

Water-Data Report 2008

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 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 36.1 ft³/s was diverted above station from Lake Michie and Little River Lake. About 12.8 ft³/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 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 2007 TO SEPTEMBER 2008
DAILY MEAN VALUES

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0.01	0.03	0.06	0.02	0.25	0.48	729	175	0.08	0.06	0.02	31
2	0.01	0.01	0.06	0.02	0.33	0.41	449	95	0.07	0.03	0.03	39
3	0.01	0.01	0.07	0.02	0.20	0.48	201	69	0.07	0.04	0.02	25
4	0.01	0.02	0.06	0.02	0.25	0.67	397	32	0.05	0.09	0.02	16
5	0.01	0.02	0.06	0.02	0.31	939	1,500	33	0.04	0.31	0.02	11
6	0.01	0.02	0.06	0.02	0.55	460	806	47	0.04	0.52	0.02	6,890
7	0.01	0.02	0.06	0.02	0.42	359	522	42	0.04	0.35	0.02	3,260
8	0.01	0.03	0.06	0.04	0.49	1,150	264	39	0.05	0.30	0.05	355
9	0.01	0.02	0.06	0.07	0.54	368	185	45	0.03	0.36	0.06	143
10	0.01	0.03	0.06	0.13	0.48	170	122	40	0.03	0.34	0.25	88
11	0.01	0.04	0.06	0.14	0.42	94	88	39	0.02	0.32	0.06	123
12	0.01	0.04	0.06	0.14	0.40	64	83	46	0.03	0.25	0.02	109
13	0.01	0.06	0.06	0.13	0.69	42	50	34	0.02	0.15	0.03	71
14	0.01	0.06	0.06	0.13	0.36	32	49	35	0.01	0.17	0.02	50
15	0.01	0.16	0.10	0.11	0.23	19	34	33	0.02	0.16	0.01	37
16	0.01	0.12	0.29	0.09	0.28	130	24	54	0.02	0.13	0.02	40
17	0.01	0.13	0.06	0.24	0.23	210	24	30	0.05	0.13	0.02	48
18	0.02	0.13	0.04	0.15	0.26	102	21	12	0.02	0.14	0.02	57
19	0.03	0.13	0.04	0.15	0.17	60	4.9	22	0.02	0.17	0.04	44
20	0.02	0.13	0.03	0.14	0.11	50	23	22	0.02	0.18	0.02	32
21	0.02	0.13	0.04	0.09	0.13	40	72	20	0.02	0.09	0.02	26
22	0.02	0.14	0.02	0.09	0.20	23	107	5.6	0.06	0.11	0.03	22
23	0.03	0.11	0.03	0.09	0.29	7.4	70	2.0	0.07	0.14	0.06	19
24	0.13	0.09	0.03	0.09	0.30	6.6	38	1.2	0.03	0.12	0.19	16
25	0.09	0.09	0.02	0.09	0.31	5.3	22	0.18	0.03	0.09	0.15	13
26	0.18	0.09	0.30	0.09	0.55	2.9	15	0.11	0.02	0.09	0.33	127
27	0.22	0.09	0.11	0.09	0.54	1.4	16	0.09	0.02	0.09	1.4	1,020
28	0.02	0.07	0.06	0.09	0.51	0.93	470	0.31	0.02	0.08	1.7	508
29	0.02	0.06	0.08	0.09	0.50	0.70	1,600	0.11	0.06	0.06	38	196
30	0.02	0.06	0.41	0.13	---	0.08	401	0.08	0.57	0.04	29	106
31	0.02	---	0.09	0.13	---	12	---	0.08	---	0.01	41	---
Total	1.01	2.14	2.60	2.87	10.30	4,351.35	8,386.9	973.76	1.63	5.12	112.65	13,522
Mean	0.03	0.07	0.08	0.09	0.36	140	280	31.4	0.05	0.17	3.63	451
Max	0.22	0.16	0.41	0.24	0.69	1,150	1,600	175	0.57	0.52	41	6,890
Min	0.01	0.01	0.02	0.02	0.11	0.08	4.9	0.08	0.01	0.01	0.01	11
Cfsm	0.00	0.00	0.00	0.00	0.00	0.84	1.66	0.19	0.00	0.00	0.02	2.68
In.	0.00	0.00	0.00	0.00	0.00	0.96	1.86	0.22	0.00	0.00	0.02	2.99

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1927 - 2008^a, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	60.8	102	141	206	272	306	266	116	76.4	85.1	83.0	79.1
Max	530	496	444	759	614	1,041	856	476	491	795	481	714
(WY)	(1930)	(1986)	(2003)	(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 2007		Water Year 2008		Water Years 1927 - 2008 ^a	
Annual total	27,354.41		27,372.33			
Annual mean	74.9		74.8		148	
Highest annual mean					406	
Lowest annual mean					2.63	
Highest daily mean	1,700	Apr 16	6,890	Sep 6	10,500	Oct 2, 1929
Lowest daily mean	0.00	Sep 8	0.01	Oct 1	0.00	Sep 4, 1938
Annual seven-day minimum	0.00	Sep 7	0.01	Oct 1	0.00	Sep 4, 1938
Maximum peak flow			14,300	Sep 6	19,700	Jul 26, 1938
Maximum peak stage			17.31	Sep 6	19.50	Jul 26, 1938
Instantaneous low flow			^b 0.00	Oct 25	^b 0.00	Sep 4, 1938
Annual runoff (cfs)	0.446		0.445		0.883	
Annual runoff (inches)	6.06		6.06		12.00	
10 percent exceeds	193		94		306	
50 percent exceeds	0.13		0.13		54	
90 percent exceeds	0.01		0.02		0.24	

^aSee Period of Record.^bSee Remarks.