

Water-Data Report 2007

02087183 NEUSE RIVER NEAR FALLS, NC

Neuse Basin
Upper Neuse Subbasin

LOCATION.--Lat 35°56'24", long 78°34'51" referenced to North American Datum of 1983, Wake County, NC, Hydrologic Unit 03020201, on right bank 300 ft downstream from Falls Lake Dam, and 0.3 mi northwest of Falls.

DRAINAGE AREA.--771 mi².

SURFACE-WATER RECORDS

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.--No estimated daily discharges. Records good. 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 January 13, 1983, gates closed and Falls Lake partially filled to provide storage for City of Raleigh water supply; January 13, 1983, gates closed and normal pool elevation, 250.1 ft, reached December 7, 1983. The City of Raleigh diverted an average of 79.3 ft³/s, 1.2 mi upstream from station for municipal water supply, of which an average of 67.1 ft³/s 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, September 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, August 27-September 30, 1996. Minimum discharge for period of record not determined due to intermittent gate closure at dam.

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.

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007
DAILY MEAN VALUES

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	119	99	3,720	1,500	322	636	356	325	137	144	118	186
2	120	100	3,710	1,490	323	797	358	323	159	125	134	176
3	120	98	3,690	1,490	323	1,010	359	323	186	114	151	171
4	121	98	3,670	1,490	324	1,010	360	271	176	148	166	171
5	127	98	3,650	1,180	325	1,220	315	167	167	188	166	172
6	135	80	3,640	892	324	1,670	246	168	140	197	166	171
7	134	64	3,610	893	325	1,670	247	169	122	186	166	171
8	134	65	3,590	897	324	1,250	246	168	123	188	167	171
9	136	65	3,570	1,600	325	638	196	167	141	188	190	171
10	120	64	2,930	2,670	324	637	153	167	150	189	203	171
11	103	64	1,410	2,950	323	639	154	166	150	196	189	169
12	103	65	328	2,900	324	639	345	166	150	149	187	168
13	103	721	151	2,920	325	500	639	166	138	114	198	168
14	103	2,090	152	2,890	329	332	637	246	132	141	199	169
15	103	1,630	152	2,690	611	333	642	342	132	158	200	122
16	102	633	151	1,930	825	336	653	343	131	157	198	105
17	121	712	151	1,040	823	338	967	224	131	157	196	130
18	125	1,480	152	812	827	339	2,120	158	128	122	196	147
19	98	2,010	152	513	818	991	2,680	158	127	92	195	131
20	100	2,470	151	334	821	1,750	2,750	157	127	93	195	105
21	98	1,360	151	333	820	1,730	2,720	157	126	93	194	113
22	98	243	153	336	567	1,690	2,690	158	126	92	194	119
23	98	163	153	641	259	1,510	2,390	159	132	116	193	119
24	98	163	153	823	259	1,280	2,050	159	144	180	194	118
25	98	163	154	827	259	1,280	1,800	159	144	132	171	118
26	98	163	157	1,040	435	1,280	821	159	144	116	165	117
27	98	346	157	1,130	636	907	394	159	144	153	154	115
28	99	1,290	668	1,130	638	352	329	159	145	139	133	116
29	99	2,890	1,530	1,130	---	354	329	131	145	109	187	126
30	98	3,720	1,510	759	---	355	329	127	144	109	188	148
31	98	---	1,510	322	---	355	---	138	---	109	188	---
Total	3,407	23,207	45,026	41,552	13,138	27,828	28,275	6,039	4,241	4,394	5,541	4,354
Mean	110	774	1,452	1,340	469	898	942	195	141	142	179	145
Max	136	3,720	3,720	2,950	827	1,750	2,750	343	186	197	203	186
Min	98	64	151	322	259	332	153	127	122	92	118	105

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 2007 ^a, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	377	381	584	770	1,097	1,448	1,154	488	332	320	294	401
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	60.5	62.0	64.8	67.6	72.3	110	126	61.7	61.0	67.8
(WY)	(1984)	(1984)	(2006)	(2006)	(2006)	(2006)	(2006)	(1995)	(1987)	(1983)	(1983)	(1985)

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SUMMARY STATISTICS

	Calendar Year 2006		Water Year 2007		Water Years 1983 - 2007 ^a	
Annual total	138,816		207,002			
Annual mean	380		567		634	
Highest annual mean					1,312	2003
Lowest annual mean					123	2002
Highest daily mean	3,720	Nov 30	3,720	Nov 30	7,420	Sep 16, 1996
Lowest daily mean	54	Jan 27	64	Nov 7	54	Jan 27, 2006
Annual seven-day minimum	60	Jan 22	67	Nov 6	56	Jan 10, 1995
Maximum peak flow			3,920	Nov 30	^a 7,650	Sep 16, 1996
Maximum peak stage			4.04	Nov 30	^a 8.05	Sep 16, 1996
Instantaneous low flow			54	Sep 30	Not determined	
10 percent exceeds	1,380		1,610		2,060	
50 percent exceeds	107		186		177	
90 percent exceeds	63		105		82	

^a Regulated period only (1983-2007). See Remarks.

