

**STATE OF GEORGIA
TIER 2 TMDL IMPLEMENTATION PLAN REVISION 1**

Gum Creek
Flint River Basin
Crisp County
City of Cordele

I. INTRODUCTION

Total Maximum Daily Load (TMDL) Implementation Plans are platforms for evaluating and tracking water quality protection and restoration. These plans have been designed to accommodate continual updates and revisions as new conditions and information warrant. In addition, field verification of watershed characteristics and listing data has been built into the preparation of the plans. The overall goal of the plans is to define a set of actions that will help achieve water quality standards in the state of Georgia.

This implementation plan addresses the general characteristics of the watershed, the sources of pollution, stakeholders and public involvement, and education/outreach activities. In addition, the plan describes regulatory and voluntary practices/control actions (*management measures*) to reduce pollutants, milestone schedules to show the development of the management measures (*measurable milestones*), and a monitoring plan to determine the efficiency of the management measures.

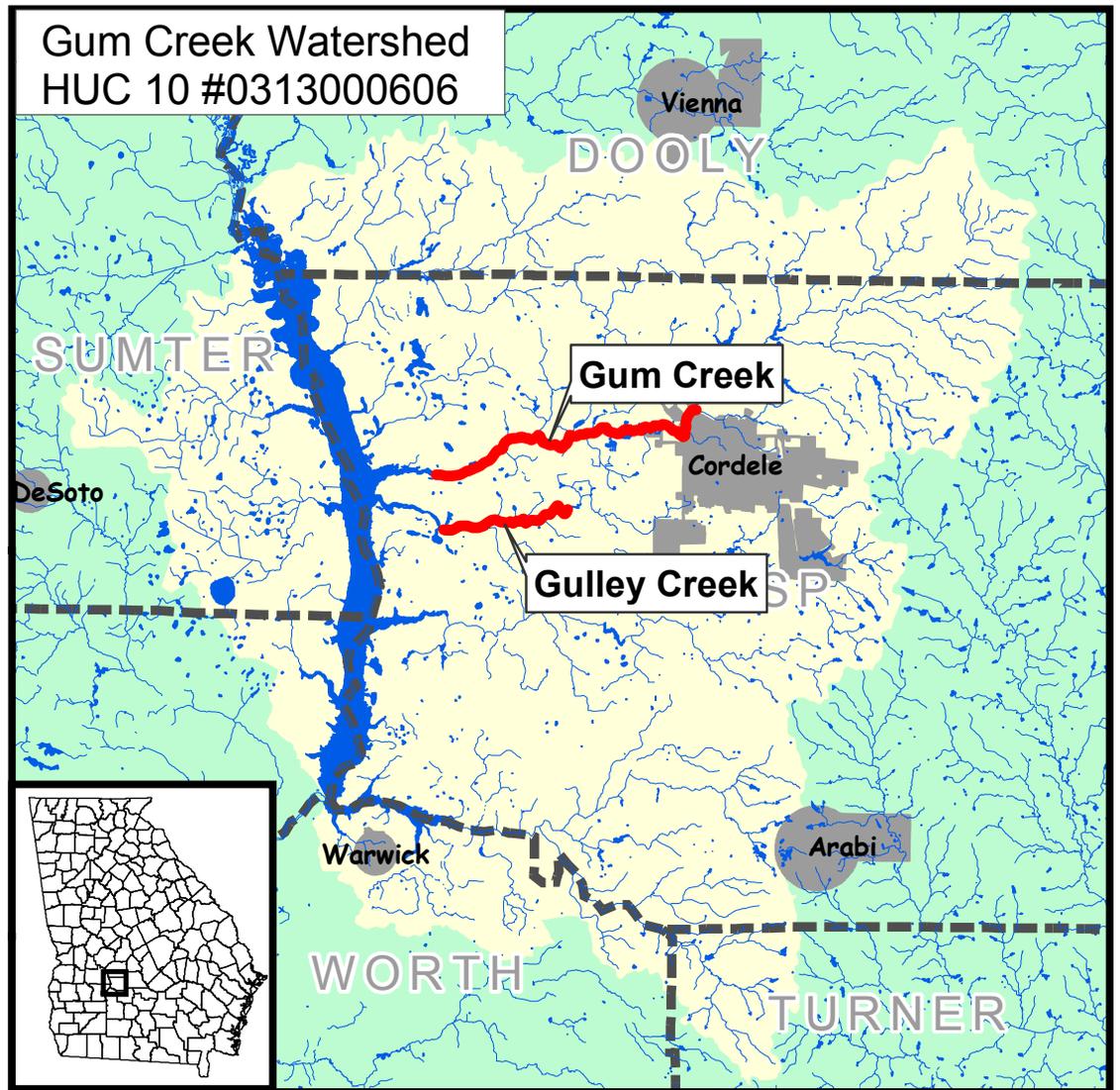


Table 1. IMPAIRMENTS

IMPAIRED STREAM SEGMENT	IMPAIRED SEGMENT LOCATION	IMPAIRMENT
Gulley Creek	Upstream Lake Blackshear	Dissolved Oxygen
Gum Creek	Downstream Cordele to Lake Blackshear	Biota (sediment)
Spring Creek *	Lake Blackshear	Lead, Zinc
Gum Creek +	Downstream Cordele to Lake Blackshear	Fecal Coliform Bacteria
Swift Creek #	Upstream Lake Blackshear	Fecal Coliform Bacteria

* Plan will be written by GA EPD

+ RDC previously developed inventory for stream which will be used as plan.

Plan written by RDC under 604(b) contract.

II. GENERAL INFORMATION ABOUT THE WATERSHED

Write a narrative describing the watershed, HUC 10# 0313000606. Include an updated overview of watershed characteristics. Identify new conditions and verify or correct information in the TMDL document using the most current data. Include the size and location of the watershed, political jurisdictions, and physical features which could influence water quality. Describe the source and date of the latest land cover/use for the watershed. Describe and quantify major land uses and activities which could influence water quality. See the instructions for more information on what to include.

The referenced watershed, approximately 198,000 acres in size¹, covers the western half of Crisp County and extends into Dooly, Sumter, Lee, Worth, and Turner Counties with predominantly agricultural and forest/woodland. The Cities of Cordele (Crisp), Warwick (Worth) and western third of Arabi (Crisp) are located within the drainage basin. The watershed is primarily rural and with few exceptions is not experiencing growth or development pressures. The limited development which has occurred over the past ten years consists almost entirely of rural (single-family) housing. Perhaps the two most significant exceptions to this general statement are construction of a county-owned water system along the developed lakefront in Crisp, Sumter and Worth Counties, and low level urban development in and immediately surrounding Cordele, a city of 12,000 residents.

The impaired segment is located in sub-basin HUC 031300060605 (the subject of the balance of this document) between the City of Cordele and Lake Blackshear. Virtually all of this ±18,600 acre² sub-basin is in unincorporated Crisp County (refer to color map on next page). Gum merges with another creek from an adjoining watershed a very short distance before the combined flow discharges into Lake Blackshear backwater in Georgia Veteran’s Memorial State Park. As the accompanying table represents, a nominal proportion of the area in the basin has been developed.

Gum Creek Land Use Distribution				
Forest	Row Crop Agriculture	Pasture/Hay	Residential/Developed	Other*
22%	44%	19%	1%	13%

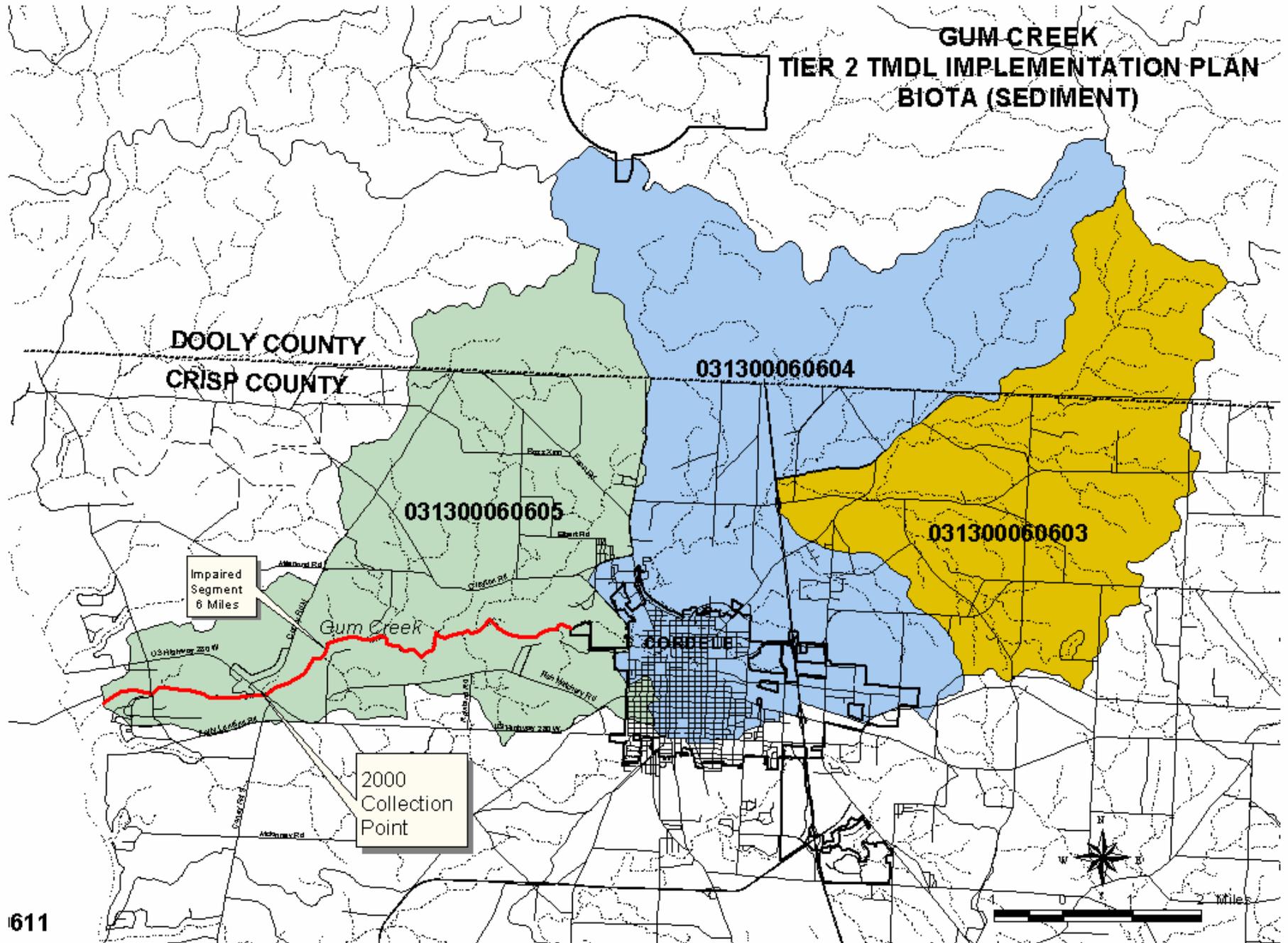
* open water, land in transition, wetlands

Source: Total Maximum Daily Load Evaluation for Twenty-eight Stream Segments in the Flint River Basin For Sediment (Biota Impacted), January 2003; Georgia Department of Natural resources, Environmental Protection Division

According to the source, this land use distribution data is from Landsat Thematic Mapper digital images developed in 1995. More recent land use acreages have not been generated, but based on review of the data and comparison with recent development and current conditions, respective acreage distributions may have been altered from data presented in the accompanying table by one percentile up or down. Development in this basin over the past ten years has consisted almost exclusively of single-family housing most heavily concentrated in the east-central basin. There are not any private, lakefront properties in this watershed to benefit from the public water system mentioned earlier. Limited commercial timber harvest has occurred followed by reforestation, and a very small amount of row crop acreage has been converted to forest. The color aerial photograph on page 4 highlights the impaired segment only.

¹ Department of Natural Resources-EPD

² Department of Natural Resources-EPD





Gum Creek watershed is included in the Flint River Watershed Basin Planning performed under the direction of the Georgia Department of Natural Resources-Environmental Protection Division every five years, and currently scheduled for 2005.

Lake Blackshear was classified as eutrophic in a 1974 EPA survey of Georgia lakes. During the period 1974-1993, inclusive, the lake was ranked among the top 8 lakes in the state for eutrophic state index values. The Georgia EPD report *Water Quality in Georgia*, 1992-1993 listed the lake in the not support category for recreational use because of fecal coliform and heavy metals. The report indicated that potential sources of the contaminants were municipal and agricultural non-point sources.

A study sponsored by the Buckeye Cellulose Corporation in 1984 reported that nutrient loading was sufficient to classify Gum Creek as eutrophic. Gum Creek was identified in the December 1989 *Georgia Nonpoint Source Assessment Report* and the *Georgia Non-point Source Management Plan* as an agricultural stream likely to be threatened by agricultural non-point sources of pollution. A subsequent study, conducted in 1989 by Cofer, et al., for the Lake Blackshear Watershed Association, concluded that control of agricultural release of phosphorous and nitrogen is important in the watershed.

The Gum Creek Water Quality Project (1991-1999) was implemented to address the environmental issues raised in the above referenced research. The main objective of the project was to secure farmer participation in cost-shared best management practices (BMP) designed to reduce pollution and/or the potential of pollution of surface and ground waters in the project area while maintaining farmer productivity and profitability. Other objectives included: increasing landowner knowledge and understanding of agricultural pollution potentials and water quality, increasing crop production efficiency through better management of natural resources, increasing awareness among the general public of surface and groundwater contamination, and to initiate a state-administered cost-share program for agricultural BMPs.

Among the many BMPs promoted, the ones most relevant to the current effort are:

Permanent structures designed to reduce surface water contamination by acting as nutrient or pesticide sinks and settling areas for sediments.

Permanent structures designed to reduce sediment, pesticide and nutrient loading of surface water by run-off management.

Permanent structures designed to prevent access of cattle to streams thus reducing nutrient loading from waste products and sedimentation caused by bank erosion.

The project was very successful. Cost-share contracts were written with 31 farmers on 12,000 acres in the project area, representing 98% of all full-time farmers and 48% of all cropland in the watershed. Nineteen of 23 BMPs were initiated. Annual enrollment figures on the most widely adopted practices were as follows: 7980 acres in Integrated Crop Management, 7,129 acres in crop residue management, 4,168 acres in irrigation water management, 2579 acres in conservation tillage, 1,224 acres in green manure cover crop. Permanent structure installation highlights were as follows: 3 water holding facilities (ponds), 150 wellheads curbed, repaired or upgraded, 13 portable chemical mixing stations, 1 permanent chemical mixing/loading/storage facility, 7,938 feet of livestock fencing, 1 alternative livestock water source, 1 alternative livestock water supply, and 10 miles of terraces.

Excluding the Flint River Watershed Basin Planning, there are not any current or planned water quality management or sampling programs in the watershed. There are not any Phase I or Phase II stormwater treatment regulated communities or stormwater utility districts in the watershed. However, the City of Cordele has been identified as needing NPDES permit coverage under the Phase II Stormwater Rule. There is one "municipal" well in this watershed, operated by the Crisp County Water System near Lake Blackshear. The basin is neither in nor part of a water supply watershed. Both Crisp County and the City of Cordele have permit issuing authority for land disturbing activity (erosion and sedimentation control ordinances). There are not any watershed or Adopt-A-Stream associations specific to the watershed. No Section 319(h) grant projects are known to have been implemented or planned.

To minimize erosion and stream sedimentation from forestry practices, the Georgia Forestry Commission's 7th District office has a specially trained Water Quality Coordinator to educate the forest community about, and promote the use of, forestry Best Management Practices (BMPs). Loggers and foresters are required by most major timber companies to attend 3-day Master Timber Harvesters' Program training which emphasizes use of forestry BMPs.

The District conducts monthly BMP Assurance examinations to provide "reasonable assurance" that forestry operations comply with BMPs. Active sites are identified through numerous means and inspected in an effort to educate landowners about BMPs, their responsibilities and liabilities concerning state water quality laws, and to provide on-the-ground assistance to loggers or operators before problems occur. No examinations have occurred in this unit.

The GFC also monitors BMP implementation. The 7th District participated in the 4th statewide BMP implementation survey (2002) which collected data on 420 randomly selected sites where forestry activities had occurred within the previous two years. Of the 40,159 acres evaluated across the state, 99.1% were in compliance with BMPs. Of the 226 miles of stream evaluated on 287 sites, 94.2% of the miles were in compliance with BMPs. EPA identifies silviculture as the lowest contribution source of nonpoint pollution. The Commission also investigates and mediates forestry water quality and wetland complaints.

The Conservation Reserve Program reduces soil erosion, protects the nation's ability to produce food and fiber, reduces sedimentation in streams and lakes, improves water quality, establishes wildlife habitat, and enhances forest and wetland resources. It encourages farmers to convert highly erodible cropland, other cropland or other environmentally sensitive acreage to vegetative cover. The watershed has landowner participation in this program.

The Environmental Quality Incentives Program provides assistance to eligible farmers and ranchers to address soil, water, and related natural resource concerns. The program provides assistance complying with environmental laws, and encourages environmental enhancement. The purposes are achieved through implementation of a conservation plan which includes structural, vegetative, and land management practices. Incentive payments can be made to implement one or more land management practices, such as residue management, upland wildlife habitat management, and grazing land management. The financial assistance available statewide is very limited, and directed more toward addressing state priorities that local need. There is no such assistance currently in the watershed.

Gum Creek

COMPLETE THE FOLLOWING TABLES FOR AND NARRATIVES ABOUT EACH IMPAIRED STREAM IN THE WATERSHED.

STREAM SEGMENT NAME	LOCATION	MILES/AREA	DESIGNATED USE	PS/NS
Gum Creek	Downstream Cordele to Lake Blackshear	6	Fishing	PS

III. SOURCES AND CAUSES OF STREAM SEGMENT IMPAIRMENT LISTED IN TMDLs

After reviewing the TMDLs written for this stream, complete the following tables with **the information found in the TMDLs**. List each parameter for which the stream segment is impaired and the water quality standard violated. See the instructions for the water quality standards. Describe the sources and causes of each violation identified in the TMDLs.

Table 2. SOURCES OF IMPAIRMENT AS INDICATED IN TMDLs

PARAMETER 1	WQ STANDARD	SOURCES OF IMPAIRMENT	NEEDED REDUCTION FROM TMDL
Biota	No degradation to fish community.	Sediment	33%

IV. IDENTIFICATION AND RANKING OF POTENTIAL SOURCES OR CAUSES OF IMPAIRMENT

INVESTIGATE AND EVALUATE the sources of impairment for each parameter listed in Table 2. Write a narrative describing efforts made or procedures used to verify the significance and extent of the sources or causes of each impairment listed in the TMDLs. Include:

- Involvement of stakeholder group
 - Field surveys
 - Review of land cover data
 - Evaluation of sources
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County tax records were researched to identify owners of properties contiguous to the impaired segment. These and “public” stakeholders received a written invitation (copy attached) to a stakeholder meeting to discuss the reported high sediment counts, and possible cause(s) and corrective action(s) which might contribute to an improvement in water quality. TMDL background information was included in the invitation. A newspaper notice (Cordele Dispatch) invited the general public to the same meeting.

As stated in Section II, recent land use acreage distributions in the watershed have not been generated, but the combination of site visits by RDC staff, and familiarity with the watershed among RDC staff and public and private stakeholders confirmed the reasonable accuracy of the accompanying tabular data.

Successful environmental stewardship activities have been widely implemented in the watershed. Land use has changed very little over the past decade; consequently, stakeholders were unable to identify any obvious contributors.

To the extent possible, identify sources and quantify the extent of pollution in the stream segment for each of the parameters listed in Table 2 and evaluate the likely impact on the parameter load to the stream. This should follow research performed and described in preceding narrative and should correct or add information to the TMDLs. **The SOURCES SHOULD BE RANKED** from those having the most impact to those having the least impact. The estimated extent of contribution can be expressed as the area of the watershed affected, the stream miles affected, or the number of activities contributing to the problem. The magnitude of contribution should be estimated to be large, moderate, small, or negligible.

Table 3. CONCLUSIONS MADE OF POTENTIAL SOURCES OF STREAM SEGMENT IMPAIRMENT

PARAMETER 1	POTENTIAL SOURCES	ESTIMATED EXTENT OF CONTRIBUTION	ESTIMATED MAGNITUDE OF CONTRIBUTION	COMMENTS
Biota (sediment)	"Flood of '94"	Entire stream segment	Small	Legacy sediment
Biota (sediment)	Agriculture	Entire stream segment	Small	Conservation tillage and other BMPs are common in area
Biota (sediment)	Unpaved Roads	Entire stream segment	Negligible	Limited unpaved road exposure
Biota (sediment)	Silviculture	Entire stream segment	Negligible	Activity is minimal, but inadequate BMPs could release sediment

V. STAKEHOLDERS

PUBLIC INVOLVEMENT AND THE ACTIVE PARTICIPATION OF STAKEHOLDERS is essential to the process of preparing TMDL implementation plans and improving water quality. Stakeholders can provide valuable information and data regarding their community, impaired water bodies, potential causes of impairments, and management practices and activities which may be employed to reduce the impacts of the causes of impairment.

Describe outreach activities to advise and engage stakeholders in the TMDL implementation plan preparation process. Describe the stakeholder group employed or formed to address the impaired segments in the watershed. Summarize the results of the number of attendees and meetings and describe major findings, recommendations, and approvals.

County tax records were researched to identify owners of properties contiguous to the impaired segment. These and "public" stakeholders received a written invitation to a stakeholder meeting to discuss the reported high sediment counts, and possible cause(s) and corrective action(s) which might contribute to an improvement in water quality. TMDL background information was included in the invitation. A newspaper notice (Cordele Dispatch) invited the general public to the same meeting.

As stated in Section II, recent land use acreage in the watershed has not been generated, but site visits and familiarity with the watershed confirmed the reasonable accuracy of the accompanying tabular data. Stakeholders included property owners, farmers, educators, concerned/interested citizens, and representatives of the Crisp County Board of Commissioners, Crisp County Power Commission, Crisp County Health Department, City of Cordele Wastewater Treatment Facility, Georgia Forestry Commission, Georgia Southwestern State University and Cooperative Extension Service.

On August 24, 2004, a meeting was held at the Georgia Veteran’s State Park at Lake Blackshear to address the listing of Gum Creek on the Federal 303(d) List for Biota (Sediment). Twenty-two public and private stakeholders were invited to attend; twenty-three stakeholders were in attendance. During the meeting, several issues concerning possible contributors to the high sediment count were identified.

- Flood of '94
- High participation in agriculture BMPs
- Limited silvicultural activity
- Unpaved roads have a limited and distant presence

Environmental stewardship activities have previously been widely implemented in the watershed. Land use has changed very little over the past decade; consequently, stakeholders were unable to identify any obvious contributors.

Because of the natural creek buffer and absence of development activity in the watershed, no contributing sites could be identified. The accompanying photographs (in rear of document) generally show the natural buffer present near each end of the impaired segment.

List the watershed or advisory committee members of the stakeholder group for this segment in the following table.

Table 4. COMMITTEE MEMBERS

NAME/ORG	ADDRESS	CITY	STATE	ZIP	PHONE	E-MAIL
Clarence Brown, landowner					229-273-2823	
Joyce Cason Pheil, Crisp County Board of Commissioners	210 7 th Street	Cordele	GA	31015	229-273-6743	pheil@sowega.net
Steve Rentfrow, Crisp Power Commission	202 S. 7 th Street				229-273-3811	srentfrow@crispcountypower.com
Jerry Johnson, Cedar Creek Landowner					229-276-0087	jerryjohnson@bellsouth.net

Marcus Waters, Crisp County Power Commission	202 S. 7 th Street				229-273-3820	
Al Davis, Cedar Creek landowner					229-276-1709	alcpa@thallcpa.com
Lawton Sammons, Gum Creek landowner					229-273-5579	sammons@planttel.net
Bucky Brookshier, Lincoln Pinch					229-276-1058	buckybrookshier@aol.com
Morris Cook, Georgia Forestry Commission	259 Hwy 41 N.	Vienna	GA	31092	229-273-3576	Gfc07040@gfc.state.ga.us
Robert Phillips, Farmer					229-276-0856	rbp@vol.com
Brad Faircloth					229-271-2205	bfaircloth@planttel.net
Norman and Nedra Meyer					478-945-6973	
Lila Grace Beck					229-273-5988	
Dr. William L Tietjen Emeritus Professor	800 Wheatley Street	Americus	GA	31709	229-931-2253	wlt@canes.gsw.edu
Ken Lewis Crisp County Extension	110 West 13 th Avenue, Suite C	Cordele	GA	31015	229-276-2612	kenlewis@uga.edu
Phil Porter & Morris Cook, GFC	243 U S Highway 19 North	Americus	GA	31709	229-931-2436	ppporter@gfc.state.ga.us
Roger Pheil, City of Cordele	City of Cordele	Cordele	GA	31015	229-273-2829	gumcrktp@sowega.net
Phyllis Goldstein	Crisp County Health Dept	Cordele	GA	31010	229-276-2680	

In Appendix A, list the names, addresses, telephone numbers, and e-mail addresses for local governments, agricultural or commercial forestry organizations, significant landholders, businesses and industries, and local organizations including environmental groups and individuals with a major interest in this watershed.

VI. MANAGEMENT MEASURES AND ACTIVITIES

Describe any management measures or activities that have been put into place or will be put into place including regulatory or voluntary actions or other controls by governments or individuals that specifically apply to the pollutant that will help achieve water quality standards. Include who will be responsible for the measure, how it will be funded, the status, the date it will be or was initiated, and a short description of how effective the measure is or will be.

Table 5. MANAGEMENT MEASURES AND ACTIVITIES

GENERAL MEASURES APPLICABLE TO ALL PARAMETERS

MEASURE	RESPONSIBILITY	DESCRIPTION	SOURCE OF FUNDING	STATUS	ENACTED/ IMPLEMENTED	EFFECTIVENESS (Very, Moderate, Weak)
Federal Clean Water Act Section 404 (Ag and Forestry)	EPA (situations involving forestry are normally referred to GFC to determine compliance)	Requires agricultural and silvicultural practices to adhere to BMPs and 15 baseline provisions for road construction/maintenance in and across waters of the U.S. to be exempted from permitting process.	Farmers Timber Harvesters	Current	June 6, 1998	EPA identifies silviculture as the lowest contribution source of nonpoint pollution
Memo to the Field: Application of BMPs to mechanical silvicultural site preparation activities for establishment of pine plantations in SE. (Silviculture)	EPA/ US Army Corps of Engineers - (cases normally referred to GFC for initial determination)	Identifies certain bottomland hardwood wetlands that should be subject to permitting if converting to pine plantations.	Landowner	Current	November 1995	
Federal Farm Bill (Swampbuster, Ag)	US Department of Agriculture NRCS	Prohibits landowners participating in federal price support programs from converting forested wetlands to ag.	-	Current		
GA Growth Planning Act (OCGA 12-2-8)	GA DNR, Department of Community Affairs, and local units of government	Authorized GA DNR to develop minimum planning standards local jurisdictions could adopt and enforce (river corridors, groundwater recharge areas, and wetlands) Silvicultural activities may be exempted from permitting provided activity complies with BMPs	Landowners Developers	Current	1991	

Georgia Forestry Commission Monthly BMP Assurance Examination	Georgia Forestry Commission (matters involving enforcement are generally referred to GA EPD)	To document “reasonable assurance” water quality will be proactively protected during silvicultural operations, GCF will offer monthly BMP assurance examination of active sites. Sites within watersheds of biota (sediment) impaired streams will be given priority for examination.	Georgia Forestry Commission	Current	1/1/03	EPA identifies silviculture as the lowest contribution source of nonpoint pollution
Georgia Water Quality Control Act (OCGA 12-5-20)	GA DNR EPD	Makes it unlawful to discharge excessive pollutants (sediments, nutrients, pesticides, animal waste, etc.) into waters of the State in amounts harmful to public health, safety, or welfare, or to animals, birds, or aquatic life or the physical destruction of stream habitats.	Developers	Current	1964	
Georgia’s Best Management Practices	Georgia Forestry Commission (matters involving enforcement are generally referred to GA EPD)	Inform landowners, foresters, timber buyers, loggers, site preparation and reforestation contractors, et al, about commonsense, economical and effective practices to minimize nonpoint source & thermal pollution.	Timber Harvesters	Current	1989, 1997	EPA identifies silviculture as the lowest contribution source of nonpoint pollution
Conservation Reserve Program (CRP)	Farmers	Encourages farmers to convert highly erodible and other cropland or other environmentally sensitive acreage to vegetative cover.	Federal	Current		Very
Environmental Quality Incentives Program (EQIP)	Farmers	Provides technical, educational, and financial assistance to eligible farmers to address soil, water and related natural resource concerns through a cost-share program to implement eligible structural or vegetative practices such as terraces, filter strips, tree planting and permanent wildlife habitat.	Federal Commodity Credit Corporation	Current		
Ordinance Revisions	Local Government	Review current E&S control ordinance and modify as appropriate. Include certification program with requirements for pollution prevention at construction site through preparation of an Erosion, Sedimentation and Pollution Control Plan to address trash, construction debris, leaking vehicles, storage of chemicals, etc.	Local Government	Proposed		Changes are proposed for state’s erosion and sediment control pro-gram. Channel protection and conservation subdivision ordinances will provide further guidelines for construction activity.

MEASURES APPLICABLE TO INDIVIDUAL PARAMETERS

MEASURE	RESPONSIBILITY	DESCRIPTION	SOURCE OF FUNDING	STATUS	ENACTED/ IMPLEMENTED	EFFECTIVENESS (Very, Moderate,)
Georgia's Best Management Practices	Georgia Forestry Commission (matters involving enforcement are generally referred to GA EPD)	Inform landowners, foresters, timber buyers, loggers, site preparation and reforestation contractors, et al, about commonsense, economical and effective practices to minimize nonpoint source & thermal pollution.	Timber Harvesters	Current	1989, 1997	Very
BMP assurance examination of active sites	Georgia Forestry Commission	To document "reasonable assurance" water quality will be proactively protected during silvicultural operations, GFC will offer monthly BMP assurance examination of active sites. Sites within watersheds of biota (sediment) impaired streams will be given priority for examination.	Georgia Forestry Commission	Current	1/1/03	Very
Agriculture BMPs	Extension Service, Natural Resources Conservation Service	Reduce agriculture generated erosion and sediment	Local	Current	1990s	Very

VII. MONITORING PLAN

The purposes of monitoring are to obtain more data, to determine the sources of pollution, to describe baseline conditions, and to evaluate the effects of management and activities on water quality. Describe any sampling activities or other surveys - active, planned or proposed - and their intended purpose. Reference the development and submission of a Sample Quality and Assurance Plan (SQAP) if monitoring for delisting purposes.

Table 6. MONITORING PLAN

PARAMETER(S) TO BE MONITORED	ORGANIZATION	STATUS (CURRENT, PROPOSED, PLANNED)	TIME FRAME		PURPOSE (If for delisting, date of SQAP submission)
			START	END	
Biota (Sediment)	Georgia DNR-EPD	Planned	2005	2005	Watershed Basin Planning
Biota (Sediment)	Georgia DNR-EPD	Planned	2010	2010	Watershed Basin Planning

VIII. PLANNED OUTREACH FOR IMPLEMENTATION

List and describe outreach activities which will be conducted to support this plan and the implementation of it.

Table 7. PLANNED OUTREACH

RESPONSIBILITY	DESCRIPTION	AUDIENCE	DATE
Georgia Forestry Commission	Inform landowners, foresters, timber buyers, loggers, site preparation/reforestation contractors, et al, about practices to minimize pollution.	Timber harvester(s)	Continuous
Georgia Forestry Commission	Monthly examination of active sites. Sites within watersheds of biota (sediment) impaired streams will be given priority for examination.	Timber harvester(s)	Continuous
Extension Service, Natural Resources Conservation Service	Agriculture BMPs	Farmers	Continuous

IX. MILESTONES/ MEASURES OF PROGRESS OF BMPs AND OUTREACH

This table will be used to **track and report progress of management measures including BMPs and outreach**. Record milestone dates for:

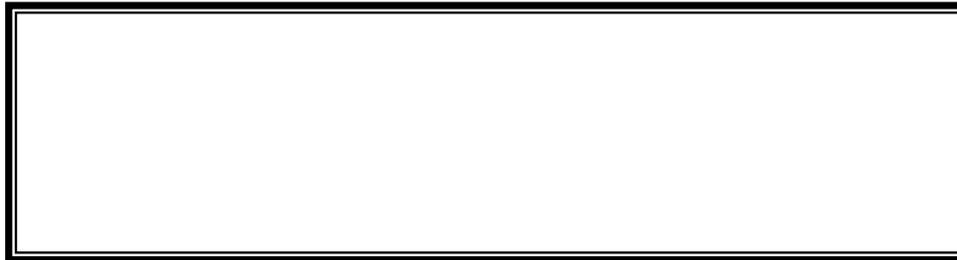
- accomplishment of management practices or activities
- outreach activities
- installation of BMPs

to attain water quality standards. Comment on the effectiveness of the management measure, how much support the measure was given by the community, what was learned, how the measure might be improved in the future, and any other observations made. This table can be "pulled out" of this template and used to report and track progress.

Table 8. MILESTONES

MANAGEMENT MEASURE	RESPONSIBLE ORGANIZATIONS	STATUS		COMMENT
		PROPOSED	INSTALLED	
BMP assurance examination of active sites	Georgia Forestry Commission	Continuous		
Agriculture BMPs	Extension Service, Natural Resources Conservation Service	Continuous		
Review unpaved road maintenance practices, modify as needed	Crisp County	2005-2006		
Adopt-A-Stream	Stakeholders	2005-06		

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Date Submitted to EPD:	December 2004
	Revision: 0



APPENDIX A.
STAKEHOLDERS

List the names, addresses, telephone numbers, and e-mail addresses for local governments, agricultural or commercial forestry organizations, significant landholders, businesses and industries, and local organizations including environmental groups and individuals with a major interest in this watershed.

NAME/ORG	ADDRESS	CITY	STATE	ZIP	PHONE	E-MAIL
C L Williams	937 W Hwy 280	Cordele	GA	31015		
Gloria G Slade	405 North Coney Road	Cordele	GA	31015		
Bill Overstreet	P O Box 1123	Cordele	GA	31015		
Louis D & Larry M Perlis	P O Box 1097	Cordele	GA	31015		
Griffin Lumber Company	P O Box 237	Cordele	GA	31015		
Wylie G Sheppard	19 Quail Street	Leesburg	GA	31763		
Ms. Jean Burnette City of Cordele	P O Box 569	Cordele	GA	31015		
Monroe C Hunt	1308 Ogburn Road	Cordele	GA	31015		
Harry F Carter	165 Farmers Market Road	Cordele	GA	31015		
Annette M Wade	P O Box 122	Cordele	GA	31015		
Harold McCay	2076 Drayton Road	Cordele	GA	31015		
S F Clements	P O Box 393	Cobb	GA	31735		
Dennis T & Jennifer T Phillips	P O Box 67	Byromville	GA	31007		
Carolyn Albritton Howard	139 Pinecrest Drive	Cordele	GA	31015		
Michael D & Kim L Arnett	147 Pinecrest Drive	Cordele	GA	31015		
John W Floyd	P O Box 5260	Cordele	GA	31015		
Hale M & Jacquelyn Crim	159 Pinecrest Drive	Cordele	GA	31015		
Lawton W & Betty Sammons	173 Pinecrest Drive	Cordele	GA	31015		
Daniel & Denis Athon	177 Pinecrest Drive	Cordele	GA	31015		
WM Douglas & Patricia P Rainey	610 East 15 th Avenue	Cordele	GA	31015		
Roman Musselwhite	195 Pinecrest Drive	Cordele	GA	31015		
James Farrow Baker	349 Farmers Market Road	Cordele	GA	31015		

Stephens Brothers Development Corporation	P O Box 217	Montezuma	GA	31063		
James R. Dowdy, Jr., Chairman, Crisp County Board of Commissioners	210 7 th Street	Cordele	GA	31015		
Ranger First Class Harold Hill, Region V Law Enforcement	2024 Newton Road	Albany	GA	31701-3576		
Don Williford, President Crisp County Farm Bureau	302 North Pecan Street	Cordele	GA	31015		
Janet Moehle, Field Rep. The Georgia Conservancy	18 North Main Street	Moultrie	GA	31768		
Dr. William L Tietjen Emeritus Professor	800 Wheatley Street	Americus	GA	31709		
Ken Lewis Crisp County Extension	110 West 13 th Avenue, Suite C	Cordele	GA	31015		
Alicia Parker, Director Crisp County Health Department	111 East 24 th Avenue	Cordele	GA	31015		
Phil Porter & Robbie Hughes, Georgia Forestry Commission	243 U S Highway 19 North	Americus	GA	31709		

APPENDIX B.
UPDATES TO THIS PLAN

Describe any updates made to this plan. Include the date, section or table updated, and a summary of what was changed and why.



View of Gum Creek looking upstream (E) from rear of State Fish Hatchery. This location is near east end of impaired segment.



Deep natural buffer along both banks of Gum Creek behind State Fish Hatchery.



U. S. 280 Bridge in background. This pool area is approximate location of 2000 water quality sample collection site.



Opposite end of pool referenced in accompanying photo.