

CHOWAN RIVER BASIN

02049500 BLACKWATER RIVER NEAR FRANKLIN, VA

LOCATION.--Lat 36°45'45", long 76°53'55", Southampton County, Hydrologic Unit 03010202, on right bank 0.4 mi south of Burdette, 0.5 mi upstream from Black Creek, 3.3 mi downstream from Corrowaugh Swamp, and 6.0 mi north of Franklin.

DRAINAGE AREA.--617 mi<sup>2</sup>.

PERIOD OF RECORD.--August 1944 to current year.

REVISED RECORDS.--WSP 2104: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1.56 ft above sea level.

REMARKS.--Records good except for period of no gage-height record, Sep. 16-27, and for periods of tidal effect below 20 ft<sup>3</sup>/s, which are poor. Low flow reversed by tide some years. Diversion upstream from station by city of Norfolk for municipal water supply most years. Maximum discharge, 23,000 ft<sup>3</sup>/s, from rating curve extended above 12,800 ft<sup>3</sup>/s. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in August 1940 reached a stage of about 22 ft, discharge, 21,000 ft<sup>3</sup>/s, from rating curve extended above 9,400 ft<sup>3</sup>/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 23,000 ft<sup>3</sup>/s, probably occurred Sep 18, gage height, 26.27 ft; minimum daily, 1.4 ft<sup>3</sup>/s, Jun 10, 12.

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	7.9	5.0	1.6	343	1210	454	854	444	16	6.1	278	19
2	7.6	4.9	1.6	321	1090	504	809	407	11	7.5	294	12
3	7.4	5.3	1.5	403	1040	508	746	374	7.2	7.4	304	7.4
4	14	5.6	1.5	856	1000	514	678	345	4.7	6.8	300	14
5	31	5.3	1.7	966	933	501	610	330	3.2	5.4	283	379
6	34	4.9	1.6	933	845	474	543	309	2.3	3.8	258	900
7	29	4.4	1.6	882	763	446	486	284	1.9	3.0	223	1450
8	22	3.8	1.7	856	691	416	441	260	1.6	4.0	179	1990
9	19	3.5	2.2	880	629	384	407	233	1.6	4.4	134	2000
10	17	2.9	2.8	903	577	369	397	203	1.4	5.0	85	2070
11	15	2.6	3.1	870	526	357	494	165	1.5	11	58	2260
12	13	3.0	3.3	816	482	342	1090	118	1.4	14	52	2110
13	11	2.7	36	761	472	324	1440	89	1.7	31	51	1970
14	9.9	2.4	208	704	466	312	1650	81	2.2	112	84	1890
15	9.5	2.3	276	848	444	512	1630	95	3.1	193	139	1920
16	9.9	2.1	226	1440	416	828	1550	88	5.6	213	153	e13000
17	9.3	1.9	178	1660	386	1110	1460	72	7.6	248	93	e20000
18	8.5	1.8	142	1720	384	1390	1330	47	8.2	330	59	e22000
19	8.0	1.8	122	1770	453	1590	1230	38	8.5	415	47	e20500
20	8.0	1.7	119	1730	503	1640	1150	36	8.3	481	32	e18500
21	7.6	1.8	125	1580	531	1580	1070	47	8.2	512	21	e15500
22	7.2	1.9	130	1390	529	1530	971	46	8.5	480	14	e12800
23	7.1	1.9	129	1180	499	1520	863	44	8.8	401	11	e10500
24	6.8	2.0	155	1230	468	1480	764	53	8.5	325	8.2	e8000
25	6.6	2.1	270	2020	441	1370	685	70	6.8	331	6.5	e5890
26	6.2	1.7	342	2230	421	1240	626	88	6.2	299	5.3	e4150
27	5.8	1.8	334	2190	404	1090	573	86	6.5	306	9.4	e2740
28	5.9	1.8	330	2030	392	968	516	65	5.9	458	18	2080
29	5.5	1.9	351	1820	---	880	474	44	5.0	505	38	1650
30	5.5	1.8	366	1620	---	852	469	26	4.9	427	43	1400
31	5.3	---	359	1410	---	862	---	20	---	335	29	---
TOTAL	360.5	86.6	4222.2	38362	16995	26347	26006	4607	168.3	6480.4	3309.4	177701.4
MEAN	11.6	2.89	136	1237	607	850	867	149	5.61	209	107	5923
MAX	34	5.6	366	2230	1210	1640	1650	444	16	512	304	22000
MIN	5.3	1.7	1.5	321	384	312	397	20	1.4	3.0	5.3	7.4
(†)	0	0	0	0	0	0	0	7.1	0	0	0	0
MEAN†	11.6	2.89	136	1237	607	850	867	156	5.61	209	107	5923
CFSM†	.02	.00	.22	2.01	.98	1.38	1.40	.25	.01	.34	.17	9.60
IN.†	.02	.01	.25	2.31	1.02	1.59	1.57	.29	.01	.39	.20	10.71

CAL YR 1998 TOTAL 276118.91 MEAN 756 MAX 7150 MIN .83 MEAN† 757 CFSM† 1.23 IN.† 16.66  
WTR YR 1999 TOTAL 304645.80 MEAN 835 MAX 22000 MIN 1.4 MEAN† 835 CFSM† 1.35 IN.† 18.37

† Average daily diversion, in cubic feet per second, by city of Norfolk.  
‡ Adjusted for diversion.

02049500 BLACKWATER RIVER NEAR FRANKLIN, VA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1944 - 1999, BY WATER YEAR (WY) [UNADJUSTED]

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	286	367	625	1015	1195	1290	917	554	339	293	349	380
MAX	1795	1713	2082	2271	3520	2915	2783	1890	1925	2003	1481	5923
(WY)	1973	1980	1958	1978	1998	1989	1989	1958	1963	1945	1969	1999
MIN	.94	1.69	2.12	12.5	152	158	107	51.4	5.61	3.02	2.08	2.16
(WY)	1988	1981	1981	1981	1981	1981	1995	1985	1999	1986	1995	1995

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1944 - 1999	
ANNUAL TOTAL	276118.91		304645.8			
ANNUAL MEAN	756		835		632	
HIGHEST ANNUAL MEAN					1155	
LOWEST ANNUAL MEAN					133	
HIGHEST DAILY MEAN	7150		Feb 7		e22000	
LOWEST DAILY MEAN	.83		Aug 25		1.4	
ANNUAL SEVEN-DAY MINIMUM	1.1		Aug 19		1.6	
INSTANTANEOUS PEAK FLOW					23000	
INSTANTANEOUS PEAK STAGE					b26.27	
INSTANTANEOUS LOW FLOW					(c)	
ANNUAL RUNOFF (CFSM)	1.23		1.35		1.02	
ANNUAL RUNOFF (INCHES)	16.65		18.37		13.91	
10 PERCENT EXCEEDS	2380		1580		1640	
50 PERCENT EXCEEDS	92		248		373	
90 PERCENT EXCEEDS	2.3		2.7		8.0	

- a Probably occurred Sep 18, 1999.
- b From floodmarks.
- c Not determined, tidally affected most years during periods of extreme low flows; minimum measured flow, 2.4 ft<sup>3</sup>/s (reverse flow), Sep 17, 1952.
- e Estimated.

