



# COMMUNITY PLANNING ASSISTANCE TEAMS

## A Green Infrastructure Vision For Harford County, MD

Final Report | September 7, 2016



**American Planning Association**  
*Making Great Communities Happen*

■ The American Planning Association provides leadership in the development of vital communities by advocating excellence in planning, promoting education and citizen empowerment, and providing the tools and support necessary to meet the challenges of growth and change.

### **Community Assistance Program Staff**

Felicia Braunstein | Director of Professional Practice  
Ryan Scherzinger | Program Manager  
Eric Roach | Program Associate  
Jennie Gordon | Senior Leadership Coordinator

### **APA Board of Directors**

Carol A. Rhea, FAICP | President  
Cynthia Bowen, AICP | President Elect of APA  
Valerie Hubbard, FAICP | Director, President of AICP  
Courtenay D. Mercer, AICP | Director, Region I  
Rodger H. Lentz, AICP | Director, Region II  
Wendy D. Shabay, AICP | Director Region III  
Wendy E. Moeller, AICP | Director Region IV  
Brian Campbell, FAICP | Director, Region V  
Kurt E. Christiansen, AICP | Director, Region VI  
Kara W. Drane, AICP | Director at Large  
Ann C. Bagley, FAICP | Director at Large  
W. Shedrick Coleman | Director at Large, Focused  
Fleming El-Amin, AICP | Director at Large, Focused

### **Advisors to the Board**

Shane Burkhardt, AICP | Chair, Chapter President's Council  
Linda Amato, AICP | Chair, Divisions Council  
Ellen Forthofer | Chair, Student Representatives Council

### **AICP Commission**

Valerie Hubbard, FAICP | President  
Glenn E. Larson, AICP | AICP President Elect  
Deborah Lawlor, FAICP | Commissioner, Region I  
Denise M. Harris, AICP | Commissioner, Region II  
Silvia E. Vargas, AICP | Commissioner, Region III  
Benjamin Carlisle, AICP | Commissioner, Region IV  
Karen Wolf, FAICP | Commissioner, Region V  
Marissa Aho, AICP | Commissioner, Region VI

### **Officers of APA**

James M. Drinan, JD | Executive Director  
Ann M. Simms | Chief Financial/Operating Officer  
Mark Ferguson | Chief Information Officer  
Harriet M. Bogdanowicz, MBA, CAE | Chief Communications Officer

### **CPAT Members**

Jean K. Akers, AICP, RLA | Team Leader  
Christina Arlt, AICP  
Jack Heide, AICP  
Nicole Hostettler, AICP  
Eric Roach | Project Manager

### **Community Assistance Planning Services Committee**

Deborah A. Lawlor, FAICP | Chair  
Jason Beske, AICP  
Irayda Ruiz Bode, AICP  
Robyn Eason, AICP, LEED, AP ND BD+C  
Craig Farmer, FAICP  
Emil Malizia, PHD, FAICP  
Thom Rounds, AICP  
Sue Schwartz, FAICP

### **APA Offices**

#### **Washington, D.C. Office**

1030 15th Street, NW  
Suite 750 West  
Washington, DC 20005-1503  
Telephone 202.872.0611

#### **Chicago Office**

205 N. Michigan Avenue  
Suite 1200  
Chicago, IL 60601-5927  
Telephone 312.431.9100

### **APA Community Planning Assistance Teams**

Please visit:

[planning.org/communityassistance/teams](http://planning.org/communityassistance/teams)

### **Project Webpage**

[planning.org/communityassistance/teams/harfordcounty](http://planning.org/communityassistance/teams/harfordcounty)

**TABLE OF CONTENTS**

Introduction..... 4

Harford County Green Infrastructure ..... 4

Green Infrastructure..... 4

Related Planning Efforts..... 5

*HarfordNEXT*..... 6

*Harford County Hazard Mitigation Plan*..... 6

*Gunpowder Watershed Conservation Plan* ..... 6

*2013 Harford County Land Preservation, Parks and Recreation Plan* ..... 6

    Deer Creek Watershed Restoration Action Strategy..... 7

    Aberdeen Proving Ground Joint Land Use Study..... 7

    Chesapeake Bay Critical Area Management Program..... 7

*Harford County Phase II Watershed Implementation Plan* ..... 7

CPAT Process..... 7

Workshop Findings..... 10

Recommendations..... 13

Next Steps..... 16

References..... 17

Appendices ..... 18

About the Team..... 62

## Introduction

In April 2016, the American Planning Association (APA), through its professional institute, the American Institute of Certified Planners (AICP), organized a Community Planning Assistance Team (CPAT) project in Harford County, Maryland. Harford County is the 30th community to participate in the APA's CPAT program.

This project was selected from a grant awarded to the Greater Baltimore Wilderness Coalition (GBWC) through the National Fish and Wildlife Foundation, the CPAT assisted Harford County, Maryland, with a community-visioning meeting to gather residents' feedback about implementing a green infrastructure plan. Bryan Lightner, Harford County's environmental planner, submitted an application to the GBWC for the opportunity and served as the community contact for the project.

This report presents the Team's findings, observations and recommendations for the residents and stakeholders of Harford County, Maryland.

## Harford County Green Infrastructure

Harford County, Maryland, engaged the expertise of the American Planning Association to execute and organize a community visioning workshop that will engage regional leaders and community groups on green infrastructure and resiliency planning. The workshop focused on identifying and prioritizing opportunities to use green infrastructure to enhance resilience in two subwatersheds: the more rural Upper Little Gunpowder Falls and the more urban Lower Gunpowder River.

The primary goal of the project is to establish the parameters for delineating a green infrastructure network within the identified study areas, with the secondary goal being the identification and prioritization of land acquisition and restoration projects. A longer term goal for Harford County will be to use the parameters established during the project to help delineate a countywide network and develop a formal Green Infrastructure Plan. The development of a Green Infrastructure Plan has been identified as a goal within *HarfordNEXT*.

Harford County environmental planners have articulated the extent of issues related to green infrastructure and coastal resiliency that have been both historically and recently affecting public safety and property in the county. These issues include flood damage, shoreline erosion, sewage overflows at pump stations and wastewater treatment plants, deforestation and habitat fragmentation, loss of wetlands and headwater stream function, and pervasive establishment of invasive plant species. These factors have triggered a more proactive approach to implementing a green infrastructure for more efficient and effective management of natural pattern disruptions.

## Green Infrastructure

What is green infrastructure? "Green infrastructure" can be interpreted many ways. At the landscape level, it is defined by a multifunctional natural open space network. At the other end of the spectrum, at the site design scale, it has come to indicate stormwater management practices that mimic natural hydrologic functions.

The U.S. Environmental Protection Agency (EPA) defines green infrastructure as "use(ing) vegetation, soils, and other elements and practices to restore some of the natural processes required to manage water and create healthier urban environments. At the city or county scale, green infrastructure is a patchwork of natural areas that provides habitat, flood protection, cleaner air, and cleaner water. At the neighborhood or site scale, stormwater management systems that mimic nature soak up and store water"<sup>1</sup>

For the purposes of the Gunpowder Watershed Pilot Program, green infrastructure refers to natural areas, other green spaces, and features that are connected and managed in ways to produce multiple valuable "services" to the Harford community at different scales. Common services provided by green infrastructure include: recreation, wildlife habitat, water quality, water supply protection, flooding reduction, shoreline erosion protection, shoreline wave attenuation, temperature moderation, nature education, improved property values, aesthetics, and protection of historic or traditional land uses.

---

1 <https://www.epa.gov/green-infrastructure/what-green-infrastructure>



An example of green infrastructure. (Credit: Christina Arlt, AICP)

Benefits of green infrastructure extend beyond the variety of services; green infrastructure also provides multiple direct and indirect benefits, including the following<sup>2</sup>:

- Clean Air. Such infrastructure reduces air temperature, and the plants, soils, and landscape that compose green infrastructure sequester carbon, mitigate ground-level ozone, and screen particulates in the air.
- Clean Water. In addition to source water protection, green infrastructure acts as a filter for stormwater runoff, essentially “cleaning” the water as it flows through the vegetation.
- Control Flood Risk. Stormwater runoff from asphalt, concrete, and similar impervious surfaces moves quickly, increasing peak flows and volumes. As water moves more slowly through vegetative surfaces, flooding risk is reduced.
- Economic Stimulus. Green infrastructure provides key aesthetic value for a community, and provides a draw for residents and visitors. Green jobs can also be generated from the preservation and promotion of green infrastructure.
- Heritage Preservation. Heritage resources that are preserved with the creation and maintenance of green infrastructure include archaeological resources, historic structures, and scenic areas and viewsheds.
- Natural Areas for All. Green infrastructure is used by a variety of natural and recreational users, serving multiple purposes (from mountain biking to picnicking to birding) allowing outdoor physical activity in close proximity to their homes.
- Property Values. The draw of residing in proximity to green infrastructure is considered an asset reflected in increased home values. Additionally, mature tree cover and vegetation associated with green infrastructure has demonstrated increased

2 <https://www.epa.gov/green-infrastructure/benefits-green-infrastructure>

property values.

- Quality of Life. As a fundamental public good, green infrastructure provides a setting for community interaction and pride.
- Shoreline Protection. Commonly referred to as a “living shoreline,” coastal green infrastructure can absorb wake from water vessels, storm surge, and sea-level rise.
- Wildlife Habitat. Adjoining preserved parcels that create green infrastructure create a continuous habitat to provide movement, protection, and nutrients needed for various wildlife, insects, and birds.

## Related Planning Efforts

Harford County just completed its countywide comprehensive planning process to update policies, directives, and overall growth management priorities. The green infrastructure pilot project involving portions of the Gunpowder Watershed could provide a template or some recommendations for the county to complete a countywide green infrastructure plan that can be incorporated into its comprehensive planning process.

*HarfordNEXT* is the county master plan, a land-use document required by Maryland state law. The plan sets a progressive course for the future of Harford County, providing the framework for the vision, goals, and policies for the long term. *HarfordNEXT* is centered around seven themes, including: Grow with Purpose, Economic Vitality, Environmental Stewardship, Preserving our Heritage, Mobility & Connectivity, Healthy Communities, and Community Planning Areas. Within the themes there are many big ideas, one of which is green infrastructure planning. *HarfordNEXT* specifically identifies the need for an interconnected system of ecological hubs and corridors that help protect wildlife and preserve open space and agriculture.

In addition to Harford County's comprehensive planning process, other related planning efforts are highlighted below.

The *Harford County Hazard Mitigation Plan* assesses and summarizes how vulnerable the county is to natural and man-made hazards. The plan was developed to prioritize work projects, programs, and policies for mitigating the risk from all hazards that face the county. An approved hazard mitigation plan allows the county to pursue Federal Emergency Management Agency funding for various and numerous mitigation activities. The plan identifies many hazards that face the county; however, the major focus is on flooding (both precipitation events and coastal storm surge). The reduction of flood risks is the number one goal of the *Harford County Hazard Mitigation Plan*.

The *Gunpowder Watershed Conservation Plan* is a current planning effort. The Gunpowder Valley Conservancy serves as the lead organization, with technical assistance from the National Park Service Rivers, Trails, and Conservation Assistance Program, to identify the most important lands to protect within the watershed. The goal of this conservation plan is to identify and map those lands most important for each individual organization to protect, and to combine all of the high-priority lands identified into an overall conservation framework for the Gunpowder Watershed, based on collaboration and partnerships. The final (of three) workshops is scheduled for Fall 2016 to share the results of the planning process.

The *2013 Harford County Land Preservation, Parks and Recreation Plan (LPPRP)* (<http://www.harfordcountymd.gov/DocumentCenter/Home/View/1348>) restates the goal targeting protection of green infrastructure and contiguous forests or farmland (from their 2005 LPPRP) relative to working with the state to support planning at both state and county levels. In the 2013 plan, the needs analysis revealed that the county had not yet reached the state goal (30 acres of local recreation acreage for every 1,000 residents) for program open space provided by each county. Harford County has a total of 29.8 acres of local land per 1,000 people. By 2025, the county will need 959.2 additional acres to maintain the current level of service for park and recreation lands. The 2013 parks plan reported that the demand for recreation facilities indicated participation rates with playgrounds (52.4 percent), swimming pools (49.6 percent) and then trails (44.8 percent) as the top outdoor recreation activities in a combination of county, school, and private facilities. The parks plan reports the current trail inventory as 34.8 miles. The parks plan recognizes the value of trails and supports the creation of a countywide trail system including multiuse trails. Multiuse trails are considered an integral part of the county's bicycle and pedestrian network. The parks plan proposes complementary and supportive incorporation of trail systems into the county's active transportation network. The parks plan makes reference to “green infrastructure” under the needs analysis for Greenways and Blueways. The plan states: “Greenways enhance the character of the County, provide opportunities for physical

activity (e.g., walking, jogging) and alternative transportation (e.g. bicycles), and protect natural habitats for migratory birds and animals. Greenways include both private lands and public parks and trail systems.” The *2013 Harford County Land Preservation, Parks, and Recreation Plan* illustrates the strong link between 1) the public need for parkland and other sites for leisure activity and 2) the importance of preserving significant areas of land from development, specifically farmland and natural resources. The LPPRP policy recommendations directly related to green infrastructure planning include:

- PR-1 Acquire additional recreation land, including waterfront properties, to help meet the needs of current and future residents.
- PR-2 Develop integrated greenway/trail systems with both public and private segments.
- PR-7 Incorporate sustainable development and conservation practices in all Parks and Recreation parks and facilities.

The *Deer Creek Watershed Restoration Action Strategy (WRAS)* was initiated by Harford County to help restore and protect the Deer Creek Watershed. The goal of the WRAS is to protect water quality, conserve fish and wildlife habitats, and restore those areas found to be impaired. The WRAS sets goals and objectives in the areas of Agriculture, Natural Resources, Development, Education and Outreach, and Stakeholder Coordination. The Deer Creek Watershed is just north of the Little Gunpowder Falls Watershed and shares the same rural character and agricultural lifestyle.

The *Aberdeen Proving Ground (APG) Joint Land Use Study (JLUS)* represents a collaborative effort between local agencies and the Department of the Army military facility and testing ground. APG generates approximately \$4.3 billion in economic activity and support to the region. The joint land-use study is a process to establish and encourage a working relationship between local communities, agencies, and APG. The goal of the JLUS is to protect the viability of current and future military operations while guiding community growth, sustaining the environmental and economic health of the region, and protecting public health, safety, and welfare. The JLUS sets priorities on natural resource preservation and conservation and identifies the need for bolstering natural coastal defenses against current and future storm events and flooding.

The *Chesapeake Bay Critical Area Management Program* was developed to address three main objectives: to minimize adverse impacts on water quality that result from pollutants being discharged from structures; to conserve fish, wildlife and plant habitat; and to establish land-use policies for development within the area that accommodates growth while acknowledging that direct pollution of the Bay needs to be controlled. A major focus of the program is directed toward sediment control and stormwater management programs that can be more effective for controlling runoff from development activities outside the Critical Area. The program also establishes criteria for the types of fish, wildlife, and plant habitat that need additional protection, preservation, and conservation.

The *Harford County Phase II Watershed Implementation Plan (WIP)* identifies the strategies Harford County will take to reduce nutrient loads flowing into the Chesapeake Bay and meet the required Total Maximum Daily Load. The strategies focus on five areas to reduce nutrient loadings: agriculture, wastewater treatment plants, septic tanks, urban stormwater, and other land-use planning. The plan also details requirements for tracking, verifying, and reporting on the status of these strategies and their effectiveness.

## **CPAT Process**

The American Planning Association (APA) organizes volunteer planning teams through its Community Planning Assistance Teams (CPAT) program. In January 2016, Harford County, Maryland, submitted an application for assistance with their green infrastructure planning work.

APA selected a team of experts including team leader Jean Akers, AICP, RLA; Christina Arlt, AICP; Jack Heide, AICP; Nicole Hostettler, PP, AICP, LEED Green Associate; and Eric Roach of APA. (See Appendix A for Team Biographies.) The team conducted several conference calls prior to arriving in Harford County on June 12, 2016.

On Monday, June 13, 2016, the team began the day by touring portions of the Lower Gunpowder Falls watershed, including Baltimore County Eastern Regional Park and Marshy Point Nature Center. In the afternoon, the team met with Harford County environmental planner Bryan Lightner, and began planning the content of the community meeting, which had already been advertised for the



Dundee Creek (Credit: Christina Arlt, AICP)

following evening (See Appendix B for a copy of the workshop advertisement and Appendix C for list of invited organizations.)

On Tuesday, June 14, the team created the materials and handouts for the community meeting. The agenda for the workshop was:



Tuesday, June 14, 2016, Harford County Green Infrastructure Community Meeting	
Time	Activity
6:00 — 6:20pm	Registration / Meet and Greet
6:20 — 6:40pm	Introductions
6:40 — 7:00pm	Presentation: What is Green Infrastructure?
7:00 — 7:50pm	Small Group Discussions
7:50 — 8:00pm	Wrap Up and Thank You

Workshop participants at the registration table (Credit: Nicole Hostettler, PP, AICP, LEED Green Associate)

Forty participants attended the Green Infrastructure workshop at the Harford Glen Environmental Education Center in Bel Air, Maryland, on June 14 (See Appendix D for Community Visioning Workshop Attendees). After signing in, each participant was handed three index cards and asked to answer the question, “What three words come to mind when you hear ‘Green Infrastructure?’” by writing one word on each index card. The cards were later collected and a word cloud of the responses was shown at the end of the meeting.

After participants had a chance to mingle, eat some snacks, and peruse the display boards which had been set up around the edge of the room, the workshop began. Bryan Lightner of Harford County gave brief introductory remarks. Then members of the Steering Committee introduced themselves and the organizations they represented. Eric Roach from APA introduced the members of the Planning Team, who in turn each introduced themselves. Next, team leader Jean Akers gave a presentation defining green infrastructure and explaining its benefits. (See Appendix E for a copy of the workshop PowerPoint).





*Eric Roach's small discussion group at the Green Infrastructure workshop (Credit: Christina Arlt, ACP)*

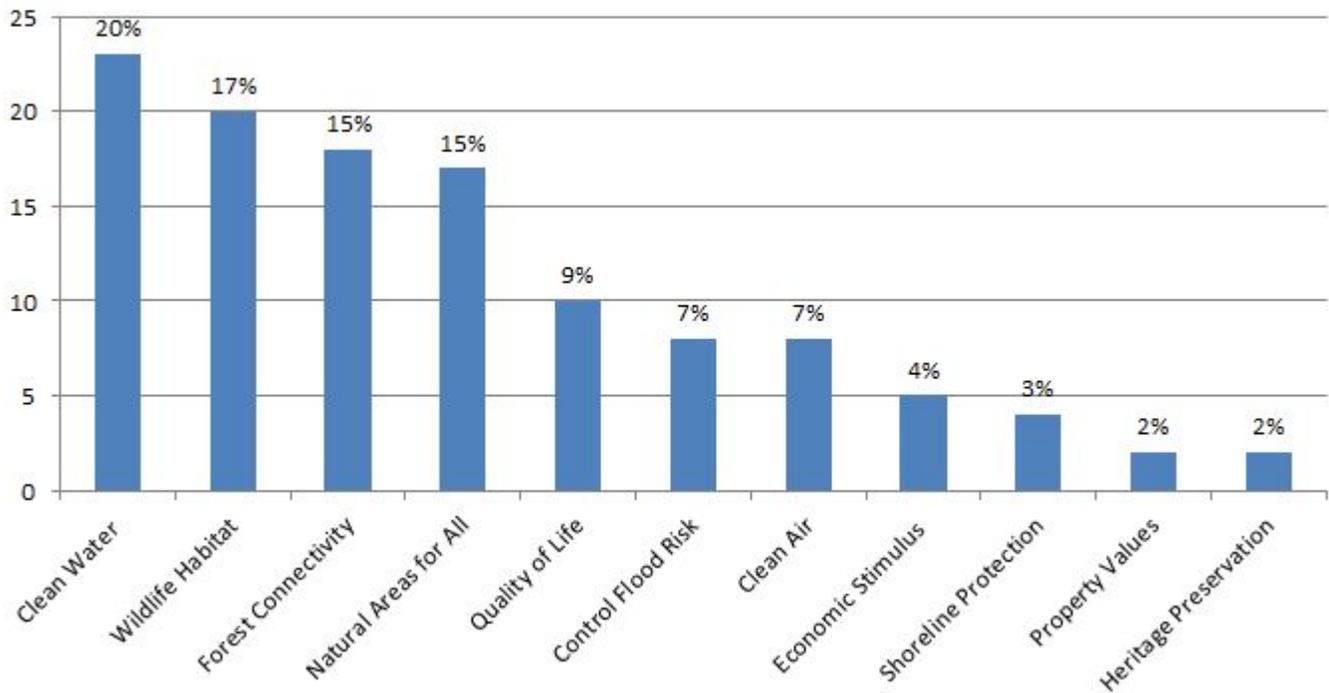
**Workshop Findings**

Several methods of engagement offered opportunities to reveal the impressions, top priorities, and experiences among the participants relative to green infrastructure in the multiple-county region. Initially, the request for simple one-word associations triggered a qualitative summary of the key ideas and concepts that stakeholders use to define green infrastructure. The word cloud helps reveal those associations through its hierarchy of word sizes based on repetition of the word.

The dot exercise identified the three most important benefits of green infrastructure. A total of 117 dots were placed on the 11 various categories of benefits. Clean Water was identified as most important benefit with 23 dots, representing 20 percent of the votes. Second most important was Wildlife Habitat with 20 dots, representing 17 percent of the participants' votes. A close third and fourth most important category were Forest Connectivity and Natural Areas for All, with 18 dots/15 percent and 17 dots/15 percent of the votes, respectively. The remaining categories received 10 or less dots collectively, representing less than 10 percent of final vote.

The results indicate four benefits that were valued above all other benefits:

- 1. Clean Water
- 2. Wildlife Habitat
- 3. Forest Connectivity
- 4. Natural Areas for All



Top three priorities for the benefits of green infrastructure (dot exercise)

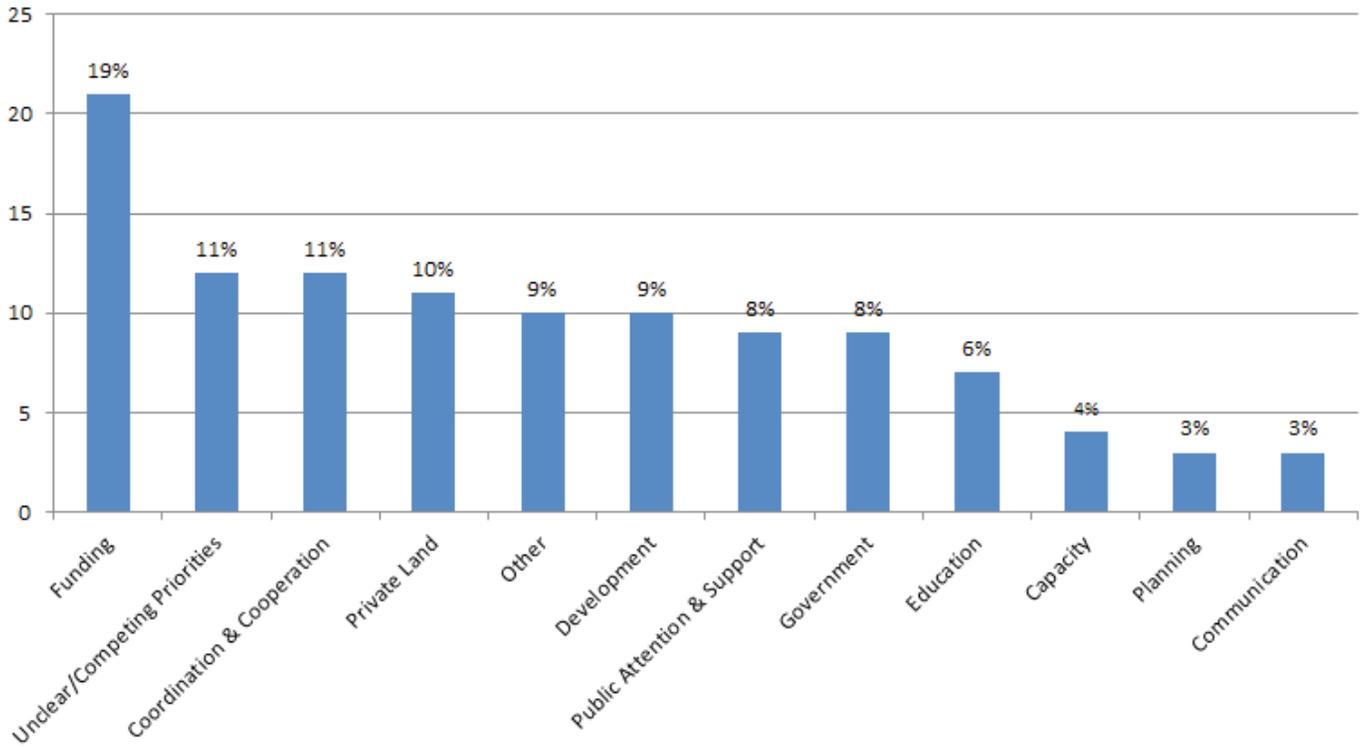
The dot survey shows a stakeholder group that most values the natural benefits of Green Infrastructure over the social and economic benefits.

Individuals in each of the small groups were asked to respond in writing on questionnaires to the four questions that provided the subjects for group discussion. Most of those responses were then shared in discussions within each group.

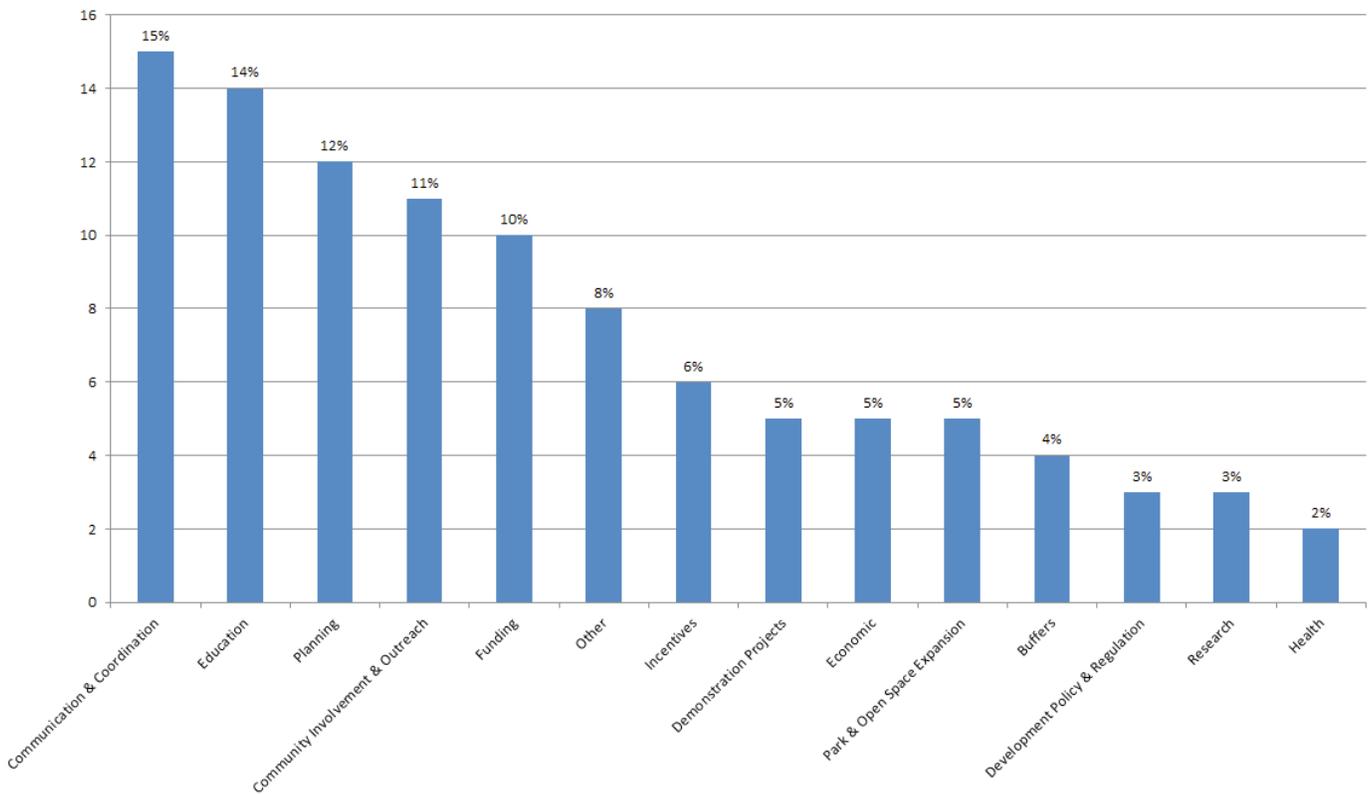
The responses to the first question, “What challenges limit creating an effective Gunpowder Watershed Green Infrastructure Network?” were filtered into 12 categories. Of the 111 responses, 21 responses (19 percent) identified funding as a key challenge. Such short answers mainly consisted of “funding,” with some expanding on this to state “money,” “funding limitations,” “lack of funding,” “funding for in the ground projects” and “lack of funding for land protection, restoration, long term maintenance.” Limited financial resources was clearly the predominant challenge to effectively creating a green infrastructure network.

The second most common expressed challenge was shared across two categories: Coordination & Cooperation and Unclear/Competing Priorities (each with 12 votes, 11 percent). In these two categories some responses referred to the numerous stakeholder agencies and organizations, each with their own priorities and degrees of practicing coordination with other land-managing entities. Private Land (10 percent) and Development (nine percent) expressed the frustrations for implementing green infrastructure across the landscape where implementation may be completely voluntary. With numerous individual private landowners, each with individual needs and values relating to land stewardship, implementing an effective green infrastructure is likely to be a piecemeal process. With different developers designing and creating a variety of developments, the prospect of a universally connected network of green infrastructure is challenging.

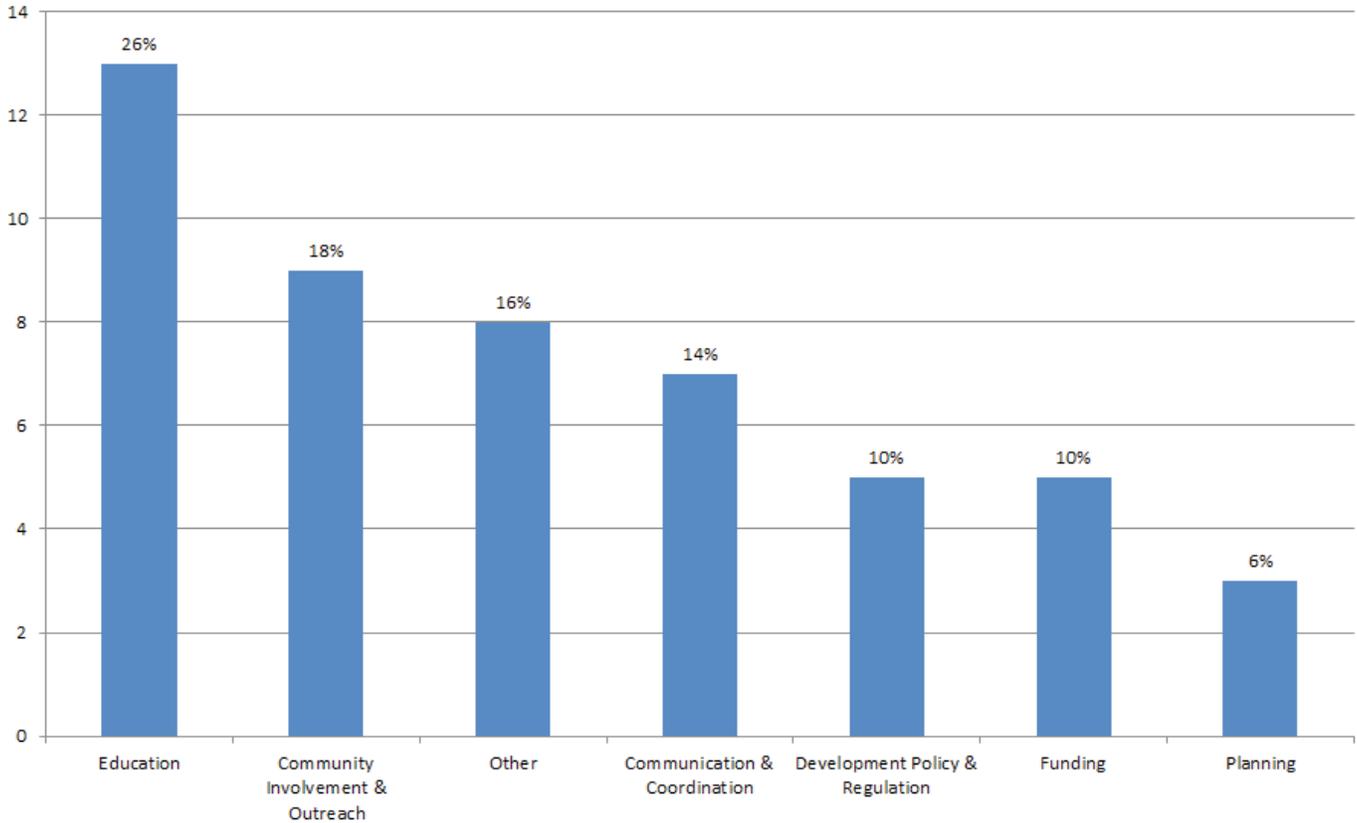
Responses to “What opportunities could help create an effective Gunpowder Watershed Green Infrastructure Network?” were categorized into 14 categories. Of the 103 responses, two categories were highly ranked statistically equal: Communication & Coordination (15 percent) and Education (14 percent). Responses identifying education as an opportunity to create a green infrastructure network were mainly identified with the single word “education” or slightly expanded “education in schools” and “provide public education/awareness.” Communication & Coordination consisted of more complex answers such as “designate overall coordination to schedule and implement focus” and “liaisons between stakeholders.” Other identified opportunities included Planning (12 percent), Community Involvement & Outreach (11 percent), and Funding (10 percent). The remaining categories were mentioned between two and eight times.



Responses to Green Infrastructure Challenges Question



Responses to Green Infrastructure Opportunities Question



Highest priority to green infrastructure opportunities

When participants were asked to prioritize the most important opportunity, education was the highest priority, with 13 of the 50 responses representing 26 percent of the written answers. Responses also recognized the value of community involvement and outreach, and often education was connected with this response. Communication and coordination came as the next distinct priority opportunity. The need for broader awareness of the values and benefits of green infrastructure to a broad audience was indicated by these expressed priorities.

**Recommendations**

From the workshop findings and stakeholder feedback, both general and specific recommendations were developed to guide future green infrastructure policies and actions. These recommendations are not necessarily in order of priority and should be considered as opportunities arise.

*A Landscape Approach.* Since green infrastructure is an interconnected network of green space that integrates natural ecosystem functions and associated benefits for human populations, the approach to implementing an effective network requires a broad landscape approach. This broad approach requires the connection of urban and rural programs, the linking of conservation and public works efforts, and the implementation of green infrastructure practices in education and public policy. A more holistic approach can provide more lasting benefits to the environmental, economic, and social aspects of green infrastructure.

*GI Network Coalition.* A common adage asserts that unified efforts are more economical and symbiotic than individual efforts. Stakeholders at the visioning workshop repeatedly advocated for a coordinated and cooperative approach to implementing green infrastructure. A formal coalition could provide the structure for this unified effort. The coalition should extend beyond the traditional conservation-related stakeholders to include public, nonprofit, and private health organizations; local and regional businesses related

to outdoor industries and physical health; and governmental agencies connected to land management and public safety. Partnerships and networks should be encouraged and enhanced and could help address the workshop question “Who’s not at the table?” Consider Memos of Agreement with regional partners listing the collective goals and objectives to implement the shared GI vision.

The Greater Baltimore Wilderness Coalition is an existing volunteer alliance that supports the implementation of a green infrastructure network in the Baltimore region. Other similar alliances across the county are providing a unified effort to reach common goals more effectively than any one entity could achieve on its own. Harford County could join the GBWC since the vision to expand, connect, and protect green infrastructure is essentially the same.

*Public Campaign.* The need for greater public awareness of the issues facing public safety, water quality, flood management, and coastal resilience were repeatedly discussed. A proactive marketing and communication plan for increasing public awareness should be developed and shared across the coalition of stakeholders to be integrated into a broad approach to news, education, and advocacy for green infrastructure.

*Ecosystem Services Assessment.* Implementing an effective green infrastructure program in an urban or suburban community can have a direct positive influence on reducing the costs of gray infrastructure. Conducting an ecosystems services assessment can help quantify the direct savings that natural systems provide for communities. The Maryland Department of Natural Resources could potentially conduct an ecosystems services valuation assessment for Harford County or for a specific watershed. This quantitative assessment provides critical information for conveying the value of green infrastructure and would assist in any education and programming materials.

*Education and Programming.* An important element within any conservation and land-use planning effort is the articulation of the “what” and “why” for the communication of basic messages. Defining green infrastructure and quantifying its value (from an ecosystem services assessment) is key to developing support across a broad base of stakeholders, elected officials and the general public. Craft an “elevator speech” that defines the basic green infrastructure message in simple values and powerful words.

One workshop participant suggested hiring a communication specialist or social anthropologist to develop marketing and educational messages targeted at land owners, the public, planners, and elected officials. The group identified communication as an important strategy for improving public education about watershed and water quality issues. The need for the conservation community to “speak a common language” was also viewed as important. It is not unprecedented for watershed coalitions to hire media consultants—recently, the Delaware River Watershed Initiative hired Resource Media (<http://www.resource-media.org>) to conduct a media scan and suggest improvements to the language that nonprofit organizations use to talk about water quality in the Delaware River. Belinda Griswold of Resource Media gave a presentation about these efforts in May 2016. Some of her suggestions included:

- Use everyday language (e.g., “polluted runoff” instead of “nonpoint source pollution” and “land around lakes and streams” instead of “buffer”).
- Avoid jargon and acronyms.
- Help people picture the problem.
- Frame solutions around shared values.
- Emphasize the multiple benefits of green infrastructure.
- Tell a story, which includes setting, characters, and conflict.
- The formula for an effective message is to talk about shared values, identify a problem/conflict, and then identify a solution or call to action.
- Emphasize the benefits, not the technical tools.

Another workshop participant recommended expanding the University of Maryland’s Watershed Stewards Academy (WSA) program (<https://extension.umd.edu/watershed/watershed-stewards-academy>) to Harford County. The WSA is a training program that empowers residents to improve local streams’ water quality. By sharing resources, forming partnerships, and coordinating efforts, WSA works with a consortium of professionals, Master Watershed Stewards, and their communities to reduce pollutants, infiltrate stormwater, and restore

natural systems. Currently, the Watershed Steward Academy is in Anne Arundel County, Howard County, the National Capital region, Cecil County, and St. Mary's County.

*Demonstration Projects.* Expanding existing visual and physical examples of green infrastructure practices with their associated measures of value and benefits provides an effective method for communicating and promoting the integration of green infrastructure into policy and practice across the region. If a variety of agencies, organizations, and land owners can offer different demonstration projects, their stories can be incorporated into public outreach and messaging as well as educational programming and curriculum.

*Stewardship Advancement.* Encourage environmentally sensitive design practices to infiltrate stormwater at the source, matching grants with projects, or using county funds in partnership with Harford County's future Watershed Stewards Academy. Integrated with other education and programming efforts, a conservation stewardship program with high school students could foster a closer connection between learning the science of ecology and participating in actual watershed restoration projects.

*Funding Resources.* Combining and leveraging strategies is a more effective route for obtaining adequate financial resources for green infrastructure. Government agencies, nonprofits, and private enterprises each have different funding tools that may contribute to green infrastructure efforts. The strategies listed below are not a complete list of potential funding resources, but they may help trigger further exploration into the partnerships and possibilities for implementation.

- Tax incentives for implementing stormwater best management practices
- Fee-in-lieu for off-site mitigation could be directed to underwrite reforestation on private properties.
- Grants for projects and programs from local, state and federal programs
- Consider potential tie-in to the urban challenge initiative from the U.S. Fish and Wildlife Service that is focusing on connecting the public to their urban wildlife refuges.
- Engage corporate and business entities in conservation and stewardship activities as part of their community involvement and volunteer contributions.
- Private donations and charitable gifts of land, restoration supplies, equipment, or similar in-kind contributions could be promoted.

*Unified GIS Mapping.* Develop a countywide Green Infrastructure Plan that includes extending the mapping methodology developed by the Greater Baltimore Wilderness Coalition to the rest of Harford County. Incorporating a unified system of GIS-based mapping resources will help identify priority targets for best practices applied to implementing green infrastructure projects and programs. Unified mapping will assist the different partners to work from the same data and assumptions to better achieve green infrastructure goals. GIS mapping can also integrate the storytelling function that helps interpret maps and their meanings to regular viewers. These story maps (similar to the one developed for this project) are effective communication tools for conveying complex concepts as digestible ideas. (See Appendix K for story maps.)

*Parks, Trails, and Outdoor Recreation.* Park agencies typically own and manage significant public lands, including conserved open spaces with sensitive environmental characteristics. Active coordination and collaboration with local, county, regional, state, and national park agencies should be an integral part of implementing a green infrastructure network. Greenway trails should be promoting and actively connected to further the public recreation, transportation, and health benefits for access to physical activity and nature. Those greenway trails provide a continual demonstration of the value of connecting people and nature. Park agencies have regular planning efforts that update their capital facilities planning and funding allocations. Those allocations should demonstrate the priority of being an effective partner in implementing the green infrastructure network.

*Habitat Assessments.* A recurring theme expressed in the public involvement processes for Harford County's planning continues to be "take care of what we have." Maintaining accurate maintenance and targeted conditions for lands and facilities could also extend to documenting current wildlife habitat inventories. Habitat assessments for each "hub" and "corridor" in the green infrastructure network could help identify key priorities for protection, conservation, or restoration.

*Urban and Community Forestry Canopy Programs.* The continuum of a green infrastructure network extends from rural into urban environments. Enhanced value to the GI network is an extended tree canopy layer that can follow streets, residential, and commercial

properties, and connect the natural ecosystem into the built environment. Tree canopy is a stormwater best management practice; it increases property values, moderates urban heat islands, reduces energy costs, improves air quality, and provides corridors for avian wildlife. Tree planting programs should be actively promoted in urban, suburban, and rural communities.

*Land-Use Policy Audit.* Taking time to measure the effectiveness of existing land-use regulations through an audit of planning and zoning codes that intend to help create, protect, and enhance a green infrastructure network will help to identify where and how best to implement new strategies and land-use codes that promote protection of land values and ecosystem services that benefit all land owners. The identification of gaps and loopholes can help guide the policies centering on both growth management and conservation. When considering how best to approach the design and development of any new regulations, finding the relationship with economic development and quality of life can be the key to success.

### Next Steps

Bryan Lightner, Harford County's environmental planner, provided a summary of the next steps that county planning proposed as follow-up for the green infrastructure project and the visioning workshop. He hopes to prioritize opportunities to use Green Infrastructure to enhance resilience in both study areas.

Harford County is developing a program (not limited to the Gunpowder Watershed) to start funding riparian forest buffers on private property. Baltimore County already has four different reforestation programs. The program's objective is to restore forest edges to expand forest interior, as well as increase protective buffers around streams, wetlands, steep slopes, and erodible soils. In addition to supporting the Green Infrastructure network, the county will receive credits for both its Stormwater Management program and *Watershed Implementation Plan* to complete tree planting projects.

Harford County plans to create a Watershed Stewards Academy starting in the Fall 2017. Similar to the Master Gardener program (a partnership with the University of Maryland Extension Office) Master Watershed Stewards are trained to help solve drainage or water quality problems in their neighborhoods and connect people with environmental resources to help restore watersheds. Inside the Green Infrastructure network, conservation landscaping practices such as tree plantings and butterfly gardens will be implemented to enhance the interconnected system of wildlife habitats.

Further next steps include:

- Establishing a network to promote the best practices for maximizing community resilience, sharing the costs with multiple groups.
  - Partnering with the Susquehannock Wildlife Society for current habitat surveys to further determine values and prioritize implementation strategies.
  - Partnering with Department of Natural Resources to provide living shoreline cost-share programs. Tapping into programs and other grant funds will help to realize living shoreline projects, which can serve as demonstration projects to increase coastal resilience along tidal waters.
- Developing a formal Green Infrastructure Plan. The development of a Green Infrastructure Plan has been identified as a goal within *HarfordNEXT*. The goals of the plan will be to define, protect, and enhance an interconnected network of the county's most ecologically valuable land, as well as to encourage and incentivize community stewardship practices.
- Promoting the project to constituents. Stakeholders who participated in the workshop can promote the project to their respective constituents, provide progress updates, and remain engaged during the development of the Green Infrastructure Plan.
- Ongoing collaboration with the Gunpowder Valley Conservancy's Priority Lands Project will help to identify and prioritize the acquisition of properties for land preservation.
- Controlling invasive plants in both tidal marshes and forests will be an important implementation strategy as land within the Green Infrastructure network undergoes restoration or enhancement. Key partners from various agencies will be critical to help identify problem plants and develop sustainable control measures.

- Providing for greater regional trail connectivity is one of the co-benefits of defining a Green Infrastructure network. Preserving land that is interconnected provides an opportunity to increase public access to nature and promote healthy lifestyles.

## References

Trust for Public Land. 2013. *City Parks, Clean Water: Making Great Places Using Green Infrastructure*. Available at <https://www.tpl.org/city-parks-clean-water>.

U.S. Environmental Protection Agency. "What is Green Infrastructure?" Available at <https://www.epa.gov/green-infrastructure/what-green-infrastructure>.

Center for Neighborhood Technology. 2011. *The Value of Green Infrastructure: A Guide to Recognizing Its Economic, Environmental and Social Benefits*. Available at [http://www.cnt.org/sites/default/files/publications/CNT\\_Value-of-Green-Infrastructure.pdf](http://www.cnt.org/sites/default/files/publications/CNT_Value-of-Green-Infrastructure.pdf).

U.S. Environmental Protection Agency. "Enhancing Sustainable Communities with Green Infrastructure." Available at <https://www.epa.gov/smartgrowth/enhancing-sustainable-communities-green-infrastructure>.

Benedict, Mark A., and Edward T. McMahon. 2001. "Green Infrastructure: Smart Conservation for the 21<sup>st</sup> Century." The Conservation Fund. Sprawl Watch Clearinghouse Monograph. Available at <http://www.sprawlwatch.org/greeninfrastructure.pdf>.

# Appendices

## Workshop Flyer

# COMMUNITY VISIONING WORKSHOP

for **Green Infrastructure Planning** in the **Gunpowder Watershed**



How can **YOU**  
protect  
your **LAND??**

**Tuesday, June 14th, 2016**  
from 6 to 8pm

*Harford Glen  
Environmental Education Center*

502 West Wheel Rd, Bel Air, MD 21015

Come **Join** your neighbors at a fully interactive workshop where **You** can **Share** comments and guidance as Harford County and the American Planning Association move forward with a **Community Action Plan** of conceptual recommendations and implementation strategies.

Citizens and stakeholders are encouraged to provide comments and guidance to assist in **steering policy, land acquisition, & restoration practices** for the two study areas within the Gunpowder Watershed!



We'll review the delineation of a regional green infrastructure network prepared by the Greater Baltimore Wilderness Coalition. The workshop will also include information on successful green infrastructure projects located within the three jurisdictions of Harford County, Baltimore County, and the Aberdeen Proving Ground.

**Harford County**  
**Department of Planning and Zoning**

For more information, please contact Bryan Lightner, Long-Range Planner  
410-638-3103, ext. 1386 or [bcflightner@harfordcountymd.gov](mailto:bcflightner@harfordcountymd.gov)

List of Invited Organizations

# Community Visioning Workshop

Green Infrastructure Planning in the Gunpowder Watershed

## INVITED PARTICIPANTS

Alliance for the Chesapeake Bay  
 Baltimore County Land Trust Alliance  
 Baltimore Metropolitan Council (BMC)  
 Greater Baltimore Wilderness Coalition  
 Bay Land Services  
 Brown Brown & Young  
 Chesapeake Bay Program, Environmental Protection Agency (EPA)  
 Chesapeake Science & Security Corridor  
 Coastal Rural Legacy Area  
 Critical Area Commission  
 Deer Creek Watershed Association  
 Ecotone  
 Farm Bureau  
 Frederick Ward Associates  
 G.W. Stephens  
 Gunpowder Falls State Park  
 Gunpowder Valley Conservancy  
 Harford Community College  
 Harford County Chamber of Commerce  
 Harford County Council  
 Harford County Department of Community Services  
 Harford County Department of Governmental & Community Relations  
 Harford County Department of Parks & Recreation  
 Harford County Department of Public Works (DPW)  
 Harford County Emergency Operations Center (EOC)  
 Harford County Environmental Advisory Board  
 Harford County Forestry Board  
 Harford County Public Schools



Harford Glen Foundation  
 Harford Land Trust  
 Jarrettsville Norrisville Community Advisory Board  
 Joppa Heritage & Development Corporation  
 Joppa Joppatowne Community Advisory Board  
 Joppatowne Garden Club  
 Ladew Topiary Gardens  
 Manor Conservancy  
 Maryland Agriculture Land Preservation Foundation (MALPF)  
 Maryland Conservation Corps  
 Maryland Department of Environment (MDE) Tidal Wetland Division  
 Maryland Department of Natural Resources  
 Maryland Department of Planning  
 Maryland Rural Legacy Program  
 Maryland State Highway Administration  
 Maryland Trout Unlimited  
 Maryland Wildlife & Heritage Service  
 Morris & Ritchie Associates  
 Neighborspace  
 Site Resources  
 Soil Conservation District  
 Stark & Keenan  
 Susquehannock Wildlife Society  
 Ten Oaks Realty  
 U.S. Army Corp of Engineers  
 University of Maryland Extension (Master Gardener Program)  
 Upper Western Shore Tributary Team (UWSTT)

**Tuesday, June 14, 2016**

## Community Workshop Attendees

Name	Organization/Affiliation	Number
Christina Artl	APA CPAT Team / Delaware Valley Regional Planning Commission	1
Bryan Lightner	Harford County	2
Matt Kropp	Harford County	3
Mike Simini	Town of Bel Aire Tree Committee	4
Geoff Graff	Harford County Forestry Board	5
Karen Mullin	Greater Baltimore Wilderness Coalition	6
Bryon Bodt	Izaak Walton League	7
Jeff Lerner	American Forests	8
Lynn Davis	Ecotone, Inc. / Susquehannock Wildlife Society	9
Sally LaBarre	Harford County Environmental Advisory Board (EAB)	10
Howard Eakes	Harford Glen	11
Jean Akers	APA CPAT Team / Conservation Technix	12
Jim Herman	JV Herman and Associates	13
John R. Alexander	Neighbor Space GTA	14
Jen Powers	Gunpowder Valley Conservancy	15
Eric Roach	American Planning Association (APA)	16
Jack Heide	APA CPAT Team / Sustainable Jersey	17
Paul Gartelmann	Harford County Environmental Advisory Board (EAB)	18
Phil Powers	Anita Leight Estuary	19
Pat Pudelkewicz	Resident -- Gunpowder	20
Becky Swerida	MD DNR CCS	21
Ginn White	RASAC Harford County Running Club	22
Jerry Fonshell	Gunpowder United Mountain Bike Operators (GUMBO)	23
Deidre DeRoia	Harford Glen Foundation	24
Marc Petrequin	Harford County Climate Action	25
Scott McDaniel	Susquehannock Wildlife Society	26
Charlie Conklin	Gunpowder Valley Conservancy	27
Greg Adolph	CEM, Inc.	28
Jennifer Ohshell	Maryland Park Service Gundpower Falls State Park	29
Paul Magness	Harford County Parks & Recreation	30
Nicole Hostettler	APA CPAT Team / Philadelphia Water Department	31
Renee Hamidi	Manor Conservancy	32
Shane Grimm	Planning & Zoning	33
Todd Beser	Aberdeen Proving Ground (APG)	34
Ronald Swatski	Harford Forest Conservancy District Board	35
Sharyn Spray	Anita C. Leight Estuary Center (ACLEC)	36
Christine Conn	MD DNR	37
John Firth	Resident	38
Wally Lippincott Jr	Baltimore County Planning	39
Seth McElroy	RASAC Harford County Running Club	40
Marlo Atkinson	Greater Baltimore Wilderness Coalition	41
Eric Meyers	The Conservation Fund	42
Andy Adams	Harford Community College / Susquehannock Wildlife Society	43
Barbara Risacher	Joppa DHC	44
Stephanie Stone	Resident	45
Jennifer Harrington	Site Resources Inc.	46

Workshop PowerPoint

# Community Visioning Workshop

Green Infrastructure Planning in the Gunpowder Watershed

Tuesday, June 14<sup>th</sup>, 2016

Harford County Department of Planning and Zoning  
 American Planning Association  
 Greater Baltimore Wilderness Coalition



planning.org

## Tonight's Agenda

- |              |                         |
|--------------|-------------------------|
| 6:00-6:20 pm | Meet and Greet          |
| 6:20-6:40 pm | Introductions           |
| 6:40-7:00 pm | Presentation            |
| 7:00-7:50 pm | Small Group Discussions |
| 7:50-8:00 pm | Wrap-Up                 |

# Steering Committee Members

Harford County  
Greater Baltimore Wilderness Coalition  
Baltimore County  
Aberdeen Proving Ground  
Gunpowder Valley Conservancy  
Manor Conservancy  
Harford County Public Schools

planning.org

## What is a CPAT?



The Community Planning Assistance Team (CPAT) program is an initiative of the *American Planning Association*. CPAT Teams provide pro-bono skills and experience of professional, certified planners from around the United States.

planning.org

## CPAT Team Members

Jean Akers, AICP, PLA – Team Leader

Christina Arlt, AICP

Nicole Hostettler, AICP

Jack Heide, AICP

Eric Roach - APA Staff

planning.org

## Green Infrastructure Planning

The Department of Planning and Zoning is currently implementing a pilot study for delineating a regional green infrastructure network within two subwatersheds of the Gunpowder River.

This project will guide the future development of a Countywide Green Infrastructure Plan.

planning.org

# What is Green Infrastructure?

Refers to natural areas, other green spaces and features that are connected and managed to produce multiple valuable “services” contributing to the health and quality of life for communities and people.



planning.org

## Green Infrastructure Multiple Benefits:

Environment

Economy

Community



## Benefits of Green Infrastructure

- Clean Air
- Clean Water
- Economic Stimulus
- Control Flood Risk
- Forest Connectivity
- Heritage Preservation: historic/traditional land uses  
(farming, forestry, fishing, nursery operations)
- Property Values
- Quality of Life
- Natural Areas for All
- Shoreline Protection
- Wildlife Habitat

planning.org

### **Benefits of Green Infrastructure** **Clean Water**



## **Benefits of Green Infrastructure Clean Air**



## **Benefits of Green Infrastructure Economic Stimulus**



**Benefits of Green Infrastructure  
Control Flood Risk**



**Benefits of Green Infrastructure  
Forest Connectivity**



## Benefits of Green Infrastructure Heritage Preservation



## Benefits of Green Infrastructure Property Values



## Benefits of Green Infrastructure Quality of Life



**Benefits of Green Infrastructure  
Natural Areas for All**



**Benefits of Green Infrastructure  
Wildlife Habitat**





# Benefits of Green Infrastructure Shoreline Protection

## Community Visioning Workshop

Green Infrastructure Planning in the Gunpowder Watershed



## Benefits of Green Infrastructure

*Place a dot on your top three benefits.*

Clean Air	
Clean Water	
Economic Stimulus	
Control Flood Risk	
Forest Connectivity	
Heritage Preservation	
Property Values	
Quality of Life	
Natural Areas for All	
Shoreline Protection	
Wildlife Habitat	

Tuesday, June 14, 2016

## Questions for Small Groups

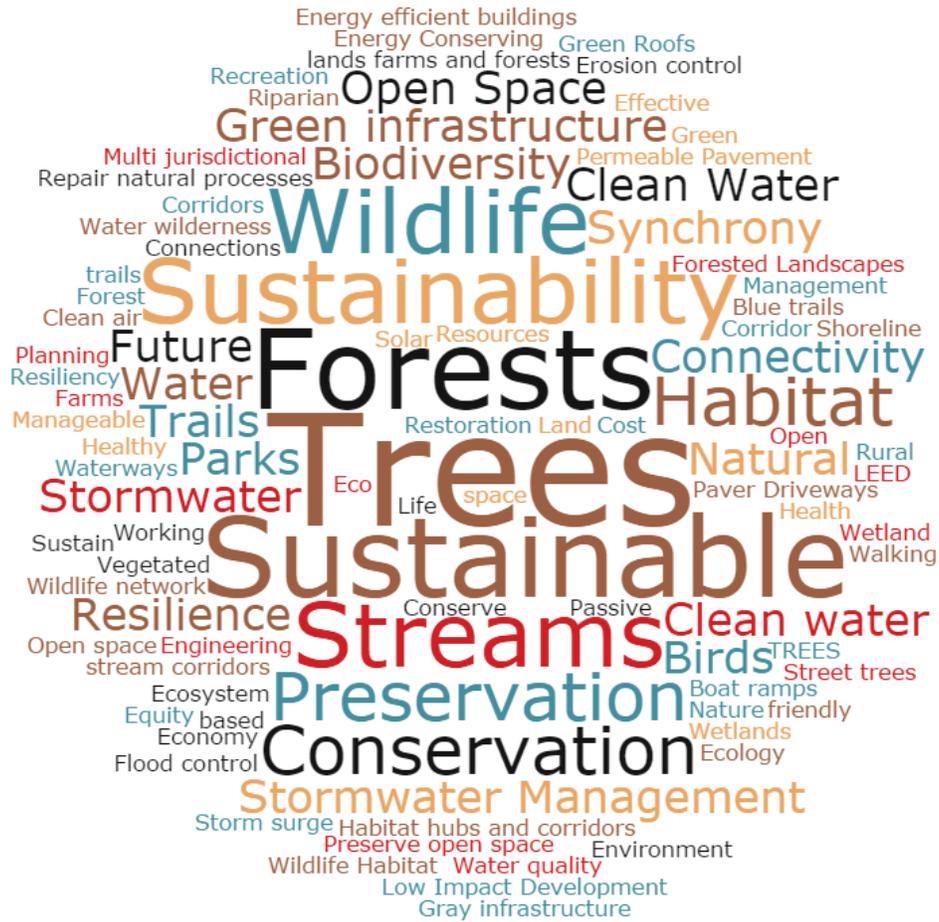
1. What challenges limit creating an effective Gunpowder watershed green infrastructure network?
2. What opportunities could help create an effective Gunpowder watershed green infrastructure network?
3. Of all the priorities discussed, which should be the highest?
4. Who else should be here or part of the process?



**American Planning Association**

*Making Great Communities Happen*

planning.org



## Facilitator Instructions

### Community Visioning

#### Workshop

Gunpowder Watershed

Green Infrastructure Planning in the

June 14, 2016

#### Facilitator Instructions

[10 Minutes: Approximately 7:00 PM - 7:10 PM]

1. Go around the table and ask participants to introduce themselves.
  - Name
  - Organization/Affiliation (if any) or Town/City they live in
2. Briefly cover some ground rules, such as:
  - One person speaks at a time
  - Be concise
  - Be respectful
  - Everyone has something valuable to contribute
  - There are no “right” answers
  - Disagree with the idea, not with the person
  - We will be collecting the handouts
3. Identify a volunteer notetaker to take notes on the flip chart.

[15 minutes: Approximately 7:10 PM - 7:25 PM]

4. Give participants 1-2 minutes to fill in some bullet points/sentences for question #1 on the handout: *What challenges limit creating an effective Gunpowder Watershed Green Infrastructure Network?*

If prompts are necessary:

- What barriers prevent a Green Infrastructure Network today?

Example answers:

- Lack of funds
- Lack of support from elected officials
- Lack of support from the public
- Take care of what you have before you build something new

Go around the table and have each participant list one challenge that has not already been listed. Have the notetaker write down the responses on the flip chart. If time permits, go around and add anything else that participants wrote down that has not already been listed.

[15 minutes: Approximately 7:25 PM - 7:40 PM]

## Community Visioning

### Workshop

Gunpowder Watershed

Green Infrastructure Planning in the

June 14, 2016

5. Give participants 1-2 minutes to fill in some bullet points/sentences for question #2 on the handout: *What opportunities could help create an effective Gunpowder Watershed Green Infrastructure Network?*

If prompts are necessary:

- How can we solve some of the challenges we identified in Question #1?
- Are there any projects that can be implemented?
- Are there any policies that can be improved or adopted?
- Are there practices that should be adopted?

Example answers:

- Plant more trees
- Change the Transfer of Development Rights program
- Encourage farmers to use conservation practices
- Encourage no mow policies
- Encourage new development in places where water/sewer infrastructure already exists

Go around the table and have each participant list one opportunity that has not already been listed. Have the notetaker write down the responses on the flip chart. If time permits, go around and add anything else that participants wrote down that has not already been listed.

[10 minutes: Approximately 7:40 PM - 7:50 PM]

6. Have participants turn over their handouts. Give them 5 minutes to fill in the answers to the last two questions. Let them know that these will be collected but not discussed as a group.

*#3. Of all of the opportunities discussed, what is the highest priority?  
[Pick only one]*

*#4. Who else should be here or part of this process?  
[People or organizations]*

7. Thank the notetaker for taking notes. Thank the participants for their participation in this important effort?

8. Collect the handouts from the participants.

9. Hand out 4x6 index card. Say:

*If you are working on a project or have an idea for a project that you want to share with us, put your contact information and a brief description of the project on this 4x6 index card.*

-----

# Community Visioning Workshop

Green Infrastructure Planning in the Gunpowder Watershed

What challenges limit creating an effective Gunpowder Watershed green infrastructure network?



What opportunities could help create an effective Gunpowder Watershed green infrastructure network?

**Tuesday, June 14, 2016**

Of all the opportunities discussed, what is the highest priority?

Who else should be here or part of this process?



# Community Visioning Workshop

Green Infrastructure Planning in the Gunpowder Watershed

## Benefits of Green Infrastructure

*Place a dot on your top three benefits.*

Clean Air	
Clean Water	
Economic Stimulus	
Control Flood Risk	
Forest Connectivity	
Heritage Preservation	
Property Values	
Quality of Life	
Natural Areas for All	
Shoreline Protection	
Wildlife Habitat	

**Tuesday, June 14, 2016**

## Small Group Comments

<b>Questions 1: What challenges limit creating an effective Gunpowder Watershed Green Infrastructure Network?</b>	
<b>RESPONSES</b>	<b>CATEGORIES</b>
Being focused on our role or job due to expectations of your role or program (adding something else to your plate)	Capacity
Effective management at all levels	Capacity
Lack of time and services to recruit and retain volunteers support	Capacity
Time commitments of potential network members	Capacity
Communication between stakeholders - single message	Communication
Lack of outreach to the community and to local businesses AND elected officials	Communication
Using unclear or complicated messages/words	Communication
Cooperation	Coordination & Cooperation
Coordination (problems) between different: counties, disciplines, agencies	Coordination & Cooperation
Creating steps and roles of organization	Coordination & Cooperation
Definition of success for who, shared definition of success	Coordination & Cooperation
Disconnects between various governmental organization	Coordination & Cooperation
Integration of GI network w/ land use decisions	Coordination & Cooperation
Integrations across scales	Coordination & Cooperation
Knowledge based coordination	Coordination & Cooperation
Many different agencies involved	Coordination & Cooperation
Multiple views from required parties involved	Coordination & Cooperation
Need for better coordination of resources to preserve/protect vital lands	Coordination & Cooperation
Number of groups involved in various jurisdictions	Coordination & Cooperation
Built (gray) infrastructure	Development
Developers	Development
Development	Development
Development	Development
Existing development	Development
Over-influence of developers	Development
tThe need to accommodate for growing population and economic development	Development
Urban sprawl (unsustainable population growth) --> habitat destruction/fragmentation	Development
Urbanization (sprawl)	Development
Zoning	Development
Can't see immediate economic benefit	Education
Educating the public about the importance of creating and sustaining a green infrastructure network	Education
Education of the public	Education
ignorance of science -- believing green "costs too much" (pits against public safety)	Education
Lack of education of public - apathy - leading to lack of support	Education

## Questions 1: What challenges limit creating an effective Gunpowder Watershed Green Infrastructure Network?

Lack of environmental understanding and sensitivity by local agencies (i.e. DPW, development review)	Education
Lack of knowledge	Education
\$	Funding
Availability of funding	Funding
Budgeting constraints	Funding
Funding	Funding
Funding (development/ land use)	Funding
Funding for in the ground projects	Funding
Funding limitations	Funding
Funding to create actionable projects	Funding
Lack of funding	Funding
Lack of funding	Funding
Lack of funding for land protection, restoration, long term maintenance of network	Funding
Limited funding for outreach, all forms of media	Funding
Money	Funding
Money	Funding
Money	Funding
Money - to support parks both state and county	Funding
Money to purchase land or easements is limited	Funding
APG	Government
APG, UXO, Security (Fedland)	Government
Bureaucracy	Government
fear of "government interference in my life"	Government
Government answers to the donors	Government
Harford County Government	Government
Policy barriers - county government and state agencies	Government
Political impetus to implementing	Government
Special interests	Government
A lot of land is agriculture--can be converted to more "green"	Other
Boundaries	Other
Full assessment of resources/ condition	Other
High land values	Other
Limited engineering oversight	Other
NIMBY	Other

**Questions 1: What challenges limit creating an effective Gunpowder Watershed Green Infrastructure Network?**

Rewards/ incentives for stewardship of lands that are part of network	Other
Runoff	Other
Short-term thinking	Other
Unintended consequences	Other
Encompassing overview planning	Planning
Long range perspective	Planning
Planning for growth and preservation	Planning
Diversity of landowners from waterfront to home front	Private Land (too many land owners)
Lack of protected land	Private Land (too many land owners)
Land owners, private	Private Land (too many land owners)
Landowner buy in -- resistance to permanent easements	Private Land (too many land owners)
Landowner commitment/investment	Private Land (too many land owners)
Large number of land owners	Private Land (too many land owners)
Much land that is not owned by the state parks is in private lands.	Private Land (too many land owners)
Ownership--public vs private especially implementing on private land	Private Land (too many land owners)
"Parcelization"	Private Land (too many land owners)
Private property ownership	Private Land (too many land owners)
Private property ownership	Private Land (too many land owners)
Changing priorities of the public	Public Attention & Support
Commitment and interest are lacking due to lack of information	Public Attention & Support
Lack of commitment	Public Attention & Support
Lack of community/education/awareness/involvement	Public Attention & Support
Lack of general public support (lack of understanding)	Public Attention & Support
Lack of public interest	Public Attention & Support
Public buy in	Public Attention & Support
Public participation	Public Attention & Support
Stasis	Public Attention & Support
(Lack of) agreement on priorities	Unclear/Competing Priorities
Competing ideals	Unclear/Competing Priorities
Competing interests/ creating gaps	Unclear/Competing Priorities

### Questions 1: What challenges limit creating an effective Gunpowder Watershed Green Infrastructure Network?

Competing priorities for attention spans/needs of community	Unclear/Competing Priorities
Competing priorities for county and state funds	Unclear/Competing Priorities
Conservation vs. preservation	Unclear/Competing Priorities
Economic development pressures and resistance of governments to prioritize green	Unclear/Competing Priorities
Land preservation commitment	Unclear/Competing Priorities
Priorities of individual orgs	Unclear/Competing Priorities
Prioritizing lands to be protected and enhanced in the area	Unclear/Competing Priorities
Varying land use priorities	Unclear/Competing Priorities
Weight of priorities vs. available funding	Unclear/Competing Priorities

### Question 2: What Opportunities could help create an effective Gunpowder Watershed infrastructure network?

RESPONSES	CATEGORIES
Flooding due to loss of vegetated stream buffer	Buffers
Forest and water buffers that still accommodate for human growth -- intelligently eliminating the "edge effect"	Buffers
Forests to shade and cool streams	Buffers
Stream buffers	Buffers
Conservation groups work with local, county state governments	Communication & Coordination
Cooperation	Communication & Coordination
Creating early public buy in	Communication & Coordination
Designate overall coordination to schedule and implement focus	Communication & Coordination
Have communication specialists/social anthropologists develop marketing/educational strategies that resonate with planners, public, elected officials and speak a common language	Communication & Coordination
Liaisons between stakeholders	Communication & Coordination
Branding to galvanize public opinion to immediacy of need for action	Communication & Coordination
Workshops!! bringing together groups of all kinds to have effective management -- everyone has a role	Communication & Coordination
Identify arguments outside of the "traditional" environment arguments	Communication & Coordination
instill public discussion of green features and value to county/ watershed	Communication & Coordination
Networking with local businesses for buy-in	Communication & Coordination

**Question 2: What Opportunities could help create an effective Gunpowder Watershed infrastructure network?**

NFWF CBT maybe impressed by system-wide coordination	Communication & Coordination
Quality of life issues--have to be focused, practical	Communication & Coordination
Include church groups - "faith based" initiatives	Communication & Coordination
Get new audiences to invest and buy into it--developers, planners, businesses, local leaders: different audiences need different messages	Communication & Coordination
Community celebration, fun, environment, support	Community Involvement & Outreach
Community celebrations, events	Community Involvement & Outreach
Community discussion and coordinating	Community Involvement & Outreach
Community involvement	Community Involvement & Outreach
Community participation in saving open space/habitat in their communities	Community Involvement & Outreach
Doing tour events of green infrastructure places ("no adult left inside!")	Community Involvement & Outreach
Events connecting to urban areas	Community Involvement & Outreach
Harford County Planning and Zoning employees "riding circuit" between stakeholder meetings	Community Involvement & Outreach
Make public feel that they are part of the process and their input is valued	Community Involvement & Outreach
Public meetings to discuss and encourage input	Community Involvement & Outreach
Public service announcements	Community Involvement & Outreach
Big bang buck project, PR to the max, saturate media market, draw out the critics up front	Demonstration Projects
Demonstration/ catalyst projects	Demonstration Projects
Effective demonstration project	Education
Scale of economic or ecosystem value to adjacent properties	Demonstration Projects
Low hanging fruit project -- demonstration project to show the community and other stakeholders the benefits and reasons for the network and how it works	Demonstration Projects
Joppa Town - community started trail	Demonstration Projects
Development control (urban reuse)	Development Policy & Regulation
Implementation of policy to promote smart development and reduce development of forest areas	Development Policy & Regulation

## Question 2: What Opportunities could help create an effective Gunpowder Watershed infrastructure network?

TDR???	Development Policy & Regulation
Analysis of costs + benefits to justify investment	Economic
Capitalize on/sell and prove economic benefits so people who control the money become the champions	Economic
Identify the multiple benefits of GI including the economic benefits	Economic
Property value increases	Economic
Value for ecotourism, hunting/ fishing - buy-in	Economic
Educating the public on the monetary value of green infrastructure	Education
Education	Education
Education in schools	Education
Education of positive consequences of green infrastructure and negatives of reduced green infrastructure	Education
Education of younger generation	Education
Encourage sustainable public practices	Education
Incorporate programs into school curricula	Education
Provide Public education/ awareness	Education
Public education	Education
Schools--clearinghouse of information	Education
Watershed stewards academy = champions (NFWF)	Education
Campaign for political funding and backing for overall coordination of GI	Funding
Funding	Funding
Funding	Funding
Funding (grant matching programs)	Funding
Funding (taxes/grants)	Funding
Funding to purchase land for connectivity	Funding
Fundraising	Funding
Program open space funds	Funding
Water utility funding for GI protection/ restoration	Funding
Ease bureaucracy for grants/lift restrictions	Funding
Addressing health issues directly - Lyme disease	Health
Can have public health benefits (AND management of deer to protect green infrastructure regeneration and control Lyme disease)	Health
Incentive programs for landowners	Incentives
Increase tax incentives for conservation/BMPs	Incentives
Land owner recognition	Incentives
Private company incentives	Incentives

**Question 2: What Opportunities could help create an effective Gunpowder Watershed infrastructure network?**

Real estate tax that gives credits to land owners who participate in the program	Incentives
Tax incentive for homes and property owners to retain and restore green spaces and forest buffers adjacent to infrastructure	Incentives
Champions!!!	Other
Federal clean and air and water regulations, Chesapeake restoration	Other
Greater flexibility to allow for the establishment of these banks	Other
Non-invasive plant species (more seasonal allergies)	Other
One on one land owner outreach for high priority parcels	Other
Prioritization, political	Other
Public prioritization (perceived criticality)	Other
The threat of rising sea levels - changing environment could motivate education and funding	Other
Expansion of state parks	Park & Open Space Expansion
include school lands and institutional lands	Park & Open Space Expansion
Redirect some money of Parks & Rec to passive parks	Park & Open Space Expansion
Build on existing protected lands	Park & Open Space Expansion
Incorporation of forest/wetland banks with conservation easements into the network	Park & Open Space Expansion
Cohesive plan positions county for federal/ state/ other funding (use GI plan to attract funding)	Planning
First of larger plan	Planning
Implement green infrastructure policy into public planning	Planning
Land use planning	Planning
Local planning process to create GI network	Planning
Strict compliance with Watershed Implementation Plans (WIPs)	Planning
Then roll out the bigger plan	Planning
Think ahead. Plan for the future. Once something is developed, it is forever.	Planning
Keep through zoning out of potential areas	Planning
Build on existing green print information/ resource data	Planning
Assessment of GI resources/ condition in watershed for multiple benefits	Planning
More trails and connectivity	Planning
Rresearch - universities	Research
Research and science-based management planning	Research
Studying how restoring natural habitats (eradicating invasive species associated with Lyme disease)	Research
Land preservation commitment	Unclear/Competing Priorities
Priorities of individual orgs	Unclear/Competing Priorities
Prioritizing lands to be protected and enhanced in the area	Unclear/Competing Priorities
Varying land use priorities	Unclear/Competing Priorities
Weight of priorities vs. available funding	Unclear/Competing Priorities

**Question 3: Of all of the opportunities discussed, what is the highest priority?**

<b>RESPONSES</b>	<b>CATEGORIES</b>
Communicating the non-environmental benefits of a green infrastructure network effectively to specific target audiences	Communication & Coordination
Communication	Communication & Coordination
Coordination of organizing groups	Communication & Coordination
Designate overall coordination	Communication & Coordination
Designate overall coordination to move things forward and keep effort going	Communication & Coordination
Effective communication	Communication & Coordination
Identify and define the infrastructure itself, the message and audience that needs to be connected to network	Communication & Coordination
Community involvement/input	Community Involvement/ Outreach
Community activities and events	Community Involvement/ Outreach
Community involvement	Community Involvement/ Outreach
Goal: gain advocates/teachers	
Press the persuadable into better behavior	Community Involvement/ Outreach
Interests for seniors	Community Involvement/ Outreach
Linkage and buy-ins (Branding) to all sectors of the community	Community Involvement/ Outreach
Outreach to all stakeholders - the risks - loss of, the benefits - putting it back	Community Involvement/ Outreach
Outreach to the public through education and incentives (helps them get behind the ideal/ process, regardless of how each person values it	
Eventually other things start to fall in place (voting, legislation, local action)	Community Involvement/ Outreach
Public buy-in	Community Involvement/ Outreach
Development policy	
De-incentivize razing undeveloped land	

**Question 3: Of all of the opportunities discussed, what is the highest priority?**

Incentivize urban infill	Development Policy/Control
Developmental control	Development Policy/Control
Proper zoning to achieve	Development Policy/Control
Smart development policy implementation	Development Policy/Control
Smart Growth Policies	Development Policy/Control
All of the above - widespread knowledge of the economic impact could facilitate all the above	Education
Broaden the span of knowledge	Education
Demonstration project <-- --> branding <-- --> education	Education
Demonstration projects that promote public awareness	Education
Educate the public	Education
Education	Education
Education	Education
Education	Education
Education -- all ages on the consequences of our "foot print" on the natural world on which we depend	Education
Education of future generations	Education
Education of sewage overflow and engineering and funding to act effectively and timely	Education
Experiential learning of young people	Education
Changing the public mindset about conservation by affecting tangible progress they can see	Education
Funding	Funding
Funding and mediated collaboration	Funding
Funding at all levels	Funding
Funding for education	Funding
Funding to achieve these priorities	Funding
Catalytic/ demo projects	Other
Back bone items that if taken care of will effect the others positivity	Other
Coastal blue-water sea kayaking trails (with rest stops)	Other
Saving what we have	Other
Sell the economic stimulus	Other
Values for working people	Other
Water protection	Other
Water, connectivity, wildlife	Other
Connect plan to compliance and funding (requirements/ rewards)	Planning
Connecting GI plan with funding and reg compliance	
Or public education and awareness of value	Planning
Planning ahead	Planning

#### Question 4: Who else should be a part of this process?

RESPONSES	CATEGORIES
Agricultural community	Agricultural
Farm Bureau	Agricultural
Farmers	Agricultural
Business representatives?	Business
Chamber of Commerce	Business
Industrial/Corporate/Commercial Entities--especially those that own land or can donate to good causes	Business
Community education and collaboration	Community Groups & Leaders
Community groups - that can help with education	Community Groups & Leaders
Community Leaders	Community Groups & Leaders
County leadership	Community Groups & Leaders
Local communities	Community Groups & Leaders
Local leaders	Community Groups & Leaders
More citizens	Community Groups & Leaders
Boy scouts	Community Groups & Leaders
Friends of Harford	Community Groups & Leaders
Developers	Developers
Developers - teach them! - Nature matters!	Developers
Development community--MBIA	Developers
Teachers	Educators
Harford County Public Schools - physical ed (younger) innovators	Educators

**Question 4: Who else should be a part of this process?**

Anita C. Leight Estuary Center (part of Chesapeake Bay Natural Estuarine Research Reserve)	Environmental Organizations
Anita Leight Estuary	Environmental Organizations
Issac Walton League (one person here but not invited)	Environmental Organizations
Izaak Walton League of America, Harford Chapter	Environmental Organizations
Maryland Environmental Trust	Environmental Organizations
Soil conservation	Environmental Organizations
Army Corps of Engineers	Government
Dept of Aging	Government
DNR Forest Service	Government
EPA (who is studying green infrastructure health issues; their office is in Philly. Bill Jenkin's group?)	Government
Transportation (SHA or County DOT)	Government
HOAs	HOAs
HOAs	HOAs
Hospitals	Hospitals
Hospitals	Hospitals
Hospitals (Upper Chesapeake/University of MD)	Hospitals
Hospitals and anchor institutions in the area	Hospitals
Land owners/farmers	Key landowners
Landowners	Key landowners
Large landowners in conservation programs--to educate and communicate	Key landowners
People with preserved properties	Key landowners
Identify and define the infrastructure itself, the message and audience that needs to be connected to network	Other
Local/community government organizations and research communities	Other
Funding agents	Other
Media/ marketing coalition - tell the story	Other
PA groups	Other
Planning representatives from more sustainable cities (i.e. Portland)	Other
Fishing & Hunting groups (Rod & Gun)	Outdoor Recreation User
Hunters	Outdoor Recreation User
"Gunpowder united mountain bike operators" USER groups	Outdoor Recreation User
Horse riders	Outdoor Recreation User
Park agencies	Parks & Recreation
Parks and rec	Parks & Recreation
Harford County Council	Politicians & Elected Officials
Legislators	Politicians & Elected Officials
Politicians	Politicians & Elected Officials
politicians	Politicians & Elected Officials

---

**Question 4: Who else should be a part of this process?**

Politicians - at the right time	Politicians & Elected Officials
Dept of Health	Public Health
Physicians/ Public Health	Public Health
Faith-based groups--a good point of contact for communities	Religious
Interfaith Partners for the Chesapeake	Religious
Big academia (Towson)	Universities & Colleges
Harford Community College	Universities & Colleges
Harford Community College (Towson)	Universities & Colleges
Universities	Universities & Colleges

Grant Project Application

**BARRY GLASSMAN**  
HARFORD COUNTY EXECUTIVE



**BILLY BONIFACE**  
DIRECTOR OF ADMINISTRATION

January 13, 2016

Erik Meyers  
Greater Baltimore Wilderness Coalition  
1655 N. Fort Myer Drive, Suite 1300  
Arlington, VA 22209

RE: Community Action Plan Proposal

Dear Mr. Meyers:

Harford County Government expresses its support of the proposed Green Infrastructure Plan for the Gunpowder Watershed. This project will provide for a unique opportunity for the three entities of Harford County, Baltimore County, and the Aberdeen Proving Ground, to work together on an inter-jurisdictional project that encompasses two sub-watersheds of the Gunpowder- the more rural, Upper Little Gunpowder Falls, and the more urban, Lower Gunpowder River.

The project will execute and organize a community visioning workshop with the assistance of your Coalition and the American Planning Association. The outcome of this workshop will be to work with the communities to identify and prioritize Green Infrastructure initiatives within the Gunpowder Watershed.

This project will be one piece towards developing a green infrastructure vision for the Baltimore region. As Harford County communities look at green infrastructure planning for resiliency in the future, it is important to ensure this action plan provides us with a framework for moving forward. It is envisioned that this project will lead Harford County in furthering its green infrastructure planning.

Utilizing the available assistance will enable Harford County, Baltimore County, and the Aberdeen Proving Ground, to continue our roles in preserving our shared natural resources, and restoring them in a prioritized fashion, which contributes so much to the economy and quality of life of the residents in our region.

*MARYLAND'S NEW CENTER OF OPPORTUNITY*

410.638.3350 | 410.879.2038 | TTY Maryland Relay 711 | [www.harfordcountymd.gov](http://www.harfordcountymd.gov)

220 South Main Street, Bel Air, Maryland 21014

THIS DOCUMENT IS AVAILABLE IN ALTERNATIVE FORMAT UPON REQUEST

We appreciate the opportunity to be involved in your planning process. Bryan Lightner, Long-Range Planner, Harford County Planning & Zoning, will serve as the primary contact for the Project. Thank you for this opportunity, and if there is any further information we can provide, please contact Mr. Lightner at 410.638.1386.

With every good wish, I remain

Very truly yours,



Barry Glassman  
Harford County Executive

cc: Bradley F. Killian, Director, Harford County Planning & Zoning  
Jenny B. King, Deputy Director, Harford County Planning & Zoning  
Shane Grimm, Chief, Long-Range Planning, Harford County Planning & Zoning  
Bryan Lightner, Long-Range Planning, Harford County Planning & Zoning  
Wallace Lippincott, Jr., Northern Sector Planner, Baltimore County Dept. of Planning  
Todd Beser, ACUB Program Manager, Aberdeen Proving Ground

BG/jbk



REPLY TO  
ATTENTION OF

**DEPARTMENT OF THE ARMY**  
**U.S. ARMY INSTALLATION MANAGEMENT COMMAND**  
**U.S. ARMY GARRISON ABERDEEN PROVING GROUND**  
**4510 BOOTHBY HILL AVENUE**  
**ABERDEEN PROVING GROUND MARYLAND 21005-5001**

15 January 2016

Erik Meyers  
 Greater Baltimore Wilderness Coalition  
 1655 N. Fort Myer Drive, Suite 1300  
 Arlington, VA 22209

Dear Mr. Meyers,

I am writing on behalf of Harford County's Community Action Plan Proposal in support of their application. As a partner of Harford County through the Joint Land Use Study (JLUS), we are well aware of their capacity for success.

The JLUS program encourages installations to work with partners to initiate and execute various projects aimed at supporting our military mission while sustaining the health and resilience of the surrounding ecosystem and community. Ecological resilience is paramount in sustaining our mission in the face of global climate change. It is also important in supporting our surrounding communities which are our primary asset in completing our mission. Developing integrated plans and processes to create, sustain, and protect green infrastructure is a logical step in increasing the resilience of our Chesapeake Bay ecosystem. We encourage our JLUS partners to seek assistance in support of the JLUS recommendations in order to stretch dwindling resources. We support Harford County in their effort to obtain services through the Greater Baltimore Wilderness Coalition.

We look forward to working with our surrounding counties to reach our mutual goals and look forward to developing a resilient ecosystem and supporting our local community. We appreciate the opportunity to have you consider funding the Harford County Community Action Plan Proposal.

 E-Signed by BESER.TO  
 VERIFY authenticity w

Todd Beser  
 Chesapeake Bay Program  
 Aberdeen Proving Ground

## Community Action Plan Proposal

1. **Title:**

Green Infrastructure Planning in two Gunpowder River subwatersheds

2. **Project Description:**

Harford County would like to secure the assistance of the American Planning Association to execute and organize a community visioning workshop, to partner with the neighboring jurisdictions of Baltimore County and the Aberdeen Proving Ground. The workshop will focus on identifying and prioritizing opportunities to use Green Infrastructure to enhance resilience in two subwatersheds: the more rural, Upper Little Gunpowder Falls and the more urban, Lower Gunpowder River.

Harford County's GI planning experiences to date

Harford County's experience with Green Infrastructure and resiliency planning has been limited within the two proposed study areas. However, in 2012 the County completed the Small Watershed Action Plan for Foster Branch, which feeds the Lower Gunpowder River and has a drainage area of 1,400 acres. This plan is available for download at: <http://www.harfordcountymd.gov/Archive.aspx?AMID=49>. One of the projects identified in the plan has been implemented; a segment of Foster Branch received a \$1 million dollar stream restoration in 2014.

Restoration practices were identified for all County owned facilities in 2011. A list of those facilities that are located within the two study areas is included as an [attachment]. The County partnered with Magnolia Middle School to reforest along stream and wetland buffers on their campus, as well as, initiate an invasive plants management program. Within the next five years, the County will also complete the Small Watershed Action Plan for Mariner Run and Rumsey Island. These two tributaries drain to the Lower Gunpowder River and have a drainage area of over 700 acres. Finally, the Joppatowne Wastewater Treatment Plant completed its Enhanced Nutrient Removal (ENR) upgrade in 2013.

Harford County has been a member of the Association of State Floodplain Managers since 1983 and its Floodplain Management program maintains a CRS Rating of 7. The Manor Rural Legacy Area, located within the proposed Upper Little Gunpowder Falls Study Area, is proposed for inclusion in the County's Priority Preservation Area Plan, which is an element of the County's draft Master Plan, known as HarfordNEXT. The County has been using an online discussion forum known as Open Town Hall for soliciting feedback during the development of HarfordNEXT. If the County is awarded this project, Open Town Hall can be used to develop online public engagement before and after the community visioning workshop.

Baltimore County's GI planning experiences to date

The proposed Lower Gunpowder River Study Area within Baltimore County is within the Coastal Rural Legacy Area, designated by the Maryland Department of Natural Resources. Information is available on the County's website:

(<http://www.baltimorecountymd.gov/Agencies/planning/landpreservation/coastalrurallegacy.html>) and a full plan for the preservation and enhancement of the rural resources is available upon request of the Baltimore County Department of Planning, Towson, MD contact [wlippincott@baltimorecountymd.gov](mailto:wlippincott@baltimorecountymd.gov). The Coastal Rural Legacy Area includes the highest concentration of natural resources values in the County (forest and agricultural lands, as well as both fresh and tidal wetlands). Since the RLA was created, a contiguous block of over 1,500 protected acres has been created on the Back River Neck peninsula. There are significant opportunities for increasing public access to the Chesapeake Bay and to protect shorelines.

The proposed Lower Gunpowder River Study Area is also within the Middle River and Tidal Gunpowder Small Watershed Action Plan, Vol. 1, prepared for Baltimore County Department of Environmental Protection & Sustainability by Parsons Brinckerhoff in February of 2012. This plan is available for download at:

<http://resources.baltimorecountymd.gov/Documents/Environment/Watersheds/swapareafvolu1.pdf> This plan identifies water quality improvements for the area, including such treatments as rain gardens, stormwater detention, and riparian forest buffer plantings.

The proposed Upper Little Gunpowder Falls Study Area is within the Manor Small Watershed Action Plan, which was just initiated in November 2015. This area is also within the Manor Rural Legacy Area, which includes many productive horse and cattle farms and the Little Gunpowder Falls, a Class 3 trout stream and important Chesapeake tributary. Easement purchases fill in and round out an existing large block of preserved private lands enrolled in MET and MALPF easements.

#### APG's GI planning experiences to date

Climate change, storm surge, and coastal resilience are of the utmost importance to the Department of Defense and Aberdeen Proving Ground. In 2014, DoD released the *2014 Climate Change Adaptation Roadmap* highlighting potential mission impacts and vulnerabilities of different climate change scenarios. The geographic nature of Aberdeen Proving Ground (APG) results in an increased vulnerability to several climate change scenarios including sea level rise, precipitation changes, changes in storm patterns, and atmospheric temperatures. APG, through its Master Plan and Integrated Natural Resource Management Plan (INRMP), attempts to minimize mission impacts from climate change. As a premier Research, Development, Test, and Evaluation (RDT&E) installation, APG is constantly developing ways to deal with new and emerging threats. Climate change and the associated impacts are a real threat to their mission and proper planning is necessary to protect the invaluable resources on APG. By 2050, MD DNR

projects areas of the western shore of the Edgewood Arsenal along the Gunpowder River will be under water.

#### GI recognition

The degree to which connections between Green Infrastructure and resilience are recognized is relatively low and typically surfaces around the time of major storm events, such as Hurricane Sandy. Emphasizing the connection between Green Infrastructure and resilience is vital to preparing for natural hazards. Despite the fact Green Infrastructure for resilience is not a topic that is highly publicized; awareness must be on the rise, as smaller storms cause nuisance flooding that affects people's daily lives, both in upland and coastal areas. The practice of infiltrating stormwater at the source is becoming increasingly more main stream, when new development projects, both private and public, demonstrate how it's done.

Some of the obstacles that have hindered Green Infrastructure planning to date, have been reaching consensus on where wildlife hubs and corridors should be delineated, with a particular lack of understanding on current habitat assessments. Once a network is established, the next challenge is to determine the best practices for maximizing community resilience, what the practices will look like, and who shares in the costs. Due to the perceived high costs of implementing these practices, coupled with the fear of potential failure, communities are often limited to creating demonstration projects with the help of grant funding.

#### Project Goals

Harford County desires to secure the expertise of the American Planning Association to engage regional leaders and community groups on Green Infrastructure and resiliency planning. The primary goal of the project is to establish the parameters for delineating a Green Infrastructure network within the study areas, with the secondary goal being the identification and prioritization of land acquisition and restoration projects. A longer term goal for Harford County will be to use the parameters established during the project to help delineate a county-wide network and develop a formal Green Infrastructure Plan. The development of a Green Infrastructure Plan has been identified as a goal within HarfordNEXT.

### **3. Stakeholders:**

The following list of stakeholders will be invited to the community visioning workshop and will participate in the development of the Community Action Plan:

1. Harford County
2. Baltimore County
3. Aberdeen Proving Ground
4. Elected Officials
5. Community Advisory Boards and other community groups

- 6. Key State Agencies
- 7. Primary Land Conservancy Groups
- 8. Major businesses in the environmental restoration industry
- 9. Agricultural community

The roles of individual stakeholders will be further defined during the planning process, but each one will be able to influence the project by participating in the workshop, promoting the project to their respective constituents, and advertising updates on the progress.

**4. Primary Contact Person:**

Bryan Lightner  
 Environmental Planner  
 Department of Planning and Zoning  
 Harford County Government  
 220 South Main Street  
 Bel Air, MD 21014  
[blightner@harfordcountymd.gov](mailto:blightner@harfordcountymd.gov)  
 410-638-3103 ext. 1386

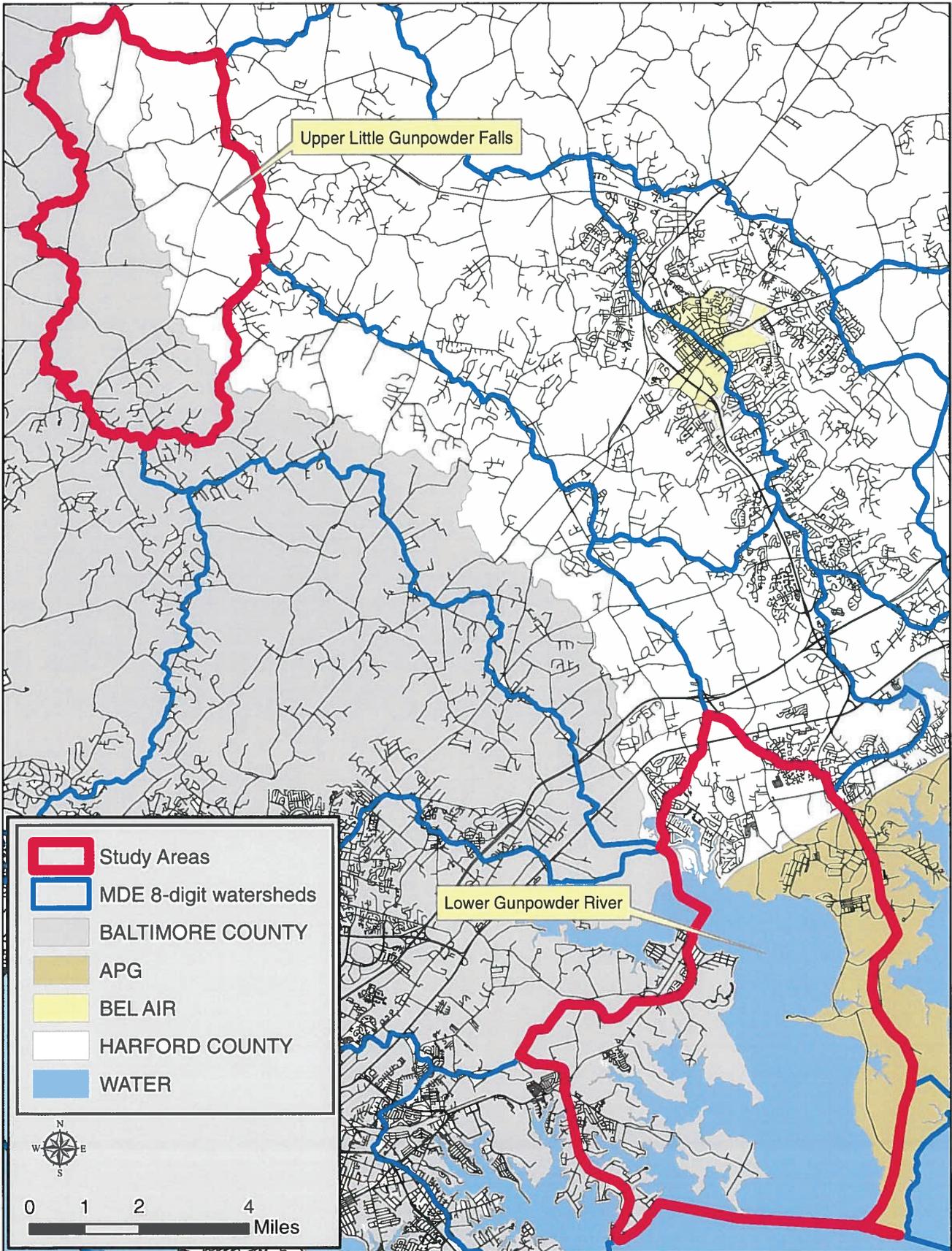
Mr. Lightner just completed a \$350,000 grant from MD DNR known as the Governor’s Stream Restoration Challenge Grant. As part of the grant, reforestation efforts were coordinated with Harford County Public Schools and the Harford Land Trust, which recently acquired land using funds from APG as part of the Army’s Compatible Use Buffer (ACUB) program. In the past, he and his colleagues have also participated in regional planning efforts with Baltimore County related to the Sustainable Forestry Council and the Reservoir Technical Group. Mr. Lightner has project management experience working across multiple agencies, jurisdictions, and community groups to accomplish project goals.

Mr. Lightner has been involved with the Greater Baltimore Wilderness Coalition since its inception and is eager for this project to succeed. Mr. Lightner proposes to engage local leaders and community groups within the study areas, with the goal of demonstrating how Green Infrastructure planning can benefit communities throughout the region. He maintains a good working relationship with the planning staff in Baltimore County and the Aberdeen Proving Ground, and if awarded this project, Mr. Lightner will use this experience as a springboard to develop Harford County’s Green Infrastructure Plan.

[Resume Attached]

**5. Letters of Support:**

- Letter from Harford County Executive Barry Glassman
- Letter from APG Chesapeake Bay Program Todd Beser



Harford County Facilities located within the proposed study areas - Potential Green stormwater infrastructure projects

Address	City	Zip	Type	Name	Assessment
901 Trimble Road	EDGEW OOD	21085	Schoo l	Magnolia ES, Magnolia MS	Potential for implementation of BMP at outfall. Potential for downspout disconnection to direct roof top runoff to pervious area. Large open space area available. Good tree planting opportunities.
555 Joppa Farm Road	JOPPA	21085	Schoo l	Joppatowne HS	Part of the property is treated by onsite BMP. Limited tree planting opportunities as all the open space is occupied by play fields.
211 Stillmeadow Drive	JOPPA	21085	Schoo l	Riverside ES	A small strip of open area behind the ball fields on the east side of the property can be used for tree planting. A BMP can be added at the outfall on the Southside to treat runoff. Potential for BMP in the parking median and rain gardens at downspouts.
655 Towne Center Drive	JOPPA	21085	Librar y	Joppa Library	Very small property. Potential to add a BMP at the outfall to treat impervious runoff.
4352 Norrisville Road	WHITE HALL	21161	Fire Statio n	Jarrettsville Vounteer Fire Company	Good open space available for tree planting. A rain garden/small BMP can be installed on south side of the property to capture runoff.
1601 Hanson Road	EDGEW OOD	21040	Fire Statio n	Joppa Magnolia Volunteer Fire Company	Existing BMPs treat runoff from impervious area. Good tree cover on the property no improvements recommended.
1702 Trimble Road	EDGEW OOD	21040	Park	Edgewoodc Recreation Park	Property occupied by forested area and recreational fields. Existing BMP treats runoff from fields and parking area.
100 Kearney Drive	JOPPA	21085	Park	Mariner Point Park	Medians in the parking lots can be converted to bioretention cells to treat impervious runoff. Good tree cover on property. Also possible rain garden around building to collect roof runoff.
664 Trimble Road	JOPPA	21085	Park	Robert Copenhaver Park	Good forest cover. Part of the runoff from parking lot and field is treated by the onsite pond the rest sheetflows into the woods. No improvements recommended.
1219 Clover Valley Way	EDGEW OOD	21040	Park	Woodbridge Park	Entire property covered by woods. No improvements recommended.

## THE PURPOSE OF THE CPAT INITIATIVE

The purpose of the Community Planning Assistance Team (CPAT) initiative is to serve communities facing limited resources by helping them address planning issues such as social equity and affordability, economic development, sustainability, consensus building, and urban design, among others. By pairing expert urban planning professionals from around the country with residents and other stakeholders from local communities, the initiative seeks to foster education, engagement, and empowerment. As part of each team's goals, a community develops a vision that promotes a safe, ecologically sustainable, economically vibrant, and healthy environment.

APA staff works with the community, key stakeholders, and the host organization(s) to assemble a team of planners with the specific expertise needed for the project. The team meets on-site for three to five days, during which time a series of site visits, focused discussions, and analysis are performed. On the final day, the team reports their results back to the community. A more detailed report is issued to the community at a later date.

### GUIDING VALUES

APA's professional institute, the American Institute of Certified Planners (AICP), is responsible for the CPAT initiative. It is a part of APA's broader Community Assistance Program. Addressing issues of social equity in planning and development is a priority of APA and AICP. The Community Assistance Program, including the CPAT initiative, was created to express this value through service to communities in need across the United States.

Community assistance is built into the professional role of a planner. One principle of the *AICP Code of Ethics and Professional Conduct* states that certified planners shall aspire to "seek social justice by working to expand choice and opportunity for all persons, recognizing a special responsibility to plan for the needs of the disadvantaged and to promote racial and economic integration. Another principle is that certified planners should aspire to "contribute time and effort to groups lacking in adequate planning resources and to voluntary professional activities."

### PROGRAM BACKGROUND

In recognition of the key role urban and regional planners play in shaping vibrant, sustainable, and equitable communities, the APA Board of Directors established the "Community Planning Team" initiative in 1995. This initiative resulted in a pro bono effort to assist an economically struggling African American community in Greensboro, North Carolina. APA has continued to develop a pro bono planning program that provides assistance to communities in need.

Another Community Assistance Program initiative is the Community Planning Workshop, which is held in the host city of APA's National Planning Conference every year. The workshop is a one-day event that engages community leaders, citizens, and guest planners from around the country (and abroad) in discussing and proposing specific solutions to urban planning challenges. Workshops typically begin with an introduction of individuals involved and a tour of the community, neighborhood, or site. Participants form breakout groups that begin by discussing existing issues, then participants brainstorm new ideas based on community needs and sound planning techniques. Each breakout group "reports out" on its results to the entire group. Facilitators then lead a discussion to form consensus around future goals and ways to achieve these goals. Upon the conclusion of the workshop, the local community composes a final report that incorporates workshop results and specific actions that local officials could take to turn the project vision into reality.

In 2005, program efforts were increased after Hurricane Katrina in the Gulf Coast region to include a number of initiatives and projects in the affected cities of Henderson Point, Mississippi, and Mandeville, Slidell, and New Orleans in Louisiana. Another Gulf Coast recovery project included the Dutch Dialogues, which brought American planners together with Dutch experts to transform the way that Louisiana relates to and manages its water resources.

AICP broadened the scope of the CPAT program with its 2009 project in Buzzard Point, a neighborhood in Southwest Washington, D.C. Over the course of the site visit, the team met with more than 40 neighborhood groups, government agencies, residents, and other stakeholders. The team advised community leaders on long-range strategies to strengthen existing and proposed transit links and increase accessibility, improve affordable housing developments, position the area as a major gateway to the city, and to deal with dominant industrial areas within the neighborhood.

The last several years of completed projects in Matthews, North Carolina; Story County, Iowa; Maricopa, Arizona; Wakulla County, Florida; Dubuque County, Iowa; La Feria, Texas; Franklin, Tennessee; and Lyons, Colorado are important landmarks in the development of the CPAT program as an ongoing effort. They mark the inauguration of CPAT as an ongoing programmatic effort. CPAT has become an integrated part of APA's service, outreach, and professional development activities.

More information about APA's Community Assistance Program and the Community Planning Assistance Teams initiative, including full downloadable reports, is available at: [\*\*www.planning.org/communityassistance/teams\*\*](http://www.planning.org/communityassistance/teams)

## Meet the Harford CPAT Team



**Jean K. Akers, AICP, RLA**, is senior associate with Conservation Technix, which provides park, trail, conservation, and community forestry planning in the Pacific Northwest and beyond. Akers works with local governments and conservation organizations planning their park and trail systems and acquiring conservation lands. She is an avid hiker and expresses her professional expertise through many forms of trail system planning, design, and management. A professional landscape architect and certified planner, Akers also has degrees in agriculture, horticulture, and landscape architecture. She served three consecutive terms on the board of the Society of Outdoor Recreation Professionals to promote the professional development of outdoor recreation planners and related professionals who plan recreational uses of land and water across public and private venues. Akers has taught ecological site design and conservation planning (Conway School of Ecological Design), municipal planning (Pennsylvania Municipal Planner’s Educational Institute), and college courses in horticulture, urban forestry, and landscape design. She also teaches sketching and drawing as a means to record and observe plants, landscapes, and nature.



**Christina Arlt, AICP**, is a senior planner in the Office of Smart Growth at the Delaware Valley Regional Planning Commission (DVRPC) in Philadelphia. She also coordinates DVRPC’s Municipal Outreach Program. Arlt has experience working on master plans, environmental resource inventories, farmland preservation plans, open space & recreation plans, transit plans, and waterfront plans. She is currently involved in a municipal water quality project that is part of the Delaware River Watershed Initiative. Prior to working at DVRPC, Arlt worked in the planning and zoning department of Warwick Township in Bucks County, and spent a year as a Fulbright English teaching assistant in Hamburg, Germany. She obtained her master’s degree in city planning with a focus on land-use and environmental planning at the University of Pennsylvania, where she also obtained a certificate in GIS and spatial analysis. Her undergraduate degree is in urban & environmental studies from Franklin & Marshall College. Arlt is active in numerous professional organizations and nonprofits, including the APA Pennsylvania Chapter Southeast Section.



**Jack Heide, AICP**, serves as a resiliency manager with the Sustainable Jersey Resilience Program. In this capacity, Heide works with Sandy-affected communities across South Jersey, connecting municipal leaders with long-term recovery and resiliency planning resources and technical assistance. Prior to joining Sustainable Jersey, Heide worked as an associate planner for Douglas County, Washington, where he administered land-use and environmental applications, and upheld subdivision, zoning, and building codes. He also worked as a research associate for the Oregon Partnership for Disaster Resilience, where he worked on a systems-based approach to combining natural hazards mitigation with climate change plans for the cities of Eugene and Springfield, Oregon. Heide was a captain and civil affairs officer in the U.S. Army, deployed to Afghanistan to support redevelopment operations in the government, agriculture, public health, and education sectors of the country. He holds a master’s degree in community and regional planning from the University of Oregon, where he concentrated on natural hazards mitigation in the context of land-use planning.



**Nicole Hostettler, AICP, PP, LEED**, Green Associate, is a city planner at the Philadelphia Water Department in the Office of Watersheds, implementing green stormwater infrastructure projects as part of the Green City, Clean Waters program since 2012. Prior to this, she was the senior planner with the Township of Cherry Hill, New Jersey, for nine years, where she authored several master plans and a new zoning code. Before then, Hostettler was a planner for the Delaware Valley Regional Planning Commission, working on regional bicycle and pedestrian issues. She currently serves as the secretary for the APA Pennsylvania Chapter Southeast Section and the Policy Committee for the Delaware Valley Green Building Council. After graduating from Michigan State University and serving two years in Chicago with Americorp VISTA, she graduated from Rutgers University with a master's degree in city & regional planning. Originally from the Detroit area, she currently resides in South Philadelphia.



**Eric Roach**, APA program associate, currently works in the Professional Practice department focusing on the AICP and ASC certifications, the CPAT program, and providing member support. He has experience managing certification and training programs focused on energy-efficiency building maintenance, social justice leadership principles, and professional certification.