



Water-Data Report 2009

02085070 ENO RIVER NEAR DURHAM, NC

Neuse Basin
Upper Neuse Subbasin

LOCATION.--Lat 36°04'20", long 78°54'28" referenced to North American Datum of 1983, Durham County, NC, Hydrologic Unit 03020201, on right bank 275 ft downstream of bridge on U.S. Highway 501, 0.2 mi downstream of Crooked Creek, and 5 mi north of Durham.

DRAINAGE AREA.--141 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--August 1963 to current year. Occasional low-flow measurements, 1955.

REVISED RECORDS.--WDR NC-72-1: 1968-71 (maximum discharges).

GAGE.--Water-stage recorder. Datum of gage is 269.92 ft above North American Vertical Datum of 1988. Prior to November 19, 1966, at site 275 ft upstream, at datum 272.35 ft. Water-stage recorder at present site, at datum 270.94 ft. November 20, 1966, to September 30, 1967. U.S. Army Corps of Engineers satellite telemetry at streamgage.

REMARKS.--No estimated daily discharges. Records fair. Some regulation during periods of low flow caused by mill 600 ft upstream. Maximum gage height for period of record, 23.58 ft, from floodmark. Minimum discharge for period of record also occurred on August 15, 1977. Rainfall data associated with this site is available, station number 360419078543145.

Water-Data Report 2009

02085070 ENO RIVER NEAR DURHAM, NC—Continued

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009
DAILY MEAN VALUES

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	66	6.7	283	48	56	873	145	42	24	11	6.0	7.7
2	76	7.2	117	45	50	1,380	136	40	24	11	15	6.2
3	54	11	78	44	61	491	605	40	15	10	25	5.7
4	41	24	61	63	66	235	405	39	12	8.6	16	4.6
5	33	42	52	77	58	156	191	44	603	8.8	11	4.2
6	27	37	46	249	49	123	158	64	676	30	12	3.7
7	21	26	43	925	46	104	166	86	163	34	13	3.9
8	16	19	39	606	45	92	119	84	77	19	11	5.6
9	16	14	36	218	44	81	100	58	58	13	7.5	4.8
10	15	14	34	125	42	71	90	61	857	9.7	5.7	4.3
11	14	12	539	99	41	65	143	59	282	8.6	6.2	4.1
12	12	11	1,280	84	41	60	151	50	565	8.0	6.2	4.9
13	12	10	423	71	39	64	106	42	174	9.3	5.6	2.8
14	12	17	158	65	37	182	98	36	86	10	9.5	3.5
15	11	80	101	59	36	1,030	104	35	60	12	7.7	3.4
16	10	71	80	54	36	1,050	93	40	50	9.5	6.1	3.7
17	12	48	71	48	36	729	80	36	90	9.0	5.2	5.6
18	27	35	66	47	63	367	72	36	98	21	5.7	5.3
19	28	25	61	50	95	210	69	34	83	24	4.8	5.7
20	20	20	57	51	76	305	87	28	58	17	4.3	6.7
21	16	18	341	49	59	196	125	23	44	12	8.8	5.4
22	14	15	304	45	51	133	95	20	35	22	24	30
23	12	12	125	43	47	111	75	17	29	40	17	25
24	10	12	88	43	44	96	64	16	26	23	18	8.3
25	11	19	121	42	41	84	59	18	22	14	12	8.7
26	12	16	125	40	40	89	54	26	19	11	8.3	10
27	11	16	96	39	39	240	50	29	17	9.4	6.6	41
28	9.6	15	80	52	58	590	46	32	15	7.7	19	27
29	8.5	15	71	90	---	1,220	43	31	14	6.6	22	21
30	7.3	111	62	89	---	437	42	34	13	5.8	17	19
31	5.8	---	54	67	---	209	---	31	---	5.7	11	---
Total	640.2	778.9	5,092	3,627	1,396	11,073	3,771	1,231	4,289	440.7	347.2	291.8
Mean	20.7	26.0	164	117	49.9	357	126	39.7	143	14.2	11.2	9.73
Max	76	111	1,280	925	95	1,380	605	86	857	40	25	41
Min	5.8	6.7	34	39	36	60	42	16	12	5.7	4.3	2.8
Cfsm	0.15	0.18	1.16	0.83	0.35	2.53	0.89	0.28	1.01	0.10	0.08	0.07
In.	0.17	0.21	1.34	0.96	0.37	2.92	0.99	0.32	1.13	0.12	0.09	0.08

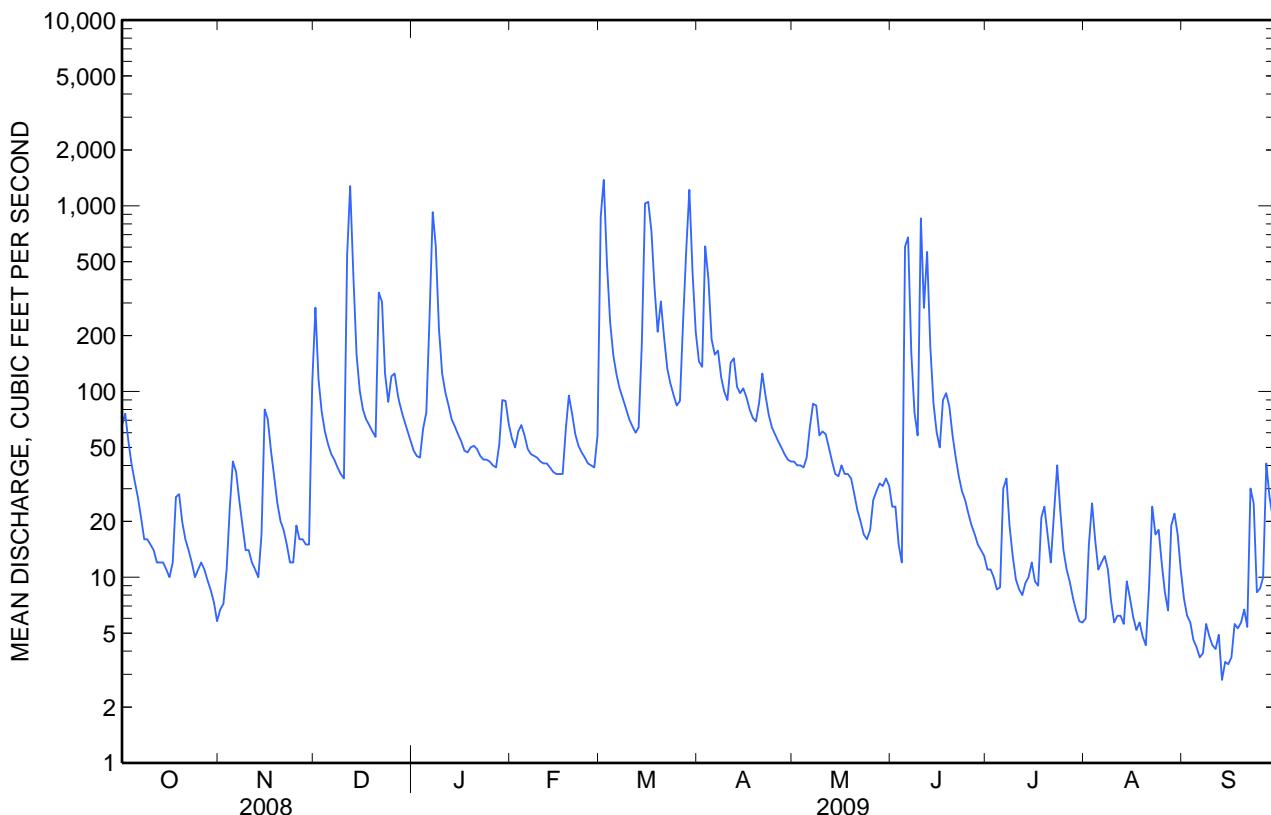
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 2009, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	56.5	76.9	112	187	226	272	185	113	87.2	68.7	52.0	72.8
Max	456	462	406	517	638	767	603	429	411	452	282	606
(WY)	(1972)	(1986)	(1973)	(1998)	(1998)	(1998)	(2003)	(1978)	(1982)	(1975)	(1985)	(1999)
Min	4.77	3.51	11.3	14.3	37.4	32.4	34.9	10.2	5.28	6.01	3.12	0.84
(WY)	(1964)	(2008)	(2002)	(2008)	(2008)	(2006)	(1995)	(2002)	(2002)	(2002)	(2007)	(1968)

02085070 ENO RIVER NEAR DURHAM, NC—Continued**SUMMARY STATISTICS**

	Calendar Year 2008		Water Year 2009		Water Years 1963 - 2009	
Annual total	31,489.3		32,977.8			
Annual mean	86.0		90.4		125	
Highest annual mean					293	2003
Lowest annual mean					26.7	2002
Highest daily mean	4,930	Sep 6	1,380	Mar 2	9,900	Sep 6, 1996
Lowest daily mean	1.6	Jun 21	2.8	Sep 13	0.08	Aug 14, 1977
Annual seven-day minimum	2.8	Jun 10	3.8	Sep 10	0.20	Aug 8, 1977
Maximum peak flow			2,570	Mar 1	14,700	Sep 6, 1996
Maximum peak stage				8.57 Mar 1	^a 23.58	Sep 6, 1996
Instantaneous low flow				1.6 Sep 13	^a 0.06	Aug 14, 1977
Annual runoff (cfsm)	0.610		0.641		0.889	
Annual runoff (inches)	8.31		8.70		12.08	
10 percent exceeds	128		169		255	
50 percent exceeds	29		39		50	
90 percent exceeds	5.2		7.0		6.4	

^a See Remarks.



02085070 ENO RIVER NEAR DURHAM, NC—Continued**WATER-QUALITY RECORDS**

PERIOD OF RECORD.--Water years 1989-95, 2009.

REMARKS.--Station operated to define water quality as part of a regional surface-water quality assessment.

**WATER-QUALITY DATA
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009**

Part 1 of 5

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

Date	Time	Medium name	Baro-metric pressure, mm Hg (00025)	Color, water, filtrd, Pt-Co units (00080)	Instantaneous discharge, ft³/s (00061)	Dissolved oxygen, mg/L (00300)	Dis-solved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif-ic conduc-tance, wat unf µS/cm @ 25 degC (00095)	Temper-ature, water, deg C (00010)
Jan 07...	0930	Surface water	740	70	814	11.5	102	7.2	82	8.9
Mar 01...	1400	Surface water	750	70	585	11.9	99	7.2	114	6.6
May 27...	1215	Surface water	754	--	27	8.0	96	7.2	128	23.5
	27...	Bottom material	--	--	--	--	--	--	--	--

**WATER-QUALITY DATA
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009**

Part 2 of 5

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

Date	Dis-solved solids dried @ 180degC wat flt mg/L (70300)	Hard-ness, water, mg/L CaCO3 (00900)	Calcium water, mg/L (00915)	Magnes-iun, water, mg/L (00925)	Potas-sium, water, mg/L (00935)	Sodium, water, mg/L (00930)	ANC, infl pt titr., mg/L CaCO3 (00419)	Bicar-bonate, wat unf titr., mg/L CaCO3 (00450)	Chlor-ide, water, mg/L (00940)	Fluor-ide, water, mg/L (00950)	Silica, water, mg/L SiO2 (00955)	Sulfate, water, mg/L (00945)	Ammonia + org-N, water, unfiltrd mg/L as N (00625)
Jan 07...	63	26	6.43	2.49	1.77	5.24	19.7	24.0	6.39	E.06	11.5	6.26	.59
Mar 01...	70	33	8.29	3.04	1.62	9.53	27.1	33.0	11.9	E.06	6.25	7.43	.58
May 27...	--	--	--	--	--	--	--	--	--	--	--	6.01	--
27...	--	--	--	--	--	--	--	--	--	--	--	--	--

02085070 ENO RIVER NEAR DURHAM, NC—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009

Part 3 of 5

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

Date	Ammonia water, filtrd, mg/L as N (00608)	Nitrate + nitrite water, filtrd, mg/L as N (00631)	Nitrite water, filtrd, mg/L as N (00613)	Ortho-phosphate, water, filtrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L as P (00665)	Mercury bed sediment total digest µg/g (01385)	Alum-inum, water, unfltrd recoverable, µg/L (01105)	Chromium, water, unfltrd Cadmium water, unfltrd recoverable, µg/L (01027)	Cobalt water, unfltrd recoverable, µg/L (01034)	Copper, water, unfltrd recoverable, µg/L (01037)	Iron, water, unfltrd recoverable, µg/L (01042)	Lead, water, unfltrd recoverable, µg/L (01051)	
Jan 07...	E.020	.323	.003	.015	.115	--	632	<.06	.78	1.2	E2.8	1,870	1.90
Mar 01...	E.015	.342	.003	.009	.080	--	618	<.06	1.0	1.1	E2.8	1,270	2.04
May 27...	--	--	--	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	.03	--	--	--	--	--	--	--

WATER-QUALITY DATA
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009

Part 4 of 5

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

Date	Manganese, water, unfltrd recoverable, µg/L (01055)	Mercury water, filtrd, -able, µg/L (71890)	Mercury water, unfltrd recoverable, µg/L (71900)	Molybdenum, water, unfltrd recoverable, µg/L (01062)	Nickel, water, unfltrd recoverable, µg/L (01067)	Silver, water, unfltrd recoverable, µg/L (01077)	Zinc, water, unfltrd recoverable, µg/L (01092)	Arsenic, water, unfltrd recoverable, µg/L (01002)	Selenium, water, unfltrd bed sediment percent (01147)	Organic carbon, water, unfltrd sediment percent (01395)	Organic carbon, water, unfltrd mg/L (00681)	Organic carbon, water, unfltrd mg/L (00680)	Bed sediment, wet sieved, percent <.062mm (69589)
Jan 07...	222	<.010	E.005	E.1	.79	<.06	6.8	.57	E.10	--	6.5	10.6	--
Mar 01...	154	<.010	<.010	E.1	1.2	<.06	8.8	.52	E.09	--	5.4	8.2	--
May 27...	--	<.010	<.010	--	--	--	--	--	--	--	4.4	--	--
27...	--	--	--	--	--	--	--	--	2.2	--	--	--	4

02085070 ENO RIVER NEAR DURHAM, NC—Continued**WATER-QUALITY DATA
WATER YEAR OCTOBER 2008
TO SEPTEMBER 2009**

Part 5 of 5
[Remark codes: <, less than;
E, estimated.]

Date	Sus- pended sediment concen- tration mg/L	Data base number (80154)
Jan		
07...	76	01
Mar		
01...	67	01
May		
27...	--	01
27...	--	01