

Water-Data Report 2008

02087359 WALNUT CREEK AT SUNNYBROOK DRIVE AT RALEIGH, NC

Neuse Basin
Upper Neuse Subbasin

LOCATION.--Lat 35°45'30", long 78°34'59" referenced to North American Datum of 1983, Wake County, NC, Hydrologic Unit 03020201, at bridge on Sunnybrook Drive (Secondary Road 2544), 0.9 mi upstream from Big Branch, and 3.5 mi southeast of Raleigh.

DRAINAGE AREA.--29 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--May 1996 to current year.

GAGE.--Water-stage recorder. Datum of gage is 190.8 ft above NGVD of 1929. Satellite and telephone telemetry at station.

REMARKS.--Records poor. Maximum discharge for period of record from computation of peak flow through culvert; maximum gage height, 17.03 ft, from high-water mark in gage shelter.

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008
DAILY MEAN VALUES

[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	e1.6	13	4.7	63	50	14	86	23	5.9	19	e1.8	33
2	e1.8	10	4.4	32	35	12	33	16	5.1	6.6	e1.7	16
3	e1.7	9.6	6.3	21	21	10	20	13	2.1	e2.7	e1.7	10
4	e1.7	7.6	6.6	15	15	14	39	10	1.9	e2.0	e1.8	5.9
5	e1.9	6.5	4.8	13	13	95	206	8.1	1.8	13	e1.7	42
6	e4.9	5.8	4.6	12	12	40	76	5.7	1.7	40	e1.5	1,050
7	e2.0	5.6	4.2	11	11	118	39	5.4	1.6	102	e1.4	506
8	e1.8	5.7	e4.1	10	9.3	209	27	5.4	1.6	31	e1.3	78
9	e1.6	5.8	e4.1	10	8.1	50	21	15	1.6	33	e1.3	34
10	e1.5	5.3	e4.0	9.7	7.1	25	19	20	1.6	81	e3.1	115
11	e1.4	5.1	4.0	9.3	7.1	16	17	30	1.5	e26	e3.9	48
12	e1.4	4.7	4.4	8.8	17	11	17	63	1.5	e14	e2.3	19
13	e1.4	4.9	5.1	7.6	83	9.1	15	23	1.5	e5.2	e2.8	13
14	e1.3	4.5	4.4	7.6	39	7.6	12	12	11	e38	e3.1	10
15	e1.3	24	7.0	8.5	19	22	10	8.2	29	e34	e3.9	8.1
16	e1.3	15	141	7.2	14	83	8.6	25	5.5	e14	e14	73
17	e1.3	7.9	39	29	12	28	7.6	33	11	e6.9	e5.3	56
18	23	5.9	e19	28	53	17	7.0	26	3.0	e14	e3.4	20
19	15	5.1	e13	32	28	13	6.5	41	2.0	e20	e2.1	14
20	9.4	4.3	10	37	18	21	16	26	2.5	e7.2	e22	10
21	2.6	4.0	8.4	19	13	11	19	34	17	e4.6	e9.3	8.0
22	1.7	4.9	7.4	14	20	8.9	21	18	65	e2.6	e1.8	7.2
23	1.7	5.7	11	16	18	7.1	32	11	27	e4.8	e1.4	6.7
24	102	4.7	15	13	13	5.8	18	6.6	30	e7.1	e1.2	4.8
25	182	3.9	9.3	11	12	5.0	13	5.0	12	e1.8	e1.2	6.1
26	161	12	90	9.2	28	5.2	9.6	4.0	5.2	e1.6	e1.1	77
27	782	13	60	8.8	61	5.9	25	3.1	2.7	e1.5	e90	39
28	169	7.6	28	8.2	27	6.1	421	12	2.1	e2.3	144	39
29	41	6.0	22	8.5	18	6.2	228	14	1.8	e1.8	47	21
30	24	5.2	198	14	---	12	42	6.9	51	e1.9	27	14
31	17	---	374	10	---	77	---	7.2	---	e2.0	172	---
Total	1,561.3	223.3	1,117.8	503.4	681.6	964.9	1,511.3	530.6	307.2	541.6	576.1	2,383.8
Mean	50.4	7.44	36.1	16.2	23.5	31.1	50.4	17.1	10.2	17.5	18.6	79.5
Max	782	24	374	63	83	209	421	63	65	102	172	1,050
Min	1.3	3.9	4.0	7.2	7.1	5.0	6.5	3.1	1.5	1.5	1.1	4.8

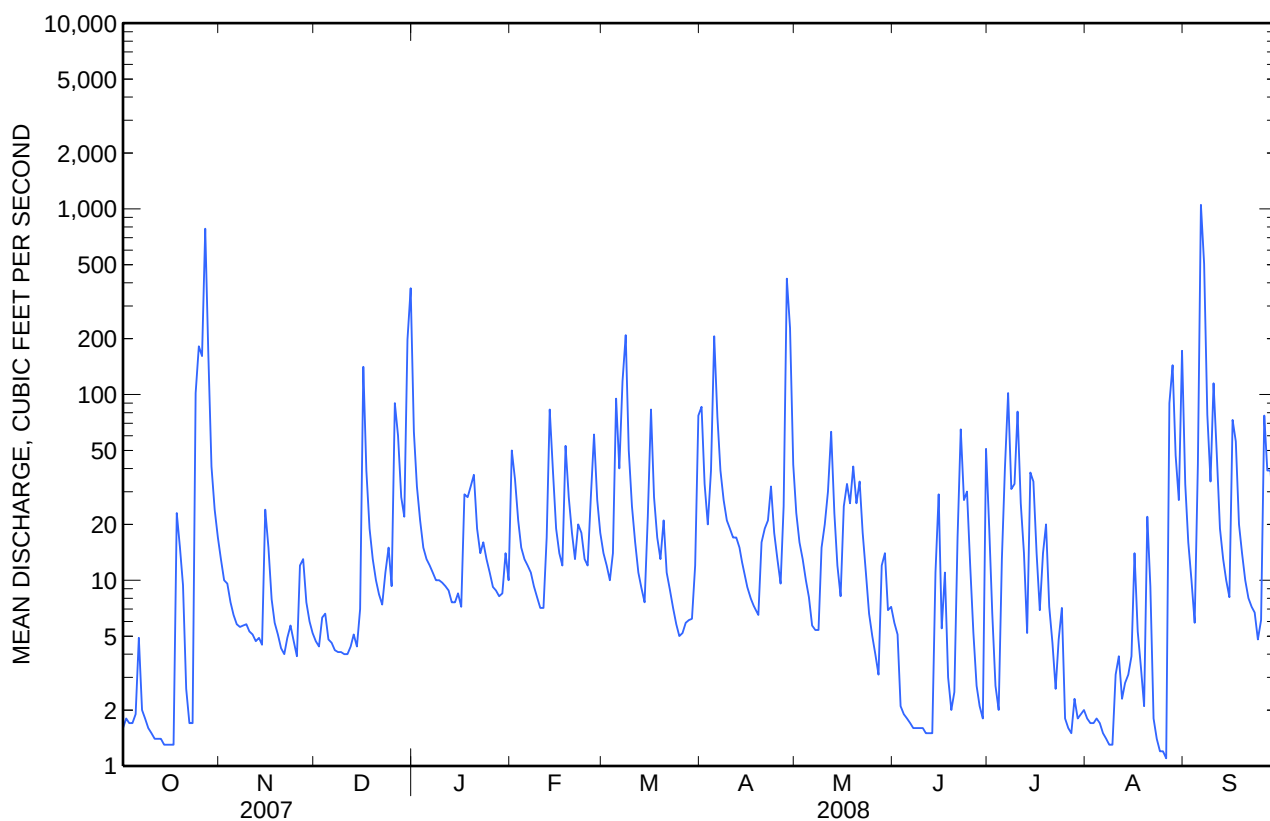
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 2008, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	29.9	30.5	33.9	42.4	39.9	50.8	39.9	21.3	36.5	29.5	32.7	62.4
Max	79.3	108	58.5	106	98.0	123	84.5	34.3	131	54.3	114	263
(WY)	(2003)	(2007)	(2003)	(1998)	(1998)	(1998)	(2003)	(2003)	(2006)	(2003)	(2004)	(1999)
Min	9.04	5.69	15.2	13.9	21.9	14.5	20.9	3.03	10.2	11.3	4.98	4.68
(WY)	(2001)	(2002)	(2001)	(2001)	(1999)	(2006)	(1999)	(2002)	(2008)	(1999)	(2007)	(2005)

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SUMMARY STATISTICS

	Calendar Year 2007		Water Year 2008		Water Years 1996 - 2008	
Annual total	9,534.0		10,902.9			
Annual mean	26.1		29.8		36.6	
Highest annual mean					61.2	2003
Lowest annual mean					23.4	2002
Highest daily mean	782	Oct 27	1,050	Sep 6	3,600	Sep 6, 1996
Lowest daily mean	1.3	Sep 6	1.1	Aug 26	0.50	Aug 8, 2002
Annual seven-day minimum	1.3	Oct 11	1.3	Oct 11	0.50	Aug 8, 2002
Maximum peak flow			1,680	Sep 6	^a 6,760	Sep 6, 1996
Maximum peak stage			10.81	Sep 6	^a 17.03	Sep 6, 1996
Instantaneous low flow			NOT DETERMINED		NOT DETERMINED	
10 percent exceeds	48		57		69	
50 percent exceeds	10		10		15	
90 percent exceeds	1.8		1.8		4.4	

^aSee Remarks.

02087359 WALNUT CREEK AT SUNNYBROOK DRIVE AT RALEIGH, NC—Continued**CLIMATOLOGICAL RECORDS**

PERIOD OF RECORD.--July 1996 to current year. Records from July 1996 to September 1998 are unpublished and available from the USGS Water Science Center, Raleigh, NC.

INSTRUMENTATION.--Tipping bucket raingage. Satellite telemetry at station.

REMARKS.--Precipitation data collected during freezing periods may not be accurately reflected in daily record; consequently, winter record is poor.

PRECIPITATION, TOTAL, INCHES
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008
DAILY SUM VALUES

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0.00	0.00	0.00	0.00	0.49	0.00	0.06	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.04	0.00	0.00	0.00	0.30	0.00	0.00	---	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.46	0.16	0.00	0.00	---	0.00	0.00
5	0.12	0.00	0.00	0.00	0.00	0.02	1.07	0.00	0.00	0.50	0.00	0.81
6	0.01	0.00	0.00	0.00	0.00	0.00	0.08	0.00	0.00	1.15	0.00	3.17
7	0.00	0.00	0.00	0.00	0.00	1.71	0.00	0.00	0.00	0.01	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.08	0.00	0.07	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.00	0.73	0.00	0.67
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.01	0.07	0.55
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.51	0.00	0.00	0.00	0.01
12	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.01	0.05	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.75	0.00	0.00	0.00	0.00	0.00	0.20	0.00
14	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.46	0.87	0.01	0.00
15	0.00	0.32	0.98	0.00	0.00	0.76	0.00	0.15	0.40	0.00	0.17	0.00
16	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.45	0.00	0.00	0.01	1.00
17	0.00	0.00	0.00	0.46	0.00	0.00	0.00	0.00	0.22	0.00	0.00	0.01
18	0.02	0.00	0.00	0.01	0.44	0.00	0.00	0.41	0.00	0.13	0.00	0.00
19	0.09	0.01	0.02	0.37	0.00	0.19	0.00	0.01	0.00	0.01	0.00	0.00
20	0.00	0.00	0.00	0.02	0.00	0.00	0.20	0.25	0.01	0.00	0.47	0.00
21	0.00	0.00	0.00	0.00	0.01	0.00	0.11	0.00	0.30	0.00	0.01	0.00
22	0.00	0.00	0.00	0.05	0.18	0.00	0.08	0.00	0.07	0.29	0.00	0.00
23	0.00	0.00	0.17	0.02	0.00	0.00	0.00	0.00	0.17	0.49	0.00	0.00
24	1.79	0.00	0.01	0.00	0.02	0.00	0.00	0.00	0.01	0.00	0.00	0.00
25	0.11	0.04	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.35
26	1.05	0.17	0.87	0.00	0.48	0.00	0.00	0.00	0.00	0.00	0.19	0.82
27	1.37	0.00	0.00	0.00	0.00	0.00	1.06	0.00	0.02	0.00	1.47	0.15
28	0.00	0.00	0.02	0.00	0.00	0.00	1.13	0.31	0.00	0.03	0.38	0.01
29	0.00	0.00	0.03	0.00	0.00	0.03	0.01	0.00	0.66	0.00	0.03	0.00
30	0.00	0.00	1.45	0.11	---	0.38	0.00	0.00	0.17	0.00	0.20	0.00
31	0.00	---	0.01	0.00	---	1.04	---	0.00	---	0.00	0.00	---
Total	4.56	0.54	3.84	1.04	2.39	4.66	4.31	2.29	2.54	---	3.21	7.55

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