

09502000 SALT RIVER BELOW STEWART MOUNTAIN DAM, AZ

Salt Basin
Lower Salt Subbasin

LOCATION.--Lat 33°33'10", long 111°34'33" referenced to North American Datum of 1927, in NW ¼ NW ¼ sec.6, T.2 N., R.8 E., Maricopa County, AZ, Hydrologic Unit 15060106, on left bank 3.5 mi downstream from Stewart Mountain Dam and 6 mi upstream from Verde River.(unsurveyed).

DRAINAGE AREA.--6,232 mi², of which 21 mi² are below Stewart Mountain Dam.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--Mar. 1930 to current year. Monthly discharge only for some periods, published in WSP 1313. Published as "at Stewart Mountain Dam" 1934-41.

REVISED RECORDS.--WSP 1343: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 1,370 ft above sea level, from topographic map. Prior to Sept. 27, 1934, at site 3.2 mi upstream at different datum. Sept. 27, 1934, to Jan. 20, 1950, at site 2.8 mi upstream at datum 1,396.33 ft above sea level.

REMARKS.--Records good. No estimated daily discharge values. Flow regulated by four reservoirs above station. Entire flow (except during infrequent periods of extreme flooding) is diverted at Granite Reef Dam, 10 mi downstream, for irrigation in Salt River Valley and for municipal use by the city of Phoenix.

AVERAGE DISCHARGE FOR PERIOD OF RECORD.--81 years, 962 ft³/s, 696,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 75,200 ft³/s, Feb. 15, 1980, gage height, 25.0 ft, from highwater mark inside gage well, from rating curve then in use, extended above 10,000 ft³/s defined by known release rates from Stewart Mountain Dam and recorded gage heights; maximum daily discharge, 64,000 ft³/s Feb. 16, 1980; minimum, no flow at times in recent years.

EXTREMES FOR CURRENT YEAR.--Peak discharges, maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jul 18	1130	*1,750	*4.98

Minimum discharge, 3.5 ft³/s, Dec. 26, gage height, 2.12 ft.

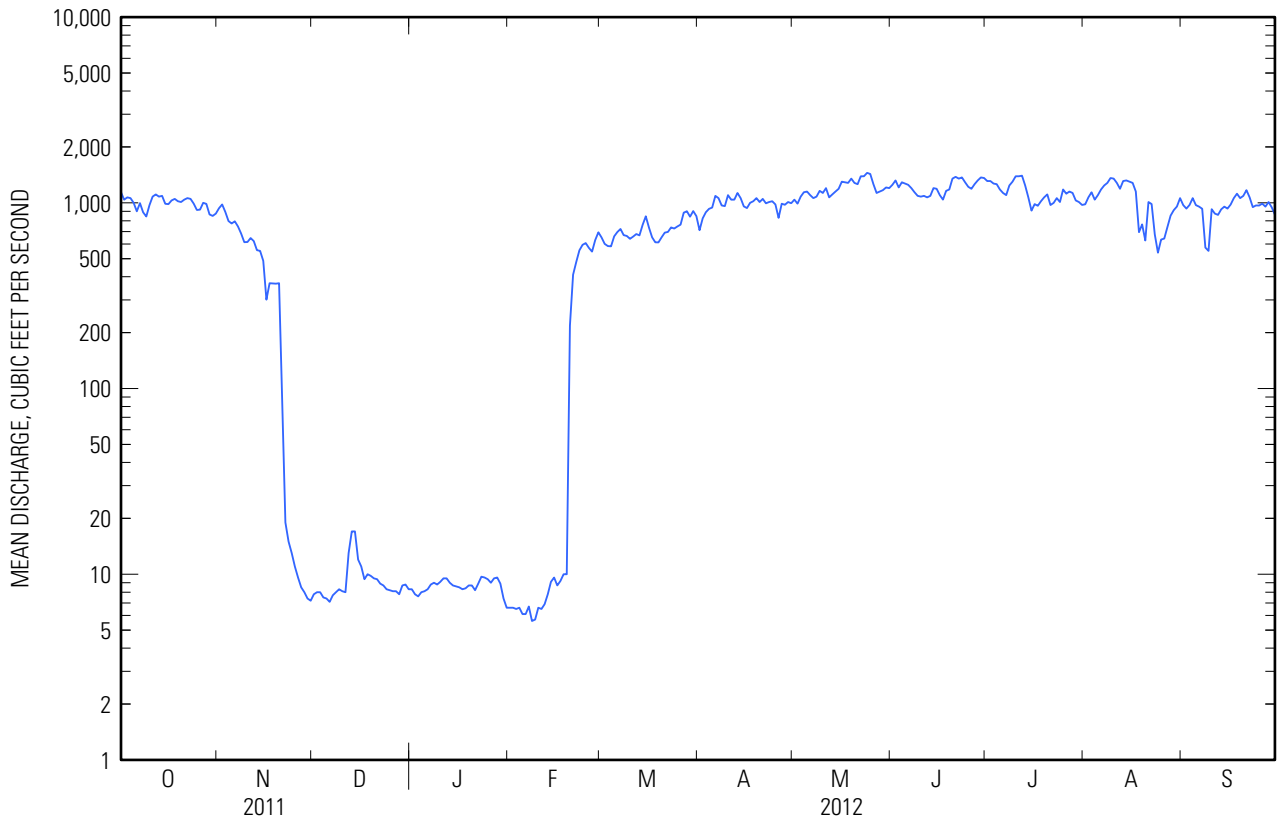
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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012
DAILY MEAN VALUES

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	1,140	935	7.8	8.3	6.6	651	712	1,040	1,250	1,310	982	972
2	1,040	980	8.0	7.8	6.6	601	825	990	1,320	1,310	1,070	931
3	1,070	893	8.0	7.6	6.5	585	890	1,080	1,210	1,270	1,140	974
4	1,060	798	7.5	8.0	6.6	583	928	1,140	1,290	1,260	1,040	1,060
5	1,000	774	7.4	8.1	6.1	660	943	1,150	1,270	1,180	1,100	972
6	900	795	7.1	8.3	6.1	696	1,090	1,100	1,250	1,130	1,180	954
7	996	746	7.7	8.8	6.7	723	1,060	1,060	1,200	1,100	1,240	929
8	889	683	8.0	9.0	5.6	670	968	1,080	1,140	1,240	1,280	574
9	844	614	8.3	8.8	5.7	663	960	1,160	1,090	1,300	1,360	551
10	971	615	8.1	9.1	6.6	640	1,100	1,130	1,080	1,390	1,350	924
11	1,080	646	8.0	9.5	6.5	658	1,040	1,200	1,090	1,390	1,280	875
12	1,110	622	13	9.5	6.9	679	1,040	1,070	1,070	1,400	1,190	861
13	1,080	556	17	9.0	7.8	668	1,130	1,110	1,090	1,240	1,310	922
14	1,090	551	17	8.7	9.1	761	1,060	1,150	1,200	1,070	1,320	954
15	988	487	12	8.6	9.6	846	957	1,190	1,190	908	1,300	931
16	984	301	11	8.5	8.7	736	937	1,300	1,100	984	1,280	979
17	1,030	369	9.4	8.3	9.2	652	1,000	1,290	1,040	964	1,150	1,060
18	1,050	368	10	8.4	10	613	1,020	1,280	1,160	1,020	695	1,120
19	1,020	367	9.8	8.7	10	612	1,060	1,350	1,180	1,070	765	1,060
20	1,010	369	9.5	8.7	218	652	1,010	1,280	1,350	1,110	627	1,090
21	1,040	84	9.4	8.2	410	691	1,050	1,260	1,380	973	1,010	1,170
22	1,060	19	8.9	8.9	480	697	994	1,390	1,350	999	985	1,070
23	1,050	15	8.7	9.7	555	737	1,010	1,390	1,370	1,060	676	948
24	990	13	8.3	9.6	594	727	1,020	1,450	1,290	1,010	539	968
25	915	11	8.2	9.4	607	746	980	1,430	1,220	1,180	634	967
26	919	9.6	8.1	9.0	572	763	830	1,260	1,190	1,120	642	990
27	1,000	8.5	8.1	9.5	546	885	989	1,130	1,260	1,150	741	954
28	987	8.0	7.8	9.6	630	901	976	1,150	1,320	1,130	853	1,010
29	866	7.4	8.7	8.9	694	842	1,010	1,170	1,370	1,030	913	945
30	850	7.2	8.8	7.4	---	903	995	1,210	1,360	1,010	955	863
31	875	---	8.3	6.6	---	848	---	1,200	---	974	1,060	---
Total	30,904	12,651.7	287.9	268.5	5,446.9	22,089	29,584	37,190	36,680	35,282	31,667	28,578
Mean	997	422	9.29	8.66	188	713	986	1,200	1,223	1,138	1,022	953
Max	1,140	980	17	9.7	694	903	1,130	1,450	1,380	1,400	1,360	1,170
Min	844	7.2	7.1	6.6	5.6	583	712	990	1,040	908	539	551
Ac-ft	61,300	25,090	571	533	10,800	43,810	58,680	73,770	72,750	69,980	62,810	56,680

	Calendar Year 2011	Water Year 2012
Total	261,158.3	270,629.0
Mean	716	739
Max	1,870	1,450
Min	3.7	5.6
Ac-ft	518,000	536,800

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09502000 SALT RIVER BELOW STEWART MOUNTAIN DAM, AZ—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Dec. 1950 to Aug. 1992, Aug. 1999 to current year.

PERIOD OF DAILY RECORD.--SPECIFIC CONDUCTANCE:Oct. 1964 to Sept. 1982, Mar. 1983 to Sept. 1990.

WATER TEMPERATURE:Dec. 1950 to Sept. 1982, Mar. 1983 to Sept. 1990.

WATER-QUALITY DATA

WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012

Part 1 of 7

[%, percent; CaCO₃, calcium carbonate; MF, membrane filter; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; col/100 mL, colonies per 100 milliliters; ft³/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than; A, average; E, estimated; k, counts outside acceptable range; p, value reported is preferred; r, value verified by rerun, same method]

Sample date-time	Medium name	Sample type	Barometric pressure, mm Hg (00025)	Temperature, air, °C (00020)	Discharge, instantaneous, ft ³ /s (00061)	Dissolved oxygen, water, unfiltered, mg/L (00300)	Dissolved oxygen, water, unfiltered, % saturation (00301)	pH, water, unfiltered, field, standard units (00400)	Specific conductance, water, unfiltered, µS/cm at 25°C (00095)
12-07-2011 1230	Surface water	Regular	734	13.0	7.8	10.4	94	8.3	1,140
03-16-2012 1130	Surface water	Regular	728	28.0	729	10.8	111	8.2	1,110
06-06-2012 1025	Surface water	Regular	722	37.0	1,270	8.3	98	8.1	1,220
08-15-2012 1010	Surface water	Regular	724	37.5	1,280	5.3	64	8.0	1,330

WATER-QUALITY DATA

WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012

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[%, percent; CaCO₃, calcium carbonate; MF, membrane filter; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; col/100 mL, colonies per 100 milliliters; ft³/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than; A, average; E, estimated; k, counts outside acceptable range; p, value reported is preferred; r, value verified by rerun, same method]

Sample date-time	Temperature, water, °C (00010)	Turbidity, water, unfiltered, broad band light source (400-680 nm), detectors at multiple angles including 90 +/- 30 degrees, ratiometric correction, NTRU (63676)	Dissolved solids dried at 180°C, water, filtered, mg/L (70300)	Dissolved solids, water, filtered, sum of constituents, mg/L (70301)	Dissolved solids, water, filtered, tons per acre-foot (70303)	Hardness, water, mg/L as CaCO ₃ (00900)	Non-carbonate hardness, water, filtered, field, mg/L as CaCO ₃ (00904)	Suspended solids, water, unfiltered, mg/L (00530)	Calcium, water, filtered, mg/L (00915)
12-07-2011 1230	9.0	< 2.0	621	601	0.85	173	28	< 15	47.0
03-16-2012 1130	14.6	< 2.0	617	569	.84	173	42	< 15	47.7
06-06-2012 1025	20.6	< 2.0	664	621	.90	179	41	< 15	48.9
08-15-2012 1010	22.4	< 2.0	727	682	.99	188	A 62	< 15	50.9 r

09502000 SALT RIVER BELOW STEWART MOUNTAIN DAM, AZ—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012

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[%, percent; CaCO₃, calcium carbonate; MF, membrane filter; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; col/100 mL, colonies per 100 milliliters; ft³/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than; A, average; E, estimated; k, counts outside acceptable range; p, value reported is preferred; r, value verified by rerun, same method]

Sample date-time	Calcium, water, unfiltered, recoverable, mg/L (00916)	Magnesium, water, filtered, mg/L (00925)	Magnesium, water, unfiltered, recoverable, mg/L (00927)	Potassium, water, filtered, mg/L (00935)	Sodium adsorption ratio, water, number (00931)	Sodium, water, filtered, mg/L (00930)	Alkalinity, water, filtered, inflection-point, incremental titration method, field, mg/L as CaCO ₃ (39086)	Bicarbonate, water, filtered, inflection-point, incremental titration method, field, mg/L (00453)	Carbonate, water, filtered, inflection-point, incremental titration method, field, mg/L (00452)
							A 126	A 154	< .1
12-07-2011 1230	47.4	13.6	13.7	4.89	5.12	155	146	173	2.4
03-16-2012 1130	47.3	13.0	12.7	4.59	4.93	149	130	152	3.6
06-06-2012 1025	48.5	13.8	13.8	4.99	5.24	161	137	168	< .1
08-15-2012 1010	47.9 r	14.9	14.1	4.91	5.82	184	A 126	A 154	< .1

WATER-QUALITY DATA
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012

Part 4 of 7

[%, percent; CaCO₃, calcium carbonate; MF, membrane filter; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; col/100 mL, colonies per 100 milliliters; ft³/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than; A, average; E, estimated; k, counts outside acceptable range; p, value reported is preferred; r, value verified by rerun, same method]

Sample date-time	Chloride, water, filtered, mg/L (00940)	Fluoride, water, filtered, mg/L (00950)	Sulfate, water, filtered, mg/L (00945)	Ammonia plus organic nitrogen, water, unfiltered, mg/L as N		Nitrate plus nitrite, water, filtered, mg/L as N (00631)	Organic nitrogen, water, unfiltered, mg/L (00605)	Phosphorus, water, unfiltered, mg/L as P (00665)	Total nitrogen, water, unfiltered, mg/L (00600)
				Ammonia, water, filtered, mg/L as N (00608)	Ammonia, water, unfiltered, mg/L as N (00625)				
12-07-2011 1230	251	0.30	41.6	0.20	< .010	0.042	< .20	0.01	0.25
03-16-2012 1130	235	.33	40.8	.27	< .010	< .040	< .27	.02	< .31
06-06-2012 1025	266	.33	43.9	.27	< .010	< .040	< .27	.02	< .31
08-15-2012 1010	296	.29	46.0	.26	< .010	< .040	< .26	.02	< .30

09502000 SALT RIVER BELOW STEWART MOUNTAIN DAM, AZ—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012

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[%, percent; CaCO₃, calcium carbonate; MF, membrane filter; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; col/100 mL, colonies per 100 milliliters; ft³/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than; A, average; E, estimated; k, counts outside acceptable range; p, value reported is preferred; r, value verified by rerun, same method]

Sample date-time	Esche- richia coli, modified m-TEC MF method, water, col/100 mL (90902)	Barium, water, unfiltered, recover- able, µg/L (01007)	Beryllium, water, unfiltered, recover- able, µg/L (01010)	Beryllium, water, unfiltered, recover- able, µg/L (01012)	Cadmium, water, filtered, µg/L (01025)	Cadmium, water, unfiltered, µg/L (01027)	Chromium, water, unfiltered, recover- able, µg/L (01034)	Copper, water, filtered, µg/L (01040)	Copper, water, unfiltered, recover- able, µg/L (01042)
	12-07-2011 1230	< 1 k	55.8	< .006	< .02	< .016	< .016	< .30	< .80
03-16-2012 1130	< 1 k	69.6	< .006	< .02	< .016	< .016	< .30	< .80	.71
06-06-2012 1025	E 4 k	74.8	< .006	< .02	< .016	< .016	< .30	< .80	< .70
08-15-2012 1010	E 4 k	86.4	< .006	< .02	< .016	< .016	< .30	< .80	< .70

WATER-QUALITY DATA
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012

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[%, percent; CaCO₃, calcium carbonate; MF, membrane filter; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; col/100 mL, colonies per 100 milliliters; ft³/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than; A, average; E, estimated; k, counts outside acceptable range; p, value reported is preferred; r, value verified by rerun, same method]

Sample date-time	Lead, water, filtered, µg/L (01049)	Lead, water, unfiltered, recover- able, µg/L (01051)	Manga- nese, water, unfiltered, recover- able, µg/L (01055)	Mercury, water, filtered, µg/L (71890)	Mercury, water, unfiltered, recover- able, µg/L (71900)	Zinc, water, filtered, µg/L (01090)	Zinc, water, unfiltered, recover- able, µg/L (01092)	Antimony, water, filtered, µg/L (01095)	Antimony, water, unfiltered, µg/L (01097)
	12-07-2011 1230	< .025	< .04	32.6	< .005	< .005	< 1.4	< 3.0	0.136
03-16-2012 1130	< .025	.06	25.8	< .005	< .005	< 1.4	< 3.0	.142	< .18
06-06-2012 1025	< .025	< .04	29.4	< .005	< .005	< 1.4	< 3.0	.142	< .18
08-15-2012 1010	< .025	< .04	90.2	< .005	< .005	< 1.4	< 3.0	.171	< .18

09502000 SALT RIVER BELOW STEWART MOUNTAIN DAM, AZ—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012

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[%, percent; CaCO₃, calcium carbonate; MF, membrane filter; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; col/100 mL, colonies per 100 milliliters; ft³/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; μS/cm, microsiemens per centimeter; μg/L, micrograms per liter; <, less than; A, average; E, estimated; k, counts outside acceptable range; p, value reported is preferred; r, value verified by rerun, same method]

Sample date-time	Arsenic, water, filtered, μg/L (01000)	Arsenic, water, unfiltered, μg/L (01002)	Boron, water, unfiltered, recoverabl e, microgram s per liter (01022)	Selenium, water, unfiltered, μg/L (01147)	Suspended sediment concentra- tion, mg/L (80154)	Suspended sediment discharge, tons per day (80155)
12-07-2011 1230	3.6	3.3	91	0.065	1	0.02
03-16-2012 1130	4.0	4.1	96	.092	2	3.9
06-06-2012 1025	4.1	3.8	125	.134	2	6.9
08-15-2012 1010	4.6	4.6	108	.084	2	6.9