

03479000 WATAUGA RIVER NEAR SUGAR GROVE, NC

LOCATION.--Lat 36°14'18", long 81°49'21", 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 mi<sup>2</sup>.

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. Slight diurnal fluctuation at low flow caused by small mills above station. Maximum discharge for period of record from rating curve extended above 4,900 ft<sup>3</sup>/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 Oct. 14, 15.

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 ft<sup>3</sup>/s, from rating curve extended above 4,900 ft<sup>3</sup>/s, on basis of slope-area measurement.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	85	97	97	342	146	295	212	251	159	172	184	168
2	72	86	95	318	137	280	245	263	140	770	136	143
3	64	80	94	361	133	249	220	228	152	568	297	121
4	57	81	98	319	204	220	204	199	187	331	268	150
5	56	87	265	276	189	207	224	221	150	256	233	133
6	50	184	231	242	168	341	199	276	134	249	190	110
7	47	152	176	211	166	295	216	243	494	282	210	104
8	45	123	153	195	146	255	209	219	495	231	255	100
9	47	110	140	186	e139	231	269	222	398	204	243	92
10	52	104	132	172	139	208	1,290	194	268	190	225	85
11	61	221	374	e160	133	191	1,230	183	226	196	220	80
12	56	347	313	e150	130	179	757	166	212	172	178	76
13	48	299	423	e145	124	175	566	152	211	173	158	73
14	45	204	500	e140	132	170	430	145	314	156	152	71
15	78	168	341	e136	405	157	348	196	374	156	427	80
16	446	301	274	e128	611	585	297	206	432	141	617	74
17	196	485	230	e126	373	428	269	165	527	133	314	67
18	125	312	200	e120	275	348	1,580	164	379	124	226	65
19	103	232	185	e119	228	341	871	154	351	117	180	63
20	90	195	302	e120	212	596	567	144	295	123	154	60
21	89	202	232	e130	215	572	450	147	245	111	136	58
22	84	191	205	e118	1,610	423	370	160	214	124	142	117
23	75	163	185	e112	1,200	334	305	155	191	149	198	349
24	70	149	315	e110	628	282	265	193	173	111	132	115
25	69	138	344	e107	438	245	243	160	160	101	114	88
26	73	129	267	e103	351	225	228	203	151	94	104	79
27	68	123	225	e100	337	204	205	160	159	91	101	183
28	75	112	202	e98	329	190	189	146	148	88	132	243
29	84	106	185	e128	---	184	177	156	135	100	303	125
30	141	103	171	e160	---	218	200	163	146	113	225	102
31	120	---	162	156	---	192	---	181	---	99	153	---
TOTAL	2,771	5,284	7,116	5,288	9,298	8,820	12,835	5,815	7,620	5,925	6,607	3,374
MEAN	89.4	176	230	171	332	285	428	188	254	191	213	112
MAX	446	485	500	361	1,610	596	1,580	276	527	770	617	349
MIN	45	80	94	98	124	157	177	144	134	88	101	58
CFSM	0.97	1.91	2.49	1.85	3.61	3.09	4.65	2.04	2.76	2.08	2.31	1.22
IN.	1.12	2.13	2.87	2.14	3.76	3.56	5.18	2.35	3.08	2.39	2.67	1.36

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2003, BY WATER YEAR (WY)

	110	150	171	211	264	305	258	180	145	112	120	108
MEAN	110	150	171	211	264	305	258	180	145	112	120	108
MAX	380	662	434	817	643	858	689	411	583	461	1,169	691
(WY)	(1965)	(1978)	(1951)	(1995)	(1998)	(1979)	(1987)	(1973)	(1992)	(1989)	(1940)	(1979)
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 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1940 - 2003	
ANNUAL TOTAL	44,072.4		80,753		176	
ANNUAL MEAN	121		221		84.7	
HIGHEST ANNUAL MEAN					297	1979
LOWEST ANNUAL MEAN					84.7	1988
HIGHEST DAILY MEAN	1,410	Sep 27	1,610	Feb 22	15,900	Aug 13, 1940
LOWEST DAILY MEAN	8.1	Sep 13	45	Oct 8	8.1	Sep 13, 2002
ANNUAL SEVEN-DAY MINIMUM	11	Sep 7	51	Oct 4	11	Sep 7, 2002
MAXIMUM PEAK FLOW			3,630	Feb 22	50,800*	Aug 13, 1940
MAXIMUM PEAK STAGE			8.45	Feb 22	29.60	Aug 13, 1940
INSTANTANEOUS LOW FLOW			42*	Oct 9	6.5*	Jan 1, 1954
ANNUAL RUNOFF (CFSM)	1.31		2.40		1.91	
ANNUAL RUNOFF (INCHES)	17.80		32.62		25.92	
10 PERCENT EXCEEDS	231		373		325	
50 PERCENT EXCEEDS	90		178		115	
90 PERCENT EXCEEDS	25		85		39	

e Estimated.  
 \* See REMARKS.

