

## ROANOKE RIVER BASIN

02054510 ROANOKE RIVER NEAR WABUN, VA

LOCATION.--Lat 37°14'48", long 87°09'55", Roanoke County, Hydrologic Unit 03010101, on right bank 150 ft downstream from mouth of Dry Hollow, 0.7 mi downstream from bridge on State Highway 5800, 3 mi upstream from Dry Branch, and 5.9 mi southwest of Salem.

DRAINAGE AREA.--273 mi<sup>2</sup>.

PERIOD OF RECORD.--April 1994 to September 1999 (discontinued).

GAGE.--Water-stage recorder. Elevation of gage is 1,140 ft above sea level, from topographic map.

REMARKS.--Records good except for period with ice effect, Jan. 5-7, which is fair. Water is withdrawn upstream for municipal use by Roanoke County, amount unknown. Roanoke County gage-height transmitter at station. Maximum discharge, 15,900 ft<sup>3</sup>/s, from rating curve extended above 1,660 ft<sup>3</sup>/s. Minimum discharge, 24 ft<sup>3</sup>/s, Dec. 30, 1995, gage height, 2.57 ft, result of freezeup. Several observations of water temperature were made during the year.

COOPERATION.--Records were provided by the Virginia Department of Environmental Quality - Water Division.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Apr. 21, 1992, reached a stage of 13.69 ft, from high-water marks in the gage vicinity, from information by local resident, discharge not determined.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,500 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Sep 5	2045	*4,950	*7.72	No other peak greater than base discharge.			

Minimum discharge, 26 ft<sup>3</sup>/s, Aug 19-20.

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	45	50	50	48	83	96	139	152	68	47	52	39
2	44	50	48	45	137	76	166	146	64	45	52	35
3	44	55	47	71	166	104	137	138	68	46	49	34
4	44	57	47	121	129	223	123	130	67	47	45	32
5	44	55	47	e73	100	170	114	120	63	44	41	1630
6	44	52	48	e61	106	183	111	115	61	40	37	2610
7	46	50	48	e74	137	208	105	109	59	38	35	602
8	218	50	50	57	105	168	105	117	56	37	34	254
9	131	49	110	60	85	152	118	118	54	38	33	152
10	79	49	65	125	86	141	128	104	52	36	33	166
11	65	51	56	94	78	118	431	94	52	36	32	99
12	59	55	49	71	83	105	609	89	52	85	31	78
13	55	58	97	90	102	98	394	86	52	139	30	72
14	52	55	114	103	91	110	285	152	51	74	40	69
15	50	53	63	322	87	445	241	224	49	67	39	73
16	50	54	61	245	86	516	261	173	49	58	33	69
17	50	53	53	158	86	451	228	130	54	52	30	67
18	50	52	50	134	300	432	210	98	59	49	28	65
19	50	52	46	116	353	364	193	170	53	47	27	62
20	50	52	46	88	249	272	181	160	52	46	34	59
21	49	54	45	66	191	387	174	119	54	45	47	76
22	48	54	43	63	154	522	162	101	58	62	40	78
23	47	52	43	90	116	384	153	102	54	57	68	70
24	48	52	48	720	103	300	152	103	51	47	188	63
25	49	52	54	467	77	245	147	96	49	43	71	59
26	49	55	50	251	80	201	141	90	49	39	80	56
27	49	58	47	164	78	173	149	84	50	36	70	55
28	49	55	46	115	99	153	158	79	52	39	63	86
29	50	53	50	98	---	141	168	75	50	127	53	116
30	49	52	56	128	---	124	160	72	49	72	46	223
31	50	---	51	113	---	109	---	70	---	65	41	---
TOTAL	1807	1589	1728	4431	3547	7171	5843	3616	1651	1703	1502	7149
MEAN	58.3	53.0	55.7	143	127	231	195	117	55.0	54.9	48.5	238
MAX	218	58	114	720	353	522	609	224	68	139	188	2610
MIN	44	49	43	45	77	76	105	70	49	36	27	32
CFM	.21	.19	.20	.52	.46	.85	.71	.43	.20	.20	.18	.87
IN.	.25	.22	.24	.60	.48	.98	.80	.49	.22	.23	.20	.97

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STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	90.2	135	216	468	543	454	284	241	233	118	139	181
MAX	165	352	679	747	1237	798	643	457	373	183	289	599
(WY)	1997	1997	1997	1996	1998	1998	1998	1998	1995	1995	1996	1996
MIN	55.5	53.0	55.7	143	127	231	104	117	55.0	54.9	48.5	45.9
(WY)	1998	1999	1999	1999	1999	1999	1995	1999	1999	1999	1999	1998

SUMMARY STATISTICS FOR 1998 CALENDAR YEAR FOR 1999 WATER YEAR WATER YEARS 1994 - 1999

ANNUAL TOTAL	128973	41737	
ANNUAL MEAN	353	114	258
HIGHEST ANNUAL MEAN			357
LOWEST ANNUAL MEAN			114
HIGHEST DAILY MEAN	6740	Mar 21	2610
LOWEST DAILY MEAN	41	aSep 16	27
ANNUAL SEVEN-DAY MINIMUM	43	bSep 11	32
INSTANTANEOUS PEAK FLOW			4950
INSTANTANEOUS PEAK STAGE			7.72
INSTANTANEOUS LOW FLOW			26
ANNUAL RUNOFF (CFSM)	1.29	.42	.94
ANNUAL RUNOFF (INCHES)	17.57	5.69	12.82
10 PERCENT EXCEEDS	798	204	495
50 PERCENT EXCEEDS	131	67	130
90 PERCENT EXCEEDS	47	44	52

- a Also Sep 17, 1998.
- b Also Sep 12, 13, 1998.
- c Also Aug 20, 1999.
- d Result of freezeup.
- e Estimated.

