

## STATE OF GEORGIA

TMDL IMPLEMENTATION PLAN FOR: Brushy Fork Creek  
(STREAM)FC  
(PARAMETER)RIVER BASIN: Upper Ocmulgee  
PLAN DATE: 6/2001

Prepared by: _____ _____ Regional Development Center		Or Prepared By: <u>Gwinnett County Contact: Janet P. Vick</u>					
Address: _____		Address: <u>684 Winder Highway</u>					
City: _____ State: _____		City: <u>Lawrenceville GA</u> State: <u>GA</u>					
Zip: _____ e-mail: _____		Zip: <u>30045</u> e-mail: <u>vickja@co.gwinnett.ga.us</u>					
Date Submitted to EPD: _____		Date Submitted to EPD: <u>11/13/2000</u>					
General Information Obtain this information from the TMDL document or other information. When completed, this document will be a self-contained report independent of the TMDL document.		Significant Stakeholders Identify local governments, agricultural organizations or significant land holders, commercial forestry organizations, businesses and industries, and local organizations including environmental groups with a major interest in this water body.					
TMDL ID (to be entered by EPD)		Name/Organization	Janet P. Vick/Gwinnett County				
Water body name	Brushy Fork Creek	Address	684 Winder Highway				
HUC basin name	Upper Ocmulgee	City	Lawrenceville	State	GA	Zip	30045
HUC number	03070101	Phone	678-376-6957			e-mail	vckja@co.gwinnett.ga.us
Primary county	Gwinnett	Name/Organization	Bob Cowan/Walton County				
Secondary county	Walton	Address	126 Court Street Courthouse Annex 1				
Primary RDC	Atlanta Regional Commission	City	Monroe	State	GA	Zip	30655
Secondary RDC	N.E. Georgia	Phone	770-267-1485			e-mail	cb@co.walton.ga.us
Water body location	From Lake Carlton to Big Haynes Creek	Name/Organization	Earl Hillis/City of Loganville				
		Address	P.O. Box 39				
Miles or area impacted	5	City	Loganville	State	GA	Zip	30052
Parameter addressed in plan	FC	Phone	770-466-2633			e-mail	
Water use classification	Recreation/drinking water	Name/Organization	Don Crouch/Gwinnett County Health Department				
Degree of impairment	Partially supporting use <input type="checkbox"/>	Address	250 Oak Street				
	Not supporting use <input checked="" type="checkbox"/>	City	Lawrenceville	State	GA	Zip	30045
Date TMDL approved by EPA		Phone	770-963-5132			e-mail	jcouch@dhr.state.ga.us
Impairment due to	Point sources <input type="checkbox"/>	Name/Organization	Jose Pagan/NRCS				
	Nonpoint sources <input checked="" type="checkbox"/>	Address	P.O. Box 8				
	Both <input type="checkbox"/>	City	Monroe	State	GA	Zip	30655
Point source-Form A; Nonpoint source-Form B; Both-Form A+B+C		Phone	770-267-8363			e-mail	Jose.pagan@gamonre.fsc.usda.gov

FORM B

SUMMARY OF ALLOCATION MODEL RESULTS FROM TMDL DOCUMENT (existing load, target TMDL, and needed reduction)

EXISTING LOAD	TARGET TMDL	NEEDED REDUCTION
262 cfu/100ml	150cfu/100ml	112 cfu/100ml

I. IDENTIFY **NONPOINT SOURCE** CATEGORIES AND SUBCATEGORIES OR INDIVIDUAL SOURCES WHICH MUST BE CONTROLLED TO IMPLEMENT LOAD ALLOCATIONS:

List major nonpoint sources contributing to impairment including those identified in TMDL document.

SOURCE	DESCRIPTION OF CONTRIBUTION TO IMPAIRMENT	RECOMMENDED LOAD REDUCTION (FROM TMDL)
Base flow	Non-point source(2/1998)	50%
Urban Impervious land uses	Non-point source(2/1998)	50%
Urban pervious land uses	Non-point source(2/1998)	50%
<b>Revised Information</b>		
Agriculture	Wildlife and domestic animals(10/2000)	10%
Urban	Non-point source	0%

II. DESCRIBE ANY REGULATORY OR VOLUNTARY ACTIONS INCLUDING MANAGEMENT MEASURES OR OTHER CONTROLS BY GOVERNMENTS OR INDIVIDUALS THAT SPECIFICALLY APPLY TO THE POLLUTANT AND THE WATERBODY FOR WHICH THE TMDL WAS WRITTEN, THAT WILL BE ACCOMPLISHED THROUGH RELIABLE AND EFFECTIVE DELIVERY MECHANISMS, AND THAT WILL HELP ACHIEVE THE LOAD ALLOCATIONS IN THE TMDL:

See the attachment for more instructions.

Existing or required regulatory actions

RESPONSIBLE GOVERNMENT, ORGANIZATION OR ENTITY	NAME OF REGULATION/ORDINANCE	DESCRIPTION	ENACTED OR PROJECTED DATE (mm/yy)	STATUS
Gwinnett County	Storm Water Management Ordinance	Ordinance to address non-point source pollution	9/96	enacted
Gwinnett County	Development Regulations	Regulations modified to include water quality and quantity include in county's Watershed Protection Plan	1/01	enacted
City of Snellville	Storm Water Management Ordinance	Ordinance to address non-point source pollution	1/95	enacted
City of Snellville	Development Regulations	Regulations modified to include water quality and quantity include in county's Watershed Protection Plan	3/01	enacted
Gwinnett County Board of Health	On-Site Sewage Management System	Regulated on-site sewage systems	1/98	enacted
Gwinnett County Board of Health	Chapter 290-5-14 Food Services	Regulates Food Service including grease trap maintenance	1/98	enacted
Gwinnett County City of Snellville	NPDES for MS4 Phase I	Permit issued by GAEPD to address non point source permit	6/94	enacted
Gwinnett County	Watershed Assessment	Development of Watershed Protection Plan	5/00	enacted
Walton County	Land Development Ordinance(with Big Haynes Watershed Protection Overlay District)	Regulates zoning, water quality and water quality in Big Haynes Creek Basin.	8/95	enacted
Gwinnett County	Zoning Regulations	Adopted small supply watershed buffers enacted.	11/97	enacted
Gwinnett County	NPDES for MS4 revised 12/99	Monitor for fecal coliform	9/00	continuing

Existing voluntary actions

RESPONSIBLE ORGANIZATION OR ENTITY	NAME OF ACTION	DESCRIPTION	ENACTED OR PROJECTED DATE (mm/yy)	STATUS
Gwinnett County	Stenciling Program	Stenciling storm drains to let citizens know that storm drains are a direct link to our waterways	9/98	enacted
Gwinnett County	Utility bill inserts	4 times a year information goes out in over 180,000 utilities bills with information on non point source pollution including information on septic tank maintenance and cleaning up after you pets.	9/98	enacted
Gwinnett County	Pet Waste Brochure	Educate public on the need to clean up after their pets	10/00	enacted
Gwinnett County	Sign Program	Put signs up in county parks reminding citizens to clean up after pets.	10/01	pending
Gwinnett County	Stream Sign Program	Look into put signs up on impaired waters	6/02	pending

Additional recommended regulatory or other measures which should be implemented to reduce the loads of the TMDL parameter

ENTITY/ORGANIZATION RESPONSIBLE	NAME OF PROPOSED REGULATION/ORDINANCE/ OTHER	DESCRIPTION	ENACTED OR PROJECTED DATE (mm/yy)	STATUS
Gwinnett County Board of Health	Stream Walks	Walk stream looking for direct connects from septic systems	1/01	enacted
Walton County Board of Health	Stream Walks	Walk stream looking for direct connects from septic systems	1/01	continuing
Gwinnett County	Septic Tank locations	Determine lots using utility billing records	10/00	continuing
Gwinnett County	Failing Septic Tanks	Put in for EPA grant to determine location of failing system using infra red photography	4/01	continuing
Gwinnett County Walton County City of Loganville City of Snellville	Uniform Storm Water Management Plan	Develop a management plan to address identified sources, along with public education	4/06	projected
Gwinnett County	Detailed watershed study	Develop a detailed watershed plan for this basin	4/05	projected
Gwinnett County	Wetlands Grant	County has a grant to construct wetland within the Big	4/01	continuing

		Haynes basin to treat storm water runoff		
Gwinnett County Walton County City of Loganville City of Snellville	Source Identification	Identify sources of fecal coliform	4/01	continuing

III. SCHEDULE FOR IMPLEMENTING MANAGEMENT MEASURES OR OTHER CONTROL ACTIONS:

These must be implemented as expeditiously as practicable within five years of when the implementation plan is accepted by EPA.

IMPLEMENTATION ACTION	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
Form stakeholders group	X				
Organize implementation work with stakeholders and local officials to identify remedial measures and potential funding sources	X	X	X	X	X
Identify sources of TMDL parameter	X	X	X		
Develop management programs to control runoff including identification and implementation of BMPs (Phase I):				X	X
Agriculture					
Forestry					
Urban				X	X
Mining					
Organize and implement education and outreach programs	X	X	X	X	X
Detect and eliminate illicit discharges	X	X	X	X	X
Evaluate additional management controls needed					X
Monitor and evaluate results	X	X	X	X	X
Reassess TMDL allocations					X
Provide periodic status reports on implementation of remedial activities		X		X	X
If needed, begin process for Phase II (next 5 years) and subsequent phases					X

IV. PROJECTED ATTAINMENT DATE AND BASIS FOR THAT PROJECTION:

The projected attainment date is 10 years from acceptance of the implementation plan by EPA.

V. MEASURABLE MILESTONES:

- Number of management controls and activities already implemented 11

- Number of management controls and activities proposed in five-year work program 8

- Number of management controls and activities actually implemented in five-year work period \_\_\_\_\_ (to be completed after 5 years)
- Stream sampled to identify areas of concern See monitoring plan
- Other \_\_\_\_\_
- Other \_\_\_\_\_

**VI. MONITORING PLAN:**

Monitoring data that placed stream on 303(d) list will be provided if requested.

Describe previous or current sampling activities or other surveys to detect sources or to measure effectiveness of management measures or other controls.

ORGANIZATION	TIME FRAME	PARAMETERS	PURPOSE	STATUS
Gwinnett County	12/00 – 6/04	FC	Fecal Monitoring required under MS4 permit	On going

Describe any planned or proposed sampling activities or other surveys. (Scheduled EPD sampling can be found in the Basin Planning document.)

ORGANIZATION	TIME FRAME	PARAMETERS	PURPOSE	STATUS
EPD	2000-2001	Various	basin planning	ongoing

**VII. CRITERIA TO DETERMINE WHETHER SUBSTANTIAL PROGRESS IS BEING MADE:**

- % concentration or load change (monitoring program)
- 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)

COMMENTS

See additional contact listed below.

Pat Stevens	Atlanta Regional Commission	40	Courtland Street, NE	Atlanta	GA	30303	404-463-3255	pstevens@atlantaregional.com
Steve Leslie	NRCS	240	Oak Street Bldg. A Room 201	Lawrenceville	GA	30045	770-963-9288	Steve.leslie@galawrence.fsc.usda.gov
Robert Brannen	Gwinnett County Extension Service	750	South Perry Street, Suite 400	Lawrenceville	GA	30045	678-377-4020	rbrannen@uga.edu
Joe Tichy	Georgia Regional Development Center	305	Research Drive	Athens	GA	30605-2795	706-369-5650	jtichy@negrdc.org
Bill Carlin	Walton County Extension Service	203	Milledge Avenue P.O. Box 151	Monroe	GA	30655	770-267-1324	uge1297@uga.edu
Tony Huff	Northeast Health District	850	Gaines School Road	Athens	GA	30605	706-583-2854	thuffeefd@cs.com
Clint Moye	EPD - Water Protection Branch	4220	International Parkway, Suite 101	Atlanta	GA	30354	404-675-1752	clint_moye@mail.dnr.state.ga.us

# TMDL IMPLEMENTATION PLAN FOR BRUSHY FORK CREEK

## Introduction

Brushy Fork Creek in the Ocmulgee River Basin from Lake Carlton to Big Haynes Creek is on the 303 (d) list of the State of Georgia for not meeting the water quality standard for fecal coliform to maintain its designated use of fishing. The U.S. Environmental Protection Agency developed a "total maximum daily load" (TMDL) that predicted the fecal coliform violation, in addition to water quality data showing an exceedance of the standard. Fecal coliform is an "indicator" of microorganisms that can make the stream not fully useable for recreation in and on the water. The purpose of this implementation plan is to identify and eliminate sources of fecal coliform within the drainage basin, in order to meet the fecal coliform water quality standard.

The Implementation Plan will include the following elements:

- (1) form a Brushy Fork Watershed Team;
- (2) begin implementation by seeking funding for and then conducting baseline monitoring, and by instituting a public education campaign on the need for prevention and on prevention measures each person can take immediately to reduce the problem;
- (3) identify and rank sources of the problem after analyzing the monitoring data;
- (4) determine feasibility of various abatement measures, then draft First Phase Plan with proposed measures;
- (5) implement First Phase Plan, with help of citizens and other stakeholders, after obtaining funding for measures selected;
- (6) after appropriate time past implementation of First Phase Plan measures, obtain funding for, and conduct additional monitoring to determine effectiveness of First Phase Plan;
- (7) if monitoring shows that compliance has not yet been attained, develop Second Phase Plan and subsequent plans, using same steps, until compliance is achieved;
- (8) submit report to RDC, then Georgia EPD, showing compliance, and request Brushy Fork to be removed from 303(d) list; and
- (9) implement measures to maintain compliance with fecal coliform water quality standard.

## Overview

A comprehensive control strategy is needed to address the numerous and diverse sources of fecal coliform bacteria in the Brushy Fork Basin. Four governing bodies exist within the Brushy Fork Basin—Gwinnett and Walton counties and the cities of Loganville and Snellville. Land Use in this basin is made up of agriculture, urban, and forest. Possible sources of fecal coliform in the Brushy Fork Basin include the possibility of illegal connections to drainage systems, leaking sewer pipes, sanitary sewer overflows, animal waste, storm water runoff, and failing septic systems. Pinpointing individual sources typically requires extensive analysis and monitoring of the receiving waters and tributary storm water drainage systems during both dry and wet weather conditions. A comprehensive program is needed to ensure that any illicit sources are identified and that appropriate actions will be taken to eliminate them, among other measures.

The intent of this storm water management plan is designed to address manmade activities to improve water quality in the Brushy Fork Basin. Abatement measures should be developed after source identification has been completed.

## **1) Brushy Fork Watershed Team Formation**

A watershed team should be formed for the Brushy Fork Watershed. The watershed team should include Gwinnett County, Walton County, Loganville, Snellville, Northeast Georgia Regional Development Center, Atlanta Regional Commission, Gwinnett and Walton County's Boards of Health and Gwinnett and Walton County's Natural Resources Conservation Services. This team should develop a strategy for baseline monitoring, a public education campaign, basin-wide implementation of uniform storm water quality and quantity regulation, the identification and removal of sources of non-point source pollution, the removal of any illicit discharges, as well as identifying on-site septic systems, compliance monitoring, and additional measures if compliance monitoring shows that initial measures taken are not sufficient.

A "Stakeholders Group" should also be formed for the Brushy Fork Watershed. The stakeholders group should be made up of civic groups, homeowners associations, citizens, and other significant stakeholders. This group will identify areas of concern, offer input and feedback on plans, and recruit support from the community.

## **2) Begin Implementation**

The Brushy Fork Watershed Team with help from the Stakeholders Group, can decide specifics of baseline monitoring (such as selecting the location, frequency, and conditions of monitoring), identify and seek to obtain funding for baseline monitoring, and conduct the monitoring needed. The purpose of such monitoring is to determine where the fecal coliform standard is being violated and to set a baseline to measure progress. Implementation can also include selection or development of materials to use in a public education campaign to inform citizens of the need to reduce sources of waste that might produce fecal coliform and minimize the exposure of storm water to these sources. A public education campaign will also inform the public of measures people can take immediately, to reduce possible sources of the problem. Decisions will have to be made on how and where to disseminate the information.

## **3) Source Identification.**

Watershed team members will each need to identify and rank potential sources of fecal coliform within their jurisdictions, after analyzing the monitoring data and obtaining public input from the Stakeholders Group or other means. Possible sources are illegal discharges at food service industries and apartment complexes, failing on-site septic systems; defined as sewage coming to the surface or backing up in the house, accidental sanitary sewer overflows, animal waste, domestic and non-domestic sources and agricultural activities near streams. Information should be compiled and mapped, so that areas of concern and major sources of fecal coliform can be identified.

## **4) Abatement Measures**

The Brushy Fork Watershed Team needs to determine feasibility of various abatement measures, then draft a First Phase Plan including proposed measures. The First Phase Plan could include input from the Stakeholders Group. Measures could include any of the following, for example.

- (a) Storm Water Runoff and Illicit Discharge Connections** - To address storm water runoff quality and illicit discharges, a comprehensive watershed storm water management and illicit discharge removal program is necessary. The storm water management plan

will be used to address non-point source pollution. Gwinnett County and the City of Snellville are subject to the Storm Water Phase I Rule and Walton County and the City of Loganville are subject to Storm Water Phase II Rule. These rules require designated municipalities and construction activities to obtain National Pollution Discharge Elimination System (NPDES) permit coverage. Regulated communities must develop, implement, and enforce a storm water management program designed to reduce the discharge of pollutants from their storm drainage systems to the maximum extent practicable to protect water quality.

The storm water management plan for non-point source pollution for Gwinnett County and the City of Snellville should be used as a base to develop the watershed plan. Gwinnett County's plan includes the following: (1) Long Term Trend Monitoring; (2) Detection and removal of Illicit Connections; (3) Inspection of Industries; (4) Public Education and Outreach; (5) Structural and Source Control Measures; (6) Public Participation/Involvement.

Industrial inspection will be done to insure compliance with the local Storm Water Management Ordinance. This includes outdoor housekeeping and looking for any illicit discharges and/or possible illegal connects to storm drain system.

**(b) Sanitary Sewer Overflows and Leaking Sewer Pipes.**

Sanitary Sewer overflows (SSOs) will be addressed by each jurisdiction. If review of the data shows a problem in Gwinnett County, items from the following list will be used to address the problem:

- Easement clearing
- Clean/TV of lines
- Root control
- Manhole adjustment and rehabilitation
- Pipe rehabilitation
- CIP projects for pump station and pipeline rehabilitation.
- Emergency response.
- Future ability to divert heavy flow out of some areas to help prevent overflows.

**(c) Failing On-Site Septic Systems.**

Failing on-site septic systems will be addressed through the local Board of Health, which is responsible for implementing the on-site sewage management systems regulations. The number of failing septic systems and extent that they are contributing to the fecal coliform levels in the Brushy Fork Basin is unknown. Working with existing databases both electronic and paper to determine sites with on-site systems should be the first step. If failing on-site septic systems are found to be contributing to water quality standards violations; prompt actions must be taken to eliminate the source.

Public education regarding on-site septic systems is a high priority. Education efforts should include information on how the system works, things to do and not do, maintenance required, and who to call if your system is failing. The watershed team will investigate the feasibility of adopting an ordinance for the inspection of septic systems at the time of transfer of property.

#### **(d) Agriculture**

Watershed team members will each need to identify potential sources. Possible sources of data are tax exemption for agriculture, NRCS, Department of Agriculture, and County Extension Offices. Once sources have been identified listing of possible BMP's could be provided to property owners.

#### **(e) Public Education**

Create a Watershed Outreach Program. Informing residents and industries of the basin about the fecal coliform violation is paramount in recruiting support and changing individual behaviors. Outreach should include information about on-site septic systems, disposal of pet waste, what can be properly disposed of in the sanitary sewer system, and other non-point source pollution prevention. This could include information on a web page, mass mailings, watershed information meetings, setting up stream walks, and clean ups.

### **5) Implement First Phase Plan**

Funding sources such as Clean Water Act §319 grants, Revolving Loan Fund, other state and local funding, environmental citizens groups, and other sources, should be explored. After obtaining funding, and revising the measures selected accordingly, the Brushy Fork Watershed Team will seek to implement the revised mix of measures, in conjunction with other citizens' groups, agencies, and other entities as appropriate.

### **6) Progress Monitoring**

After an appropriate time past implementation of First Phase Plan measures, the Brushy Fork Watershed Team will seek to set specifics of progress monitoring, and seek to obtain funding for it. Specifics need to take into account data requirements for removing Brushy Fork Creek from the 303(d) list, if monitoring shows compliance with the fecal coliform standard.

### **7) Subsequent Phases**

Go through previous steps, as appropriate, until compliance with the fecal coliform water quality standard is achieved.

### **8) Final Report**

The Brushy Creek Watershed Team will write a report showing that compliance has been achieved, including monitoring data confirming compliance. The Report is first submitted to the Regional Development Council (RDC), then to EPD for approval after RDC approval.

### **9) Maintenance Measures**

The Brushy Creek Watershed Team will develop a strategy for maintaining compliance, after obtaining comment from the Stakeholders Group and any other appropriate entities.

### **Conclusion**

This plan may be revised as experience and circumstances dictate. A projected schedule including tasks and responsibilities is attached.

## Projected Schedule Including Tasks and Responsibilities

The projected schedule and further details for these activities are as follows. This schedule and further details may be revised, depending on the circumstances encountered.

<b>Task</b>	<b>Responsibility</b>	<b>Schedule</b>
Writing TMDL Implementation Plan	EPD/Watershed Team(Gwinnett County, Walton County, City of Loganville, City of Snellville)	10/2000-4/2001
TMDL Implementation Plan Public Meeting	EPD/Watershed Team	
Response to public comments	EPD/Watershed Team	
Watershed Team Formation	Watershed Team	4/2001-6/2001
<b>Source Identification</b>		4/2001-4/2004
On-site septic	Watershed Team	
SSO's	Watershed Team	
Agriculture activities	Watershed Team	
Industrial	Watershed Team	
<b>Monitoring</b>		
1 Sampling Site	Gwinnett County	4/2001-4/2006
<b>Storm Water Management Plan</b>	Watershed team	4/2004-4/2006
Industrial Inspections		
Detection and removal of illicit connection.		
Structural and source controls		
Sanitary Sewer Overflows	Gwinnett County, City of Loganville	4/2001-4/2006
Failing On-Site Septic Systems	Board of Health	4/2001-4/2006
Agriculture	Watershed Team	4/2001-4/2006
Public Education	Watershed Team	4/2001-4/2006

### *(i) Attainment Date*

A great deal of research is being done that will allow us to better understand the relationship between bacterial indicators and the risk to public health in urban watersheds. The management plan will be re-evaluated at the end of every five years using the monitoring data until the Brushy Fork Creek meets the water quality standard for fecal coliform.

### *(ii) Milestones*

- Formation of Watershed Team by 6/2001
- Source Identification completed by 4/2004
- Management Plan completed by 4/2006

### *(iii) Monitoring.*

Review historic sanitary sewer spill data, failed on-site septic system complaints, along with any ambient stream monitoring available. Reviewing this data provides information on the history of fecal coliform in the basin. After reviewing the monitoring and source identification, a monitoring site should be selected. Gwinnett County will operate this monitoring site on Brushy

Fork Creek or its tributaries. Other monitoring sites may be required to identify problem areas. All monitoring shall be in compliance with the Fecal Coliform Monitoring section of the Atlanta Region Phase I NPDES Stormwater Monitoring Program of the EPA Municipal Stormwater General Permit.

***(iv) Criteria to Determine Whether Substantial Progress Toward Attainment is Being Made.*** Annual reports including progress on source identification, Storm Water Management Plan and monitoring. Report should be used to determine progress of the Watershed Team in achieving the schedule in the implementation plan. Monitoring data should be reviewed to see if any progress is being made toward attainment of the water quality standard for fecal coliform.