

03050104-04
(Wateree River)

General Description

Watershed 03050104-04 (formerly a portion of 03050104-030, and 090, 100) is located in Sumter and Richland Counties and consists primarily of the lowest portion of the **Wateree River** and its tributaries from Swift Creek to its confluence with the Congaree River Basin. The watershed occupies 179,948 acres of the Piedmont, Sandhills, and Upper Coastal Plain regions of South Carolina. Land use/land cover in the watershed includes: 36.5% forested land, 36.0% forested wetland (swamp), 18.2% agricultural land, 6.3% urban land, 1.4% nonforested wetland (marsh), 1.2% water, and 0.4% barren land.

Downstream of Swift Creek, the Wateree River receives drainage from Spears Creek. Spears Creek originates near the Town of Elgin and flows through several small lakes before accepting the drainage of Sloan Branch, Kelly Creek (White Pond), Haig Creek, McCaskill Creek (Rununder Branch, Otterslide Branch), Raglins Creek, Madraw Branch, and Moke Branch. The river then accepts drainage from Pigeon Roost Branch, Gum Swamp Branch (Robert Branch, Big Lake, Little Lake, Dry Swamp Lake), and Colonels Creek (Buffalo Creek, Bee Branch, Jumping Run Creek, Leesburg Branch, Murray Pond, Goodwill Pond). The Wateree River then accepts drainage from Kohler Old River (Green Lake), Sandy Creek (Halfway Creek), and the Little River. Beech Creek (Campell Creek, Shanks Creek) merges with Sandy Creek to form the Little River. Wateree Swamp extends across the lower portion of the watershed. Additional natural resources include the Manchester State Forest and Poinsett State Park located in the lower portion of the watershed. Poinsett State Park Lake is located on Shanks Creek. There are a total of 461.9 stream miles and 1,311.8 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>
CW-154	S/W/BIO	FW	KELLY CREEK AT S-28-367 2.9 MI SE OF ELGIN
CW-155	P/W/BIO	FW	SPEARS CREEK AT SC 12 3.6 MI SE OF ELGIN
CW-166	W/INT	FW	SPEARS CREEK AT US 601
CW-250	INT	FW	COLONELS CREEK AT SC 262
CW-240	W	FW	COLONELS CREEK AT US 601
CW-206	P/SPRP	FW	WATEREE RIVER AT US 76 & 378
CW-222/SC-002	P/INT	FW	WATEREE RIVER 1.6 MI UPSTREAM OF CONFL. WITH CONGAREE RIVER

Kelly Creek (CW-154) – Aquatic life uses are fully supported based on macroinvertebrate community data; however, there is a significant increasing trend in five-day biochemical oxygen demand. Although pH excursions occurred, they were typical of values seen in such systems and were considered natural, not standards violations. Recreational uses are fully supported.

Spears Creek – There are two SCDHEC monitoring sites along Spears Creek. Although pH excursions occurred at both sites, they were typical of values seen in such systems and were considered natural, not standards violations. At the upstream site (**CW-155**), aquatic life uses are

fully supported based on macroinvertebrate community data; however, there is a significant increasing trend in five-day biochemical oxygen demand. Recreational uses are partially supported due to fecal coliform bacteria excursions, which are compounded by a significant increasing trend in fecal coliform bacteria. At the downstream site (*CW-166*), aquatic life uses are fully supported; however, there are significant increasing trends in five-day biochemical oxygen demand, total phosphorus concentration, and total nitrogen concentration. There is a significant increasing trend in pH at this site. Recreational uses are partially supported at this site due to fecal coliform bacteria excursions.

Colonels Creek – There are two SCDHEC monitoring sites along Colonels Creek and recreational uses are fully supported at both sites. Although pH excursions occurred at both sites, they were typical of values seen in such systems and were considered natural, not standards violations. At the upstream site (*CW-250*), aquatic life uses are fully supported; however, there are significant increasing trends in five-day biochemical oxygen demand and total phosphorus concentration. There is a significant decreasing trend in pH at this site. At the downstream site (*CW-240*), aquatic life uses are again fully supported; however, there are significant increasing trends in five-day biochemical oxygen demand and decreasing trends in dissolved oxygen concentration.

Wateree River - There are two SCDHEC monitoring sites (*CW-206*, *CW-222*) and one South Carolina Public Service Authority (SCPSA) monitoring site (*SC-002*) along this portion of the Wateree River. Aquatic life and recreational uses are fully supported at the upstream site (*CW-206*) and significant increasing trends in dissolved oxygen concentration and decreasing trends in turbidity, total phosphorus and total nitrogen concentration, and total suspended solids suggest improving conditions for these parameters. Aquatic life and recreational uses are also fully supported at the downstream site (*CW-222/SC-002*); however, there is a significant increasing trend in five-day biochemical oxygen demand. There is a significant increasing trend in pH at this site. Significant decreasing trends in total phosphorus concentration, total suspended solids, and fecal coliform bacteria concentration suggest improving conditions for these parameters.

A fish consumption advisory has been issued by the Department for mercury and includes the Wateree River within this watershed (for the most current advisories visit www.scdhec.gov/fish).

Natural Swimming Areas

<i>FACILITY NAME</i>	<i>PERMIT #</i>
<i>RECEIVING STREAM</i>	<i>STATUS</i>
POINSETT STATE PARK	43-N01
POINSETT STATE PARK LAKE	ACTIVE

Groundwater Quality

<u>Well #</u>	<u>Class</u>	<u>Aquifer</u>	<u>Location</u>
AMB-018	GB	BLACK CREEK	OAKLAND PLANTATION
AMB-048	GB	MIDDENDORF	NORTH OF EASTOVER

NPDES Program

Active NPDES Facilities

<i>RECEIVING STREAM FACILITY NAME PERMITTED FLOW @ PIPE (MGD)</i>	<i>NPDES# TYPE COMMENT</i>
WATEREE RIVER SCE&G/WATEREE STATION	SC0002038 MAJOR INDUSTRIAL
WATEREE RIVER INTERNATIONAL PAPER/EASTOVER (UNION CAMP)	SC0038121 MAJOR INDUSTRIAL
WATEREE RIVER FINNCHEM USA, INC.	SC0047902 MINOR INDUSTRIAL
WATEREE RIVER RICHLAND COUNTY/EASTOVER REG. WWTP	SC0047911 MINOR DOMESTIC
WATEREE RIVER CITY OF SUMTER	SC0027707 MAJOR DOMESTIC
BEECH CREEK US AIR FORCE/SHAW AFB	SC0024970 MINOR INDUSTRIAL
BEECH CREEK CWS/OAKLAND PLANTATION SD	SC0030678 MINOR DOMESTIC
BEECH CREEK TRIBUTARY SOUTH FORGE APTS	SC0033235 MINOR DOMESTIC
SPEARS CREEK TRIBUTARY KROGER CO./PONTIAC FOODS	SCG250053 MINOR INDUSTRIAL
SLOAN BRANCH LOVELESS & LOVELESS, INC.	SCG730047 MINOR INDUSTRIAL
COLONELS CREEK - DITCH SC NATL GUARD/MCCRADY TRAINING FAC.	SC0046108 MINOR INDUSTRIAL
COLONELS CREEK C RAY MILES CONSTRUCTION/PERCIVAL ROAD	SCG730373 MINOR INDUSTRIAL
OTTERSLIDE BRANCH CAROLINA CERAMICS/DRY BRANCH MINE	SCG730439 MINOR INDUSTRIAL
SLOAN BRANCH RB COX TRUST/YEA YEA MINE	SCG730464 MINOR INDUSTRIAL
MCCASKILL CREEK HANSON BRICK EAST/GADSON	SCG730510 MINOR INDUSTRIAL
OTTERSLIDE BRANCH CAROLINA CERAMICS/KOON MINE	SCG730551 MINOR INDUSTRIAL
GUM SWAMP BRANCH HANSON AGGREGATES SE/HASSKEMP MINE	SCG730575 MINOR INDUSTRIAL
SPEARS CREEK MILDRED PORTER/PORTER PIT	SCG730608 MINOR INDUSTRIAL

SLOAN BRANCH
HARDAWAY CONSTRUCTION/NE MINE

SCG730702
MINOR INDUSTRIAL

Municipal Separate Storm Sewer Systems (MS4)

***RECEIVING STREAM
MUNICIPALITY
RESPONSIBLE PARTY
IMPLEMENTING PARTY***

***NPDES#
MS4 PHASE
MS4 SIZE***

WATEREE RIVER

RICHLAND COUNTY
RICHLAND COUNTY

SCS400001
PHASE I
MEDIUM MS4

WATEREE RIVER
ELGIN
ELGIN
KERSHAW COUNTY

SCR035501
PHASE II
SMALL MS4

WATEREE RIVER
UNINCORPORATED AREAS
KERSHAW COUNTY
KERSHAW COUNTY

SCR035502
PHASE II
SMALL MS4

WATEREE RIVER
UNINCORPORATED AREAS
KERSHAW COUNTY
KERSHAW COUNTY

SCR035502
PHASE II
SMALL MS4

WATEREE RIVER
UNINCORPORATED AREAS
RICHLAND COUNTY
RICHLAND COUNTY

SCS400001
PHASE I
MEDIUM MS4

WATEREE RIVER
SUMTER
SHAW AFB
SHAW AFB

SCR038501
PHASE II
SMALL MS4

WATEREE RIVER
UNINCORPORATED AREAS
SUMTER COUNTY
SUMTER COUNTY

SCR038503
PHASE II
SMALL MS4

Nonpoint Source Permitted Activities

Land Disposal Activities

Landfill Facilities

***LANDFILL NAME
FACILITY TYPE***

***PERMIT#
STATUS***

INTERNATIONAL PAPER/EASTOVER
INDUSTRIAL

403313-1601
ACTIVE

PLOWDEN C&D DUMP
C&D

INACTIVE

SCREAMING EAGLE ROAD YARD TRASH LF
MUNICIPAL

INACTIVE

SCREAMING EAGLE ROAD LANDFILL COMPOSTING	402400-3001 INACTIVE
SCREAMING EAGLE ROAD LANDFILL MUNICIPAL	----- INACTIVE
CLEMSON ROAD DUMP MUNICIPAL	----- INACTIVE
CLEMSON ROAD DUMP MUNICIPAL	----- INACTIVE
CAROLINA CONTAINER NORTHEAST LANDFILL MUNICIPAL	403323-1101 INACTIVE
LOVELESS & LOVELESS, INC. C&D	282428-1201 ACTIVE
LOVELESS & LOVELESS, INC. COMPOSTING FACILITY COMPOSTING	282428-3001 INACTIVE
LOVELESS & LOVELESS SCREAMING EAGLE RD LF C&D	402428-1701 ACTIVE
PINE HILL C&D LANDFILL C&D	282401-1201 ACTIVE
TNT SANDS LLC & LT LANDFILL C&D	402423-1201 INACTIVE
CAROLINA GRADING INC. INDUSTRIAL	402446-1601 ACTIVE
NORTHEAST LANDFILL, LLC MUNICIPAL	402434-1101 ACTIVE
RICHLAND LANDFILL, INC. MUNICIPAL	402401-1101 ACTIVE
YANDLE GARBAGE SERVICES INC. INDUSTRIAL	----- INACTIVE
YANDLE SANITARY LANDFILL MUNICIPAL	----- INACTIVE

Land Application Sites

***LAND APPLICATION SYSTEM
FACILITY NAME***

***ND#
TYPE***

INFILTRATION BASIN
PALMETTO UTILITIES, INC. REG. WWTP

ND0068411
DOMESTIC

TILE FIELD
HACIENDA MOBILE HOME ESTATES

ND0067598
DOMESTIC

Mining Activities

<i>MINING COMPANY MINE NAME</i>	<i>PERMIT # MINERAL</i>
HANSEN AGGREGATES HARRY HASSKAMP MINE	0582-85 SAND/GRAVEL
CAROLINA CERAMICS, INC. KOON CLAY MINE	0137-55 KAOLIN
UNIMIN CORP. BLANEY PLANT	0089-55 SAND
TAYLOR CLAY PRODUCTS CO. TAYLOR MINE	0830-55 KAOLIN
HANSON BRICK COLUMBIA GADSON PIT	0409-55 KAOLIN
LOVELESS & LOVELESS, INC. SCREAMING EAGLE ROAD PIT	0492-55 SAND
HARDAWAY CONCRETE COMPANY, INC. NORTHEAST MINE	0507-79 SAND
CHAMBERS RICHLAND CO. LANDFILL, INC. SCREAMING EAGLE ROAD MINE	0700-79 KAOLIN
TNT SAND TNT SAND MINE	0898-79 SAND
MILDRED R. PORTER PORTER'S PIT	1115-55 SAND; SAND/CLAY
TURTLE CREEK FARM MILES MINING OF LUGOFF	1239-55 KAOLIN
RB COX TRUST YEA YEA MINE	1276-79 SAND/SANDCLAY
C. RAY CONSTRUCTION CO., INC. PERCIVAL ROAD MINE	1370-79 SAND
CAROLINA CERAMICS DRY BRANCH MINE	1432-55 KAOLIN

Growth Potential

There is a moderate to high potential for residential, commercial, and industrial growth in this watershed, which contains a portion of the City of Columbia, the eastern portion of Ft. Jackson, and Shaw Air Force Base. I-20 crosses the area, together with U.S. Hwy 601, U.S. Hwy 1, and U.S. Hwys 378/76 and S.C. Hwy 12. There are also several large and growing subdivisions, the Richland County Industrial Park, and a privately owned solid waste landfill to add to future growth in the area. Sewer is provided to this area through a regional system located in Kershaw County. Water service is available from the City of Columbia's water system. A

large portion of the watershed consists of river bottomland swamp forests, which are heavily forested for timber.

Watershed Protection and Restoration

Total Maximum Daily Loads (TMDLs)

A TMDL was developed by SCDHEC and approved by EPA for *Kelly Creek* water quality monitoring site CW-154 and *Spears Creek* site CW-166 to determine the maximum amount of fecal coliform bacteria they can receive from nonpoint sources and still meet water quality standards. The primary sources of fecal coliform to the streams were determined to be failed septic systems, cattle-in-stream, and runoff from pastureland. The TMDL states that a 65% reduction in fecal coliform loading at CW-154 and 61% reduction at CW-166 is necessary for the streams to meet the recreational use standard. For more detailed information on TMDLs, please visit www.scdhec.gov/tmdl.

Special Studies

COWASEE Basin Focus Area

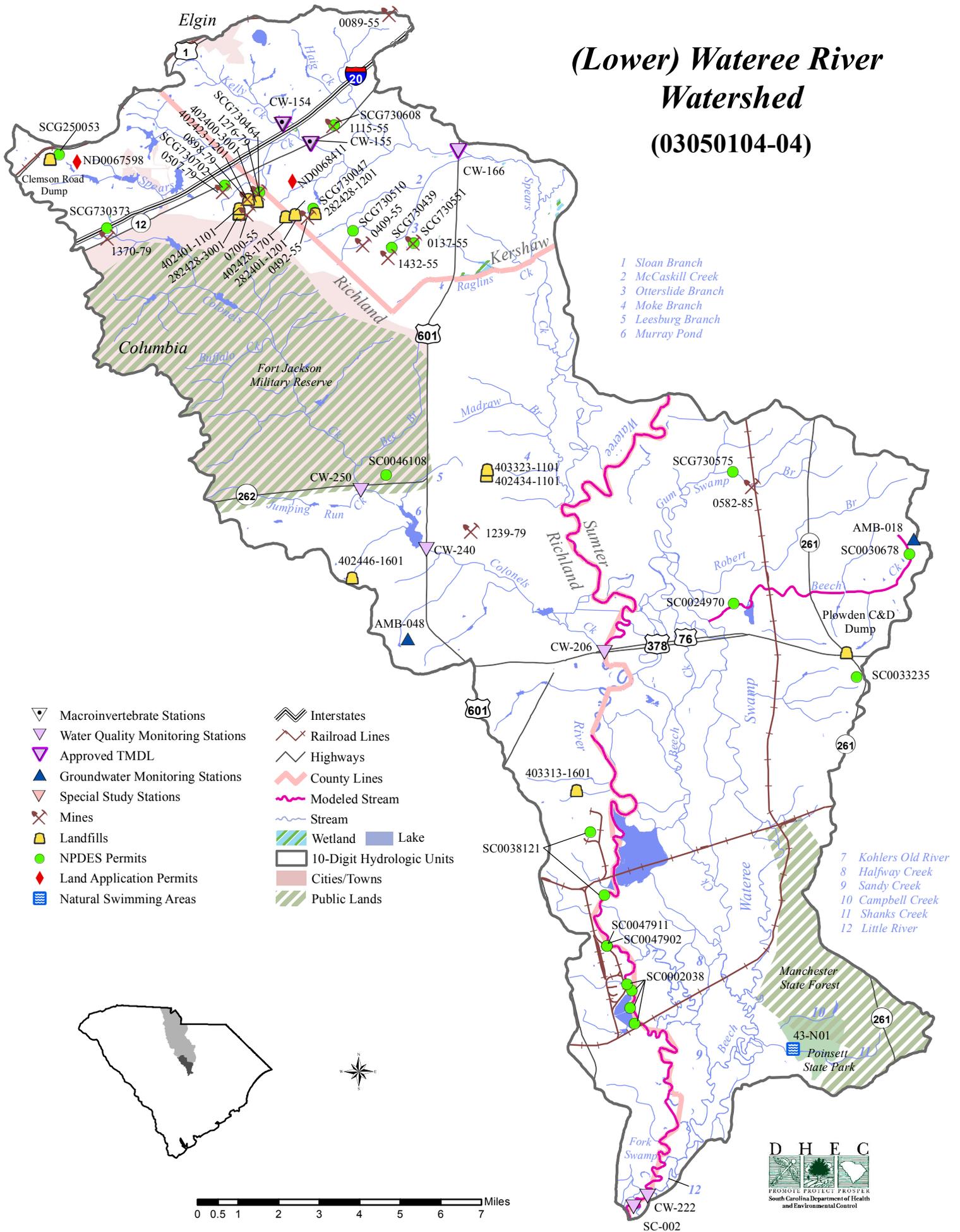
The COWASEE Basin covers over 215,000 acres in the midlands of South Carolina and includes the Congaree, Wateree and upper Santee River watersheds. Based on the ACE Basin focus area model, land trusts and other conservation organizations have come together to protect land in the COWASEE basin through land acquisition and conservation easements. The focus area is also a priority waterfowl restoration area where basin partners are implementing research and management to improve waterfowl habitat and populations. Organizations working in the COWASEE basin include the Congaree Land Trust, Ducks Unlimited, Friends of Congaree Swamp, the USDA Natural Resources Conservation Service, Richland County Conservation Commission, the South Carolina Department of Natural Resources, Sumter County Soil and Water Conservation District, and The Conservation Fund.

Water Quality Model of the Upper Wateree River and Allocation of Oxygen Demand

The Kershaw County Water and Sewer Authority contracted with the U.S. Geological Survey to conduct an extensive modeling study of the upper Wateree River. Model development was completed in 1999. The study included the characterization of streamflow and water quality in the river and the development of hydrodynamic and water quality computer simulation models to determine allowable loads for oxygen demanding substances. Together, the models are designed to predict water quality, especially dissolved oxygen levels, under various streamflow and loading conditions.

The USGS model was converted to a wasteload allocation tool and the allowable oxygen demand load to the upper Wateree River determined. The new model required an overall reduction of 27% from the previously permitted load. With input from the Central Midlands Council of Governments (CMCOG) and the Santee Lynches Regional Council of Governments (SLRCOG), the available load was allocated with the CMCOG's one discharge being allocated 31% of the load and the SLRCOG's five discharges being allocated 69% of the load. The agreed upon loadings have been incorporated into NPDES permits for the individual dischargers.

(Lower) Wateree River Watershed (03050104-04)



- 1 Sloan Branch
- 2 McCaskill Creek
- 3 Otterslide Branch
- 4 Moke Branch
- 5 Leesburg Branch
- 6 Murray Pond

- 7 Kohlers Old River
- 8 Halfway Creek
- 9 Sandy Creek
- 10 Campbell Creek
- 11 Shanks Creek
- 12 Little River

- ▽ 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

0 0.5 1 2 3 4 5 6 7 Miles



SC-002