

02080500 ROANOKE RIVER AT ROANOKE RAPIDS, NC

Roanoke Basin
Lower Roanoke Subbasin

LOCATION.--Lat 36°27'36", long 77°38'01" referenced to North American Datum of 1983, Halifax County, NC, Hydrologic Unit 03010107, on right bank 1.2 mi downstream of bridge on State Highway 48 at Roanoke Rapids, 2.5 mi upstream from Chockoyotte Creek, 2.8 mi downstream of Roanoke Rapids dam, and 133.6 mi upstream from mouth in Albemarle Sound.

DRAINAGE AREA.--8,384 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--December 1911 to current year. Prior to January 1933, published as "Roanoke River at Old Gaston". Records published for both sites February 1930 to December 1932. Gage-height records collected at site of auxiliary gage since November 1890 are contained in reports of National Weather Service, NOAA, U.S. Department of Commerce.

REVISED RECORDS.--WSP 712: 1930. WSP 822: 1936. WSP 1032: 1912, 1928(M), 1930(M), 1932-33(M). WSP 1433: 1912-23, 1925-28, 1930, 1932-33, 1935, 1937-39. WSP 1904: 1958, 1960. WDR NC-83-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 43.84 ft above NGVD of 1929. December 7, 1911, to November 21, 1921, and April 7 to December 31, 1932, nonrecording gage and November 21, 1921, to April 7, 1932, water-stage recorder, both at site 9 mi upstream at different datum. August 6, 1941, to March 1, 1973, auxiliary water-stage recorder, 3.6 mi downstream of base gage. Satellite telemetry at station.

REMARKS.--No estimated daily discharges. Records good. Flow regulated since August 1950 by Philpott Lake on Smith River, usable capacity, 6,325,000,000 ft³; since September 1950 by John H. Kerr Reservoir, usable capacity, 101,247,000,000 ft³; since June 1955 by Roanoke Rapids Lake; since September 1962 by Leesville Lake; since October 1962 by Lake Gaston; and since September 1963 by Smith Mountain Lake. Prior to regulation, maximum discharge: 261,000 ft³/s, August 18, 1940; gage height: 39.0 ft, from floodmarks; minimum discharge: about 250 ft³/s, December 16, 1955.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in November 1877, discharge, 212,000 ft³/s, reached a stage about 2 ft lower at Old Gaston than flood in August 1940 which was 21.5 ft. Flood in August 1940 is the maximum known since at least 1771.

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008
DAILY MEAN VALUES

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	2,210	2,700	2,120	2,120	3,260	2,450	3,990	7,910	6,680	2,390	4,090	2,260
2	2,160	1,660	2,110	2,130	2,460	2,490	3,860	7,910	6,720	2,250	2,330	2,280
3	2,500	1,570	2,100	4,020	2,520	2,530	3,920	7,910	6,750	6,230	2,290	6,090
4	3,030	1,580	2,120	3,300	2,550	2,480	3,930	7,900	6,720	2,270	2,290	6,440
5	1,570	2,110	2,130	6,940	2,570	2,480	4,510	9,240	6,680	5,470	3,860	5,160
6	1,530	1,530	2,440	2,190	2,550	2,490	4,470	10,300	6,820	4,670	4,380	2,480
7	1,530	2,000	2,440	2,850	2,500	2,570	4,500	10,300	6,210	2,330	4,640	2,410
8	1,880	2,700	2,170	2,080	2,660	2,400	4,540	10,400	6,030	5,360	3,100	2,410
9	2,080	2,010	2,100	2,100	2,670	2,390	4,520	10,200	5,070	3,060	2,370	2,410
10	2,130	1,540	2,080	2,060	2,700	2,460	11,500	10,200	4,530	5,350	2,350	2,380
11	1,590	1,550	2,060	2,090	2,750	2,430	12,100	10,300	4,000	5,400	2,340	2,370
12	1,620	1,550	2,080	2,090	2,790	2,430	12,200	9,600	4,070	2,300	2,340	2,380
13	1,840	1,600	3,480	2,080	2,760	2,430	12,200	9,430	4,030	2,290	3,110	2,390
14	1,820	1,550	2,460	2,070	2,650	2,400	12,200	9,990	4,040	2,340	6,140	2,410
15	1,530	1,570	2,180	2,980	2,610	2,310	12,200	10,000	4,060	3,280	3,750	11,000
16	1,520	2,410	2,410	2,630	2,600	2,310	12,300	11,700	4,490	2,310	2,400	2,430
17	1,510	2,060	4,380	3,300	2,630	2,320	12,200	12,300	2,980	6,220	2,380	2,150
18	1,900	2,050	5,960	3,080	2,680	2,310	12,200	12,300	2,980	5,010	3,170	2,150
19	1,660	2,090	2,130	2,600	2,650	2,810	10,400	12,400	3,010	2,280	5,510	2,080
20	1,830	2,360	2,120	2,610	2,770	2,340	10,500	12,500	2,980	2,240	3,990	2,050
21	1,820	2,200	2,150	4,200	2,720	2,320	9,140	12,500	2,830	7,030	2,240	2,020
22	2,730	2,200	2,140	3,380	2,840	2,310	8,250	12,500	2,800	10,100	2,210	8,210
23	2,260	2,150	2,120	2,570	2,430	2,330	7,730	12,500	2,800	10,400	2,200	2,360
24	4,210	2,160	2,120	2,590	2,420	2,350	7,790	11,300	2,850	4,940	2,220	2,030
25	2,220	2,150	2,120	2,620	2,430	2,360	7,730	11,200	2,820	2,260	2,230	2,020
26	1,580	3,300	2,170	2,610	2,430	3,700	7,710	9,730	2,890	2,280	2,230	2,110
27	1,930	2,280	2,160	2,580	2,400	2,640	7,790	9,790	3,010	2,290	2,240	2,080
28	1,860	2,140	2,190	2,630	2,430	2,310	7,860	8,240	3,010	2,280	2,260	2,030
29	2,370	2,140	2,180	2,660	2,430	2,300	7,830	8,130	2,930	2,960	3,120	8,150
30	3,600	2,130	2,180	2,630	---	2,330	7,830	8,090	2,990	3,830	2,260	3,370
31	2,680	---	2,150	2,670	---	3,840	---	6,680	---	7,500	2,260	---
Total	64,700	61,040	74,750	86,460	75,860	77,620	247,900	313,450	127,780	128,920	92,300	100,110
Mean	2,087	2,035	2,411	2,789	2,616	2,504	8,263	10,110	4,259	4,159	2,977	3,337
Max	4,210	3,300	5,960	6,940	3,260	3,840	12,300	12,500	6,820	10,400	6,140	11,000
Min	1,510	1,530	2,060	2,060	2,400	2,300	3,860	6,680	2,800	2,240	2,200	2,020

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2008^a, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	5,681	6,230	7,694	9,606	9,983	10,310	11,260	10,040	7,439	6,117	5,244	5,341
Max	20,360	17,690	18,380	17,850	26,800	27,350	32,660	31,750	23,040	22,870	15,180	25,970
(WY)	(1980)	(1986)	(1973)	(1991)	(1998)	(1998)	(1993)	(1978)	(2003)	(2003)	(2003)	(1996)
Min	2,031	1,987	2,046	2,037	2,014	1,910	1,951	2,446	2,365	2,581	2,519	2,186
(WY)	(1971)	(1987)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)	(1977)	(1970)	(1993)	(1968)

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SUMMARY STATISTICS

	Calendar Year 2007		Water Year 2008		Water Years 1964 - 2008 ^a	
Annual total	2,075,450		1,450,890			
Annual mean	5,686		3,964		7,784	
Highest annual mean					15,330	2003
Lowest annual mean					2,361	2002
Highest daily mean	22,300	Jan 6	12,500	May 20	36,000	Sep 11, 1996
Lowest daily mean	1,510	Oct 17	1,510	Oct 17	818	Nov 15, 1970
Annual seven-day minimum	1,620	Nov 9	1,620	Nov 9	989	Nov 5, 1986
Maximum peak flow			22,700	Sep 15	37,700	Apr 16, 1993
Maximum peak stage			8.75	Sep 15	11.87	Apr 16, 1993
Instantaneous low flow			1,450	Oct 22	760	Nov 23, 1970
10 percent exceeds	15,800		9,300		18,700	
50 percent exceeds	2,910		2,540		5,880	
90 percent exceeds	1,950		2,060		2,030	

^aRegulated period only (1964-2008). See Remarks.

