

Project Title: Middle Saluda Fecal Coliform Pollution Reduction

Length (months): 36 months

Watershed Name(s): Middle Saluda Watershed

12 Digit HUC(s): 030501090203

County(ies): Greenville

Water Quality Parameter(s): Fecal Coliform

SCDHEC Monitoring Site(s): S-252

This watershed: (check one) Has a draft or approved TMDL Is impaired (no TMDL) Is threatened

1. FUNDING REQUEST:

Federal Request: \$119,648.25 54.01%

Non-Federal Match: \$101,891.50 45.99%

Total Amount: \$221,539.75

Additional Federal Funding, if applicable: \$ 0

Source: N/A

2. LEAD ORGANIZATION INFORMATION:

Lead Organization: Greenville County Soil and Water Conservation District

Federal ID Number: 57-0639129

Project Manager: Kirsten Robertson

Mailing address: 301 University Ridge, Suite 4800, Greenville, SC 29601

Telephone: 864-467-2755 x 110

Fax: 864-467-3177

Email: kirobertson@greenvillecounty.org

Alternate Contact: Katy Sides

Telephone: 864-350-9802

Email: ksides@greenvillecounty.org

Financial Officer: Danny Howard

Telephone: 864-608-1652

Email: DHoward@clemson.edu

Official project paperwork (e.g. contract) Robert Hanley, Chair
should be sent to the attention of: _____

3. COOPERATING ORGANIZATIONS:

- Greenville County Land Development Division takes the lead role for Greenville County in ensuring that the county's NPDES MS4 requirements are met. Greenville County will supply outfall information for the MS4 roads, as well as maps, and illicit discharge reports regarding septic tanks in the watershed. Their in-kind contribution will include staff hours and travel expenses.
- South Carolina Department of Health and Environmental Control Onsite Wastewater Management Division will assist by referring possible participants to the septic system program, and by ensuring that the tanks are repaired effectively.

4. GENERAL PROJECT OVERVIEW (ABSTRACT):

The Saluda River Watershed has been designated a priority watershed and has a finalized TMDL for fecal coliform bacteria. The Middle Saluda River, within the Upper Saluda portion of the watershed has fecal coliform impairment water at a monitoring station close to the confluence of the Middle Saluda and the South Saluda Rivers (monitoring point S-252). Caesar's Head and Jones Gap State Parks are in the northernmost section of the watershed. The Middle Saluda watershed-based plan targets three main areas of possible fecal contamination: agriculture, municipal sewer and septic tank failures. There are no industrial discharges on the Middle Saluda.

This project will address failing septic systems to reduce the fecal loading on local waterbodies, as required in the Upper Saluda River Basin TMDL for fecal coliform bacteria. The TMDL identifies key nonpoint sources in the watershed, including failing septic systems. The project would allow Greenville County Soil and Water Conservation District (SWCD) to provide technical assistance to landowners in the Middle Saluda River Watershed. These outreach efforts should prompt landowner installation of Best Management Practices (BMPs).

Through cost share assistance, Greenville County SWCD will recruit rural homeowners to repair or replace their failing septic systems. The SWCD will coordinate with DHEC's Onsite Wastewater Management Division, Greenville County's Land Development Division, and local septic tank contractors to discern possible participants in the cost share program.

Printed literature will be disseminated to home owners' associations and local civic groups to inform rural residents of septic system maintenance in order to promote the available cost share opportunities. Greenville County SWCD will educate potential project participants about the potential sources of fecal coliform and how participating in the cost share program will enable them to reduce fecal coliform pollution in the watershed through proper use of septic systems. Septic system education will focus on maintenance and inspections, how best to landscape a septic drain field, and avoiding parking of vehicles on top of septic systems to best maintain the installed BMP. The septic system maintenance education and outreach will be targeted to homeowners participating in the program who live within the boundaries of the project HUC, with the intent of reducing the amount of fecal coliform bacteria in the watershed.

5. PROJECT DESCRIPTION:

A. General Background

The project area is located in northern Greenville County in the Middle Saluda River Waterbody, located within the Middle Saluda Watershed (Hydrological Unit Code 030501090203). The Saluda Watershed is a priority watershed for SCDHEC and EPA Region 4 and has a finalized TMDL for fecal coliform. The project includes Water Quality Monitoring Site S-252, close to the confluence of the Middle Saluda and the South Saluda Rivers. The monitoring location is Middle Saluda River at SC 288, 2.3 miles west-southwest of Slater. The monitoring station was placed on South Carolina's 2002 Section 303(d) list for impairment due to fecal coliform. On September 29, 2004 the monitoring site was included in the TMDL issued for the Upper Saluda River Basin for fecal coliform bacteria. The TMDL identifies that 78 percent of the watershed is forested, while the remaining 22 percent is composed of pastureland (9%), urban area (7%), cropland (5%), and a small mix of water and barren land uses (1%). The impaired stream segments of the upper Saluda River basin are designated as Class Freshwater, but the fecal coliform bacteria in the watershed has resulted in the impairment of standards for recreational use. Caesar's Head and Jones Gap State Parks are in the northernmost section of the watershed.

The Middle Saluda watershed-based plan targets three main areas of possible fecal contamination: agriculture, municipal sewer and septic tank failures. There are no industrial discharges on the Middle Saluda. This partial watershed-based plan implementation will focus on septic tank failures. For more information on the other contaminants, see the associated watershed-based plan.

The TMDL requires a 69 percent reduction in waste load at this monitoring station, which had an existing load of 2.97E+12 counts per day at the time of the TMDL issuance. The existing waste load was not available for this monitoring station. The project area is defined in the map included in Figure 1. The project addresses several strategies for TMDL implementation through the development and promotion of measures focused at reducing fecal coliform contamination.

B. Specific Goal of the Project:

The specific goal of the project is a reduction of the fecal coliform bacteria pollution load to the Middle Saluda River, as part of the watershed-based plan. Cost share assistance will be provided to repair or replace septic systems, for

homeowners who have a failing system in order to reduce the fecal coliform load. This project is designed to provide technical assistance and outreach services to prompt landowner installation of BMPs at sites that may lead to nonpoint source pollution.

Implementation of the BMPs in this plan will address all of the known possible sources of fecal contamination for the Middle Saluda that are not already being addressed through permits (either point source or MS4) or that are wildlife or agriculture related.

C. Detailed Project Description:

The Middle Saluda River Watershed (HUC 030501090203) was included in South Carolina's Section 303(d) list of impaired waters for exceeding the fecal coliform water quality standard for recreational use in 2002. A Total Maximum Daily Load (TMDL) for fecal coliform bacteria was developed for the Upper Saluda River Basin in 2004. This project focuses on the Middle Saluda River, in northern Greenville County, as measured at the S-252 water quality monitoring site. The river is used as a recreational site. The TMDL requires a 69 percent reduction at this monitoring site.

To reduce the fecal coliform loading on local waterbodies, this project will concentrate on nonpoint source (NPS) pollutants. The TMDL identifies the key NPS pollutants in the watershed as livestock, manure application, failing septic systems, illicit discharges, and natural sources. This project will address failing septic systems, as identified causes of fecal loading in the watershed-based plan. This project is a partial implementation of a watershed-based plan for the Middle Saluda Watershed. Other efforts outlined in the watershed-based plan will continue in conjunction with the partial watershed-based project described below (see the attached plan for more details).

The largest percentage of the watershed is forested (78%), while the second largest land use in the watershed is pastureland (9%). Failing septic systems are sources of pollution that can be readily reduced. We estimate that septic system failure is the largest contributor to the fecal coliform issue in this waterbody, due to the potentially large number of failures.

This project will not address forest land, agricultural practices or upstream runoff, as they are beyond the scope of this effort at this time. These elements are discussed in the Middle Saluda Watershed Based Plan. As outlined above, the project focuses on failing septic systems, which are not included in the current Greenville County MS4 permit. All work on this project will be outside the MS4 outfall areas.

Identify and Replace Failing Septic Systems

There are approximately 3,200 houses using a septic system in the Middle Saluda River waterbody. The number of houses was derived by using information provided in the Upper Saluda TMDL, which identifies that there are approximately 50,000 people in the Upper Saluda River basin who use septic systems. The project area encompasses approximately 25% of the region included in the Upper Saluda TMDL; however there are no urbanized areas within the Middle Saluda watershed, and Caesar's Head and Jones Gap State Parks are located within the watershed. Therefore, there are an estimated 8,000 people using a septic system in the Middle Saluda River watershed. Based on the average of 2.5 persons per household, there are approximately 3,200 houses in the project area that use septic systems. The TMDL references Schueler (1999) for a failure rate average of 20%, as the failure rate in this watershed is not known. If we assume a 20% failure rate, there would be approximately 640 failing septic systems. Recognizing that not all citizens will be willing to participate in this program, we estimate that we will be able to assist 100 households in replacing failing septic systems, which is 16% of the population expected to have a failing septic system.

Through this project, Greenville County SWCD will encourage homeowners with septic systems in the Middle Saluda watershed to have their systems inspected and repairs made to restore systems to the necessary proper functionality. All homeowners will have a 60% cost share assistance available to them. Due to the socioeconomic demographics of the area, it may be necessary to implement a sliding scale that would allow low to moderate income homeowners to potentially qualify for more than 60% compensation for the associated cost. The need for a sliding scale will be evaluated throughout the recruitment phase of the project. SWCD will be in charge of coordinating the initial inspection efforts and repair between the homeowner and the septic contractors. Once the inspections are completed, the failed systems will be repaired or replaced by local septic contractors with the goal of reducing the fecal loading in the local waterbodies. The project will only be used to repair septic systems that directly enter a water of the state, as none of them enter into a conveyance system.

Our target demographic is homeowners with septic systems in the project area. We will work to recruit them by hosting meetings at several public forums, including community groups and hardware stores, as well as other appropriate public gatherings within the community. We will provide printed literature on the project and how to detect if you have a problem with your septic system to home owners' associations and civic groups, as we are able. We will strive to hold the meetings at times when the greatest number of people can attend. See Section 5E for more details.

Another way to reach our target demographic is by using the resources of our partners. SWCD will coordinate with DHEC's Onsite Wastewater Management Division, Greenville County's Land Development Division, and local septic tank contractors to discern possible participants in the cost share program. Septic contractors will have a list of houses that have been previously pumped or homes in need of repair within the watershed. We can use this list as a guide to see which residents may have an issue and reach out to them in an effort to garner their participation in the program. If people are interested in the program, we will then verify if their system is faulty prior to moving forward with the installation of a new septic system or repair of their current one.

D. Information/Education Component:

The target audience of this project is people living in the Middle Saluda Watershed area. We will focus on homeowners who have septic systems and have experienced problems with their system. To get a sense of the demographics of this target group, we looked at census data for the Slater-Marietta census-designated place (CDP). The monitoring station that our project is centered on is located 2.3 miles west-southwest of Slater. While the CDP may be the most urban section of our project area, it is still fairly rural and provides the best data available to analyze the demographics of our target population. A third of the population in this census-designated place was between the ages of 25 and 44, with the median age being 40.5 years. The majority of the population is White (90%), while Hispanics make up 6 percent of the population and African-Americans compose 3.5 percent. Ninety-one percent speak only English at home, which will dictate that our outreach efforts will be conducted in English. The population is split with 50 percent females and 50 percent males. The educational attainment of the CDP varies, with the largest group (37%) having a high school degree. Twenty-eight percent completed some high school or less (do not have a degree); while 35 percent have some college or higher educational attainment. The educational attainment of this demographic shows that some targeted print materials would be appropriate, as 60 percent are a high school graduate or attained a higher level of education. Brochures will be specific and simple, as well as provide graphs and charts to create a visual depiction of any data. However, only 6.5 percent have a bachelor's degree or higher, which suggests that while initial print material may be appropriate, the physical demonstration of proper maintenance to participants will likely be more effective than a campaign focused solely on providing written literature.

Some of the residents who live in the Slater-Marietta area will be challenging to work with as many individuals are opposed to the idea of grant funding in general. Grant money represents tax money to which many are politically opposed. Another challenge is that many of the residents do not trust local environmental groups, and see money spent on environmental efforts as a waste. Using grant funding to enable environmental projects has met with vehement opposition in the recent past with a project in the larger watershed that encompasses this watershed.

There is a small watershed group, Save Our Saluda, that we plan to work with. Save Our Saluda was founded in response to environmental threats to the rivers in the Upstate. The organization has evolved into an active citizens group with a voice to protect the Saluda watershed and its natural resources. They are headquartered in Marietta.

We feel that we will reach the most people by targeting community groups such as the Lions Club. The Slater-Marietta Lions Club is part of the international network of Lions Clubs. They have provided many community contributions and partner with other civic organizations, including the Boys Scouts, to improve their community. They are headquartered in Slater. We would also be willing, if applicable, to connect with Travelers Rest community groups that have members who live in the project area, as the number of community groups in the project area is limited. Community groups in Travelers Rest that we could potentially work with include the Rotary Club of the Foothills and the VFW Post of Travelers Rest.

Based on the political feelings of many of the residents in the target area, our outreach efforts will be very important as we establish trust with potential participants and attempt to create buy-in for the program. It is important to the success of this program that we gain an individual's trust as well as offer clear incentives to attend informational meetings, participate in the cost-share program and maintain the BMPs long-term. Our educational efforts will focus on

creating interest in the project and encouraging participation among our target audience. All outreach efforts will reinforce that this is a voluntary program and the purpose of the program is to help landowners; not to enforce, persecute, fine or condemn them. We expect that recruiting the first participant will be the hardest but that interest in the project will grow through word-of-mouth, following the first successful project. Throughout the process, any concerns of individuals will be addressed honestly and clearly. Another trial of recruitment is the potential difficulty of securing a funding match, once we are able to create interest in the program. Therefore, we will monitor the program participation and adjust our message and funding formula as needed to reach the greatest number of partakers as possible, within the limitations of the project.

To engage stakeholders, we will distribute flyers in newsletters, mailbox marketing, placement in post offices, local restaurants, plumbing supply stores, and hardware stores. Flyers for public meetings hosted by these organizations will clearly describe the problem, what solutions will be discussed at stakeholder meetings, the benefits of participation and who would be eligible to receive cost share assistance. We will provide information on the program and BMPs at these meetings. Meetings will be held during the early stages of the project timeline and then as needed to complete recruitment efforts. Our marketing efforts will be focused on businesses in the Slater Marietta area, but we would be willing to expand our marketing to hardware and plumbing supply stores in Travelers Rest in order to reach a larger audience, if necessary. Travelers Rest is the closest town to the project area that would allow us to potentially reach six hardware and plumbing supply stores. This list includes potential venues through which to notify the public but our outreach efforts will not be limited to only those outlets listed here. As the residents live in rural areas, we will provide outreach through local businesses, homeowners associations and community groups, where we will be able to reach many members of the community. Foothills Family Resource is a local organization that we would approach to find needs in the community and see if they would help inform residents of the program. This Slater-based non-profit organization is committed to improving the quality of life of residents in the program area.

It is imperative that the BMPs installed during this project be properly maintained over the long term. Therefore, much of our education efforts will focus on teaching project participants the best ways to properly maintain the BMPs we install. We will use surveys to determine audience needs through a pre-test and to gauge information learned, through a post-test. Septic system education will be provided in many different formats, including PowerPoint presentations at meetings and informational pamphlets that will detail proper septic maintenance practices. Homeowners that are unaware of a potential septic issue will learn the possible hazards. In order to encourage participation in the program, we will stress how maintenance of a system can ultimately save them money, as the potential cost savings of proper maintenance should be a major motivational factor in fostering involvement. Program participants will be shown the proper operation of a septic system as well as learn the potential hazards of failing septic systems for human health and the environment. Additionally, homeowners will be taught that plants with a large root system should not be planted above a septic system and provided guidelines on how best to landscape a septic drain field. Cost share participants will also learn that vehicles should not be parked on top of the septic system, as the additional force created may break the septic system or cause improper functioning. We will use a septic tank model to demonstrate the proper maintenance of a system and show the cost share recipients how to detect potential future problems. Educational meetings will be held quarterly, or as needed, for those who have received cost-share assistance to demonstrate proper care and maintenance.

E. Anticipated Environmental Results:

The anticipated environmental result is the fecal coliform bacteria pollution load in the Middle Saluda Watershed will be lowered based on the impact of replaced or maintained septic systems in the watershed. The project area is centered around monitoring station S-252. Quarterly DHEC monitoring at station S-252 would enable tracking of pollution load reduction overall, as well as enabling pinpointing of which BMPs could have been responsible for the reduction.

Load reductions for septic system repairs and replacements are as follows. Based on studies that suggest that septic systems treat 2.4176×10^{10} cfu/household/year, the load reduction can be estimated. Assume that a repaired septic system keeps all of the fecal coliform out of the water and that the grant will pay for 100 repairs. At this rate, a load reduction of 2.4176×10^{12} is applicable.

F. Technical And Financial Assistance Needed:

This project will depend on the reliability of septic tank contractors as well as SCDHEC Onsite Wastewater personnel.

Additionally, Save Our Saluda has members who live in the project area who may be able to provide assistance with identifying potential project participants. Save Our Saluda group members may also help create a culture of trust between Greenville County SWCD and homeowners in the area.

G. Completion of Watershed-Based Plan Implementation:

Within the Middle Saluda, Greenville County MS4 is completing general education on pet waste and the impact of pet waste on this watershed. Pet waste is believed to be the primary source of fecal Coliform in urban runoff. Additionally, ReWa currently owns and operates a sewer system within the Middle Saluda watershed. They provide maintenance on their collection systems to limit the impact of sanitary sewer overflows, which addresses concerns over the element of wastewater collection system. NRCS also completes standardized agricultural BMPs with farmers in the watershed; including eliminating livestock's access to streams and ponds by fencing off these waterbodies, providing alternate water sources, and providing designated crossings and promoting a filtering vegetative buffer between the pastures and the streams on all farms where crossing is necessary. NRCS provides assistance with these practices through cost share money for land owners installing BMPs. These efforts will continue in conjunction with the project identified in this partial watershed-based implementation effort. While wildlife is identified in the watershed-based plan, this pollution source is not easily maintained.

H. Measurable Milestones:

#	Month	Milestone
1	Quarterly	Submit progress reports, invoices, MBE/WBE forms and BMP information per schedule outlined in grant agreement.
2	30 days after project completion	Submit final invoice and final technical closeout report to DHEC. Submit Final Budget Report within 45 days of project close.
3	1-3	Team up with local septic contractors that work within the watershed. Put together program information to market to potential participants. Send out information promoting the incentives for septic tank inspections. Partner with DHEC Greenville Environmental Health Office and Greenville County Land Development to learn of people experiencing septic failures. Contact community groups and other entities to set up educational meetings. Begin meetings to promote program, targeted on septic tank repair. Develop pre-test survey to determine needs and post-test survey to determine knowledge gained through the program.
4	4-6	Verify that interested parties' septic tanks need repair. Repair 10 faulty septic tanks. Prepare content for long-term maintenance education for those receiving cost share assistance. Conduct education for those receiving cost share assistance. Conduct pre-test and post-test surveys for those receiving cost share assistance. Conduct site inspections.
5	7-9	Verify that interested parties' septic tanks need repair. Repair 10 faulty septic tanks. Continue education for those receiving cost share assistance. Conduct pre-test and post-test surveys for those receiving cost share assistance. Conduct site inspections. Continue meetings to promote program, targeted on septic tank repair.
6	10-12	Verify that interested parties' septic tanks need repair. Repair 10 faulty septic tanks. Continue education for those receiving cost share assistance. Conduct pre-test and post-test surveys for those receiving cost share assistance. Conduct site inspections.
7	13-15	Verify that interested parties' septic tanks need repair. Repair 10 faulty septic tanks. Continue education for those receiving cost share assistance.

		Conduct pre-test and post-test surveys for those receiving cost share assistance. Conduct site inspections. Continue meetings to promote program, targeted on septic tank repair.
8	16-18	Verify that interested parties' septic tanks need repair. Repair 10 faulty septic tanks. Continue education for those receiving cost share assistance. Conduct pre-test and post-test surveys for those receiving cost share assistance. Conduct site inspections.
9	19-21	Verify that interested parties' septic tanks need repair. Repair 10 faulty septic tanks. Continue education for those receiving cost share assistance. Conduct pre-test and post-test surveys for those receiving cost share assistance. Conduct site inspections. Continue meetings to promote program, targeted on septic tank repair.
10	22-24	Verify that interested parties' septic tanks need repair. Repair 10 faulty septic tanks. Continue education for those receiving cost share assistance. Conduct pre-test and post-test surveys for those receiving cost share assistance. Conduct site inspections.
11	25-27	Verify that interested parties' septic tanks need repair. Repair 10 faulty septic tanks. Continue education for those receiving cost share assistance. Conduct pre-test and post-test surveys for those receiving cost share assistance. Conduct site inspections. Continue meetings to promote program, targeted on septic tank repair.
12	28-30	Verify that interested parties' septic tanks need repair. Repair 10 faulty septic tanks. Continue education for those receiving cost share assistance. Conduct pre-test and post-test surveys for those receiving cost share assistance. Conduct site inspections.
13	31-33	Verify that interested parties' septic tanks need repair. Repair 10 faulty septic tanks. Continue education for those receiving cost share assistance. Conduct site inspections. Conduct pre-test and post-test surveys for those receiving cost share assistance. If needed, hold meetings to promote program, targeted on septic tank repair to foster final participation.
14	34-36	Conduct site inspections. Complete any remaining post-test surveys for those receiving cost share assistance.

I. Measures Of Project Success:

- Participation in interest meetings
- Participation in cost share program
- Number of BMPs installed
- Pre-test and post-test survey results from participants
- Decrease in fecal coliform in the watershed as identified through SCDHEC monitoring data at station S-252

6. PROPOSED BUDGET

A. Overall Project Budget

	Federal	Non-Federal	Total
Personnel - Salary		\$49,149.60	\$49,149.60
Personnel - Fringe		\$12,287.40	\$12,287.40
Travel	\$5,378.25		\$5,378.25
Equipment			\$0.00
Supplies	\$4,270.00		\$4,270.00
Contractual		\$454.50	\$454.50
Construction	\$110,000.00	\$40,000.00	\$150,000.00
Other			\$0.00
Indirect			\$0.00
TOTAL	\$119,648.25	\$101,891.50	\$221,539.75

B. Budget Narrative:

Personnel - Salary: A professional engineer and outreach coordinator are the staff members that will provide staff support on the 319 grant project. The professional engineer's personnel costs were determined by assuming that she would work on the project for approximately 10 hours a week for 50 weeks a year. The outreach coordinator's personnel costs were determined based on assuming approximately 10 days of contributed time per project year. Both of these are low estimates and actual contributions may be much greater.

Personnel – Fringe: Greenville County provides fringe benefits at a rate of 25% of salary, per staff member.

Travel: It was estimated that the professional engineer would travel on the average three times to each of the 100 septic locations (once to check to see if the project is eligible; once to meet with the contractor; and a last trip to check the completed work). Additionally, we anticipate that not everyone who is interested in the program will qualify, so we are also anticipating 25 trips (a quarter of the total number of the anticipated qualifying projects) to non-qualifying homes. Assuming that the distance would be on average 30 miles round trip, we estimated that she would travel approximately 9,750 miles over the course of the project. It was estimated that the outreach coordinator would travel on the average 300 miles per project year, as she will be responsible for the initial information/educational component and pre-test/post-test surveys but will be limited in making any site visits.

Equipment: n/a

Supplies: We hope to use a septic system model to provide education to those receiving cost share assistance. The cost of a septic system model, including tax and shipping charges, is \$1,040. It was estimated that we would provide septic tank repairs for 100 people. We anticipate that not everyone we talk to about the program will be interested, therefore we are assuming that 10% of those who have a problem will decide to participate in the program. In order to provide printed materials/marketing to every potential participant, we assumed that we would hand out 1,000 literature pieces on the project. Assuming that each unit costs \$2 to print, printed materials would cost \$2,000. Additional printed materials will be used to provide education to those who participate in the program, with an estimated cost of \$750. It was assumed that we would expect to spend \$300 on envelopes and paper in communication with the anticipated 100 program participants. We also assumed that we would need postage for four mailings to each of the 100 anticipated program participants, so postage was determined to be \$0.45 per piece of mail, giving us a total of \$180.

Contractual: We estimated that Greenville County Land Development will drive 300 miles per project year, resulting in 900 miles over the course of the program.

Construction: We anticipate replacing or repairing 100 septic tanks, which is approximately 10% of the expected failed septic systems in the project watershed. The cost of a septic tank repair is \$1,500. We will provide cost share assistance at 60%, but anticipate that many participating in the program will require more than the 60% share to participate. We determined the cost of the repairs assuming that residents would need on average between 70 and 75% cost share assistance to participate. The requested federal budget amount for septic repair is \$110,000. The in-kind match of \$40,000 will be provided by home owners participating in the program. The 319 grant funds would be managed in a

separate account to manage cash flow. Greenville County SWCD will handle reimbursements through the District's annual budget. SWCD's Secretary/Treasurer and District Manager will manage the program finances. We will have funds available to cover costs each quarter to provide reimbursement to the landowners while waiting for reimbursement from DHEC.

Other: n/a
Indirect : n/a

References:

- Schueler, T.R. 1999. Microbes and Urban Watersheds: Concentrations, Sources, and Pathways. *Watershed Protection Techniques* 3(1):554-565.
- Slater-Marietta Census-Designated Place, 2010 United States Census Bureau Fact Finder. Retrieved February 21, 2012 from <http://factfinder2.census.gov/faces/nav/jsf/pages/searchresults.xhtml>.
- South Carolina Department of Health and Environmental Control. 2004. EPA Finalized TMDL: Upper Saluda River Basin, Fecal Coliform Bacteria, Bureau of Water.

Figures:

Figure 1 – Middle Saluda Watershed Map

Appendices:

Appendix 1 - Detailed Budget Tables

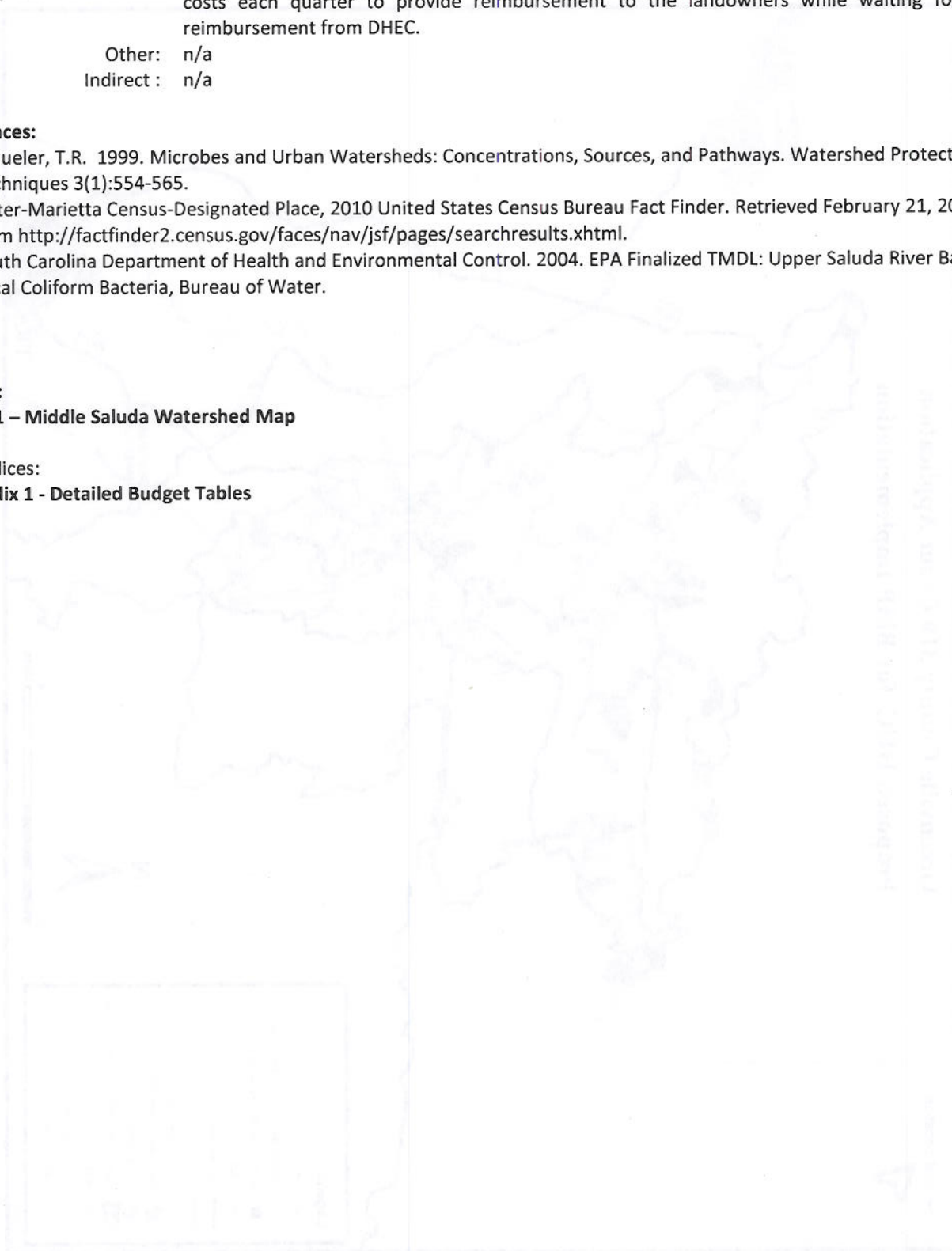
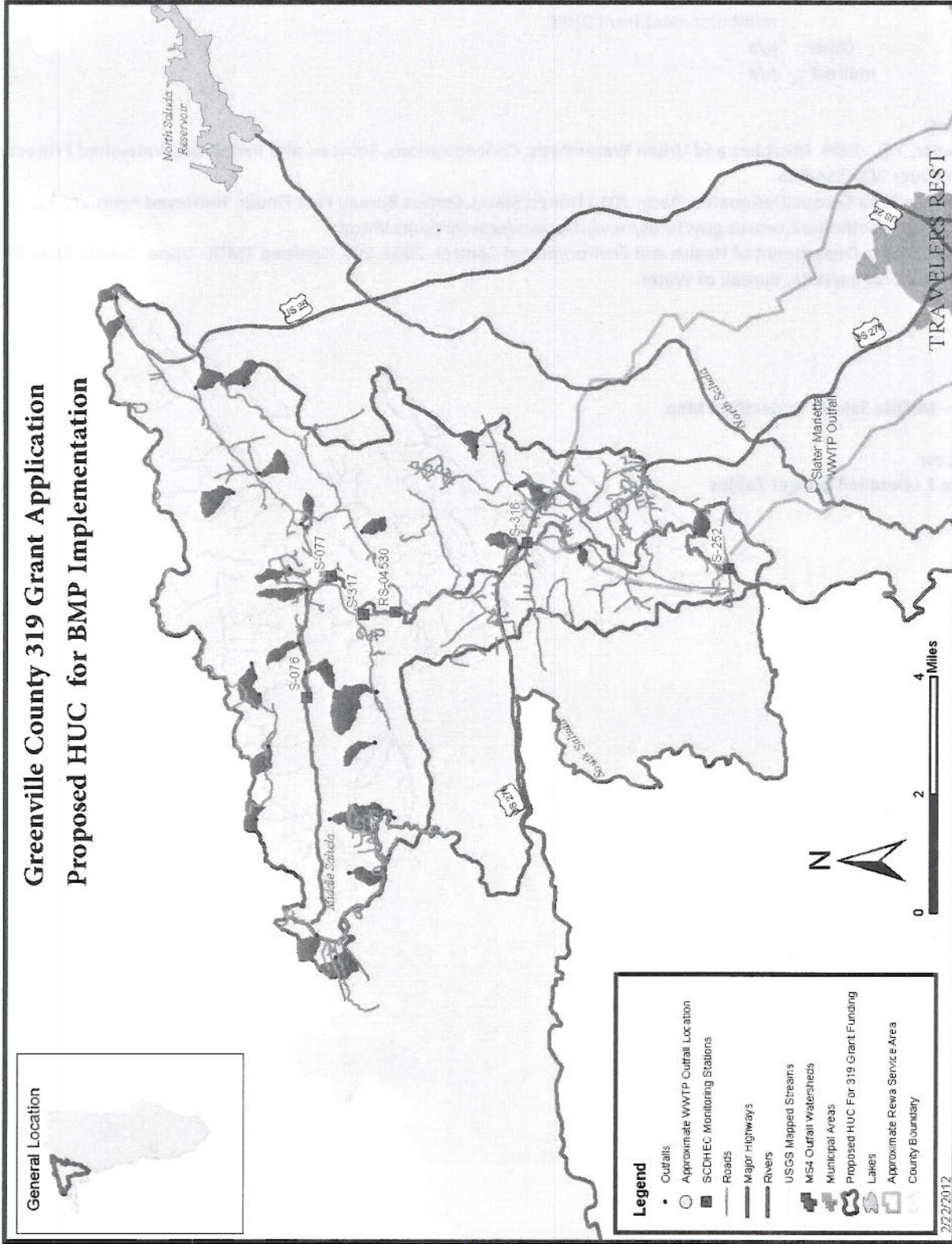


Figure 1 – Middle Saluda Watershed Map



Appendix 1 - Detailed Budget Tables

Section	Federal Budget (to be billed to 319 Grant)				Section	Non-Federal Budget (Match to grant)			
1	Federal: Personnel - Salary Costs (Lead Organization Personnel ONLY)				10	Non-Fed: Personnel - Salary, In-Kind Hours (Lead Organization ONLY)			
	Employee	# of Hours or Years	Hourly Rate or Salary	Total Cost		In-Kind Employee	# of Hours	Hourly Rate	Total Cost
		0.00	\$0.00	\$0.00		Professional Engineer	1500.00	\$30.00	\$45,000.00
		0.00	\$0.00	\$0.00		Outreach Coordinator	240.00	\$17.29	\$4,149.60
			Section 1 TOTAL	\$0.00			Section 10 TOTAL		\$49,149.60
2	Federal: Personnel - Fringe Benefits Costs (Lead Organization Personnel ONLY)				11	Non-Fed: Personnel - Fringe Benefits Costs (Lead Organization ONLY)			
		Percentage of TOTAL Federal Salary	0.00%				Percentage of TOTAL Non-Federal Salary	25.00%	
			Section 2 TOTAL	\$0.00				Section 11 TOTAL	\$12,287.40
3	Federal: Travel (Lead Organization Personnel ONLY)				12	Non-Fed: Travel (Lead Organization ONLY)			
	Employee	# of miles	Per Mile	Total Cost		Employee	# of miles	Per Mile	Total Cost
	Professional Engineer	9,750.00	\$0.505	\$4,923.75			0.00	\$0.505	\$0.00
	Outreach Coordinator	900.00	\$0.505	\$454.50			0.00	\$0.505	\$0.00
		Mileage	Sub Total	\$5,378.25			Mileage	Sub Total	\$0.00
**		Overnight Travel Cost	\$0.00	\$0.00	**		Overnight Travel Cost	\$0.00	\$0.00
			Section 3 TOTAL	\$5,378.25				Section 12 TOTAL	\$0.00
4	Federal: Equipment (if applicable. Equipment is defined as single items with cost over \$2,500)				13	Non-Fed: Equipment (if applicable. Equipment is defined as single items with cost over \$2,500)			
	Description	Single Cost	Number Needed	Total Cost		Description	Single Cost	Number Needed	Total Cost
			Section 4 TOTAL	\$0.00				Section 13 TOTAL	\$0.00
5	Federal: Supplies (i.e., office supplies, laptop, printing costs, postage)				14	Non-Fed: Supplies (i.e., office supplies, laptop, printing costs, postage)			
	Description	Cost		Total Cost		Description	Cost		Total Cost
	Septic System Model	\$1,040.00		\$1,040.00			\$0.00		\$0.00
	Printing costs/marketing	\$2,750.00		\$2,750.00			\$0.00		\$0.00
	Paper/envelopes	\$300.00		\$300.00			\$0.00		\$0.00
	Stamps	\$180.00		\$180.00			\$0.00		\$0.00
			Section 5 TOTAL	\$4,270.00				Section 14 TOTAL	\$0.00
6	Federal: Contractual / Services - Section A (Sub-Contractor services, not associated with salary)				15	Non-Fed: Contractual / Services - Section A (Not associated with volunteered time)			
A	Description	Cost		Total Cost	A	Description	Cost		Total Cost
		\$0.00		\$0.00			\$0.00		\$0.00
			Section A	\$0.00				Section A	\$0.00
B	Federal: Contractual / Services - Section B - Salary Costs (Sub-Contractors)				B	Non-Fed: Contractual / Services - Section B - Salary Costs (in-kind from Volunteers, etc..)			
	Employee	Total # of Hours	Hourly Rate	Total Cost		In-Kind Employee	Total # of Hours	Hourly Rate	Total Cost
		0.00	\$0.00	\$0.00			0.00	\$0.00	\$0.00
			Section B	\$0.00				Section B	\$0.00
			Sub Total	\$0.00				Sub Total	\$0.00

C		Federal: Contractual / Services - Section C - Travel (Sub-Contractors)		C		Non-Fed: Contractual / Services - Section C - Travel (In-Kind from Volunteers, etc.)	
Employee	Mileage	Per Mile	Total Cost	In-Kind Employee	Mileage	Per Mile	Total Cost
	0.00	0.505	\$0.00	Land Development Staff	900.00	0.505	\$454.50
	Section C	Sub Total	\$0.00	Section C		Sub Total	\$454.50
		Section 6 TOTAL	\$0.00			Section 15 TOTAL	\$454.50
7 Federal: Construction (i.e. BMPs)							
Description	Single Cost	Number Needed	Total Cost	Description	Single Cost	Number Needed	Total Cost
Septic Tank Repair	\$1,100.00	100	\$110,000.00	Septic tank repair	\$400.00	100	\$40,000.00
		Section 7 TOTAL	\$110,000.00			Section 16 TOTAL	\$40,000.00
8 Federal: Other							
Description	Cost	Section 8 TOTAL	\$0.00	Description	Cost	Section 17 TOTAL	\$0.00
9 Federal: Indirect							
	Include Attachment 4				Include Attachment 4		
	Percentage of TOTAL Federal Salary	0.00%	\$0.00		Percentage of TOTAL Non-Federal Salary	0.00%	\$0.00
		Section 9 TOTAL	\$0.00			Section 18 TOTAL	\$0.00
FEDERAL Budget Summary							
19	Category	Section Totals	Percentage	Category	Section Totals	Percentage	
	Federal:						
1	Personnel - Salary	\$0.00		Non-Federal / Match			
2	Personnel - Fringe	\$0.00		Personnel - Salary	\$49,149.60		
3	Travel	\$5,378.25		Personnel - Fringe	\$12,287.40		
4	Equipment	\$0.00		Travel	\$0.00		
5	Supplies	\$4,270.00		Equipment	\$0.00		
6	Contractual / Services	\$0.00		Supplies	\$0.00		
7	Construction	\$110,000.00		Contractual / Services	\$454.50		
8	Other	\$0.00		Construction	\$40,000.00		
9	Indirect	\$0.00		Other	\$0.00		
	Federal TOTAL	\$119,648.25	54.01%	Indirect	\$0.00		
	Grand TOTAL	\$221,539.75		Non-Federal TOTAL	\$101,891.50	45.99%	Non-Federal TOTAL
FEDERAL & NON-FEDERAL Budget Grand Total							