Turnpike and Sugar Creeks Watershed Cluster
TMDL Implementation Plan Narrative
Telfair County, Georgia

Introduction

Turnpike and Sugar creeks have been listed as impaired water bodies on the State of Georgia's 303(d) list of impaired waters. Because of the recent drought, Turnpike and Sugar creeks have become intermittent streams. The lack of consistent water flow and the resultant high water temperatures of remaining pools of stagnant water has no doubt contributed to water quality problems of fecal coliform and pH (Hydrogen Ion Concentration). Locals note numerous large beaver dams throughout the creek that aggravate the problems of low flow and stagnant water. As another possible contributor to the fecal coliform problem, locals note the number of wastewater treatment plants that lie along both creeks. The City of Milan's wastewater treatment plant lies on Turnpike Creek. The City of Milan wastewater treatment plant has an LAS permit. On Sugar Creek, the City of Eastman has a wastewater treatment plant; however it has an NPDES permit. Also on Sugar Creek, the City of McRae has a wastewater treatment plant. Like the City of Milan, it has an LAS permit. There is also some local concern about sewage not being properly treated that flows, overflows, or discharges from these same wastewater treatment systems. The pH levels could possibly be affected by several factors like the rain and the soil that the watershed cluster lies in. The soil in the Turnpike Creek watershed is mostly sandy and silt loam, as noted in the TMDL. These types of soil tend to be acidic and have a pH level from 5.01 to 5.02, thus lowering the pH levels below the State of Georgia's criterion. Along with Turnpike Creek, the Sugar Creek watershed cluster is mostly sandy and silt loam as well. Soil in the Sugar Creek watershed tends to be acidic because the soil has a pH level ranging from 4.85 to 5.20, which tends to lower pH levels. The water in both creeks, like many blackwater creeks in South Georgia, is full of leaves and has a high, natural content of tanic acid. While there is a general understanding and willingness to help improve water quality, these local concerns over the true nature of the water quality issues in Turnpike and Sugar creeks will have to be addressed to obtain acceptance and support of the TMDL Implementation Plans. The TMDL Implementation Plans concentrate on educating the public about non-point sources of water pollution and encouraging the use of best management practices at the agriculture, forestry, and urban and residential levels. Also, where appropriate, the TMDL Implementation Plans encourage the investigation of possible point sources of pollution to alleviate related local concerns. Reduction of bacteria entering Turnpike Creek by 14% will no doubt make for better water quality regardless. Returning the pH levels of both creeks to normalcy is another question, as the natural background pH levels of water in both creeks may naturally be near or below the state standard. A more involved and in-depth monitoring program can also help better define the issues and resolve any local concerns.

Background and Purpose
Turnpike Creek, lying in Telfair County, is in the Lower Ocmulgee River Basin and eventually flows into the Ocmulgee River. The 24-mile segment with headwaters west of the City of Chauncey in Dodge County is currently listed on the 303(d) list in the State of Georgia for violating the water quality standard for fecal coliform and pH. Sugar Creek, lying in Telfair County, is in the Lower Ocmulgee River Basin and eventually flows into the Ocmulgee River. The 5-mile segment with headwaters just west of the City of Eastman in Dodge County is on the 303(d) list as well.

The presence of fecal coliform bacteria in aquatic environments indicates that the water has been contaminated with the fecal material of man or other animals. At the time this occurred, the source water might have been contaminated by pathogens or disease producing bacteria or viruses, which can also exist in fecal material. Some waterborne pathogenic diseases include typhoid fever, viral and bacterial gastroenteritis and hepatitis A. The presence of fecal contamination is an indicator that a potential health risk exists for individuals exposed to this water. Fecal coliform bacteria may occur in ambient water as a result of the overflow of domestic sewage or non-point sources of human and animal waste.

pH, or hydrogen ion concentration, is the acidic or basic nature of a solution. pH levels can be affected by nature in a number of ways. Rainfall and different types of soil tend to make the pH level of a solution more acidic in nature. Excess temperatures make the level of pH rise according to how high a temperature may increase. Also, submerged plants and animals (hydrilla and water lilies, for example) affect pH when they persist in a solution without being washed out by events such as a rainfall.

The U.S. Clean Water Act requires a TMDL, or Total Maximum Daily Load, to be established for each pollutant in every body of water on the 303(d) list. A TMDL is a calculation of the maximum amount of pollutant, from both point and non-point sources, that a water body can receive and still adhere to the minimum water quality standard developed by the State of Georgia. The United States Department of Interior-Geological Survey (USGS) and the Georgia Environmental Protection Division (GAEPD) gathered samples from Turnpike Creek beginning in January of 1999 through December of 1999 for fecal coliform and pH. The GAEPD tested samples to detect the level of fecal coliform. For the months of May through October, fecal coliform should not exceed 400 counts per 100ml on any given sample collected from a given sampling site. In the months of November through April, fecal coliform should not exceed 4,000 colonies per 100ml, on any given sample collected from a given sampling site. The data gathered indicated one exceedance of the fecal coliform level during the months of November through April. Due to a lack of sufficient sampling data during the period, a more generous standard for fecal coliform was utilized for Turnpike Creek. Normally, the standard for the months for May through October is 200

colonies per 100ml. For the months of November through April, the normal standard is 1,000 colonies per 100ml. The GAEPD also tested samples to detect the levels of pH in Turnpike Creek. The pH level criterion for the State of Georgia is between 6.0 and 8.5. Turnpike Creek violated the State of Georgia's pH criterion 3 of the 12 times it was measured in 1999, or 25.00%. None of the 3 violations went above the criterion. All of them fell below the criterion. It should also be noted that out of the 3 violations, the lowest measurement was 5.6, which is not extremely low. In 2000, the 24-mile segment of Turnpike Creek was placed on the 303(d) list. The GAEPD also tested samples to detect the levels of pH in Sugar Creek. The pH level criterion for the State of Georgia is between 6.0 and 8.5. Sugar Creek violated the State of Georgia's pH criterion 2 of the 20 times it was measured in 1999, or 10.00%. Neither of the 2 violations went above the criterion. Both of them fell below the criterion. It should also be noted that out of the 2 violations, the lowest measurement was 5.8, which is not extremely low. Normal rainfall in the area is estimated to have a pH of 5.6. In 2000, the 5-mile segment of Sugar Creek was placed on the 303(d) list.

The purpose of the implementation plan is to identify the actions that must be taken in the future to decrease the level of fecal coliform in Turnpike Creek by reducing the amount of bacteria entering the stream by 14%. Also, to identify the actions to improve all pH measurements to fall within the State of Georgia's criterion by 2012 in Turnpike and Sugar creeks. This should improve the water quality and better enable Turnpike and Sugar creeks to meet the state water quality standard.

Plan Preparation

The implementation plan was developed by the Heart of Georgia Altamaha RDC with the assistance of a watershed committee comprised of stakeholder representatives from the forestry industry, agriculture, the Georgia Forestry Commission, the Altamaha Soil and Water Conservation Committee, Cooperative Extension Service, the Pine Country R C & D, the NRCS, Ocmulgee RiverKeeper, the Department of Human Resources South Central Health District, Telfair County Commission, a mayor of a local town, a member of the RDC's Regional Water Resources Advisory Committee, and the local president of Farm Bureau. The Heart of Georgia Altamaha RDC was in charge of drafting the plan under a contract signed with the GA EPD to prepare a TMDL Implementation Plan. A preliminary copy of the plan and planning process was discussed and a presentation was given at the initial watershed committee meeting on February 12, 2003 at the Telfair County Community Development Center. Along with the watershed committee, landowners with 500 acres or more of property within two miles of either side of the creek were invited to attend this initial committee meeting to give comments.

A meeting to educate the public and receive further stakeholder input by discussing and reviewing the draft plan took place with a presentation at the Telfair County Community Development Center in McRae, GA on March 6, 2003.

At this meeting, any landowners who owned 25 acres or more of property within two miles of either side of both creeks were sent a letter informing and inviting them to the public meeting. Thirty-six persons attended this meeting. Public comments were solicited and input was placed into the plans. The plans address the steps that will be taken in the future to improve the water quality standard. The plans provide for monitoring and implementation actions to achieve goals submitted on the TMDLs. A draft of the final plans was mailed to the watershed stakeholder committee on May 16, 2003, for solicitation of comments before final submittal to EPD.

TMDL Data and Potential Sources of Pollution

In January 1999, the USGS and the GAEPD began a follow-up sampling and monitoring study as a part of a five-year River Basin Planning cycle (Georgia EPD). The data was gathered on a monthly basis through December 1999 for fecal coliform in Turnpike Creek. As stated earlier, a more generous water quality standard was utilized for Turnpike Creek due to a lack of complete sampling data. For the months of May through October, fecal coliform should not exceed 400 counts per 100ml on any given sample collected from a given sampling site. In the months of November through April, fecal coliform should not exceed 4,000 colonies per 100ml, on any given sample collected from a given sampling site. The data gathered indicated one exceedance of the fecal coliform level during the months of November through April. The GAEPD also tested samples to detect the levels of pH in Turnpike Creek. The pH level criterion for the State of Georgia is between 6.0 and 8.5. Turnpike Creek violated the State of Georgia's pH criterion 3 of the 12 times it was measured in 1999, or 25.00%. None of the 3 violations went above the criterion. All of them fell below the criterion. It should also be noted that out of the 3 violations, the lowest measurement was 5.6, which is not extremely low. In 2000, the 24-mile segment of Turnpike Creek was placed on the 303(d) list. The GAEPD also tested samples to detect the levels of pH in Sugar Creek. The pH level criterion for the State of Georgia is between 6.0 and 8.5. Sugar Creek violated the State of Georgia's pH criterion 2 of the 20 times it was measured in 1999, or 10.00%. Neither of the 2 violations went above the criterion. Both of them fell below the criterion. It should also be noted that of the 2 violations, the lowest measurement was 5.8, which is not extremely low. In 2000, the 5-mile segment of Sugar Creek was placed on the 303(d) list.

The Turnpike Creek watershed consists primarily of forest and cropland, with minimal areas of pasture and wetlands. Of the 51,387 acres that make up the impaired segment, 52 percent is comprised of forest. Another 21 percent is cropland. The Sugar Creek watershed consists primarily of miscellaneous land (residential, commercial, for example) and other grasses (urban/recreational, for example) with minimal areas of wetlands and forest. Miscellaneous land makes up 44.4 percent and other grasses make up 21.7 percent. Urban non-point sources were identified by EPD as a possible primary source of the fecal coliform and pH problems. One of the sources is the general storm water runoff that originates from the Cities of Milan, Eastman, and McRae. This is the runoff from

construction, streets, and residential areas that results from rainfall. There is one point source with an NPDES permit that is a possible contributor to the problem of fecal coliform in Sugar Creek. The Eastman (South) WPCP (#GA0046485) has an NPDES permit for Sugar Creek.

As mentioned in the introduction, the erection by beavers of large dams has been a continuous problem. This has led to a significant reduction in the amount of timber located along the streams. In addition, the presence of the beavers also raises the possibility of an additional contributor of non-point source pollution. Both creeks have a well-known reputation among locals as being intermittent streams throughout most of the year. The beaver dams tend to aggravate the situation by further restricting the stream's ability to flow.

Along with the large beaver dams, locals believe that the fecal coliform problem in Turnpike Creek possibly comes from the wastewater treatment plant in the City of Milan. It should be noted that the City of Milan does not have an NPDES permit, only an LAS permit (#GA02-086). While it is not known conclusively that the plant is directly contributing to the problems present along the stream, the City of Milan may be required at some point to obtain an NPDES permit. On Sugar Creek, locals note that problems possibly come from wastewater treatment plants in the Cities of Eastman and McRae. It should be noted that the City of Eastman has an NPDES permit (#GA0046485). However, it should also be noted that the City of McRae has only an LAS permit (#GA02-248). Like the City of Milan wastewater treatment plant, it is not known conclusively that the City of McRae wastewater treatment plant is directly contributing to the problems present along the stream, the City of McRae may be required at some point to obtain an NPDES permit . One concerned citizen noted the possibility of the City of McRae could have contributed to the fecal coliform problem in Sugar Creek prior to the construction of the wastewater treatment plant by dumping raw sewage into the creek. This apparently took place many years ago and ceased with the construction of the city's wastewater treatment facility. The concern is that the untreated sewage might have remained in the soil over the years, and that this could possibly have some effect with Sugar Creek's present-day pH issues. This is unlikely, but accidental discharges or overflows could be a possible, but not likely probable, contributor.

Regulatory and Voluntary Measures: Existing and Future

Septic tank maintenance ordinances are an effective way to curtail urban and residential runoff. In Telfair County, such ordinances are not in effect, septic tank installations are regulated. It is important that future septic tank regulations, particularly relating to post-construction maintenance, be implemented at the local level. Future use of residential BMPs should also be explored as a practical means of limiting residential runoff. The local Cooperative Extension office can help individual homeowners assess and utilize BMPs through its Home*A*Syst Program.

Public education measures, beginning with the TMDL Implementation Plans and continuing in the future concerning Best Management Practices, are an efficient way to reach the local citizenry. Agriculture BMPs include, but are not limited to, the use of a waste storage structure, conservation tillage, waste storage pond, diversion, fencing, filter strips, stock trails/walkways, stream/shoreline protection, nutrient management, and well protection. The beavers have contributed to the problem by killing the natural filter strips of trees along the creek. Farmers utilize some of the agriculture BMPs currently; however, many do not practice them, and some do not know how to define a BMP. The NRCS and the Pine Country RC&D continue to work with farmers by educating them and providing them with the proper resources/information to enable them to install current and future BMPs. Cooperative Extension can also provide individually tailored assistance with BMPs through its Farm*A*Syst Program.

The use of forestry BMPs are becoming more prevalent, however, some landowners continue to ignore forestry BMPs. The Georgia Forestry Commission has and continues to make a conscious effort to educate and monitor BMPs by aerial surveillance. Some forestry BMP categories include, but are not limited to, harvesting in SMZ's, mechanical site preparation, chemical site preparation, fertilization, firebreaks, skid trail stream crossings and road crossings, and logging roads. The State Implementation Committee of the forest industry's Sustainable Forestry Initiative can lend valuable support/assistance. It is unlikely that forestry contributes to any fecal coliform problems. To the contrary, more forested buffers of streams could help prevent such contamination.

The City of Milan currently does not have planning and zoning regulations within its city limits. The City of McRae does have planning and zoning regulations within its city limits. Telfair County currently does not have any planning and zoning regulations in the unincorporated areas as well. Telfair County enforces erosion and sedimentation control measures at the state level. However, there are no erosion and sedimentation measures enforced at the local level.

The implementation of Land Use Management Regulations is planned in the future on a county-by-county basis. The regulations will be put into place as the necessary support at the local level is obtained. They will be enforced by local governments, GA DNR, GA Department of Human Resources, GA Department of Community Affairs, and the GA Forestry Commission. The regulations would utilize state-mandated environmental planning criteria, local planning and zoning ordinances, BMPs for agriculture and forestry, erosion and sedimentation measures, and septic tank permitting to manage runoff and development. The Heart of Georgia Altamaha RDC will provide technical assistance in developing a "zoning lite" ordinance to encourage local governments to implement planning and zoning measures.

Storm Water Management Regulations are planned for implementation in the future as well on a county-by-county basis. The new regulations will be put into

effect as requisite local support is obtained, and the GA DNR, GA EPD, and local governments will enforce them. The regulations would utilize local ordinance enforcement to produce better erosion and sedimentation control at the time of construction. These regulations could possibly require post-construction erosion and sedimentation control and possibly utilize passive design elements in new developments and stream buffers to prevent runoff.

A Cooperative Monitoring Program is needed for future implementation. The GA DNR, GA EPD, local governments, and possibly local volunteers would conduct the program. Additional regular monitoring of Turnpike and Sugar creeks are needed to better define pollutant sources. The program could also consist of a scientific study of issues such as fecal coliform and pH levels in slow-moving blackwater streams. It also could possibly seek funding and cooperation for watershed assessments, including possible model demonstration assessments for small watersheds, and develop a program for implementation assessments for Turnpike and Sugar creeks.

An implementation of an Adopt-A-Stream program is needed. The program would be utilized through various organizations and groups throughout the watershed. The program will provide updates on current stream conditions in the future as the requisite funding and support are developed.

Schedule for Implementation
BMPs for the agriculture and forestry community will be promoted beginning in 2003 and continuing. The schedule for implementing the Land Use Management Regulations and the Storm Water Management Regulations is on a county-by-county basis in the near future, as local support is obtained. It would be helpful if the Cooperative Monitoring Program could be implemented in 2003 pending funding. An Adopt-A-Stream Program would also be helpful if implemented by 2004, pending local support and funding.

Monitoring Plan
The GA Forestry Commission will continue to do aerial and land surveillance of the watershed area. It is possible for Adopt-A-Stream monitoring to begin to take place in the future, as the requisite funding and support are developed. State study of the natural background levels of pH is also needed, with possible reduction of the state standard as appropriate. State action on pollution sources other than local which impact the pH of rainfall in the area may be necessary.

Funding
The GA Forestry Commission will continue to do aerial and land surveillance of the watershed area. Also, the Georgia Forestry Commission will continue to administer Best Management Practices Assurance Examinations. The U.S. Fish and Wildlife Service is funding a program called “Partners for Wildlife,” which is sponsored through the GA Soil and Conservation Service. Also, some funding will originate from the USDA through the Farm Service Agency and the Natural

Resource Conservation Service. The UGA Cooperative Extension Service is funding two programs; Home*A*Syst and Farm*A*Syst, which are enacted by the local agriculture extension agent offices. Finally, the State Implementation Committee (SFI) is funding a program called “Sustainable Forestry Initiative.” The National Fish and Wildlife Foundation is funding a program called the General Grant Challenge Program. The Georgia Department of Natural Resources Wildlife Resources Division has produced two booklets that are available to the public, “Small Game Management in Georgia” and “Beaver Management and Control in Georgia.” Additional funding is likely needed to establish more in-depth monitoring.

Criteria to Determine Progress

The criteria to determine whether progress toward attainment is being made will be shown through the results of future monitoring by any improved fecal coliform levels through reducing the amount of bacterial loading in Turnpike Creek. Obtaining the State of Georgia’s criterion for pH levels in both creeks may be almost impossible because of natural background levels, and more study is warranted.

Conclusion

Improved future utilization and implementation of best management practices at the agricultural, residential, and urban levels will provide substantial progress in reducing the levels of fecal coliform bacteria in Turnpike Creek. Meeting the State of Georgia’s criterion for pH levels in Turnpike and Sugar creeks may be nearly impossible, especially as the result of local action. An examination of a potential point source(s) would help to determine if a problem exists from that concern, and to what extent such a problem may exist. The examination of potential non-point sources would be helpful as well. Any action(s) taken as a result of such an examination would further assist in producing progress. We anticipate the removal of Turnpike and Sugar creeks from the State of Georgia’s 303(d) list.

STATE OF GEORGIA

TMDL IMPLEMENTATION PLAN
WATERSHED APPROACH
Ocmulgee River Basin

Local Watershed Governments

Heart of Georgia-Altamaha RDC
Telfair County
Dodge County
City of Milan

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 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.

Sugar Creek/Turnpike Creek Watershed
0307010504

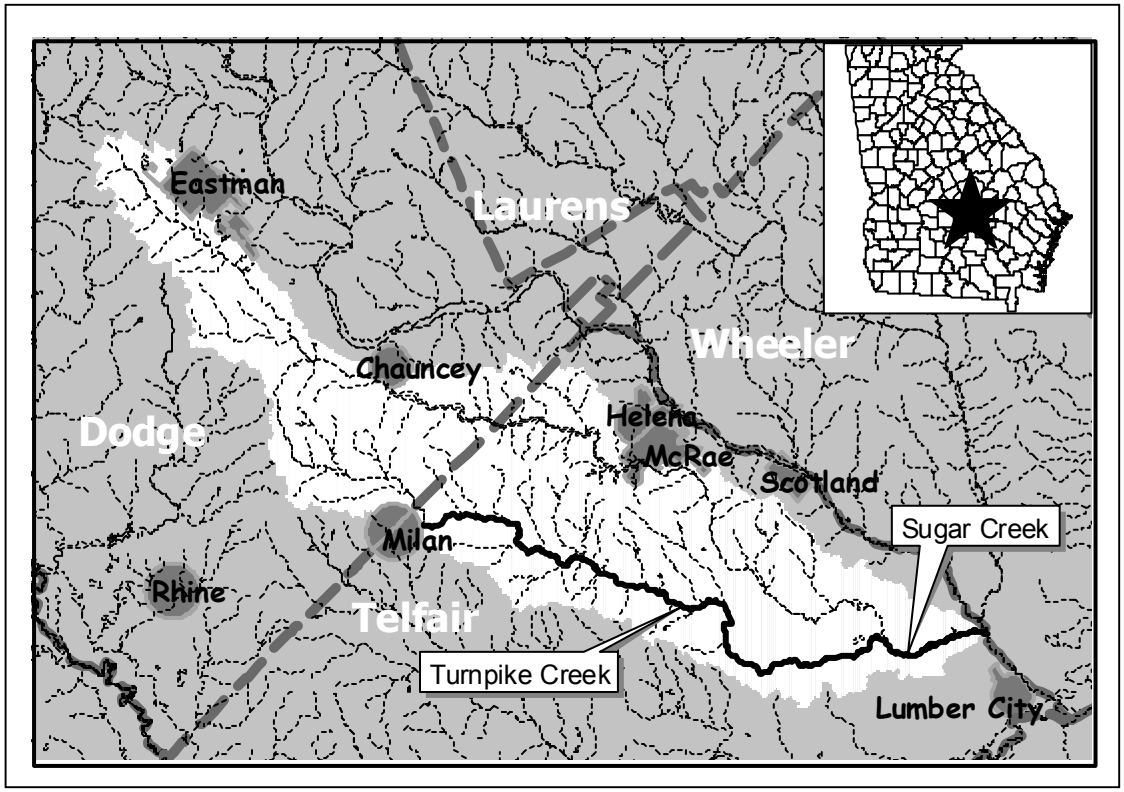


FIGURE 1

Impaired Waterbody*	Impaired Stream Location	Impairment
1. Turnpike Creek	Highway 280 to Sugar Creek	Fecal Coliform, pH
2. Sugar Creek	Turnpike Creek to Little Ocmulgee River	pH
3.		

*These Waterbody Numbers are referenced throughout the Implementation Plan.

Sugar Creek/Turnpike Creek
Watershed 0307010504

POLLUTANT:	SOURCE:	EFFECT:	WHAT CAN I DO?	
			At Home: Community, School	At Work: Business, Government
__ Dissolved Oxygen (DO) **X** Fecal Coliform (FC) __ Sediment __ Metals __ Fish Consumption Guidelines (FCG) **X** Other (Please List) pH (Hydrogen Ion Concentration)	__ Industrial **X** Urban **X** Agriculture **X** Forestry **X** Residential __ Other (Please List)	__ Habitat __ Recreation __ Drinking Water __ Aesthetics **X** Other (Please List) Fishing	Get Involved in Adopt-A-Stream Public Education Use Proper BMPs Check Septic System	Develop Zoning Ordinances Dispose of Harmful Chemicals Properly

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	Impacted Waterbodies*	Target Audience	Anticipated Dates (MM/YY)
Heart of Georgia Altamaha RDC	TMDL Presentation at Telfair County Community Development Center for the committee	Turnpike & Sugar Creeks	Local Governments, Agriculture Organizations, Georgia Forestry Commission, Forestry Industries, Altamaha Soil and Water Conservation Service, Natural Resource Conservation Service, Pine Country RC & D, DHR South Central Health District, Ocmulgee RiverKeeper	February 12, 2003
Heart of Georgia Altamaha RDC	A Press Release to The Telfair Enterprise concerning Public Meeting	Turnpike & Sugar Creeks	General Public	February 27, 2003
Heart of Georgia Altamaha RDC	A Public Service Announcement to WYSC (102.7 FM) in McRae, GA	Turnpike & Sugar Creeks	General Public	March 3-6, 2003
Heart of Georgia Altamaha RDC	TMDL Presentation at City of Milan City Council Meeting	Turnpike & Sugar Creeks	City Officials	March 3, 2003
Heart of Georgia Altamaha RDC	TMDL Presentation for Public Meeting at the Telfair County Community Development Center in McRae, GA	Turnpike & Sugar Creeks	Landowners with 25 Acres or more within 2 miles on either side of Turnpike & Sugar Creeks in Telfair County	March 6, 2003
Heart of Georgia Altamaha RDC	TMDL Presentation at Telfair County Commissioners Meeting	Turnpike & Sugar Creeks	County Officials	March 18, 2003

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	Rt. 1 Box 67	Helena	GA	31037	(229)-868-5649	
Altamaha Soil and Water Conservation District	PO Box 277	McRae	GA	31055	N/A	
Telfair Co. Cooperative Extension Service	713 Telfair Avenue	McRae	GA	31055	(229)-868-5688	
Telfair Co. Commissioners	713 Telfair Avenue	McRae	GA	31055	(229)-868-5688	
City of Milan	PO Box 87	Milan	GA	31060	(229)-362-4290	
Natural Resource Conservation Service	707 Ward Street	Douglas	GA	31533	(912)-384-4811	
DHR South Central Health District	2121-B Bellevue Road	Dublin	GA	31021-2998	(912)-275-6618	
Pine Country RC & D	105 Martin Luther King Drive	Soperton	GA	30457	(912)-529-6652	
Regional Advisory Committee (William Dopson)	PO Box 334	McRae	GA	31055	N/A	
Rayonier Southeast Forest Products	PO Box 626	Jesup	GA	31598	(912)-427-5280	
Telfair Co. Farm Bureau	Highway 341 South	McRae	GA	31055	(229)-868-6484	
Ocmulgee RiverKeeper	2340 Clayton Street	Macon	GA	31204	N/A	
International Paper	RT 2 Box 2	Soperton	GA	30457	(912)-529-3447	

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 #1	Location	Miles/Area Impacted	Use Classification	Partially Supporting/ Not Supporting (PS/NS)
Turnpike Creek	Highway 280 to Sugar Creek	24	Fishing	NS

Primary County	Secondary County	Second RDC	Source (Point/ Nonpoint)
Telfair	Dodge		NP

Pollutants	Water Quality Standards	Required Reduction	TMDL ID	Date TMDL Established
Fecal Coliform	1000/100 ml (geometric mean Nov.-April) 200/100 ml (geometric mean May-Nov.)	14 %		February 2002
pH	6.0 – 8.5 standard units	N/A		February 2002

Waterbody Name #2	Location	Miles/Area Impacted	Use Classification	Partially Supporting/ Not Supporting (PS/NS)
Sugar Creek	Turnpike Creek to Little Ocmulgee River	5	Fishing	NS

Primary County	Secondary County	Second RDC	Source (Point/ Nonpoint)
Telfair	Dodge		Nonpoint

Pollutants	Water Quality Standards	Required Reduction	TMDL ID	Date TMDL Established
pH	6.0 – 8.5 standard units	N/A		February 2002

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	Impacted Waterbodies*
Fecal Coliform & pH	Agriculture	Possible introduction of animal waste from upslope practices and sediment from storm water runoff when BMPs are not followed	Turnpike and Sugar Creeks
Fecal Coliform & pH	Forestry	Possible introduction of runoff resulting from timber practices when BMPs are not followed	Turnpike and Sugar Creeks
Fecal Coliform & pH	Residential	Possible introduction of discharges resulting from septic tank runoff and littering from nearby residential areas (including the cities of Eastman, McRae, and Milan)	Turnpike and Sugar Creeks
Fecal Coliform & pH	Municipal (Storm water Runoff)	Possible introduction of storm water runoff from municipal areas (cities of Eastman, McRae, and Milan)	Turnpike and Sugar Creeks
Fecal Coliform & pH	Urban	Possible introduction of water runoff from urban development in and near Eastman, McRae, and Milan	Turnpike and Sugar Creeks
Fecal Coliform & pH	Municipal (Wastewater)	Possible introduction of wastewater discharges from Eastman (South) WPCP Site, McRae, and Milan	Turnpike and Sugar Creeks

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)	Georgia DNR, EPD	Makes it unlawful to discharge excessive pollutants into waters of the state in amounts harmful to public health, safety or welfare, animals, or the physical destruction of stream habitat	1964	Current	Regulatory

Pollutant(s) Affected	Sources of Pollutant(s)	Impacted Waterbodies*	Anticipated or Past Effectiveness
Fecal Coliform & pH	Agriculture, Municipal, Residential, Forestry	Turnpike and Sugar Creeks	Effective in point source pollution in dealing with local governments and industry/ Limited effectiveness in dealing with non-point sources

Measurable Milestones	Schedule		Comments
	Start	End	
Land Use Application System Permits NPDES Permits	1964	Ongoing	Work with local governments and others to increase monitoring of Land Use Application System Permits and NPDES Permits/Eastman (South) WPCP has an NPDES Permit for Sugar Creek Permit #GA0046485, City of Milan has an LAS Permit #GA02-086

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status	Regulatory /Voluntary
Forestry Water Quality Program	Georgia Forestry Commission	Designated by EPD to lead the effort to develop BMP's, educational BMP programs, forestry complaint resolution process and BMP monitoring, conducts biennial BMP monitoring, complaint investigation and mediation	1999 Manual	Current	Voluntary

Pollutant(s) Affected	Sources of Pollutant(s)	Impacted Waterbodies*	Anticipated or Past Effectiveness
Fecal Coiform & pH	Preharvesting planning, road management, harvesting, forest chemical management	Turnpike and Sugar Creeks	Established BMPs Effective in limiting runoff and less effective in limiting debris associated with timber practices

Measurable Milestones	Schedule		Comments
	Start	End	
Harvesting in SMZ's, Mechanical Site Preparation, Chemical Site Preparation, Fertilization, Firebreaks, Skid Trail Stream Crossings/Road Crossings, Logging Roads	1999 Manual	Ongoing	Additional installation of BMPs possible, depending on future monitoring results

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status	Regulatory /Voluntary
Agricultural BMP's	Georgia Soil and Water Conservation Service, Georgia Department of Agriculture	Leads effort in agricultural water quality program, develops agricultural BMP educational and monitoring efforts	1987	Current	Voluntary

Pollutant(s) Affected	Sources of Pollutant(s)	Impacted Waterbodies*	Anticipated or Past Effectiveness
Fecal Coliform & pH	Pesticide management, animal facility runoff, irrigation water management	Turnpike and Sugar Creeks	Utilization of BMPs has been found to be effective in controlling runoff and other contaminants from farming practices

Measurable Milestones	Schedule		Comments
	Start	End	
Waste Storage Structure, Conservation Tillage, Waste Storage Pond, Diversion, Fencing, Field Borders, Filter Strips, Stock Trails/Walkways, Stream/Shoreline Protection, Nutrient Management, Well Protection, Land Use Application System Permits and NPDES Permits	1987	Ongoing	Additional BMPs possible depending on results of future monitoring/ Work with local governments and others to increase monitoring of Land Use Application System Permits and NPDES Permits

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status	Regulatory /Voluntary
Nutrient Application Plan	Natural Resource Conservation Service	Leads effort in agricultural water quality by developing plans to control nutrient runoff	2000	Current	Voluntary

Pollutant(s) Affected	Sources of Pollutant(s)	Impacted Waterbodies*	Anticipated or Past Effectiveness
Fecal Coliform & pH	Pesticide management, irrigation water management	Turnpike and Sugar creeks	Effective in the initial stages of the program's beginning if plans are followed properly

Measurable Milestones	Schedule		Comments
	Start	End	
Increase the number of farming establishments utilizing nutrient application plans to limit nutrient runoff	2000	Ongoing	Plans will continue to be effective at the local level if they continue to be implemented by more and more farming establishments

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status	Regulatory /Voluntary
Comprehensive Nutrient Management Plan (CNMP)	Agriculture Extension Service, Department of Natural Resources	Leads effort in agricultural water quality by developing plans to control animal waste runoff	2001	Current	Regulatory

Pollutant(s) Affected	Sources of Pollutant(s)	Impacted Waterbodies*	Anticipated or Past Effectiveness
Fecal Coliform & pH	Animal facility runoff	Turnpike and Sugar creeks	Effective in the initial stages of the program's beginning and if the plans are carried out properly

Measurable Milestones	Schedule		Comments
	Start	End	
Increase the number of farming establishments implementing plans/Encourage increased compliance with plan requirements	2001	Ongoing	Plans will continue to be effective at the local level if they continue to be implemented by more and more farming establishments

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status	Regulatory /Voluntary
Georgia Erosion and Sedimentation Control Act (OCGA 12-7-1)	Georgia Department of Natural Resources Environmental Protection Division and Local Governments	Authorizes local governments to adopt a comprehensive ordinance governing land-disturbing activities within local planning and zoning jurisdictions and require the use of BMPs	Amended 2000	Current	Regulatory

Pollutant(s) Affected	Sources of Pollutant(s)	Impacted Waterbodies*	Anticipated or Past Effectiveness
Fecal Coliform & pH	Agricultural, Municipal, Residential	Turnpike and Sugar Creeks	Effectiveness is minimal due to a lack of local enforcement of erosion and sedimentation control measures

Measurable Milestones	Schedule		Comments
	Start	End	
Local erosion and sedimentation control measures	2003	Ongoing	Work with local governments to obtain a greater enforcement of erosion and sedimentation control measures at the local level

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status	Regulatory /Voluntary
Georgia Planning Act (OCGA 12-2-8)	Georgia Department of Natural Resources and Local Governments	Authorized DCA to develop minimum planning standards and procedures that local government planning and zoning jurisdictions could adopt and enforce pertaining to the protection of river corridors, mountains, water supply watersheds, groundwater recharge areas, and wetlands	1989	Current	Regulatory

Pollutant(s) Affected	Sources of Pollutant(s)	Impacted Waterbodies*	Anticipated or Past Effectiveness
Fecal Coliform & pH	Agricultural, Residential, Municipal	Turnpike and Sugar creeks	Effectiveness is minimal because of lack of land use management regulations at the local level

Measurable Milestones	Schedule		Comments
	Start	End	
Land Use Management Regulations	2003	Ongoing	Need to work with local governments to establish land use management regulations and other regulations as appropriate/ Need to work with local governments in enforcing DNR's Part 5 Environmental Planning criteria to better protect local streams

Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status	Regulatory /Voluntary
Local Septic Tank Permit Ordinance	Georgia Department of Human Resources and Local Governments	Authorizes the regulation of septic tanks, including placement, installation and maintenance	1969	Current	Regulatory

Pollutant(s) Affected	Sources of Pollutant(s)	Impacted Waterbodies*	Anticipated or Past Effectiveness
Fecal Coliform & pH	Residential	Turnpike and Sugar creeks	Effective at point of construction and poor at point of post-construction follow up maintenance

Measurable Milestones	Schedule Start	Schedule End	Comments
Continuous updating of health inspector manual to upgrade current standards	1969	Ongoing	Better enforcement at local level needed

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status	Regulatory /Voluntary
Land Use Management Regulations	Heart of Georgia Altamaha Regional Development Center, Local Governments, Georgia Department of Natural Resources, Georgia Department of Human Resources, Georgia Department of Community Affairs, Georgia Forestry Commission	Utilize state-mandated environmental planning criteria, local planning and zoning ordinances, BMP's for agriculture and forestry, and septic tank permitting to manage runoff and development, RDC will provide technical assistance in developing a model "zoning-lite" ordinance to encourage local governments to implement planning and zoning measures	Adopted on a County-by-County basis	Planned	Regulatory

Pollutant(s) Affected	Sources of Pollutant(s)	Impacted Waterbodies*	Anticipated or Past Effectiveness
Fecal Coliform & pH	Agricultural, Municipal, Residential	Turnpike and Sugar creeks	Not very effective due to lack of Land Use Regulations on county-wide level

Measurable Milestones	Schedule Start	Schedule End	Comments
Establishment of County-wide Land Use Regulations	2008	Ongoing	There is a need to work with local governments to adopt Land Use Regulations

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status	Regulatory /Voluntary
Cooperative Monitoring Program	Georgia Department of Natural Resources, Georgia Environmental Protection Division, Local Governments, Heart of Georgia Altamaha Regional Development Center	Seek a scientific study of issues such as natural dissolved oxygen levels in slow-moving streams, could seek funding/cooperation for watershed assessments including possible model demonstration assessments for small watersheds, develop a program for implementation assessments for the Turnpike and Sugar Creek Watershed Cluster		Planned	Voluntary

Pollutant(s) Affected	Sources of Pollutant(s)	Impacted Waterbodies*	Anticipated or Past Effectiveness
Fecal Coliform & pH	Agricultural, Municipal, Residential	Turnpike and Sugar Creeks	Anticipated effectiveness is significant because of more frequent monitoring which will produce better and more frequent data

Measurable Milestones	Schedule Start	Schedule End	Comments
Implementation of Adopt-A-Stream programs with various organizations for purposes of more sampling/Additional monitoring to increase the amount of data collected	2003	Ongoing	Utilize monitoring programs of Georgia Forestry Commission, NRCS, Adopt-A-Stream to gather updated sampling data on a more frequent basis

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status	Regulatory /Voluntary
Environmental Code Enforcement	Local Governments, Department of Natural Resources, Environmental Protection Division	Utilize local ordinances to ensure greater compliance with state environmental codes at the local level	2008	Planned	Regulatory

Pollutant(s) Affected	Sources of Pollutant(s)	Impacted Waterbodies*	Anticipated or Past Effectiveness
Fecal Coliform & pH	Municipal, Residential	Turnpike and Sugar Creeks	Limited effectiveness due to lack of enforcement at county-wide level

Measurable Milestones	Schedule Start	Schedule End	Comments
Establishment of code enforcement program	2008	Ongoing	Greater enforcement of state standards at the local level could help to reduce the amount of man made wastes entering into local streams

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status	Regulatory /Voluntary
Clean Water Act, Section 404 CFR Part 232.3 (Pine Plantation Regulations)	US EPA, Army Corps of Engineers	Requires normal forestry practices to adhere to BMPs and 15 baseline provisions for forest road construction and maintenance in and across waters of the U.S., including lakes, rivers, perennial and intermittent streams, wetlands, sloughs, and natural ponds in order to qualify for the silvicultural exemption from the permitting process	1988	Current	Regulatory

Pollutant(s) Affected	Sources of Pollutant(s)	Impacted Waterbodies*	Anticipated or Past Effectiveness
Fecal Coliform & pH	Forestry	Turnpike and Sugar Creeks	Significantly effective in controlling runoff in silviculture practices

Measurable Milestones	Schedule		Comments
	Start	End	
Installation of additional BMPs/Increase compliance with BMPs and education by Georgia Forestry Commission and industrial forestry companies	2008	Ongoing	Based on future monitoring results, additional BMPs may be required

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status	Regulatory /Voluntary
Federal Farm Bill	U.S. Department of Agriculture	Prohibits landowners from converting forested wetlands to agricultural uses (swamp buster)		Current	Voluntary

Pollutant(s) Affected	Sources of Pollutant(s)	Impacted Waterbodies*	Anticipated or Past Effectiveness
Fecal Coliform & pH	Forestry	Turnpike and Sugar Creeks	Effective in leaving forested wetlands in their natural state

Measurable Milestones	Schedule		Comments
	Start	End	
Increase number of farmers utilizing incentive programs to keep forested wetlands in their natural state	1940's	Ongoing	Legislative updates should continue to increase program incentives

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status	Regulatory /Voluntary
Standards of Practice (OCGA 43-1-19)	Georgia State Board of Registration for Foresters	Failure to practice professional forestry in accordance with generally accepted standards of practices (includes BMPs) shall constitute unprofessional conduct and shall be grounds for disciplinary action	1993	Current	Regulatory

Pollutant(s) Affected	Sources of Pollutant(s)	Impacted Waterbodies*	Anticipated or Past Effectiveness
Fecal Coliform & pH	Forestry	Turnpike and Sugar Creeks	Effective in ensuring professional standards of forestry practices

Measurable Milestones	Schedule Start	Schedule End	Comments
Keeping professional standards updated and enforced	1993	Ongoing	Standards need to be closely monitored and continuously enforced to ensure professional conduct

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status	Regulatory /Voluntary
Forestry BMPs	Georgia Forestry Commission	BMP Categories include Harvesting in SMZ's, Mechanical Site Preparation, Chemical Site Preparation, Fertilization, Firebreaks, Skid Trail Stream Crossings and Road Crossings, Logging Roads	1999	Current	Voluntary

Pollutant(s) Affected	Sources of Pollutant(s)	Impacted Waterbodies*	Anticipated or Past Effectiveness
Fecal Coliform & pH	Forestry	Turnpike and Sugar Creeks	Somewhat Effective but could be more so with increased utilization by more farming establishments

Measurable Milestones	Schedule Start	Schedule End	Comments
Continuous installation of new BMPs as appropriate	1999	Ongoing	Need for monitoring of BMPs to monitor utilization and effectiveness/Need for continued and stronger industry enforcement

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status	Regulatory /Voluntary
Storm water Management Regulations	Georgia Department of Natural Resources, Environmental Protection Division, and Local Governments	Utilize local ordinance enforcement to produce better erosion/sedimentation control at the time of construction, could possibly require post-construction erosion/sedimentation control, could use passive design elements in new developments and stream buffers to prevent runoff	Adopted on a County-by-County basis	Planned	Regulatory

Pollutant(s) Affected	Sources of Pollutant(s)	Impacted Waterbodies*	Anticipated or Past Effectiveness
Fecal Coliform & pH	Municipal	Turnpike and Sugar creeks	Limited Effectiveness due to lack of erosion and sedimentation regulations

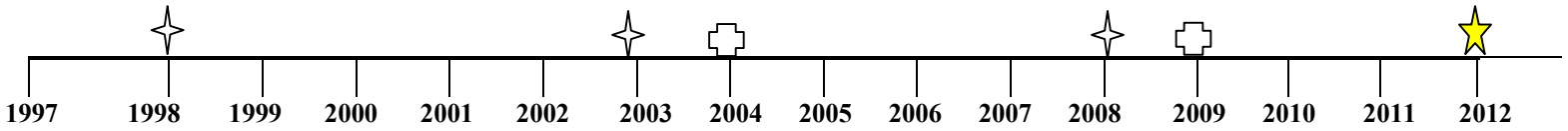
Measurable Milestones	Schedule		Comments
	Start	End	
File for NPDES general land disturbance permit/ Phase II General Industrial Permits	2003	Ongoing	ISTEA Exemption ends for all local governments in March 2003/All cities and counties will need to file Notices of Intent by this date

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	Impacted Waterbodies*
Georgia Forestry Commission	Georgia Forestry Commission	Current	Unknown	Turnpike & Sugar Creeks
Georgia Department of Natural Resources	Environmental Protection Division	Current	$75,000.00	Turnpike & Sugar Creeks
U.S. Environmental Protection Agency	U.S. Environmental Protection Agency	Planned	Unknown	Turnpike & Sugar Creeks
U.S. Department of Agriculture	Farm Service Agency	Planned	Unknown	Turnpike & Sugar Creeks
U.S. Department of Agriculture	Natural Resource Conservation Service	Planned	Unknown	Turnpike & Sugar Creeks
U.S. Fish and Wildlife Service	Georgia Soil and Water Conservation Service (“Partners for Wildlife” Program)	Planned	Unknown	Turnpike & Sugar Creeks
University of Georgia Extension Service	Local Cooperative Extension Service (Home*A*Syst Program)	Planned	Unknown	Turnpike & Sugar Creeks
University of Georgia Extension Service	Local Cooperative Extension Service (Farm*A*Syst Program)	Planned	Unknown	Turnpike & Sugar Creeks
State Implementation Committee	Sustainable Forestry Initiative Program	Planned	Unknown	Turnpike & Sugar Creeks
Georgia Forestry Commission	Georgia Forestry Commission (Best Management Practices Assurance Examinations)	Current	Unknown	Turnpike & Sugar Creeks
The National Fish and Wildlife Foundation	The National Fish and Wildlife Foundation (General Challenge Grant Program)	Planned	Unknown	Turnpike & Sugar Creeks
Georgia Department of Natural Resources (Wildlife Resources Division)	Georgia Department of Natural Resources (Wildlife Resources Division) “Small Game Management in Georgia” & “Beaver Management and Control in Georgia” Booklets	Current	Unknown	Turnpike & Sugar Creeks
U.S. Department of Agriculture	Pine Country RC&D 319 Grant	Current	$125,000.00	Turnpike Creek

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.



EPD Monitoring
Evaluate TMDL & Attainment Date
Project Attainment

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	Impacted Waterbodies*	Pollutants	Purpose/Description	Time Frame		Status (Previous, Current, Proposed)
					Start	End	
1999 Study	United States Geological Survey	Turnpike Creek	FC	To detect the levels of Fecal Coliform at the USGS Certified Station #02216187 (Turnpike Creek at Cedar Park Dowdyville Road near Lumber City, GA)	1/99	12/99	Previous
1999 Study	United States Geological Survey	Turnpike Creek	pH	To detect the levels of pH at the USGS Certified Station #02216187 (Turnpike Creek at Cedar Park Dowdyville Road near Lumber City, GA)	1/99	12/99	Previous
1999 Study	United States Geological Survey	Sugar Creek	pH	To detect the levels of pH at the USGS Certified Station #02216190 (Sugar Creek at Lumber City, GA)	1/99	12/99	Previous

Name Of Regulation / Ordinance Or Management Measure	Organization	Impacted Waterbodies*	Pollutants	Purpose/Description	Time Frame Start	Time Frame End	Status (Previous, Current, Proposed)
Best Management Practices Monitoring	Georgia Forestry Commission	Turnpike and Sugar creeks	Fecal Coliform & pH	Within the watershed, can conduct monthly aerial and land reconnaissance to identify recent forestry practices, conduct BMP audit, and make recommendations for remediation if problems are found		On-going	Current

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)	Install BMPs and reduce the amount of fecal coliform by 10% by 2008 and 14% by 2012 and return the pH levels to sufficiently meet the State of Georgia's criterion in Turnpike Creek. Install BMPs and return the pH levels to sufficiently meet the State of Georgia's criterion in Sugar Creek.

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)	Classification is proposed to remain fishing/ Delist from 303(d) list
- Regulatory controls or activities installed (ordinances, laws)	Work with local governments and individuals to install Erosion and Sedimentation Controls, Land Use Management Regulations (Development Regulations such as stream buffers, limited impervious cover, porous pavement materials, limited clearing, grading, and disturbance); BMPs, Storm Water Management, Code Enforcement, etc. to help reduce runoff and minimize land disturbance.
- Best management practices installed (agricultural, forestry, urban)	Forestry- (Harvesting in Streamside Management Zones, Mechanical Site Preparation, Chemical Site Preparation, Fertilization, Firebreaks, Skid Trail Crossing and Road Crossings, Logging Roads) Agriculture – (Waste Storage Facilities, Conservation Tillage, Waste Storage Pond, Diversion, Fencing, Field Borders, Filter Strips, Stock Trails/Walkways)

COMMENTS

Attachments

Appendix A – Turnpike and Sugar Creeks Watershed Cluster Proposed TMDL Implementation Plan Committee Meeting Invitation List (February 12, 2003)

Appendix B – Turnpike and Sugar Creeks Watershed Cluster Proposed TMDL Implementation Plan List of Major Landowners Invited to Committee Meeting (February 12, 2003) (Telfair County)

Appendix C – Turnpike and Sugar Creeks Watershed Cluster Proposed TMDL Implementation Plan Committee and Major Landowners Meeting Sign-in Sheet (February 12, 2003)

Appendix D – Turnpike and Sugar Creeks Watershed Cluster Proposed TMDL Implementation Plan Committee and Major Landowners Meeting Handout (February 12, 2003)

Appendix E – Stakeholder Notification List for Turnpike and Sugar Creeks Watershed Cluster Proposed TMDL Implementation Plan Public Meeting (March 6, 2003) (Telfair County)

Appendix F – Press Release for Public Meeting for Turnpike and Sugar Creeks Watershed Cluster Proposed TMDL Implementation Plan in The Telfair Enterprise (February 27, 2003)

Appendix G – Public Service Announcement concerning Turnpike and Sugar Creeks Watershed Cluster Proposed TMDL Implementation Plan given to WYSC-FM (102.7 in McRae, GA) (March 3-6, 2003)

Appendix H – Turnpike and Sugar Creeks Watershed Cluster Proposed TMDL Implementation Plan Public Meeting Sign-in Sheet (March 6, 2003)

Appendix I – Turnpike and Sugar Creeks Watershed Cluster Proposed TMDL Implementation Plan Public Meeting Handout (March 6, 2003)

Appendix J – Memo to Telfair Co. Commissioners to be placed in the March 18th, 2003 Meeting Agenda Packet (February 25, 2003)

Appendix K – Memo to City of Milan City Council to be placed in the March 3rd, 2003 Meeting Agenda Packet (February 5, 2003)

Appendix L – Turnpike and Sugar Creeks Watershed Cluster Proposed TMDL Implementation Plan Handout for Telfair Co. Commissioners and City of Milan's City Council Meetings

Appendix M – Turnpike and Sugar Creeks Watershed Proposed TMDL Implementation Plan Committee Review Memo (May 16, 2003)

Sugar Creek/Turnpike Creek
Watershed 0307010504

Prepared By:	Nicholas Overstreet
Agency:	Heart of Georgia Altamaha Regional Development Center
Address:	331 West Parker Street
City:	Baxley ST: GA ZIP: 31513
E-mail:	overstreet@hogardc.org
Date Submitted to EPD:	May 30, 2003

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

TOGETHER WE CAN MAKE A DIFFERENCE!