

# **WATERSHED MANAGEMENT PLAN**

## **COLDWATER CREEK WATERSHED**

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## PURPOSE

This document is the 2013 edition of a Watershed Management Plan (WMP) for the identified segment of the Coldwater Creek watershed. The objective of a WMP is to identify and prioritize significant sources of pollution causing impairment in a watershed, determine effective management practices that will reduce pollutant loads from those sources, and seek funds and other resources to install the pollution controls and restore water quality in the impaired water body.

In this particular instance, the contamination stems from non-point sources and has been added to the list of streams for Total Maximum Daily Load (TMDL) planning and water quality restoration. An original TMDL assessment and Implementation Plan has already been developed and some progress made with regards to remediation measures by local stakeholders in restoring stream banks and promoting septic tank maintenance standards. This WMP will provide a summary of progress and of recent monitoring efforts, then produce an updated Implementation Plan for ultimately achieving water quality. The results of this WMP will be used to coordinate local and State assisted remediation measures for the next 5-10 years.

## PROJECT SCOPE AND REQUIREMENTS

This project is part of a 319 Grant awarded in 2011 for addressing water quality in Coldwater Creek, a small but vital watershed between the cities of Elberton and Hartwell that empties into the Upper Savannah River basin. In 2007, the Northeast Georgia Regional Commission developed a Tier 2 TMDL Implementation Plan for Coldwater Creek. This plan focused on the six-mile impaired segment from SR 77 to Little Cold Water Creek near Ruckersville, which was identified for having violated the fecal coliform criteria for its designated use of fishing.

The 319 Grant was awarded to develop a Watershed Management Plan (WMP) for the HUC 10 (0306010303) Coldwater Creek watershed and initiate implementation of the WMP by working with local landowners to install voluntary improvement measures on their property as recommended by the WMP. There are four objectives identified within the Cold Water Creek 319 Grant Program:

- Determine the level and identify the sources of fecal coliform pollution
- Develop a comprehensive Watershed Management Plan (WMP) consistent with *USEPA's Nine Key Elements of Watershed Planning*
- Implement water quality BMPs specifically related to the sources of impairment within the watershed
- Educate the local community through outreach activities to prevent and lower the level of non-point sources of fecal coliform pollution in the watershed

The Chestatee-Chattahoochee Resource Conservation and Development Council (RC&D) is the lead agency on the 319 Grant and is responsible for its administration and the overall development of the WMP. Together with its partner organizations the RC&D applied for and is administering the 319 Grant award for the Coldwater Creek watershed.

As the sub-contractor for this project, the GMRC was responsible for carrying out the tasks and duties necessary to complete this document, including but not limited to the following:

- Outreach to local stakeholders;
- Survey the watershed to identify possible causes/sources of pollution, as well as opportunities for remediation;
- Perform water sampling to gauge the current level of contamination;
- Produce the final WMP.

#### The CCRC&D

The Resource Conservation and Development Program was established in the Agriculture Act of 1962, with responsibility for the administration of the program placed within the Department of Agriculture's Natural Resources Conservation Service (NRCS). Successive Farm Bills have provided for the further development of the program, including deepening the partnership between RC&D Councils and the Natural Resource Conservation Service. RC&D Councils were created to assist local people in planning and carrying out activities that conserve natural resources, support economic development, enhance the environment, and improve the standard of living for all citizens. The partnership is made up of locally organized, led and sponsored groups called RC&D Councils. Each Council identifies problems, develops strategies and implements projects to benefit the community. A broad range of public and private entities collaborate to assist RC&D Councils in achieving goals and objectives.

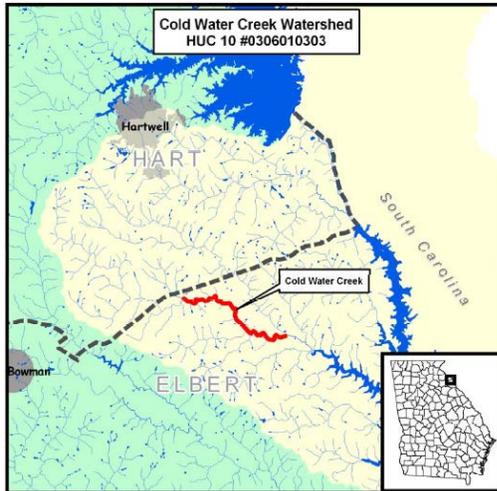
The Chest-Chat RC&D serves a 13 county area in northeast Georgia, working in conjunction with the local NRCS staff throughout the region as well as the 6 Soil and Water Conservation Districts within the area. Together with the Georgia Environmental Protection Division and other partners like the UGA Extension Service, the Chest-Chat RC&D works to promote environmental stewardship and to assist individuals and communities in utilizing and protecting our natural resources while improving the economy, environment and quality of life.

#### THE GMRC

The Georgia Mountains Regional Commission (GMRC) contributed to the development of the WMP as a sub-contractor with the CCRC&D. The GMRC is one of 12 regional government offices within Georgia working to foster economic development and to provide community planning and information services. The GMRC provides services and technical assistance directly to its 13 counties and 38 municipalities as well as developing regional initiatives and supporting the programs of various State Departments. Originally founded as the Georgia Mountains Area and Planning Development Center in 1962, the GMRC has evolved in the common services provided but continually works to assist its member governments in efforts that preserve local character, encourage sustainable resource management and progressive economies, and contribute to improving the overall well being of the region and its communities.

Currently the GMRC employs 13 staff in the realms of planning, economic development, information technology, human resources and general administration. The Council for the GMRC consists of two representatives from each county, one from the County Commission and one mayoral representative from all the cities within that county, as well as 5 appointees from the State legislature.

## WATERSHED LOCATION & DESCRIPTION



The Coldwater Creek watershed is within the Upper Savannah River Basin, straddling the Elbert County/ Hart County line. This is part of the transitional zone where the piedmont gives way to the rolling foothills of the Appalachian Mountains, with mostly gentle, rolling terrain and land cover that blends a variety of open fields with pine forests. The most common soils within this watershed feature a sandy loam base conducive to plant growth and wildlife habitat. Portions of the watershed also exhibit high volumes of rock and mineral base, including undifferentiated granite, sillimanite and mica.

The northern reaches of the Coldwater Creek watershed come just south of the City of Hartwell, not fully connecting with the urbanized portions of the city. There are pockets of suburban development patterns within the watershed nearest Hartwell, Royston and Elberton, as well as near the convergence with the Savannah River. The predominant use within the watershed, however, remains agricultural and large lot residential development consistent with rural settings.

Agricultural activity is common in Hart and Elbert Counties, particularly poultry farming with various small-to-moderate scales of livestock and row crop operations. Poultry farming, both for egg layers and broilers, is the most common commercial-scale agricultural activity in the region, with farms contracted to area processors and hosting as many as 8 to 12 chicken houses on a single property. Based on 2007 data there are several Confined Animal Feeding Operations (CAFOs) within the watershed, however, meaning livestock operations capable of holding enough animals to serve animal production industries. Significant portions of the livestock population is also on smaller farms where residents harbor some horses, goats or other animals more for personal use.

Wildlife within the watershed consists of whitetail deer, varieties of smaller mammals such as foxes, gophers and beaver, as well as a growing population of wild hogs. There are no major public hunting lands within the watershed, though there are some in the region and some private property in the watershed that does see use for hunting purposes.

The local populations are slowly growing through both natural means and in-migration, the latter due largely to the popularity of the reservoir. This has brought with it suburbanization and now the area is experiencing the slow transition from a predominantly agricultural based economy to one incorporating more and more commercial and services operations as well as goods productions. Textile manufacturing has given way to a variety of smaller professional and service oriented industries that cater to local residents. New development, residential and otherwise, is cropping up in and around the cities, leading to a slow dilution of the areas pure rural nature.

**Land Use – Coldwater Creek Watershed, 2011**

Category	Acres
Undeveloped	19,884.30
Agriculture	8,873.54
Residential	3,746.32
Industrial	468.89
Commercial	172.53
Public/Institutional	118.09
<b>Total</b>	<b>33,263.68</b>

**WATER QUALITY IMPAIRMENTS AND TMDLS**

A Total Maximum Daily Load (TMDL) is a calculation of the maximum amount of a pollutant, from both point and non-point sources, that a waterbody can receive and still meet water quality standards. The Clean Water Act, section 303, establishes the water quality standards and the TMDL programs. TMDLs are simply the implementation of rules included in Section 303(d) of the Clean Water Act of 1972. The resulting inventory of impaired streams and water bodies – called the 305(b)/303(d) list – provides a basis for decisions related to restoring water quality. Although some TMDLs are aimed at managing all sources of pollution which affect beneficial uses of water, the focus of the implementation plan discussed here relates primarily to nonpoint water sources including contamination from diffuse sources such as agricultural and urban runoff.

The Georgia EPD monitors stream segments throughout the state, and the targeted stream segment was placed on the Georgia 303 (d) list of impaired water bodies due to high fecal coliform readings obtained during sampling events in 2002. A total maximum daily load (TMDL) was developed by the USEPA in 2005 to address pollutant loads in the watershed. A TMDL is a calculation of the maximum amount of a pollutant that a water body can receive and still meet water quality standards, and an allocation of that amount to the pollutant’s sources. The 2007 TMDL implementation plan document states that this segment of Coldwater Creek is not supporting its designated use due to fecal coliform impairment, and as of 2012 this stream was still listed as out of compliance.

The objective in managing bacterial loads within streams is to achieve testing counts within the thresholds shown in the table below.

**Targeted Monitoring Pollutants or Indicators**

Pollutant or Indicator	Recommended Water Quality Criteria*	Required Number of Samples
E. coli <sup>1</sup>	Designated: <235 cfu/100 mL Moderate: <298 cfu/100 mL Light: <410 cfu/100 mL Infrequent: <576 cfu/100 mL	1 sample per site every month (12 samples per year)

<sup>1</sup> USEPA recommendations based on an acceptable risk level of 8 people out of 1000 getting sick

The following tables provide an indication of the level of impairment, recommended reductions and possible sources of contamination identified within the ColdwaterCreek TMDL Implementation Plan.

<b>Impairment Sources and Recommended Loading Reduction</b>			
<b>Stream</b>	<b>Impairment</b>	<b>Possible Sources of Contamination</b>	<b>Recommended Reduction</b>
Coldwater Creek	Fecal Coliform	Nonpoint source pollution; Animal production, wildlife, failing septic systems, illegal dumping	83%

In addition, Targeted / BMP Monitoring offers the opportunity to evaluate other pollutants or indicators in addition to the already-known impairments (listed or documented) addressed by specific BMPs.

<b>BMP Project</b>	<b>Impairment(s) Addressed</b>	<b>Monitoring</b>
Septic System Replacement	Bacteria	E coli or Fecal Coliform Nutrients
Fence Livestock out of Stream	Bacteria	E coli or Fecal Coliform Settleable Solids

**VISUAL FIELD SURVEYS AND TARGETED MONITORING RESULTS**

Visual Field Survey

GMRC staff toured the original, smaller watershed on 9 different occasions, including 6 sampling dates. These were mostly considered windshield surveys with staff driving along public roads throughout the watershed. At select points staff did explore fields and streams by foot to ascertain the general quality of the creek, shorelines and adjoining lands.

As depicted in the watershed description the area is predominantly low-rolling hills with an abundance of fields and some woodlands. The fields ranged from cultivated agricultural operations and simple, undeveloped properties. Overall the topsoil and landscape of the watershed showed little sign of failing integrity. There were only few, scattered barren patches of earth and limited instances of severe erosion. Most problem areas of this type occurred at smaller stream crossings with rugged culverts. The majority of agricultural properties exhibited fencing and other measures to minimize/prevent livestock from entering the streams. None of the fields identified as row crops exhibited signs of erosion issues or encroachment upon the perennial streams.

The water itself appeared relatively clear, particularly in upstream tributaries. Many of the smaller creeks feature more rocky, whitewater flows that seemed to aid natural oxygenation and cleansing, while the larger, slower moving waters downstream featured a cloudier look. On two occasions after rainfall events most of the watershed featured cloudier waters but not nothing considered outright muddy, suggesting minimal erosion concerns.

Apart from the various agricultural operations there was no prominent pollution source visible during the field surveys. The area is known for wildlife, including deer and boar, while some horse, cattle and chicken farms are definitely present. It is also know that all the properties in the watershed utilize septic systems to treat wastewater, including some that appear to be within 100' of a perennial stream.

### Targeted Monitoring Results

Targeted Monitoring involves collecting samples at multiple sites within the watershed to either 1) determine the most likely source(s) of impairment, or 2) better assess the effectiveness of BMPs in achieving their expected load reductions. Targeted Monitoring is performed at multiple locations in the watershed including any already-established GAEPD / USEPA sampling site(s). Resulting data can either direct resources toward areas that show the greatest need for BMPs or evaluate the success of BMPs implemented to reduce the pollutant loads. Resulting data that shows improvement in water quality can lead to monitoring for 305(b) / 303(d) List purposes under an approved SQAP or by GAEPD.

Sampling and testing for this project will be done in accordance with the most current GA Adopt-A-Stream Program's **Visual Stream Survey, Biological & Chemical Stream Monitoring** and **Bacterial Monitoring** manuals, as referenced below:

“All sample collection, field parameters, and lab analysis will be conducted in accordance with the GAEPD Adopt-A-Stream Program's Quality Assurance Project Plan (QAPP) and Quality Monitoring Plan (QMP) developed and maintained by GAEPD Adopt-A-Stream and previously approved by USEPA. Copies of the QAPP and QMP will be provided by GAEPD and will be kept on site to be used as reference and provide future guidance on water quality monitoring procedures. Any additional agencies, organizations, or subcontractors that participate in the aforementioned water quality monitoring activities shall also adhere to GAEPD Adopt-A-Stream procedures and this guidance.”

### Equipment

Equipment used for sampling and testing is as follows:

- a. 3M™ *E. coliform* Count Plates, product #6404, 3M Company, [http://solutions.3m.com/wps/portal/3M/en\\_US/Microbiology/FoodSafety/products/petrifilm-plates/e-coli-count/](http://solutions.3m.com/wps/portal/3M/en_US/Microbiology/FoodSafety/products/petrifilm-plates/e-coli-count/)
- b. Genesis Hova-Bator Incubator with circulation fan, product #1588, calibrated to 35° C. G.Q.F. Manufacturing, [http://www.fqfmfg.com/store/comersus\\_viewItem.asp?idProduct=77](http://www.fqfmfg.com/store/comersus_viewItem.asp?idProduct=77)
- c. Fixed-volume pipettor 1000uL, product #EW-21600-06. Cole Parmer, [http://www.coleparmer.com/catalog/product\\_view.asp?sku=2160006](http://www.coleparmer.com/catalog/product_view.asp?sku=2160006)
- d. Pipette tips, 200-1300uL, product #EW-25711-50, Cole Parmer, [http://www.coleparmer.com/catalog/product\\_view.asp?sku=2571150](http://www.coleparmer.com/catalog/product_view.asp?sku=2571150)
- e. MicroLite USB Temperature Data Logger, product #LITE5008. The Data Logger Store, [http://www.microdaq.com/fourier/microlite\\_usb\\_logger.php](http://www.microdaq.com/fourier/microlite_usb_logger.php)
- f. Armored Thermometer, Lamotte, <http://www.lamotte.com/pages/aqua/sampling.html>
- g. Whirl-Pack® sterile sampling bag, 2 oz., product #EW-06499-60, Cole Parmer
- h. 90% Isopropyl Alcohol
- i. Latex Gloves
- j. Bleach

Monitoring Locations

The key to effective Targeted Monitoring is to select sample collection sites that are representative of watershed conditions and supportive of the reasons for monitoring. Sampling sites that isolate geographical areas can serve to detect possible contributions to impairments; while, sites established upstream and downstream of BMP clusters can help to evaluate the impact of BMPs on reducing pollutant loads in the watershed or project area. This monitoring will prioritize sources or areas of pollutant loadings (“hot spots”).

The overall goal is to establish the most productive, practical number of targeted sample collection sites in addition to the already established GA-EPD / USEPA sampling site. Sample collection locations should be selected with the following considerations:

- Up-stream and downstream of the established GA-EPD / USEPA sample location
- Up-stream from the confluence of any major tributaries with the main stem
- Downstream of perceived potential pollution sources along the main stem of the stream
- Upstream and downstream from sites where BMPs will be and/or are installed

After preliminary input from the Advisory Committee and an assessment of land use conditions within the watershed, the ten sites listed below were recommended for sampling locations. These locations provide geographic disparity and will allow the testing to identify which of several main tributaries or sub-watersheds might be more problematic than others. Each of the locations also occurs at a public road crossing to facilitate access.

Station Number	General Location	Stream	Sampling Site Coordinates	Sample Parameters
1	Double Bridges Rd, near intersection w/Coldwater Rd.	Coldwater Creek	-82.830650 34.223367	E Coli
2	Harper Farm Rd, near Plantation Rd	Tributary to Coldwater Creek	-82.867197 34.214265	E Coli
3	Plantation Rd, Between Harper Farm Rd and Ridge Rd	Gum Log Branch	-82.863287 34.223198	E Coli
4	Hartwell Hwy, near Hope Dickerson Rd	Gum Log Branch	-82.893343 34.220757	E Coli
5	Hartwell Hwy, near Holmes Rd	Coldwater Creek	-82.899780 34.245237	E Coli
6	Holmes Rd, near Hartwell Hwy	Tributary to Coldwater Creek	-82.905725 34.247412	E Coli
7	Shiloh Church Road, near Kristi Lane	Coldwater Creek	-82.936536 34.246777	E Coli
8	Thermon Adams Rd, near Shiloh Church Rd	Robinson Branch	-82.946611 34.243363	E Coli
9	Bowman Hwy, near Howard Rd	Coldwater Creek	-82.966217 34.266405	E Coli
10	St. John’s CME Church Rd, near Speedway Rd	Coldwater Creek	-82.977275 34.278913	E Coli

Quality Assurance / Quality Control

1. Field Quality Assurance

- A. The following sampling protocol will be used for each sample:
1. The Grab samples for quantification of *E. coli* bacteria will be collected at 10 stations in the Upper ColdwaterCreek watershed.
  2. Prior to sample collection:
    - a. 1 Whirl-Pak® bag per site.
    - b. Using a Sharpie, label each bag as follows:
      - c. Stream Name
      - d. Collection Site Number
      - e. Date of Collection
      - f. Time of Collection
      - g. Collector
  3. Record the following on the Georgia Adopt-a-Stream *E. coli* Data Form at each sample site:
    - a. Current Weather Conditions
    - b. Overcast
    - c. Partly Cloudy
    - d. Clear/Sunny
    - e. Air Temperature
    - f. Water Temperature
    - g. Date and Time
  4. Sample Collection
    - a. Put on latex gloves for protection and to limit sample contamination.
    - b. Tear off top of bag along perforation. Avoid touching the inside of the bag.
    - c. Select a spot in the middle of the flow channel.
    - d. Open the Whirl-Pak® bag by taking hold of the white tabs on either side of the bag, one in each hand. If you accidentally touch the inside of the collection bag, use another one.
    - e. Keep the bag upright and use a scooping motion to submerge the top under the water.
    - f. At mid-depth, pull both white tabs apart to open the mouth. Allow water to pour into the mouth until the bag is  $\frac{3}{4}$  full.
    - g. Pull the bag out of the water, take the yellow ties on either side, one in each hand, and flip or fold the top of the bag twice to wrap up the top.
    - h. Twist the yellow ties to seal the top and place the bag in a cooler with ice or frozen packs.
    - i. Where necessary, drop buckets may be used to collect raw water from bridges or overpasses. Samples will then be collected using the Whirl-Pak® bags to retrieve water from the bucket, in accordance with the same procedure outlined above. The buckets will be properly cleaned and sterilized after each use so as to prevent cross-contamination between samples.

2. Sample Handling and Custody Requirements

- A. *E. coli* samples will be stored for no longer than 6 hours after collection in a cooler with ice or frozen packs.

1. Within 6 hours of collection, the Georgia Mountain Regional Commission staff will utilize the Adopt-a-Stream Bacterial Monitoring methods and procedures to process and analyze the samples.
2. Petrifilm plates shall be labeled with a Sharpie pen as follows:
  - a. Site number
  - b. Date of collection
  - c. Test number
3. The Georgia Adopt-a-Stream *E. coli* Data Form found in the Appendix will be completed by Georgia Mountain Regional Commission staff for petrifilm results.
4. Utilizing a fixed volume pipette, a sample from each site will be placed on 3 petrifilm plates according to the instructions on the GA EPD Adopt-a-Stream Bacterial Monitoring Manual.
5. Plates will be stacked and placed in the Hova-Bator incubator calibrated to 35° C for 24 hours.
6. Incubator temperature will be monitored over a 24-hour period with an independent thermometer.
7. After 24 hours, plates (3 per site) will be removed from the incubator and *E. coli* colonies will be counted. The sum of the colonies found on 3 plates prepared for each site will be multiplied by 33 to calculate a total colony count per 100/mL per site.

### Training

Staff from the Georgia Mountains Regional Commission who will collect *E. coli* samples were trained by GA EPD Adopt-a-Stream personnel on January 7, 2009 and/or December 12, 2012 in *E. coli* and dissolved oxygen (DO) sampling and testing.

### Monitoring Schedule

As this is pre-BMP monitoring being done to establish priority targets for recommended BMP installation and possible future SQAP testing, the sampling schedule is being compressed to a 6 month period. In order to cover the breadth of the watershed, the sampling schedule is also prioritizing volume of sampling locations over frequency. As a result, the sampling for this phase of the project will involve collection from 10 different locations conducted once per month from September of 2012 through March of 2013. December has been excused due to scheduling issues during winter holidays. When possible samples will be collected at least 48 hours after a rainfall event and will be targeted for the end of the month in approximate consistency with other samples.

Month	Sampling Site	Parameter
Sep '12	1-10	<i>E. coli</i>
Oct '12	1-10	<i>E. coli</i>
Nov '12	1-10	<i>E. coli</i>
Jan '13	1-10	<i>E. coli</i>
Feb '13	1-10	<i>E. coli</i>
Mar '13	1-10	<i>E. coli</i>

**ColdwaterCreek Sampling - Raw Petrifilm Counts**

Date	Test Sample	Sample Location									
		1	2	3	4	5	6	7	8	9	10
9/22/12	A	8	3	11	1	2	2	5	8	5	1
	B	10	3	15	4	5	2	2	6	5	3
	C	7	7	11	3	4	2	4	8	8	3
	<b>Avg.</b>	<b>8.3</b>	4.3	<b>12.3</b>	2.7	3.7	2.0	3.7	<b>7.3</b>	6.0	2.3
10/23/12	A	*	4	10	2	2	0	4	14	4	0
	B	*	6	11	2	3	4	5	1	6	4
	C	*	8	12	4	2	2	3	9	4	1
	<b>Avg.</b>		6.0	<b>11.0</b>	2.7	2.3	2.0	4.0	<b>8.0</b>	4.7	1.7
11/23/12	A	7	5	9	1	2	1	4	8	3	2
	B	5	6	13	4	5	5	4	6	5	3
	C	5	5	8	4	3	4	5	9	1	3
	<b>Avg.</b>	5.7	5.3	<b>10.0</b>	3.0	3.3	3.3	4.3	<b>7.7</b>	3.0	2.7
1/11/13	A	6	2	7	0	6	3	7	8	5	5
	B	4	3	8	2	8	3	6	8	8	8
	C	5	3	5	3	8	2	6	10	7	8
	<b>Avg.</b>	5.0	2.7	6.7	1.7	7.3	2.7	6.3	<b>8.7</b>	6.7	<b>7.0</b>
2/15/13	A	9	1	1	4	5	6	6	7	5	6
	B	4	2	4	1	3	10	8	3	4	4
	C	3	2	3	0	3	10	2	5	4	1
	<b>Avg.</b>	5.3	1.7	2.7	1.7	3.7	<b>8.7</b>	5.3	5.0	4.3	3.7
3/28/13	A	7	3	1	5	3	1	3	3	4	3
	B	5	1	3	3	3	9	4	2	2	6
	C	3	0	1	9	6	5	3	0	0	3
	<b>Avg.</b>	5.0	1.3	1.7	5.7	4.0	5.0	3.3	1.7	2.0	4.0
<b>Overall</b>	<b>Avg.</b>	<b>5.9</b>	<b>3.6</b>	<b>7.4</b>	<b>2.9</b>	<b>4.1</b>	<b>4.0</b>	<b>4.5</b>	<b>6.4</b>	<b>4.5</b>	<b>3.6</b>

\*=No Sample Collected

TNTC=Too Numerous to Count

**Sample Results**

Sample Location	Avg. Count
3	7.4
8	6.4
1	5.9
7	4.5
9	4.5
5	4.1
6	4.0
10	3.6
2	3.6
4	2.9

Based on the sample testing done during the plan development phase, the only sample site to exceed the preferred threshold of 7 is site #3, along Plantation Road. The county may be considered skewed, however, that the results for this site continued to decrease over the course of the testing period, suggesting the higher counts are more the result of a specific event or time frame rather than indicative of the normal conditions throughout the year. There is both livestock and field agriculture upstream from this sample site and it is possible that an event such as a one-time treatments of the fields or possibly a temporary episode that allowed animals access to the stream may have introduced abnormal amounts of fecal coliform to the stream. If such an event took place then over time this contaminated condition would dissipate, explaining the decrease in scores.

All the remaining sites lie below the targeted threshold, however sites #8 and #1 were not only the next highest scoring locations but are close enough to the threshold to warrant additional attention. Together with site #3, all three locations should be first priority among sections of the watershed to be reviewed for possible sources of contamination and opportunities for mitigation measures.



**RANKING AND PRIORITIZING OF SOURCES OF IMPAIRMENT**

This element includes an accounting of the significant point and nonpoint sources in the watershed, in addition to the natural background levels that make up the pollutant loads causing problems in the watershed. The analytical methods did include mapping, modeling, monitoring, and field assessments to make the link between the sources of pollution and the extent to which they cause the water to exceed relevant water quality standards.

The original TMDL listed contributions to impairment coming from variants of agricultural activity and as a result of urban runoff. These were based in part due to a macro-scale assessment done for the watershed using older land cover maps and aerial imagery. The particular contributing factors as defined in the TMDL are shown below.

Based on discussions leading into the planning process, the following basic profile of watershed conditions was established for identifying potential pollution sources:

- There are no sewer systems within the upper reaches of the watershed, with every parcel reliant on septic systems of some fashion. Some package collection system may be at play for certain developments, but all waste is treated on site.

Neither Elbert nor Hart County have exact data regarding the average ages of septic systems in the area or for the volume of repair and maintenance activity performed on systems within the watershed. Indications are that violations are rarely spotted or reported because the landowner would seek to avoid any penalties. Inspections and code enforcement activities, then, are limited to new installations or the few confirmed violations per year.

Given that the bulk of the larger Coldwater Creek watershed, and the entire upper watershed, relies on septic systems both Counties indicated improved monitoring measures would be a crucial issue going forward. Efforts to establish a database for long-term monitoring of system ages and confirmed repairs/violations would help in gauging the potential for leaks and the possible impact and the waterways.

- As confirmed in the land use data and discussion with stakeholders, the watershed is predominantly rural and features a substantial volume of agricultural activity. The most common practices seen within the watershed include poultry farming, some minor cattle operations, row crops, and smaller animal farms.

**Estimated Agricultural Livestock - 2011**

	<b>Beef Production (pounds)</b>	<b>Dairy Cattle Total #</b>	<b>Goats Total #</b>	<b>Horses Total #</b>	<b>Pork Production (pounds)</b>
<b>Elbert County</b>	4,012,000	220	2,000	440	110,000
<b>Hart County</b>	6,809,000	1,050	800	290	6,089,000

Natural Resources Conservation Service - 2012

**Estimated Poultry Production - 2011**

	<b>Poultry Houses Total #</b>	<b>Broiler Production (pounds)</b>	<b>Breeder Pullet Units Total #</b>	<b>Chickens Layers</b>
<b>Elbert County</b>	265	148,246,000	0	600
<b>Hart County</b>	589	317,358,000	516	3,268

**Natural Resources Conservation Service – 2012**

In reviewing the data concerning livestock operations the volume of pork production associated with Hart County is very revealing. This does not indicate how much of that activity occurs within the Coldwater creek watershed, but it does suggest a high probability for that activity among the farms seen in that part of Hart County. Likewise the data supports the inclinations that there is an abundance of cattle and poultry production practiced in the region.

The heightened concern over any livestock activity stems from the potential interaction between animals and perennial streams. Animals will tend to congregate near water and shadier shorelines, meaning their waste can easily be introduced to the streams via stormwater runoff. Measures such as fencing, sufficient drinking sources removed from the streams and properly designed stream crossings can aid in the prevention of animal waste pollution in native streams.

Despite the marginal visible level of livestock operations within the watershed, the presence of any activity and the severity of impact from animal wastes means this element must be considered in any mitigation strategy.

- In addition to considerations of livestock there is a prominent concern for the impact of wildlife on water quality. Specifically, larger mammals that proliferate in an area can introduce excessive amounts of animal wastes that will reach the creeks via stormwater runoff.

Deer is the most prominent wild animal contributing to fecal coliform issues in Georgia waters, by virtue of the animal's size, the large numbers of deer throughout the state and their penchant to reside near flowing streams and rivers. The Wildlife Resources Division of the Georgia Department of Natural Resources produces a Deer Management Plan for the State. According to this document Hart County is within Deer Management Unit (DMU) 2, which typically features 35 deer per square mile of forested acre but the targeted ratio is a more sustainable 30 deer per square mile. Elbert County, meanwhile, is in DMU 5 with an estimated 44 deer per square forested mile but an optimum range of 35 deer per square mile. Assessments of both DMU's applicable to the Coldwater Creek watershed indicate a probable overcrowding of the deer population compared to optimum levels, supporting the notion that deer and wildlife are contributing to water pollution issues.

- Agricultural activity is also to be considered with regards to row crops and harvested farmland. Often topsoil is amended with material such as manure or chicken litter that can contain bacteria and pollute nearby streams through erosion and via stormwater runoff.

**Comparative Farm Information**

	Number of Farms		Land in Farms (acres)		Harvested Cropland (acres)	
	1997	2007	1997	2007	1997	2007
<b>Elbert County</b>	386	507	60,462	62,915	13,136	10,656
<b>Hart County</b>	570	657	63,496	70,405	16,919	17,362

UGA, 2012

Hart and Elbert Counties are both communities with a strong agricultural heritage. Despite the onset of suburban development and waning industrial operations Hart County even witnessed an increase in the amount of harvested cropland between 1997 and 2007. Combined the two counties did see a slight decrease in production, however, and the amount of row crops seen within the watershed appeared marginal during field surveys.

Based on input from other stakeholders there are indications that the activity within the area may feature high degrees of soil treatment using chicken litter from local poultry producers, largely to impact nitrogen levels. There is also suspicion of some farmers possibly dumping litter into fields simply to dispose of the waste. Closer inspection of the agricultural activity will be required going forward both to determine any seasonal variations not yet discovered and to isolate any particular farms that may have conditions conducive to runoff related issues.

- Only four distinct NPDES permits of any kind were listed within the watershed (shown below). This limits the possibility of extensive large-scale animal operations as being the primary source, as well as limits the threat posed by land application systems (LAS). Either source may still be a contributor, but unless these facilities are experiencing problems that would threaten their respective permits then chances are the major sources lay elsewhere.

**Existing LAS Permits**

Name	Permit #	County
Twin Line Dairies Inc.	GAU010436	Elbert County
Twin Line Dairies Inc.	GAU010436	Hart County

**CAFO's with Existing NPDES Permits - 2013**

Name	Permit #	Location
Twin Line Dairies, Inc.	GAG930000	Dewey Rose, GA 30624
J. J. Wilson Swine Farm	NA	Hartwell, GA, 30643

**Summary of Source Assessment**

Upon reviewing all the information and consulting various resources and other stakeholders, the Advisory Committee weighed the various sources and developed the assessment presented below.

Each potential source was assessed based on the extent of the activity within the watershed and the magnitude of potential threat presented. Then each potential source was considered with regard to the estimated actual contribution to pollution levels (based on known data). Finally the Committee assigned each potential source a priority based on the severity of the threat and the feasibility by which the issue could be addressed.

Taken all together the potential sources should all be addressed but the Committee’s recommendations for Coldwater Creek focus on those areas where mitigation measures are known, established and can yield substantial impact at a cost efficient basis. While concerns over septic systems rated the highest in potential contribution, concern over viability of mitigation measures meant other issues received higher priority rankings.

**Assessment of Potential Pollution Sources**

Source	Extent	Magnitude	Permit (Y/N)	Estimated Contribution (Rank 1-5)	Stakeholder Priority (Rank 1-5)
Livestock (field treatment)	3	3		2.5	5
Row crops (field treatment)	2	3		3	5
Livestock (waste mgmt.)	2	2		1	4
Septic systems	4	4	X	3.5	4
Urban runoff	2	2		1	4
Poultry (waste mgmt.)	4	3		2	3
Silviculture/ Forestry	2	2	X	1	3
Wildlife	2	3		2.5	3
Illicit discharges	1	1		1	1
Land Application Sites	1	2	X	1.5	1

**IDENTIFICATION OF APPLICABLE EXISTING MANAGEMENT MEASURES**

This element describes the management measures that need to be implemented to achieve the load reductions estimated above, as well as to achieve any additional pollution prevention goals called out in the watershed plan (e.g., habitat conservation and protection). Pollutant loads will vary even within land use types, so the plan should also identify the critical areas in which those measures will be needed to implement the plan.

Both Elbert County and Hart County maintain many policies and programs which illustrate their respective commitment to environmental stewardship in general. Many of these measures apply to the ColdwaterCreek watershed, though the specific activity may not have occurred during this planning time frame. However, as these actions benefit all of the County and its properties, they are being presented

to demonstrate the type of watershed management already in place with each government and Coldwater Creek.

Both jurisdictions employ an *Erosion Control and Sedimentation Ordinance* to help control pollution along surface streams. Both local governments adopted the State of Georgia model ordinance that established stream protection measures for certain construction sites. Both County governments also rely on their respective Health Departments, through rules and regulations established the Georgia Department of Human Services, to *administer the review and placement of septic systems* for residential, commercial and industrial land uses.

Both Counties have also adopted various environmental protection ordinances as required by the State: *Water Supply/ Watershed Protection, River Corridor Protection Ordinance, Ground Water Recharge Area Protection and Wetlands Protection Ordinances*. The Water Supply/ Watershed ordinance will limit types and density of development that would impair the water supply or watershed. This ordinance will allow for the establishment of protective buffers around streams where septic tanks are not allowed to be placed. This ordinance will also limit impervious surface adjacent to streams.

The River Corridor Protection Ordinance protects land within 100 feet horizontally on both sides of the River at the point when it becomes 400 cfs. New construction is prohibited in the river corridor except for single family houses on two-acre or larger lots. Septic tanks and septic tank drainfields are prohibited in the river corridor, as are hazardous waste and solid waste landfills. These provisions help to keep pollution flowing into the river at a minimum. Potential for fecal coliform bacteria caused by leaking septic tanks is decreased by this ordinance. The state minimum standard for this ordinance is at the 400 cfs location.

The Wetlands Protection Ordinance protects wetlands alterations that will significantly affect or reduce their primary functions for water quality control, floodplain and erosion control, groundwater recharge, aesthetic nature, and wildlife habitat. This protection is achieved through land use controls on lands surrounding wetlands. The floodplain control measures contained in the ordinance also serve to indirectly control fecal coliform bacteria levels because of the direct correlation between fecal coliform bacteria levels and flow rates. Less unnatural flooding and water diversion means lower flow rates, and therefore, lower fecal coliform levels.

The Ground Water Recharge Ordinance regulates lot sizes and density of land uses in areas designated as a significant recharge area. This ordinance also prohibits a number of uses that handle hazardous materials and requires liners for agricultural lagoons.

Voluntary environmental stewardship efforts within the Counties include active Adopt-A-Stream programs, support from the local Cattlemen's Association, the Georgia Farm Bureau and the Natural Resource Conservation Service. Both Elbert and Hart Counties have local Keep America Beautiful campaigns, as well. These and other groups help the local communities educate residents and landowners about sustainable environmental practices, support clean up events and work to raise awareness about water quality issues in the area.

There is no record of any other recent stewardship programs on behalf of this stretch of Coldwater Creek.

**RECOMMENDATIONS FOR ADDITIONAL MANAGEMENT MEASURES**

On the basis of the existing source loads estimated above, this element discusses various management measures that will help to reduce the pollutant loads and estimate the load reductions expected as a result of these management measures to be implemented, recognizing the difficulty in precisely predicting the performance of management measures over time. The estimate should account for reductions in pollutant loads from point and nonpoint sources identified in the TMDL as necessary to attain the applicable water quality standards.

The recommended load reductions with this WMP are representative of the projected share each potential source contributes to the overall impairment. It has also been selected based on the probable impact of remediation measures.

**Proposed Mitigation Measures**

<b>BMP</b>	<b>Pollutant Source</b>	<b>Estimated Effectiveness</b>	<b>Estimated Load Reduction (%)</b>	<b>Cost Estimate</b>	<b>Public Support (1-5)</b>	<b>Install Priority</b>
Survey Application of Agricultural BMPs	Diffuse runoff of animal waste	Med	5%	\$5,000	2	Low
Stackhouses for poultry litter	Applied animal waste	Med	10%	TBD	3	Med
Livestock mgmt. measures (fencing, watering systems...)	Diffuse animal runoff	High	10%	Various	3	High
Management of ag soil treatments	Applied animal wastes	High	25%	Various	3	High
Wildlife management	Diffuse animal waste	Med	10%	TBD	4	Med
Education Materials	Diffuse runoff of animal waste; Failing septic systems	Med	10%	\$3,000	3	High
Inventory/Treatment of Septic Systems	Failing septic systems	Med	20%	\$5,000	2	Med
Targeted surveys and clean-up events	Diffuse runoff of animal waste	Low	5%	\$5,000	3	Low
Better Backroads	Diffuse runoff and siltration	Low	5%	\$20,000	2	Low
Stream bank restoration	Diffuse runoff and siltration	Low	5%	TBD	2	Low

- Survey Application of Agricultural BMPs*

While this watershed is not the most populated with regards to livestock, there are enough farms in the area to warrant consideration. More importantly, the terrain and general accessibility seen for some streams suggests this remains a possible source of contamination. A coordinated effort involving the Counties, local Farm Bureaus and other stakeholders could serve to increase promotion and awareness of watershed stewardship, while simultaneously confirming the volume of livestock present within the watershed and the level of vulnerability.

The three separate actions entailed would begin with a detailed accounting of livestock operations within the watershed, complete with visual field surveys of conditions and written surveys for property owners to determine the extent of BMP applications. The second action would be the distribution of promotional material about agricultural BMPs in general and information specifically about the watershed. Lastly, a follow up effort for remediation should be developed for any incidents of livestock operations with severe conditions that are strongly suspected of causing water pollution.

- *Stackhouses for poultry litter*  
This will be a long-term objective promoting such structures and supporting efforts to make them affordable/available to area farmers. Poultry farming is prevalent in Hart and Elbert Counties and the litter byproduct can prove difficult to process or dispose, either on or off site. Stackhouses provide an effective means for storing and managing chicken litter and might minimize the volume of litter applied on local fields.
- *Livestock management measures*  
This is the catch-all category for on-site property improvements and best management practices designed to mitigate the ability of animal waste to wash off fields and find its way into the stream. This can include fencing, stream crossings, the introduction of drinkers and heavy use areas away from streams, swales and landscaping or other measures. All such measures should be done according to the latest standards advised by NRCS, and should be pursued in coordination with an overall improvement plan for the subject property.
- *Management of agricultural soil treatments*  
This is the catch-all category for on-site property improvements and best management practices designed to mitigate the ability of cultivated soil amendments to wash off fields and find their way into the stream. This can include setbacks, nutrient management, swales and landscaping or other measures. All such measures should be done according to the latest standards advised by NRCS, and should be pursued in coordination with an overall improvement plan for the subject property.
- *Wildlife management*  
This is the general term for measures designed to address animal overpopulation or the concentration and infiltration of specific animals into streams and lakes. This can include the forced removal of animals, the introduction of measures to deter animals, or adjustments in hunting policies. All such efforts would have to be coordinated with the Wildlife Management Division and Georgia State law.
- *Detailed Inventory of Septic Systems*  
This particular watershed is almost completely reliant on on-site septic systems to treat wastewater, and many of these systems are aging and/or within close proximity to a surface water. To the best extent possible, both jurisdictions should work to develop an accurate, up-to-date parcel map that can be codified based on the presence, age, and proximity to the stream of each septic tank and drainfield. As new testing can be used to identify hot spots within the river and tributaries, this information could aid in identifying any correlating concentrations of septic systems that may be candidates for failures or leaks. Where possible, information about system repairs should also be accounted for, providing the most accurate portrait possible of the viability of on-site systems within the watershed.

- *Targeted river bank surveys and clean-ups*  
In addition to routine observation and surveys of the watershed, a concentrated effort to walk as much of the river as possible at least once per year would help confirm the integrity of the stream banks and identify possible points of animal intrusion. This could coincide with efforts to maintain the cleanliness of the watershed, and would increase public awareness of the need to sustain healthier watersheds. These could be coordinated with Adopt-A-Stream to both benefit the communities and also provide an additional opportunity for volunteer training and participation.
  
- *Review and update of education programs and materials*  
Both Counties currently employ several methods to engage area residents, employers and developers on the rules and efforts behind maintaining local water quality. A specialized approach for the watershed could aid in this effort by providing targeted information to critical stakeholders, building a stronger sense of vested interest among property owners and business owners and hopefully increasing awareness and support for BMPs and mitigation measures. This could include promotional material illustrating the health of the Coldwater Creek watershed and special guidance about WMP related activities and issues.
  
- *Better Backroads program*  
This State sponsored program is administered in partnership by the NRCS, EPD and GDOT. Better Backroads seeks to improve unpaved road conditions so as to minimize erosion and degrading roadbed conditions. As applied for 319 Grant projects, these efforts would upgrade dirt roads with proper surfacing and drainage conditions, limiting the amount of topsoil and surface material draining into nearby streams.
  
- *Stream bank restoration*  
This is a landscaping and engineering effort to restore the integrity of declining stream banks. Shorelines prone to washouts and erosion issues often need structural repair, and these singular engineering projects can repair the bank's ability to treat and slow stormwater runoff, as well as aiding shade conditions and litter control.

Some of the above measures can be implemented easily and cheaply through special application and coordination of existing programs and work at each government. Reviews of permits and updating of GIS information are regular facets of local government operations, and provided the time frame is permissible the County's would only need to make special notice of efforts related to the creek to ensure the collected/developed information is shared with stakeholders. Specifically, if the efforts related to GIS mapping of information and the reviews of septic tank records are compiled through routine workloads, those materials could be developed at marginal cost.

Where some projects may entail the need for critical investment, some outside funding sources should be called upon to assist local efforts. The following list identifies potential funding sources that the County, City or other stakeholders could pursue to assist with financing special projects and efforts, paying for materials, manpower or specialized lab testing. As the stakeholders begin to address specific tasks, each potential outside funding source should be considered for support. Further, the GMRC and local stakeholders should routinely consult EPA and other organization to learn about other opportunities or funding resources not listed here.

Georgia Environmental Facilities Authority - GEFA's program focus areas are water, wastewater, solid waste, recycling, land conservation, energy efficiency and fuel storage tanks for local governments, other state agencies and non-profit organizations.

Clean Water State Revolving Fund - Programs cover the cost of engineering, planning, and design, construction, and contingencies.

Southeastern Regional Water Quality Assistance Network - Can provide funding to assist communities in water quality and related projects.

NRCS: Environmental Quality Incentives Program (EQIP) - Page maintained by NRCS that contains information on this program that provides monetary and technical assistance.

NRCS: Wildlife Habitat Incentives Program (WHIP) - Page maintained by NRCS that contains information on this program that provided monetary and technical assistance for habitat conservation for fish and wildlife.

US EPA Section 319 Grant Program - Under Section 319, states, territories and tribes receive grant money that supports a wide variety of activities including technical assistance, financial assistance, education, training, technology transfer, demonstration projects and monitoring to assess the success of specific nonpoint source implementation projects.

Community Action for Renewed Environment (CARE) Grants - Projects to help communities reduce toxics in their environment and to solve environmental problems.

5-Star Restoration Program - Must have five or more project partners. Provides environmental education through stream bank and wetland restorations.

**PARTNERSHIP ADVISORY COUNCIL AND PARTNER ORGANIZATIONS**

Any successful environmental protection and mitigation program requires a level of public outreach, education and involvement. This ensures the community is receiving the most information possible to correctly assess the situations and make wise decisions. This also ensures the widest number and variety of stakeholders and potential contaminant contributors are being presented with the information necessary to implement any improvement measures.

While both governments currently provide a modicum of leadership and support to stakeholders in this area, there is no singular existing body designed to discuss and champion local environmental concerns within Hart and Elbert Counties. This means an advisory council to help guide efforts concerning ColdwaterCreek must be developed. The following names of people and organizations have been mentioned for participation in this capacity, and the exact make-up and format for the advisory council will be confirmed within the second year of the WMP development.

Specific measures regarding ColdwaterCreek will include regular communication and meetings with the Partnership Advisory Council (PAC) and other stakeholders. At least one formal meeting per year should be provided for this group, giving them updates on progress with implementation efforts and any water monitoring. Coordination of special implementation measures, such as stream bank clean ups, should be guided by PAC members. The PAC should also advise on how better to reach additional stakeholders in the future regarding soliciting public input or notifying area residents and businesses about the WMP.

NAME/ORG	ADDRESS	PHONE	E-MAIL
John Devine	Northeast Ga. GRC	706.369.5650 x322	jdevine@negrc.org
Lanier Dunn	City of Elberton	706.213.3100	ldunn@cityofelberton.net
David Hudson	Elberton Utilities	706.213.3278	dHUDSON@cityofelberton.net
Byron Stovall	Elberton Utilities	706.213.3278	bstovall@cityofelberton.net
Bob Thomas	Elbert County	706.283.2000	bobthomas@elberton.net
Robert Amos	GWSCC	706.552.4479	ramos@gaswcc.org
Ryan Burgess	NRCS		ryan.burgess@ga.usda.gov
David Leard	Hart Co. Health Dept.	706.376.2582	daleard@dhr.state.ga.us
Charles Rice	Hart Co. Extension Service	706.376.3134	chrice@uga.edu
Clay Talton	Elbert Co. Extension Service		ctalton@elberton.net
Tim Savelle	Oconee RC&D	706.769.7922	savelle.orr.cd@att.net
Chris Thompson	Ga. Forestry Commission	478-954-9867	cthompson@gfc.state.ga.us
Frank Riley	Chest-Chat CRCD	706-897-1676	Frank.ccrd@gmail.com
Leslie George	Chest-Chat CRCD		Leslie30510@gmail.com
Susan Creasy	Chest-Chat CRCD	706.894.1591	susan.ccrd@gmail.com
Adam Hazell	Georgia Mountains RC	770.538.2617	ahazell@gmrc.ga.gov

**SCHEDULE OF SEQUENTIAL MILESTONES**

The following table presents the recommended implementation schedule for to-be-completed actions or newly proposed remediation measures. This assumes the Counties, Cities and other stakeholders are continuing with existing and ongoing measures already discussed in this WMP and/or all previous TMDL plans and reports for Coldwater Creek.

<b>Action Item</b>	<b>Responsible Party</b>	<b>Timeline</b>	
		<b>Begin</b>	<b>End</b>
Promulgation of WMP	GMRC, RC&D	2013	2013
Distribution of 319 Grant program material	GMRC, RC&D	2013	2014
Networking with local stakeholder organizations	GMRC, RC&D	2013	2014
Solicitation of landowners for improvement program	GMRC, RC&D	2013	2014
Updated field survey of watershed	GMRC, RC&D	2014	2014
Review and update of local Comp Plans	GMRC, NEGRC, Counties	2014	2014
Initiation of septic system databases	GMRC, NEGRC, Counties	2014	2015
Survey of agricultural BMPs	RC&D, GFB, EPD	2014	2014
Propose 2 <sup>nd</sup> 319 Grant Application	RC&D	2015	2015
Review WMP for possible amendments	RC&D, GMRC, EPD	2015	2015

*Interim Measureable Milestones*

Part of this process included the development of interim, measurable milestones to gauge progress in implementing the management measures for the watershed. These milestones will measure the implementation of the management measures, such as whether they are being implemented on schedule, as identified and without difficulty.

<b>Action Item</b>	<b>Responsible</b>	<b>Date</b>	<b>Milestone</b>
Promulgation of the WIP	GMRC, RC&D	2013	Summary memo re: distribution
Landowner participation in improvement program	GMRC, RC&D	2014	Contracts, reports to EPD
Septic system database	GMRC, Counties	2014	Copy of latest map and data
Review of BMPs re: agricultural operations	RC&D, GFB, EPD	2014	Summary of results
Updated field survey	GMRC, RC&D	2014	Summary of findings
Convene AC	GMRC, RC&D	2014	Copy of minutes
Targeted water sampling for delisting	GMRC, RC&D	2015	Application for assistance

In addition to the identified milestones, the GMRC and the Counties could collaborate in producing a simple, annual memorandum identifying progress with implementation measures for use in reporting to the PAC, EPD and other stakeholders.

#### **PUBLIC INVOLVEMENT**

During this planning process, public comment and input was solicited through a combination of email notifications to select stakeholders, attendance at a local Cattleman's Association meeting, distribution of notices an open public forum.

Once preliminary stakeholder groups were identified, GMRC staff reached out to those parties and invited further nominations for inclusion in general communications. This led to the creation of an email list used for announcements of the public forums and comment opportunities.

Additionally, a promotional brochure announcing the 319 Grant program for Coldwater Creek was developed and distributed at select locations in the watershed. These notices were provided to the offices for Hart County, Elbert County, the Cities of Hartwell, Royston, Bowman and Elberton. Notices were also provided to the GMRC Council at select council meetings.

Future public involvement will be more aggressively encouraged through specialized promotional and educational material, as well as efforts to include water sampling and monitoring within proposed training and outreach programs for Adopt-A-Stream. Notices about efforts to pursue delisting of the listed Coldwater Creek segment will be featured within environmental notices shared by Elbert and Hart Counties, raising awareness about both the watershed and the overall stewardship programs of local stakeholders.

It has been recommended the Counties also find a way to support a regular environmental advisory committee, or improve regular communication about the watershed with the affected stakeholders such as the extension service and Resource Conservation and Development councils. Coldwater Creek is a major water resource for the area but there is no standing body to regularly champion and monitor the health of the watershed within either county. Closer coordination with these groups could assist in not only regularly communicating the needs and issues of the watershed but also help coordinate management measures among all involved to ensure successful restoration of water quality.

## **RECOMMENDATIONS FOR MONITORING AND CRITERIA FOR MEASURING SUCCESS**

Watershed management plans must include a monitoring component to determine whether progress is being made toward attaining or maintaining the applicable water quality standards. There must be water quality benchmarks to track progress, and the monitoring program should ideally be integrated with the established schedule and interim milestone criteria.

One facet of criteria should be the confirmation of data and conditions through the Counties and Cities programs, utilities or efforts. This can hopefully be done at little to no extra cost by the verification and update of select of records and special actions for Coldwater Creek as part of routine maintenance. This would include the following items:

- Accurate and current inventory of septic systems within the watershed, with as much detail about age and repair history as possible;
- Confirmation of agricultural operations within the watershed and the extent of BMP application;
- Confirmation of no suspected illicit discharges within the watershed;
- Confirmation of no leaks from sewer lines and pump station within the watershed;
- Confirmation of no suspected illicit discharges within the watershed;
- Confirmation that all applicable BMPs are being practiced by the governments, business and property owners and the utility managers.

These actions can be scheduled for the convenience of local government staff where applicable. Any activities requiring additional financial support or additional manpower can be pursued as grant opportunities or the governments can ask other partners (GMRC, NEGRC) to assist. Achievement of the above will at least rule out the probability that any lingering pollution would stem from those sources, and allow the stakeholders to concentrate on animal waste within runoff. Such measures would also ensure the long-term integrity of the stream is more secure due to the overall vigilance and increased knowledge available to the Counties and local stakeholders.

The next foremost criteria for monitoring progress would be the eventual development of a SQAP and pursuit of formal testing to have Coldwater Creek officially removed from the 303(d) list. Should this be performed and the delisting accomplished, then the watershed efforts for the stream can focus on maintenance. Should the effort reveal a continuing problem, the new data can be used to further isolate the probable cause.

All other measures and criteria can be pulled from the list included within the **SCHEDULE OF SEQUENTIAL MILESTONES**.

## **APPENDICES**

- A. USEPA Guidelines for Watershed Planning**
- B. Watershed Maps**
- C. Field Notes and Pictures**
- D. Copies of Public Notices and Other Literature**
- E. Meeting Minutes**

**APPENDIX A - USEPA Guidelines for Watershed Planning**

**GA EPD recommends that the Watershed Management Plan include the following elements to comply with USEPA Guidelines (9 Key Elements):**

- 1) An identification of the sources or groups of similar sources contributing to nonpoint source pollution to be controlled to implement load allocations or achieve water quality standards. Sources should be identified at the subcategory level with estimates of the extent to which they are present in the watershed;

*Addressed in "Ranking and Sources of Impairment," pages 10-11.*

- 2) An estimate of the load reductions expected for the management measures described under paragraph (3) below;

*Addressed in "Recommendations for Management Measures," pages 14-18*

- 3) A description of the NPS management measures that will need to be implemented to achieve the load reductions established in the TMDL or to achieve water quality standards;

*Addressed in "Recommendations for Management Measures," pages 14-18*

- 4) An estimate of the sources of funding needed, and/or authorities that will be relied upon, to implement the plan;

*Addressed in "Recommendations for Management Measures," pages 14-18*

- 5) An information/education component that will be used to enhance public understanding of and participation in implementing the plan;

*Addressed in "Public Involvement," page 21*

- 6) A schedule for implementing the management measures that is reasonably expeditious;

*Addressed in "Schedule and Sequential Milestones," page 20*

- 7) A description of interim, measurable milestones (e.g., amount of load reductions, improvement in biological or habitat parameters) for determining whether management measures or other control actions are being implemented;

*Addressed in "Schedule and Sequential Milestones," page 20*

- 8) A set of criteria that can be used to determine whether substantial progress is being made towards attaining water quality standards and, if not, the criteria for determining whether the plan needs to be revised; and;

*Addressed in "Recommendations for Monitoring and Criteria for Measuring Success," pages 21, 22*

- 9) A monitoring component to evaluate the effectiveness of the implementation efforts, measured against the criteria established under item (8).

*Addressed in "Recommendations for Monitoring and Criteria for Measuring Success," pages 21, 22*

**APPENDIX B - Watershed Maps**

APPENDIX C - Field Notes and Pictures



**Sample Site #1**  
Double Bridges Rd, near intersection w/Coldwater Rd.



**Sample Site #2**  
Harper Farm Rd, near Plantation Rd



**Sample Site #3**  
Plantation Rd, Between Harper Farm Rd and Ridge Rd



Sample Site #4  
Hartwell Hwy, near Hope Dickerson Rd



**Sample Site #5**  
Hartwell Hwy, near Holmes Rd





**Sample Site #6**  
Holmes Rd, near Hartwell Hwy



**Sample Site #8**  
Thermon Adams Rd, near Shiloh Church Rd



**Sample Site #9**  
Bowman Hwy, near Howard Rd



**Sample Site #10**

St. John's CME Church Rd, near Speedway Rd



**APPENDIX D - Copies of Public Notices And Other Literature**



**Chestatee-Chattoohochee RC&D Council**  
**170 Scoggins Drive**  
**Demorest, GA 30535**  
**706-894-1591**

**APPLICATION FOR**

Phase I Cold Water Creek

Watershed Management Plan Implementation Project

I hereby apply for participation in the Cold Water Creek 319 Project Cost-sharing Program. The information given below is part of and supports this application.

**Applicant's Name:** \_\_\_\_\_

**Applicant is:** Owner \_\_\_\_\_ Operator \_\_\_\_\_ Other \_\_\_\_\_

**Applicant's Address:** \_\_\_\_\_

**Applicant's Phone #:** \_\_\_\_\_ **Applicant's Cell Phone #:** \_\_\_\_\_

**County:** \_\_\_\_\_

**Location and Description of Site:** \_\_\_\_\_

\_\_\_\_\_

**Area: Total Acres** \_\_\_\_\_ **and/or Total Miles:** \_\_\_\_\_

**If a farm, check the type of animals presently on your farm and list the total number of each.**

- Poultry **Total Number:** \_\_\_\_\_
- Beef Cattle **Total Number:** \_\_\_\_\_
- Dairy Cattle **Total Number:** \_\_\_\_\_
- Horses **Total Number:** \_\_\_\_\_
- Sheep/Goats **Total Number:** \_\_\_\_\_
- Swine **Total Number:** \_\_\_\_\_
- Other (Crops) **Total Number:** \_\_\_\_\_

**Check/ list the Conservation Practices or Best Management Practices you are requesting:**

- Buffer Fence  Stream Crossing  Heavy Use Area  Watering Facility  Cross Fencing  Comprehensive Nutrient Management Plan (required for cost share on animal waste management practices)

**Other (List practices):** \_\_\_\_\_

This application **DOES NOT OBLIGATE ME** to enter into a contract. If selected for participation, I will cooperate with the Chestatee-Chattoohochee RC&D Council Inc. and the Soil and Water Conservation District(s) with tours, field days and other information or education activities.

**Applicant's Signature** \_\_\_\_\_ **Date** \_\_\_\_\_

**319 GRANT MONEY AVAILABLE FOR HOMEOWNERS AND FARMERS**



**COLD WATER CREEK WATERSHED IMPROVEMENT PROJECT**

**PROJECT DETAILS -**

Beginning in spring 2013 farmers and landowners who implement Best Management Practices (BMPs) on their property can be refunded 60% of their investment for helping to restore the Cold Water Creek Watershed through a grant funded by the Clean Water Act and Georgia Environmental Protection Division.

Natural Resources Conservation Service (NRCS) will provide technical support and expertise throughout the project. The Chestatee-Chattoohochee RC&D Council will provide assistance with the payment process.

This project will be completed with additional assistance from: the Georgia Mountains Regional Commission, The UGA Cooperative Extension Service, and the Soil and Water Conservation Districts of Elbert and Hart Counties.



**CHESTATEE-CHATTAHOOCHEE RESOURCE CONSERVATION & DEVELOPMENT COUNCIL**



# COLD WATER CREEK COST-SHARE IMPLEMENTATION PROJECT 319 WATER QUALITY GRANT



## WHO IS ELIGIBLE?

Residents in northeast Georgia's Counties with property within the Cold Water Creek watershed, which includes portions of Elbert and Hart Counties.

## WHAT IS THE PROGRAM?

A cost-share grant program where reimbursement funding is available for landowners who install approved BMPs in the Cold Water Creek Watershed.

## PROJECT PURPOSE?

To reduce and prevent agricultural, forestry, residential, and municipal non-point-source pollution within the watershed.

## APPLICATION PROCESS -

1. Fill out attached application (last page)
2. Submit completed application to Council Office
3. Meet with your District Conservationist to discuss project
4. Implement BMPs as outlined in Conservation Plan
5. Applications presented to Cold Water Creek stakeholders
6. Contract Support Document is generated by RC&D Council
7. All documents are reviewed and signed.

## FOR MORE INFORMATION -

Please contact the Georgia Mountains Regional Commission's Planning Department  
770.538.2626

## TYPES OF BMPs -

- Access Roads/Unpaved public road stabilization
- Alternative water sources (wells, troughs, pipeline, etc)
- Buffer fencing (15ft minimum buffer)
- Critical area treatment (washes and gullies)
- Forestry BMPs which promote water quality
- Heavy use area protection
- Nutrient management planning
- Prescribed grazing
- Residential septic tank installation & maintenance
- Stackhouse and/or composting facilities
- Stream bank stabilization
- Stream crossing (forded or piped)
- Winter feeder

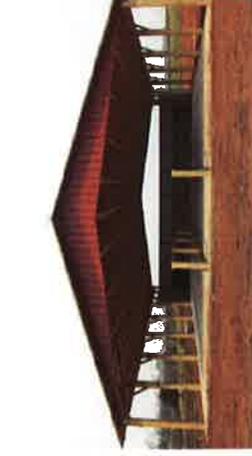
## PROJECT EXAMPLES:



Stream crossing with buffer fence



Manure stackhouse with composter



Winter feeder



Heavy use area (feeding area)



Rerouted logging road with water bars



Heavy use area with water trough

## PLEASE NOTE -

In order to be reimbursed, improvements **MUST** be approved by the Natural Resource Conservation Service (NRCS) prior to the start of work. Unfortunately, BMPs that have already begun will not be eligible for this program and, therefore, are not eligible for reimbursement. Any supplies that have been purchased prior to documents being signed will not be eligible for reimbursement. Participants will be reimbursed only if the project meets NRCS standards and is not already included in other reimbursement programs.

**APPENDIX E - Meeting Minutes**

DRAFT



## **Meeting Notes**

**6/26/12**

### **Cold Water Creek Steering Committee**

#### **Attendance**

Adam Hazell (GMRC)

Leslie George (CCRCD)

Susan Creasy (CCRC)

Clay Talton (Elbert Co. Ext.)

David Leard, (Hart Co. Health Dept.)

John Devine (NEGRC)

Welcome and introductions shared with the group, with Adam providing an overview of the project and the aspirations for the committee. This included an overview of the 319 grant program, how Cold Water Creek has been cited for violations of bacterial/Fecal coliform levels, and that the goal of the project is to produce improvements that will reduce infiltration into the streams.

#### **Potential candidates for invitation to participate on the committee (throughout the meeting)**

Cattleman's Associations

Broad River SWCD

Oconee River RCD

Patrick Hopp – Elbert County Code Enforcement

Stéphen Wooten – Elbert County Health Dept.

Katrina White – NRCS in Elbert County

Ron Ward (Local cattleman)

Poultry industry (Fieldale, Columbia, Mar Jac)

#### **Sites for future consideration as possible sources of pollution**

Richard B Russell State Park

Arrowhead Pt Golf Course

Closed muni landfill outside Hartwell

Hartwell and Cateche Golf Courses

LAS sites owned by two different septic tank cleaning services (JL Adams & Bobby Adams)

The GMRC is in the process of working with the NEGRC and local governments to get updated parcel and land use information for the watershed, and will share such with the committee in the future. It was suggested copies of the current watershed map (shared at the meeting) be shared electronically with everyone, and members were encouraged to use that in communicating with others about the project and in identifying potential sources of pollution.

Both counties have significant presence of cattle and poultry farming. Members of those industries should be brought into the process early on, and efforts to identify potential sources should review locations of these farms carefully. Working with the Cattleman's Association and Poultry producers would also help identify potential partners for future property improvement contracts.



It was asked whether or not illegal dumping could be a cause. Usually that is not the case for bacterial pollution, but in the event such sites are found local and State codes would provide enough cause for the local authorities to require clean up.

It was suggested we contact local elected officials (County Council reps) to encourage their participation, and Adam will craft a letter to this effect (to be reviewed by the committee). Where appropriate, communications in Elbert County will flow through the NEGRC.

It was noted that the City of Bowman does have sewer service outside their city limits, but it's not clear if that reaches into the watershed. The NEGRC is currently working on a project to identify sewer and septic tank service within Elbert County, and we will get that information added to our mapping data.

Adam discussed the general scope of the project. The GMRC will work with the committee to develop the watershed mgmt. plan during the next nine months, which will include preliminary water sampling and some public meetings. The goal of the document is to identify potential sources of contamination and remediation measures to reduce pollution. Once that has been completed the outreach effort will begin to solicit participation among residents and landowners to enter into contracts with the RCD to improve their properties according to NRCS standards. This will be a 2+ year effort with targets for the number of contracts and total funds dedicated to BMP installation.

The Committee will meet approximately 4 more times in 2012 as part of the plan development phase, with an additional 2 meetings to be held in the first quarter of 2013 to close out that particular process. After that the committee will assist the RCD in approving contracts for BMP installation.



## **Meeting Notes**

**8/28/2012**

**Cold Water Creek 319 Steering Committee**

### **Attendance**

(See attached sign in sheet)

### **Discussion Notes**

Adam welcomed everyone and began introductions. A quick overview of the project and the Committee's objectives were discussed.

Adam walked everyone through the required elements and general content of the Watershed Management Plan (WMP), the document required by EPD before any implementation projects can be developed. Copies of instructional material provided by EPD were shared with the group, and the discussion focused on the "Nine Key Elements" that must be included within the WMP. The purpose of the document is to build upon the information already available for the watershed, allowing the Committee to better assess the probable causes of contamination, the methods for addressing those causes, and a formal agenda for implementation and follow up regarding improvement measures to restore water quality. The goal is to develop the WMP by April, and during this part of the process the Committee will assist with identifying potential sources of contamination and their possible locations, recommended remediation measures, and identifying measures for public outreach and education. The GMRC will develop the document as we move forward, sharing draft material with the Committee via email and through additional meetings.

The next major topic was the overview of the Total Maximum Daily Load (TMDL) Implementation Plan that was produced by the NEGRC in 2007. This document was the first formal effort to identify probable sources of contamination within the watershed and is the first resource to be considered by the Committee in developing the WMP. At the time the TMDL Plan identified Agricultural Production as the primary probable source, with wildlife and septic systems considered secondary sources. This plan only addressed the Elbert County side of the watershed, however.

Having introduced that material, the floor was opened for general discussion about the watershed and contributions from the Committee. To begin, the Committee was asked to give their thoughts regarding the present day level of impact from various sources:

#### *Land Application Systems*

- It was recalled that the previous meeting cited 3 possible LAS locations within the watershed. GMRC will confirm their locations and current permit status before the next meeting.
- John (Devine) noted that the TMDL Plan included one map showing LAS permits for the area.



#### *Timber Activity/ Silviculture*

- A significant property has apparently been clear cut near/along Teasley Rd in Elbert County. This is not a traditional timbering property but was recently cleared.
- There has been some logging the past 5 years within WMA property within the watershed.
- It was suggested we try to acquire and review multiple years of aerial imagery for a comparison of land cover, identifying lands recently cleared.
- It was suggested we contact the Georgia Forestry Commission regarding records of logging activity in the area, and to speak with their water quality specialist about issues and trends for timber activity within the watershed.

#### *Wildlife*

- The area is mostly known for deer and hogs, with some pockets of geese.
- There is a preserve (Arrowhead Lodge) on Ruckersville Road in Elbert County.
- No other main properties advertised for hunting, but some large enough to sustain this.
- There is Russell State Park at the bottom of the larger watershed

#### *Industrial Activity*

- Nothing big within this watershed

#### *Livestock*

- Predominantly cattle, horses, poultry and some goats.
- Major producers in the area include Mar-Jac, Fieldale, Pilgrim's Pride. (We need to make a better effort to include representatives from the poultry industry)
- To date, most farmers in the area seem aware of, and participate in, programs that support property improvements to help water quality. Recent programs tend to have more willing participants than money available. (Subsequent discussion highlighted the possible concern for this 319 grant to feature a more stringent 50/50 match rate compared to other grant programs offering 60% or 75% reimbursement. The key note here is that 319 money allows in-kind match in the forms of land donations, personal labor and more)

It was noted there is no current major education or awareness campaign regarding water quality in the area. None of these governments are Waterwise communities. Likewise, there is limited effort in the way of Adopt-A-Stream groups, Keep America Beautiful, etc. Some select events and small scale programs but nothing considered large or ongoing.

Possible locations for posting promotional and educational material for the 319 project include Hopkins (store) on 368/Ruckersville Road and the Tractor Supply Company in Hartwell.

Expanding the discussion about water testing, Adam indicated the GMRC would use this information to present to the Committee possible locations for collecting water samples. The Committee will then provide comment on the options and by the next meeting we'll look to affirm the sampling locations and begin routine water testing. Some sampling will begin as early as late September, prior to the next meeting, to gauge preliminary water quality and to test the accessibility of potential sites.

**P.O. Box 1720 • Gainesville, Georgia 30503 • Phone (770) 538-2626 • FAX (770) 538-2625**



The Committee was asked to consider additional people and organizations that should be invited to participate in the process and to include them in future emails and meetings. The Committee was also charged to consider more input about possible locations of potential sources within the watershed as we work to refine the locations of preferred sampling sites.

The next meeting will be tentatively scheduled in October.



**Georgia Mountains  
Regional Commission**

**COLD WATER CREEK 319  
STERING COMMITTEE MEETING  
August 28, 2012  
10:00 PM  
ROYSTON LIBRARY**

NAME	ORGANIZATION	PHONE #	EMAIL ADDRESS
<i>Leslie Grange</i>	<i>Chest. Chatt R.C.A</i>	<i>706-894-2785</i>	<i>leslie305100@gmail.com</i>
<i>Susan Creasy</i>	<i>Chest-Chest R.C.A</i>	<i>706-894-1591</i>	<i>susan.creasy@gmail.com</i>
<i>Ryan Burgess</i>	<i>NRCS</i>	<i>706-<del>894</del><sup>376</sup>-5451</i>	<i>ryan.burgess@ga.usda.gov</i>
<i>Scotty Palmer</i>	<i>NRCS</i>	<i>706-<del>894</del><sup>376</sup>-5451</i>	<i>scotty.palmer@ga.usda.gov</i>
<i>Andy Dyer</i>	<i>GSWCC</i>	<i>706-552-4478</i>	<i>andydyer@gswww.org</i>
<i>Charles Rice</i>	<i>Hort Ext.</i>	<i>706-376-2221</i>	<i>chrisc@uga.edu</i>
<i>Robert Amis</i>	<i>GSWCC</i>	<i>706-552-4477</i>	<i>ramis@gswww.org</i>



**Georgia Mountains  
Regional Commission**

*Katrina Wilk  
09.11.15*

KATRINA WHITE NACS 706-283-3001

Ron Ward Callahan 706-213-9125

Scott Fleming Callahan 706 436 6590

Tim Saville Oconee River RCAD 706 769 7922

Bob Jones Elbert County Administrator 706-281-2000

JOHN DAVIS NEGRAC 706-613-2912

Steven Wooten Elbert County Health Dept 706-283-3453

David Leard Hart Co Health Dept 706-376-2582

Clay Talton Elbert County Extension 706-488-0153 AstaltonDugan



## **Meeting Notes**

**10/30/2012**

**Cold Water Creek 319 Steering Committee**

### **Attendance**

(See attached sign in sheet)

### **Discussion Notes**

Adam welcomed everyone and shared introductions. A quick update of the project and the Committee's objectives were discussed.

It was noted that Barbara Stitt Allen from EPD was in attendance, as well as Frank Riley, the new Executive Director of the CCRC&D.

Adam presented everyone with the draft Targeted Monitoring Plan. This outlines the strategy and methodology used for collecting and testing water samples within Cold Water Creek for generating a current profile of water conditions. The approach as generated considered Committee guidance on using a high number of collection points (10) to be sampled at least once per month while the Watershed Management Plan (WMP) is under development (estimated 6 months). The approach is to use Adopt-A-Stream methodology for collecting samples and testing those at the GMRC office for Ecoli bacterial counts. This would cheaply and easily identify any hot spots within the watershed, giving the committee and stakeholders an overview of bacterial conditions.

Adam presented the results of the first two sets of samples. This included one sample set without a draw for site #1, which was inaccessible that day due to roadwork. The maps provided also showed one erroneous sample site location: The recommended site along Plantation Road is fenced off along both sides of the stream crossing and thick with vegetation. Accessing the creek here would require trespassing along private property. Two committee members volunteered to contact the landowners in anticipation they would cooperate with the 319 effort and grant access to their property for sampling. This will be pursued with future collections.

Preliminary results indicate only 1 sample site considered highly polluted, but this is a small sample site and the committee was advised to refrain from final assessment until more samples were completed. The suspected hot spot, however, was in a location known to be surrounded by several livestock farms. This area will be the focal point of further investigation with future field surveys and samples.

As the Committee discussed outreach, formal interaction with the Cattleman's Association was suggested. The Elbert County Cattleman's Association was to meet in December and Katrina White felt she could have the GMRC and/or CCRC&D invited to make a presentation. This would be pursued and Adam and Frank would both attend if available on that date. Adam would use that event to spur development of informational brochures and would be prepared to speak if able, using the event to promote the 319 project and begin communications with farmers in the watershed.



Similar events would be explored for Hart County and other stakeholder groups. For the poultry industry it was suggested the Committee needed to make contact with the local integrators. Committee members from both counties offered to look into those contacts and seek ways to begin communicating with those companies. In the meantime, Patrick Hopp of Elbert County would provide the list of known poultry farmers in the area.

Regarding poultry farmers, the question was raised about the ability of 319 implementation funds to build/repair stack houses. While considered permissible there was debate about the value of the impact based upon the cost of each project. Especially since most bacterial problems in polluted waterways stem mostly from other animal wastes. This would be discussed further depending on the pollution trends discovered from the ongoing water sampling.

In regards with working with prospective participants in the implementation stage, the early communication with landowners was considered very favorable but also a need to provide everyone with timelines and reports outlining project benefits. More discussion should be held specifically about the approach to securing buy in and ensuring the participants are given the best help available.

Additional discussion addressed the need to bring the Georgia Forestry Commission to the table. While the volume of forestry land within the watershed was marginal, they're considered a prime resource for working with stakeholders who own and maintain woodland. Adam agreed to reach out to the GFC regarding future participation.

Committee members were encouraged to continue reviewing the watershed for evidence of possible pollution sources and to promote the project as available.

The next meeting will be tentatively scheduled in December.



**Georgia Mountains  
Regional Commission**

**COLD WATER CREEK 319  
STEERING COMMITTEE MEETING  
October 29, 2012  
10:15 PM  
ROYSTON LIBRARY**

NAME	ORGANIZATION	PHONE #	EMAIL ADDRESS	MILAGE
Leslie George	ChestChatt	706-218-5458	leslie.ccrcc@regional.com	
Susan Creasy	ChestChatt	706-894-1591	susan.ccrcc@gmail.com	
Frank Riley	ChestChatt	706-897-1676	Frank.ccrcc@gmail.com	
Barbara Smith	EPD	404-675-1719		
Tim Smalley	Oconee River Region	706-769-7922	smalleort@att.net	

Cold Water Creek 310 10-29-12



**Georgia Mountains  
Regional Commission**

NAME	ORGANIZATION	PHONE #	EMAIL ADDRESS	MILAGE
JOHN DUVENE	NEERC	706-369-5650	jdvene@neerc.org	?
David Leard	Hatch HD	855-6019 706-376-2582	leard@sbj.us	24 Road Trip
Patricia Hagg	Elbert County BOC	706-213-1000	Phagg@elbertco.net	45
Steven Wooten	Elbert Co. E.M. Health	706-283-3953	swooten@elbr.st-ge.ga.us	45
Frederick Dilbeck		706-576-5451	Fred.Dilbeck@GANSOA.Gov	20
Katrina White	NRCS	706-283-7021 X3	Katrina.White@gs.usda.gov	30 X2
Scotty Palmer	NRCS	706-376-5451	scotty.palmer@gs.usda.gov	

Cold Water Creek 310 10-29-12



## **Meeting Notes**

**03/05/13**

**Cold Water Creek 319 Steering Committee**

## **Attendance**

(See attached sign in sheet)

## **Discussion Notes**

Adam welcomed everyone and shared introductions. A quick update of the project and the Committee's objectives were discussed.

First thing discussed was the expansion of the project area to include the full HUC-10 Cold Water Creek watershed. This move would feature land outside and downstream from the targeted stream segment cited within the original TMDL, but there are other listed segments throughout the watershed. More importantly, this would provide a larger pool of landowners available for the implementation phase. The Committee was supportive of the move and would begin considering critical concerns in the expanded watershed regarding possible pollution sources and opportunities for mitigation measures. Adam provided some maps showing preliminary information about the expanded watershed, with a promise to include more details, such as land use and identified permitted discharge locations, as soon as that data becomes available.

There was a comment suggesting priority should be given to potential mitigation projects within the original watershed, so as to ensure the best possible improvement for the targeted stream segment. This would be considered going forward and it was agreed that promotional and outreach efforts would give special attention to the original watershed.

Adam proceeded to share updated drafts of the Watershed Management Plan (WMP) with the Committee. A quick refresher about the general scope and content of the document was discussed, with Adam noting that the goal of this phase in the planning process was to complete the WMP and use that as a guide for future implementation efforts. The Committee would reconvene in April in hopes of reviewing and approving a complete draft for submittal to EPD, and then begin the earnest efforts to promote the 319 program and target/solicit participants in the implementation phase.

Adam then used the document to highlight results from sampling thus far. 5 samples have been collected from the ten sites, and preliminary results indicate 3 sites with bacterial counts above or close to the recommended threshold (see draft WMP for tables and details). The Committee reviewed the data and discussed these results in conjunction with available information about land use, owners and agricultural practices within those areas. Sampling site #3 had the highest scores and was above the threshold, with confirmed agricultural and livestock operations immediately upstream. Committee members noted the consistent downward trend of the scores, however, and it was suggested the results may indicate that a singular or seasonal event from last fall may be responsible. Several members volunteered to try to contact the landowner and explore that theory.



Concerns for other sites were more muted, as none of the other sites showed a consistently high score indicative of being a persistent problem area. Discussion turned to general knowledge of the uses and activities in the watershed and what agricultural and livestock practices could be involved.

The Committee recalled previous discussions of quantities of chicken litter produced in the area and dumped onto fields and agreed this is a big issue in this watershed. Farmers need a means to dispose or sell and transport excessive amounts of litter. Examples were referenced of how select farmers have been successful in using stack houses and/or having litter shipped to other farms, and these ideas should be explored for this watershed. It was noted, however, that chicken litter is traditionally a limited factor in aquatic bacterial counts and that the primary focus should be other animal wastes.

In discussing landowner implementation, it was asked if there were limits for each and every contract. Leslie and Susan noted that there is no limit for individual contracts, but that the 319 effort as a whole had a fixed budget for implementation and that a minimum # of contracts must be attained. For every landowner that uses less than the average share of implementation funds, additional money could go to the other landowners for either larger contracts or more contracts overall. The Committee would be used to help the CCRC&D in managing the application of these funds so as to meet the 319 terms and achieve the best impacts on improving the watershed, as well.

Committee members were encouraged to continue reviewing the watershed for evidence of possible pollution sources and to promote the project as available. They were also tasked with drafting their own comments and scores for the tables within the WMP that prioritize pollution sources and proposed mitigation measures.

The next meeting will be scheduled in April.



**Georgia Mountains  
Regional Commission**

March 5, 2013  
Coldwater Creek

<u>Name</u>	<u>Organization</u>	<u>Contact Info</u>	<u>R/T mileage</u>
Kathina White	NRCS	706-283-3021	4
Susan Crenay	Chest-Chest RCD	706-894-1591	0
Steven Wooten	Elbert Co. Health Dept.	706-283-3453	4 / 40 <sup>mi</sup>
Leslie George	Chest-Chest RCD	706-894-2785	
Patrick Hagg	Elbert County	706-213-1010	1.2
Bob Thomas	Elbert County	706-283-2100	1.2 mi
Frank Riley	Chest-Chest RCD	706-897-1676	180



## **Meeting Notes**

**04/30/13**

**Cold Water Creek 319 Steering Committee**

## **Attendance**

(See attached sign in sheet)

## **Discussion Notes**

Adam welcomed everyone and shared introductions. A quick update of the project and the Committee's objectives were discussed. It was also mentioned that members of the general public were invited to sit in to view the draft WMP and offer comments during and after the Committee meeting. (No members of the public attended.)

Copies of the draft WMP were shared with the Council, with Adam pointing out the material that remained incomplete. Particularly, the tables on pages 13 and 15 that attempted to quantify and rank potential pollution sources and mitigation measures needed more content and guidance from Committee members.

The Committee began to review the Assessment of Potential Pollution Sources, offering their suggested scores and rankings for each. It was noted that silviculture and illicit discharges were not among the categories listed but should be added. This would allow the WMP to support mitigation measures in the event that such activity is subsequently found to be contributing to pollution. Agricultural sources received the highest scores and most attention, but it was noted by several attendees that none of these sources is likely at fault for the pollution by themselves. Rather, any issues within Cold Water Creek are most likely the collective result of activity from all sources mentioned. As a result the Committee advised promotion of mitigation measures should reinforce this message that no single source is at fault but that all mitigation activity contributes to sustaining water quality.

In assessing the proposed mitigation measures the Committee focused on the feasibility of proposals as well as potential effectiveness. Rather than concentrating on particular best management practices it was suggested the emphasis going forward was on doing any and all measures possible to help each property pursue improvement measures. Part of this was to maintain the established momentum of proactivity and heightened awareness of water quality issues among area landowners. While some "big ticket" items such as community stackhouses were discussed, the Committee wanted the outreach and implementation effort to be comprehensive.

One specific initiative suggested was to sustain an education and promotional campaign through the local stakeholder groups, such as the Cattlemen's Association and the Georgia Farm Bureau. Another was to help the local governments in their monitoring and assessment of septic tank maintenance. By building programs and policy the hope is to sustain lasting results.



The Committee discussed the decline in participation for the last two meetings and Adam noted he would try to speak with all the absent members in the subsequent days. Even though it's not uncommon for members to miss meetings we wanted to be sure of everyone's input.

It was also asked if the Committee would be continuing after this phase. Adam noted that the Committee would be called upon to help coordinate the various elements of the next phase but that might mean only 1-2 meetings and would not necessarily require everyone at the same event. Future efforts will be focusing on implementing the WMP and following through on the guidance offered by the Committee, so their involvement going forward will be more about making new contacts and having Committee members participate in support of project events.

The Committee also reviewed the larger watershed maps to identify any additional areas of concern. It was agreed that adding the full watershed to the project was a good decision and while there were no specific changes to the priority issues and objectives because of the expanded area the Committee members would continue to speak with other locals and stakeholders for additional input.

No additional meeting would be scheduled at this time but Adam or Susan would notify everyone when a meeting would be necessary. Everyone was encouraged to share the draft material and contact Adam with any questions or comments.



**Georgia Mountains  
Regional Commission**

**COLD WATER CREEK 319  
STEERING COMMITTEE MEETING**

April 30, 2013  
10:15 PM

Elberton 4H Office

NAME	ORGANIZATION	PHONE #	EMAIL ADDRESS	MILAGE
Laura Creasy	RCFD	706-894-1591	5021957@gmail.com	
Leslie Savage	Road	706-594-8785	leslie@ccspool.com	
Kathleen White		706-283-3201	Kathleen.White@g3.usdoh.nv.gov	
Frank Hopp		706-213-1000	phopp@elberton.net	
Andy Dyar	GMDL	706-552-4479	adylar@gaswcc.org	
Frank Riley	Checklist RCFD	706-877-4676	Frank.cered@gmail.com	

Cold Water Creek 310 10-29-12