

ROANOKE RIVER BASIN

02075500 DAN RIVER AT PACES, VA

LOCATION.--Lat 36°38'32", long 79°05'23", Halifax County, Hydrologic Unit 03010104, on right bank 100 ft upstream from bridge on State Highway 658, 0.5 mi southeast of Paces, 0.5 mi upstream from Big Toby Creek, 2.7 mi upstream from Birch Creek, and at mile 36.0.

DRAINAGE AREA.--2,550 mi², approximately.

PERIOD OF RECORD.--November 1950 to current year.

GAGE.--Water-stage recorder. Datum of gage is 322.48 ft above sea level.

REMARKS.--Records good. Diurnal fluctuation caused by mills 23 mi upstream at Danville. Since August 1950, flow regulated by Philpott Lake (station 02071900) 101.4 mi upstream. U.S. Army Corps of Engineers satellite gage-height telemeter at station. Maximum discharge, 64,800 ft³/s, from rating curve extended above 32,000 ft³/s. Minimum gage height, 1.71 ft, Sep. 4, 1956. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location. Analytical results of water samples collected for the Albemarle-Pamlico Sound NAWQA are given in the section "Analyses of Samples Collected at Water-Quality Miscellaneous Sampling sites".

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Aug. 16, 1940, reached a stage of 32.3 ft, from floodmark.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 18,000 ft³/s, Sep 30, gage height, 19.67 ft, stage rising, peak occurred Oct 1, 1999; maximum peak discharge 15,700 ft³/s, Jan 25, gage height, 18.22 ft; minimum, 360 ft³/s, Jul 6, gage height, 2.09 ft, minimum daily 458 ft³/s, Aug 17.

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	889	847	834	1430	2040	1810	2330	9730	870	1210	1120	858
2	807	825	906	1310	2780	1780	4190	5550	809	1350	816	993
3	909	576	996	3560	4090	1810	3890	3250	1250	1410	653	966
4	596	728	970	5820	3700	1920	2870	2120	898	1270	745	938
5	938	1040	1040	4820	2870	1970	2090	2040	1120	1280	798	1680
6	673	1210	1050	2330	2220	1990	2170	1950	878	660	763	4790
7	e800	886	1000	1910	2170	1800	2080	1490	1100	677	735	6350
8	888	864	774	2100	2030	1680	1930	1900	660	1180	714	3910
9	1200	860	1170	2070	1960	1600	1860	1550	678	1240	611	2440
10	1220	691	1630	1960	1910	1390	1900	1500	835	1190	468	2230
11	1120	885	1770	1680	1910	1800	1840	1310	902	943	586	1940
12	849	1250	1170	1660	1730	1750	1810	1090	1070	788	e900	1580
13	709	1200	1970	1610	1790	1330	1680	1520	1100	1090	808	888
14	875	1240	5080	1570	1550	1520	1810	1970	871	2030	805	943
15	880	952	4080	2130	1580	2900	e1740	7770	658	1900	824	1170
16	861	942	1950	2680	1510	4340	2450	5600	748	1510	620	7590
17	866	1040	1890	2290	1460	3700	2160	2900	1210	1270	458	6720
18	815	918	1670	2500	1790	2940	1890	2070	1200	1070	595	3830
19	776	985	1330	4170	2410	2170	1590	1890	1180	887	780	1780
20	658	1090	1410	4130	2870	2260	1440	1870	1130	766	779	1210
21	849	839	1210	2480	2270	2260	1680	2060	890	1030	841	1050
22	856	1250	920	2360	1970	3860	1550	1600	708	1850	860	1370
23	847	753	1430	2100	1800	3450	1450	1490	917	3250	628	1730
24	822	700	1860	9410	1780	2720	1470	1430	1210	1500	483	1240
25	842	959	2120	14800	1830	2320	1530	1300	1090	1210	585	954
26	593	1520	2740	8200	1790	2230	1020	1290	975	983	1590	886
27	e780	906	1970	4540	1670	2020	1340	1010	794	866	3740	992
28	801	678	1620	2940	1480	1970	1560	1400	845	866	2440	2520
29	805	1300	1630	2590	---	1510	1760	912	1090	942	1650	10900
30	853	710	1610	2510	---	1750	5580	1050	780	1550	878	15600
31	857	---	1560	2050	---	1700	---	1110	---	1530	694	---
TOTAL	26234	28644	51360	105710	58960	68250	62660	73722	28466	39298	28967	90048
MEAN	846	955	1657	3410	2106	2202	2089	2378	949	1268	934	3002
MAX	1220	1520	5080	14800	4090	4340	5580	9730	1250	3250	3740	15600
MIN	593	576	774	1310	1460	1330	1020	912	658	660	458	858
(†)	-2143	-2420	-938	+3625	+2349	+2405	+319	+1492	-3998	-4427	-8898	-319
MEAN‡	680	874	1627	3527	2190	2279	2099	2426	816	1125	647	2991
CFSM‡	.27	.34	.64	1.38	.86	.89	.82	.95	.32	.44	.25	1.17
IN. ‡	.31	.38	.74	1.60	.89	1.03	.92	1.10	.36	.51	.29	1.31

CAL YR 1998 TOTAL 1247324 MEAN 3417 MAX 29400 MIN 574 MEAN‡ 3412 CFSM‡ 1.34 IN. ‡ 18.17
WTR YR 1999 TOTAL 663697 MEAN 1818 MAX 15600 MIN 476 MEAN‡ 1783 CFSM‡ .70 IN. ‡ 9.49

† Total change in contents, equivalent in cubic feet per second, per month, in Philpott Lake; provided by U.S. Army Corps of Engineers.

‡ Adjusted for monthly change in contents.

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STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2026	2065	2668	3483	3940	4525	4048	2871	2385	1870	1759	1914
MAX	7253	6184	5734	8407	9141	11190	11500	6505	8987	5091	4833	10200
(WY)	1960	1958	1997	1978	1960	1975	1987	1978	1972	1975	1985	1996
MIN	616	778	1083	1015	1756	1580	1318	1184	860	788	647	452
(WY)	1954	1954	1981	1981	1977	1981	1967	1986	1986	1977	1977	1954

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR	FOR 1999 WATER YEAR	WATER YEARS 1951 - 1999
ANNUAL TOTAL	1247324	662319	
ANNUAL MEAN	3417	1815	2790
HIGHEST ANNUAL MEAN			4050
LOWEST ANNUAL MEAN			1310
HIGHEST DAILY MEAN	29400	Jan 29	a15600
LOWEST DAILY MEAN	574	Sep 21	458
ANNUAL SEVEN-DAY MINIMUM	780	Sep 29	668
INSTANTANEOUS PEAK FLOW			15700
INSTANTANEOUS PEAK STAGE			18.22
INSTANTANEOUS LOW FLOW			360
ANNUAL RUNOFF (CFSM)	1.34	.71	1.09
ANNUAL RUNOFF (INCHES)	18.20	9.66	14.86
10 PERCENT EXCEEDS	6610	2940	5000
50 PERCENT EXCEEDS	2030	1430	1900
90 PERCENT EXCEEDS	844	775	915

a Stage rising, peak occurred Oct 1, 1999.
 e Estimated.

