

03050203-03

(North Fork Edisto River - Lower Reach)

General Description

Watershed 03050203-03 (formerly 03050203-060, 070, 080) is located in Orangeburg and Calhoun Counties and consists primarily of the **North Fork Edisto River** and its tributaries from Bull Swamp Creek to its confluence with the South Fork Edisto River. The watershed occupies 154,502 acres of the Upper and Lower Coastal Plain regions of South Carolina. Land use/land cover in the watershed includes: 36.4% agricultural land, 34.4% forested land, 18.4% forested wetland (swamp), 9.7% urban land, 0.8% water, and 0.3% nonforested wetland (marsh).

This lowest section of the North Fork Edisto River accepts drainage from Long Branch, Double Branch, Limestone Creek (Little Limestone Creek), Great Branch (Grape Branch, Moss Pond), Mill Branch, Fourmile Creek, and Caw Caw Swamp. Caw Caw Swamp flows through Redmond Pond and is joined by Murph Mill Creek (Mack Branch, Crim Creek), Sweetwater Lake, Burke Creek, Saddler Swamp, Early Branch, Cooner Branch, and Turkey Hill Branch before draining into the North Fork Edisto River. The river then accepts drainage from Pen Branch, Anderson Branch, Whirlwind Creek, Dry Swamp, and Cooper Swamp before merging with the South Fork Edisto River. There are a total of 390.0 stream miles and 1,348.1 acres of lake waters in this watershed, all classified FW.

Surface Water Quality

<u>Station #</u>	<u>Type</u>	<u>Class</u>	<u>Description</u>
E-099	INT	FW	NORTH FORK EDISTO RIVER AT S-38-74 NW ORANGEBURG
E-105	INT	FW	CAW CAW SWAMP AT S-38-1032
E-007	W	FW	NORTH FORK EDISTO RIVER AT US 601 AT ORANGEBURG
E-007A	S/W	FW	NORTH FORK EDISTO R. AT POWER LINE CROSSING, 2 MI BELOW E-007
E-007B	S/W	FW	NORTH FORK EDISTO RIVER, 4 MILES BELOW E-007 AT A CABIN
E-007C	P/W	FW	NORTH FORK EDISTO R. AT POLICEMAN CAMP, 6 MILES BELOW E-007
E-008	P/W/BIO	FW	NORTH FORK EDISTO RIVER AT S-38-39, WSW OF ROWESVILLE
E-008A	W/INT	FW	NORTH FORK EDISTO RIVER AT S-38-63

North Fork Edisto River – There are seven SCDHEC monitoring stations along this portion of the North Fork Edisto River. This is a blackwater system, characterized by naturally low pH conditions. Although pH excursions occurred at E-099 and E-008A, they were typical of values seen in blackwater systems and were considered natural, not standards violations. A significant decreasing trend in pH occurred at all sites. At the furthest upstream site (**E-099**), aquatic life uses are fully supported; however, there is a significant increasing trend in five-day biochemical oxygen demand. Significant decreasing trends in turbidity and total phosphorus concentration suggest improving conditions for these parameters. Recreational uses are partially supported due to fecal coliform bacteria excursions; however, a significant decreasing trend in fecal coliform bacteria concentration suggests improving conditions for this parameter.

At the next site downstream (**E-007**), aquatic life uses are not supported due to pH excursions. In addition, there is a significant increasing trend in five-day biochemical oxygen

demand. Significant decreasing trends in turbidity and total nitrogen concentration suggest improving conditions for these parameters. Recreational uses are fully supported. Further downstream (*E-007A*), aquatic life and recreational uses are fully supported; however, there is a significant increasing trend in five-day biochemical oxygen demand. Significant decreasing trends in turbidity and total phosphorus concentration suggest improving conditions for these parameters. At the next site downstream (*E-007B*), aquatic life uses are fully supported; however, there is a significant increasing trend in five-day biochemical oxygen demand. Significant decreasing trends in turbidity and total phosphorus concentration suggest improving conditions for these parameters. Recreational uses are partially supported due to fecal coliform bacteria excursions. Further downstream (*E-007C*), aquatic life and recreational uses are fully supported; however, there is a significant increasing trend in five-day biochemical oxygen demand. A significant decreasing trend in turbidity suggests improving conditions for this parameter.

At the next site downstream (*E-008*), aquatic life uses are fully supported; however, there is a significant increasing trend in five-day biochemical oxygen demand. Significant decreasing trends in turbidity and total phosphorus concentration suggest improving conditions for these parameters. Recreational uses are partially supported due to fecal coliform bacteria excursions. At the furthest downstream site (*E-008A*), aquatic life and recreational uses are fully supported; however, there is a significant increasing trend in five-day biochemical oxygen demand. Although pH excursions occurred, they were typical of values seen in blackwater systems and were considered natural, not standards violations. Significant decreasing trends in turbidity, total phosphorus concentration, and fecal coliform bacteria concentration suggest improving conditions for these parameters.

Caw Caw Swamp (E-105) - Aquatic life uses are fully supported; however, there is a significant increasing trend in five-day biochemical oxygen demand. A significant decreasing trend in turbidity suggests improving conditions for this parameter. Recreational uses are partially supported due to fecal coliform bacteria excursions.

A fish consumption advisory has been issued by the Department for mercury and includes portions of the North Fork Edisto River within this watershed (see advisory p.41).

Groundwater Quality

<u>Well #</u>	<u>Class</u>	<u>Aquifer</u>	<u>Location</u>
AMB-044	GB	MIDDENDORF	ORANGEBURG FISH HATCHERY (1)
AMB-101	GB	TERTIARY LIMESTONE	ORANGEBURG FISH HATCHERY (2)

All water samples collected from ambient monitoring well *AMB-044* and *AMB-101* met standards for Class GB groundwater.

NPDES Permitted Activities

Active NPDES Facilities

<i>RECEIVING STREAM FACILITY NAME</i>	<i>NPDES# TYPE</i>
NORTH FORK EDISTO RIVER ALBERMARLE CORP./ORANGEBURG	SC0001180 MAJOR INDUSTRIAL
NORTH FORK EDISTO RIVER CITY OF ORANGEBURG WWTP	SC0024481 MAJOR DOMESTIC
NORTH FORK EDISTO RIVER CITY OF ORANGEBURG/PEARSON WTP	SCG641002 MINOR DOMESTIC
WHIRLWIND CREEK TRIBUTARY ORANGEBURG SCHOOL DIST. 4	SC0040185 MINOR DOMESTIC
NORTH FORK EDISTO RIVER VELCOREX INC.	SC0043419 MAJOR INDUSTRIAL
NORTH FORK EDISTO RIVER TRIBUTARY US FISH & WILDLIFE SERVICE	SC0047023 MINOR INDUSTRIAL
NORTH FORK EDISTO RIVER TRIBUTARY COUNCIL ENERGY INC.	SCG250217 MINOR INDUSTRIAL
NORTH FORK EDISTO RIVER TRIBUTARY ENGINEERED POLYMER SOLUTIONS INC./VALSPAR CORP.	SCG250251 MINOR INDUSTRIAL
CAW CAW SWAMP TRIBUTARY LIMESTONE EARTH PRODUCTS LLC	SCG730636 MINOR INDUSTRIAL
CAW CAW SWAMP TRIBUTARY REA CONTRACTING LLC	SCG730654 MINOR INDUSTRIAL
NORTH FORK EDISTO RIVER TRIBUTARY TILLS LANDSCAPING & CONSTR./TILLS MINE 2	SCG731012 MINOR INDUSTRIAL

Municipal Separate Storm Sewer Systems (MS4)

<i>RECEIVING STREAM MUNICIPALITY RESPONSIBLE PARTY IMPLEMENTING PARTY</i>	<i>NPDES# MS4 PHASE MS4 SIZE COUNTY</i>
LOWER NORTH FORK EDISTO RIVER CITY OF ORANGEBURG CITY OF ORANGEBURG CITY OF ORANGEBURG	----- PHASE II SMALL MS4

Nonpoint Source Permitted Activities

Land Disposal Activities

Landfill Facilities

<i>LANDFILL NAME FACILITY TYPE</i>	<i>PERMIT # STATUS</i>
SPIRES LAC & YT LANDFILL C&D	382480-1701 ACTIVE

ALBERMARLE CORP. INDUSTRIAL	383345-1601 ACTIVE
CITY OF ORANGEBURG LANDFILL C&D	381002-1201 ACTIVE
COUNCIL OF ENERGY LAND APPLICATION OF WOOD ASH	382633-8001 ACTIVE
JAMES TRAYWICK (SCE&G) LAND APPLICATION	383320-8001 ACTIVE
JF CLECKLEY & CO. PLANT 2 INDUSTRIAL	----- INACTIVE
RINGNECK TRAIL C&D LANDFILL C&D	----- PROPOSED

Land Application Sites

*LAND APPLICATION SYSTEM
FACILITY NAME*

*ND#
TYPE*

APPLICATION TO POND
ORANGEBURG SAUSAGE CO.

ND0080730
INDUSTRIAL

Mining Activities

*MINING COMPANY
MINE NAME*

*PERMIT #
MINERAL*

REA CONSTRUCTION CO.
MINE #8

0536-75
SAND

LIMESTONE PRODUCTS
TOLLY JACK MINE

1246-75
SAND; SAND/CLAY

CONSTRUCTIVE LOGIX INC.
RINGNECK MINE

1730-75
SAND; TOPSOIL

Water Quantity

*WATER USER
WATERBODY*

*REG. CAPACITY (MGD)
PUMP. CAPACITY (MGD)*

ORANGEBURG DPU
NORTH FORK EDISTO RIVER

56.5
44.5

Growth Potential

There is a low to moderate potential for growth in this watershed, which contains the Towns of Edisto and Cordova and the City of Orangeburg. The existing infrastructure of the US 178 out of Orangeburg may encourage some growth. US 601 connects Orangeburg to the Towns of Bamberg and St. Matthews. The US 21 corridor runs from Orangeburg to Rowesville and is paralleled by a rail line. I-26 bisects the watershed and includes four interchanges near St. Matthews.

(Lower)
North Fork Edisto River
Watershed
(03050203-03)

-  Macroinvertebrate Stations
-  Water Quality Monitoring Stations
-  Approved TMDL
-  Groundwater Monitoring Stations
-  Special Study 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

