



Water-Data Report 2007

08383500 PECOS RIVER NEAR PUERTO DE LUNA, NM

Upper Pecos Basin
Pecos Headwaters Subbasin

LOCATION.--Lat 34°43'48.3", long 104°31'29.68" referenced to North American Datum of 1983, Guadalupe County, NM, Hydrologic Unit 13060001, on left bank 9.0 mi southeast of Puerto de Luna, 17.5 mi upstream from Sumner Dam, and at mile 719.5.

DRAINAGE AREA.-- 3,970 mi², approximately (contributing area).

SURFACE-WATER RECORDS

PERIOD OF RECORD.--April 1938 to current year.

REVISED RECORDS.--WSP 1512: 1939.

GAGE.--Water-stage recorder with satellite telemetry and concrete control. Elevation of gage is 4,311.34 ft above NGVD of 1983. Prior to Apr. 15, 1954, at datum 1.0 ft higher.

REMARKS.--Water-discharge records good except for those greater than 1,000 ft³/s and those estimated, which are fair. Flow regulated by Santa Rosa Lake (station 08382810), 37.7 mi upstream, since Apr. 1980. Diversions for irrigation of about 10,280 acres, 1970 determination, upstream from station. Spring discharge from Blue Hole and Agua Negra upstream from station contributes a substantial inflow. Discharge represents inflow to Lake Sumner. Several observations of water temperature and specific conductance were made during the year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum flood since at least 1886 occurred June 2, 1937, when peak at Santa Rosa was 55,200 ft³/s, and peak inflow to Lake Sumner was about 75,000 ft³/s. Flood of July 24, 1895, was reported as "highest in 10 years." Other major floods occurred on June 9, 1903, Sept. 30, 1904, and May 1, 1914.

Water-Data Report 2007

08383500 PECOS RIVER NEAR PUERTO DE LUNA, NM—Continued

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007
DAILY MEAN VALUES

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	79	78	83	83	83	784	80	81	67	1,190	78	1,480
2	79	78	83	82	82	219	80	96	63	1,190	79	1,490
3	79	79	82	84	82	115	80	100	62	1,240	80	1,490
4	78	79	82	86	80	101	79	85	65	1,440	79	1,490
5	78	78	83	86	81	95	80	83	64	1,470	76	1,340
6	79	79	82	83	81	90	81	83	62	1,480	76	332
7	79	80	81	82	80	87	85	77	61	1,500	72	131
8	85	80	81	82	80	84	85	74	63	1,510	76	107
9	94	80	82	81	80	82	85	78	91	1,340	76	108
10	101	80	82	83	80	81	83	74	77	241	76	93
11	82	79	81	83	80	79	81	73	134	121	75	107
12	78	80	81	82	79	80	82	75	137	102	73	87
13	79	80	81	81	78	80	88	72	71	96	73	85
14	79	80	81	82	80	80	87	72	73	89	73	82
15	80	80	82	81	80	78	83	72	73	86	67	80
16	79	81	81	104	80	77	83	72	73	83	67	77
17	78	79	81	80	79	77	83	74	72	80	67	105
18	79	80	81	80	79	77	83	75	71	78	68	76
19	80	81	82	80	79	77	82	72	69	77	76	73
20	77	81	83	85	78	77	81	71	66	74	71	73
21	76	82	83	82	78	76	80	71	65	74	70	102
22	76	81	82	82	78	80	80	69	65	73	69	76
23	77	81	82	81	520	85	80	66	64	72	72	74
24	78	81	81	81	1,140	84	78	66	65	74	71	74
25	78	81	81	81	1,220	82	80	67	66	72	70	72
26	76	82	81	81	1,280	81	80	74	65	72	70	72
27	77	81	81	81	1,310	81	81	71	70	77	68	71
28	79	81	81	80	1,210	80	80	80	117	74	501	72
29	78	82	87	80	---	79	79	69	505	76	1,320	74
30	78	83	91	79	---	80	80	68	1,110	75	1,450	70
31	78	---	85	81	---	82	---	68	---	77	1,630	---
Total	2,473	2,407	2,550	2,559	8,437	3,410	2,449	2,328	3,706	14,303	6,869	9,663
Mean	79.8	80.2	82.3	82.5	301	110	81.6	75.1	124	461	222	322
Max	101	83	91	104	1,310	784	88	100	1,110	1,510	1,630	1,490
Min	76	78	81	79	78	76	78	66	61	72	67	70
Ac-ft	4,910	4,770	5,060	5,080	16,730	6,760	4,860	4,620	7,350	28,370	13,620	19,170

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 2007, BY WATER YEAR (WY)

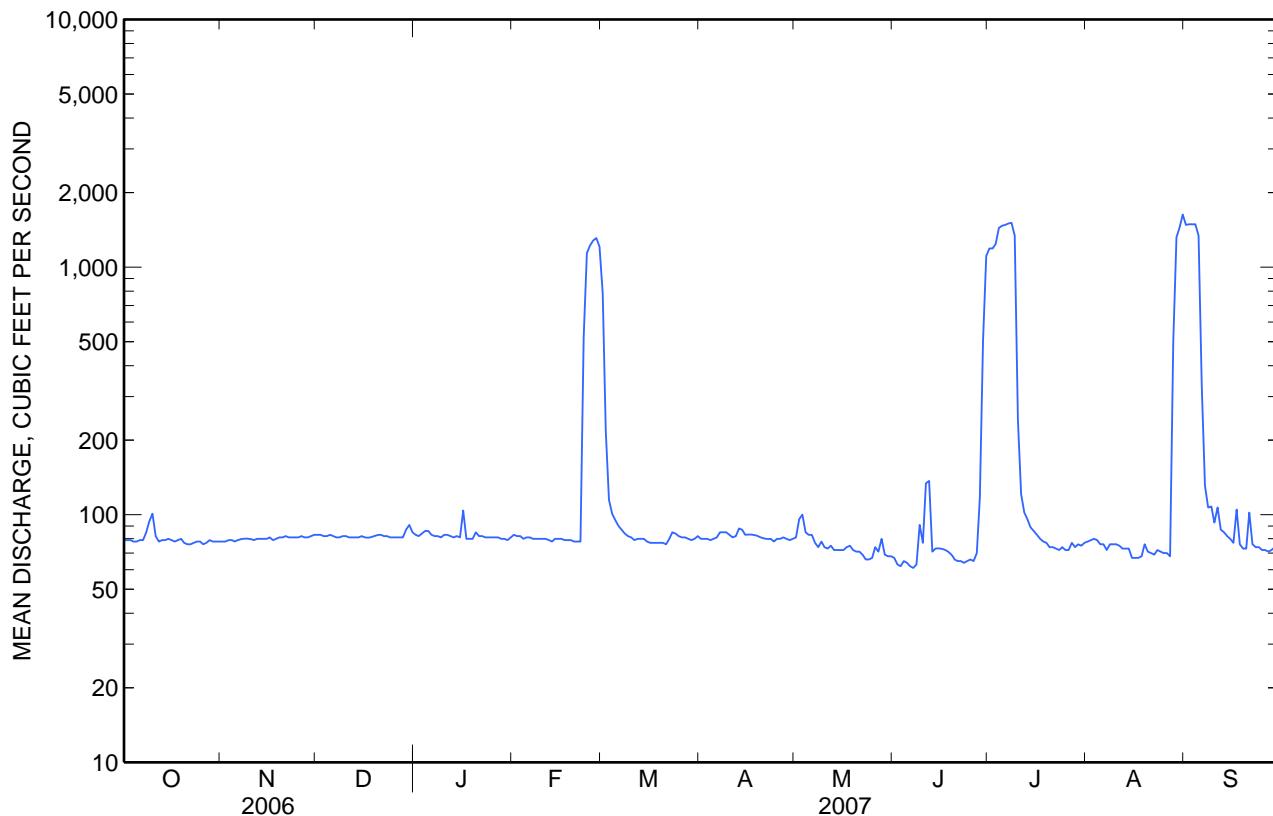
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	109	92.4	97.7	96.1	129	133	148	308	348	281	293	261
Max	225	232	223	252	362	373	685	744	1,211	725	706	948
(WY)	(1986)	(1987)	(2006)	(1996)	(2006)	(1998)	(1989)	(1989)	(1995)	(1983)	(1994)	(1988)
Min	73.1	76.3	73.5	75.9	76.7	73.5	65.9	63.0	61.5	68.2	65.2	66.4
(WY)	(1988)	(2000)	(1991)	(2004)	(1984)	(1989)	(2006)	(2004)	(2004)	(2003)	(2001)	(1990)

08383500 PECOS RIVER NEAR PUERTO DE LUNA, NM—Continued**SUMMARY STATISTICS**

	Calendar Year 2006	Water Year 2007			Water Years 1980 - 2007	
Annual total	62,371		61,154			
Annual mean	171		168		a192	
Highest annual mean					318	1995
Lowest annual mean					103	2002
Highest daily mean	1,750	Sep 8	1,630	Aug 31	3,510	Oct 17, 1985
Lowest daily mean	57	Apr 24	61	Jun 7	39	Aug 4, 1987
Annual seven-day minimum	59	Apr 21	63	Jun 2	43	Jul 29, 1987
Maximum peak flow			1,650	Aug 31	b48,600	Sep 1, 1942
Maximum peak stage			4.10	Aug 31	17.00	Sep 1, 1942
Instantaneous low flow			58	Jun 6	11	Jan 31, 1951
Annual runoff (ac-ft)	123,700		121,300		138,700	
10 percent exceeds	221		111		498	
50 percent exceeds	81		80		84	
90 percent exceeds	65		71		67	

^a Average discharge for 41 years (water years, 1939-79), 209 ft³/s, 151,400 acre-ft/yr, prior to completion of Santa Rosa Dam.

^b From rating curve extended above 7,400 ft³/s, on basis of flow "at Santa Rosa".



08383500 PECOS RIVER NEAR PUERTO DE LUNA, NM—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1937-66, 1972 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	Turbidity white Instan- taneous dis- charge, light, det ang 90+/-30 degrees	cfs (00061)	NTU (63675)	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	solved percent of sat- uration (00301)	pH water, unfltrd field, std units (00400)	Specif. conduc- tance, unf field, μS/cm (00095)	Temper- ature, wat air, deg C (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)
Oct 25...	1105	79	18	652	9.2	103	8.2	2,920	20.5	13.0	1,600	548	67.1	
Mar 16...	1045	76	2.8	665	9.6	101	8.2	2,840	7.5	11.0	1,200	368	56.6	

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 fxf end	Alka- linity, wat flt inc tit	Bicar- bonate, wat flt	Chlor- ide, incrm.	Fluor- ide, titr.	Silica, water, filtrd,	Sulfate, water, filtrd,	Residue water, filtrd,	Ammonia + org-N, water, filtrd,	Ammonia + org-N, water, unfiltrd
Oct 25...	2.09	1.0	97.1	120	127	152	141	.69	11.1	1,530	2,470	E.07	.11
Mar 16...	1.68	.9	73.7	122	134	160	140	.69	6.77	1,510	2,230	.27	.16

08383500 PECOS RIVER NEAR PUERTO DE LUNA, NM—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Part 3 of 5

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

Date	Ammonia water, fltrd,		Nitrite + Ammonia water, fltrd,		Ortho-phosphate, water, fltrd,		Phosphorus, water, fltrd,		Alum-inum, water, fltrd,		Antimony, water, fltrd,		Arsenic water, fltrd,		Barium, water, fltrd,		Beryllium, water, fltrd,		Boron, water, fltrd,	
	mg/L (00608)	as N (00610)	mg/L (00631)	as N (00613)	mg/L (00671)	as P (00667)	mg/L (00666)	mg/L (00665)	µg/L (01106)	µg/L (01095)	µg/L (01000)	µg/L (01005)	µg/L (01010)	µg/L (01020)	µg/L (01010)	µg/L (01020)				
Oct 25...	<.020	E.033	E.04	.005	E.004	<.006	<.080	<3.2	<12	.50	23	<.12	100							
Mar 16...	<.020	E.026	<.06	<.002	<.006	<.006	.010	<3.2	E.06	.44	35	<.12	70							

WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Part 4 of 5

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

Date	Chrom-ium, water, fltrd,		Cobalt water, fltrd,		Copper, water, fltrd,		Iron, water, fltrd,		Lead, water, fltrd,		Mangan-ese, water, unfltrd		Mercury, water, recover-able,		Molyb-denum, water, fltrd,		Nickel, water, fltrd,		Selen-ium, water, unfltrd		Selen-ium, water, fltrd,	
	µg/L (01025)	(01030)	µg/L (01035)	(01040)	µg/L (01046)	(01049)	µg/L (01056)	(71900)	µg/L (01056)	(71900)	µg/L (01060)	(01065)	µg/L (01145)	(01147)	µg/L (01075)							
Oct 25...	<.08	<.24	E.06	<.80	<18	<.24	10.2	<.010	2.9	.60	.50	1.3	<.2									
Mar 16...	<.08	<.24	.10	E.42	<18	<.24	7.4	.014	3.0	.92	.70	.42	<.2									

WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Part 5 of 5

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

Date	Uranium Zinc, water, fltrd,		Natural water, fltrd,		Sieve diametr,		Suspended sediment,	
	µg/L (01090)	(22703)	µg/L (22703)	(70331)	<.063mm	percent	mg/L (80154)	concentration
Oct 25...	<1.2	1.94	100	51				
Mar 16...	E1.1	1.92	79	22				