Section B - Chapter 11
Neuse River Subbasin 03-04-11
Jones, Lenoir and Onslow Counties

11.1 Subbasin Overview

Subbasin 03-04-11 at a Glance

Land and Water Area

Total area:	444 mi^2
Land area:	443 mi^2
Water area:	1 mi^2

Population

2000 Est. Pop.:	15,914 people
Pop. Density:	36 persons / mi^2

Land Cover (percent)

Forest / Wetland:	70.1
Water:	0.3
Urban:	1.5
Cultivated Crop:	24.7
Pasture / Managed Herbaceous:	2.4

Municipalities
Trenton and River Bend

Counties
Jones, Lenoir and Onslow

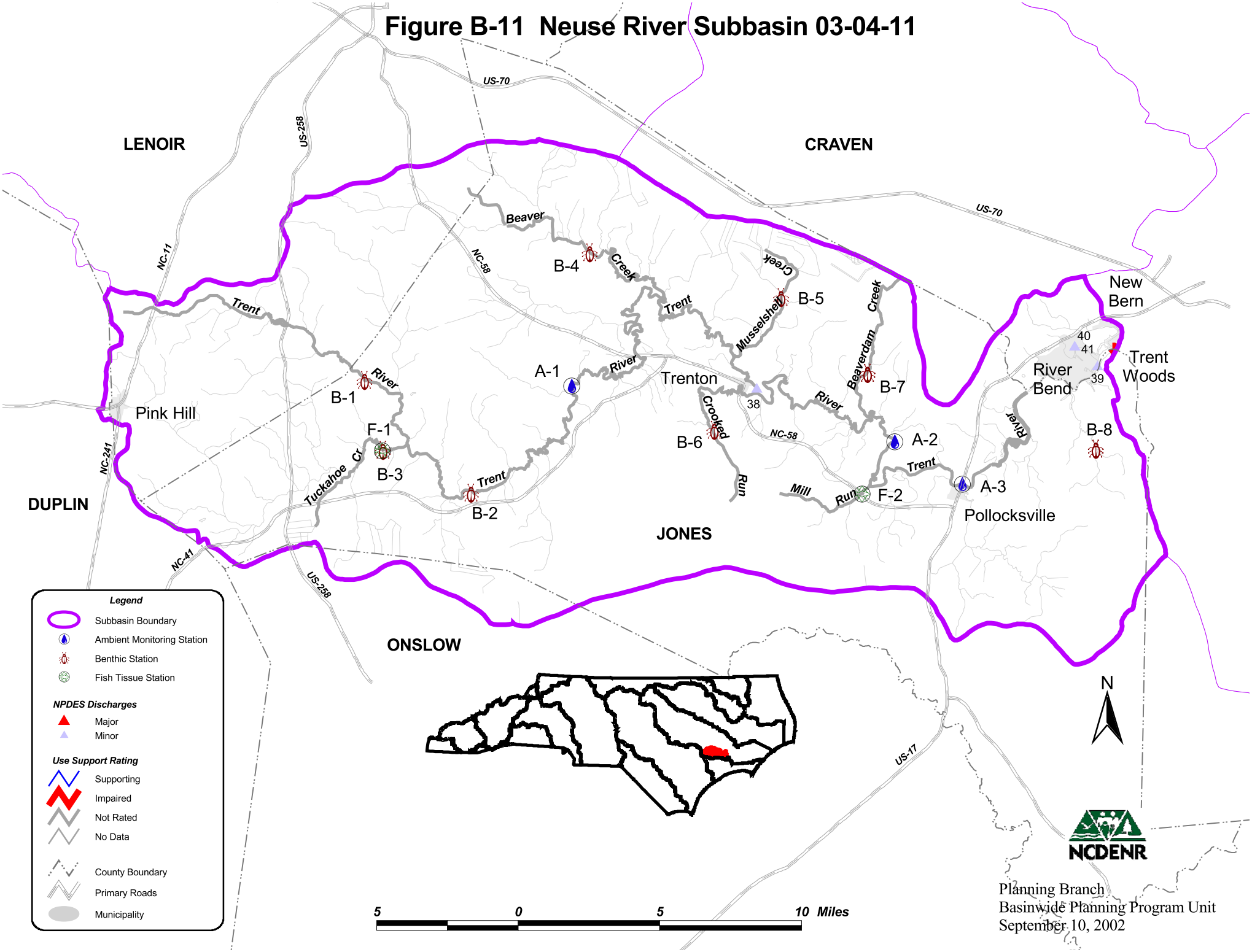
Population growth in the subbasin is concentrated to the west of New Bern. Population density is highest (60-320 persons/mi^2) south of New Bern. Land use in the subbasin is mostly forest and agriculture. There are 38,316 acres of managed public lands in this subbasin, mostly associated with the Croatan National Forest and the Hoffman State Forest.

There are three NPDES wastewater discharge permits in this subbasin with a total permitted flow of 0.4 MGD (Figure B-11). Refer to Appendix I for identification and more information on individual NPDES permit holders. There are also 64 registered animal operations in this subbasin.

There were eight benthic macroinvertebrate community samples and three fish community samples (Figure B-11 and Table B-31) collected in 2000 as part of basinwide monitoring. One site was Fair for the first time, and all other sites were not rated as biocriteria are being developed (page 75) to assess these swampy streams. Data were also collected from three 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.

Use support ratings are summarized in Part 11.2 below. Recommendations, current status and future recommendations for waters that were impaired in 1998 are discussed in Part 11.3 below. Current status and future recommendations for newly impaired waters are discussed in Part 11.4 below. Supporting waters with noted water quality impacts are discussed in Part 11.5 below. Water quality issues related to the entire subbasin are discussed in Part 11.6, and NCWRP (page 203) targeted local watersheds are discussed in part 11.7. 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.

Figure B-11 Neuse River Subbasin 03-04-11



Planning Branch
Basinwide Planning Program Unit
September 10, 2002

Table B-31 DWQ Monitoring Locations in Subbasin 03-04-11

Benthic Macroinvertebrate Community Monitoring Sites					
Map #[1]	**Waterbody**	**County**	**Location**	**1995**	**2000**
B-1	Trent R	Jones	SR 1153	---	Not Rated
B-2	Trent R	Jones	Becks Bank, near Comfort	---	Fair
B-3	Tuckahoe Swp	Jones	SR 1142	---	Not Rated
B-4	Beaver Cr	Jones	SR 1315	Fair (1991)	Not Rated
B-5	Musselshell Cr	Jones	SR 1320	Not Rated	Not Rated
B-6	Crooked Run	Jones	SR 1123	---	Not Rated
B-7	Beaverdam Cr	Jones	SR 1002	Not Rated	Not Rated
B-8	Island Cr[2]	Jones	SR 1004	Not Rated	Not Rated
Fish Community Monitoring Sites					
Map #[1]	**Waterbody**	**County**	**Location**	**1995**	**2000**
F-1	Tuckahoe Cr	Jones	SR 1142	---	Not Rated
F-2	Mill Run	Jones	NC 58	---	Not Rated
F-3	Island Cr[2]	Jones	SR 1004	Not Rated	Not Rated
Ambient Monitoring Sites					
Map #[1]	**Waterbody**	**County**	**Location**	**Station #**	**Noted Parameters[3]**
A-1	Trent R	Jones	Near Trenton	J8690000	none
A-2	Trent R	Jones	SR 1121	J8720000	none
A-3	Trent R	Jones	Pollacksville	J8730000	none

[1] B = benthic macroinvertebrates; F = fish community; A = ambient monitoring station; SB = benthic macroinvertebrates special study site; and SF = fish community special study site.

[2] Historical data available at this site. Refer to Appendix II.

[3] Parameters are noted if in excess of state standards in greater than 10 percent of all samples.

11.2 Use Support Summary

Use support ratings (page 54) in subbasin 03-04-11 were assigned for aquatic life and secondary recreation, fish consumption and primary recreation. All waters in the subbasin are considered impaired on an evaluated basis because of fish consumption advisories (page 93).

There were 120 stream miles (40.5 percent) and 253 estuarine acres (100 percent) monitored during this assessment period. Refer to Table B-32 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-33.

Table B-32 Summary of Use Support Ratings by Use Support Category in Subbasin 03-04-11

Use Support Rating	Basis	Aquatic Life and Secondary Recreation	Fish Consumption	Primary Recreation
Supporting	Monitored	0	0	0 mi 252.7 ac
	All Waters	0	0	0 mi 252.7 ac
Impaired	Monitored	**0**	0	0
	All Waters	0	295.8 mi 252.7 ac	0
Not Rated	Monitored	120.0 mi 252.7 ac	0	0
No Data	N/A	178.8 mi	0	1.2 mi 0 ac
Total	Monitored	120.0 mi 252.7 ac	0	0 mi 252.7 ac
	All Waters	295.8 mi 252.7 ac	295.8 mi 252.7 ac	1.2 mi 252.7 ac
	Percent Monitored	40.5% mi 100% ac	0%	0% mi 100% ac

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

Table B-33 Previously or Currently Impaired Waters in Subbasin 03-04-02

Name	1998 Status	2002 Status	Use Support Category	Miles
Trent River	Impaired	Not Rated	Aquatic Life/Secondary Recreation	N/A
Beaver Creek	Impaired	Not Rated	Aquatic Life/Secondary Recreation	N/A
			Total 2002 Impaired Miles	**0**

11.3 Status and Recommendations of Previously Impaired Waters

11.3.1 Trent River

1998 Recommendations

The Trent River was partially supporting from the source to the Neuse River. There were no specific recommendations made in the 1998 plan.

Current Status

The Trent River is currently not rated from the confluence with Tuckahoe Creek to the subbasin boundary. There are many animal operations above the site and algal growths were noted. The site is under stress and hurricane damage was also noted. Lower summer flows may be due to increases in agriculture water use.

2002 Recommendations
DWQ will investigate the potential for low flows to impact biological communities in the Trent River. Unusually low flows have prevented DWQ staff from resampling the Trent River. DWQ will continue to monitor the Trent River.

11.3.2 Beaver Creek

1998 Recommendations
Beaver Creek was partially supporting from the source to the Trent River. There were no specific recommendations made in the 1998 basin plan.

Current Status
Beaver Creek is currently not rated. Abundant periphyton growth was noted at site B-7. Conductivity was elevated and hurricane damage was noted. The biological community was very disturbed and appeared to be under stress.

2002 Recommendations
DWQ will continue to monitor Beaver Creek and continue to develop criteria that can be used to assign a bioclassification (page 92) for future monitoring.

11.4 Status and Recommendations of Waters Newly Impaired Waters

There are no newly impaired waters in subbasin 03-04-11. Refer to Part 11.5 below for information on waters with noted water quality impacts.

11.5 Status and Recommendations for Waters with Noted Impacts

The surface waters discussed in this section are supporting designated uses (unless otherwise noted) based on DWQ's use support assessment and are not considered to be impaired. However, notable water quality problems and concerns have been documented for some waters based on this assessment. While these waters are not considered impaired, attention and resources should be focused on these waters to prevent additional degradation or facilitate water quality improvement.

11.5.1 Musselshell Creek

Current Status and 2002 Recommendations
Musselshell Creek is currently not rated. Habitat degradation (page 89) was noted with infrequent pools, lack of instream habitat, little riparian area, eroding banks and channelized segments. There is extensive cotton farming in the watershed. DWQ will continue to monitor water quality in this creek to evaluate possible impacts from agriculture practices.

11.6 Additional Water Quality Issues Within Subbasin 03-04-11

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.

11.6.1 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. Refer to page 86 for more information on this issue.