

Water-Data Report 2010

## 02145000 SOUTH FORK CATAWBA RIVER AT LOWELL, NC

Santee Basin  
South Fork Catawba Subbasin

LOCATION.--Lat 35°17'07", long 81°06'04" referenced to North American Datum of 1983, Gaston County, NC, Hydrologic Unit 03050102, on right bank 50 ft north of private mill road, 120 ft downstream of Housers Creek, 2.5 mi upstream from bridge on Interstate Highway 85, 3.0 mi downstream of Long Creek and 1.0 mi north of Lowell.

DRAINAGE AREA.--628 mi<sup>2</sup>.

### **SURFACE-WATER RECORDS**

PERIOD OF RECORD.--January 1942 to September 1971, October 1983 to current year.

REVISED RECORDS.--WSP 1002: 1943, minimum discharge. WSP 1303: 1950, maximum discharge.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 602.28 ft above North American Vertical Datum of 1988. Satellite telemetry at streamgage.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Considerable diurnal fluctuation and slight regulation for short periods at low flow caused by power plant upstream from station. For diversion by Town of Bessemer City, see Long Creek near Bessemer City (station 02144000). The city of Lincolnton diverts water approximately 23 mi upstream from gaging station for water supply and returns treated effluent to South Fork Catawba River approximately 18.7 mi upstream of gaging station. A daily average of 5.02 ft<sup>3</sup>/s was diverted during the year and a daily average of 4.02 ft<sup>3</sup>/s of treated effluent from the City of Lincolnton wastewater treatment plant was returned. A daily average of 10.36 ft<sup>3</sup>/s of treated effluent from Long Creek wastewater treatment plant was discharged into the river approximately 3.47 mi upstream of the gaging station, causing some diurnal fluctuation. Minimum discharge for all years affected by regulation.

EXTREMES OUTSIDE PERIOD OF RECORD.--The flood of August 15, 1940, reached a stage of 21.33 ft, from floodmarks; discharge, 34,000 ft<sup>3</sup>/s. Depth of flow over dam during the July 1916 flood at High Shoals, 11 mi upstream, was about 1 ft higher than that for August 1940, from information by local resident.

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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	350	1,080	571	1,030	1,170	922	1,150	672	1,280	360	281	239
2	320	1,140	1,120	945	1,300	919	1,060	670	1,010	361	295	184
3	334	845	4,060	891	2,140	926	1,000	695	857	335	312	240
4	289	643	2,930	849	2,130	922	960	851	781	288	314	204
5	349	546	1,940	815	5,360	868	934	740	673	281	308	181
6	332	501	1,130	793	10,700	838	904	660	675	269	324	159
7	347	471	935	775	6,620	820	879	639	656	259	365	176
8	319	437	846	757	3,650	826	846	609	603	245	291	195
9	294	434	3,340	733	1,980	818	2,610	597	535	265	241	159
10	301	467	3,010	702	1,680	799	1,640	545	543	273	234	191
11	429	4,580	1,870	681	1,490	818	1,090	577	541	244	247	130
12	352	6,610	1,210	693	1,340	914	966	630	495	333	239	207
13	358	5,160	1,030	692	1,290	2,560	913	602	477	609	240	183
14	383	2,540	1,070	669	1,250	1,800	859	572	514	568	216	179
15	436	1,160	964	655	1,200	1,370	863	591	e524	367	337	170
16	436	917	884	662	1,210	1,160	807	666	e516	371	406	170
17	448	800	820	3,200	1,110	1,060	798	1,580	503	369	400	150
18	384	727	804	2,910	1,070	1,000	775	2,350	490	610	333	130
19	388	705	1,110	1,870	1,020	949	770	1,440	449	650	1,590	129
20	360	689	1,220	1,230	988	913	723	942	405	406	1,100	144
21	351	646	1,080	1,130	958	900	755	762	455	441	534	110
22	326	605	937	1,320	1,070	2,150	767	753	431	363	372	138
23	318	771	883	1,140	1,150	2,230	714	745	381	304	343	136
24	343	798	853	1,380	1,150	1,590	724	681	369	272	320	128
25	338	717	4,970	10,600	1,130	1,270	917	644	376	270	324	106
26	298	677	7,950	11,200	1,040	1,130	1,010	630	371	274	299	192
27	365	684	4,510	6,780	1,000	1,060	825	600	342	293	280	671
28	741	616	2,550	2,220	956	1,170	832	569	338	291	297	908
29	695	580	1,400	1,470	---	3,530	714	777	376	362	262	479
30	578	569	1,170	1,380	---	1,770	675	625	394	347	253	375
31	492	---	1,090	1,310	---	1,320	---	717	---	308	261	---
<b>Total</b>	12,054	37,115	58,257	61,482	57,152	39,322	28,480	24,131	16,360	10,988	11,618	6,763
<b>Mean</b>	389	1,237	1,879	1,983	2,041	1,268	949	778	545	354	375	225
<b>Max</b>	741	6,610	7,950	11,200	10,700	3,530	2,610	2,350	1,280	650	1,590	908
<b>Min</b>	289	434	571	655	956	799	675	545	338	244	216	106
<b>Cfsm</b>	0.62	1.97	2.99	3.16	3.25	2.02	1.51	1.24	0.87	0.56	0.60	0.36
<b>In.</b>	0.71	2.20	3.45	3.64	3.39	2.33	1.69	1.43	0.97	0.65	0.69	0.40

**STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1942 - 2010<sup>a</sup>, BY WATER YEAR (WY)**

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
<b>Mean</b>	603	622	802	991	1,158	1,266	1,035	741	630	526	566	496
<b>Max</b>	2,862	2,034	1,879	2,468	3,204	3,511	3,187	2,412	2,232	1,599	2,266	2,460
<b>(WY)</b>	(1965)	(1958)	(2010)	(1993)	(1960)	(1952)	(2003)	(2003)	(2003)	(2003)	(1970)	(1945)
<b>Min</b>	104	175	235	242	404	539	367	228	122	109	116	110
<b>(WY)</b>	(1955)	(2002)	(1956)	(1956)	(2009)	(2006)	(2002)	(2002)	(2002)	(2002)	(2002)	(1954)

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SUMMARY STATISTICS

	Calendar Year 2009		Water Year 2010		Water Years 1942 - 2010 <sup>a</sup>	
<b>Annual total</b>	288,311		363,722			
<b>Annual mean</b>	790		996		785	
<b>Highest annual mean</b>					1,518	2003
<b>Lowest annual mean</b>					272	2002
<b>Highest daily mean</b>	7,950	Dec 26	11,200	Jan 26	21,700	Aug 11, 1970
<b>Lowest daily mean</b>	190	Aug 15	106	Sep 25	25	Aug 15, 2002
<b>Annual seven-day minimum</b>	212	Aug 10	127	Sep 19	54	Aug 9, 2002
<b>Maximum peak flow</b>			12,400	Jan 26	24,800	Aug 11, 1970
<b>Maximum peak stage</b>			12.70	Jan 26	17.38	Aug 11, 1970
<b>Instantaneous low flow</b>			<sup>b</sup> 71	Sep 21	<sup>b</sup> 13	Aug 22, 1988
<b>Annual runoff (cfs)</b>	1.26		1.59		1.25	
<b>Annual runoff (inches)</b>	17.08		21.55		16.99	
<b>10 percent exceeds</b>	1,310		1,720		1,350	
<b>50 percent exceeds</b>	500		684		553	
<b>90 percent exceeds</b>	269		260		254	

<sup>a</sup> See Period of Record.

<sup>b</sup> See Remarks.

