03050204-03

(South Fork Edisto River – Lower Reach)

General Description

Watershed 03050204-03 (formerly 03050204-050, 060, 070) is located in Barnwell, Orangeburg, and Bamberg Counties and consists primarily of the ***South Fork Edisto River*** and its tributaries from Dean Swamp Creek to its confluence with the North Fork Edisto River. The watershed occupies 212,608 acres of the Upper and Lower Coastal Plain regions of South Carolina. Land use/land cover in the watershed includes: 40.2% agricultural land, 32.7% forested land, 21.7% forested wetland (swamp), 4.6% urban land, 0.5% water, and 0.3% nonforested wetland (marsh).

This lowest reach of the South Fork Edisto River accepts the drainage from Spur Branch, Whaley Creek (Matthews Millpond), Dry Branch, Goodland Creek (Capers Mill Pond, Gin Branch, Tampa Creek), Windy Hill Creek (Sheepford Branch), Rocky Swamp Creek (Campbell Branch, Pleasant Branch), Rogers Branch, Snake Branch, and Little River (Willow Swamp) near the Town of Norway. Sykes Swamp enters the river next, followed by Hays Mill Creek (Stout Creek), Scratchnose Swamp (Reed Branch), Sucksand Branch, Roberts Swamp (Twin Lakes, Deadfall Swamp, Twomile Swamp), Snake Swamp (Sam Branch), and Isaac Jennings Canal. There are a total of 580.3 stream miles and 1,296.6 acres of lake waters in this watershed, all classified FW.

Surface Water Quality

Station #	Type	Class	Description
E-011	INT	FW	South Fork Edisto River at SC 39
E-036	INT/BIO	FW	Goodland Creek at SC 4, 2.1 miles E of Springfield
E-029	BIO	FW	Windy Hill Creek at SR 38
E-039	INT	FW	Roberts Swamp at SC 332
E-012	INT	FW	South Fork Edisto River at S-38-39 Bridge

South Fork Edisto River – There are two SCDHEC monitoring stations along this section of the South Fork Edisto River. This is a blackwater system, characterized by naturally low pH conditions. Although pH 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 ***(E-011)***, aquatic life uses are fully supported; however, there is a significant increasing trend in five-day biochemical oxygen demand. There is a significant decreasing trend in pH. A significant decreasing trend in turbidity suggests improving conditions for this parameter. Recreational uses are fully supported; however, there is a significant increasing trend in fecal coliform bacteria concentration. At the downstream site ***(E-012)***, aquatic life and recreational uses are fully supported; however, there is a significant increasing trend in five-day biochemical oxygen demand. There is a significant decreasing trend in pH. Significant decreasing trends in turbidity and total phosphorus concentration suggest improving conditions for these parameters.

Goodland Creek (E-036) – This is a blackwater system, characterized by naturally low pH conditions. Although pH excursions occurred, they were typical of values seen in blackwater systems and were considered natural, not standards violations. Although there were occurrences of copper in excess of the aquatic life chronic criterion, aquatic life uses are fully supported based on macroinvertebrate community data. However, there is a significant increasing trend in five-day biochemical oxygen demand. There is a significant decreasing trend in pH. 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, which are compounded by a significant increasing trend in fecal coliform bacteria concentration.

Windy Hill Creek (E-029) – Aquatic life uses are partially supported based on macroinvertebrate community data.

Roberts Swamp (E-039) - Aquatic life uses are fully supported and significant decreasing trends in total phosphorus and nitrogen concentration suggest improving conditions for these parameters. Recreational uses are not supported due to fecal coliform bacteria excursions.

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

Groundwater Quality

Well #	Class	Aquifer	Location
AMB-100	GB	TERTIARY LIMESTONE	COPE
AMB-002	GB	BLACK CREEK	WILLISTON
AMB-102	GB	TERTIARY SANDS	BLACKVILLE

All water samples collected from ambient monitoring wells ***AMB-100, AMB-002,*** and ***AMB-102*** met standards for Class GB groundwater.

NPDES Permitted Activities

Active NPDES Facilities

RECEIVING STREAM *FACILITY NAME*	*NPDES#* *TYPE*
SOUTH FORK EDISTO RIVER TOWN OF SPRINGFIELD/PLANT #1	SC0023272 MINOR DOMESTIC
SOUTH FORK EDISTO RIVER SCE&G/COPE POWER PLANT	SC0045772 MINOR INDUSTRIAL
WINDY HILL CREEK TOWN OF BLACKVILLE WWTP	SC0026417 MINOR DOMESTIC
WILLOW SWAMP TOWN OF NORWAY	SC0045993 MINOR DOMESTIC

GOODLAND CREEK TOWN OF SPRINGFIELD/PLANT #2	SC0023281 MINOR DOMESTIC
SCRATCHNOSE SWAMP RUTLAND FARMS/RUTLAND FARMS MINE	SCG731138 MINOR INDUSTRIAL

Nonpoint Source Permitted Activities

Land Disposal Activities

Landfill Facilities

LANDFILL NAME ***FACILITY TYPE***	***PERMIT #*** ***STATUS***
SCE&G COPE POWER PLANT INDUSTRIAL	383320-1601 ACTIVE
SALLEY TOWN DUMP MUNICIPAL	---------- INACTIVE

Land Application Sites

LAND APPLICATION ***FACILITY NAME***	***PERMIT #*** ***TYPE***
TILE FIELD LAUREL BAYE HEALTHCARE OF BLACKVILLE	ND0067024 DOMESTIC

Growth Potential

There is a low potential for growth in this watershed, which contains the Towns of Norway, Cope, and Springfield, and portions of the Towns of Blackville, Denmark, Bamberg, Neeses, Salley, and Perry. Slight increases in commercial growth would be possible with the proposed widening of US 78, which runs from the Town of Denmark to the Town of Bamberg. Industrial growth is possible due to the rail lines already in place. One rail line runs from the Town of Blackville to the Town of Springfield, and another from Denmark to the Town of Norway and on upstate to the City of Columbia. US 321 parallels the rail line that bisects the watershed. Denmark shows declining population trends, but Bamberg shows slightly increasing population growth. The SCE&G Cope Power Plant could boost residential and commercial growth in the area, primarily for Bamberg.

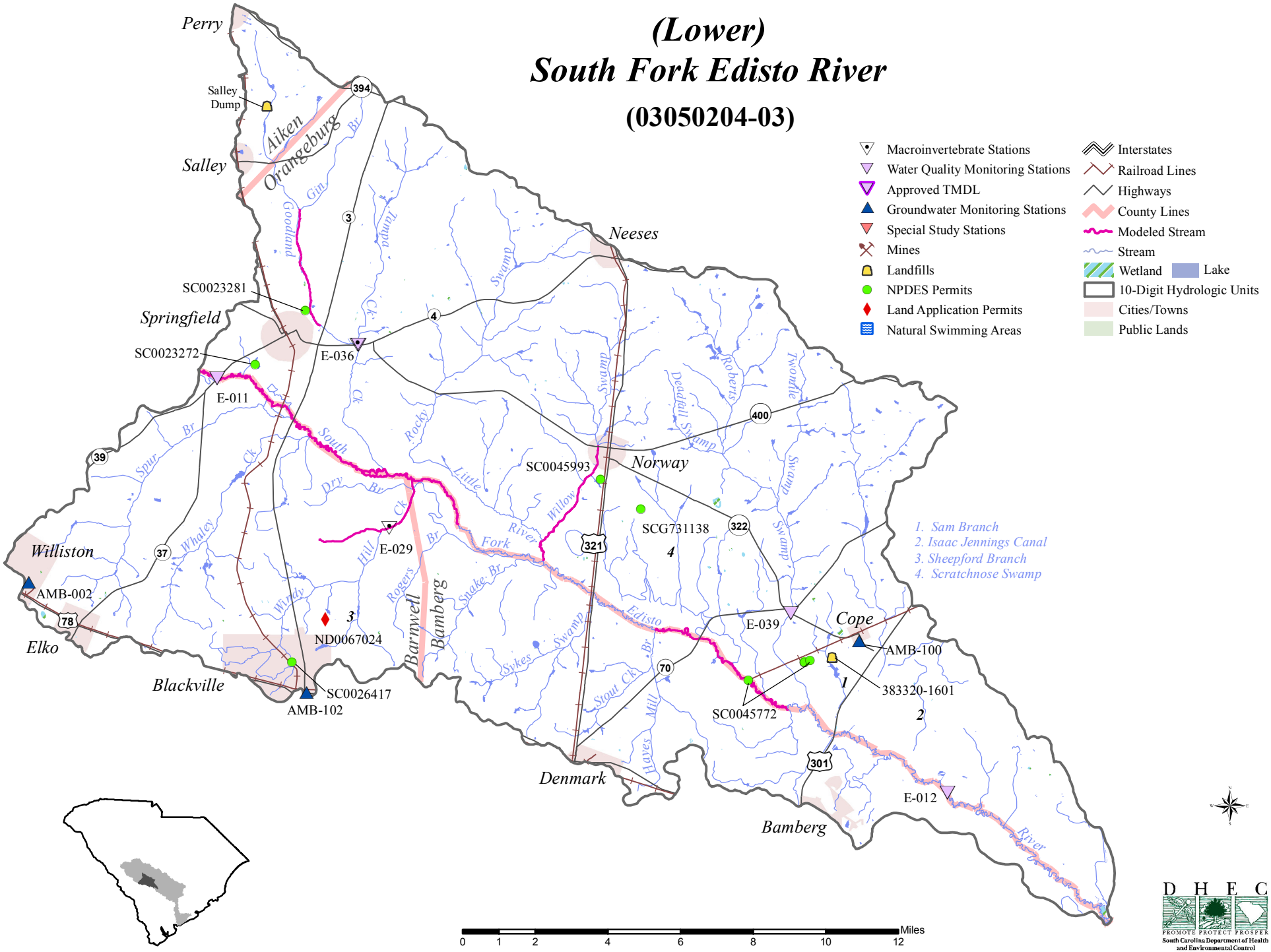
Watershed Protection and Restoration Strategies

Total Maximum Daily Loads (TMDLs)

A TMDL was developed for SCDHEC and approved by EPA for **Roberts Swamp** at water quality monitoring site E-039. TMDLs determine the maximum amount of fecal coliform bacteria a waterbody can receive from sources and still meet water quality standards. There is no permitted wastewater treatment facility in this watershed. This watershed has no designated or potential MS4s. Probable sources of fecal coliform bacteria that were identified in the watershed are runoff from agricultural lands and cattle with access to streams. The TMDL states that a reduction of 78% in fecal coliform loading is necessary for the stream to meet the recreational use standard.

A TMDL was developed for SCDHEC and approved by EPA for **Goodland Creek** at water quality monitoring site E-036. There is one minor permitted wastewater treatment facility in the watershed and no designated MS4s. Probable sources of fecal coliform bacteria are cattle watering in the creeks, failing septic systems, land application of poultry litter, and wildlife. The TMDL states that a reduction of 34% in fecal coliform loading is necessary for the stream to meet the recreational use standard.

(Lower)
South Fork Edisto River
(03050204-03)



D H E C
PROMOTE PROTECT PROSPER
South Carolina Department of Health and Environmental Control