

Water-Data Report 2007

08405500 BLACK RIVER ABOVE MALAGA, NM

Upper Pecos Basin
Upper Pecos-Black Subbasin

LOCATION.--Lat 32°13'44.72", long 104°09'06.67" referenced to North American Datum of 1983, Eddy County, NM, Hydrologic Unit 13060011, on right bank 0.6 mi upstream from Black River diversion dam, 4.8 mi west of Malaga, and 7.1 mi upstream from mouth. Mouth at Pecos River mile 436.3.

DRAINAGE AREA.--343 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--March to December 1940, December 1946 to current year.

REVISED RECORDS.--WSP 1632: 1948, 1949-50(P).

GAGE.--Water-stage recorder with satellite telemetry and concrete control. Elevation of gage is 3,070 ft above NGVD of 1929, from topographic map. Mar. to Dec. 1940, water-stage recorder and Cippoletti weir at site 0.3 mi downstream at different datum.

REMARKS.--Records are good, except for estimated which are fair. Diversions and ground-water withdrawals for irrigation of about 1,000 acres, 1959 determination, upstream from station. Several observations of water temperature were made during the year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Sept. 20 or 21, 1941, reached a stage of 19.0 ft, present site and datum, determined in 1947 from well-defined floodmarks, discharge, 33,000 ft³/s, from rating curve extended above 1,400 ft³/s on basis of slope-area measurements at gage heights 8.41 ft and 12.60 ft.

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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	9.1	8.4	9.3	9.7	11	9.9	7.8	8.4	7.6	7.1	4.9	5.7
2	9.2	8.5	9.5	9.7	11	9.8	7.3	19	8.0	7.1	17	5.7
3	7.9	8.7	9.4	9.6	11	9.9	8.1	24	8.1	6.5	9.6	6.2
4	8.9	8.7	9.4	9.4	11	10	8.0	11	7.7	6.0	7.2	6.1
5	10	8.7	9.4	9.4	11	10	7.5	8.0	8.8	7.2	6.7	5.6
6	8.8	8.8	9.5	9.4	11	10	6.9	8.0	8.6	14	6.5	5.0
7	8.9	9.0	9.7	9.4	11	11	7.5	7.1	7.5	17	6.1	5.6
8	8.3	9.2	9.7	9.4	11	11	8.4	9.7	5.9	12	6.6	6.2
9	8.9	9.1	9.7	9.5	11	11	7.1	18	7.3	8.2	5.8	6.2
10	8.4	8.9	9.7	9.5	11	11	7.8	14	8.4	7.0	5.6	15
11	8.5	9.0	9.7	9.7	11	12	6.5	9.6	7.8	7.0	5.3	9.2
12	8.2	9.0	9.6	9.8	11	12	7.1	8.4	7.9	8.0	4.8	3.7
13	8.4	8.9	9.4	10	11	12	8.0	8.2	7.2	7.3	4.6	1.7
14	8.1	8.6	9.4	9.8	12	12	9.1	9.2	6.3	6.9	4.5	1.2
15	13	8.6	9.4	9.7	12	12	9.8	8.9	6.5	6.5	4.5	1.1
16	21	9.0	9.4	9.7	11	11	9.4	9.5	7.2	6.2	4.6	1.0
17	11	9.2	9.4	9.7	11	11	8.3	13	7.0	6.5	5.0	9.5
18	8.6	9.4	9.4	9.7	11	12	8.3	12	7.0	5.8	4.7	8.9
19	11	9.4	9.4	10	11	12	7.9	10	6.6	5.5	5.8	8.7
20	9.0	9.1	9.9	11	11	12	7.6	9.3	e6.5	5.9	5.8	8.7
21	8.0	9.1	9.9	11	11	11	8.2	9.1	6.5	7.4	5.4	29.4
22	7.2	9.1	9.7	11	11	13	8.5	8.3	6.5	8.1	5.3	3.9
23	6.3	9.1	9.7	11	11	27	8.6	8.0	6.7	6.1	5.1	1.7
24	6.8	9.2	9.6	11	10	55	8.3	8.4	7.4	5.6	e4.0	1.2
25	7.2	9.4	9.4	11	10	17	7.3	7.9	5.2	5.4	5.2	1.0
26	8.4	9.4	9.5	11	10	13	7.0	e8.3	5.4	5.3	5.0	1.0
27	8.4	9.1	9.7	11	10	12	7.1	8.4	15	5.2	5.0	1.0
28	8.4	9.1	9.7	11	10	12	7.0	7.9	13	5.0	5.2	8.9
29	7.6	9.2	9.7	11	---	11	7.4	7.7	11	4.3	5.3	8.3
30	7.1	9.2	9.7	11	---	10	8.5	7.9	9.9	4.8	5.4	1.3
31	7.2	---	9.7	11	---	7.7	---	8.0	---	5.3	5.6	---
Total	277.8	270.1	296.6	315.1	305	410.3	236.3	315.2	234.5	220.2	182.1	704.3
Mean	8.96	9.00	9.57	10.2	10.9	13.2	7.88	10.2	7.82	7.10	5.87	23.5
Max	21	9.4	9.9	11	12	55	9.8	24	15	17	17	29.4
Min	6.3	8.4	9.3	9.4	10	7.7	6.5	7.1	5.2	4.3	4.0	5.0
Ac-ft	551	536	588	625	605	814	469	625	465	437	361	1,400

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1948 - 2007, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	12.9	9.40	9.60	10.4	10.3	7.40	10.6	12.1	14.4	13.8	22.1	19.7
Max	80.4	33.0	17.5	18.7	19.7	15.0	55.5	106	87.8	111	553	121
(WY)	(1955)	(1966)	(1989)	(1987)	(1987)	(1993)	(1954)	(1965)	(1986)	(1960)	(1966)	(1955)
Min	2.54	1.15	3.79	2.82	4.11	2.01	4.67	4.27	2.82	3.06	2.99	3.04
(WY)	(1980)	(1978)	(1964)	(1964)	(1960)	(1978)	(1978)	(1974)	(1974)	(1974)	(2003)	(2003)

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SUMMARY STATISTICS

	Calendar Year 2006		Water Year 2007		Water Years 1948 - 2007	
Annual total	3,501.1		3,767.5			
Annual mean	9.59		10.3		12.7	
Highest annual mean					58.3	1966
Lowest annual mean					6.10	2003
Highest daily mean	97	Aug 15	294	Sep 21	12,000	Aug 23, 1966
Lowest daily mean	3.5	Jul 26	4.0	Aug 24	0.01	Sep 30, 1998
Annual seven-day minimum	3.6	Jul 21	4.7	Aug 12	1.0	Nov 9, 1977
Maximum peak flow			748	Sep 21	^a 74,600	Aug 23, 1966
Maximum peak stage			3.80	Sep 21	^b 21.70	Aug 23, 1966
Instantaneous low flow			3.6	Aug 18	0.00	Sep 30, 1998
Annual runoff (ac-ft)	6,940		7,470		9,220	
10 percent exceeds	12		12		14	
50 percent exceeds	8.8		9.1		8.2	
90 percent exceeds	5.6		5.7		4.2	

^a From rating curve extended above 5,900 ft³/s, on basis of slope-area measurement at gage heights 12.60 ft and 21.7 ft.

^b From floodmarks.

