

Water-Data Report 2007

02146600 MCALPINE CREEK AT SARDIS ROAD NEAR CHARLOTTE, NC

Santee Basin
Lower Catawba Subbasin

LOCATION.--Lat 35°08'16", long 80°46'03" referenced to North American Datum of 1983, Mecklenburg County, NC, Hydrologic Unit 03050103, near left bank on downstream end of bridge pier at Sardis Road (Secondary Road 3356), 1.7 mi downstream of Irvins Creek, and 7 mi southeast of city hall, Charlotte.

DRAINAGE AREA.--39.6 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--April 1962 to current year.

REVISED RECORDS.--WDR NC-81-1: Drainage area. WDR NC-99-1B: Instantaneous low flow period of record.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 552.36 ft above North American Vertical Datum of 1988, from levels. Radio telemetry at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. No flow for part of November 15, 1972, result of upstream construction, and August 14, 15, 2002. Minimum discharge for current water year also occurred September 26, 27, 28.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of January 6, 1962, reached a stage of about 14.0 ft, from floodmarks; discharge, 4,150 ft³/s.

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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	3.9	9.5	53	62	148	383	18	9.7	2.8	22	2.7	6.8
2	3.9	7.9	22	31	92	1,490	e38	9.5	2.5	6.6	1.9	7.9
3	3.9	6.9	16	21	37	69	e14	8.9	43	5.6	1.4	1.6
4	3.9	5.7	14	19	25	39	e13	8.7	11	e3.2	1.1	0.95
5	3.7	6.0	12	198	20	31	e12	12	4.9	e2.8	1.1	0.89
6	3.6	7.7	12	128	18	26	e11	14	3.3	e3.4	6.7	0.84
7	3.7	108	11	197	18	23	11	8.2	5.0	138	9.2	0.77
8	80	114	9.7	335	16	22	10	7.7	2.9	25	1.8	0.68
9	15	27	9.4	58	15	19	10	8.3	6.0	24	0.79	0.68
10	6.8	15	11	34	14	19	9.9	12	3.1	20	0.61	0.63
11	5.0	24	12	25	14	19	19	8.4	7.0	7.0	0.56	0.55
12	17	251	11	23	13	18	88	8.1	6.5	14	0.54	0.37
13	5.1	32	10	21	313	17	19	12	35	3.8	0.54	0.43
14	3.9	21	10	19	364	17	14	7.3	43	3.1	0.97	0.54
15	3.7	19	9.5	18	45	17	480	6.3	26	13	0.54	15
16	3.6	873	8.4	18	34	64	93	6.0	8.9	26	0.54	1.3
17	492	64	7.4	15	24	29	31	5.6	6.1	5.9	0.54	0.71
18	134	34	7.9	27	21	19	22	5.1	3.9	12	0.54	0.44
19	22	26	8.1	24	18	18	43	5.0	2.5	5.2	0.54	0.38
20	14	21	8.9	17	17	17	94	5.1	3.7	3.1	0.54	0.27
21	9.3	504	8.0	49	19	17	25	4.9	4.8	2.5	0.54	0.34
22	7.9	e3,300	240	181	17	17	19	4.5	2.9	1.9	0.97	0.27
23	7.6	e1,100	72	37	16	17	17	4.3	2.1	1.6	24	0.23
24	5.6	e90	26	25	14	16	16	4.2	3.1	1.3	14	0.26
25	5.5	32	390	22	122	16	16	4.0	293	1.3	1.8	0.26
26	5.5	26	82	18	48	16	14	3.8	117	1.4	0.80	0.21
27	62	22	35	17	26	16	24	3.5	17	56	6.6	0.19
28	217	18	24	18	20	15	15	3.6	7.4	126	1.5	0.20
29	24	18	20	15	---	19	12	3.4	5.3	10	0.87	0.24
30	13	17	18	14	---	16	11	4.5	124	6.3	1.5	0.24
31	10	---	29	14	---	15	---	3.3	---	4.1	21	---
Total	1,196.1	6,799.7	1,207.3	1,700	1,548	2,536	1,218.9	211.9	803.7	556.1	106.73	44.17
Mean	38.6	227	38.9	54.8	55.3	81.8	40.6	6.84	26.8	17.9	3.44	1.47
Max	492	3,300	390	335	364	1,490	480	14	293	138	24	15
Min	3.6	5.7	7.4	14	13	15	9.9	3.3	2.1	1.3	0.54	0.19
Cfsm	0.97	5.72	0.98	1.38	1.40	2.07	1.03	0.17	0.68	0.45	0.09	0.04
In.	1.12	6.39	1.13	1.60	1.45	2.38	1.15	0.20	0.75	0.52	0.10	0.04

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 2007, BY WATER YEAR (WY)

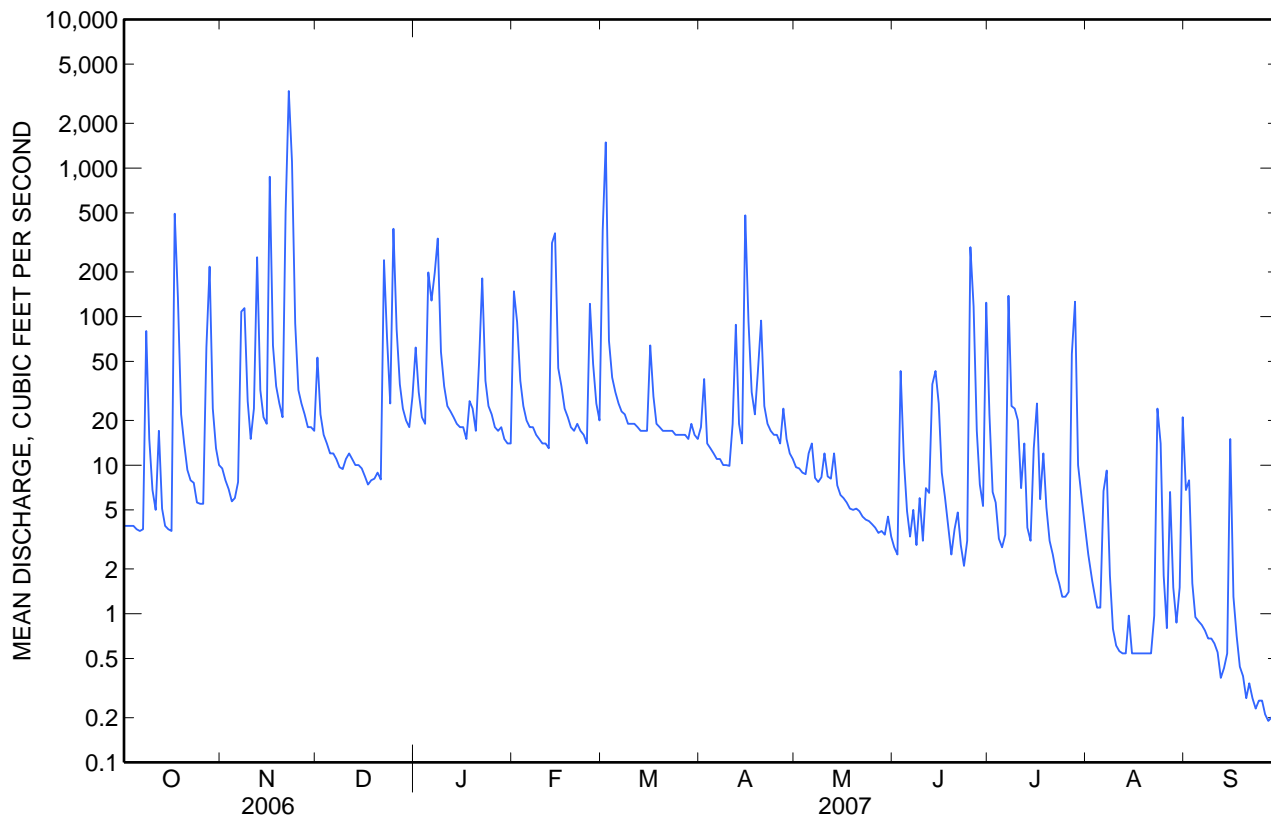
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	32.9	32.8	39.2	62.8	70.1	79.7	49.2	32.6	33.5	30.1	32.9	26.3
Max	212	227	128	157	169	200	182	173	200	140	178	166
(WY)	(1991)	(2007)	(1984)	(1978)	(1979)	(1977)	(2003)	(1975)	(2003)	(1997)	(1994)	(2004)
Min	3.16	3.11	7.55	6.58	13.2	13.6	7.45	6.84	3.60	4.04	3.42	1.46
(WY)	(1963)	(2002)	(1966)	(2004)	(2006)	(1985)	(1967)	(2007)	(1986)	(1977)	(1968)	(1968)

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SUMMARY STATISTICS

	Calendar Year 2006		Water Year 2007		Water Years 1962 - 2007	
Annual total	16,868.4		17,928.60			
Annual mean	46.2		49.1		43.5	
Highest annual mean					90.5	2003
Lowest annual mean					18.9	2001
Highest daily mean	3,300	Nov 22	3,300	Nov 22	4,490	Aug 27, 1995
Lowest daily mean	2.3	Jul 19	0.19	Sep 27	0.01	Aug 14, 2002
Annual seven-day minimum	2.6	Jul 29	0.23	Sep 23	0.08	Aug 8, 2002
Maximum peak flow			3,960	Nov 22	9,040	Aug 27, 1995
Maximum peak stage			12.96	Nov 22	17.79	Aug 27, 1995
Instantaneous low flow			^a 0.15	Sep 23	^a 0.00	Nov 15, 1972
Annual runoff (cfsm)	1.17		1.24		1.10	
Annual runoff (inches)	15.85		16.84		14.91	
10 percent exceeds	67		75		74	
50 percent exceeds	10		13		13	
90 percent exceeds	3.9		0.86		3.7	

^a See Remarks.



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CLIMATOLOGICAL RECORDS

PERIOD OF RECORD.--November 1992 to current year. Records for period November 1992 to September 1998 published in USGS OFR 96-150, 98-67, and 99-273.

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

REMARKS.--Gage is operated as part of Charlotte/Mecklenburg Rainfall Runoff Network (CRN10). Frozen precipitation collected during February 2007 is not reflected in daily or monthly totals.

PRECIPITATION, TOTAL, INCHES
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007
DAILY SUM VALUES

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0.00	0.00	0.15	0.27	---	2.13	0.25	0.00	0.00	0.06	0.00	0.02
2	0.00	0.00	0.00	0.00	---	0.90	0.00	0.00	0.09	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.00
5	0.00	0.00	0.00	0.84	0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.00
6	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00
7	0.13	1.04	0.00	0.65	0.00	0.00	0.00	0.00	0.00	1.42	0.00	0.00
8	0.92	0.23	0.00	0.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.70	0.00	0.08
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00
11	0.20	0.96	0.00	0.00	0.00	0.00	0.36	0.00	0.37	0.07	0.00	0.00
12	0.01	0.06	0.00	0.00	0.00	0.00	0.22	0.01	0.03	0.00	0.00	0.00
13	0.00	0.00	0.02	0.00	1.54	0.00	0.00	0.00	0.05	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.01	0.00	0.37	0.00	0.16	0.00	0.00	0.37
15	0.00	0.79	0.01	0.00	0.00	0.00	1.41	0.00	0.02	0.35	0.00	0.00
16	0.00	1.06	0.00	0.00	0.00	0.55	0.00	0.00	0.00	0.01	0.00	0.00
17	2.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.00	0.00
18	0.03	0.00	0.00	0.35	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00
19	0.01	0.00	0.00	0.00	0.00	0.00	0.69	0.00	0.00	0.00	0.00	0.00
20	0.02	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.09	0.00	0.00	0.02
21	0.00	2.73	0.07	0.79	0.03	0.00	0.00	0.00	0.00	0.00	0.01	0.00
22	0.03	3.19	1.34	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.22	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.00
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.00	0.00	0.00
25	0.00	0.00	1.34	0.00	0.66	0.00	0.00	0.00	1.43	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.00	0.08	0.00
27	1.11	0.00	0.00	0.00	0.01	0.00	0.08	0.00	0.00	0.99	0.01	0.00
28	0.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00
29	0.00	0.00	0.00	0.00	---	0.09	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.12	0.00	0.00	---	0.00	0.00	0.00	0.70	0.00	0.11	0.00
31	0.00	---	0.17	0.00	---	0.00	---	0.00	---	0.00	0.05	---
Total	5.38	10.18	3.10	3.39	---	3.68	3.39	0.12	3.94	3.71	0.67	0.49

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