

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 mi².

SURFACE-WATER RECORDS

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

REVISED RECORDS.--WSP 1002: 1943(M). WSP 1303: 1950(M).

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 station.

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 5.68 ft³/s was diverted during the year and a daily average of 4.52 ft³/s of treated effluent from the City of Lincolnton wastewater treatment plant was returned. A daily average of 9.59 ft³/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. Minimum discharge for current water year also occurred September 10.

EXTREMES OUTSIDE PERIOD OF RECORD.--The flood of August 15, 1940, reached a stage of 21.33 ft, from floodmarks; discharge, 34,000 ft³/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 2006 TO SEPTEMBER 2007
DAILY MEAN VALUES

[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	372	546	631	3,510	696	1,130	628	548	302	429	175	112
2	347	508	614	4,650	774	9,410	658	499	287	371	189	109
3	328	484	603	3,950	725	5,370	640	466	320	300	155	106
4	325	464	587	1,890	678	3,130	623	535	397	245	152	107
5	325	450	558	1,350	648	1,420	613	550	386	238	141	95
6	330	448	557	1,640	634	1,120	584	526	358	e240	156	91
7	319	473	556	1,550	655	969	573	530	308	e228	127	122
8	329	782	533	3,980	636	900	576	501	275	e222	108	93
9	328	1,120	521	2,930	608	856	577	481	297	243	150	51
10	342	869	517	2,110	616	802	552	496	296	266	122	50
11	343	697	518	1,340	617	775	572	466	308	339	110	103
12	455	675	517	1,120	602	758	794	796	433	372	79	73
13	358	589	515	1,030	614	730	657	682	378	247	117	56
14	316	563	503	948	978	716	601	498	377	e211	102	81
15	312	537	509	900	804	703	1,280	473	549	225	72	164
16	311	1,950	493	865	706	940	991	430	559	213	e78	325
17	575	2,320	487	800	657	1,300	785	452	475	e208	102	229
18	1,470	1,660	480	785	634	1,010	708	461	380	197	96	160
19	879	989	481	801	631	990	667	419	319	213	94	137
20	692	808	478	768	614	821	833	402	304	188	92	127
21	584	754	468	743	597	766	732	425	323	250	91	130
22	500	1,760	548	1,110	620	738	673	393	290	200	97	129
23	471	1,330	975	949	583	734	624	372	238	204	109	127
24	439	924	1,470	820	585	713	596	375	260	164	90	140
25	414	805	1,480	778	817	704	605	364	508	193	110	115
26	414	741	2,510	744	1,170	678	579	357	378	235	91	83
27	440	692	1,730	726	881	672	586	352	287	178	110	117
28	1,080	661	1,090	716	749	655	582	352	283	218	125	155
29	972	639	888	692	---	663	580	319	268	184	129	89
30	754	626	811	675	---	640	546	317	359	221	109	113
31	622	---	768	662	---	638	---	319	---	218	147	---
Total	15,746	25,864	23,396	45,532	19,529	41,451	20,015	14,156	10,502	7,460	3,625	3,589
Mean	508	862	755	1,469	697	1,337	667	457	350	241	117	120
Max	1,470	2,320	2,510	4,650	1,170	9,410	1,280	796	559	429	189	325
Min	311	448	468	662	583	638	546	317	238	164	72	50
Cfsm	0.81	1.37	1.20	2.34	1.11	2.13	1.06	0.73	0.56	0.38	0.19	0.19
In.	0.93	1.53	1.39	2.70	1.16	2.46	1.19	0.84	0.62	0.44	0.21	0.21

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1942 - 2007 ^a, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	622	625	793	988	1,170	1,280	1,047	747	638	539	574	505
Max	2,862	2,034	1,748	2,468	3,204	3,511	3,187	2,412	2,232	1,599	2,266	2,460
(WY)	(1965)	(1958)	(1968)	(1993)	(1960)	(1952)	(2003)	(2003)	(2003)	(2003)	(1970)	(1945)
Min	104	175	235	242	443	539	367	228	122	109	116	110
(WY)	(1955)	(2002)	(1956)	(1956)	(2002)	(2006)	(2002)	(2002)	(2002)	(2002)	(2002)	(1954)

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SUMMARY STATISTICS

	Calendar Year 2006		Water Year 2007		Water Years 1942 - 2007 ^a	
Annual total	226,613		230,865			
Annual mean	621		633		793	
Highest annual mean					1,518	2003
Lowest annual mean					272	2002
Highest daily mean	3,360	Jan 14	9,410	Mar 2	21,700	Aug 11, 1970
Lowest daily mean	168	Aug 2	50	Sep 10	25	Aug 15, 2002
Annual seven-day minimum	185	Jul 29	72	Sep 8	54	Aug 9, 2002
Maximum peak flow			10,800	Mar 2	24,800	Aug 11, 1970
Maximum peak stage			11.79	Mar 2	17.38	Aug 11, 1970
Instantaneous low flow			^b 27	Sep 9	^b 13	Aug 22, 1988
Annual runoff (cfsm)	0.989		1.01		1.26	
Annual runoff (inches)	13.42		13.68		17.16	
10 percent exceeds	1,010		1,020		1,360	
50 percent exceeds	510		517		563	
90 percent exceeds	286		117		262	

^a See Period of Record.

^b See Remarks.

