

Water-Data Report 2010

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, on right bank on downstream end of bridge 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: Period of record instantaneous low flow.

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 streamgage.

REMARKS.--No estimated daily discharges. Records fair. 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 25.

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 2009 TO SEPTEMBER 2010
DAILY MEAN VALUES

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	1.2	234	15	24	49	19	20	9.5	503	55	33	2.8
2	0.88	20	466	19	208	32	18	9.6	486	17	11	2.6
3	0.85	9.7	183	17	145	75	16	19	101	11	13	2.3
4	0.74	6.1	32	15	54	33	16	12	29	9.0	11	2.2
5	36	4.3	24	14	1,480	24	15	8.6	20	9.2	290	1.8
6	11	3.4	18	13	260	21	14	7.6	20	7.1	147	1.6
7	3.5	3.3	14	13	61	20	13	7.0	34	7.3	79	1.7
8	1.9	3.2	67	13	41	20	17	6.2	14	6.7	15	1.6
9	1.3	3.2	655	12	43	21	31	5.4	13	5.8	11	1.8
10	1.3	166	58	11	35	21	13	6.1	63	5.1	8.2	1.4
11	1.3	1,300	26	12	27	38	12	17	38	4.9	6.3	1.4
12	5.6	348	19	14	25	240	12	15	15	1,560	5.5	2.7
13	9.6	55	42	12	43	343	12	11	107	281	4.8	1.8
14	8.1	24	26	11	31	66	11	11	61	33	49	1.3
15	15	16	19	12	66	35	11	11	36	15	140	1.2
16	10	12	15	12	42	27	11	11	30	40	16	1.2
17	4.8	10	13	501	27	23	10	105	14	29	9.2	0.92
18	4.6	10	148	57	24	22	9.5	45	9.9	25	6.9	0.75
19	2.6	11	222	30	22	20	9.2	17	8.1	18	208	2.2
20	2.1	8.4	42	23	20	18	9.8	13	7.3	11	57	1.1
21	1.8	7.5	25	188	20	24	17	13	7.6	9.2	14	0.98
22	1.7	8.9	19	127	106	38	11	19	7.3	13	9.1	1.2
23	1.5	193	16	39	41	20	9.6	13	6.8	6.4	7.2	0.63
24	13	30	14	182	47	17	9.9	16	6.0	19	6.0	0.56
25	8.3	17	1,220	1,950	41	17	50	19	5.7	16	6.1	0.31
26	2.7	13	136	72	26	17	13	13	5.3	6.1	5.9	18
27	68	11	43	38	23	15	22	11	5.6	430	4.8	99
28	116	8.9	29	29	21	16	31	16	6.8	198	4.2	32
29	11	8.0	22	25	---	234	11	68	5.5	21	3.8	54
30	5.5	8.8	19	39	---	36	9.4	13	476	12	3.4	101
31	5.0	---	53	58	---	23	---	245	---	24	3.1	---
Total	356.87	2,553.7	3,700	3,582	3,028	1,575	464.4	793.0	2,141.9	2,904.8	1,188.5	342.05
Mean	11.5	85.1	119	116	108	50.8	15.5	25.6	71.4	93.7	38.3	11.4
Max	116	1,300	1,220	1,950	1,480	343	50	245	503	1,560	290	101
Min	0.74	3.2	13	11	20	15	9.2	5.4	5.3	4.9	3.1	0.31
Cfsm	0.29	2.15	3.01	2.92	2.73	1.28	0.39	0.65	1.80	2.37	0.97	0.29
In.	0.34	2.40	3.48	3.36	2.84	1.48	0.44	0.74	2.01	2.73	1.12	0.32

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 2010, BY WATER YEAR (WY)

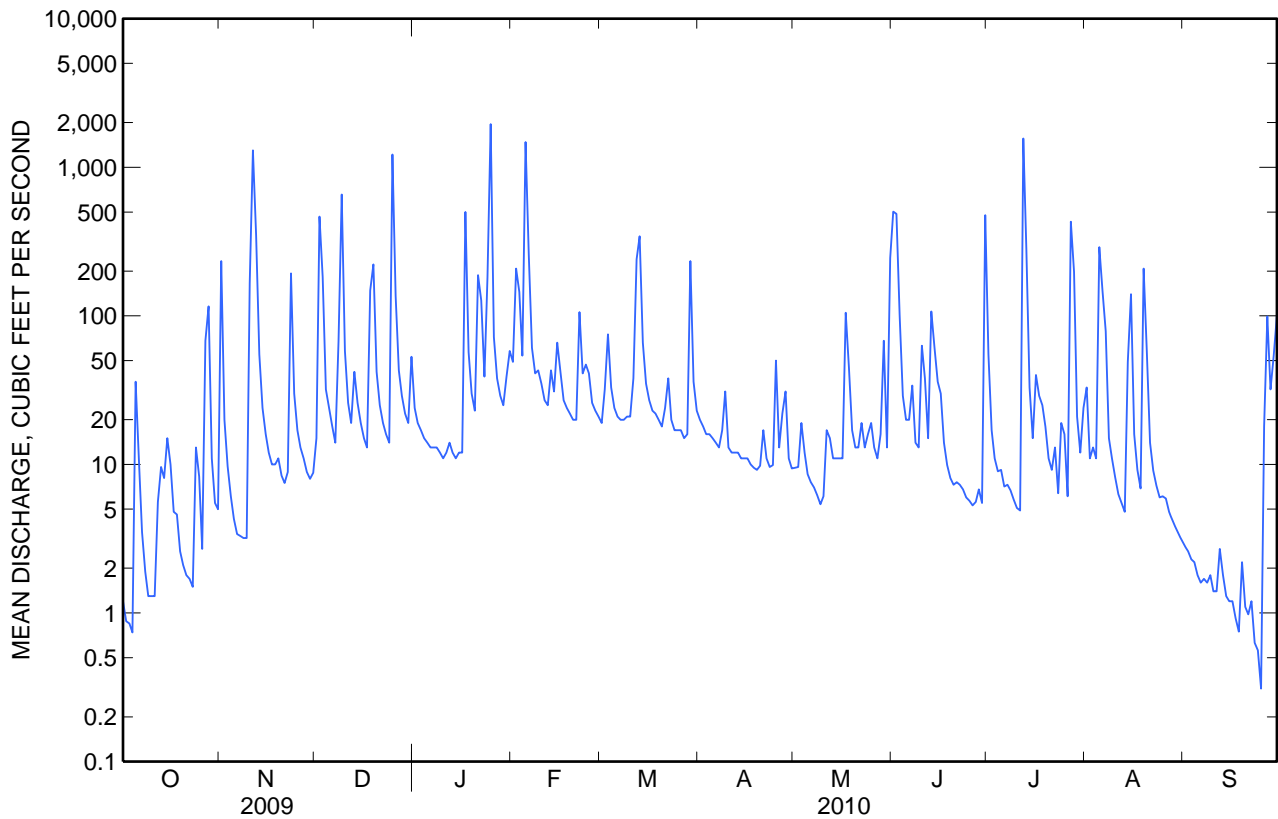
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	31.5	32.9	40.8	62.4	69.2	79.1	47.8	33.2	33.7	31.9	34.3	25.7
Max	212	227	128	157	169	200	182	173	200	140	178	166
(WY)	(1991)	(2007)	(1984)	(1978)	(1979)	(1977)	(2003)	(1975)	(2003)	(1997)	(1994)	(2004)
Min	3.16	1.81	7.55	6.58	13.2	13.6	7.45	6.84	3.60	4.04	3.42	1.46
(WY)	(1963)	(2008)	(1966)	(2004)	(2006)	(1985)	(1967)	(2007)	(1986)	(1977)	(1968)	(1968)

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SUMMARY STATISTICS

	Calendar Year 2009		Water Year 2010		Water Years 1962 - 2010	
Annual total	17,986.46		22,630.22			
Annual mean	49.3		62.0		43.5	
Highest annual mean					90.5	2003
Lowest annual mean					18.9	2001
Highest daily mean	1,300	Nov 11	1,950	Jan 25	4,490	Aug 27, 1995
Lowest daily mean	0.58	Sep 6	0.31	Sep 25	0.01	Aug 14, 2002
Annual seven-day minimum	1.00	Sep 3	1.00	Sep 19	0.08	Aug 8, 2002
Maximum peak flow			5,020	Jan 25	9,040	Aug 27, 1995
Maximum peak stage			14.67	Jan 25	17.79	Aug 27, 1995
Instantaneous low flow			^a 0.24	Sep 24	^a 0.00	Nov 15, 1972
Annual runoff (cfsm)	1.24		1.57		1.10	
Annual runoff (inches)	16.90		21.26		14.94	
10 percent exceeds	84		120		74	
50 percent exceeds	11		15		13	
90 percent exceeds	2.1		2.7		3.5	

^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. Frozen precipitation collected in 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

[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0.00	---	0.00	0.00	---	0.00	0.00	0.00	0.41	0.00	0.04	0.00
2	0.00	0.00	1.52	0.00	---	0.60	0.00	0.00	1.27	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	---	0.00	0.00	0.26	0.00	0.00	0.00	0.00
4	0.01	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.70	0.00	0.07	0.00	2.29	0.00	0.00	0.00	0.00	0.00	0.92	0.00
6	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39	0.00	0.01	0.00
7	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00
8	0.00	0.00	1.19	0.01	0.00	0.00	0.27	0.00	0.00	0.00	0.00	0.00
9	0.01	0.00	0.60	0.00	0.13	0.00	0.04	0.00	0.00	0.00	0.00	0.00
10	0.01	1.37	0.00	0.00	0.01	0.08	0.00	0.00	0.12	0.00	0.00	0.00
11	0.00	2.60	0.00	0.00	0.00	0.13	0.00	0.16	0.00	0.00	0.00	0.02
12	0.27	0.30	0.09	0.00	e0.30	1.28	0.00	0.00	0.00	3.61	0.00	0.00
13	0.00	0.00	0.21	0.00	e0.03	0.01	0.00	0.00	0.28	0.09	0.00	0.00
14	0.31	0.00	0.01	0.00	0.00	0.14	0.00	0.00	0.45	0.00	0.68	0.00
15	0.17	0.00	0.01	0.00	0.23	0.00	0.00	0.00	0.00	0.00	0.04	0.00
16	0.00	0.00	0.00	0.43	0.00	0.00	0.00	0.11	0.00	0.20	0.00	0.00
17	0.11	0.00	0.00	1.21	0.00	0.00	0.00	0.98	0.00	0.00	0.00	0.00
18	0.00	0.05	1.01	0.00	0.00	0.00	0.00	0.02	0.00	0.05	0.00	0.00
19	0.00	0.09	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.61	0.00
20	0.00	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	0.00	0.81	0.00	0.26	0.03	0.13	0.00	0.00	0.00	0.00
22	0.00	0.38	0.00	0.04	0.45	0.11	0.00	0.03	0.03	0.00	0.00	0.00
23	0.00	0.57	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	0.21	0.00	0.00	2.04	0.14	0.00	0.17	0.12	0.00	0.45	0.00	0.00
25	0.00	0.01	2.08	0.76	0.09	0.00	0.29	0.03	0.00	0.00	0.00	0.00
26	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.09
27	1.24	0.01	0.00	0.00	0.00	0.00	0.36	0.00	0.06	1.58	0.00	0.71
28	0.03	0.00	0.00	0.00	0.00	0.09	0.02	0.66	0.01	0.00	0.00	0.06
29	0.00	0.00	0.00	---	---	0.48	0.00	0.06	0.01	0.00	0.00	0.88
30	0.00	0.08	0.18	---	---	0.00	0.00	0.00	2.34	0.00	0.00	0.24
31	---	---	0.09	---	---	0.00	---	2.12	---	0.20	0.00	---
Total	---	---	7.14	---	---	3.18	1.30	4.68	5.38	6.33	2.30	3.00

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