

ROANOKE RIVER BASIN

02054500 ROANOKE RIVER AT LAFAYETTE, VA

LOCATION.--Lat 37°14'11", long 80°12'34", Montgomery County, Hydrologic Unit 03010101, on right bank 120 ft upstream from bridge on State Highway 603 at Lafayette, 0.4 mi downstream from confluence of North and South Forks, and 1.1 mi upstream from Cove Hollow.

DRAINAGE AREA.--257 mi².

PERIOD OF RECORD.--September 1943 to current year.

REVISED RECORDS.--WSP 1333: 1944-47(M), 1948-49.

GAGE.--Water-stage recorder. Datum of gage is 1,174.47 ft above sea level. Prior to July 30, 1949, nonrecording gage at same site and datum.

REMARKS.--Records good except for period with ice effect, Jan. 6, which is fair. Occasional diurnal fluctuation caused by meat-processing plant upstream from station. Virginia Department of Emergency Services gage-height radio transmitter at station. Maximum discharge, 24,500 ft³/s, from rating curve extended above 12,000 ft³/s on basis of slope-area measurement of peak flow. Minimum discharge, 8.0 ft³/s, Jan. 19, 1959, gage height, 0.60 ft, result of freezeup. 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 OUTSIDE PERIOD OF RECORD.--Flood in August 1940 reached a stage of 12.2 ft, from information by local residents, discharge, 19,000 ft³/s, from rating curve extended above 12,000 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	2015	*4,250	*7.01	No other peak greater than base discharge.			

Minimum discharge, 27 ft³/s, Aug 19.

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	47	51	44	50	80	95	127	139	61	39	48	35
2	44	49	42	44	165	85	138	131	59	39	49	34
3	44	53	42	77	178	113	117	124	65	38	44	31
4	45	54	43	104	140	217	110	119	60	41	40	31
5	46	51	44	60	114	170	104	115	56	36	37	1630
6	46	50	45	e53	100	175	100	111	54	33	34	2330
7	49	48	44	68	94	193	94	106	52	30	33	646
8	239	47	50	61	91	168	90	117	49	32	32	293
9	122	48	103	74	82	157	89	109	47	30	32	204
10	83	48	69	108	76	145	94	99	46	29	32	215
11	69	50	53	82	70	126	495	93	44	32	31	139
12	61	55	48	73	69	116	605	88	45	93	30	108
13	58	52	109	85	72	107	370	85	43	137	28	91
14	55	49	117	99	63	128	283	168	41	74	44	81
15	53	49	75	371	60	488	259	210	40	60	36	78
16	53	48	62	204	60	521	254	157	42	50	31	85
17	52	48	55	133	61	482	215	132	51	45	30	73
18	51	47	50	121	324	449	195	121	50	42	29	65
19	51	47	48	115	333	343	179	186	44	42	27	62
20	50	48	47	95	224	254	174	145	43	39	38	61
21	49	47	46	84	167	413	160	120	49	42	47	93
22	48	46	45	77	130	529	149	108	51	59	38	88
23	47	46	45	140	110	381	143	100	46	48	114	70
24	49	46	54	793	103	302	141	96	43	40	181	63
25	48	45	55	420	97	244	132	90	43	36	88	57
26	48	50	50	235	90	199	130	85	44	34	108	54
27	48	51	48	155	82	169	138	80	44	31	75	57
28	47	47	49	120	92	147	156	73	44	44	57	122
29	48	46	55	100	---	131	160	69	44	137	48	164
30	49	44	56	87	---	118	150	66	41	87	42	270
31	51	---	50	77	---	107	---	63	---	57	37	---
TOTAL	1850	1460	1743	4365	3327	7272	5551	3505	1441	1576	1540	7330
MEAN	59.7	48.7	56.2	141	119	235	185	113	48.0	50.8	49.7	244
MAX	239	55	117	793	333	529	605	210	65	137	181	2330
MIN	44	44	42	44	60	85	89	63	40	29	27	31
CFSM	.23	.19	.22	.55	.46	.91	.72	.44	.19	.20	.19	.95
IN.	.27	.21	.25	.63	.48	1.05	.80	.51	.21	.23	.22	1.06

02054500 ROANOKE RIVER AT LAFAYETTE, VA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1944 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	136	170	227	313	398	471	414	284	185	114	112	123
MAX	603	770	913	682	1214	1309	1497	716	791	590	551	570
(WY)	1977	1978	1949	1947	1998	1993	1987	1978	1972	1949	1948	1989
MIN	36.7	44.1	47.0	52.0	83.4	103	102	99.1	48.0	43.2	37.0	29.4
(WY)	1954	1954	1964	1981	1959	1981	1966	1963	1999	1963	1963	1954

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR	FOR 1999 WATER YEAR	WATER YEARS 1944 - 1999
ANNUAL TOTAL	128299	40960	
ANNUAL MEAN	352	112	245
HIGHEST ANNUAL MEAN			442
LOWEST ANNUAL MEAN			87.0
HIGHEST DAILY MEAN	5040	Mar 21	2330
LOWEST DAILY MEAN	40	Sep 16	27
ANNUAL SEVEN-DAY MINIMUM	42	Sep 12	31
INSTANTANEOUS PEAK FLOW			4250
INSTANTANEOUS PEAK STAGE			7.01
INSTANTANEOUS LOW FLOW			27
ANNUAL RUNOFF (CFSM)	1.37	.44	15.60
ANNUAL RUNOFF (INCHES)	18.57	5.93	12.95
10 PERCENT EXCEEDS	846	201	497
50 PERCENT EXCEEDS	126	63	134
90 PERCENT EXCEEDS	46	40	50

- a Also Jan 15, 18, 19, 1959.
- b From high-water mark in gage house.
- c Result of freezeup.
- e Estimated.

