**Potential Milestone Products**

| Recommended Product | Addressed by science prioritization needs/ WQGIT 2-year workplan | Contact | Current Partnership Work |
|---|---|---|---|
| Verification Protocol Updates | No/Actions #2.2, 5.4 | MB/ WQGIT/ Habitat GIT/ workgroups/ BMP verification committee/ EPA | 1. Annually, EPA reviews each states' BMP submissions and BMP Verification Programs.  Addition of information to existing CBP BMP Verification documents can be discussed as part of this review process.<br>2. BMP verification was last discussed on the February 2019 Water Quality GIT meeting  and the July 2019 WQGIT meeting.as well as February, March and September 2019 Watershed Technical Workgroup meetings and the February 2019 Forestry Workgroup Meeting.<br>3. The approval of new or modified verification protocols currently goes through the relevant source-sector workgroup and the MB/GITs for approval.<br>4. Annually, jurisdictions provide input on the grant guidance, which includes BMP verification requirements. |
| Process to expedite inclusion of new BMPs in CAST and associated tools | | PSC/ MB/ WQGIT/ workgroups | Current partnership-approved process for "new" BMPs:  Protocol for the Development, Review, and Approval of Loading and Effectiveness Estimates for Nutrient and Sediment Controls in the Chesapeake Bay Watershed Model<br><br>Timing is controlled by prior PSC, MB, WQGIT decisions. |
| Bay Watershed Data Dashboard | Line 57, 67, 68 / Action #8.3 | STAR GIS team, CBP modeling team, WQGIT, jurisdictions | Beta version available at:  Bay Watershed Dashboard. Currently contains water quality monitoring data and trends, watershed data to help geographically target implementation, CAST output data, current BMP implementation information and data to help guide land conservation decisions. |

| Recommended Product | Addressed by science prioritization needs/ WQGIT 2-year workplan | Contact | Current Partnership Work |
|---|---|---|---|
| Optimization engine that builds from previous progress year | ?/Action #7.1, 7.3 | CBPO Modeling Team, CAST Team, WQGIT | On-going work – Contact:  Dan Kaufman, Research Scientist, Chesapeake Research Consortium, (410) 267-5744, dkaufman@chesapeakebay.net |
| Tools to facility implementation targeting, maximize co-benefits and improve cost effectiveness | Line 57, 67, 68 / Action #8.3 | USGS, STAR Integrated Trends and Assessment WG, WQGIT, State Agencies | 1. Bay Watershed Dashboard (in addition to have a tool to sort/filter BMPs based on removal and cost efficiencies, also contains a section on maximizing co-benefits based on TetraTech BMP Impact Scoring Report. 2.  "Cross-GIT Mapping" tool to understand geographic opportunities for restoration and conservation co-benefits.  See:  Maps in the Chesapeake Bay Watershed Model Phase 6 Map Viewer and the methods used to identify and merge datasets 3. EPA currently has a 6-year cooperative agreement with the Chesapeake Conservancy which includes a project to build off the Cross-GIT mapping project and/or incorporate that info into the Watershed Data Dashboard. 4. Under the 6-year cooperative agreement with the Chesapeake Conservancy is working with Chesapeake Commons and Drexel University to develop products for BMP prioritization, planning, tracking and reporting, especially at a local level. The first version of these tools is in development as a pilot in Pennsylvania, working with PADEP and Lancaster and York counties. This pilot should expand over the next year or two and will eventually work with all jurisdictions to iteratively develop the products. |
| Improvements to CAST, including updated cost data and how | Line 51/ Action #5.4, 7.1, 7.2, 7.3 | CBPO Modeling Team, CAST Team, WQGIT | 1. Ongoing:  Updated land cover and land use information. For example, 2019 CAST updates will include updated 1-meter high resolution land cover data for certain areas of the watershed identified as hot spots of change (identified through comparing land use between years and change detection methodologies). Hotpots will again be updated in June 2021. Full watershed-wide wall-to-wall updates of 1- |

| Recommended Product | Addressed by science prioritization needs/ WQGIT 2-year workplan | Contact | Current Partnership Work |
|---|---|---|---|
| CAST will be used with milestone reporting | | | meter high resolution land cover will be made available in June 2020 and June 2023. Full wall-to-wall updates will be converted from land cover to land use in March 2021 and March 2024.<br><br>2. Cost data updates are typically done as "new" BMPs are introduced. Currently, cost information is being updated to current dollars. CAST has several versions of cost data to choose from for the development of alternative scenarios and there are options to employ user-specified cost data. |
| Tools to analyze monitoring trends and target to improve water quality attainment (EPA expectations Appendix A) | | USGS, STAR Integrated Trends and Assessment WG, WQGIT, State Agencies | 1. Bay Watershed Dashboard includes monitoring data.<br>2. The EPA has also developed tools for exploring water quality standards attainment in freshwater rivers and streams (https://www.epa.gov/waterdata/attains) and for exploring all water quality data available for streams (https://watersgeo.epa.gov/mywaterway/mywaterway.html). |
| Process and timing for incorporating updated base data from local partners and industries | ?/Action #1.3, 1.4 | PSC/ MB/ WQGIT | Timing has been discussed at the WQGIT: https://www.chesapeakebay.net/channel_files/26230/data_input_deadlines_and_guidance_to_inform_planning_using_the_phase_6_model_clean_12072018.pdf<br><br>The Management Board, in January 2016, made decisions on the timing of updates. See: |

| Recommended Product | Addressed by science prioritization needs/ WQGIT 2-year workplan | Contact | Current Partnership Work |
|---|---|---|---|
| | | | https://www.chesapeakebay.net/what/event/management_board_meeting_february_2016 https://www.chesapeakebay.net/what/event/management_board_meeting_january_2016 <br><br> PSC made decisions on timing in July 2018: https://www.chesapeakebay.net/channel_files/29609/i.a._psc_actions-decisions_7-9-18_final_2.pdf |
| Process and timing for incorporating updated 2025 forecast of base conditions into CAST and associated tools | | MB/ WQGIT | See info directly above. |