

## 03060103-04

(Savannah River/Lake Russell)

### General Description

The South Carolina portion of watershed 03060103-04 (formerly 03060103-030 minus the Rocky River arm) is located in Anderson and Abbeville Counties and consists primarily of the *Savannah River* and its tributaries from the Hartwell Dam to the Richard B. Russell Dam, forming *Lake Richard B. Russell*. This Savannah River watershed extends into Georgia. There are 217,939 acres in the extended watershed; 110,145 acres or 50.5% are outside of South Carolina. The South Carolina portion is within the Piedmont physiographic region. Land use/land cover in the South Carolina portion of the watershed includes: 44.4% forested land, 34.2% agricultural land, 12.3% urban land, 7.2% water, and 1.4% forested wetland (swamp). A map depicting this watershed is found in Appendix B, page B-21.

The Savannah River flows out of the Hartwell Dam and flows into and through Lake Richard B. Russell. Streams flowing into the river from the Georgia side are connoted with an asterisk. Big Generostee Creek (Whitner Creek, Dye Creek, Threemile Creek, Fivemile Creek, Richland Creek, Mountain Creek, Devil Fork Creek, Reedy Creek, Buckingham Creek, Weems Creek) drains into the Savannah River at the top of the watershed, followed by Cedar Creek\* and Little Generostee Creek (East Prong, Canoe Creek, Crooked Creek). Pickens Creek\* and Bond Creek flow into the headwaters of Lake Russell, followed by Coldwater Creek\*, Allen Creek (Bowman Branch, Deal Creek), Van Creek\*, the Rocky River watershed, Beaverdam Creek\*, Calhoun Branch, and Beer Garden Creek (Manor Creek). There are a total of 664.0 stream miles and 17,015.9 acres of lake waters in this extended watershed. The Savannah River, from Lake Hartwell dam to the Lake Russell headwaters is classified TPGT, the remaining streams in the watershed are classified FW.

### Surface Water Quality

<u>Station #</u>	<u>Type</u>	<u>Class</u>	<u>Description</u>
SV-316	W	FW	BIG GENEROSTEE CREEK AT COUNTY ROAD 104
RS-02490	RS02	FW	DEVIL FORK CREEK AT BUSBY RD OFF S-04-22
SV-100	W	FW	LAKE RUSSELL AT SC 181, 6.5 MI SW OF STARR
RL-06441	RL06	FW	LAKE RUSSELL, 5.8 MI WSW OF IVA
RS-05414	RS05	FW	LITTLE GENEROSTEE CREEK AT TINY MCCONELL RD, 4.1 MI SW OF STARR
SV-109	BIO	FW	LITTLE GENEROSTEE CREEK AT SC 184
RL-05409	RL05	FW	LAKE RUSSELL, 3.85 MI WSW OF END OF S-1-169
SV-098	INT	FW	LAKE RUSSELL AT SC 72, 3.1 MI SW CALHOUN FALLS

**Big Generostee Creek (SV-316)** – Aquatic life uses are fully supported and a significant decreasing trend in turbidity suggests improving conditions for this parameter. There is a significant increasing trend in pH. Recreational uses are not supported due to fecal coliform

bacteria excursions; however, a significant decreasing trend in fecal coliform bacteria concentration suggests improving conditions for this parameter.

**Devil Fork Creek (RS-02490)** - Aquatic life uses are fully supported, but recreational uses are not supported due to fecal coliform bacteria excursions.

**Lake Russell** – There are four SCDHEC monitoring stations along Lake Russell (**SV-100, RL-06441, RL-05409, SV-098**) and aquatic life and recreational uses are fully supported at all sites. At the furthest uplake site (**SV-100**), there are significant increasing trends in five-day biochemical oxygen demand and total nitrogen concentration. Although pH excursions occurred at **RL-05409**, due to the small sample size, aquatic life uses are considered to be fully supported. At the furthest downlake site (**SV-098**), there is a significant increasing trend in five-day biochemical oxygen demand. There is a significant increasing trend in pH. Significant decreasing trends in turbidity and total phosphorus concentration suggest improving conditions for these parameters at this site.

**Little Generostee Creek** – There are two SCDHEC monitoring stations along Little Generostee Creek. At the upstream site (**RS-05414**), aquatic life uses are fully supported, but recreational uses are not supported due to fecal coliform bacteria excursions. Aquatic life uses are fully supported at the downstream site (**SV-109**) based on macroinvertebrate community data.

*A fish consumption advisory has been issued by the Department for mercury and includes Lake Russell within this watershed (see advisory p. 84).*

## Groundwater Quality

<u>Well #</u>	<u>Class</u>	<u>Aquifer</u>	<u>Location</u>
AMB-055	GB	SAPROLITE	STARR
AMB-076	GB	PIEDMONT BEDROCK	STARR

All water samples collected from ambient monitoring wells **AMB-055** and **AMB-076** met standards for Class GB groundwater.

## NPDES Program

### Active NPDES Facilities

<i>RECEIVING STREAM FACILITY NAME</i>	<i>NPDES# TYPE</i>
BIG GENEROSTEE CREEK CITY OF ANDERSON/GENEROSTEE CREEK	SC0023752 MAJOR DOMESTIC
BIG GENEROSTEE CREEK SHAW INDUSTRIES GROUP, INC./ANDERSON	SC0000281 MAJOR INDUSTRIAL

EAST PRONG  
TOWN OF IVA/WESTSIDE WWTP B

SC0025828  
MINOR DOMESTIC

MOUNTAIN CREEK  
UNITED UTILITIES/CHAMBERT FOREST SD

SC0024716  
MINOR DOMESTIC

LAKE RUSSELL  
SCPSA/JOHN RAINEY GEN. STA.

SC0048135  
MAJOR INDUSTRIAL

### ***Municipal Separate Storm Sewer Systems (MS4)***

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

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

BIG GENEROSTEE CREEK  
CITY OF ANDERSON  
CITY OF ANDERSON  
CITY OF ANDERSON

SCR030701  
PHASE II  
SMALL MS4

BIG GENEROSTEE CREEK  
UNINCORPORATED AREAS  
ANDERSON COUNTY  
ANDERSON COUNTY

SCR030702  
PHASE II  
SMALL MS4

## **Nonpoint Source Management Program**

### ***Land Disposal Activities***

#### **Landfill Facilities**

***LANDFILL NAME  
FACILITY TYPE***

***PERMIT #  
STATUS***

STARR C & D LANDFILL  
C & D

041001-1201; 041001-1203  
ACTIVE

STARR C & D & LCD LANDFILL  
C & D

041001-1701  
ACTIVE

STARR MUNICIPAL SW LANDFILL  
DOMESTIC

041001-1104  
INACTIVE

SHAW GRADING – THOMPSON SITE  
C & D

042698-1701  
INACTIVE

ANDERSON CO. LANDFILL  
DOMESTIC

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INACTIVE

## **Growth Potential**

There is a moderate to high potential for growth in this watershed, which contains portions of the City of Anderson and the Towns of Starr, Iva, Calhoun Falls, and the Homeland Park community. Anderson is currently one of the largest manufacturing areas in the upstate region. Growth of the manufacturing industry is dependent on infrastructural expansion, which is

dependent on the capacity of existing facilities. Many wastewater treatment facilities have expanded and are able to support future growth.

Projected industrial development in this watershed runs along the US 76 corridor from Anderson to Pendleton, along the SC 81 corridor from Anderson to Starr, and along the western side of Anderson on SC 28. A rail line runs between Iva and Starr to Anderson, another criterion for siting new industry. A residential growth area lies between Lowndesville and Antreville and will be impacted along SC 81 by any future lakefront development in Calhoun Falls, located near the Lake Russell Dam. Calhoun Falls has upgraded their treatment system, replacing the lagoon treatment system, and are better able to support future growth.

## **Watershed Protection and Restoration Strategies**

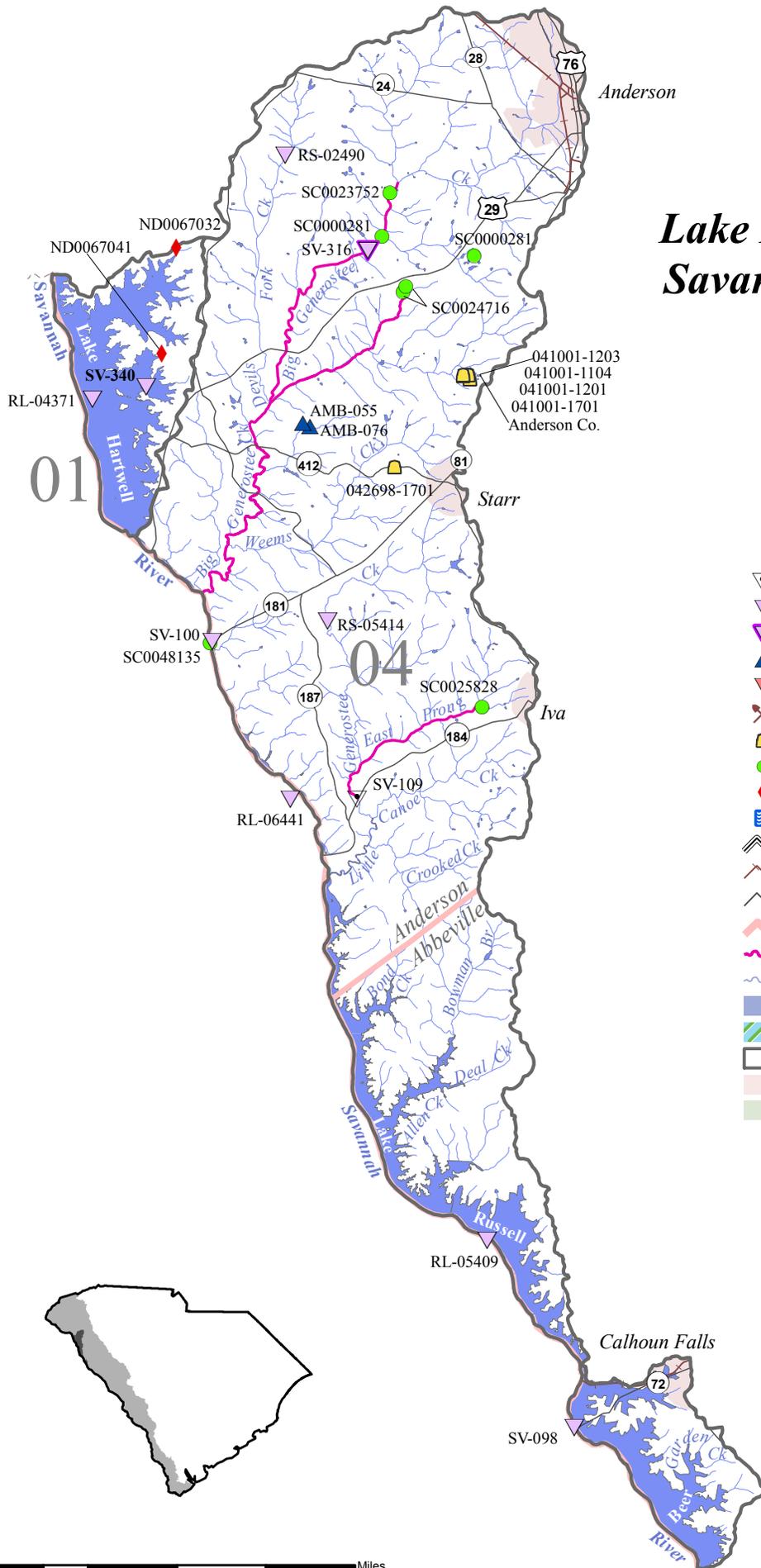
### ***Total Maximum Daily Loads (TMDLs)***

A TMDL was developed by SCDHEC and approved by the EPA for **Big Generostee Creek** at monitoring site SV-316. TMDLs determine the maximum amount of fecal coliform bacteria water bodies can receive from pollution sources and still meet water quality standards. There are two permitted wastewater dischargers in this watershed. About half of the watershed has been designated as part of a MS4. The nonpoint sources that have been determined to be contributors to Big Generostee Creek impairment include urban runoff, livestock depositing manure directly into streams, sanitary sewer overflows (SSOs), and failing septic systems. The TMDL requires a reduction of 80% in the current load to the creek to meet standards.

The nonpoint source component of the Big Generostee Creek TMDL has been implemented using §319 grant funds. Implementation was completed in December 2006. For more information on §319 grants, visit <http://www.scdhec.gov/water> and click on Nonpoint Source Program.

# Lake Hartwell/Lake Russell/ Savannah River Watersheds

## (03060103-01, -04)



- ▽ Macroinvertebrate Stations
- ▽ Water Quality Monitoring Stations
- ▽ Approved TMDL
- ▲ Groundwater Monitoring Stations
- ▽ Special Study Stations
- ⚡ Mines
- 🗑️ Landfills
- NPDES Permits
- ◆ Land Application Permits
- 🏊 Natural Swimming Areas
- ⚡ Interstates
- 🚂 Railroad Lines
- 🛣️ Highways
- 📏 County Lines
- 🌊 Modeled Stream
- 🌊 Stream
- 🟦 Lake
- 🟩 Wetland
- 📏 10-Digit Hydrologic Units
- 🏘️ Cities/Towns
- 🟩 Public Lands

0 1 2 4 6 8 Miles

B-21

