

03479000 WATAUGA RIVER NEAR SUGAR GROVE, NC

LOCATION.--Lat 36°14'21", long 81°49'20", Watauga County, Hydrologic Unit 06010103, on right bank 250 ft upstream from bridge on Secondary Road 1121, 300 ft downstream of Cove Creek, 2.3 mi southwest of Sugar Grove, and at mile 64.4.

DRAINAGE AREA.--92.1 mi².

PERIOD OF RECORD.--October 1939 to current year. Monthly discharge only for some periods, published in WSP 1306.

REVISED RECORDS.--WDR NC-81-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,607.84 ft above NGVD of 1929. Satellite telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Maximum discharge for period of record from rating curve extended above 7,300 ft³/s on basis of slope-area measurement of peak flow, from profile based on floodmarks. Minimum discharge for period of record, result of freezeup. Minimum discharge for current water year also occurred Sept. 1.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 1916 reached a stage of 22.1 ft, from floodmarks on barn 0.25 mi upstream from station, as witnessed by local resident; discharge, 28,000 ft³/s, from rating curve extended above 4,900 ft³/s, on basis of slope-area measurement.

EXTREMES FOR CURRENT YEAR.--Peak discharges associated with the remnants of Hurricanes Frances and Ivan.

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Sep 8	0900	17,000	19.07	Sep 17	0900	23,000	21.90

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	93	57	172	187	e100	182	185	145	153	130	123	42
2	87	57	160	180	e98	219	170	144	119	151	123	602
3	80	56	155	177	228	258	176	137	106	233	91	241
4	78	54	168	181	144	254	174	125	254	252	71	115
5	76	95	204	192	134	245	160	120	203	196	69	88
6	73	229	195	182	764	310	149	114	150	155	74	76
7	70	137	176	164	720	281	141	107	131	138	59	707
8	69	100	166	e157	385	260	137	103	192	121	55	8,970
9	75	84	161	157	290	233	132	122	214	109	54	1,610
10	97	77	453	148	252	216	125	119	172	101	50	695
11	84	73	574	e139	226	199	124	114	141	99	48	465
12	76	72	348	e135	215	185	264	115	145	107	98	356
13	71	78	285	137	202	168	896	142	244	98	95	299
14	70	66	276	133	197	158	690	119	198	87	66	264
15	86	67	247	e126	196	157	415	106	221	79	58	237
16	71	68	228	125	188	183	315	99	598	74	54	222
17	68	73	303	122	175	163	263	107	275	78	53	8,730
18	66	78	271	146	170	156	226	158	200	96	57	2,270
19	63	6,220	256	144	171	151	201	183	166	76	49	904
20	61	1,130	226	126	180	142	187	126	145	69	46	575
21	60	541	e202	e120	239	148	175	109	199	64	48	437
22	58	374	e195	e114	233	136	159	132	211	63	50	358
23	57	291	220	e112	215	130	149	191	170	64	54	309
24	55	257	473	e110	207	127	142	165	159	61	59	280
25	56	227	375	119	206	123	139	125	207	108	54	257
26	58	205	296	138	197	120	238	116	344	72	47	234
27	85	191	257	122	192	118	210	145	227	114	44	222
28	77	210	232	e116	182	116	171	130	187	87	59	1,000
29	67	206	216	e112	183	113	155	124	160	72	49	517
30	61	180	225	e110	---	118	147	107	141	70	44	390
31	59	---	200	e108	---	176	---	201	---	91	41	---
TOTAL	2,207	11,553	7,915	4,339	6,889	5,545	6,815	4,050	6,032	3,315	1,942	31,472
MEAN	71.2	385	255	140	238	179	227	131	201	107	62.6	1,049
MAX	97	6,220	574	192	764	310	896	201	598	252	123	8,970
MIN	55	54	155	108	98	113	124	99	106	61	41	42
CFSM	0.77	4.18	2.77	1.52	2.58	1.94	2.47	1.42	2.18	1.16	0.68	11.4
IN.	0.89	4.67	3.20	1.75	2.78	2.24	2.75	1.64	2.44	1.34	0.78	12.71

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2004, BY WATER YEAR (WY)

MEAN	109	153	172	210	263	303	258	180	146	112	119	122
MAX	380	662	434	817	643	858	689	411	583	461	1,169	1,049
(WY)	(1965)	(1978)	(1951)	(1995)	(1998)	(1979)	(1987)	(1973)	(1992)	(1989)	(1940)	(2004)
MIN	19.2	34.6	45.6	55.5	67.5	77.0	82.1	67.5	41.4	35.0	23.9	18.1
(WY)	(1955)	(1982)	(1964)	(1956)	(1941)	(1988)	(1986)	(1941)	(1988)	(1944)	(2002)	(1954)

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SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1940 - 2004	
ANNUAL TOTAL	87,257		92,074		177	
ANNUAL MEAN	239		252		84.7	
HIGHEST ANNUAL MEAN					297	1979
LOWEST ANNUAL MEAN					84.7	1988
HIGHEST DAILY MEAN	6,220	Nov 19	8,970	Sep 8	15,900	Aug 13, 1940
LOWEST DAILY MEAN	54	Nov 4	41	Aug 31	8.1	Sep 13, 2002
ANNUAL SEVEN-DAY MINIMUM	58	Oct 20	47	Aug 26	11	Sep 7, 2002
MAXIMUM PEAK FLOW			23,000	Sep 17	50800*	Aug 13, 1940
MAXIMUM PEAK STAGE			21.90	Sep 17	29.60	Aug 13, 1940
INSTANTANEOUS LOW FLOW			41*	Aug 31	6.5*	Jan 1, 1954
ANNUAL RUNOFF (CFSM)	2.60		2.73		1.92	
ANNUAL RUNOFF (INCHES)	35.24		37.19		26.09	
10 PERCENT EXCEEDS	377		305		324	
50 PERCENT EXCEEDS	180		146		115	
90 PERCENT EXCEEDS	74		61		39	

* See REMARKS.

e Estimated.

