

Water-Data Report 2008

02151500 BROAD RIVER NEAR BOILING SPRINGS, NC

Santee Basin
Upper Broad Subbasin

LOCATION.--Lat 35°12'39", long 81°41'51" referenced to North American Datum of 1983, Cleveland County, NC, Hydrologic Unit 03050105, on right bank 0.5 mi upstream from Sandy Run Creek, 3 mi downstream of Second Broad River, and 3.5 mi southwest of Boiling Springs.

DRAINAGE AREA.--875 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--June 1925 to current year.

REVISED RECORDS.--WDR NC-81-1: Drainage area. WDR NC-88-1: 1986 (minimum discharge, gage height, daily discharges, June, July, August).

GAGE.--Water-stage recorder. Datum of gage is 638.33 ft above North American Vertical Datum (Trimble GPS). Prior to July 20, 1934, at site 500 ft upstream at 640.92 ft. Satellite and telephone telemetry at station.

REMARKS.--No estimated daily discharges. Records fair. Considerable diurnal fluctuation and some regulation caused by power plants upstream from station. Minimum discharge for water year 2007 also occurred September 30. Maximum discharge and gage height for period of record from former site, present datum. Minimum discharge for current water year also occurred August 11.

REVISIONS.--Revised figures of daily discharge for the water year 2007, superceding those published in the report for 2007, are given below.

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

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	497	895	1,160	7,700	1,210	1,440	1,070	1,080	742	569	509	412
2	522	801	1,480	6,100	1,380	11,600	1,230	965	665	553	462	331
3	737	773	1,200	3,280	1,320	5,080	1,280	932	501	612	422	376
4	641	783	1,260	2,730	1,230	2,790	1,170	961	584	569	358	365
5	569	517	1,150	2,660	1,170	2,080	1,080	1,110	786	446	310	343
6	637	664	1,130	3,570	1,160	1,680	793	866	623	440	357	297
7	731	889	1,140	3,290	1,160	1,500	1,090	888	578	507	322	313
8	445	2,400	1,130	7,270	1,160	1,430	801	1,040	425	395	342	228
9	571	1,760	1,350	4,880	1,160	1,370	828	958	607	458	345	183
10	619	1,300	856	3,390	1,090	1,340	1,150	907	439	497	338	238
11	620	1,160	1,020	2,610	1,080	1,230	1,140	1,050	579	439	254	290
12	749	741	1,140	2,280	1,070	1,120	1,150	1,020	529	450	265	249
13	761	941	1,050	2,090	1,120	1,190	1,050	732	525	438	983	299
14	497	1,110	814	1,760	1,220	1,160	1,040	613	600	474	661	303
15	504	1,050	1,080	1,770	1,100	1,350	1,030	995	730	327	433	832
16	669	2,720	884	1,830	1,090	1,710	1,290	931	848	504	308	497
17	832	2,550	628	1,710	1,090	2,460	1,390	820	696	483	291	394
18	1,790	1,730	570	1,550	1,050	1,730	1,220	809	651	448	309	395
19	1,150	1,190	867	1,620	903	1,360	1,100	833	673	535	221	342
20	1,070	1,070	1,020	1,650	801	1,410	1,360	569	624	450	225	407
21	933	1,190	945	1,480	1,070	1,410	1,290	560	659	371	289	347
22	613	1,280	1,510	1,580	1,140	1,440	843	821	483	321	293	295
23	698	1,250	4,870	1,660	982	1,220	934	861	477	394	356	264
24	756	842	2,380	1,600	1,020	1,290	1,080	779	442	353	347	287
25	824	1,160	3,330	1,340	1,160	1,190	1,090	775	598	373	518	364
26	837	805	4,860	1,250	1,420	1,060	985	710	631	366	464	318
27	833	663	2,950	1,350	1,290	1,240	1,050	519	616	381	365	295
28	1,100	972	2,130	1,380	1,110	1,180	1,020	460	483	342	326	342
29	949	1,020	1,630	1,200	---	1,230	712	653	492	304	334	244
30	726	1,040	1,640	1,220	---	1,140	831	610	635	472	304	177
31	904	---	966	1,420	---	1,070	---	704	---	537	521	---
Total	23,784	35,266	48,140	79,220	31,756	58,500	32,097	25,531	17,921	13,808	11,832	10,027
Mean	767	1,176	1,553	2,555	1,134	1,887	1,070	824	597	445	382	334
Max	1,790	2,720	4,870	7,700	1,420	11,600	1,390	1,110	848	612	983	832
Min	445	517	570	1,200	801	1,060	712	460	425	304	221	177
Cfs/m	0.88	1.34	1.77	2.92	1.30	2.16	1.22	0.94	0.68	0.51	0.44	0.38
In.	1.01	1.50	2.05	3.37	1.35	2.49	1.36	1.09	0.76	0.59	0.50	0.43

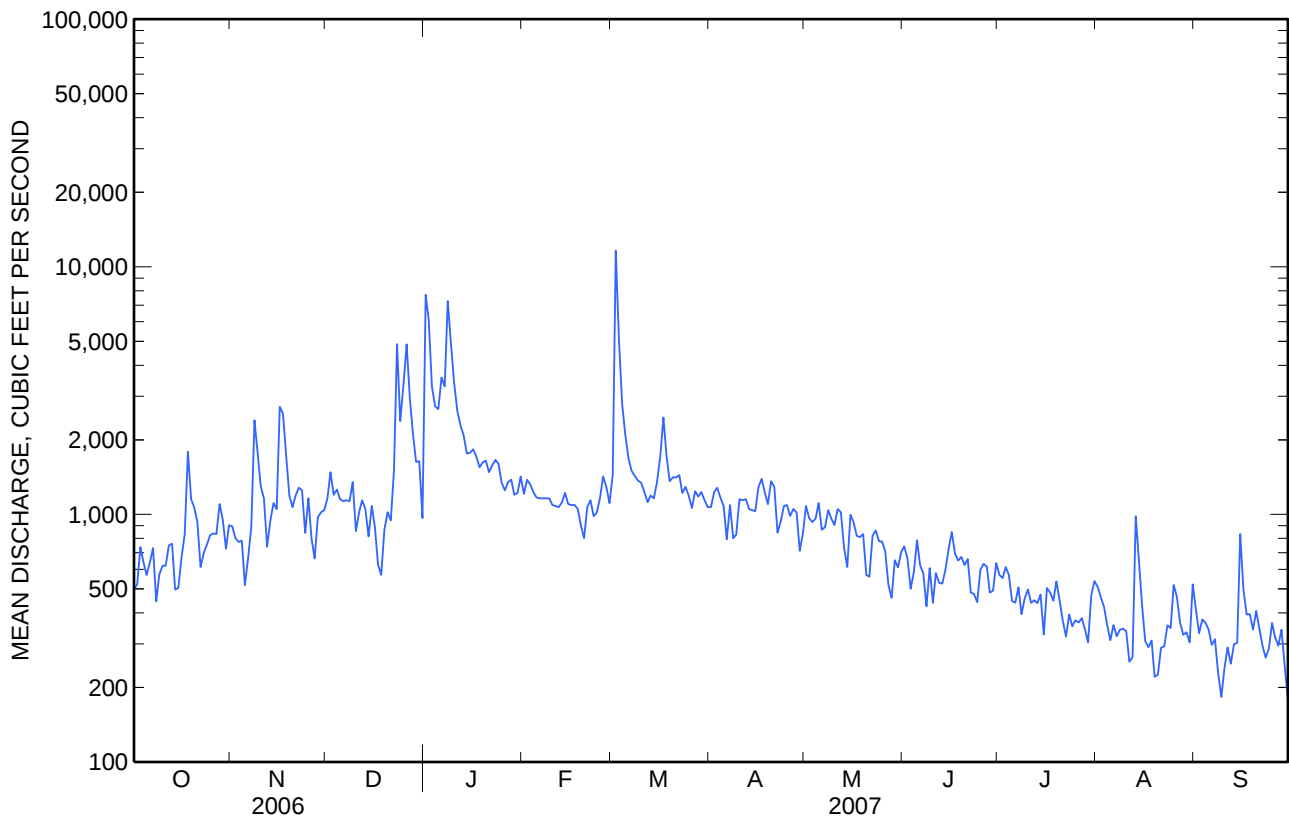
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1925 - 2007, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	1,244	1,220	1,448	1,734	1,861	2,064	1,898	1,517	1,297	1,112	1,199	1,085
Max	5,499	3,275	2,875	4,750	4,304	4,868	4,525	3,441	2,812	3,241	6,893	4,806
(WY)	(1965)	(1993)	(1984)	(1937)	(1960)	(1975)	(1936)	(1973)	(1973)	(2005)	(1928)	(2004)
Min	237	407	449	422	641	783	821	505	420	305	175	288
(WY)	(1955)	(1955)	(1956)	(1956)	(2001)	(1988)	(1986)	(2001)	(1988)	(2002)	(2002)	(1954)

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SUMMARY STATISTICS

	Calendar Year 2006		Water Year 2007		Water Years 1925 - 2007	
Annual total	371,849		387,882			
Annual mean	1,019		1,063		1,473	
Highest annual mean					2,328	
Lowest annual mean					578	
Highest daily mean	6,630	Jun 27	11,600	Mar 2	63,900	Aug 16, 1928
Lowest daily mean	332	Jun 19	177	Sep 30	83	Sep 13, 2002
Annual seven-day minimum	418	Aug 5	256	Sep 8	102	Sep 8, 2002
Maximum peak flow			14,000	Mar 2	^a 73,300	Aug 16, 1928
Maximum peak stage			9.76	Mar 2	^a 24.30	Aug 16, 1928
Instantaneous low flow			^a 139	Aug 20	40	Oct 17, 1954
Annual runoff (cfs)	1.16		1.21		1.68	
Annual runoff (inches)	15.81		16.49		22.88	
10 percent exceeds	1,610		1,690		2,470	
50 percent exceeds	853		866		1,160	
90 percent exceeds	505		342		552	

^aSee Remarks.

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008
DAILY MEAN VALUES

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	268	336	289	1,360	1,310	500	911	681	332	222	264	572
2	282	389	277	942	2,060	424	854	630	338	210	195	578
3	301	270	295	857	1,270	481	630	570	378	210	181	463
4	255	234	284	524	1,030	734	637	434	425	214	203	401
5	388	288	462	637	1,080	2,540	1,320	542	505	177	212	405
6	340	341	423	471	906	1,790	1,350	583	307	135	206	230
7	259	309	403	730	924	1,640	1,460	584	333	330	187	243
8	278	360	302	455	962	2,420	1,310	546	257	321	194	296
9	318	383	402	571	656	1,880	1,160	557	302	296	125	219
10	316	256	261	593	475	1,390	1,010	801	257	302	86	243
11	307	244	425	550	675	1,240	1,020	401	304	420	95	1,920
12	292	284	270	522	749	1,010	907	561	227	264	148	782
13	248	328	298	682	678	1,070	639	505	279	191	196	498
14	192	366	335	503	664	1,060	828	540	230	364	155	442
15	283	410	413	690	561	906	831	468	185	317	216	436
16	302	366	422	524	421	1,090	797	620	259	246	156	550
17	296	257	456	895	417	859	695	587	255	229	479	744
18	363	284	523	770	815	990	668	366	235	246	346	560
19	317	246	309	524	884	1,110	834	481	250	184	230	390
20	259	245	360	469	727	1,720	587	515	255	144	171	311
21	216	278	448	561	735	1,550	708	452	185	174	189	305
22	269	344	453	679	850	1,290	590	650	139	221	155	304
23	352	377	412	624	585	910	719	402	182	237	118	234
24	366	284	1,030	485	515	993	723	335	262	204	107	336
25	444	275	828	496	573	924	662	275	223	197	145	277
26	478	458	763	396	606	966	631	485	199	172	303	256
27	332	779	665	372	867	813	456	486	186	156	3,480	537
28	265	629	548	473	692	850	615	438	175	185	2,100	459
29	311	389	1,350	536	512	778	937	740	176	207	725	524
30	340	343	1,410	493	---	562	780	531	205	254	509	318
31	351	---	1,880	373	---	840	---	476	---	223	414	---
Total	9,588	10,352	16,996	18,757	23,199	35,330	25,269	16,242	7,845	7,252	12,290	13,833
Mean	309	345	548	605	800	1,140	842	524	262	234	396	461
Max	478	779	1,880	1,360	2,060	2,540	1,460	801	505	420	3,480	1,920
Min	192	234	261	372	417	424	456	275	139	135	86	219
Cfs/m	0.35	0.39	0.63	0.69	0.91	1.30	0.96	0.60	0.30	0.27	0.45	0.53
In.	0.41	0.44	0.72	0.80	0.99	1.50	1.07	0.69	0.33	0.31	0.52	0.59

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1925 - 2008, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	1,232	1,209	1,437	1,720	1,848	2,053	1,885	1,505	1,284	1,102	1,189	1,078
Max	5,499	3,275	2,875	4,750	4,304	4,868	4,525	3,441	2,812	3,241	6,893	4,806
(WY)	(1965)	(1993)	(1984)	(1937)	(1960)	(1975)	(1936)	(1973)	(1973)	(2005)	(1928)	(2004)
Min	237	345	449	422	641	783	821	505	262	234	175	288
(WY)	(1955)	(2008)	(1956)	(1956)	(2001)	(1988)	(1986)	(2001)	(2008)	(2008)	(2002)	(1954)

02151500 BROAD RIVER NEAR BOILING SPRINGS, NC—Continued

SUMMARY STATISTICS

	Calendar Year 2007		Water Year 2008		Water Years 1925 - 2008	
Annual total	317,628		196,953			
Annual mean	870		538		1,462	
Highest annual mean					2,328	
Lowest annual mean					538	
Highest daily mean	11,600	Mar 2	3,480	Aug 27	63,900	Aug 16, 1928
Lowest daily mean	177	Sep 30	86	Aug 10	83	Sep 13, 2002
Annual seven-day minimum	256	Sep 8	143	Aug 8	102	Sep 8, 2002
Maximum peak flow			6,040	Aug 27	^a 73,300	Aug 16, 1928
Maximum peak stage			5.61	Aug 27	^a 24.30	Aug 16, 1928
Instantaneous low flow			^a 81	Aug 10	40	Oct 17, 1954
Annual runoff (cfs)	0.995		0.615		1.67	
Annual runoff (inches)	13.50		8.37		22.70	
10 percent exceeds	1,430		991		2,460	
50 percent exceeds	569		422		1,150	
90 percent exceeds	284		202		537	

^aSee Remarks.