



Water-Data Report 2011

02086500 FLAT RIVER AT DAM NEAR BAHAMA, NC

Neuse Basin
Upper Neuse Subbasin

LOCATION.--Lat 36°08'55", long 78°49'44" referenced to North American Datum of 1983, Durham County, NC, Hydrologic Unit 03020201, on right bank 900 ft downstream from Durham municipal dam, 3 mi southeast of Bahama, and 5 mi upstream from confluence with Eno River.

DRAINAGE AREA.--168 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--September 1927 to September 1959, August 1961 to September 1966, October 1982 to September 1990, October 1992 to September 1993, October 2000 to current year.

GAGE.--Water-stage recorder. Datum of gage is 256.6 ft above National Geodetic Vertical Datum of 1929. U.S. Army Corps of Engineers satellite telemetry at streamgage.

REMARKS.--Records good except those below 0.5 ft³/s, which are poor. Flow regulated by Lake Michie (station 02086490). No flow occurs at times most years. Minimum discharge for current water year occurred many days.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of September 6, 1996, reached a stage of 23.48 ft, present datum, from floodmarks; discharge, 20,900 ft³/s.

02086500 FLAT RIVER AT DAM NEAR BAHAMA, NC—Continued

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011
DAILY MEAN VALUES

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	263	0.01	0.37	0.14	0.12	0.68	323	0.46	5.7	0.04	0.28	0.25
2	65	0.01	0.20	0.22	0.15	24	192	0.17	2.5	0.02	0.20	0.31
3	16	0.01	0.12	0.16	0.12	49	128	5.8	0.64	0.03	0.20	0.37
4	10	0.23	0.15	0.12	0.20	52	99	129	0.24	0.01	0.21	0.43
5	11	0.18	0.22	0.12	0.51	25	91	303	0.11	0.02	0.22	0.52
6	10	0.12	0.14	0.15	0.39	21	79	123	0.10	0.09	0.32	1.5
7	8.5	0.09	0.12	0.12	0.36	310	72	103	0.05	0.18	0.28	12
8	7.4	0.07	0.12	0.12	0.38	173	56	91	0.04	0.06	0.26	83
9	6.6	0.06	0.12	0.12	0.39	77	29	66	0.04	0.25	0.30	47
10	6.0	0.04	0.12	0.14	0.35	67	104	52	0.07	0.08	0.30	17
11	5.5	0.01	0.14	0.22	0.41	224	148	47	0.22	0.03	0.28	0.64
12	4.8	0.01	0.31	0.21	0.36	148	92	41	0.31	0.01	0.31	0.08
13	4.5	0.01	0.30	0.22	0.33	79	83	40	0.20	0.01	1.3	0.01
14	8.2	0.03	0.21	0.22	0.32	67	65	387	0.09	0.01	0.46	0.01
15	0.19	0.02	0.20	0.22	0.33	43	52	304	0.06	0.01	0.27	0.01
16	0.05	0.06	0.44	0.26	0.42	64	51	208	0.06	0.01	0.23	0.01
17	0.01	0.16	0.48	0.32	0.42	158	297	136	0.02	0.01	0.23	0.01
18	0.01	0.06	0.36	0.27	0.39	87	173	95	0.02	0.01	0.22	0.01
19	0.01	0.06	0.33	0.11	0.40	52	95	71	0.04	0.02	0.25	0.01
20	0.03	0.05	0.27	0.12	0.42	34	69	29	0.04	0.06	0.40	0.01
21	0.01	0.06	0.22	0.13	0.42	25	49	27	0.13	0.06	0.32	0.02
22	0.04	0.06	0.09	0.18	0.47	19	30	4.9	0.22	0.06	0.34	0.01
23	0.06	0.06	0.06	0.16	0.46	17	30	16	0.22	0.07	0.30	0.07
24	0.06	0.06	0.06	0.12	0.41	339	28	12	0.27	0.23	0.31	0.01
25	0.06	0.06	0.08	0.12	0.46	289	32	10	0.40	0.29	0.29	0.01
26	0.20	0.06	0.29	0.35	0.52	98	40	5.5	0.27	0.23	0.31	0.01
27	0.11	0.06	0.16	0.25	0.45	172	27	17	0.20	0.12	0.53	0.01
28	0.08	0.06	0.11	0.15	0.61	268	40	25	0.36	0.12	0.41	0.03
29	0.06	0.06	0.10	0.12	---	141	17	33	0.60	0.22	0.55	0.01
30	0.10	0.06	0.09	0.12	---	426	2.9	29	0.15	0.26	0.44	0.01
31	0.01	---	0.11	0.12	---	1,030	---	14	---	0.31	0.28	---
Total	427.59	1.89	6.09	5.40	10.57	4,578.68	2,593.9	2,424.83	13.37	2.93	10.60	163.37
Mean	13.8	0.06	0.20	0.17	0.38	148	86.5	78.2	0.45	0.09	0.34	5.45
Max	263	0.23	0.48	0.35	0.61	1,030	323	387	5.7	0.31	1.3	83
Min	0.01	0.01	0.06	0.11	0.12	0.68	2.9	0.17	0.02	0.01	0.20	0.01
Cfsm	0.08	0.00	0.00	0.00	0.00	0.88	0.51	0.47	0.00	0.00	0.00	0.03
In.	0.09	0.00	0.00	0.00	0.00	1.01	0.57	0.54	0.00	0.00	0.00	0.04

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1927 - 2011^a, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	58.2	105	150	205	269	303	257	115	77.2	81.2	78.8	75.3
Max	530	496	723	759	614	1,041	856	476	491	795	481	714
(WY)	(1930)	(1986)	(2010)	(1937)	(1948)	(1993)	(2003)	(2003)	(1938)	(1938)	(1939)	(1945)
Min	0.03	0.03	0.05	0.07	0.06	9.90	8.91	0.06	0.05	0.01	0.02	0.01
(WY)	(2006)	(2002)	(2002)	(2002)	(2002)	(2006)	(2002)	(2002)	(2008)	(2004)	(2005)	(2007)

02086500 FLAT RIVER AT DAM NEAR BAHAMA, NC—Continued**SUMMARY STATISTICS**

	Calendar Year 2010		Water Year 2011		Water Years 1927 - 2011^a	
Annual total	43,158.11		10,239.22			
Annual mean	118		28.1		147	
Highest annual mean					406	2003
Lowest annual mean					2.63	2002
Highest daily mean	5,620	Feb 6	1,030	Mar 31	10,500	Oct 2, 1929
Lowest daily mean	0.00	Jun 26	0.01	Oct 17	0.00	Sep 4, 1938
Annual seven-day minimum	0.00	Jun 30	0.01	Jul 12	0.00	Sep 4, 1938
Maximum peak flow			1,920	Mar 31	19,700	Jul 26, 1938
Maximum peak stage			6.70	Mar 31	19.50	Jul 26, 1938
Instantaneous low flow			b0.01	Oct 16	b0.00	Sep 4, 1938
Annual runoff (cfsm)	0.704		0.167		0.875	
Annual runoff (inches)	9.56		2.27		11.89	
10 percent exceeds	268		85		304	
50 percent exceeds	4.5		0.27		53	
90 percent exceeds	0.01		0.02		0.20	

^a See Period of Record.^b See Remarks.