

02056650 BACK CREEK NEAR DUNDEE, VA

LOCATION.--Lat 37°13'39", long 79°52'06", Roanoke County, Hydrologic Unit 03010101, on right bank 65 ft upstream from bridge on State Highway 660, 0.9 mi upstream from Horseshoe Branch, 1.1 mi southeast of Dundee, 2.8 mi west of Hardy Post Office, and at mile 2.4.

DRAINAGE AREA.--56.8 mi².

PERIOD OF RECORD.--July 1974 to current year.

GAGE.--Water-stage recorder. Datum of gage is 822.67 ft above sea level. Prior to Apr. 4, 1975, nonrecording gage, and Apr. 4, 1975, to Nov. 4, 1985, water-stage recorder, at site 80 ft downstream at same datum.

REMARKS.--Records good except for period with ice effect, Jan. 2-8, which is fair. Maximum discharge, 20,000 ft³/s, from rating curve extended above 5,900 ft³/s on basis of slope-area measurement of peak flow. Several measurements of water temperature were made during the year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Floods of May 30, 1971, and Jun. 21, 1972, reached a stage of 17.5 ft and 20.0 ft, respectively, from information by local resident.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 600 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Sep 5	1915	*812	*6.56	Sep 6	1100	622	5.91

Minimum discharge, 1.4 ft³/s, Aug 19-20, gage height, 2.20 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	4.7	8.7	8.8	8.3	21	20	32	19	9.7	3.6	5.9	3.1
2	4.9	7.9	8.8	e8.0	55	16	36	17	9.1	3.7	6.4	2.8
3	3.8	9.1	8.1	e7.8	50	17	28	16	10	3.7	6.3	2.7
4	4.6	10	8.5	e7.4	38	33	26	15	9.5	3.7	4.2	2.6
5	5.0	10	8.6	e7.0	30	25	24	14	8.0	3.5	3.5	341
6	5.7	10	8.6	e6.8	26	24	22	14	7.6	2.6	3.2	440
7	8.2	8.7	8.7	e10	24	22	20	13	7.4	4.9	2.8	165
8	44	8.5	12	e12	24	20	19	56	6.7	3.4	2.4	76
9	21	9.1	37	14	19	21	19	25	5.9	2.2	2.4	110
10	7.7	9.7	9.7	18	19	22	21	18	5.6	2.0	2.4	146
11	5.2	11	4.5	17	17	22	70	15	5.3	1.9	2.2	61
12	4.6	11	3.7	16	17	19	77	12	5.3	11	2.0	41
13	4.4	10	31	23	16	19	51	22	5.5	41	1.8	30
14	4.3	9.7	33	32	14	25	43	107	4.8	19	2.3	24
15	3.8	9.5	16	54	13	98	41	96	4.7	16	1.8	21
16	4.2	8.9	11	42	13	100	44	56	4.8	9.9	1.9	33
17	4.3	8.8	8.9	28	13	65	34	43	8.1	8.3	1.9	20
18	4.2	8.7	7.5	39	52	56	30	36	9.1	9.5	1.6	15
19	4.3	9.1	6.9	37	47	47	28	45	6.2	6.9	1.5	12
20	4.3	8.9	7.3	27	36	41	26	32	5.4	5.2	5.5	11
21	4.1	8.6	7.0	22	29	46	25	27	6.0	5.6	4.2	16
22	3.9	8.3	6.8	19	24	57	23	24	8.1	50	4.8	25
23	4.6	8.4	6.5	25	21	46	21	21	7.1	12	4.9	12
24	5.3	8.9	12	144	20	42	23	19	5.7	6.5	17	9.5
25	5.9	8.4	13	75	19	40	19	18	5.3	4.8	21	8.5
26	5.9	10	9.4	47	19	34	18	16	5.7	3.9	22	7.3
27	5.5	12	9.0	36	17	30	19	15	6.8	3.4	10	9.1
28	6.0	10	9.5	29	19	27	23	13	5.7	4.1	6.4	63
29	7.2	8.6	11	24	---	25	28	12	5.0	26	4.8	81
30	7.3	8.8	11	21	---	23	22	11	4.1	24	3.9	149
31	8.0	---	8.8	18	---	21	---	10	---	9.1	3.3	---
TOTAL	216.9	279.3	352.6	874.3	712	1103	912	857	198.2	311.4	164.3	1937.6
MEAN	7.00	9.31	11.4	28.2	25.4	35.6	30.4	27.6	6.61	10.0	5.30	64.6
MAX	44	12	37	144	55	100	77	107	10	50	22	440
MIN	3.8	7.9	3.7	6.8	13	16	18	10	4.1	1.9	1.5	2.6
CFSM	.12	.16	.20	.50	.45	.63	.54	.49	.12	.18	.09	1.14
IN.	.14	.18	.23	.57	.47	.72	.60	.56	.13	.20	.11	1.27

02056650 BACK CREEK NEAR DUNDEE, VA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	34.3	48.5	47.8	70.6	84.1	111	112	66.7	52.9	28.5	24.6	41.6
MAX	154	292	117	146	317	265	396	190	173	110	121	314
(WY)	1977	1986	1987	1996	1998	1993	1987	1978	1992	1989	1985	1979
MIN	5.61	6.58	11.4	11.6	21.6	20.5	22.4	20.8	6.61	6.96	3.47	5.03
(WY)	1992	1982	1999	1981	1989	1981	1981	1981	1999	1981	1981	1998

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR	FOR 1999 WATER YEAR	WATER YEARS 1974 - 1999
ANNUAL TOTAL	29061.4	7918.6	
ANNUAL MEAN	79.6	21.7	60.1
HIGHEST ANNUAL MEAN			108 1987
LOWEST ANNUAL MEAN			15.9 1981
HIGHEST DAILY MEAN	1790	Feb 4	4000 Nov 4 1985
LOWEST DAILY MEAN	3.3	aSep 14	.90 Aug 30 1981
ANNUAL SEVEN-DAY MINIMUM	3.6	Sep 11	1.1 Aug 26 1981
INSTANTANEOUS PEAK FLOW			812 Sep 5 20000 Nov 4 1985
INSTANTANEOUS PEAK STAGE			6.56 Sep 5 b25.10 Nov 4 1985
INSTANTANEOUS LOW FLOW			1.4 cAug 19 (d)
ANNUAL RUNOFF (CFSM)	1.40	.38	1.06
ANNUAL RUNOFF (INCHES)	19.03	5.19	14.36
10 PERCENT EXCEEDS	178	44	114
50 PERCENT EXCEEDS	31	12	32
90 PERCENT EXCEEDS	5.2	3.9	9.7

- a Also Sep 15, 1998.
- b From floodmark, present site.
- c Also Aug 20, 1999.
- d Not determined.
- e Estimated.

