

Water-Data Report 2010

02087500 NEUSE RIVER NEAR CLAYTON, NC

Neuse Basin
Upper Neuse Subbasin

LOCATION.--Lat 35°38'50", long 78°24'19" referenced to North American Datum of 1983, Johnston County, NC, Hydrologic Unit 03020201, on left bank at downstream side of bridge on North Carolina Highway 42, 2.3 mi upstream from Mill Creek, and 3 mi east of Clayton.

DRAINAGE AREA.--1,150 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--July 1927 to current year.

REVISED RECORDS.--WSP 1032: 1930, 1935(M). WSP 1333: 1935. WSP 1503: 1949. WDR NC-81-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 128.41 ft above National Geodetic Vertical Datum of 1929. Prior to March 18, 1942, at site 1,100 ft upstream at same datum. U.S. Army Corps of Engineers satellite telemetry at streamgage.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Falls Lake (station 02087182), since December 7, 1983. The City of Raleigh diverts water upstream from station at Falls Lake, most of which is returned upstream from station as treated effluent. Prior to regulation, maximum discharge: 22,900 ft³/s, September 19, 1945; gage height: 22.12 ft; minimum discharge: 44 ft³/s, September 15, 1932; gage height: 0.28 ft, at site then in use.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 23, 1919, reached a stage of 21.15 ft, from floodmark at former site; discharge 21,200 ft³/s.

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010
DAILY MEAN VALUES

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	267	266	2,330	3,650	1,730	4,170	820	386	2,210	316	330	261
2	235	593	1,390	3,520	1,860	3,100	1,060	347	3,060	258	332	281
3	220	366	4,890	3,440	2,800	2,330	1,630	335	3,400	256	286	285
4	208	294	3,600	3,390	3,300	2,190	1,630	347	2,850	270	262	261
5	206	229	3,010	3,330	2,560	1,660	1,600	340	2,690	275	475	225
6	225	206	3,180	1,490	7,020	1,110	1,560	323	2,620	277	1,720	226
7	223	188	2,770	979	3,980	834	1,330	314	2,620	274	770	259
8	204	178	2,590	962	1,980	815	948	312	1,740	265	441	259
9	196	175	4,670	947	1,570	745	1,420	289	735	251	337	250
10	193	181	4,550	926	1,770	706	942	281	365	517	298	248
11	187	2,630	3,160	912	2,110	669	759	280	342	422	267	252
12	194	5,580	3,380	577	3,040	764	789	280	323	294	322	264
13	214	2,700	3,610	484	3,840	1,320	699	286	400	259	339	268
14	215	1,350	3,680	477	4,010	1,190	656	283	676	262	258	259
15	246	2,030	3,560	475	3,960	924	658	275	456	276	234	235
16	233	2,080	3,480	448	3,920	751	677	280	364	253	222	216
17	212	1,970	3,400	1,390	3,880	657	655	518	383	331	214	217
18	203	2,320	3,340	2,500	3,840	694	600	3,030	357	463	238	236
19	195	2,590	2,200	1,260	4,010	749	564	1,960	319	313	464	244
20	203	1,540	1,730	2,220	4,230	2,350	543	1,130	307	273	925	250
21	216	954	1,240	2,960	4,260	2,770	525	650	287	376	531	246
22	210	905	2,920	3,180	4,020	2,850	595	1,160	281	326	377	242
23	211	1,050	3,560	1,620	3,400	2,460	518	2,650	278	257	457	240
24	197	1,270	3,520	1,170	3,740	781	478	3,230	380	312	2,340	242
25	187	1,120	3,590	3,020	4,020	464	565	1,250	299	289	1,770	247
26	195	2,140	4,240	2,790	4,230	457	608	741	270	229	632	267
27	201	2,340	3,900	2,230	4,240	454	497	574	277	241	438	1,830
28	237	2,300	3,720	3,210	4,210	432	439	1,540	272	382	359	1,370
29	253	2,280	3,610	2,350	---	3,500	437	3,570	270	280	321	771
30	209	2,270	3,520	1,820	---	2,330	415	2,450	334	804	300	4,960
31	205	---	3,660	1,780	---	1,120	---	2,040	---	463	278	---
Total	6,600	44,095	102,000	59,507	97,530	45,346	24,617	31,451	29,165	10,064	16,537	15,411
Mean	213	1,470	3,290	1,920	3,483	1,463	821	1,015	972	325	533	514
Max	267	5,580	4,890	3,650	7,020	4,170	1,630	3,570	3,400	804	2,340	4,960
Min	187	175	1,240	448	1,570	432	415	275	270	229	214	216

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 2010 ^a, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	657	722	1,044	1,311	1,667	2,078	1,650	843	703	594	613	859
Max	3,822	2,201	3,290	2,821	4,961	5,688	4,813	2,864	2,170	1,841	1,539	6,620
(WY)	(2000)	(1996)	(2010)	(1984)	(1998)	(1998)	(2003)	(1989)	(2003)	(1995)	(1989)	(1996)
Min	212	215	237	342	378	312	290	292	267	234	204	136
(WY)	(1984)	(1992)	(1995)	(2008)	(2008)	(2006)	(1986)	(2002)	(1999)	(1983)	(1983)	(1985)

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SUMMARY STATISTICS

	Calendar Year 2009		Water Year 2010		Water Years 1983 - 2010 ^a	
Annual total	412,015		482,323			
Annual mean	1,129		1,321		1,058	
Highest annual mean					2,052	2003
Lowest annual mean					425	2002
Highest daily mean	5,580	Nov 12	7,020	Feb 6	19,700	Sep 17, 1999
Lowest daily mean	175	Nov 9	175	Nov 9	105	Sep 16, 1985
Annual seven-day minimum	200	Oct 8	200	Oct 8	117	Sep 12, 1985
Maximum peak flow			7,750	Feb 6	20,500	Sep 17, 1999
Maximum peak stage			11.65	Feb 6	20.67	Sep 17, 1999
Instantaneous low flow			155	Nov 9	78	Sep 18, 1985
10 percent exceeds	3,170		3,540		2,990	
50 percent exceeds	470		632		462	
90 percent exceeds	234		228		252	

^a Regulated period only (1983-2010). See Remarks.

