

## YORK RIVER BASIN

01674000 MATTAPONI RIVER NEAR BOWLING GREEN, VA

LOCATION.--Lat 38°03'42", long 77°23'10", Caroline County, Hydrologic Unit 02080105, on right bank 0.1 mi upstream from bridge on State Highway 605, 2.2 mi northwest of Bowling Green, 2.4 mi upstream from South River, and 7.1 mi downstream from confluence of Matta and Poni Rivers.

DRAINAGE AREA.--257 mi<sup>2</sup>.

PERIOD OF RECORD.--September 1942 to current year.

REVISED RECORDS.--WSP 1382: 1943, 1945(M), 1948(M), 1949, 1953(M). WSP 2103: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 85.14 ft above sea level. Prior to Aug. 17, 1978, gage located on left bank at same datum.

REMARKS.--Records good except those for period of doubtful gage-height record, Oct. 31 to Nov. 2, and period with ice effect, Jan. 5-7, which are fair. Some diurnal fluctuation from gristmill upstream on Po River. Maximum discharge, 13,400 ft<sup>3</sup>/s, from rating curve extended above 8,100 ft<sup>3</sup>/s. No flow at times in September and October 1954 and September 1966. 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 in August 1928 reached a stage of 19.5 ft based on relative difference in stage between this flood and flood of Oct. 17, 1942, at Milford 4 mi downstream, discharge, 15,000 ft<sup>3</sup>/s, from rating curve extended above 8,100 ft<sup>3</sup>/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,000 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)
Mar 17	1600	*1,640	*9.18	No peak greater than base discharge.			

Minimum discharge, 0.01 ft<sup>3</sup>/s, Aug 11-14.

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	2.0	e1.1	7.3	16	44	132	127	42	7.7	35	3.7	2.3
2	1.9	e1.1	7.7	15	49	202	143	39	7.1	32	3.2	.91
3	1.3	1.6	7.2	33	63	180	149	38	6.7	16	1.4	.54
4	1.2	3.4	7.1	101	77	153	143	38	5.7	12	.68	.56
5	1.2	3.4	7.1	e84	74	226	133	37	5.1	9.8	.45	3.0
6	1.4	2.5	8.7	e66	59	294	120	36	5.1	7.4	.26	7.7
7	1.6	2.0	7.2	e48	51	232	114	37	4.1	6.0	.13	19
8	2.8	3.1	6.8	36	45	126	110	37	4.2	5.0	.09	20
9	5.5	4.4	14	30	41	95	100	36	4.4	4.2	.06	20
10	4.3	4.1	23	28	38	90	110	33	3.9	4.1	.03	27
11	3.0	5.0	18	30	36	91	132	29	3.9	4.4	.02	18
12	2.5	6.1	22	28	35	98	151	26	3.8	5.5	.01	12
13	2.2	5.4	28	26	56	110	137	25	4.9	5.0	.01	10
14	2.2	6.0	42	26	59	133	115	22	5.7	4.7	.42	8.0
15	2.1	5.8	31	30	49	355	100	21	5.8	4.6	.72	9.0
16	1.8	5.4	26	38	44	685	93	18	4.4	4.2	.23	236
17	1.7	4.8	22	40	40	1510	88	16	4.2	3.7	.08	525
18	1.7	5.4	19	62	65	1260	82	15	4.0	3.3	.03	541
19	1.7	7.4	16	109	192	631	80	15	4.0	2.3	.05	382
20	1.7	7.1	16	104	230	344	71	15	4.1	1.9	.37	163
21	1.6	9.4	14	87	160	249	70	14	4.1	1.8	.26	93
22	1.7	8.7	12	60	96	395	72	13	5.3	1.3	.06	72
23	1.9	6.6	12	45	68	695	68	14	5.4	.84	.04	57
24	1.4	7.5	14	82	56	767	67	15	4.6	.77	.04	44
25	1.3	8.3	14	273	49	457	64	15	4.0	1.3	.26	37
26	1.4	8.6	14	378	48	310	59	13	3.8	.98	1.8	31
27	1.5	9.3	13	410	46	245	55	12	3.5	1.3	4.0	26
28	1.4	9.2	14	206	53	203	51	11	3.5	2.4	11	32
29	1.3	10	17	101	---	175	48	9.8	3.9	4.1	8.7	40
30	1.2	8.8	18	67	---	153	45	9.2	21	3.5	5.7	126
31	e1.2	---	17	53	---	136	---	8.1	---	3.5	4.0	---
TOTAL	59.7	171.5	495.1	2712	1923	10732	2897	709.1	157.9	192.89	47.80	2563.01
MEAN	1.93	5.72	16.0	87.5	68.7	346	96.6	22.9	5.26	6.22	1.54	85.4
MAX	5.5	10	42	410	230	1510	151	42	21	35	11	541
MIN	1.2	1.1	6.8	15	35	90	45	8.1	3.5	.77	.01	.54
CFSM	.01	.02	.06	.34	.27	1.35	.38	.09	.02	.02	.01	.33
IN.	.01	.02	.07	.39	.28	1.55	.42	.10	.02	.03	.01	.37

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STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1943 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	123	169	268	363	411	483	380	253	139	103	114	81.2
MAX	860	721	1041	1174	1706	1540	1164	707	1111	853	939	714
(WY)	1943	1973	1949	1978	1998	1994	1983	1972	1972	1945	1955	1975
MIN	1.44	5.72	16.0	34.7	68.7	79.8	96.6	22.9	5.26	6.22	1.18	.43
(WY)	1992	1999	1999	1981	1999	1981	1999	1999	1999	1999	1977	1954

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR	FOR 1999 WATER YEAR	WATER YEARS 1943 - 1999
ANNUAL TOTAL	146109.0	22661.00	
ANNUAL MEAN	400	62.1	240
HIGHEST ANNUAL MEAN			516
LOWEST ANNUAL MEAN			61.0
HIGHEST DAILY MEAN	6310	Feb 6	1510
LOWEST DAILY MEAN	e1.1	aNov 1	.01
ANNUAL SEVEN-DAY MINIMUM	1.3	Oct 27	.05
INSTANTANEOUS PEAK FLOW			1640
INSTANTANEOUS PEAK STAGE			9.18
INSTANTANEOUS LOW FLOW			.01
ANNUAL RUNOFF (CFSM)	1.56		.24
ANNUAL RUNOFF (INCHES)	21.15		3.28
10 PERCENT EXCEEDS	990		145
50 PERCENT EXCEEDS	70		14
90 PERCENT EXCEEDS	2.1		1.3

- a Also Nov 2, 1998.
- b Also Aug 13, 1999.
- c Many days in September and October 1954, and September 1966.
- d Many days in September and October 1954.
- e Estimated.
- f From floodmark in well.
- g Also Aug 12-14, 1999.

