

~~Appendix B. Programmatic Policy Approach: Guidance Example~~
Sample Narrative Template

~~(Under development by the Climate Resiliency Workgroup and Water Quality Goal Implementation Team)¹~~

Background: Programmatic “qualitative” (and optional quantitative) Policy Approach: Optimize Phase III WIP Development and Adaptively Manage BMP Implementation

Description: Within a practical time-period applicable to an individual source sector, initiative or action but no later than 2022, the Partnership will consider new information on the performance of BMPs, including the contribution of seasonal, inter-annual climate variability, and weather extremes. Jurisdictions will assess this information and their support programs and adjust plans through the two-year milestone process to implement their Phase III WIPs to better mitigate anticipated increases in nitrogen, phosphorus, or sediment due to climate change. Jurisdictions will provide a narrative consistent with the Guiding Principles that describes their programmatic commitments to address climate change in their Phase III WIPs.

Implementation Considerations: The CBP’s ~~assessment of the projected impacts and preliminary~~ modeling results of climate change in 2025 ~~and 2050 for a range of scenarios would be~~ were relayed to the jurisdictions at the March 2018 PSC meeting. The jurisdictions will ~~would document these preliminary numeric targets~~ results in their respective Phase III WIPs and will include a narrative strategy ~~in their Phase III WIPs~~, outlining their programmatic and/or numeric commitments to address projected impacts consistent with the Guiding Principles, outlined below (approved by the PSC on December 13, 2016).² Narrative strategies could vary across jurisdictions; however, by following a “narrative template,” they could be standardized or harmonized to provide for transparency, accountability, and consistency. EPA can potentially ~~potentially~~ use ~~these elements~~ the guiding principles as a guide to evaluate the proposed narrative strategies in the Phase III WIPs.

To inform implementation, over the longer-term, ~~it is expected that~~ the Partnership expects to facilitate the collection and evaluation of BMP performance data. ~~This will enable the~~ The Partnership will ~~to~~ learn more about BMP performance and the sensitivity of BMPs that are attributable to climate change, to allow for consideration of these factors while adaptively managing for long-term change. Periodically, in support of this action, the CBP Partnership,

¹ ~~Appendix B includes informational material compiled by the CRWG, including a “Sample Narrative Template.” This document outlines a potential means and method for implementation of the proposed programmatic policy approach. Once the Partnership reaches agreement on the approach to consider climate change in Jurisdictions’ Phase III WIPs, formal implementation guidance will be developed and approved by the CRWG and WQGIT.~~

² Jurisdictions should also reference Chesapeake Bay TMDL, Section 7: Reasonable Assurance and Accountability Framework; and, Section 10: Implementation and Adaptive Management for guidance on developing narrative strategies.

Commented [MD1]: General Comment: Are we trying to provide an amended Appendix B or a Sample Narrative? If the latter, then we should retitle this document. I assumed the latter and made adjustments.

Having said that, in order for this document to be useful as a template for climate change actions in the jurisdictions’ WIP, additional work is necessary. I recognize that this information was generated before we received PSC direction and some of it may not be relevant anymore. The PSC guiding principles, EPA’s expectations and the PSC decisions may be sufficient to serve as guidance to develop the narrative climate change section of the WIP, so perhaps this template is not necessary anymore.

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Commented [MD3]: Since this is referring to the modeling numbers, we should just say so.

Provide a hyperlink to slide 14 of this presentation: https://www.chesapeakebay.net/channel_files/26045/v_2_025_chesapeake_bay_climate_change_load_projections_explanation_revised_02.28.18.pdf

Commented [MD4]: Not sure what the “elements” are—the guiding principles?

through STAC working consultatively with CRWG, could compile and assess the latest climate and ecosystem science, research, or data, and relay this information to the jurisdictions.

Sample Narrative Phase III WIP Template:

I. Documenting the preliminary 2025 Climate Change Impacts Scientific Assessment and Conclusions

- a) The CBP's assessment of the projected impacts and modeling results of climate change in 2025 and 2050 for a range of scenarios will/were be relayed to the jurisdictions in the form of nutrient load projections. If the capacity exists, jurisdictions will ~~should~~ ~~will~~ document those numeric load projections due to 2025 climate change impacts in their Phase III WIPs, describe method(s) for gathering and assessing additional scientific data and information. This element allows for flexibility in jurisdictions' approaches to addressing climate change, and can incorporate local knowledge and information where quantitative data may be lacking.
- b) Jurisdictions committed to adopting climate change targets by 2021, employing the CBP partnership's Phase 6 suite of models that factor in climate change and other relevant local information.
- a. c) The preliminary modeling estimates attributable to climate change by 2025 to be roughly an additional 9 million pounds of nitrogen and 0.5 million pounds of phosphorus. Identify conclusions based on scientific assessments.

b.a. Address how the scientific conclusions guided their programmatic and/or numeric commitments. Jurisdictions should use local expertise and knowledge along with the latest climate information and science to inform their programmatic and/or numeric commitments.

II. Programmatic (and optional/or Numeric) and/or Numeric Commitments

- a) Consistent with EPA's Phase III WIP expectations document, describe current action plans and strategies at both the state and local levels to address climate change. Jurisdictions should use local expertise and knowledge along with the latest climate information and science to inform their programmatic and/or numeric commitments.
- b) Outline programmatic and/or numeric commitments to address projected impacts consistent with the Climate Resiliency Guiding Principles. Commitments may vary across jurisdictions but could include activities such as undertaking demonstration projects; prioritizing implementation of climate-resilient BMPs; approaches for assessing vulnerability of planned BMPs; or enhancing plans, policies, regulations or on-the-ground efforts to address impacts, etc.
- c) Jurisdictions could also pursue BMPs with clear co-benefits and climate change-related positive impacts (e.g., habitat restoration and flood control).
- d) If jurisdiction decides to make numeric commitments, jurisdictions also have the flexibility to go beyond just documenting the load reductions addressing additional loads due to 2025 climate change impacts.

Commented [lp5]: I wonder if we should just document the PSC decision on future science and research needs here:

Understand the Science

- By refining the climate modeling and assessment framework, continue to sharpen the understanding of the science, the impacts of climate change, and any research gaps and needs.
- Develop an estimate of pollutant load changes (nitrogen, phosphorus, and sediment) due to 2025 climate change conditions.
- Develop a better understanding of BMP responses, including new, enhanced, and climate resilient BMPs.
- In March 2021, the CBP partnership will consider results of updated methods, techniques, and studies and refine estimated loads due to climate change for each jurisdiction.
- The PSC agreed that in September 2021, jurisdictions will account for additional nutrient and sediment pollutant loads due to 2025 climate change conditions in a Phase III WIP addendum and/or two-year milestones beginning in 2022.

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Commented [MD6]: It is not clear what is meant by "projected impacts" — I believe it is the N, P increases. If so, say that and link to slide 14 of presentation: https://www.chesapeakebay.net/channel_files/26045/v_2_025_chesapeake_bay_climate_change_load_projections_explanation_revised_02.28.18.pdf

Commented [lp7]: My understanding is that this will be a Partnership undertaking, with support and leadership from the Modeling Workgroup and the Climate Resiliency Workgroup.

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Commented [MD8]: We are providing a "narrative" template, not a template for numeric commitments. However, the states have the option to develop numeric commitments. If they do, they will need to provide specific programmatic support of those commitments.

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III ~~III:~~ Phase III WIP Development: Planning and Scoping³

- a) In developing their narrative strategies, jurisdictions should consider the following ~~Describe the process used to guide Phase III WIP development when addressing climate change, in accordance with the approved Climate Resiliency Guiding Principles for 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 where feasible*– align with implementation of existing greenhouse gas reduction strategies; coastal/climate adaptation strategies; hazard mitigation plans; floodplain management programs; **DoD Installation Natural Resource Management Plans (INRMPs)**; 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 Federal and 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.

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IV. ~~Phase III WIP Implementation: BMP Evaluation Process⁴~~

- a) Describe the process used by jurisdictions to implement WIP programmatic and/or numeric commitments, including proposed the qualitative and/or quantitative evaluation of and implementation of BMPs, in accordance with the approved Climate Resiliency Guiding Principles: 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.

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³ See Johnson, Z. et. al. In-Press. [STAC Workshop Report: Monitoring and Assessing Impacts of Changes in Weather Patterns and Extreme Events on BMP Siting and Design](#). (in press) for more information and guidance on implementation.

⁴ See Johnson, Z. et. al. In-Press. [STAC Workshop Report: Monitoring and Assessing Impacts of Changes in Weather Patterns and Extreme Events on BMP Siting and Design](#). (in press) for more information and guidance on implementation.

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.

V. **Documentation, Reporting and Adaptive Management**

- a) Establish a timeline for submission of documentation and reporting on all of the above. Reporting should include findings of new or updated scientific assessments and resulting changes to Phase III WIPs, including adjustments to two-year milestones. Documentation, reporting, and adaptive management shall be administered in accordance with Chesapeake Bay TMDL, Section 7: Reasonable Assurance and Accountability Framework⁵; and, Section 10: Implementation and Adaptive Management⁶.
- b) Jurisdictions would identify programmatic and/or numeric efforts and plans to adaptively manage. Jurisdictions should describe processes that will 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.

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Commented [lp10]: I'm struggling to see how this now fits into the narrative guidance, given the final PSC decision on how to address climate change in the Phase III WIPs. These steps and actions may change as new science and data emerge on BMP resiliency, projections, etc.

Commented [MD11R10]: These are important activities and if the states want to incorporate into their WIP, I would support that. If the states have information now that could inform where they would place BMPs (e.g., the history of what BMPs worked and where based on increased flooding or storm events). I'm fine with somehow acknowledging that this is adaptively managed through the milestones.

However, I agree with Lucinda that the PSC did recognize that this work would be taken on by the Partnership.

⁵ Chesapeake Bay TMDL, Section 7: Reasonable Assurance and Accountability Framework

⁶ Chesapeake Bay TMDL, Section 10: Implementation and Adaptive Management