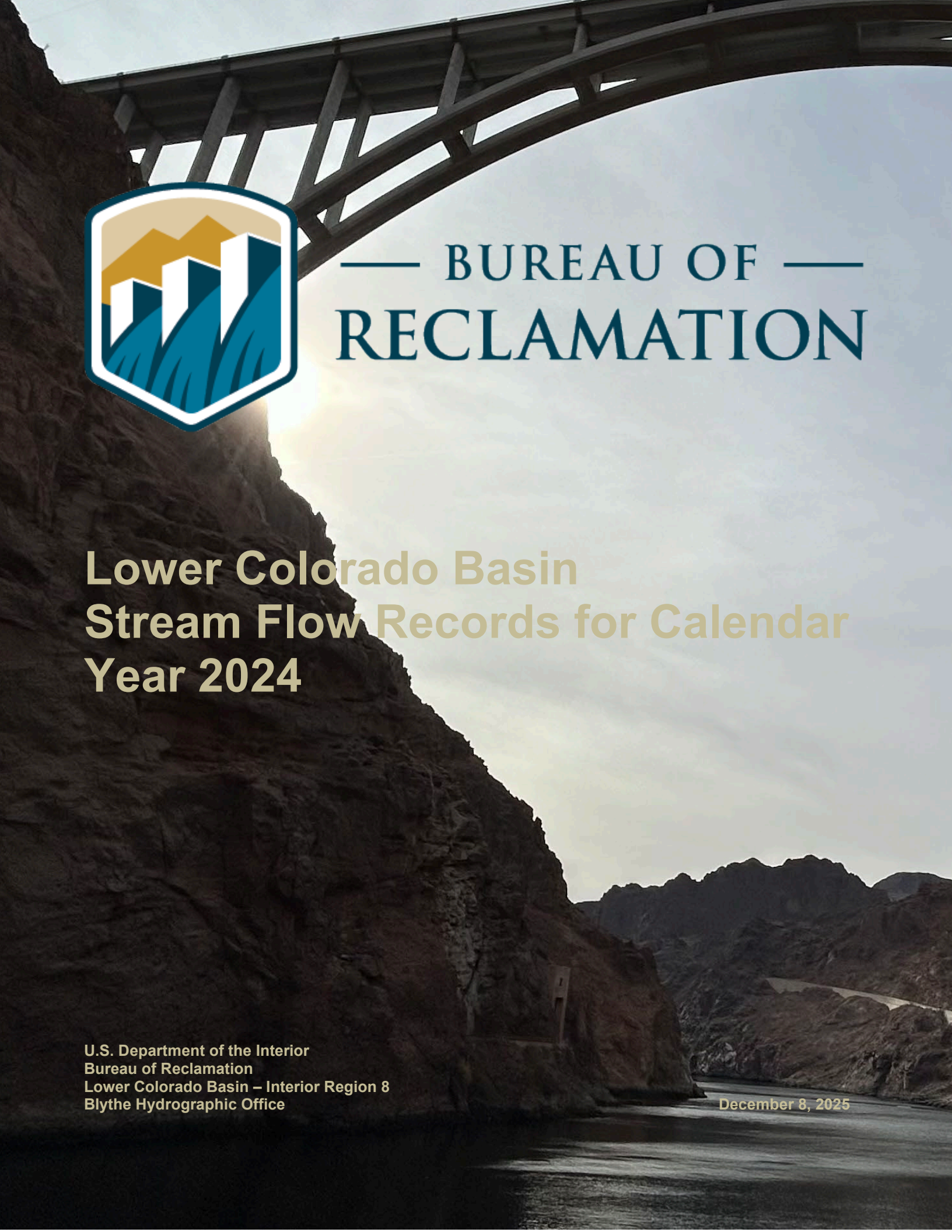


BUREAU OF RECLAMATION

Lower Colorado Basin Stream Flow Records for Calendar Year 2024

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

December 8, 2025

Cover:

The photograph captures the Mike O'Callaghan-Pat Tillman Memorial Bridge perched high above the Colorado River below Hoover Dam, as seen from the Hoover Dam Water Quality Monitoring Station. The Bureau of Reclamation photograph was taken by John Weiss during a routine site visit on December 11, 2024.

Abbreviated Terms and Symbols

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

Abbreviation	Full Term
ac-ft	acre-foot (or acre-feet)
cfs	cubic feet per second
°	degrees
E	east
EC	electrical conductivity
elev	elevation
ft	feet
gh	gage height
GPS	Global Positioning System
ID	identification
max	maximum
µS/cm	microsiemens per centimeter
mi	mile (or miles)
mi²	square mile (or square miles)
min	minimum
'	minute (of time or arc)
NGVD29	National Geodetic Vertical Datum of 1929
N	north
NE	northeast
NW	northwest

Abbreviation	Full Term
ppm	parts per million
R	range
ROE	residue on evaporation
S	south
SE	southeast
SW	southwest
Sp Cond	specific conductance
SOC	sum of constituents
TDS	total dissolved solids
T	township
W	west

Table of Contents

Explanation of Records

The Bureau of Reclamation, Blythe Hydrographic Office is responsible for collecting water data 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.

Surface Water Data Collection and Computation

Records of stage, velocity, and computed discharge are collected using electronic sensors programmed to record at regular intervals. These measurements are transmitted every minute to a datalogger, which calculates one-minute and hourly averages and stores them in a log file using an end of period format. The data are then transmitted via telemetry to the Aquarius Time-Series Database (database) in Boulder City, Nevada.

Sensor selection varies by gaging station and is based on the parameters required to measure water level or components of discharge with consideration to deployment requirements. Stilling well gages offer more flexibility and greater accuracy over land based – open water gaging, as the later method of deployment has fewer suitable sensing options.

During monthly site visits, technicians verify stage sensor calibration by comparing live sensor readings to known reference gage values such as an electric-tape, staff, or wire-weight gage. The difference in these values is known as a gage-height correction and if it exceeds the reference gage uncertainty, the sensor is calibrated and verified. If it does not exceed the reference gage uncertainty, it is considered within calibration, and no action is taken to the data. Technicians also download one-minute datalogger and sensor logs to a laptop and document all observations in the station visit log.

Discharge measurements are conducted using an acoustic Doppler velocimeter (ADV), acoustic Doppler current profiler (ADCP), or clamp-on acoustic pipe meter, depending on site conditions. Technicians strive to collect discharge measurements throughout the range of flows in the stream and during all seasons to define the behavior of the stream. All measurements follow U.S. Geological Survey standards and Reclamation's internal protocols.

The discharge measurements are used to develop rating curves—hydraulic models that define the relationship between measured parameters and computed data of velocity, area, and/or discharge. Common relationships include stage-discharge, stage-area, velocity-index, and discharge-discharge, which may be used independently or in combination to derive the desired result. Because the discharge measurements rarely cover the full range of observed flows, the rating curves are often projected beyond the extent of the discharge measurement observations using regression methods such as linear, logarithmic, or power functions.

The stage-discharge method is one of the most robust but requires a stable control feature in the stream, such as a natural rock bar or a man-made structure like a flume or weir. Stage-discharge ratings can be complex if the channel has multiple controls, resulting in a compound rating with one or more breakpoints and numerous segments. Most of the Colorado River Gages listed herein utilize this method. The velocity-index method estimates average channel velocity using an index velocity measured at a fixed point in the stream. This value, combined with a stage-area relationship, is used to compute discharge. It is particularly useful in open-channel systems affected by backwater conditions.

The discharge-index method is used at gaging stations with pipe meters. It involves correlating an index discharge with total stream discharge, making it suitable for closed conduit systems or locations where direct flow measurement is limited. This is a common gaging approach in pump diversion situations for agricultural irrigation.

Quality assurance procedures include uploading high-resolution one-minute data into the database where they are reviewed and corrected if necessary. Any changes in the one-minute data triggers a reaggregation of the hourly data in the database, overriding the telemetry-derived averages. Further analysis is performed on the hourly values making final corrections to fill gaps, correct for errors, and resolve partially computed hourly values. Technicians then apply gage-height corrections to adjust the stage data using either a constant correction (offset) or prorated correction (drift).

To address changes in the stage-discharge relationship caused by dynamic physical conditions—such as migrating sandbars, aquatic vegetation, unstable banks, or ephemeral sidewash flows—stage-shifting and velocity-shifting techniques are applied. These shifts may be prorated by time, stage, or both, depending on the nature and duration of the change, providing a smooth transition between corrections over time. Further analysis is performed on the hourly discharge data, and corrections are applied as needed. Data gaps due to equipment failure or anomalies are addressed, and all modifications are documented in station files to maintain a complete audit trail. Once the hourly record is finalized, daily, monthly, and annual mean discharge values are computed.

A complex and thorough set of documentation accompanies each record defining the methods used and issues found during the generation, an occur on an annual basis. Once all data and records are reviewed and approved, the database record is locked for preservation and documentation is preserved in the agency approved records management system.

Water Quality Data Collection and Computation

Water temperature and specific conductance data are measured using electronic sensors in the Colorado River below Hoover and Parker Dams to produce records of specific conductance and total dissolved solids (TDS). Previously mentioned quality assurance processes are applicable to water quality data collection practices and therefore will only be mentioned below if they differ.

During monthly site visits, technicians assess sensor performance using handheld instruments, such as a handheld specific conductance and temperature sensor, to detect foul or drift. Water quality samples are collected for shipment to the Reclamation Regional Water Laboratory, where they will be monitored for a panel of constituents and later used in the quantification of TDS.

Water quality data are often found missing due to equipment failure and during site visits when the technician takes the sensor offline for calibration verification. Additionally, erroneous data is deleted due to fouling that cannot be explained from physical observation. These gaps in the record are never estimated and therefore, gaps in the published record may exist.

Laboratory results of the water quality samples are used to develop conversion factors that relate specific conductance to TDS, using the Sum of Constituents method. These factors are entered into the database and applied to the hourly specific conductance data to compute TDS. Although not reported here, TDS data are also computed using the Residue on Evaporation method as a secondary quality control check.

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 record, information on system outages, and other pertinent items.

BUREAU OF RECLAMATION

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

Gage Number	Gaging Station	Code
1	Colorado River Below Hoover Dam	HDMLC
2	Lake Mohave at Davis Dam	DDMLC
3	Colorado River Below Big Bend	BBBLC
4	Fort Mojave Tribe - Nevada	FMTNV
5	Fort Mojave Tribe - North Casino	FMTNC
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 Below Parker Dam	PDMLC
18	Colorado River at Parker Gage	PGLC
19	Colorado River at Water Wheel	WWLC
20	Colorado River Below Interstate Bridge	BIBLC
21	Colorado River Below McIntyre Park	BMPLC
22	Colorado River at Taylor Ferry	TFLC
23	Colorado River Below Oxbow Bridge	BOBLC
24	Palo Verde Irrigation District - Outfall Drain	PVOF
25	Colorado River at Cibola Gage	CLC
26	Colorado River at Picacho Park	PPGLC
27	Colorado River at Martinez lake	MLLC

Map Revision: 12/5/2025

Map Pathway: DOI\Projects\LCRO\Programs_Projects\BCOO\Gaging Station Map\Exports\GagingStationsDec2025.pdf

Colorado River Gaging Stations

Colorado River Below Hoover Dam

Location—Latitude 36° 0.846′ N, longitude 114° 44.440′ W, located on the Colorado River between Lot 3 of Section 29, T. 22 S., 65 E. Mount Diablo Meridian and Lot 3 of Section 03, T. 30 N., 23 W., Gila-Salt River Meridian, between Clark County, Nevada and Mohave County, Arizona; Hydrologic Unit 15010005; at Colorado River mile 342.2; 370 miles downstream of Glen Canyon, 30 miles southeast of Las Vegas, NV., 8 miles northeast of Boulder City, Nevada, and 67 miles upstream of Davis Dam.

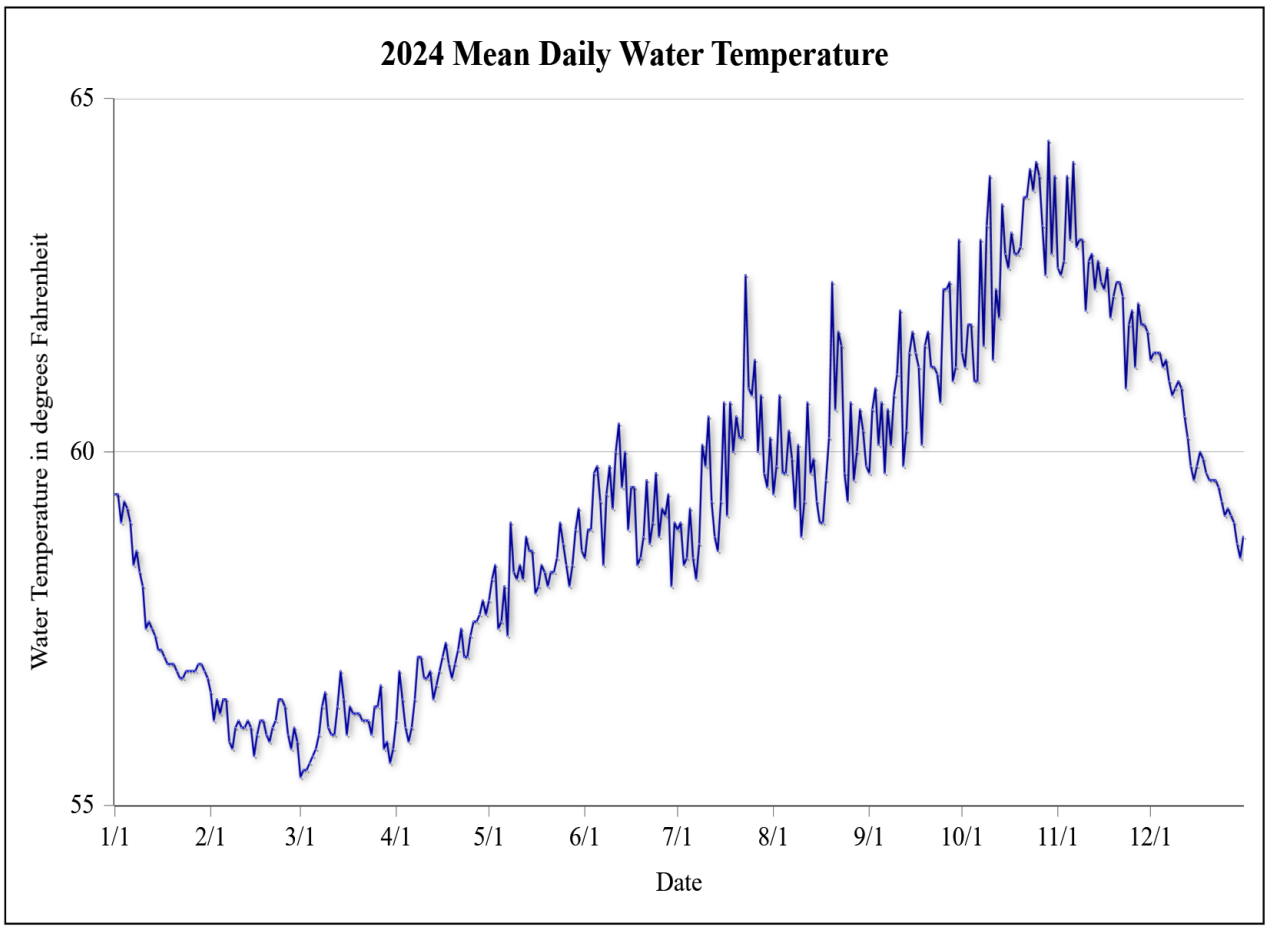
Drainage Area—167,800 mi².

Period of Record—January 1, 2024 to December 31, 2024.

Gage—A Sutron Xlite datalogger (Model 9210-0000-2B) records temperature from a YSI SDI-12 submersible water quality monitor (Model 600R-BCR-C-T).

Extremes—Maximum daily water temperature, 64.4 °F, Oct. 29, 2024; minimum daily water temperature, 55.4 °F, Mar. 1, 2024; maximum hourly water temperature, 67.7 °F, Sep. 9, 2024 at 21:00; minimum hourly water temperature, 55.1 °F, Mar. 1, 2024, at 18:00.

Remarks—Record was reported for 8,784 of 8,784 hours or 100% of the time.



Colorado River Below Hoover Dam

Mean daily water temperature, in degrees Fahrenheit, Calendar Year 2024

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	59.4	56.6	55.4	56.2	57.9	58.5	58.9	59.4	59.7	61.4	62.6	61.3
2	59.4	56.2	55.5	56.9	58.2	58.9	59.0	59.8	60.6	61.2	62.5	61.4
3	59.0	56.5	55.5	56.5	58.4	58.9	58.4	60.8	60.9	61.8	62.7	61.4
4	59.3	56.3	55.6	56.1	57.5	59.7	58.5	59.7	60.1	61.8	63.9	61.4
5	59.2	56.5	55.7	55.9	57.6	59.8	59.2	59.7	60.7	61.0	63.0	61.2
6	59.0	56.5	55.8	56.1	58.1	59.3	58.5	60.3	59.7	61.0	64.1	61.3
7	58.4	55.9	56.0	56.5	57.4	58.4	58.2	59.9	60.6	63.0	62.9	61.0
8	58.6	55.8	56.4	57.1	59.0	59.4	58.7	59.2	60.1	61.5	63.0	60.8
9	58.3	56.1	56.6	57.1	58.3	59.8	60.1	60.1	60.8	63.2	63.0	60.9
10	58.1	56.2	56.1	56.8	58.2	59.2	59.8	58.8	61.1	63.9	62.0	61.0
11	57.5	56.1	56.0	56.8	58.4	60.0	60.5	59.3	62.0	61.3	62.7	60.9
12	57.6	56.1	56.0	56.9	58.2	60.4	59.3	60.7	59.8	62.3	62.8	60.5
13	57.5	56.2	56.4	56.5	58.8	59.5	58.8	59.7	60.3	61.9	62.3	60.2
14	57.4	56.1	56.9	56.7	58.6	60.0	58.6	59.9	61.4	63.5	62.7	59.8
15	57.2	55.7	56.5	56.9	58.6	58.9	59.3	59.3	61.7	62.8	62.4	59.6
16	57.2	56.0	56.0	57.1	58.0	59.5	60.7	59.0	61.4	62.6	62.3	59.8
17	57.1	56.2	56.4	57.3	58.1	59.5	59.1	59.0	61.2	63.1	62.6	60.0
18	57.0	56.2	56.3	57.0	58.4	58.4	60.7	59.6	60.1	62.8	61.9	59.9
19	57.0	56.0	56.3	56.8	58.3	58.5	60.0	60.2	61.5	62.8	62.2	59.7
20	57.0	55.9	56.3	57.0	58.1	58.8	60.5	62.4	61.7	62.9	62.4	59.6
21	56.9	56.1	56.2	57.2	58.3	59.6	60.2	60.6	61.2	63.6	62.4	59.6
22	56.8	56.2	56.2	57.5	58.3	58.7	60.2	61.7	61.2	63.6	62.2	59.6
23	56.8	56.5	56.2	57.1	58.5	59.0	62.5	61.5	61.1	64.0	60.9	59.5
24	56.9	56.5	56.0	57.1	59.0	59.7	60.9	59.7	60.7	63.7	61.8	59.3
25	56.9	56.4	56.4	57.4	58.7	58.8	60.8	59.3	62.3	64.1	62.0	59.1
26	56.9	56.0	56.4	57.6	58.4	59.2	61.3	60.7	62.3	63.9	61.2	59.2
27	56.9	55.8	56.7	57.6	58.1	59.1	60.0	59.6	62.4	63.2	62.1	59.1
28	57.0	56.1	55.8	57.7	58.4	59.4	60.8	60.0	61.0	62.5	61.8	59.0
29	57.0	55.9	55.9	57.9	58.9	58.1	59.7	60.6	61.2	64.4	61.8	58.7
30	56.9		55.6	57.7	59.2	59.0	59.5	60.3	63.0	62.8	61.7	58.5
31	56.8		55.8		58.6		60.2	59.8		63.9		58.8
Mean	57.7	56.2	56.1	57.0	58.3	59.2	59.8	60.0	61.1	62.7	62.4	60.1
Max	59.4	56.6	56.9	57.9	59.2	60.4	62.5	62.4	63.0	64.4	64.1	61.4
Min	56.8	55.7	55.4	55.9	57.4	58.1	58.2	58.8	59.7	61.0	60.9	58.5

Calendar Year Summary

Annual Mean 59.2 Daily Max 64.4 Daily Min 55.4

Maximum Water Temperature			Minimum Water Temperature		
Date	Time	Temp	Date	Time	Temp
Sep. 9	21:00	67.7	Mar. 1	18:00	55.1

Colorado River Below Hoover Dam

Location—Latitude 36° 0.846′ N, longitude 114° 44.440′ W, located on the Colorado River between Lot 3 of Section 29, T. 22 S., 65 E. Mount Diablo Meridian and Lot 3 of Section 03, T. 30 N., 23 W., Gila-Salt River Meridian; between Clark County, Nevada and Mohave County, Arizona; Hydrologic Unit 15010005; at Colorado River mile 342.2; 370 miles downstream of Glen Canyon, 30 miles southeast of Las Vegas, NV., 8 miles northeast of Boulder City, Nevada, and 67 miles upstream of Davis Dam.

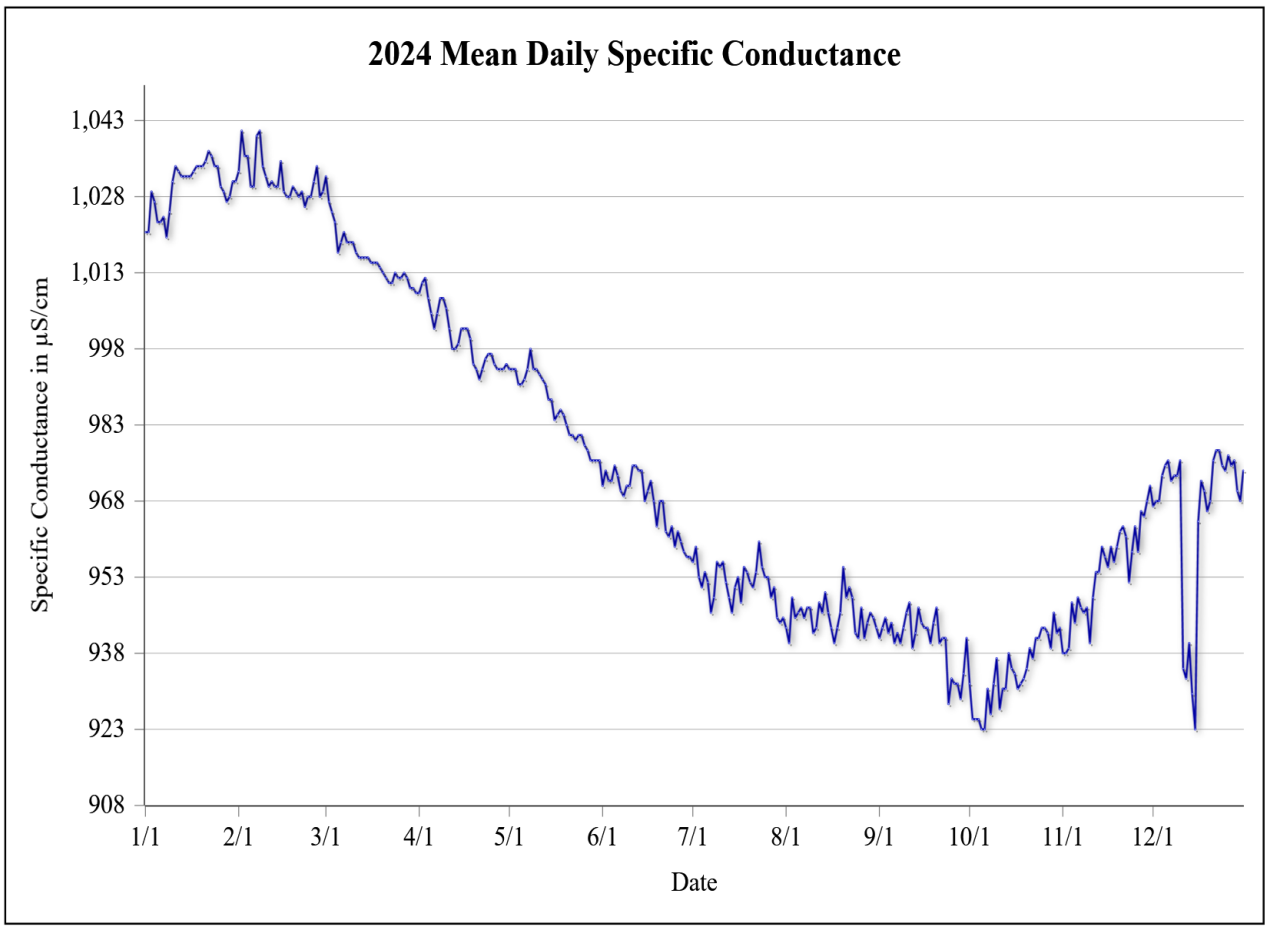
Drainage Area—167,800 mi².

Period of Record—January 1, 2024 to December 31, 2024.

Gage—A Sutron Xlite datalogger (Model 9210-0000-2B) records specific conductance and temperature from a YSI SDI-12 submersible water quality monitor (Model 600R-BCR-C-T).

Extremes—Maximum daily specific conductance, 1,041 µS/cm, Feb. 8, 2024; minimum daily specific conductance, 923 µS/cm, Oct. 6, 2024; maximum hourly specific conductance, 1,047 µS/cm, Feb. 2, 2024 at 14:00; minimum hourly specific conductance, 899 µS/cm, Dec. 15, 2024 at 04:00.

Remarks—Record was reported for 8,784 of 8,784 hours or 100% of the time.



Colorado River Below Hoover Dam

Mean daily specific conductance (sp cond), in µS/cm, Calendar Year 2024

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	1,021	1,033	1,032	1,009	994	971	956	943	941	932	938	967
2	1,021	1,041	1,027	1,011	994	974	959	940	943	925	938	968
3	1,029	1,036	1,025	1,012	994	972	953	949	945	925	939	968
4	1,027	1,036	1,023	1,008	991	972	951	945	942	925	948	973
5	1,023	1,030	1,017	1,005	991	975	954	946	944	923	944	975
6	1,023	1,030	1,019	1,002	992	973	952	947	940	923	949	976
7	1,024	1,040	1,021	1,005	994	970	946	945	942	931	947	972
8	1,020	1,041	1,019	1,008	998	969	949	947	940	926	946	973
9	1,025	1,034	1,019	1,008	994	971	956	947	943	932	947	973
10	1,031	1,032	1,019	1,006	994	971	955	942	946	937	940	976
11	1,034	1,030	1,017	1,002	993	975	956	943	948	927	949	935
12	1,033	1,031	1,016	998	992	975	952	948	939	931	954	933
13	1,032	1,030	1,016	998	991	974	949	946	942	931	954	940
14	1,032	1,030	1,016	999	988	974	946	950	947	938	959	930
15	1,032	1,035	1,016	1,002	988	968	951	946	944	935	957	923
16	1,032	1,029	1,015	1,002	984	970	953	943	943	934	955	964
17	1,033	1,028	1,015	1,002	985	972	948	940	943	931	959	972
18	1,034	1,028	1,015	1,000	986	968	955	943	940	932	956	970
19	1,034	1,030	1,014	995	985	963	954	946	944	933	959	966
20	1,034	1,029	1,013	994	983	968	952	955	947	935	962	968
21	1,035	1,028	1,012	992	981	968	951	949	940	939	963	976
22	1,037	1,029	1,011	994	981	962	954	951	941	937	961	978
23	1,036	1,026	1,011	996	980	961	960	949	941	941	952	978
24	1,034	1,028	1,013	997	981	963	955	942	928	941	958	975
25	1,034	1,028	1,012	997	981	959	953	941	933	943	963	974
26	1,030	1,031	1,012	995	979	962	953	947	932	943	958	977
27	1,029	1,034	1,013	994	978	960	949	941	932	942	966	975
28	1,027	1,028	1,012	994	976	958	951	944	929	939	965	976
29	1,028	1,029	1,010	994	976	957	945	946	934	946	968	970
30	1,031		1,010	995	976	957	944	945	941	942	971	968
31	1,031		1,009		976		945	943		943		974
Mean	1,030	1,032	1,016	1,000	986	968	952	945	940	934	954	966
Max	1,037	1,041	1,032	1,012	998	975	960	955	948	946	971	978
Min	1,020	1,026	1,009	992	976	957	944	940	928	923	938	923

Calendar Year Summary

Annual Mean 977 Daily Max 1,041 Daily Min 923

Maximum Specific Conductance			Minimum Specific Conductance		
Date	Time	Sp Cond	Date	Time	Sp Cond
Feb. 2	14:00	1,047	Dec. 15	04:00	899

Colorado River Below Hoover Dam

Location—Latitude 36° 0.846′ N, longitude 114° 44.440′ W, located on the Colorado River between Lot 3 of Section 29, T. 22 S., 65 E. Mount Diablo Meridian and Lot 3 of Section 03, T. 30 N., 23 W., Gila-Salt River Meridian; between Clark County, Nevada and Mohave County, Arizona; Hydrologic Unit 15010005; at Colorado River mile 342.2; 370 miles downstream of Glen Canyon, 30 miles southeast of Las Vegas, NV., 8 miles northeast of Boulder City, Nevada, and 67 miles upstream of Davis Dam.

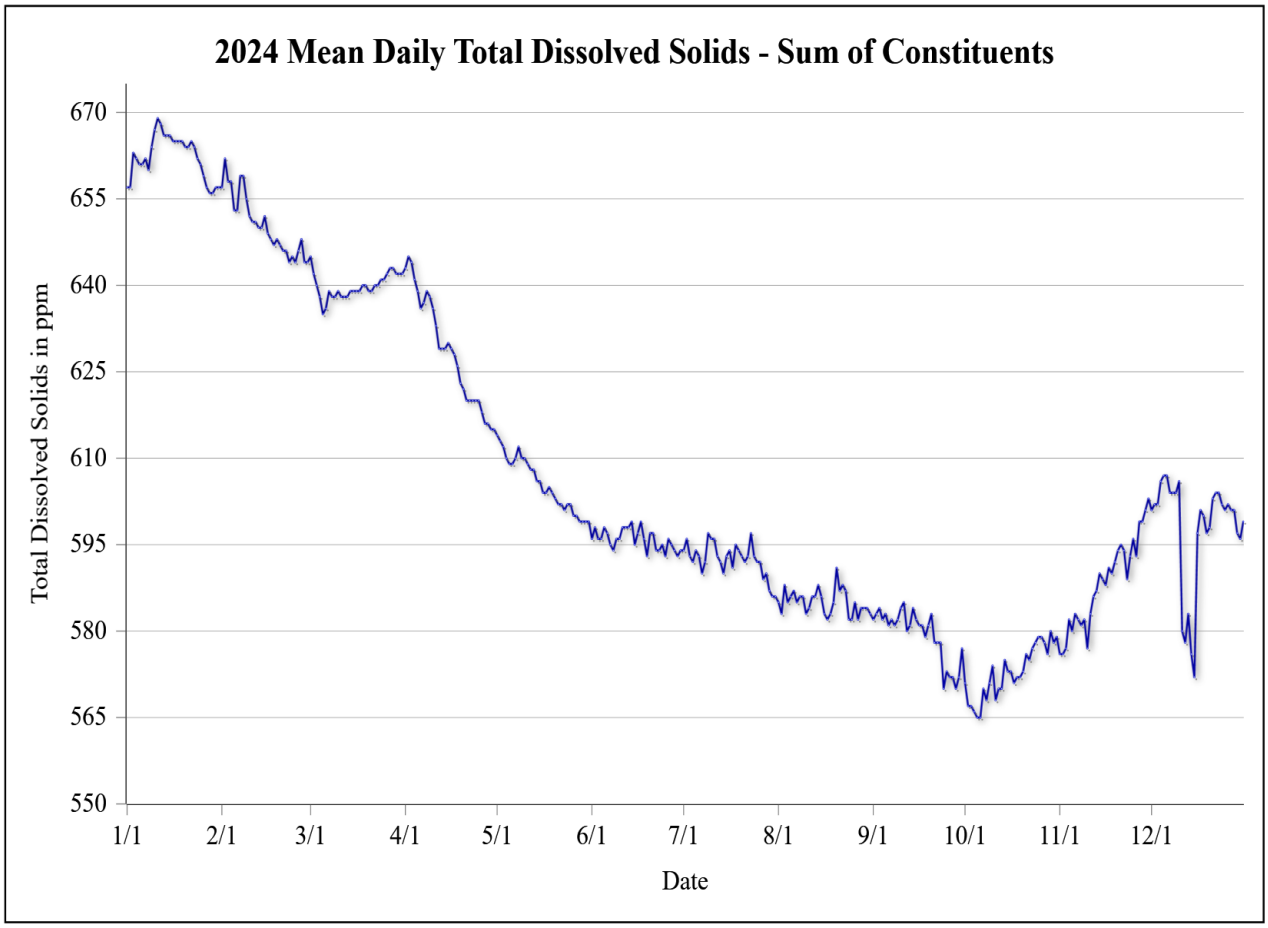
Drainage Area—167,800 mi².

Period of Record—January 1, 2024 to December 31, 2024.

Gage—A Sutron Xlite datalogger (Model 9210-0000-2B) records specific conductance and temperature from a YSI SDI-12 submersible water quality monitor (Model 600R-BCR-C-T). Total Dissolved Solid (TDS) concentrations are presented in parts per million (ppm) and were calculated using the Sum of Constituents (SOC) method.

Extremes—Maximum daily TDS, 669 ppm, Jan. 11, 2024; minimum daily TDS, 565 ppm, Oct. 6, 2025; maximum hourly TDS, 675 ppm, Jan. 11, 2024 at 06:00; minimum hourly TDS, 557 ppm, Dec. 15, 2024 at 04:00.

Remarks—Record was reported for 8,784 of 8,784 hours or 100% of the time. TDS results are based on monthly water quality samples, excluding fluoride and nitrate.



Colorado River Below Hoover Dam

Mean daily total dissolved solids (TDS) - sum of constituents, in parts per million, Calendar Year 2024

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	657	657	645	643	614	596	594	585	582	571	576	601
2	657	662	642	645	613	598	596	583	583	567	576	602
3	663	658	640	644	612	596	593	588	584	567	577	602
4	662	658	638	641	610	596	592	585	582	566	582	606
5	661	653	635	639	609	598	594	586	583	565	580	607
6	661	653	636	636	609	597	593	587	581	565	583	607
7	662	659	639	637	610	595	590	585	582	570	582	604
8	660	659	638	639	612	594	592	586	581	568	581	604
9	664	655	638	638	610	596	597	586	582	571	582	604
10	667	652	639	636	610	596	596	583	584	574	577	606
11	669	651	638	633	609	598	596	584	585	568	583	580
12	668	651	638	629	608	598	593	586	580	570	586	578
13	666	650	638	629	608	598	592	586	581	570	587	583
14	666	650	639	629	606	599	590	588	584	575	590	576
15	666	652	639	630	606	595	593	586	582	573	589	572
16	665	649	639	629	604	597	594	583	581	573	588	597
17	665	648	639	628	604	599	591	582	581	571	591	601
18	665	647	640	626	605	596	595	583	579	572	590	600
19	665	648	640	623	604	593	594	585	581	572	592	597
20	664	647	639	622	603	597	593	591	583	573	594	598
21	664	646	639	620	602	597	592	587	578	576	595	603
22	665	646	640	620	602	594	593	588	578	575	594	604
23	664	644	640	620	601	594	597	587	578	577	589	604
24	662	645	641	620	602	595	593	582	570	578	593	602
25	661	644	641	620	602	593	592	582	573	579	596	601
26	659	646	642	618	600	596	592	585	572	579	593	602
27	657	648	643	616	600	595	589	582	572	578	599	601
28	656	644	643	616	599	594	590	584	570	576	599	601
29	656	644	642	615	599	593	587	584	572	580	601	597
30	657		642	615	599	594	586	584	577	578	603	596
31	657		642		599		586	583		579		599
Mean	662	650	640	628	605	596	592	585	579	573	588	598
Max	669	662	645	645	614	599	597	591	585	580	603	607
Min	656	644	635	615	599	593	586	582	570	565	576	572

Calendar Year Summary

Annual Mean 608 Daily Max 669 Daily Min 565

Maximum Total Dissolved Solids			Minimum Total Dissolved Solids		
Date	Time	TDS	Date	Time	TDS
Jan. 11	06:00	675	Dec. 15	04:00	557

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.

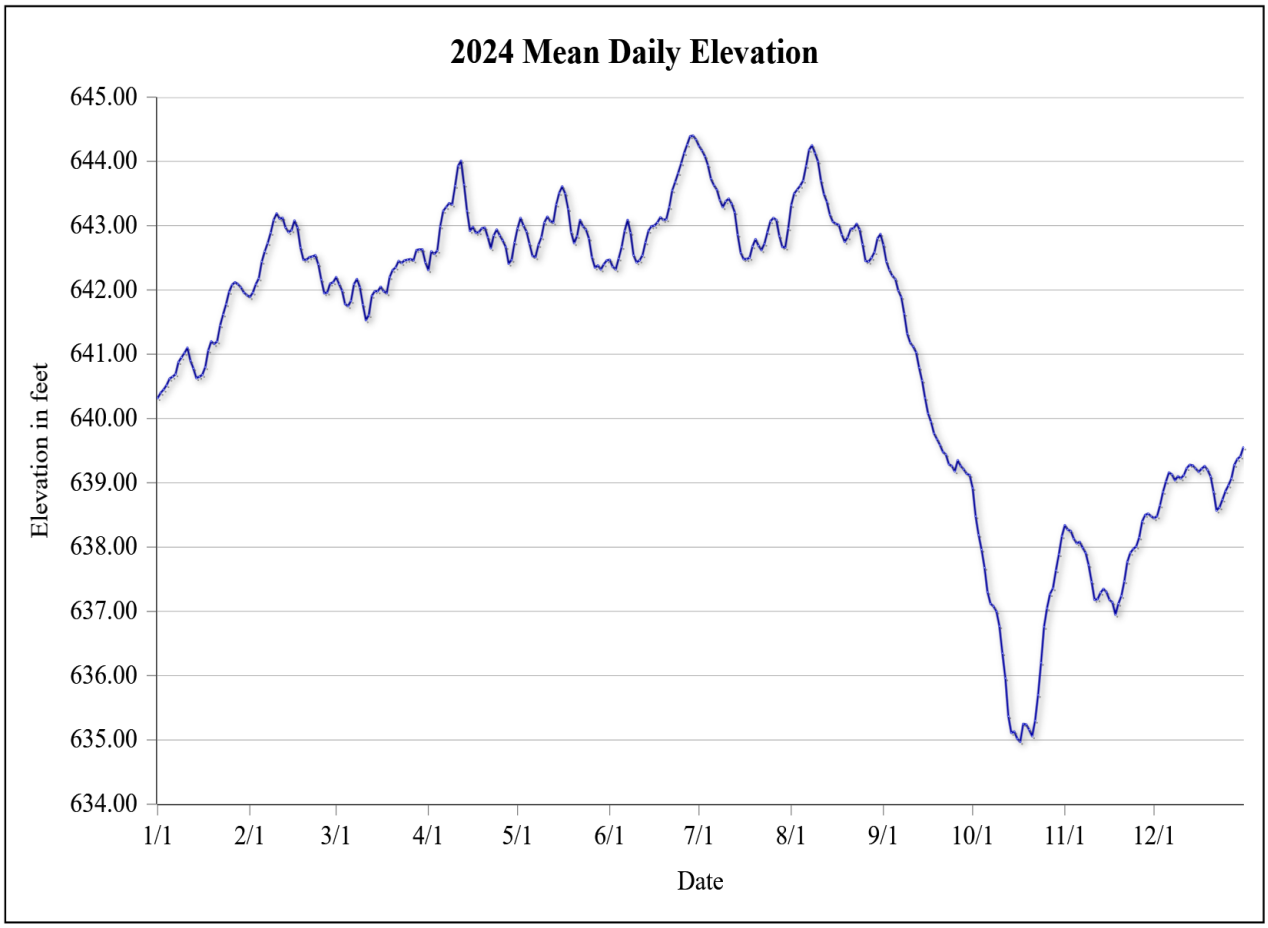
Period of Record—January 1, 2011 to current year.

Gage—A Sutron Xlite datalogger (Model 9210-0000-2B) records water elevation measured with a Sutron stage discharge recorder shaft encoder (Model SDR-0001-1SD).

Datum—Reclamation Project Vertical Datum, add 0.779 ft 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—None.



Lake Mohave at Davis Dam

Mean daily elevation, in feet, Calendar Year 2024

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	640.32	641.89	642.20	642.31	642.96	642.47	644.24	643.32	642.70	638.92	638.34	638.45
2	640.40	641.96	642.09	642.60	643.12	642.36	644.17	643.50	642.44	638.48	638.27	638.48
3	640.45	642.09	641.99	642.56	643.00	642.32	644.08	643.56	642.31	638.19	638.25	638.65
4	640.52	642.18	641.78	642.61	642.91	642.49	643.94	643.62	642.22	637.96	638.13	638.86
5	640.62	642.44	641.75	642.99	642.72	642.67	643.73	643.70	642.17	637.68	638.06	639.02
6	640.65	642.60	641.83	643.23	642.53	642.92	643.63	643.93	641.99	637.30	638.08	639.16
7	640.69	642.73	642.09	643.29	642.51	643.09	643.56	644.18	641.89	637.12	637.99	639.13
8	640.88	642.89	642.17	643.35	642.70	642.89	643.40	644.25	641.63	637.08	637.91	639.04
9	640.95	643.09	642.04	643.33	642.82	642.54	643.29	644.13	641.32	637.00	637.72	639.10
10	641.02	643.19	641.77	643.62	643.05	642.43	643.38	644.00	641.18	636.77	637.46	639.07
11	641.10	643.11	641.53	643.93	643.14	642.46	643.42	643.70	641.12	636.35	637.18	639.12
12	640.90	643.12	641.61	644.01	643.07	642.54	643.34	643.49	641.03	635.96	637.19	639.23
13	640.78	642.97	641.91	643.64	643.05	642.74	643.21	643.37	640.79	635.37	637.29	639.28
14	640.63	642.90	641.98	643.23	643.33	642.92	642.86	643.17	640.59	635.11	637.35	639.27
15	640.65	642.93	641.98	642.92	643.51	642.99	642.58	643.06	640.32	635.13	637.30	639.22
16	640.68	643.08	642.05	642.98	643.61	643.00	642.48	643.03	640.08	635.02	637.18	639.17
17	640.80	642.97	641.98	642.89	643.50	643.05	642.48	643.01	639.95	634.97	637.14	639.22
18	641.06	642.66	641.95	642.90	643.26	643.13	642.50	642.86	639.77	635.25	636.95	639.26
19	641.20	642.47	642.20	642.96	642.90	643.09	642.68	642.75	639.68	635.24	637.12	639.20
20	641.16	642.47	642.31	642.97	642.73	643.10	642.79	642.82	639.59	635.16	637.24	639.10
21	641.20	642.51	642.35	642.82	642.84	643.29	642.69	642.95	639.48	635.06	637.47	638.86
22	641.45	642.52	642.45	642.65	643.09	643.55	642.62	642.96	639.44	635.30	637.77	638.57
23	641.62	642.54	642.42	642.85	642.99	643.68	642.72	643.03	639.29	635.70	637.91	638.62
24	641.78	642.40	642.46	642.94	642.94	643.82	642.90	642.94	639.26	636.20	637.97	638.74
25	641.97	642.16	642.47	642.85	642.80	643.97	643.07	642.71	639.18	636.76	638.01	638.87
26	642.08	641.95	642.48	642.77	642.51	644.13	643.12	642.45	639.35	637.05	638.15	638.96
27	642.12	641.96	642.46	642.67	642.35	644.26	643.09	642.44	639.26	637.27	638.40	639.07
28	642.09	642.10	642.62	642.41	642.38	644.39	642.84	642.50	639.21	637.36	638.50	639.28
29	642.04	642.12	642.63	642.47	642.32	644.40	642.67	642.59	639.14	637.64	638.52	639.37
30	641.96		642.63	642.74	642.40	644.34	642.66	642.80	639.12	637.89	638.48	639.41
31	641.92		642.43		642.46		642.96	642.87		638.17		639.55
Mean	641.15	642.55	642.15	642.98	642.89	643.17	643.13	643.22	640.52	636.60	637.78	639.04
Max	642.12	643.19	642.63	644.01	643.61	644.40	644.24	644.25	642.70	638.92	638.52	639.55
Min	640.32	641.89	641.53	642.31	642.32	642.32	642.48	642.44	639.12	634.97	636.95	638.45

Calendar Year Summary

Annual Mean 641.26 Daily Max 644.40 Daily Min 634.97

Maximum Elevation			Minimum Elevation		
Date	Time	Elev	Date	Time	Elev
Jun. 29	04:00	644.60	Oct. 17	22:00	634.85

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.

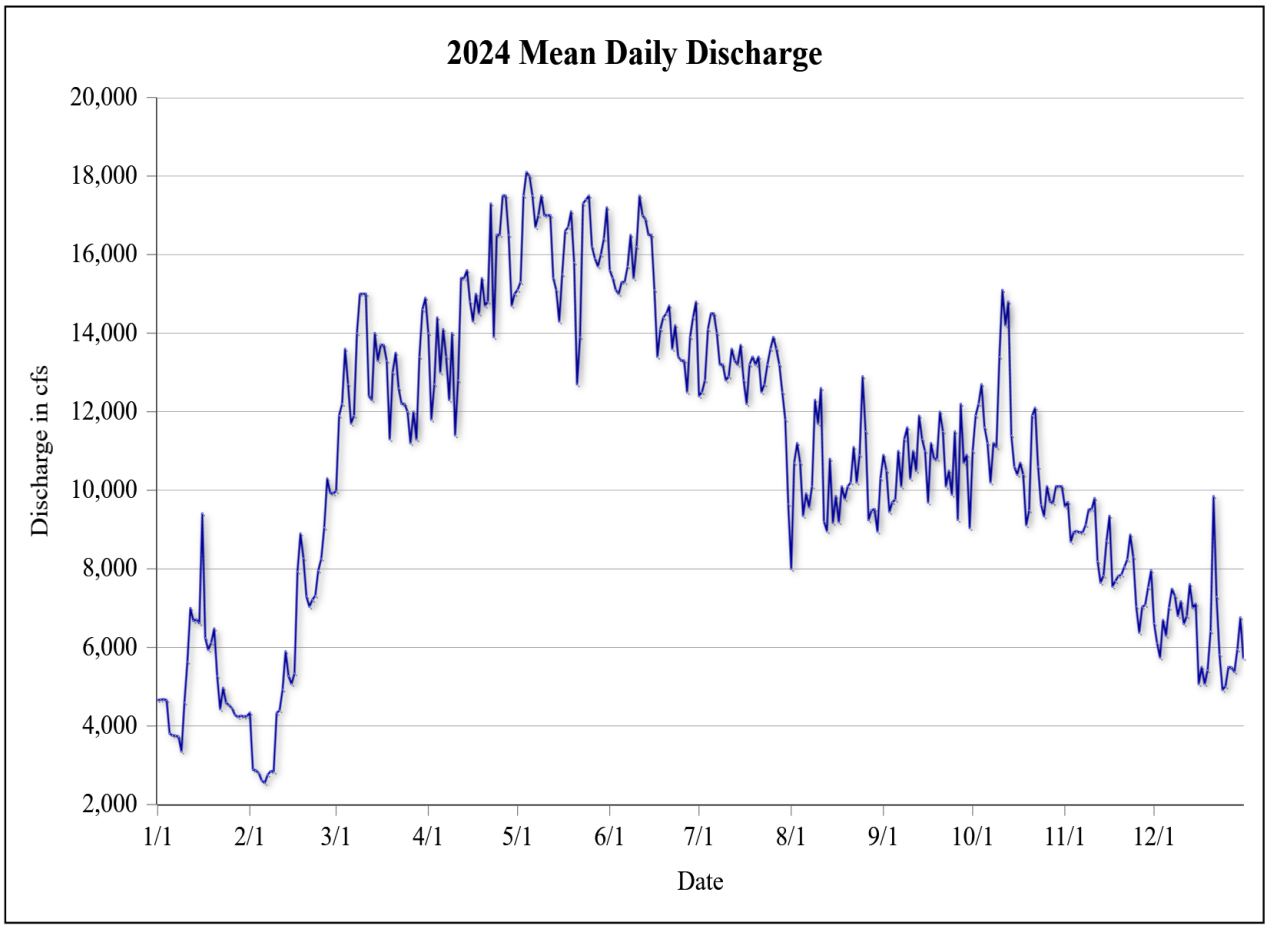
Period of Record—January 1, 2008 to current year.

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 2024

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	4,660	4,340	9,980	14,000	15,100	15,600	12,400	8,000	10,900	11,000	9,590	6,610
2	4,670	2,890	11,900	11,800	15,300	15,400	12,500	10,700	10,500	11,900	9,700	6,110
3	4,680	2,870	12,200	12,700	17,500	15,100	12,800	11,200	9,450	12,200	8,690	5,740
4	4,660	2,800	13,600	14,400	18,100	15,000	14,100	10,700	9,700	12,700	8,940	6,700
5	3,810	2,610	12,700	13,000	18,000	15,300	14,500	9,350	9,760	11,600	8,960	6,300
6	3,760	2,550	11,700	14,100	17,500	15,300	14,500	9,920	11,000	11,200	8,930	7,010
7	3,750	2,760	11,900	13,400	16,700	15,700	14,000	9,570	10,100	10,200	8,930	7,490
8	3,730	2,850	14,000	12,300	17,000	16,500	13,200	10,100	11,300	11,200	9,120	7,310
9	3,350	2,840	15,000	14,000	17,500	15,400	13,200	12,300	11,600	11,100	9,510	6,800
10	4,600	4,330	15,000	11,400	17,000	16,200	12,800	11,700	10,300	13,400	9,520	7,170
11	5,640	4,400	15,000	12,800	17,000	17,500	12,900	12,600	11,000	15,100	9,800	6,600
12	7,000	4,930	12,400	15,400	17,000	17,000	13,600	9,210	10,500	14,200	8,190	6,800
13	6,680	5,900	12,300	15,400	15,400	16,900	13,300	8,960	11,900	14,800	7,650	7,610
14	6,710	5,270	14,000	15,600	15,100	16,500	13,200	10,800	11,300	11,400	7,830	7,010
15	6,620	5,070	13,300	14,800	14,300	16,500	13,700	9,170	11,000	10,600	8,710	7,110
16	9,410	5,340	13,700	14,300	15,500	15,100	12,800	9,850	9,690	10,400	9,350	5,070
17	6,240	7,930	13,700	15,000	16,600	13,400	12,200	9,190	11,200	10,700	7,550	5,500
18	5,940	8,900	13,300	14,500	16,700	14,100	13,200	10,100	10,800	10,400	7,690	5,070
19	6,120	8,270	11,300	15,400	17,100	14,400	13,400	9,780	10,800	9,110	7,820	5,420
20	6,480	7,300	13,000	14,700	15,800	14,500	13,200	10,100	12,000	9,490	7,850	6,410
21	5,270	7,040	13,500	14,800	12,700	14,700	13,400	10,200	11,500	11,900	8,050	9,850
22	4,430	7,210	12,600	17,300	13,900	13,600	12,500	11,100	10,100	12,100	8,240	7,290
23	4,970	7,320	12,200	13,900	17,300	14,200	12,700	10,200	10,500	10,600	8,870	5,820
24	4,590	7,960	12,200	16,500	17,400	13,400	13,200	10,900	9,890	9,630	8,300	4,920
25	4,530	8,260	12,000	16,500	17,500	13,300	13,600	12,900	11,500	9,340	7,040	5,010
26	4,450	9,050	11,200	17,500	16,200	13,300	13,900	11,500	9,250	10,100	6,380	5,500
27	4,280	10,300	12,000	17,500	15,900	12,500	13,600	9,240	12,200	9,710	7,030	5,490
28	4,230	9,930	11,300	16,500	15,700	13,900	13,200	9,490	10,700	9,680	7,080	5,380
29	4,260	9,920	13,400	14,700	16,000	14,400	12,500	9,520	10,900	10,100	7,530	5,950
30	4,240		14,600	15,000	16,400	14,800	11,800	8,950	9,040	10,100	7,960	6,760
31	4,250		14,900		17,200		9,650	10,300		10,100		5,730
Total	158,023	171,158	400,290	439,092	506,218	449,256	405,454	317,541	320,412	345,766	250,836	197,552
Mean	5,098	5,902	12,910	14,640	16,330	14,980	13,080	10,240	10,680	11,150	8,361	6,373
Max	9,410	10,300	15,000	17,500	18,100	17,500	14,500	12,900	12,200	15,100	9,800	9,850
Min	3,350	2,550	9,980	11,400	12,700	12,500	9,650	8,000	9,040	9,110	6,380	4,920
Ac-ft	313,435	339,488	793,963	870,926	1,004,069	891,085	804,207	629,834	635,527	685,818	497,526	391,838

Calendar Year Summary

Annual Total 3,961,598 Annual Mean 10,820 Daily Max 18,100 Daily Min 2,550 Annual Ac-ft 7,857,715

Maximum Discharge				Minimum Discharge			
Date	Time	Elev	Discharge	Date	Time	Elev	Discharge
Oct. 11	01:00	487.90	20,027	Feb. 8	17:00	478.74	2,135

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.

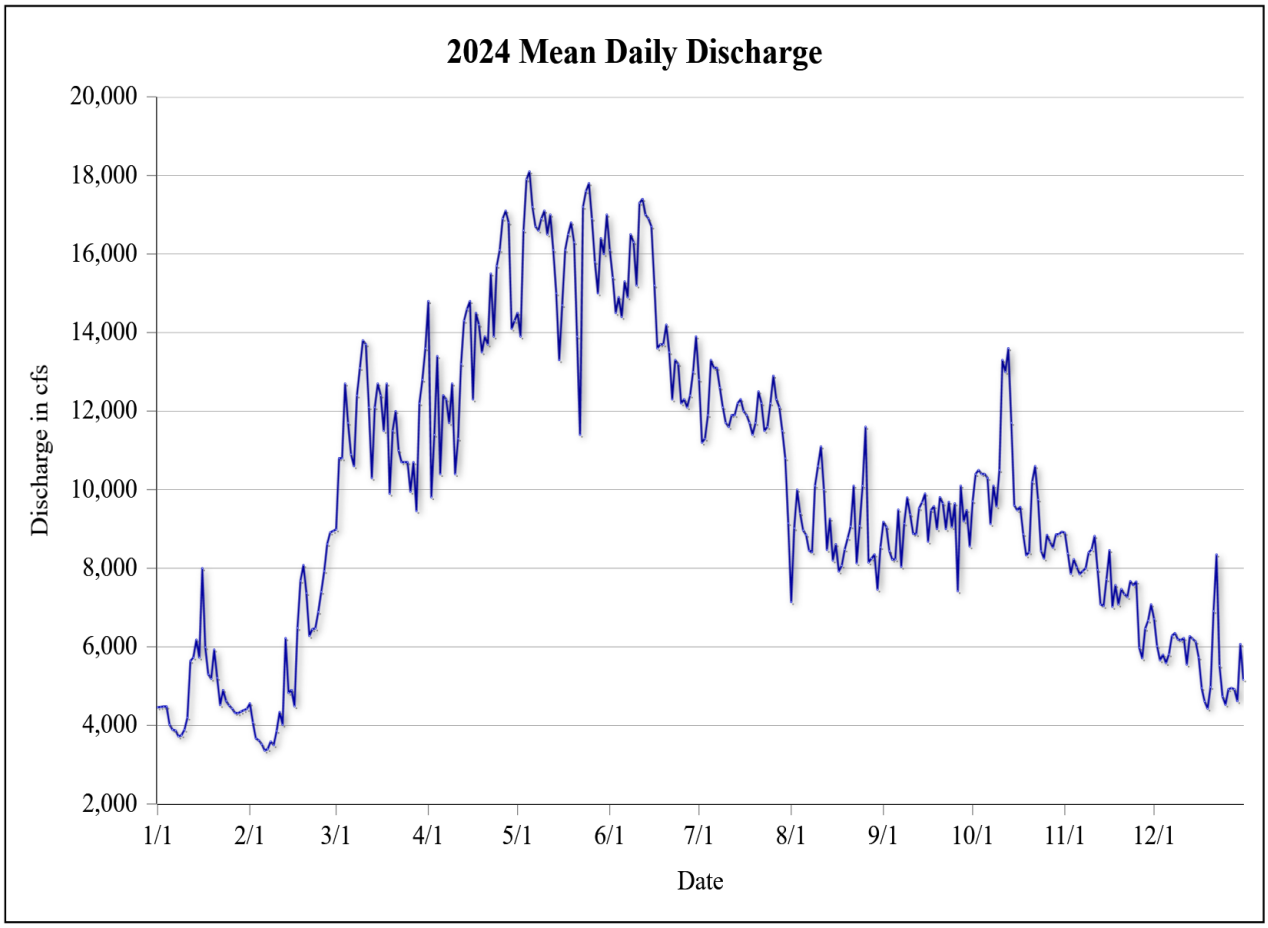
Period of Record—January 1, 2008 to current year.

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, 3,313 cfs, Jan. 7, 2024 at 18:00.

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. Several short duration periods were estimated in January and February, due to the gage bottoming out in low water conditions.



Colorado River Below Needles Bridge

Mean daily discharge, in cubic-feet per second, Calendar Year 2024

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	4,460	4,560	8,990	14,800	14,500	16,100	12,800	7,140	9,180	9,710	8,900	6,710
2	4,470	4,080	10,800	9,810	13,900	15,400	11,200	9,020	9,050	10,400	8,380	6,020
3	4,480	3,670	10,800	11,400	16,600	14,500	11,300	10,000	8,440	10,500	7,860	5,660
4	4,480	**3,620**	12,700	13,400	17,900	14,900	11,900	9,400	8,220	10,400	8,230	5,800
5	4,020	**3,520**	11,700	10,400	18,100	14,400	13,300	8,970	8,230	10,400	8,030	5,590
6	3,890	**3,360**	10,900	12,400	17,200	15,300	13,100	8,850	9,490	10,300	7,850	5,810
7	3,870	**3,400**	10,600	12,300	16,700	14,900	13,100	8,450	8,040	9,130	7,930	6,280
8	3,720	**3,590**	12,400	11,700	16,600	16,500	12,600	8,410	9,140	10,100	8,000	6,350
9	3,750	**3,500**	13,100	12,700	16,900	16,300	12,100	10,100	9,800	9,580	8,400	6,190
10	3,890	**3,860**	13,800	10,400	17,100	15,200	11,700	10,600	9,370	10,500	8,480	6,170
11	4,200	4,340	13,700	11,300	16,500	17,300	11,600	11,100	8,880	13,300	8,820	6,220
12	5,640	4,020	12,100	13,200	17,000	17,400	11,900	10,000	8,870	13,000	7,960	5,550
13	5,730	6,220	10,300	14,300	16,100	17,000	11,900	8,470	9,530	13,600	7,080	6,270
14	6,180	4,830	12,100	14,600	15,000	16,900	12,200	9,260	9,680	11,700	7,040	6,200
15	5,730	4,900	12,700	14,800	13,300	16,700	12,300	8,200	9,900	9,600	7,720	6,130
16	8,000	4,490	12,400	12,300	14,700	15,200	12,000	8,610	8,680	9,480	8,460	5,730
17	5,990	6,480	11,500	14,500	16,100	13,600	11,900	7,920	9,480	9,560	7,020	4,950
18	5,300	7,680	12,700	14,200	16,500	13,700	11,700	8,070	9,580	8,870	7,570	4,610
19	5,190	8,080	9,900	13,500	16,800	13,700	11,400	8,480	9,000	8,330	7,080	4,430
20	5,930	7,370	11,500	13,900	16,300	14,200	11,700	8,770	9,810	8,410	7,470	4,980
21	5,210	6,280	12,000	13,700	13,900	13,500	12,500	9,070	9,650	10,200	7,340	6,910
22	4,520	6,450	11,000	15,500	11,400	12,300	12,200	10,100	9,000	10,600	7,270	8,350
23	4,900	6,470	10,700	13,900	17,200	13,300	11,500	8,130	9,690	9,750	7,670	5,520
24	4,620	6,890	10,700	15,700	17,600	13,200	11,600	9,080	9,050	8,440	7,570	4,740
25	4,510	7,400	10,700	16,100	17,800	12,200	12,200	10,100	9,650	8,250	7,660	4,530
26	4,430	7,930	9,950	16,900	16,900	12,300	12,900	11,600	7,420	8,850	5,980	4,920
27	4,320	8,620	10,700	17,100	15,800	12,100	12,300	8,150	10,100	8,670	5,710	4,950
28	4,310	8,910	9,460	16,800	15,000	12,400	12,100	8,250	9,200	8,530	6,460	4,920
29	4,350	8,950	12,200	14,100	16,400	13,000	11,500	8,350	9,480	8,860	6,670	4,620
30	4,390		12,800	14,300	16,000	13,900	10,800	7,460	8,560	8,870	7,080	6,070
31	4,420		13,600		17,000		9,150	8,540		8,930		5,170
Total	148,899	163,481	358,219	410,205	498,804	437,484	370,392	278,687	274,165	306,657	227,669	176,356
Mean	4,803	5,637	11,560	13,670	16,090	14,580	11,950	8,990	9,139	9,892	7,589	5,689
Max	8,000	8,950	13,800	17,100	18,100	17,400	13,300	11,600	10,100	13,600	8,900	8,350
Min	3,720	3,360	8,990	9,810	11,400	12,100	9,150	7,140	7,420	8,250	5,710	4,430
Ac-ft	295,336	324,260	710,517	813,630	989,363	867,736	734,663	552,768	543,799	608,245	451,576	349,796

Calendar Year Summary (Estimated values are excluded from all min and max statistics)

Annual Total 3,651,018 Annual Mean 9,975 Daily Max 18,100 Daily Min 3,670 Annual Ac-ft 7,241,690

Maximum Discharge (Excludes Estimates)				Minimum Discharge (Excludes Estimates)			
Date	Time	Elev	Discharge	Date	Time	Elev	Discharge
Jun. 12	10:00	459.87	19,063	Jan. 7	18:00	451.11	3,313

Bold values indicate the daily value was derived from hourly data that contains one or more hours of estimated record.

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.

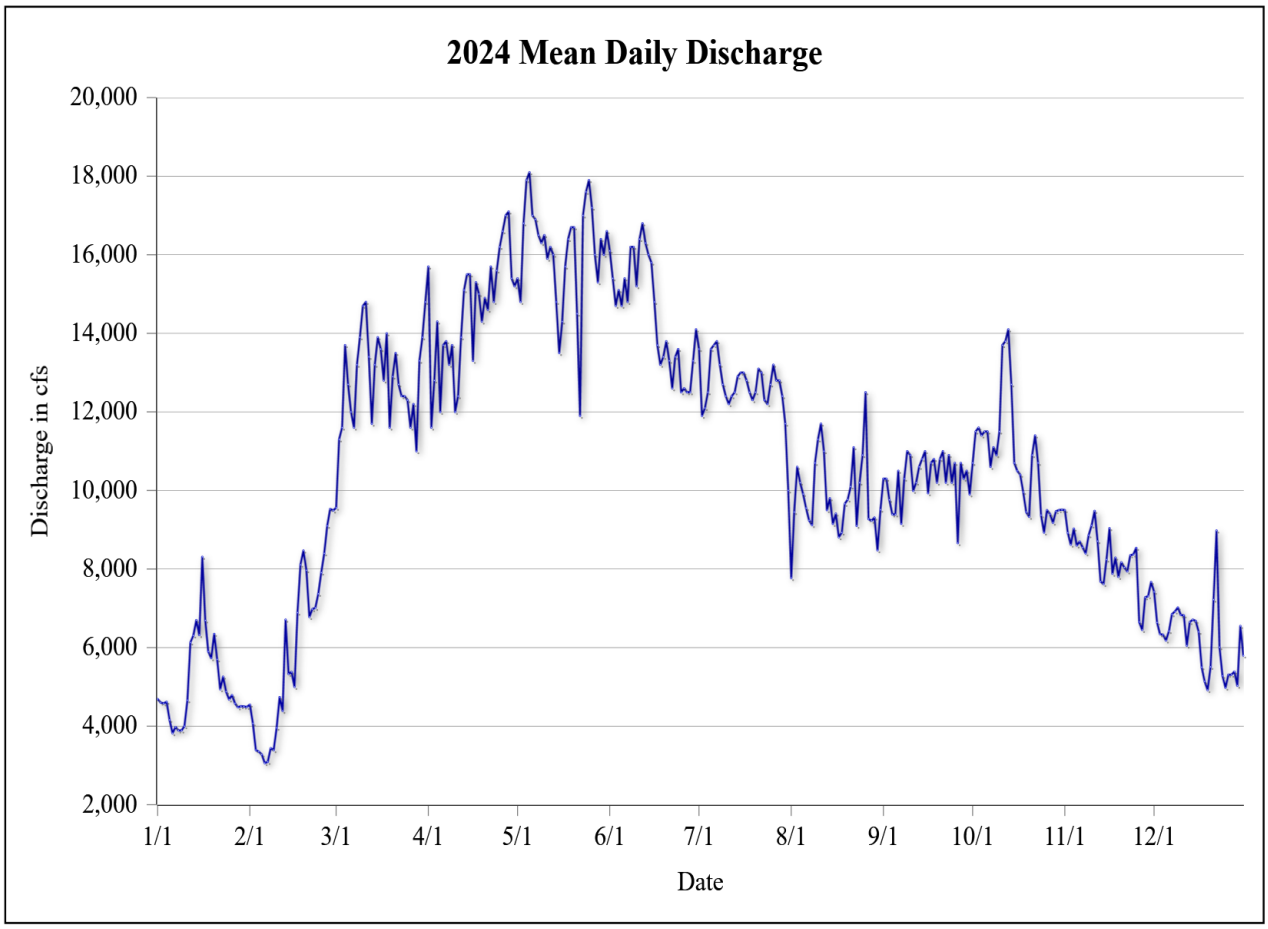
Period of Record—June 29, 2006 to current year.

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, 2,499 cfs, Feb. 8, 2024 at 03:00.

Remarks—The discharge record was estimated from Aug. 16, 2024 at 06:00 to Aug. 18, 2024 at 19:00, due to equipment failure.



Colorado River at River Section 41

Mean daily discharge, in cubic-feet per second, Calendar Year 2024

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	4,690	4,550	9,560	15,700	15,400	16,100	13,600	7,770	10,300	10,700	9,500	7,420
2	4,600	4,070	11,300	11,600	14,800	15,400	11,900	9,450	10,300	11,500	8,920	6,640
3	4,580	3,390	11,600	12,800	16,800	14,700	12,100	10,600	9,760	11,600	8,620	6,340
4	4,620	3,350	13,700	14,300	17,900	15,100	12,500	10,200	9,390	11,400	9,030	6,330
5	4,160	3,280	12,700	12,000	18,100	14,700	13,600	9,910	9,390	11,500	8,600	6,180
6	3,820	3,060	12,000	13,700	17,000	15,400	13,700	9,550	10,500	11,500	8,700	6,420
7	3,980	3,090	11,600	13,800	16,900	14,800	13,800	9,240	9,150	10,600	8,550	6,850
8	3,890	3,440	13,200	13,200	16,500	16,200	13,200	9,120	10,300	11,100	8,400	6,920
9	3,890	3,390	13,900	13,700	16,300	16,200	12,700	10,700	11,000	10,900	8,860	7,020
10	4,000	3,960	14,700	12,000	16,500	15,200	12,400	11,300	10,900	11,500	9,110	6,830
11	4,660	4,740	14,800	12,400	15,900	16,400	12,200	11,700	9,990	13,700	9,480	6,820
12	6,130	4,390	13,400	13,900	16,200	16,800	12,400	11,000	10,200	13,800	8,710	6,050
13	6,310	6,710	11,700	15,100	16,000	16,300	12,500	9,500	10,600	14,100	7,680	6,650
14	6,700	5,330	13,200	15,500	14,800	16,000	12,900	9,800	10,800	12,700	7,620	6,710
15	6,320	5,380	13,900	15,500	13,500	15,800	13,000	9,150	11,000	10,700	8,240	6,680
16	8,310	5,000	13,600	13,300	14,300	14,800	13,000	**9,410**	9,930	10,500	9,040	6,400
17	6,690	6,890	12,800	15,300	15,700	13,700	12,800	**8,810**	10,700	10,400	7,880	5,500
18	5,900	8,110	14,000	15,000	16,400	13,200	12,500	**8,930**	10,800	9,960	8,290	5,140
19	5,730	8,470	11,600	14,300	16,700	13,400	12,300	9,660	10,200	9,450	7,800	4,920
20	6,350	7,970	12,900	14,900	16,700	13,800	12,500	9,770	10,800	9,330	8,170	5,510
21	5,700	6,780	13,500	14,600	14,500	13,300	13,100	10,100	11,000	10,900	8,040	7,220
22	4,940	6,980	12,700	15,700	11,900	12,600	13,000	11,100	10,200	11,400	7,940	8,980
23	5,260	7,010	12,400	14,800	17,000	13,400	12,300	9,100	10,900	10,700	8,350	6,010
24	4,880	7,370	12,400	15,600	17,600	13,600	12,200	10,200	10,200	9,370	8,370	5,280
25	4,680	7,910	12,300	16,200	17,900	12,500	12,700	10,900	10,700	8,930	8,540	4,980
26	4,790	8,400	11,600	16,600	17,200	12,600	13,200	12,500	8,660	9,500	6,650	5,310
27	4,580	9,100	12,200	17,000	16,000	12,500	12,800	9,270	10,700	9,400	6,450	5,310
28	4,480	9,530	11,000	17,100	15,300	12,500	12,800	9,230	10,300	9,180	7,280	5,390
29	4,510	9,490	13,300	15,400	16,400	13,300	12,400	9,310	10,500	9,470	7,310	5,030
30	4,500		13,900	15,200	16,000	14,100	11,700	8,480	9,900	9,500	7,670	6,550
31	4,490		14,800		16,600		10,000	9,510		9,510		5,800
Total	158,166	171,139	396,457	436,068	498,973	434,563	391,620	305,184	309,131	334,552	247,817	193,148
Mean	5,102	5,901	12,790	14,540	16,100	14,490	12,630	9,845	10,300	10,790	8,261	6,231
Max	8,310	9,530	14,800	17,100	18,100	16,800	13,800	12,500	11,000	14,100	9,500	8,980
Min	3,820	3,060	9,560	11,600	11,900	12,500	10,000	7,770	8,660	8,930	6,450	4,920
Ac-ft	313,718	339,450	786,361	864,929	989,699	861,943	776,767	605,323	613,153	663,574	491,538	383,103

Calendar Year Summary (Estimated values are excluded from all min and max statistics)

Annual Total 3,876,819 Annual Mean 10,590 Daily Max 18,100 Daily Min 3,060 Annual Ac-ft 7,689,558

Maximum Discharge (Excludes Estimates)				Minimum Discharge (Excludes Estimates)			
Date	Time	Elev	Discharge	Date	Time	Elev	Discharge
May 25	17:00	453.73	18,837	Feb. 8	03:00	449.35	2,499

Bold values indicate the daily value was derived from hourly data that contains one or more 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.

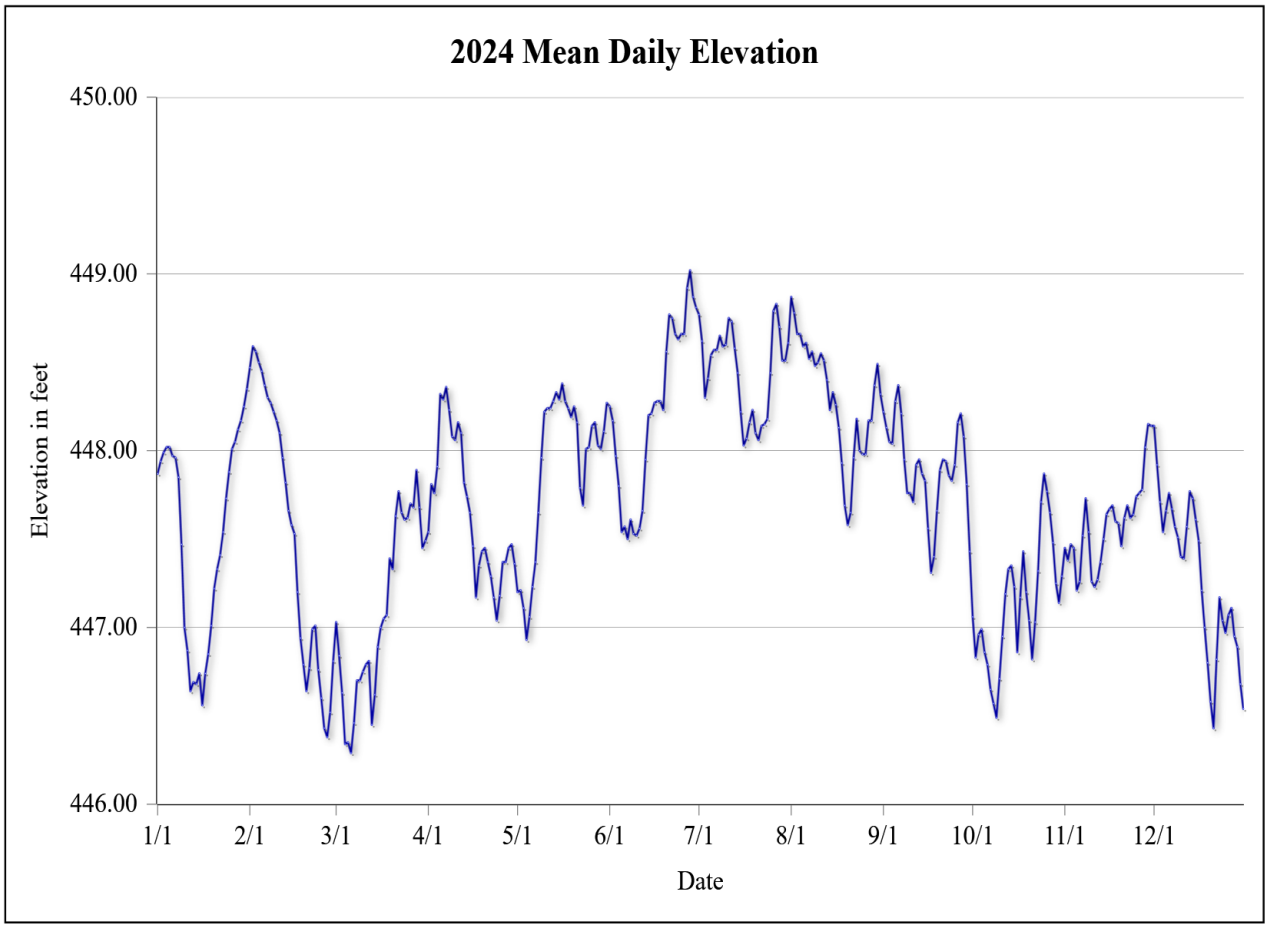
Period of Record—January 1, 2011 to current year.

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 ft 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 elevation, in feet, Calendar Year 2024

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	447.87	448.47	447.03	447.54	447.20	448.25	448.77	448.87	448.22	447.06	447.45	448.14
2	447.94	448.59	446.84	447.81	447.21	448.17	448.62	448.78	448.13	446.83	447.38	447.92
3	447.99	448.56	446.63	447.76	447.11	447.97	448.30	448.66	448.05	446.96	447.47	447.71
4	448.02	448.50	446.34	447.91	446.93	447.80	448.41	448.66	448.04	446.99	447.45	447.54
5	448.02	448.45	446.35	448.32	447.06	447.54	448.54	448.59	448.28	446.86	447.21	447.66
6	447.97	448.37	446.29	448.29	447.23	447.57	448.57	448.61	448.37	446.79	447.26	447.76
7	447.96	448.30	446.46	448.36	447.37	447.50	448.57	448.52	448.21	446.65	447.52	447.67
8	447.85	448.27	446.70	448.23	447.65	447.61	448.65	448.56	447.95	446.57	447.73	447.57
9	447.47	448.22	446.70	448.08	447.96	447.53	448.59	448.48	447.76	446.49	447.54	447.51
10	447.00	448.17	446.75	448.06	448.22	447.52	448.60	448.50	447.76	446.71	447.26	447.40
11	446.87	448.10	446.79	448.16	448.24	447.56	448.75	448.55	447.71	446.95	447.23	447.39
12	446.64	447.96	446.81	448.10	448.24	447.66	448.73	448.51	447.92	447.19	447.27	447.57
13	446.69	447.82	446.45	447.82	448.28	447.95	448.58	448.40	447.95	447.33	447.37	447.77
14	446.68	447.66	446.62	447.74	448.33	448.20	448.44	448.23	447.87	447.35	447.50	447.73
15	446.74	447.58	446.89	447.65	448.29	448.21	448.22	448.33	447.83	447.23	447.64	447.61
16	446.56	447.53	447.00	447.46	448.38	448.27	448.03	448.26	447.56	446.86	447.67	447.49
17	446.74	447.20	447.05	447.17	448.28	448.28	448.07	448.13	447.31	447.17	447.69	447.21
18	446.85	446.94	447.07	447.35	448.24	448.28	448.16	447.93	447.40	447.43	447.60	447.00
19	447.01	446.79	447.39	447.43	448.19	448.23	448.23	447.69	447.66	447.20	447.59	446.80
20	447.22	446.64	447.33	447.45	448.25	448.56	448.10	447.58	447.89	447.04	447.46	446.58
21	447.33	446.77	447.63	447.37	448.16	448.77	448.06	447.65	447.95	446.82	447.62	446.43
22	447.41	446.99	447.77	447.29	447.79	448.75	448.14	447.96	447.94	447.03	447.69	446.82
23	447.54	447.01	447.65	447.17	447.69	448.66	448.15	448.18	447.86	447.32	447.62	447.17
24	447.73	446.76	447.61	447.04	448.01	448.63	448.18	448.00	447.83	447.71	447.64	447.04
25	447.88	446.60	447.62	447.18	448.02	448.66	448.44	447.98	447.92	447.87	447.74	446.97
26	448.01	446.43	447.70	447.37	448.14	448.66	448.79	447.98	448.16	447.77	447.76	447.07
27	448.05	446.38	447.68	447.37	448.16	448.92	448.83	448.17	448.21	447.65	447.78	447.11
28	448.12	446.52	447.89	447.45	448.03	449.02	448.70	448.17	448.08	447.48	448.02	446.95
29	448.17	446.81	447.68	447.47	448.01	448.87	448.51	448.37	447.81	447.25	448.15	446.89
30	448.25		447.45	447.36	448.11	448.81	448.51	448.49	447.43	447.14	448.14	446.68
31	448.35		447.49		448.27		448.61	448.32		447.29		446.54
Mean	447.51	447.53	447.09	447.66	447.90	448.21	448.45	448.29	447.90	447.13	447.58	447.28
Max	448.35	448.59	447.89	448.36	448.38	449.02	448.83	448.87	448.37	447.87	448.15	448.14
Min	446.56	446.38	446.29	447.04	446.93	447.50	448.03	447.58	447.31	446.49	447.21	446.43

Calendar Year Summary

Annual Mean 447.71 Daily Max 449.02 Daily Min 446.29

Maximum Elevation			Minimum Elevation		
Date	Time	Elev	Date	Time	Elev
Jun. 27	22:00	449.13	Mar. 4	07:00	446.19

Colorado River Below Parker Dam

Location—Latitude 34° 17.747', longitude -114° 08.406', 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.

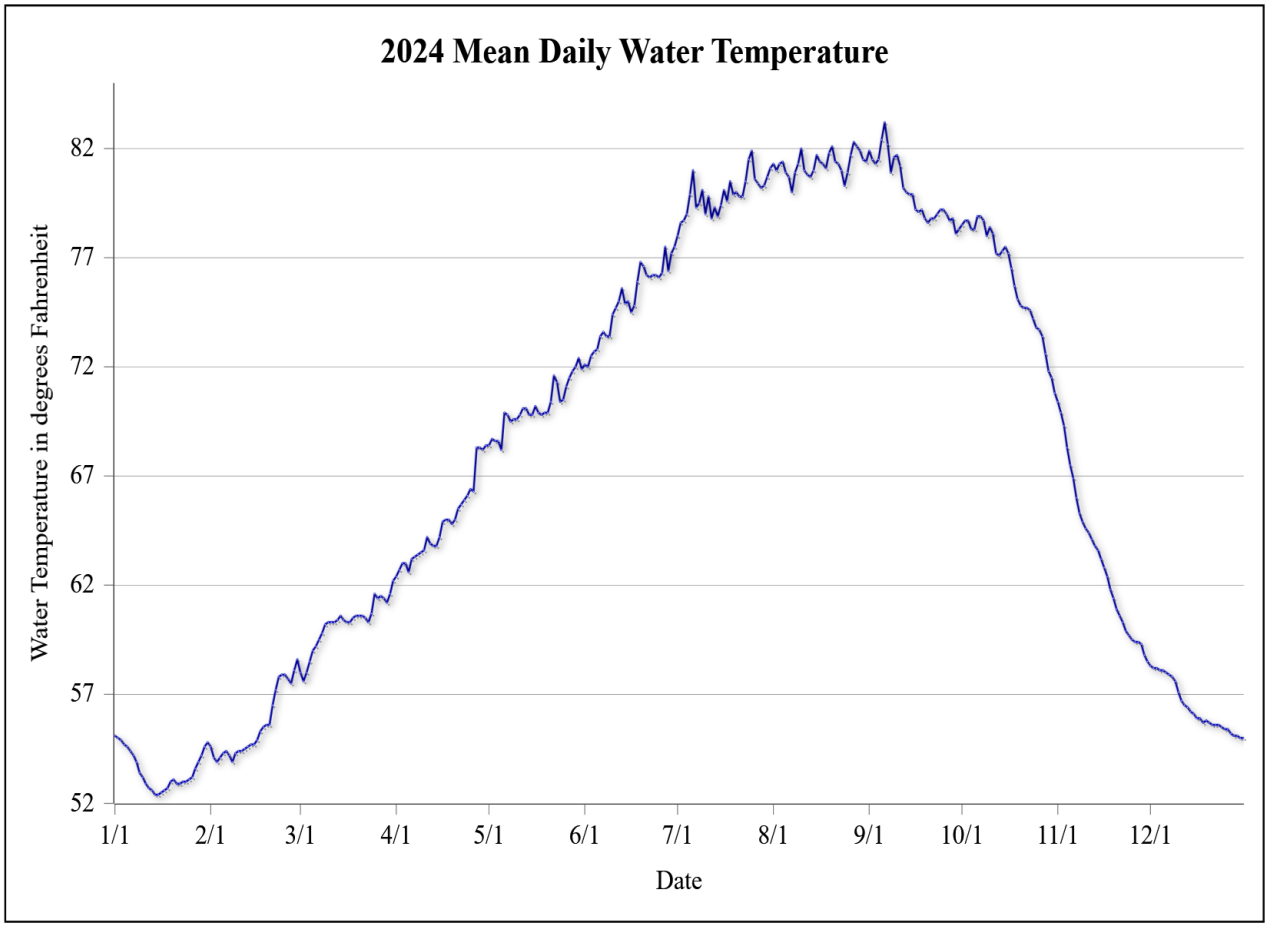
Drainage Area—180,800 mi².

Period of Record—January 1, 2024 to December 31, 2024.

Gage—A Sutron Xpert datalogger (Model 8080-0000-2B) records water temperature measured with a YSI ProSwap submersible water quality monitor (Model 610152.30).

Extremes—Maximum daily water temperature, 83.2° F, Sep. 6, 2024; minimum daily water temperature, 52.4° F, Jan. 15, 2024; maximum hourly water temperature, 84.5° F, Sep. 6, 2024 at 02:00; minimum hourly water temperature, 52.3° F, Jan. 15, 2024 at 11:00.

Remarks—Record was reported for 8,750 of 8,784 hours or 99.6% of the time.



Colorado River Below Parker Dam

Mean daily water temperature, in degrees Fahrenheit, Calendar Year 2024

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	55.1	54.6	58.0	62.4	68.4	72.1	78.0	81.3	81.9	78.5	70.4	58.3
2	55.0	54.1	57.6	62.7	68.7	72.0	78.6	81.0	81.5	78.7	69.9	58.2
3	54.9	53.9	58.0	63.0	68.6	72.5	78.7	81.3	81.3	78.7	69.3	58.2
4	54.7	54.1	58.5	63.0	68.6	72.7	79.0	81.4	81.5	78.3	68.3	58.1
5	54.6	54.3	59.0	62.6	68.2	72.8	79.9	80.9	82.4	78.3	67.5	58.1
6	54.4	54.4	59.2	63.2	69.9	73.4	81.0	80.7	83.2	78.9	66.9	58.0
7	54.2	54.2	59.5	63.3	69.8	73.6	79.3	80.0	82.2	78.9	66.0	57.9
8	53.9	53.9	59.8	63.4	69.5	73.4	79.5	80.9	80.9	78.7	65.3	57.8
9	53.4	54.3	60.2	63.5	69.6	73.4	80.1	81.3	81.6	78.0	64.9	57.6
10	53.2	54.4	60.3	63.6	69.6	74.4	79.0	82.0	81.7	78.4	64.6	57.1
11	52.9	54.4	60.3	64.2	69.8	74.7	79.8	81.0	81.2	78.1	64.4	56.7
12	52.7	54.5	60.3	63.9	70.1	75.0	78.8	80.8	80.2	77.2	64.1	56.5
13	52.6	54.6	60.4	63.8	70.1	75.6	79.3	80.7	80.0	77.1	63.8	56.4
14	52.4	54.7	60.6	63.8	69.8	74.9	78.9	81.0	79.9	77.3	63.6	56.2
15	52.4	54.7	60.4	64.2	69.8	75.0	79.4	81.7	79.9	77.5	63.2	56.1
16	52.5	54.9	60.3	64.9	70.2	74.5	80.1	81.4	79.2	77.2	62.8	55.9
17	52.6	55.3	60.3	65.0	69.9	74.8	79.6	81.3	79.1	76.5	62.4	55.9
18	52.7	55.5	60.5	65.0	69.8	75.9	80.5	81.1	79.2	75.7	61.8	55.7
19	53.0	55.6	60.6	64.8	69.9	76.8	79.9	81.8	78.8	75.1	61.4	55.8
20	53.1	55.6	60.6	65.0	69.9	76.6	80.0	82.1	78.6	74.8	60.9	55.7
21	52.9	56.5	60.6	65.5	70.4	76.2	79.8	81.4	78.8	74.7	60.6	55.6
22	52.9	57.2	60.5	65.7	71.6	76.1	79.8	81.3	78.8	74.7	60.3	55.6
23	53.0	57.8	60.3	65.9	71.3	76.2	80.5	81.0	79.0	74.6	59.9	55.6
24	53.0	57.9	60.7	66.1	70.4	76.2	81.5	80.3	79.2	74.2	59.7	55.5
25	53.1	57.9	61.6	66.4	70.5	76.1	81.9	80.9	79.2	73.8	59.5	55.4
26	53.2	57.7	61.4	66.3	71.1	76.3	80.6	81.7	79.0	73.7	59.4	55.4
27	53.6	57.5	61.5	68.3	71.5	77.5	80.4	82.3	78.7	73.4	59.4	55.2
28	53.9	58.1	61.4	68.3	71.8	76.4	80.2	82.1	78.8	72.6	59.3	55.1
29	54.2	58.6	61.2	68.2	72.0	77.2	80.3	81.9	78.1	71.8	58.8	55.1
30	54.6		61.6	68.4	72.4	77.5	80.7	81.5	78.3	71.5	58.5	55.0
31	54.8		62.2		71.9		81.1	81.4		70.8		55.0
Mean	53.5	55.6	60.2	64.8	70.2	75.0	79.9	81.3	80.1	76.1	63.2	56.4
Max	55.1	58.6	62.2	68.4	72.4	77.5	81.9	82.3	83.2	78.9	70.4	58.3
Min	52.4	53.9	57.6	62.4	68.2	72.0	78.0	80.0	78.1	70.8	58.5	55.0

Calendar Year Summary

Annual Mean 68.1 Daily Max 83.2 Daily Min 52.4

Maximum Water Temperature			Minimum Water Temperature		
Date	Time	Temp	Date	Time	Temp
Sep. 6	02:00	84.5	Jan. 15	11:00	52.3

Colorado River Below Parker Dam

Location—Latitude 34° 17.747', longitude -114° 08.406', 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.

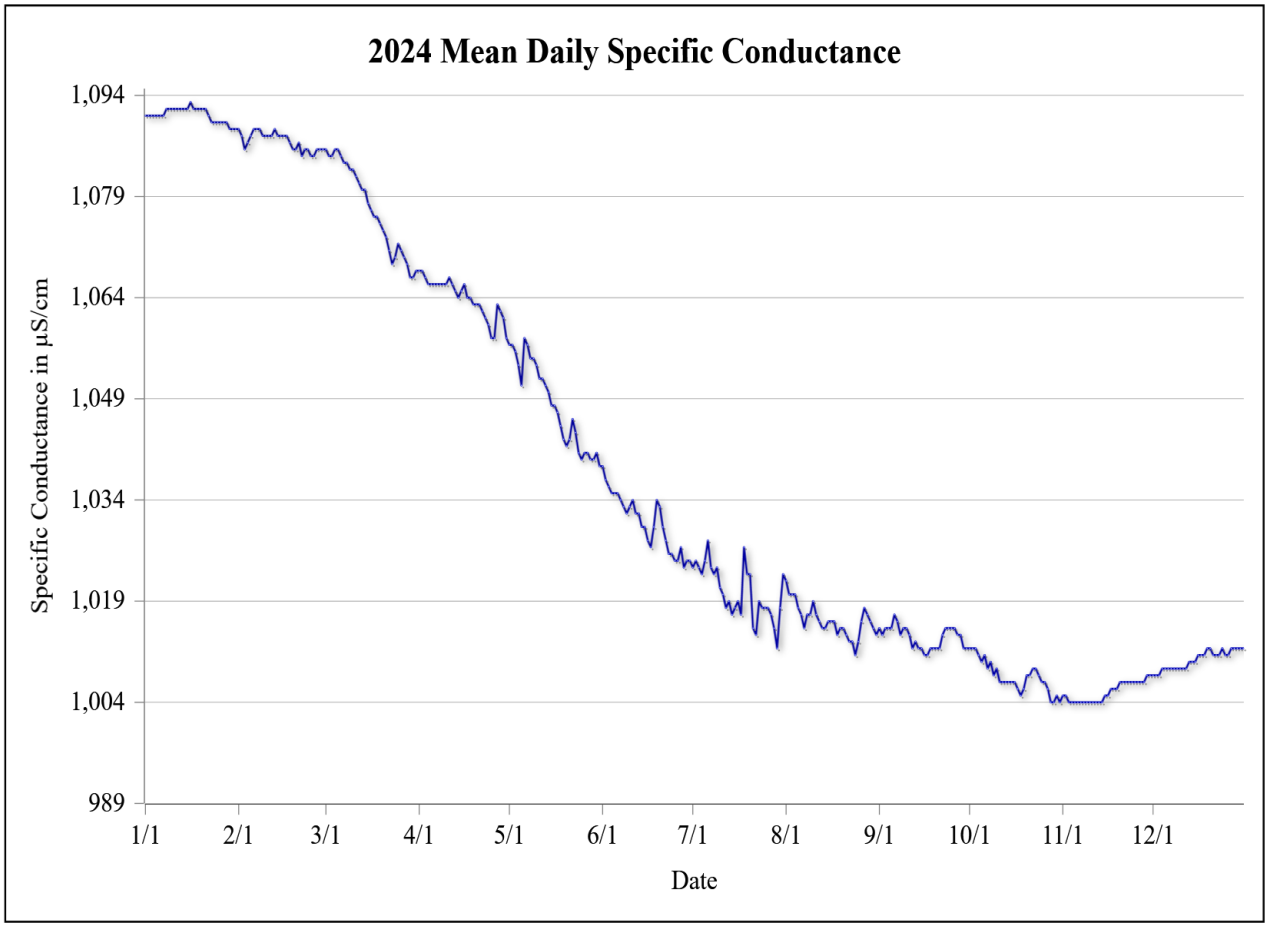
Drainage Area—180,800 mi².

Period of Record—January 1, 2024 to December 31, 2024.

Gage—A Sutron Xpert datalogger (Model 8080-0000-2B) records specific conductance measured with a YSI ProSwap submersible water quality monitor (Model 610152.30) and ProDSS conductivity and temperature sensor (Model 626902).

Extremes—Maximum daily specific conductance, 1,093 µS/cm, Jan. 16, 2024; minimum daily specific conductance, 1,004 µS/cm, Nov. 6, 2024; maximum hourly specific conductance, 1,094 µS/cm, Jan. 16, 2024 at 07:00; minimum hourly specific conductance, 998 µS/cm, Oct. 28, 2024 at 09:00.

Remarks—Record was reported for 8,716 of 8,784 hours or 99.2% of the time.



Colorado River Below Parker Dam

Mean daily specific conductance (sp cond), in µS/cm, Calendar Year 2024

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	1,091	1,089	1,086	1,068	1,057	1,039	1,024	1,022	1,015	1,012	1,005	1,008
2	1,091	1,088	1,085	1,068	1,057	1,037	1,025	1,020	1,014	1,012	1,005	1,008
3	1,091	1,086	1,085	1,067	1,056	1,036	1,024	1,020	1,015	1,012	1,004	1,008
4	1,091	1,087	1,086	1,066	1,054	1,035	1,023	1,020	1,015	1,011	1,004	1,009
5	1,091	1,088	1,086	1,066	1,051	1,035	1,025	1,018	1,015	1,010	1,004	1,009
6	1,091	1,089	1,085	1,066	1,058	1,035	1,028	1,017	1,017	1,011	1,004	1,009
7	1,091	1,089	1,084	1,066	1,057	1,034	1,024	1,015	1,016	1,009	1,004	1,009
8	1,092	1,089	1,084	1,066	1,055	1,033	1,023	1,017	1,014	1,010	1,004	1,009
9	1,092	1,088	1,083	1,066	1,055	1,032	1,024	1,017	1,015	1,008	1,004	1,009
10	1,092	1,088	1,083	1,066	1,054	1,033	1,021	1,019	1,015	1,009	1,004	1,009
11	1,092	1,088	1,082	1,067	1,052	1,034	1,020	1,017	1,014	1,007	1,004	1,009
12	1,092	1,088	1,081	1,066	1,052	1,032	1,018	1,016	1,012	1,007	1,004	1,009
13	1,092	1,089	1,080	1,065	1,051	1,032	1,019	1,015	1,013	1,007	1,004	1,010
14	1,092	1,088	1,080	1,064	1,050	1,030	1,017	1,015	1,012	1,007	1,004	1,010
15	1,092	1,088	1,078	1,065	1,048	1,030	1,018	1,016	1,012	1,007	1,005	1,010
16	1,093	1,088	1,077	1,066	1,048	1,028	1,019	1,016	1,011	1,007	1,005	1,011
17	1,092	1,088	1,076	1,064	1,047	1,027	1,017	1,016	1,011	1,006	1,006	1,011
18	1,092	1,087	1,076	1,064	1,045	1,030	1,027	1,014	1,012	1,005	1,006	1,011
19	1,092	1,086	1,075	1,063	1,043	1,034	1,023	1,015	1,012	1,006	1,006	1,012
20	1,092	1,086	1,074	1,063	1,042	1,033	1,023	1,015	1,012	1,008	1,007	1,012
21	1,092	1,087	1,073	1,063	1,043	1,030	1,015	1,014	1,012	1,008	1,007	1,011
22	1,091	1,085	1,071	1,062	1,046	1,028	1,014	1,013	1,014	1,009	1,007	1,011
23	1,090	1,086	1,069	1,061	1,044	1,026	1,019	1,013	1,015	1,009	1,007	1,011
24	1,090	1,086	1,070	1,060	1,041	1,026	1,018	1,011	1,015	1,008	1,007	1,012
25	1,090	1,085	1,072	1,058	1,040	1,025	1,018	1,013	1,015	1,007	1,007	1,011
26	1,090	1,085	1,071	1,058	1,041	1,025	1,018	1,016	1,015	1,007	1,007	1,011
27	1,090	1,086	1,070	1,063	1,041	1,027	1,017	1,018	1,014	1,006	1,007	1,012
28	1,090	1,086	1,069	1,062	1,040	1,024	1,015	1,017	1,014	1,004	1,007	1,012
29	1,089	1,086	1,067	1,061	1,040	1,025	1,012	1,016	1,012	1,004	1,008	1,012
30	1,089		1,067	1,058	1,041	1,025	1,018	1,015	1,012	1,005	1,008	1,012
31	1,089		1,068		1,039		1,023	1,014		1,004		1,012
Mean	1,091	1,087	1,077	1,064	1,048	1,031	1,020	1,016	1,014	1,008	1,006	1,010
Max	1,093	1,089	1,086	1,068	1,058	1,039	1,028	1,022	1,017	1,012	1,008	1,012
Min	1,089	1,085	1,067	1,058	1,039	1,024	1,012	1,011	1,011	1,004	1,004	1,008

Calendar Year Summary

Annual Mean 1,039 Daily Max 1,093 Daily Min 1,004

Maximum Specific Conductance

Date	Time	Sp Cond
Jan. 16	07:00	1,094

Minimum Specific Conductance

Date	Time	Sp Cond
Oct. 28	09:00	998

Colorado River Below Parker Dam

Location—Latitude 34° 17.747', longitude -114° 08.406', 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.

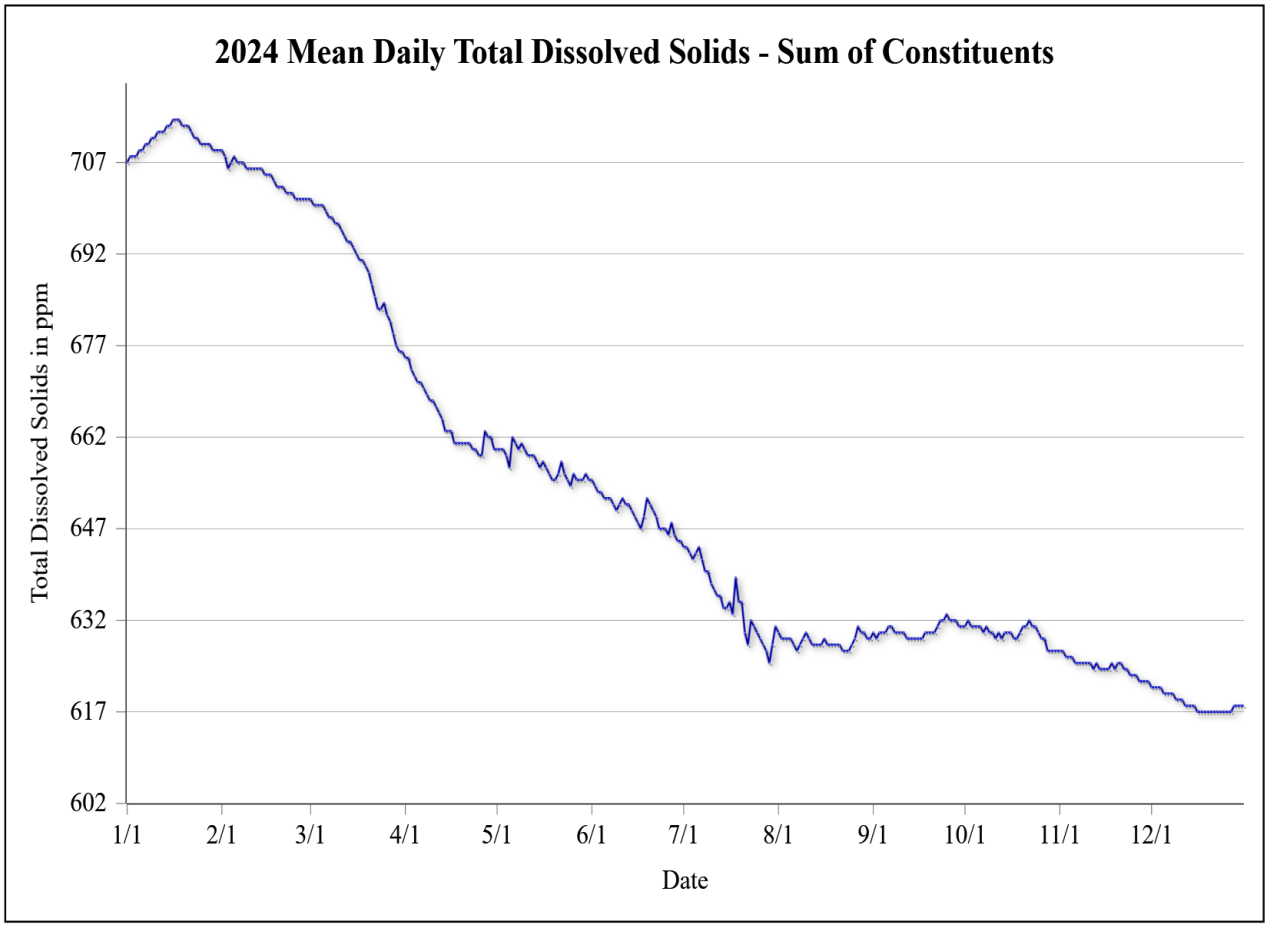
Drainage Area—180,800 mi².

Period of Record—January 1, 2024 to December 31, 2024.

Gage—A Sutron Xpert datalogger (Model 8080-0000-2B) records specific conductance measured with a YSI ProSwap submersible water quality monitor (Model 610152.30) and ProDSS conductivity and temperature sensor (Model 626902). Total Dissolved Solid (TDS) concentrations are presented in parts per million (ppm) and were calculated using the Sum of Constituents (SOC) method.

Extremes—Maximum daily TDS, 714 ppm, Jan. 16, 2024; minimum daily TDS, 617 ppm, Dec. 17, 2024; maximum hourly TDS, 714 ppm, Jan. 16, 2024 at 07:00; minimum hourly TDS, 617 ppm, Dec. 18, 2024 at 09:00.

Remarks—Record was reported for 8,716 of 8,784 hours or 99.2% of the time. TDS results are based on monthly water quality samples, excluding fluoride and nitrate.



Colorado River Below Parker Dam

Mean daily total dissolved solids (TDS) - sum of constituents, in parts per million, Calendar Year 2024

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	707	709	701	675	660	655	644	630	630	631	627	621
2	708	708	700	675	660	654	644	629	629	632	627	621
3	708	706	700	673	660	653	643	629	630	631	626	621
4	708	707	700	672	659	653	642	629	630	631	626	621
5	709	708	700	671	657	652	643	629	630	631	626	620
6	709	707	699	671	662	652	644	628	631	631	625	620
7	710	707	698	670	661	652	642	627	631	630	625	620
8	710	707	698	669	660	651	640	628	630	631	625	620
9	711	706	697	668	661	650	640	629	630	630	625	619
10	711	706	697	668	660	651	638	630	630	630	625	619
11	712	706	696	667	659	652	637	629	630	629	625	619
12	712	706	695	666	659	651	636	628	629	630	624	618
13	712	706	694	665	659	651	636	628	629	629	625	618
14	713	706	694	663	658	650	634	628	629	630	624	618
15	713	705	693	663	657	649	634	628	629	630	624	618
16	714	705	692	663	658	648	635	629	629	630	624	617
17	714	705	691	661	657	647	633	628	629	629	624	617
18	714	704	691	661	656	649	639	628	630	629	625	617
19	713	703	690	661	655	652	635	628	630	630	624	617
20	713	703	689	661	655	651	635	628	630	631	625	617
21	713	703	687	661	656	650	630	628	630	631	625	617
22	712	702	685	661	658	649	628	627	631	632	624	617
23	711	702	683	660	656	647	632	627	632	631	624	617
24	711	702	683	660	655	647	631	627	632	631	623	617
25	710	701	684	659	654	647	630	628	633	630	623	617
26	710	701	682	659	656	646	629	629	632	629	623	617
27	710	701	681	663	655	648	628	631	632	629	622	617
28	710	701	679	662	655	646	627	630	632	627	622	618
29	709	701	677	662	655	645	625	630	631	627	622	618
30	709		676	660	656	645	628	629	631	627	622	618
31	709		676		655		631	629		627		618
Mean	711	705	691	665	657	650	635	629	630	630	624	618
Max	714	709	701	675	662	655	644	631	633	632	627	621
Min	707	701	676	659	654	645	625	627	629	627	622	617

Calendar Year Summary

Annual Mean 654 Daily Max 714 Daily Min 617

Maximum Total Dissolved Solids			Minimum Total Dissolved Solids		
Date	Time	TDS	Date	Time	TDS
Jan. 16	07:00	714	Dec. 18	09:00	617

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.

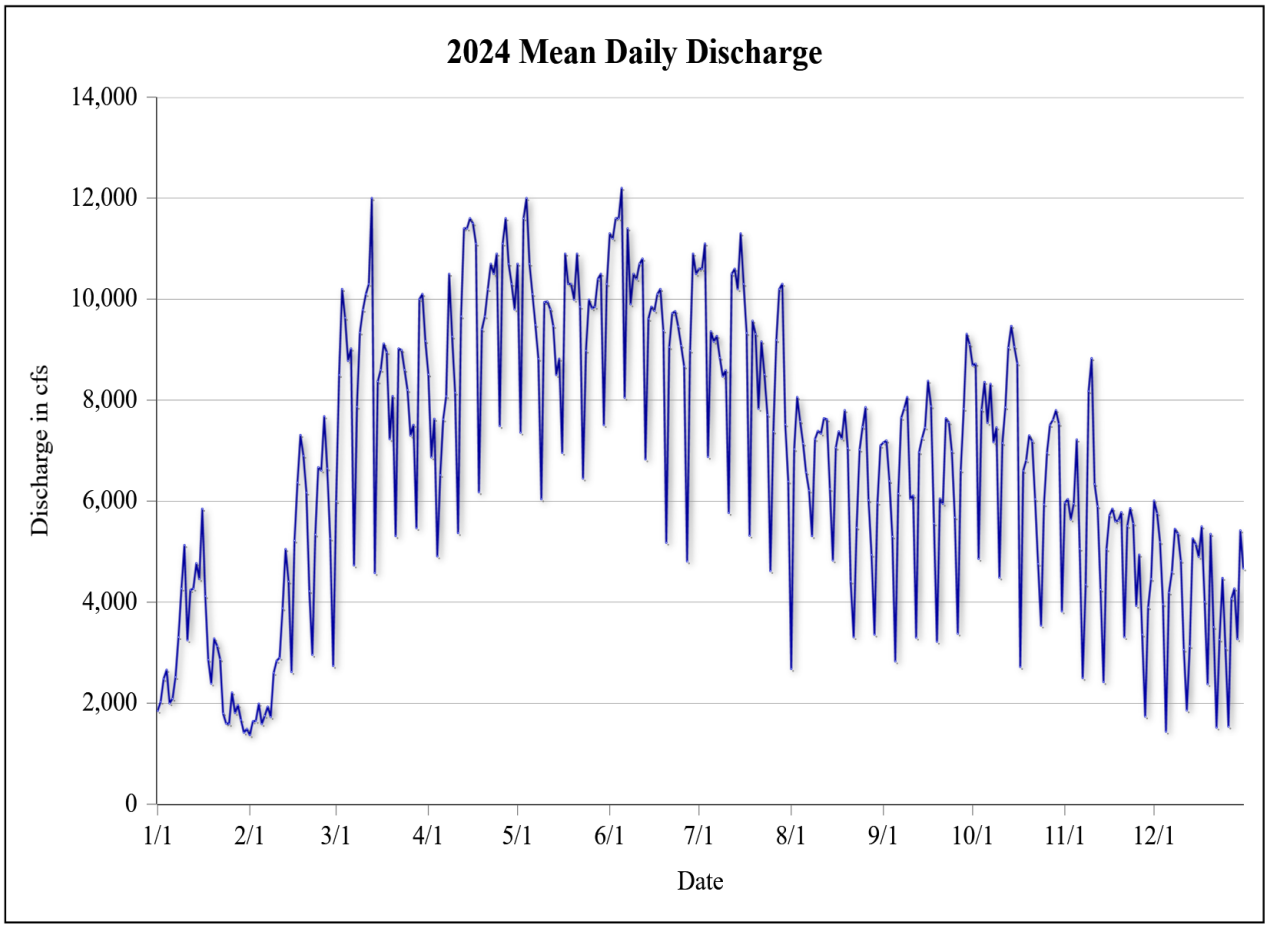
Period of Record—January 1, 2005 to current year.

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, 2019 at 07:00.

Remarks—None.



Colorado River at Parker Gage

Mean daily discharge, in cubic-feet per second, Calendar Year 2024

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	1,850	1,370	6,000	8,510	10,700	11,300	10,600	2,680	7,160	8,690	5,970	6,010
2	2,030	1,640	8,500	6,870	7,360	11,200	10,600	7,030	7,200	8,720	6,040	5,760
3	2,480	1,650	10,200	7,630	11,600	11,600	11,100	8,060	6,400	4,860	5,640	5,190
4	2,660	1,990	9,630	4,910	12,000	11,600	6,880	7,580	5,300	7,810	5,950	3,960
5	2,000	1,590	8,780	6,520	10,700	12,200	9,360	7,140	2,830	8,360	7,220	1,440
6	2,090	1,750	9,020	7,620	10,100	8,050	9,160	6,570	6,150	7,550	5,060	4,190
7	2,520	1,930	4,730	8,080	9,490	11,400	9,270	6,210	7,650	8,320	2,500	4,600
8	3,310	1,730	7,870	10,500	8,820	9,900	8,840	5,310	7,840	7,170	4,350	5,450
9	4,270	2,600	9,340	9,260	6,040	10,500	8,470	7,230	8,060	7,460	8,180	5,360
10	5,130	2,840	9,790	8,150	9,940	10,400	8,590	7,390	6,050	4,490	8,830	4,820
11	3,250	2,900	10,100	5,370	9,950	10,700	5,770	7,340	6,110	7,150	6,340	3,060
12	4,240	3,880	10,300	9,660	9,800	10,800	10,500	7,640	3,300	7,860	5,900	1,860
13	4,270	5,050	12,000	11,400	9,470	6,830	10,600	7,620	6,970	9,040	4,250	3,130
14	4,770	4,410	4,580	11,400	8,500	9,610	10,200	6,240	7,250	9,470	2,420	5,260
15	4,460	2,620	8,370	11,600	8,820	9,850	11,300	4,830	7,460	9,060	5,050	5,150
16	5,850	5,220	8,600	11,500	6,960	9,770	10,300	7,060	8,380	8,730	5,720	4,900
17	4,120	6,370	9,120	11,100	10,900	10,100	9,330	7,380	7,880	2,720	5,850	5,500
18	2,860	7,310	8,950	6,180	10,300	10,200	5,320	7,240	5,560	6,600	5,600	4,010
19	2,390	6,900	7,230	9,400	10,300	9,380	9,570	7,800	3,220	6,810	5,620	2,380
20	3,280	6,170	8,080	9,660	9,990	5,180	9,310	7,050	6,050	7,300	5,780	5,350
21	3,130	4,220	5,310	10,200	10,900	9,050	7,830	4,410	5,950	7,190	3,310	3,510
22	2,870	2,960	9,020	10,700	9,850	9,720	9,160	3,310	7,640	6,040	5,510	1,520
23	1,800	5,340	8,990	10,500	6,450	9,760	8,510	5,480	7,560	4,760	5,860	3,260
24	1,600	6,670	8,600	10,900	8,980	9,460	7,710	7,020	6,990	3,540	5,560	4,480
25	1,590	6,610	8,200	7,490	9,990	9,080	4,620	7,470	5,680	5,940	3,930	3,090
26	2,210	7,680	7,300	11,100	9,820	8,670	7,380	7,860	3,380	6,960	4,940	1,540
27	1,810	6,650	7,510	11,600	9,850	4,810	9,190	6,020	6,610	7,510	3,360	4,070
28	1,960	5,260	5,470	10,700	10,400	8,980	10,200	4,940	7,830	7,610	1,740	4,270
29	1,670	2,740	10,000	10,300	10,500	10,900	10,300	3,360	9,310	7,800	3,900	3,270
30	1,420		10,100	9,800	7,510	10,500	7,520	5,970	9,100	7,530	4,460	5,420
31	1,490		9,170		10,300		6,390	7,100		3,820		4,670
Total	89,387	118,017	260,976	278,547	296,164	291,486	273,867	198,362	196,890	216,877	154,844	126,467
Mean	2,883	4,070	8,419	9,285	9,554	9,716	8,834	6,399	6,563	6,996	5,161	4,080
Max	5,850	7,680	12,000	11,600	12,000	12,200	11,300	8,060	9,310	9,470	8,830	6,010
Min	1,420	1,370	4,580	4,910	6,040	4,810	4,620	2,680	2,830	2,720	1,740	1,440
Ac-ft	177,297	234,084	517,639	552,489	587,433	578,154	543,207	393,446	390,526	430,168	307,128	250,844

Calendar Year Summary

Annual Total 2,501,883 Annual Mean 6,836 Daily Max 12,200 Daily Min 1,370 Annual Ac-ft 4,962,413

Maximum Discharge				Minimum Discharge			
Date	Time	Elev	Discharge	Date	Time	Elev	Discharge
May 4	07:00	345.81	19,381	Dec. 18	13:00	339.22	341

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.

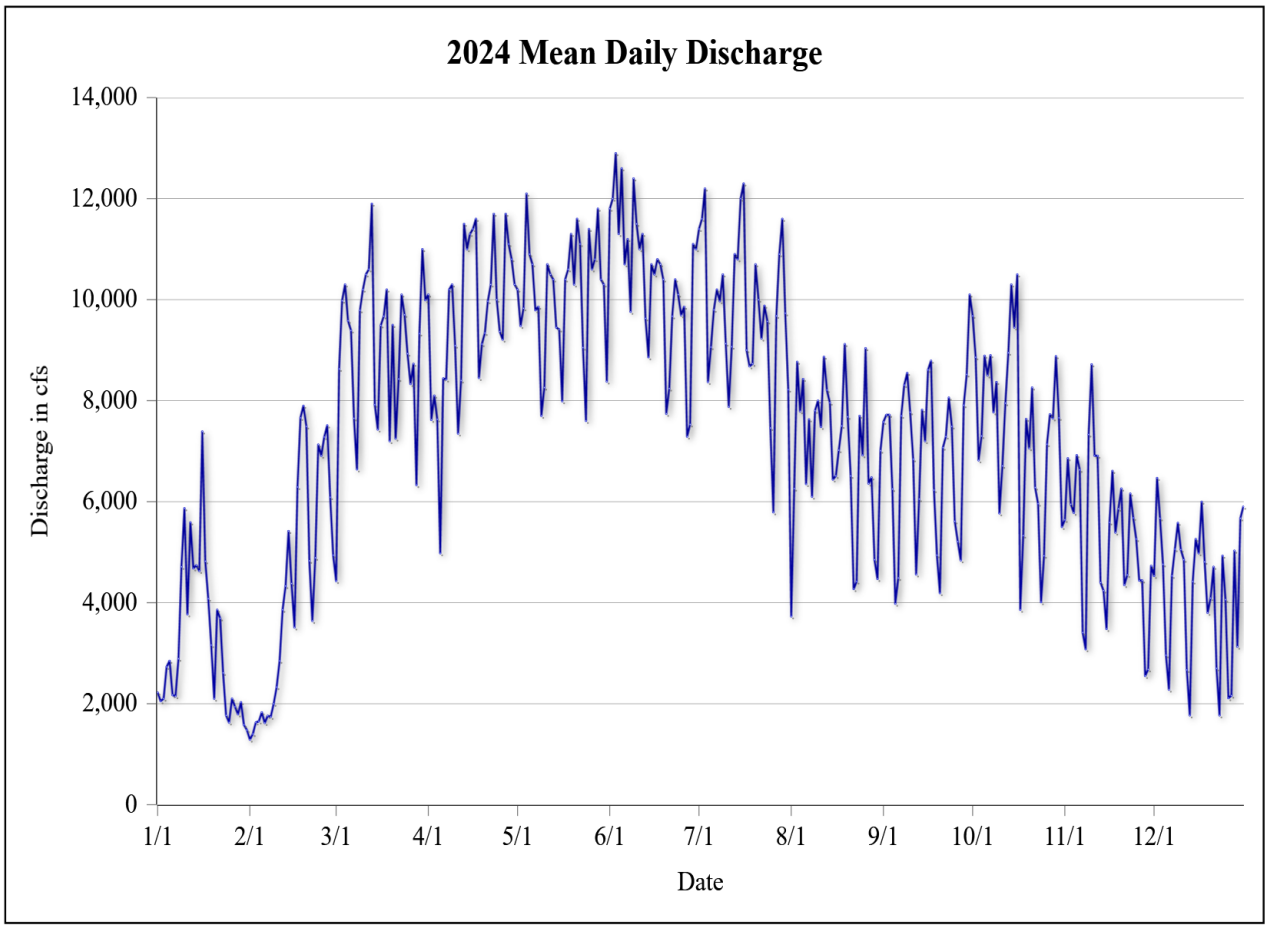
Period of Record—January 1, 2005 to current year.

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, 1,290 cfs, Feb. 1, 2024; maximum hourly discharge, 20,402 cfs, Apr. 22, 2015 at 03:00; minimum hourly discharge, 915 cfs, Dec. 29, 2024 at 23:00.

Datum—National Geodetic Vertical Datum of 1929.

Remarks—The stage record is considered good. The discharge record is considered fair due to unstable stream conditions during the record period.



Colorado River at Water Wheel

Mean daily discharge, in cubic-feet per second, Calendar Year 2024

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	2,220	1,290	4,430	10,100	10,200	11,800	11,400	3,730	7,580	9,680	5,640	4,530
2	2,050	1,400	8,630	7,620	9,480	12,000	11,600	6,260	7,720	8,860	6,860	6,470
3	2,100	1,630	9,980	8,100	9,830	12,900	12,200	8,770	7,720	6,820	5,950	5,670
4	2,730	1,650	10,300	7,630	12,100	11,300	8,370	7,790	6,250	7,300	5,780	4,760
5	2,850	1,830	9,580	4,980	10,900	12,600	9,060	8,430	3,980	8,890	6,920	2,960
6	2,170	1,620	9,390	8,440	10,700	10,700	9,800	6,350	4,490	8,500	6,630	2,280
7	2,150	1,760	7,650	8,420	9,790	11,200	10,200	7,630	7,700	8,900	3,410	4,530
8	2,890	1,740	6,640	10,200	9,860	9,760	9,970	6,100	8,310	7,770	3,080	5,060
9	4,710	2,000	9,790	10,300	7,700	12,400	10,500	7,800	8,550	8,370	7,330	5,580
10	5,870	2,330	10,200	9,090	8,260	11,500	9,130	8,000	7,770	5,770	8,720	5,050
11	3,770	2,850	10,500	7,350	10,700	11,000	7,880	7,480	6,840	6,710	6,910	4,850
12	5,590	3,860	10,600	8,400	10,500	11,300	9,070	8,870	4,560	7,950	6,910	2,670
13	4,680	4,330	11,900	11,500	10,400	9,630	10,900	8,210	6,050	8,950	4,400	1,770
14	4,740	5,420	7,920	11,000	9,450	8,860	10,800	7,960	7,820	10,300	4,240	4,420
15	4,630	4,380	7,430	11,300	9,410	10,700	12,000	6,440	7,200	9,450	3,480	5,260
16	7,390	3,510	9,490	11,400	7,990	10,500	12,300	6,510	8,610	10,500	5,590	4,980
17	4,820	6,290	9,670	11,600	10,400	10,800	9,000	7,020	8,790	3,860	6,610	6,000
18	4,080	7,660	10,200	8,450	10,600	10,700	8,680	7,500	6,230	5,330	5,390	4,810
19	3,160	7,900	7,200	9,120	11,300	10,400	8,730	9,120	4,940	7,640	5,860	3,800
20	2,100	7,490	9,500	9,340	10,300	7,740	10,700	7,680	4,190	7,060	6,260	4,090
21	3,860	4,830	7,250	9,970	11,600	8,240	10,000	6,510	7,070	8,260	4,350	4,710
22	3,690	3,640	8,430	10,300	11,100	9,670	9,230	4,270	7,290	6,280	4,550	2,700
23	2,610	4,890	10,100	11,700	9,050	10,400	9,880	4,420	8,060	5,960	6,160	1,770
24	1,770	7,130	9,700	10,000	7,600	10,100	9,570	7,700	7,490	4,010	5,680	4,930
25	1,630	6,910	8,930	9,370	11,400	9,690	7,460	6,920	5,610	4,930	5,260	4,060
26	2,100	7,280	8,330	9,210	10,600	9,860	5,790	9,040	5,210	7,140	4,440	2,110
27	1,940	7,510	8,730	11,700	10,800	7,290	9,680	6,360	4,840	7,730	4,440	2,160
28	1,790	6,090	6,330	11,100	11,800	7,530	10,900	6,480	7,910	7,650	2,550	5,030
29	2,030	4,940	9,330	10,800	10,400	11,100	11,600	4,850	8,520	8,880	2,680	3,130
30	1,580		11,000	10,300	10,300	11,000	9,730	4,470	10,100	7,660	4,730	5,670
31	1,480		9,990		8,380		8,220	7,010		5,500		5,900
Total	99,178	124,177	279,149	288,797	312,781	312,729	304,250	215,679	207,402	232,614	160,805	131,726
Mean	3,199	4,282	9,005	9,627	10,090	10,420	9,815	6,957	6,913	7,504	5,360	4,249
Max	7,390	7,900	11,900	11,700	12,100	12,900	12,300	9,120	10,100	10,500	8,720	6,470
Min	1,480	1,290	4,430	4,980	7,600	7,290	5,790	3,730	3,980	3,860	2,550	1,770
Ac-ft	196,717	246,302	553,683	572,821	620,392	620,289	603,470	427,793	411,376	461,383	318,953	261,274

Calendar Year Summary

Annual Total 2,669,287 Annual Mean 7,293 Daily Max 12,900 Daily Min 1,290 Annual Ac-ft 5,294,453

Maximum Discharge				Minimum Discharge			
Date	Time	Elev	Discharge	Date	Time	Elev	Discharge
Jun. 5	13:00	305.17	17,029	Dec. 29	23:00	296.50	915

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.

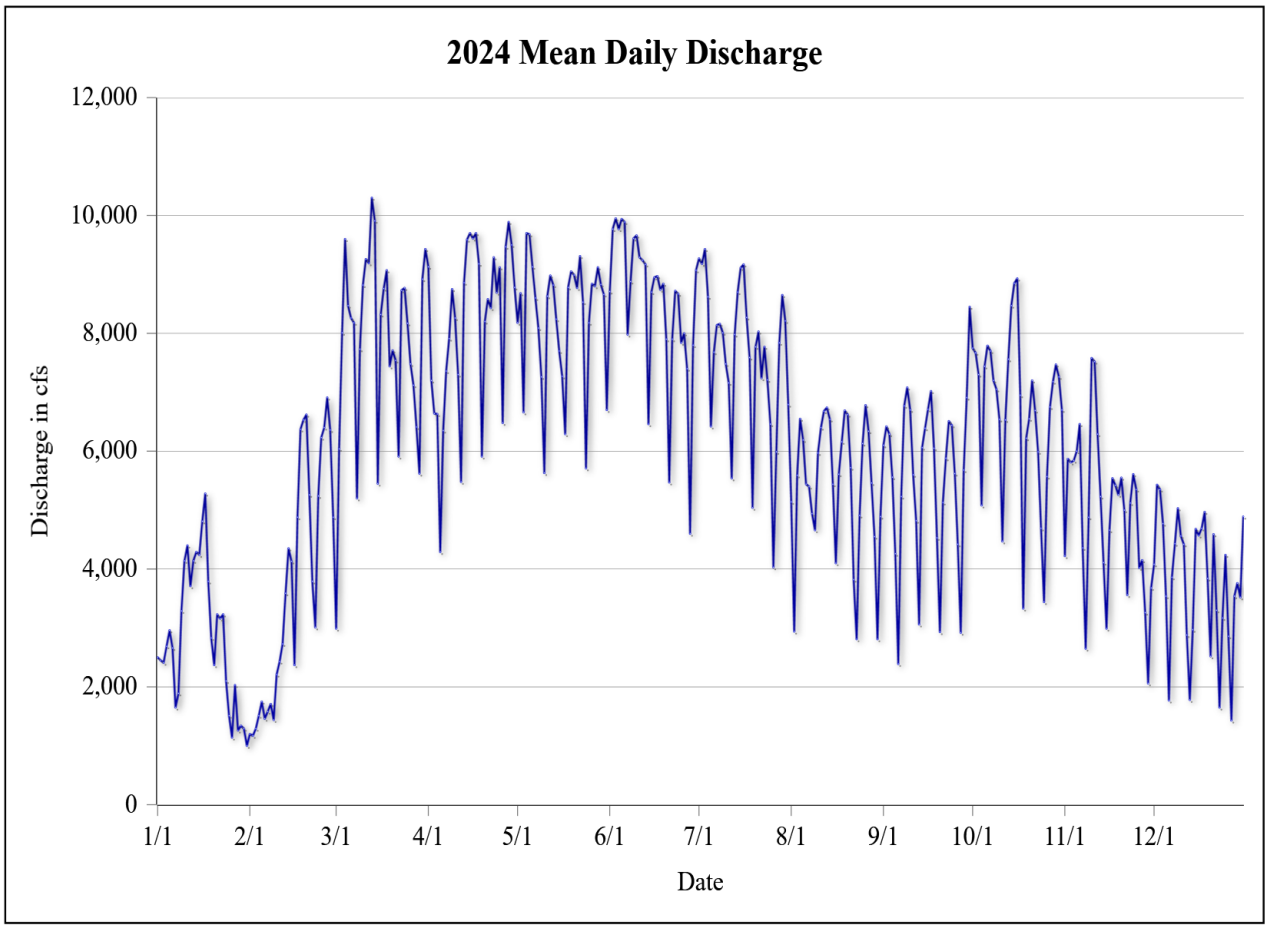
Period of Record—January 1, 2011 to current year.

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, 1,000 cfs, Jan. 31, 2024; maximum hourly discharge, 17,541 cfs, Mar. 27, 2014 at 07:00; minimum hourly discharge, 916 cfs, Dec. 23, 2013 at 19:00.

Remarks—During January and February, there were six short duration periods where the elevation dropped below the bottom of the stilling well, rendering the sensors inaccurate. Discharge values were estimated for these periods and are rated poor.



Colorado River Below Interstate Bridge

Mean daily discharge, in cubic-feet per second, Calendar Year 2024

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	2,500	**1,200**	2,990	9,130	8,180	8,710	9,270	5,140	6,100	7,750	4,220	4,080
2	2,450	**1,170**	6,040	7,200	8,680	9,770	9,180	2,940	6,420	7,670	5,870	5,430
3	2,410	**1,290**	8,010	6,640	6,660	9,950	9,430	5,590	6,290	7,300	5,810	5,350
4	2,690	1,510	9,600	6,630	9,700	9,770	8,620	6,550	5,560	5,080	5,840	4,770
5	2,960	1,750	8,470	4,290	9,680	9,940	6,420	6,190	4,260	7,440	6,000	3,540
6	2,660	1,460	8,260	6,350	9,130	9,890	7,680	5,440	2,390	7,790	6,460	1,770
7	**1,650**	1,580	8,180	7,360	8,600	7,980	8,140	5,400	5,230	7,700	4,360	3,860
8	**1,890**	1,710	5,200	7,910	8,090	8,880	8,160	4,940	6,770	7,200	2,650	4,430
9	3,290	1,440	7,730	8,750	7,260	9,610	8,010	4,660	7,080	7,050	4,880	5,030
10	4,140	2,210	8,820	8,260	5,630	9,660	7,480	5,970	6,700	6,540	7,580	4,560
11	4,400	2,430	9,260	7,300	8,630	9,290	7,160	6,400	5,600	4,470	7,520	4,420
12	3,710	2,730	9,190	5,480	8,980	9,240	5,540	6,680	4,820	6,530	6,290	2,880
13	4,140	3,590	10,300	8,860	8,820	9,170	7,980	6,740	3,060	7,560	5,230	1,780
14	4,290	4,350	9,910	9,590	8,240	6,460	8,700	6,540	6,060	8,470	4,110	2,970
15	4,240	4,130	5,450	9,700	7,700	8,700	9,110	5,440	6,390	8,850	2,990	4,680
16	4,810	2,370	8,320	9,610	7,270	8,950	9,170	4,100	6,710	8,930	4,660	4,570
17	5,280	4,880	8,760	9,700	6,290	8,970	8,270	5,610	7,020	6,950	5,540	4,690
18	3,790	6,370	9,070	9,180	8,780	8,740	7,590	6,160	6,050	3,330	5,420	4,970
19	2,830	6,530	7,440	5,910	9,050	8,840	5,040	6,690	4,530	6,220	5,260	3,840
20	2,370	6,620	7,710	8,200	8,990	7,900	7,770	6,620	2,930	6,550	5,550	2,520
21	3,230	5,260	7,540	8,580	8,770	5,470	8,030	5,720	5,130	7,200	5,000	4,590
22	3,160	3,790	5,910	8,430	9,310	7,900	7,240	3,820	5,880	6,690	3,560	3,300
23	3,230	3,010	8,730	9,290	8,530	8,720	7,770	2,810	6,510	5,990	5,120	1,650
24	2,100	5,240	8,770	8,690	5,710	8,670	7,210	4,910	6,440	4,690	5,610	3,170
25	**1,510**	6,230	8,170	9,120	8,180	7,840	6,460	6,130	5,620	3,440	5,350	4,240
26	**1,140**	6,400	7,480	6,480	8,840	8,000	4,030	6,780	4,420	5,570	4,020	2,860
27	**2,030**	6,910	7,120	9,470	8,800	7,400	5,990	6,340	2,920	6,750	4,150	1,430
28	**1,260**	6,360	6,410	9,890	9,120	4,600	7,840	5,460	5,680	7,180	3,260	3,540
29	**1,340**	4,880	5,620	9,500	8,830	7,800	8,650	4,550	6,910	7,470	2,060	3,760
30	**1,290**		8,920	8,780	8,660	9,070	8,210	2,810	8,450	7,260	3,680	3,520
31	**1,000**		9,430		6,700		6,790	4,890		6,700		4,890
Total	87,814	107,379	242,842	244,272	255,794	255,884	236,944	167,998	167,932	208,326	148,066	117,085
Mean	2,833	3,703	7,834	8,142	8,251	8,529	7,643	5,419	5,598	6,720	4,936	3,777
Max	5,280	6,910	10,300	9,890	9,700	9,950	9,430	6,780	8,450	8,930	7,580	5,430
Min	1,000	1,170	2,990	4,290	5,630	4,600	4,030	2,810	2,390	3,330	2,060	1,430
Ac-ft	174,176	212,982	481,670	484,507	507,361	507,538	469,971	333,219	333,088	413,209	293,684	232,235

Calendar Year Summary (Estimated values are excluded from all min and max statistics)

Annual Total 2,240,335 Annual Mean 6,121 Daily Max 10,300 Daily Min 1,430 Annual Ac-ft 4,443,639

Maximum Discharge (Excludes Estimates)				Minimum Discharge (Excludes Estimates)			
Date	Time	Elev	Discharge	Date	Time	Elev	Discharge
Mar. 13	23:00	250.82	12,549	Feb. 6	15:00	243.95	1,196

Bold values indicate the daily value was derived from hourly data that contains one or more 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.

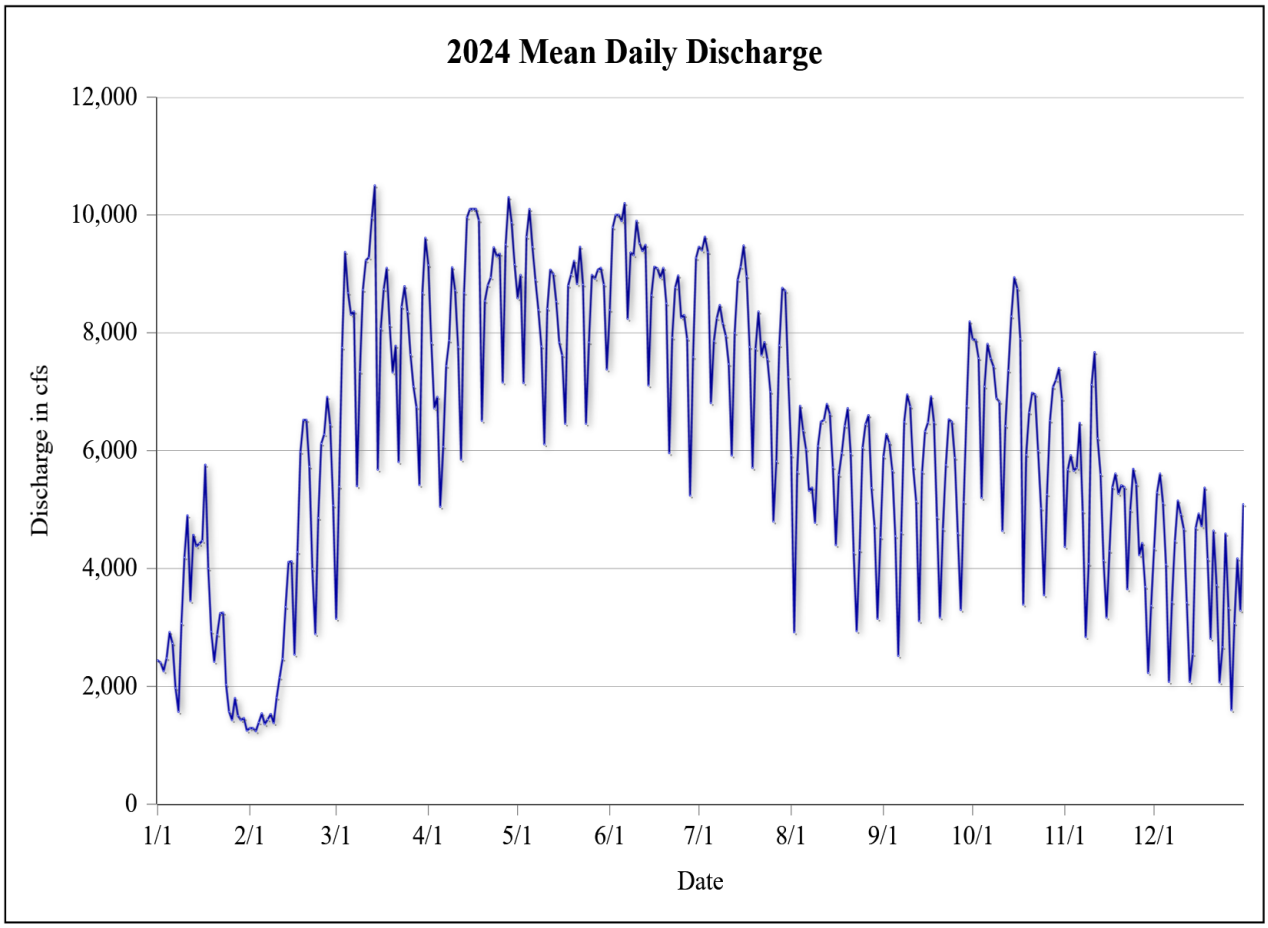
Period of Record—January 1, 2011 to current year.

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, 1,240 cfs, Feb. 3, 2024; maximum hourly discharge, 17,801 cfs, Mar. 27, 2014 at 10:00; minimum hourly discharge, 506 cfs, Jan. 8, 2024 at 08:00.

Remarks—None.



Colorado River Below McIntyre Park

Mean daily discharge, in cubic-feet per second, Calendar Year 2024

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	2,440	1,290	3,150	9,150	8,590	8,390	9,460	5,920	5,900	7,890	4,370	4,340
2	2,400	1,290	5,390	7,830	8,980	9,790	9,400	2,920	6,280	7,880	5,680	5,290
3	2,260	1,240	7,750	6,720	7,150	10,000	9,630	5,640	6,130	7,570	5,920	5,610
4	2,480	1,390	9,370	6,910	9,630	10,000	9,370	6,760	5,660	5,200	5,660	5,110
5	2,920	1,540	8,680	5,050	10,100	9,900	6,810	6,340	4,550	7,090	5,710	4,070
6	2,730	1,360	8,310	6,070	9,460	10,200	7,860	6,020	2,520	7,810	6,470	2,080
7	1,970	1,440	8,360	7,440	8,900	8,240	8,250	5,320	4,610	7,570	4,970	3,430
8	1,570	1,530	5,400	7,870	8,390	9,360	8,470	5,370	6,490	7,430	2,840	4,470
9	3,070	1,380	7,340	9,110	7,770	9,320	8,160	4,780	6,950	6,890	4,080	5,150
10	4,190	1,810	8,730	8,720	6,110	9,900	7,950	6,080	6,750	6,830	7,120	4,920
11	4,900	2,150	9,230	7,760	8,410	9,520	7,470	6,490	5,720	4,640	7,670	4,670
12	3,450	2,470	9,280	5,850	9,070	9,390	5,920	6,520	5,140	6,420	6,210	3,420
13	4,570	3,350	9,950	8,680	9,000	9,490	8,000	6,790	3,110	7,360	5,600	2,080
14	4,380	4,110	10,500	9,960	8,530	7,110	8,900	6,620	5,640	8,280	4,140	2,550
15	4,420	4,120	5,680	10,100	7,840	8,640	9,120	5,720	6,330	8,940	3,170	4,690
16	4,470	2,540	8,070	10,100	7,620	9,120	9,480	4,400	6,480	8,750	4,300	4,930
17	5,760	4,280	8,740	10,100	6,460	9,090	8,960	5,590	6,920	7,900	5,380	4,720
18	4,000	5,980	9,100	9,910	8,800	8,940	7,760	5,960	6,480	3,390	5,610	5,370
19	2,930	6,520	8,130	6,510	8,990	9,100	5,710	6,420	4,870	5,930	5,270	4,160
20	2,420	6,520	7,330	8,540	9,220	8,500	7,730	6,720	3,170	6,650	5,410	2,810
21	2,880	5,730	7,780	8,810	8,830	5,960	8,360	5,950	4,670	6,980	5,380	4,640
22	3,240	3,990	5,810	8,940	9,460	7,920	7,620	4,270	5,760	6,950	3,650	3,720
23	3,250	2,890	8,440	9,450	8,820	8,770	7,840	2,940	6,530	6,000	4,990	2,070
24	2,030	4,860	8,790	9,300	6,460	8,970	7,550	4,310	6,490	5,020	5,690	2,670
25	1,570	6,120	8,360	9,340	7,840	8,260	7,000	6,050	5,880	3,550	5,430	4,590
26	1,430	6,280	7,630	7,160	8,980	8,300	4,800	6,450	4,600	5,260	4,230	3,330
27	1,800	6,910	7,090	9,500	8,920	7,900	5,820	6,600	3,300	6,510	4,430	1,600
28	1,500	6,440	6,740	10,300	9,070	5,240	7,790	5,370	5,130	7,080	3,690	3,070
29	1,430	5,070	5,420	9,870	9,100	7,590	8,760	4,720	6,760	7,200	2,230	4,170
30	1,460		8,680	9,160	8,820	9,270	8,710	3,150	8,190	7,400	3,370	3,290
31	1,250		9,610		7,380		7,250	4,530		6,880		5,090
Total	89,171	104,596	242,826	254,210	262,689	262,256	245,887	170,725	167,032	209,259	148,635	122,114
Mean	2,876	3,607	7,833	8,474	8,474	8,742	7,932	5,507	5,568	6,750	4,954	3,939
Max	5,760	6,910	10,500	10,300	10,100	10,200	9,630	6,790	8,190	8,940	7,670	5,610
Min	1,250	1,240	3,150	5,050	6,110	5,240	4,800	2,920	2,520	3,390	2,230	1,600
Ac-ft	176,869	207,464	481,638	504,218	521,036	520,176	487,710	338,628	331,303	415,059	294,813	242,210

Calendar Year Summary

Annual Total 2,279,399 Annual Mean 6,228 Daily Max 10,500 Daily Min 1,240 Annual Ac-ft 4,521,123

Maximum Discharge				Minimum Discharge			
Date	Time	Elev	Discharge	Date	Time	Elev	Discharge
Mar. 14	02:00	241.77	12,336	Jan. 8	08:00	233.97	506

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.

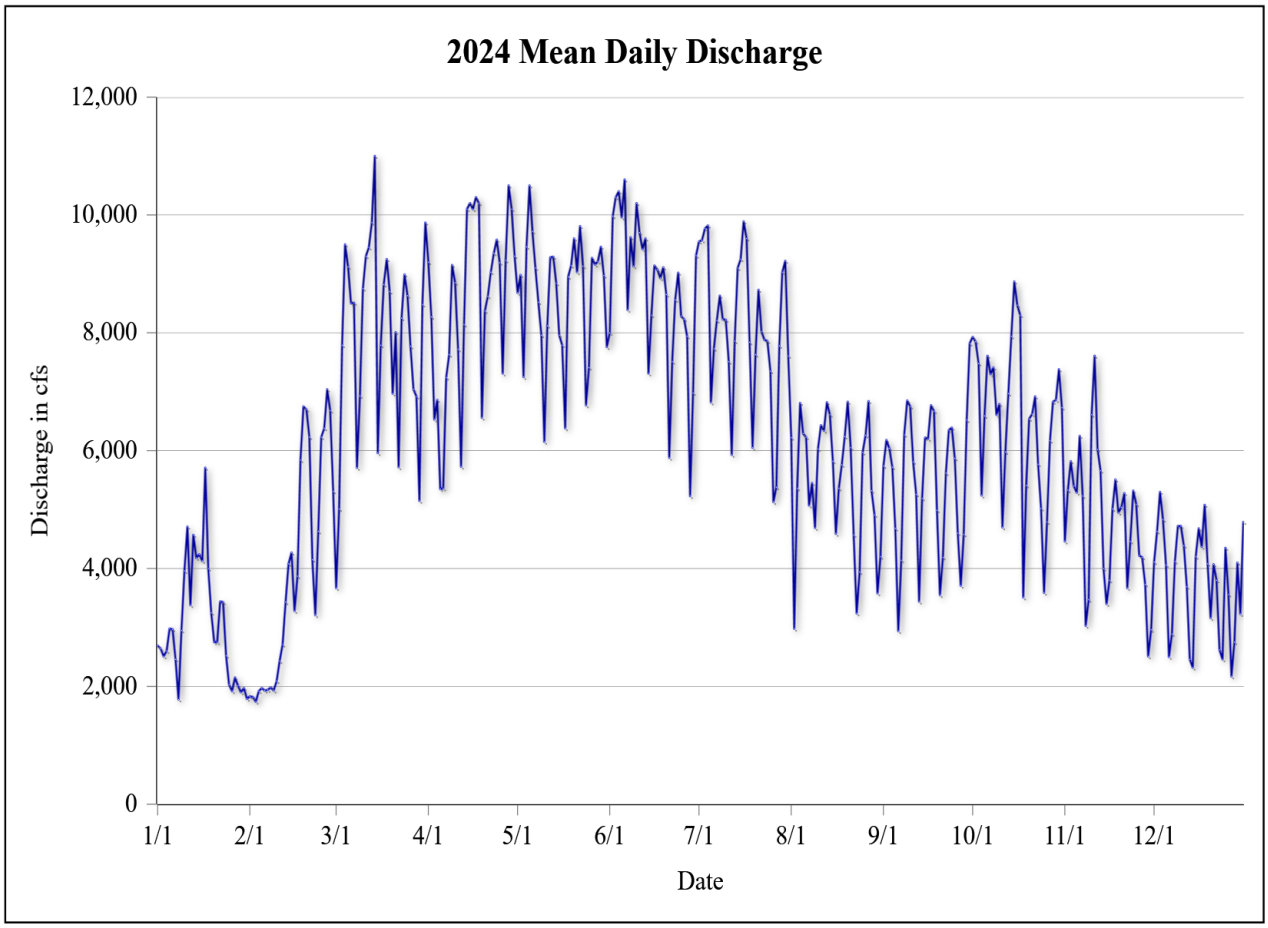
Period of Record—January 1, 2005 to current year.

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, 1,256 cfs, Jan. 8, 2024 at 11:00.

Remarks—The discharge record was estimated from Sep. 2, 2024 at 00:00 to Sep. 3, 2024 at 08:00, due to gage malfunction.



Colorado River at Taylor Ferry

Mean daily discharge, in cubic-feet per second, Calendar Year 2024

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	2,690	1,830	3,670	9,200	8,680	8,000	9,550	6,220	**5,740**	7,930	4,460	4,110
2	2,640	1,820	5,010	8,270	8,980	9,980	9,570	2,980	**6,180**	7,850	5,330	4,630
3	2,510	1,740	7,790	6,530	7,250	10,300	9,770	5,360	**6,040**	7,480	5,820	5,300
4	2,600	1,920	9,500	6,860	9,460	10,400	9,820	6,810	5,720	5,240	5,400	4,830
5	2,980	1,970	9,120	5,350	10,500	9,960	6,820	6,290	4,680	6,590	5,290	4,060
6	2,970	1,930	8,500	5,360	9,720	10,600	7,730	6,230	2,940	7,610	6,250	2,500
7	2,460	1,940	8,510	7,240	9,100	8,390	8,210	5,070	4,140	7,300	5,230	2,890
8	1,780	1,980	5,710	7,630	8,520	9,620	8,630	5,450	6,270	7,410	3,030	4,120
9	2,950	1,930	6,930	9,150	7,960	9,130	8,230	4,690	6,850	6,610	3,470	4,720
10	3,960	2,090	8,750	8,850	6,150	10,200	8,220	6,030	6,750	6,790	6,610	4,720
11	4,710	2,430	9,300	7,720	8,120	9,700	7,510	6,430	5,810	4,700	7,610	4,390
12	3,380	2,710	9,450	5,730	9,280	9,420	5,930	6,340	5,260	5,980	6,020	3,690
13	4,570	3,430	9,870	8,140	9,290	9,600	7,860	6,820	3,440	6,970	5,660	2,460
14	4,180	4,080	11,000	10,100	8,840	7,310	9,100	6,610	5,190	7,940	4,000	2,320
15	4,240	4,270	5,960	10,200	7,960	8,300	9,250	5,820	6,220	8,870	3,400	4,200
16	4,130	3,280	7,790	10,100	7,790	9,140	9,890	4,590	6,200	8,470	3,800	4,680
17	5,710	3,870	8,820	10,300	6,380	9,070	9,600	5,360	6,770	8,300	5,010	4,370
18	4,000	5,840	9,250	10,200	8,950	8,930	7,840	5,760	6,670	3,510	5,510	5,080
19	3,250	6,750	8,700	6,560	9,140	9,110	6,050	6,240	4,990	5,410	4,950	4,080
20	2,750	6,700	6,970	8,370	9,600	8,650	7,630	6,830	3,550	6,540	5,040	3,160
21	2,750	6,230	8,010	8,620	9,030	5,880	8,730	6,050	4,190	6,620	5,280	4,070
22	3,440	4,150	5,720	9,030	9,810	7,510	8,020	4,570	5,620	6,920	3,670	3,800
23	3,430	3,210	8,250	9,350	9,130	8,560	7,880	3,240	6,350	5,770	4,460	2,620
24	2,520	4,630	8,990	9,580	6,770	9,020	7,860	3,940	6,390	5,020	5,320	2,460
25	2,030	6,230	8,630	9,190	7,410	8,280	7,350	5,970	5,870	3,590	5,090	4,350
26	1,920	6,380	7,770	7,310	9,270	8,230	5,130	6,260	4,600	4,790	4,220	3,560
27	2,150	7,040	7,040	9,230	9,160	7,940	5,380	6,840	3,710	6,170	4,190	2,170
28	2,010	6,680	6,920	10,500	9,210	5,230	7,780	5,320	4,580	6,830	3,730	2,750
29	1,900	5,310	5,150	10,100	9,460	6,980	9,030	4,910	6,520	6,860	2,510	4,100
30	1,970		8,480	9,300	8,970	9,310	9,220	3,580	7,820	7,380	2,960	3,230
31	1,790		9,870		7,760		7,610	4,200		6,730		4,790
Total	94,367	112,378	245,440	254,045	267,629	262,764	251,169	170,821	165,021	204,194	143,319	118,203
Mean	3,044	3,875	7,917	8,468	8,633	8,759	8,102	5,510	5,501	6,587	4,777	3,813
Max	5,710	7,040	11,000	10,500	10,500	10,600	9,890	6,840	7,820	8,870	7,610	5,300
Min	1,780	1,740	3,670	5,350	6,150	5,230	5,130	2,980	2,940	3,510	2,510	2,170
Ac-ft	187,175	222,898	486,822	503,891	530,835	521,186	498,186	338,819	327,314	405,014	284,270	234,453

Calendar Year Summary (Estimated values are excluded from all min and max statistics)

Annual Total 2,289,352 Annual Mean 6,255 Daily Max 11,000 Daily Min 1,740 Annual Ac-ft 4,540,863

Maximum Discharge (Excludes Estimates)				Minimum Discharge (Excludes Estimates)			
Date	Time	Elev	Discharge	Date	Time	Elev	Discharge
Mar. 14	05:00	233.51	12,712	Jan. 8	11:00	224.69	1,256

Bold values indicate the daily value was derived from hourly data that contains one or more hours of estimated record.

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.

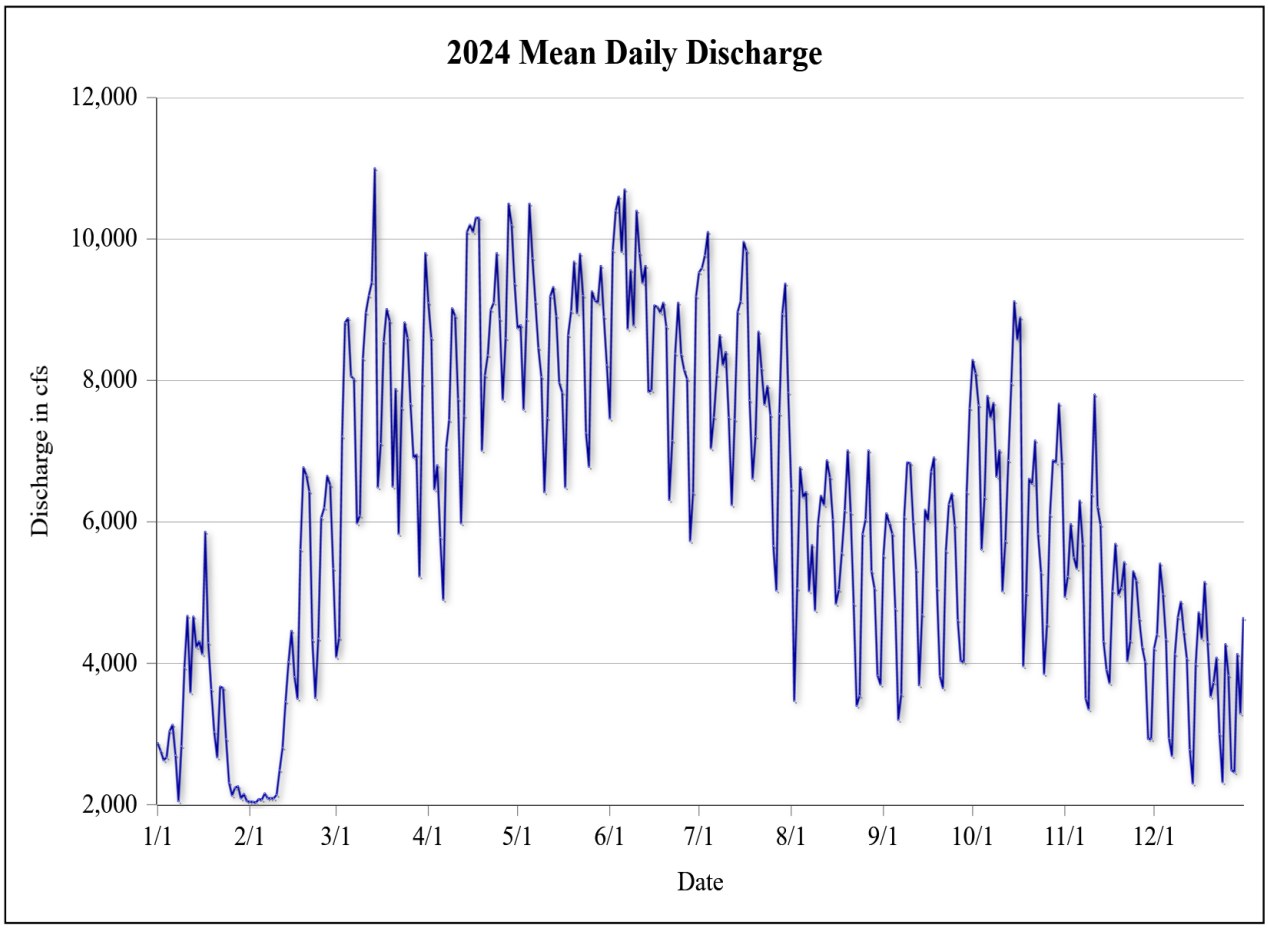
Period of Record—January 1, 2011 to current year.

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—During January and February, there were unprecedented low flows creating several short duration periods where the gage bottomed out. These periods were qualified as "Unverified" and should be used cautiously.



Colorado River Below Oxbow Bridge

Mean daily discharge, in cubic-feet per second, Calendar Year 2024

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	2,870	2,040	4,090	9,100	8,740	7,460	9,530	6,470	5,520	8,290	4,940	4,210
2	2,760	2,040	4,360	8,600	8,780	9,840	9,590	3,470	6,120	8,100	5,230	4,410
3	2,630	2,030	7,210	6,460	7,590	10,400	9,770	5,060	5,980	7,650	5,970	5,410
4	2,670	2,080	8,820	6,800	8,870	10,600	10,100	6,770	5,830	5,610	5,500	4,980
5	3,040	2,070	8,880	5,780	10,500	9,820	7,040	6,350	4,770	6,350	5,340	4,340
6	3,130	2,160	8,060	4,900	9,730	10,700	7,480	6,420	3,200	7,780	6,300	2,940
7	2,700	2,090	8,020	7,050	9,110	8,730	8,080	5,020	3,560	7,480	5,690	2,690
8	2,050	2,090	5,980	7,440	8,460	9,560	8,640	5,670	6,070	7,680	3,500	4,130
9	2,830	2,090	6,090	9,020	8,050	8,780	8,220	4,750	6,840	6,640	3,350	4,650
10	3,940	2,140	8,310	8,910	6,420	10,400	8,400	5,970	6,830	7,010	6,390	4,870
11	4,670	2,490	8,960	7,740	7,470	9,800	7,480	6,370	6,000	5,020	7,800	4,440
12	3,590	2,810	9,200	5,980	9,190	9,380	6,240	6,240	5,320	5,730	6,210	4,070
13	4,660	3,460	9,390	7,500	9,320	9,620	7,450	6,870	3,690	6,870	5,960	2,780
14	4,230	4,020	11,000	10,100	8,910	7,840	8,970	6,630	4,690	7,960	4,310	2,300
15	4,310	4,460	6,490	10,200	7,970	7,860	9,120	6,030	6,170	9,120	3,910	3,990
16	4,130	3,810	7,110	10,100	7,830	9,060	9,960	4,840	6,020	8,580	3,720	4,720
17	5,860	3,500	8,550	10,300	6,490	9,040	9,830	5,040	6,710	8,890	5,020	4,350
18	4,290	5,610	9,010	10,300	8,640	8,960	7,720	5,560	6,910	3,960	5,690	5,150
19	3,630	6,770	8,840	7,010	8,980	9,100	6,610	6,160	5,060	4,990	4,970	4,300
20	3,030	6,660	6,500	8,070	9,680	8,760	7,210	7,010	3,820	6,610	5,070	3,530
21	2,670	6,430	7,880	8,360	8,950	6,310	8,690	6,130	3,650	6,540	5,430	3,730
22	3,670	4,330	5,830	9,000	9,790	7,150	8,170	4,840	5,590	7,150	4,030	4,080
23	3,650	3,510	7,610	9,100	9,200	8,380	7,660	3,400	6,250	5,830	4,320	3,000
24	2,930	4,350	8,820	9,800	7,260	9,100	7,920	3,540	6,400	5,280	5,300	2,320
25	2,310	6,060	8,600	8,870	6,780	8,370	7,510	5,830	5,950	3,850	5,170	4,270
26	2,130	6,200	7,670	7,730	9,260	8,150	5,660	6,030	4,610	4,550	4,630	3,830
27	2,240	6,650	6,910	8,600	9,130	8,020	5,030	7,010	4,030	6,100	4,230	2,490
28	2,260	6,520	6,950	10,500	9,100	5,730	7,530	5,300	4,020	6,870	4,020	2,460
29	2,090	5,340	5,230	10,200	9,620	6,410	8,940	5,060	6,420	6,840	2,930	4,130
30	2,150		7,950	9,370	8,900	9,190	9,370	3,830	7,610	7,670	2,930	3,290
31	2,050		9,800		8,220		7,830	3,700		6,850		4,640
Total	99,169	113,810	238,071	252,825	266,968	262,497	251,735	171,379	163,642	207,851	147,833	120,514
Mean	3,199	3,924	7,680	8,427	8,612	8,750	8,120	5,528	5,455	6,705	4,928	3,888
Max	5,860	6,770	11,000	10,500	10,500	10,700	10,100	7,010	7,610	9,120	7,800	5,410
Min	2,050	2,030	4,090	4,900	6,420	5,730	5,030	3,400	3,200	3,850	2,930	2,300
Ac-ft	196,700	225,739	472,206	501,470	529,522	520,654	499,310	339,926	324,580	412,266	293,222	239,036

Calendar Year Summary

Annual Total 2,296,293 Annual Mean 6,274 Daily Max 11,000 Daily Min 2,030 Annual Ac-ft 4,554,631

Maximum Discharge				Minimum Discharge			
Date	Time	Elev	Discharge	Date	Time	Elev	Discharge
Jun. 6	08:00	222.55	12,515	Jan. 8	18:00	216.10	1,989

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.

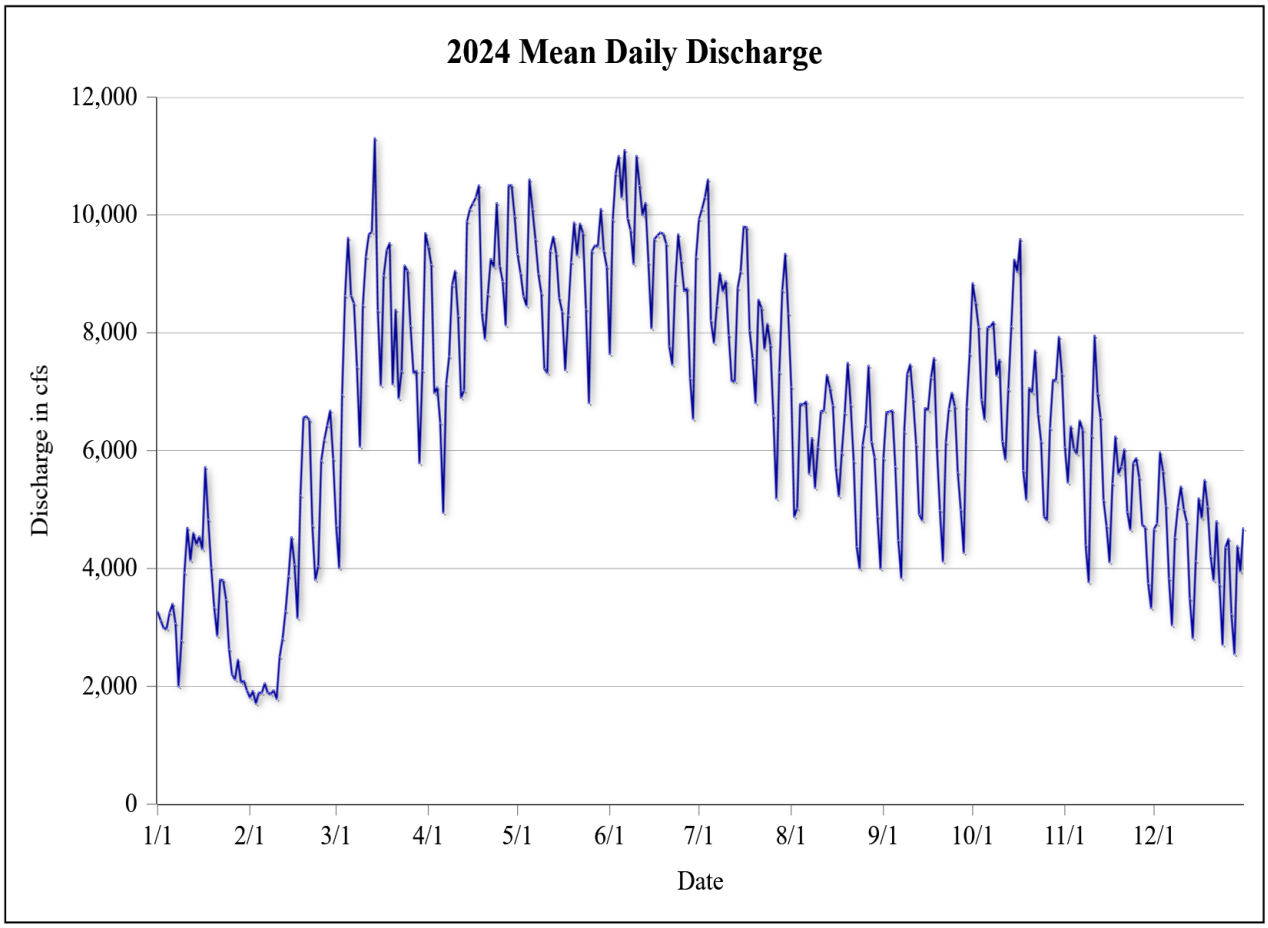
Period of Record—January 1, 2005 to current year.

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, 1,710 cfs, Feb. 3, 2024; maximum hourly discharge, 17,615 cfs, Mar. 27, 2014 at 19:00; minimum hourly discharge, 1,354 cfs, Jan. 8, 2024 at 20:00.

Remarks—None.



Colorado River at Cibola Gage

Mean daily discharge, in cubic-feet per second, Calendar Year 2024

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	3,260	1,810	4,730	9,460	9,330	7,640	9,930	7,080	5,870	8,840	6,060	4,670
2	3,120	1,920	4,010	9,160	9,010	9,920	10,100	4,880	6,650	8,510	5,460	4,760
3	2,990	1,710	6,950	6,980	8,620	10,700	10,300	5,020	6,660	8,100	6,410	5,970
4	2,980	1,890	8,630	7,070	8,460	11,000	10,600	6,790	6,680	6,860	6,030	5,650
5	3,250	1,890	9,610	6,470	10,600	10,300	8,210	6,780	5,730	6,530	5,950	5,060
6	3,400	2,050	8,630	4,950	10,100	11,100	7,830	6,830	4,480	8,090	6,510	3,830
7	3,070	1,890	8,500	7,130	9,590	9,940	8,460	5,610	3,840	8,110	6,350	3,040
8	2,000	1,870	7,420	7,600	9,000	9,740	9,010	6,210	6,320	8,180	4,400	4,530
9	2,780	1,930	6,070	8,810	8,670	9,170	8,710	5,370	7,300	7,280	3,770	5,040
10	3,930	1,790	8,470	9,050	7,390	11,000	8,870	6,060	7,460	7,540	6,250	5,390
11	4,690	2,500	9,290	8,290	7,320	10,500	7,960	6,670	6,870	6,160	7,950	5,000
12	4,140	2,810	9,670	6,900	9,390	10,000	7,180	6,680	6,100	5,850	6,970	4,790
13	4,600	3,280	9,710	7,020	9,630	10,200	7,180	7,280	4,920	7,040	6,560	3,490
14	4,410	3,870	11,300	9,890	9,340	9,190	8,760	7,060	4,820	8,110	5,160	2,820
15	4,540	4,530	8,380	10,100	8,590	8,080	9,040	6,770	6,720	9,240	4,720	4,130
16	4,330	4,070	7,110	10,200	8,360	9,590	9,800	5,710	6,690	9,040	4,110	5,190
17	5,720	3,160	8,970	10,300	7,370	9,650	9,790	5,230	7,240	9,590	5,440	4,860
18	4,830	5,240	9,400	10,500	8,300	9,700	8,040	5,960	7,570	5,660	6,240	5,500
19	4,010	6,560	9,520	8,340	9,200	9,680	7,570	6,640	6,030	5,170	5,610	5,050
20	3,340	6,580	7,130	7,900	9,870	9,510	6,810	7,490	4,990	7,060	5,730	4,210
21	2,860	6,520	8,390	8,650	9,320	7,770	8,560	6,780	4,120	6,990	6,020	3,800
22	3,810	4,730	6,890	9,250	9,850	7,460	8,420	5,820	6,140	7,700	4,960	4,800
23	3,800	3,810	7,350	9,120	9,690	8,830	7,730	4,370	6,710	6,620	4,660	3,730
24	3,470	4,040	9,140	10,200	8,400	9,670	8,150	4,000	6,980	6,160	5,790	2,710
25	2,630	5,830	9,050	9,130	6,810	9,220	7,790	6,090	6,750	4,880	5,870	4,360
26	2,200	6,180	8,120	8,870	9,390	8,710	6,590	6,440	5,630	4,820	5,540	4,500
27	2,120	6,430	7,320	8,130	9,480	8,750	5,190	7,440	5,000	6,380	4,740	3,230
28	2,450	6,680	7,350	10,500	9,470	7,230	7,330	6,150	4,270	7,200	4,700	2,550
29	2,070	5,860	5,790	10,500	10,100	6,540	8,720	5,890	6,740	7,190	3,750	4,380
30	2,090		7,360	9,980	9,390	9,290	9,340	4,880	7,640	7,930	3,330	3,950
31	1,930		9,690		9,120		8,330	4,000		7,300		4,680
Total	104,798	111,412	249,925	260,553	279,121	280,335	260,312	187,985	182,923	224,121	165,041	135,663
Mean	3,381	3,842	8,062	8,685	9,004	9,344	8,397	6,064	6,097	7,230	5,501	4,376
Max	5,720	6,680	11,300	10,500	10,600	11,100	10,600	7,490	7,640	9,590	7,950	5,970
Min	1,930	1,710	4,010	4,950	6,810	6,540	5,190	4,000	3,840	4,820	3,330	2,550
Ac-ft	207,864	220,983	495,719	516,800	553,629	556,036	516,321	372,863	362,822	444,537	327,354	269,083

Calendar Year Summary

Annual Total 2,442,189 Annual Mean 6,673 Daily Max 11,300 Daily Min 1,710 Annual Ac-ft 4,844,011

Maximum Discharge				Minimum Discharge			
Date	Time	Elev	Discharge	Date	Time	Elev	Discharge
Jun. 6	13:00	209.21	12,341	Jan. 8	20:00	204.58	1,354

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.

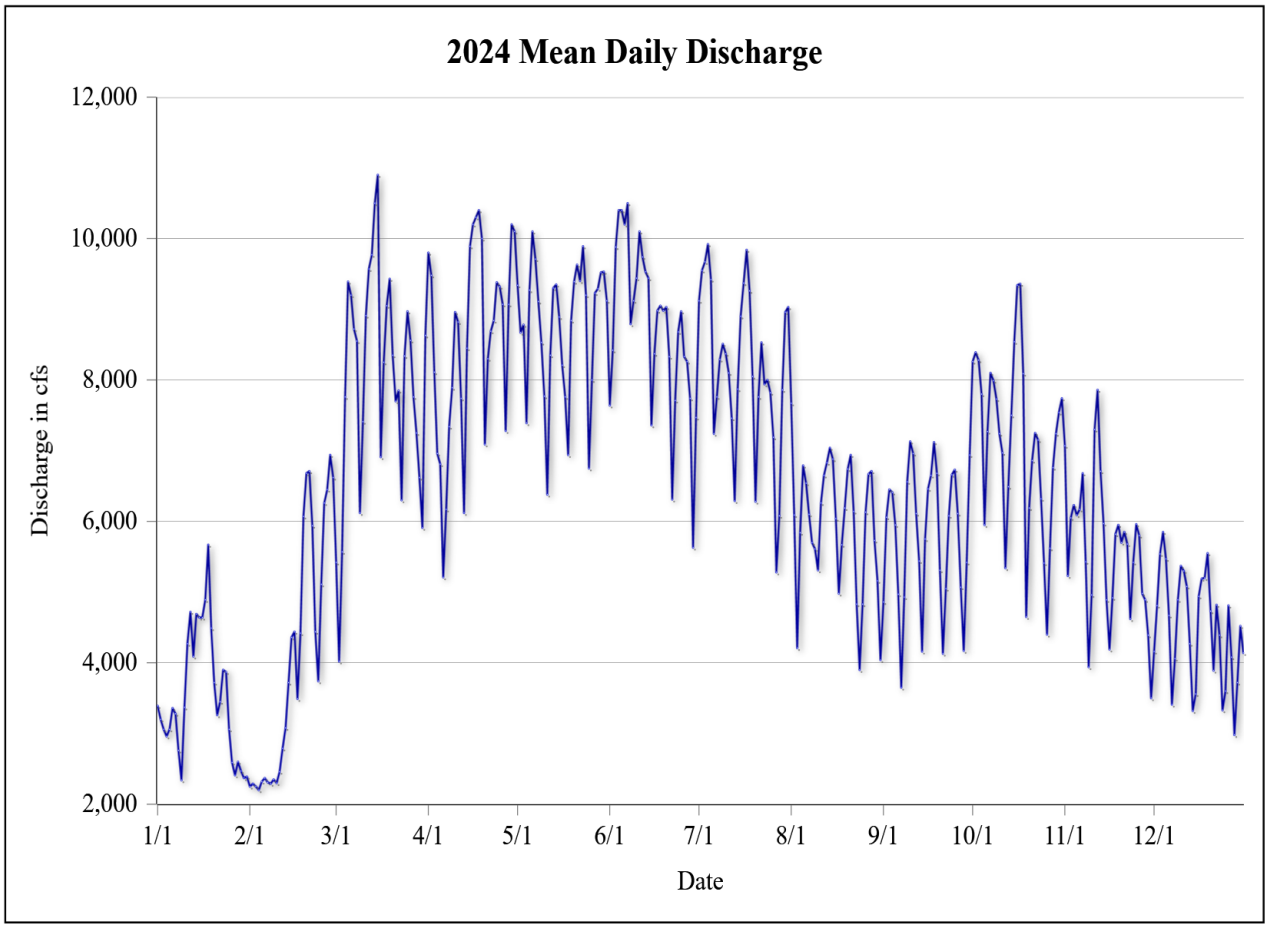
Period of Record—March 27, 2012 to current year.

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 2024

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	3,390	2,250	5,420	9,800	9,340	7,640	9,120	7,670	4,860	8,260	7,070	4,160
2	3,200	2,290	4,020	9,480	8,670	8,420	9,550	6,090	6,060	8,390	5,230	4,810
3	3,060	2,250	5,570	8,110	8,780	9,880	9,670	4,210	6,450	8,280	6,050	5,540
4	2,960	2,200	7,760	6,960	7,390	10,400	9,920	5,840	6,410	7,800	6,230	5,850
5	3,060	2,320	9,390	6,810	9,270	10,400	9,420	6,790	5,950	5,950	6,090	5,470
6	3,360	2,370	9,200	5,210	10,100	10,200	7,240	6,540	4,970	7,270	6,170	4,670
7	3,280	2,310	8,720	6,170	9,710	10,500	7,760	6,100	3,650	8,100	6,680	3,410
8	2,760	2,290	8,550	7,340	9,110	8,790	8,290	5,700	4,930	7,990	5,430	4,060
9	2,340	2,350	6,120	7,890	8,530	9,120	8,510	5,610	6,560	7,730	3,940	4,890
10	3,370	2,300	7,410	8,960	7,770	9,440	8,370	5,310	7,130	7,240	4,960	5,370
11	4,270	2,460	8,910	8,820	6,380	10,100	8,100	6,260	6,960	6,970	7,300	5,300
12	4,720	2,790	9,570	7,740	8,350	9,740	7,460	6,650	6,110	5,340	7,860	5,080
13	4,090	3,080	9,770	6,120	9,300	9,530	6,290	6,830	5,440	6,490	6,710	4,270
14	4,690	3,720	10,500	8,450	9,350	9,440	7,870	7,040	4,160	7,500	5,970	3,320
15	4,640	4,360	10,900	9,890	8,890	7,360	8,900	6,880	5,750	8,540	4,890	3,560
16	4,640	4,440	6,910	10,200	8,210	8,370	9,370	6,040	6,460	9,340	4,190	4,940
17	4,890	3,490	8,250	10,300	7,760	8,980	9,840	4,980	6,650	9,360	4,920	5,190
18	5,670	4,420	9,050	10,400	6,940	9,050	9,260	5,670	7,120	8,090	5,820	5,200
19	4,490	6,070	9,430	10,000	8,840	8,980	8,050	6,190	6,680	4,650	5,950	5,550
20	3,720	6,680	8,350	7,090	9,390	9,030	6,280	6,740	5,310	6,190	5,700	4,730
21	3,260	6,710	7,700	8,300	9,630	8,330	7,760	6,940	4,130	6,860	5,850	3,890
22	3,450	5,940	7,850	8,690	9,400	6,310	8,530	6,140	5,050	7,250	5,680	4,820
23	3,900	4,440	6,300	8,840	9,890	7,710	7,940	4,830	6,080	7,150	4,620	4,390
24	3,870	3,740	8,340	9,380	9,200	8,680	8,000	3,900	6,660	6,320	5,420	3,330
25	3,060	5,110	8,970	9,320	6,750	8,970	7,820	4,830	6,730	5,410	5,960	3,600
26	2,590	6,260	8,560	9,070	8,000	8,330	7,190	6,130	6,110	4,400	5,800	4,810
27	2,410	6,450	7,760	7,280	9,230	8,260	5,280	6,670	5,070	5,620	4,980	4,080
28	2,600	6,940	7,250	9,070	9,290	7,740	6,080	6,710	4,170	6,760	4,890	2,980
29	2,470	6,620	6,620	10,200	9,520	5,630	7,860	5,730	5,420	7,240	4,390	3,720
30	2,370		5,910	10,100	9,530	7,470	8,960	5,160	6,940	7,540	3,500	4,520
31	2,390		8,630		9,120		9,030	4,040		7,740		4,140
Total	108,946	116,659	247,635	256,017	271,704	262,840	253,703	184,212	173,938	221,761	168,251	139,629
Mean	3,514	4,023	7,988	8,534	8,765	8,761	8,184	5,942	5,798	7,154	5,608	4,504
Max	5,670	6,940	10,900	10,400	10,100	10,500	9,920	7,670	7,130	9,360	7,860	5,850
Min	2,340	2,200	4,020	5,210	6,380	5,630	5,280	3,900	3,650	4,400	3,500	2,980
Ac-ft	216,091	231,389	491,177	507,802	538,917	521,335	503,212	365,379	345,002	439,856	333,722	276,951

Calendar Year Summary

Annual Total 2,405,295 Annual Mean 6,572 Daily Max 10,900 Daily Min 2,200 Annual Ac-ft 4,770,832

Maximum Discharge				Minimum Discharge			
Date	Time	Elev	Discharge	Date	Time	Elev	Discharge
Mar. 15	04:00	192.44	11,538	Jan. 9	06:00	186.91	1,928

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.

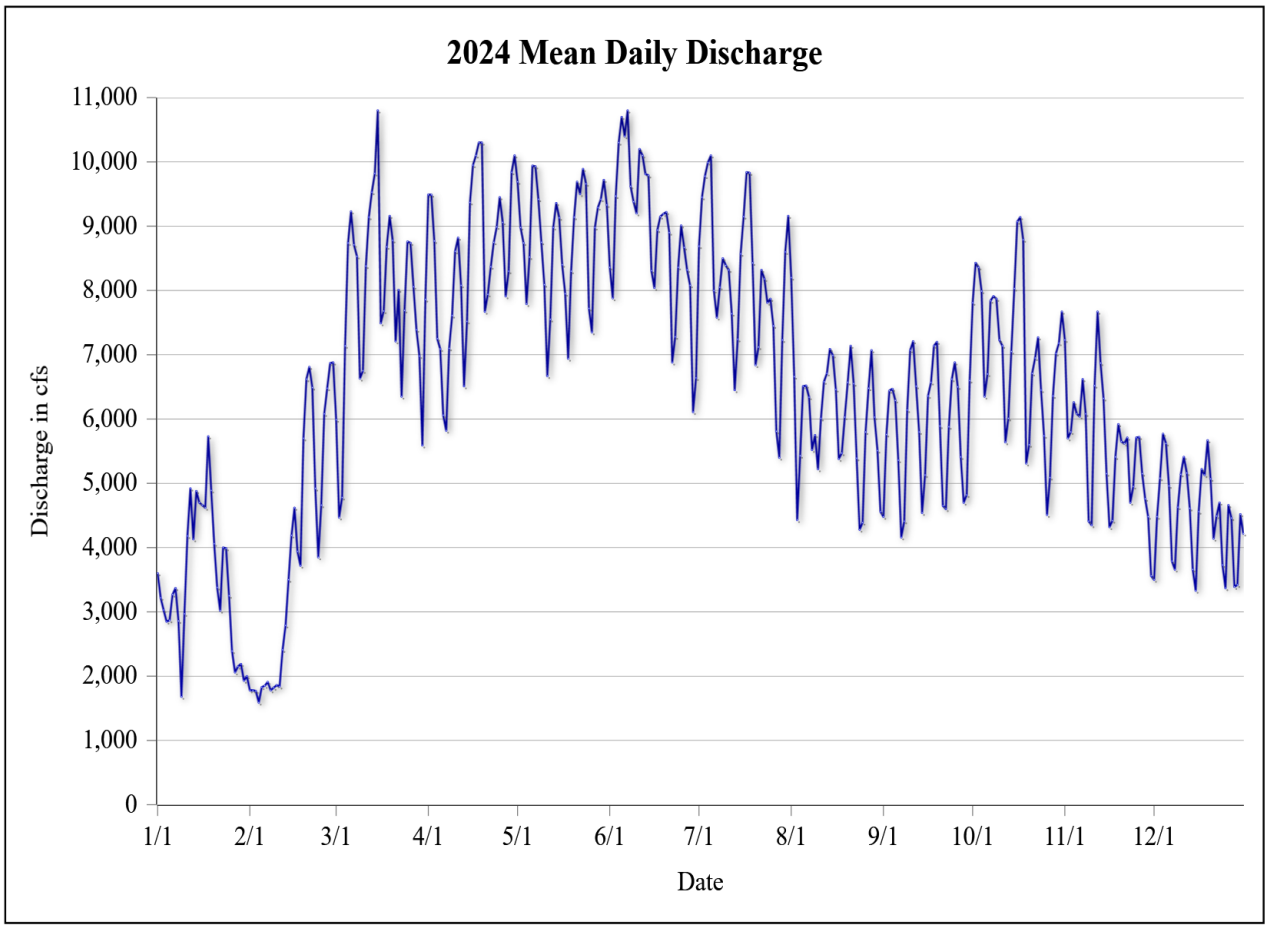
Period of Record—January 1, 2012 to current year.

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 hydraulically disconnected from the river when the stage fell below 183.80 feet, a condition that occurred multiple times during the period of record. Discharge values during these periods were estimated and are rated poor.



Colorado River at Martinez Lake

Mean daily discharge, in cubic-feet per second, Calendar Year 2024

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	**3,600**	**1,780**	5,990	9,490	9,690	8,360	8,690	8,200	**4,480**	7,810	7,230	**3,500**
2	**3,220**	**1,780**	**4,470**	9,490	8,980	7,880	9,450	6,660	5,760	8,430	5,700	**4,480**
3	**3,030**	**1,770**	**4,780**	8,770	8,740	9,470	9,780	**4,430**	6,440	8,360	5,800	5,080
4	**2,850**	**1,590**	7,140	7,250	7,790	10,300	9,990	**5,430**	6,470	7,990	6,260	5,770
5	**2,870**	**1,830**	8,740	7,090	8,520	10,700	10,100	6,510	6,290	6,350	6,080	5,620
6	**3,270**	**1,850**	9,230	6,060	9,940	10,400	8,000	6,520	5,360	6,700	6,040	**4,960**
7	**3,370**	**1,910**	8,710	5,820	9,930	10,800	7,580	6,340	**4,160**	7,840	6,620	**3,790**
8	**2,860**	**1,780**	8,530	7,100	9,420	9,620	8,050	5,520	**4,410**	7,910	6,080	**3,660**
9	**1,680**	**1,820**	**6,630**	7,610	8,750	9,380	8,500	5,750	6,140	7,870	**4,410**	**4,630**
10	**2,970**	**1,860**	**6,750**	8,610	8,090	9,200	8,390	5,220	7,070	7,230	**4,350**	5,140
11	**4,180**	**1,840**	8,380	8,820	6,670	10,200	8,320	6,010	7,210	7,140	6,520	5,410
12	**4,920**	**2,410**	9,140	8,080	7,550	10,100	7,640	6,580	6,510	5,640	7,670	5,160
13	**4,130**	**2,790**	9,530	6,510	8,980	9,810	6,450	6,710	5,800	6,010	6,870	**4,610**
14	**4,880**	**3,500**	9,820	7,520	9,360	9,790	7,240	7,090	**4,540**	7,050	6,320	**3,660**
15	**4,700**	**4,190**	10,800	9,370	9,130	8,310	8,570	6,990	**5,130**	8,030	5,150	**3,330**
16	**4,660**	**4,620**	**7,490**	9,950	8,400	8,040	9,150	6,460	6,360	9,070	**4,320**	**4,560**
17	4,620	**3,940**	**7,680**	10,100	7,950	8,940	9,840	5,380	6,570	9,140	**4,420**	5,220
18	5,730	**3,720**	8,680	10,300	6,940	9,150	9,830	5,470	7,140	8,790	5,410	5,130
19	4,890	**5,700**	9,160	10,300	8,300	9,190	8,430	6,030	7,200	5,310	5,920	5,670
20	**4,060**	6,620	**8,780**	**7,670**	9,140	9,220	6,840	6,570	5,890	5,600	5,650	5,070
21	**3,380**	6,810	**7,210**	**7,940**	9,690	8,900	7,120	7,140	**4,650**	6,710	5,620	**4,140**
22	**3,020**	6,490	8,010	8,370	9,500	6,880	8,320	6,550	**4,600**	6,950	5,710	4,490
23	**4,000**	**4,920**	**6,350**	8,750	9,890	7,280	8,180	**5,390**	5,880	7,270	**4,700**	4,700
24	**3,990**	**3,850**	**7,690**	8,990	9,660	8,360	7,810	**4,280**	6,620	6,450	4,950	**3,730**
25	**3,250**	**4,660**	8,760	9,450	7,720	9,010	7,870	**4,390**	6,880	5,740	5,710	**3,370**
26	**2,390**	6,080	8,740	9,060	7,350	8,670	7,450	5,800	6,500	**4,510**	5,720	4,660
27	**2,060**	6,480	8,060	7,910	8,980	8,320	5,810	6,480	5,410	**5,090**	5,150	4,460
28	**2,150**	6,870	7,390	8,300	9,290	8,080	5,400	7,070	**4,700**	6,360	4,760	**3,390**
29	**2,190**	6,880	**6,980**	9,840	9,420	6,110	7,230	6,030	**4,820**	7,020	**4,480**	**3,420**
30	**1,930**		**5,590**	10,100	9,720	6,640	8,600	5,510	6,600	7,180	**3,560**	4,520
31	**2,000**		**7,860**		9,330		9,160	**4,560**		7,670		4,220
Total	106,839	110,336	243,082	254,620	272,852	267,086	253,775	187,073	175,581	219,208	167,161	139,547
Mean	3,446	3,805	7,841	8,487	8,802	8,903	8,186	6,035	5,853	7,071	5,572	4,502
Max	5,730	6,880	10,800	10,300	9,940	10,800	10,100	8,200	7,210	9,140	7,670	5,770
Min	1,680	1,590	4,470	5,820	6,670	6,110	5,400	4,280	4,160	4,510	3,560	3,330
Ac-ft	211,913	218,849	482,146	505,031	541,194	529,757	503,356	371,054	348,261	434,792	331,558	276,788

Calendar Year Summary (Estimated values are excluded from all min and max statistics)

Annual Total 2,397,160 Annual Mean 6,550 Daily Max 10,800 Daily Min 4,220 Annual Ac-ft 4,754,698

Maximum Discharge (Excludes Estimates)				Minimum Discharge (Excludes Estimates)			
Date	Time	Elev	Discharge	Date	Time	Elev	Discharge
Mar. 15	13:00	186.67	11,025	Dec. 22	01:00	183.19	3,744

Bold values indicate the daily value was derived from hourly data that contains one or more 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.

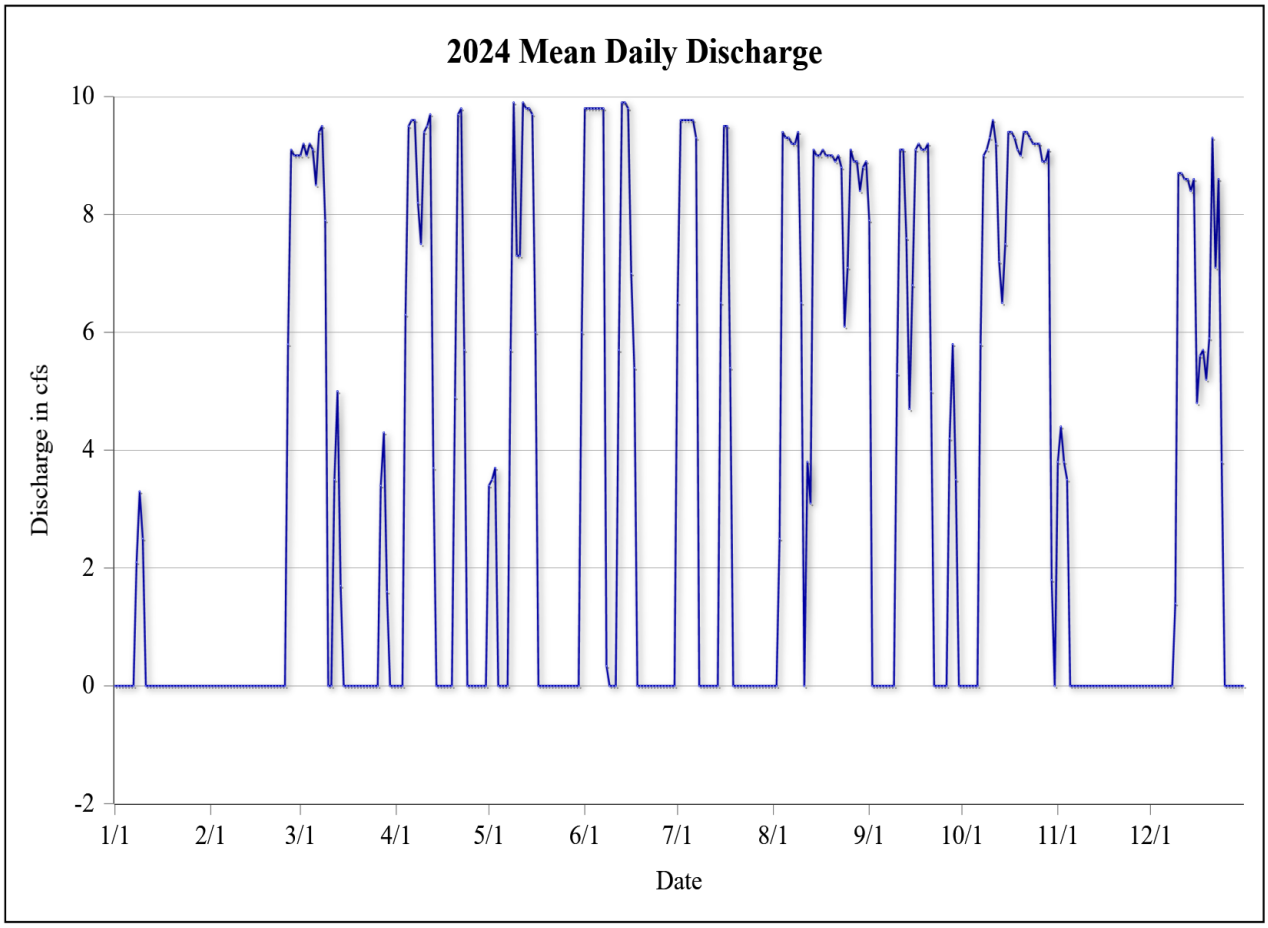
Period of Record—January 1, 2006 to current year.

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 2024

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0	9.0	0	3.4	9.8	6.5	0	7.9	0	3.8	0
2	0	0	9.2	0	3.5	9.8	9.6	0	0	0	4.4	0
3	0	0	9.0	0	3.7	9.8	9.6	2.5	0	0	3.8	0
4	0	0	9.2	6.3	0	9.8	9.6	9.4	0	0	3.5	0
5	0	0	9.1	9.5	0	9.8	9.6	9.3	0	0	0	0
6	0	0	8.5	9.6	0	9.8	9.6	9.3	0	0	0	0
7	0	0	9.4	9.6	0	9.8	9.3	9.2	0	5.8	0	0
8	2.1	0	9.5	8.2	5.7	0.34	0	9.2	0	9.0	0	0
9	3.3	0	7.9	7.5	9.9	0	0	9.4	0	9.1	0	1.4
10	2.5	0	0	9.4	7.3	0	0	6.5	5.3	9.3	0	8.7
11	0	0	0	9.5	7.3	0	0	0	9.1	9.6	0	8.7
12	0	0	3.5	9.7	9.9	5.7	0	3.8	9.1	9.2	0	8.6
13	0	0	5.0	3.7	9.8	9.9	0	3.1	7.6	7.2	0	8.6
14	0	0	1.7	0	9.8	9.9	0	9.1	4.7	6.5	0	8.4
15	0	0	0	0	9.7	9.8	6.5	9.0	6.8	7.5	0	8.6
16	0	0	0	0	6.0	7.0	9.5	9.0	9.1	9.4	0	4.8
17	0	0	0	0	0	5.4	9.5	9.1	9.2	9.4	0	5.6
18	0	0	0	0	0	0	5.4	9.0	9.1	9.3	0	5.7
19	0	0	0	0	0	0	0	9.0	9.1	9.1	0	5.2
20	0	0	0	4.9	0	0	0	9.0	9.2	9.0	0	5.9
21	0	0	0	9.7	0	0	0	8.9	5.0	9.4	0	9.3
22	0	0	0	9.8	0	0	0	9.0	0	9.4	0	7.1
23	0	0	0	5.7	0	0	0	8.8	0	9.3	0	8.6
24	0	0	0	0	0	0	0	6.1	0	9.2	0	3.8
25	0	0	0	0	0	0	0	7.1	0	9.2	0	0
26	0	5.8	0	0	0	0	0	9.1	0	9.2	0	0
27	0	9.1	3.4	0	0	0	0	8.9	4.2	8.9	0	0
28	0	9.0	4.3	0	0	0	0	8.9	5.8	8.9	0	0
29	0	9.0	1.6	0	0	0	0	8.4	3.5	9.1	0	0
30	0		0	0	0	0	0	8.8	0	1.8	0	0
31	0		0		6.0		0	8.9		0		0
Total	8.0	32.9	100.1	113.1	92.1	116.57	94.7	227.9	114.6	203.8	15.6	109.0
Mean	0.26	1.13	3.23	3.77	2.97	3.89	3.05	7.35	3.82	6.58	0.52	3.52
Max	3.3	9.1	9.5	9.8	9.9	9.9	9.6	9.4	9.2	9.6	4.4	9.3
Min	0	0	0	0	0	0	0	0	0	0	0	0
Ac-ft	16	65	199	224	183	231	188	452	227	404	31	216

Calendar Year Summary

Annual Total 1,228.27 Annual Mean 3.36 Daily Max 9.9 Daily Min 0 Annual Ac-ft 2,436

Maximum Discharge				Minimum Discharge			
Date	Time	GH	Discharge	Date	Time	GH	Discharge
Oct. 11	01:00	N/A	10	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.

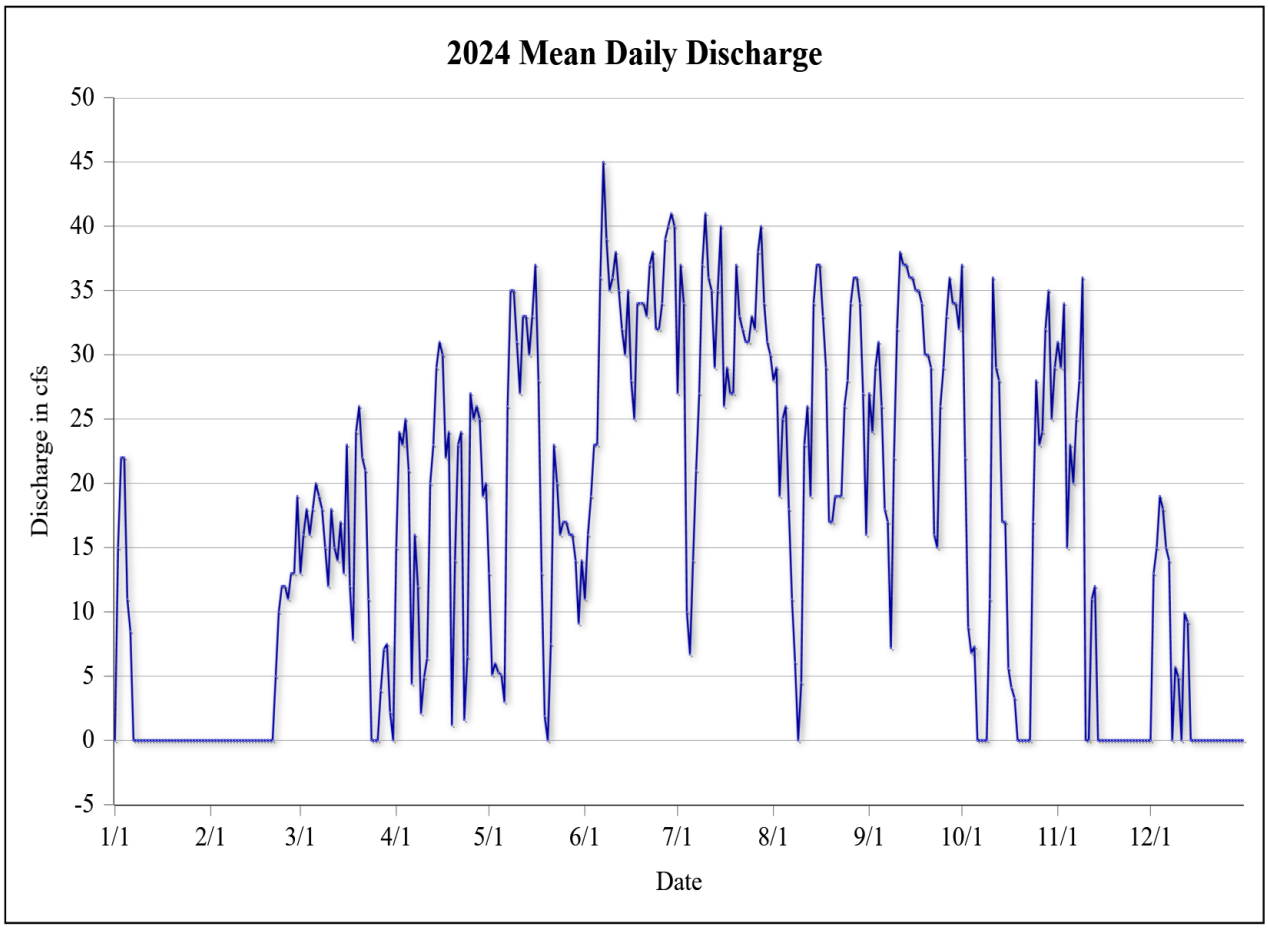
Period of Record—February 23, 2006 to current year.

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 for the following periods: Feb. 25, 2024 at 17:00 to Feb. 26, 2024 at 09:00, Feb. 29, 2024 at 22:00 to Mar. 5, 2024 at 12:00, Mar. 10, 2024 at 19:00 to Mar. 11, 2024 at 10:00, Mar. 11, 2024 at 17:00 to Mar. 12, 2024 at 09:00, Mar. 14, 2024 at 12:00 to Mar. 15, 2024 at 09:00, Mar. 31, 2024 at 03:00 to Apr. 3, 2024 at 15:00, Apr. 7, 2024 at 03:00 to Apr. 8, 2024 at 12:00, and Apr. 14, 2024 at 06:00 to Apr. 16, 2024 at 08:00, due to gage malfunction.



Fort Mojave Tribe-North Casino

Mean daily discharge, in cubic-feet per second, Calendar Year 2024

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0	**13**	**15**	13	11	27	28	27	37	31	0
2	15	0	**16**	**24**	5.1	16	37	29	24	22	29	13
3	22	0	**18**	**23**	6.0	19	34	19	29	8.8	34	15
4	22	0	**16**	25	5.3	23	10	25	31	6.8	15	19
5	11	0	**18**	21	5.1	23	6.7	26	26	7.3	23	18
6	8.5	0	20	4.4	3.0	36	14	18	18	0	20	15
7	0	0	19	**16**	26	45	21	11	17	0	25	14
8	0	0	18	**12**	35	39	27	6.1	7.2	0	28	0
9	0	0	15	2.1	35	35	37	0	22	0	36	5.7
10	0	0	**12**	4.9	31	36	41	4.5	32	11	0.02	4.9
11	0	0	**18**	6.4	27	38	36	23	38	36	0	0
12	0	0	**15**	20	33	35	35	26	37	29	11	9.9
13	0	0	14	23	33	32	29	19	37	28	12	9.2
14	0	0	**17**	**29**	30	30	35	34	36	17	0	0
15	0	0	**13**	**31**	33	35	40	37	36	17	0	0
16	0	0	23	**30**	37	28	26	37	35	5.6	0	0
17	0	0	12	22	28	25	29	33	35	4.1	0	0
18	0	0	7.8	24	13	34	27	29	34	3.3	0	0
19	0	0	24	1.2	1.9	34	27	17	30	0	0	0
20	0	0	26	14	0	34	37	17	30	0	0	0
21	0	0	22	23	7.5	33	33	19	29	0	0	0
22	0	5.0	21	24	23	37	32	19	16	0	0	0
23	0	10	11	1.6	20	38	31	19	15	0	0	0
24	0	12	0	6.5	16	32	31	26	26	17	0	0
25	0	**12**	0	27	17	32	33	28	29	28	0	0
26	0	**11**	0	25	17	34	32	34	33	23	0	0
27	0	13	3.9	26	16	39	38	36	36	24	0	0
28	0	13	7.1	25	16	40	40	36	34	32	0	0
29	0	**19**	7.5	19	14	41	34	34	34	35	0	0
30	0		2.2	20	9.1	40	31	27	32	25	0	0
31	0		**0.01**		14		30	16		29		0
Total	78.7	96.3	410.95	546.3	569.8	974	941.8	731.6	864.4	445.8	264.62	123.3
Mean	2.54	3.32	13.3	18.2	18.4	32.5	30.4	23.6	28.8	14.4	8.82	3.98
Max	22	19	26	31	37	45	41	37	38	37	36	19
Min	0	0	0	1.2	0	11	6.7	0	7.2	0	0	0
Ac-ft	156	191	815	1,084	1,130	1,932	1,868	1,451	1,715	884	525	245

Calendar Year Summary (Estimated values are excluded from all min and max statistics)

Annual Total 6,047.81 Annual Mean 16.5 Daily Max 45 Daily Min 0 Annual Ac-ft 11,996

Maximum Discharge (Excludes Estimates)				Minimum Discharge (Excludes Estimates)			
Date	Time	GH	Discharge	Date	Time	GH	Discharge
May 16	08:00	2.75	50	May 6	08:00	0.37	-0.63

Bold values indicate the daily value was derived from hourly data that contains one or more 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.

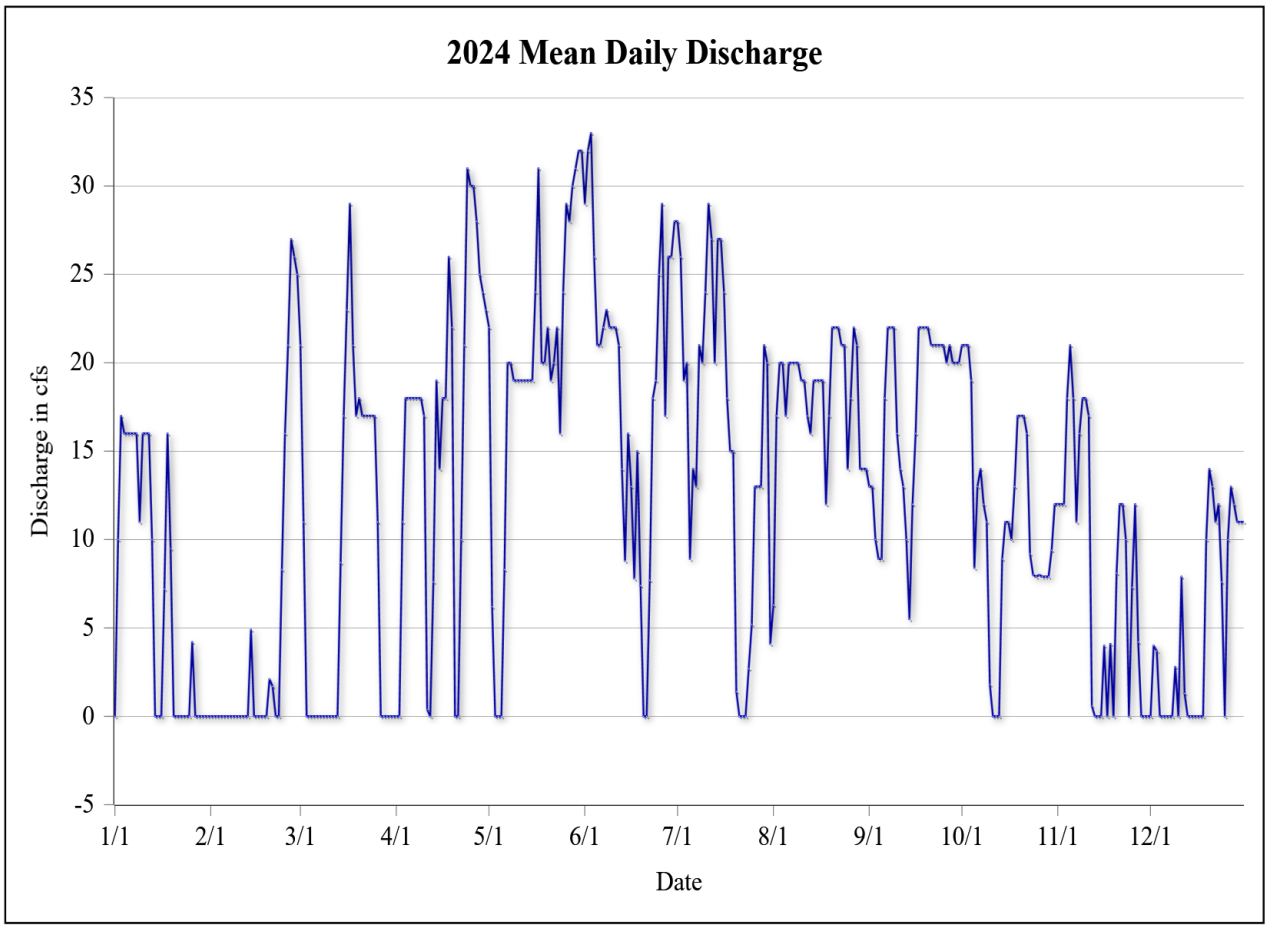
Period of Record—April 10, 2006 to current year.

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 2024

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0	21	0	22	29	28	6.3	13	21	12	0
2	10	0	11	0	6.2	32	26	17	13	21	12	4.0
3	17	0	0	11	0	33	19	20	10	21	12	3.7
4	16	0	0	18	0	26	20	20	8.9	19	18	0
5	16	0	0	18	0	21	8.9	17	8.9	8.4	21	0
6	16	0	0	18	8.3	21	14	20	18	13	18	0
7	16	0	0	18	20	22	13	20	22	14	11	0
8	16	0	0	18	20	23	21	20	22	12	16	0
9	11	0	0	18	19	22	20	20	22	11	18	2.8
10	16	0	0	17	19	22	24	19	16	1.8	18	0
11	16	0	0	0.39	19	22	29	19	14	0	17	7.9
12	16	0	0	0	19	21	27	17	13	0	0.59	1.3
13	10	0	0	7.6	19	14	20	16	10	0	0	0
14	0	4.9	8.7	19	19	8.8	27	19	5.5	8.9	0	0
15	0	0	17	14	19	16	27	19	12	11	0	0
16	0	0	23	18	24	13	24	19	16	11	4.0	0
17	7.2	0	29	18	31	7.8	18	19	22	10	0	0
18	16	0	21	26	20	15	15	12	22	13	4.1	0
19	9.5	0	17	22	20	7.4	15	17	22	17	0	10
20	0	2.1	18	0	22	0	1.4	22	22	17	8.1	14
21	0	1.7	17	0	19	0	0	22	21	17	12	13
22	0	0	17	10	20	7.7	0	22	21	16	12	11
23	0	0	17	21	22	18	0	21	21	9.2	10	12
24	0	8.3	17	31	16	19	2.7	21	21	8.0	0	7.6
25	0	16	17	30	24	25	5.2	14	21	7.9	7.3	0
26	4.2	21	11	30	29	29	13	18	20	8.0	12	10
27	0	27	0	28	28	17	13	22	21	7.9	4.2	13
28	0	26	0	25	30	26	13	21	20	7.9	0	12
29	0	25	0	24	31	26	21	14	20	7.9	0	11
30	0		0	23	32	28	20	14	20	9.4	0	11
31	0		0		32		4.1	14		12		11
Total	213.6	132.7	263.2	481.68	611.4	572.7	488.3	556.9	517.6	342.1	246.93	154.3
Mean	6.89	4.58	8.49	16.1	19.7	19.1	15.8	18.0	17.3	11.0	8.23	4.98
Max	17	27	29	31	32	33	29	22	22	21	21	14
Min	0	0	0	0	0	0	0	6.3	5.5	0	0	0
Ac-ft	424	263	522	955	1,213	1,136	969	1,105	1,027	678	490	306

Calendar Year Summary

Annual Total 4,581.36 Annual Mean 12.5 Daily Max 33 Daily Min 0 Annual Ac-ft 9,087

Maximum Discharge				Minimum Discharge			
Date	Time	GH	Discharge	Date	Time	GH	Discharge
Jun. 2	09:00	1.40	35	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.

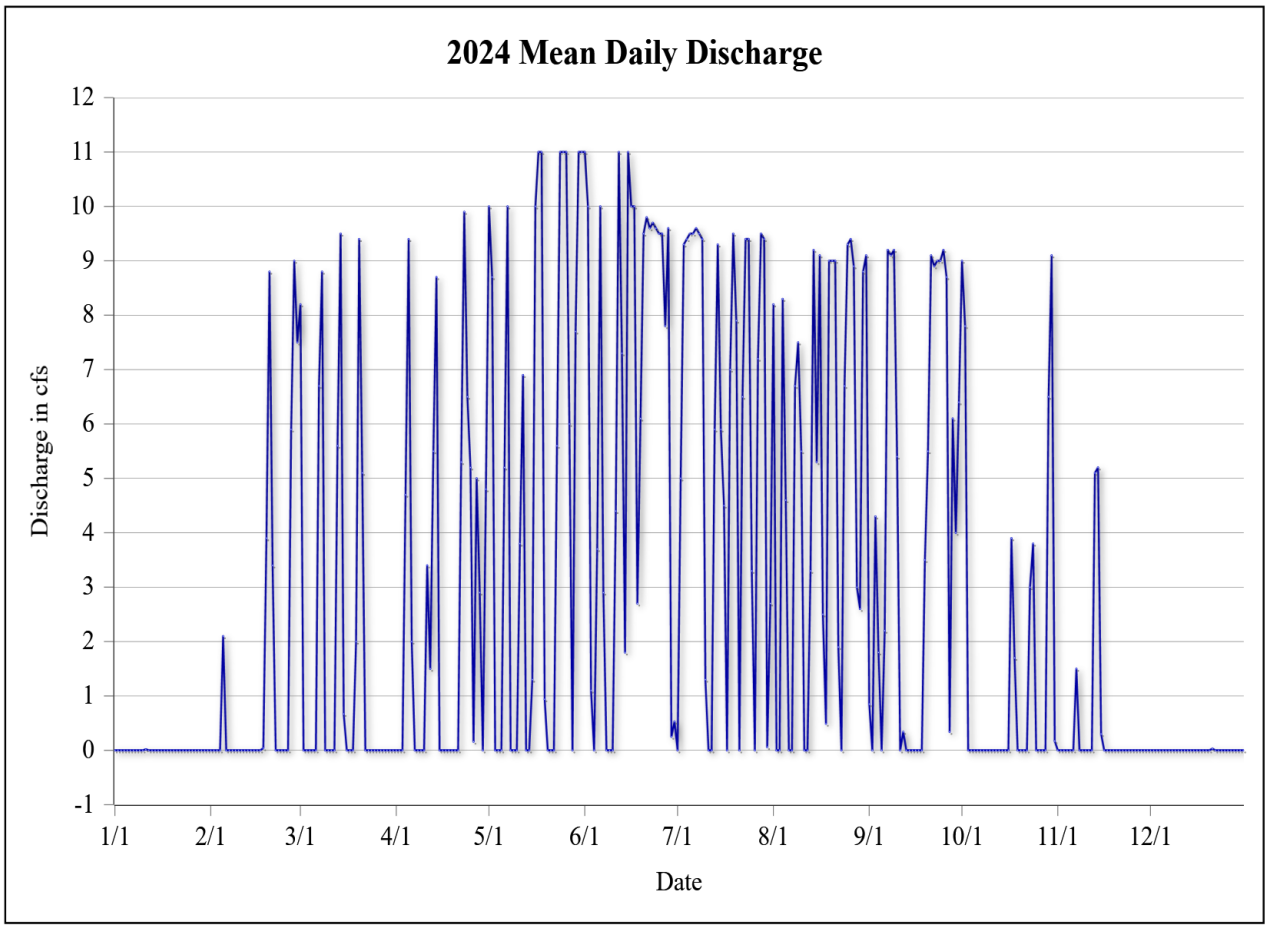
Period of Record—January 1, 2006 to current year.

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 Feb. 5, 2024 at 08:00 to Feb. 8, 2024 at 08:00, numerous periods from Apr. 12, 2024 to Jun. 18, 2024, and Jul. 14, 2024 at 22:00 to Jul. 15, 2024 at 09:00, due to gage malfunction.



Fort Mojave Tribe-California 2 (North)

Mean daily discharge, in cubic-feet per second, Calendar Year 2024

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0	8.2	0	10	**11**	0	8.2	0.85	9.0	0	0
2	0	0	0	0	8.7	**10**	5.0	0	0	7.8	0	0
3	0	0	0	0	0	**1.1**	9.3	0	4.3	0	0	0
4	0	0	0	4.7	0	0	9.4	8.3	1.8	0	0	0
5	0	**2.1**	0	9.4	0	**3.7**	9.5	4.6	0	0	0	0
6	0	**0**	0	2.0	**5.2**	**10**	9.5	0	2.2	0	0	0
7	0	**0**	6.7	0	**10**	**2.9**	9.6	0	9.2	0	1.5	0
8	0	**0**	8.8	0	0	0	9.5	6.7	9.1	0	0	0
9	0	0	0	0	0	0	9.4	7.5	9.2	0	0	0
10	0	0	0	0	0	0	1.3	5.5	5.4	0	0	0
11	0.02	0	0	3.4	**3.8**	**4.4**	0	0	0	0	0	0
12	0	0	0	1.5	**6.9**	**11**	0	0	0.34	0	0	0
13	0	0	5.6	5.5	0	**7.3**	5.9	3.3	0	0	5.1	0
14	0	0	9.5	8.7	0	**1.8**	**9.3**	9.2	0	0	5.2	0
15	0	0	0.67	0	**1.3**	**11**	**5.9**	5.3	0	0	0.30	0
16	0	0	0	0	**10**	**10**	4.5	9.1	0	0	0	0
17	0	0	0	0	**11**	**10**	0	2.5	0	3.9	0	0
18	0	0.04	0	0	**11**	**2.7**	7.0	0.49	0	1.7	0	0
19	0	3.9	2.0	0	**0.94**	6.1	9.5	9.0	3.5	0	0	0
20	0	8.8	9.4	0	0	9.5	7.9	9.0	5.5	0	0	0
21	0	3.4	5.1	0	0	9.8	0	9.0	9.1	0	0	0.03
22	0	0	0	**5.3**	0	9.6	6.5	1.9	8.9	0	0	0
23	0	0	0	**9.9**	**5.6**	9.7	9.4	0	9.0	3.0	0	0
24	0	0	0	6.5	**11**	9.6	9.4	6.7	9.0	3.8	0	0
25	0	0	0	5.2	**11**	9.5	3.3	9.3	9.2	0	0	0
26	0	0	0	0.16	**11**	9.5	0	9.4	8.7	0	0	0
27	0	5.9	0	**5.0**	**6.0**	7.8	7.2	8.9	0.34	0	0	0
28	0	9.0	0	**2.9**	0	9.6	9.5	3.0	6.1	0	0	0
29	0	7.5	0	0	**7.7**	0.25	9.4	2.6	4.0	6.5	0	0
30	0		0	4.8	**11**	0.53	0.06	8.8	6.4	9.1	0	0
31	0		0		**11**		2.7	9.1		0.17		0
Total	0.02	40.56	56.12	74.93	152.11	188.82	179.80	157.08	122.22	44.93	12.10	0.03
Mean	0.001	1.40	1.81	2.50	4.91	6.29	5.80	5.07	4.07	1.45	0.40	0.001
Max	0.02	9.0	9.5	9.9	11	11	9.6	9.4	9.2	9.1	5.2	0.03
Min	0	0	0	0	0	0	0	0	0	0	0	0
Ac-ft	0	80	111	149	302	375	357	312	242	89	24	0.1

Calendar Year Summary (Estimated values are excluded from all min and max statistics)

Annual Total 1,028.72 Annual Mean 2.81 Daily Max 10 Daily Min 0 Annual Ac-ft 2,040

Maximum Discharge (Excludes Estimates)				Minimum Discharge (Excludes Estimates)			
Date	Time	GH	Discharge	Date	Time	GH	Discharge
May 1	09:00	N/A	11	Jan. 1	01:00	N/A	0

Bold values indicate the daily value was derived from hourly data that contains one or more 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.

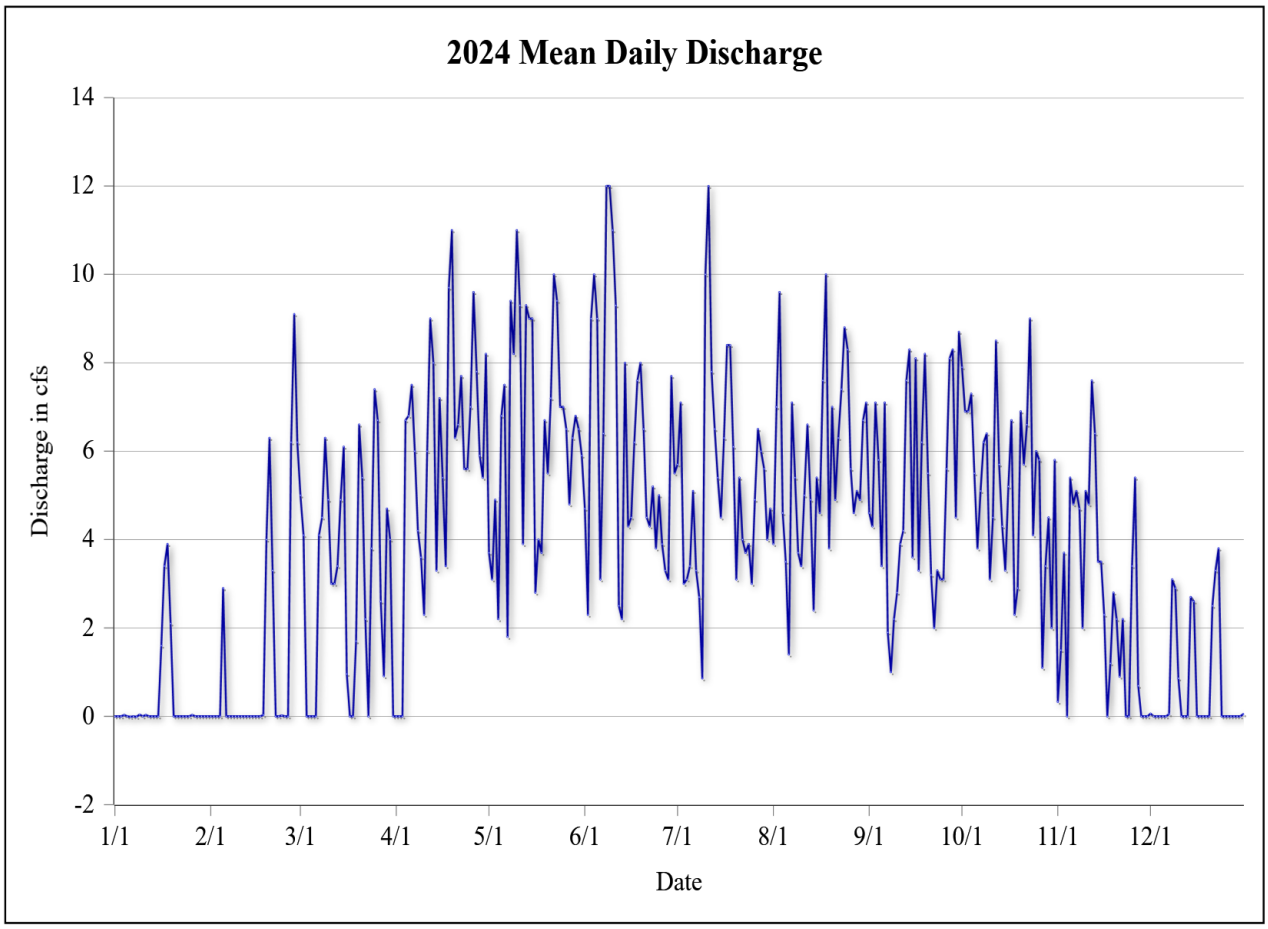
Period of Record—January 1, 2006 to current year.

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 Feb. 5, 2024 at 08:00 to Feb. 8, 2024 at 08:00 and Jul. 14, 2024 at 22:00 to Jul. 15, 2024 at 09:00, due to gage malfunction.



Fort Mojave Tribe-California 2 (West)

Mean daily discharge, in cubic-feet per second, Calendar Year 2024

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0	5.0	0	3.7	4.7	5.7	3.9	4.6	7.9	0.33	0.06
2	0	0	4.1	0	3.1	2.3	7.1	7.0	4.3	6.9	1.5	0
3	0	0	0	0	4.9	9.0	3.0	9.6	7.1	6.9	3.7	0
4	0.03	0	0	6.7	2.2	10	3.1	4.6	5.8	7.3	0	0
5	0	**2.9**	0	6.8	6.8	9.0	3.4	3.5	3.4	5.5	5.4	0
6	-0.01	**0**	0	7.5	7.5	3.1	5.1	1.4	7.1	3.8	4.8	0
7	0	**0**	4.1	6.0	1.8	6.4	3.3	7.1	1.9	5.1	5.1	0.05
8	-0.01	**0**	4.5	4.2	9.4	12	2.7	5.4	1.0	6.2	4.7	3.1
9	0.04	0	6.3	3.6	8.2	12	0.86	3.7	2.2	6.4	2.0	2.9
10	0	0	4.9	2.3	11	11	10	3.4	2.8	3.1	5.1	0.86
11	0.03	0	3.0	6.0	9.3	9.3	12	5.0	3.9	4.5	4.8	0
12	0	0	3.0	9.0	3.9	2.5	7.8	6.6	4.2	8.5	7.6	0
13	0	0	3.4	8.0	9.3	2.2	6.5	4.9	7.6	5.7	6.4	0
14	0	0	4.9	3.3	9.0	8.0	**5.4**	2.4	8.3	4.3	3.5	2.7
15	0	0	6.1	7.2	9.0	4.3	**4.5**	5.4	3.6	3.3	3.5	2.6
16	1.6	0	0.96	5.4	2.8	4.5	6.3	4.6	8.1	5.2	2.3	0
17	3.4	0	0	3.4	4.0	6.2	8.4	7.6	3.3	6.7	0	0
18	3.9	0.03	0	9.7	3.7	7.6	8.4	10	6.2	2.3	1.2	0
19	2.1	4.0	1.7	11	6.7	8.0	6.1	3.8	8.2	2.9	2.8	0
20	0	6.3	6.6	6.3	5.5	6.5	3.1	7.0	5.5	6.9	2.2	0
21	0	3.3	5.4	6.6	7.2	4.5	5.4	4.9	3.2	5.7	0.90	2.5
22	0	0	2.2	7.7	10	4.3	4.0	6.3	2.0	6.6	2.2	3.3
23	0	0	0	5.6	9.4	5.2	3.7	7.4	3.3	9.0	0	3.8
24	0	0.02	3.8	5.6	7.0	3.8	3.9	8.8	3.1	4.1	0	0
25	0	0	7.4	7.0	7.0	5.0	3.0	8.3	3.1	6.0	3.4	0
26	0.03	0	6.7	9.6	6.5	3.9	4.9	5.6	5.6	5.8	5.4	0
27	0	6.2	2.6	7.8	4.8	3.3	6.5	4.6	8.1	1.1	0.69	0
28	0	9.1	0.91	5.9	6.3	3.1	6.0	5.1	8.3	3.4	0	0
29	0	6.2	4.7	5.4	6.8	7.7	5.6	4.9	4.5	4.5	0	0
30	0		4.0	8.2	6.5	5.5	4.0	6.7	8.7	2.0	0	0
31	0		0		5.9		4.7	7.1		5.8		0.05
Total	11.06	38.04	96.16	176.1	200.2	185.5	164.09	177.0	148.9	163.4	79.43	22.08
Mean	0.36	1.31	3.10	5.87	6.46	6.18	5.29	5.71	4.96	5.27	2.65	0.71
Max	3.9	9.1	7.4	11	11	12	12	10	8.7	9.0	7.6	3.8
Min	-0.01	0	0	0	1.8	2.2	0.86	1.4	1.0	1.1	0	0
Ac-ft	22	75	191	349	397	368	325	351	295	324	158	44

Calendar Year Summary (Estimated values are excluded from all min and max statistics)

Annual Total 1,462.00 Annual Mean 3.99 Daily Max 12 Daily Min -0.01 Annual Ac-ft 2,900

Maximum Discharge (Excludes Estimates)				Minimum Discharge (Excludes Estimates)			
Date	Time	GH	Discharge	Date	Time	GH	Discharge
Apr. 25	08:00	N/A	14	Jan. 8	03:00	N/A	-0.29

Bold values indicate the daily value was derived from hourly data that contains one or more 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.

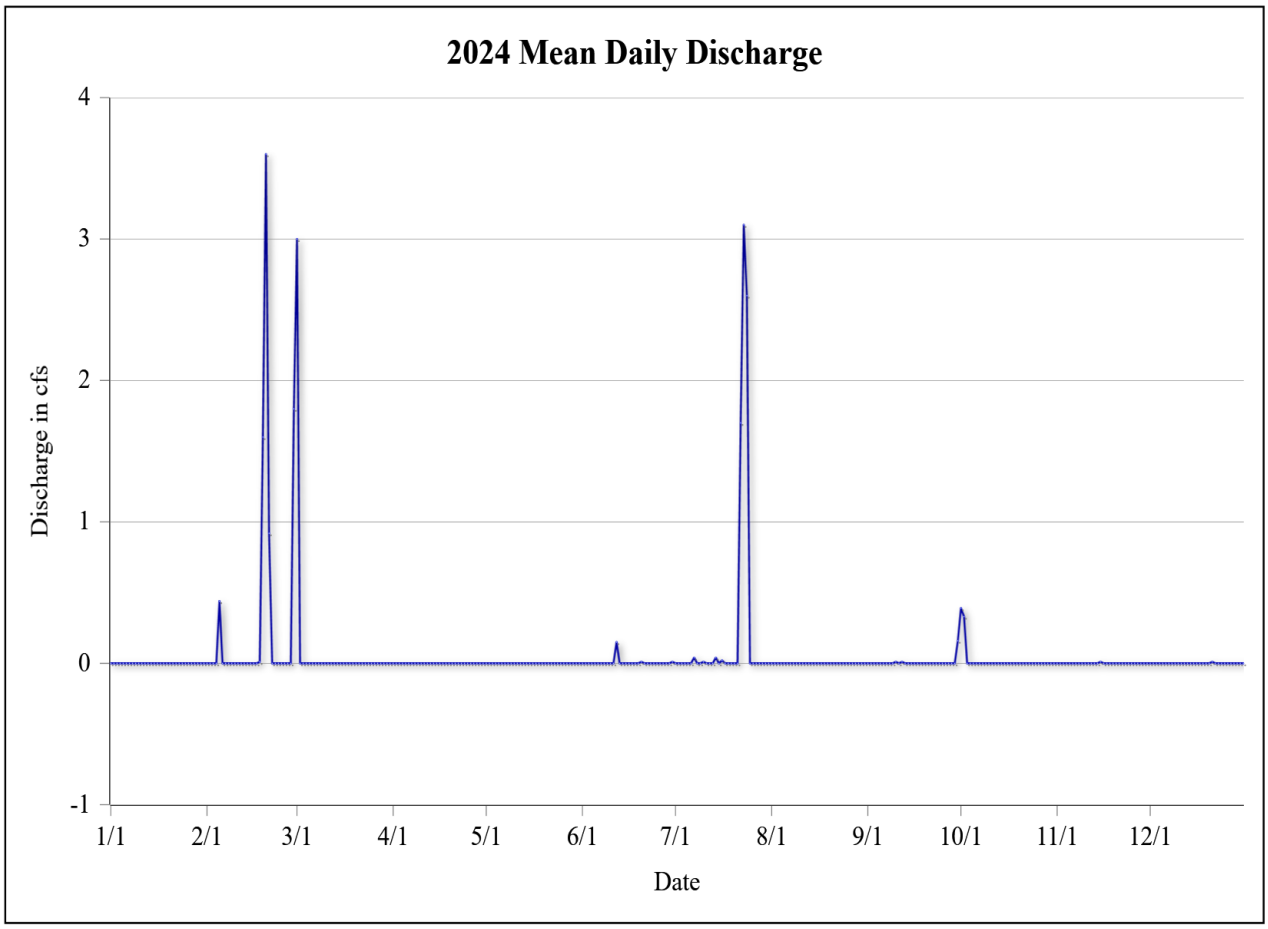
Period of Record—January 1, 2006 to current year.

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—The discharge record was estimated from Feb. 5, 2024 at 08:00 to Feb. 8, 2024 at 08:00 and Jul. 14, 2024 at 22:00 to Jul. 15, 2024 at 09:00, due to gage malfunction.



Fort Mojave Tribe-California 2 (South)

Mean daily discharge, in cubic-feet per second, Calendar Year 2024

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0	3.0	0	0	0	0	0	0	0.39	0	0
2	0	0	0	0	0	0	0	0	0	0.33	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	**0.44**	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	0.04	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	0.01	0	0.01	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0.15	0	0	0.01	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	**0.04**	0	0	0	0	0
15	0	0	0	0	0	0	**0**	0	0	0	0.01	0
16	0	0	0	0	0	0	0.02	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0.01	0	0	0	0	0	0	0	0	0	0
19	0	1.6	0	0	0	0	0	0	0	0	0	0
20	0	3.6	0	0	0	0.01	0	0	0	0	0	0
21	0	0.92	0	0	0	0	0	0	0	0	0	0.01
22	0	0	0	0	0	0	1.7	0	0	0	0	0
23	0	0	0	0	0	0	3.1	0	0	0	0	0
24	0	0	0	0	0	0	2.6	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	1.8	0	0	0	0	0	0	0	0	0	0
30	0		0	0	0	0.01	0	0	0.16	0	0	0
31	0		0		0		0	0		0		0
Total	0	8.35	3.0	0	0	0.17	7.43	0	0.18	0.72	0.01	0.01
Mean	0	0.29	0.096	0	0	0.006	0.24	0	0.006	0.023	0	0
Max	0	3.6	3.0	0	0	0.15	3.1	0	0.16	0.39	0.01	0.01
Min	0	0	0	0	0	0	0	0	0	0	0	0
Ac-ft	0	17	5.9	0	0	0.3	15	0	0.4	1.4	0	0

Calendar Year Summary (Estimated values are excluded from all min and max statistics)

Annual Total 19.84 Annual Mean 0.054 Daily Max 3.6 Daily Min 0 Annual Ac-ft 39

Maximum Discharge (Excludes Estimates)				Minimum Discharge (Excludes Estimates)			
Date	Time	GH	Discharge	Date	Time	GH	Discharge
Jul. 23	04:00	N/A	4.3	Jan. 1	01:00	N/A	0

Bold values indicate the daily value was derived from hourly data that contains one or more hours of estimated record.

Fort Mojave Tribe-California 1

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

Drainage Area—Not applicable.

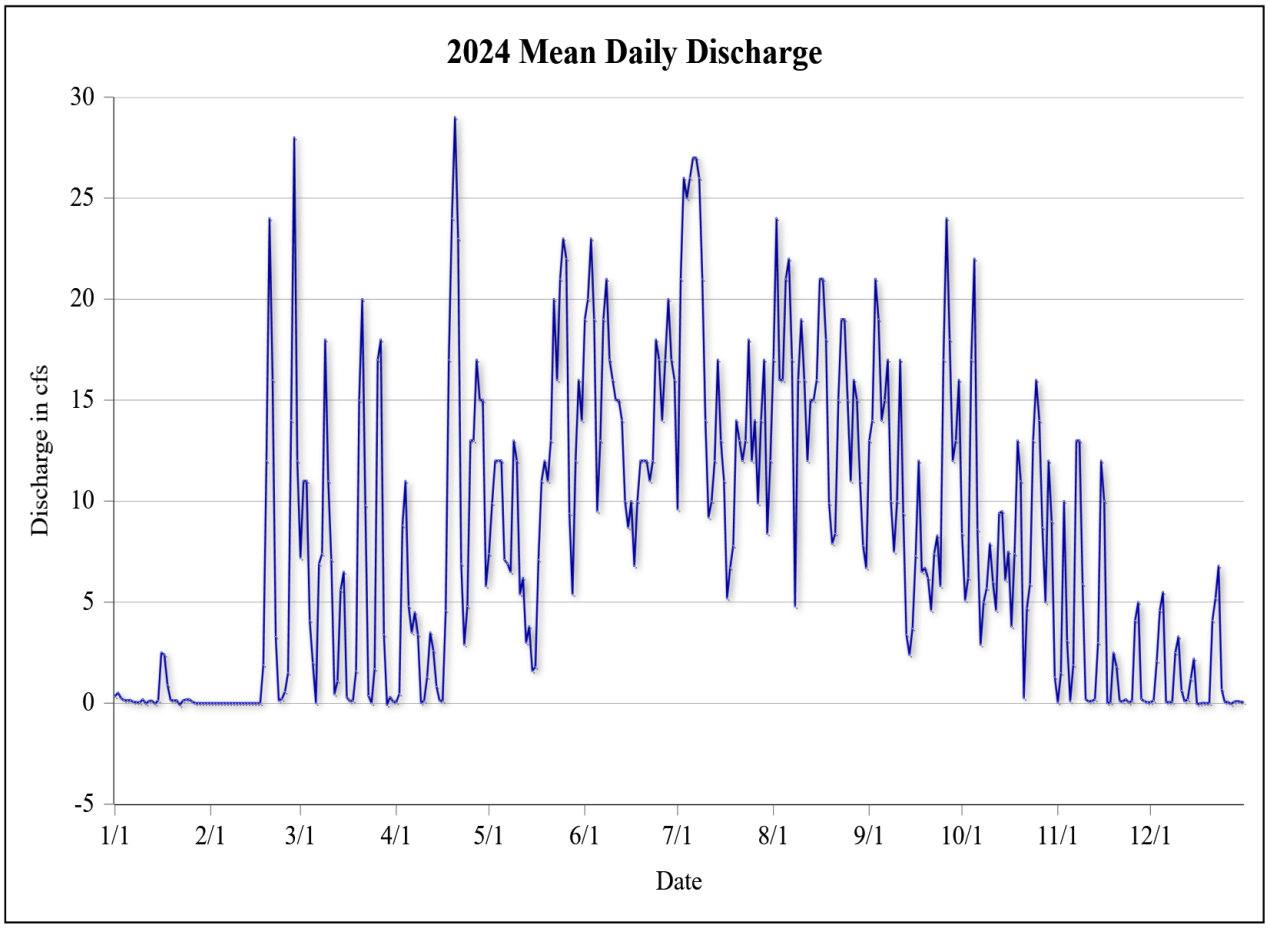
Period of Record—January 1, 2006 to current year.

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

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 2024

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0.34	0	7.2	0.05	7.4	19	9.6	17	13	8.4	0.04	0.05
2	0.52	0	11	0.47	9.9	20	21	24	14	5.1	1.5	0.13
3	0.25	0	11	8.8	12	23	26	16	21	6.2	10	2.1
4	0.14	0	4.1	11	12	19	25	16	19	17	3.1	4.6
5	0.14	0	2.0	4.8	12	9.5	26	21	14	22	0.10	5.5
6	0.15	0	0.01	3.5	7.1	13	27	22	15	8.6	1.9	0.06
7	0.06	0	6.9	4.5	6.9	19	27	17	17	2.9	13	0.05
8	0.05	0	7.4	3.4	6.5	21	26	4.8	10	5.0	13	0.06
9	0.03	0	18	0.02	13	17	21	16	7.5	5.7	5.9	2.5
10	0.19	0	11	0.12	12	16	14	19	10	7.9	0.19	3.3
11	-0.02	0	7.1	1.3	5.4	15	9.2	16	17	6.0	0.09	0.63
12	0.11	0	0.45	3.5	6.2	15	10	12	9.4	4.6	0.11	0.10
13	0.12	0	1.1	2.6	3.0	14	12	15	3.4	9.4	0.19	0.18
14	-0.03	0	5.6	0.83	3.8	10	17	15	2.4	9.5	3.0	1.2
15	0.14	0	6.5	0.13	1.6	8.7	13	16	3.7	6.1	12	2.2
16	2.5	0	0.29	0.11	1.8	10	11	21	7.3	7.5	10	-0.04
17	2.4	0	0.10	4.6	7.1	6.8	5.2	21	12	3.8	0.01	-0.02
18	0.90	1.9	0.13	17	11	10	6.7	18	6.5	7.4	0.04	0.01
19	0.15	12	1.6	24	12	12	7.8	9.9	6.7	13	2.5	0
20	0.13	24	15	29	11	12	14	7.9	6.2	11	1.8	0
21	0.14	16	20	23	13	12	13	8.4	4.6	0.26	0.11	4.1
22	-0.09	3.3	9.8	6.9	20	11	12	15	7.4	4.7	0.09	5.2
23	0.13	0.13	0.37	2.9	16	12	13	19	8.3	5.9	0.19	6.8
24	0.18	0.21	0.01	4.8	21	18	18	19	5.8	13	0.03	0.69
25	0.19	0.57	1.7	13	23	17	12	15	17	16	0.11	0.06
26	0.08	1.5	17	13	22	14	14	11	24	14	4.1	0.06
27	0	14	18	17	9.4	17	9.9	16	18	8.7	5.0	-0.04
28	0	28	3.4	15	5.4	20	14	15	12	5.0	0.20	0.07
29	0	12	-0.08	15	12	17	17	11	13	12	0.10	0.11
30	0		0.31	5.8	16	16	8.4	7.8	16	9.0	0.04	0.07
31	0		0.08		14		12	6.7		1.3		0.05
Total	8.89	113.79	187.67	235.99	334.3	444.0	471.7	468.2	340.7	258.96	89.18	39.93
Mean	0.29	3.92	6.05	7.87	10.8	14.8	15.2	15.1	11.4	8.35	2.97	1.29
Max	2.5	28	20	29	23	23	27	24	24	22	13	6.8
Min	-0.09	0	-0.08	0.02	1.6	6.8	5.2	4.8	2.4	0.26	0.01	-0.04
Ac-ft	18	226	372	468	663	881	936	929	676	514	177	79

Calendar Year Summary

Annual Total 2,993.23 Annual Mean 8.18 Daily Max 29 Daily Min -0.09 Annual Ac-ft 5,937

Maximum Discharge				Minimum Discharge			
Date	Time	GH	Discharge	Date	Time	GH	Discharge
May 25	01:00	2.50	44	Jan. 26	02:00	0.68	-1.6

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.

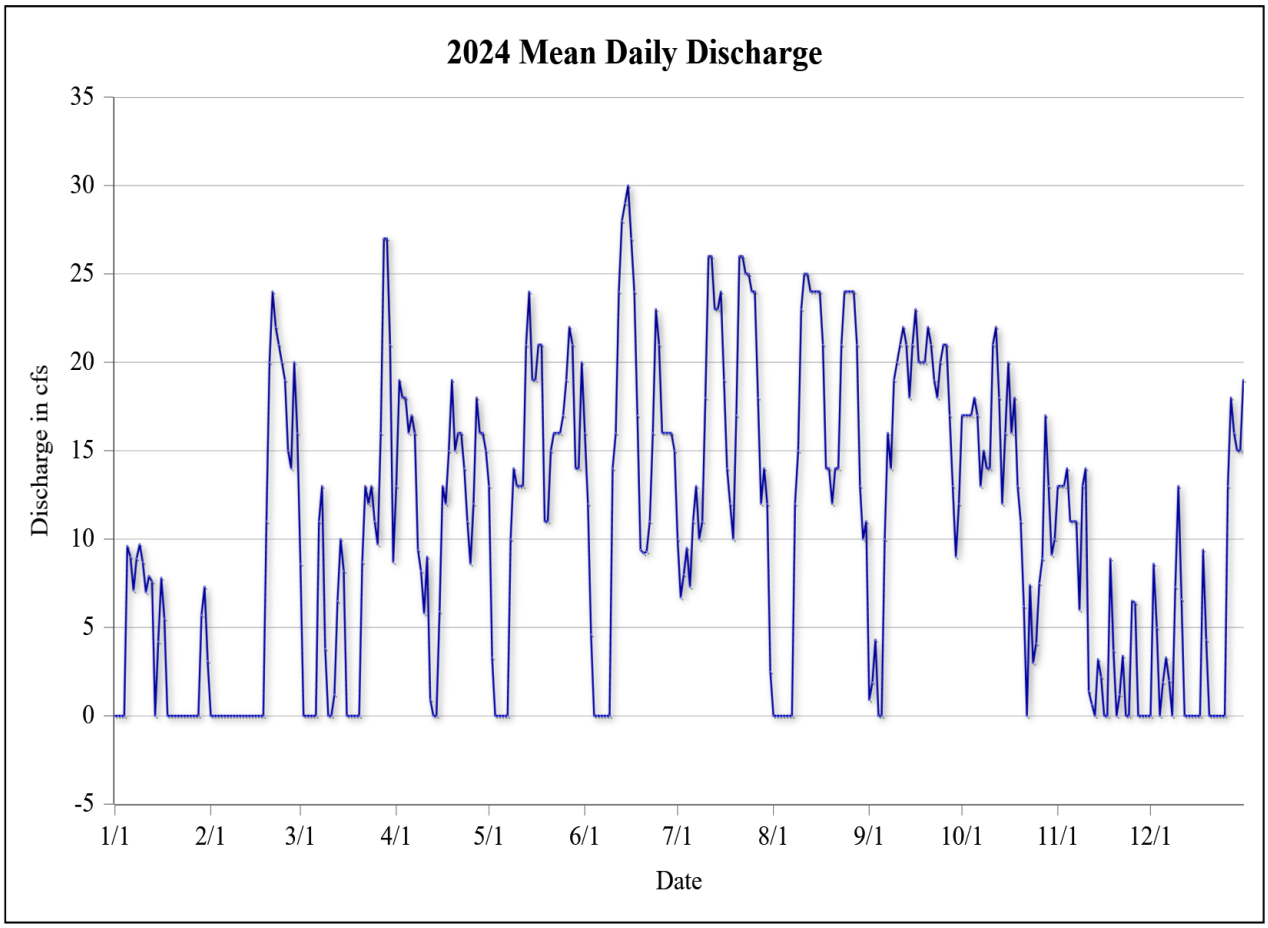
Period of Record—April 10, 2006 to current year.

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—There were several short duration periods when the flume was nearing submergence due to improper operation of the downstream retention pond. No discernable visual identifiers were found in the data therefore the data was not modified.



Fort Mojave Tribe-Cimmaron

Mean daily discharge, in cubic-feet per second, Calendar Year 2024

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0	8.6	13	13	16	10	0	0.90	17	13	0
2	0	0	0	19	3.3	12	6.7	0	1.9	17	13	8.6
3	0	0	0	18	0	4.6	8.0	0	4.3	17	13	5.0
4	0	0	0	18	0	0	9.5	0	0	17	14	0
5	9.6	0	0	16	0	0	7.3	0	0	18	11	1.9
6	9.0	0	0	17	0	0	11	0	10	17	11	3.3
7	7.1	0	11	16	0	0	13	0	16	13	11	2.0
8	8.9	0	13	9.4	10	0	10	12	14	15	6.0	0
9	9.7	0	3.8	8.2	14	0	11	15	19	14	13	7.3
10	8.7	0	0	5.8	13	14	18	23	20	14	14	13
11	7.0	0	0	9.0	13	16	26	25	21	21	1.4	6.6
12	7.9	0	1.2	0.92	13	24	26	25	22	22	0.66	0
13	7.6	0	6.5	0	21	28	23	24	21	18	0	0
14	0	0	10	0	24	29	23	24	18	12	3.2	0
15	4.2	0	8.2	5.9	19	30	24	24	21	16	2.2	0
16	7.8	0	0	13	19	27	19	24	23	20	0	0
17	5.5	0	0	12	21	24	14	21	20	16	0	0
18	0	0	0	15	21	17	12	14	20	18	8.9	9.4
19	0	11	0	19	11	9.4	10	14	20	13	3.7	4.3
20	0	20	0	15	11	9.2	17	12	22	11	0	0
21	0	24	8.7	16	15	9.3	26	14	21	6.2	1.2	0
22	0	22	13	16	16	11	26	14	19	0	3.4	0
23	0	21	12	14	16	16	25	21	18	7.4	0	0
24	0	20	13	11	16	23	25	24	20	3.0	0	0
25	0	19	11	8.6	17	21	24	24	21	4.1	6.5	0
26	0	15	9.7	12	19	16	24	24	21	7.5	6.4	13
27	0	14	16	18	22	16	18	24	17	8.9	0	18
28	0	20	27	16	21	16	12	21	13	17	0	16
29	5.7	16	27	16	14	16	14	13	9.0	13	0	15
30	7.3		21	15	14	15	12	10	12	9.1	0	15
31	3.1		8.7		20		2.5	11		10		19
Total	109.4	202	228.4	372.20	415.8	418.7	507.8	455	466.45	411.0	155.56	157.5
Mean	3.53	6.97	7.37	12.4	13.4	14.0	16.4	14.7	15.5	13.3	5.19	5.08
Max	9.7	24	27	19	24	30	26	25	23	22	14	19
Min	0	0	0	0	0	0	2.5	0	0	0	0	0
Ac-ft	217	401	453	738	825	830	1,007	903	925	815	309	312

Calendar Year Summary

Annual Total 3,900.23 Annual Mean 10.7 Daily Max 30 Daily Min 0 Annual Ac-ft 7,736

Maximum Discharge				Minimum Discharge			
Date	Time	GH	Discharge	Date	Time	GH	Discharge
Dec. 31	11:00	0.98	32	Jan. 1	01:00	0.00	0

Fort Mojave Tribe-Willow

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

Drainage Area—Not applicable.

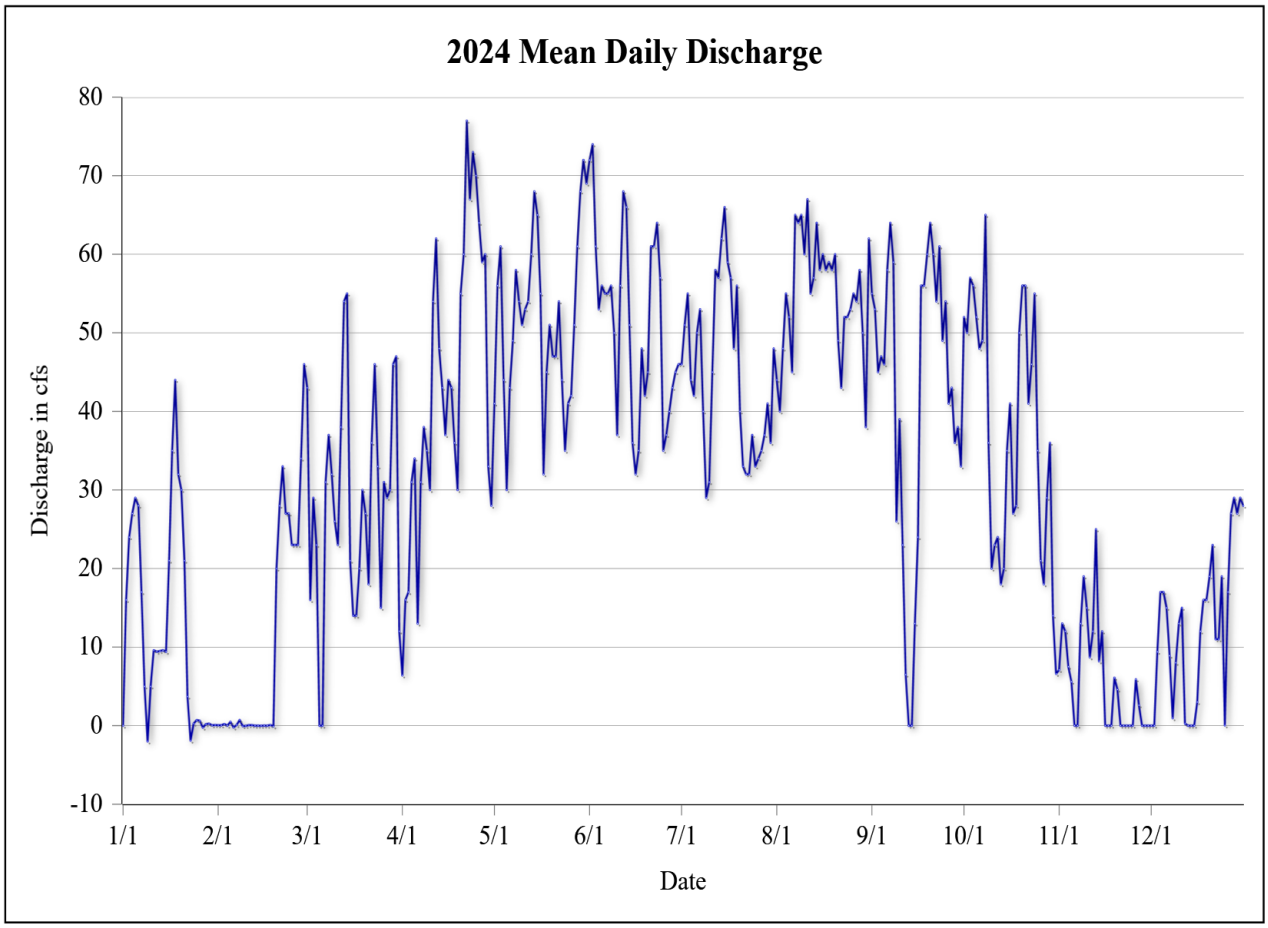
Period of Record—July 12, 2006 to current year.

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

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, -8.0 cfs, Feb. 5, 2024 at 12:00.

Remarks—None.



Fort Mojave Tribe-Willow

Mean daily discharge, in cubic-feet per second, Calendar Year 2024

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0.05	43	6.4	41	72	46	44	55	52	7.1	0
2	16	0.04	16	16	56	74	51	40	53	50	13	0
3	24	0.21	29	17	61	61	55	48	45	57	12	9.4
4	27	0	23	31	44	53	44	55	47	56	7.5	17
5	29	0.50	0	34	30	56	42	52	46	52	5.6	17
6	28	-0.23	0	13	43	55	50	45	58	48	0	15
7	17	0.08	31	31	49	55	53	65	64	49	0	8.9
8	5.0	0.73	37	38	58	56	40	64	59	65	13	0.95
9	-2.0	-0.06	32	35	54	50	29	65	26	36	19	8.0
10	5.0	-0.03	26	30	51	37	31	60	39	20	15	13
11	9.6	0.06	23	54	53	56	45	67	23	23	8.7	15
12	9.4	0.06	38	62	54	68	58	55	6.5	24	12	0.26
13	9.5	-0.01	54	48	60	66	57	57	0	18	25	0
14	9.6	0	55	43	68	51	62	64	0	20	8.2	0
15	9.4	-0.02	21	37	65	36	66	58	13	35	12	0
16	21	0.01	14	44	55	32	59	60	24	41	0	3.0
17	35	-0.01	14	43	32	35	57	58	56	27	0	12
18	44	0.08	20	36	45	48	48	59	56	28	0	16
19	32	-0.09	30	30	51	42	56	58	60	50	6.1	16
20	30	20	27	55	47	45	40	60	64	56	4.6	19
21	21	28	18	60	47	61	33	49	60	56	0	23
22	3.7	33	36	77	54	61	32	43	54	41	0	11
23	-1.9	27	46	67	44	64	32	52	61	46	0	11
24	0.26	27	33	73	35	57	37	52	49	55	0	19
25	0.71	23	15	70	41	35	33	53	54	35	0	0.04
26	0.63	23	31	64	42	37	34	55	41	21	5.9	17
27	-0.25	23	29	59	51	40	35	54	43	18	2.6	27
28	0.19	34	30	60	61	43	37	58	36	29	0	29
29	0.25	46	46	33	68	45	41	50	38	36	0	27
30	0.04		47	28	72	46	36	38	33	14	0	29
31	0.08		12		69		48	62		6.6		28
Total	383.68	285.75	877	1,296.5	1,597	1,536	1,386	1,700	1,263.9	1,167.4	177.0	392.52
Mean	12.4	9.85	28.3	43.2	51.5	51.2	44.7	54.9	42.1	37.7	5.90	12.7
Max	44	46	55	77	72	74	66	67	64	65	25	29
Min	-2.0	-0.23	0	6.4	30	32	29	38	0	6.6	0	0
Ac-ft	761	567	1,739	2,572	3,169	3,048	2,749	3,373	2,507	2,316	351	779

Calendar Year Summary

Annual Total 12,063.63 Annual Mean 33.0 Daily Max 77 Daily Min -2.0 Annual Ac-ft 23,928

Maximum Discharge				Minimum Discharge			
Date	Time	GH	Discharge	Date	Time	GH	Discharge
Apr. 24	08:00	3.82	91	Feb. 5	12:00	0.59	-8.0

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.

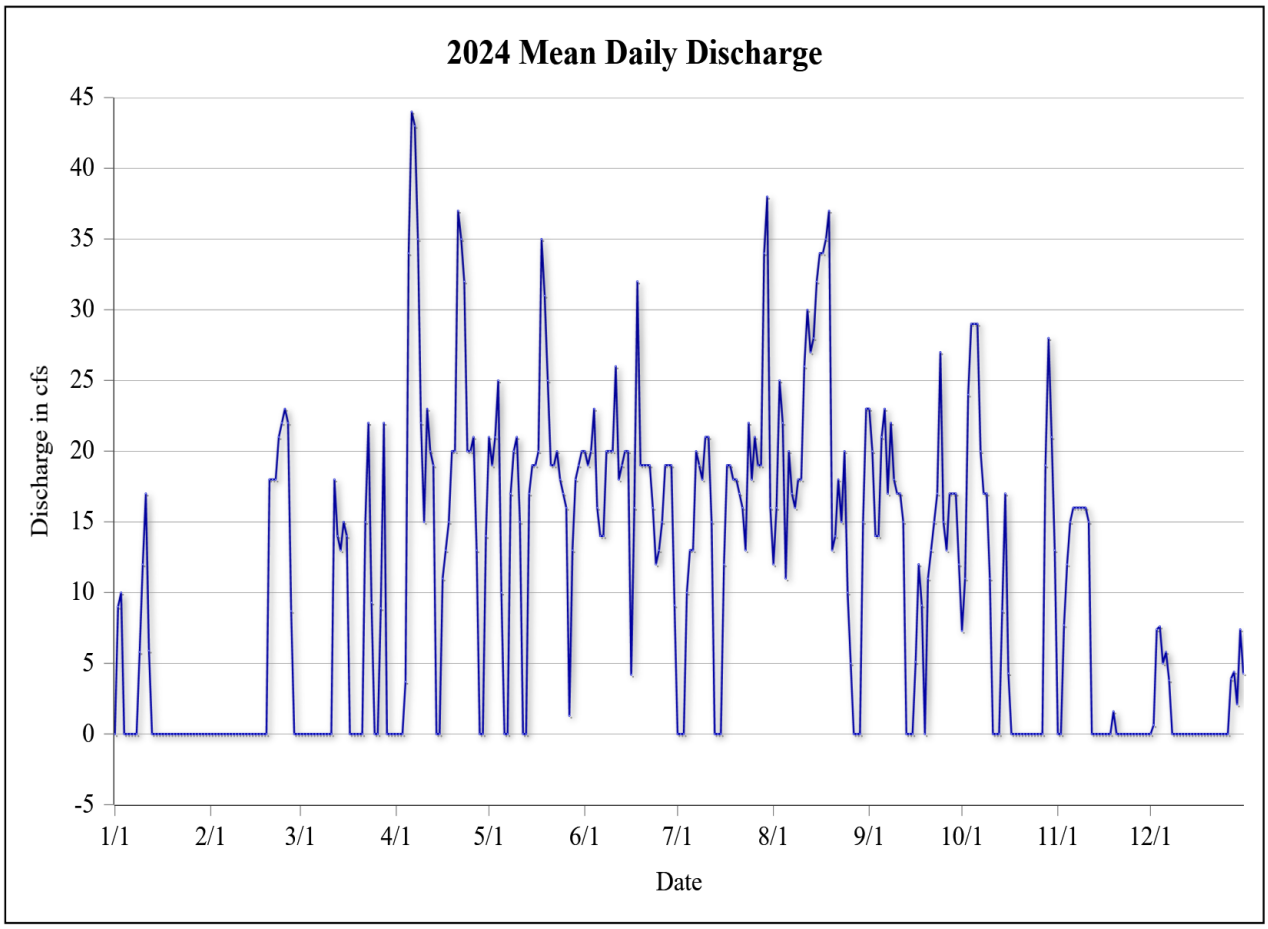
Period of Record—April 21, 2006 to current year.

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—None.



Fort Mojave Tribe-Barrackman

Mean daily discharge, in cubic-feet per second, Calendar Year 2024

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0	0	0	21	20	0	12	23	7.3	0	0
2	9.0	0	0	0	19	19	0	16	20	11	0	0.64
3	10	0	0	0	21	20	0	25	14	24	7.7	7.4
4	0	0	0	3.7	25	23	10	22	14	29	12	7.6
5	0	0	0	34	10	16	13	11	21	29	15	5.0
6	0	0	0	44	0	14	13	20	23	29	16	5.8
7	0	0	0	43	0	14	20	17	17	20	16	3.8
8	0	0	0	35	17	20	19	16	22	17	16	0
9	5.8	0	0	22	20	20	18	18	18	17	16	0
10	12	0	0	15	21	20	21	18	17	11	16	0
11	17	0	0	23	15	26	21	26	17	0	15	0
12	5.9	0	18	20	0	18	15	30	15	0	0	0
13	0	0	14	19	0	19	0	27	0	0	0	0
14	0	0	13	0	17	20	0	28	0	8.7	0	0
15	0	0	15	0	19	20	0	32	0	17	0	0
16	0	0	14	11	19	4.2	12	34	5.1	4.3	0	0
17	0	0	0	13	20	16	19	34	12	0	0	0
18	0	0	0	15	35	32	19	35	9.1	0	0	0
19	0	0	0	20	31	19	18	37	0	0	1.6	0
20	0	18	0	20	25	19	18	13	11	0	0	0
21	0	18	0	37	19	19	17	14	13	0	0	0
22	0	18	15	35	19	19	16	18	15	0	0	0
23	0	21	22	32	20	16	13	15	17	0	0	0
24	0	22	9.3	20	18	12	22	20	27	0	0	0
25	0	23	0	20	17	13	18	10	15	0	0	0
26	0	22	0	21	16	15	21	5.0	13	0	0	0
27	0	8.7	8.9	13	1.3	19	19	0	17	0	0	3.9
28	0	0	22	0	13	19	19	0	17	19	0	4.4
29	0	0	0	0	18	19	34	0	17	28	0	2.1
30	0		0	14	19	9.1	38	15	12	21	0	7.4
31	0		0		20		16	23		13		4.3
Total	59.7	150.5	151.2	528.7	516.0	538.8	470	588.4	421.4	304.3	131.4	52.18
Mean	1.92	5.19	4.88	17.6	16.6	18.0	15.2	19.0	14.0	9.82	4.38	1.68
Max	17	23	22	44	35	32	38	37	27	29	16	7.6
Min	0	0	0	0	0	4.2	0	0	0	0	0	0
Ac-ft	118	299	300	1,049	1,023	1,069	932	1,167	836	604	261	104

Calendar Year Summary

Annual Total 3,912.43 Annual Mean 10.7 Daily Max 44 Daily Min 0 Annual Ac-ft 7,760

Maximum Discharge				Minimum Discharge			
Date	Time	GH	Discharge	Date	Time	GH	Discharge
May 18	15:00	0.97	47	Jan. 1	01:00	0.00	0

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.

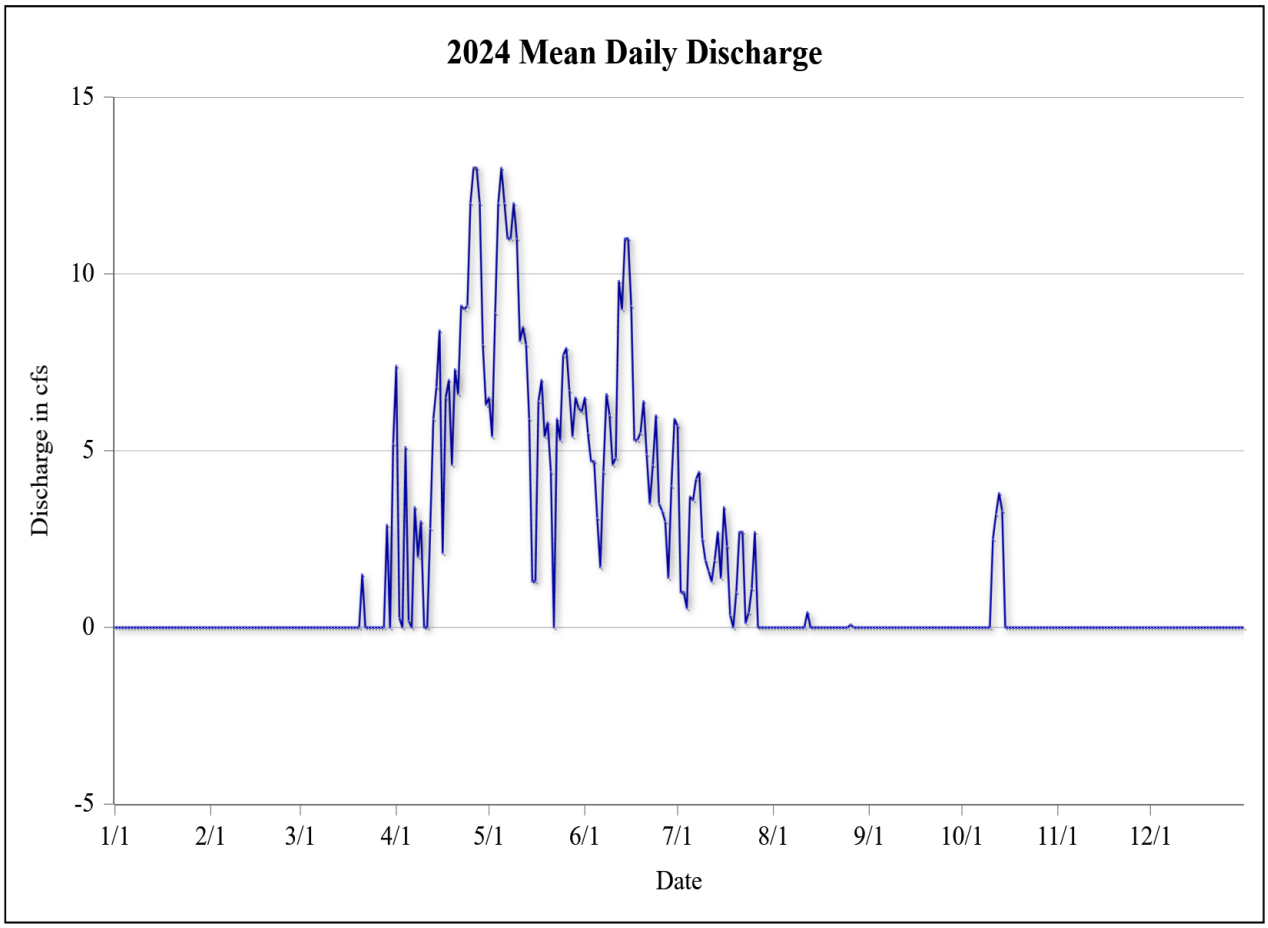
Period of Record—January 1, 2005 to current year.

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 Jan. 1, 2024 at 01:00 to Mar. 20, 2024 at 10:00, as there was no diversion from the river during this period. 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 2024

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	**0**	**0**	7.4	6.5	6.5	5.7	0	0	0	0	0
2	0	**0**	**0**	0.27	5.4	5.5	0.99	0	0	0	0	0
3	0	**0**	**0**	0	8.9	4.7	1.0	0	0	0	0	0
4	**0**	**0**	**0**	5.1	12	4.7	0.54	0	0	0	0	0
5	**0**	**0**	**0**	0.19	13	3.1	3.7	0	0	0	0	0
6	**0**	**0**	**0**	0	12	1.7	3.6	0	0	0	0	0
7	**0**	**0**	**0**	3.4	11	4.4	4.2	0	0	0	0	0
8	**0**	**0**	**0**	2.0	11	6.6	4.4	0	0	0	0	0
9	**0**	**0**	**0**	3.0	12	6.0	2.5	0	0	0	0	0
10	**0**	**0**	**0**	0	11	4.6	1.9	0	0	0	0	0
11	**0**	**0**	**0**	0	8.1	4.8	1.6	0	0	2.5	0	0
12	**0**	**0**	**0**	2.8	8.5	9.8	1.3	0.43	0	3.2	0	0
13	**0**	**0**	**0**	5.9	8.0	9.0	1.9	0	0	3.8	0	0
14	**0**	**0**	**0**	6.8	5.9	11	2.7	0	0	3.3	0	0
15	**0**	**0**	**0**	8.4	1.3	11	1.4	0	0	0	0	0
16	**0**	**0**	**0**	2.1	1.3	9.1	3.4	0	0	0	0	0
17	**0**	**0**	**0**	6.5	6.4	5.3	2.3	0	0	0	0	0
18	**0**	**0**	**0**	7.0	7.0	5.3	0.35	0	0	0	0	0
19	**0**	**0**	**0**	4.6	5.4	5.5	0	0	0	0	0	0
20	**0**	**0**	**0**	7.3	5.8	6.4	1.0	0	0	0	0	0
21	**0**	**0**	1.5	6.6	4.4	4.9	2.7	0	0	0	0	0
22	**0**	**0**	0	9.1	0	3.5	2.7	0	0	0	0	0
23	**0**	**0**	0	9.0	5.9	4.6	0.12	0	0	0	0	0
24	**0**	**0**	0	9.1	5.3	6.0	0.42	0	0	0	0	0
25	**0**	**0**	0	12	7.7	3.5	1.1	0	0	0	0	0
26	**0**	**0**	0	13	7.9	3.3	2.7	0.08	0	0	0	0
27	**0**	**0**	0	13	6.7	3.0	0	0	0	0	0	0
28	**0**	**0**	0	12	5.4	1.4	0	0	0	0	0	0
29	**0**	**0**	2.9	8.0	6.5	4.0	0	0	0	0	0	0
30	**0**		-0.01	6.3	6.2	5.9	0	0	0	0	0	0
31	**0**		5.2		6.1		0	0		0		0
Total	0	0	9.64	170.54	223.2	165.1	54.09	0.51	0	12.9	0	0
Mean	0	0	0.31	5.68	7.20	5.50	1.74	0.016	0	0.41	0	0
Max	0	0	5.2	13	13	11	5.7	0.43	0	3.8	0	0
Min	0	0	-0.01	0	0	1.4	0	0	0	0	0	0
Ac-ft	0	0	19	338	443	327	107	1.0	0	25	0	0

Calendar Year Summary (Estimated values are excluded from all min and max statistics)

Annual Total 635.98 Annual Mean 1.74 Daily Max 13 Daily Min -0.01 Annual Ac-ft 1,261

Maximum Discharge (Excludes Estimates)				Minimum Discharge (Excludes Estimates)			
Date	Time	GH	Discharge	Date	Time	GH	Discharge
Apr. 26	17:00	N/A	15	Mar. 30	19:00	N/A	-3.7

Bold values indicate the daily value was derived from hourly data that contains one or more 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.

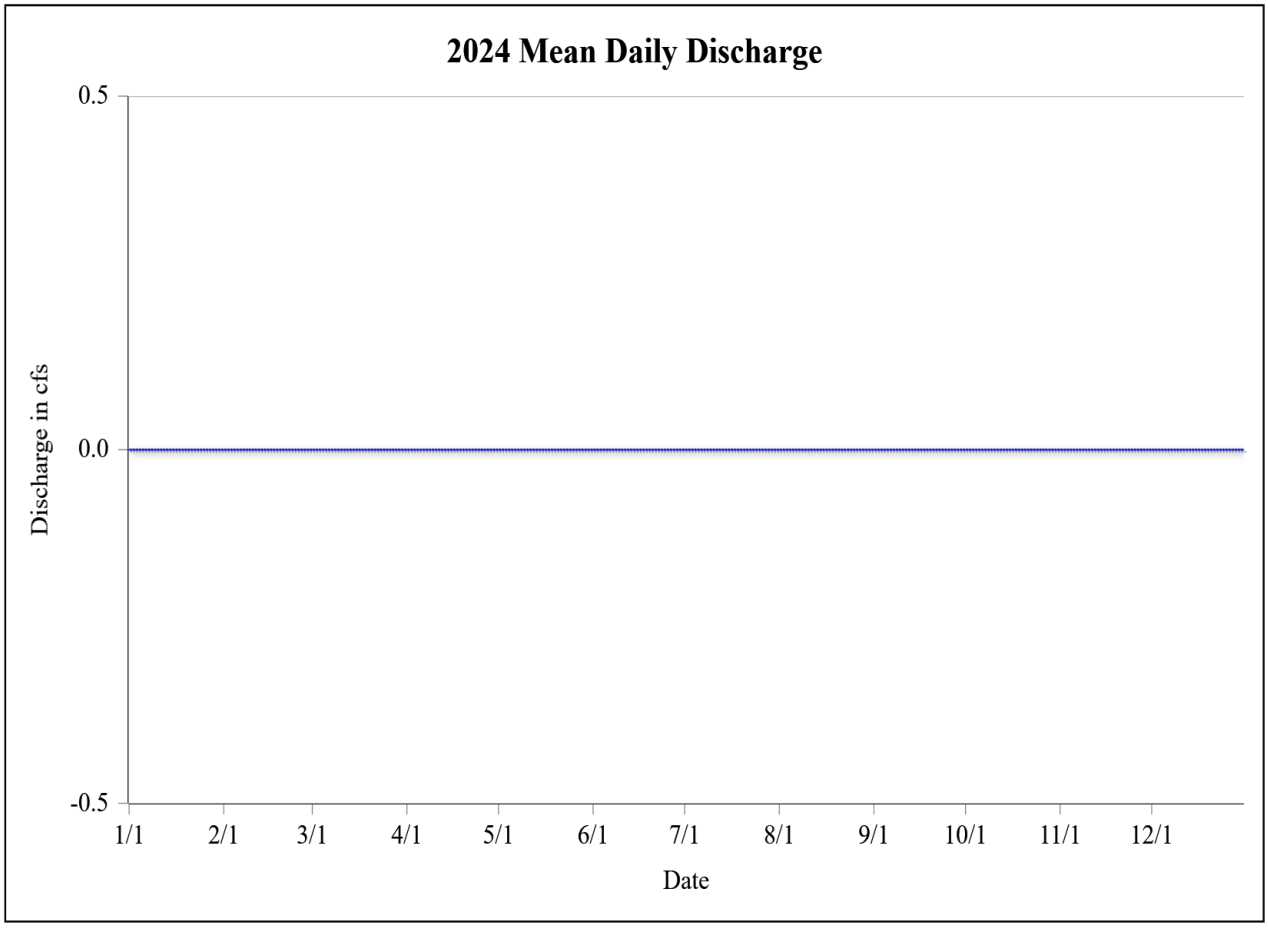
Period of Record—June 16, 2005 to current year.

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. Data were estimated from Aug. 22, 2024 at 17:00 to Aug 26, 2024 at 08:00, due to gage malfunction.



United States Fish and Wildlife Service-South Dike

Mean daily discharge, in cubic-feet per second, Calendar Year 2024

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	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 (Estimated values are excluded from all min and max statistics)

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	N/A	0	Jan. 1	01:00	N/A	0

Bold values indicate the daily value was derived from hourly data that contains one or more hours of estimated record.

Palo Verde Irrigation District-Outfall Drain

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

Drainage Area—Undetermined.

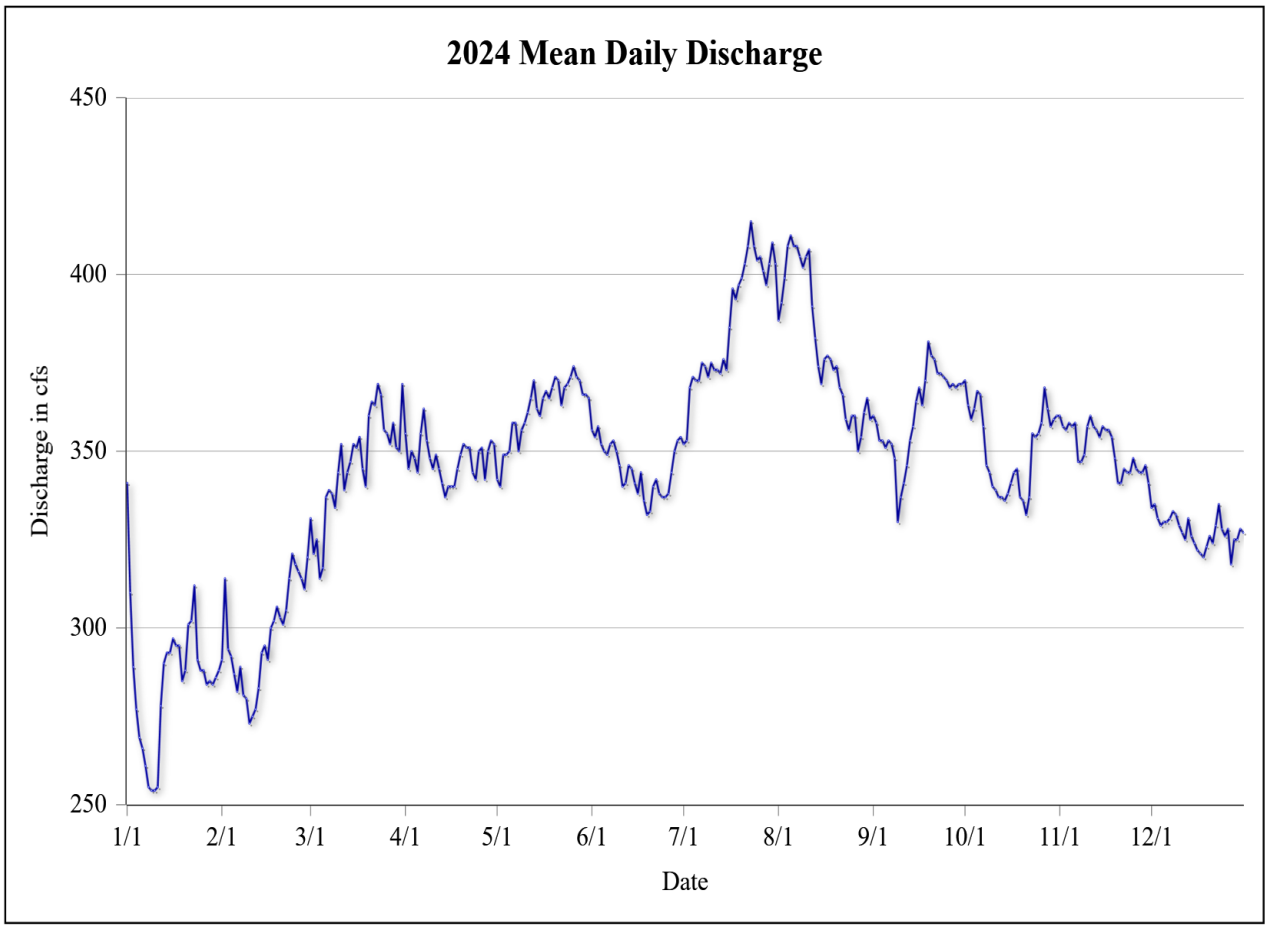
Period of Record—January 1, 2005 to current year.

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

Datum—National Geodetic Vertical Datum of 1929.

Extremes—Maximum daily discharge, 1,200 cfs, Aug. 10, 2005; minimum daily discharge, 254 cfs, Jan. 9, 2024; 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 estimated for the following periods: Apr. 13, 2024 at 13:00 to Apr. 15, 2024 at 07:00, Jul. 27, 2024 at 04:00 to Jul. 29, 2024 at 08:00, Aug. 1, 2024 at 12:00 to Aug. 4, 2024 at 19:00, Oct. 21, 2024 at 12:00 to Oct. 23, 2024 at 08:00 and Dec. 9, 2024 at 04:00 to Dec. 9, 2024 at 10:00, due to gage malfunction.



Palo Verde Irrigation District-Outfall Drain

Mean daily discharge, in cubic-feet per second, Calendar Year 2024

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	341	291	331	355	342	356	352	**387**	**360**	370	360	334
2	310	314	321	345	340	354	353	**392**	358	363	357	335
3	289	294	325	350	349	357	368	**399**	353	359	356	331
4	277	292	314	348	349	352	371	**408**	353	362	358	329
5	269	287	317	344	350	350	370	411	351	367	357	330
6	266	282	337	355	358	349	370	408	353	366	358	330
7	261	289	339	362	358	352	375	408	352	357	347	331
8	255	281	338	353	350	353	374	405	348	346	347	333
9	254	280	334	348	356	350	371	402	330	344	349	**332**
10	254	273	344	345	358	346	375	405	337	340	357	329
11	255	275	352	349	361	340	373	407	341	339	360	327
12	278	277	339	345	365	341	373	391	346	337	357	325
13	290	283	344	**341**	370	346	372	382	353	337	356	331
14	293	293	347	**337**	362	345	376	374	357	336	354	326
15	293	295	352	**340**	360	341	373	369	364	338	357	324
16	297	291	351	340	365	338	385	376	368	341	356	322
17	295	300	354	340	367	344	396	377	363	344	356	321
18	295	302	345	345	365	336	393	376	370	345	354	320
19	285	306	340	349	368	332	397	373	381	337	348	323
20	288	303	360	352	371	333	399	374	377	336	341	326
21	301	301	364	351	370	340	403	368	376	**332**	341	324
22	302	305	363	351	363	342	408	366	372	**337**	345	329
23	312	314	369	344	368	338	415	359	372	**355**	344	335
24	291	321	366	342	369	337	408	356	371	354	344	328
25	288	318	356	350	371	337	404	360	370	355	348	326
26	288	316	355	351	374	338	405	360	368	358	345	328
27	284	314	352	342	371	344	**401**	350	369	368	344	318
28	285	311	358	350	370	350	**397**	354	368	362	344	325
29	284	320	351	353	366	353	**403**	361	369	357	346	325
30	286		350	352	366	354	409	365	369	359	341	328
31	288		369		365		403	359		360		327
Total	8,854	8,628	10,738	10,430	11,217	10,346	11,971	11,784	10,818	10,861	10,527	10,150
Mean	286	298	346	348	362	345	386	380	361	350	351	327
Max	341	321	369	362	374	357	415	411	381	370	360	335
Min	254	273	314	337	340	332	352	350	330	332	341	318
Ac-ft	17,562	17,113	21,299	20,688	22,248	20,521	23,744	23,373	21,457	21,543	20,879	20,132

Calendar Year Summary (Estimated values are excluded from all min and max statistics)

Annual Total 126,323 Annual Mean 345 Daily Max 415 Daily Min 254 Annual Ac-ft 250,559

Maximum Discharge (Excludes Estimates)				Minimum Discharge (Excludes Estimates)			
Date	Time	Elev	Discharge	Date	Time	Elev	Discharge
Jul. 23	07:00	216.74	424	Jan. 9	12:00	214.29	250

Bold values indicate the daily value was derived from hourly data that contains one or more hours of estimated record.

Acknowledgments

As the Supervisory Hydrologic Technician responsible for compiling this report, I would like to extend my sincere appreciation to the following members of the Operations Support Group for their dedication, technical expertise, and unwavering support throughout the data collection, analysis, and reporting process.

The following individuals made substantial contributions to the successful completion of this report—contributions that extend well beyond the details documented herein:

- **Michael Arend**, Hydrologic Technician – Field data collection, record computation, and record review
- **Nicolas Arias**, Hydrologic Technician – Field data collection and record computation
- **William Kendall**, Hydrologic Technician – Field data collection and record computation
- **Jarrett Peters**, Hydrologic Technician – Field data collection and record computation
- **Chris Pope**, Hydrologic Technician – Field data collection and record computation
- **Rodney Smith**, Hydrologic Technician – Record computation, hydrologic system design, operation, and programmatic support

I would also like to acknowledge **John McElrath,** Telecommunications Specialist, for his critical role in developing, maintaining, and operating the data collection and telemetry systems that support the reliable acquisition, storage, and transmission of hydrologic data.

It is a privilege to recognize the hard work, professionalism, and commitment of this team in advancing the mission of the Bureau of Reclamation.

John S. Weiss
Supervisory Hydrologic Technician
Blythe Hydrographic Office

Glossary

Acre-foot/feet (AF)—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 for 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.

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.

Residue on Evaporation—A method of measuring total dissolved solids of a water sample through direct measurement where the water in a sample is evaporated, and the remaining material is weighed.

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.

Specific Conductance (EC)—A measure of waters ability to conduct electrical current at a reference temperature of 25º C.

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.

Sum of Constituents (SOC)—A method used to estimate total dissolved solids by adding the results of all inorganic ions in a water sample.

Total Dissolved Solids (TDS)—The quantification of material dissolved in water, typically consisting of inorganic salts.

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