

POTOMAC RIVER BASIN

01632900 SMITH CREEK NEAR NEW MARKET, VA

LOCATION.--Lat 38°41'36", long 78°38'35", Shenandoah County, Hydrologic Unit 02070006, on left bank 25 ft upstream from bridge on State Highway 620, 3.6 mi north of New Market, and 4.4 mi upstream from mouth.

DRAINAGE AREA.--93.2 mi<sup>2</sup>.

PERIOD OF RECORD.--August 1960 to current year.

REVISED RECORDS.--WSP 2103: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 881.50 ft above sea level. Prior to Aug. 2, 1963, on right bank a short distance downstream, at datum 0.71 ft higher.

REMARKS.--Records good except those for periods with ice effect, Jan. 1, 2, and 5, 6 which are fair. Maximum discharge, 12,400 ft<sup>3</sup>/s, from rating curve extended above 2,300 ft<sup>3</sup>/s on basis of contracted-opening measurement at gage height 16.38 ft. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

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

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Oct. 1, 1959, reached a stage of 10.7 ft, discharge not determined, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 650 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 30	0930	*917	*5.91	No other peak greater than base discharge.			

Minimum discharge, 4.0 ft<sup>3</sup>/s, Aug 12, 13.

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	14	15	13	e15	33	27	51	23	16	9.9	8.6	11
2	13	15	13	e16	35	23	50	22	16	9.0	8.5	11
3	14	16	13	22	34	26	47	22	16	14	7.5	10
4	16	18	14	25	32	55	45	22	15	9.7	5.9	10
5	16	17	14	e20	30	46	44	20	15	9.4	6.3	40
6	16	16	14	e15	29	39	41	19	14	8.4	6.0	233
7	16	16	14	15	28	36	38	19	14	6.8	6.1	195
8	19	16	15	16	28	31	36	33	14	9.2	6.0	78
9	20	17	23	32	26	30	37	27	12	9.0	7.0	51
10	18	17	19	88	25	35	42	23	12	8.4	5.8	50
11	17	18	16	35	24	33	38	21	12	8.0	6.0	42
12	16	18	15	55	24	34	36	20	13	8.4	4.6	37
13	16	17	17	112	25	39	34	19	12	9.3	5.1	32
14	15	17	19	59	23	42	31	24	12	9.0	8.0	29
15	15	17	17	50	22	59	31	43	11	8.5	7.5	39
16	16	17	15	53	22	84	32	34	11	8.6	7.3	304
17	15	16	15	48	22	153	30	28	12	7.8	6.3	167
18	15	15	15	44	51	229	28	25	14	7.6	5.7	92
19	15	15	15	45	58	150	28	24	13	7.4	6.6	70
20	14	16	14	38	46	100	28	22	13	7.2	18	70
21	14	16	14	37	39	127	28	21	13	7.8	11	295
22	15	16	14	44	35	257	28	21	13	11	10	209
23	15	15	14	38	32	150	27	28	12	8.0	9.3	127
24	15	15	14	156	30	115	32	24	10	8.0	9.0	97
25	16	15	14	110	30	96	28	22	9.3	8.4	11	79
26	17	15	14	65	29	81	26	20	9.5	8.0	15	66
27	15	15	16	52	27	72	25	19	9.5	7.6	21	58
28	14	15	14	46	27	65	25	18	9.4	6.9	21	66
29	14	15	14	41	---	59	24	18	8.6	11	17	67
30	15	14	14	37	---	54	23	17	8.8	9.4	13	566
31	15	---	14	35	---	50	---	16	---	8.8	10	---
TOTAL	481	480	466	1464	866	2397	1013	714	370.1	270.5	290.1	3201
MEAN	15.5	16.0	15.0	47.2	30.9	77.3	33.8	23.0	12.3	8.73	9.36	107
MAX	20	18	23	156	58	257	51	43	16	14	21	566
MIN	13	14	13	15	22	23	23	16	8.6	6.8	4.6	10
CFSM	.17	.17	.16	.51	.33	.83	.36	.25	.13	.09	.10	1.14
IN.	.19	.19	.19	.58	.35	.96	.40	.28	.15	.11	.12	1.28

01632900 SMITH CREEK NEAR NEW MARKET, VA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	52.9	57.7	69.1	104	117	156	116	84.5	58.5	35.9	35.7	40.5
MAX	297	324	240	423	447	530	372	238	294	121	139	408
(WY)	1973	1986	1997	1996	1998	1994	1987	1988	1972	1972	1996	1996
MIN	8.56	11.0	8.86	10.1	21.1	26.4	19.4	20.0	12.3	8.73	9.36	9.36
(WY)	1987	1966	1966	1966	1989	1981	1981	1969	1999	1999	1999	1986

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR	FOR 1999 WATER YEAR	WATER YEARS 1960 - 1999
ANNUAL TOTAL	43982	12012.7	
ANNUAL MEAN	120	32.9	77.1
HIGHEST ANNUAL MEAN			152
LOWEST ANNUAL MEAN			27.8
HIGHEST DAILY MEAN	1510	Jan 8	5190
LOWEST DAILY MEAN	13	aOct 2	4.6
ANNUAL SEVEN-DAY MINIMUM	14	bNov 30	5.8
INSTANTANEOUS PEAK FLOW			917
INSTANTANEOUS PEAK STAGE			5.91
INSTANTANEOUS LOW FLOW			4.0
ANNUAL RUNOFF (CFSM)	1.29		.35
ANNUAL RUNOFF (INCHES)	17.56		4.79
10 PERCENT EXCEEDS	321		59
50 PERCENT EXCEEDS	39		17
90 PERCENT EXCEEDS	15		8.6

- a Also Dec 1-3, 1998.
- b Also Dec 1, 1998.
- c Also Aug 13, 1999.
- e Estimated.

