09466500 GILA RIVER AT CALVA, AZ

LOCATION.--Lat 33°11'08", long 110°13'10", in SW1/4 sec. 8, T.3 S., R.21 E. (unsurveyed), Graham County, Hydrologic Unit 15040005, in San Carlos Indian Reservation, on Southern Pacific Railroad bridge at head of San Carlos Reservoir, 2 mi west of Calva.

DRAINAGE AREA.--11,470 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Oct. 1929 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,517.29 ft above sea level. Prior to Oct. 1, 1954, and Aug. 25, 1958, to Dec. 31, 1962, at datum 2.52 ft lower. Oct. 1, 1954, to Aug. 24, 1958, at datum 5.52 ft lower. Dec. 31, 1962, to Oct. 20, 1972, at site 530 ft downstream at datum 3.65 ft lower. Oct. 20, 1972, to Sept. 30, 1974, supplementary gage at bridge on U.S. Highway 70, 6.2 mi upstream at datum 2,560.19 ft, NGVD.

REMARKS.--Records fair. Diversion above station for irrigation of about 69,000 acres, metallurgical treatment of ores, and municipal uses.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 150,000 ft^3/s Oct. 3, 1983, gage height, 23.1 ft, from rating curve extended above 87,000 ft^3/s on basis of area-velocity and flow-over-road computations of peak flow; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since at least 1914, probably in excess of 100,000 ft^3/s Jan. 20, 1916, determined on basis of peak discharge at stations near Solomon and at Kelvin.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,000 ft^3/s and (or) maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)
Aug. 19.....	1500	*873	*3.91

Minimum daily discharge, no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	29	74	150	163	264	228	48	0.00	58	69
2	0.00	0.00	38	69	153	166	254	213	43	0.00	45	66
3	0.00	0.00	41	64	154	166	248	199	37	0.00	44	89
4	0.00	0.00	36	58	154	174	267	193	34	0.00	39	94
5	0.00	0.00	32	58	158	213	374	178	32	0.00	84	88
6	0.00	0.00	32	58	158	338	454	173	29	0.00	126	93
7	0.00	0.00	37	69	158	293	483	151	27	0.00	83	104
8	0.00	0.00	39	94	161	215	516	147	24	0.00	80	97
9	0.00	0.00	44	98	162	176	557	147	22	0.00	73	89
10	0.00	0.00	43	101	164	189	575	135	18	0.00	57	83
11	0.00	0.00	44	103	165	228	607	120	17	0.00	57	88
12	0.00	0.00	57	106	166	270	653	114	14	0.00	67	78
13	0.00	0.00	66	109	163	322	735	110	13	0.00	76	72
14	0.00	0.00	72	111	161	362	773	108	12	0.00	77	66
15	0.00	282	72	113	162	376	799	104	10	0.00	109	57
16	0.00	283	77	115	160	378	807	97	9.1	6.6	177	48
17	0.00	142	79	123	160	376	802	89	9.7	195	349	44
18	0.00	129	82	127	158	353	759	90	8.3	58	513	40
19	0.00	113	81	129	155	338	704	87	7.4	24	796	42
20	0.00	92	81	130	151	382	638	81	6.7	8.1	621	41
21	0.00	e76	79	132	151	371	612	76	5.2	2.6	260	43
22	0.00	67	78	134	145	360	565	72	4.9	0.78	178	47
23	0.00	60	68	135	142	442	499	69	e4.0	0.24	166	46
24	0.00	57	59	139	141	450	454	66	2.9	0.21	130	48
25	0.00	53	56	e141	145	429	399	64	1.7	2.7	128	45
26	0.00	39	50	143	151	425	353	61	0.39	10	107	41
27	0.00	31	63	144	154	402	318	59	0.08	17	102	186
28	0.00	26	65	146	157	375	284	57	0.02	312	96	484
29	0.00	25	68	148	155	347	265	56	0.03	195	85	197
30	0.00	22	72	149	---	319	245	52	0.03	103	74	132
31	0.00	---	74	150	---	292	---	50	---	73	72	---
TOTAL	0.00	1497.00	1814	3470	4514	9690	15263	3446	440.45	1008.23	4929	2717
MEAN	0.00	49.9	58.5	112	156	313	509	111	14.7	32.5	159	90.6
MAX	0.00	283	82	150	166	450	807	228	48	312	796	484
MIN	0.00	0.00	29	58	141	163	245	50	0.02	0.00	39	40
AC-FT	0.00	2970	3600	6880	8950	19220	30270	6840	874	2000	9780	5390
CFSM	0.00	0.00	0.01	0.01	0.01	0.03	0.04	0.01	0.00	0.00	0.01	0.01
IN.	0.00	0.00	0.01	0.01	0.01	0.03	0.05	0.01	0.00	0.00	0.02	0.01

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 2004, BY WATER YEAR (WY)

MEAN	340	227	439	734	705	711	404	218	51.3	77.4	294	238
MAX	8486	2468	5652	16310	6225	3757	2623	3079	1272	838	1661	1681
(WY)	1984	2001	1979	1993	1993	1991	1992	1992	1992	1955	1967	1975
MIN	0.00	0.00	0.00	21.6	28.5	10.3	1.35	1.25	0.00	0.00	0.00	0.00
(WY)	1954	1954	1954	1956	1957	1957	1957	1956	1946	1989	1989	1956

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1930 - 2004	
ANNUAL TOTAL	25821.58		48788.68			
ANNUAL MEAN	70.7		133		369	
HIGHEST ANNUAL MEAN					2451	1993
LOWEST ANNUAL MEAN					28.7	1956
HIGHEST DAILY MEAN	421	Mar 20	807	Apr 16	90000	Oct 3 1983
LOWEST DAILY MEAN	0.00	Jul 3	0.00	Oct 1	0.00	Jul 4 1930
ANNUAL SEVEN-DAY MINIMUM	0.00	Jul 3	0.00	Oct 1	0.00	Aug 24 1933
ANNUAL RUNOFF (AC-FT)	51220		96770		267200	
ANNUAL RUNOFF (CFSM)	0.006		0.012		0.032	
ANNUAL RUNOFF (INCHES)	0.08		0.16		0.44	
10 PERCENT EXCEEDS	187		365		760	
50 PERCENT EXCEEDS	41		78		69	
90 PERCENT EXCEEDS	0.00		0.00		2.2	

e Estimated

09466500 GILA RIVER AT CALVA, AZ—CONTINUED

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Oct. 1974 to Sept. 1994 and Aug. 1999 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Turbidity, wat unf lab, Hach 2100AN NTU (99872)	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)	Noncarb hardness, wat flt field, mg/L as CaCO3 (00904)	Hardness, water, mg/L as CaCO3 (00900)
NOV													
17...	1400	132	--	670	697	9.1	97	8.3	615	16.0	14.0	28	160
DEC													
10...	1125	40	--	18	699	12.3	111	8.5	2730	10.0	6.9	85	350
MAR													
25...	1240	428	--	260	696	7.9	95	8.2	735	27.5	19.6	4	150
JUN													
04...	1110	35	--	44	696	7.5	102	8.2	3600	31.5	25.8	100	380
AUG													
12...	1105	60	180	--	697	6.8	94	8.4	1730	32.0	27.4	66	270

Date	Calcium water, fltrd, mg/L (00915)	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)
NOV													
17...	44.0	60.0	11.0	19.0	3.90	2	61.0	127	145	5	87.0	.6	36.0
DEC													
10...	95.0	101	27.0	28.0	7.90	10	440	263	311	5	600	1.8	250
MAR													
25...	42.0	57.0	9.80	17.0	4.00	3	88.0	142	168	2	100	1.2	54.0
JUN													
04...	96.0	103	33.0	34.0	9.60	14	610	271	320	5	800	2.0	330
AUG													
12...	78.5	94.7	18.3	23.3	9.08	6	226	205	240	5	318d	1.6	137d

Date	Residue water, fltrd, sum of constituents mg/L (70301)	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, fltrd, mg/L as N (00608)	Ammonia water unfltrd mg/L (71845)	Ammonia water, unfltrd mg/L as N (00610)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite + nitrate water unfltrd mg/L as N (00630)	Organic nitrogen, water, unfltrd mg/L (00605)	Phosphorus, water, unfltrd mg/L (00665)	Total nitrogen, water, unfltrd mg/L (00600)
NOV													
17...	320	.52	379	543	1.4	--	.08	.06	--	.410	1.3	1.00	1.8
DEC													
10...	1580	2.27	1670	24	.60	--	.03	.02	--	.820	.58	.06	1.4
MAR													
25...	384	.59	436	487	1.0	--	.03	.02	--	.640	.98	.64	1.6
JUN													
04...	2040	2.86	2100	87	.50	--	.03	.02	--	.270	.48	.10	.77
AUG													
12...	919	1.37	1010	410d	.79	<.04	--	--	1.70	--	--	.56	2.5

Date	Total nitrogen, water, unfltrd mg/L as NO3 (71887)	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)	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)
NOV													
17...	8.0	29	380	<1	<1	3	7	36.0	170	<1	<1	56	66
DEC													
10...	6.3	8	E8k	<1	2	8	11	73.0	81.0	<1	<1	474	496
MAR													
25...	7.3	7	E150k	<1	<1	3	5	30.0	130	<1	1	90	98
JUN													
04...	3.4	13	E40k	<1	<1	7	8	95.0	110	<1	<1	609	631
AUG													
12...	--	--	E280k	E.19n	E.2n	7.0	8	--	164	<.06	.62	--	229

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)	Chrom-ium, water, fltrd, ug/L (01030)	Chrom-ium, water, unfltrd recover -able, ug/L (01034)	Copper, water, fltrd, ug/L (01040)	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)
NOV													
17...	<.5	<.5	<1	9	3	50	6	10900	<2	14	1	571	<.1
DEC													
10...	<.5	<.5	<1	<1	<2	3	<2	680	<2	<2	9	38	<.1
MAR													
25...	<.5	<.5	<1	9	<2	39	<2	9640	<2	11	<1	462	<.1
JUN													
04...	<.5	<.5	<1	2	<2	8	<2	1810	<2	<2	10	160	<.1
AUG													
12...	E.03n	.18	--	7.9	4.0	38.3	--	--	<.08	11.2	--	286	<.02

Date	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)	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)
NOV													
17...	<.1	2	24	<1	<1	<1	<1	540	<2	<2	<2	47	573
DEC													
10...	<.1	1	2	<1	<1	<1	<1	1100	<2	<2	2	6	69
MAR													
25...	<.1	<1	16	<1	<1	<1	<1	450	<2	<2	<2	42	482
JUN													
04...	<.1	1	4	<1	<1	<1	<1	1270	<2	<2	6	8	109
AUG													
12...	E.02n	--	--	--	1.3	--	--	--	--	--	.6	34	476

Date	Sus-pended sedi-ment dis-charge, tons/d (80155)
NOV	
17...	204
DEC	
10...	7.5
MAR	
25...	557
JUN	
04...	10
AUG	
12...	77

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

Value qualifier codes used in this table:
d -- Diluted sample: method hi range exceeded
k -- Counts outside acceptable range
n -- Below the LRL and above the LT-MDL