

02087183 NEUSE RIVER NEAR FALLS, NC

LOCATION.--Lat 35°56'26", long 78°34'55", Wake County, Hydrologic Unit 03020201, on right bank 300 ft downstream of Falls Lake Dam, and 0.3 mi northwest of Falls.

DRAINAGE AREA.--771 mi².

PERIOD OF RECORD.--July 1970 to current year.

REVISED RECORDS.--WDR NC-91-1: Drainage area. WRD NC 96-1: 1991-95 (M).

GAGE.--Water-stage recorder. Datum of gage is 194.69 ft above NGVD of 1929. Prior to Oct. 1, 1990, water-stage recorder at site 0.4 mi downstream at 182.62 ft. U.S. Army Corps of Engineers satellite telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow regulated by Falls Lake (station 02087182). June 5, 1980, to May 6, 1981, flows affected by incidental storage in Falls Lake, under construction; May 6, 1981, to Jan. 13, 1983, gates closed and Falls Lake partially filled to provide storage for City of Raleigh water supply; Jan. 13, 1983, gates closed and normal pool elevation, 250.1 ft, reached Dec. 7, 1983. The City of Raleigh diverted an average of 76.8 ft³/s, 1.2 mi upstream from station for municipal water supply, most of which was returned downstream as treated effluent. Prior to regulation, maximum discharge: 13,600 ft³/s, July 17, 1975; gage height: 25.21 ft; minimum discharge: 4.6 ft³/s, Sept. 24, 1980; gage height: 2.13 ft, at site then in use. Maximum gage-height and discharge for period of record may have been higher during period of estimated record, Aug. 27-Sept. 30, 1996. Minimum discharge for period of record not determined due to intermittent gate closure at dam. Minimum discharge for current water occurred several days.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in September 1945 reached an elevation of 216.1 ft; discharge, 23,300 ft³/s at bridge 0.4 mi upstream, from information provided by the U.S. Army Corps of Engineers.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	125	1,650	210	1,370	497	344	3,640	3,740	4,020	164	265	183
2	125	2,140	183	1,360	496	646	3,630	3,330	3,990	164	213	184
3	125	2,130	151	1,380	654	1,830	3,620	2,420	3,640	436	214	186
4	115	2,110	152	1,370	1,010	2,640	3,690	1,580	2,850	1,070	214	187
5	109	2,110	152	1,370	1,400	2,070	3,740	918	1,870	1,360	215	188
6	109	1,570	153	1,370	2,040	582	3,730	641	1,350	1,950	216	189
7	110	1,050	155	758	2,030	348	2,060	642	1,350	3,040	217	190
8	110	1,040	155	188	2,040	348	681	643	1,350	3,010	217	190
9	110	1,040	271	189	2,040	1,110	693	621	2,060	3,010	218	192
10	110	1,040	1,270	188	2,040	2,250	706	558	3,000	1,290	220	192
11	113	1,040	2,110	188	2,220	3,130	715	543	3,010	209	334	193
12	119	1,040	2,100	189	2,350	3,630	719	544	1,950	209	488	193
13	122	1,050	2,120	189	2,340	3,630	1,420	544	773	209	763	193
14	122	1,340	2,130	189	1,380	3,600	2,580	434	775	210	1,270	192
15	122	1,520	2,150	189	363	3,230	3,340	369	775	210	1,000	192
16	122	1,500	2,310	189	365	2,220	4,630	305	777	210	1,110	192
17	122	1,490	2,990	189	365	2,920	5,820	241	1,130	210	2,190	192
18	122	1,870	3,140	189	935	3,660	5,870	242	1,570	471	2,160	193
19	122	2,110	3,110	189	1,660	3,300	5,860	467	1,270	723	2,160	193
20	122	2,100	3,120	189	1,860	1,110	5,800	764	786	616	2,130	193
21	446	2,100	3,100	189	1,440	186	5,760	882	788	332	2,120	193
22	930	1,800	3,100	189	488	189	5,730	532	785	293	1,680	193
23	1,420	1,380	3,090	190	494	189	5,260	192	786	212	743	195
24	925	1,380	2,550	189	1,550	1,090	4,680	468	e500	212	433	1,010
25	258	1,000	2,200	189	2,390	2,550	4,600	962	395	247	288	1,830
26	155	645	2,220	189	2,120	3,140	4,610	1,840	315	333	182	1,530
27	155	484	2,690	190	1,540	3,350	4,580	2,870	248	332	182	1,400
28	155	209	3,060	189	834	3,350	4,520	3,410	248	333	182	1,400
29	155	209	3,060	189	---	3,340	4,170	3,820	248	333	183	1,400
30	544	210	3,060	190	---	2,030	3,750	4,030	196	334	183	1,230
31	1,400	---	2,120	282	---	2,310	---	4,020	---	334	183	---
TOTAL	8,899	40,357	58,382	13,607	38,941	64,322	110,604	42,572	42,805	22,066	22,173	14,188
MEAN	287	1,345	1,883	439	1,391	2,075	3,687	1,373	1,427	712	715	473
MAX	1,420	2,140	3,140	1,380	2,390	3,660	5,870	4,030	4,020	3,040	2,190	1,830
MIN	109	209	151	188	363	186	681	192	196	164	182	183
†	+1,500	-377	+16	+149	+649	+736	-1,070	+74	-620	+69	-65	+48

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 2003,* BY WATER YEAR (WY)

MEAN	419	389	541	800	1,216	1,603	1,269	551	340	323	306	418
MAX	3,217	1,535	1,883	2,014	3,462	3,992	3,687	1,821	1,427	1,501	1,099	3,953
(WY)	(2000)	(1996)	(2003)	(1984)	(1998)	(1989)	(2003)	(1989)	(2003)	(1995)	(1989)	(1996)
MIN	72.6	65.2	63.3	66.3	67.0	68.4	118	110	126	61.7	61.0	67.8
(WY)	(1984)	(1984)	(1992)	(2002)	(2002)	(2002)	(1995)	(1995)	(1987)	(1983)	(1983)	(1985)

02087183 NEUSE RIVER NEAR FALLS, NC—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1983 - 2003*	
ANNUAL TOTAL	141,770		478,916		678 (UNADJUSTED)	
ANNUAL MEAN	388		1,312 ‡1,400		1,312 2003	
HIGHEST ANNUAL MEAN					123 2002	
LOWEST ANNUAL MEAN					7,420 Sep 16, 1996	
HIGHEST DAILY MEAN	3,140	Dec 18	5,870	Apr 18	55 Jan 10, 1995	
LOWEST DAILY MEAN	65	Jan 1	109	Oct 5	56 Jan 10, 1995	
ANNUAL SEVEN-DAY MINIMUM	65	Jan 4	110	Oct 5	7,650* Sep 16, 1996	
MAXIMUM PEAK FLOW			5,960*	Apr 17	8.05* Sep 16, 1996	
MAXIMUM PEAK STAGE			5.56	Apr 17	NOT DETERMINED	
INSTANTANEOUS LOW FLOW			NOT DETERMINED		NOT DETERMINED	
10 PERCENT EXCEEDS	1,410		3,340		2,290	
50 PERCENT EXCEEDS	146		775		179	
90 PERCENT EXCEEDS	67		183		85	

e Estimated.

* Regulated period only (1983-2003). See REMARKS.

† Change in contents, equivalent in cubic feet per second, in Falls Reservoir, provided by U.S. Army Corps of Engineers.

‡ Adjusted for change in contents.

