

January 2, 2017

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Via Electronic Mail Only

Re: Adopting Options from “Guiding Principles and Options for Addressing Climate Change Considerations in the Jurisdictions’ Phase III Watershed Implementation Plans”

Dear Chairs of the Principals’ Staff Committee, Management Board, and Water Quality Goal Implementation Team:

The undersigned organizations strongly support adoption of the rigorous quantitative and qualitative measures for integrating climate projections into Phase III Watershed Implementation Plans (WIPs) that have been devised and proposed by the Chesapeake Bay Program’s Climate Resiliency Workgroup. Specifically, we strongly recommend and request that the Principals’ Staff Committee, Management Board, and Water Quality Goal Implementation Team adopt proposed options numbered 1, 2, 5 and 6 and reject proposed options 3 and 4 as presented in the Workgroup’s “Guiding Principles and Options for Addressing Climate Change Considerations in the Jurisdictions’ Phase III Watershed Implementation Plans” briefing document.¹

As described below, proposed options 1, 2, 5 and 6 would serve to ensure that climate-induced impacts to the Bay watershed would be adequately mitigated to comply with water quality standards on the basis of peer-reviewed scientific data and analysis. Further, the proposed options provide the unique opportunity to obtain co-benefits that would support climate and coastal resiliency through the design, prioritization, and

¹ The CBP Management Board has already rejected proposed option 8 during its meeting of Nov. 17, 2016.

implementation of Bay restoration practices. Finally, by requiring both near- and long-term action, the combination of the proposed options presents the most fiscally prudent approach to take advantage of cost-effective restoration opportunities, support adaptive management, provide climate resilience and ecological benefits, and gradually increase the level of regional climate resilience.

I. Climate Change Factors Should Be Quantitatively Integrated to Ensure That Water Quality Standards Are Achieved

Climate projections should be immediately incorporated in the Phase III WIPs through adoption of options 1 and 2, because the impacts of climate change are already modifying ecosystem functions and influencing the input and delivery of nutrient and sediment loads within the watershed. Numerous peer-reviewed and rigorous scientific studies show that climate change-induced impacts in the Bay are already occurring and will worsen over the coming decades. Rising sea levels are reducing the extent of coastal wetlands; higher water temperatures increase the prevalence and extent of algal blooms and dangerous waterborne pathogens; and higher intensity storms are generating increasing volumes of runoff and associated pollutant loads. The projected impact of these climate factors are being established by the CBP Modeling Workgroup through integration into the Bay Model and are being peer-reviewed by the CBP Science and Technical Advisory Committee. To our knowledge, there is no credible legal, scientific, or policy rationale for delaying action to mitigate the climate-induced impacts to the Bay's assimilative capacity and watershed pollutant loadings. Therefore, proposed options 1 and 2 should be adopted in order to quantitatively factor climate projections into Phase III WIPs.

As a matter of public policy, adopting options 1 and 2 and rejecting option 3, which would defer integration of and action upon climate factors in Phase III WIPs, represents the best outcome. History is replete with examples of the drastic fiscal and societal costs associated with deferring action. The cost of designing and implementing restoration practices that account for future climate conditions, higher pollutant levels, and lower assimilative capacity of Bay waterways is much lower than the future costs to redesign and retrofit projects, practices, and infrastructure. Adoption of options 1 and 2 sends important signals to state and local governments and ultimately the private sector about how to optimally invest scarce resources. Moreover, a golden opportunity exists to invest in the short-term in climate resilience due to exceptionally low capital costs for state and local governments, and opportunity made even more valuable considering the multiple benefits of many of these resilience projects.

Taking immediate action to explicitly integrate climate projections in Phase III WIPs through adoption of options 1 or 2 could also protect the Bay TMDL from legal challenge. Adoption of option 3 to defer integration of climate factors could be viewed as an arbitrary and groundless withdrawal from the commitment to integrating climate change factors into the Bay TMDL and a disregard of the recent climate research and analysis conducted by the state and federal partners of the CBP. Indeed, the 2010 Chesapeake Bay TMDL explicitly commits action to “incorporate new scientific understanding of the effects of climate change into the Bay TMDL [...] during the mid-course assessment.”² Adoption of the weakest options currently under consideration could set the stage for legal action similar to challenges to other TMDLs that lacked the type of rigorous scientific research and analysis employed by CBP to date.³

Similarly, the CBP should reject option 4, which would explicitly account for climate change factors in the TMDL’s margin of safety (MOS). The MOS is required to take into account any lack of knowledge concerning the relationship between pollution sources and water quality. While there is uncertainty inherent in any climate change projection, the CBP has undertaken substantial work to study and synthesize knowledge for the purpose of quantifying climate change-induced impacts and relationships between watershed pollutant loading rates and Bay assimilative capacity. By allocating an explicit portion of the MOS to climate change-induced impacts, the CBP could be forced to justify how the remaining portion of the MOS adequately accounts for other unknown or uncertain factors impacting watershed pollutant loading rates and Bay assimilative capacity. Therefore, option 4 is far less favorable and legally justifiable than options 1 and 2 for accounting for climate-induced impacts to watershed pollutant loading rates and Bay assimilative capacity.

II. Climate Change Factors Should Be Qualitatively Integrated to Ensure That Water Quality Standards Are Achieved and Climate Resiliency Co-benefits are Realized

² Chesapeake Bay TMDL, Section 10.5 “Factoring in Effects from Continued Climate Change” (December 29, 2010)

³ See e.g. Complaint, *Conservation Law Foundation, et al., v. Env’tl. Prot. Agency*, No. 1:13-cv-12704-LTS (D. Mass., Oct. 24, 2013) (Challenging agency’s approval of nutrient TMDLs for Cape Cod that failed to take into account climate change factors) and Settlement Agreement, *Conservation Law Foundation, et al., v. Env’tl. Prot. Agency*, No. 1:11-cv-11657-MLW (D. Mass., Nov. 17, 2014) (Requiring agency action to undertake scientific study and to integrate climate change projections into TMDLs); Also Complaint, *Conservation Law Foundation v. Env’tl. Prot. Agency*, No. 2:08-cv-00238 (D. Vt. Oct. 28, 2008) (Challenging agency’s approval of nutrient TMDL for Lake Champlain that failed to take into account climate change factors).

Options 5 and 6 should also be adopted to mitigate climate-induced impacts to Bay assimilative capacity and watershed pollutant loading. These two options provide a framework to ensure that the thousands of public and private best management practices (BMPs) installed are themselves climate resilient. Climate change-induced impacts to known pollutant removal efficiencies of approved BMPs require additional study, which can be addressed through adaptive management principles in option 6.

Sensible criteria for BMP optimization can be established pursuant to option 5, which is likely to promote practices that increase community climate resilience. BMPs specifically designed for climate resilience, especially where supported by peer-reviewed study, should be prioritized for Phase III WIPs. BMPs that promote community resilience to climate-induced flooding should also be prioritized through preference for practices that address stormwater quantity, rather than merely water quality, and for practices that are sited upstream of flood-prone communities. Finally, BMPs should not be sited within geographic areas that are likely to experience sea level rise, storm surge, or other impacts that could reasonably be expected to reduce or eliminate their pollutant removal capability.

Option 7 should not be adopted without including options 5 and 6, because it would merely require jurisdictions to provide a narrative response to climate change impacts and would fail to stimulate the immediate and ongoing BMP optimization.⁴ By contrast, options 5 and 6 would promote greater ongoing investment in projects and practices that produce the greatest co-benefits. As previously noted, a focus on multiple benefit projects will maximize the cost-effectiveness of public investments in Bay restoration, climate resilience, flood control, and other local environment and safety needs. In sum, the greatest cost savings and co-benefits will be realized by aligning climate-informed BMP optimization with ongoing and near-term state and local climate adaptation plans and strategies.

Options 1, 2, 5, 6 and 7 in combination should serve best to mitigate the impacts of climate change to ensure future compliance with water quality standards, promote climate resilience in Bay jurisdictions, and maximize the cost-effectiveness of public investments in infrastructure. These options will also best support the Climate Resiliency Workgroup's guiding principles for jurisdictions' development and implementation of Phase III WIPs, which include, for example, integrated planning with

⁴ During its Dec. 13, 2016 meeting, the CBP Principals' Steering Committee proposed combining options 5, 6, and 7, which is acceptable so long as the purpose and actions outlined in options 5 and 6 are rigorously designed, implemented, and enforced.

other Bay stressors, alignment with local climate resiliency planning, and a framework for adaptive management.

Thank you for taking the time to carefully consider our input. We welcome and look forward to the opportunity to engage in further discussion with you about addressing climate change through development and implementation of the Phase III WIPs.

Sincerely,

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