

STATE OF GEORGIA
TIER 2 TMDL IMPLEMENTATION PLAN REVISION 0

Segment Name Talking Rock Creek
Coosa River Basin
April 28, 2006

Local Watershed Governments Pickens County,
Gilmer County, City of Talking Rock

I. INTRODUCTION

Total Maximum Daily Load (TMDL) Implementation Plans are platforms for evaluating and tracking water quality protection and restoration. These plans have been designed to accommodate continual updates and revisions as new conditions and information warrant. In addition, field verification of watershed characteristics and listing data has been built into the preparation of the plans. The overall goal of the plans is to define a set of actions that will help achieve water quality standards in the state of Georgia.

This implementation plan addresses the general characteristics of the watershed, the sources of pollution, stakeholders and public involvement, and education/outreach activities. In addition, the plan describes regulatory and voluntary practices/control actions (*management measures*) to reduce pollutants, milestone schedules to show the development of the management measures (*measurable milestones*), and a monitoring plan to determine the efficiency of the management measures.

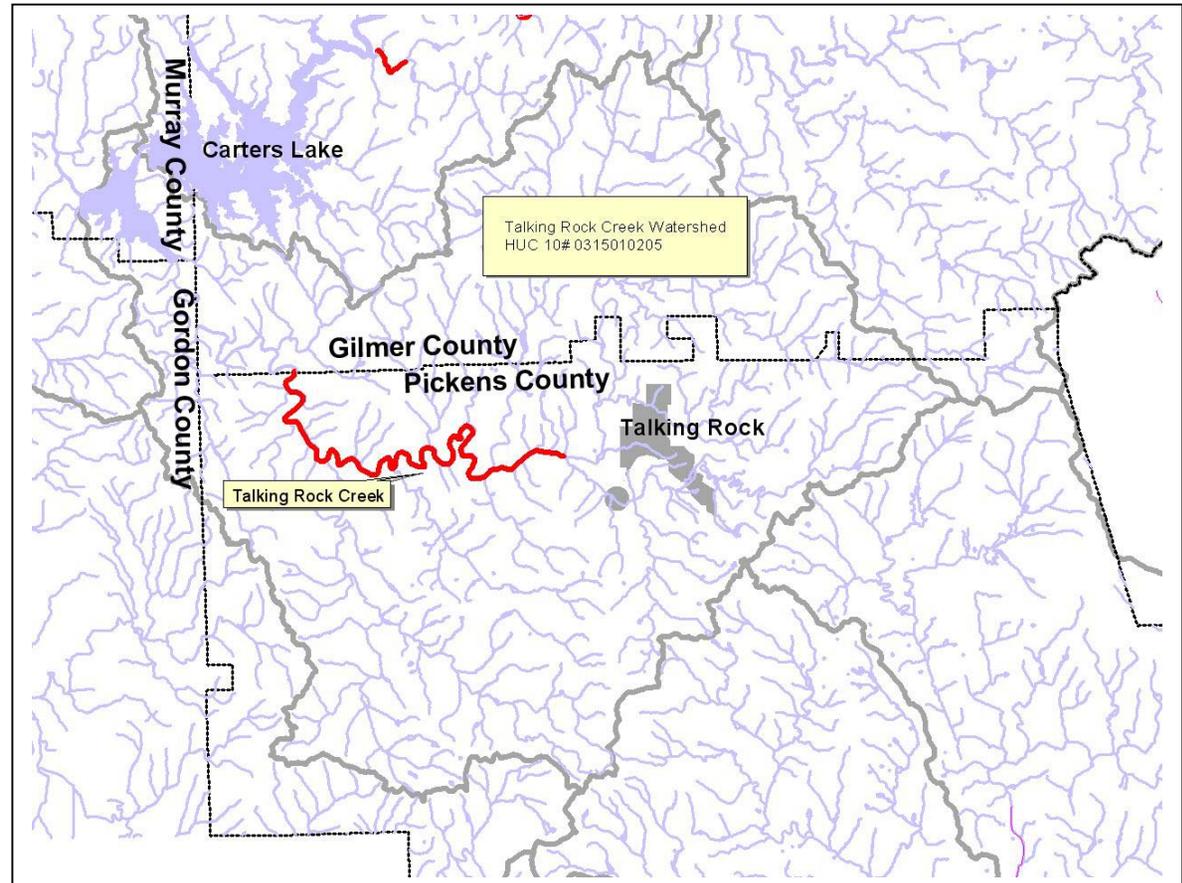


Table 1. IMPAIRMENTS

IMPAIRED STREAM SEGMENT	IMPAIRED SEGMENT LOCATION	IMPAIRMENT	TMDL ID
Talking Rock Creek	Ga. Hwy 136 to Pickens/Gilmer County line	Fecal Coliform Bacteria	CSA 000054

II. GENERAL INFORMATION ABOUT THE WATERSHED

Write a narrative describing the watershed, HUC 10# 0315010205. Include an updated overview of watershed characteristics. Identify new conditions and verify or correct information in the TMDL document using the most current data. Include the size and location of the watershed, political jurisdictions, and physical features that could influence water quality. Describe the source and date of the latest land cover/use for the watershed. Describe and quantify major land uses and activities that could influence water quality. See the “Instructions for Completing the Georgia Total Maximum Daily Load (TMDL) Tier 2 Implementation Plan” for more information on what to include.

The watershed (HUC10# 0315010205) is comprised of 88,505 acres and is located principally in the northwestern corner of Pickens County and southwestern corner of Gilmer County, although small areas are also located in Murray and Gordon County. One of the stream segments identified by the Georgia Environmental Protection Division’s 303(d) list in HUC 10 # 0315010205 is Talking Rock Creek from Ga. Hwy. 136 to the Gilmer County line. Principal highways traveling through the watershed include Ga. APD Highway 515, and State Routes 136 and 52. The Town of Talking Rock is located in the watershed. The watershed begins in the higher elevations in Pickens and Gilmer Counties and ends where Talking Rock Creek enters the lower pump/storage lake below Carters Lake Dam. The watershed is sparsely settled with developed land uses consisting primarily of agriculture (12,260 acres, 14% of watershed); forestry (11,379 acres, 13% of watershed); and residential (4,555 acres, 4% of watershed).

Talking Rock Creek HUC 10 # 0315010205

Land Use Classification	Area (Acres)	% of total area
Agriculture	12260.5	14%
Forestry	11379.9	13%
Commercial	71.4	<1%
Industrial	88.8	<1%
Public, Institutional	835.1	1%
Residential	4555.9	4%
Transportation, Communication, Utilities	38.2	<1%
Right of Way	3105.6	4%
Vacant	53879.6	61.00%
Water	2290.7	2%
Total	88505.7	100%

The majority of the land in the watershed is vacant, undeveloped woodlands at 53,879 acres or 61% of the watershed. The latest land use surveys were conducted in conjunction with recently completed Comprehensive Plan updates in each of the counties. Land use data was derived from air photos, the County tax digests, and windshield surveys. These acreages and percentages may differ from the land cover information provided in the TMDL.

Residential land use is low density and highly scattered along county roads throughout the watershed. Some subdivision development is beginning to occur. Agriculture activity consists primarily of cattle and horse grazing operations and a few large poultry operations.

Source: Pickens County Comprehensive Plan, April, 2003; Gilmer County Comprehensive Plan, October, 2004; Murray County Comprehensive Plan, November, 2005; Gordon County Comprehensive Plan, April, 1992

There are no agricultural watershed planning activities such as PL-566 Watershed Planning occurring in the watershed. A Pickens County Adopt-a-Stream program has been organized and has been functioning in the watershed. A Section 319(h) project, which is administered by the North

Georgia Regional Development Center is available for cost sharing with landowners the repair of failing septic systems or installation of new systems where straight pipes exist. To date, no systems have been repaired or installed within the Talking Rock Creek watershed. Funds are available to repair 65 to 75 failing systems throughout the entire upper Coosawattee River watershed (HUC 8 area).

{TALKING ROCK CREEK}

COMPLETE THE FOLLOWING TABLES FOR AND NARRATIVES ABOUT EACH IMPAIRED STREAM IN THE WATERSHED.

STREAM SEGMENT NAME	LOCATION	MILES/AREA	DESIGNATED USE	PS/NS
Talking Rock Creek	Ga. Hwy 136 to Pickens/Gilmer County line	19	Fishing	NS

III. SOURCES AND CAUSES OF STREAM SEGMENT IMPAIRMENT LISTED IN TMDLs

After reviewing the TMDLs written for this stream, complete the following tables with the information found in the TMDLs. List each parameter for which the stream segment is impaired and the water quality standard not met. See the “Instructions for Completing the Georgia Total Maximum Daily Load (TMDL) Tier 2 Implementation Plan” for the water quality standards. Enter the needed reduction from the TMDL. Describe the sources and causes of each impairment identified in the TMDLs.

Table 2. SOURCES OF IMPAIRMENT AS INDICATED IN TMDLs

PARAMETER 1	WQ STANDARD	SOURCES OF IMPAIRMENT	NEEDED REDUCTION FROM TMDL
Fecal Coliform	1,000 per 100 ml (geometric mean Nov. – April) and 200 per 100 ml (geometric mean May - Oct.)	Nonpoint Sources – leaking septic systems, agriculture activities.	53%

IV. IDENTIFICATION AND RANKING OF POTENTIAL SOURCES OR CAUSES OF IMPAIRMENT

INVESTIGATE AND EVALUATE the extent and relative contributions from causes or sources of the impairment for each parameter listed in Table 2. Write a narrative describing efforts made or procedures used to verify the significance and extent of the sources or causes of each impairment listed in the TMDLs. Include: 1) involvement of stakeholder group; 2) review of land cover data; 3) field surveys; and 4) other pertinent sources of information consulted.

An initial meeting of the Pickens County Stakeholders Advisory group was conducted on August 10, 2005. Members involved represented the County Planning and Development Office, County Environmental Health Office, farmers, the Georgia Soil and Water Conservation Commission, land developers and the University of Georgia Cooperative Extension Service. A discussion of land use within the Talking Rock Creek HUC 12

watershed with stakeholders indicated that the watershed is a mix of residential, agriculture, forestry, and vacant land. A review of aerial photography and recent land use data compiled for Gilmer County's 2004 Comprehensive Plan update and Pickens County's 2003 Comprehensive Plan update confirms information provided by the stakeholders.

Talking Rock Creek HUC 12 Watersheds

Land Use Classification	Area (Acres)	% of total area
Agriculture	4983.2	15%
Forestry	6218.7	18%
Commercial	21.7	<1%
Industrial	99.7	<1%
Public. Institutional	793	2%
Residential	1181.7	3%
Transportation, Communication, Utilities	24.5	<1%
Right of Way	1140.2	3%
Vacant	18756.7	55%
Water	972.4	3%
Total	34191.8	100%

Source: Pickens County Comprehensive Plan, April, 2003; Gilmer County Comprehensive Plan, October, 2004

Talking Rock Creek is not a source of public water supply. Field surveys were also conducted in fall of 2005. (See Appendix C for results of the Visual Survey.) Based upon land use data and the visual surveys sources of impairment within the watershed include:

1. Malfunctioning Septic Systems/Straight Pipes. Data from the Georgia Department of Human Resources, Div. Of Public Health in 2001 indicated that Pickens County contained 10,467 septic systems, and installed 5,121 new systems between 1990 and 2000. 579 repairs were also made during that period. The Pickens County Environmental Health office reported that it issued 396 new septic system permits and 52 system repair permits county wide in FY 2005. Data for indicated that Gilmer County contained 12,538 septic systems in 2001, and installed 6,730 new systems between 1990 and 2000. 120 repairs were also made during that period. The Gilmer County Environmental Health Office reported that it issued

766 septic system permits and 50 system repair permits county wide in FY 2005. There are 1,181 acres of residential land use within the HUC 12 watershed area, all of which is on individual septic systems. At an average density of 2 acres per housing unit, it is estimated there are 500 – 600 on-site individual wastewater management systems in the watershed. Visual observations noted that there are a number of residences located relatively close to the many streams in the watershed, with a few located directly on Talking Rock Creek.

2. Agricultural Activities, Pasture Run-off & Poultry Operations. There are over 4,983 acres of agricultural land within the HUC 12 watershed area consisting primarily of cattle and horse grazing areas. The Natural Resources Conservation Service estimates there were over 6,000 beef and dairy cattle in Gilmer County in 2001, and over 4,200 beef cattle in Pickens County. Visual observations indicated that many of the cattle and/or horse grazing areas are located adjacent to streams and have direct access to the streams for drinking water. There are also approximately 3 poultry producers within the area, many of which spread poultry manure on pasture land within the watershed.

3. Wildlife. 55% of the HUC 12 watershed area is vacant, undeveloped land that contains a variety of wildlife. The most populous large species is deer estimated by the Georgia Department of Natural Resources at 25 animals per square mile in Pickens County and 40 animals per square mile in Gilmer County.

Combining information provided in the TMDL document, stakeholder knowledge, existing watershed assessments, and the watershed evaluation conducted for this plan, identify the potential sources or causes most likely to contribute to each identified impairment (parameter) in Table 3. If available information is inadequate to estimate the extent and relative contribution of significant potential sources or causes, recommend appropriate management actions (watershed assessments, monitoring, etc.) to determine the potential sources or causes and relative contributions. In Table 3, list the significant potential sources or causes of each impairment. Estimate the geographic extent of each potential source or cause as percent of the contributing watershed area, percent of stream miles affected, or number per square mile and enter the appropriate rating (from the following table) in the column entitled “Rating (A)”. Estimate the relative contribution of each major source or cause to the pollutant causing the impairment and enter the appropriate rating (from the following table) in the column entitled “Rating (B)”. Calculate a relative impact ratings for each source or cause by multiplying “Rating (A)” by “Rating (B)”. Comments on the source of information used to determine the extent or contribution may be entered in the applicable columns in Table 3.

The following table provides guidance for rating the estimated extent and portion of the contribution from each potential source and cause.

Estimated Geographic Extent of the Source or Cause in the Contributing Watershed (Percent of area or stream miles)	Estimated Contribution of the Source or Cause to the Pollutant Load Causing the Impairment (Percent of load)	Rating
None or negligible (approximately 0-5%)	None or negligible (approximately 0-5%)	0.5
Scattered or low (approximately 5-20%)	Scattered or low (approximately 5-20%)	1
Medium (approximately 20-50%)	Medium (approximately 20-50%)	3
Widespread or high (approximately 50% or more)	Widespread or high (approximately 50% or more)	5
Unknown	Unknown	UNK

Table 3. CONCLUSIONS MADE OF POTENTIAL SOURCES OF STREAM SEGMENT IMPAIRMENT

PARAMETER 1: Fecal Coliform

POTENTIAL SOURCES OR CAUSES	ESTIMATED EXTENT OF CONTRIBUTION		ESTIMATED PORTION OF CONTRIBUTION		IMPACT RATING (A X B)
	Comments	Rating (A)	Comments	Rating (B)	
Malfunctioning Septic Systems or straight pipes to streams	Residential use is 3% of land area and all is on septic systems	1	Less than 10% of all home lots are located adjacent to streams	1	1
Active Pasture run-off - cattle & horse access to streams	Agricultural use is 15% of land area	1	Cattle/horse grazing adjacent to streams is frequently located throughout the watershed	3	3

Wild animal waste	Vacant, undeveloped is 55% of land area	1	Mostly deer habitat is located throughout the watershed.	1	1
Poultry Operations	There are approximately 3 major poultry operations	1	Sporadically located throughout the watershed	1	1

V. STAKEHOLDERS

PUBLIC INVOLVEMENT AND THE ACTIVE PARTICIPATION OF STAKEHOLDERS is essential to the process of preparing TMDL implementation plans and improving water quality. Stakeholders can provide valuable information and data regarding their community, impaired water bodies, potential causes of impairments, and management practices and activities which may be employed to reduce the impacts of the causes of impairment.

Describe outreach activities to advise and engage stakeholders in the TMDL implementation plan preparation process. Describe the stakeholder group employed or formed to address the impaired segments in the watershed. Summarize the results of the number of attendees and meetings and describe major findings, recommendations, and approvals.

An initial meeting of the Advisory Committee was held on August 10, 2005 at the Pickens County Chamber of Commerce, which was well attended by the members, NGRDC personnel, and Mary Gazaway of Georgia EPD. At the meeting, the RDC presented information regarding the Clean Water Act requirements, the impaired streams in Pickens County, water quality monitoring data and the TMDLs that had been prepared by Georgia EPD. The RDC led a discussion on possible sources for the pollutant parameters and sought input from the Advisory Committee members concerning land use and other activities, which may be sources. NGRDC explained that it would be conducting a field survey along the streams to verify potential causes. Visual observations along with aerial photography and recent land use data would be utilized to determine the potential causes. Once causes were identified, the RDC will identify recommended measures that could be utilized to reduce the parameters causing the impairments.

On October 18, 2005, NGRDC in partnership with the CVRDC and the Northwest Georgia Regional Water Resources Partnership conducted a workshop entitled “**Clean Water- the TMDL Link**”, which was attended by the local officials from Pickens County. This workshop provided excellent information on the TMDL process, its requirements, the potential causes for stream impairments, and the various tools that can be utilized to clean up the rivers.

The North Georgia Regional Development Center met with the Stakeholder's Advisory Committee again on February 15, 2006, which was well attended by Committee members as well as Mary Gazaway of Georgia EPD. The purpose of the meeting was to review the draft TMDL Implementation Plan for all impaired streams in Pickens County. NGRDC discussed the results of the field survey and confirmed the conclusions regarding the sources of impairment. A discussion was held regarding proposed implementation measures. All members concurred with the proposed measures

List the watershed stakeholder advisory group committee members, described in Project Task #1 of the Scope of Services, in following table.

Table 4. STAKEHOLDER ADVISORY GROUP MEMBERS

NAME/ORG	ADDRESS	CITY	STATE	ZIP	PHONE	E-MAIL
Norman Pope, Pickens Co. Planning Director	52 N Main Street, Suite 204	Jasper	GA	30143	706-253-8850	Pickenscoplan-develop@ellijay.com
Jan Stephens, Pickens Co. Environmental Health Office	4773 Cove Road	Jasper	GA	30143	706-253-0900	Jfs1053@hotmail.com
Rodney Buckingham, Pickens Co. Land Development Officer	52 N Main Street, Suite 204	Jasper	GA	30143	706-253-8850	rodneypcldo@exite.com
Rick Jasperse, UGA Co. Extension Agent	109 Depot Street	Jasper	GA	30143	706-253-8840	rickj@uga.edu
Joshua Johns, Reece Logging Company	P.O. Box 962	Jasper	GA	30143	770-894-2678	joshuamatthewjohns@yahoo.com
Tom Page, Naterra Land of Georgia LLC	2071 Waleska Hwy. 108	Jasper	GA	30143	706-253-6531	tpage@naterraland.com
Larry Coleman, Pickens Water Authority	35 W. Church Street	Jasper	GA	30143	706-253-8718	pickenswater@ellijay.com
John Loughridge, Ga Soil and Water Commission	700 East Avenue, Suite J	Rome	GA	30161	706-295-6131	jloughridge@gaswcc.org
Machelle Simmons,	717 South Wall Street,	Calhoun	GA	30701	706-629-2582	Machelle.simmons@ga.usda.gov

Natural Resource Conservation Service	Box 1					
Robert D. Keller, Ph.D. Mountain Conservation Trust	104 North Main Street, Suite B3	Jasper	GA	30143	706-253-4077	rkeller@mctga.org
Andrea Wheeler, Gilmer Co. Health Dept.	15 Dalton Street	Ellijay	GA	30540	706-635-6050	awheeler@gdph.state.ga.us

In Appendix A, list the names, addresses, telephone numbers, and e-mail addresses for local governments, agricultural or commercial forestry organizations, significant landholders, businesses and industries, and local organizations including environmental groups and individuals with a major interest in this watershed, as described in Project Task #1 of the Scope of Services. (See Appendix A.)

VI. MANAGEMENT MEASURES AND ACTIVITIES

Identify and list in Table 5A the significant management measures or activities which have or will be taken in the contributing watershed to address sources or causes of the impairment(s). List significant management measures and activities in Column 1 and responsible organizations in Column 2. Describe the measure or activity in Column 3 and sources of funding or resources in Column 4 (you may wish to adapt the generic language included in the “Standard Language for Management Measures and Activities” to local applications) In Column 5, enter one of the following codes describing the status of the measure or activity: (A) installed and active; (AE) active and **will be** enhanced or expanded; (R) required in the future by law, regulation or permit conditions; (P) currently proposed, but not required; and (N/R) **additional new recommended** or (N/E) **recommended enhanced** management measures and activities. In Column 6 enter the rating of the estimated existing or proposed extent of application of the measure or activity or percentage of individual sources to which the management actions have or will be applied (see the following table). In Column 7 enter a rating of the estimated effectiveness of the management measures and activities (see following table). Effectiveness may be estimated by local experts or derived from tables included in the “Standard Language for Management Measures and Activities”.

The following table provides guidance for rating the estimated extent and portion of the contribution for each significant potential source and cause.

Estimated Extent of Application or Percentage of Individual Sources to Which the Management Measure or Activity Has or Will be Applied in the Contributing Watershed	Estimated Effectiveness or Percent Removal of Constituent (Percent of load)	Rating
None or negligible (approximately 0-5%)	None or negligible (approximately 0-5%)	.5
Scattered or low (approximately 5-20%)	Low to medium (approximately 5-25%)	1
Medium (approximately 20-50%)	Medium to High (approximately 25-75%)	3
Widespread or high (approximately 50% or more)	High (approximately 75% or more)	5
Unknown	Unknown	UNK

Table 5A. MANAGEMENT MEASURES AND ACTIVITIES

GENERAL MEASURES APPLICABLE TO ALL PARAMETERS

MEASURE	RESPONSIBILITY	DESCRIPTION	SOURCES OF FUNDING & RESOURCES	STATUS CODE	TARGET DATE	EXTENT RATING (Area, #)	EFFECT. RATING (Reduction)
Georgia Water Quality Control Act (OCGA 12-5-20)	Ga. Environmental Protection Division	Makes it unlawful to discharge excessive pollutants (sediments, nutrients, pesticides, animal wastes, etc.) into waters of the State in amounts harmful to public health, safety, or welfare, or to animals, birds, or aquatic life or the physical destruction of stream habitats	Federal, State, Local Governments	A	In place, on-going		

MEASURES APPLICABLE TO SPECIFIC PARAMETER: Fecal Coliform Bacteria

MEASURE	RESPONSIBILITY	DESCRIPTION	POTENTIALSOURCES OF FUNDING & RESOURCES	STATUS	TARGET DATE	EXTENT RATING	EFFECT. RATING
Rules and Regulations for On-site Wastewater Management	Gilmer and Pickens County Boards of Health, Environmental Health Office	Stringent application/enforcement of the regulations	Local county government/ State Department of Human Resources	A	In place; on-going	5	5 (in new development)
Septic System Repair Assistance Program	North Ga. Regional Development Center, Pickens Co. Health Dept.	Administer State/Federal grants to cost/share with land owners the repair of failing systems or install new systems to replace straight pipes	Section 319(h) Grant through Ga. Environmental Protection Division (60% grant/40% match)	A	1/12005 through 6./30/2009	3	5
Agriculture BMP Installation Assistance Program	Georgia Soil and Water Conservation Commission	Administer State/Federal grants to cost/share with land owners the installation of agriculture BMPs (pasture management, fencing along streams, alternative water supplies for cattle, poultry manure stack houses, etc.)	Section 319(h) Grant through Ga. Environmental Protection Division (60% grant/40% match)	NR	1/12007 through 6/30/2010	3	5
Environmental Quality Incentives Program (EQIP)	Natural Resources Conservation Service	Voluntary program that provides technical and cost share assistance for protection of water resources via pasture management, stream bank and water body protection including livestock access limitation.	Federal (Farm Bill 2002) 50% cost share with possible additional incentive payments.	A	In place, on-going	1	3
Georgia Rules and Regulations for Water Quality Control, Chapter 391-3-6-20&21 for CAFOs of 301 to	Georgia Dept. of Agriculture, Georgia Environmental Protection Division	Outlines the Swine and non-swine Feeding Operation Permit Requirements for Concentrated Animal Feeding Operations (CAFOs) with more than 300 animal units. CAFOs of more than 300 but equal to or less than 1000 animal	Federal and State	A	In place, on-going	1	5 (in new developments)

1000 animal units		units receive a land application system (LAS) permit. Larger CAFOs with more than 1000 animal units must obtain a NPDES permit from EPD.					
National Pollutant Discharge Elimination System (NPDES) Permit Regulations for CAFOs over 1000 animal units	U.S. Environmental Protection Agency & Ga. Environmental Protection Division	Permitting program created to protect and improve water quality by regulating Concentrated Animal Feeding Operations (CAFOs) and providing minimum permit requirements for CAFOs of more than 1000 animal units.	Federal and State	A	In place, on-going	1	5 (in new developments)

The purpose of Table 5B is to initiate and guide a “first-cut” evaluation of the capacity of existing, currently proposed, and future required management measures and activities to achieve the load reductions specified in the TMDL (and meet water quality goals) and where needed, identify potential feasible and effective measures and practices which could be encouraged and supported to further reduce pollutant loadings from significant potential sources. Though completely voluntary, such recommendations would provide an effective local guide to effective management actions to achieve local water quality goals, establish priorities for grant or loan programs (Section 319 (h), EQUIP, SRF), establish eligibility for grants for Tier plans and implementation, and identify priorities for local watershed assessments and protection plans.

In Columns 1 and 2 of Table 5B, enter each significant potential source and its’ corresponding impact ratings from Table 3. Review Table 5A and list significant management practices and activities applicable to each significant cause or source. Evaluate and compare the estimated extent and relative contribution of each significant cause or source with the extent and effectiveness of the applicable management measures and in conjunction with appropriate local stakeholders or organizations, make a best current determination of whether the existing or proposed management practices would achieve the load reductions needed to achieve the TMDL. Summarize conclusions and rationale in Column 4. If more information is needed to adequately determine the significant sources or causes and their relative contributions so note and recommend management actions needed to adequately identify sources such as monitoring, watershed assessments, or Tier 1 implementation plans in the last column. If the current, proposed and required management measures are judged inadequate to achieve the needed load reductions for significant sources, recommend, in consultation with the advisory groups, additional management activities, programs, and measures which would effectively reduce pollutant loads from the source. List such measures in the final column and list as a recommended activity in the milestones (Table 8).

TABLE 5B: EVALUATION OF MANAGEMENT MEASURES AND ACTIVITIES APPLIED TO SPECIFIC SOURCES OR CAUSES

APPLICABLE TO SPECIFIC PARAMETER: Fecal Coliform Bacteria

SIGNIFICANT POTENTIAL SOURCE (S) OR CAUSE(S) (From Table 3)	IMPACT RATING (From Table 3)	EXISTING, CURRENTLY PROPOSED, OR REQUIRED MANAGEMENT MEASURES OR ENHANCEMENTS APPLICABLE TO EACH SIGNIFICANT SOURCE (From Table 5A)	EVALUATION: WILL THE ESTIMATED EXTENT OF APPLICATION AND EFFECTIVENESS OF EXISTING, CURRENTLY PROPOSED, AND REQUIRED MANAGEMENT MEASURES BE ADEQUATE TO ACHIEVE THE SOURCE REDUCTION SPECIFIED BY THE TMDL?	IF MANAGEMENT MEASURES ARE ESTIMATED TO BE INSUFFICIENT, RECOMMEND ADDITIONAL MANAGEMENT MEASURES AND ACTIVITIES WHICH COULD EFFECTIVELY REDUCE LOADS FROM SIGNIFICANT SOURCES
Malfunctioning Septic Systems or straight pipes to streams	1	Rules and Regulations for On-Site Wastewater Management	Effective administration and enforcement of existing rules will prevent or minimize future failures. The Septic System Repair program funded with Section 319(h) funds could effectively reduce 75 to 100% of fecal coliform coming from this source.	Successful implementation will require education of landowners and effective marketing of the program's availability.
		Septic System Repair Assistance		Additional funding may be necessary to continue the Section 319 program.
Active pasture run-off – Cattle & horse access to streams	3	Cost share of Agricultural BMPs (pasture management, fencing along streams, alternative water sources, etc.)	The Section 319(h) program along with the NRCS programs could effectively reduce 75 to 100% of fecal coliform from these sources.	Successful implementation of these programs will require effective technical assistance, education and marketing to farmers.
		EQIP Program		Additional funding may be necessary to meet needs.
		Conservation Reserve Program		
Poultry Operations	1	Cost share of Agricultural BMPs (poultry manure stack houses and nutrient management plans)	The Section 319(h) program along with the NRCS programs could effectively reduce 75 to 100% of fecal coliform from these sources	Successful implementation of these programs will require effective technical assistance, education and marketing to farmers.
		EQIP Program		Additional funding may be necessary to meet needs.
		Conservation Reserve Program		

VII. MONITORING PLAN

The purposes of monitoring are to obtain more data to determine the sources of pollution, describe baseline conditions, and evaluate the effects of management and activities on water quality. Describe any sampling activities or other surveys - active, planned or proposed (including monitoring required for watershed assessments, or stormwater permits) - and their intended purpose. Reference the development and submission of a Sample Quality and Assurance Plan (SQAP) if monitoring for listing decisions.

Table 6. MONITORING PLAN

PARAMETER (S) TO BE MONITORED	ORGANIZATION	STATUS (CURRENT, PROPOSED, PLANNED)	TIME FRAME		PURPOSE (If for delisting, date of SQAP submission)
			START	END	
Fecal coliform	Pickens Adopt-a-Stream/Mountain Conservation Trust	Proposed	1/1/2007	1/1/2010	To monitor TMDL implementation efforts

VIII. PLANNED OUTREACH FOR IMPLEMENTATION

List and describe outreach activities, including those described in the Scope of Services that will be conducted to support this plan and the implementation of it.

Table 7. PLANNED OUTREACH

RESPONSIBILITY	DESCRIPTION	AUDIENCE	DATE
NGRDC	Distribute copies of the Plan	To all stakeholders & local governments	4/15/2006
NGRDC/County	Prepare and distribute press release describing the plan and where to attain copies	To the local newspapers	4/30/2006
NGRDC/County	Prepare Power Point presentations and present to civic groups & local agencies	Civic Groups and local agencies	5/15/2006
Pickens Adopt-a-Stream/Mountain Conservation Trust	Conduct general education efforts regarding non-point source pollution and water quality	Local citizens	7/1/2006

IX. MILESTONES/ MEASURES OF PROGRESS OF BMPs AND OUTREACH

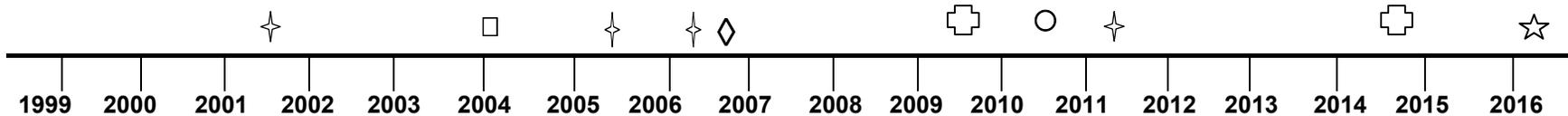
This table will be used to periodically track and report progress of significant management practices and activities identified or recommended in Tables 5A, 5B, and other sections of this plan, including outreach, additional monitoring and assessments, and the enhancement or installation of management measures and activities. Identify and list significant planned or recommended activities and the target date of accomplishment. Provide room to comment on the effectiveness of the management measure, how much support the measure was given by the community, what was learned, how the measure might be improved in the future, and any other observations made. This table can be "pulled out" of this template and used to report and track progress.

Table 8. MILESTONES

MANAGEMENT MEASURE OR ACTIVITY	RESPONSIBLE ORGANIZATIONS	STATUS		COMMENT
		PROPOSED	INSTALLED	
Rules and Regulations for On-site Wastewater Management	Pickens and Gilmer County Boards of Health, Environmental Health Offices		X	The environmental health office will continue to effectively enforce and administer the existing regulations.
Septic System Repair Assistance Program	North Ga. Reg. Dev. Center, Gilmer and Pickens County Health Depts.		X	Continued implementation of program. Additional funds may be needed after 2009
Agriculture BMP Installation Assistance Program	Ga. Soil and Water Conservation Commission	X		Application needs to be developed and submitted
Environmental Quality Incentives Program (EQIP)	Natural Resources Conservation Service		X	Program assistance is available. Program outreach needs to be conducted. Assistance provided to farmers as requested.
Conservation Reserve Program	Natural Resources Conservation Service		X	Program assistance is available. Program outreach needs to be conducted. Assistance provided to farmers as requested.
Georgia Rules and Regulations for Water Quality Control, Chapter 391-3-6-20&21 for CAFOs 301 to 1000 animal units	Georgia Dept. of Agriculture, Georgia Environmental Protection Division		X	Permits will be issued as needed.
National Pollutant Discharge Elimination System (NPDES) Permit Regulations for CAFOs over 1000 animal units	U.S. Environmental Protection Agency & Ga. Environmental Protection Division		X	Permits will be issued as needed.

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 Georgia EPD.



- Scheduled EPD Basin Group Monitoring ✦
- TMDL Completed □
- Revised TMDL Implementation Plan Accepted ◇
- Plan Status Evaluation Report ⊕
- Plan Update or Revision, if Necessary ○
- Project Attainment for Plans Prepared in 2006 ☆

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Date Submitted to EPD:	March 31, 2006	Revision:	

APPENDIX A.
STAKEHOLDERS

List the names, addresses, telephone numbers, and e-mail addresses for local governments, agricultural or commercial forestry organizations, significant landholders, businesses and industries, and local organizations including environmental groups and individuals with a major interest in this watershed.

NAME/ORG							A
Norman Pope, Pickens Co. Planning Director	52 N Main Street, Suite 204	Jasper	GA	30143	706-253-8850	Pickenscoplan-develop@ellijay.com	
Jan Stephens, Pickens Co. Environmental Health Office	4773 Cove Road	Jasper	GA	30143	706-253-0900	Jfs1053@hotmail.com	
Rodney Buckingham, Pickens Co. Land Development Officer	52 N Main Street, Suite 204	Jasper	GA	30143	706-253-8850	rodneypcldo@exite.com	
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County Commission						
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APPENDIX B.

UPDATES TO THIS PLAN

Describe any updates made to this plan. Include the date, section or table updated, and a summary of what was changed and why.

APPENDIX C
VISUAL SURVEY RESULTS

Visual Field Survey
For
Talking Rock Creek TMDL Segment
(Ga. Hwy 136 to Pickens/Gilmer County Line)

December 2005

Prepared by the North Georgia Regional Development Center.

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INTRODUCTION

1.1 Location

Talking Rock Creek is located in the northwest portion of Pickens County. The majority of Talking Rock Creek’s watershed is in Pickens County, but there are portions located in Gordon, Gilmer, and Murray as well. The impaired segment and the HUC 12 watershed are shown below in Figure 1.

1.2 Watershed Description

The Talking Rock Creek TMDL segment watershed is comprised of 34,191.8 acres of land inside Pickens, Gilmer, Gordon, and Murray Counties. The TMDL segment is located within HUC 10 – 0315040205 and flows west. Based upon our most recent existing land use data for Pickens, Gilmer, Murray, and *Gordon Counties, mapping of the TMDL segment watershed shows that land cover within the watershed is varied. Roughly 55% of the land is classified as vacant, 18% is in conservation, 15% of the land is classified as agricultural, and 3% is classified as residential. The table below breaks down each land cover and their percentage in the Talking Rock Creek watershed.

Table 1. Watershed Land Cover

Land Cover Classification	Area (Acres)	% of total area
Agriculture	4983.2	15%
Conservation	6218.7	18%
Commercial	21.7	<1%
Industrial	99.7	<1%
Public	793	2%
Residential	1181.7	3%
TCU	24.5	<1%
R/W (Roads)	1140.2	3%
Vacant	18756.7	55%
Water	972.4	3%
Total	34191.8	100%

*The Coosa Valley RDC provided Gordon County Existing Land use information.

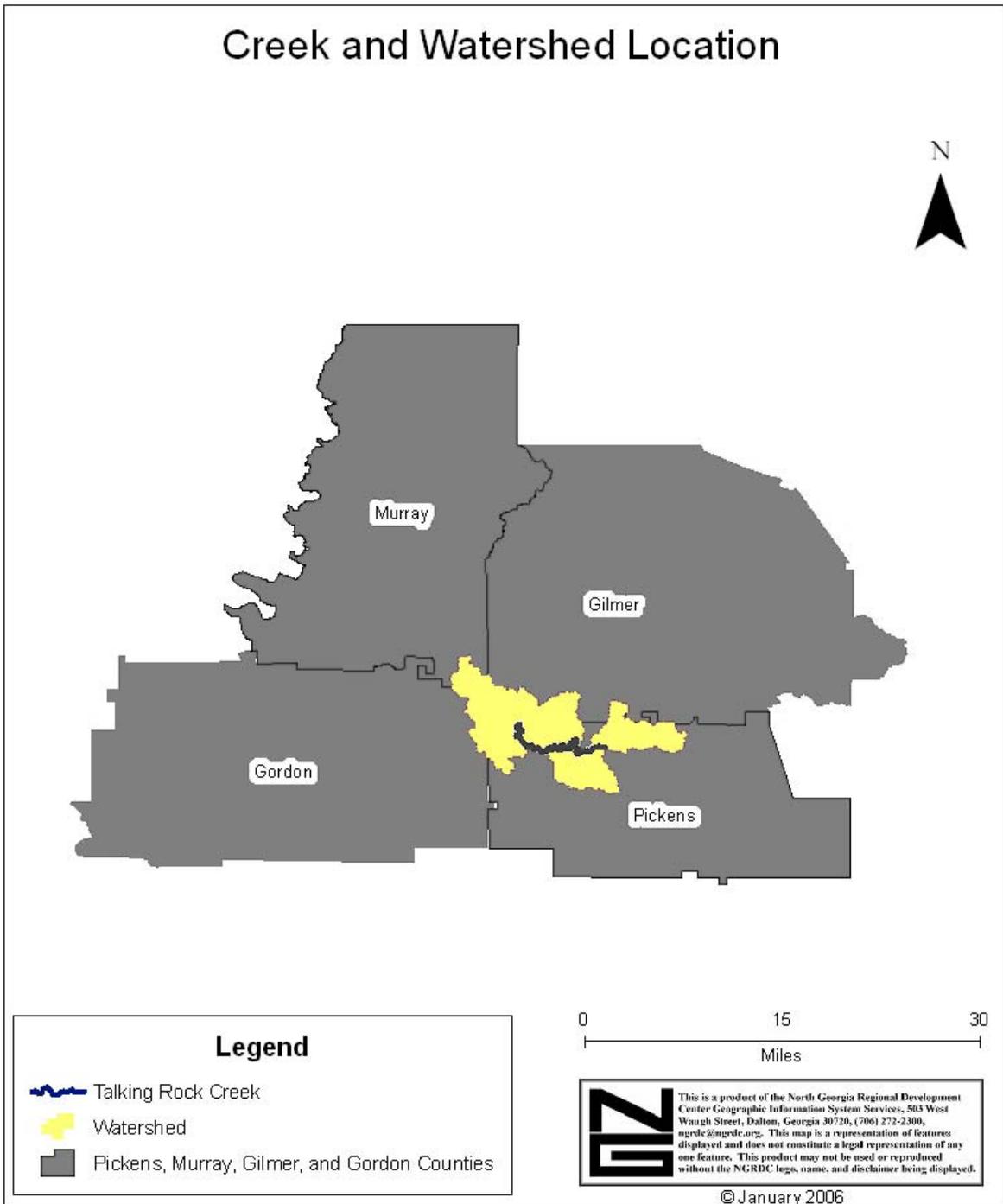


Figure 1

2.0 METHODOLOGY

The Source Water Assessment Project (SWAP, December 2003) was studied to determine the locations of any known point sources and potential individual sources of pollution in relation to the area of interest. Aerial photos were also used as another means to compile information and further evaluate the area.

A windshield survey of the watershed area adjacent to the stream segment was the initial step. There are 3 road crossings on the Talking Rock Creek TMDL segment. All three-road crossings (136, Swan Bridge, and Bradley) were visited during the windshield survey. The stream was not conducive to walking for reasons such as private property and no trespassing signs posted. The road crossings were not the only places in the watershed that were visited however. Many potential problem areas within the TMDL stream segment were visited to confirm land use aerial photography. The purpose of the stream segment visual survey was to identify and observe possible sources of pollution. Observations were documented and captured in photographs of the stream channel and its surroundings.

3.0 Field Findings

3.1 General Characteristics

The field findings discussed here are the results of the visual survey at road crossings as well as visual surveys throughout the entire TMDL stream segments watershed. A pretty thick vegetative buffer bordered the Talking Rock Creek TMDL segment, but there are also a few areas with no buffer at all. The Creek had a nice moving flow, and it did not seem to be congested with much debris. General photographs of the stream condition at access points to the segment are shown below in Figure 3.



Figure 3. Talking Rock Creek at 136 (looking downstream)



Figure 4. Horse Crossing sign by Talking Rock Creek

3.2 Point Sources

There is no sewer system in the Talking Rock Creek watershed.

3.3 Non-Point Sources

The watershed is rural in nature, and has farms with cows and horses that may have some non-permitted feeding operations (figure 4). There is a good amount of wildlife in this area as well. There are approximately 3 poultry producers within the Talking Rock Creek Watershed and plenty of places where cattle and horses have easy access to the surrounding streams. The land is either undeveloped or served by septic tank systems. There is also one landfill in the northern part of Pickens County.



Figure 5. Vacant land in the watershed

4.0 Ranks Assigned To Pollution Sources

There are a variety of pollution sources that are affecting the Talking Rock Creek TMDL segment. Animal waste from the surrounding wildlife is a potential low to moderate source of fecal coliform, as well as waste from horse or cattle farms. Straight pipes and leaking or failing septic tanks are also another moderate source of fecal coliform bacteria affecting sporadic areas along the stream segment.

5.0 Summary of Findings

There are no point sources in the TMDL segment watershed. There are many non-point sources in the TMDL stream segments watershed as well. The field survey and background investigation identified urban runoff, wildlife and domestic waste, and possible septic tank leaking and/or failure.

