



Water-Data Report 2011

0208524975 LITTLE RIVER BELOW LITTLE RIVER TRIBUTARY AT FAIRNTOSH, NC

Neuse Basin
Upper Neuse Subbasin

LOCATION.--Lat 36°06'48", long 78°51'35" referenced to North American Datum of 1983, Durham County, NC, Hydrologic Unit 03020201, 125 ft downstream of the mouth of Little River tributary and 0.5 mi downstream of Little River dam.

DRAINAGE AREA.--98.9 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--October 1995 to current year.

REVISED RECORDS.--WDR-US-2006: 2005 (maximum discharge, gage height, daily discharges).

GAGE.--Water-stage recorder. Elevation of gage is 270 ft above National Geodetic Vertical Datum of 1929, from topographic map. Satellite telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow regulated by releases from the Little River Reservoir.

Maximum discharge for period of record from extension of rating curve based on contracted-opening measurement of peak flow. Maximum gage height for period of record from floodmarks. Instantaneous low flow for the period of record not determined due to the effects of beaver dams on the gage height-discharge relationship.

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011
DAILY MEAN VALUES
[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	5.3	2.3	4.2	8.8	4.8	7.3	171	5.9	2.5	2.2	2.2	2.5
2	3.4	2.2	2.3	10	5.5	6.1	87	6.0	2.5	2.1	2.1	2.5
3	3.3	2.4	2.9	10	4.6	5.9	45	5.6	2.4	2.1	2.0	2.5
4	3.3	3.6	2.8	9.5	10	5.9	24	24	2.4	2.1	2.1	2.5
5	3.4	2.5	3.0	9.4	18	5.9	21	85	2.4	2.2	2.1	2.2
6	3.4	2.3	2.7	9.7	7.8	7.0	8.5	34	2.3	2.2	2.1	27
7	3.4	2.2	2.6	10	6.7	6.5	6.2	17	2.3	2.4	2.1	19
8	3.4	2.3	2.5	11	6.1	5.9	5.3	9.4	2.4	2.3	2.1	2.0
9	3.5	2.3	2.5	11	5.9	6.0	14	6.1	2.4	3.2	2.1	1.8
10	3.8	2.2	2.7	9.4	5.9	8.8	98	5.6	9.8	2.1	2.0	2.0
11	4.4	2.3	2.8	9.9	5.9	7.0	119	5.9	10	2.1	2.0	2.0
12	5.1	2.2	3.0	9.0	5.8	6.2	67	5.6	3.2	2.1	2.1	2.0
13	5.3	2.2	3.0	8.3	5.6	5.9	30	6.8	2.6	2.2	11	1.7
14	7.1	2.3	2.5	7.3	5.6	5.9	9.3	10	2.2	2.1	2.9	1.1
15	4.6	2.2	2.5	7.3	5.6	5.9	5.2	7.3	2.1	2.0	2.7	1.2
16	4.2	2.7	4.1	7.3	5.6	7.5	40	6.2	2.2	2.0	2.5	1.8
17	3.4	3.3	3.4	6.8	5.6	6.1	112	5.9	2.4	2.0	2.5	2.0
18	3.1	2.9	2.5	6.8	5.6	5.9	61	5.9	2.4	2.1	2.5	2.0
19	3.1	2.7	2.3	6.4	5.6	5.9	22	5.6	2.5	2.1	2.5	2.1
20	3.2	2.7	2.2	6.3	5.6	5.9	9.7	5.6	2.4	2.1	2.5	e2.3
21	3.3	2.7	2.1	6.3	5.6	5.9	5.8	5.6	2.3	2.1	2.5	e2.3
22	3.6	2.7	2.8	6.2	5.6	6.0	6.1	5.6	2.2	2.1	2.4	e2.2
23	3.2	2.8	7.9	6.2	5.6	6.3	6.6	12	2.2	2.1	2.3	e3.6
24	2.9	2.9	8.8	5.9	5.6	11	13	6.6	2.2	2.2	2.3	e2.2
25	3.1	2.8	8.3	5.8	5.7	6.6	14	6.3	2.2	2.5	2.3	e1.8
26	4.4	2.9	9.4	11	5.6	6.4	6.2	6.0	2.2	2.3	2.3	e1.8
27	2.8	2.9	9.1	7.6	5.6	33	6.4	20	2.2	2.1	2.7	e2.0
28	2.9	2.7	8.6	6.0	7.8	108	6.5	29	7.9	2.1	2.8	e3.4
29	2.7	2.7	8.6	5.2	---	86	6.5	24	4.6	2.1	2.7	e2.1
30	2.4	2.6	9.0	5.0	---	196	5.9	13	2.3	2.2	2.8	e2.1
31	2.4	---	8.9	4.9	---	406	---	3.9	---	2.3	2.4	---
Total	113.4	77.5	140.0	244.3	178.9	998.7	1,032.2	395.4	93.7	67.8	81.6	105.7
Mean	3.66	2.58	4.52	7.88	6.39	32.2	34.4	12.8	3.12	2.19	2.63	3.52
Max	7.1	3.6	9.4	11	18	406	171	85	10	3.2	11	27
Min	2.4	2.2	2.1	4.9	4.6	5.9	5.2	3.9	2.1	2.0	2.0	1.1
Med	3.4	2.6	2.9	7.3	5.6	6.2	14	6.2	2.4	2.1	2.3	2.1
Ac-ft	225	154	278	485	355	1,980	2,050	784	186	134	162	210
Cfsm	0.04	0.03	0.05	0.08	0.06	0.33	0.35	0.13	0.03	0.02	0.03	0.04
In.	0.04	0.03	0.05	0.09	0.07	0.38	0.39	0.15	0.04	0.03	0.03	0.04

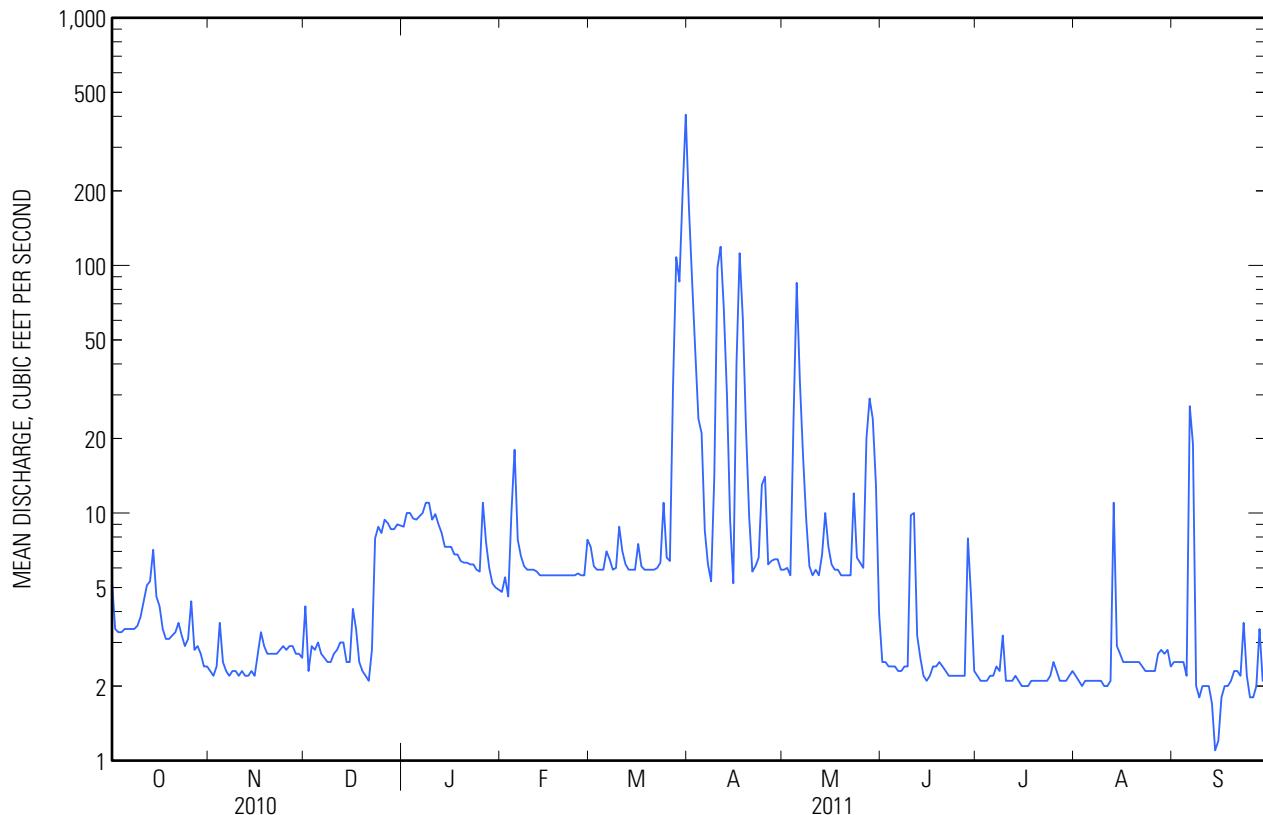
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 2011, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	19.8	47.2	82.7	78.2	111	158	115	41.8	25.1	17.2	15.6	84.1
Max	178	169	341	333	509	705	510	260	162	146	132	538
(WY)	(2003)	(2007)	(2010)	(1998)	(1998)	(1998)	(2003)	(2003)	(2003)	(2003)	(2003)	(1996)
Min	1.06	0.78	1.07	0.64	1.19	4.46	6.09	5.69	1.30	1.16	1.57	0.95
(WY)	(2008)	(2008)	(2001)	(2008)	(2008)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)

0208524975 LITTLE RIVER BELOW LITTLE RIVER TRIBUTARY AT FAIRNTOSH, NC—Continued**SUMMARY STATISTICS**

	Calendar Year 2010		Water Year 2011		Water Years 1996 - 2011	
Annual total	19,404.5		3,529.2		62.4	
Annual mean	53.2		9.67		224	2003
Highest annual mean					3.39	2002
Lowest annual mean						
Highest daily mean	2,990	Feb 6	406	Mar 31	10,300	Sep 6, 1996
Lowest daily mean	1.8	Aug 17	1.1	Sep 14	0.41	Nov 22, 1998
Annual seven-day minimum	1.9	Aug 21	1.7	Sep 9	0.51	Sep 7, 2002
Maximum peak flow			631	Mar 31	^a 16,600	Sep 6, 1996
Maximum peak stage			5.46	Mar 31	^a 17.27	Sep 6, 1996
Instantaneous low flow			0.89	Sep 15		^a Not determined
Annual runoff (ac-ft)	38,490		7,000		45,190	
Annual runoff (cfs-m)	0.538		0.098		0.631	
Annual runoff (inches)	7.30		1.33		8.57	
10 percent exceeds	104		11		110	
50 percent exceeds	6.1		3.4		6.2	
90 percent exceeds	2.1		2.1		1.9	

^a See Remarks.



0208524975 LITTLE RIVER BELOW LITTLE RIVER TRIBUTARY AT FAIRNTOSH, NC—Continued**WATER-QUALITY RECORDS**

PERIOD OF RECORD.--June 1995 to current year.

REMARKS.--Station operated to define the impacts of various land-use development on surface-water quality in the Upper Neuse River basin.

**WATER-QUALITY DATA
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011**

Part 1 of 3

[%, percent; N, nitrogen; P, phosphorus; ft³/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; °C, degrees Celsius; µS/cm, microsiemens per centimeter; --, no data; <, less than]

Date	Sample start time	Medium name	Sample type	Barometric pressure, mm Hg (00025)	Discharge, instantane-ous, ft ³ /s (00061)	Dissolved oxygen, water, unfiltered, mg/L (00300)	Dissolved oxygen, water, unfiltered, % saturation (00301)	pH, water, unfiltered, field, standard units (00400)
10-01-2010	1230	Surface water	Regular	740	5.0	5.6	67	6.2
11-23-2010	1115	Surface water	Regular	755	2.7	8.8	83	5.3
12-21-2010	1145	Surface water	Regular	752	2.1	9.3	72	5.8
02-25-2011	1200	Surface water	Regular	748	5.6	12.4	116	5.9
02-25-2011	1205	QC sample - Surface water	Replicate	--	--	--	--	--
05-04-2011	1030	Surface water	Regular	757	19	8.9	90	5.8
07-22-2011	1345	Surface water	Regular	756	2.1	7.3	102	7.0
09-07-2011	1300	Surface water	Regular	752	3.7	7.0	88	6.2
09-07-2011	1305	QC sample - Surface water	Replicate	--	--	--	--	--

**WATER-QUALITY DATA
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011**

Part 2 of 3

[%, percent; N, nitrogen; P, phosphorus; ft³/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; °C, degrees Celsius; µS/cm, microsiemens per centimeter; --, no data; <, less than]

Date	Sample start time	Specific conduc-	Ammonia plus organic		Nitrate plus nitrite		Orthophos-	
		tance, water, unfiltered, µS/cm at 25 °C (00095)	Tempera-ture, water, °C (00010)	nitrogen, water, unfiltered, mg/L as N (00625)	Ammonia, water, filtered, mg/L as N (00608)	nitrite, water, filtered, mg/L as N (00631)	Nitrate, water, filtered, mg/L as N (00618)	Nitrite, water, filtered, mg/L as N (00613)
10-01-2010	1230	101	23.2	.71	.032	.440	.437	.004
11-23-2010	1115	84	12.9	.43	.074	.112	.103	.009
12-21-2010	1145	106	4.1	.42	.122	.182	.174	.008
02-25-2011	1200	85	11.8	.42	<.010	.239	.237	.002
02-25-2011	1205	--	--	.39	<.010	.238	.237	.011
05-04-2011	1030	97	15.5	.99	.039	.436	.429	.007
07-22-2011	1345	96	32.7	.44	.040	.033	.031	.010
09-07-2011	1300	85	26.4	.87	.063	.489	.474	.015
09-07-2011	1305	--	--	.82	.059	.499	.484	.015
								.156

0208524975 LITTLE RIVER BELOW LITTLE RIVER TRIBUTARY AT FAIRNTOSH, NC—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011

Part 3 of 3

[%, percent; N, nitrogen; P, phosphorus; ft³/s, cubic feet per second;
mg/L, milligrams per liter; mm Hg, millimeters of mercury; °C,
degrees Celsius; µS/cm, microsiemens per centimeter; --, no data; <,
less than]

Date	Sample start time	Phosphorus, water, unfiltered, mg/L as P (00665)	Suspended sediment	
			concentration, mg/L (80154)	discharge, tons per day (80155)
10-01-2010	1230	.156	15	.20
11-23-2010	1115	.021	4	.03
12-21-2010	1145	.023	2	.01
02-25-2011	1200	.020	2	.03
02-25-2011	1205	.021	--	--
05-04-2011	1030	.245	45	2.3
07-22-2011	1345	.035	8	.05
09-07-2011	1300	.301	43	.43
09-07-2011	1305	.291	--	--