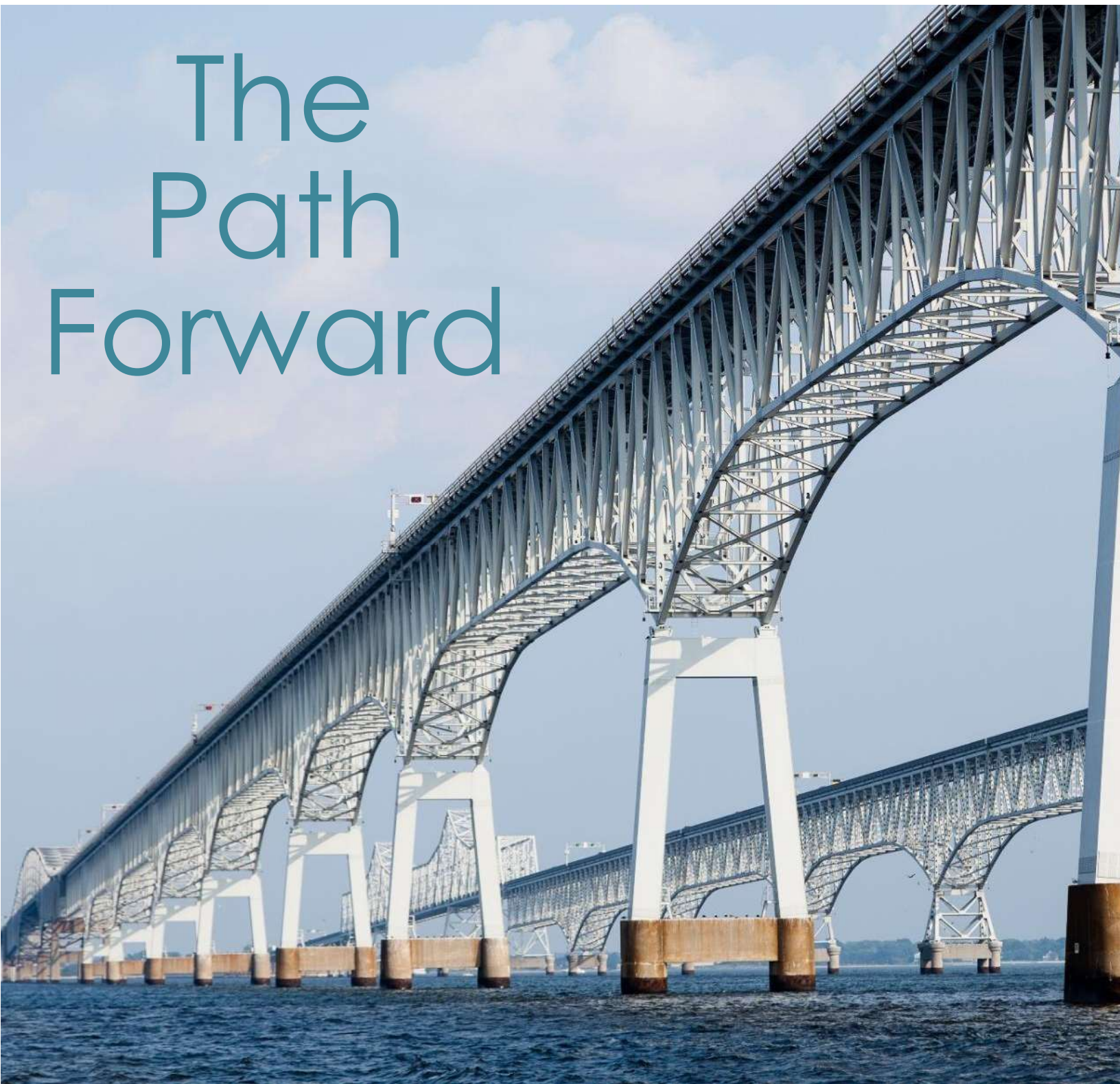


# The Path Forward



Chesapeake Bay Program Response to Chesapeake  
Bay Environmental Finance Symposium  
Recommendations and Final Report, August 2016

May 17, 2017 – **DRAFT**

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# Purpose and Charge

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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 Symposium Report Action Team (AT). This report outlines ***The Path Forward*** for further analyses, studies and/or actions that may need to be taken by the CBP to address the environmental symposium report recommendations over the next three to five years.

**The Charge:** The Management Board will convene an action team that will include 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 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 Principals’ Staff Committee (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 CBP to address these recommendations over time. Present the draft plan at the March 2017 MB 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 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 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

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## Chesapeake Executive Council (EC) Resolution for Environmental Finance Symposium

At the July 2015 annual EC meeting, the council 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 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 CBP Financing Advisory Board.

### Core Recommendations

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.

### Theme Recommendations

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

The AT sought input on the priorities from the PSC at the committee's October 26, 2016, 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 AT 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 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. 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 (e.g., tools used by those with Masters in Business Administration or Bachelor of Arts in Finance) so 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 similar to those discussed in the action items section. 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 some organizations have fallen into when they attempted business partnerships and it is important 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 best management practices that also support the local and regional economy; and create local and state government incentives to grow innovative initiatives that both generate revenue and function as restoration practices.



#### *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 are exploring the possibility of investing in revenue-generative riparian buffers. The buffers are part of the Pennsylvania best management practice 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 analyses 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 at 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 Delaware, Maryland and Virginia, 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 P3, 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.

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

- Maryland Chesapeake and Atlantic Coastal Bays Trust Fund has helped fund aP3 between Soil Conservation Districts (SCD) in Harford, Baltimore, Frederick counties 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's County, Maryland, and Corvias established a partnership that is an excellent example other local governments can replicate, outlining how to structure P3 programs. This example shows 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). Government agencies can get more per dollar spent by removing barriers that create inefficiencies or hinder innovation. (Appendix 6)
- U.S. 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 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.

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

- 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 more than 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

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The prior report sections were developed to provide the background and context CBP'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 behalf of CBP, 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 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 AT determined 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 team, instead produced a single list of action items addressing the PSC priority recommendations. Additionally, please note several of the action items address multiple priority recommendations.

The following are the action items options identified by the AT in response to the PSC's top three priority report recommendations. The 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 existing grant vehicles like the Chesapeake Research Consortium or similar organizations, 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 U.S. Department of Agriculture 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.
- Explore use of green infrastructure tools and alternative financing mechanisms including, U.S. EPA provided funding under the Water Infrastructure Finance and Innovation Act, <https://www.epa.gov/wifia>, which is intended to accelerate investment in our nation's water and

wastewater infrastructure by providing long-term, low-cost supplemental credit assistance to water and wastewater projects of national and regional significance.

- 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.

Please note a business case is a standard tool or template used in the business community to define the reasons, investment, and expected return when starting a new project.

*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 Chesapeake Bay Program partnership organizations or local governments 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:** Enable use of the pay-for-success model into standard practice more broadly through the watershed, where feasible.

*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 Program partnership 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 will lead, with support of Region 3, and the CBP Local Government Advisory Committee.

**Purpose:** To identify jurisdictions current authorities for P3 projects and lessons learned. This information will assist interested jurisdictions advance P3 projects through a better understanding of their legislative authorities.

## 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 to increasing the predictability of return on investment for private entities investing in restoration, helping stabilize a market for restoration activities in the watershed (different from a nutrient credit trading market). This reduces risk for private investment, helping 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:** Budget and Finance Workgroup of Goal Implementation Team 6 in collaboration with the jurisdictions, and the CBP Science and Technical Advisory Committee.

**Purpose:** Build a watershed-wide water quality credit system into the routine operations for CBP. A water quality credit system is considered by many to be a critical element and fundamental building block to advance and economic development effort.

*E. Action: Undertake a pilot project using nutrient purchases (cost/pound) as a commodity for cash, in lieu of funding a best management practice.*

**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 best management practices. 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 Bay 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 P3, where appropriate.

**Lead:** Budget and Finance Workgroup of Goal Implementation Team 6 in coordination with the Bay Funders Network, with the jurisdictions.

**Purpose:** Ensure 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*
- *Bay 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 P3, where appropriate.

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

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

## **Next Steps to Advance the Action Items**

Input on The Path Forward AT report was sought from and provided by both MB and PSC, and also discussed during their respective meetings on April 13, and May 17, 2017. Plans call for the PSC to present the AT final report to the Chesapeake Executive Council at their annual meeting on June 8, 2017. Going forward, the overall oversight and coordination for addressing the actions contained in this report into the work of the Chesapeake Bay Program will be the responsibility of the Budget and Finance Workgroup of the Enhance Partnering, Leadership and Management Goal Implementation Team. The workgroup will provide updates to the PSC as needed, to receive their ongoing leadership and strategic input.