

03040202-06
(Lake Swamp)

General Description

Watershed 03040202-06 is located in Florence and Williamsburg Counties and consists primarily of *Lake Swamp* and its tributaries. The watershed occupies 105,112 acres of the Lower Coastal Plain region of South Carolina. Land use/land cover in the watershed includes: 33.1% agricultural land, 36.1% forested wetland, 20.5% forested land, 7.5% urban land, 2.6% nonforested wetland, 0.1% barren land, and 0.1% water.

Twomile Branch (Cypress Branch, Sandy Run Branch, Spring Run) merges with Camp Branch near the City of Lake City to form the headwaters of Lake Swamp. Smith Swamp (Spring Bay, Grahams Mill Branch, Graham Branch, Tupelo Bay) and McNamee Swamp (Rutledge Bay, Lower Rutledge Bay) join to form Singleton Swamp, which accepts drainage from Long Branch before draining into Lake Swamp. There are a total of 152.9 stream miles and 71.1 acres of lake waters in this watershed. Lake Swamp is classified FW* (Dissolved oxygen not less than 4.0 mg/l and pH between 5.0 and 8.5) and the remaining streams are classified FW.

Surface Water Quality

<u>Station #</u>	<u>Type</u>	<u>Class</u>	<u>Description</u>
PD-346	INT	FW	CAMP BRANCH AT S-21-278
PD-085	W	FW*	LAKE SWAMP AT US 378
PD-086A	INT	FW*	LAKE SWAMP ON SC 341
RS-10397	RS10	FW	LONG BRANCH AT CULVERT AT MOULDS RD
PD-314	INT	FW	SINGLETON SWAMP AT S-21-67
PD-087	INT	FW*	LAKE SWAMP AT SC 341 2.6 MI W OF JOHNSONVILLE

Camp Branch (PD-346) - Aquatic life uses are not supported due to dissolved oxygen concentration excursions. A significant decreasing trend in total phosphorus concentration suggests improving conditions for this parameter. Recreational uses are partially supporting due to fecal coliform excursions. In addition, there is a significant increasing trend in fecal coliform.

Lake Swamp – There are three SCDHEC monitoring stations along Lake Swamp. At the upstream site (**PD-085**), aquatic life uses are not supported due to dissolved oxygen excursions. Recreational uses are fully supported. Further downstream (**PD-086A**), aquatic life uses are not supported due to dissolved oxygen excursions. A significant decreasing trend in total phosphorus concentration suggests improving conditions for this parameter. Recreational uses are partially supporting due to fecal coliform excursions. In addition, there is a significant increasing trend in fecal coliform at this site. At the furthest downstream site (**PD-087**), aquatic life and recreational uses are fully supported; however, there is a significant decreasing trend in dissolved oxygen concentration. Although dissolved oxygen excursions occurred, they were typical of values seen in blackwater systems and were considered natural, not standards violations. A significant decreasing trend in total phosphorus concentration suggests improving conditions for this parameter

Long Branch (RS-10397) - Aquatic life uses are fully supported. Although dissolved oxygen excursions occurred, they were typical of values seen in blackwater systems and were considered natural, not standards violations. Recreational uses are not supporting due to fecal coliform excursions.

Singleton Swamp (PD-314) – Aquatic life uses are not supported due to dissolved oxygen excursions. Although pH excursions occurred, they were typical of values seen in blackwater systems and were considered natural, not standards violations. Recreational uses are fully supported.

NPDES Program

Active NPDES Facilities

<i>RECEIVING STREAM FACILITY NAME</i>	<i>NPDES# TYPE</i>
LONG BRANCH NAN YA PLASTICS CORP. AMERICA	SCG250092 MINOR INDUSTRIAL
TWOMILE BRANCH L&B DEVELOPERS/WOODBERRY LAKE MINE	SCG731153 MINOR INDUSTRIAL
TWOMILE BRANCH DDC LLC/OSHAY PIT MINE	SCG731139 MINOR INDUSTRIAL

Nonpoint Source Management Program

Land Disposal Activities

Landfill Facilities

<i>LANDFILL NAME FACILITY TYPE</i>	<i>PERMIT # STATUS</i>
CITY OF LAKE CITY DUMP MUNICIPAL	----- CLOSED
CITY OF LAKE CITY C&D LANDFILL C&D	451002-1201 ACTIVE
CITY OF LAKE CITY SANITARY LANDFILL MUNICIPAL	----- INACTIVE
CITY OF LAKE CITY C&D LANDFILL C&D	PROPOSED -----

Mining Activities

<i>MINING COMPANY MINE NAME</i>	<i>PERMIT # MINERAL</i>
DDC LLC OSHAY PIT MINE	1960-41 SAND; TOP SOIL
L&B DEVELOPERS WOODBERRY LAKE MINE	1961-41 SAND; TOP SOIL

Groundwater Quantity

Portions of this watershed fall within the Pee Dee Capacity Use Area and large groundwater uses must be reported (see Capacity Use Program p.22).

Growth Potential

There is a low to moderate potential for growth in this watershed, which contains the Town of Scranton, and a portion of the City of Lake City and the Town of Johnsonville. Water and sewer services are limited to the urban areas of Lake City and Scranton. The sewer system in Scranton and the wastewater system in Lake City have undergone an expansion and should moderately add to the growth potential of the area. U.S. Hwy. 52, a four-lane highway, is the main corridor between the Cities of Florence and Charleston. This highway corridor contains the NanYa Industrial Complex and a surrounding multi-county industrial park, making this a prime industrial growth corridor in the region. The Florence County Industrial Park at Lake City and the expanded water and sewer capacity of the City of Lake City should also encourage industrial growth. A rail line parallels the road corridor between Lake City and Florence. U.S. Hwy. 378 is a major beach access highway. Additional commercial development is possible along U.S. Hwy. 52 and at the U.S. Hwy. 52/U.S. Hwy. 378 intersection.

Watershed Protection and Restoration Strategies

Special Projects

Fecal Coliform Bacteria TMDL Development and Implementation and Dissolved Oxygen Characterization for the Big Swamp and Singleton Swamp Watersheds

The Santee-Wateree Resource Conservation and Development Council (RC&D), along with the Williamsburg and Florence Soil and Water Conservation Districts, Williamsburg and Florence Natural Resource Conservation Services, and the Department of Natural Resources have developed and are implementing a fecal coliform bacteria TMDL for the Big Swamp and Singleton Swamp watersheds. The TMDL addresses fecal coliform excursions at SCDHEC water quality monitoring station PD-169. The RC&D and its cooperators used their local knowledge to assist a contractor with the development of a TMDL and the identification of potential pollution sources that negatively effect dissolved oxygen levels within the watershed. Following TMDL approval, project cooperators implemented a series of best management practices (BMPs) in cooperation with local homeowners. These BMPs were designed to reduce the loading of fecal coliform bacteria into the respective watersheds. Along with repairing failing septic tanks in the area, RC&D focused their attention on local ‘Hobby Farms’. These are places where a landowner may have several animals that are not utilized as income in a traditional farming or animal agriculture sense. RC&D identified cattle, horses, goats, donkeys, llamas, and even camels in the watershed. In cooperation with these landowners BMPs, including fencing, watering wells, heavy use protection areas, and filter strips were implemented to prevent these animals and their waste from accessing local streams. Through these BMPs and the upgrade of the Town of Pamplico wastewater treatment facility, SCDHEC hopes to begin seeing significant reductions of fecal coliform and increases in dissolved oxygen throughout the watersheds.

