

**THE PATH FORWARD**

***Chesapeake Bay Program Response to  
Chesapeake Bay Environmental Finance Symposium Recommendations and Final Report, August 2016  
Response Report Date [to be inserted]***

**PURPOSE AND CHARGE**

The purpose of this document is to respond to the charge of the Chesapeake Bay Program (CBP) Management Board (MB), and is the collective product of the Environmental Finance Symposium Report Action Team (AT).

**The Charge:** The Management Board will convene an action team that will include the members of the GIT 6 Budget and Finance Workgroup and other interested partners to propose a “path forward” regarding the recommendation in the report and the issues raised at the symposium. The action team will report to the Management Board by March 2017. The action team will seek input on priorities from the PSC and consult with symposium attendees and others with financing and environmental market expertise. (Appendix 1)

In developing its proposed response and path forward, the Environmental Finance Symposium Report Action Team shall undertake, at a minimum, the following actions:

1. **Draft a plan and a “path forward”/schedule** for further analysis, studies, or other actions that may need to be taken by the CBP to address these recommendations over time Present the draft plan at the March 2017 Management Board Meeting and at the Spring 2017 PSC Meeting.
2. **Identify those recommendations that are most likely to benefit from a coordinated CBP partnership approach** vs. those that may be best addressed through separate actions by individual jurisdictions, agencies or other partners.
3. **Assess challenges of and opportunities** to support selected recommendations, including, but not limited to, cost, workload, and resource implications.
4. **Prioritize which recommendations should be acted on first** so that other responses can build upon those actions as well as any that can be pursued simultaneously.
5. **Consider short-term vs. long term actions** that may be taken to address each recommendation.
6. **Identify work being done by the CBP, our partners, and in other regions of the country** that may serve as models for others seeking to address recommendations.
7. **Identify which Goal Team, workgroup or other partner** within the CBP organization would take the lead in responding to recommendations. Also identify those actions that may require use of an external entity through use of a grant, contract or other vehicle.

**BACKGROUND*****Chesapeake Executive Council (EC) Resolution for Environmental Finance Symposium***

At the July 2015 annual EC meeting, they resolved:

That the Chesapeake Bay Program, under the leadership of the Principals’ Staff Committee conduct a symposium on environmental financing within the next 12 months and report any findings and

recommendations at the next meeting of this council. That the symposium include representatives from federal, state and local governments, private capital firms, non-profit organizations, academic institutions and others. (Appendix 2)

### ***Environmental Finance Symposium, Report and Recommendations***

On April 25 and 26, 2016, the Environmental Finance Center (EFC) at the University of Maryland, in collaboration with the EPA Chesapeake Bay Program (CBP), convened the **Chesapeake Bay Environmental Finance Symposium**. The event gathered more than 130 creative, successful leaders from diverse fields including finance, business, policy, and resource protection to discuss options for advancing a more market---like approach to achieving Bay restoration goals. Symposium participants engaged in robust and fruitful discussions, both during and following the event, and these conversations have provided the foundation for the analysis and recommendations for the final report issued in August 2016. (Appendix 3)

The report recommendations were organized into one overarching recommendation, five core recommendations and four theme recommendations.

#### Overarching Recommendation:

Create a Chesapeake Bay Program Financing Advisory Board.

#### The five Core Recommendations are:

1. Advance a Chesapeake Bay restoration economic development effort.
2. Create a credit-based financing system and market infrastructure, basin-wide.
3. Establish implementation and performance standards, basin-wide.
4. Reduce unnecessary transaction costs.
5. Facilitate the flow of capital through innovative institutional structures.

#### The four Theme Recommendations are:

1. Pilot pay for success investment models.
2. Establish proactive stormwater banking programs.
3. Advance public-private partnerships, where appropriate.
4. Incentivize commercial landowners to mitigate nutrient and sediment emissions.

### ***Principal's Staff Committee Priority Recommendations***

In October of 2016, the CBP MB provided the above stated charge to the Action Team (AT).

The AT sought input on the priorities from the Principal's Staff Committee (PSC) at the October 26, 2016, PSC meeting which resulted in focusing primarily on three of the recommendations in the EFC report for initial action.

#### The three PSC priority recommendations are:

Core Recommendation #1: Advance a Chesapeake Bay restoration economic development effort.

Theme Recommendation #3: Advance public-private partnerships, where appropriate.

Theme Recommendation #1: Pilot pay for success investment models.

### ***Remaining Recommendations***

While the above recommendations from the EFC report have been prioritized by the PSC, the remaining recommendations are also important for meeting water quality goals for the Chesapeake Bay and may be implemented in the future. As such, the Action Team created a matrix (appendix 4) which addresses all ten recommendations found in the ***Chesapeake Bay Environmental Finance Symposium Recommendations and Final Report***. The matrix contains information at a preliminary level which can serve as a resource for the partners who wish to pursue any of the other recommendations in more depth.

Many of the recommendations made in the report are interconnected, with some creating enabling conditions for others. For example, implementation and performance standards would likely need to be established for a watershed-wide credit based finance and market system to be successful. Standards will also help to facilitate pay for success models and would further the restoration as economic development effort.

Similarly, creating a credit based finance and market system for the watershed (Core Recommendation #2) could be transformational, integrating the currently separate state nutrient trading programs and restoration finance mechanisms. This would be a major shift, and potentially difficult, but was identified as being foundational to meeting Bay goals in an economical way. Establishment of a standard credit finance system for the watershed was acknowledged in the EFC Report as being the most important component of Core Recommendation #2, and could be pursued independent of an integrated market or performance financing. A standard credit based finance system may not be necessary for the prioritized recommendations to be implemented, but it is likely that credit based financing would allow for greater success, particularly in engaging private finance.

Certain recommendations were determined to be most appropriately addressed at the scale of the states, rather than the Bay Program. In particular, the states would be best able to address reducing procurement costs (Core Recommendation #4), establishing proactive stormwater banking programs (Theme Recommendation #2), and incentivizing commercial landowners to mitigate nutrient and sediment emissions (Theme Recommendation #4).

### ***Engaging New Partners in CBP's Financing Work***

Harnessing the creativity of the business community is the best way to generate new ideas and successful business-private partnerships. To harness that creativity, government agencies may need to step away from a top-down approach of choosing projects and instead, provide seed funding or other incentives that entice businesses to generate solutions. The CBP can facilitate good decisions on business partnerships by giving decision makers (i.e., those with money to invest in business development) enough of a background in business and finance fundamentals so that they can evaluate alternative investments. Also, partners may want to invest in collaborations with business schools or environmental finance experts who can guide decision makers in creating successful programs and developing financing structures. Finally, the partnership can facilitate collaboration and coordination across jurisdictions to share knowledge gained or leverage multiple funding sources.

It is also necessary to choose business investments wisely to avoid the pitfalls that some organizations have fallen into when they attempted business partnerships and it is important that they be developed through due diligence.

### **THREE PRIORITY RECOMMENDATIONS**

#### ***Core Recommendation #1: Advanced a Chesapeake Bay restoration economic development effort.***

Strengthen the linkage between the Bay restoration effort and the region's economy and economic development framework – a paradigm shift that views water quality as economic development. Three opportunities are identified: develop industries and products that are naturally linked with a clean and healthy Bay; target investment in BMPs that also support the local and regional economy; and local and state governments can create incentives to grow innovative initiatives that both generate revenue and function as restoration practices in and of themselves.

**Examples of related and ongoing work** being implemented in the Chesapeake Bay watershed include the following.

- PENNVEST identifies possible avenues to identify funding opportunities for Bay restoration in activities that simultaneously improve water quality as well as generate revenues. PENNVEST is exploring a fresh water mussel hatchery that will yield product to be sold in both Delaware and Chesapeake Bay watersheds, revenues generated will be for funding restoration. Additionally, PENNVEST and the Pennsylvania Department of Conservation and Natural Resources have been exploring the possibility of investing in revenue-generative riparian buffers. The buffers are part of the Pennsylvania best management practice or BMP commitment to reduce pollution; these switchgrass buffers can be harvested as a revenue generating crop. (Appendix 5)
- IMPLAN (Impact Analysis for Planning) data exists for economic impact modeling/jobs created for the financial investment sector. These types of analysis can be run or modeled for any segment of the Chesapeake Bay Watershed. [https://efc.umd.edu/assets/stormwater\\_projects/eia\\_nfwf\\_final\\_.pdf](https://efc.umd.edu/assets/stormwater_projects/eia_nfwf_final_.pdf)
- In 2017, the Virginia General Assembly passed legislation that allows the Department of Environmental Quality to purchase nutrient credits for attracting or retaining “valued” economic development prospects. The bill was the outgrowth of Governor McAuliffe’s Executive Order 52 addressing the long term availability of credits in order to maintain water quality and allow continued economic growth.
- **Farm Manure-to-Energy Initiative in the Chesapeake Bay region:** The initiative is helping farmers demonstrate and evaluate the performance of manure-to-energy technologies that convert surplus poultry litter to electricity or heat. Three demonstration projects are identified in the Delmarva Peninsula, one each in DE, MD and VA, as well as projects in Pennsylvania’s Lancaster County and Virginia’s Shenandoah Valley. These technologies are still in the early phases of commercialization and, in some cases, still in the research and development phase. <https://efc.umd.edu/manuretoenergyinitiative.html>

#### ***Theme Recommendation #3: Advance public-private partnerships, where appropriate.***

A P3 is a “contractual arrangement between a public agency (federal, state or local) and a private sector entity. Through this agreement, the skills and assets of each sector (public and private) are shared in delivering a service or facility for the use of the general public.” P3 can be used for various

aspects of a project, including financing, design, construction, operations and maintenance, and /or monitoring and evaluation.

**Examples of related and ongoing work** being implemented in the Chesapeake Bay watershed include the following.

- Maryland Chesapeake and Atlantic Coastal Bays Trust Fund have helped to fund a P3 (Public-Private Partnership) between Soil Conservation Districts (SCD) in Harford, Baltimore, Frederick and Ecotone, Inc. to assist in the design, permitting and implementation of wetland, stream and habitat restoration projects. In partnership with the SCD's traditional agricultural best management practices, the Ecotone P3 works to promote improved land stewardship of agricultural lands and sensitive habitats to improve overall watershed health in cost-effective ways.
- Prince George County, Maryland, and Corvias established a partnership that is an excellent example that local governments can replicate of how to structure public-private partnership programs. This example demonstrates how local governments can encourage business participation by demonstrating a willingness to 1) lower barriers to entry, 2) minimize costs of doing business, and 3) generate a steady income stream (e.g., by imposing fees). The government agencies can get more per dollar spent by removing barriers that create inefficiencies or hinder innovation. (Appendix 6)
- US EPA Region 3 published a guide for local governments titled, "Community Based Public-Private Partnerships (CBP3s) and Alternative Market-Based Tools for Integrated Green Stormwater Infrastructure". This comprehensive guide is designed to help communities decide if a P3 approach is appropriate for helping to address their unique stormwater management needs. (Appendix 7)

***Theme Recommendation #1: Pilot pay for success investment models.***

A social impact bond, also known as a pay for success contract, is an agreement between a public agency and a private firm, in which a commitment is made to pay for improved social outcomes that result in public sector savings.

**Examples of related and ongoing work** being implemented in the Chesapeake Bay watershed include the following.

- The Maryland Chesapeake and Atlantic Coastal Bays Trust Fund Pay for Success through private investment is an example. The Trust Fund has partnered with Cecil Land Trust and Ecosystem Investment Partners (EIP) to begin restoration of over 8,000 linear feet of stream in Principio Creek. Payments are structured based on implementation success and paid in pre-determined percentages at construction end. This payment mechanism greatly reduces the risk of investment for public dollars compared to standard restoration grant-making.
- The Pay-For-Success Learning Hub, is a repository for information on this type of model and includes an assessment tool for governments to evaluate readiness to implement these programs. The learning hub is located at <http://www.payforsuccess.org/>

**ACTION ITEMS AND RESPONSIBLE LEADS**

The prior report sections were developed to provide the background and context of the Partnership's efforts to fulfill the Chesapeake Executive Council resolution for the Environmental Finance Symposium, and the process for responding to the resulting symposium report and recommendations.

This section is developed by the Action Team, on the behalf of the Partnership, and is designed to respond, as directed by the Principals' Staff Committee (PSC), to the ***Chesapeake Bay Environmental Finance Symposium Recommendations and Final Report, August 2016***. It is intended that these actions support the ***2014 Chesapeake Watershed Agreement*** goals, outcomes, and management strategies.

The PSC expressed a desire to consolidate their top three priority recommendations into two recommendations. The Action Team determined that it was not possible for the three recommendations to be modified since the three priority recommendations were the product of a final and published report, the ***Chesapeake Bay Environmental Finance Symposium Recommendations and Final Report, August 2016***. To be responsive to the PSC, the Action Team, instead produced a single list of action items addressing the PSC priority recommendations. Additionally, please note that several of the action items address multiple priority recommendations.

The following are the action items options identified by the Action Team in response to the PSC's top three priority report recommendations. The Action Team members are listed in Appendix 8.

#### ***Short-term (12 to 18 months)***

##### **A. Action: Identify and develop implementable business cases for revenue-generating Bay restoration activities.**

###### **Recommendation Addressed:**

###### **Core Recommendation #1 – Advancing a Chesapeake Bay restoration economic development effort.**

**Lead:** Jurisdictions through Chesapeake Bay Implementation Grants (CBIG), another grant vehicle, or Chesapeake Research Consortium or similar organization to access university business school administration or related entities that have the personnel, resources and expertise to engage the business communities in the Bay jurisdictions. One or more such entity could be identified as the sole lead or as a partnership.

**Purpose:** The lead entity would be charged with identifying financially self-sustaining revenue generating activities, while simultaneously contributing to Bay restoration. One example of this would be riparian buffers that generate revenues from crops grown on the buffers while simultaneously reducing nutrient discharges into the Bay watershed. The revenues generated would have to cover both initial investment expenses as well as on-going operation and maintenance. The lead entity could undertake tasks:

- Engage the USDA and other potential sources of data to help build business cases
- Look for models or pilots elsewhere in the U.S. or internationally to identify revenue-generating water quality benefitting activities
- Involve Bay state departments of commerce and chambers of commerce to identify industries within their states that could either benefit financially from Bay restoration or generate revenues from Bay restoration activities, or both

- Consult with economic development and education professionals to determine what, if any, business climate and workforce development needs should be addressed to foster this effort. Ultimately, the lead entity would be charged with identifying and developing defensible business cases for investment opportunities that would lead to Bay restoration.

**B. Action: Compile successful pay for success pilot project case studies from across the country. Share the compiled information through workshops or other appropriate means with those organizations which may undertake similar pay for success pilot projects or efforts in the Chesapeake Bay Watershed.**

**Recommendation Addressed:**

**Theme Recommendation #1 – Pilot pay for success investment models.**

**Lead:** Budget and Finance Workgroup of the CBP Goal Implementation Team 6, in coordination with the jurisdictions and with possible contact or grant support.

**Purpose:** Expand the pay for success model into standard practice more broadly through the watershed.

**C. Action: Evaluate statutes in each jurisdiction to determine current authority for P3 projects addressing water quality, stormwater and related issues.** Identify ways to advance successful P3 models, including potential issues and lessons learned through local government implementation. Disseminate this information through existing Chesapeake Bay Partner networks and private entities.

**Recommendation Addressed: Theme Recommendation #3 - Advance public-private partnerships, where appropriate.**

**Lead:** Budget and Finance Workgroup of the CBP Goal Implementation Team 6 with the Chesapeake Bay Commission and Region 3, and supported by the Local Government Advisory Committee.

**Purpose:** To identify jurisdictions current authorities for P3 projects and lessons learned.

***Intermediate (1.5 to 3 years)***

**D. Action: Create enabling conditions for engaging private finance in Bay restoration by developing a standardized water quality credit system for the watershed.** Establishing standards for water quality credits is important in increasing the predictability of return on investment for private entities investing in restoration, helping to stabilize a market for restoration activities in the watershed (different from a nutrient credit trading market). This reduces risk for private investment, helping to engage private finance, a critical step in using Bay restoration to enhance economic development.

**Recommendation Addressed:**

**Core Recommendation #1 - Advancing a Chesapeake Bay restoration economic development effort.**

**Lead:** Science and Technical Advisory Committee (STAC) of the Chesapeake Bay Program.

**Purpose:** Build a watershed-wide water quality credit system into the routine verification operations for the CBP.

- E. Action: Undertake a Pilot Project using nutrient purchases (cost/pound) as a commodity for cash, in lieu of funding a BMP.**

**Recommendation Addressed:**

**Theme Recommendation #3 - Advance public-private partnerships, where appropriate.**

**Lead:** Maryland Department of Environment.

**Purpose:** First in Maryland, pilot the use of nutrient and sediment load purchases at a lower cost/pound (or cost/ton for sediments) than using grant funds for implementing higher capital cost BMPs. Measure success by evaluating growth of private equity investments in Bay restoration and the decreasing cost per pound (or ton) over time. Maryland plans to share lessons learned with the jurisdictions and other partners.

***Long-term (>3 years)***

- F. Action: Measure project-specific finance metrics of success for the following:**

- Goals of the project (nutrients reduced, etc.) are clear and status of the goals are regularly reported
- Project goals delivered at or below cost projected
- Private enterprise profits from exchange
- Synthesize factors of success or failure and amend funding programs using this information (adaptively manage)

**Recommendations Addressed:**

**Theme Recommendation #1 – Pilot pay for success investment models.**

**Theme Recommendation #3 – Advance public-private partnerships, where appropriate.**

**Lead:** Bay Funders Network, with the jurisdictions.

**Purpose:** Ensure that the success or failure of individual projects and the driving economic factors of either result are being reported and used to guide the overall effort.

- G. Action: Measure overall finance metrics of success for the following.**

- Growth of private equity invested in Bay restoration
- Decreasing cost of pounds of nutrients reduced over time
- TMDL goals being met at or below cost projected
- Other programmatic goals met in timeframe projected

**Recommendations Addressed:**

**Core Recommendation #1 – Advance a Chesapeake Bay restoration economic development effort.**

**Theme Recommendation #1 - Pilot pay for success investment models.**

**Theme Recommendation #3 – Advance public-private partnerships, where appropriate.**

**Lead:** CBP Budget and Finance Workgroup.



**Purpose:** Ensure that the decisions being made are yielding desired economic results in terms of watershed wide Bay restoration efforts.

## **APPENDICES**

1. Management Board Charge to the Action Team & Report Summary in Brief, October 2016
2. EC Financing Resolution, 2015
3. Chesapeake Bay Environmental Finance Symposium Recommendations and Final Report, August 2016
4. Recommendations Matrix with List of Contributing Organizations
5. PENNVEST Examples Mussel & Buffer Revenue-Generating
6. PG County Public Private Partnership Examples
7. “Community Based Public-Private Partnerships (CBP3s) and Alternative Market-Based Tools for Integrated Green Stormwater Infrastructure”
8. Action Team Membership