

ROANOKE RIVER BASIN

02056000 ROANOKE RIVER AT NIAGARA, VA

LOCATION.--Lat 37°15'18", long 79°52'18", Roanoke County, Hydrologic Unit 03010101, on right bank 200 ft downstream from powerplant of American Electric Power at Niagara, 2 mi downstream from Tinker Creek, 2.1 mi southeast of Vinton, and at mile 355.3.

DRAINAGE AREA.--512 mi².

PERIOD OF RECORD.--July 1926 to current year.

REVISED RECORDS.--WSP 972: 1927(M), 1929(M), 1934(M), 1937(M). WSP 1303: 1928, 1930, 1933-38, 1940. WSP 2104: Drainage area. WDR VA-72-1: 1928(M), 1930(M), 1933(M), 1935-36(M), 1938(M), 1940, 1944-45(M), 1948-49(M), 1951(M), 1955(M), 1960(M), 1967(M), 1969(M).

GAGE.--Water-stage recorder. Datum of gage is 820.15 ft above sea level (levels by U.S. Army Corps of Engineers).

REMARKS.--Records good except for period with ice effect, Jan. 2-6, which is fair. Flow regulated by dam and powerplant 200 ft upstream from station. Maximum discharge, 52,300 ft³/s, from rating curve extended above 12,000 ft³/s on basis of slope- area measurements at gage heights 18.98 ft and 25.30 ft. Minimum gage height, 0.17 ft, Aug. 25, 1971. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

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 6	0315	*5,090	*9.04	No other peak greater than base discharge.			
Minimum discharge, 43 ft ³ /s, Dec 30, gage height, 1.03 ft.							

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	129	144	151	161	314	252	335	293	159	121	188	129
2	129	144	140	e155	372	226	351	278	198	143	165	131
3	109	217	145	e150	372	262	297	266	212	123	160	117
4	127	162	144	e140	334	371	277	264	169	120	140	124
5	129	163	148	e135	297	330	273	245	154	111	146	1190
6	125	155	141	e180	265	315	271	245	146	104	130	4090
7	144	154	140	214	299	355	255	239	135	184	125	1260
8	454	146	208	211	283	332	238	375	133	172	125	569
9	352	152	245	212	234	303	267	250	131	115	127	433
10	231	153	213	238	233	293	280	230	126	92	124	349
11	197	166	171	237	226	276	618	218	120	91	123	278
12	178	148	165	219	214	252	1000	210	122	347	121	228
13	175	155	345	225	232	243	695	229	121	286	108	212
14	158	153	273	242	228	319	539	541	121	200	119	203
15	158	155	208	482	221	759	483	424	119	162	118	235
16	156	146	193	475	213	1020	483	347	117	139	122	246
17	160	150	182	339	222	792	437	302	143	172	118	192
18	154	146	171	348	522	766	400	249	147	388	112	183
19	153	148	166	281	604	659	370	354	135	258	107	178
20	154	148	165	262	467	523	367	329	125	151	215	182
21	145	147	167	242	387	641	348	261	125	230	138	337
22	149	147	171	221	332	907	327	233	130	418	126	252
23	142	149	182	393	280	723	309	218	132	202	151	209
24	144	149	209	1170	266	585	309	226	126	149	292	197
25	150	149	175	962	251	509	285	211	120	153	421	187
26	145	172	186	526	236	436	288	199	119	148	291	167
27	149	151	172	397	226	379	278	200	119	136	186	270
28	149	154	170	318	258	332	382	183	121	205	175	536
29	148	149	175	265	---	304	335	175	120	345	154	419
30	145	147	164	272	---	277	314	168	114	213	144	597
31	142	---	171	268	---	262	---	162	---	184	135	---
TOTAL	5180	4619	5656	9940	8388	14003	11411	8124	4059	5862	4906	13700
MEAN	167	154	182	321	300	452	380	262	135	189	158	457
MAX	454	217	345	1170	604	1020	1000	541	212	418	421	4090
MIN	109	144	140	135	213	226	238	162	114	91	107	117
CFSM	.33	.30	.36	.63	.59	.88	.74	.51	.26	.37	.31	.89
IN.	.38	.34	.41	.72	.61	1.02	.83	.59	.29	.43	.36	1.00

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STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1927 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	352	369	474	640	783	915	827	564	421	292	340	319
MAX	1722	2100	2065	1941	2805	2846	3661	1447	1550	1396	2456	2051
(WY)	1938	1986	1949	1937	1998	1993	1987	1958	1972	1949	1940	1928
MIN	86.0	101	115	110	117	210	157	193	135	109	92.2	84.0
(WY)	1931	1942	1966	1966	1934	1981	1942	1930	1999	1930	1956	1954

SUMMARY STATISTICS FOR 1998 CALENDAR YEAR FOR 1999 WATER YEAR WATER YEARS 1927 - 1999

ANNUAL TOTAL	281779	95848	
ANNUAL MEAN	772	263	523
HIGHEST ANNUAL MEAN			984 1949
LOWEST ANNUAL MEAN			198 1981
HIGHEST DAILY MEAN	12600	Mar 21	4090 Sep 6 19700 Nov 4 1985
LOWEST DAILY MEAN	109	Oct 3	91 Jul 11 8.0 Oct 9 1954
ANNUAL SEVEN-DAY MINIMUM	127	Sep 27	115 Aug 13 67 Jan 28 1966
INSTANTANEOUS PEAK FLOW			5090 Sep 6 52300 Nov 4 1985
INSTANTANEOUS PEAK STAGE			9.04 Sep 6 a25.30 Nov 4 1985
INSTANTANEOUS LOW FLOW			b43 Dec 30 1.0 cOct 16 1956
ANNUAL RUNOFF (CFSM)	1.51		.51 1.02
ANNUAL RUNOFF (INCHES)	20.47		6.96 13.88
10 PERCENT EXCEEDS	1540		428 988
50 PERCENT EXCEEDS	330		203 311
90 PERCENT EXCEEDS	144		125 136

- a From floodmark.
- b Result of regulation.
- c Also Oct 20, 1956, and Nov 25, 26, 1990.
- e Estimated.

