

RECLAMATION

Managing Water in the West

Lower Colorado River Stream Flow Records for Calendar Year 2009



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Bureau of Reclamation
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Cover:

Photograph of a stilling well and cableway at the Water Wheel gaging station on the Colorado River.

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Explanation of Stage and Discharge Records

Data Collection and Computation

The data collected by the Bureau of Reclamation at gaging stations along the Lower Colorado River (between Hoover Dam and the Southern International Boundary with Mexico) consist of records of stage, velocity, and/or discharge indicator values, measurements of discharge of streams or canals, and stage of lakes or reservoirs. Records of stage, velocity, and/or discharge are obtained from digital dataloggers that measure electronic sensors at programmed time intervals, and calculate mean hourly values. The recorded values are transmitted via telemetry to the Lower Colorado River Hydrologic Database in Boulder City, Nevada and are downloaded from gaging station field locations by Reclamation Hydrologic Technicians with a laptop computer. Electronic sensor selection is dependent on the parameters required to measure a component of discharge, and vary by gaging station. Measurements of discharge are made with a mechanical current meter, an acoustic Doppler velocimeter, or an acoustic Doppler current profiler. Measurement techniques comply with standards established by the United States Geological Survey (USGS) and following guidelines set forth by the Bureau of Reclamation, Blythe Hydrographic Office QA/QC draft plan.

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

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

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

Data Presentation

Records published for each continuous-record discharge station (gaging station) consist of three parts: (1) station manuscript; (2) discharge hydrograph; and (3) data table of daily mean discharge values for the current year with summary data.

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 Global Positioning System data referencing the World Geodetic System of 1984, and the location of the gage with respect to the physical features in the vicinity. Township, range, section, and meridian descriptions are obtained from USGS topographical maps. In a few locations, the grid system is not available on 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 cited from Inter-agency Committee River Mile Index, published in January 1976, and measured using Bureau of Reclamation aerial orthophotographs, and USGS topographic quadrangles. 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 the Bureau of Reclamation.

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

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

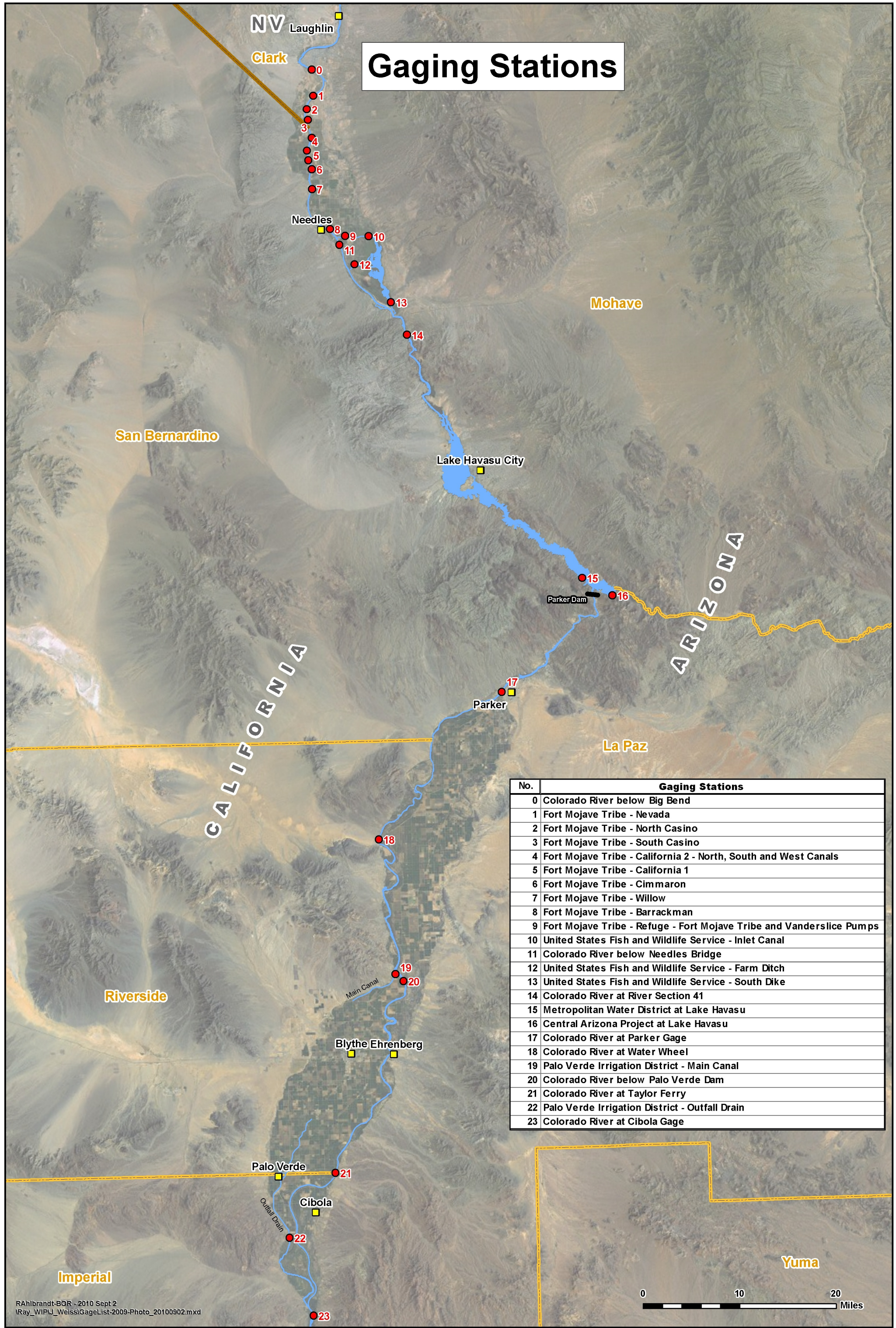
Extremes—Extreme discharge values are listed as minimum and maximum hourly, and daily mean values for the record period listed in the period of record section.

Remarks—Periods of estimated hourly discharge record will be identified in this paragraph. The paragraph is also used to present information relative to the accuracy of the records, special methods of computation, conditions that affect flow at the station, and other pertinent items.

Discharge Hydrograph, Data Table, and Summary Data

The discharge hydrograph displays mean daily discharge in a graphical format. The data table that follows each station manuscript and discharge hydrograph provides mean daily discharge values presented in tabular format. Basic statistical information is provided near the bottom summarizing each month, including total discharge in cubic-feet per second (cfs), mean, maximum, and minimum values for the month, and total volume expressed in acre-feet (ac-ft). In addition, annual discharge in cfs, and volume in ac-ft are provided for the year along with the annual mean, maximum, and minimum daily discharges. Maximum and minimum hourly discharge values located on the bottom of the table indicate the date, time, gage height or elevation, and discharge that the hourly extremes occurred during the year.

Gaging Stations



No.	Gaging Stations
0	Colorado River below Big Bend
1	Fort Mojave Tribe - Nevada
2	Fort Mojave Tribe - North Casino
3	Fort Mojave Tribe - South Casino
4	Fort Mojave Tribe - California 2 - North, South and West Canals
5	Fort Mojave Tribe - California 1
6	Fort Mojave Tribe - Cimmaron
7	Fort Mojave Tribe - Willow
8	Fort Mojave Tribe - Barrackman
9	Fort Mojave Tribe - Refuge - Fort Mojave Tribe and Vanderslice Pumps
10	United States Fish and Wildlife Service - Inlet Canal
11	Colorado River below Needles Bridge
12	United States Fish and Wildlife Service - Farm Ditch
13	United States Fish and Wildlife Service - South Dike
14	Colorado River at River Section 41
15	Metropolitan Water District at Lake Havasu
16	Central Arizona Project at Lake Havasu
17	Colorado River at Parker Gage
18	Colorado River at Water Wheel
19	Palo Verde Irrigation District - Main Canal
20	Colorado River below Palo Verde Dam
21	Colorado River at Taylor Ferry
22	Palo Verde Irrigation District - Outfall Drain
23	Colorado River at Cibola Gage

RAhlbrandt-BOR - 2010 Sept 2
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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 mile (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.

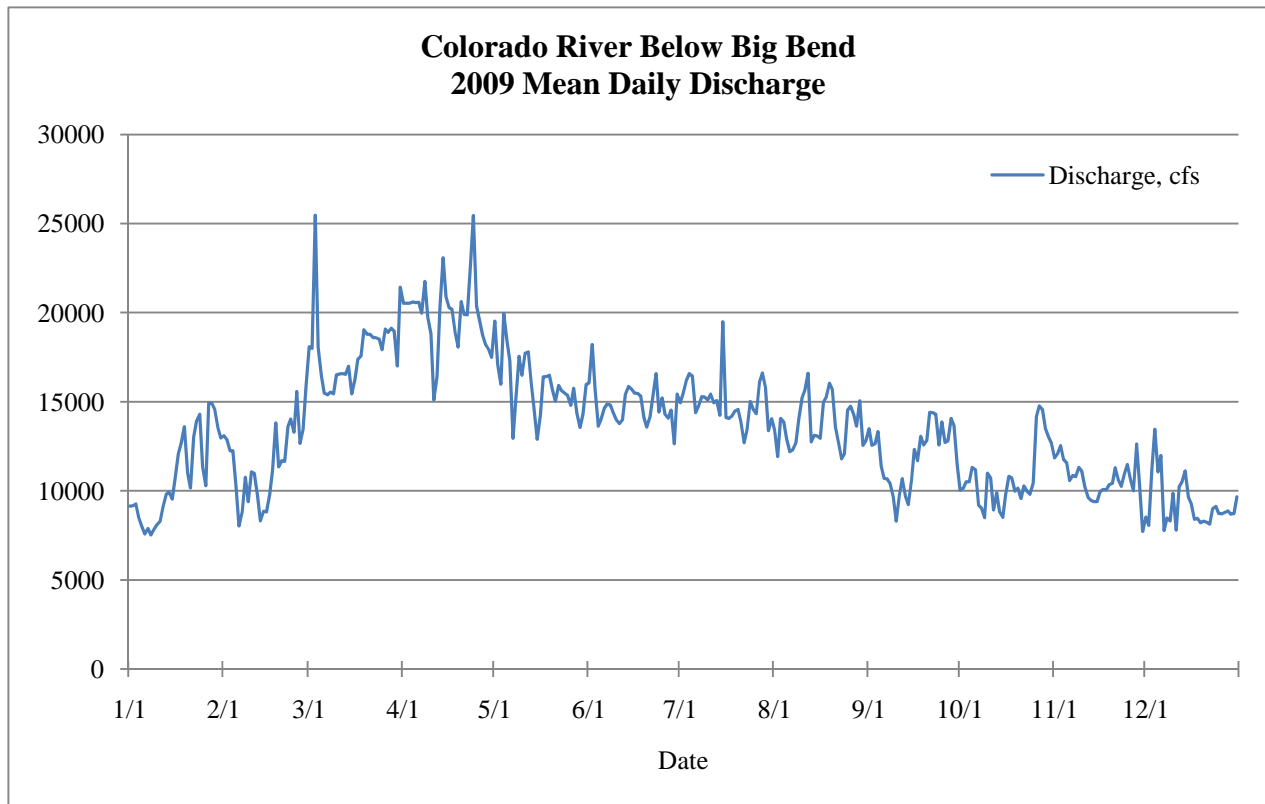
Drainage Area—Unknown.

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

Gage—A Sutron Xlite datalogger (Model 9210-0000-1A) records water elevation measured with a Sutron AccuBubble self-contained bubbler system (Model 5600-0131-4). Discharge is calculated using a stage discharge relationship.

Extremes—Maximum daily discharge, 25,460 cubic feet per second (cfs), Mar. 3, 2009; minimum daily discharge, 2,180 cfs, Jan. 13, 2005; maximum hourly discharge, 27,620 cfs, Jul. 14, 2005 at 23:00; minimum hourly discharge, 689 cfs, Mar. 8, 2005 at 11:00.

Remarks—None.



Colorado River Below Big Bend

Discharge, in cfs, Calendar Year 2009

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	9140	13100	18080	20530	19530	16060	14950	13440	13480	10030	11860	8530
2	9150	12880	17990	20530	17090	18210	15480	11920	12560	10150	12060	8060
3	9260	12240	25460	20530	15990	15670	16200	14070	12650	10510	12530	11250
4	8490	12250	18050	20600	19950	13630	16580	13860	13330	10510	11770	13460
5	8000	10200	16470	20560	18430	14030	16430	12910	11390	11310	11560	11060
6	7570	8030	15490	20590	17300	14640	14390	12200	10700	11180	10580	11970
7	7890	8810	15390	19970	12940	14870	14750	12300	10670	9190	10860	7770
8	7530	10760	15540	21750	15200	14810	15280	12700	10420	9040	10790	8470
9	7840	9400	15440	19750	17540	14380	15270	14030	9660	8500	11320	8310
10	8100	11070	16510	18800	16490	13970	15110	15190	8300	10990	11120	9860
11	8300	10980	16550	15110	17720	13770	15420	15650	9750	10730	10220	7800
12	9100	9730	16580	16410	17800	13990	14940	16590	10690	8920	9620	10220
13	9800	8310	16540	20270	16070	15410	15060	12760	9700	9890	9460	10540
14	9930	8850	16990	23070	14450	15860	14250	13110	9230	8820	9400	11120
15	9540	8820	15450	20910	12900	15720	19480	13080	10590	8520	9400	9650
16	10700	9780	16250	20280	14240	15490	14110	12950	12320	9810	9970	9270
17	12070	11160	17390	20190	16400	15460	14070	14960	11690	10810	10070	8410
18	12680	13810	17560	18850	16410	15320	14210	15260	13060	10720	10050	8460
19	13600	11350	19030	18060	16490	14110	14470	16040	12580	9990	10350	8210
20	11010	11700	18780	20610	15650	13570	14570	15700	12830	10140	10410	8290
21	10170	11660	18790	19900	15040	14140	13850	13570	14400	9570	11290	8250
22	13020	13590	18610	19890	15910	15310	12690	12740	14390	10280	10600	8130
23	13910	14020	18590	22690	15620	16580	13430	11800	14290	9970	10260	9000
24	14290	13290	18520	25450	15490	14430	15020	12090	12580	9800	10970	9120
25	11330	15570	17930	20360	15350	15210	14540	14530	13860	10410	11480	8720
26	10290	12670	19070	19590	14800	14300	14340	14750	12720	14150	10610	8710
27	14920	13470	18890	18730	15750	14080	16110	14270	12800	14770	10000	8790
28	14910	15840	19120	18210	14350	14530	16620	13640	14060	14570	12630	8880
29	14560		18960	17920	13560	12640	15770	15050	13670	13530	10440	8700
30	13550		17010	17500	14290	15420	13380	12560	11460	13030	7720	8730
31	12960		21420		15960		14040	12800		12680		9670
Total	333610	323340	552450	597610	494710	445610	464810	426520	359830	332520	319400	287410
Mean	10762	11548	17821	19920	15958	14854	14994	13759	11994	10726	10647	9271
Max	14920	15840	25460	25450	19950	18210	19480	16590	14400	14770	12630	13460
Min	7530	8030	15390	15110	12900	12640	12690	11800	8300	8500	7720	7770
Ac-ft	661715	641345	1095785	1185359	981257	883867	921951	846002	713723	659553	633530	570078

Calendar Year 2009 Total 4937820 Mean 13521 Max 25460 Min 7530 Ac-ft 9794166

Maximum Discharge

Date Time G.H. Discharge
 Jun. 24 22:00 488.75 26830

Minimum Discharge

Date Time G.H. Discharge
 Sep.15 8:00 480.20 4100

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

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 mile (mi) 243.5, 2.0 mi east of Needles, California, 20.1 mi south of Bullhead City, Arizona, and 32.4 river mi downstream from Davis Dam.

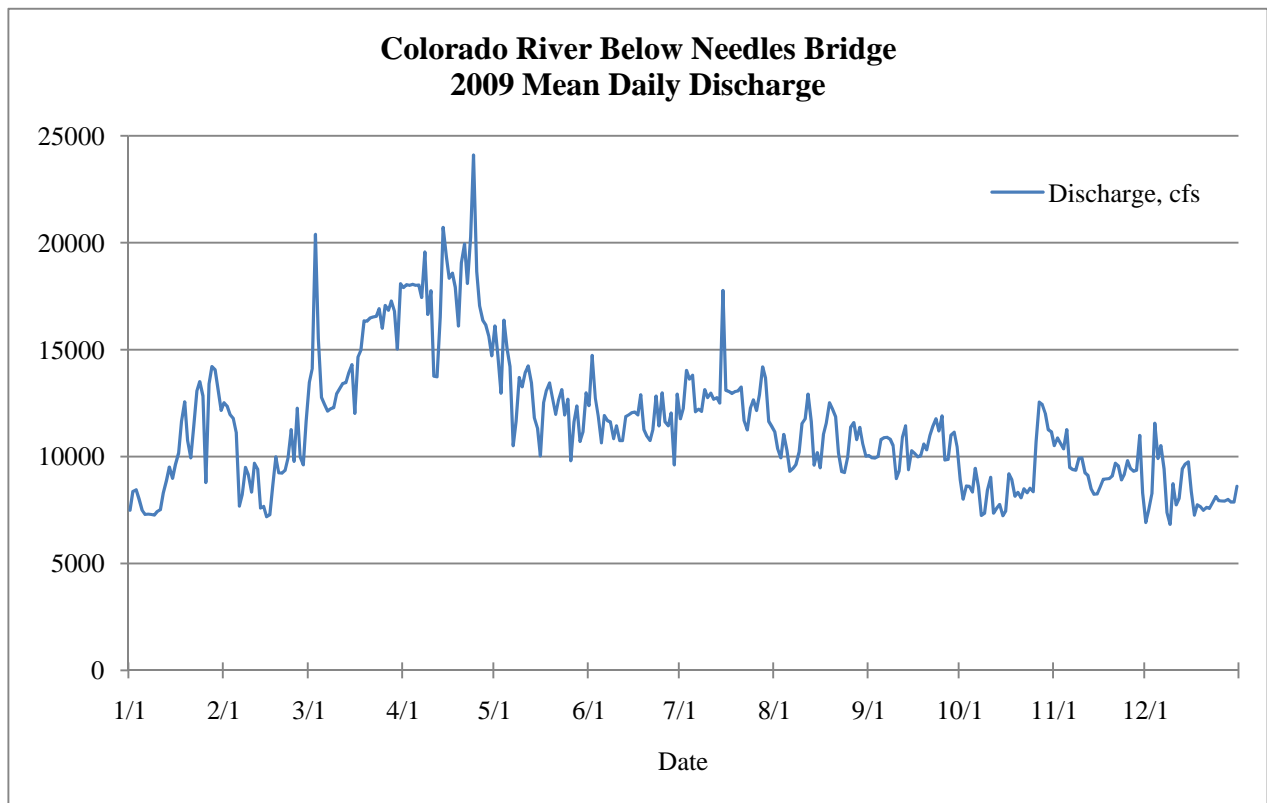
Drainage Area—Undetermined.

Period of Record—April 25, 2006 to current year.

Gage—A Sutron Xlite datalogger (Model 9210-0000-1A) 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, 24,090 cubic feet per second (cfs), Apr. 24, 2009; minimum daily discharge, 4,470 cfs, Dec. 4, 2008; maximum hourly discharge, 24,290 cfs, Apr. 24, 2009 at 09:00; minimum hourly discharge, 3,830 cfs, Jun. 21, 2009 at 13:00.

Remarks—None.



Colorado River Below Needles Bridge

Discharge, in cfs, Calendar Year 2009

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	7490	12510	13470	17900	16100	12370	11760	11150	10040	8910	10500	6920
2	8370	12350	14130	18030	14740	14720	12250	10360	9930	8010	10860	7480
3	8440	11960	20390	18000	12960	12720	14030	9930	9920	8620	10600	8240
4	8020	11780	15520	18050	16370	11890	13620	11030	10000	8600	10350	11550
5	7480	11130	12750	18000	15020	10640	13800	10280	10790	8340	11260	9900
6	7290	7670	12440	18020	14200	11920	12090	9310	10880	9440	9490	10500
7	7300	8210	12130	17430	10500	11680	12210	9440	10890	8580	9380	9420
8	7290	9490	12230	19560	11650	11610	12110	9630	10810	7240	9360	7400
9	7260	9150	12280	16650	13690	10840	13130	10210	10510	7350	9920	6820
10	7430	8330	12930	17750	13260	11430	12750	11540	8960	8430	9930	8730
11	7510	9680	13190	13760	13940	10740	12960	11760	9340	9020	9240	7740
12	8290	9410	13410	13720	14240	10740	12680	12910	10900	7350	9110	8040
13	8880	7590	13450	16530	13440	11870	12750	11630	11440	7590	8490	9410
14	9500	7660	13920	20710	11820	11950	12500	9600	9380	7750	8230	9640
15	8980	7190	14290	19360	11330	12050	17760	10180	10270	7230	8250	9740
16	9630	7280	12020	18340	10030	12080	13090	9480	10150	7450	8560	8370
17	10160	8620	14650	18570	12490	11940	13030	11010	9980	9190	8930	7260
18	11650	9980	14960	17920	13100	12880	12940	11550	10020	8920	8950	7730
19	12560	9240	16350	16110	13440	11250	13030	12510	10580	8140	8970	7640
20	10740	9220	16330	19050	12740	10950	13060	12220	10310	8320	9080	7480
21	9940	9360	16480	19930	11970	10750	13240	11870	10980	8060	9690	7610
22	11370	9920	16520	18100	12640	11270	11670	10160	11410	8490	9570	7570
23	13050	11260	16560	20270	13120	12820	11240	9290	11770	8300	8900	7840
24	13500	9770	16910	24090	11950	11430	12270	9250	11190	8520	9170	8120
25	12830	12260	16000	18650	12680	12970	12640	9960	11900	8350	9810	7930
26	8790	9980	17060	17050	9810	11610	12160	11360	9840	10680	9440	7910
27	13390	9610	16840	16370	11610	11440	12890	11590	9870	12540	9310	7920
28	14200	11660	17270	16160	12360	12030	14190	10790	11000	12430	9360	7990
29	14050		16780	15620	10700	9610	13670	11360	11140	12000	10990	7870
30	13160		15020	14710	11140	12920	11650	10600	10440	11260	8290	7870
31	12150		18080		12970		11420	10010		11150		8600
Total	310700	272270	464360	534410	396010	353120	398590	331970	314640	276260	283990	257240
Mean	10023	9724	14979	17814	12775	11771	12858	10709	10488	8912	9466	8298
Max	14200	12510	20390	24090	16370	14720	17760	12910	11900	12540	11260	11550
Min	7260	7190	12020	13720	9810	9610	11240	9250	8960	7230	8230	6820
Ac-ft	616273	540048	921058	1060002	785486	700414	790603	658462	624088	547962	563294	510236

Calendar Year 2009 Total 4193560 Mean 11485 Max 24090 Min 6820 Ac-ft 8317926

Maximum Discharge

Date Time G.H. Discharge
Apr. 24 9:00 462.50 24290

Minimum Discharge

Date Time G.H. Discharge
Oct. 12 15:00 453.54 5140

Bold values indicate the daily value was derived from hourly data that contained 6 or more consecutive 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 mile (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.

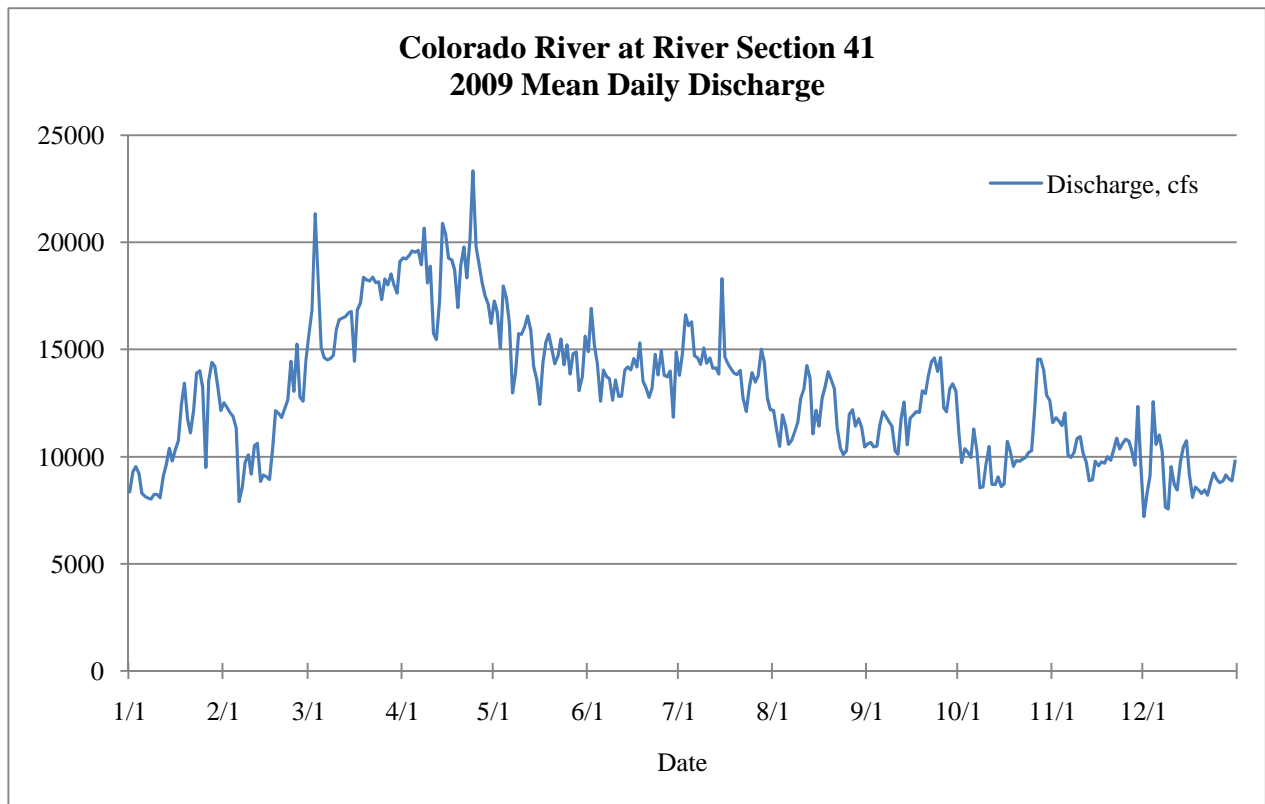
Drainage Area—172,300 square miles.

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

Gage—A Sutron Xlite datalogger (Model 9210-0000-1A) records stage and velocity measured by a SonTek/YSI Argonaut-SL current meter. Discharge is calculated using a velocity-index relationship.

Extremes—Maximum daily discharge, 23,330 cubic feet per second (cfs), Apr. 24, 2009; minimum daily discharge 4,100 cfs, Dec. 8, 2007; maximum hourly discharge, 23,610 cfs, Apr. 24, 2009 at 11:00; minimum hourly discharge, 3,420 cfs, Dec. 8, 2007 at 17:00.

Remarks—None.



Colorado River at River Section 41

Discharge, in cfs, Calendar Year 2009

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	8360	12510	15780	19270	17260	14900	13790	12160	10590	11160	11590	7210
2	9290	12310	16830	19230	16750	16920	14760	11300	10660	9720	11810	8310
3	9530	12050	21320	19390	15060	15150	16620	10490	10450	10360	11660	9100
4	9220	11880	18380	19590	17960	14370	16110	11950	10480	10210	11450	12560
5	8300	11340	15080	19530	17370	12590	16290	11390	11460	9970	12030	10570
6	8140	7900	14610	19630	16240	14040	14710	10580	12100	11290	10070	11010
7	8070	8540	14510	18950	12970	13730	14600	10770	11880	10250	9970	10230
8	8020	9750	14570	20650	13870	13630	14310	11150	11640	8540	10220	7650
9	8240	10090	14740	18110	15740	12630	15070	11620	11430	8590	10840	7570
10	8240	9190	15930	18880	15700	13570	14370	12720	10270	9630	10930	9530
11	8080	10510	16390	15750	16070	12810	14600	13150	10120	10470	10150	8700
12	9090	10620	16470	15470	16560	12820	14130	14240	11810	8710	9720	8450
13	9610	8850	16520	17280	15880	14030	14140	13670	12550	8690	8880	9740
14	10380	9150	16710	20880	14200	14190	13850	11070	10560	9050	8920	10440
15	9800	9060	16770	20350	13570	14050	18300	12150	11800	8610	9790	10740
16	10330	8940	14450	19250	12440	14570	14640	11430	11950	8720	9580	9170
17	10730	10410	16850	19180	14390	14180	14320	12740	12090	10710	9750	8100
18	12470	12140	17190	18710	15310	15300	14100	13240	12060	10260	9700	8580
19	13420	12000	18360	16950	15700	13520	13880	13960	13060	9540	10000	8440
20	11760	11830	18240	18890	15000	13210	13830	13600	12950	9820	9830	8280
21	11110	12250	18200	19770	14330	12770	14020	13180	13760	9780	10290	8450
22	12190	12640	18370	18340	14690	13190	12690	11340	14440	9870	10860	8210
23	13880	14430	18120	20130	15480	14770	12110	10400	14600	9960	10370	8800
24	14000	13050	18150	23330	14290	13810	13180	10100	13980	10190	10640	9230
25	13240	15250	17330	19790	15210	14940	13910	10280	14610	10280	10810	8940
26	9500	12800	18290	19000	13860	13790	13490	11970	12290	12070	10720	8790
27	13550	12590	18020	18100	14790	13720	13760	12190	12100	14540	10270	8860
28	14400	14490	18530	17510	14890	13990	15000	11430	13170	14540	9610	9150
29	14210		18010	17100	13080	11850	14420	11770	13390	14010	12330	8970
30	13200		17630	16210	13710	14890	12710	11400	13070	12860	9430	8880
31	12160		19100		15610		12190	10460		12600		9800
Total	332520	316570	529450	565220	467980	417930	443900	367900	365320	325000	312220	282460
Mean	10726	11306	17079	18841	15096	13931	14319	11868	12177	10484	10407	9112
Max	14400	15250	21320	23330	17960	16920	18300	14240	14610	14540	12330	12560
Min	8020	7900	14450	15470	12440	11850	12110	10100	10120	8540	8880	7210
Ac-ft	659553	627917	1050164	1121114	928238	828964	880476	729730	724612	644638	619288	560259

Calendar Year 2009 Total 4726470 Mean 12946 Max 23330 Min 7210 Ac-ft 9374953

Maximum Discharge

Date Time G.H. Discharge
Apr. 24 11:00 454.62 23610

Minimum Discharge

Date Time G.H. Discharge
Dec. 1 16:00 449.58 5060

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 mile (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.

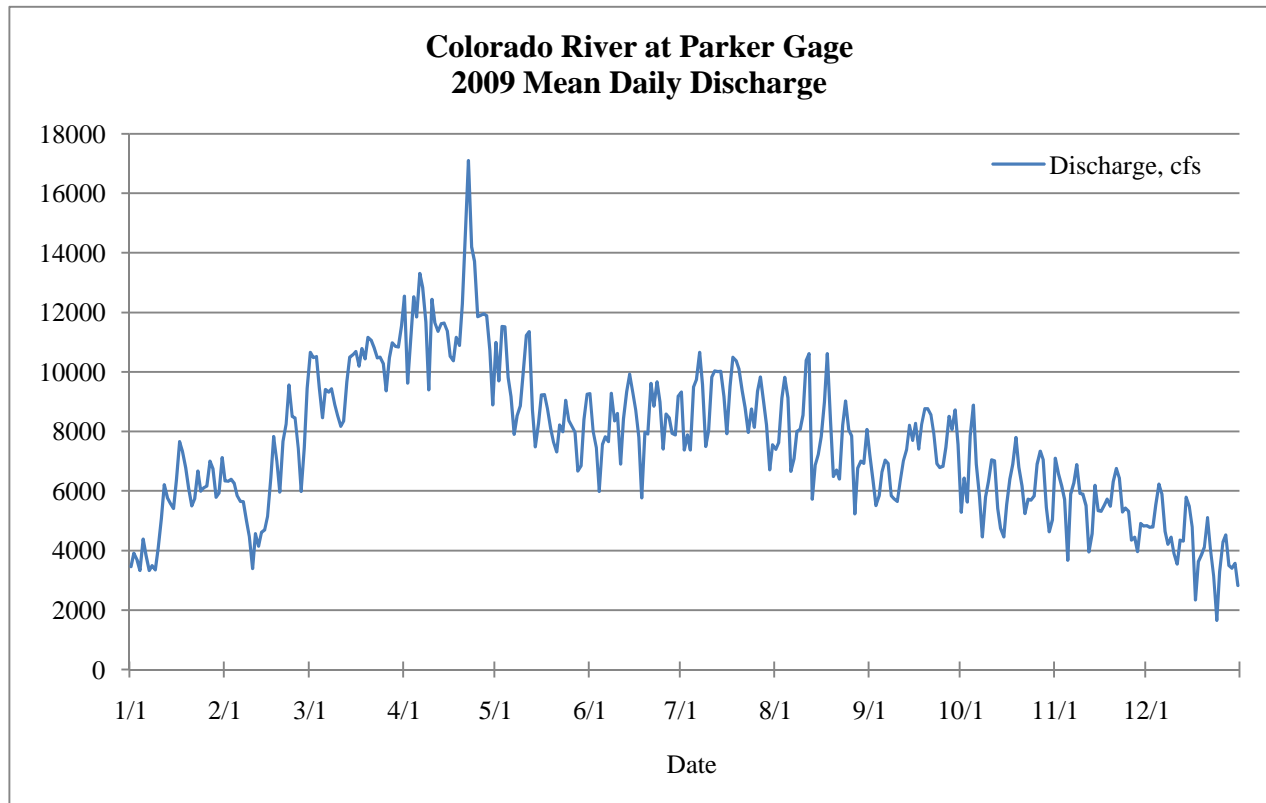
Drainage Area—Undetermined.

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

Gage—A Sutron Xlite datalogger (Model 9210-0000-1A) records water elevation measured with a Sutron AccuBubble self-contained bubbler system (Model 5600-0131-4). Discharge is calculated using a stage-discharge relationship.

Extremes—Maximum daily discharge, 17,090 cubic feet per second (cfs), Apr. 22, 2009; minimum daily discharge, 1,450 cfs, Dec. 20, 2008; maximum hourly discharge, 21,490 cfs, Sep. 14, 2005 at 17:00; minimum hourly discharge, 487 cfs, Aug. 18, 2006 at 06:00.

Remarks—None.



Colorado River at Parker Gage

Discharge, in cfs, Calendar Year 2009

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	3460	6340	10650	12540	10990	9270	9320	7400	7200	5280	7100	4830
2	3910	6330	10480	9620	9700	8000	7380	7630	6340	6430	6570	4780
3	3680	6390	10510	11000	11520	7450	7880	9120	5510	5630	6170	4790
4	3330	6250	9460	12520	11510	5980	7380	9820	5830	7850	5710	5540
5	4380	5840	8460	11840	9820	7560	9490	9130	6640	8880	3670	6230
6	3840	5650	9410	13300	9170	7820	9740	6660	7030	6910	5900	5910
7	3330	5640	9320	12830	7900	7660	10650	7090	6930	5820	6270	4640
8	3490	4990	9430	11670	8520	9280	9570	8000	5840	4460	6880	4210
9	3350	4470	8900	9400	8850	8350	7500	8070	5740	5800	5920	4450
10	4080	3390	8530	12440	9960	8600	8030	8550	5650	6310	5900	3900
11	5080	4570	8170	11650	11220	6910	9830	10380	6330	7040	5510	3550
12	6210	4150	8350	11360	11350	8420	10030	10610	7010	7010	3950	4350
13	5770	4610	9670	11620	8720	9330	10010	5720	7390	5410	4570	4320
14	5580	4690	10490	11640	7490	9920	10020	6850	8200	4740	6190	5790
15	5410	5150	10580	11370	8270	9300	9170	7230	7700	4460	5340	5480
16	6370	6440	10690	10520	9220	8720	7930	7830	8270	5540	5320	4790
17	7660	7830	10190	10370	9240	7810	9510	8990	7410	6400	5520	2340
18	7330	7000	10780	11160	8770	5770	10490	10610	8240	6900	5720	3620
19	6780	5960	10440	10890	8100	7970	10370	8350	8760	7800	5490	3860
20	6100	7670	11160	12280	7650	7910	10080	6490	8760	6800	6320	4110
21	5500	8250	11060	14790	7310	9610	9360	6700	8560	6160	6760	5100
22	5730	9560	10810	17090	8210	8850	8810	6400	7930	5240	6440	4050
23	6670	8500	10470	14200	7990	9670	7970	8200	6920	5720	5290	3150
24	5990	8450	10490	13710	9040	8990	8750	9020	6790	5690	5420	1650
25	6110	7430	10280	11860	8370	7410	8140	8050	6830	5830	5320	3290
26	6170	5980	9360	11900	8180	8580	9350	7850	7460	6890	4350	4280
27	7000	7450	10470	11950	7980	8450	9830	5230	8510	7330	4450	4520
28	6750	9450	10970	11890	6670	7940	8990	6770	8070	7060	3960	3490
29	5790		10860	10720	6840	7880	8220	7000	8720	5450	4910	3410
30	5930		10830	8890	8400	9180	6710	6930	7560	4630	4820	3570
31	7120		11550		9250		7550	8060		5040		2830
Total	167900	178430	312820	357020	276210	248590	278060	244740	218130	190510	165740	130830
Mean	5416	6373	10091	11901	8910	8286	8970	7895	7271	6145	5525	4220
Max	7660	9560	11550	17090	11520	9920	10650	10610	8760	8880	7100	6230
Min	3330	3390	8170	8890	6670	5770	6710	5230	5510	4460	3670	1650
Ac-ft	333030	353916	620478	708149	547863	493078	551532	485442	432661	377877	328745	259501

Calendar Year 2009 Total 2768980 Mean 7584 Max 17090 Min 1650 Ac-ft 5492272

Maximum Discharge

Date Time G.H. Discharge
Apr. 21 15:00 345.80 20070

Minimum Discharge

Date Time G.H. Discharge
Jan. 1 6:00 339.73 742

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

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 mile (mi) 151.6, 20.7 mi south of Parker, Arizona, 22.3 mi north of Blythe, California, and 40.4 mi downstream of Parker Dam.

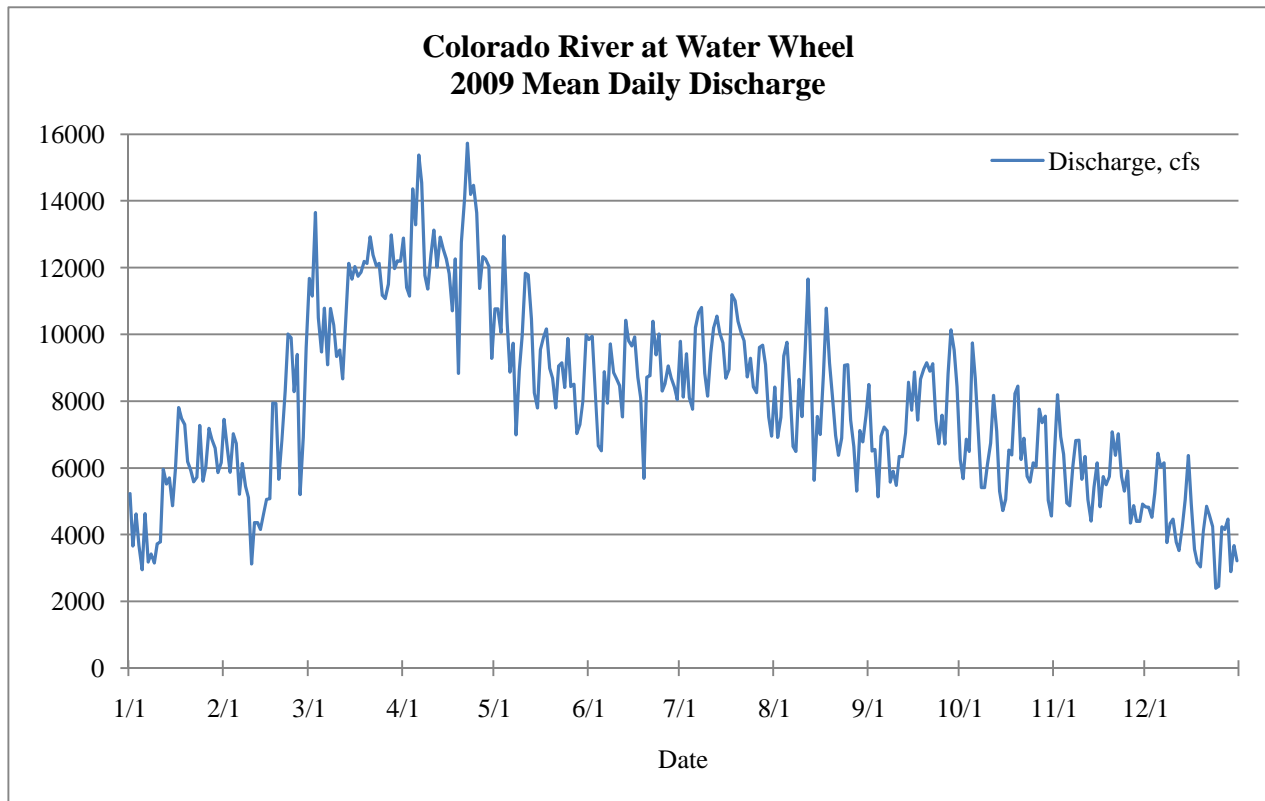
Drainage Area—180,700 square miles.

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

Gage—A Sutron Xlite datalogger (Model 9210-0000-1A) 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, 15,730 cubic feet per second (cfs), Apr. 22, 2009; minimum daily discharge, 1,990 cfs, Jan. 27, 2005; maximum hourly discharge, 18,920 cfs, Apr. 23, 2009 at 01:00; minimum hourly discharge, 1,610 cfs, Oct. 27, 2005 at 23:00.

Remarks—None.



Colorado River at Water Wheel

Discharge, in cfs, Calendar Year 2009

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	5230	7450	11680	12880	10770	9850	9790	8420	8500	6250	6340	4830
2	3660	6600	11150	11400	10770	9940	8120	6920	6500	5680	8190	4820
3	4620	5870	13650	11150	10060	8220	9420	7520	6550	6860	6930	4520
4	3670	7020	10500	14360	12950	6670	8090	9350	5130	6490	6410	5250
5	2950	6740	9470	13290	10370	6510	7760	9760	6940	9740	4950	6440
6	4630	5210	10790	15370	8870	8880	10200	8400	7220	8680	4870	6030
7	3180	6130	9090	14540	9730	7940	10660	6650	7120	6970	6050	6150
8	3420	5450	10780	11770	6990	9710	10800	6490	5570	5410	6820	3760
9	3150	5120	10280	11360	8910	8860	8840	8650	5900	5410	6830	4330
10	3730	3120	9340	12390	9950	8680	8150	7540	5480	6100	5660	4460
11	3780	4360	9530	13120	11830	8460	9440	9540	6340	6740	6340	3780
12	5960	4360	8670	12020	11780	7530	10210	11660	6340	8170	5050	3520
13	5520	4160	10490	12910	10460	10420	10550	8710	7050	7100	4410	4220
14	5700	4640	12130	12570	8260	9810	10050	5630	8560	5300	5420	5050
15	4870	5060	11660	12260	7800	9660	9730	7540	7730	4720	6150	6370
16	5970	5080	12030	11820	9530	9920	8690	7000	8870	5060	4840	4910
17	7810	7940	11740	10710	9910	8720	8950	8800	7430	6530	5740	3560
18	7480	7930	11860	12260	10160	8090	11190	10790	8670	6390	5500	3160
19	7300	5660	12180	8830	8990	5690	11010	9150	8970	8230	5740	3040
20	6200	6830	12130	12760	8700	8720	10390	8150	9150	8450	7080	4110
21	5930	8300	12920	14060	7800	8760	10050	6970	8900	6250	6380	4850
22	5580	10010	12380	15730	9050	10390	9810	6380	9120	6890	7020	4580
23	5720	9890	12060	14200	9150	9390	8730	6900	7440	5750	5740	4240
24	7270	8290	12130	14460	8410	10010	9280	9070	6720	5570	5310	2390
25	5600	9400	11170	13640	9880	8300	8430	9090	7580	6150	5910	2450
26	6040	5200	11070	11380	8440	8530	8260	7430	6710	6040	4350	4230
27	7180	6920	11500	12330	8510	9050	9610	6640	8820	7760	4870	4160
28	6860	9600	12980	12250	7030	8700	9670	5310	10130	7360	4400	4460
29	6600		11970	12040	7310	8420	9090	7120	9530	7550	4400	2890
30	5860		12200	9280	8000	8050	7530	6780	8430	5030	4910	3670
31	6150		12190		9980		6950	7570		4560		3220
Total	167620	182340	351720	377140	290350	261880	289450	245930	227400	203190	172610	133450
Mean	5407	6512	11346	12571	9366	8729	9337	7933	7580	6555	5754	4305
Max	7810	10010	13650	15730	12950	10420	11190	11660	10130	9740	8190	6440
Min	2950	3120	8670	8830	6990	5690	6950	5310	5130	4560	4350	2390
Ac-ft	332474	361671	697637	748057	575909	519439	574124	487802	451048	403027	342372	264698

Calendar Year 2009 Total 2903080 Mean 7950 Max 15730 Min 2390 Ac-ft 5758259

Maximum Discharge

Date Time G.H. Discharge
Apr. 23 1:00 304.82 18920

Minimum Discharge

Date Time G.H. Discharge
Dec. 29 13:00 297.40 1710

Colorado River Below Palo Verde Dam

Location—Latitude 33° 43.155', longitude 114° 29.852', in the SE¼ NE¼ of Section 2, T. 4 N., R. 22 W., Gila-Salt River meridian, Riverside County, California, Hydrologic Unit 15030104, river mile (mi) 132.6, 32.1 mi south of Parker, Arizona, 8.9 mi north of Blythe, California, and 1.2 river mi downstream of Palo Verde Diversion Dam.

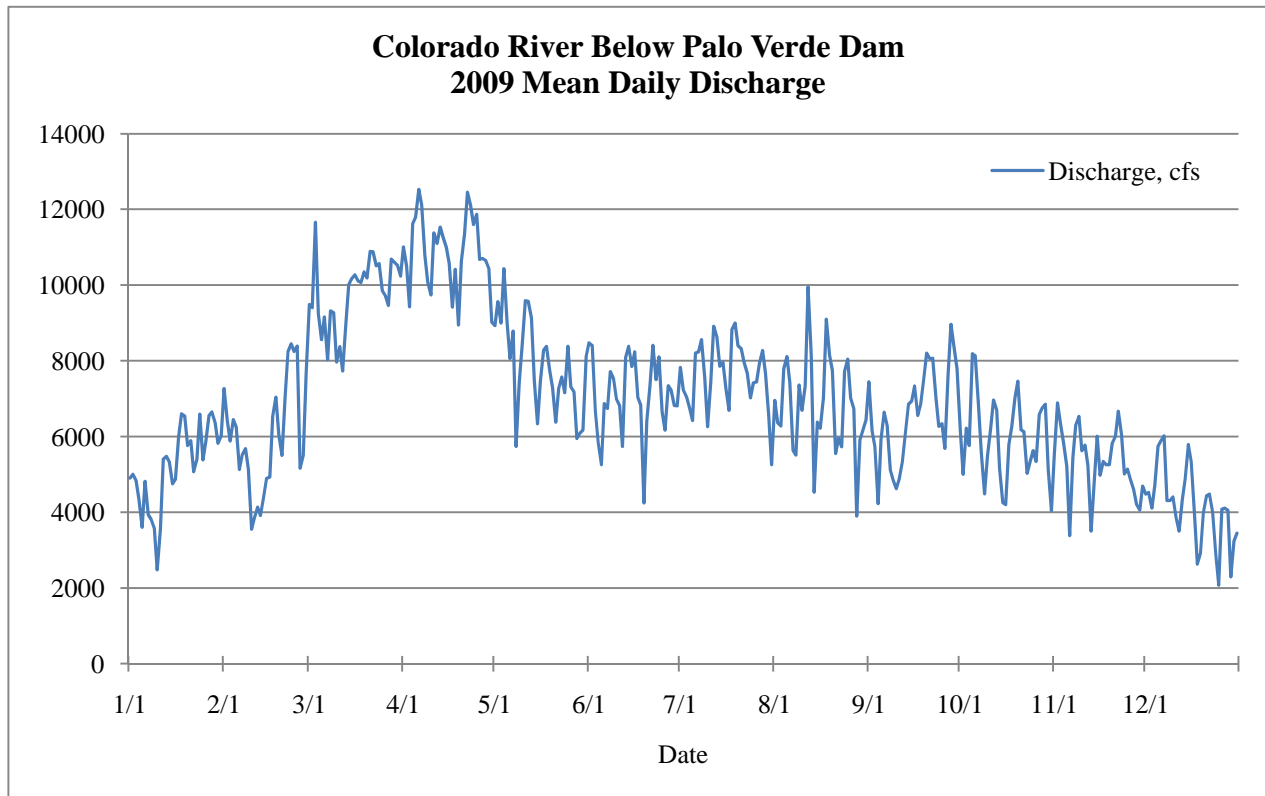
Drainage Area—Undetermined.

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

Gage—A Sutron Xlite datalogger (Model 9210-0000-1A) records water elevation measured with a Sutron AccuBubble self-contained bubbler system (Model 5600-0131-4). Discharge is calculated using a stage-discharge relationship.

Extremes—Maximum daily discharge, 13,230 cubic feet per second (cfs), Apr. 08, 2008; minimum daily discharge, 1,270 cfs, Dec. 27, 2008; maximum hourly discharge, 14,670 cfs, Apr. 24, 2006 at 06:00; minimum hourly discharge, 309 cfs, Jan. 10, 2009 at 15:00.

Remarks—None.



Colorado River Below Palo Verde Dam

Discharge, in cfs, Calendar Year 2009

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	4900	7270	9490	11010	8930	8470	7820	6950	7440	6190	5530	4480
2	5000	6420	9400	10490	9560	8410	7230	6360	6150	5000	6890	4520
3	4830	5880	11660	9430	9000	6670	7050	6280	5730	6220	6300	4110
4	4340	6450	9250	11620	10430	5830	6770	7790	4230	5760	5820	4710
5	3600	6250	8560	11790	9000	5260	6420	8110	5930	8190	5210	5740
6	4820	5130	9160	12530	8060	6870	8200	7420	6640	8130	3380	5880
7	3940	5520	8030	12110	8790	6740	8240	5640	6300	6830	5440	6020
8	3810	5680	9320	10780	5740	7710	8560	5510	5120	5550	6300	4310
9	3580	5130	9270	10080	7440	7520	7560	7360	4850	4490	6530	4310
10	2480	3550	7970	9740	8410	6990	6260	6690	4620	5480	5630	4400
11	3540	3850	8370	11380	9590	6820	7450	7330	4880	6210	5770	3850
12	5400	4130	7730	11100	9570	5740	8910	9950	5340	6960	5230	3500
13	5480	3910	8960	11530	9130	8100	8630	8120	6140	6690	3500	4340
14	5320	4410	10010	11260	7480	8380	7860	4530	6850	5150	4710	4870
15	4750	4890	10180	11000	6340	7850	7960	6380	6940	4250	6010	5790
16	4870	4930	10270	10580	7470	8240	7280	6220	7330	4200	4980	5340
17	6000	6540	10110	9420	8280	7030	6690	7020	6560	5790	5340	3960
18	6600	7040	10070	10420	8380	6830	8830	9100	6850	6260	5260	2630
19	6540	6050	10350	8950	7750	4240	9000	8150	7540	7020	5260	2920
20	5760	5500	10190	10630	7290	6410	8400	7740	8200	7460	5820	3990
21	5890	7080	10890	11350	6380	7350	8320	5550	8050	6180	6010	4440
22	5070	8250	10880	12450	7260	8410	7960	5960	8070	6130	6670	4480
23	5380	8450	10510	12100	7570	7500	7670	5730	7030	5030	6050	4000
24	6590	8250	10570	11600	7160	8100	7020	7710	6270	5320	5010	2870
25	5380	8390	9850	11870	8380	6640	7420	8040	6340	5630	5140	2070
26	5870	5160	9720	10680	7320	6170	7440	7020	5690	5340	4870	4080
27	6560	5510	9460	10700	7180	7340	7930	6740	7630	6580	4610	4110
28	6650	7670	10690	10650	5950	7220	8270	3900	8960	6750	4210	4050
29	6370		10600	10430	6090	6820	7660	5910	8340	6850	4060	2290
30	5820		10530	9020	6170	6810	6550	6150	7790	5130	4690	3250
31	6020		10240		8100		5260	6430		4040		3450
Total	161160	167290	302290	326700	244200	212470	236620	211790	197810	184810	160230	128760
Mean	5199	5975	9751	10890	7877	7082	7633	6832	6594	5962	5341	4154
Max	6650	8450	11660	12530	10430	8470	9000	9950	8960	8190	6890	6020
Min	2480	3550	7730	8950	5740	4240	5260	3900	4230	4040	3380	2070
Ac-ft	319661	331820	599592	648009	484371	421434	469336	420085	392356	366571	317816	255395

Calendar Year 2009 Total 2534130 Mean 6941 Max 12530 Min 2070 Ac-ft 5026447

Maximum Discharge

Date Time G.H. Discharge
Apr. 23 5:00 267.97 14390

Minimum Discharge

Date Time G.H. Discharge
Jan. 10 15:00 258.89 309

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

Colorado River at Taylor Ferry

Location—Latitude 33° 26.052', longitude 114° 37.646', in the SW¼ SE¼ of Section 36, T. 8 S., R. 22 E., San Bernardino meridian, Riverside County, California, Hydrologic Unit 15030104, river mile (mi) 106.3, 12.4 mi south of Blythe, California, 50.8 mi north of Yuma, Arizona, and 85.7 mi downstream of Parker Dam.

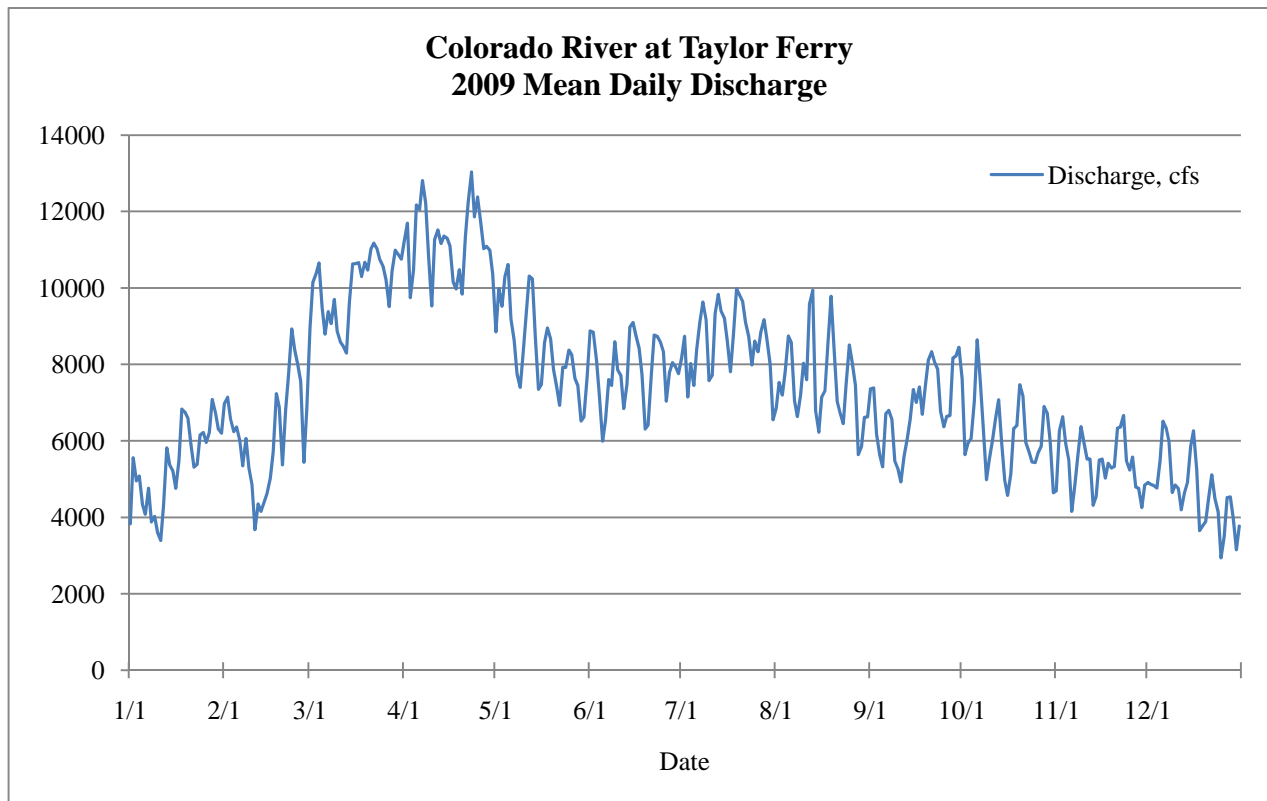
Drainage Area—183,700 square miles.

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

Gage—A Sutron Xlite datalogger (Model 9210-0000-1A) records water level using a Sutron multiple interface shaft encoder (Model 56-0540-400-DTR). Discharge is calculated using a stage-discharge relationship.

Extremes—Maximum daily discharge, 13,250 cubic feet per second (cfs), Apr. 16, 2008; minimum daily discharge, 2,050 cfs, Dec. 28, 2008; maximum hourly discharge, 14,370 cfs, Apr. 18, 2007 at 15:00; minimum hourly discharge, 1,960 cfs, Dec. 27, 2008 at 17:00.

Remarks—None.



Colorado River at Taylor Ferry

Discharge, in cfs, Calendar Year 2009

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	3830	6980	8950	11220	8850	8880	8180	6860	7360	7620	4690	4910
2	5560	7140	10150	11690	9980	8840	8730	7530	7380	5640	6280	4860
3	4950	6570	10380	9750	9520	8100	7150	7200	6180	5950	6630	4830
4	5080	6240	10650	10470	10280	7170	8020	7810	5630	6060	5930	4770
5	4340	6360	9480	12170	10610	5990	7450	8740	5320	7030	5500	5480
6	4080	6000	8790	12050	9190	6540	8400	8570	6710	8640	4160	6510
7	4760	5350	9380	12810	8630	7600	9120	7060	6800	7520	4870	6330
8	3880	6060	9070	12220	7750	7450	9630	6640	6550	6340	5610	5970
9	4020	5300	9700	10840	7400	8590	9170	7190	5470	4990	6370	4650
10	3610	4850	8860	9530	8290	7860	7580	8030	5260	5520	5960	4840
11	3390	3680	8580	11270	9350	7710	7710	7600	4930	6030	5520	4750
12	4330	4350	8470	11520	10310	6850	9330	9600	5600	6560	5520	4200
13	5820	4160	8300	11160	10230	7480	9830	9940	6060	7070	4320	4640
14	5370	4400	9610	11360	8740	8980	9390	6790	6560	6000	4530	4900
15	5210	4630	10630	11300	7350	9090	9210	6230	7340	4970	5500	5850
16	4760	5030	10640	11090	7480	8760	8620	7150	7010	4580	5520	6260
17	5490	5710	10660	10150	8570	8420	7810	7310	7410	5130	5030	5250
18	6830	7230	10300	9970	8950	7740	8750	8540	6700	6320	5410	3650
19	6750	6870	10670	10480	8660	6310	9970	9780	7480	6400	5290	3780
20	6600	5370	10470	9840	7870	6410	9820	8440	8120	7470	5330	3890
21	5870	6820	11020	11330	7410	7710	9650	7040	8330	7170	6340	4550
22	5310	7740	11170	12250	6930	8770	9100	6740	8060	5950	6360	5110
23	5390	8930	11030	13030	7930	8730	8730	6450	7870	5710	6660	4480
24	6150	8390	10740	11860	7920	8590	7990	7490	6770	5450	5470	4140
25	6220	7990	10560	12380	8370	8320	8610	8510	6370	5430	5240	2940
26	5960	7550	10220	11750	8250	7040	8330	8050	6640	5680	5570	3510
27	6230	5440	9510	11030	7630	7800	8850	7450	6660	5860	4790	4520
28	7080	6840	10440	11090	7440	8050	9170	5640	8160	6900	4760	4530
29	6730		10990	10990	6520	7940	8650	5850	8220	6720	4260	3990
30	6310		10880	10360	6630	7760	8000	6610	8450	5990	4840	3150
31	6200		10750		7670		6550	6630		4640		3770
Total	166110	171980	311050	336960	260710	235480	267500	233470	205400	191340	162260	145010
Mean	5358	6142	10034	11232	8410	7849	8629	7531	6847	6172	5409	4678
Max	7080	8930	11170	13030	10610	9090	9970	9940	8450	8640	6660	6510
Min	3390	3680	8300	9530	6520	5990	6550	5640	4930	4580	4160	2940
Ac-ft	329479	341122	616968	668360	517118	467075	530586	463088	407411	379523	321843	287627

Calendar Year 2009 Total 2687270 Mean 7358 Max 13030 Min 2940 Ac-ft 5330200

Maximum Discharge

Date Time G.H. Discharge
Apr. 23 15:00 234 14280

Minimum Discharge

Date Time G.H. Discharge
Dec. 30 5:00 225.53 2280

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

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 mile (mi) 86.9, 27.4 mi south of Blythe, California, 36.2 mi north of Yuma, Arizona, and 105.1 mi downstream of Parker Dam.

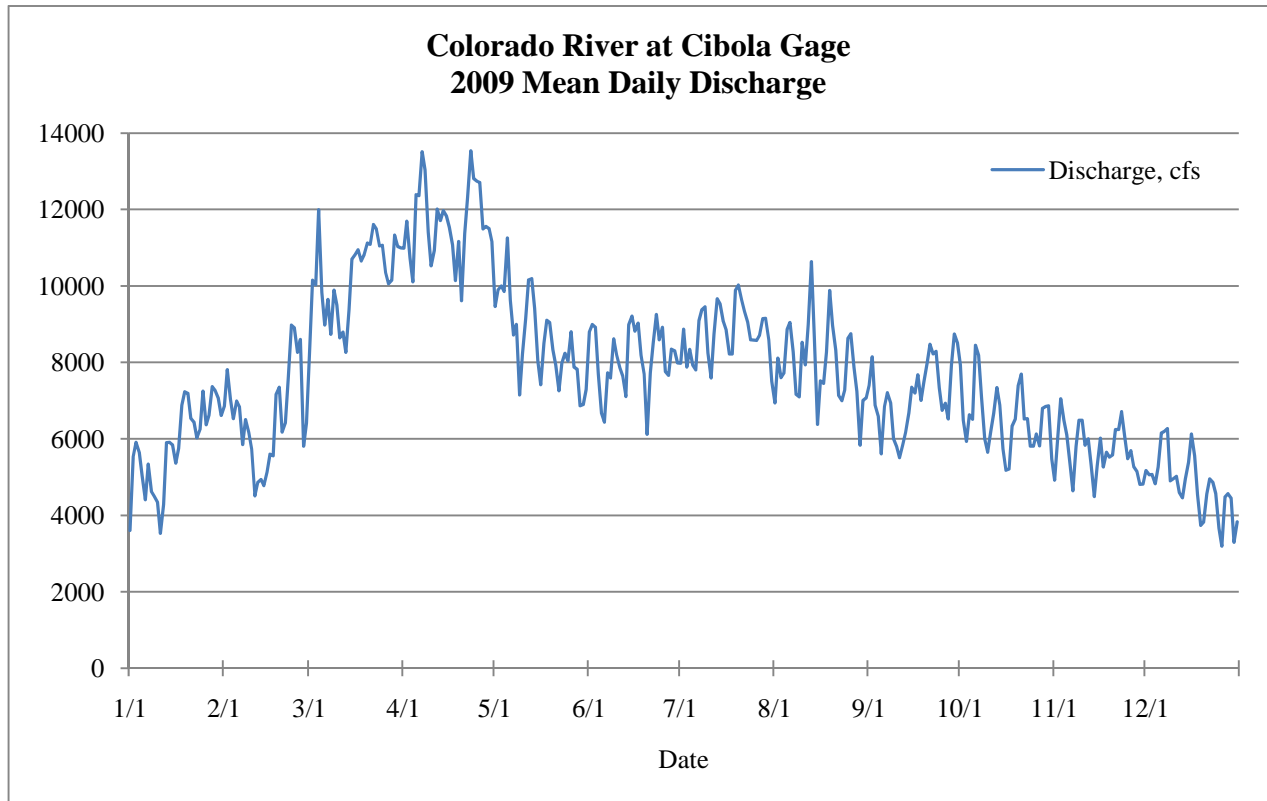
Drainage Area—183,800 square miles.

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

Gage—A Sutron Xlite datalogger (Model 9210-0000-1A) records water level 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, 13,670 cubic feet per second (cfs), Apr. 09, 2008; minimum daily discharge, 2,570 cfs, Dec. 28, 2008; maximum hourly discharge, 14,530 cfs, Apr. 23, 2009 at 23:00; minimum hourly discharge, 2,560 cfs, Dec. 28, 2008 at 02:00.

Remarks—None.



Colorado River at Cibola Gage

Discharge, in cfs, Calendar Year 2009

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	3600	6860	8340	10990	9460	8800	7980	6940	7400	7930	4920	5170
2	5520	7810	10150	11690	9900	8990	8870	8110	8150	6490	6070	5060
3	5910	7030	10030	10740	10000	8920	7880	7600	6870	5930	7050	5070
4	5650	6530	11990	10110	9860	7690	8340	7720	6580	6630	6490	4830
5	5030	6990	9830	12390	11260	6660	7920	8860	5610	6510	6100	5260
6	4410	6840	8980	12360	9630	6440	7800	9040	6850	8450	5350	6150
7	5340	5850	9650	13510	8720	7730	9090	8270	7210	8180	4640	6190
8	4630	6500	8730	13030	8990	7590	9380	7170	6950	7090	5810	6270
9	4500	6170	9890	11410	7150	8620	9450	7100	6010	6000	6490	4900
10	4340	5730	9500	10530	8220	8200	8250	8520	5800	5650	6490	4950
11	3530	4510	8640	10930	9140	7860	7590	7940	5510	6200	5830	5020
12	4280	4860	8790	12010	10160	7640	8740	8990	5840	6660	6000	4600
13	5900	4940	8260	11710	10190	7110	9660	10640	6170	7340	5320	4460
14	5910	4780	9380	11970	9410	8990	9530	8670	6680	6880	4490	4950
15	5840	5130	10700	11830	8040	9210	9070	6380	7350	5740	5300	5390
16	5360	5600	10820	11530	7420	8820	8840	7520	7200	5180	6020	6130
17	5750	5560	10950	11070	8500	9030	8220	7450	7680	5210	5260	5560
18	6880	7170	10650	10140	9100	8190	8220	8270	7010	6330	5650	4540
19	7230	7350	10820	11160	9040	7690	9890	9880	7490	6510	5520	3740
20	7190	6180	11120	9610	8330	6120	10020	8970	7980	7380	5580	3820
21	6540	6410	11090	11370	7930	7730	9640	8320	8470	7690	6240	4560
22	6440	7580	11610	12320	7260	8500	9340	7130	8220	6520	6240	4950
23	6030	8980	11490	13540	7980	9250	9050	7000	8290	6530	6710	4860
24	6250	8910	11050	12810	8240	8590	8590	7280	7330	5810	6060	4570
25	7250	8260	11060	12740	8040	8920	8580	8630	6750	5810	5480	3660
26	6370	8600	10350	12710	8800	7760	8570	8750	6930	6130	5690	3190
27	6630	5810	10060	11490	7880	7660	8710	7870	6520	5820	5270	4480
28	7370	6410	10150	11560	7820	8350	9140	7240	7930	6800	5150	4570
29	7270		11330	11500	6860	8310	9150	5830	8740	6850	4810	4450
30	7060		11030	11150	6900	7990	8590	7010	8500	6860	4820	3290
31	6610		11000		7290		7500	7070		5470		3830
Total	180620	183350	317440	349910	267520	243360	271600	246170	214020	202580	170850	148470
Mean	5826	6548	10240	11664	8630	8112	8761	7941	7134	6535	5695	4789
Max	7370	8980	11990	13540	11260	9250	10020	10640	8740	8450	7050	6270
Min	3530	4510	8260	9610	6860	6120	7500	5830	5510	5180	4490	3190
Ac-ft	358260	363675	629642	694046	530626	482705	538719	488278	424509	401817	338881	294490

Calendar Year 2009 Total 2795890 Mean 7656 Max 13540 Min 3190 Ac-ft 5545648

Maximum Discharge

Date Time G.H. Discharge
Apr. 23 23:00 209.68 14530

Minimum Discharge

Date Time G.H. Discharge
Dec. 30 15:00 205.03 2790

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 mile (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.

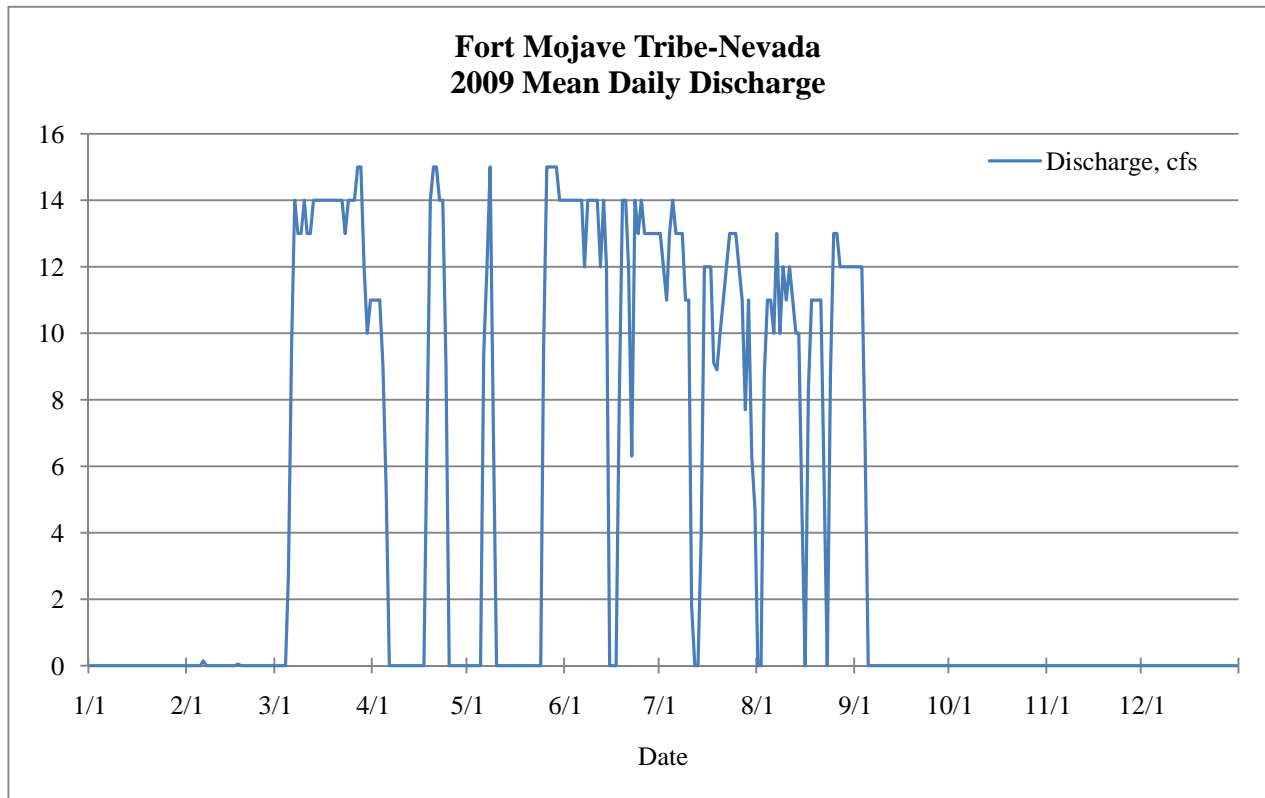
Drainage Area—Not applicable.

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

Gage—A Sutron Xlite datalogger (Model 9210-0000-1A) records discharge values measured by a SeaMetrics insertion magnetic flow meter (Model EX-201-S) mounted in the discharge side of the diversion pipe. Discharge is calculated using an indicator-discharge relationship.

Extremes—Maximum daily discharge, 15 cubic feet per second (cfs), Apr. 08, 2008; minimum daily discharge, no diversion at times; maximum hourly discharge, 16 cfs, Feb. 14, 2008 at 12:00; minimum hourly discharge, no diversion at times.

Remarks—None.



Fort Mojave Tribe-Nevada

Discharge, in cfs, Calendar Year 2009

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0	0	11	0	14	13	0	12	0	0	0
2	0	0	0	11	0	14	12	0	12	0	0	0
3	0	0	0	11	0	14	11	8.7	12	0	0	0
4	0	0	0	9.0	0	14	13	11	6.8	0	0	0
5	0	0	2.7	5.3	0	14	14	11	0	0	0	0
6	0	0.14	9.6	0	9.4	14	13	10	0	0	0	0
7	0	0	14	0	12	12	13	13	0	0	0	0
8	0	0	13	0	15	14	13	10	0	0	0	0
9	0	0	13	0	7.1	14	11	12	0	0	0	0
10	0	0	14	0	0	14	11	11	0	0	0	0
11	0	0	13	0	0	14	1.8	12	0	0	0	0
12	0	0	13	0	0	12	0	11	0	0	0	0
13	0	0	14	0	0	14	0	10	0	0	0	0
14	0	0	14	0	0	12	3.9	10	0	0	0	0
15	0	0	14	0	0	0	12	4.6	0	0	0	0
16	0	0	14	0	0	0	12	0	0	0	0	0
17	0	0.04	14	0	0	0	12	8.3	0	0	0	0
18	0	0	14	7.1	0	8.0	9.1	11	0	0	0	0
19	0	0	14	14	0	14	8.9	11	0	0	0	0
20	0	0	14	15	0	14	10	11	0	0	0	0
21	0	0	14	15	0	12	11	11	0	0	0	0
22	0	0	14	14	0	6.3	12	5.6	0	0	0	0
23	0	0	13	14	0	14	13	0	0	0	0	0
24	0	0	14	9.0	0	13	13	8.8	0	0	0	0
25	0	0	14	0	9.5	14	13	13	0	0	0	0
26	0	0	14	0	15	13	12	13	0	0	0	0
27	0	0	15	0	15	13	11	12	0	0	0	0
28	0	0	15	0	15	13	7.7	12	0	0	0	0
29	0		12	0	15	13	11	12	0	0	0	0
30	0		10	0	14	13	6.3	12	0	0	0	0
31	0		11		14		4.7	12		0		0
Total	0	0.18	350	135	141	350	308	287	43	0	0	0
Mean	0	0.01	11	4.5	4.5	12	9.9	9.3	1.4	0	0	0
Max	0	0.14	15	15	15	14	14	13	12	0	0	0
Min	0	0	0	0	0	0	0	0	0	0	0	0
Ac-ft	0	0.36	695	269	280	695	612	569	85	0	0	0

Calendar Year 2009 Total 1615 Mean 4.4 Max 15 Min 0 Ac-ft 3204

Maximum Discharge

Date Time G.H. Discharge
May 8 19:00 -- 16

Minimum Discharge

Date Time G.H. Discharge
Jan. 1 0:00 -- 0

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

Fort Mojave Tribe-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 mile (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.

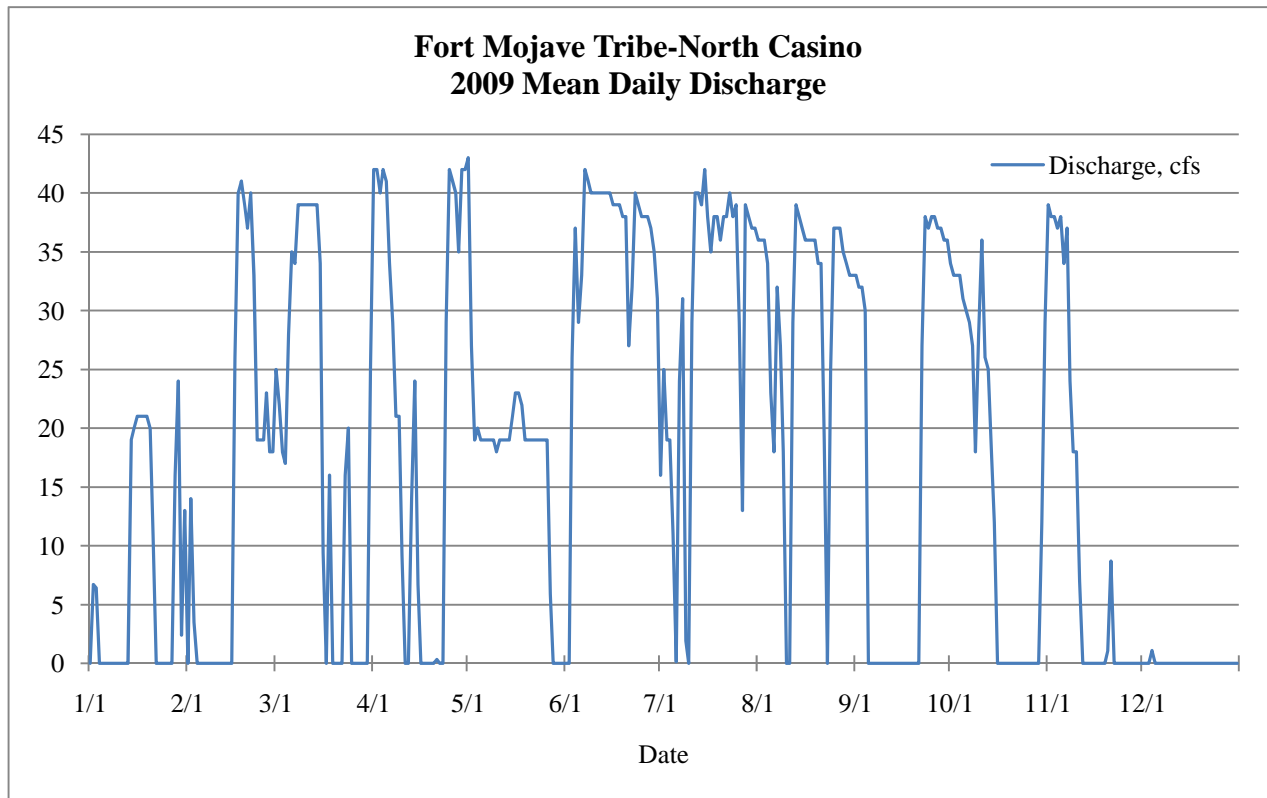
Drainage Area—Not applicable.

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

Gage—A Sutron Xlite datalogger (Model 9210-0000-1B) records stage and water velocity measured by a SonTek/YSI Argonaut-SW current meter. Discharge is calculated using a velocity-index relationship.

Extremes—Maximum daily discharge, 44 cubic feet per second (cfs), which first occurred on May 3, 2006; minimum daily discharge, 0 cfs, which occurred many times; maximum hourly discharge, 46 cfs, May 2, 2006 at 15:00; minimum hourly discharge, 0 cfs, which occurred many times.

Remarks—None.



Fort Mojave Tribe-North Casino

Discharge, in cfs, Calendar Year 2009

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0	25	42	43	0	16	36	33	34	39	0
2	6.7	14	22	42	27	0	25	36	32	33	38	0
3	6.4	3.5	18	40	19	26	19	36	32	33	38	0
4	0	0	17	42	20	37	19	34	30	33	37	1.1
5	0	0	28	41	19	29	11	23	0	31	38	0
6	0	0	35	34	19	33	0.15	18	0	30	34	0
7	0	0	34	29	19	42	24	32	0	29	37	0
8	0	0	39	21	19	41	31	27	0	27	24	0
9	0	0	39	21	19	40	1.9	18	0	18	18	0
10	0	0	39	9.2	18	40	0	0	0	28	18	0
11	0	0	39	0	19	40	29	0	0	36	7.0	0
12	0	0	39	0	19	40	40	29	0	26	0	0
13	0	0	39	14	19	40	40	39	0	25	0	0
14	19	0	39	24	19	40	39	38	0	18	0	0
15	20	0	34	6.7	21	40	42	37	0	12	0	0
16	21	26	9.4	0	23	39	38	36	0	0	0	0
17	21	40	0	0	23	39	35	36	0	0	0	0
18	21	41	16	0	22	39	38	36	0	0	0	0
19	21	39	0	0	19	38	38	36	0	0	0	0
20	20	37	0	0	19	38	36	34	0	0	1.1	0
21	11	40	0	0.33	19	27	38	34	0	0	8.7	0
22	0	33	0	0	19	32	38	19	27	0	0	0
23	0	19	16	0	19	40	40	0	38	0	0	0
24	0	19	20	29	19	39	38	25	37	0	0	0
25	0	19	0	42	19	38	39	37	38	0	0	0
26	0	23	0	41	19	38	29	37	38	0	0	0
27	0	18	0	40	5.9	38	13	37	37	0	0	0
28	16	18	0	35	0	37	39	35	37	0	0	0
29	24		0	42	0	35	38	34	36	0	0	0
30	2.4		0	42	0	31	37	33	36	12	0	0
31	13		25		0		37	33		29		0
Total	223	390	572	637	545	1036	908	905	451	454	338	1.1
Mean	7.2	14	18	21	18	35	29	29	15	15	11	0
Max	24	41	39	42	43	42	42	39	38	36	39	1.1
Min	0	0	0	0	0	0	0	0	0	0	0	0
Ac-ft	441	773	1135	1264	1081	2055	1801	1795	895	901	670	2.2

Calendar Year 2009 Total 6459 Mean 18 Max 43 Min 0 Ac-ft 12812

Maximum Discharge

Date	Time	G.H.	Discharge
Jul. 28	16:00	2.73	45

Minimum Discharge

Date	Time	G.H.	Discharge
Jan. 1	0:00	0	0

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

Fort Mojave Tribe-South Casino

Location—Latitude 34° 59.160', longitude 114° 37.622', in the SE¼ SW¼ of Section 33, T. 19N., R. 22W., Gila-Salt River meridian, Mohave County, Arizona, Hydrologic Unit 15030101, river mile (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.

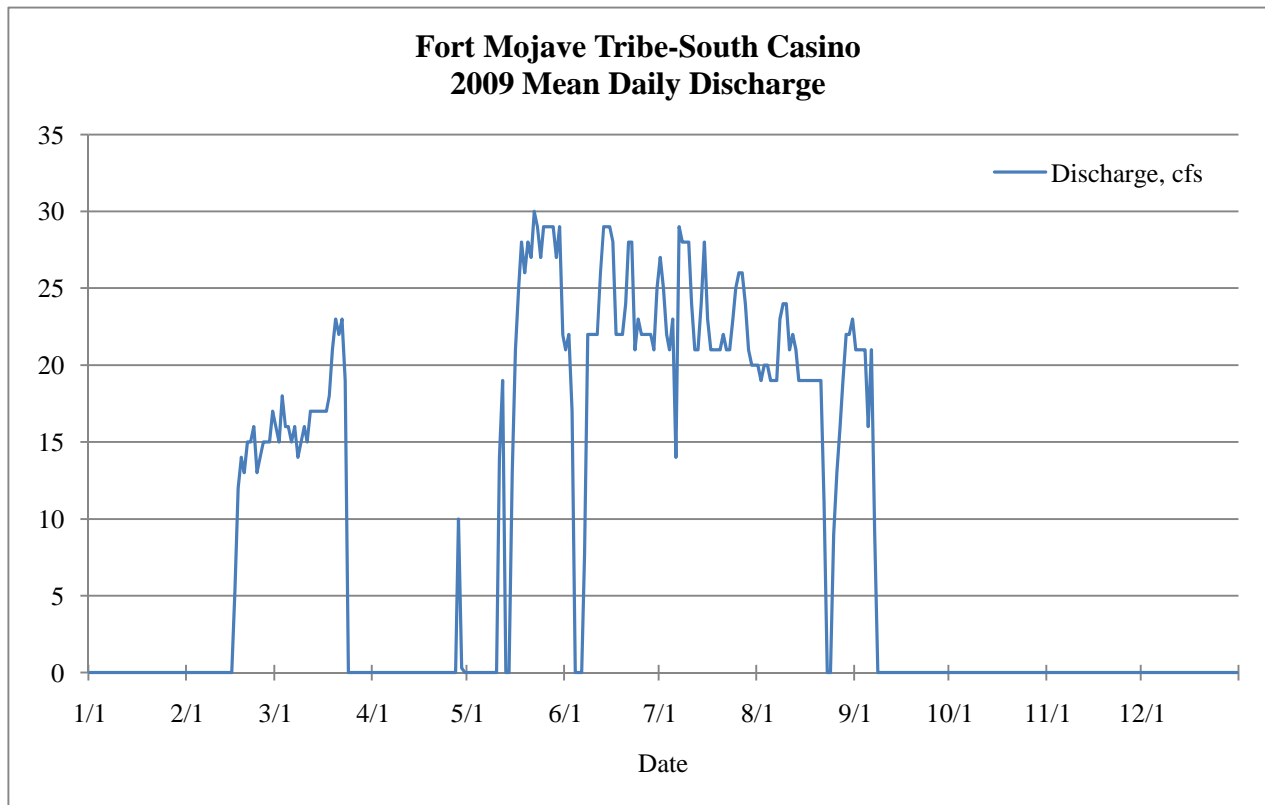
Drainage Area—Not applicable.

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

Gage—A Sutron Xlite datalogger (Model 9210-0000-1A) records water stage measured by a Sutron AccuBubble self-contained bubbler system (Model 5600-0131-4) upstream of a fixed abrupt-expansion type, long-throated flume made of smooth metal. Discharge is calculated using a stage-discharge relationship.

Extremes—Maximum daily discharge, 30 cubic feet per second (cfs), May 22, 2009; minimum daily discharge, 0 cfs, which occurred many times; maximum hourly discharge, 32 cfs, May 20, 2009 at 19:00; minimum hourly discharge, 0 cfs, which occurred many times.

Remarks—None.



Fort Mojave Tribe-South Casino

Discharge, in cfs, Calendar Year 2009

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0	16	0	0	21	27	20	21	0	0	0
2	0	0	15	0	0	22	25	19	21	0	0	0
3	0	0	18	0	0	17	22	20	21	0	0	0
4	0	0	16	0	0	0	21	20	21	0	0	0
5	0	0	16	0	0	0	23	19	16	0	0	0
6	0	0	15	0	0	0	14	19	21	0	0	0
7	0	0	16	0	0	7.7	29	19	9.2	0	0	0
8	0	0	14	0	0	22	28	23	0	0	0	0
9	0	0	15	0	0	22	28	24	0	0	0	0
10	0	0	16	0	0	22	28	24	0	0	0	0
11	0	0	15	0	14	22	24	21	0	0	0	0
12	0	0	17	0	19	26	21	22	0	0	0	0
13	0	0	17	0	0	29	21	21	0	0	0	0
14	0	0	17	0	0	29	24	19	0	0	0	0
15	0	0	17	0	13	29	28	19	0	0	0	0
16	0	5.4	17	0	21	28	23	19	0	0	0	0
17	0	12	17	0	25	22	21	19	0	0	0	0
18	0	14	18	0	28	22	21	19	0	0	0	0
19	0	13	21	0	26	22	21	19	0	0	0	0
20	0	15	23	0	28	24	21	19	0	0	0	0
21	0	15	22	0	27	28	22	19	0	0	0	0
22	0	16	23	0	30	28	21	11	0	0	0	0
23	0	13	19	0	29	21	21	0	0	0	0	0
24	0	14	0	0	27	23	23	0	0	0	0	0
25	0	15	0	0	29	22	25	9	0	0	0	0
26	0	15	0	0	29	22	26	13	0	0	0	0
27	0	15	0	0	29	22	26	16	0	0	0	0
28	0	17	0	10	29	22	24	19	0	0	0	0
29	0		0	0.31	27	21	21	22	0	0	0	0
30	0		0	0	29	25	20	22	0	0	0	0
31	0		0		22		20	23		0		0
Total	0	179	400	10	481	621	719	558	130	0	0	0
Mean	0	6.4	13	0.34	16	21	23	18	4.3	0	0	0
Max	0	17	23	10	30	29	29	24	21	0	0	0
Min	0	0	0	0	0	0	14	0	0	0	0	0
Ac-ft	0	356	793	20	954	1231	1426	1107	258	0	0	0

Calendar Year 2009 Total 3099 Mean 8.4 Max 30 Min 0 Ac-ft 6146

Maximum Discharge

Date Time G.H. Discharge
May 20 19:00 1.31 32

Minimum Discharge

Date Time G.H. Discharge
Jan. 1 0:00 0 0

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

Fort Mojave Tribe-California 2 (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 mile (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.

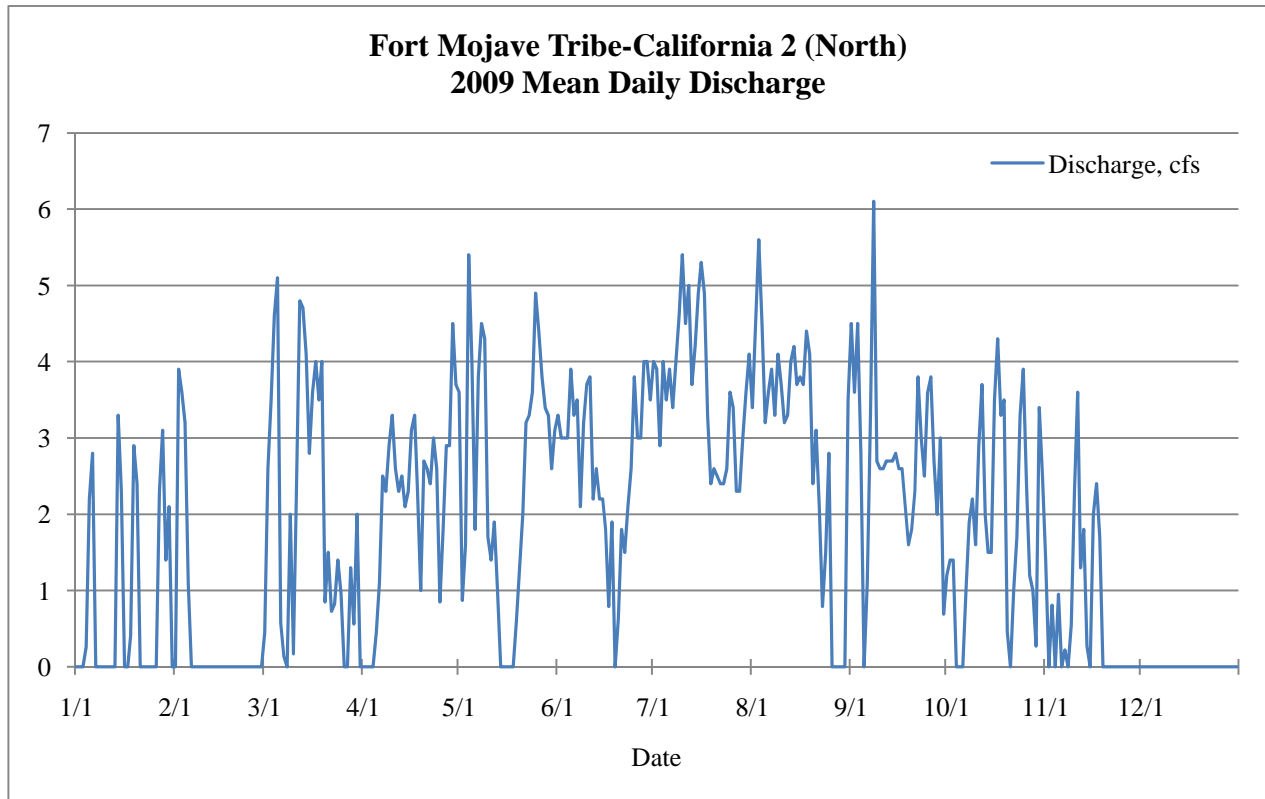
Drainage Area—Not applicable.

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

Gage—A Sutron Xlite datalogger (Model 9210-0000-1A) records gage height measured by a Sutron AccuBubble self-contained bubbler system (Model 5600-0131-4) upstream of a fixed abrupt-expansion type, long-throated flume. Discharge is calculated using a stage-discharge relationship.

Extremes—Maximum daily discharge, 14 cubic feet per second (cfs), Apr. 27, 2007; minimum daily discharge, no diversion at times; maximum hourly discharge, 26 cfs, Sep. 21, 2006 at 07:00; minimum hourly discharge, no diversion at times.

Remarks—None.



Fort Mojave Tribe-California 2 (North)

Discharge, in cfs, Calendar Year 2009

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0	0.45	0	3.6	3.3	4.0	3.4	4.5	1.2	1.4	0
2	0	3.9	2.6	0	0.87	3.0	3.9	4.5	3.6	1.4	0	0
3	0	3.6	3.5	0	1.6	3.0	2.9	5.6	4.5	1.4	0.81	0
4	0.26	3.2	4.6	0	5.4	3.0	4.0	4.5	2.8	0	0	0
5	2.2	1.1	5.1	0.44	4.0	3.9	3.5	3.2	0	0	0.95	0
6	2.8	0	0.58	1.1	1.8	3.3	3.9	3.6	1.1	0	0	0
7	0	0	0.14	2.5	3.8	3.5	3.4	3.9	3.3	1.0	0.22	0
8	0	0	0	2.3	4.5	2.1	4.0	3.3	6.1	1.9	0	0
9	0	0	2.0	2.9	4.3	3.2	4.6	4.1	2.7	2.2	0.55	0
10	0	0	0.17	3.3	1.7	3.7	5.4	3.7	2.6	1.6	2.3	0
11	0	0	2.4	2.6	1.4	3.8	4.5	3.2	2.6	2.9	3.6	0
12	0	0	4.8	2.3	1.9	2.2	5.0	3.3	2.7	3.7	1.3	0
13	0	0	4.7	2.5	1.0	2.6	3.7	4.0	2.7	2.0	1.8	0
14	3.3	0	4.1	2.1	0	2.2	4.2	4.2	2.7	1.5	0.27	0
15	2.3	0	2.8	2.3	0	2.2	4.9	3.7	2.8	1.5	0	0
16	0	0	3.6	3.1	0	1.8	5.3	3.8	2.6	3.5	2.0	0
17	0	0	4.0	3.3	0	0.79	4.9	3.7	2.6	4.3	2.4	0
18	0.41	0	3.5	2.3	0	1.9	3.3	4.4	2.1	3.3	1.7	0
19	2.9	0	4.0	1.0	0.60	0	2.4	4.1	1.6	3.5	0	0
20	2.4	0	0.85	2.7	1.3	0.63	2.6	2.4	1.8	0.46	0	0
21	0	0	1.5	2.6	2.0	1.8	2.5	3.1	2.3	0	0	0
22	0	0	0.73	2.4	3.2	1.5	2.4	2.1	3.8	1.0	0	0
23	0	0	0.83	3.0	3.3	2.1	2.4	0.79	3.0	1.7	0	0
24	0	0	1.4	2.6	3.6	2.6	2.6	1.5	2.5	3.3	0	0
25	0	0	0.96	0.85	4.9	3.8	3.6	2.8	3.6	3.9	0	0
26	0	0	0	1.8	4.4	3.0	3.4	0	3.8	2.4	0	0
27	2.3	0	0	2.9	3.8	3.0	2.3	0	2.7	1.2	0	0
28	3.1	0	1.3	2.9	3.4	4.0	2.3	0	2.0	1.0	0	0
29	1.4		0.56	4.5	3.3	4.0	3.0	0	3.0	0.27	0	0
30	2.1		2.0	3.7	2.6	3.5	3.6	0	0.69	3.4	0	0
31	0		0		3.1		4.1	3.5		2.5		0
Total	25	12	63	64	75	79	113	90	83	58	19	0
Mean	0	0	0	2.1	2.4	2.6	3.6	2.9	2.8	1.9	0.64	0
Max	3.3	3.9	5.1	4.5	5.4	4.0	5.4	5.6	6.1	4.3	3.6	0
Min	0	0	0	0	0	0	2.3	0	0	0	0	0
Ac-ft	51	23	125	127	149	158	223	179	164	115	38	0

Calendar Year 2009 Total 682 Mean 1.6 Max 6.1 Min 0 Ac-ft 1353

Maximum Discharge

Date	Time	G.H.	Discharge
Aug. 12	22:00	0.76	12

Minimum Discharge

Date	Time	G.H.	Discharge
Jan. 1	0:00	0	0

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

Fort Mojave Tribe-California 2 (West)

Location—Latitude 34° 58.022', longitude 114° 38.173', in the NE¼ NW¼ of Section 13, T. 10 N., R. 22 E., San Bernardino meridian, San Bernardino County, California, Hydrologic Unit 15030101, river mile (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.

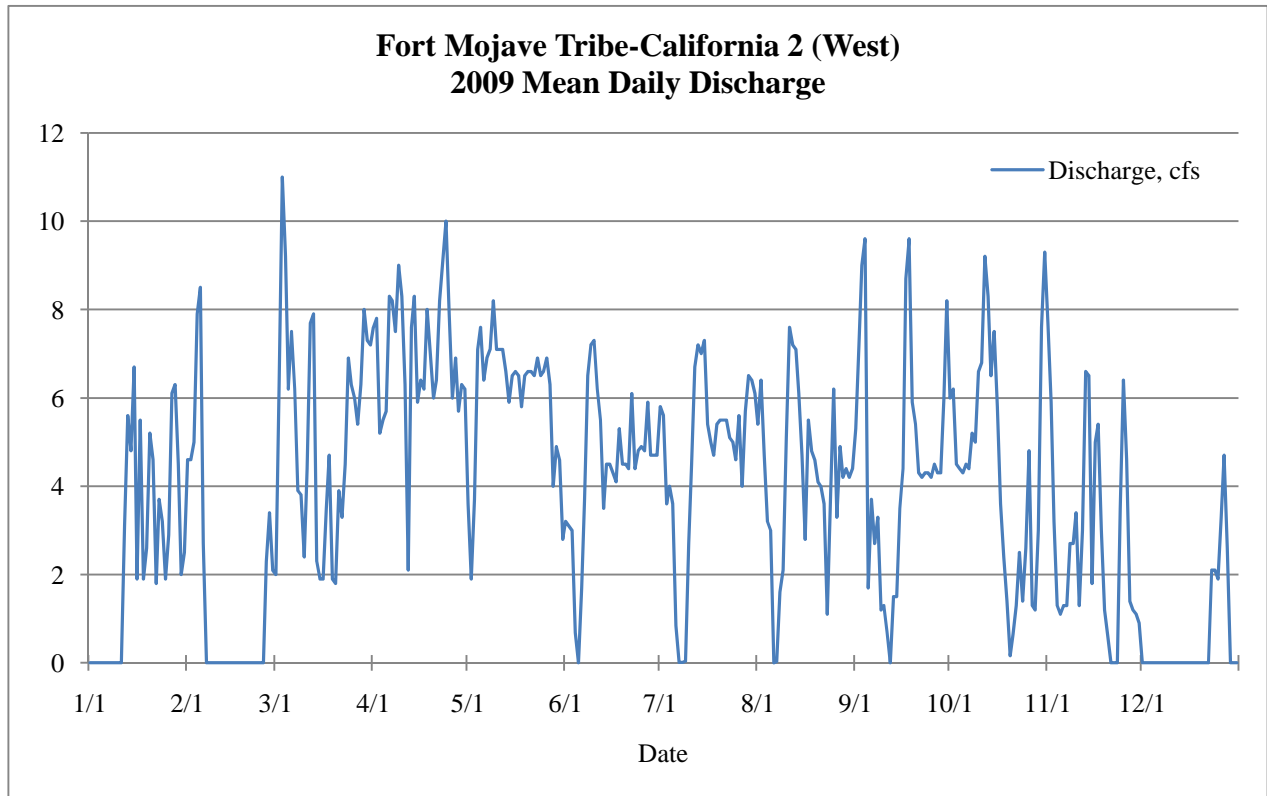
Drainage Area—Not applicable.

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

Gage—A Sutron Xlite datalogger (Model 9210-0000-1A) records discharge measured by a SeaMetrics insertion magnetic flow meter (Model EX-201-S) mounted inside of the discharge pipe downstream of the diversion pump. Discharge is calculated using an indicator-discharge relationship.

Extremes—Maximum daily discharge, 13 cubic feet per second (cfs), Mar. 6, 2006; minimum daily discharge, 0 cfs, Jan. 1, 2006; maximum hourly discharge, 20 cfs, Sep. 20, 2006 at 12:00; minimum hourly discharge, 0 cfs, Jan. 1, 2006 at 00:00.

Remarks—None.



Fort Mojave Tribe-California 2 (West)

Discharge, in cfs, Calendar Year 2009

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	4.6	2.0	7.6	3.6	3.2	5.8	5.4	5.3	6.0	7.7	0
2	0	4.6	6.3	7.8	1.9	3.1	5.6	6.4	7.2	6.2	5.9	0
3	0	5.0	11	5.2	3.7	3.0	3.6	4.7	9.0	4.5	3.2	0
4	0	7.9	9.2	5.5	7.1	0.68	4.0	3.2	9.6	4.4	1.3	0
5	0	8.5	6.2	5.7	7.6	0	3.6	3.0	1.7	4.3	1.1	0
6	0	2.7	7.5	8.3	6.4	1.7	0.84	0	3.7	4.5	1.3	0
7	0	0	6.2	8.2	6.9	3.7	0.01	0.03	2.7	4.4	1.3	0
8	0	0	3.9	7.5	7.1	6.5	0.01	1.6	3.3	5.2	2.7	0
9	0	0	3.8	9.0	8.2	7.2	0.04	2.1	1.2	5.0	2.7	0
10	0	0	2.4	8.3	7.1	7.3	2.7	5.1	1.3	6.6	3.4	0
11	0	0	4.4	6.3	7.1	6.2	4.5	7.6	0.70	6.8	1.3	0
12	3.1	0	7.7	2.1	7.1	5.5	6.7	7.2	0	9.2	3.0	0
13	5.6	0	7.9	7.6	6.6	3.5	7.2	7.1	1.5	8.3	6.6	0
14	4.8	0	2.3	8.3	5.9	4.5	7.0	6.1	1.5	6.5	6.5	0
15	6.7	0	1.9	5.9	6.5	4.5	7.3	4.7	3.5	7.5	1.8	0
16	1.9	0	1.9	6.4	6.6	4.3	5.4	2.8	4.4	5.8	5.0	0
17	5.5	0	3.5	6.2	6.5	4.1	5.0	5.5	8.7	3.6	5.4	0
18	1.9	0	4.7	8.0	5.8	5.3	4.7	4.8	9.6	2.4	3.0	0
19	2.6	0	1.9	7.0	6.5	4.5	5.4	4.6	5.9	1.4	1.2	0
20	5.2	0	1.8	6.0	6.6	4.5	5.5	4.1	5.4	0.16	0.61	0
21	4.6	0	3.9	6.4	6.6	4.4	5.5	4.0	4.3	0.65	0	0
22	1.8	0	3.3	8.2	6.5	6.1	5.5	3.6	4.2	1.3	0	0
23	3.7	0	4.5	9.1	6.9	4.4	5.1	1.1	4.3	2.5	0.01	2.1
24	3.2	0	6.9	10	6.5	4.8	5.0	3.7	4.3	1.4	3.5	2.1
25	1.9	0	6.3	7.9	6.6	4.9	4.6	6.2	4.2	2.6	6.4	1.9
26	2.9	2.3	6.0	6.0	6.9	4.8	5.6	3.3	4.5	4.8	4.6	3.3
27	6.1	3.4	5.4	6.9	6.3	5.9	4.0	4.9	4.3	1.3	1.4	4.7
28	6.3	2.1	6.3	5.7	4.0	4.7	5.7	4.2	4.3	1.2	1.2	2.6
29	4.5		8.0	6.3	4.9	4.7	6.5	4.4	6.0	3.0	1.1	0
30	2.0		7.3	6.2	4.6	4.7	6.4	4.2	8.2	7.6	0.91	0
31	2.5		7.2		2.8		6.1	4.4		9.3		0
Total	77	41	162	210	187	133	145	130	135	138	84	17
Mean	2.5	1.5	5.2	7.0	6.0	4.4	4.7	4.2	4.5	4.5	2.8	0.54
Max	6.7	8.5	11	10	8.2	7.3	7.3	7.6	9.6	9.3	7.7	4.7
Min	0	0	1.8	2.1	1.9	0	0.01	0	0	0.16	0	0
Ac-ft	152	82	321	416	372	263	287	258	267	275	167	33

Calendar Year 2009 Total 1458 Mean 4.0 Max 11 Min 0 Ac-ft 2892

Maximum Discharge

Date Time G.H. Discharge
Mar. 2 17:00 -- 14

Minimum Discharge

Date Time G.H. Discharge
Jan. 1 0:00 -- 0

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

Fort Mojave Tribe-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 mile (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.

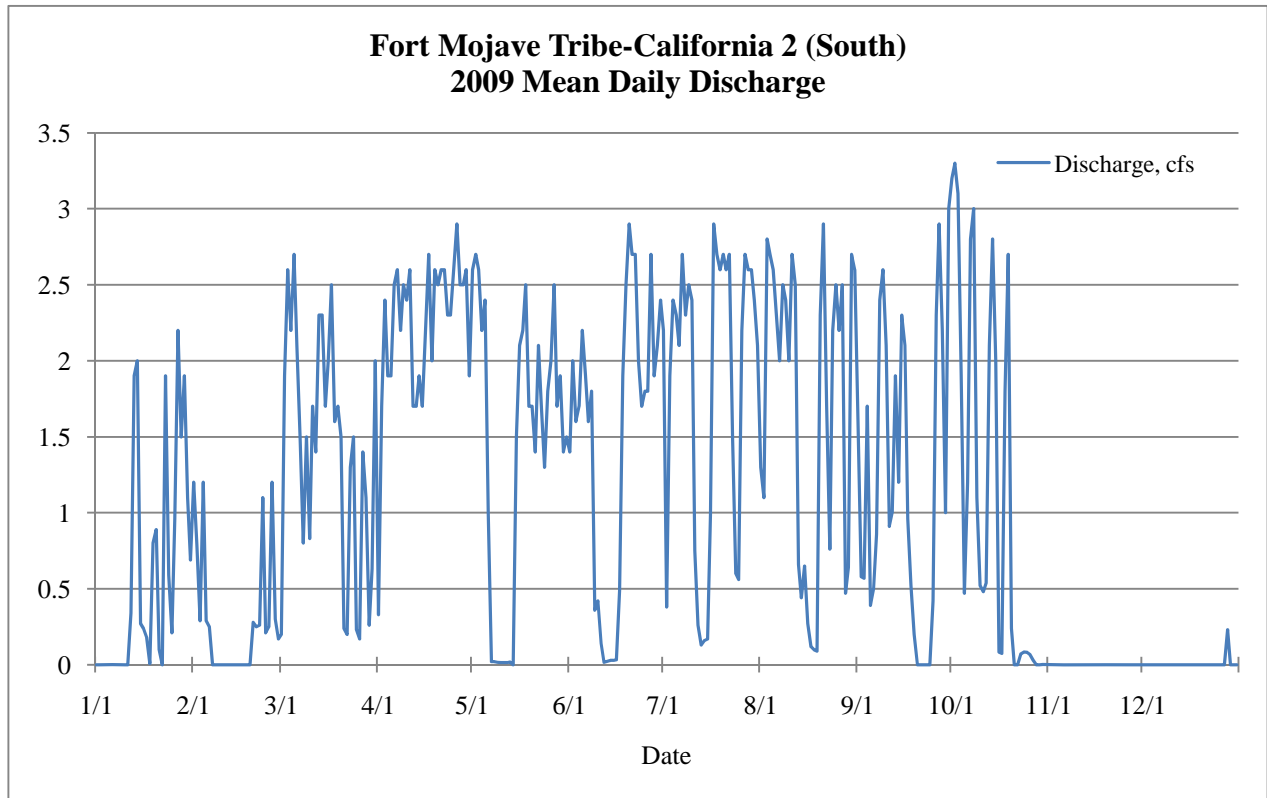
Drainage Area—Not applicable.

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

Gage—A Sutron Xlite datalogger (Model 9210-0000-1A) records gage height measured by a Sutron AccuBubble self-contained bubbler system (Model 5600-0131-4) upstream of a fixed abrupt-expansion type, long-throated flume. Discharge is calculated using a stage-discharge relationship.

Extremes—Maximum daily discharge, 5.7 cubic feet per second (cfs), May 25, 2006; minimum daily discharge, no diversion at times; maximum hourly discharge, 13 cfs, May 26, 2006 at 04:00; minimum hourly discharge, no diversion at times.

Remarks—None.



Fort Mojave Tribe-California 2 (South)

Discharge, in cfs, Calendar Year 2009

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	1.2	0.20	0.33	2.6	1.4	2.2	1.3	1.6	3.2	0	0
2	0	0.79	1.9	1.7	2.7	2.0	0.38	1.1	0.58	3.3	0	0
3	0	0.29	2.6	2.4	2.6	1.6	1.9	2.8	0.57	3.1	0	0
4	0	1.2	2.2	1.9	2.2	1.7	2.4	2.7	1.7	1.9	0	0
5	0	0.29	2.7	1.9	2.4	2.2	2.3	2.6	0.39	0.47	0	0
6	0	0.25	2.1	2.5	1.0	1.9	2.1	2.3	0.50	1.2	0	0
7	0	0	1.5	2.6	0.02	1.6	2.7	2.0	0.86	2.8	0	0
8	0	0	0.80	2.2	0.02	1.8	2.3	2.5	2.4	3.0	0	0
9	0	0	1.5	2.5	0.02	0.36	2.5	2.4	2.6	1.1	0	0
10	0	0	0.83	2.4	0.02	0.42	2.4	2.0	2.1	0.52	0	0
11	0	0	1.7	2.6	0.01	0.14	0.75	2.7	0.91	0.48	0	0
12	0.34	0	1.4	1.7	0.02	0.02	0.26	2.5	1.0	0.54	0	0
13	1.9	0	2.3	1.7	0.02	0.02	0.13	0.66	1.9	2.1	0	0
14	2.0	0	2.3	1.9	0	0.03	0.16	0.44	1.2	2.8	0	0
15	0.27	0	1.7	1.7	1.5	0.03	0.17	0.65	2.3	2.0	0	0
16	0.24	0	2.0	2.2	2.1	0.03	1.0	0.27	2.1	0.08	0	0
17	0.18	0	2.5	2.7	2.2	0.49	2.9	0.12	1.0	0.08	0	0
18	0.01	0	1.6	2.0	2.5	1.9	2.7	0.10	0.52	1.8	0	0
19	0.80	0	1.7	2.6	1.7	2.5	2.6	0.09	0.20	2.7	0	0
20	0.89	0.28	1.5	2.5	1.7	2.9	2.7	2.3	0	0.24	0	0
21	0.10	0.25	0.24	2.6	1.4	2.7	2.6	2.9	0	0	0	0
22	0	0.26	0.20	2.6	2.1	2.7	2.7	1.7	0	0	0	0
23	1.9	1.1	1.3	2.3	1.7	2.0	1.5	0.76	0	0.07	0	0
24	0.59	0.21	1.5	2.3	1.3	1.7	0.60	2.2	0	0.08	0	0
25	0.21	0.25	0.23	2.6	1.8	1.8	0.56	2.5	0.42	0.08	0	0
26	1.0	1.2	0.17	2.9	2.0	1.8	2.2	2.2	2.3	0.07	0	0
27	2.2	0.30	1.4	2.5	2.5	2.7	2.7	2.5	2.9	0.03	0	0
28	1.5	0.17	1.1	2.5	1.7	1.9	2.6	0.47	2.2	0	0	0.23
29	1.9		0.26	2.6	1.9	2.1	2.6	0.64	1.0	0	0	0
30	1.1		0.63	1.9	1.4	2.4	2.4	2.7	3.0	0	0	0
31	0.69		2.0		1.5		2.1	2.6		0		0
Total	18	8.0	44	67	45	45	57	53	36	34	0	0.23
Mean	0	0	0	2.2	1.4	1.5	1.8	1.7	1.2	1.1	0	0.01
Max	2.2	1.2	2.7	2.9	2.7	2.9	2.9	2.9	3.0	3.3	0	0.23
Min	0	0	0.17	0.33	0	0.02	0.13	0.09	0	0	0	0
Ac-ft	35	16	87	133	89	89	113	105	72	67	0	0.46

Calendar Year 2009 Total 406 Mean 0.92 Max 3.3 Min 0 Ac-ft 806

Maximum Discharge

Date	Time	G.H.	Discharge
Sep. 27	20:00	0.58	5.9

Minimum Discharge

Date	Time	G.H.	Discharge
Jan. 1	0:00	0	0

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

Fort Mojave Tribe-California 1

Location—Latitude 34° 57.171', longitude 114° 38.037', in the NW¼ NE¼ of Section 24, T. 10 N., R. 22 E., San Bernardino meridian, San Bernardino County, California, Hydrologic Unit 15030101, river mile (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.

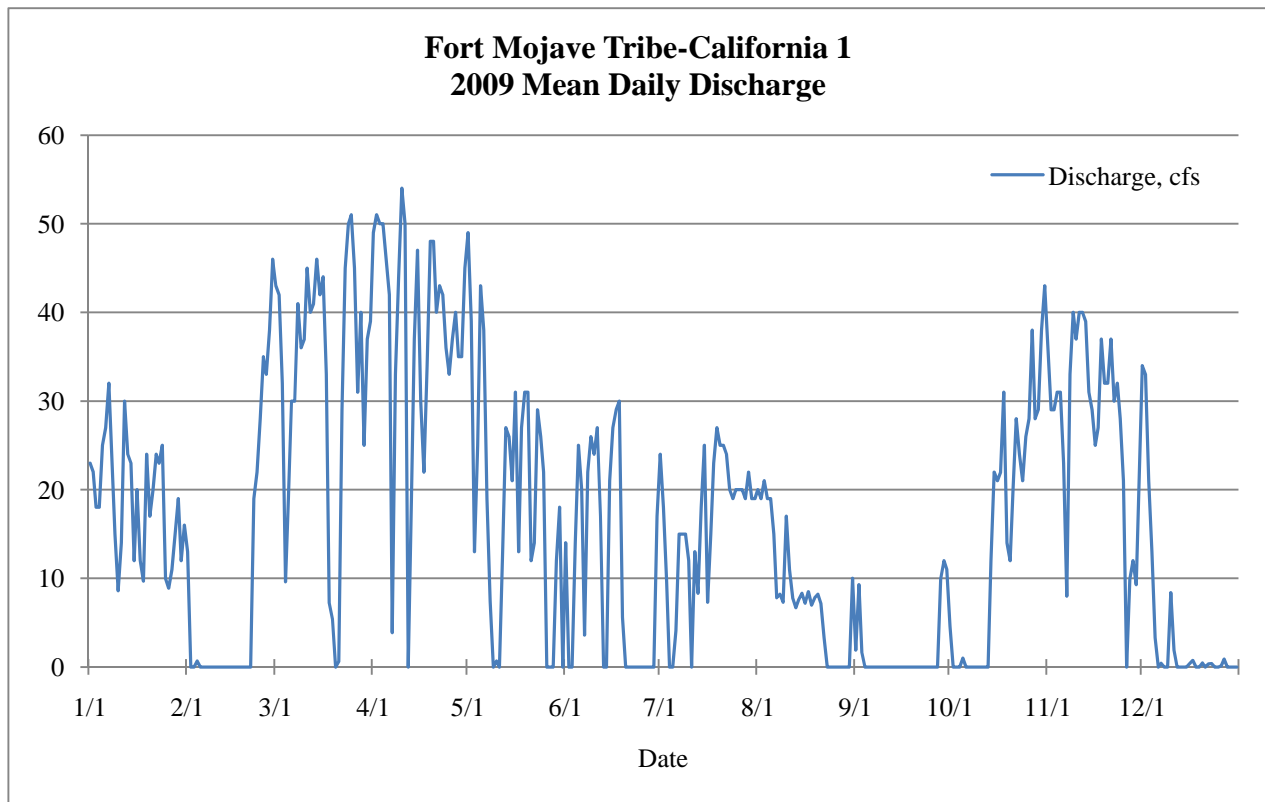
Drainage Area—Not applicable.

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

Gage—A Sutron Xlite datalogger (Model 9210-0000-1B) records stage and velocity measured by a SonTek/YSI Argonaut-SW current meter. Discharge is calculated using a velocity-index relationship.

Extremes—Maximum daily discharge, 58 cubic feet per second (cfs), which first occurred on Jun. 12, 2007; minimum daily discharge, 0 cfs, which occurred many times; maximum hourly discharge, 64 cfs, Jun. 30, 2007 at 19:00; minimum hourly discharge, 0 cfs, which occurred many times.

Remarks—None.



Fort Mojave Tribe-California 1

Discharge, in cfs, Calendar Year 2009

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	23	13	43	49	49	14	24	20	1.9	4.6	36	34
2	22	0	42	51	39	0	18	19	9.3	0	29	33
3	18	0	32	50	13	0	9.6	21	1.7	0	29	21
4	18	0.68	9.6	50	25	14	0	19	0	0	31	13
5	25	0	19	46	43	25	0	19	0	1.0	31	3.3
6	27	0	30	42	38	20	4.1	15	0	0	23	0
7	32	0	30	3.9	19	3.6	15	7.8	0	0	8.0	0.43
8	23	0	41	33	7.4	22	15	8.2	0	0	33	0
9	15	0	36	44	0	26	15	7.3	0	0	40	0
10	8.6	0	37	54	0.67	24	12	17	0	0	37	8.4
11	14	0	45	50	0	27	0	11	0	0	40	1.9
12	30	0	40	0	13	17	13	7.8	0	0	40	0
13	24	0	41	19	27	0	8.3	6.7	0	0	39	0
14	23	0	46	37	26	0	18	7.6	0	12	31	0
15	12	0	42	47	21	21	25	8.3	0	22	29	0
16	20	0	44	30	31	27	7.3	7.2	0	21	25	0.38
17	12	0	33	22	13	29	15	8.5	0	22	27	0.74
18	9.7	0	7.2	34	27	30	23	7.0	0	31	37	0
19	24	0	5.4	48	31	5.6	27	7.8	0	14	32	0
20	17	0	0	48	31	0	25	8.2	0	12	32	0.46
21	20	0	0.65	40	12	0	25	7.2	0	20	37	0
22	24	19	29	43	14	0	24	3.3	0	28	30	0.35
23	23	22	45	42	29	0	20	0	0	24	32	0.39
24	25	28	50	36	26	0	19	0	0	21	28	0
25	10	35	51	33	22	0	20	0	0	26	21	0
26	8.9	33	45	37	0	0	20	0	0	28	0	0.15
27	11	38	31	40	0	0	20	0	0	38	10	0.90
28	15	46	40	35	0	0	19	0	10	28	12	0
29	19		25	35	12	0	22	0	12	29	9.3	0
30	12		37	45	18	17	19	0	11	38	21	0
31	16		39		0		19	10		43		0
Total	581	235	1016	1144	587	322	501	254	46	463	829	118
Mean	19	8.4	33	38	19	11	16	8.2	1.5	15	28	3.8
Max	32	46	51	54	49	30	27	21	12	43	40	34
Min	8.6	0	0	0	0	0	0	0	0	0	0	0
Ac-ft	1153	465	2015	2269	1164	639	994	504	91	918	1645	235

Calendar Year 2009 Total 6096 Mean 17 Max 54 Min 0 Ac-ft 12092

Maximum Discharge

Date Time G.H. Discharge
Apr. 1 17:00 3.74 63

Minimum Discharge

Date Time G.H. Discharge
Jan. 9 22:00 1.84 0

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

Fort Mojave Tribe-Cimmaron

Location—Latitude 34° 56.347', longitude 114° 37.699', in the SE¼ SW¼ of Section 16, T. 18 N., R. 22 W., Gila-Salt River meridian, Mohave County, Arizona, Hydrologic Unit 15030101, river mile (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.

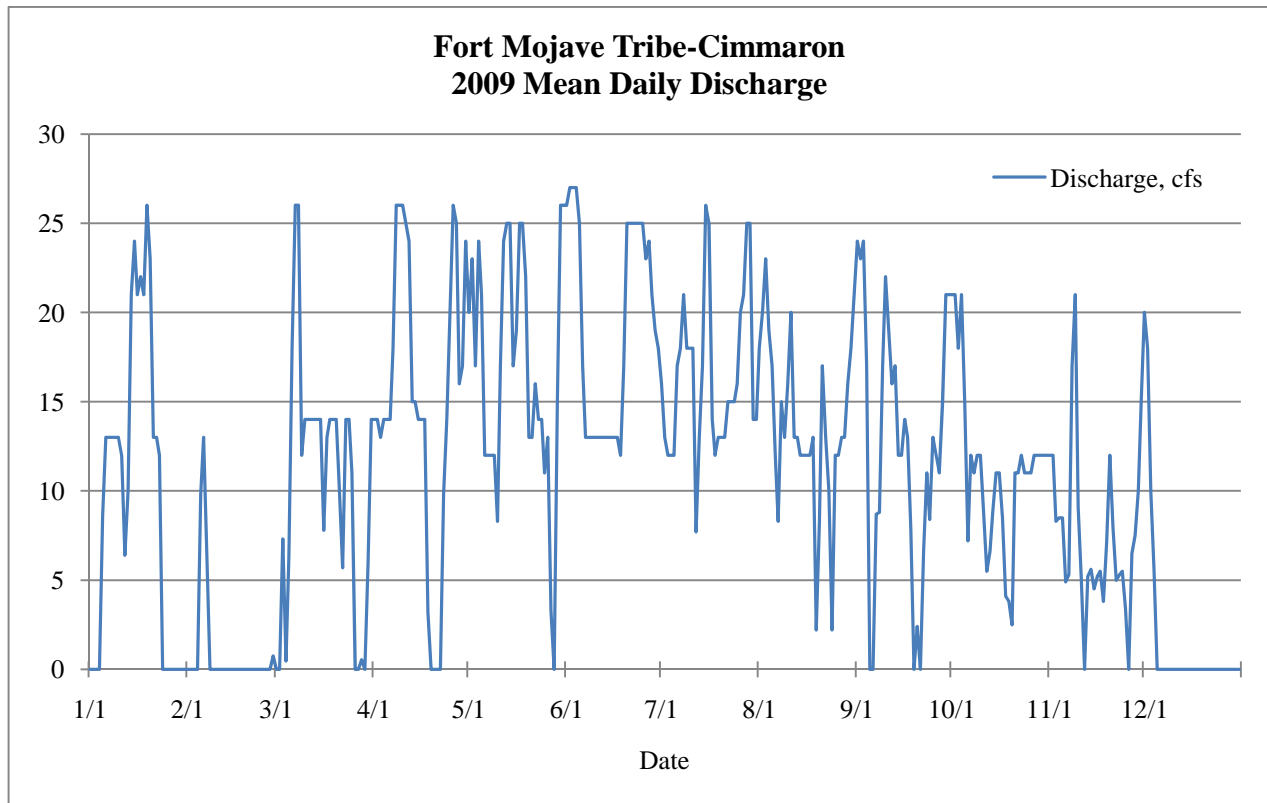
Drainage Area—Not applicable.

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

Gage—A Sutron Xlite datalogger (Model 9210-0000-1B) records gage height and water velocity measured by a SonTek/YSI Argonaut-SW current meter attached to a fixed abrupt-expansion type, long-throated flume made of smooth metal. Discharge is calculated using a stage factor velocity index rating.

Extremes—Maximum daily discharge, 41 cubic feet per second (cfs), Jun. 15, 2007; minimum daily discharge, 0 cfs, which occurred many times; maximum hourly discharge, 52 cfs, Jun. 12, 2007 at 16:00; minimum hourly discharge, 0 cfs, which occurred many times.

Remarks—None.



Fort Mojave Tribe-Cimmaron

Discharge, in cfs, Calendar Year 2009

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0	0	14	20	26	16	18	24	21	12	20
2	0	0	0	14	23	27	13	20	23	21	12	18
3	0	0	7.3	13	17	27	12	23	24	18	8.3	10
4	0	0	0.46	14	24	27	12	19	17	21	8.5	5.6
5	8.6	9.8	6.3	14	21	25	12	17	0	15	8.5	0
6	13	13	18	14	12	17	17	12	0	7.2	4.9	0
7	13	6.5	26	18	12	13	18	8.3	8.7	12	5.3	0
8	13	0	26	26	12	13	21	15	8.8	11	17	0
9	13	0	12	26	12	13	18	13	17	12	21	0
10	13	0	14	26	8.3	13	18	16	22	12	9.1	0
11	12	0	14	25	17	13	18	20	19	8.8	5.0	0
12	6.4	0	14	24	24	13	7.7	13	16	5.5	0	0
13	10	0	14	15	25	13	13	13	17	6.6	5.2	0
14	21	0	14	15	25	13	17	12	12	8.9	5.6	0
15	24	0	14	14	17	13	26	12	12	11	4.5	0
16	21	0	7.8	14	19	13	25	12	14	11	5.2	0
17	22	0	13	14	25	13	14	12	13	8.5	5.5	0
18	21	0	14	3.2	25	12	12	13	7.9	4.1	3.8	0
19	26	0	14	0	22	17	13	2.2	0	3.8	7.1	0
20	23	0	14	0	13	25	13	8.3	2.4	2.5	12	0
21	13	0	10	0	13	25	13	17	0	11	7.9	0
22	13	0	5.7	0	16	25	15	13	6.6	11	5.0	0
23	12	0	14	9.8	14	25	15	10	11	12	5.3	0
24	0	0	14	14	14	25	15	2.2	8.4	11	5.5	0
25	0	0	11	20	11	25	16	12	13	11	3.4	0
26	0	0	0	26	13	23	20	12	12	11	0	0
27	0	0	0	25	3.3	24	21	13	11	12	6.5	0
28	0	0.75	0.53	16	0	21	25	13	15	12	7.5	0
29	0		0	17	15	19	25	16	21	12	10	0
30	0		6.0	24	26	18	14	18	21	12	15	0
31	0		14		26		14	21		12		0
Total	298	30	318	455	525	576	509	426	377	348	227	54
Mean	9.6	1.1	10	15	17	19	16	14	13	11	7.6	1.7
Max	26	13	26	26	26	27	26	23	24	21	21	20
Min	0	0	0	0	0	12	7.7	2.2	0	2.5	0	0
Ac-ft	591	60	631	902	1041	1142	1009	845	747	690	449	106

Calendar Year 2009 Total 4141 Mean 11 Max 27 Min 0 Ac-ft 8214

Maximum Discharge

Date	Time	G.H.	Discharge
Jun. 1	22:00	3.88	28

Minimum Discharge

Date	Time	G.H.	Discharge
Jan. 1	0:00	0	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 mile (mi) 250.8, 14.3 mi south of Bullhead City, Arizona, 4.9 mi north of Needles, California, and 25.1 river mi downstream of Davis Dam.

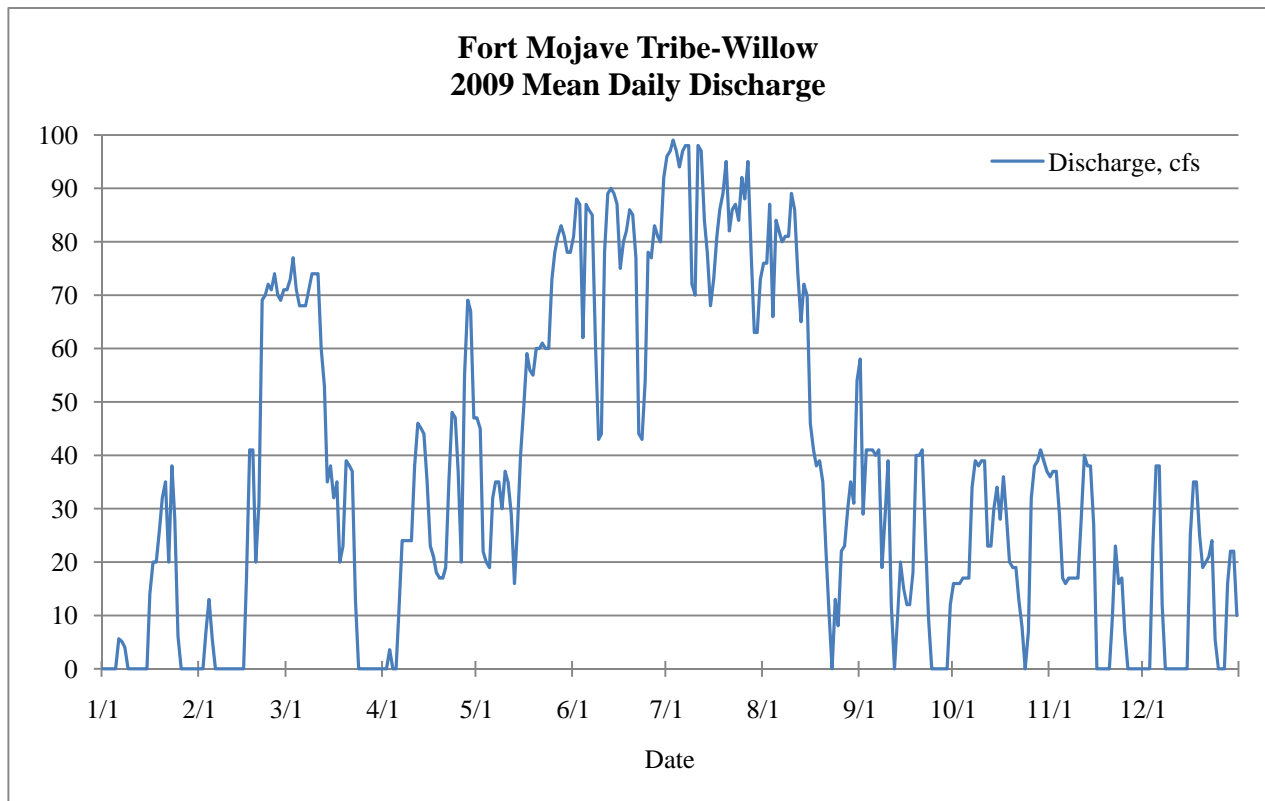
Drainage Area—Not applicable.

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

Gage—A Sutron Xlite datalogger (Model 9210-0000-1B) records gage height and water velocity measured by a SonTek/YSI Argonaut-SW current meter. Discharge is calculated using a velocity-index relationship.

Extremes—Maximum daily discharge, 99 cubic feet per second (cfs), Jul. 3, 2009; minimum daily discharge, no diversion at times; maximum hourly discharge, 108 cfs, Jul. 1, 2009 at 21:00; minimum hourly discharge, no diversion at times.

Remarks—None.



Fort Mojave Tribe-Willow

Discharge, in cfs, Calendar Year 2009

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0	71	0	47	81	96	76	58	16	36	0
2	0	0	73	0	45	88	97	76	29	16	37	0
3	0	7.4	77	3.6	22	87	99	87	41	16	37	0
4	0	13	71	0	20	62	97	66	41	17	29	23
5	0	5.6	68	0	19	87	94	84	41	17	17	38
6	5.6	0	68	11	32	86	97	82	40	17	16	38
7	5.1	0	68	24	35	85	98	80	41	34	17	12
8	4.0	0	71	24	35	61	98	81	19	39	17	0
9	0	0	74	24	30	43	72	81	29	38	17	0
10	0	0	74	24	37	44	70	89	39	39	17	0
11	0	0	74	38	35	78	98	86	12	39	28	0
12	0	0	60	46	29	89	97	74	0	23	40	0
13	0	0	53	45	16	90	84	65	9.8	23	38	0
14	0	0	35	44	26	89	78	72	20	30	38	0
15	0	0	38	35	40	87	68	70	15	34	27	0
16	14	17	32	23	49	75	73	46	12	28	0	25
17	20	41	35	21	59	80	81	41	12	36	0	35
18	20	41	20	18	56	82	86	38	18	29	0	35
19	26	20	23	17	55	86	89	39	40	20	0	25
20	32	31	39	17	60	85	95	35	40	19	0	19
21	35	69	38	19	60	77	82	22	41	19	9.1	20
22	20	70	37	35	61	44	86	11	25	13	23	21
23	38	72	13	48	60	43	87	0	9.4	7.9	16	24
24	28	71	0	47	60	54	84	13	0	0	17	5.5
25	6.1	74	0	37	73	78	92	8.1	0	7.0	7.0	0
26	0	70	0	20	78	77	88	22	0	32	0	0
27	0	69	0	55	81	83	95	23	0	38	0	0
28	0	71	0	69	83	81	78	30	0	39	0	16
29	0		0	67	81	80	63	35	0	41	0	22
30	0		0	47	78	92	63	31	12	39	0	22
31	0		0		78		73	54		37		10
Total	254	742	1212	859	1540	2274	2658	1617	644	803	483	391
Mean	8.2	27	39	29	50	76	86	52	21	26	16	13
Max	38	74	77	69	83	92	99	89	58	41	40	38
Min	0	0	0	0	16	43	63	0	0	0	0	0
Ac-ft	503	1472	2404	1703	3055	4510	5272	3208	1278	1593	958	775

Calendar Year 2009 Total 13476 Mean 37 Max 99 Min 0 Ac-ft 26730

Maximum Discharge

Date Time G.H. Discharge
Jun. 1 21:00 3.97 108

Minimum Discharge

Date Time G.H. Discharge
Jan. 1 0:00 0 0

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

Fort Mojave Tribe-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 mile (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.

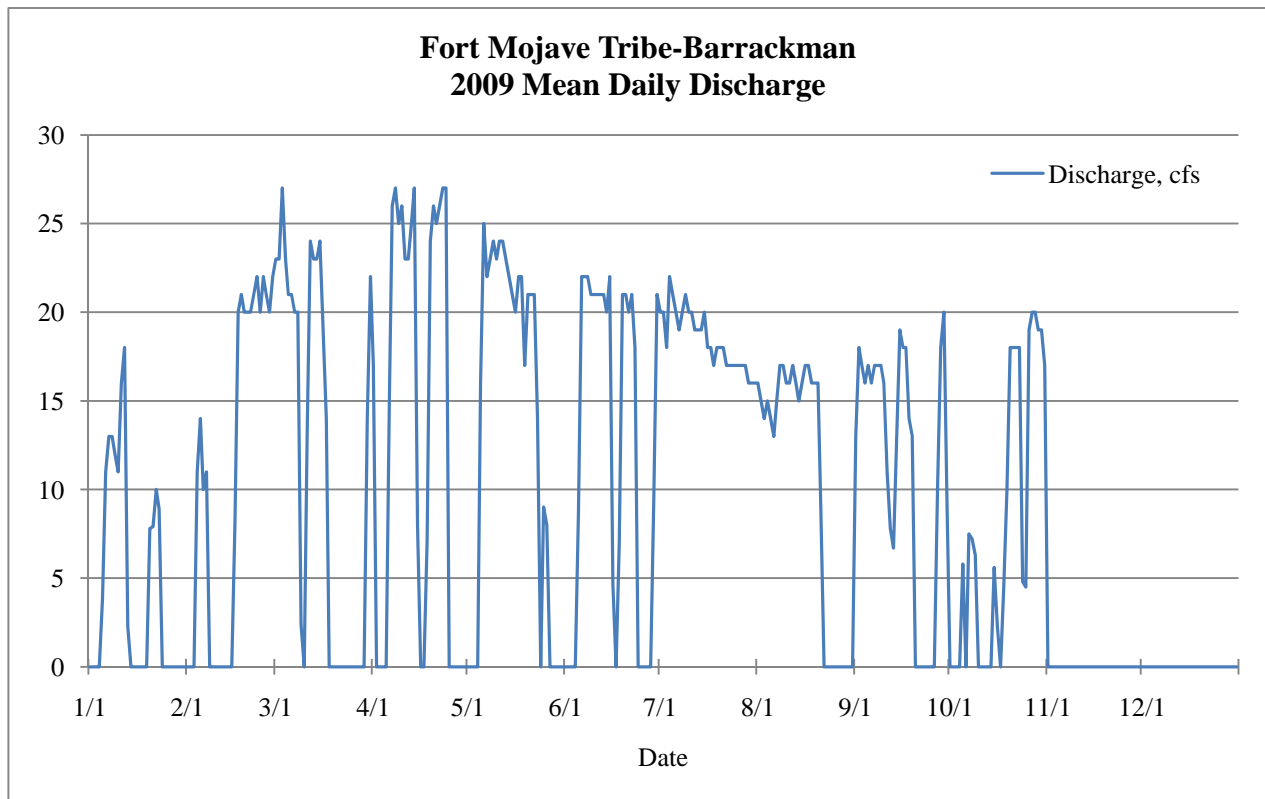
Drainage Area—Not applicable.

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

Gage—A Sutron Xlite datalogger (Model 9210-0000-1A) records gage height measured by a Sutron multiple interface shaft encoder (Model 56-0540-400-DTR) upstream from a fixed abrupt-expansion type long-throated flume. Discharge is calculated using a stage-discharge relationship.

Extremes—Maximum daily discharge, 38 cubic feet per second (cfs), May 12, 2006 and May 10, 2007; minimum daily discharge, no diversion at times; maximum hourly discharge, 47 cfs, May 9, 2006 at 11:00; minimum hourly discharge, no diversion at times.

Remarks—None.



Fort Mojave Tribe-Barrackman

Discharge, in cfs, Calendar Year 2009

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0	23	17	0	0	20	16	13	0	0	0
2	0	0	23	0	0	0	20	15	18	0	0	0
3	0	0	27	0	0	0	18	14	17	0	0	0
4	0	11	23	0	0	0	22	15	16	0	0	0
5	3.8	14	21	0	16	8.8	21	14	17	5.8	0	0
6	11	10	21	15	25	22	20	13	16	0	0	0
7	13	11	20	26	22	22	19	15	17	7.5	0	0
8	13	0	20	27	23	22	20	17	17	7.2	0	0
9	12	0	2.4	25	24	21	21	17	17	6.3	0	0
10	11	0	0	26	23	21	20	16	16	0	0	0
11	16	0	13	23	24	21	20	16	11	0	0	0
12	18	0	24	23	24	21	19	17	7.8	0	0	0
13	2.3	0	23	25	23	21	19	16	6.7	0	0	0
14	0	0	23	27	22	20	19	15	13	0	0	0
15	0	0	24	8.0	21	22	20	16	19	5.6	0	0
16	0	8.1	19	0	20	4.7	18	17	18	2.3	0	0
17	0	20	14	0	22	0	18	17	18	0	0	0
18	0	21	0	7.1	22	7.0	17	16	14	4.5	0	0
19	0	20	0	24	17	21	18	16	13	10	0	0
20	7.8	20	0	26	21	21	18	16	0	18	0	0
21	7.9	20	0	25	21	20	18	8.8	0	18	0	0
22	10	21	0	26	21	21	17	0	0	18	0	0
23	8.9	22	0	27	14	18	17	0	0	18	0	0
24	0	20	0	27	0	0	17	0	0	4.8	0	0
25	0	22	0	0	9.0	0	17	0	0	4.5	0	0
26	0	21	0	0	8.0	0	17	0	0	19	0	0
27	0	20	0	0	0	0	17	0	10	20	0	0
28	0	22	0	0	0	0	17	0	18	20	0	0
29	0		0	0	0	9.6	16	0	20	19	0	0
30	0		14	0	0	21	16	0	9.9	19	0	0
31	0		22		0		16	0		17		0
Total	135	303	356	404	422	365	572	323	342	245	0	0
Mean	4.3	11	11	13	14	12	18	10	11	7.9	0	0
Max	18	22	27	27	25	22	22	17	20	20	0	0
Min	0	0	0	0	0	0	16	0	0	0	0	0
Ac-ft	267	601	707	802	837	724	1135	640	679	485	0	0

Calendar Year 2009 Total 3467 Mean 10 Max 27 Min 0 Ac-ft 6877

Maximum Discharge

Date	Time	G.H.	Discharge
Apr. 8	7:00	0.74	30

Minimum Discharge

Date	Time	G.H.	Discharge
Jan. 1	0:00	0	0

Fort Mojave Tribe-Refuge (Fort Mojave Tribe Diversion)

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

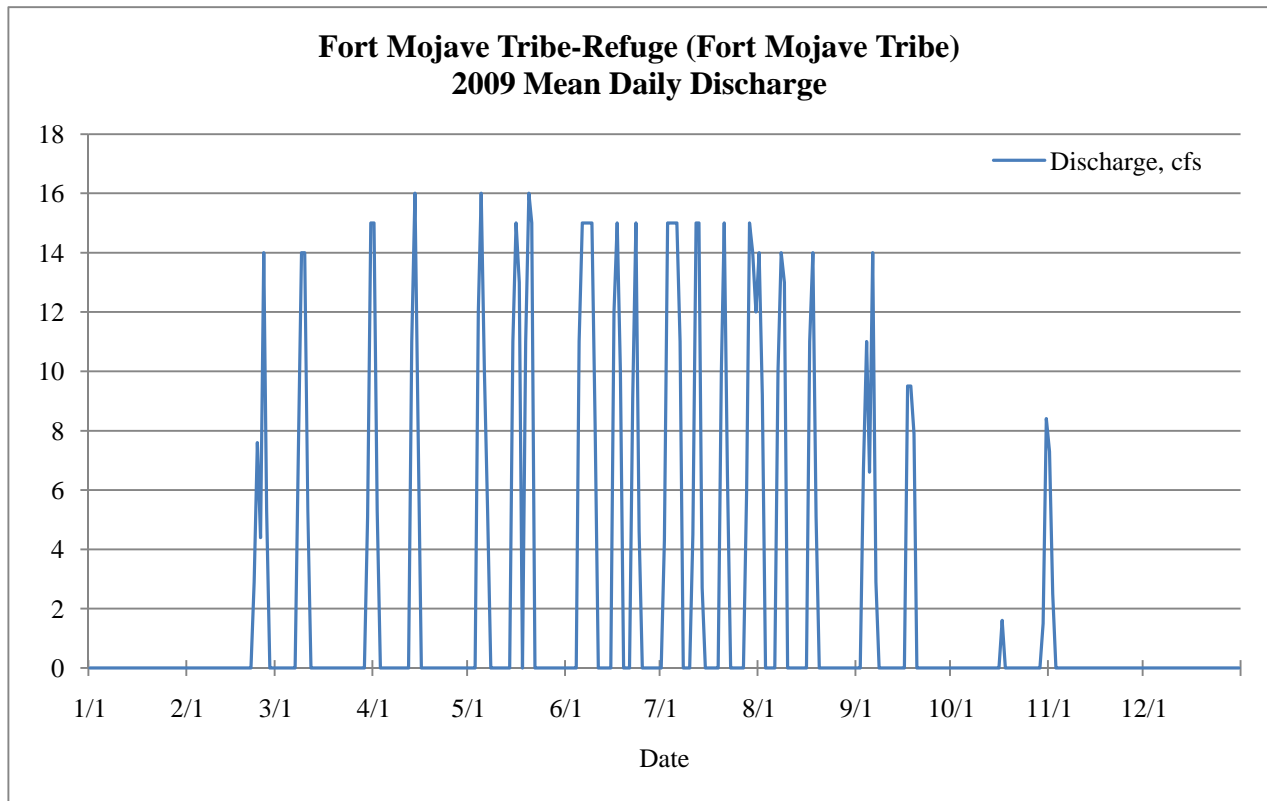
Drainage Area—Not applicable.

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

Gage—A Sutron Xlite datalogger (Model 9210-0000-1A) records discharge measured by a SeaMetrics insertion magnetic flow meter (Model EX-201-S) mounted to the inside of the discharge pipe downstream of the diversion pump. Discharge is calculated using a discharge-indicator relationship.

Extremes—Maximum daily discharge, 22 cubic feet per second (cfs), which first occurred on Apr. 25, 2008 at 10:00; minimum daily discharge, 0 cfs, occurred many times throughout the year; maximum hourly discharge, 27 cfs, which first occurred on Jul. 21, 2006 at 13:00; minimum hourly discharge, 0 cfs, which occurred many times.

Remarks—The gage experienced numerous short duration failures that ranged from one to five hours. Discharge for these periods were assumed to be zero as no other source of diversion records were available.



Fort Mojave Tribe-Refuge (Fort Mojave Tribe Diversion)

Discharge, in cfs, Calendar Year 2009

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	0	0	15	0	0	0	14	0	0	7.3	0
2	0	0	0	5.3	0	0	4.3	9.2	0	0	2.5	0
3	0	0	0	0	0	0	15	0	6.7	0	0	0
4	0	0	0	0	12	0	15	0	11	0	0	0
5	0	0	0	0	16	11	15	0	6.6	0	0	0
6	0	0	0	0	10	15	15	0	14	0	0	0
7	0	0	0	0	5.3	15	11	10	2.9	0	0	0
8	0	0	7.2	0	0	15	0	14	0	0	0	0
9	0	0	14	0	0	15	0	13	0	0	0	0
10	0	0	14	0	0	8.2	0	0	0	0	0	0
11	0	0	5.3	0	0	0	4.5	0	0	0	0	0
12	0	0	0	0	0	0	15	0	0	0	0	0
13	0	0	0	11	0	0	15	0	0	0	0	0
14	0	0	0	16	0	0	2.7	0	0	0	0	0
15	0	0	0	7.9	11	0	0	0	0	0	0	0
16	0	0	0	0	15	12	0	0	0	0	0	0
17	0	0	0	0	13	15	0	11	9.5	1.6	0	0
18	0	0	0	0	0	10	0	14	9.5	0	0	0
19	0	0	0	0	11	0	0	5.1	7.9	0	0	0
20	0	0	0	0	16	0	10	0	0	0	0	0
21	0	0	0	0	15	0	15	0	0	0	0	0
22	0	2.9	0	0	0	9.1	6.5	0	0	0	0	0
23	0	7.6	0	0	0	15	0	0	0	0	0	0
24	0	4.4	0	0	0	4.6	0	0	0	0	0	0
25	0	14	0	0	0	0	0	0	0	0	0	0
26	0	5.3	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	6	0	0	0	0	0
29	0		0	0	0	0	15	0	0	0	0	0
30	0		5.1	0	0	0	14	0	0	1.5	0	0
31	0		15		0		12	0		8.4		0
Total	0	34	61	55	124	145	191	90	68	12	9.8	0
Mean	0	1.2	2.0	1.8	4.0	4.8	6.2	2.9	2.3	0.37	0.33	0
Max	0	14	15	16	16	15	15	14	14	8.4	7.3	0
Min	0	0	0	0	0	0	0	0	0	0	0	0
Ac-ft	0	68	120	109	247	287	379	179	135	23	19	0

Calendar Year 2009 Total 790 Mean 2.2 Max 16 Min 0 Ac-ft 1567

Maximum Discharge

Date	Time	G.H.	Discharge
Apr. 14	4:00	--	17

Minimum Discharge

Date	Time	G.H.	Discharge
Jan. 1	0:00	--	0

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

Fort Mojave Tribe-Refuge (Vanderslice Farms Diversion)

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

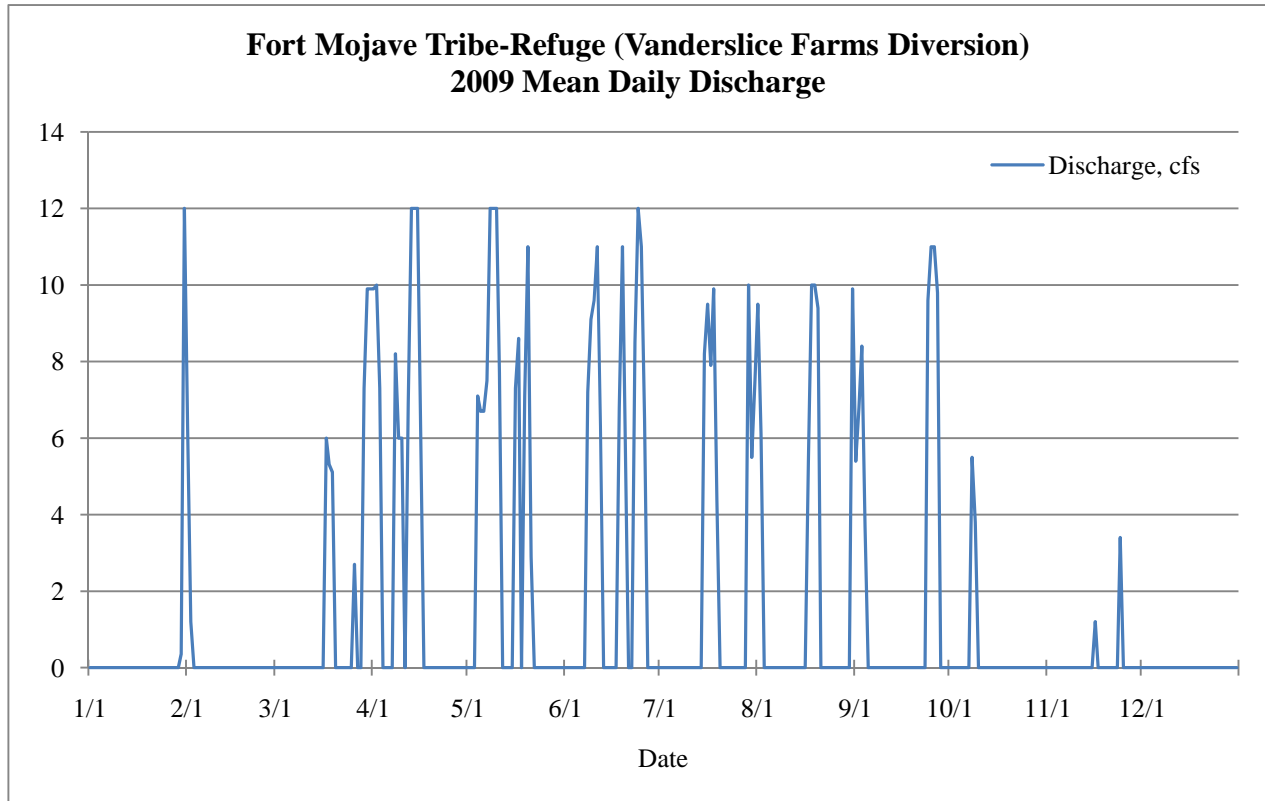
Drainage Area—Not applicable.

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

Gage—A Sutron Xlite datalogger (Model 9210-0000-1A) records discharge measured by a SeaMetrics insertion magnetic flow meter (Model EX-201-S) mounted to the inside of the discharge pipe downstream of the diversion pump. Discharge is calculated using a discharge-indicator relationship.

Extremes—Maximum daily discharge, 16 cubic feet per second (cfs), Aug. 16, 2006; minimum daily discharge, 0 cfs, which occurred many times; maximum hourly discharge, 18 cfs, Aug. 02, 2006 at 10:00; minimum hourly discharge, 0 cfs, which occurred many times.

Remarks—None.



Fort Mojave Tribe-Refuge (Vanderslice Farms Diversion)

Discharge, in cfs, Calendar Year 2009

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	0	6.3	0	9.9	0	0	0	9.5	5.4	0	0	0
2	0	1.2	0	10	0	0	0	6.1	6.8	0	0	0
3	0	0	0	7.3	0	0	0	0	8.4	0	0	0
4	0	0	0	0	7.1	0	0	0	3.7	0	0	0
5	0	0	0	0	6.7	0	0	0	0	0	0	0
6	0	0	0	0	6.7	0	0	0	0	0	0	0
7	0	0	0	0	7.5	0	0	0	0	0	0	0
8	0	0	0	8.2	12	7.2	0	0	0	5.5	0	0
9	0	0	0	6.0	12	9.1	0	0	0	3.8	0	0
10	0	0	0	6.0	12	9.6	0	0	0	0	0	0
11	0	0	0	0	7.7	11	0	0	0	0	0	0
12	0	0	0	6.9	0	6.3	0	0	0	0	0	0
13	0	0	0	12	0	0	0	0	0	0	0	0
14	0	0	0	12	0	0	0	0	0	0	0	0
15	0	0	0	12	0	0	8.2	0	0	0	0	0
16	0	0	0	6.1	7.3	0	9.5	0	0	0	1.2	0
17	0	0	6.0	0	8.6	0	7.9	5.4	0	0	0	0
18	0	0	5.3	0	0	6.8	9.9	10	0	0	0	0
19	0	0	5.1	0	7.1	11	4.4	10	0	0	0	0
20	0	0	0	0	11	5.2	0	9.4	0	0	0	0
21	0	0	0	0	2.9	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	8.5	0	0	0	0	0	0
24	0	0	0	0	0	12	0	0	9.6	0	3.4	0
25	0	0	0	0	0	11	0	0	11	0	0	0
26	0	0	2.7	0	0	6.5	0	0	11	0	0	0
27	0	0	0	0	0	0	0	0	9.8	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0
29	0		7.3	0	0	0	10	0	0	0	0	0
30	0.36		9.9	0	0	0	5.5	0	0	0	0	0
31	12		9.9		0		7.5			0		0
Total	12	7.5	46	96	109	104	63	60	66	9.3	4.6	0
Mean	0.40	0.27	1.5	3.2	3.5	3.5	2.0	1.9	2.2	0.30	0.15	0
Max	12	6.3	9.9	12	12	12	10	10	11	5.5	3.4	0
Min	0	0	0	0	0	0	0	0	0	0	0	0
Ac-Ft	25	15	92	191	215	207	125	120	130	18	9.1	0

Calendar Year 2009 Total 578 Mean 1.6 Max 12 Min 0 Ac-ft 1147

Maximum Discharge

Date	Time	G.H.	Discharge
Apr. 8	8:00	--	16

Minimum Discharge

Date	Time	G.H.	Discharge
Jan. 1	0:00	--	0

United States Fish and Wildlife Service-Inlet Canal

Location—Latitude 34° 50.202', longitude 114° 31.674', in the NE¼ NE¼ of Section 29, T. 17 N., R. 21 W., Gila-Salt River meridian, Mohave County, Arizona, Hydrologic Unit 15030101, 19.6 mile (mi) south of Bullhead City, Arizona, and 4.8 mi east of Needles, California.

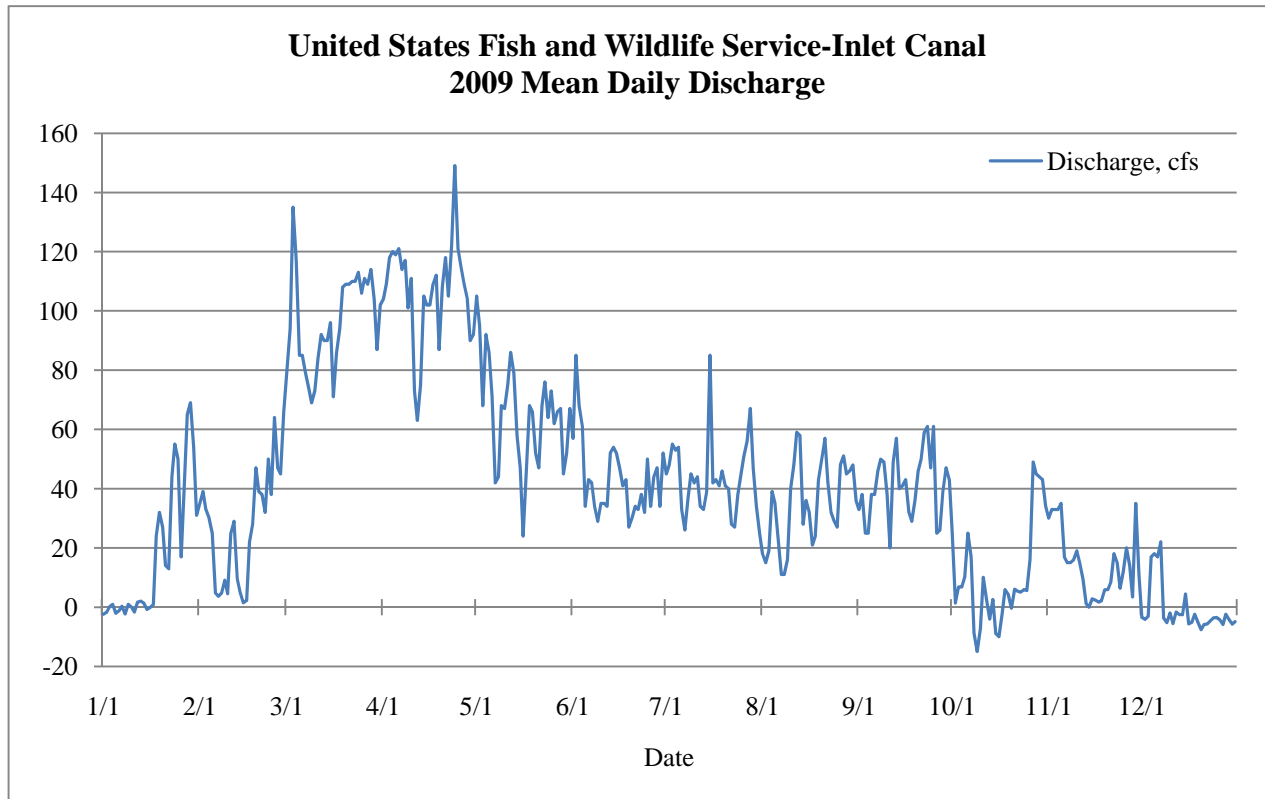
Drainage Area—Not applicable.

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

Gage—A Sutron Xlite datalogger (Model 9210-0000-1B) records water elevation and velocity measured by a SonTek/YSI Argonaut-SW current meter mounted to a two-inch galvanized pipe on the channel bottom about 25 feet upstream from the siphon structure. Discharge is computed using a velocity-index relationship.

Extremes—Maximum daily discharge, 150 cubic feet per second (cfs), Apr. 20, 2007; minimum daily discharge, -12 cfs, Dec. 2, 2006; maximum hourly discharge, 164 cfs, Apr. 19, 2007 at 22:00; minimum hourly discharge, -41 cfs, Aug. 4, 2006 at 03:00.

Remarks—None.



United States Fish and Wildlife Service-Inlet Canal

Discharge, in cfs, Calendar Year 2009

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	-2.4	35	80	104	105	57	45	18	33	25	30	-3.5
2	-1.8	39	94	109	95	85	48	15	38	1.4	33	-4.1
3	0.18	33	135	118	68	68	55	19	25	6.8	33	-3.1
4	0.94	30	117	120	92	61	53	39	25	6.8	33	17
5	-2.1	25	85	119	86	34	54	35	38	10	35	18
6	-1.2	4.7	85	121	71	43	33	23	38	25	17	17
7	0.31	3.6	79	114	42	42	26	11	46	17	15	22
8	-2.3	4.7	74	117	44	34	37	11	50	-8.8	15	-3.7
9	0.91	9.1	69	101	68	29	45	16	49	-15	16	-5.2
10	-0.05	4.5	73	111	67	35	42	40	38	-7.3	19	-2.0
11	-1.6	25	84	73	75	35	44	48	20	10	15	-5.5
12	1.7	29	92	63	86	34	34	59	49	2.7	9.5	-1.7
13	2.0	9.5	90	75	79	52	33	58	57	-4.0	1.2	-2.5
14	1.4	4.9	90	105	58	54	39	28	40	2.6	-0.05	-2.5
15	-0.80	1.5	96	102	47	52	85	36	41	-8.9	2.8	4.4
16	-0.10	2.3	71	102	24	47	42	32	43	-10	2.4	-5.7
17	0.82	22	86	109	46	41	43	21	32	-2.2	1.7	-5.1
18	24	28	94	112	68	43	41	24	29	5.9	2.1	-2.4
19	32	47	108	87	66	27	46	43	36	4.3	5.8	-5.1
20	27	39	109	108	52	30	41	50	46	-0.37	5.9	-7.6
21	14	38	109	118	47	34	40	57	50	6.0	8.4	-5.9
22	13	32	110	105	68	33	28	42	59	5.4	18	-5.7
23	44	50	110	122	76	38	27	32	61	5.1	15	-4.6
24	55	38	113	149	64	32	38	29	47	5.9	6.4	-3.6
25	50	64	106	121	73	50	45	27	61	5.6	12	-3.5
26	17	47	111	115	62	34	51	48	25	16	20	-4.2
27	42	45	109	109	66	44	56	51	26	49	14	-5.9
28	65	66	114	104	67	47	67	45	39	45	3.4	-2.4
29	69		104	90	45	34	47	46	47	44	35	-4.1
30	54		87	92	52	52	34	48	43	43	11	-5.8
31	31		102		67		25	36		34		-4.9
Total	533	777	2986	3195	2026	1301	1344	1087	1231	320	436	-32
Mean	17	28	96	107	65	43	43	35	41	10	15	-1.0
Max	69	66	135	149	105	85	85	59	61	49	35	22
Min	-2.4	1.5	69	63	24	27	25	11	20	-15	-0.05	-7.6
Ac-ft	1057	1541	5923	6337	4019	2581	2666	2156	2442	635	864	-63

Calendar Year 2009 Total 15203 Mean 42 Max 149 Min -15 Ac-ft 30156

Maximum Discharge

Date Time G.H. Discharge
Apr. 24 21:00 458.78 158

Minimum Discharge

Date Time G.H. Discharge
Jul. 20 18:00 455.20 -29

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

United States Fish and Wildlife Service-Farm Ditch

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

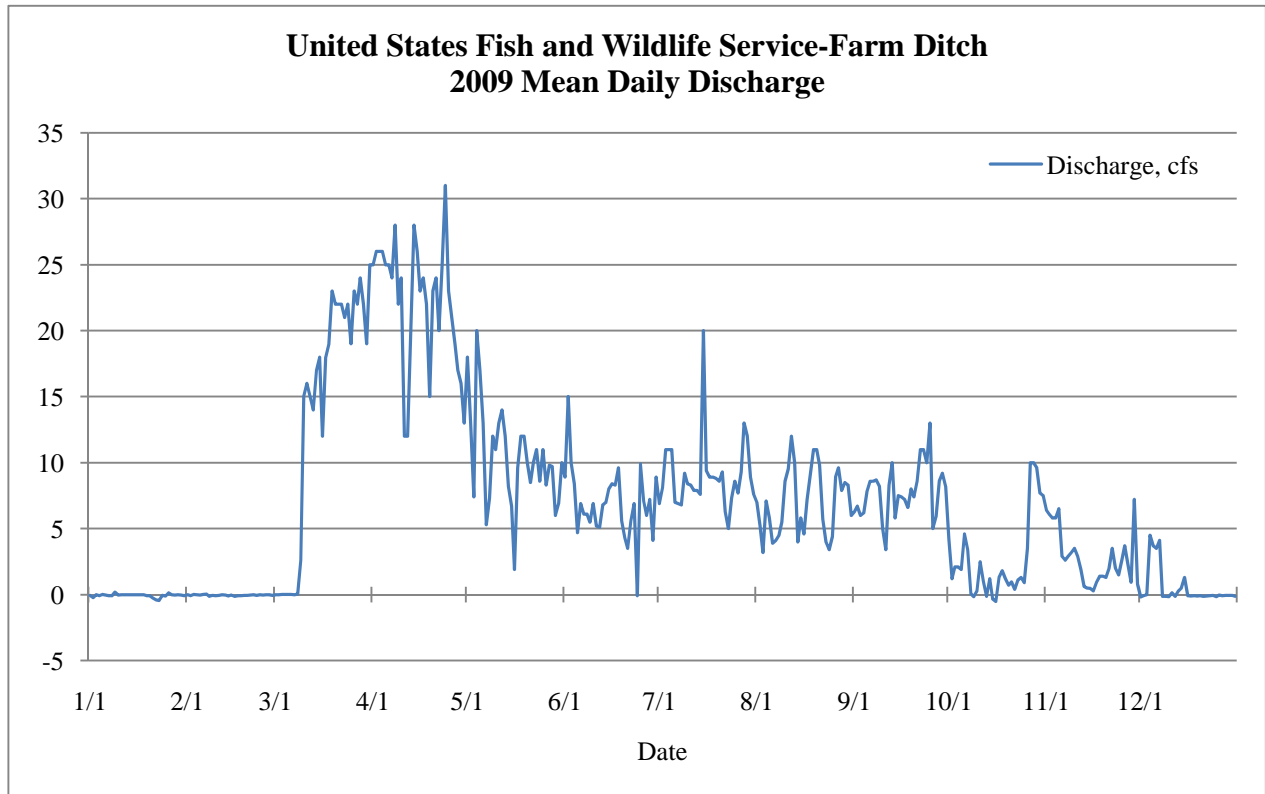
Drainage Area—Not applicable.

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

Gage—A Sutron Xlite datalogger (Model 9210-0000-1B) records water velocity measured by a SonTek/YSI Argonaut-SW current meter mounted in a culvert pipe. Discharge is calculated using a velocity-index relationship.

Extremes—Maximum daily discharge, 33 cubic feet per second (cfs), Apr. 20, 2007; minimum daily discharge, -1.0 cfs, Aug. 12-14, 2005; maximum hourly discharge, 39 cfs, May 22, 2005 at 02:00; minimum hourly discharge, -8.2 cfs, Jun. 26, 2005 at 15:00 and May 20, 2007 at 11:00.

Remarks—None.



United States Fish and Wildlife Service-Farm Ditch

Discharge, in cfs, Calendar Year 2009

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	-0.06	-0.02	-0.01	25	18	8.9	6.9	7.0	6.3	4.2	6.4	-0.18
2	-0.23	-0.07	0	26	13	15	8.1	5.2	6.7	1.2	6.1	-0.08
3	0	0.01	0.02	26	7.4	10	11	3.2	6.0	2.1	5.8	-0.01
4	-0.07	0	0.02	26	20	8.4	11	7.1	6.2	2.1	5.8	4.5
5	0.03	-0.02	0.01	25	17	4.7	11	5.8	7.8	1.9	6.5	3.7
6	-0.03	0.03	0.02	25	13	6.9	7.0	3.9	8.6	4.6	2.9	3.5
7	-0.07	0.03	-0.01	24	5.3	6.1	6.9	4.1	8.6	3.4	2.6	4.1
8	-0.08	-0.13	0.04	28	7.3	6.1	6.8	4.5	8.7	0.07	2.9	-0.13
9	0.19	-0.06	2.6	22	12	5.5	9.2	5.5	8.2	-0.14	3.2	-0.12
10	-0.04	-0.08	15	24	11	6.9	8.4	8.6	5.0	0.28	3.5	-0.14
11	0	-0.07	16	12	13	5.2	8.3	9.5	3.4	2.5	2.9	0.13
12	0	-0.02	15	12	14	5.1	7.9	12	8.3	1.0	1.9	-0.12
13	0	-0.04	14	20	12	6.8	7.9	10	10	-0.12	0.62	0.29
14	0	-0.09	17	28	8.2	7.0	7.6	4.0	5.8	1.2	0.51	0.51
15	0	-0.04	18	26	6.7	8.0	20	5.8	7.5	-0.32	0.47	1.3
16	0	-0.12	12	23	1.9	8.4	9.4	4.6	7.4	-0.51	0.29	-0.09
17	0	-0.08	18	24	9.6	8.3	8.9	7.2	7.2	1.3	1.0	-0.11
18	0	-0.09	19	22	12	9.6	8.9	9.1	6.6	1.8	1.4	-0.07
19	-0.08	-0.06	23	15	12	5.6	8.8	11	8.0	1.2	1.4	-0.10
20	-0.07	-0.05	22	23	10	4.3	8.6	11	7.4	0.73	1.3	-0.09
21	-0.26	-0.04	22	24	8.5	3.5	9.3	9.8	8.6	1.0	2.0	-0.13
22	-0.39	-0.01	22	20	10	5.6	6.3	5.7	11	0.40	3.5	-0.10
23	-0.45	-0.05	21	25	11	6.9	5.0	4.0	11	1.1	2.0	-0.08
24	-0.06	-0.01	22	31	8.6	-0.07	7.3	3.4	10	1.3	1.5	-0.04
25	-0.11	-0.04	19	23	11	9.9	8.6	4.4	13	0.91	2.6	-0.15
26	0.14	-0.01	23	21	8.3	7.1	7.7	8.9	5.0	3.5	3.7	-0.03
27	-0.01	-0.01	22	19	9.8	6.0	9.3	9.6	5.9	10	2.3	-0.08
28	-0.04	-0.05	24	17	9.7	7.2	13	7.9	8.6	10	0.93	-0.06
29	0		22	16	6.0	4.1	12	8.5	9.2	9.6	7.2	-0.06
30	-0.04		19	13	6.9	8.9	8.9	8.3	8.2	7.7	0.79	-0.06
31	-0.08		25		10		7.6	6.0		7.5		-0.12
Total	-1.8	-1.2	433	665	323	206	278	216	234	81	84	16
Mean	-0.06	-0.04	14	22	10	6.9	9.0	7.0	7.8	2.6	2.8	0.51
Max	0.19	0.03	25	31	20	15	20	12	13	10	7.2	4.5
Min	-0.45	-0.13	-0.01	12	1.9	-0.07	5.0	3.2	3.4	-0.51	0.29	-0.18
Ac-ft	-3.6	-2.3	858	1319	641	408	551	428	465	162	167	32

Calendar Year 2009 Total 2533 Mean 6.9 Max 31 Min -0.51 Ac-ft 5023

Maximum Discharge

Date	Time	G.H.	Discharge
Mar. 28	4:00	2.91	32

Minimum Discharge

Date	Time	G.H.	Discharge
May 3	15:00	2.91	-5.1

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

United States Fish and Wildlife Service-South Dike

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

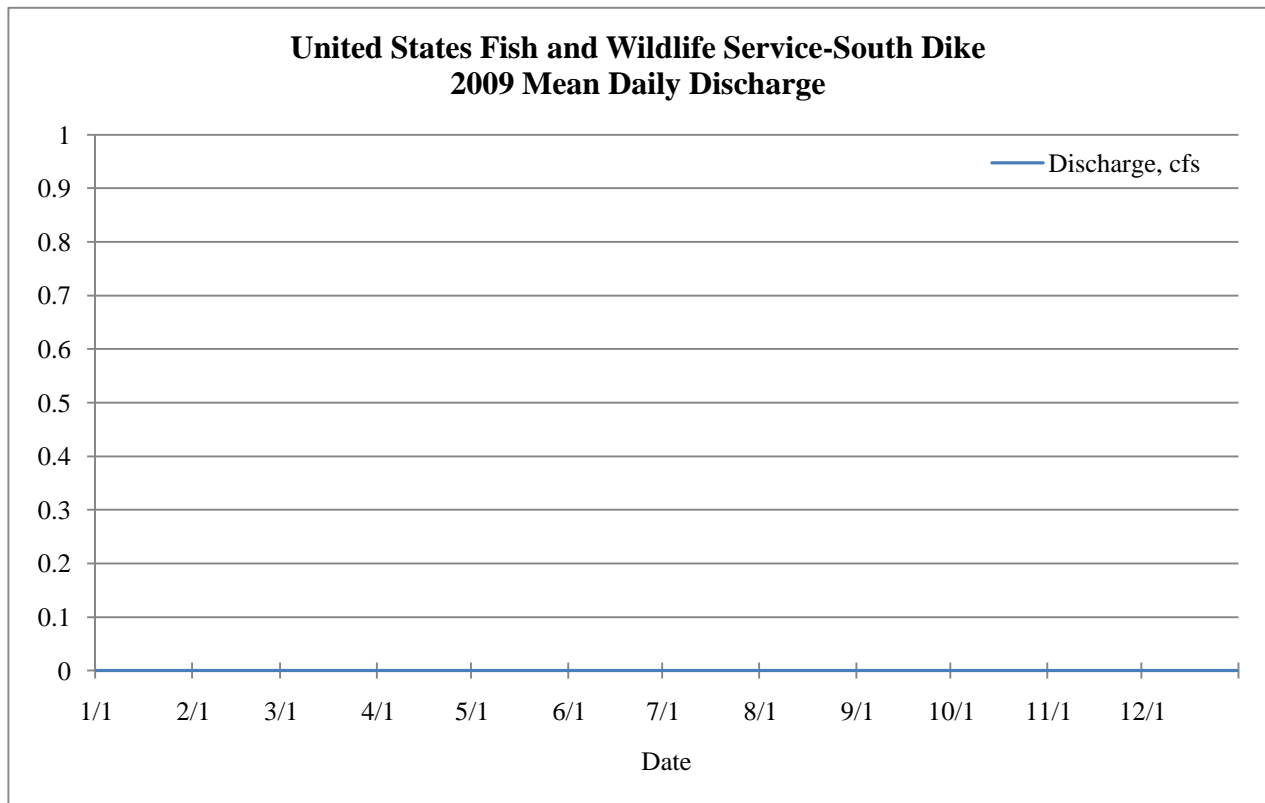
Drainage Area—Unknown.

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

Gage—A Sutron Xlite datalogger (Model 9210-0000-1B) records marsh elevation, river elevation, and gate position measured by Sutron multiple interface shaft encoders (Model 56-0540-400-DTR). Discharge over the bi-fold lateral gate is computed by applying a theoretical weir equation.

Extremes—Maximum daily discharge, 9.1 cubic feet per second (cfs) on Aug. 5, 2005; minimum daily discharge, 0 cfs, occurs frequently; maximum hourly discharge, 36 cfs on Apr. 18, 2007 at 12:00; minimum hourly discharge, 0 cfs, occurs frequently.

Remarks—The gate was not opened during this record period.



United States Fish and Wildlife Service-South Dike

Discharge, in cfs, Calendar Year 2009

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	0
31	0	0	0	0	0	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 2009 Total 0 Mean 0 Max 0 Min 0 Ac-ft 0

Maximum Discharge

Date	Time	G.H.	Discharge
Jan. 1	0:00	453.52	0

Minimum Discharge

Date	Time	G.H.	Discharge
Jan. 1	0:00	453.52	0

Metropolitan Water District at Lake Havasu

Location—Latitude 34° 18.967', longitude 114° 09.433', in the NW¼ SW¼ of Section 28, T. 3 N., R. 27 E., San Bernardino meridian, San Bernardino County, California, Hydrologic Unit 15030101, river mile (mi) 193.8, 14.9 mi southeast of Lake Havasu City, Arizona, 13.7 mi northeast of Parker, Arizona, and 82.1 river mi downstream of Davis Dam.

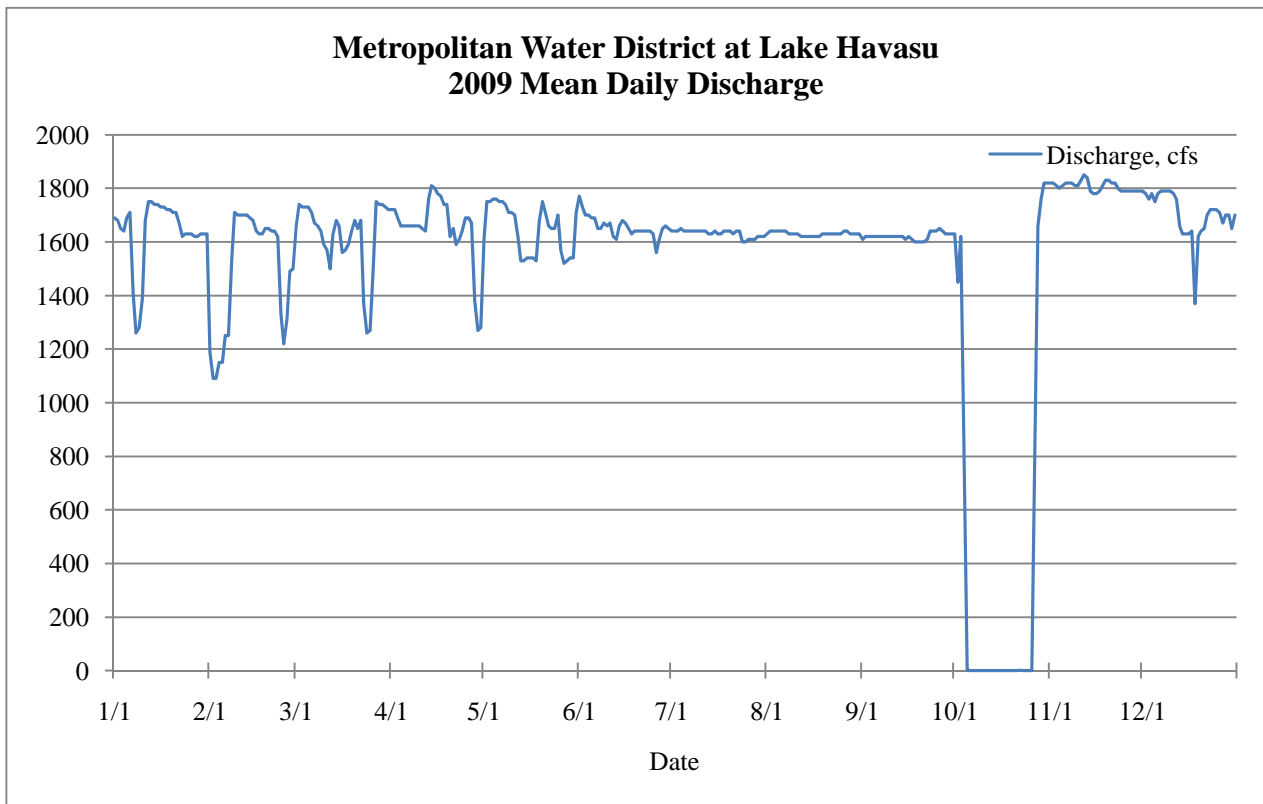
Drainage Area—Not applicable.

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

Gage—A Sutron Xlite datalogger (Model 9210-0000-1A) records discharge measured by an Accusonic flow meter (Model 7500) operated by the Metropolitan Water District of Southern California. The flow meter measures discharge from nine pumps that divert Colorado River water into the Colorado River Aqueduct which conveys the water to metropolitan areas of southwestern California.

Extremes—Maximum daily discharge, 1970 cubic feet per second (cfs), Nov. 11, 2005; minimum daily discharge, no diversion at times; maximum hourly discharge, 1981 cfs, Nov. 10, 2005, at 09:00 and 10:00; minimum hourly discharge, no diversion at times.

Remarks—Maintenance and calibration of measuring equipment are performed by the Metropolitan Water District of Southern California. The Bureau of Reclamation does not perform measurements to verify the accuracy of the data. The Bureau of Reclamation also does not monitor flows that return to the Colorado River below the Gene Wash Reservoir Dam.



Metropolitan Water District at Lake Havasu

Discharge, in cfs, Calendar Year 2009

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	1690	1190	1660	1720	1610	1770	1640	1630	1610	1630	1820	1790
2	1680	1090	1740	1720	1750	1730	1640	1640	1620	1450	1820	1780
3	1650	1090	1730	1690	1750	1700	1640	1640	1620	1620	1810	1760
4	1640	1150	1730	1660	1760	1700	1650	1640	1620	820	1800	1780
5	1690	1150	1730	1660	1760	1690	1640	1640	1620	1.1	1810	1750
6	1710	1250	1710	1660	1750	1690	1640	1640	1620	0	1820	1780
7	1410	1250	1670	1660	1750	1650	1640	1640	1620	0	1820	1790
8	1260	1530	1660	1660	1740	1650	1640	1630	1620	0	1820	1790
9	1280	1710	1640	1660	1710	1670	1640	1630	1620	0	1810	1790
10	1390	1700	1590	1660	1710	1660	1640	1630	1620	0	1810	1790
11	1680	1700	1570	1650	1700	1670	1640	1630	1620	0	1830	1780
12	1750	1700	1500	1640	1620	1620	1640	1620	1620	0.42	1850	1760
13	1750	1700	1630	1760	1530	1610	1630	1620	1620	0	1840	1660
14	1740	1690	1680	1810	1530	1660	1630	1620	1620	0	1790	1630
15	1740	1680	1660	1800	1540	1680	1640	1620	1610	0	1780	1630
16	1730	1640	1560	1780	1540	1670	1630	1620	1620	0	1780	1630
17	1730	1630	1570	1770	1540	1650	1630	1620	1610	0	1790	1640
18	1720	1630	1590	1740	1530	1630	1640	1620	1600	0	1810	1370
19	1720	1650	1640	1740	1680	1640	1640	1630	1600	0	1830	1620
20	1710	1650	1680	1620	1750	1640	1640	1630	1600	0	1830	1640
21	1710	1640	1650	1650	1710	1640	1630	1630	1600	0	1820	1650
22	1670	1640	1680	1590	1660	1640	1640	1630	1610	1.3	1820	1700
23	1620	1620	1370	1610	1650	1640	1640	1630	1640	0	1800	1720
24	1630	1330	1260	1640	1650	1640	1600	1630	1640	0	1790	1720
25	1630	1220	1270	1690	1700	1630	1600	1630	1640	0	1790	1720
26	1630	1310	1480	1690	1570	1560	1610	1640	1650	0	1790	1710
27	1620	1490	1750	1670	1520	1610	1610	1640	1640	792	1790	1670
28	1620	1500	1740	1380	1530	1650	1610	1630	1630	1660	1790	1700
29	1630		1740	1270	1540	1660	1620	1630	1630	1760	1790	1700
30	1630		1730	1280	1540	1650	1620	1630	1630	1820	1790	1650
31	1630		1720		1710		1620	1630		1820		1700
Total	50690	41530	50330	49530	51030	49700	50570	50540	48620	13375	54240	52800
Mean	1635	1483	1624	1651	1646	1657	1631	1630	1621	431	1808	1703
Max	1750	1710	1750	1810	1760	1770	1650	1640	1650	1820	1850	1790
Min	1260	1090	1260	1270	1520	1560	1600	1620	1600	0	1780	1370
Ac-ft	100544	82375	99830	98243	101218	98580	100306	100246	96438	26529	107585	104729

Calendar Year 2009 Total 562955 Mean 1543 Max 1850 Min 0 Ac-ft 1116621

Maximum Discharge

Date Time G.H. Discharge
Dec. 4 12:00 -- 1947

Minimum Discharge

Date Time G.H. Discharge
Oct. 2 6:00 -- 0

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

Central Arizona Project at Lake Havasu

Location—Latitude 34° 17.340', longitude 114° 06.230', in the NW¼ NE¼ of Section 23, T. 11 N., R. 18 W., Gila-Salt River meridian, in La Paz County, Arizona, Hydrologic Unit 15030204, river mile (mi) 192.5, 15.3 mi southeast of Lake Havasu City, Arizona, 14.3 miles northeast of Parker, Arizona, and 83.4 river mi downstream of Davis Dam.

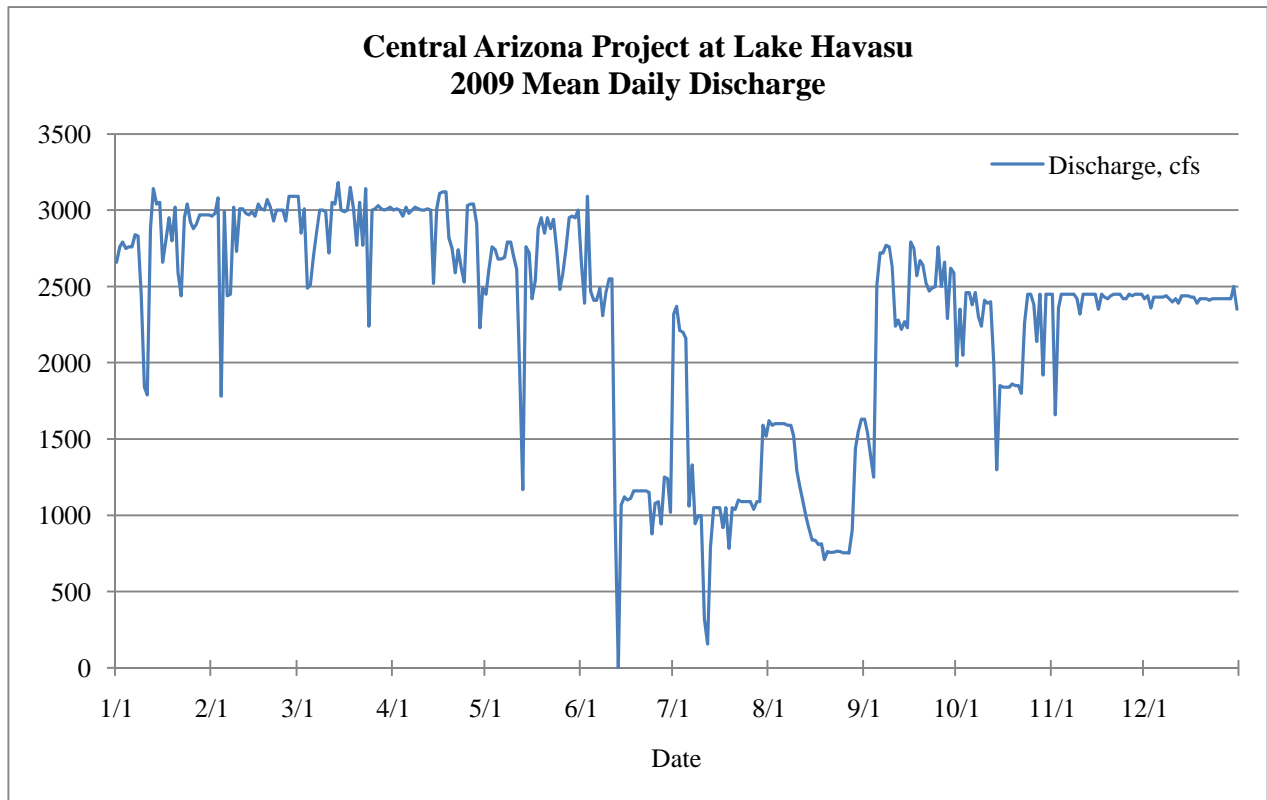
Drainage Area—Not applicable.

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

Gage—A Sutron Xlite datalogger (Model 9210-0000-1A) records discharge values measured by two Accusonic flow meters (Model 7500) operated by the Central Arizona Project. The flow meters measure discharge from six pumps that divert Colorado River water into the Hayden-Rhodes Aqueduct which conveys the water to the Phoenix and Tucson metropolitan areas.

Extremes—Maximum daily discharge, 3600 cubic feet per second (cfs), Mar. 24 and 25, 2007; minimum daily discharge, no diversion at times; maximum hourly discharge, 3670 cfs, Jun. 3, 2005 at 07:00 and Jun. 4, 2005 at 00:00; minimum hourly discharge, no diversion at times.

Remarks—Maintenance and calibration of measuring equipment are performed by a private contractor hired by the Central Arizona Project. The Bureau of Reclamation does not perform measurements to verify the accuracy of the data.



Central Arizona Project at Lake Havasu

Discharge, in cfs, Calendar Year 2009

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	2660	2960	3090	3000	2450	2660	2320	1620	1630	1980	2450	2420
2	2760	2980	2850	3010	2610	2390	2370	1590	1540	2350	1660	2440
3	2790	3080	3010	3000	2760	3090	2210	1600	1380	2050	2360	2360
4	2750	1780	2490	2960	2740	2470	2200	1600	1250	2460	2450	2430
5	2760	2990	2510	3020	2680	2410	2160	1600	2510	2460	2450	2430
6	2760	2440	2700	2980	2680	2410	1060	1600	2720	2380	2450	2430
7	2840	2450	2850	3000	2690	2490	1330	1590	2720	2460	2450	2430
8	2830	3020	3000	3020	2790	2310	945	1590	2770	2300	2450	2440
9	2450	2730	3000	3010	2790	2460	997	1520	2760	2240	2420	2420
10	1840	3010	2990	3000	2700	2550	997	1290	2630	2410	2320	2400
11	1790	3010	2720	3000	2610	2550	321	1190	2240	2390	2450	2420
12	2880	2980	3050	3010	1890	993	158	1090	2280	2400	2450	2390
13	3140	2970	3040	3000	1170	2.4	791	986	2220	1990	2450	2440
14	3040	2990	3180	2520	2760	1070	1050	913	2270	1300	2450	2440
15	3050	2960	3000	3010	2720	1120	1050	838	2230	1850	2450	2440
16	2660	3040	2990	3110	2420	1100	1050	835	2790	1840	2350	2430
17	2800	3010	3000	3120	2540	1110	919	808	2750	1840	2450	2430
18	2950	3000	3150	3120	2880	1160	1050	813	2570	1840	2430	2390
19	2800	3070	3010	2820	2950	1160	783	710	2670	1860	2420	2420
20	3020	3020	2770	2750	2850	1160	1050	762	2640	1850	2440	2420
21	2590	2930	3050	2590	2950	1160	1040	757	2520	1850	2450	2420
22	2440	3000	2770	2740	2880	1160	1100	759	2470	1800	2450	2410
23	2950	3000	3140	2620	2940	1150	1090	765	2490	2260	2450	2420
24	3040	3000	2240	2530	2740	877	1090	763	2500	2450	2420	2420
25	2920	2930	3000	3030	2480	1080	1090	755	2760	2450	2420	2420
26	2880	3090	3010	3040	2580	1090	1090	754	2500	2380	2450	2420
27	2910	3090	3030	3040	2750	942	1040	752	2660	2140	2440	2420
28	2970	3090	3010	2910	2950	1250	1090	906	2290	2450	2450	2420
29	2970		3000	2230	2960	1240	1090	1440	2620	1920	2450	2420
30	2970		3010	2490	2950	1020	1590	1550	2590	2450	2450	2500
31	2970		3020		3000		1520	1630		2450		2350
Total	86180	81620	90680	86680	82860	47634	37641	35376	71970	66850	72230	75040
Mean	2780	2915	2925	2889	2673	1588	1214	1141	2399	2156	2408	2421
Max	3140	3090	3180	3120	3000	3090	2370	1630	2790	2460	2450	2500
Min	1790	1780	2240	2230	1170	2.4	158	710	1250	1300	1660	2350
Ac-ft	170938	161893	179864	171930	164353	94483	74661	70168	142752	132597	143268	148842

Calendar Year 2009 Total 834761 Mean 2292 Max 3180 Min 2.4 Ac-ft 1655749

Maximum Discharge

Date	Time	G.H.	Discharge
May 19	1:00	--	3610

Minimum Discharge

Date	Time	G.H.	Discharge
Jan. 1	19:00	--	0

Palo Verde Irrigation District-Main Canal

Location—Latitude 33° 43.801', longitude 114° 30.717', in the SW¼ NE¼ of Section 19, T. 5 S., R. 24 E., San Bernardino meridian, Riverside County, California, Hydrologic Unit 15030104, river mile (mi) 133.8, 31.7 mi south of Parker, Arizona, 9.2 mi north of Blythe, California, and 58.2 river mi downstream of Parker Dam.

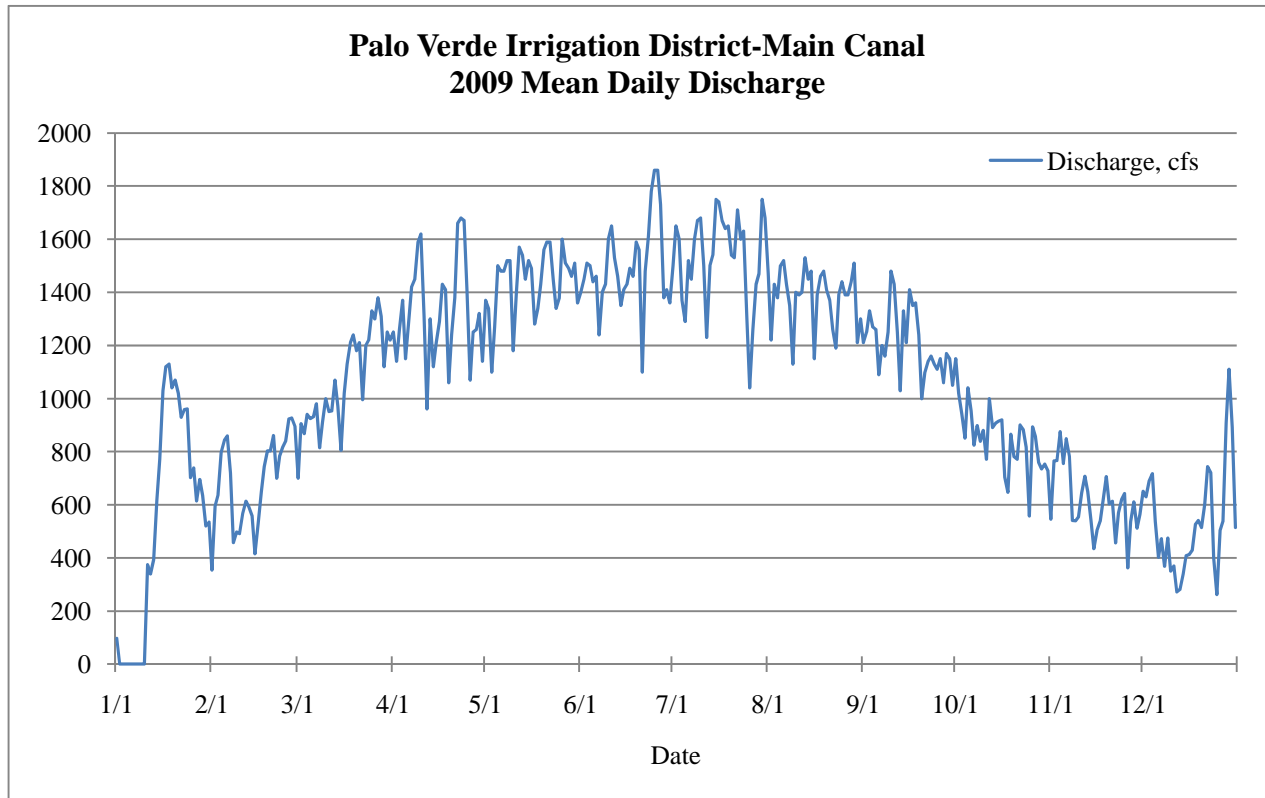
Drainage Area—Not applicable.

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

Gage—A Sutron Xlite datalogger (Model 9210-0000-1B) records water elevation and velocity measured by a SonTek/YSI Argonaut-SL current meter. Discharge is calculated using a velocity-index relationship.

Extremes—Maximum daily discharge, 2,190 cubic feet per second (cfs), Aug. 5, 2006; minimum daily discharge, 0 cfs, no diversion at times; maximum hourly discharge, 2,530 cfs, Jun. 30, 2008 at 14:00; minimum hourly discharge, 0 cfs, no diversion at times.

Remarks—Due to the Palo Verde Irrigation District annual outage there were no diversions from Jan. 1, 2009 at 13:00 to Jan. 11, 2009 at 03:00.



Palo Verde Irrigation District-Main Canal

Discharge, in cfs, Calendar Year 2009

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	97	354	700	1250	1370	1400	1500	1470	1210	1150	546	651
2	0	596	905	1140	1340	1450	1650	1220	1250	1020	765	630
3	0	637	868	1260	1100	1510	1600	1430	1330	941	767	690
4	0	799	940	1370	1270	1500	1370	1380	1270	851	875	717
5	0	844	925	1150	1500	1440	1290	1500	1260	1040	756	537
6	0	860	932	1290	1480	1460	1520	1520	1090	953	849	402
7	0	719	980	1420	1480	1240	1450	1430	1200	825	782	472
8	0	458	815	1450	1520	1400	1600	1350	1160	898	541	368
9	0	497	910	1590	1520	1430	1670	1130	1250	839	540	475
10	0	491	1000	1620	1180	1600	1680	1400	1480	880	554	350
11	375	567	951	1310	1400	1650	1500	1390	1430	772	645	370
12	340	613	953	961	1570	1530	1230	1400	1250	1000	707	272
13	394	592	1070	1300	1540	1460	1500	1530	1030	891	649	282
14	618	559	972	1120	1450	1350	1540	1450	1330	908	542	340
15	771	415	805	1210	1520	1410	1750	1480	1210	915	435	408
16	1030	529	1020	1290	1490	1430	1740	1150	1410	920	504	413
17	1120	649	1130	1430	1280	1490	1670	1390	1350	705	538	429
18	1130	744	1210	1410	1340	1460	1640	1460	1360	647	617	527
19	1040	803	1240	1060	1430	1590	1650	1480	1240	866	706	541
20	1070	803	1180	1240	1560	1560	1540	1410	1000	781	604	515
21	1020	861	1210	1380	1590	1100	1530	1370	1100	772	613	601
22	929	700	996	1660	1590	1480	1710	1260	1140	900	456	744
23	958	782	1200	1680	1450	1610	1600	1190	1160	883	570	721
24	961	817	1220	1670	1340	1780	1630	1390	1130	817	621	400
25	703	840	1330	1410	1380	1860	1310	1440	1110	558	642	262
26	739	923	1300	1070	1600	1860	1040	1390	1150	893	362	502
27	614	927	1380	1250	1510	1730	1260	1390	1060	856	536	537
28	695	896	1310	1260	1490	1380	1430	1440	1170	759	611	908
29	635		1120	1320	1460	1410	1470	1510	1150	735	512	1110
30	520		1250	1140	1510	1360	1750	1210	1050	753	564	892
31	535		1220		1360		1680	1300		728		515
Total	16294	19275	33042	39711	44620	44930	47500	42860	36330	26456	18409	16581
Mean	526	688	1066	1324	1439	1498	1532	1383	1211	853	614	535
Max	1130	927	1380	1680	1600	1860	1750	1530	1480	1150	875	1110
Min	0	354	700	961	1100	1100	1040	1130	1000	558	362	262
Ac-ft	32319	38232	65539	78767	88504	89119	94216	85013	72061	52475	36514	32888

Calendar Year 2009 Total 386008 Mean 1056 Max 1860 Min 0 Ac-ft 765647

Maximum Discharge

Date Time G.H. Discharge
 Jun. 26 6:00 281.86 2410

Minimum Discharge

Date Time G.H. Discharge
 Jan. 1 13:00 269.02 0

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

Palo Verde Irrigation District-Outfall Drain

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

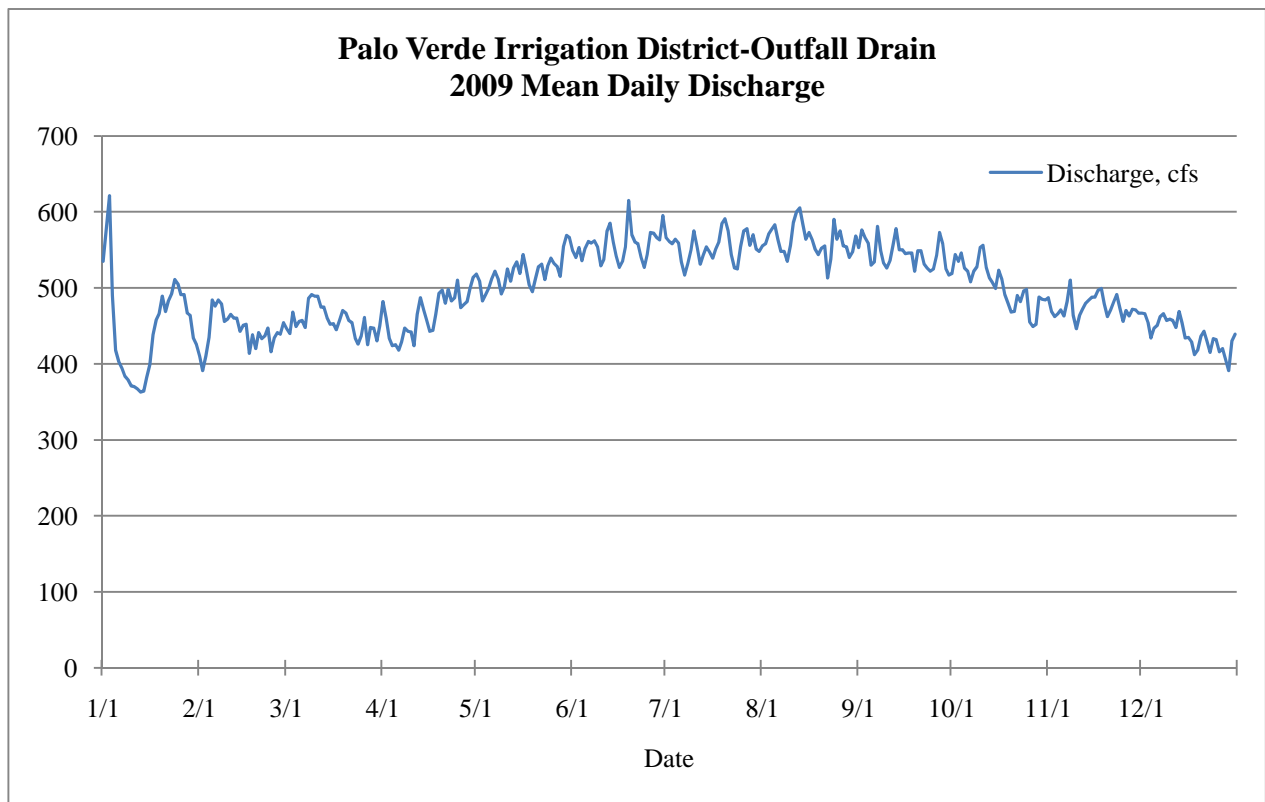
Drainage Area—Undetermined.

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

Gage—A Sutron Xlite datalogger (Model 9210-0000-1B) records water elevation and velocity measured by a SonTek/YSI Argonaut-SL current meter. Discharge is calculated using a velocity-index relationship.

Extremes—Maximum daily discharge, 1,200 cubic feet per second (cfs), Aug. 10, 2005; minimum daily discharge, 326 cfs, Feb. 26, 2005; maximum hourly discharge, 3,230 cfs (estimated), Aug. 9, 2005 at 22:00, caused by an overbank condition created from significant side wash inflow; minimum hourly discharge, 225 cfs, Nov. 29, 2006 at 14:00.

Remarks—None.



Palo Verde Irrigation District-Outfall Drain

Discharge, in cfs, Calendar Year 2009

Day	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	535	410	446	482	518	549	566	555	553	519	487	467
2	578	391	440	460	509	540	561	558	576	544	469	466
3	621	410	468	433	483	553	558	571	566	535	462	454
4	490	435	449	424	491	536	564	577	559	546	466	434
5	418	484	456	425	500	552	559	583	530	526	471	447
6	403	476	457	418	512	561	534	563	534	522	463	451
7	394	484	448	429	522	559	517	548	581	508	482	462
8	384	479	486	447	512	562	532	548	549	522	510	466
9	379	456	491	443	492	554	550	535	533	528	464	457
10	371	459	489	442	501	529	575	556	526	553	446	459
11	370	465	489	424	525	537	554	586	536	556	464	457
12	367	460	475	465	509	574	531	600	555	527	472	448
13	363	460	475	487	526	585	543	605	578	513	480	469
14	364	443	461	471	534	560	554	583	550	507	484	454
15	382	451	452	458	519	542	547	564	550	499	488	434
16	399	452	453	443	544	527	539	573	545	523	488	435
17	438	414	445	444	526	535	551	563	546	511	497	429
18	458	438	457	465	504	554	560	551	546	491	499	412
19	466	420	470	493	495	615	585	544	522	480	479	418
20	489	441	467	497	511	570	591	552	549	468	462	436
21	469	433	457	480	528	560	575	555	549	469	471	443
22	483	437	454	498	531	558	544	513	531	490	482	430
23	492	447	434	483	511	540	526	538	526	482	491	415
24	511	416	426	487	529	527	525	590	522	496	473	433
25	505	434	437	510	539	544	554	564	525	498	456	432
26	491	441	461	474	532	573	575	575	543	455	470	416
27	491	439	425	478	528	572	578	555	573	449	463	420
28	467	454	448	482	515	566	556	554	558	452	472	405
29	464		447	499	554	563	570	540	525	488	471	391
30	434		430	514	569	595	551	547	517	485	467	430
31	425		450		566		548	568		484		439
Total	13901	12429	14143	13955	16135	16692	17173	17414	16353	15626	14249	13609
Mean	448	444	456	465	520	556	554	562	545	504	475	439
Max	621	484	491	514	569	615	591	605	581	556	510	469
Min	363	391	425	418	483	527	517	513	517	449	446	391
Ac-ft	27573	24653	28053	27680	32004	33109	34063	34541	32436	30994	28263	26993

Calendar Year 2009 Total 181679 Mean 497 Max 621 Min 363 Ac-ft 360360

Maximum Discharge

Date	Time	G.H.	Discharge
Jan. 3	10:00	215.37	640

Minimum Discharge

Date	Time	G.H.	Discharge
Jan. 14	10:00	213.81	356

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

Glossary

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

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

Cubic Feet per Second (ft³/s or cfs)—The rate of discharge representing a volume of one cubic foot passing a given point during one second, the equivalent of approximately 7.48 gallons per second or 448.8 gallons per minute.

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

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

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

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

Discharge-Indicator Relationship—The relationship between an indicator discharge and a volume of water, per unit of time, flowing in a channel or pipe.

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

Elevation—The height of water above 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—Provisional data that have been checked for completeness and accuracy and may have been adjusted and corrected based on observations.

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

Gage-Height (G.H.)—The height of water at a gage.

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, expressed in degrees and minutes or DM.

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 that changes direction, and passes a gage for a second time. 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 *sections*; each section is divided into four quarter sections: southeast, southwest, northeast, and northwest. Each subdivided section is then divided again into four quarter sections giving a total of 16 quadrants per section.

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

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

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

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

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

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

Township—A territorial subdivision, generally considered six miles long, six miles wide, and containing 36 *sections*. The township designation is part of a description of the location of land using the Public Land Survey System (PLSS) of the United States Government, 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.

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 indicator velocity, and the mean stream velocity, computed from a discharge measurement, flowing in a channel.

World Geodetic System of 1984 —The World Geodetic System of 1984 (WGS84) is the datum that is used by the Global Positioning System (GPS). The datum is defined and maintained by the United States National Geospatial-Intelligence Agency (NGA).

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Disclaimer

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