

Water-Data Report 2007

**0209741955 NORTHEAST CREEK AT SECONDARY ROAD 1100 NEAR GENLEE, NC**

Cape Fear Basin  
Haw Subbasin

LOCATION.--Lat 35°52'20", long 78°54'47" referenced to North American Datum of 1983, Durham County, NC, Hydrologic Unit 03030002, on left bank, downstream side of bridge on Secondary Road 1100, 1.3 mi west of Genlee, and 1.6 mi downstream of Burdens Creek.

DRAINAGE AREA.--21.1 mi<sup>2</sup>.

**SURFACE-WATER RECORDS**

PERIOD OF RECORD.--October 1982 to January 1994, August 1995 to current year.

GAGE.--Water-stage recorder. Datum of gage is 229.01 ft above NGVD of 1929, by levels. Satellite telemetry at station.

REMARKS.--No estimated daily discharges. Records fair. An average of 39.6 ft<sup>3</sup>/s was diverted from the Neuse River basin for municipal water supply; 16.1 ft<sup>3</sup>/s was returned to the Cape Fear River basin, of which 7.2 ft<sup>3</sup>/s entered upstream from station as treated effluent. About 13.1 ft<sup>3</sup>/s was returned to the Neuse River basin as treated effluent. Maximum discharge for period of record from rating curve extended above 2,000 ft<sup>3</sup>/s, by logarithmic plotting.

## 0209741955 NORTHEAST CREEK AT SECONDARY ROAD 1100 NEAR GENLEE, NC—Continued

**DISCHARGE, CUBIC FEET PER SECOND**  
**WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007**  
**DAILY MEAN VALUES**

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	9.0	9.9	33	37	15	12	10	8.7	8.2	9.3	10	7.8
2	8.1	10	46	89	40	243	11	8.4	8.0	8.5	8.3	7.1
3	7.7	10	21	27	24	98	11	8.0	42	8.1	8.4	6.7
4	8.3	9.3	29	19	15	26	11	7.9	39	6.8	6.7	7.8
5	7.9	8.8	22	17	13	19	11	7.7	13	7.6	5.9	8.3
6	13	9.2	18	128	12	15	10	7.4	24	6.9	7.1	8.4
7	15	71	17	44	12	14	11	8.3	12	7.4	7.2	8.7
8	31	398	15	141	11	13	11	8.7	10	7.0	7.8	8.0
9	17	71	13	60	11	13	11	11	8.7	7.8	8.6	7.6
10	12	25	13	26	10	12	11	24	8.3	10	7.5	8.1
11	10	17	13	19	9.4	11	12	11	8.4	11	6.7	8.6
12	9.3	295	13	16	9.3	11	349	33	8.5	14	6.2	8.6
13	9.0	205	13	14	10	11	102	123	9.5	8.7	6.8	8.4
14	7.9	34	13	12	123	11	20	22	14	7.1	6.8	16
15	7.3	22	13	12	39	10	164	14	11	6.6	7.3	50
16	8.0	490	12	12	20	102	281	12	8.0	7.6	7.1	11
17	14	339	11	11	14	238	40	11	7.1	8.2	7.3	8.4
18	131	44	12	12	13	35	20	11	8.0	63	6.1	8.0
19	26	25	12	22	12	21	14	9.3	8.5	14	5.6	7.6
20	21	19	11	15	12	17	12	8.0	9.4	9.0	6.6	7.9
21	16	27	12	13	11	15	11	9.0	9.3	7.2	6.8	10
22	12	692	22	225	11	13	9.2	9.0	8.3	6.1	7.8	9.3
23	14	263	163	68	10	13	9.1	8.9	7.8	6.4	13	8.9
24	12	48	36	26	9.2	11	8.8	8.5	7.9	7.0	8.9	9.1
25	11	28	234	19	18	11	8.9	8.4	9.1	7.1	7.6	8.2
26	10	21	367	15	51	11	8.5	8.3	11	6.6	9.6	7.2
27	12	18	56	13	20	11	8.3	8.2	17	15	15	7.2
28	120	17	28	12	14	11	7.4	7.3	9.6	91	10	6.9
29	44	16	20	12	---	13	6.9	8.1	9.3	13	9.2	6.6
30	15	16	16	11	---	16	7.7	9.0	11	19	9.0	6.8
31	11	---	13	10	---	11	---	8.7	---	29	9.1	---
<b>Total</b>	649.5	3,258.2	1,317	1,157	568.9	1,068	1,207.8	447.8	365.9	436.0	250.0	293.2
<b>Mean</b>	21.0	109	42.5	37.3	20.3	34.5	40.3	14.4	12.2	14.1	8.06	9.77
<b>Max</b>	131	692	367	225	123	243	349	123	42	91	15	50
<b>Min</b>	7.3	8.8	11	10	9.2	10	6.9	7.3	7.1	6.1	5.6	6.6
<b>Cfsm</b>	0.99	5.15	2.01	1.77	0.96	1.63	1.91	0.68	0.58	0.67	0.38	0.46
<b>In.</b>	1.15	5.74	2.32	2.04	1.00	1.88	2.13	0.79	0.65	0.77	0.44	0.52

**STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 2007<sup>a</sup>, BY WATER YEAR (WY)**

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
<b>Mean</b>	20.1	27.7	32.8	49.6	51.9	54.9	34.4	18.1	13.4	15.4	16.6	31.6
<b>Max</b>	83.8	109	86.7	134	111	128	84.5	59.1	44.4	48.6	66.7	247
<b>(WY)</b>	(2003)	(2007)	(2003)	(1998)	(1998)	(1998)	(1993)	(1990)	(1992)	(1989)	(1986)	(1999)
<b>Min</b>	3.27	3.89	4.31	12.6	10.8	8.18	4.00	4.57	4.55	3.33	3.50	2.49
<b>(WY)</b>	(1986)	(1985)	(2002)	(1986)	(1991)	(1985)	(1985)	(2002)	(1987)	(1983)	(1983)	(1983)

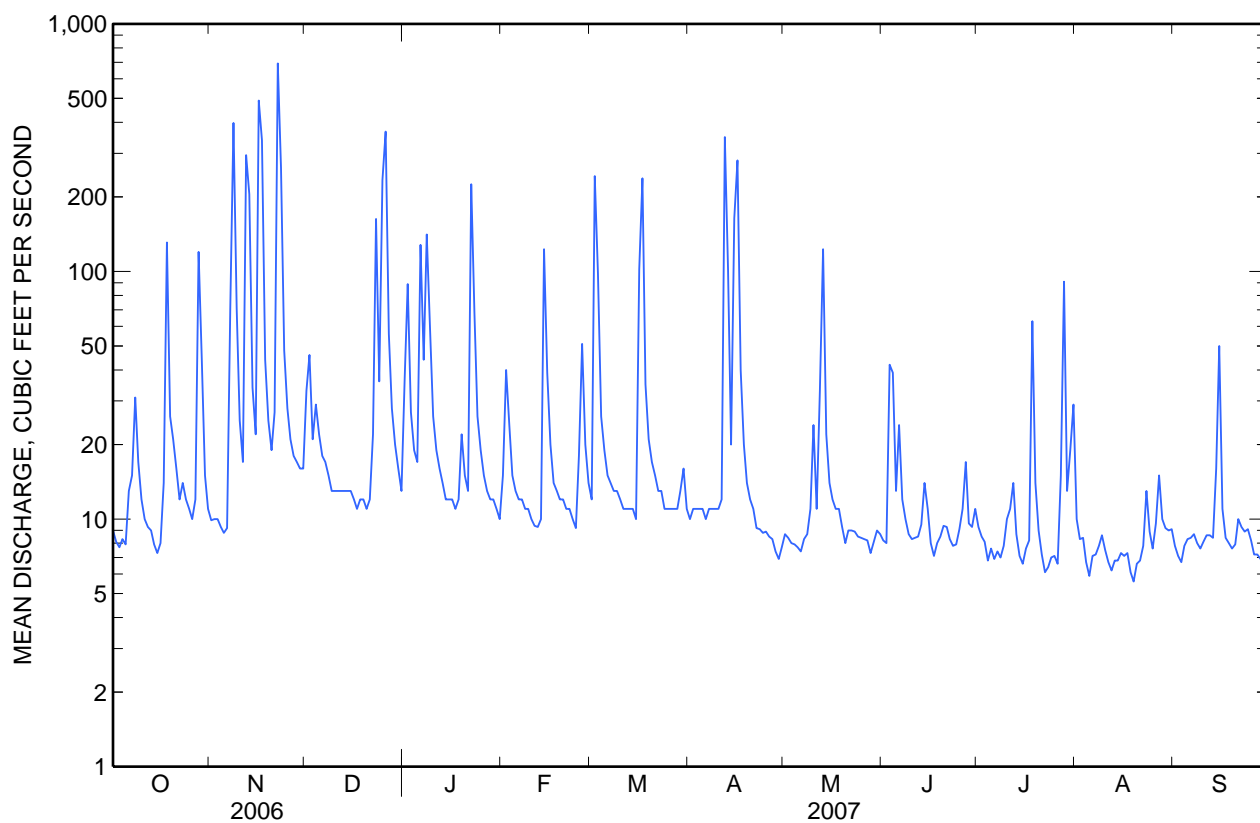
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SUMMARY STATISTICS

	Calendar Year 2006		Water Year 2007		Water Years 1983 - 2007 <sup>a</sup>	
<b>Annual total</b>	11,147.4		11,019.3			
<b>Annual mean</b>	30.5		30.2		30.7	
<b>Highest annual mean</b>					49.1	1996
<b>Lowest annual mean</b>					12.4	2002
<b>Highest daily mean</b>	1,120	Sep 5	692	Nov 22	3,350	Sep 6, 1996
<b>Lowest daily mean</b>	5.6	May 28	5.6	Aug 19	0.74	Jul 16, 1991
<b>Annual seven-day minimum</b>	6.5	May 24	6.7	Aug 14	1.5	Oct 7, 1985
<b>Maximum peak flow</b>			1,130	Nov 16	<sup>b</sup> 5,140	Sep 6, 1996
<b>Maximum peak stage</b>			10.50	Nov 16	13.92	Sep 6, 1996
<b>Instantaneous low flow</b>			4.6	Aug 19	0.76	Oct 7, 1985
<b>Annual runoff (cfsm)</b>	1.45		1.43		1.46	
<b>Annual runoff (inches)</b>	19.65		19.43		19.79	
<b>10 percent exceeds</b>	45		47		56	
<b>50 percent exceeds</b>	11		11		9.3	
<b>90 percent exceeds</b>	7.3		7.3		4.2	

<sup>a</sup> See Period of Record.

<sup>b</sup> See Remarks.



## 0209741955 NORTHEAST CREEK AT SECONDARY ROAD 1100 NEAR GENLEE, NC—Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1983-86, 1988-1995, 1999, 2001, 2004-07.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1982 to September 1985.

WATER TEMPERATURE: October 1982 to September 1985.

INSTRUMENTATION.--Water-quality monitor from October 1982 to September 1985.

REMARKS.--Station operated to define water quality as part of aregional surface-water quality assessment. Sample for October 1994 and April 1995 were collected by the North Carolina Department of Environment, Health, and Natural Resources. A GC/FID scan for trace organic compounds was performed on these samples by the U.S. Geological Survey Water Quality Lab. Results may be obtained from the USGS Water Science Center, Raleigh, NC. Instantaneous discharge is not available for April and August 1994.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum recorded, 872 microsiemens, October 15, 1984; minimum, 29 microsiemens, January 11, April 5, 1984.

WATER TEMPERATURE: Maximum, 29.0°C, August 23, 1983; minimum, 0.0°C, December 28, 1983, January 2, 22, 23, 1984.

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007**

Part 1 of 4

[Remark codes: <, less than; E, estimated.]

Date	Time	Instan- taneous dis- charge, cfs (00061)	Color, water, fltrd, Pt-Co units (00080)	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxy- gen, mg/L (00300)	Dis- solved oxy- gen, of sat- uration (00301)	pH, water, unfltrd field, std units (00400)	Specif- ic conduc- tance, wat unf µS/cm 25 degC (00095)	Temper- ature, deg C (00010)	Hard- ness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnes- ium, water, fltrd, mg/L (00925)	Potas- sium, water, fltrd, mg/L (00935)
<b>Nov</b>													
08...	0845	488	100	745	6.9	67	7.2	92	12.9	26	6.60	2.25	3.73
16...	1430	653	250	744	5.1	54	7.4	76	17.0	23	5.99	1.98	3.08

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007**

Part 2 of 4

[Remark codes: <, less than; E, estimated.]

Date	Sodium, water, fltrd, mg/L (00930)	ANC, wat unf incrm. titr., mg/L as CaCO3 (00419)	Bicar- bonate, wat unf incrm. titr., mg/L (00450)	Chlor- ide, water, fltrd, mg/L (00940)	Fluor- ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue Ammonia + Nitrite + Ortho- phos- phate, water, fltrd, mg/L (00671)	Ammonia + Ammonia nitrate water, fltrd, mg/L (00625)	Nitrite + Nitrite water, fltrd, mg/L (00631)	Nitrite water, fltrd, mg/L (00613)	Ortho- phos- phate, water, fltrd, mg/L (00671)	
													evap. at 180degC wat flt mg/L (70300)
<b>Nov</b>													
08...	6.56	23	28	7.46	.15	4.89	5.61	80	.76	<.020	.145	<.002	.052
16...	8.40	16	19	8.07	.11	5.34	5.33	76	.88	<.020	.139	.003	.068

## 0209741955 NORTHEAST CREEK AT SECONDARY ROAD 1100 NEAR GENLEE, NC—Continued

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007**

Part 3 of 4

[Remark codes: &lt;, less than; E, estimated.]

Date	Phos-	Organic	Alum-	Arsenic	Cadmium	Chrom-	Cobalt	Copper,	Iron,	Lead,	Mangan-	Mercury	Molyb-
	phorus,	carbon,	inum,	water,	water,	ium,	water,	water,	water,	water,	ese,	water,	denum,
	water,	water,	water,	water,	water,	water,	water,	water,	water,	water,	water,	water,	water,
	unfltrd	unfltrd	unfltrd	unfltrd	unfltrd	unfltrd	unfltrd	unfltrd	unfltrd	unfltrd	unfltrd	unfltrd	unfltrd
	-able,	-able,	-able,	-able,	-able,	-able,	-able,	-able,	-able,	-able,	-able,	-able,	-able,
	mg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
	(00665)	(00680)	(01105)	(01002)	(01027)	(01034)	(01037)	(01042)	(01045)	(01051)	(01055)	(71900)	(01062)
<b>Nov</b>													
<b>08...</b>	.224	16.1	1,210	.92	.04	1.7	.816	7.8	1,430	1.73	114	E.007	1.0
<b>16...</b>	.246	15.5	2,300	1.0	.03	2.9	1.19	7.8	1,780	2.56	131	.014	1.8

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007**

Part 4 of 4

[Remark codes: &lt;, less than; E, estimated.]

Date	Nickel,	Selen-	Silver,	Zinc,	Sus-
	water,	ium,	water,	water,	pended
	unfltrd	water,	unfltrd	unfltrd	sed-
	recover	unfltrd	recover	recover	iment
	-able,	unfltrd	-able,	-able,	concen-
	µg/L	µg/L	µg/L	µg/L	tration
	(01067)	(01147)	(01077)	(01092)	mg/L
	(80154)				
<b>Nov</b>					
<b>08...</b>	2.07	.12	E.01	11	46
<b>16...</b>	2.77	.12	.02	20	75