

JAMES RIVER BASIN

02015700 BULLPASTURE RIVER AT WILLIAMSVILLE, VA

LOCATION.--Lat 38°11'43", long 79°34'14", Bath County, Hydrologic Unit 02080201, on left bank 15 ft downstream from bridge on State Highway 614 at Williamsville and 0.62 mi upstream from mouth.

DRAINAGE AREA.--110 mi².

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

REVISED RECORDS.--WSP 2104: Drainage area. WRD VA-62-1: 1961. WRD VA-96-1: 1985(M).

GAGE.--Water-stage recorder. Datum of gage is 1,610.14 ft above sea level. Prior to July 12, 1974, at site 700 ft upstream at datum 11.84 ft higher.

REMARKS.--Records good except those for period of no gage-height record, Dec. 6-8, and period with ice effect, Jan. 5-7, which are fair. Maximum discharge, 22,900 ft³/s, from rating curve extended above 3,300 ft³/s on basis of slope-area measurement of peak flow. Minimum discharge, 19 ft³/s, result of freezeup. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location by the Virginia Department of Environmental Quality - Water Division.

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

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan 24	1045	*1,260	*4.14	No peak greater than base discharge.			

Minimum discharge, 23 ft³/s, Aug 7, 11, 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	38	36	34	33	84	87	95	56	40	30	25	32
2	37	36	33	33	239	80	94	55	39	30	25	31
3	38	39	33	75	195	92	86	54	39	29	25	31
4	40	41	34	60	156	178	83	53	37	27	24	31
5	39	37	34	e47	129	141	79	53	36	27	25	168
6	39	36	e34	e39	112	140	75	52	35	26	24	267
7	40	36	e35	e36	113	146	72	51	34	26	24	142
8	62	36	e38	38	150	123	70	63	33	26	24	84
9	51	36	48	45	127	123	69	56	32	25	25	64
10	41	36	40	70	115	120	70	52	46	25	25	55
11	39	41	36	54	103	111	70	50	56	25	24	49
12	38	39	35	49	102	110	72	49	39	26	24	46
13	38	37	40	68	105	104	66	208	36	27	25	44
14	36	37	48	153	90	111	63	455	35	27	47	43
15	36	36	39	450	85	135	64	263	34	26	37	43
16	37	36	37	171	82	159	68	173	32	25	31	46
17	37	36	36	111	81	393	64	127	35	25	30	44
18	37	34	35	188	117	570	61	102	34	26	30	41
19	37	35	34	221	117	431	60	103	32	26	30	40
20	37	35	34	130	106	286	60	81	33	25	39	41
21	37	35	34	108	96	268	61	70	33	26	36	42
22	36	34	34	108	86	285	62	64	32	26	32	43
23	36	34	34	147	80	220	59	67	31	25	31	40
24	36	34	34	840	79	199	65	73	30	26	32	39
25	36	34	32	384	78	174	60	65	30	28	95	39
26	37	36	33	209	77	149	59	56	30	26	98	38
27	36	35	32	158	74	133	59	52	30	25	49	39
28	36	34	35	129	82	120	60	48	31	26	40	44
29	36	34	35	109	---	110	58	45	30	39	36	51
30	36	34	35	95	---	99	57	43	30	29	34	99
31	36	---	30	86	---	91	---	41	---	26	32	---
TOTAL	1195	1079	1105	4444	3060	5488	2041	2780	1044	831	1078	1816
MEAN	38.5	36.0	35.6	143	109	177	68.0	89.7	34.8	26.8	34.8	60.5
MAX	62	41	48	840	239	570	95	455	56	39	98	267
MIN	36	34	30	33	74	80	57	41	30	25	24	31
CFSM	.35	.33	.32	1.30	.99	1.61	.62	.82	.32	.24	.32	.55
IN.	.40	.36	.37	1.50	1.03	1.86	.69	.94	.35	.28	.36	.61

02015700 BULLPASTURE RIVER AT WILLIAMSVILLE, 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	84.0	121	161	200	224	314	222	189	117	65.4	64.7	67.7
MAX	295	784	543	631	498	655	663	448	376	245	272	432
(WY)	1977	1986	1974	1996	1982	1993	1987	1996	1982	1972	1969	1996
MIN	30.1	35.9	31.9	34.7	63.8	62.2	68.0	65.4	34.8	26.8	27.7	28.5
(WY)	1989	1992	1966	1981	1963	1981	1999	1977	1999	1999	1964	1968

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1960 - 1999	
ANNUAL TOTAL	68639		25961			
ANNUAL MEAN	188		71.1		152	
HIGHEST ANNUAL MEAN					248	
LOWEST ANNUAL MEAN					71.1	
HIGHEST DAILY MEAN	3800		Jan 8		e8700	
LOWEST DAILY MEAN	30		Dec 31		23	
ANNUAL SEVEN-DAY MINIMUM	33		Dec 25		24	
INSTANTANEOUS PEAK FLOW					1260	
INSTANTANEOUS PEAK STAGE					4.14	
INSTANTANEOUS LOW FLOW					23	
ANNUAL RUNOFF (CFSM)	1.71				.65	
ANNUAL RUNOFF (INCHES)	23.21				8.78	
10 PERCENT EXCEEDS	443				137	
50 PERCENT EXCEEDS	63				40	
90 PERCENT EXCEEDS	36				27	

- a Also Aug 6-8, 11, 12, 1999.
- b Also Sep 9, 1964.
- c From floodmarks.
- d Also Aug 11, 12-13, 1999.
- e Estimated.
- f Result of freezeup.

