

RAPPAHANNOCK RIVER BASIN

01662800 BATTLE RUN NEAR LAUREL MILLS, VA

LOCATION.--Lat 38°39'20", long 78°04'27", Rappahannock County, Hydrologic Unit 02080103, on left bank just downstream from bridge on State Highway 729, 0.8 mi upstream from mouth, and 1.0 mi northwest of Laurel Mills.

DRAINAGE AREA.--27.6 mi².

PERIOD OF RECORD.--April 1958 to July 1995. October 1997 to current year..

REVISED RECORDS.--WSP 2103: Drainage area. WDR VA-72-1: 1971. WDR VA-74-1: 1972.

GAGE.--Water-stage recorder. Datum of gage is 374.62 ft above sea level.

REMARKS.--Records good except those for periods of doubtful gage-height record, Oct. 18-28 and Nov. 12-17, and periods with ice effect, Dec. 26-28, Jan. 1, 2, 5, 6, 8, and Feb. 22, 23, which are fair. Maximum discharge, 9,120 ft³/s, from rating curve extended above 2,500 ft³/s on basis of velocity-area study and slope-area measurement of peak flow. No flow many days in 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 FOR CURRENT YEAR.--Peak discharges greater than base discharge of 310 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Sep 5	2130	334	4.62	Sep 30	0030	*5,740	*11.95
Sep 9	2100	469	5.48				

Minimum discharge, 0.04 ft³/s, Aug 12, 13, 19.

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	.39	1.5	1.8	e3.7	10	11	18	8.3	2.7	1.2	.38	.46
2	.39	1.4	1.8	e2.4	21	9.1	17	7.9	2.5	1.0	.31	.40
3	.45	2.0	1.8	68	17	10	15	7.8	2.3	1.5	.24	.35
4	.64	2.3	1.8	21	14	24	20	8.3	2.0	1.0	.18	.50
5	.68	1.8	1.9	e13	12	16	20	7.8	1.8	.81	.14	41
6	.83	1.8	1.9	e8.2	12	16	17	8.0	1.8	.61	.14	44
7	.93	1.7	2.0	4.5	11	14	16	8.2	1.7	.50	.12	31
8	11	1.8	3.4	e7.2	11	12	16	23	1.6	.53	.11	11
9	5.2	1.9	9.0	8.9	9.7	13	16	12	1.4	.45	.13	75
10	3.5	2.0	4.0	13	9.3	15	17	8.5	1.3	.40	.09	53
11	1.8	2.7	2.8	9.8	8.7	13	18	7.5	1.4	.39	.09	18
12	1.5	2.9	2.6	6.5	8.9	16	18	6.8	1.4	.43	.06	12
13	1.4	e2.2	5.0	24	8.7	19	15	6.6	1.4	.54	.06	9.4
14	1.5	e1.9	5.3	18	7.9	23	14	6.5	1.5	.52	.19	7.9
15	1.4	e1.8	3.2	52	7.7	58	14	6.1	1.4	.41	.29	10
16	1.4	e1.8	2.7	20	7.9	62	15	5.4	1.1	.34	.24	111
17	1.5	e1.7	2.6	11	8.1	49	13	5.5	1.3	.28	.11	50
18	e1.4	1.7	2.4	27	23	40	12	5.3	1.5	.25	.08	29
19	e1.4	1.7	2.3	20	17	30	12	5.1	1.2	.22	.35	22
20	e1.3	1.8	2.2	13	14	26	12	4.4	2.5	.31	2.7	20
21	e1.3	1.9	2.3	18	12	35	12	4.1	2.5	7.7	.61	60
22	e1.2	1.8	2.2	34	e11	37	13	5.1	1.8	2.3	.30	47
23	e1.2	2.1	2.1	25	e10	30	12	16	1.4	1.9	.24	32
24	e1.4	2.4	2.4	117	10	27	13	9.8	1.0	.97	.28	25
25	e1.5	2.0	3.0	49	9.9	24	11	6.4	.93	.81	.49	21
26	e1.6	2.3	e3.6	29	9.6	21	10	5.0	.87	.61	19	18
27	e1.5	2.1	e2.7	22	8.8	20	9.8	4.2	.86	.44	16	18
28	e1.4	1.8	e2.2	17	11	19	9.3	3.8	2.2	.84	2.7	40
29	1.5	1.7	2.6	14	---	17	9.1	3.5	3.3	1.3	1.4	267
30	1.3	1.7	2.9	12	---	16	8.8	3.1	1.7	.68	.78	1080
31	1.3	---	4.0	11	---	15	---	2.9	---	.45	.57	---
TOTAL	53.81	58.2	90.5	699.2	321.2	737.1	423.0	222.9	50.36	29.69	48.38	2154.01
MEAN	1.74	1.94	2.92	22.6	11.5	23.8	14.1	7.19	1.68	.96	1.56	71.8
MAX	11	2.9	9.0	117	23	62	20	23	3.3	7.7	19	1090
MIN	.39	1.4	1.8	2.4	7.7	9.1	8.8	2.9	.86	.22	.06	.35
CFSM	.06	.07	.11	.82	.42	.86	.51	.26	.06	.03	.06	2.60
IN.	.07	.08	.12	.94	.43	.99	.57	.30	.07	.04	.07	2.90

01662800 BATTLE RUN NEAR LAUREL MILLS, VA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1958 - 1995, 1997 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	16.9	23.2	26.1	34.6	41.4	48.7	41.4	32.5	22.2	11.3	11.7	12.9
MAX	119	106	79.9	116	132	144	150	85.9	91.8	39.9	73.8	102
(WY)	1980	1986	1993	1978	1998	1993	1983	1988	1972	1972	1994	1979
MIN	.92	1.94	1.82	1.45	7.92	12.5	9.31	7.19	1.68	.96	.42	.63
(WY)	1992	1999	1966	1966	1989	1981	1981	1999	1999	1999	1966	1985

SUMMARY STATISTICS FOR 1998 CALENDAR YEAR FOR 1999 WATER YEAR WATER YEARS 1958 - 1995 1997 - 1999

ANNUAL TOTAL	14885.87	4888.35	
ANNUAL MEAN	40.8	13.4	26.9
HIGHEST ANNUAL MEAN			48.4
LOWEST ANNUAL MEAN			9.17
HIGHEST DAILY MEAN	654	Jan 28	1080
LOWEST DAILY MEAN	.34	Sep 30	.06
ANNUAL SEVEN-DAY MINIMUM	.41	Sep 27	.09
INSTANTANEOUS PEAK FLOW			5740
INSTANTANEOUS PEAK STAGE			11.95
INSTANTANEOUS LOW FLOW			.04
ANNUAL RUNOFF (CFSM)	1.48		.49
ANNUAL RUNOFF (INCHES)	20.06		6.60
10 PERCENT EXCEEDS	92		23
50 PERCENT EXCEEDS	11		3.7
90 PERCENT EXCEEDS	1.2		.45

- a Also Aug 13, 1999.
- b Also Sep 6-13, 1966.
- c Also Sep 7, 1966.
- d Also Jun 27, 1995.
- e Estimated.
- f From high-water mark in gage house. Result of backwater from bridge collapse.
- g Also Aug 13, 19, 1999.

