

**03040205-01**  
**(Rocky Bluff Swamp)**

**General Description**

Watershed 03040205-01 is located in Lee, Kershaw, and Sumter Counties and consists primarily of **Rocky Bluff Swamp** and its tributaries. The watershed occupies 179,089 acres of the Sandhills and Upper Coastal Plain regions of South Carolina. Land use/land cover in the watershed includes: 41.1% agricultural land, 26.6% forested land, 25.4% forested wetland, 5.5% urban land, 1.0% nonforested wetland, 0.3% water, and 0.1% barren land.

Rocky Bluff Swamp accepts drainage from Lee Swamp, Whites Millpond, Brunson Branch (Mile Branch, Mulberry Branch), Cowpen Swamp, Scape Ore Swamp, Alligator Branch, and Concord Branch before draining into the Black River. Scape Ore Swamp originates from the confluence of Timber Creek (Grassy Bottom Branch, Maple Branch, Long Branch, Nancy Branch, Pates Mill Branch, Fuzzy Branch) and Black Creek. Downstream of the confluence, Scape Ore Swamp accepts drainage from Cedar Creek, Cedar Creek Pond, Gum Springs Branch, Beaverdam Creek, McGrits Creek, Ashwood Lake, Mechanicsville Swamp, and Long Branch (Little Long Branch).

There are a total of 339.7 stream miles and 441.1 acres of lake waters in this watershed. Rocky Bluff Swamp and Lee Swamp are classified FW\* (Dissolved oxygen not less than 4.0 mg/l and pH between 5.0 and 8.0) and the remaining streams in the watershed are classified FW.

**Surface Water Quality**

| <u>Station #</u> | <u>Type</u> | <u>Class</u> | <u>Description</u>   |
|------------------|-------------|--------------|--|
| RS-09095         | RS09        | FW           | GUM SPRINGS BRANCH AT BRIDGE ON S-31-162 OFF SC 34         |
| PD-355           | INT         | FW           | SCAPE ORE SWAMP AT S-31-108                                |
| CL-077           | W           | FW           | LAKE ASHWOOD, FOREBAY EQUIDISTANT FROM DAM AND SHORE LINES |
| PD-356           | INT         | FW           | MECHANICVILLE SWAMP AT S-31-500                            |
| PD-357           | INT         | FW*          | ROCKY BLUFF SWAMP AT US 76                                 |
| PD-201           | INT         | FW           | ROCKY BLUFF SWAMP AT S-43-41                               |

**Gum Springs Branch (RS-09095)** – 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.

**Scape Ore Swamp (PD-355)** - This is a blackwater system, characterized by naturally low pH and dissolved oxygen conditions. Although pH and dissolved oxygen excursions occurred, they were typical of values seen in blackwater systems and were considered natural, not standards violations. Aquatic life and recreational uses are fully supported; however, there is a significant increasing trend in turbidity. There is a significant increasing trend in pH. A significant decreasing trend in total nitrogen concentration suggests improving conditions for this parameter.

**Lake Ashwood (CL-077)** – This is a blackwater system, characterized by naturally low dissolved oxygen conditions. Although dissolved oxygen excursions occurred, they were typical of values seen in blackwater systems and were considered natural, not standards violations. Aquatic life uses are fully supported and significant increasing trends in dissolved oxygen and decreasing trends in total nitrogen

concentration suggest improving conditions for these parameters. Recreational uses are fully supported; however, there is a significant increasing trend in fecal coliform bacteria.

***Mechanicsville Swamp (PD-356)*** – This is a blackwater system, characterized by naturally low pH and dissolved oxygen conditions. Although pH and dissolved oxygen excursions occurred, they were typical of values seen in blackwater systems and were considered natural, not standards violations. Aquatic life uses are fully supported and significant increasing trends in dissolved oxygen and decreasing trends in total nitrogen concentration suggest improving conditions for these parameters. Recreational uses are fully supported.

***Rocky Bluff Swamp*** – There are two stations along Rocky Bluff Swamp. Although dissolved oxygen excursions occurred at both sites, they were typical of values seen in blackwater systems and were considered natural, not standards violations. At the upstream site (***PD-357***), aquatic life uses are fully supported. Recreational uses are partially supported and there is a significant increasing trend in fecal coliform. At the downstream site (***PD-201***), aquatic life and recreational uses are fully supported; however, there are significant decreasing trends in dissolved oxygen and increasing trends in turbidity.

## **NPDES Program**

### ***Active NPDES Facilities***

| <b><i>RECEIVING STREAM<br/>FACILITY NAME</i></b>   | <b><i>NPDES#<br/>TYPE</i></b> |
|--|-------------------------------|
| BLACK CREEK<br>CAROLINA GAS TRANSMISSION CORP.     | SCG670001<br>MINOR INDUSTRIAL |
| SCAPE ORE SWAMP TRIBUTARY<br>LEE COUNTY BORROW PIT | SCG730694<br>MINOR INDUSTRIAL |
| LEE SWAMP<br>PALMETTO CORP. OF CONWAY/AIRPORT MINE | SCG731150<br>MINOR INDUSTRIAL |

### ***Municipal Separate Storm Sewer Systems (MS4)***

| <b><i>RECEIVING STREAM<br/>MUNICIPALITY<br/>RESPONSIBLE PARTY<br/>IMPLEMENTING PARTY</i></b> | <b><i>NPDES#<br/>MS4 PHASE<br/>MS4 SIZE</i></b> |
|--|---|
| ROCKY BLUFF SWAMP<br>UNINCORPORATED AREAS<br>SUMTER COUNTY<br>SUMTER COUNTY                  | SCR038503<br>PHASE II<br>SMALL MS4              |

## **Nonpoint Source Management Program**

### ***Land Disposal Activities***

#### **Landfill Activities**

| <b><i>SOLID WASTE LANDFILL NAME<br/>FACILITY TYPE</i></b> | <b><i>PERMIT #<br/>STATUS</i></b> |
|---|-----------------------------------|
| ASHWOOD DUMP<br>MUNICIPAL                                 | -----<br>CLOSED                   |

|   |                                     |
|---|-------------------------------------|
| SUMTER COUNTY LANDFILL<br>MUNICIPAL         | 431001-1101<br>CLOSED               |
| SUMTER COUNTY TRANSFER STATION<br>MUNICIPAL | 431001-6001<br>ACTIVE               |
| SUMTER COUNTY LANDFILL<br>MUNICIPAL         | -----<br>CLOSED                     |
| SUMTER COUNTY C&D LANDFILL<br>CONSTRUCTION  | 431001-1201, -1202, -1203<br>ACTIVE |
| UNION CAMP<br>LAND APPLICATION              | 433313-8001<br>INACTIVE             |

### ***Mining Activities***

| <b><i>MINING COMPANY<br/>MINE NAME</i></b> | <b><i>PERMIT #<br/>MINERAL</i></b> |
|--|------------------------------------|
| LEE COUNTY<br>LEE COUNTY BORROW PIT        | 1042-61<br>SAND/CLAY               |
| JAMES L. CORBITT<br>CORBITTS PIT           | 1301-61<br>SAND; SAND/CLAY         |
| WR MCLEOD<br>MCCLEOD MINE                  | 1304-85<br>SAND; SAND/CLAY         |
| MICHAEL BLANDING<br>AIRPORT MINE           | 1970-85<br>SAND                    |

### **Growth Potential**

There is a moderate to high potential for residential, commercial, and industrial growth in the area fringing the City of Sumter in this watershed. Growth is also expected along the corridor of U.S. Hwy. 76 en route from Sumter to the City of Florence, and I-20 which crosses the watershed south of the City of Bishopville. U.S. Hwys. 15, 521, and 378 bisect the watershed, along with two rail lines. There is a low potential for growth in the remainder of the watershed, which is rural with agricultural and timberland uses.

### **Watershed Restoration and Protection**

#### ***Total Maximum Daily Loads (TMDLs)***

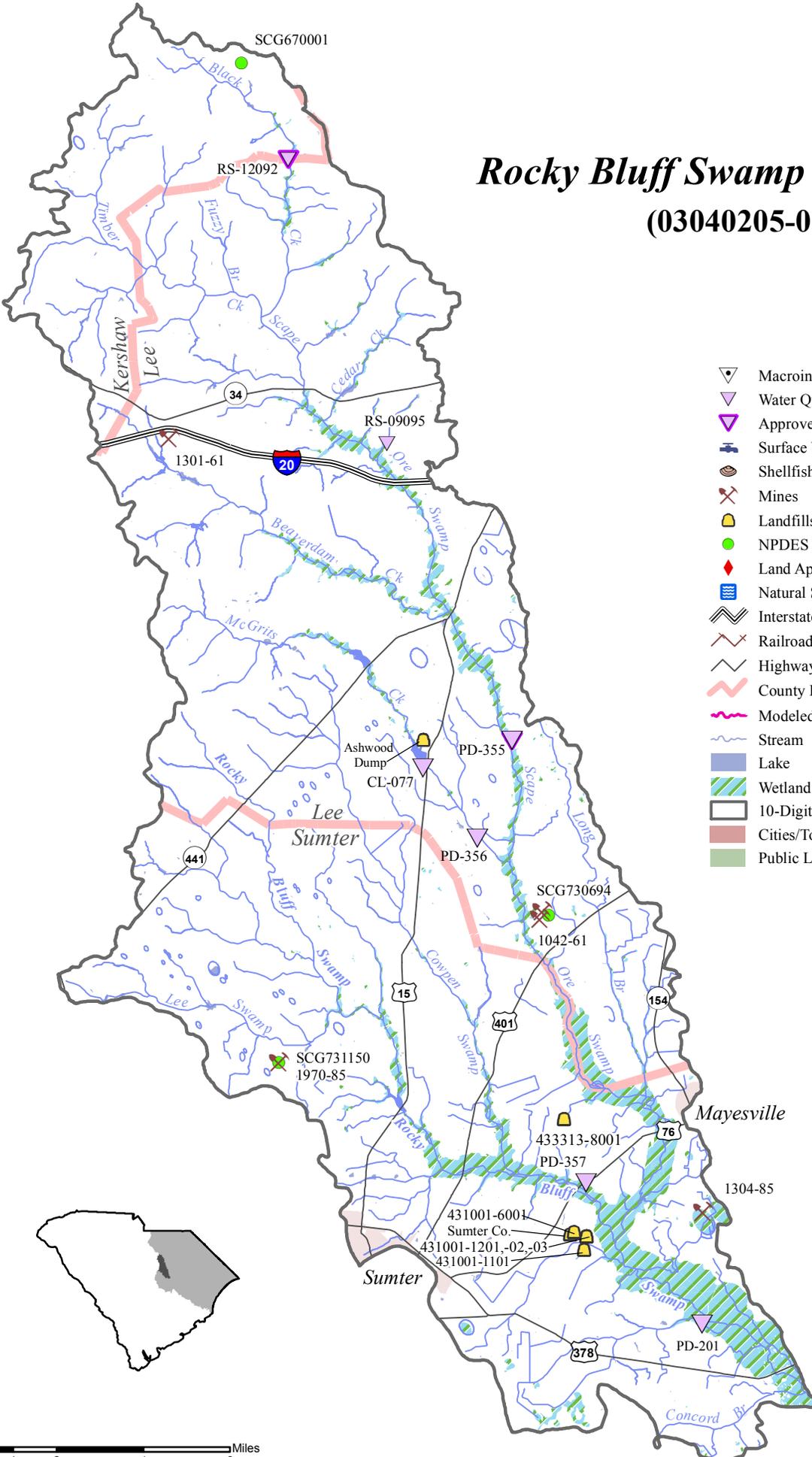
A TMDL was developed by SCDHEC and approved by the EPA for *Scape Ore Swamp* (monitoring site **PD-355**) to determine the maximum amount of fecal coliform bacteria it can receive from nonpoint sources and still meet water quality standards. The nonpoint sources that have been determined to be contributors to the Scape Ore Swamp impairment include wildlife, grazing livestock and livestock defecating directly into streams, land application of poultry litter, and failed or malfunctioning septic systems. To achieve compliance with water quality standards, the TMDL recommends fecal coliform bacteria loads contributed by livestock sources and runoff from poultry litter application be reduced by approximately 58%, and existing fecal coliform bacteria loads contributed by failing septic systems be reduced by 100%.

### *Special Projects*

#### **Fecal Coliform Bacteria TMDL Development and Implementation for the Scape Ore Swamp Watershed**

The Santee-Wateree Resource Conservation and Development Council (RC&D), along with the Lee and Kershaw Soil and Water Conservation Districts, Lee and Kershaw Natural Resource Conservation Services, and the Department of Natural Resources have developed and implemented a fecal coliform bacteria TMDL for the Scape Ore Swamp watershed. The TMDL addresses the impairment at SCDHEC station PD-355, potential sources of pollution, and the amount of reduction needed to meet water quality standards. During the implementation phase of this project, RC&D staff identified homeowners and agriculture operations that could potentially contribute to the impairment. Through voluntary agreements and cost share assistance, a series of best management practices (BMPs) were installed to address fecal coliform loading in the watershed. These BMPs were designed to reduce the loading of fecal coliform into the respective watersheds. These BMPs included replacing or repairing failing septic tanks, fencing out livestock from streams, and providing alternative water sources for livestock. Additionally, RC&D identifies several local farmers who applied poultry litter as fertilizer for their crops. By establishing nutrient management plans and installing waste storage facilities, the project managers were able to significantly reduce the runoff of bacteria getting into local streams. Because of these BMPs, SCDHEC has begun to see fecal coliform reductions at PD-355 that, if continued, will ultimately result in the attainment of water quality standards in Scape Ore Swamp.

# Rocky Bluff Swamp Watershed (03040205-01)



- ▽ Macroinvertebrate Stations
- ▽ Water Quality Monitoring Stations
- ▽ Approved TMDL
- ⊥ Surface Water Intakes
- ⊕ Shellfish Monitoring Stations
- ⚡ Mines
- 🗑️ Landfills
- NPDES Permits
- ♦ Land Application Permits
- 🏊 Natural Swimming Areas
- ⚡ Interstates
- ⚡ Railroad Lines
- ⚡ Highways
- ⚡ County Lines
- 🌊 Modeled Stream
- 🌊 Stream
- 🌊 Lake
- 🌊 Wetland
- 📏 10-Digit Hydrologic Units
- 🏠 Cities/Towns
- 🌲 Public Lands

