

**ATTACHMENT A
SCOPE OF WORK
MARYLAND'S NONPOINT SOURCE PROGRAM
GRTS #20**

Project Title: Upper Choptank River Small Watershed Plans: Denton and Greensboro Areas

Name of Grant: Reprogrammed FFY2007 319(h) Base Grant Reprogrammed

Proposed Budget: Federal Funds: \$35,694
Non-Federal match: \$23,796
Total: \$59,490

Project Funding Period: July 1, 2009 – June 30, 2010

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Grant Project Synopsis: Caroline County is seeking grant funds to support one staff person who will perform watershed planning activities in two Upper Choptank River subwatersheds and for reimbursement of expenses for supplies and printing. Caroline County, as the Lead Agency, Contractor and 319(h) Program Grantee, is responsible for performance of this Agreement, including providing reports, and for monitoring performance of any contractor or subcontractor to ensure that the activities outlined in this Scope of Work are performed, that the Deliverables (Outputs and Measurable Environmental Results/Outcomes) set forth herein are provided to the Department, and that any other contractor(s) or subcontractor(s) perform the activities outlined in this Scope of Work in accordance with the grant conditions and the terms and conditions of this Agreement.

Date Submitted: July 31, 2008
Date Revised: June 11, 2009 (Date revisions)
Date Revised: June 30, 2009 (Project work plan Objective 1 activity 2)

Project Area and Watershed Information	
Name of Grantee	Caroline County Commissioners
Federal Watershed Hydrologic Unit Code (HUC), See: http://cfpub.epa.gov/surf/locate/index.cfm	02060005
Tributary Strategy Basin Name(s) http://www.dnr.state.md.us/bay/tribstrat/index.html	Choptank
Maryland 8-digit watershed name and number http://mddnr.chesapeakebay.net/wsprofiles/surf/prof/prof.html	Upper Choptank, 02130404
303(d) Listing Information www.mde.state.md.us/Programs/WaterPrograms/TMDL/Maryland%20303%20dlist/303d_search/index.asp	
303(d) Impairing substance #1: name and listing date	Sediments, 1996
303(d) Impairing substance #2: name and listing date	Nutrients, 1996
303(d) Impairing substance #3: name and listing date	Bacteria, 1998
303(d) Impairing substance #4: name and listing date	Biological, 2002 & 2004
Total Maximum Daily Load (TMDL) Status and Summary of Model Allocation results from TMDL document http://www.mde.state.md.us/Programs/WaterPrograms/TMDL/Sumittals/index.asp	
Name of county TMDL contact	David Porter, County Engineer
TMDL #1 – Status, date, pollutants	N/A
TMDL #2 – Status, date, pollutants	N/A
TMDL #3 – Status, date, pollutants	N/A
TMDL #4 – Status, date, pollutants	N/A

Watershed Plan Status	
Name/Date	N/A
Jurisdiction	Caroline County

EXECUTIVE SUMMARY

The Caroline County Planning & Codes Administration proposes to develop a watershed plan for two, twelve-digit watersheds within the Upper Choptank River watershed, to reduce nonpoint source pollution entering the Choptank River. These two watersheds have been selected to represent the prevailing land uses in the County. They also have been identified as areas where working partnerships exist between the County and important stakeholders in those watersheds. Two of these basins drain lands predominately occupied by the municipalities of Greensboro and Denton, and their respective planned growth areas.

The County is in the process of completing watershed characterizations for three of the four eight digit watersheds in the County in preparation for developing watershed plans. The focus of this project will be on the Upper Choptank watershed, for which a characterization has been completed. In addition, an MOU among and between all jurisdictions within the Upper Choptank River watershed has been circulating in which the jurisdictions agree to take the health of the watershed into consideration in their planning activities. To date, five of nine jurisdictions have signed the MOU while meetings and presentations are currently being scheduled for the remaining four jurisdictions. Caroline County has local buy-in and support for completing a watershed plan.

We are requesting funding to develop watershed plans that will meet the EPA A-I requirements. These plans will then be used to complete similar plans for the four, eight digit watersheds, in the County. The County proposes to have its existing environmental planners lead this effort, with help from stakeholders to provide assistance with this planning effort. We plan to reconvene and coordinate with the same workgroup that was formed to develop the watershed characterization. That workgroup is made up of representatives from local government, the agricultural community, special interest groups, nonprofits, and other key persons.

It is our hope that this planning process will lead to future projects to design & implement a stormwater management retrofit on the County Public Works Department parking lot/yard to improve water quality and fix erosion problems in the adjacent stream. Other projects in the planning stages, are Agricultural BMPs at a new Soil Conservation District Office, and stormwater retrofits at County Recreation and Parks sites on the water. Not only will these and other similar projects have a direct positive impact on the receiving stream; they will also provide a local example of innovative storm water management practices that can serve as a model for other projects in Caroline County and as an educational tool for the public.

The requested funding will support salaries for County planning staff; as well as the cost for hired consultants and the work group that will be completing the watershed plan.

SCOPE OF WORK

Project History and Background

The Upper Choptank River watershed is dominated by agricultural and forested lands, though it does include eight incorporated municipalities. It is the most significant watershed in Caroline County in terms of acres of land and human population. The Maryland Department of Planning has projected nearly 40% growth in the County by 2030. The watershed currently faces substantial water quality problems including four 303(d) list impairments that the County must address. Furthermore, a new wastewater treatment system is currently entering the design stages to serve four incorporated municipalities and surrounding areas in the northern region of the Upper Choptank river watershed. This new wastewater treatment system may include a point-source discharge into the headwaters of the Choptank River.

In 2006, Caroline County Planning staff convened a workgroup composed of representatives from the County, incorporated municipalities, nonprofits, the County Farm Bureau, and other interested citizens to develop a watershed characterization document for the Upper Choptank River. The resulting document is intended to establish the baseline information needed to develop a watershed plan. A Memorandum of Understanding is currently circulating among the affected jurisdictions in which each jurisdiction agrees to take the findings of the watershed characterization into consideration in its planning activities. To date, five of the nine affected jurisdictions have signed the MOU, and meetings/presentations are in the process of being scheduled for the remaining four jurisdictions. The Center for Watershed Protection has held a series of workshops directed at local jurisdictions in the County, in an effort to improve natural resource protection by changing codes and ordinances addressing storm water management and design standards for future development. This work is continuing with the Center now working directly with two jurisdictions, as a pilot project, to implement these code changes. Both of these municipalities are in the two selected watersheds for this planning project. Also promising, is the work being done to reduce nutrient loading from agricultural nonpoint sources. Several farms in the County are currently working with the University of Maryland, The Hughes Center for Agro-Ecology, and the Caroline Soil Conservation District, to implement innovative BMPs on their farms to improve water quality without negatively impacting crop production.

These, and many other initiatives, have led to a building momentum for the development of a watershed plan for the Upper Choptank River Watershed. Caroline County would like to remain a predominantly agricultural County, and has set a high agricultural land preservation goal. The County would also like to continue with Smart Growth principles in the County by directing growth towards the incorporated municipalities and designated growth areas, while improving our natural resource protections. This project will provide the key stakeholders with an opportunity to work together and create two watershed plans that will address the needs and issues for all of our land uses in a collective fashion.

The first watershed selected for this project is identified by the Maryland 12-digit watershed number, 12130404094. This watershed, one of the largest within the Upper Choptank, drains the Town of Denton, which is the Caroline County Seat and largest incorporated municipality in the Upper Choptank basin. The Town is facing strong development pressure and also counter pressure from a citizen group that would like to place a moratorium on development within the municipality. This watershed contains the only major wastewater treatment plant in the larger basin, and a historical waste disposal site. Completing a plan for this 12-digit watershed will help the County prepare for a new point source wastewater treatment plant in the North end of the County, and the arrival of MidShore II, a regional solid waste disposal site located in the crux of two tributaries of the Upper Choptank River. In addition to these infrastructure aspects of the watershed, it also contains several parcels categorized as agricultural preservation districts or with land preservation easements. It is a microcosm of the larger, 8-digit basin, and as such will serve well as watershed plan template.

The second selected Maryland 12-digit watershed, 021304040505, contains the town of Greensboro, a County Park (Christian Park), several large areas of preserved agricultural land, and a USGS gauging station. Like the watershed draining Denton, this watershed is facing residential development pressure, and has stakeholders willing to plan for watershed protection, and to implement changes required to complete this protection. The presence of the USGS gauging station will provide the project with significant historical data that has been gathered by Dr. Tom Fisher, of the University of Maryland Center for Environmental Studies, Horns Point Laboratory. A particularly strong stakeholder in this watershed is the County Recreation and Parks Department, which manages Christian Park. Christian Park is a 20 acre passive use park, with unimproved nature trails, and small craft access to the water.

Project Justification

The resulting watershed plans will provide the necessary guidance to the County and its municipalities to address the water quality impairments in the Upper Choptank River in a cohesive manner. The County currently is finding itself at a tipping point between managed development and poorly planned, unchecked growth. The Maryland Department of Planning's growth projections for the County are very high in the foreseeable future; much higher than the County has identified as preferable in their planning documents. The management of growth pressures, through careful planning for land use, will become increasingly more critical in this County with many precious natural resources deserving of protection. The development of a comprehensive watershed management plan will go a long way in giving County officials the tools which they will need in order to champion responsible land use.

While the Upper Choptank River is on the 303(d) list for four separate water quality impairments, there are currently no TMDLs developed. Regardless, the County wishes to develop these watershed plans to begin addressing the impairments.

The potential for this project to improve the management of the Upper Choptank River

watershed is significant if we are successful. The County and the incorporated municipalities have very good working relationships and have been working together on several projects and grant initiatives. Both the agricultural community and the municipalities have demonstrated a mutual willingness to work towards improving water quality in the Choptank River.

A critical component of the watershed plans will be to address the implications of a potential new wastewater treatment facility that may include a point source into the Choptank River. Currently there is a MDE consent order on the Town of Goldsboro requiring the town to address failing septic systems, which are posing a human health hazard. Besides contributing to a human health hazard, the input from the failing septic systems may be responsible in part for some of the river's impairments. There is a draft proposed consent order on the entire North County region to address the same issues. The wastewater treatment system, which would bring these septic systems online, is currently entering the design and engineering phase. Watershed planning will take this potential point source into consideration and develop recommendations on how to minimize impacts to water quality by wastewater treatment point sources.

Project Goals and Objectives

GOAL: To improve water quality in the Upper Choptank River.

OBJECTIVE 1: Develop watershed plans for two, twelve-digit watersheds in the Upper Choptank River watershed.

Process

A workgroup of key stakeholders was formed in 2006 to develop the Upper Choptank Watershed Characterization document. A similar group of stakeholders will be reconvened to work on the two, twelve-digit watershed plans, with a specific group being focused on the completion of each plan. The plans will be completed to address the EPA's A-I criteria. An analysis of each subwatershed will be completed in order to make specific recommendations based on land use, topography, demographic make-up, etc. Using this method we can take into account the codes and ordinances unique to each incorporated municipality to make specific recommendations. These plans then can be applied more broadly to all of the twelve-digit watersheds, in the future, based on the land use within those watersheds. The historic monitoring data available from multiple sources in the watersheds will enable the County to work with the scientific community to establish a monitoring program that will determine a baseline for water quality analysis, on what we know to be impaired waterways.

Capacity

Caroline County has limited staff resources, however, restoring and protecting the Choptank River is a priority of the Caroline County Commissioners. Therefore, the

County is willing dedicate a significant portion of staff time to complete the project. The County is prepared to dedicate a majority of their Environmental Planner's time to completing a watershed plan within the next year. This planner will be supported by the Department Director and GIS manager. In addition, the County intends to utilize its partners and their expertise to the maximum extent possible. One particular group that has expressed a willingness to support the effort is the Choptank Tributary Team. A stakeholder group has already been identified through the previous watershed characterization process, and the County intends to involve the same group. Letters of Support from several of those individuals are either attached to this application or will be sent directly. Strong partnerships have already been established with the Towns of Denton and Greensboro, the Caroline County Soil Conservation District, and the Center for Watershed Protection.

Public Involvement

The previously identified stakeholder group will be reconvened and utilized to complete this project. This stakeholder group is made up of partner agencies, interested citizens, and nonprofit organizations. We intend to convene this group of stakeholders 4-6 times during the watershed planning process, in addition to meeting with individuals separately to discuss portions of the plan that are in their area of expertise. In addition to working with our stakeholder group, we intend to meet with landowners as appropriate when conducting our twelve-digit watershed analyses. Landowner willingness to participate will be one criteria used to prioritize implementation recommendations.

Policy, Code, Land Use, Legislative, Or Regulatory Changes

Currently the County is working with the Center for Watershed Protection to identify code changes that would improve natural resource protection. Furthermore, the County Commissioners and County Planning Commission have tasked the Planning and Codes Department with a comprehensive review and rewrite of the County Code. Now is the opportune time to ensure that codes are developed that will protect the County's waterways. Similar work is planned with the municipalities in the County. Currently, the Center for Watershed Protection and the County are seeking funding to pilot this project with 2 municipalities; Denton and Greensboro. As the watershed plans are developed, recommendations for code changes will be made.

Project Completion Assurances

The County is comfortable with the proposed project timeline. Many of the stakeholders are already in place, and the recently completed watershed characterization provides a foundation from which to start the planning process.

COOPERATING AGENCIES' ROLES AND RESPONSIBILITIES

Agency/Organization	Role	Responsibility
Caroline County Planning & Codes Administration	Lead Agency	Will lead the project, coordinate meetings, provide staff to draft the watershed plan
Maryland Department of the Environment	Grant Administration and Technical Assistance	Provide before and after monitoring for the in-the-ground implementation project.
Caroline County Soil Conservation District	Partner	Assist with addressing agricultural components of watershed plan. Provide technical assistance and insight regarding agriculture in Caroline County.
State of Delaware	Partner/Stakeholder	State of Delaware participation will be requested to provide input for their territory: planning data, planning process participation, management/implementation preferences, etc.
Adkins Arboretum	Stakeholder	Assist with identifying natural resource conservation areas and input in drafting the watershed plan.
Choptank River Tributary Team	Stakeholder	Provide input throughout project and assist with plan review.
Caroline County Incorporated Municipalities	Stakeholders	Provide input throughout project and assist with plan review.

PROJECT WORK PLAN
Activities and Deliverables

Objective 1: Develop a watershed plan for the Upper Choptank River watershed that is accepted by US EPA based on EPA's components of a watershed-based plan (A-I Criteria).

Activities	Time line	Responsible Entity	Deliverables	
			Outputs / Project Results	Outcomes / Measurable Environ. Results
Convene Workgroup focused on education of and buy-in by key partners and stakeholders for the Upper Choptank River watershed planning effort	7/1/09-9/1/09	Caroline Co. Planning	Report Workgroup status and accomplishments for each reporting period. (1, 2) List of partners and stakeholders engaged in the process. (1, 2)	N/A
Complete watershed analysis and fact sheets with specific characteristics and recommendations for each of at least two Maryland 12-digit watersheds in the Upper Choptank River watershed	7/1/09-1/31/10	Caroline Co. Planning with partners & stakeholders	Report status for each reporting period. (1, 2) Sample copy of the draft watershed analysis. (1) Electronic copies of draft fact sheets. (1) Electronic copies of final fact sheets. (1)	N/A
Using subwatershed analyses, identify key watershed plan goals	12/1/09-3/31/10	Caroline Co. Planning with partners & stakeholders	Report status for each reporting period. (1, 2) Electronic copy of watershed plan outline. (1)	N/A
Draft a watershed plan for the Upper Choptank River Watershed that is designed to attain EPA acceptance (re: A-I criteria)	7/1/09-6/30/10	Caroline Co. Planning with partners & stakeholders	Report status for each reporting period. (1, 2) Electronic copy of watershed plan (for MDE review and MDE submittal to EPA) (1, 2)	N/A

Footnotes:

- (1) Required reporting in Quarterly Status Reports (QSR)
- (2) Required reporting in Final Report.

BUDGET

Upper Choptank River Small Watershed Plans: Denton and Greensboro Areas
Caroline County, Maryland

Category	Federal 319(h) Grant	Non-Federal Match	Total
Personnel Salary (1)	\$21,862		\$21,862
Personnel Fringe (1)	\$9,401		\$9,401
Supplies Office supplies	\$631		\$631
Contractual Printing - subcontractor TBD (2)	\$3,000		\$3000
Other Workgroup support (3)	\$800		\$800
MATCH (4)		\$23,796	\$23,796
TOTAL	\$35,694	\$23,796	\$59,490

(1) Grant reimbursable staff time (salary/fringe) for work associated with generating the watershed plan.

Position Title: Planner I; Grade/Step: 9/1; % of time on project: 60% for 12 months

Annual Salary Amount: \$ 36436; Fringe: 43 %

Fringe includes: X Social Security; X Unemployment ; X Health Insurance; X Retirement

(2) Printing 200 paper copies of the Watershed Plan @ ~\$15/copy = \$3000

(3) Workgroup Support: room rental, refreshments, etc.

(4) Documentation of local match (salary/fringe) for work associated with generating the watershed plan.

Position Title: Department Director; Grade/Step: 15/11; % of time on project: 5% for 12 months

Annual Salary Amount: \$ 78590; Fringe: 29 %

Fringe includes: X Social Security; X Unemployment ; X Health Insurance; X Retirement

Position Title: Planner III/ GIS manager; Grade/Step: 11/16; % of time on project: 18% for 12 months

Annual Salary Amount: \$ 40080; Fringe: 56 %

Fringe includes: X Social Security; X Unemployment ; X Health Insurance; X Retirement

Position Title: Planner II; Grade/Step: 10/1; % of time on project: 10% for 12 months

Annual Salary Amount: \$ 57314; Fringe: 41 %

Fringe includes: X Social Security; X Unemployment ; X Health Insurance; X Retirement