

Improving Watershed Planning Capacity: Middle Chester Partnership

Final Report

A Sustainable Implementation Strategy for the Middle Chester Watershed, Kent County, Maryland

Prepared by the **Environmental Finance Center** for the
Maryland Department of Natural Resources and the
Watershed Assistance Collaborative



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Table of Contents

Table of Contents.....	2
Introduction – The Development of the Middle Chester Partnership.....	3
Approach – The Group and Subcommittee Process.....	4
Agricultural Program.....	5
Cover Crops.....	5
Manure Storage.....	6
Advanced Nutrient Management.....	6
Switchgrass.....	7
Septic Program.....	8
Restoration Program.....	11
Urban Restoration.....	11
Marsh Restoration.....	12
Agricultural Wetland Restoration.....	12
Future Funding Considerations.....	13
Next Steps.....	14
EFC Project Team.....	16
Appendix A – Full Proposal Budget.....	17
Appendix B – July 2008 Meeting Materials.....	18
Appendix C – April 2009 Meeting Materials.....	22
Appendix D – Subcommittee Membership.....	24
Appendix E – Subcommittee Calls Round One.....	25
Appendix F – May 2009 Meeting Materials.....	31
Appendix G – Subcommittee Calls Round Two.....	37
Appendix H – June 2009 Meeting Materials.....	43
Appendix I – Draft GreenSeeker™ Agreement.....	47
Appendix J – Septic Program Mailing Materials.....	49
Appendix K – Septic Contractors Operating in the Watershed.....	50
Appendix L – Contact Information for Key Middle Chester Partners.....	51

Introduction – The Development of the Middle Chester Partnership

When the availability of the Maryland Department of Natural Resources' Local Implementation Grants program (DNR LIG) was announced in 2008, several entities operating in the Chester River watershed expressed an interest in the opportunity to utilize the funding for collaborative projects that would restore and protect the watershed. An initial meeting of potential partners facilitated by the Environmental Finance Center at the University of Maryland (EFC) took place in July of 2008 to identify a focus, location, and projects that would make for a successful proposal to DNR.

The EFC assembled approximately a dozen stakeholders from local government agencies, educational entities, and nongovernmental organizations associated with the protection and restoration of the watershed and facilitated a half-day discussion of how best to coordinate efforts. The result was the prioritization of potential locations, consensus on potential on-the-ground projects, commitment to the roles of the partner organizations, and the establishment of a partnership that would serve as the basis for a proposal to the state for 2010 Trust funds.¹

After much debate, the partners agreed to focus on the Middle Chester watershed. Although categorized by DNR as a medium-priority watershed, the Middle Chester met DNR's requirement of an area 30,000 acres or less. More importantly, the Middle Chester offered the best current measurement data, an existing Watershed Restoration Action Strategy (WRAS), a reputation among local government and NGOs as the Chester's worst subwatershed, and the greatest opportunity to leverage other programs and initiatives.

Land use in the watershed is diverse, and the Middle Chester Partners were interested in developing a proposal that incorporated projects that would address a variety of community priorities. A collection of nutrient reducing agricultural, septic, and restoration projects were agreed upon and included in the proposal submitted to DNR in August 2008, at a cost of close to \$3 million for the three-year timeframe.

An initial assessment of the proposal indicated a level of engagement among partners that could be anticipated to have real and measureable impact on nutrient levels in the watershed if the included projects could be carried out effectively. To better capitalize on the strength of this partnership and further improve the likelihood of successful implementation, the review committee suggested more thoroughly detailing the proposed work plan.

In addition, the LIG process was not immune to the economic difficulties and budget shortfalls that plagued much of the nation. This resulted in significantly less year-one funding devoted to the program than originally anticipated, leaving the Middle Chester and other communities seeking funding to recraft their proposed projects to accommodate a year-one that funded at a fraction of what was expected.

To provide much needed assistance to these communities, and others, as they attempt to move forward with their watershed protection and restoration efforts, DNR established the Watershed Assistance Collaborative. Through this partnership, DNR, the Chesapeake Bay Trust and Maryland Sea Grant and their newly appointed Regional Watershed Restoration Specialist work to identify opportunities to improve local resource protection capacity and develop sustainable implementation strategies for doing so.

¹ A list of participants and meeting notes for the July 2008 meeting can be found in Appendix B of this document.

The EFC is one of nine university-based centers located across the country with the mission of helping communities develop sustainable strategies for implementing natural resource protection efforts. Because the EFC is a non-advocacy organization promoting efficiency and sustainability, it seemed the most appropriate partner to facilitate the type of short- and long-term planning necessary to enable the Middle Chester Partners to maintain the successful launch of the majority of their proposed projects despite the funding limitations.

Approach – The Group and Subcommittee Process

The EFC's goal in this effort was to assist the Middle Chester Partners in better detailing the tasks, anticipated outcomes and costs associated with collection of proposed LIG projects to develop a more formal implementation and financing strategy. Having a clearly defined strategy to guide implementation efforts will improve efficiencies, address potential barriers to implementation, and maximize the return on the investments made in the watershed.

This process began with an initial meeting with key program partners and DNR on April 20, 2009 at the Kent County Planning and Zoning Offices. The purpose of this meeting was to provide a status update to key partners in the LIG proposal submitted for the Middle Chester watershed, discuss the impact of budgetary restraints, and identify necessary next steps to move the projects in the proposal forward.²

Upon discovering that funding would be made available to the Middle Chester Partners, just at a significantly reduced rate, there was a good deal of debate as to whether spreading a little money over a number of projects to demonstrate overall progress or investing all of the funds into one showcase project would be the best approach. Overall, the group agreed that a meeting of the full partnership was necessary to have a level of participation appropriate for further prioritizing and rescaling activities.

In addition, this group agreed that separate subcommittees composed of the partners appropriate to specific projects would help further the fleshing out of implementation activities while requiring a more manageable time commitment from program partners. The EFC established and managed three subcommittees – one focused on agricultural projects, one on septic activities, and one on restoration efforts.³ Each of the three subcommittees participated in a conference call in early May to prioritize proposed activities and identify project gaps and needed resources prior to a full group meeting.⁴

The EFC convened a meeting of the full group of the Middle Chester Partnership to further discuss the matter on May 20, 2009 on the campus of Washington College. Representatives of DNR explained that although \$25 million was expected for the Trust Fund in fiscal year 2010, this figure is likely to be closer to \$10 million, with approximately \$3.7 mil to go towards the LIG program. The Middle Chester is one of seven proposals to get funding. The top three proposals – the Magothy, the Little Patuxent, and Wheel Creek – will get full funding. **The Middle Chester can expect to receive \$280K for year one**, and DNR will continue to explore additional funding opportunities to supplement this.⁵

After lengthy discussion on each of the project areas, the scope and scale of each was refined to fit with the reduced year-one funding of approximately \$93,000 per project area. Subcommittee members

² A list of participants and notes for the April 2009 meeting can be found in Appendix C of this document.

³ A list of each subcommittee and its members can be found in Appendix D of this document.

⁴ Notes from each of the initial subcommittee calls can be found in Appendix E of this document.

⁵ A list of participants and notes for the May 2009 meeting can be found in Appendix F of this document.

identified remaining information gaps to be addressed to solidify project area work plans and budgets and agreed to a second round of subcommittee conference calls in the weeks to follow.

The second round of subcommittee calls took place in early June. These calls were intended to fill any remaining information gaps and finalize the details of each project area in terms of year one activities, timelines, budgets, and longer-term plans for presentation at the final full group meeting.⁶

The final meeting of the full group of the Middle Chester Partnership took place on June 18, 2009, again on the campus of Washington College. This meeting provided an opportunity to ensure full-group consensus on the details of each project area's proposed work plan. It was also a chance to identify and prioritize the activities that merit attention should additional funding become available.⁷

Although this finalized the majority of the year-one work plan, some limited follow up on specific aspects of project area activities was conducted by the EFC in the weeks following the meeting. The final task to be completed as a part of this effort was for the EFC to compile the information gathered and decisions made in the course of these meetings into a final report that could serve as a guide for the Middle Chester Partnership as they move these efforts forward. The resulting short- and long-term strategies and expected expenses for each project area follow.

The full cost for year one projects totals \$330,500. A wish list includes potential add-on year one expenses totaling an additional \$131,000. A budget for the full year one project is included in the appendices of this document.

Agricultural Program

The original proposal to the LIG program included agricultural projects in four focus areas: cover crops, switchgrass, adaptive nutrient management, and manure management. The Agriculture Subcommittee included representatives from Kent County Soil Conservation, the Chester River Association (CRA), the Maryland Department of Agriculture (MDA), Maryland Sea Grant Extension, and the Hughes Center for Agro-Ecology. Additional research, expert opinion, and subcommittee discussion were used to prioritize the proposed projects, as well as establish short- and long-term implementation strategies. The following outlines these.

Cover Crops

At the suggestion of the Agriculture Subcommittee, the Middle Chester Partners chose to suspend inclusion of the originally proposed cover crop project which would have paid an additional premium to farmers planting cover crops in the Middle Chester watershed. MDA has ample cover crop funding available and has switched to a tiered payment system, offering higher pay-outs for participants meeting certain criteria including optimal planting date, crop choice, and watershed

Middle Chester Agricultural Projects	
Year One Projects	
•	Two advanced nutrient management pilot sites
•	Expand switchgrass rentals to include 200 additional acres
Year One Budget	
•	GreenSeeker – \$87,000
•	Switchgrass – \$68,000
	Total – \$155,000

⁶ Notes from the second round of subcommittee calls can be found in Appendix G of this document.

⁷ A list of participants and notes from the June 2009 meeting can be found in Appendix H of this document.

location. Although there are concerns regarding the level of equity achievable for Middle Chester farmers due to the watershed's "medium priority" status, the Middle Chester Partners agreed to table this concept for year one and revisit in year two pending any adjustments to priority area mapping.

Manure Storage

The original proposal to the LIG program included a manure storage program that would provide up to ten manure storage sheds to Middle Chester farmers. The intent of this project was to address the expanding practice of importing chicken manure from the Delmarva as a grain farm fertilizer and stockpiling it in open fields, often near streams, for extended periods of time. Although there are existing cost-share programs accessible to livestock farmers, these programs are not available to grain farmers. However, when cost estimates for permanent storage facilities came in at nearly four times the anticipated cost, the Middle Chester Partners chose to revisit this potential project in year two when some of the on-going research might indicate the extent to which nutrients could be reduced and, in turn, if the investment is worthwhile.

Advanced Nutrient Management

The proposed advanced nutrient management project involved the use of an innovative precision farming technology, GreenSeeker™.⁸ This variable rate nutrient application and mapping system can be mounted on existing field equipment to assess the level of nitrogen available in soils and manage spray applications accordingly, thus ensuring nitrogen is applied only in areas where there are deficits, and only to the extent necessary.

Programmatic details: In what would essentially be the first field-scale implementation of this type of technology within the Maryland farming community, LIG funds will be used to purchase two GreenSeeker™ mechanisms to pilot the technology in the Middle Chester watershed. The University of Maryland has agreed to provide consultation to farmers on appropriate implementation of the technology and quantify changes in nutrient use efficiency. The resulting peer to peer extension is expected to be a particularly effective way to expand the use of this technology throughout the Middle Chester farm community.

Selection process and criteria: An initial introduction to the technology was made during a watershed-wide open event hosted by the CRA to gauge interest in the technology. As a result, two farmers have expressed an interest in piloting the technology in the Middle Chester. Due to their willingness to commit to a three-year trial of the technology, including accepting responsibility for the maintenance and upkeep of the equipment, these farmers have been selected for enrollment in this project.⁹

Partner Roles: CRA has served as lead partner on the implementation of the GreenSeeker™ project to date, responsible for the announcement of the opportunity and recruitment of farmers. The University of Maryland, specifically Dr. Josh McGrath of the Environmental Science and Technology program, has committed to a supporting role providing technical assistance to the participating farmers and for testing to demonstrate the extent of nutrient reduction. The participating farmers will be responsible for equipment maintenance and repair.

⁸ More information on GreenSeeker is available at www.ntechindustries.com/greenseeker-home.html.

⁹ A sample participation agreement can be found in Appendix I of this document.

MDA is coordinating the research that will come out of this effort. Participating farmers will need to sign an MOU with the agency obligating them to participate in the study. To improve the efficiency of how the funds for this project flow, it would seem appropriate to perform an interagency transfer of the funds to MDA for dispersal for equipment purchase and to the University for their technical assistance and testing efforts, rather than have these funds flow through several local level partners.

Budget – \$87,000: The \$87,000 allocated for year-one of this program includes \$45,000 for the purchase of two GreenSeeker™ units, as well as \$42,000 for associated testing (\$32,000) and technical assistance (\$10,000) to be conducted by the University of Maryland.

Long-term considerations: Future year expenses are expected to be limited to the testing and technical assistance to be conducted by the University of Maryland as no additional equipment is to be purchased and all operations and maintenance costs are the responsibility of the farmer.

Switchgrass

Switchgrass is grass native to Maryland, and its deep roots make it highly effective in absorbing nutrients. The Hughes Center for Agro-Ecology and CRA have successfully partnered on a project that pays rental fees to farmers for planting switchgrass. Demand for the program has far exceeded expectations, and the Middle Chester Partners proposed expanding this effort through the LIG program.

Programmatic details: The proposed switchgrass project will be modeled after the existing CRA/Hughes Center project whereby participating farmers are paid rental fees of \$200 per acre to plant switchgrass. The goal is to expand the total number of acres planted by an additional 200 acres.

Selection process and criteria: A Middle Chester-wide announcement of the availability of this program will be made during annual farmer-targeted events expected to be hosted by CRA this winter. CRA has hosted similar events in past years and has had high levels of farmer participation, which has been attributed to effective marketing as well as timing the offering when little field work is required. In addition, announcing the program's availability in January allows ample time for spring planting planning to take place.

CRA will collect information from interested farmers. Participants will be selected from interested respondents based on the appropriateness of the site(s), the opportunity to incorporate the plantings as buffers, and the farmer's willingness to commit to the program for the full three years.

Partner Roles: CRA is the primary partner for the Switchgrass project, responsible for informing farmers in the Middle Chester of the opportunity, selecting the most appropriate candidates, and coordinating planting activities. CRA will also work with Washington College and other entities to identify markets for the biomass end-product.

Budget – \$68,000: The year one budget for the switchgrass effort is expected to be \$68,000. This includes \$40,000 in rental fees (\$200 per acre x 200 acres) plus an additional \$28,000 to cover costs associated with planting, spraying, and other maintenance activities.

Long-term considerations: There are no additional planting or maintenance requirements anticipated beyond year one; future year expenses are expected to be limited to the \$40,000 in rental fees.

Perhaps the most innovative aspect of this project is the potential to leverage the environmental benefits of switchgrass even further by creating an end-market for the crop. A five year study at the University of Nebraska indicated that in addition to producing five times the energy required to grow, harvest and process switchgrass, the greenhouse gas emissions from the cellulosic ethanol made from switchgrass were 94% less than the green house gas emissions associated with gasoline production.¹⁰ In addition, the Chesapeake Bay Commission’s 2007 report “Biofuels and the Bay” suggested that switchgrass is the “next generation” for cellulose based ethanol.¹¹

Switchgrass takes three years to become fully harvestable. During year one, while the plants are becoming established, CRA and Middle Chester Partners plan to take steps to create an end-user market for the biomass grown.

Washington College presents one possible end-use opportunity. In 2007, Washington College was one of more than 300 institutions across the country to sign onto the American College & University Presidents Climate Commitment, an initiative aimed at reducing green house gas emissions and creating climate neutral campuses. Alternative fuel choices could play a significant role in meeting this commitment.

The College’s Center for the Environment & Society has been an active Middle Chester Partner and is investigating the prospect of using switchgrass as an alternative fuel source for providing heat to facilities. This would require the use of a specially designed boiler, and the Center is pursuing a number of funding opportunities for this purchase.

Additionally, switchgrass could provide an alternative heat source for the dozens of greenhouses located on Maryland’s eastern shore, as well. CRA is initiating discussions to identify and remove barriers to switchgrass greenhouse heating with David Ross, a University of Maryland professor and agricultural extension engineer who has done a great deal of work on various aspects of greenhouse environmental controls.

Septic Program

Approximately 60% of the homes in Kent County are on septic systems; a rate three times the state average. Conventional septic systems put nitrogen into the ground which ultimately impacts water quality. Failing systems, representing approximately 10% to 20% of the total systems in Kent County, place even more nitrogen into the ground. In fact, the Maryland Department of the Environment (MDE) estimates that as much as 10% of the Chester River’s nitrogen load can be attributed to septic.

Better technologies that reduce the amount of nitrogen leached from these systems are

Middle Chester Septic Projects	
Year One Projects	
<ul style="list-style-type: none">• Repair ten failing systems in an effort to qualify these for enrollment in the BRF upgrade program.	
Year One Budget	
<ul style="list-style-type: none">• Outreach and promotion – \$6,000• System repairs – \$100,000	
	Total – \$106,000

¹⁰ Schmer, M.R. et al. “Net Energy of Cellulosic Ethanol from Switchgrass.” *Proceedings of the National Academy of Sciences*. January 15, 2008. 105:2. 464-469.

¹¹ This publication can be found at www.chesbay.state.va.us/Publications/BiofuelsAndTheBay1.pdf.

available. In an effort to incorporate more of these upgraded systems into the watershed, the CRA has worked closely with Kent County Environmental Health to promote the state's Bay Restoration Fund program (BRF) which provides funding to upgrade a system to the best available technology. CRA has hosted outreach seminars in homes where a system upgrade has taken place, enabling community members to learn more about the program through the experience of their neighbors.

Although the BRF has proven to be a very effective upgrade program, the BRF does not fund the repair of existing conditions, a necessary first step for those who would like to upgrade a system that is currently failing. To address this, the Middle Chester Partners proposed to establish a fund to assist homeowners in repairing their failing systems in order to qualify for BRF funding for a system upgrade.

The Septics Subcommittee included representatives from Kent County Environmental Health, Kent County Water and Wastewater, Maryland Sea Grant Extension, CRA, and MDE. This group was tasked with developing recommendations for how best to move a localized system repair fund forward. The Middle Chester Partners reviewed these recommendations and developed consensus on the program as follows.

Programmatic details: This Middle Chester septic program will seek to provide repair funds to the owners of failing systems, with the intent of preparing these systems for inclusion in the BRF program. The Chesapeake Bay Nitrogen Reduction Act of 2009 now requires that any septic system installed or replaced in the Critical Areas employ best available nitrogen removal technology. This legislation also charged MDE with using the BRF to assist homeowners in this endeavor, clearly identifying the Critical Areas as a BRF priority.¹²

There are approximately 300 systems in the Middle Chester's Critical Areas. If a generous 20% failure rate is assumed, approximately 60 systems can be expected to be failing in the Critical Areas of the Middle Chester. The Middle Chester septic program will attempt to repair ten failing Critical Areas systems each year for the three years of the LIG funding, effectively halving the number of failing systems contributing to nutrient loading in the watershed.

Selection process and criteria: To leverage the State and proposed programs to the greatest extent possible, the Middle Chester Partner's program will borrow from the selection criteria used by MDE in administering the BRF. The BRF's first funding priority is to upgrade failing systems in the Critical Areas; second priority is to upgrade failures outside the Critical Areas; and third priority is non-failing upgrades in the Critical Areas.

Ideally, if timeline and funding were not a factor, a sanitary survey would be the best method of determining the extent to which systems are failing and/or contributing to nitrogen loading in the Middle Chester. In an effort to have as immediate an impact as possible, however, the Middle Chester Partners have chosen to draw on owner interest and commitment and contractor input to identify year-one participants.

A postcard announcement of the availability of the program will be mailed to all Middle Chester system owners located in the Critical Areas. The postcard has been designed by Maryland Sea Grant Extension and Kent County Environmental Health with review and additional input provided by the Middle Chester

¹² Fiscal and policy notes for Senate Bill 554 were accessed June 30, 2009 and are available at: mlis.state.md.us/2009rs/fnotes/bil_0004/sb0554.pdf

Partners.¹³ Kent County Planning and Zoning will produce and mail these postcards using addresses provided by MDE and reviewed by CRA. To avoid promoting a program that the public cannot access yet, the outreach process will be initiated once the LIG funds become available.

This postcard will direct interested potential participants to contact CRA or visit the CRA website for additional information. CRA will compile information on interested parties for review by a selection committee representing CRA, Kent County Environmental Health, Kent County Water and Waste Water, MDE, Maryland Sea Grant Extension, and local septic contractors. Potential participants will be ranked. The top ten will receive repairs, while the remaining system owners will be placed onto a wait-list for future year funding or as replacements should a system in the top ten become ineligible.

Kent County Environmental Health will facilitate the process of incorporating the repaired systems into the BRF program, although it may also be helpful for DNR to have an interagency conversation with MDE to ensure their inclusion. There are approximately a dozen contractors operating in and around the watershed with experience installing best available technology upgrades. These contractors could also provide repair services.¹⁴

In an effort to address the septic systems having the greatest potential to reduce nutrient loading, the ten participants are expected to be chosen based on the system's location in the Critical Areas, contractor input as to the extent to which a given system is failing, and the system owner's willingness to enroll in the BRF upgrade program following repairs.

The Middle Chester Partners agreed that system owner income should not be a qualifying factor for the program. However, low-income applicants will be assisted on a case-by-case basis, leveraging home improvement funding programs and other available mechanisms.

Partner Roles: Production and mailing of the outreach postcard will be the responsibility of Kent County Planning and Zoning. Compiling data on interested system owners for the selection process will be the responsibility of CRA. Kent County Environmental Health will have primary responsibility for connecting selected system owners with the Bay Restoration Fund to fully complete upgrades to the system.

Budget – \$106,000: Because repair expenses tend to be highly site specific, it is difficult to estimate the cost of repairing a system. Kent County Environmental Health provided a generic Middle Chester Septic Bid that suggested that repair costs could range from \$7,000 to \$17,000 based on a 1500 gallon, top-seam tank with a 240 ft drainfield, 5 ft to 15 ft deep with backfill and grass/seed included.¹⁵ For the purposes of year one, an estimate of \$10,000 per system was used. This per system estimate can be adjusted for years two and three based on year one experience.

In addition to the costs associated with the actual system repair, there are also promotional and outreach expenses related to the program. The cost to Kent County Planning and Zoning for the production and mailing of the promotional postcard is estimated to be \$1,000. CRA expects personnel expenses of up to \$5,000 associated with fielding inquires about the program and compiling potential participant data for review by the selection committee. Both CRA and Planning and Zoning will need to provide DNR with a more detailed budget for these activities for final costs to be determined.

¹³ A copy of the postcard and associated mailing materials can be found in Appendix J of this document.

¹⁴ A list of these contractors appears in Appendix K of this document.

¹⁵ It should be noted that this does not include the hauling of excess materials offsite.

Long-term considerations: Based on the year one estimate of \$10,000 per system, future years would be expected to cost \$100,000 annually. A review of the year one experience, however, will likely provide a better sense of repair costs and could be used to generate a more accurate budget for years two and three.

Outreach could generate interest beyond the ten systems slated for repair in year one. If this is the case, a wait-list of potential candidates could be developed and year two and year three participants could be pulled from this list. A list such as this might also make a strong argument for the Middle Chester to receive an increased level of funding in future years.

Alternatively, if deemed appropriate and should funding levels permit, a sanitary survey could be conducted, providing a more systemic approach to identifying year two and year three candidates. A final option for consideration could be to resume CRA's septic seminars. CRA has conducted nearly a dozen of these seminars to encourage responsible septic ownership and promote the BRF program, and they have met with a good deal of success. To date, 15 systems have been upgraded to the enhanced technology in Kent County, with over 30 additional systems on a wait-list as a direct result of the CRA seminars. Additional seminars focusing on the Middle Chester and the opportunity to leverage both the repair fund and the BRF could serve as another option for soliciting additional participants if additional funding becomes available.

Restoration Program

The Restoration Subcommittee included representatives from Kent County Planning and Zoning, Ducks Unlimited, Maryland Sea Grant, and Washington College. The original proposal to DNR included urban restoration in the Town of Chestertown, a 100-acre marsh restoration, and the installation of ten wetland restoration ponds on agricultural lands. Follow up subcommittee and full group discussion were used to prioritize the proposed projects, as well as establish short- and long-term implementation strategies. The following outlines these.

Urban Restoration

Radcliff Creek receives runoff from several large retail centers and residential developments in located in Chestertown. The urban restoration project proposed for the LIG focused on stream restoration projects to be conducted by Washington College's Center for the Environment & Society in coordination with the Town Of Chestertown to mitigate stormwater impacts to Radcliff Creek. Year one

activities included field assessment and design work to identify appropriate best management practices and their placement. Because these activities are not likely to provide demonstrative nutrient reduction impacts, the group chose to pursue leveraging Chesapeake Bay Trust Restoration Grant funds for year one efforts and will reconsider the appropriateness of this project for inclusion in the LIG in year two when actual on-the-ground implementation is expected to take place.

Middle Chester Restoration Projects

Year One Projects

- Two agricultural wetland restoration sites
- One hundred acre marsh restoration

Year One Budget

- Agricultural wetland sites – \$66,000
- Marsh site – \$3,500

Total – \$69,500

Marsh Restoration

The mouth of Morgan Creek is essentially choked with phragmites, a prolific and invasive common reed. This is of particular concern in the Middle Chester because this area serves as the last wetland buffer area on one of the most stressed tributaries in the watershed. Eradication was attempted several years ago, and although the project was initially successful, it ultimately failed due to a lack of follow through spraying.

Programmatic details: The Middle Chester Partners propose to eradicate 100 acres of phragmites located at the mouth of Morgan Creek in an effort to allow native marsh species to reestablish. This will allow the marsh to return to providing ecosystem services such as flood mitigation, flow control, nutrient uptake, and habitat in a manner more aligned with pre-disturbance conditions.

The County is currently in the process of obtaining approval agreements from adjacent property owners. Spraying of an initial 30 acres is expected to begin in September or October, and the County is looking into developing signage explaining the project for public education and promotion purposes.

Selection process and criteria: The mouth of Morgan Creek was selected due to the opportunity for the project to have significant positive impact on one of the most stressed tributaries in the watershed. This site has also shown a capacity to respond favorably to phragmites removal in the past. These factors indicate a high potential for success assuming follow up activities take place as needed in years two and three.

Partner Roles: Kent County will have the primary responsibility for implementing this project.

Budget – \$3,500: Year one expenses are expected to be approximately \$100 per acre with an initial site of 30 acres to be sprayed.

Long-term considerations: Past experience with this site would indicate that a second year of spraying will be necessary, so year two expenses are anticipated to also be \$3,500. Monitoring will determine if year three spraying or replanting efforts are required.

Agricultural Wetland Restoration

The original LIG proposal included provisions for the installation of ten wetland restoration ponds on agricultural lands over the course of the three year project period. The wetlands would be designed to reduce nutrient and sediment flow from these working lands in the watershed into the tributaries of the Chester River.

Programmatic details: The Middle Chester Partners propose to install two wetland restoration ponds on agricultural lands in year one.

Selection process and criteria: The Conservation Planners at CRA have extensive knowledge of and established relationships with the farming community in the Middle Chester. They will assist in identifying potential participants for this program. Ducks Unlimited will then determine which potential sites are most appropriate using the following criteria:

1. location within the Kent County portion of the Middle Chester watershed
2. site is not an existing jurisdictional (regulated) wetland
3. site is preferably a drained/ditched wetland in an agricultural setting, where water quality benefits could be realized
4. if site is not a drained wetland, then site is acceptable for wetland creation (clay soils, good landscape position)
5. minimal project costs (low berms and ditch plugs rather than extensive dams and excavation)
6. level of landowner interest in participating

Partner Roles: Ducks Unlimited will be the primary partner on this effort; they have agreed to be responsible for survey, design, and construction services. CRA has agreed to assist Ducks Unlimited in identifying potential participants based on their relationship with the Middle Chester’s farming community. Soil Conservation has offered to provide an assessment of participant’s potential benefits as compared to other existing funding programs to ensure maximum property owner benefit.

Budget – \$66,000: Because repair expenses tend to be highly site specific, it is difficult to estimate the exact costs associated with these installations. Primary partner Ducks Unlimited has extensive experience with these projects and suggests \$33,000 per site as a rough estimate. Based on this, agricultural wetland restoration projects are anticipated to cost \$66,000 for year one.

Long-term considerations: The experience of year one will provide a number of lessons learned that will be valuable as planning for years two and three takes place and budget estimations are made. In addition, partners may want to consider how the Middle Chester funds could work in coordination with existing federal programs perhaps fulfilling cost-share requirements and further leveraging the LIG dollars invested.

Future Funding Considerations

The Middle Chester Partners are hopeful that additional resources may become available in FY10, and they have developed a list of funding priorities designed to supplement, enhance, or further ensure the success of the proposed projects.

Agriculture: First, it has been suggested that a second spraying during the switchgrass effort could improve the chances for success. This has been estimated to cost \$6,000.

In addition, because of the innovative nature of the GreenSeeker™ and the potential this technology poses for moving Bay-wide nutrient reductions forward, the group would like to make certain that this project can continue into year two regardless of future year funding levels. The Middle Chester Partners would like to set aside an additional \$45,000 to cover the cost of technical assistance and testing for the adaptive nutrient management project.

Middle Chester Wish List	
Agriculture – \$51,000	
Septics – \$70,000	
Monitoring – \$10,000	
	Total – \$131,000

Septics: An estimated repair cost of \$10,000 per system was used in calculating the budget for the septic project. However, Kent County Environmental Health has indicated that these could cost as much as \$17,000 each to repair. If this is the case, then the septic budget will be short \$7,000 per system and the goal of repairing ten systems in year one will not be met. The Middle Chester Partners would like to set aside an additional \$70,000 to cover the potential costs associated with systems whose repair costs come in higher than the \$10,000 estimate. If no system comes in higher than the \$10,000 estimate, these funds could then be used to repair additional systems above and beyond the proposed ten.

Monitoring: The goal of the LIG program is to reduce the level of nutrients entering the Chesapeake and Atlantic Coastal Bays. Extensive monitoring is key to determining the extent to which the proposed projects are accomplishing this goal. The Middle Chester Partners would like to invest an additional \$10,000 in the Chester Testers program to expand number and capacity of the testing sites. This would allow for approximately 20 additional sites.

Next Steps

The proposed projects for improving water quality in the Middle Chester have been significantly strengthened through the work and dedication of the Partners over the past several months. There are a number of overarching suggestions for maintaining this momentum and continuing to move the efforts of the Middle Chester Partners forward:

- Capitalize on the availability of the newly hired Regional Watershed Restoration Specialist assigned to this region to maintain progress, as well as coordinate implementation of these and future projects the partners may undertake.
- Consider Watershed Assistance Grants via the Chesapeake Bay Trust for future planning or design projects to the extent appropriate.
- Continue to pursue and leverage both public and private funding avenues as the opportunity arises.
- Seek additional partners to increase capacity in the watershed as needed.

In addition, although scope of the projects and partner roles included in the original proposal to the LIG program have been better defined over the course of the past several months, there are still a number of steps that remain to be taken for these efforts to be successful in a way that maximizes the return on the investment to be made in this watershed.

Agricultural projects: For the **switchgrass** project, the Middle Chester Partners, and CRA in particular, will need to take steps to ensure that the winter announcement of the program to the farming community goes as planned. CRA will also need to establish a method for collecting relevant information for interested farmers and identify who will review these applications and, based on the criteria agreed to by the partners, select participants. In addition, CRA and partners will need to determine how best to pursue markets for the resulting biomass.

For the **advanced nutrient management** project, an initial meeting including MDA, the participating farmers and representatives from the UMD technical assistance and testing personnel would provide an opportunity to review the MOU and explain the procedures and requirements of the program and

associated technical assistance. It might also be beneficial to identify opportunities for the participating farmers to share their experience with this technology with other farmers in the watershed.

Although both **manure shed and cover crop** activities have been shelved for year one, the Middle Chester Partners may want to revisit the potential for the projects. If existing programs do not benefit the watershed to the extent desired, additional future funds are available, and the available science indicates significant nutrient reductions can be expected, the partners may want to reconsider these programs.

Septics: As the process of producing the outreach post cards and preparing them for mailing takes place, the partners will want to establish exactly what information will need to be collected from interested parties in order for the selection committee to have adequate and consistent information to base their decisions on. A meeting with relevant contractors to inform them of how the program is intended to work and identify the best way to facilitate putting successful applicants in touch with appropriate service providers is likely necessary as well.

In addition, the Middle Chester Partners may want to pursue working with MDE to coordinate the allocation of additional BRF dollars to the watershed to increase the leveraging capacity of the proposed repair program.

Restoration: As more information becomes available regarding future year funding, Washington College, Chestertown and other relevant partners will want to determine the extent to which they will want to pursue LIG funds for **urban restoration** projects.

For the **wetland restoration** projects, once the Conservation Planners at CRA are able to provide Ducks Unlimited with a list of potential projects and Soil Conservation is able to provide as to the extent of landowner benefits, Ducks Unlimited will need to select sites based on the criteria listed previously in this document. Based on year one progress and experience, the partners will need to determine if an outreach and competitive application process is necessary for year two and three.

In addition, the Middle Chester Partners will want to consider the extent to which other funding sources specific to restoration projects, such as the Chesapeake Bay Trust's Restoration Grant program, can be leveraged.

EFC Project Team

Jennifer Cotting, Program Manager – Jennifer Cotting joined the EFC at the University of Maryland in 2004 to manage an EPA funded program designed to help communities and organizations in Region 3 overcome barriers to implementing and financing their watershed protection efforts. She now a senior Project Manager coordinating a number of the EFC's core programs with a particular focus on urban greening, tree canopy, and green infrastructure. She is the EFC's representative to the Community of Practice, as well as the Source Water Collaborative. Prior to joining the EFC, Ms. Cotting worked as an independent consultant developing and implementing environmentally based education and outreach programs for nonprofit organizations and government agencies. She received her M.S. in Sustainable Development and Conservation Biology from the University of Maryland and her B.A. in Communications from Marymount University. Ms. Cotting is also co-editor of *Urban Wildlife News*, the biannual newsletter of the Urban Wildlife Working Group of The Wildlife Society.

Joanne Throwe, Director – Hired in 2005 as the EFC's Agricultural Program Leader, Joanne Throwe became Assistant Director in 2007, was recently named to the position of Associate Director in 2008, and became Director of the EFC in the summer of 2009. In addition, she completed an 18-month assignment working with USDA/CSREES as shared-faculty to assist in the coordination of special agriculture projects. Ms. Throwe works with communities in the Mid-Atlantic region implementing innovative financing solutions for environmental protection. Her work experience includes extensive knowledge about agriculture, green infrastructure, biofuels, ecosystem services and solid waste management. She assisted with developing a "Women in Agriculture" Symposium for the University of Maryland, a national conference for USDA on "Water Reuse Applications in Agriculture" and a Sustainable Infrastructure for Water and Wastewater conference for EPA Region 3 and Region 4. Ms. Throwe currently participates in several committees, including Mid-Atlantic Water Quality Advisory Committee for Region 3; USDA Ecosystem Services Group; and the Shenandoah Valley Waste Solutions Forum. Prior to joining the EFC, Ms. Throwe spent several years as a Development Resource Specialist at USDA's Foreign Agriculture Service and two years as an Agriculture Extension Agent for Peace Corps in the South Pacific. She holds a M.A. in Public Policy and Private Enterprise from the University of Maryland. She also received intensive agriculture training from the Hawaii Loa College and the East West Center in Hawaii.

Appendix A – Full Proposal Budget

Middle Chester Partnership Year-One Budget

August 1, 2009

Ag Projects

switchgrass	
rental	\$40,000
planting and maintenance	\$28,000
switchgrass total	\$68,000
precision farming	
equipment	\$45,000
testing	\$10,000
technical assistance	\$32,000
precision farming total	\$87,000

Ag Total **\$155,000**

Septics Project

system repairs	\$100,000
outreach and promotion	\$6,000

Septics Total **\$106,000**

Restoration Projects

wetlands	\$66,000
phragmites	\$3,500
urban projects	\$0

Restoration Total **\$69,500**

Grand Total **\$330,500**

Wish List

second switchgrass spraying	\$6,000
year-two tech asst for prec. farming	\$45,000
additional septic repairs	\$70,000
expand Chester Testers	\$10,000

Wish List Total **\$131,000**

Appendix B – July 2008 Meeting Materials

**** PLEASE NOTE THIS IS OFFERED ONLY AS A BACKGROUND DOCUMENT AND **
DOES NOT REFLECT THE FINALIZED FRAMEWORK FOR MOVING FORWARD**

Chester-Sassafras 2010 Trust Fund Working Session

facilitated by the

Environmental Finance Center, University of Maryland and

hosted by the

Center for the Environment & Society

Washington College – Custom House

10:30 am to 1:00 pm

July 25, 2008

In Attendance:

Chris Aadland, Tributary Strategies Program, Maryland Department of Natural Resources
Wayne Bell, Senior Associate, Washington College Center for the Environmental & Society
John Beskid, Department of Health & Mental Hygiene, Director of Environmental Health, Kent County
Jennifer Cotting, Program Manager, Environmental Finance Center, University of Maryland
Jennifer Dindinger, Communications/Outreach Coordinator, Center for Agro-Ecology
JoAnn Fairchild, Program Manager, Washington College Center for the Environment & Society
Kascie Herron, Sassafras River Keeper
Kim Kohl, Chester River Association
Kirk Mantay, Ducks Unlimited
Nancy Metcalf, NRCS/Kent County Soil Conservation District
Michael Moore, Board President, Chester River Association
Amy Moredock, Kent County Planning and Zoning
Ed Neilson, Chester River Association Board
Nancy Nunn, Development Coordinator, Center for Agro-Ecology
Gail Owings, Kent County Planning and Zoning
Beth Ostrander, Intern, Chester River Association
Bob Parks, Executive Director, Chester River Association
Jennifer Raulin, Chesapeake Bay & Coastal Programs, Maryland Department of Natural Resources
John Seidel, Director, Washington College Center for the Environment & Society
Joanne Throwe, Associate Director, Environmental Finance Center, University of Maryland
John Vail, Director, Sassafras River Association
Ellyn Vail, Programs Manager, Sassafras River Association
Mark Wiest, Washington College Center for the Environment & Society
Terry Willis, Chair, Upper Eastern Shore Tributary Team

The purpose of this meeting was to assist community representatives and stakeholders in reaching consensus on the projects, location, and roles of committed partners to develop a strong proposal to the State's 2010 Trust Fund.

Overall Needs

- **Potential Projects**
 - Realistic
 - Nonpoint source
 - Meet grant criteria – MEASURABLE
- **Location**
- **Implementation Logistics**
 - Potential Partners and their roles
 - Reimbursable – who fronts the money
- **Resources to be leveraged**
 - Cover crop program
 - MDE 2010 funds
 - Targeted watershed grant

Project Ideas

- Harvestable buffers – ex: switchgrass-to-energy
- Septic amnesty program – funds for outreach on inspections and supplemental \$\$ for upgrading units
- Practices/structure that address eroding woodland gullies
- Nutrient management
- Alternative income opportunities for ecosystem services such as carbon sequestration, water quality, etc.

In general with regards to projects:

Consider toolbox style presentation of options

Must provide the economic opportunities, particularly for farmers

Need for global vision, not piecemeal implementation

Location

Requirements/Preferences

- 30,000 acres or less
- No effluent impact
- Limited tidal impact
- monitoring potential – perhaps on farm/parcel monitoring

Potential sites

- Morgan Creek – 0 votes
- Langford Creek – 1 vote
- Middle Chester – 7 votes

Middle Chester selected based on the advantage of an existing WRAS, existing baseline data, and what is believed to be a portion of the watershed which qualifies as high priority. In addition, the Kent County portion of the Middle Chester is under 30,000 acres.

Project Partners

Chester River Association

- Lead on proposal
- Input from Ag Committee

Sassafras River Association

- General support and assistance

Washington College

- Grant writing/ proposal development assistance
- Grant administration assistance – will follow up with County re: reimbursement issue
- Mapping/GIS resources
- Assistance coordinating with Chestertown and MDE on urban BMPs

Ducks Unlimited

- Fiscal resources for relevant habitats
- Engineering and surveying assistance

Department of Natural Resources

- Technical services
- Baseline/monitoring assistance
- Trib Team letter of support
- Proposal feedback

Kent County Soil Conservation District

- Outreach assistance
- Survey assistance
- Technical assistance

Center for Agro-Ecology

- Assistance to be determined

Kent County Planning and Zoning (pending Council approval)

Others to Get On-Board

- Farm Bureau
- Farming Community
- Extension Office

Additional Details

Budget

- Dollar amounts to be determined as proposal is developed
- Chester River Association will develop proposal budget in coordination with relevant partners
- Ducks Unlimited can assist with cost-share for relevant wetlands projects
- Washington College/County can assist with grant administration

Monitoring

- Potential to use Corsica model
- TMDL modeling process may be useful

Gaps

- Specific project details
- Farmer involvement

Appendix C – April 2009 Meeting Materials

LIG Debrief for Middle Chester Proposal
facilitated by the
Environmental Finance Center, University of Maryland
Kent County Planning and Zoning Offices
10:00 am to noon
April 20, 2009

In Attendance:

Carolyn Brinkley, Administrative Assistant, Kent County Planning and Zoning
Jennifer Cotting, Program Manager, Environmental Finance Center, University of Maryland
Carrie Decker, Chesapeake Bay and Coastal Programs, Department of Natural Resources
Jennifer de Mooy, Targeted Watershed Coordinator, Chester River Association
Jennifer Dindinger, Regional Watershed Restoration Specialist, Maryland Sea Grant
Amy Moredock, Environmental Planner, Kent County Planning and Zoning
Gail Owings, Director, Kent County Planning and Zoning
Bob Parks, Executive Director, Chester River Association
Jennifer Raulin, Chesapeake Bay and Coastal Programs, Department of Natural Resources
Joanne Throwe, Associate Director, Environmental Finance Center, University of Maryland
Mark Wiest, Project Coordinator, Washington College's Center for the Environment and Society

The purpose of this meeting was to provide a status update to key partners in the LIG proposal submitted for the Middle Chester watershed, discuss the impact of budgetary restraints, and identify necessary next steps to move the projects in the proposal forward.

The Watershed Assistance Collaborative

Carrie Decker of the Chesapeake Bay and Coastal Program at Maryland's Department of Natural Resources (DNR) explained the concept behind the establishment of the Watershed Assistance Collaborative (WAC). This is a joint effort of DNR, Maryland Sea Grant, the Chesapeake Bay Trust, and the Environmental Finance Center at the University of Maryland (EFC) designed to provide support and technical assistance to the watershed communities in the region, particularly those who submitted proposals to DNR's Local Implementation Grants program last summer.

Assistance is currently being provided to the Sassafras River community. They are currently working on their watershed plan, and now the WAC is moving forward with helping LIG communities in moving their proposals forward.

Status of the Chesapeake and Atlantic Coastal Bays Trust Fund

Jenn Raulin, also of the Chesapeake Bay and Coastal Program, explained that the Trust Fund was not funded at the expected levels. Of the \$9.6 million allocated for FY 09, \$340,000 went to the LIG program and will be dispersed to the Little Patuxent watershed. Although \$25 million was anticipated for FY 10, this will actually be around \$10 million, and although the majority of the cuts are expected to be taken by MDA, the actual breakdown of how these funds will be split among the agencies has not yet been determined (MDA, MDE, DNR).

In light of this, DNR is still hopeful to fund all seven watersheds that merited funding, likely in the neighborhood of \$100,000 to \$300,000. In the interim, DNR, in partnership with the other WAC entities, is looking for ways to strengthen the existing LIG proposals to prove funding worthiness, as well as attempting to identify alternative sources of funding for these projects.

Although some felt this news left the partners with little option but to start over at square one, the group reviewed the various projects described in the proposal in an attempt to get a sense of which projects might provide the greatest return on investment and might be higher priority. **There was also a good deal of debate as to whether spreading a little money over a number of projects to demonstrate overall progress or investing all of the funds into one showcase project would be the best approach.**

A number of the participants suggested looking for one pilot site where a number of the proposed projects could be rolled out in an attempt to have a demonstration site that engages stakeholders and builds momentum for expanded implementation as future resources become available. The group felt that Morgan Creek was one potential location for this type of “poster child” site. There were some concerns, though, that there may be farmers that do not want this type of exposure.

Agricultural Projects

- Chester River Association (CRA) participants felt that a number of the ag projects carried the benefit of being easy to administer, including the switchgrass, cover crop, and precision farming projects.
- CRA said that the switchgrass program has been very popular with local farmers.
- DNR shared that the switchgrass and precision farming projects were viewed favorably by the review panel, while there were a number of concerns expressed over the manure stockpiling. It was also felt that the cover crop program might be suitably served by MDA’s tiered approach.

Septic Projects

- DNR expressed some concerns over the precedent that the septic program could present – that there might be a need to better coordinate the proposed project with similar existing projects.

Restoration Projects

- The review panel did not find any of these proposed projects to be controversial.
- All were interested in having better details on the extent of Ducks Unlimited’s, Washington College’s, and DNR’s match.
- CRA expressed that the biggest challenge as being getting farmers on board. Outreach will be critical to the project’s success.
- Wetlands: Debate over prioritizing Radcliff Creek – it has the advantage of being relatively ready to run, however, it might qualify for MDE Trust Funds for stormwater and may not be the best use of the LIG resources.
- Marsh: The marsh project is a political priority. It could be difficult to prove the nutrient benefits of implementation.

Next Steps

- DNR representatives will push to have exact dollar figures determined.
- EFC will schedule a meeting of the full group of partners.
- EFC will begin to establish working groups for AG, Septics, and Restoration.

Appendix D – Subcommittee Membership

Agriculture Subcommittee

Joe Blizzard	Kent County Soil Conservation District
Jennifer Dindinger	Maryland Sea Grant
Nancy Metcalf	NRCS/Kent County Soil Conservation District
Karen Miller	Kent County Soil Conservation District
Nancy Nunn	Center for Agro-Ecology
Bob Parks	Chester River Association
John Rhoderick	Maryland Department of Agriculture
Joanne Throwe	Environmental Finance Center, University of Maryland

Septics Subcommittee

John Beskid	Department of Health and Mental Hygiene
Jennifer Dindinger	Maryland Sea Grant
Josh Flatley	Maryland Department of the Environment
Amy Moredock	Kent County Planning and Zoning
Wayne Morris	Kent County Water and Wastewater
Bob Parks	Chester River Association
Karl Weed	Kent County Water and Wastewater

Restoration Subcommittee

Jennifer Dindinger	Maryland Sea Grant
Kirk Mantay	Ducks Unlimited
Kurt Dyroff	Ducks Unlimited
Gail Owings	Kent County Planning and Zoning
John Seidel	Washington College's Center for the Environment and Society

Appendix E – Subcommittee Calls Round One

Middle Chester Agricultural Subcommittee Call prepared by the **Environmental Finance Center, University of Maryland**

May 13, 2009
1:30 pm

Participants:

Joe Blizzard, Kent County Soil Conservation District
Jennifer Cotting, Program Manager, Environmental Finance Center, University of Maryland
Carrie Decker, Chesapeake Bay and Coastal Programs, Department of Natural Resources
Nancy Metcalf, Soil Conservationist, NRCS/Kent County Soil Conservation District
Nancy Nunn, Development Coordinator, Center for Agro-Ecology
Bob Parks, Executive Director, Chester River Association
John Rhoderick, Resource Conservation Operations, Maryland Department of Agriculture
Joanne Throwe, Associate Director, Environmental Finance Center, University of Maryland

The purpose of this call was to identify gaps in the workplan for proposed agricultural activities and take initial steps to address these needs in preparation for the meeting of the full group of Middle Chester partners scheduled for May 20, 2009.

Proposed Restoration Project Summary

The agricultural projects in the LIG proposal to DNR fall into four broad categories: a cover crops program, a switchgrass program, a precision farming program, and a manure stockpiling program. The following is a brief summary of the group's discussion of each program area.

Questions, Concerns, and Needs

Switchgrass

- This would build on a successful existing program that pays farmers for switchgrass installation – ideally as a buffer to increase water quality benefits. The project with UMD was for 100 acres, but demand to participate far exceeded this.
- Washington College currently uses the harvested grass as a heat sources. There is interest, if the program is expanded, in identifying additional markets for end product use. A school in central PA is using a pelletized form for heat. Eastern Shore greenhouses could use this as well as an alternative to propane.
- Because switchgrass takes three years to be fully marketable, there is a need for long-term planning.
- To be fully strategic and gain the greatest possible water quality benefits from switchgrass installations, need to establish criteria for participation in the program.

- In response to concerns that funding for future years might not be available, there was some discussion of the possibility of concentrating a larger portion of 2010 funding on this program and paying full program benefits up-front.
- Joanne indicated that there may also be a USDA program to be leveraged.

Precision Farming

- The systems under consideration are less expensive than originally expected. Units are \$22,500 rather than the \$45,000 anticipated.
- CRA has been working with the manufacturer to get a pilot program operating in Queen Anne's County.
- Development of a short list of potential farms in the Middle Chester will require coordination with Josh McGrath, John Hall, and/or Jenny Rhodes.

Manure Stockpiling

- John explained that MDA's key concern is that the science has not yet indicated whether this type of manure structure is worth the investment, and that this effort might be getting too far ahead of the research.
- Bob explained that farmers are trucking poultry litter into Kent County and this was an attempt to address resulting nutrient issues. Poultry farmers can get funding from other programs for these efforts, but grain farmers like those in Kent County do not have this option.
- Bob was comfortable tabling this program until year two or three when more research has been conducted.

Cover Crops

- John explained that MDA's new tiered payment system pays more for achieving certain criteria including planting date, crop choice, watershed location, etc and that this may supplant the need for the proposed program.
- Bob explained that because the Middle Chester was not in a high priority area farmers could not receive maximum funding and this was an attempt to correct that.
- There are not currently plans to alter the priority area mapping, but there was interest in the group in seeing the models re-run.
- The group agreed to table this concept for year one and revisit for year two to see if any alterations to the priority areas takes place.

Next Steps

- Bob will take the first stab at drafting switchgrass program description and criteria.
- Joanne and Bob will discuss USDA program off-line.
- John will put thoughts together on reaching appropriate farmers for the precision farming/adaptive nutrient management and pass on to Bob for additional input.

Middle Chester Septics Subcommittee Call
prepared by the
Environmental Finance Center, University of Maryland

May 7, 2009
9 am

Participants:

John Beskid, Director of Environmental Health, Kent County, Dept of Health & Mental Hygiene
Jennifer Cotting, Program Manager, Environmental Finance Center, University of Maryland
Jennifer de Mooy, Targeted Watershed Coordinator, Chester River Association
Jennifer Dindinger, Regional Watershed Restoration Specialist, Maryland Sea Grant
Amy Moredock, Environmental Planner, Kent County Planning and Zoning
Wayne Morris, Water/Wastewater Services Director, Kent County Water and Wastewater
Jennifer Raulin, Chesapeake Bay and Coastal Programs, Department of Natural Resources
Joanne Throwe, Associate Director, Environmental Finance Center, University of Maryland
Karl Weed, Water/Wastewater Services Deputy Director, Kent County Water and Wastewater

The purpose of this call was to identify gaps in the workplan for proposed septic activities and take initial steps to address these needs in preparation for the meeting of the full group of Middle Chester partners scheduled for May 20, 2009.

Proposed Septic Project Summary

The septic project included in the LIG proposal to DNR seeks to provide resources to assist system owners with failing systems achieve compliance, so they will qualify for the states upgrade program, thus leveraging Bay Restoration funds (BRF).

Questions, Concerns, and Needs

What is the impact of pending legislation? John Beskid mentioned a concern that pending Critical Areas legislation would concentrate BRF dollars in Critical Areas, which could significantly reduce the BRF funds coming to the Middle Chester since non-critical areas will be deemed lower priority. John and Jennifer de Mooy have a meeting scheduled with Jay Prager at MDE for May 12 to further discuss this and other septic issues.

How will funds be allocated? The LIG proposal states that 100 systems will be repaired, which would suggest as many as 30 systems in the first year, however at an estimated \$5,000 per system, this results in a \$150,000 total price, when funding for ALL projects may be as low as \$100,000 and \$300,000 at best. The group will need more accurate dollar amounts for both DNR funds available and the true cost of system upgrades in order to determine exactly how many system repairs will be feasible in year one.

How will program work, how will systems be identified? John mentioned that his office typically processes these types of applications; however, he does not have the staff available to do the field work. There were also questions as to how best to prioritize systems in the selection process. Selection criteria will need to be established, as well as a more targeted outreach program designed to reach these audiences. There will likely need to be a short-term solution, such as using soil types, income, etc

as determining factors while a formal sanitary survey can be planned and implemented for the long-term operation of the program.

How can other resources be appropriately leveraged? There are septic and/or home improvement funds available through a handful of programs, including the BRF, USDA programs, and home improvement funding programs. Again, a sanitary survey could be a useful long-term step towards ensuring these programs are coordinated to the greatest extent.

Is there an appropriate site where this program could be piloted? Establishing a pilot site would enable outreach to neighbors that could maximize the return on nutrient reductions. Wharton and Uriville Lake were mentioned as areas where there is likely a significant concentration of homes whose systems would be contributing to water quality issues. Morgan Neck was also mentioned, with concern however, that it might be considered to be outside the “Middle Chester.”

Next Steps

- John and Jennifer deM. Will report back to the group on the outcomes of their meeting with Jay Prager.
- Jennifer de M. will send maps to DNR, identify alternative locations, and consider how to adjust the existing outreach program to best fit the issues discussed here.
- Jenn R. will review the maps and investigate funding options for a sanitary survey.
- John will find more reliable cost estimates for the group to consider as implementation plans are clarified.
- Amy will begin a document that identifies subcommittee member roles, beginning with her department and will then forward this document to others in the group for the inclusion of their roles.

Middle Chester Restoration Subcommittee Call
prepared by the
Environmental Finance Center, University of Maryland

May 7, 2009
10 am

Participants:

Jennifer Cotting, Program Manager, Environmental Finance Center, University of Maryland

Kirk Mantay, Regional Biologist, Ducks Unlimited

Gail Owings, Director, Kent County Planning and Zoning

Jennifer Raulin, Chesapeake Bay and Coastal Programs, Department of Natural Resources

Joanne Throwe, Associate Director, Environmental Finance Center, University of Maryland

The purpose of this call was to identify gaps in the workplan for proposed restoration activities and take initial steps to address these needs in preparation for the meeting of the full group of Middle Chester partners scheduled for May 20, 2009.

Proposed Restoration Project Summary

The restoration projects in the LIG proposal to DNR include the installation of ten wetland restoration ponds on agricultural lands over the next three years along Morgan Creek and the upper portion of Radcliffe Creek to help address runoff issues on farms that do not qualify for the traditional ag program dollars. In addition, the LIG proposal included a 100 acre marsh restoration to combat phragmites at the mouth of Morgan Creek and urban stream projects in Chestertown to address runoff and other stormwater management issues.

Questions, Concerns, and Needs

What other resources can be leveraged? In addition to the assistance offered by Ducks Unlimited, Gail Owings indicated that Soil Conservation would be players in the implementation of resource protection efforts as well. She also mentioned the Waterfowl/Wildlife festival as an additional potential resource. Kirk Mantay added that Ducks has submitted a proposal for \$1 million US FWS grant some of which might also be appropriate leveraged.

Since Soil Conservation will likely play a significant role in the implementation of these projects, a representative should be on this subcommittee. Gail will contact appropriate individuals to consult prior to full group meeting on the 20th.

How much of the restoration work plan is feasible? Gail suggested that the range of potential funding levels for year one would not allow for the marsh restoration. However, doing some of the study work needed to conduct marsh restoration efforts in future years can be accomplished now with resources outside the LIG program.

In reference to timeline, Kirk said that the full process to completing a restoration wetland typically takes nine to twelve months. However, due to weather constraints, January through April are difficult months to conduct any work. Jenn Raulin with DNR mentioned that funds would become available July

1, 2009. Kirk suggested that Ducks might be able to frontload their match to get things going while waiting for July 1.

How will appropriate sites for implementation be selected? Kirk stated that Ducks knows of many landowners who have expressed an interest and are potential candidates for the wetland restoration ponds. A critical next step in the subcommittee's opinion is to determine the suitability of potential sites. The EFC will compile a list of suitable sites based on full group suggestions and will forward to this subcommittee for consideration. Until the specifics of the sites can be determined, it is difficult to estimate associated costs accurately.

What will the role of the project partners be? Kirk defined the role of Ducks to be their typical role, that is, to assist in: determining site suitability; wetland planning and design; coordinating with contractor and landowners as needed.

What about the urban projects? No one on the call was clear as to the College and Town's progress to date. An update from the College would be helpful.

Next Steps

- Jen C will survey the full group for restoration site suggestions.
- Gail will contact Soil Conservation regarding participating on this subcommittee who will work with Gail, Kirk, and others to create a short list of potential sites.
- Gail to check in with College contacts to assess progress on urban projects.

Appendix F – May 2009 Meeting Materials

Middle Chester Partners' Meeting Agenda prepared by the **Environmental Finance Center, University of Maryland**

100 Goldstein Hall

May 20, 2009

9 am

9:00 am – 9:15 am	Welcome and Introductions – Joanne Throwe, EFC
9:15 am – 9:30 am	DNR Update – Jenn Raulin, DNR
9:30 am – 9:45 am	EFC's role – Joanne Throwe, EFC
9:45 am – 10:05 am	Septics Subcommittee report out
10:05 am – 10:25 am	Restoration Subcommittee report out
10:25 am – 10:45 am	Ag Subcommittee report out
10:45 am – 10:55 am	Break
10:55 am – 11:45 am	Full group discussion to prioritize projects and identify information gaps
11:45 am – 12 noon	Next Steps

Middle Chester Partners' Meeting
notes prepared by the
Environmental Finance Center, University of Maryland

100 Goldstein Hall

May 20, 2009

9 am

In Attendance:

John Beskid, Kent County Health Department
Joe Blizzard, Kent Soil Conservation District
Jennifer Cotting, Environmental Finance Center
Jennifer Dindinger, Maryland Sea Grant Extension
Joshua Flatley, Maryland Department of the Environment
Nancy Metcalf, Kent County NRCS
Karen Miller, Kent Soil Conservation District
Amy Moredock, Kent County Planning and Zoning
Nancy Nunn, Center for Agro-Ecology
Gail Owings, Kent County Planning and Zoning
Bob Parks, Chester River Association
Jennifer Raulin, Maryland Department of Natural Resources
John Rhoderick, Maryland Department of Agriculture
Joanne Throwe, Environmental Finance Center
Ellyn Vail, Sassafras River Association
Karl Weed, Kent County Water and Wastewater Service
Mark Wiest, Washington College

Meeting Purpose

This meeting was designed to reconvene all of the Middle Chester Partners in person to discuss subcommittee progress in refining the scope and scale of projects outlined in the group's 2008 proposal to the Department of Natural Resource's Local Implementation Grant program (LIG). The goal of the meeting was to reach full group consensus on short- and long-term implementation plans for these projects.

LIG Program Update – Jenn Raulin, Maryland Department of Natural Resources

Although the Trust Fund program was slated to receive \$25 mil FY09, due to state budget shortfalls and fuel price impacts to the rental car and motor fuel taxes, funding was actually \$9.6 mil. DNR's LIG program received approximately \$340K, which was distributed to the highest ranking project proposal received, the Little Patuxent

For FY10, \$25mil was expected as well, however, this will likely be closer to \$10 mil again, with approximately \$3.7 mil to go towards the LIG program. The Middle Chester will be one of seven proposals to get funding. The top three proposals – the Magothy, the Little Patuxent, and Wheel Creek – will get full funding. **The Middle Chester can expect to receive \$280K for year one. In addition, because a number of MDE's stormwater projects qualified for stimulus funds, it is possible that the four watershed not currently slated for full funding could receive the resulting surplus – which could**

total as much as \$2 mil for these four watersheds. DNR hopes to have a final decision on this by the end of May.

The Role of the EFC – Joanne Throwe, Environmental Finance Center

The EFC is one of nine regional centers located at land grant colleges across the country. These centers were initially established by the EPA to help communities identify sustainable ways to pay for their resource protection priorities. The EFC has been asked as a neutral third-party, to assist the Middle Partners Help move forward and invest their LIG dollars in on-the-ground efforts as efficiently and effectively as possible. The EFC has focused this assistance on managing a subcommittee process that will address the needs of the three broad project categories of projects included in the LIG proposal.

In addition to the resources of the EFC, Jen Dindinger has a new role with Maryland Sea Grant Extension. She is the new Regional Watershed Restoration Specialist for the communities of the Eastern Shore. She is based at the Wye Center in Queenstown and is slated to assist three or four groups in their attempts to achieve 2010 or similar funding. She is designed to be a resource to community in finding funding, put together outreach programs, filling other capacity gaps, helping build partnerships and implementing on-the-ground projects.

Septics Subcommittee Report Out

John Beskid shared the details of his meeting with MDE May 12th. Kent County was originally slated to get their BRF dollars on July 1st, but this has been pushed back due to the Critical Areas (CA) law recently passed.¹⁶ With the new legislation, priority for funding is given to CAs, so Kent County expects less than originally anticipated.

Joshua Flatley from MDE explained that his shop is looking for ways to bring other funding into the County, but with the passing of the bill, beginning October 1st, BRF funding will be prioritized first to failing septic systems in the CA; second to failures elsewhere; and third to upgrades in CA. MDE is currently in the process of establishing prioritization schemes, and a possible sliding scale based on income, over the next several months so that by October 1st the agency can move straight to putting money on-the-ground.

John B recommended using an estimate of \$10K to repair a system, which would suggest an ability to do approximately ten properties. John B will look into getting better numbers.

How will the Middle Chester select where and how to invest septic program dollars? Bob Parks suggested choosing a place within the Middle Chester that qualifies as a CA, has a high likelihood of failing systems, and low-income residents. Morgan Neck had been initially suggested, but actually falls outside the Middle Chester.

John B suggested using an initial postcard mailing as a way to announce the availability of the program to be followed by targeted follow up based on contractor input. The language of the postcard will need to be carefully chosen so as not to panic system owners. John B said he can work with contractors to get appropriate input on potential properties and postcard language. Once failures are identified, the County and MDE pick up the process.

DNR expressed concerns that (a) those receiving repair dollars commit to following through with an upgrade, and (b) that those who participate in the County repair program will definitely qualify for the

¹⁶ Bill 554

state upgrade program. John B said that a one-page agreement could be used and that the County could help system owners through that process.

The general consensus was to use the criteria MDE anticipates using to align the likelihood of property owners qualifying for both programs. Ellyn Vail commented that this seemed a reasonable approach for year one while more concrete criteria for years two and three are established. Karl Weed pointed out that having additional interested system owners beyond the first ten on a wait-list would strengthen the case for future funding for the program. Gail Owings added that if there were extremely low-income owners in the final pool of ten, it is likely that the LIG dollars could be stretched further with community development home improvement funding.

Bob asked what type of impact this would have on the septic system seminars Chester River Association offers. Although these were initially thought to be the method for identifying interested system owners, based on the small number to be conducted in year one and the quick turn-around time involved, the post card seems more efficient. The seminars would be a valuable tool for consideration for years two and three.

It is difficult to identify exactly how long it could take to get ten systems repaired and upgraded. This varies on the specific property, the weather, the paperwork involved, etc. Some systems could take six to eight months, some could take less. It isn't easy to stagger implementation evenly over the timeframe.

DNR commented that the criteria suggested fits well with the Governor's two-year milestone framework, but cautioned that system owners be made clearly aware that this is a program with a limited life span and not a permanent program they can tap into five years from now.

The Septics Subcommittee will have a follow up conference call in approximately two weeks to determine progress and identify any remaining project gaps.

Restoration Subcommittee Report Out

Phragmites project – Although in the initial subcommittee call this project did not seem appropriate for year one, it turns out the County has actually already conducted year one spraying. Following up with a second year of spraying in LIG year-one seems an appropriate use of LIG funds. Total cost is estimated at \$2K.

Urieville Lake – The County received a letter from Senator Cardin regarding Urieville Lake. The site has been picked up for consideration for \$4 mil federal dollars if the County can find a \$1.4 mil match. DNR commented that Urieville is a priority for them as well and they might be able to find additional resources to assist. CBT's Restoration grant program is an option as well. Kirk Mantay mentioned that Fish America Foundation has an open rfp that could bring in an additional \$20K to \$50K that might be appropriate as well.

Soil Conservation and Kirk are both working to identify appropriate wetland sites. Kirk said that completing two for year one was feasible, assuming there are some other resources available to be leveraged. Kirk added that two three-acre sites would cost approximately \$17K each to complete.

As for timeline, because of the nature of these projects, the window of opportunity is July (because that is when the money becomes available) and December (when weather impacts make on-the-ground

work impossible). Because this is a short window for getting permits and on-the-ground work done, there was some discussion of using pending projects, perhaps ones that are already permitted. Soil Conservation commented that the pending projects are for temporary wetlands that would be drained from April through September and will not provide the same type of water quality benefit. DNR pointed out that this funding is intended to expand the capacity of communities not to fund existing projects.

Gail asked if addressing some of the woodland gullies would be an appropriate alternative. Kirk commented that Ducks Unlimited does not have existing funds to do this type of project, but that they are still qualified to do the work. DNR is comfortable with this idea particularly because the need was indicated in their WRAS. Also, because Urieville will be a long-term project, it might be good to balance that with some projects that would offer more immediate impacts.

Urban restoration projects – Washington College’s Radcliff Creek project with the town is at the preliminary site work stage which does not appear to be the best use of LIG funds. However, given the discussion of the need to have some quick turn-around year one projects, this may need to be reconsidered. The town’s participation may allow for expediting the permitting process. Mark Wiest will take this back to the College for further discussion.

Ag wetlands, gullies, and urban projects remain on the table for discussion over the next two weeks and final decisions will be made on the next subcommittee call. Soil Conservation and Kirk will continue to identify potential farms.

Agricultural Subcommittee Report Out

Cover crops – Because the proposed incentive does not appear to be strong enough to have real impact in year one, the concept will be revisited for years two and/or three.

Switchgrass – Bob has identified fourteen farmers interested in participating in the expanded switchgrass program. This could result in an additional 200 acres of switchgrass and is targeting properties where the grass would be used as buffers and to protect erodible soils. Year one should cost approximately \$65K, year two about \$45K. John Rhoderick suggested possibly focusing on precision farming (because of the longevity gained) while working to find a better market for the switchgrass end product.

Precision farming – The project has been refined to include two greenseekers at \$22.5K each. The University of Maryland initially offered to provide testing and technical assistance for approximately \$55K, but that was assuming six pieces of equipment. John R estimates that this cost should drop to approximately \$40K, but he will check and get better figures.

Nancy Metcalf asked what steps would be taken to ensure that the technology is distributed in a fair and equitable manner, as well as who would be the owner of said equipment. CRA had an initial seminar with the manufacturer open to the public; since that time only two to three farmers have expressed interest. Several in the group agreed that CRA ownership and the shared equipment concept would be complicated and significantly less effective than sole ownership. Since the full benefits of the Greenseeker technology will not be seen for close to three years, the full group supported the idea of CRA taking initial ownership which is then

passed along to the farmer if he demonstrates full commitment over the course of the first three years of use.

The units require custom installation, but could be in place in time for fall planting. Bob will refine details of who is interested and steps that would be taken in implementing project.

Manure Storage – Although this was originally slated to be postponed until year two, two farmers are eager to put manure sheds in place. One (or both) of these could be rolled into existing UMD research and nutrient reductions could be included in LIG outcomes. However, these studies focus on mobile piles, while the sites in the Middle Chester are stationary. The group agreed that permanent storage might be a good candidate project for potential additional monies. Bob will develop blurb on this – including acreage and other relevant measurable details.

Group Discussion on Allocation

If the anticipated \$280K is divided equally, \$93,300 is available for each project area. The price tag for Ag projects now stands at \$150K, Septic \$100K, and \$36K for Restoration projects. This is a total of \$286K. If additional funds should become available, the group felt that permanent manure sheds (2 @ \$25K each); woodland gully erosion restoration (SC to get cost estimates); and expanded Chester Tester/monitoring (\$440 to \$500 per additional site) would be the most appropriate uses of the funds.

Next Steps

Homework assignments should ideally be done by Friday, May 29th.

- John B agreed to get better septic repair cost estimates and to work with contractors on identifying potential properties and proper language for the outreach postcard.
- DNR will investigate potential additional funds for Urieville lake match.
- Mark will revisit the idea of urban projects as a year one endeavor with the College.
- Soil Conservation will continue to identify potential farms for wetlands projects and get cost estimates for the woodland gully projects.
- Kirk will continue to identify potential farms for wetlands projects.
- John R will get more solid figures for UMD testing/technical asst charges.
- Bob will coordinate with Jennifer Hicks regarding her role in the septic work. He will also develop some language regarding the manure shed program and refine details on the precision farming pilot.

The EFC will coordinate another round of subcommittee calls in two weeks.

The EFC will reconvene the full group in approximately one month.

Appendix G – Subcommittee Calls Round Two

Second Middle Chester Agricultural Subcommittee Call

prepared by the
Environmental Finance Center, University of Maryland

June 2, 2009
9:30 am

Participants:

Joe Blizzard, Kent County Soil Conservation District
Jennifer Cotting, Program Manager, Environmental Finance Center, University of Maryland
Carrie Decker, Chesapeake Bay and Coastal Programs, Department of Natural Resources
Jennifer Dindinger, Regional Watershed Restoration Specialist, Maryland Sea Grant Extension
Karen Miller, District Manager, Kent County Soil Conservation District
Nancy Nunn, Development Coordinator, Center for Agro-Ecology
Bob Parks, Executive Director, Chester River Association
Jennifer Raulin, Chesapeake Bay and Coastal Programs, Department of Natural Resources
John Rhoderick, Resource Conservation Operations, Maryland Department of Agriculture
Joanne Throwe, Associate Director, Environmental Finance Center, University of Maryland

The purpose of this call was to follow up on the group's progress on further developing the agricultural project concepts proposed for the Local Implementation Grant program, to identify any remaining gaps, and to discuss long-term planning needs.

Questions, Concerns, and Needs

Switchgrass

- Fourteen farmers have been identified. They range from five to twenty acres a piece for total acreage close to 200. Bob will forward list.
- The farmers who are interested have CA properties along Morgan Creek and the Chester River and are good candidates for buffer plantings.
- **Process:** A more formalized participation process will be identified asap.
- **Budget:** To be harvestable, it is best to do a second application of spray – a \$3K expense which raises the **bottom line for the switchgrass project to \$68K.**
- **Long-term:** Years two and three do not require replanting or extensive maintenance. Costs are expected to be \$40K annually for rentals fees.
- **To Do List:** **Bob** will send out a list of the farmers currently interested and the budget numbers. **Joanne** will look into the possibility of finding someone at extension who can commit to assisting with this project.

Precision Farming

- Josh McGrath and Frank Cole are committed to assisting with this project.

- John R is looking into the possibility of leveraging some federal dollars, but will not know the status until the fall.
- **Process:** A public meeting was held by the CRA and since that open meeting, two farmers have expressed a serious interest.
- **Budget:** The equipment remains at \$22.5K a piece. The technical assistance will run \$32K and the testing will run \$10K for a **grand total of \$87K for the precision farming project.**
- **Long-term:** ???
- **To Do List:** **Bob** will check with Hoover to get an estimate of the maintenance costs for years two and three to see if it is feasible to pass that cost onto the farmer (year one is likely covered by warranty). **John R** can pull a contract together based on other similar projects.

Manure Stockpiling – Poultry Waste Structures

- The two farmers interested in participating are NOT interested in temporary storage facilities and therefore are not good candidates to participate in the existing research project.
- Both are interested in permanent storage facilities, one will need to accommodate 800 acres at 3 tons per acre and the other 325 acres at 3 tons per acre.
- **Budget:** Originally these were estimated to cost \$25K each; however, if NRCS is to participate, then these structures must meet NRCS standards, which has been estimated at \$95K each. Concrete pads would be less expensive, but perhaps not necessary and berms and tarp might be more appropriate, although perhaps less appealing to the farmers. Given the broad range of costs suggested, Karen will look further into the details of these estimates.
- **Long-term:** Dependent on cost-estimates.
- **To Do List:** **Bob** will gauge the interest of the farmer's given the additional details discussed today. **Karen** will get more details on what is involved in the \$95K cost estimate and alternatives.

Next Step/Homework

- **Bob** will send out a list of the farmers currently interested in switchgrass and the budget numbers. He will also get year two and three cost estimates on GreenSeekers from Hoover and gauge the interest of the farmer's given the additional waste structure details discussed today.
- **Joanne** will look into the possibility of finding someone at extension who can commit to assisting with this project.
- **John R** will pull a GreenSeeker contract together based on other similar MDA projects.
- **Karen** will get more details on what is involved in the waste structure cost estimates and potential alternatives.

Second Septics Subcommittee Call Notes
prepared by the
Environmental Finance Center, University of Maryland

June 8, 2009
9:30 am

Participants:

John Beskid, Director of Environmental Health, Kent County, Dept of Health & Mental Hygiene
Jennifer Cotting, Program Manager, Environmental Finance Center, University of Maryland
Jennifer Dindinger, Regional Watershed Restoration Specialist, Maryland Sea Grant
Jennifer Raulin, Chesapeake Bay and Coastal Programs, Department of Natural Resources
Bob Parks, Director, Chester River Association
Joanne Throwe, Associate Director, Environmental Finance Center, University of Maryland
Karl Weed, Water/Wastewater Services Deputy Director, Kent County Water and Wastewater

Questions, Concerns, and Needs

Program Announcement (Postcard) – Because it is important to maintain the transparency of the proposed county septic repair program, the group will send out a postcard to system owners announcing the availability of the program. Contractor input will be used to do targeted follow up with systems owners with a high likelihood of failure. Ten applicants will be selected for year one repairs by the septic subcommittee. Remaining applicants will be ranked and wait-listed as potential year two and three candidates. This wait-list will make a strong case for continuing the program.

There are three steps to the postcard process: developing the mailing list, drafting the postcard and postcard production and mailing. A small amount of funds has been written into the grant for this outreach. It is believed that someone in Amy's office at planning may have an existing list we can use. The EFC will follow up with her. Jen D volunteered to draft initial language for the postcard and John B offered to review the language.

Assurances – The success of the county septic repair program being proposed will rely heavily on the program's linkage to and ability to leverage the state-level BRF program. There is still concern that a more formal linkage of these programs may be necessary to ensure both that county program participants commit to pursuing the state-level program and that the BRF program admit the county participants into the state-level program. Jenn R is scheduled to attend the BRF meeting Tuesday. The EFC will touch base with Josh Flatley at MDE to bring him up to speed on today's discussion and suggest he speak with Jenn R further on the issue at the BRF meeting.

Income factor – The group agreed that system owner income should not be a qualifying factor for the program. However, low-income applicants can be assisted on a case-by-case basis leveraging home improvement and other available mechanisms.

Long-term strategy – With 155 systems in the Middle Chester, doubling a generous failure rate estimate of 10% to 20%, one would expect approximately 30 systems to need repairs, so it is feasible that ten systems could be addressed each year of a three-year program. Future year applicants will come from

year one's wait-list, as well as from interested parties attending CRA outreach seminars that feature year one participants.

Next Steps/Homework

- **John B** will get better septic repair cost estimates, provide a list of the contractors that will assist in identifying potential properties, provide language for participant commitment, and review outreach postcard language.
- **Jen D** will begin draft of language for postcard. John B will provide feedback.
- **The EFC** will contact Josh Flatley at MDE about the need for assurances via an email that John B and Jenn R can use to nudge others at MDE. **The EFC** will also contact Amy at planning about a possible mailing list of septic system owners.
- **An agency or organization must be identified for postcard production and mailing.**

Second Restoration Subcommittee Call Notes

Monday, June 8th, 1 pm

Participants

Jennifer Cotting, Program Manager, Environmental Finance Center, University of Maryland

Jennifer Dindinger, Regional Watershed Restoration Specialist, Maryland Sea Grant Extension

Amy Moredock, Environmental Planner, Kent County Planning and Zoning

Gail Owings, Director, Kent County Planning and Zoning

Jennifer Raulin, Chesapeake Bay and Coastal Programs, Department of Natural Resources

John Seidel, Director, Washington College's Center for Society and the Environment

Joanne Throwe, Associate Director, Environmental Finance Center, University of Maryland

Questions, Concerns, and Needs

Urieville Lake – The Core of Engineers has approached the county about funding a major restoration project at Urieville Lake. Because the proposal was submitted quite some time ago, the Core is willing to grandfather the county in under a 35% match requirement rather than the current-day 50% match. In essence the county will need to come up with \$1.4 million.

Jenn R has received information from Amy about this effort and is preparing to shop the proposal at DNR to seek out sources of match dollars. Potentially appropriate RFP's from Fish America Foundation and Chesapeake Bay Trust have been forwarded to the group.

Because of the extensive timeline and match requirements, it was decided by the group that while the details of this project develop in year one, this may be an appropriate fit for a portion of year two and/or three LIG funding.

Urban/Radcliff Creek Projects – Washington College had expressed an interest in adding their initial survey/planning work to the wish list for year one. However, since there would be little nutrient reduction demonstrated by these efforts, it was decided that this may be better suited to funding through the CBT Restoration Grant program holding open the possibility of using year two and or three LIG dollars for implementation. Jen D offered to assist the College in their application efforts if needed.

Phragmites Control – County is still very interested in this effort moving forward. What has been done already makes continuation of the project a good year one project. The \$2K cost estimate is a ballpark figure that Gail will double check on.

Wetland Restoration – Because Urieville Lake will make a more appropriate year two and/or three project, there is a need for some smaller-scale restoration projects that will demonstrate a more immediate impact. There are a number of details on these efforts which remain to be determined. The EFC will follow up with Duck Unlimited and Soil Conservation to flesh out details and identify any remaining gaps.

Next Steps/Homework

- Jen R will shop the Urieville Lake proposal at DNR to seek additional match funding.
- Gail will double check the budget numbers for phrag control.
- The EFC will follow up with Ducks Unlimited and Soil Conservation on the status of wetland restoration projects.
- Jen D will work with the College, if needed, to pursue CBT Restoration program dollars.
- Amy will circulate a partners list for this subcommittee similar to the one she started for the septic committee.

Appendix H – June 2009 Meeting Materials

Middle Chester Partners’ Meeting Agenda
prepared by the
Environmental Finance Center, University of Maryland

Norman James Theater, William Smith Hall

June 18, 2009
9 am to 12 noon

9:00 am – 9:15 am	Welcome and Introductions – Joanne Throwe, EFC
9:15 am – 9:30 am	DNR Update – Jenn Raulin, DNR
9:30 am – 10:00 am	Ag Subcommittee – Progress and Remaining Issues
10:00 am – 10:30 am	Septics – Progress and Remaining Issues
10:30 am – 11:00 am	Restoration – Progress and Remaining Issues
11:00 am – 11:10 am	Break
11:10 am – 11:45 am	Full group discussion – finalize budget, partner roles, etc.
11:45 am – 12 noon	Wrap Up

Middle Chester Partners' Meeting
notes prepared by the
Environmental Finance Center, University of Maryland

Norman James Theater, William Smith Hall

June 18,2009

9 am

In Attendance:

Joe Blizzard, Kent Soil Conservation District
Jennifer Cotting, Environmental Finance Center
Carrie Decker, Maryland Department of Natural Resources
Jennifer Dindinger, Maryland Sea Grant Extension
Joshua Flatley, Maryland Department of the Environment
JoAnn Fairchild, Washington College
Kim Kohl, Sassafras River Association
Amy Moredock, Kent County Planning and Zoning
Gail Owings, Kent County Planning and Zoning
Bob Parks, Chester River Association
Jennifer Raulin, Maryland Department of Natural Resources
John Rhoderick, Maryland Department of Agriculture
Joanne Throwe, Environmental Finance Center
Karl Weed, Kent County Water and Wastewater Service
Mark Wiest, Washington College

Meeting Purpose

This meeting was designed to reconvene all of the Middle Chester Partners in person to discuss the continued subcommittee progress in refining the scope and scale of projects outlined in the group's 2008 proposal to the Department of Natural Resource's Local Implementation Grant program (LIG). The goal of the meeting was to finalize short- and long-term implementation plans, partner roles and budgets for these projects.

LIG Program Update – Jenn Raulin, Maryland Department of Natural Resources

Jenn Raulin explained that she had submitted for more than the \$280K. She cannot speak to the exact amount that will ultimately be approved, as there is a comment period that will run through mid August. Her next steps include working with individuals to pull contracts together so money can flow as soon as it is approved.

She added that the IMAP program is looking to add trust fund layer and that this project could be mapped via IMAP charting projects watershed wide identifying who getting trust fund dollars and how it is being spent on the ground.

Bob Parks asked about the contract process and Jenn responding that she will be working with partners to determine how best to line up contracts. Gail Owings felt that one contract through Planning and Zoning would be most appropriate. Jenn commented that having one contract eliminates paperwork, but in case of other funding recipients, such as the Little Patuxent, opting for separate contracts enables the more efficient spending of funds due to distinctions in workplan.

Septics Subcommittee Report Out

Jen Dindinger, in collaboration with John Beskid, produced a draft postcard to use a promotional tool for the septic project. Jen D shared it with the group to gauge what type of revisions may be necessary.

There were a number of state and local level agencies and departments involved with the program but not listed on the card. To avoid having too many listings, the group chose to use “the State of Maryland and Kent County Government.”

Josh Flatley expressed a concern over the phrase “funds are limited” because of the impression it conveys on the Bay Restoration Fund. Limited offer might be a better term as it more clearly suggests that the time is limited and not the funding.

With regard to what type of response the Partners can expect, Josh shared that MDE experienced a 25% response rate from mailing they conducted within the Critical Areas. An estimate of 155 system owners has been mentioned previously, but there is some debate over whether that number is accurate. Although John B can facilitate this process once the ten system owners are selected, he does not have the staff available to field these calls or inquiries for additional information.

Some Partners suggested that more specific language to ensure we are not suggesting we will replace systems, but only repair systems and coordinate with the BRF for upgrades would be useful. Josh suggested showing the card to family members, neighbors, and others who are not so close to the subject to get a better sense of how the card is interpreted.

Normally identifying the ten best systems for repairs would be done through a sanitary survey. System repairs are estimated to cost \$7,000 to \$17,000 per system according to John B. Gail suggested specifying that this is not septic repairs for home improvements, only for existing systems, but perhaps that can be addressed in the screening process.

The question was raised as to who would take responsibility for getting the postcard produced and mailed, and if the cost can be incorporated into the budget. Jenn confirmed that this would be an appropriate expense (approximately \$1,000). Gail suggested that she could get better list and do the mailing. The group suggested narrowing the list to septic system owners in the critical areas.

An organization to field postcard responses and inquires still needs to be identified. Gail suggested a website and fact sheet that might help to filter some of the interested systems owners prior to calling into a “hotline.” Jen D agreed to draft a fact sheet for the group to respond to. This should not be a county department or state agency to protect owners who will be admitting to having a failing system. The EFC is willing to put a student on this assignment if necessary.

The contractors will need to be made aware of this program and how it functions. EFC agreed to help facilitate a meeting of this nature. Ideally the timeline would play out as: July, contractor meeting; August (following signed agreement with DNR) postcards out; September, selection committee review; October, systems identified.

Restoration Subcommittee Report Out

Marsh Restoration – The County is in the process of reaching agreement with adjacent property owners to commence spraying. Gail estimates a maximum cost of \$3500 based on approximately \$100 per acre

with a need to spray 30 acres total. This will require a minimum of two years of spraying to be effective. No replanting following the spraying is expected to be necessary. Spraying should begin in September or October and the County is interested in using signage to promote program.

Woodland Gullies Restoration Sites— Joe Blizzard shared that he had walked the Upper Urieville region and discovered that the five potential woodland gully sites have been repaired already.

Ag Wetland Restoration Sites – Kirk Mantaty was not in attendance therefore status is unclear.

Urieville Lake – Amy Moredock has sent some information to Jenn R and she believes that there might be fish passage funding that would be appropriate for this project in addition to LIG funds. John McCoy at DNR believes that this project could potentially be done for significantly less than the Core has suggested if the County is interested. Jenn is willing to arrange an exploratory meeting to discuss this further with DNR staff. In addition, the buffer planting portion of the Urieville Lake restoration qualifies for natural filters funding that meets one of the Governor’s recently established milestones. CRA has some concerns over how the Urieville Lake project could stress the river severely in the short term. Bob Parks would like the opportunity to participate in any further discussions of the project.

Agricultural Subcommittee Report Out

Manure – The full group agreed that even with property owner cost-share this is a very expensive project without a solid sense of what the nutrient reductions might be. The group would like to revisit this in preparation for year two.

Greenseeker – Josh McGrath’s desire to include Middle Chester farmers in his study – due to their unique ability to conduct peer outreach – justifies incorporating them into his work. Although questions have been raised about “giving” technology to selected farmers, the full group agrees that this is appropriate assuming the farmer takes responsibility for all repairs and maintenance.

Switchgrass – ARS is willing to document nutrient reduction benefits as a part of a study they would like to conduct. The EFC is willing to work with DNR to get this funded outside of the LIG grant. The testing will have minimal impact on the harvestability of the crop. CRA expressed concerns regarding farmer privacy, as well as whether the farms of interest to the Middle Chester Partners are even appropriate sites for the nature of the study. Joanne Throwe will coordinate with John Rhoderick to resolve these issues and report back to the group.

If ARS is not appropriate, another justification for the project will be necessary. The group is interested in looking at the market opportunities for the end-product. Washington College is still potentially interested in using the switchgrass as a fuel source and the green houses of the eastern shore present another potential market.

Budget Discussion

As the projects stand currently, the budget for septic systems totals \$101,000; restoration totals \$39,500; and agricultural projects total \$155,000. There are additional items that the group would like to see happen in year one should funding become available. These items include: funneling additional money to septic systems in case the per-system estimates for repair are higher than expected (\$70K); having money set aside up front for year two technical assistance for the Greenseeker project to ensure the viability of the project (\$45K); budgeting for a second phragmites spraying as a part of marsh restoration efforts (\$6K); and expanding testing and monitoring to be done by the Chester Testers (\$10K).

Appendix I – Draft GreenSeeker™ Agreement

MEMORANDUM OF UNDERSTANDING
BETWEEN
MARYLAND DEPARTMENT OF AGRICULTURE
AND

The Maryland Department of Agriculture and its partners have an interest in the development and promotion of an alternative nutrient use efficiency program through the use of an adaptive farm management strategy. The program would involve the utilization of tractor mounted active optical sensors that can be used to measure the vigor of a crop and can be used to slow variability across a field (Green seeker) vs. standard farm fertilization practices. The Department has received funding under the Chesapeake Bay 2010 Trust funding to conduct this work in the Middle Chester River watershed.

The Department has identified _____
_____ who has agreed to participate in this study as outlined in the attached project description and further agrees to:

- a) Work with personnel at the University of Maryland, the local University of Maryland Extension, Maryland Department of Agriculture and the Kent Soil Conservation District to facilitate the study.
- b) To allow access for research staff to farm management information for study purposes.
- c) Cooperate with research staff on demonstration site established and allow farm tours.
- d) Allow research staff to utilize the results of the study in a public disclosure.
- e) Provide proper use, storage and care for all equipment provided.

The Department agrees:

- a) All scientist and staff that require access to the research site will carry and provide identification and will make every effort to notify you ahead of any visit.
- b) Research studies involve tours for the public and other scientists. You will be notified in advance of any individuals other than those directly involved in the study that need access to the site.

- c) Monitoring and research information provided as part of the project will not be used as the basis of any enforcement action.
- d) The ongoing research may necessitate a temporary change in management for your operation to accommodate the investigation. This will not result in adverse actions due to non-compliance with your nutrient management plan.

Furthermore all parties recognize that:

- a) This is a three year project, subject to continued funding under the Chesapeake Bay 2010 Trust.
- b) The Chesapeake Bay 2010 Trust fund, funding will pay for \$22,500 of the initial equipment purchase.
- c) The installation and maintenance cost for the equipment after the first year are the responsibility of _____.
- d) In exchange for agreeing to participate in the study and upon successful completion of the project the equipment becomes the property of _____

Date _____

John C. Rhoderick
Administrator, RCO
Maryland Department of Agriculture

Appendix J – Septic Program Mailing Materials



A partnership with Chester River Association, Kent County Government,
and the State of Maryland

Free Septic System Repairs Now Available

Do you want to participate in the state-funded program for septic system upgrade to best available technology (BAT) for nitrogen removal in your existing home but need costly repairs done first?

If so, this opportunity is for you!

The Chester River Association, Kent County Government, and the State of Maryland are teaming up to bring you **FREE septic repairs** for your existing drain field. Funding has been made available in your area through the Local Implementation Grant to repair failing septic systems as the first step toward participating in the state-funded program for installing BAT upgrades.

Call [Name], [xxx-xxx-xxxx], [Affiliation] for details.
This is a limited time offer! Deadline is Month, Day Year

ORGANIZATION NAME

Primary Business Address

Your Address Line 2

Your Address Line 3

Your Address Line 4

Phone: 555-555-5555

Fax: 555-555-5555

E-mail:

someone@example.com

For more information visit www.xxxxxx.com

Appendix K – Septic Contractors Operating in the Watershed

Contractors Who Have Participated in BAT Installation

Raymond Harrison

Harry's Septic Inst, Inc.
105 Laurel Court
Chestertown, MD 21620
410-778-4141

Timothy Yoder

Yoder's Bobcat & Backhoe
955 Dudley Corners Road
Millington, MD 21651
410-708-0778

Steve Green

Green's Septic Service
10600 Hyala Court
Chestertown, MD 21620
410-778-5480

Wayne Edwards

A Plus Septic Service
13083 Hickory Drive
Galena, MD 21635
410-708-1160

Jeff Wallace

J Wallace & Sons
5311 Elburn Lane
Rock Hall, MD 21661
443-480-0198

Chuck Collins

The Collins Company, LLC
11427 Still Pond Road
PO Box 236
Kennedyville, MD 21645
410-778-5090

Richard Nicholson

Richard Nicholson Contractor
1314 Dudley Corners Road
Millington, MD 21651
410-928-3259

Arthur Leonard

Arthur Leonard Backhoe Service
PO Box 129
Crumpton, MD 21628
410-778-0874

Norman Ervin

Kaufman's Backhoe Service
3425 McGinnes Road
Millington, MD 21651

Douglas E. Nicholson, Jr.

D.E. Nicholson Plumbing Repair & B
PO Box 85
Worton, MD 21678
410-708-8392

Appendix L – Contact Information for Key Middle Chester Partners

Agricultural Contacts

Bob Parks
Chester River Association
410-810-7556, ext 300
bparks@chesterriverassociation.org

John Rhoderick
Maryland Department of Agriculture
410-841-5896
rhoderjc@mda.state.md.us

Josh McGrath
University of Maryland
301-405-1351
mcgrathj@umd.edu

John Seidel
Washington College Ctr for Envmt & Society
410-810-7164
Jseidel2@washcoll.edu

Septics Contacts

John Beskid
Kent County Environmental Health
410-778-2142
jbeskid@dnhm.state.md.us

Karl Weed
Kent County Water and Waste Water
410-778-3287
kweed@kentgov.org

Josh Flatley
Maryland Department of the Environment
410- 537-3635
jflatley@mde.state.md.us

Restoration Contacts

Gail Owings
Kent County Planning and Zoning
410-778-7423
gowings@kentgov.org

Kurt Dyroff
Ducks Unlimited
410-224-6620
kdyroff@ducks.org

Karen Miller/Joe Blizzard
Soil Conservation
410-778-5150
kentsoil@verizon.net
joe.blizzard@md.nacdnet.net

Support Contacts

Jennifer Dindinger
Maryland Sea Grant Extension
410-827-8056
jdinding@umd.edu

Jennifer Raulin
Maryland Department of Natural Resources
410-260-8745
jrauln@dnr.state.md.us

Jennifer Cotting
Environmental Finance Center
301-405-5495
jcotting@umd.edu