Funding Opportunities for Supporting the Jurisdictions Development of Enhanced BMP Verification Programs

The Chesapeake Bay Program's *Chesapeake Bay Basinwide BMP Verification Framework* sets the path forward for the partnership, challenging our jurisdictional partners to enhance their existing BMP tracking, verification, and reporting programs. The *Basinwide Verification Framework* also calls for the commitment of resources needed to support enhanced and expanded BMP verification. There are currently four specific sets of financial and technical support resources available to jurisdictional partners to help support their ongoing efforts to enhance and document their BMP verification programs.

Chesapeake Bay Regulatory and Accountability Grants—EPA established the Chesapeake Bay Regulatory and Accountability Program (CBRAP) grants to provide the seven Chesapeake Bay watershed jurisdictions with the funds needed to establish, strengthen and expand their jurisdictions' regulatory, accountability, assessment, compliance, and enforcement capabilities in support of reducing nitrogen, phosphorus, and sediment loads delivered to Chesapeake Bay to meet the water quality goals of the *2014 Chesapeake Bay Watershed Agreement* and the 2010 Chesapeake Bay Total Maximum Daily Load (TMDL). These grants are awarded non-competitively. EPA is confident that the CBRAP grant program will continue for the foreseeable future. EPA has received funding for this grant program every year since 2010, and EPA does not have any reason to expect funding for the CBRAP grant program to discontinue. Within its 2014 *Chesapeake Bay Program Grant and Cooperative Agreement Guidance* and the draft 2015 Grant Guidance recently distributed to partners for review and comment, the EPA took extra steps to clearly spell out that these CBRAP grants can be used to fund all aspects of the jurisdictions' BMP verification programs—from design and enhancement to documentation to ongoing implementation (Attachment A).

Chesapeake Bay Program Watershed Implementation Plan Assistance Funds—Since 2011, EPA has made funding available to the seven Chesapeake Bay watershed jurisdictions to initially develop their Phase I and then their Phase II Watershed Implementation Plans (WIPs). This funding then transitioned to WIP Assistance Funds to provide programmatic, technical, and resource support towards high priority needs that can be directly linked to implementation of the jurisdictions' Phase II WIPs, meeting their two-year milestones, and/or addressing related midpoint assessment needs under the Chesapeake Bay TMDL.

EPA plans to continue to provide WIP Assistance Funds annually, with each year's funding targeted towards specific WIP implementation priorities selected by EPA in collaboration with the jurisdictions, working through the partnership's Water Quality Goal Implementation Team. In 2015, at the request of the jurisdictions, these funds will be directed at providing support for jurisdictions' efforts to enhance existing and develop new BMP verification procedures and programs, document those procedures and programs, and clean up their historical BMP data. A draft request for proposals is provided (Attachment B) for review and comment by the Water Quality Goal Implementation Team members. When awarded, WIP Assistance Funds can be: 1) added to a jurisdiction's existing 2015 CBRAP grant or Chesapeake Bay Implementation Grant (CBIG) funding award; 2) applied for use in the EPA Chesapeake Bay Program Office's Tetra

Tech contract (see below); or 3) applied to another applicable existing EPA contract, cooperative agreement, or grant.

EPA Chesapeake Bay Program Office's Virginia Tech Cooperative Agreement—In 2014, EPA awarded a six year cooperative agreement with Virginia Tech with the express purpose of providing technical assistance to the Chesapeake Bay Program partners. This technical assistance can be directed towards:

- developing or revising the technical basis for nitrogen, phosphorus, and sediment load reduction values or efficiencies for new or existing nutrient and sediment controls or other pollutant load reduction/prevention treatments or technologies within the Chesapeake Bay region;

- development of expert-based recommendations for other modeling-related topics such as land use loading rates, watershed response to varying inputs, or scale effects; and

- supporting verification of implemented practices, treatments, and technologies.

Virginia Tech works with a team of representatives from all seven watershed jurisdictions' land grant universities—Cornell University, Penn State University, West Virginia University, University of Maryland, Virginia Tech, University of Delaware, and University of the District of Columbia—to bring in the right experts depending on the nature of the request from the partnership.

Individual jurisdictions can put forth specific requests for technical assistance in developing and enhancing their BMP verification programs, with emphasis on designing statistical surveys and other procedures and protocols for the verification of implemented nutrient and sediment pollutant load reducing or preventing practices, treatments, and technologies. An example request for technical assistance in the form of a specific request for proposals (RFP) is provided (Attachment C). All requests for technical assistance should be directed to Jeremy Hanson, Project Coordinator, Expert Panel BMP Assessment, Virginia Tech/Chesapeake Bay Program Office, at jchanson@vt.edu. If the request for technical assistance is accepted, the applying jurisdiction will not have to provide funding from its CBRAP grant or awarded WIP assistance funds—they will tap into the existing EPA funds already awarded for that year to Virginia Tech's cooperative agreement with EPA.

EPA Chesapeake Bay Program Office's Tetra Tech Contract—EPA awarded a five-year Chesapeake Bay TMDL Midpoint Assessment and Watershed Implementation Plan Support contract to Tetra Tech in 2013. As part of this contract, jurisdictions can request and receive technical support for the development, design, enhancement, and documentation of their BMP verification programs. A jurisdiction can ask the EPA to apply part of their CBRAP grant funds or awarded WIP assistance funds to the Tetra Tech contract to fund the jurisdiction's requested technical support. All jurisdictions seeking technical support from this contract will be asked to draft up technical direction (see Attachment D for an example to follow). Once the jurisdiction's technical direction is approved, they will receive their allocated hours of Tetra Tech contractor support and proceed to work directly with their assigned Tetra Tech team.

ATTACHMENT A
BMP Verification Related Text Extracted from the
2015 Draft Chesapeake Bay Program Grant and
Cooperative Agreement Guidance

Page 14:
3.) *CWA Sections 117(e)(1)(A) – Chesapeake Bay Regulatory and Accountability Program Grants (CBRAP)*

These grants help each of the six watershed states and the District of Columbia to:

- Develop/revise regulations, design and implement WIPs and two-year milestones;
- Implement regulatory, tracking, reporting, verification, assessment, and/or monitoring commitments of the jurisdictions' WIPs and/or two-year milestones or in response to EPA's evaluation of these documents;

Page 33:
In September 2014, the Chesapeake Bay Program partnership's Principals' Staff Committee approved and adopted the Chesapeake Bay Basinwide BMP Verification Framework.[1] This framework commits the partners to a set of five BMP verification principles and comprehensive sets of BMP verification guidance. Based on the schedule agreed to by the CBP partnership, as embodied within the framework report, the expectation is clear that during 2015 all seven jurisdictions will develop, document, and submit for EPA review and approval, enhanced BMP tracking, verification, and reporting programs. These programs will need to be fully consistent with and supportive of the Chesapeake Bay Program partnership's adopted BMP verification principles. CBRAP grant funding can be used directly by the jurisdictions to support the development or enhancement of their BMP verification programs and their continued operation.

Page 34:
"d. Improved Tracking, Reporting, Verification, and Accountability Consistent with WIPs and/or Two-Year Milestones for Water Quality

- Development and implementation of National Environmental Information Exchange Network (NEIEN) BMP data flows to report practices to the Chesapeake Bay Program;
- Improved verification of point and nonpoint sources of pollution and management actions (e.g., procedures for verifying that agricultural conservation practices – both cost-shared and non-cost shared – are properly designed, installed, and maintained) consistent with the November 4, 2009 and December 29, 2009 expectations letters, as well as the *Guide for EPA's Evaluation of Phase I Watershed Implementation Plans* issued April 2, 2010, as amended or clarified by subsequent EPA or Chesapeake Bay Program partnership communications, including the CBP partnership's September 2014 Chesapeake Bay Basinwide BMP Verification Framework;
- Development and implementation of protocols and staff resources to report data that meet EPA expectations for tracking and verification into NEIEN, Scenario Builder, the

[1] Chesapeake Bay Program, 2014. *Strengthening Verification of Best Management Practices Implemented in the Chesapeake Bay Watershed: A Basinwide Framework*. Annapolis, Maryland. Accessible at: [give web site URL]

Chesapeake Bay Watershed Model, ChesapeakeStat, and/or Chesapeake Bay Tracking and Accountability System (BayTAS), and are consistent with the November 4, 2009 and December 29, 2009 expectations letters, as well as the *Guide for EPA's Evaluation of Phase I Watershed Implementation Plans* issued April 2, 2010, and subsequent EPA and Chesapeake Bay Program communications;

- Development and/or improvement of procedures for verifying practices that were designed, implemented, and maintained properly, including as specified in permit or contract conditions; and/or
- Reporting of available state data for the 12 outcome measures contained in the EO 13508 Strategy."

ATTACHMENT B
Watershed Implementation Plan Assistance Funding
Request for Proposals

DRAFT—SUBJECT TO CHANGE UPON
REVIEW BY THE CBP WQGIT MEMBERSHIP

BACKGROUND

Every year, EPA provides funds available to the seven Chesapeake Bay watershed jurisdictions to provide programmatic, technical, and resource support towards high priority needs that can be directly linked to implementation of the jurisdictions' Phase II Watershed Implementation Plans (WIPs), meeting their two-year milestones, and/or addressing related midpoint assessment needs under the Chesapeake Bay Total Maximum Daily Load (Bay TMDL). These Watershed Implementation Plan (WIP) Assistance funds are used to address common themes identified in EPA's evaluation of the jurisdictions' WIP implementation milestones that require enhancement and/or increased implementation.

2015 FUNDING PRIORITIES

Each year, EPA, working in collaboration with its seven Chesapeake Bay watershed jurisdictional partners through the partnership's Water Quality Goal Implementation Team, selects specific WIP implementation priorities on which to target the funding towards. In 2015, at the request of the jurisdictions, $400,000 in WIP Assistance Funds will be directed at providing support for jurisdictions' efforts to enhance existing and develop new BMP verification procedures and programs, document those procedures and programs, and clean up their historical BMP data.

Recognizing that jurisdictions have programmatic and resource needs beyond those identified in this request for proposals, future WIP assistance funds will continued to be targeted towards an evolving set of priorities established through the partnership every year.

REQUEST FOR PROPOSALS

EPA is requesting a descriptive narrative, cost estimate, and schedule for one or both of the following activities so that funds may be provided to initiate this work. EPA asks that you structure your proposal using the format and content of your intended funding vehicle—e.g., CBRAP grant work plan objective, Tetra Tech contract technical direction—to save time in the process to award these funds. EPA also asks that you identify the key tasks and their associated cost estimates under each selected activity so that partial funding can be provided in the event that the proposed work cannot be fully funded. Priority will be given to proposals which not only benefit a single jurisdiction, but have utility and possible use by other jurisdictions.

The jurisdictions' proposals should include narrative, cost estimates, and schedules for one or both of the following activities:

BMP Verification

At the Principals' Staff Committee's September 11, 2014 meeting, the PSC approved and adopted the Chesapeake Bay Basinwide BMP Verification Framework on behalf of the

partnership. The framework demonstrates our collective commitment to ensure that our accounting of implemented pollution reduction and prevention practices is reliable and transparent. At the Management Board's November 13, 2014 meeting, the Partnership approved the Chesapeake Bay Basinwide BMP Verification Framework: Year One Implementation Plan accessible at: http://www.chesapeakebay.net/bmpverification. Part of this Year One Implementation Plan included a detailed schedule calling for the jurisdictions submission of draft documentation of their proposed BMP tracking, verification, and reporting programs within their existing Chesapeake Bay Implementation Grant Quality Assurance (QA) plans (or Chesapeake Bay Regulatory and Accountability Grant QA plans).

Jurisdictions are encouraged to submit proposals to support any aspects of their planned work to enhance existing and develop new verification protocols, procedures, and programs as part of their larger BMP tracking, verification, and reporting programs. This planned work can include documentation of existing, enhanced, or new verification protocols, procedures, and programs as well as the statistical design of survey techniques for verification of BMPs.

EPA asks that the proposals describe support needed to develop/enhance BMP verification programs to ultimately accept the principles and adhere to the guidelines contained within the partnership's Chesapeake Bay Basinwide BMP Verification Framework report and accompanying appendices, accessible through the partnership's website at http://www.chesapeakebay.net/bmpverification.

Historical Data Cleanup

As part of the Chesapeake Bay TMDL's 2017 Midpoint Assessment, the seven Chesapeake Bay watershed jurisdictions are expected to "clean up" the information on best management practice (BMP) information and wastewater treatment plant discharges that they have submitted to the Chesapeake Bay Program Office (CBPO). CBPO must receive complete, quality-assured, and final information in proper formats by September 30, 2015, in order to remain on track with the Midpoint Assessment schedule. The partnership's Watershed Technical Workgroup has agreed that draft historic BMP data for non-wastewater sources needs to be submitted through the National Environmental Information Exchange Network (NEIEN) by June 30, 2015, to allow enough time for processing and jurisdictions' review to work through issues of data quality and completeness.

Information on BMP implementation and wastewater plant discharges that is as accurate as possible is integral to: calibrating the Phase 6 Chesapeake Bay Watershed Model; planning and reporting future actions; using monitoring data to assess the impacts of past efforts; and assessing the critical period for the Chesapeake Bay TMDL.

Jurisdictions are encouraged to support proposals to support their work on cleaning up their historical BMP and wastewater treatment facility data consistent with the guidelines, schedule, and overall direction presented to and adopted by the partnership's Watershed Technical Workgroup at their December 4, 2014 meeting. These guidelines can be directly accessed at http://www.chesapeakebay.net/channel_files/21403/historic_bmp_and_wastewater_data_cleanup_12_4_14.pdf. The supporting briefing presentation can be directly accessed at:

http://www.chesapeakebay.net/channel_files/21403/historic_bmp_cleanup_rules_of_the_road_12032014.pdf.

SCHEDULE

Please provide your requests for funding and associated estimates to Lucinda Power, EPA Chesapeake Bay Program Office, at power.lucinda@epa.gov by **January 30, 2015**. Jurisdictions will be notified of the award of funds for their proposals by **February 11, 2015**.

EPA will then work with each of the jurisdictions to determine the appropriate funding mechanisms through which proposed projects may be funded. Funding mechanisms could include the jurisdictions' CBIG and CBRAP grants, EPA's Tetra Tech contract, and other existing EPA grants, cooperative agreements, and contracts.

Note to WQGIT Members: during the January 12, 2015 conference call, EPA is seeking your input on the two above high-lighted dates. Given the Partnership schedule for the jurisdictions' delivery of their draft BMP verification program documentation, it is in all of our interest to allocate the above described funds as soon as possible. Is the January 30th deadline realistic to work with? If not, please recommend alternative date recognizing that will bump the date for notification of award and the eventual award of the funds themselves.

ATTACHMENT C
Virginia Tech Cooperative Agreement
Example Request for Technical Assistance

Urban Tree Canopy Expert Panel Request for Proposals

I. Summary:

The U.S. Environmental Protection Agency Chesapeake Bay Program (CBP) through its Expert Panel Management Cooperative Agreement with Virginia Tech (VT) is seeking proposals to assemble an Expert Panel to determine pollution control performance measure estimates for the best management practice (BMP) of extended urban tree canopy. Proposals should address the process of developing expert-based recommendations for nitrogen (N), phosphorus (P), and sediment reduction values from existing urban tree canopy and BMP efficiencies that result from increases in urban tree canopy, as specified in the body of this request for proposals (RFP). The awarded group will deliver a science-based, defensible report on the effectiveness of the expanded urban tree canopy BMP in reducing N, P and sediment loss to the Chesapeake Bay (Bay). When conducting their business and reporting their findings, Expert Panels are expected to adhere to the process and protocols contained in the document entitled *Protocol for the Development, Review, and Approval of Loading and Effectiveness Estimates for Nutrient and Sediment Controls in the Chesapeake Bay Watershed Model*[2] hereafter referred to as the "BMP Protocol." The selected expert panel will be assisted by Virginia Tech's Project Coordinator for Expert Panel BMP Assessment who is located in EPA's Chesapeake Bay Program Office in Annapolis, MD. Included in that assistance is logistical support for all Expert Panel conference calls (including providing a conference bridge) and meetings.

II. Background:

Stormwater runoff from urban areas is a growing source of nutrient and sediment loads to the Chesapeake Bay. Urban stormwater currently accounts for over 14 percent of delivered nitrogen and phosphorus loads, and 18 percent of sediment loads delivered to the Bay. Increases in urban tree canopy cover may provide many benefits to local communities, including reductions in stormwater runoff and associated nutrient and sediment reductions which are the focus of this RFP.

The new 2014 Chesapeake Bay Watershed Agreement calls for 2,400 acres of new urban tree canopy by 2025. Most states have included this practice in their Watershed Implementation Plans (WIPs) as part of the Chesapeake Bay Total Maximum Daily Load. According to some of the Chesapeake Bay jurisdictions' Phase II WIP "input decks" to the Chesapeake Bay partnership's Watershed Model (CBWM), planned implementation is 8 times higher than the 2,400 acres of new urban tree canopy outcome described in the Chesapeake Bay Watershed Agreement. Currently, in Phase 5.3.2 of the CBWM, urban tree canopy receives the same nutrient and sediment loading factors as forested land regardless of where they are planted or the areal extent. Currently, in the CBWM, one hundred new trees is equivalent to one acre of urban tree canopy.

[2] http://www.chesapeakebay.net/documents/Nutrient-Sediment_Control_Review_Protocol_v7.14.2014.pdf

III. Scope of Work:

This RFP solicits proposals to assemble an Expert Panel to determine pollution control performance measure estimates for both existing and expanding urban tree canopy. The Panel's recommendations will be evaluated for incorporation into the CBWM and associated modeling tools. The Expert Panel will define the conditions under which trees planted in the urban environment reduce stormwater runoff loads and associated nutrient and sediment loads. Such conditions may include tree placement, leaf density, soils, understory conditions, and other factors. In addition to relevant peer-reviewed scientific literature, established modeling tools (e.g., iTree-Hydro) may be used to inform the Panel's recommendations, as described in the BMP Protocol1. While the Panel's focus should be on water quality benefits that accrue to receiving waters (e.g., nutrient and sediment load reductions, stormwater retention), the panel is also encouraged to identify ancillary benefits of trees in urban settings, such as heat island reduction, and any potential unintended consequences of this practice to water quality, watershed health, habitat, or fisheries – other Chesapeake Bay Program goal areas. To meet CBP partnership needs, the Panel will deliver its full recommendations for the BMP by the end of September 2015.

Proposals to establish the Urban Tree Canopy Expert Panel should outline the proposed process of developing expert-based recommendations for N, P and sediment reduction values for existing tree canopy and BMP efficiencies for newly planted trees.

IV. Content and Length:

Proposals submitted under this RFP may request funding up to $30,000 in total costs. No indirect, facilities & administration (F&A) or overhead charges are permitted on this project. The project duration is a maximum of ten (10) months from the award date. Proposals should be no longer than five (5) 8 ½" x 11" pages, single-spaced, 12 pt Arial font. Two-page (maximum) CVs that document the qualifications of each of the proposed Expert Panel members, including the expert panel chair, should be included with the proposal submission. The CVs are in addition to the five page proposal limit. Proposals must specify/identify the following:

1. Expert Panel Chair.
2. Expert Panel membership. As specified in the BMP Protocol1, the Panel must include at least eight individuals; three recognized topic experts, three individuals with expertise in environmental and water quality-related issues, a representative from the CBP's Watershed Technical Work Group (WTWG), and a representative from the CBP modeling team. The CBP will assign panel members from the WTWG and the CBP modeling team and applicants need not include the CV's of these panel members in their proposal. These assigned panelists will lend specific expertise to each panel (e.g., the CBP modeling team panel member will lend a working knowledge of the CBP Watershed Model and potential ways the model can accommodate various BMPs). Panelists' areas of expertise may overlap. Suggested areas of expertise that may be applicable to the urban tree canopy Panel include, but are not limited to: stormwater management, forestry and urban forestry, biogeochemistry, and nutrient cycling dynamics in urban systems. Panel members should not represent entities with potential conflicts of interest, such as

entities that could receive a financial benefit from Panel recommendations or where there is a conflict between the private interests and the official responsibilities of those entities. All panelists are expected to identify any potential financial or other conflicts of interest prior to serving on the Panel.

3. Project Narrative/Scope of Work that details how the Expert Panel Chair and membership plan to develop their final report. This section should document how the proposed Expert Panel will execute the process and procedures detailed in the CBP's BMP Protocol.
4. Project timeline.
5. Project Budget including a detailed budget justification.

V. Proposal Review and Selection

Proposals will be reviewed by Chesapeake Bay Watershed Research and Outreach Collaborative (CBW-ROC) Steering Committee. Current CBW-ROC Steering Committee membership includes representatives from selected land grant universities within the Chesapeake Bay watershed (Table 1). Proposals will be scored and ranked using the criteria specified below. The proposals will also be shared with and reviewed by the CBP Program Officer responsible for oversight of the Expert Panel Management Cooperative Agreement with VT. Review comments made by the CBP Program Officer will be considered when selecting the winning proposal. Upon selection by CBW-ROC, the Panel's scope of work (SOW) and list of proposed panel membership will be subject to review and comment by the following CBP partnership groups, as described in the BMP Protocol:1 the Water Quality Goal Implementation Team (WQGIT) and relevant workgroups, the Habitat Goal Implementation Team, and the Scientific and Technical Advisory Committee. Approval of the SOW and membership will be requested from the Forestry Workgroup or WQGIT. Any changes to the SOW or membership as a result of this process will be made cooperatively between the Panel Chair and the CBP partnership. 3

Table 1. Current Chesapeake Bay Watershed Research and Outreach Collaborative (CBW-ROC) Steering Committee

Jurisdiction	**Team Member**	**Institution**
Delaware	Jenn Volk	University of Delaware
Maryland	Frank Coale	University of Maryland
New York	Quirine Ketterings	Cornell University
Pennsylvania	Matt Royer	Penn State University
Virginia	Brian Benham (Chair)	Virginia Tech
Washington, D.C.	Tolessa Deksissa	University of the District of Columbia
West Virginia	Tom Basden	West Virginia University

V.i. *Evaluation Criteria:*

1. Organizational Capability and Program Description (40%):
Proposals will be scored based on the overall quality of the proposal and how it demonstrates/illustrates the process/tasks that will be undertaken to successfully achieve the project's objectives by the posed deadline. Reviewers will specifically assess the extent to which

proposed project acknowledges and will adhere to the BMP Protocol1. As presented in the BMP Protocol, Expert Panels are expected to develop definitions and loading or effectiveness estimates for the nutrient- and sediment-reducing technologies and practices they have agreed to review. Each Expert Panel will work with the Project Coordinator (a VT employee stationed at the CBP office in Annapolis, MD), the appropriate CBP source Workgroup(s) and the CBP Watershed Technical Work Group to develop a final report that documents the following:

- Identity and expertise of Panel members.
- BMP name/title.
- Detailed definition of the practice.
- Recommended N, P, and sediment loading or effectiveness estimates.
    - Discussion may include alternative modeling approaches if appropriate.
- Justification for the selected effectiveness estimates, including:
- List of references used (peer-reviewed, grey literature, etc.).
- Detailed discussion of how each reference was considered and, if applicable, which sources of potential relevance were not considered.
- Description of how best professional judgment was used, if applicable.
- Land uses to which the BMP is applied, for both Phase 5 and Phase 6 Watershed Model land uses.
- Load sources that the BMP will address and potential interactions with other practices.
- Description of pre-BMP and post-BMP circumstances, including the baseline conditions for practices.
- Conditions under which the BMP works:
    - Should include conditions where the BMP will not work, or will be less effective. An example is large storms that overwhelm the design.
    - Any variations in BMP effectiveness across the watershed due to climate, hydrogeomorphic region, or other measureable factors.
- Temporal performance of the BMP including lag times between establishment and full functioning (if applicable).
- Unit of measure for the BMP and its effectiveness estimate (e.g., feet, acres).
- Locations within the Chesapeake Bay watershed where this practice is applicable.
- Useful life; effectiveness of practice over time.
- Cumulative or annual practice.
- Description of how the BMP will be tracked, reported, and verified.
    - Include a clear indication that this BMP should be used and reported by jurisdictions;
- Suggestion for a review timeline; when will additional information be available that may warrant a re-evaluation of the estimate.
- Outstanding issues that need to be resolved in the future and a list of ongoing studies, if any.
- Documentation of any dissenting opinion(s) if consensus cannot be reached.
- Operation and Maintenance requirements and how neglect alters performance.

2. Past Performance and Programmatic Capability (20%)

Proposals should, to the extent possible, discuss how the applicant's past performance will ensure the successful completion of proposed activity (i.e., managing a panel of experts to seek

out and review relevant data/information to produce a science-based, defensible report on a given topic or suite of topics).

3. Probability of success of the project (40%)

Proposals will be evaluated against the following criteria:

a. Reasonableness of timeline.
b. Qualifications of proposed Expert Panelists and their willingness to participate (can be demonstrated with a letter or collaboration appended to proposal).
c. Appropriateness of requested budget and budget justification.
d. Adequacy of available support personnel and facilities (if specified in proposal).

VI. Proposal Submission

Proposals are due by the close of business on January 5, 2014. Proposals may be submitted via email or via regular mail to:

Brian Benham
Professor and Extension Specialist
Virginia Tech
Biological Systems Engineering (MC0303)
Seitz Hall RM 209, Virginia Tech
155 Ag Quad Lane
Blacksburg, VA 24061
benham@vt.edu

Questions about this RFP should also be directed to Project Coordinator Jeremy Hanson (410.267.5753; hanson.jeremy@epa.gov) or Dr. Benham.

ATTACHMENT D
Tetra Tech Contract
Example Technical Direction

Technical Direction
District of Columbia BMP Tracking Database Phase 2

Contract #: EP-C-12-055
Contractor: Tetra Tech
Task Order #: 003
Task #: 4
Technical Direction #: 13
Technical Direction Issue Date: 11/5/13
Task Title: **District of Columbia BMP Tracking Database Phase II**

Task Description:
The District Department of the Environment (DDOE) is seeking to improve and add functionality to an online system and database developed by Tetra Tech (Phase 1), which tracks and monitors stormwater management plans, stormwater best management practices (BMPs), and land use changes occurring in the municipal separate storm sewer system (MS4) and combined sewer system (CSS) areas of the District of Columbia (District). Tetra Tech has some understanding of the requirements for Phase 2 based on their interactions with DDOE during Phase 1. In Phase 1 Tetra Tech developed a draft database to track projects, their BMPs, land-use changes, BMP verification information, and field collection. The delivery of Phase 1 did not include the functionality to generate the National Environmental Information Exchange Network (NEIEN) submission for exchange with the Chesapeake Bay Program Office as per the original Technical Direction.

System improvements will refine the underlying table structure and relationships developed in Phase 1. System enhancements will:

- Address new requirements under the District's new rule on Stormwater Management and Soil Erosion and Sediment Control, which includes retention requirements for Stormwater Management Plan (SWMP) submission and off-site compliance options including Stormwater Retention Credit trading and In Lieu Fee.
- Address the new rule on the Stormwater Fee Discount Program (RiverSmart Rewards).
- Integrate data sources residing on the District's geographic information system (GIS) servers and web services (e.g., DC GIS and Master Address Repository) from the District's Office of the Chief Technology Officer (OCTO).
- Enhance reporting capability to District stakeholders and federal agencies by generating NEIEN Non-point source Best Management Practice (NEIEN-NPSBMP) compliant XML files and synchronizing BMP records in the database with a BMP GIS data layer consistent with DDOE's Total Maximum Daily Load Implementation Plan as required under the District's MS4 Permit.

General Project Management and Approvals:
The contractor (Tetra Tech) shall carry out the activities described in this task. DDOE will provide feedback and day-to-day oversight of the tasks, and the U.S. Environmental Protection Agency (EPA) will provide oversight and high-level contract management. EPA will provide all direction to Tetra Tech that incurs billable costs. Tetra Tech shall continue to provide monthly status reports to EPA and shall also provide DDOE with bi-weekly status reports throughout the process. Status reports shall include project updates, identify technical issues related to items in the technical directive, and provide a snapshot of project performance compared to the baseline budget and schedule determined at the completion of Activity 1. Tetra Tech shall notify DDOE immediately of any impediments that would prevent them from complying with the approved schedule and approved budget. EPA may, at any time, direct Tetra Tech to stop work.

Activity 1
Requirements Confirmation

DDOE will provide Tetra Tech with a draft of business and functional requirements, access to existing databases and data layers, and documentation of the related business processes (work flows), forms, reports, and graphs. Tetra Tech shall review DDOE's draft requirements to confirm the project scope and refine the level of effort estimated at the completion of the Phase 1 effort. DDOE will assign a subject matter expert to answer questions and review use cases for Tetra Tech analysts and technical leads. Tetra Tech shall confirm and elaborate the requirements and attend 2–3 site visits at DDOE to present the refined requirements to DDOE program managers and OCTO staff. Prior to meeting with OCTO, Tetra Tech shall provide a list of anticipated hardware and software components and discuss deployment expectations for OCTO review and confirmation. After the requirements have been finalized, Tetra Tech and DDOE will jointly develop a project schedule for Activities 2–3, and pending approval, EPA shall issue Technical Direction for these Activities.

Activity 1 Subtasks
1. Confirm availability of dedicated project staff
2. Review draft requirements, work flow, and existing DDOE databases
3. Meeting/conference call to discuss requirements and constraints
4. Meeting to refine requirements
5. Meeting to confirm and finalize requirements

Deliverables:	**Deadlines**:
1. Status reports	Bi-weekly
2. List of anticipated hardware and software components and deployment expectations	Prior to meeting scheduled with OCTO staff
3. List of refined requirements.	Within 1 week receipt of DDOE draft

Deliverables:	Deadlines:
4. List of finalized requirements and PPT presentation on interaction between the modules	Within 1 week of refinement session
5. Scope and budget confirmation	Within 1 week of finalized requirements
6. Design and Build schedule for Activities 2–3, which will require separate Technical Direction, to be furnished by EPA at a later date.	Within 1 week of finalized requirements

Anticipated level of effort:
The anticipated level of effort is approximately 150 hours (not to exceed $20,000).

Required Skills and Experience:
Project manager, Analyst, Technical Leads

Does this deliverable contain sensitive information (Yes/No)?
No

Contacts	
Chesapeake Bay Program Office Task Leads: Reginald Parrish Phone: (202) 566-1396 parrish.reginald@epa.gov Lucinda Power Phone: (410) 267-5722 power.lucinda@epa.gov	**DDOE Project Officer:** Sheila Besse, Associate Director, Water Protection Division Phone: (202) 535-2244 sheila.besse@dc.gov
Task Order Project Officer: Tim Roberts Chesapeake Bay Program Office, EPA Phone: (410) 267-5770 roberts.timothy-p@epa.gov	**DDOE Primary Technical Contact:** Martin Hurd, DDOE Environmental Protection Specialist Phone: (202) 299-3344 martin.hurd@dc.gov