

ROANOKE RIVER BASIN

02061500 BIG OTTER RIVER NEAR EVINGTON, VA

LOCATION.--Lat 37°12'30", long 79°18'14", Campbell County, Hydrologic Unit 03010101, on right bank 60 ft upstream from bridge on State Highway 682, 2.0 mi southwest of Evington, and 2.1 mi upstream from Flat Creek.

DRAINAGE AREA.--320 mi².

PERIOD OF RECORD.--October 1936 to current year. Monthly discharge only for some periods, published in WSP 1303. Prior to October 1965, published as Otter River near Evington.

REVISED RECORDS.--WSP 852: 1937. WSP 892: 1938-39(M). WSP 972: 1937-39. WSP 1032: 1940. WSP 2104: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 544.02 ft above sea level.

REMARKS.--Records good except those for period with ice effect, Jan. 6, and periods of doubtful or no gage-height record, Jan. 8-11, and Aug. 1-30, which are fair. Maximum discharge, 65,600 ft³/s, from rating curve extended above 24,000 ft³/s on basis of slope-area measurements of 24.96 ft and 29.93 ft. 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.--Floods in October 1937 and August 1939 reached a stage of 23.1 ft, discharge, 27,500 ft³/s, from rating curve extended above 7,000 ft³/s on basis of unit hydrograph and flood-routing studies by U.S. Army Corps of Engineers, and records for other stations in Roanoke River Basin.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Sep 30	0530	*9,280	*16.45	No other peak greater than base discharge.			

Minimum daily discharge, 5.7 ft³/s, Aug 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	73	71	84	93	200	204	222	151	74	39	e22	29
2	67	72	83	85	615	189	333	143	73	40	e24	26
3	64	79	83	328	502	185	235	138	71	43	e19	24
4	60	107	84	465	348	228	217	137	72	42	e15	22
5	59	92	84	173	281	193	200	133	67	38	e11	34
6	63	79	84	e115	246	180	196	136	64	32	e12	451
7	71	76	84	156	232	180	193	139	62	31	e12	420
8	111	75	86	e120	237	164	187	164	60	42	e11	198
9	140	78	183	e145	210	164	187	169	56	53	e10	105
10	92	79	143	e162	199	177	183	141	52	39	e10	222
11	77	109	100	e140	186	174	306	133	49	30	e9.1	114
12	73	118	91	134	182	165	369	127	50	43	e8.2	76
13	73	92	212	127	179	159	240	127	52	95	e7.5	64
14	72	85	225	131	168	199	209	341	49	75	e6.7	60
15	69	84	130	215	161	728	203	433	49	63	e6.4	65
16	69	82	110	234	161	583	223	223	49	53	e6.0	201
17	70	80	100	166	165	397	196	183	58	44	e6.0	145
18	71	80	94	253	400	324	182	167	65	39	e6.0	91
19	72	80	90	328	429	274	177	158	53	35	e5.7	79
20	74	82	89	211	290	244	166	140	46	32	e23	68
21	71	82	89	173	240	273	162	123	49	40	e50	72
22	68	79	89	152	214	303	158	120	57	64	e59	103
23	64	78	87	149	197	237	155	123	52	54	e27	79
24	64	80	110	1200	191	223	182	115	47	39	e25	62
25	68	80	118	822	187	225	161	108	44	32	e145	51
26	70	86	106	439	183	209	148	104	44	29	e120	48
27	70	88	104	323	173	193	151	94	45	25	e74	65
28	71	84	106	269	182	190	166	87	45	24	e48	901
29	71	83	105	234	---	183	183	84	43	28	e40	2110
30	69	84	101	208	---	165	168	80	42	31	e36	5060
31	71	---	94	193	---	154	---	76	---	26	32	---
TOTAL	2277	2524	3348	7943	6958	7466	6058	4597	1639	1300	886.6	11045
MEAN	73.5	84.1	108	256	248	241	202	148	54.6	41.9	28.6	368
MAX	140	118	225	1200	615	728	369	433	74	95	145	5060
MIN	59	71	83	85	161	154	148	76	42	24	5.7	22
CFSM	.23	.26	.34	.80	.78	.75	.63	.46	.17	.13	.09	1.15
IN.	.26	.29	.39	.92	.81	.87	.70	.53	.19	.15	.10	1.28

02061500 BIG OTTER RIVER NEAR EVINGTON, VA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1937 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	229	256	336	418	493	545	487	378	310	213	238	208
MAX	1163	1200	1192	1045	1165	1332	2062	1335	2124	925	1412	1150
(WY)	1991	1986	1949	1998	1998	1993	1987	1989	1995	1949	1940	1996
MIN	52.5	68.7	68.6	95.7	193	153	127	106	54.6	27.9	28.6	29.9
(WY)	1964	1966	1966	1966	1968	1981	1966	1981	1999	1966	1999	1968

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR	FOR 1999 WATER YEAR	FOR 1998 CALENDAR YEAR	FOR 1999 WATER YEAR	FOR 1998 CALENDAR YEAR	FOR 1999 WATER YEAR
ANNUAL TOTAL	161427	56041.6				
ANNUAL MEAN	442	154				
HIGHEST ANNUAL MEAN			341		635	1949
LOWEST ANNUAL MEAN					139	1981
HIGHEST DAILY MEAN	6850	Jan 28	5060	Sep 30	35700	Jun 23 1995
LOWEST DAILY MEAN	43	Sep 17	e5.7	Aug 19	e 5.7	Aug 19 1999
ANNUAL SEVEN-DAY MINIMUM	46	Sep 11	6.3	Aug 13	6.3	Aug 13 1999
INSTANTANEOUS PEAK FLOW			9280	Sep 30	65600	Jun 23 1995
INSTANTANEOUS PEAK STAGE			16.45	Sep 30	29.93	Jun 23 1995
INSTANTANEOUS LOW FLOW			e 5.7	Aug 19	e5.7	Aug 19 1999
ANNUAL RUNOFF (CFSM)	1.38		.48		1.07	
ANNUAL RUNOFF (INCHES)	18.77		6.51		14.50	
10 PERCENT EXCEEDS	921		240		626	
50 PERCENT EXCEEDS	189		93		218	
90 PERCENT EXCEEDS	70		32		80	

e Estimated.

