

09498500 SALT RIVER NEAR ROOSEVELT, AZ

Salt Basin
Upper Salt Subbasin

LOCATION.--Lat 33°37'10", long 110°55'15" referenced to North American Datum of 1927, in SE ¼ NE ¼ sec.9, T.3 N., R.14 E., Gila County, AZ, Hydrologic Unit 15060103, (unsurveyed), in Tonto National Forest on left bank 100 ft downstream from bridge on State Highway 288, 0.3 mi downstream from Pinal Creek, 1 mi upstream from diversion dam for power canal, 14 mi east of village of Roosevelt, and 17 mi upstream from Roosevelt Dam.

DRAINAGE AREA.--4,306 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--Jan. 1913 to current year (monthly discharge only Jan. to Sept. 1913, published in WSP 1313).

REVISED RECORDS.--WSP 1049: 1914, 1916, 1918-19, 1926. WSP 1343: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,177.14 ft above sea level. Prior to 1925, nonrecording gage at diversion dam about 1 mi downstream at different datum. Nonrecording gage at present site and datum 1925 to Jan. 17, 1935. May 20, 1955, to July 30, 1959, supplementary water-stage recorder at diversion dam.

REMARKS.--Records good, except estimated daily discharges, which are poor. Several small diversions for irrigation of about 4,000 acres above station and two transbasin diversions above station, one into basin from Show Low Creek and one out of basin to Willow Creek. Records show inflow to Roosevelt Lake. Tonto Creek also contributes to Roosevelt Lake; see records elsewhere in this report.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 143,000 ft³/s Jan. 8, 1993, gage height, 30.09 ft, from rating curve extended above 108,000 ft³/s; minimum discharge, 59 ft³/s all or part of each day, July 1-4, 7-12, 1955.

EXTREMES OUTSIDE PERIOD OF RECORD.--A discharge of about 42 ft³/s was reported Aug. 5, 1911.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4,000 ft³/s and (or) maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec 26	1410	*17,600	*16.90
No other peak greater than base discharge			

Minimum daily discharge, 107 ft³/s, Sept. 3.

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009
DAILY MEAN VALUES

[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	227	217	258	702	843	1,910	1,040	734	282	147	130	108
2	219	212	245	656	769	1,860	978	721	269	146	127	108
3	215	206	232	620	718	1,950	939	711	261	144	125	107
4	211	200	222	600	670	2,090	898	696	246	164	122	108
5	242	198	216	706	639	2,280	887	689	232	177	121	113
6	346	196	213	847	635	2,440	900	691	217	172	120	119
7	321	195	205	1,020	643	2,230	909	690	204	173	121	122
8	339	197	206	794	701	1,960	857	e680	198	161	119	150
9	363	200	202	651	741	1,720	844	e660	197	152	122	156
10	309	210	211	608	894	1,580	874	e640	208	141	124	240
11	284	228	216	595	884	1,510	937	e620	206	132	122	194
12	279	231	219	555	799	1,430	973	615	209	128	120	170
13	328	223	214	513	839	1,370	986	584	215	123	121	179
14	432	223	220	487	937	1,330	1,000	552	198	120	120	168
15	540	231	252	468	819	1,320	1,000	526	186	119	117	175
16	444	229	292	454	735	1,270	936	486	182	118	116	172
17	392	227	1,200	438	725	1,180	907	452	172	121	123	164
18	355	224	1,440	436	877	1,160	884	427	167	124	125	158
19	327	222	1,150	436	1,000	1,240	846	402	161	122	123	246
20	305	220	687	435	881	1,400	800	383	157	121	118	190
21	289	219	466	431	762	1,550	774	381	158	131	116	231
22	273	217	379	445	745	1,670	768	431	154	139	113	174
23	263	211	1,590	513	796	1,790	794	428	153	129	112	164
24	255	205	1,230	2,180	1,030	1,880	839	426	154	148	114	159
25	251	204	1,320	2,720	1,520	1,760	881	414	154	153	112	146
26	246	209	11,600	2,480	1,800	1,600	887	407	158	205	114	137
27	239	228	6,320	2,050	1,970	1,470	873	376	164	195	121	130
28	234	465	2,550	1,640	2,000	1,340	846	342	158	207	119	125
29	230	384	1,420	1,300	---	1,240	802	319	156	169	115	122
30	224	283	963	1,070	---	1,190	759	304	147	154	113	118
31	221	---	802	952	---	1,130	---	290	---	139	111	---
Total	9,203	6,914	36,740	27,802	26,372	49,850	26,618	16,077	5,723	4,574	3,696	4,653
Mean	297	230	1,185	897	942	1,608	887	519	191	148	119	155
Max	540	465	11,600	2,720	2,000	2,440	1,040	734	282	207	130	246
Min	211	195	202	431	635	1,130	759	290	147	118	111	107
Med	279	218	292	620	809	1,550	885	486	184	144	120	157
Ac-ft	18,250	13,710	72,870	55,150	52,310	98,880	52,800	31,890	11,350	9,070	7,330	9,230
Cfsm	0.07	0.05	0.28	0.21	0.22	0.37	0.21	0.12	0.04	0.03	0.03	0.04

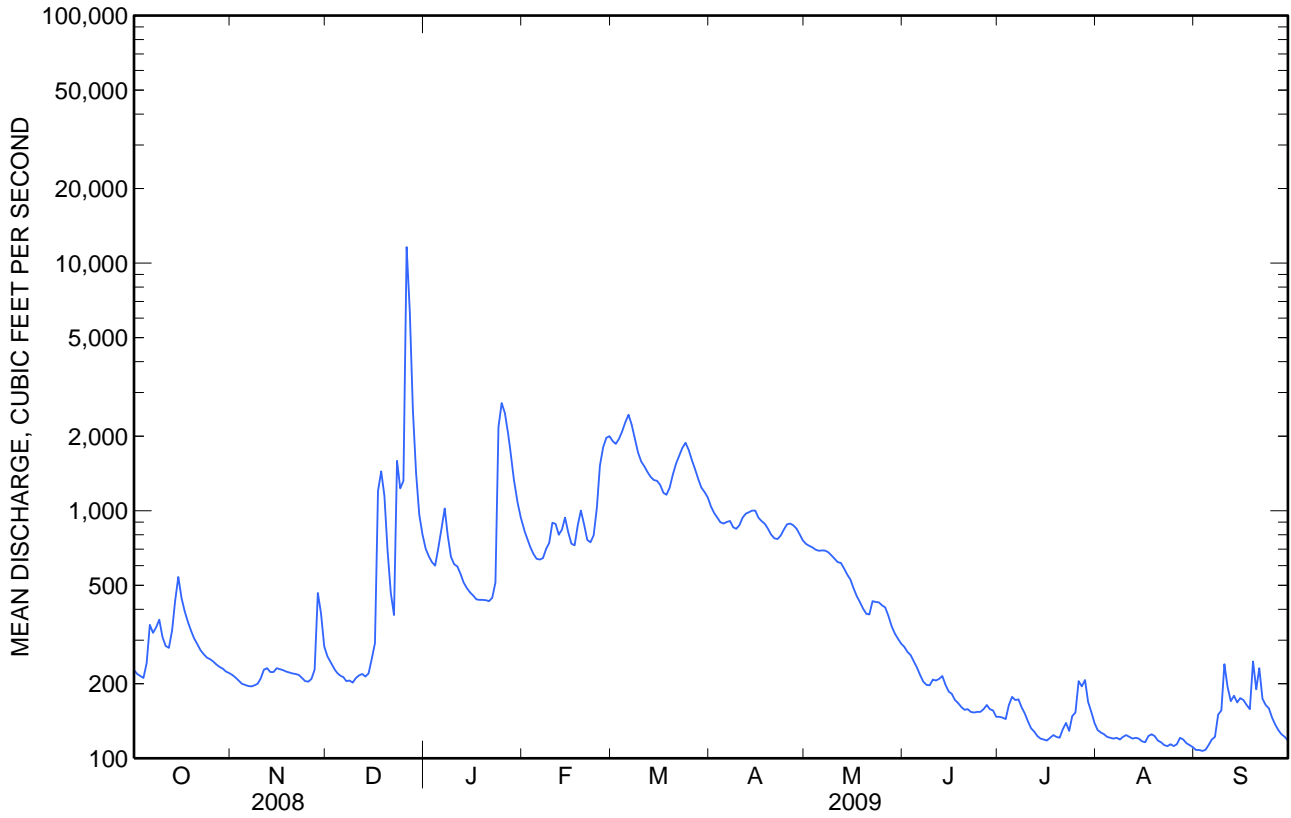
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1914 - 2009, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	414	371	739	1,086	1,398	1,964	1,913	983	348	322	589	447
Max	4,832	2,150	6,327	15,990	9,072	10,390	6,281	5,933	1,365	3,276	3,607	1,852
(WY)	(1984)	(1920)	(1966)	(1916)	(1980)	(1978)	(1979)	(1973)	(1941)	(1919)	(1921)	(1923)
Min	85.5	122	127	161	161	179	164	110	74.6	78.3	119	77.9
(WY)	(1957)	(1957)	(1957)	(1964)	(2006)	(2002)	(2002)	(2002)	(2002)	(1963)	(2009)	(1956)

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SUMMARY STATISTICS

	Calendar Year 2008		Water Year 2009		Water Years 1914 - 2009	
Annual total	477,699		218,222			
Annual mean	1,305		598		879	
Highest annual mean					3,252	1916
Lowest annual mean					191	2000
Highest daily mean	48,500	Jan 28	11,600	Dec 26	91,000	Jan 19, 1916
Lowest daily mean	138	Jun 30	107	Sep 3	59	Jul 4, 1955
Annual seven-day minimum	145	Jun 26	110	Aug 30	62	Jul 2, 1955
Annual runoff (ac-ft)	947,500		432,800		636,500	
Annual runoff (cfsm)	0.303		0.139		0.204	
10 percent exceeds	2,820		1,350		1,990	
50 percent exceeds	548		289		324	
90 percent exceeds	211		122		156	



09498500 SALT RIVER NEAR ROOSEVELT, AZ—Continued**WATER-QUALITY RECORDS**

PERIOD OF RECORD.--Apr. 1958 to Sept. 1965 and Jan. 1976 to current year.

PERIOD OF DAILY RECORD.--SPECIFIC CONDUCTANCE:Dec. 1996 to Jan. 1998.

WATER TEMPERATURE:Apr. 1958 to Sept. 1965 and Dec. 1996 to Jan. 1998.

**WATER-QUALITY DATA
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009**

Part 1 of 5

[Remark codes: <, less than; A, average; E, estimated. Value qualifier codes: b, value extrapolated at low end; d, diluted sample: method hi range exceeded; k, counts outside acceptable range; n, below the LRL and above the LT-MDL; p, value reported is preferred; r, value verified by rerun, same method.]

Date	Time	Medium name	Sample type code	Barometric pressure, mm Hg (00025)	Temperature, air, deg C (00020)	Instantaneous discharge, ft ³ /s (00061)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unf μS/cm @ 25 degC (00095)
Dec 02...	1230	Surface water	9	712	16.0	244	10.0	98	8.2	3,360
Feb 23...	1355	Surface water	9	712	24.0	786	10.2	101	8.4	1,200
Mar 17...	1340	Surface water	9	711	26.0	1,180	10.2	105	8.3	772
May 13...	1220	Surface water	9	705	28.0	590	8.5	104	8.3	1,240
Jun 09...	1155	Surface water	9	705	27.0	199	8.2	103	8.4	2,540
Aug 19...	1215	Surface water	9	704	30.5	124	7.5	101	8.3	4,620

09498500 SALT RIVER NEAR ROOSEVELT, AZ—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009

Part 2 of 5

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Date	Temperature, deg C (00010)	Turbidity, white light, det ang 90+/-30 corrctd NTRU (63676)	Dissolved solids, dried @ 180degC wat flt mg/L (70300)	Dissolved solids, sum of constituents, mg/L (70301)	Dissolved solids, tons/ acre-ft (70303)	Hardness, water, mg/L as CaCO3 (00900)	Noncarbohardness, wat flt field, mg/L as CaCO3 (00904)	Suspended solids, water, unfltrd mg/L (00530)	Calcium water, fltrd, mg/L (00915)	Calcium unfltrd recover-able, mg/L (00916)	Magnesium, water, fltrd, mg/L (00925)	Magnesium, unfltrd recover-able, mg/L (00927)	Potassium, water, fltrd, mg/L (00935)
Dec 02...	11.0	47	1,880	E1,720	2.55	170	--	39	45.1	97.9d	13.3	27.7d	5.57
Feb 23...	11.7	E11b	653	E632	.89	170	43	<15	47.4d	48.0	13.7d	13.6	4.16d
Mar 17...	13.6	E11b	435	E390	.59	110	21	<15	30.6	32.8	8.26	8.72	2.77
May 13...	21.1	E11b	663r	E615	.90	140	32	<15	38.2	37.6	10.4	10.2	4.62
Jun 09...	21.8	E4.5b	1,380r	E1,280	1.87	220	--	<15	59.1dr	64.8d	17.4dr	18.7d	7.71dr
Aug 19...	26.0	E6.6b	2,550	E2,420	3.46	330	170	<15	78.9dr	76.1d	33.3dr	33.0d	15.2dr

WATER-QUALITY DATA
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009

Part 3 of 5

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Date	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Alkalinity, wat flt inf tit field, mg/L as CaCO3 (39086)	Bicarbonate, wat flt inf pt titr., field, mg/L (00453)	Carbonate, wat flt inf pt titr., field, mg/L (00452)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Sulfate, water, fltrd, mg/L (00945)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia, water, fltrd, mg/L as N (00608)	Nitrate + nitrite, water, fltrd, mg/L as N (00631)	Phosphorus, water, unfltrd mg/L as P (00665)	E coli, modif. m-TEC, water, col/ 100 mL (90902)
Dec 02...	18	523dp	201	240	2.4	890dr	.25	122d	.15	<.020	<.04	.04	73
Feb 23...	5.7	172d	131	155	2.4	264	.18	53.0	.14	<.020	<.04	.03	<1k
Mar 17...	4.1	98.4	89.0	104	2.4	165	.10	31.1	.17	<.020	<.04	.04	<1k
May 13...	6.4	172	106	121	4.4	292	.12	33.7	.17	<.020	<.04	.03	E2k
Jun 09...	11	361dr	A163	A188	A4.8	673d	.19	64.6d	.18	<.020	<.04	.02	E2k
Aug 19...	18	744dr	167	202	1.2	1,340d	.23	110d	.18	<.020	<.04	.02	22

09498500 SALT RIVER NEAR ROOSEVELT, AZ—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009

Part 4 of 5

[Remark codes: <, less than; A, average; E, estimated. Value qualifier codes: b, value extrapolated at low end; d, diluted sample: method hi range exceeded; k, counts outside acceptable range; n, below the LRL and above the LT-MDL; p, value reported is preferred; r, value verified by rerun, same method.]

Date	Barium, water, unfltrd recover- able, µg/L (01007)	Beryll- ium, water, unfltrd recover- able, µg/L (01010)	Beryll- ium, water, unfltrd recover- able, µg/L (01012)	Cadmium water, fltrd, µg/L (01025)	Cadmium water, unfltrd µg/L (01027)	Chrom- ium, water, unfltrd recover- able, µg/L (01034)	Copper, water, fltrd, µg/L (01040)	Copper, water, recover- able, µg/L (01042)	Lead, water, fltrd, µg/L (01049)	Lead, water, recover- able, µg/L (01051)	Mangan- ese, water, unfltrd recover- able, µg/L (01055)	Mercury water, fltrd, µg/L (71890)	Mercury water, unfltrd recover- able, µg/L (71900)
Dec 02...	91.4d	<.04d	.06d	<.04d	<.12d	1.4d	<2.0d	<8.0d	E.09nd	.50d	41.6d	<.010	<.010
Feb 23...	39.7	E.02n	.08	E.01n	<.06	.89	1.1	<4.0	E.04n	.27	15.0	<.010	<.010
Mar 17...	24.9	E.01n	.05	E.01n	<.06	.68	<1.0	<4.0	<.06	.24	14.2	<.010	<.010
May 13...	30.9	<.02	<.02	<.02	<.06	<.40	1.2	<4.0	E.03n	<.10	6.1	<.010	<.010
Jun 09...	71.4d	<.04d	<.04d	<.04d	<.12d	<.80d	<2.0d	<8.0d	E.10nd	<.20d	37.8d	<.010	<.010
Aug 19...	139d	<.04d	<.04d	<.04d	<.12d	<.80d	E1.1nd	<8.0d	<.12d	.25d	48.1d	<.010	<.010

WATER-QUALITY DATA
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009

Part 5 of 5

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Date	Zinc, water, fltrd, µg/L (01090)	Zinc, water, unfltrd recover- able, µg/L (01092)	Anti- mony, water, fltrd, µg/L (01095)	Anti- mony, water, unfltrd µg/L (01097)	Arsenic water, fltrd, µg/L (01000)	Arsenic water, unfltrd µg/L (01002)	Boron, water, unfltrd recover- able, µg/L (01022)	Selen- ium, water, unfltrd µg/L (01147)	Sus- pended sedi- ment concen- tration mg/L (80154)	Sus- pended sedi- ment dis- charge, tons/d (80155)
Dec 02...	E3.2nd	E3.3nd	.08d	<.8d	5.9d	5.4d	274d	E.13nd	70	46
Feb 23...	3.4	E1.8n	E.03n	<.4	3.4	3.2	84	E.11n	13	28
Mar 17...	2.1r	E1.2nr	E.03n	<.4	2.4	2.2	52	E.08n	14	45
May 13...	2.1r	<2.0r	E.02n	<.4	3.6	3.4	97	E.08n	7	11
Jun 09...	<10.0d	<4.0d	E.05nd	<.8d	5.3d	5.3d	213d	<.24d	5	2.7
Aug 19...	E2.4nd	<4.0d	E.05nd	<.8d	8.4d	7.8d	433d	<.24d	9	3.0