

**STATE OF GEORGIA  
TIER 2 TMDL IMPLEMENTATION PLAN REVISION 1**

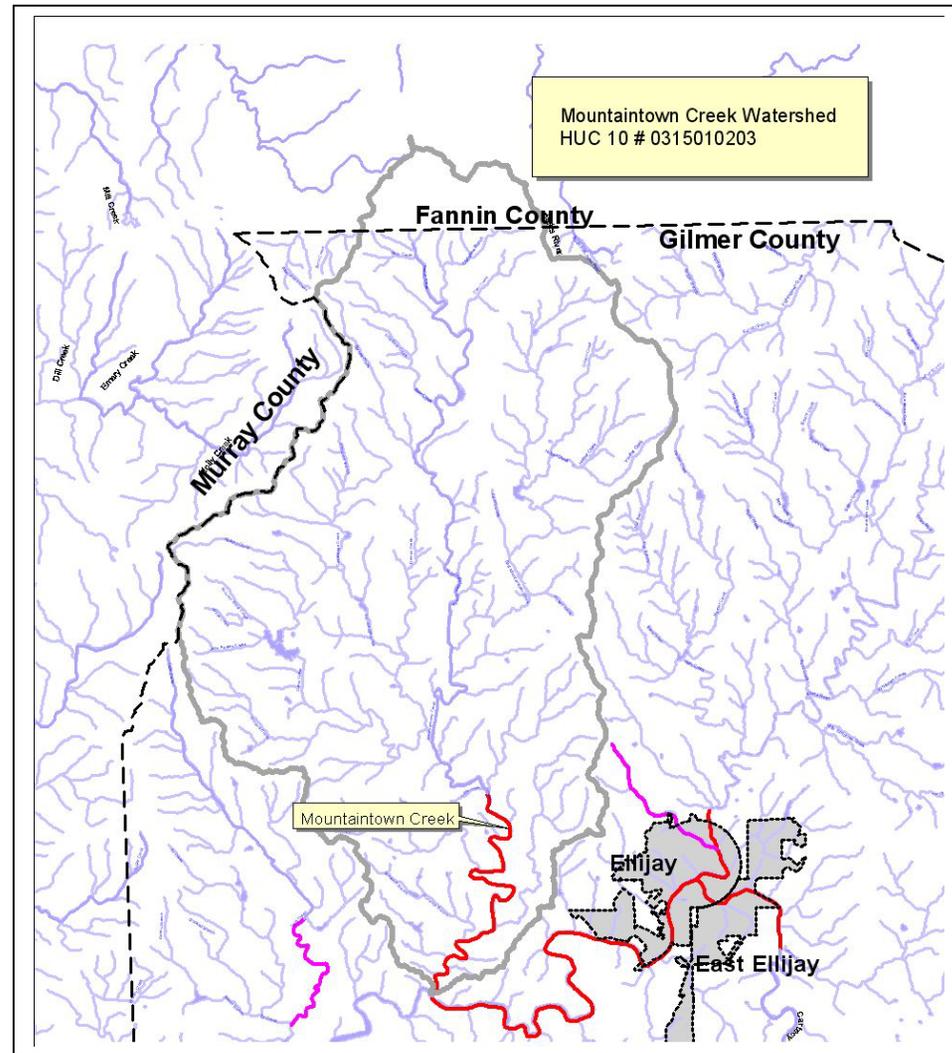
Segment Name Mountaintown Creek  
Coosa River Basin  
April 28, 2006

Local Watershed Governments Gilmer County

**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    |
|-------------------------|-------------------------------|-------------------------|------------|
| Mountaintown Creek      | Hwy. 282 to Coosawattee River | Fecal Coliform Bacteria | CSA0000015 |

## II. GENERAL INFORMATION ABOUT THE WATERSHED

Write a narrative describing the watershed, HUC 10# 0315010203. 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 Mountaintown Creek Watershed (HUC 10# 0315010203) is comprised of 47,338 acres and is located primarily in Gilmer County, Georgia; although a small portion of the watershed lies in Fannin County to the north. Major roads, which travel throughout the watershed include State Highways 52 and 282. Terrain in the watershed is mountainous and is heavily forested. The upper reaches of the watershed are contained within the Chattahoochee National Forest. One of the stream segments identified on Georgia Environmental Protection Division’s 303(d) list in HUC 10# 0315010203 is Mountaintown Creek from SR 282 to the Coosawattee River. As seen in the following table, the majority of the land area is vacant and undeveloped (57%) or in conservation via the National Forest (29%). Agricultural activity consists primarily of pasture land with small beef cattle or horse grazing operations. There are also 21 large poultry operations in the watershed. Residential development is the most significant recent development activity. The residential development pattern is highly scattered at low density with all of it on individual septic systems. Lot sizes for residential development are determined by the County’s subdivision design and Environmental Health standards and approval process. Some of the residential land use is located directly on Mountaintown Creek and the many tributaries located in the watershed. The following table indicates the land use acreages per each classification in HUC 10 # 0315010203. The source of the data is from county tax digests, air photos and windshield surveys. These acreages and percentages may differ from the land cover information provided in the TMDL.

### Land Use in HUC 10 # 0315010203

| Land Use Classification  | Area (Acres)   | % of Total Area |
|--------------------------|----------------|-----------------|
| Agriculture              | 1786.5         | 4%              |
| Commercial               | 19.8           | <1%             |
| Conservation             | 13578.3        | 29%             |
| Forestry                 | 409            | 1%              |
| Industrial               | 18.5           | <1%             |
| Public, Institutional    | 7              | <1%             |
| Right of Way             | 1142.3         | 2.00%           |
| Residential              | 3438.7         | 7%              |
| Trans., Comm., Utilities | 1              | <1%             |
| Vacant, Undeveloped      | 26815.1        | 57%             |
| Water                    | 121.6          | <1%             |
| <b>Total</b>             | <b>47337.8</b> | <b>100%</b>     |

Source: Gilmer County Comprehensive Plan, October, 2004

There are no known water quality management and sampling programs currently taking place in the watershed. There are no agricultural watershed planning activities such as PL-566 Watershed Planning) occurring in the watershed. The Coosa River Basin Initiative, an Adopt-a-Stream organization has an interest in the watershed and is currently seeking grants to conduct non-point source education activities.

There are two Section 319(h) grant projects currently being conducted in the watershed. One, administered by North Georgia Regional Development Center is for cost sharing with landowners the repair of failing septic systems or installation of new systems where straight pipes exist. To date, 3 systems have been repaired or installed within the watershed. Funds are available to repair 65 to 75 failing systems throughout the county.

The second Section 310(h) grant is administered by the Georgia Soil and Water Conservation Commission. This project is for cost sharing with farmers the installation of agriculture BMPs that will reduce fecal coliform bacteria from entering streams. Typical projects include poultry manure stack houses and nutrient management plans,

fencing to keep cattle out of streams, etc. To date, 2 projects have been completed in the watershed.

Prior to implementation of the Section 319(h) projects, North Georgia Regional Development Center also implemented a EPA funded Water Quality Agreement project, which was completed on December 31, 2005. This project conducted a variety of education activities and also completed septic system repair and agricultural BMP projects as demonstrations for educational purposes. A total of 12 septic system repairs were completed, and 8 agriculture BMPs were installed county wide. Two septic system repairs and two agriculture BMP projects were completed in the Mountaintown HUC 10 # 0315010203 watershed.

**{MOUNTAINTOWN 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 |
|---------------------|-------------------------------|------------|----------------|-------|
| Mountaintown Creek  | Hwy. 282 to Coosawattee River | 5          | 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.) | Failing Septic Systems                   | 64%                        |
|                |   | Agriculture operations (poultry, cattle) |                            |
|                |   |  |                            |

#### 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 Gilmer County Stakeholders group was conducted on August 22, 2005. Members involved represented the County Land Development Office, County Environmental Health Office, farmers, the Georgia Soil and Water Conservation Commission, The Corp of Engineers, land developers and the Natural Resources Conservation Service. A discussion of land use within the HUC 12 watershed with stakeholders indicated that the watershed is a mostly undeveloped, rural area of the county, although there is increasingly more residential development taking place. A review of aerial photography and recent land use data compiled for the County's 2004 Comprehensive Plan update confirms information provided by the stakeholders.

Mountaintown Creek is not a source of public water supply; however, a Source Water Assessment completed for public water intakes in Gilmer County in December, 2003 revealed that the bacteria pathogens from poultry and agricultural operations, and the many septic systems in the county are a serious threat to water supplies in the county. Agricultural activity consists of small cattle or horse grazing operations as well as 17 major poultry operations. Field surveys were also conducted in fall of 2005. (See Appendix C for results of the Visual Survey.)

##### HUC 12 Watershed containing Impaired Stream Segment

| Land Use Classification  | Area (Acres)   | % of Total Area |
|--------------------------|----------------|-----------------|
| Agriculture              | 695.3          | 5.50%           |
| Commercial               | 19.8           | 0.20%           |
| Forestry                 | 116.1          | 1.00%           |
| Industrial               | 18.5           | 0.20%           |
| Public, Institutional    | 6.8            | >.01%           |
| Right of Way             | 583.8          | 5.00%           |
| Residential              | 2640.3         | 21%             |
| Trans., Comm., Utilities | 0.5            | >.01%           |
| Vacant, undeveloped      | 8347.8         | 67.01%          |
| Water                    | 50.7           | 0.10%           |
| <b>Total</b>             | <b>12479.6</b> | <b>100%</b>     |

Source: Gilmer County Comprehensive Plan, October, 2004

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 Gilmer County contained 12,538 septic systems, 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 new septic system permits and 50 system repair permits county wide in FY 2005. There are 2,640 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 unit, there are an estimated 1,320 septic 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 Mountaintown Creek. Recent activity completed by the U.S EPA Water Quality Agreement grant and Section 319 (h)

grant indicates that there are substantial numbers of failing systems as well as straight pipes within the County.

2. **Agricultural Activities, Pasture Run-off & Poultry Operations.** Data from the Natural Resources Conservation Service (NRCS) indicated that in 2001 Gilmer County contained 5,000 beef cattle, 1,050 dairy cattle, and 3,450 swine. There are over 695 acres of agricultural land within the HUC 12 watershed area consisting primarily of small cattle and horse grazing areas. There are no dairy or swine production facilities. 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 17 poultry producers within the area, many of which spread poultry manure on pastures within the watershed.
3. **Wildlife.** 67% of the HUC 12 watershed containing the impaired segment is vacant, undeveloped forested land that contains a variety of wildlife. The most populous large species is deer estimated by the Georgia Department of Natural Resources at 40 animals per square mile

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.

| <b>Estimated Geographic Extent of the Source or Cause in the Contributing Watershed</b> (Percent of area or stream miles) | <b>Estimated Contribution of the Source or Cause to the Pollutant Load Causing the Impairment</b> (Percent of load) | <b>Rating</b> |
|---|---|---------------|
| 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 21% of land area and all is on septic systems | 3          | Approximately 10% of all home lots are located adjacent to streams                      | 1          | 3                     |
| Active Pasture run-off - cattle & horse access to streams  | Agricultural use is 5.5% of land area                            | 1          | Cattle/horse grazing adjacent to streams is frequently located throughout the watershed | 3          | 3                     |
| Wild animal waste  | Vacant, undeveloped is 67 % of land area                         | 1          | Mostly deer habitat is located throughout the watershed.                                | 1          | 1                     |
| Poultry Operations   | There are 17 major poultry operations                            | 3          | Sporadically located throughout the watershed   | 1          | 3                     |

**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.

The North Georgia Regional Development Center, with input from the County Commission Chairman, Jerry Farist formed a Stateholders’s Advisory Committee in June, 2005. An initial meeting of the Advisory Committee was held on August 22, 2005 at the Ellijay Library, 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 list of impaired streams in Gilmer 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.

A number of stakeholder activities have been conducted in Gilmer County as part of a U.S. EPA Water Quality Agreement project that was initiated

in January, 2003, and a Section 319(h) grant that was initiated in January, 2005. As part of these two grant programs, a stakeholders group was organized and has been meeting on at least a bi-monthly basis. An agriculture BMP field day on fencing cattle out of streams was conducted in May, 2004; a workshop on septic system installation, maintenance and repair was conducted in January, 2005; a public open-forum on water resource issues was conducted in November, 2005, which was attended by approximately 75 citizens; and numerous newspaper articles have been featured in the local newspaper.

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 Gilmer Water and Sewer Authority and representatives from the County Environmental Health office. 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 January 17, 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 Gilmer 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                    |
|--|--------------------------------|---------|-------|-------|--------------|---------------------------|
| Don Schneider, Code Officer, City of Ellijay | 197 N. Main Street             | Ellijay | GA    | 30540 | 706-635-4711 | codeenforce@ellijay.com   |
| Andrea Wheeler, Gilmer Co. Health Dept.      | 15 Dalton Street               | Ellijay | GA    | 30540 | 706-635-6050 | awheeler@gdph.state.ga.us |
| Ray King, North Georgia Health District      | 100 West Walnut Ave., Suite 92 | Dalton  | GA    | 30720 | 706-272-2342 | rking@gdph.state.ga.us    |
| James Holloway, Gilmer Co. Land Dev. Officer | # 1 Westside Square            | Ellijay | GA    | 30540 | 706-635-3406 | planning@ellijay.com      |
| Jim Smith, Gilmer Co. Community Dev. Office  | # 1 Westside Square            | Ellijay | GA    | 30540 | 706-635-3406 | planning@ellijay.com      |
| David Pierce, Farmer                         | 209 Westpoint Drive,           | Ellijay | GA    | 30540 | 706-276-3200 |                           |

|   |                               |             |    |       |              |                                 |
|---|-------------------------------|-------------|----|-------|--------------|---------------------------------|
|   | P.O. Box A                    |             |    |       |              |                                 |
| David Durgan,<br>Coosawattee River<br>Resort Property<br>Owners Association | 635 Beaver Lake Drive         | Ellijay     | GA | 30540 | 706-276-1060 |                                 |
| Debbie Royston, Ga.<br>Forest Watch   | 15 Tower Street               | Ellijay     | GA | 30540 | 706-635-8733 |                                 |
| Doug Towery, Natural<br>Resources<br>Conservation<br>Services               | 185 Wellborn Street, Box<br>3 | Blairsville | GA | 30512 | 706-745-2794 | doug.towery@ga.usda.gov         |
| LuAnn Lackey, Corps<br>of Engineers   | P.O. Box 96                   | Oakman      | GA | 30732 | 706-334-2248 | Luann.lackey@sam.usace.army.mil |
| Marlin Cox, Ga. Soil<br>and Water<br>Conservation<br>Commission             | 1123 Progress Rd.             | Ellijay     | GA | 30540 | 706-635-4416 | mcox@gaswwcg.org                |
| Emory DeBord,<br>Gilmer Co. Water &<br>Sewer Authority                      | P.O. Box 635                  | Ellijay     | GA | 30540 | 706-276-2202 | egcwsa@ellijay.com              |
| Ruth Caudell. Ellijay<br>City Council                                       | 167 Gartrell Street           | Ellijay     | GA | 30540 | 706-635-4447 | rhcaudell@ellijay.com           |

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 County Board 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                         | North Ga. Regional Development                             | Administer State/Federal grants to cost/share with land owners the repair of | Section 319(h) Grant through Ga. Environmental Protection Division | A      | 1/12005 through    | 3             | 5                      |

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|   |  |  |  |    |                           |   |                         |
|---|--|--|--|----|---------------------------|---|-------------------------|
| Program   | Center, Gilmer Co. Health Dept.  | failing systems or install new systems to replace straight pipes   | (60% grant/40% match)  |    | 6./30/2009                |   |                         |
| Agriculture BMP Installation Assistance Program   | Ga. Soil & 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)                     | AR | 1/12005 through 6/30/2009 | 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                       |
| Conservation Reserve Program  | Natural Resources Conservation Service                                       | Provides technical assistance, rental payments and cost share funding to address specific natural resource concerns including protection of ground and surface waters, soil erosion and wildlife habitat. Eligible practices include tree planting, grassed waterways, wildlife habitat buffers, and shallow water area for wildlife and filter strips.          | Federal Annual rental payment for land taken out of production and 50% cost share for practice installation. | A  | In place, on going        | 1 | 1                       |
| 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      | 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 units receive a land application system (LAS) permit. Larger CAFOs with more than 1000 animal units must obtain a NPDES permit from EPD. | Federal and State  | A  | In place, on-going        | 1 | 5 (in new developments) |
| 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)<br>(From Table 3) | IMPACT RATING<br>(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     | 3                               | Rules and Regulations for On-Site Wastewater Management<br><br>Septic System Repair Assistance   | 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. 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.)<br><br>EQIP Program<br>Conservation Reserve Program | 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. Additional funding may be necessary to continue the Section 319 program. |

|                    |   |   |  |  |
|--------------------|---|---|--|--|
| Poultry Operations | 3 | 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 continue the Section 319 program.   |
|                    |   | 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      |   |
| Benthic Monitoring            | Georgia Forest Watch/SAMAB                                      | Current                             | 2003       | On-going | Determine aquatic organisms in Coosa Basin              |
| Fecal Coliform                | Gilmer County Adopt-a-Stream (Chapter proposed to be organized) | Proposed                            | 2007       | On-going | To monitor and evaluate TMDL implementation activities. |

**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 and local agencies         | 5/15/2006 |

|                              |  |   |                          |
|------------------------------|--|---|--------------------------|
|                              | civic groups & local agencies  |   |                          |
| Coosa River Basin Initiative | Will conduct general public education activities regarding non-point pollution sources | Local citizens in Coosawattee River watershed | On going as funds allow. |

**IX. MILESTONES/ MEASURES OF PROGRESS OF BMPs AND OUTREACH**

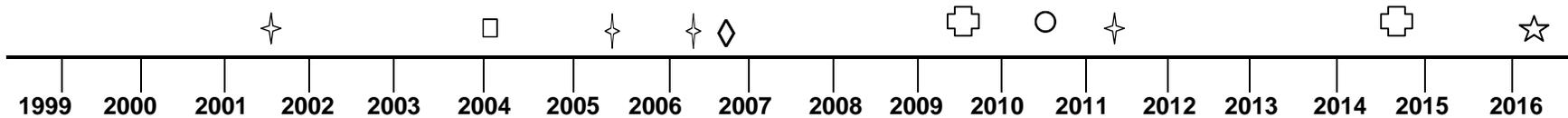
This table will be used to periodically track and report progress of significant management practices and activities identified or recommended in Tables 5A, 5B, and other sections of this plan, including outreach, additional monitoring and assessments, and the enhancement or installation of management 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   | Gilmer County Board of Health, Environmental Health Office                   |          | 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 County Health Dept.                       |          | X         | Continued implementation of program. Additional funds may be needed after 2009  |
| Agriculture BMP Installation Assistance Program   | Ga. Soil and Water Conservation Commission                                   |          | X         | Continued implementation of program. Additional funds may be needed after 2009  |
| 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 ☆

|                        |  |           |            |
|------------------------|--|-----------|------------|
| Prepared By:           | Larry Vanden Bosch                                   |           |            |
| Agency:                | North Georgia Regional Development Center            |           |            |
| Address:               | 503 West Waugh Street                                |           |            |
| City:                  | Dalton   | ST: GA    | ZIP: 30720 |
| E-mail:                | <a href="mailto:dceds@ngrdc.org">dceds@ngrdc.org</a> |           |            |
| Date Submitted to EPD: | March 31, 2006                                       | Revision: |            |

The preparation of this report was financed in part through a grant from the U.S. Environmental Protection Agency under the provisions of Section 106 of the Federal Water Pollution Control Act, as amended.

**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   | ADDRESS                          | CITY        | STATE | ZIP   | PHONE        | E-MAIL                          |
|--|----------------------------------|-------------|-------|-------|--------------|---------------------------------|
| Don Schneider, Code Officer, City of Ellijay           | 197 N. Main Street               | Ellijay     | GA    | 30540 | 706-635-4711 | codeenforce@ellijay.com         |
| Andrea Wheeler, Gilmer Co. Health Dept.                | 15 Dalton Street                 | Ellijay     | GA    | 30540 | 706-635-6050 | awheeler@gdph.state.ga.us       |
| James Holloway, Gilmer Co. Land Dev. Officer           | # 1 Westside Square              | Ellijay     | GA    | 30540 | 706-635-3406 | planning@ellijay.com            |
| Jim Smith, Gilmer Co. Community Dev. Office            | # 1 Westside Square              | Ellijay     | GA    | 30540 | 706-635-3406 | planning@ellijay.com            |
| David Pierce, Farmer                                   | 209 West Point Drive, P.O. Box A | Ellijay     | GA    | 30540 | 706-276-3200 |                                 |
| David Durgan, Property Owners Association              | 635 Beaver Lake Drive            | Ellijay     | GA    | 30540 | 706-276-1060 |                                 |
| Debbie Royston, Ga. Forest Watch                       | 15 Tower Street                  | Ellijay     | GA    | 30540 | 706-635-8733 |                                 |
| Doug Towery, Natural Resources Conservation Services   | 185 Wellborn Street, Box 3       | Blairsville | GA    | 30512 | 706-745-2794 | doug.towery@ga.usda.gov         |
| LuAnn Lackey, Corps of Engineers                       | P.O> Box 96                      | Oakman      | GA    | 30732 | 706-334-2248 | Luann.lackey@sam.usace.army.mil |
| Marlin Cox, Ga. Soil and Water Conservation Commission | 1123 Progress Rd.                | Ellijay     | GA    | 30540 | 706-635-4416 | mcox@gaswwcg.org                |

|  |                                   |         |    |       |              |                        |
|--|-----------------------------------|---------|----|-------|--------------|------------------------|
| Emory DeBord,<br>Gilmer Co. Water &<br>Sewer Authority | P.O. Box 635                      | Ellijay | GA | 30540 | 706-276-2202 | egcwsa@ellijay.com     |
| Jerry Farist, Gilmer<br>County Commission<br>Chairman  | # 1 Westside Square               | Ellijay | GA | 30540 | 706-635-3406 |                        |
| Ray King, North<br>Georgia Health<br>District          | 100 West Walnut Ave.,<br>Suite 92 | Dalton  | GA | 30720 | 706-272-2342 | rking@gdph.state.ga.us |
| Joe Cook, Director,<br>Coosa River Basin<br>Initiative | 408 Broad Street                  | Rome    | GA | 30161 | 706-409-0128 | www.coosa.org          |

**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.

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**APPENDIX C**  
**VISUAL FIELD SURVEY**

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**Visual Field Survey**

**For**

**Mountaintown Creek TMDL Segment**  
**(Hwy. 282 to Coosawattee River)**

**September 2005**

Prepared by the North Georgia Regional Development Center.

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# INTRODUCTION

## 1.1 Location

Mountaintown Creek is located right in the center of Gilmer County. The impaired TMDL segment is from Hwy. 282 to the Coosawattee River. The entire Huc 12 watershed is located completely within Gilmer County (Figure 1).

## 1.2 Watershed Description

The Mountaintown Creek TMDL segment watershed is comprised of 12,479.6 acres of land inside of Gilmer County (Figure 2). The TMDL segment is located within HUC 10 – 0315010203 and flows south. Based upon our 2004 existing land use data for Gilmer County, mapping of the TMDL segment watershed shows that land cover within the watershed is varied. Roughly 67% of the land is classified as vacant, 21% is classified as residential, and 5.5% of the land is classified as agricultural. The table below breaks down each land cover and their percentage in the Mountaintown Creek watershed.

**Table 1. Watershed Land Cover**

| <b>Land Cover Classification</b> | <b>Area (Acres)</b> | <b>% of Total Area</b> |
|----------------------------------|---------------------|------------------------|
| Agriculture                      | 695.3               | 5.50%                  |
| Commercial                       | 19.8                | 0.20%                  |
| Forestry                         | 116.1               | 1.00%                  |
| Industrial                       | 18.5                | 0.20%                  |
| Public                           | 6.8                 | >.01%                  |
| R/W (Road)                       | 583.8               | 5.00%                  |
| Single Family                    | 2640.3              | 21%                    |
| TCU                              | 0.5                 | >.01%                  |
| Unknown                          | 0.1                 | >.01%                  |
| Vacant                           | 8347.7              | 67.00%                 |
| Water                            | 50.7                | 0.10%                  |
| <b>Total</b>                     | <b>12479.6</b>      | <b>100%</b>            |

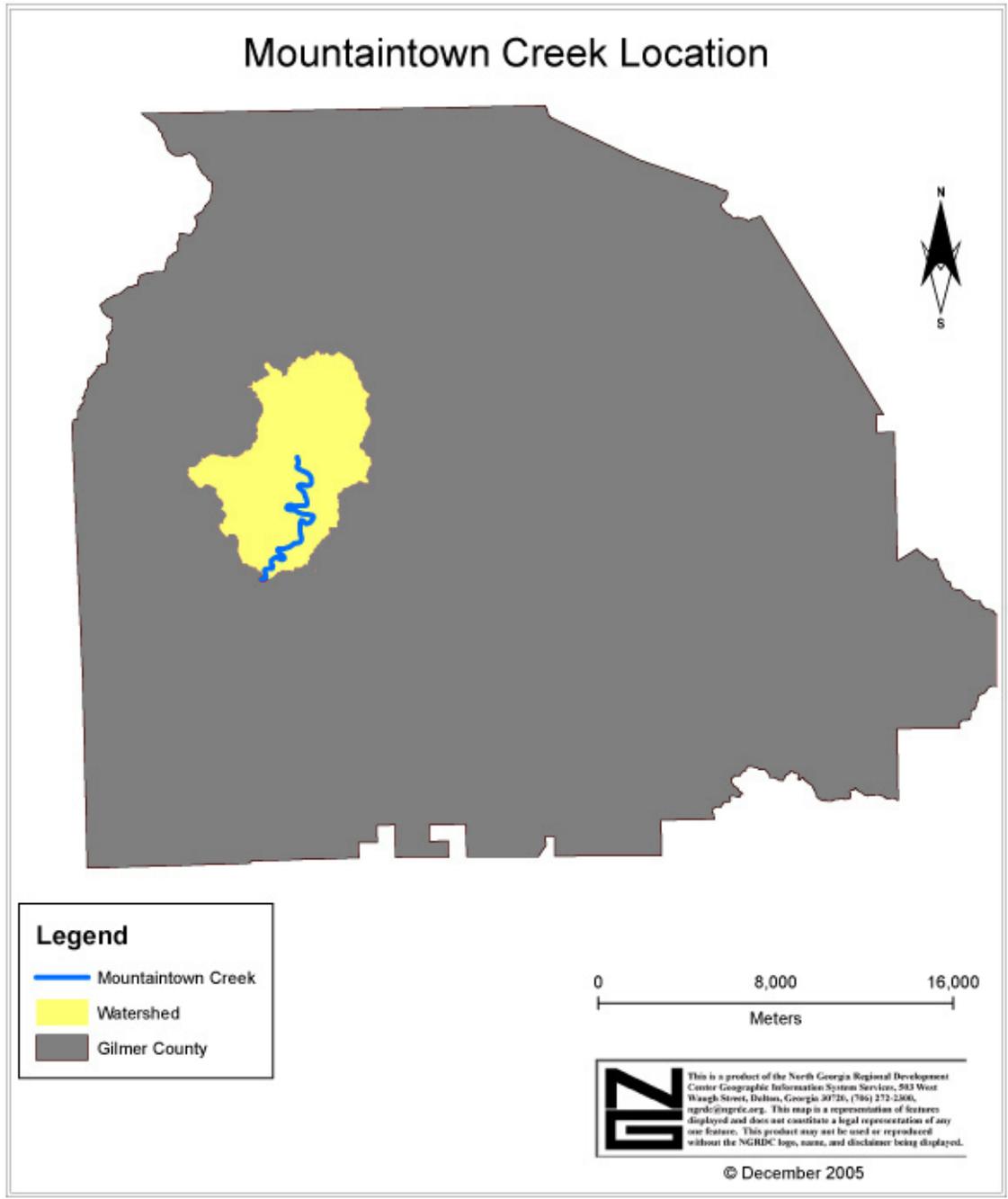


Figure 1. Location of Mountaintown Creek and Watershed

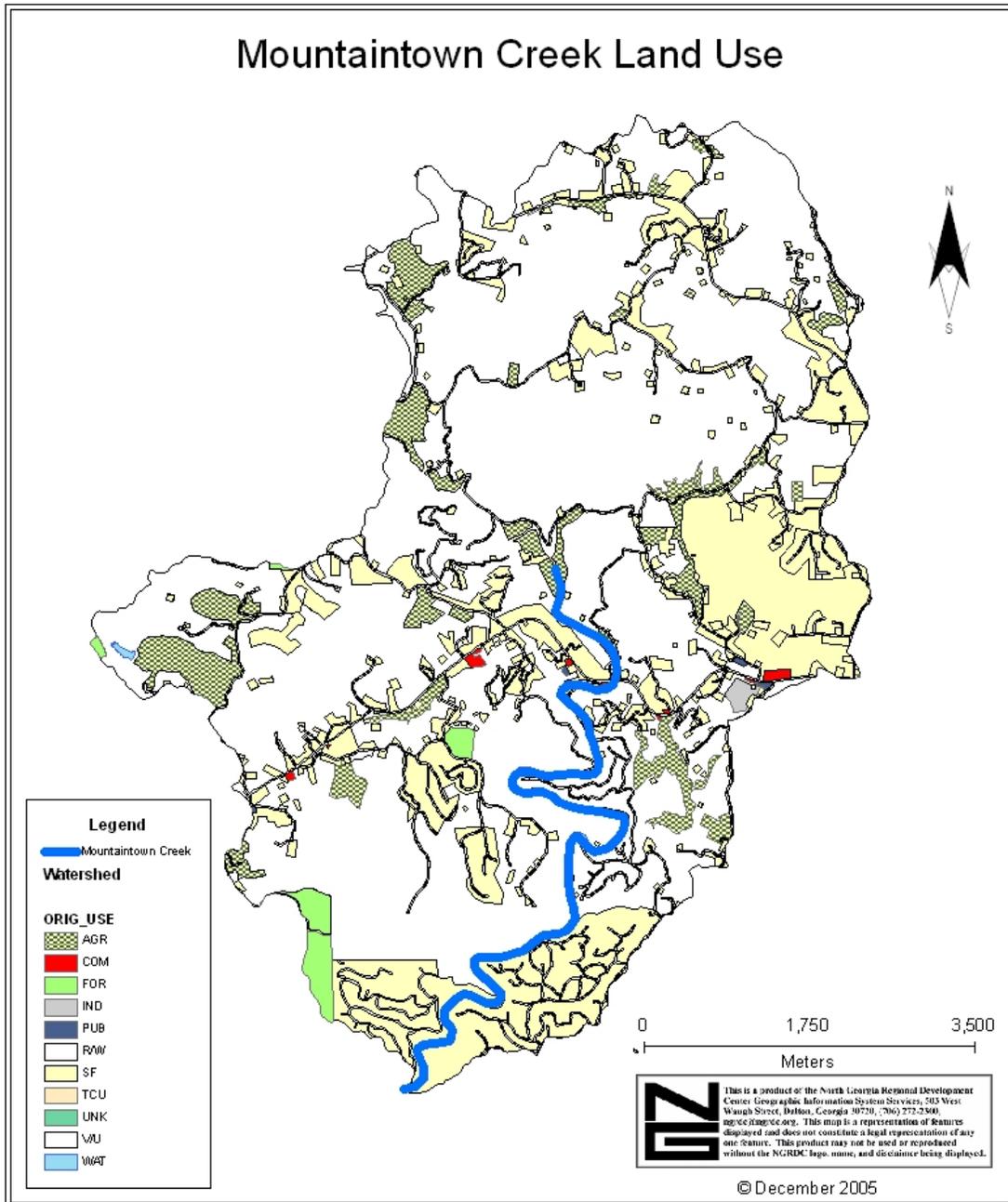


Figure 2. Land Cover for Mountaintown Creek Watershed.

## **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. Known potential individual sources of pollution located in the Mountaintown Creek watershed are shown in Figure 3. 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 not many road crossings on the Mountaintown Creek TMDL segment (1). The road crossing at Tails Creek Road was 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 crossing was not the only place in the watershed that was 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.

### **2.0 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. There was a nice vegetative buffer in some areas, but there were also some areas with no vegetative buffer at all. Also, there were areas where cattle could get directly in the stream (Figure 4). The Creek had a nice moving flow, and it did not seem to be congested with much debris.

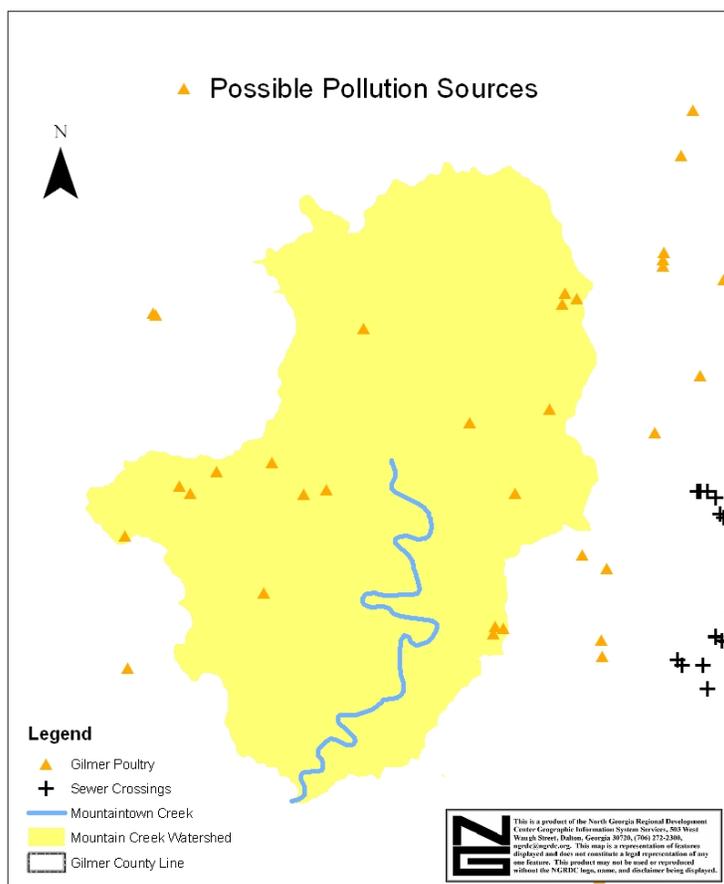


Figure 3. Potential Individual Sources of Pollution Identified in NGRDC’s Source Water Assessment Project (December 2003).

### 3.2 Point Sources

There is no sewer system in the Mountaintown Creek watershed.

### 3.3 Non-Point Sources

The watershed is rural in nature, and has numerous farms with cows and horses that may have some non-permitted animal feeding operations. There is a good amount of wildlife in this area as well. As seen in Figure 3, there are 18 chicken farms located directly in the Mountaintown Creek watershed. The land is either undeveloped or served by septic tank systems in the residential areas.



Figure 4. Cattle in a tributary



Figure 5. Chicken Houses



Figure 6. Cattle and Llamas off of Harold Pritchett

#### **4.0 Ranks Assigned To Pollution Sources**

There are a variety of pollution sources that are affecting the Mountaintown Creek TMDL segment. Urban runoff is considered a moderate source of fecal coli form bacteria affecting the entire TMDL segment. Animal waste from the surrounding wildlife is a potential low to moderate source of fecal coliform, as well as waste from horse, cattle, or chicken farms. These sources are affecting the TMDL segment in sporadic areas. Leaking or failing septic tanks are also another moderate source of fecal coliform bacteria affecting areas almost entirely along the stream segment.

#### **5.0 Summary of Findings**

The most likely cause for the Mountaintown Creek watershed being non supportive is a combination of things. Urban runoff from residential areas, wild and domestic animal waste, failing septic systems, and possibly some poultry operation runoff are all causes for impairment.

