

02087183 NEUSE RIVER NEAR FALLS, NC

LOCATION.--Lat 35°56'25", long 78°34'56", 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 sea level. 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 fair 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 85.7 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 also occurred on Dec. 15, due to gate closure.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in September 1945 reached a stage 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 2000 TO SEPTEMBER 2001
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	142	127	130	138	137	142	232	192	213	149	138	141
2	138	128	136	138	137	140	390	193	245	179	140	146
3	138	124	138	138	137	139	578	195	517	205	164	147
4	145	121	e138	138	137	139	812	197	717	208	191	146
5	144	139	e136	138	137	320	1610	198	375	155	191	146
6	144	145	e134	138	137	495	2630	198	149	119	211	147
7	143	144	132	139	137	527	3290	195	148	124	218	172
8	141	144	131	139	137	543	3430	192	149	125	219	189
9	141	146	130	139	138	536	3440	192	192	140	219	192
10	139	142	128	139	138	580	3420	192	219	148	219	e195
11	138	138	131	139	137	340	3480	192	219	148	219	160
12	133	135	133	138	137	167	3510	191	218	147	222	137
13	124	133	130	138	137	165	3500	189	216	148	399	136
14	125	128	99	137	138	156	3490	187	169	149	1090	165
15	124	125	89	138	138	153	3540	186	141	152	1930	241
16	124	125	130	137	139	148	3550	186	140	153	1340	258
17	123	129	131	135	139	146	3520	185	140	153	501	231
18	127	128	132	136	139	147	3230	185	140	155	225	197
19	126	127	133	136	140	150	1770	183	144	157	228	197
20	125	125	133	137	142	228	852	184	143	177	230	200
21	125	125	133	137	143	263	716	156	150	219	234	201
22	126	126	133	136	143	266	2050	139	155	219	190	198
23	127	127	133	136	142	434	2360	140	154	221	156	208
24	126	126	133	136	143	910	2000	140	153	224	154	216
25	132	128	133	137	144	1960	1990	141	152	203	154	152
26	131	130	133	136	142	2480	1780	159	152	181	152	e110
27	131	129	134	136	142	2790	829	170	149	158	153	155
28	131	128	135	136	142	1890	240	171	146	135	153	243
29	130	129	136	137	---	354	242	171	147	135	146	267
30	128	130	134	137	---	227	212	160	148	135	153	268
31	127	---	136	138	---	231	---	148	---	137	141	---
TOTAL	4098	3931	4047	4257	3899	17166	62693	5507	6100	5058	10080	5561
MEAN	132	131	131	137	139	554	2090	178	203	163	325	185
MAX	145	146	138	139	144	2790	3550	198	717	224	1930	268
MIN	123	121	89	135	137	139	212	139	140	119	138	110
†	-203	-97	-14	-7	310	1381	-1377	-109	83	107	-137	-162

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 2001,* BY WATER YEAR (WY)

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
MEAN	439	353	496	857	1267	1659	1200	529	291	312	293	430							
MAX	3217	1535	1818	2014	3462	3992	2586	1821	735	1501	1099	3953							
(WY)	2000	1996	1986	1984	1998	1989	1984	1989	1984	1995	1989	1996							
MIN	72.6	65.2	63.3	102	139	233	118	110	126	61.7	61.0	67.8							
(WY)	1984	1984	1992	1994	2001	1988	1995	1995	1987	1983	1983	1985							

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SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1983 - 2001*	
ANNUAL TOTAL	195090		132397		674 (UNADJUSTED)	
ANNUAL MEAN	533		363		1161 1984	
HIGHEST ANNUAL MEAN			†346		205 1988	
HIGHEST DAILY MEAN	2750	Feb 19	3550	Apr 16	7420	Sep 16 1996
LOWEST DAILY MEAN	89	Dec 15	89	Dec 15	55	Jan 10 1995
ANNUAL SEVEN-DAY MINIMUM	120	Dec 9	120	Dec 9	56	Jan 10 1995
MAXIMUM PEAK FLOW			3790	Apr 15	7650*	Sep 16 1996
MAXIMUM PEAK STAGE			3.97	Apr 15	8.05*	Sep 16 1996
INSTANTANEOUS LOW FLOW			37*	Dec 14	NOT DETERMINED	
10 PERCENT EXCEEDS	1880		539		2300	
50 PERCENT EXCEEDS	155		146		179	
90 PERCENT EXCEEDS	128		128		97	

e Estimated.

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

* For regulated period only (1983-2001). See REMARKS.

‡ Adjusted for change in contents.

