Section B - Chapter 4
Tar-Pamlico River Subbasin 03-03-04
Fishing Creek, Little Fishing Creek, Rocky Swamp and Beech Swamp

4.1 Subbasin Overview

Subbasin 03-03-04 at a Glance

Land and Water Area

Total area:	893 mi²
Land area:	878.3 mi²
Water area:	14.7 mi²

Population Statistics

2000 Est. Pop.:	69,693 people
Pop. Density:	78 persons/mi²

Land Cover (percent)

Forest/Wetland:	73.8
Surface Water:	0.3
Urban:	0.2
Cultivated Cropland:	22.6
Pasture/ Managed Herbaceous:	3.1

Counties

Edgecombe, Franklin, Halifax, Martin, Nash, Vance and Warren

Municipalities

Middleburg, Warrenton, Littleton and Scotland Neck

Except for the area immediately around Tarboro in the southern portion of the subbasin, there has been little growth in population. Tarboro experienced rapid growth in the 1980s but has since slowed, and the remainder of the subbasin is experiencing very little growth. The predominant land cover is forest and wetland with extensive cultivated cropland as well.

There are eight NPDES wastewater discharge permits in this subbasin with a total permitted flow of 3.9 MGD (Figure B-4). The largest is Warrenton WWTP (2.0 MGD). There are also two general NPDES wastewater permits, one individual NPDES stormwater permit, and ten general NPDES stormwater permits in the subbasin. Refer to Appendix I for identification and more information on individual NPDES permit holders. Significant issues related to compliance with NPDES permit conditions are discussed below. There are also 21 registered animal operations in this subbasin.

There were six benthic macroinvertebrate community samples and six fish community samples (Figure B-4 and Table B-7) collected in 2002 as part of basinwide monitoring. One site improved, two sites remained the same, and two sites had lower bioclassifications. Five sites were monitored for the first time, and there were two special study samples collected in the subbasin during the assessment period. Data were collected from one ambient monitoring station as well.

Refer to *2003 Tar-Pamlico 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-4 Tar-Pamlico River Subbasin 03-03-04

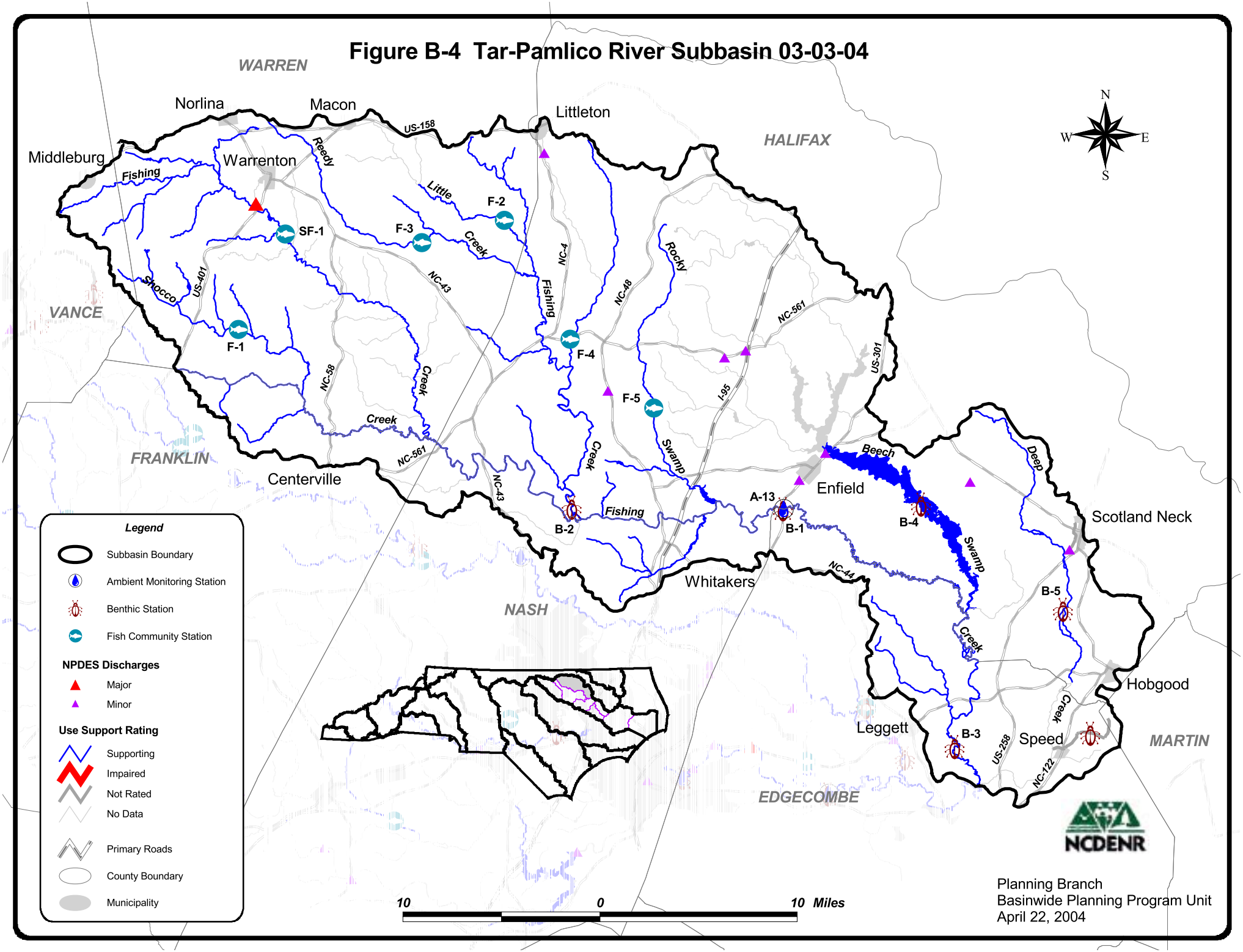

Table B-7 DWQ Assessment and Use Support Ratings Summary for Monitored Waters in Subbasin 03-03-04

Waterbody	Assessment Unit Number	DWQ Classification	Length/ Area	Category	Data Type with Map Number and Data Results			Use Support Rating	
					Biological	Ambient	Other	2004	1998
Fishing Creek	28-79-(21)	WS-V NSW	16.7 mi	AL	B-1 GF--02	A-13 nce		S	FS
Shocco Creek	28-79-22	C NSW	28.7 mi	AL	F-1 E--02			S	ST
Little Fishing Creek	28-79-25	C NSW	31.4 mi	AL	B-2 G--02 F-2 G--02			S	FS
Reedy Creek	28-79-25-5	C NSW	20.5 mi	AL	F-3 G--02			S	FS
Bear Swamp	28-79-25-7	C NSW	13.6 mi	AL	F-4 G--02			S	FS
Fishing Creek	28-79-(25.5)	WS-IV NSW	14.7 mi	AL	B-1 GF--02	A-13 nce		S	FS
(Bellamy Lake)	28-79-28-(0.7)	WS-IV NSW	10.6 mi	AL	F-5 G--02			S	ST
Fishing Creek	28-79-(28.5)	WS-IV NSW CA	0.6 ac	AL	B-1 GF--02	A-13 nce		S	FS
Fishing Creek	28-79-(29)	C NSW	24.3 mi.	AL	B-1 GF--02	A-13 nce		S	FS
Fishing Creek	28-79-(29)	C NSW	24.3 mi.	REC		A-13 nce		S	N/A
Beech Swamp	28-79-30	C Sw NSW	13.1 mi.	AL	B-4 MS--02			S	NR
Fishing Creek	28-79-(30.5)	WS-IV NSW	17.1 mi.	AL	B-3 G--02			S	FS
Deep Creek	28-79-32-(0.5)	C NSW	19.8 mi.	AL	B-5 MS--02			S	FS
Savage Mill Run	28-79-32-4	WS-IV NSW	4.2 mi.	AL	SB-1 NR--01			NR	FS

Assessment Unit Number - Portion of DWQ Classified Index where monitoring is applied to assign a use support rating.

Use Categories:
AL - Aquatic Life
REC - Recreation
FC - Fish Consumption

Monitoring data type:
F - Fish Community Survey
B - Benthic Community Survey
SF - Special Fish Community Study
SB - Special Benthic Community Study
A - Ambient Monitoring Site
FT - Fish Tissue Site

Bioclassifcations:
E - Excellent
G - Good
GF - Good-Fair
F - Fair
P - Poor
N - Natural
MS - Moderate Stress
SS - Severe Stress

Ambient Data
nce - no criteria exceeded
ce - criteria exceeded

Use Support Ratings 2004:
S - Supporting, I - Impaired, NR - Not Rated

Use Support Ratings 1998:
FS - fully supporting, ST - supporting but threatened,
PS - partially supporting, NS - not supporting,
NR - not rated, N/A - not applicable

Use support ratings for all waters in subbasin 03-03-04 are summarized in Part 4.2 below. Recommendations, current status and future recommendations for waters that were Impaired in 1999 are discussed in Part 4.3 below. Current status and future recommendations for newly Impaired waters are discussed in Part 4.4 below. Waters with noted water quality impacts are discussed in Part 4.5 below. Water quality issues related to the entire subbasin are discussed in Part 4.6. Refer to Appendix III for a complete list of monitored waters and more information on Supporting monitored waters.

4.2 Use Support Assessment Summary

Use support ratings were assigned for waters in subbasin 03-03-04 in the aquatic life, recreation, fish consumption and water supply categories. All waters are Impaired on an evaluated basis in the fish consumption category because of statewide fish consumption advice for mercury that is applied in this category to basins east and south of I-85 (page 90). In the water supply category, all waters are Supporting on an evaluated basis based on reports from DEH regional water treatment plant consultants.

There were 251.9 stream miles (44 percent) monitored during this assessment period in the aquatic life category. There were no Impaired waters in this category. Refer to Table B-8 for a summary of use support ratings by category for waters in subbasin 03-03-04.

Table B-8 Summary of Use Support Ratings by Category in Subbasin 03-03-04

Use Support Rating	Aquatic Life	Fish Consumption	Recreation	Water Supply
Monitored Waters				
Supporting	247.7 mi	0	24.3 mi	0
Impaired	0	0	0	0
Not Rated	4.2 mi	0	0	0
Total	**251.9 mi**	**0**	**24.3 mi**	**0**
Unmonitored Waters				
Supporting	125.7 mi	0	0	116.4 mi
Impaired	0	572.7 mi	0	0
Not Rated	1.9 mi	0	0	0
No Data	140.3 mi	0	548.4 mi	0
Total	**193.2 mi**	**572.7 mi**	**548.4 mi**	**116.4 mi**
Totals				
All Waters	**572.7 mi**	**572.7 mi**	**572.7 mi**	**116.4 mi**

4.3 Status and Recommendations of Previously Impaired Waters

There were no Impaired streams identified in the 1999 basin plan in this subbasin.

4.4 Status and Recommendations of Newly Impaired Waters

There are no newly Impaired waters in subbasin 03-03-04. Refer to Part 4.5 below for information on waters with noted water quality impacts.

4.5 Status and Recommendations for Waters with Noted Impacts

The surface waters discussed in this section are not Impaired. However, notable water quality problems and concerns have been documented for these waters based on this assessment. While these waters are not Impaired, attention and resources should be focused on these waters to prevent additional degradation or facilitate water quality improvement.

Waters in the following section are identified by assessment unit number (AU#). This number is used to track defined segments in the water quality assessment database, 303(d) Impaired waters list, and the various tables in this basin plan. The assessment unit number is a subset of the DWQ index number (classification identification number). A letter attached to the end of the AU# indicates that the assessment is smaller than the DWQ index segment. No letter indicates that the assessment unit and the DWQ index segment are the same.

4.5.1 Fishing Creek [AU# 28-79-(29) and (21)]

Current Status and 2004 Recommendations
Fishing Creek (24.3 miles) is currently Supporting in the aquatic life category from Enfield water supply intake to Beech Swamp because of a Good-Fair bioclassification at site B-1 in 2002. Filamentous algae were covering all habitats and leaf packs were rare at site B-1. The next downstream monitoring site has a Good bioclassification, indicating water quality recovery. Drought may be partially responsible for the lower bioclassification upstream. Total phosphorus and iron were elevated at site A-13 as well.

DWQ will continue to monitor water quality in Fishing Creek to determine if the cause of the depressed biological community is from extreme meteorological events or land use activities. Land-disturbing activities should implement BMPs to minimize or prevent future impacts to water quality in the Fishing Creek watershed.

Because of the potential water quality problems noted above and because Fishing Creek has endangered species present, it has been identified by EEP as one of 27 local watersheds in the basin with the greatest need and opportunity for stream and wetland restoration efforts. This watershed will be given higher priority than nontargeted watersheds for implementation of EEP restoration projects.

4.5.3 Deep Creek [AU# 28-79-32-(0.5)]

Current Status and 2004 Recommendations
Deep Creek (19.8 miles) is currently Supporting in the aquatic life category from the source to NC 97 because of a Moderate Stress bioclassification at site B-5 in 2002. There was no flow in Deep Creek above Scotland Neck and the stream channel is braided. There are also indicators of stress in Deep Creek. DWQ will continue to monitor water quality in Deep Creek to assess future upgrades at the Scotland Neck WWTP (see below).

4.5.4 Canal Creek [AU# 28-79-32-1]

Current Status and 2004 Recommendations
Scotland Neck WWTP discharges into Canal Creek just upstream of Deep Creek. Scotland Neck WWTP failed four whole effluent toxicity tests in the last two years of the assessment period and exceeded permit limits for both chlorine and ammonia on occasions in 2002. DWQ will continue to evaluate the Scotland Neck discharge. Scotland Neck will receive $3,000,000 through DWQ Construction, Grants and Loans Program for collection system rehabilitation and for spray irrigation of some of the effluent. Scotland WWTP will also start treating wastewater from individual onsite wastewater treatment systems in Hobgood. A Special Order by Consent between Scotland Neck and DWQ is being finalized. It requires upgrades on specific equipment at their WWTP, as well as collection system rehabilitation that will reduce inflow and infiltration.