

Lanahassee Creek  
TMDL Implementation Plan  
West Fork Lanahassee Creek to Kinchafoonee Creek  
Webster County, Georgia  
HUC #031300070203

Prepared by  
Middle Flint Regional Development Center  
June 30, 2004  
Funded by  
Georgia Department of Community Affairs

Lanahassee Creek TMDL Implementation Plan  
Webster County Georgia - Flint River Basin  
HUC # 031300070203

Background

The State of Georgia assesses its water bodies for compliance with water quality standards criteria as required by the Federal Clean Water Act (CWA). Assessed water bodies are placed into one of three categories; supporting, partially supporting or not supporting their designated uses depending on water quality assessment results. These water bodies are placed on Georgia's 305(b) list as required by that section of the CWA that addresses the assessment process, and are published every two years in *Water Quality in Georgia*.

Some 305(b) partially supporting and not supporting water bodies are also assigned to Georgia's 303(d) list, also named after the corresponding section of the CWA. Water bodies on the 303(d) list are required to have a Total Maximum Daily Load (TMDL) evaluation when samples exceed water quality standards for any of numerous contaminants. Lanahassee Creek, from West Fork Lanahassee to Kichafonee Creek, in Webster County was one of many in the Flint River basin found to be in violation of water quality standards for fecal coliform bacteria. Based on analysis of water quality samples collected, the TMDL calls for a 53% reduction in the fecal coliform bacteria count; from  $3.13E+12$  to  $1.48E+12$ .

The TMDL process establishes the allowable loading of pollutants or other quantifiable parameters for a water body based on the relationship between pollution sources and in-stream water quality conditions. This allows water quality-based controls to be developed to reduce pollution and restore and maintain water quality.

Water samples were collected by the Environmental Protection Division (EPD) of the Georgia Department of Natural Resources between February and October, 2000, inclusive, at trend monitoring station #11065501 located at State Road 153 northeast of Preston, Georgia. The 303(d) listing consists of that six mile segment of Lanahassee Creek from West Fork Lanahassee to Kinchafonee Creek in Webster County. The 2000 sampling point is located near the northern extremity of this impaired segment (see map).

Environmental Parameter

Fecal coliform bacteria are indicators of a potential public health risk, and not an actual cause of disease. These bacteria have been traditionally used by public health authorities to indicate health risk from a wide range of living organisms too small to see with the naked eye (microbes), and to set water quality standards for drinking water, shellfish consumption and water contact recreation.

Fecal coliform bacteria suggest the co-presence of bacterial pathogens (disease-causing microbes) which can cause dysentery, gastrointestinal illness, cholera, typhoid fever and staph infections. The actual risk of contracting a disease from a pathogen depends on a host of factors, such as the method of exposure or transmission, pathogen concentration, incubation period and the age and health status of the infected party.

Fecal coliform are an imperfect indicator of water safety, and regulators debate whether other bacterial species are better indicators of potential health problems. The debate remains largely academic; however, as over 90% of states still rely on fecal coliform, in whole or in part, as their recreational water quality standard.<sup>1</sup>

The water safety standard used by the State of Georgia for fecal coliform bacteria is based on a 30-day geometric mean (at least four samples collected during a thirty day period at intervals of not less than twenty-four hours) of 200 cfu/100 ml for water samples collected during the six month period May through October, inclusive, and a 30-day geometric mean of 1,000 cfu/100 ml (with a maximum of 4,000 cfu/100 ml) for water samples collected during the months of November through April, inclusive.<sup>2</sup> The geometric mean is a statistical method used to adjust for great variability in sample values; quite characteristic of fecal coliform bacteria.

As data in the following table indicates, one of the four geometric means (424 cfu) exceeds applicable standards. Consequently, Lanahassee was classified as partially supporting the creek’s designated use of fishing.

Lanahassee Creek Water Quality Sampling Data  
HUC # 031300070203  
monitoring station #11065501

Sample Date 2000	Observed Fecal Coliform (counts/100 ml)	Geometric Mean (counts/100 ml)
February 24	130	236
March 9	220	
March 16	460	
March 23	0	
April 5	230	182
April 6	490	
April 12	140	
April 20	70	
June 15	130	424
June 20	1100	
June 27	490	
July 13	460	
September 21	20	190
September 25	490	
October 3	790	
October 19	170	

<sup>1</sup> Watershed Protection Techniques, vol..3, no.1, April, 1999

<sup>2</sup> coliform units/100 milliliters

It is well documented that fecal coliform bacteria counts typically increase immediately after rain events, in part because naturally occurring fecal coliform bacteria present across the landscape are washed into nearby surface waters. Consequently, static-state conditions (conditions not influenced by rainfall) are preferred for collecting water samples used in water quality analysis.

As the preceding table reveals, the highest bacteria count (1100) was collected June 20. According to the Record of River and Climatological Observations at the nearest recording station,<sup>3</sup> .78 inch rainfall occurred the date of collection, but it is not known the time of day the rainfall occurred or time of day the sample was taken. Most, but not all, of the other higher count days were preceded by significant rainfall events. The second highest bacteria count (790) was recorded October 3. The recording station recorded no rainfall on that date or during the preceding seven day period. Webster County recorded a lower than average rainfall in 2000.

### Watershed Description

Two, twelve-digit watersheds have been analyzed. The two primary water bodies in these basins form a “Y”. The right fork of the “Y” is the upstream segment of Lanahassee Creek and constitutes the secondary hydrologic unit (Hydrologic Unit Code 031300070202), a roughly oval shape basin of approximately 10,800 acres. The left fork of the “Y” is the location of West Fork Lanahassee Creek and the base of the “Y” is the lower segment of Lanahassee Creek. The left fork and base of the “Y” constitute the 16,600 acre primary HUC (031300070203). The confluence of the left (West Fork Lanahassee) and right (upper Lanahassee) forks constitute Lanahassee Creek, approximately 1,000 feet upstream of the GA Hwy 153 water quality sampling site. The collection point is in the primary HUC, and the six mile impaired segment runs from this site to Kinchafoonee Creek. These watersheds are not charged by waters from any other basins. Approximately half of the combined area is in Webster and half in Marion County.

### Land Use

Sixty-six percent of the state land area is in forest. In Webster, 68% is in forest; very similar to land cover in Webster’s portion of the watershed studied. Eighty percent of Marion County is in forestland,<sup>4</sup> but only approximately half of that portion in the affected watershed is in forest. Marion’s second largest land use in the affected watershed is conventional agriculture.

None of the referenced basins have experienced development in the past ten years. Total estimated population is less than 200; approximately 135 in HUC -03; and 65 in HUC -02. Less than one hundred housing units (single-family with septic systems) are

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<sup>3</sup> Southwest Georgia Agricultural Experiment Station near Plains, nine air miles east of the impaired segment

<sup>4</sup> The Georgia County Guide 2003, University of Georgia

distributed throughout these basins (averaging over 275 acres per residence) with no concentrations and no development along the water's edge.

Source Assessment

Pollution originates from two broad sources; point sources and nonpoint sources. A point source is defined as a discernable, confined, and discrete point or site from which pollutants are discharged into surface waters. Examples of point sources are municipal and industrial wastewater treatment plants. These sources have been addressed through the federal Clean Water Act National Pollutant Discharge Elimination System (NPDES) permit program and are not the subject of this implementation plan.

No municipalities or their wastewater disposal systems are located within the subject watersheds. However, Tri-County High School (±500 students) maintains a wastewater treatment facility in the northern-most section of the West Fork Lanahassee watershed. The facility is approximately 1/3 linear mile from a West Fork tributary, and approximately 9 linear miles north of the original collection site. The highest recorded fecal coliform bacteria count during the 2000 monitoring was from a sample taken June 20, when school was out of session for the summer.

The second broad category of pollution is nonpoint sources. These are diffuse and generally involve accumulation of fecal coliform bacteria on land surfaces that wash off as a result of rain events. In general, nonpoint sources cannot be identified as discharging wastewater into a water body at a single location. Typical nonpoint sources of fecal coliform bacteria include:

Wildlife

Agricultural Livestock

Urban Development

Animal grazing/confinement

Leaking septic systems

Animal access to streams

Land application systems

Use of manure on crop/pasture

Landfills

Storm sewers

Wildlife

The importance of wildlife as a source of fecal coliform bacteria in streams varies considerably, depending on the animal species and numbers present in the watershed. Animals that spend a large portion of their time in or around aquatic habitats are considered to be the most significant wildlife contributors of fecal coliform bacteria.

Marion County stakeholders reported a “significant” feral hog population in the secondary HUC. Feral hogs are adaptable to almost any habitat, but prefer wooded areas close to water. Lacking sweat glands they regulate body temperature by lying in water or mud and cannot survive in hot climates without a plentiful supply of water. Their ability to thrive on a very diverse diet gives them a distinct survival advantage over other species. Because they are so prolific, adaptable, tenacious, and have no natural predators, it is difficult to control their population. Areas elsewhere with significant feral hog populations have recorded high concentrations of fecal coliform bacteria.

According to 2000 deer census data of the Wildlife Resources Division of the Georgia Department of Natural Resources, there are approximately 35 deer per square mile in Marion and Webster Counties. On the basis of this information, and assuming a relatively even distribution, it is assumed there are approximately 1500 deer in the affected basin; equivalent to one deer for every eighteen acres.

Although deer are generally considered to be one of the less significant contributors of fecal coliform bacteria, the feces they deposit on the land surface can result in the introduction of fecal coliform to streams during runoff (rain) events. It should be noted that considerable decomposition of the fecal matter should occur between rain events, resulting in a decrease in the associated bacteria counts. This also holds true for other terrestrial mammals such as squirrel, rabbit and terrestrial birds.

The deer are numerous enough to attract the attention of large numbers of hunters. A hunting camp of undetermined size is upstream of the original water quality sampling site. While the natural activity of deer in the watershed may not be contributing significantly to the presence of fecal coliform bacteria, it is yet to be determined whether conditions and activities at the hunting camp could be having an influence. Perhaps unrelated to the specific hunting camp, stakeholders did report occasional sightings of deer carcass along waterways in the watershed.

Webster County stakeholders also reported the presence of wild dogs and coyotes in the watershed.

### Agricultural Livestock

Agricultural livestock are potential sources of fecal coliform bacteria whether on open pasture or in confinement. Cattle, sheep, horses, and goats grazing on pasture deposit feces onto the land surface from where it can be transported to nearby streams during rain events. Livestock on open grazing often have direct access to streams that pass through pastures, and as such can impact water quality in a more direct manner. Confined animal feeding operations (CAFO), such as beef cattle in feedlots, poultry houses and confined dairy cattle and swine, generate large quantities of fecal material within a limited area with potential for significant bacterial runoff.

According to agricultural statistics there were 10,000 head of beef in Webster and Marion Counties in 2000, the year of the previous sampling, but local stakeholders could not identify the location of any such livestock in the watershed. It was made clear there were not any commercial livestock operations in the watershed in 2000. Any beef cattle which were present were in very small, sparse herds maintained by a hobby-farmer or used to supplement family income rather than serve as a source of livelihood. More recent statistics (2002)<sup>5</sup> report virtually no change in herd sizes, and stakeholders report no change in this agricultural activity in the watershed.

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<sup>5</sup> Georgia County Guide 2001 and Georgia County Guide 2003

The two counties reportedly had 500 head of swine in 2000, and 125 in 2002.<sup>6</sup> Here again, stakeholders could not identify any sites in the watershed where these animals would have been or are present. The only dairy farm credited by agricultural statistics to either county was a fifty-head Marion County operation in 2000.<sup>7</sup> It last appears in the 2001 statistics, but that dairy was not located in the watershed.

The 2000 agricultural statistics reported 10.25 million broilers, breeding hens and laying hens distributed throughout Marion County in 124 poultry houses. Webster County was credited with four poultry houses and 290,000 chickens that year. The most recent statistics show 73 houses and 8.25 million chickens in Marion, and 4 houses and 440,000 chickens in Webster.<sup>8</sup> None of these chicken houses were reported to exist in the affected watersheds. Marion County's portion of the affected watershed is in the highest concentration of prime farmland in the county, and is more heavily devoted to conventional row-crop agriculture than the northern portion of the county. Webster County's portion of the watershed is heavily forested.

Agricultural officials reported application of poultry litter on farmland in this watershed was uncommon. Where it is applied the poultry industry has been promoting the use of nutrient management planning; matching nutritional value of poultry litter with the nutritional needs of any given application site. This refinement to an existing best management practice further reduces the potential for bacterial runoff. There was no report of exposed stock piles of poultry litter used for cultivation of deer plots or agricultural use in the affected watersheds.

### Urban Development

For TMDL purposes, septic tanks are considered an "urban" development. After solids are trapped in a septic tank and broken down via bacterial activity, wastewater is discharged through a subsurface drain (tile) field and allowed to percolate through the soil. If the septic system is properly located, installed and maintained, bacteria are effectively removed by filtering and straining water through the soil profile. Septic systems fail when wastewater breaks out or passes through the soil profile without adequate treatment.

The causes of septic system failure are numerous; inadequate soils, poor design, siting, testing or inspection, hydraulic overloading, tree growth in the drain field, old age, and owner failure to clean the system. Among the factors officials should consider when investigating whether septic systems are likely to be a major bacteria source are age (systems older than twenty years) and small lots. The design life of most septic systems is 15-30 years, at which point major rehabilitation or replacement is often needed.

Only two public roads cross the six mile impaired segment, Georgia Highway 153 at the northern extremity and U.S. 280 at the southern-most extremity. This serves to limit public access to the waterway. There are less than 100 single-family housing units (with

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<sup>6</sup> Georgia County Guide 2001 and Georgia County Guide 2003

<sup>7</sup> Georgia County Guide 2001

<sup>8</sup> Georgia County Guide 2001 and Georgia County Guide 2003

septic systems) in the study area with no significant concentrations and essentially no units proximate to the creek. No problems with malfunctioning septic systems have been reported in Webster or Marion Counties.

### Land Application Systems

Many smaller communities use a land application system (LAS) for treatment of sanitary wastewater. State-issued LAS permits require the facilities to treat wastewater by land application and to have zero discharge. However, runoff during rain events may carry surface residual containing fecal coliform bacteria to nearby streams. No land application system has operated in the watershed.

### Landfills

Leachate from landfills may contain fecal coliform bacteria and may at some point discharge into surface waters. Sanitary (municipal) landfills are the most likely type of solid waste disposal facility to be a source of fecal coliform bacteria. These receive household wastes, animal manure, offal, hatchery and poultry processing plant wastes, dead animals, and other types of wastes. Older sanitary landfills were not synthetically lined, and those that remain active operate as construction/demolition landfills. Newer sanitary landfills are lined and have leachate collection systems. All landfills, except inert facilities, are now required to install environmental monitoring systems to sample for groundwater quality. No active or closed landfills are located within the affected watersheds.

### Storm Sewers

Municipalities typically collect storm water flow (runoff) via a storm sewer system, and discharge it through distinct outlet structures into creeks and streams. Documented sources of non-human fecal coliform in urban watersheds include dogs, cats, raccoons, rats, beaver, gulls, geese, pigeons. Dogs in particular appear to be a major source of coliform bacteria and other microbes, because of their population density, daily defecation rate, and pathogen infection rates. In absence of any municipalities there are not any such municipal discharges in the subject watersheds.

### Stakeholder Involvement

Owners of land contiguous to the impaired segment of Lanahassee Creek were identified from courthouse tax records. Local government officials, Farm Bureau officers, health department and forestry officials, and agricultural experts from the County Extension Office and National Resources and Conservation Service were also identified. Twenty invitations were mailed to property owners and other stakeholders. Block ads were published in Webster County's local newspaper inviting public participation in development of this document. Ten identified stakeholders attended the Webster County meeting.

The meeting opened with a viewing of the fifteen-minute videocassette tape, *Watershed Wisdom*, after which the purpose of the meeting was clearly explained. During the ninety minute meeting participants shared their knowledge of land use in the watershed, possible contributing sources and suggested possible corrective measures.

Information was presented depicting the sparsity of housing (and septic tank) development within the watershed, especially in proximity to the creek and tributaries. Agricultural personnel and area residents reported the area is, and at the time of previous water sampling was, essentially devoid of the livestock activity present in other parts of the two counties. Residents did note two hunting camps exist along the Lanahassee's banks which led to the question of sanitation. At least one of these camps is perceived to have a significant, seasonal occupancy. No information was available concerning human sanitation or on-site processing of venison.

#### Potential Funding Sources

Georgia EPD  
Watershed Assistance Grants  
Volunteer Activities (Adopt-A-Stream)  
Water Quality Cooperative Agreements  
Nonpoint Source Implementation Grants (319)

Lanahassee Creek Water Quality Sampling/Monitoring Plan  
HUC 031300070203  
(refer to accompanying map)

Additional water sampling and analysis is proposed to help identify areas where efforts to locate possible contributors of fecal coliform loading are likely to be most beneficial. Proposed collection sites are presented in descending priority as follows:

- Collection site 1      GA Hwy 153 – This is the site of original sampling February-October, 2000; downstream of the confluence of the West Fork Lanahassee and Lanahassee. Analysis of additional samples taken at this site will be compared with 2000 sampling results to get an indication of whether previously documented conditions still exist.
- Collection site 2      Tri-County Road (West Fork Lanahassee) – approximately ½ linear mile northwest of the original collection site (site 1). This site is accessible from the public road and could serve to identify, or eliminate, West Fork as the area of possible fecal loading. This site is immediately downstream of a hunting camp.
- Collection site 3      John Colbert Road (Lanahassee, upper segment) – approximately 1 ¼ miles northeast of the original collection site (site 1). This site is accessible only via private road east of John Colbert Road and could serve to identify, or eliminate, the upper segment of Lanahassee (HUC -02) as an area of possible fecal loading.
- Collection site 4      Bill Merritt Road, Marion County (Lanahassee, upper segment) – approximately 5 linear miles north-northeast of the original collection site (site 1). This site is accessible from the public roadway. If high counts are collected at site 3, sampling at this location could help determine how far upstream any contributors may be located.
- Collection site 5      Bill Merritt Road, Marion County (West Fork Lanahassee) – approximately 5 linear miles north-northwest of the original collection site (site 1). This site is accessible from the public roadway. If high counts are collected at site 2, sampling at this location could help determine how far upstream any contributors may be located.

STATE OF GEORGIA

TMDL IMPLEMENTATION PLAN FOR: LANAHASSEE CREEK FECAL COLIFORM RIVER BASIN: FLINT  
 (STREAM) (PARAMETER) PLAN DATE: June 30, 2004

Prepared by: <u>Gerald Mixon</u> <u>Middle Flint Regional Development Center</u> Address: <u>228 West Lamar Street</u> City: <u>Americus</u> State: <u>GA</u> Zip: <u>31709</u> e-mail: <u>gmixon@middleflintrdc.org</u> Date Submitted to EPD: <u>June 30, 2004</u>		Or Prepared By:  Address:  City: _____ State: _____ Zip: _____ e-mail:  Date Submitted to EPD: _____	
<p style="text-align: center;">General Information</p> <p>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.</p>		<p style="text-align: center;">Significant Stakeholders</p> <p>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.</p> <p style="text-align: center;">Additional stakeholders identified on page 16.</p>	
TMDL ID (to be entered by EPD)		Name/Organization	Webster County Board of Commissioners
Water body name	Lanahassee Creek	Address	P. O. Box 29
HUC basin name	Kinchafoonee-Muckalee	City	Preston State GA Zip 31824
HUC number	031300070203	Phone	229-828-5775 e-mail
Primary county	Webster	Name/Organization	Webster County Extension Service
Secondary county	Marion	Address	P. O. Box 89 (7235 Washington Street)
Primary RDC	Middle Flint	City	Preston State GA Zip 31824
Secondary RDC	-	Phone	229-828-2325 e-mail
Water body location	West Fork Lanahassee Cr.	Name/Organization	Webster County Farm Bureau
	to Kinchafoonee Cr.	Address	P.O. Box 16
Miles or area impacted	6 miles	City	Preston State GA Zip 31824
Parameter addressed in plan	Fecal coliform	Phone	229-828-2125 e-mail
Water use classification	fishing	Name/Organization	Webster County Health Department
Degree of impairment	Partially supporting use X	Address	P.O. Box 12
	Not supporting use	City	Preston State GA Zip 31824
Date TMDL approved by EPA		Phone	229-828-3225 e-mail
Impairment due to	Point sources	Name/Organization	National Resource Conservation Service
	Nonpoint sources X	Address	P. O. Box 129 (177 Montgomery Street)
	Both	City	Preston State GA Zip 31824
<b>Point source-Form A; Nonpoint source-Form B; Both-Form A+B+C</b>		Phone	229-828-2015 e-mail

FORM B

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

EXISTING LOAD	TARGET TMDL	NEEDED REDUCTION
3.13E+12 cnts/30 days	1.48E+12 cnts/30 days	53%

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)
Wildlife	Wildlife and associated activities	53%

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:

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
Webster Co Health Dept.	State rules and regs. for on-site sewage mgt. sys.	Regulates installation of septic tanks	01-98	active
Webster County Board of Commissioners	Groundwater Recharge Area Protection Ord.	Regulate development in areas of significant groundwater recharge	07-01	Active
GA EPD	Concentrated Animal Feedlot Operations	Enforcement of wastewater treatment regulations applicable to feedlot operations	09-74	enforced as needed
GA DNR	Hunter Education	Hunter safety & stewardship	-	-

Existing voluntary actions

RESPONSIBLE ORGANIZATION OR ENTITY	NAME OF ACTION	DESCRIPTION	ENACTED OR PROJECTED DATE (mm/yy)	STATUS
Ag producers	Best Management Practices	Maximizing production without causing deleterious effects on other resources	1990s	active
Ag producers	Nutrient Management Plans	Purchasers of poultry litter match nutrient needs of land to nutrient value of litter	2000	active
Soil and Water Conservation District	Promote voluntary adoption of agricultural best management practices	Provide leadership in the protection, conservation, and improvement of soil, water and related resources	1937	active
USDA Natural Resources Conservation Service (NRCS)	Environmental Quality Incentives Program and other T/A	Develop standards and specification regarding conservation practices, animal waste management systems, grazing activities, et. al. – implements state priorities.	1997	needs funding

Cooperative Extension Service	Disseminate information	Consultative assistance, information on nonpoint-related impacts on water quality, water quality monitoring, analysis of nutrients and other constituents in animal waste, nutrient management plans	1914	active
Farm Services Agency (FSA)	Water quality improvement practices (Conservation Reserve Program)	Administration of cost-sharing and incentive programs for practices that improve environmental quality of farms. Funds targeted for high-priority watersheds with water quality problems.	1985	active
Georgia Department of Agriculture	Disease control	Provides guidance in location of animal waste facilities and disposal of dead animals	1874	as needed
USDA Agricultural Research Service (ARS)	Agriculture research and monitoring	Research on grazing land systems and irrigation methods relevant to watershed-scale monitoring projects and nutrient movement in surface water and groundwater.		as needed
Resource Conservation and Development Council	Volunteer activism	Citizen activism in conservation of natural resources	1962	as needed

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
Webster County Health Department	Site Inspection	Determine hunting club compliance with sanitation standards	Spring '04	Scheduled
GA DNR-Game and Fish	Hunter Education	Educate hunters of the environmental harm of discarding wild game carcasses in or near bodies of water.	Year 2-5	Pending plan approval
GA DNR-Game and Fish	Wildlife Survey	Determine whether wildlife presence is sufficient to be significant contributor.	Year 2-5	Pending plan approval
County Extension	Survey of Soil Enhancement Activity	Survey to determine application of poultry litter in watershed.	Year 2	Pending plan approval

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
Form stakeholders group	X				
Organize implementation work with stakeholders and local officials to identify remedial measures and potential funding sources	X	X			
Identify sources of TMDL parameter		X			
Develop management programs to control runoff including identification and implementation of BMPs (Phase I):					
Agriculture	n/a				
Forestry	n/a				
Urban	n/a				
Mining	n/a				
Organize and implement education and outreach programs		X	X*	X*	
Detect and eliminate illicit discharges		X*			
Evaluate additional management controls needed		X	X	X	
Monitor and evaluate results		X	X		
Reassess TMDL allocations			X	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

\* as needed

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 13
- Number of management controls and activities proposed in five-year work program 4
- 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
Georgia EPD/DNR	2/00 – 10/00	Fecal Coliform	Watershed Basin Plan	State schedule

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	2005	Fecal Coliform	Watershed Basin Planning	State schedule
Georgia Southwestern State University	Year 2 (2005)	Fecal Coliform	TMDL implementation - Establish base flow, confirm fecal presence and identify source(s)	Pending plan approval and funding

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

- % concentration or load change (monitoring program)
  - 53% reduction in loading and/or resultant concentrations from activities related to wild game hunting
- Categorical change in classification of the stream
  - delisting is the goal of this TMDL plan
- Regulatory controls or activities installed
  - supplement Georgia Hunter Education curriculum
  - perform wildlife survey
  - health department inspection of hunting camp(s) and implementation of corrective measures if needed

Additional Stakeholders from page 10:

Wayne Burks, Mayor of Weston

Carol R. Dillard

Helen Duke

Robert E. & Gail Hall

J Sullivan Prop LLLP

Jerry Kichler, Webster County Extension

Jerry Kirksey, Mayor of Preston

Arnold Kisor

Thomas & Patricia R. Lee

Minick Farms, Inc.

Plum Creek Timberlands LP

John Pollard, Chief Ranger

Dr. William Tietjen, Georgia Southwestern Biology Department

Tolleson Lumber Company, Inc.

Weyerhaeuser Company

Dave Wills, Chairman, Webster County Board of Commissioners

Roger Swain, National Resources Conservation Service, Webster

Roger Sinyard, Marion County Extension

Lewis Folks, National Resources Conservation Service, Marion

Phil Porter, Georgia Forestry Commission

Gerald Smith, Georgia Farm Bureau

Michelle Stone, Webster Health Department

Sullivan R E Est.

LANAHASSEE CREEK  
TMDL IMPLEMENTATION PLAN  
PROPOSED WATER QUALITY COLLECTION SITES

