



Water-Data Report 2010

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 and those for estimated daily discharges, which are poor. Flow regulated by Lake Michie (station 02086490). Water was diverted above station from Lake Michie and treated effluent was returned to tributaries downstream. No flow occurs at times most years.

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.

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

[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	e2.8	5.5	65	219	191	125	197	1.4	67	0.00	0.01	0.05
2	e1.7	4.8	164	190	193	118	154	2.7	72	0.00	0.00	0.06
3	e1.4	4.1	3,020	158	584	120	131	5.4	133	0.00	0.00	0.02
4	e1.3	3.8	573	137	992	124	118	1.1	121	0.00	0.00	e0.03
5	e1.1	3.6	337	126	1,050	118	111	0.43	75	0.00	0.49	e0.02
6	e0.90	3.5	532	117	5,620	107	82	0.31	56	0.00	40	e0.03
7	0.59	3.6	256	109	1,190	101	70	0.22	45	0.00	24	e0.01
8	0.48	3.7	169	106	749	97	51	0.11	37	0.00	15	e0.01
9	0.42	3.8	2,290	100	659	94	55	0.15	33	0.00	0.72	e0.02
10	0.42	4.3	1,220	93	699	93	74	0.07	32	0.00	1.6	e0.01
11	0.42	596	367	86	661	96	75	0.06	29	0.00	4.8	e0.06
12	0.59	3,150	231	87	558	111	65	0.06	6.0	0.01	5.9	e0.07
13	0.92	2,820	322	e90	459	290	49	0.10	2.3	0.04	5.2	e0.06
14	1.2	675	959	e85	378	431	59	0.09	27	0.20	3.7	e0.08
15	1.5	288	409	79	304	401	59	0.08	23	0.01	3.5	e0.06
16	1.3	167	255	80	279	233	59	0.56	46	0.00	3.4	e0.05
17	1.1	115	186	587	250	172	59	1.4	182	0.21	3.4	e0.06
18	1.1	90	160	840	191	144	54	511	82	0.47	4.9	e0.07
19	1.3	149	484	332	161	128	50	243	28	321	8.3	e0.11
20	1.7	245	640	219	143	114	42	117	11	122	7.8	e0.12
21	2.2	147	439	191	135	109	23	80	6.2	33	5.5	e0.06
22	2.4	101	346	556	135	105	33	87	1.8	8.6	0.20	e0.07
23	2.6	910	e310	477	178	109	57	2,420	0.47	1.2	0.01	e0.09
24	3.1	1,290	e300	287	183	81	56	458	0.11	0.17	0.00	e0.06
25	3.3	399	e2,250	3,240	232	60	59	187	0.03	0.01	0.01	e0.08
26	3.1	200	e4,100	991	214	84	55	134	0.00	0.00	0.00	e0.24
27	3.4	171	e900	428	165	92	35	95	0.00	0.28	0.00	0.63
28	4.8	143	e400	e285	141	89	21	79	0.74	0.05	0.03	0.21
29	4.0	95	286	e230	---	1,050	9.3	577	0.02	0.01	0.06	0.27
30	4.1	78	222	e210	---	701	4.2	275	0.00	0.00	0.06	5.5
31	4.1	---	206	202	---	301	---	99	---	0.00	0.07	---
Total	59.34	11,869.7	22,398	10,937	16,694	5,998	1,966.5	5,376.24	1,116.67	487.26	138.66	8.21
Mean	1.91	396	723	353	596	193	65.5	173	37.2	15.7	4.47	0.27
Max	4.8	3,150	4,100	3,240	5,620	1,050	197	2,420	182	321	40	5.5
Min	0.42	3.5	65	79	135	60	4.2	0.06	0.00	0.00	0.00	0.01
Cfsm	0.01	2.36	4.30	2.10	3.55	1.15	0.39	1.03	0.22	0.09	0.03	0.00
In.	0.01	2.63	4.96	2.42	3.70	1.33	0.44	1.19	0.25	0.11	0.03	0.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1927 - 2010^a, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	59.0	107	153	208	274	306	260	116	78.5	82.7	80.2	76.5
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)

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SUMMARY STATISTICS

	Calendar Year 2009		Water Year 2010		Water Years 1927 - 2010 ^a	
Annual total	71,045.97		77,049.58			
Annual mean	195		211		149	
Highest annual mean					406	2003
Lowest annual mean					2.63	2002
Highest daily mean	4,100	Dec 26	5,620	Feb 6	10,500	Oct 2, 1929
Lowest daily mean	0.06	Aug 16	0.00	Jun 26	0.00	Sep 4, 1938
Annual seven-day minimum	0.09	Aug 13	0.00	Jun 30	0.00	Sep 4, 1938
Maximum peak flow			7,750	Feb 6	19,700	Jul 26, 1938
Maximum peak stage			13.69	Feb 6	19.50	Jul 26, 1938
Instantaneous low flow			^b 0.00	Jun 25	^b 0.00	Sep 4, 1938
Annual runoff (cfsm)	1.16		1.26		0.888	
Annual runoff (inches)	15.73		17.06		12.06	
10 percent exceeds	483		495		306	
50 percent exceeds	54		55		54	
90 percent exceeds	0.58		0.02		0.24	

^a See Period of Record.

^b See Remarks.

