

Water-Data Report 2008

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), 2005 (daily discharges).

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

REMARKS.--Records are poor due to the effects of beaver dams on the gage height-discharge relationship. 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. Maximum gage height for the current year 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 2007 TO SEPTEMBER 2008
DAILY MEAN VALUES

[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0.83	0.81	0.63	1.1	3.1	0.87	154	91	22	3.0	2.5	74
2	0.79	0.80	0.63	0.86	0.85	0.90	165	56	15	2.5	2.5	42
3	0.84	0.80	0.63	0.72	0.61	0.89	91	39	8.8	2.5	2.7	6.2
4	0.77	0.72	0.61	0.60	0.60	13	143	29	8.1	3.2	2.7	2.6
5	0.79	0.73	0.59	0.56	0.53	24	817	23	6.2	4.5	2.7	87
6	0.77	0.82	0.57	0.57	0.55	11	250	15	4.6	7.2	2.8	e3,300
7	0.75	0.81	0.74	0.52	0.58	32	209	7.2	4.1	3.2	2.5	e100
8	0.73	0.80	0.62	0.58	0.54	12	129	7.4	3.6	2.5	2.7	e10
9	0.75	0.80	0.64	0.61	0.64	8.3	86	7.9	3.5	3.6	2.5	4.0
10	0.85	0.75	0.61	0.59	0.61	7.6	62	7.7	3.5	2.9	3.1	3.1
11	0.76	0.69	0.60	0.56	0.57	7.2	49	8.5	3.5	3.2	2.7	3.5
12	0.81	0.73	0.55	0.57	0.97	7.1	45	13	3.5	2.5	2.6	4.1
13	0.83	0.75	0.53	0.61	6.0	7.2	40	15	3.5	2.4	2.8	3.1
14	0.82	0.75	0.55	0.60	1.8	7.6	31	6.6	3.7	2.4	2.6	2.8
15	0.76	0.92	0.70	0.49	1.4	11	26	6.7	3.9	2.2	2.4	3.1
16	0.82	0.81	2.4	0.49	1.3	10	22	9.9	4.0	2.2	2.5	7.2
17	0.79	0.73	0.58	1.1	1.3	7.5	20	7.2	4.0	2.2	2.4	3.2
18	0.66	0.83	0.57	0.69	1.2	6.9	19	8.7	4.1	2.2	2.4	2.8
19	0.69	0.93	0.66	0.63	1.1	7.7	17	7.7	4.1	2.5	2.6	2.9
20	0.76	0.97	0.61	0.70	1.1	8.2	32	7.8	4.4	2.6	2.4	2.7
21	0.75	0.85	0.61	0.54	1.1	7.4	45	8.0	4.7	2.4	2.5	3.4
22	0.74	0.83	0.64	0.54	1.2	7.2	51	10	7.5	5.4	2.4	3.5
23	0.72	0.76	0.62	0.58	0.96	6.5	41	11	5.0	2.7	2.4	2.6
24	1.4	0.75	0.58	0.56	0.84	6.2	30	12	5.1	2.4	2.4	2.8
25	2.3	0.76	0.60	0.54	0.89	6.0	23	9.8	5.1	2.2	2.5	3.0
26	3.4	0.77	12	0.60	1.5	6.3	20	9.5	5.3	2.3	2.9	19
27	4.9	0.63	2.2	0.61	1.1	6.7	22	8.6	5.6	2.3	33	127
28	0.82	0.65	1.4	0.60	0.84	6.8	205	15	6.0	2.5	15	127
29	0.73	0.69	3.1	0.62	0.83	6.8	682	15	10	2.6	2.6	52
30	0.73	0.70	13	0.71	---	6.4	168	14	23	2.8	3.0	25
31	0.82	---	2.3	0.70	---	14	---	16	---	2.6	3.5	---
Total	32.88	23.34	51.07	19.75	34.61	271.26	3,694	503.2	195.4	89.7	124.3	4,029.6
Mean	1.06	0.78	1.65	0.64	1.19	8.75	123	16.2	6.51	2.89	4.01	134
Max	4.9	0.97	13	1.1	6.0	32	817	91	23	7.2	33	3,300
Min	0.66	0.63	0.53	0.49	0.53	0.87	17	6.6	3.5	2.2	2.4	2.6

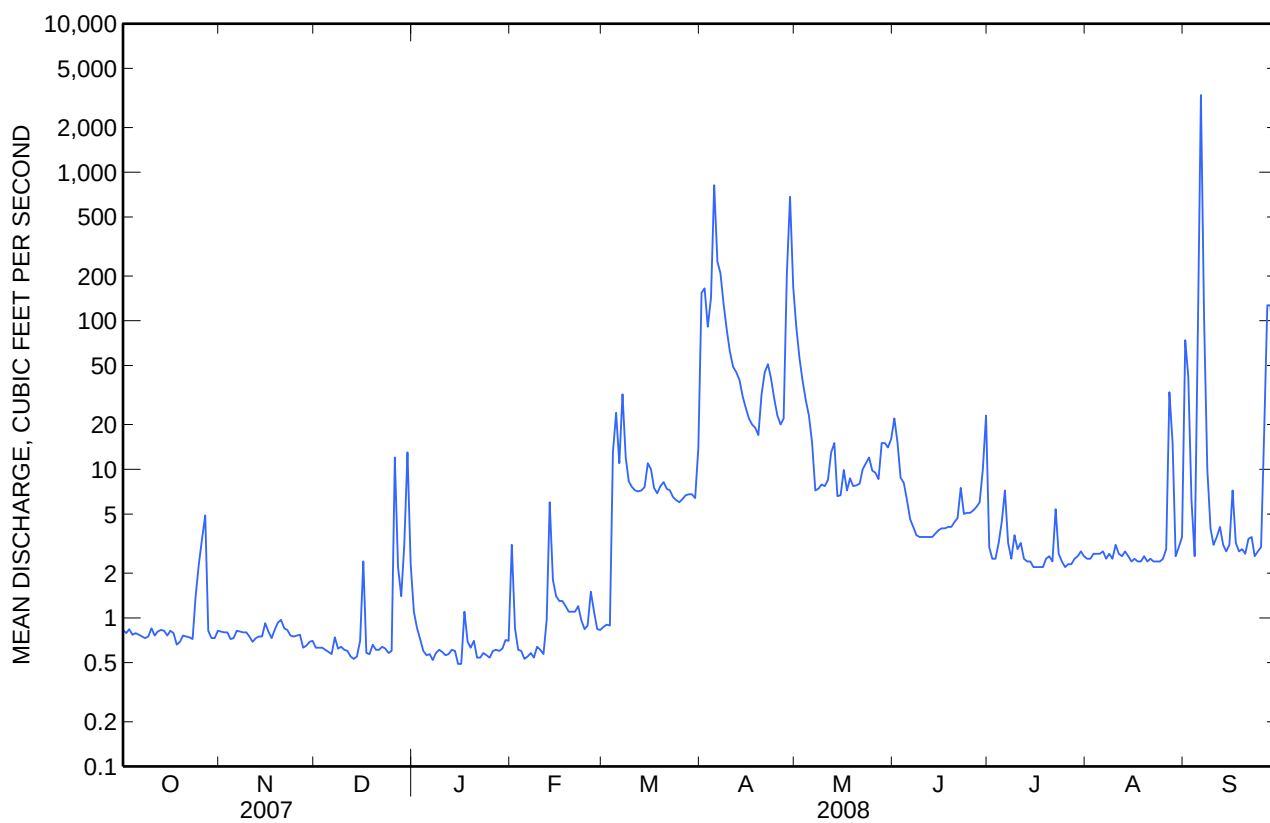
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 2008, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	23.9	45.3	72.2	79.2	117	168	132	41.4	24.9	20.4	18.6	103
Max	178	169	290	333	509	705	510	260	162	146	132	538
(WY)	(2003)	(2007)	(2003)	(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)

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SUMMARY STATISTICS

	Calendar Year 2007		Water Year 2008		Water Years 1996 - 2008	
Annual total	13,280.13		9,069.11			
Annual mean	36.4		24.8		65.8	
Highest annual mean					224	2003
Lowest annual mean					3.39	2002
Highest daily mean	1,480	Apr 15	3,300	Sep 6	10,300	Sep 6, 1996
Lowest daily mean	0.53	Dec 13	0.49	Jan 15	0.41	Nov 22, 1998
Annual seven-day minimum	0.59	Dec 8	0.56	Jan 10	0.51	Sep 7, 2002
Maximum peak flow			8,680	Sep 6	^a 16,600	Sep 6, 1996
Maximum peak stage			15.12	Sep 6	^a 17.27	Sep 6, 1996
Instantaneous low flow			^a 0.43	Jan 6	^a NOT DETERMINED	
10 percent exceeds	82		27		110	
50 percent exceeds	3.2		2.6		6.7	
90 percent exceeds	0.73		0.61		1.6	

^aSee 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 2007 TO SEPTEMBER 2008

Part 1 of 3

[QC, quality control sample. Remark codes: <, less than; E, estimated.]

Date	Time	Sample medium and type	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unf 25 degC (00095)	Temperature, water, deg C (00010)
Oct									
02...	1430	Surface water, regular	.82	746	8.4	100	6.9	90	22.6
02...	1435	QC - Surface water, replicate	--	--	--	--	--	--	--
Dec									
11...	1100	Surface water, regular	.58	757	7.5	68	7.1	113	11.0
Feb									
13...	0815	Surface water, regular	5.6	745	7.6	63	6.0	132	6.4
Mar									
28...	1245	Surface water, regular	6.6	752	10.5	107	6.1	82	15.8
May									
22...	1315	Surface water, regular	13	745	8.2	87	6.9	79	17.0
Jun									
30...	1300	Surface water, regular	4.4	740	7.0	88	6.7	84	25.3
Aug									
27...	1345	Surface water, regular	7.3	750	--	--	6.9	107	22.2
Sep									
06...	1230	Surface water, regular	6,800	741	8.7	108	7.0	71	24.9

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WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Part 2 of 3

[QC, quality control sample. Remark codes: <, less than; E, estimated.]

Date	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)	Nitrate water, fltrd, mg/L as N (00618)	Nitrite water, fltrd, mg/L as N (00613)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)	Phos- phorus, water, unfltrd mg/L as P (00665)	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)
Oct													
02...	.57	E.013	<.04	--	E.001	E.004	.04	--	--	--	--	--	--
02...	.54	<.020	<.04	--	<.002	E.004	.05	--	--	--	--	--	--
Dec													
11...	.42	.023	.144	.14	.004	E.004	.026	--	--	--	--	--	--
Feb													
13...	.99	.036	1.10	1.10	.005	.146	.224	--	--	--	--	--	--
Mar													
28...	.57	.045	.262	.26	.004	<.006	.055	--	--	--	--	--	--
May													
22...	.50	.028	.253	.25	.003	E.005	.033	--	--	--	--	--	--
Jun													
30...	1.1	.056	.603	.60	.008	.161	.287	--	--	--	--	--	--
Aug													
27...	.97	.091	.614	.61	.007	.158	.280	--	--	--	--	--	--
Sep													
06...	.52	.033	.026	.02	.002	<.006	.030	104	E.51	<.01	E.20	.14	E.93

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WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Part 3 of 3

[QC, quality control sample. Remark codes: <, less than; E, estimated.]

Date	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, 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 recover- able, 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)	Sus- pended sedi- ment dis- charge, tons/d (80155)	Data base number	Medium code
Oct													
02...	--	--	--	--	--	--	--	--	--	7	.02	01	WS
02...	--	--	--	--	--	--	--	--	--	--	--	04	WSQ
Dec													
11...	--	--	--	--	--	--	--	--	--	4	.01	01	WS
Feb													
13...	--	--	--	--	--	--	--	--	--	22	.33	01	WS
Mar													
28...	--	--	--	--	--	--	--	--	--	19	.34	01	WS
May													
22...	--	--	--	--	--	--	--	--	--	5	.18	01	WS
Jun													
30...	--	--	--	--	--	--	--	--	--	78	.93	01	WS
Aug													
27...	--	--	--	--	--	--	--	--	--	48	.95	01	WS
Sep													
06...	331	.17	189	<.010	.1	.30	.11	<.02	<2.0	11	202	01	WS