03050206-01

(Edisto River - Headwaters)

General Description

Watershed 03050206-01 (formerly 03050205-010, 020, 030) is located in Bamberg, Orangeburg, Dorchester, and Colleton Counties and consists primarily of the ***Edisto River*** and its tributaries from its origin to Polk Swamp. The watershed occupies 169,636 acres of the Lower Coastal Plain region of South Carolina. Land use/land cover in the watershed includes: 42.2% forested land, 27.7% forested wetland (swamp), 25.3% agricultural land, 4.2% urban land, 0.4% water, and 0.2% nonforested wetland (marsh).

The headwaters of the Edisto River are formed from the confluence of the North Fork Edisto River and the South Fork Edisto River near the Town of Branchville. The Edisto River accepts drainage from Betty Branch (Staley Branch, Mill Branch), Piney Bay, Broad Branch, Pen Branch, and Brier Creek. Further downstream, the river accepts drainage from Bush Branch, Box Branch, Cattle Creek (Sandy Run, Murray Branch, Mill Branch, Big Branch), Brickhouse Branch, Crooked Creek, Skull Branch, and Polk Swamp. Polk Swamp flows past Reevesville and St. George accepting drainage from Bear Branch, Cowtail Creek, and Indian Field Swamp Colleton State Park resides in the lower portion of the watershed. There are a total of 625.3 stream miles and 657.3 acres of lake waters in this watershed, all classified FW.

Surface Water Quality

Station #	Type	Class	Description
E-013	W	FW	EDISTO RIVER AT U.S. 78, W OF BRANCHVILLE
E-013A	INT	FW	EDISTO RIVER AT U.S. 21
RS-06180	RS06	FW	EDISTO R. OFF DOCK NEAR END OF FISHTALE RD, 6.5 MI SE BRANCHVILLE
E-108	INT/BIO	FW	CATTLE CREEK AT S-18-19
E-014	W	FW	EDISTO RIVER AT US 15, S OF ST. GEORGE
E-086	INT	FW	EDISTO RIVER AT S-18-29

Edisto River – There are five SCDHEC monitoring stations along this section of the Edisto River. This is a blackwater system, characterized by naturally low pH conditions. Although pH excursions occurred at all except E-014, they were typical of values seen in blackwater systems and were considered natural, not standards violations. At the furthest upstream site ***(E-013)***, 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. Significant decreasing trends in turbidity and total nitrogen concentration suggest improving conditions for these parameters. Recreational uses are partially supported due to fecal coliform bacteria excursions. Further downstream ***(E-013A)***, 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. A significant decreasing trend in turbidity suggests improving conditions for this parameter.

At the next site downstream ***(RS-06180)***, aquatic life uses are fully supported, but recreational uses are partially supported due to fecal coliform bacteria excursions. Further downstream ***(E-014)***, aquatic life uses are fully supported and a significant increasing trend in dissolved oxygen concentration suggests improving conditions for this parameter. There is a significant increasing trend in pH. Recreational uses are fully supported at this site and a significant decreasing trend in fecal coliform bacteria concentration suggests improving conditions for this parameter. At the furthest downstream site ***(E-086)***, aquatic life uses are fully supported; however, there is a significant increasing trend in five-day biochemical oxygen demand. A significant increasing trend in dissolved oxygen concentration suggests improving conditions for this parameter. Recreational uses are fully supported and a significant decreasing trend in fecal coliform bacteria concentration suggests improving conditions for this parameter.

Cattle Creek (E-108) – Although pH excursions occurred, aquatic life uses are fully supported based on macroinvertebrate community data. Significant decreasing trends in turbidity and increasing trends in dissolved oxygen 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 Edisto River within this watershed (see advisory p.41).

NPDES Permitted Activities

Active NPDES Facilities

RECEIVING STREAM ***FACILITY NAME***	***NPDES#*** ***TYPE***
EDISTO RIVER TOWN OF BRANCHVILLE	SC0047333 MINOR DOMESTIC
CATTLE CREEK R. WHALEY DURR/HARTZOG PIT	SCG730091 MINOR INDUSTRIAL
EDISTO RIVER SCE&G/CANADYS STATION	SC0002020 MAJOR INDUSTRIAL
BETTY BRANCH TRIBUTARY NORTH AMERICAN CONTAINER CORP.	SCG250191 MINOR INDUSTRIAL
EDISTO RIVER PETER R. STOKES IV MINE	SCG731112 MINOR INDUSTRIAL
EDISTO RIVER JAY & J CONSTRUCTION INC./BRANCHVILLE PIT MINE	SCG731107 MINOR INDUSTRIAL
EDISTO RIVER TRIBUTARY REA CONTRACTING LLC/CARROLL PIT #9	SCG730656 MINOR INDUSTRIAL
EDISTO RIVER CIRCLE C TRUCK STOP	SCG730003 MINOR INDUSTRIAL
EDISTO RIVER TRIBUTARY SCDOT/GROVER PIT	SCG730517 MINOR INDUSTRIAL

Nonpoint Source Permitted Activities

Mining Activities

MINING COMPANY *MINE NAME*	*PERMIT #* *MINERAL*
DORCHESTER COUNTY HARTZOG PIT	0412-35 SAND; SAND/CLAY

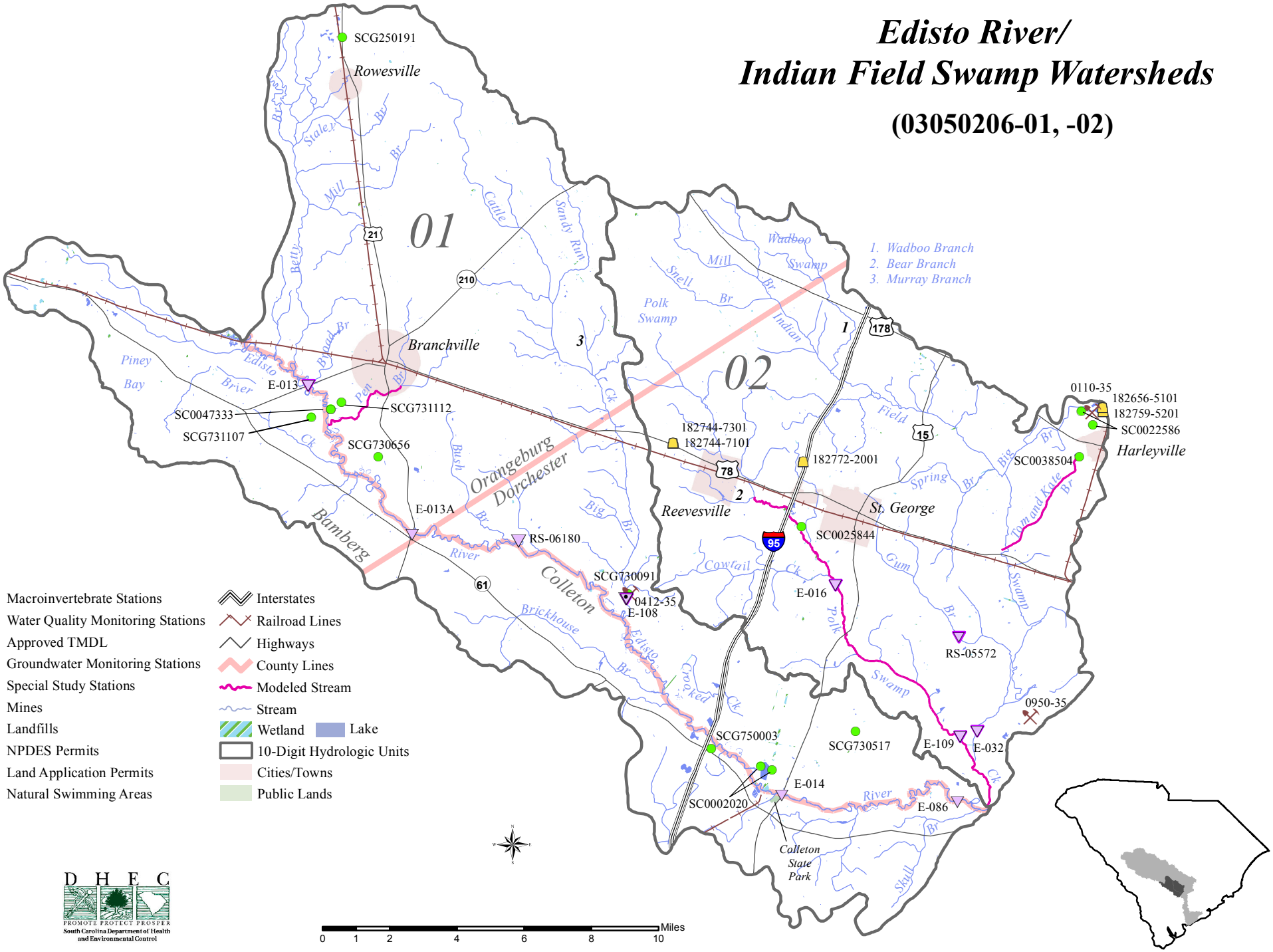
Growth Potential

There is a low to moderate potential for growth in this watershed, which contains the Towns of Branchville and Rowesville. The Town of Branchville is located in the center of the watershed with US 78 and a rail line connecting it to the Towns of Bamberg and St. George, and US 21 and another rail line connecting it to the City of Orangeburg. Infrastructure exists to serve any development. In the Dorchester County portion of the watershed, only about 250 proposed residential units are identified as most of this section is designated for conservation in the future.

Watershed Protection and Restoration Strategies

Total Maximum Daily Loads (TMDLs)

A TMDL was developed by SCDHEC and approved by EPA for **Cattle Creek** at water quality monitoring site E-108. TMDLs determine the maximum amount of fecal coliform bacteria waterbodies can receive from sources and still meet water quality standards. This small stream has no permitted NPDES facility that discharges fecal coliform bacteria. None of the watershed is within a designated MS4. Probable sources of fecal coliform bacteria that were identified in the watershed are grazing animals, especially cattle with access to streams, land application of litter, and failing septic systems. The TMDL states that a reduction of 66% in fecal coliform loading is necessary for the stream to meet the recreational use standard.


Edisto River/
Indian Field Swamp Watersheds
(03050206-01, -02)
01
02
1. Wadboo Branch
2. Bear Branch
3. Murray Branch
SCG250191
Rowesville
Branchville
Reevesville
St. George
Harleyville
Orangeburg
Dorchester
Bamberg
Colleton
Colleton State Park
E-013
SC0047333
SCG731107
SCG731112
SCG730656
E-013A
RS-06180
SCG730091
0412-35
E-108
182744-7301
182744-7101
182772-2001
SC0025844
E-016
RS-05572
0110-35
182656-5101
182759-5201
SC0022586
SC0038504
0950-35
SCG750003
SCG730517
E-109
E-032
E-014
SC0002020
E-086
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
Wetland
Lake
10-Digit Hydrologic Units
Cities/Towns
Public Lands
D H E C
PROMOTE PROTECT PROSPER
South Carolina Department of Health and Environmental Control
0 1 2 4 6 8 10
Miles