

**Water Quality Improvement Strategic Action Plan  
Scope of Work  
Lebanon County Clean Water Alliance**

**Purpose**

The Scope of Work defines the pathway for the Lebanon County Clean Water Alliance (Alliance) to develop a county-based Strategic Action Plan. The Strategic Action Plan will primarily serve as a comprehensive guide for coordinating the many varied watershed planning Best Management Practices (BMPs) and Municipal Separate Storm Sewer Systems (MS4) Permit compliance activities in Lebanon County relative to the Pennsylvania Chesapeake Watershed Implementation Plan (WIP). It will guide the Alliance's efforts to help Lebanon County cost effectively meet its obligations associated with the Chesapeake Bay Total Maximum Daily Load (TMDL), the Pennsylvania Department of Environmental Protection (DEP) implementation strategy established in the Phase II WIP process, and MS4 Permit requirements for the municipalities in both the Chesapeake Bay and Delaware Bay drainage basins.

**The Mission of the Alliance**

The mission/vision of the Alliance is to maintain a coalition of local government agencies and interested stakeholders to partner together to conserve, protect and enhance the water resources for the people of Lebanon County.

Initially organized in January 2011, this informal coalition now has representation from 18 municipalities, Lebanon County, the Lebanon County Conservation District (LCCD), and several non-profit organizations involved with water resources management issues.

**Background Information**

Addressing clean water issues in Lebanon County is complicated by the diversity of watersheds and land uses as well as the extensive local government structure. Several sub-watersheds are highly urbanized, others nearly completely rural, with many containing a mix of land uses. There are a number of plans and strategies proposed at various scales within the County. Additionally, there are a number of municipalities with regulatory responsibilities associated with an issued MS4 Permit. What is lacking is a comprehensive approach to coordinate all these efforts amongst the many local governments, identify and fill any gaps, and develop a strategy for how Lebanon County can continue to move forward in a cost effective manner.

The Alliance, working with a diverse group of interested stakeholders and local governments, has set a goal to develop a Strategic Action Plan to serve as the comprehensive, county-wide strategy to meet water quality regulations. As a needed step toward achieving the County's regulatory requirements (TMDL), the Strategic Action Plan needs to provide a prioritization of actions (including BMPs by type), identify the responsible parties for implementation, quantify the nutrient reduction, estimate costs of implementation, and include a cost-benefit analysis through a systematic evaluation. That evaluation must be cognizant of the following:

- Applicable laws and regulations
- Stakeholders and sectors represented and/or impacted
- Implementation timeframes (including regulatory-driven timelines)
- BMPs planned
- Quantification of BMPs (including nutrient/sediment reduction methodology)
- Known and perceived BMP implementation constraints
- Cost-benefit analysis
- Financial/funding opportunities and requirements
- Other considerations deemed appropriate by the Alliance

It is critical that benefit stacking (implementing projects with multiple environmental, economic, and regulatory advantages) within the various efforts as well as benefit stacking between various initiatives be integrated into the cost-benefit analysis process.

### **Strategic Action Plan Objectives**

The key objectives that will be addressed in the Strategic Action Plan are as follows:

1. Identify and address overlapping initiatives and/or requirements.
2. Identify and address gaps in requirements and initiatives.
3. Prioritize activities.
4. Identify cost-effective approaches for initiatives and regulatory requirements.
5. Define potential strategies and approaches as recommendations for both point and non-point source sectors.
6. Identify and address constraints to BMP and strategy implementation.
7. Establish baseline requirements to achieve quantifiable reductions and attain the TMDL and designated uses as established in DEP Chapter 93 Regulations.
8. Identify multi-entity initiatives, including intergovernmental cooperation agreements to facilitate the implementation of the Strategic Action Plan.

### **Project Team**

The Project Team consists of representatives from the Alliance and their planning and technical support consultants. The Project Team will include representatives from the local and county levels of government, Lebanon County Planning Commission, Lebanon County Conservation District, private sector consultants, and watershed groups. Planning and technical consultants will be utilized to ensure a detailed strategic action plan includes quantifiable results developed with consideration of the Chesapeake Bay Model. The intent is to evaluate the most cost effective way for Lebanon County to meet its obligations as defined in the load reduction targets established in the Phase WIP II process..

### **Scope of Work**

The Scope of Work is subdivided in phases and corresponding tasks as follows:

#### **Phase 1: Organize**

Task 1: Develop sector-focused committees

- Establish committees such as agricultural, urban/suburban (MS4), construction, technology, financial, source water, and so on in order to clarify roles and focus efforts in the development of the Strategic Action Plan.

Task 2: Evaluate the interrelationship of existing plans, programs, and initiatives

- Develop and implement a systematic evaluation of the various initiatives, their interrelationship and effectiveness.
- Determine where existing initiatives overlap and which initiatives have produced measurable results.
- Prioritize opportunities with existing initiatives to support implementation of the Phase II Watershed Implementation Plan and identify opportunities for improvement where gaps are present.
- Identify cost saving opportunities in overlapping MS4 Permit programs.

- Establish potential costs for initiative implementation individually or in conjunction with other initiatives, including fiscal abilities.
- Evaluate the fiscal opportunities and constraints to implementation
- Rank the proposed priority initiatives and map their locations

Task 3: Summarize organizational phase findings

- Determine the components of the plan.

## **Phase 2: Baseline Assessment**

Task 1: PA Chesapeake WIP-Phase 2 Review

- Review current and accepted BMPs and corresponding definitions and requirements to achieve measurable reductions in nutrients and sediment.
- Establish an initial list of BMPs that may be feasible and cost-effective in Lebanon County

Task 2: Assess constraints and opportunities

- Identify where gaps could become opportunities for implementing planned or new initiatives
- Identify where constraints that may interfere with opportunistic initiatives from being implemented.

Task 3: Assess opportunities and constraints for overlapping initiatives

- Identify and analyze potential benefits of opportunities for overlapping initiatives.
- Evaluate, what constraints may interfere with achieving the full benefit of synergistic initiatives.

Task 4: Establish baseline nutrient and sediment loadings by sub-watershed

- Using the data collected from documents and reports summarized in Task 1, calculate nutrient and sediment loading rates using modeling spreadsheets and protocols. These calculations will take into consideration BMP removal efficiency and land use in the respective sub-watersheds. This will include both implemented and non-implemented BMPs listed in the watershed-wide reports and documents.

Task 5: Summarize assessments

## **Phase 3: Analysis**

Task 1: Establish cost/benefit/effectiveness of BMPs

- Based on the BMPs determined in Task 1, from the summarized reports, documents and initiatives perform a systematic and detailed cost-benefit analysis of individual programs and integrated program scenarios. Evaluating the potential to achieve multiple objectives more efficiently through a single project (Benefit Stacking) or through multiple projects to achieve synergistic benefits should be a critical element in this analysis process. A set of recommendations should be prepared to address the most cost effective ways to meet the Chesapeake Bay TMDL and MS4 Permit requirements within Lebanon County. Recommendations should prioritize specific existing initiatives and evaluate opportunities by location within the county, land use, and BMP type.
- Ensure identified BMPs are consistent with acceptable Phase II WIP BMPs.

Task 2: Identify baseline cost for implementation of priority initiatives

Task 3: Identify cost difference for allocated reductions

- Conduct a cost/reduction analysis to determine which BMP/projects and initiatives may provide the largest nutrient and sediment reduction with the most cost effective implementation. The cost/reduction benefit ratio is an important factor in establishing the priority of BMPs for the Strategic Action Plan.

Task 4: Establish maximum BMP implementation parameters

Task 5: Summarize analysis

- Provide an overall summary of the analysis including: cost/benefit analysis and cost/load reduction benefit. This will provide the results in a format conducive to facilitating the development of a Strategic Action Plan.

#### **Phase 4: Strategic Action Plan**

Task 1: Define Process for Developing and Implementing a Strategic Action Plan

Task 2: Define Public Involvement Needs – including routine communications and coordination, and the potential need for a Stakeholder Summit

Task 3: Identify Funding/Financial strategies

Task 4: Categorize all initiatives and programs based on technical analysis and stakeholder input

Task 5: Draft Strategic Action Plan

Task 6: Public Outreach on Draft Strategic Action Plan

Task 7: Final Strategic Action Plan