

ROANOKE RIVER BASIN

02074000 SMITH RIVER AT EDEN, NC

LOCATION.--Lat 36°31'31", long 79°45'56", Rockingham County, Hydrologic Unit 03010103, on right bank at Eden, 0.3 mi downstream of bridge on State Highway 14, 0.8 mi upstream from bridge on Secondary Road 1714, 1.2 mi south of Virginia-North Carolina State line, 1.3 mi downstream of Stuart Creek, and 3.9 mi upstream from mouth.

DRAINAGE AREA.--538 mi².

PERIOD OF RECORD.--October 1939 to current year. Prior to October 1970, published as "Smith River at Spray".

REVISED RECORDS.--WSP 1433: 1946.

GAGE.--Water-stage recorder. Datum of gage is 539.56 ft above NGVD of 1929. Satellite telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow regulated since August 1950 by Philpott Lake, 40 mi upstream (usable capacity, 6,325,000,000 ft³). Additional regulation by hydroelectric plant at Martinsville, Virginia, 18 mi upstream. Maximum discharge prior to regulation: 45,600 ft³/s, Aug. 15, 1940, from rating curve extended above 12,000 ft³/s on the basis of computation of peak flow over dam 1.5 mi downstream; gage height: 19.28 ft. Minimum discharge for current water year also occurred Oct. 11.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	245	292	150	890	321	1,630	819	1,400	507	803	1,060	e900
2	151	177	247	1,020	236	788	770	1,130	579	1,280	924	e700
3	166	166	188	987	352	795	581	980	1,190	1,990	568	e600
4	154	230	280	843	419	1,010	948	738	1,410	1,870	947	e1,400
5	124	229	242	463	375	949	870	695	3,840	1,780	1,140	1,300
6	84	455	232	508	386	996	419	1,010	1,590	1,760	1,370	889
7	100	346	222	481	626	940	1,590	1,340	2,670	1,780	1,450	576
8	127	274	210	456	400	731	1,640	1,310	2,170	968	1,100	551
9	167	176	309	530	222	394	2,770	1,310	3,110	866	1,240	946
10	150	163	240	509	402	528	4,150	1,150	2,110	922	771	949
11	305	490	511	422	424	819	4,130	446	1,970	892	2,140	911
12	372	1,300	701	249	441	838	2,290	499	2,550	850	2,160	865
13	134	1,200	945	357	502	836	2,010	825	3,070	549	1,870	975
14	140	508	1,590	462	412	896	1,840	825	1,700	2,580	1,780	519
15	262	385	628	449	379	709	1,760	834	921	1,190	1,730	537
16	421	429	593	449	1,210	906	1,700	901	2,080	996	1,300	826
17	447	1,540	424	459	703	881	1,660	851	3,270	1,050	529	805
18	322	784	316	362	573	855	1,700	532	2,640	935	719	872
19	212	478	342	185	554	779	1,430	686	2,800	897	1,110	1,540
20	133	395	522	348	683	11,400	507	697	2,260	530	1,060	992
21	166	338	448	444	922	3,750	557	649	1,950	508	1,060	501
22	213	302	381	442	4,460	2,360	863	1,490	1,840	901	1,060	530
23	288	196	426	432	3,480	2,050	1,310	1,480	1,770	944	1,030	4,160
24	180	196	544	402	1,860	1,900	1,550	1,170	1,250	1,300	631	1,550
25	167	318	1,370	379	1,910	1,770	1,550	1,060	1,610	922	503	1,130
26	201	256	850	226	1,760	819	1,210	1,520	1,650	880	950	1,050
27	145	240	527	267	1,860	810	453	1,300	1,670	435	992	995
28	169	202	325	408	2,000	782	514	1,490	1,170	456	916	667
29	377	256	353	381	---	606	922	1,310	488	888	e800	785
30	531	178	460	399	---	762	1,050	1,400	518	915	e600	1,300
31	513	---	682	431	---	1,060	---	1,260	---	899	e800	---
TOTAL	7,166	12,499	15,258	14,640	27,872	44,349	43,563	32,288	56,353	33,536	34,310	30,321
MEAN	231	417	492	472	995	1,431	1,452	1,042	1,878	1,082	1,107	1,011
MAX	531	1,540	1,590	1,020	4,460	11,400	4,150	1,520	3,840	2,580	2,160	4,160
MIN	84	163	150	185	222	394	419	446	488	435	503	501
†	+29	+200	+157	-36	+164	+25	-33	+1	-12	-4	-42	-44

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 2003,* BY WATER YEAR (WY)

MEAN	496	491	576	678	728	892	883	707	649	510	495	528
MAX	1,572	1,530	1,376	1,453	1,633	2,519	3,016	1,567	2,026	1,374	1,454	2,030
(WY)	(1990)	(1986)	(1997)	(1979)	(1998)	(1993)	(1987)	(1978)	(1972)	(1989)	(1985)	(1996)
MIN	201	211	267	291	249	331	248	266	146	151	126	165
(WY)	(1952)	(1982)	(2001)	(1989)	(2002)	(1967)	(2002)	(1964)	(2002)	(2002)	(2002)	(2002)

02074000 SMITH RIVER AT EDEN, NC—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1951 - 2003*	
ANNUAL TOTAL	102,288		352,155		(UNADJUSTED)	
ANNUAL MEAN	280		965		635	
HIGHEST ANNUAL MEAN					1,010	1987
LOWEST ANNUAL MEAN					254	2002
HIGHEST DAILY MEAN	2,560	May 9	11,400	Mar 20	16,700	Jun 21, 1972
LOWEST DAILY MEAN	73	Jul 21	84	Oct 6	46	Aug 14, 1967
ANNUAL SEVEN-DAY MINIMUM	100	Aug 10	129	Oct 2	100	Aug 10, 2002
MAXIMUM PEAK FLOW			16,800	Mar 20	24,800	Jun 21, 1972
MAXIMUM PEAK STAGE			13.06	Mar 20	16.24	Jun 21, 1972
INSTANTANEOUS LOW FLOW			76*	Oct 10	38	Aug 7, 1967
10 PERCENT EXCEEDS	451		1,860		1,170	
50 PERCENT EXCEEDS	228		800		445	
90 PERCENT EXCEEDS	113		230		219	

e Estimated.

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

‡ Adjusted for change in contents.

* Regulated period only (1951-2003). See REMARKS.

