



Defining the Existing and Emerging Challenges to Accomplishing our Goals

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CBP Biennial Meeting 2023

EC Charge

Identify new and emerging scientific data and studies which could modify our progress

Define the existing and emerging challenges to accomplishing the Watershed Agreement



Chesapeake Bay Program Partnership
Executive Council Charge to the Principals' Staff Committee: Charting a Course to 2025 and Beyond
Adopted October 11, 2022

As the Chesapeake Bay Program (CBP) partnership nears the 2025 date that the partnership set for several of the goals and outcomes under the *Chesapeake Bay Watershed Agreement (Watershed Agreement)*, there are many successes to celebrate. At the same time, emerging issues and changing conditions (e.g., climate change, growth, new scientific data) have impacted the levels of effort needed to meet our collective restoration priorities. We, as a partnership, remain committed to using the best available science in restoring the Chesapeake Bay as we accelerate toward the deadline and anticipate continued progress post-2025.

Thus, this Executive Council charges the Principals' Staff Committee (PSC) in recommending a critical path forward that prioritizes and outlines the next steps for meeting the goals and outcomes of the *Watershed Agreement* leading up to and beyond 2025. The PSC is to report back to the Executive Council at our 2023 annual meeting with recommendations on how to best address and integrate new science and restoration strategies leading up to 2025. At our 2024 annual meeting, the PSC is to prepare recommendations that continue to address new advances in science and restoration, along with a focus on our partnership for going beyond 2025.

In undertaking such a process, the PSC should address the following considerations:

Science

- Identify new and emerging scientific data and studies which could modify our progress reporting and adaptive management approach, as well as the goals and outcomes under the *Watershed Agreement*.
- Enhance our monitoring and reporting capabilities to improve our understanding of existing conditions and trends.
- Define the existing and emerging challenges (e.g., climate change conditions, increasing growth, diversity, equity, inclusion and justice considerations) to accomplishing the partnership's work under the *Watershed Agreement*, and how addressing those challenges might alter our collective restoration priorities, including the possibility of extending the target date for completing restoration of water quality beyond 2025.
- Identify opportunities to leverage action across multiple goals and outcomes of the *Watershed Agreement*.

Restoration

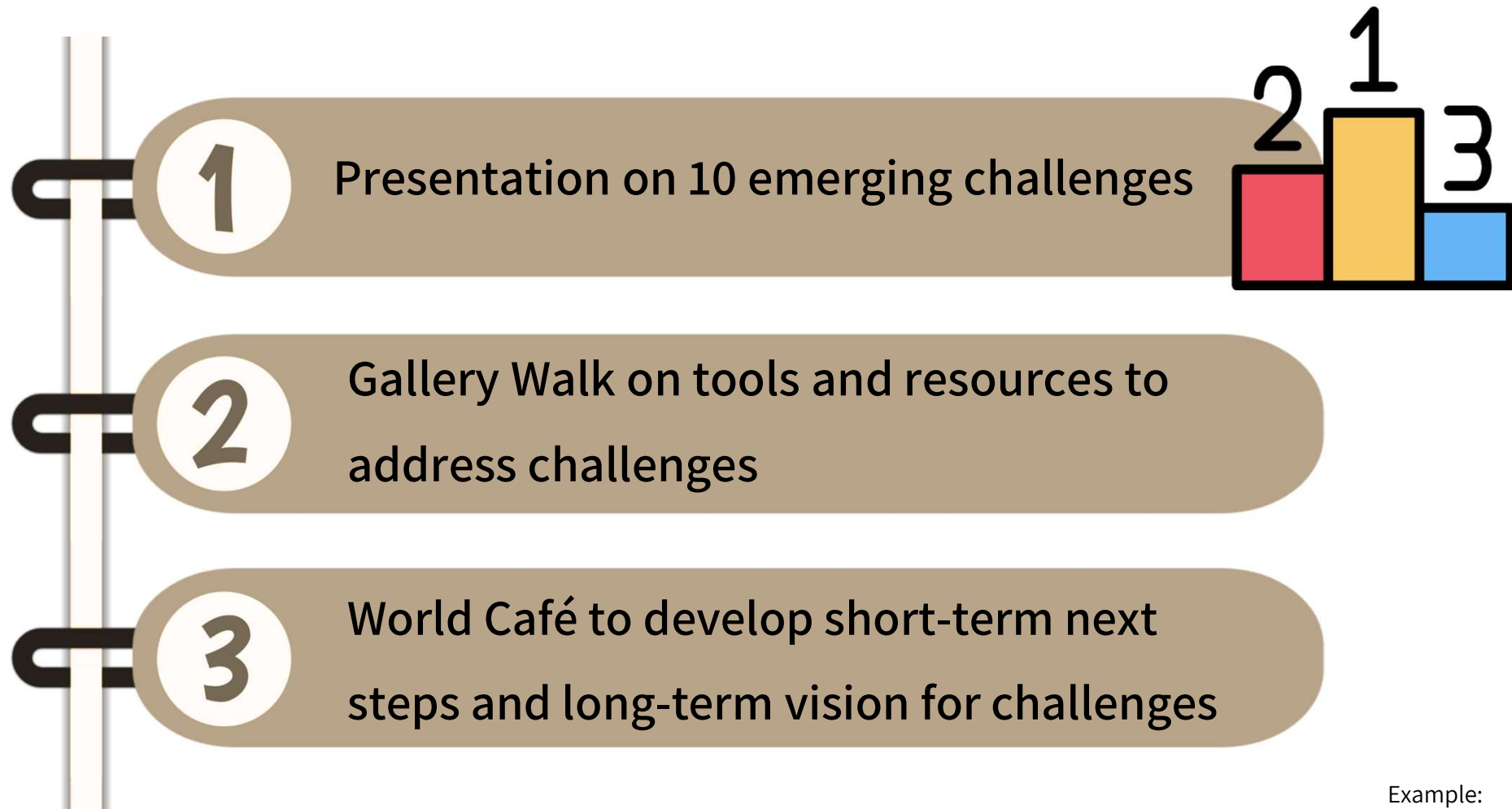
- Develop and begin to implement a communication strategy that identifies key partnership successes, associated ecosystem improvements and areas where more effort is needed.
- Provide snapshots of outcome attainability under the Agreement (e.g., which outcomes are likely to be met by the date(s) set by the partnership, which won't, and why) and options for communicating these snapshots to demonstrate progress in achieving our outcomes and the remaining work to be done, including gaps to be addressed.

Partnership

- Focus on moving beyond 2025 by seeking ways in which restoration can be relevant to all communities within the watershed.
- Assess the overall partnership to determine whether we
 - Are effectively hearing from and listening to all stakeholders, and
 - Have systems of evaluation and decision-making to enable meaningful action and allocation of partnership resources.
- Based on this assessment, develop recommendations for potential improvement.

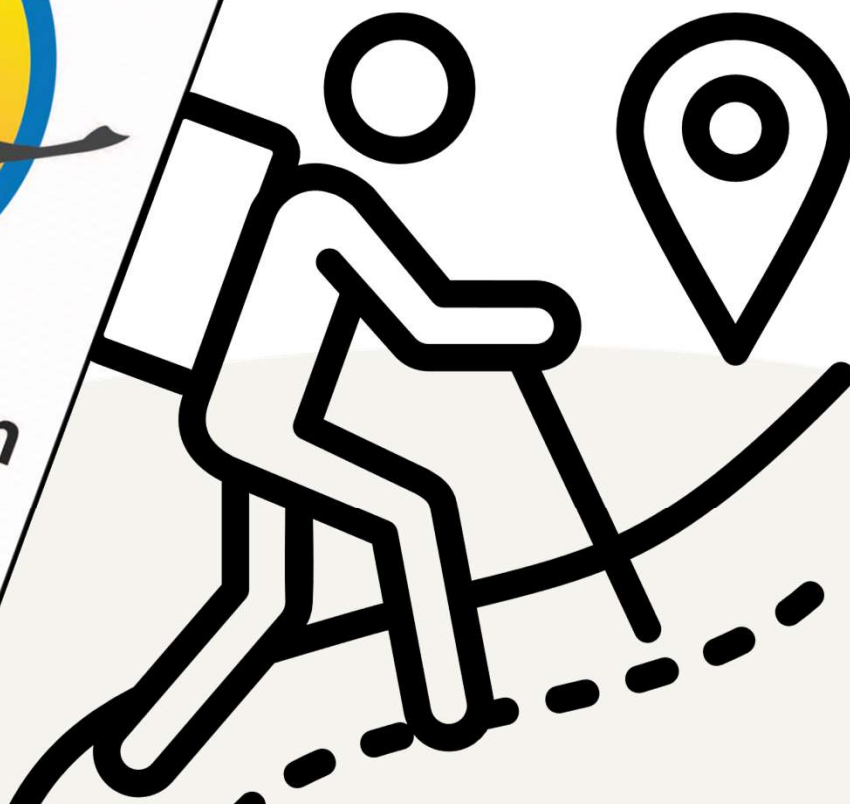
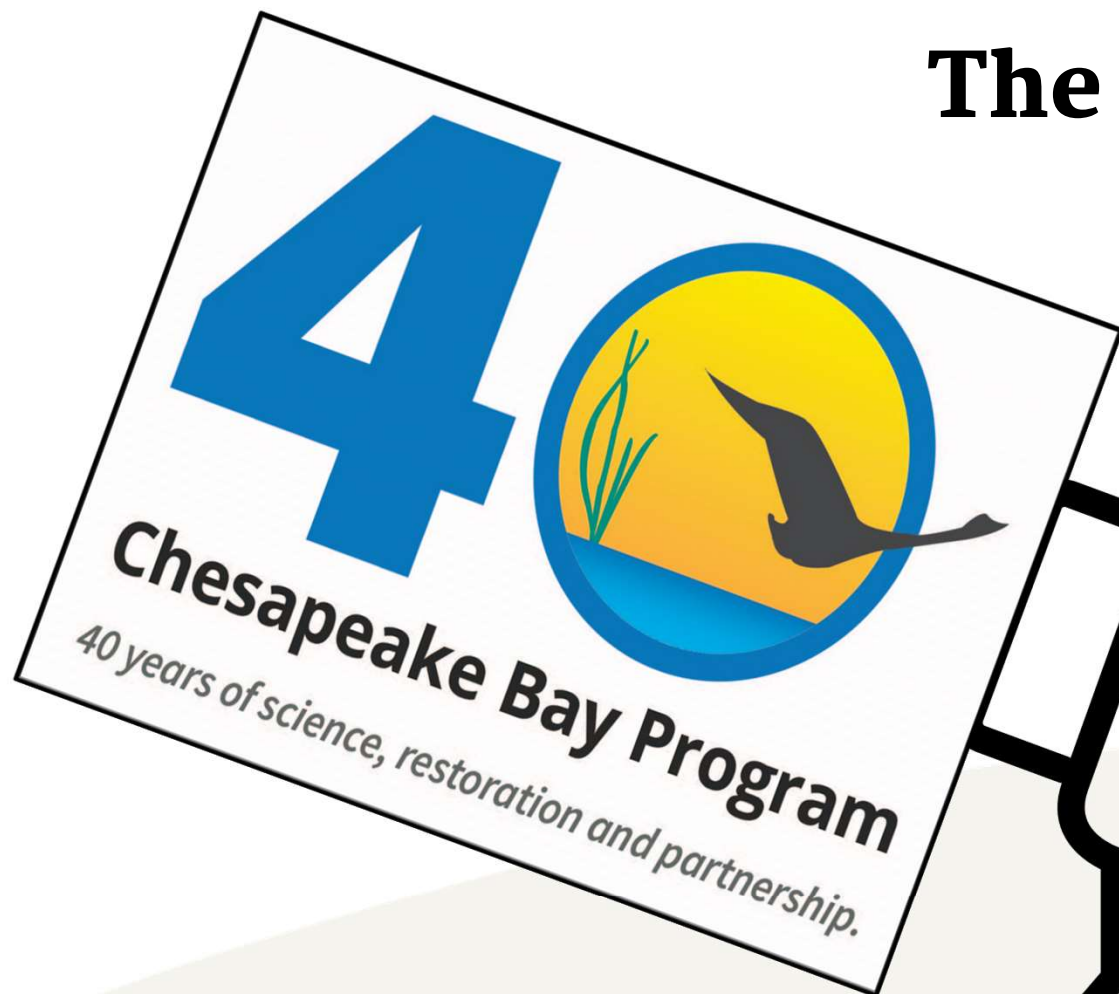
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- 1** Presentation on 10 emerging challenges
 - 2** Gallery Walk on tools and resources to address challenges
 - 3** World Café to develop short-term next steps and long-term vision for challenges

Example:
Lessons Learned #
Gallery Walk Poster



Example:
Lessons Learned #
Gallery Walk Poster

**The challenges are a
heavy load**



Tackling small pieces of the challenges



**To estimate what
the future Bay and
its watershed will
look like under
different scenarios
of management**



The Past

1800s: Oyster population peaks

Estimates range from 14 million to 20 million bushels harvested from the bay each year.



Land change between 2013/2014 and 2017/2018

Development increased by an additional 131,000 acres

1993: SAV population

73,114 acres

The Present

2021 Public Access

Sites

31 public access sites were added for a total of 237

2018 - 2020 Water Quality Standards

Only 30% of tidal waters met criteria



2023: Millions invested in monitoring

Partnership investments leads to a new phase in monitoring

The Future

Resiliency

No Action

Conservation

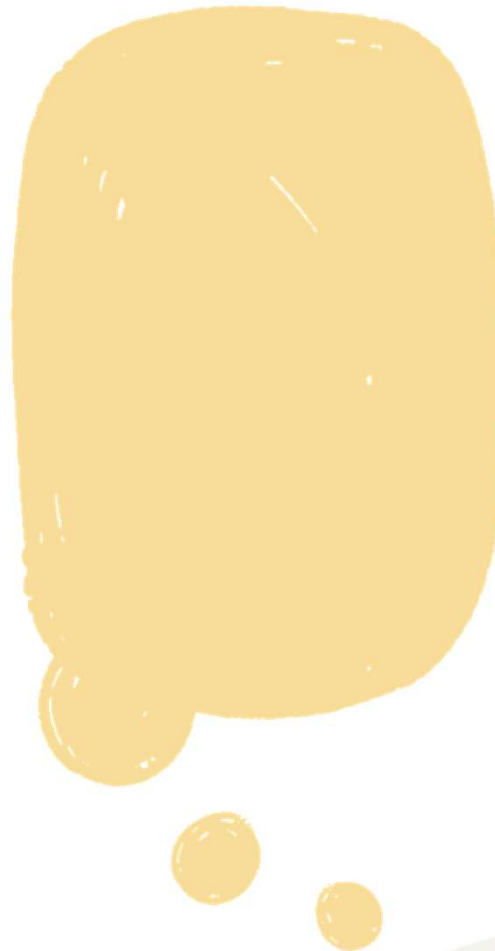
Meet TMDLs

Population Growth

2023

Climate Change

2050

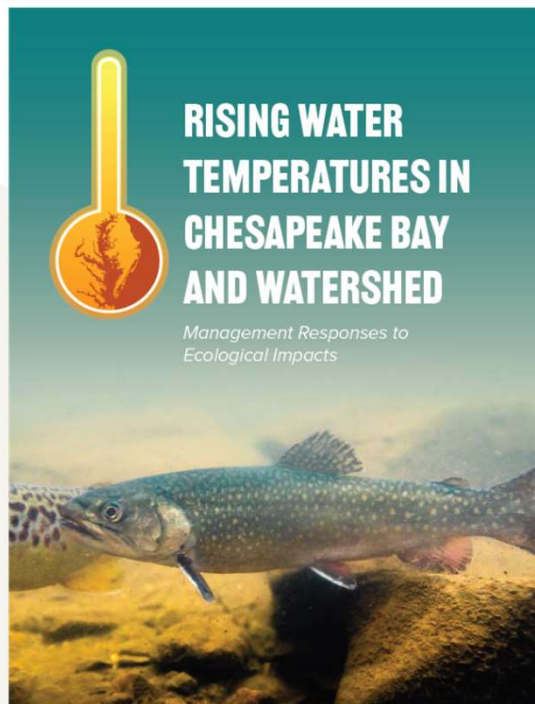


To develop and implement approaches accounting for the interactions of climate change with other issues (vulnerability to communities, increasing resiliency, land use/land change)



How do we account for climate change?

Gallery Walk Poster



Will Parsons, Alliance



Marshes move in response to changing water levels, especially in the face of barriers such as upland slope and bulkheads.



Participants discussed relative sea level rise rates in the Chesapeake Bay and the potential influence of land subsidence and sediment supply on marsh elevation change.



**To develop and apply the
necessary social science
tools to effectively involve
and serve communities in
ways that are equitable,
fair, and just for all**



D

Community Based
Social Marketing

E

Chesapeake Bay
Program
Environmental
Justice and Equity
Dashboard

I

Chesapeake Behavior
Change

J

Social Science
Assessment for
Advancing CBP Goals
GIT Funding Project



**How do we
incorporate
DEIJ?**

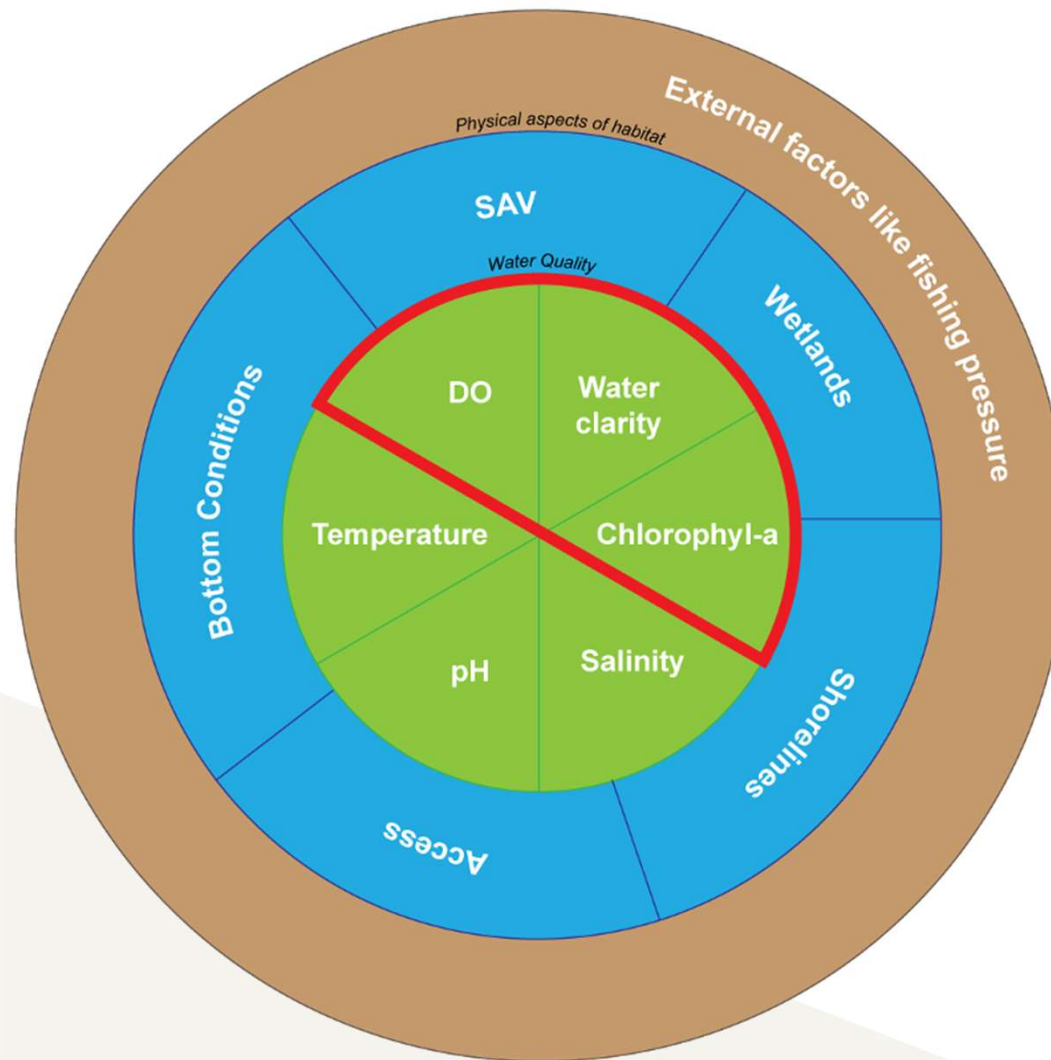
**To maximize the impact of
management efforts for
living resource response**



**CBP may boost the living resource
response and accelerate attainment of
the partnership's water quality
standards by focusing more time and
resources into rehabilitating the health
of the shallow water areas – CESR**



Gallery Walk Poster
Lessons Learned 7 and 8



Managed by Bay
water quality
standards

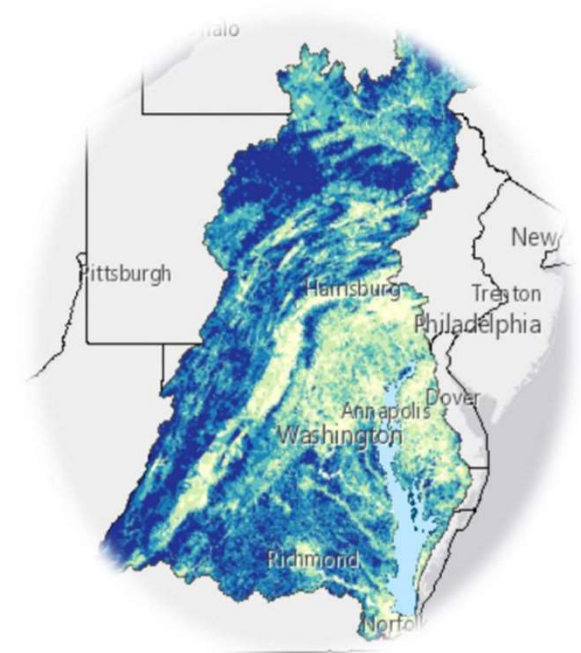
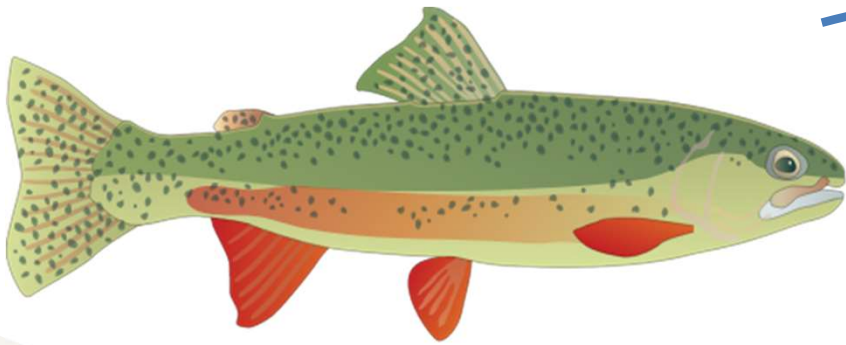
**To craft approaches
to balance
attention and
efforts across all
outcomes in the
Watershed
Agreement**



Rebalance emphasis across outcomes more equitably



Outcomes do not live in silos



Gallery Walk Poster
Lessons Learned 2 and 3

**To efficiently monitor
to assess progress on
all ten goals of the
Watershed Agreement**



Watershed Agreement Outcomes Status in 2021

Categories Based on Ability to Measure Progress

Have Targets, Indicators, and Data Support

- Blue Crab Abundance
- Blue Crab Management
- Oyster Restoration
- Fish Passage
- Forest Buffers
- SAV
- Watershed Implementation Plans (WIPs) – 2017 and 2025
- Protected Lands
- Diversity
- Public Access
- Student MWEEs
- Stream Health

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No Targets, But Have Indicators and Data Support

- Water Quality Standards Attainment & Monitoring
- Sustainable Schools
- Stewardship
- Environmental Literacy and Planning
- Toxic Contaminants Policy and Prevention
- Climate Monitoring and Assessment

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Have Targets, Indicators, but need Data Support

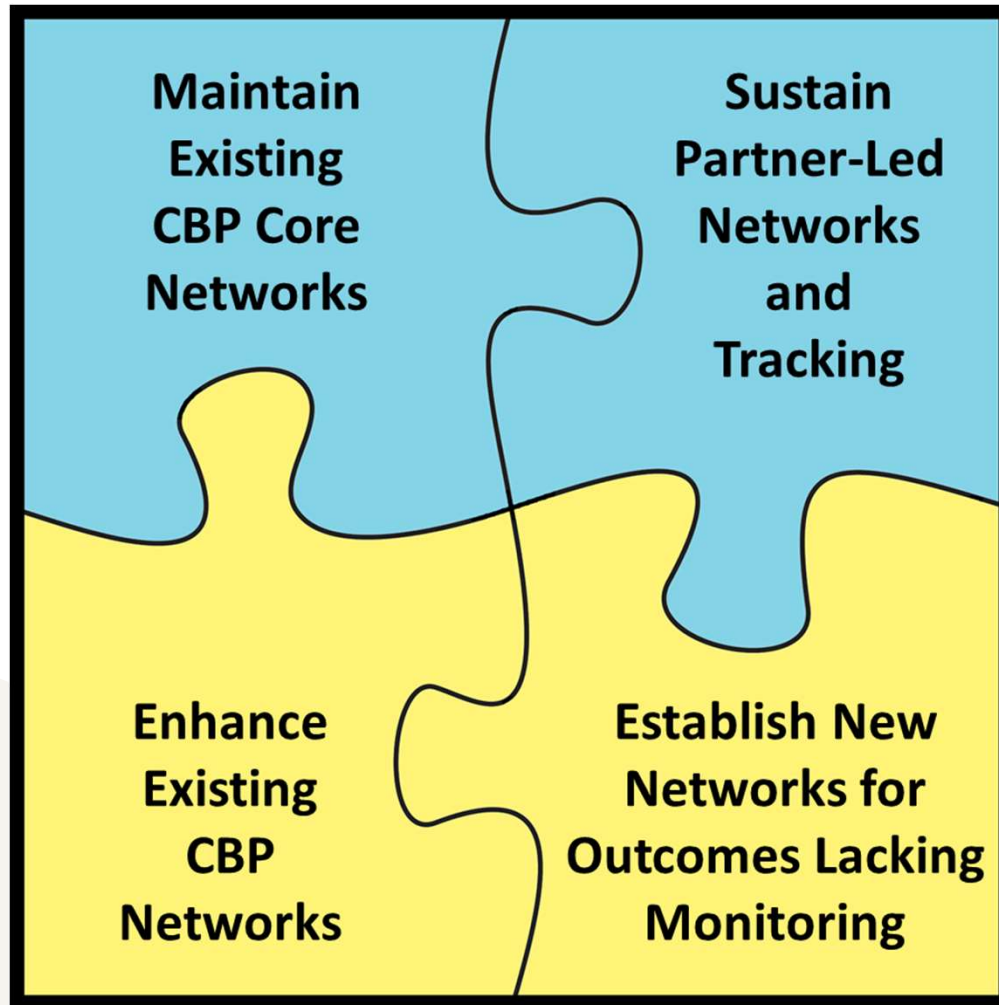
- Wetlands
- Brook Trout
- Black Duck

3

Progress Assessed by Qualitative Information

- Fish Habitat
- Forage Fish
- Toxic Contaminants Research
- Land Use Options and Evaluation
- Land Use Methods and Metrics
- Local Leadership
- Climate Adaptation
- Healthy Watersheds
- Tree Canopy

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Bireley, 2022

Gallery Walk Poster

**To express and illustrate
the benefits to society of
watershed and Bay
conditions at a relevant
spatial scale and how
human activities,
interventions, and climate
change affect it**





The CBP has determined forest buffers in agriculture has positive effects across all CBP goals. They are not implemented across the watershed because there are costs and other downsides as well.

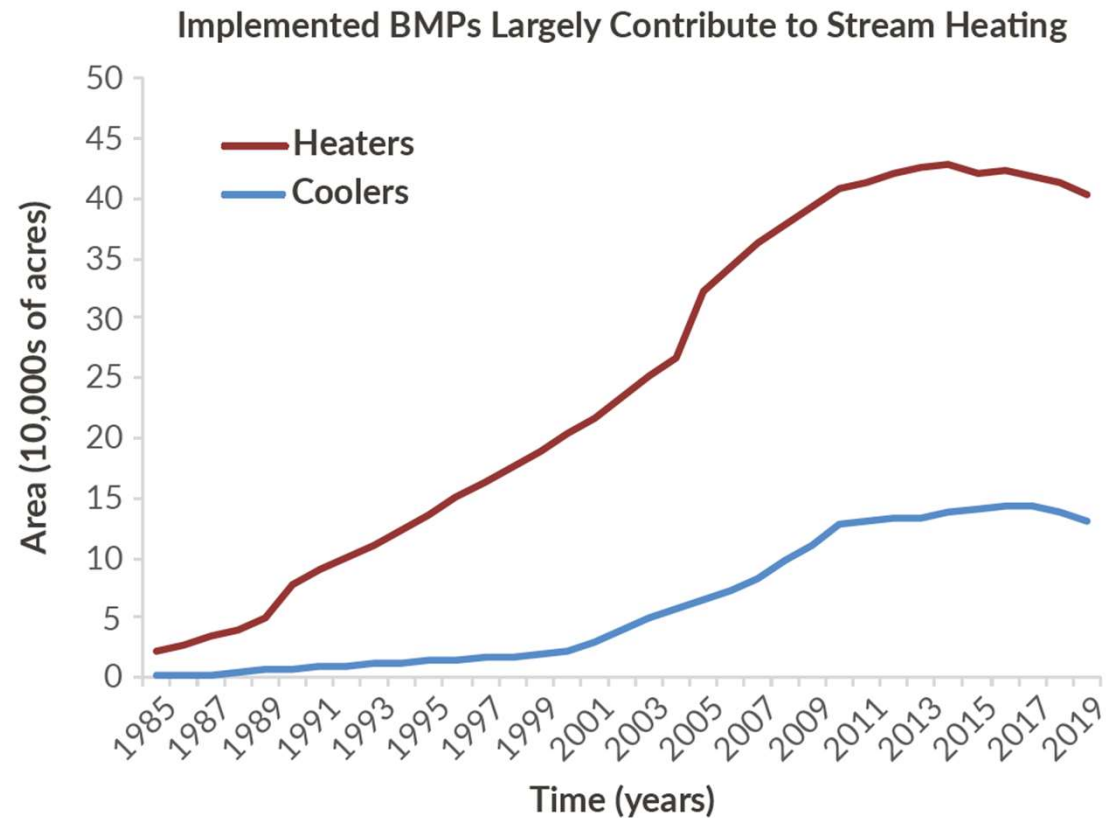
**What are the total effects of actions
that we take or fail to take in the
watershed, particularly for the local
population?**



**To develop and apply
the necessary decision-
science tools to allow
effective and
appropriate assessment
of tradeoffs**



Enhance "coolers" and reduce "heaters"



Gallery Walk Poster
Lessons Learned 2 and 3

213 Science needs – Which one do we look for resources first?



Science Needs Database

Science Needs

Download

SSRF Guidance

Admin

Log Out

Goals ?

Goal Filter

Primary Outcomes ?

Primary Outcome Filter

Categories ?

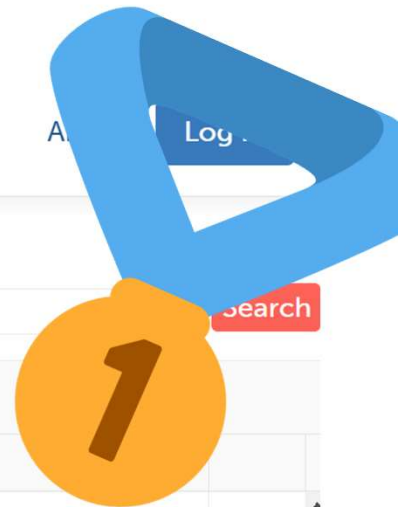
Category Filter

Need ?

Need

Clear Filters

Goal	Primary Outcome	Category	Need	
Sustainable Fisheries	Blue Crab Abundance	Analysis, Climate	Evaluate the effects of environmental factors on blue crab abundance and recruitment.	Det...
Vital Habitats	Submerged Aquatic Vegetation (SAV)	Literature Review, Research, Climate	Compare the ecosystem services of <i>Ruppia maritima</i> and <i>Zostera marina</i> and determine if a shift from Zm to Rm dominance in the polyhaline will impact fisheries such as blue crabs.	Det...
Vital Habitats	Submerged Aquatic Vegetation (SAV)	Research, Climate	Investigate impacts of climate change on freshwater SAV species	Det...
Sustainable Fisheries	Blue Crab Abundance	Data Gathering, Monitoring	Improve accountability and harvest reporting for both commercial and recreational fisheries (electronic harvest survey)	Det...

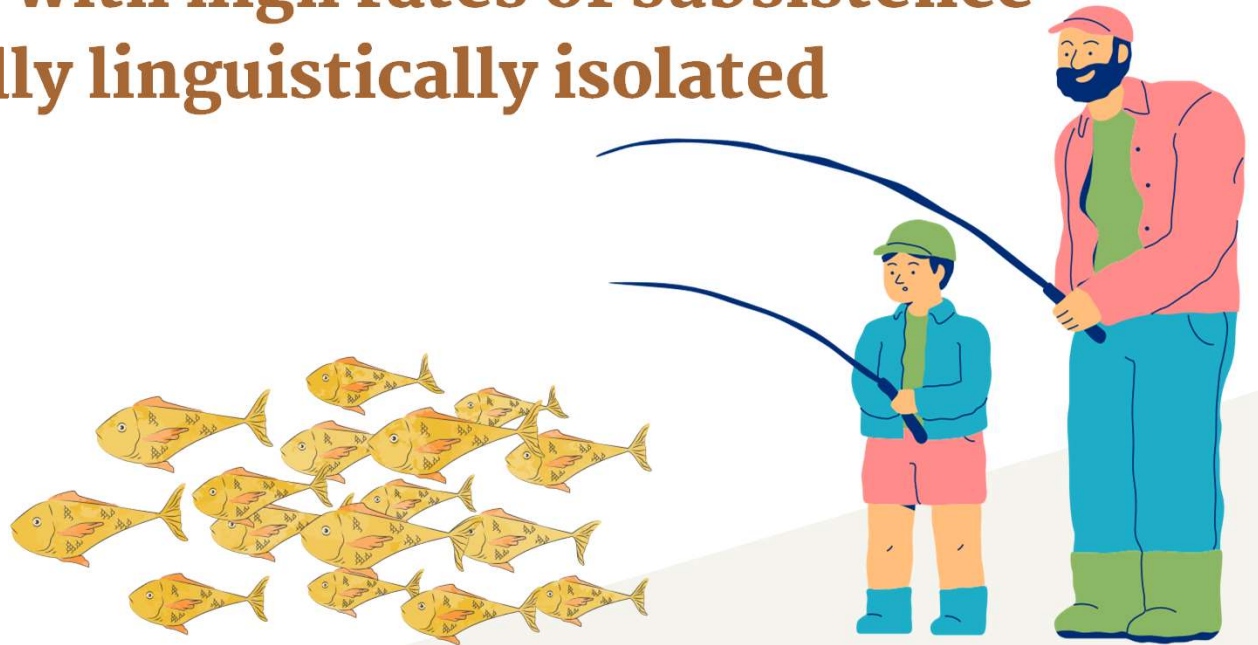


**To be more effective
at centering people in
Bay conservation/
restoration efforts for
the future**



Develop effective communication tools for populations at high risk for PCB exposure through fish consumption in waters impaired.

Target communities with high rates of subsistence fishing, and especially linguistically isolated populations.



**To incorporate learnings
effectively and efficiently
into all levels of decision-
making across the
partnership**



Strategy

A

When considering all these different approaches/shifts, so what does this look like in our adaptive management process?

B

How would you incorporate learnings from CESR and the Retrospective on Lessons Learned?

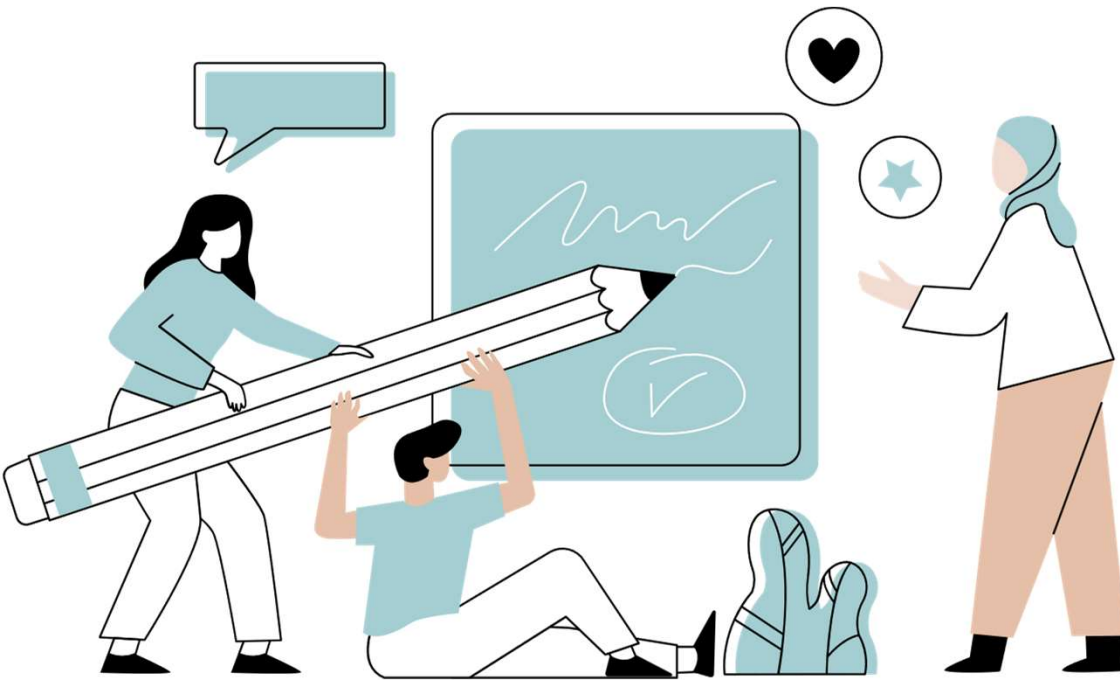
C

How to expand the learning throughout the levels of the partnership hierarchy and make sure it is used to inform policy and decision making at all levels, not just the GIT level



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World Café

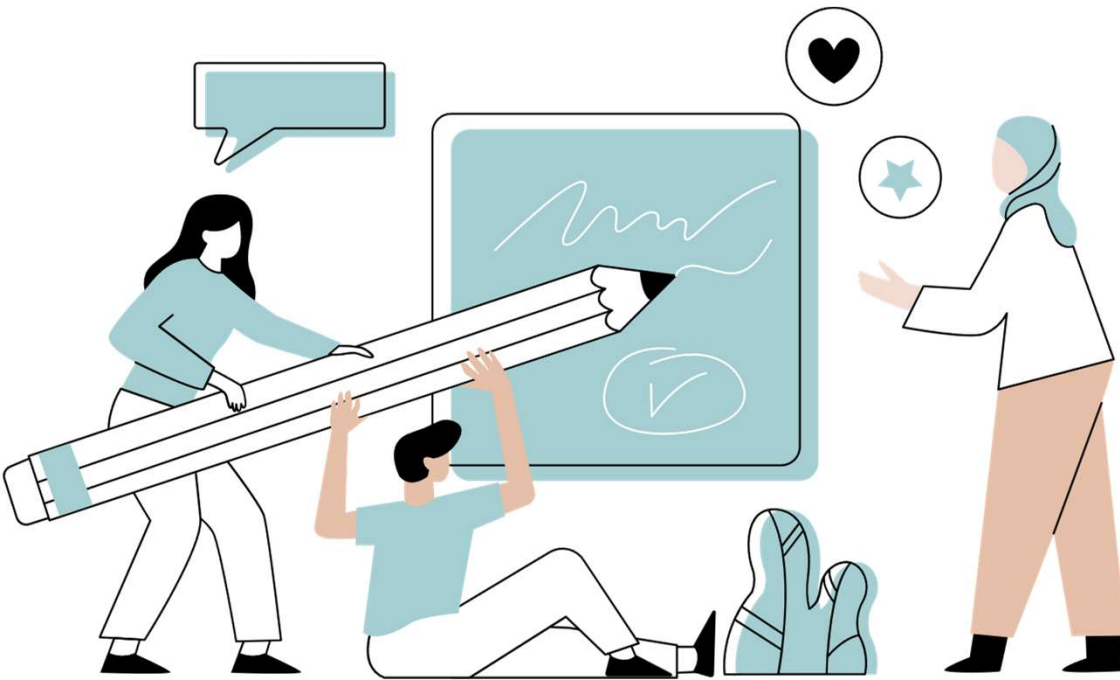


You do not need to be an expert on the challenge

This is a time to be inspired

Continue writing feedback after the world café

Thank You!



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