

YORK RIVER BASIN

01673550 TOTOPOTOMOY CREEK NEAR STUDLEY, VA

LOCATION.--Lat 37°39'44", long 77°15'29", Hanover County, Hydrologic Unit 02080106, on right bank at downstream side of bridge on State Highway 606, 2.0 mi southeast of Studley, 2.4 mi downstream from Hawes millrace, and 4.1 mi upstream from mouth.

DRAINAGE AREA.--26.2 mi².

PERIOD OF RECORD.--October 1977 to current year.

GAGE.--Water-stage recorder. Datum of gage is 38.36 ft above sea level.

REMARKS.--No estimated daily discharges. Records good. Maximum discharge, 1,620 ft³/s, from rating curve extended above 783 ft³/s. 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 FOR CURRENT YEAR.--Peak discharges greater than base discharge of 160 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar 16	0130	172	5.00	Sep 16	1900	*1,620	*9.46
Sep 6	2130	272	6.03				

Minimum discharge, 0.20 ft³/s, Aug 12.

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	13	4.1	7.7	12	14	17	19	12	2.9	90	3.3	3.7
2	13	4.3	7.4	9.8	15	17	22	11	2.8	83	4.5	3.2
3	8.2	6.4	7.4	51	17	19	23	11	2.2	29	2.0	3.1
4	5.0	9.2	7.4	91	17	25	20	11	2.0	13	1.3	4.5
5	4.7	10	7.5	30	15	25	17	10	1.8	7.8	1.0	93
6	4.8	8.0	7.6	21	14	19	16	10	1.8	4.9	.71	203
7	4.7	8.2	7.7	15	13	16	15	9.9	1.6	3.3	.51	140
8	5.2	6.3	8.3	15	14	14	15	9.5	1.6	2.7	.34	120
9	6.3	6.2	23	15	13	14	16	9.1	1.4	1.9	.32	43
10	7.0	6.3	32	14	13	16	28	8.8	1.2	1.7	.27	48
11	5.5	8.3	18	12	13	17	28	7.1	1.2	3.5	.25	35
12	4.8	8.7	12	11	12	17	23	6.3	.66	3.3	.47	24
13	4.5	8.1	40	11	15	15	19	6.1	.77	8.1	.83	18
14	4.1	7.4	82	11	18	21	17	7.1	5.6	13	2.1	15
15	4.1	7.7	29	19	14	123	16	8.7	4.1	14	16	19
16	3.8	7.7	17	38	13	120	17	8.5	2.5	11	34	913
17	3.6	7.7	14	23	13	43	15	8.2	2.6	7.3	17	595
18	3.4	7.2	11	20	16	28	14	7.9	2.9	5.1	8.5	181
19	3.5	7.0	9.0	28	21	23	13	7.3	2.4	3.5	4.7	73
20	3.3	7.5	8.4	26	20	20	13	6.2	2.3	2.4	21	49
21	3.1	9.9	8.6	18	17	30	12	5.5	3.1	1.8	56	43
22	3.3	9.5	8.4	15	14	80	12	4.6	3.3	1.6	24	53
23	3.8	9.1	7.8	14	13	55	20	12	3.0	1.2	12	51
24	3.9	8.4	12	55	13	32	34	19	2.2	1.3	7.3	36
25	4.7	8.1	15	122	13	27	28	13	1.5	1.2	7.4	28
26	3.3	9.6	13	43	14	23	19	9.3	1.1	.95	7.7	24
27	3.6	9.7	12	23	14	21	15	7.2	.93	.67	13	24
28	3.9	9.4	14	20	15	21	13	5.8	1.0	.59	15	51
29	4.2	8.9	16	18	---	20	13	4.8	2.2	.64	8.9	104
30	4.6	7.8	16	16	---	19	13	3.9	21	.47	6.1	86
31	5.3	---	13	15	---	18	---	3.5	---	.54	4.6	---
TOTAL	156.2	236.7	492.2	831.8	413	955	545	264.3	83.66	319.46	281.10	3083.5
MEAN	5.04	7.89	15.9	26.8	14.8	30.8	18.2	8.53	2.79	10.3	9.07	103
MAX	13	10	82	122	21	123	34	19	21	90	56	913
MIN	3.1	4.1	7.4	9.8	12	14	12	3.5	.66	.47	.25	3.1
CFSM	.19	.30	.61	1.02	.56	1.18	.69	.33	.11	.39	.35	3.92
IN.	.22	.34	.70	1.18	.59	1.36	.77	.38	.12	.45	.40	4.38

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STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1978 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	14.0	22.9	25.5	36.4	38.4	50.7	41.6	29.2	17.5	12.5	13.5	13.9
MAX	54.0	80.8	56.0	114	103	127	106	68.4	43.2	25.8	49.7	103
(WY)	1980	1986	1997	1978	1998	1984	1984	1978	1979	1998	1985	1999
MIN	2.93	6.44	10.5	10.3	14.8	12.7	12.3	8.46	2.79	5.73	.92	1.18
(WY)	1982	1982	1981	1981	1999	1981	1985	1985	1999	1995	1995	1997

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR	FOR 1999 WATER YEAR	WATER YEARS 1978 - 1999
ANNUAL TOTAL	13588.5	7661.92	
ANNUAL MEAN	37.2	21.0	26.3
HIGHEST ANNUAL MEAN			45.1 1984
LOWEST ANNUAL MEAN			11.8 1981
HIGHEST DAILY MEAN	521 Feb 5	913 Sep 16	913 Sep 16 1999
LOWEST DAILY MEAN	e1.1 aSep 17	.25 Aug 11	e.03 Aug 31 1995
ANNUAL SEVEN-DAY MINIMUM	e1.3 Sep 15	.41 Aug 6	e.09 Aug 25 1995
INSTANTANEOUS PEAK FLOW		1620 Sep 16	1620 Sep 16 1999
INSTANTANEOUS PEAK STAGE		9.46 Sep 16	9.46 Sep 16 1999
INSTANTANEOUS LOW FLOW		.20 Aug 12	(b) Sep 1 1995
ANNUAL RUNOFF (CFSM)	1.42	.80	1.00
ANNUAL RUNOFF (INCHES)	19.29	10.88	13.62
10 PERCENT EXCEEDS	76	34	52
50 PERCENT EXCEEDS	16	11	17
90 PERCENT EXCEEDS	3.4	2.0	4.1

a Also Sep 18, 1998.
 b Minimum discharge observed, 0.025 ft³/s.
 e Estimated.

