

STATE OF GEORGIA
REVISED TMDL IMPLEMENTATION PLAN
CHATTAHOOCHEE RIVER BASIN

COPPER

Prepared by
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Environmental Protection Division
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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.

This Implementation Plan is applicable to the following segments in the Chattahoochee River Basin:

Impaired Waterbody	Location	Miles/Area Impacted
Orr Creek	U/S Castleberry Rd (Tyson Foods) to Big Creek (Forsyth County)	3
Big Creek	Headwaters to Cheatham Creek (Forsyth County)	2
Park Branch	LaGrange (Troup County)	2
Utoy Creek	Atlanta (Fulton County)	5

INTRODUCTION

The Georgia Environmental Protection Division (GAEPD) has identified four segments in the Chattahoochee River Basin as impaired due to exceedances of the water quality standard for Copper. Big Creek is listed as partially supporting; Orr Creek, Park Branch and Utoy Creek are listed as not supporting their designated use of fishing. The fishing classification, as stated in Georgia's Rules and Regulations for Water Quality Control Chapter 391-3-3-.(6)(c), is established to protect the "propagation of Fish, Shellfish, Game and Other Aquatic Life; secondary contact recreation in and on the water; or for any other use requiring water of a lower quality."

Orr Creek and Big Creek Watersheds are located in Forsyth County, near the City of Cumming. This area is in the northern part of Metropolitan Atlanta. Orr Creek is a tributary to Big Creek. The area in both watersheds is developing and predominantly urban. Utoy Creek watershed is located in Metropolitan Atlanta, Fulton County. The land use for the Utoy Creek drainage basin is predominantly urban and highly developed.

The Orr Creek and Big Creek listings resulted from data collected by GAEPD during a special investigation in the vicinity of the Tyson Foods discharge in Forsyth County from July through December 2000. The Park Branch listing was also the result of samples collected by GAEPD in 2000. The Utoy Creek listing resulted from the water quality assessment of data collected at Great Southwest Parkway near Atlanta in 2001.

DISCUSSION OF POLLUTANT

Copper is a naturally occurring element that is found in various compounds with other elements. The metallic form of copper has a number of common uses ranging from water pipes, coinage, and electrical wiring & components. Copper salts such as copper sulfate are used in agriculture as a fungicide.

POLLUTANT SOURCES

The potential sources of copper in these watersheds are from both point sources and nonpoint sources. Title IV of the Clean Water Act (CWA) establishes the National Pollutant Discharges Elimination System (NPDES) permit program. The NPDES permit program requires permits for the discharge of “pollutants” from any “point source” into “waters of the United States” (40 CFR 122.1). There are two categories of NPDES permits: 1) municipal and industrial wastewater treatment facilities and 2) regulated storm water discharges. Industrial and municipal wastewater treatment facilities have NPDES permits with effluent limits. These permit limits are either based on federal and state effluent guidelines or on water quality standards. Municipal and industrial wastewater treatment facilities’ discharges may be contributing copper to the receiving waters. There are four NPDES permitted discharges identified in these watersheds. They are listed in the Table below.

Facility Name	Permit Number	Average or Permitted Flow	Receiving Waters
City of Cumming WPCP	GA0046019	8 MGD	Big Creek
Tyson Foods	GA0001074	1.4 MGD	Orr Creek
East Point WTP	GAG640000	Backwash	Utoy Creek
Metalplate Galvanizing	GA0037907	0.0001 MGD	Utoy Creek

Storm water NPDES permits establish controls. Currently, regulated storm water discharges include those associated with industrial activities, including construction sites five acres or greater, and large and medium municipal separate storm sewer systems (MS4s). There are numerous industrial and construction sites in these watersheds. It is unknown at this time whether these facilities are contributing copper to the watershed.

Storm water discharges from MS4s are very diverse in pollutant loadings and frequency of discharge. All cities and counties within Georgia with a population greater than 100,000 at the time of the 1990 Census are permitted for storm water discharge. This includes 60 permittees, 45 of which are located in the greater Atlanta metro area. MS4 permits prohibit non-storm water discharges in the storm sewer systems, and require controls to reduce the discharge of pollutants to the maximum extent practicable, including the use of management practices, control techniques and systems, and design and engineering methods. It is unknown whether MS4s are contributing copper to the watersheds.

There are four permitted landfills in the watersheds of the listed segments. It is unknown whether these are contributing copper to the watershed at this time. It is unknown whether any nonpoint sources potentially cause or contribute to exceedances of the water quality standard for copper. There is no data available that indicated any specific nonpoint source of copper.

PLAN FOR IMPLEMENTATION OF TMDL

Through its NPDES permitting process, GAEPD will determine whether the permitted dischargers to the listed watersheds have a reasonable potential of discharging copper levels equal to or greater than the allocated load. The results of this reasonable potential analysis will determine the specific type of requirements in an individual facility's NPDES permit. EPD will use its EPA-approved 2001 NPDES Reasonable Potential Procedures to determine whether monitoring requirements or effluent limitations are necessary. If effluent limitations or monitoring requirements are determined to be necessary for any or all of these facilities, it is recommended that concentration limits or concentration monitoring requirements be imposed in addition to any loading limits or monitoring requirements.

EPD will also encourage local governments and stakeholders to continue implementing management practices and activities that are already in place, including watershed assessments of pollutant sources and controls as well as water quality sampling and monitoring.

MONITORING PLAN

The GAEPD 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 Chattahoochee and Flint River Basins were the subjects of focused monitoring in 2000 and will again receive focused monitoring in 2005.

EDUCATION/OUTREACH ACTIVITIES

The Environmental Protection Division will continue to provide guidance and education to the public on all water quality issues through outreach by the Water Protection Branch. Permitted discharges will be regulated through the NPDES permitting process. EPD is working with local governments, agricultural, and forestry agencies such as the Natural Resources Conservation Service, the Regional Development Centers, the Georgia Soil and Water Conservation Commission, and the Georgia Forestry Commission to foster the 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 February 2004.

GAEPD, 2003. Chattahoochee River Basin Copper TMDLs. January 2003.