

JAMES RIVER BASIN

02039000 BUFFALO CREEK NEAR HAMPDEN SYDNEY, VA

LOCATION.--Lat 37°15'25", long 78°29'12", Prince Edward County, Hydrologic Unit 02080207, on left bank 100 ft upstream from bridge on State Highway 658, 0.8 mi upstream from Locket Creek, 2.0 mi northwest of Hampden Sydney, and 6.0 mi southwest of Farmville.

DRAINAGE AREA.--69.7 mi².

PERIOD OF RECORD.--August 1946 to current year.

REVISED RECORDS.--WSP 1303: 1948-50(M). WSP 2104: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 339.19 ft above sea level (levels by Virginia Department of Transportation). Prior to Aug. 19, 1953, nonrecording gage at same site and datum.

REMARKS.--Records good except those for period of doubtful or no gage-height record, Dec .24 to Jan. 2, Feb. 23 to Mar. 24, Apr. 8 to May 12, and period with ice effect, Jan. 5-10, which are fair. Maximum discharge, 9,160 ft³/s, from rating curve extended above 1,600 ft³/s on basis of slope-area measurement at gage height 11.96 ft. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location by the Virginia Department of Environmental Quality - Water Division.

COOPERATION.--Records were provided by the Virginia Department of Environmental Quality - Water Division.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in August 1940 reached a stage of about 15 ft, from information by local resident.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan 24	2400	*747	*6.43	No other peak greater than base discharge.			

Minimum discharge, 6.3 ft³/s, Aug 20.

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	15	20	21	e31	52	e69	52	e34	17	33	11	7.7
2	14	20	20	e29	74	e57	68	e32	17	32	13	7.3
3	14	23	20	156	73	e51	55	e30	17	26	11	7.0
4	14	26	20	207	64	e59	52	e29	16	21	11	7.4
5	16	25	20	e90	57	e55	46	e28	16	17	10	25
6	17	24	20	e48	53	e51	43	e29	16	15	9.6	34
7	18	23	20	e55	50	e50	41	e28	16	14	9.1	35
8	21	23	20	e47	50	e46	e48	e27	15	13	8.9	79
9	23	23	41	e44	47	e44	e39	e26	14	13	8.5	53
10	21	23	37	e42	45	e47	e50	e26	14	12	8.1	40
11	20	27	30	42	43	e46	e105	e25	14	11	7.9	30
12	19	27	27	41	43	e44	e71	e25	14	12	7.9	21
13	19	26	122	39	47	e41	e55	30	15	17	7.7	17
14	18	26	96	39	43	e78	e52	186	16	23	7.6	14
15	18	26	61	80	41	e160	e51	180	15	24	7.8	19
16	17	24	46	86	40	e215	e46	82	16	19	7.6	212
17	17	24	39	67	40	e140	e41	53	17	16	7.2	225
18	17	23	33	114	69	e90	e40	41	16	14	7.0	90
19	17	23	30	161	76	e72	e39	35	16	13	6.7	50
20	17	23	29	100	63	e58	e38	30	15	12	6.7	35
21	17	24	28	74	55	e60	e36	27	16	11	7.1	29
22	17	23	27	61	49	e83	e34	26	16	11	7.2	28
23	17	22	26	55	e47	e66	e33	28	16	11	7.1	23
24	18	22	e30	329	e45	e58	e31	26	15	15	7.1	20
25	18	22	e35	528	e44	56	e33	24	14	49	7.2	18
26	19	23	e33	272	e43	51	e32	23	14	25	16	16
27	19	22	e31	140	e42	47	e31	22	14	17	15	22
28	19	21	e34	89	e53	45	e32	21	14	14	11	34
29	19	21	e36	71	---	43	e34	20	15	13	9.8	46
30	19	21	e34	61	---	41	e38	19	65	12	8.9	153
31	20	---	e32	55	---	40	---	18	---	11	8.2	---
TOTAL	554	700	1098	3253	1448	2063	1366	1230	511	546	278.9	1397.4
MEAN	17.9	23.3	35.4	105	51.7	66.5	45.5	39.7	17.0	17.6	9.00	46.6
MAX	23	27	122	528	76	215	105	186	65	49	16	225
MIN	14	20	20	29	40	40	31	18	14	11	6.7	7.0
CFSM	.26	.33	.51	1.51	.74	.95	.65	.57	.24	.25	.13	.67
IN.	.30	.37	.59	1.74	.77	1.10	.73	.66	.27	.29	.15	.75

02039000 BUFFALO CREEK NEAR HAMPDEN SYDNEY, VA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1947 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	49.9	64.0	72.3	92.1	101	113	92.5	66.6	50.0	39.4	40.8	41.5
MAX	365	315	157	313	295	324	256	173	294	129	260	168
(WY)	1972	1986	1997	1978	1979	1993	1983	1978	1972	1989	1955	1979
MIN	9.94	14.6	18.7	25.3	36.9	37.5	29.4	23.4	11.2	14.0	9.00	6.67
(WY)	1971	1970	1966	1966	1968	1981	1967	1969	1970	1970	1999	1970

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR	FOR 1999 WATER YEAR	WATER YEARS 1947 - 1999
ANNUAL TOTAL	32673	14445.3	
ANNUAL MEAN	89.5	39.6	68.4
HIGHEST ANNUAL MEAN			134 1972
LOWEST ANNUAL MEAN			28.5 1970
HIGHEST DAILY MEAN	1210 Jan 28	528 Jan 25	4940 Aug 18 1955
LOWEST DAILY MEAN	14 aSep 12	6.7 bAug 19	e2.7 cOct 7 1970
ANNUAL SEVEN-DAY MINIMUM	14 dSep 10	7.0 Aug 18	2.9 Oct 4 1970
INSTANTANEOUS PEAK FLOW		747 Jan 24	9160 Jun 21 1972
INSTANTANEOUS PEAK STAGE		6.43 Jan 24	12.38 Jun 21 1972
INSTANTANEOUS LOW FLOW		6.3 Aug 20	(f) (g)
ANNUAL RUNOFF (CFSM)	1.28	.57	.98
ANNUAL RUNOFF (INCHES)	17.44	7.71	13.33
10 PERCENT EXCEEDS	223	71	120
50 PERCENT EXCEEDS	42	26	43
90 PERCENT EXCEEDS	17	11	18

- a Also Sep 13-16, 1998.
- b Also Aug 20, 1999.
- c Also Oct 8, 1970.
- d Also Sep 11, 12, 1998.
- e Estimated.
- f Not determined.
- g Probably occurred Oct 7, 8, 1970.

