

## 02086500 FLAT RIVER AT DAM NEAR BAHAMA, NC

LOCATION.--Lat 36°08'55", long 78°49'44", Durham County, 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>.

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.--Records fair except those for estimated daily discharges, which are poor. Flow regulated by Lake Michie (station 02086490). An average of 28.2 ft<sup>3</sup>/s was diverted above station from Lake Michie and Little River Lake. About 13.2 ft<sup>3</sup>/s of treated effluent was returned to tributaries downstream. No flow also occurred on Sept. 4-14, 1938 (result of construction work upstream), Sept. 26-30, 1965, and Oct. 1-3, 5, 1988. No flow occurs many times most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Sept. 6, 1996, reached a stage of 23.48 ft, present datum, from floodmarks; discharge, 20,900 ft<sup>3</sup>/s.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	40	79	98	71	140	99	626	41	41	0.02	0.03	351
2	37	58	68	67	103	97	582	69	42	0.02	0.03	162
3	34	48	54	65	448	102	256	279	13	0.02	227	97
4	34	41	50	64	810	102	172	248	0.29	0.02	195	65
5	34	38	70	69	e253	96	118	133	0.14	0.02	70	50
6	34	38	129	79	e202	93	92	82	0.11	0.01	52	44
7	34	38	114	75	e371	90	80	60	0.12	0.01	48	79
8	34	41	83	64	e754	83	73	49	0.23	0.01	35	217
9	34	46	66	63	e130	70	68	41	0.18	0.01	35	692
10	35	41	92	62	194	68	61	39	0.10	0.01	36	232
11	35	37	1,750	59	166	62	58	38	0.08	0.01	37	109
12	39	35	554	e56	156	60	75	38	0.06	0.01	39	68
13	44	35	266	e60	183	57	361	38	0.04	0.01	40	50
14	41	33	956	e61	172	54	412	39	0.03	0.01	362	42
15	49	31	1,010	e71	148	57	387	40	0.04	0.01	798	41
16	64	31	431	e69	147	72	238	41	0.06	0.01	247	40
17	53	31	334	e66	157	111	159	41	0.07	0.01	121	73
18	42	31	480	e61	150	144	119	42	0.16	0.02	71	419
19	36	36	290	72	e160	114	97	42	0.71	0.01	48	340
20	35	252	208	75	e150	91	83	42	0.19	0.03	42	149
21	35	190	160	54	e135	80	73	42	0.03	0.01	41	80
22	35	103	133	51	e125	66	61	43	0.03	0.02	42	55
23	35	71	119	52	e120	59	56	43	0.03	0.02	42	45
24	35	57	118	48	100	54	52	43	0.03	0.02	42	42
25	35	48	122	55	95	51	48	43	0.05	0.01	42	41
26	35	45	112	61	88	61	48	42	0.05	0.01	42	e40
27	35	43	95	60	91	65	49	42	0.03	0.02	42	e38
28	34	45	86	57	101	65	53	42	0.03	0.02	42	e38
29	81	105	77	55	111	59	50	42	0.03	0.02	42	e40
30	239	155	80	64	---	42	47	42	0.02	0.02	978	40
31	128	---	75	132	---	43	---	41	---	0.01	2,730	---
TOTAL	1,515	1,882	8,280	2,018	5,960	2,367	4,654	1,907	98.94	0.46	6,588.06	3,779
MEAN	48.9	62.7	267	65.1	206	76.4	155	61.5	3.30	0.01	213	126
MAX	239	252	1,750	132	810	144	626	279	42	0.03	2,730	692
MIN	34	31	50	48	88	42	47	38	0.02	0.01	0.03	38

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1927 - 2004,<sup>@</sup> BY WATER YEAR (WY)

MEAN	64.2	97.8	142	211	287	316	273	122	80.7	89.9	89.4	76.2
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	0.05	0.03	0.05	0.07	0.06	21.5	8.91	0.06	0.06	0.01	0.02	0.02
(WY)	(1988)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)	(2004)	(2002)	(2002)

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SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1927 - 2004 <sup>@</sup>	
ANNUAL TOTAL	126,924		39,049.46		153	
ANNUAL MEAN	348		107		406	
HIGHEST ANNUAL MEAN					2003	
LOWEST ANNUAL MEAN					2002	
HIGHEST DAILY MEAN	5,320	Mar 20	2,730	Aug 31	10,500	Oct 2, 1929
LOWEST DAILY MEAN	31	Nov 15	0.01	Jul 6	0.00	Sep 4, 1938
ANNUAL SEVEN-DAY MINIMUM	32	Nov 12	0.01	Jul 6	0.00	Sep 4, 1938
MAXIMUM PEAK FLOW			5,840	Aug 31	19,700	Jul 26, 1938
MAXIMUM PEAK STAGE			12.03	Aug 31	19.50	Jul 26, 1938
INSTANTANEOUS LOW FLOW			0.00*	Jul 14	0.00*	Sep 4, 1938
ANNUAL RUNOFF (CFSM)	2.07		0.635		0.912	
ANNUAL RUNOFF (INCHES)	28.10		8.65		12.38	
10 PERCENT EXCEEDS	851		220		310	
50 PERCENT EXCEEDS	114		54		58	
90 PERCENT EXCEEDS	37		0.03		0.40	

<sup>@</sup> See PERIOD OF RECORD.

\* See REMARKS.

e Estimated.

