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^2.

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 National Geodetic Vertical Datum of 1929. Satellite telemetry at streamgage.

REMARKS.--No estimated daily discharges. Records fair. Water was diverted from the Neuse River basin for municipal water supply and was returned to the Cape Fear River and the Neuse River basins as treated effluent. Maximum discharge for period of record from rating curve extended above 2,000 ft^3/s, by logarithmic plotting.

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

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	6.8	59	19	19	23	15	16	9.8	47	9.7	9.9	11
2	7.3	36	67	17	36	15	14	9.7	33	9.5	10	12
3	7.8	17	682	16	162	27	16	10	20	9.0	9.6	11
4	8.0	15	96	15	132	22	14	10	17	7.9	9.7	9.0
5	8.1	14	71	14	184	18	13	10	13	8.1	38	7.8
6	8.1	15	57	14	546	16	12	9.9	12	8.7	32	8.7
7	8.5	15	23	14	78	15	12	9.7	13	8.7	14	9.6
8	8.8	15	20	15	27	15	12	9.6	12	9.1	9.0	10
9	9.0	16	297	14	33	14	39	9.4	11	11	10	9.7
10	9.6	16	165	13	74	14	16	9.5	12	10	10	9.3
11	9.4	310	26	14	26	15	13	9.6	11	9.5	11	8.9
12	10	444	20	13	21	36	12	10	10	9.9	11	8.8
13	11	276	37	13	21	148	12	10	13	10	11	9.2
14	10	45	47	13	21	57	11	9.9	17	13	9.6	9.1
15	12	20	23	13	20	26	11	9.5	12	11	9.3	9.3
16	12	17	20	13	20	19	11	9.6	11	11	9.7	9.9
17	11	16	17	163	18	17	11	33	11	9.9	10	9.6
18	10	16	16	238	17	16	10	388	11	10	11	9.4
19	11	23	225	38	16	15	11	115	10	11	11	9.1
20	12	20	114	22	15	14	11	38	9.5	11	11	9.4
21	12	17	26	26	15	13	14	19	10	14	8.7	9.7
22	12	16	21	175	21	14	14	26	9.7	11	9.6	10
23	13	104	18	44	28	13	12	191	10	10	40	10
24	13	130	17	22	20	13	10	313	11	9.7	119	10
25	15	24	61	286	21	13	14	56	10	9.6	37	10
26	15	19	238	115	18	13	13	25	9.4	9.6	16	12
27	16	19	39	25	16	12	11	18	9.5	11	12	103
28	21	18	22	20	15	12	10	16	9.7	12	11	39
29	19	16	19	18	---	151	10	148	9.8	11	11	42
30	16	16	17	20	---	59	9.7	40	9.8	13	11	381
31	16	---	20	20	---	19	---	18	---	9.6	11	---
Total	358.4	1,784	2,540	1,462	1,644	866	394.7	1,600.2	404.4	318.5	543.1	817.5
Mean	11.6	59.5	81.9	47.2	58.7	27.9	13.2	51.6	13.5	10.3	17.5	27.2
Max	21	444	682	286	546	151	39	388	47	14	119	381
Min	6.8	14	16	13	15	12	9.7	9.4	9.4	7.9	8.7	7.8
Cfsm	0.55	2.82	3.88	2.24	2.78	1.32	0.62	2.45	0.64	0.49	0.83	1.29
In.	0.63	3.15	4.48	2.58	2.90	1.53	0.70	2.82	0.71	0.56	0.96	1.44

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 2010 [a], BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	19.3	28.3	35.1	47.9	50.2	56.6	34.4	19.4	13.6	16.0	16.6	32.5
Max	83.8	109	86.7	134	111	128	84.5	59.1	44.4	48.6	66.7	247
(WY)	(2003)	(2007)	(2003)	(1998)	(1998)	(1998)	(1993)	(1990)	(1992)	(1989)	(1986)	(1999)
Min	3.27	3.89	4.31	11.1	10.8	8.18	4.00	4.57	4.55	3.33	3.50	2.49
(WY)	(1986)	(1985)	(2002)	(2008)	(1991)	(1985)	(1985)	(2002)	(1987)	(1983)	(1983)	(1983)

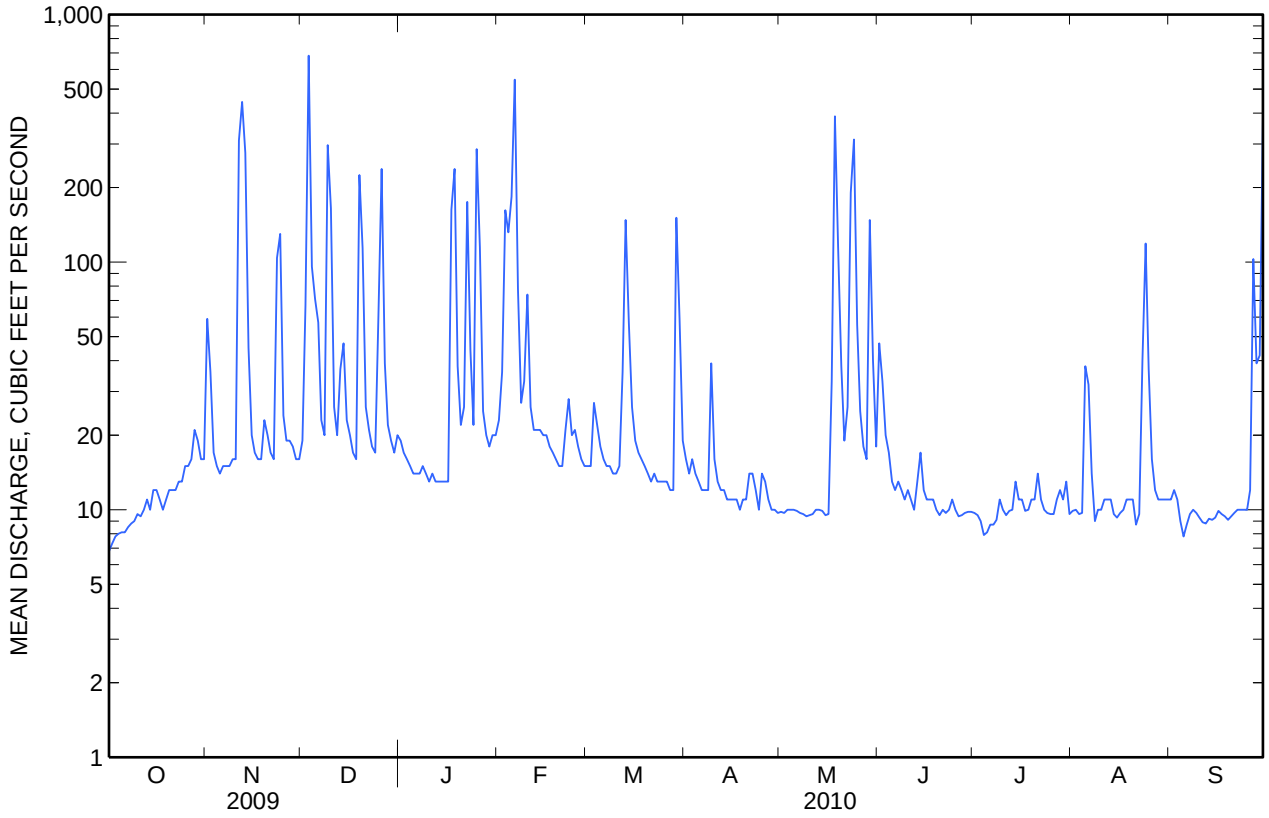
0209741955 NORTHEAST CREEK AT SECONDARY ROAD 1100 NEAR GENLEE, NC—Continued

SUMMARY STATISTICS

	Calendar Year 2009		Water Year 2010		Water Years 1983 - 2010 [a]	
Annual total	12,966.2		12,732.8			
Annual mean	35.5		34.9		31.0	
Highest annual mean					49.1	1996
Lowest annual mean					12.4	2002
Highest daily mean	682	Dec 3	682	Dec 3	3,350	Sep 6, 1996
Lowest daily mean	4.0	Sep 26	6.8	Oct 1	0.74	Jul 16, 1991
Annual seven-day minimum	7.3	Sep 30	7.8	Oct 1	1.5	Oct 7, 1985
Maximum peak flow			1,070	Dec 3	[b]5,140	Sep 6, 1996
Maximum peak stage			10.39	Dec 3	13.92	Sep 6, 1996
Instantaneous low flow			3.5	Aug 21	0.76	Oct 7, 1985
Annual runoff (cfsm)	1.68		1.65		1.47	
Annual runoff (inches)	22.86		22.45		19.95	
10 percent exceeds	69		60		57	
50 percent exceeds	14		14		9.9	
90 percent exceeds	8.0		9.5		4.3	

[a] See Period of Record.

[b] See Remarks.



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

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1983-86, 1988-95, 1999, 2001, 2004-10.

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 a regional 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 2009 TO SEPTEMBER 2010
Part 1 of 5
[%, percent; ANC, acid neutralizing capacity; CaCO3, calcium carbonate; N, nitrogen; P, phosphorus; SiO2, silicon dioxide; ft³/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than; E, estimated]

Date	Sample start time	Medium name	Sample type	Barometric pressure, mm Hg (00025)	Color, water, filtered, platinum cobalt units (00080)	Discharge, instantaneous, ft³/s (00061)	Dissolved oxygen, water, unfiltered, mg/L (00300)	Dissolved oxygen, water, unfiltered, % saturation (00301)	pH, water, unfiltered, field, standard units (00400)	Specific conductance, water, unfiltered, µS/cm at 25 °C (00095)
11-12-2009	0900	Surface water	Regular	752	175	504	7.6	72	7.2	82
12-03-2009	1015	Surface water	Regular	745	350	953	7.2	71	6.5	61

WATER-QUALITY DATA
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010
Part 2 of 5
[%, percent; ANC, acid neutralizing capacity; CaCO3, calcium carbonate; N, nitrogen; P, phosphorus; SiO2, silicon dioxide; ft³/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than; E, estimated]

Date	Temperature, water, °C (00010)	Dissolved solids dried at 180 °C, water, filtered, mg/L (70300)	Hardness, water, mg/L as CaCO3 (00900)	Calcium, water, filtered, mg/L (00915)	Magnesium, water, filtered, mg/L (00925)	Potassium, water, filtered, mg/L (00935)	Sodium, water, filtered, mg/L (00930)	ANC, water, unfiltered, inflection-point, incremental titration method, field, mg/L as CaCO3 (00419)	Bicarbonate, water, unfiltered, inflection-point, incremental titration method, field, mg/L (00450)
11-12-2009	12.0	75	22.2	5.72	1.93	3.09	7.26	18.5	22.6
12-03-2009	13.7	65	18.2	4.75	1.54	2.65	4.49	14.4	17.5

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

WATER-QUALITY DATA
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010
Part 3 of 5
[%, percent; ANC, acid neutralizing capacity; CaCO3, calcium carbonate; N, nitrogen; P, phosphorus; SiO2, silicon dioxide; ft³/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than; E, estimated]

Date	Chloride, water, filtered, mg/L (00940)	Fluoride, water, filtered, mg/L (00950)	Silica, water, filtered, mg/L as SiO2 (00955)	Sulfate, water, filtered, mg/L (00945)	Ammonia plus organic nitrogen, water, unfiltered, mg/L as N (00625)	Ammonia, water, filtered, mg/L as N (00608)	Nitrate plus nitrite, water, filtered, mg/L as N (00631)	Nitrite, water, filtered, mg/L as N (00613)	Orthophosphate, water, filtered, mg/L as P (00671)
11-12-2009	7.12	.08	5.76	7.22	.80	< .020	.358	.011	.060
12-03-2009	4.78	E .07	5.67	4.73	.93	< .020	.164	.006	.038

WATER-QUALITY DATA
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010
Part 4 of 5
[%, percent; ANC, acid neutralizing capacity; CaCO3, calcium carbonate; N, nitrogen; P, phosphorus; SiO2, silicon dioxide; ft³/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than; E, estimated]

Date	Phosphorus, water, unfiltered, mg/L as P (00665)	Aluminum, water, unfiltered, recoverable, µg/L (01105)	Cadmium, water, unfiltered, µg/L (01027)	Chromium, water, unfiltered, recoverable, µg/L (01034)	Cobalt, water, unfiltered, recoverable, micrograms per liter (01037)	Copper, water, unfiltered, recoverable, µg/L (01042)	Iron, water, unfiltered, recoverable, µg/L (01045)	Lead, water, unfiltered, recoverable, µg/L (01051)	Manganese, water, unfiltered, recoverable, µg/L (01055)	Mercury, water, unfiltered, recoverable, µg/L (71900)
11-12-2009	.155	898	E .03	1.4	.57	7.3	1,090	1.64	60.2	E .005
12-03-2009	.171	1,840	E .03	2.5	1.3	10.1	2,190	3.03	142	< .010

WATER-QUALITY DATA
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010
Part 5 of 5
[%, percent; ANC, acid neutralizing capacity; CaCO3, calcium carbonate; N, nitrogen; P, phosphorus; SiO2, silicon dioxide; ft³/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than; E, estimated]

Date	Molybdenum, water, unfiltered, recoverable, micrograms per liter (01062)	Nickel, water, unfiltered, recoverable, µg/L (01067)	Silver, water, unfiltered, recoverable, µg/L (01077)	Zinc, water, unfiltered, recoverable, µg/L (01092)	Arsenic, water, unfiltered, µg/L (01002)	Selenium, water, unfiltered, µg/L (01147)	Organic carbon, water, unfiltered, mg/L (00680)	Suspended sediment concentration, mg/L (80154)
11-12-2009	1.4	1.9	E .02	13.5	.91	.11	14.9	33
12-03-2009	.7	2.7	.02	15.9	1.1	.11	17.3	74