

Water-Data Report 2010

0208524975 LITTLE RIVER BELOW LITTLE RIVER TRIBUTARY AT FAIRTOSH, 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.--No estimated daily discharges. Records good, except those for August 9 to September 30, 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. Minimum discharge for current water year also occurred September 13, 2010.

0208524975 LITTLE RIVER BELOW LITTLE RIVER TRIBUTARY AT FAIRNTOSH, 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	2.2	12	52	86	74	49	82	6.8	69	2.1	2.6	2.0
2	2.1	2.6	300	73	76	35	53	6.7	33	2.2	2.4	2.2
3	2.1	2.6	1,840	60	445	32	38	6.6	12	2.2	2.4	2.2
4	2.1	5.0	238	46	358	35	30	6.9	12	2.2	2.3	1.9
5	2.2	6.5	206	35	1,030	31	31	6.9	6.7	2.2	5.0	1.9
6	2.2	11	244	27	2,990	21	39	6.9	6.5	2.2	3.3	2.0
7	2.3	11	161	29	374	26	40	6.8	6.3	2.2	2.3	2.2
8	2.7	11	117	28	160	21	29	7.4	6.2	2.3	2.3	2.1
9	2.7	10	1,410	21	144	17	39	7.2	6.1	2.3	2.3	2.1
10	3.0	13	556	19	177	16	13	7.3	6.2	2.3	2.0	1.9
11	3.3	53	173	17	146	17	6.8	7.3	6.2	2.3	2.3	1.9
12	3.5	314	103	15	108	29	6.2	7.3	6.2	2.3	2.1	1.8
13	3.7	1,460	125	14	88	102	8.9	7.3	6.9	2.6	2.0	1.9
14	3.5	238	260	11	81	198	6.7	6.9	6.2	4.2	1.9	2.0
15	3.7	128	165	11	77	214	6.3	6.9	5.9	2.3	2.0	2.0
16	3.5	71	102	9.1	77	116	6.8	8.3	14	2.2	1.9	2.4
17	3.4	44	68	298	69	69	6.5	33	6.8	11	1.8	2.2
18	3.5	26	59	391	57	55	6.2	383	6.0	10	1.9	2.2
19	3.9	79	266	166	52	42	6.2	160	5.9	4.5	2.0	2.0
20	3.8	128	309	105	42	30	6.2	63	5.9	2.5	2.1	1.9
21	3.7	91	215	85	38	26	6.7	26	6.2	2.6	2.0	2.0
22	3.8	59	168	227	48	27	6.6	38	6.2	2.3	1.9	1.9
23	4.2	745	134	194	68	29	6.6	1,070	4.0	2.3	1.9	2.0
24	6.2	562	113	283	70	36	6.6	226	2.2	2.2	1.8	2.2
25	6.6	177	969	1,960	95	34	7.1	133	2.2	2.4	1.9	2.5
26	6.3	126	1,520	245	86	21	6.6	58	2.2	2.4	1.9	3.4
27	6.9	99	230	164	62	14	6.7	23	2.2	3.4	1.9	6.0
28	9.5	82	172	123	46	15	6.7	40	2.2	2.5	2.0	3.6
29	2.8	65	119	96	---	554	6.8	741	2.3	2.2	2.1	7.3
30	3.0	54	84	117	---	321	6.9	231	2.2	2.4	2.0	27
31	3.1	---	81	104	---	141	---	111	---	2.3	1.9	---
Total	115.5	4,685.7	10,559	5,059.1	7,138	2,373	528.1	3,449.5	265.9	93.1	68.2	98.7
Mean	3.73	156	341	163	255	76.5	17.6	111	8.86	3.00	2.20	3.29
Max	9.5	1,460	1,840	1,960	2,990	554	82	1,070	69	11	5.0	27
Min	2.1	2.6	52	9.1	38	14	6.2	6.6	2.2	2.1	1.8	1.8
Med	3.5	62	172	85	79	32	6.8	8.3	6.2	2.3	2.0	2.0
Ac-ft	229	9,290	20,940	10,030	14,160	4,710	1,050	6,840	527	185	135	196
Cfsm	0.04	1.58	3.44	1.65	2.58	0.77	0.18	1.13	0.09	0.03	0.02	0.03
In.	0.04	1.76	3.97	1.90	2.68	0.89	0.20	1.30	0.10	0.04	0.03	0.04

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 2010, BY WATER YEAR (WY)

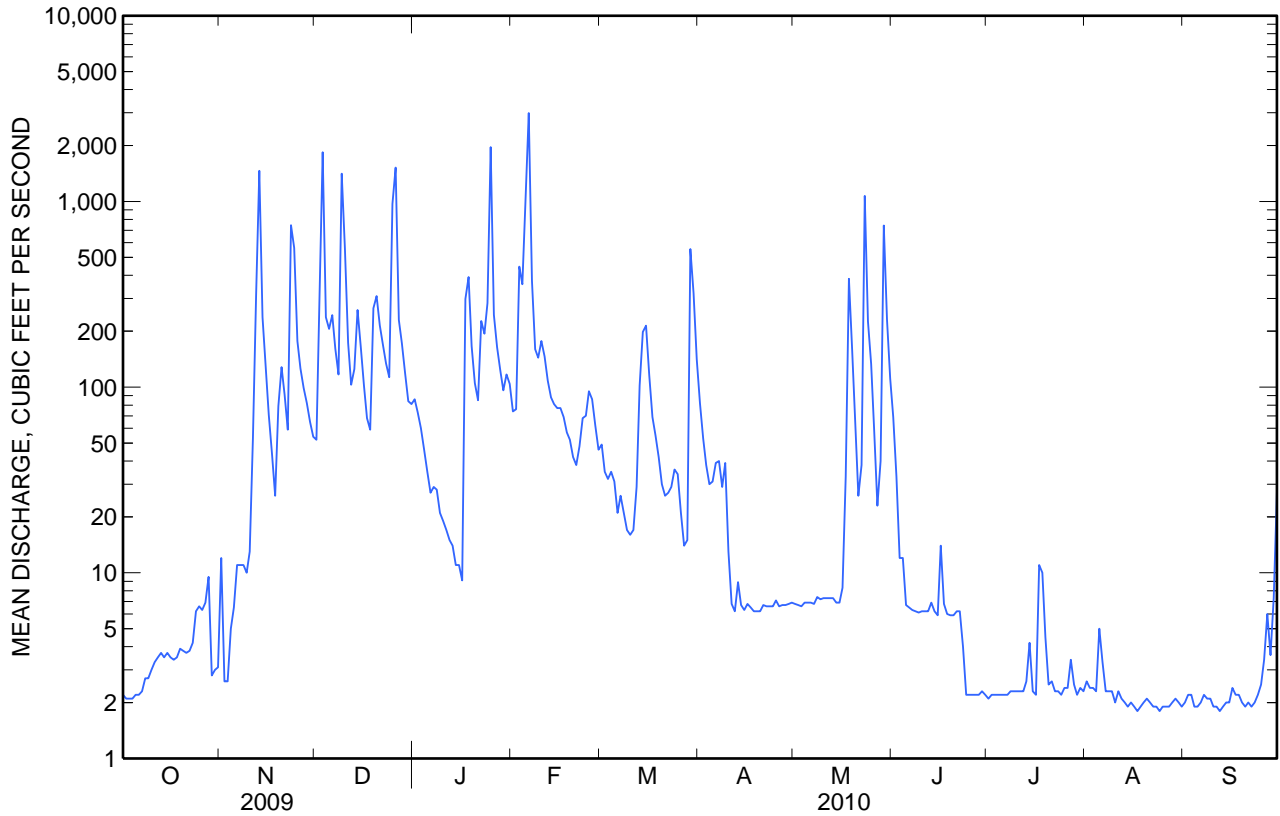
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	21.0	50.2	87.9	82.9	118	167	120	43.7	26.5	18.2	16.5	89.5
Max	178	169	341	333	509	705	510	260	162	146	132	538
(WY)	(2003)	(2007)	(2010)	(1998)	(1998)	(1998)	(2003)	(2003)	(2003)	(2003)	(2003)	(1996)
Min	1.06	0.78	1.07	0.64	1.19	4.46	6.09	5.69	1.30	1.16	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 2009		Water Year 2010		Water Years 1996 - 2010	
Annual total	29,002.7		34,433.8			
Annual mean	79.5		94.3		66.1	
Highest annual mean					224	2003
Lowest annual mean					3.39	2002
Highest daily mean	1,840	Dec 3	2,990	Feb 6	10,300	Sep 6, 1996
Lowest daily mean	2.1	Oct 2	1.8	Aug 17	0.41	Nov 22, 1998
Annual seven-day minimum	2.2	Sep 30	1.9	Aug 21	0.51	Sep 7, 2002
Maximum peak flow			4,920	Feb 6	^a 16,600	Sep 6, 1996
Maximum peak stage			12.92	Feb 6	^a 17.27	Sep 6, 1996
Instantaneous low flow			^a 1.5	Sep 12	^a Not Determined	
Annual runoff (ac-ft)	57,530		68,300		47,920	
Annual runoff (cfsm)	0.803		0.954		0.669	
Annual runoff (inches)	10.91		12.95		9.09	
10 percent exceeds	181		214		117	
50 percent exceeds	4.1		8.3		6.5	
90 percent exceeds	2.6		2.1		1.8	

^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 2009 TO SEPTEMBER 2010**

Part 1 of 2

[%, 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; <, less than; E, estimated]

Date	Sample start time	Medium name	Sample type	Barometric pressure, mm Hg (00025)	Discharge, instantaneous, ft ³ /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)	Temperature, water, °C (00010)
11-11-2009	1100	Surface water	Regular	758	98	9.6	92	6.2	55	13.2
12-03-2009	1130	Surface water	Regular	748	1,420	10.5	98	5.9	63	11.5
02-18-2010	1300	Surface water	Regular	752	65	12.6	102	6.3	59	5.7
05-04-2010	1145	Surface water	Regular	750	6.9	10.3	102	6.7	69	14.2
06-24-2010	0845	Surface water	Regular	751	2.2	6.0	71	6.5	77	23.4
08-27-2010	1230	Surface water	Regular	752	.05	4.4	55	6.2	99	25.3

**WATER-QUALITY DATA
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010**

Part 2 of 2

[%, 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; <, less than; E, estimated]

Date	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)	Nitrate, water, filtered, mg/L as N (00618)	Nitrite, water, filtered, mg/L as N (00613)	Orthophosphate, water, filtered, mg/L as P (00671)	Phosphorus, water, unfiltered, mg/L as P (00665)	Suspended sediment concentration, mg/L (80154)	Suspended sediment discharge, tons per day (80155)
11-11-2009	1.1	E .018	.406	.402	.004	.198	.407	267	71
12-03-2009	.70	.086	.251	.245	.006	.018	.070	6	23
02-18-2010	.36	.036	.336	.331	.005	.018	.085	21	3.7
05-04-2010	.40	< .020	.355	< .355	< .002	E .006	.035	8	.15
06-24-2010	.57	.085	.207	.200	.007	.010	.040	10	.06
08-27-2010	.50	.038	.037	E .036	E .001	.008	.054	20	.00