



Chesapeake Bay Program
Science. Restoration. Partnership.

Wetlands

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Through the Chesapeake Bay Watershed Agreement, the Chesapeake Bay Program has committed to...



Goal: *85,000 Acres*

Outcome: Continually increase the capacity of wetlands to provide water quality and habitat benefits throughout the watershed. Create or reestablish 85,000 acres of tidal and nontidal wetlands and enhance the function of an additional 150,000 acres of degraded wetlands by 2025.

NEW REPORT ENABLES CREATION OF CARBON CREDITS FOR RESTORED WETLANDS

Study Finds \$600M Plus in Property Losses Averted by Coastal Wetlands

October 31, 2016

In Maryland, wetlands reduced property damages by nearly 30%, and in New Jersey, wetlands prevented US\$425 million in property damages. In Ocean County, NJ, the conservation of salt marshes is predicted to reduce average annual coastal property losses by more than 20%. (Additional findings available online here).

Wetland credited with reducing flood's crest

More absorbent watershed 'makes an impact,' Department of Natural Resources biologist says

Fish Need Wetlands

Fish and humans have similar basic survival needs. Both require food, shelter, and a healthy environment. Wetlands fulfill these essential needs for fish across the United States. For example, shrimp feed and grow in the tidal marshes of the Mississippi delta. Striped bass pursue killifish living in the salt marshes along the Chesapeake Bay. Young salmon rest in the brackish marshes along the Pacific Coast, until their bodies adapt to salty ocean waters. Alewife and blueback herring lay eggs in the forested wetlands along rivers in the eastern United States. Different types of wetlands provide fish with food, refuge, and safe areas to lay their eggs.



Wetlands





What We Want



1. **Assign** leaders and ensure active participation
2. **Incentivize** prioritization using existing data

1

Setting the Stage:

What are our assumptions?



Logic Behind Our Outcome

Following the Decision Framework:

Factors Influencing Success:	Gaps:	Management Approaches:
<ul style="list-style-type: none">• Funding• Acreage counting centralization• Landowner Willingness• Inaccurate and Incomplete Reporting• Value on Restoration by Decision Makers• Technical Knowledge• Climate Change	<ul style="list-style-type: none">• Reporting Discrepancies• Dedicated funding• Technical Personnel Capacity• Comprehensive Maps• Watershed Wide Prioritization	<ol style="list-style-type: none">1. Improve Mapping, Reporting and Tracking2. Identify Barriers to Restoration3. Increase technical Understanding4. Prioritize Areas for Restoration5. Expand Involvement by Local Stakeholders



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Gap: Tracking and Reporting Discrepancies

- Tracking project implementation is difficult; the burden falls to Workgroup members.
- A more coordinated, streamlined approach should be developed with the EPA.

If Decision-Makers Value Wetlands, why is staff capacity a gap?

In September 2017, a survey was put out to gauge participation and satisfaction:

Would you consider Chairing the Wetland Workgroup:
16 / 19 Respondents said No

I'm not active b/c staff goals reflect on the ground conservation - not meetings. I have to meet delivery goals for conservation.
The workgroup would be very valuable if we could translate work to on the ground accomplishments.

The Bay Program is seen as vast bureaucracy that consumes staff time with no clear agency benefit.

Leading the wetlands restoration expert panel was a drain

I am not the right person to be answering your survey, I don't want to be active. I just read the emails to keep up with BMP changes.

The goals and outcomes of the workgroup do not align with the work I'm doing – I don't need to be more involved.

Unless I am directed by my Chain of Command, I will not be able to Chair a Workgroup

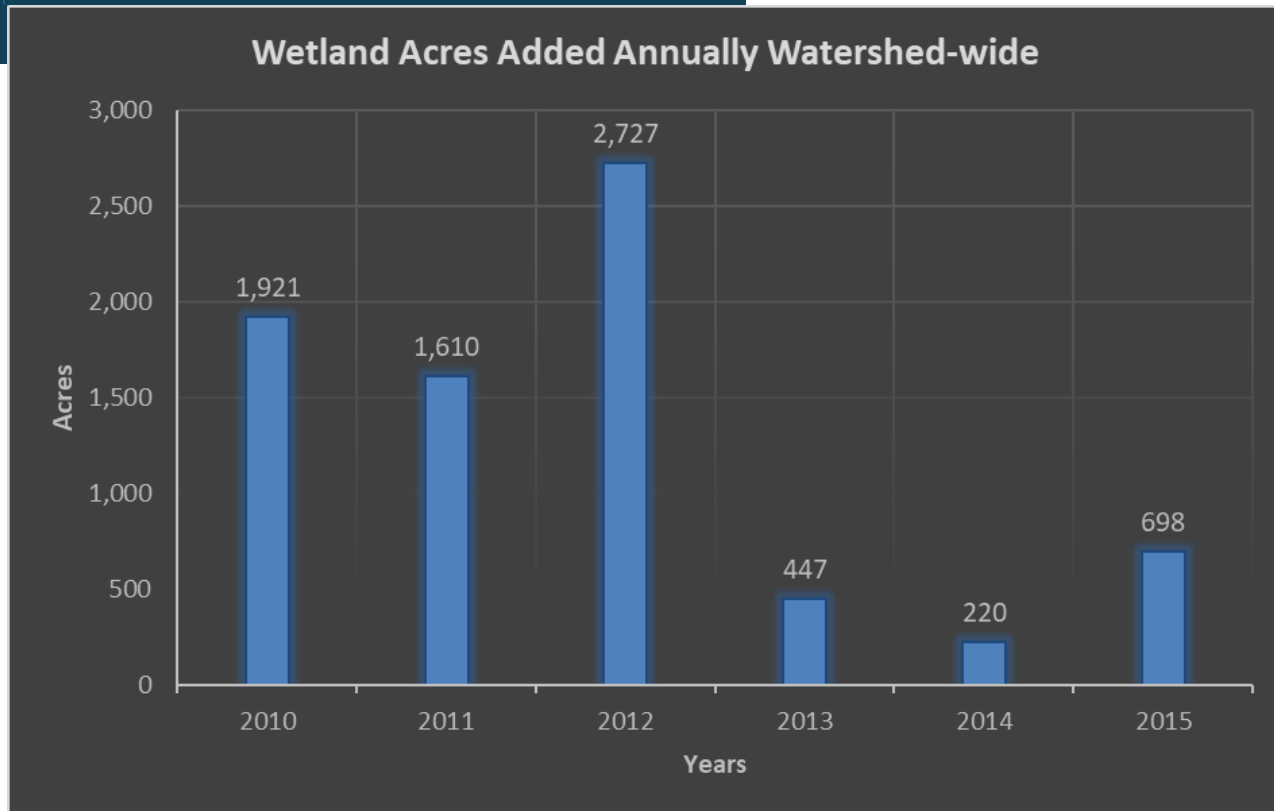
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Progress:

Are we doing what we said we would do?

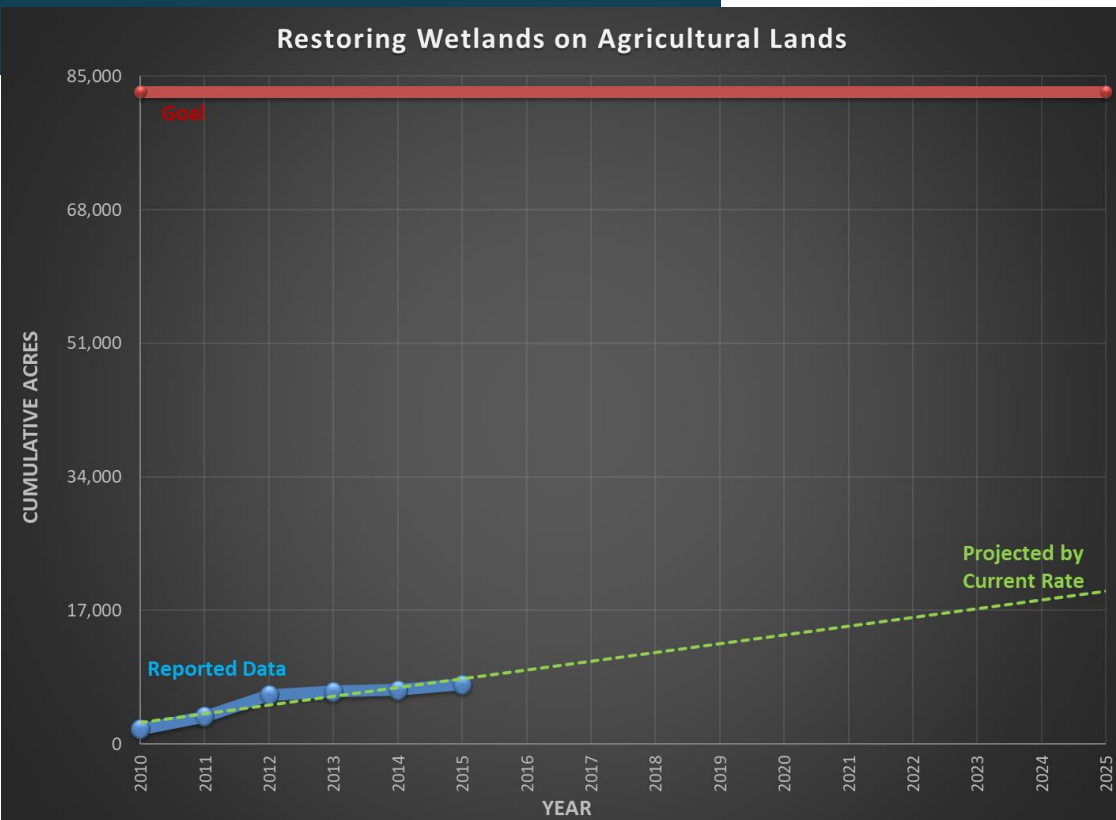


What is our progress?





Are we on track?



While this outcome includes a target to restore 85,000 acres of tidal and non-tidal wetlands in the watershed, 83,000 of these restored acres should take place on agricultural lands.

Support for tracking tidal and non-tidal wetland implementation could help inform Black Duck progress

It will take **67 years** to reach the 85,000 acre goal at the current rate of implementation (1,270.5 acres/year)



Analysis

Key Issues (Current and Future):

1. Reporting / Data collection
2. Landowner engagement

Wetlands Work – Landowner Willingness Progress



Wetlands are found across the Chesapeake Bay watershed, from the upper reaches of the Susquehanna River to the banks of Maryland and Virginia waterways. Some wetlands are influenced by changing tides, while others are influenced by the flow of water across the land and underground. All wetlands provide countless benefits for wildlife and clean water.



What is a Wetland?

Wetlands are what their name implies, lands where naturally occurring water regularly saturates soil and plants.



Types of Wetlands

The Chesapeake Bay watershed is home to tidal and non-tidal wetlands. These wetlands can be further classified by the source of the water that saturates their soil, their location within the landscape and the plants that can be found there.



Importance of Restoration

The agricultural community has a tremendous opportunity to restore wetlands on their property and protect the services these habitats provide.



Wetlands Work

A resource for agricultural landowners in the Chesapeake Bay watershed, it was developed by the Chesapeake Bay Program's dedicated biological resource landowners with the people and programs that can support wetland restoration on their land.



The Benefits of Wetlands



Clean Water

Wetlands filter pollutants and sediments from runoff, improving water quality for drinking water and recreation. Wetlands also help reduce flooding by absorbing excess water.

Learn more about the benefits of wetlands.



Wildlife

Wetlands provide habitat for a wide variety of wildlife, including birds, fish, and invertebrates. Wetlands also help maintain the health of the Chesapeake Bay ecosystem.

Learn more about the benefits of wetlands.



Economy

Wetlands provide a variety of ecosystem services, including flood protection, water filtration, and carbon sequestration. Wetlands also provide a source of income for landowners through hunting and fishing.

Learn more about the benefits of wetlands.

- GIT Funded Projects in multiple years to:
- Compile database of wetland programs/providers
- Conduct survey of landowner attitudes/willingness
- Target and engage landowners based on survey results via Wetlands Work website



3

Challenges:

Are our actions having the expected effect?



Challenges

Lessons Learned

- Overall lack of parity exists for data analysis and science support for outcomes other than water quality
- Data reporting burden hurts ability to recruit workgroup leaders and active participants
- Financial support to research wetland BMPs would inform Wetland Expert Panels and decisions on Phase 3 WIP implementation

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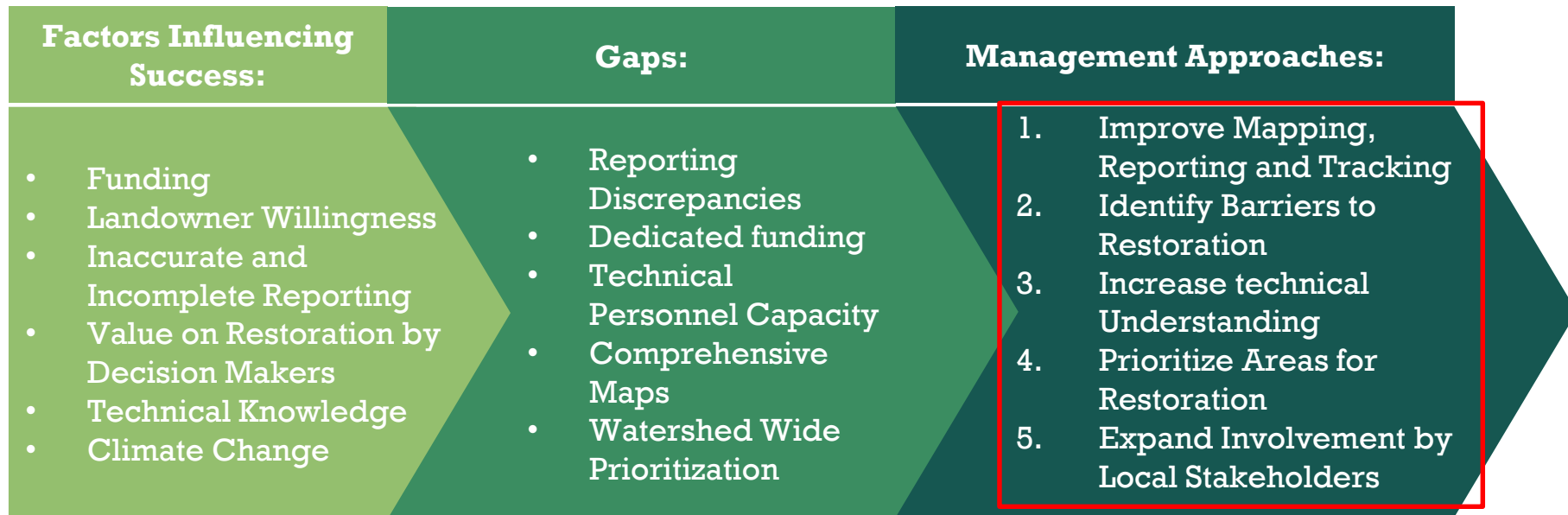
Adaptations:

How should we adapt?



**Based on what we've
learned, we plan to...**

Following the Decision Framework:



Ask 1: Assign leaders and ensure active participation

Lack of participation on Wetland Outcome is:

- Chronic (often raised, not effectively dealt with)
- Serious (impacts CBP's ability to make progress)
- Therefore deserves Management Board attention

**Ask 2: Incentivize
prioritization using existing
data**



We ask the Management Board to incentivize wetland prioritization through Chesapeake Bay Implementation Grants

- Use existing GIS data
- Overlay with cross-outcome priorities (Black Duck, Climate Resilience, etc.)

Centralize Wetland Reporting Function via the National Environmental Information Exchange Network

- The Workgroup plans to reduce member participation burden by centralizing wetland reporting via the National Environmental Information Exchange Network (NEIEN)
- Is CBP committed to assist (ask Carin)?

**Shift structure of workgroup
to reflect practitioner
interests**



Shift structure of Workgroup away from reporting
acres to focus on

- *Science supporting wetlands as BMPs*
- *Innovative restoration techniques and application*
- *Crediting based on functionality*
- *Financing options for projects*

Support staff participation in annual technical transfer forums

- A restructured Workgroup will allow for this forum
- The Workgroup could leverage support from existing regional forums.





Cross-Outcome Considerations

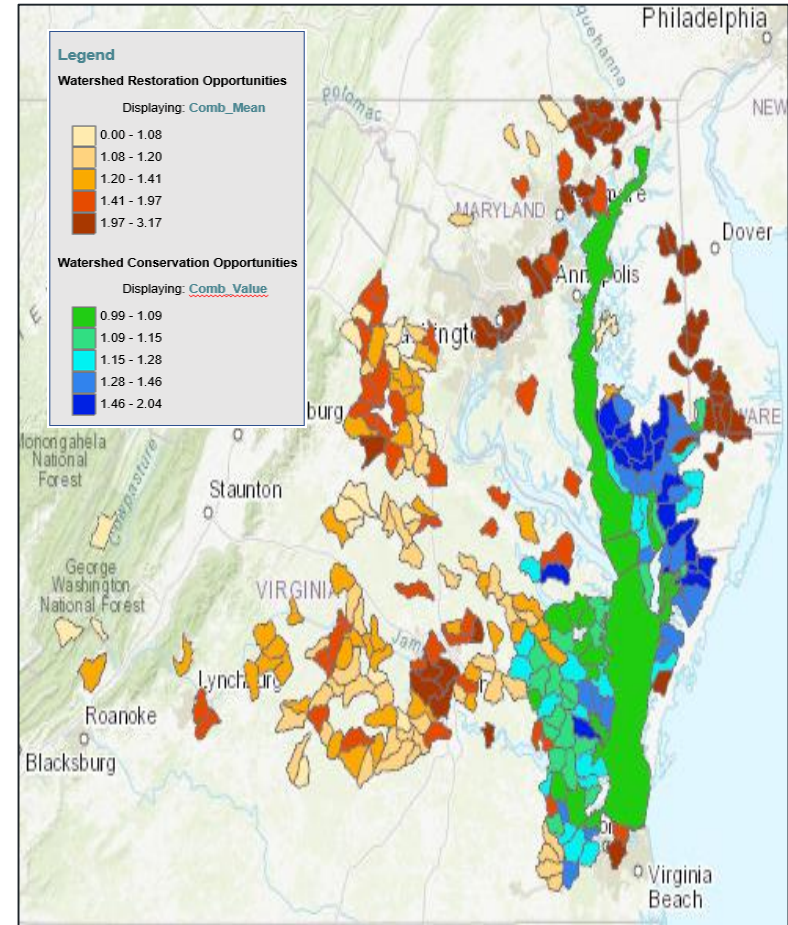
Restoration Metrics –

- Wetlands
- High pollution loading
- Marsh migration
- Low food availability (black duck)

Conservation Metrics –

- Wetlands
- Healthy Watersheds
- Marsh Migration
- High food availability (black duck)

Brown (restoration) and **Blue** (conservation) = High co-benefit opportunities



Agreement Goals and Outcomes



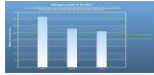
Sustainable Fisheries

- Blue Crab Abundance
- Blue Crab Management
- Oyster
- Forage Fish
- Fish Habitat



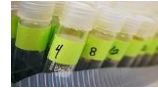
Vital Habitats Goal

- Wetlands
- Black Duck
- Stream Health
- Brook Trout
- Fish Passage
- Submerged Aquatic Vegetation (SAV)
- Forest Buffer
- Tree Canopy



Water Quality Goal

- 2017 Watershed Implementation Plans (WIP)
- 2025 WIP
- Water Quality Standards Attainment and Monitoring



Toxic Contaminants Goal

- Toxic Contaminants Research
- Toxic Contaminants Policy and Prevention



Healthy Watersheds Goal

- Healthy Waters



Stewardship Goal

- Citizen Stewardship
- Local Leadership
- Diversity



Land Conservation Goal

- Protected Lands
- Land Use Methods and Metrics Development
- Land Use Options Evaluation



Public Access Goal

- Public Access Site Development



Environmental Literacy Goal

- Student
- Sustainable Schools
- Environmental Literacy Planning



Climate Resiliency Goal

- Monitoring and Assessment
- Adaptation Outcome



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Discussion