



Water-Data Report 2007

09444000 SAN FRANCISCO RIVER NEAR GLENWOOD, NM

Upper Gila Basin
San Francisco Subbasin

LOCATION.--Lat 33°14'49.8", long 108°52'48.0" referenced to North American Datum of 1983, Catron County, NM, Hydrologic Unit 15040004, on left bank 0.2 mi upstream from hot springs, 5 mi south of Glenwood, 6 mi downstream from White Water Creek, and at mile 511.5.

DRAINAGE AREA.--1,653 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--October 1927 to current year. Monthly discharge only for some periods, published in WSP 1313.

REVISED RECORDS.--WSP 1213: 1931, 1934, 1936-37, 1940-42, 1943-44(M), 1945-47. WSP 1283: drainage area. WDR NM-78-1: 1977. WDR NM-79-1: 1973, 1975-77(P).

GAGE.--Water-stage recorder with satellite telemetry and crest-stage gage. Elevation of gage is 4,560 ft above NGVD of 1929, from topographic map. Prior to Feb. 15, 1934, at site 4.5 mi upstream at datum 98.82 ft higher.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Diversions for irrigation of about 2,000 acres upstream from station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Major floods probably occurred Jan. 19 and Oct. 14, 1916, when discharges of 60,000 ft³/s or greater were computed for station at Clifton, AZ. On Nov. 26, 1905, a peak of 25,000 ft³/s was measured (by float-area method) at station at Alma (about 12 mi upstream, drainage area 1,560 mi²). A similar measurement of 21,000 ft³/s was made at the Alma station for peak of Dec. 3, 1906.

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007
DAILY MEAN VALUES
[*e*, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	43	51	37	35	39	45	92	35	27	17	88	130
2	41	49	36	35	39	46	82	38	26	16	92	148
3	42	49	35	35	39	45	71	39	28	15	273	118
4	41	48	35	35	38	44	66	40	29	20	277	93
5	40	47	35	35	38	43	62	40	28	21	404	79
6	42	45	35	35	37	44	60	41	28	20	221	72
7	88	45	34	34	37	44	60	39	28	19	364	67
8	79	45	34	34	37	44	62	37	27	20	248	69
9	127	44	35	34	37	42	63	36	24	18	e190	64
10	261	44	35	34	38	42	63	34	25	18	e149	56
11	262	43	35	34	38	43	61	32	24	17	e111	59
12	156	42	35	34	43	43	60	30	25	18	e95	72
13	111	42	34	34	42	44	59	30	24	17	e84	66
14	129	42	34	35	44	42	58	29	22	23	76	62
15	527	42	34	35	46	43	55	29	23	21	68	56
16	228	42	34	34	46	46	53	28	28	19	62	52
17	136	42	35	34	44	47	51	35	26	20	60	49
18	102	41	34	35	44	48	48	37	21	20	59	48
19	84	41	35	36	44	46	46	35	20	17	57	48
20	75	41	36	36	45	42	43	33	19	59	54	45
21	65	41	36	36	44	46	43	30	e18	35	48	44
22	61	41	36	37	44	60	41	29	e18	76	45	43
23	57	40	36	37	44	107	40	28	e18	148	56	65
24	55	40	35	36	44	180	38	28	e18	120	112	88
25	56	39	35	36	45	307	37	29	18	56	79	50
26	53	37	35	36	44	317	37	29	18	58	71	43
27	52	38	35	36	44	257	36	28	18	114	133	36
28	52	37	36	36	44	193	35	27	18	159	134	34
29	52	38	35	37	---	162	35	27	18	109	124	33
30	52	38	35	38	---	132	35	28	16	137	118	33
31	51	---	35	39	---	110	---	28	---	93	108	---
Total	3,220	1,274	1,086	1,097	1,168	2,754	1,592	1,008	680	1,520	4,060	1,922
Mean	104	42.5	35.0	35.4	41.7	88.8	53.1	32.5	22.7	49.0	131	64.1
Max	527	51	37	39	46	317	92	41	29	159	404	148
Min	40	37	34	34	37	42	35	27	16	15	45	33
Ac-ft	6,390	2,530	2,150	2,180	2,320	5,460	3,160	2,000	1,350	3,010	8,050	3,810

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 2007, BY WATER YEAR (WY)

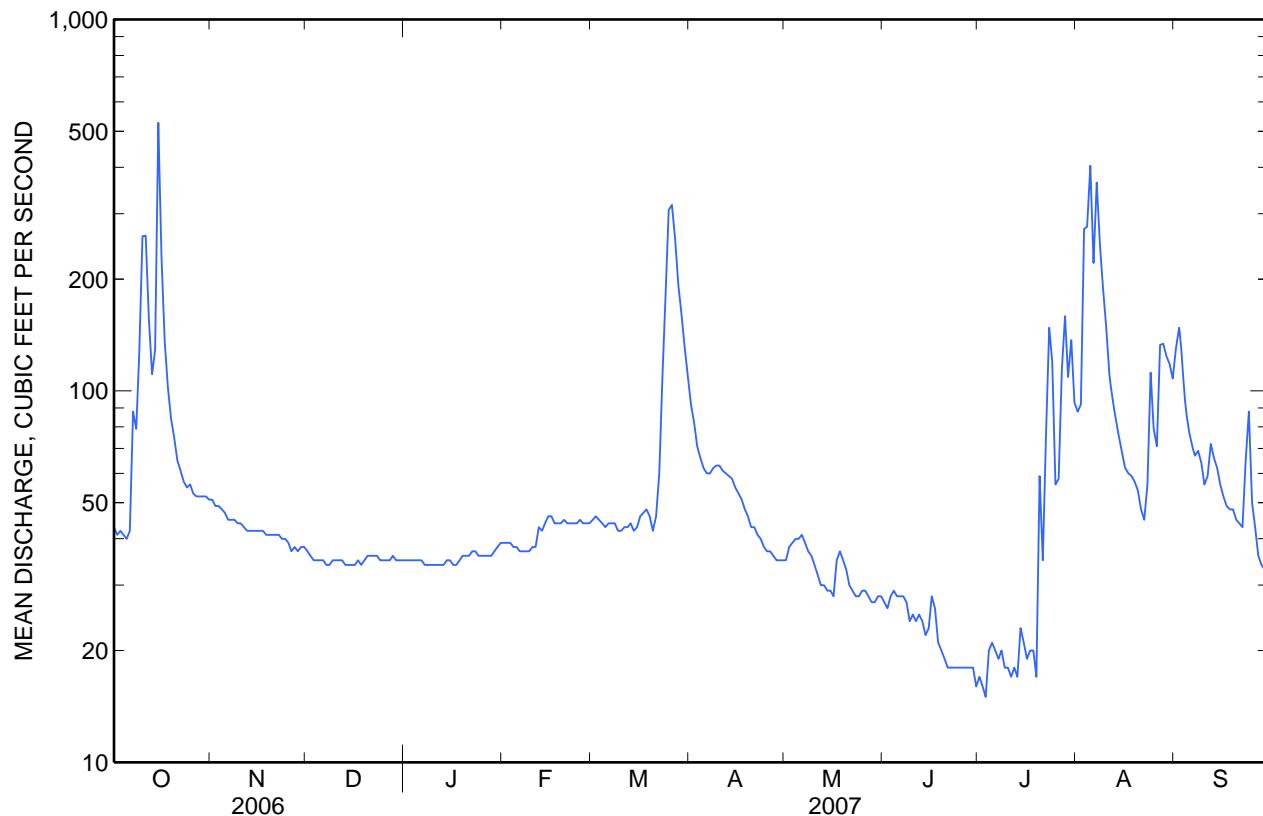
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	86.0	52.3	81.7	96.0	131	186	138	72.7	27.9	36.7	81.2	62.2
Max	2,026	520	1,068	1,568	1,034	1,036	1,049	593	146	108	566	368
(WY)	(1984)	(1979)	(1979)	(1993)	(1993)	(1985)	(1973)	(1973)	(1992)	(1930)	(2006)	(1988)
Min	9.77	10.8	12.9	13.5	14.9	11.3	10.3	8.65	5.70	13.2	13.7	7.66
(WY)	(1966)	(1957)	(1954)	(1956)	(1956)	(1959)	(1957)	(1956)	(1956)	(1963)	(1960)	(1956)

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	Calendar Year 2006	Water Year 2007		Water Years 1928 - 2007	
Annual total	33,839	21,381			
Annual mean	92.7	58.6		87.5	
Highest annual mean				351	1979
Lowest annual mean				13.9	1956
Highest daily mean	1,340	Aug 20	527	Oct 15	27,500 Oct 2, 1983
Lowest daily mean	11	Jun 21	15	Jul 3	2.5 Jun 25, 1956
Annual seven-day minimum	12	Jun 16	17	Jun 27	3.9 Jun 22, 1956
Maximum peak flow			1,170	Oct 15	^a 37,100 Oct 2, 1983
Maximum peak stage			7.27	Oct 15	^b 18.15 Oct 2, 1983
Instantaneous low flow			13	Jul 3	1.5 Dec 3, 1906
Annual runoff (ac-ft)	67,120		42,410		63,400
10 percent exceeds	270		111		168
50 percent exceeds	22		41		31
90 percent exceeds	14		24		15

^a From rating curve extended above 4,200 ft³/s, on basis of slope-area measurement at gage heights 10.74 ft, 15.60 ft, and 20.80 ft.

^b 20.80 ft outside floodmarks.



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WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1963-85, 1999 to current year.

WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007
 Part 1 of 5
 [Remark codes: <, less than; E, estimated.]

Date	Time	Instan- taneous dis- charge, cfs (00061)	Turbdty white light, det ang 90+/-30 degrees (NTU (63675))	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	Dis- solved oxygen, percent of sat- uration (00301)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unf field, μS/cm (00095)	Temper- ature, air, deg C (25 degC (00020))	Temper- ature, water, deg C (00010)	Hard- ness, water, mg/L as CaCO ₃ (00900)	Calcium water, filtrd, mg/L (00915)	Magnes- ium water, filtrd, mg/L (00925)
Mar 20...	1315	42	3.8	651	8.8	107	8.3	348	24.5	17.0	130	36.6	9.42
Jul 12...	0907	18	8.7	655	6.6	81	8.1	357	21.0	18.0	110	31.0	7.77

WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007
 Part 2 of 5
 [Remark codes: <, less than; E, estimated.]

Date	Potas- sium, water, filtrd, mg/L (00935)	Sodium adsorp- tion ratio (00931)	Sodium, water, filtrd, mg/L (00930)	Alka- linity, wat flt fxd end	Alka- linity, wat flt inc tit	Bicar- bonate, wat flt incrm.	Carbon- ate, wat flt incr.	Chlor- ide, titr., field,	Fluor- ide, titr., field,	Silica, water, filtrd, mg/L (00940)	Sulfate water, filtrd, mg/L (00945)	Residue water, + filtrd, sum of consti- tuents mg/L (70301)	Ammonia org-N, water, filtrd, mg/L as N (00623)
Mar 20...	1.96	.8	19.9	162	165	197	2	5.23	.36	34.5	8.46	216	.16
Jul 12...	1.55	.6	15.2	187	174	210	--	5.99	.40	53.9	8.10	228	.23

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WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Part 3 of 5

[Remark codes: <, less than; E, estimated.]

Date	Ammonia		Nitrite		Ortho-phosphate		Alumnum		Antimony		Arsenic		Barium		Beryllium
	+ org-N, water, unfltrd mg/L as N (00625)	Ammonia water, unfltrd mg/L as N (00608)	Ammonia water, unfltrd mg/L as N (00610)	+ nitrate water, fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Phosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)	Alumnum, water, fltrd, μg/L (01106)	Antimony, water, fltrd, μg/L (01095)	Arsenic water, fltrd, μg/L (01000)	Barium, water, fltrd, μg/L (01005)	Barium, water, fltrd, μg/L (01010)	ium, water, fltrd, μg/L	
Mar 20...	.17	<.020	.180	.12	.003	.054	.059	.083	3.7	E.05	1.3	12	<.06		
Jul 12...	.14	<.020	E.034	.11	.004	.038	.049	.085	2.7	E.04	1.0	13	<.06		

WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Part 4 of 5

[Remark codes: <, less than; E, estimated.]

Date	Chrom-						Mercury						Selen-		Selen-
	Boron, water, fltrd, μg/L (01020)	Cadmium water, fltrd, μg/L (01025)	ium, water, fltrd, μg/L (01030)	Cobalt water, fltrd, μg/L (01035)	Copper, water, fltrd, μg/L (01040)	Iron, water, fltrd, μg/L (01046)	Lead, water, fltrd, μg/L (01049)	Mangan- ese, water, fltrd, μg/L (01056)	water, unfltrd recover- able, μg/L (71900)	Molyb- denum, water, fltrd, μg/L (01060)	Nickel, water, fltrd, μg/L (01065)	ium, water, fltrd, μg/L (01145)	ium, water, fltrd, μg/L (01147)		
Mar 20...	16	<.04	.38	.07	.66	E4	<.12	13.4	.014	.6	.24	.11	.10		
Jul 12...	41	.05	.23	.13	.61	7	1.03	32.9	E.010	.4	.71	.08	.10		

WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Part 5 of 5

[Remark codes: <, less than; E, estimated.]

Date	Uranium					Suspnd. sediment,		Sus- pended sediment	
	Silver, water, fltrd, μg/L (01075)	Zinc, water, fltrd, μg/L (01090)	natural water, fltrd, μg/L (22703)	sieve diametr percent	concentra- tion	<.063mm	(70331)	mg/L	(80154)
Mar 20...	<.1	.99	1.64	84	11				
Jul 12...	<.1	E.50	1.25	98	17				