

STATE OF GEORGIA
TIER 2 TMDL IMPLEMENTATION PLAN **REVISION** ___
 Town Creek
 Chattahoochee River Basin

Local Watershed Governments: Heard County

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.

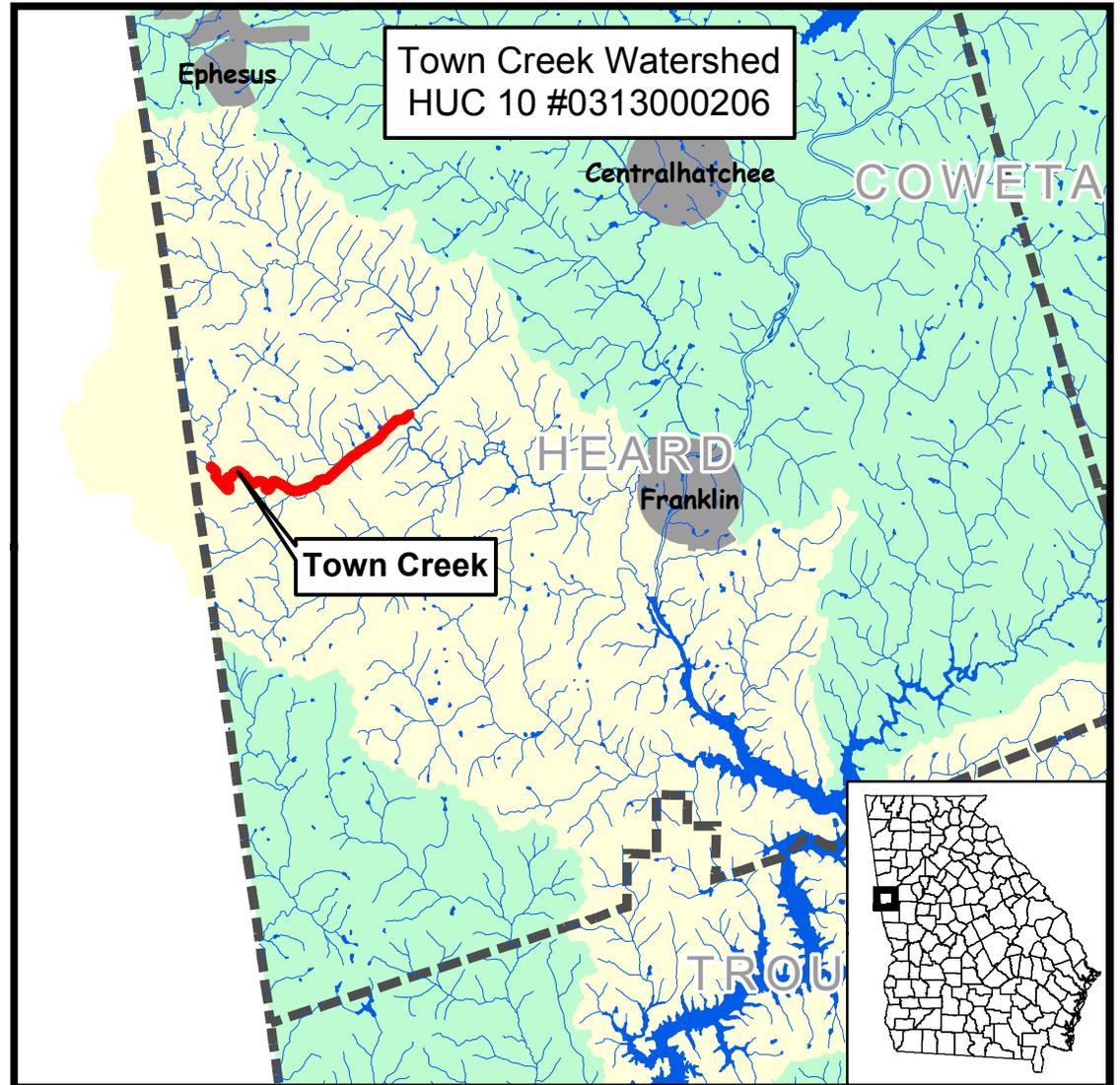


Table 1. IMPAIRMENTS

IMPAIRED STREAM SEGMENT	IMPAIRED SEGMENT LOCATION	IMPAIRMENT
Town Creek	Headwaters to Little Creek	Biota(sediment)

II. GENERAL INFORMATION ABOUT THE WATERSHED

Write a narrative describing the watershed. 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.

Watershed Characteristics:

Town Creek watershed is located in western Heard County, in the Piedmont region of Georgia. Its headwaters are in Randolph County Alabama. The watershed encompasses 3.3 square miles. This report does not include or evaluate the portion of the watershed that is in Alabama. Soils of the Piedmont are acid and low in nitrogen and phosphorus. Although row crops can be productive in this region, the area is better adapted to pasture production. Erosion control is critical when these soils are cultivated or exposed through construction activity (*West Georgia Watershed Assessment and Management Plan, 2004*). There are no NPDES facilities, hazardous waste sites or surface water intakes within the watershed.

New Data:

In 2004 a watershed assessment was completed for Heard County. Water quality and biological monitoring-were conducted in July and August of 2001 at a sampling station located at Town Creek and Jim Mickie Road. The sampling point was downstream from the one used to develop the TMDL, which was very close to the Alabama border, and thus did provide information about the portion of the watershed in Georgia. Sampling at the downstream location showed the same conditions as the earlier assessment. The stream received good habitat and macroinvertebrate scores but a fair Fish IBI score.

Land Use:

The most current land use data was collected in 2000 during the WGWA by the State University of West Georgia's Geosciences Department. Predominate land cover is forest, portions of which are in active timber production. A larger portion than indicated in the TMDL appears to be in pasture. Although there was historic row cropping in the area, there is none currently. There are two areas of low-density residential development in the upper watershed that the TMDL did not take into account.

In 2002, a large portion of the watershed was designated a Rural Historic Overlay District. Several landowners who wished to protect the area from development and maintain its historic, rural character sought the designation. Heard County's Historic Overlay District Ordinance regulates the visual impact of incompatible development.

Relevant Watershed Planning and Management Activities:

319 Grants: In 2000 Rolling Hills RC&D Council received a 319 grant to construct poultry litter stack houses with farmers in their region. The grant was not specific to Town Creek watershed, however farmers in the watershed were eligible to participate.

Source Water Assessment: In 2004 The West Georgia Watershed Assessment was completed. The assessment was funded by the State of Georgia to support work in Carroll and Heard Counties. Funding for the project was administered through the City of Villa Rica, Georgia. The project sampled a significantly denser network of data stations than is normal, allowing planners to understand surface water impacts in detail than equivalent studies. The project was particularly helpful for information about Town Creek because it provided data from a sampling point downstream from the one used to develop the TMDL.

E&S Program: Heard County is revising their Soil Erosion & Sedimentation Control Ordinances to require land disturbing permits for sites over one acre. Permitting is done during the plan review process. The county engineer is responsible for enforcing the ordinance.

Georgia Forestry Commission Activities: In an effort to minimize erosion and stream sedimentation from forestry practices, the GFC has an agreement with the Georgia Department of Natural Resources Environmental Protection Division (GADNR EPD) to educate the forest community and promote the use of forestry Best Management Practices (BMPs). A specially trained forester located in each of the 12 district offices statewide carries out this service.

Since January 2003, the GFC is conducting monthly BMP Assurance examinations in an effort to provide "reasonable assurance " that forestry operations are complying with the BMPs and meet any TMDL requirements. Active sites are identified through aerial or ground observations, requests by landowners, companies or operators, or by county tax records and then inspected for BMP implementation with the landowner's permission. This effort will hopefully educate landowners about BMPs and their responsibilities and liabilities with state water quality laws and also provide on-the-ground assistance to loggers or operators before potential problems occur.

Town 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
Town Creek	Heard County	6 miles/3.3 sq.mi.	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 AS PERCENT OF TOTAL LOAD	NEEDED REDUCTION FROM TMDL
Biota	No degradation to fish community	Row Crops 94.65% Pasture 3.02 % Decid Forest .96% Mixed Forest .42%, Evergreen Forest .41 %, Roads .35%, Transitional .17 % Commerical /Ind .03%	11%

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

NOTE: The possible contribution of all impairments listed below must take into account that both the TMDL sampling data as well as the data collected for the West Georgia Watershed Assessment state that Town Creek has an impairment of the fish community only. The 1998 Biomonitoring Report conducted for the TMDL states the “Probable cause for the fish community impairment in the stream is unclear. There did not appear to be any water quality problems and habitat assessment scores were generally fair to good”. Additionally, the monitoring point used to evaluate the stream was upstream and close to the Alabama border. Little can be concluded regarding the conditions of the majority of the watershed in Heard County.

The *Total Maximum Daily Load Evaluation Thirty-One Stream Segments in the Chattahoochee River Basin For Sediment (GAEPD, 2003)* states that based on findings, “it was determined that most of the sediment in the Chattahoochee River Basin streams is due to ‘legacy’ sediment. Therefore it is recommended that there be no net increase in sediment ...in order that these streams recover over time”(pg. 64). This indicates that it emphasis should focus on avoiding future and current erosion rather than to determining the cause of the existing impairment, which probably occurred because of past land use. This indicates that it is more important to avoid future and current erosion than to determine the cause of the existing impairment, which probably occurred because of past land use.

Evaluation of Impairments listed in the TMDLS:

Row Cropping: The TMDL attributes 1.12% of land use and over 90% of the sediment load to row cropping. Discussions with individual landowners, foresters and county staff confirmed that there is no row cropping in the watershed apart from vegetable gardens for personal consumption. All parties stated that even the 1.12% listed in the TMLD as the percentage of land use in row cropping was not accurate. During a field survey conducted by CFRDC staff on March 30 2004, no row cropping was seen. Row cropping may have been a past land use that contributed to the problem.

Pasture: TheTMDL attributes 6.33% of land use and 3% of the sediment load to pasture. Discussions with landowners confirm that there is a moderate amount cattle production in the watershed. During a field survey conducted on March 30 2004, CFRDC staff noted pasture adjacent to streams with no vegetative buffer and/or buffer in poor condition.

Forest: TheTMDL attributes 89.66% of land use and less than 2% of the sediment load to forest (evergreen, deciduous and mixed combined). The 1998 Biomonitoring Report conducted for the TMDL states the “. There is a substantial amount of siculture activity in the area. In some instances poor bride/culvert construction prevents fish passage from downstream areas, leaving upstream populations unable to recolonize after catastrophic local events; this is a possible albeit improbable cause for the impairment of Town Creek”. Since the

WGWA showed the same impairment in the lower watershed poor culvert/bridge construction can be ruled out as a cause for the impairment. During a field survey conducted on March 30 2004, CFRDC staff noted several areas of active forestry.

Roads: The TMDL attributes less than 1% of the impairment to roads. During a field survey conducted on March 30 2004, CFRDC staff noted that most of the roads within the watershed were unpaved and in fair to poor conditions. Soil loss was noted, particularly in areas that had unstable road banks combined with poorly maintained ditches. Discussions with landowners confirmed that roads are in poor condition.

Commercial Industrial Lands: The TMDL attributes .06% of land use and .03% of the sediment load to commercial and industrial land use. The only land use of this type identified in the watershed was poultry production in the upper watershed. During the field survey steep, bare slopes were noted adjacent to the chicken house.

Evaluation of possible impairments not listed in the TMDL that were identified during this evaluation:

Off-Road Recreational Vehicle Use: Landowners identified off road driving as a possible source of the impairment. The reason for this activity is mainly to gain access to Town Creek. It is particularly prevalent next to bridges.

Low Density Residential : Two areas of low density residential development were noted during the fields survey. These did not appear to be a significant contributor to the impairment.

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 effected, the stream miles effected, 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
Sediment (biota)	Roads	Throughout watershed	Large	
	Pasture	Widespread in watershed	Moderate	
	Commercial /Industrial	1 activity noted	Moderate	
	Forest	Widespread in watershed	Small	
	Row Cropping	None in watershed	Negligible	

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.

Individual stakeholders (major landowners, local government staff, state and federal agencies and other identified groups) were notified of the project by mail. An article describing the project also appeared in all the local newspapers. The letter received by individual stakeholders and the article described three ways for interested parties to engage in the process; 1) attend one of five county stakeholder meetings, 2) contact CFRDC staff directly through e-mail or by phone, and 3) view and comment on the draft plans on the CFRDC website between June 28th and July 14th 2004.

Meetings: Meetings were held in each of CFRDC's five counties (see attachment). CFRDC staff developed presentation boards for the meetings that contained a map of each of the nine affected streams, land use data that had been provided in the TMDL, and preliminary findings, if any. Sampling data was also provided for all the streams. After a short presentation, participants were asked to examine and comment on the data and offer insight into current watershed conditions. Participants were supplied with comment sheets. One landowner, representing several others in Town Creek Watershed attended the Heard County meeting. Stakeholders from the Georgia Forestry Commission, the NRCS and other agencies with an interest in Town Creek Watershed attended one of the five meetings. Information about all nine watersheds was presented at each meeting because many stakeholders had an interest in watersheds in more than one county.

Press Releases: Two Press Releases ran in local newspapers during the course of the project. The first ran in early May 2004. It alerted readers to the project, meeting times and ways to participate. The second ran in early October 2004. It gave an update on the project and asked for participation through direct contact with staff or by reviewing the plans on CFRDC's website.

Website: the nine TMDL Implementation Plans were posted on CFRDC's website on June 28th 2004 for the purpose of receiving comment. Stakeholders who attended meeting of contacted CFRDC staff directly were asked to visit the website and comment on the draft plans.

Advisory Group: CFRDC formed a Water Issues Committee (WIC) in 2000 for the purpose of guiding the agency on TMDL, Source Water Assessment Plans (SWAP) and other water related issues. The WIC consists of two or more representatives from each county who were appointed by the local governments. During this TMDL process, this group met in mid July 2004 to review draft plans and develop public outreach activities.

Major Findings and Comments from Stakeholder Involvement:

1. Newspaper articles are the most effective method for public outreach. Educating children, public meetings, events and Adopt-a-Stream were also mentioned.
2. Sampling points need to be selected downstream of the Alabama border!.
3. Little to no row cropping in watershed
4. Dirt roads and 4 wheeler recreation contribute to sediment problem

QUESTION: Does the information provided about land use seem accurate? If not, how is it different?

“No, row crops are not as big in the area indicated”

QUESTION: Do you know of any event or human caused changes in the watershed over the last 5 years that might have had a positive or negative impact on the pollution problem?

“Area designated a Historic District in last five years”

“ Development. Dirt roads not maintained.”

Comments as received on Comment Sheets at meetings:

“Pasture more than 6%”

“Sampling should be done at other points farther downstream”

“I think the data needs to be updated and the causes determined, before making recommendations on how to improve.”

More ground pounding needs to be done by the people that can get things done. Seeing the presence of GFC, EPD in a friendly way helps much. Too much of what is seen of EPD is only on TV or in a few law enforcement cases.

More ground pounding needs to be done by people gathering and using the data for watershed management plans. Using satellite imagery is great for figuring land use statistics only as long as it is checked on the ground.

Consideration has to be given to the fact that it took hundreds of years of human misuse to cause our problems we see today and no law or education is going to change things in only a few years. We as citizens need to get serious about solving the problems instead of just looking like we are solving them. There is more talk, monitoring, and laws about soil disturbances than ever, but nearly every construction site I see is still putting silt in streams because of improper installation or maintenance of sediment control structures. Sometimes just the installation of silt fence causes a major problem. These comment sheets are a good start if used.”

“Good formatting for TMDL reporting.

I note that we might add Georgia's Better Back Road Program (What is it?) to Management Measures for Town Creek, Cavender Creek, Long Branch Creek, and the Tributary of Flat Shoals Creek, especially if it addresses both public county and private unsurfaced roads. Primarily, unsurfaced county road crews must be educated. Are there no possible management measure for Off Highway Vehicle abuse of utility easements and elsewhere? There is a National Off Highway Vehicle Conservation Council (NOVHCC) and a Georgia Association of Recreational Trail Riders Association (GARTRA) that may address this as stakeholders. How might we review the GA EPD developed TMDL reports?”

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	ST	ZIP	PHONE (W)	PHONE (H)
Denny Ivey/CFRDC Water Issues Committee	103 Carroll Circle	Carrollton	GA	30117	770-832-2171	
Brenda Rice/CFRDC Water Issues Committee	300 Old Goldmine Road	Villa Rica	GA	30180	770-830-6673	
Loren McCune/CFRDC Water Issues Committee	PO Box 428	Newnan	GA	30264	770-253-2020	770-253-9357
David Brown/CFRDC Water Issues Committee	1770 Al Robert Road	Senoia	GA	30276		770-599-1830
Robert Blackburn/CFRDC Water Issues Committee	200 Joe Ben Lee Road	Newnan	GA	30263	770-253-6990	770-253-6728
Bob Jones/CFRDC Water Issues Committee	252 Jones Road	Franklin	GA	30217	706-675-3053	706-675-3049
Doug Craven/CFRDC Water Issues Committee	2404 Armstrong Mill Road	Franklin	GA	30217		770-854-8186
C.E. Withrow/CFRDC Water Issues Committee	940 Linda Lane	Manchester	GA	31816	706-846-3525	
Bill Tomlin/CFRDC Water Issues Committee	807 McCurdy Boulevard	Manchester	GA	31816		706-846-2717
A.J. McCoy/CFRDC Water Issues Committee	571 Alvaton Road	Gay	GA	30218	404-506-0919	772-927-9055
Arthur Holbrook/CFRDC Water Issues Committee	215 Cofield Road	LaGrange	GA	30240		706-884-7905
Buck Davis/CFRDC Water Issues Committee	1134 Young's Mill Road	LaGrange	GA	30240		706-884-1621
David Brown/CFRDC Water Issues Committee	Post Office Box 430	LaGrange	GA	30241	706-883-2000	

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

MEASURES APPLICABLE TO SEDIMENT IMPAIRMENT

MEASURE	RESPONSIBILITY	DESCRIPTION	SOURCE OF FUNDING	STATUS	ENACTED/ IMPLEMENTED	EFFECTIVENESS (Very, Moderate, Weak)
Erosion & Sedimentation Control Ordinance	County	Requires erosion control plans for all new development over 1.1 acres	County	In place	Amended summer 2004	Moderate Little development in watershed.
NPDES Permitting	EPD Permittee	Permittee monitors discharges to determine if they are within allowable limits and files a report to EPD	EPD Permittee	Underway		Weak, no NPDES sites in watershed.
Georgia's Better Back Road Program	Rolling Hills RC&D Council	Demonstration sites, Statewide training & publication of <i>Unpaved Road Maintenance Manual</i>	Grants	Underway	Project runs from spring 2004 to spring 2005	Very
Implementation of GFC's Forestry BMPs	GFC,	Inform landowners, foresters, timber buyers, logger site and reforestation effective practices contractors and others about commonsense, economical and effective practices to minimize nonpoint pollution	GFC	Underway	1997	Moderate to weak. EPA identifies siculture as the lowest contributor to np pollution. However there is a large amount of forestry in the watershed.
GFC Monthly BMP Assurance Exams	GFC	GFC offers monthly assurance exams of active sites, particularly those located in impaired watersheds.	GFC	Current	Jan 2003	Moderate to weak. EPA identifies siculture as the lowest contributor to nonpoint pollution.
NRSC BMP Programs	NRSC Property Owner	Various voluntary programs to assist landowners with BMPs	Federal Property Owner	Underway		Very
Public Outreach	CFRDC	CFRDC will distribute findings of Implementation Plans to local governments, agencies and citizen groups.	Local	Planned	Sept-Dec. 2004	Moderate

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	
All	EPD	Planned	2005	2005	Basin monitoring

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
CFRDC	TMDL section on CFRDC web page will contain all Implementation Plans, information about the TMDL process, links to other web pages and an area for comments	Local governments and some citizens	Starts July 2004 and continues indefinitely
CFRDC	News releases in all local papers when final plans are approved	Readers of Newspapers	December 2004

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	
Erosion & Sedimentation Control Ordinance	County	Revised 2004	Adopted 2004	
NPDES Permitting	EPD Permittee	N/A	N/A	Ongoing program
Georgia's Better Back Road Program	Rolling Hills RC&D Council	2003	2004	In collaboration other
Implementation of GFC's Forestry BMPs	GFC,	N/A	N/a	Ongoing program
GFC Monthly BMP Assurance Exams	GFC	2002	2002	On going
NRSC BMP Programs	NRSC Property Owner			Ongoing programs
TMDL Section on CFRDC Website	CFRDC	May 2004	July 2004	On-going

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Date Submitted to EPD:	November 30 2004	Revision:	

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
Mr. Frank Sullivan Coweta County Cattlemen's Association	354 Donald Lamb Road	Moreland	GA	30259	-NA-	-NA-
Mr. Robert Tolleson Coweta County - Planning and Zoning	22 East Broad Street	Newnan	GA	30263	-NA-	-NA-
Mr. Wayne Kennedy Coweta County - Development and Engineering	22 East Broad Street	Newnan	GA	30263	-NA-	-NA-
Mr. Ned Chambless Coweta County Farm Bureau	19 Bullsboro Drive	Newnan	GA	30264	-NA-	-NA-
Mr. Render Ward Coweta County Extension Service	21 East Washington Street	Newnan	GA	30263	-NA-	-NA-
Ms. Pat Miolen Coweta County Adopt-A-Stream	21 East Washington Street	Newnan	GA	30263	-NA-	-NA-

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.

Attachments

Meeting Time & Places Flier (hard copy only)
Sample Press Release # 1 (hard copy only)
Sample Press Release #2 (hard copy only)