

Water-Data Report 2008

02077670 MAYO CREEK NEAR BETHEL HILL, NC

Roanoke Basin
Lower Dan Subbasin

LOCATION.--Lat 36°32'27", long 78°52'19" referenced to North American Datum of 1983, Person County, NC, Hydrologic Unit 03010104, on right bank 0.1 mi upstream from Virginia state line, 0.3 mi downstream of Mayo Steam Electric Generating Plant dam, 2.9 mi northeast of Bethel Hill, and 4.8 mi downstream of Spoonwater Creek.

DRAINAGE AREA.--53.5 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--August 1977 to current year.

REVISED RECORDS.--WDR NC-81-1: Drainage area. WDR NC-02-1A: 2001 (daily discharges).

GAGE.--Water-stage recorder. Datum of gage is 338.84 ft above NGVD of 1929. Satellite telemetry at station.

REMARKS.--No estimated daily discharges. Daily discharges above 5 ft³/s are good, those below 5 ft³/s are poor. Flow regulated by Mayo Steam Electric Generating Plant. Minimum discharge for period of record, no flow, occurred periodically in 1977, 1980, 1981, and 1982 as a result of regulation. Minimum discharge for current water year also occurred on December 15, 17-30.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of September 4, 1974, reached a stage of 11.11 ft, from floodmarks; discharge, 4,300 ft³/s.

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008
DAILY MEAN VALUES

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	3.2	2.9	2.2	2.1	3.2	2.7	4.7	45	4.5	2.8	3.4	2.9
2	3.2	2.9	2.2	2.0	2.9	2.7	3.2	40	5.6	2.8	3.4	2.9
3	3.2	2.9	2.2	2.0	2.6	2.7	3.0	35	4.8	2.8	3.4	2.8
4	3.2	2.8	2.2	2.0	2.6	5.5	4.6	30	4.3	2.8	3.4	2.9
5	3.2	2.9	2.1	2.0	2.7	8.8	11	25	3.1	2.8	3.3	2.9
6	3.2	2.9	2.1	2.1	2.9	3.2	9.8	23	2.7	2.8	3.4	205
7	3.1	2.9	2.1	2.1	2.8	3.8	19	21	2.6	2.9	3.4	300
8	3.1	3.1	2.1	2.1	2.7	4.0	23	18	2.6	2.9	3.4	242
9	3.1	2.7	2.1	2.1	2.7	3.1	25	25	2.6	3.3	3.3	194
10	3.1	2.6	2.0	2.2	2.9	2.8	27	20	2.6	3.2	3.3	160
11	3.1	2.6	2.1	2.2	3.2	2.8	28	21	2.6	3.2	3.3	142
12	3.1	2.6	2.1	2.2	3.3	2.8	28	23	2.6	3.2	3.2	119
13	3.1	2.6	2.1	2.2	3.5	2.7	24	20	2.6	3.3	3.2	101
14	3.1	2.5	2.0	2.2	3.3	2.7	21	18	2.6	3.4	3.2	85
15	3.1	2.6	2.0	2.3	3.4	2.8	18	16	2.5	3.4	3.3	71
16	3.1	2.5	2.1	2.3	3.2	4.1	16	16	2.5	3.4	3.2	64
17	3.1	2.6	2.0	2.4	3.0	3.0	15	14	2.6	3.3	3.2	60
18	3.1	2.6	1.9	2.4	2.8	2.8	13	12	2.6	3.3	3.2	53
19	3.1	2.5	1.9	2.5	2.8	2.8	13	11	2.7	3.3	3.2	43
20	3.2	2.4	1.9	2.5	2.8	2.9	16	9.4	2.6	3.3	3.2	34
21	3.2	2.4	1.9	2.4	2.7	2.8	20	9.1	2.6	3.3	3.2	28
22	3.1	2.5	1.9	2.4	2.7	2.8	20	7.6	2.6	3.3	3.2	24
23	3.1	2.5	1.9	2.4	2.7	2.7	19	6.2	2.6	3.5	3.2	19
24	3.5	2.4	1.9	2.5	2.7	2.7	19	6.8	2.7	3.4	3.2	14
25	3.6	2.4	1.9	2.5	2.7	2.7	18	6.4	2.7	3.4	3.2	9.1
26	3.5	2.4	2.0	2.4	2.7	2.7	16	6.2	2.7	3.3	3.2	15
27	5.1	2.3	1.9	2.4	2.8	2.7	15	5.1	2.7	3.2	4.7	27
28	3.1	2.3	1.9	2.5	2.7	2.7	28	6.0	2.7	3.2	7.9	32
29	3.0	2.3	1.9	2.5	2.7	2.7	49	5.3	2.7	3.2	4.1	32
30	2.9	2.2	4.1	2.5	---	2.7	47	4.7	2.8	3.2	2.9	29
31	2.9	---	2.8	2.5	---	3.6	---	4.5	---	3.5	2.9	---
Total	99.7	77.8	65.5	70.9	83.7	99.5	573.3	510.3	88.1	98.7	107.6	2,116.5
Mean	3.22	2.59	2.11	2.29	2.89	3.21	19.1	16.5	2.94	3.18	3.47	70.5
Max	5.1	3.1	4.1	2.5	3.5	8.8	49	45	5.6	3.5	7.9	300
Min	2.9	2.2	1.9	2.0	2.6	2.7	3.0	4.5	2.5	2.8	2.9	2.8

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1977 - 2008, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	11.2	18.0	26.4	56.8	62.5	90.1	70.8	37.8	22.1	17.5	13.2	28.4
Max	62.2	76.0	101	254	301	260	267	210	162	118	68.4	350
(WY)	(1990)	(1980)	(2005)	(1978)	(1998)	(1998)	(2003)	(1978)	(2003)	(1995)	(2003)	(1996)
Min	0.01	0.01	0.02	0.00	0.28	0.14	0.20	0.12	0.07	0.24	0.04	0.00
(WY)	(1981)	(1981)	(1981)	(1981)	(1981)	(1981)	(1981)	(1981)	(1981)	(1981)	(1981)	(1980)

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SUMMARY STATISTICS

	Calendar Year 2007		Water Year 2008		Water Years 1977 - 2008	
Annual total	6,991.0		3,991.6			
Annual mean	19.2		10.9		37.8	
Highest annual mean					111	2003
Lowest annual mean					0.11	1981
Highest daily mean	135	Jan 10	300	Sep 7	2,260	Sep 7, 1996
Lowest daily mean	1.9	Dec 18	1.9	Dec 18	0.00	Jul 31, 1977
Annual seven-day minimum	1.9	Dec 18	1.9	Dec 18	0.00	Jul 31, 1977
Maximum peak flow			335	Sep 6	3,950	Apr 26, 1978
Maximum peak stage			5.14	Sep 6	10.83	Apr 26, 1978
Instantaneous low flow			^a 1.9	Dec 14	^a 0.00	Jul 31, 1977
10 percent exceeds	55		23		96	
50 percent exceeds	3.2		3.1		6.9	
90 percent exceeds	2.4		2.2		1.9	

^aSee Remarks.