

03060106-08
(Savannah River)

General Description

The South Carolina portion of watershed 03060106-08 (formerly 03060106-110) is located in Aiken, Barnwell, and Allendale Counties and consists primarily of the *Savannah River* and its tributaries from Upper Three Runs to Lower Three Runs. This Savannah River watershed extends into Georgia. There are 147,432 acres in this extended watershed; 59,376 acres or 40.3% are outside of South Carolina. The South Carolina portion is within the Sand Hills, Upper Coastal Plain, and Lower Coastal Plain physiographic regions. Land use/land cover in the South Carolina portion of the watershed includes: 58.6% forested land, 29.2% forested wetland (swamp), 6.1% agricultural land, 3.0% urban land, 2.0% water, 0.7% nonforested wetland (marsh), and 0.4% barren land. A map depicting this watershed is found in Appendix C, page C-36.

This section of the Savannah River accepts drainage from its upper reaches, together with Beaverdam Creek, Fourmile Branch, Beaverdam Creek*, Pen Branch (Indian Grave Branch), and Little Beaverdam Creek*. An asterisk connotes a stream entering from the Georgia side of the river. Steel Creek (L-Lake, Meyers Branch) enters the river next, followed by Boggy Gut Branch, Brier Branch (The Bay), Swift Gut, Sweetwater Creek*, Little Sweetwater Creek*, and Cator Hall Lake. There are a total of 315.2 stream miles and 1,844.0 acres of lake waters in this extended watershed, all classified FW. This watershed resides within the federally owned Savannah River Plant.

Surface Water Quality

| <u>Station #</u> | <u>Type</u> | <u>Class</u> | <u>Description</u> |
|------------------|-------------|--------------|---|
| RS-02470 | RS02 | FW | FOURMILE BRANCH AT SRS ROAD A-13 |
| SV-327 | W | FW | STEEL CREEK AT SRS ROAD A |
| SV-367 | INT | FW | SAVANNAH RIVER OFF LITTLE HELL LANDING OFF S-03-368 |

Fourmile Branch (RS-02470) - Aquatic life and recreational uses are fully supported.

Steel Creek (SV-327) - Aquatic life and recreational uses are fully supported; however; there are significant increasing trends in five-day biochemical oxygen demand and fecal coliform bacteria concentration. A significant decreasing trend in total phosphorus concentration suggests improving conditions for this parameter.

Savannah River (SV-367) - Aquatic life and recreational uses are fully supported. Significant increasing trends in dissolved oxygen concentration and decreasing trends in turbidity suggest improving conditions for these parameters. There is a significant increasing trend in pH.

A fish consumption advisory has been issued by the Department for mercury and includes the Savannah River within this watershed (see advisory p. 111).

NPDES Program

Active NPDES Facilities

| <i>RECEIVING STREAM FACILITY NAME</i> | <i>NPDES# TYPE</i> |
|---|-------------------------------|
| INDIAN GRAVE BRANCH USDOE WESTINGHOUSE SRS | SC0000175 MAJOR INDUSTRIAL |
| SAVANNAH RIVER USDOE WESTINGHOUSE SRS | SC0000175 MAJOR INDUSTRIAL |
| FOURMILE BRANCH TRIBUTARY USDOE WESTINGHOUSE SRS | SC0000175 MAJOR INDUSTRIAL |
| FOURMILE BRANCH USDOE WESTINGHOUSE SRS | SC0000175 MAJOR INDUSTRIAL |
| L-LAKE (STEEL CREEK) USDOE WESTINGHOUSE SRS | SC0000175 MAJOR INDUSTRIAL |

Nonpoint Source Management Program

Land Disposal Activities

Land Application Sites

| <i>LAND APPLICATION SYSTEM FACILITY NAME</i> | <i>ND# TYPE</i> |
|--|-------------------------|
| SPRAYFIELDS USDOE WESTINGHOUSE SRS | ND0072125 INDUSTRIAL |

Landfill Activities

| <i>SOLID WASTE LANDFILL NAME FACILITY TYPE</i> | <i>PERMIT # STATUS</i> |
|--|----------------------------|
| SRS 632-G C&D LANDFILL C & D | 065800-1901 ACTIVE |
| SRS BURMA RD C&C LANDFILL C & D | 065800-1901 INACTIVE |
| SRS 200-H SITE INDUSTRIAL | ----- INACTIVE |
| USDOE WESTINGHOUSE SRS C & D | 025800-1901 ACTIVE |

Growth Potential

There is a moderate potential for growth in this watershed, which contains the Savannah River Site. The Savannah River Site, which covers the majority of the watershed, employs 25,000 people from nearby counties and is responsible for the overall growth in proximity to the site. Allendale County has adopted a zoning ordinance that includes River and Streamside Management

Areas that restrict development within 100 feet of a river and 50 feet from perennial streams, which flow directly into the river.

Watershed Protection and Restoration Strategies

Total Maximum Daily Loads (TMDLs)

Portions of the **Savannah Harbor** have been included on the Georgia 303(d) list of impaired waters as impaired for dissolved oxygen. This tidal area is considered, at times, to experience naturally occurring levels of dissolved oxygen (DO) below the Georgia standard. This naturally occurring low DO is further impacted by point source discharges both to the harbor and the Savannah River upstream of the estuarine portion of the river. In 2006, the US Environmental Protection Agency (EPA) finalized a dissolved oxygen TMDL for the system that required a 100% reduction in the loading of oxygen demanding substances being discharged to the system. This essentially required that all discharges to the system below Thurmond Dam cease discharging.

Subsequent to development of this TMDL, the State of Georgia adopted a new DO standard for the harbor. The new Georgia standards allow for a 0.1 mg/L depression in DO levels below natural conditions in naturally low DO waters. This is essentially consistent with the South Carolina standard for the waters it shares with Georgia. EPA, with assistance and input from Georgia, South Carolina and interested stakeholders, is developing a new TMDL based on the new Georgia standard. It is anticipated that the new TMDL, though very restrictive, will allow continued discharge of some oxygen demanding substances to the Savannah River and Harbor. The final TMDL is not expected until 2011.

Savannah River Watershed (03060106-08)

