

Water-Data Report 2007

03479000 WATAUGA RIVER NEAR SUGAR GROVE, NC

French Broad-Holston Basin
Watauga Subbasin

LOCATION.--Lat 36°14'21", long 81°49'20" referenced to North American Datum of 1983, Watauga County, NC, 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 river mile 64.4.

DRAINAGE AREA.--92.1 mi².

SURFACE-WATER RECORDS

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 poor. 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.

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.

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007
DAILY MEAN VALUES

[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	61	83	612	1,290	e113	157	143	86	47	97	78	83
2	53	117	336	505	e109	650	140	83	58	73	80	48
3	51	94	233	339	e107	314	127	88	52	63	66	34
4	48	86	196	269	e104	222	125	112	50	72	57	29
5	47	82	172	269	e101	182	115	102	47	81	52	26
6	72	78	157	309	e98	160	111	96	60	102	50	23
7	55	155	148	252	e97	146	115	84	42	72	46	21
8	57	1,130	134	502	e96	136	108	80	38	60	43	20
9	56	388	e128	408	e94	126	106	79	36	53	40	19
10	50	246	e122	314	e92	121	101	77	33	47	39	18
11	49	242	115	254	e90	120	102	90	32	55	39	19
12	54	364	110	232	e89	111	121	77	32	53	36	20
13	49	255	109	219	87	107	100	74	34	44	37	18
14	46	211	105	202	106	104	99	67	48	44	33	72
15	44	190	101	190	86	108	152	65	58	40	30	104
16	45	1,330	97	180	e86	478	155	66	46	39	28	48
17	164	601	93	161	e85	397	136	67	38	72	27	35
18	141	369	91	152	124	254	126	61	33	93	25	31
19	92	280	90	149	92	202	142	59	31	60	23	28
20	117	226	88	139	83	178	160	56	50	56	23	26
21	99	191	87	152	170	168	141	54	33	52	26	25
22	86	177	545	195	131	154	130	52	28	42	34	26
23	77	164	415	165	109	144	121	50	27	46	26	24
24	70	146	230	153	99	136	116	50	86	131	26	22
25	67	135	267	145	129	128	111	49	113	181	24	21
26	65	126	294	138	132	128	108	55	92	219	30	20
27	77	119	232	131	117	122	106	53	71	158	23	19
28	166	114	199	129	109	124	98	49	171	114	22	19
29	110	111	180	e124	---	264	94	48	127	93	34	17
30	93	180	166	e120	---	168	89	42	160	90	41	16
31	86	---	193	e117	---	149	---	40	---	96	62	---
Total	2,347	7,990	6,045	7,904	2,935	5,958	3,598	2,111	1,773	2,498	1,200	931
Mean	75.7	266	195	255	105	192	120	68.1	59.1	80.6	38.7	31.0
Max	166	1,330	612	1,290	170	650	160	112	171	219	80	104
Min	44	78	87	117	83	104	89	40	27	39	22	16
Cfsm	0.82	2.89	2.12	2.77	1.14	2.09	1.30	0.74	0.64	0.87	0.42	0.34
In.	0.95	3.23	2.44	3.19	1.19	2.41	1.45	0.85	0.72	1.01	0.48	0.38

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2007, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	110	157	174	211	258	298	256	177	146	112	117	120
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

	Calendar Year 2006		Water Year 2007		Water Years 1940 - 2007	
Annual total	55,996		45,290			
Annual mean	153		124		176	
Highest annual mean					297	1979
Lowest annual mean					84.7	1988
Highest daily mean	1,400	Jan 18	1,330	Nov 16	15,900	Aug 13, 1940
Lowest daily mean	26	Aug 27	16	Sep 30	8.1	Sep 13, 2002
Annual seven-day minimum	30	Aug 22	19	Sep 24	11	Sep 7, 2002
Maximum peak flow			2,600	Jan 1	^a 50,800	Aug 13, 1940
Maximum peak stage			7.10	Jan 1	29.60	Aug 13, 1940
Instantaneous low flow			15	Sep 30	^a 6.5	Jan 1, 1954
Annual runoff (cfsm)	1.67		1.35		1.91	
Annual runoff (inches)	22.62		18.29		25.97	
10 percent exceeds	269		231		321	
50 percent exceeds	117		94		116	
90 percent exceeds	52		30		39	

^a See Remarks.

