Issue Paper:
Development and Implementation of Chesapeake BMPs, Stormwater Management, and Other Management Responses to Future Climate Risk

March 24, 2019

The PSC Direction on Future Climate Risks to the Chesapeake Watershed and Bay

The PSC gave specific direction to the CBP partnership at their December 2017 meeting. The direction included "narrative strategies in the Phase III WIPs that describe the jurisdictions current action plans and strategies to address climate change, as well as the jurisdiction-specific nutrient and sediment pollution loadings due to 2025 climate change conditions, while incorporating local priorities and actions to address climate change impacts." Further, the PSC requested that the Partnership "… *develop a better understanding of the BMP responses, including new or other emerging BMPs, to climate change conditions*" so that in "*2021, the Partnership will consider results of updated methods, techniques, and studies and revisit existing estimated loads due to climate change* to determine if any updates to those load estimates are needed [through] a Phase III WIP addendum and/or 2-year milestones beginning in 2022." (Emphasis mine). Finally, the PSC directed the partnership to "starting with the 2022-2023 milestones, determine how climate change will impact the BMPs included in the WIPs and address these vulnerabilities in the two-year milestones."

Follow-up On the PSC Direction and Guidance by the Management Board

The response to the PSC direction was further outlined in discussion at the February 14, 2019 meeting of the Management Board and the following priorities were discussed:

- Update design and function of stormwater management and BMPs under the new climate reality of increased flow volumes and intensities.
- Incorporation of precipitation changes with regards to intensity, annual amounts, and seasonal impacts into BMP design.
- Develop understanding of the co-benefits of management practices in response to climate change particularly with respect to jurisdiction-specific and local public health, safety, and infrastructure concerns as well as green infrastructure performance including riparian buffers, wetlands, and other management actions to future climate risk.

ACTION:

The Management Brd requests that the Climate Resiliency Workgroup and the Water Quality Goal Implementation Team consider the direction of the PSC and the key points from the February 14 Management Board meeting a return a proposal to the Management Board by their April 11, 2019 meeting on the process and timeline for what's needed to address the PSC's direction and guidance.

A Potential Process and Path Forward

Develop a multiyear prototype science and technical program with available funding that runs to 2025. If successful, the CBP partnership could decide to continue the program. The program would be specific and directed toward the bulleted CBP partnership applied science needs listed above. The initial efforts of the new program would be to:

- Design and accelerate adoption of stormwater management systems appropriately designed for future climate volumes and intensities specific for counties in the Chesapeake watershed. Determine how redesigned stormwater management BMPs for future volumes and intensity could generate nutrient and sediment reductions that can be counted in the WIP3 milestones up to 2025.
- Examine the top tier agricultural/urban BMPs in the WIP3s vulnerable to future climate risk with emphasis on BMPs that are structural in nature in order to adapt them to future climate conditions. Determine how the redesigned management BMPs for future volumes and intensity would generate nutrient and sediment reductions that can be counted in the WIP3 milestones up to 2025.
- Develop co-benefit of management practices to fit local needs of infrastructure and public health and safety concerns including green infrastructure, riparian buffers, watershed and tidal wetlands, and other management actions to future climate risk.

The program could be developed through a new RFP and by contracts as appropriate. The ongoing scientific CBP oversight of the projects could be by the CBP technical groups of STAR and the WQGIT including the Urban Workgroup, Watershed Technical Workgroup, Agricultural Workgroup and/or the Modeling Workgroup depending on subject matter expertise required. A scientific review by of the projects and their products could be conducted by STAC.