ITRC PROJECT PROPOSAL

[WLA/BMP Planning Approach/Tool]

PROPOSAL DATE:

February 11, 2011 (Revised on 3.21.11)

Proposal Contact:

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Call for Proposals Topical Area

The topical area for this proposal is:

WATR Watershed Management: *Proposals are sought from within the Chesapeake Bay area, which may serve as models to address watershed management issues in other impaired water bodies nationally. Proposals may consider tools to determine contaminant loadings from various facilities or properties, identify best management practices (BMP) applied in watershed implementation plans, assess low impact development (LID) techniques and applications, and measure results from implementation of BMP or LID techniques.*

Problem Statement (why is this project necessary and relevant to ITRC's purpose & mission[1]?)

USEPA has issued more stringent total maximum daily load (TMDL) requirements for the entire Chesapeake Bay watershed. USEPA has given states the authority to implement this more stringent TMDL requirement using a state specific approach. As a result, the states are developing watershed implementation plans (WIPs) uniquely from one another, which has created great confusion to land owners within the Chesapeake Bay watershed. In addition, there is a lack of clarity as to how the USEPA TMDL model inputs have been calculated given the information that was provided during the data calls to both federal/nonfederal land owners.

Consequently, there is a need to develop a standard approach for planning and incorporating Best Management Practice (BMP) utilization based on waste load allocation (WLA) at the individual or installation watershed level. This proposal looks to form a team comprised of academics, state and federal regulators, consultants and members of the federal government to develop a technically

[1] **ITRC Purpose**: To advance innovative environmental decision making
ITRC Mission: Develop information resources and help break down barriers to the acceptance and use of technically sound innovative solutions to environmental challenges through an active network of diverse professionals.

consistent approach to watershed management so that each stakeholder accepts, promotes and proactively engages in future watershed implementation plan (WIP) discussions.

There is a need for an ITRC team to examine the following types of issues:

1) Provide an approach or planning tool for use at the individual watershed level (i.e. county, installation, jurisdiction) that will allow the user to conceptualize the current WLA scenario and to develop the most cost effective BMP strategy to meet the current and future TMDL requirements.
2) Standardize this practice for utilization in the development of any watershed management plan with respect to any surface water body experiencing degradated water quality nationwide.
3) Provide a training forum for all stakeholders on how to develop and utilize this approach when addressing watershed implementation plans.
4) Provide watershed specific data or planning tools for direct use/implementation into the Chesapeake Bay TMDL Tracking and Accountability System (BayTAS) and National Environmental Information Exchange Network (NEIEN).

Proposed Scope to Address Problem (what is the approach for this project?) Please note that technology research and demonstration project proposals are not valid for this RFP.

This proposal looks at the development of an approach or planning tool that will assist stakeholders in selecting the most cost effective best management practice (BMP) strategy in a given watershed (i.e. county, installation, jurisdiction) based on a conceptualization of the current WLA scenario in the watershed. This approach or planning tool will provide stakeholders a standardized technically sound framework for diagnosing the current WLA and BMP scenario within a watershed that will allow them to make sound fiscal and planning decisions with respect to the future use and implementation of BMPs in order to effectively meet or exceed TMDL regulatory requirements.

This approach will seek to provide specific insight on each element involved in calculating WLA at the individual watershed or facility management level. This tool would utilize a conceptual site model (CSM) that assists the stakeholder in developing a baseline WLA that matches the individual state's requirement (county, jurisdiction, planning district, federal installation, etc.); will serve as a data collection tool to inventory approved BMPs currently in place and the credited effectiveness in reducing WLA within that watershed. This CSM would allow the stakeholder to strategically plan where to incorporate future BMPs; effectively demonstrate that they have met TMDL requirements to regulatory authorities; and effectively plan how to utilize future financial resources in the most cost effective manner.

This proposal is achievable because it will provide a consistent framework and effective approach to watershed management decision making processes (with regard to WIPs) and will remove the regulatory barriers currently in place because of how each state is implementing the TMDL requirements set forth by the USEPA in various ways within the Chesapeake Bay watershed. Again though, once developed this tool or approach could be utilized in any watershed where a surface water body is experiencing degradated water quality. Each watershed CSM could then be compiled together within a master database or model to provide an overall framework for making key decisions at big picture levels (i.e. entire Chesapeake Bay watershed) or at the specific watershed level (i.e. Anne Arundel County).

Targeted Users (who will use products generated by this project?)

This planning approach or tool would be designed for use by Consultants, Planners, Water Program Managers, Construction Managers, Regulators and any Stakeholder to use as a resource for developing strategies in support of EO 13508, state and federal compliance programs and Low Impact Development (LID) initiatives. Once developed this tool or approach could be utilized in any watershed where a surface water body is experiencing degradated water quality.

Primarily water program experts within state and federal regulatory agencies; and other state and federal stakeholders (i.e. Department of Defense, National Park Service) could utilize this approach or tool for planning purposes and to cost effectively optimize how to implement best management practices through

low impact development retrofits and initiatives at the installation or local watershed level. Since WIPs and TMDL will be determined at the federal and state level, this tool will provide a consistent framework for discussing how to best influence waste loading with best management practices at the specific watershed management level.

Secondarily, consultants, planners, contract managers, compliance program managers and construction managers will utilize information developed from this tool in watershed and facility management for financial and developmental decision making purposes. This tool will provide a concise standard tool for management and working level individuals to quickly derive information for decision making purposes at the watershed or installation level.

Summary of Deliverables (primary project product(s))

Deliverables will include the required ITRC deliverables: an overview of the planning approach/tool, a technical regulatory guidance document, a summary of case studies, and an internet based training module. In addition, this technical regulatory guidance document shall explain in detail the WLA/BMP planning approach/tool that provide's stakeholders a standard technically sound framework for diagnosing the current WLA and BMP scenario within a given watershed and allow them to make sound fiscal and planning decisions with respect to the future use and implementation of BMPs in order to effectively meet TMDL regulatory requirements. Below is a discussion of potential key Planning Approach/Tool Elements:

1.0 Introduction
1.1 Objective
1.2 Table of Contents – Presents the layout to familiarize readers with content.
2.0 Watershed Description
2.1 Watershed Location and History
2.2 Focused Conceptual Site Model – Provides a graphic dipiction of the watershed. This allows readers to understand the conditions within the watershed contributing to WLA and provides a clear understanding of the BMPs and LIDs currently in place within a specific watershed. The CSM will include the level of detail necessary to keep the effort moving towards the agreed upon goals and allow the user to make informed fiscal planning decisions (i.e. land cover data, stormwater BMP data, wastewater discharge data, septic tank data, agricultural and silvicultural lands).
3.0 WLA vs. TMDL
3.1 WLA – How is it being calculated for the given watershed in question?
3.2 TMDL Strategy – Provides a clear path to allow for meeting our TMDL goals.
4.0 Current BMP/LID Policy within that watershed
4.1 BMP/LID Inventory within that watershed
5.0 BMP/LID Evaluation for that watershed
5.1 BMP/LID Evaluation Results –This section includes figures and tables to clearly show the results.
5.2 Trend Analysis of Costs – Documents historical and current cost to allow for an understanding of the use of limited resources to meet the requirements for the watershed.
5.3 Optimization – what are the BMPs each watershed or installation should incorporate and in what location to meet current and future TMDL requirements.

6.0 Recommendations and Conclusions – Allows for documentation of recommendations by each agency. Clearly and concisely states conclusions drawn from the CSM and trend analysis.

Impact (how will this project result in more effective environmental decision making?)

A consistent approach to watershed management is needed for all stakeholders. This WLA/BMP planning approach/tool that provide's stakeholders a standard technically sound framework for diagnosing the current WLA and BMP scenario within a given watershed and allow them to make sound fiscal and planning decisions with respect to the future use and implementation of BMPs in order to effectively meet TMDL regulatory requirements. This will result in more effective environmental decision making because all stakeholders from both a landowner and regulatory perspective will have approved and helped to develop this tool. This will remove the barriers that are naturally created in the typical back and forth correspondance type of approach to environmental regulation at the state and federal level. Since less time will be devoted to identifying the issues and problems at hand; more time, energy and resources will be devoted to actually making a positive impact and progress with respect to improving the water quality within a given surface water body.

Project Schedule

February 11, 2011: Phase I. Proposal Development.

First Quarter of 2012: Phase II. Team Formation. Members from multiple state/federal agencies.

Second Quarter 2012 through the end of 2014: Phase III. Product Development.

End of 2014: Phase IV. Project Transition.

2015: Phase V. Product Implementation—Initial Phase.

2016: Phase VI. Product Implementation—Final Phase.

Proposed Personnel

Team leadership will be initially provided by members from the Commonwealth of Virginia. Other state representatives within the Chesapeake Bay watershed (MD, DE, PA, NY and WV) have been in talks to join a group of this nature and will most likely be involved if this proposal is accepted and it is assumed leadership would also be provided from those states under those circumstances. Information about these team leaders is identified below:

David A. Johnson, Director (Recruiting Team Leader for ITRC Proposal)
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Gov. Bob McDonnell appointed David A. Johnson DCR director in May 2010. Johnson has spent more than 14 years working on environmental policy and its practical application. He served as chief deputy for the Virginia Department of Environmental Quality (DEQ) from 1998 through 2002 and as director for a short time in 2002. Since 2006, he has worked as an environment and energy consultant to the Virginia Chamber of Commerce and represented the group before state regulatory bodies and the General Assembly. In 2009 he was named director of policy for the newly formed Virginia Fountainhead Alliance, an organization of businesses interested in Virginia's environmental and economic future. In that capacity he conducted research and drafted comments regarding stormwater regulations proposed by DCR.

While at DEQ, Johnson undertook initiatives to enhance environmental protection and reduce costs. These initiatives covered pollution prevention, nonpoint source pollution, Internet-based environmental reporting, total maximum daily load (TMDL) development, wetland programs and the establishment of the Virginia Environmental Excellence program. In 2004 and 2005, Johnson consulted with DEQ to streamline the agency's business processes. A report containing more than 100 recommendations, which would cut costs for DEQ and the regulated community, was submitted to the General Assembly as a result of that effort. In 1996, Johnson served on the Governor's Commission on Environmental Stewardship, and he chaired the Citizen Wetlands Advisory Committee on Wetlands Management Strategy in 1999. The committee's recommendations were the basis of legislation that created the Virginia Wetlands Program. He also served as a key Virginia representative in negotiations between the Chesapeake Bay states and the EPA during the formation of the Chesapeake Bay 2000 agreement. More recently, he was appointed by the Virginia secretary of natural resources to the Virginia Chesapeake Bay TMDL Stakeholder Advisory Group in 2009.

And

Michael P. Murphy, Director (Recruiting Team Leader for ITRC Proposal)
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Mike Murphy is the Director of the Virginia Department of Environmental Quality's (DEQ) Piedmont Regional Office. The Piedmont Region is comprised of 24 counties and 5 incorporated cities in Central Virginia. Mike's responsibilities include overseeing an office of 90-plus employees that administers DEQ's air, water and waste management regulatory responsibilities in the Piedmont Region.

Prior to being named the Piedmont Regional Director in April 2010, Mike served as the Director of DEQ's Division of Environmental Enhancement for over 15 years. While in that position, Mike's responsibilities included the overall management of the following programs: Waste Tire Management, Environmental Impact Review, Litter Prevention and Recycling, Coastal Resources Management, Pollution Prevention, and Environmental Education.

Mike is also a member of DEQ's legislative and strategic planning teams. Mike is a founding member of the Environmental Council of the States (ECOS) – Department of Defense Sustainability Work Group. In January 2009, Mike became a member of the Interstate Technology & Regulatory Council's Board of Advisors.

- List states that would be interested in participating in this project and why.

Any state nationwide that deals with watershed implementation plans will be interested in this project because it will focus on a collaborative and consistent approach to watershed management. A standard approach or tool is needed for all parties that will allow individuals to focus more directly on watershed management issues and less on what those issues are by determining contaminant loadings from facilities or properties, identify existing and future best management practices (BMP) to be applied in watershed implementation plans, and to assess low impact development (LID) techniques and applications at the local level, and to measure the actual results from implementation of BMP or LID techniques. If the team can agree on a consistent approach to evaluating watershed management, than they can cost effectively optimize how to implement best management practices through low impact development retrofits and initiatives in the future.

- List other organizations that have expressed interest in participating as team members for this project and why.

This proposal group is currently soliciting interest through existing partnerships from MD, DE, PA, NY and WV (specifically from stakeholders dealing with TMDL issues in the Chesapeake Bay watershed) from other federal agencies, state agencies and DOD agencies in order to develop a useful tool that can be utilized in any state dealing with watershed implementation plans.

- Skill mix of Team Members required (e.g., hydrogeology, engineering, risk assessment, etc.).

The proposed team should include regulatory experts, stormwater subject matter experts, engineering experts, budgetary experts, planning experts, and construction managers with intimate knowledge of BMPs and low impact development initiatives.

- Sectors of Team Members required (e.g., federal, state, community, regulated, regulator, etc.).

The proposed team should include federal and state regulatory representatives, and state and federal representatives from the regulated community (i.e. DoD, USACE, and the National Park Service).

Related Work:

This proposal is to develop a WLA/BMP Planning Approach or Tool that could be linked or utilized by all of the stakeholders currently involved in negotiating and/or developing watershed implementation plans within the Chesapeake Bay watershed or any other watershed where water quality is of the utmost concern. Various focus groups in various forums are addressing watershed management; this tool could provide a common link and purpose between all or some of those focus groups.