

03040204-07

(*Brunson Swamp*)

General Description

Watershed 03040204-07 is located in Horry County and consists primarily of *Brunson Swamp* and its tributaries. The watershed occupies 44,602 acres of the Lower Coastal Plain region of South Carolina. Land use/land cover in the watershed includes: 35.5% forested wetland, 32.9% agricultural land, 23.7% forested land, 5.9% urban land, 1.5% nonforested wetland, 0.3% water, and 0.2% barren land.

Brunson Swamp accepts drainage from Chinners Swamp and Spring Swamp (Holly Hill Branch) before draining into the Little Pee Dee River. Chinners Swamp accepts drainage from Rabon Branch, South Prong, North Prong (Mose Swamp), Mill Branch, Savannah Creek, Big Swamp, Burnt Bay, Schoolhouse Branch, and Evans Branch. There are a total of 83.0 stream miles and 73.0 acres of lake waters in this watershed. All are classified FW with the exception of Chinners Swamp, which is classified FW* (dissolved oxygen not less than 4.0 mg/l and pH between 5.0 and 8.5).

Surface Water Quality

| <u>Station #</u> | <u>Type</u> | <u>Class</u> | <u>Description</u> |
|------------------|-------------|--------------|---|
| PD-370 | W | FW | BRUNSON SWAMP AT S-26-99 |
| RS-07051 | RS07 | FW* | CHINNERS SWAMP AT S-26-569, .6 MI ESE OF AYNOR |
| PD-177 | W | FW* | CHINNERS SWAMP AT S-26-24 1.9 MI SSE OF AYNOR |
| PD-352 | INT | FW* | CHINNERS SWAMP AT GUNTERS ISLAND ROAD OFF S-26-99 |

Brunson Swamp (PD-370) – This is a blackwater system, characterized by naturally low dissolved oxygen concentration conditions. Although 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.

Chinners Swamp – There are three SCDHEC monitoring sites along Chinners Swamp. This is a blackwater system, characterized by naturally low dissolved oxygen concentration conditions. Although dissolved oxygen excursions occurred at all sites, they were typical of values seen in blackwater systems and were considered natural, not standards violations. At the upstream site (***RS-07051***), aquatic life and recreational uses are fully supported. At the midstream site (***PD-177***), aquatic life and recreational uses are fully supported; however, there is a significant increasing trend in fecal coliform bacteria. Aquatic life uses are fully supported at the downstream site (***PD-352***); however there is a significant increasing trend in total phosphorus concentration. There is a significant increasing trend in pH. Recreational uses are partially supported due to fecal coliform bacteria excursions and there is a significant increasing trend in fecal coliform bacteria.

Nonpoint Source Management Program

Land Disposal Activities

Landfill Facilities

| <i>LANDFILL NAME</i> | <i>PERMIT #</i> |
|----------------------|-----------------|
| <i>FACILITY TYPE</i> | <i>STATUS</i> |
| TOWN OF AYNOR DUMP | ----- |
| MUNICIPAL | CLOSED |

Mining Activities

| <i>MINING COMPANY</i> | <i>PERMIT #</i> |
|--------------------------|-----------------|
| <i>MINE NAME</i> | <i>MINERAL</i> |
| JARRETTS LANDCLEARING | 1757-51 |
| HUGHES MINE | SAND |
| KENNETH E & JEAN JOHNSON | 1790-51 |
| ALLEN PLACE MINE | SAND; TOPSOIL |

Water Quantity

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

Growth Potential

There is a low potential for growth for most of this watershed. An exception is the U.S. Hwy. 501 corridor that bisects the watershed. This heavily traveled road connects I-95 with Myrtle Beach, and an increase in residential and commercial growth is likely. The Town of Aynor has been connected to the Grand Strand Water and Sewer Authority Conway wastewater plant, which should encourage growth. The northeastern edge of the watershed contains water infrastructure and should see a moderate increase in development. The remainder of the watershed is rural with agricultural, timberlands, and residential areas. The proposed Preferred Alternative route of I-73 (Southern Corridor) would cross this watershed and could bring some growth to the area, especially around interchanges.

Watershed Restoration and Protection

Total Maximum Daily Loads (TMDLs)

A TMDL was developed by SCDHEC and approved by EPA for *Chinners Swamp* water quality monitoring site *PD-352* to determine the maximum amount of fecal coliform bacteria it can receive and still meet water quality standards. OSD systems may represent the major source of fecal coliform loadings, and swine AFOs may also contribute substantially to elevated concentrations. Wildlife and cattle may also contribute fecal coliform loadings. The TMDL states that a 39% reduction in fecal coliform loading is necessary for the stream to meet the water quality standard.

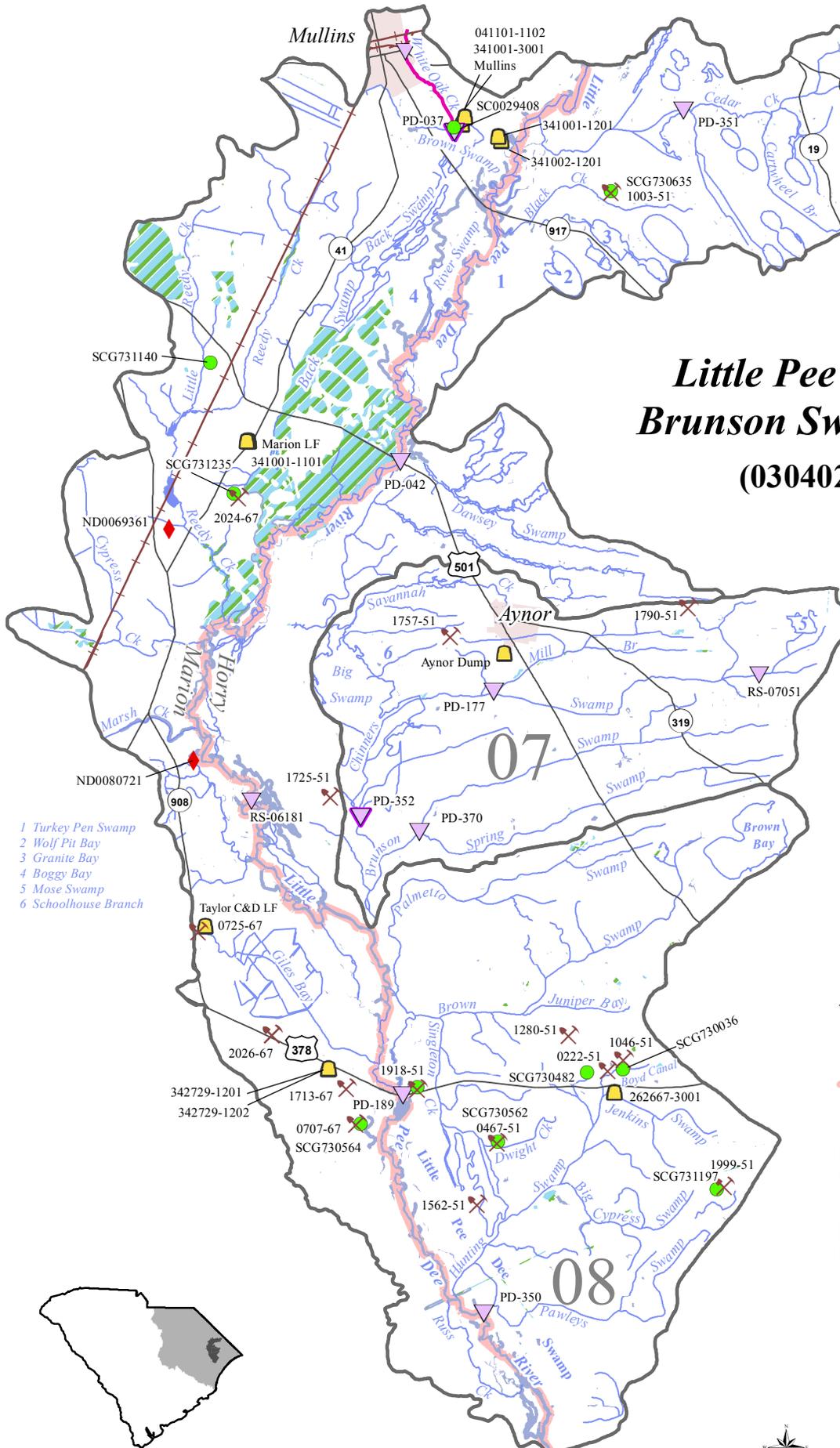
Special Studies

Horry, Aynor and Dog Bluff (HAD)/Chinners Swamp Water Quality Project

The 319 Grant funded Horry, Aynor, and Dog Bluff (HAD) Water Quality Project began in June of 2011. The project was started to address water quality problems in areas adjacent to the successfully

completed Little Pee Dee and Catfish Creek Water Quality Project. The goal of the project is to reduce loading in the watershed so that water quality as measured at PD-352 will meet water quality standards for bacteria. Sponsors and supporters of the HAD project include the Horry Soil and Water Conservation District, the USDA Natural Resources Conservation Service, Clemson Extension Service, Horry County Storm Water Division, SCDHEC, Grand Strand Water and Sewer Authority, and the Town of Aynor. The project's identified watersheds in Western Horry County include the Chinners, Brunson, and Palmetto Swamps and their tributaries. The primary focus of the HAD project is failing septic systems and nonpoint pollution associated with livestock. The project is scheduled to be completed in July of 2015.

Little Pee Dee River and Brunson Swamp Watersheds (03040204-07, -08)



- 1 Turkey Pen Swamp
- 2 Wolf Pit Bay
- 3 Granite Bay
- 4 Boggy Bay
- 5 Mose Swamp
- 6 Schoolhouse Branch

- ▽ 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
- ⊠ Bay/Estuary
- ⊠ Wetland
- ⊠ 10-Digit Hydrologic Units
- ⊠ Cities/Towns
- ⊠ Public Lands

