

STATE OF GEORGIA
REVISED TMDL IMPLEMENTATION PLAN
SAVANNAH RIVER BASIN
Revision 01; June 15, 2007

SEDIMENT (Biota/Habitat Impacted)
0% REDUCTION REQUIRED

Prepared by
The Georgia Department of Natural Resources
Environmental Protection Division
Atlanta, GA

Total Maximum Daily Load (TMDL) implementation plans are platforms for establishing a course of actions to restore the quality of impaired water bodies in a watershed. They are intended as a continuing process that may be revised as new conditions and information warrant. Procedures will be developed to track and evaluate the implementation of the management practices and activities identified in the plans. Once restored, appropriate management practices and activities will be continued to maintain the water bodies. The overall goal of the Plan is to define a set of actions that will help achieve water quality standards in the state of Georgia.

The initial TMDL Implementation Plan was part of the TMDL developed in 2005. This Revision supercedes the initial TMDL Implementation Plan.

This implementation plan is applicable to the following segment in the Savannah River Basin:

Impaired Waterbody	Location	County	Miles/area Impacted
Headstall Creek	U/S Tudor Road to Brier Creek	McDuffie	6

INTRODUCTION

The TMDL process establishes the allowable pollutant loadings or other quantifiable parameters for a water body based on the relationship between pollutant sources and in-stream water quality conditions. This allows water quality-based controls to be developed to reduce pollution and restore and maintain water quality.

Georgia Environmental Protection Division (GA EPD) developed a TMDL in 2005 for sediment for Headstall Creek in the Savannah River Basin due to a "biota/habitat-impacted" designation on Georgia's 2002 Section 303(d) list. The biota/habitat-impacted designation indicates that studies have shown a modification of the biological community, which is generally caused by habitat loss due to stream sedimentation. The narrative sediment standard is to prevent objectionable conditions that interfere with legitimate water uses, as stated in *Georgia's Rules and Regulations for Water Quality Control* Chapter 391-3-6-.03(5)(c):

"All waters shall be free from material related to municipal, industrial, or other discharges which produce turbidity, color, odor or other objectionable conditions which interfere with legitimate water uses."

The listed segment found to be impaired due to sediment has shown, based on the current estimated annual loading, that no reduction in sediment loading is needed to meet water quality standards.

DISCUSSION OF POLLUTANT

Erosion and sedimentation are a major disturbance to stream habitats. Excessive sediment can cause several changes to a stream, such as making the stream shallower and wider, thus affecting the stream's temperature, dissolved oxygen, flow rate and velocity. Excess sediment loads can be detrimental to aquatic life by interfering with photosynthesis, respiration, growth, and reproduction. Sediment can also carry attached nutrients, pesticides, and metals into streams. High turbidity associated with sediment loads also impairs recreational uses and increases the cost of treating drinking water.

POLLUTANT SOURCES

The current loading rate for this segment is below the TMDL. It has been determined that the sediment found in this segment is due to past land use practices and is referred to as "legacy" sediment. It is believed that, if sediment loads are maintained at current levels, this stream will repair itself over time.

PLAN FOR IMPLEMENTATION OF TMDL

Although sediment load reductions are not needed for this segment, compliance with NPDES permits, diligent application of the Erosion and Sedimentation Control Act and local ordinances related to land disturbing activities, and application of best management practices (BMPs) to control sediment delivery

from other activities will be necessary to meet the TMDL for this segment. Management practices that may be used to help maintain average annual sediment loads at current levels include:

- Compliance with NPDES permit limits and requirements;
- Implementation of the Georgia Forestry Commission's BMPs for Forestry;
- Adoption of the National Resource Conservation Service's Conservation Practices;
- Adherence to the Mined Land Use Plan prepared as part of the Surface Mining Permit Application;
- Adoption of proper unpaved road maintenance practices;
- Implementation of Erosion and Sedimentation Control Plans for land disturbing activities;
- Mitigation and prevention of stream bank erosion due to increased streamflow and velocities caused by urban runoff.

MONITORING PLAN

GA EPD has adopted a basin approach to water quality management that divides Georgia's fourteen major river basins into five groups. This approach provides for additional sampling work to focus on one of the five basin groups each year and offers a five year planning and assessment cycle. The Savannah and Ogeechee River Basins were the subjects of focused monitoring in 2002 and will again receive focus monitoring in 2007.

EDUCATION/OUTREACH ACTIVITIES

GA EPD will continue to provide guidance and education to the public on all water quality issues through outreach by the Watershed Protection Branch. Permitted discharges will be regulated through the NPDES permitting process. GA EPD is working with local governments, Regional Development Centers, agricultural and forestry agencies such as the Georgia Department of Agriculture, the Natural Resources Conservation Service, the Georgia Soil and Water Conservation Commission, and the Georgia Forestry Commission to foster implementation of best management practices to address nonpoint sources. Public education efforts will be targeted to stakeholders to provide information regarding the use of best management practices to protect water quality.

REFERENCES

Georgia Rules and Regulations for Water Quality Control, Chapter 391-3-6-.03,
Water Use Classifications and Water Quality Standards,
Revised November 2005.

GAEPD, 2005. Total Maximum Daily Load Evaluation for Headstall Creek in the
Savannah River Basin for Sediment (Biota Impacted). January 2005.