

02080500 ROANOKE RIVER AT ROANOKE RAPIDS, NC

LOCATION.--Lat 36°27'36", long 77°38'01", Halifax County, 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.

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. Dec. 7, 1911, to Nov. 21, 1921, and Apr. 7 to Dec. 31, 1932, nonrecording gage and Nov. 21, 1921, to Apr. 7, 1932, water-stage recorder, both at site 9 mi upstream at different datum. Aug. 6, 1941, to Mar. 1, 1973, auxiliary water-stage recorder, 3.6 mi downstream of base gage. Satellite telemetry at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. 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 (station 02080100); since September 1962 by Leesville Lake; since October 1962 by Lake Gaston (station 02079964); and since September 1963 by Smith Mountain Lake. Prior to regulation, maximum discharge: 261,000 ft³/s, Aug. 18, 1940; gage height: 39.0 ft, from floodmarks; minimum discharge: about 250 ft³/s, Dec. 16, 1955. Minimum discharge for current water year also occurred Sept. 29.

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.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11,300	8,200	14,400	13,300	9,960	6,090	19,000	7,600	6,590	2,790	2,840	2,930
2	11,500	8,160	14,300	12,600	5,330	7,560	18,600	7,610	6,600	2,920	3,000	3,230
3	e12,300	8,340	13,300	15,800	5,000	8,090	18,500	7,620	6,590	3,010	3,890	3,250
4	11,300	7,800	9,960	12,700	7,410	8,140	18,500	7,620	6,580	2,920	3,580	3,500
5	10,700	8,050	9,580	14,000	7,080	7,820	18,500	7,620	6,580	4,410	3,200	3,510
6	10,700	5,800	9,630	15,900	7,550	8,270	18,700	7,670	6,600	4,120	3,120	3,470
7	11,000	6,090	9,450	12,300	8,070	8,240	18,800	7,650	6,600	3,410	3,190	3,480
8	10,900	6,390	9,740	11,300	7,350	8,230	18,800	7,620	6,610	3,220	2,930	3,480
9	11,100	6,630	13,200	11,200	7,510	8,440	14,400	7,570	6,620	2,740	2,900	3,060
10	9,580	6,680	13,000	11,000	7,500	8,220	14,300	7,650	6,600	2,750	3,270	2,590
11	11,000	6,850	13,700	8,280	7,280	8,580	9,890	7,660	6,970	7,740	6,030	2,680
12	10,600	6,840	13,600	5,720	7,350	7,750	9,740	7,650	7,000	6,550	4,930	2,760
13	11,100	5,410	14,000	6,980	7,340	8,090	8,360	7,670	6,980	8,420	5,860	2,690
14	10,900	5,260	15,700	8,880	5,010	8,030	8,090	6,770	6,980	8,680	7,210	2,690
15	11,100	7,250	15,100	8,090	5,630	8,040	8,100	6,620	7,000	8,470	7,620	2,840
16	e12,400	8,320	14,900	8,660	7,040	8,030	8,170	6,770	8,900	7,910	3,850	2,640
17	e12,500	8,470	15,900	8,850	7,090	8,030	8,150	6,740	5,580	7,020	3,520	4,970
18	e12,300	7,870	14,500	9,090	7,070	8,010	8,140	6,670	2,960	7,720	4,490	2,610
19	11,300	8,010	15,700	13,800	7,310	15,100	8,130	6,680	3,000	7,850	3,880	3,580
20	11,300	5,030	15,900	14,200	7,290	15,100	8,180	6,670	6,400	8,220	4,410	4,090
21	11,300	7,980	16,000	17,400	3,940	15,100	8,220	6,620	6,400	8,050	4,180	2,250
22	11,300	6,840	15,800	17,400	4,060	15,200	8,270	6,610	6,430	5,090	4,290	3,570
23	10,800	8,390	16,100	17,500	4,040	8,620	8,300	6,570	7,040	3,160	4,070	4,250
24	11,200	9,210	16,200	17,500	7,480	8,170	8,260	6,560	7,130	3,340	3,440	2,980
25	13,100	8,690	16,100	17,500	5,410	8,160	8,290	6,570	2,980	2,850	3,470	2,920
26	10,800	8,770	16,100	14,600	3,350	8,150	8,120	6,580	3,010	3,470	3,430	7,220
27	11,300	8,610	16,200	14,800	3,720	8,200	8,110	6,560	2,990	6,900	3,760	2,830
28	11,300	8,760	16,200	15,100	5,470	8,130	8,080	6,550	2,990	3,510	3,460	2,830
29	11,400	8,180	15,700	10,900	---	12,900	7,950	6,520	3,090	3,470	3,250	2,810
30	8,910	8,130	13,900	9,830	---	19,600	7,590	6,520	2,980	3,060	3,160	2,820
31	8,030	---	15,500	9,930	---	19,000	---	6,570	---	2,970	2,970	---
TOTAL	344,320	225,010	439,360	385,110	178,640	305,090	344,240	218,360	172,780	156,740	123,200	98,530
MEAN	11,110	7,500	14,170	12,420	6,380	9,842	11,470	7,044	5,759	5,056	3,974	3,284
MAX	13,100	9,210	16,200	17,500	9,960	19,600	19,000	7,670	8,900	8,680	7,620	7,220
MIN	8,030	5,030	9,450	5,720	3,350	6,090	7,590	6,520	2,960	2,740	2,840	2,250
†	-3,465	+3,749	-2,220	-1,891	+1,409	+4,528	-2,292	-1,087	-1,344	+198	-738	-2,197

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2005,* BY WATER YEAR (WY)

MEAN	5,801	6,296	7,625	9,625	10,370	10,760	11,470	10,280	7,708	6,186	5,382	5,509
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	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1964 - 2005*	
ANNUAL TOTAL	3,259,120		2,991,380		7,953 (UNADJUSTED)	
ANNUAL MEAN	8,905		8,196		2,361 2003	
HIGHEST ANNUAL MEAN			‡7736		2,361 2002	
LOWEST ANNUAL MEAN					36,000 Sep 11, 1996	
HIGHEST DAILY MEAN	20,500	Jan 1	19,600	Mar 30	818 Nov 15, 1970	
LOWEST DAILY MEAN	2,070	Mar 30	2,250	Sep 21	989 Nov 5, 1986	
ANNUAL SEVEN-DAY MINIMUM	2,260	Mar 25	2,700	Sep 10	37,700 Apr 16, 1993	
MAXIMUM PEAK FLOW			19,800	Dec 18	11.87 Apr 16, 1993	
MAXIMUM PEAK STAGE			8.75	Dec 18	760 Nov 23, 1970	
INSTANTANEOUS LOW FLOW			1,720	Sep 28		
10 PERCENT EXCEEDS	15,200		15,100		18,900	
50 PERCENT EXCEEDS	8,180		7,650		6,040	
90 PERCENT EXCEEDS	3,820		3,040		2,020	

† Change in contents, equivalent in cubic feet per second, in Leesville and Smith Mountain Lakes, provided by Appalachian Power Co.; Philpott and Kerr Reservoirs, provided by U.S. Army Corps of Engineers; and Lake Gaston and Roanoke Rapids Lake, provided by North Carolina Power Company.

* Regulated period only (1964-2005). See REMARKS.

‡ Adjusted for change in contents.

e Estimated.

