Auchumpkee Creek and Ulcohatchee Creek Watershed Management Plan 2017

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TABLE OF CONTENTS

LIST OF TABLES:

LIST OF FIGURES:

1. SUMMARY

This document describes an interim framework for the implementation of Total Maximum Daily Loads (TMDLs). This interim framework is intended to guide and document the evolving local policies and procedures for advancing consistency with water quality standards. This documentation is intended to promote internal coordination among local, state, and federal agencies and to help inform the general public and commercial interests.

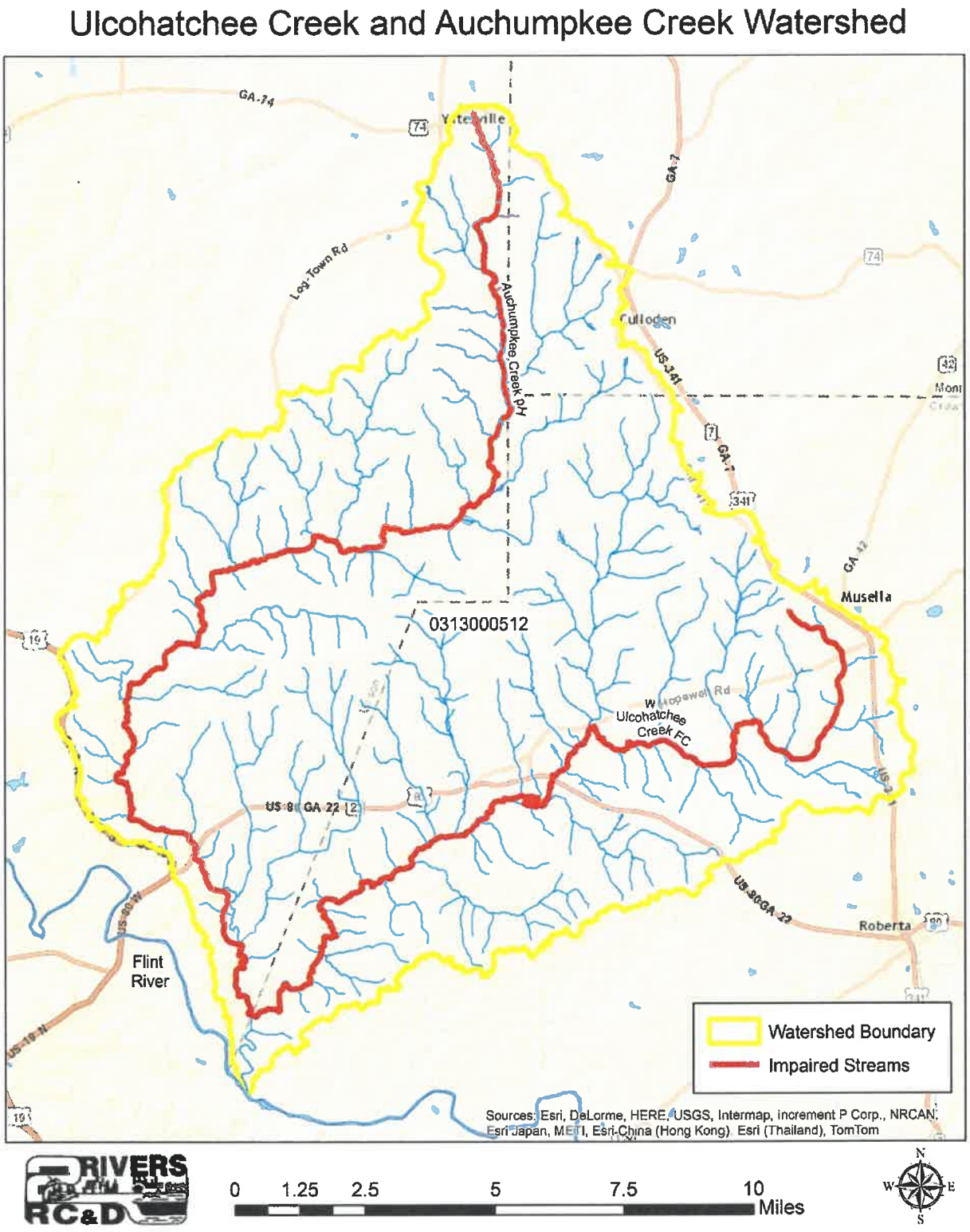
2. INTRODUCTION

The Federal Clean Water Act (33 U.S.C. §§ 1251-1387) allows the U.S. Environmental Protection Agency (EPA) to delegate authority to states to implement a technical and administrative framework for managing water quality. Those assigned responsibilities include setting water quality standards, assessing water quality, identifying waters that do not meet standards, establishing limits on impairing substances, and issuing permits to ensure consistency with those pollutant limits.

For waters that do not meet water quality standards due to an excessive pollutant load, the State must conduct a scientific study to determine the maximum amount of the pollutant that can be introduced to a waterbody and still meet standards. That maximum amount of pollutant is called a Total Maximum Daily Load (TMDL). A TMDL is a means for recommending controls needed to meet water quality standards, which are set by the state; a TMDL determines how much of a pollutant can be present in a waterbody. If the pollutant is over the set limit, a water quality violation has occurred. If a stream is polluted to the extent that there is a water quality standard violation, there cannot be any new additions (or "loadings") of the pollutant into the stream until a TMDL is developed. Pollutants can come from point source and non-point source pollution. Examples of pollutants include, but are not limited to: Point Source Pollution – wastewater treatment plant discharges and Non-point Source Pollution – runoff from urban, agricultural, and forested areas – such as animal waste, litter, antifreeze, gasoline, motor oil, pesticides, metals, and sediment. The purpose of developing a Watershed Management Plan for Auchumpkee Creek and Ulcohatchee Creek is to provide a tool that demonstrates a holistic approach to water quality management. The TMDL report is reviewed by the public, revised, and then submitted to the EPA to be considered for approval.

The Auchumpkee Creek and Ulcohatchee Creek Total Maximum Daily Load (TMDL) Watershed Management Plan defines the approach to planning, implementing, and evaluating the effectiveness of best management practices (BMPs) with the goal to achieve the wasteload allocations (WLAs) for fecal coliform (FC) and pH loads in order to restore beneficial uses of the Auchumpkee Creek and Ulcohatchee Creek Watershed (Figure 1).

FIGURE 1. ULCOHATCHEE CREEK AND AUCHUMPKEE CREEK WATERSHED.



Watershed Management Plans require the development of a process to develop and implement a plan document for the purpose of: 1) creating the local network of partners; 2) identifying and securing the resources needed to fund and install the management practices and activities that would best achieve the pollutant load reductions needed to meet the TMDL and restore water quality; 3) verifying major sources or impairment; 4) developing a TMDL Implementation Plan that would address USEPA's 9-Key Elements of Watershed Planning; and 5) providing the information needed to support applications for funding (such as EQIP, Section 319(h), GEFA, or others), or identifying existing funding sources such as utility fees, SPLOST, or others.

3. Segment and Watershed Description

One of the first steps in understanding a watershed is through the discovery of its general and natural history. This section presents an overview and characterization of the Auchumpkee Creek and Ulcohatchee Creek watershed. The successful application of BMPs in the Auchumpkee Creek and Ulcohatchee Creek watershed will depend on the TMDL components, the physical characteristics of the watershed, and regulatory requirements. By having a general knowledge of history and natural resources of the area, an understanding and appreciation of its existence can be established.

The Ulcohatchee Creek and Auchumpkee Creek HUC 0313000512 watershed is primarily located in Crawford County and Upson County, although 5,787 acers lie in Monroe County in the north-eastern portion of the watershed. The watershed encompasses approximately 100,872 acres.

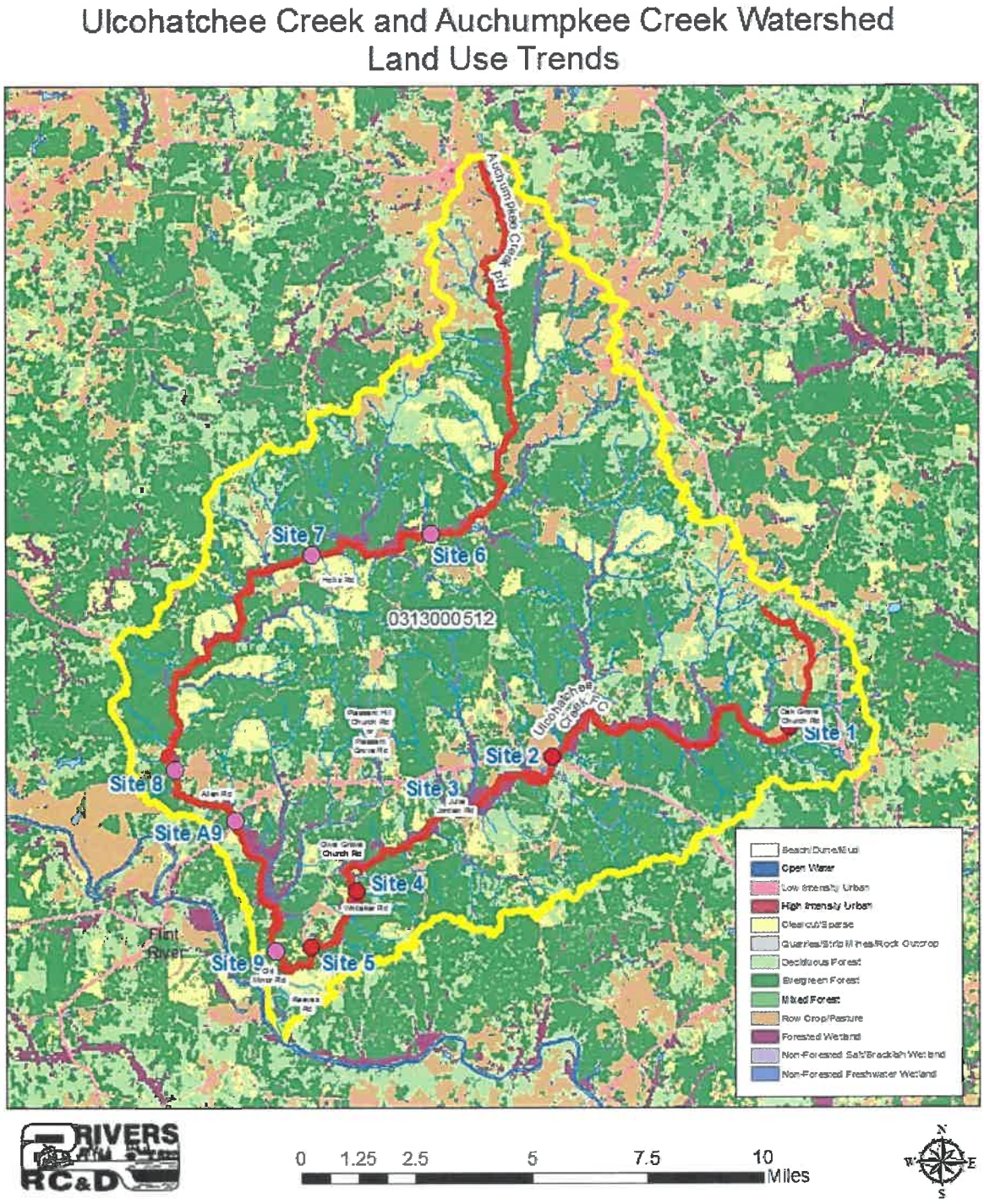
Approximately 323 miles of navigable streams are found throughout the watershed. These streams are predominately first and second order. The two primary streams, Auchumpkee Creek and Ulcohatchee Creek are both fourth order streams. These two flow south-west and run parallel to each other until converging in the south-west portion of the watershed. The northern-most Auchumpkee Creek spans 23 miles within the watershed, while Ulcohatchee Creek spans 16 miles. These two streams converge and flow 2 miles until emptying into the Flint River. The Flint River flows south to Lake Blackshear and then to Lake Seminole. At this point, the Flint River converges with the Chattahoochee River to form Lake Seminole at the Georgia-Florida border. The outflow from Lake Seminole forms the Apalachicola River in Florida, which ultimately discharges to the Gulf of Mexico.

According to the 2017 "The Georgia County Guide," the main land coverage within Crawford County, Monroe County, and Upson County is forestland at 86.2%, 73.1% and 70.4% respectively. The watershed holds approximately 131 acres of lakes and 5,488 acres of wetlands.

Figure 2 shows the Auchumpkee Creek and Ulcohatchee Creek watershed Land Use Trends of 2008 prescribed by Natural Resources Spatial Analysis Laboratory. This map demonstrates the characteristics of the land use cover within the watersheds. Information on the unified soil classifications and representative slopes throughout these watersheds can be found in Appendix C.

The Auchumpkee Creek and Ulcohatchee Creek watershed's climate is classified as humid - subtropical (Cfa) according to the Köppen climate classification system. Winters are cool and short with periodic cold spells moderating in 1-2 days. Summers are hot and humid. Annual precipitation averages to 51.2 inches and is spread evenly throughout the year (2-5 inches each month). Measurable snowfalls are very rare with a less than 5% probability each year. When they occur, snowfall amounts are most always less than one inch and melt quickly. In winter, the average minimum daily temperature is 39.2° F. In summer, the average maximum daily temperature is 91.8° F. The first winter freeze typically occurs in early November, and the last freeze typically occurs in mid-March. The frost-free season ranges from 230 to 260 days.

FIGURE 2. ULCOHATCHEE CREEK AND AUCHUMPKEE CREEK WATERSHED LAND USE TRENDS.



4. Water Quality Impairments and Total Maximum Daily Loads (TMDLs)

Water quality standards address the federal requirement "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters" (Clean Water Act §101). The broad term "water quality standards" encompasses the adoption of "designated uses" and specific "criteria" that indicate whether or not the uses are being achieved.

The Georgia 2014 305(b)/303(d) list of waters was prepared as a part of the Georgia assessment of water quality prepared in accordance with Sections 305(b) and 303(d) of the Federal Clean Water Act and guidance from the U.S. Environmental Protection Agency (EPA). Assessed water bodies are classified according to a comparison of water quality monitoring results to water quality standards and other pertinent information. Table 1 depicts the 2014 list of impaired streams located within the Auchumpkee Creek and Ulcohatchee Creek watersheds and their impairments. There are no supporting streams within these watersheds.

Table 1. Ulcohatchee Creek and Auchumpkee Creek Watershed 2014 303(d) List.

Waterbody Name	Location	County(s)	Impairment	Miles Impacted	Designated Use	Category
Ulcohatchee Creek	Headwaters to Auchumpkee Creek	Crawford	FC	16	Fishing	4a
Auchumpkee Creek	Headwaters to Ulcohatchee Creek	Crawford, Upson	pH	23	Fishing	5

Source: Georgia Department of Natural Resources, Environmental Protection Division, 2014

Ulcohatchee Creek, from the headwaters to Auchumpkee Creek (16 miles), was placed on the Section 303(d) list by the Georgia Environmental Protection Division (GA EPD) for violating the state standards for fecal coliform (shown in table above as FC). Based off of information provided in GA EPD's 2003 *Total Maximum Daily Load Evaluation for Twenty-Eight Stream Segments in the Flint River Basin for Fecal Coliform*, a TMDL called for a 1% reduction in fecal coliform for Ulcohatchee Creek. The GA EPD Sampling Station #RV113449, located at Reeves Road (32.708923 °, -84.18779°), is where GA EPD monitors this section of the creek. Georgia's instantaneous standard specifies that fecal coliform concentration in the stream water shall not exceed the 30 – day geometric mean of 200 cfu/100 mL for the months of May through October, and 1,000 cfu/100 mL for the months of November through April.

A 23 mile stretch of Auchumpkee Creek, from its headwaters to Ulcohatchee Creek, was placed on the 303(d) list by the GA EPD for violating the state standards for pH. EPA or GA EPD has not issued a TMDL evaluation for Auchumpkee Creek. However, Georgia's numeric pH criterion (6.0 to 8.5) should be used as the TMDL target. The GA EPD Sampling Station #RV113773, located at Old Minor Road (32.70836 °, -84.19827°), is where GA EPD monitors this section of the creek.

This TMDL for fecal coliform has an implicit margin of safety embodied in the endpoint identification. By defining the endpoint in the same units as the impairment, concentration in mg/L, at a geographic point within the drinking water source, the TMDL assures that successfully meeting the endpoint will also eliminate the impairment. Units of percent can be used to quantify the standard TMDL equation: LA + WLA = TMDL. This equation describes both the allocation of allowable loading and the allocation of responsibility for reducing loading to the extent necessary to achieve the endpoint. There is minimal utility in attempting to define a precise target for loading when concentration is the important and controlling factor. Using the data set resulting in the violations of fecal coliform levels suggests that a load reduction of approximately 1% would result in attainment of the standard for the fecal coliform impairment.

As a result of the water quality impairment, Ulcohatchee Creek was assessed as "not supporting" the Clean Water Act's standards for the designated use of fishing. In order to remedy the water quality impairment pertaining to fecal coliform, a TMDL has been developed, taking into account all sources of contamination. Upon implementation, the TMDL for Ulcohatchee Creek shall ensure that the water quality standard relating to fecal coliform load levels will be in compliance with the fecal coliform geometric mean standard.

A TMDL establishes the total pollutant load a waterbody can receive and still achieve water quality standards. Because pH is not a load, but rather a measure of acidity and/or alkalinity of a given solution, the TMDL uses an "other appropriate measure" (40 CFR Section 130.2(i)) rather than an actual mass-per-unit time measure. The State's numeric pH criterion (6.0 to 8.5) is used as the TMDL target (other appropriate measure). The final TMDL ensures both point and non-point source activities meet the pH criterion at the point of discharge.

5. Visual Field Survey

A visual survey of Auchumpkee Creek and Ulcohatchee Creek is very important. The purpose of a visual survey is to determine if there are observable problems in the stream and to characterize the environment through which the stream flows. The visual survey helps pinpoint areas that may be the source of water quality problems and helps to familiarize the overall condition of the stream. The Visual Field Surveys were conducted on November 14, 2016 for both stream segments. See Appendix D for field notes and pictures.

6. Ranking and Prioritizing of Significant Sources of Impairments

The Advisors/Stakeholders have provided input on potential sources listed in the last Implementation Plan at the Advisory/Stakeholder meetings held on May 4, 2017 and November 14, 2017. Visual field assessments made from October 2016 through September 2017 yielded additional pollution sources. Tables 2 and 3 address the sources of impairment and their estimated contribution (1 being little or no contribution and 5 being great contribution).

More than ten farms within the Ulcohatchee Creek watershed have been identified to support livestock. These operations primarily carry cattle; however, horses, donkeys, and goats are also

present. Many of these locations allow the livestock direct access to Ulcohatchee Creek and its tributaries. The Partnership Advisory Council identified poultry operations that house over 32,000 chickens near the confluence of Auchumpkee Creek and Ulcohatchee Creek; however, the council states that the operations follow all Georgia Department of Agriculture rules and regulations and likely do not contribute to any runoff.

Illegal carcass dumping has been extensively documented throughout the state of Georgia. Additionally, the rural setting of the watershed often results in large numbers of road kill. These carcasses typically remain on or near roadways until full decomposition. Their presence attracts large groups of scavenging birds. The waste from these large groups of birds often surrounds the rotting carcasses. Eventually washing into the waterways, this further contributes to fecal coliform contamination.

The land area within this watershed is classified as rural with no wastewater infrastructure. The few homes within the area are adequately spaced out to ensure proper septic system functionality. In addition, the local health departments have not issued any citations for failing septic systems.

Wildlife is also a contributor to fecal coliform contamination; however, this should be considered a natural "background" level.

The sources of low pH in this watershed may be tied to natural and anthropogenic means. Because the predominate land use is related to agriculture and forestry, agricultural erosion and runoff of the naturally low pH soils may be a potential source. Runoff of fertilizer and vegetative decay are also potential sources of low pH. It is possible that the low pH is naturally occurring due to biological activity associated with woody wetlands.

TABLE 2. FECAL COLIFORM SOURCES OF CONTAMINATION FOR ULCOHATCHEE CREEK.

Source	Extent (Miles, acres, etc.)	Permitted (Y/N)	Estimated Contribution (Rank 1 – 5)	Stakeholder Opinion (1 – 5)	Comments
Livestock and agricultural uses	100+ acres	unsure	5	5	There are many livestock operations with cattle within this watershed. In many areas, cattle can enter directly into the stream.
Illegal dumping/ roadkill	25+ miles	NA	2	2	Hunters occasionally illegally dump unwanted remains of carcasses over bridges and/or directly within the stream. Carcasses left in wooded areas eventually get washed into the stream as well.

Scavenging Birds	25+	NA	1	1	Dumped carcasses attract large groups of these birds that feed and defecate along the roadways.
Septic Systems	0	Y	1	1	The homeowners within this watershed have not reported any septic repairs.
Wildlife	100,000+ acres	NA	2	2	As in many areas of Georgia, feral hogs are invasive and contribute to contamination; Other animal wastes should be considered natural background sources.

TABLE 3. PH IMBALANCE SOURCES OF CONTAMINATION FOR AUCHUMPKEE CREEK.

Source	Extent (Miles, acres, etc.)	Permitted (Y/N)	Estimated Contribution (Rank 1 – 5)	Stakeholder Opinion (1 – 5)	Comments
Agricultural Uses	100+ acres	Unsure	3	3	Possible introduction from normal practices when BMPs are not followed
Submerged aquatic vegetation	10 miles	NA	2	2	Possible introduction from vegetation in between sample sites
Rapidly growing algae	10 miles	NA	2	2	Possible introduction from algae in between sample sites

7. IDENTIFICATION OF APPLICABLE EXISTING MANAGEMENT MEASURES

Several Best Management Practices are for the Ulcohatchee Creek and Auchumpkee Creek watersheds. Upson, Crawford, and Monroe Counties strive to keep waterways clean and have implemented several ordinances to reduce the pollution levels within the watersheds. Table 4 describes these ordinances and responsible entities.

TABLE 4. EXISTING MANAGEMENT MEASURES FOR ULCOHATCHEE CREEK AND AUCHUMPKEE CREEK.

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description
Use of storm water BMPs for all new development	Crawford County, Monroe County, Upson County	All new development will require storm water best Management Practices to be installed.
Implementation of land use measures that will protect the natural resources within the community	Crawford County, Monroe County, Upson County	Measures will include steep slope regulations, floodplain or marsh protection, etc.
Adoption of planning and zoning ordinances to ensure proper control of water and septic systems	Crawford County	1) assure building permits 2) require health department check for soil suitability for septic tank use prior to allowing occupancy of new structures 3) provide population density control by enactment of enforcement of a county-wide zoning ordinance
Groundwater Recharge Ordinance	Crawford County, Monroe County	Establishes requirements to manage land use within significant groundwater recharge areas.
Wetland Protection Ordinance	Crawford County, Monroe County, Upson County	Establishes boundaries around wetlands within the town and limits types and density of development to protect water quality and habitats in these areas.
Part V Environmental Planning Criteria Ordinance	Crawford County, Monroe County	New wetlands, groundwater, and river corridor protection standards.
Enforcement of soil erosion, storm water BMPs	Crawford County, Monroe County	Protects water quality through sedimentation and erosion control by establishing BMPs and regulating land-disturbing activities.

Storm water is the result of rain that collects in an area and can drain into a nearby body of water, such as a lake or river. The water can collect on roof tops, parking lots, saturated ground, roads, etc. The problem is large amounts of the pollutants of our modern living – such as oil, grease, pesticides, sediment, salt, and animal waste – are washed away within the storm water and flow directly into any adjacent bodies of water. Even following a moderate rainfall, the storm water pollution can be significant enough to cause the water quality in the adjacent public

water areas to violate federal and state standards for swimming and boating as defined by the EPA and state health departments.

Storm water best management practices are methods designed to control storm water runoff incorporating sediment control and soil stabilization. They also define management practices that can prevent or reduce non-point source pollution. The Environmental Protection Agency defines storm water BMPs as a "technique, measure or structural control that is used for a given set of conditions to manage the quantity and improve the quality of storm water runoff in the most cost-effective manner."

The Wetland Protection Ordinance prevents the formation of densely populated areas. Throughout this watershed, and immediately around Auchumpkee Creek and Ulcohatchee Creek, there are no heavily populated areas.

One of the goals of the Georgia Planning Act of 1989 is the protection of our state's natural resources, environment, and vital areas. Included in the Act are minimum standards and procedures generally known as the "Environmental Planning Criteria" or "Part V Criteria" (from Part 5 of House Bill 215, which became the Planning Act). To maintain eligibility for certain state grants, loans, and permits, local governments must implement regulations consistent with these criteria.

The Rules for Environmental Planning Criteria (Chapter 391-3-16) were developed by the Georgia Department of Natural Resources (DNR) and are part of the local government planning standards. The rules direct local governments to establish local protection efforts to conserve critical environmental resources. They are divided into the following five sections:

- Water Supply Watersheds
- Groundwater
- Wetlands
- Protected Rivers
- Protected Mountains

Beyond the ordinances listed above, there are not any watershed planning activities related to the Auchumpkee Creek and Ulcohatchee Creek watershed impairments that are known by the staff at Two Rivers Resource Conservation and Development (RC&D) Council.

8. Recommendations for Additional Management Measures

To address the pH imbalance within the Auchumpkee Creek watershed, management practices should be installed on the agricultural fields within the area. These practices, as shown in Table 5, can include vegetative buffers, filter strips, and silt fencing, which will help reduce the runoff of the agricultural chemicals that are contributing to the pH imbalance. In addition, carbonate materials and limestone are two elements that can buffer pH changes in water. Calcium carbonate ($CaCO_3$) and other bicarbonates can combine with hydrogen or hydroxyl ions to

neutralize pH. When carbonate minerals are present in the soil, the buffering capacity of water is increased, keeping the pH of water close to neutral even when acids or bases are added. Limestone could be dispersed throughout the watershed to help alleviate these pollutions levels. On agricultural fields, not only can limestone help neutralize the soil, but it can also provide a source of calcium and magnesium for plants and improve the uptake of major plant nutrients, such as nitrogen, phosphorus, and potassium, for plants growing on acidic soils.

Advisors expressed various concerns about a number of activities within the Ulcohatchee Creek watershed that may contribute to fecal coliform pollution. To address these fully, Two Rivers RC&D Council proposes the use of DNA/microbial source tracking, which will assist in determining the best type and location for BMPs. This will help to determine more confidently if the source is coming from unnatural carcass dumping, related scavenging birds, runoff from agricultural fields using poultry litter, feral hogs, or cattle operations in the area. For example, DNA/microbial source tracking could suggest that an area originally believed to be impacted by a cattle, might actually be experiencing an unnoted feral hog problem. With DNA/Microbial source tracking, discoveries could be made before financial commitments were put towards something more suited to address decaying carcasses rather than the real issue of cattle operations. Assessing these possibilities in depth before implementation of BMPs ensures that efforts are not wasted.

Management practices that can be used on livestock operations to help alleviate fecal coliform contamination include, but are not limited to, vegetative buffers, fencing, alternate watering sources, silt fencing, stream crossings, and heavy use areas. A composting facility can be installed in areas where there is problem carcass dumping or abundant road-kill.

Citizens within the Auchumpkee Creek and Ulcohatchee Creek watersheds should be educated on how improper management practices can impact the water quality of neighboring streams. Workshops or educational handouts should be utilized to further better the water quality within these watersheds.

TABLE 5. SUGGESTED ACTIONS AND MEASURES TO ADDRESS IMPAIRMENTS.

Action/Best Management Practice	Category	Water Quality Criteria to be Addressed	BMP Estimated Effectiveness
DNA/microbial source tracking	Source determination – BMP placement	Fecal coliform	n/a
Vegetative buffers	Agricultural BMP	pH and/or Fecal coliform	59%
Filter strips	Agricultural BMP	pH	60%
Fencing	Agricultural BMP	Fecal coliform	99%
Alternate watering sources	Agricultural BMP	Fecal coliform	15%
Silt fencing	Agricultural BMP	pH and/or Fecal coliform	68-98%
Stream crossings	Agricultural BMP	Fecal coliform	30-50%
Heavy use area	Agricultural BMP	Fecal coliform	80%

Application of calcium carbonate or limestone	Agricultural BMP/Surface water BMP	pH	Unknown
Cross fencing	Agricultural BMP	Fecal coliform	99%
Pond ramp	Agricultural BMP	Fecal coliform	40%

9. Partnership Advisory Council and Partner Organizations

An Advisory Group was formed to provide input for this Watershed Management Plan. Representatives include agriculture and forestry professionals, members of local governments, as well as health, safety, and environmental professionals. Table 6 shows the members of the Advisory Group.

Table 6. Advisory Group for Ulcohatchee Creek and Auchumpkee Creek.

Name	Address	City	State	ZIP	Organization
Carol Oliver	231 Hwy 41 N. Suite B	Barnesville	GA	30204	NRCS
Harold West	1199 Madison Rd.	Eatonton	GA	31024	GA Forestry Commission
Jeff Sibley	187 Corinth Rd.	Newnan	GA	30263	GA Forestry Commission
Brandon Baker	1014 MLK Jr. Dr.	Ft. Valley	GA	31030	DNR – Fisheries-Wildlife Resources Division
Lance Renfrow	100 Ridley Ave.	LaGrange	GA	30240	Two Rivers RC&D
Brenda Corral	1011 Highway 341 North	Roberta	GA	31078	Crawford County Development Authority
Suzi Scott	1011 Highway 341 North	Roberta	GA	31078	Crawford County Development Authority
Joey Sims	1011 Highway 341 North	Roberta	GA	31078	Crawford County Water
Jeff Harrison	1011 Highway 341 North	Roberta	GA	31078	City of Roberta
Bill Patton	1011 Highway 341 North	Roberta	GA	31078	Crawford County Water
Brenda Logan	231 Hwy 41 N. Suite B	Barnesville	GA	30204	NRCS

The TMDL Advisory Group is a collection of individuals who bring unique knowledge and skills that help to more effectively accomplish this plan. The purpose of the TMDL Advisory Group is to provide a forum for the public, partners, etc. to discuss potential concerns and solutions that will impact Auchumpkee Creek and Ulcohatchee Creek and to make recommendations relative to TMDLs.

The Advisory Group's key responsibilities were to:

- **Advise** on matters of concern to the community;
- **Contribute to the education** of the residents of the watershed on water quality issues;
- **Help identify** contributing pollution sources;
- **Assist** in arriving at equitable pollution reduction allocations among contributors;
- **Recommend specific actions** needed to effectively control sources of pollution; and
- **Help develop** and set in motion an extended plan.

The Advisory Group meetings were held on May 4, 2017 at 1:30 pm at the Thomaston-Upson Government Complex in Thomaston, Georgia and on November 14, 2017 at 10:30 am at 1011 Highway 341 North in Roberta, Georgia to discuss potential ways to assess the watershed of Auchumpkee Creek and Ulcohatchee Creek. See Appendix F for meeting minutes.

Future implementation of recommended measures will be possible through partnership with GA EPD, local governments, GA Forestry Commission, GA Department of Agriculture, Natural Resources Conservation Service, GA Adopt-A-Stream, and the local health department. Independent contractors will need to be secured to ensure proper installation of recommended measures.

10. Public Involvement

Stakeholders are individuals who live or have land management responsibilities in the watershed, including government agencies, businesses, private individuals, and special interest groups. Stakeholder participation and support is essential for achieving the goals of this TMDL effort. Table 7 shows a list of interested stakeholders within the Auchumpkee Creek and Ulcohatchee Creek watersheds.

Table 7. Stakeholder Group for Ulcohatchee Creek and Auchumpkee Creek.

Name	City	State	ZIP
Jody Morrison	Warner Robins	GA	31088
Robert Dickey	Musella	GA	31066
Mechele Wilder	Culloden	GA	31016
Curtis Wilder	Culloden	GA	31016

Building partnerships was a key component in order to gather input from the stakeholder perspective in evaluation of the Watershed Management Plan. Additionally, partnerships help to provide an opportunity for stakeholders to understand how the peer review process contributes to the development of TMDL plans and results. As a result of their participation, Stakeholders became knowledgeable advocates for the role to help manage or decrease non-point source pollution impacts.

Stakeholder's key responsibilities were to:

- **Provide** technical support and assistance;
- **Distribute** and share information;
- **Identify** opportunities and common concerns; and
- **Develop** public support.

Two Rivers RC&D Council staff encouraged public participation in the development of this TMDL Plan by inviting Stakeholders to participate in a meeting throughout the development stages. The objective of this meeting was to obtain feedback from Stakeholders about the concerns and composition of watershed activities. To maximize cooperation of interested parties for the purposes of plan development, the Stakeholder Group meetings were held in conjunction with Advisory Group meetings on May 4, 2017 at 1:30 pm at the Thomaston-Upson Government Complex in Thomaston, Georgia and on November 14, 2017 at 10:30 am at 1011 Highway 341 North in Roberta, Georgia. See Appendix F for meeting minutes.

Examples of stakeholder recommendations include:

- Additional monitoring to verify effectiveness of measures implemented;
- Review of all existing development codes, ordinances, and policies to identify where revisions could be made to reduce non-point source water pollution;
- Design and implement a citizen education program to make citizens aware of the non-point source water pollution problem and their role in improving the water quality;
- Encourage the continuing formation of volunteer groups to conduct community based stream protection efforts such as restoring vegetative cover within riparian areas, stream clean-up, and reporting of problems;
- Conduct screening level analyses of structural and non-structural BMPs;
- Investigate grant and funding opportunities to fund these efforts;
- Propose best management practices (BMPs) or other ways to correct problems at each location; and
- Evaluate technical assistance needed and how to administer assistance.

Additional educational workshops, presentations, and meetings should be held throughout the implementation process of recommended measures.

11. Schedule of Sequential Milestones

The main goal of this Watershed Management Plan is to bring Auchumpkee Creek and Ulcohatchee Creek into compliance with water quality standards, which will result in their removal from the 303(d) list of impaired waters. This goal will be measured by the concentration of fecal coliform samples taken after installation of BMPs to address the bacterial issue and by the successful installation of agriculture and surface water BMPs to address the pH issue. In order to establish sources of contamination and BMPs to mitigate the pollution levels, it was important to determine the origin of the fecal coliform bacteria and the pH imbalance. Per GA EPD and Adopt-A-Stream standards, *E. coli* serves as an indicator species for fecal coliform

levels. Two Rivers RC&D Council staff executed a targeted monitoring plan whereby *E. coli* samples were taken at five (5) locations and chemical (to include pH) samples were taken at four (4) locations throughout the watershed over a 12-month period.

The targeted monitoring for *E. coli* and pH was conducted during the months of October 2016 – September 2017. Testing was avoided up to 48 hours after rain events totaling 1-2 inches of precipitation. This data is stored at Two Rivers RC&D Council, located at 100 Ridley Avenue, LaGrange, Georgia 30240. After results were obtained, Two Rivers RC&D Council staff determined what Best Management Practices were needed to mitigate the pollution levels.

Money to fund the management practices outlined in Section 8 of this report will be sought through Section 319(h) of the Federal Clean Water Act. Funds for microbial source tracking will be sought during the FY18 319(h) Seed Grant application period. For BMP implementation funds, a 319(h) grant application will be submitted to EPD by the FY19 or FY20 deadline. Notification of approved Seed Grant applicants will be in the spring of 2018, and funding and project activities will begin in the summer of 2018. Notification of approved 319(h) implementation applicants will be in the spring, and funding and project activities will begin in the fall.

Should the grant application be funded, evaluation of BMP locations will begin immediately. Installation of all BMPs will take approximately two years to complete. Furthermore, during the time of BMP installation, an educational outreach component should take place and continue on through the second year. All of the outputs of the 319(h) application will take approximately two years to complete.

12. Recommendations for Monitoring and Criteria for Measuring Success

Targeted monitoring for Auchumpkee and Ulcohatchee Creek was conducted from October 2016 – September 2017. The results of this monitoring can be found in Appendix H. The portion of this plan documenting sampling protocols and techniques can be found in Appendix I.

Sampling locations were identified while considering Advisory Member opinion to best assess sources of pollution within the watershed. Specific sampling locations and GPS coordinates for each site are listed below in Table 8. A map of the sampling locations may be found in Figure 3. Samples were collected on the upstream side of the bridge at the road crossings.

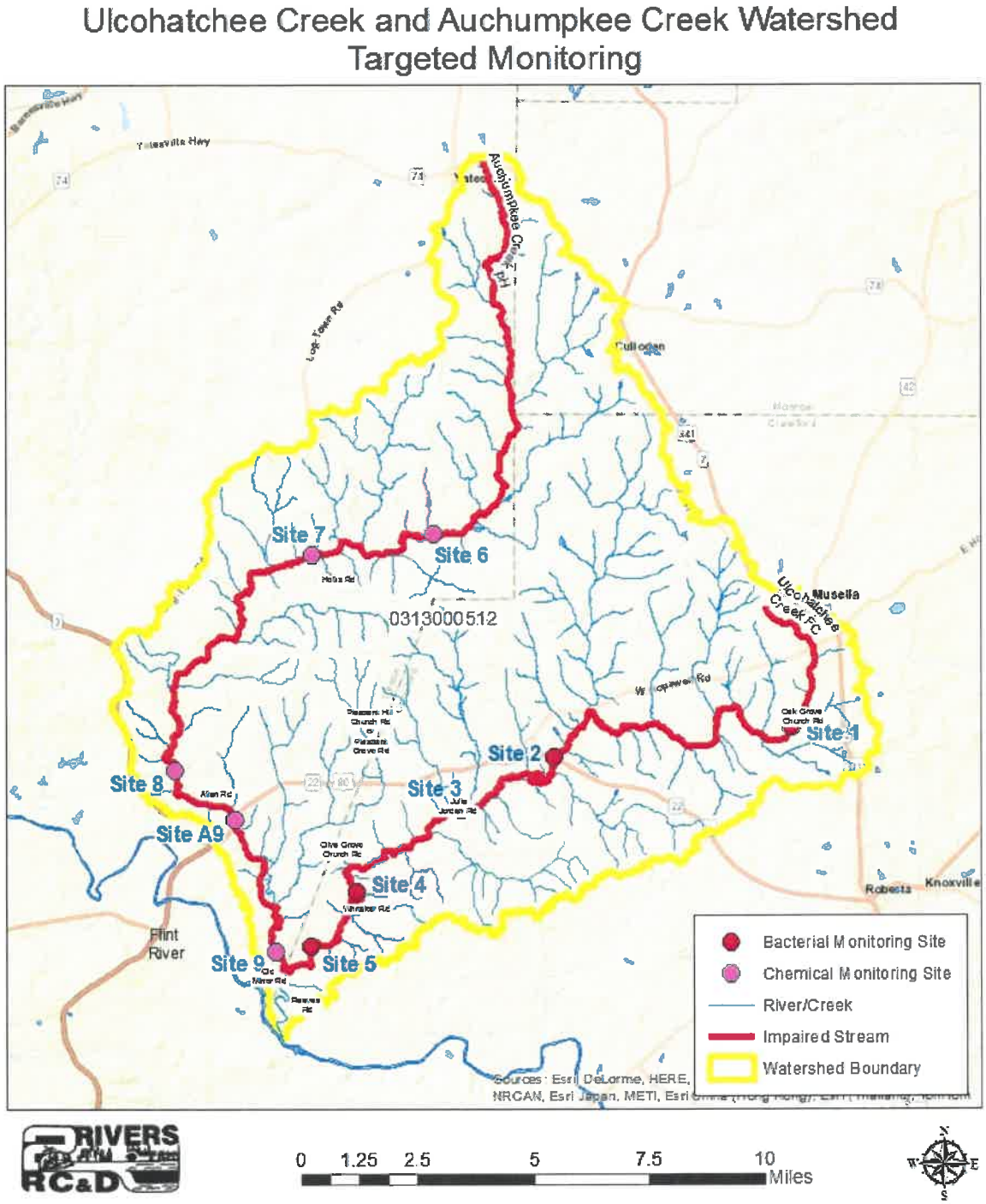
Future monitoring efforts should include DNA/microbial source tracking to determine specific sources of fecal coliform pollution. Detection should be focused on determining the location and type of fecal coliform contribution. Having a better understanding of the source of contamination will ensure that the appropriate BMPs outlined in Table 5 are placed in an area where they will be most effective. To measure success, bacterial targeted monitoring will be conducted following the installation of BMP measures.

TABLE 8. SAMPLING STATIONS FOR TARGETED MONITORING.

Station Number	General Location	Sampling Site Coordinates		Sample Parameters
		Latitude	Longitude	
1	Ulcohatchee Creek and Oak Grove Church Road	32.767478	-84.037320	*E. coli*
2	Ulcohatchee Creek and US Highway 80	32.759116	-84.111584	*E. coli*
3	Ulcohatchee Creek and Julia Jordan Road	32.745655	-84.140694	*E. coli*
4	Ulcohatchee Creek and Whitaker Road	32.724086	-84.172683	*E. coli*
5	Ulcohatchee Creek and Reeves Road	32.709312	-84.187757	*E. coli*
6	Auchumpkee Creek and Pleasant Grove Road	32.818118	-84.148925	Chemical
7	Auchumpkee Creek and Hollis Road	32.812803	-84.187251	Chemical
8	Auchumpkee Creek and Allen Road	32.755637	-84.229920	Chemical
9	Auchumpkee Creek and Old Minor Road	32.708295	-84.198270	Chemical
A9	Auchumpkee Creek and US Highway 80	32.742607	-84.211212	Chemical

Sites were determined based on logistics prior to Two Rivers RC&D Council staff visiting the watershed. After investigation, site 9 was determined to be inaccessible. A new ninth site named A9 was then established.

FIGURE 3. ULCOHATCHEE CREEK AND AUCHUMPKEE CREEK WATERSHED TARGETED MONITORING.



13. Plan Implementation

During each semi – annual evaluation of implementation on Auchumpkee Creek and Ulcohatchee Creek, a reassessment of implementation priorities will be made by the Advisory Group to readjust the targeting approach in concert with the staged implementation approach. If reasonable progress toward implementing the management practices is not demonstrated, the Advisory Group will consider additional implementation actions.

The objective of TMDL Implementation Plan is to restore impaired water quality to meet water quality standards. From a broader perspective, Georgia's water quality management strategy addresses three things:

1. Protection: Prevent the degradation of healthy waters.
2. Restoration: Develop and execute plans to eliminate impairments.
3. Maintenance of Restored Waters: Institutionalize technical and administrative procedures to prevent or offset new pollutants.

A list of management measures and other general actions to be implemented during future stages is shown in Table 9.

Table 9. Schedule for Future Implementation.

Management Measure	Responsible Organization	Time Frame
DNA/Microbial Source Tracking	Two Rivers RC&D Council, Independent Contractor	1½ years, summer 2018 – winter 2019
Determination of Most Effective BMP Locations	Two Rivers RC&D Council, Natural Resources Conservation Service	1 year, fall 2021 – fall 2022
Installation of Agricultural BMPs	Two Rivers RC&D Council, Natural Resources Conservation Service	1½ years, spring 2022 – fall 2023
Installation of Surface Water BMP	Two Rivers RC&D Council, Natural Resources Conservation Service	1½ years, spring 2022 – fall 2023
Post Bacterial/pH BMP Monitoring	Two Rivers RC&D Council, Independent Contractor	6 months, spring 2022 – fall 2023

During each semi – annual evaluation of implementation on Auchumpkee Creek and Ulcohatchee Creek, a reassessment of implementation priorities will be made by the Advisory Group to readjust the targeting approach. If reasonable progress toward implementing the

management practices is not demonstrated, the Advisory Group will consider additional implementation actions.

If it is demonstrated that reasonable and feasible management measures have been implemented for a sufficient period of time and TMDL targets are still not being met, the TMDL will be reevaluated and revised accordingly. If after three years the Advisory Group determines that load reductions are being achieved as management measures are implemented, then the recommended appropriate course of action would be to continue management measure implementation and compliance oversight. If it is determined that all proposed control measures have been implemented, yet the TMDL is not achieved, further investigations will be made to determine whether: 1) the control measures are not effective; 2) fecal coliform and pH loads are due to sources not previously addressed; or 3) the TMDL is unattainable.

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15. Plan Appendices

- **A. Nine (9) – Key Element Summary**
- **B. Auchumpkee/Ulcohatchee Creek Watershed Map (HUC 0313000512)**
- **C. Watershed Characteristics**
- **D. Field Notes and Pictures**
- **E. Copies of Public Notices and Other Literature**
- **F. Meeting Minutes**
- **G. Forms**
- **H. Data Collected**
- **I. Sampling protocols**

APPENDIX A. NINE (9) – KEY ELEMENT SUMMARY

Element 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.

(See Section 6, pages 8-10)
More than ten farms within the Ulcohatchee Creek watershed have been identified to support livestock. These operations primarily carry cattle; however, horses, donkeys, and goats are also present. Many of these locations allow the livestock direct access to Ulcohatchee Creek and its tributaries. The Partnership Advisory Council identified poultry operations that house over 32,000 chickens near the confluence of Auchumpkee Creek and Ulcohatchee Creek; however, the council states that the operations follow all Georgia Department of Agriculture rules and regulations and likely do contribute to any runoff.

Illegal carcass dumping has been extensively documented throughout the state of Georgia. Additionally, the rural setting of the watershed often results in large numbers of road kill. These carcasses typically remain on or near roadways until full decomposition. Their presence attracts large groups of scavenging birds. The waste from these large groups of birds often surrounds the rotting carcasses. Eventually washing into the waterways, this further contributes to fecal coliform contamination.

The land area within this watershed is classified as rural with no wastewater infrastructure. The few homes within the area are adequately spaced out to ensure proper septic system functionality. In addition, the local health departments have not issued any citations for failing septic systems.

Wildlife is also a contributor to fecal coliform contamination; however, this should be considered a natural "background" level.

The sources of low pH in this watershed may be tied to natural and anthropogenic means. Because the predominate land use is related to agriculture and forestry, agricultural erosion and runoff of the naturally low pH soils may be a potential source. Runoff of fertilizer and vegetative decay are also potential sources of low pH. It is possible that the low pH is naturally occurring due to biological activity associated with woody wetlands.

Element 2 – An estimate of the load reductions expected for the management measures described under Element 3.

(See Section 4, page 7; Section 8, page 13, Table 5)
Based off of information provided in GA EPD's 2003 *Total Maximum Daily Load Evaluation for Twenty-Eight Stream Segments in the Flint River Basin for Fecal Coliform*, a TMDL called for a 1% reduction in fecal coliform for Ulcohatchee Creek. EPA or GA EPD has not issued a TMDL evaluation for Auchumpkee Creek. However, Georgia's numeric pH criterion (6.0 to 8.5) should be used as the TMDL target.

Several Best Management Practices need to be implemented throughout this watershed in order to obtain the goals for fecal coliform. These may include, but are not limited to DNA/microbial source tracking, vegetative buffers, fencing, alternate watering sources, silt fencing, stream crossings, and heavy use areas. Management Practices to help balance pH levels include, but are not limited to vegetative buffers, filter strips, silt fencing, and limestone applications.

According to the 2013 *Best Management Practices for Georgia Agriculture* by the Georgia Soil and Water Conservation Commission, vegetation buffers prevent erosion and help absorb up to 59% of nutrients, fencing can have a success rate to prevent 99% of livestock from entering the waterways, alternate watering sources can reduce pathogens by 15%, silt fencing can reduce sediment 68-98%, streams crossings reduce pathogens 30-50%, heavy use areas reduce fecal coliform by 80%, and filter strips can potentially remove up to 60% of pathogens.

Although the application of calcium carbonate or limestone is an accepted management measure, the practice is not well documented enough to accurately predict the extent to which pH levels will balance.

Element 3 – A description of the nonpoint source management measures that will need to be implemented to achieve the load reductions established in the TMDL or to achieve water quality standards.

(See Section 8, Table 5, pages 12-13)
To address the pH imbalance within the Auchumpkee Creek watershed, management practices should be installed on the agricultural fields within the area. These practices, as shown in Table 5, can include vegetative buffers, filter strips, and silt fencing, which will help reduce the runoff of the agricultural chemicals that are contributing to the pH imbalance. In addition, carbonate materials and limestone are two elements that can buffer pH changes in water. Calcium carbonate ($CaCO_3$) and other bicarbonates can combine with hydrogen or hydroxyl ions to neutralize pH. When carbonate minerals are present in the soil, the buffering capacity of water is increased, keeping the pH of water close to neutral even when acids or bases are added. Limestone could be dispersed throughout the watershed to help alleviate these pollutions levels. On agricultural fields, not only can limestone help neutralize the soil, but it can also provide a source of calcium and magnesium for plants and improve the uptake of major plant nutrients, such as nitrogen, phosphorus, and potassium, for plants growing on acidic soils.

Advisors expressed various concerns about a number of activities within the Ulcohatchee Creek watershed that may contribute to fecal coliform pollution. To address these fully, Two Rivers RC&D Council proposes the use of DNA/microbial source tracking, which will assist in determining the best type and location for BMPs. This will help to determine more confidently if the source is coming from unnatural carcass dumping, related scavenging birds, runoff from agricultural fields using poultry litter, feral hogs, or cattle operations in the area. For example, DNA/microbial source tracking could suggest that an area originally believed to be impacted by a cattle, might actually be experiencing an unnoted feral hog problem. With DNA/Microbial source tracking, discoveries could be made before financial commitments were put towards

something more suited to address decaying carcasses rather than the real issue of cattle operations. Assessing these possibilities in depth before implementation of BMPs ensures that efforts are not wasted.

Management practices that can be used on livestock operations to help alleviate fecal coliform contamination include, but are not limited to, vegetative buffers, fencing, alternate watering sources, silt fencing, stream crossings, and heavy use areas. A composting facility can be installed in areas where there is problem carcass dumping or abundant road-kill.

Citizens within the Auchumpkee Creek and Ulcohatchee Creek watersheds should be educated on how improper management practices can impact the water quality of neighboring streams. Workshops or educational handouts should be utilized to further better the water quality within these watersheds.

Element 4 – An estimate of the sources of funding needed, and/or authorities that will be relied upon, to implement the plan.

(See Section 11, pages 16-17)
Funding for watershed monitoring and BMP implementation can be obtained from a 319(h) Non-point Source Implementation Grant from GA EPD Department of Natural Resources. Should funding be awarded, the staff of Two Rivers RC&D Council would implement the Watershed Management Plan during the allowed contractual timeline. Match funds would be obtained through in-kind services provided by the three counties through which the majority of the watershed lies as well as from the land owners within the watersheds. Additional support will be given through local governments and assistance from Georgia Department of Agriculture and Natural Resources Conservation Service. An independent contractor will be consulted to assist with DNA/microbial source tracking.

Element 5 – An information/education component that will be used to enhance public understanding of and participation in implementing the plan.

(See Section 8, page 10; Section 10, page 16; Section 11, page 17)
This Watershed Management Plan for Auchumpkee Creek and Ulcohatchee Creek document will be available for all persons who wish to obtain it. Two Rivers RC&D Council will hold additional Stakeholder/Advisory Group meetings to update interested persons on the status of the implementation of the Watershed Management Plan. All announcements for any additional Stakeholder meetings and public hearings will be announced in *The Georgia Post* and *The Upson Beacon*. Advisors and stakeholders will also be contacted by mailed letters.

Educational workshops or handouts to promote effective agricultural management techniques should be offered to area residents.

Element 6 – A schedule for implementing the management measures that is reasonably expeditious.

(See Section 11, page 17)
Funds for microbial source tracking will be sought during the FY18 319(h) Seed Grant application period. For BMP implementation funds, a 319(h) grant application will be submitted to EPD by the FY19 or FY20 deadline. Notification of approved Seed Grant applicants will be in the spring of 2018, and funding and project activities will begin in the summer of 2018. Notification of approved 319(h) implementation applicants will be in the spring, and funding and project activities will begin in the fall.

Should the grant application be funded, evaluation of BMP locations will begin immediately. Installation of all BMPs will take approximately two years to complete. Furthermore, during the time of BMP installation, an educational outreach component should take place and continue on through the second year. All of the outputs of the 319(h) application will take approximately two years to complete.

Element 7 – A description of interim, measurable milestones for determining whether management measures or other control actions are being implemented.

(See Section 12, pages 17-19, Table 8, Figure 3; Section 13, page 20, Table 9)
Two Rivers RC&D Council will take regular visits to the watershed in order to monitor the progress of the BMP installations. This could help identify any areas of concern that might need to be addressed during the grant period. Should more outreach be necessary, more workshops will be held. Following BMP installation, monthly bacterial and chemical monitoring will continue to measure success for a period of six months to a year.

Element 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.

(See Sections 12 and 13, pages 17-21)
Targeted monitoring after BMP installation will be conducted. The data set will be compared with the monitoring data conducted for the development of this plan to assess whether the BMPs are working. To conclude success, pollutant loads obtained after BMP installation should be lower than those in previous years.

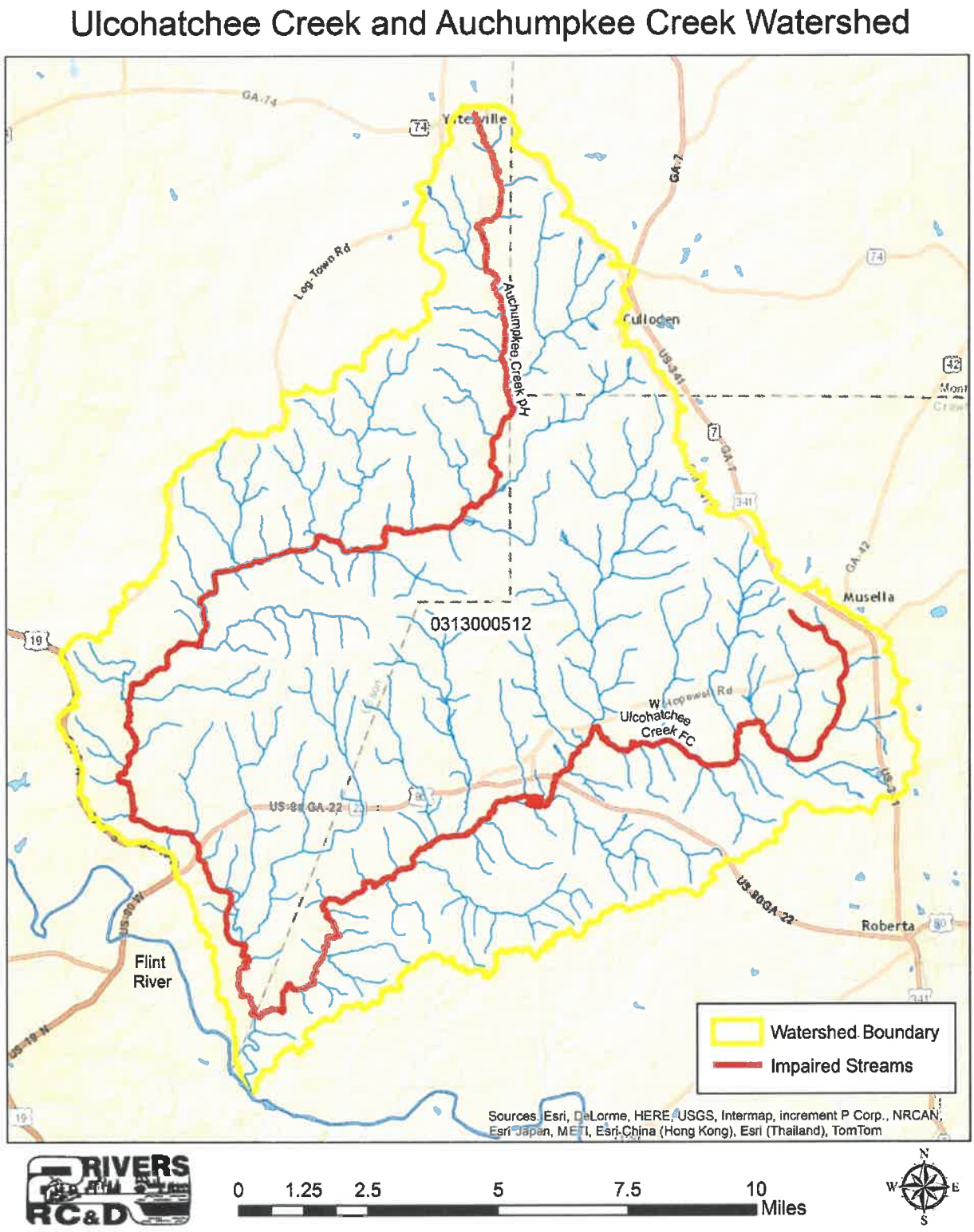
During each semi – annual evaluation of implementation on Auchumpkee Creek and Ulcohatchee Creek, a reassessment of implementation priorities will be made by the Advisory Group to readjust the targeting approach. If reasonable progress toward implementing the management practices is not demonstrated, the Advisory Group will consider additional implementation actions.

Element 9 – A monitoring component to evaluate the effectiveness of the implementation efforts, measured against the criteria established under Element 8.

(See Sections 12, pages 17-19, Table 8, Figure 3)
Should the 319(h) Seed Grant application be funded, DNA/microbial source tracking will be conducted to locate areas of agricultural concern. Following identification of agricultural operations that would benefit from BMP installation, implementation would begin should funding for the FY19 or FY20 319(h) application be approved.

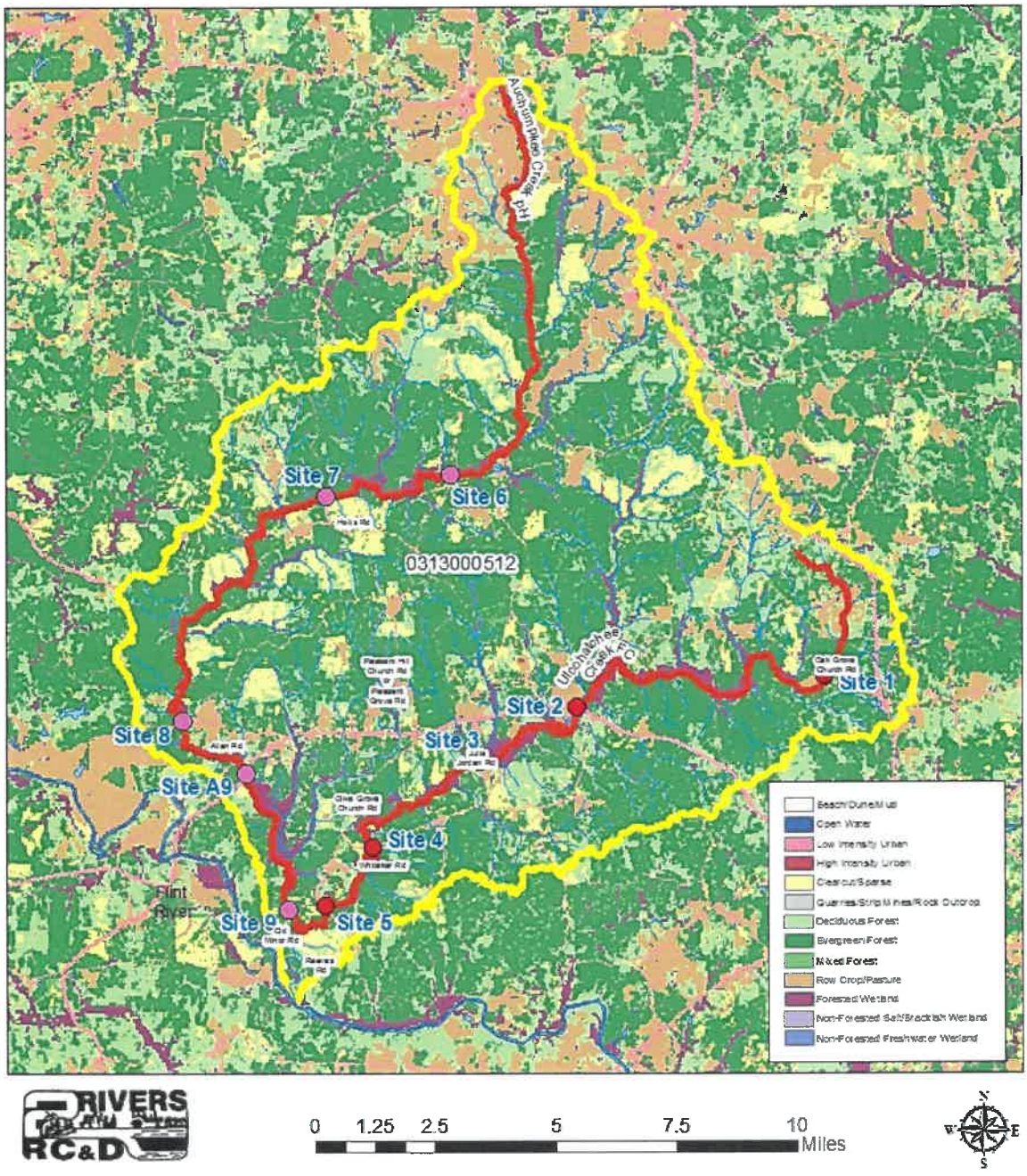
After BMP installation, follow up targeted monitoring from six months to a year should be conducted to determine load reductions of fecal coliform and to determine if the pH levels are more balanced. Should Best Management Practices be installed correctly and used as intended, reductions in fecal coliform and a balance in pH should be found.

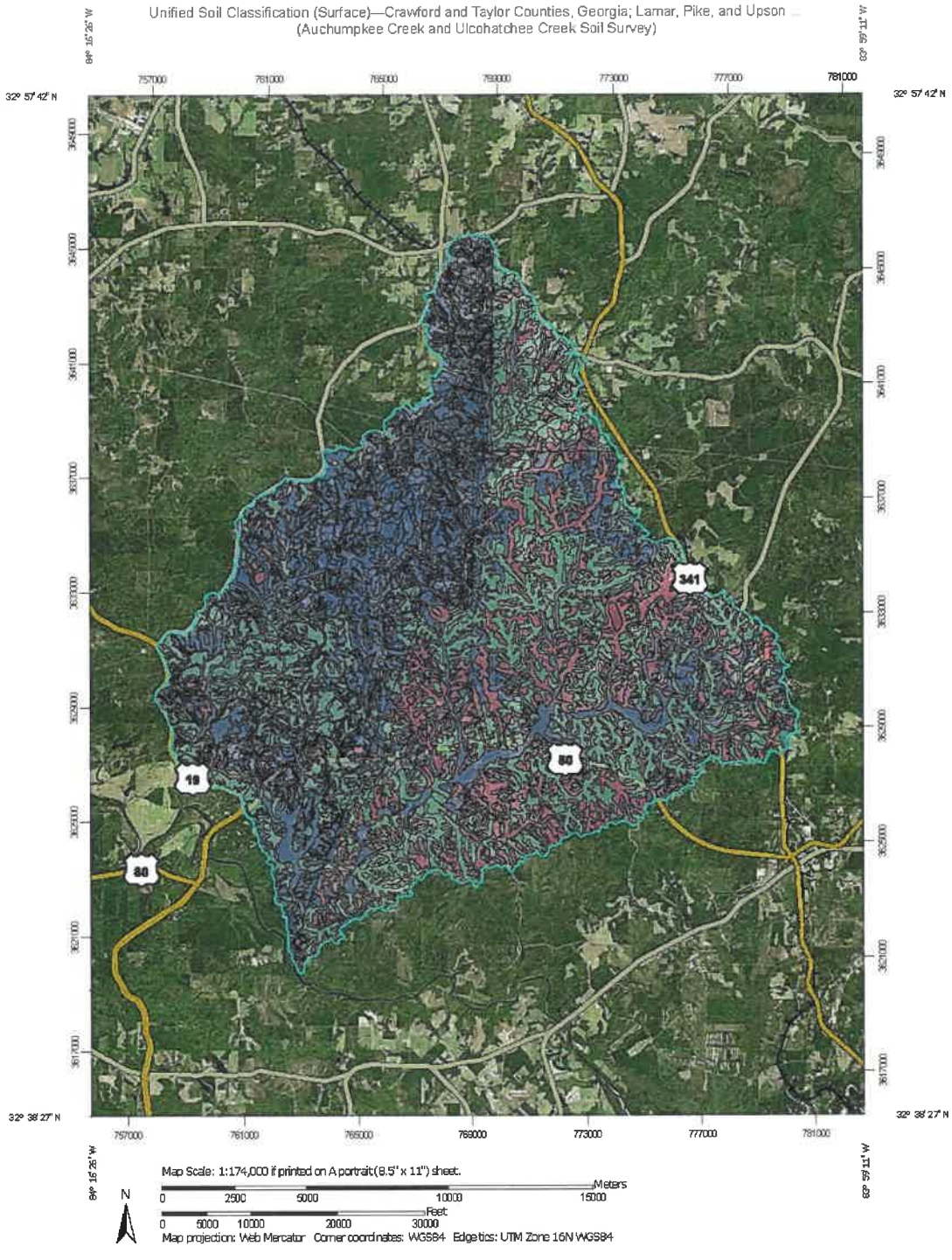
APPENDIX B. AUCHUMPKEE/ULCOHATCHEE CREEK WATERSHED MAP (HUC 0313000512)



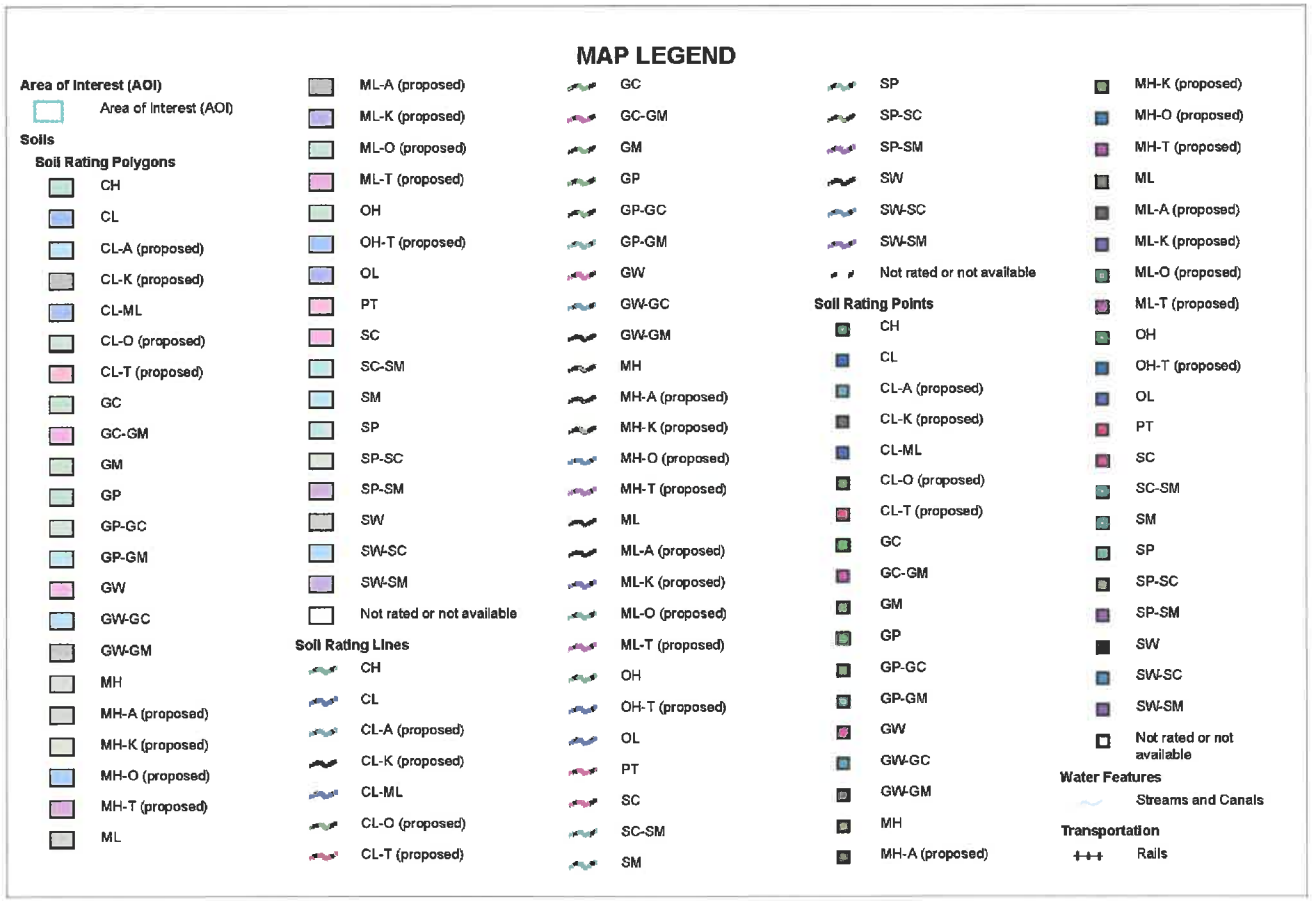
APPENDIX C. WATERSHED CHARACTERISTICS

Ulcohatchee Creek and Auchumpkee Creek Watershed
Land Use Trends




Unified Soil Classification (Surface)—Crawford and Taylor Counties, Georgia; Lamar, Pike, and Upson
(Auchumpkee Creek and Ulcohatchee Creek Soil Survey)
84° 15' 26" W
83° 59' 11" W
32° 57' 42" N
32° 38' 27" N
757000
761000
765000
769000
773000
777000
781000
3645000
3641000
3637000
3633000
3629000
3625000
3621000
3617000
341
80
19
Map Scale: 1:174,000 if printed on A portrait (8.5" x 11") sheet.
Meters
0 2500 5000 10000 15000
Feet
0 5000 10000 20000 30000
N
Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 16N WGS84
USDA
Natural Resources Conservation Service
Web Soil Survey
National Cooperative Soil Survey
8/23/2017
Page 1 of 9

Unified Soil Classification (Surface)—Crawford and Taylor Counties, Georgia; Lamar, Pike, and Upson Counties, Georgia; and Monroe County, Georgia
(Auchumpkee Creek and Ulcohatchee Creek Soil Survey)



MAP INFORMATION

- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

The soil surveys that comprise your AOI were mapped at scales ranging from 1:15,800 to 1:24,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Crawford and Taylor Counties, Georgia
Survey Area Data: Version 14, Sep 13, 2016

Soil Survey Area: Lamar, Pike, and Upson Counties, Georgia
Survey Area Data: Version 9, Sep 13, 2016

Soil Survey Area: Monroe County, Georgia
Survey Area Data: Version 12, Sep 19, 2016

Your area of interest (AOI) includes more than one soil survey area. These survey areas may have been mapped at different scales, with a different land use in mind, at different times, or at different levels of detail. This may result in map unit symbols, soil properties, and interpretations that do not completely agree across soil survey area boundaries.

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jan 1, 1999—Dec 31, 2014

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Unified Soil Classification (Surface)

Unified Soil Classification (Surface)— Summary by Map Unit — Crawford and Taylor Counties, Georgia (GA630)				
Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
AgB	Ailey loamy sand, 2 to 5 percent slopes	SM	1.3	0.0%
AmB	Appling sandy loam, 2 to 6 percent slopes	SC	1,045.4	1.5%
AmC	Appling sandy loam, 6 to 10 percent slopes	SC	2,305.4	3.2%
CeB	Cecil sandy loam, 2 to 6 percent slopes	SC-SM	3,183.5	4.5%
CeC	Cecil sandy loam, 6 to 10 percent slopes	SC-SM	3,095.1	4.4%
Ch	Chenneby silt loam, frequently flooded	CL	1,948.9	2.7%
CwB	Cowarts loamy sand, 2 to 5 percent slopes	SM	12.8	0.0%
CwC	Cowarts loamy sand, 5 to 12 percent slopes	SM	60.8	0.1%
FsB	Fuquay loamy sand, 1 to 5 percent slopes	SM	2.4	0.0%
HaB	Helena sandy loam, 2 to 6 percent slopes	CL-ML	1,236.4	1.7%
HaC	Helena sandy loam, 6 to 10 percent slopes	CL-ML	1,878.1	2.6%
LpB	Lakeland sand, 1 to 5 percent slopes	SP-SM	0.9	0.0%
LrB	Lloyd clay loam, 2 to 6 percent slopes	CL	1,537.1	2.2%
LsC2	Lloyd clay loam, 6 to 10 percent slopes, eroded	CL	1,709.1	2.4%
LsD2	Lloyd clay loam, 10 to 17 percent slopes, eroded	CL	707.0	1.0%
LuB	Lucy loamy sand, 0 to 5 percent slopes	SM	19.0	0.0%
OrB	Orangeburg loamy sand, 2 to 5 percent slopes	SM	7.0	0.0%
PaC2	Pacolet sandy clay loam, 6 to 10 percent slopes, moderately eroded	SC	2,395.8	3.4%

Unified Soil Classification (Surface)— Summary by Map Unit — Crawford and Taylor Counties, Georgia (GA630)				
Map unit symbol	**Map unit name**	**Rating**	**Acres in AOI**	**Percent of AOI**
PaD2	Pacolet sandy clay loam, 10 to 15 percent slopes, moderately eroded	SC	5,244.0	7.4%
PaE2	Pacolet sandy clay loam, 15 to 25 percent slopes, moderately eroded	SC	587.2	0.8%
SeC	Sedgefield sandy loam, 6 to 10 percent slopes	SC-SM	2,252.9	3.2%
Sh	Shellbluff silt loam, occasionally flooded	CL-ML	294.8	0.4%
W	Water		156.1	0.2%
WnD	Wynott sandy loam, 10 to 15 percent slopes	SC-SM	7,959.4	11.2%
Subtotals for Soil Survey Area			**37,640.5**	**52.9%**
Totals for Area of Interest			**71,087.2**	**100.0%**

Unified Soil Classification (Surface)— Summary by Map Unit — Lamar, Pike, and Upson Counties, Georgia (GA642)				
Map unit symbol	**Map unit name**	**Rating**	**Acres in AOI**	**Percent of AOI**
AlB	Altavista sandy loam, 2 to 6 percent slopes	SM	178.2	0.3%
Alm	Alluvial land	SM	186.2	0.3%
AmB	Appling sandy loam, 2 to 6 percent slopes	SC	235.2	0.3%
AmC	Appling sandy loam, 6 to 10 percent slopes	SC	148.9	0.2%
AnB3	Appling sandy clay loam, 2 to 6 percent slopes, severely eroded	CL	165.6	0.2%
AnC3	Appling sandy clay loam, 6 to 10 percent slopes, severely eroded	CL	107.1	0.2%
Bfs	Buncombe loamy sand	SM	6.7	0.0%
Cco	Chewacla complex, occasionally flooded	ML	45.8	0.1%
Cwf	Chewacla and Wehadkee soils, frequently flooded	ML	1,366.0	1.9%
CYB2	Cecil sandy loam, 2 to 6 percent slopes, moderately eroded	SC	189.8	0.3%
CYC2	Cecil sandy loam, 6 to 10 percent slopes, moderately eroded	SC	223.3	0.3%

Unified Soil Classification (Surface)— Summary by Map Unit — Lamar, Pike, and Upson Counties, Georgia (GA642)				
Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
CYE	Cecil sandy loam, 10 to 25 percent slopes	SM	3.1	0.0%
CYE2	Cecil sandy loam, 10 to 25 percent slopes, eroded	SM	390.4	0.5%
CZB3	Cecil sandy clay loam, 2 to 6 percent slopes, severely eroded	CL	731.5	1.0%
CZD3	Cecil sandy clay loam, 6 to 15 percent slopes, severely eroded	CL	1,974.6	2.8%
DgB	Davidson loam, 2 to 6 percent slopes	CL	983.0	1.4%
DgC2	Davidson loam, 6 to 10 percent slopes, moderately eroded	CL	621.7	0.9%
DgD2	Davidson loam, 10 to 15 percent slopes, eroded	CL	1,316.3	1.9%
DhB3	Davidson clay loam, 2 to 6 percent slopes, severely eroded	CL	3,554.4	5.0%
DhC3	Davidson clay loam, 6 to 10 percent slopes, severely eroded	CL	5,491.8	7.7%
DhE3	Davidson clay loam, 10 to 25 percent slopes, severely eroded	CL	2,748.6	3.9%
Gul	Gullied land		29.2	0.0%
HYB	Helena sandy loam, 2 to 6 percent slopes	CL-ML	59.3	0.1%
LmD	Louisburg stony soils, 6 to 15 percent slopes	SM	19.6	0.0%
MgB2	Madison sandy loam, 2 to 6 percent slopes, moderately eroded	SC-SM	1.7	0.0%
MiB3	Madison sandy clay loam, 2 to 6 percent slopes, severely eroded	ML	8.1	0.0%
MiD3	Madison sandy clay loam, 6 to 15 percent slopes, severely eroded	SC	22.1	0.0%
PkC	Pacolet stony loam, 6 to 10 percent slopes	SM	22.0	0.0%
Pt	Pits		35.3	0.0%
Roc	Rock land		1.5	0.0%
Sto	Starr soils	ML	75.4	0.1%

Unified Soil Classification (Surface)— Summary by Map Unit — Lamar, Pike, and Upson Counties, Georgia (GA642)				
Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
W	Water		110.8	0.2%
WEC	Wilkes and Enon soils, 2 to 10 percent slopes	SM	1,856.9	2.6%
Wed	Wehadkee soils, 0 to 2 percent slopes, frequently flooded	CL	2,240.1	3.2%
WEE	Wilkes and Enon soils, 10 to 25 percent slopes	SM	4,221.7	5.9%
Subtotals for Soil Survey Area			29,372.1	41.3%
Totals for Area of Interest			71,087.2	100.0%

Unified Soil Classification (Surface)— Summary by Map Unit — Monroe County, Georgia (GA207)				
Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
BpD	Bush River-Prosperity complex, 6 to 15 percent slopes	SC-SM	19.5	0.0%
CaB	Cataula sandy loam, 2 to 6 percent slopes	SM	129.8	0.2%
CdB	Cecil sandy loam, 2 to 6 percent slopes	SC	77.5	0.1%
CeC2	Cecil sandy loam, 6 to 10 percent slopes, moderately eroded	SC	91.4	0.1%
CfB2	Cecil sandy clay loam, 2 to 6 percent slopes, moderately eroded	SC-SM	422.2	0.6%
CgC3	Cecil sandy clay loam, 6 to 10 percent slopes, severely eroded	SC-SM	708.6	1.0%
CuC	Cecil-Urban land complex, 2 to 10 percent slopes	SC	62.6	0.1%
CwA	Chewacla loam, 0 to 2 percent slopes, frequently flooded	CL-ML	191.4	0.3%
HaB	Hard Labor sandy loam, 2 to 6 percent slopes	SM	18.9	0.0%
LcB	Lloyd sandy loam, 2 to 6 percent slopes	SM	93.9	0.1%
LdD2	Lloyd sandy loam, 6 to 15 percent slopes, moderately eroded	SM	10.1	0.0%
LfB3	Lloyd sandy clay loam, 2 to 6 percent slopes, severely eroded	SC-SM	362.7	0.5%
LfD3	Lloyd sandy clay loam, 6 to 15 percent slopes, severely eroded	SC-SM	357.5	0.5%

Unified Soil Classification (Surface)— Summary by Map Unit — Monroe County, Georgia (GA207)				
Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
LfE3	Lloyd sandy clay loam, 15 to 30 percent slopes, severely eroded	SC-SM	148.9	0.2%
MdB3	Madison sandy clay loam, 2 to 6 percent slopes, severely eroded	SC-SM	115.6	0.2%
MdD3	Madison sandy clay loam, 6 to 15 percent slopes, severely eroded	SC	196.3	0.3%
MdE3	Madison sandy clay loam, 15 to 30 percent slopes, severely eroded	SC-SM	7.5	0.0%
MsD	Madison-Bethlehem complex, 6 to 15 percent slopes, stony	SM	42.8	0.1%
MsE	Madison-Bethlehem complex, 15 to 30 percent slopes, stony	SM	75.4	0.1%
PaD2	Pacolet sandy loam, 6 to 15 percent slopes, moderately eroded	SC	186.5	0.3%
PcD3	Pacolet sandy clay loam, 6 to 15 percent slopes, severely eroded	SC	191.6	0.3%
PdD	Pacolet-Saw complex, 6 to 15 percent slopes, stony	SM	264.6	0.4%
PdE	Pacolet-Saw complex, 15 to 25 percent slopes, stony	SM	192.7	0.3%
SeB	Sedgefield sandy loam, 0 to 4 percent slopes	SC	1.4	0.0%
ToA	Toccoa sandy loam, 0 to 2 percent slopes, frequently flooded	SC-SM	64.9	0.1%
W	Water		40.5	0.1%
Subtotals for Soil Survey Area			**4,074.6**	**5.7%**
Totals for Area of Interest			**71,087.2**	**100.0%**

Description

The Unified soil classification system classifies mineral and organic mineral soils for engineering purposes on the basis of particle-size characteristics, liquid limit, and plasticity index. It identifies three major soil divisions: (i) coarse-grained soils having less than 50 percent, by weight, particles smaller than 0.074 mm in diameter; (ii) fine-grained soils having 50 percent or more, by weight, particles smaller than 0.074 mm in diameter; and (iii) highly organic soils that demonstrate certain organic characteristics. These divisions are further subdivided into a total of 15 basic soil groups. The major soil divisions and basic soil groups are determined on the basis of estimated or measured values for grain-size distribution and Atterberg limits. ASTM D 2487 shows the criteria chart used for classifying soil in the Unified system and the 15 basic soil groups of the system and the plasticity chart for the Unified system.

The various groupings of this classification correlate in a general way with the engineering behavior of soils. This correlation provides a useful first step in any field or laboratory investigation for engineering purposes. It can serve to make some general interpretations relating to probable performance of the soil for engineering uses.

For each soil horizon in the database one or more Unified soil classifications may be listed. One is marked as the representative or most commonly occurring. The representative classification is shown here for the surface layer of the soil.

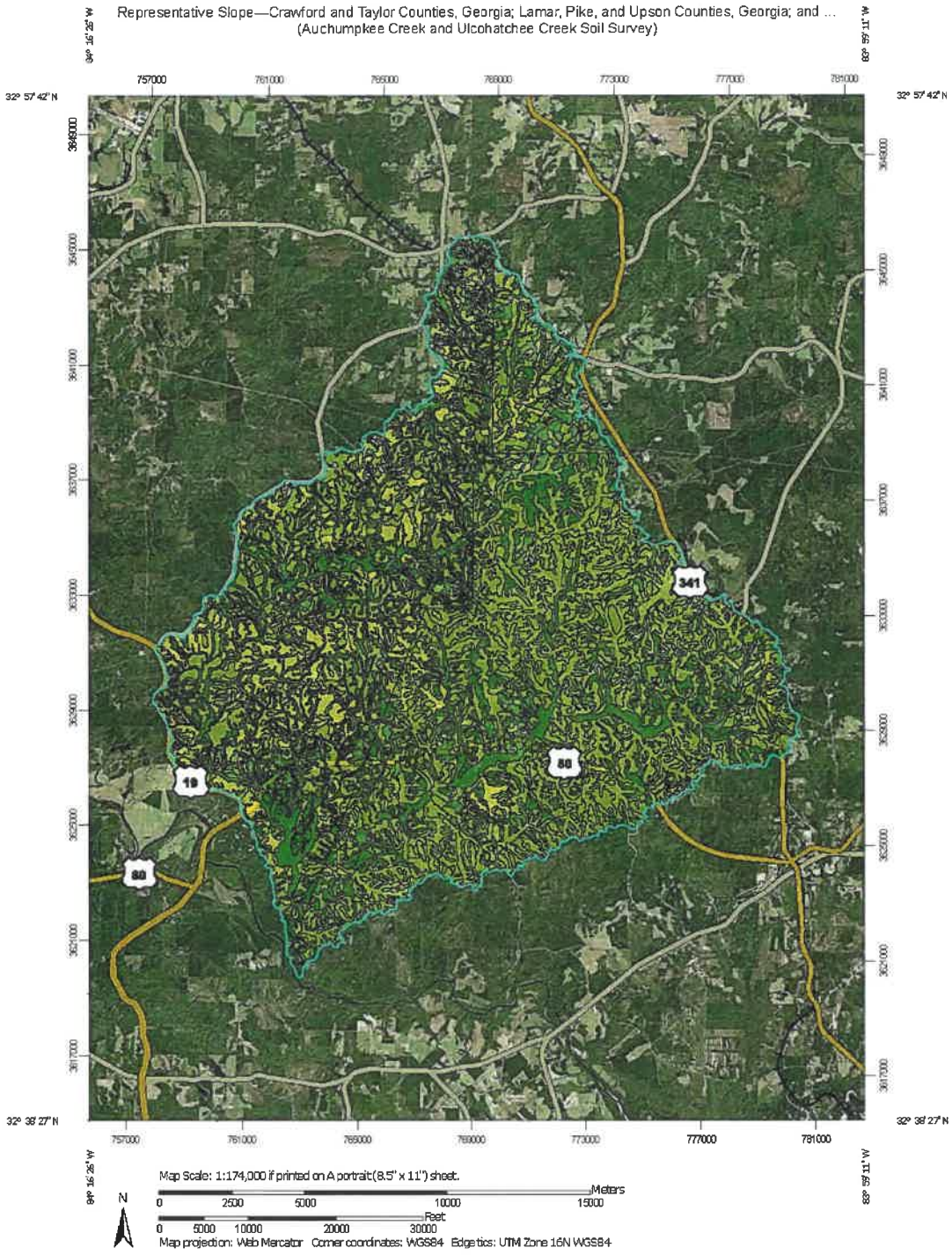
Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Lower

Layer Options (Horizon Aggregation Method): Surface Layer (Not applicable)



USDA **Natural Resources Conservation Service**

Web Soil Survey
National Cooperative Soil Survey

8/23/2017
Page 1 of 8

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils

Soil Rating Polygons
- 60 - 100
- 45 - 60
- 15 - 45
- 5 - 15
- 0 - 5
- Not rated or not available

Soil Rating Lines
- 60 - 100
- 45 - 60
- 15 - 45
- 5 - 15
- 0 - 5
- Not rated or not available

Soil Rating Points
- 60 - 100
- 45 - 60
- 15 - 45
- 5 - 15
- 0 - 5
- Not rated or not available

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at scales ranging from 1:15,800 to 1:24,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Crawford and Taylor Counties, Georgia
Survey Area Data: Version 14, Sep 13, 2016

Soil Survey Area: Lamar, Pike, and Upson Counties, Georgia
Survey Area Data: Version 9, Sep 13, 2016

Soil Survey Area: Monroe County, Georgia
Survey Area Data: Version 12, Sep 19, 2016

Your area of interest (AOI) includes more than one soil survey area. These survey areas may have been mapped at different scales, with a different land use in mind, at different times, or at different levels of detail. This may result in map unit symbols, soil properties, and interpretations that do not completely agree across soil survey area boundaries.

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jan 1, 1999—Dec 31, 2014

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Representative Slope

Representative Slope— Summary by Map Unit — Crawford and Taylor Counties, Georgia (GA630)				
Map unit symbol	Map unit name	Rating (percent)	Acres in AOI	Percent of AOI
AgB	Ailey loamy sand, 2 to 5 percent slopes	4.0	1.3	0.0%
AmB	Appling sandy loam, 2 to 6 percent slopes	4.0	1,045.4	1.5%
AmC	Appling sandy loam, 6 to 10 percent slopes	8.0	2,305.4	3.2%
CeB	Cecil sandy loam, 2 to 6 percent slopes	4.0	3,183.5	4.5%
CeC	Cecil sandy loam, 6 to 10 percent slopes	8.0	3,095.1	4.4%
Ch	Chenneby silt loam, frequently flooded	1.0	1,948.9	2.7%
CwB	Cowarts loamy sand, 2 to 5 percent slopes	4.0	12.8	0.0%
CwC	Cowarts loamy sand, 5 to 12 percent slopes	9.0	60.8	0.1%
FsB	Fuquay loamy sand, 1 to 5 percent slopes	3.0	2.4	0.0%
HaB	Helena sandy loam, 2 to 6 percent slopes	4.0	1,236.4	1.7%
HaC	Helena sandy loam, 6 to 10 percent slopes	8.0	1,878.1	2.6%
LpB	Lakeland sand, 1 to 5 percent slopes	3.0	0.9	0.0%
LrB	Lloyd clay loam, 2 to 6 percent slopes	4.0	1,537.1	2.2%
LsC2	Lloyd clay loam, 6 to 10 percent slopes, eroded	8.0	1,709.1	2.4%
LsD2	Lloyd clay loam, 10 to 17 percent slopes, eroded	14.0	707.0	1.0%
LuB	Lucy loamy sand, 0 to 5 percent slopes	3.0	19.0	0.0%
OrB	Orangeburg loamy sand, 2 to 5 percent slopes	4.0	7.0	0.0%
PaC2	Pacolet sandy clay loam, 6 to 10 percent slopes, moderately eroded	8.0	2,395.8	3.4%

Representative Slope— Summary by Map Unit — Crawford and Taylor Counties, Georgia (GA630)				
Map unit symbol	Map unit name	Rating (percent)	Acres in AOI	Percent of AOI
PaD2	Pacolet sandy clay loam, 10 to 15 percent slopes, moderately eroded	13.0	5,244.0	7.4%
PaE2	Pacolet sandy clay loam, 15 to 25 percent slopes, moderately eroded	20.0	587.2	0.8%
SeC	Sedgefield sandy loam, 6 to 10 percent slopes	8.0	2,252.9	3.2%
Sh	Shellbluff silt loam, occasionally flooded	1.0	294.8	0.4%
W	Water		156.1	0.2%
WnD	Wynott sandy loam, 10 to 15 percent slopes	13.0	7,959.4	11.2%
Subtotals for Soil Survey Area			**37,640.5**	**52.9%**
Totals for Area of Interest			**71,087.2**	**100.0%**

Representative Slope— Summary by Map Unit — Lamar, Pike, and Upson Counties, Georgia (GA642)				
Map unit symbol	Map unit name	Rating (percent)	Acres in AOI	Percent of AOI
AlB	Altavista sandy loam, 2 to 6 percent slopes	4.0	178.2	0.3%
Alm	Alluvial land	1.0	186.2	0.3%
AmB	Appling sandy loam, 2 to 6 percent slopes	4.0	235.2	0.3%
AmC	Appling sandy loam, 6 to 10 percent slopes	8.0	148.9	0.2%
AnB3	Appling sandy clay loam, 2 to 6 percent slopes, severely eroded	4.0	165.6	0.2%
AnC3	Appling sandy clay loam, 6 to 10 percent slopes, severely eroded	8.0	107.1	0.2%
Bfs	Buncombe loamy sand	1.0	6.7	0.0%
Cco	Chewacla complex, occasionally flooded	1.0	45.8	0.1%
Cwf	Chewacla and Wehadkee soils, frequently flooded	1.0	1,366.0	1.9%
CYB2	Cecil sandy loam, 2 to 6 percent slopes, moderately eroded	4.0	189.8	0.3%
CYC2	Cecil sandy loam, 6 to 10 percent slopes, moderately eroded	8.0	223.3	0.3%

Representative Slope— Summary by Map Unit — Lamar, Pike, and Upson Counties, Georgia (GA642)				
Map unit symbol	Map unit name	Rating (percent)	Acres in AOI	Percent of AOI
CYE	Cecil sandy loam, 10 to 25 percent slopes	18.0	3.1	0.0%
CYE2	Cecil sandy loam, 10 to 25 percent slopes, eroded	18.0	390.4	0.5%
CZB3	Cecil sandy clay loam, 2 to 6 percent slopes, severely eroded	4.0	731.5	1.0%
CZD3	Cecil sandy clay loam, 6 to 15 percent slopes, severely eroded	11.0	1,974.6	2.8%
DgB	Davidson loam, 2 to 6 percent slopes	4.0	983.0	1.4%
DgC2	Davidson loam, 6 to 10 percent slopes, moderately eroded	8.0	621.7	0.9%
DgD2	Davidson loam, 10 to 15 percent slopes, eroded	13.0	1,316.3	1.9%
DhB3	Davidson clay loam, 2 to 6 percent slopes, severely eroded	4.0	3,554.4	5.0%
DhC3	Davidson clay loam, 6 to 10 percent slopes, severely eroded	8.0	5,491.8	7.7%
DhE3	Davidson clay loam, 10 to 25 percent slopes, severely eroded	18.0	2,748.6	3.9%
Gul	Gullied land		29.2	0.0%
HYB	Helena sandy loam, 2 to 6 percent slopes	4.0	59.3	0.1%
LmD	Louisburg stony soils, 6 to 15 percent slopes	11.0	19.6	0.0%
MgB2	Madison sandy loam, 2 to 6 percent slopes, moderately eroded	4.0	1.7	0.0%
MiB3	Madison sandy clay loam, 2 to 6 percent slopes, severely eroded	4.0	8.1	0.0%
MiD3	Madison sandy clay loam, 6 to 15 percent slopes, severely eroded	11.0	22.1	0.0%
PkC	Pacolet stony loam, 6 to 10 percent slopes	8.0	22.0	0.0%
Pt	Pits		35.3	0.0%
Roc	Rock land		1.5	0.0%
Sto	Starr soils	1.0	75.4	0.1%

Representative Slope— Summary by Map Unit — Lamar, Pike, and Upson Counties, Georgia (GA642)				
Map unit symbol	Map unit name	Rating (percent)	Acres in AOI	Percent of AOI
W	Water		110.8	0.2%
WEC	Wilkes and Enon soils, 2 to 10 percent slopes	7.0	1,856.9	2.6%
Wed	Wehadkee soils, 0 to 2 percent slopes, frequently flooded	1.0	2,240.1	3.2%
WEE	Wilkes and Enon soils, 10 to 25 percent slopes	18.0	4,221.7	5.9%
Subtotals for Soil Survey Area			**29,372.1**	**41.3%**
Totals for Area of Interest			**71,087.2**	**100.0%**

Representative Slope— Summary by Map Unit — Monroe County, Georgia (GA207)				
Map unit symbol	Map unit name	Rating (percent)	Acres in AOI	Percent of AOI
BpD	Bush River-Prosperity complex, 6 to 15 percent slopes	8.0	19.5	0.0%
CaB	Cataula sandy loam, 2 to 6 percent slopes	4.0	129.8	0.2%
CdB	Cecil sandy loam, 2 to 6 percent slopes	4.0	77.5	0.1%
CeC2	Cecil sandy loam, 6 to 10 percent slopes, moderately eroded	8.0	91.4	0.1%
CfB2	Cecil sandy clay loam, 2 to 6 percent slopes, moderately eroded	4.0	422.2	0.6%
CgC3	Cecil sandy clay loam, 6 to 10 percent slopes, severely eroded	8.0	708.6	1.0%
CuC	Cecil-Urban land complex, 2 to 10 percent slopes	6.0	62.6	0.1%
CwA	Chewacla loam, 0 to 2 percent slopes, frequently flooded	1.0	191.4	0.3%
HaB	Hard Labor sandy loam, 2 to 6 percent slopes	4.0	18.9	0.0%
LcB	Lloyd sandy loam, 2 to 6 percent slopes	4.0	93.9	0.1%
LdD2	Lloyd sandy loam, 6 to 15 percent slopes, moderately eroded	10.0	10.1	0.0%
LfB3	Lloyd sandy clay loam, 2 to 6 percent slopes, severely eroded	4.0	362.7	0.5%
LfD3	Lloyd sandy clay loam, 6 to 15 percent slopes, severely eroded	11.0	357.5	0.5%

Representative Slope— Summary by Map Unit — Monroe County, Georgia (GA207)				
Map unit symbol	Map unit name	Rating (percent)	Acres in AOI	Percent of AOI
LfE3	Lloyd sandy clay loam, 15 to 30 percent slopes, severely eroded	23.0	148.9	0.2%
MdB3	Madison sandy clay loam, 2 to 6 percent slopes, severely eroded	4.0	115.6	0.2%
MdD3	Madison sandy clay loam, 6 to 15 percent slopes, severely eroded	11.0	198.3	0.3%
MdE3	Madison sandy clay loam, 15 to 30 percent slopes, severely eroded	23.0	7.5	0.0%
MsD	Madison-Bethlehem complex, 6 to 15 percent slopes, stony	11.0	42.8	0.1%
MsE	Madison-Bethlehem complex, 15 to 30 percent slopes, stony	23.0	75.4	0.1%
PaD2	Pacolet sandy loam, 6 to 15 percent slopes, moderately eroded	11.0	186.5	0.3%
PcD3	Pacolet sandy clay loam, 6 to 15 percent slopes, severely eroded	11.0	191.6	0.3%
PdD	Pacolet-Saw complex, 6 to 15 percent slopes, stony	11.0	264.6	0.4%
PdE	Pacolet-Saw complex, 15 to 25 percent slopes, stony	20.0	192.7	0.3%
SeB	Sedgefield sandy loam, 0 to 4 percent slopes	2.0	1.4	0.0%
ToA	Toccoa sandy loam, 0 to 2 percent slopes, frequently flooded	2.0	64.9	0.1%
W	Water	0.0	40.5	0.1%
Subtotals for Soil Survey Area			**4,074.6**	**5.7%**
Totals for Area of Interest			**71,087.2**	**100.0%**

Description

Slope gradient is the difference in elevation between two points, expressed as a percentage of the distance between those points.

The slope gradient is actually recorded as three separate values in the database. A low value and a high value indicate the range of this attribute for the soil component. A "representative" value indicates the expected value of this attribute for the component. For this soil property, only the representative value is used.

Rating Options

Units of Measure: percent

Aggregation Method: Dominant Component

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Interpret Nulls as Zero: No

APPENDIX D. FIELD NOTES AND PICTURES

GEORGIA ADOPT-A-STREAM: Basic Visual Form

To be used with: Photo Points, Wentworth Pebble Count, Cross Section, Bio Survey, Stream Habitat Survey, Stream Flow and Site Sketch

SITE INFORMATION

Group Name: Two Rivers RC&D
Event Date: 11/19/16 (MMDDYYYY)
Group ID: G-_____ Site ID: S- 1
Time Sample Collected: _____ (HHMM am/pm)
Stream Name: Ulcohatchee Creek
Time Spent Sampling: 6 hrs (Min)
Monitor(s): Lance Renfrow
Total Time Spent Traveling *(optional)*: _____ (Min)
Number of Participants: 2
Furthest Distance Traveled *(optional)*: _____ (Miles)

Present conditions (check all that apply)
☐ Heavy Rain ☐ Steady Rain ☐ Intermittent Rain
☐ Overcast ☐ Partly Cloudy ☒ Clear/Sunny

Amount of rain, if known?
Amount in Inches: n/a
In Last Hours/Days: n/a
*Refer to *wunderground.com* for rainfall data

OBSERVATIONS

Flow/Water Level: (check all that apply) ☒ Dry ☐ Stagnant/Still ☐ Low ☐ Normal ☐ High ☐ Flood (over banks)

Water Clarity: ☐ Clear/Transparent ☐ Cloudy/Somewhat Turbid ☐ Opaque/Turbid ☐ Other:_____

Water Color: ☐ No Color ☐ Brown/Muddy ☐ Green ☐ Milky/White ☐ Tannic ☐ Other:_____

Water Surface: ☐ Clear ☐ Oily sheen: Does it break when disturbed? Yes/No (circle one) ☐ Algae
☐ Foam ○ Greater than 3" high ○ It is pure white ☐ Other:_____

Water Odor: ☐ Natural/None ☐ Gasoline ☐ Sewage ☐ Rotten Egg
☐ Fishy ☐ Chlorine ☐ Other:_____

Trash: ☒ None ☐ Yes, I did a cleanup ☐ This site needs an organized cleanup

PHOTO POINTS

Photos: Please take images to document your observations and changes in water quality conditions.
Photo point directions can be found in the manuals. Images can be submitted online with your other data.

Reference Location (RL): Latitude (+)_____ (DD.DDDD°) Longitude (-)_____ (DD.DDDD°)

Compass bearing to permanent Photo Point Location (PPL): Degrees (°)_____

Distance to permanent Photo Point Location (PPL) from Reference Location (RL): Distance _____ (ft/in)

Camera height at permanent Photo Point location (PPL): Height _____ (ft/in)

COMMENTS

Any changes since you last sampled at this site? If yes, please describe.

Please submit data to our online database at www.GeorgiaAdoptAStream.org

GEORGIA ADOPT-A-STREAM: Basic Visual Form

To be used with: Photo Points, Wentworth Pebble Count, Cross Section, Bio Survey, Stream Habitat Survey, Stream Flow and Site Sketch

SITE INFORMATION

Group Name: Two Rivers RC&D
Group ID: G-_____ Site ID: S-2
Stream Name: Ulcohatchee Creek
Monitor(s): Lance Renfrow
Number of Participants: 2

Event Date: 11/19/16 (MMDDYYYY)
Time Sample Collected: _____ (HHMM am/pm)
Time Spent Sampling: 6 hrs (Min)
Total Time Spent Traveling *(optional)*: _____ (Min)
Furthest Distance Traveled *(optional)*: _____ (Miles)

Present conditions (check all that apply)
☐ Heavy Rain ☐ Steady Rain ☐ Intermittent Rain
☐ Overcast ☐ Partly Cloudy ☒ Clear/Sunny

Amount of rain, if known?
Amount in Inches: n/a
In Last Hours/Days: n/a
*Refer to *wunderground.com* for rainfall data

OBSERVATIONS

Flow/Water Level: *(check all that apply)* ☒ Dry ☐ Stagnant/Still ☐ Low ☐ Normal ☐ High ☐ Flood (over banks)

Water Clarity: ☐ Clear/Transparent ☐ Cloudy/Somewhat Turbid ☐ Opaque/Turbid ☐ Other:_____

Water Color: ☐ No Color ☐ Brown/Muddy ☐ Green ☐ Milky/White ☐ Tannic ☐ Other:_____

Water Surface: ☐ Clear ☐ Oily sheen: Does it break when disturbed? Yes/No (circle one) ☐ Algae
☐ Foam ○ Greater than 3" high ○ It is pure white ☐ Other:_____

Water Odor: ☐ Natural/None ☐ Gasoline ☐ Sewage ☐ Rotten Egg
☐ Fishy ☐ Chlorine ☐ Other:_____

Trash: ☐ None ☐ Yes, I did a cleanup ☐ This site needs an organized cleanup ☒ moderate trash

PHOTO POINTS

Photos: Please take images to document your observations and changes in water quality conditions.
Photo point directions can be found in the manuals. Images can be submitted online with your other data.

Reference Location (RL): Latitude (+)_____ (DD.DDDD°) Longitude (-)_____ (DD.DDDD°)

Compass bearing to permanent Photo Point Location (PPL): Degrees (°)_____

Distance to permanent Photo Point Location (PPL) from Reference Location (RL): Distance _____(ft/in)

Camera height at permanent Photo Point location (PPL): Height _____(ft/in)

COMMENTS

Any changes since you last sampled at this site? If yes, please describe.

Please submit data to our online database at www.GeorgiaAdoptAStream.org

GEORGIA ADOPT-A-STREAM: Basic Visual Form

To be used with: Photo Points, Wentworth Pebble Count, Cross Section, Bio Survey, Stream Habitat Survey, Stream Flow and Site Sketch

SITE INFORMATION

Group Name: Two Rivers RC&D
Group ID: G-_____ Site ID: S- 3
Stream Name: Ulcohatchee Creek
Monitor(s): Lance Renfrow
Number of Participants: 2

Event Date: 11/19/16 (MMDDYYYY)
Time Sample Collected: _____ (HHMM am/pm)
Time Spent Sampling: 6 hrs (Min)
Total Time Spent Traveling *(optional)*: _____ (Min)
Furthest Distance Traveled *(optional)*: _____ (Miles)

Present conditions (check all that apply)
☐ Heavy Rain ☐ Steady Rain ☐ Intermittent Rain
☐ Overcast ☐ Partly Cloudy ☒ Clear/Sunny

Amount of rain, if known?
Amount in Inches: n/a
In Last Hours/Days: n/a
*Refer to *wunderground.com* for rainfall data

OBSERVATIONS

Flow/Water Level: (check all that apply) ☐ Dry ☐ Stagnant/Still ☒ Low ☐ Normal ☐ High ☐ Flood (over banks)

Water Clarity: ☒ Clear/Transparent ☐ Cloudy/Somewhat Turbid ☐ Opaque/Turbid ☐ Other: _____

Water Color: ☒ No Color ☐ Brown/Muddy ☐ Green ☐ Milky/White ☐ Tannic ☐ Other: _____

Water Surface: ☒ Clear ☐ Oily sheen: Does it break when disturbed? Yes/No (circle one) ☐ Algae
☐ Foam ○ Greater than 3" high ○ It is pure white ☐ Other: _____

Water Odor: ☒ Natural/None ☐ Gasoline ☐ Sewage ☐ Rotten Egg
☐ Fishy ☐ Chlorine ☐ Other: _____

Trash: ☒ None ☐ Yes, I did a cleanup ☐ This site needs an organized cleanup

PHOTO POINTS

Photos: Please take images to document your observations and changes in water quality conditions.
Photo point directions can be found in the manuals. Images can be submitted online with your other data.

Reference Location (RL): Latitude (+) _____ (DD.DDDD°) Longitude (-) _____ (DD.DDDD°)

Compass bearing to permanent Photo Point Location (PPL): Degrees (°) _____

Distance to permanent Photo Point Location (PPL) from Reference Location (RL): Distance _____ (ft/in)

Camera height at permanent Photo Point location (PPL): Height _____ (ft/in)

COMMENTS

Any changes since you last sampled at this site? If yes, please describe.

Please submit data to our online database at www.GeorgiaAdoptAStream.org

GEORGIA ADOPT-A-STREAM: Basic Visual Form

To be used with: Photo Points, Wentworth Pebble Count, Cross Section, Bio Survey, Stream Habitat Survey, Stream Flow and Site Sketch

SITE INFORMATION

Group Name: Two Rivers RC&D
Group ID: G-_____ Site ID: S- 4
Stream Name: Ulcohatchee Creek
Monitor(s): Lance Renfrow
Number of Participants: 2

Event Date: 11/19/16 (MMDDYYYY)
Time Sample Collected: _____ (HHMM am/pm)
Time Spent Sampling: 6 hrs (Min)
Total Time Spent Traveling *(optional)*: _____ (Min)
Furthest Distance Traveled *(optional)*: _____ (Miles)

Present conditions (check all that apply)
☐ Heavy Rain ☐ Steady Rain ☐ Intermittent Rain
☐ Overcast ☐ Partly Cloudy ☒ Clear/Sunny

Amount of rain, if known?
Amount in Inches: n/a
In Last Hours/Days: n/a
*Refer to *wunderground.com* for rainfall data

OBSERVATIONS

Flow/Water Level: *(check all that apply)* ☐ Dry ☒ Stagnant/Still ☐ Low ☐ Normal ☐ High ☐ Flood (over banks)

Water Clarity: ☒ Clear/Transparent ☐ Cloudy/Somewhat Turbid ☐ Opaque/Turbid ☐ Other: _____

Water Color: ☐ No Color ☐ Brown/Muddy ☒ Green ☐ Milky/White ☐ Tannic ☐ Other: _____

Water Surface: ☒ Clear ☐ Oily sheen: Does it break when disturbed? Yes/No (circle one) ☐ Algae
☐ Foam ○ Greater than 3" high ○ It is pure white ☐ Other: _____

Water Odor: ☒ Natural/None ☐ Gasoline ☐ Sewage ☐ Rotten Egg
☐ Fishy ☐ Chlorine ☐ Other: _____

Trash: ☒ None ☐ Yes, I did a cleanup ☐ This site needs an organized cleanup

PHOTO POINTS

Photos: Please take images to document your observations and changes in water quality conditions.
Photo point directions can be found in the manuals. Images can be submitted online with your other data.

Reference Location (RL): Latitude (+)_____ (DD.DDDD°) Longitude (-)_____ (DD.DDDD°)

Compass bearing to permanent Photo Point Location (PPL): Degrees (°)_____

Distance to permanent Photo Point Location (PPL) from Reference Location (RL): Distance _____(ft/in)

Camera height at permanent Photo Point location (PPL): Height _____(ft/in)

COMMENTS

Any changes since you last sampled at this site? If yes, please describe.

Please submit data to our online database at www.GeorgiaAdoptAStream.org

GEORGIA ADOPT-A-STREAM: Basic Visual Form

To be used with: Photo Points, Wentworth Pebble Count, Cross Section, Bio Survey, Stream Habitat Survey, Stream Flow and Site Sketch

SITE INFORMATION

Group Name: Two Rivers RC&D
Group ID: G-_____ Site ID: S- 5
Stream Name: Ulcohatchee Creek
Monitor(s): Lance Renfrow
Number of Participants: 2

Event Date: 11/19/16 (MMDDYYYY)
Time Sample Collected: _____ (HHMM am/pm)
Time Spent Sampling: 6 hrs (Min)
Total Time Spent Traveling *(optional)*: _____ (Min)
Furthest Distance Traveled *(optional)*: _____ (Miles)

Present conditions (check all that apply)
☐ Heavy Rain ☐ Steady Rain ☐ Intermittent Rain
☐ Overcast ☐ Partly Cloudy ☒ Clear/Sunny

Amount of rain, if known?
Amount in Inches: n/a
In Last Hours/Days: n/a
*Refer to *wunderground.com* for rainfall data

OBSERVATIONS

Flow/Water Level: *(check all that apply)* ☐ Dry ☒ Stagnant/Still ☐ Low ☐ Normal ☐ High ☐ Flood (over banks)

Water Clarity: ☒ Clear/Transparent ☐ Cloudy/Somewhat Turbid ☐ Opaque/Turbid ☐ Other: _____

Water Color: ☐ No Color ☐ Brown/Muddy ☒ Green ☐ Milky/White ☐ Tannic ☐ Other: _____

Water Surface: ☒ Clear ☐ Oily sheen: Does it break when disturbed? Yes/No (circle one) ☐ Algae
☐ Foam ○ Greater than 3" high ○ It is pure white ☐ Other: _____

Water Odor: ☒ Natural/None ☐ Gasoline ☐ Sewage ☐ Rotten Egg
☐ Fishy ☐ Chlorine ☐ Other: _____

Trash: ☐ None ☐ Yes, I did a cleanup ☒ This site needs an organized cleanup

PHOTO POINTS

Photos: Please take images to document your observations and changes in water quality conditions.
Photo point directions can be found in the manuals. Images can be submitted online with your other data.

Reference Location (RL): Latitude (+)_____ (DD.DDDD°) Longitude (-)_____ (DD.DDDD°)

Compass bearing to permanent Photo Point Location (PPL): Degrees (°)_____

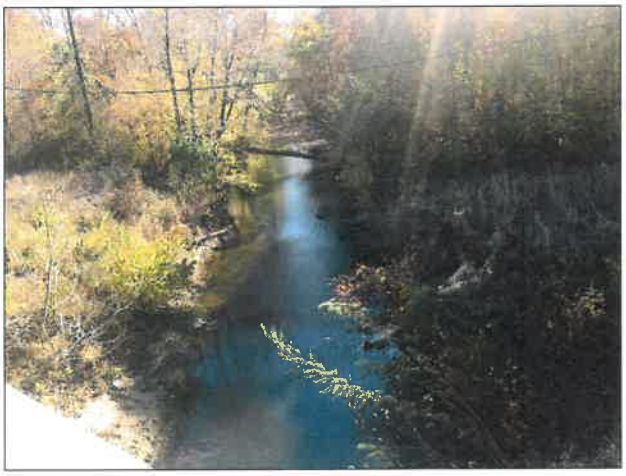
Distance to permanent Photo Point Location (PPL) from Reference Location (RL): Distance _____ (ft/in)

Camera height at permanent Photo Point location (PPL): Height _____ (ft/in)

COMMENTS

Any changes since you last sampled at this site? If yes, please describe.

Please submit data to our online database at www.GeorgiaAdoptAStream.org



GEORGIA ADOPT-A-STREAM: Basic Visual Form

To be used with: Photo Points, Wentworth Pebble Count, Cross Section, Bio Survey, Stream Habitat Survey, Stream Flow and Site Sketch

SITE INFORMATION

Group Name: Two Rivers RC&D
Group ID: G-_____ Site ID: S- 6
Stream Name: Auchumpkee Creek
Monitor(s): Lance Renfrow
Number of Participants: 2

Event Date: 11/19/16 (MMDDYYYY)
Time Sample Collected: _____ (HHMM am/pm)
Time Spent Sampling: 6 hrs (Min)
Total Time Spent Traveling *(optional)*: _____ (Min)
Furthest Distance Traveled *(optional)*: _____ (Miles)

Present conditions (check all that apply)
☐ Heavy Rain ☐ Steady Rain ☐ Intermittent Rain
☐ Overcast ☐ Partly Cloudy ☒ Clear/Sunny

Amount of rain, if known?
Amount in Inches: n/a
In Last Hours/Days: n/a
*Refer to *wunderground.com* for rainfall data

OBSERVATIONS

Flow/Water Level: (check all that apply) ☒ Dry ☐ Stagnant/Still ☐ Low ☐ Normal ☐ High ☐ Flood (over banks)

Water Clarity: ☐ Clear/Transparent ☐ Cloudy/Somewhat Turbid ☐ Opaque/Turbid ☐ Other:_____

Water Color: ☐ No Color ☐ Brown/Muddy ☐ Green ☐ Milky/White ☐ Tannic ☐ Other:_____

Water Surface: ☐ Clear ☐ Oily sheen: Does it break when disturbed? Yes/No (circle one) ☐ Algae
☐ Foam ○ Greater than 3" high ○ It is pure white ☐ Other:_____

Water Odor: ☐ Natural/None ☐ Gasoline ☐ Sewage ☐ Rotten Egg
☐ Fishy ☐ Chlorine ☐ Other:_____

Trash: ☐ None ☐ Yes, I did a cleanup ☒ This site needs an organized cleanup

PHOTO POINTS

Photos: Please take images to document your observations and changes in water quality conditions.
Photo point directions can be found in the manuals. Images can be submitted online with your other data.

Reference Location (RL): Latitude (+)_____ (DD.DDDD°) Longitude (-)_____ (DD.DDDD°)

Compass bearing to permanent Photo Point Location (PPL): Degrees (°)_____

Distance to permanent Photo Point Location (PPL) from Reference Location (RL): Distance _____ (ft/in)

Camera height at permanent Photo Point location (PPL): Height _____ (ft/in)

COMMENTS

Any changes since you last sampled at this site? If yes, please describe.

Please submit data to our online database at www.GeorgiaAdoptAStream.org

GEORGIA ADOPT-A-STREAM: Basic Visual Form

To be used with: Photo Points, Wentworth Pebble Count, Cross Section, Bio Survey, Stream Habitat Survey, Stream Flow and Site Sketch

SITE INFORMATION

Group Name: Two Rivers RC&D
Event Date: 11/19/16 (MMDDYYYY)
Group ID: G-_____ Site ID: S-7
Time Sample Collected: _____ (HHMM am/pm)
Stream Name: Auchumpkee Creek
Time Spent Sampling: 6 hrs (Min)
Monitor(s): Lance Renfrow
Total Time Spent Traveling *(optional)*: _____ (Min)
Number of Participants: 2
Furthest Distance Traveled *(optional)*: _____ (Miles)

Present conditions (check all that apply)
☐ Heavy Rain ☐ Steady Rain ☐ Intermittent Rain
☐ Overcast ☐ Partly Cloudy ☒ Clear/Sunny

Amount of rain, if known?
Amount in Inches: n/a
In Last Hours/Days: n/a
*Refer to *wunderground.com* for rainfall data

OBSERVATIONS

Flow/Water Level: *(check all that apply)* ☒ Dry ☐ Stagnant/Still ☐ Low ☐ Normal ☐ High ☐ Flood (over banks)

Water Clarity: ☐ Clear/Transparent ☐ Cloudy/Somewhat Turbid ☐ Opaque/Turbid ☐ Other: _____

Water Color: ☐ No Color ☐ Brown/Muddy ☐ Green ☐ Milky/White ☐ Tannic ☐ Other: _____

Water Surface: ☐ Clear ☐ Oily sheen: Does it break when disturbed? Yes/No (circle one) ☐ Algae
☐ Foam ○ Greater than 3" high ○ It is pure white ☐ Other: _____

Water Odor: ☐ Natural/None ☐ Gasoline ☐ Sewage ☐ Rotten Egg
☐ Fishy ☐ Chlorine ☐ Other: _____

Trash: ☐ None ☐ Yes, I did a cleanup ☒ This site needs an organized cleanup

PHOTO POINTS

Photos: Please take images to document your observations and changes in water quality conditions.
Photo point directions can be found in the manuals. Images can be submitted online with your other data.

Reference Location (RL): Latitude (+)_____ (DD.DDDD°) Longitude (-)_____ (DD.DDDD°)

Compass bearing to permanent Photo Point Location (PPL): Degrees (°)_____

Distance to permanent Photo Point Location (PPL) from Reference Location (RL): Distance _____ (ft/in)

Camera height at permanent Photo Point location (PPL): Height _____ (ft/in)

COMMENTS

Any changes since you last sampled at this site? If yes, please describe.

Please submit data to our online database at www.GeorgiaAdoptAStream.org

GEORGIA ADOPT-A-STREAM: Basic Visual Form

To be used with: Photo Points, Wentworth Pebble Count, Cross Section, Bio Survey, Stream Habitat Survey, Stream Flow and Site Sketch

SITE INFORMATION

Group Name: Two Rivers RC&D
Group ID: G-_____ Site ID: S- 8
Stream Name: Auchumpkee Creek
Monitor(s): Lance Renfrow
Number of Participants: 2

Event Date: 11/19/16 (MMDDYYYY)
Time Sample Collected: _____ (HHMM am/pm)
Time Spent Sampling: 6 hrs (Min)
Total Time Spent Traveling *(optional)*: _____ (Min)
Furthest Distance Traveled *(optional)*: _____ (Miles)

Present conditions (check all that apply)
☐ Heavy Rain ☐ Steady Rain ☐ Intermittent Rain
☐ Overcast ☐ Partly Cloudy ☒ Clear/Sunny

Amount of rain, if known?
Amount in Inches: n/a
In Last Hours/Days: n/a
*Refer to *wunderground.com* for rainfall data

OBSERVATIONS

Flow/Water Level: (check all that apply) ☐ Dry ☐ Stagnant/Still ☐ Low ☒ Normal ☐ High ☐ Flood (over banks)

Water Clarity: ☒ Clear/Transparent ☐ Cloudy/Somewhat Turbid ☐ Opaque/Turbid ☐ Other: _____

Water Color: ☐ No Color ☐ Brown/Muddy ☒ Green ☐ Milky/White ☐ Tannic ☐ Other: _____

Water Surface: ☒ Clear ☐ Oily sheen: Does it break when disturbed? Yes/No (circle one) ☐ Algae
☐ Foam ○ Greater than 3" high ○ It is pure white ☐ Other: _____

Water Odor: ☒ Natural/None ☐ Gasoline ☐ Sewage ☐ Rotten Egg
☐ Fishy ☐ Chlorine ☐ Other: _____

Trash: ☒ None ☐ Yes, I did a cleanup ☐ This site needs an organized cleanup

PHOTO POINTS

Photos: Please take images to document your observations and changes in water quality conditions.
Photo point directions can be found in the manuals. Images can be submitted online with your other data.

Reference Location (RL): Latitude (+)_____ (DD.DDDD°) Longitude (-)_____ (DD.DDDD°)

Compass bearing to permanent Photo Point Location (PPL): Degrees (°)_____

Distance to permanent Photo Point Location (PPL) from Reference Location (RL): Distance _____(ft/in)

Camera height at permanent Photo Point location (PPL): Height _____(ft/in)

COMMENTS

Any changes since you last sampled at this site? If yes, please describe.

Please submit data to our online database at www.GeorgiaAdoptAStream.org

GEORGIA ADOPT-A-STREAM: Basic Visual Form

To be used with: Photo Points, Wentworth Pebble Count, Cross Section, Bio Survey, Stream Habitat Survey, Stream Flow and Site Sketch

SITE INFORMATION

Group Name: Two Rivers RC&D
Group ID: G-_____ Site ID: S- 9A
Stream Name: Auchumpkee Creek
Monitor(s): Lance Renfrow
Number of Participants: 2

Event Date: 11/19/16 (MMDDYYYY)
Time Sample Collected: _____ (HHMM am/pm)
Time Spent Sampling: 6 hrs (Min)
Total Time Spent Traveling *(optional)*: _____ (Min)
Furthest Distance Traveled *(optional)*: _____ (Miles)

Present conditions (check all that apply)
☐ Heavy Rain ☐ Steady Rain ☐ Intermittent Rain
☐ Overcast ☐ Partly Cloudy ☒ Clear/Sunny

Amount of rain, if known?
Amount in Inches: n/a
In Last Hours/Days: n/a
*Refer to *wunderground.com* for rainfall data

OBSERVATIONS

Flow/Water Level: *(check all that apply)* ☐ Dry ☐ Stagnant/Still ☒ Low ☐ Normal ☐ High ☐ Flood (over banks)

Water Clarity: ☒ Clear/Transparent ☐ Cloudy/Somewhat Turbid ☐ Opaque/Turbid ☐ Other: _____

Water Color: ☐ No Color ☐ Brown/Muddy ☒ Green ☐ Milky/White ☐ Tannic ☐ Other: _____

Water Surface: ☒ Clear ☐ Oily sheen: Does it break when disturbed? Yes/No (circle one) ☐ Algae
☐ Foam ○ Greater than 3" high ○ It is pure white ☐ Other: _____

Water Odor: ☒ Natural/None ☐ Gasoline ☐ Sewage ☐ Rotten Egg
☐ Fishy ☐ Chlorine ☐ Other: _____

Trash: ☐ None ☒ Yes, I did a cleanup ☐ This site needs an organized cleanup

PHOTO POINTS

Photos: Please take images to document your observations and changes in water quality conditions.
Photo point directions can be found in the manuals. Images can be submitted online with your other data.

Reference Location (RL): Latitude (+)_____ (DD.DDDD°) Longitude (-)_____ (DD.DDDD°)

Compass bearing to permanent Photo Point Location (PPL): Degrees (°)_____

Distance to permanent Photo Point Location (PPL) from Reference Location (RL): Distance _____ (ft/in)

Camera height at permanent Photo Point location (PPL): Height _____ (ft/in)

COMMENTS

Any changes since you last sampled at this site? If yes, please describe.

Please submit data to our online database at www.GeorgiaAdoptAStream.org

Photos taken April 2, 2017:

Site 1. Fours cows relaxing next to Ulcohatchee Creek.

Site 1. Nine cows within and outside of Ulcohatchee Creek.

Site 1: Cow waste is in direct contact with the Ulcohatchee Creek water. This is a major contributor to the fecal coliform impairment.

Site 1: Cow waste directly next to Ulcohatchee Creek.

Approximately 1½ miles from Site 1: Cattle in and around a tributary to Ulcohatchee Creek.

Approximately 1½ miles from Site 1: Cattle grazing in pasture next to a tributary of Ulcohatchee Creek. More cattle can be seen within the tree line next to the tributary.

Site 6. Picture taken facing east upstream of Auchumpkee Creek.

Approximately ½ miles from Site 8. Cattle farms in vicinity.

Approximately ½ miles from Site 8. Cattle operations outside of rural residential homes.

Approximately ½ miles from Site 8. Cattle operations outside of rural residential homes.

Photos taken August 27, 2017:

Approximately 1¼ miles from Site 1. Cattle spotted near a pond that is close to Ulcohatchee Creek. Geese can even be spotted in the background of the picture.

Approximately 1¼ miles from Site 1. Cattle spotted in the Ulcohatchee Creek watershed.

Approximately 1½ miles from Site 1. Cattle are shading around this tributary to Ulcohatchee Creek.

Approximately 1½ miles from Site 1. Cattle are shading around this tributary to Ulcohatchee Creek.

Site 5. A deer is wading in the creek. Introduction of natural background levels of fecal coliform should be included as a source.

APPENDIX E. COPIES OF PUBLIC NOTICES AND OTHER LITERATURE

The Upson Beacon
Wednesday, April 26, 2017
Page 15

Executor's Address
100 S. HILL ST
GRIFFIN, GA 30223
Attorney
BECK, OWEN & MURRAY
100 S. HILL ST
GRIFFIN, GA 30223
Apr. 26; May 3, 10, 17, 2017
17UB4-40

CITATION
IN THE SUPERIOR COURT
OF UPSON COUNTY GEORGIA

DEPARTMENT OF TRANSPORTATION DOCKET NO. 17V128SLB
VS. IN REM
0.083 acres of land; and certain easement rights; and
Rick Thrasher and Roger Thrasher, Individually
The said named persons and any and all other persons known and unknown claiming any right, title, power, interest, ownership, equity, claim or demand in and to the lands hereinafter described as follows:
That the above stated case, being a condemnation in rem against the property hereinafter described, was filed in said Court on the 11th day of April, 2017; That, in accordance with provisions of the aforesaid Official Code, a Declaration of Taking, duly authorized and properly executed as provided by the

[illegible] way line a distance of 61.28 feet to a point 19.07 feet right of and opposite station 61+01.45 on said Franklindale Road centerline; thence S 46 ° 30' 20.9" W a distance of 68.90 feet to a point 50.00 feet right of and opposite station 158+25.46 on the construction centerline of U.S. 19/SR 3; thence S 0° 15' 31.2" W a distance of 176.64 to a point 50.00 feet right of and opposite station 156+48.82 on said centerline, said point also being a point on the southern property line of the condemnee; thence northwesterly along said property line a distance of 9.60 feet back to the point of BEGINNING. Said described land being the required right of way and is shown colored yellow on the attached plats marked Amex 1-A.
Also to be acquired by condemnation are two permanent easements for construction and maintenance of slopes and utilities being described as follows:
BEGINNING at a point on the southern property line of the condemnee, said point being 50.00 feet right of and opposite station 156+48.82 on the construction centerline of US 19/SR 3 on Georgia Highway Project NHS00-0000-00(297). P.I. 0000297; running thence northeasterly along a straight line to a point 50.00 feet right of and opposite station 158+25.46 on said centerline; thence southwesterly along a straight line to a point 70.00 feet right of and opposite station 158+44.61 on said centerline; thence southwesterly along a straight line to a point 70.00 feet right of and opposite station 156+48.15 on said centerline, said point also being a point on the southern property line of the condemnee; thence northwesterly along said property line back to the

construction rights and existing right of way to the condemnee remaining land for driveway purposes. Said easement will expire on January 1, 2020 and is shown colored orange on the above mentioned plats.
Upon completion of the project, the driveway will remain in place for use by the condemnee.
Apr. 26, May 3, 2017
17UB4-41

CITATION IN THE SUPERIOR COURT OF UPSON COUNTY GEORGIA

DEPARTMENT OF TRANSPORTATION DOCKET NO. 17V129SLB
VS. IN REM
0.140 acres of land; and certain easement rights; and
William Ellis Chastain and Virginia Well Company, individually
The said named persons and any and all other persons known and unknown claiming any right, title, power, interest, ownership, equity, claim or demand in and to the lands hereinafter described, and all occupants, tenants, lessees, licensees and all holders, owners and users of ways and easements in, across, over and under said land are hereby notified, under the provisions of the Official Code of Georgia Annotated Sections 32-3-4 through 32-3-19, providing for the exercise of the power of eminent domain by the State of Georgia, or any of its subdivisions, or by any county of such State, as follows:
That the above stated case, being a condemnation in rem against the property hereinafter described, was filed in said Court on the 11th day of April, 2017; That, in accordance with provisions of the aforesaid Official Code, a Declaration of Taking, duly authorized and properly executed as provided by the

27.79 feet on a bearing of N 89 ° 53' 05.8" W) to a point 86.98 feet left of and opposite station 174+16.91 on said centerline; thence N 75 ° 19' 39.6" W a distance of 13.31 feet to a point 73.55 feet right of and opposite station 81+27.16 on the construction centerline of Corley Drive; thence N 13 ° 12' 15.7" E a distance of 47.78 feet to a point 60.00 feet left of and opposite station 174+58.92 on said centerlines; thence N 34 ° 58' 08.3" W a distance of 228.43 to a point 60.00 feet left of and opposite station 176+87.36 of said centerline, said point also being a point on the northwestern property line of the condemnee; thence northeasterly along said northwestern property line of the condemnee a distance of 19.67 feet to a point 41.43 feet left of and opposite station 176+93.83 on said centerline, said point also being a point on the existing southwestern right of way line of U.S. 19/SR 3; thence southeasterly along said existing right of way line a distance of 236.79 to a point 48.14 feet left of and opposite station 174+57.05 on said centerlines; thence southwesterly along said right of way line a distance of 5.00 feet to a point 48.14 feet left of and opposite station 174+57.08 on said centerlines; thence southeasterly along said existing right of way line a distance of 10.00 feet to a point 48.21 feet left of and opposite station 174+47.08 on said centerlines; thence northeasterly along said existing right of way line a distance of 5.00 feet to a point 43.21 feet left of and opposite station 174+47.05 on said centerline; thence southeasterly along said existing right of way line a distance of 38.24 feet back to the point of BEGINNING. Said described land being the required right of way and is shown colored yellow on the at-

Apr. 26, 2017
17UB4-43

Public Hearing on Water Quality Concerns in Auchumpkee and Ulcohatchee Creek
A community hearing will be held to discuss the monitoring and preparation of new Watershed Management Plans for the decrease in pollutant Total Maximum Daily Loads (TMDL). A TMDL is the maximum amount of a pollutant that a river can receive and still be safe and healthy.
Stakeholders will have the opportunity to assist in developing a plan to restore Auchumpkee Creek and Ulcohatchee Creek to their designated uses. Also, you will be able to help identify and discuss contributing pollution sources, assist in arriving at equitable pollution reduction allocations, and recommend specific actions needed to effectively control sources of pollution. In order to make recommendations and/or provide key information and materials from your local community, Two Rivers Resource Conservation and Development Council is asking all interested residents to attend and provide input. This group of people will be critical to the successful restoration and protection of Auchumpkee Creek and Ulcohatchee Creek.
Our community hearing will be held on May 4, 2017 at 1:30 pm in the Thomaston-Upson Government Complex in Thomaston, located at 106 East Lee Street. If you have any questions please email Lance Rentfrow at rentfrowlance@gmail.com.
Apr. 26, 2017
17UB4-44

UPSON COUNTY PLANNING COMMISSION PUBLIC HEARING
Upson County Governmental Complex
106 East Lee Street
City/County Meeting Room, #140
Rezoning Application REZ2017-04
Monday May 8, 2017
6:30 P.M.
The Upson County Planning Commission will conduct a Public Hearing Monday May 8, 2017 to

Public Hearing on Water Quality Concerns In Auchumpkee and Ulcohatchee Creek

A community hearing will be held to discuss the monitoring and preparation of new Watershed Management Plans for the decrease in pollutant Total Maximum Daily Loads (TMDL). A TMDL is the maximum amount of a pollutant that a river can receive and still be safe and healthy.

Stakeholders will have the opportunity to assist in developing a plan to restore Auchumpkee Creek and Ulcohatchee Creek to their designated uses. Also, you will be able to help identify and discuss contributing pollution sources, assist in arriving at equitable pollution reduction allocations, and recommend specific actions needed to effectively control sources of pollution. In order to make recommendations and/or provide key information and materials from your local community, Two Rivers Resource Conservation and Development Council is asking all interested residents to attend and provide input. This group of people will be critical to the successful restoration and protection of Auchumpkee Creek and Ulcohatchee Creek.

Our community hearing will be held on May 4, 2017 at 1:30 pm in the Thomaston-Upson Government Complex in Thomaston, located at 106 East Lee Street. If you have any questions please email Lance Renfrow at renfrowlance@gmail.com.

4-10 Water 4.27 |

Probate Clerk, and filing fees must be tendered with your objections. If any objections are filed, a hearing will be scheduled at a later date. If no objections are filed, the Petition may be granted without a hearing.

Pamela L. Busbee, Probate Judge
Lindsay G. Hudson, Probate Clerk
100 GA Hwy 42 South
Knoxville, GA 31050
(478) 836-3313

4-13 Meadows 4.27-5.18 |

IN THE PROBATE COURT OF CRAWFORD COUNTY STATE OF GEORGIA

IN RE: ESTATE OF
JACOB RICHARD BASSETT
ESTATE NO. 17-029
DECEASED
PETITION FOR LETTERS OF ADMINISTRATION
NOTICE

TO: ALL INTERESTED PARTIES

Lisa Faircloth Bassett has petitioned to be appointed Administrator of the estate of Jacob Richard Bassett, deceased, of said County. The Petitioner has also applied for waiver of bond and/or grant of certain powers contained in O.C.G.A. § 53-12-261. All interested parties are hereby notified to show cause why said Petition should not be granted. All objections to the Petition must be in writing, setting forth the grounds of any such objections, and must be filed with the Court on or before May 22, 2017. All objections should be sworn to before a notary/ Probate Clerk, and filing fees must be tendered with your objections. If any objections are filed, a hearing will be scheduled at a later date. If no objections are filed, the Petition may

241 Third Street
Macon, Georgia 31201
(478) 751-6500, extension 6498
(478) 751-8581 (fax number)

4-11 Morris-Freiburg 4.20-5.11 |

Right to Redeem

**GEORGIA,
CRAWFORD COUNTY
NOTICE OF FORECLOSURE THE RIGHT TO REDEEM**

To: Julia Troutman
9195 Hopewell Rd.
Lizella, GA 31052

Resident/Tenant/Occupant and all other parties, known and unknown having an interest in the property hereinafter described:

TAX PARCEL #C080 060

TAKE NOTICE THAT:

The right to redeem the following described property, to-wit:

All and only that parcel of land designated as Tax Parcel C080 060, lying and being in Land Lot 222 of the 2nd Land District of Crawford County, Georgia, containing 1.27 acres, more or less, being Tract 4 shown in Plat Book 14, Page 815, the description contained therein being incorporated herein by this reference, described in Deed Book 267, Page 755.

This property is conveyed subject to all easements and rights-of-way, if any, appearing in the Clerk's Office of Crawford Superior Court.

will expire and be forever foreclosed and barred on and after the 19th day of June, 2017, at 5:00 P.M.

The tax deed to which this notice is related is dated the 1st day of December, 2015, and is recorded in Deed Book 348, Page 705, Clerk's Office, Crawford Superior Court.

State Bar #642055

4-9 Dowdy 4.20-5.11 |

**GEORGIA, CRAWFORD COUNTY
NOTICE OF FORECLOSURE
THE RIGHT TO REDEEM**

To: Andrea Elaine Nine
3283 Jordan Rd.
Byron, GA 31008

Donald McCallum
5245 Hartley Bridge Road
Macon, GA 31216

Resident/Tenant/Occupant and all other parties, known and unknown having an interest in the property hereinafter described:

TAX PARCEL #C116 060

TAKE NOTICE THAT:

The right to redeem the following described property, to-wit:

All and only that parcel of land designated as Tax Parcel C116 060, lying and being in Land Lot 51 of the 6th Land District of Crawford County, Georgia, containing 1.12 acres, more or less, being Lot 24, Addition 1, Long Leaf Forest, shown on plat in Plat Book 10, Page 241, the description contained therein being incorporated herein by this reference, described in Deed Book 208, Page 326, known as 3283 Jordan Road.

This property is conveyed subject to all easements and rights-of-way, if any, appearing in the Clerk's Office of Crawford Superior Court.

will expire and be forever foreclosed and barred on and after the 26th day of June, 2017, at 5:00 P.M.

The tax deed to which this notice is related is dated the 4th day of February, 2014, and is recorded in Deed Book 333, Page 760, Clerk's Office, Crawford Superior Court.

The property may be redeemed

GAFLX39AB13296-F211, WHICH WAS FORMERLY PERSONALTY BUT IS NOW PERMANENTLY ANNEXED AND AFFIXED TO THE ABOVE DESCRIBED LAND AS A PERMANENT IMPROVEMENT.

Said property is known as 1010 Cleveland Rd, Fort Valley, GA 31030, together with all fixtures and personal property attached to and constituting a part of said property,

THE LAW FIRM IS ACTING AS A DEBT COLLECTOR. ANY INFORMATION OBTAINED WILL BE USED FOR THAT PURPOSE

5-3 Warren 4.27-6.29 |

The deadline for Public Notices is Friday at noon. Please e-mail them to: GAPostLegals@pstel.net

Crawford County, Georgia Request for Qualifications for Architectural Services

Crawford County is requesting statements of qualifications from architectural firms for providing designs, specifications and related services pursuant to the remodeling of the future Crawford County Administration Building, located at 640 West Agency Street/ GA 128, Roberta, GA 31078. Interested parties are invited to secure a Request for Qualifications (RFQ) package from Greg Boike, Director of Public Administration, Middle Georgia Regional Commission, 175 Emery Hwy., Suite C, Macon, GA 31217.

For consideration, all interested parties must submit their response to Greg Boike at the address listed above, no later than 5:00 p.m. on May 19, 2017. Proposals received after the deadline or at any other location will not be considered. Crawford County reserves the right to accept

The Upson Beacon Wednesday, November 8, 2017 Page 15

Current Record Holder:
Blasingame, Murray
CRH Address: 2998 Olive Grove Church Road Roberta, GA 31078
Amount Due: $1,250.01
Tax Years Due: 2017,2016,2015, 2014,2013
Deed Book: 1196/33
Legal Description: A l that tract of land being in the State of Georgia, County of Upson, Land Lot 231, 1st District being 3.50 acre, more or less. O as further described as a portion of the tract in Deed Book 1196 Page 33. Being known as Tax Map & Parcel 105002, Upson County, Georgia.
Map & Parcel: 105003
Defendant in Fi Fa:
Blasingame, Murray
Current Record Holder:
Blasingame, Murray
CRH Address: 2879 Olive Grove Church Road Roberta, GA 31078
Amount Due: $1,896.95
Tax Years Due: 2017,2016,2015, 2014,2013,2012,2011
Legal Description: A l l that tract of land being in the State of Georgia, County of Upson, being 2.60 acres, more or less. Being known as Tax Map & Parcel 105003, Upson County, Georgia.
Map & Parcel:108A005
Defendant in Fi Fa:
Owens, Brian K.
Current Record Holder:
Owens, Brian K.
CRH Address:
451 Bypass Road Barnesville, GA 30204
Amount Due: $4,256.18
Tax Years Due:2017,2016,2015
Deed Book: 1266/135
Legal Description: A l l that tract of land being in the State of Georgia, County of Upson, Land Lot 171, 4th District, being 6.76 acres, more or less, being Tract 4. Or as further

dress:
ke Drive
ton, GA 30286
Due:$2,259.15
Due: 2017,2016,2015
k: 352/370
cription: A l l of land being in the: Georgia, County of ty of Thomaston, Land oth District. Or as further bed in Deed Book 352, Being known as Tax arcel T31123. Upson orgia.
arcel: T3217A
t in Fi Fa:
dward L.
ord Holder:
ard L.
ress:
McKinley Road
n, GA 30286
ue:$1,432.95
Due: 2017,2016,2015
1256/65
ption: A l l
f land being in the: Georgia, County of of Thomaston, Land h District. Being Lot of Thomaston Cotton ision, Section One. in Plat Book 4, Page further described as a Deed Book 1156, Page known as Tax Map & rcel, Upson County,
rcel: T32140A
t in Fi Fa:
dward L.
ord Holder:
ard L.
ress:
McKinley Road
n, GA 30286
ue:$2,080.12
Due: 2017,2016,2015
1256/65
ption: A l l
f land being in the: Georgia, County of of Thomaston, Land h District. Being Lot

2017,2016,2015
Deed Book: 818/237; 686/17
Legal Description: A
that tract of land being in State of Georgia, County Upson, City of Thomaston, L Lot 191, 10th District, being acres, more or less. Being T A. As shown in Plat Book Page 220. Or as further descri in Deed Book 818, Page 23 Deed Book 686, Page 172. Be known as Tax Map & Pa T34110, Upson County, Geor
Map & Parcel: T39118
Defendant in Fi Fa:
MDB Enterprises Of Georgia, LLC
Current Record Holder:
MDB Enterprises Of Geor LLC
CRH Address: 3645 Market Place Boulevard Suite 130366 East Point, GA 30344
Amount Due: $543.72
Tax Years Due:
2017,2016,2015,2014,2013,201
Deed Book: 1409/342
Legal Description: A
that tract of land being in t State of Georgia, County Upson, City of Thomaston, La Lot 180, 10th District, being acres, more or less. Being Lot Block R. As shown in Plat Bo 25, Page 134. Or as further d scribed as Tract 2 in Deed Boo 1409, Page 342. Being known Tax Map & Parcel T39118, Upso County, Georgia.
Map & Parcel: T39118
Defendant in Fi Fa:
Watts & Sprueglins
Current Record Holder:
Watts & Sprueglins, LLC
CRH Address:
1268 Flint Rock Road
Molena, GA 30258
Amount Due: $1,065.73
Tax Years Due:
2016,2015,2014,2013,2012,201
2010
Deed Book: 921/122
Legal Description: A l l

Public Hearing on Water Quality Concerns in Auchumpkee and Ulcohatchee Creek

A community hearing will be held to discuss the monitoring and preparation of new Watershed Management Plans for the decrease in pollutant Total Maximum Daily Loads (TMDL). A TMDL is the maximum amount of a pollutant that a river can receive and still be safe and healthy.

Stakeholders will have the opportunity to assist in developing a plan to restore Auchumpkee Creek and Ulcohatchee Creek to their designated uses. Also, you will be able to help identify and discuss contributing pollution sources, assist in arriving at equitable pollution reduction allocations, and recommend specific actions needed to effectively control sources of pollution. In order to make recommendations and/or provide key information and materials from your local community, Two Rivers Resource Conservation and Development Council is asking all interested residents to attend and provide input. This group of people will be critical to the successful restoration and protection of Auchumpkee Creek and Ulcohatchee Creek.

Our community hearing will be held on November 14, 2017 at 10:30 am in the Crawford County Commission office in Roberta, located at 1011 Highway 341 North. If you have any questions please email Lance Renfrow at tworiversrcd@hotmail.com.

Nov. 8, 2017
17UB11-24

17UB11-24

IN THE PROBATE COURT OF UPSON COUNTY STATE OF GEORGIA
IN RE: ESTATE OF Mildred Pete Sanford DECEASED

PUBLIC NOTICES

PAGE 5
THURSDAY
NOVEMBER 9, 2017

• FORECLOSURES • NAME CHANGE • DEBTORS & CREDITORS • PLANNING & ZONING • JUVENILE COURT
• CIVIL ACTIONS • LAW ENFORCEMENT SEIZURES • TAX SALES • REFERENDUMS • INCORPORATIONS

CC Sheriff's Office	CC Probate Court	CC Magistrate Court	CC Superior Court	CC Tax Commissioner
Lewis Walker	Pam Busbee	Buddy Hayes	Ryan Johnson	Patrice Walker
478-836-3116	478-836-3313	478-836-5804	478-836-3328	478-836-3575

Public Notices, sometimes called legal notices, are published each week in The Georgia Post, the designated legal organ for Crawford County. These notices inform the public of certain actions being taken within the legal system.
A brief synopsis of the various kinds is listed below. This is not an all encompassing list and any questions should be directed to our staff.
• Debtors & Creditors, falls under notices dealing with estates. There are over 20 different kind of estate notices, the most common being Notice to Debtors & Creditors. This lets the court know if a deceased person owes any money to someone. Most estate notices come from the Probate Judge's office, the individual themselves or an attorney.
• Juvenile Court covers a broad spectrum of notices dealing with juveniles. It includes adoptions, custody and name changes for those under age. These notices can come from the Juvenile Court, the Probate Court or an attorney.
• Foreclosures, also called Notice of Sale, are usually the result of non-payment on a loan. Property used to secure the loan can be taken back by the lender and sold to pay back the note. These typically run four weeks, sometimes more. They usually come from an attorney.
• Tax Sales are also notices of sale but are where a person has not paid property taxes (ad valorem) and the county or city is selling the property to collect the unpaid taxes. Tax Sales usually are held at least once a year and sometimes twice a year, depending on the tax commissioner's office.
• Name changes and other domestic issues like divorce, etc. and can come from the probate court or an attorney.
• Law Enforcement Seizures are required to be published when a law enforcement agency has seized money, guns, vehicles or other property during an investigation or raid. Notices come from the department making the seizure.
•Referendums might include a SPLOST vote, or an election for alcohol sales and more. Typically, they come from the entity involved.
• Planning & Zoning covers a wide range of legal issues including but not limited to zoning and rezoning, amendments to ordinances, annexation and the public hearings involved with each.
Public notices must reach our office by 5 p.m. the Friday before the expected publication date. Rates for notices are established by the state of Georgia. Most legal ads are billed at a rate of $10 per 100 words and we use the word count tool in the Word program to determine the number of words. Some legals such as incorporations, debtors and creditors and others have a $40 flat fee. Most notices require a tear sheet and affidavit at a fee of $15 to cover the costs involved. There is a $25 early cancellation fee for all public notices. Prepayment is required in most situations and in case of cancellation, we cannot provide a refund check but will carry a credit for the submitting agency. We accept cash, check and credit cards.
Notices can be emailed, preferably in a word document to gapostlegals@pstel.net. They may also be mailed to PO box 860, Roberta, GA 31078 or courier serviced to 58 S. Dugger Ave., Roberta, GA 31078, Attention Linda Reynolds. Please include your contact information. Call our office at 478-836-3195 if you need clarification or want to know the cost of a specific notice.

Probate Court

IN THE PROBATE COURT OF CRAWFORD COUNTY STATE OF GEORGIA
IN RE: ESTATE OF
EDWARD MARION WALKER
ESTATE NO. 17-071
DECEASED
PETITION FOR LETTERS OF ADMINISTRATION
NOTICE
TO: ALL INTERESTED PARTIES
Dennis Chris Walker has petitioned to be appointed Administrator of the estate of **Edward Marion Walker**, deceased, of said County. The Petitioner has also applied for waiver of bond and/or grant of certain powers contained in O.C.G.A. § 53-12-261. All interested parties are hereby notified to show cause why said Petition should not be granted. All objections to the Petition must be in writing, setting forth the grounds of any such objections, and must be filed with the Court on or before November 13, 2017. All objections should be sworn to before a notary/Probate Clerk and filing fees must be tendered with your objections. If any objections are filed, a hearing will be scheduled at a later date. If no objections are filed, the Petition may be granted without a hearing.
Pamela L. Busbee, Probate Judge
Lindsay G. Hudson, Probate Clerk
100 GA Hwy 42 South
Knoxville, GA 31050
(478) 836-3313
10-20 Walker 10.19—11.9 |

Public Notice

PUBLIC NOTICE
REZONING APPLICATION #: 20170929
APPLICANT: Sharon Wallace
PURPOSE: To rezone 12.84 acres from C-2 (General Commercial District) to R-AG (Agricultural Residential District).
There are already a home on this property since 2002.
LOCATION: 1815 US Hwy 341S
LEGAL DESCRIPTION REFERENCE:
TAX MAP: C056, PARCEL: 031A
PRESENT ZONING: C-2 (General Commercial)
PROPOSED ZONING: R-AG (Agricultural Residential District)
PUBLIC HEARING: Board of Commissioners (Decision)
DATE OF HEARING: Tuesday, November 21, 2017
TIME: 6:00 p.m.
PLACE: NEW COURTHOUSE (PAUL COVERDELL RM.) @ 100 GA HWY 42 S. KNOXVILLE, GEORGIA
FOR MORE INFORMATION CONTACT: PLANNING AND ZONING @ 478-836-3199
10-22 Wallace BoC 10.26--11.9 |

Public Notice
Application: Special Exception
Applicant: Amy Donovan
Type: Manufactured Home
Location: 2408 Old Knoxville Rd, Map C069, Parcel 030
Present Zoning: R1-AG
Date of Hearing: November 21,2017
Hearing Before: Board Of Commissioners
Time: 6:00 PM
Place: New Courthouse, Hwy 42, The Paul Coverdell Room.
FOR MORE INFORMATION
CONTACT: Planning and Zoning @ 478-836-3199
11-2 Donovan 11.2-11.16 |

Public Notice
Application: Special Exception
Applicant: Amy Donovan
Type: Manufactured Home
Location: 2408 Old Knoxville Rd, Map C069, Parcel 030
Present Zoning: R1-AG
Date of Hearing: November 16, 2017
Hearing Before: Planning & Zoning
Time: 7:00 PM
Place: New Courthouse, Hwy 42, The Paul Coverdell Room.
FOR MORE INFORMATION
CONTACT: Planning and Zoning @ 478-836-3199
11-3 DonovanP&Z 11.2—11.16 |

Public Hearing on Water Quality Concerns in Auchumpkee and Ulcohatchee Creek
A community hearing will be held to discuss the monitoring and preparation of new Watershed Management Plans for the decrease in pollutant Total Maximum Daily Loads (TMDL). A TMDL is the maximum amount of a pollutant that a river can receive and still be safe and healthy.
Stakeholders will have the opportunity to assist in developing a plan to restore Auchumpkee Creek and Ulcohatchee Creek to their designated uses. Also, you will be able to help identify and discuss contributing pollution sources, assist in arriving at equitable pollution reduction allocations, and recommend specific actions needed to effectively control sources of pollution. In order to make recommendations and/or provide key information and materials from your local community, Two Rivers Resource Conservation and Development Council is asking all interested residents to attend and provide input. This group of people will be critical to the successful restoration and protection of Auchumpkee Creek and Ulcohatchee Creek.
Our community hearing will be held on November 14, 2017 at 10:30 am in the Crawford County Commission office in Roberta, located at 1011 Highway 341 North. If you have any questions please email Lance Renfrow at tworiversrcd@hotmail.com.
11-9 Water 11.9 |

Juvenile Court

IN THE JUVENILE COURT OF CRAWFORD COUNTY, GEORGIA
IN THE INTEREST OF: J. D. B. , SEX W/M , AGE 14 , DOB 05/2003 , CASE #039-17J-043
CHILD UNDER 18 YEARS OF AGE TO WHOM IT MAY CONCERN,
SHANDEL SAWYER (mother), ANY UNKNOWN PUTATIVE FATHER, AND ANYONE CLAIMING A PARENTAL INTEREST IN THE ABOVE CHILD
You are notified that a Petition for Dependency with Custody to the Maternal Grandmother was filed against you in said court on 10/13/17. an Order for Service by Publication was entered on 09/**illegible**26/17.
YOU ARE COMMANDED AND REQUIRED TO BE AND APPEAR before Crawford County Juvenile Court, held at Peach County Courthouse, Ft. Valley, Georgia on 10/24/17 at 8:30 o'clock a.m. for a hearing, and on 02/01/18 at 10:30 o'clock a.m., for a hearing following service by publication. Serve an answer on Petitioner's Attorney, James E. Patterson, P. O. Box 1006, Forsyth, Georgia 31029. You may obtain a copy of the petition by contacting Crawford County Juvenile Court Clerk.
WITNESS the Honorable Judges of this court, this 13th day of October, 2017.
ASHLEY RIGGINS, DEPUTY CLERK, CRAWFORD COUNTY COURT
James E. Patterson
Attorney at Law
P.O. Box 1006
Forsyth, GA 31029-1006
10-24 Byrd-Sawyer 10.26—11.16

IN THE JUVENILE COURT OF CRAWFORD COUNTY, GEORGIA
IN THE INTEREST OF:
B. W., SEX W/M, AGE 8, DOB 08/2008 , CASE #039-17J-040
D. W., SEX W/F, AGE 13 , DOB 01/2004 , CASE #039-17J-041
C. W., SEX W/M , AGE 15 , DOB 07/2002 , CASE #039-17J-042
CHILDREN UNDER 18 YEARS OF AGE
TO WHOM IT MAY CONCERN,
HEATHER MCMANN-LYONS (mother), AND ANYONE CLAIMING A PARENTAL INTEREST IN THE ABOVE CHILDREN
You are notified that a Petition for Protective Order was filed against you in said court on 08/29/17, an Order for Service by Publication was entered on 10/**illegible**19/17.
YOU ARE COMMANDED AND REQUIRED TO BE AND APPEAR before Crawford County Juvenile Court, held at Peach County Courthouse, Ft. Valley, Georgia on 03/01/18 at 10:30 o'clock a.m. for a hearing following service by publication. Serve an answer on Petitioner's Attorney, James E. Patterson, P. O. Box 1006, Forsyth, Georgia 31029. You may obtain a copy of the petition by contacting Crawford County Juvenile Court Clerk.
WITNESS the Honorable Judges of this court, this 13th day of October, 2017.
ASHLEY RIGGINS, DEPUTY CLERK, CRAWFORD COUNTY COURT
James E. Patterson
Attorney at Law
P.O. Box 1006
Forsyth, GA 31029-1006
10-24 Byrd-Sawyer 10.26—11.16

Deed Book 363, Page 465, Crawford County, Georgia Records, conveying the after-described property to secure a Note in the original principal amount of THREE HUNDRED FIFTY-TWO THOUSAND FIVE HUNDRED AND 0/100 DOLLARS ($352,500.00), with interest thereon as set forth therein, there will be sold at public outcry to the highest bidder for cash before the courthouse door of Crawford County, Georgia, or at such place as may be lawfully designated as an alternative, within the legal hours of sale on the first Tuesday in December, 2017, the following described property: SEE EXHIBIT "A" ATTACHED HERETO AND MADE A PART HEREOF. The debt secured by said Security Deed has been and is hereby declared due because of, among other possible events of default, failure to pay the indebtedness as and when due and in the manner provided in the Note and Security Deed. The debt remaining in default, this sale will be made for the purpose of paying the same and all expenses of this sale, as provided in Security Deed and by law, including attorney's fees (notice of intent to collect attorney's fees having been given). Said property will be sold subject to any outstanding ad valorem taxes (including taxes which are a lien, but not yet due and payable), any matters which might be disclosed by an accurate survey and inspection of the property, any assessments, liens, encumbrances, zoning ordinances, restrictions, covenants, and matters of record superior to the Security Deed first set out above. American Advisors Group is the holder of the Security Deed to the property in accordance with OCGA § 44-14-162.2. The entity that has full authority to negotiate, amend, and modify all terms of the mortgage with the debtor is: CoLink, 3500 Capital City Blvd, Lansing, MI 48906 800-751-0073. To the best knowledge and belief of the undersigned, the party in possession of the property is Benny D. Crooms and Mary F. Crooms or a tenant or tenants and said property is more commonly known as 1954 Old Knoxville Road, Knoxville, Georgia 31050. The sale will be conducted subject (1) to confirmation that the sale is not prohibited under the U.S. Bankruptcy Code and (2) to final confirmation and audit of the status of the loan with the holder of the security deed. American Advisors Group as Attorney in Fact for Benny D. Crooms and Mary F. Crooms
McCalla Raymer Leibert Pierce, LLC
1544 Old Alabama Road Roswell, Georgia 30076 www.foreclosurehotline.net EXHIBIT "A" ALL THOSE TRACTS OR PARCELS OF LAND SITUATE, LYING AND BEING IN LAND LOT 207 OF THE SECOND LAND DISTRICT OF CRAWFORD COUNTY, GEORGIA, AND BEING KNOWN AND DESIGNATED AS LOT 3 (CONTAINING 4.55 ACRES) APPROVAL OF THE MOBILE HOME. 4) NO JUNK OR INOPERATIVE VEHICLES SHALL BE KEPT ON ANY LOT FOR OVER 30 DAYS. 5) NO COMMERCIAL BUSINESS OTHER THAN A "HOME OCCUPATION" AS PERMITTED BY THE ROBERT-CRAWFORD COUNTY, PLANNING AND ZONING COMMISSION SHALL BE ALLOWED. 6) THERE SHALL BE NO POULTRY HOUSES OR ANIMAL FEED LOTS. 7) A 20 FEET EASEMENT IS RESERVED ON THE FRONT AND REAR OF EACH LOT AND 15 FEET ON BOTH SIDES OF ALL LOTS FOR THE PURPOSE OF INSTALLING UTILITIES AND FOR DRAINAGE. BEING the same property conveyed unto Benny D. Crooms, by Warranty Deed from Linstead INC., dated April 5, 1999, recorded April 6, 1999, as/in Book 174, Page 661, The Property address and tax parcel identification number listed are provided solely for informational purposes, without warranty as to accuracy or completeness and are not hereby insured. Property Address: 1954 Old Knoxville Road, Knoxville, Georgia 31050 Tax ID No.: C069 014 AND C069 011 MRAved 12/5/17 Our file no. 5328517 - FT17
11-1 Crooms 11.9—11.30 |

STATE OF GEORGIA
COUNTY OF CRAWFORD
NOTICE OF SALE UNDER POWER
Under and by virtue of the power of sale contained with that certain Deed to Secure Debt dated March 1, 2014, from H&H LAND DEVELOPMENT CORPORATION, by and through CEO Bobby Holcomb, Sr., to **WILLIAM RACHELS** and **JAN RACHELS**, recorded on April 11, 2014 in Deed Book 334 at Pages 580-585, Crawford County, Georgia Records, and said Deed to Secure Debt having been given to secure a note dated March 1, 2014, in the amount of $78,199.28, said note being in default, the undersigned will sell at public outcry during the legal hours of sale before the door of the courthouse of Crawford County, Georgia, on DECEMBER 5, 2017, the following described real property (hereinafter referred to as the "Property"): KNOWN AS: **102.92 acres off Holcomb Valley Road, Crawford County, GA**
The debt secured by the Security Deed and evidenced by the Note and has been, and is hereby, declared due and payable because of, among other possible events of default, failure to make the payments as required by the terms of the Note. The debt remaining is in default and this sale will be made for the purposes of paying the Security Deed, accrued interest, and all expenses of the sale including attorneys' fees. Notice of intention to collect attorneys' fees has been given as provided by law. To the best of the undersigned's knowledge, the sale will be conducted subject (1) to confirmation that the sale is not prohibited under U.S. Bankruptcy code and (2) to final confirmation and audit of the status of the loan with the holder of the Security Deed.
THIS FIRM IS ACTING AS A DEBT COLLECTOR ATTEMPTING TO COLLECT A DEBT, ANY INFORMATION OBTAINED WILL BE USED FOR THAT PURPOSE.
11-4 Rachels 11.9—11.30 |

STATE OF GEORGIA
COUNTY OF CRAWFORD
NOTICE OF FORECLOSURE
There will be sold on the first Tuesday in December, 2017, before the courthouse door in Crawford County, Georgia, during the legal hours of sale, to the highest bidder for cash, the following described property, to-wit:
All that tract or parcel of land, together with improvements located thereon, being in Land Lot 99, 7th Land District of Crawford County, Georgia, known as Tract 21, Containing 1.4 acres as shown in Plat Book 10, pages 96-98, Clerk's Office Crawford Superior Court. There is attached to and made a part of the real estate one Dynasty manufactured home.
The property is commonly know as **100 Jackson Street, Roberta, Georgia.**
This sale will be made under the Power of Sale contained in a deed to secure debt in favor of T. Darryl Wilson, Sr., dated July 30, 2010 from Joan L. Brewer, recorded in Deed Book 304, Pages 310-317, Clerk's Office, Crawford County Superior Court. Said deed secures a note payable in monthly installments. Default has occurred in the payment, and the power of sale in said deed to secure debt has become operative. A copy of the notice of sale is being given to debtor as required by O.C.G.A. Section 44-14-162.2. The proceeds of said sale will be applied as provided in said deed. Said sale will also be made subject to all unpaid ad valorem taxes, liens and assessments, if any. To the best of the undersigned's knowledge and belief the property is in the possession of **Joan L. Brewer.**
S/ Arthur L. Phillips
Attorney for T. Darryl Wilson , Sr.
843 Poplar Street
Macon GA 31201
478.743.1354
11-6 Wilson 11.9—11.30 |

GEORGIA, CRAWFORD COUNTY
ADVERTISEMENT OF SALE UNDER POWER
By virtue of the Power of Sale contained in a Purchase Money Deed to Secure Debt from **Keesha D. Carson and Orlando O. Carson** to **E. Dean Roeler and Charles M. Jones, III, d/b/a Delta Partners**, dated February 26, 2010 and recorded July 16, 2010 in Deed Book 304, Page 97; subsequently assigned to Consoli-

THE TWO RIVERS RC&D COUNCIL, INC.

100 Ridley Avenue
LaGrange, Georgia 30240
Phone: (706) 885-0101 FAX: (706) 885-0103
E-mail:tworiversrcd@hotmail.com
www.tworiversrcd.org

Honorable Frank J. Jordan, Jr.- President, Tom Lacey-Vice President, Harvey Milner-Secretary, J. Morris Jones, III-Treasurer
Glen Gosa, At-Large Member, Harold Fallin, At-Large Member, Jim Ham, At-Large Member & Richard English, At-Large member

Serving: Butts, Chattahoochee, Fayette, Harris, Lamar, Marion, Meriwether, Monroe, Muscogee, Pike, Spalding
Talbot, Troup and Upson Counties. Lamar, Pine Mtn., Roosevelt, and Towaliga Conservation Districts.

April 12, 2017

Dear Stakeholder/Landowner:

I am writing to inform you that the State of Georgia is conducting a study for Auchumpkee Creek and Ulcohatchee Creek. This study, known as a TMDL (or Total Maximum Daily Load) study, will determine and address the levels of pollutants in these creeks. This study will also propose the means to reduce the amount of pollutants in the waters.

It is important that the State include input from landowners in the immediate area, local government authorities, and concerned citizens concerning any possible actions or decisions. This input will be included in the resulting TMDL Watershed Management Plan, as well as plans for further stakeholder participation, both in the restoration and/or maintenance of these creeks.

The primary impairment identified in Auchumpkee Creek is a pH imbalance. The primary impairment identified in Ulcohatchee Creek is fecal coliform. The major sources of the pH impairment and fecal coliform are runoff of adjacent land, point contributions, and unauthorized contributions. These impairments are an indicator of other possible health threats. This impact can be reversed or marginalized.

The State of Georgia's TMDL protocol process is most effective when the stakeholder, landowner, and local authorities are encouraged to participate and make suggestions. The process is meant to be a coordinated effort among all parties to ensure success of the program.

As a landowner/stakeholder, your participation is needed. On **Thursday, May 4, 2017 at 1:30 pm** in the Thomaston-Upson Government Complex in Thomaston, located at 106 East Lee Street, you may express and hear other people's concerns about these watersheds. We encourage you to attend this meeting. If you have any questions, please feel free to contact me at renfrowlance@gmail.com.

Sincerely,

Lance Renfrow
Environmental Consultant

"Building Better Lives. . . . Between The Rivers"

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April 12, 2017

Dear Community Leader:

The Georgia Department of Natural Resources – Environmental Protection Division (GA DNR -- EPD) has contracted with Two Rivers Resource Conservation and Development Council (Two Rivers RC&D) to monitor and prepare new Watershed Management Plans for the decrease in Total Maximum Daily Load (TMDL) of the levels of fecal coliform in Ulcohatchee Creek and pH levels in Auchumpkee Creek. As part of the contract, Two Rivers RC&D must form a Technical Advisory Group to make recommendations and/or provide key information and materials to the staff. The purpose of the Advisory Group is to provide a forum for the public, partners, etc. to discuss potential concerns and solutions that will impact Auchumpkee Creek and Ulcohatchee Creek, and to make recommendations relative to TMDLs.

This committee will assist in developing a plan to restore the creeks to their designated use of fishing. The Advisory Group will help identify contributing pollution sources, assist in arriving at equitable pollution reduction allocations, and recommend specific actions needed to effectively control sources of pollution. These groups of people are critical to the successful restoration and protection of these watersheds.

The Advisory Group's key responsibilities are to:

- **Advise** on matters of concern to the community;
- **Contribute to the education** of the residents of the watershed on water quality issues;
- **Help identify** contributing pollution sources;
- **Assist** in arriving at equitable pollution reduction allocations among contributors;
- **Recommend specific actions** needed to effectively control sources of pollution; and
- **Help develop** and set in motion an extended plan.

Since you may have a better understanding of the interests in your area, we are asking for you or someone of interest to please serve on this Advisory Group. Our first meeting will be held on **Thursday, May 4, 2017** at **1:30 pm** in the Thomaston-Upson Government Complex in Thomaston, located at 106 East Lee Street. If you have any questions please email at renfrowlance@gmail.com. Together, we can ensure our waters will be clean and safe for everyone to enjoy!

Sincerely,

Lance Renfrow
Environmental Consultant

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Talbot, Troup and Upson Counties. Lamar, Pine Mtn., Roosevelt, and Towaliga Conservation Districts.

November 1, 2017

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It is important that the State include input from landowners in the immediate area, local government authorities, and concerned citizens concerning any possible actions or decisions. This input will be included in the resulting TMDL Watershed Management Plan, as well as plans for further stakeholder participation, both in the restoration and/or maintenance of these creeks.

The primary impairment identified in Auchumpkee Creek is a pH imbalance. The primary impairment identified in Ulcohatchee Creek is fecal coliform. The major sources of the pH impairment and fecal coliform are runoff of adjacent land, point contributions, and unauthorized contributions. These impairments are an indicator of other possible health threats. This impact can be reversed or marginalized.

The State of Georgia's TMDL protocol process is most effective when the stakeholder, landowner, and local authorities are encouraged to participate and make suggestions. The process is meant to be a coordinated effort among all parties to ensure success of the program.

As a landowner/stakeholder, your participation is needed. On Tuesday, November 14, 2017 at 10:30 am at the Crawford County Commissioner Office, located at 1011 Highway 341 North, Roberta, Georgia you may express and hear other people's concerns about these watersheds. We encourage you to attend this meeting. If you have any questions, please feel free to contact me at tworiversrcd@hotmail.com or at 706-885-0101.

Sincerely,

Lance Renfroe
Executive Director

"Building Better Lives. . . . Between The Rivers"

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November 1, 2017

Dear Community Leader:

The Georgia Department of Natural Resources Environmental Protection Division (GA DNR EPD) has contracted with Two Rivers Resource Conservation and Development Council (Two Rivers RC&D) to monitor and prepare new Watershed Management Plans for the decrease in Total Maximum Daily Load (TMDL) of the levels of fecal coliform in Ulcohatchee Creek and pH levels in Auchumpkee Creek. As part of the contract, Two Rivers RC&D must form a Technical Advisory Group to make recommendations and/or provide key information and materials to the staff. The purpose of the Advisory Group is to provide a forum for the public, partners, etc. to discuss potential concerns and solutions that will impact Auchumpkee Creek and Ulcohatchee Creek, and to make recommendations relative to TMDLs.

This committee will assist in developing a plan to restore the creeks to their designated use of fishing. The Advisory Group will help identify contributing pollution sources, assist in arriving at equitable pollution reduction allocations, and recommend specific actions needed to effectively control sources of pollution. These groups of people are critical to the successful restoration and protection of these watersheds.

The Advisory Group's key responsibilities are to:

- **Advise** on matters of concern to the community;
- **Contribute to the education** of the residents of the watershed on water quality issues;
- **Help identify** contributing pollution sources;
- **Assist** in arriving at equitable pollution reduction allocations among contributors;
- **Recommend specific actions** needed to effectively control sources of pollution, and
- **Help develop** and set in motion an extended plan.

Since you may have a better understanding of the interests in your area, we are asking for you or someone of interest to please serve on this Advisory Group. This second meeting will be held on Tuesday, November **14, 2017** at **10:30** am at the Crawford County Commissioner Office, located at 103 Highway 341 North, Roberta, Georgia. If you have any questions please email at tworiversrcd@hotmail.com or call 706-885-0101. Together, we can ensure our waters will be clean and safe for everyone to enjoy!

Sincerely,

Lance Renfrow
Executive Director

"Building Better Lives. . . . Between The Rivers"

APPENDIX F. MEETING MINUTES

TMDL Partnership Advisory Council / Stakeholder Meeting Minutes for
Auchumpkee Creek and Ulcohatchee Creek
May 4, 2017

Persons Attending

Lance Renfrow
Carol Oliver, NRCS
Harold West, GA Forestry Commission
Jeff, Sibley, GA Forestry Commission
Brandon Baker, DNR

This meeting was held at 1:30 pm at the Thomaston-Upson Government Complex in Thomaston, located at 106 East Lee Street to discuss potential sources and solutions for the fecal coliform pollution and pH imbalance in the Auchumpkee and Ulcohatchee Creek watersheds.

Lance Renfrow provided an overview of the Watershed Management Plan that is being written for this watershed and the role that the Advisory Committee has in providing input into the plan.

The following topics were discussed:

- Log Town Road has commercial forestry
- Horsley Road has chicken houses
    - Chicken litter sold
    - Poultry litter is great for pastures
    - Poultry operations will not have runoff or contribute to fecal coliform
    - There are 32,000 chicken per house and there are 4-6 houses
    - GA Department of Agriculture will pull the contract if poultry operations are not following appropriate guidelines
- There are more wild hogs the further south you go within the watershed
    - Wild hogs have been spotted near Yatesville
- 8 years ago there was a lot of farming near the pH impairment but a lot of that has diminished today
- A suggestion was mad to educate the landowners so that they may want management practices installed on their farms
- Crawford County is a "strike free" county with residents who get offered a 90/10 cost-share program through Equip. They may not be interested in a 60/40 cost-share program.

Meeting was adjourned at 3:00 pm.

TMDL Partnership Advisory Council / Stakeholder Meeting Minutes for Auchumpkee Creek and Ulcohatchee Creek
November 14, 2017

Persons Attending

Lance Renfrow
Carol Oliver, NRCS
Brenda Logan, NRCS
Brandon Baker, DNR
Brenda Corral, Dev. Authority
Suzi Scott, Dev. Authority
Joey Sims, Water Dept.
Bill Patton, Water Dept.
Jeff Harrison, City of Roberta
Robert Dickey, landowner
Mechele Wilder, landowner
Curtis Wilder, landowner

This meeting was held at 10:30 am at the Crawford County Commissioner office in Roberta, located at 1011 Highway 341 North to discuss potential sources and solutions for the fecal coliform pollution and pH imbalance in the Auchumpkee and Ulcohatchee Creek watersheds.

Lance Renfrow provided an overview of the Watershed Management Plan that has been drafted for this watershed and the role that the Advisory Committee has in providing input into the plan.

The following topics were discussed:

- Poor soil is located in the Auchumpkee Creek watershed. The top soil is pretty much gone.
- There are few farms in the Auchumokee Creek area
- Pipes were installed in August 2016 on Hollis Road, which may have influenced the pH on Site A9
- There has been a lot of timber cutting in the Auchumpkee Creek area
- Cattle was suggested to be source of fecal coliform
- Brandon Baker questioned the potential longevity of limestone additions as a management measure
- Funding for microbial source tracking will be sought before the end of 2017
- Farmers could be educated on the program to have management practices installed

Meeting was adjourned at 11:30 am.

APPENDIX G. FORMS

GEORGIA ADOPT-A-STREAM: Bacterial Form

To be conducted every month

SITE INFORMATION

Group Name:_____ Event Date: _____ (MMDDYYYY)

Group ID: G-_____ Site ID: S-_____ Time Sample Collected:_____ (HHMM am/pm)

Stream Name:_____ Time Spent Sampling: _____ (Min)

Monitor(s):_____ Total Time Spent Traveling *(optional)* : _____ (Min)

Number of Participants:_____ Furthest Distance Traveled *(optional)* : _____(Miles)

WEATHER

Present conditions (check all that apply)

☐ Heavy Rain ☐ Steady Rain ☐ Intermittent Rain

☐ Overcast ☐ Partly Cloudy ☐ Clear/Sunny

Amount of rain, if known?

Amount in Inches :_____

In Last Hours/Days:_____

*Refer to *wunderground.com* for rainfall data

OBSERVATIONS

Flow/Water Level: *(check all that apply)* ☐ Dry ☐ Stagnant/Still ☐ Low ☐ Normal ☐ High ☐ Flood (over banks)

Water Clarity: ☐ Clear/Transparent ☐ Cloudy/Somewhat Turbid ☐ Opaque/Turbid

Water Color: ☐ No Color ☐ Brown/Muddy ☐ Green ☐ Milky/White ☐ Tannic ☐ Other:_____

Water Surface: ☐ Clear ☐ Oily Sheen: does it break when disturbed? Yes/No (circle one) ☐ Algae

☐ Foam ◯ Greater than 3" high ◯ It is white

Water Odor: ☐ Natural/None ☐ Gasoline ☐ Sewage ☐ Rotten Egg

☐ Fishy ☐ Chlorine ☐ Other:_____

Photos: Please take images to document your observations and changes in water quality conditions. Photo point directions can be found in the manuals. Images can be submitted online with your other data.

Trash: ☐ None ☐ Yes, I did a cleanup ☐ This site needs an organized cleanup

BACTERIAL

3M Petrifilm Method: *Escherichia coli*

Run three (3) plates/tests for each site, plus one (1) blank plate. Process within 6-24hrs, incubate at 35°C ±1° and read at 24 ± 1 hr

Plate	Colonies	Find AVG of Number of Colonies (total # colonies/total # of plates (do not include blank)	cfu/100mL
Blank			
1		(/) x 100 =	
2			
3			
Total # Colonies			

Sample Holding Time (HH): _____

Date START(MMDDYYYY): _____ Date END (MMDDYYYY):_____

Time START (HHMM):_____ Time END (HHMM):_____

MIN Temp (°C):_____ MAX Temp (°C): _____

COMMENTS

Any changes since you last sampled at this site? If yes, please describe.

Please submit data to our online database at www.GeorgiaAdoptAStream.org

GEORGIA ADOPT-A-STREAM: Chemical Form

To be conducted every month

SITE INFORMATION

Group Name:_____ Event Date:_____ (MMDDYYYY)

Group ID: G-_____ Site ID: S-_____ Time Sample Collected:_____ (HHMM am/pm)

Stream Name:_____ Time Spent Sampling:_____ (Min)

Monitor(s):_____ Total Time Spent Traveling *(optional)*:_____ (Min)

Number of Participants:_____ Furthest Distance Traveled *(optional)*:_____(Miles)

WEATHER

Present conditions (check all that apply)

☐ Heavy Rain ☐ Steady Rain ☐ Intermittent Rain

☐ Overcast ☐ Partly Cloudy ☐ Clear/Sunny

Amount of rain, if known?

Amount in Inches:_____

In Last Hours/Days:_____

*Refer to *wunderground.com* for rainfall data

OBSERVATIONS

Flow/Water Level: *(check all that apply)* ☐ Dry ☐ Stagnant/Still ☐ Low ☐ Normal ☐ High ☐ Flood (over banks)

Water Clarity: ☐ Clear/Transparent ☐ Cloudy/Somewhat Turbid ☐ Opaque/Turbid

Water Color: ☐ No Color ☐ Brown/Muddy ☐ Green ☐ Milky/White ☐ Tannic ☐ Other:_____

Water Surface: ☐ Clear ☐ Oily sheen: Does it break when disturbed? Yes/No (circle one) ☐ Algae ☐ Foam ◯ Greater than 3" high ◯ It is pure white Other:_____

Water Odor: ☐ Natural/None ☐ Gasoline ☐ Sewage ☐ Rotten Egg ☐ Fishy ☐ Chlorine ☐ Other:_____

Photos: Please take images to document your observations and changes in water quality conditions. Photo point directions can be found in the manuals. Images can be submitted online with your other data.

Trash: ☐ None ☐ Yes, I did a cleanup ☐ This site needs an organized cleanup

CHEMICAL

Conductivity Meter Calibration (within 24hrs of sampling)

Date_____ Time_____ Standard Value_____ Initial Meter Reading_____ Meter Adjusted to_____

Reagents: Are any reagents expired? ☐ Yes ☐ No List any expired:_____

Core Tests	Test 1	Test 2	Units	Other Tests	Test 1	Test 2	Units
Air Temp			°C				
Water Temp			°C				
pH (+/-0.25)			Standard unit				
Dissolved Oxygen (+/-0.6)			mg/L or ppm				
Conductivity			uS/cm				

COMMENTS

Any changes since you last sampled at this site? If yes, please describe.

Please submit data to our online database at www.GeorgiaAdoptAStream.org

APPENDIX H. DATA COLLECTED

From 1999 through 2010 GA EPD of the Department of Natural Resources collected several parameters of water quality data throughout Auchumpkee Creek and its tributaries. For the purposes of this report, only the historical data relating to pH and other chemical parameters, as well as the data collected from October 2016 – September 2017, is reported here.

Site 9		Parameter						
		Air Temp (°C)	Water Temp (°C)	pH	Conductivity (µmho/cm)	DO (ppm)	Nitrate (ppm)	Orthophosphate (ppm)
Date	1/07/2010	2.0	2.1	7.2	58.0	13.4	N/A	0.04
	2/2/2010	11.0	8.6	5.8	48.0	12.5	N/A	0.04
	3/22/2010	9.0	11.2	6.1	53.0	10.5	N/A	N/A
	4/14/2010	18.0	14.9	6.8	63.0	9.4	N/A	0.04
	5/6/2010	21.0	18.5	6.3	27.0	7.2	N/A	N/A
	6/29/2010	27.0	25.0	6.4	69.0	8.0	N/A	0.04
	7/15/2010	29.0	25.1	5.9	58.0	7.0	N/A	0.04
	8/17/2010	31.0	26.0	6.2	64.0	6.9	N/A	0.04
	9/21/2010	31.0	21.9	6.6	72.0	7.7	N/A	0.04
	10/14/2010	18.0	15.1	6.5	62.0	9.2	N/A	N/A
	11/2/2010	20.0	14.4	6.6	71.0	9.1	N/A	N/A
	12/7/2010	1.5	3.6	6.5	66.0	11.7	N/A	0.04

The data reported below was collected throughout the duration of the development of this Watershed Management Plan.

10/22/2016		Parameter						
		Air Temp (°C)	Water Temp (°C)	pH	Conductivity (µS/s)	DO (ppm)	Nitrate (ppm)	Orthophosphate (ppm)
Site	6	13.5	dry	dry	dry	dry	dry	dry
	7	13.6	dry	dry	dry	dry	dry	dry
	8	13.4	16.7	6.98	107.5	4.64	0.88	0.2
	9	no access	no access	no access	no access	no access	no access	no access
	A9	N/A	N/A	N/A	N/A	N/A	N/A	N/A

11/19/2016		Parameter						
		Air Temp (°C)	Water Temp (°C)	pH	Conductivity (µS/s)	DO (ppm)	Nitrate (ppm)	Orthophosphate (ppm)
Site	6	8.2	dry	dry	dry	dry	dry	dry
	7	8.5	dry	dry	dry	dry	dry	dry
	8	8.9	11.4	7.08	108.0	6.91	0.88	0.2
	9	no access	no access	no access	no access	no access	no access	no access
	A9	8.9	12.5	7.16	113.2	6.7	0.88	0.2

12/17/2016		Parameter						
		Air Temp (°C)	Water Temp (°C)	pH	Conductivity (µS/s)	DO (ppm)	Nitrate (ppm)	Orthophosphate (ppm)
Site	6	13.5	8.7	7.19	68.83	10.51	1.76	0.2
	7	14.3	8.7	6.92	65.46	10.59	1.76	0.2
	8	14.3	8.1	7.19	77.90	10.76	1.76	0.2
	9	no access	no access	no access	no access	no access	no access	no access
	A9	20.9	9.4	7.29	77.93	10.66	1.76	0.2

1/14/2017		Parameter						
		Air Temp (°C)	Water Temp (°C)	pH	Conductivity (µS/s)	DO (ppm)	Nitrate (ppm)	Orthophosphate (ppm)
Site	6	18.5	11.9	6.65	57.95	9.99	1.76	0.2
	7	18.3	13.1	6.76	54.48	9.83	1.76	0.2
	8	17.9	11.4	6.86	59.70	10.17	1.76	0.2
	9	no access	no access	no access	no access	no access	no access	no access
	A9	24.8	12.2	6.67	60.20	10.08	1.76	0.2

2/11/2017		Parameter						
		Air Temp (°C)	Water Temp (°C)	pH	Conductivity (µS/s)	DO (ppm)	Nitrate (ppm)	Orthophosphate (ppm)
Site	6	23.0	11.8	6.89	56.21	10.30	1.76	0.2
	7	23.5	12.4	6.96	54.92	10.46	1.76	0.2
	8	22.8	10.4	7.02	61.38	10.72	1.76	0.2
	9	no access	no access	no access	no access	no access	no access	no access
	A9	27.0	11.7	7.18	60.21	10.6	1.76	0.2

4/2/2017		Parameter						
		Air Temp (°C)	Water Temp (°C)	pH	Conductivity (µS/s)	DO (ppm)	Nitrate (ppm)	Orthophosphate (ppm)
Site	6	26.5	17.4	6.75	62.78	9.08	1.76	0.2
	7	27.6	17.5	6.71	60.56	9.16	1.76	0.2
	8	26.7	16.4	6.84	68.19	9.60	1.76	0.2
	9	no access	no access	no access	no access	no access	no access	no access
	A9	31.4	19.8	6.81	69.13	10.06	1.76	0.2

4/22/2017		Parameter						
		Air Temp (°C)	Water Temp (°C)	pH	Conductivity (µS/s)	DO (ppm)	Nitrate (ppm)	Orthophosphate (ppm)
Site	6	27.6	18.8	6.75	69.20	8.41	1.76	0.2
	7	26.7	20.8	6.60	327.8	8.44	1.76	0.2
	8	26.8	20.8	6.37	181.0	7.93	1.76	0.2
	9	no access	no access	no access	no access	no access	no access	no access
	A9	25.2	21.7	6.67	170.9	7.97	1.76	0.2

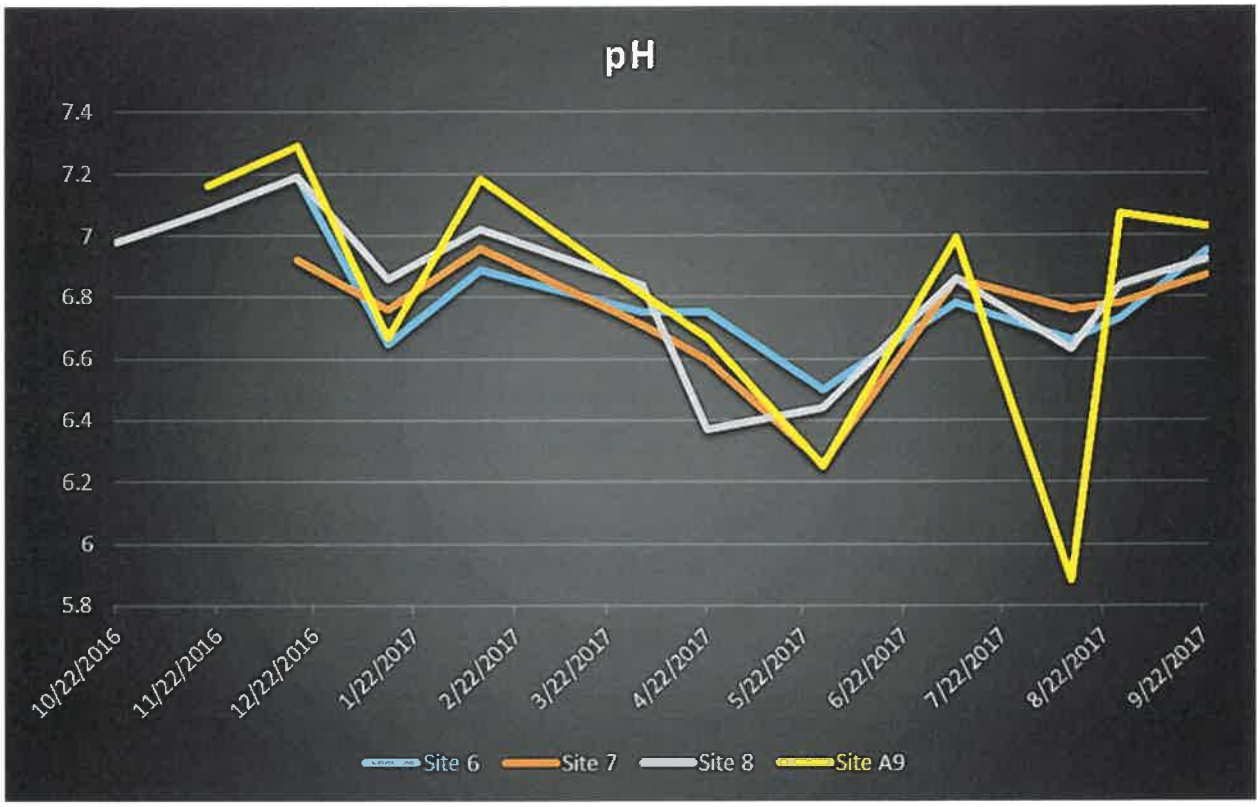
5/28/2017		Parameter						
		Air Temp (°C)	Water Temp (°C)	pH	Conductivity (µS/s)	DO (ppm)	Nitrate (ppm)	Orthophosphate (ppm)
Site	6	22.4	21.5	6.50	184.6	8.31	1.76	0.2
	7	27.1	23.1	6.26	243.0	8.13	1.76	0.2
	8	30.7	24.4	6.44	238.8	7.79	0.88	0.2
	9	no access	no access	no access	no access	no access	no access	no access
	A9	25.4	23.0	6.25	208.4	8.25	1.76	0.2

7/8/2017		Parameter						
		Air Temp (°C)	Water Temp (°C)	pH	Conductivity (µS/s)	DO (ppm)	Nitrate (ppm)	Orthophosphate (ppm)
Site	6	25.1	24.1	6.78	228.3	7.61	1.76	0.2
	7	26.5	24.7	6.86	153.4	7.82	1.76	0.2
	8	31.1	26	6.86	143.7	7.45	1.76	0.2
	9	no access	no access	no access	no access	no access	no access	no access
	A9	26.5	25.6	6.99	184.7	7.96	0.88	0.2

8/12/2017		Parameter						
		Air Temp (°C)	Water Temp (°C)	pH	Conductivity (µS/s)	DO (ppm)	Nitrate (ppm)	Orthophosphate (ppm)
Site	6	24.0	25.1	6.66	251.8	7.59	1.76	0.2
	7	26.0	24.6	6.76	184.1	7.50	0.88	0.2
	8	27.7	25.8	6.63	124.2	7.92	1.76	0.2
	9	no access	no access	no access	no access	no access	no access	no access
	A9	27.6	26.8	5.88	140.0	7.74	0.88	0.2

8/27/2017		Parameter						
		Air Temp (°C)	Water Temp (°C)	pH	Conductivity (µS/s)	DO (ppm)	Nitrate (ppm)	Orthophosphate (ppm)
Site	6	26.7	24.8	6.73	196.1	7.63	0.88	0.2
	7	26.3	25.6	6.78	238.1	7.58	0.88	0.2
	8	30.6	26.1	6.84	143.3	7.84	1.76	0.2
	9	no access	no access	no access	no access	no access	no access	no access
	A9	29.7	27.7	7.07	246.3	7.90	1.76	0.2

9/23/2017		Parameter						
		Air Temp (°C)	Water Temp (°C)	pH	Conductivity (µS/s)	DO (ppm)	Nitrate (ppm)	Orthophosphate (ppm)
Site	6	25.3	24.7	6.95	224.8	8.12	0.88	0.2
	7	24.9	24.1	6.87	198.7	7.96	0.88	0.2
	8	26.4	25.2	6.92	213.6	8.23	0.88	0.2
	9	no access	no access	no access	no access	no access	no access	no access
	A9	26.5	25.8	7.03	178.0	8.52	0.88	0.2



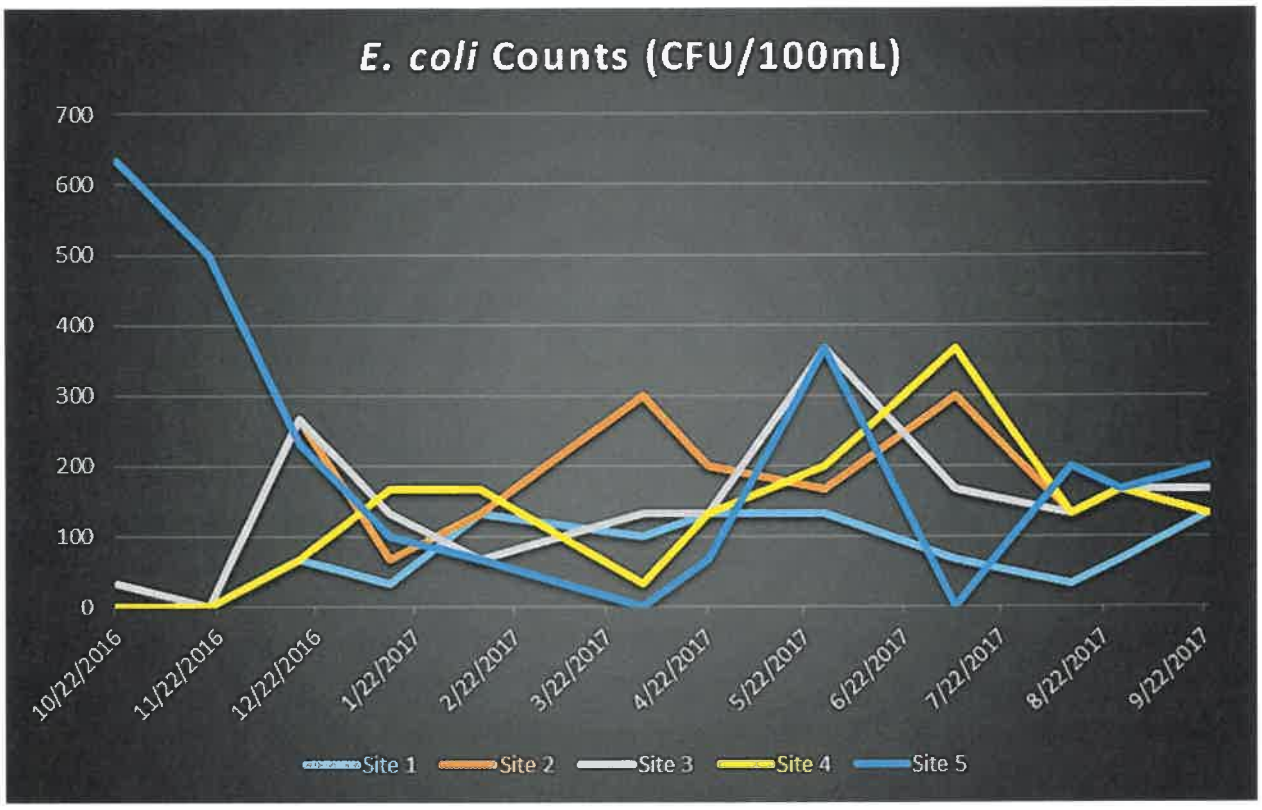
From 2000 through 2012 the GA EPD of the Department of Natural Resources collected several parameters of water quality data throughout Ulcohatchee Creek. For the purposes of this report, only the historical data relating to bacteria, as well as the data collected from October 2016 – September 2017, is reported here.

Fecal Coliform Bacterial Counts Collected at Site 5	
Date	CFU/100mL
1/26/2000	330.0
2/24/2000	20.0
3/2/2000	70.0
3/8/2000	70.0
3/15/2000	50.0
5/17/2000	220.0
5/25/2000	490.0
6/1/2000	310.0
6/14/2000	50.0
7/27/2000	50.0
8/3/2000	130.0
8/10/2000	330.0
8/17/2000	40.0
11/8/2000	110.0
11/15/2000	20.0
11/29/2000	170.0

12/7/2000	70.0
2/2/2010	40.0
2/4/2010	300.0
2/11/2010	70.0
2/25/2010	40.0
4/12/2010	110.0
4/14/2010	300.0
4/20/2010	80.0
4/28/2010	1300.0
7/5/2010	500.0
7/12/2010	110.0
7/15/2010	110.0
7/20/2010	110.0
10/5/2010	230.0
10/26/2010	130.0
10/28/2010	800.0
11/3/2010	300.0
1/3/2012	230.0
1/12/2012	130.0
1/18/2012	170.0
1/24/2012	800.0
4/2/2012	500.0
4/5/2012	260.0
4/16/2012	300.0
4/18/2012	200.0
7/5/2012	20.0
10/16/2012	60.0
10/18/2012	300.0
10/22/2012	8000.0
10/30/2012	800.0

The data reported below was collected throughout the duration of the development of this Watershed Management Plan.

E. Coli Bacterial Counts cfu/100mL		Date											
		10/22/2016	11/19/2016	12/17/2016	1/14/2017	2/11/2017	4/2/2017	4/22/2017	5/28/2017	7/8/2017	8/12/2017	8/27/2017	9/23/2017
Site	1	dry	dry	67	33	133	100	133	133	67	33	67	133
	2	dry	dry	267	67	133	300	200	167	300	133	167	133
	3	33	0	267	133	67	133	133	367	167	133	167	167
	4	dry	300*	67	167	167	33	133	200	367	133	167	133
	5	633	500	233	100	67	0	67	367	0	200	167	200



APPENDIX I. SAMPLING PROTOCOLS

The following outlines the procedures for *E. coli* monitoring:

A. 5 sites were monitored.
   1. Sites were sampled in October 2016 – September 2017
   2. 1 sample was collected per site per month over a 12-month period
   3. There were a total of 5 samples per month and 60 samples over a 12-month period

B. Samples were collected and analyzed by EPD-trained professionals. Staff who collected and analyzed *E. coli* samples were trained by GA EPD Adopt-A-Stream personnel in *E. coli* sampling and testing.

C. Equipment used for sampling and testing is as follows:
   1. 3M™ *E. coliform* Count Plates
   2. Genesis Hova-Bator Incubator with circulation fan, calibrated to 35° C
   3. Fixed-volume pipettor 1000µL
   4. Pipette tips, 200 - 1300µL
   5. Thermometer
   6. Whirl-Pak® sterile sampling bag, 8 oz
   7. 90% Isopropyl Alcohol
   8. Latex Gloves
   9. Bleach
   10. Distilled Water

D. Georgia Adopt-A-Stream Bacterial Monitoring Data Form was used to record official field notes for current weather, air and water temperature, rainfall intensity over the previous 24 hours, date, and time.

The following outlines the procedures for chemical monitoring:

A. 4 sites were monitored.
   1. Sites were sampled in October 2016 – September 2017
   2. 1 sampling event was conducted per site per month over a 12-month period
   3. There was a total of 4 samples per month and 48 samples over a 12-month period

B. Samples were collected and analyzed by EPD-trained professionals. Staff who collected chemical samples were trained by GA EPD Adopt-A-Stream personnel in chemical monitoring protocol prior to sampling.

C. Equipment used for sampling is as follows:
   1. Latex Gloves
   2. 90% Isopropyl Alcohol
   3. Nitrogen Test Strips
   4. Multi probe to test for DO and pH
   5. Multi-Range Conductivity Tester
   6. Phosphorus Test Kit

D. Georgia Adopt-A-Stream Chemical Monitoring Data Form was used to record official field notes for stream bottom sediment type, current weather, rainfall intensity over the previous 24 hours, date, and time, as well as chemical counts.

Schedule

The table below demonstrates the sampling dates for Ulcohatchee Creek and Auchumpkee Creek. One sample for *E. coli* was collected at sites 1-5 monthly from October 2016 – September 2017. One chemical sampling event was conducted at sites 6-9 monthly from October 2016 – September 2017.

Month/Year	Sampling Sites	Parameter
October 22, 2016	1-5 6-9	Bacterial Monitoring Chemical Monitoring
November 19, 2016	1-5 6-9	Bacterial Monitoring Chemical Monitoring
December 17, 2016	1-5 6-9	Bacterial Monitoring Chemical Monitoring
January 14, 2017	1-5 6-9	Bacterial Monitoring Chemical Monitoring
February 11, 2017	1-5 6-9	Bacterial Monitoring Chemical Monitoring
April 2, 2017	1-5 6-9	Bacterial Monitoring Chemical Monitoring
April 22, 2017	1-5 6-9	Bacterial Monitoring Chemical Monitoring
May 28, 2017	1-5 6-9	Bacterial Monitoring Chemical Monitoring
July 8, 2017	1-5 6-9	Bacterial Monitoring Chemical Monitoring
August 12, 2017	1-5 6-9	Bacterial Monitoring Chemical Monitoring
August 27, 2017	1-5 6-9	Bacterial Monitoring Chemical Monitoring
September 23, 2017	1-5 6-9	Bacterial Monitoring Chemical Monitoring

Quality Assurance

The following outlines the Quality Assurance Plan for sampling Ulcohatchee and Auchumpkee Creek:

A. Bacterial Field Quality Assurance
   a. The following sampling protocol was used for each sample:
      i. The grab samples for quantification of *E. coli* bacteria were collected at 5 locations on Ulcohatchee Creek and/or its tributaries
      ii. Prior to sample collection:
         1. 1 Whirl-Pak® bag per site plus a bag for the "Blank"
         2. Using a Sharpie, labeled each bag as follows:
            a. Stream name or for the blank, label the bag "Blank"
            b. Collection site number
            c. Date of collection
            d. Time of collection
            e. Collector
      iii. Recorded the following on the Field Notes Form at each sample site:
         1. Current weather conditions (overcast, partly cloudy, clear/sunny)
         2. Air temperature
         3. Water temperature
         4. Date and time
         5. Rainfall intensity for the previous 24 hours, total amount if known
      iv. Sample Collection
         1. Put on latex gloves for protection and to limit sample contamination
         2. Tear off top of bag along perforation. Avoid touching the inside of the bag
         3. Before first sample was collected from the stream, filled one Whirl-Pak® bag with distilled water. This was the "blank." Twist the yellow ties to seal the top and place the bag in a cooler with ice or frozen ice packs
         4. Select a location in the middle of the flow channel. The flow channel may not be in the middle of the stream. Stand downstream from the flow
         5. Collect sample from mid-depth of the flow channel
         6. Open the Whirl-Pak® bag by taking hold of the white tabs on either side of the bag, one in each hand. Use a different bag if the inside is accidentally touched

7. Keep the bag upright and use a scooping motion to submerge the top under the water
8. At mid-depth, pull both white tabs apart to open the mouth. Allow water to pour into the mouth until the bag is ¾ full
9. Pull the bag out of the water, take the yellow ties on either side, one in each hand, and flip of fold the top of the bag twice to wrap up the top
10. Twist the yellow ties to seal the top and place the bag in a cooler with ice or frozen ice packs

b. Sample Handling and Custody Requirements
   i. *E. coli* samples were stored for no longer than 24 hours after collection in a cooler with ice or frozen packs
      1. Within 24 hours of collection, Two Rivers RC&D staff utilized the Adopt-A-Stream Bacterial Monitoring methods and procedures to process and analyze the samples and the blank
      2. Petrifilm plates for each sample, including the blank, were labeled with a Sharpie pen as follows:
         a. Stream name, or in the case of the blank, "Blank"
         b. Site number
         c. Date of collection
         d. Collector
      3. The Georgia Adopt-A-Stream *E. coli* Data Form was completed by Two Rivers RC&D staff for petrifilm results
         a. Utilizing a fixed volume pipette, a sample from each site was placed on 3 petrifilm plates according to the instructions in the GA EPD Adopt-A-Stream Bacterial Monitoring Manual
         b. Utilizing a fixed volume pipette, a sample from the "Blank" was placed on 1 petrifilm plate
         c. Plates were stacked and placed in the Hova-Bator incubator calibrated to 35° C for 24 hours
         d. After 24 hours, plates (3 per site plus the blank were removed from the incubator and *E. coli* colonies will be counted. The sum of colonies found on 3 plates prepared for each site as well as the 1 plate prepared for the blank, were multiplied by 33.33 to calculate the total colony count per 100 mL for each site
         e. Two Rivers RC&D Council staff did not need to contact GA EPD staff regarding questions about total colony counts

ii. Two Rivers RC&D Council staff collected the samples with equipment obtained by the Two Rivers RC&D. Staff was trained by GA EPD staff prior to any collection. To ensure safety, staff chose a sample collection technique on site. If waters were safe for wading, staff used the "grab sampling while wading technique" for *E. coli* bacteria. However, if the water was unsafe for wading, then the *E. coli* sample was collected by lowering a sampling container from a bridge or culvert. Sampling did not occur until 48 hours after a rain event.

B. Chemical Field Sampling Quality Assurance

a. The following sampling protocol was used for each sample:

i. The samples for quantification of chemicals was collected at 4 locations on Auchumpkee Creek and/or its tributaries using the muddy bottom stream sampling protocol

ii. The same stream segment at each site was sampled each month to ensure consistency

1. 1 Whirl-Pak® bag per site plus a bag for the "Blank"
2. Using a Sharpie, label each bag as follows:
   a. Stream name or for the blank, label the bag "Blank"
   b. Collection site number
   c. Date of collection
   d. Time of collection
   e. Collector

iii. Record the following on the Field Notes Form at each sample site

1. Current weather conditions (overcast, partly cloudy, clear/sunny)
2. Date and time
3. Rainfall intensity for the previous 24 hours, total amount if known
4. Site Description

iv. Sample Collection

1. Put on latex gloves for protection and to limit sample contamination
2. Tear off top of bag along perforation. Avoid touching the inside of the bag
3. Before first sample was collected from the stream, filled one Whirl-Pak® bag with distilled water. This was the "blank." Twist the yellow ties to seal the top and place the bag in a cooler with ice or frozen ice packs
4. Select a location in the middle of the flow channel. The flow channel may not be in the middle of the stream. Stand downstream from the flow

5. Collect sample from mid-depth of the flow channel
6. Open the Whirl-Pak® bag by taking hold of the white tabs on either side of the bag, one in each hand. Use a different bag if the inside is accidentally touched
7. Keep the bag upright and use a scooping motion to submerge the top under the water
8. At mid-depth, pull both white tabs apart to open the mouth. Allow water to pour into the mouth until the bag is ¾ full
9. Pull the bag out of the water, take the yellow ties on either side, one in each hand, and flip of fold the top of the bag twice to wrap up the top
10. Twist the yellow ties to seal the top and place the bag in a cooler with ice or frozen ice packs

b. Sample Handling and Custody Requirements
   1. Within 24 hours of collection, Two Rivers RC&D Council staff utilized the Adopt-A-Stream Chemical Monitoring methods and procedures to process and analyze the samples and the blank
   2. Two Rivers RC&D Council staff collected the samples with equipment obtained by the Two Rivers RC&D. Staff was trained by GA EPD staff prior to any collection. Sampling was postponed if weather conditions made sampling unsafe for field personnel.

Records Retention

Records will be maintained by Two Rivers RC&D Council at 100 Ridley Avenue, LaGrange, Georgia 30240 and will be available for review for a period of three years from the conclusion of the project.