

Water-Data Report 2007

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 (levels by Progress Energy Company). 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 July 27, 28, 31, August 1.

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 2006 TO SEPTEMBER 2007
DAILY MEAN VALUES

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	4.1	2.9	81	29	32	37	69	30	3.0	2.9	2.5	3.2
2	3.8	2.8	67	31	33	51	64	26	3.1	2.9	2.8	3.3
3	3.6	2.9	57	27	33	56	58	21	3.2	2.9	2.9	3.4
4	3.4	2.9	45	43	32	54	53	20	3.1	2.9	2.8	3.6
5	3.3	2.9	35	46	28	52	43	19	3.1	2.9	2.6	3.8
6	9.0	2.9	41	59	25	46	36	16	3.1	2.9	2.6	3.4
7	4.6	3.2	44	62	23	43	32	12	3.0	2.9	2.6	3.5
8	3.5	4.3	45	121	22	39	27	9.8	2.9	2.9	2.6	3.4
9	3.2	3.3	55	131	20	37	23	10	2.9	2.8	2.7	3.4
10	3.5	3.2	47	135	18	35	21	13	2.9	2.8	2.7	3.4
11	3.5	3.2	40	114	17	33	21	12	2.9	2.8	2.8	3.5
12	3.8	8.9	34	98	15	30	47	11	3.0	2.8	2.8	3.4
13	4.1	14	30	87	14	29	56	8.9	3.0	2.8	2.7	3.4
14	3.9	17	27	79	32	28	55	7.8	2.9	2.8	2.7	3.6
15	2.9	17	24	73	37	27	93	7.2	2.9	2.8	2.8	3.4
16	2.9	44	20	66	37	45	128	6.6	2.9	2.8	2.8	3.4
17	4.1	64	18	59	36	85	122	7.7	3.0	2.8	2.8	3.4
18	3.3	57	15	55	36	82	110	6.6	3.0	2.8	2.8	3.4
19	2.9	47	13	53	34	75	98	5.7	3.0	2.7	2.8	3.3
20	3.0	36	10	52	32	67	86	4.9	3.0	2.7	2.9	3.2
21	2.9	32	8.6	52	30	60	77	4.0	2.9	2.7	3.0	3.4
22	2.8	174	9.1	52	30	57	70	3.6	2.9	2.7	2.9	3.2
23	2.9	253	15	52	27	53	65	3.3	2.9	2.6	2.9	3.2
24	2.9	221	13	53	25	48	59	3.1	2.9	2.6	2.9	3.2
25	2.9	197	18	51	28	43	55	3.1	2.9	2.6	2.9	3.2
26	3.0	162	31	52	36	39	48	3.1	2.9	2.6	3.2	3.2
27	3.0	137	29	52	38	35	50	3.2	3.0	2.5	3.1	3.2
28	3.2	132	25	47	37	36	47	3.2	2.9	2.5	3.1	3.3
29	2.9	108	23	42	---	77	40	3.0	3.0	2.6	3.1	3.2
30	2.8	89	28	39	---	80	35	3.0	2.9	2.6	3.2	3.2
31	2.8	---	26	34	---	74	---	3.0	---	2.5	3.3	---
Total	108.5	1,844.4	973.7	1,946	807	1,553	1,788	290.8	89.1	85.1	88.3	100.7
Mean	3.50	61.5	31.4	62.8	28.8	50.1	59.6	9.38	2.97	2.75	2.85	3.36
Max	9.0	253	81	135	38	85	128	30	3.2	2.9	3.3	3.8
Min	2.8	2.8	8.6	27	14	27	21	3.0	2.9	2.5	2.5	3.2

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1977 - 2007, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	11.5	18.5	27.2	58.6	64.6	93.0	72.5	38.5	22.8	18.0	13.6	27.0
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 2006		Water Year 2007		Water Years 1977 - 2007	
Annual total	4,866.1		9,674.6			
Annual mean	13.3		26.5		38.7	
Highest annual mean					111	2003
Lowest annual mean					0.11	1981
Highest daily mean	253	Nov 23	253	Nov 23	2,260	Sep 7, 1996
Lowest daily mean	2.7	Jan 28	2.5	Jul 27	0.00	Jul 31, 1977
Annual seven-day minimum	2.8	May 25	2.5	Jul 26	0.00	Jul 31, 1977
Maximum peak flow			267	Nov 23	3,950	Apr 26, 1978
Maximum peak stage			4.68	Nov 23	10.83	Apr 26, 1978
Instantaneous low flow			^a 2.5	Jul 26	^a 0.00	Jul 31, 1977
10 percent exceeds	32		65		98	
50 percent exceeds	4.1		8.9		7.8	
90 percent exceeds	2.9		2.8		1.8	

^a See Remarks.

