General

Q-1: What is the difference between specific and general land use in this tool?

A-1: Specific land use distinguishes between Impervious Road and Impervious Nonroad while non-specific land use combines the two into Aggregate Impervious. The CAST components of load sources used in the tool can be found in the ReadMe tab.

Q-2: What should we do if we want to backcast our land cover data to be consistent with our TMDL baseline year?

A-2: MDE has reviewed and approved a backcasting methodology developed by Baltimore County. A description of this methodology is located on the Stormwater Documents page under Nutrient and Sediment TMDL Guidance in the TMDL Data Center.

Q-3: How do we track new development or change in land use acreage over time (e.g. between baseline year, permit term, and current year)?

A-3: MDE has historically recommended tracking new development since the TMDL baseline conditions separately from assessing progress towards Urban Stormwater Wasteload Allocations. Urban to natural land use changes should be accounted for through land use conversion BMPs.

Q-4: How do jurisdictions account for TMDL load reductions achieved before the implementation of this model? Can previously calculated load reductions be added as an input?

A-4: Load reductions achieved to-date would be accounted for in the current progress tab of the tool through input of all BMPs implemented after the baseline year. The tool does not allow for input of load reductions calculated outside of the model to ensure consistency when calculating a percent load reduction.

Q-5: How do you accurately account for baseline information with varying baseline years for approved pollutant reductions? Upper Monocacy for example has a TSS TMDL baseline in 2000, whereas the TP TMDL baseline year is 2009. Will multiple versions of the model need to be set up and run for each watershed that has different baseline years for pollutants?

A-5: Yes, multiple versions of the model will need to be set up for each watershed that has different baseline years for different pollutants in order to maintain baseline accuracy. Each TMDL should have its own unique spreadsheet file.

Q-6: At what scale should jurisdictions report TMDL progress or planned implementation if they have sub 8-digit TMDLs?

A-6: The spreadsheet tool was developed at the MD 8-digit scale and uses 8-digit specific unit loads. For a single, sub 8-digit watershed TMDL (e.g., an impoundment TMDL at a sub 8-digit scale),

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users can select the applicable 8-digit watershed and apply the appropriate watershed acreage. For an 8-digit watershed that is broken down into multiple, specific TMDLs, users can aggregate and report reductions in combination as long as specific TMDL segments have the same required reduction percentage. Users can also report each TMDL separately.

Q-7: Why is the Mixed Open and Tree Canopy land use loading rate calculated as a percent removal efficiency?

A-7: The Mixed Open and Tree Canopy loading rates are based on percent removal efficiencies consistent with the Expert Panel on Conservation Landscaping and Urban Tree Canopy Expansion. MDE determined that the BMP efficiencies more accurately estimated these load source loading rates than raw model output.

Q-8: Why are TSS loading rates for turf and mixed open the same?

A-8: Mixed Open loading rates are based on percent removal efficiencies consistent with the Conservation Landscaping BMP, which lists a 0% removal efficiency for sediment.

Scenario-Specific

Q-9: Why is there no option to input Tree Canopy or Mixed Open acres into the Baseline Scenario LAND USE section?

A-9: Baseline land use acres for Tree Canopy over Aggregate Impervious, Tree Canopy over Impervious Road, Tree Canopy over Impervious NonRoad, Tree Canopy over Turf, and Mixed Open are intended to be input as Land Use Conversion BMPs in this tool. For any tree canopy cover in the baseline scenario, that information should be input as a land-use conversion, similar to any other BMP existent on the landscape in the baseline scenario.

Q-10: Why is it necessary to recalculate load reductions already accounted for using the Phase 5 model?

A-10: Since MDE is using an updated model and loading rates, it is important that we maintain consistency when calculating baseline load and subsequent load reductions. We are still able to assess TMDL progress through comparison of load reduction percentages rather than absolute load reductions. This Phase 6 spreadsheet calculator represents a full scale switch from the old, Phase 5 Chesapeake Bay watershed model. All information, i.e., baseline, current progress, and planned implementation, should be transferred to the new model.

Q-11: The baseline year land use section includes septic system loads. MS4 WLAs do not include pollution loads from septic systems. IS MDE asking MS4 to include septic system loads in the TMDL requirements (e.g., WLAs)?

A-11: MDE is not requiring MS4s to include septic system loads in the TMDL reduction requirements. It is noted in the spreadsheet that the addition of these loads is optional. Many TMDLs do not explicitly account for septic loads, and therefore they are implicitly captured by the urban stormwater load. MDE also recognizes that opportunities may exist for jurisdictions to achieve more efficient load reductions, particularly for nitrogen, via septic

BMPs rather than urban stormwater BMPs, and the Department does not want to create a roadblock to achieving enhanced efficiency.

Q-12: What does the current progress tab represent?

A-12: The current progress tab represents all BMPs implemented (put in the ground) through the "current" reporting year. For example, in December of this year, jurisdictions will be submitting their 2020 annual reports, which should reflect BMP reporting from July 1, 2019 to June 30, 2020. Given 6 months to compile their reports, when they fill out the current progress sheet for the 2020 annual report, it should include all BMPs in the ground up to June 30, 2020.

Q-13: In the implementation scenario tab, how are the milestone designations meant to be used?

A-13: The different designations are meant to represent different implementation timeframes and can be interpreted in whichever way suits the user best. "Milestone 1" and "Milestone 2" indicate that a BMP counts toward a pre-defined milestone. "Planned" indicates that a BMP was planned, but not included in the other milestone designations..

BMP-Specific

Q-14: How was the septic connection removal efficiency determined?

A-14: All BMP efficiencies are consistent with the 2020 MS4 Accounting Guidance document. To remain consistent with what is presented in Maryland's Phase III WIP, the ratio between the septic upgrade and septic connection load reductions outlined in the WIP was applied to find the updated septic connection load reduction with STB. For instance, the WIP indicates that a septic upgrade results in a 5.5 lb/system TN reduction. Septic connections in the WIP yield an 8 lb/system TN reduction. The septic upgrade load reduction in the accounting document is 8.4 lbs TN/system. Therefore, the septic connection load reduction in the accounting document is equal to (8 lbs/5.5 lbs) * 8.4 lbs = 12.2 lbs. The septic connection removal efficiency is determined by dividing the septic connection load reduction by the statewide average septic unit load, (12.2 lbs/16.83 lbs)*100 = 73%

Q-15: When should we use the default planning rate for stream restoration or shoreline management BMPs?

Q-15: The default planning rate for Stream Restoration and Shoreline Management BMPs should be used for planning purposes only. Supplemental spreadsheets are available outside of the tool to help determine load reductions based on protocols outlined in the expert panels approved by CBP.

Q-16: How is the Fertilizer Act accounted for in the tool?

A-16: The Fertilizer Act is implicitly accounted for within the Phase 6 Chesapeake Bay Watershed Model. To estimate the Fertilizer Act's effect on Urban Nutrient Management BMPs implemented prior to 2017, an additional percent reduction is added to the phosphorus load

reduction formula to account for the change in phosphorus loads attributed to turf grass between the years of 2010 and 2017. This percent reduction was estimated using 2010 and 2017 statewide average No Action turf unit loads. In general, the Fertilizer Act applies to all practices implemented after 2014.

Q-17: In the STORMWATER MANAGEMENT BMPs regions, treated land use options are limited and do not reflect the actual land uses that are treated by many SWM BMPs (can include mixed open, tree canopy, forest, ag, etc.)

A-17: While your statement is correct, CAST only considers treated impervious, turf, and tree canopy land uses. For the sake of consistency with CAST and the accounting document, our spreadsheet model only considers treated impervious and turf. In addition, TMDL SW-WLA reductions are only applied to urban land areas. Therefore, accounting for reductions for any non-urban lands within a BMP drainage area would be inconsistent with TMDL allocations and required reductions.

Q-18: How do we handle conversions in the STORMWATER MANAGEMENT BMPs regions? Conversions must have the pollution reductions from the existing SWM Facility subtracted from the post-conversion facility reductions.

A-18: Stormwater Management retrofits/conversions can be addressed through inputting the change in BMP capacity as an additional stormwater management BMP. Users can account for changes by inputting a negative amount of the BMP that was converted and positive amount of the BMP it's being converted to.