

House Creek TMDL Implementation Plan Narrative

City of Douglasville, Georgia

Background and Purpose

House Creek is in the Chattahoochee River Basin. A 1.5-mile segment from Douglas Blvd to the confluence with Anneewakee Creek in the City of Douglasville was listed on the 303(d) list of the State of Georgia for violating the water quality standard for fecal coliform bacteria. Fecal coliform bacteria is bacteria found in the intestinal tract of humans and animals. Its presence in streams, rivers and lakes is an indicator of possible harmful pathogens.

For each waterbody on the 303(d) list, the U.S. Clean Water Act requires a TMDL or Total Maximum Daily Load be developed for each pollutant. A TMDL is a calculation of the maximum amount of a pollutant, from both point and non-point sources that a waterbody can receive and still meet water quality standards. The U.S. EPA developed a TMDL for House Creek showed that a reduction from sources of pollution for fecal coliform was needed.

The purpose of this implementation plan is to reduce or eliminate the sources of fecal coliform bacteria entering House Creek in order to meet the fecal coliform water quality standard.

Plan Preparation

This plan was developed with a watershed team made up of representatives of the City of Douglasville Engineering Department, the Douglasville Planning Department, the Douglasville - Douglas County Water and Sewer Authority (DDCWSA), the Douglas County Health Department, and the Atlanta Regional Commission (ARC). The City of Douglasville County Engineering Department took the lead on drafting the plan. The plan was reviewed and adopted at a regular public meeting of the City Council on March 19, 2001. The plan is a phased approach over a five-year period that begins with convening a stakeholder group in the first year. The plan provides for activities and a schedule to achieve the load reductions and achieve the TMDL.

TMDL Data and Potential Sources of Pollution

House Creek was listed on Georgia's 303(d) list due to samples collected as part water quality sampling by the DDCWSA. These samples did show elevated levels of fecal coliform bacteria. The EPA TMDL document used mathematical modeling to predict a fecal coliform 30 day geometric mean of 201cfu/100ml which is just above the state water quality standard of 200cfu/100ml (geometric mean) and above the recommended EPA target of 150cfu/100ml. The 1998 EPA TMDL documents recommended a 40% load reduction from urban impervious land uses. This was revised by an October 3, 2000 letter from EPA to 10% reduction from urban sources.

The House Creek watershed includes commercial and residential land uses. It is in a rapidly growing county and is undergoing urbanization. Possible specific causes of increased levels of fecal coliform in House Creek include leaking septic tanks, leaky sewer lines, stormwater runoff, domestic animals and wildlife. Monitoring and analysis of data collected as part of the implementation plan will be necessary to determine the actual source of fecal coliform bacteria.

Regulatory and Voluntary Measures: Existing and Future

The City of Douglasville and Douglas County have already undertaken several measures to improve water quality and reduce bacteria in streams.

The City enforces the Soil Erosion and Sediment Control Ordinance that requires BMPs to be installed, does regular on-site inspections and enforces controls on development. The City also, requires stormwater detention ponds in new development along House Creek that provides first flush storage for the first ½ inch of runoff.

The Douglas County Environmental Health Department enforces the Septic System Code updated in February 2000.

The Douglasville –Douglas County Water and Sewer Authority conducted a watershed assessment of an area that included House Creek called the Anneewakee Creek Watershed Assessment in 2000. The purpose of the assessment was to assess the quality of the stream water quality and develop a plan to protect and restore the surface waters in the watershed. One result of the assessment was the City adopted a Watershed Protection Regulation for the watershed in January of 2001 that includes 100-ft stream buffers, 150-ft setbacks for all impervious surfaces, septic tanks, drain fields and animal pasturing, and a maximum impervious surface of 25%. The County also adopted a Watershed Protection Ordinance in October 2000 that requires 50' stream buffers, 75' setbacks for all impervious surfaces, septic tanks, drain fields and animal pasturing.

The City of Douglasville also convened a meeting of local residents that live adjacent to House Creek to discuss stormwater runoff in February 2001.

Within two years the City of Douglasville will develop a NPDES Phase II Municipal Stormwater Permit Program. The City is working with the Douglasville-Douglas County Water and Sewer Authority to determine the lead agency on this program. This will be a comprehensive program to control polluted stormwater runoff. Measures included in this program are: public education and participation, detection and elimination of illicit discharge to storm drains, construction site runoff control, post construction runoff control, and pollution prevention. The Phase II Municipal Stormwater Program is planned to be in place by late 2002.

Douglasville will also work with the Watershed Team and the Stakeholders Group to review and evaluate other potential management measures recommended in the watershed assessment that could be put in place to reduce fecal coliform bacteria. Examples of the kinds of measures that will be discussed included water quality and stormwater quality criteria for new developments, septic tank certification policy, maintenance requirements for stormwater facility owners, onsite treatment detention basin and wet ponds, and new sewer service.

Schedule for Implementation

This plan provides for implementation over a five year timeframe. This schedule is detailed in the plan matrix on page 6. During the first year the City will convene a stakeholder group. A list of stakeholders in the House Creek watershed has been compiled. The watershed team and the stakeholders will work together to identify sources of the problem, identify remedial measures and potential funding sources. The DDCWSA will continue the program of baseline monitoring throughout the 5 year plan and additional monitoring will be implemented as needed to help narrow the sources of the problem. Any illicit discharges will also be eliminated as soon as

possible when detected. Additional management measures will be reviewed and considered in year three. The results of the plan will be evaluated in years 3, 4 and 5. Periodic status reports will be provided throughout the plan schedule. Education programs and outreach will be developed and organized and implemented in year three to coincide with the program required under the NPDES MS4 Permit. If needed, a process for Phase II (the next five years) will be developed in year five.

Monitoring Plan

The DDCWSA has an ongoing monitoring program that includes weekly sampling of House Creek for fecal coliform. Additional sampling as part of the NPDES Phase II Stormwater Plan and to narrow the sources of the problem will be developed in year 3 to coincide with the NPDES program.

Funding

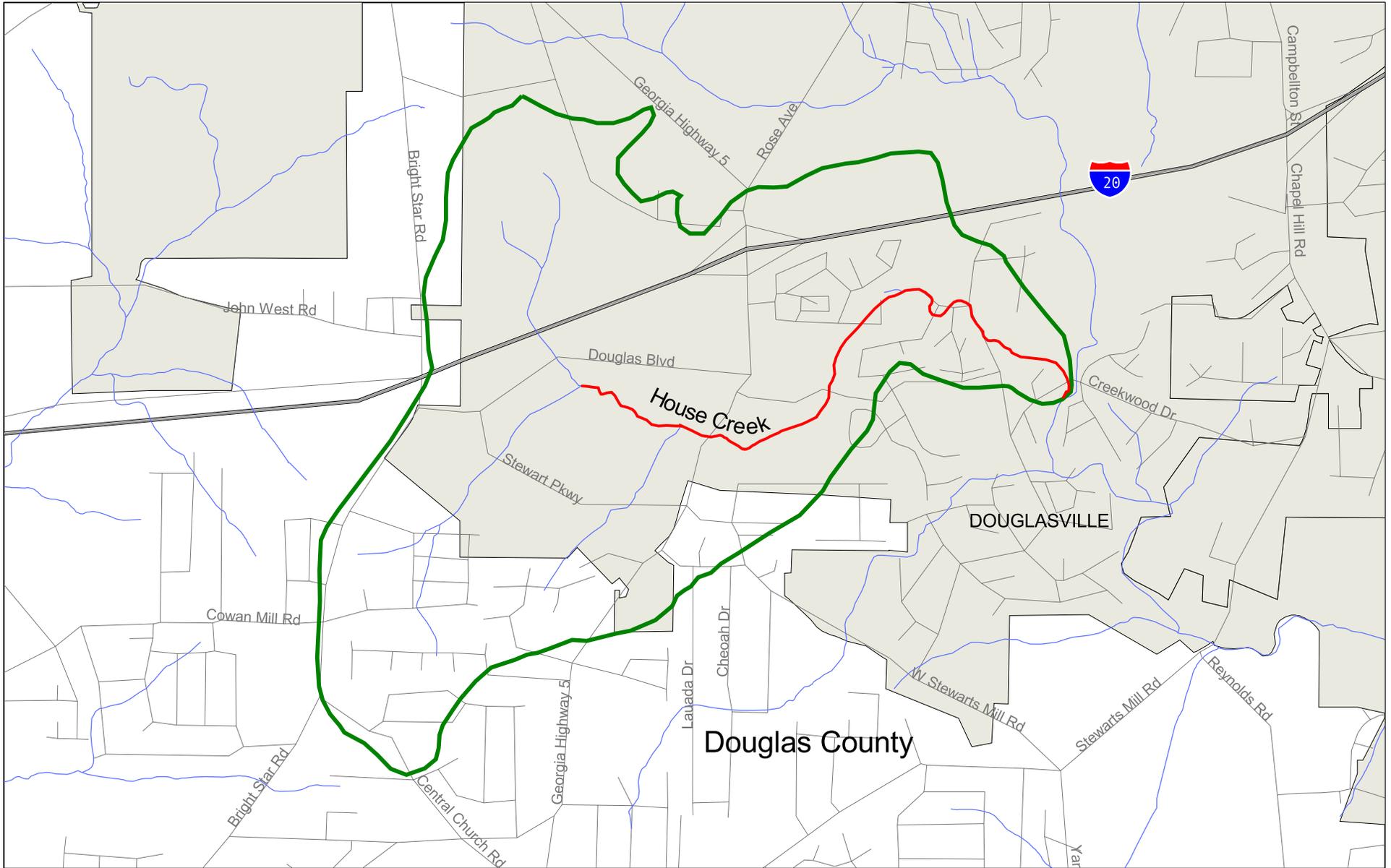
Potential sources of funding that should be explored include Clean Water Act Section 319 grants, the State Water Revolving Loan Fund, NRCS incentive grants, and EPA Watershed Assistance grants, and other local and state funding. Partnerships with various community and business groups should also be explored to support the effort.

Criteria to Determine Progress

The criteria to determine whether progress toward attainment is being made will include the results of monitoring. Also, progress will be measured by the controls and best management practices put in place. The plan will be considered a success when fecal coliform bacteria concentrations are reduced enough to remove the House Creek from the 303(d) list.

Conclusion

The implementation of the regulatory and voluntary measures that have been put in place in Douglasville and the additional measures that will be developed and put in place as part of this implementation plan will reduce the levels of fecal coliform bacteria present.



House Creek TMDL Stream Segment

Map Prepared by Atlanta Regional Commission
 Data Source: Georgia Environmental Protection Division's 305(b)/303(d) List



Legend

- Stream Segment of Concern
- Streams & Rivers
- Freeways
- Roads
- Watershed Boundary
- County Boundaries
- Municipal Boundaries

STATE OF GEORGIA			
TMDL IMPLEMENTATION PLAN FOR: House Creek, fecal coliform		RIVER BASIN: Chattahoochee River	
(stream and parameter)		Plan date: March 19, 2001	
Prepared by: Douglasville Engineering and Inspections Department Address: 6695 Church St City: Douglasville State: GA Zip: 30133 Date Submitted to EPD: March 30, 2001		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.	
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.		Name/Organization	Bill Osborne, City Manager
		Address	6695 Church St.
		City/State/Zip	Douglasville, GA 30133
		Telephone	(770) 920-3000
TMDL ID (to be entered by EPD)		Name/Organization	Keith Williams, City Engineer
		Address	6695 Church St.
		City/State/Zip	Douglasville, GA 30133
		Telephone	(770) 920-3000
Water body name	House Creek	E-mail	
HUC basin name	Annewakee Creek	Name/Organization	Michelle Wright, Planning and Zoning Director
HUC number	031300020304	Address	6695 Church St.
Primary county	Douglas County	City/State/Zip	Douglasville, GA 30134
Secondary county		Telephone	(770) 920-3000
Primary RDC	Atlanta Regional Commissior	E-mail	
Secondary RDC		Name/Organization	Pete Frost, DDCWSA
Water body location	From: Douglas Blvd.	Address	PO Box 1157
	To: Confluence of Annewakee C	City/State/Zip	Douglasville, GA 30133
Miles or area impacted		Telephone	(770) 949-8669
Water use classification	Fishing	E-mail	
Degree of impairment	Partially supporting use:	Name/Organization	Pete Frost, DDCWSA
	Not supporting use: YES	Address	PO Box 1157
Date TMDL approved by EPA	19-Feb-98	City/State/Zip	Douglasville, GA 30133
Impairment due to	Point source:	Telephone	(770) 949-8669
	Nonpoint source: YES	E-mail	
	Both:		
Point source- Form A; nonpoint source- Form B; both-Form C			

Significant Stakeholders Page 2

Name/Organization	Robert Gore, Environmental Health Services	Name/Organziation	UGA Cooperative Extension Service
Address	8700 Hospital Dr.	Address	8700 Hospital Dr
City/State/Zip	Douglasville, GA 30134	City/State/Zip	Douglasville, GA 30134
Telephone	(770) 920-7311	Telephone	(770) 920-7224
E-mail		Email	
Name/Organization	Mike McBrier, P.E., Director of Public Works Douglas County Public Works Dept., Engineering Div.	Name/ Organization	Upper Chattahoochee Riverkeeper
Address	8700 Hospital Drive	Address	1900 Emery Street, Ste. 450
City/State/Zip	Douglasville, GA 30134	City/State/Zip	Atlanta, GA 30318
Telephone	(770) 920-7243	Telephone	(404)352-9828
E-mail	mmcbrier@co.douglas.ga.us	Email	info@ucriverkeeper.org
Name/Organization	Eric Linton, AICP, Director of Developmental Services Planning Department, Douglas County	Organization	Large Landowners (>100 acres)
Address	8700 Hospital Drive	Name	CS Douglas Place Association
City/State/Zip	Douglasville, GA 30134	Address	One Fawcett Place
Telephone	(770) 920-7241	City/State/Zip	Greenwich, CT 06830
E-mail	elinton@co.douglas.ga.us	Email	
Name/Organization	Georgia Soil and Water Conservation Commission		
Address	Region III 1500 Klondike Rd		
City/State/Zip	Conyers, GA 30094		
Telephone	(770) 761-3020		
E-mail			
Name/Organization	Natural Resource Conservation Service		
Address	8700 Hospital Dr		
City/State/Zip	19-Feb-98		
Telephone	(770) 920-7246		
E-mail			
Name/Organization	Chris Collier, Homebuliders Assoc. of Douglas Co.		
Address	PO BOX 1272		
City/State/Zip	Douglasville, GA 30133		
Telephone	(678) 715-09094		
Email			

II. DESCRIBE ANY REGULATORY OR VOLUNTARY ACTIONS INCLUDING MANAGEMENT MEASURES OR OTHER CONTROLS BY GOVERNMENTS OR INDIVIDUALS THAT WILL HELP ACHIEVE THE LOAD ALLOCATIONS IN THE TMDL:				
Existing or required regulatory actions				
RESPONSIBLE GOVERNMENT, ORGANIZATION OR ENTITY	NAME OF REGULATION OR ORDINANCE	DESCRIPTION	ENACTED OR PROJECTED DATE(mm/yy)	STATUS
City of Douglasville Planning and Zoning	Watershed Protection Regulations - Annewakee Creek Watershed (House Creek is a subwatershed of Annewakee Creek)	100-ft stream buffers, 150-ft setbacks for all impervious surfaces, septic tanks, drain fields and animal livestock/pasturing, keeping or grazing, maximum 25% impervious surface area	Jan-01	enforced
Douglas County Planning and Zoning	Watershed Protection Regulations - Annewakee Creek Watershed (House Creek is a subwatershed of Annewakee Creek)	50-ft stream buffers, 75-ft setbacks for all impervious surfaces, septic tanks, drain fields and animal livestock/pasturing, keeping or grazing	Oct-00	enforced
Douglas County Environmental Health Department	Rules and Regulations for On-site Sewage Management	Septic System code - Permits include pre-site analysis and suitability determination, requires installers to be certified, inspections during and after installation required, enforced sanctions on violations.	latest update Feb-00	enforced, State and County regulations
City of Douglasville Engineering and Inspections	Soil Erosion and Sediment Control	Requires Best Management Practices to be installed, a 25-foot buffer to be maintained, regular on-site inspections, enforced sancations on those who do not comply with state and local ordinances	latest update Jan 01	enforced
JDN Development; Lowes, Best Buys, Sonny's	First flush storage	In addition to the stormwater detention pond adjacent to House Creek first flush storage is provided for a minimum of the first 1/2" of run-off.	Apr. 1998	enforced
Existing voluntary actions				
RESPONSIBLE ORGANIZATION OR ENTITY	NAME OF ACTION	DESCRIPTION	ENACTED OR PROJECTED DATE(mm/yy)	STATUS
DDCWSA	Baseline Monitoring Program	Baseline sampling has been underway for a number of years.	1987	In progress
City of Douglasville	Townhall Meeting	Meeting with residents that live adjacent to House creek to discuss stormwater run-off issues.	Feb. 2001	completed

Additional recommended regulatory or other measures which should be implemented to reduce the loads of the TMDL parameter				
	NAME OF PROPOSED		ENACTED OR	
ENTITY/ORGANIZATION	REGULATION/ORDINANCE/		PROJECTED	
RESPONSIBLE	OTHER	DESCRIPTION	DATE (mm/yy)	STATUS
To be determined between the City and DDCWSA	NPDES Phase II MS4 Municipal Stormwater Permit	Requires jurisdiction to have a comprehensive stormwater program which includes public education and participation, illicit discharge detection and elimination, construction site runoff control, post construction runoff control, pollution prevention, permitting and reporting, and program implementation plans.	Late 2002 - Dependent on the date Implementation Plans will be due	To be determined between the City and DDCWSA
To be determined between the City and DDCWSA	Stream Monitoring	Stream sampling/monitoring will be necessary to show progress for TMDLs	2001	To be determined between the City and DDCWSA
Watershed Team		Review recommendations from watershed assessments performed for the DDCWSA in Annewakee Creek to determine regulatory actions that can be taken to mitigate non-point source runoff. Example recommendations include water quality and stormwater control criteria for new developments, septic system certification policy, maintenance requirements of stormwater facilities for landowners, onsite treatment detention basins and wet ponds, land trusts to purchase buffer zones along creeks, sewer service to all new developments, stream corridor management measures, and educational programs.	2002	To be determined between the City and DDCWSA

III. SCHEDULE FOR IMPLEMENTING MANAGEMENT MEASURES OR OTHER CONTROL ACTIONS:						
These must be implemented within five years of when the implementation plan is accepted by EPA.						
IMPLEMENTATION ACTION	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	NOTES
Form Watershed Team	X					
Organize implementation work with stakeholders and local officials to identify potential remedial measures and potential funding sources	X	X	X			
Review monitoring data for possible source information	X					
Identify sources of TMDL parameter		X				
Develop management programs to control runoff including identification and implementation of BMPs (Phase 1):						
Agriculture						
Forestry						
Urban		X				
Mining						
Organize and implement education and outreach programs			X			
Detect and eliminate illicit discharges			X	X	X	
Evaluate additional management controls needed			X	X		
Monitor and evaluate results			X	X	X	
Reassess TMDL allocations			X		X	
Provide periodic status reports on implementation of remedial activities	X	X	X	X	X	
If needed, begin process for Phase II (next 5 yrs.) 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			
Management controls and activities already implemented	2			
Management controls and activities proposed in five-year work program	4			
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			
IV. MONITORING PLAN				
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
Douglasville Douglas County WSA	weekly	Fecal Coliform, pH, turbidity and nutrients	Baseline monitoring.	In place for past 14 years

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
City of Douglasville (or DDCWSA contingent upon the City or the WSA, whomever is responsible Stormwater regulatory party)		Fecal Coliform	Implement established TMDL monitoring criteria to be determined for source locations, verification of status, and progress monitoring	To be determined, if necessary
Douglasville/Douglas County WSA	weekly	Fecal Coliform and nutrients	Baseline Monitoring	Continuation of existing program
City of Douglasville (or DDCWSA contingent upon the City or the WSA, whomever is responsible Stormwater regulatory party)	weekly	To be determined with NPDES Phase II permitting plan	Source locations, verification of status, and progress monitoring.	To be determined

VII. CRITERIA TO DETERMINE WHETHER SUBSTANTIAL PROGRESS IS BEEN 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:

This TMDL Implementation Plan was adopted by the Douglasville City Council on March 19, 2001