

Attachment B

College Creek Watershed Work Plan – FFY 2009

Lead Organization. Greene County Soil Conservation District, 214 N College Street, Greeneville, TN 37745 will be the Lead Organization. The person who will sign the contract is Johnny Ottinger, District Board Chairman.

The Project Manager will be Paul Hayden, 319 Project Manager for Greene County. The Office phone number is 423-638-4771 ext. 3. Paul Hayden can also be contacted by cell phone at 423-552-0774 or via email at pehaydentn@yahoo.com .

Subcontracting. Because of the volume of effort required to design the major detention/retention facilities, GCSCD requests permission to subcontract these design efforts. The contractor will be selected through competitive bidding based on previous experience, general knowledge of detention/retention concepts and price. All negotiations and awards will be conducted in accordance with TDA procurement policies and procedures. GCSCD will ensure all subcontractor work is reviewed by the appropriate NRCS engineering group and that all BMPs are installed in accordance with NRCS standards.

Federal Employer Identification Number (FEIN) 62-1235912

Cooperating Organizations. Partners involved in this project include:

1. USDA Natural Resource Conservation Service (NRCS), providing technical assistance with design and design review as well as onsite installation quality control.
2. Middle Nolichucky Watershed Alliance (MNWA), assisting with community outreach and involvement.
3. Tusculum College, providing student volunteers for creek surveys, cleanup and stream monitoring of bacteria and silt buildup.
4. Tennessee Department of Environment and Conservation (TDEC), providing periodic stream monitoring to determine when the stream can be removed from 303d listing. Also, monitoring permit requirements for planned activities.
5. US Fish and Wildlife Service (USFWS), providing review of plans and designs associated with stream bank stabilization and in-stream structures.
6. Tennessee Wildlife Resource Agency (TWRA), providing input for monitoring endangered species of plants and animals.
7. Tennessee Valley Authority (TVA), providing permits for and review of stream activities.

Project Leader. Paul Hayden, the Greene County Soil Conservationist for the past 5.5 years and now the 319 Restoration Manager for Greene County. During the last 5.5 years, the number of NPS BMPs installed by the district has increased 10 fold. Also during that period, funding has been sought and secured through TDA-ARCF/303d, TWRA-LIP, USFWS-Partners, TVA and MNWA. Mr. Hayden holds an MBA as well as a BS in Engineering. He has managed budgets for industry in excess of 1.5 million dollars per year for a number of years before coming to the GCSCD.

Project Location. College Creek is located in Greene County, TN and flows partially through the Town of Tusculum. The main stem starts north of Snapps Ferry Road and runs along Brown Ridge Road where it empties into the Nolichucky River. It is located on topographic quad map Chuckey N3607.5 W8237.5 and has been assigned the hydrologic unit number TN 06010108010-300.

Project Implementation.

In order to reduce NPS pollution in College Creek, the problem will be addressed from several angles, i.e. flooding, BMPs, and stream bank stabilization. In this first year of the restoration plan, the focus will be to reduce the severity and occurrence of flooding events. Once the volume of water from rain events has been decreased, focus will be placed on implementing BMPs, such as cattle exclusion fencing, water systems, heavy use areas, and stream bank stabilization.

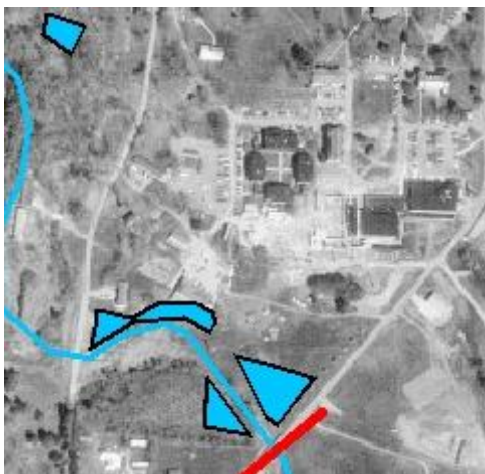
Viking Place



Viking Place is a small subdivision (approximately 15 acres) of duplex condominiums. All of the roof downspouts as well as the street and driveway runoff flows directly to the creek with no detention.

The plan is to develop rain gardens where possible to detain roof runoff and implement a bio-detention pond to collect and clean street and driveway runoff.

Tusculum College -- Rain Water Collection



The Tusculum campus is ripe with opportunities for runoff retention and detention areas. A Rain Water Harvesting system to capture roof runoff for athletic field irrigation and reduction in the amount of water reaching the creek will be installed during this contract. Also several rain gardens will be installation on campus.

Because of the nature of the landowner in this case, detail plans and cost estimates will be required for the Board of Directors to evaluate prior to any approved construction. The plans and costs will be used to determine the priority of projects. Construction will begin during FY 2010 and will most probably continue through 2012.

Adult Education

All property owners along the stream will be invited to participate in BMP field days, which will provide an opportunity to learn about water quality protection, wildlife, and warm season grasses, and to see projects that have been completed. NRCS biologist, Robin Mayberry, who has expertise in facilitating such events, will assist the CGSCD in leading this event. In addition, the MNWA will attempt to sign up one or more groups to adopt College Creek as part of the Adopt-a-Stream program.

Farm BMPs.

There are a number of farms on the lower end of the watershed which are allowing full access of their cattle to the stream. The intention is to fully exclude all cattle from the stream and establish a riparian zone a minimum of 25 feet wide along all the area that will be fenced. When possible, creek accesses and stream crossings will be used to provide water for the cattle. In other areas of the creek pumping stations will be used to gather water from the stream and provide that water in freeze proof troughs to all pastures along the stream.

Milestones - College / Frank Creek Project Milestones

PROJECT NAME	ACTIVITIES	EXPECTED COMPLETION DATE
Monthly Report	Cumulative Progress	By 10th of each month after funding
Farm Tour	Tour of Installed BMPs in Watershed	5/1/2010
Viking Place	Design and Build Detention Pond for Subdivision and Rain Gardens	7/1/2010
Robert Bird	Exclusion Fence Riparian Establishment Water System Streambank Repair	9/15/2010
Annual Report	Activities completed during the current year	9/15/2010
Anne King	Exclusion Fence Riparian Establishment Water System Streambank Repair	10/15/2010
Tusculum College	Wetland Retention Pond	3/20/2011
Farm Tour	Tour of Installed BMPs in Watershed	5/1/2011
Tusculum College	Rain Gardens	7/15/2011
Marzella Dobson	Exclusion Fence Riparian Establishment Water System Streambank Repair	8/15/2011

PROJECT NAME	ACTIVITIES	EXPECTED COMPLETION DATE
Robert Hipps	Exclusion Fence Riparian Establishment Water System Streambank Repair	9/15/2011
Carl Davenport, Jr.	Creek Access Creek Crossing	9/15/2011
Education Element	Field experience for adult education	9/15/2011
Annual Report	Activities completed during the current year	9/15/2011
Farm Tour	Tour of Installed BMPs in Watershed	5/1/2012
Tusculum College	Rain Water Collection System for stormwater Retention and Irrigation	5/30/2012
Education Element	Field experience for college students and adults	9/15/2012
Contract Final Report	End of Contract Report For All Completed BMPs	10/15/2012

MEASURE OF SUCCESS. TDEC's water quality monitoring data will be used to determine if progress is being made towards the reduction of nutrient and sediment loads in College Creek. The stream was monitored by TDEC in the year 2006 and is scheduled to be monitored again in 2011. In addition, Interns from Tusculum College Biology Department will conduct routine monitoring for coli forms and sediment loading. The students will monitor each of the eight sections of the stream by using Coli Scan field kits and sediment traps. Data collected by the students will be reviewed by members of the MNWA Technical Advisory Committee and GCSCD, and compared to data collected by TDEC.

Budget and Schedule for 3 year request

BMP's	Quantity		Cost/ Unit	Budget Estimate
Design and Install Retention Ponds	2	ea	\$55,000.00	\$110,000.00
Rain Gardens	12	ea	\$4,000.00	\$48,000.00
Exclusion Fencing (21 mi of stream)	22000	ft	\$2.00	\$44,000.00
Riparian Re-establishment	9	ac	\$1000.00	\$9,000.00
Creek Accesses for livestock water	2	ea	\$3,200.00	\$6,400.00
Creek Crossings for livestock	1	ea	\$3,800.00	\$3,800.00
Water Troughs and HUAs	8	ea	\$2,000.00	\$16,000.00
Pipeline	6258	ft	\$2.00	\$12,516.00
Feed Pad HUAs	2	ea	\$4,000.00	\$8,000.00
Stream Bank Repair	4040	ft	\$20.00	\$80,800.00
Pumping Station (for water system)	2	ea	\$2,900.00	\$5,800.00
Subcontract for Engineering Services	3	Yr.	\$25,000.00	\$75,000.00
Subcontract for Project Management	3	Yr.	\$30,000.00	\$90,000.00
Grant Funds \$305,590.00 Match Funds \$203,726.00			TOTAL	\$509,316.00

Educational Events, Supplies, et.	Quantity		Cost/ Unit	Budget Estimate
Farm Tour of BMPs (Adults)	3	ea	\$425.00	\$1,275.00
Mailings and Printings/Brochures	3	ea	\$458.33	\$1,375.00
Stream Cleanup	3	ea	\$342.00	\$1,026.00
Travel, Supplies,etc				\$3,675.00
Grant Funds \$4,410.00 Match Funds \$2,941.00			TOTAL	\$7,351.00

TOTAL				\$516,667.00
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Timeline, Tasks, and Assessment of Progress

The tasks and budget proposed in this plan are intended to be completed over a 3 year period. The following table details the intended completion process after the contract start date for this effort.

Task or Event	CONTRACT YEAR		
	1	2	3
Design and Install Retention Ponds (ea)	1	1	
Rain Gardens (ea)	6	6	
Exclusion Fencing (ft)	8000	8000	6000
Riparian Re-establishment (ac)	3.7	3.7	1.6
Creek Accesses for livestock water (ea)		1	1
Creek Crossings for livestock (ea)			1
Water Troughs and HUAs (ea)	4	3	1
Pipeline (ft)	2400	2400	1458
Feed Pad HUAs (ea)		1	1
Stream Bank Repair (ft)	1350	1350	1340
Pumping Station (for water system) (ea)		1	1
Farm Tour of BMPs (Adults) (ea)	1	1	1
Mailings and Printings/Brochures (ea)	1	1	1
Stream Cleanup (ea)	1	1	1

Progress toward these milestones will be measured on a monthly basis and adjustments will be made to keep the overall progress moving toward a completion of all planned activities before the conclusion of the contract. A detailed master schedule will be created for each contract year to reflect the particular landowner or other participants involved on a monthly basis so that slippages will be easily identified and corrected.

BMP List, Educational Activities and Budget

Total estimated cost for project is **\$516,667.00** with **\$310,000.00** in Grant Funds and **\$206,667.00** in Matching Funds.

TDA-NPS 319 60 % **MATCH** 40 %

Total 319(h) money for Salaries and Benefits & Taxes: \$0.00

Total 319(h) money for Project Tasks (i.e. BMP implementation, education/training events, publications produced, etc.): **\$310,000.00**

Sources of Matching Funds. Matching funds are coming from three (3) sources:

1. Participant’s 25 % cost of projects.
2. TWRA-LIP, USFWS and Middle Nolichucky Watershed Alliance (MNWA) Program Funds (10%).
3. In-Kind labor from Town of Greeneville and Town of Tusculum employees, MNWA members, and project participants (5%).

Line-Item Category:	Source:	Type:	Amount:
4&15	TWRA-LIP, USFWS and MNWA Program Funds	Cash	\$51,299.00
4&15	Participants	Cash	\$128,248.00
4&15	Town of Greeneville & Town of Tusculum employees, MNWA members, and project participants	In-Kind	\$25,650.00
5 thru 12	Town of Greeneville & Town of Tusculum employees, MNWA members, and project participants	In-Kind	\$1470.00