



Water-Data Report 2010

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 streamgage.

REMARKS.--Records fair except those for estimated daily discharges which 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 occurred several days.

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

02077670 MAYO CREEK NEAR BETHEL HILL, NC—Continued

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010
DAILY MEAN VALUES

[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	3.1	e22	73	109	99	45	94	5.9	33	3.1	3.1	3.1
2	3.3	e4.7	83	96	89	42	85	5.6	29	3.1	3.1	3.1
3	e3.3	3.4	195	84	99	44	79	5.2	26	3.1	3.1	3.1
4	e3.0	3.4	182	75	113	41	72	3.9	21	3.1	3.1	3.1
5	e2.8	3.4	169	68	147	38	68	3.3	18	3.1	3.2	3.1
6	e2.8	3.5	161	62	385	35	65	2.9	16	3.1	3.0	3.1
7	e3.0	3.5	138	57	350	33	62	2.6	12	3.1	3.1	3.0
8	e3.0	3.5	119	54	285	31	59	2.8	9.0	3.1	3.0	3.0
9	e3.0	3.4	205	48	236	29	56	2.6	7.2	3.4	3.0	3.0
10	e2.9	4.4	223	43	213	29	52	2.6	5.5	3.5	3.0	3.1
11	e2.8	17	188	39	184	28	47	2.6	4.1	3.5	3.0	3.1
12	e2.8	39	157	34	158	32	42	2.6	3.7	3.5	3.0	3.1
13	e2.8	133	183	32	139	50	38	2.6	5.1	3.6	3.1	3.1
14	e2.9	139	213	29	122	58	32	2.6	4.4	3.6	3.0	3.1
15	e3.0	126	187	27	109	60	30	2.6	3.7	3.5	3.0	3.1
16	e2.9	111	160	25	101	59	28	2.6	3.4	3.7	3.0	3.1
17	e2.8	96	135	54	91	57	25	3.3	3.1	3.9	3.0	3.1
18	e2.8	83	117	74	83	55	21	7.1	2.9	3.9	3.1	3.1
19	e2.8	100	131	73	76	51	18	8.3	2.9	3.7	3.1	3.1
20	e2.9	102	127	70	71	48	16	7.8	2.9	3.8	3.1	3.0
21	e2.9	89	118	69	66	44	17	6.9	2.9	3.9	3.1	3.0
22	e2.8	78	109	84	63	42	20	7.6	2.9	3.9	3.1	3.0
23	e3.0	112	101	87	61	38	18	14	2.9	3.9	3.1	3.1
24	e3.7	154	93	84	59	35	17	13	2.9	3.9	4.0	3.1
25	e4.6	143	129	174	59	33	19	13	3.0	3.7	3.3	3.1
26	e5.2	126	256	187	57	33	16	12	3.1	3.1	3.1	3.1
27	e5.6	119	236	163	53	32	13	11	3.1	3.1	3.1	3.1
28	e6.8	104	201	141	49	32	9.4	17	3.1	3.1	3.1	3.2
29	e9.7	90	167	121	---	109	7.7	50	3.1	3.1	3.0	3.2
30	e11	80	141	119	---	114	6.6	49	3.1	3.1	3.0	5.8
31	e8.2	---	124	111	---	104	---	40	---	3.1	3.0	---
Total	122.2	2,096.2	4,821	2,493	3,617	1,481	1,132.7	313.0	243.0	106.3	96.0	95.3
Mean	3.94	69.9	156	80.4	129	47.8	37.8	10.1	8.10	3.43	3.10	3.18
Max	11	154	256	187	385	114	94	50	33	3.9	4.0	5.8
Min	2.8	3.4	73	25	49	28	6.6	2.6	2.9	3.1	3.0	3.0

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1977 - 2010, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	10.8	19.2	30.6	57.0	63.0	88.7	69.1	36.2	23.1	16.7	12.6	26.9
Max	62.2	76.0	156	254	301	260	267	210	162	118	68.4	350
(WY)	(1990)	(1980)	(2010)	(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)

02077670 MAYO CREEK NEAR BETHEL HILL, NC—Continued

SUMMARY STATISTICS

	Calendar Year 2009		Water Year 2010		Water Years 1977 - 2010	
Annual total	15,490.2		16,616.7			
Annual mean	42.4		45.5		37.7	
Highest annual mean					111	2003
Lowest annual mean					0.11	1981
Highest daily mean	256	Dec 26	385	Feb 6	2,260	Sep 7, 1996
Lowest daily mean	2.7	Sep 4	2.6	May 7	0.00	Jul 31, 1977
Annual seven-day minimum	2.7	Sep 3	2.6	May 9	0.00	Jul 31, 1977
Maximum peak flow			403	Feb 6	3,950	Apr 26, 1978
Maximum peak stage			5.56	Feb 6	10.83	Apr 26, 1978
Instantaneous low flow			^a 2.6	May 7	^a 0.00	Jul 31, 1977
10 percent exceeds	121		132		97	
50 percent exceeds	15		12		7.1	
90 percent exceeds	2.8		3.0		2.0	

^a See Remarks.

