

Sample Narrative Template

(Developed by the Climate Resiliency Workgroup and Water Quality Goal Implementation Team)

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

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 management practices, BMPs, including the contribution of seasonal, inter-annual climate variability, and weather extremes. Management practices referenced here may include all wastewater treatment programs and practices in addition to non-point source best management practices (BMPs) on agricultural lands, developed lands and open spaces. Jurisdictions will assess this information and their support programs and adjust their Phase III Watershed Implementation Plans (WIPs) 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. In developing their narrative strategies, jurisdictions should reference the following approved Climate Resiliency Guiding Principles:

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.

In developing their narrative strategies, jurisdictions should also identify and address how climate change impacts may affect the operation, maintenance, and resiliency of BMP-types as well as ~~non-BMP-type~~ wastewater treatment management practices; such as conventional

Commented [TS1]: Seeking to make it clearly reflect ALL potential implementation practices, not just NPS BMPs. By stressing ‘all’ it will hopefully prompt ‘What are the climate impacts on the WW Sector?’

Commented [WM2]: From Joan Smedinghoff, Communications Team: I’d suggest flipping this sentence around or flipping and breaking into two sentences: “The partnership will consider...and weather extremes. It will do this within a practical time frame... than 2022.”

Commented [MD3]: Provide link.

Commented [KV4R3]: Not necessary anymore

Commented [WM5]: There was discussion on the WQGIT call for jurisdictions to incorporate the guiding principles language into their WIP text.

Commented [WM6]: Guiding principles are intended for non-point source BMPs. Not sure whether to alter BMP language here

Commented [KV7]: Not sure the principles need to be listed here anymore. To address Kristin’s concern, they need to be listed below. It doesn’t hurt to have them in both places though.

Commented [WM8]: From Joan Smedinghoff: include links to WIP fact sheets for co-benefits?

Commented [TS9]: Intent is to make it clear that the full range of impacts needs to be assessed and factored in when evaluating all of the WW Sectors’ practices. And not assume no impact or minimal impact.

wastewater treatment plant processes, land treatment (e.g. spray irrigation), biosolids management; and the implications for collection systems and combined sewer systems. This evaluation should also assess, at a minimum, ~~a) How changes in temperature and precipitation will affect operational performance for all wastewater sector practices, including~~ ~~and b) How growth and changes land use may also associated impacts on runoff that finds its way into wastewater collection systems.~~

Implementation Considerations: The Chesapeake Bay Program's (CBP) ~~relayed its~~ preliminary modeling results of climate change in 2025 ~~were relayed~~ to the jurisdictions at the March 2018 Principals Staff Committee (PSC) meeting (see Table 1 below).¹ The jurisdictions will document these preliminary numeric targets in their respective Phase III WIPs and will include a narrative strategy, 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 use the guiding principles as a guide to evaluate the proposed narrative strategies in the Phase III WIPs.

Jurisdiction	1985 Baseline	2013 Progress	Climate Change	Phase III Planning Target
NY	18.71	15.44	0.400 (3.8%)	11.59
PA	122.41	99.28	4.135 (5.7%)	73.18
MD	83.56	55.89	2.194 (4.8%)	45.30
WV	8.73	8.06	0.236 (3.7%)	8.35
DC	6.48	1.75	0.006 (0.3%)	2.43
DE	6.97	6.59	0.397 (8.5%)	4.59
VA	84.29	61.53	1.722 (3.1%)	55.82
Basinwide	331.15	248.54	9.09 (4.6%)	201.25

*Units: millions of pounds

To inform ~~long-term~~ implementation, ~~over the longer term~~, the Partnership expects to facilitate the collection and evaluation of ~~management practice BMP~~ performance data. The Partnership will learn more about ~~management practice BMP~~ performance and the sensitivity of ~~management practices BMPs~~ that are attributable to climate change, to allow for consideration of these factors

¹ Presentation to the PSC, March 2, 2018:

https://www.chesapeakebay.net/channel_files/26045/v.2025_chesapeake_bay_climate_change_load_projection_s_explanation_revised_02.28.18.pdf

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 [MD10]: 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.2025_chesapeake_bay_climate_change_load_projections_explanation_revised_02.28.18.pdf

Commented [MD11]: Not sure what the “elements” are—the guiding principles?

Commented [WM12]: Response to Dianne McNally and Joan Smedinghoff to include Table 14 with predicted climate impacts from nitrogen, from March PSC meeting.

Commented [KV13R12]: Good idea!

while adaptively managing for long-term change. Periodically, in support of this action, the CBP Partnership could compile and assess the latest climate and ecosystem science, research, or data, and relay this information to the jurisdictions. 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.

Sample Narrative Phase III WIP Template:

I. ~~Document the preliminary 2025 Climate Change Impacts Background~~

- a) The CBP's Partnership relayed preliminary modeling results of climate change in 2025 ~~were relayed to the jurisdictions~~ in the form of nutrient load projections as part of the Midpoint Assessment completed in July, 2018. Jurisdictions will document those preliminary numeric load targets due to 2025 climate change impacts in their Phase III WIPs with support from the Modeling Workgroup and Climate Resiliency Workgroup (CRWG).

~~b) Jurisdictions committed to adopting refined 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. The Partnership also committed to the following strategy to address climate change between now and 2025:~~

~~b)c) Finally, in developing the narrative strategy, the following CBP Partnership approved Guiding Principles were considered:~~

- ~~a.—c) The preliminary modeling estimates estimated additional loads attributable to climate change by 2025 to be are roughly an additional 9 million pounds of nitrogen and 0.5 million pounds of phosphorus.~~

II. Programmatic (and ~~Optional~~ 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) Commitments may vary across jurisdictions but could include activities such as undertaking demonstration projects; prioritizing implementation of climate-resilient ~~practices-BMPs~~; ~~approaches for~~ assessing vulnerability of planned management practices ~~BMPs~~; or enhancing plans, policies, regulations or on-the-ground efforts to address impacts, etc.
- c) Jurisdictions could also pursue management practices ~~BMPs~~ with clear co-benefits and climate change-related positive impacts (e.g., habitat restoration and flood control).
- d) Jurisdictions have the flexibility to go beyond just documenting efforts ~~-addressing~~ additional loads due to 2025 climate change impacts and making numeric commitments. In choosing to make a numeric commitment, jurisdictions should identify programmatically how the commitment will be met.

Commented [lp14]: 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.

Commented [KV15R14]: Not a bad idea....but I think it would be better to put them in the actual text to be used below.

Commented [lp16]: My understanding is that this will be a Partnership undertaking, with support and leadership from the Modeling Workgroup and the Climate Resiliency Workgroup.

Commented [KV17]: Insert the PSC language here

Commented [KV18]: Insert the guiding principle in here to address Kristin's comment that the principles actually be in each jurisdiction's WIP.

Commented [MD19]: 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.

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

a) ~~In developing their narrative strategies, jurisdictions should consider the following approved Climate Resiliency Guiding Principles:~~

~~2. 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.~~

~~3. 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.~~

~~4. 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.~~

~~5. 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.~~

~~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 impact~~

III. Phase III WIP Implementation: BMP Evaluation Process⁴

a) Describe any process that might be used by the jurisdiction to implement WIP programmatic and/or numeric commitments, including qualitative and/or quantitative evaluation of and implementation of BMPs, in accordance with the approved Climate Resiliency Guiding Principles: WIP Implementation. It is acknowledged that issues related to BMP efficiency and vulnerability will be taken on by the partnership, however, individual jurisdictions are encouraged to incorporate into their WIP any actions along these lines that they may be taking.

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

Commented [MD20]: Should this be lumped with II.?

Commented [WM21R20]: This section has moved to the background introductory section.

Commented [WM22]: From Joan Smedinghoff: include links to WIP fact sheets for co-benefits?

Commented [WM23]: This text is cited directly in the Guiding Principles—not sure whether altering references to BMPs here is appropriate

Commented [WM24]: Should this be cited as a footnote? Not sure if this is the correct document:
https://www.chesapeakebay.net/channel_files/23844/attachment_g.1_climate_options_for_phase_iii_wips_crwg_briefing_document.pdf

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.

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.

a)

Commented [BMR25]: I think this reporting element should be removed as part of the climate narrative. There is already a timeline for development of the WIPs and the PSC has already established that numeric targets will be considered in a WIP addendum or milestones beginning in 2022. The Partnership has committed to looking at the change in BMP efficiencies. To me, that covers adaptive management as it relates to climate. I feel that this section is redundant and a little confusing.