Appendix I: Examples of Local Engagement Successes, including specific strategies and pilots, in Phase I and Phase II WIPs

These are the steps that could be taken that either build off successes in the Phase I and/or Phase II WIP local engagement process, or, may be used to improve this engagement in Phase III WIP development and implementation.

- Target local engagement at the county level, which helps cover larger geographic areas and allows larger groups of stakeholders to think about how they could work together. Specific examples include Lycoming County's Nutrient Trading program where point and nonpoint sources worked together, and York County that developed a regional Pollution Reduction Plan for stormwater.
- Identify the needs of each source sector by identifying or establishing groups that would be representative of that sector.
    - An example is West Virginia's establishment of a multi-agency effort (West Virginia University-Extension and West Virginia Department of Agriculture) to solicit feedback from producers in their Bay watershed counties on current and future BMP implementation and water quality attitudes. This helped ensure that outreach was tied to the sector's needs.
- Periodically convene regional meetings, targeted at local government stakeholders and the various source sectors (e.g. developed lands, agriculture) coming together to share perspectives about advancing BMP implementation.
- Convene regular webinars on Phase I and Phase II "best practices" (invitations to include the original TMDL webinar distribution list, stakeholder assessment participants, as well as other suggestions made by the jurisdictions and partnership teams and workgroups).
- Conduct more working level meetings where there is information sharing about implementation planning and progress, and how that information can be directly incorporated into decision support tools, instead of a continuous feedback loop of submission, review, and correction.
- Target the unregulated community and clearly articulate their share of responsibility under the WIP. This may require a regional solution and could, for example, take the form of leveraging property owner funds to pay for lower-cost pollution controls outside of these non-regulated sectors. **Additional examples would be helpful with how to engage the unregulated community.**
- Directly involve those groups with decision-making power and the necessary skill set, who are responsible for securing commitments to adopt necessary legislation and other approvals for key elements of the WIP.
- Technical tools must be available and accurate to support local implementation efforts and facilitate improved tracking, reporting and verification of best management practices to ensure proper credit for pollutant load reductions is reflected in Bay Model progress scenario output.
- Allow enough time during the Phase III WIP development process for localities to finalize and gain approval from governing bodies on potentially expensive strategies and commitments.
- Specify target loads and required load reductions to local jurisdictions early in the process, so adequate time is provided for these localities to invest in the process.

A list and description of success stories, including local engagement pilots is as follows:

- 2011 Eastern Panhandle Planning and Development Council Stormwater Matrix for its Developed Lands Sector. http://www.region9wv.com/Portals/0/SWM_Matrix_Inventory/Developed_Lands_Stormwater_BMP_Inventory.pdf

This database served as both a needs and capacity assessment tool for Local Governments in West Virginia. The database identified a series of Best Management Practices that Local Governments were either already doing, or could practically achieve within 3-5 years.

This tool proved very helpful to guide Phase II WIP strategy development and 2-yr milestone commitments.

- Region 9 WIP Coordinator Position

The Eastern Panhandle Planning and Development Council (Regional Council of Governments) created a circuit rider position to provide technical assistance to its local jurisdictions. The Region 9 WIP Coordinator assists in developing stormwater ordinances, MS4 Stormwater Programs, environmental program grant writing and management, Green Infrastructure Planning, and stormwater financial strategies.

- TetraTech analyzed implementation potential in some pilot subwatersheds.

This helped WV's WIP team realize that TRP (degraded pasture) landuse was overestimated in the watershed model, which helped us to come up with more realistic input decks.

Successful local engagement with nontraditional partners (e.g. schools, churches).

- Apple Valley Waste

The Region 9 WIP Coordinator has developed a successful outreach program with the largest private solid waste (curbside pickup) hauling company in the region. The Coordinator provides environmental educational content for the company's quarterly newsletter that is distributed to over 100,000 homes and businesses.

- The Eastern Panhandle Planning and Development Council hosted a series of stakeholder meetings with the representatives from Morgan, Berkeley, and Jefferson Counties, and the Municipalities that reside within their boundaries. Separate meetings were held for the Wastewater, Local Leaders, and Developed Lands sectors to reach a common consent among each workgroup and proposed strategies identified in the Phase II WIP. A final Summit style meeting was conducted as a finale to the process where all sectors where brought together for a final presentation of the strategies.

Of the projects listed below, the Bladensburg, Town of Forest Heights, Hyattsville green street at University Hills, and the Town of Takoma Park are completed. These projects were all funded for designs, charrettes, or planning efforts.

- Stormwater BMPs will be built this summer at a school in the City of Charlottesville, VA.
- The Jefferson Greenway at 10th Street Green Street Corridor with the Alliance for the Chesapeake Bay as the lead applicant just received permits and is or will be under construction asap.

- The Town of Bethel has a small green street with multiple partners leveraging funds. This project is under construction now.

Abstracts:
Town of Bladensburg abstract:

The applicants seeks funds to support the Port Towns' Green Surfaces - Green Jobs Initiative, which would identify the pollutant load issues of greatest concern based on the Anacostia Restoration Plan, conduct a community-wide impervious surfaces study to identify priority sites for improvement, and create basic designs that could be used to promote green surfaces (roofs, parking lots & streets) to address the targeted pollutants. The process would include community charrettes, outreach materials, and 4 basic designs.

Town of Forest Heights abstract:

The project proposes to reduce urban runoff by creation of a rubric that identifies BMP practices and techniques that can be acted on by homeowners, used by students and teachers for instruction. The applicant may use this rubric for future planning within the Town, while working with PaveDrain and the DC Job Corps will provide job training to local students.

City of Hyattsville abstract:

The applicant requests funds to develop a complete Green Street conceptual design for the University Hills section of Hyattsville. The City will be investing $2 million in infrastructure improvements to this section of the community and is interested in incorporating green infrastructure, including techniques identified in the attached Center for Watershed Protection memorandum, to reduce pervious surface and improve the stormwater management.

Town of Takoma Park abstract:

The applicant proposed to create a plan for the conversion of a heavily used two-lane urban street into a green street with low-impact stormwater facilities and safe sidewalks and crossings. Currently, almost no stormwater infrastructure exists; stormwater runs to Sligo Creek and Long Branch creek. We have access to $896,000 for the project; planning funds will help move the project forward quickly and may provide a model for similar roads without stormwater infrastructure.

City of Charlottesville (in progress) abstract:

The City of Charlottesville intends to partner with the Charlottesville City Schools to retrofit an existing parking lot at Charlottesville High School (CHS) by converting over 26,000 square feet of asphalt to permeable pavers, bioretention, and restored forest while treating runoff from over three acres of the CHS campus. In addition to treating pollutants and reducing stormwater runoff, the project will provide educational opportunities for CHS and the community at large. The project is located within the impaired watersheds of Schenks Branch, Meadow Creek, and the Rivanna River.

DDOE (in progress) "A green "o"vation project (ecological restoration and re-opening of o street):

The District Department of Environment (DDOE), in partnership with the Department of General Services (DGS), is proposing to reopen a portion of O Street, NW as part of the reconstruction of Dunbar High School. O Street, NW originally ran straight through the middle of the Dunbar High School campus, but was cut off due to construction of the school back in the 1950's. DDOE has worked with DGS and the District Department of Transportation to design a new street which will include 6,125 square feet of bioretention cells to retain 1.2" of stormwater from a 52,877 square foot drainage area.

Town of Bethel (in progress) abstract:

The Town of Bethel is a very small and historic village community which lacks any stormwater infrastructure. The town would like funding assistance to implement green infrastructure and Green Street practices to reduce flooding and provide water quality treatment, as well as reduce erosion to the banks of the Broad Creek in critical locations. The project includes the implementation of bioretention areas, a living shoreline, Filterra units, as well as erosion and sediment control measures.

Alliance for the Chesapeake Bay (in progress) abstract:

The Alliance for the Chesapeake Bay will partner with the City of Richmond, 3North, Water Street Studio, and Capital Trees to continue implementation of the "Greening Virginia's Capitol" project to complete design and begin implementation of Richmond's green corridor on 10th Street, stretching from the Capitol to the James River. This green corridor will be constructed using "green street" technologies that reduce polluted stormwater runoff from entering the City's combined sewer overflow system (CSO) and the James River.

University of Maryland

Anacostia Watershed—Prince Georges County, Maryland

The University of Maryland will implement a two-pronged project to help restore impaired sub-watersheds within the Anacostia River Watershed. The first prong will be to design low impact development (LID) solutions to retrofit school roofs, parking lots, service drives, and sport facilities in an effort to reduce runoff discharge and improve water quality. The second prong will be to develop lesson plans that will integrate the LID solutions into outdoor laboratories. The project will be piloted at New Hope Academy in Landover Hills, Maryland.

University of Baltimore
Patapsco Watershed—Baltimore, Maryland

The University of Baltimore will use DNA-based microbial source tracking to estimate the relative contribution of human and dog fecal bacteria to outfalls from the Mill Corridor, which is a stretch of the lower Jones Falls stream that runs through two historically blue collar neighborhoods. The data from the effort will be provided to the City of Baltimore and the community for prioritizing infrastructure repairs to reduce pet waste. The project team will train community volunteers to monitor water pollution, and educate middle and high school students about their local stream ecosystems. A long-term outcome of the project is expected to be lower bacteria loads in the lower Jones Falls stream and the Inner Harbor.

Smithsonian Anacostia Community Museum
Anacostia Watershed—Washington, DC

Through its Citizen Scientist Project, the Smithsonian Anacostia Community Museum will engage at-risk high school students in water quality monitoring activities throughout Watts Branch, a tributary to the main basin of the Anacostia Watershed. In addition, the museum will schedule community outreach presentations to discuss the results of these monitoring activities and educate the community on the water quality conditions of the tributary and any associated health effects.

UNIQUE PARTNERSHIP APPROACH PROVIDING MULTIPLE BENEFITS IN MD COUNTY
Prince George's County, MD; November 19, 2015

Progress – A unique, community-based public-private partnership (CBP3) – fostered by EPA's Mid-Atlantic Water Protection Division (WPD) – is underway in Prince George's County, MD, to generate "faster, cheaper, greener" controls for stormwater and provide considerable benefits for the local economy and the community.

General Information:
EPA partnered with the county to provide support for the establishment of the 30-year, $100 million Clean Water Partnership between the county Department of the Environment and Corvias Solutions to retrofit and maintain thousands of acres of public and private land with green infrastructure. A key benefit of the innovative Partnership is the creation of a local "stormwater management industry" spawning a significant number of local jobs and a variety of training opportunities.

Over three years, Corvias is converting an initial 2,000 acres of impervious surfaces using green features to soak up or treat the stormwater – with an option to retrofit an additional 2,000 acres if performance goals are met.

GREENING AMERICA'S CAPITALS WITH EPA ASSISTANCE – RICHMOND BENEFITS
Richmond, VA, March 26, 2015

Greening America's Capitals is an EPA program conducted in collaboration with the U.S. Department of Housing and Urban Development and the U.S. Department of Transportation through the Partnership for Sustainable Communities.

EPA is funding a design team to develop options for improving an area of Jefferson Avenue that links the historic neighborhoods of Church Hill and Union Hill. Meetings in the spring of 2015 will support planning of the implementation phase.

The team will build on a community vision and ongoing work to increase pedestrian and cyclist safety, develop pocket parks and continue the area's economic comeback. The plans are expected to include rain gardens and urban food gardens, expanding the city's efforts to use green infrastructure to reduce stormwater pollution.

GREEN STREETS GRANTS HELP BALTIMORE, OTHER COMMUNITIES
Baltimore, MD, June 18, 2015
Progress Story: Fifteen Green Streets, Green Towns, Green Jobs (G3) grants for 2015 will support projects in three states, including the conversion of hard surfaces to green space at Sarah's Hope, a homeless shelter in a troubled Baltimore neighborhood. The $75,000 grant to Parks & People Foundation will be used to tear up the hard surfaces at Sarah's Hope that during storms send rain water rushing into streets and drains, leading to flooding and pollution problems. The surfaces will be replaced with lawn, shade trees, native plants and other green features that will let the rain soak in.

The G3 grant will tie into a larger Baltimore City-led project designed to create public open space, a playground area and a community garden at the site, which is now almost fully covered with impervious surface. The work will improve the property for shelter residents and the community at large, and transform the appearance of the Sandtown-Winchester neighborhood.

PLAN SETS STAGE FOR GREEN FEATURES IN CITY SUBJECT TO SEA LEVEL RISE
Norfolk, VA; October 8, 2015
An EPA-financed plan will help the Knitting Mill Creek watershed in Norfolk, VA, move ahead in using green infrastructure to control stormwater pollution in a community vulnerable to sea level rise. John D. Stewart of the Lafayette Wetlands Partnership said the groups are proceeding on several fronts to keep momentum behind the report. The team has obtained $10,000 toward a demonstration buffer and walkway along Knitting Mill Creek to test materials, plants and aesthetics before committing to a full installation, and has engaged a graduate student in civil engineering to study in more depth the influence of sea level rise on green infrastructure along the creek. "Adaptation to sea level rise is in the foreground here in Norfolk, and we want to understand the life cycle of costly installations along the riverfront," Stewart said in an e-mail. The partners are also working with the city to link up the plan's recommendations with a living shorelines project already underway.

PREVENTING POLLUTION TO LOCAL WATERS, BAY; PRESERVING HISTORIC NATURAL BRIDGE IN VA
Rockbridge County, VA, April 30, 2015
Progress/Success Story: In helping to preserve one of the oldest tourist destinations in the country – a spectacular natural land bridge in Virginia – EPA funding is protecting the surrounding land from development that would have impacted local waters and the Chesapeake Bay. Using a $9.1 million EPA Clean Water State Revolving Fund (CWSRF) loan, the historic Natural Bridge in Rockbridge County,

Virginia (just north of Roanoke) has been preserved as part of a larger land conservation project involving 1,500 mostly forested acres.

Without the CWSRF loan to close the funding gap for the conservation easement, the private property could have been sold, making the forest available for residential and commercial development.

WATER REUSE PROJECT IN VA PROVIDING MULTIPLE BENEFITS
Fairfax County, VA; Sept. 17, 2015
Progress Story: More than 500 million gallons a year of treated wastewater that would otherwise be discharged into a tributary of the Chesapeake Bay are instead being put to beneficial reuse to cool a waste-to-energy plant and irrigate a golf course and ball fields in Fairfax County, Virginia. Fairfax County receives about $1 million a year from the sale of its reclaimed water, according to Michael McGrath, director of the Wastewater Treatment Division of the county's Department of Public Works and Environmental Services. By preventing volumes of treated wastewater from entering Pohick Creek and eventually the Potomac River and Chesapeake Bay, the project has helped the plant stay under its cap on nitrogen and phosphorus pollution. The water reclamation project is conserving potable water that the energy facility, golf course and fields would ordinarily use, and rewarding those customers with a 25 percent discount on their water bills. Recycled water is most commonly used for agriculture, landscape, public parks, and golf course irrigation, as well as cooling water for power plants and oil refineries, industrial process water, toilet flushing, dust control, construction activities, concrete mixing, and artificial lakes.

STREAM RESTORATION PROJECT SHOWS BENEFITS OF REMOVING LEGACY SEDIMENTS
West Lampeter Township, PA; September 10, 2015
Progress Story – A stream restoration project near Lancaster, PA, is serving as a showcase for the benefits of removing legacy sediments and restoring a natural floodplain. After the restoration, the Pennsylvania Department of Environmental Protection (PADEP) surveyed plant, amphibian, fish and aquatic macroinvertebrate communities, documenting the development of wet meadow habitat, ideal for natural fauna and indicative of a return to a natural ecosystem. EPA's Office of Research and Development (ORD) and collaborators at Franklin & Marshall College and three universities found a "remarkable transformation" to marshy conditions sprouting native wetland plants, attracting wetland birds, processing nutrients, and stifling sediment loads. Scientists estimate that the wetlands restoration is preventing 100 tons of sediment and 230 pounds of phosphorus from entering the stream each year – helping in Pennsylvania's efforts to restore local waters and the downstream Chesapeake Bay. ORD worked with Region III to provide $200,000 in 2011 through the Regional Applied Research Effort (RARE) for nutrient and sediment monitoring, and EPA provided funding from a Wetland Program Development Grant to collect post-restoration data. PADEP provided more than $1 million in Growing Greener grants and matching funds. The Big Spring Run project – with its potential for replication – has many partners, including PADEP, the U.S. Geological Survey, LandStudies, Inc., and a host of organizations, colleges and universities.

I. EPA Best Practices

a. http://www.epa.gov/sites/production/files/2015-07/documents/nationalwaterprogrameodreportfy2014webfile.pdf
    a. Wastewater Optimization -see page 39
    b. Virginia's Nutrient Credit Trading Program see page 45

c. Enhancing the Availability of Clean Water and Drinking Water State Revolving Funds to States -see page 51

b. http://www.epa.gov/sites/production/files/2015-06/documents/2013_full_report_0.pdf
    a. CWSRF Financing Septic System Repairs By Partnering With State Housing Agencies – page 35
    b. Demonstrating Successful Community- Based Public-Private Partnerships (CBP3) for Affordable Green Infrastructure – page 55

c. http://www.epa.gov/sites/production/files/2015-06/documents/ow_end_of_year_bpfy2012_report.pdf

    a. Watershed Resources Registry— A Data-Driven, Integrated Decision Support Framework and Tool – page 39

    b. Institutionalizing Green Infrastructure via Municipal Stormwater Permits – page 41