STATE OF GEORGIA

TMDL IMPLEMENTATION PLAN

WATERSHED APPROACH

Savannah River Basin

Local Watershed Governments

Hart County

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. **With input from appropriate stakeholder groups, a TMDL Implementation Plan has been developed for a cluster of impaired streams and the corresponding pollutants.** The impaired streams are located in the same sub-basin identified by a HUC10 code (Figure 1).

This Implementation Plan addresses an action plan, education/outreach activities, stakeholders, pollutant sources, and potential funding sources affecting the sub-basin. In addition, the Plan describes (a) regulatory and voluntary practices/control actions (*management measures*) to reduce target pollutants, (b) milestone schedules to show the development of the management measures (*measurable milestones*), (c) a monitoring plan to determine the efficiency of the management measures and measurable milestones, and (d) criteria to determine whether substantial progress is being made towards reducing pollutants in impaired waterbodies. 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. Following this section is information regarding individual segments.

Little Shoal Creek Watershed
0306010213

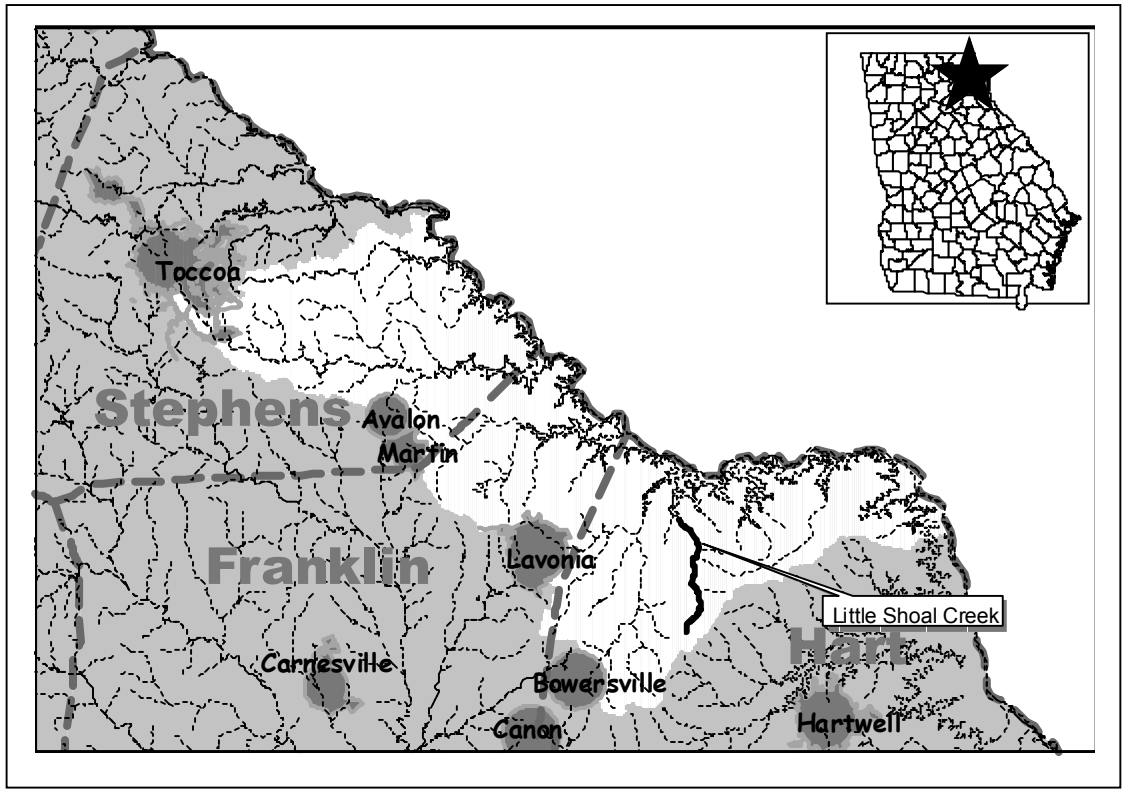

FIGURE 1

Impaired Waterbody	Impaired Stream Location	Impairment
Little Shoal Creek	Hart County	Sediment (Biota Impaired)

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Action Plan for Little Shoal Creek Watershed

POLLUTANT:	SOURCE:	EFFECT:	WHAT CAN I DO? At Home: Community, School	At Work: Business, Government
__ Dissolved Oxygen (DO) __ Fecal Coliform (FC) X Sediment __ Metals __ Fish Consumption Guidelines (FCG) __ Other (Please List)	__ Industrial __ Urban X Agriculture X Forestry __ Residential X Other (Please List) Unpaved Road	X Habitat __ Recreation __ Drinking Water X Aesthetics __ Other (Please List)	1. Limit the amount of impervious surfaces in your landscape. Use permeable paving surfaces such as wood decks, bricks, and concrete lattice to allow water to soak into the ground. Where possible, direct runoff from impervious surfaces across vegetated areas. 2. Allow "thick" vegetation or "buffer strips" to grow alongside waterways to filter and slow runoff and soak up pollutants. 3. Plant trees, shrubs, and groundcover. They will absorb up to fourteen times more rainwater than a grass lawn and they don't require fertilizer.	1. Implement Agricultural BMPs; cease mowing stream buffers 2. Implement Forestry BMPs

INFORMATION/EDUCATION/OUTREACH ACTIVITIES:

An education/outreach component will be used to enhance public understanding of and participation in implementing the TMDL Implementation Plan.
List of all previous and planned information/education/outreach activities.

Responsible Organization Or Entity	Description	Target Audience	Anticipated Dates (MM/YY)
Georgia Forestry Commission	Conduct forestry Best Management Practices educational training at Master Timber Harvester and continuing logger education programs, civic programs, and landowner meetings.	Foresters, timber buyers and loggers, site preparation contractors, landowners	Continuous
Natural Resource Conservation Service (NRCS)	Provides leadership in a partnership effort to help people conserve, maintain, and improve our natural resources and environment	Private land owners	Continuous
Chestatee-Chattahoochee RC&D	Helps people initiate, sponsor, plan and implement projects that will make their communities better places in which to live	Individuals, Businesses, and Governments	Continuous
US Fish and Wildlife	The U.S. Fish and Wildlife Service is the principal Federal agency responsible for conserving, protecting and enhancing fish, wildlife and plants and their habitats for the continuing benefit of the American people. The US Fish and Wildlife has numerous activities that relate to water quality, fish, sedimentation and many more that are available on their website.	Everyone	Continuous
Georgia Soil & Water Conservation Commission	Formed to protect, conserve and improve the soil and water resources of the State of Georgia. The Commission's goal is to make Georgia a better place for its citizens through the wise use and protection of basic soil and water resources and to achieve practical water quality goals. Workshops are presented as a basic guide for anyone implementing Best Management Practices (BMPs).	Everyone	Continuous

STAKEHOLDERS:

EPD encourages public involvement and the active participation of stakeholders in the process of improving water quality. Stakeholders can provide valuable information and data regarding their community and the impaired water bodies and can provide insight and/or implement management measures.
List of local governments, agricultural organizations or significant landholders, commercial forestry organizations, businesses and industries, and local organizations including environmental groups and individuals with a major interest in this watershed.

Name/Organization	Address	City	State	Zip	Phone	E-Mail
Georgia Forestry Commission (GFC)	P.O. Box 819	Macon	GA	31202	478-751-3485	
Georgia Forestry Association	500 Pinnacle Court, Ste. 505	Norcross	GA	30071	770-416-7621	
Southeastern Wood Producers	P.O. Box 9	Hilliard	FL	32046	904-845-7133	
NRCS (Hartwell Service Center)	88 Maret St.	Hartwell	GA	30643-1172	706-376-5451	
Georgia Farm Service Agency	Federal Building Room 102 355 East Hancock Avenue STOP 100	Athens	GA	30601-2775	706-546-2266	
Georgia Extension Service-Hart County	200 Arthur St	Hartwell		30643	706-376-3134	chrice@arches.uga.edu
Chestatee-Chattahoochee RC&D	624 Green St. NE	Gainesville	GA	30501	770-536-1221	
Georgia Mountains RDC	1310 W. Ridge Road P.O. Box 1720	Gainesville	GA	30503	770-538-2626	
Hart County	800 Chandler St. P.O. Box 279	Hartwell	GA	30643-0279	706-376-2024	gscobb@hartcom.net

WATER BODIES/STREAMS COVERED IN THIS PLAN:

These impaired streams are located in the same sub-basin identified by a HUC10 code. Most of the information contained in this section comes from the 303(d) list and has been completed by employees of the EPD Water Protection Branch. Data that placed stream on 303(d) list will be provided upon request.

Waterbody Name	Location	Miles/Area Impacted	Use Classification	Partially Supporting/ Not Supporting (PS/NS)
Little Shoal Creek	Hart County	Unknown	Fishing	N/A
Primary County	**Secondary County**	**Second RDC**		**Source (Point/ Nonpoint)**
Hart				Nonpoint
Pollutants	**Water Quality Standards**	**Required Reduction**	**TMDL ID**	**Date TMDL Established**
Sediment (Biota Impaired)	N/A	Unknown		May 9, 2000

POLLUTANT SOURCES:

It is important to recognize the potential source(s) causing water quality impairment. Each source must be controlled to comply with target TMDL/Load Allocations for each pollutant. Included is a description of how the sources contribute to the impairment and the waterbody that is impaired.

List of major nonpoint source categories and sub-categories or individual sources (Urban Runoff, Agriculture, Forestry, Municipal Sewage Treatment Plant)

Pollutant	Sources of Pollutants	Description of Contribution To Impairment
Sediment	Silviculture	Introduction of sediment from normal practices and stream crossings when Best Management Practices (BMPs) are not followed
Sediment	Agriculture	Construction of chicken houses; massive clear cutting not subject to local Erosion & Sedimentation ordinances
Sediment	Agriculture	Cropland plowed to edge of stream (corn, soybeans, cotton)
Sediment	Agriculture	Pastures plowed to edge of stream
Sediment	Unpaved Road	Roper Road—county road until 1996; reports of sedimentation from off-road vehicles/dirt bikes

MANAGEMENT MEASURES, MEASURABLE MILESTONES AND SCHEDULE:

(i.e. Local codes and ordinances, Erosion and Sedimentation Control, Storm Water Management, Local water resource monitoring)

The following table lists management measures that have been or will be implemented to achieve water quality standards and the load reductions established in the TMDL. The management measures, including regulatory or voluntary actions or other controls by governments or individuals, specifically apply to the pollutant and the waterbody for which the TMDL was written. A description is provided of how these management measures are/will be accomplished through reliable and effective delivery mechanisms, and how these management measures are/will help achieve the target TMDL. Included is the source of the pollutant, anticipated/past effectiveness of the management measure (very effective, somewhat effective, not effective), the current status (i.e. enforced, in-progress, planning), and measurable milestones and schedule. Milestones are used to measure progress in attaining water quality standards and to determine whether management measures are being implemented.

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status	Regulatory/ Voluntary
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	1964	Enforced	Regulatory

Pollutant(s) Affected	Sources of Pollutant	Anticipated or Past Effectiveness
Sediment, nutrients, pesticides	Multiple	

Measurable Milestones	Schedule		Comments
	Start	End	
GFC investigates and mediates silviculture complaints on behalf of EPD. Unresolved complaints are turned over to EPD for enforcement	Continuous		

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status	Regulatory/ Voluntary
Federal Clean Water Act Section 404	EPA (situations involving forestry are normally referred to the GFC to determine compliance with this regulation)	Requires normal ongoing agricultural and silvicultural practices to adhere to BMPs and 15 baseline provisions for road construction and maintenance in and across waters of the US including lakes, rivers, perennial and intermittent streams, wetlands, sloughs in order to qualify for the exemption from the permitting process.	June 6, 1988	Enforced	Regulatory

Pollutant(s) Affected	Sources of Pollutant	Anticipated or Past Effectiveness
Sediment from dredge or fill activities	Agriculture and silviculture	EPA identifies silviculture as the lowest contribution source of nonpoint pollution

Measurable Milestones	Schedule		Comments
	Start	End	
GFC can report status on accomplishments or complaints investigated involving this act to the RDC as needed.	Continuous		

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status	Regulatory/ Voluntary
Memo to the Field: Application of BMPs to mechanical silvicultural site preparation activities for the establishment of pine plantations in the Southeast	EPA/ US Army Corps of Engineers (cases normally referred to GFC to make initial determination)	Identifies certain bottomland hardwood wetlands that should be subject to permitting if converting to pine plantations.	November 1995	Enforced	Regulatory

Pollutant(s) Affected	Sources of Pollutant	Anticipated or Past Effectiveness
Sediment	Silviculture	

Measurable Milestones	Schedule		Comments
	Start	End	
GFC can provide status reports as needed	Continuous		

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status	Regulatory/ Voluntary
Federal Farm Bill (Swampbuster)	US Department of Agriculture Natural Resource Conservation Service	Prohibits landowners participating in federal price support programs from converting forested wetlands to agriculture		Enforced	Regulatory

Pollutant(s) Affected	Sources of Pollutant	Anticipated or Past Effectiveness
Sediment	Agriculture	Effective

Measurable Milestones	Schedule Start	Schedule End	Comments
Status reports can be provided as needed	Continuous		

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status	Regulatory/ Voluntary
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 and procedures that local jurisdictions could adopt and enforce pertaining to the protection of river corridors, mountaintops, water supply watersheds/reservoirs, groundwater recharge areas, and wetlands. Silvicultural activities may be exempted from permitting requirements provided the activity complies with BMPs	1991	Local jurisdictions have to adopt ordinances to address these areas	Regulatory

Pollutant(s) Affected	Sources of Pollutant	Anticipated or Past Effectiveness
Sediment	Silviculture	Effective

Measurable Milestones	Schedule Start	Schedule End	Comments
GFC can determine applicability and BMP implementation for local units of government.	Continuous		

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status	Regulatory/ Voluntary
Savannah River Basin Management Plan	Georgia Department of Natural Resources	Detailed management plan for the Savannah River Basin. The purpose of the plan is to develop and implement a river basin planning program to protect, enhance, and restore waters for the State of Georgia, which will provide for effective monitoring, allocation, use, regulation, and management of water resources.	2001	In progress	Voluntary

Pollutant(s) Affected	Sources of Pollutant	Anticipated or Past Effectiveness
Sediment	Multiple	Very effective

Measurable Milestones	Schedule Start	Schedule End	Comments
• Implement monitoring plan and compile detailed information/Data	2002	2002	Cycle will begin again in 2006; River Basin Management plan is on a 5 year cycle
• Analyze and evaluate detailed information; Update basin assessment and Priority Issues List	2003	2003	
• Develop strategies for priority issues	2003	2004	
• Prepare/Update Draft River Basin Plan	2004	2004	
• Agency and Public Review/Hearings; Finalize River Basin Plan	2005	2005	
• Implement River Basin Plan	2005	2006	

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status	Regulatory/Voluntary
Conservation Reserve Program (CRP)	United States Department of Agriculture (USDA)	The Conservation Reserve Program (CRP) provides technical and financial assistance to eligible farmers and ranchers to address soil, water, and related natural resource concerns on their lands in an environmentally beneficial and cost-effective manner. The program provides assistance to farmers and ranchers in complying with Federal, State, and tribal environmental laws, and encourages environmental enhancement. The program is funded through the Commodity Credit Corporation (CCC). 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 or other environmentally sensitive acreage to vegetative cover, such as tame or native grasses, wildlife plantings, trees, filter strips, or riparian buffers. Farmers receive an annual rental payment for the term of the multi-year contract. Cost sharing is provided to establish the vegetative cover practices.		Current	Voluntary

Pollutant(s) Affected	Sources of Pollutant	Anticipated or Past Effectiveness
Sediment	Various Sources	Effective

Measurable Milestones	Schedule		Comments
	Start	End	
CRP is administered by the Farm Service Agency, with NRCS providing technical land eligibility determinations, Environmental Benefit Index Scoring, and conservation planning.	Continuous		Utilized in this region due to high amount of farm production.

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status	Regulatory/ Voluntary
Environmental Quality Incentives Program (EQIP)	United States Department of Agriculture (USDA)	The Environmental Quality Incentives Program (EQIP) was reauthorized in the Farm Security and Rural Investment Act of 2002 (Farm Bill) to provide a voluntary conservation program for farmers and ranchers that promotes agricultural production and environmental quality as compatible national goals. EQIP offers financial and technical help to assist eligible participants install or implement structural and management practices on eligible agricultural land.		Current	Voluntary

Pollutant(s) Affected	Sources of Pollutant	Anticipated or Past Effectiveness
Sediment	Various Sources	Effective

Measurable Milestones	Schedule: Start	Schedule: End	Comments
EQIP offers contracts with a minimum term that ends one year after the implementation of the last scheduled practices and a maximum term of ten years. These contracts provide incentive payments and cost-shares to implement conservation practices. Persons who are engaged in livestock or agricultural production on eligible land may participate in the EQIP program. EQIP activities are carried out according to an environmental quality incentives program plan of operations developed in conjunction with the producer that identifies the appropriate conservation practice or practices to address the resource concerns. The practices are subject to NRCS technical standards adapted for local conditions. The local conservation district approves the plan.	Continuous		NRCS EQIP Funds and provide for cross fencing, paddock development, rotational grazing, and nutrient and pest management. It helps to provide healthier pastures and more efficient use of grasses.

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status	Regulatory/ Voluntary
Erosion & Sedimentation Control Ordinance	Hart County	Regulation of BMPs for development Erosion and Sedimentation Control Act (GESA). Requires permits for "land disturbing activities" (excluding projects less than 1.1 acres unless the land disturbing activity is within 200 feet of the bank of any state waters) and requires buffers to be maintained between the land disturbing activity and waters of the state.	1995	Enforced	Regulatory

Pollutant Affected	Sources of Pollutant	Anticipated or Past Effectiveness
Sediment	Land Disturbing Activities	Effective

Measurable Milestones	Schedule		Comments
	Start	End	
Continued enforcement of ordinance will ensure less sedimentation in waterbodies	Continuous		

POTENTIAL FUNDING SOURCES:

The identification and discussion of dedicated funding is important in determining the economic feasibility of the above-mentioned management measures.

Funding Source	Responsible Authority	Status	Anticipated Funding Amount
Section 319(h) of the Clean Water Act	EPD/State of Georgia	Must Apply	N/A
Environmental Quality Incentive Program	NRCS	Must Apply	N/A
Conservation Reserve Program	NRCS (Farm Service Agency)	Must Apply	N/A
Watershed Surveys and Planning	NRCS	Must Apply	N/A
Conservation Technical Assistance	NRCS	Must Apply	N/A
Conservation Buffer Initiative	NRCS	Must Apply	N/A

PROJECTED ATTAINMENT DATE:

The projected date to attain and maintain water quality standards in this watershed is 10 years from acceptance of the TMDL Implementation Plan by EPD.

MONITORING PLAN:

The purpose of this monitoring plan is to determine the effectiveness of the target TMDL and the management measures being implemented to meet water quality standards. List of previous, current or planned/proposed sampling activities or other surveys. (Monitoring data that placed stream on 303(d) list will be provided if requested.)

Name Of Regulation / Ordinance Or Management Measure	Organization	Pollutants	Purpose/Description	Time Frame		Status (Previous, Current, Proposed)
				Start	End	
TMDL Monitoring	EPA	Sediment	Monitoring data for Georgia 305(b)/303(d) List	1996	1996	Previous
Forest Water Quality Program	GFC	Sediment	BMP Education			Current
Forest Water Quality Program	GFC	Sediment	Complaint Investigation			Current
Forest Water Quality Program	GFC	Sediment	BMP Monitoring monthly Assurance Exams			Proposed

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CRITERIA TO DETERMINE WHETHER SUBSTANTIAL PROGRESS IS BEING MADE:

The following set of criteria will be used to determine whether any substantial progress is being made towards reducing pollutants in impaired waterbodies and attaining water quality standards. Discussion on each criteria is recorded in the space provided. Additional relevant criteria are presented in comments.

Percent of concentration or load change (monitoring program) _____

If monitoring results show that it is unlikely that the TMDL will be adequate to meet water quality standards, revision of the TMDL may be necessary.

- Categorical change in classification of the stream (delisting the stream is the goal) _____

- Regulatory controls or activities installed (ordinances, laws) _____

- Best management practices installed (agricultural, forestry, urban) The GFC has proposed to conduct monthly aerial reconnaissance of the watershed and monitor all active sites to provide for "reasonable assurance" that BMPs are implemented on these sites. Cases of noncompliance will be turned over to EPD for enforcement

COMMENTS:

Due to the restrictive timeframe imposed by the February 2000 Order of Consent to propose and finalize TMDLs, the EPA proposes a phased approach. This phased approach recognizes that with more information, the assumptions on which the TMDL is based may have to be modified to achieve compliance with any applicable water quality standard. These TMDLs may be revised when more information is available. Implementation of the TMDL should also follow a phased approach and be subject to changes as more information becomes available. It is further recommended that the North Fork of the Broad River and the Middle Fork of the Broad River watershed be considered a high priority for any sediment reduction Best Management Practices for agriculture, forestry, construction, urban development or any other land disturbing activities.

Little Shoal Creek was added to the Georgia 303(d) List by EPA.

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Environmental Protection Division of the Department of Natural Resources, State of Georgia.

TOGETHER WE CAN MAKE A DIFFERENCE!