

Water-Data Report 2007

02096846 CANE CREEK NEAR ORANGE GROVE, NC

Cape Fear Basin
Haw Subbasin

LOCATION.--Lat 35°59'14", long 79°12'22" referenced to North American Datum of 1983, Orange County, NC, Hydrologic Unit 03030002, on right bank, downstream of bridge on Secondary Road 1114, and 1.0 mi northwest of Orange Grove.

DRAINAGE AREA.--7.54 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--November 1988 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 510 ft above NGVD of 1929, from topographic map. Satellite telemetry at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Maximum discharge for period of record from rating curve extended above 500 ft³/s, based on contracted-opening measurement of peak flow; maximum gage-height, 7.90 ft, from flood mark. No flow occurs at times most years.

02096846 CANE CREEK NEAR ORANGE GROVE, NC—Continued

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	0.17	0.83	3.3	11	3.3	4.7	2.7	1.5	0.15	0.07	0.01	0.00
2	0.14	0.88	2.9	11	10	156	2.7	1.4	0.12	0.05	0.00	0.00
3	0.10	0.95	2.4	6.0	7.6	22	2.5	1.4	1.1	0.04	0.00	0.00
4	0.09	0.98	2.2	4.7	4.9	11	2.3	1.4	0.93	0.03	0.00	0.00
5	0.07	0.63	2.0	4.3	4.0	7.8	2.1	1.7	0.42	0.02	0.00	0.00
6	0.63	0.66	1.9	40	3.4	6.3	2.0	1.8	0.31	0.02	0.00	0.00
7	0.33	11	1.9	21	3.4	5.4	2.1	1.3	0.28	0.02	0.00	0.00
8	2.2	30	1.7	79	3.0	4.9	2.0	1.1	0.22	0.02	0.00	0.00
9	0.49	6.1	1.6	18	2.8	4.3	2.0	1.3	0.18	0.02	0.00	0.00
10	0.29	3.0	1.6	9.6	2.7	4.0	1.9	1.6	0.19	0.10	0.00	0.00
11	0.30	2.1	1.6	6.7	2.5	3.9	2.2	1.3	0.15	0.14	0.00	0.00
12	0.64	22	1.6	5.5	2.5	3.6	17	1.1	0.14	0.05	0.00	0.00
13	0.66	8.2	1.5	4.9	4.9	3.3	6.1	1.8	0.19	0.03	0.00	0.00
14	0.67	4.0	1.5	4.5	74	3.3	3.6	1.2	0.23	0.02	0.00	0.00
15	0.59	2.8	1.5	4.1	14	3.1	174	0.91	0.18	0.02	0.00	0.00
16	0.55	58	1.5	3.7	9.1	43	67	0.95	0.14	0.02	0.00	0.00
17	1.3	15	1.4	3.1	7.3	27	16	0.79	0.11	0.03	0.00	0.00
18	6.0	6.0	1.3	3.2	5.8	10	9.3	0.79	e0.09	0.05	0.00	0.00
19	1.5	3.9	1.3	4.2	4.7	7.2	6.7	0.70	e0.07	0.04	0.00	0.00
20	0.79	3.1	1.3	3.4	4.4	5.9	5.3	0.55	0.07	0.02	0.00	0.00
21	0.62	19	1.2	3.4	4.1	5.1	4.3	0.52	0.07	0.01	0.00	0.00
22	0.56	274	2.9	35	3.7	4.4	3.7	0.45	e0.07	0.01	0.00	0.00
23	0.56	43	8.9	14	3.3	4.2	3.2	0.41	0.05	0.01	0.00	0.00
24	0.56	15	3.8	8.1	3.0	3.8	2.9	0.35	0.05	0.01	0.00	0.00
25	0.61	7.9	79	6.1	11	3.6	2.8	0.33	0.08	0.01	0.00	0.00
26	0.69	5.7	29	4.9	16	3.1	2.6	0.29	0.07	0.01	0.00	0.00
27	0.93	4.5	10	4.5	7.7	3.1	2.5	0.26	0.06	0.01	0.00	0.00
28	11	3.6	6.4	4.0	5.5	3.0	2.2	0.24	0.76	0.02	0.00	0.00
29	2.5	3.1	4.7	3.3	---	3.0	1.9	0.22	0.24	0.01	0.00	0.00
30	1.4	2.9	3.8	3.1	---	3.0	1.8	0.19	0.10	0.01	0.00	0.00
31	1.0	---	3.5	3.0	---	2.9	---	0.17	---	0.01	0.00	---
Total	37.94	558.83	189.2	337.3	228.6	375.9	357.4	28.02	6.82	0.93	0.01	0.00
Mean	1.22	18.6	6.10	10.9	8.16	12.1	11.9	0.90	0.23	0.03	0.00	0.00
Max	11	274	79	79	74	156	174	1.8	1.1	0.14	0.01	0.00
Min	0.07	0.63	1.2	3.0	2.5	2.9	1.8	0.17	0.05	0.01	0.00	0.00
Cfsm	0.16	2.47	0.81	1.44	1.08	1.61	1.58	0.12	0.03	0.00	0.00	0.00
In.	0.19	2.76	0.93	1.66	1.13	1.85	1.76	0.14	0.03	0.00	0.00	0.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 2007, BY WATER YEAR (WY)

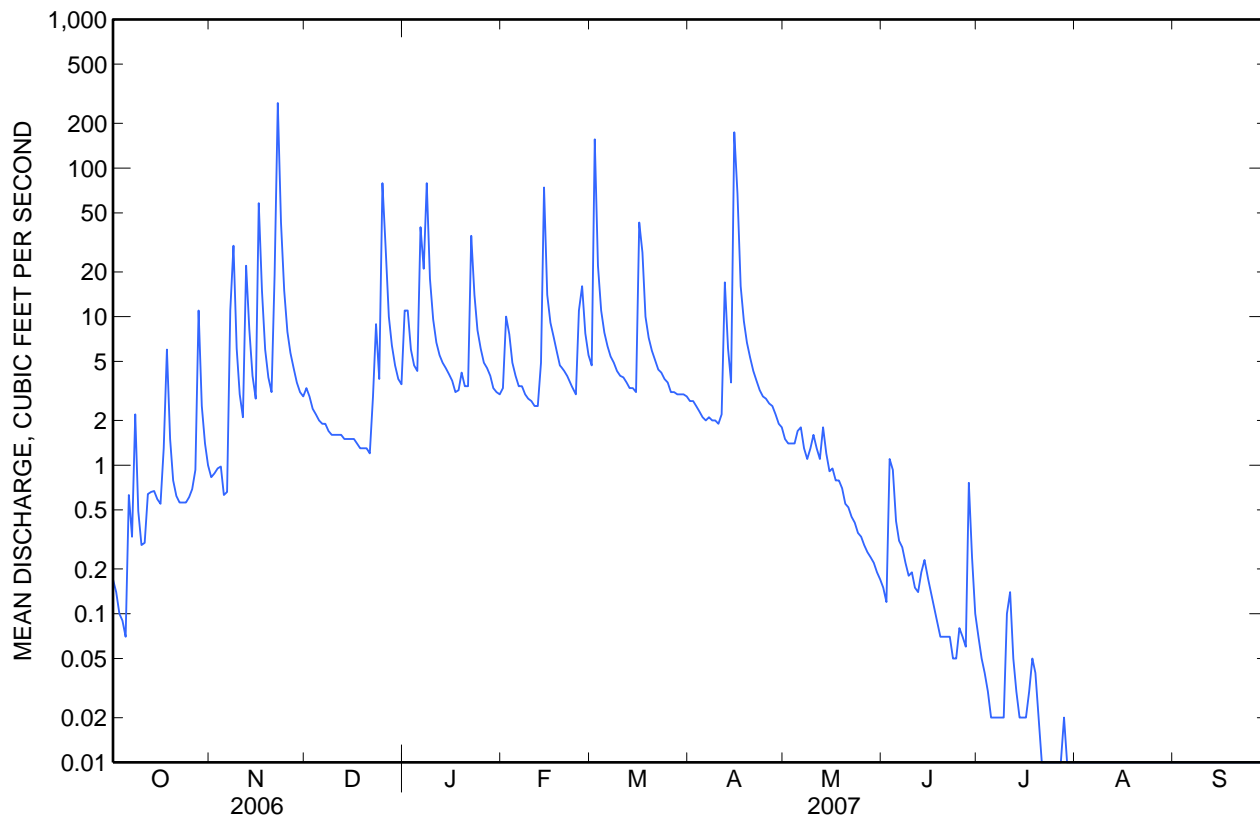
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	2.61	4.11	5.73	11.0	11.6	16.8	10.0	4.82	3.78	2.37	1.41	3.75
Max	13.0	18.6	19.8	28.3	34.3	46.3	37.2	18.7	16.4	13.5	9.50	25.9
(WY)	(2003)	(2007)	(2003)	(1998)	(1998)	(1998)	(2003)	(1989)	(1995)	(2000)	(2004)	(1996)
Min	0.01	0.01	0.29	1.93	2.01	1.19	1.06	0.13	0.02	0.03	0.00	0.00
(WY)	(1999)	(1999)	(2002)	(2004)	(2006)	(2006)	(2002)	(2002)	(2002)	(2007)	(2007)	(2005)

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SUMMARY STATISTICS

	Calendar Year 2006		Water Year 2007		Water Years 1989 - 2007	
Annual total	1,429.73		2,120.95			
Annual mean	3.92		5.81		6.33	
Highest annual mean					14.3	2003
Lowest annual mean					0.99	2002
Highest daily mean	274	Nov 22	274	Nov 22	516	Mar 4, 1993
Lowest daily mean	0.03	Aug 16	0.00	Aug 2	0.00	Sep 17, 1990
Annual seven-day minimum	0.04	Aug 24	0.00	Aug 2	0.00	Sep 17, 1990
Maximum peak flow			644	Mar 2	^a 2,060	Sep 6, 1996
Maximum peak stage			4.77	Mar 2	^a 7.90	Sep 6, 1996
Instantaneous low flow			^a 0.00	Jul 24	^a 0.00	Sep 17, 1990
Annual runoff (cfsm)	0.520		0.771		0.839	
Annual runoff (inches)	7.05		10.46		11.40	
10 percent exceeds	4.9		9.8		12	
50 percent exceeds	1.1		1.4		1.7	
90 percent exceeds	0.13		0.00		0.06	

^a See Remarks.



02096846 CANE CREEK NEAR ORANGE GROVE, NC—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1989 to current year.

REMARKS.--Station operated to define water quality as part of a regional surface-water quality assessment.

WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Part 1 of 4

[Remark codes: <, less than; E, estimated; M, presence verified but not quantified.]

Date	Time	Sample type	Instantaneous discharge, cfs (00061)	Color, water, fltrd, Pt-Co units (00080)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unf 25 degC (00095)	Temperature, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)
Oct												
02...	1200	Environmental	.15	25	758	6.3	64	6.5	112	15.6	34	8.49
Nov												
16...	1215	Environmental	155	200	738	7.9	81	6.9	65	15.2	19	4.61
Dec												
05...	1100	Environmental	2.1	60	760	12.9	104	6.5	83	5.9	26	6.30
05...	1105	<i>Replicate</i>	2.1	50	760	13.1	105	6.5	84	5.9	26	6.23
Feb												
13...	1130	Environmental	2.4	25	751	12.7	103	6.5	78	5.8	26	6.38
Apr												
12...	1215	Environmental	25	75	744	10.1	98	6.2	65	13.0	24	5.89
Jun												
04...	1115	Environmental	.89	50	740	7.6	84	6.6	94	18.8	31	8.09
Aug												
20...	1130	Environmental	.00	35	753	--	--	--	188	24.9	63	16.4

02096846 CANE CREEK NEAR ORANGE GROVE, NC—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Part 2 of 4

[Remark codes: <, less than; E, estimated; M, presence verified but not quantified.]

Date	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium, water, fltrd, mg/L (00930)	ANC, wat unfiltered, titr., mg/L as CaCO3 (00419)	Bicarbonate, wat unfiltered, titr., mg/L (00450)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate, water, fltrd, mg/L (00945)	Residue on evap. at 180degC, wat flt mg/L (70300)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)
Oct 02...	3.20	3.62	5.24	36	44	5.65	<.10	11.0	3.56	76	.27	E.018	.045
Nov 16...	1.91	4.11	3.50	13	16	5.14	<.10	8.01	5.71	67	1.5	.041	.303
Dec 05...	2.55	1.47	5.62	17	20	9.30	<.10	14.5	5.11	66	.26	<.020	.981
05...	2.52	1.45	5.57	15	19	9.33	<.10	14.4	5.13	66	.24	<.020	.988
Feb 13...	2.35	.81	5.70	21	25	6.41	<.10	8.05	4.45	60	.20	<.020	.734
Apr 12...	2.14	1.28	5.07	21	26	5.52	<.10	10.8	3.64	68	.62	.056	.314
Jun 04...	2.65	1.45	5.13	31	38	5.11	E.10	13.8	1.92	76	.44	<.020	.485
Aug 20...	5.38	4.68	6.54	67	79	7.37	.12	6.68	1.34	111	.69	<.020	<.016

WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Part 3 of 4

[Remark codes: <, less than; E, estimated; M, presence verified but not quantified.]

Date	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Organic carbon, water, fltrd, mg/L (00681)	Organic carbon, water, unfltrd mg/L (00680)	Aluminum, water, recoverable, µg/L (01105)	Arsenic water, unfltrd µg/L (01002)	Cadmium water, unfltrd µg/L (01027)	Chromium, water, recoverable, µg/L (01034)	Cobalt water, unfltrd recoverable, µg/L (01037)	Copper, water, unfltrd recoverable, µg/L (01042)	Iron, water, unfltrd recoverable, µg/L (01045)	Lead, water, unfltrd recoverable, µg/L (01051)
Oct 02...	<.002	.012	.034	--	5.2	37	.43	<.02	E.38	.121	E.7	224	.07
Nov 16...	.006	.141	.39	--	23.7	1,310	.74	.03	1.0	1.59	4.2	2,210	2.30
Dec 05...	.002	.009	.038	--	4.1	--	--	--	--	--	--	--	--
05...	.002	.009	.037	--	4.2	--	--	--	--	--	--	--	--
Feb 13...	.003	.007	.017	--	3.1	--	--	--	--	--	--	--	--
Apr 12...	.006	.014	.078	--	8.7	316	.42	E.01	<.60	.47	E1.2	1,230	.52
Jun 04...	.005	.024	.077	--	5.4	--	--	--	--	--	--	--	--
Aug 20...	E.001	.008	.074	7.7	7.4	--	--	--	--	--	--	--	--

02096846 CANE CREEK NEAR ORANGE GROVE, NC—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Part 4 of 4

[Remark codes: <, less than; E, estimated; M, presence verified but not quantified.]

Date	Mangan- ese, water, unfltrd recover -able, µg/L (01055)	Mercury water, unfltrd recover -able, µg/L (71890)	Mercury water, unfltrd recover -able, µg/L (71900)	Molyb- denum, water, unfltrd recover -able, µg/L (01062)	Nickel, water, unfltrd recover -able, µg/L (01067)	Selen- ium, water, unfltrd recover -able, µg/L (01147)	Silver, water, unfltrd recover -able, µg/L (01077)	Zinc, water, unfltrd recover -able, µg/L (01092)	Sus- pended sedi- ment concen- tration mg/L (80154)	Data base number
Oct										
02...	41.2	--	<.010	.1	.28	.11	<.02	2	2	01
Nov										
16...	335	--	.016	E.1	.73	.15	E.01	10	198	01
Dec										
05...	--	--	--	--	--	--	--	--	4	01
05...	--	--	--	--	--	--	--	--	--	04
Feb										
13...	--	--	--	--	--	--	--	--	2	01
Apr										
12...	106	--	.012	M	.50	.10	<.02	3.4	19	01
Jun										
04...	--	--	--	--	--	--	--	--	--	01
Aug										
20...	--	<.010	<.010	--	--	--	--	--	8	01