STATE OF GEORGIA

TMDL IMPLEMENTATION PLAN

OCMULGEE RIVER BASIN

LOW DISSOLVED OXYGEN DUE TO POINT SOURCES

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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.

Impaired Waterbody	Location	Miles/Area Impacted
Cabin Creek	Headwaters, Griffin to Towaliga River	16

INTRODUCTION

The Ocmulgee River Basin is part of the Middle Three Basins in Georgia. The Ocmulgee contains three 8-digits Hydrologic Unit Codes (HUCs), the Upper Ocmulgee River Basin, the Lower Ocmulgee River Basin and the Little Ocmulgee River Basin. The listed segment, Cabin Creek is located in the Upper Ocmulgee in Spalding County. The Upper Ocmulgee River Basin flows into the Lower Ocmulgee River Basin near Macon, GA.

The segment listed was placed on the 303(d) list for low dissolved oxygen concentration based on water quality modeling results and not for measured dissolved oxygen concentrations below the water quality standard. Georgia Environmental Protection Division (GAEPD) maintains a database of current National Pollutants Discharge Elimination System (NPDES) Permits and GIS files that locate each permitted outfall. Monthly Discharge Monitoring Reports (DMRs) for 1999 were downloaded from the Permit Compliance System (PCS). Table 1 shows the two point sources that discharge into or upstream of the impaired segment and NPDES permit limits for contributing point sources that was used for modeling.

Table 1			June 1999 Monthly Average Permit Limits			
NPDES Permit	**Facility Name**	**Receiving Water**	**Flow (mgd)**	**DO (mg/L)**	**BOD (mg/L)**	**NH3 (mg/L)**
GA0003409	Spring Industries, Inc	Cabin Creek	1.0	5	20	NA
GA0020214	Griffin (Cabin Creek WPCP)	Cabin Creek	1.5	5	20	3.5

DISCUSSION OF POLLUTANT

Naturally occurring low levels of dissolved oxygen are often the result of high organic (leaf litterfall, decomposing plants) loading, slow flows (due to minimum topographical relief) and elevated temperatures in a surface water system.

The data collected by the USGS in Georgia during 1999 showed that dissolved oxygen impairments were limited to small, headwater streams where the drainage areas are relatively small and dry weather flows are low, or zero. In the downstream reaches of larger watersheds where the flows are higher and not intermittent, and the assimilative capacity is therefore greater, the dissolved oxygen concentrations always met the minimum standard of 4.0 mg/l, and the daily average of 5.0 mg/l.

POLLUTANT SOURCES

Allocations were based on EPA Dissolved Oxygen Criteria that states if the natural dissolved oxygen is less than the standard, then only a 10% reduction in the natural condition is allowed. Or, the target limits are defined as 90% of the naturally occurring dissolved oxygen concentration at critical conditions.

PLAN FOR IMPLEMENTATION OF TMDL

Griffin (Cabin Creek WPCP) needed an 18% reduction so Cabin Creek will meet its designated use. GA EPD modified the waste load allocation (WLA) during the NPDES permitting renewal process. This point source reduction was implemented with the TMDL.

MONITORING PLAN

The GAEPD has adopted a basin approach to water quality management; an approach that divides Georgia's fourteen major river basins into five groups. Each year, the GAEPD water quality monitoring resources are concentrated in one of the basin groups. One goal is to continue to monitor 303(d) listed waters. The next monitoring cycle for the Ocmulgee River Basin is in 2004 and will help further characterize water quality conditions resulting from the implementation of best management practices in the watershed.

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 Developments 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 individual 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 December 2002.

GAEPD, 2002. Ocmulgee River Basin Dissolved Oxygen TMDLs. February 2002.