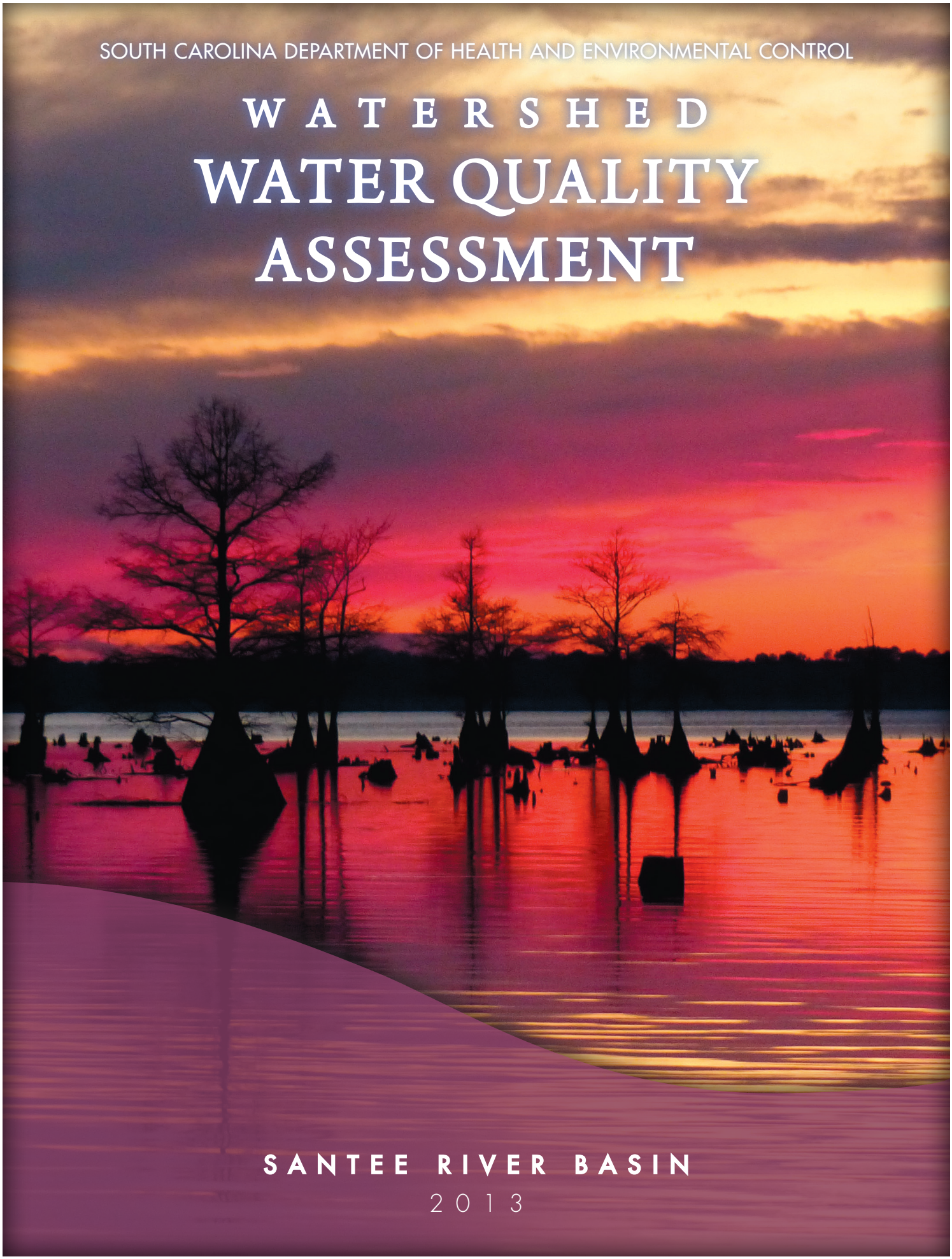
SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL

WATERSHED WATER QUALITY ASSESSMENT

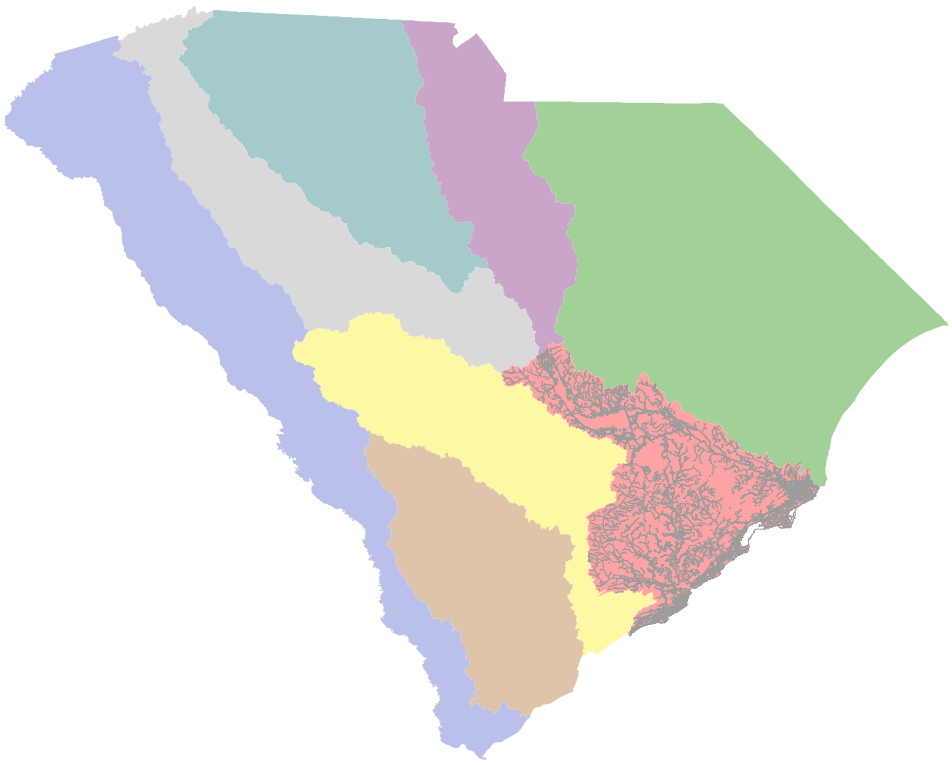


SANTEE RIVER BASIN

2013

Watershed Water Quality Assessment

Santee River Basin
2013



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PREFACE

In 1993, the South Carolina Department of Health and Environmental Control (SCDHEC) published the first in a series of five watershed management documents. The first in that series, Watershed Water Quality Management Strategy: Savannah-Salkehatchie Basin, communicated SCDHEC's innovative watershed approach, summarizing water programs and water quality in the basins. The approach continues to evolve and improve.

The watershed documents facilitate broader participation in the water quality management process. Through these publications, SCDHEC shares water quality information with internal and external partners, providing a common foundation for water quality improvement efforts at the local watershed or large-scale, often interstate, river basin level.

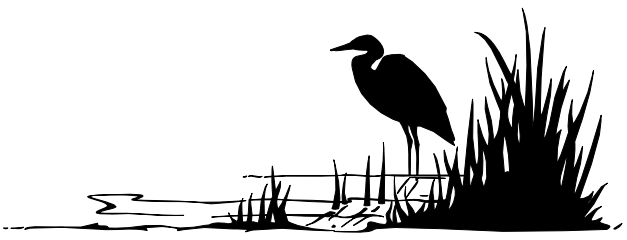
Water quality data from the Santee River Basin was collected during 2004 through 2008 and assessed during this fourth, five-year watershed management cycle. This updated atlas provides summary information on a watershed basis, as well as geographical presentations of all permitted watershed activities. Waterbody, monitoring station and facility indices allow the reader to locate information on specific waters and facilities of interest.

A brief summary of the water quality assessments included in the body of this document is provided following the Table of Contents. This summary lists all waters within the Santee River Basin that fully support recreational and aquatic life uses, followed by those waters not supporting uses. In addition, the summaries list changes in use support status; those that have improved or degraded over the five years since the last assessment was written. More comprehensive information can be found in the individual watershed sections. The information provided is accurate to the best of our knowledge at the time of writing and will be updated in five years.

General information on Santee River Basin Watershed Protection and Restoration Strategies can be found under that section on page 28, and more detailed information is located within the individual watershed evaluations.

A major change to this assessment is the use of the National Watershed Boundary dataset using the 8-, 10-, 12-Digit Hydrologic Unit Codes for South Carolina. This more accurate hydrologic unit code's use changes numerous boundaries in the basin and introduces a new numbering system for the watersheds. For comparison, each watershed evaluation will state the prior hydrologic code.

As SCDHEC continues basinwide and statewide water quality protection and improvement efforts, we are counting on the support and assistance of all stakeholders in the Santee River Basin to participate in water quality improvements. If you have questions or comments regarding this document, or if you are seeking further information on the water quality in the Santee Basin, please contact the Santee River Watershed Manager at (803) 898-4300 or www.scdhec.gov.watershed



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Cover photograph compliments of Larry McCord

This document should be cited as:

South Carolina Department of Health and Environmental Control. 2013. Watershed Water Quality Assessment: Santee River Basin. Technical Report No. 0620-13. Bureau of Water, Columbia, S.C.

Water Quality Assessment Summary

Santee River Basin

TERMS USED IN TABLES

AQUATIC LIFE USE SUPPORT (AL) - The degree to which aquatic life is protected is assessed by comparing important water quality characteristics and the concentrations of potentially toxic pollutants with standards. Aquatic life use support is based on the percentage of standards excursions at a sampling site.

For **dissolved oxygen** and **pH**:

If the percentage of standard excursions is 10% or less, then uses are ***fully supported***.

If the percentage of standard excursions is greater than 10% and less than or equal to 25%, then uses are ***partially supported***.

If the percentage of standard excursions is greater than 25%, uses are ***not supported*** (see p.12 for further information).

For **toxins** (heavy metals, priority pollutants, chlorine, ammonia):

If the chronic or acute aquatic life standard for any individual toxicant is not exceeded more than once, uses are ***fully supported***.

If the appropriate acute or chronic aquatic life standard is exceeded more than once (i.e. $\geq$ 2), but is less than or equal to 10% of the samples, uses are ***partially supported***.

If the appropriate acute or chronic aquatic life standard is exceeded more than once (i.e.$\geq$2), and is greater than 10% of the samples, aquatic life uses are ***not supported*** (see p.12 for further information).

For **turbidity** and waters with **numeric total phosphorus, total nitrogen, and chlorophyll-a**:

If the percentage of standard excursions is 25% or less, then uses are ***fully supported***.

If the percentage of standard excursions is greater than 25%, then uses are ***not supported*** (see p.13 for further information).

RECREATIONAL USE SUPPORT (REC) - The degree to which the swimmable goal of the Clean Water Act is attained (recreational use support) is based on the frequency of fecal coliform bacteria excursions, defined as greater than 400/100 ml for all surface water classes.

If 10% or less of the samples are greater than 400/100 ml, then recreational uses are said to be ***fully supported***.

If the percentage of standards excursions is greater than 10% and less than or equal to 25%, then recreational uses are said to be ***partially supported***.

If the percentage of standards excursions is greater than 25%, then recreational uses are said to be ***nonsupported*** (see p.14 for further information).

Excursion - The term excursion is used to describe a measurement that does not comply with the appropriate water quality standard.

Table 1. Fully Supported Sites in the Santee River Basin 2004-2008

***** = Station not evaluated for Recreational Support; TD=TMDL Developed; TI=TMDL Implementation; Trend Data 1994-2008

Watershed	Waterbody Name	Station #	Improving Trends	Other Trends
03050111-01	Santee River	SC-004		
	Lake Marion	RL-06426		
		RL-04382		
		RL-05464		
		RL-06424		
		RL-05406		
		RL-08054		
		RL-06428		
		SC-021		
		RL-04384		
		RL-05402		
		CL-042	Decreasing Total Nitrogen	
	Halfway Swamp Creek	CW-241[TD]	Decreasing Total Phosphorus	Increasing pH
	Tavern Creek	ST-527*		
	Upper Lake Marion near Safety Kleen	ST-057*		
	Jacks Creek	CW-244	Decreasing Turbidity	Increasing BOD_5, Total Phosphorus
	Chapel Branch	SC-045		
	Eutaw Creek Arm of Lake.Marion	RL-04386		

Table 1. Fully Supported Sites in the Santee River Basin 2004-2008

***** = Station not evaluated for Recreational Support; TD=TMDL Developed; TI=TMDL Implementation; Trend Data 1994-2008

Watershed	Waterbody Name	Station #	Improving Trends	Other Trends
03050112-01	Santee River	SC-024		
		ST-016	Decreasing Total Phosphorus, Total Suspended Solids	Increasing BOD_5, pH
	Rediversion Canal	SC-037		
		ST-031	Decreasing Total Nitrogen, Fecal Coliform	Increasing BOD_5
03050112-02	Santee River	ST-001	Increasing Dissolved Oxygen; Decreasing Turbidity, Total Suspended Solids, Fecal Coliform	Increasing BOD_5
03050112-03	Wambaw Creek	CSTL-112		Increasing BOD_5, Total Phosphorus; Decreasing Dissolved Oxygen
	South Santee River	ST-006 (FW)	Increasing Dissolved Oxygen	Increasing BOD_5, Turbidity, pH
	Sixmile Creek	RT-042062		
	Alligator Creek	RT-06001		
03050112-04	North Santee River	ST-005 (FW)	Decreasing Total Phosphorus	Increasing Turbidity
		RO-056098		
	Minim Creek	RT-07065		
		RT-042068		
	North Santee Bay	MD-263		Increasing BOD_5, Fecal Coliform; Decreasing Dissolved Oxygen
		RO-06301		

Table 2. Impaired Sites in the Santee River Basin 2004-2008

REC=Recreational; AL=Aquatic Life; FS=Fully Supported Standards; PS=Partially Supported Standards; NS=Nonsupported Standards; *=Station not evaluated for Recreational Support; TD=TMDL Developed; TI=TMDL Implementation; Trend Data 1994-2008

Watershed	Waterbody Name	Station #	Use	Status	Water Quality Indicator	Improving Trends	Other Trends
03050111-01	Santee River	ST-034	AL	NS	Total Phosphorus		
	Warley Creek	RS-04389 TD	AL	PS	Macroinvertebrates		
			REC	NS	Fecal Coliform		
		SC-006 TD	AL	NS	Total Nitrogen		
	Lake Marion	SC-005	AL	NS	Total Phosphorus, Dissolved Oxygen		
		SC-039	AL	NS	Total Phosphorus		
		SC-038	AL	NS	Total Phosphorus		
		RL-04388	AL	NS	Total Phosphorus		
		SC-010	AL	NS	Total Phosphorus		
		SC-042	AL	NS	Total Phosphorus		
		ST-025	AL	PS	Zinc	Decreasing BOD_5, Total Nitrogen, Total Phosphorus, Fecal Coliform	Decreasing Dissolved Oxygen, pH
		SC-040	AL	NS	Total Phosphorus		
		SC-041	AL	NS	Total Phosphorus		
		RL-02308	AL	NS	Total Phosphorus		
		SC-036	AL	PS	pH		
		RL-01011	AL	NS	Total Phosphorus, pH		

Table 2. Impaired Sites in the Santee River Basin 2004-2008

REC=Recreational; AL=Aquatic Life; FS=Fully Supported Standards; PS=Partially Supported Standards; NS=Nonsupported Standards; *=Station not evaluated for Recreational Support; TD=TMDL Developed; TI=TMDL Implementation; Trend Data 1994-2008

Watershed	Waterbody Name	Station #	Use	Status	Water Quality Indicator	Improving Trends	Other Trends
03050111-01 (continued)	Lake Inspiration	C-058 [TD]	AL	NS	Turbidity, pH, Total Phosphorus, Chlorophyll	Increasing Dissolved Oxygen	
	Lyons Creek	ST-533 [TD]	AL	PS	Macroinvertebrates		
	Halfway Swamp Creek	C-063 [TD]	REC	NS	Fecal Coliform		Decreasing Dissolved Oxygen; Increasing pH
		C-015 [TD]	REC	PS	Fecal Coliform	Decreasing Total Nitrogen	
	Halfway Swamp Creek Arm of Lake Marion	RL-06422	AL	NS	Total Phosphorus		
	Upper Lake Marion near Safety Kleen	SC-058*	AL	NS	Nickel		
		SC-056*	AL	NS	pH, Total Nitrogen, Nickel		
	Spring Grove Creek	SC-009	AL	NS	Total Nitrogen		
			REC	PS	Fecal Coliform		
	Duckford Branch	RS-05585	REC	NS	Fecal Coliform		
	Big Poplar Creek	SC-011	AL	NS	Dissolved Oxygen, Total Nitrogen		
	Jacks Creek	ST-017*	AL	PS	Macroinvertebrates		
	Jacks Creek Arm of Lake Marion	RL-02306	AL	NS	Total Phosphorus		

Table 2. Impaired Sites in the Santee River Basin 2004-2008

REC=Recreational; AL=Aquatic Life; FS=Fully Supported Standards; PS=Partially Supported Standards; NS=Nonsupported Standards; *=Station not evaluated for Recreational Support; TD=TMDL Developed; TI=TMDL Implementation; Trend Data 1994-2008

Watershed	Waterbody Name	Station #	Use	Status	Water Quality Indicator	Improving Trends	Other Trends
03050111-01 (continued)	Big Branch	CW-243 TD	REC	NS	Fecal Coliform		Increasing BOD_5, pH, Fecal Coliform
	Chapel Branch	SC-014	AL	NS	Total Phosphorus, pH		
	Tawcaw Creek	ST-018	AL	NS	Total Nitrogen, Dissolved Oxygen		Increasing BOD_5, Total Phosphorus
			REC	NS	Fecal Coliform		
		SC-017	AL	NS	Total Phosphorus		
	Potato Creek	ST-035 TD	AL	PS	Dissolved Oxygen	Increasing Dissolved Oxygen; Decreasing Fecal Coliform	Increasing BOD_5, pH
			REC	PS	Fecal Coliform		
	Potato Creek Arm of Lake Marion	SC-019	AL	PS	pH		
	Wyboo Swamp	ST-036	AL	PS	pH		
03050112-01	Bennetts Branch	RS-05399/ ST-536	AL	PS	Macroinvertebrates		
			REC	NS	Fecal Coliform		
	Doctors Branch	ST-537*	AL	PS	Macroinvertebrates		
03050112-03	South Santee River	ST-006 Saltwater	AL	NS	Turbidity	Increasing Dissolved Oxygen	Increasing BOD_5, Turbidity, pH
		RO-08344	AL	NS	Turbidity		
03050112-04	North Santee River	ST-005 Saltwater	AL	NS	Turbidity	Decreasing Total Phosphorus	Increasing Turbidity

Table 3. Changes in Use Support Status

Santee River Basin Sites that Improved from 2004 to 2008

REC= Recreational; AL=Aquatic Life; FS=Fully Supported Standards; PS=Partially Supported Standards; NS=Nonsupported Standards; TD=TMDL Developed; TI=TMDL Implementation

Watershed	Waterbody Name	Station #	Use	Status		Water Quality Indicator	
				2004	2008	2004	2008
03050111-01	Warley Creek	SC-006 [TD]	REC	NS	FS	Fecal Coliform	
	Lake Marion	ST-025	AL	NS	PS	Total Phosphorus	Zinc
	Lake Inspiration	C-058 [TD]	REC	PS	FS	Fecal Coliform	
	Halfway Swamp Creek	C-015 [TD]	REC	NS	PS	Fecal Coliform	Fecal Coliform
		CW-241 [TD]	REC	NS	FS	Fecal Coliform	
	Spring Grove Creek	SC-009	REC	NS	PS	Fecal Coliform	Fecal Coliform
	Big Poplar Creek	SC-011	REC	NS	FS	Fecal Coliform	
	Big Branch	SC-243 [TD]	AL	NS	FS	Dissolved Oxygen	
	Potato Creek	ST-035 [TD]	AL	NS	PS	Dissolved Oxygen, pH	Dissolved Oxygen
03050112-03	Wambaw Creek	CSTL-112	REC	PS	FS	Fecal Coliform	
	South Santee River	ST-006	REC	PS	FS	Fecal Coliform	

Table 4. Changes in Use Support Status

Santee River Basin Sites that Degraded from 2004 to 2008

REC= Recreational; AL=Aquatic Life; FS=Fully Supported Standards; PS=Partially Supported Standards; NS=Nonsupported Standards; TD=TMDL Developed; TI=TMDL Implementation

Watershed	Waterbody Name	Station #	Use	Status		Water Quality Indicator	
				2004	2008	2004	2008
03050111-01	Warley Creek	SC-006 [TD]	AL	FS	NS		Total Nitrogen
	Lake Marion	SC-005	AL	FS	NS		Total Phosphorus, Dissolved Oxygen
		SC-039	AL	FS	NS		Total Phosphorus
		SC-042	AL	FS	NS		Total Phosphorus
		SC-040	AL	FS	NS		Total Phosphorus
		SC-041	AL	FS	NS		Total Phosphorus
		SC-036	AL	FS	PS		pH
	Spring Grove Creek	SC-009	AL	FS	NS		Total Nitrogen
	Big Poplar Creek	SC-011	AL	FS	NS		Dissolved Oxygen, Total Nitrogen
	Tawcaw Creek Arm of Lake Marion	SC-017	AL	FS	NS		Total Phosphorus
	Potato Creek Arm of Lake Marion	SC-019	AL	FS	PS		pH
	Wyboo Swamp	ST-036	AL	FS	PS		pH
03050112-04	North Santee River	ST-005 (Saltwater)	AL	FS	NS		Turbidity

Introduction

The South Carolina Department of Health and Environmental Control (SCDHEC or the Department) initiated its first watershed planning activities as a result of a U.S. Environmental Protection Agency (USEPA) grant in June of 1972. These activities were soon extended by requirements for a Continuing Planning Process under §303(e), "Federal Water Pollution Control Act Amendments of 1972", U.S. Public Law 92-500. In 1975, the SCDHEC published basin-planning reports for the four major basins in South Carolina. A related planning activity resulted from §208 of the Federal Water Pollution Control Act, which required states to prepare planning documents on an areawide basis. The Continuing Planning Process, watershed assessments, and 208 plans are elements of South Carolina's overall water quality management plan. In 1992, SCDHEC's Bureau of Water initiated its Watershed Water Quality Management program to better coordinate river basin planning and water quality management. Watershed-based management allows the Department to address Congressional and Legislative mandates in a coordinated manner and to better utilize current resources. The watershed approach also improves communication between the Department, the regulated community, and the public on existing and future water quality issues.

Purpose of the Watershed Water Quality Assessment

A watershed is a geographic area into which the surrounding waters, sediments, and dissolved materials drain, and whose boundaries extend along surrounding topographic ridges. Watershed-based water quality management recognizes the interdependence of water quality related activities associated with a drainage basin including: monitoring, problem identification and prioritization, water quality modeling, planning, permitting, and other activities. The Bureau of Water's watershed approach integrates these and other activities by watershed, resulting in appropriately focused water quality protection efforts. While an important aspect of the program is water quality problem identification and solution, the emphasis is on problem prevention.

The Department has divided the State into five regions (areas consisting of one or more river basins), along hydrologic lines, which contain approximately the same number of NPDES permitted dischargers. A Watershed Water Quality Assessment (WWQA) will be created for each major river basin within the five regions and will be updated on a five-year rotational basis. This will allow for effective allocation and coordination of water quality activities and efficient use of available resources. The Department's Santee River Basin is subdivided into 16 watersheds or hydrologic units within South Carolina, which include the Santee River Basin, the Cooper River Basin, and the Santee Coastal Frontage Basin. The Santee River Basin is subdivided into 5 watersheds and includes the Santee River as it winds through Lake Marion, along the Rediversion Canal and splits into the North and South Santee Rivers draining to the Atlantic Ocean. The Cooper River Basin is subdivided into 9 watersheds and includes Lake Moultrie, the Cooper River and its tributaries (Wadboo Creek, East Branch Cooper River, Wando River, Ashley River, Stono

River) as it winds its way to Charleston Harbor. The Santee Coastal Frontage Basin is divided into 2 watersheds that contain portions of the Atlantic Intracoastal Waterway (AIWW).

The hydrologic units are based on the National Watershed Boundary dataset using the 8-, 10-, 12-Digit Hydrologic Unit Codes for South Carolina. All water quality related evaluations are made at the 10-digit watershed level. The stream names used are derived from USGS topographic maps. The National Hydrography Dataset (NHD) served as the basemap for streams and lakes. The dataset was used to calculate stream length estimates, and lake acreages. NHD is the digital database of the USGS 1:24,000 scale hydrography, integrated with reach (stream) related information from the USEPA. Based on the blue line streams of the USGS topographic maps, it is likely that portions of the stream network in terms of perennial, intermittent, and ephemeral streams are not accurately represented.

The watershed-based assessments fulfill a number of USEPA reporting requirements including various activities under §303(d), §305(b), §314, and §319 of the Clean Water Act (CWA). Section 303(d) requires a listing of waters located within a watershed that do not meet applicable water quality standards. Section 305(b) requires that the State biennially submit a report that includes a water quality description and analysis of all navigable waters to estimate environmental impacts. Section 314 requires that the State submit a biennial report that identifies, classifies, describes, and assesses the status and trends in water quality of publicly owned lakes. The watershed plan is also a logical evaluation, prioritization, and implementation tool for nonpoint source (§319) requirements. Nonpoint source best management practices (BMPs) can be selected by identifying water quality impairments and necessary controls, while considering all the activities occurring in the drainage basin.

The assessment also allows for more efficient issuance of National Pollutant Discharge Elimination System (NPDES) and State wastewater discharge permits. Proposed permit issuances within a watershed may be consolidated and presented to the public in groups, rather than one at a time, allowing the Department to realize a resource savings and the public to realize an information advantage.

The Watershed Water Quality Assessment (WWQA) is a geographically based document that describes, at the watershed level, water quality related activities that may potentially have an adverse impact on water quality. The Watershed Implementation Staff investigates the impaired streams mentioned in the WWQA to determine, where possible, the source of the impairment and recommends solutions to correct the problems. As part of this effort, the watershed staff is forging partnerships with various federal and state agencies, local governments, and community groups. In particular, the Department's Watershed Program and the NRCS (Natural Resources Conservation Service) district offices are working together to address some of the nonpoint source (NPS) concerns in the basin. By combining NRCS's local knowledge of land use and the Department's knowledge of water quality, we are able to build upon NRCS's close relationships with landowners and determine where NPS projects are needed. These projects may include educational campaigns or special water quality studies.

Factors Assessed in Watershed Evaluations

Surface Water Quality

SCDHEC's Bureau of Water and Bureau of Environmental Services work to ensure that the water in South Carolina is safe for drinking and recreation, and that it is suitable to support and maintain aquatic flora and fauna. Functions include planning, permitting, compliance assurance, enforcement, and monitoring. This section provides an overview of water quality evaluation and protection activities.

Monitoring

In an effort to evaluate the State's water quality, the Department operates and collects data from a statewide network of ambient monitoring sites. The ambient monitoring network is directed toward determining long-term water quality trends, assessing attainment of water quality standards, identifying locations in need of additional attention, and providing background data for planning and evaluating stream classifications and standards.

Ambient monitoring data are also used in the process of formulating permit limits for wastewater discharges with the goal of maintaining State and Federal water quality standards and criteria in the receiving streams in accordance with the goals of the Clean Water Act. These standards and criteria define the instream chemical concentrations that provide for protection and reproduction of aquatic flora and fauna, help determine support of the classified uses of each waterbody, and serve as instream limits for the regulation of wastewater discharges or other activities. In addition, by comparing the ambient monitoring network data to the State Water Quality Standards, these data are used in the preparation of the biennial §305(b) report to Congress, which provides a general summary of statewide water quality, and the §303(d) list of impaired waters with respect to attainment of classified uses.

There are several major components to SCDHEC's ambient surface water quality monitoring activities, including ongoing fixed-location monitoring, cyclic watershed monitoring, and statewide probability-based monitoring, each designed to provide data for water quality assessment of major water resource types at different spatial and temporal scales. In addition to sites sampled specifically as part of the cyclical watershed activities (W), the ambient surface water quality monitoring program includes several different monitoring station types: Integrator (INT), Special Purpose (SPRP), Summer-Only (SUMM), Random Stream for year ## (RS##), Random Lake for year ## (RL##), Random Tide Creek for year ## (RT##), Random Open Water for year ## (RO##), biological (BIO) stations. Special Study Sites (SSS) are designed to investigate specific activities at a station.

Integrator Sites are fixed-location sites sampled on a monthly basis, year-round, every year, and target the furthest downstream access of each of the 10-digit watershed units in the state, as well as the major waterbodies that occur within these watershed units. Special Purpose Sites are also

permanent, monthly, year-round, fixed-location sites, but represent locations of special interest to the Department that do not meet the location criteria of Integrator Sites.

Summer-Only stations are sampled monthly from May through October, a period critical to aquatic life, and characterized by higher water temperatures and lower flows. There are very few Summer-Only Sites as they are intended to track specific reservoir eutrophication concerns.

Watershed stations (W) are sampled on a monthly basis, year-round, during a basin's target year. Watershed stations are located to provide more complete and representative coverage within the larger drainage basin, and to identify additional monitoring needs. Watershed stations have the same parameter coverage as Integrator Sites. Watershed stations are locations with extensive historic monitoring data (e.g. primary or secondary monitoring sites under the previous design). Changes in water quality can be identified by comparison of the new data to the historic data.

A statewide Probability-Based, or random sampling, component is part of the monitoring design. A probability-based monitoring design is a type of a survey design in which the population of interest is sampled in a fashion that allows statements to be made about the whole population based on a subsample, and produces an estimate of the accuracy of the assessment results. The advantage of the probability-based sampling design is that statistically valid statements about water quality can be made about large areas based on a relatively small subsample. Separate monitoring schemes have been developed for stream, lake/reservoir, and estuarine resources. Each year a new statewide set of probability-based random sites is selected for each waterbody type. Random Sites are sampled on a monthly basis for one year with the same parameter coverage as Integrator Sites. The data from those Random Sites located within this basin are included in this assessment.

Ambient biological trend monitoring is conducted to collect data to indicate general biological conditions of State waters that may be subject to a variety of point and nonpoint source impacts. Ambient biological sampling is also used to establish regional reference or "least impacted" sites from which to make comparisons in future monitoring. Additionally, special macroinvertebrate studies, in which stream specific comparisons among stations located upstream and downstream from a known discharge or nonpoint source area, are used to assess impact.

Qualitative sampling of macroinvertebrate communities is the primary bioassessment technique used in ambient biological trend monitoring. A habitat assessment of general stream habitat availability and a substrate characterization is conducted at each site. Annual ambient biological monitoring is conducted during low flow "worst case" conditions in July - September. Some coastal plain streams that have no flow conditions in the summer months may be sampled in the winter (January-March). This technique may also be used in special studies for the purpose of determining if, and to what extent, a wastewater discharge or nonpoint source runoff is impacting the receiving stream. A minimum of two sample locations, one upstream and one downstream from a discharge or runoff area, is collected. At least one downstream recovery station is also established when appropriate. Sampling methodology follows procedures described in Standard Operating Procedures, Biological Monitoring. Only sites described as 'BIO' will collect information on the macroinvertebrate communities used in the ambient biological trend monitoring.

Many pollutants may be components of point source discharges, but may be discharged in a discontinuous manner, or at such low concentrations that water column sampling for them is impractical. Some pollutants are also common in nonpoint source runoff, reaching waterways only after a heavy rainfall; therefore, in these situations, the best media for the detection of these chemicals are sediment and fish tissue where they may accumulate over time. Their impact may also affect the macroinvertebrate community.

The ambient monitoring program has the capability of sampling a wide range of media and analyzing them for the presence or effects of contaminants. Ambient monitoring data (2004-2008) and trend data (1994- 2008) from 197 stations were reviewed for the Santee River Basin, 70 from the Santee River Basin, 102 from the Cooper River Basin, and 25 from the Santee Coastal Frontage Basin.

Natural Swimming Areas

Although all waters of the State are protected for swimming, some areas are more popular than others and may require closer monitoring. Currently monitored areas are located and discussed in the appropriate watershed evaluations.

Classified Waters, Standards, and Natural Conditions

The waters of the State have been classified in regulation based on the desired uses of each waterbody. State standards for various parameters have been established to protect all uses within each classification. The water-use classifications that apply to this basin are as follows.

Class ORW, or "outstanding resource waters", are freshwaters or saltwaters that constitute an outstanding recreational or ecological resource, or those freshwaters suitable as a source for drinking water supply purposes, with treatment levels specified by the Department.

Class FW, or "freshwaters", are freshwaters that are suitable for primary and secondary contact recreation and as a source for drinking water supply, after conventional treatment, in accordance with the requirements of the Department. These waters are suitable for fishing, and the survival and propagation of a balanced indigenous aquatic community of fauna and flora. This class is also suitable for industrial and agricultural uses.

Class SFH, or "shellfish harvesting" waters, are tidal saltwaters protected for shellfish harvesting, and are suitable also for uses listed in Classes SA and SB.

Class SA comprises "tidal saltwaters" suitable for primary and secondary contact recreation, crabbing and fishing. These waters are not protected for harvesting of clams, mussels, or oysters for market purposes or human consumption. The waters are suitable for the survival and propagation of a balanced indigenous aquatic community of marine fauna and flora.

Class SB are "tidal saltwaters" suitable for the same uses listed in SA. The difference between the Class SA and SB saltwater concerns the DO limitations. Class SA waters must maintain daily DO averages not less than 5.0 mg/l, with a minimum of 4.0 mg/l, and Class SB waters maintain DO levels not less than 4.0 mg/l.

Class GB, or "groundwaters", include all groundwaters of the State, unless classified otherwise, which meet the definition of underground sources of drinking water.

Site specific numeric standards (*) for surface waters may be established by the Department to replace the numeric standards found in Regulation 61-68 or to add new standards not contained in R.61-68. Establishment of such standards shall be subject to public participation and administrative procedures for adopting regulations. In addition, such site specific numeric standards shall not apply to tributary or downstream waters unless specifically described in the water classification listing in R.61-69.

The standards are used as instream water quality goals to maintain and improve water quality and also serve as the foundation of the Bureau of Water's program. They are used to determine permit limits for treated wastewater dischargers and any other activities that may impact water quality. Using mathematical Wasteload Allocation Models, the impact of a wastewater discharge on a receiving stream is predicted under critical conditions following R.61-68. These predictions are then used to set limits for different pollutants on the National Pollutant Discharge Elimination System (NPDES) permits issued by the Department. The NPDES permit limits are set so that, as long as a permittee (wastewater discharger) meets the established permit limits, the discharge should not cause a standards violation in the receiving stream. All discharges to the waters of the State are required to have an NPDES permit and must abide by those limits, under penalty of law.

Classifications are based on desired uses, not on natural or existing water quality, and are a legal means to obtain the necessary treatment of discharged wastewater to protect designated uses. Actual water quality may not have a bearing on a waterbody's classification. A waterbody may be reclassified if desired or existing public uses justify the reclassification and the water quality necessary to protect these uses is attainable. A classification change is an amendment to a State regulation and requires public participation, SCDHEC Board approval, and General Assembly approval.

Natural conditions may prevent a waterbody from meeting the water quality goals as set forth in the standards. The fact that a waterbody does not meet the specified numeric standards for a particular classification does not mean the waterbody is polluted or of poor quality. Certain types of waterbodies (i.e. swamps, lakes, tidal creeks) may naturally have water quality lower than the numeric standards. A waterbody can have water quality conditions below standards due to natural causes and still meet its use classification. A site specific numeric standard may be established by the Department after being subjected to public participation and administrative procedures for adopting regulations. Site specific numeric standards apply only to the stream segment described in the water classification listing, not to tributaries or downstream unspecified waters.

Water Quality Indicators

Water quality data are used to describe the condition of a waterbody, to help understand why that condition exists, and to provide some clues as to how it may be improved. Water quality indicators include physical, chemical, and biological measurements. The current State of S.C. Monitoring Strategy describes what parameters are sampled, where they are sampled, and how frequently. It is available on our website at www.scdhec.gov/environment/water/docs/strategy.pdf .

MACROINVERTEBRATE COMMUNITY

Macroinvertebrates are aquatic insects and other aquatic invertebrates associated with the substrates of waterbodies (including, but not limited to, streams, rivers, tidal creeks, and estuaries). Macroinvertebrates can be useful indicators of water quality because these communities respond to integrated stresses over time that reflect fluctuating environmental conditions. Community responses to various pollutants (i.e. organic, toxic, and sediment) may be assessed through interpretation of diversity, known organism tolerances, and in some cases, relative abundances and feeding types.

FISH TISSUE

Many pollutants occur in such low concentrations in the water column that they are usually below analytical detection limits. Over time many of these chemicals may accumulate in fish tissue to levels that are easily measured. By analyzing fish tissue it is possible to see what pollutants may be present in waterbodies at very low levels. This information can also be used to determine if consumption of the fish poses any undue human health concerns and to calculate consumption rates that are safe.

DISSOLVED OXYGEN

Oxygen is essential for the survival and propagation of aquatic organisms. If the amount of oxygen dissolved in water falls below the minimum requirements for survival, aquatic organisms or their eggs and larvae may die. A severe example is a fish kill. Dissolved oxygen (DO) varies greatly due to natural phenomena, resulting in daily and seasonal cycles. Different forms of pollution also can cause declines in DO.

Changes in DO levels can result from temperature changes or the activity of plants and other organisms present in a waterbody. The natural diurnal (daily) cycle of DO concentration is well documented. Dissolved oxygen concentrations are generally lowest in the morning, climbing throughout the day due to photosynthesis and peaking near dusk, then steadily declining during the hours of darkness.

There is also a seasonal DO cycle in which concentrations are greater in the colder, winter months and lower in the warmer, summer months. Streamflow (in freshwater) is generally lower during the summer and fall, and greatly affects flushing, reaeration, and the extent of saltwater intrusion, all of which affect dissolved oxygen values.

BIOCHEMICAL OXYGEN DEMAND

Five-day biochemical oxygen demand (BOD_5) is a measure of the amount of dissolved oxygen consumed by the decomposition of carbonaceous and nitrogenous matter in water over a five-day period. The BOD_5 test indicates the amount of biologically oxidizable carbon and nitrogen that is present in wastewater or in natural water. Matter containing carbon or nitrogen uses dissolved oxygen from the water as it decomposes, which can result in a dissolved oxygen decline. The quantity of BOD_5 discharged by point sources is limited through the National Pollutant Discharge Elimination System (NPDES) permits issued by the Department. The discharge of BOD_5 from a point source is restricted by the permits so as to maintain the applicable dissolved oxygen standard.

pH

pH is a measure of the hydrogen ion concentration of water, and is used to indicate degree of acidity. The pH scale ranges from 0 to 14 standard units (SU). A pH of 7 is considered neutral, with values less than 7 being acidic, and values greater than 7 being basic.

Low pH values are found in natural waters rich in dissolved organic matter, especially in Coastal Plain swamps and black water rivers. The tannic acid released from the decomposition of vegetation causes the tea coloration of the water and low pH. High pH values in lakes during warmer months are associated with high phytoplankton (algae) densities. The relationship between phytoplankton and daily pH cycles is well established. Photosynthesis by phytoplankton consumes carbon dioxide during the day, which results in a rise in pH. In the dark, phytoplankton respiration releases carbon dioxide. In productive lakes, carbon dioxide decreases to very low levels, causing the pH to rise to 9-10 SU.

FECAL COLIFORM BACTERIA

Fecal coliform bacteria are present in the digestive tract and feces of all warm-blooded animals, including humans, poultry, livestock, and wild animal species. Fecal coliform bacteria are themselves generally not harmful, but their presence indicates that surface waters may contain pathogenic microbes. Diseases that can be transmitted to humans through water contaminated by improperly treated human or animal waste are the primary concern. At present, it is difficult to distinguish between waters contaminated by animal waste and those contaminated by human waste.

Public health studies have established correlations between fecal coliform numbers in recreational and drinking waters and the risk of adverse health effects. Based on these relationships, the USEPA and SCDHEC have developed enforceable standards for surface waters to protect against adverse health effects from various recreational or drinking water uses. Proper waste disposal or sewage treatment prior to discharge to surface waters minimizes this type of pollution.

NUTRIENTS

Oxygen demanding materials and plant nutrients are common substances discharged to the environment by man's activities, through wastewater facilities and by agricultural, residential, and stormwater runoff. The most important plant nutrients, in terms of water quality, are phosphorus and nitrogen. In general, increasing nutrient concentrations are undesirable due to the potential for accelerated growth of aquatic plants, including algae.

The forms of nitrogen routinely analyzed at SCDHEC stations are ammonia and ammonium nitrogen (NH_3/NH_4), total Kjeldahl nitrogen (TKN), and nitrite and nitrate nitrogen (NO_2/NO_3). Ammonia and ammonium are readily used by plants. TKN is a measure of organic nitrogen and ammonia in a sample. Nitrate is the product of aerobic transformation of ammonia, and is the most common form used by aquatic plants. Nitrite is usually not present in significant amounts. Total nitrogen is the sum of TKN and NO_2/NO_3.

Total phosphorus (TP) is commonly measured to determine phosphorus concentrations in surface waters. TP includes all of the various forms of phosphorus (organic, inorganic, dissolved, and particulate) present in a sample.

CHLOROPHYLL *a*

Nuisance plant growth can create imbalances in the aquatic community, as well as aesthetic and access issues. Invasive growth of rooted aquatic vegetation can clog boat motors and create disagreeable conditions for swimming and water skiing. High densities of microscopic algae (phytoplankton) can cause wide fluctuations in pH and dissolved oxygen, and can cause undesirable shifts in the composition of aquatic life, or even fish kills. Chlorophyll *a* is a dominant photosynthetic pigment in plants and is used as an indicator of the density of phytoplankton in the water column. The process of cultural eutrophication, from increased plant nutrients, is particularly noticeable in lakes. Continuous flushing in streams prevents the development of significant phytoplankton populations and the resultant chemical changes in water quality.

TURBIDITY

Turbidity is an expression of the scattering and absorption of light through water. The presence of clay, silt, fine organic and inorganic matter, soluble colored organic compounds, and plankton and other microscopic organisms increases turbidity. Increasing turbidity can be an indication of increased runoff from land. It is an important consideration for drinking water as finished water has turbidity limits.

TOTAL SUSPENDED SOLIDS

Total Suspended Solids (TSS) are the suspended organic and inorganic particulate matter in water. Although increasing TSS can also be an indication of increased runoff from land, TSS differs from turbidity in that it is a measure of the mass of material in, rather than light transmittance

through, a water sample. High TSS can adversely impact fish and fish food populations and damage invertebrate populations. There are no explicit State standards for TSS.

HEAVY METALS

Concentrations of cadmium, chromium, copper, lead, mercury, and nickel in water are routinely measured by the Department to compare to State standards intended to protect aquatic life and human health. These metals occur naturally in the environment, and many are essential trace elements for plants and animals. Human activities, such as land use changes and industrial and agricultural processes have resulted in an increased flux of metals from land to water. Atmospheric inputs are also recognized as important sources of metals to aquatic systems. Metals are released to the atmosphere from the burning of fossil fuels (coal, oil, gasoline), wastes (medical, industrial, municipal), and organic materials. The metals are then deposited on land and in waterways from the atmosphere via rainfall and attached to particulates (dry deposition).

Assessment Methodology

The Watershed Water Quality Assessment is a geographically-based document that describes, at the watershed level, water quality as well as conditions and activities related to water quality. This section provides an explanation of the information assessment methodology used to generate the watershed-level summaries. Water quality data summaries used in this assessment are presented in Appendices A and B.

USE SUPPORT DETERMINATION

Physical, chemical and biological data were evaluated, as described below, to determine if water quality met the water quality criteria established to protect the State classified uses defined in S.C. Regulation 61-68, *Water Classifications and Standards*. Some waters may exhibit characteristics outside the appropriate criteria due to natural conditions. Such natural conditions do not constitute a violation of the water quality criteria. To determine the appropriate classified uses and water quality criteria for specific waterbodies and locations, refer to S.C. Regulation 61-69, *Classified Waters*, in conjunction with S.C. Regulation 61-68.

At the majority of SCDHEC's surface water monitoring stations, samples for analysis are collected as surface grabs once per month, quarter, or year, depending on the parameter. Grab samples collected at a depth of 0.3 meters are considered to be a surface measurement. For the purpose of assessment, only surface samples are used in standards comparisons and trend assessments. Because of the inability to target individual high or low flow events on a statewide basis these data are considered to represent typical physical conditions and chemical concentrations in the waterbodies sampled. All water and sediment samples are collected and analyzed according to standard procedures (SCDHEC 1997, 2001).

Results from water quality samples can be compared to State and USEPA criteria, with some restrictions due to time of collection and sampling frequency. For certain parameters, the monthly sampling frequency employed in the ambient monitoring network is insufficient for strict interpretation of the standards. The USEPA does not define the sampling method or frequency other than indicating that it should be "representative." The grab sample method is considered to be representative for the purpose of indicating excursions relative to criteria, within certain considerations. A single grab sample is more representative of a one-hour average than a four-day average, more representative of a one-day average than a one-month average, and so on; thus, when inferences are drawn from grab samples relative to criteria, sampling frequency and the intent of the criteria must be weighed. When the sampling method or frequency does not agree with the intent of the particular criterion, any conclusion about water quality should be considered as only an indication of conditions, not as a proven circumstance.

Macroinvertebrate community structure is analyzed routinely, at selected stations, as a means of detecting adverse biological impacts on the aquatic fauna of the state's waters due to water quality conditions that may not be readily detectable in the water column chemistry.

This water quality assessment is based on the last complete five years of available quality assured physical, chemical, and biological data ***(2004-2008).***

AQUATIC LIFE USE SUPPORT

One important goal of the Clean Water Act, the South Carolina Pollution Control Act, and the State Water Quality Classifications and Standards is to maintain the quality of surface waters to provide for the survival and propagation of a balanced indigenous aquatic community of fauna and flora. The degree to which aquatic life is protected (Aquatic Life Use Support) is assessed by comparing important water quality characteristics and the concentrations of potentially toxic pollutants with numeric criteria.

Support of aquatic life uses is determined based on the percentage of numeric criteria excursions and, where data are available, the composition and functional integrity of the biological community. The term excursion is used to describe a measured pollutant concentration that is outside of the acceptable range as defined by the appropriate criterion. Some waters may exhibit characteristics outside the appropriate criteria due to natural conditions. Such natural conditions do not constitute a violation of the water quality criteria. A number of waterbodies have been given waterbody-specific criteria for pH and dissolved oxygen, which reflect natural conditions. To determine the appropriate numeric criteria and classified uses for specific waterbodies and locations, please refer to S.C. Regulation 61-68, *Water Classifications and Standards* and S.C. Regulation 61-69, *Classified Waters*.

If the appropriate criterion for **dissolved oxygen and pH** are contravened in 10 percent or less of the samples, the criterion is said to be fully supported. If the percentage of criterion excursions is greater than 10 percent, but less than or equal to 25 percent, the criterion is partially supported, unless excursions are due to natural conditions. If there are more than 25 percent

excursions, the criterion is not supported, unless excursions are due to natural conditions. The decision that criteria excursions are due to natural conditions is determined by consensus and/or the professional judgment of SCDHEC staff with specific local knowledge.

If the appropriate acute or chronic aquatic life criterion for any individual **toxicant** (**heavy metals, priority pollutants, ammonia**) is exceeded more than once, representing more than 10 percent of the samples collected, the criterion is not supported. If the acute or chronic aquatic life criterion is exceeded more than once, but in less than or equal to 10 percent of the samples, the criterion is partially supported.

The total recoverable metals criteria for **heavy metals** are adjusted to account for solids partitioning following the approach set forth in the Office of Water Policy and Technical Guidance on Interpretation and Implementation of Aquatic Life Metals Criteria, October 1, 1993, by Martha G. Prothro, Acting Assistant Administrator for Water, available from the Water Resource center, USEPA, 401 M St., SW, mail code RC4100, Washington, DC 20460; and 40CFR131.36(b)(1). Under this approach, a default TSS value of 1 mg/L is used. Where the metals criteria are hardness based, a default value of 25 mg/L is used for waters where hardness is 25 mg/l or less.

The calculation of the appropriate criterion value for **ammonia** requires the values of several associated field parameters measured concurrent with the ammonia sample collection. Where direct measurements of any of the parameters are lacking the ammonia value will not be used to determine compliance with the standards.

If the appropriate criterion for **turbidity** in all waters, and for waters with **numeric total phosphorus, total nitrogen, and chlorophyll-a** criteria is exceeded in more than 25 percent of the samples, the criterion is not supported. If the criterion is exceeded in more than 10 but less than 25 percent, sites are evaluated on a case-by-case basis to determine if local conditions indicate that classified uses are impaired. Among the characteristics considered are: hydrology and morphometry of the waterbody, existing and projected trophic state, characteristics of pollutant loadings and ongoing pollutant control mechanisms. If the criterion is exceeded in less than 10 percent of the samples, then the criterion is fully supported.

If the conclusion for any single parameter is that the criterion is “not supported”, then it is concluded that aquatic life uses are not supported for that waterbody, at that monitoring location. If there are no criteria that are “not supported”, but the conclusion for at least one parameter criterion is “partially supported”, then the conclusion is aquatic life uses are partially supported. Regardless of the number of samples, no monitoring site will be listed as partially or not supporting for any pollutant based a single sample result because of the possibility of an anomalous event.

The goal of the standards for aquatic life uses is the protection of a balanced indigenous aquatic community; therefore, biological data is the ultimate deciding factor, regardless of chemical conditions. If biological data shows a healthy, balanced community, the use is considered supported even if chemical parameters do not meet the applicable criteria.

MACROINVERTEBRATE DATA INTERPRETATION

Macroinvertebrate community assessment data are used to directly determine Aquatic Life Use Support and to support determinations based on water chemistry data. Macroinvertebrate community data may also be used to evaluate potential impacts from the presence of sediment contaminants. Aquatic and semi-aquatic macroinvertebrates are identified to the lowest practical taxonomic level depending on the condition and maturity of specimens collected. The EPT Index and the North Carolina Biotic Index are the main indices used in analyzing macroinvertebrate data. To a lesser extent, taxa richness and total abundance may be used to help interpret data.

The EPT Index or the Ephemeroptera (mayflies) - Plecoptera (stoneflies) - Trichoptera (caddisflies) Index is the total taxa richness of these three generally pollution-sensitive orders. EPT values are compared with least impacted regional sites. The Biotic Index for a sample is the average pollution tolerance of all organisms collected, based on assigned taxonomic tolerance values. A database is currently being developed to establish significant EPT index levels to be used in conjunction with the Biotic Index to address aquatic life use support.

Taxa richness is the number of distinct taxa collected and is the simplest measure of diversity. High taxa richness is generally associated with high water quality. Increasing levels of pollution progressively eliminate the more sensitive taxa, resulting in lower taxa richness. Total abundance is the enumeration of all macroinvertebrates collected at a sampling location. When gross differences in abundance occur between stations, this metric may be considered as a potential indicator.

RECREATIONAL USE SUPPORT

Recreational use support is defined as the degree to which the swimmable goal of the Clean Water Act is attained and is based on the frequency of fecal coliform bacteria excursions. A fecal coliform excursion is defined as an occurrence of a bacteria concentration greater than 400/100 ml for all surface water classes. Comparisons to the bacteria geometric mean standard are not considered appropriate based on sampling frequency and the intent of the standard. If 10 percent or less of the samples are greater than 400/100 ml, then recreational uses are said to be fully supported. If the percentage of standards excursions is greater than 10 percent, but less than or equal to 25 percent, then recreational uses are said to be partially supported. If the percentage of excursions is greater than 25 percent, then it is considered to represent nonsupport of recreational uses.

FISH CONSUMPTION USE SUPPORT

The Department uses a risk-based approach to evaluate fish tissue data and to issue consumption advisories in affected waterbodies. This approach contrasts the average daily exposure dose to the reference dose (RfD). Using these relationships, fish tissue data are interpreted by determining the consumption rates that would not be likely to pose a health threat to adult males and nonpregnant adult females. Because an acceptable RfD for developmental neurotoxicity has not been developed, pregnant women, infants, and children are advised to avoid consumption of fish from any waterbody where a mercury advisory was issued.

Fish consumption use support is determined by the occurrence of advisories or bans on consumption for a waterbody. For the support of fish consumption uses, a fish consumption advisory indicates partial use support, a consumption ban indicates nonsupport of uses. Fish consumption advisories are updated annually in the spring. For background information and the most current advisories please visit http://www.scdhec.gov/environment/water/fish/index.htm .

DRINKING WATER USE SUPPORT

Nonattainment of drinking water use is indicated if the median concentration of the ambient surface water data for any pollutant exceeds the appropriate drinking water Maximum Contaminant Level (MCL), based on a minimum of three samples. Where MCLs do not exist, SCDHEC may use or develop other criteria such that pollutant concentrations or amounts do not interfere with drinking water use, actual or intended, as determined by SCDHEC.

Additional Screening and Prioritization Tools

Evaluation of water quality data and other supplemental information facilitates watershed planning. Information from the following sources is used to develop watershed-based protection and prevention strategies.

LONG-TERM TREND ASSESSMENT

As part of the watershed water quality assessments, surface data from each station are analyzed for statistically significant long-term trends using the Seasonal Kendall Test Without Correction (SKWOC) for significant serial correlation, using a program written in-house using SAS. Flows are not available for most stations, and the parametric concentrations are not flow-corrected. Seasonal Kendall's Tau Analysis is used to test for the presence of a statistically significant trend of a parameter, either increasing or decreasing, over a fifteen-year period. It indicates whether the concentration of a given parameter is exhibiting consistent change in one direction over the specified time period. A two sided test at p=0.1 is used to determine statistically significant trends, and the direction of trend. An estimate of the magnitude of any statistically significant trend is calculated.

A rigorous evaluation for trends in time-series data usually includes a test for autocorrelation. The data are not tested for autocorrelation prior to the trend analysis. It is felt that autocorrelation would not seriously compromise a general characterization of water quality trends based on such a long series of deseasonalized monthly samples.

One of the advantages of the seasonal Kendall test is that values reported as being below detection limits (DL) are valid data points in this nonparametric procedure, since they are all considered to be tied at the DL value. When the DL changed during the period of interest, all values are considered to be tied at the highest DL occurring during that period. Since it is possible to measure concentrations equal to the value of the DL, values less than DL are reduced by subtraction of a constant so that they remain tied with each other, but are less than the values equal to the DL. Since fecal coliform bacteria

detection limits vary with sample dilution, there is no set DL; therefore, for values reported as less than some number, the value of the number is used.

For the purposes of this assessment, long-term trends in selected parameters were examined using data collected from 1994 through 2008.

Shellfish Water Quality

The shellfish-monitoring program provides the database that is used in conducting a comprehensive evaluation of each shellfish growing area. Evaluations of growing areas, which meet National Shellfish Sanitation Program requirements, are conducted annually. Routine bacteriological monitoring and subsequent laboratory analyses of water quality from approximately 465 strategically located sample sites are conducted monthly. South Carolina currently has 25 management areas comprising approximately 578,000 surface acres of estuarine and coastal riverine habitat suitable for the cultivation and harvest of molluscan shellfish. These management areas are assigned water quality classifications for the primary purpose of public health protection. The shellfish areas in the Santee River Basin are located in the Trident and Waccamaw Management Areas. All standards, monitoring methodology, and laboratory analyses comply with guidance set forth in the National Shellfish Sanitation Program Model Ordinance. The Department uses combinations of the following harvesting classifications for shellfish area management:

Approved - Areas that are normally open for the direct marketing of shellfish for human consumption. Approved areas must not exceed an established water quality standard.

Conditionally Approved - Areas that meet criteria for an Approved classification except under predictable conditions. Closure criteria and subsequent re-opening procedures are described in an area-specific management plan.

Restricted - Areas exceeding Approved area water quality standards and normally closed for direct harvesting activities but where harvesting may be allowed by special permit.

Prohibited – Areas that are administratively closed for the harvesting of shellfish for any purposes related to human consumption. These closures are established adjacent to permitted wastewater discharges, marina facilities, or areas containing multiple point sources of pollution. The Prohibited classification is not based upon violation of a bacteriological standard.

For background information and the most current evaluation, please visit
http://www.scdhec.gov/environment/water/shellfish.htm

Ocean Water Quality

SCDHEC's Ocean Water Quality Monitoring Program allows the public to make informed decisions concerning recreating in waters with the potential to cause adverse health effects. Routine monitoring of ocean front beaches by SCDHEC began in 1998 in Horry and Georgetown counties and was expanded to include all coastal counties in 2000. Beginning in 2002, SCDHEC has been awarded grant monies by EPA under the Beaches Environmental Assessment and Coastal Health (BEACH) Act. This grant money has allowed South Carolina to continue and to enhance a comprehensive monitoring and public notification program. To effectively allocate available resources, EPA required all monitoring and notification efforts be based on potential risk and intensity of use. An initial evaluation and classification of all beaches was performed to establish a three-tier monitoring program with Tier 1 beaches being highest priority. More information on the South Carolina Beach Program can be found online at: http://www.scdhec.gov/environment/water/ow.htm.

Groundwater Quality

The state of South Carolina depends upon its groundwater resources to supply an estimated 40 percent of its residents. To monitor the ambient quality of this valuable resource, a network of existing public and private water supply wells has been established that provides groundwater quality data representing all of the State's major aquifers (see SCDHEC's Ambient Groundwater Quality Monitoring Network Report for listing of groundwater quality data). A great deal of monitoring is also being carried out at regulated sites with known or potential groundwater contamination (see SCDHEC's South Carolina Groundwater Contamination Inventory).

The ambient monitoring network has been designed to avoid wells in areas of known or potential contamination in order to analyze natural aquifer conditions. Information collected can then be used to identify variations in water chemistry among the major aquifers of South Carolina and give a general understanding of the groundwater conditions throughout the state at varying depths.

There are several aquifers underlying the Santee River Basin including: the Middendorf Aquifer, the Black Creek Aquifer, the Pee Dee Aquifer, the Black Mingo Aquifer, the Tertiary Limestone Aquifer, and the Surficial Aquifer. All well samples met state standards for Class GB groundwater (see section on Classified Waters, Standards, and Natural Conditions). The ambient monitoring well sites are indicated in the appropriate watershed evaluations and depicted on the watershed maps.

Middendorf Aquifer

The Middendorf Aquifer overlies the crystalline bedrock and associated saprolite and stretches from the upper coastal plain beyond the Atlantic coastline where it is buried by younger Coastal Plain sediments at maximum depths of over 3000 feet. The Middendorf Aquifer is tapped by only a few wells in the middle and lower coastal plain regions. The lower usage toward the coast is primarily a result of the presence of shallower, more economically developed aquifers such as the Black Creek and

Tertiary Limestone (Floridan) Aquifers. Middendorf sediments are comprised of fine to coarse quartzitic and arkosic sands, with discontinuous interbeds of sandy clays, kaolins, and gravel. Lower coastal plain water from the Middendorf Aquifer is often highly mineralized. The downdip increase in ion concentration is thought to be largely a function of the residence time of the water in the aquifer (flow is from the updip recharge area in the upper coastal plain toward downdip, coastal area), as well as from the possible mixing of more mineralized water from adjacent aquifers.

There is a downdip increase in pH from the upper coastal plain (Elgin, AMB-120) to wells in the lower Santee basin [e.g. Summerville (AMB-022), and Mt. Pleasant (AMB-119)]. This is in contrast to the much lower, acidic pH values found in the recharge area where buffering effects are not significant. Other changes in groundwater chemistry from the Middendorf's shallow recharge area to deeper portions of the aquifer include a less distinct downdip increase in fluoride concentrations.

Black Creek Aquifer

The Black Creek Aquifer consists of medium to coarse-grained glauconitic and phosphatic quartz sands interbedded with lenses of lignitic and micaceous clays. In some areas, the Black Creek Aquifer is hydraulically similar to, and screened in the same well with, the underlying Middendorf Aquifer. Yields of over 1000 gallons per minute (gpm) from the Black Creek are quite common when wells are screened in both aquifers. Yields that were recorded for Black Creek wells in the monitoring network ranged from 50 to 1500 gpm.

Similar to the Middendorf Aquifer, Black Creek Aquifer water chemistry also indicates a relationship between distance from recharge area and certain chemical concentrations. The high fluoride values in the Black Creek may be attributable to the presence of fluorapatite from the abundant fossilized shark teeth in the formation. Values of pH in the Black Creek Aquifer are generally alkaline, with a much less distinct trend toward higher downdip values than those observed in the Middendorf Aquifer. Samples obtained from the Black Creek aquifer display high variability in their composition, and samples from the recharge areas through the middle coastal plain often show no dominant ionic affinity. With increased distance from the recharge area, Black Creek waters become more buffered and are typically a sodium bicarbonate type.

Pee Dee Aquifer

The Pee Dee Aquifer constitutes a minor water resource in the majority of the study area even though the Pee Dee Formation is present throughout the entire Santee basin. Within the study area the Pee Dee is generally a poor producing aquifer, as grain size and lithology are non-conducive to high yielding wells. Analysis of a core near Charleston averaged 60% sand with the remainder being clay, or silt, while near Summerville, the Pee Dee has been described as a silty clay, and appears to behave more as a confining unit than an aquifer.

Water quality of the Pee Dee aquifer in the Santee basin has been documented from few wells completed in the formation. Of those wells, sodium bicarbonate-type water is the dominant species, becoming more saline with proximity to the Atlantic coast. The single Pee Dee aquifer well (AMB-053)

sampled during 2002 for the Ambient Groundwater Quality Network displayed an intermediate composition between calcium and sodium bicarbonate types and was hard due to an abundance of calcium and magnesium.

Black Mingo Aquifer

The Black Mingo Formation occurs stratigraphically above the Pee Dee Formation, and below the Santee limestone that comprises the Tertiary Limestone Aquifer. The Black Mingo is utilized in much of Berkeley and Dorchester Counties, and wells tapping the formation commonly also utilize the Tertiary Limestone Aquifer for additional capacity. Lithology of the Black Mingo is varied and is composed of several prominent members. Of those, black silty clay (shale), calcite- and silica-cemented sandstone beds, and grey limestone are common.

As found in other aquifer systems near the coast, water quality varies with depth and/or proximity to sources of saline water. Samples collected found that pH ranged between 6.6 near the recharge area to 8.0 reflecting the buffered bicarbonate nature of the water. Fluoride content in samples ranged between 0.1 ppm and 1.0 ppm, while dissolved silica concentrations in the samples from the Black Mingo Aquifer were high, with three of the four samples exceeding 40 ppm.

Tertiary Limestone Aquifer

The Tertiary Limestone Aquifer (also known as the Floridan Aquifer) is utilized primarily in Berkeley, Charleston, and Dorchester counties. The Tertiary Limestone Aquifer includes parts of the Cooper Group and the Santee Formation, and is composed of limestone that ranges from white, fossiliferous and pure to impure sandy and clayey varieties. Well yields vary from less than 10 gpm to greater than 400 gpm and are controlled by the occurrence of solution cavities and openings in the limestone. Water from the Tertiary Limestone Aquifer can be distinguished from the other noncarbonate aquifers in the state by its high concentration of calcium and bicarbonate ions and basic pH. This elevated ion concentration is also reflected in specific conductance and total dissolved solids (TDS) levels. In wells adjacent to the coast, sodium is the dominant cation, apparently a result of seawater/freshwater mixing. As many wells that are drilled into the Santee limestone also utilize the Black Mingo aquifer (and thus mix aquifer chemistries), no wells in the watershed were located that were open only to the Santee Limestone, thus no samples are taken from this aquifer.

Surficial Aquifer

The Surficial Aquifer is a shallow, lower coastal plain aquifer system that is utilized mainly as a source of private water supply for homes and small industry. The aquifer matrix is composed of sands deposited as dunes, barrier islands, near-shore deltas and submarine bars, and to a lesser extent alluvium adjacent to major rivers during the Pleistocene and Holocene epochs. The aquifer consists mainly of quartz sand with clay and silt lenses and is the water table aquifer over most of its extent. Due to its proximity to both the land surface and the ocean, the water from the Surficial Aquifer is predictably high in dissolved solids and displays elevated levels of sodium, chloride, some sulfur, and a widely varied pH

ranging from 6.2 to 8.6. Amounts of dissolved solids are also widely varied, ranging from 80 to 2400 ppm. Water pumped from this aquifer typically has an obvious odor and distinct taste but is still within standards for drinking water, except where it has been influenced by tidal water bodies or contamination. Despite the higher levels of dissolved solids, this aquifer is frequently utilized because its shallow nature allows for inexpensive well construction and yields are adequate for domestic use. It should be noted that due to the shallow, unconfined nature of the Surficial Aquifer, the system is extremely susceptible to contamination, both natural and man-made. Such sources of contamination include septic tanks, above and underground petroleum storage tanks, brackish water from tidal creeks and wetlands, and other point and non-point sources from roadways, and agricultural and industrial operations.

NPDES Program

The Water Facilities Permitting Division is responsible for drafting and issuing National Pollutant Discharge Elimination System (NPDES) permits. Facilities are defined as either "major" or "minor." For municipal permits, a facility is considered a "major" if it has a permitted flow of 1 MGD (million gallons per day) or more and is not a private facility. The determination for industrial facilities is based on facility and stream characteristics, including toxicity, amount of flow, BOD (biochemical oxygen demand) loading, proximity of drinking water source, potential to exceed stream standards, and potential effect on coastal waters.

Permitting Process

A completed draft permit is sent to the permittee, the SCDHEC District office, and if it is a major permit, to the USEPA for review. A public notice is issued when the permit draft is finalized. Comments from the public are considered and, if justified, a public hearing is arranged. Both oral and written comments are collected at the hearing, and after considering all information, the Department staff makes the decision whether to issue the permit as drafted, issue a modified permit, or to deny the permit. Everyone who participated in the process receives a notice of the final decision. A copy of the final permit will be sent to anyone who requests it. Staff decisions may be appealed according to the procedures in R.61-72 and the rule of the Administrative Law Court of South Carolina.

The permitting Divisions use general permits with statewide coverage for certain categories of discharges. Discharges covered under general permits include utility water, potable surface water treatment plants, potable groundwater treatment plants with iron removal, petroleum contaminated groundwater, mine dewatering activities, aquaculture facilities, bulk oil and gas terminals, hydrostatic test waters (oil & gas lines), and vehicle wash waters. State Land application systems for land disposal and lagoons are also permitted.

Wasteload Allocation

A wasteload allocation (WLA) is the portion of a stream's assimilative capacity for a particular pollutant that is allocated to an existing or proposed point source discharge. Existing WLAs are updated during the basin review process and included in permits during the normal permit expiration and reissuance process. New WLAs are developed for proposed projects seeking a discharge permit or for existing discharges proposing to increase their effluent loading at the time of application. Wasteload allocations for oxygen demanding parameters and nutrients are developed by the Department's modeling staff, and WLAs for toxic pollutants and metals are developed by the appropriate permitting division.

The ability of a stream to assimilate a particular pollutant is directly related to its physical and chemical characteristics. Various techniques are used to estimate this capacity. Simple mass balance/dilution calculations may be used for a particular conservative (nondecaying) pollutant while complex models may be used to determine the fate of nonconservative pollutants that degrade in the environment. Waste characteristics, available dilution, and the number of discharges in an area may, along with existing water quality, dictate the use of a simple or complex method of analysis. Projects that generally do not require complex modeling include: groundwater remediation, noncontact cooling water, mine dewatering, air washers, and filter backwash. Streams that have been modeled are indicated on the watershed maps.

Streams are considered either effluent limited or water quality limited based on the level of treatment required of the dischargers to that particular portion of the stream. In cases where the USEPA published effluent guidelines and the minimum treatment levels required by law are sufficient to maintain instream water quality standards, the stream is said to be effluent limited. Streams lacking the assimilative capacity for a discharge at minimum treatment levels are said to be water quality limited. In cases where better than technology limits are required, water quality, not minimum treatment requirements, controls the permit limits. The Department's modeling staff develops limits for numerous parameters including ammonia nitrogen (NH3-N), dissolved oxygen (DO), and five-day biochemical oxygen demand (BOD_5). Limits for other parameters, including metals, toxics (including total residual chlorine), and nutrients are developed by the Water Facilities Permitting Division in conjunction with support groups within the Department.

Nonpoint Source Management Program

Nonpoint source (NPS) water pollution, sometimes called "runoff pollution" or "polluted runoff" does not result from a discharge at a specific, single location (or point), but generally comes from diffuse, numerous sources. Runoff occurring after a rain event may transport sediment from plowed fields, construction sites, or logging operations, pesticides and fertilizers from farms and lawns, motor oil and grease deposited on roads and parking lots, or bacteria containing waste from agricultural animal facilities or malfunctioning septic systems. The rain moves the pollutants across

the land to the nearest waterbody or storm drain where they may impact the water quality in creeks, rivers, lakes, estuaries, and wetlands. NPS pollution may also impact groundwater when it is allowed to seep or percolate into aquifers. Adverse effects of NPS pollution include physical destruction of aquatic habitat, fish kills, interference with or elimination of recreational uses of a waterbody (particularly lakes), closure of shellfish beds, reduced water supply or taste and odor problems in drinking water, and increased potential for flooding because waterbodies become choked with sediment.

Congress recognized the growing problem of nonpoint source pollution in the late 1980s, and added NPS provisions to the federal law. Section 319 of the 1987 Amendments to the Clean Water Act required states to assess the nonpoint source water pollution associated with surface and groundwater within their borders and then develop and implement a management strategy to control and abate the pollution. The first Assessment of Nonpoint Source Pollution in South Carolina accomplished this purpose. The Department's Bureau of Water manages the ongoing State NPS Management Program, which develops strategies and targets waterbodies for priority implementation of management projects. Section 319 funds various voluntary efforts, including watershed-based improvement projects, which address many aspects of the pollution prevention management measure and provide education, outreach and technical assistance to various groups and agencies. Most of the projects are implemented by cooperating agencies.

Many land activities can individually or cumulatively contribute to NPS pollution. Eight categories of NPS pollution sources have been identified as contributing to water quality degradation in South Carolina: agriculture, forestry, urban areas, marinas and recreational boating, mining, hydrologic modification, wetlands and riparian areas disturbance, land disposal, and groundwater contamination. There are programs in place, both regulatory and voluntary to address all eight categories.

Agriculture

In South Carolina, pesticides, fertilizers, animal waste, and sediment are potential sources of agricultural NPS pollution. Agricultural activities also have the potential to directly impact the habitat of aquatic species through physical disturbances caused by livestock or equipment, and through the management of water. The State has laws and regulations that prevent NPS pollution from several agricultural sources including pesticides and animal waste. Funding programs, including those under §319 grants from EPA such as the Environmental Quality Incentives Program (EQIP) and the Conservation Reserve Program (CRP), cost share funds from USDA and are used to implement best management practices that are not covered under regulations. Agriculture land acreage is quantified in the basin-wide and individual watershed evaluations.

Silviculture

Forests comprise a major portion of South Carolina's land base. As of 2009, 67% (12.9 million acres) of the State's total land area is in timberland. Silvicultural practices associated with road access, harvest, and regeneration of timber present the most significant potential for NPS pollution. Silvicultural activities have the potential to degrade the State's waters through the addition of sediment, nutrients, organics, elevated temperature, and pesticides. Erosion and subsequent sedimentation are the most significant and widespread NPS problems associated with forestry practices. Sudden removal of large quantities of vegetation through harvesting or silvicultural practices can also increase leaching of nutrients from the soil system into surface waters and groundwaters. Most water quality impacts from forestry are temporary or short-lived, can be minimized or mitigated when Best Management Practices (BMPs) are applied, and the site recovers within 2-3 years as vegetation is re-established.

Overall compliance with South Carolina's Best Management Practices for Forestry is 98.6% for timber harvesting operations. Programs to abate or control NPS pollution from forestry activities are primarily the responsibility of the S.C. Forestry Commission (SCFC) and the United States Department of Agriculture's Forest Service (USFS), with other agencies having supplementary programs. SCFC provides the results of courtesy exams of forestry operations monthly to both SCDHEC's Division of Water Quality and to forest industries. Impacts from silviculture can be significant if BMPs are not properly applied. If water quality was impacted by a forestry operation, SCDHEC may institute enforcement action under the South Carolina Pollution Control Act. The United States Department of Agriculture's Natural Resources Conservation Service (USDA-NRCS) also provides technical assistance to government, landowners, and land users. Forest land acreage is quantified in the basin-wide and individual watershed evaluations.

Urban Areas

Urbanization has been linked to the degradation of urban waterways. The major pollutants found in runoff from urban areas include sediment, nutrients, oxygen-demanding substances, heavy metals, petroleum hydrocarbons, pathogenic bacteria, and viruses. Suspended sediments constitute the largest mass of pollutant loadings to receiving waters from urban areas. Construction sites are a major source of sediment erosion. Nutrient and bacterial sources of contamination include fertilizer and pesticide usage, pet wastes, leaves, grass clippings, and faulty septic tanks. Petroleum hydrocarbons result mostly from automobile sources. From April 2000 through July 2008, statewide population growth was 11.7 percent, while the coastal counties had an increase of 19.7 percent, during the same time period. This continuing development and population growth has the potential to make urban runoff the most significant source of pollution in waters of the State in the future, particularly in South Carolina's coastal communities. Urban land acreage is quantified in the basin-wide and individual watershed evaluations.

SCDHEC has a number of statewide programs that address components of urban NPS pollution. The Bureau of Water administers four permitting programs that control runoff from new and existing urban

sources. These include the Stormwater and Sediment Reduction program, Municipal Separate Storm Sewer System (MS4), Industrial NPDES Stormwater Permits, and the §401 water quality certification program (see p.30). Additional controls for urban runoff in the coastal zone are implemented by SCDHEC's Oceans and Coastal Resources Management (OCRM) through the State Coastal Zone Management Plan.

SCDHEC's Bureau of Environmental Health's Division of Onsite Wastewater Management administers the Onsite Sewage Disposal System program for the entire State, and oversees the permitting for the installation and management of septic systems. Although not associated with urban land use, this Division permits the septic systems of camping facilities if the facility is not on public sewer. The camp sewage is discharged into a public collection, treatment and disposal system if available, or an onsite wastewater treatment and disposal system (septic tank) is used.

Marinas and Recreational Boating

As with any human activity, marinas and associated recreational boating activities have the potential to impact the natural environment. Marine sanitation devices and illicit discharges can be sources of bacteria and oxygen demanding substances. Antifouling paints, exhausts, and maintenance activities can be sources of toxic metals, hydrocarbons, and other pollutants. Construction and maintenance activities, such as dredging, can negatively impact aquatic habitats and ecosystems. The physical characteristics of marinas (basin verses open water, high tidal flushing verses low or no tidal flushing, etc.) have the potential to impact water quality. To ensure that impacts associated with existing and proposed marinas are minimized to the greatest extent possible, the U.S. Army Corps of Engineers and the SCDHEC are responsible for permitting marinas in South Carolina. Within SCDHEC, the two offices that have marina permitting authority are the Office of Ocean and Coastal Resource Management (SCDHEC OCRM) and the Office of Environmental Quality Control (SCDHEC Bureau of Water). SCDHEC OCRM issues critical area permits for marinas within the critical area of the coastal zone. SCDHEC Bureau of Water issues permits for marinas at all other locations within the State and issues §401 Water Quality Certifications (see p.29) for marinas statewide. The U.S. Coast Guard and the S.C. Department of Natural Resources are responsible for managing recreational boating activity.

Mining

South Carolina's mineral production consists of non-fuel minerals that provide raw materials for construction products and a precious metal industry. Portland cement clays (kaolin and brick), sand and gravel, and crushed stone represent the majority of the total mineral value. As of June 30, 2012 there were 582 permitted mining operations in South Carolina totaling 78,282 acres (includes acreage for excavation, buffer, and mine reserves). There were 382.3 acres of mine land reclaimed during the past fiscal year, which brings the cumulative total of mine land reclaimed since the beginning of the mining and reclamation program to 18,650 acres. Surface mining has the potential to generate NPS pollution during mineral exploration, mine development extraction, transportation, mining and processing, product storage, waste disposal, or reclamation. Potential nonpoint source impacts related to mining activities

generally include hydrologic modification, erosion and sedimentation, water quality deterioration, fish and wildlife disturbances, and public nuisances.

The Department's Bureau of Land and Waste Management has primary regulatory responsibility for mining activities. Within the Bureau, the Division of Mining and Solid Waste Permitting is responsible for administering and implementing the S.C. Mining Act and its associated regulations. The Mining Act serves as part of an overall management plan for NPS pollution from active mines. Mining activities and locations are identified in the appropriate watershed evaluations.

Hydromodification

Hydrologic modification (or hydromodification) is defined as stream channelization, channel modification, and dam construction. These activities can negatively impact water quality, destroy or modify instream habitat and increase streambank and shoreline erosion. Two State permits, implemented by the SCDHEC, are involved in the implementation of management measures for hydromodification. A critical area permit is required for coastal waters, saltwater wetlands, and beaches defined as critical areas. A navigable waters permit is required for the remainder of the State. Implementation of State policy for dam construction is similar to control of other hydromodification projects in South Carolina, requiring the same State permits and certifications. In addition, dams require a State dam safety permit or a State stormwater management and sediment reduction permit. The Department must also issue Water Quality Certifications pursuant to §401 of the Federal Clean Water Act for dam construction and hydropower operations licensed by the Federal Energy Regulatory Commission.

Wetlands

The U.S. Fish and Wildlife Service is the principal Federal agency that provides information to the public on the extent and status of the Nation's wetlands. According to the most recent survey by the U.S. Fish and Wildlife Service (Dahl 1999), twenty-one percent of South Carolina is covered by 4,104,805 acres of wetlands. The U.S. Army Corps of Engineers implements the federal program for regulating development in wetlands with guidelines established by EPA. The Corps delineates wetlands and determines which wetlands fall under regulatory jurisdiction and require a federal permit for development. At the state level, the primary focus of wetland regulation is through the §401 Water Quality Certification. In accordance with §401 of the Federal Clean Water Act, a certification is required by the state for any Federal permit that may result in a discharge to waters of the state, including wetlands. Applications for wetland alterations may be denied or modified due to the special nature of a wetland or the functions that a wetland provides. Wetland impacts must be compensated for through restoration, enhancement, preservation, or creation and protected in perpetuity. Future development would be legally protected in these areas. Knowledge of areas that are restricted from development due to mitigation or special water classification is useful in planning future development in a watershed. Wetland acreage is quantified in the basin-wide and individual watershed evaluations.

Land Disposal

Solid Waste Landfills are permitted by the Bureau of Land and Waste Management under Regulation 61-107.19. There are three classifications of Solid Waste Landfills in South Carolina: Class One Landfills, Class Two Landfills, and Class Three Landfills. The landfill classifications are based upon the physical and chemical characteristics of the waste that is disposed in each landfill. There are currently 171 permitted landfills in South Carolina. This total represents 56 Class One Landfills that are limited to disposal of land-clearing debris; 91 Class Two Landfills that receive construction and demolition debris and waste streams that characterize at less than ten times the maximum contamination limits for drinking water; and 24 Class Three Landfill that receive municipal solid wastes and other nonhazardous waste streams that must be characterized prior to acceptance. Solid Waste Landfills are considered point sources of pollution and are thereby required to have BOW industrial storm water permits. Storm water runoff from these landfills may have an impact on the watershed if it is not managed correctly. Regulatory authority over solid waste disposal activities resides with SCDHEC's Bureau of Land and Waste Management. All active and closed Solid Waste Landfills are identified in the appropriate watershed evaluations.

Land application of wastewater or its by-products is a form of recycling because it allows recovery of elements needed for crop production. Land application of biosolids may be beneficial and environmentally sound when applied at the correct agronomic rate. Land applying biosolids can benefit farmers by offsetting the costs of fertilizer and lime while reducing the pressure on existing landfills. SCDHEC's Bureau of Water, Division of Water Monitoring, Assessment and Protection, Groundwater Management Section conducts a program to prevent and monitor groundwater contamination from nonpoint source pollution from land application of wastewater biosolids, solids, animal manures, biosolids, and sewage sludge. Land application, which is not a discharge, requires a "no discharge" permit (ND). All active industrial and municipal land applications are identified in the appropriate watershed evaluations.

Groundwater Contamination

All aquifers in the State are potential Underground Sources of Drinking Water and are protected under the S.C. Water Classifications and Standards. Groundwaters are thus protected in a manner consistent with the SCDHEC groundwater protection strategy. Staff hydrogeologists implement a screening program for nonpoint source impacts from pits, ponds, and lagoons associated with the permitted storage, treatment, and disposal of industrial and municipal wastewaters. In cases where a groundwater impact has been identified in violation of S.C. Water Classifications and Standards, appropriate actions will be coordinated with the facility owner to ensure regulatory compliance. The hydrogeologist coordinates with the facility owner to implement source identification, contaminant extent assessments, initiation of contaminant remediation systems, and performance evaluations of corrective actions. In addition to releases from wastewater treatment systems, the staff evaluates releases from other nonpoint sources such as above ground tanks, nonregulated fuel oil tanks, spills and/or leaks. Sites with confirmed groundwater impact will be placed under a Consent Agreement or an Order. SCDHEC's South Carolina Groundwater Contamination Inventory quantifies the status of groundwater quality in South Carolina. The sites in the

inventory are known groundwater contamination cases in the State, and are referenced by name and county, and updated annually.

Water Quantity

Any withdrawal of surface water over 3 million gallons in any month is required to be permitted and reported to the Department per the *Surface Water Withdrawal, Permitting, Use and Reporting Act* 49-4-10 (effect as of January 1, 2011). Any withdrawal of groundwater over 3 million gallons in any month is required to be reported to the Department and permits are required in counties designated as Capacity Use Areas (per the *Groundwater Use and Reporting Act* 49-5-10). Capacity Use Areas consist mainly of coastal counties where significant groundwater use has resulted in the lowering of groundwater levels in major aquifers.

Interbasin Transfer of Water

Requirements pertaining to the interbasin transfer of surface water between major river basins in the South Carolina are contained in the Surface Water Withdrawal, Permitting, Use and Reporting Act 49-4-10 and the Surface Water Withdrawal, Permitting, Use and Reporting Regulation R.61-119. The Regulation designates eight river basins to be used when applying the interbasin transfer (IBT) requirements of the Act. The transfer of water from one of these basins to any other river basin such that more than three million gallons of water are permanently lost to the basin of origin in any one month is considered an interbasin transfer. The primary difference between the permitting requirements for a non-interbasin transfer permit and a permit including an interbasin transfer of water is in the requirement for public notice. A permit involving an IBT must meet more stringent public notice and public hearing requirements. Public notice of an IBT permit application must be sent to a wider audience and a public hearing is required for an IBT application where it is optional for a non-IBT application. The status of interbasin transfer permits and registrations issued under the now repealed Interbasin Transfer of Water Regulation (former R. 121-10) is addressed in the Surface Water Withdrawal, Permitting, Use and Reporting Act 49-4-10.

Capacity Use Program

As authorized under the Groundwater Use and Reporting Act, the Department may declare a capacity use area if the resource is threatened by increasing demand or the potential problems of saltwater intrusion. The Capacity Use Program requires large groundwater users to obtain a permit in capacity use areas. Permits are required for groundwater withdrawn in excess of 3 million gallons in a month. Permit owners are required to report the amount of groundwater withdrawn per month on an annual basis. As part of the Capacity Use Program, the Department monitors a large number of wells to determine the relationship between water levels and pumpage in order to determine regional impacts and evaluate reserve supply. A reserve supply is maintained to offset drought conditions. The Santee Basin extends into the Trident

Capacity Area (Berkeley, Charleston, and Dorchester Counties), the Pee Dee Capacity Area (Williamsburg County), and the Waccamaw Capacity Use Area (Georgetown County).

Growth Potential and Planning

Land use and management can define the impacts to water quality in relation to point and nonpoint sources. Assessing the potential for an area to expand and grow allows for water quality planning to occur and, if appropriate, increased monitoring for potential impairment of water quality. Indicators used to predict growth potential include water and sewer service, road and highway accessibility, and population trends. These indicators and others were used as tools to determine areas having the greatest potential for impacts to water quality as a result of development.

Watershed boundaries extend along topographic ridges and drain surrounding surface waters. Roads are commonly built along ridge tops with the best drainage conditions. Cities often develop in proximity to ridges as a result of their plateau terrain. It is not uncommon, then, to find cities or road corridors located along watershed boundaries, and thus influencing or impacting several watersheds.

SCDHEC's Strategic Plan for 2005-2010 (www.scdhec.gov/news/releases/pdf files/Stratpln.pdf) acknowledges that growth issues are best handled at the local government level. SCDHEC's role is to work with local governments and communities to help them understand the importance of planning for smart growth: buffers, greenspaces, mass transit, subdivision and roadway planning, bike paths and bike lanes, and park and ride lots. SCDHEC can also provide assistance in helping local entities access information and provide consultation on technical issues such as the establishment of buffers and watershed stormwater planning. Many counties in the Santee River Basin lack county wide zoning ordinances; therefore, there is little local regulatory power to influence the direction or magnitude of regional growth. The majority of municipalities have zoning ordinances in place; however, much of the growth takes place just outside the municipal boundaries, where infrastructure is inadequate. Section 208 of the Clean Water Act serves to encourage and facilitate the development and implementation of areawide waste treatment management plans. South Carolina's water quality management plans support consolidation of wastewater treatment facilities into larger regional systems.

The regional Councils of Government (COGs) located in the Santee River Basin include the Berkeley-Charleston-Dorchester COG and the Waccamaw Regional COG. Growth potential reported in the individual watershed evaluations are updated by the COGs active in that watershed.

Watershed Protection and Restoration Strategies

SCDHEC's Bureau of Water is responsible for ensuring that South Carolina's water is safe for drinking and recreation, and suitable to support aquatic life. This section provides an overview of other important Bureau programs and strategies applied statewide to protect and restore water quality. The point and nonpoint source controls described previously assist with achieving these goals.

Under §303(d) of the Federal Clean Water Act, each state is required to provide a comprehensive inventory of impaired waters for which existing required pollution controls are not stringent enough to achieve State water quality standards or Federal Clean Water Act goals. This biennial list, commonly referred to as the "303(d) list", is the basis for targeting waterbodies for watershed-based solutions. A copy of the current §303(d) list can be obtained by contacting the Bureau of Water (803-898-4300) or online at www.scdhec.gov/water. Several Bureau programs address these impaired streams in an effort to restore them.

Total Maximum Daily Load

A Total Maximum Daily Load (TMDL) is the calculated maximum allowable pollutant loading to a waterbody at which water quality standards are maintained. A TMDL is made up of two main components, a load allocation and a wasteload allocation. A load allocation is the portion of the receiving water's loading capacity attributed to existing or future nonpoint sources or to natural background sources. The waste load allocation is the portion of a receiving water's loading capacity allocated to an existing or future point source.

A TMDL is a means for recommending controls needed to meet water quality standards in a particular water or watershed. Historically, the typical TMDL has been developed as a wasteload allocation, considering a particular waterbody segment, for a particular point source, to support setting effluent limitations. In order to address the combined cumulative impacts of all sources, broad watershed-based TMDLs are now being developed.

The TMDL process is linked to all other State water quality activities. Water quality impairments are identified through monitoring and assessment. Watershed-based investigations result in source identification and TMDL development. TMDLs form links between water quality standards and point and nonpoint source controls. Where TMDLs are established, they constitute the basis for NPDES permits and for strategies to reduce nonpoint source pollution. The effectiveness and adequacy of applied controls are evaluated through continued monitoring and assessment.

Funding for TMDL implementation is currently available with USEPA's §319 of the Clean Water Act grants. For more information, see the Bureau of Water web page www.scdhec.gov/water or call the TMDL Program at (803) 898-4300.

Antidegradation Implementation

The State's Antidegradation Policy as part of S.C. Regulation 61-68 is represented by a three-tiered approach to maintaining and protecting various levels of water quality and uses; streams included on the §303(d) list are addressed under Tier 1. Tier 1 antidegradation policies apply to all waters of the State and require that existing uses and the minimum level of water quality for those uses be maintained and protected. Tier 2 policies apply to high quality water where the water quality exceeds the mandatory minimum levels to support the Clean Water Act's goals of propagation of fish, shellfish, wildlife, and recreation in and on the water. The Department considers all the waters of the State as high quality waters. Tier 3 policies apply to the maintenance of water quality in waters that constitute an Outstanding National Resource Water and do not allow for any permanent permitted dischargers. Outstanding Resource Waters of the State are provided a higher level of protection than Tier 2, but do not meet the requirements of Tier 3.

Tier 1 protection will be implemented when applying numeric standards included in Regulation 61-68 for human health, aquatic life, and organoleptic protection as follows: if a waterbody has been affected by a parameter of concern causing it to be on the §303(d) list, then the Department will not allow a permitted net increase of loading for the parameter of concern unless the concentration will not contribute to a violation of water quality standards. This no net increase will be achieved by reallocation of existing total load(s) or by meeting applicable water quality standard(s) at the end-of-pipe. No discharge will be allowed to cause or contribute to further degradation of a §303(d) listed waterbody.

The Antidegradation Rules apply to both nonpoint source pollution and for point sources into impaired waters. Many activities contributing to nonpoint source pollution are controlled with voluntary measures. The Department implements permitting or certification programs for some of these activities and has the opportunity to ensure compliance with the Antidegradation Rules. The activities of primary concern are land development projects which are immediately adjacent to and discharge runoff or stormwater into impaired waters.

§401 Water Quality Certification Program

If a Federal permit for a discharge into waters of the State, including wetlands, is required, the Department must issue Water Quality Certification pursuant to §401 of the Federal Clean Water Act. Certification is required for permits issued by the U.S. Army Corps of Engineers for construction in navigable waters and for deposition of dredged or fill material.

Regulation 61-101 presents administrative and technical guidance for the water quality certification program and requires SCDHEC to consider whether or not a project is water dependent; whether or not there are feasible alternatives which will have less adverse consequences on water quality and classified uses; the intended purpose of the project; and all potential water quality impacts of the project, both direct and indirect, over the life of the project. Any project with the potential to affect waters of the State must be conducted in such a manner as to maintain the specified standards and classified and existing water uses.

As a routine part of the §401 Water Quality Certification review process, the waterbody in question is identified as impaired or not impaired according to the §303(d) list. If it is impaired, the

parameter of concern is noted, along with any steps required to prevent further degradation of the water quality of that waterbody.

Stormwater Program

Stormwater discharges result from precipitation during rain events. Runoff washes pollutants associated with industrial activities (including construction activity), agricultural operations, and commercial and household sites directly into streams, or indirectly into drainage systems that eventually drain into streams. The SCDHEC Stormwater Permitting Program focuses on pollution prevention to reduce or eliminate stormwater pollution. The Department has general permitting authority for stormwater discharges associated with industrial activity, including construction. General NPDES permits SCR000000 and SCR100000 for industrial and construction activities, respectively, require permittees to develop and implement stormwater pollution prevention plans that establish best management practices to effectively reduce or eliminate the discharge of pollutants via stormwater runoff. The Construction, Stormwater and Agricultural Division is responsible for issuing NPDES stormwater permits to prevent degradation of water quality as well as for issuing state sediment and erosion control permits for construction sites.

NPDES permits are issued under the authority of the federal Clean Water Act and the S.C. Pollution Control Act. The state sediment and erosion control permits are issued under the authority of two S.C. laws. The S.C. Stormwater Management and Sediment Reduction Act of 1991 addresses construction on land that is not state owned or managed. Currently, NPDES permits are required for: construction sites 1 acre and greater; construction sites in the coastal area that are within 1/2 mile of a receiving water body; and construction sites less than 1 acre on a case-by-case basis where water quality is a concern. Permits are required under the state sediment and erosion control for construction sites that are greater than 2 acres; however, there are exemptions under the law and regulation. The State Sediment and Erosion Program is somewhat duplicative of the NDPES Stormwater Program. The state program created by the 1991 Act can be delegated to local governments. SCDHEC's Office of Ocean and Coastal Resource Management (OCRM) oversees stormwater permitting in the coastal area. The Stormwater Permitting Section manages the program in the remainder of the state.

SCDHEC is assisted in implementing these regulations by many cities and counties that have been delegated to run a stormwater program under provisions of the 1991 Act and/or are owners of Municipal Separate Storm Sewer Systems (MS4) and required to run stormwater management programs under the NPDES program. MS4 will identify all impaired water bodies in a Stormwater Management Plan (SWMP). In addition, existing pollution discharge control methods will be identified and incorporated into the SWMP. Procedures, processes, and methods to control the discharge of pollutants from the MS4 into impaired waterbodies and publicly owned lakes included on the §303(d) list will be described in the SWMP. The effectiveness of these controls will be assessed and necessary corrective measures, if any, shall be developed and implemented.

NPDES MS4 permits allow communities to design SWMP that are suited for controlling pollutants in their jurisdiction. There are three population-based categories of MS4: large (population of 250,000 or greater), medium (population of 100,000 or more but less than 250,000), and small

(population less than 100,000). Large and medium MS4 have been regulated since the 1990s. Those small MS4 within the boundaries of an urbanized area are called Regulated Small MS4. MS4 NPDES Permits are required for all large, medium, and regulated small MS4. MS4 can extend over more than one 10-digit watershed or even 8-digit river basin as it follows municipal boundaries, so the same permit can be listed in multiple watersheds. The MS4 receiving stream listed in the individual watershed evaluations is the mainline stream of the 10-digit hydrologic unit. The initial receiving source of the MS4 may be a smaller tributary upstream.

South Carolina Animal Feeding Operations Strategy

Among the general categories of pollution sources, agriculture ranks as the number one cause of stream and lake impairment nationwide. Many diseases can potentially be contracted from drinking water or coming into contact with waters contaminated with animal wastes. The Department uses S.C. Regulation 61-43: *Standards for the Permitting of Agricultural Animal Facilities* to address the permitting of animal feeding operations (AFOs). Implementing these regulations and their corresponding compliance efforts are a priority for the Department in order to reduce public health and environmental impacts from AFOs. There are approximately 1,100 active AFOs in S.C. There are no federally defined concentrated animal feeding operations (CAFOs) in operation in South Carolina based on the EPA definition of a CAFO in the NPDES regulations. Using the Watershed Program cycle and the division of the State into five regions, AFOs will be monitored and inspected by region. The §303(d) list will be used to prioritize the inspections. After all the inspections have been made in a region, the Department will move to the river basins in the next region in the watershed cycle. The Department is continuing to work in cooperation and coordination with the U.S. Department of Agriculture, the Natural Resources Conservation Service, the S.C. Department of Agriculture, the S.C. Soil and Water Conservation Districts, and the Clemson Extension Service.

Sewer Overflow Strategy

Sanitary sewers are designed to collect municipal and industrial wastewater, with the allowance for some acceptable level of infiltration and inflow, and transport these flows to a treatment facility. When the sewer system is unable to carry these flows, the system becomes surcharged and an overflow may occur. Sewer overflows (SSOs) have existed since the introduction of separate sanitary sewers, and most overflows are caused by inadequate operation, maintenance, and management of the collection system.

The Department encourages utilities to embrace the principals of EPA's capacity Management, Operations, and Maintenance (cMOM) program. Through this program utilities can ensure adequate funding and capacity as well as a proactive approach to operations and maintenance. Those that have implemented cMOM programs have been able to significantly reduce or eliminate overflows from their collection systems. Additionally, the Department has adopted requirements for operation and maintenance of sewer systems in Regulation 61-9, Water Pollution Control Permits.

The Department's approach has been to shift resources historically applied to treatment plant inspections to include evaluations of pump stations and collection systems where problems are suspected.

To assist in identifying water quality violations related to SSOs, staff have utilized the 303(d) list of impaired waters to identify waters impacted by fecal coliform or other appropriate pollutants and correlate those with collection systems with incidences of SSOs. The Department's Enforcement Referral Procedures Document is to be used to determine when a collection system should be referred to enforcement for SSOs. The enforcement process allows for the Department to consider actions taken by the collection system such as: timely and proper notification, containment and mitigation of discharge, voluntarily conducting self evaluations, and requests for compliance assistance. The Department will take immediate action where it has been determined that SSOs have occurred and the collection system has not made timely and proper notification.

SCDHEC's Watershed Stewardship Programs

Public participation is an important component of the Department's Watershed Water Quality Management Program. Benefits to this interaction on the local level include improved public awareness about SCDHEC water programs, and increased local interest and participation in water quality improvement. Described below are some of the Department's water programs that encourage public interest and involvement in water quality. These programs and their contacts are listed on the Department's website at www.scdhec.gov/water.

Source Water Assessment Program

A safe, adequate source of drinking water is key to development of communities and the health of citizens. The Safe Drinking Water Act (SDWA) places an emphasis on protection of sources of drinking water. As a result of the 1996 amendments to the SDWA, source water protection has become a national priority. States are required to develop a plan for assessment of source waters for all federally defined public groundwater and surface water systems.

The Source Water Assessment Program (SWAP) involves determining the boundaries of the areas that are the source of waters for public water systems. For groundwater systems, these areas are defined using groundwater flow models. For surface water systems, a distance of 15 miles upstream from the surface water intake is the designated protection area (although certain areas within the basin will be segmented as being of greater vulnerability to contamination from overland flow, groundwater contributions to surface water, and direct spills into the surface water). Known and potential sources of contamination in the delineated area must be identified, and the inventoried sources evaluated to determine the susceptibility of public water systems to such contaminants. Assessments must be made available to the public.

Local involvement is a critical factor in the success of the SWAP, and local governments, citizen groups, environmental groups, water suppliers, and the Department must all work together to increase the general public's awareness of where drinking water comes from and how to better protect sources of drinking water. Implementation of source water protection activities largely occur at the local level, and local authorities may wish to base zoning and land-use planning on the source water assessments. The SWAP is a key part of the Department's watershed management approach. To avoid duplication, information gathered from existing regulatory programs and/or watershed protection efforts is utilized (e.g., ambient monitoring programs, TMDLs, etc.).

Consumer Confidence Reports

The Consumer Confidence Report (CCR) is an annual water quality report required of all community water systems. The rationale behind the CCR is that consumers have a right to know what is in their drinking water and where it comes from. These reports are to educate consumers and help them make informed

choices that affect the health of themselves and their families. All CCRs are to include the following basic components:

- the water source, its location, and the availability of source water assessment plan;
- information about the water system (name and telephone number of a contact person, opportunities for public participation, and information for non-English speaking populations if applicable);
- definitions of terms and abbreviations used in the report;
- table of detected contaminants including the known or likely source of the contaminants;
- the health effects language for Maximum Contaminant Level violations and an explanation of the violation;
- information on cryptosporidium, radon, and other contaminants if applicable; and
- educational information that includes an explanation of contaminants and their presence in drinking water, an advisory for immuno-compromised people, the Safe Drinking Water Hotline telephone number, and other statements about lead, arsenic, and nitrate if applicable.

Swimming Advisory Outreach

SCDHEC tests rivers, lakes and streams all over the State. Sometimes these tests show high amounts of bacteria for some streams and rivers. DHEC puts up a swimming advisory sign where high amounts of bacteria have been found and people commonly swim. For more information on the swimming advisories call the hotline at 1-800-360-5655. Information and tips on reducing NPS can be found on the swimming advisory website at www.scdhec.gov/environment/water/swim.htm.

Fish Advisory Outreach

Based on fish tissue monitoring results assessing mercury levels, SCDHEC and the Department of Natural Resources work together to provide annual fish consumption advisories that tell the public the right amounts and types of fish to eat in South Carolina. The advisories particularly focus on providing statewide advice for at-risk women and children. For more information and the most current advisories, please visit http://www.scdhec.gov/fish. For a hard copy of the advisories, call SCDHEC's toll-free Fish Consumption Advisory hotline at 1-888-849-7241.

Champions of the Environment

Champions of the Environment encourages, enables and recognizes youth environmental education projects that develop awareness, promote behavior change or improve and protect the water, air and land. Champions has been rewarding South Carolina's kindergarten through twelfth-grade students and teachers since 1993. Grant awards enable schools and communities to participate in activities such as protecting nesting sea turtles, reducing a school's carbon footprint, and protecting water quality; all positively impacting the environment and developing young environmental stewards. Champions is a unique public-private partnership between DHEC, industry partners, and the media. For more information contact the Champions of the Environment coordinator at 803-898-4300 or visit www.scdhec.gov/environment/water/champions/

Clean Water State Revolving Fund

Congress created the Clean Water State Revolving Fund (SRF) in 1987, to replace the §201 Construction Grants program. In doing so, 'state banks' were created to lend money for virtually any type of water pollution control infrastructure project. Project types include construction of wastewater treatment systems and nonpoint source pollution control. The interest rate on the loans is always below the current market rate. As repayments are made on the loans, funds are recycled to fund additional water protection projects. The vast majority of the SRF funds have been used for the construction of traditional municipal wastewater treatment systems. Because of its inherent flexibility, the SRF program is well suited to accommodate the watershed approach.

SRF loans are available to units of state, local, and regional government, and special purpose districts. South Carolina law prevents loans from being made directly to private organizations and individuals. Local governments such as cities and counties and other units of government such as Soil and Water Conservation Districts, Councils of Government, and Water and Sewer Districts are encouraged to apply for SRF loans for nonpoint source projects. Nonpoint source projects may include construction and maintenance of stormwater management facilities, establishment of a stormwater utility, purchase of land for wetlands and riparian zones, and implementation of source water protection assessments. For more information, view the State Revolving Fund web site www.scdhec.gov/srf .

Clean Marina Program

South Carolina's Clean Marine Program is part of an international effort, along with 24 other states and territories, to use best management practices to protect and improve water quality at marinas. By meeting prescribed environmental performance criteria, marinas can qualify to fly the Clean Marina flag to attract recreational and transient boaters to their facility. Water quality issues covered by the program include proper cleaning and painting, fuel and used oil management, sewage collection and removal, and emergency preparedness. The program is administered by the South Carolina Marine Association, which is governed by the Clean Marina Committee. The Clean Marina Committee consists of representatives from SCDHEC-OCRM, SCDNR, Palmetto Pride, and the commercial marine industry.

Citizen-Based Watershed Stewardship Programs

Throughout the Santee River Basin, water quality is a common interest among citizen groups. The issues and membership of these groups vary widely. Some of the citizen groups interested in water quality in the Santee River Basin are described below. To view the most current listing, visit our webpage at http://www.scdhec.gov/environment/water/shed/org.htm.

Charleston Waterkeeper

The Charleston Waterkeeper is member program of the nationwide Waterkeeper Alliance. They are focused on protecting water quality in the Ashley and Cooper Basins which includes Charleston Harbor, the Ashley, Cooper, Wando, Stono Rivers, and associated coastal areas. Their activities include patrolling the waters to ID pollution sources, supporting water quality research, outreach and education, volunteer monitoring, and engaging with regulatory authorities on water quality related permits and policy issues. http://charlestonwaterkeeper.org/

Santee Riverkeeper

The Santee Riverkeeper's mission is to protect and preserve the water quality of the Santee River including Lakes Marion and Moultrie. Among the activities of the Riverkeeper are: Education and Outreach, litter clean ups, press contacts, interacting with regulatory agencies. Toxic Waste, Mercury, stormwater pollution, and abandoned vessels are issues of particular focus.
http://santeeriverkeeper.org/

Michaux Conservancy

The Michaux Conservancy is most active in the North Charleston area with a particular emphasis given to Noisette Creek, an urban waterbody which has been identified as a future restoration project. The goal for their efforts in Noisette Creek is "…clean, accessible, enjoyable and scenic urban ecosystem for use by all current and future generations of North Charleston residents." They are also involved in educational activities both as a partner of the Ashley Cooper Consortium, and through learning activities targeted towards youth. http://www.michauxconservancy.org/current_programs.html

Sewee Association

The Sewee Association is a nonprofit whose mission is to promote and assist in the mission of SC's Coastal National Forests and National Wildlife Refuges. These are Cape Romain NWR, Ernest F. Hollings ACE Basin NWR, Waccamaw NWR and Francis Marion NF. They are involved in activities related to many facets of the coastal environment including water quality.
http://www.seweeassociation.org/

St. Julian's Cove Homeowners Association

The St. Julian's Cove Homeowners Association has been involved in working with property owners in the surrounding watershed to reduce nutrient and other pollutants to the cove located on the southern shore of Lake Marion. Educational programs are held with shoreline property owners and engagement with the Santee Cooper Authority have been underway for solutions to the algae blooms that have formed intermittently in the cove over the years.

Coastal Conservation League (CCL)

The CCL is a grassroots organization with the primary goal of environmental protection of the South Carolina Coastal Zone. The organization is active in promotion of "smart growth" initiatives and other land use issues, wetlands protection, water quality, and a variety of other issues. A legislative liaison is active at the state level to promote environmentally sound public policy.
http://coastalconservationleague.org/

Ashley Scenic River Advisory Council

As part of the S.C. Scenic Rivers Program, an advisory council was formed to develop a plan for managing the Ashley River Corridor. The advisory council, initiated by the South Carolina Department of Natural Resources, is composed of local landowners, conservation organizations, business representatives, and natural resource agency personnel. The council will propose recommendations for managing the natural, cultural, recreational, and historical assets of the Ashley Scenic River area.
http://www.dnr.sc.gov/water/envaff/river/scenic/ashley.html

Land Trusts

Both the Lord Berkeley Conservation Trust and Low Country Open Land Trust have been active in the Santee River basin. Efforts are geared towards acquiring property or easements for the preservation of natural areas.
http://lordberkeley.org/
http://www.lolt.org/

Santee River Basin Description

The ***Santee River Basin (hydrologic units 03050111 and 03050112)*** is located in Sumter, Clarendon, Calhoun, Orangeburg, Williamsburg, Georgetown, Charleston, and Berkeley Counties and encompasses 1,249 square miles. The 5 watersheds extend through the Upper and Lower Coastal Plain and Coastal Zone Regions. The Santee River Basin encompasses 799,227 acres of which 33.0% is forested land, 30.8% is forested wetland, 15.8% is agricultural land, 11.2% is water, 5.6% is nonforested wetland, 3.4% is urban land, and 0.2% is barren land. There are a total of 1,828.3 stream miles, 73,008.6 acres of lake waters, and 5,441.5 acres of estuarine areas in the Santee River Basin.

The Santee River is formed from the confluence of the Congaree and Wateree Rivers and flows through Lake Marion. The river is diverted in lower Lake Marion and either flows out of the Santee dam or is channeled along a 7.5 mile Diversion Canal to fill Lake Moultrie. The waters flowing through the Santee dam are joined by the Rediversion Canal, which connects Lake Moultrie and the (lower) Santee River, and continues to the Atlantic Ocean via the South Santee River and the North Santee River.

Physiographic Regions

The USDA Soil Conservation Service divided the State of South Carolina into six Major Land Resource Areas (MLRAs). The MLRAs are physiographic regions that have soils, climate, water resources, and land uses in common. The physiographic regions defining the Santee River Basin are as follows:

The **Upper Coastal Plain** is an area of gentle slopes with increased dissection and moderate slopes in the northwestern section that contain the State's major farming areas; elevations range from 100 to 450 feet.

The **Lower Coastal Plain** is an area that is mostly nearly level and is dissected by many broad, shallow valleys with meandering stream channels; elevations range from 25 to 125 feet.

The **Coastal Zone** is a mostly tidally-influenced area that is nearly level and dissected by many broad, shallow valleys with meandering stream channels; most of the valleys terminate in tidal estuaries along the coast; elevations range from sea level to about 25 feet.

Land Use/Land Cover

General land use/land cover mapping for South Carolina was derived from the 2006 National Land Cover Data (NLCD). The dataset is based on nationwide Landsat Thematic Mapper (TM) multispectral satellite images (furnished through the Multi-Resolution Land Characteristics (MRLC) consortium, coordinated by USEPA) using image analysis software to inventory the Nation’s land classes. The NLCD are developed by the USGS (EROS Data Center) using TM image interpretation, air photo interpretation, National Wetland Inventory data analysis, and ancillary data analysis.

Urban land is characterized by man-made structures and artificial surfaces related to industrial, commercial, and residential uses, as well as vegetated portions of urban areas.

Agricultural/Grass land is characterized by cropland, pasture, and orchards and may include some grass cover in urban, scrub/shrub, and forest areas.

Forest land is characterized by deciduous and evergreen trees not including forests in wetland settings.

Forested Wetland (swampland) is the saturated bottomland, mostly hardwood forests that are primarily composed of wooded swamps occupying river floodplains and isolated low-lying wet areas, primarily located in Coastal Plain.

Nonforested Wetland (marshland) is dependent on soil moisture to distinguish it from Scrub/Shrub since both classes contain grasses and low herbaceous cover; nonforested wetlands are most common along the coast and isolated freshwater areas found in the Coastal Plain.

Barren land is characterized by an unvegetated condition of the land, both natural (rock, beaches, unvegetated flats) and man-induced (rock quarries, mines, and areas cleared for construction in urban areas or clearcut forest areas).

Water (non-land) includes both fresh and tidal waters.

Soil Types

The dominant soil associations, or those soil series comprising, together, over 40% of the land area, were recorded for each watershed in percent descending order. The individual soil series for the Santee River Basin are described as follows.

Bladen soils are poorly drained soils on low, nearly level areas and low ridges.

Bohicket soils are very poorly drained soils, clayey throughout or mucky and underlain with clayey layers, frequently flooded.

Bonneau soils are deep, moderately well drained soils with loamy subsoil on ridges.

Cantey soils are moderately well drained soils with a loamy surface layer and a clayey or loamy subsoil and poorly drained soils with a loamy surface layer and a clayey subsoil.

Capers soils are very poorly drained soils, clayey throughout or mucky, and underlain with clayey layers, frequently flooded.

Chastain soils are poorly drained to well drained soils that are clayey or loamy throughout and are subject to flooding.

Chipley soils are moderately to excessively well drained soils, sandy throughout, on high ridges.

Emporia soils are well drained, gently sloping soils with surface and subsoils of loamy fine sand.

Faceville soils are well drained, sandy soils with a loamy or clayey subsoil.

Goldsboro soils are moderately well to poorly drained soils with loamy subsoil on nearly level ridges and in shallow depressions.

Hobcaw soils are nearly level, very poorly drained soils in depressions.

Leon soils are somewhat poorly drained to poorly drained, level to nearly level, sandy soils with weakly cemented layers stained by organic matter.

Levy soils are nearly level, very poorly drained soils, mucky throughout or loamy and underlain with clayey layers, rarely or frequently flooded with fresh water.

Lynchburg soils are moderately well to poorly drained soils, with loamy subsoil, on nearly level ridges and in shallow depressions.

Marlboro soils are well drained soils with a sandy or loamy surface layer and a loamy or clayey subsoil.

Noboco soils are well drained, sandy soils with a loamy or clayey subsoil.

Pantego soils are moderately well drained and well drained soils with a sandy surface layer and a loamy subsoil, and very poorly drained soils that are loamy throughout.

Paxville soils are somewhat to very poorly drained soils, with loamy subsoil, on low ridges and in depressions.

Rains soils are moderately well to poorly drained soils, with a loamy subsoil, on nearly level ridges and in shallow depressions.

Rutledge soils are somewhat poorly drained to moderately well drained, nearly level, sandy soils on ridges and poorly drained to very poorly drained, sandy soils in depressions.

Tawcaw soils are poorly drained to well drained soils that are clayey or loamy throughout and are subject to flooding.

Wagram soils are well drained to very poorly drained, depressional to nearly level and gently sloping soils with a loamy to sandy surface layer and a clayey to loamy subsoil.

Wahee soils are poorly drained soils on low, nearly level areas and low ridges.

Yauhannah soils are poorly drained to moderately well drained soils with a loamy subsoil, on nearly level ridges and in shallow depressions.

Yemassee soils are poorly drained to moderately well drained soils with a loamy subsoil, on nearly level ridges and in shallow depressions.

Slope and Erodibility

The definition of soil erodibility differs from that of soil erosion. Soil erosion may be more influenced by slope, rainstorm characteristics, cover, and land management than by soil properties. Soil erodibility refers to the properties of the soil itself, which cause it to erode more or less easily than others when all other factors are constant.

The soil erodibility factor, K, is the rate of soil loss per erosion index unit as measured on a unit plot, and represents an average value for a given soil reflecting the combined effects of all the soil properties that significantly influence the ease of soil erosion by rainfall and runoff if not protected. K values closer to 1.0 represent higher soil erodibility and a greater need for best management practices to minimize erosion and contain those sediments that do erode. The range of K-factor values in the Santee River Basin is from 0.12 to 0.24.

Fish Consumption Advisory

At the time of publication, a fish consumption advisory issued by SCDHEC is in effect for Lake Marion, the Rediversion Canal, the Santee River (from the Lake Marion dam to the South Santee River), South Santee River (from the Santee River to US Hwy 17/701 bridge), North Santee River (from the Santee River to U.S. Hwy 17/701 bridge), Wadmacon Creek, and Wambaw Creek advising people to limit the amount of some types of fish consumed from these waters. Fish consumption advisories are updated annually in March. For background information and the most current advisories please visit http://www.scdhec.gov/fish .

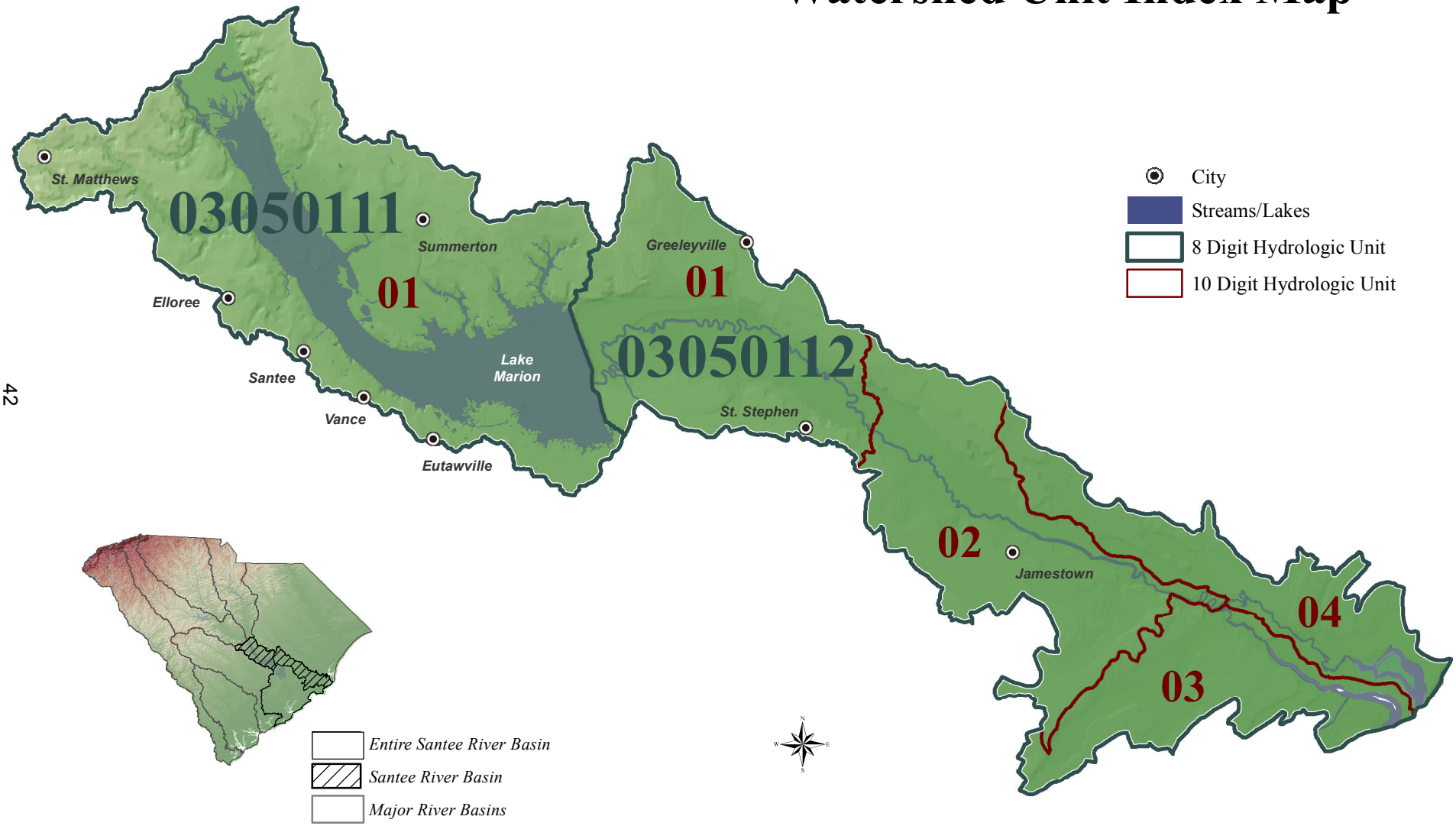
Ocean Swimming Advisory

SCDHEC routinely collects water samples along South Carolina's beaches. If high numbers of bacteria (enterococcus) are found, an advisory is issued for that portion of beach. An advisory means that DHEC advises you NOT to swim in that areas while signs are posted. This is especially true for young children, those with comprised immune systems, and the elderly. Advisories do not mean that the beach is closed. Wading, fishing, and shell collecting do not pose a risk. Advisories may be issued due to high sample results or because of rainfall causing stormwater to runoff on the beach. Advisories are lifted when sample results fall below the limit of 104CFU/100mL. Check local newspapers, television stations, posted advisory signs on beaches, and this website http://www.scdhec.gov/environment/water/ow.htm for up-to-date information.

Climate

Normal yearly rainfall in the Santee River area during the period of 1971 to 2000 was 49.69 inches, according to South Carolina's **30-year** climatological record. Data compiled from National Weather Service stations in Rimini, Wedgefield, Manning, Holly Hill, Georgetown, McClellanville, and Andrews were used to determine the general climate information for this portion of the State. The highest seasonal rainfall occurred in the summer with 16.37 inches; 11.15, 11.49, and 10.68 inches of rain fell in the fall, winter, and spring, respectively. The average annual daily temperature was 64.1 ^{o}F. Winter temperatures averaged 48.1^{o}F, spring temperatures averaged 63.4 ^{o}F and summer and fall mean temperatures were 79.3 ^{o}F and 65.5 ^{o}F, respectively.

Santee River Basin
Watershed Unit Index Map



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South Carolina Department of Health and Environmental Control

Watershed Evaluations

03050111-01

(Santee River/Lake Marion)

General Description

Watershed 03050111-01 (formerly 03050111-010, 020, 030, 040, 050) is located in Sumter, Clarendon, Calhoun, Orangeburg, and Berkeley Counties and consists primarily of the ***Santee River*** and its tributaries that flow into ***Lake Marion***. The watershed occupies 351,157 acres of the Upper and Lower Coastal Plain regions of South Carolina. Land use/land cover in the watershed includes: 25.1% agricultural land, 24.0% forested land, 22.2% forested wetland, 21.6% water, 5.2% urban land, 1.8% nonforested wetland, and 0.1% barren land.

The Congaree River Watershed and the Wateree River Watershed join to form the headwaters of the Santee River. The Santee River flows through Lake Marion and exits through the Santee Dam to continue the Santee River. Waters from the southeastern corner of Lake Marion are diverted through the Diversion Canal to fill Lake Moultrie. Before entering the impounded Lake Marion, the Santee River receives drainage from Broadwater Creek and the Santee Swamp (Fullers Earth Creek, Tavern Creek, Mill Creek). Streams draining into the upper reaches of Lake Marion include Squirrel Creek, Warley Creek, Spring Grove Creek (Pine Tree Creek, Ballard Creek, Half Way Creek, Duckford Branch), Richardson Branch, and Halfway Swamp Creek (Lake Inspiration, Furlick Branch, Lyons Creek, Antley Springs Branch, Bell Branch, Hutto Pond). Further downlake, Little Poplar Creek enters the lake followed by Big Poplar Creek, Jacks Creek (Belser Creek, Chapel Creek, Sullivans Branch, Big Branch, Spring Branch), Cantey Bay (Oyster Bay, Monkey Bay), Chapel Branch, and Webbs Creek. The downlake region accepts drainage from Mill Creek, Savana Branch, Tawcaw Creek (Little Tawcaw Creek, Penn Branch), Eutaw Creek, and Potato Creek. Potato Creek accepts the drainage of Wyboo Swamp, Church Branch, and Big Branch as it forms an arm of Lake Marion. Wyboo Swamp is formed from the drainage of Dean Swamp, Buckhead Branch, McCoys Branch, Rooty Branch, Bluff Branch, White Oak Branch (Three Hole Swamp), Birch Branch, White Oak Creek, Lizzies Branch (Clubhouse Branch), and Carroll Slough.

Additional natural resources in the watershed include Santee State Park near Big Poplar Creek and the Santee National Wildlife Refuge, which extends over the northern shoreline from Jacks Creek/Cantey Bay area to the Santee Dam. The South Carolina Public Service Authority (Santee Cooper) oversees the operation of the lake with uses that include power generation and numerous forms of recreation (hunting, fishing, boating, swimming). There are a total of 695.4 stream miles and 71,933 acres of lake waters in this watershed, all classified FW.

Surface Water Quality

Station #	Type	Class	Description
SC-004	SC	FW	SANTEE RIVER 0.1 MI UPSTR MOUTH OF BROADWATER CREEK
RS-04389	BIO/RS-04	FW	WARLEY CREEK AT S-09-287, 3.4 MI NW OF LONE STAR
SC-006	SC	FW	WARLEY CREEK AT SC 267
ST-034/SC-008	INT	FW	SANTEE RIVER AT RR TRESTLE AT LONE STAR
ST-527	BIO	FW	TAVERN CREEK
SC-056	SC	FW	SURFACE DRAINAGE FROM SAFETY KLEEN HAZARDOUS LANDFILL
SC-058	SC	FW	STREAM ORIGINATING UPSTR OF SAFETY KLEEN HAZ LANDFILL
SC-057	SC	FW	SURFACE DRAINAGE FROM SAFETY KLEEN HAZARDOUS LANDFILL
SC-005	SC	FW	UPPER LAKE MARION NEAR PACK'S LANDING
RS-05585	RS-05	FW	DUCKFORD BRANCH AT S-43-52, 3.2 MI SW OF PINEWOOD
SC-009	SC	FW	SPRING GROVE CREEK AT SR 26 BRIDGE
SC-039	SC	FW	UPPER LAKE MARION 1.25 MI BELOW RIMINI RR TRESTLE
C-058	W	FW	LAKE INSPIRATION - ST MATTHEWS
C-063	W	FW	HALFWAY SWAMP CREEK AT S-09-43, 3 MI E OF ST MATTHEWS
ST-533	BIO	FW	LYONS CREEK
C-015/SC-007	INT/SC	FW	HALFWAY SWAMP CREEK AT SC 33
CW-241	W	FW	HALFWAY SWAMP CREEK AT S-09-72
SC-038	SC	FW	UPPER LAKE MARION AT MOUTH OF HALFWAY SWAMP CREEK
RL-06422	RL-06	FW	SANTEE RIVER ARM OF LAKE MARION, 6MI NE OF ELLOREE
RL-04388/SC-044	RL-04	FW	LAKE MARION, 0.5 MI NE OF CALHOUN LANDING
SC-010	SC	FW	UPPER LAKE MARION AT CHANNEL MARKER 150
SC-011	SC	FW	BIG POPLAR CREEK AT S-38-105 BRIDGE
RL-06426	RL-06	FW	LAKE MARION, 9.3 MI ESE OF SUMMERTON
ST-017	BIO	FW	JACKS CREEK
CW-244/SC-023	W/INT/SC	FW	JACKS CREEK AT S-14-76
CW-243/SC-047	W/INT/SC	FW	BIG BRANCH AT S-14-41
RL-02306/SC-012	RL-02	FW	LAKE MARION AT JACKS CREEK EMBAYMENT
SC-042	SC	FW	MID LAKE MARION AT NORTH END OF I-95/US 301 BRIDGES
SC-045	SC	FW	STREAM FLOWING THROUGH SANTEE NATL. GOLF COURSE POND AT HWY 6
SC-014	SC	FW	UPPER LAKE MARION AT HEADWATERS OF CHAPEL BRANCH FLOODED CREEK
ST-025/SC-015	W/SC	FW	LAKE MARION AT OLD US 301/15 BRIDGE AT SANTEE
RL-04382	RL-04	FW	LAKE MARION, 1.0 MI DOWNLAKE OF I-95 BRIDGE IN OLD RIVER CHANNEL
RL-05464	RL-05	FW	LAKE MARION, 4.97 MI SE OF I-95 BRIDGE OVER LAKE
SC-040	SC	FW	MID LAKE MARION AT CHANNEL MARKER 79
SC-041	SC	FW	MID LAKE MARION 2 MI N OF CHANNEL MARKER 79
RL-06424	RL-06	FW	LAKE MARION, 11 MI SSW OF SUMMERTON
RL-04386	RL-04	FW	EUTAW CREEK ARM OF LAKE MARION, NEAR CATHEAD BOAT RAMP
RL-02308/SC-016	RL-02	FW	LAKE MARION AT CHANNEL MARKER 69
ST-018/SC-018	S/INT/SC	FW	TAWCAW CREEK AT S-14-127 3.2 MI S OF SUMMERTON
SC-017	SC	FW	MID LAKE MARION AT TAWCAW CREEK EMBAYMENT
SC-036	SC	FW	MID LAKE MARION AT MOUTH OF TAWCAW CREEK
RL-05406	RL-05	FW	LAKE MARION, 3.25 MI S OF LOG JAM LANDING
SC-021	SC	FW	LOWER LAKE MARION, 0.9 MI NE OF ROCKS POND CAMPGROUND
RL-04384	RL-04	FW	LAKE MARION, 3.8 MI W OF EADYTOWN
RL-08054	RL-08	FW	LAKE MARION, APPROX. 3 MI W OF CENTER OF DAM
RL-06428	RL-06	FW	LAKE MARION, 4.9 MI S OF END OF S-14-64
RL-05402	RL-05	FW	LAKE MARION, 3.5 MI NNW OF BRIDGE OVER DIVERSION CANAL ON SC 45
CL-042/SC-022	INT/SC	FW	LAKE MARION FOREBAY, SPILLWAY MARKER 44
ST-035/SC-020	INT	FW	POTATO CREEK AT S-14-127, 3.2 MI S OF SUMMERTON
SC-019	SC	FW	LOWER LAKE MARION AT POTATO CREEK FLOODED EMBAYMENT
ST-036/SC-023A	INT/SC	FW	LAKE MARION, WYBOO SWAMP ARM DOWNSTREAM OF CLUBHOUSE BRANCH
RL-01011/SC-035	RL-01	FW	LAKE MARION, 1.1 MI SSE OF SANTEE NWR & 1MI S OF EAGLE POINT

Santee River – There are two monitoring sites along the Santee River before it is impounded. At the upstream site ***(SC-004)***, aquatic life and recreational uses are fully supported. At the downstream site ***(ST-034)***, aquatic life uses are not supported due to total phosphorus excursions. Recreational uses are fully supported.

Warley Creek - There are two monitoring sites along Warley Creek. At the upstream site ***(RS-04389)***, aquatic life uses are partially supported based on macroinvertebrate community data. Recreational uses are not supported due to fecal coliform excursions. At the downstream site ***(SC-006)***, aquatic life uses are not supported due to total nitrogen excursions. Recreational uses are fully supported.

Lake Marion - There are fourteen SCDHEC monitoring sites in the open waters of Lake Marion and there are nine South Carolina Public Service Authority - Santee Cooper (SCPSA) monitoring sites, many overlapping to provide greater coverage of a site. All lake sites are fully supported for recreational uses.

In the upper lake region, ***SC-005*** is not supported for aquatic life uses due to total phosphorus and dissolved oxygen excursions. ***SC-039, SC-038, RL-04388, SC-010, and SC-042*** are not supported for aquatic life uses due to total phosphorus excursions. Aquatic life uses are fully supported at ***RL-06426***. At ***ST-025***, near the I-95 crossing, aquatic life uses are partially supported due to occurrences of zinc in excess of the aquatic life criterion. In addition, there is a significant decreasing trend in dissolved oxygen concentration. There is a significant decreasing trend in pH. Significant decreasing trends in five-day biochemical oxygen demand, total phosphorus, total nitrogen, and fecal coliform bacteria suggest improving conditions for these parameters at this site.

In the mid-lake region, aquatic life uses are fully supported at ***RL-04382, RL-05464***, and ***RL-06424***. Aquatic life uses are not supported at ***SC-040, SC-041***, and ***RL-02308*** due to total phosphorus excursions.

In the downlake region, aquatic life uses are fully supported at ***RL-05406, RL-08054, RL-06428, SC-021, RL-04384, RL-05402***, and ***CL-042***. There is also a significant decreasing trend in total nitrogen concentration at CL-042, suggesting improving conditions for this parameter at this site. Aquatic life uses are partially supported at ***SC-036*** due to pH excursions and not supported at ***RL-01011*** due to total phosphorus and pH excursions.

Lake Inspiration (C-058) – Aquatic life uses are not supported due to turbidity, total phosphorus, chlorophyll, and pH excursions. This is compounded by significant increasing trends in pH, turbidity, and total phosphorus concentration. A significant increasing trend in dissolved oxygen concentration suggests improving conditions for this parameter. Recreational uses are fully supported.

Lyons Creek (ST-533) – Aquatic life uses are partially supported based on macroinvertebrate community data.

Halfway Swamp Creek – There are three monitoring sites along Halfway Swamp Creek. At the upstream site ***(C-063)***, aquatic life uses are fully supported; however, there is a significant decreasing trend in dissolved oxygen concentration. There is a significant increasing trend in pH. Recreational uses are not supported due to fecal coliform bacteria excursions. At the mid-stream site ***(C-015)***, aquatic life uses are fully supported. A significant decreasing trend in total nitrogen concentration suggests improving conditions for this parameter at this site. Recreational uses are partially supported due to fecal coliform bacteria excursions. At the downstream site ***(CW-241)***, aquatic life and recreational uses are fully supported. There is a significant increasing trend in pH. A significant decreasing trend in total phosphorus concentration suggests improving conditions for this parameter at this site.

Halfway Swamp Creek arm of Lake Marion (RL-06422) – Aquatic life uses are not supported due to total phosphorus excursions. Recreational uses are fully supported.

Tavern Creek (ST-527) – Aquatic life uses are fully supported based on macroinvertebrate community data.

Upper Lake Marion upstream of Safety Kleen Pinewood (SC-058) – Aquatic life uses are not supported due to occurrences of nickel in excess of the aquatic life criterion. Although pH excursions occurred, they were typical of values seen in blackwater systems and were considered natural, not standard violations.

Surface Drainage to Upper Lake Marion from Safety Kleen – There are two drainages monitored from Safety Kleen. At ***SC-056***, aquatic life uses are not supported due to pH and total nitrogen excursions and for occurrences of nickel in excess of the aquatic life criterion. Aquatic life uses are fully supported at ***SC-057***.

Spring Grove Creek (SC-009) – Aquatic life uses are not supported due to total nitrogen excursions and recreational uses are partially supported due to fecal coliform bacteria excursions.

Duckford Branch (RS-05585) - Aquatic life uses are fully supported. Although pH excursions occurred, they were typical of values seen in blackwater systems and were considered natural, not standard violations. Recreational uses are not supported due to fecal coliform bacteria excursions.

Big Poplar Creek (SC-011) – Aquatic life uses are not supported due to dissolved oxygen and total nitrogen excursions. Recreational uses are fully supported.

Jacks Creek – There are two monitoring stations along Jacks Creek. At the upstream site ***(ST-017)***, aquatic life uses are partially supported based on macroinvertebrate community data. At the downstream site ***(CW-244)***, aquatic life uses are fully supported; however, there are significant increasing trends in five-day biological oxygen demand and total phosphorus concentration. Significant decreasing trends in

turbidity suggest improving conditions for this parameter. Recreational uses are fully supported.

Jacks Creek arm of Lake Marion (RL-02306) - Aquatic life uses are not supported due to total phosphorus excursions. Recreational uses are fully supported.

Big Branch (CW-243) – Aquatic life uses are fully supported; however, there is a significant increasing trend in five-day biological oxygen demand. Although dissolved oxygen excursions occurred, they were typical of values seen in blackwater systems and were considered natural, not standard violations. There is a significant increasing trend in pH. Recreational uses are not supported due to fecal coliform bacteria excursions, which are compounded by a significant increasing trend in fecal coliform bacteria concentration.

Chapel Branch - There are two monitoring sites along Chapel Branch. The upstream site ***(SC-045)*** monitors the stream as it flows through the Santee National Golf Course Pond and the downstream site ***(SC-014)*** monitors the impounded portion of the stream. Aquatic life and recreational uses are fully supported at ***SC-045***. Aquatic life uses are not supported at ***SC-014*** due to total phosphorus and pH excursions. Recreational uses are fully supported.

Eutaw Creek Arm of Lake Marion (RL-04386) – Aquatic life and recreational uses are fully supported.

Tawcaw Creek – There are two monitoring sites along Tawcaw Creek. At the upstream site ***(ST-018),*** aquatic life uses are not supported due to total nitrogen and dissolved oxygen excursions. In addition, there are significant increasing trends in five-day biological oxygen demand and total phosphorus concentration. Recreational uses are not supported at this site due to fecal coliform bacteria excursions. At the downstream site in the impounded waters of the creek ***(SC-017)***, aquatic life uses are not supported due to total phosphorus excursions. Recreational uses are fully supported.

Potato Creek (ST-035) – Aquatic life uses are partially supported due to dissolved oxygen excursions. In addition, there is a significant increasing trend in five-day biological oxygen demand. There is a significant increasing trend in pH. Significant increasing trends in dissolved oxygen concentration suggest improving conditions for this parameter. 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.

Potato Creek Arm of Lake Marion (SC-019) - Aquatic life uses are partially supported due to pH excursions. Recreational uses are fully supported.

***Wyboo Swamp (ST-036)* -** Aquatic life uses are partially supported due to pH excursions. Recreational uses are fully supported.

A fish consumption advisory has been issued by the Department for mercury and includes the entire Lake Marion (see advisory p.41).

Natural Swimming Areas

FACILITY NAME / ***RECEIVING STREAM***	***PERMIT #*** / ***STATUS***
CAMP MAC BOYKIN LAKE MARION	43-N04 ACTIVE
ROCKS POND LAKE MARION	38-N06 ACTIVE
SPIERS LANDING LAKE MARION	08-N05 ACTIVE
SANTEE STATE PARK LAKE MARION	38-N04 ACTIVE
RM COOPER 4H CENTER LAKE MARION	14-N01 ACTIVE
BIG WATER RESORT LAKE MARION	14-1009N ACTIVE

Groundwater Quality

Well #	Class	Aquifer	Location
AMB-025	GB	BLACK MINGO	ST. MATTHEWS
AMB-003	GB	BLACK CREEK	ELLOREE

NPDES Program

Active NPDES Facilities

RECEIVING STREAM / ***FACILITY NAME***	***NPDES#*** / ***TYPE***
LAKE MARION TRIBUTARY KESTREL HORIZONS LLC (TRUSTEE OF PINEWOOD SITE/HILLS LABRUCE MINE)	SCG730026 MINOR INDUSTRIAL
LAKE MARION TRIBUTARY KESTREL HORIZONS LLC (TRUSTEE OF PINEWOOD SITE)	SC0042170 MINOR INDUSTRIAL
LAKE MARION TRIBUTARY MARTIN MARIETTA/BERKELEY QUARRY	SCG730058 MINOR INDUSTRIAL
BALLARD CREEK TOWN OF PINEWOOD WWTP	SC0046868 MINOR DOMESTIC

ANTLEY SPRINGS BRANCH	SC0028801
TOWN OF ST MATTHEWS/SOUTH PLANT	MINOR DOMESTIC
JACKS CREEK	SCG730457
STUKES MINING CO./STUKES MINE	MINOR INDUSTRIAL

Municipal Separate Storm Sewer Systems (MS4)

RECEIVING STREAM	***NPDES#***
MUNICIPALITY	***MS4 PHASE***
RESPONSIBLE PARTY	***MS4 SIZE***
IMPLEMENTING PARTY	
LAKE MARION-SANTEE RIVER	SCS400001
----------	PHASE I
RICHLAND COUNTY	MEDIUM MS4
RICHLAND COUNTY	

Nonpoint Source Management Program

Land Disposal Activities

Landfill Facilities

LANDFILL NAME	***PERMIT #***
FACILITY TYPE	***STATUS***
SC SCA SERVICES, INC.	----------
INDUSTRIAL	INACTIVE
JF CLECKLEY & CO./PLT #2, #3	----------
INDUSTRIAL	INACTIVE
GODWIN JOHURIE JR	----------
MUNICIPAL	INACTIVE

Land Application Sites

LAND APPLICATION SYSTEM	***ND#***
FACILITY NAME	***TYPE***
SPRAYFIELD	ND0067628
TOWN OF ELLOREE WWTP	DOMESTIC
TILEFIELD	ND0067610
LAKE MARION RESORT & MARINA	DOMESTIC
SPRAY ON GOLF COURSE	ND0065676
SANTEE PSD	DOMESTIC
ABSORPTION FIELD	ND0067652
LENORA'S SANTEE RESORT LLC	DOMESTIC
ADJACENT TILEFIELD	ND0067326
SANTEE LAKES CAMPGROUND	DOMESTIC
SPRAYFIELD	ND0062227
CYPRESS POINT CONDO HOMEOWNERS ASSOC.	DOMESTIC

LOW PRESSURE IRRIGATION SITE	ND0067920
SCDPRT/SANTEE STATE PARK	DOMESTIC
SPRAYFIELD	ND0063401
TOWN OF SUMMERTON	DOMESTIC
SPRAYFIELD	ND0067318
GOAT ISLAND W&S	DOMESTIC
AERATED TREATMENT LAGOON	ND0066117
SIGFIELD/FOXBORO GOLF COURSE	DOMESTIC
SPRAY ON GOLF COURSE	ND0072427
CLARENDEN COUNTY/WYBOO PLANTATION WWTP	DOMESTIC

Mining Activities

MINING COMPANY ***MINE NAME***	***PERMIT #*** ***MINERAL***
KESTREL HORIZONS (SAFETY KLEEN)	1014-27
HILLS-LABRUCE MINE	CLAY
LAFORGE MATERIALS, INC.	1069-17
MCCURRY PIT	CLAY
STUKES MINING	0990-27
STUKES MINE	SAND/CLAY
GIANT CEMENT CO.	1429-17
ST. MATTHEWS CLAY MINE	CLAY

Water Quantity

WATER USER ***STREAM***	***REGULATED CAPACITY (MGD)*** ***PUMPING CAPACITY (MGD)***
LAKE MARION REGIONAL WATER AUTHORITY	12.1
LAKE MARION	18.1

Growth Potential

There is a moderate potential for growth in this watershed, which contains portions of the Towns of Pinewood, Elloree, Santee, Vance, and Eutawville due primarily to Lake Marion related factors of fishery tourism, new lakeside subdivisions, marinas, landings, and camping facilities. There is also a potential for residential, commercial, and industrial growth around the interchanges of I-95 at the Town of Santee and with US Hwy. 301 and US Hwy. 15. US Hwy 601 from the Orangeburg County line to downtown St. Matthews may provide future growth to that area.

Watershed Protection and Restoration

Total Maximum Daily Loads (TMDLs)

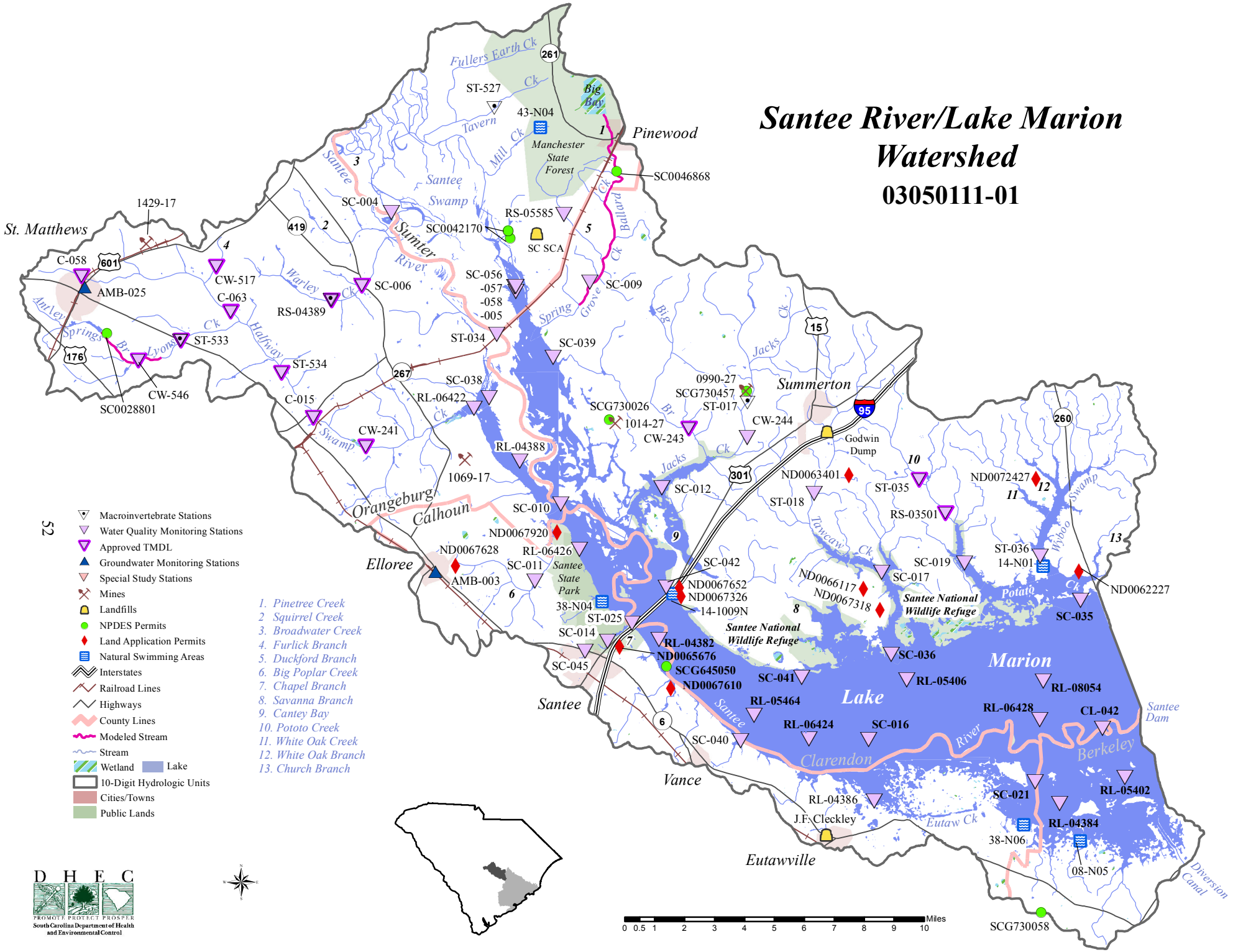
A TMDL was developed by SCDHEC using the load duration methodology and approved by the EPA for ***Big Branch*** in Clarendon County (monitoring site CW-243). The TMDL determines the maximum amount of fecal coliform bacteria that Big Branch at CW-243 can receive from pollution sources and still meet water quality standards. At the time the TMDL was approved there were no permitted continuous dischargers of fecal coliform in the watershed. At that time the only non-continuous discharger in the watershed with potential to discharge fecal coliform was SCDOT. Probable potential sources of fecal coliform pollution in the watershed contributing to the impairment of Big Branch include direct loading by livestock, failing septic systems, and wildlife. The TMDL requires a reduction of 75% in the current load to the creek to meet standards.

A TMDL was also developed by SCDHEC using the load duration methodology and approved by the EPA for ***Potato Creek*** in Clarendon County (monitoring sites: ST-035 and RS-03501). The TMDL determines the maximum amount of fecal coliform bacteria that Potato Creek at the two sites can receive from all pollution sources and still meet water quality standards. At the time the TMDL was approved there were no permitted continuous dischargers of fecal coliform in the watershed. At that time the only non-continuous discharger in the watershed with potential to discharge fecal coliform was SCDOT. Probable potential sources of fecal coliform pollution in the watershed contributing to the impairment of Potato Creek include wildlife, agricultural runoff, failing septic systems, and domestic animals. The TMDL requires a 34% reduction of fecal coliform loading at ST-035 and 31% at RS-03501 for the stream to meet the recreational uses standard. For more detailed information on TMDLs, please visit www.scdhec.gov/tmdl.

Special Projects

Santee Cooper FERC Relicensing

Hydroelectric projects require licenses issued by the Federal Energy Regulatory Commission in order to operate. These licenses require re-evaluation periodically in order to incorporate new information for the protection of the common good and typically last from 30 to 50 years. In addition to economic factors, a wide variety of natural resource elements can be considered including: reservoir water quality, downstream water quality, fisheries issues, flow issues, and shoreline management issues. State and federal agencies as well as citizens and nonprofit groups have been meeting to discuss these issues in the Santee Cooper re-licensing process. All federal permits, which have any bearing on waters of the state, must first receive a §401 water quality certification. The §401 water quality certification will be SCDHEC's main responsibility in the process. Santee Cooper is presently operating under an annual renewal of the existing license until a final assessment of the application filed with the FERC is completed. For more information on Santee Cooper's re-licensing, view their website at: http://www.santeecooper.com/environment/ferc/index.html.


Santee River/Lake Marion Watershed
03050111-01
St. Matthews
Pinewood
Summerton
Manning
Elloree
Santee
Vance
Eutawville
Orangeburg
Calhoun
Clarendon
Berkeley
Marion
Lake
Santee National Wildlife Refuge
Santee State Park
Manchester State Forest
Godwin Dump
J.F. Cleckley
Santee Dam
Diversion Canal
Fullers Earth Ck
Tavern Ck
Mill Ck
Big Bay
Ballard Ck
Santee Swamp
Sumter Ck
Warley Ck
Halfway Ck
Antley Springs Br
Lyons Ck
Spring Grove Ck
Big Jacks Ck
Jacks Ck
Rl-04388
RL-06422 Ck
Swamp
Tawcaw Ck
Potato Ck
Wyboo Swamp
Eutaw Ck
1429-17
C-058
AMB-025
CW-517
C-063
ST-533
ST-534
CW-546
SC0028801
C-015
CW-241
1069-17
SC-004
SC-006
RS-04389
SC0042170
RS-05585
SC SCA
SC-056
-057
-058
-005
ST-034
SC-009
SC-039
SC-038
SCG730026
1014-27
CW-243
0990-27
SCG730457
ST-017
CW-244
SC-012
ST-018
ND0063401
ST-035
ND0072427
RS-03501
SC-010
ND0067920
ND0067628
AMB-003
RL-06426
SC-011
SC-042
ND0067652
ND0067326
14-1009N
38-N04
ST-025
SC-014
SC-045
RL-04382
ND0065676
SCG645050
ND0067610
SC-040
SC-041
RL-05464
RL-06424
SC-016
SC-036
RL-05406
RL-08054
RL-06428
CL-042
SC-019
SC-017
ND0066117
ND0067318
ST-036
14-N01
ND0062227
SC-035
RL-04386
SC-021
RL-05402
RL-04384
38-N06
08-N05
SCG730058
43-N04
SC0046868
1. Pinetree Creek
2. Squirrel Creek
3. Broadwater Creek
4. Furlick Branch
5. Duckford Branch
6. Big Poplar Creek
7. Chapel Branch
8. Savanna Branch
9. Cantey Bay
10. Pototo Creek
11. White Oak Creek
12. White Oak Branch
13. Church Branch
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 8 9 10 Miles
DHEC
PROMOTE PROTECT PROSPER
South Carolina Department of Health and Environmental Control
52

03050112-01

(Santee River/Rediversion Canal)

General Description

Watershed 03050112-01 (formerly 03050112-010, 020) is located in Clarendon, Williamsburg, and Berkeley Counties and consists primarily of the ***Santee River*** and its tributaries downstream of Lake Marion to Crawl Creek (***Rediversion Canal***). The watershed occupies 144,350 acres of the Upper and Lower Coastal Plain regions of South Carolina. Land use/land cover in the watershed includes: 45.1% forested wetland, 32.9% forested land, 15.5% agricultural land, 3.4% urban land, 1.7% nonforested wetland, and 1.4% water.

This segment of the Santee River flows out of the Santee Dam of Lake Marion and incorporates the drainage of the Old Santee Canal, the Little River, the Dead River, Doctors Branch (Torkiln Branch, Mill Branch, Highland Creek, Hicks Branch, Meetinghouse Branch, Bennetts Branch), Butlers Bay, Johns Run, Mt. Hope Swamp (Buck Bay, Islandea Bay, Junkyard Bay, Hagan Branch, Guise Bay, Little Junkyard Bay, Long Branch), Campbell Branch, Walnut Branch, and Pen Branch. Crawl Creek (Lifeland Branch, Big Bay Branch, Curriboo Branch) flows through the Santee Swamp and joins with the Rediversion Canal (Ponteaux Branch) in Mattassee Lake (Mattassee Branch) before draining into the Santee River. The 11.5 mile Rediversion Canal connects Lake Moultrie with the lower Santee River near the Town of St. Stephen. Oxbow lakes draining into the river include Couturier Lake, Cordes Lake, Solomon Lake, Little Solomon Lake, Wood Lake, and Maham Lake. There are a total of 482.4 stream miles and 700.6 acres of lake waters in this watershed, all classified FW. An additional natural resource is the Francis Marion National Forest, which extends over the base of the watershed.

Surface Water Quality

Station #	Type	Class	Description
SC-024	SC	FW	SANTEE RIVER AT WILSONS LANDING BELOW SPILLWAY DAM
RS-05399/ST-536	RS-05/BIO	FW	BENNETTS BRANCH AT S-14-351, 11.5 MI SSE OF MANNING
ST-537	BIO	FW	DOCTORS BRANCH AT S-14-48
ST-016	P/INT	FW	SANTEE RIVER AT US 52, 6.5 MI NNW OF ST. STEPHENS
SC-037	SC	FW	REDIVERSION CANAL AT SC 45 BRIDGE
ST-031/SC-037A	INT/SC	FW	REDIVERSION CANAL AT US 52

Santee River – There is one SCPSA monitoring site and one SCDHEC site along this section of the Santee River. At the upstream site ***(SC-024)***, aquatic life and recreational uses are fully supported. At the downstream site ***(ST-016)***, 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 increasing trend in pH. Significant decreasing trends in total phosphorus concentration and total suspended solids suggest improving conditions for these parameters.

Bennetts Branch (RS-05399/ST-536) - Aquatic life uses are partially supported based on macroinvertebrate community data. Recreational uses are not supported due to fecal coliform bacteria excursions.
Doctors Branch (ST-537) - Aquatic life uses are partially supported based on macroinvertebrate community data.

Rediversion Canal – There are two monitoring sites (SCPSA, SCDHEC) along the Rediversion Canal. Aquatic life and recreational uses are fully supported at the upstream site ***(SC-037)***. Aquatic life and recreational uses are also fully supported at the downstream site ***(ST-031)***; however, there is a significant increasing trend in five-day biochemical oxygen demand. Significant decreasing trends in total nitrogen concentration and fecal coliform bacteria suggest improving conditions for these parameters.

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

Groundwater Quality

Well #	Class	Aquifer	Location
AMB-021	GB	BLACK CREEK/MIDDENDORF	ST. STEPHEN

All water samples collected from ambient monitoring well ***AMB-21*** met standards for Class GB groundwater.

NPDES Program

Active NPDES Facilities

RECEIVING STREAM *FACILITY NAME*	*NPDES#* *TYPE*
SANTEE RIVER WILLIAMSBURG CO. W&SA/SANTEE RIVER WWTP	SC0048097 MINOR DOMESTIC
REDIVERSION CANAL US ARMY CORP./ST. STEPHEN POWER PLANT	SC0047937 MINOR INDUSTRIAL
SANTEE RIVER BCW&SA/ST.STEPHEN WWTP	SC0025259 MINOR DOMESTIC
CURRIBOO BRANCH ALBANY INTNL/PRESS FABRIC	SC0002569 MINOR INDUSTRIAL

Nonpoint Source Management Program

Land Disposal Activities

Landfill Facilities

LANDFILL NAME	*PERMIT #*
FACILITY TYPE	*STATUS*
GA PACIFIC CORP. CHEM.	083304-1601
INDUSTRIAL	ACTIVE

Mining Activities

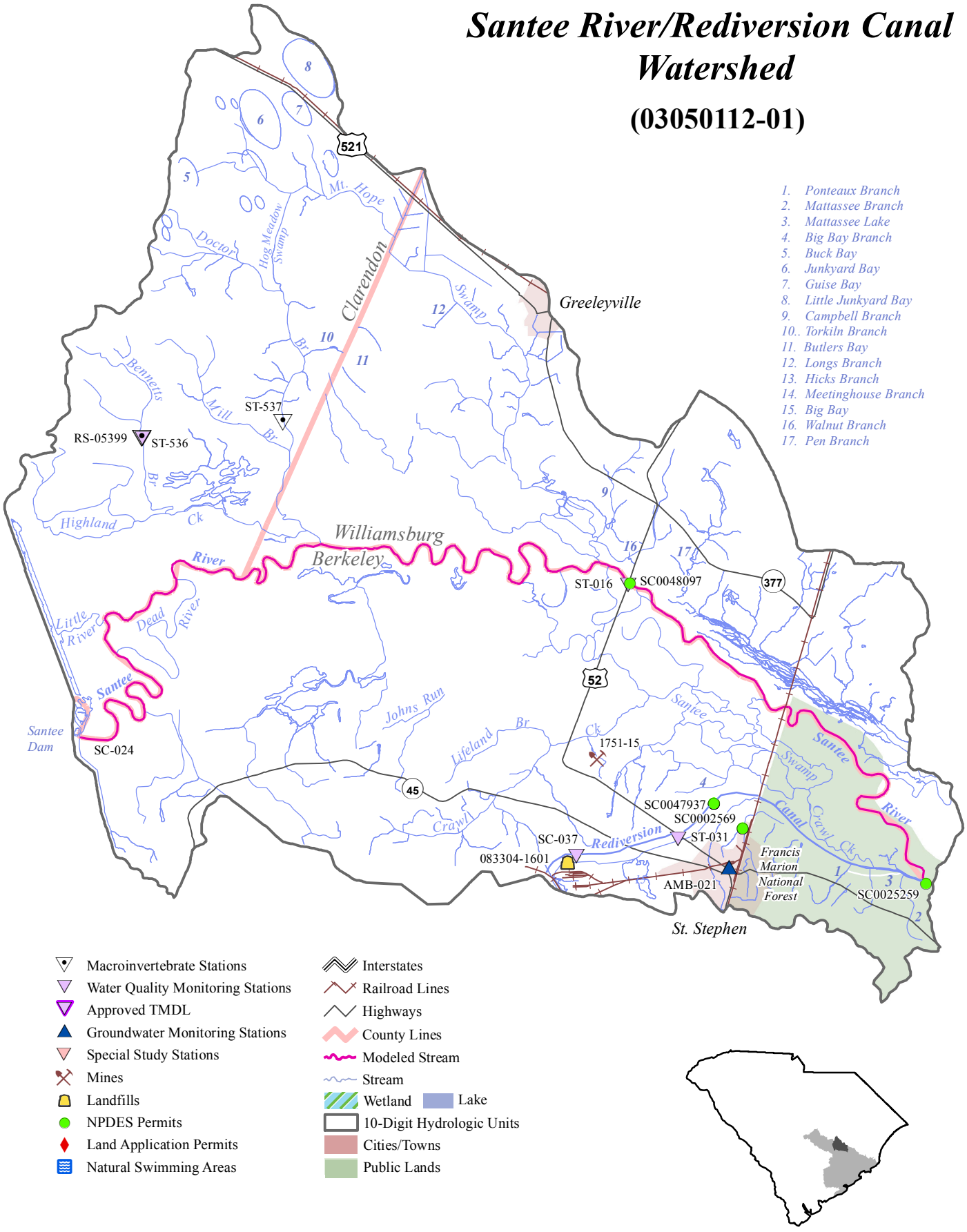
MINING COMPANY	*PERMIT #*
MINE NAME	*MINERAL*
DH HANKINS TRUCKING CO. LLC	1715-15
CAROLINE MINE	SAND/TOP SOIL

Growth Potential

There is a low potential for growth projected in this watershed, which contains portions of the Towns of Greeleyville and St. Stephen and portions of the communities of Pineville and Russellville and the Francis Marion National Forest. The Town of St. Stephen has both water and sewer services available, which may aid in attracting development to the area. Another source of potential growth is US Hwy. 52.

Santee River/Rediversion Canal Watershed

(03050112-01)



- 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

DHEC
PROMOTE PROTECT PROSPER
South Carolina Department of Health and Environmental Control

0 0.5 1 2 3 4 5 Miles

03050112-02

(Santee River)

General Description

Watershed 03050112-02 (formerly 03050112-030) is located in Williamsburg, Berkeley, and Georgetown Counties and consists primarily of the ***Santee River*** and its tributaries from the Rediversion Canal to Wadmacon Creek. The watershed occupies 137,602 acres of the Lower Coastal Plain and Coastal Zone regions of South Carolina. Land use/land cover in the watershed includes: 47.8% forested land, 40.0% forested wetland, 7.1% agricultural land, 1.8% nonforested wetland, 1.6% urban land, 1.5% water, and 0.2% barren land.

This lowest segment of the Santee River accepts the upstream river drainage together with Wedboo Creek (Meeting House Branch, Beauford Branch), Savanna Creek (Big Ocean Bay), Byne Creek, Wittee Lake (June Branch), Wittee Branch (Wittee Bay, Mill Creek), and Ferry Lake. Further downstream, the river accepts drainage from Dutart Creek and Echaw Creek (Bark Island Slough, Gum Branch, Beaman Branch, Bay Branch, Little Hellhole Bay, Pole Branch, June Pond Strand, Gal Branch). Gravel Run (Devils Lodge Branch) connects Dutart Creek to Gal Branch. Put-on Branch (Buck Branch) and Velvet Branch enter the river near the base of the watershed. Hell Hole Bay extends across the watershed near the headwaters of Dutart and Savanna Creeks. There are a total of 256.2 stream miles and 292 acres of lake waters in this watershed, all classified FW. Additional natural resources in the watershed include the Francis Marion National Forest.

Surface Water Quality

Station #	Type	Class	Description
ST-001	P/INT	FW	SANTEE RIVER AT SC 41/US 17A NE OF JAMESTOWN

Santee River (ST-001) – Aquatic life and recreational uses are fully supported; however, there is a significant increasing trend in five-day biochemical oxygen demand. Significant increasing trends in dissolved oxygen concentration and decreasing trends in turbidity, 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 Santee River within this watershed (see advisory p.41).

NPDES Program

Active NPDES Facilities

RECEIVING STREAM *FACILITY NAME*	*NPDES#* *TYPE*
SANTEE RIVER CHARGEURS WOOL (USA), INC.	SC0000990 MAJOR INDUSTRIAL

DUTART CREEK	SCG730059
MARTIN MARIETTA MATERIALS/GEORGETOWN II QUARRY	MINOR INDUSTRIAL

Nonpoint Source Management Program

Mining Activities

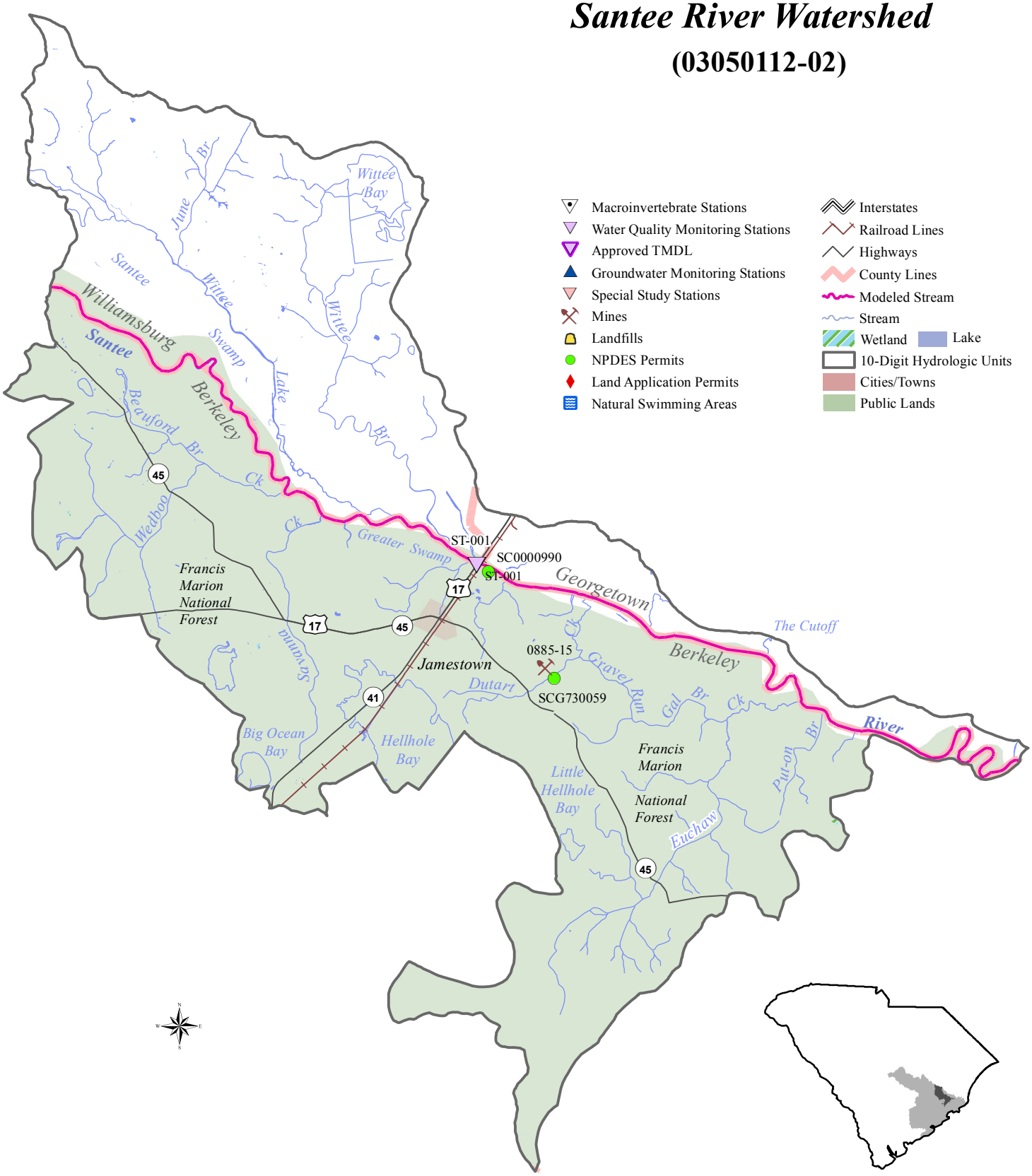
MINING COMPANY ***MINE NAME***	***PERMIT #*** ***MINERAL***
MARTIN MARIETTA MATERIALS, INC. GEORGETOWN II QUARRY	0885-15 LIMESTONE

Growth Potential

There is a low potential for growth in this watershed, which contains the Town of Jamestown and the communities of Alvin, Honey Hill, and Shulerville. Jamestown provides water, but there is no sewer service. The majority of the watershed extends over wetland (bays and swamps) areas.

Santee River Watershed

(03050112-02)



D H E C

PROMOTE PROTECT PROSPER

South Carolina Department of Health and Environmental Control

1 0.5 0 1 2 3 4 5 Miles

03050112-03

(South Santee River)

General Description

Watershed 03050112-03 (formerly 03050112-050 and the South Santee River portion of –060) is located in Berkeley, Charleston, and Georgetown Counties and consists primarily of the ***South Santee River*** and its tributaries. The watershed occupies 84,787 acres of the Lower Coastal Plain and Coastal Zone regions of South Carolina. Land use/land cover in the watershed includes: 39.9% forested land, 33.0% forested wetland, 19.8% nonforested wetland, 4.6% water, 1.5% agricultural land, 1.1% urban land, and 0.1% barren land.

The lower Santee River divides into the South Santee River and the North Santee River, both draining into the Atlantic Ocean. The South Santee River is classified FW from its origin to the U.S. Hwy. 17 crossing, SA from the U.S. Hwy. 17 crossing to 1000 feet below the Atlantic Intracoastal Waterway (AIWW) crossing, and ORW from 1000 feet below the AIWW crossing to the Atlantic Ocean. Streams flowing into these sections of the river take on that section's classification. The Santee Swamp lies between the South and North Santee Rivers. The South Santee River accepts drainage from Chicken Creek (Red Bluff Creek), Wambaw Creek, Hampton Creek (Cedar Creek), Montgomery Creek, Sixmile Creek (Garfish Creek), and Collins Creek. Wambaw Creek accepts drainage from Wambaw Swamp, Mechaw Creek, Mill Branch, Cane Branch (Keepers Branch), and Big Morgan Branch (Little Morgan Branch). Pleasant Creek enters the river downstream of Collins Creek, followed by Fourmile Creek Canal (a segment of the AIWW) and Alligator Creek. This section of the AIWW is classified SFH. Additional natural resources include the Francis Marion National Forest, the Wambaw Creek National Wilderness Area, the Wambaw Swamp National Wilderness Area, the Waterhorn Historic Area, and Hampton Plantation State Park. There are a total of 182.3 stream miles in this watershed, along with 11.8 acres of lake waters, and 2,143.1 acres of estuarine areas.

Surface Water Quality

Station #	Type	Class	Description
CSTL-112	W/INT	FW	WAMBAW CREEK AT EXTENTION OF S-10-857
ST-006	P/INT	FW/SA	SOUTH SANTEE RIVER AT US 17
RT-042062	RT-01	SA	SIXMILE CREEK NEAR CONFLUENCE WITH SOUTH SANTEE RIVER
RO-08344	RO-08	SA	SOUTH SANTEE RIVER, 400 YDS UPSTR. FROM AIWW S OF GOAT ISLAND
RT-06001	RT-06	ORW	ALLIGATOR CREEK, 0.9 MI SSE OF AIWW CONFL. WITH SOUTH SANTEE RIVER

Wambaw Creek (CSTL-112) – Aquatic life uses are fully supported; however, there are significant decreasing trends in dissolved oxygen concentration and increasing trends in five-day biochemical oxygen demand and total phosphorus concentration. Although dissolved oxygen excursions occurred, they were typical of values seen in such systems and were considered natural, not standard violations. Recreational uses are fully supported.

South Santee River **-** There are two SCDHEC monitoring sites along the South Santee River. The upstream site ***(ST-006)*** has both freshwater and saltwater classifications**.** The freshwater classification is fully supported for aquatic life uses and the saltwater classification is not supported due to turbidity excursions. In addition, both classifications show significant increasing trends in five-day biochemical oxygen demand and turbidity. There is a significant increasing trend in pH for both classifications. Both classifications indicate significant increasing trends in dissolved oxygen demand which suggests improving conditions for this parameter. Recreational uses are fully supported with both classifications. The downstream site ***(RO-08344)*** is not supporting of aquatic life uses due to turbidity excursions. Recreational uses are fully supported.

Sixmile Creek (RT-042062) – Aquatic life and recreational uses are fully supported.

Alligator Creek (RT-06001) – Aquatic life and recreational uses are fully supported.

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

Shellfish Monitoring Stations

Station #	Description
06A-01	SOUTH SANTEE RIVER AT ALLIGATOR CREEK
06A-01A	SOUTH SANTEE RIVER NEAR THE MIDPOINT OF GRACE ISLAND
06A-02	SOUTH SANTEE INLET
06B-13	ALLIGATOR CREEK NEAREST SOUTH SANTEE RIVER BETWEEN MARKERS 24&25

Growth Potential

There is a low potential for growth projected for this watershed.

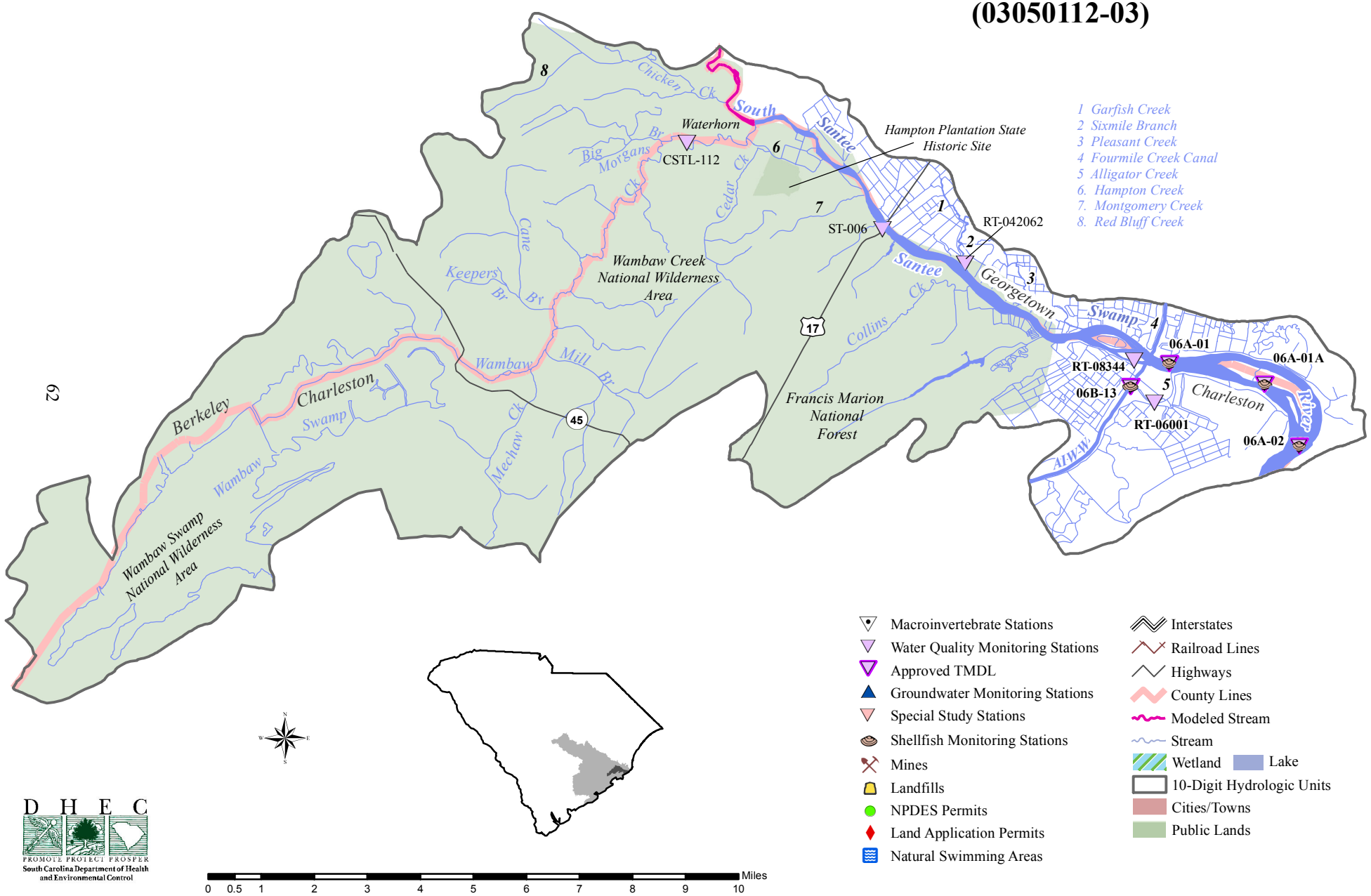
Watershed Restoration and Protection

Total Maximum Daily Loads (TMDLs)

Shellfish fecal coliform TMDLs were calculated by SCDHEC and approved by the USEPA for the ***South Santee River watershed***. Shellfish monitoring stations within Shellfish Management Areas 06A and 06B have been impaired due to exceedances of fecal coliform bacteria and these impaired stations were included on the 2008 303(d) list of impaired waters. Due to these exceedances, Shellfish Management Areas 06A and 06B have been closed for shellfish harvesting. There are no wastewater treatment plants within the watershed. There are wastewater treatment facilities upstream of the watershed, but all are not considered as potential sources due to treatment levels, distance and other factors. SCDOT is the only designated Municipal Separate Storm Sewer System (MS4) in the watershed. The probable sources of the fecal coliform bacteria are large populations of waterfowl and wildlife. These TMDLs require reductions in loading of fecal coliform bacteria ranging from 1 to 84%. For more detailed information on TMDLs, please visit www.scdhec.gov/tmdl.

South Santee River Watershed

(03050112-03)



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03050112-04

(North Santee River)

General Description

Watershed 03050112-04 (formerly 03050112-040 and the North Santee River portion of -060) Watershed 03050112-040 is located in Georgetown and Williamsburg Counties and consists primarily of the ***North Santee River*** and its tributaries. The watershed occupies 81,330 acres of the Lower Coastal Plain and Coastal Zone regions of South Carolina. Land use/land cover in the watershed includes: 39.9% forested land, 25.0% forested wetland, 19.9% nonforested wetland, 7.0% water, 6.2% agricultural land, 1.6% urban land, and 0.4% barren land.

The lower Santee River divides into the South Santee River and the North Santee River, both draining into the Atlantic Ocean. The North Santee River is classified FW from its origin to the U.S. Hwy. 17 crossing, SA from the U.S. Hwy. 17 crossing to 1000 feet below the Atlantic Intracoastal Waterway (AIWW) crossing, and ORW from 1000 feet below the AIWW crossing to the Atlantic Ocean. Streams flowing into these sections of the river take on that section's classification. The Santee Swamp lies between the South and North Santee Rivers. The North Santee River accepts drainage from Wadmacon Creek (Cedar Creek, Long Branch, Brunson Branch, Dawhoo Lake, Wilkes Branch, The Cutoff), Cedar Creek (Foot Log Slough), Pole Branch, Bonny Clabber Creek, White Oak Creek, and Sixmile Creek. The Cutoff connects Wadmacon Creek to the lower Santee River. Minim Creek drains into the North Santee River and into the North Santee Bay, and incorporates the drainage of Kinloch Creek (Bluff Creek), Pleasant Meadow Creek, Bella Creek, and Cork Creek. Atchison Creek and Fourmile Creek Canal drain directly into the river, and Little Duck Creek, Duck Creek, Big Duck Creek, Mosquito Creek, and Beach Creek drain into the North Santee Bay. The AIWW flows through the Esterville Minim Creek Canal, connecting Duck Creek to the Pee Dee Basin. Cane Creek connects the North Santee River to the North Santee Bay, and Bird Bank Creek enters the river just before it flows into the Atlantic Ocean. The Britton Neck area is near the headwaters of the North Santee River. There are a total of 212.2 stream miles in this watershed, along with 71.1 acres of lake waters, and 3,298.4 acres of estuarine areas. Additional natural resources in the watershed include several wildlife management areas and the Yawkey Center.

Surface Water Quality

Station #	Type	Class	Description
ST-005	W	FW/SA	North Santee River at US 17
RO-056098	RO-05	SA	North Santee River, 3.9mi SSE of North Santee
RT-07065	RT-07	SA	Minim Creek, 0.25 mi W of mouth of Pleasant Meadow Creek
RT-042068	RT-04	SA	Minim Creek, 0.15 mi E of mouth of Bella Creek
MD-263	INT	ORW	North Santee Bay at Beach Creek
RO-06301	RO-06	ORW	North Santee Bay, 2.5mi N of confl. with Atlantic Ocean

North Santee River – There are two monitoring sites along the North Santee River. The upstream site ***(ST-005)*** has both freshwater and saltwater classifications**.** The freshwater classification is fully supported for aquatic life uses, however; there is a significant increasing trend in turbidity. The saltwater classification is not supported due to turbidity excursions, which is compounded by the increasing trend in turbidity. Both classifications indicate a significant decreasing trend in total phosphorus concentration which suggests improving conditions for this parameter. Recreational uses are fully supported with both classifications. The downstream site ***(RO-056098)*** is fully supporting of aquatic life and recreational uses.

Minim Creek **-** There are two monitoring sites along Minim Creek. At both the upstream site ***(RT-07065)*** and the downstream site ***(RT-042068)***, aquatic life and recreational uses are fully supported. Although dissolved oxygen excursions occurred at both sites, they were typical of values seen in such systems and were considered natural, not standard violations.

North Santee Bay **-** There are two monitoring sites along North Santee Bay. At the upstream site (***MD-263)***, aquatic life uses are fully supported; however, there are significant decreasing trends in dissolved oxygen concentration and increasing trends in five-day biochemical oxygen demand. Although dissolved oxygen excursions occurred, they were typical of values seen in such systems and were considered natural, not standard violations. Recreational uses are fully supported; however, there were significant increasing trends in fecal coliform bacteria concentration. At the downstream site ***(RO-06301)***, aquatic life and recreational uses are fully supported.

A fish consumption advisory has been issued by the Department for mercury and includes the North Santee River and Wadmacon Creek within this watershed (see advisory p.41).

Groundwater Quality

Well #	Class	Aquifer	Location
AMB-087	GB	SURF SANDS	NORTH SANTEE

Shellfish Monitoring Stations

Station #	Description
06A-03	NORTH SANTEE RIVER AT BEACH CREEK
06A-04	NORTH SANTEE INLET
06A-04A	NORTH SANTEE BAY – E. OF CANE ISLAND
06A-04B	NORTH SANTEE RIVER - SW OF CANE ISLAND
06A-04C	NORTH SANTEE RIVER NEAR NORTHWESTERN TIP OF CANE ISLAND
06A-05	NORTH SANTEE RIVER AND MOSQUITO CREEK
06A-11	AIWW AT MINUM CREEK

NPDES Program

Active NPDES Facilities

RECEIVING STREAM *FACILITY NAME*	*NPDES#* *TYPE*
NORTH SANTEE RIVER GCW&SD NORTH SANTEE WWTP	SC0042439 MINOR DOMESTIC
NORTH SANTEE RIVER SCPSA/WINYAH STEAM	SC0022471 MAJOR INDUSTRIAL
CEDAR CREEK TRIBUTARY BLACK RIVER GRADING/LAMBERT PIT MINE	SCG730512 MINOR INDUSTRIAL
CEDAR CREEK STONE CONSTR. CO./HWY 41 PIT	SCG730676 MINOR INDUSTRIAL

Nonpoint Source Management Program

Mining Activities

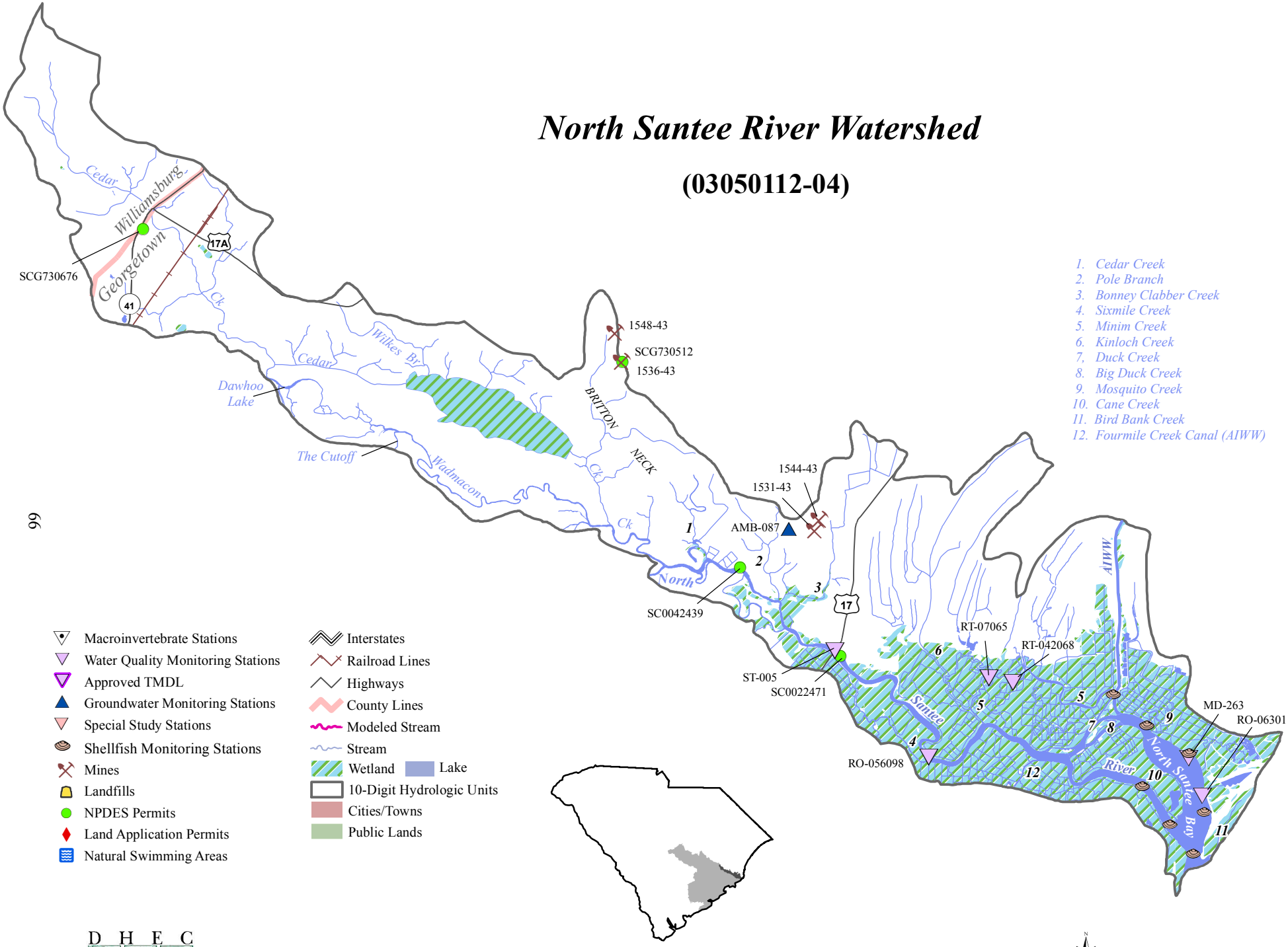
MINING COMPANY *MINE NAME*	*PERMIT #* *MINERAL*
SHADER & SONS, INC. POWELL ROAD DIRT PIT	1548-43 SAND
BLACK RIVER GRADING & EXCAVATING LAMBERT PIT MINE	1536-43 SAND
MCKENZIE BACKHOE & DOZIER SERVICE, INC. CHARLES CLARK MINE	1531-19 SAND
SHELLEYS LANDCLEARING TAYLOR POND MINE	1544-43 SAND

Growth Potential

There is a low potential for growth projected for this watershed.

North Santee River Watershed

(03050112-04)



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Cooper River Basin Description

The ***Cooper River Basin (hydrologic units 03050201 and 03050202)*** is located in Charleston, Dorchester, and Berkeley Counties and encompasses 9 watersheds and 1,545 square miles. The Cooper River Basin incorporates the Lower Coastal Plain and Coastal Zone regions. Of approximately one million acres in the Cooper River Basin, 35.5% is forested land, 25.8% is forested wetland, 13.5% is urban land, 10.0% is water, 8.0% is nonforested wetland, 6.6% is agricultural land, and 0.6% is barren land. The urban land is comprised chiefly of the greater City of Charleston area. There are a total of 2,037.2 stream miles in the Cooper River Basin, together with 60,829.1 acres of lake waters, and 29,134.6 acres of estuarine areas.

The diverted Santee River flows into Lake Moultrie, out of Lake Moultrie's Pinopolis Dam, along the Tailrace Canal, and joins with Biggin Creek to form the West Branch Cooper River. The West Branch Cooper River then converges with the East Branch Cooper River at "The Tee" to form the Cooper River. The Cooper River then accepts drainage from the Back River, Goose Creek, the Wando River, and the Ashley River before flowing into Charleston Harbor and the Atlantic Ocean**.**

Physiographic Regions

The State of South Carolina has been divided into six Major Land Resource Areas (MLRAs) by the USDA Soil Conservation Service. The MLRAs are physiographic regions that have soils, climate, water resources, and land uses in common. The physiographic regions defining the Cooper River Basin are as follows:

The **Lower Coastal Plain** is an area that is mostly nearly level and is dissected by many broad, shallow valleys with meandering stream channels; elevations range from 25 to 125 feet.

The **Coastal Zone** is a mostly tidally-influenced area that is nearly level and dissected by many broad, shallow valleys with meandering stream channels; most of the valleys terminate in tidal estuaries along the coast; elevations range from sea level to about 25 feet.

Land Use/Land Cover

General land use/land cover mapping for South Carolina was derived from the 2006 National Land Cover Data (NLCD). The dataset is based on nationwide Landsat Thematic Mapper (TM) multispectral satellite images (furnished through the Multi-Resolution Land Characteristics (MRLC) consortium, coordinated by USEPA) using image analysis software to inventory the Nation's land classes. The NLCD are developed by the USGS (EROS Data Center) using TM image interpretation, air photo interpretation, National Wetland Inventory data analysis, and ancillary data analysis.

Urban land is characterized by man-made structures and artificial surfaces related to industrial, commercial, and residential uses, and vegetated portions of urban areas such as recreational grasslands and industrial facility lawns.

Agricultural/Grass land is characterized by row crops, pastures, orchards, vineyards, and hay land, and includes grass cover in fallow, scrub/shrub, forest clearcut and urban areas.

Forestland is characterized by deciduous and evergreen trees (or a mix of these), not including forests in wetland settings, generally greater than 6 meters (approximately 20 feet) in height, with tree canopy of 25-100% cover.

Forested Wetland is saturated bottomland, mostly hardwood, forests primarily composed of wooded swamps occupying river floodplains, moist marginal forests, and isolated low-lying wet areas, located predominantly in the Coastal Plain.

Nonforested Wetland is saturated marshland, most commonly located in coastal tidelands and in isolated freshwater inland areas, found predominantly in the Coastal Plain.

Barren land is characterized by a nonvegetated condition of the land, both natural (rock, beaches, nonvegetated flats) and man-induced (rock quarries, mines, and areas cleared for construction in urban areas or clearcut forest areas).

Water (non-land) includes both fresh (inland) and saline (tidal) waters.

Soil Types

The dominant soil associations, or those soil series comprising, together, over 40% of the land area, were recorded for each watershed in percent descending order. The individual soil series for the Cooper River Basin are described as follows.

Bladen soils are poorly drained soils on low, nearly level areas and low ridges.

Bohicket soils are very poorly drained soils, clayey throughout or mucky and underlain with clayey layers, frequently flooded.

Brookman soils are somewhat poorly drained to very poorly drained soils with a loamy surface layer and a loamy and clayey subsoil.

Capers soils are very poorly drained soils, clayey throughout or mucky, and underlain with clayey layers, frequently flooded.

Chipley soils are moderately to excessively well drained soils, sandy throughout, on high ridges.

Chisolm soils are deep, well to moderately drained soils with sandy to loamy subsoil on nearly level to gently sloping terrain.

Daleville soils are nearly level, poorly drained soils, with silty loam in slight depressions and drainage ways on upland terraces.

Foxworth soils are well drained, sandy marine sediment derived, with acidic soils.

Hobcaw soils are nearly level, very poorly drained soils in depressions.

Jedburg soils moderately well drained to poorly drained soils with a loamy surface layer and a thick, loamy subsoil that has a high silt content.

Kiawah soils are deep, somewhat poorly drained to poorly drained, acidic soils, sandy throughout, with a surface soil and subsoil of loamy fine sand.

Leon soils are somewhat poorly drained to poorly drained, level to nearly level, sandy soils with weakly cemented layers stained by organic matter.

Lynchburg soils are moderately well to poorly drained soils, with loamy subsoil, on nearly level ridges and in shallow depressions.

Meggett soils are poorly drained to very poorly drained, level to nearly level soils with a loamy to sandy surface layer and a loamy to clayey subsoil.

Mouzon soils are poorly drained, loamy and sandy soils with a loamy subsoil.

Rains soils are moderately well to poorly drained soils, with a loamy subsoil, on nearly level ridges and in shallow depressions.

Udipsamments soils are excessively drained, gently sloping to moderately steep, sandy soils that occur on long, narrow ridges.

Udorthents soils are mostly well drained soils forming in heterogeneous material from excavation or construction soil or refuse, or loamy, dredged material pumped onto low-lying marshy areas.

Wahee soils are poorly drained soils on low, nearly level areas and low ridges.

Yauhannah soils are poorly drained to moderately well drained soils with a loamy subsoil, on nearly level ridges and in shallow depressions.

Yemassee soils are poorly drained to moderately well drained soils with a loamy subsoil, on nearly level ridges and in shallow depressions.

Yonges soils are moderately well drained to poorly drained, nearly level soils with a sandy surface layer and a predominantly loamy subsoil.

Slope and Erodibility

The definition of soil erodibility differs from that of soil erosion. Soil erosion may be more influenced by slope, rainstorm characteristics, cover, and land management than by soil properties. Soil erodibility refers to the properties of the soil itself, which cause it to erode more or less easily than others when all other factors are constant.

The soil erodibility factor, K, is the rate of soil loss per erosion index unit as measured on a unit plot, and represents an average value for a given soil reflecting the combined effects of all the soil properties that significantly influence the ease of soil erosion by rainfall and runoff if not protected. K values closer to 1.0 represent higher soil erodibility and a greater need for best management practices to minimize erosion and contain those sediments that do erode. The range of K-factor values in the Cooper River Basin is from 0.12 to 0.28.

Fish Consumption Advisory

At the time of publication, a fish consumption advisory issued by SCDHEC is in effect for the Diversion Canal, Lake Moultrie, East Branch Cooper River (from Quinby Creek to "The Tee" or confluence with West Branch Cooper River), Tail Race Canal, Wadboo Creek, West Branch Cooper River, Cooper River (downstream to Bushy Park), Durham Creek, the Ashley River (from SR-165 to SC 526), and the Atlantic Ocean advising people to limit the amount of some types of fish consumed from these waters. Fish consumption advisories are updated annually in March. For background information and the most current advisories please visit http://www.scdhec.gov/fish .

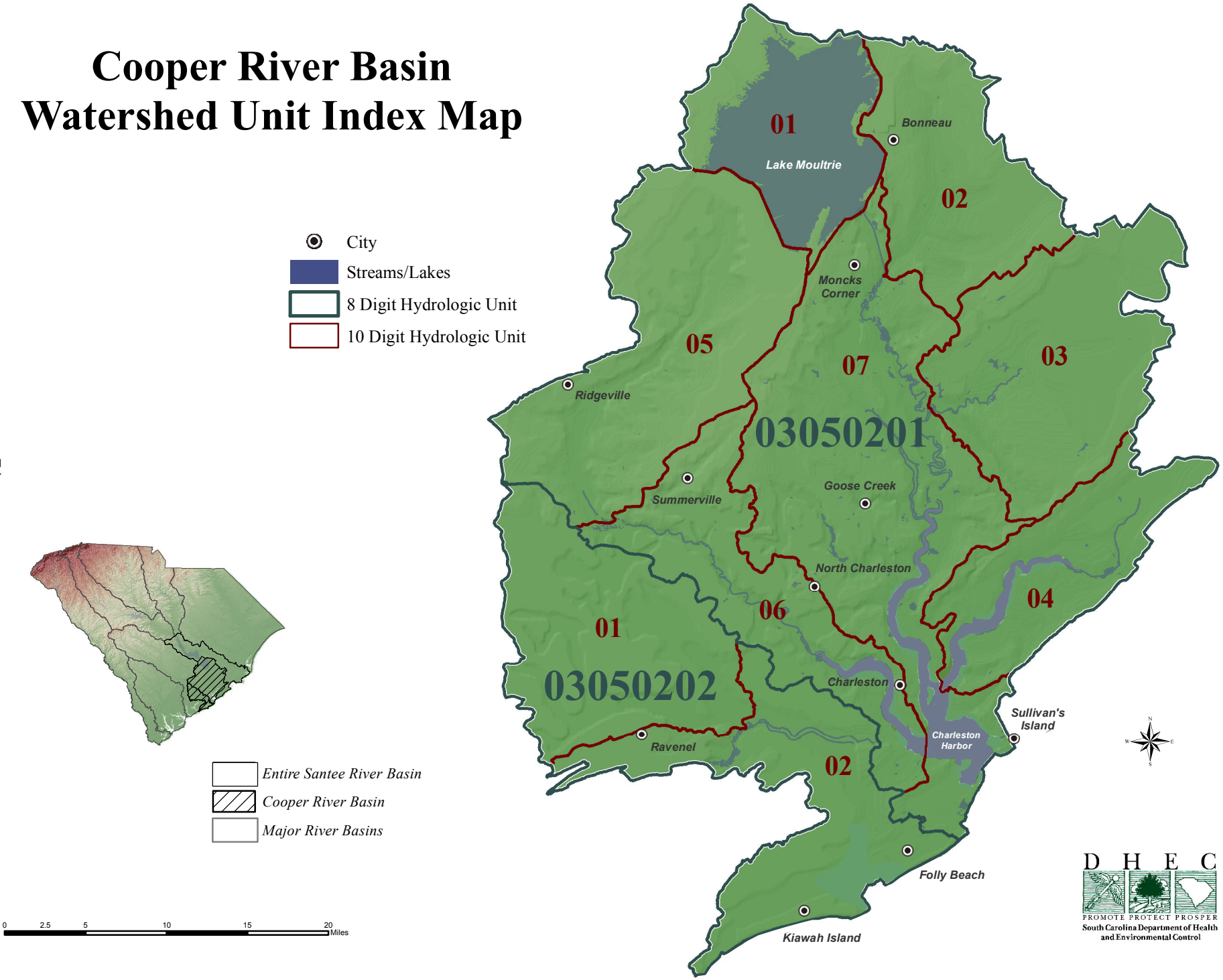
Ocean Swimming Advisory

SCDHEC routinely collects water samples along South Carolina's beaches. If high numbers of bacteria (enterococcus) are found, an advisory is issued for that portion of beach. An advisory means that DHEC advises you NOT to swim in that areas while signs are posted. This is especially true for young children, those with comprised immune systems, and the elderly. Advisories do not mean that the beach is closed. Wading, fishing, and shell collecting do not pose a risk. Advisories may be issued due to high sample results or because of rainfall causing stormwater to runoff on the beach. Advisories are lifted when sample results fall below the limit of 104CFU/100mL. Check local newspapers, television stations, posted advisory signs on beaches, and this website http://www.scdhec.gov/environment/water/ow.htm for up-to-date information.

Climate

Normal yearly rainfall in the Cooper River Basin area during the period of 1971 to 2000 was 50.55 inches, according to South Carolina's **30-year** climatological record. Data compiled from National Weather Service stations in Givhans Ferry State Park, Charleston Airport, Charleston, Sullivans Island, Summerville, and at the Pinopolis Dam were used to determine the general climate information for this portion of the State. The highest seasonal rainfall occurred in the summer with 17.80 inches; 11.43, 10.89, and 10.43 inches of rain fell in the fall, winter, and spring, respectively. The average annual daily temperature was 65.0 ^{o}F. Summer temperatures averaged 79.4^{o}F, fall temperatures averaged 65.9 ^{o}F, and winter and spring mean temperatures were 48.9 ^{o}F and 63.5 ^{o}F, respectively.

Cooper River Basin
Watershed Unit Index Map



Watershed Evaluations

03050201-01

(Lake Moultrie)

General Description

Watershed 03050201-01 (formerly 03050201-010 less the Tailrace Canal) is located in Berkeley County and consists primarily of ***Lake Moultrie*** and its tributaries. The watershed occupies 78,638 acres of the Lower Coastal Plain region of South Carolina. Land use/land cover in the watershed includes: 70.4% water, 11.6% forested land, 10.3% forested wetland, 2.9% agricultural land, 2.5% urban land, 2.1% nonforested wetland, and 0.2% barren land.

Lake Moultrie (also known as Pinopolis Reservoir) was created by diverting the Santee River (Lake Marion) through a 7.5 mile Diversion Canal filling a levee-sided basin and impounding it with the Pinopolis Dam. South Carolina Public Service Authority (Santee Cooper) oversees the operation of Lake Moultrie, which is used for power generation, recreation, and water supply. Other bays and swamps draining into the lake include Todd Bay and Duck Pond Creek on the western shore, and Bulltown Ditch, Bulltown Bay, Kirk Swamp, and Crooked Bay on the northern shore. The Tailrace Canal flows out of the Pinopolis dam connecting Lake Moultrie with the West Branch Cooper River near the Town of Moncks Corner, and the Rediversion Canal connects Lake Moultrie with the lower Santee River. There are a total of 14.5 stream miles and 56,759.9 acres of lake waters in this watershed, all classified FW. Additional natural resources in the watershed include the Dennis Wildlife Center near the Town of Bonneau, Sandy Beach Water Fowl Area along the northern lakeshore, and the Santee National Wildlife Refuge covering the lower half of the lake.

Surface Water Quality

Station #	Type	Class	Description
CSTL-079/SC-025	W/SC	FW	Diversion Canal at SC 45 12.6 mi W of St. Stephens
SC-043	SC	FW	Tributary flowing to Lake Moultrie from Cross Generating Station
SC-026	SC	FW	Lake Moultrie trib 0.4 mi upstream of SC 6
SC-027	SC	FW	SW Quadrant of Lake Moultrie, 0.75 mi E of shoreline
SC-028	SC	FW	NW Quadrant of Lake Moultrie near Angel's Landing cove
RL-07022	RL-07	FW	Lake Moultrie N end approx 1.6mi SE of old canal
RL-04462	RL-04	FW	Lake Moultrie, 4.2mi SW of Russelville
RL-07030	RL-07	FW	Lake Moultrie, approx. 0.6mi SSW of Rediversion Canal mouth
SC-031	SC	FW	Northern Quadrant of Lake Moultrie at mouth of Rediversion Canal
RL-04364	RL-04	FW	Lake Moultrie, 303mi NW of Bonneau Beach
RL-05396	RL-05	FW	Lake Moultrie, 6.25mi WNW of Bonneau
RL-07018	RL-07	FW	Lake Moultrie, approx. 2.3mi SE of Diversion Canal
RL-04362	RL-04	FW	Lake Moultrie, 2.2mi SE of Cross
RL-08066	RL-08	FW	Lake Moultrie, W end 1mi E of Fred Day Landing
SC-034	SC	FW	Duck Pond Creek at SC 6
RL-08050	RL-02	FW	SW Lake Moultrie in open water
ST-037/SC-030	INT/SC	FW	Lake Moultrie at Channel Marker 17

RL-07014	RL-07	FW	NE LAKE MOULTRIE, APPROX. 3MI W OF JEHOVAH GOOD SHEPHERD
RL-05400	RL-05	FW	LAKE MOULTRIE, 3.7MI WNW OF BONNEAU
RL-06450	RL-06	FW	LAKE MOULTRIE, 1.7MI WSW OF BONNEAU
SC-046	SC	FW	SE QUADRANT OF LAKE MOULTRIE AT PINOPOLIS EMBAYMENT
SC-032	SC	FW	SE QUADRANT OF LAKE MOULTRIE AT CHANNEL MARKER 2

Diversion Canal (CSTL-079/SC-025) - Aquatic life uses are fully supported; however, there is a significant increasing trend in turbidity. There is a significant increasing trend in pH. Significant decreasing trends in five-day biological oxygen demand, total phosphorus concentration, and total nitrogen concentration suggest improving conditions for these parameters. Recreational uses are fully supported.

Lake Moultrie Tributary (SC-043) - Aquatic life uses are partially supported due to occurrences of copper in excess of the aquatic life criterion. Recreational uses are partially supported due to fecal coliform bacteria excursions.

Lake Moultrie Tributary near Hwy 6 (SC-026) - Aquatic life uses are fully supported. Recreational uses are not supported due to fecal coliform bacteria excursions.

Lake Moultrie – There are thirteen SCDHEC monitoring sites in the open waters of Lake Moultrie and six South Carolina Public Service Authority - Santee Cooper (SCPSA) monitoring sites, many overlapping to provide greater coverage of a site. All lake sites are fully supported for recreational uses. Aquatic life uses are fully supported in the northwest quadrant of the lake at monitoring sites ***SC-028, SC-027,*** and ***RL-07018***. In the southwest quadrant, aquatic life uses are fully supported at ***RL-04362*** and ***RL-08066***, and are not supported at ***RL-08050*** due to ammonia excursions.

In the northeast quadrant of the lake, aquatic life uses are fully supported at monitoring sites ***RL-07022, RL-05396, RL-04364, RL-04462, RL-07030, SC-031, RL-07014,*** and ***RL-05400***. In the southeast quadrant, aquatic life uses are fully supported at ***SC-046***. Aquatic life uses are also fully supported at ***ST-037*** and significant decreasing trends in total nitrogen concentration suggest improving trends for this parameter at this site. Aquatic life uses are partially supported at ***SC-032*** due to pH excursions. Aquatic life uses are fully supported at ***RL-06450***. Although pH excursions occurred, they were typical of values seen in lake systems and were considered natural, not standard violations.

Duck Pond Creek (SC-034) – Aquatic life and recreational uses are fully supported. Although pH excursions occurred, they were typical of values seen in such systems and were considered natural, not standard violations.

A fish consumption advisory has been issued by the Department for mercury and includes the Diversion Canal and Lake Moultrie within this watershed (see advisory p.70).

Natural Swimming Areas

FACILITY NAME / *RECEIVING STREAM*	*PERMIT #* / *STATUS*
OVERTON RECREATION PARK LAKE MOULTRIE	08-1012N ACTIVE
SHORT STAY LAKE MOULTRIE	08-1061N ACTIVE
SOMERSET POINT LAKE MOULTRIE	08-N06 ACTIVE
LIONS BEACH LAKE MOULTRIE	08-N01 ACTIVE
BERKELEY FAMILY YMCA LAKE MOULTRIE	08-1006N ACTIVE

NPDES Program

Active NPDES Facilities

RECEIVING STREAM / *FACILITY NAME*	*NPDES#* / *TYPE*
LAKE MOULTRIE SCPSA/CROSS GENERATING STATION	SC0037401 MAJOR INDUSTRIAL
LAKE MOULTRIE US NAVY/SHORT STAY REC. FAC.	SC0024708 MINOR INDUSTRIAL
LAKE MOULTRIE BERKELEY COUNTY/CROSS HIGH SCHOOL	SC0027103 MINOR DOMESTIC
DUCK POND CREEK BERKELEY COUNTY/CROSS ELEM SCHOOL	SC0034479 MINOR DOMESTIC
LAKE MOULTRIE GA PACIFIC CORP. .	SCG250240 MINOR INDUSTRIAL

Nonpoint Source Management Program

Land Disposal Activities

Landfill Facilities

LANDFILL NAME / *FACILITY TYPE*	*PERMIT #* / *STATUS*
SCPSA/CROSS GENERATING STATION INDUSTRIAL	083337-1601 ACTIVE

Water Quantity

WATER USER STREAM	*REGULATED CAPACITY (MGD) PUMPING CAPACITY (MGD)*
SANTEE COOPER REG. WTR. AUTH.	36.0
LAKE MOULTRIE	48.0

Growth Potential

There is a moderate potential for growth in this watershed. Lake Moultrie contributes significantly to the growth in the area in terms of fishery tourism and residential development. The Towns of Monk Corner, Cross, and Bonneau should benefit from the lake-based growth. Monks Corner provides both water and sewer services and may encourage future growth. The Pinopolis peninsula has low density residential, including several historic structures, and a Santee Cooper semi-private recreation/conference center. There is a regional domestic water supply system on Lake Moultrie near Lions Beach (water withdrawn from Pinopolis cove) that serves the Berkeley County Water and Sewer Authority, Moncks Corner, Goose Creek, and the Summerville Public Service Area.

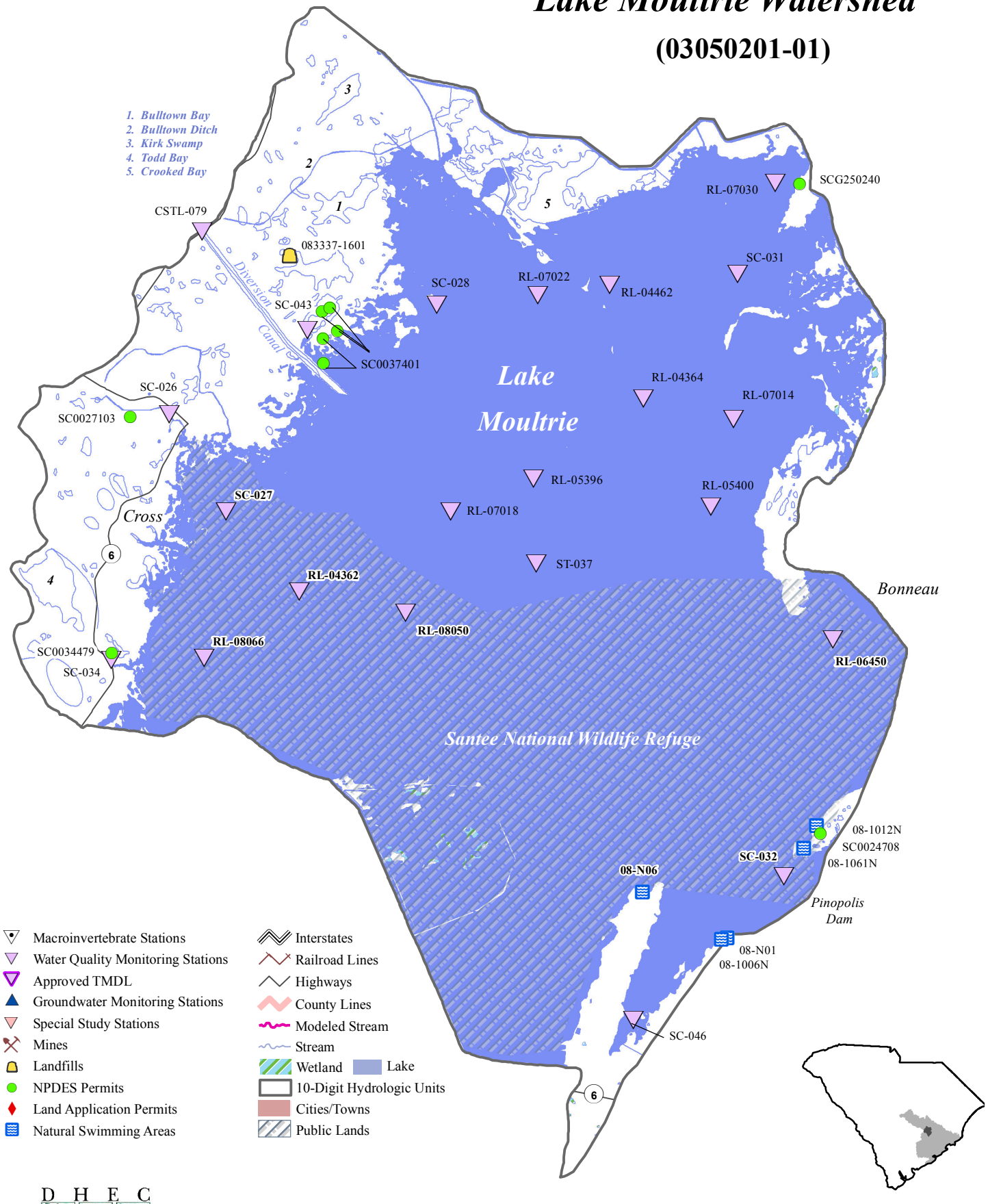
Special Projects

Santee Cooper FERC Relicensing

Hydroelectric projects require licenses issued by the Federal Energy Regulatory Commission in order to operate. These licenses require re-evaluation periodically in order to incorporate new information for the protection of the common good and typically last from 30 to 50 years. In addition to economic factors, a wide variety of natural resource elements can be considered including: reservoir water quality, downstream water quality, fisheries issues, flow issues, and shoreline management issues. State and federal agencies as well as citizens and nonprofit groups have been meeting to discuss these issues in the Santee Cooper re-licensing process. All federal permits, which have any bearing on waters of the state, must first receive a §401 water quality certification. The §401 water quality certification will be SCDHEC's main responsibility in the process. Santee Cooper is presently operating under an annual renewal of the existing license until a final assessment of the application filed with the FERC is completed. For more information on Santee Cooper's re-licensing, view their website at: http://www.santeecooper.com/environment/ferc/index.html.

Lake Moultrie Watershed

(03050201-01)



03050201-02

(Wadboo Creek)

General Description

Watershed 03050201-02 (formerly 03050201-020) is located in Berkeley County and consists primarily of ***Wadboo Creek*** and its tributaries. The watershed occupies 82,385 acres of the Lower Coastal Plain region of South Carolina. Land use/land cover in the watershed includes: 45.1% forested land, 38.7% forested wetland, 11.4% agricultural land, 2.8% urban land, 1.8% nonforested wetland, and 0.2% water.

Gravel Hill Swamp (Walker Swamp, Halfway Swamp) merges with Rice Hope Swamp to form Wadboo Swamp near the Town of Bonneau. Downstream of the confluence, Wadboo Swamp accepts drainage from Stewart Creek, Whiskinboo Creek (Cane Pond Branch), Cane Gully Branch (Walleye Bay, Peters Swamp, Callum Branch), and Bullhead Run (Mary Anne Branch, Vanilla Bay, Middle Bay). Wadboo Swamp becomes Wadboo Creek at the confluence with Broad Ax Branch (Canady Branch, Mingo Branch). Walleye Bay accepts drainage from Whitten Bay and Boggy Swamp before draining into Cane Gully Branch. Little Ocean Bay and Graveyard Bay drain into Peters Swamp through Graveyard Lead and Mill Bay drains directly into Peters Swamp. Wadboo Creek flows into the headwaters of the West Branch Cooper River. There are a total of 223.9 stream miles and 133.7 acres of lake waters in this watershed, all classified FW. Another natural resource is the Francis Marion National Forest, which extends across the entire watershed.

Surface Water Quality

Station #	Type	Class	Description
ST-007	S/W	FW	WALKER SWAMP AT US 52 2.5 MI S OF ST. STEPHENS
CSTL-113	W/INT	FW	WADBOO CREEK AT SC 402

Walker Swamp (ST-007) – Aquatic life uses are not supported due to dissolved oxygen excursions, which are compounded by a significant decreasing trend in dissolved oxygen concentration. Recreational uses are fully supported.

Wadboo Creek (CSTL-113) – Aquatic life uses are fully supported; however, there are significant decreasing trends in dissolved oxygen concentration and increasing trends in five-day biochemical oxygen demand and total phosphorus concentration. Although dissolved oxygen excursions occurred, they were typical of values seen in blackwater systems and were considered natural, not standard violations. A significant decreasing trend in total nitrogen concentration suggests improving conditions for this parameter. Recreational uses are fully supported.

A fish consumption advisory has been issued by the Department for mercury and includes Wadboo Creek within this watershed (see advisory p.70).

NPDES Program

Active NPDES Facilities

RECEIVING STREAM *FACILITY NAME*	*NPDES#* *TYPE*
WADBOO SWAMP TRIBUTARY D&S CONSTRUCTION/BONNEAU MINE	SCG731110 MINOR INDUSTRIAL

Nonpoint Source Management Program

Mining Activities

MINING COMPANY *MINE NAME*	*PERMIT #* *MINERAL*
WARE BROTHERS, INC. FONDREN EARTH EXCAVATION	0817-15 SAND/GRAVEL

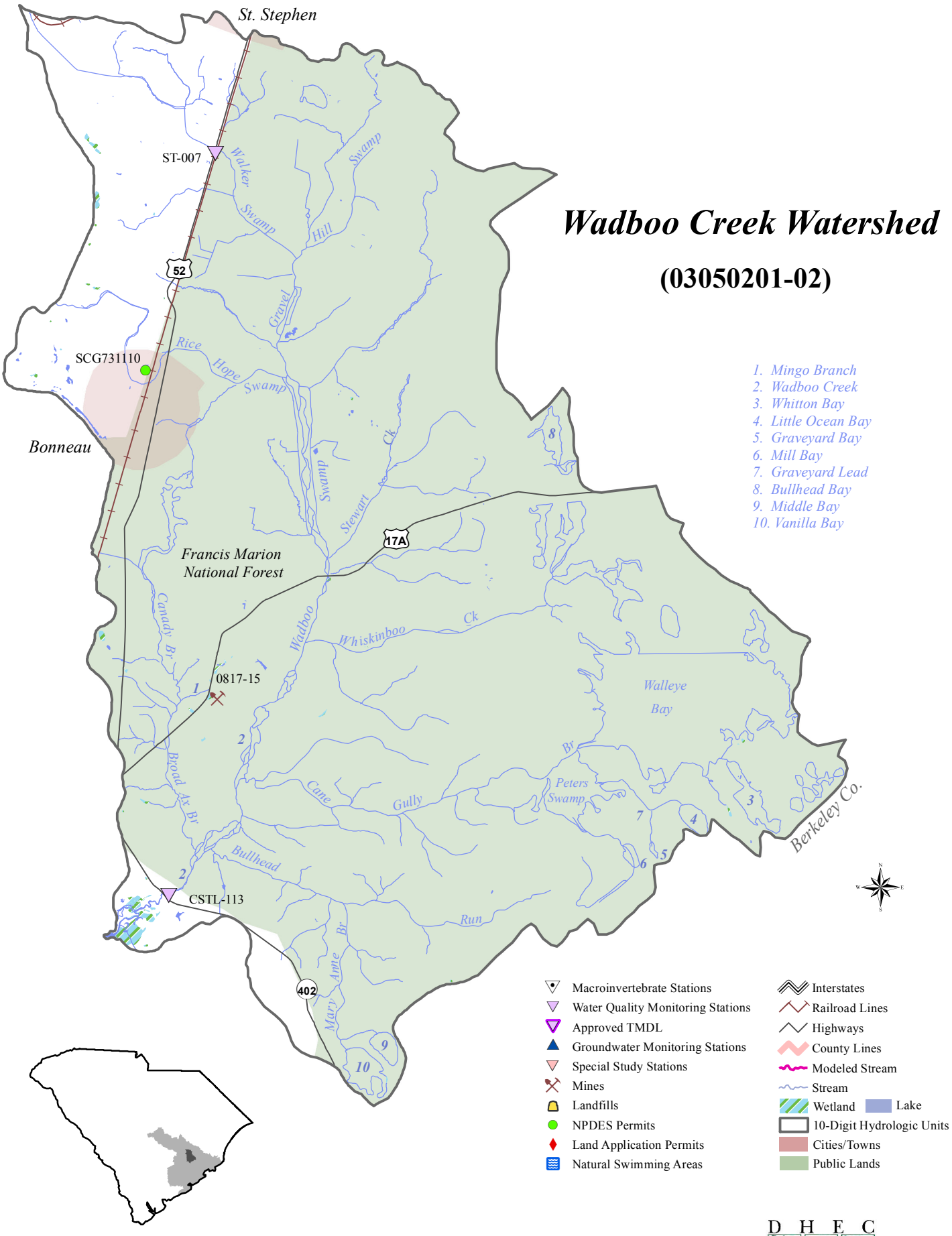
Growth Potential

There is a low potential for growth in this watershed, which contains portions of the Towns of St. Stephens and Bonneau and portions of the communities of Macedonia and Russellville. A large portion of the watershed is contained within the Francis Marion National Forest.

Watershed Protection and Restoration

Total Maximum Daily Loads (TMDLs)

Pathogen indicator (E. coli) TMDLs have been developed for two sites on ***Wadboo Creek*** (RS-02461 and RS-03333) within Francis Marion National Forest. As of May 2013, it is anticipated that these TMDLs will soon be placed on public notice for comment. After the comment period and appropriate responses by DHEC to any received comments, DHEC will submit the TMDLs to the USEPA for their approval. After approval by EPA, the Wadboo Creek TMDLs will be made available on DHEC website: www.scdhec.gov/tmdl.


Wadboo Creek Watershed
(03050201-02)
St. Stephen
Bonneau
Francis Marion National Forest
ST-007
SCG731110
CSTL-113
0817-15
52
17A
402
Walker Swamp
Hill Swamp
Gravel Ck
Rice Hope Swamp
Stewart Swamp
Wadboo Ck
Whiskinboo Ck
Canady Br
Broad Ax Br
Cane Gully
Bullhead Run
Mary Anne Br
Peters Swamp
Walleye Bay
Berkeley Co.
1. Mingo Branch
2. Wadboo Creek
3. Whitton Bay
4. Little Ocean Bay
5. Graveyard Bay
6. Mill Bay
7. Graveyard Lead
8. Bullhead Bay
9. Middle Bay
10. Vanilla Bay
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 Miles

03050201-03

(East Branch Cooper River)

General Description

Watershed 03050201-03 (formerly 03050201-040) is located in Berkeley County and consists primarily of the ***East Branch Cooper River*** and its tributaries. The watershed occupies 119,005 acres of the Lower Coastal Plain region of South Carolina. Land use/land cover in the watershed includes: 46.4% forested land, 43.2% forested wetland, 5.1% nonforested wetland, 2.8% agricultural land, 1.2% urban land, 1.2% water, and 0.1% barren land.

The East Branch Cooper River is formed by the confluence of Huger Creek and Quinby Creek. Huger Creek is formed by the merger of Nicholson Creek (Darlington Creek, Darlington Swamp, Kutz Creek, Cooks Creek, Jericho Branch, Fourth of July Branch) and Turkey Creek (Huitt Branch, Old Man Lead, Oakie Branch, Muddy Creek, Fox Gully Branch). Downstream of the confluence, Huger Creek accepts drainage from Negro Field Branch and Gough Creek (Alligator Creek, Midway Reserve, Little Hellhole Reserve, Little Hellhole Bay, Quarterman Branch, Upper Reserve, Lower Reserve). Quinby Creek accepts drainage from Harleston Dam Creek (Cropnel Dan Creek, Northampton Creek), Bennett Branch, Pinckney Reserve Branch, Menzer Run, Deep Branch, York Bottom Creek, and Hester Canal. The East Branch Cooper River receives drainage from Mayrant Lead, French Quarter Creek (Chipper Swamp, Redbank Reserve (Long Pond Savannah), Hard Pinch Reserve, Leneigh Reserve), and Comingtee Creek (Big Dam Lead). There are a total of 361.6 stream miles and 635.3 acres of lake waters in this watershed, all classified FW.

Surface Water Quality

Station #	Type	Class	Description
CSTL-123	INT	FW	EAST BRANCH COOPER RIVER AT BONNEAU FERRY PLANTATION

East Branch Cooper River (CSTL-123) - Aquatic life uses are fully supported; however, there are significant increasing trends in five-day biochemical oxygen demand. Although dissolved oxygen excursions occurred, they were typical of values seen in such systems and were considered natural, not standard violations. Recreational uses are fully supported.

A fish consumption advisory has been issued by the Department for mercury and includes the East Branch Cooper River within this watershed (see advisory p.70).

Groundwater Quality

Well #	Class	Aquifer	Location
AMB-023	GB	BLACK MINGO	CAINHOY HIGH SCHOOL

NPDES Program

Active NPDES Facilities

RECEIVING STREAM *FACILITY NAME*	*NPDES#* *TYPE*
EAST BRANCH COOPER RIVER CAROLINA LOWCOUNTRY GS COUNCIL	SC0033073 MINOR DOMESTIC
FRENCH QUARTER CREEK FRENCH QUARTER CREEK MINE	SCG730086 MINOR INDUSTRIAL
FRENCH QUARTER CREEK FIRST RELIANCE BANK/POLE FARM MINE	SCG730986 MINOR INDUSTRIAL
MENZER RUN UNITED DIRT LLC/KEYSTONE MINE	SCG731019 MINOR INDUSTRIAL
ALLIGATOR CREEK TRIBUTARY TUTTLE ROAD LLC/TUTTLE ROAD MINE	SCG731022 MINOR INDUSTRIAL
BENNETT BRANCH TRIBUTARY COASTAL DIRT CO. LLC/WINDHAM POND MINE	SCG731063 MINOR INDUSTRIAL
FRENCH QUARTER CREEK TRIBUTARY RLF FRENCH QUARTER CK LLC/RLF FRENCH QUARTER CK MINE	SCG731184 MINOR INDUSTRIAL
QUIMBY CREEK PRIME TIME DEVELOPMENT LLC/PINE LAKE MINE	SCG731051 MINOR INDUSTRIAL
MENZER RUN PRIME TIME DEVELOPMENT LLC/KEYSTONE LAKE MINE	SCG731052 MINOR INDUSTRIAL

Nonpoint Source Management Program

Mining Activities

MINING COMPANY *MINE NAME*	*PERMIT #* *MINERAL*
FRENCH QUARTER CREEK INVESTORS FRENCH QUARTER CREEK MINE	0873-15 SAND/CLAY
OL THOMPSON CONSTRUCTION CO. BLESSING EAST MINE	1787-15 SAND/TOP SOIL

Growth Potential

There is a low potential for growth expected in this watershed, which is almost entirely within the Francis Marion National Forest. There are numerous historic structures located in the area, and great public sentiment to preserve the historic character of the area.

Watershed Protection and Restoration

Total Maximum Daily Loads (TMDLs)

The TMDLs addressing dissolved oxygen for the Ashley River and for the ***Cooper River***-Wando River-Charleston Harbor have been revised. The revised TMDLs are combined in a single TMDL document covering Charleston Harbor and the Cooper, Ashley, and Wando Rivers. The basis for this revision is a new 3-Dimensional Environmental Fluid Dynamics Code (EFDC) model covering the entire system completed in 2008, a revised Dissolved Oxygen standard as amended in the South Carolina Pollution Control Act in 2010 (adopted in S.C. R.61-68 in 2012), and subsequent reallocation of the TMDLs led by the Berkeley-Charleston-Dorchester Council of Governments. The revised TMDL was placed on public notice in October 2012 and approved by EPA in April 2013. The TMDL determined revised wasteload allocations for oxygen-demanding pollutants from continuous point sources which will be implemented in NPDES permits.

The previous and revised TMDLs can be compared on a percent reduction basis. The Cooper River TMDL required an interim reduction of 58% (Phase 1) and a final reduction of 69% (Phase 2) from pre-TMDL permitted UOD; the Ashley River TMDL required a reduction of 32% form pre-TMDL permitted UOD. This TMDL applies a more accurate water quality model in addition to a more accurate laboratory characterization of the wastewater. Based on this new information, the revised TMDL is equivalent to an additional 2% reduction below the Phase 1 level for the Cooper River. The revised TMDL for the Ashley River is equivalent to a 15% reduction from the pre-TMDL permitted UOD. For more detailed information on TMDLs, please visit www.scdhec.gov/tmdl.

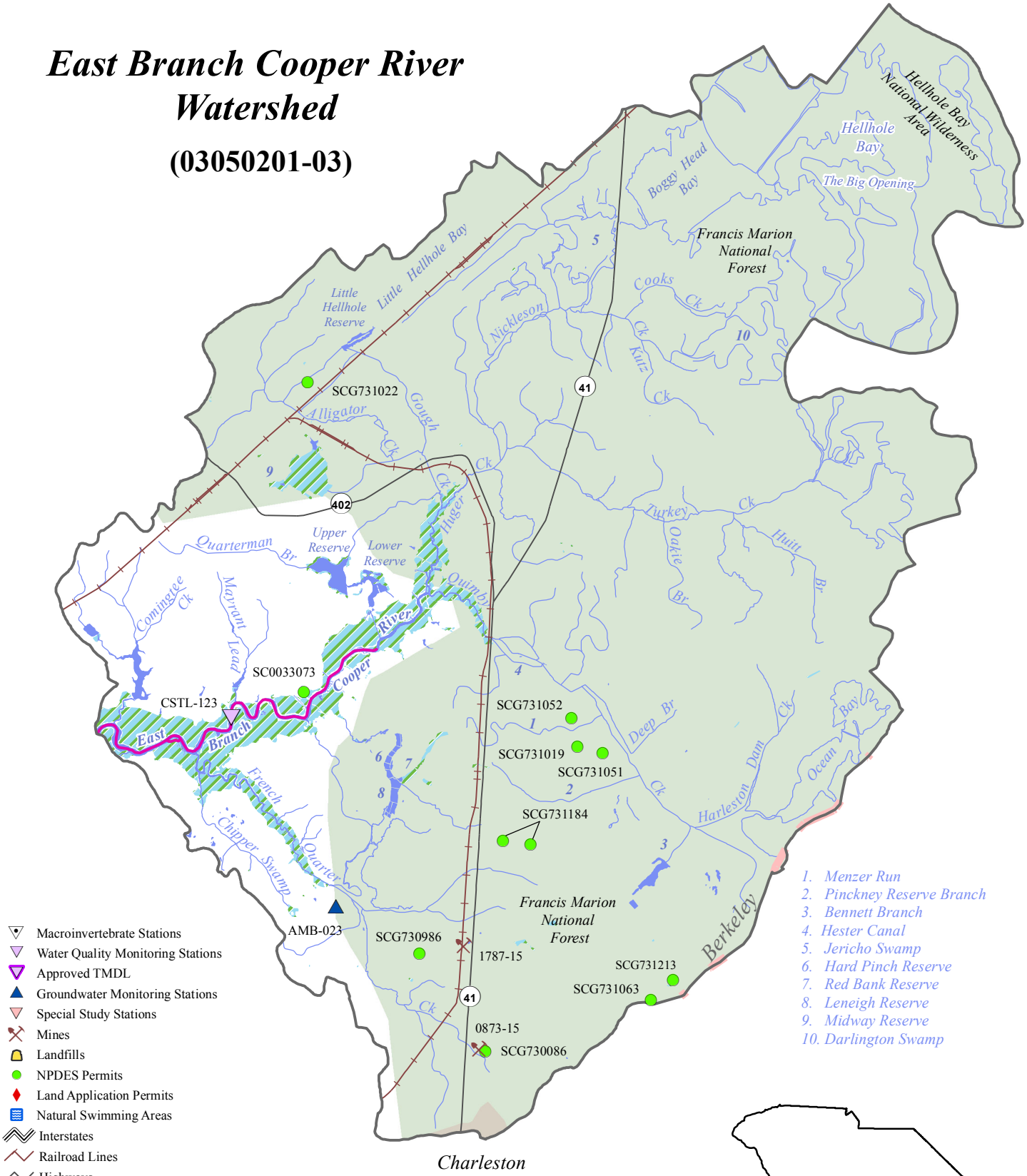
Special Models

Charleston Harbor System TMDLs

Modeling for the revised TMDL includes EFDC hydrodynamic and water quality models for the river and harbor segments and linked Loading Simulation Program in C++ (LSPC) watershed model. Charleston waters are considered naturally low in dissolved oxygen, so the TMDL target is an allowable oxygen depression of 0.1 mg/L due to continuous NPDES point sources. Regulated stormwater and nonpoint sources were determined equivalent to natural background due to high levels of natural organic matter in the system. As such, they do not contribute to the 0.1mg/L depression target at existing conditions. The TMDL model is currently being adapted for future harbor deepening evaluations.

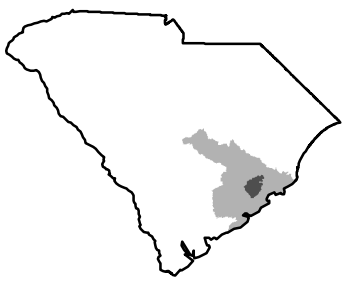
East Branch Cooper River Watershed

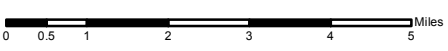
(03050201-03)



1. Menzer Run
2. Pinckney Reserve Branch
3. Bennett Branch
4. Hester Canal
5. Jericho Swamp
6. Hard Pinch Reserve
7. Red Bank Reserve
8. Leneigh Reserve
9. Midway Reserve
10. Darlington Swamp

- 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





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03050201-04

(Wando River)

General Description

Watershed 03050201-04 (formerly 03050201-080) is located in Berkeley and Charleston Counties and consists primarily of the ***Wando River*** and its tributaries. The watershed occupies 72,370 acres of the Coastal Zone region of South Carolina. Land use/land cover in the watershed includes: 33.1% forested land, 22.6% forested wetland, 17.0% nonforested wetland, 16.8% urban land, 7.7% water, 2.4% agricultural land, and 0.4% barren land.

The Wando River headwaters flow through I'on Swamp (Mayrants Reserve) and accepts drainage from Alston Creek (SFH), Darrell Creek (SFH), Deep Creek, Toomer Creek (SFH), and Wagner Creek (SFH) before receiving Guerin Creek (SFH) drainage (Lachicotte Creek, Old House Creek, Fogarty Creek) near Cat Island. I'on Swamp and Guerin Creek drainages flow through the Francis Marion National Forest. Johnfield Creek enters the river downstream followed by Horlbeck Creek (SFH) (Boone Hall Creek-SFH), Foster Creek (SFH), Beresford Creek (Martin Creek, Sanders Creek, Hopewell Creek), Ralston Creek (SFH), Rathall Creek (SFH), Bermuda Creek, Hobcaw Creek (SFH), and Molasses Creek (SFH). The Wando River then drains into the Cooper River, which flows into the Charleston Harbor. The Wando River is classified SFH from its headwaters to a point 2.5 miles north of its confluence with the Cooper River, and is classified SA downstream of this point to its confluence with the Cooper River. Beresford Creek drains into both the Wando River and Clouter Creek and is classified SFH from its confluence with the Wando River to a point 4 miles away from the confluence, and classified SA from that point to the confluence with Clouter Creek. There are a total of 46.3 stream miles, 38.7 acres of lake waters, and 5,408.6 acres of estuarine areas in this watershed

Surface Water Quality

Station #	Type	Class	Description
RT-08076	RT-08	SFH	750 YARDS UPSTREAM DEEP CREEK OFF OF WANDO RIVER
RT-06012	RT-06	SFH	TOOMER CREEK, 2.5MI E OF SC 41 BRIDGE OVER WANDO RIVER
MD-115	P/INT	SFH	WANDO RIVER AT S.C. 41
RT-07056	RT-07	SFH	JOHNFIELD CREEK, 0.25MI FROM MOUTH
RT-052100	RT-05	SFH	BOONE HALL CREEK, 1.5MI WNW OF US 17/SC 41 INTERSECTION
RO-056092	RO-05	SFH	BERESFORD CREEK, 5.3 MI NNE OF WANDO RIVER AND COOPER RIVER CONFLUENCE
MD-264	INT	SFH	WANDO RIVER AT I-526 MARK CLARK EXPRESSWAY
MD-198	P/W	SFH	WANDO RIVER BETWEEN RATHALL & HOBCAW CREEKS

Deep Creek (RT-08076) - Aquatic life and recreational uses are fully supported. Although dissolved oxygen excursions occurred, they were typical of values seen in such systems and were considered natural, not standard violations.

Toomer Creek (RT-06012) - Aquatic life uses are not supported due to dissolved oxygen excursions. Recreational uses are fully supported.

Wando River - There are three monitoring stations along the Wando River and recreational uses are fully supported at all sites. Aquatic life uses are fully supported at the upstream site ***(MD-115)***. There is a significant decreasing trend in pH. Although dissolved oxygen excursions occurred, they were typical of values seen in such systems and were considered natural, not standard violations. Significant decreasing trends in turbidity, total phosphorus concentration, and total nitrogen concentration suggest improving conditions for these parameters. At the midstream site ***(MD-264)***, aquatic life uses are fully supported; however, there is a significant increasing trend in five-day biochemical oxygen demand. At the downstream site ***(MD-198)***, aquatic life uses are fully supported. In addition, significant decreasing trends in five-day biochemical oxygen demand, turbidity, total phosphorus concentration, total nitrogen concentration, and fecal coliform bacteria concentration suggest improving conditions for these parameters.

Johnfield Creek (RT-07056) - Aquatic life and recreational uses are fully supported. Although dissolved oxygen excursions occurred, they were typical of values seen in such systems and were considered natural, not standard violations.

Boone Hall Creek (RT-052100) - Aquatic life uses are fully supported. Although dissolved oxygen excursions occurred, they were typical of values seen in such systems and were considered natural, not standard violations. Recreational uses are partially supported due to fecal coliform bacteria excursions.

Beresford Creek (RO-056092) – Aquatic life uses are partially supported due to dissolved oxygen excursions. Recreational uses are fully supported.

Fish tissue samples from the lower Wando River indicate no advisories are needed at this time.

Shellfish Monitoring Stations

Station #	Description
09B-01	WANDO RIVER AT NOWELL CREEK
09B-02	WANDO RIVER AT HORLBECK CREEK
09B-03	WANDO RIVER AT SC HWY 41 BRIDGE
09B-04	WANDO RIVER AT DEEP CREEK
09B-05	WANDO RIVER OPPOSITE BIG PARADISE ISLAND
09B-06	WANDO RIVER AT PARADISE BOAT LANDING
09B-07	BOONE HALL CREEK OPPOSITE COUNTY RECREATION AREA
09B-08	WANDO RIVER AT MARKER #29
09B-09	DEEP CREEK – 1 MI FORM CONFLUENCE WITH WANDO RIVER
09B-10	WANDO RIVER AT ALSTON CREEK CONFLUENCE
09B-11	WANDO RIVER AT GUERIN CREEK
09B-12	GUERIN CREEK AT OLD HOUSE CREEK
09B-13	CONFLUENCE OF WANDO RIVER AND COOPER RIVER
09B-14	NORTH EDGE OF SC PORT AUTHORITY/WANDO TERMINAL
09B-15	NEW BRIDGE- ROUTE I-526
09B-16	CONFLUENCE OF MARTIN CREEK AND NOWELL CREEK
09B-17	WANDO RIVER MIDWAY BETWEEN STATIONS 3 AND 11 (AT OLD DRY DOCK)
09B-18	RATHALL CREEK AT CONFLUENCE WITH WANDO RIVER
09B-19	FOSTER CREEK AT CONFLUENCE WITH WANDO RIVER

09B-21	HORLBECK CREEK AT POWER LINE CROSSING
09B-22	WANDO RIVER @ FOSTER CREEK
09B-23	WANDO RIVER @ MARKER #20
09B-24	WANDO RIVER @ MARKER #13

NPDES Program

Active NPDES Facilities

RECEIVING STREAM / ***FACILITY NAME***	***NPDES#*** / ***TYPE***
WANDO RIVER	SC0033022
DETYENS SHIPYARDS/WANDO YARD	MINOR INDUSTRIAL
WANDO RIVER	SC0043273
MT.PLEASANT WATER WORKS/WTP#2	MINOR MUNICIPAL

Municipal Separate Storm Sewer Systems (MS4)

RECEIVING STREAM / ***MUNICIPALITY*** / ***RESPONSIBLE PARTY*** / ***IMPLEMENTING PARTY***	***NPDES#*** / ***MS4 PHASE*** / ***MS4 SIZE***
WANDO RIVER	SCR031906
TOWN OF MOUNT PLEASANT	PHASE II
TOWN OF MOUNT PLEASANT	SMALL MS4
TOWN OF MOUNT PLEASANT	
WANDO RIVER	SCR031902
UNINCORPORATED AREAS	PHASE II
CHARLESTON COUNTY	SMALL MS4
CHARLESTON COUNTY	

Nonpoint Source Management Program

Land Disposal Activities

Landfill Facilities

LANDFILL NAME / ***FACILITY TYPE***	***PERMIT #*** / ***STATUS***
EAST COOPER RES.DEV.C&D	PROPOSED
C&D	--------

Mining Activities

MINING COMPANY / ***MINE NAME***	***PERMIT #*** / ***MINERAL***
DH HANKINS TRUCKING CO. LLC	1707-19
WAPPETAW MINE	SAND/CLAY

Growth Potential

There is a high potential for growth projected for this watershed, which contains portions of the Towns of Mt. Pleasant and Awendaw, and the City of Charleston. Some of the major development areas include: Dunes West, Liberty, Rivertowne, Brickyard, Long Point, Belle Hall, and Daniel Island. Water and sewer services are available in all potential growth areas.

Watershed Protection and Restoration

Total Maximum Daily Loads (TMDLs)

The TMDLs addressing dissolved oxygen for the Ashley River and for the Cooper River-***Wando River***-Charleston Harbor have been revised. The revised TMDLs are combined in a single TMDL document covering Charleston Harbor and the Cooper, Ashley, and Wando Rivers. The basis for this revision is a new 3-Dimensional Environmental Fluid Dynamics Code (EFDC) model covering the entire system completed in 2008, a revised Dissolved Oxygen standard as amended in the South Carolina Pollution Control Act in 2010 (adopted in S.C. R.61-68 in 2012), and subsequent reallocation of the TMDLs led by the Berkeley-Charleston-Dorchester Council of Governments. The revised TMDL was placed on public notice in October 2012 and approved by EPA in April 2013. The TMDL determined revised wasteload allocations for oxygen-demanding pollutants from continuous point sources which will be implemented in NPDES permits.

The previous and revised TMDLs can be compared on a percent reduction basis. The Cooper River TMDL required an interim reduction of 58% (Phase 1) and a final reduction of 69% (Phase 2) from pre-TMDL permitted UOD; the Ashley River TMDL required a reduction of 32% form pre-TMDL permitted UOD. This TMDL applies a more accurate water quality model in addition to a more accurate laboratory characterization of the wastewater. Based on this new information, the revised TMDL is equivalent to an additional 2% reduction below the Phase 1 level for the Cooper River. The revised TMDL for the Ashley River is equivalent to a 15% reduction from the pre-TMDL permitted UOD. For more detailed information on TMDLs, please visit www.scdhec.gov/tmdl.

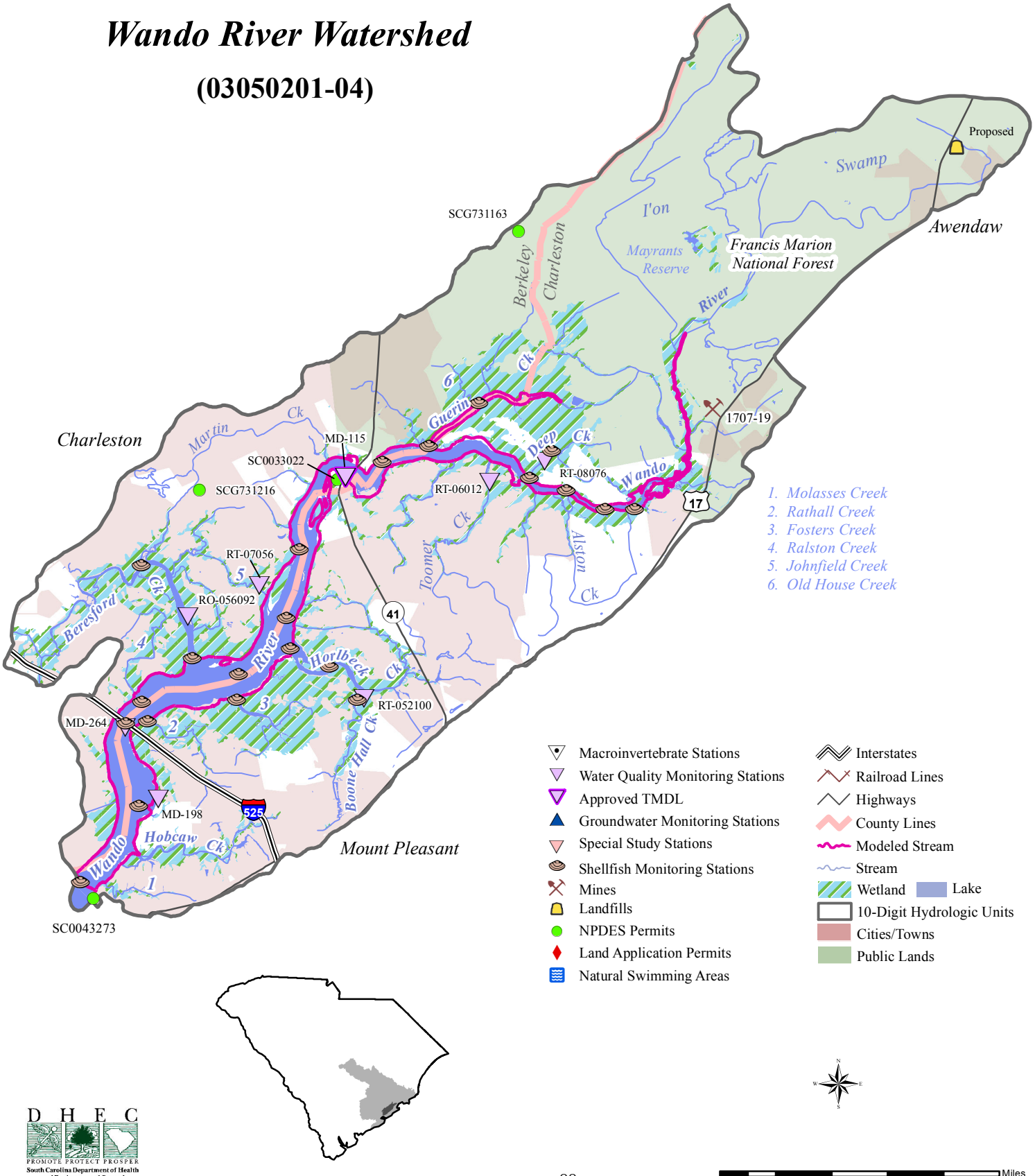
Special Models

Charleston Harbor System TMDLs

Modeling for the revised TMDL includes EFDC hydrodynamic and water quality models for the river and harbor segments and linked Loading Simulation Program in C++ (LSPC) watershed model. Charleston waters are considered naturally low in dissolved oxygen, so the TMDL target is an allowable oxygen depression of 0.1 mg/L due to continuous NPDES point sources. Regulated stormwater and nonpoint sources were determined equivalent to natural background due to high levels of natural organic matter in the system. As such, they do not contribute to the 0.1 mg/L depression target at existing conditions. The TMDL model is currently being adapted for future harbor deepening evaluations.

Wando River Watershed

(03050201-04)



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03050201-05

(Cypress Swamp)

General Description

Watershed 03050201-05 (formerly 03050202-010, and a portion of -020) is located in Berkeley and Dorchester Counties and consists primarily of ***Cypress Swamp*** and it tributaries. The watershed occupies 139,162 acres of the Lower Coastal Plain region of South Carolina. Land use/land cover in the watershed includes: 52.5% forested land, 25.3% forested wetland, 14.4% agricultural land, 7.1% urban land, 0.4% nonforested wetland, 0.2% water, and 0.1% barren land.

Williams Branch flows into Big Run and is joined by Black Creek to form Wassamassaw Swamp, which accepts drainage from Mill Branch, Caton Creek, and Simmons Bay. Partridge Creek (Rudd Branch, Mill Branch) joins Wassamassaw Swamp to form the headwaters of Cypress Swamp. Cypress Swamp receives drainage from Sandy Run (Smith Branch), Miller Dam Branch, Felder Branch, Dawson Branch, Stanley Branch (Kelly Branch), and Green Bay Branch near the Town of Ridgeville. Cypress Swamp then accepts drainage from Captains Creek (McKeown Branch), Platt Branch, Rumphs Hill Creek (Negro Branch), Tina Branch, Hurricane Branch, Bobs Lake, and Schultz Lake before flowing into the Ashley River watershed. There are a total of 357.9 stream miles and 219.7 acres of lake waters in this watershed, all classified FW. Givhans Ferry State Park is located at the base of the watershed.

Surface Water Quality

Station #	Type	Class	Description
CSTL-063	P/W	FW	WASSAMASSAW SWAMP AT U.S. 176
CSTL-078	W/INT	FW	CYPRESS SWAMP AT U.S. 78

Wassamassaw Swamp (CSTL-063) **-** Aquatic life and recreational uses are fully supported. Although dissolved oxygen excursions occurred, they were typical of values seen in blackwater systems and were considered natural, not standard violations. There is a significant increasing trend in pH. Significant decreasing trends in turbidity and total phosphorus concentration suggest improving conditions for these parameters.

Cypress Swamp (CSTL-078) **–** Aquatic life uses are fully supported; however, there is a significant increasing trend in five-day biological oxygen demand. Although dissolved oxygen excursions occurred, they were typical of values seen in blackwater systems and were considered natural, not standard violations. There is a significant increasing trend in pH. Recreational uses are partially supported due to fecal coliform bacteria excursions.

Groundwater Quality

Well #	Class	Aquifer	Location
AMB-096	GB	TERTIARY LIMESTONE	LEIBER CORRECTIONAL INST.

NPDES Program

Active NPDES Facilities

RECEIVING STREAM *FACILITY NAME*	*NPDES#* *TYPE*
MILL BRANCH D&A PARTNERSHIP/CUMBIE PIT	SCG730115 MINOR INDUSTRIAL
CYPRESS SWAMP TRIBUTARY THE WHITFIELD CO./WHIT'S PIT	SCG730266 MINOR INDUSTRIAL
SANDY RUN TRIBUTARY GRAMLING BROTHERS REAL EST./SKI LAKE MINE	SCG731011 MINOR INDUSTRIAL
SANDY RUN TRIBUTARY GRAMLING BROTHERS REAL EST./CANAL LAKES MINE	SCG731024 MINOR INDUSTRIAL
SANDY RUN TRIBUTARY GRAMLING BROS REAL EST./CANAL LAKES 5ACRE MINE	SCG731029 MINOR INDUSTRIAL

Municipal Separate Storm Sewer Systems (MS4)

RECEIVING STREAM *MUNICIPALITY* *RESPONSIBLE PARTY* *IMPLEMENTING PARTY*	*NPDES#* *MS4 PHASE* *MS4 SIZE*
CYPRESS SWAMP TOWN OF SUMMERVILLE TOWN OF SUMMERVILLE TOWN OF SUMMERVILLE	SCR033502 PHASE II SMALL MS4
CYPRESS SWAMP UNINCORPORATED AREAS BERKELEY COUNTY BERKELEY COUNTY	SCR031501 PHASE II SMALL MS4
CYPRESS SWAMP TOWN OF SUMMERVILLE TOWN OF SUMMERVILLE TOWN OF SUMMERVILLE	SCR033502 PHASE II SMALL MS4
CYPRESS SWAMP UNINCORPORATED AREAS BERKELEY COUNTY BERKELEY COUNTY	SCR031501 PHASE II SMALL MS4

Nonpoint Source Management Program

Land Disposal Activities

Landfill Facilities

LANDFILL NAME *FACILITY TYPE*	*PERMIT #* *STATUS*
WESTVACO INDUSTRIAL	082430-1601 ACTIVE
BFI MUNICIPAL	---------- INACTIVE
BFI INDUSTRIAL	---------- INACTIVE
AMERIACAN RESOURCES INC. INDUSTRIAL	182415-5201 INACTIVE
CAROLINA RESEARCH DEV. LLC C&D	---------- PROPOSED

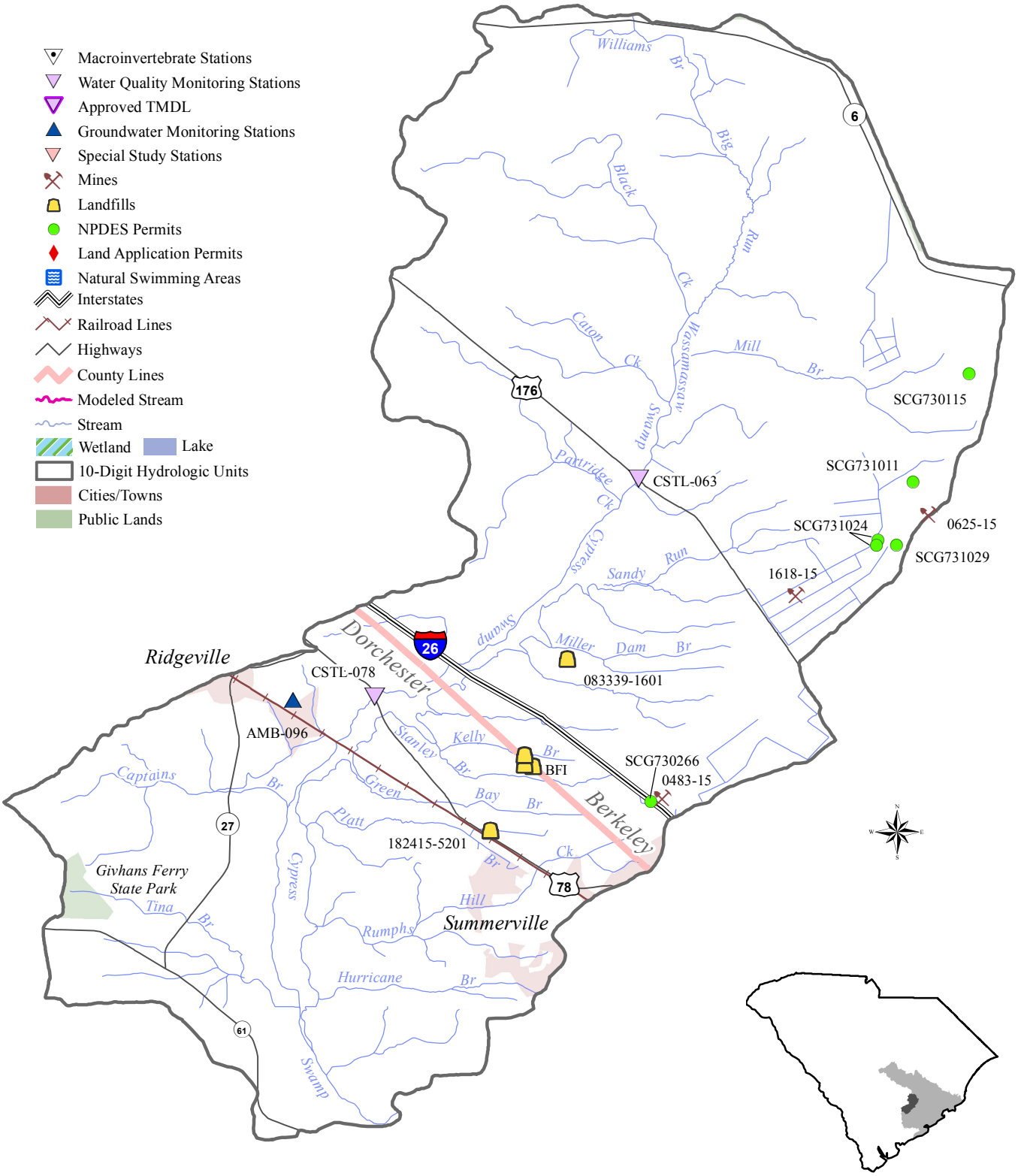
Mining Activities

MINING COMPANY *MINE NAME*	*PERMIT #* *MINERAL*
ACD, A PARTNERSHIP DANGERFIELD MINE (17A)	0625-15 SAND; SAND/CLAY
WHITFIELD CO. WHITS PIT	0483-15 SAND
GRAMLING BROTHERS REAL ESTATE HWY 176 PIT	1618-15 SAND/TOP SOIL

Growth Potential

There is a moderate potential for growth in this watershed, which contains portions of the Towns of Ridgeville and Summerville, and water and sewer services are available to these growth areas.

Cypress Swamp Watershed
(03050201-05)



03050201-06

(Ashley River)

General Description

Watershed 03050201-06 (formerly 03050202-030, 040, and a portion of -020) is located in Berkeley, Charleston, and Dorchester Counties and consists primarily of the ***Ashley River*** and its tributaries. The watershed occupies 86,887 acres of the Lower Coastal Plain and Coastal Zone regions of South Carolina. Land use/land cover in the watershed includes: 43.3% urban land, 20.0% forested land, 19.5% forested wetland, 9.4% nonforested wetland, 4.9% water, 2.5% agricultural land, and 0.4% barren land.

The Ashley River flows out of the Cypress Swamp and accepts drainage from Dorchester Creek (Sawmill Branch, Rose Creek) and Eagle Creek (Spencer Branch, Federwitz Branch, Chandler Bridge Creek). Sawmill Branch is classified FW, Dorchester Creek is SA, and Eagle Creek is SB. Old Dorchester State Park lies between Dorchester and Eagle Creeks. The river then receives drainage from Coosaw Creek (SA), Olive Branch (SA), Sawpit Creek (SA), and Popperdam Creek (SA). MacBeth Creek (SA) enters the river next followed by Keivling Creek (SA), Church Creek, Bulls Creek (SA*), Brickyard Creek (SB), Duck Island Canal (SA*), Orangegrove Creek (Oldtown Creek), Wappoo Creek, Dill Creek, James Island Creek, and Mill Creek before flowing into the Cooper River in Charleston Harbor. The Atlantic Intracoastal Waterway (AIWW) follows Wappoo Creek from the Stono River to the Ashley River and into the harbor. This portion of the AIWW is classified SB.

The Ashley River is classified FW from its origin to Bacon Bridge and SA from Bacon Bridge to Church Creek, where it changes to SA* (DO not less than 4 mg/l) to the entrance of Orangegrove Creek. Downstream of Orangegrove Creek, the Ashley River returns to its classification of SA. In addition to the Old Dorchester State Park, other natural resources in the watershed include many historic gardens and plantations, and Charles Towne Landing State Park. There are a total of 113.4 stream miles, 421.3 acres of lake waters, and 3,862.5 acres of estuarine areas in this watershed.

Surface Water Quality

Station #	Type	Class	Description
CSTL-102	P/INT	FW/SA	ASHLEY RIVER AT SC 165 4.8 MI SSW OF SUMMERVILLE
CSTL-043	S/W	FW	SAWMILL BRANCH AT SC 78 E OF SUMMERVILLE
RS-05563	RS-05	FW	SAWMILL BRANCH AT S-18-706 IN SUMMERVILLE
CSTL-013	P/INT	SA	DORCHESTER CREEK AT SC 165
CSTL-099	P/W	SB	EAGLE CREEK AT SC 642 5 MI SSE OF SUMMERVILLE
MD-049	P/SPRP	SA	ASHLEY RIVER AT MAGNOLIA GARDENS
MD-246	P/W	SA*	CHURCH CREEK MOUTH
MD-135	S/W	SA*	ASHLEY RIVER AT S.C. 7 (NORTH BRIDGE)
MD-052	P/INT	SA	ASHLEY RIVER AT SAL RR BRIDGE
MD-020	P/INT	SB	MOUTH OF WAPPOO CREEK BETW CHANNEL MARKERS 3 & 4
MD-034	P/INT	SA	RT BANK OF ASHLEY R. BETW MOUTH OF WAPPOO CREEK AND DILLS CREEK
RT-052098	RT-05	SA	JAMES ISLAND CREEK N OF WHITE HALL PLANTATION

Ashley River – There are five monitoring stations along the Ashley River. At the furthest upstream site ***(CSTL-102)***, aquatic life uses are fully supported for both fresh and saltwater classifications; however, there is a significant increasing trend in total phosphorus concentration for both classifications. Although dissolved oxygen excursions occurred, they were typical of values seen in such systems and were considered natural, not standard violations. There is a significant increasing trend in pH. A significant decreasing trend in total nitrogen concentration suggests improving conditions for this parameter. Recreational uses are partially supported due to fecal coliform bacteria excursions for both classifications. Moving downstream to ***MD-049***, aquatic life uses are not supported due to turbidity and dissolved oxygen excursions. Significant decreasing trends in turbidity, total nitrogen concentration, and fecal coliform bacteria concentration suggest improving conditions for these parameters. Recreational uses are partially supported due to fecal coliform bacteria excursions at this site. Further downstream ***(MD-135)***, both aquatic life and recreational uses are fully supported. Significant increasing trends in dissolved oxygen concentration and decreasing trends in total phosphorus concentration suggest improving conditions for these parameters.

Continuing downstream to ***MD-052***, aquatic life uses are not supported due to occurrences of copper in excess of the aquatic life criterion and dissolved oxygen excursions. In addition, there is a significant increasing trend in five-day biological oxygen demand. There is a significant decreasing trend in pH. Significant increasing trends in dissolved oxygen concentration and decreasing trends in turbidity, total nitrogen concentration, and fecal coliform bacteria suggest improving conditions for these parameters. Recreational uses are fully supported at this site. At the furthest downstream site ***(MD-034)***, aquatic life and recreational uses are fully supported. Significant decreasing trends in five-day biological oxygen demand, total phosphorus and total nitrogen concentration, and fecal coliform bacteria suggest improving conditions for these parameters.

Sawmill Branch - There are two monitoring stations along Sawmill Branch. At the upstream site ***(CSTL-043)***, aquatic life uses are partially supported due to dissolved oxygen excursions. In addition, there is a significant increasing trend in turbidity. There is a significant increasing trend in pH. Significant decreasing trends in five-day biological oxygen demand and fecal coliform bacteria concentration suggest improving conditions for these parameters. Recreational uses are fully supported. At the downstream site ***(RS-05563)***, aquatic life uses are fully supported, but recreational uses are not supported due to fecal coliform excursions.

Dorchester Creek (CSTL-013) - Aquatic life uses are partially supported due to dissolved oxygen excursions. There is a significant increasing 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; however, a significant decreasing trend in fecal coliform bacteria concentration suggests improving conditions for this parameter.

***Eagle Creek* (CSTL-099) –** Aquatic life uses are not supported due to ammonia excursions. In addition, there is a significant increasing trend in total phosphorus concentration. There is a significant increasing trend in pH. Significant decreasing trends in five-day biological oxygen demand and total nitrogen concentration suggest improving conditions for these parameters. Recreational uses are not supported due to fecal coliform bacteria excursions.

***Church Creek (MD-246)* –** Aquatic life and recreational uses are fully supported. In addition, significant increasing trends in dissolved oxygen and decreasing trends in five-day biological oxygen demand, turbidity, total phosphorus and total nitrogen concentration, and fecal coliform bacteria concentration suggest improving conditions for these parameters.

***Wappoo Creek (MD-020)* –** Aquatic life and recreational uses are fully supported. There is a significant decreasing trend in pH. Significant decreasing trends in five-day biological oxygen demand, total nitrogen concentration, and fecal coliform bacteria concentration suggest improving conditions for these parameters.

***James Island Creek (RT-052098)* –** Aquatic life uses are not supported due to dissolved oxygen excursions. 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 Ashley River within this watershed (see advisory p.70). Fish tissue samples from the lower Ashley River (downstream of U.S. 17) indicate no advisories are needed at this time.

Groundwater Quality

Well #	Class	Aquifer	Location
AMB-022	GB	BLACK CREEK/MIDDENDORF	SUMMERVILLE NO.5

NPDES Program

Active NPDES Facilities

RECEIVING STREAM *FACILITY NAME*	*NPDES#* *TYPE*
ASHLEY RIVER CHARLESTON CPW/PLUM ISLAND WWTP	SC0021229 MAJOR MUNICIPAL
ASHLEY RIVER TRIBUTARY USAF CHARLESTON AFB	SCG250218 MINOR INDUSTRIAL
ASHLEY RIVER TOWN OF SUMMERVILLE/WWTP	SC0037541 MAJOR DOMESTIC

ASHLEY RIVER MIDDLETON INN	SC0039063 MINOR DOMESTIC
ASHLEY RIVER TRIBUTARY THE BOEING CO./N. CHARLESTON	SCG250270 MINOR INDUSTRIAL
CHANDLER BRIDGE CREEK LJ INC./LADSON FARMS MINE	SCG730623 MINOR INDUSTRIAL
ASHLEY RIVER TRIBUTARY MURRAY SAND CO., INC./MILL BROOK MINE	SCG731028 MINOR INDUSTRIAL
OLIVE BRANCH MCDIRT CO. LLC/MILL BROOK MINE	SCG731217 MINOR INDUSTRIAL
ASHLEY RIVER L&L CONTRACTORS INC./L&L DORCHESTER ROAD MINE	SCG731178 MINOR INDUSTRIAL
SAWMILL BRANCH MASSENBURG CONSTR. INC./MAIN STREET CARWASH	SCG750030 MINOR INDUSTRIAL
COOSAW CREEK DORCHESTER COUNTY/LOWER DORCHESTER PLANT	SC0038822 MAJOR DOMESTIC

Municipal Separate Storm Sewer Systems (MS4)

RECEIVING STREAM ***MUNICIPALITY*** ***RESPONSIBLE PARTY*** ***IMPLEMENTING PARTY***	***NPDES#*** ***MS4 PHASE*** ***MS4 SIZE***
ASHLEY RIVER TOWN OF SUMMERVILLE TOWN OF SUMMERVILLE TOWN OF SUMMERVILLE	SCR033502 PHASE II SMALL MS4
ASHLEY RIVER UNINCORPORATED AREAS BERKELEY COUNTY BERKELEY COUNTY	SCR031501 PHASE II SMALL MS4
ASHLEY RIVER CITY OF CHARLESTON CITY OF CHARLESTON CITY OF CHARLESTON	SCR031901 PHASE II SMALL MS4
ASHLEY RIVER LINCOLNVILLE LINCOLNVILLE CHARLESTON COUNTY	SCR031905 PHASE II SMALL MS4
ASHLEY RIVER CITY OF NORTH CHARLESTON CHARLESTON AFB CHARLESTON AFB	SCR031909 PHASE II SMALL MS4
ASHLEY RIVER CITY OF NORTH CHARLESTON CITY OF NORTH CHARLESTON CITY OF NORTH CHARLESTON	SCR031907 PHASE II SMALL MS4

ASHLEY RIVER	SCR033502
TOWN OF SUMMERVILLE	PHASE II
TOWN OF SUMMERVILLE	SMALL MS4
TOWN OF SUMMERVILLE	
ASHLEY RIVER	SCR031902
UNINCORPORATED AREAS	PHASE II
CHARLESTON COUNTY	SMALL MS4
CHARLESTON COUNTY	
ASHLEY RIVER	SCR031907
CITY OF NORTH CHARLESTON	PHASE II
CITY OF NORTH CHARLESTON	SMALL MS4
CITY OF NORTH CHARLESTON	
ASHLEY RIVER	SCR033502
TOWN OF SUMMERVILLE	PHASE II
TOWN OF SUMMERVILLE	SMALL MS4
TOWN OF SUMMERVILLE	
ASHLEY RIVER	SCR033501
UNINCORPORATED AREAS	PHASE II
DORCHESTER COUNTY	SMALL MS4
DORCHESTER COUNTY	

Nonpoint Source Management Program

Land Disposal Activities

Landfill Facilities

LANDFILL NAME	***PERMIT #***
FACILITY TYPE	***STATUS***
TOWN OF SUMMERVILLE C&D SW TRANSFER STATION	181002-6001
C&D	ACTIVE
MOORE DRUMS	--------
INDUSTRIAL	INACTIVE
CHARLESTON COUNTY DUMP	---------
MUNICIPAL	CLOSED
LOCKWOOD BLVD DUMP	---------
MUNICIPAL	INACTIVE
BEES FERRY RD ASH MONOFIL	-------
ASH MONOFIL	INACTIVE
GENSTA	--------
INDUSTRIAL	INACTIVE
BANKS CONSTRUCTION CO.	102707-7301
UOM	ACTIVE
BANKS CONSTRUCTION CO.	102707-7101
UOP	ACTIVE

BANKS CONSTRUCTION CO. INDUSTRIAL	---------- INACTIVE
PEPPERHILL REG. IND. SW LANDFILL INDUSTRIAL	182441-1601 ACTIVE
PEPPERHILL PROCESSING & TRANSFER STA. SWP	182441-2001 ACTIVE
HAMMOND WOOD RECYCLING COMP. SITE COMPOSTING	182621-3001 INACTIVE
WESTOE PLANTATION C&D & LCD C&D	182437-1201 INACTIVE
WESTOE PLANTATION INDUSTRIAL	---------- INACTIVE
DORCHESTER COUNTY NORTH COMPOSTING SITE COMPOSTING	181001-3001 INACTIVE

Mining Activities

MINING COMPANY ***MINE NAME***	***PERMIT #*** ***MINERAL***
L.J., INC. LADSON FARMS MINE	0644-35 SAND/SAND CLAY
ADDCO MINING CO. EVERGREEN MINE	0252-35 SAND
JENNER TRUCKING & CONSTRUCTION INC. JENNER RECYCLING	1355-31 CLAY
THE WHITFIELD CO. RUNNYMEADE MINE	1717-19 SAND
MC DIRT LLC. MIDDLETON MINE	1249-35 SAND/CLAY

Growth Potential

There is a high potential for growth in this watershed, which contains portions of the Towns of Summerville and Ladson and the Cities of Charleston and North Charleston. The west bank of the Ashley River contains numerous historic structures including Middleton Place, Drayton Hall, Magnolia Gardens, Runnymead Plantation, and Charles Towne Landing State Park; all are important scenic, cultural, and tourism resources. Areas with a high potential for growth include Amberwood, Jerico on the Ashley, Summerfield, River Oaks, and Shadowmoss in Charleston County; and Coosaw Creek, Whitehall, Avanti Tract, Appian Landing, Bakers Landing, Indigo Fields, and Ricefield/Windsor Hill in Dorchester County. There are water and sewer services available to all these growth areas.

Watershed Protection and Restoration

Total Maximum Daily Loads (TMDLs)

A TMDL was developed by SCDHEC and approved by EPA for ***Sawmill Branch*** water quality monitoring site CSTL-043 and for ***Dorchester Creek*** site CSTL-013 to determine the maximum amount of fecal coliform bacteria it can receive from nonpoint sources and still meet water quality standards. Most of Sawmill Branch and Dorchester Creek have been straightened and channelized, separating them from their flood plains. The primary sources of fecal coliform to the streams were determined to be runoff from urbanized land in the watershed. The TMDL states that a 96% reduction in fecal coliform loading from urban sources for Sawmill Branch and a 93% reduction for Dorchester Creek is necessary for the streams to meet the recreational use standard.

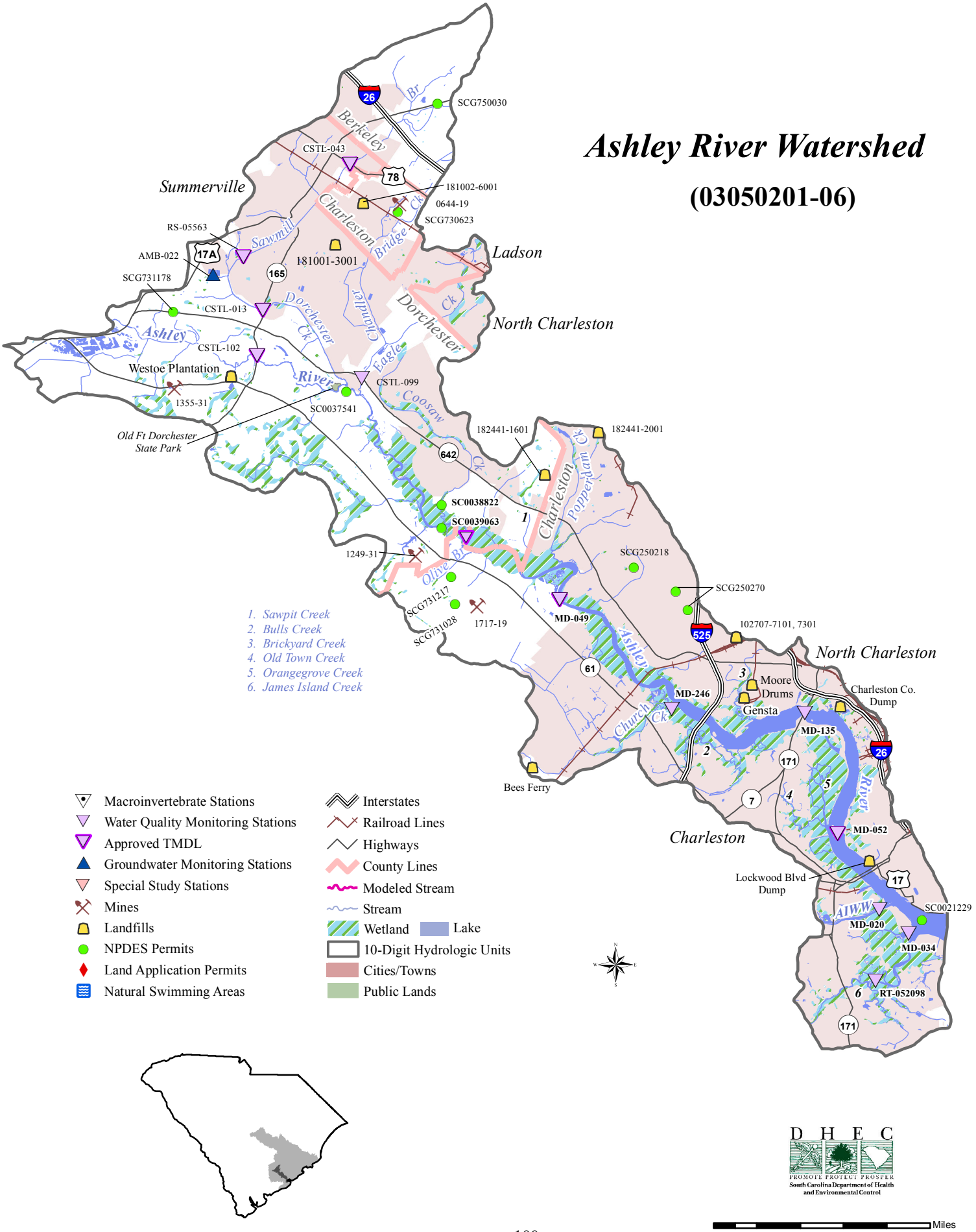
The TMDLs addressing dissolved oxygen for the ***Ashley River*** and for the Cooper River-Wando River-Charleston Harbor have been revised. The revised TMDLs are combined in a single TMDL document covering Charleston Harbor and the Cooper, Ashley, and Wando Rivers. The basis for this revision is a new 3-Dimensional Environmental Fluid Dynamics Code (EFDC) model covering the entire system completed in 2008, a revised Dissolved Oxygen standard as amended in the South Carolina Pollution Control Act in 2010 (adopted in S.C. R.61-68 in 2012), and subsequent reallocation of the TMDLs led by the Berkeley-Charleston-Dorchester Council of Governments. The revised TMDL was placed on public notice in October 2012 and approved by EPA in April 2013. The TMDL determined revised wasteload allocations for oxygen-demanding pollutants from continuous point sources which will be implemented in NPDES permits.

The previous and revised TMDLs can be compared on a percent reduction basis. The Cooper River TMDL required an interim reduction of 58% (Phase 1) and a final reduction of 69% (Phase 2) from pre-TMDL permitted UOD; the Ashley River TMDL required a reduction of 32% form pre-TMDL permitted UOD. This TMDL applies a more accurate water quality model in addition to a more accurate laboratory characterization of the wastewater. Based on this new information, the revised TMDL is equivalent to an additional 2% reduction below the Phase 1 level for the Cooper River. The revised TMDL for the Ashley River is equivalent to a 15% reduction from the pre-TMDL permitted UOD. For more detailed information on TMDLs, please visit www.scdhec.gov/tmdl.

Special Models

Charleston Harbor System TMDLs

Modeling for the revised TMDL includes EFDC hydrodynamic and water quality models for the river and harbor segments and linked Loading Simulation Program in C++ (LSPC) watershed model. Charleston waters are considered naturally low in dissolved oxygen, so the TMDL target is an allowable oxygen depression of 0.1 mg/L due to continuous NPDES point sources. Regulated stormwater and nonpoint sources were determined equivalent to natural background due to high levels of natural organic matter in the system. As such, they do not contribute to the 0.1mg/L depression target at existing conditions. The TMDL model is currently being adapted for future harbor deepening evaluations.


Ashley River Watershed
(03050201-06)
Summerville
Ladson
North Charleston
Westoe Plantation
Old Ft Dorchester State Park
Bees Ferry
Charleston
Moore Drums
Gensta
Charleston Co. Dump
Lockwood Blvd Dump
SCG750030
CSTL-043
181002-6001
0644-19
SCG730623
RS-05563
AMB-022
SCG731178
181001-3001
CSTL-013
CSTL-102
1355-31
SC0037541
CSTL-099
182441-1601
182441-2001
SC0038822
SC0039063
1249-31
SCG731217
SCG731028
1717-19
MD-049
SCG250218
SCG250270
102707-7101, 7301
MD-246
MD-135
MD-052
MD-020
MD-034
RT-052098
SC0021229
1. Sawpit Creek
2. Bulls Creek
3. Brickyard Creek
4. Old Town Creek
5. Orangegrove Creek
6. James Island Creek
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 0.5 1 2 3 4 5 Miles

03050201-07

(Cooper River/Charleston Harbor)

General Description

Watershed 03050201-07 (formerly 03050201-010 (tailrace canal), 030, 050, 060, 070, 03050202-070) is located in Berkeley, Charleston, and Dorchester Counties and consists primarily of the ***Cooper River*** and its tributaries draining into the ***Charleston Harbor***. The watershed occupies 206,457 acres of the Lower Coastal Plain and Coastal Zone regions of South Carolina. Land use/land cover in the watershed includes: 26.9% forested land, 25.9% urban land, 20.3% forested wetland (swamp), 10.5% nonforested wetland (marsh), 10.3% water, 4.6% agricultural land, and 1.5% barren land.

The Tailrace Canal (California Branch, Old Santee Canal) flows out of Lake Moultrie's Pinopolis Dam and merges with Biggin Creek to form the West Branch Cooper River. The West Branch Cooper River then accepts drainage from the Wadboo Creek Watershed, Mepkin Creek, Molly Branch (Stony Branch), Wappoola Swamp, Durham Canal and Durham Creek before merging with the East Branch Cooper River Watershed at "The Tee" to form the Cooper River. Downstream of "The Tee", the Cooper River accepts drainage from Freshing Lead, Cowbell Branch, Grove Creek (Little Johnson Creek) and the Back River. Laurel Swamp (Gants Mill Branch, Tillmans Branch, Poplar Branch, Daisy Swamp, King Branch, Huckhole Swamp), Sophia Swamp (Lindsey Branch, Brick Bound Swamp), Canterhill Swamp, and Chicken Creek flow into the Back River upstream of the Back River Reservoir (also known as the Bushy Park Reservoir). Water is not released from the dam, but is pumped into the Cooper River near Bushy Industrial Park. Prioleau Creek (Long Field Pond, Crane Pond) enters Back River Reservoir in the upper lake region and Foster Creek enters the reservoir near the dam. The West Branch Cooper River also drains into the Back River via Durham Canal/Chicken Creek. All streams to this point are classified FW.

Downstream of its confluence with the Back River, the Cooper River is classified SB and accepts drainage from Flag Creek (Pepper Gully), Slack Reach, Yellow House Creek, and Goose Creek. McChune Branch, Ladson Branch, and Ancrum Swamp (Stroberfield Branch, Limehouse Branch) flow into Bluehouse Swamp and join Huckhole Swamp to form the headwaters of Goose Creek. Goose Creek is dammed to form Goose Creek Reservoir, which is used for recreation and water supply. Goose Creek is classified FW from its headwaters to the Goose Creek Reservoir Dam and SB downstream from the reservoir. Turkey Creek (SB) flows into Goose Creek downstream of the reservoir near the Town of Hanahan. Goose Creek accepts drainage from Old Goose Creek, New Tenant Pond, Brown Pond, and Logan Pond before it flows into the Cooper River.

The Cooper River (SB) then accepts drainage from Filbin Creek, Noisette Creek, Clouter Creek (Beresford Creek - SA), Shipyard Creek, the Wando River Watershed (SA), and the Ashley River Watershed (SA) as it drains into the Charleston Harbor (SB). Town Creek (Newmarket Creek) connects to the Cooper River above and below the Wando River confluence. The Charleston Harbor accepts

drainage from Kushiwah Creek, Shem Creek, Parrot Point Creek, Schooner Creek (Clark Sound), The Cove, and Bass Creek before flowing into the Atlantic Ocean. The AIWW flows across the harbor from the Ashley River and through the Sullivans Island Narrows near Ft. Moultrie. This portion of the AIWW is classified SB. Seaside Creek and Secessionville Creek drain into Clark Sound (SB). Fort Johnson Creek connects Clark Sound to Lighthouse Creek. Clark Sound drains into Lighthouse Creek as does First Sister Creek, Second Sister Creek, Block Island Creek, and Rat Island Creek. Lighthouse Creek drains to the Atlantic Ocean via Lighthouse Inlet. Natural resources in the watershed include Francis Marion National Forest, and Cypress Gardens, Ft. Sumter, and Ft. Moultrie. There are a total of 690.8 stream miles, 2,553.6 acres of lake waters, and 12,020.6 acres of estuarine areas in this watershed.

Surface Water Quality

Station #	Type	Class	Description
CSTL-062/SC-033	P/INT/SC	FW	TAILRACE CANAL AT US 52 & 17A BELOW LAKE MOULTRIE
CSTL-085	S/INT	FW	PIER IN W. BRANCH COOPER RIVER AT END OF RICE MILL ROAD IN PIMLICO
MD-217	P/W	FW	DURHAM CREEK AT S-08-9 BRIDGE
MD-240	P/W	FW	FOSTER CREEK AT CHARLESTON CPW WATER INTAKE
RT-042070	RT-04	SB	UNNAMED TRIB TO THE COOPER RIVER NEXT CK UPRIVER FROM GROVE CK
CSTL-124	INT	FW	BACK RIVER RES. IN FOREBAY EQUIDISTANT FROM DAM AND SHORELINES
MD-152	P/W	FW/SB	COOPER RIVER AT S-08-503, 6.2 MI ESE OF GOOSE CREEK
MD-043	P/SPRP	SB	COOPER RIVER AT CHANNEL MARKER 72 NEAR USN AMMO DEPOT
RO-06308	RO-06	SB	COOPER RIVER, 1.8 MI NNE OF GOOSE CREEK
RT-07040	RT-07	SB	CLOUTER CREEK, 0.5 MI BELOW NORTHERN CONFLUENCE WITH COOPER R.
MD-114	P/W	FW	GOOSE CREEK AT U.S. 52 N CHARLESTON
RL-04390	RL-04	FW	GOOSE CREEK RESERVOIR, 2.8MI NW OF SPILLWAY NEAR OTRANTO
RL-06434	RL-06	FW	GOOSE CREEK RESERVOIR, 2MI N OF SPILLWAY
RL-08065	RL-08	FW	GOOSE CREEK RESERVOIR, MIDLAKE IN LINE WITH NORTHBROOK BLVD
RL-07017	RL-07	FW	GOOSE CREEK RES., 0.6MI NW OF 2ND POWERLINE UPSTREAM OF BOAT RAMP
ST-033/CL-050	W	FW	GOOSE CREEK RES. AT 2ND POWER LINES UPSTREAM OF BOAT RAMP
RL-05412	RL-05	FW	GOOSE CREEK RESERVOIR, 0.55MI W OF DAM
RL-07001	RL-07	FW	GOOSE CREEK RESERVOIR, 100M NW OF SW DAM
ST-032/CL-049	P/SPRP	FW	GOOSE CREEK RESERVOIR 100 M UPSTREAM OF DAM
MD-039	P/INT	SB	GOOSE CREEK AT S-08-136 BRIDGE
MD-044	P/W	SB	COOPER RIVER BELOW MOUTH OF GOOSE CREEK AT CHAN. BUOY 60
RO-046070	RO-04	SB	COOPER RIVER, 0.7MI SSW OF MOUTH OF GOOSE CREEK
MD-249/MD-593	P/W	SB	FILBIN CREEK AT VIRGINIA AVE., NORTH CHARLESTON
MD-248	P/SPRP	SB	COOPER RIVER AT MARK CLARK BRIDGE (I-526)
RO-08352	RO-08	SB	COOPER RIVER, 1MI DOWNSTREAM FROM NOISETTE CREEK IN THE NAVY YARD
MD-045	P/INT	SB	COOPER RIVER ABOVE MOUTH OF SHIPYARD CK AT CHAN BUOY 49
MD-243	P/W	SB	SHIPYARD CREEK BETWEEN MARKER #6 AND MCALLOY DOCK
MD-046	P/W	SB	COOPER RIVER UNDER GRACE MEMORIAL BRIDGE
MD-047	P/W	SB	TOWN CREEK (W SIDE OF DRUM ISLAND) UNDER GRACE MEM. BRDG
RO-06304	RO-06	SB	COOPER RIVER, 0.3MI W OF SHUTES FOLLY ISLAND
MD-071	P/SPRP	SB	SHEM CREEK AT BRIDGE ON US 17
RO-07336	RO-07	SB	CHARLESTON HARBOR, 0.4MI SE OF MOUTH OF SHEM CREEK
MD-247	P/INT	SB	CHARLESTON HARBOR NEAR MT. PLEASANT WWTP DIFFUSER
MD-069	INT	SB/SFH	AIWW AT SC 703, E OF MT. PLEASANT
RO-046066	RO-04	SB	CHARLESTON HARBOR, 0.65MI SSE OF SHUTES FOLLY ISLAND
MD-165	P/INT	SB	CHARLESTON HARBOR AT FT.JOHNSON PIER AT MARINE SCIENCE LAB
MD-048	P/W	SB	S. CHANNEL CHAS HARBOR OFF FT JOHNSON , BELL BUOY 28
RT-042072	RT-04	SB	UNNAMED TRIB TO PARROT POINT CREEK, 0.8MI S OF FT. JOHNSON

Tailrace Canal (CSTL-062/SC-033) – Aquatic life and recreational uses are fully supported. There is a significant increasing trend in pH. A significant decreasing trend in five-day biological oxygen demand suggests improving conditions for this parameter.

West Branch Cooper River (CSTL-085) – Aquatic life and recreational uses are fully supported; however, there are significant decreasing trends in dissolved oxygen concentration and increasing trends in five-day biological oxygen demand and total phosphorus concentration. Although dissolved oxygen excursions occurred, they were typical of values seen in such systems and were considered natural, not standard violations.

Unnamed Tributary to Cooper River (RT-042070) – Aquatic life and recreational uses are fully supported.

Cooper River – There are ten monitoring stations along the Cooper River. At the furthest upstream site (***MD-152***), aquatic life and recreational uses are fully supported for both freshwater and saltwater classifications. Although dissolved oxygen excursions occurred, they were typical of values seen in such systems and were considered natural, not standard violations. There is a significant increasing trend in pH. Significant decreasing trends in five-day biological oxygen demand, turbidity, total phosphorus concentration, and total nitrogen concentration suggest improving conditions for these parameters at this site. Moving downstream, ***MD-043*** is fully supported for both aquatic life and recreational uses; however, there is a significant increasing trend in five-day biological oxygen demand. Significant decreasing trends in turbidity, total phosphorus concentration, and total nitrogen concentration suggest improving conditions for these parameters at this site. At the next site downstream ***(RO-06308)***, aquatic life and recreational uses are fully supported.

Further downstream, aquatic life and recreational uses are fully supported at ***MD-044***. Significant decreasing trends in five-day biological oxygen demand, turbidity, total phosphorus concentration, total nitrogen concentration, and fecal coliform bacteria suggest improving conditions for these parameters at this site. Aquatic life and recreational uses are fully supported at ***RO-046070***. Moving downstream, ***MD-248*** is fully supported for both aquatic life and recreational uses; however, there is a significant increasing trend in five-day biological oxygen demand. Significant decreasing trends in turbidity, total phosphorus concentration, total nitrogen concentration, and fecal coliform bacteria concentration suggest improving conditions for these parameters at this site. Aquatic life uses are fully supported at ***RO-08352***, but recreational uses are partially supported due to fecal coliform bacteria excursions.

At ***MD-045***, aquatic life and recreational uses are fully supported; however, there is a significant increasing trend in five-day biological oxygen demand. Significant decreasing trends in turbidity, total phosphorus concentration, and total nitrogen concentration suggest improving conditions for these parameters at this site. Moving downstream, ***MD-046*** is fully supported for both aquatic life and recreational uses. There is a significant decreasing trend in pH. Significant increasing trends in dissolved

oxygen concentration and decreasing trends in five-day biological oxygen demand, turbidity, total phosphorus concentration, total nitrogen concentration, and fecal coliform bacteria concentration suggest improving conditions for these parameters at this site. At the furthest downstream site ***(R0-06304)***, aquatic life and recreational uses are fully supported.

Durham Creek (MD-217) – Aquatic life and recreational uses are fully supported. There is a significant increasing trend in pH. Significant decreasing trends in five-day biological oxygen demand and increasing trends in dissolved oxygen concentration suggest improving conditions for these parameters.

Foster Creek (MD-240) – Aquatic life uses are not supported due to dissolved oxygen excursions. There is a significant increasing trend in pH. Significant decreasing trends in five-day biological oxygen demand, turbidity, and fecal coliform bacteria suggest improving conditions for these parameters. Recreational uses are fully supported.

Back River Reservoir (CSTL-124) – Aquatic life uses are partially supported due to dissolved oxygen excursions. In addition, there are significant increasing trends in five-day biological oxygen demand and total phosphorus concentration. A significant increasing trend in dissolved oxygen concentration suggests improving conditions for this parameter. Recreational uses are fully supported.

Clouter Creek (RT-07040) - Aquatic life and recreational uses are fully supported.

Goose Creek - There are two monitoring stations along Goose Creek. At the upstream site ***(MD-114)***, aquatic life uses are not supported due to dissolved oxygen excursions. Significant decreasing trends in five-day biological oxygen demand, turbidity, and total phosphorus concentration suggest improving conditions for these parameters. Recreational uses are fully supported at this site. At the downstream site ***(MD-039)***, aquatic life uses are fully supported. There is a significant decreasing trend in pH. Significant decreasing trends in turbidity, total phosphorus concentration, and total nitrogen concentration suggest improving conditions for these parameters. Recreational uses are not supported due to fecal coliform bacteria excursions; however, a significant decreasing trend in fecal coliform suggests improving conditions for this parameter.

Goose Creek Reservoir – There are eight monitoring stations along Goose Creek Reservoir and recreational uses are fully support at all sites. At the furthest upstream sites to mid lake ***(RL-04390, RL-06434, RL-08065, RL-07017)***, aquatic life uses are partially supported due to dissolved oxygen excursions. At the next site downstream ***(ST-033)***, aquatic life uses are not supported due to total phosphorus excursions. Aquatic life uses are fully supported at ***RL-05412*** and ***RL-07001***. At the furthest downlake site ***(ST-032)***, aquatic life uses are not supported due to total phosphorus excursions and there is a significant increasing trend in total phosphorus concentration. There is a significant decreasing trend in pH at this site.

Filbin Creek (MD-249) – Aquatic life uses are fully supported. Although dissolved oxygen excursions occurred, they were typical of values seen in such systems and were considered natural, not standard violations. There is a significant decreasing trend in pH. Recreational uses are not supported due to fecal coliform bacteria excursions and there is a significant increasing trend in fecal coliform bacteria concentration.

Shipyard Creek (MD-243) – Aquatic life and recreational uses are fully supported. Significant decreasing trends in five-day biological oxygen demand, turbidity, total phosphorus concentration, total nitrogen concentration, total suspended solids, and fecal coliform bacteria suggest improving conditions for these parameters.

Town Creek (MD-047) – Aquatic life and recreational uses are fully supported. Significant increasing trends in dissolved oxygen concentration and decreasing trends in five-day biological oxygen demand, turbidity, total phosphorus concentration, total nitrogen concentration, and fecal coliform bacteria suggest improving conditions for these parameters.

Shem Creek (MD-071) – Aquatic life uses are partially supported due to ammonia excursions. In addition, there is a significant increasing trend in five-day biological oxygen demand. There is a significant decreasing trend in pH. Significant increasing trends in dissolved oxygen concentration and decreasing trends in total phosphorus concentration and total nitrogen concentration suggest improving conditions for these parameters. Recreational uses are partially supported due to fecal coliform bacteria excursions.

Atlantic Intracoastal Waterway (MD-069) - Aquatic life uses are fully supported; however, there are significant increasing trends in five-day biological oxygen demand and turbidity. There is a significant decreasing trend in pH. A significant decreasing trend in total nitrogen concentration suggests improving conditions for this parameter. Recreational uses are fully supported.

Charleston Harbor – There are five monitoring stations within the Charleston Harbor and recreational uses are fully supported at all sites. Aquatic life uses are fully supported at ***RO-07336*** and ***RO-046066***. At ***MD-247***, aquatic life uses are fully supported; however, there is a significant increasing trend in five-day biological oxygen demand. There is a significant decreasing trend in pH. Significant increasing trends in dissolved oxygen concentration and decreasing trends in total nitrogen concentration and fecal coliform bacteria concentration suggest improving conditions for these parameters at this site. At ***MD-165***, aquatic life uses are partially supported due to ammonia excursions. In addition, there is a

significant increasing trend in five-day biological oxygen demand. There is a significant decreasing trend in pH. Significant decreasing trends in turbidity, total phosphorus concentration, total nitrogen concentration, and fecal coliform bacteria concentration suggest improving conditions for these parameters. Near the mouth of the harbor, aquatic life uses are fully supported at ***MD-048***. There is a significant decreasing trend in pH. Significant increasing trends in dissolved oxygen concentration and decreasing trends in five-day biological oxygen demand, total nitrogen concentration, and fecal coliform bacteria concentration suggest improving conditions for these parameters at this site.

Parrot Point Creek Tributary (RT-04272) – Aquatic life uses are not supported due to turbidity excursions. Recreational uses are fully supported.

A fish consumption advisory has been issued by the Department for mercury and includes the Tailrace Canal, West Branch Cooper River, portions of the Cooper River, and Durham Creek within this watershed (see advisory p.70). Fish tissue samples from Charleston Harbor, Back River Reservoir, and Goose Creek Reservoir indicate no advisories are needed at this time.

Shellfish Monitoring Stations

Station #	Description
10A-11	RAT ISLAND CREEK AT CONFLUENCE WITH FIRST CREEK ON LEFT FROM LIGHTHOUSE CREEK
10A-13	LIGHTHOUSE CREEK AT CONFLUENCE WITH FOLLY CREEK
10A-15	SECESSIONVILLE CREEK AT PRIVATE DOCKS
10A-16	CLARK SOUND AT OCEAN VIEW FLATS
10A-16B	CLARK SOUND, 550 YDS E OF STATION 10A-16A
10A-18	MOUTH OF SCHOONER CREEK
10A-19	JUST INSIDE CLARK SOUND FROM SCHOONER CREEK
10A-23	LIGHTHOUSE CREEK STATE SHELLFISH GROUND AT MOUTH OF FIRST SISTER CREEK
10A-29A	LIGHTHOUSE CREEK AT SECESSIONVILLE CREEK AND CLARK SOUND
10A-30	SECOND BEND IN RATHALL CREEK
10A-32	BLOCK ISLAND CREEK – 100 YDS S.OF SPILT FORM SPOIL AREA
10A-33	CONFLUENCE OF LIGHTHOUSE CREEK AND CLARK SOUND
10A-34	THE FIRST DOCK IN SECESSIONVILLE CREEK AT ITS CONFLUENCE WITH CLARK SOUND
10A-34A	BLOCK ISLAND CREEK AT FLATS
10A-35	RIGHT FORK OF SCHOONER CREEK, MIDDLE OF DOCKS, ACROSS FROM PARROT POINT DEVELOPMENT

Groundwater Quality

Well #	Class	Aquifer	Location
AMB-053	GB	PEE DEE	MONCKS CORNER
AMB-024	GB	BLACK MINGO	SANTEE COOPER

NPDES Program

Active NPDES Facilities

RECEIVING STREAM *FACILITY NAME*	*NPDES#* *TYPE*
TAILRACE CANAL SCPSA/JEFFERIES GENERATING STATION	SC0001091 MAJOR INDUSTRIAL

TAILRACE CANAL C.R. BARD, INC.	SC0035190 MINOR INDUSTRIAL
WEST BRANCH COOPER RIVER TOWN OF MONCKS CORNER WWTP	SC0021598 MAJOR DOMESTIC
WEST BRANCH COOPER RIVER BCW&SA/CENTRAL BERKELEY WWTP	SC0039764 MINOR DOMESTIC
WEST BRANCH COOPER RIVER DICK SMITH CHEVROLET/MONKS CORNER	SCG750032 MINOR INDUSTRIAL
WAPPOOLA SWAMP SCE&G/WILLIAMS ASH DISPOSAL	SC0046175 MINOR INDUSTRIAL
MOLLY BRANCH SCE&G/WILLIAMS LANDFILL	SC0039535 MINOR INDUSTRIAL
MOLLY BRANCH TRIBUTARY BCSD/OAKLEY MAINTENANCE FACILITY	SC0026867 MINOR DOMESTIC
MOLLY BRANCH D&A PARTNERSHIP/DANGERFIELD MINE	SCG730125 MINOR INDUSTRIAL
COOPER RIVER KAPSTONE CHARLESON KRAFT LLC	SC0001759 MAJOR INDUSTRIAL
COOPER RIVER HESS/CHARLESTON N. TERMINAL	SC0002852 MINOR INDUSTRIAL
COOPER RIVER HESS/CHARLESTON S. TERMINAL	SC0002861 MINOR INDUSTRIAL
COOPER RIVER ALLIED TERMINALS/CHARLESTON	SC0001350 MINOR INDUSTRIAL
COOPER RIVER CHEVRON USA INC./DELPHIN GROUP	SC0003026 MINOR INDUSTRIAL
COOPER RIVER SUN CHEMICAL CORP./BUSHY PARK	SC0003441 MAJOR INDUSTRIAL
COOPER RIVER US NAVY/WEAPONS STATION	SC0043206 MINOR INDUSTRIAL
COOPER RIVER NCSD/FELIX DAVIS WWTP	SC0024783 MAJOR DOMESTIC
COOPER RIVER DAK AMERICAS LLC/COOPER RIVER PLANT	SC0026506 MAJOR INDUSTRIAL
COOPER RIVER BP AMOCO CHEMICALS/COOPER RIVER	SC0028584 MAJOR INDUSTRIAL
COOPER RIVER BCW&SA/LOWER BERKELEY WWTP	SC0046060 MAJOR DOMESTIC

COOPER RIVER NUCOR STEEL/BERKELEY PLANT	SC0047392 MAJOR INDUSTRIAL
COOPER RIVER TRIBUTARY CHARLESTON CPW/DANIEL ISLAND	SC0047074 MAJOR DOMESTIC
COOPER RIVER SCE&G/WILLIAMS STATION	SC0003883 MAJOR INDUSTRIAL
COOPER RIVER PETROLIANCE LLC	SC0047261 MINOR INDUSTRIAL
COOPER RIVER DETYENS SHIPYARD INC./MAIN YARD	SC0047562 MINOR INDUSTRIAL
COOPER RIVER SEACREST MARINE HOLDINGS LLC	SC0048518 MINOR INDUSTRIAL
COOPER RIVER KINDER MORGAN OPERATING LPC/SHIPYARD TERM.	SCG250287 MINOR INDUSTRIAL
COOPER RIVER EI DUPONT/COOPER RIVER PLANT	SC0048950 MINOR INDUSTRIAL
YELLOW HOUSE CREEK OL THOMPSON CONSTR.CO., INC./PRIMUS TRACT	SCG730117 MINOR INDUSTRIAL
CANTERHILL SWAMP AUSTIN CONTR. CO. INC./COLEMAN MINE	SCG731032 MINOR INDUSTRIAL
CLARK SOUND TRIBUTARY LOYD MCCRACKEN PIT MINE	SCG731118 MINOR INDUSTRIAL
FILBIN CREEK DEFENSE FUEL SUPPLY CENTER/CHAS.	SCG340022 MINOR INDUSTRIAL
FILBIN CREEK MEAD WESTVACO CORP/CHAS.	SC0001759 MAJOR INDUSTRIAL
FILBIN CREEK KINDER MORGAN BULK TERMINAL/N. CHAS.	SCG340015 MINOR INDUSTRIAL
LINDSEY BRANCH JW ALUMINUM CO.	SCG250105 MINOR INDUSTRIAL
POPLAR BRANCH THOMAS DANIELS 17A BORROW PIT	SCG730005 MINOR INDUSTRIAL
CHARLESTON HARBOR TOWN OF MT PLEASANT/CENTER ST. & RR RD	SC0040771 MAJOR DOMESTIC
COVE CREEK TOWN OF SULLIVANS ISLAND WWTP	SC0020052 MINOR DOMESTIC

Municipal Separate Storm Sewer Systems (MS4)

RECEIVING STREAM	***NPDES#***
MUNICIPALITY	***MS4 PHASE***
RESPONSIBLE PARTY	***MS4 SIZE***
IMPLEMENTING PARTY	
COOPER RIVER	SCR031502
TOWN OF GOOSE CREEK	PHASE II
TOWN OF GOOSE CREEK	SMALL MS4
TOWN OF GOOSE CREEK	
COOPER RIVER	SCR031504
TOWN OF GOOSE CREEK	PHASE II
NAVAL WEAPONS STATION	SMALL MS4
NAVAL WEAPONS STATION	
COOPER RIVER	SCR031503
TOWN OF HANAHAN	PHASE II
TOWN OF HANAHAN	SMALL MS4
TOWN OF HANAHAN	
COOPER RIVER	SCR031501
UNINCORPORATED AREAS	PHASE II
BERKELEY COUNTY	SMALL MS4
BERKELEY COUNTY	
COOPER RIVER	SCR031504
UNINCORPORATED AREAS	PHASE II
NAVAL WEAPONS STATION	SMALL MS4
NAVAL WEAPONS STATION	
COOPER RIVER	SCR031901
CITY OF CHARLESTON	PHASE II
CITY OF CHARLESTON	SMALL MS4
CITY OF CHARLESTON	
COOPER RIVER	SCR031906
TOWN OF MOUNT PLEASANT	PHASE II
TOWN OF MOUNT PLEASANT	SMALL MS4
TOWN OF MOUNT PLEASANT	
COOPER RIVER	SCR031909
CITY OF NORTH CHARLESTON	PHASE II
CHARLESTON AFB	SMALL MS4
CHARLESTON AFB	
COOPER RIVER	SCR031907
CITY OF NORTH CHARLESTON	PHASE II
CITY OF NORTH CHARLESTON	SMALL MS4
CITY OF NORTH CHARLESTON	
COOPER RIVER	SCR031908
TOWN OF SULLIVANS ISLAND	PHASE II
TOWN OF SULLIVANS ISLAND	SMALL MS4
CHARLESTON COUNTY	

COOPER RIVER	SCR031902
UNINCORPORATED AREAS	PHASE II
CHARLESTON COUNTY	SMALL MS4
CHARLESTON COUNTY	
COOPER RIVER	SCR033502
TOWN OF SUMMERVILLE	PHASE II
TOWN OF SUMMERVILLE	SMALL MS4
TOWN OF SUMMERVILLE	
COOPER RIVER	SCR031501
UNINCORPORATED AREAS	PHASE II
DORCHESTER COUNTY	SMALL MS4
DORCHESTER COUNTY	

Nonpoint Source Management Program

Land Disposal Activities

Land Application Sites

LAND APPLICATION FACILITY NAME	***PERMIT # YPE***
SPRAYFIELD	ND0073491
CHARLESTON CPW/HANAHAN WTP	DOMESTIC

Landfill Facilities

LANDFILL NAME FACILITY TYPE	***PERMIT # STATUS***
SCE&G/WILLIAMS STATION	083320-1601
INDUSTRIAL	ACTIVE
SCE&G/GENCO/WILLIAMS STATION	083309-1601
INDUSTRIAL	ACTIVE
BERKELEY COUNTY LANDFILL	081001-1101
MUNICIPAL	ACTIVE
BERKELEY COUNTY LANDFILL	081001-1102
MUNICIPAL	ACTIVE
BERKELEY COUNTY COMPOSTING FACILITY	081001-3001
COMPOSTING	ACTIVE
OLD BERKELEY COUNTY	---------
MUNICIPAL	INACTIVE
OLD BERKELEY COUNTY/NEIGHBORS SITE	----------
MUNICIPAL	INACTIVE
BERKELEY COUNTY C&D LANDFILL	081001-1201
CONSTRUCTION	ACTIVE
BERKELEY COUNTY TIRE DISPOSAL	081001-5101
MUNICIPAL	INACTIVE

WOOD NOT WASTE LAND APPLICATION	102756-8001 ACTIVE
GREEN OASIS ENVIRONMENTAL INC. USED OIL PROCESSING	102619-7101 ACTIVE
GREEN OASIS ENVIRONMENTAL INC. UOM	102619-7301 INACTIVE
MONTENAY CHARLESTON RESOURCE RECOVERY INC	102495-4001 ACTIVE
SHEPPARD TRUCKING CO. INDUSTRIAL	--------- INACTIVE
SPRING GROVE ENVIRONMENTAL INC. COMPOSTING	102441-3001 ACTIVE
SPRING GROVE ENVIRONMENTAL INC. INDUSTRIAL	102441-1601 ACTIVE
AMOCO CHEMICAL CO. INDUSTRIAL	---------- INACTIVE
WESTVACO LANDFILL INDUSTRIAL	---------- INACTIVE
CHARLESTON COUNTY MUNICIPAL	--------- INACTIVE
CHARLESTON COUNTY SOLID WASTE REDUCTION MUNICIPAL	--------- INACTIVE
CHARLESTON/SPRUIL AVENUE DUMP MUNICIPAL	--------- CLOSED
GASTON DUMP MUNICIPAL	--------- CLOSED
HOLSTON LANDFILL MUNICIPAL	---------- INACTIVE
ROMEY STREET LANDFILL MUNICIPAL	---------- INACTIVE
M&S DEVELOPMENT CO. INDUSTRIAL	---------- INACTIVE
G&S ROOFING PRODUCTS INDUSTRIAL	102434-1601 ACTIVE
WESTVACO/CHARLESTON CO. MUNICIPAL	--------- CLOSED
WESTVACO/CHARLESTON CO. INDUSTRIAL	--------- CLOSED

TOWN OF SULLIVANS ISLAND	---------
MUNICIPAL	CLOSED
LADSON WOOD RECYCLING	102745-3001
COMPOSTING	ACTIVE
CHARLESTON DISPOSAL SERVICE INC.	----------
MUNICIPAL	INACTIVE
RUBBER RECOVERY INC.	082728-5201
WTP	ACTIVE

Mining Activities

MINING COMPANY	***PERMIT #***
MINE NAME	***MINERAL***
D&A PARTNERSHIP	0747-15
JOHN R. CUMBIE MINE	SAND
SHUMPERT CONSTR. CO.	1611-15
WEEKS MINE	SAND
SC GENERATING CO., INC.	0964-15
WILLIAMS ASH DISPOSAL	SAND
OL THOMPSON CONSTRUCTION CO., INC.	0962-15
PRIMUS TRACT	SAND/CLAY
ACRE MAKER, A PARTNERSHIP	0743-15
17A MINE PIT	SAND; SAND/CLAY
ROBERT O. COLLINS COMPANY, INC.	0595-19
SPRINGROVE MINES	SAND/CLAY

Water Quantity

WATER USER	***REGULATED CAPACITY (MGD)***
STREAM	***PUMPING CAPACITY (MGD)***
CHARLESTON WATER SYSTEM	125.0
FOSTER CREEK	150.0
CHARLESTON WATER SYSTEM	10.0
GOOSE CREEK RESERVOIR	10.0

Growth Potential

There is a high potential for growth for much of this watershed, which contains the Towns of Moncks Corner, Hanahan, Goose Creek, Ladson, and Kiawah Island, the City of Folly Beach, and portions of the City of Charleston, North Charleston and the Towns of Summerville, Seabrook Island, Sullivans Island, and Mount Pleasant. At the top of the watershed, future growth is expected in the Town of Moncks Corner, the Whitesville and Pimlico Communities, and the Berkeley Country Club area. The Town of Moncks Corner and Berkeley County operate water and sewer systems in the area, which may allow scattered development. Scattered development is also possible for the Town of Goose Creek.

Summerville, Hanahan, North Charleston, Charleston, and Berkeley County are population growth areas in the central area of the watershed. In addition, the Charleston County Parks and Recreation Commission has purchased a large parcel of land above Goose Creek Reservoir for development as a county park. The interbasin transfer of fresh water via a pipeline connecting the Edisto River to the Hanahan WTP will help to provide for growth in this area.

Fresh water is a vital necessity to the area's economy. The Back River and its tributaries are a major source of fresh water for the public water supply and many of the large industries located along the Cooper River. The Union Terminal (Sea Port Facility) within the City of Charleston is projected to be an area of population growth. The population in the urban areas west of the Cooper River has declined in the last decade and are not expected to grow in the near future. The U.S. Navy Base/Shipyard was closed by the Navy in 1996. The Office/Manufacturing/Industrial reuses of this property will occur well into the future, but residential uses are not significant components of the Base Reuse Plan. The Bushy Industrial Park includes several very large industries and should continue to encourage industrial growth.

The lower portion of the watershed contains the Peninsula of the City of Charleston, Mount Pleasant, James Island, Johns Island, the beaches, and Charleston Harbor that bring great residential and commercial growth. Suburban growth areas include: the Dills Property, Ellis Property II, Stiles Point Plantation, Stonefield, Fort Lamar, Grimbel Shores, and Harborwoods III on James Island; and Kiawah Island, Andell Property, and Hope Plantation on Johns Island. All growth areas in the watershed have water and sewer services available.

Watershed Protection and Restoration

Total Maximum Daily Loads (TMDLs)

The TMDLs addressing dissolved oxygen for the Ashley River and for the ***Cooper River***-Wando River-***Charleston Harbor*** have been revised. The revised TMDLs are combined in a single TMDL document covering Charleston Harbor and the Cooper, Ashley, and Wando Rivers. The basis for this revision is a new 3-Dimensional Environmental Fluid Dynamics Code (EFDC) model covering the entire system completed in 2008, a revised Dissolved Oxygen standard as amended in the South Carolina Pollution Control Act in 2010 (adopted in S.C. R.61-68 in 2012), and subsequent reallocation of the TMDLs led by the Berkeley-Charleston-Dorchester Council of Governments. The revised TMDL was placed on public notice in October 2012 and approved by EPA in April 2013. The TMDL determined revised wasteload allocations for oxygen-demanding pollutants from continuous point sources which will be implemented in NPDES permits.

The previous and revised TMDLs can be compared on a percent reduction basis. The Cooper River TMDL required an interim reduction of 58% (Phase 1) and a final reduction of 69% (Phase 2) from pre-TMDL permitted UOD; the Ashley River TMDL required a reduction of 32% from pre-TMDL permitted UOD. This TMDL applies a more accurate water quality model in addition to a more accurate laboratory characterization of the wastewater. Based on this new information, the revised TMDL is equivalent to an additional 2% reduction below the Phase 1 level for the Cooper River. The revised TMDL for the Ashley River is equivalent to a 15% reduction from the pre-TMDL permitted UOD. For more detailed information on TMDLs, please visit www.scdhec.gov/tmdl.

Special Models

Charleston Harbor System TMDLs

Modeling for the revised TMDL includes EFDC hydrodynamic and water quality models for the river and harbor segments and linked Loading Simulation Program in C++ (LSPC) watershed model. Charleston waters are considered naturally low in dissolved oxygen, so the TMDL target is an allowable oxygen depression of 0.1 mg/L due to continuous NPDES point sources. Regulated stormwater and nonpoint sources were determined equivalent to natural background due to high levels of natural organic matter in the system. As such, they do not contribute to the 0.1mg/L depression target at existing conditions. The TMDL model is currently being adapted for future harbor deepening evaluations.

Special Projects

Charleston Harbor Project

The Charleston Harbor Project initiated a comprehensive variety of projects designed to inform the public and decision makers on all major issues affecting the harbor and facilitate the best possible policies for achieving economic and natural resource goals for the region. Considerable scientific research was conducted with over fifty reports published on topics including ecological dynamics, water quality impacts of urban growth, and recreational uses of the resource.

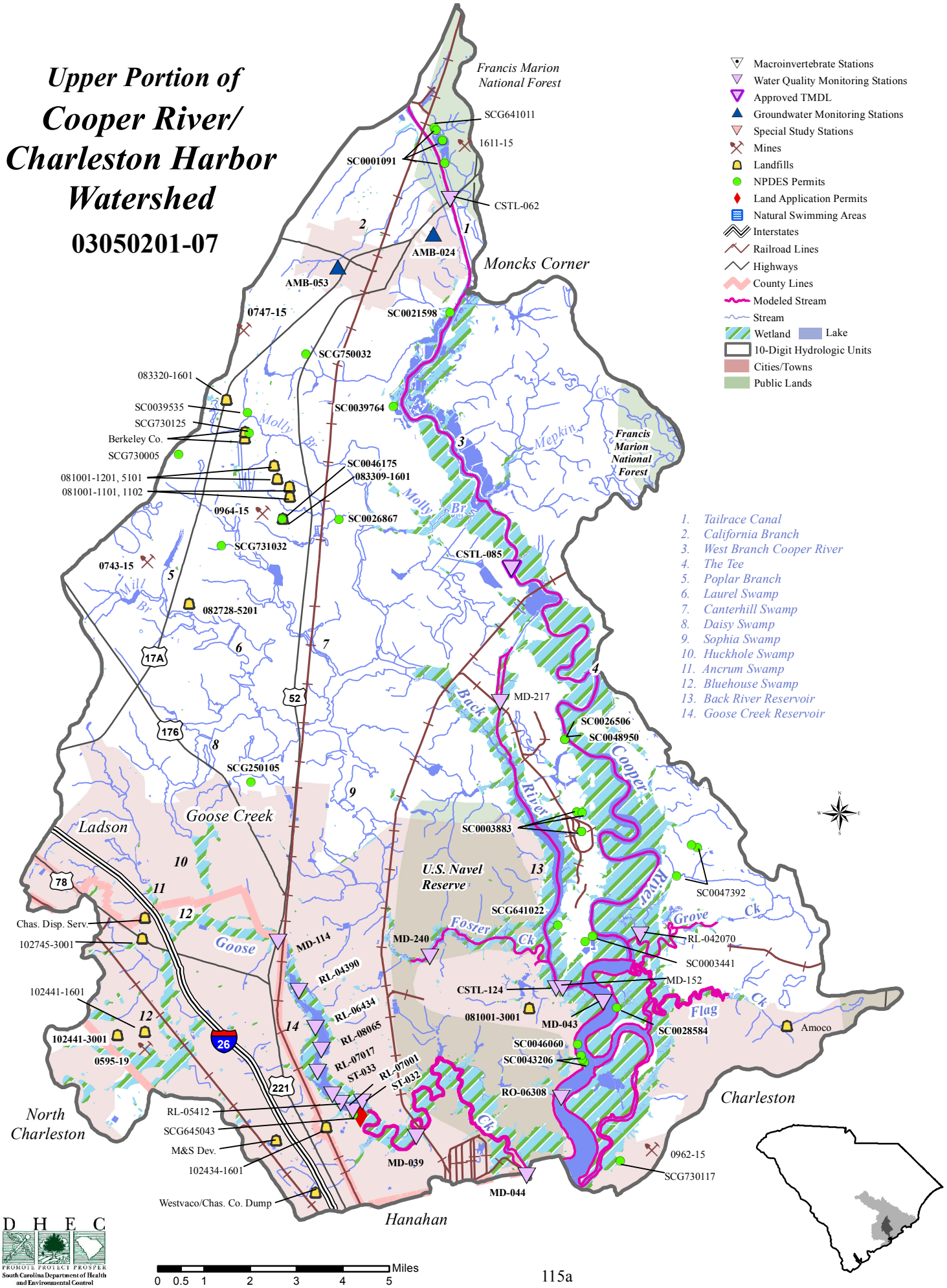
A publication with recommendations related to these studies was made available in 2000. One particular recommendation of the final report was the development of a Special Area Management Plan focused on the Upper Cooper River region. This project was completed in 2004 with the management of old rice fields, a major subject of interest. A website with the final report as well as a searchable database of other information on the project is available at: http://www.scdhec.gov/environmental.ocrm.samp.htm.

Charleston Harbor Deepening Project

The U.S. Army Corps of Engineers – Charleston District and the South Carolina State Ports Authority initiated the feasibility phase of the Post 45 harbor deepening project in 2011. The feasibility study will analyze economic benefits and environmental impacts for various alternative depths for the Charleston Harbor ship channel and includes National Environmental Policy Act (NEPA) review by USEPA and Section 401 water quality review by SCDHEC.

Upper Portion of Cooper River/ Charleston Harbor Watershed

03050201-07



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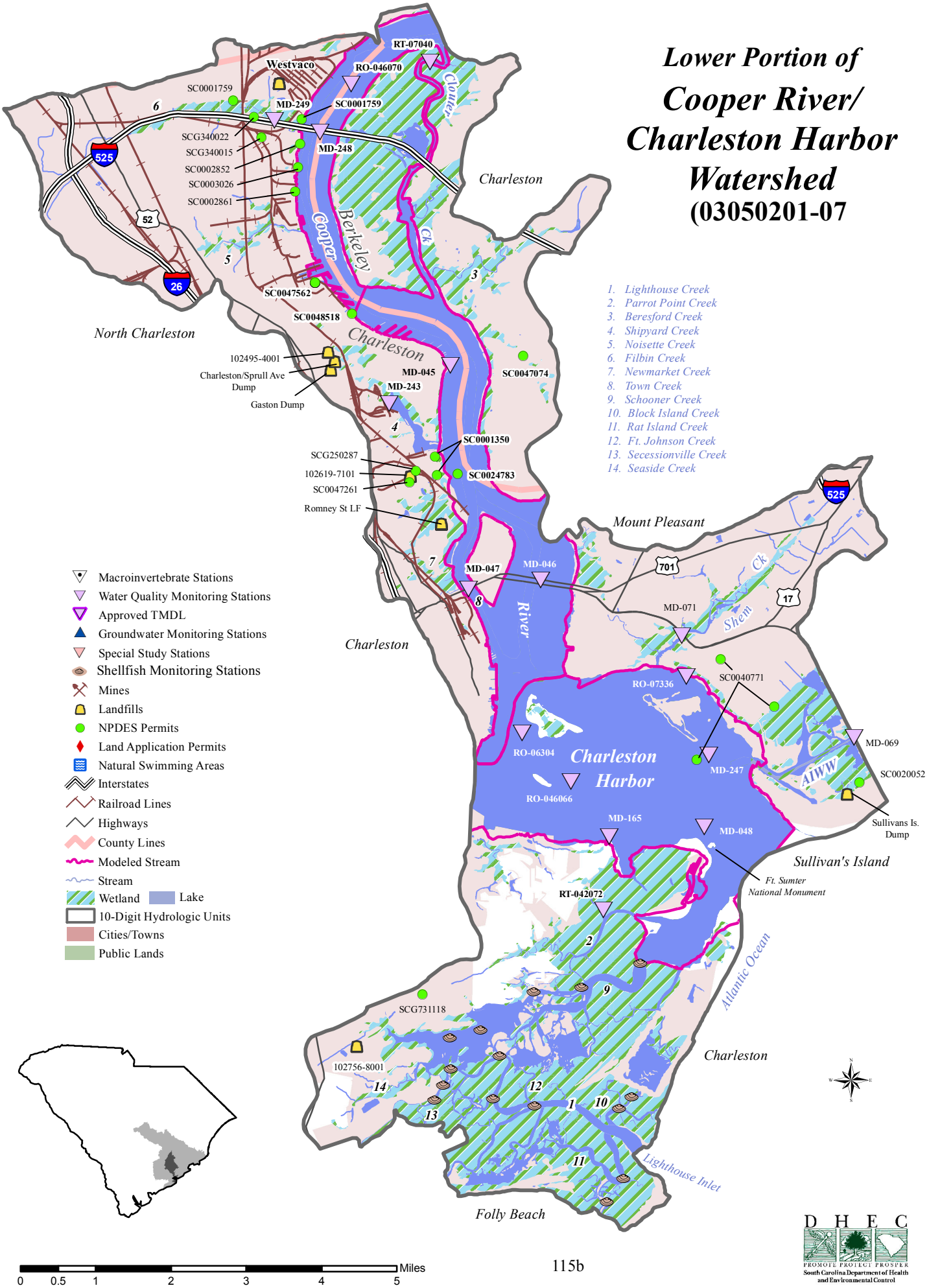
PROMOTE PROTECT PROSPER
South Carolina Department of Health and Environmental Control


Lower Portion of
Cooper River/
Charleston Harbor
Watershed
(03050201-07
1. Lighthouse Creek
2. Parrot Point Creek
3. Beresford Creek
4. Shipyard Creek
5. Noisette Creek
6. Filbin Creek
7. Newmarket Creek
8. Town Creek
9. Schooner Creek
10. Block Island Creek
11. Rat Island Creek
12. Ft. Johnson Creek
13. Secessionville Creek
14. Seaside Creek
Macroinvertebrate Stations
Water Quality Monitoring Stations
Approved TMDL
Groundwater Monitoring Stations
Special Study Stations
Shellfish Monitoring 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
RT-07040
RO-046070
Westvaco
SC0001759
MD-249
SC0001759
MD-248
SCG340022
SCG340015
SC0002852
SC0003026
SC0002861
Clouter
Charleston
Cooper
Berkeley
Ck
North Charleston
SC0047562
SC0048518
Charleston
102495-4001
Charleston/Sprull Ave Dump
Gaston Dump
MD-045
MD-243
SC0047074
SC0001350
SCG250287
102619-7101
SC0047261
Romney St LF
SC0024783
Mount Pleasant
MD-047
MD-046
River
Charleston
MD-071
Shem
Ck
SC0040771
RO-07336
RO-06304
Charleston
Harbor
RO-046066
MD-247
MD-069
AIWW
SC0020052
Sullivans Is. Dump
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MD-048
Sullivan's Island
Ft. Sumter National Monument
RT-042072
Atlantic Ocean
SCG731118
102756-8001
Charleston
Lighthouse Inlet
Folly Beach
Miles
0 0.5 1 2 3 4 5
115b
D H E C
PROMOTE PROTECT PROSPER
South Carolina Department of Health and Environmental Control

03050202-01

(Rantowles Creek)

General Description

Watershed 03050202-01 (formerly 03050201-050 less the Stono River) is located in Dorchester and Charleston Counties and consists primarily of ***Rantowles Creek*** and its tributaries. The watershed occupies 106,459 acres of the Lower Coastal Plain and Coastal Zone regions of South Carolina. Land use/land cover in the watershed includes: 48.4% forested land, 35.1% forested wetland, 9.1% agricultural land, 4.1% nonforested wetland, 1.7% urban land, 1.2% water, and 0.4% barren land.

Fishburne Creek accepts drainage from Scotts Branch before flowing into Horse Savanna (Round Savanna), which flows into Rantowles Creek (Bear Swamp). Rantowles Creek also accepts drainage from the Wallace River (Caw Caw Swamp, Drayton Swamp, Caddin Bridge Swamp) before flowing into the Stono River. There are a total of 205.6 stream miles, 43.6 acres of lake waters, and 350.3 acres of estuarine areas in this watershed, all classified SFH.

Surface Water Quality

There are currently no water quality monitoring stations in this watershed.

Shellfish Monitoring Stations

Station #	Description
11-18	CONFLUENCE OF RANTOWLES CREEK AND THE STONO RIVER

NPDES Program

Active NPDES Facilities

RECEIVING STREAM *FACILITY NAME*	*NPDES#* *TYPE*
RANTOWLES CREEK COUNTY LINE INVESTORS/POPLAR GROVE MINE	SCG730891 MINOR INDUSTRIAL
CAW CAW SWAMP TRIBUTARY COUNTY LINE INVESTORS/POPLAR GROVE B MINE	SCG731050 MINOR INDUSTRIAL
CAW CAW SWAMP LAUREL OAKS PLANTATION/LAURAL OAKS MINE	SCG731087 MINOR INDUSTRIAL
HORSE SAVANNA TRIBUTARY M. PLATT/CROWN CASTLE #2 MINE	SCG731141 MINOR INDUSTRIAL
CAW CAW SWAMP TRIBUTARY RAVENEL CAR WASH	SCG750031 MINOR INDUSTRIAL

Nonpoint Source Management Program

Land Disposal Activities

Landfill Facilities

LANDFILL NAME *FACILITY TYPE*	*PERMIT #* *STATUS*
TOWER WASTE TIRE PROCESSING WTP	102714-5201 ACTIVE
MOBERRY LCD WOOD CHIPPING FACILITY COMPOSTING	102746-3001 ACTIVE
COASTAL MULCH & COMPOSTING WOOD CHIP FAC. COMPOSTING	182717-3001 ACTIVE

Mining Activities

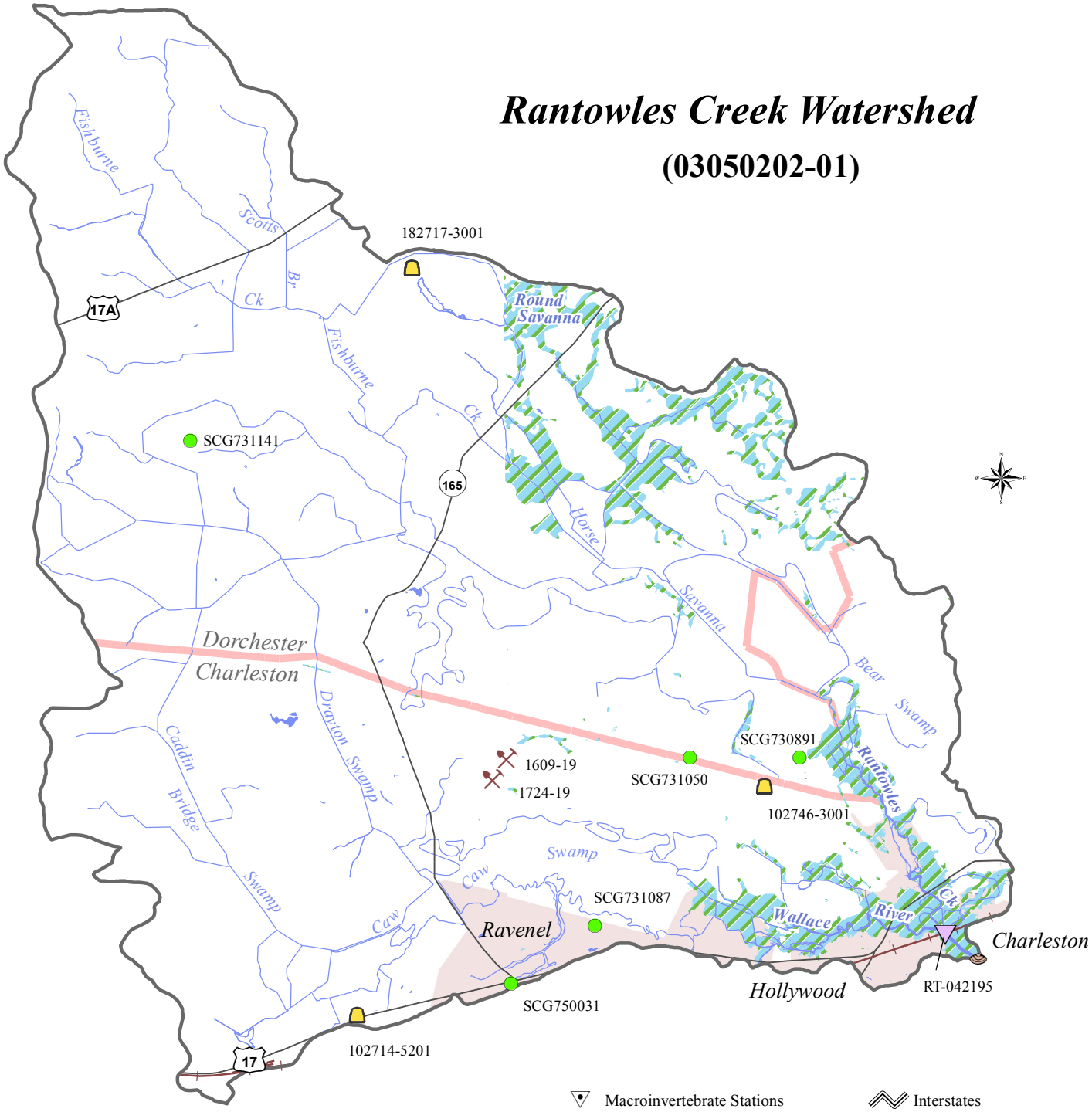
MINING COMPANY *MINE NAME*	*PERMIT #* *MINERAL*
SPARTINA ENTERPRISES LLC HYDE PARK PIT	1609-19 SAND/TOP SOIL
HYDE PARK SOILS HYDE PARK SOILS MINE	1724-19 SAND/CLAY

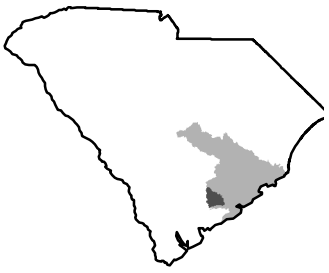
Growth Potential

This watershed contains the Towns of Ravenel and Hollywood and a portion of the City of Charleston. The areas with a high potential for growth in the watershed include Stono Ferry in Hollywood; Rushland Plantation, Headquarters Plantation, and Fenwick Acres on Johns Island; and Bees Landing and Essex Farms in the City of Charleston. Water and sewer services are available to all these growth areas.

Rantowles Creek Watershed

(03050202-01)





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

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03050202-02

(Stono River)

General Description

Watershed 03050202-02 (formerly the Stono River portions of 03050202-050, -070) located in Charleston County and consists primarily of the ***Stono River*** and its tributaries. The watershed occupies 97,672 acres of the Lower Coastal Plain and Coastal Zone regions of South Carolina. Land use/land cover in the watershed includes: 29.1% forested land, 23.4% nonforested wetland, 16.4% forested wetland, 12.8% urban land, 9.5% water, 7.7% agricultural land, and 1.1% barren land.

The Stono River drains into the Edisto River Basin and to the Atlantic Ocean via the Stono Inlet. En route to the ocean, the Stono River accepts drainage from Log Bridge Creek (Middle Branch, Mellichamp Branch), the Rantowles Creek Watershed, Penner Branch, Long Branch Creek, Sandy Bay, and Wappoo Creek. The Stono River is connected to the Ashley River Watershed via Wappoo Creek and Elliots Cut.

The Stono River then flows between Johns Island and James Island, accepting drainage from Pennys Creek, Hut Creek, Abbapoola Creek, Green Creek, Alligator Creek, and the Kiawah River from the Johns Island side of the river. The Kiawah River accepts drainage from Captain Sams Creek, Haulover Creek, Mullet Hall Creek, Bryans Creek, and Chaplin Creek. The Kiawah River also drains directly into the Atlantic Ocean through Captain Sams Inlet. Bass Creek (Cinder Creek) drains into the Stono River from Kiawah Island. Streams draining into the Stono River from James Island include James Island Creek or Ellis Creek (Simpson Creek, Wolfpit Run), Holland Island Creek, and Green Creek. The Folly River (Folly Creek, Oak Island Creek, Robbins Creek, King Flats Creek, Cutoff Reach, Cole Creek) drains into the mouth of the Stono River before it drains into the Atlantic Ocean. The Atlantic Intracoastal Waterway (AIWW) follows the Stono River from Wadmalaw Sound in the Edisto Basin to Elliots Cut and into the Charleston Harbor. There are a total of 23.2 stream miles, 23.3 acres of lake waters, and 7,492.6 acres of estuarine areas in this watershed, all classified SFH with the exception of Wappoo Creek (SB).

Surface Water Quality

Station #	Type	Class	Description
MD-121	S/W	SFH	LOG BRIDGE CREEK AT SC 162
MD-202	P/INT	SFH	STONO RIVER AT S-10-20, 2 MI UPSTREAM OF CLEMSON EXP. STATION
RO-07331	RO-07	SFH	STONO RIVER, 1.75MI SE OF S-10-20
RT-08068	RT-08	SB	MOUTH OF WAPPOO CREEK AT WAPPOO ROAD
MD-025	S/W	SFH	MOUTH OF ELLIOTS CUT AT EDGE WATER DR. (S-10-26 OFF HWY 17)
MD-026	P/W	SFH	STONO RIVER AT SC 700
RT-052112	RT-05	SFH	ABBAPOOLA CREEK, 0.9MI WSW OF CONFLUENCE WITH STONO RIVER
MD-206	S/INT	SFH	STONO RIVER AT ABBAPOOLA CREEK
RO-046068	RO-04	SFH	STONO RIVER, 0.3MI SSW OF MOUTH OF GREEN CREEK
MD-208	S/W	SFH	STONO RIVER MOUTH AT BUOY 10 OFF SANDY POINT

MD-273	INT	SFH	KIAWAH RIVER ON THE FLATS
MD-207	S/W	SFH	KIAWAH RIVER MOUTH AT STONO RIVER
RT-08084	RT-08	SFH	TIDAL FLAT, 0.3MI NE OF THE TIP OF OAK ISLAND OFF FOLLY RIVER
MD-130	INT	SFH	FOLLY RIVER AT SC 171
MD-274	INT	SFH	FOLLY CREEK AT SECESSIONVILLE POLLUTION LINE
RT-06020	RT-06	SFH	CUTOFF REACH, 1.5MI WNW OF FOLLY BEACH
RO-08347	RO-08	SFH	FOLLY RIVER, 0.04MI ABOVE COLE CREEK, 30 YDS FROM THE RIGHT BANK

Log Bridge Creek (MD-121) – Aquatic life and recreational uses are fully supported. Although dissolved oxygen excursions occurred, they were typical of values seen in such systems and were considered natural, not standard violations. A significant decreasing trend in five-day biological oxygen demand suggests improving conditions for this parameter.

Stono River – There are six water quality monitoring sites along the Stono River. Aquatic life and recreational uses are fully supported at the furthest upstream site ***(MD-202)***. Although dissolved oxygen excursions occurred, they were typical of values seen in such systems and were considered natural, not standard violations. There is a significant decreasing trend in pH. Significant decreasing trends in turbidity, total phosphorus concentration, total nitrogen concentration, and fecal coliform bacteria suggest improving conditions for these parameters. At the next site downstream ***(RO-07331)***, aquatic life and recreational uses are fully supported. Although dissolved oxygen excursions occurred, they were typical of values seen in such systems and were considered natural, not standard violations. Further downstream ***(MD-026)***, aquatic life uses are partially supported due to dissolved oxygen excursions. There is a significant increasing trend in pH. Significant decreasing trends in five-day biological oxygen demand, turbidity, total phosphorus concentration, and total nitrogen concentration suggest improving conditions for these parameters. Recreational uses are fully supported and a significant decreasing trend in fecal coliform bacteria suggests improving conditions for this parameter.

Aquatic life and recreational uses are fully supported at ***MD-206***; however, there are significant decreasing trends in dissolved oxygen and increasing trends in five-day biological oxygen demand. Although dissolved oxygen excursions occurred, they were typical of values seen in such systems and were considered natural, not standard violations. There is a significant decreasing trend in pH. Aquatic life and recreational uses are fully supported at ***RO-046068.*** At the furthest downstream site ***(MD-208)***, aquatic life and recreational uses are fully supported. There is a significant decreasing trend in pH at this site.

Wappoo Creek (RT-08068) – Aquatic life and recreational uses are fully supported.

Elliots Cut (MD-025) – Aquatic life uses are not supported due to dissolved oxygen excursions. There is a significant increasing trend in pH. Significant increasing trends in dissolved oxygen concentration and decreasing trends in five-day biological oxygen demand, turbidity, total phosphorus concentration, and fecal coliform bacteria suggest improving conditions for these parameters. Recreational uses are fully supported.

Abbapoola Creek (RT-052112) – Aquatic life and recreational uses are fully supported. Although dissolved oxygen excursions occurred, they were typical of values seen in such systems and were considered natural, not standard violations.

Kiawah River – There are two water quality monitoring sites along the Kiawah River and recreational uses are fully supported at both sites. At the upstream site ***(MD-273)***, aquatic life uses are not supported due to occurrences of copper in excess of the aquatic life criterion. In addition, there is a significant increasing trend in five-day biological oxygen demand and total phosphorus concentration. Although dissolved oxygen excursions occurred, they were typical of values seen in such systems and were considered natural, not standard violations. At the downstream site ***(MD-207)***, aquatic life and recreational uses are fully supported. There is a significant decreasing trend in pH. A significant decreasing trend in fecal coliform bacteria concentration suggests improving conditions for this parameter at this site.

Folly River Tidal Flat (RT-08084) – Aquatic life and recreational uses are fully supported. Although dissolved oxygen excursions occurred, they were typical of values seen in such systems and were considered natural, not standard violations.

Folly River – There are two water quality monitoring sites along the Folly River and recreational uses are fully supported at both sites. At the upstream site ***(MD-130)***, aquatic life uses are fully supported; however, there is a significant increasing trend in five-day biological oxygen demand. Aquatic life uses are fully supported at the downstream site ***(RO-08347)***. Although dissolved oxygen excursions occurred at both sites, they were typical of values seen in such systems and were considered natural, not standard violations.

Folly Creek (MD-274) – Aquatic life and recreational uses are fully supported; however, there is a significant increasing trend in five-day biological oxygen demand. Although dissolved oxygen excursions occurred, they were typical of values seen in such systems and were considered natural, not standard violations.

Cutoff Reach (RT-06020) – Aquatic life and recreational uses are fully supported.

A fish consumption advisory has been issued by the Department for mercury and includes Pennys Creek and the Atlantic Ocean edging this watershed (see advisory p.70).

Shellfish Monitoring Stations

Station #	Description
10A-02	FOLLY CREEK BRIDGE
10A-04	BACKMAN CREEK AT FOLLY CREEK
10A-05	KING FLATS AT FOLLY CREEK
10A-06	OPPOSITE LITTLE ISLAND IN FOLLY CREEK
10A-07	NORTH BOUNDARY OF PROHIBITED AREA AT FOLLY MARINA
10A-08	FOLLY RIVER BRIDGE
10A-09	LAST DOCK NORTH IN FOLLY RIVER
10A-10A	ROBBINS CREEK AT THE 1ST BEND UPSTREAM FROM CUTOFF REACH
10A-15A	FOLLY CREEK AT CONFLUENCE WITH SECESSIONVILLE CREEK
10A-22	FOLLY RIVER STATE SHELLFISH GROUND OPPOSITE FOLLY ISLAND
10A-24	COLE CREEK STATE SHELLFISH GROUND
10A-36	UNNAMED CREEK AT FORK NEAR RIVER FRONT SUBDIVISION
10A-37	FOLLY CREEK AT OAK ISLAND CREEK
11-01	ELLIOTS CUT AT STONO RIVER
11-02A	STONO RIVER AT SOUTHERN BOUNDARY OF ST. JOHN'S YACHT HARBOR MARINA CLOSURE ZONE
11-03	DOCKS BETWEEN MARKERS 10&11 IN STONO RIVER
11-05	MOUTH OF ABBAPOOLA CREEK
11-06	ABBAPOOLA CREEK AT FIRST LARGE BEND
11-0A6	ABBAPOOLA CREEK AT CONFLUENCE WITH SMALL CREEK ON WEST BACK AT 7TH BEND
11-07	GREEN CREEK AT STONO RIVER
11-07A	GREEN CREEK, 4 BENDS UPSTREAM OF STATION 11-07
11-08	MOUTH OF KIAWAH RIVER
11-11	STONO RIVER (AIWW) AT MARKER 21A
11-12	STONO RIVER (AIWW) AT MARKER 27
11-16	STONO RIVER (AIWW) AT MARKER 51
11-17	STONO RIVER (LOG BRIDGE CREEK) AT MARKER 54
11-21	KIAWAH RIVER ON THE FLATS
11-22	KIAWAH RIVER POG AT MINGO POINT
11-23	CAPTAIN SAMS CREEK AND KIAWAH RIVER
11-27	AIWW AT PENNYS CREEK NEAR MARKER #25
11-28	MULLET HALL CREEK 150 YDS FROM MOUTH AT FORK
11-30	KIAWAH RIVER AT MOUTH OF BRYANS CREEK
11-31	BASS CREEK AT CONFLUENCE WITH KIAWAH RIVER
11-32	BASS CREEK AT CONFLUENCE WITH CINDER CREEK
11-33	SOL LEGARE BOAT LANDING
11-34	CINDER CREEK AT PUBLIC DOCK – 3RD BEND FROM CONFLUENCE WITH BASS CREEK
11-35	BASS CREEK AT PUBLIC DOCK – 5TH BEND FROM CONFLUENCE WITH CINDER CREEK

NPDES Program

Active NPDES Facilities

RECEIVING STREAM *FACILITY NAME*	*NPDES#* *TYPE*
MIDDLE BRANCH W. FRAZIER CONSTRUCTION/RAVENEL MINE	SCG730126 MINOR INDUSTRIAL
KIAWAH RIVER TRIBUTARY KIAWAH RESORT/CASSIQUE GOLF COURSE	SC0048186 MINOR DOMESTIC
HUT CREEK TO STONO RIVER THREE OAKS/CHICKEN FARM MINE	SCG730083 MINOR INDUSTRIAL

LOG BRIDGE CREEK MURRAY SAND CO./DUNGANNON PIT	SCG730139 MINOR INDUSTRIAL
PENNER BRANCH W. FRAZIER CONSTRUCTION/RAVENEL MINE	SCG730374 MINOR INDUSTRIAL
PENNER BRANCH CHARLESTON CO./KINSEY-BLAKE	SCG730617 MINOR INDUSTRIAL
STONO RIVER TRIBUTARY MURRAY SAND CO./WOODLAND PLANTATION MINE	SCG731004 MINOR INDUSTRIAL
STONO RIVER TRIBUTARY DH HANKINS TRUCKING LLC/RASHFORD POND II MINE	SCG731009 MINOR INDUSTRIAL
ABBAPOOLA CREEK JAMES C ONEAL/LEGAREVILLE MINE	SCG731036 MINOR INDUSTRIAL
PENNER BRANCH ST JOHNS LAKES MINE	SCG731047 MINOR INDUSTRIAL
PENNER BRANCH BOYER & READEN/BENWOOD FARM MINE	SCG731146 MINOR INDUSTRIAL
ABBAPOOLA CREEK LOW COUNTRY SITE SERVICES/BRIARS CREEK MINE	SCG731172 MINOR INDUSTRIAL

Municipal Separate Storm Sewer Systems (MS4)

RECEIVING STREAM ***MUNICIPALITY*** ***RESPONSIBLE PARTY*** ***IMPLEMENTING PARTY***	***NPDES#*** ***MS4 PHASE*** ***MS4 SIZE***
STONO RIVER CITY OF CHARLESTON CITY OF CHARLESTON CITY OF CHARLESTON	SCR031901 PHASE II SMALL MS4
STONO RIVER CITY OF FOLLY BEACH CITY OF FOLLY BEACH CHARLESTON COUNTY	SCR031903 PHASE II SMALL MS4
STONO RIVER UNINCORPORATED AREAS CHARLESTON COUNTY CHARLESTON COUNTY	SCR031902 PHASE II SMALL MS4

Nonpoint Source Management Program

Land Disposal Activities

Landfill Facilities

LANDFILL NAME *FACILITY TYPE*	*PERMIT #* *STATUS*
BEES FERRY LANDFILL MUNICIPAL	---------- INACTIVE
BEES FERRY LANDFILL MUNICIPAL	101001-1101 ACTIVE
CHARLESTON CO. BEES FERRY C&D & LCD LANDFILL C&D	101001-1201 ACTIVE
TRIDENT SANITARY LANDFILL MUNICIPAL	---------- INACTIVE
CHARLESTON CO. COMPOSTING FACILITY COMPOSTING	101001-3001 ACTIVE
SUNNYSIDE FARMS COMPOSTING COMPOSTING	102646-3001 ACTIVE
DIMARE'S LAND APPLICATION LAND APPLICATION	102643-8001 ACTIVE

Land Application Sites

LAND APPLICATION *FACILITY NAME*	*PERMIT #* *YPE*
SPRAY ON GOLF COURSE KIAWAH ISLAND UTILITIES	ND0017361 DOMESTIC

Mining Activities

MINING COMPANY *MINE NAME*	*PERMIT #* *MINERAL*
MAD DOG MINING, INC. (FELDER) MAD DOG MINE #2	0645-19 SAND; SAND/CLAY
D&A PARTNERSHIP RAVENEL MINE	1089-19 SAND
W. FRAZIER CONSTRUCTION CO., INC. (DIRTCO) MURRAY WOODS PIT	0512-19 SAND/CLAY
ISLAND CONSTRUCTION CO., INC. TREMONT MINE	0660-19 SAND
THREE OAKS CONTRACTORS, INC. CHICKEN FARM MINE	1129-19 SAND

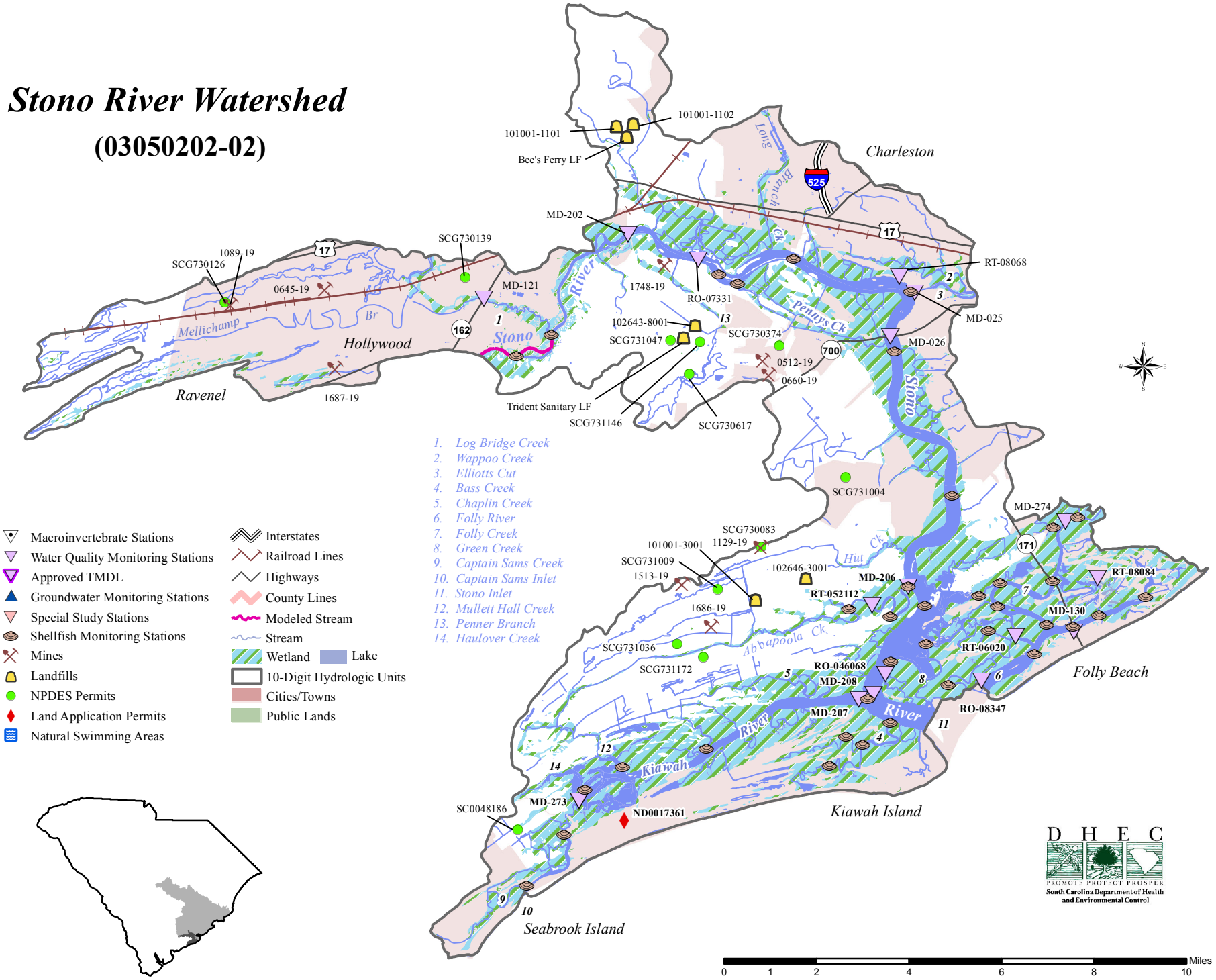
MURRAY SAND CO., INC. DAVIS PIT	1513-19 SAND
DH HANKINS TRUCKING CO. LLC RASHFORD MINE	1686-19 SAND/TOP SOIL
JOHN & BEAULAH MITCHELL WOODROW ROAD MINE	1687-19 SAND/TOP SOIL
OLD POND LLC OLD POND SAND MINE	1748-19 SAND/TOP SOIL

Growth Potential

There is a high potential for growth in this watershed, which contains the Towns of Kiawah Island, Ravenel and Hollywood, the City of Folly Beach, and portions of the City of Charleston and the Towns of Seabrook Island, and Mount Pleasant. Suburban growth areas include: the Dills Property, Ellis Property II, Stiles Point Plantation, Stonefield, Fort Lamar, Grimbel Shores and Harborwoods III on James Island; Kiawah Island; Andell Property, Hope Plantation, Rushland Plantation, Headquarters Plantation, and Fenwick Acres on Johns Island; Stono Ferry in Hollywood; and Bees Landing and Essex Farms in the City of Charleston. Water and Sewer services are available to all these growth areas.

Stono River Watershed

(03050202-02)



Santee Coastal Frontage Basin Description

The ***Santee Coastal Frontage Basin (hydrologic unit 03050209)*** is located in Charleston County and encompasses 2 watersheds and 212 square miles, incorporating the Lower Coastal Plain and Coastal Zone regions. Of the 135,501 acres in the Coastal Basin, 40.1% is nonforested wetland, 22.5% is forested land, 17.0% is forested wetland, 11.5% is water, 5.0% is urban land, 2.9% is agricultural land, and 1.0% is barren land. There are a total of 36.1 stream miles in the Santee Coastal Frontage Basin, together with 29.0 acres of lake waters, and 10,935.1 acres of estuarine areas.

The Atlantic Intracoastal Waterway (AIWW) connects the streams in this basin that flow directly into the Atlantic Ocean through Cape Romain Harbor, Key Inlet, Bulls Bay, Bull Harbor, Price Inlet, Capers Inlet, Dewees Inlet, and Breach Inlet.

Physiographic Regions

The State of South Carolina has been divided into six Major Land Resource Areas (MLRAs) by the USDA Soil Conservation Service. The MLRAs are physiographic regions that have soils, climate, water resources, and land uses in common. The physiographic regions defining the Santee Coastal Frontage Basin are as follows:

The **Lower Coastal Plain** is an area that is mostly nearly level and is dissected by many broad, shallow valleys with meandering stream channels; elevations range from 25 to 125 feet.

The **Coastal Zone** is a mostly tidally-influenced area that is nearly level and dissected by many broad, shallow valleys with meandering stream channels; most of the valleys terminate in tidal estuaries along the coast; elevations range from sea level to about 25 feet.

Land Use/Land Cover

General land use/land cover mapping for South Carolina was derived from the 2006 National Land Cover Data (NLCD). The dataset is based on nationwide Landsat Thematic Mapper (TM) multispectral satellite images (furnished through the Multi-Resolution Land Characteristics (MRLC) consortium, coordinated by USEPA) using image analysis software to inventory the Nation's land classes. The NLCD are developed by the USGS (EROS Data Center) using TM image interpretation, air photo interpretation, National Wetland Inventory data analysis, and ancillary data analysis.

Urban land is characterized by man-made structures and artificial surfaces related to industrial, commercial, and residential uses, and vegetated portions of urban areas such as recreational grasslands and industrial facility lawns.

Agricultural/Grass land is characterized by row crops, pastures, orchards, vineyards, and hay land, and includes grass cover in fallow, scrub/shrub, forest clearcut and urban areas.

Forestland is characterized by deciduous and evergreen trees (or a mix of these), not including forests in wetland settings, generally greater than 6 meters (approximately 20 feet) in height, with tree canopy of 25-100% cover.

Forested Wetland is saturated bottomland, mostly hardwood, forests primarily composed of wooded swamps occupying river floodplains, moist marginal forests, and isolated low-lying wet areas, located predominantly in the Coastal Plain.

Nonforested Wetland is saturated marshland, most commonly located in coastal tidelands and in isolated freshwater inland areas, found predominantly in the Coastal Plain.

Barren land is characterized by a nonvegetated condition of the land, both natural (rock, beaches, nonvegetated flats) and man-induced (rock quarries, mines, and areas cleared for construction in urban areas or clearcut forest areas).

Water (non-land) includes both fresh (inland) and saline (tidal) waters.

Soil Types

The dominant soil associations, or those soil series comprising, together, over 40% of the land area, were recorded for each watershed in percent descending order. The individual soil series for the Santee Coastal Frontage Basin are described as follows.

Bohicket soils are very poorly drained soils, clayey throughout or mucky and underlain with clayey layers, frequently flooded.

Capers soils are very poorly drained soils, clayey throughout or mucky, and underlain with clayey layers, frequently flooded.

Chipley soils are moderately to excessively well drained soils, sandy throughout, on high ridges.

Leon soils are somewhat poorly drained to poorly drained, level to nearly level, sandy soils with weakly cemented layers stained by organic matter.

Yauhannah soils are poorly drained to moderately well drained soils with a loamy subsoil, on nearly level ridges and in shallow depressions.

Yemassee soils are poorly drained to moderately well drained soils with a loamy subsoil, on nearly level ridges and in shallow depressions.

Slope and Erodibility

The definition of soil erodibility differs from that of soil erosion. Soil erosion may be more influenced by slope, rainstorm characteristics, cover, and land management than by soil properties. Soil erodibility refers to the properties of the soil itself, which cause it to erode more or less easily than others when all other factors are constant.

The soil erodibility factor, K, is the rate of soil loss per erosion index unit as measured on a unit plot, and represents an average value for a given soil reflecting the combined effects of all the soil properties that significantly influence the ease of soil erosion by rainfall and runoff if not protected. K values closer to 1.0 represent higher soil erodibility and a greater need for best management practices to

minimize erosion and contain those sediments that do erode. K-factor values in the Santee Coastal Frontage Basin average 0.2.

Fish Consumption Advisory

At the time of publication, a fish consumption advisory issued by SCDHEC is in effect for the Atlantic Ocean fringing this basin advising people to limit the amount of some types of fish consumed from these waters. Fish consumption advisories are updated annually in March. For background information and the most current advisories please visit visit http://www.scdhec.gov/fish .

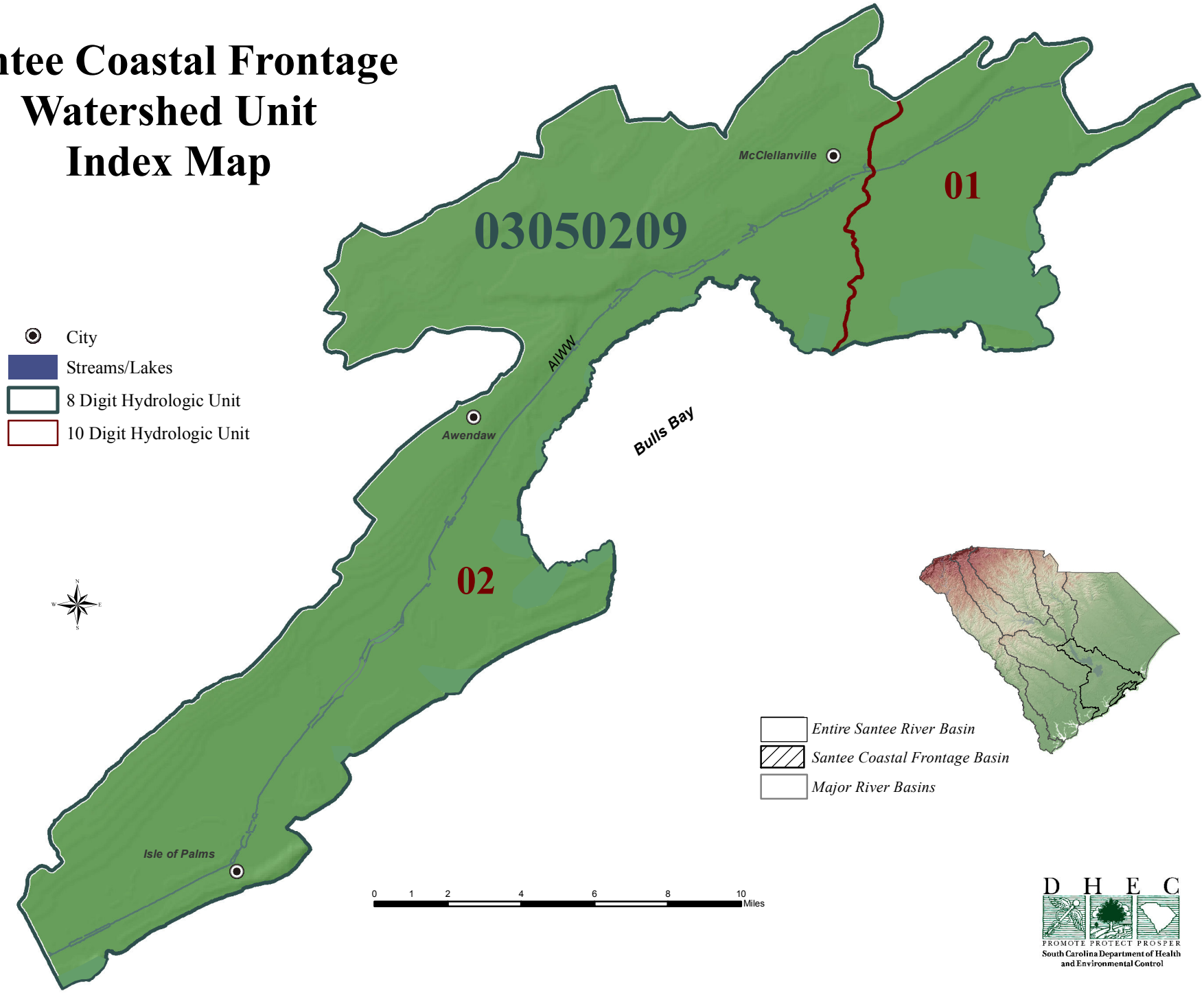
Ocean Swimming Advisory

SCDHEC routinely collects water samples along South Carolina's beaches. If high numbers of bacteria (enterococcus) are found, an advisory is issued for that portion of beach. An advisory means that DHEC advises you NOT to swim in that areas while signs are posted. This is especially true for young children, those with comprised immune systems, and the elderly. Advisories do not mean that the beach is closed. Wading, fishing, and shell collecting do not pose a risk. Advisories may be issued due to high sample results or because of rainfall causing stormwater to runoff on the beach. Advisories are lifted when sample results fall below the limit of 104CFU/100mL. Check local newspapers, television stations, posted advisory signs on beaches, and this website http://www.scdhec.gov/environment/water/ow.htm for up-to-date information.

Climate

Normal yearly rainfall in the Santee Coastal Frontage Basin area during the period of 1971 to 2000 was 51.43 inches, according to South Carolina's **30-year** climatological record. Data compiled from National Weather Service stations in McClellanville and Sullivan's Island were used to determine the general climate information for this portion of the State. The highest seasonal rainfall occurred in the summer with 17.14 inches; 12.62, 11.28, and 10.39 inches of rain fell in the fall, winter, and spring, respectively. The average annual daily temperature was 64.5 ^{o}F. Summer temperatures averaged 79.7^{o}F, fall temperatures averaged 66.5 ^{o}F, and winter and spring mean temperatures were 48.6 ^{o}F and 63.3 ^{o}F, respectively.

Santee Coastal Frontage Watershed Unit Index Map



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Watershed Evaluations

03050209-01

(Upper Santee Coastal Frontage Basin/Atlantic Intracoastal Waterway)

General Description

Watershed 03050209-01 (formerly a portion of 03050202-060) is located in Charleston County and consists primarily of the upper portion of the Santee Coastal Frontage Basin's ***Atlantic Intracoastal Waterway*** and its tributaries from Alligator Creek to Five Fathom Creek. The watershed occupies 26,731 acres of the Coastal Zone region of South Carolina. Land use/land cover in the watershed includes: 72.0% nonforested wetland, 12.2% water, 10.2% forested land, 3.4% forested wetland, 1.4% barren land, 0.6% agricultural land, and 0.2% urban land.

This watershed contains a portion of the Atlantic Intracoastal Waterway (AIWW), which flows past numerous sea islands and the tidally influenced creeks that separate them. This reach of the AIWW is classified SFH. The AIWW leaves the South Santee River Watershed and accepts drainage from Alligator Creek, Sall Creek, Ramhorn Creek, and Ormand Hall Creek. Ramhorn Creek connects to Alligator Creek which also drains to Cape Romain Harbor. Further along the AIWW moving southwest, the waterway accepts drainage from Casino Creek (Shrine Creek, Congaree Boat Creek, Mill Creek, Needles Eye Creek) and Dupre Creek. Casino Creek also drains into Cape Romain Harbor. A larger Dupre Creek joins Clubhouse Creek and together with Shrine Creek (Congaree Boat Creek) flows into Muddy Bay. Muddy Bay accepts drainage from Joe and Ben Creek, Oyster Bay, Little Papas Creek, Nellie Creek, and Horsehead Creek before draining into the Romain River and through Key Inlet to the Atlantic Ocean. Horsehead Creek drains into Cape Romain Harbor along with Deepwater Creek (Mill Den Creek) near Deepwater Point. Devils Den Creek also drains into the harbor and connects to the Romain River via Slack Reach. The Romain River accepts drainage from Nellie Creek (Papas Creek, Santee Path Creek, Key Creek, S Creek before draining into the harbor near Cape Romain. Key Creek (Key Bay, Bay Creek) drains to the Atlantic Ocean via Raccoon Creek. Key Bay and Bay Creek also drain to the Atlantic Ocean via Clark Creek near Sandy Point. Little Papas Creek, Papas Creek, Santee Path Creek, Key Creek, and Clark Creek also share drainage with Five Fathom Creek in 03050209-02.

There are 3,361.3 acres of estuarine areas in this watershed. All streams draining into Cape Romain Harbor are classified ORW and those draining only into the AIWW are classified SFH. Additional natural resources in the watershed include the Cape Romain National Wildlife Refuge and portions of the Frances Marion National Forest.

Surface Water Quality

Station #	Type	Class	Description
MD-265	INT	SFH/ORW	ALLIGATOR CREEK AT STATE SHELLFISH GROUND

RO-056100	RO-05	ORW	CASINO CREEK, 4.1MI ENE OF MCCLELLANVILLE
MD-266	INT	SFH/ORW	CASINO CREEK AT CLOSURE LINE
RT-07048	RT-07	ORW	LITTLE PAPAS CK, 0.4MI SW OF MUDDY BAY & 0.15MI E OF CON. TO NELLIE CK

Alligator Creek (MD-265) – Aquatic life uses are not supported due to turbidity excursions. In addition, there are significant increasing trends in five-day biological oxygen demand and total phosphorus concentration. Although dissolved oxygen excursions occurred, they were typical of values seen in such systems and were considered natural, not standard violations. Recreational uses are fully supported; however, there is a significant increasing trend in fecal coliform bacteria concentration.

Casino Creek – There are two water quality monitoring sites along Casino Creek. Although dissolved oxygen excursions occurred at both sites, they were typical of values seen in such systems and were considered natural, not standard violations. At the upstream site ***(RO-056100)***, aquatic life and recreational uses are fully supported. At the downstream site ***(MD-266)***, aquatic life uses are fully supported; however, there is a significant increasing trend in five-day biological oxygen demand. A significant increasing trend in dissolved oxygen concentration suggests improving conditions for this parameter. Recreational uses are fully supported.

Little Papas Creek (RT-07048) - Aquatic life and recreational uses are fully supported. Although dissolved oxygen excursions occurred, they were typical of values seen in such systems and were considered natural, not standard violations.

A fish consumption advisory has been issued by the Department for mercury and includes the Atlantic Ocean edging this watershed (see advisory p.129). Fish tissue samples from Muddy Bay and Cape Romain indicate no advisories are needed at this time.

Shellfish Monitoring Stations

Station #	Description
06B-06	ALLIGATOR CREEK AT CAPE ROMAIN HARBOR
06B-06A	NORTH END OF CAPE ROMAIN HARBOR
06B-07	ALLIGATOR CREEK AT MARKER 26
06B-08	CASINO CREEK AT MARKER 26
06B-09	DUPREE CREEK – 500 FT N OF NEW DOCK
06B-10	AIWW AT MARKER 32
06B-12	ALLIGATOR CREEK STATE SHELLFISH GROUND
06B-15	CASINO CREEK AT CAPE ROMAIN HARBOR
06B-16	CASINO CREEK MIDWAY BETWEEN STATION 19&24 (AT SMALL S.BOUND UNNAMED CREEK ON RIGHT)
06B-17	CONGAREE BOAT CREEK AT TOWER CREEK
06B-18	CONFLUENCE OF DUPREE CREEK AND CLUBHOUSE CREEK
06B-19	CONFLUENCE OF CASINO CREEK AND SHRINE CREEK
06B-19A	CASINO CREEK, MIDWAY BETWEEN STATIONS 06B-19 & 06B-16 AT UNNAMED CREEK
06B-20	1,000 YDS UPSTREAM DUPREE CREEK FROM CLUBHOUSE CREEK
06B-21	CONFLUENCE OF ALLIGATOR CREEK AND RAMHORN CREEK
06B-22	CONFLUENCE OF RAMHORN CREEK AND MILL CREEK

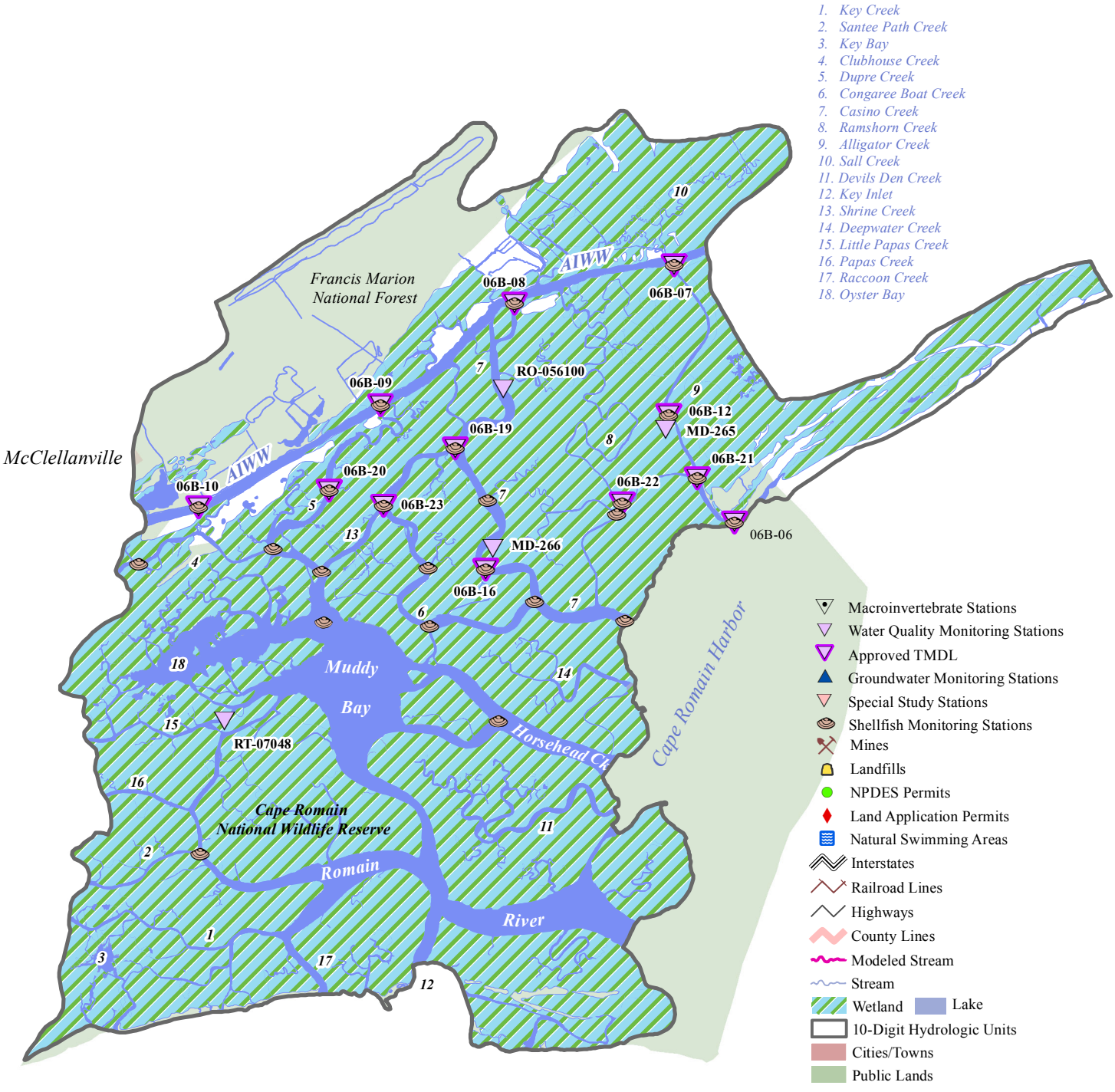
06B-22A	Mill Creek at Ramhorn Creek
06B-23	Confluence of Shrine Creek and Congaree Boat Creek
06B-24	Confluence of Casino Creek and Congaree Boat Creek
06B-25	Confluence of Horsehead Creek and unnamed creek at lower end of Horsehead Island
06B-26	Confluence of Shrine Creek and unnamed Creek N. of Muddy Bay
06B-27	Confl. of first large creek on the left, with Congaree Boat Creek, traveling SE of Sta.23
07-08	Clubhouse Creek – ¼ mi N. of Five Fathom Creek
07-08A	Oyster Bay at Muddy Bay
07-16	Confluence of Romain River and Santee Path Creek

Growth Potential

There is a low potential for growth in this watershed, which contains no municipalities. Although the adjacent McClellanville area experiences scattered low density development, significant growth is not anticipated.

Upper Santee Coastal Frontage Basin/ Atlantic Intracoastal Waterway Watershed

(03050209-01)



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South Carolina Department of Health and Environmental Control

03050209-02

(Lower Santee Coastal Frontage Basin/Atlantic Intracoastal Waterway)

General Description

Watershed 03050209-02 (formerly portions of 03050202-060, 03050112-050) is located in Charleston County and consists primarily of the lower portion of the Santee Coastal Frontage Basin's ***Atlantic Intracoastal Waterway*** and its tributaries from Five Fathom Creek to the Ben Sawyer Bridge. The watershed occupies 108,770 acres of the Coastal Zone region of South Carolina. Land use/land cover in the watershed includes: 32.3% nonforested wetland, 25.5% forested land, 20.4% forested wetland, 11.3% water, 6.2% urban land, 3.4% agricultural land, and 0.9% barren land.

This watershed contains a portion of the Atlantic Intracoastal Waterway (AIWW), which flows past numerous sea islands and the tidally influenced creeks that separate them. This reach of the AIWW is classified SFH. Five Fathom Creek (Key Creek, Key Bay, Santee Path Creek, Papas Creek, Little Papas Creek, Matthews Creek, Town Creek, Clubhouse Creek) drains into the AIWW at the top of the watershed and into Bulls Bay (ORW). Five Fathom Creek drains into the Atlantic Ocean via Clark Creek near Sandy Point. The Harbor River, Bull River (Sett Creek, Little Sett Creek), and Long Creek drain directly into Bulls Bay. Wambaw Swamp, Little Wambaw Swamp, and Willow Hall Swamp drain into Bell Creek (Cooter Creek, Withey Wood Canal) and Steed Creek forming Awendaw Creek and Lake Awendaw, which flow into the Harbor River (AIWW) and into Bulls Bay. Streams draining into the AIWW from the mainland, near the Town of McClellanville, include Sandy Point Creek, Doe Hall Creek, Tibwin Creek, and Jeremy Creek. Streams draining into Bull Harbor and Bulls Bay include Anderson Creek, Blind Creek, Venning Creek, Belvedere Creek, Vanderhorst Creek, Saltpond Creek, and Graham Creek (SFH). Capers Creek, Watermelon Creek, Toomer Creek, and Whiteside Creek drain to the ocean through Capers Inlet (ORW). Santee Pass connects Capers Creek to Mark Bay (ORW) and drains to the ocean via Price Inlet (ORW). Other streams draining into Price Inlet include Price Creek, Clauson Creek, Palmetto Point Creek, and Bull Narrows. Bull Narrows also flows into Sewee Bay (SFH) and Hickory Bay. Back Creek connects Sewee Bay to Bull Creek (Summerhouse Creek, Jack Creek), which flows into Bull Harbor and Bulls Bay.

Morgan Creek, Seven Reaches, and Cedar Creek flow into Meeting Reach (AIWW). Seven Reaches also drains into Gray Bay (SFH) as does Hamlin Creek and another Long Creek. Hamlin and Long Creeks also flow into Hamlin Sound (SFH), which in turn drains into Copahee Sound (ORW) (Porcher Bluff Creek) and Bullyard Sound (ORW). Dewees Creek collects drainage from Bullyard Sound and Hamlin Sound, together with Old House Creek and Horsebend Creek, and flows through Dewees Inlet (SFH) to the Atlantic Ocean. Inlet Creek (Gentide Creek), Swinton Creek, and Conch Creek located near Sullivans Island, drain to the Atlantic Ocean via Breach Inlet. There are 36.1 stream miles, 29.0 acres of lake waters and 7,573.8 acres of estuarine areas in this watershed.

Surface Water Quality

Station #	Type	Class	Description
RO-07328	RO-07	SFH	AIWW, 0.4MI ENE OF MOUTH OF JEREMY CREEK
MD-203	P/W	SFH	JEREMY CREEK NEAR BOAT LANDING AT MCCLELLANVILLE TOWN HALL
MD-267	INT	SFH	FIVE FATHOM CREEK AT BULL RIVER
RT-08080	RT-08	SFH	DOE HALL CREEK, 100YDS UPSTREAM OF THE AIWW
MD-250	W	SFH	AWENDAW CREEK AT US 17
MD-268	W/INT	SFH	AWENDAW CREEK AT MARKER #57
RT-07060	RT-07	ORW	VENNING CREEK, 0.7MI FROM MOUTH OF VANDERHORST CREEK
RT-052094	RT-05	ORW	UNNAMED CREEK TO SEWEE BAY, W OF BULLS BAY
MD-269	INT	SFH	SEWEE BAY AT MOORES LANDING
RO-06312	RT-06	SFH	SEWEE BAY, 0.7MI S OF MOORES LANDING
RT-042076	RT-04	ORW	SANTEE PASS ON CAPERS ISLAND, 7.8MI NE OF ISLE OF PALMS
RO-046072	RO-06	SFH	TOOMER CREEK MOUTH AT AIWW
RO-08356	RO-08	SFH	AIWW, 0.3MI BELOW TOOMER CREEK
MD-270	INT	ORW	BULLYARD SOUND AT MARKER #104
RT-042078	RT-04	SFH	UNNAMED TRIB TO DEWEES CK (BETW HAMLIN & COPAHEE SOUNDS)
MD-271	INT	SFH	HAMLIN SOUND
RT-06024	RT-06	SFH	SEVEN REACHES, 4.7MI S OF WHITEHALL TERRACE
MD-272	INT	SFH	LOWER HAMLIN CREEK AT SITE OF NEW BRIDGE
RO-07340	RO-07	SFH	AIWW, 0.5MI SW OF MOUTH OF HAMLIN CREEK
RT-06008	RT-06	SFH	CONCH CREEK, 1.6MI NNE OF SULLIVANS ISLAND
MD-069	INT	SB/SFH	AIWW AT SC 703, E OF MT. PLEASANT

Atlantic Intracoastal Waterway – There are four water quality monitoring sites along this portion of the Atlantic Intracoastal Waterway (AIWW). Near the mouth of Jeremy Creek ***(RO-07328)*** and below Toomer Creek ***(RO-08356)***, aquatic life and recreational uses are fully supported. Although dissolved oxygen excursions occurred at both sites, they were typical of values seen in such systems and were considered natural, not standard violations. Aquatic life uses are not supported near the mouth of Hamlin Creek ***(RO-07340)*** due to ammonia excursions. Recreational uses are fully supported. At the sites near Mount Pleasant ***(MD-069)***, aquatic life and recreational uses are fully supported; however, there are significant increasing trends in five-day biological oxygen demand and turbidity. There is a significant decreasing trend in pH. A significant decreasing trend in total nitrogen concentration suggests improving conditions for this parameter.

Jeremy Creek (MD-203) – Aquatic life uses are not supported due to dissolved oxygen excursions. Significant decreasing trends in total phosphorus concentration and fecal coliform bacteria suggest improving conditions for these parameters. Recreational uses are fully supported.

Five Fathom Creek (MD-267) - Aquatic life uses are not supported due to turbidity excursions. In addition, there is a significant increasing trend in five-day biological oxygen demand. Although dissolved oxygen excursions occurred, they were typical of values seen in such systems and were considered natural, not standard violations. Recreational uses are fully supported; however, there is a significant increasing trend in fecal coliform bacteria concentration.

Doe Hall Creek (RT-08080) – Aquatic life and recreational uses are fully supported.

Awendaw Creek – There are two water quality monitoring sites along Awendaw Creek and recreational uses are fully supported at both sites. Although dissolved oxygen excursions occurred at both sites, they were typical of values seen in such systems and were considered natural, not standard violations. At the upstream site ***(MD-250)***, aquatic life uses are fully supported. A significant decreasing trend in fecal coliform bacteria suggests improving conditions for this parameter at this site. At the downstream site ***(MD-268)***, aquatic life uses are not supported due to turbidity excursions. In addition, there is a significant increasing trend in five-day biological oxygen demand. A significant decreasing trend in fecal coliform bacteria suggests improving conditions for this parameter at this site as well.

Venning Creek (RT-07060) – Aquatic life uses are not supported due to turbidity excursions. Although dissolved oxygen excursions occurred, they were typical of values seen in such systems and were considered natural, not standard violations. Recreational uses are fully supported.

Unnamed Creek to Sewee Bay (RT-052094) - Aquatic life and recreational uses are fully supported.

Sewee Bay - There are two water quality monitoring sites along the AIWW portion of Sewee Bay. At the Moores Landing site ***(MD-269)***, aquatic life and recreational uses are fully supported; however, there is a significant increasing trend in five-day biological oxygen demand. Although dissolved oxygen excursions occurred, they were typical of values seen in such systems and were considered natural, not standard violations. Aquatic life and recreational uses are fully supported at the site south of Moores Landing ***(RO-06312)***.

Santee Pass (RT-042076) – Aquatic life and recreational uses are fully supported. Although dissolved oxygen excursions occurred, they were typical of values seen in such systems and were considered natural, not standard violations.

Toomer Creek (RO-046072) - Aquatic life and recreational uses are fully supported. Although dissolved oxygen excursions occurred, they were typical of values seen in such systems and were considered natural, not standard violations.

Bullyard Sound (MD-270) – Aquatic life uses are not supported due to ammonia excursions. In addition, there is a significant increasing trend in five-day biological oxygen demand. Recreational uses are fully supported; however, there is a significant increasing trend in fecal coliform bacteria.

Unnamed Tributary to Dewees Creek (RT-042078) **-** Aquatic life and recreational uses are fully supported. Although dissolved oxygen excursions occurred, they were typical of values seen in such systems and were considered natural, not standard violations.

Hamlin Sound (MD-271) **–** Aquatic life and recreational uses are fully supported; however; there are significant increasing trends in five-day biological oxygen demand and fecal coliform bacteria. Although dissolved oxygen excursions occurred, they were typical of values seen in such systems and were considered natural, not standard violations.

Seven Reaches (RT-06024) **-** Aquatic life and recreational uses are fully supported. Although dissolved oxygen excursions occurred, they were typical of values seen in such systems and were considered natural, not standard violations.

Hamlin Creek (MD-272) **–** Aquatic life use is not supported due to occurrences of copper in excess of the aquatic life criterion. In addition, there is a significant increasing trend in five-day biological oxygen demand. Although dissolved oxygen excursions occurred, they were typical of values seen in such systems and were considered natural, not standard violations. Recreational uses are fully supported.

Conch Creek (RT-06008) **-** Aquatic life and recreational uses are fully supported. Although dissolved oxygen excursions occurred, they were typical of values seen in such systems and were considered natural, not standard violations.

A fish consumption advisory has been issued by the Department for mercury and includes the Atlantic Ocean edging this watershed (see advisory p.129).

Groundwater Quality

Well #	Class	Aquifer	Location
AMB-084	GB	SURFICIAL SANDS	MCCLELLANVILLE

Shellfish Monitoring Stations

Station #	Description
07-01A	VENNING CREEK AT BULLS BAY
07-02	GRAHAM CREEK AT MARKER 64
07-02A	BULLS BAY, 1000 FT FROM GRAHAM CREEK
07-03	AWENDAW CREEK AT MARKER 57
07-04	HARBOR RIVER AT MARKER 48
07-04A	HARBOR RIVER AT BULLS BAY
07-05	TIBWIN CREEK AT MARKER 42
07-06	FIVE FATHOM CREEK AT MARKER 20
07-06A	FIVE FATHOM CREEK AT BULL RIVER
07-09	CONFLUENCE OF DOEHALL CREEK WITH AIWW – N. OF MARKER 46

07-14	DOEHALL CREEK – THRID BEND
07-15	SANDY POINT CREEK – FOURTH BEND
07-17	SECOND SMALL CREEK N. OF MARKER 26 IN FIVE FATHOM CREEK
07-18	MARKER 65 IN AIWW
07-19	AIWW AT CONFLUENCE WITH UNNAMED CREEK, 1.5 MI SW OF GRAHAM CREEK
07-20	GRAHAM CREEK AT BULLS BAY
07-21	AIWW, MIDWAY BETWEEN TIBWIN CREEK AND MATTHEWS CREEK
07-22	TIBWIN CREEK PAST 1ST BEND AT 1ST SMALL CREEK ON RIGHT
08-01	MORGAN CREEK AT NORTHERNMOST CONFLUENCE WITH AIWW – ADJACENT TO MARKER 115
08-02	HAMLIN SOUND
08-03	DEWEES INLET AT AIWW – N. OF MARKER 110
08-04	BULLYARD SOUND - MARKER 104
08-06	MARK BAY - MARKER 90
08-06A	UNNAMED CREEK E OF MARKER #90
08-09	MOORES LANDING DOCK AT MARKER 74
08-10	MARKER 116 N. OF ISLE OF PALMS STP OUTFALL IN AIWW
08-14	DEWEES ISLAND – ¼ MI UP HORSEBEND CREEK
08-16	CONFLUENCE OF SEVEN REACHES AND GRAY BAY
08-17	SW COPAHEE SOUND AT PORCHER BLUFF CREEK
08-18	ONE HALF MI UP CEDAR CREEK FROM DEWEES INLET
08-19	CONFLUENCE OF TOOMER CREEK AT COPAHEE SOUND
08-20	UPPER REACHES OF WHITESIDE CREEK
08-21	UPPER REACHES OF CLAWSON CREEK
08-22	CONFLUENCE OF CAPERS CREEK AND SANTEE PASS
08-25	PALMETTO POINT CREEK ADJACENT TO MARKER 84
08-27	NORTHERN HAMLIN SOUND
08-28	SUMMERHOUSE CREEK AT BULLS ISLAND FERRY DOCK
08-29	ANDERSON CREEK AT BULLS ISLAND FERRY CHANNEL
09A-01	HAMLIN CREEK AT ITS CONFLUENCE WITH AIWW
09A-02	UPPER END OF HAMLIN CREEK AT POG
09A-03	UPPER END OF SWINTON CREEK
09A-06	INLET CREEK AND GENTIDE CREEK
09A-07	INLET CREEK AT ITS CONFLUENCE WITH AIWW
09A-09	BEN SAWYER BRIDGE
09A-11	END OF 10TH STREET AT HAMLIN CREEK
09A-14	SWINTON CREEK AT ITS CONFLUENCE WITH AIWW
09A-17	CONCH CREEK STATE SHELLFISH GROUND – MT. PLEASANT SIDE
09A-17A	CONCH CREEK STATE SHELLFISH GROUND – SULLIVANS ISLAND SIDE
09A-18	AIWW ADJACENT TO WILD DUNES GOLF COURSE STORM DRAINAGE OUTFALL
09A-19	AIWW AT 25TH STREET – ISLE OF PALMS
09A-20	CONCH CREEK AT LOFTON CREEK
09A-23	UPPER REACHES OF CONCH CREEK
09A-24	UPPER REACHES OF INLET CREEK
09A-25	UPPER REACHES OF SWINTON CREEK
09A-26	HAMLIN CREEK ½ WAY BETWEEN STATIONS 1&2
09A-28	SWINTON CREEK WEST OF AIWW AT SECOND BEND
09A-29	LOWER HAMLIN CREEK AT SITE OF NEW BRIDGE
09A-32	FIRST CREEK ON RIGHT DOWNSTREAM FROM STATION 6
09A-33	FIRST LARGE CREEK UP INLET CREEK FROM STATION 8
09A-35	GENTIDE CREEK AT THE POWER LINES
09A-36	CONCH CREEK AT ITS CONFLUENCE WITH AIWW
09A-37	LOWER CONCH CREEK AT MARINA CLOSURE ZONE

NPDES Program

Active NPDES Facilities

RECEIVING STREAM *FACILITY NAME*	*NPDES#* *TYPE*
HAMLIN CREEK CITY OF ISLE OF PALMS W&S	SC0043583 MINOR DOMESTIC
MEETING REACH CITY OF ISLE OF PALMS/FOREST TRAILS SD	SC0025283 MINOR DOMESTIC
DEWEES CREEK TOWN OF DEWEES ISLAND WTP	SC0046817 MINOR DOMESTIC
AIWW UNNAMED TRIBUTARY CHARLESTON CPW/BEAN PIT	SCG730226 MINOR INDUSTRIAL
JEREMY CREEK MARCINAK CONSTRUCTION CO./LANDRY FARMS MINE	SCG731034 MINOR INDUSTRIAL
HAMLIN SOUND TRIBUTARY DEWEES ISLAND UTIL. CORP./DEWEES ISLAND WWTF	SCG731187 MINOR INDUSTRIAL

Municipal Separate Storm Sewer Systems (MS4)

RECEIVING STREAM *MUNICIPALITY* *RESPONSIBLE PARTY* *IMPLEMENTING PARTY*	*NPDES#* *MS4 PHASE* *MS4 SIZE*
BULLS BAY CITY OF ISLE OF PALMS CITY OF ISLE OF PALMS CHARLESTON COUNTY	SCR031904 PHASE II SMALL MS4
BULLS BAY TOWN OF MOUNT PLEASANT TOWN OF MOUNT PLEASANT TOWN OF MOUNT PLEASANT	SCR031906 PHASE II SMALL MS4
BULLS BAY TOWN OF SULLIVANS ISLAND TOWN OF SULLIVANS ISLAND TOWN OF CHARLESTON COUNTY	SCR031908 PHASE II SMALL MS4
BULLS BAY UNINCORPORATED AREAS CHARLESTON COUNTY CHARLESTON COUNTY	SCR031902 PHASE II SMALL MS4

Nonpoint Source Management Program

Land Disposal Activities

Landfill Facilities

LANDFILL NAME *FACILITY TYPE*	*PERMIT #* *STATUS*
PINCKNEY ROAD DUMP MUNICIPAL	------- CLOSED
CITY OF ISLE OF PALMS DUMP MUNICIPAL	------- CLOSED
TOWN OF MT. PLEASANT WOOD GRINDING COMPOSTING	101002-3001 INACTIVE
TOWN OF MT. PLEASANT C&D SW TRANSFER STATION C&D	101002-6001 ACTIVE
BURNING ACRES COMPOSTING & SHRED SITE COMPOSTING	102487-3001 ACTIVE
BAR CONSTRUCTION WOOD GRINDING COMPOSTING	102641-3001 ACTIVE
ISLAND CLEARING DEBRIS SITE COMPOSTING	102610-3001 INACTIVE

Land Application Sites

LAND APPLICATION *FACILITY NAME*	*PERMIT #* *YPE*
TILE FIELD DEWEES ISL. DEV./DEWEES UTILITY CORP.	ND0069329 DOMESTIC
SPRAY ON GOLF COURSE CITY OF ISLE OF PALMS/WILD DUNES BEACH	ND0062260 DOMESTIC
SPRAYFIELD CHARLESTON COUNTY/LINCOLN HIGH SCHOOL	ND0073016 DOMESTIC

Mining Activities

MINING COMPANY *MINE NAME*	*PERMIT #* *MINERAL*
CHARLESTON COUNTY PUBLIC WORKS BEAN PIT	1159-19 SAND

Growth Potential

There is a high potential for growth in this watershed, which contains the City of Isle of Palms, the Towns of Awendaw and McClellanville, and portions of the Towns of Mt. Pleasant and Sullivans Island. Several suburban growth areas surround the City of Charleston. Some of the larger planned developments include Wild Dunes, Shell Point, Hidden Lakes, Seaside Farms, Palmetto Fort, and the Charleston National Country Club. All growth areas in the watershed have water and sewer services

available. Sources of tourism in this watershed include Patriots Point and Fort Moultrie. Despite scattered low density development in the McClellanville area, significant growth is not anticipated.

Watershed Restoration and Protection

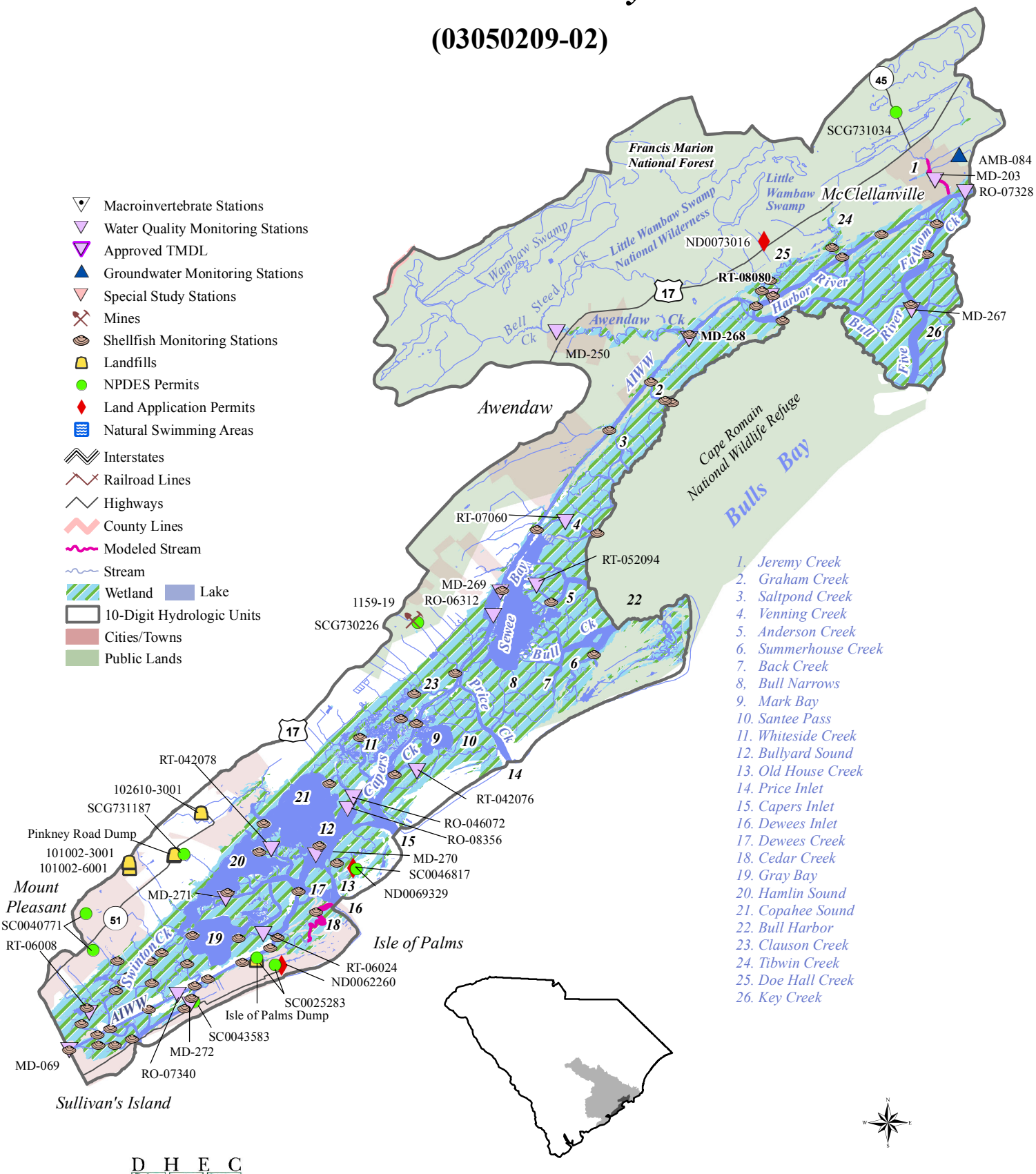
Special Projects

Sewee to Santee Nonpoint Source Pollution Project

The Bulls Bay watershed has been of special significance for its prominence as a part of the Cape Romain National Wildlife Refuge, its proximity to Francis Marion National Forest, and its considerable shellfish resources. Data from DHEC's shellfish monitoring program and other special studies on Graham Creek, Doehall Creek, and Sandy Run had indicated elevated bacteria levels at several areas in the watershed. In 2008, SCDHEC issued its request for proposals for 319 funding of Nonpoint Source Control projects. In response, a partnership was formed to prepare a project to implement BMPs targeted towards mitigation of fecal coliform bacteria inputs in a significant portion of the Bulls Bay watershed. The region is commonly known as the Sewee to Santee area. The Charleston County Soil and Water Conservation District led the effort using their own staff and that of S.C. Department of Natural Resources. Other partners included, Charleston County, Sewee Community Development Corporation, Town of McClellanville, Town of Awendaw, and local Federal Agencies. The project was approved and a comprehensive strategy was implemented to reduce bacteria runoff to waterways. Measures implemented included extensive outreach and education, pet waste pick up stations at public areas adjacent to waterways, boater surveys, evaluation of institutional waste treatment systems (e.g. campground), and an aggressive program of repair and or replacement of failing septic systems. Failing septic systems, a well-known problem in the area, were the main focus of the effort. Agricultural waste management was also a potential source, but only one operator was willing to participate. As of 2013, post project monitoring was underway to assess the effectiveness of the project.

Lower Santee Coastal Frontage Basin/ Atlantic Intracoastal Waterway Watershed

(03050209-02)



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APPENDIX A.

Santee River Basin

Ambient Water Quality Monitoring Site Descriptions

Station #	Type	Class	Description
03050111-01			
SC-004	SC	FW	Santee River 0.1 mi upstr mouth of Broadwater Creek
RS-04389	BIO/RS-04	FW	Warley Creek at S-09-287, 3.4 mi NW of Lone Star
SC-006	SC	FW	Warley Creek at SC 267
ST-034/SC-008	INT	FW	Santee River at RR trestle at Lone Star
ST-527	BIO	FW	Tavern Creek
SC-056	SC	FW	Surface drainage from Safety Kleen Hazardous Landfill
SC-058	SC	FW	Stream originating upstr of Safety Kleen haz landfill
SC-057	SC	FW	Surface drainage from Safety Kleen hazardous landfill
SC-005	SC	FW	Upper Lake Marion near Pack's Landing
RS-05585	RS-05	FW	Duckford Branch at S-43-52, 3.2 mi SW of Pinewood
SC-009	SC	FW	Spring Grove Creek at SR 26 bridge
SC-039	SC	FW	Upper Lake Marion 1.25 mi below Rimini rr trestle
C-058	W	FW	Lake Inspiration - St Matthews
C-063	W	FW	Halfway Swamp Creek at S-09-43, 3 mi E of St Matthews
ST-533	BIO	FW	Lyons Creek
C-015/SC-007	INT/SC	FW	Halfway Swamp Creek at SC 33
CW-241	W	FW	Halfway Swamp Creek at S-09-72
SC-038	SC	FW	Upper Lake Marion at mouth of Halfway Swamp Creek
RL-06422	RL-06	FW	Santee River arm of Lake Marion, 6mi NE of Elloree
RL-04388/SC-044	RL-04	FW	Lake Marion, 0.5 mi NE of Calhoun Landing
SC-010	SC	FW	Upper Lake Marion at channel marker 150
SC-011	SC	FW	Big Poplar Creek at S-38-105 bridge
RL-06426	RL-06	FW	Lake Marion, 9.3 mi ESE of Summerton
ST-017	BIO	FW	Jacks Creek
CW-244/SC-023	W/INT/SC	FW	Jacks Creek at S-14-76
CW-243/SC-047	W/INT/SC	FW	Big Branch at S-14-41
RL-02306/SC-012	RL-02	FW	Lake Marion at Jacks Creek embayment
SC-042	SC	FW	Mid Lake Marion at north end of I-95/US 301 bridges
SC-045	SC	FW	Stream flowing through Santee Natl. Golf Course Pond at Hwy 6
SC-014	SC	FW	Upper Lake Marion at headwaters of Chapel Branch flooded creek
ST-025/SC-015	W/SC	FW	Lake Marion at old US 301/15 bridge at Santee
RL-04382	RL-04	FW	Lake Marion, 1.0 mi downlake of I-95 bridge in Old River Channel
RL-05464	RL-05	FW	Lake Marion, 4.97 mi SE of I-95 bridge over lake
SC-040	SC	FW	Mid Lake Marion at Channel marker 79
SC-041	SC	FW	Mid Lake Marion 2 mi N of Channel marker 79
RL-06424	RL-06	FW	Lake Marion, 11 mi SSW of Summerton
RL-04386	RL-04	FW	Eutaw Creek arm of Lake Marion, near Cathead Boat Ramp
RL-02308/SC-016	RL-02	FW	Lake Marion at Channel Marker 69
ST-018/SC-018	S/INT/SC	FW	Tawcaw Creek at S-14-127 3.2 mi S of Summerton
SC-017	SC	FW	Mid Lake Marion at Tawcaw Creek embayment
SC-036	SC	FW	Mid Lake Marion at mouth of Tawcaw Creek
RL-05406	RL-05	FW	Lake Marion, 3.25 mi S of Log Jam Landing
SC-021	SC	FW	Lower Lake Marion, 0.9 mi NE of Rocks Pond Campground
RL-04384	RL-04	FW	Lake Marion, 3.8 mi W of Eadytown
RL-08054	RL-08	FW	Lake Marion, approx. 3 mi W of center of dam
RL-06428	RL-06	FW	Lake Marion, 4.9 mi S of end of S-14-64
RL-05402	RL-05	FW	Lake Marion, 3.5 mi NNW of bridge over Diversion Canal on SC 45
CL-042/SC-022	INT/SC	FW	Lake Marion forebay, spillway marker 44
ST-035/SC-020	INT	FW	Potato Creek at S-14-127, 3.2 mi S of Summerton
SC-019	SC	FW	Lower Lake Marion at Potato Creek flooded embayment

Station #	Type	Class	Description
03050111-01 (continued)			
ST-036/SC-023A	INT/SC	FW	LAKE MARION, WYBOO CREEK ARM DOWNSTREAM OF CLUBHOUSE BRANCH
RL-01011/SC-035	RL-01	FW	LAKE MARION, 1.1 MI SSE OF SANTEE NWR & 1MI S OF EAGLE POINT
03050112-01			
SC-024	SC	FW	SANTEE RIVER AT WILSONS LANDING BELOW SPILLWAY DAM
RS-05399/ST-536	RS-05/BIO	FW	BENNETTS BRANCH AT S-14-351, 11.5 MI SSE OF MANNING
ST-537	BIO	FW	DOCTORS BRANCH AT S-14-48
ST-016	P/INT	FW	SANTEE RIVER AT US 52, 6.5 MI NNW OF ST. STEPHENS
SC-037	SC	FW	REDIVERSION CANAL AT SC 45 BRIDGE
ST-031/SC-037A	INT/SC	FW	REDIVERSION CANAL AT US 52
03050112-02			
ST-001	P/INT	FW	SANTEE RIVER AT SC 41/US 17A NE OF JAMESTOWN
03050112-03			
CSTL-112	W/INT	FW	WAMBAW CREEK AT EXTENTION OF S-10-857
ST-006	P/INT	FW/SA	SOUTH SANTEE RIVER AT US 17
RT-042062	RT-01	SA	SIXMILE CREEK NEAR CONFLUENCE WITH SOUTH SANTEE RIVER
RO-08344	RO-08	SA	SOUTH SANTEE RIVER, 400 YDS UPSTR. FROM AIWW S OF GOAT ISLAND
RT-06001	RT-06	ORW	ALLIGATOR CREEK, 0.9 MI SSE OF AIWW CONFL. WITH SOUTH SANTEE RIVER
03050112-04			
ST-005	W	FW/SA	NORTH SANTEE RIVER AT US 17
RO-056098	RO-05	SA	NORTH SANTEE RIVER, 3.9MI SSE OF NORTH SANTEE
RT-07065	RT-07	SA	MINIM CREEK, 0.25 MI W OF MOUTH OF PLEASANT MEADOW CREEK
RT-042068	RT-04	SA	MINIM CREEK, 0.15 MI E OF MOUTH OF BELLA CREEK
MD-263	INT	ORW	NORTH SANTEE BAY AT BEACH CREEK
RO-06301	RO-06	ORW	NORTH SANTEE BAY, 2.5MI N OF CONFL. WITH ATLANTIC OCEAN

Groundwater Monitoring Sites

Well #	Class	Aquifer	Location
03050111-01			
AMB-025	GB	BLACK MINGO	ST. MATTHEWS
AMB-003	GB	BLACK CREEK	ELLOREE
03050112-01			
AMB-021	GB	BLACK CREEK/MIDDENDORF	ST. STEPHEN
03050112-04			
AMB-087	GB	SURF SANDS	NORTH SANTEE

Shellfish Monitoring Stations

Station #	Description
03050112-03	
06A-01	SOUTH SANTEE RIVER AT ALLIGATOR CREEK
06A-01A	SOUTH SANTEE RIVER NEAR THE MIDPOINT OF GRACE ISLAND
06A-02	SOUTH SANTEE INLET
06B-13	ALLIGATOR CREEK NEAREST SOUTH SANTEE RIVER BETWEEN MARKERS 24&25
03050112-04	
06A-03	NORTH SANTEE RIVER AT BEACH CREEK
06A-04	NORTH SANTEE INLET
06A-04A	NORTH SANTEE BAY – E. OF CANE ISLAND
06A-04B	NORTH SANTEE RIVER - SW OF CANE ISLAND
06A-04C	NORTH SANTEE RIVER NEAR NORTHWESTERN TIP OF CANE ISLAND
06A-05	NORTH SANTEE RIVER AND MOSQUITO CREEK
06A-11	AIWW AT MINUM CREEK

For further details concerning sampling frequency and parameters sampled, please visit our website at www.scdhec.gov/eqc/admin/html/eqcpubs.html#wqreports for the current State of S.C. Monitoring Strategy.

STATION				DO	DO	DO	MEAN	TRENDS (94-2008)					
NUMBER	TYPE	WATERBODY NAME	CLASS	N	EXC.	%	EXC.	DO	N	MAG	BOD	N	MAG
03050111-01													
SC-004	SC	SANTEE RVR	FW	52	0	0							
RS-04389	RS04	WARLEY CK	FW	11	0	0							
SC-006	SC	WARLEY CR	FW	10	1	10	4.8						
ST-034/ SC-008/ RL-01002	INT	LAKE MARION	FW	54	0	0							
SC-056	SC	RUNOFF	FW	52	0	0							
SC-058	SC	UNNAMED TRIB	FW	49	1	2	3.4						
SC-057	SC	RUNOFF	FW	54	1	1.9	4.9						
SC-005	SC	LAKE MARION	FW	42	6	14	4.177						
RS-05585	RS05	DUCKFORD BRANCH	FW	12	0	0							
SC-009	SC	SPRING GROVE CK	FW	10	1	10	4.62						
SC-039	SC	LAKE MARION	FW	40	1	2.5	3.3						
C-058	CS	LAKE INSPIRATION	FW	12	0	0		I	63	0.134	NS	59	-0.014
C-063	CS	HALFWAY SWAMP CK	FW	12	0	0		D	64	-0.078	NS	62	-0.067
C-015/ SC-007	INT	HALFWAY SWAMP CK	FW	57	0	0							
CW-241	CS	HALFWAY SWAMP CK	FW	12	0	0		NS	32	-0.065			
SC-038	SC	LAKE MARION	FW	41	1	2.4	4.4						
RL-06422	RL06	LAKE MARION	FW										
RL-04388/ SC-044/ RL-12066/ RL-13078	RL04	LAKE MARION	FW	40	0	0							
SC-010	SC	LAKE MARION	FW	46	0	0							
SC-011	SC	BIG POPLAR CR	FW	10	3	30	3.067						
RL-06426	RL06	LAKE MARION	FW										
CW-244/ SC-013	INT	JACKS CK	FW	70	4	5.7	4.593	NS	101	0.005	I	88	0.1
CW-243/ SC-047	INT	BIG BRANCH	FW	59	11	19	2.367	NS	93	0.098	I	79	0.1
RL-02306/ SC-012	RL02	LAKE MARION	FW	48	0	0							
SC-042	SC	LAKE MARION	FW	48	0	0							
SC-045	SC	CHAPEL BRANCH CK	FW	49	3	6.1	4.547						
SC-014	SC	LAKE MARION	FW	46	0	0							
ST-025/ SC-015	CS	LAKE MARION	FW	50	1	2	0.3	D	82	-0.435	D	82	-0.333
RL-04382	RL04	LAKE MARION	FW										
RL-05464	RL05	LAKE MARION	FW										

STATION NUMBER	TYPE	WATERBODY NAME	CLASS	pH N	pH EXC.	pH %	MEAN EXC.	TRENDS (94-2008) PH	TRENDS (94-2008) N	TRENDS (94-2008) MAG	TURB N	TURB EXC.	TURB %	MEAN EXC.	TRENDS (94-2008) TURB	TRENDS (94-2008) N	TRENDS (94-2008) MAG
03050111-01																	
SC-004	SC	SANTEE RVR	FW	82	0	0					54	3	5.556	109.2			
RS-04389	RS04	WARLEY CK	FW	11	0	0					12	0	0				
SC-006	SC	WARLEY CR	FW	16	1	6.3	5.6				10	0	0				
ST-034/ SC-008/ RL-01002	INT	LAKE MARION	FW	84	1	1.2	5.74				54	5	9.259	78.53			
SC-056	SC	RUNOFF	FW	80	46	58	5.367										
SC-058	SC	UNNAMED TRIB	FW	74	10	14	4.778				50	0	0				
SC-057	SC	RUNOFF	FW	84	0	0											
SC-005	SC	LAKE MARION	FW	72	0	0					43	0	0				
RS-05585	RS05	DUCKFORD BRANCH	FW	12	9	75	6.079				12	0	0				
SC-009	SC	SPRING GROVE CK	FW	16	0	0					10	0	0				
SC-039	SC	LAKE MARION	FW	69	0	0					43	1	2.326	30.5			
C-058	CS	LAKE INSPIRATION	FW	12	3	25	9.083	I	63	0.076	12	11	91.67	42.091	I	61	3.392
C-063	CS	HALFWAY SWAMP CK	FW	12	0	0		I	64	0.04	12	0	0		NS	64	0.245
C-015/ SC-007	INT	HALFWAY SWAMP CK	FW	88	1	1.1	8.89				56	2	3.571	278.5			
CW-241	CS	HALFWAY SWAMP CK	FW	12	0	0		I	32	0.064	12	0	0				
SC-038	SC	LAKE MARION	FW	69	0	0					42	2	4.762	37.3			
RL-06422	RL06	LAKE MARION	FW								8	1	12.5	26.4			
RL-04388/ SC-044/ RL-12066/ RL-13078	RL04	LAKE MARION	FW	71	1	1.4	8.65				42	2	4.762	40.25			
SC-010	SC	LAKE MARION	FW	76	0	0					46	4	8.696	36.537			
SC-011	SC	BIG POPLAR CR	FW	16	0	0					10	0	0				
RL-06426	RL06	LAKE MARION	FW								7	1	14.29	26.3			
CW-244/ SC-013	INT	JACKS CK	FW	75	0	0		NS	101	0.009	69	0	0		D	102	-0.2
CW-243/ SC-047	INT	BIG BRANCH	FW	59	3	5.1	5.403	I	93	0.024	59	1	1.695	54	NS	94	-0.2
RL-02306/ SC-012	RL02	LAKE MARION	FW	78	0	0					48	1	2.083	35			
SC-042	SC	LAKE MARION	FW	79	1	1.3	8.79				46	1	2.174	60			
SC-045	SC	CHAPEL BRANCH CK	FW	76	2	2.6	8.67				51	0	0				
SC-014	SC	LAKE MARION	FW	76	16	21	8.733				44	0	0				
ST-025/ SC-015	CS	LAKE MARION	FW	81	0	0		D	82	-0.061	53	2	3.774	35	NS	82	0.158
RL-04382	RL04	LAKE MARION	FW								11	1	9.091	53.8			
RL-05464	RL05	LAKE MARION	FW								11	0	0				

STATION NUMBER	TYPE	WATERBODY NAME	CLASS	TP N	TP EXC.	TP %	MEAN EXC.	TRENDS (94-2008) TP	TRENDS (94-2008) N	TRENDS (94-2008) MAG	TN N	TN EXC.	TN %	MEAN EXC.	TRENDS (94-2008) TN	TRENDS (94-2008) N	TRENDS (94-2008) MAG
03050111-01																	
SC-004	SC	SANTEE RVR	FW								23	1	4.3	2.97			
RS-04389	RS04	WARLEY CK	FW														
SC-006	SC	WARLEY CR	FW								7	6	86	1.982			
ST-034/ SC-008/ RL-01002	INT	LAKE MARION	FW	91	56	62	0.099	NS	62	0.002	65	1	1.5	3.37	NS	65	0.008
SC-056	SC	RUNOFF	FW								23	12	52	2.191			
SC-058	SC	UNNAMED TRIB	FW								22	3	14	14.767			
SC-057	SC	RUNOFF	FW								24	4	17	1.648			
SC-005	SC	LAKE MARION	FW	33	21	64	0.1				15	0	0				
RS-05585	RS05	DUCKFORD BRANCH	FW														
SC-009	SC	SPRING GROVE CK	FW								7	2	29	1.58			
SC-039	SC	LAKE MARION	FW	32	22	69	0.147				16	0	0				
C-058	CS	LAKE INSPIRATION	FW	12	5	42	0.088	I	50	0.01	9	0	0				
C-063	CS	HALFWAY SWAMP CK	FW					NS	52	-0.002							
C-015/ SC-007	INT	HALFWAY SWAMP CK	FW					NS	66	0	31	0	0		D	61	-0.03
CW-241	CS	HALFWAY SWAMP CK	FW					D	31	-0.004							
SC-038	SC	LAKE MARION	FW	34	22	65	0.107				16	0	0				
RL-06422	RL06	LAKE MARION	FW	11	3	27	0.104				8	0	0				
RL-04388/ SC-044/ RL-12066/ RL-13078	RL04	LAKE MARION	FW	43	23	53	1.373				25	0	0				
SC-010	SC	LAKE MARION	FW	36	20	56	0.097				20	0	0				
SC-011	SC	BIG POPLAR CR	FW								7	2	29	2.335			
RL-06426	RL06	LAKE MARION	FW	10	1	10	0.11				6	0	0				
CW-244/ SC-013	INT	JACKS CK	FW					I	92	0.001	7	1	14	1.53	NS	79	-0.005
CW-243/ SC-047	INT	BIG BRANCH	FW					NS	85	0					NS	52	-0.009
RL-02306/ SC-012	RL02	LAKE MARION	FW	38	11	29	0.106				22	0	0				
SC-042	SC	LAKE MARION	FW	36	12	33	0.096				23	1	4.3	2.59			
SC-045	SC	CHAPEL BRANCH CK	FW								28	1	3.6	1.79			
SC-014	SC	LAKE MARION	FW	38	22	58	0.114				24	5	21	2.424			
ST-025/ SC-015	CS	LAKE MARION	FW	66	16	24	0.103	D	96	-0.003	48	2	4.2	2.99	D	117	-0.021
RL-04382	RL04	LAKE MARION	FW	19	4	21	0.091				17	1	5.9	3.88			
RL-05464	RL05	LAKE MARION	FW	22	5	23	0.104				11	0	0				

STATION NUMBER	TYPE	WATERBODY NAME	CLASS	CHL N	CHL EXC.	CHL %	MEAN EXC.	TRENDS (94-2008) TSS	TRENDS (94-2008) N	TRENDS (94-2008) MAG
03050111-01										
SC-004	SC	SANTEE RVR	FW							
RS-04389	RS04	WARLEY CK	FW							
SC-006	SC	WARLEY CR	FW							
ST-034/ SC-008/ RL-01002	INT	LAKE MARION	FW							
SC-056	SC	RUNOFF	FW							
SC-058	SC	UNNAMED TRIB	FW							
SC-057	SC	RUNOFF	FW							
SC-005	SC	LAKE MARION	FW							
RS-05585	RS05	DUCKFORD BRANCH	FW							
SC-009	SC	SPRING GROVE CK	FW							
SC-039	SC	LAKE MARION	FW							
C-058	CS	LAKE INSPIRATION	FW	5	3	60	120.633			
C-063	CS	HALFWAY SWAMP CK	FW							
C-015/ SC-007	INT	HALFWAY SWAMP CK	FW							
CW-241	CS	HALFWAY SWAMP CK	FW							
SC-038	SC	LAKE MARION	FW							
RL-06422	RL06	LAKE MARION	FW							
RL-04388/ SC-044/ RL-12066/ RL-13078	RL04	LAKE MARION	FW							
SC-010	SC	LAKE MARION	FW							
SC-011	SC	BIG POPLAR CR	FW							
RL-06426	RL06	LAKE MARION	FW							
CW-244/ SC-013	INT	JACKS CK	FW							
CW-243/ SC-047	INT	BIG BRANCH	FW							
RL-02306/ SC-012	RL02	LAKE MARION	FW							
SC-042	SC	LAKE MARION	FW							
SC-045	SC	CHAPEL BRANCH CK	FW							
SC-014	SC	LAKE MARION	FW							
ST-025/ SC-015	CS	LAKE MARION	FW							
RL-04382	RL04	LAKE MARION	FW							
RL-05464	RL05	LAKE MARION	FW							

STATION NUMBER	TYPE	WATERBODY NAME	CLASS		GEO MEAN	BACT N	BACT EXC.	BACT %	MEAN EXC.	TRENDS (94-2008) BACT	N	MAG
03050111-01												
SC-004	SC	SANTEE RVR	FW		31	48	2	4.167	480			
RS-04389	RS04	WARLEY CK	FW		538	12	7	58.33	1430			
SC-006	SC	WARLEY CR	FW		176	10	1	10	415			
ST-034/ SC-008/ RL-01002	INT	LAKE MARION	FW		19	50	1	2	600			
SC-056	SC	RUNOFF	FW									
SC-058	SC	UNNAMED TRIB	FW									
SC-057	SC	RUNOFF	FW									
SC-005	SC	LAKE MARION	FW		4	38	0	0				
RS-05585	RS05	DUCKFORD BRANCH	FW		355	12	5	41.67	1248			
SC-009	SC	SPRING GROVE CK	FW		249	9	2	22.22	667			
SC-039	SC	LAKE MARION	FW		3	38	0	0				
C-058	CS	LAKE INSPIRATION	FW		21	12	0	0		NS	58	0
C-063	CS	HALFWAY SWAMP CK	FW		349	12	4	33.33	705	NS	64	10
C-015/ SC-007	INT	HALFWAY SWAMP CK	FW		186	51	8	15.69	611.25			
CW-241	CS	HALFWAY SWAMP CK	FW		159	12	1	8.333	440	NS	31	-9.444
SC-038	SC	LAKE MARION	FW		8	37	0	0				
RL-06422	RL06	LAKE MARION	FW		4	7	0	0				
RL-04388/ SC-044/ RL-12066/ RL-13078	RL04	LAKE MARION	FW		4	38	0	0				
SC-010	SC	LAKE MARION	FW		6	39	0	0				
SC-011	SC	BIG POPLAR CR	FW		16	9	0	0				
RL-06426	RL06	LAKE MARION	FW		2	6	0	0				
CW-244/ SC-013	INT	JACKS CK	FW		116	68	3	4.412	1953.333	NS	103	-3.417
CW-243/ SC-047	INT	BIG BRANCH	FW		449	59	36	61.02	1337.778	I	95	21.625
RL-02306/ SC-012	RL02	LAKE MARION	FW		3	42	0	0				
SC-042	SC	LAKE MARION	FW		2	42	0	0				
SC-045	SC	CHAPEL BRANCH CK	FW		10	46	1	2.174	600			
SC-014	SC	LAKE MARION	FW		9	39	0	0				
ST-025/ SC-015	CS	LAKE MARION	FW		3	46	0	0		D	81	-3
RL-04382	RL04	LAKE MARION	FW		2	11	0	0				
RL-05464	RL05	LAKE MARION	FW		1	9	0	0				

STATION NUMBER	TYPE	WATERBODY NAME	CLASS	CD N	CD EXC.	CD %	MEAN EXC.	CR N	CR EXC.	CR %	MEAN EXC.	CU N	CU EXC.	CU %	MEAN EXC.
03050111-01															
SC-004	SC	SANTEE RVR	FW	28	0	0		29	0	0		29	0	0	
RS-04389	RS04	WARLEY CK	FW												
SC-006	SC	WARLEY CR	FW	6	0	0		6	0	0		6	0	0	
ST-034/ SC-008/ RL-01002	INT	LAKE MARION	FW	38	0	0		39	0	0		39	0	0	
SC-056	SC	RUNOFF	FW	28	0	0		29	0	0		29	0	0	
SC-058	SC	UNNAMED TRIB	FW	25	0	0		26	0	0		26	0	0	
SC-057	SC	RUNOFF	FW	28	0	0		29	0	0		29	0	0	
SC-005	SC	LAKE MARION	FW	17	0	0		17	0	0		16	0	0	
RS-05585	RS05	DUCKFORD BRANCH	FW												
SC-009	SC	SPRING GROVE CK	FW	6	0	0		6	0	0		6	0	0	
SC-039	SC	LAKE MARION	FW	17	0	0		17	0	0		16	0	0	
C-058	CS	LAKE INSPIRATION	FW	4	0	0		4	0	0		4	0	0	
C-063	CS	HALFWAY SWAMP CK	FW	4	0	0		4	0	0		4	0	0	
C-015/ SC-007	INT	HALFWAY SWAMP CK	FW	43	0	0		44	0	0		44	1	2.3	11
CW-241	CS	HALFWAY SWAMP CK	FW	4	0	0		4	0	0		4	0	0	
SC-038	SC	LAKE MARION	FW	16	0	0		16	0	0		15	1	6.7	11
RL-06422	RL06	LAKE MARION	FW	10	0	0		10	0	0		10	1	10	11
RL-04388/ SC-044/ RL-12066/ RL-13078	RL04	LAKE MARION	FW	16	0	0		16	0	0		15	1	6.7	11
SC-010	SC	LAKE MARION	FW	19	0	0		20	0	0		19	0	0	
SC-011	SC	BIG POPLAR CR	FW	6	0	0		6	0	0		6	0	0	
RL-06426	RL06	LAKE MARION	FW	10	0	0		10	0	0		10	0	0	
CW-244/ SC-013	INT	JACKS CK	FW	17	0	0		17	0	0		17	0	0	
CW-243/ SC-047	INT	BIG BRANCH	FW	10	0	0		10	0	0		10	0	0	
RL-02306/ SC-012	RL02	LAKE MARION	FW	21	0	0		22	0	0		21	0	0	
SC-042	SC	LAKE MARION	FW	20	0	0		21	0	0		21	0	0	
SC-045	SC	CHAPEL BRANCH CK	FW	26	0	0		27	0	0		27	0	0	
SC-014	SC	LAKE MARION	FW	22	0	0		22	0	0		21	0	0	
ST-025/ SC-015	CS	LAKE MARION	FW	33	0	0		33	0	0		32	0	0	
RL-04382	RL04	LAKE MARION	FW												
RL-05464	RL05	LAKE MARION	FW												

STATION NUMBER	TYPE	WATERBODY NAME	CLASS	PB N	PB EXC.	PB %	MEAN EXC.	HG N	HG EXC.	HG %	MEAN EXC.	NI N	NI EXC.	NI %	MEAN EXC.	ZN N	ZN EXC.	ZN %	MEAN EXC.
03050111-01																			
SC-004	SC	SANTEE RVR	FW	29	0	0						29	0	0		26	0	0	
RS-04389	RS04	WARLEY CK	FW																
SC-006	SC	WARLEY CR	FW	6	0	0						6	0	0		6	0	0	
ST-034/ SC-008/ RL-01002	INT	LAKE MARION	FW	39	0	0		10	0	0		39	0	0		36	0	0	
SC-056	SC	RUNOFF	FW	29	0	0						28	5	18	28.2	26	0	0	
SC-058	SC	UNNAMED TRIB	FW	26	0	0						25	3	12	42.67	23	0	0	
SC-057	SC	RUNOFF	FW	29	0	0						28	1	4	24	26	0	0	
SC-005	SC	LAKE MARION	FW	17	0	0						17	0	0		14	0	0	
RS-05585	RS05	DUCKFORD BRANCH	FW																
SC-009	SC	SPRING GROVE CK	FW	6	0	0						6	0	0		6	0	0	
SC-039	SC	LAKE MARION	FW	17	0	0						17	0	0		14	0	0	
C-058	CS	LAKE INSPIRATION	FW	4	0	0		4	0	0		4	0	0		4	0	0	
C-063	CS	HALFWAY SWAMP CK	FW	4	0	0		4	0	0		4	0	0		4	0	0	
C-015/ SC-007	INT	HALFWAY SWAMP CK	FW	44	0	0		12	0	0		43	0	0		40	1	2.5	162
CW-241	CS	HALFWAY SWAMP CK	FW	4	0	0		4	0	0		4	0	0		4	0	0	
SC-038	SC	LAKE MARION	FW	16	0	0						16	0	0		13	0	0	
RL-06422	RL06	LAKE MARION	FW	10	0	0		3	0	0		10	0	0		10	0	0	
RL-04388/ SC-044/ RL-12066/ RL-13078	RL04	LAKE MARION	FW	16	0	0						16	0	0		13	0	0	
SC-010	SC	LAKE MARION	FW	20	0	0						20	0	0		17	0	0	
SC-011	SC	BIG POPLAR CR	FW	6	0	0						6	0	0		6	0	0	
RL-06426	RL06	LAKE MARION	FW	10	0	0		3	0	0		10	0	0		10	0	0	
CW-244/ SC-013	INT	JACKS CK	FW	17	0	0		11	0	0		17	0	0		17	0	0	
CW-243/ SC-047	INT	BIG BRANCH	FW	10	0	0		10	0	0		10	0	0		10	0	0	
RL-02306/ SC-012	RL02	LAKE MARION	FW	22	0	0						21	0	0		19	0	0	
SC-042	SC	LAKE MARION	FW	21	0	0						20	0	0		19	0	0	
SC-045	SC	CHAPEL BRANCH CK	FW	27	0	0						26	0	0		24	0	0	
SC-014	SC	LAKE MARION	FW	22	0	0						21	0	0		20	0	0	
ST-025/ SC-015	CS	LAKE MARION	FW	33	0	0		4	0	0		31	0	0		31	2	6.5	144
RL-04382	RL04	LAKE MARION	FW																
RL-05464	RL05	LAKE MARION	FW																

STATION				DO	DO	DO	MEAN	TRENDS (94-2008)					
NUMBER	TYPE	WATERBODY NAME	CLASS	N	EXC.	%	EXC.	DO	N	MAG	BOD	N	MAG
03050111-01 (Cont.)													
SC-040	SC	LAKE MARION	FW	49	0	0							
SC-041	SC	LAKE MARION	FW	27	0	0							
RL-06424	RL06	LAKE MARION	FW										
RL-04386	RL04	LAKE MARION	FW										
RL-02308/ SC-016/ RL-09074 /RL-12054	RL02	LAKE MARION	FW	49	0	0							
ST-018/ SC-018	INT	TAWCAW CK	FW	68	17	25	3.142	NS	125	-0.005	I	114	0.075
SC-017	SC	LAKE MARION	FW	54	0	0							
SC-036	SC	LAKE MARION	FW	52	0	0							
RL-05406	RL05	LAKE MARION	FW										
SC-021	SC	LAKE MARION	FW	47	0	0							
RL-04384	RL04	LAKE MARION	FW										
RL-08054	RL08	LAKE MARION	FW										
RL-06428/ RL-08038/ RL-09102	RL06	LAKE MARION	FW										
RL-05402	RL05	LAKE MARION	FW										
CL-042/ SC-022	INT	LAKE MARION	FW	50	0	0							
ST-035/ SC-020	INT	POTATO CK	FW	70	16	23	4.549	I	93	0.233	I	80	0
SC-019	SC	LAKE MARION	FW	52	0	0							
ST-036/ SC-023A	INT	LAKE MARION	FW	52	0	0							
ST-024	I*	LAKE MARION						NS	81	0.029	NS	81	-0.071
RL-01011/ SC-035	RL01	LAKE MARION	FW	54	0	0							
03050112-01													
SC-024	SC	SANTEE RVR	FW	58	1	1.7	4.89						
RS-05399	RS05	BENNETTS BRANCH	FW	12	1	8.3	4.75						
ST-016	INT	SANTEE RVR	FW	57	5	8.8	4.09	NS	165	-0.026	I	153	0.042
SC-037	SC	REDIVERSION CANAL	FW	46	0	0							
ST-031/ SC-037A	INT	REDIVERSION CANAL	FW	57	0	0		NS	166	-0.003	I	154	0.017

STATION				pH	pH	pH	MEAN	TRENDS (94-2008)			TURB	TURB	TURB	MEAN	TRENDS (94-2008)		
NUMBER	TYPE	WATERBODY NAME	CLASS	N	EXC.	%	EXC.	PH	N	MAG	N	EXC.	%	EXC.	TURB	N	MAG
03050111-01 (Cont.)																	
SC-040	SC	LAKE MARION	FW	79	0	0					49	0	0				
SC-041	SC	LAKE MARION	FW	51	1	2	8.86				25	1	4	35			
RL-06424	RL06	LAKE MARION	FW								12	1	8.333	25.7			
RL-04386	RL04	LAKE MARION	FW								11	0	0				
RL-02308/ SC-016/ RL-09074 /RL-12054	RL02	LAKE MARION	FW	79	2	2.5	8.585				47	0	0				
ST-018/ SC-018	INT	TAWCAW CK	FW	73	0	0		NS	126	0.013	67	0	0		NS	128	-0.1
SC-017	SC	LAKE MARION	FW	83	1	1.2	8.54				52	1	1.923	40			
SC-036	SC	LAKE MARION	FW	80	2	2.5	8.68				49	1	2.041	35			
RL-05406	RL05	LAKE MARION	FW								10	0	0				
SC-021	SC	LAKE MARION	FW	79	1	1.3	8.86				46	1	2.174	26.1			
RL-04384	RL04	LAKE MARION	FW								11	0	0				
RL-08054	RL08	LAKE MARION	FW								7	0	0				
RL-06428/ RL-08038/ RL-09102	RL06	LAKE MARION	FW								12	0	0				
RL-05402	RL05	LAKE MARION	FW								11	0	0				
CL-042/ SC-022	INT	LAKE MARION	FW	80	1	1.3	8.61				47	1	2.128	30			
ST-035/ SC-020	INT	POTATO CK	FW	75	0	0		I	93	0.025	69	0	0		NS	95	0
SC-019	SC	LAKE MARION	FW	81	6	7.4	9.053				52	1	1.923	35			
ST-036/ SC-023A	INT	LAKE MARION	FW	79	9	11	8.37				51	1	1.961	35			
ST-024	I*	LAKE MARION						NS	80	0.003					NS	81	-0.037
RL-01011/ SC-035	RL01	LAKE MARION	FW	81	8	9.9	8.717				51	1	1.961	35			
03050112-01																	
SC-024	SC	SANTEE RVR	FW	88	0	0					56	0	0				
RS-05399	RS05	BENNETTS BRANCH	FW	12	0	0					12	0	0				
ST-016	INT	SANTEE RVR	FW	58	1	1.7	5.85	I	166	0.02	59	0	0		NS	167	-0.075
SC-037	SC	REDIVERSION CANAL	FW	57	0	0					35	0	0				
ST-031/ SC-037A	INT	REDIVERSION CANAL	FW	58	1	1.7	8.84	NS	166	0.004	59	0	0		NS	167	0.025

STATION NUMBER	TYPE	WATERBODY NAME	CLASS	TP N	TP EXC.	TP %	MEAN EXC.	TRENDS (94-2008) TP	TRENDS (94-2008) N	TRENDS (94-2008) MAG	TN N	TN EXC.	TN %	MEAN EXC.	TRENDS (94-2008) TN	TRENDS (94-2008) N	TRENDS (94-2008) MAG
03050111-01 (Cont.)																	
SC-040	SC	LAKE MARION	FW	42	14	33	0.165				27	1	3.7	3.54			
SC-041	SC	LAKE MARION	FW	19	6	32	0.122				9	1	11	1.63			
RL-06424	RL06	LAKE MARION	FW	16	2	13	0.088				14	0	0				
RL-04386	RL04	LAKE MARION	FW	20	0	0					18	2	11	2.485			
RL-02308/ SC-016/ RL-09074 /RL-12054	RL02	LAKE MARION	FW	39	10	26	0.097				26	1	3.8	3.11			
ST-018/ SC-018	INT	TAWCAW CK	FW					I	105	0.004	7	2	29	1.68	NS	73	-0.026
SC-017	SC	LAKE MARION	FW	43	11	26	0.144				30	0	0				
SC-036	SC	LAKE MARION	FW	41	12	29	1.355				29	1	3.4	20.49			
RL-05406	RL05	LAKE MARION	FW	21	3	14	0.103				14	0	0				
SC-021	SC	LAKE MARION	FW	38	6	16	0.115				25	1	4	2.59			
RL-04384	RL04	LAKE MARION	FW	20	4	20	0.833				18	3	17	4.803			
RL-08054	RL08	LAKE MARION	FW	14	2	14	0.11				11	0	0				
RL-06428/ RL-08038/ RL-09102	RL06	LAKE MARION	FW	16	1	6	0.112				14	0	0				
RL-05402	RL05	LAKE MARION	FW	22	4	18	0.08				12	0	0				
CL-042/ SC-022	INT	LAKE MARION	FW	86	8	9	0.138	NS	63	0	67	2	3	2.22	D	47	-0.056
ST-035/ SC-020	INT	POTATO CK	FW					NS	84	0	7	0	0		NS	56	-0.03
SC-019	SC	LAKE MARION	FW	43	8	19	0.12				28	1	3.6	2.62			
ST-036/ SC-023A	INT	LAKE MARION	FW	94	7	7	0.107	NS	68	0	76	1	1.3	3.26	NS	37	-0.027
ST-024	I*	LAKE MARION						D	55	-0.005					D	36	-0.057
RL-01011/ SC-035	RL01	LAKE MARION	FW	42	12	29	0.102				31	2	6.5	1.98			
03050112-01																	
SC-024	SC	SANTEE RVR	FW								30	0	0				
RS-05399	RS05	BENNETTS BRANCH	FW														
ST-016	INT	SANTEE RVR	FW					D	138	-0.001					D	141	-0.01
SC-037	SC	REDIVERSION CANAL	FW								20	0	0				
ST-031/ SC-037A	INT	REDIVERSION CANAL	FW					NS	132	0					D	98	-0.017

STATION NUMBER	TYPE	WATERBODY NAME	CLASS	CHL N	CHL EXC.	CHL %	MEAN EXC.	TRENDS (94-2008) TSS	TRENDS (94-2008) N	TRENDS (94-2008) MAG
03050111-01 (Cont.)										
SC-040	SC	LAKE MARION	FW							
SC-041	SC	LAKE MARION	FW							
RL-06424	RL06	LAKE MARION	FW							
RL-04386	RL04	LAKE MARION	FW							
RL-02308/ SC-016/ RL-09074 /RL-12054	RL02	LAKE MARION	FW							
ST-018/ SC-018	INT	TAWCAW CK	FW							
SC-017	SC	LAKE MARION	FW							
SC-036	SC	LAKE MARION	FW							
RL-05406	RL05	LAKE MARION	FW							
SC-021	SC	LAKE MARION	FW							
RL-04384	RL04	LAKE MARION	FW							
RL-08054	RL08	LAKE MARION	FW							
RL-06428/ RL-08038/ RL-09102	RL06	LAKE MARION	FW							
RL-05402	RL05	LAKE MARION	FW							
CL-042/ SC-022	INT	LAKE MARION	FW							
ST-035/ SC-020	INT	POTATO CK	FW							
SC-019	SC	LAKE MARION	FW							
ST-036/ SC-023A	INT	LAKE MARION	FW							
ST-024	I*	LAKE MARION								
RL-01011/ SC-035	RL01	LAKE MARION	FW							
03050112-01										
SC-024	SC	SANTEE RVR	FW							
RS-05399	RS05	BENNETTS BRANCH	FW							
ST-016	INT	SANTEE RVR	FW							
SC-037	SC	REDIVERSION CANAL	FW							
ST-031/ SC-037A	INT	REDIVERSION CANAL	FW							

STATION NUMBER	TYPE	WATERBODY NAME	CLASS	GEO MEAN	BACT N	BACT EXC.	BACT %	MEAN EXC.	TRENDS (94-2008) BACT	N	MAG
03050111-01 (Cont.)											
SC-040	SC	LAKE MARION	FW	2	43	0	0				
SC-041	SC	LAKE MARION	FW	1	25	0	0				
RL-06424	RL06	LAKE MARION	FW	3	10	0	0				
RL-04386	RL04	LAKE MARION	FW	2	11	0	0				
RL-02308/ SC-016/ RL-09074 /RL-12054	RL02	LAKE MARION	FW	1	42	0	0				
ST-018/ SC-018	INT	TAWCAW CK	FW	260	66	17	25.76	2769.412	NS	128	-4.833
SC-017	SC	LAKE MARION	FW	4	47	0	0				
SC-036	SC	LAKE MARION	FW	1	45	0	0				
RL-05406	RL05	LAKE MARION	FW	1	10	0	0				
SC-021	SC	LAKE MARION	FW	1	41	0	0				
RL-04384	RL04	LAKE MARION	FW	1	10	0	0				
RL-08054	RL08	LAKE MARION	FW	2	6	0	0				
RL-06428/ RL-08038/ RL-09102	RL06	LAKE MARION	FW	3	10	0	0				
RL-05402	RL05	LAKE MARION	FW	1	11	0	0				
CL-042/ SC-022	INT	LAKE MARION	FW	1	42	0	0				
ST-035/ SC-020	INT	POTATO CK	FW	173	69	9	13.04	1702.222	D	95	-12
SC-019	SC	LAKE MARION	FW	2	47	0	0				
ST-036/ SC-023A	INT	LAKE MARION	FW	3	46	0	0				
ST-024	I*	LAKE MARION							D	71	-0.333
RL-01011/ SC-035	RL01	LAKE MARION	FW	2	46	0	0				
03050112-01											
SC-024	SC	SANTEE RVR	FW	13	49	1	2.041	570			
RS-05399	RS05	BENNETTS BRANCH	FW	440	12	6	50	1183.333			
ST-016	INT	SANTEE RVR	FW	26	58	0	0		NS	165	-0.5
SC-037	SC	REDIVERSION CANAL	FW	4	29	0	0				
ST-031/ SC-037A	INT	REDIVERSION CANAL	FW	3	59	0	0		D	129	0

STATION NUMBER	TYPE	WATERBODY NAME	CLASS	CD N	CD EXC.	CD %	MEAN EXC.	CR N	CR EXC.	CR %	MEAN EXC.	CU N	CU EXC.	CU %	MEAN EXC.
03050111-01 (Cont.)															
SC-040	SC	LAKE MARION	FW	25	0	0		25	0	0		24	0	0	
SC-041	SC	LAKE MARION	FW	4	0	0		4	0	0		4	0	0	
RL-06424	RL06	LAKE MARION	FW	14	0	0		14	0	0		14	0	0	
RL-04386	RL04	LAKE MARION	FW												
RL-02308/ SC-016/ RL-09074 /RL-12054	RL02	LAKE MARION	FW	23	0	0		23	0	0		22	1	4.5	57
ST-018/ SC-018	INT	TAWCAW CK	FW	16	0	0		16	0	0		16	0	0	
SC-017	SC	LAKE MARION	FW	26	0	0		27	0	0		26	0	0	
SC-036	SC	LAKE MARION	FW	24	0	0		25	1	4	58	24	0	0	
RL-05406	RL05	LAKE MARION	FW												
SC-021	SC	LAKE MARION	FW	22	0	0		22	0	0		21	0	0	
RL-04384	RL04	LAKE MARION	FW												
RL-08054	RL08	LAKE MARION	FW	9	0	0		9	0	0		8	0	0	
RL-06428/ RL-08038/ RL-09102	RL06	LAKE MARION	FW	13	0	0		13	0	0		13	0	0	
RL-05402	RL05	LAKE MARION	FW												
CL-042/ SC-022	INT	LAKE MARION	FW	34	1	2.9	65	34	0	0		33	0	0	
ST-035/ SC-020	INT	POTATO CK	FW	17	0	0		17	0	0		17	0	0	
SC-019	SC	LAKE MARION	FW	26	0	0		27	0	0		26	1	3.8	36
ST-036/ SC-023A	INT	LAKE MARION	FW	35	0	0		36	0	0		35	0	0	
ST-024	I*	LAKE MARION													
RL-01011/ SC-035	RL01	LAKE MARION	FW	25	0	0		26	0	0		25	0	0	
03050112-01															
SC-024	SC	SANTEE RVR	FW	31	0	0		32	0	0		32	1	3.1	17
RS-05399	RS05	BENNETTS BRANCH	FW												
ST-016	INT	SANTEE RVR	FW	11	0	0		11	0	0		11	0	0	
SC-037	SC	REDIVERSION CANAL	FW	31	0	0		32	0	0		32	0	0	
ST-031/ SC-037A	INT	REDIVERSION CANAL	FW	11	0	0		11	0	0		11	0	0	

STATION NUMBER	TYPE	WATERBODY NAME	CLASS	PB N	PB EXC.	PB %	MEAN EXC.	HG N	HG EXC.	HG %	MEAN EXC.	NI N	NI EXC.	NI %	MEAN EXC.	ZN N	ZN EXC.	ZN %	MEAN EXC.
03050111-01 (Cont.)																			
SC-040	SC	LAKE MARION	FW	25	0	0						25	0	0		23	0	0	
SC-041	SC	LAKE MARION	FW	4	0	0						4	0	0		4	0	0	
RL-06424	RL06	LAKE MARION	FW	14	0	0		4	0	0		14	0	0		14	0	0	
RL-04386	RL04	LAKE MARION	FW																
RL-02308/ SC-016/ RL-09074 /RL-12054	RL02	LAKE MARION	FW	23	0	0						23	0	0		21	1	4.8	135
ST-018/ SC-018	INT	TAWCAW CK	FW	16	0	0		10	0	0		16	0	0		16	0	0	
SC-017	SC	LAKE MARION	FW	27	0	0						27	0	0		25	0	0	
SC-036	SC	LAKE MARION	FW	25	0	0						25	1	4	25	24	0	0	
RL-05406	RL05	LAKE MARION	FW																
SC-021	SC	LAKE MARION	FW	22	0	0						22	0	0		20	0	0	
RL-04384	RL04	LAKE MARION	FW																
RL-08054	RL08	LAKE MARION	FW	9	0	0		3	0	0		9	0	0		8	0	0	
RL-06428/ RL-08038/ RL-09102	RL06	LAKE MARION	FW	13	0	0		3	0	0		13	0	0		13	0	0	
RL-05402	RL05	LAKE MARION	FW																
CL-042/ SC-022	INT	LAKE MARION	FW	34	0	0		9	0	0		34	0	0		32	1	3.1	94
ST-035/ SC-020	INT	POTATO CK	FW	17	0	0		11	0	0		17	0	0		17	0	0	
SC-019	SC	LAKE MARION	FW	27	0	0						27	0	0		25	0	0	
ST-036/ SC-023A	INT	LAKE MARION	FW	36	0	0		10	0	0		36	0	0		34	0	0	
ST-024	I*	LAKE MARION																	
RL-01011/ SC-035	RL01	LAKE MARION	FW	26	0	0						26	0	0		25	0	0	
03050112-01																			
SC-024	SC	SANTEE RVR	FW	32	0	0						31	0	0		29	0	0	
RS-05399	RS05	BENNETTS BRANCH	FW																
ST-016	INT	SANTEE RVR	FW	11	0	0		11	0	0		11	0	0		11	0	0	
SC-037	SC	REDIVERSION CANAL	FW	32	0	0						31	0	0		28	0	0	
ST-031/ SC-037A	INT	REDIVERSION CANAL	FW	11	0	0		11	0	0		11	0	0		11	0	0	

STATION					DO	DO	DO	MEAN	TRENDS (94-2008)					
NUMBER	TYPE	WATERBODY NAME	CLASS		N	EXC.	%	EXC.	DO	N	MAG	BOD	N	MAG
03050112-02														
ST-001	INT	SANTEE RVR	FW		57	4	7	3.892	I	170	0.066	I	156	0.039
03050112-03														
CSTL-112	INT	WAMBAW CK	FW		60	20	33	3.973	D	96	-0.119	I	84	0
ST-006/ RO-11311	INT	S SANTEE RVR	FW		60	5	8.3	4.192	I	172	0.03	I	158	0.017
ST-006/ RO-11311	INT	S SANTEE RVR	SA		60	5	8.3	4.192	I	172	0.03	I	158	0.017
RT-042062	RT04	SIXMILE CK	SA		13	1	7.7	3.62						
RO-08344	RO08	S SANTEE RVR	SA		10	0	0							
RT-06001	RT06	ALLIGATOR CK	ORW		13	1	7.7	4.92						
03050112-04														
ST-005	CS	N SANTEE RVR	FW		12	0	0		NS	62	-0.021	NS	61	-0.067
ST-005	CS	N SANTEE RVR	SA		12	0	0		NS	62	-0.021	NS	61	-0.067
RO-056098	RO05	NORTH SANTEE RVR	SA		13	1	7.7	4.79						
RT-07065	RT07	MINIM CK	SA		16	6	38	4.418						
RT-042068	RT04	MINIM CK	SA		13	3	23	4.387						
MD-263	INT	SANTEE BAY	ORW		48	6	13	4.538	D	81	-0.14	I	76	0.033
RO-06301	RO06	NORTH SANTEE BAY	ORW		12	0	0							

STATION				pH	pH	pH	MEAN	TRENDS (94-2008)			TURB	TURB	TURB	MEAN	TRENDS (94-2008)		
NUMBER	TYPE	WATERBODY NAME	CLASS	N	EXC.	%	EXC.	PH	N	MAG	N	EXC.	%	EXC.	TURB	N	MAG
03050112-02																	
ST-001	INT	SANTEE RVR	FW	58	0	0		NS	171	0.003	59	0	0		D	171	-0.2
03050112-03																	
CSTL-112	INT	WAMBAW CK	FW	58	1	1.7	8.98	NS	94	0	60	1	1.667	706	NS	97	0.5
ST-006/ RO-11311	INT	S SANTEE RVR	FW	58	0	0		I	170	0.025	60	3	5	99.667	I	171	0.35
ST-006/ RO-11311	INT	S SANTEE RVR	SA	58	1	1.7	6.47	I	170	0.025	60	17	28.33	44.059	I	171	0.35
RT-042062	RT04	SIXMILE CK	SA	13	1	7.7	6.39				13	2	15.39	26.5			
RO-08344	RO08	S SANTEE RVR	SA	12	0	0					12	4	33.33	40.25			
RT-06001	RT06	ALLIGATOR CK	ORW	12	0	0					13	3	23.08	36			
03050112-04																	
ST-005	CS	N SANTEE RVR	FW	10	0	0		NS	60	0.032	12	0	0		I	62	0.8
ST-005	CS	N SANTEE RVR	SA	10	0	0		NS	60	0.032	12	4	33.33	39.5	I	62	0.8
RO-056098	RO05	NORTH SANTEE RVR	SA	13	0	0					13	0	0				
RT-07065	RT07	MINIM CK	SA	16	0	0					13	1	7.692	28			
RT-042068	RT04	MINIM CK	SA	13	0	0					13	0	0				
MD-263	INT	SANTEE BAY	ORW	48	0	0		NS	80	-0.03	48	5	10.42	32.6	NS	81	0.51
RO-06301	RO06	NORTH SANTEE BAY	ORW	12	0	0					12	2	16.67	35			

STATION					TP	TP	TP	MEAN	TRENDS (94-2008)				TN	TN	TN	MEAN	TRENDS (94-2008)		
NUMBER	TYPE	WATERBODY NAME	CLASS		N	EXC.	%	EXC.	TP	N	MAG		N	EXC.	%	EXC.	TN	N	MAG
03050112-02																			
ST-001	INT	SANTEE RVR	FW						NS	138	0						NS	116	-0.006
03050112-03																			
CSTL-112	INT	WAMBAW CK	FW						I	86	0.002						NS	50	-0.029
ST-006/ RO-11311	INT	S SANTEE RVR	FW						NS	141	0						NS	102	-0.006
ST-006/ RO-11311	INT	S SANTEE RVR	SA						NS	141	0						NS	102	-0.006
RT-042062	RT04	SIXMILE CK	SA																
RO-08344	RO08	S SANTEE RVR	SA																
RT-06001	RT06	ALLIGATOR CK	ORW																
03050112-04																			
ST-005	CS	N SANTEE RVR	FW						D	52	-0.001								
ST-005	CS	N SANTEE RVR	SA						D	52	-0.001								
RO-056098	RO05	NORTH SANTEE RVR	SA																
RT-07065	RT07	MINIM CK	SA																
RT-042068	RT04	MINIM CK	SA																
MD-263	INT	SANTEE BAY	ORW						NS	64	0						NS	39	0
RO-06301	RO06	NORTH SANTEE BAY	ORW																

STATION NUMBER	TYPE	WATERBODY NAME	CLASS	CHL N	CHL EXC.	CHL %	MEAN EXC.	TRENDS (94-2008) TSS	TRENDS (94-2008) N	TRENDS (94-2008) MAG
03050112-02										
ST-001	INT	SANTEE RVR	FW					D	142	-0.205
03050112-03										
CSTL-112	INT	WAMBAW CK	FW							
ST-006/ RO-11311	INT	S SANTEE RVR	FW							
ST-006/ RO-11311	INT	S SANTEE RVR	SA							
RT-042062	RT04	SIXMILE CK	SA							
RO-08344	RO08	S SANTEE RVR	SA							
RT-06001	RT06	ALLIGATOR CK	ORW							
03050112-04										
ST-005	CS	N SANTEE RVR	FW							
ST-005	CS	N SANTEE RVR	SA							
RO-056098	RO05	NORTH SANTEE RVR	SA							
RT-07065	RT07	MINIM CK	SA							
RT-042068	RT04	MINIM CK	SA							
MD-263	INT	SANTEE BAY	ORW							
RO-06301	RO06	NORTH SANTEE BAY	ORW							

STATION NUMBER	TYPE	WATERBODY NAME	CLASS	GEO MEAN	BACT N	BACT EXC.	BACT %	MEAN EXC.	TRENDS (94-2008) BACT	N	MAG
03050112-02											
ST-001	INT	SANTEE RVR	FW	22	59	0	0		D	168	-2.5
03050112-03											
CSTL-112	INT	WAMBAW CK	FW	82	60	2	3.333	715	NS	97	-5
ST-006/ RO-11311	INT	S SANTEE RVR	FW	74	60	1	1.667	420	NS	173	1.414
ST-006/ RO-11311	INT	S SANTEE RVR	SA	74	60	1	1.667	420	NS	173	1.414
RT-042062	RT04	SIXMILE CK	SA	71	13	1	7.692	900			
RO-08344	RO08	S SANTEE RVR	SA	28	12	0	0				
RT-06001	RT06	ALLIGATOR CK	ORW	60	13	0	0				
03050112-04											
ST-005	CS	N SANTEE RVR	FW	43	12	0	0		NS	60	2.508
ST-005	CS	N SANTEE RVR	SA	43	12	0	0		NS	60	2.508
RO-056098	RO05	NORTH SANTEE RVR	SA	18	13	0	0				
RT-07065	RT07	MINIM CK	SA	21	13	0	0				
RT-042068	RT04	MINIM CK	SA	44	13	0	0				
MD-263	INT	SANTEE BAY	ORW	10	48	0	0		I	78	1.333
RO-06301	RO06	NORTH SANTEE BAY	ORW	12	12	0	0				

STATION NUMBER	TYPE	WATERBODY NAME	CLASS	CD N	CD EXC.	CD %	MEAN EXC.	CR N	CR EXC.	CR %	MEAN EXC.	CU N	CU EXC.	CU %	MEAN EXC.
03050112-02															
ST-001	INT	SANTEE RVR	FW	11	0	0		11	0	0		11	0	0	
03050112-03															
CSTL-112	INT	WAMBAW CK	FW	12	0	0		12	0	0		12	1	8.3	100
ST-006/ RO-11311	INT	S SANTEE RVR	FW	12	0	0		12	0	0		12	0	0	
ST-006/ RO-11311	INT	S SANTEE RVR	SA	12	0	0		12	0	0		12	0	0	
RT-042062	RT04	SIXMILE CK	SA												
RO-08344	RO08	S SANTEE RVR	SA	4	0	0		4	0	0		4	0	0	
RT-06001	RT06	ALLIGATOR CK	ORW	4	0	0		4	0	0		4	1	25	59
03050112-04															
ST-005	CS	N SANTEE RVR	FW	4	0	0		4	0	0		4	1	25	12
ST-005	CS	N SANTEE RVR	SA	4	0	0		4	0	0		4	1	25	12
RO-056098	RO05	NORTH SANTEE RVR	SA												
RT-07065	RT07	MINIM CK	SA	4	0	0		4	0	0		4	0	0	
RT-042068	RT04	MINIM CK	SA												
MD-263	INT	SANTEE BAY	ORW	8	0	0		8	0	0		8	0	0	
RO-06301	RO06	NORTH SANTEE BAY	ORW	4	0	0		4	0	0		4	0	0	

STATION NUMBER	TYPE	WATERBODY NAME	CLASS	PB N	PB EXC.	PB %	MEAN EXC.	HG N	HG EXC.	HG %	MEAN EXC.	NI N	NI EXC.	NI %	MEAN EXC.	ZN N	ZN EXC.	ZN %	MEAN EXC.
03050112-02																			
ST-001	INT	SANTEE RVR	FW	11	0	0		11	0	0		11	0	0		11	0	0	
03050112-03																			
CSTL-112	INT	WAMBAW CK	FW	12	0	0		12	0	0		12	0	0		12	0	0	
ST-006/ RO-11311	INT	S SANTEE RVR	FW	12	0	0		12	0	0		12	0	0		12	0	0	
ST-006/ RO-11311	INT	S SANTEE RVR	SA	12	0	0		12	0	0		12	0	0		12	0	0	
RT-042062	RT04	SIXMILE CK	SA																
RO-08344	RO08	S SANTEE RVR	SA	4	0	0		4	0	0		4	0	0		4	0	0	
RT-06001	RT06	ALLIGATOR CK	ORW	4	0	0		4	0	0		4	0	0		4	1	25	95
03050112-04																			
ST-005	CS	N SANTEE RVR	FW	4	0	0		4	0	0		4	0	0		4	0	0	
ST-005	CS	N SANTEE RVR	SA	4	0	0		4	0	0		4	0	0		4	0	0	
RO-056098	RO05	NORTH SANTEE RVR	SA																
RT-07065	RT07	MINIM CK	SA	4	0	0		4	0	0		4	0	0		4	0	0	
RT-042068	RT04	MINIM CK	SA																
MD-263	INT	SANTEE BAY	ORW	8	0	0		8	0	0		8	0	0		8	0	0	
RO-06301	RO06	NORTH SANTEE BAY	ORW	4	0	0		4	0	0		4	0	0		4	0	0	

APPENDIX B.

Cooper River Basin

Ambient Water Quality Monitoring Site Descriptions

Station #	Type	Class	Description
03050201-01			
CSTL-079/SC-025	W/SC	FW	DIVERSION CANAL AT SC 45 12.6 MI W OF ST. STEPHENS
SC-043	SC	FW	TRIBUTARY FLOWING TO LAKE MOULTRIE FROM CROSS GENERATING STATION
SC-026	SC	FW	LAKE MOULTRIE TRIB 0.4 MI UPSTREAM OF SC 6
SC-027	SC	FW	SW QUADRANT OF LAKE MOULTRIE, 0.75 MI E OF SHORELINE
SC-028	SC	FW	NW QUADRANT OF LAKE MOULTRIE NEAR ANGEL'S LANDING COVE
RL-07022	RL-07	FW	LAKE MOULTRIE N END APPROX 1.6MI SE OF OLD CANAL
RL-04462	RL-04	FW	LAKE MOULTRIE, 4.2MI SW OF RUSSELVILLE
RL-07030	RL-07	FW	LAKE MOULTRIE, APPROX. 0.6MI SSW OF REDIVERSION CANAL MOUTH
SC-031	SC	FW	NORTHERN QUADRANT OF LAKE MOULTRIE AT MOUTH OF REDIVERSION CANAL
RL-04364	RL-04	FW	LAKE MOULTRIE, 303MI NW OF BONNEAU BEACH
RL-05396	RL-05	FW	LAKE MOULTRIE, 6.25MI WNW OF BONNEAU
RL-07018	RL-07	FW	LAKE MOULTRIE, APPROX. 2.3MI SE OF DIVERSION CANAL
RL-04362	RL-04	FW	LAKE MOULTRIE, 2.2MI SE OF CROSS
RL-08066	RL-08	FW	LAKE MOULTRIE, W END 1MI E OF FRED DAY LANDING
SC-034	SC	FW	DUCK POND CREEK AT SC 6
RL-08050	RL-02	FW	SW LAKE MOULTRIE IN OPEN WATER
ST-037/SC-030	INT/SC	FW	LAKE MOULTRIE AT CHANNEL MARKER 17
RL-07014	RL-07	FW	NE LAKE MOULTRIE, APPROX. 3MI W OF JEHOVAH GOOD SHEPHERD
RL-05400	RL-05	FW	LAKE MOULTRIE, 3.7MI WNW OF BONNEAU
RL-06450	RL-06	FW	LAKE MOULTRIE, 1.7MI WSW OF BONNEAU
SC-046	SC	FW	SE QUADRANT OF LAKE MOULTRIE AT PINOPOLIS EMBAYMENT
SC-032	SC	FW	SE QUADRANT OF LAKE MOULTRIE AT CHANNEL MARKER 2
03050201-02			
ST-007	S/W	FW	WALKER SWAMP AT US 52 2.5 MI S OF ST. STEPHENS
CSTL-113	W/INT	FW	WADBOO CREEK AT SC 402
03050201-03			
CSTL-123	INT	FW	EAST BRANCH COOPER RIVER AT BONNEAU FERRY PLANTATION
03050201-04			
RT-08076	RT-08	SFH	750 YARDS UPSTREAM DEEP CREEK OFF OF WANDO RIVER
RT-06012	RT-06	SFH	TOOMER CREEK, 2.5MI E OF SC 41 BRIDGE OVER WANDO RIVER
MD-115	P/INT	SFH	WANDO RIVER AT S.C. 41
RT-07056	RT-07	SFH	JOHNFIELD CREEK, 0.25MI FROM MOUTH
RT-052100	RT-05	SFH	BOONE HALL CREEK, 1.5MI WNW OF US 17/SC 41 INTERSECTION
RO-056092	RO-05	SFH	BERESFORD CREEK, 5.3 MI NNE OF WANDO R. AND COOPER RIVER CONFL.
MD-264	INT	SFH	WANDO RIVER AT I-526 MARK CLARK EXPRESSWAY
MD-198	P/W	SFH	WANDO RIVER BETWEEN RATHALL & HOBCAW CREEKS
03050201-05			
CSTL-063	P/W	FW	WASSAMASSAW SWAMP AT U.S. 176
CSTL-078	W/INT	FW	CYPRESS SWAMP AT U.S. 78
03050201-06			
CSTL-102/	P/INT	FW/SA	ASHLEY RIVER AT SC 165 4.8 MI SSW OF SUMMERVILLE
CSTL-043	S/W	FW	SAWMILL BRANCH AT SC 78 E OF SUMMERVILLE
RS-05563	RS-05	FW	SAWMILL BRANCH AT S-18-706 IN SUMMERVILLE
CSTL-013	P/INT	SA	DORCHESTER CREEK AT SC 165

Station #	Type	Class	Description
03050201-06 (continued)			
CSTL-099	P/W	SB	EAGLE CREEK AT SC 642 5 MI SSE OF SUMMERVILLE
MD-049	P/SPRP	SA	ASHLEY RIVER AT MAGNOLIA GARDENS
MD-246	P/W	SA*	CHURCH CREEK MOUTH
MD-135	S/W	SA*	ASHLEY RIVER AT S.C. 7 (NORTH BRIDGE)
MD-052	P/INT	SA	ASHLEY RIVER AT SAL RR BRIDGE
MD-020	P/INT	SB	MOUTH OF WAPPOO CREEK BETW CHANNEL MARKERS 3 & 4
MD-034	P/INT	SA	RT BANK OF ASHLEY R. BETW MOUTH OF WAPPOO CREEK AND DILLS CREEK
RT-052098	RT-05	SA	JAMES ISLAND CREEK N OF WHITE HALL PLANTATION
03050201-07			
CSTL-062/SC-033	P/INT/SC	FW	TAILRACE CANAL AT US 52 & 17A BELOW LAKE MOULTRIE
CSTL-085	S/INT	FW	PIER IN W. BRANCH COOPER RIVER AT END OF RICE MILL ROAD IN PIMLICO
MD-217	P/W	FW	DURHAM CREEK AT S-08-9 BRIDGE
MD-240	P/W	FW	FOSTER CREEK AT CHARLESTON CPW WATER INTAKE
RT-042070	RT-04	SB	UNNAMED TRIB TO THE COOPER RIVER NEXT CK UPRIVER FROM GROVE CK
CSTL-124	INT	FW	BACK RIVER RES. IN FOREBAY EQUIDISTANT FROM DAM AND SHORELINES
MD-152	P/W	FW/SB	COOPER RIVER AT S-08-503, 6.2 MI ESE OF GOOSE CREEK
MD-043	P/SPRP	SB	COOPER RIVER AT CHANNEL MARKER 72 NEAR USN AMMO DEPOT
RO-06308	RO-06	SB	COOPER RIVER, 1.8 MI NNE OF GOOSE CREEK
RT-07040	RT-07	SB	CLOUTER CREEK, 0.5 MI BELOW NORTHERN CONFLUENCE WITH COOPER R.
MD-114	P/W	FW	GOOSE CREEK AT U.S. 52 N CHARLESTON
RL-04390	RL-04	FW	GOOSE CREEK RESERVOIR, 2.8MI NW OF SPILLWAY NEAR OTRANTO
RL-06434	RL-06	FW	GOOSE CREEK RESERVOIR, 2MI N OF SPILLWAY
RL-08065	RL-08	FW	GOOSE CREEK RESERVOIR, MIDLAKE IN LINE WITH NORTHBROOK BLVD
RL-07017	RL-07	FW	GOOSE CREEK RES., 0.6MI NW OF 2ND POWERLINE UPSTREAM OF BOAT RAMP
ST-033/CL-050	W	FW	GOOSE CREEK RES. AT 2ND POWER LINES UPSTREAM OF BOAT RAMP
RL-05412	RL-05	FW	GOOSE CREEK RESERVOIR, 0.55MI W OF DAM
RL-07001	RL-07	FW	GOOSE CREEK RESERVOIR, 100M NW OF SW DAM
ST-032/CL-049	P/SPRP	FW	GOOSE CREEK RESERVOIR 100 M UPSTREAM OF DAM
MD-039	P/INT	SB	GOOSE CREEK AT S-08-136 BRIDGE
MD-044	P/W	SB	COOPER RIVER BELOW MOUTH OF GOOSE CREEK AT CHAN. BUOY 60
RO-046070	RO-04	SB	COOPER RIVER, 0.7MI SSW OF MOUTH OF GOOSE CREEK
MD-249/MD-593	P/W	SB	FILBIN CREEK AT VIRGINIA AVE., NORTH CHARLESTON
MD-248	P/SPRP	SB	COOPER RIVER AT MARK CLARK BRIDGE (I-526)
RO-08352	RO-08	SB	COOPER RIVER, 1MI DOWNSTREAM FROM NOISETTE CREEK IN THE NAVY YARD
MD-045	P/INT	SB	COOPER RIVER ABOVE MOUTH OF SHIPYARD CK AT CHAN BUOY 49
MD-243	P/W	SB	SHIPYARD CREEK BETWEEN MARKER #6 AND MCALLOY DOCK
MD-046	P/W	SB	COOPER RIVER UNDER GRACE MEMORIAL BRIDGE
MD-047	P/W	SB	TOWN CREEK (W SIDE OF DRUM ISLAND) UNDER GRACE MEM. BRDG
RO-06304	RO-06	SB	COOPER RIVER, 0.3MI W OF SHUTES FOLLY ISLAND
MD-071	P/SPRP	SB	SHEM CREEK AT BRIDGE ON US 17
RO-07336	RO-07	SB	CHARLESTON HARBOR, 0.4MI SE OF MOUTH OF SHEM CREEK
MD-247	P/INT	SB	CHARLESTON HARBOR NEAR MT. PLEASANT WWTP DIFFUSER
MD-069	INT	SB/SFH	AIWW AT SC 703, E OF MT. PLEASANT
RO-046066	RO-04	SB	CHARLESTON HARBOR, 0.65MI SSE OF SHUTES FOLLY ISLAND
MD-165	P/INT	SB	CHARLESTON HARBOR AT FT.JOHNSON PIER AT MARINE SCIENCE LAB
MD-048	P/W	SB	S. CHANNEL CHAS HARBOR OFF FT JOHNSON , BELL BUOY 28
RT-042072	RT-04	SB	UNNAMED TRIB TO PARROT POINT CREEK, 0.8MI S OF FT. JOHNSON
03050202-01			
CW-019	S/W	FW	WATEREE RIVER AT US 1
CW-223	S/W/BIO	FW	LITTLE PINE TREE CREEK AT S-28-132

Station #	Type	Class	Description
03050202-01 (continued)			
CW-021	W/INT	FW	BIG PINE TREE CREEK AT US 521, NW OF BRIDGE
CW-082	INT	FW	SWIFT CREEK AT S-28-12
CW-238	W/INT	FW	SWIFT CREEK AT SC 261
03050202-02			
MD-121	S/W	SFH	LOG BRIDGE CREEK AT SC 162
MD-202	P/INT	SFH	STONO RIVER AT S-10-20, 2 MI UPSTREAM OF CLEMSON EXP. STATION
RO-07331	RO-07	SFH	STONO RIVER, 1.75MI SE OF S-10-20
RT-08068	RT-08	SB	MOUTH OF WAPPOO CREEK AT WAPPOO ROAD
MD-025	S/W	SFH	MOUTH OF ELLIOTTS CUT AT EDGE WATER DR. (S-10-26 OFF HWY 17)
MD-026	P/W	SFH	STONO RIVER AT SC 700
RT-052112	RT-05	SFH	ABBAPOOLA CREEK, 0.9MI WSW OF CONFLUENCE WITH STONO RIVER
MD-206	S/INT	SFH	STONO RIVER AT ABBAPOOLA CREEK
RO-046068	RO-04	SFH	STONO RIVER, 0.3MI SSW OF MOUTH OF GREEN CREEK
MD-208	S/W	SFH	STONO RIVER MOUTH AT BUOY 10 OFF SANDY POINT
MD-273/	INT/	SFH	KIAWAH RIVER ON THE FLATS
MD-207	S/W	SFH	KIAWAH RIVER MOUTH AT STONO RIVER
RT-08084	RT-08	SFH	TIDAL FLAT, 0.3MI NE OF THE TIP OF OAK ISLAND OFF FOLLY RIVER
MD-130	INT	SFH	FOLLY RIVER AT SC 171
MD-274	INT	SFH	FOLLY CREEK AT SECESSIONVILLE POLLUTION LINE
RT-06020	RT-06	SFH	CUTOFF REACH, 1.5MI WNW OF FOLLY BEACH
RO-08347	RO-08	SFH	FOLLY RIVER, 0.04MI ABOVE COLE CREEK, 30 YDS FROM THE RIGHT BANK

Groundwater Monitoring Sites

Well #	Class	Aquifer	Location
03050201-03			
AMB-023	GB	BLACK MINGO	CAINHOY HIGH SCHOOL
03050201-05			
AMB-096	GB	TERTIARY LIMESTONE	LEIBER CORRECTIONAL INST.
03050201-06			
AMB-022	GB	BLACK CREEK/MIDDENDORF	SUMMERVILLE NO.5
03050201-07			
AMB-053	GB	PEE DEE	MONCKS CORNER
AMB-024	GB	BLACK MINGO	SANTEE COOPER

Shellfish Monitoring Stations

Station #	Description
03050201-04	
09B-01	WANDO RIVER AT NOWELL CREEK
09B-02	WANDO RIVER AT HORLBECK CREEK

Station #	Description
03050201-04 (continued)	
09B-03	WANDO RIVER AT SC HWY 41 BRIDGE
09B-04	WANDO RIVER AT DEEP CREEK
09B-05	WANDO RIVER OPPOSITE BIG PARADISE ISLAND
09B-06	WANDO RIVER AT PARADISE BOAT LANDING
09B-07	BOONE HALL CREEK OPPOSITE COUNTY RECREATION AREA
09B-08	WANDO RIVER AT MARKER #29
09B-09	DEEP CREEK – 1 MI FORM CONFLUENCE WITH WANDO RIVER
09B-10	WANDO RIVER AT ALSTON CREEK CONFLUENCE
09B-11	WANDO RIVER AT GUERIN CREEK
09B-12	GUERIN CREEK AT OLD HOUSE CREEK
09B-13	CONFLUENCE OF WANDO RIVER AND COOPER RIVER
09B-14	NORTH EDGE OF SC PORT AUTHORITY/WANDO TERMINAL
09B-15	NEW BRIDGE- ROUTE I-526
09B-16	CONFLUENCE OF MARTIN CREEK AND NOWELL CREEK
09B-17	WANDO RIVER MIDWAY BETWEEN STATIONS 3 AND 11 (AT OLD DRY DOCK)
09B-18	RAT HALL CREEK AT CONFLUENCE WITH WANDO RIVER
09B-19	FOSTER CREEK AT CONFLUENCE WITH WANDO RIVER
09B-21	HORLBECK CREEK AT POWER LINE CROSSING
09B-22	WANDO RIVER @ FOSTER CREEK
09B-23	WANDO RIVER @ MARKER #20
09B-24	WANDO RIVER @ MARKER #13
03050201-07	
10A-11	RAT ISLAND CREEK AT CONFLUENCE WITH FIRST CREEK ON LEFT FROM LIGHTHOUSE CREEK
10A-13	LIGHTHOUSE CREEK AT CONFLUENCE WITH FOLLY CREEK
10A-15	SECESSIONVILLE CREEK AT PRIVATE DOCKS
10A-16	CLARK SOUND AT OCEAN VIEW FLATS
10A-16B	CLARK SOUND, 550 YDS E OF STATION 10A-16A
10A-18	MOUTH OF SCHOONER CREEK
10A-19	JUST INSIDE CLARK SOUND FROM SCHOONER CREEK
10A-23	LIGHTHOUSE CREEK STATE SHELLFISH GROUND AT MOUTH OF FIRST SISTER CREEK
10A-29A	LIGHTHOUSE CREEK AT SECESSIONVILLE CREEK AND CLARK SOUND
10A-30	SECOND BEND IN RATHALL CREEK
10A-32	BLOCK ISLAND CREEK – 100 YDS S.OF SPILT FORM SPOIL AREA
10A-33	CONFLUENCE OF LIGHTHOUSE CREEK AND CLARK SOUND
10A-34	THE FIRST DOCK IN SECESSIONVILLE CREEK AT ITS CONFLUENCE WITH CLARK SOUND
10A-34A	BLOCK ISLAND CREEK AT FLATS
10A-35	RIGHT FORK OF SCHOONER CREEK, MIDDLE OF DOCKS, ACROSS FROM PARROT POINT DEVELOPMENT
03050202-01	
11-18	CONFLUENCE OF RANTOWLES CREEK AND THE STONO RIVER
03050202-02	
10A-02	FOLLY CREEK BRIDGE
10A-04	BACKMAN CREEK AT FOLLY CREEK
10A-05	KING FLATS AT FOLLY CREEK
10A-06	OPPOSITE LITTLE ISLAND IN FOLLY CREEK
10A-07	NORTH BOUNDARY OF PROHIBITED AREA AT FOLLY MARINA
10A-08	FOLLY RIVER BRIDGE
10A-09	LAST DOCK NORTH IN FOLLY RIVER
10A-10A	ROBBINS CREEK AT THE 1ST BEND UPSTREAM FROM CUTOFF REACH
10A-15A	FOLLY CREEK AT CONFLUENCE WITH SECESSIONVILLE CREEK

Station #	Description
03050202-02 (continued)	
10A-22	FOLLY RIVER STATE SHELLFISH GROUND OPPOSITE FOLLY ISLAND
10A-24	COLE CREEK STATE SHELLFISH GROUND
10A-36	UNNAMED CREEK AT FORK NEAR RIVER FRONT SUBDIVISION
10A-37	FOLLY CREEK AT OAK ISLAND CREEK
11-01	ELLIOT CUT AT STONO RIVER
11-02A	STONO RIVER AT SOUTHERN BOUNDARY OF ST. JOHN'S YACHT HARBOR MARINA CLOSURE ZONE
11-03	DOCKS BETWEEN MARKERS 10&11 IN STONO RIVER
11-05	MOUTH OF ABBAPOOLA CREEK
11-06	ABBAPOOLA CREEK AT FIRST LARGE BEND
11-0A6	ABBAPOOLA CREEK AT CONFLUENCE WITH SMALL CREEK ON WEST BACK AT 7TH BEND
11-07	GREEN CREEK AT STONO RIVER
11-07A	GREEN CREEK, 4 BENDS UPSTREAM OF STATION 11-07
11-08	MOUTH OF KIAWAH RIVER
11-11	STONO RIVER (AIWW) AT MARKER 21A
11-12	STONO RIVER (AIWW) AT MARKER 27
11-16	STONO RIVER (AIWW) AT MARKER 51
11-17	STONO RIVER (LOG BRIDGE CREEK) AT MARKER 54
11-21	SOUTH KIAWAH RIVER ON THE FLATS
11-22	KIAWAH RIVER POG AT MINGO POINT
11-23	CAPTAIN SAMS CREEK AND KIAWAH RIVER
11-27	AIWW AT PENNY CREEK NEAR MARKER #25
11-28	MULLETT HALL CREEK 150 YDS FROM MOUTH AT FORK
11-30	KIAWAH RIVER AT MOUTH OF BRYANS CREEK
11-31	BASS CREEK AT CONFLUENCE WITH KIAWAH RIVER
11-32	BASS CREEK AT CONFLUENCE WITH CINDER CREEK
11-33	SOL LEGARE BOAT LANDING
11-34	CINDER CREEK AT PUBLIC DOCK – 3RD BEND FROM CONFLUENCE WITH BASS CREEK
11-35	BASS CREEK AT PUBLIC DOCK – 5TH BEND FROM CONFLUENCE WITH CINDER CREEK

For further details concerning sampling frequency and parameters sampled, please visit our website at www.scdhec.gov/eqc/admin/html/eqcpubs.html#wqreports for the current State of S.C. Monitoring Strategy.

Appendix B. Cooper River Basin

STATION				DO	DO	DO	MEAN	TRENDS (94-2008)					
NUMBER	TYPE	WATERBODY NAME	CLASS	N	EXC.	%	EXC.	DO	N	MAG	BOD	N	MAG
03050201-01													
CSTL-079/ SC-025	CS	DIVERSION CANAL	FW	59	0	0		NS	77	-0.045	D	77	-0.145
SC-043	SC	UNNAMED TRIB	FW	56	4	7.1	4.568						
SC-026	SC	UNNAMED TRIB	FW	9	0	0							
SC-027	SC	LAKE MOULTRIE	FW	51	0	0							
SC-028	SC	LAKE MOULTRIE	FW	51	0	0							
RL-07022	RL07	LAKE MOULTRIE	FW										
RL-04462	RL04	LAKE MOULTRIE	FW										
RL-07030	RL07	LAKE MOULTRIE	FW										
SC-031	SC	LAKE MOULTRIE	FW	54	0	0							
RL-04364	RL04	LAKE MOULTRIE	FW										
RL-05396	RL05	LAKE MOULTRIE	FW										
RL-07018	RL07	LAKE MOULTRIE	FW										
RL-04362	RL04	LAKE MOULTRIE	FW										
RL-08066	RL08	LAKE MOULTRIE	FW										
SC-034	SC	DUCK POND CK	FW	9	1	11	4.6						
RL-02454/ RL-08050	RL02	LAKE MOULTRIE	FW										
ST-037/ SC-030/ RL-08034/ RL-12055/ RL-13087	INT	LAKE MOULTRIE	FW	56	0	0							
RL-07014	RL07	LAKE MOULTRIE	FW										
RL-05400	RL05	LAKE MOULTRIE	FW										
RL-06450	RL06	LAKE MOULTRIE	FW										
SC-046	SC	LAKE MOULTRIE	FW	53	1	1.9	2.9						
SC-032	SC	LAKE MOULTRIE	FW	56	1	1.8	4.6						
03050201-02													
ST-007	CS	WALKER SWAMP	FW	10	7	70	2.659	D	51	-0.283	NS	52	-0.05
CSTL-113	INT	WADBOO SWAMP	FW	57	22	39	3.925	D	96	-0.176	I	85	0.067
03050201-03													
CSTL-123	INT	E BR COOPER RVR	FW	53	13	25	3.985	NS	80	-0.069	I	70	0

Appendix B. Cooper River Basin

STATION NUMBER	TYPE	WATERBODY NAME	CLASS	pH N	pH EXC.	pH %	MEAN EXC.	TRENDS (94-2008) PH	TRENDS (94-2008) N	TRENDS (94-2008) MAG	TURB N	TURB EXC.	TURB %	MEAN EXC.	TRENDS (94-2008) TURB	TRENDS (94-2008) N	TRENDS (94-2008) MAG
03050201-01																	
CSTL-079/ SC-025	CS	DIVERSION CANAL	FW	90	1	1.1	8.55	I	77	0.091	58	0	0		I	77	0.6
SC-043	SC	UNNAMED TRIB	FW	87	0	0					55	3	5.455	99.133			
SC-026	SC	UNNAMED TRIB	FW	14	0	0					9	0	0				
SC-027	SC	LAKE MOULTRIE	FW	85	0	0					49	0	0				
SC-028	SC	LAKE MOULTRIE	FW	85	0	0					50	0	0				
RL-07022	RL07	LAKE MOULTRIE	FW								10	0	0				
RL-04462	RL04	LAKE MOULTRIE	FW								11	0	0				
RL-07030	RL07	LAKE MOULTRIE	FW								11	0	0				
SC-031	SC	LAKE MOULTRIE	FW	88	2	2.3	8.605				53	0	0				
RL-04364	RL04	LAKE MOULTRIE	FW								11	0	0				
RL-05396	RL05	LAKE MOULTRIE	FW								10	0	0				
RL-07018	RL07	LAKE MOULTRIE	FW								10	0	0				
RL-04362	RL04	LAKE MOULTRIE	FW								11	0	0				
RL-08066	RL08	LAKE MOULTRIE	FW								10	0	0				
SC-034	SC	DUCK POND CK	FW	14	3	21	5.883				9	0	0				
RL-02454/ RL-08050	RL02	LAKE MOULTRIE	FW								10	0	0				
ST-037/ SC-030/ RL-08034/ RL-12055/ RL-13087	INT	LAKE MOULTRIE	FW	89	2	2.2	8.605				56	0	0				
RL-07014	RL07	LAKE MOULTRIE	FW								10	0	0				
RL-05400	RL05	LAKE MOULTRIE	FW								12	0	0				
RL-06450	RL06	LAKE MOULTRIE	FW								12	0	0				
SC-046	SC	LAKE MOULTRIE	FW	85	1	1.2	8.95				51	0	0				
SC-032	SC	LAKE MOULTRIE	FW	89	6	6.7	8.667				55	0	0				
03050201-02																	
ST-007	CS	WALKER SWAMP	FW	10	0	0		NS	51	-0.013	11	0	0		NS	52	0.069
CSTL-113	INT	WADBOO SWAMP	FW	57	2	3.5	5.765	NS	96	-0.014	59	0	0		NS	98	-0.04
03050201-03																	
CSTL-123	INT	E BR COOPER RVR	FW	53	2	3.8	5.91	NS	80	-0.013	56	0	0		NS	83	0.037

Appendix B. Cooper River Basin

STATION NUMBER	TYPE	WATERBODY NAME	CLASS	TP N	TP EXC.	TP %	MEAN EXC.	TRENDS (94-2008) TP	TRENDS (94-2008) N	TRENDS (94-2008) MAG	TN N	TN EXC.	TN %	MEAN EXC.	TRENDS (94-2008) TN	TRENDS (94-2008) N	TRENDS (94-2008) MAG
03050201-01																	
CSTL-079/ SC-025	CS	DIVERSION CANAL	FW					D	96	-0.001	33	1	3	1.75	D	95	-0.01
SC-043	SC	UNNAMED TRIB	FW								28	4	14	2.253			
SC-026	SC	UNNAMED TRIB	FW								7	0	0				
SC-027	SC	LAKE MOULTRIE	FW	36	2	6	0.135				25	2	8	2.385			
SC-028	SC	LAKE MOULTRIE	FW	37	4	11	0.627				26	0	0				
RL-07022	RL07	LAKE MOULTRIE	FW	17	0	0					10	0	0				
RL-04462	RL04	LAKE MOULTRIE	FW	19	0	0					20	1	5	1.52			
RL-07030	RL07	LAKE MOULTRIE	FW	19	0	0					13	0	0				
SC-031	SC	LAKE MOULTRIE	FW	41	4	10	0.44				27	0	0				
RL-04364	RL04	LAKE MOULTRIE	FW	19	0	0					19	2	11	8.725			
RL-05396	RL05	LAKE MOULTRIE	FW	19	1	5	0.16				14	0	0				
RL-07018	RL07	LAKE MOULTRIE	FW	17	0	0					11	0	0				
RL-04362	RL04	LAKE MOULTRIE	FW	19	0	0					20	1	5	2.55			
RL-08066	RL08	LAKE MOULTRIE	FW	20	0	0					19	0	0				
SC-034	SC	DUCK POND CK	FW								6	0	0				
RL-02454/ RL-08050	RL02	LAKE MOULTRIE	FW	18	1	6	0.1				17	0	0				
ST-037/ SC-030/ RL-08034/ RL-12055/ RL-13087	INT	LAKE MOULTRIE	FW	92	3	3	0.42	NS	63	0	76	2	2.6	3.055	D	42	-0.035
RL-07014	RL07	LAKE MOULTRIE	FW	17	1	6	0.11				11	0	0				
RL-05400	RL05	LAKE MOULTRIE	FW	21	1	5	0.1				16	1	6.3	2.925			
RL-06450	RL06	LAKE MOULTRIE	FW	16	0	0					12	0	0				
SC-046	SC	LAKE MOULTRIE	FW	41	3	7	0.157				29	2	6.9	2.315			
SC-032	SC	LAKE MOULTRIE	FW	43	2	5	0.125				31	2	6.5	3.075			
03050201-02																	
ST-007	CS	WALKER SWAMP	FW					NS	44	0.007							
CSTL-113	INT	WADBOO SWAMP	FW					I	88	0.002					D	35	-0.035
03050201-03																	
CSTL-123	INT	E BR COOPER RVR	FW					NS	73	0							

STATION NUMBER	TYPE	WATERBODY NAME	CLASS	CHL N	CHL EXC.	CHL %	MEAN EXC.	TRENDS (94-2008) TSS	TRENDS (94-2008) N	TRENDS (94-2008) MAG
03050201-01										
CSTL-079/ SC-025	CS	DIVERSION CANAL	FW							
SC-043	SC	UNNAMED TRIB	FW							
SC-026	SC	UNNAMED TRIB	FW							
SC-027	SC	LAKE MOULTRIE	FW							
SC-028	SC	LAKE MOULTRIE	FW							
RL-07022	RL07	LAKE MOULTRIE	FW							
RL-04462	RL04	LAKE MOULTRIE	FW							
RL-07030	RL07	LAKE MOULTRIE	FW							
SC-031	SC	LAKE MOULTRIE	FW							
RL-04364	RL04	LAKE MOULTRIE	FW							
RL-05396	RL05	LAKE MOULTRIE	FW							
RL-07018	RL07	LAKE MOULTRIE	FW							
RL-04362	RL04	LAKE MOULTRIE	FW							
RL-08066	RL08	LAKE MOULTRIE	FW							
SC-034	SC	DUCK POND CK	FW							
RL-02454/ RL-08050	RL02	LAKE MOULTRIE	FW							
ST-037/ SC-030/ RL-08034/ RL-12055/ RL-13087	INT	LAKE MOULTRIE	FW							
RL-07014	RL07	LAKE MOULTRIE	FW							
RL-05400	RL05	LAKE MOULTRIE	FW							
RL-06450	RL06	LAKE MOULTRIE	FW							
SC-046	SC	LAKE MOULTRIE	FW							
SC-032	SC	LAKE MOULTRIE	FW							
03050201-02										
ST-007	CS	WALKER SWAMP	FW							
CSTL-113	INT	WADBOO SWAMP	FW							
03050201-03										
CSTL-123	INT	E BR COOPER RVR	FW							

Appendix B. Cooper River Basin

STATION NUMBER	TYPE	WATERBODY NAME	CLASS	GEO MEAN	BACT N	BACT EXC.	BACT %	MEAN EXC.	TRENDS (94-2008) BACT	N	MAG
03050201-01											
CSTL-079/ SC-025	CS	DIVERSION CANAL	FW	6	52	1	1.923	440	NS	70	0
SC-043	SC	UNNAMED TRIB	FW	50	49	6	12.25	718.333			
SC-026	SC	UNNAMED TRIB	FW	183	8	4	50	575			
SC-027	SC	LAKE MOULTRIE	FW	1	46	0	0				
SC-028	SC	LAKE MOULTRIE	FW	1	47	0	0				
RL-07022	RL07	LAKE MOULTRIE	FW	1	7	0	0				
RL-04462	RL04	LAKE MOULTRIE	FW	1	11	0	0				
RL-07030	RL07	LAKE MOULTRIE	FW	2	8	0	0				
SC-031	SC	LAKE MOULTRIE	FW	2	49	0	0				
RL-04364	RL04	LAKE MOULTRIE	FW	1	11	0	0				
RL-05396	RL05	LAKE MOULTRIE	FW	1	10	0	0				
RL-07018	RL07	LAKE MOULTRIE	FW	1	7	0	0				
RL-04362	RL04	LAKE MOULTRIE	FW	1	11	0	0				
RL-08066	RL08	LAKE MOULTRIE	FW	1	9	0	0				
SC-034	SC	DUCK POND CK	FW	139	9	1	11.11	780			
RL-02454/ RL-08050	RL02	LAKE MOULTRIE	FW	12	10	0	0				
ST-037/ SC-030/ RL-08034/ RL-12055/ RL-13087	INT	LAKE MOULTRIE	FW	2	53	0	0				
RL-07014	RL07	LAKE MOULTRIE	FW	2	7	0	0				
RL-05400	RL05	LAKE MOULTRIE	FW	2	12	0	0				
RL-06450	RL06	LAKE MOULTRIE	FW	2	12	0	0				
SC-046	SC	LAKE MOULTRIE	FW	4	47	0	0				
SC-032	SC	LAKE MOULTRIE	FW	3	51	0	0				
03050201-02											
ST-007	CS	WALKER SWAMP	FW	99	11	0	0		NS	51	-5.607
CSTL-113	INT	WADBOO SWAMP	FW	141	59	3	5.085	633.333	NS	98	-2.75
03050201-03											
CSTL-123	INT	E BR COOPER RVR	FW	25	56	0	0		NS	81	-1.208

STATION NUMBER	TYPE	WATERBODY NAME	CLASS	CD N	CD EXC.	CD %	MEAN EXC.	CR N	CR EXC.	CR %	MEAN EXC.	CU N	CU EXC.	CU %	MEAN EXC.
03050201-01															
CSTL-079/ SC-025	CS	DIVERSION CANAL	FW	40	0	0		41	0	0		41	0	0	
SC-043	SC	UNNAMED TRIB	FW	30	0	0		31	0	0		31	2	6.5	15.5
SC-026	SC	UNNAMED TRIB	FW	5	0	0		5	0	0		5	0	0	
SC-027	SC	LAKE MOULTRIE	FW	24	0	0		25	0	0		25	0	0	
SC-028	SC	LAKE MOULTRIE	FW	25	0	0		26	0	0		26	0	0	
RL-07022	RL07	LAKE MOULTRIE	FW	12	1	8.3	47	13	0	0		13	0	0	
RL-04462	RL04	LAKE MOULTRIE	FW												
RL-07030	RL07	LAKE MOULTRIE	FW	12	0	0		13	0	0		13	0	0	
SC-031	SC	LAKE MOULTRIE	FW	27	0	0		28	0	0		28	0	0	
RL-04364	RL04	LAKE MOULTRIE	FW												
RL-05396	RL05	LAKE MOULTRIE	FW												
RL-07018	RL07	LAKE MOULTRIE	FW	10	0	0		11	0	0		11	0	0	
RL-04362	RL04	LAKE MOULTRIE	FW												
RL-08066	RL08	LAKE MOULTRIE	FW	12	0	0		12	0	0		12	0	0	
SC-034	SC	DUCK POND CK	FW	5	0	0		5	0	0		5	0	0	
RL-02454/ RL-08050	RL02	LAKE MOULTRIE	FW	11	0	0		11	0	0		11	0	0	
ST-037/ SC-030/ RL-08034/ RL-12055/ RL-13087	INT	LAKE MOULTRIE	FW	39	0	0		40	0	0		40	0	0	
RL-07014	RL07	LAKE MOULTRIE	FW	10	0	0		11	0	0		11	0	0	
RL-05400	RL05	LAKE MOULTRIE	FW												
RL-06450	RL06	LAKE MOULTRIE	FW	14	0	0		14	0	0		14	0	0	
SC-046	SC	LAKE MOULTRIE	FW	26	0	0		27	0	0		27	0	0	
SC-032	SC	LAKE MOULTRIE	FW	28	0	0		29	0	0		29	0	0	
03050201-02															
ST-007	CS	WALKER SWAMP	FW	3	0	0		3	0	0		3	0	0	
CSTL-113	INT	WADBOO SWAMP	FW	12	0	0		12	0	0		12	0	0	
03050201-03															
CSTL-123	INT	E BR COOPER RVR	FW	12	0	0		12	0	0		12	1	8.3	11

Appendix B. Cooper River Basin

STATION NUMBER	TYPE	WATERBODY NAME	CLASS	PB N	PB EXC.	PB %	MEAN EXC.	HG N	HG EXC.	HG %	MEAN EXC.	NI N	NI EXC.	NI %	MEAN EXC.	ZN N	ZN EXC.	ZN %	MEAN EXC.
03050201-01																			
CSTL-079/ SC-025	CS	DIVERSION CANAL	FW	41	0	0		8	0	0		40	0	0		37	0	0	
SC-043	SC	UNNAMED TRIB	FW	31	0	0						30	1	3	24	27	0	0	
SC-026	SC	UNNAMED TRIB	FW	5	0	0						5	0	0		5	0	0	
SC-027	SC	LAKE MOULTRIE	FW	25	0	0						25	0	0		22	0	0	
SC-028	SC	LAKE MOULTRIE	FW	26	0	0						26	0	0		22	0	0	
RL-07022	RL07	LAKE MOULTRIE	FW	13	0	0		3	0	0		13	0	0		12	0	0	
RL-04462	RL04	LAKE MOULTRIE	FW																
RL-07030	RL07	LAKE MOULTRIE	FW	13	0	0		3	0	0		13	0	0		12	0	0	
SC-031	SC	LAKE MOULTRIE	FW	28	0	0						28	0	0		24	0	0	
RL-04364	RL04	LAKE MOULTRIE	FW																
RL-05396	RL05	LAKE MOULTRIE	FW																
RL-07018	RL07	LAKE MOULTRIE	FW	11	0	0		3	0	0		11	0	0		10	0	0	
RL-04362	RL04	LAKE MOULTRIE	FW																
RL-08066	RL08	LAKE MOULTRIE	FW	12	0	0		2	0	0		12	0	0		9	0	0	
SC-034	SC	DUCK POND CK	FW	5	0	0						5	0	0		5	0	0	
RL-02454/ RL-08050	RL02	LAKE MOULTRIE	FW	11	0	0						11	0	0		8	0	0	
ST-037/ SC-030/ RL-08034/ RL-12055/ RL-13087	INT	LAKE MOULTRIE	FW	40	0	0		9	0	0		40	0	0		36	0	0	
RL-07014	RL07	LAKE MOULTRIE	FW	11	0	0		3	0	0		11	0	0		10	0	0	
RL-05400	RL05	LAKE MOULTRIE	FW																
RL-06450	RL06	LAKE MOULTRIE	FW	14	0	0		4	0	0		14	0	0		14	0	0	
SC-046	SC	LAKE MOULTRIE	FW	27	0	0						27	0	0		23	0	0	
SC-032	SC	LAKE MOULTRIE	FW	29	0	0						29	0	0		25	0	0	
03050201-02																			
ST-007	CS	WALKER SWAMP	FW	3	0	0		3	0	0		3	0	0		3	0	0	
CSTL-113	INT	WADBOO SWAMP	FW	12	0	0		12	0	0		12	0	0		12	0	0	
03050201-03																			
CSTL-123	INT	E BR COOPER RVR	FW	12	0	0		12	0	0		12	0	0		12	0	0	

STATION				DO	DO	DO	MEAN	TRENDS (94-2008)					
NUMBER	TYPE	WATERBODY NAME	CLASS	N	EXC.	%	EXC.	DO	N	MAG	BOD	N	MAG
03050201-04													
RT-08076	RT08	WANDO RVR TRIB	SFH	11	6	55	4.01						
RT-06012	RT06	TOOMER CK	SFH	12	4	33	4.198						
MD-115	INT	WANDO RVR	SFH	60	17	28	4.394	NS	173	-0.014	NS	159	0
RT-07056	RT07	JOHNFIELD CREEK	SFH	11	2	18	4.61						
RT-052100	RT05	BOONE HALL CK	SFH	13	5	38	4.048						
RO-056092/ RO-10388	RO05	BERESFORD CK	SFH	13	2	15	4.14						
MD-264	INT	WANDO RVR	SFH	54	4	7.4	4.53	NS	84	-0.05	I	81	0
MD-198	CS	WANDO RVR	SFH	10	1	10	4.78	NS	91	0.042	D	94	-0.1
03050201-05													
CSTL-063	CS	WASSAMASSAW SWAMP	FW	10	5	50	3.648	NS	100	-0.047	NS	100	-0.025
CSTL-078	INT	CYPRESS SWAMP	FW	55	31	56	2.74	NS	94	0.025	I	88	0
03050201-06													
CSTL-102/ RS-07037	INT	ASHLEY RVR	FW	55	10	18	4.316	NS	164	0.033	NS	155	0
CSTL-102/ RS-07037	INT	ASHLEY RVR	SA	55	10	18	4.316	NS	164	0.033	NS	155	0
CSTL-043	CS	SAWMILL BRANCH	FW	12	3	25	4.433	NS	61	0.005	D	61	-0.1
RS-05563	RS05	SAWMILL BRANCH	FW	12	1	8.3	4.4						
CSTL-013	INT	DORCHESTER CK	SA	55	9	16	2.991	NS	162	0.002	NS	153	0.004
CSTL-099	CS	EAGLE CK	SB	12	1	8.3	3.58	NS	101	0	D	101	-0.133
MD-049	SPRP	ASHLEY RVR	SA	56	22	39	4.191	NS	164	0.018	NS	157	0
MD-246	CS	CHURCH CK	SA	11	1	9.1	3.19	I	96	0.071	D	96	-0.1
MD-135	CS	ASHLEY RVR	SA	11	0	0		I	59	0.136	NS	59	-0.022
MD-052	INT	ASHLEY RVR	SA	56	10	18	4.56	I	163	0.038	I	155	0.011
MD-020	CS	WAPPOO CK	SB	9	0	0		NS	91	0.043	D	96	-0.15
MD-034	CS	ASHLEY RVR	SA	9	1	11	4.45	NS	91	0.05	D	94	-0.133
RT-052098	RT05	JAMES ISLAND CK	SA	13	6	46	4.267						
03050201-07													
CSTL-062/ SC-033	INT	TAIL RACE CANAL BELOW LAKE MOULTRIE	FW	57	0	0		NS	77	0.006	D	77	-0.1
RT-042070	RT04	TRIB TO THE COOPER RVR	SB	13	0	0							
CSTL-085	INT	COOPER RVR	FW	57	7	12	4.25	D	126	-0.07	I	115	0.03
MD-217	CS	DURHAM CK	FW	11	0	0		I	101	0.099	D	99	-0.08
MD-240	CS	FOSTER CK	FW	11	9	82	2.069	NS	101	-0.037	D	100	-0.1
CSTL-124	INT	LAKE, BACK RIVER RESERVOIR	FW	58	12	21	4.072	I	91	0.172	I	83	0
MD-152	CS	COOPER RVR	FW	11	2	18	3.765	NS	93	0.02	D	91	-0.05
MD-152	CS	COOPER RVR	SB	11	1	9.1	3.06	NS	93	0.02	D	91	-0.05
MD-043	SPRP	COOPER RVR	SB	56	1	1.8	3.58	NS	160	0.001	I	150	0.058

STATION				pH	pH	pH	MEAN	TRENDS (94-2008)			TURB	TURB	TURB	MEAN	TRENDS (94-2008)		
NUMBER	TYPE	WATERBODY NAME	CLASS	N	EXC.	%	EXC.	PH	N	MAG	N	EXC.	%	EXC.	TURB	N	MAG
03050201-04																	
RT-08076	RT08	WANDO RVR TRIB	SFH	13	1	7.7	8.67				13	0	0				
RT-06012	RT06	TOOMER CK	SFH	9	1	11	6.44				12	0	0				
MD-115	INT	WANDO RVR	SFH	58	0	0		D	171	-0.018	60	0	0		D	170	-0.189
RT-07056	RT07	JOHNFIELD CREEK	SFH	13	0	0					13	1	7.692	27			
RT-052100	RT05	BOONE HALL CK	SFH	13	0	0					13	1	7.692	28			
RO-056092/ RO-10388	RO05	BERESFORD CK	SFH	13	0	0					13	0	0				
MD-264	INT	WANDO RVR	SFH	54	1	1.9	8.89	NS	84	-0.014	59	1	1.695	32	NS	93	0.122
MD-198	CS	WANDO RVR	SFH	12	0	0		NS	93	-0.002	12	0	0		D	92	-0.16
03050201-05																	
CSTL-063	CS	WASSAMASSAW SWAMP	FW	10	0	0		I	100	0.019	11	0	0		D	101	-0.5
CSTL-078	INT	CYPRESS SWAMP	FW	56	1	1.8	8.89	I	95	0.042	59	2	3.39	62	NS	100	-0.092
03050201-06																	
CSTL-102/ RS-07037	INT	ASHLEY RVR	FW	56	1	1.8	8.77	I	165	0.041	59	1	1.695	58	NS	168	0
CSTL-102/ RS-07037	INT	ASHLEY RVR	SA	56	3	5.4	7.173	I	165	0.041	59	12	20.34	33.083	NS	168	0
CSTL-043	CS	SAWMILL BRANCH	FW	12	0	0		I	61	0.07	12	1	8.333	69	I	61	0.833
RS-05563	RS05	SAWMILL BRANCH	FW	12	1	8.3	8.88				12	1	8.333	121			
CSTL-013	INT	DORCHESTER CK	SA	56	5	8.9	8.8	I	163	0.018	59	8	13.56	38.625	D	165	-0.17
CSTL-099	CS	EAGLE CK	SB	12	0	0		I	101	0.033	12	3	25	32.333	NS	100	0.125
MD-049	SPRP	ASHLEY RVR	SA	55	0	0		NS	162	-0.002	59	33	55.93	43.97	D	169	-0.429
MD-246	CS	CHURCH CK	SA	5	0	0		NS	91	0.012	12	1	8.333	35	D	95	-1.622
MD-135	CS	ASHLEY RVR	SA	5	0	0		NS	54	-0.005	12	0	0		NS	58	-0.317
MD-052	INT	ASHLEY RVR	SA	48	0	0		D	154	-0.018	59	1	1.695	32	D	166	-0.208
MD-020	CS	WAPPOO CK	SB	11	0	0		D	94	-0.014	12	0	0		NS	95	0.164
MD-034	CS	ASHLEY RVR	SA	11	0	0		NS	94	-0.003	12	1	8.333	45	NS	94	0.07
RT-052098	RT05	JAMES ISLAND CK	SA	12	0	0					13	0	0				
03050201-07																	
CSTL-062/ SC-033	INT	TAIL RACE CANAL BELOW LAKE MOULTRIE	FW	89	0	0		I	77	0.128	57	0	0		NS	77	0
RT-042070	RT04	TRIB TO THE COOPER RVR	SB	12	0	0					13	0	0				
CSTL-085	INT	COOPER RVR	FW	57	0	0		NS	125	-0.021	59	0	0		NS	128	0.03
MD-217	CS	DURHAM CK	FW	11	0	0		I	100	0.049	12	0	0		NS	100	-0.062
MD-240	CS	FOSTER CK	FW	10	0	0		I	100	0.016	11	0	0		D	100	-0.34
CSTL-124	INT	LAKE, BACK RIVER RESERVOIR	FW	56	0	0		NS	89	0.024	59	0	0		NS	94	0
MD-152	CS	COOPER RVR	FW	11	0	0		I	93	0.018	12	0	0		D	93	-0.14
MD-152	CS	COOPER RVR	SB	11	0	0		I	93	0.018	12	1	8.333	26	D	93	-0.14
MD-043	SPRP	COOPER RVR	SB	55	1	1.8	9.23	NS	157	-0.002	58	1	1.724	31	D	161	-0.112

STATION NUMBER	TYPE	WATERBODY NAME	CLASS	TP N	TP EXC.	TP %	MEAN EXC.	TRENDS (94-2008) TP	TRENDS (94-2008) N	TRENDS (94-2008) MAG	TN N	TN EXC.	TN %	MEAN EXC.	TRENDS (94-2008) TN	TRENDS (94-2008) N	TRENDS (94-2008) MAG
03050201-04																	
RT-08076	RT08	WANDO RVR TRIB	SFH														
RT-06012	RT06	TOOMER CK	SFH														
MD-115	INT	WANDO RVR	SFH					D	131	-0.001					D	83	-0.022
RT-07056	RT07	JOHNFIELD CREEK	SFH														
RT-052100	RT05	BOONE HALL CK	SFH														
RO-056092/ RO-10388	RO05	BERESFORD CK	SFH														
MD-264	INT	WANDO RVR	SFH					NS	75	0					NS	42	0
MD-198	CS	WANDO RVR	SFH					D	69	-0.002					D	73	-0.038
03050201-05																	
CSTL-063	CS	WASSAMASSAW SWAMP	FW					D	77	-0.002					NS	50	-0.028
CSTL-078	INT	CYPRESS SWAMP	FW					NS	89	0							
03050201-06																	
CSTL-102/ RS-07037	INT	ASHLEY RVR	FW					I	133	0.004					D	98	-0.032
CSTL-102/ RS-07037	INT	ASHLEY RVR	SA					I	133	0.004					D	98	-0.032
CSTL-043	CS	SAWMILL BRANCH	FW					NS	52	-0.002							
RS-05563	RS05	SAWMILL BRANCH	FW														
CSTL-013	INT	DORCHESTER CK	SA					NS	129	0					D	88	-0.017
CSTL-099	CS	EAGLE CK	SB					I	75	0.021					D	85	-0.049
MD-049	SPRP	ASHLEY RVR	SA					NS	132	0.003					D	141	-0.04
MD-246	CS	CHURCH CK	SA					D	76	-0.011					D	81	-0.057
MD-135	CS	ASHLEY RVR	SA					D	49	-0.007							
MD-052	INT	ASHLEY RVR	SA					NS	130	0					D	124	-0.026
MD-020	CS	WAPPOO CK	SB					NS	71	0					D	78	-0.055
MD-034	CS	ASHLEY RVR	SA					D	69	-0.001					D	73	-0.064
RT-052098	RT05	JAMES ISLAND CK	SA														
03050201-07																	
CSTL-062/ SC-033	INT	TAIL RACE CANAL BELOW LAKE MOULTRIE	FW					NS	114	0	29	0	0		NS	99	-0.006
RT-042070	RT04	TRIB TO THE COOPER RVR	SB														
CSTL-085	INT	COOPER RVR	FW					I	110	0.001					NS	48	-0.022
MD-217	CS	DURHAM CK	FW					NS	79	0					NS	71	-0.005
MD-240	CS	FOSTER CK	FW					NS	77	0					NS	34	-0.008
CSTL-124	INT	LAKE, BACK RIVER RESERVOIR	FW	58	1	2	0.095	I	82	0	50	0	0				
MD-152	CS	COOPER RVR	FW					D	76	-0.002					D	75	-0.01
MD-152	CS	COOPER RVR	SB					D	76	-0.002					D	75	-0.01
MD-043	SPRP	COOPER RVR	SB					D	131	0					D	140	-0.013

STATION					CHL	CHL	CHL	MEAN		TRENDS (94-2008)		
NUMBER	TYPE	WATERBODY NAME	CLASS		N	EXC.	%	EXC.		TSS	N	MAG
03050201-04												
RT-08076	RT08	WANDO RVR TRIB	SFH									
RT-06012	RT06	TOOMER CK	SFH									
MD-115	INT	WANDO RVR	SFH									
RT-07056	RT07	JOHNFIELD CREEK	SFH									
RT-052100	RT05	BOONE HALL CK	SFH									
RO-056092/ RO-10388	RO05	BERESFORD CK	SFH									
MD-264	INT	WANDO RVR	SFH									
MD-198	CS	WANDO RVR	SFH									
03050201-05												
CSTL-063	CS	WASSAMASSAW SWAMP	FW									
CSTL-078	INT	CYPRESS SWAMP	FW									
03050201-06												
CSTL-102/ RS-07037	INT	ASHLEY RVR	FW									
CSTL-102/ RS-07037	INT	ASHLEY RVR	SA									
CSTL-043	CS	SAWMILL BRANCH	FW									
RS-05563	RS05	SAWMILL BRANCH	FW									
CSTL-013	INT	DORCHESTER CK	SA									
CSTL-099	CS	EAGLE CK	SB									
MD-049	SPRP	ASHLEY RVR	SA									
MD-246	CS	CHURCH CK	SA									
MD-135	CS	ASHLEY RVR	SA									
MD-052	INT	ASHLEY RVR	SA									
MD-020	CS	WAPPOO CK	SB									
MD-034	CS	ASHLEY RVR	SA									
RT-052098	RT05	JAMES ISLAND CK	SA									
03050201-07												
CSTL-062/ SC-033	INT	TAIL RACE CANAL BELOW LAKE MOULTRIE	FW									
RT-042070	RT04	TRIB TO THE COOPER RVR	SB									
CSTL-085	INT	COOPER RVR	FW									
MD-217	CS	DURHAM CK	FW									
MD-240	CS	FOSTER CK	FW									
CSTL-124	INT	LAKE, BACK RIVER RESERVOIR	FW		28	0	0					
MD-152	CS	COOPER RVR	FW									
MD-152	CS	COOPER RVR	SB									
MD-043	SPRP	COOPER RVR	SB									

STATION NUMBER	TYPE	WATERBODY NAME	CLASS	GEO MEAN	BACT N	BACT EXC.	BACT %	MEAN EXC.	TRENDS (94-2008) BACT	N	MAG
03050201-04											
RT-08076	RT08	WANDO RVR TRIB	SFH	37	13	0	0				
RT-06012	RT06	TOOMER CK	SFH	22	12	1	8.333	900			
MD-115	INT	WANDO RVR	SFH	15	60	2	3.333	700	NS	169	0
RT-07056	RT07	JOHNFIELD CREEK	SFH	8	13	0	0				
RT-052100	RT05	BOONE HALL CK	SFH	52	13	2	15.39	1050			
RO-056092/ RO-10388	RO05	BERESFORD CK	SFH	14	13	1	7.692	500			
MD-264	INT	WANDO RVR	SFH	7	58	0	0		NS	77	0
MD-198	CS	WANDO RVR	SFH	17	12	0	0		D	90	-0.429
03050201-05											
CSTL-063	CS	WASSAMASSAW SWAMP	FW	58	11	0	0		NS	100	-6
CSTL-078	INT	CYPRESS SWAMP	FW	116	59	7	11.86	880	NS	99	-5.5
03050201-06											
CSTL-102/ RS-07037	INT	ASHLEY RVR	FW	191	59	8	13.56	587.5	NS	166	-1.667
CSTL-102/ RS-07037	INT	ASHLEY RVR	SA	191	59	8	13.56	587.5	NS	166	-1.667
CSTL-043	CS	SAWMILL BRANCH	FW	71	12	0	0		D	61	-47.692
RS-05563	RS05	SAWMILL BRANCH	FW	222	12	5	41.67	1320			
CSTL-013	INT	DORCHESTER CK	SA	140	59	14	23.73	892.857	D	163	-10
CSTL-099	CS	EAGLE CK	SB	416	12	6	50	961.667	NS	100	-7.846
MD-049	SPRP	ASHLEY RVR	SA	182	58	12	20.69	1220	D	168	-4.773
MD-246	CS	CHURCH CK	SA	81	12	0	0		D	95	-14.583
MD-135	CS	ASHLEY RVR	SA	29	12	1	8.333	900	NS	60	-2.5
MD-052	INT	ASHLEY RVR	SA	44	59	4	6.78	775	D	164	-2
MD-020	CS	WAPPOO CK	SB	20	12	0	0		D	95	-3.321
MD-034	CS	ASHLEY RVR	SA	21	12	0	0		D	94	-1
RT-052098	RT05	JAMES ISLAND CK	SA	173	13	2	15.39	1050			
03050201-07											
CSTL-062/ SC-033	INT	TAIL RACE CANAL BELOW LAKE MOULTRIE	FW	13	50	0	0		NS	74	-0.333
RT-042070	RT04	TRIB TO THE COOPER RVR	SB	44	13	0	0				
CSTL-085	INT	COOPER RVR	FW	31	59	0	0		NS	127	-0.2
MD-217	CS	DURHAM CK	FW	41	12	0	0		NS	102	0
MD-240	CS	FOSTER CK	FW	51	11	1	9.091	900	D	101	-3
CSTL-124	INT	LAKE, BACK RIVER RESERVOIR	FW	6	59	0	0		NS	87	0
MD-152	CS	COOPER RVR	FW	58	12	1	8.333	500	NS	94	0
MD-152	CS	COOPER RVR	SB	58	12	1	8.333	500	NS	94	0
MD-043	SPRP	COOPER RVR	SB	27	58	0	0		NS	158	0

STATION NUMBER	TYPE	WATERBODY NAME	CLASS	CD N	CD EXC.	CD %	MEAN EXC.	CR N	CR EXC.	CR %	MEAN EXC.	CU N	CU EXC.	CU %	MEAN EXC.
03050201-04															
RT-08076	RT08	WANDO RVR TRIB	SFH	4	0	0		4	0	0		4	0	0	
RT-06012	RT06	TOOMER CK	SFH	3	0	0		3	0	0		3	0	0	
MD-115	INT	WANDO RVR	SFH	12	0	0		12	0	0		12	0	0	
RT-07056	RT07	JOHNFIELD CREEK	SFH	4	0	0		4	0	0		4	0	0	
RT-052100	RT05	BOONE HALL CK	SFH												
RO-056092/ RO-10388	RO05	BERESFORD CK	SFH												
MD-264	INT	WANDO RVR	SFH	11	0	0		11	0	0		11	0	0	
MD-198	CS	WANDO RVR	SFH	4	0	0		4	0	0		4	0	0	
03050201-05															
CSTL-063	CS	WASSAMASSAW SWAMP	FW	3	0	0		3	0	0		3	0	0	
CSTL-078	INT	CYPRESS SWAMP	FW	11	0	0		11	0	0		11	0	0	
03050201-06															
CSTL-102/ RS-07037	INT	ASHLEY RVR	FW	11	0	0		11	0	0		11	0	0	
CSTL-102/ RS-07037	INT	ASHLEY RVR	SA	11	0	0		11	0	0		11	0	0	
CSTL-043	CS	SAWMILL BRANCH	FW	4	0	0		4	0	0		4	0	0	
RS-05563	RS05	SAWMILL BRANCH	FW												
CSTL-013	INT	DORCHESTER CK	SA	11	0	0		11	0	0		11	0	0	
CSTL-099	CS	EAGLE CK	SB	4	1	25	14	4	0	0		4	1	25	18
MD-049	SPRP	ASHLEY RVR	SA	11	0	0		11	0	0		11	0	0	
MD-246	CS	CHURCH CK	SA	4	0	0		4	0	0		4	1	25	24
MD-135	CS	ASHLEY RVR	SA	4	0	0		4	0	0		4	1	25	20
MD-052	INT	ASHLEY RVR	SA	12	0	0		12	0	0		12	2	17	15
MD-020	CS	WAPPOO CK	SB	4	0	0		4	0	0		4	0	0	
MD-034	CS	ASHLEY RVR	SA	4	0	0		4	0	0		4	0	0	
RT-052098	RT05	JAMES ISLAND CK	SA												
03050201-07															
CSTL-062/ SC-033	INT	TAIL RACE CANAL BELOW LAKE MOULTRIE	FW	41	0	0		42	0	0		42	1	2.4	12
RT-042070	RT04	TRIB TO THE COOPER RVR	SB												
CSTL-085	INT	COOPER RVR	FW	12	0	0		12	0	0		12	1	8.3	12
MD-217	CS	DURHAM CK	FW	4	0	0		4	0	0		4	0	0	
MD-240	CS	FOSTER CK	FW	4	0	0		4	0	0		4	0	0	
CSTL-124	INT	LAKE, BACK RIVER RESERVOIR	FW	12	0	0		12	0	0		12	0	0	
MD-152	CS	COOPER RVR	FW	4	0	0		4	0	0		4	0	0	
MD-152	CS	COOPER RVR	SB	4	0	0		4	0	0		4	0	0	
MD-043	SPRP	COOPER RVR	SB	11	0	0		11	0	0		11	0	0	

STATION NUMBER	TYPE	WATERBODY NAME	CLASS	PB N	PB EXC.	PB %	MEAN EXC.	HG N	HG EXC.	HG %	MEAN EXC.	NI N	NI EXC.	NI %	MEAN EXC.	ZN N	ZN EXC.	ZN %	MEAN EXC.
03050201-04																			
RT-08076	RT08	WANDO RVR TRIB	SFH	4	0	0		4	0	0		4	0	0		4	0	0	
RT-06012	RT06	TOOMER CK	SFH	3	0	0		3	0	0		3	0	0		3	0	0	
MD-115	INT	WANDO RVR	SFH	12	0	0		12	0	0		12	0	0		12	0	0	
RT-07056	RT07	JOHNFIELD CREEK	SFH	4	0	0		4	0	0		4	0	0		4	0	0	
RT-052100	RT05	BOONE HALL CK	SFH																
RO-056092/ RO-10388	RO05	BERESFORD CK	SFH																
MD-264	INT	WANDO RVR	SFH	11	0	0		11	0	0		11	1	9	28	11	0	0	
MD-198	CS	WANDO RVR	SFH	4	0	0		4	0	0		4	0	0		4	1	25	360
03050201-05																			
CSTL-063	CS	WASSAMASSAW SWAMP	FW	3	0	0		3	0	0		3	0	0		3	0	0	
CSTL-078	INT	CYPRESS SWAMP	FW	11	0	0		11	0	0		11	0	0		11	0	0	
03050201-06																			
CSTL-102/ RS-07037	INT	ASHLEY RVR	FW	11	0	0		11	0	0		11	0	0		11	1	9.1	190
CSTL-102/ RS-07037	INT	ASHLEY RVR	SA	11	0	0		11	0	0		11	0	0		11	1	9.1	190
CSTL-043	CS	SAWMILL BRANCH	FW	4	0	0		4	0	0		4	0	0		4	0	0	
RS-05563	RS05	SAWMILL BRANCH	FW																
CSTL-013	INT	DORCHESTER CK	SA	11	0	0		11	0	0		11	0	0		11	0	0	
CSTL-099	CS	EAGLE CK	SB	4	0	0		4	0	0		4	0	0		4	0	0	
MD-049	SPRP	ASHLEY RVR	SA	11	0	0		11	0	0		11	0	0		11	0	0	
MD-246	CS	CHURCH CK	SA	4	0	0		4	0	0		4	0	0		4	0	0	
MD-135	CS	ASHLEY RVR	SA	4	0	0		4	0	0		4	0	0		4	0	0	
MD-052	INT	ASHLEY RVR	SA	12	0	0		12	0	0		12	0	0		12	0	0	
MD-020	CS	WAPPOO CK	SB	4	0	0		4	0	0		4	0	0		4	0	0	
MD-034	CS	ASHLEY RVR	SA	4	0	0		4	0	0		4	0	0		4	0	0	
RT-052098	RT05	JAMES ISLAND CK	SA																
03050201-07																			
CSTL-062/ SC-033	INT	TAIL RACE CANAL BELOW LAKE MOULTRIE	FW	42	0	0		11	0	0		42	0	0		38	1	2.6	16000
RT-042070	RT04	TRIB TO THE COOPER RVR	SB																
CSTL-085	INT	COOPER RVR	FW	12	0	0		12	0	0		12	0	0		12	0	0	
MD-217	CS	DURHAM CK	FW	4	0	0		4	0	0		4	0	0		4	0	0	
MD-240	CS	FOSTER CK	FW	4	0	0		4	0	0		4	0	0		4	0	0	
CSTL-124	INT	LAKE, BACK RIVER RESERVOIR	FW	12	0	0		12	0	0		12	1	8	28	12	0	0	
MD-152	CS	COOPER RVR	FW	4	0	0		4	0	0		4	0	0		4	0	0	
MD-152	CS	COOPER RVR	SB	4	0	0		4	0	0		4	0	0		4	0	0	
MD-043	SPRP	COOPER RVR	SB	11	0	0		11	0	0		11	0	0		11	0	0	

STATION				DO	DO	DO	MEAN	TRENDS (94-2008)					
NUMBER	TYPE	WATERBODY NAME	CLASS	N	EXC.	%	EXC.	DO	N	MAG	BOD	N	MAG
03050201-07 (Cont.)													
RO-06308	RO06	COOPER RVR	SB	12	0	0							
RT-07040	RT07	CLOUTER CREEK	SB	12	0	0							
MD-114	CS	GOOSE CK	FW	10	8	80	1.997	NS	98	0.007	D	98	-0.15
RL-04390/ RL-09070	RL04	LAKE, GOOSE CK RESERVOIR	FW	11	2	18	4.04						
RL-06434	RL06	LAKE, GOOSE CK RESERVOIR	FW	12	2	17	4.335						
RL-08065	RL08	LAKE, GOOSE CK RESERVOIR	FW	12	2	17	4.265						
RL-07017	RL07	LAKE, GOOSE CK RESERVOIR	FW	12	2	17	4.395						
ST-033/ CL-050	CS	LAKE, GOOSE CK RESERVOIR	FW	12	0	0							
RL-05412	RL05	LAKE, GOOSE CK RESERVOIR	FW	12	1	8.3	4.9						
RL-07001	RL07	LAKE, GOOSE CK RESERVOIR	FW	12	0	0							
ST-032/ CL-049	SPRP	LAKE, GOOSE CK RESERVOIR	FW	59	1	1.7	4.71	NS	115	-0.01	NS	102	0
MD-039	INT	GOOSE CK	SB	57	4	7	3.655	NS	169	0.023	NS	157	0
MD-044	CS	COOPER RVR	SB	11	0	0		NS	93	-0.014	D	95	-0.1
RO-046070	RO04	COOPER RVR	SB	13	0	0							
MD-249/ MD-593	CS	FILBIN CK	SB	12	2	17	2.83	NS	46	-0.073	NS	45	0
MD-248	SPRP	COOPER RVR	SB	56	0	0		NS	156	0.02	I	150	0
RO-08352	RO08	COOPER RVR	SB	11	0	0							
MD-045/ RO-11308	INT	COOPER RVR	SB	56	0	0		NS	156	0.018	I	149	0.056
MD-243	CS	SHIPYARD CK	SB	10	0	0		NS	90	0.008	D	93	-0.09
MD-046	CS	COOPER RVR	SB	11	0	0		I	93	0.027	D	93	-0.1
MD-047	CS	TOWN CK, COOPER RVR	SB	11	0	0		I	92	0.042	D	93	-0.133
RO-06304	RO06	COOPER RVR	SB	12	0	0							
MD-071	SPRP	SHEM CK	SB	54	5	9.3	3.344	I	155	0.042	I	148	0.038
RO-07336	RO07	CHARLESTON HARBOR	SB	12	0	0							
MD-247	INT	CHARLESTON HARBOR	SB	55	0	0		I	158	0.056	I	152	0.038
MD-069	INT	ICWW	SB	53	1	1.9	3.9	NS	159	0.03	I	150	0.008
MD-069	INT	ICWW	SFH	53	5	9.4	4.574	NS	159	0.03	I	150	0.008
RO-06304	RO06	COOPER RVR	SB	12	0	0							
RO-046066	RO04	CHARLESTON HARBOR	SB	12	0	0							
MD-165	INT	CHARLESTON HARBOR	SB	56	0	0		NS	164	0.004	I	154	0.025
MD-048	CS	CHARLESTON HARBOR	SB	11	0	0		I	93	0.054	D	94	-0.122
RT-042072	RT04	TRIB TO PARROT POINT CK	SB	10	1	10	3.97						

STATION				pH	pH	pH	MEAN	TRENDS (94-2008)			TURB	TURB	TURB	MEAN	TRENDS (94-2008)		
NUMBER	TYPE	WATERBODY NAME	CLASS	N	EXC.	%	EXC.	PH	N	MAG	N	EXC.	%	EXC.	TURB	N	MAG
03050201-07 (Cont.)																	
RO-06308	RO06	COOPER RVR	SB	9	0	0					12	0	0				
RT-07040	RT07	CLOUTER CREEK	SB	13	0	0					13	0	0				
MD-114	CS	GOOSE CK	FW	10	0	0		NS	96	0.02	11	0	0		D	97	-0.4
RL-04390/ RL-09070	RL04	LAKE, GOOSE CK RESERVOIR	FW	11	0	0					12	0	0				
RL-06434	RL06	LAKE, GOOSE CK RESERVOIR	FW	11	0	0					12	0	0				
RL-08065	RL08	LAKE, GOOSE CK RESERVOIR	FW	12	0	0					12	0	0				
RL-07017	RL07	LAKE, GOOSE CK RESERVOIR	FW	11	0	0					12	0	0				
ST-033/ CL-050	CS	LAKE, GOOSE CK RESERVOIR	FW	11	1	9.1	8.88				12	0	0				
RL-05412	RL05	LAKE, GOOSE CK RESERVOIR	FW	12	1	8.3	5.95				12	0	0				
RL-07001	RL07	LAKE, GOOSE CK RESERVOIR	FW	11	1	9.1	8.85				12	0	0				
ST-032/ CL-049	SPRP	LAKE, GOOSE CK RESERVOIR	FW	57	1	1.8	8.92	D	112	-0.057	60	0	0		NS	114	-0.05
MD-039	INT	GOOSE CK	SB	57	3	5.3	6.393	D	169	-0.01	59	0	0		D	169	-0.305
MD-044	CS	COOPER RVR	SB	12	0	0		NS	95	0.007	12	0	0		D	95	-0.15
RO-046070	RO04	COOPER RVR	SB	12	0	0					13	0	0				
MD-249/ MD-593	CS	FILBIN CK	SB	10	1	10	6.41	D	44	-0.051	12	1	8.333	45	NS	46	-0.183
MD-248	SPRP	COOPER RVR	SB	55	1	1.8	9.3	NS	156	-0.002	59	0	0		D	163	-0.16
RO-08352	RO08	COOPER RVR	SB	13	1	7.7	9.26				13	0	0				
MD-045/ RO-11308	INT	COOPER RVR	SB	55	1	1.8	9.31	NS	156	-0.007	59	0	0		D	162	-0.067
MD-243	CS	SHIPYARD CK	SB	11	0	0		NS	94	0	11	0	0		D	92	-0.117
MD-046	CS	COOPER RVR	SB	12	0	0		D	96	-0.01	12	0	0		D	92	-0.145
MD-047	CS	TOWN CK, COOPER RVR	SB	12	0	0		NS	95	-0.007	12	0	0		D	94	-0.231
RO-06304	RO06	COOPER RVR	SB	9	0	0					12	0	0				
MD-071	SPRP	SHEM CK	SB	45	0	0		D	150	-0.022	57	0	0		NS	159	0
RO-07336	RO07	CHARLESTON HARBOR	SB	6	0	0					13	0	0				
MD-247	INT	CHARLESTON HARBOR	SB	46	1	2.2	8.99	D	150	-0.022	59	2	3.39	28.5	NS	163	0.027
MD-069	INT	ICWW	SB	43	1	2.3	9.2	D	150	-0.021	57	2	3.509	68.5	I	163	0.15
MD-069	INT	ICWW	SFH	43	1	2.3	9.2	D	150	-0.021	57	2	3.509	68.5	I	163	0.15
RO-06304	RO06	COOPER RVR	SB	9	0	0					12	0	0				
RO-046066	RO04	CHARLESTON HARBOR	SB	11	0	0					12	0	0				
MD-165	INT	CHARLESTON HARBOR	SB	47	1	2.1	9.07	D	154	-0.015	59	0	0		D	165	-0.12
MD-048	CS	CHARLESTON HARBOR	SB	5	0	0		D	87	-0.02	12	2	16.67	41.5	NS	94	-0.042
RT-042072	RT04	TRIB TO PARROT POINT CK	SB	9	0	0					10	3	30	38			

STATION NUMBER	TYPE	WATERBODY NAME	CLASS	TP N	TP EXC.	TP %	MEAN EXC.	TRENDS (94-2008) TP	TRENDS (94-2008) N	TRENDS (94-2008) MAG	TN N	TN EXC.	TN %	MEAN EXC.	TRENDS (94-2008) TN	TRENDS (94-2008) N	TRENDS (94-2008) MAG
03050201-07 (Cont.)																	
RO-06308	RO06	COOPER RVR	SB														
RT-07040	RT07	CLOUTER CREEK	SB														
MD-114	CS	GOOSE CK	FW					D	74	-0.012							
RL-04390/ RL-09070	RL04	LAKE, GOOSE CK RESERVOIR	FW														
RL-06434	RL06	LAKE, GOOSE CK RESERVOIR	FW														
RL-08065	RL08	LAKE, GOOSE CK RESERVOIR	FW														
RL-07017	RL07	LAKE, GOOSE CK RESERVOIR	FW														
ST-033/ CL-050	CS	LAKE, GOOSE CK RESERVOIR	FW	11	4	36	0.113				7	0	0				
RL-05412	RL05	LAKE, GOOSE CK RESERVOIR	FW														
RL-07001	RL07	LAKE, GOOSE CK RESERVOIR	FW														
ST-032/ CL-049	SPRP	LAKE, GOOSE CK RESERVOIR	FW	59	21	36	0.135	I	83	0.005	49	1	2	2.035			
MD-039	INT	GOOSE CK	SB					D	136	-0.003					D	130	-0.046
MD-044	CS	COOPER RVR	SB					D	74	-0.002					D	86	-0.019
RO-046070	RO04	COOPER RVR	SB														
MD-249/ MD-593	CS	FILBIN CK	SB												NS	37	-0.022
MD-248	SPRP	COOPER RVR	SB					D	132	-0.001					D	138	-0.019
RO-08352	RO08	COOPER RVR	SB														
MD-045/ RO-11308	INT	COOPER RVR	SB					D	129	-0.001					D	129	-0.015
MD-243	CS	SHIPYARD CK	SB					D	71	-0.002					D	75	-0.036
MD-046	CS	COOPER RVR	SB					D	71	-0.002					D	75	-0.04
MD-047	CS	TOWN CK, COOPER RVR	SB					D	71	-0.002					D	80	-0.034
RO-06304	RO06	COOPER RVR	SB														
MD-071	SPRP	SHEM CK	SB					D	123	-0.001					D	89	-0.029
RO-07336	RO07	CHARLESTON HARBOR	SB														
MD-247	INT	CHARLESTON HARBOR	SB					NS	123	0					D	84	-0.025
MD-069	INT	ICWW	SB					NS	122	0					D	65	-0.025
MD-069	INT	ICWW	SFH					NS	122	0					D	65	-0.025
RO-06304	RO06	COOPER RVR	SB														
RO-046066	RO04	CHARLESTON HARBOR	SB														
MD-165	INT	CHARLESTON HARBOR	SB					D	128	-0.001					D	116	-0.028
MD-048	CS	CHARLESTON HARBOR	SB					NS	66	-0.001					D	66	-0.045
RT-042072	RT04	TRIB TO PARROT POINT CK	SB														

STATION NUMBER	TYPE	WATERBODY NAME	CLASS	CHL N	CHL EXC.	CHL %	MEAN EXC.	TRENDS (94-2008) TSS	TRENDS (94-2008) N	TRENDS (94-2008) MAG
03050201-07 (Cont.)										
RO-06308	RO06	COOPER RVR	SB							
RT-07040	RT07	CLOUTER CREEK	SB							
MD-114	CS	GOOSE CK	FW							
RL-04390/ RL-09070	RL04	LAKE, GOOSE CK RESERVOIR	FW							
RL-06434	RL06	LAKE, GOOSE CK RESERVOIR	FW							
RL-08065	RL08	LAKE, GOOSE CK RESERVOIR	FW							
RL-07017	RL07	LAKE, GOOSE CK RESERVOIR	FW							
ST-033/ CL-050	CS	LAKE, GOOSE CK RESERVOIR	FW	6	1	16.7	48			
RL-05412	RL05	LAKE, GOOSE CK RESERVOIR	FW							
RL-07001	RL07	LAKE, GOOSE CK RESERVOIR	FW							
ST-032/ CL-049	SPRP	LAKE, GOOSE CK RESERVOIR	FW	28	4	14.3	64.455			
MD-039	INT	GOOSE CK	SB							
MD-044	CS	COOPER RVR	SB							
RO-046070	RO04	COOPER RVR	SB							
MD-249/ MD-593	CS	FILBIN CK	SB							
MD-248	SPRP	COOPER RVR	SB							
RO-08352	RO08	COOPER RVR	SB							
MD-045/ RO-11308	INT	COOPER RVR	SB							
MD-243	CS	SHIPYARD CK	SB					D	71	-0.385
MD-046	CS	COOPER RVR	SB							
MD-047	CS	TOWN CK, COOPER RVR	SB							
RO-06304	RO06	COOPER RVR	SB							
MD-071	SPRP	SHEM CK	SB							
RO-07336	RO07	CHARLESTON HARBOR	SB							
MD-247	INT	CHARLESTON HARBOR	SB							
MD-069	INT	ICWW	SB							
MD-069	INT	ICWW	SFH							
RO-06304	RO06	COOPER RVR	SB							
RO-046066	RO04	CHARLESTON HARBOR	SB							
MD-165	INT	CHARLESTON HARBOR	SB							
MD-048	CS	CHARLESTON HARBOR	SB					NS	76	-0.388
RT-042072	RT04	TRIB TO PARROT POINT CK	SB							

STATION NUMBER	TYPE	WATERBODY NAME	CLASS	GEO MEAN	BACT N	BACT EXC.	BACT %	MEAN EXC.	TRENDS (94-2008) BACT	N	MAG
03050201-07 (Cont.)											
RO-06308	RO06	COOPER RVR	SB	27	12	0	0				
RT-07040	RT07	CLOUTER CREEK	SB	36	13	1	7.692	1600			
MD-114	CS	GOOSE CK	FW	66	10	1	10	1300	NS	96	0
RL-04390/ RL-09070	RL04	LAKE, GOOSE CK RESERVOIR	FW	8	12	0	0				
RL-06434	RL06	LAKE, GOOSE CK RESERVOIR	FW	5	12	0	0				
RL-08065	RL08	LAKE, GOOSE CK RESERVOIR	FW	4	12	0	0				
RL-07017	RL07	LAKE, GOOSE CK RESERVOIR	FW	7	12	0	0				
ST-033/ CL-050	CS	LAKE, GOOSE CK RESERVOIR	FW	5	12	0	0				
RL-05412	RL05	LAKE, GOOSE CK RESERVOIR	FW	6	12	0	0				
RL-07001	RL07	LAKE, GOOSE CK RESERVOIR	FW	6	12	0	0				
ST-032/ CL-049	SPRP	LAKE, GOOSE CK RESERVOIR	FW	5	60	0	0		NS	104	0
MD-039	INT	GOOSE CK	SB	230	58	20	34.48	823.5	D	170	-15
MD-044	CS	COOPER RVR	SB	20	12	0	0		D	96	-0.833
RO-046070	RO04	COOPER RVR	SB	18	13	0	0				
MD-249/ MD-593	CS	FILBIN CK	SB	626	12	7	58.33	1400	I	46	38.095
MD-248	SPRP	COOPER RVR	SB	23	59	2	3.39	1050	D	161	-1
RO-08352	RO08	COOPER RVR	SB	23	13	2	15.39	1250			
MD-045/ RO-11308	INT	COOPER RVR	SB	29	59	3	5.085	1133.333	NS	157	0
MD-243	CS	SHIPYARD CK	SB	25	12	1	8.333	1600	D	93	-0.833
MD-046	CS	COOPER RVR	SB	8	12	0	0		D	94	-1.1
MD-047	CS	TOWN CK, COOPER RVR	SB	26	12	0	0		D	94	-1.625
RO-06304	RO06	COOPER RVR	SB	11	12	0	0				
MD-071	SPRP	SHEM CK	SB	81	57	10	17.54	1210	NS	161	-0.737
RO-07336	RO07	CHARLESTON HARBOR	SB	8	13	0	0				
MD-247	INT	CHARLESTON HARBOR	SB	9	59	2	3.39	1250	D	145	-0.236
MD-069	INT	ICWW	SB	10	57	0	0		NS	152	-0.091
MD-069	INT	ICWW	SFH	10	57	0	0		NS	152	-0.091
RO-06304	RO06	COOPER RVR	SB	11	12	0	0				
RO-046066	RO04	CHARLESTON HARBOR	SB	11	12	0	0				
MD-165	INT	CHARLESTON HARBOR	SB	13	59	0	0		D	162	-1.083
MD-048	CS	CHARLESTON HARBOR	SB	6	12	0	0		D	91	-1.2
RT-042072	RT04	TRIB TO PARROT POINT CK	SB	15	10	0	0				

STATION NUMBER	TYPE	WATERBODY NAME	CLASS	CD N	CD EXC.	CD %	MEAN EXC.	CR N	CR EXC.	CR %	MEAN EXC.	CU N	CU EXC.	CU %	MEAN EXC.
03050201-07 (Cont.)															
RO-06308	RO06	COOPER RVR	SB	3	0	0		3	0	0		3	0	0	
RT-07040	RT07	CLOUTER CREEK	SB	4	0	0		4	0	0		4	0	0	
MD-114	CS	GOOSE CK	FW	3	0	0		3	0	0		3	0	0	
RL-04390/ RL-09070	RL04	LAKE, GOOSE CK RESERVOIR	FW												
RL-06434	RL06	LAKE, GOOSE CK RESERVOIR	FW	4	0	0		4	0	0		4	0	0	
RL-08065	RL08	LAKE, GOOSE CK RESERVOIR	FW	4	0	0		4	0	0		4	0	0	
RL-07017	RL07	LAKE, GOOSE CK RESERVOIR	FW	4	0	0		4	0	0		4	0	0	
ST-033/ CL-050	CS	LAKE, GOOSE CK RESERVOIR	FW	4	0	0		4	0	0		4	0	0	
RL-05412	RL05	LAKE, GOOSE CK RESERVOIR	FW												
RL-07001	RL07	LAKE, GOOSE CK RESERVOIR	FW	4	0	0		4	0	0		4	0	0	
ST-032/ CL-049	SPRP	LAKE, GOOSE CK RESERVOIR	FW	12	0	0		12	0	0		12	0	0	
MD-039	INT	GOOSE CK	SB	12	0	0		12	0	0		12	0	0	
MD-044	CS	COOPER RVR	SB	4	0	0		4	0	0		4	0	0	
RO-046070	RO04	COOPER RVR	SB												
MD-249/ MD-593	CS	FILBIN CK	SB	4	0	0		4	0	0		4	0	0	
MD-248	SPRP	COOPER RVR	SB	11	0	0		11	0	0		11	0	0	
RO-08352	RO08	COOPER RVR	SB	4	0	0		4	0	0		4	0	0	
MD-045/ RO-11308	INT	COOPER RVR	SB	11	0	0		11	0	0		11	1	9.1	11
MD-243	CS	SHIPYARD CK	SB	4	0	0		4	0	0		4	0	0	
MD-046	CS	COOPER RVR	SB	4	0	0		4	0	0		4	0	0	
MD-047	CS	TOWN CK, COOPER RVR	SB	4	0	0		4	0	0		4	0	0	
RO-06304	RO06	COOPER RVR	SB	3	0	0		3	0	0		3	0	0	
MD-071	SPRP	SHEM CK	SB	10	0	0		10	0	0		10	1	10	22
RO-07336	RO07	CHARLESTON HARBOR	SB	4	0	0		4	0	0		4	1	25	28
MD-247	INT	CHARLESTON HARBOR	SB	11	0	0		11	0	0		11	0	0	
MD-069	INT	ICWW	SB	11	0	0		11	0	0		11	1	9.1	11
MD-069	INT	ICWW	SFH	11	0	0		11	0	0		11	1	9.1	11
RO-06304	RO06	COOPER RVR	SB	3	0	0		3	0	0		3	0	0	
RO-046066	RO04	CHARLESTON HARBOR	SB												
MD-165	INT	CHARLESTON HARBOR	SB	12	0	0		12	0	0		12	1	8.3	15
MD-048	CS	CHARLESTON HARBOR	SB	4	0	0		4	0	0		4	0	0	
RT-042072	RT04	TRIB TO PARROT POINT CK	SB												

STATION NUMBER	TYPE	WATERBODY NAME	CLASS	PB N	PB EXC.	PB %	MEAN EXC.	HG N	HG EXC.	HG %	MEAN EXC.	NI N	NI EXC.	NI %	MEAN EXC.	ZN N	ZN EXC.	ZN %	MEAN EXC.
03050201-07 (Cont.)																			
RO-06308	RO06	COOPER RVR	SB	3	0	0		3	0	0		3	0	0		3	0	0	
RT-07040	RT07	CLOUTER CREEK	SB	4	0	0		4	0	0		4	0	0		4	0	0	
MD-114	CS	GOOSE CK	FW	3	0	0		3	0	0		3	0	0		3	0	0	
RL-04390/ RL-09070	RL04	LAKE, GOOSE CK RESERVOIR	FW																
RL-06434	RL06	LAKE, GOOSE CK RESERVOIR	FW	4	0	0		4	0	0		4	0	0		4	0	0	
RL-08065	RL08	LAKE, GOOSE CK RESERVOIR	FW	4	0	0		4	0	0		4	0	0		4	0	0	
RL-07017	RL07	LAKE, GOOSE CK RESERVOIR	FW	4	0	0		4	0	0		4	0	0		4	0	0	
ST-033/ CL-050	CS	LAKE, GOOSE CK RESERVOIR	FW	4	0	0		4	0	0		4	0	0		4	1	25	97
RL-05412	RL05	LAKE, GOOSE CK RESERVOIR	FW																
RL-07001	RL07	LAKE, GOOSE CK RESERVOIR	FW	4	0	0		4	0	0		4	0	0		4	0	0	
ST-032/ CL-049	SPRP	LAKE, GOOSE CK RESERVOIR	FW	12	0	0		12	0	0		12	0	0		12	0	0	
MD-039	INT	GOOSE CK	SB	12	0	0		12	0	0		12	0	0		12	0	0	
MD-044	CS	COOPER RVR	SB	4	0	0		4	0	0		4	0	0		4	0	0	
RO-046070	RO04	COOPER RVR	SB																
MD-249/ MD-593	CS	FILBIN CK	SB	4	0	0		4	0	0		4	0	0		4	0	0	
MD-248	SPRP	COOPER RVR	SB	11	0	0		11	0	0		11	0	0		11	0	0	
RO-08352	RO08	COOPER RVR	SB	4	0	0		4	0	0		4	0	0		4	0	0	
MD-045/ RO-11308	INT	COOPER RVR	SB	11	0	0		11	0	0		11	0	0		11	0	0	
MD-243	CS	SHIPYARD CK	SB	4	0	0		4	0	0		4	0	0		4	0	0	
MD-046	CS	COOPER RVR	SB	4	0	0		4	0	0		4	0	0		4	0	0	
MD-047	CS	TOWN CK, COOPER RVR	SB	4	0	0		4	0	0		4	0	0		4	0	0	
RO-06304	RO06	COOPER RVR	SB	3	0	0		3	0	0		3	0	0		3	0	0	
MD-071	SPRP	SHEM CK	SB	10	0	0		10	0	0		10	1	10	24	10	0	0	
RO-07336	RO07	CHARLESTON HARBOR	SB	4	0	0		4	0	0		4	1	25	37	4	0	0	
MD-247	INT	CHARLESTON HARBOR	SB	11	0	0		11	0	0		11	0	0		11	0	0	
MD-069	INT	ICWW	SB	11	0	0		11	0	0		11	0	0		11	0	0	
MD-069	INT	ICWW	SFH	11	0	0		11	0	0		11	0	0		11	0	0	
RO-06304	RO06	COOPER RVR	SB	3	0	0		3	0	0		3	0	0		3	0	0	
RO-046066	RO04	CHARLESTON HARBOR	SB																
MD-165	INT	CHARLESTON HARBOR	SB	12	0	0		12	0	0		12	0	0		12	0	0	
MD-048	CS	CHARLESTON HARBOR	SB	4	0	0		4	0	0		4	0	0		4	0	0	
RT-042072	RT04	TRIB TO PARROT POINT CK	SB																

STATION					DO	DO	DO	MEAN	TRENDS (94-2008)					
NUMBER	TYPE	WATERBODY NAME	CLASS		N	EXC.	%	EXC.	DO	N	MAG	BOD	N	MAG
03050202-02														
MD-121	CS	LOG BRIDGE CK	SFH		12	6	50	3.68	NS	57	-0.002	D	60	-0.067
MD-202	INT	STONO RVR	SFH		56	18	32	4.282	NS	165	-0.034	NS	159	0
RO-07331	RO07	STONO RVR	SFH		11	4	36	3.76						
RT-08068	RT08	WAPPOO CK	SB		9	1	11	3.32						
MD-025	CS	ELLIOTT CUT	SFH		9	3	33	4.643	I	57	0.124	D	58	-0.225
MD-026	CS	STONO RVR	SFH		9	2	22	4.25	NS	98	0.03	D	101	-0.05
RT-052112	RT05	ABBAPOOLA CK	SFH		13	5	38	3.716						
MD-206	INT	STONO RVR	SFH		53	7	13	4.539	D	121	-0.034	I	114	0
RO-046068	RO04	STONO RVR	SFH		10	1	10	4.73						
MD-208	CS	STONO RVR	SFH		9	0	0		NS	57	-0.037	NS	58	-0.05
MD-273/ RT-042073	INT	KIAWAH RVR	SFH		53	13	25	4.462	NS	84	-0.036	I	79	0
MD-207	CS	KIAWAH RVR	SFH		9	1	11	4.89	NS	56	-0.042	NS	57	-0.082
RT-08084	RT08	FOLLY RVR TIDAL FLAT TRIB	SFH		10	5	50	4.348						
MD-130	INT	FOLLY RVR	SFH		53	6	11	4.37	NS	84	0.011	I	79	0
MD-274	INT	FOLLY CK	SFH		53	17	32	4.215	NS	84	-0.074	I	79	0
RT-06020	RT06	CUTOFF REACH	SFH		12	1	8.3	4.6						
RO-08347	RO08	FOLLY RVR	SFH		11	2	18	4.815						

STATION				pH	pH	pH	MEAN	TRENDS (94-2008)			TURB	TURB	TURB	MEAN	TRENDS (94-2008)		
NUMBER	TYPE	WATERBODY NAME	CLASS	N	EXC.	%	EXC.	PH	N	MAG	N	EXC.	%	EXC.	TURB	N	MAG
03050202-02																	
MD-121	CS	LOG BRIDGE CK	SFH	12	0	0		NS	58	0.019	12	1	8.333	29	NS	60	0.423
MD-202	INT	STONO RVR	SFH	57	0	0		D	167	-0.011	60	2	3.333	53	D	172	-0.25
RO-07331	RO07	STONO RVR	SFH	10	0	0					13	0	0				
RT-08068	RT08	WAPPOO CK	SB	10	1	10	8.87				11	1	9.091	52			
MD-025	CS	ELLIOTT CUT	SFH	11	0	0		I	59	0.02	12	0	0		D	58	-0.857
MD-026	CS	STONO RVR	SFH	11	0	0		I	100	0.017	12	0	0		D	101	-0.71
RT-052112	RT05	ABBAPOOLA CK	SFH	12	0	0					13	2	15.39	32.5			
MD-206	INT	STONO RVR	SFH	54	0	0		D	123	-0.011	59	6	10.17	40	NS	128	0.211
RO-046068	RO04	STONO RVR	SFH	10	0	0					11	2	18.18	31.5			
MD-208	CS	STONO RVR	SFH	11	0	0		D	61	-0.023	12	1	8.333	30	NS	60	-0.085
MD-273/ RT-042073	INT	KIAWAH RVR	SFH	54	0	0		NS	84	0.005	59	1	1.695	49	NS	92	0.165
MD-207	CS	KIAWAH RVR	SFH	11	0	0		D	61	-0.027	12	0	0		NS	60	-0.08
RT-08084	RT08	FOLLY RVR TIDAL FLAT TRIB	SFH	11	0	0					12	1	8.333	28			
MD-130	INT	FOLLY RVR	SFH	53	0	0		NS	83	0.003	59	3	5.085	48.667	NS	92	0.3
MD-274	INT	FOLLY CK	SFH	54	0	0		NS	84	0.002	59	6	10.17	32.833	NS	92	0.342
RT-06020	RT06	CUTOFF REACH	SFH	11	0	0					12	1	8.333	26			
RO-08347	RO08	FOLLY RVR	SFH	12	1	8.3	8.59				12	2	16.67	32.5			

STATION					TP	TP	TP	MEAN	TRENDS (94-2008)				TN	TN	TN	MEAN	TRENDS (94-2008)		
NUMBER	TYPE	WATERBODY NAME	CLASS		N	EXC.	%	EXC.	TP	N	MAG		N	EXC.	%	EXC.	TN	N	MAG
03050202-02																			
MD-121	CS	LOG BRIDGE CK	SFH						NS	47	0								
MD-202	INT	STONO RVR	SFH						D	129	-0.003						D	72	-0.047
RO-07331	RO07	STONO RVR	SFH																
RT-08068	RT08	WAPPOO CK	SB																
MD-025	CS	ELLIOTT CUT	SFH						D	48	-0.004								
MD-026	CS	STONO RVR	SFH						D	70	-0.003						D	63	-0.047
RT-052112	RT05	ABBAPOOLA CK	SFH																
MD-206	INT	STONO RVR	SFH						NS	104	0								
RO-046068	RO04	STONO RVR	SFH																
MD-208	CS	STONO RVR	SFH						NS	47	-0.002								
MD-273/ RT-042073	INT	KIAWAH RVR	SFH						I	75	0								
MD-207	CS	KIAWAH RVR	SFH						NS	48	0								
RT-08084	RT08	FOLLY RVR TIDAL FLAT TRIB	SFH																
MD-130	INT	FOLLY RVR	SFH						NS	74	0								
MD-274	INT	FOLLY CK	SFH						NS	77	0								
RT-06020	RT06	CUTOFF REACH	SFH																
RO-08347	RO08	FOLLY RVR	SFH																

STATION NUMBER	TYPE	WATERBODY NAME	CLASS		CHL N	CHL EXC.	CHL %	MEAN EXC.		TRENDS (94-2008) TSS	N	MAG
03050202-02												
MD-121	CS	LOG BRIDGE CK	SFH									
MD-202	INT	STONO RVR	SFH									
RO-07331	RO07	STONO RVR	SFH									
RT-08068	RT08	WAPPOO CK	SB									
MD-025	CS	ELLIOTT CUT	SFH									
MD-026	CS	STONO RVR	SFH									
RT-052112	RT05	ABBAPOOLA CK	SFH									
MD-206	INT	STONO RVR	SFH									
RO-046068	RO04	STONO RVR	SFH									
MD-208	CS	STONO RVR	SFH									
MD-273/ RT-042073	INT	KIAWAH RVR	SFH									
MD-207	CS	KIAWAH RVR	SFH									
RT-08084	RT08	FOLLY RVR TIDAL FLAT TRIB	SFH									
MD-130	INT	FOLLY RVR	SFH									
MD-274	INT	FOLLY CK	SFH									
RT-06020	RT06	CUTOFF REACH	SFH									
RO-08347	RO08	FOLLY RVR	SFH									

STATION NUMBER	TYPE	WATERBODY NAME	CLASS	GEO MEAN	BACT N	BACT EXC.	BACT %	MEAN EXC.	TRENDS (94-2008) BACT	N	MAG
03050202-02											
MD-121	CS	LOG BRIDGE CK	SFH	91	12	1	8.333	900	NS	60	-9.583
MD-202	INT	STONO RVR	SFH	21	59	1	1.695	900	D	170	-2.958
RO-07331	RO07	STONO RVR	SFH	11	13	0	0				
RT-08068	RT08	WAPPOO CK	SB	31	11	0	0				
MD-025	CS	ELLIOTT CUT	SFH	9	12	0	0		D	58	-12.967
MD-026	CS	STONO RVR	SFH	7	12	0	0		D	101	-2
RT-052112	RT05	ABBAPOOLA CK	SFH	37	13	0	0				
MD-206	INT	STONO RVR	SFH	8	59	0	0		NS	103	0
RO-046068	RO04	STONO RVR	SFH	4	11	0	0				
MD-208	CS	STONO RVR	SFH	5	12	0	0		NS	40	0
MD-273/ RT-042073	INT	KIAWAH RVR	SFH	7	59	0	0		NS	69	0
MD-207	CS	KIAWAH RVR	SFH	6	12	0	0		D	41	-0.45
RT-08084	RT08	FOLLY RVR TIDAL FLAT TRIB	SFH	5	12	0	0				
MD-130	INT	FOLLY RVR	SFH	6	59	0	0		NS	73	0
MD-274	INT	FOLLY CK	SFH	3	59	0	0		NS	64	0
RT-06020	RT06	CUTOFF REACH	SFH	3	12	0	0				
RO-08347	RO08	FOLLY RVR	SFH	4	13	0	0				

STATION NUMBER	TYPE	WATERBODY NAME	CLASS	CD N	CD EXC.	CD %	MEAN EXC.	CR N	CR EXC.	CR %	MEAN EXC.	CU N	CU EXC.	CU %	MEAN EXC.
03050202-02															
MD-121	CS	LOG BRIDGE CK	SFH	4	0	0		4	0	0		4	0	0	
MD-202	INT	STONO RVR	SFH	12	0	0		12	0	0		12	1	8.3	14
RO-07331	RO07	STONO RVR	SFH	4	0	0		4	0	0		4	0	0	
RT-08068	RT08	WAPPOO CK	SB	4	0	0		4	0	0		4	0	0	
MD-025	CS	ELLIOTT CUT	SFH	4	0	0		4	0	0		4	0	0	
MD-026	CS	STONO RVR	SFH	4	0	0		4	0	0		4	0	0	
RT-052112	RT05	ABBAPOOLA CK	SFH												
MD-206	INT	STONO RVR	SFH	12	0	0		12	0	0		12	0	0	
RO-046068	RO04	STONO RVR	SFH												
MD-208	CS	STONO RVR	SFH	4	0	0		4	0	0		4	0	0	
MD-273/ RT-042073	INT	KIAWAH RVR	SFH	12	0	0		12	0	0		12	2	17	19
MD-207	CS	KIAWAH RVR	SFH	4	0	0		4	0	0		4	0	0	
RT-08084	RT08	FOLLY RVR TIDAL FLAT TRIB	SFH	4	0	0		4	0	0		4	0	0	
MD-130	INT	FOLLY RVR	SFH	12	0	0		12	0	0		12	0	0	
MD-274	INT	FOLLY CK	SFH	12	0	0		12	0	0		12	0	0	
RT-06020	RT06	CUTOFF REACH	SFH	4	0	0		4	0	0		4	0	0	
RO-08347	RO08	FOLLY RVR	SFH	4	0	0		4	0	0		4	0	0	

STATION NUMBER	TYPE	WATERBODY NAME	CLASS	PB N	PB EXC.	PB %	MEAN EXC.	HG N	HG EXC.	HG %	MEAN EXC.	NI N	NI EXC.	NI %	MEAN EXC.	ZN N	ZN EXC.	ZN %	MEAN EXC.
03050202-02																			
MD-121	CS	LOG BRIDGE CK	SFH	4	0	0		4	0	0		4	0	0		4	0	0	
MD-202	INT	STONO RVR	SFH	12	0	0		12	0	0		12	0	0		12	0	0	
RO-07331	RO07	STONO RVR	SFH	4	0	0		4	0	0		4	0	0		4	0	0	
RT-08068	RT08	WAPPOO CK	SB	4	0	0		4	0	0		4	0	0		4	0	0	
MD-025	CS	ELLIOTT CUT	SFH	4	0	0		4	0	0		4	0	0		4	0	0	
MD-026	CS	STONO RVR	SFH	4	0	0		4	0	0		4	0	0		4	0	0	
RT-052112	RT05	ABBAPOOLA CK	SFH																
MD-206	INT	STONO RVR	SFH	12	0	0		12	0	0		12	0	0		12	0	0	
RO-046068	RO04	STONO RVR	SFH																
MD-208	CS	STONO RVR	SFH	4	0	0		4	0	0		4	0	0		4	0	0	
MD-273/ RT-042073	INT	KIAWAH RVR	SFH	12	0	0		12	0	0		12	0	0		12	0	0	
MD-207	CS	KIAWAH RVR	SFH	4	0	0		4	0	0		4	0	0		4	0	0	
RT-08084	RT08	FOLLY RVR TIDAL FLAT TRIB	SFH	4	0	0		4	0	0		4	0	0		4	0	0	
MD-130	INT	FOLLY RVR	SFH	12	0	0		12	0	0		12	0	0		12	0	0	
MD-274	INT	FOLLY CK	SFH	12	0	0		12	0	0		12	0	0		12	0	0	
RT-06020	RT06	CUTOFF REACH	SFH	4	0	0		4	0	0		4	0	0		4	0	0	
RO-08347	RO08	FOLLY RVR	SFH	4	0	0		4	0	0		4	0	0		4	0	0	

APPENDIX C.

Santee Coastal Frontage Basin

Ambient Water Quality Monitoring Site Descriptions

Station #	Type	Class	Description
03050209-01			
MD-265	INT	SFH/ORW	ALLIGATOR CREEK AT STATE SHELLFISH GROUND
RO-056100	RO-05	ORW	CASINO CREEK, 4.1MI ENE OF MCCLELLANVILLE
MD-266	INT	SFH/ORW	CASINO CREEK AT CLOSURE LINE
RT-07048	RT-07	ORW	LITTLE PAPAS CK, 0.4MI SW OF MUDDY BAY & 0.15MI E OF CON. TO NELLIE CK
03050209-02			
RO-07328	RO-07	SFH	AIWW, 0.4MI ENE OF MOUTH OF JEREMY CREEK
MD-203	P/W	SFH	JEREMY CREEK NEAR BOAT LANDING AT MCCLELLANVILLE TOWN HALL
MD-267	INT	SFH	FIVE FATHOM CREEK AT BULL RIVER
RT-08080	RT-08	SFH	DOE HALL CREEK, 100YDS UPSTREAM OF THE AIWW
MD-250	W	SFH	AWENDAW CREEK AT US 17
MD-268	W/INT	SFH	AWENDAW CREEK AT MARKER #57
RT-07060	RT-07	ORW	VENNING CREEK, 0.7MI FROM MOUTH OF VANDERHORST CREEK
RT-052094	RT-05	ORW	UNNAMED CREEK TO SEWEE BAY, W OF BULLS BAY
MD-269	INT	SFH	SEWEE BAY AT MOORES LANDING
RO-06312	RT-06	SFH	SEWEE BAY, 0.7MI S OF MOORES LANDING
RT-042076	RT-04	ORW	SANTEE PASS ON CAPERS ISLAND, 7.8MI NE OF ISLE OF PALMS
RO-046072	RO-06	SFH	TOOMER CREEK MOUTH AT AIWW
RO-08356	RO-08	SFH	AIWW, 0.3MI BELOW TOOMER CREEK
MD-270	INT	ORW	BULLYARD SOUND AT MARKER #104
RT-042078	RT-04	SFH	UNNAMED TRIB TO DEWEES CK (BETW HAMLIN & COPAHEE SOUNDS)
MD-271	INT	SFH	HAMLIN SOUND
RT-06024	RT-06	SFH	SEVEN REACHES CREEK, 4.7MI S OF WHITEHALL TERRACE
MD-272	INT	SFH	LOWER HAMLIN CREEK AT SITE OF NEW BRIDGE
RO-07340	RO-07	SFH	AIWW, 0.5MI SW OF MOUTH OF HAMLIN CREEK
RT-06008	RT-06	SFH	CONCH CREEK, 1.6MI NNE OF SULLIVANS ISLAND
MD-069	INT	SB/SFH	AIWW AT SC 703, E OF MT. PLEASANT

Groundwater Monitoring Sites

Well #	Class	Aquifer	Location
03050209-02			
AMB-084	GB	SURFICIAL SANDS	MCCLELLANVILLE

Shellfish Monitoring Stations

Station #	Description
03050209-01	
06B-06	ALLIGATOR CREEK AT CAPE ROMAIN HARBOR
06B-06A	NORTH END OF CAPE ROMAIN HARBOR
06B-07	ALLIGATOR CREEK AT MARKER 26
06B-08	CASINO CREEK AT MARKER 26
06B-09	DUPREE CREEK – 500 FT N OF NEW DOCK

Station #	Description
03050209-01 (continued)	
06B-10	AIWW AT MARKER 32
06B-12	ALLIGATOR CREEK STATE SHELLFISH GROUND
06B-15	CASINO CREEK AT CAPE ROMAIN HARBOR
06B-16	CASINO CREEK MIDWAY BETWEEN STATION 19&24 (AT SMALL S.BOUND UNNAMED CREEK ON RIGHT)
06B-17	CONGAREE BOAT CREEK AT TOWER CREEK
06B-18	CONFLUENCE OF DUPREE CREEK AND CLUBHOUSE CREEK
06B-19	CONFLUENCE OF CASINO CREEK AND SHRINE CREEK
06B-19A	CASINO CREEK, MIDWAY BETWEEN STATIONS 06B-19 & 06B-16 AT UNNAMED CREEK
06B-20	1,000 YDS UPSTREAM DUPREE CREEK FROM CLUBHOUSE CREEK
06B-21	CONFLUENCE OF ALLIGATOR CREEK AND RAMHORN CREEK
06B-22	CONFLUENCE OF RAMHORN CREEK AND MILL CREEK
06B-22A	MILL CREEK AT RAMHORN CREEK
06B-23	CONFLUENCE OF SHRINE CREEK AND CONGAREE BOAT CREEK
06B-24	CONFLUENCE OF CASINO CREEK AND CONGAREE BOAT CREEK
06B-25	CONFLUENCE OF HORSEHEAD CREEK AND UNNAMED CREEK AT LOWER END OF HORSEHEAD ISLAND
06B-26	CONFLUENCE OF SHRINE CREEK AND UNNAMED CREEK N. OF MUDDY BAY
06B-27	CONFL. OF FIRST LARGE CREEK ON THE LEFT, WITH CONGAREE BOAT CREEK, TRAVELING SE OF STA.23
07-08	CLUBHOUSE CREEK – ¼ MI N. OF FIVE FATHOM CREEK
07-08A	OYSTER BAY AT MUDDY BAY
07-16	CONFLUENCE OF ROMAIN RIVER AND SANTEE PATH CREEK
03050209-02	
07-01A	VENNING CREEK AT BULLS BAY
07-02	GRAHAM CREEK AT MARKER 64
07-02A	BULLS BAY, 1000 FT FROM GRAHAM CREEK
07-03	AWENDAW CREEK AT MARKER 57
07-04	HARBOR RIVER AT MARKER 48
07-04A	HARBOR RIVER AT BULLS BAY
07-05	TIBWIN CREEK AT MARKER 42
07-06	FIVE FATHOM CREEK AT MARKER 20
07-06A	FIVE FATHOM CREEK AT BULL RIVER
07-09	CONFLUENCE OF DOEHALL CREEK WITH AIWW – N. OF MARKER 46
07-14	DOEHALL CREEK – THRID BEND
07-15	SANDY POINT CREEK – FOURTH BEND
07-17	SECOND SMALL CREEK N. OF MARKER 26 IN FIVE FATHOM CREEK
07-18	MARKER 65 IN AIWW
07-19	AIWW AT CONFLUENCE WITH UNNAMED CREEK, 1.5 MI SW OF GRAHAM CREEK
07-20	GRAHAM CREEK AT BULLS BAY
07-21	AIWW, MIDWAY BETWEEN TIBWIN CREEK AND MATTHEWS CREEK
07-22	TIBWIN CREEK PAST 1ST BEND AT 1ST SMALL CREEK ON RIGHT
08-01	MORGAN CREEK AT NORTHERNMOST CONFLUENCE WITH AIWW – ADJACENT TO MARKER 115
08-02	HAMLIN SOUND
08-03	DEWEES INLET AT AIWW – N. OF MARKER 110
08-04	BULLYARD SOUND - MARKER 104
08-06	MARK BAY - MARKER 90
08-06A	UNNAMED CREEK E OF MARKER #90
08-09	MOORES LANDING DOCK AT MARKER 74
08-10	MARKER 116 N. OF ISLE OF PALMS STP OUTFALL IN AIWW
08-14	DEWEES ISLAND – ¼ MI UP HORSEBEND CREEK
08-16	CONFLUENCE OF SEVEN REACHES AND GRAY BAY
08-17	SW COPAHEE SOUND AT PORCHER BLUFF CREEK
08-18	ONE HALF MI UP CEDAR CREEK FROM DEWEES INLET

Station #	Description
03050209-02 (continued)	
08-19	CONFLUENCE OF TOOMER CREEK AT COPAHEE SOUND
08-20	UPPER REACHES OF WHITESIDE CREEK
08-21	UPPER REACHES OF CLAWSON CREEK
08-22	CONFLUENCE OF CAPERS CREEK AND SANTEE PASS
08-25	PALMETTO POINT CREEK ADJACENT TO MARKER 84
08-27	NORTHERN HAMLIN SOUND
08-28	SUMMERHOUSE CREEK AT BULLS ISLAND FERRY DOCK
08-29	ANDERSON CREEK AT BULLS ISLAND FERRY CHANNEL
09A-01	HAMLIN CREEK AT ITS CONFLUENCE WITH AIWW
09A-02	UPPER END OF HAMLIN CREEK AT POG
09A-03	UPPER END OF SWINTON CREEK
09A-06	INLET CREEK AND GENTIDE CREEK
09A-07	INLET CREEK AT ITS CONFLUENCE WITH AIWW
09A-09	BEN SAWYER BRIDGE
09A-11	END OF 10TH STREET AT HAMLIN CREEK
09A-14	SWINTON CREEK AT ITS CONFLUENCE WITH AIWW
09A-17	CONCH CREEK STATE SHELLFISH GROUND – MT. PLEASANT SIDE
09A-17A	CONCH CREEK STATE SHELLFISH GROUND – SULLIVANS ISLAND SIDE
09A-18	AIWW ADJACENT TO WILD DUNES GOLF COURSE STORM DRAINAGE OUTFALL
09A-19	AIWW AT 25TH STREET – ISLE OF PALMS
09A-20	CONCH CREEK AT LOFTON CREEK
09A-23	UPPER REACHES OF CONCH CREEK
09A-24	UPPER REACHES OF INLET CREEK
09A-25	UPPER REACHES OF SWINTON CREEK
09A-26	HAMLIN CREEK ½ WAY BETWEEN STATIONS 1&2
09A-28	SWINTON CREEK WEST OF AIWW AT SECOND BEND
09A-29	LOWER HAMLIN CREEK AT SITE OF NEW BRIDGE
09A-32	FIRST CREEK ON RIGHT DOWNSTREAM FROM STATION 6
09A-33	FIRST LARGE CREEK UP INLET CREEK FROM STATION 8
09A-36	CONCH CREEK AT ITS CONFLUENCE WITH AIWW
09A-37	LOWER CONCH CREEK AT MARINA CLOSURE ZONE

For further details concerning sampling frequency and parameters sampled, please visit our website at www.scdhec.gov/eqc/admin/html/eqcpubs.html#wqreports for the current State of S.C. Monitoring Strategy.

STATION					DO	DO	DO	MEAN	TRENDS (94-2008)					
NUMBER	TYPE	WATERBODY NAME	CLASS		N	EXC.	%	EXC.	DO	N	MAG	BOD	N	MAG
03050209-01														
MD-265	INT	ALLIGATOR CK	SFH		53	8	15	4.714	NS	85	0.047	I	80	0
RO-056100	RO05	CASINO CK	ORW		12	2	17	3.86						
MD-266	INT	CASINO CK	SFH		54	7	13	4.377	I	86	0.122	I	79	0
RT-07048	RT07	LITTLE PAPAS CK	ORW		11	5	45	3.986						
03050209-02														
RO-07328	RO07	ICWW	SFH		10	4	40	4.285						
MD-829		JEREMY CREEK	SFH											
MD-830		JEREMY CREEK	SFH											
MD-831		JEREMY CREEK	SFH											
MD-832		JEREMY CREEK	SFH											
MD-203	CS	JEREMY CK	SFH		10	3	30	4.51	NS	101	-0.035	NS	103	-0.04
MD-833		JEREMY CREEK	SFH											
MD-267	INT	FIVE FATHOM CK	SFH		54	6	11	4.582	NS	85	0.037	I	80	0
RT-08080	RT08	DOE HALL CK	SFH		7	0	0							
MD-250	CS	AWENDAW CK	SFH		12	4	33	4.3	NS	32	-0.138	NS	31	0.1
MD-837		AWENDAW CREEK	SFH											
MD-836		AWENDAW CREEK	SFH											
MD-835		AWENDAW CREEK	SFH											
MD-834		AWENDAW CREEK	SFH											
MD-268	INT	AWENDAW CK	SFH		52	16	31	4.255	NS	84	0.041	I	80	0
RT-07060	RT07	VENNING CREEK	ORW		11	3	27	4.28						
RT-052094	RT05	UNNAMED CK TO SEWEE BAY	ORW		11	1	9.1	3.21						
MD-269	INT	SEWEE BAY	SFH		53	8	15	4.418	NS	84	0.033	I	81	0
RO-06312	RO06	SEWEE BAY	SFH		13	1	7.7	4.57						
RT-042076	RT04	SANTEE PASS	ORW		10	3	30	3.963						
RO-046072	RO04	TOOMER CK	SFH		10	2	20	4.08						
RO-08356	RO08	ICWW	SFH		11	3	27	4.607						
MD-270	INT	BULLYARD SOUND	ORW		52	2	3.8	4.57	NS	85	0.033	I	82	0
RT-042078/ RT-08088	RT04	TRIB TO DEWEES CK	SFH		21	6	29	4.258						
MD-271	INT	HAMLIN SOUND	SFH		53	6	11	4.385	NS	87	0.055	I	82	0
RT-06024	RT06	SEVEN REACHES CK	SFH		13	3	23	4.817						
MD-272	INT	HAMLIN CK	SFH		53	10	19	4.442	NS	87	0.005	I	80	0.225
RO-07340	RO07	ICWW	SFH		12	1	8.3	4.72						
RT-06008	RT06	CONCH CK	SFH		11	4	36	4.142						
MD-069	INT	ICWW	SB		53	1	1.9	3.9	NS	159	0.03	I	150	0.008
MD-069	INT	ICWW	SFH		53	5	9.4	4.574	NS	159	0.03	I	150	0.008

STATION				pH	pH	pH	MEAN	TRENDS (94-2008)			TURB	TURB	TURB	MEAN	TRENDS (94-2008)		
NUMBER	TYPE	WATERBODY NAME	CLASS	N	EXC.	%	EXC.	PH	N	MAG	N	EXC.	%	EXC.	TURB	N	MAG
03050209-01																	
MD-265	INT	ALLIGATOR CK	SFH	56	0	0		NS	88	0.001	59	18	30.51	44	NS	92	0.5
RO-056100	RO05	CASINO CK	ORW	11	0	0					12	1	8.333	28			
MD-266	INT	CASINO CK	SFH	56	0	0		NS	88	0.007	59	4	6.78	36	NS	92	0.114
RT-07048	RT07	LITTLE PAPAS CK	ORW	13	0	0					13	2	15.39	39			
03050209-02																	
RO-07328	RO07	ICWW	SFH	12	0	0					12	2	16.67	29			
MD-829		JEREMY CREEK	SFH														
MD-830		JEREMY CREEK	SFH														
MD-831		JEREMY CREEK	SFH														
MD-832		JEREMY CREEK	SFH														
MD-203	CS	JEREMY CK	SFH	12	0	0		NS	103	0	12	0	0		NS	103	-0.1
MD-833		JEREMY CREEK	SFH														
MD-267	INT	FIVE FATHOM CK	SFH	56	0	0		NS	86	0.006	59	18	30.51	40.222	NS	92	0.562
RT-08080	RT08	DOE HALL CK	SFH	10	0	0					10	2	20	35.5			
MD-250	CS	AWENDAW CK	SFH	10	1	10	6.4				12	3	25	28.333	NS	32	0.572
MD-837		AWENDAW CREEK	SFH														
MD-836		AWENDAW CREEK	SFH														
MD-835		AWENDAW CREEK	SFH														
MD-834		AWENDAW CREEK	SFH														
MD-268	INT	AWENDAW CK	SFH	55	1	1.8	5.87	NS	87	0.024	59	19	32.2	35.105	NS	92	0.55
RT-07060	RT07	VENNING CREEK	ORW	13	0	0					13	4	30.77	36			
RT-052094	RT05	UNNAMED CK TO SEWEE BAY	ORW	10	0	0					12	2	16.67	37.5			
MD-269	INT	SEWEE BAY	SFH	55	0	0		NS	86	0.002	59	3	5.085	29.667	NS	92	0.2
RO-06312	RO06	SEWEE BAY	SFH	12	0	0					13	0	0				
RT-042076	RT04	SANTEE PASS	ORW	8	0	0					11	0	0				
RO-046072	RO04	TOOMER CK	SFH	8	0	0					11	0	0				
RO-08356	RO08	ICWW	SFH	12	1	8.3	8.6				13	0	0				
MD-270	INT	BULLYARD SOUND	ORW	51	1	2	8.58	NS	84	0.01	58	4	6.897	31	NS	93	0
RT-042078/ RT-08088	RT04	TRIB TO DEWEES CK	SFH	20	1	5	8.63				24	0	0				
MD-271	INT	HAMLIN SOUND	SFH	53	1	1.9	8.9	NS	86	0.01	59	1	1.695	28	NS	93	0.167
RT-06024	RT06	SEVEN REACHES CK	SFH	12	0	0					13	1	7.692	26			
MD-272	INT	HAMLIN CK	SFH	43	1	2.3	8.95	NS	77	0.008	57	1	1.754	58	NS	91	0.02
RO-07340	RO07	ICWW	SFH	6	0	0					13	0	0				
RT-06008	RT06	CONCH CK	SFH	8	0	0					11	0	0				
MD-069	INT	ICWW	SB	43	1	2.3	9.2	D	150	-0.021	57	2	3.509	68.5	I	163	0.15
MD-069	INT	ICWW	SFH	43	1	2.3	9.2	D	150	-0.021	57	2	3.509	68.5	I	163	0.15

STATION NUMBER	TYPE	WATERBODY NAME	CLASS	TP N	TP EXC.	TP %	MEAN EXC.	TRENDS (94-2008) TP	TRENDS (94-2008) N	TRENDS (94-2008) MAG	TN N	TN EXC.	TN %	MEAN EXC.	TRENDS (94-2008) TN	TRENDS (94-2008) N	TRENDS (94-2008) MAG
03050209-01																	
MD-265	INT	ALLIGATOR CK	SFH					I	76	0.002							
RO-056100	RO05	CASINO CK	ORW														
MD-266	INT	CASINO CK	SFH					NS	76	0							
RT-07048	RT07	LITTLE PAPAS CK	ORW														
03050209-02																	
RO-07328	RO07	ICWW	SFH														
MD-829		JEREMY CREEK	SFH														
MD-830		JEREMY CREEK	SFH														
MD-831		JEREMY CREEK	SFH														
MD-832		JEREMY CREEK	SFH														
MD-203	CS	JEREMY CK	SFH					D	75	-0.002					NS	57	-0.013
MD-833		JEREMY CREEK	SFH														
MD-267	INT	FIVE FATHOM CK	SFH					NS	75	0							
RT-08080	RT08	DOE HALL CK	SFH														
MD-250	CS	AWENDAW CK	SFH					NS	32	0							
MD-837		AWENDAW CREEK	SFH														
MD-836		AWENDAW CREEK	SFH														
MD-835		AWENDAW CREEK	SFH														
MD-834		AWENDAW CREEK	SFH														
MD-268	INT	AWENDAW CK	SFH					NS	76	0							
RT-07060	RT07	VENNING CREEK	ORW														
RT-052094	RT05	UNNAMED CK TO SEWEE BAY	ORW														
MD-269	INT	SEWEE BAY	SFH					NS	76	0							
RO-06312	RO06	SEWEE BAY	SFH														
RT-042076	RT04	SANTEE PASS	ORW														
RO-046072	RO04	TOOMER CK	SFH														
RO-08356	RO08	ICWW	SFH														
MD-270	INT	BULLYARD SOUND	ORW					NS	73	0							
RT-042078/ RT-08088	RT04	TRIB TO DEWEES CK	SFH														
MD-271	INT	HAMLIN SOUND	SFH					NS	75	0							
RT-06024	RT06	SEVEN REACHES CK	SFH														
MD-272	INT	HAMLIN CK	SFH					NS	73	0							
RO-07340	RO07	ICWW	SFH														
RT-06008	RT06	CONCH CK	SFH														
MD-069	INT	ICWW	SB					NS	122	0					D	65	-0.025
MD-069	INT	ICWW	SFH					NS	122	0					D	65	-0.025

STATION					CHL	CHL	CHL	MEAN		TRENDS (94-2008)		
NUMBER	TYPE	WATERBODY NAME	CLASS		N	EXC.	%	EXC.		TSS	N	MAG
03050209-01												
MD-265	INT	ALLIGATOR CK	SFH									
RO-056100	RO05	CASINO CK	ORW									
MD-266	INT	CASINO CK	SFH									
RT-07048	RT07	LITTLE PAPAS CK	ORW									
03050209-02												
RO-07328	RO07	ICWW	SFH									
MD-829		JEREMY CREEK	SFH									
MD-830		JEREMY CREEK	SFH									
MD-831		JEREMY CREEK	SFH									
MD-832		JEREMY CREEK	SFH									
MD-203	CS	JEREMY CK	SFH									
MD-833		JEREMY CREEK	SFH									
MD-267	INT	FIVE FATHOM CK	SFH									
RT-08080	RT08	DOE HALL CK	SFH									
MD-250	CS	AWENDAW CK	SFH									
MD-837		AWENDAW CREEK	SFH									
MD-836		AWENDAW CREEK	SFH									
MD-835		AWENDAW CREEK	SFH									
MD-834		AWENDAW CREEK	SFH									
MD-268	INT	AWENDAW CK	SFH									
RT-07060	RT07	VENNING CREEK	ORW									
RT-052094	RT05	UNNAMED CK TO SEWEE BAY	ORW									
MD-269	INT	SEWEE BAY	SFH									
RO-06312	RO06	SEWEE BAY	SFH									
RT-042076	RT04	SANTEE PASS	ORW									
RO-046072	RO04	TOOMER CK	SFH									
RO-08356	RO08	ICWW	SFH									
MD-270	INT	BULLYARD SOUND	ORW									
RT-042078/ RT-08088	RT04	TRIB TO DEWEES CK	SFH									
MD-271	INT	HAMLIN SOUND	SFH									
RT-06024	RT06	SEVEN REACHES CK	SFH									
MD-272	INT	HAMLIN CK	SFH									
RO-07340	RO07	ICWW	SFH									
RT-06008	RT06	CONCH CK	SFH									
MD-069	INT	ICWW	SB									
MD-069	INT	ICWW	SFH									

STATION NUMBER	TYPE	WATERBODY NAME	CLASS	GEO MEAN	BACT N	BACT EXC.	BACT %	MEAN EXC.	TRENDS (94-2008) BACT	N	MAG
03050209-01											
MD-265	INT	ALLIGATOR CK	SFH	15	58	0	0		I	76	1.333
RO-056100	RO05	CASINO CK	ORW	11	11	0	0				
MD-266	INT	CASINO CK	SFH	6	58	0	0		NS	66	0.333
RT-07048	RT07	LITTLE PAPAS CK	ORW	3	13	0	0				
03050209-02											
RO-07328	RO07	ICWW	SFH	10	12	0	0				
MD-829		JEREMY CREEK	SFH	235	2	1	50	500			
MD-830		JEREMY CREEK	SFH	26	2	0	0				
MD-831		JEREMY CREEK	SFH	7	2	0	0				
MD-832		JEREMY CREEK	SFH	34	2	0	0				
MD-203	CS	JEREMY CK	SFH	11	12	0	0		D	102	-7.352
MD-833		JEREMY CREEK	SFH	20	2	0	0				
MD-267	INT	FIVE FATHOM CK	SFH	4	58	0	0		I	58	0.333
RT-08080	RT08	DOE HALL CK	SFH	19	10	1	10	900			
MD-250	CS	AWENDAW CK	SFH	73	12	0	0		D	32	-18.333
MD-837		AWENDAW CREEK	SFH	7	2	0	0				
MD-836		AWENDAW CREEK	SFH	8	2	0	0				
MD-835		AWENDAW CREEK	SFH	10	2	0	0				
MD-834		AWENDAW CREEK	SFH	4	2	0	0				
MD-268	INT	AWENDAW CK	SFH	21	58	0	0		D	88	-3.714
RT-07060	RT07	VENNING CREEK	ORW	4	13	0	0				
RT-052094	RT05	UNNAMED CK TO SEWEE BAY	ORW	3	11	0	0				
MD-269	INT	SEWEE BAY	SFH	4	58	0	0		NS	74	0
RO-06312	RO06	SEWEE BAY	SFH	3	13	0	0				
RT-042076	RT04	SANTEE PASS	ORW	3	11	0	0				
RO-046072	RO04	TOOMER CK	SFH	2	11	0	0				
RO-08356	RO08	ICWW	SFH	4	13	0	0				
MD-270	INT	BULLYARD SOUND	ORW	3	57	0	0		I	48	0.4
RT-042078/ RT-08088	RT04	TRIB TO DEWEES CK	SFH	5	24	0	0				
MD-271	INT	HAMLIN SOUND	SFH	3	58	0	0		I	59	0
RT-06024	RT06	SEVEN REACHES CK	SFH	4	13	0	0				
MD-272	INT	HAMLIN CK	SFH	9	57	0	0		NS	80	0
RO-07340	RO07	ICWW	SFH	12	13	0	0				
RT-06008	RT06	CONCH CK	SFH	10	11	0	0				
MD-069	INT	ICWW	SB	10	57	0	0		NS	152	-0.091
MD-069	INT	ICWW	SFH	10	57	0	0		NS	152	-0.091

STATION NUMBER	TYPE	WATERBODY NAME	CLASS	CD N	CD EXC.	CD %	MEAN EXC.	CR N	CR EXC.	CR %	MEAN EXC.	CU N	CU EXC.	CU %	MEAN EXC.
03050209-01															
MD-265	INT	ALLIGATOR CK	SFH	12	0	0		12	0	0		12	0	0	
RO-056100	RO05	CASINO CK	ORW												
MD-266	INT	CASINO CK	SFH	12	0	0		12	0	0		12	0	0	
RT-07048	RT07	LITTLE PAPAS CK	ORW	4	0	0		4	0	0		4	0	0	
03050209-02															
RO-07328	RO07	ICWW	SFH	3	0	0		3	0	0		3	0	0	
MD-829		JEREMY CREEK	SFH												
MD-830		JEREMY CREEK	SFH												
MD-831		JEREMY CREEK	SFH												
MD-832		JEREMY CREEK	SFH												
MD-203	CS	JEREMY CK	SFH	4	0	0		4	0	0		4	0	0	
MD-833		JEREMY CREEK	SFH												
MD-267	INT	FIVE FATHOM CK	SFH	12	0	0		12	0	0		12	0	0	
RT-08080	RT08	DOE HALL CK	SFH	4	0	0		4	0	0		4	0	0	
MD-250	CS	AWENDAW CK	SFH	4	0	0		4	0	0		4	0	0	
MD-837		AWENDAW CREEK	SFH												
MD-836		AWENDAW CREEK	SFH												
MD-835		AWENDAW CREEK	SFH												
MD-834		AWENDAW CREEK	SFH												
MD-268	INT	AWENDAW CK	SFH	12	0	0		12	0	0		12	0	0	
RT-07060	RT07	VENNING CREEK	ORW	4	0	0		4	0	0		4	0	0	
RT-052094	RT05	UNNAMED CK TO SEWEE BAY	ORW												
MD-269	INT	SEWEE BAY	SFH	12	0	0		12	0	0		12	0	0	
RO-06312	RO06	SEWEE BAY	SFH	4	0	0		4	0	0		4	0	0	
RT-042076	RT04	SANTEE PASS	ORW												
RO-046072	RO04	TOOMER CK	SFH												
RO-08356	RO08	ICWW	SFH	4	0	0		4	0	0		4	1	25	16
MD-270	INT	BULLYARD SOUND	ORW	12	0	0		12	0	0		12	1	8.3	11
RT-042078/ RT-08088	RT04	TRIB TO DEWEES CK	SFH	4	0	0		4	0	0		4	0	0	
MD-271	INT	HAMLIN SOUND	SFH	13	1	7.7	45	13	0	0		13	1	7.7	61
RT-06024	RT06	SEVEN REACHES CK	SFH	4	0	0		4	0	0		4	0	0	
MD-272	INT	HAMLIN CK	SFH	11	0	0		11	0	0		11	3	27	21.333
RO-07340	RO07	ICWW	SFH	4	0	0		4	0	0		4	0	0	
RT-06008	RT06	CONCH CK	SFH	3	0	0		3	0	0		3	0	0	
MD-069	INT	ICWW	SB	11	0	0		11	0	0		11	1	9.1	11
MD-069	INT	ICWW	SFH	11	0	0		11	0	0		11	1	9.1	11

STATION NUMBER	TYPE	WATERBODY NAME	CLASS	PB N	PB EXC.	PB %	MEAN EXC.	HG N	HG EXC.	HG %	MEAN EXC.	NI N	NI EXC.	NI %	MEAN EXC.	ZN N	ZN EXC.	ZN %	MEAN EXC.
03050209-01																			
MD-265	INT	ALLIGATOR CK	SFH	12	0	0		12	0	0		12	0	0		12	0	0	
RO-056100	RO05	CASINO CK	ORW																
MD-266	INT	CASINO CK	SFH	12	0	0		12	0	0		12	0	0		12	0	0	
RT-07048	RT07	LITTLE PAPAS CK	ORW	4	0	0		4	0	0		4	0	0		4	0	0	
03050209-02																			
RO-07328	RO07	ICWW	SFH	3	0	0		3	0	0		3	0	0		3	0	0	
MD-829		JEREMY CREEK	SFH																
MD-830		JEREMY CREEK	SFH																
MD-831		JEREMY CREEK	SFH																
MD-832		JEREMY CREEK	SFH																
MD-203	CS	JEREMY CK	SFH	4	0	0		4	0	0		4	0	0		4	0	0	
MD-833		JEREMY CREEK	SFH																
MD-267	INT	FIVE FATHOM CK	SFH	12	0	0		12	0	0		12	0	0		12	0	0	
RT-08080	RT08	DOE HALL CK	SFH	4	0	0		4	0	0		4	0	0		4	0	0	
MD-250	CS	AWENDAW CK	SFH	4	0	0		4	0	0		4	0	0		4	0	0	
MD-837		AWENDAW CREEK	SFH																
MD-836		AWENDAW CREEK	SFH																
MD-835		AWENDAW CREEK	SFH																
MD-834		AWENDAW CREEK	SFH																
MD-268	INT	AWENDAW CK	SFH	12	0	0		12	0	0		12	0	0		12	0	0	
RT-07060	RT07	VENNING CREEK	ORW	4	0	0		4	0	0		4	0	0		4	0	0	
RT-052094	RT05	UNNAMED CK TO SEWEE BAY	ORW																
MD-269	INT	SEWEE BAY	SFH	12	0	0		12	0	0		12	0	0		12	0	0	
RO-06312	RO06	SEWEE BAY	SFH	4	0	0		4	0	0		4	0	0		4	0	0	
RT-042076	RT04	SANTEE PASS	ORW																
RO-046072	RO04	TOOMER CK	SFH																
RO-08356	RO08	ICWW	SFH	4	0	0		4	0	0		4	0	0		4	0	0	
MD-270	INT	BULLYARD SOUND	ORW	12	0	0		12	0	0		12	0	0		12	0	0	
RT-042078/ RT-08088	RT04	TRIB TO DEWEES CK	SFH	4	0	0		4	0	0		4	0	0		4	0	0	
MD-271	INT	HAMLIN SOUND	SFH	13	0	0		13	0	0		13	1	8	46	13	0	0	
RT-06024	RT06	SEVEN REACHES CK	SFH	4	0	0		4	0	0		4	1	25	22	4	0	0	
MD-272	INT	HAMLIN CK	SFH	11	0	0		11	0	0		11	1	9	39	11	0	0	
RO-07340	RO07	ICWW	SFH	4	0	0		4	0	0		4	0	0		4	0	0	
RT-06008	RT06	CONCH CK	SFH	3	0	0		3	0	0		3	0	0		3	0	0	
MD-069	INT	ICWW	SB	11	0	0		11	0	0		11	0	0		11	0	0	
MD-069	INT	ICWW	SFH	11	0	0		11	0	0		11	0	0		11	0	0	

APPENDIX D.

Waterbody Index

Waterbody Index

APPENDIX E.

Monitoring Station/Well Index

Monitoring Station/Well Index

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Facility Index

APPENDIX G.

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Facility Permit Number Index

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