

Water-Data Report 2008

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 mi².

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. Satellite telemetry at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. An average of 36.0 ft³/s was diverted from the Neuse River basin for municipal water supply; 15.2 ft³/s was returned to the Cape Fear River basin, of which 7.2 ft³/s entered upstream from station as treated effluent.

About 12.7 ft³/s was returned to the Neuse River basin as treated effluent. Maximum discharge for period of record from rating curve extended above 2,000 ft³/s, by logarithmic plotting.

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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	6.4	11	14	43	85	14	238	26	8.2	21	9.5	19
2	6.8	11	14	18	88	10	69	19	8.6	11	8.1	14
3	6.9	11	15	12	26	10	27	15	8.4	9.2	8.1	12
4	7.3	11	15	9.9	17	12	153	13	8.3	8.2	8.2	12
5	7.8	10	14	7.9	15	403	254	12	8.2	132	8.4	12
6	7.7	11	14	7.2	13	106	186	12	8.0	530	8.3	903
7	6.8	11	13	7.6	11	132	71	11	7.2	189	8.2	334
8	7.2	10	12	7.1	11	475	33	10	7.4	31	8.4	35
9	7.2	10	11	7.0	10	107	22	24	8.4	25	7.0	21
10	7.6	9.7	e9.0	6.9	9.2	37	17	25	8.0	53	7.1	101
11	7.4	9.4	12	6.8	9.9	27	14	26	7.6	18	8.1	222
12	7.3	10	12	5.8	10	21	13	95	7.8	13	8.0	34
13	5.8	11	12	5.8	155	18	13	23	7.9	11	8.3	25
14	6.3	11	13	6.4	103	15	12	15	7.3	13	9.0	17
15	7.0	13	13	6.0	34	25	11	12	7.2	13	11	15
16	7.3	13	51	5.7	21	167	11	63	8.0	11	15	84
17	7.5	10	24	19	16	40	11	40	8.6	10	9.4	182
18	8.5	12	15	31	48	23	e10	23	7.6	10	17	28
19	9.1	13	12	14	33	18	e9.1	68	7.3	14	10	16
20	7.6	14	9.7	23	19	22	e38.0	22	7.1	24	11	12
21	7.1	13	8.6	13	14	16	32	26	6.5	13	29	10
22	8.3	11	7.1	10	26	13	15	16	15	11	12	10
23	7.9	11	6.5	11	28	11	13	12	83	12	9.0	9.8
24	11	13	6.9	9.3	17	11	11	9.5	18	12	8.2	9.1
25	38	14	6.2	8.5	15	11	9.4	8.4	11	9.9	8.6	9.4
26	79	15	61	7.0	32	10	e8.0	8.1	9.0	8.7	8.5	105
27	202	16	77	6.6	54	10	e7.5	9.2	9.1	8.3	92	79
28	33	16	17	6.8	23	9.6	e100	9.8	7.8	10	259	17
29	15	14	15	6.8	16	9.0	424	9.9	7.5	9.1	42	12
30	12	15	122	7.1	---	10	63	8.9	130	9.1	17	9.1
31	11	---	346	7.2	---	76	---	8.4	---	9.2	18	---
Total	569.8	360.1	978.0	343.4	959.1	1,868.6	1,895.0	680.2	454.0	1,258.7	691.4	2,368.4
Mean	18.4	12.0	31.5	11.1	33.1	60.3	63.2	21.9	15.1	40.6	22.3	78.9
Max	202	16	346	43	155	475	424	95	130	530	259	903
Min	5.8	9.4	6.2	5.7	9.2	9.0	7.5	8.1	6.5	8.2	7.0	9.1
Cfs/m	0.87	0.57	1.50	0.52	1.57	2.86	2.99	1.04	0.72	1.92	1.06	3.74
In.	1.00	0.63	1.72	0.61	1.69	3.29	3.34	1.20	0.80	2.22	1.22	4.18

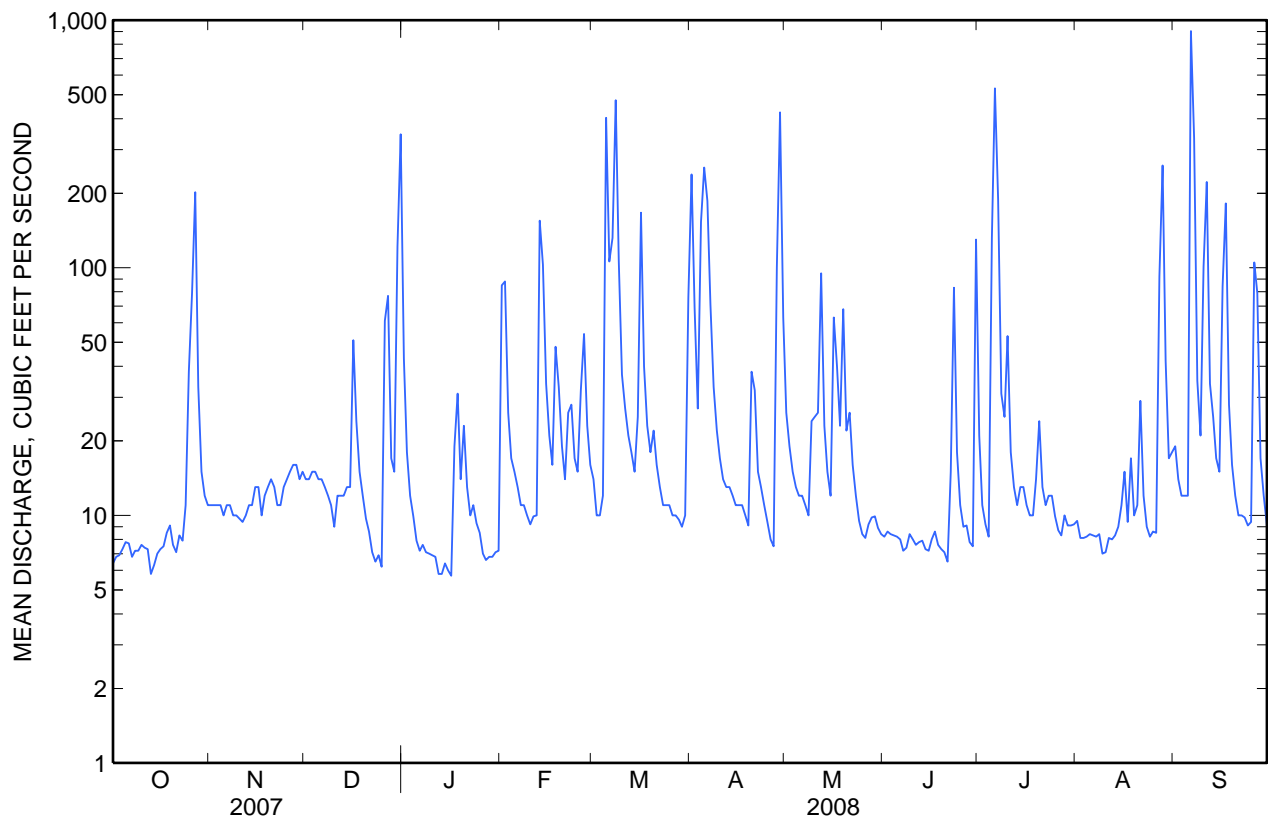
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 2008^a, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	20.0	27.1	32.7	48.1	51.1	55.2	35.6	18.3	13.5	16.4	16.9	33.5
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)

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SUMMARY STATISTICS

	Calendar Year 2007		Water Year 2008		Water Years 1983 - 2008 ^a	
Annual total	7,702.5		12,426.7			
Annual mean	21.1		34.0		30.9	
Highest annual mean					49.1	1996
Lowest annual mean					12.4	2002
Highest daily mean	349	Apr 12	903	Sep 6	3,350	Sep 6, 1996
Lowest daily mean	5.6	Aug 19	5.7	Jan 16	0.74	Jul 16, 1991
Annual seven-day minimum	6.7	Aug 14	6.2	Jan 10	1.5	Oct 7, 1985
Maximum peak flow			1,630	Sep 6	^b 5,140	Sep 6, 1996
Maximum peak stage			11.08	Sep 6	13.92	Sep 6, 1996
Instantaneous low flow			3.3	Oct 13	0.76	Oct 7, 1985
Annual runoff (cfs)	1.00		1.61		1.46	
Annual runoff (inches)	13.58		21.91		19.88	
10 percent exceeds	34		78		57	
50 percent exceeds	11		12		9.5	
90 percent exceeds	7.1		7.3		4.2	

^aSee Period of Record.^bSee 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, 2004-2008.

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 2007 TO SEPTEMBER 2008

Part 1 of 4

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

Date	Time	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, std units (00400)	Specific conductance, wat unf, μ S/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO ₃ (00900)	Calcium, water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)
Mar 08...	0830	585	175	746	8.0	75	6.6	85	12.0	23	5.96	2.03	2.24
Apr 29...	0830	535	250	755	5.8	61	7.2	95	16.7	26	6.71	2.26	2.52

WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Part 2 of 4

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

Date	Sodium, water, fltrd, mg/L (00930)	ANC, wat unf, infl pt, field, mg/L as CaCO ₃ (00419)	Bicarbonate, wat unf, infl pt, field, mg/L (00450)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L as SiO ₂ (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)	Nitrate + nitrite, water, fltrd, mg/L as N (00631)	Nitrite, water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)
Mar 08...	6.97	16	19	7.99	E.10	5.94	7.63	81	.82	E.019	.187	.006	.032
Apr 29...	7.28	26	31	6.87	E.10	6.43	6.45	77	.93	E.011	.079	.005	.049

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

WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Part 3 of 4

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

Date	Phos- phorus, water, unfltrd mg/L (00665)	Organic carbon, water, fltrd, mg/L (00681)	Organic carbon, water, unfltrd mg/L (00680)	Alum- inum, water, unfltrd recover- able, µg/L (01105)	Arsenic water, unfltrd µg/L (01002)	Cadmium water, unfltrd µg/L (01027)	Chrom- ium, water, unfltrd recover- able, µg/L (01034)	Cobalt water, unfltrd recover- able, µg/L (01037)	Copper, water, unfltrd recover- able, µg/L (01042)	Iron, water, unfltrd recover- able, µg/L (01045)	Lead, water, unfltrd recover- able, µg/L (01051)	Mangan- ese, water, unfltrd recover- able, µg/L (01055)	Mercury water, fltrd, µg/L (71890)
Mar 08...	.146	12.3	14.5	2,150	.95	.02	2.9	.94	12.8	1,560	2.25	80.8	E.008
Apr 29...	.177	13.1	15.4	1,190	1.0	E.01	1.9	.61	10.2	1,360	1.82	66.0	<.010

WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Part 4 of 4

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

Date	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 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)
Mar 08...	E.009	1.0	2.9	.17	E.02	14.5	51
Apr 29...	.011	1.1	2.2	.13	<.02	10.6	36