

ROANOKE RIVER BASIN

02077670 MAYO CREEK NEAR BETHEL HILL, NC

LOCATION.--Lat 36°32'26", long 78°52'21" Person County, 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.

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

REVISED RECORDS.--WDR NC-81-1: Drainage area. WDR NC-02-1A: 2001.

GAGE.--Water-stage recorder. Datum of gage is 338.84 ft above NGVD of 1929 (levels by Carolina Power & Light Company). Satellite telemetry at station.

REMARKS.--No estimated daily discharges. Records 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.

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

REVISIONS.--Revised figures of discharge for water year 2001, superseding those published in the report for 2001 are given below.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.2	5.5	3.5	3.2	3.2	3.2	558	11	45	3.6	2.6	3.3
2	3.2	5.4	3.5	3.2	3.2	3.2	593	9.6	70	2.7	2.6	3.4
3	3.1	5.1	3.5	3.2	3.2	3.2	509	8.3	63	2.5	2.6	3.3
4	3.3	5.2	3.4	3.2	3.2	3.3	415	7.0	55	2.4	2.9	3.4
5	3.7	5.2	3.2	3.2	3.2	3.5	337	5.7	54	2.4	2.9	3.7
6	3.5	5.1	3.2	3.1	3.2	3.3	277	4.1	108	2.4	2.9	3.6
7	3.6	5.1	3.1	3.1	3.3	3.2	222	3.5	81	2.4	2.9	3.8
8	3.6	5.2	3.0	3.1	3.4	3.2	175	3.3	70	2.4	2.9	3.6
9	3.8	5.3	2.9	3.1	3.4	3.1	141	3.2	61	2.4	2.9	3.6
10	3.8	5.2	3.0	3.1	3.5	3.1	115	3.1	53	2.4	2.9	4.0
11	4.0	5.3	3.1	3.1	3.5	3.1	97	2.9	46	2.4	3.3	4.2
12	4.0	5.1	3.1	3.1	3.4	3.1	86	3.0	40	2.3	3.1	4.2
13	3.9	5.0	3.1	3.1	3.7	3.1	77	3.2	36	2.3	3.0	4.1
14	3.7	5.2	3.4	2.9	3.3	3.1	67	3.1	42	2.3	3.1	4.1
15	3.4	5.1	3.1	2.9	3.1	3.5	61	3.1	44	2.3	e3.1	4.1
16	3.3	5.2	3.3	2.9	3.1	3.6	51	3.4	46	2.4	e3.1	4.0
17	3.1	4.8	5.1	2.9	4.9	3.6	44	4.7	40	2.5	e3.2	3.9
18	3.8	4.7	3.3	3.0	3.3	3.8	38	5.9	33	2.5	e3.1	3.8
19	4.4	4.4	3.4	3.7	3.1	3.9	33	8.9	e28	2.5	e3.0	3.9
20	4.6	4.1	3.3	6.0	3.1	5.5	30	13	e23	2.5	2.7	4.4
21	4.8	4.0	3.2	3.3	3.1	192	27	13	19	2.5	2.4	4.8
22	4.9	4.0	3.2	3.0	3.1	377	24	19	19	2.5	2.4	4.7
23	4.9	4.0	3.0	2.9	3.2	345	22	17	21	2.5	3.2	4.1
24	4.8	4.0	3.0	3.0	3.3	290	21	15	16	2.6	3.2	3.5
25	5.6	4.3	3.0	2.9	3.4	239	22	14	13	2.6	3.2	3.7
26	5.2	3.9	3.2	2.9	3.4	191	20	28	10	2.8	e3.1	4.0
27	5.1	3.7	3.2	2.9	3.2	153	19	32	8.1	4.5	e3.1	4.3
28	4.9	3.5	3.2	2.9	3.2	125	16	28	6.1	2.7	3.0	4.2
29	5.2	3.6	3.2	3.0	---	179	14	27	4.8	2.7	e2.8	4.2
30	4.6	3.5	3.2	3.3	---	540	12	25	4.1	2.7	2.7	4.4
31	e5.3	---	3.2	3.4	---	521	---	21	---	2.7	2.9	---
TOTAL	128.3	139.7	101.1	98.6	93.2	3220.6	4123	349.0	1159.1	80.4	90.8	118.3
MEAN	4.139	4.657	3.261	3.181	3.329	103.9	137.4	11.26	38.64	2.594	2.929	3.943
MAX	5.6	5.5	5.1	6.0	4.9	540	593	32	108	4.5	3.3	4.8
MIN	3.1	3.5	2.9	2.9	3.1	3.1	12	2.9	4.1	2.3	2.4	3.3

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1977 - 2001, BY WATER YEAR (WY)

	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
MEAN	11.86	14.92	21.16	64.95	72.04	100.3	72.72	38.12	20.55	17.26	11.22	26.50													
MAX	62.2	76.0	80.5	254	301	260	214	210	95.7	118	56.1	350													
(WY)	1990	1980	1997	1978	1998	1998	1993	1978	2000	1995	1984	1996													
MIN	0.011	0.011	0.016	0.003	0.28	0.14	0.20	0.12	0.075	0.24	0.038	0.000													
(WY)	1981	1981	1981	1981	1981	1981	1981	1981	1981	1981	1981	1980													

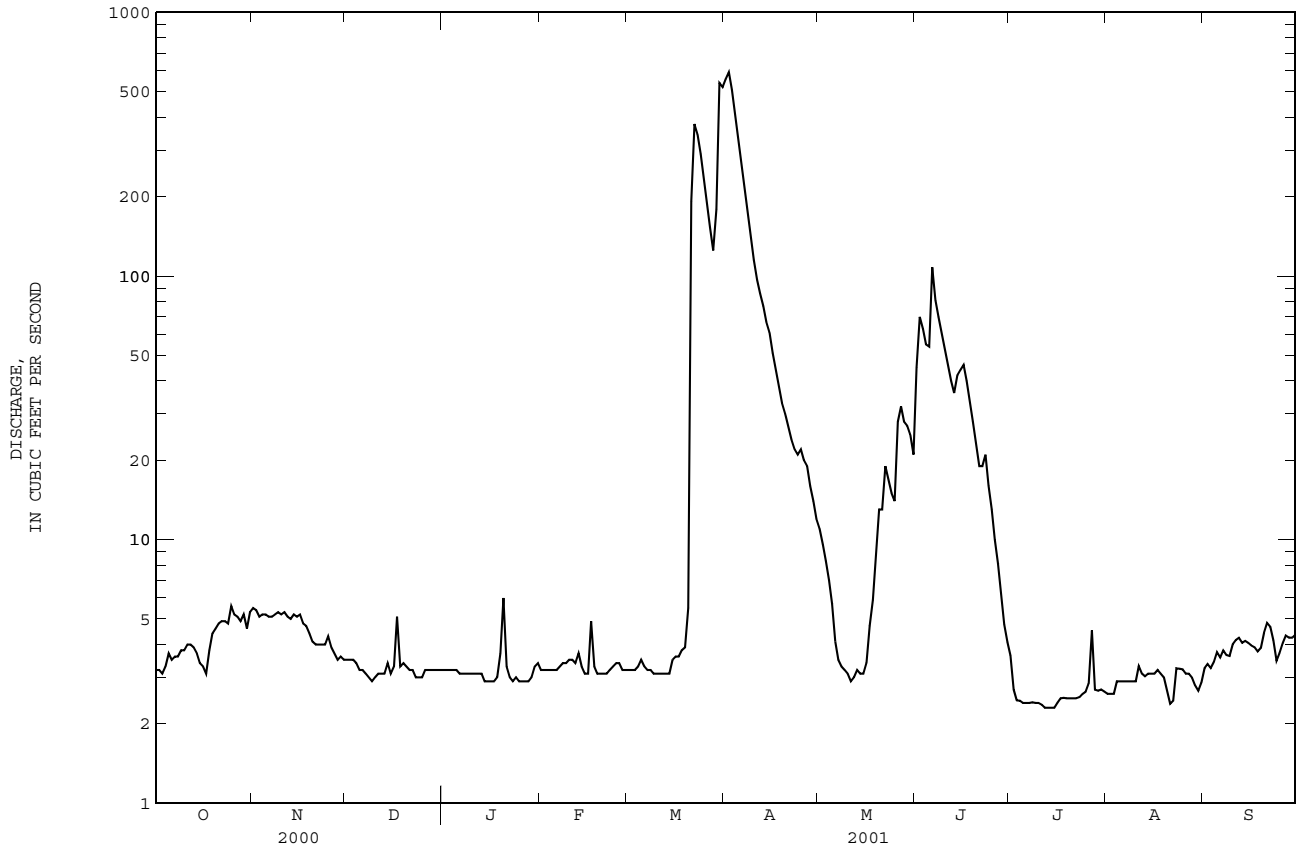
SUMMARY STATISTICS FOR 2000 CALENDAR YEAR FOR 2001 WATER YEAR WATER YEARS 1977 - 2001

	2000 CALENDAR YEAR	2001 WATER YEAR	1977 - 2001
ANNUAL TOTAL	14100.2	9702.1	
ANNUAL MEAN	38.53	26.58	39.18
HIGHEST ANNUAL MEAN			87.8
LOWEST ANNUAL MEAN			0.11
HIGHEST DAILY MEAN	334	Jun 20	2260
LOWEST DAILY MEAN	1.2	Aug 16	0.00
ANNUAL SEVEN-DAY MINIMUM	1.3	Aug 15	0.00
MAXIMUM PEAK FLOW		621	3950
MAXIMUM PEAK STAGE		5.58	10.83
INSTANTANEOUS LOW FLOW		NOT DETERMINED	0.00*
10 PERCENT EXCEEDS	129	48	100
50 PERCENT EXCEEDS	15	3.5	7.9
90 PERCENT EXCEEDS	2.1	2.8	0.79

e Estimated.

* See REMARKS.

02077670 MAYO CREEK NEAR BETHEL HILL, NC--Continued



ROANOKE RIVER BASIN

02077670 MAYO CREEK NEAR BETHEL HILL, NC--Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.3	3.8	3.8	3.1	3.4	4.4	4.2	3.1	3.5	3.2	3.2	6.8
2	4.4	3.7	3.7	3.1	3.9	4.5	4.1	3.2	3.5	3.2	3.2	3.9
3	4.6	3.7	3.5	3.2	3.7	5.1	4.0	3.2	3.5	3.2	3.2	3.7
4	4.7	3.8	3.2	3.1	3.7	4.5	3.8	3.2	3.5	3.3	4.4	3.7
5	4.5	3.8	3.2	3.1	3.8	4.2	3.9	3.1	3.6	3.2	3.1	3.7
6	4.3	3.7	3.1	3.3	3.7	4.3	3.7	3.1	3.7	3.2	3.1	3.7
7	3.9	3.8	3.1	3.2	5.1	4.4	3.8	3.3	3.7	3.2	3.2	3.7
8	3.5	3.7	3.1	3.2	4.1	4.4	3.1	3.5	3.7	3.2	3.3	3.5
9	3.5	3.7	3.1	3.1	3.8	4.3	2.9	4.6	3.6	3.2	3.1	3.5
10	4.1	4.0	3.1	3.2	3.7	4.4	2.9	3.9	3.5	3.2	3.1	3.5
11	3.4	3.8	3.2	3.2	3.8	4.4	3.0	3.6	3.4	3.2	3.1	3.5
12	3.5	3.7	3.1	3.2	3.8	4.4	3.1	3.8	3.4	3.2	3.1	3.5
13	3.5	3.7	3.1	3.2	4.2	4.4	3.1	4.1	3.5	3.2	3.2	3.5
14	4.0	3.7	3.1	3.2	4.3	4.3	3.1	4.2	3.5	3.2	3.2	3.5
15	3.9	3.6	3.1	3.1	4.2	4.3	3.1	4.0	3.4	3.2	4.0	3.6
16	3.9	3.6	3.1	3.1	4.1	4.4	3.1	3.9	3.5	3.2	3.3	3.7
17	4.2	3.6	3.1	3.1	4.1	4.6	3.1	4.1	3.5	3.2	3.6	3.5
18	4.1	3.5	3.2	3.2	4.2	6.8	2.9	3.8	3.4	3.2	3.7	3.4
19	3.9	3.5	3.1	4.3	4.2	4.6	3.0	3.2	3.4	3.2	3.5	3.4
20	4.0	3.6	3.1	4.0	4.2	4.4	3.0	2.8	3.4	3.3	3.5	3.4
21	4.2	3.5	3.1	3.3	4.5	4.2	3.0	2.9	3.4	3.2	3.5	3.5
22	4.1	3.5	3.1	3.2	4.4	4.2	3.1	2.9	3.4	3.2	3.5	3.5
23	4.1	3.5	3.1	4.1	4.5	4.1	3.1	2.9	3.3	3.2	3.5	3.5
24	4.4	3.4	3.2	3.6	4.6	4.0	3.1	3.0	3.2	3.6	3.5	3.5
25	4.0	3.5	3.1	3.7	4.4	4.0	3.1	3.0	3.2	3.6	3.5	3.5
26	3.9	3.7	3.1	3.3	4.2	4.1	3.1	3.1	3.3	3.3	3.4	3.6
27	3.7	3.7	3.1	3.2	4.4	4.5	3.1	3.1	3.5	3.2	3.6	3.7
28	3.9	3.9	3.1	3.2	4.4	4.3	3.1	3.5	3.3	3.2	3.5	3.5
29	3.9	3.8	3.1	3.1	---	4.3	3.1	3.8	3.2	3.2	3.5	3.5
30	3.9	3.8	3.1	3.1	---	4.3	3.1	4.0	3.2	3.2	3.6	3.5
31	3.9	---	3.1	3.2	---	4.4	---	3.9	---	3.2	4.1	---
TOTAL	124.2	110.3	98.3	102.2	115.4	137.5	97.8	107.8	103.2	100.3	106.3	110.0
MEAN	4.006	3.677	3.171	3.297	4.121	4.435	3.260	3.477	3.440	3.235	3.429	3.667
MAX	4.7	4.0	3.8	4.3	5.1	6.8	4.2	4.6	3.7	3.6	4.4	6.8
MIN	3.4	3.4	3.1	3.1	3.4	4.0	2.9	2.8	3.2	3.2	3.1	3.4

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1977 - 2002, BY WATER YEAR (WY)

	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
MEAN	11.55	14.47	20.44	62.48	69.34	96.44	69.94	36.73	19.87	16.69	10.92	25.62														
MAX	62.2	76.0	80.5	254	301	260	214	210	95.7	118	56.1	350														
(WY)	1990	1980	1997	1978	1998	1998	1993	1978	2000	1995	1984	1996														
MIN	0.011	0.011	0.016	0.003	0.28	0.14	0.20	0.12	0.075	0.24	0.038	0.000														
(WY)	1981	1981	1981	1981	1981	1981	1981	1981	1981	1981	1981	1980														

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1977 - 2002

ANNUAL TOTAL	9665.8	1313.3	
ANNUAL MEAN	26.48	3.598	37.76
HIGHEST ANNUAL MEAN			87.8
LOWEST ANNUAL MEAN			0.11
HIGHEST DAILY MEAN	593	Apr 2	2260
LOWEST DAILY MEAN	2.3	Jul 12	0.00
ANNUAL SEVEN-DAY MINIMUM	2.3	Jul 9	0.00
MAXIMUM PEAK FLOW			40
MAXIMUM PEAK STAGE			2.54
INSTANTANEOUS LOW FLOW			NOT DETERMINED
10 PERCENT EXCEEDS	48		98
50 PERCENT EXCEEDS	3.5		6.0
90 PERCENT EXCEEDS	2.8		1.0

* See REMARKS.

02077670 MAYO CREEK NEAR BETHEL HILL, NC--Continued

