

01635500 PASSAGE CREEK NEAR BUCKTON, VA

LOCATION.--Lat 38°57'29", long 78°16'01", Warren County, Hydrologic Unit 02070006, on right bank 350 ft upstream from bridge on State Highway 55, 1.2 mi south of Buckton railroad station, 1.4 mi upstream from mouth, and 4.2 mi west of Riverton.

DRAINAGE AREA.--87.8 mi².

PERIOD OF RECORD.--October 1905 to July 1906 (gage heights only), April 1932 to current year. Prior to October 1966 published as "at Buckton."

REVISED RECORDS.--WSP 2103: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 525.14 ft above sea level. October 1905 to July 1906, nonrecording gage at site 1 mi downstream at different datum. Apr. 4, 1932, to Oct. 7, 1937, nonrecording gage at site 350 ft downstream at different datum.

REMARKS.--Records good except those for periods with ice effect, Dec. 25-27, Dec. 31 to Jan. 2, Jan. 4, 17, and periods of no gage-height record, Jan. 5-8, 10-12, which are fair. Occasional diurnal fluctuation during low flow caused by State Fish Hatchery 2 mi upstream from station. At a point 14.2 mi upstream from station on Little Passage Creek, there has been a diversion in some years from Strasburg Reservoir, capacity, 54.6 acre-ft, by town of Strasburg for municipal water supply. There was no diversion during the year. Maximum discharge, 23,000 ft³/s, from rating curve extended above 5,200 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 1,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Sep 30	1130	*964	*5.96	No peak greater than base discharge.			

Minimum daily discharge, 1.7 ft³/s, Aug 10,11.

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	4.7	6.3	6.9	e8.1	20	22	58	27	8.4	4.1	3.8	3.5
2	4.2	6.1	6.6	e7.8	23	20	61	25	8.0	4.2	3.1	3.3
3	4.3	6.7	6.7	23	27	28	53	24	8.0	3.6	2.8	3.1
4	5.0	7.7	6.9	e47	23	80	50	24	7.4	5.1	2.6	3.3
5	5.2	7.3	7.1	e31	20	79	48	23	6.5	4.9	2.3	30
6	6.2	7.3	7.2	e23	19	66	45	22	6.0	4.1	2.0	167
7	6.4	6.8	7.3	e20	18	62	41	22	5.8	3.7	1.8	113
8	7.9	6.6	8.3	e17	18	51	38	37	5.7	3.2	1.8	57
9	10	6.6	16	28	17	49	37	56	5.4	2.6	1.9	25
10	9.5	6.8	21	e55	16	50	67	36	5.0	2.5	1.7	35
11	7.5	7.4	13	e35	15	45	69	29	4.7	2.4	1.7	30
12	6.5	7.4	9.7	e26	15	51	85	26	4.7	2.6	1.9	16
13	6.2	7.8	9.5	40	16	69	68	24	4.7	3.1	1.9	11
14	6.2	8.3	11	50	15	82	59	22	4.9	3.4	2.2	8.3
15	5.7	7.7	12	39	14	91	55	24	4.9	3.4	2.9	7.9
16	5.5	7.2	10	29	14	128	57	24	4.8	3.5	2.4	203
17	5.8	7.2	9.1	e34	14	343	51	21	6.3	3.1	2.8	165
18	5.7	7.2	8.3	38	33	635	46	20	6.8	2.8	2.2	65
19	5.5	7.0	7.9	45	74	330	42	18	6.7	2.7	1.9	41
20	5.3	7.2	7.4	28	49	183	41	15	6.1	2.5	2.1	31
21	5.2	7.4	7.6	30	38	209	40	14	5.8	3.3	4.5	101
22	5.1	7.2	8.0	166	30	576	45	13	5.9	22	7.0	236
23	5.6	7.0	7.7	71	26	251	42	36	5.9	13	4.9	87
24	5.8	6.9	7.9	305	25	178	44	36	5.5	6.8	3.6	56
25	6.1	6.9	e8.8	162	24	139	38	26	4.8	4.6	3.9	40
26	6.1	7.1	e9.0	70	22	112	36	19	3.9	3.3	4.8	29
27	6.3	6.9	e7.8	49	20	94	35	14	3.6	2.7	4.8	23
28	6.2	6.6	8.0	39	21	82	32	12	4.2	2.9	4.1	23
29	5.9	6.9	8.4	31	---	73	30	11	3.8	3.0	3.5	35
30	5.8	6.9	9.3	26	---	64	29	10	3.6	6.7	3.8	559
31	5.7	---	e8.9	23	---	57	---	9.1	---	5.3	3.9	---
TOTAL	187.1	212.4	283.3	1595.9	666	4299	1442	719.1	167.8	141.1	94.6	2207.4
MEAN	6.04	7.08	9.14	51.5	23.8	139	48.1	23.2	5.59	4.55	3.05	73.6
MAX	10	8.3	21	305	74	635	85	56	8.4	22	7.0	559
MIN	4.2	6.1	6.6	7.8	14	20	29	9.1	3.6	2.4	1.7	3.1
CFSM	.07	.08	.10	.59	.27	1.58	.55	.26	.06	.05	.03	.84
IN.	.08	.09	.12	.68	.28	1.82	.61	.30	.07	.06	.04	.94

01635500 PASSAGE CREEK NEAR BUCKTON, VA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1933 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	39.3	43.3	67.3	99.3	120	157	135	94.3	51.2	18.1	25.3	27.7
MAX	581	276	235	431	506	573	377	339	609	87.3	437	432
(WY)	1943	1986	1973	1996	1998	1994	1952	1989	1972	1941	1955	1996
MIN	2.85	4.48	4.60	6.25	5.79	20.5	20.9	14.6	5.59	1.87	1.94	2.37
(WY)	1964	1966	1966	1966	1934	1959	1981	1963	1999	1934	1963	1936

SUMMARY STATISTICS FOR 1998 CALENDAR YEAR FOR 1999 WATER YEAR WATER YEARS 1933 - 1999

ANNUAL TOTAL	48960.0	12015.7	
ANNUAL MEAN	134	32.9	72.9
HIGHEST ANNUAL MEAN			161
LOWEST ANNUAL MEAN			20.0
HIGHEST DAILY MEAN	2090	Feb 5	635
LOWEST DAILY MEAN	3.1	Sep 6	1.7
ANNUAL SEVEN-DAY MINIMUM	3.7	Sep 1	1.8
INSTANTANEOUS PEAK FLOW			964
INSTANTANEOUS PEAK STAGE			5.96
INSTANTANEOUS LOW FLOW			1.7
ANNUAL RUNOFF (CFSM)	1.53	.37	.83
ANNUAL RUNOFF (INCHES)	20.74	5.09	11.27
10 PERCENT EXCEEDS	370	67	157
50 PERCENT EXCEEDS	17	9.5	26
90 PERCENT EXCEEDS	5.1	3.3	4.4

- a Also Aug 11, 1999.
- b Also Aug 8-13, 1999.
- c Observed.
- e Estimated.

