

Water-Data Report 2007

**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 mi<sup>2</sup>.

**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 NGVD of 1929. U.S. Army Corps of Engineers satellite telemetry at station.

REMARKS.--No estimated daily discharges. Records fair. Flow regulated by Lake Michie (station 02086490). An average of 39.6 ft<sup>3</sup>/s was diverted above station from Lake Michie and Little River Lake. About 13.1 ft<sup>3</sup>/s of treated effluent was returned to tributaries downstream. No flow also occurred on September 4-14, 1938 (result of construction work upstream), September 26-30, 1965, and October 1-3, 5, 1988. No flow occurs many 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 ft<sup>3</sup>/s.

## 02086500 FLAT RIVER AT DAM NEAR BAHAMA, NC—Continued

**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	33	29	91	119	54	142	131	43	15	0.02	0.06	0.01
2	33	13	98	388	72	861	113	40	0.73	0.01	0.09	0.01
3	33	0.10	89	246	100	655	100	40	1.2	0.01	0.08	0.01
4	10	0.08	80	166	84	317	89	38	0.80	0.01	0.07	0.01
5	16	0.10	71	136	64	212	72	38	0.67	0.01	0.02	0.01
6	32	0.13	43	854	51	162	60	40	0.70	0.01	0.02	0.01
7	32	0.65	44	520	50	133	58	39	0.88	0.01	0.03	0.01
8	32	0.74	37	1,210	47	116	53	38	0.77	0.01	0.02	0.00
9	32	68	34	744	46	108	52	38	0.75	0.02	0.02	0.00
10	32	145	29	366	42	101	49	39	0.72	0.05	0.03	0.00
11	32	82	25	241	40	96	52	61	0.66	0.08	0.02	0.00
12	32	933	29	158	31	95	325	273	0.67	0.02	0.02	0.00
13	32	787	26	125	52	79	448	235	0.71	0.01	0.02	0.00
14	32	265	25	108	597	64	204	68	0.65	0.02	0.04	0.01
15	32	140	25	95	518	59	1,600	42	0.52	0.02	0.03	0.00
16	32	863	30	90	253	197	1,700	38	0.48	0.01	0.04	0.00
17	32	1,000	27	75	174	1,250	563	38	0.33	0.02	0.22	0.00
18	32	308	28	67	141	421	304	38	0.18	0.06	0.06	0.01
19	32	161	17	73	113	235	216	38	0.12	0.02	0.04	0.01
20	32	100	14	77	99	171	164	38	0.11	0.01	0.04	0.01
21	32	89	15	73	96	132	131	38	0.07	0.02	0.07	0.01
22	32	4,620	23	260	119	110	109	38	0.09	0.02	0.14	0.01
23	32	2,450	155	362	141	99	91	38	0.06	0.02	0.08	0.01
24	32	725	196	219	103	91	82	38	0.04	0.03	0.07	0.01
25	32	378	528	146	107	82	73	38	0.14	0.03	0.04	0.01
26	31	268	1,260	107	431	75	66	38	0.02	0.03	0.03	0.01
27	32	210	429	88	300	69	62	38	0.02	0.03	0.04	0.01
28	32	185	237	81	190	123	58	39	0.02	0.05	0.03	0.01
29	32	136	162	69	---	231	55	38	0.02	0.04	0.01	0.01
30	28	85	103	61	---	338	47	39	0.03	0.04	0.01	0.01
31	26	---	88	56	---	190	---	39	---	0.05	0.01	---
<b>Total</b>	946	14,041.80	4,058	7,380	4,115	7,014	7,127	1,683	27.16	0.79	1.50	0.21
<b>Mean</b>	30.5	468	131	238	147	226	238	54.3	0.91	0.03	0.05	0.01
<b>Max</b>	33	4,620	1,260	1,210	597	1,250	1,700	273	15	0.08	0.22	0.01
<b>Min</b>	10	0.08	14	56	31	59	47	38	0.02	0.01	0.01	0.00
<b>Cfsm</b>	0.18	2.79	0.78	1.42	0.87	1.35	1.41	0.32	0.01	0.00	0.00	0.00
<b>In.</b>	0.21	3.11	0.90	1.63	0.91	1.55	1.58	0.37	0.01	0.00	0.00	0.00

**STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1927 - 2007<sup>a</sup>, BY WATER YEAR (WY)**

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
<b>Mean</b>	61.9	104	143	209	277	309	265	117	77.8	86.7	84.4	72.4
<b>Max</b>	530	496	444	759	614	1,041	856	476	491	795	481	714
<b>(WY)</b>	(1930)	(1986)	(2003)	(1937)	(1948)	(1993)	(2003)	(2003)	(1938)	(1938)	(1939)	(1945)
<b>Min</b>	0.03	0.03	0.05	0.07	0.06	9.90	8.91	0.06	0.06	0.01	0.02	0.01
<b>(WY)</b>	(2006)	(2002)	(2002)	(2002)	(2002)	(2006)	(2002)	(2002)	(2002)	(2004)	(2005)	(2007)

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SUMMARY STATISTICS

	Calendar Year 2006		Water Year 2007		Water Years 1927 - 2007 <sup>a</sup>	
<b>Annual total</b>	29,939.03		46,394.46			
<b>Annual mean</b>	82.0		127		150	
<b>Highest annual mean</b>					406	2003
<b>Lowest annual mean</b>					2.63	2002
<b>Highest daily mean</b>	4,620	Nov 22	4,620	Nov 22	10,500	Oct 2, 1929
<b>Lowest daily mean</b>	0.01	Aug 19	0.00	Sep 8	0.00	Sep 4, 1938
<b>Annual seven-day minimum</b>	0.01	Aug 22	0.00	Sep 7	0.00	Sep 4, 1938
<b>Maximum peak flow</b>			6,850	Nov 22	19,700	Jul 26, 1938
<b>Maximum peak stage</b>			12.83	Nov 22	19.50	Jul 26, 1938
<b>Instantaneous low flow</b>			<sup>b</sup> 0.00	Sep 5	<sup>b</sup> 0.00	Sep 4, 1938
<b>Annual runoff (cfsm)</b>	0.488		0.757		0.892	
<b>Annual runoff (inches)</b>	6.63		10.27		12.12	
<b>10 percent exceeds</b>	138		270		307	
<b>50 percent exceeds</b>	29		38		56	
<b>90 percent exceeds</b>	0.03		0.01		0.30	

<sup>a</sup> See Period of Record.

<sup>b</sup> See Remarks.

