

Chesapeake Bay Watershed Agreement Outcomes and Phase III WIPs

July 13, 2017

Background: As a follow-up from the June Management Board meeting, the GIT Coordinators were polled to determine which Outcomes would benefit from consideration during the development and/or implementation of the jurisdictional Water Quality WIPs, why they would benefit, and what would need to be the emphasis of that consideration (e.g. targeting for specific fisheries goals, BMPs that provide for co-benefits for stream health). The Management Board will discuss the results of that polling and provide recommendations to the jurisdictions on priority considerations.

Fish Habitat Outcome *and* Fish Forage Outcome

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Fish Forage - Kara Skipper, kara.skipper@noaa.gov

Why would outcome benefit from WIPs?

The Fish Habitat Outcome aims to inform fish habitat conservation and restoration efforts. However, there is currently no method to educate and inform fish habitat to partners and stakeholders. WIPs, on the other hand, have established an effective and efficient means of reaching counties and localities in the Chesapeake Bay Watershed. While there are other methods to reach localities and counties outside of the WIP, it would not prove to be as efficient and broad. Without the WIP process, counties and localities would have to sift through information from multiple sources when making a BMP decision.

Integrating fish habitat considerations into WIPs demonstrates adherence to the EPA's Interim Expectations for the Phase III Watershed Implementation plans, which states that the "EPA also encourages state and local jurisdictions to consider the corollary benefits of BMPs that are targeted for implementation. Corollary benefits are those that not only result in water quality improvements but could address other 2014 Chesapeake Bay Watershed Agreement Outcomes." An added benefit of the suggested process to integrate fish habitat considerations into the WIP is to help local communities see tangible value in BMP implementation. Increased and healthier fish populations resulting from improved habitat may increase public support and understanding of WIPs.

Fish Forage considerations could be integrated into the Fish Habitat recommendations. The mission of the Fish Forage Outcome is to continually improve the Partnership's capacity to understand the role of forage fish populations in the Chesapeake Bay. Fish Forage efforts would not need to be a separate effort from Fish Habitat. No additional action would need to be taken by WIP leads for the inclusion of Forage, if WIP leads are willing to utilize the recommended Fish Habitat considerations into WIP development.

If outcome was in the WIP, what would be the emphasis?

It is an ultimate goal to have Fish Habitat written into a WIP, but not the main point. The ask is to use the WIP communication process to inform on Fish Habitat. Fish Forage considerations will be integrated into the Fish Habitat products and communication efforts. If that communication is successful, we could see fish habitat considerations written into a WIP. Some of the communication materials the Fish Habitat team could provide are:

1. Estimation of BMP Impact on Chesapeake Bay Program Management Strategies Matrix- This matrix can be used by local government to assess the impact BMPs will have on CBP's management strategies, including fish habitat. This matrix is intended to show the co-benefits and relative impact on additional goals that are important to the locality from nutrient and sediment load reduction BMPs.
2. BMP Impact List Best Suited for Specific Habitat Conditions- Fish habitat considerations vary geographically across the Bay Watershed and for each of our partner jurisdictions. To refine the suite of BMPs that benefit fish habitat, the Fish Habitat Action Team will develop a list of Best Management Practices (BMPs) best suited for four habitat conditions identified in the Fish Habitat Management Strategy:
 - a) Tidal Saltwater nearshore
 - b) Tidal Saltwater subtidal
 - c) Non-tidal cold upstream waters
 - d) Non-tidal warm water

These lists would be provided to localities/counties to guide their BMP selection process in a manner that incorporates corollary fish habitat benefits into local site-specific restoration and conservations projects. Individual jurisdictions could select fish habitat BMPs from the document list that best represents habitat conditions in their locality/county.

3. Impervious Surface and Hardened Shoreline Stress- To guide our progress moving forward, the Fish Habitat Action Team has identified two priority stressors to fish habitat: 1) percent impervious surface in a watershed, and 2) percent hardened shoreline. Both stressors have resulted in negative impacts on fish habitat, fish abundance and biodiversity. The Fish Habitat team will develop documents that educate and encourage action in counties and localities related to the impacts of these stressors. In addition to providing increased fish habitat value, impervious surface and hardened shoreline improvements can offer numerous co-benefits to other outcomes under the Chesapeake Bay Watershed Agreement such as blue crab, oyster, forage, wetlands, water quality, citizen stewardship, protected lands, climate, healthy watersheds, and SAV.

Toxic Contaminants Policy and Prevention Outcome

Contact: Greg Allen, allen.greg@epa.gov

Why would the outcome benefit from WIPs?

The BMPs that are planned in the WIPs for nutrients and sediment reductions are the same BMPs needed to reduce PCBs and other toxic contaminants. There are many impairments, fish consumption advisories and TMDLs due to toxic contaminants in the watershed. The only feasible way of addressing them is concurrently with the nutrient/sediment impairments.

If outcome was in the WIP, what would be the emphasis?

The WIPs should contain an explanation of how BMP scenarios are planned to ensure that toxic impairments are addressed to the greatest extent possible. Information on the effectiveness of BMPs is available for use in multi-benefit planning.

Healthy Watersheds Outcome

One-hundred percent of state-identified currently healthy waters and watersheds remain healthy.

Contact: Renee Thompson, rthompso@chesapeakebay.net

Why would the outcome benefit from WIPs?

WIP incorporation would assure that WIP developers know where Healthy Watersheds are in their jurisdiction.

If outcome was in the WIP, what would be the emphasis?

Inclusion in WIPs. Make jurisdictions aware of healthy watersheds and their locations with maps, and identify possible co-benefits from WIP related initiatives and activities. WIPs not only address target load reductions, but also provide an opportunity for a holistic approach that includes planning and land-use decisions, conservation, and other natural resource management decisions.

Climate Resiliency: Monitoring and Assessment Outcome and Adaptation Outcome

Contact: Zoe Johnson, zoe.johnson@noaa.gov

Why would the outcome benefit from WIPs?

The climate resiliency monitoring and assessment outcome reads: "Continually monitor and assess the trends and likely impacts of changing climatic and sea level conditions on the Chesapeake Bay ecosystem, including the effectiveness of restoration and protection policies, programs and projects." Watershed and bay restoration efforts, including those addressed through the WIPs, are key elements of the outcome. In terms of the Climate Resiliency Adaptation Outcome, the 2010 TMDL included language that the CBP "conduct a more complete analysis of climate change effects on nitrogen, phosphorus, and sediment loads and allocations in time for the mid-course assessment of Chesapeake Bay TMDL progress in 2017 (EO 13508)". This assessment is being undertaken through the Phase 6 modeling effort; policy options for addressing increased N, P and S loads as well as qualitative options for factoring climate change impacts into BMP design and implementation (adaptation) are under consideration by the Partnership.

If outcome was in the WIP, what would be the emphasis?

The PSC approved the following Guiding Principles for the integration of climate change outcomes in Phase III WIPs. It is envisioned that jurisdictions would provide a narrative description in their plans describing how they addressed the Principles outlined below (approved by PSC, December, 2016):

Guiding Principles - Jurisdictions should adhere to the following principles when developing and implementing Phase III WIPs:

WIP Development:

1. Capitalize on "Co-Benefits" – maximize BMP selection to increase climate or coastal resiliency, soil health, flood attenuation, habitat restoration, carbon sequestration, or socio-economic and quality of life benefits.
2. Account for and integrate planning and consideration of existing stressors – consider existing stressors such as future increase in the amount of paved or impervious area, future population growth, and land-use change in establishing reduction targets or selection/prioritizing BMPs.

3. Align with existing climate resiliency plans and strategies – align with implementation of existing greenhouse gas reduction strategies; coastal/climate adaptation strategies; hazard mitigation plans; floodplain management programs; fisheries/habitat restoration programs, etc.
4. Manage for risk and plan for uncertainty – employ iterative risk management and develop robust and flexible implementation plans to achieve and maintain the established water quality standards in changing, often difficult-to-predict conditions.
5. Engage Local Agencies and Leaders – work cooperatively with agencies, elected officials, and staff at the local level to provide the best available data on local impacts from climate change and facilitate the modification of existing WIPs to account for these impacts.

WIP Implementation

1. Reduce vulnerability - use “Climate-Smart” principles to site and design BMP’s to reduce future impact of sea level rise, coastal storms, increased temperature, and extreme events on BMP performance over time. Vulnerability should be evaluated based on the factor of risk (i.e. consequence x probability) in combination with determined levels of risk tolerance, over the intended design-life of the proposed practice.
2. Build in flexibility and adaptability - allow for adjustments in BMP implementation in order to consider a wider range of potential uncertainties and a richer set of response options (load allocations, BMP selections, BMP redesign). Use existing WIP development, implementation and reporting procedures, as well as monitoring results and local feedback on performance, to guide this process.
3. Adaptively manage - Allow for changes in BMP selection or WIP implementation, over-time, as new climate and ecosystem science, research, or data becomes available and the understanding of the impact of how changing seasonal, inter-annual climatic and weather conditions may affect the performance of watershed restoration practices. Consider new science on climate change impacts in future BMP Expert Panels, following the CBP partnership’s BMP Expert Panel Protocols.

Stream Health Outcome

Contact: Jennifer Greiner, jennifer_greiner@fws.gov

Why would outcome benefit from WIPs?

Habitat, nutrient, and sediment benefits from stream restoration projects. Reduction of flow velocity and volume encourages nutrient uptake and settling of sediment.

If outcome was in the WIP, what would be the emphasis?

Linear feet of stream restoration goals. Included in Phase II: Streamside forest buffers/stream restoration

Wetlands Outcome

Contact: Jennifer Greiner, jennifer_greiner@fws.gov

Why would outcome benefit from WIPs?

Habitat, nutrient, and sediment benefits incorporated with wetlands both in tidal and non-tidal areas. Wetlands are often at the land/water interface and provide a great “point” opportunity for nutrient removal.

If outcome was in the WIP, what would be the emphasis?

Acreage of wetlands restored goals for varying land uses (urban, agricultural). Included in Phase II.

Brook Trout Outcome

Contact: Jennifer Greiner, jennifer_greiner@fws.gov

Why would outcome benefit from WIPs?

Habitat, nutrient, and sediment benefits from forest buffer restoration.

If outcome was in the WIP, what would be the emphasis?

Miles of forest stream buffer planted. Brook Trout would be a beneficiary or BMP implementation.

Black Duck Outcome

Contact: Jennifer Greiner, jennifer_greiner@fws.gov

Why would the outcome benefit from WIPs?

Habitat, nutrient, and sediment benefits incorporated with wetlands in tidal areas.

If outcome was in the WIP, what would be the emphasis?

Acreage of high-forage potential/bio-available tidal wetlands restored or secured under easement. Black duck would be a beneficiary of BMP implementation.