

Water-Data Report 2010

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 National Geodetic Vertical Datum of 1929. Satellite telemetry at streamgage.

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. Minimum discharge for current water year also occurred September 25, 26.

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 2009 TO SEPTEMBER 2010
DAILY MEAN VALUES

[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	135	354	151	281	253	192	254	116	92	45	33	31
2	124	286	453	e249	325	187	238	114	83	42	30	29
3	116	240	612	e218	336	178	225	158	79	40	29	28
4	105	208	379	e198	285	166	211	139	76	39	30	27
5	110	187	312	e181	356	157	197	118	87	38	47	25
6	102	166	257	e169	433	153	187	112	74	36	86	24
7	106	153	227	e160	347	156	177	105	79	34	43	24
8	94	142	216	e153	294	174	264	102	68	33	33	25
9	89	133	1,010	e148	274	218	325	93	66	31	30	28
10	89	198	591	e145	274	304	229	92	72	52	29	23
11	87	1,650	390	e142	766	408	208	94	67	37	46	31
12	88	861	310	e140	252	611	194	95	63	37	63	45
13	94	507	340	e139	212	1,160	182	91	77	44	38	31
14	145	366	305	e138	197	703	172	87	101	44	87	26
15	166	292	263	e137	193	509	164	124	109	35	56	23
16	140	246	235	e137	190	400	157	158	128	32	82	22
17	132	218	216	1,000	176	335	155	212	84	35	108	26
18	122	215	220	827	170	296	144	162	72	38	328	24
19	112	340	244	577	166	265	136	130	65	62	119	21
20	105	271	197	477	165	242	135	114	61	52	106	20
21	101	236	181	507	186	290	143	112	57	38	88	19
22	99	216	179	500	291	2,430	130	116	58	33	156	18
23	96	229	182	455	406	860	130	104	53	30	91	18
24	820	203	196	787	389	560	126	96	54	28	65	17
25	293	190	1,620	2,460	316	445	164	114	66	26	57	17
26	203	177	1,090	907	264	395	141	97	54	25	50	32
27	208	165	576	580	232	326	150	94	51	54	44	59
28	365	153	424	438	211	350	141	92	48	51	41	50
29	256	147	333	361	---	382	126	98	47	34	38	36
30	217	157	283	343	---	313	120	87	46	35	35	36
31	206	---	274	284	---	280	---	93	---	31	33	---
Total	5,125	8,906	12,266	13,238	7,959	13,445	5,325	3,519	2,137	1,191	2,121	835
Mean	165	297	396	427	284	434	178	114	71.2	38.4	68.4	27.8
Max	820	1,650	1,620	2,460	766	2,430	325	212	128	62	328	59
Min	87	133	151	137	165	153	120	87	46	25	29	17
Cfsm	1.80	3.22	4.30	4.64	3.09	4.71	1.93	1.23	0.77	0.42	0.74	0.30
In.	2.07	3.60	4.95	5.35	3.21	5.43	2.15	1.42	0.86	0.48	0.86	0.34

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2010, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	109	156	175	212	255	299	252	176	144	110	116	119
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	67.0	41.4	35.0	23.9	18.1
(WY)	(1955)	(1982)	(1964)	(1956)	(1941)	(1988)	(1986)	(2008)	(1988)	(1944)	(2002)	(1954)

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SUMMARY STATISTICS

	Calendar Year 2009		Water Year 2010		Water Years 1940 - 2010	
Annual total	70,074		76,067			
Annual mean	192		208		175	
Highest annual mean					297	1979
Lowest annual mean					84.7	1988
Highest daily mean	1,650	Nov 11	2,460	Jan 25	15,900	Aug 13, 1940
Lowest daily mean	48	Jul 26	17	Sep 24	8.1	Sep 13, 2002
Annual seven-day minimum	54	Jul 22	19	Sep 19	11	Sep 7, 2002
Maximum peak flow			4,910	Mar 22	^a 50,800	Aug 13, 1940
Maximum peak stage			9.59	Mar 22	29.60	Aug 13, 1940
Instantaneous low flow			^a 17	Sep 24	^a 6.5	Jan 1, 1954
Annual runoff (cfsm)	2.08		2.26		1.90	
Annual runoff (inches)	28.30		30.72		25.80	
10 percent exceeds	336		402		320	
50 percent exceeds	150		141		115	
90 percent exceeds	70		32		39	

^a See Remarks.

