

02011460 BACK CREEK NEAR SUNRISE, VA

LOCATION.--Lat 38°14'43", long 79°46'08", Bath County, Hydrologic Unit 02080201, on right bank 900 ft upstream from bridge on State Highway 600, 0.8 mi upstream from Gap Run, and 4.8 mi northeast of Sunrise.

DRAINAGE AREA.--60.1 mi².

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

REVISED RECORDS.--WDR VA-85-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,200.02 ft above sea level (levels by Virginia Department of Transportation). Jul. 2 to Sep. 6, 1990, nonrecording gage at present site and datum.

REMARKS.--Records good except for period with ice effect, Jan. 5-7, which is fair. Virginia Power gage-height transmitter at station, receiver at Back Creek Dam. Maximum discharge, 17,500 ft³/s, from rating curve extended above 3,800 ft³/s. Minimum gage height, 0.07 ft, Jul. 21, 1977. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 850 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan 15	0630	884	3.45	Jan 24	1100	*1,080	*3.70

Minimum discharge, 0.73 ft³/s, Aug 12-13, gage height, 0.30 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	2.5	3.9	3.5	39	56	70	27	16	4.4	2.1	3.8
2	2.2	2.6	3.7	3.6	168	61	70	26	15	4.3	1.9	3.2
3	2.2	3.6	3.6	27	194	112	62	25	14	4.0	1.6	2.7
4	3.0	4.5	3.6	30	146	267	55	24	13	3.6	1.4	2.5
5	3.2	4.6	3.5	e16	108	175	51	23	11	3.1	1.2	24
6	3.0	4.1	3.5	e12	86	156	45	23	10	2.6	1.1	85
7	3.3	3.6	3.6	e10	81	157	41	21	9.3	2.4	.96	50
8	9.4	3.3	5.6	9.5	121	135	38	24	8.3	2.0	.97	25
9	10	3.3	12	43	126	124	39	20	7.5	1.8	1.3	16
10	6.3	3.4	11	85	106	107	42	18	7.9	1.8	1.0	12
11	4.9	4.9	8.3	47	85	84	39	17	29	2.0	1.1	9.0
12	4.2	6.1	7.0	32	77	75	42	15	16	2.0	.87	7.1
13	3.7	5.4	11	36	69	70	41	29	12	2.4	1.1	6.1
14	3.4	4.7	16	151	55	76	41	169	11	2.3	5.4	5.2
15	3.0	4.4	12	573	49	79	42	99	9.6	2.4	4.0	4.9
16	3.0	4.3	9.7	210	47	85	45	71	8.3	2.1	3.0	4.6
17	2.9	3.9	8.0	111	46	211	39	55	9.5	1.8	2.3	4.2
18	2.8	3.7	6.8	149	51	409	36	44	9.1	1.8	1.9	4.0
19	2.7	3.5	6.1	207	50	368	34	44	7.6	1.8	2.0	3.9
20	2.5	3.6	5.6	127	49	230	34	34	7.2	1.6	5.0	3.9
21	2.4	3.8	5.3	92	46	206	34	29	7.1	1.6	3.9	4.1
22	2.6	3.5	5.4	93	40	264	35	26	6.3	2.1	3.1	3.9
23	2.7	3.4	5.3	162	34	201	33	29	5.6	2.2	2.7	3.7
24	2.7	3.3	5.1	762	34	168	39	40	4.9	1.7	7.9	3.5
25	2.7	3.1	4.2	370	33	167	38	43	4.6	1.5	30	3.1
26	2.8	4.4	3.5	182	31	147	38	38	4.4	1.1	34	2.8
27	2.8	5.2	3.6	122	29	125	37	33	4.3	1.0	15	3.0
28	2.6	5.3	4.2	90	38	104	37	27	4.8	3.3	9.8	3.9
29	2.6	4.6	4.5	69	---	88	32	23	4.7	5.5	7.1	4.8
30	2.7	4.2	4.4	52	---	75	29	19	4.6	3.7	5.5	14
31	2.7	---	3.2	42	---	67	---	17	---	2.6	4.3	---
TOTAL	107.4	120.8	193.2	3918.6	2038	4649	1258	1132	282.6	76.5	163.50	323.9
MEAN	3.46	4.03	6.23	126	72.8	150	41.9	36.5	9.42	2.47	5.27	10.8
MAX	10	6.1	16	762	194	409	70	169	29	5.5	34	85
MIN	2.2	2.5	3.2	3.5	29	56	29	15	4.3	1.0	.87	2.5
CFM	.06	.07	.10	2.10	1.21	2.50	.70	.61	.16	.04	.09	.18
IN.	.07	.07	.12	2.43	1.26	2.88	.78	.70	.17	.05	.10	.20

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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	42.6	81.5	106	148	147	205	134	126	61.0	26.2	24.7	25.0
MAX	256	512	249	426	326	394	330	391	174	69.5	88.9	180
(WY)	1977	1986	1997	1996	1994	1993	1987	1996	1995	1994	1996	1996
MIN	3.46	4.03	6.23	8.49	45.4	54.5	41.9	31.8	9.42	2.47	4.41	2.48
(WY)	1999	1999	1999	1981	1978	1988	1999	1991	1999	1999	1987	1983

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR	FOR 1999 WATER YEAR	WATER YEARS 1974 - 1999
ANNUAL TOTAL	32734.7	14263.50	
ANNUAL MEAN	89.7	39.1	93.8
HIGHEST ANNUAL MEAN			155 1996
LOWEST ANNUAL MEAN			39.1 1999
HIGHEST DAILY MEAN	2590 Jan 8	762 Jan 24	6280 Nov 4 1985
LOWEST DAILY MEAN	2.2 aSep 6	.87 Aug 12	.87 Aug 12 1999
ANNUAL SEVEN-DAY MINIMUM	2.4 Sep 27	1.0 Aug 6	1.0 Aug 6 1999
INSTANTANEOUS PEAK FLOW		1080 Jan 24	17500 Nov 4 1985
INSTANTANEOUS PEAK STAGE		3.70 Jan 24	10.01 Nov 4 1985
INSTANTANEOUS LOW FLOW		b.73 Aug 12	b.73 Aug 12 1999
ANNUAL RUNOFF (CFSM)	1.49	.65	1.56
ANNUAL RUNOFF (INCHES)	20.26	8.83	21.20
10 PERCENT EXCEEDS	195	109	208
50 PERCENT EXCEEDS	17	9.0	43
90 PERCENT EXCEEDS	2.8	2.4	5.8

a Also Sep 7, and Oct 2, 3, 1998.
 b Also Aug 13, 1999.
 e Estimated.

