

ROANOKE RIVER BASIN

02054530 ROANOKE RIVER AT GLENVAR, VA

LOCATION.--Lat 37°16'04", long 80°08'23", Roanoke County, Hydrologic Unit 03010101, on left bank 150 ft downstream from bridge on State Highway 1154, 0.2 mi downstream from mouth of Callahan Branch, 0.3 mi south of Glenvar, and 2.5 mi upstream from mouth of Mill Creek.

DRAINAGE AREA.--284 mi².

PERIOD OF RECORD.--December 1991 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 1,100 ft above sea level, from topographic map.

REMARKS.--Records good except for period with ice effect, Jan. 5-8, which is fair. Water is withdrawn upstream for municipal use by Roanoke County, amount unknown. Roanoke County gage-height transmitter at station. Maximum discharge, 19,800 ft³/s, from rating curve extended above 10,900 ft³/s. 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 June 21, 1972, reached a stage of about 20.2 ft, from information by local resident, discharge, about 25,000 ft³/s, from rating curve extended above 10,900 ft³/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Sep 5	2200	*5,050	*8.88	No other peak greater than base discharge.			

Minimum discharge, 27 ft³/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	48	53	52	61	89	101	137	158	72	50	55	39
2	45	52	50	59	129	80	167	148	70	47	55	36
3	44	57	50	77	161	93	132	140	73	49	49	34
4	45	58	51	118	128	226	123	133	71	48	44	33
5	46	56	51	e76	102	168	116	127	66	45	40	1540
6	47	54	52	e63	101	179	110	124	63	40	37	3020
7	49	53	52	e76	128	210	104	118	61	37	34	701
8	220	53	55	e67	107	165	102	125	57	35	34	280
9	145	54	103	74	86	144	114	124	56	37	34	157
10	88	55	78	119	87	137	125	109	53	34	33	181
11	72	55	67	104	80	121	429	103	52	35	32	112
12	64	58	60	85	82	107	680	98	51	76	31	90
13	60	58	98	97	100	99	430	95	51	157	30	84
14	57	57	127	99	92	108	318	155	50	84	37	78
15	54	56	78	259	86	435	273	252	49	74	39	85
16	54	55	77	208	85	559	295	189	49	62	32	83
17	54	53	69	133	86	472	257	141	57	54	30	76
18	53	52	63	114	280	453	231	110	60	50	29	74
19	53	53	60	106	357	368	211	180	53	48	27	69
20	53	53	59	102	256	276	203	168	51	45	33	67
21	51	53	58	82	196	383	187	126	55	45	45	86
22	50	54	57	81	156	553	172	109	61	64	38	87
23	49	53	57	99	118	393	163	109	57	59	34	78
24	50	53	63	762	108	305	160	110	52	47	213	70
25	51	53	69	509	84	253	149	104	50	41	76	65
26	51	56	63	267	86	210	144	97	51	38	87	62
27	51	58	60	173	81	178	155	93	53	36	73	63
28	51	56	60	122	102	154	169	86	52	38	67	96
29	49	53	65	98	---	136	184	82	50	121	55	122
30	50	52	68	122	---	123	172	78	51	76	47	231
31	52	---	64	110	---	110	---	76	---	69	42	---
TOTAL	1906	1636	2036	4522	3553	7299	6212	3867	1697	1741	1512	7799
MEAN	61.5	54.5	65.7	146	127	235	207	125	56.6	56.2	48.8	260
MAX	220	58	127	762	357	559	680	252	73	157	213	3020
MIN	44	52	50	59	80	80	102	76	49	34	27	33
CFM	.22	.19	.23	.51	.45	.83	.73	.44	.20	.20	.17	.92
IN.	.25	.21	.27	.59	.47	.96	.81	.51	.22	.23	.20	1.02

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STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	86.1	139	253	495	586	679	436	308	291	131	130	159
MAX	170	355	715	784	1400	1667	839	610	660	195	295	586
(WY)	1997	1997	1997	1996	1998	1993	1992	1992	1992	1995	1996	1996
MIN	57.6	54.5	65.7	146	127	235	120	125	56.6	56.2	48.8	47.3
(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 1992 - 1999
ANNUAL TOTAL	142172	43780	
ANNUAL MEAN	390	120	300
HIGHEST ANNUAL MEAN			392 1998
LOWEST ANNUAL MEAN			120 1999
HIGHEST DAILY MEAN	7690	Mar 21	3020 Sep 6 8380 Apr 22 1992
LOWEST DAILY MEAN	41	aSep 16	27 Aug 19 1999
ANNUAL SEVEN-DAY MINIMUM	43	bSep 12	32 Aug 13 1999
INSTANTANEOUS PEAK FLOW			5050 Sep 5 19800 Apr 21 1992
INSTANTANEOUS PEAK STAGE			8.88 Sep 5 17.73 Apr 21 1992
INSTANTANEOUS LOW FLOW			27 cAug 19 1999
ANNUAL RUNOFF (CFSM)	1.37	.42	1.06
ANNUAL RUNOFF (INCHES)	18.62	5.73	14.36
10 PERCENT EXCEEDS	894	210	592
50 PERCENT EXCEEDS	132	74	147
90 PERCENT EXCEEDS	50	45	61

- a Also Sep 17, 1998.
- b Also Sep 13, 14, 1998.
- c Also Aug 20, 1999.
- e Estimated.

