

ROANOKE RIVER BASIN

02073000 SMITH RIVER AT MARTINSVILLE, VA

LOCATION.--Lat 36°39'40", long 79°52'51", Henry County, Hydrologic Unit 03010103, on right bank at south edge of Martinsville, 800 ft downstream from bridge on U.S. Highways 58 and 220, and 5.0 mi downstream from Beaver Creek.

DRAINAGE AREA.--380 mi².

PERIOD OF RECORD.--August 1929 to current year.

REVISED RECORDS.--WSP 1032: 1933-35(M), 1936-39, 1940-41(P). WSP 2104: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 657.22 ft above sea level.

REMARKS.--No estimated daily discharges. Records good. Flow regulated since August 1950 by Philpott Lake (station 02071900) 19.6 mi upstream from station. Some additional regulation by powerplant 1,000 ft upstream from station. Maximum discharge, 39,000 ft³/s, from rating curve extended above 17,000 ft³/s on basis of computations of flow over dam at gage heights 16.76 ft and 21.50 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 FOR CURRENT YEAR.--Maximum discharge, 3,520 ft³/s, Sep 30, gage height, 4.93 ft; minimum discharge, 23 ft³/s, Jan 3, result of regulation; minimum daily 86 ft³/s, May 30, result of regulation.

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	329	135	300	309	324	292	435	388	402	396	134	628
2	291	197	300	150	650	268	381	146	365	393	312	618
3	102	312	296	304	429	288	217	249	352	243	395	620
4	134	417	297	376	335	295	206	300	348	135	403	270
5	263	313	141	297	306	272	366	170	226	312	404	604
6	252	360	137	293	189	172	364	324	123	405	396	942
7	459	142	288	298	189	163	364	342	252	398	219	733
8	366	137	324	317	289	260	358	242	361	407	106	651
9	280	302	433	190	285	264	377	170	356	400	485	602
10	146	304	323	203	274	270	190	273	356	227	592	267
11	140	386	302	283	272	265	241	244	326	137	562	181
12	251	325	148	279	267	259	416	253	236	427	581	193
13	299	307	809	279	171	154	375	246	115	486	583	263
14	303	148	409	276	158	214	392	373	234	488	240	278
15	298	143	362	344	258	689	387	245	355	420	107	345
16	297	303	338	208	262	480	405	177	373	352	484	339
17	188	305	330	181	266	328	199	253	390	239	570	316
18	134	304	324	423	400	461	189	347	364	132	588	160
19	245	302	157	367	400	242	401	328	228	241	584	99
20	348	306	155	309	212	186	353	325	130	366	545	197
21	291	142	320	290	186	272	360	317	278	619	208	266
22	286	136	318	282	276	327	362	180	363	922	104	280
23	289	300	308	306	274	323	365	143	371	433	450	253
24	133	304	474	980	277	325	148	264	351	282	620	263
25	133	301	399	496	273	317	176	156	358	151	1230	206
26	244	307	178	358	271	303	392	364	223	300	696	99
27	296	308	171	320	164	178	349	148	124	402	667	705
28	295	140	329	271	198	176	395	305	268	534	281	1210
29	299	138	333	296	---	287	406	150	358	543	124	1390
30	296	296	327	176	---	286	535	86	347	451	467	1610
31	193	---	316	167	---	301	---	221	---	264	623	---
TOTAL	7880	7820	9646	9628	7855	8917	10104	7729	8933	11505	13760	14588
MEAN	254	261	311	311	281	288	337	249	298	371	444	486
MAX	459	417	809	980	650	689	535	388	402	922	1230	1610
MIN	102	135	137	150	158	154	148	86	115	132	104	99
(†)	-2143	-2420	-938	+3625	+2349	+2405	+319	+1492	-3998	-4427	-8898	-319
MEAN†	185	180	281	428	364	365	347	297	165	228	157	475
CFSM†	.49	.47	.74	1.13	.96	.96	.91	.78	.43	.60	.41	1.25
IN.†	.56	.53	.85	1.30	1.00	1.11	1.02	.90	.48	.69	.48	1.40

CAL YR 1998 TOTAL 208613 MEAN 572 MAX 3160 MIN 102 MEAN† 566 CFSM† 1.49 IN.† 20.23
WTR YR 1999 TOTAL 118365 MEAN 324 MAX 1610 MIN 86 MEAN† 289 CFSM† .76 IN.† 10.32

† 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.

02073000 SMITH RIVER AT MARTINSVILLE, VA--Continued

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	397	389	436	503	526	628	650	528	484	417	410	436
MAX	1389	1266	988	1000	1212	1735	2206	1138	1467	1174	1032	1624
(WY)	1990	1986	1997	1991	1998	1993	1987	1978	1992	1989	1985	1987
MIN	163	162	203	206	233	233	206	164	144	195	165	205
(WY)	1952	1953	1996	1957	1968	1981	1969	1964	1964	1981	1953	1951

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR	FOR 1999 WATER YEAR	WATER YEARS 1951 - 1999
ANNUAL TOTAL	208613	118365	
ANNUAL MEAN	572	324	483
HIGHEST ANNUAL MEAN			817
LOWEST ANNUAL MEAN			243
HIGHEST DAILY MEAN	3160	Jan 28	1610
LOWEST DAILY MEAN	102	Oct 3	86
ANNUAL SEVEN-DAY MINIMUM	239	Oct 21	204
INSTANTANEOUS PEAK FLOW			3520
INSTANTANEOUS PEAK STAGE			4.93
INSTANTANEOUS LOW FLOW			23
ANNUAL RUNOFF (CFSM)	1.50	.85	1.27
ANNUAL RUNOFF (INCHES)	20.42	11.59	17.28
10 PERCENT EXCEEDS	1150	487	911
50 PERCENT EXCEEDS	402	300	362
90 PERCENT EXCEEDS	173	148	168

