

# Section B - Chapter 8

## Neuse River Subbasin 03-04-08

### Core Creek and Neuse River



## 8.1 Subbasin Overview

### ***Subbasin 03-04-08 at a Glance***

#### **Land and Water Area**

Total area:	231 mi <sup>2</sup>
Land area:	229 mi <sup>2</sup>
Water area:	2 mi <sup>2</sup>

#### **Population Statistics**

2000 Est. Pop.:	11,097 people
Pop. Density:	48 persons/mi <sup>2</sup>

#### **Land Cover (percent)**

Forest/Wetland:	67.3
Surface Water:	1.2
Urban:	3.9
Cultivated Crop:	26.3
Pasture/ Managed Herbaceous:	1.2

#### **Counties**

**Craven, Jones and Pitt**

#### **Municipalities**

Cove City and New Bern

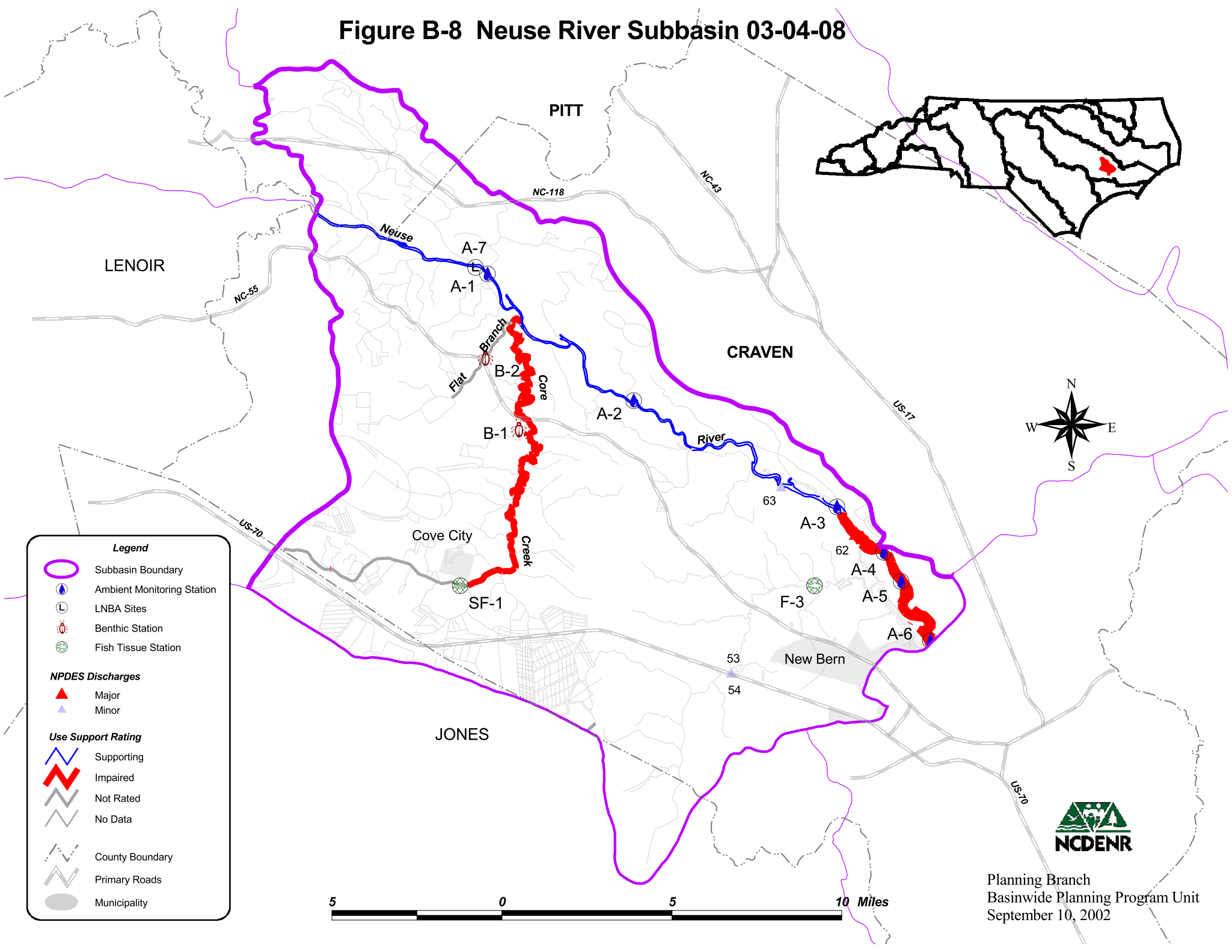
Population growth in the subbasin is concentrated around New Bern. Population density is also highest (320-1,600 persons/mi<sup>2</sup>) around New Bern. Land use in most of the subbasin is agriculture with many channelized areas in the Core Creek watershed.

There are 2,893 acres of managed public lands in this subbasin. The largest areas are an easement owned by the North American Land Trust and Turkey Quarter Island owned by the North Carolina Coastal Land Trust.

There are three NPDES wastewater discharge permits in this subbasin with a total permitted flow of 32.4 MGD (Figure B-8). The largest is Weyerhaeuser New Bern Mill (32 MGD, map #62). Refer to Appendix I for identification and more information on individual NPDES permit holders. New Bern will be required to develop a stormwater program under Phase II (page 76) and has submitted a model stormwater ordinance as required by the Neuse NSW strategy stormwater rules (page 64). There are also 14 registered animal operations in this subbasin.

There were two benthic macroinvertebrate community samples (Figure B-8 and Table B-22) collected in 2000 as part of basinwide monitoring. One site increased in bioclassification, and one site was not rated as biocriteria are being developed (page 75) to assess these swampy streams. There was also one special study site (SB and SF) collected in the subbasin during the assessment period. Data were also collected from six ambient stations. Refer to *2001 Neuse River Basinwide Assessment Report* at <http://www.esb.enr.state.nc.us/bar.html> and Section A, Chapter 3 for more information on monitoring.

**Figure B-8 Neuse River Subbasin 03-04-08**



**Legend**

- Subbasin Boundary
- Ambient Monitoring Station
- LNBA Sites
- Benthic Station
- Fish Tissue Station

**NPDES Discharges**

- Major
- Minor

**Use Support Rating**

- Supporting
- Impaired
- Not Rated
- No Data

**Other Symbols**

- County Boundary
- Primary Roads
- Municipality



Planning Branch  
 Basinwide Planning Program Unit  
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Table B-22 DWQ Monitoring Locations in Subbasin 03-04-08

<b>Benthic Macroinvertebrate Community Monitoring Sites</b>					
<b>Map #<sup>1</sup></b>	<b>Waterbody</b>	<b>County</b>	<b>Location</b>	<b>1995</b>	<b>2000</b>
B-1	Core Cr <sup>2</sup>	Craven	NC 55	Poor	Fair
B-2	Flat Swp	Craven	NC 55	---	Not rated
<b>Fish Community Monitoring Sites</b>					
<b>Map #<sup>1</sup></b>	<b>Waterbody</b>	<b>County</b>	<b>Location</b>	<b>1995</b>	<b>2000</b>
SF-1	Core Cr	Craven	SR 1001	---	Not rated
<b>Phytoplankton Monitoring Sites</b>					
P-1	Neuse R	Craven	SR 1400	---	---
<b>Ambient Monitoring Sites</b>					
<b>Map #<sup>1</sup></b>	<b>Waterbody</b>	<b>County</b>	<b>Location</b>	<b>Station #</b>	<b>Noted Parameters<sup>3</sup></b>
A-1	Neuse River	Craven	SR 1470	J7850000	none
A-2	Neuse River	Craven	Lane Landing	J7860000	none
A-3	Neuse River	Craven	SR 1400	J7930000	none
A-4	Neuse River	Craven	nr Askin	J8250000	none
A-5	Neuse River	Craven	Channel Marker 64	J8270000	none
A-6	Neuse River	Craven	nr Washington Forks	J8290000	none
A-7 <sup>4</sup>	Neuse River	Craven	SR 1470	J8500000	none

<sup>1</sup> B = benthic macroinvertebrates; F = fish community; A = ambient monitoring station; SB = benthic macroinvertebrates special study site; SF = fish community special study site; and P= phytoplankton monitoring site.

<sup>2</sup> Historical data available at this site. Refer to Appendix II.

<sup>3</sup> Parameters are noted if in excess of state standards in greater than 10 percent of all samples.

<sup>4</sup> LNBA Sites (page 220). Only dissolved oxygen, chlorophyll *a* and fecal coliform were analyzed.

Use support ratings are summarized in Part 8.2 below. Recommendations, current status and future recommendations for waters that were impaired in 1998 are discussed in Part 8.3 below. Current status and future recommendations for newly impaired waters are discussed in Part 8.4 below. Water quality issues related to the entire subbasin are discussed in Part 8.5. Unless otherwise noted, all discussions are for the aquatic life and secondary recreation use support category. Refer to Appendix III for a complete list of monitored waters by use support category and more information on supporting monitored waters.

## 8.2 Use Support Summary

Use support ratings (page 54) in subbasin 03-04-08 were assigned for aquatic life and secondary recreation and fish consumption. All waters in the subbasin are considered impaired on an evaluated basis because of fish consumption advisories (page 93).

There were 49 stream miles (38 percent) and 427 estuarine acres (100 percent) monitored during this assessment period. Approximately 15 (31 percent) of the monitored stream miles and 427 (100 percent) estuarine acres are impaired. Refer to Table B-23 for a summary of use support ratings by use support category for waters in the subbasin. Use support ratings for waters that were monitored and impaired in at least one use support category or were impaired in 1998 are presented in Table B-24.

Table B-23 Summary of Use Support Ratings by Use Support Category in Subbasin 03-04-08

Use Support Rating	Basis	Aquatic Life and Secondary Recreation	Fish Consumption
Supporting	Monitored	22.3 mi	0
	All Waters	22.3 mi	0
Impaired	Monitored	<b>15.4 mi</b> <b>426.5 ac</b>	0
	All Waters	15.4 mi 426.5 ac	129.8 mi 426.5 ac
Not Rated	Monitored	11.6 mi	0
No Data	N/A	80.3 mi	0
Total	Monitored	49.4 mi 426.5 ac	0
	All Waters	129.8 mi 426.5 ac	129.8 mi 426.5 ac
	Percent Monitored	38% mi 100% ac	0%

Note: All waters include monitored, evaluated and waters that were not assessed.

Table B-24 Previously or Currently Impaired Waters in Subbasin 03-04-08

Name	1998 Status	2002 Status	Use Support Category	mi/ac
Core Creek	Impaired	Impaired	Aquatic Life/Secondary Recreation	15.4 mi
Neuse River	Impaired	Impaired	Aquatic Life/Secondary Recreation	426.5 ac
			<b>Total 2002 Impaired Miles</b>	<b>15.4 mi</b>
			<b>Total 2002 Impaired Acres</b>	<b>426.5 ac</b>

## **8.3 Status and Recommendations of Previously Impaired Waters**

### **8.3.1 Core Creek**

#### 1998 Recommendations

Core Creek was partially supporting from the source to the Neuse River. More sampling was recommended to evaluate impacts from nonpoint sources.

#### Current Status

Core Creek is currently impaired from Cove City to the Neuse River because of a Fair bioclassification at site B-1. Low dissolved oxygen and high conductivity have been observed at the sampling site during low flow conditions.

#### 2002 Recommendations

DWQ will continue to monitor Core Creek to evaluate impacts from nonpoint sources in the watershed. As part of the 303(d) list approach, DWQ will begin the process of identifying problem parameters that may be causing biological impairment in Core Creek. Because of the presence of significant natural areas, important fisheries habitat and the noted water quality impairment, Core Creek is a NCWRP targeted local watershed (page 203).

#### Current Water Quality Initiatives

There are two buffer acquisition projects and one restoration project funded through grants by CWMTF in this watershed (page 215).

### **8.3.2 Neuse River**

#### Current Status and 2002 Recommendations

The eastern portion of the Neuse River (426 acres) in this subbasin is currently impaired and discussed in Section B, Chapter 10 with the rest of the Neuse River estuary that is impaired for the same reason (page 171).

## **8.4 Status and Recommendations of Waters Newly Impaired Waters**

There are no newly impaired waters in subbasin 03-04-08.

## **8.5 Additional Water Quality Issues Within Subbasin 03-04-08**

This section discusses issues that may threaten water quality in the subbasin that are not specific to particular streams, lakes or reservoirs. The issues discussed may be related to waters near certain land use activities or within proximity to different pollution sources.

### **8.5.1 Impacts of Post-Hurricane De-Snagging on Instream Habitats**

Many streams in the subbasin have noted impacts from the recent hurricanes. The biological community in the streams can recover rapidly if instream habitat is maintained. De-snagging operations should carefully remove debris from stream channels to restore natural flow and leave

enough instream habitats so the biological community can recover. For more information on this issue, refer to page 86.