

ROANOKE RIVER BASIN

02055100 TINKER CREEK NEAR DALEVILLE, VA

LOCATION.--Lat 37°25'03", long 79°56'08", Botetourt County, Hydrologic Unit 03010101, on left bank 1,100 ft downstream from Norfolk Southern Railway bridge, 0.2 mi downstream from unnamed tributary, 0.5 mi south of Glebe Mills, and 1.3 mi northwest of Daleville.

DRAINAGE AREA.--11.7 mi<sup>2</sup>.

PERIOD OF RECORD.--April 1956 to current year.

REVISED RECORDS.--WSP 1904: 1958-60(P). WSP 2104: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,217.47 ft above sea level (Norfolk Southern Railway bench mark).

REMARKS.--Records good except those for periods of no gage-height record, Oct. 31 to Nov. 4, Jun. 20-21, and period with ice effect Jan. 2-7, which are fair. Withdrawal of water 1,000 ft downstream of gage by city of Roanoke for Carvins Cove Reservoir. Virginia Department of Emergency Services radio transmitter at station. Maximum discharge, 10,400 ft<sup>3</sup>/s, from rating curve extended above 130 ft<sup>3</sup>/s on basis of contracted-opening measurement at gage height 9.82 ft and slope-area measurements at gage heights 8.52 ft, 9.82 ft, and 13.36 ft. Minimum discharge, 0.20 ft<sup>3</sup>/s, result of freezeup. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1940 reached a stage of 9.0 ft, from information by local resident.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 250 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Sep 21	0015	328	4.04	Sep 28	1400	*346	*4.13

Minimum discharge, 0.58 ft<sup>3</sup>/s, Sep 3-4, gage height, 0.91 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.4	e4.7	4.7	3.0	5.3	3.7	7.6	3.6	2.4	1.3	.74	.62
2	2.3	e4.6	4.2	e2.9	11	3.5	6.6	3.4	2.3	1.3	.74	.61
3	2.2	e5.2	4.2	e2.6	8.5	4.2	6.0	3.3	2.3	1.4	.69	.59
4	2.2	e5.1	4.2	e2.4	7.0	4.8	5.6	3.1	2.1	1.5	.67	.64
5	2.2	4.9	4.0	e2.2	5.9	4.2	5.3	3.1	2.1	.99	.66	42
6	2.4	5.0	4.0	e2.1	5.3	4.3	4.8	3.1	2.0	.91	.64	25
7	2.7	5.1	4.0	e2.6	5.2	4.2	4.6	2.9	1.9	2.2	.64	15
8	5.9	5.1	4.4	2.9	4.9	4.1	4.4	3.4	1.8	1.9	.67	11
9	2.9	5.1	5.1	3.3	4.3	4.4	4.5	2.9	1.7	.88	.69	9.4
10	2.3	5.2	3.9	3.2	4.1	4.5	4.4	2.8	1.7	.79	.66	7.4
11	2.1	6.0	3.7	2.9	3.9	4.3	7.1	2.6	1.7	.82	.65	5.2
12	2.0	5.3	3.7	3.3	3.8	4.3	5.8	2.5	1.7	2.2	.63	4.3
13	2.1	5.1	6.9	3.9	3.6	4.1	4.8	3.0	1.4	1.9	.63	3.9
14	2.1	5.1	5.2	4.2	3.5	7.2	4.6	8.3	1.4	1.5	.65	5.3
15	2.2	5.1	4.4	9.6	3.5	21	5.5	6.5	1.4	1.3	.66	11
16	2.2	5.1	4.1	5.1	3.4	19	5.5	4.7	1.5	1.0	.68	11
17	2.2	4.8	3.8	3.9	3.4	16	4.7	4.1	1.9	.97	.63	9.4
18	2.4	4.7	3.7	4.2	10	13	4.6	3.8	1.6	1.3	.64	7.7
19	2.7	4.5	3.4	3.7	7.7	12	4.5	5.8	1.5	1.2	.64	6.0
20	3.0	4.6	3.3	3.3	6.1	10	5.3	4.1	e1.4	.97	1.6	11
21	3.1	4.3	3.3	3.1	5.1	14	4.7	3.8	e1.8	1.5	1.0	59
22	3.2	4.5	3.2	3.0	4.4	13	4.6	3.5	1.6	2.3	.71	18
23	3.4	4.6	3.2	8.3	4.2	12	4.3	3.4	1.5	1.2	.72	11
24	3.7	4.7	3.6	22	4.0	11	4.7	3.4	1.4	.96	.87	10
25	3.7	4.3	3.3	12	4.0	10	4.1	3.1	1.4	.87	8.3	13
26	3.5	5.1	3.3	8.2	3.8	8.7	4.0	3.0	1.5	.75	2.9	12
27	3.3	5.1	3.1	6.6	3.6	8.0	4.0	2.8	1.3	.71	1.5	25
28	3.6	5.0	3.2	5.5	4.0	7.2	4.4	2.7	1.3	.84	1.2	76
29	4.0	4.9	3.3	4.8	---	6.4	4.2	2.6	1.2	2.2	1.1	48
30	4.3	4.7	3.2	4.3	---	6.0	3.9	2.5	1.2	1.2	.89	45
31	e5.0	---	3.0	4.1	---	5.5	---	2.4	---	.86	.64	---
TOTAL	91.3	147.5	120.6	153.2	143.5	254.6	149.1	110.2	50.0	39.72	34.04	504.06
MEAN	2.95	4.92	3.89	4.94	5.12	8.21	4.97	3.55	1.67	1.28	1.10	16.8
MAX	5.9	6.0	6.9	22	11	21	7.6	8.3	2.4	2.3	8.3	76
MIN	2.0	4.3	3.0	2.1	3.4	3.5	3.9	2.4	1.2	.71	.63	.59
CFM	.25	.42	.33	.42	.44	.70	.42	.30	.14	.11	.09	1.44
IN.	.29	.47	.38	.49	.46	.81	.47	.35	.16	.13	.11	1.60

02055100 TINKER CREEK NEAR DALEVILLE, VA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1956 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	8.08	11.0	10.5	14.4	19.1	22.8	19.7	12.6	8.78	6.63	6.31	7.10
MAX	34.2	118	32.6	35.9	82.6	69.3	87.9	33.8	39.0	21.8	29.8	50.4
(WY)	1980	1986	1973	1996	1998	1993	1987	1958	1972	1973	1984	1979
MIN	2.09	1.76	2.00	1.78	3.78	3.16	3.21	3.44	1.67	1.13	1.10	1.36
(WY)	1987	1982	1966	1966	1981	1981	1981	1981	1999	1966	1999	1968

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1956 - 1999	
ANNUAL TOTAL	7198.1		1797.82			
ANNUAL MEAN	19.7		4.93		12.3	
HIGHEST ANNUAL MEAN					21.6	
LOWEST ANNUAL MEAN					3.23	
HIGHEST DAILY MEAN	454		76		2560	
LOWEST DAILY MEAN	2.0		.59		.59	
ANNUAL SEVEN-DAY MINIMUM	2.0		.65		.65	
INSTANTANEOUS PEAK FLOW			346		10400	
INSTANTANEOUS PEAK STAGE			4.13		b13.36	
INSTANTANEOUS LOW FLOW			.58		d.20	
ANNUAL RUNOFF (CFSM)	1.69		.42		1.05	
ANNUAL RUNOFF (INCHES)	22.89		5.72		14.23	
10 PERCENT EXCEEDS	39		8.6		24	
50 PERCENT EXCEEDS	6.1		3.7		6.9	
90 PERCENT EXCEEDS	2.3		.90		2.5	

- a Also Sep 23-25, 28, 29 and Oct 12, 1998.
- b From floodmarks.
- c Also Sep 4, 1999.
- d Result of freezeup.
- e Estimated.

