

Water-Data Report 2010

**02150495 SECOND BROAD RIVER NEAR LOGAN, NC**

Santee Basin  
Upper Broad Subbasin

LOCATION.--Lat 35°24'16", long 81°52'21" referenced to North American Datum of 1983, Rutherford County, NC, Hydrologic Unit 03050105, on right bank 30 ft downstream of bridge on Secondary Road 1538, 2.2 mi southeast of Logan, and 2.7 mi upstream from Catheys Creek.

DRAINAGE AREA.--86.2 mi<sup>2</sup>.

**SURFACE-WATER RECORDS**

PERIOD OF RECORD.--October 1998 to current year.

REVISED RECORDS.--WDR NC-03-1B: 2000 (annual maximum discharge).

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 840 ft above National Geodetic Vertical Datum of 1929, from topographic map. Satellite telemetry at streamgage.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Minimum discharge for the current water year also occurred September 25.

## 02150495 SECOND BROAD RIVER NEAR LOGAN, NC—Continued

**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	64	166	79	169	155	124	128	98	123	53	50	41
2	59	140	526	154	195	126	124	98	101	51	48	39
3	57	114	e790	141	249	129	121	129	95	49	47	38
4	54	97	e327	133	239	122	118	124	87	48	43	36
5	70	87	221	126	1,170	119	113	105	83	47	42	35
6	65	80	168	120	1,060	116	112	97	80	45	93	35
7	57	76	143	117	514	116	109	92	78	45	64	35
8	52	73	134	114	376	115	115	89	73	43	48	35
9	50	70	657	107	313	115	139	84	72	43	43	38
10	63	87	369	104	270	114	115	84	75	44	40	35
11	55	1,320	235	102	229	122	108	94	73	42	38	36
12	54	584	182	103	207	144	105	95	71	43	37	44
13	57	309	182	100	196	232	102	89	73	52	37	38
14	68	208	170	98	178	191	100	85	72	61	123	35
15	100	155	153	97	172	161	99	88	68	44	131	33
16	85	128	138	97	162	144	98	88	70	43	94	32
17	100	115	126	550	153	137	97	105	70	41	102	32
18	84	108	135	331	146	133	94	127	64	47	71	32
19	72	115	162	226	141	127	91	111	62	44	74	31
20	67	105	144	185	138	123	92	93	76	41	69	31
21	63	97	136	196	138	125	98	99	63	43	61	30
22	60	94	133	219	152	180	92	111	59	39	66	30
23	59	112	135	191	158	154	90	97	59	37	55	31
24	84	104	140	537	152	140	91	91	57	35	50	29
25	73	98	1,670	2,800	144	134	173	101	58	34	51	28
26	63	93	909	659	135	134	135	93	59	47	49	40
27	71	88	455	391	132	122	117	89	57	42	46	61
28	186	84	327	289	128	132	111	84	58	46	45	77
29	129	81	248	225	---	164	101	87	57	49	45	50
30	102	80	202	216	---	144	99	82	54	41	44	45
31	98	---	184	172	---	134	---	125	---	38	42	---
<b>Total</b>	2,321	5,068	9,580	9,069	7,402	4,273	3,287	3,034	2,147	1,377	1,848	1,132
<b>Mean</b>	74.9	169	309	293	264	138	110	97.9	71.6	44.4	59.6	37.7
<b>Max</b>	186	1,320	1,670	2,800	1,170	232	173	129	123	61	131	77
<b>Min</b>	50	70	79	97	128	114	90	82	54	34	37	28
<b>Cfsm</b>	0.87	1.96	3.59	3.39	3.07	1.60	1.27	1.14	0.83	0.52	0.69	0.44
<b>In.</b>	1.00	2.19	4.13	3.91	3.19	1.84	1.42	1.31	0.93	0.59	0.80	0.49

**STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1999 - 2010, BY WATER YEAR (WY)**

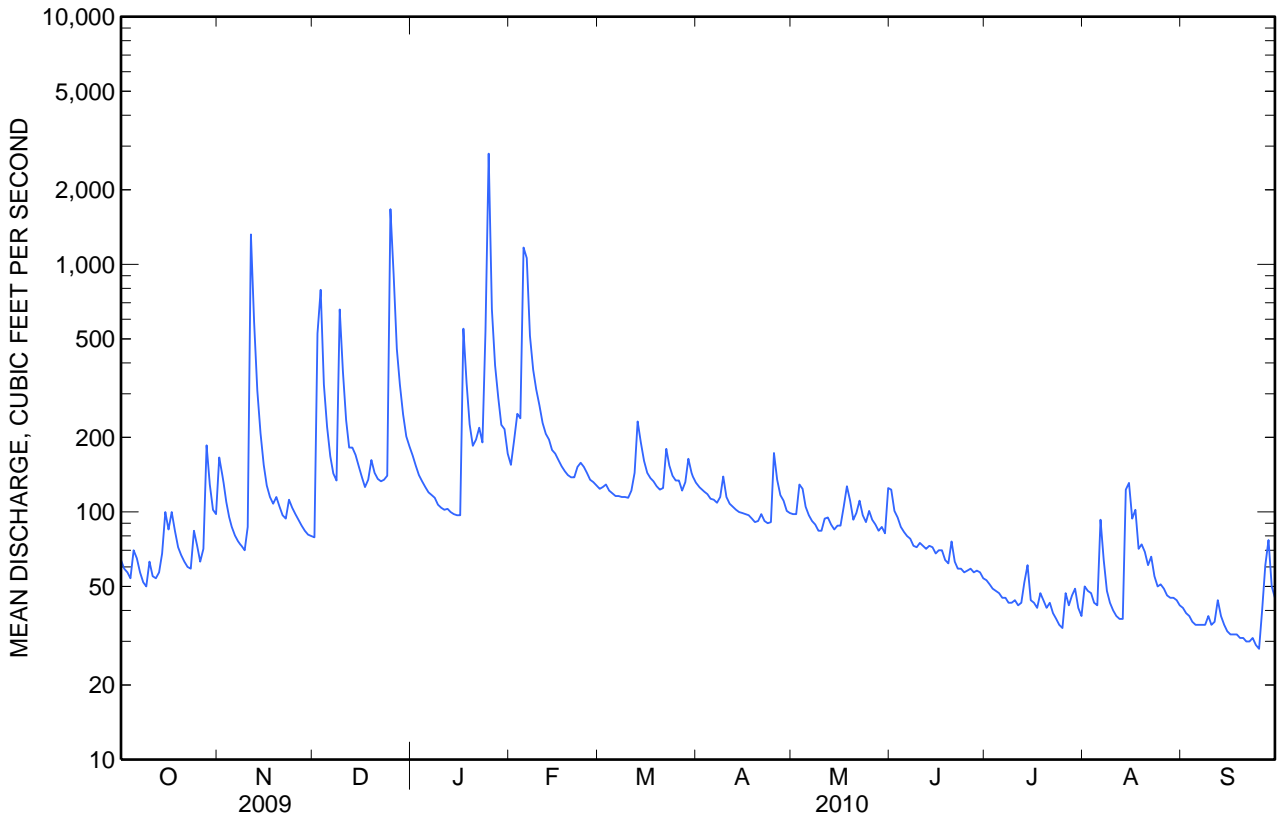
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
<b>Mean</b>	62.3	87.4	119	119	114	132	125	93.7	86.4	83.8	76.7	82.4
<b>Max</b>	122	187	309	293	264	216	368	276	275	275	384	349
<b>(WY)</b>	(2004)	(2005)	(2010)	(2010)	(2010)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2004)
<b>Min</b>	25.5	32.6	46.2	50.8	43.0	73.8	66.2	34.4	21.6	14.9	13.9	27.9
<b>(WY)</b>	(2001)	(2009)	(2002)	(2001)	(2009)	(2006)	(2002)	(2001)	(2008)	(2008)	(2002)	(2002)

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SUMMARY STATISTICS

	Calendar Year 2009		Water Year 2010		Water Years 1999 - 2010	
<b>Annual total</b>	41,944		50,538			
<b>Annual mean</b>	115		138		98.4	
<b>Highest annual mean</b>					205	2003
<b>Lowest annual mean</b>					46.2	2002
<b>Highest daily mean</b>	1,670	Dec 25	2,800	Jan 25	3,320	Sep 8, 2004
<b>Lowest daily mean</b>	32	Aug 10	28	Sep 25	6.6	Sep 12, 2002
<b>Annual seven-day minimum</b>	35	Aug 7	30	Sep 19	8.0	Sep 7, 2002
<b>Maximum peak flow</b>			4,810	Jan 25	4,810	Jan 25, 2010
<b>Maximum peak stage</b>			16.38	Jan 25	16.38	Jan 25, 2010
<b>Instantaneous low flow</b>			<sup>a</sup> 28	Sep 24	6.1	Sep 12, 2002
<b>Annual runoff (cfsm)</b>	1.33		1.61		1.14	
<b>Annual runoff (inches)</b>	18.10		21.81		15.51	
<b>10 percent exceeds</b>	202		211		168	
<b>50 percent exceeds</b>	70		97		68	
<b>90 percent exceeds</b>	40		41		29	

<sup>a</sup> See Remarks.



**02150495 SECOND BROAD RIVER NEAR LOGAN, NC—Continued****CLIMATOLOGICAL RECORDS**

PERIOD OF RECORD.--November 2000 to current year.

INSTRUMENTATION.--Tipping-bucket raingage and electronic datalogger. Satellite telemetry at station.

REMARKS.--Gage is operated in cooperation with North Carolina Department of Environment and Natural Resources. Frozen precipitation collected during December 2009, January and February 2010 is not reflected in daily or monthly totals.

**PRECIPITATION, TOTAL, INCHES**  
**WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010**  
**DAILY SUM VALUES**

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0.00	0.20	---	0.00	---	0.00	0.00	0.00	0.01	0.00	0.02	0.00
2	0.00	0.00	---	0.00	---	0.18	0.00	0.00	0.07	0.00	0.00	0.00
3	0.00	0.00	---	0.00	---	0.00	0.00	1.00	0.00	0.00	0.00	0.00
4	0.08	0.00	---	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.65	0.00	0.14	0.00	---	0.00	0.00	0.00	0.00	0.00	0.42	0.00
6	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.09	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.99	0.00	0.00	0.00	1.33	0.00	0.00	0.00	0.00	0.00
9	0.01	0.00	0.93	0.00	0.01	0.00	0.00	0.00	0.00	0.01	0.00	0.00
10	0.50	1.91	0.00	0.00	0.00	0.00	0.00	0.06	0.03	0.00	0.00	0.00
11	0.00	2.31	0.00	0.00	0.00	0.46	0.00	0.17	0.00	0.00	0.00	0.44
12	0.42	0.00	0.03	0.00	---	0.74	0.00	0.00	0.00	0.15	0.00	0.03
13	0.00	0.00	0.47	0.00	---	0.19	0.00	0.00	0.87	0.00	0.00	0.00
14	0.65	0.00	0.01	0.00	---	0.00	0.00	0.21	0.00	0.00	1.88	0.00
15	0.16	0.00	0.01	0.00	---	0.01	0.00	0.11	0.04	0.00	0.09	0.00
16	0.53	0.00	0.00	0.49	0.00	0.00	0.00	0.45	0.01	0.00	0.00	0.00
17	0.13	0.00	0.00	1.62	0.00	0.00	0.00	1.24	0.00	0.03	0.28	0.00
18	0.00	0.08	---	0.01	0.00	0.00	0.00	0.21	0.00	1.48	0.03	0.00
19	0.00	0.06	---	0.00	0.00	0.00	0.00	0.00	0.00	0.01	1.20	0.00
20	0.00	0.00	---	0.00	0.00	0.00	0.12	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	---	0.61	0.00	0.50	0.21	0.48	0.00	0.00	0.17	0.00
22	0.00	0.48	---	0.00	0.36	0.32	0.00	0.00	0.01	0.00	0.00	0.00
23	0.01	0.09	---	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00
24	0.18	0.00	---	3.41	0.15	0.00	0.79	0.03	0.00	0.00	0.04	0.00
25	0.00	---	---	0.06	0.00	0.08	0.70	0.16	0.00	0.00	0.00	0.00
26	0.00	---	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.76
27	1.36	---	0.00	0.00	0.00	0.00	0.13	0.00	0.00	0.15	0.00	0.46
28	0.10	---	0.00	0.00	0.00	0.31	0.00	0.15	0.45	0.00	0.00	0.00
29	0.00	---	0.00	---	---	0.09	0.00	0.01	0.02	0.00	0.00	0.05
30	0.01	---	0.00	---	---	0.00	0.00	0.02	0.00	0.00	0.00	0.00
31	0.76	---	0.17	---	---	0.00	---	1.18	---	0.18	0.00	---
<b>Total</b>	5.55	---	---	---	---	2.89	3.28	5.49	1.60	2.01	4.13	1.74

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