

JAMES RIVER BASIN

02027000 TYE RIVER NEAR LOVINGSTON, VA

LOCATION.--Lat 37°42'55", long 78°58'55", Nelson County, Hydrologic Unit 02080203, on right bank at downstream side of bridge on State Highway 158, 3.5 mi downstream from Hat Creek, 4.8 mi upstream from Piney River, and 6.8 mi southwest of Lovingston.

DRAINAGE AREA.--92.8 mi².

PERIOD OF RECORD.--August 1938 to current year.

REVISED RECORDS.--WSP 892: 1938. WSP 2104: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 578.39 ft above sea level. Sept. 15, 1969, to Oct. 15, 1970, nonrecording gage at same site and datum.

REMARKS.--Records good except those for periods with doubtful or no gage-height record, Dec. 4-14, Feb. 3 4, Mar. 10-24, Jul. 16-20, Aug. 11, 12, Aug. 15 to Sep. 3, Sep. 22-26, and period with ice effect, Jan. 6, which are fair. Maximum discharge, 80,000 ft³/s, from rating curve extended above 7,600 ft³/s on basis of slope-area measurement of peak flow. 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 1,600 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Sep 6	1800	1,980	4.11	Sep 30	0030	*8,680	*10.61

Minimum discharge, 2.8 ft³/s, Aug 13, 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	8.9	21	23	22	134	84	137	58	34	15	8.0	e6.3
2	7.6	22	22	23	645	72	127	57	35	18	7.5	e5.9
3	8.2	27	22	265	e400	71	111	55	38	15	6.3	e5.7
4	8.5	31	e22	142	e296	83	108	54	31	11	5.5	7.9
5	9.0	28	e22	82	234	72	101	53	29	9.4	5.0	744
6	11	25	e23	e66	196	75	97	53	27	7.6	4.7	1030
7	14	25	e24	63	174	81	104	52	26	11	4.8	732
8	99	25	e28	57	155	74	91	94	23	17	4.2	351
9	50	24	e37	76	133	77	91	69	21	11	4.0	287
10	31	24	e32	87	118	e79	86	60	19	8.6	3.8	336
11	26	33	e25	68	107	e78	105	56	21	7.9	e3.3	215
12	25	35	e22	61	101	e76	97	53	23	9.4	e3.2	165
13	24	30	e63	62	95	e75	85	53	21	15	3.1	136
14	23	27	e52	68	84	e105	81	87	23	15	5.5	117
15	22	26	39	173	80	e250	81	100	20	13	e4.4	107
16	22	24	33	147	77	e230	87	80	18	e10	e4.0	169
17	21	24	30	116	74	e220	78	74	23	e9.0	e4.3	139
18	22	24	27	216	125	e225	73	70	29	e8.6	e3.8	115
19	23	23	26	201	119	e205	73	67	20	e13	e5.0	105
20	23	23	26	164	105	e188	74	60	19	e9.7	e12	98
21	21	23	25	141	96	e210	73	56	24	8.6	e16	125
22	20	23	24	123	88	e195	71	57	23	36	e8.5	e100
23	21	22	24	146	82	e170	67	94	20	19	e6.6	e88
24	22	22	27	704	81	e158	68	67	16	17	e7.4	e80
25	23	23	26	496	78	153	62	58	15	34	e18	e74
26	22	26	24	324	76	139	62	51	15	19	e12	e66
27	21	26	24	249	72	129	60	45	15	11	e10	127
28	22	25	24	204	85	122	71	44	16	9.7	e8.5	966
29	22	24	25	173	---	115	71	40	14	24	e7.7	2560
30	22	23	25	148	---	107	62	37	12	17	e6.9	3590
31	22	---	24	130	---	100	---	35	---	11	e6.4	---
TOTAL	716.2	758	870	4997	4110	4018	2554	1889	670	440.5	210.4	12647.8
MEAN	23.1	25.3	28.1	161	147	130	85.1	60.9	22.3	14.2	6.79	422
MAX	99	35	63	704	645	250	137	100	38	36	18	3590
MIN	7.6	21	22	22	72	71	60	35	12	7.6	3.1	5.7
CFSM	.25	.27	.30	1.74	1.58	1.40	.92	.66	.24	.15	.07	4.54
IN.	.29	.30	.35	2.00	1.65	1.61	1.02	.76	.27	.18	.08	5.07

02027000 TYE RIVER NEAR LOVINGSTON, VA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	103	131	169	194	220	262	238	182	135	78.3	106	94.0
MAX	550	765	499	568	773	568	692	492	676	382	1541	556
(WY)	1943	1986	1997	1998	1998	1993	1987	1989	1972	1972	1969	1979
MIN	8.69	15.3	23.7	14.7	69.7	64.0	63.1	53.1	22.3	14.2	6.79	6.87
(WY)	1942	1942	1981	1981	1963	1981	1966	1941	1999	1999	1999	1954

SUMMARY STATISTICS FOR 1998 CALENDAR YEAR FOR 1999 WATER YEAR WATER YEARS 1939 - 1999

ANNUAL TOTAL	85157.6	33880.9	
ANNUAL MEAN	233	92.8	159
HIGHEST ANNUAL MEAN			280
LOWEST ANNUAL MEAN			61.7
HIGHEST DAILY MEAN	3830	Jan 8	3590
LOWEST DAILY MEAN	7.6	Oct 2	3.1
ANNUAL SEVEN-DAY MINIMUM	8.4	Sep 28	3.8
INSTANTANEOUS PEAK FLOW			8680
INSTANTANEOUS PEAK STAGE			10.61
INSTANTANEOUS LOW FLOW			2.8
ANNUAL RUNOFF (CFSM)	2.51	1.00	1.71
ANNUAL RUNOFF (INCHES)	34.14	13.58	23.29
10 PERCENT EXCEEDS	609	167	323
50 PERCENT EXCEEDS	70	35	102
90 PERCENT EXCEEDS	20	8.6	22

- a Also Sep 10, 11, 1966.
- b From floodmarks.
- c Also Aug 14, 1999.
- d Also Sep 11, 1966.
- e Estimated.

