

03040206-09

(Waccamaw River)

General Description

Watershed 03040206-09 is located in Horry County and consists primarily of the *Waccamaw River* and its tributaries from Simpson Creek to Socastee Creek (AIWW). The watershed occupies 136,304 acres of the Lower Coastal Plain and Coastal Zone regions of South Carolina. Land use/land cover in the watershed includes: 43.2% forested wetland, 21.9% urban land, 19.6% forested land, 6.8% agricultural land, 5.6% nonforested wetland, 2.3% water, and 0.6% barren land.

This portion of the Waccamaw River accepts drainage from its upstream reaches along with Jones Big Swamp (Boggy Swamp, Horse Savannah, Watts Bay), Stanley Creek (Beaverdam Swamp, Big Swamp), Tilly Swamp (Bare Bone Bay, Cane Bay, Tiger Bay, Buck Bay, Long Branch), Round Swamp, and McCoy Bay. Dam Swamp enters the river next followed by Steritt Swamp (Skinners Swamp) East Prong, South Prong). The river then flows past the City of Conway and accepts drainage from Bear Swamp (Butler Swamp, Willow Springs Branch, Busbee Lake), Pitch Lodge Lake, Cox Ferry Lake, and Thorofare Creek. Wadus Lake connects Busbee Lake to the river. Gravely Gully and Halfway Swamp (Big Branch) enter the river next, followed by Old Womans Lake, Big Buckskin Creek, and Peachtree Lake. Socastee Swamp and the AIWW (Folly Swamp) merge near the Town of Socastee to form Socastee Creek and flows into the Waccamaw River. Enterprise Creek connects the Waccamaw River and Socastee Creek just upstream of their confluence. There are a total of 226.2 stream miles and 477.1 acres of lake waters in this watershed. The Waccamaw River 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-373	INT	FW	WACCAMAW RIVER AT S-26-31, RED BLUFF LANDING
PD-369	INT	FW*	WACCAMAW RIVER AT S-26-105, REEVES FERRY ROAD
RS-06165	RS06	FW	STERITT SWAMP AT BRIDGE ON STERITT SWAMP RD, 4.8 MI E OF CONWAY
MD-110	W	FW*	WACCAMAW RIVER AT US 501 BYPASS AROUND CONWAY
MD-111	W	FW*	WACCAMAW RIVER AT COX'S FERRY ON COUNTY ROAD 110
MD-145	SPRP	FW*	WACCAMAW RIVER, 1 MI DS OF BUCKSVILLE LANDING AT BIG BEND IN RIVER
MD-136	W	FW*	WACCAMAW RIVER, 0.25 MI UPSTREAM OF JUNCTION WITH AIWW
MD-088	W	FW	AIWW 1 MI S OF BRIDGE ON US 501
MD-089	W	FW	AIWW 2 MI S OF BRIDGE ON US 501
MD-127	SPRP	FW	AIWW AT SC 544, 7.5 MI SW OF MYRTLE BEACH

Waccamaw River – There are six SCDHEC monitoring sites along this section of the Waccamaw River. This is a blackwater system, characterized by naturally low dissolved oxygen conditions. At the furthest upstream site (*PD-373*), aquatic life and recreational uses are fully supported. Further downstream (*PD-369*), aquatic life uses are fully supported; however, there is a significant decreasing trend in dissolved oxygen. Although dissolved oxygen excursions occurred, they were typical of values seen in swamp and blackwater systems and were considered natural, not standards violations. A significant decreasing trend in turbidity suggests improving conditions for this parameter. Recreational uses are partially supported due to fecal coliform excursions and there is an increasing trend in fecal coliform bacteria. At the next site downstream (*MD-110*), aquatic life and recreational uses are fully supported.

Further downstream (*MD-111*), aquatic life and recreational uses are fully supported. At the next site downstream (*MD-145*), aquatic life uses are partially supported due to dissolved oxygen excursions. In addition, there is a significant decreasing trend in dissolved oxygen concentration and a significant increasing trend in total phosphorus concentration. Recreational uses are fully supported. At the furthest downstream site (*MD-136*), aquatic life and recreational uses are fully supported and a significant increasing trend in dissolved oxygen concentration suggests improving conditions for this parameter.

Steritt Swamp (RS-06165) - Aquatic life uses are not supported due to dissolved oxygen excursions. Recreational uses are not supported due to fecal coliform bacteria excursions; however, a significant decreasing trend in fecal coliform bacteria suggests improving conditions for this parameter.

Atlantic Intracoastal Waterway (AIWW) - There are three SCDHEC monitoring sites along this section of the AIWW. This section of the AIWW is influenced by tidal pressures from both the Little River and the Winyah Bay ends, so flushing and mixing are limited, causing a bathtub effect whereby the water moves back and forth, but takes a long time to actually move out of the waterway. Although dissolved oxygen and pH excursions occurred at all sites, they were typical of values seen in tidally influenced systems with limited flushing and significant marsh drainage and were considered natural, not standards violations. At the upstream (*MD-088*) and midstream (*MD-089*) sites, aquatic life and recreational uses are fully supported. At the downstream site (*MD-127*), aquatic life and recreational uses are also fully supported; however, there is a significant increasing trend in five-day biochemical oxygen demand. There is a significant increasing trend in pH. A significant decreasing trend in turbidity suggests improving conditions for this parameter.

A fish consumption advisory has been issued by the Department for mercury and includes the Waccamaw River and the Atlantic Intracoastal Waterway within this watershed (see advisory p.115).

NPDES Program

Active NPDES Facilities

<i>RECEIVING STREAM FACILITY NAME</i>	<i>NPDES# TYPE</i>
WACCAMAW RIVER S.C. PUBLIC SERV. AUTH./GRAINGER GEN. STA.	SC0001104 MAJOR INDUSTRIAL
WADUS LAKE S.C. PUBLIC SERV. AUTH./GRAINGER GEN. STA.	SC0001104 MAJOR INDUSTRIAL
WACCAMAW RIVER GSW&SA/SCHWARTZ PLANT	SC0037753 MAJOR DOMESTIC
BEAR SWAMP GSW&SA/CONWAY WWTP	SC0021733 MAJOR DOMESTIC
STERITT SWAMP HUCKS LANDSCAPING & CONSTR./HUCKS MINE #8	SCG730347 MINOR INDUSTRIAL
EAST PRONG HUCKS LANDSCAPING & CONSTR./HUCKS MINE #1	SCG730310 MINOR INDUSTRIAL
SOCASTEE SWAMP RE GOODSON CONSTR./CAROLINA FOREST BLVD TRACT 19	SCG730292 MINOR INDUSTRIAL

WACCAMAW RIVER TRIBUTARY WEAVER CO./COX FERRY MINE #2	SCG730560 MINOR INDUSTRIAL
WILLOW SPRINGS BRANCH TRIBUTARY RICHARDSON & SONS/RICKYS DIRT	SCG730113 MINOR INDUSTRIAL
WACCAMAW RIVER TRIBUTARY ROBERT O. COLLINS CO., INC./LAKE RIDGE MINE	SCG730267 MINOR INDUSTRIAL
SOCASSTEE CREEK TRIBUTARY ROBERT O. COLLINS CO., INC./FORESTBROOK MINE	SCG730236 MINOR INDUSTRIAL
SOCASSTEE CREEK TRIBUTARY ROBERT O. COLLINS CO., INC./GLENS BAY MINE	SCG731299 MINOR INDUSTRIAL
WACCAMAW RIVER TRIBUTARY CL BENTON & SONS, INC./SEA MIST MINE	SCG730057 MINOR INDUSTRIAL
JONES BIG SWAMP EXPRESS CONSTRUCTION/EAST EDGE MINE	SCG731159 MINOR INDUSTRIAL
JONES BIG SWAMP EXPRESS CONSTRUCTION/EAST EDGE MINE	SCG731316 MINOR INDUSTRIAL
WACCAMAW RIVER TRIBUTARY ASHLEY ANDERSON FARM/BEAR BLUFF MATERIALS	SCG730130 MINOR INDUSTRIAL
TILLY SWAMP ASHLEY ANDERSON FARM/BARNHILL MINE	SCG731280 MINOR INDUSTRIAL
WATTS BAY WILLIAM LIVINGSTON/BLUE WATER MINE	SCG731281 MINOR INDUSTRIAL
TILLY SWAMP TRIBUTARY PALMETTO PROPERTIES/OLD REEVES FERRY MINE	SCG731246 MINOR INDUSTRIAL
SOCASSTEE SWAMP TRIBUTARY RCPS PROPERTIES/HWY 501 MINE	SCG731129 MINOR INDUSTRIAL
WACCAMAW RIVER TRIBUTARY RE GOODSON/CBP PHIV LAKE RIDGE MINE	SCG731268 MINOR INDUSTRIAL
SOCASSTEE CREEK TRIBUTARY HOME PLACE FARM LLC/WEATHERLY MINE	SCG731259 MINOR INDUSTRIAL
SOCASSTEE SWAMP AVX CORPORATION/CONWAY	SC0048402 MINOR INDUSTRIAL
TILLY SWAMP TRIBUTARY SCOTT POTTER MINE	SCG731285 MINOR INDUSTRIAL

Municipal Separate Storm Sewer Systems (MS4)

<i>RECEIVING STREAM</i>	<i>NPDES#</i>
<i>MUNICIPALITY</i>	<i>MS4 PHASE</i>
<i>RESPONSIBLE PARTY</i>	<i>MS4 SIZE</i>
<i>IMPLEMENTING PARTY</i>	
WACCAMAW RIVER CITY OF CONWAY CITY OF CONWAY CITY OF CONWAY	SCR035103 PHASE II SMALL MS4

WACCAMAW RIVER
UNINCORPORATED AREAS
HORRY COUNTY
HORRY COUNTY

SCR035104
PHASE II
SMALL MS4

Nonpoint Source Management Program

Land Disposal Activities

Landfill Facilities

<i>LANDFILL NAME</i>	<i>PERMIT #</i>
<i>FACILITY TYPE</i>	<i>STATUS</i>
HORRY COUNTY LANDFILL MUNICIPAL	----- CLOSED
HORRY COUNTY LANDFILL MUNICIPAL	261001-1101 CLOSED
HORRY COUNTY LANDFILL MUNICIPAL	261001-1102, 261001-1201 ACTIVE
CITY OF CONWAY DUMP MUNICIPAL	----- CLOSED
THOMPSONS C&D DUMP CONSTRUCTION	----- CLOSED
HORRY COUNTY COMPOSTING FACILITY COMPOSTING	261001-3001 ACTIVE
COASTAL RECLAMATION COMPOSTING SITE COMPOSTING	262448-3001 ACTIVE
AO HARDEE & SONS COMPOSTING	262626-3001 ACTIVE
HAMMOND WOOD RECYCLING #2 COMPOSTING	262660-3001 INACTIVE
ROBERT COLLINS INC. COMPOSTING	262659-3001 INACTIVE
DIXIE RECYCLING LLC COMPOSTING	262652-3001 ACTIVE
C. OWENS & SONS COMPOSTING	262635-3001 ACTIVE
HOLMES COMPOSTING SITE COMPOSTING	262616-3001 ACTIVE
POSTEC RECYCLING INC. COMPOSTING	262476-3001 INACTIVE

Mining Activities

<i>MINING COMPANY</i>	<i>PERMIT #</i>
<i>MINE NAME</i>	<i>MINERAL</i>
ASHLEY ANDERSON FARM BEAR BLUFF MATERIALS	1030-51 SAND

ASHLEY ANDERSON FARM BARNHILL MINE	1936-51 SAND; SAND/CLAY
WEAVER COMPANY, INC. COX FERRY MINE #2	1405-51 SAND
RE GOODSON CONSTRUCTION CO. GOODSON/CAROLINA FOREST BLVD.	1363-51 SAND
ARCHIE BELL CONSTRUCTION, INC. LEES LANDING CIRCLE MINE	1056-51 SAND/CLAY
C. OWENS & SONS, INC. OWENS PIT	0951-51 SAND/CLAY
DONALD RICHARDSON & SON, INC. RICKYS DIRT PIT	1099-51 SAND/CLAY
CL BENTON & SONS, INC. SEA MIST MINE	1107-51 SAND
PALMETTO PROPERTIES OLD REEVES FERRY MINE	2041-51 SAND; TOP SOIL
ROBERT O. COLLINS CO., INC. LAKE RIDGE MINE	1158-51 SAND; SAND/CLAY
RCPS PROPERTIES LLC RCPS HWY 501	1992-51 SAND; SAND/CLAY;SOIL
HOME PLACE FARM LLC WEATHERLY MINE	2049-51 SAND; TOPSOIL
DREXEL 101 LLC SUGARLOAF MINE	2092-51 SAND/CLAY; TOPSOIL
SCOTT POTTER SCOTT POTTER MINE	2062-51 SAND/CLAY; 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 high potential for residential, commercial, and industrial growth in this watershed, which contains the City of Conway and the outskirts of the Cities of Myrtle Beach and North Myrtle Beach. A high increase of growth is expected east of the Waccamaw River in particular, and a moderate increase west of the river. All but the northern most corner of the watershed contains water infrastructure. Sewer infrastructure is located in much of the watershed, including the S.C. Hwy 544 corridor, east of S.C. Hwy 544 (excluding the area north of U.S. Hwy 501), and in the Bucksport community. Commercial and residential development is the predominate land use in the City of Conway and along sections of U.S. Hwy 501, U.S. Hwy 17 Bypass, and S.C. Hwy 544. Two industrial parks are located along the U.S. Hwy 501 corridor as well as an existing rail line. The former Myrtle Beach Air Force Base has undergone significant redevelopment as a mixed use district known as the Market Common. It is

likely that it will become a central hub of growth in the region. U.S. Hwy 544 has been widened, S.C. Hwy 31 is being extended southward, and S.C. Hwy 707 is being widened, which will likely add to the growth in the area. Portions of the Buist Tract, the largest undeveloped tract of land in Horry County, are being developed. The Fantasy Harbor Bridge, which crosses the AIWW near U.S. Hwy 501 and funnels motorists to southbound U.S. 17 Bypass, was completed in 2009 and relieves some of the Myrtle Beach congestion on U.S. 501.

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. The Southern Evacuation Lifeline has been proposed to bypass S.C. Hwy 707 and U.S. 501 during hurricane evacuations and relieve congestion on the major highways the rest of the time; however, the path of the proposed road travels next to or through several wildlife preserves. Most of the land use outside of these areas consist of residential development and timberland.

Watershed Protection and Restoration

Total Maximum Daily Loads (TMDLs)

A total maximum daily load (TMDL) for oxygen demanding substances has been developed for the main stem of the **Waccamaw River** and the **Atlantic Intracoastal Waterway (AIWW)** in watersheds 02040206-09, 03040206-10, and 03040208-03. The TMDL addresses 12 separate monitoring stations on the State's 1998 303(d) list of impaired waters. The TMDL, based on a maximum 0.1 mg/l deficit allowed in waters that do not meet applicable dissolved oxygen standards due to natural conditions, will result in a decrease of approximately 63% in the permitted oxygen demanding load discharged to the system. The decreased loadings are being implemented through the NPDES permitting system with new, more restrictive limits becoming final at the conclusion of appropriate compliance schedules.

Special Projects

Development & Implementation of a S.C. Coast-A-Syst

The S.C. Coast-A-Syst project targets homeowners living along the Atlantic Intracoastal Waterway (AIWW) and Socastee Creek (watershed 03040206-09) and the AIWW and Little River (watershed 03040208-03). Like much of the coast, these areas are experiencing rapid development and increased populations, while also harboring fragile water resources for recreation and marine ecology. High fecal coliform bacteria counts, water quality non-supportive of aquatic life because of low dissolved oxygen, and pH excursions exist in local waterbodies.

S.C. Sea Grant Consortium and Clemson University developed a program called South Carolina Coast-A-Syst. This product, modeled after the Home*A*Syst and Farm-A-Syst programs, is used to teach watershed residents and waterbody users responsible practices for protecting water quality, with the ultimate goal to reduce bacteria and nutrient input into nearby waterbodies from urban/suburban activities and land development. Research was conducted through surveys to determine what BMPs were appropriate for coastal South Carolina, where education about nonpoint source was lacking, and how best to reach homeowners in providing continued education. Education of coastal residents included identification of practices, which detrimentally affect water quality, reasons why those practices do so, and instructions in better water quality management practices.

Sea Grant Extension and Clemson Extension published a S.C. Coast-A-Syst packet, which includes self-assessments and fact sheets on homeowner practices. Sea Grant Extension trained Extension agents, Master Gardeners, and homeowner associations to administer this homestead self-assessment program distribute the program and materials through homeowner associations and other public groups, provide support for the program through the Horry County Extension Service, and provide electronic distribution of the program via the world wide web.

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