

## 03050109-12

(*Saluda River/Lake Murray*)

### General Description

Watershed 03050109-12 (formerly 03050109-150) is located in Laurens, Newberry, Saluda, and Greenwood Counties and consists primarily of the *Saluda River* and its tributaries from the Lake Greenwood dam to the *Lake Murray* headwaters. The watershed occupies 182,561 acres of the Piedmont region of South Carolina. Land use/land cover in the watershed includes: 54.3% forested land, 31.3% agricultural land, 8.5% urban land, 2.6% forested wetland (swamp), 2.0% water, and 1.3% barren land.

This section of the Saluda River flows out of Lake Greenwood and is joined by Halfway Swamp (Thompsons Creek) and Sharps Branch near the Town of Chappells. Further downstream, Terrapin Creek and Mill Creek enter the river, followed by the Little River watershed, Rocky Branch, and Tosity Creek. Beaverdam Creek (Welch Creek) flows past the Town of Silverstreet and drains into the Saluda River arm of Lake Murray. The Bush River originates near the City of Clinton where it accepts drainage from Shell Creek (Sand Creek). Further downstream, near the City of Newberry, Rocky Creek, Big Beaverdam Creek (Reedy Creek), and Scott Creek flow into the Bush River. The Bush River then accepts drainage from Timothy Creek (Kinards Creek, Dewalt Creek) near the Town of Prosperity and drains into the Saluda River arm of the lake. Big Creek enters the lake just downstream of the confluence of the Saluda and Bush Rivers. There are a total of 668.9 stream miles and 3,797.0 acres of lake waters in this watershed, all classified FW.

### Surface Water Quality

<u>Station #</u>	<u>Type</u>	<u>Class</u>	<u>Description</u>
S-295	W	FW	SALUDA RIVER AT S.C. ROUTE 39
S-047	INT	FW	SALUDA RIVER AT SC 121
S-852	BIO	FW	BEAVERDAM CREEK AT SR 83
S-310	INT	FW	LAKE MURRAY, SALUDA RIVER ARM, 3.8 KM UPSTREAM OF SC 391
S-042	W	FW	BUSH RIVER AT SC 560 S OF JOANNA
S-046	W	FW	BUSH RIVER AT SC ROUTE 34
S-044	W	FW	BUSH RIVER TRIBUTARY AT SC 34, SW OF NEWBERRY
S-851	BIO	FW	BUSH RIVER AT SR 244
S-102	W	FW	BUSH RIVER AT S-36-41, 8.5 MILES S OF NEWBERRY
S-309	SUMM	FW	LAKE MURRAY, BUSH RIVER ARM, 4.6 KM UPSTREAM OF SC 391
S-223	W	FW	LAKE MURRAY, SALUDA RIVER ARM, AT SC 391 (BLACKS BRIDGE)

*Saluda River* - There are two SCDHEC monitoring stations along this section of the Saluda River. At the upstream site (*S-295*), aquatic life and recreational uses are fully supported; however, there are significant increasing trends in five-day biochemical oxygen demand and total nitrogen concentration. At the downstream site (*S-047*), aquatic life uses are fully supported; however, there is a significant increasing trend in five-day biochemical oxygen demand. Recreational uses are partially supported at this site due to fecal coliform bacteria excursions.

*Beaverdam Creek (S-852)* – Aquatic life uses are fully supported based on macroinvertebrate community data.

**Saluda River Arm of Lake Murray** – There are two SCDHEC monitoring stations along the Saluda River Arm of Lake Murray and recreational uses are fully supported at both sites. At the upstream site (*S-310*), aquatic life uses are partially supported due to pH excursions. In addition, there is a significant decreasing trend in dissolved oxygen concentration. There is a significant decreasing trend in pH. At the downstream site (*S-223*), aquatic life uses are fully supported, and a significant decreasing trend in total phosphorus concentration suggests improving conditions for this parameter.

**Bush River** - There are four SCDHEC monitoring stations along the Bush River. At the furthest upstream site (*S-042*), aquatic life uses are not supported due to dissolved oxygen excursions, which are compounded by a significant decreasing trend in dissolved oxygen concentration. Significant decreasing trends in turbidity, total phosphorus concentration, and total nitrogen concentration suggest improving conditions for these parameters. Recreational uses are fully supported at this site and a significant decreasing trend in fecal coliform bacteria concentration suggests improving conditions for this parameter. At the next site downstream (*S-046*), aquatic life uses are fully supported, but recreational uses are not supported due to fecal coliform bacteria excursions. Further downstream (*S-851*), aquatic life uses are fully supported based on macroinvertebrate community data. At the furthest upstream site (*S-102*), aquatic life uses are fully supported; however, there is a significant increasing trend in total phosphorus concentration. Recreational uses are not supported due to fecal coliform bacteria excursions.

**Scott Creek (S-044)** – Aquatic life uses are partially supported due to dissolved oxygen excursions, which are compounded by a significant decreasing trend in dissolved oxygen concentration. Recreational uses are not supported; however, a significant decreasing trend in fecal coliform bacteria concentration suggests improving conditions for this parameter.

**Bush River Arm of Lake Murray (S-309)** – Aquatic life uses are not supported due to total phosphorus and chlorophyll excursions. In addition, there is a significant decreasing trend in dissolved oxygen concentration. There is a significant decreasing trend in pH. Recreational uses are fully supported.

*A fish consumption advisory has been issued by SCDHEC for mercury and includes the Saluda River within this watershed (see advisory p.40).*

## **NPDES Permitted Activities**

### **Active NPDES Facilities**

<i>RECEIVING STREAM FACILITY NAME</i>	<i>NPDES# TYPE</i>
BUSH RIVER CITY OF CLINTON/GARY ST WWTP	SCG645004 MINOR DOMESTIC
BUSH RIVER CITY OF NEWBERRY/BUSH RIVER WWTP	SC0024490 MAJOR DOMESTIC
BUSH RIVER LAURENS COUNTY W&S/CLINTON-JOANNA	SC0037974 MAJOR DOMESTIC

SALUDA RIVER TRIBUTARY CITY OF NEWBERRY WTP	SCG645034 MINOR DOMESTIC
TERRAPIN CREEK HANSON BRICK EAST/MINCHEW PIT	SCG730503 MINOR INDUSTRIAL
HALFWAY SWAMP CREEK TRIBUTARY HANSON BRICK EAST/BAUKNIGHT MINE	SCG730508 MINOR INDUSTRIAL
SALUDA RIVER SATTERFIELD CONSTRUCTION CO./LONG FARM MINE	SCG731106 MINOR INDUSTRIAL

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

<i>RECEIVING STREAM</i>	<i>NPDES#</i>
<i>MUNICIPALITY</i>	<i>MS4 PHASE</i>
<i>RESPONSIBLE PARTY</i>	<i>MS4 SIZE</i>
<i>IMPLEMENTING PARTY</i>	
BUSH RIVER	-----
CITY OF NEWBERRY	PHASE II
CITY OF NEWBERRY	SMALL MS4
CITY OF NEWBERRY	

**Nonpoint Source Permitted Activities**

***Land Disposal Activities***

**Landfill Facilities**

<i>LANDFILL NAME</i>	<i>PERMIT #</i>
<i>FACILITY TYPE</i>	<i>STATUS</i>
CITY OF NEWBERRY LANDFILL	-----
DOMESTIC	INACTIVE
NEWBERRY CO. CC LANDFILL	-----
CC	INACTIVE
CHAMPION BUILDING PRODUCTS	-----
INDUSTRIAL	INACTIVE
CHAMPION FOREST PRODUCTS	362491-1301
C&D	INACTIVE
COOPERS IND. WASTE DUMP	PROPOSED
DOMESTIC	INACTIVE
SOUTHEASTERN RES. REC. INC.	362624-1601
INDUSTRIAL	ACTIVE

***Mining Activities***

<i>MINING COMPANY</i>	<i>PERMIT #</i>
<i>MINE NAME</i>	<i>MINERAL</i>
RICHTEX CORP.	0277-47
HICKS MINE	SHALE
HANSON BRICK EAST	0155-81
BAUKNIGHT MINE	SHALE

HANSEN BRICK COLUMBIA  
MINCHEW PIT

1261-81  
CLAY

## Water Quantity

*WATER USER  
STREAM*

*REGULATED CAPACITY (MGD)  
PUMPING CAPACITY (MGD)*

CITY OF NEWBERRY  
SALUDA RIVER

21.4  
12.6

## Growth Potential

This watershed contains the City of Newberry and portions of the City of Clinton and the Towns of Joanna, Prosperity, and Silverstreet. The growth along the Saluda arm of Lake Murray has been strong and is for the most part residential. The Town of Prosperity is serviced by the Newberry County Water and Sewer Authority, which operates a regional WWTP that discharges into the Broad River Basin via Cannons Creek.

## Watershed Protection and Restoration Strategies

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

TMDLs were developed by SCDHEC and approved by EPA for the **Bush River** at water quality monitoring sites S-046 and S-102. TMDLs determine the maximum amount of fecal coliform bacteria waterbodies can receive and still meet water quality standards. Due to limits in source identification information, water quality data, land use, and other data limitations, this TMDL is only an initial estimate. This TMDL will begin the process of a phased implementation of measures that will ultimately result in achievement of fecal coliform bacteria standards in the Bush River. As implementation progresses, and/or more data are obtained, this TMDL may be revised accordingly to facilitate the most efficient remediation of fecal coliform bacterial pollution to the Bush River. The nonpoint source component of the Bush River TMDL has been implemented using §319 grant funds. Implementation was completed in October 2007. For more information on §319 grants, visit <http://www.scdhec.gov/environment/water/grants.htm#319>.

A TMDL was developed by SCDHEC and approved by EPA for **Scott Creek** at water quality monitoring site S-044. TMDLs determine the maximum amount of fecal coliform bacteria waterbodies can receive and still meet water quality standards. There was no NPDES facility permitted to discharge fecal coliform bacteria in this watershed. At the time the TMDL was developed there were no designated MS4s in the watershed. Possible sources of fecal coliform bacteria in this watershed are leaking sanitary sewers, sanitary sewer overflows (SSOs), urban runoff, agricultural activities, and wildlife. The TMDL requires a reduction of 82% in fecal coliform loading for this stream to meet the recreational use standard.

# Saluda River/Lake Murray Watershed (03050109-12)

- |                                     |                             |
|-------------------------------------|-----------------------------|
| ▽ Macroinvertebrate Stations        | ≡ Interstates               |
| ▽ Water Quality Monitoring Stations | —x— Railroad Lines          |
| ▽ Approved TMDL                     | — Highways                  |
| ▲ Groundwater Monitoring Stations   | — County Lines              |
| ▼ Special Study Stations            | — Modeled Stream            |
| ⚡ Mines                             | — Stream                    |
| 🗑 Landfills                         | ▨ Wetland                   |
| ● NPDES Permits                     | ▩ Lake                      |
| ♦ Land Application Permits          | ▭ 10-Digit Hydrologic Units |
| 🏊 Natural Swimming Areas            | ▭ Cities/Towns              |
|                                     | ▭ Public Lands              |

