

Chapter 14 -

Cape Fear River Subbasin 03-06-14

Includes Lower Little River, Nicks Creek and Juniper Creek

14.1 Water Quality Overview

Subbasin 03-06-14 at a Glance

Land and Water Area (sq. mi.)

Total area:	484
Land area:	478
Water area:	6

Population Statistics

1990 Est. Pop.:	67,587 people
Pop. Density:	141 persons/mi ²

Land Cover (%)

Forest/Wetland:	78.8
Surface Water:	2.2
Urban:	2.4
Cultivated Crop:	8.2
Pasture/ Managed Herbaceous:	8.4

Use Support Ratings

Freshwater Streams:

Fully Supporting:	274.3 mi.
Partially Supporting:	28.3 mi.
Not Supporting:	0.0 mi.
Not Rated:	100.2 mi.

Lakes:

Old Town Reservoir - Fully Supporting
--

This subbasin is located in the Sand Hills and contains the Little River watershed and the towns of Southern Pines, Pinehurst and Aberdeen. A map of the subbasin, including water quality sampling locations, is presented in Figure B-14.

Biological ratings for these sample locations are presented in Table B-14. The current sampling resulted in impaired ratings for one stream in this subbasin. Refer to Appendix III for a complete listing of monitored waters and use support ratings. See Section A, Chapter 3, Table A-31 for a summary of lakes and reservoirs use support data.

The upper portion of this watershed is characterized by mostly rural areas, though Southern Pines is in the watershed of Mill Creek. The lower reaches flow through or near Fort Bragg or the urban areas of Spring Lake and Fayetteville. The Lower Little River was designated High Quality Waters (HQW) from its source to Crane Creek, based on Excellent biological (benthos) data. (Note: This has always been named the Lower Little River in biological reports, but the DWQ Schedule of Classifications refers to it as the (Lower) Little River).

The Lower Little River was sampled for benthos at three sites. The upper site is in the HQW section of the river and has rated Excellent, based on benthos data, since first sampled in 1988. The middle site near Manchester is below the Fort Bragg WWTP and has improved

dramatically since 1986, when water quality was Fair. The Fort Bragg WWTP completed an upgrade in 1991, and water quality improved to Good-Fair in 1993 and then to Excellent in 1998. The most downstream site was rated Excellent in both 1993 and 1998.

Nicks Creek is a headwater tributary that improved from Good in 1993 to Excellent in 1998 based on benthos data. Jumping Run Creek in Cumberland County showed a marked improvement from a Good-Fair rating in 1993 to Excellent in 1998, based on benthos data. This

Cape Fear River 030614

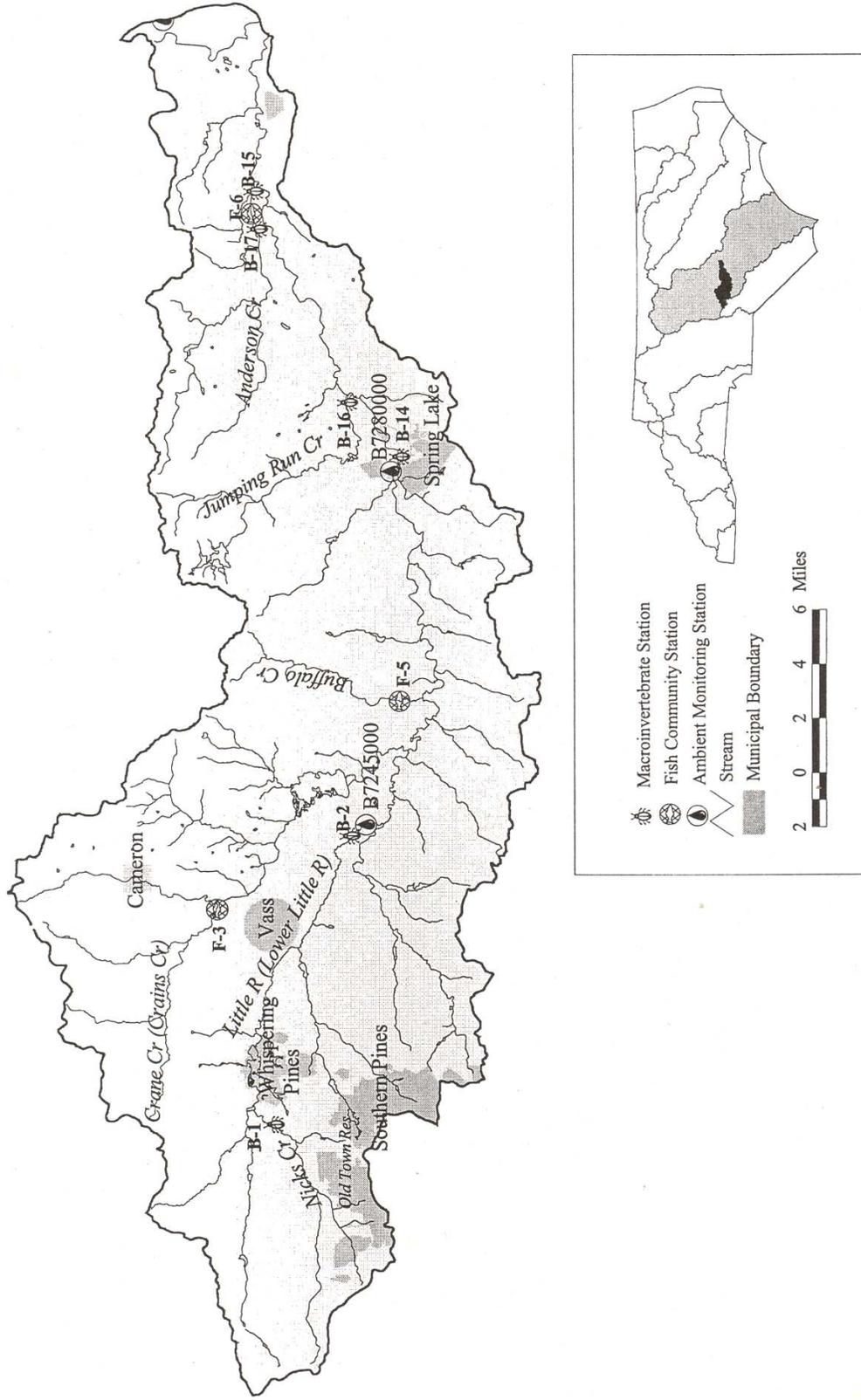


Figure B-14 Sampling Locations within Subbasin 03-06-14

Table B-14 Biological Assessment Sites in Cape Fear River Subbasin 03-06-14

<i>BENTHOS</i>				<i>Bioclassification</i>	
Site #	Stream	County	Location	1993	1998
B-1	Nicks Creek	Moore	NC 22	Good	Excellent
B-2	(Lower) Little River	Moore	SR 2023	Excellent	Excellent
B-14	(Lower) Little River	Cumberland	NC 87/24	Good-Fair	Excellent
B-15	(Lower) Little River	Cumberland	US 401	Excellent	Excellent
B-16	Jumping Run Creek	Cumberland	NC 210	Good-Fair	Excellent
B-17	Anderson Creek	Harnett	SR 2031	Good-Fair	Good-Fair

<i>FISH</i>				<i>Bioclassification</i>	
Site #	Stream	County	Location	1994	1998
F-3	Crains Creek	Moore	US 1	no sample	Fair
F-5	Buffalo Creek	Moore	SR 1001	no sample	Good-Fair
F-6	Anderson Creek	Harnett	SR 2031	no sample	Fair

was despite poor instream habitat, a very developed nearby watershed, and no apparent changes in land use since 1993.

For more detailed information on water quality in this subbasin, refer to *Basinwide Assessment Report – Cape Fear River Basin – June 1999*, available from DWQ Environmental Sciences Branch at (919) 733-9960.

14.2 Impaired Waters

Portions of Anderson Creek were identified as impaired in the 1996 Cape Fear River Basinwide Water Quality Plan. Crane Creek is currently rated as impaired according to recent DWQ monitoring. Current status of each of these streams is discussed below. Prior recommendations, future recommendations and projects aimed at improving water quality for these waters are also discussed when applicable. 303(d) listed waters are summarized in Part 14.3 and waters with other issues, recommendations or projects are discussed in Part 14.4.

Anderson Creek

Current Status

Anderson Creek (5.5 miles from source to Little River) was partially supporting (PS) in the 1996 plan. The biological community was impaired. Recent DWQ monitoring data indicate that Anderson Creek is currently not impaired. Although Anderson Creek is not impaired, it is recommended that monitoring be continued to identify potential pollutants.

Crane Creek

Current Status

Crane Creek (28.3 miles from source to Lake Surf) is partially supporting (PS) according to recent DWQ monitoring because of an impaired biological community. Instream habitat degradation associated with agricultural nonpoint sources is a possible cause of impairment. This stream is on the state's year 2000 303(d) list (not yet EPA approved).

2000 Recommendations

Local initiatives are needed to reduce land use impacts on Crane Creek. DWQ encourages implementation of agricultural best management practices that reduce potential impacts to surface waters. The 303(d) list approach will be to resample for biological and chemical data to attempt to determine potential problem parameters.

14.3 303(d) Listed Waters

Crane Creek is the only stream (28.3 stream miles) in the subbasin that is impaired and on the state's year 2000 303(d) list (not yet EPA approved). Crane Creek is discussed above. For information on 303(d) listing requirements and approaches, refer to Appendix IV.

14.4 Other Issues, Recommendations and Projects

The following surface water segments are rated as fully supporting using recent DWQ monitoring data. However, these data revealed some impacts to water quality. Although no action is required for these surface waters, continued monitoring is recommended. Enforcement of sediment and erosion control laws will help to reduce impacts on these streams and lakes. DWQ encourages the use of voluntary measures to prevent water quality degradation. Education on local water quality issues is always a useful tool to prevent water quality problems and to promote restoration efforts. For information on water quality education programs, workshops and nonpoint source agency contacts, see Appendix V.

All the waters of the subbasin are affected by nonpoint sources. DENR, other state agencies and environmental groups have programs and initiatives underway to address water quality problems associated with nonpoint sources. DWQ will notify local agencies of water quality concerns in this subbasin and work with these various agencies to conduct further monitoring, as well as assist agency personnel with locating sources of funding for water quality protection.

The Middle Cape Fear River Basin Association (MCFRBA)

The Middle Cape Fear River Basin Association (MCFRBA) started sampling at one station in this subbasin (30 stations total) in July 1998. This data will be used to give a higher resolution picture of water quality conditions in the Lower Little River. The data will also be analyzed to support various studies and will be used with DWQ data to develop use support ratings for waters in the Cape Fear River basin during the upcoming basinwide cycle.