GILA RIVER BASIN

09502000 SALT RIVER BELOW STEWART MOUNTAIN DAM, AZ

LOCATION.--Lat 33°33'10", long 111°34'33", in NW1/4NW1/4 sec. 6, T.2 N., R.8 E. (unsurveyed), Maricopa County, Hydrologic Unit 15060106, on left bank 3.5 mi downstream from Stewart Mountain Dam and 6 mi upstream from Verde River.

DRAINAGE AREA.--6,232 mi^2, of which 21 mi^2 is below Stewart Mountain Dam.

WATER-DISCHARGE 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, except for estimated daily discharges, which are poor. Flow regulated by four reservoirs above station. (See elsewhere in this report.) 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.--73 years, 990 ft^3/s, 717,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 75,200 ft^3/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 ft^3/s defined by known release rates from Stewart Mountain Dam and recorded gage heights; maximum daily discharge, 64,000 ft^3/s Feb. 16, 1980; no flow at times in recent years.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 667 ft^3/s July 17. Minimum daily discharge, 5.0 ft^3/s Mar. 29.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	157	192	9.2	8.4	7.8	9.5	5.3	6.3	489	434	516	438
2	204	158	9.0	8.5	7.6	9.7	5.3	6.3	529	339	466	528
3	200	90	8.9	8.4	7.5	9.4	5.1	6.2	542	410	370	539
4	172	48	8.4	8.4	7.6	8.9	5.4	6.2	468	419	293	563
5	188	14	8.6	7.9	7.5	8.9	5.3	6.4	525	328	483	543
6	189	11	8.1	8.7	8.0	8.5	6.0	7.9	522	345	514	452
7	189	9.6	8.2	8.4	7.9	8.6	6.0	8.2	365	348	480	410
8	216	9.3	7.8	8.9	8.5	8.8	7.6	8.3	356	517	503	428
9	228	8.6	8.6	9.4	8.3	9.0	7.1	8.1	447	500	460	333
10	217	8.2	8.0	8.6	8.5	9.4	6.8	8.2	491	529	428	323
11	196	8.4	8.2	8.3	8.3	9.4	7.1	9.1	444	560	450	403
12	197	8.1	8.4	8.5	8.7	9.3	7.0	15	438	483	606	344
13	202	7.5	8.4	8.4	11	9.3	7.7	16	401	393	509	334
14	204	7.9	8.3	8.5	12	9.1	12	14	401	453	541	418
15	207	7.9	8.5	8.6	9.4	9.1	11	14	462	481	398	396
16	209	7.8	8.4	8.9	8.7	18	8.1	14	450	582	498	397
17	215	7.1	8.9	8.4	9.0	17	6.8	13	390	667	476	403
18	213	7.5	8.7	8.5	8.4	11	6.8	8.4	479	611	451	363
19	208	7.7	8.7	8.4	8.7	8.0	7.2	20	414	539	442	387
20	210	7.4	8.5	8.9	8.2	6.4	8.0	133	476	434	364	416
21	210	7.8	8.7	9.5	8.3	6.3	7.3	343	433	481	396	343
22	231	7.8	8.6	9.1	8.1	5.8	7.1	533	365	432	410	308
23	261	7.3	11	9.2	8.6	5.5	7.3	461	366	465	322	277
24	286	7.6	9.6	9.0	7.9	5.4	7.0	446	368	507	308	215
25	263	8.0	8.8	9.0	11	5.6	7.1	375	407	509	379	142
26	152	8.6	8.8	8.8	13	5.5	7.0	308	423	345	422	141
27	64	7.5	8.9	8.2	12	5.5	6.7	348	446	437	428	103
28	122	7.7	8.9	8.2	12	5.5	6.4	419	420	445	398	89
29	123	7.1	8.1	8.2	---	5.0	6.1	482	526	307	426	87
30	122	10	8.3	8.0	---	5.3	6.1	614	451	287	457	97
31	128	---	8.3	7.9	---	5.3	---	541	---	237	407	---
TOTAL	5983	705.4	267.8	266.1	252.5	258.0	209.7	5198.6	13294	13824	13601	10220
MEAN	193	23.5	8.64	8.58	9.02	8.32	6.99	168	443	446	439	341
MAX	286	192	11	9.5	13	18	12	614	542	667	606	563
MIN	64	7.1	7.8	7.9	7.5	5.0	5.1	6.2	356	237	293	87
AC-FT	11870	1400	531	528	501	512	416	10310	26370	27420	26980	20270

CAL YR 2002 TOTAL 151773.2 MEAN 416 MAX 1640 MIN 7.1 AC-FT 301000
WTR YR 2003 TOTAL 64080.1 MEAN 176 MAX 667 MIN 5.0 AC-FT 127100

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 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Turbidity, NTU (00076)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Noncarb hardness, wat flt field, mg/L as CaCO3 (00904)	Calcium water, fltrd, mg/L (00915)
NOV													
01...	1000	178	2.2	724	7.8	89	7.9	1920	28.0	18.8	210	67	53.0
APR													
04...	0810	5.8	.92	727	5.1	55	7.8	2050	13.1	17.1	230	90	56.0
JUN													
27...	0845	428	3.6	719	5.5	65	7.6	2080	25.5	20.9	220	61	55.0
AUG													
08...	0845	506	3.8	724	4.5	57	8.0	2180	36.0	24.5	230	76	57.0

Date	Calcium water unfltrd recoverable, mg/L (00916)	Magnesium, water, fltrd, mg/L (00925)	Magnesium, water, unfltrd recoverable, mg/L (00927)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Bicarbonate, wat flt incrm. titr., field, mg/L (00453)	Carbonate, wat flt incrm. titr., field, mg/L (00452)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)
NOV													
01...	54.0	19.0	20.0	7.30	9	300	143	167	4	470	.4	69.0	1010
APR													
04...	56.0	21.0	21.0	7.30	9	300	136	166	<1	510	.4	76.0	1050
JUN													
27...	55.0	19.0	21.0	8.40	9	320	154	188	<1	500	.4	74.0	1070
AUG													
08...	58.0	22.0	23.0	8.20	9	330	158	192	<1	540	.4	77.0	1130

Date	Residue water, fltrd, tons/acre-ft (70303)	Residue on evap. at 180degC wat flt mg/L (70300)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water unfltrd mg/L (71845)	Ammonia water, unfltrd mg/L as N (00610)	Nitrite + nitrate water unfltrd mg/L as N (00630)	Organic nitrogen, water, unfltrd mg/L (00605)	Phosphorus, water, unfltrd mg/L (00665)	COD, high level, water, unfltrd mg/L (00340)	E coli, m-TEC MF, water, col/100 mL (31633)	Antimony, water, fltrd, ug/L (01095)	Antimony, water, unfltrd ug/L (01097)
NOV													
01...	1.46	1070	8	.40	--	<.01	<.020	--	.02	7	E11k	<1	<1
APR													
04...	1.51	1110	2	.30	.05	.04	<.020	.26	.02	10	E4k	<1	<1
JUN													
27...	1.55	1140	14	.40	--	<.01	<.020	--	.08	12	E4k	<1	<1
AUG													
08...	1.60	1180	11	.60	.03	.02	<.020	.58	.06	17	E4k	<1	<1

Date	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)	Barium, water, fltrd, ug/L (01005)	Barium, water, unfltrd recoverable, ug/L (01007)	Beryllium, water, fltrd, ug/L (01010)	Beryllium, water, unfltrd recoverable, ug/L (01012)	Boron, water, fltrd, ug/L (01020)	Boron, water, unfltrd recoverable, ug/L (01022)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)	Chromium, water, fltrd, ug/L (01030)	Chromium, water, unfltrd recoverable, ug/L (01034)	Copper, water, fltrd, ug/L (01040)
NOV													
01...	6	6	81.0	83.0	<1	<1	173	174	<.5	<.5	<1	<1	<2
APR													
04...	5	3	75.0	76.0	<1	<1	171	175	<.5	<.5	<1	<1	<2
JUN													
27...	4	8	87.0	93.0	<1	<1	190	191	<.5	<.5	<1	<1	<2
AUG													
08...	6	6	85.0	90.0	<1	<1	202	203	<.5	<.5	<1	<1	<2

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Copper, water, unfltrd recover -able, ug/L (01042)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recover -able, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recover -able, ug/L (01051)	Mangan- ese, water, fltrd, ug/L (01056)	Mangan- ese, water, unfltrd recover -able, ug/L (01055)	Mercury water, fltrd, ug/L (71890)	Mercury water, unfltrd recover -able, ug/L (71900)	Nickel, water, fltrd, ug/L (01065)	Nickel, water, unfltrd recover -able, ug/L (01067)	Selen- ium, water, fltrd, ug/L (01145)	Selen- ium, water, unfltrd ug/L (01147)
NOV													
01...	<2	<2	44	<2	<2	22	75	<.10	<.1	<1	<1	<1	<1
APR													
04...	<2	8	71	<2	<2	49	90	<.10	<.1	<1	<1	<1	<1
JUN													
27...	<2	<2	176	<2	<2	55	312	<.10	<.1	<1	<1	<1	<1
AUG													
08...	<2	4	115	<2	<2	63	209	<.10	<.1	<1	<1	1	<1

Date	Silver, water, fltrd, ug/L (01075)	Silver, water, unfltrd recover -able, ug/L (01077)	Stront- ium, water, unfltrd recover -able, ug/L (01082)	Thall- ium, water, fltrd, ug/L (01057)	Thall- ium, water, unfltrd ug/L (01059)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover -able, ug/L (01092)	Sus- pended sedi- ment concen- tration mg/L (80154)	Sus- pended sedi- ment load, tons/d (80155)
NOV									
01...	<1	<1	580	<2	<2	2	<2	5	2.4
APR									
04...	<1	<1	610	<2	<2	<2	<2	4	.06
JUN									
27...	<1	<1	640	<2	<2	<2	3	4	4.6
AUG									
08...	<1	<1	620	<2	<2	<2	2	57	78

Remark codes used in this report:
< -- Less than
E -- Estimated value

Value qualifier codes used in this report:
k -- Counts outside acceptable range