6.1 Subbasin Overview

Subbasin 03-03-06 at a Glance

Land and Water Area

Total area:	242.7 mi²
Land area:	242.5 mi²
Water area:	0.2 mi²

Population Statistics

2000 Est. Pop.:	20,560people
Pop. Density:	85 persons/mi²

Land Cover (percent)

Forest/Wetland:	63.5
Surface Water:	0.3
Urban:	0.6
Cultivated Crop:	31.9
Pasture/ Managed Herbaceous:	3.7

Counties

Beaufort, Martin and Pitt

Municipalities

Gold Point and Everetts

There has been little population growth in this subbasin, and the subbasin is expected to remain mostly rural. The predominant land cover is forest and wetland with extensive cultivated cropland as well.

There are three individual NPDES wastewater discharge permits in this subbasin with a total permitted flow of 2.1 MGD (Figure B-6). The largest is Robersonville WWTP (1.8 MGD). There are also five general NPDES wastewater permits, one individual NPDES stormwater permit, and six 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 four registered animal operations in this subbasin.

There were five benthic macroinvertebrate community samples (Figure B-6 and Table B-11) collected in 2002 as part of basinwide monitoring. All five sites were monitored for the first time during this 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.

Use support ratings for all waters in subbasin 03-03-06 are summarized in Part 6.2 below. Recommendations, current status and future recommendations for waters that were Impaired in 1999 are discussed in Part 6.3 below. Current status and future recommendations for newly Impaired waters are discussed in Part 6.4 below. Waters with noted water quality impacts are discussed in Part 6.5 below. Water quality issues related to the entire subbasin are discussed in Part 6.6. Refer to Appendix III for a complete list of monitored waters and more information on Supporting monitored waters.

Figure B-6 Tar-Pamlico River Subbasin 03-03-06

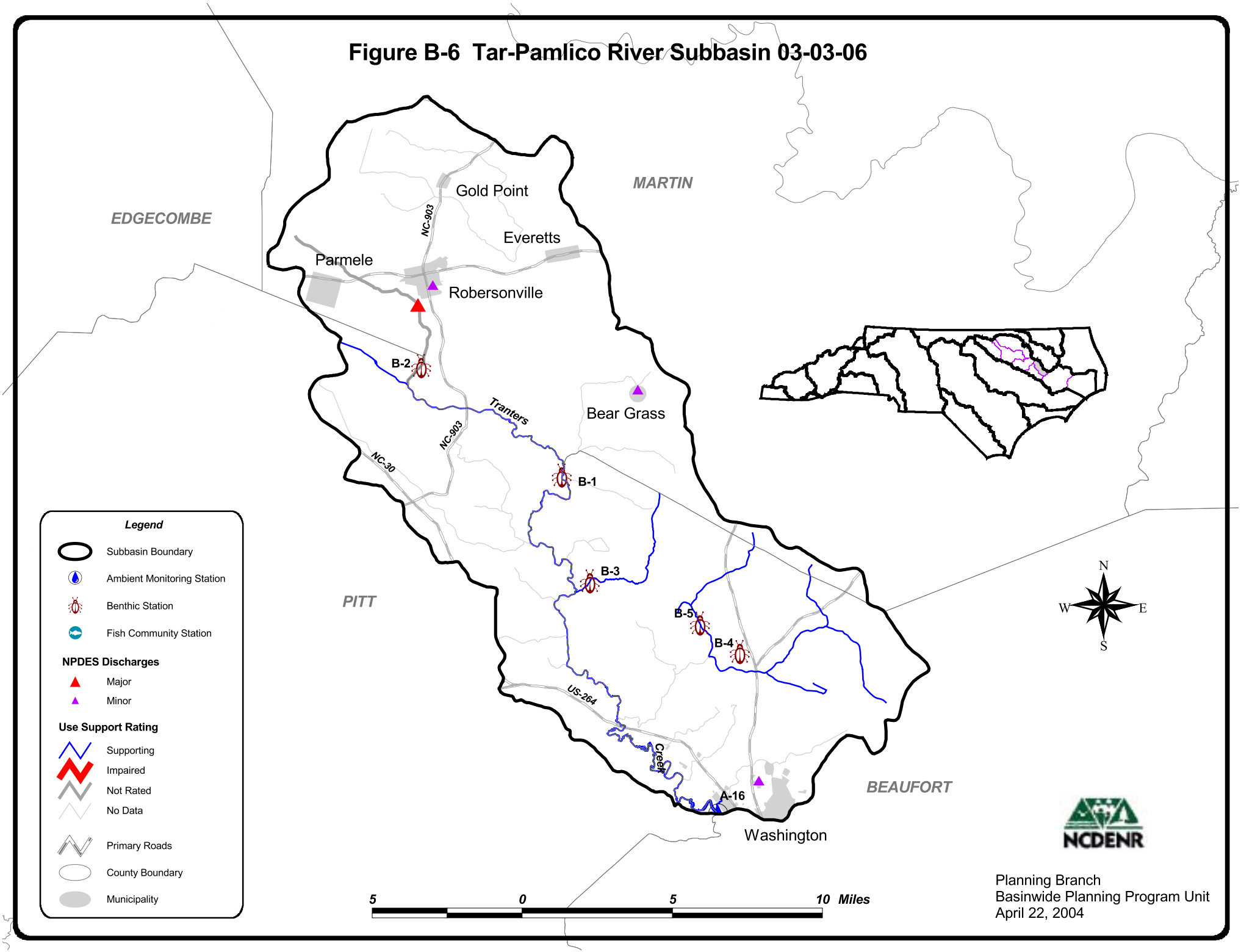

Table B-11 DWQ Assessment and Use Support Ratings Summary for Monitored Waters in Subbasin 03-03-06

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
Tranters Creek	28-103b	C Sw NSW	0.9 mi	AL	B-1 MS--02	A-16 nce		S	ST
Tranters Creek	28-103a	C Sw NSW	37.8 mi	REC		A-16 nce		S	N/A
Flat Swamp	28-103-2b	C Sw NSW	1.5 mi	AL	B-2 MS--02			S	ST
Horsepen Swamp	28-103-10	C Sw NSW	6.0 mi	AL	B-3 MS--02			S	ST
Old Ford Swamp	28-103-14-1	C Sw NSW	5.1 mi	AL	B-4 N--02			S	ST
Latham Creek	28-103-14-2	C Sw NSW	2.7 mi	AL	B-5 N--02			S	ST

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

6.2 Use Support Assessment Summary

Use support ratings were assigned for waters in subbasin 03-03-06 in the aquatic life, recreation and fish consumption 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 54.0 stream miles (35 percent) monitored during this assessment period in the aquatic life category. There were no Impaired waters in this category. Refer to Table B-12 for a summary of use support ratings by category for waters in the subbasin 03-03-06.

Table B-12 Summary of Use Support Ratings by Category in Subbasin 03-03-06

Use Support Rating	Aquatic Life	Fish Consumption	Recreation
Monitored Waters			
Supporting	54.0 mi	0	37.8 mi
Impaired	0	0	0
Not Rated	0	0	0
Total	**54.0 mi**	**0**	**37.8 mi**
Unmonitored Waters			
Supporting	12.4 mi	0	0
Impaired	0	154.3 mi	0
Not Rated	8.1 mi	0	0
No Data	79.9 mi	0	116.5 mi
Total	**100.4 mi**	**154.3 mi**	**116.5 mi**
Totals			
All Waters	**154.3 mi**	**154.3 mi**	**154.3 mi**

6.3 Status and Recommendations of Previously Impaired Waters

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

6.4 Status and Recommendations of Newly Impaired Waters

There are no newly Impaired waters in subbasin 03-03-06. Refer to Part 6.5 below for information on waters with noted water quality impacts.

6.5 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.

6.5.1 Flat Swamp [AU# 28-103-2b]

Current Status and 2004 Recommendations
Flat Swamp (1.5 miles) is currently Supporting from downstream of the Robersonville WWTP to Tranters Creek because of a Moderate Stress bioclassification at site B-2 in 2002. The upper segment is currently Not Rated, although observations suggest that water quality conditions are more degraded closer to the discharge. The biological community suggested organic overloading and toxic conditions in Flat Swamp. Macroinvertebrate species tolerant of pollutants were found, and the stream was channelized. High turbidity, conductivity and low dissolved oxygen levels were noted at site B-2. The Robersonville WWTP had three whole effluent toxicity test failures during the last two years of the assessment period.

DWQ will continue to monitor water quality in Flat Swamp to assess changes in water quality that may be associated with upgrades in treatment at the Robersonville WWTP. DWQ will work with Robersonville to ensure that the discharge has minimum impact to aquatic life in Flat Swamp.

6.5.2 Tranters Creek [AU# 28-103a]

Current Status and 2004 Recommendations
Tranters Creek (37.8 miles) is currently Supporting from the source to the subbasin boundary because of a Moderate Stress bioclassification at site B-1 in 2002. Total phosphorus was elevated at site A-16 as well. The depressed biological community may be associated with drought conditions. The lower portion of the creek is influenced by saltwater during extremely low flow.

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

6.5.3 Horsepen Swamp [AU# 28-103-10]

Current Status and 2004 Recommendations

Horsepen Swamp (37.8 miles) is currently Supporting from the source to the subbasin boundary because of a Moderate Stress bioclassification at site B-3 in 2002. The depressed biological community may be associated with drought conditions.

DWQ will continue to monitor water quality in Horsepen Swamp 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 Horsepen Swamp watershed.

6.6 Additional Water Quality Issues within Subbasin 03-03-06

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.

6.5.1 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 81.