Maryland WIP Webinar Q &A

Topics: MAST DEMONSTRATION

19 JULY 2011, 10 AM – 12 PM

First Presentation – Lee Currey, MDE

Q: Is the EPA model complete?

A: 5.3.2 is calibrated and complete. 2009 PR, NA and E3 are available.

Q: In which model component is shoreline erosion accounted for?
A: Urban and Ag pages

Q: Are the BMP efficiencies Maryland efficiencies or EPA Bay Model efficiencies?

A: There a couple not yet approved by CBP and included in tool but expected to be adopted soon.

Q: Is groundwater transport of N accurately represented in the models?

A: CBP Model does try to account for it.

Q: When you say credit given for reduction practices reported to date. What do you mean? Was that the input deck provided to EPA. What if the input deck did not include BMPs that are in the ground?

A: Yes, different sectors were reported to agencies and comes together at MDE and then sent to CBP where a PR is made: 2010 PR is under review.

Q: Is atmospheric loadings of N & P subtracted from land use loading factors?

A: Not directly subtracted but it is included in the model, e.g. to meet allocations there is a 2025 atmospheric reduction from federal actions. The 2025 has a lower loading rate due to the actions. The scenarios that have the reduced loading from federal actions are called scenarios with Allocation Air and typically have an AA in the title of the scenario.

Q: What is a baseline year for considering "credit for actions to date"?

A: The Model has been calibrated to 2005 and any actions are indirectly accounted for in the loads. Many actions reported were from 1985 onward but there are some that were implemented before this date. If a BMP was reported then it has been sent to the CBP to be incorporated in the Model There is no baseline date for when a BMP could have been

reported. Subsequent unreported BMPs can be reported through the reporting mechanism already in place in the local jurisdictions.

Second presentation – MAST - Olivia Devereaux

Q: Since BMP cost data is not built into MAST, can you suggest appropriate sources where this information can be obtained?

A: There are studies going on. MD will look at specific sector costs and we will get info to you later.

Q: As I understand previous WIP meetings, MAST is for planning so what do we use for official tracking of our actual BMPs and our wasteload allocation reductions?

A: MAST is a planning tool intended to be implemented to make reductions. Once you implement practices, you need to report info through already existing mechanisms to the state so it can be compiled and input to watershed model, i.e., a PR. Planning, implementing, reporting, assessing and getting back to planning again CYCLE …

Q: Clarify what is meant by "local allocation" - how will it reflect allocations associated with federal and/or state-owned lands within a local jurisdiction?

A: Local allocation means local geographic area – the geographic boundary of a county. There are sectors within this county, with subdivision of federal and non-fed lands. EPA identified fed lands within bay watershed. BMPs can be placed on either. State lands are not explicitly identified, they are rolled up in to fed lands

Q: How many log-ins per county or team?
A: Unlimited # of logins.

Q: For MS4 permittees, this is setting up a duplicate BMP submittal process. We are required to report annually on BMPs implemented and progress on watershed restoration using database formats specified in the permit. We recommend that MDE consolidate reporting requirements so that MS4 permittees do not meet to submit one database for MS4 permit reporting requirements and then another process for MAST two year tracking and progress.

A: MAST is not a tracking tool – so no reporting information. No duplicate reporting will go to Bay Watershed model, which will inform MAST later after Progress is available.

Q: Just to clarify, in the model, the bioswale was applied to 4.35 % of the specified land use in the county, not total county land, right?

A: Applied to land in the selected LUs only, not all of the county LU

Q: For future consideration, target BMPs in specific watershed within the County. Perhaps we can then see adjacent county's plan within watershed.

A: An adjacent county can make its scenario public so you can see it. If you wish to complete a scenario with the surrounding counties involved you can copy and add to their scenario. You could select whole areas like the eastern shore or whole state. Work with your colleagues.

Q: Agree about need to target to watersheds within County. We must report to MDE BMPs by watershed for MS4 permit.

A: Geographic specificity of reporting is heart of question. NEIEN reporting establishes the scale of reporting. We can scale up some reported BMPs , e.g. those BMPs which have the same reduction potential. It is important to keep in mind that MAST is a planning tool and by planning at county scale it gives the jurisdiction the flexibility to plan at a higher level then implement at a finer scale to which a jurisdiction can report at. The planning and reporting scale may be a future topic of a webinar.

Q: In the urban sector of MAST, there are categories for municipal MS4, state MS4, and STA MS4. Why is there no federal MS4 category?

Within the Watershed Model there are Land-River Segments (finest scale) which are based on a GIS layer. EPA revised the previous GIS layer of Land-River Segments to have the Federal Lands as there own segments. This land area is shown in MAST as Federal Land and does have a line item on both the Urban and Ag screens.

Q: Can MAST handle BMPs in series? If so, how does the tool determine whether the % land for a BMP to be implemented overlaps implementation of another BMP?

A: Yes, this is factored into the tool. You can enter them in any order and tool is programmed to order them according to the way CBP model does it. Consistent handling of mutually exclusive and additive BMPs

Q: It may be necessary to see what the loading rates are by land use for "low" vs. "high" to fully understand the cost benefit of implementing BMPs in one watershed vs. another. Where can we find data behind these land use loading rates?

A: Loading rates for LU will be seen when you create scenario with NA load rate.

Third Presentation – Lee Currey, MDE

Q: The only thing that bugs me about MAST is not being able to see where these BMPs are going in the County. I find myself constantly asking where are these BMPs being applied, what does the spatial distribution of these land uses look like and how are the BMPs spatially related to one another...

A: There will be a map to show Low, medium and high area produced by MDE

Q: Are "edge of stream" and "direct to bay" identified as unique land uses in the 2010 scheme, or is simply a percentage calculation for each county's land area?

A: Edge of stream and delivered are load calculated coming off of land area, not a portion of land area.

Q: Who inputted 2009 BMPs in existence by land use? Who provided the data?

A: The contractor input the 2009 Progress by percentages. This was then made available through an MDE contact.

Q: Implementation always occurs at the small scale (parcel, farm, etc). Will this tool interface with actual projects, or is it simply for planning purposes?

A: This tool is for planning purposes.

Q: Does MAST have list of strategies and effectiveness or do you have to figure that out from summary changes?

A: There is a list of values which vary by LU and Hydrogeomorphic region and this list will be available in the training. It is also available on the MDE MAST website.

Q: Any idea when CAST will be available for use by other states?

A: Contract just obtained so migration of data will occur soon – August end point anticipated

Q: In response to another participant: I fully concur. Without knowing the location of the BMP, the loading to the BMP and the calculated reductions are inaccurate and don't represent reality. Is it possible to add some flexible input decks that allow users with more sophisticated models to enter their own calculated pollutant reduction achieved by these BMPs/scenarios. Without this flexibility to override inaccurate/gross data, there is no way to stay consistent and integrate local comprehensive watershed study and assessment information that ARE required by the NPDES MS4 permits.

Q: MAST scenarios should be made available to adjacent jurisdictions. Worcester County would be very interested in learning about BMP planning efforts occurring in southern DE and our neighbors to the West, particularly in the shared watersheds.

A: See above -- ask them to share CAST public scenarios

Q: How will differences be reconciled between the use of BMPs that are not in the Bay Model and the WIP II/two-year milestones progress as "graded" via the MAST process? Will such BMPs be somehow fitted into existing MAST BMPs, or will accounting for such BMPs have to wait until 2017--in which case what does that mean for the two-year milestones process?

A: If you put in non-approved BMPs, there is a disconnect. For new ones, the review process would be used to adopt those BMPs. MAST would be updated if the new ones were approved monthly maintenance. BMPs are agreed to by Bay partnership. MAST allows us to integrate with the Bay program. MAST is consistent with CBP load rates, efficiencies, etc which determines Bay WQ status. You can report them for Tracking Purposes.

Q: So each County will be reporting each of the thousands of septic systems upgraded, diverted or on a pump out schedule by parcel to who?

A: There is already in existence a mechanism by which most jurisdiction report BMPs. Forestry reported to DNR and Stormwater and Septic Upgrades are reported to MDE.

Q: So all Federal Facilities will be combined into a sector allocation? That's not how the A.A. Team did it - they broke the allocation out by facility type.

A: MAST has federal lands identified. Working to develop sub targets – allocations to federal lands to get at a more refined scale, in terms of ownership within a certain region Not just a lump allocation – individual loads for larger facilities. We are working to develop sub-targets but also working at a fine scale according to difference areas of ownership; We are trying to break it down to larger facilities but smaller are more difficult and they may need to be lumped.

Q: You mentioned NEIEN as the reporting tool option but I didn't think it was ready to be used yet (2 year out)

A: NEIEN is being tested at present. The States, whom do direct reporting to CBP, have been actively testing and QA/QCing the results for over 6 months. This is a complex reporting mechanism which has many requirements, not only software but 'hardware' and the knowledge of xml generation.

Q: Is it possible for users to develop their own Flexible Input decks?

A: No, not possible right now because not peer reviewed and there is a process to evaluate BMPs the difference from EPA efficiencies. That flexibility would allow people to do something that is inconsistent with EPA CBPO model data.

Could there be more done later? YES but we need to make this a better tool for MD and the larger bay shed later.

Q: MS4 Phase II jurisdictions are not required to report BMPs. How do we input these existing BMPs into the progress load database?

A: Some Phase II jurisdictions have reported BMP implementation. Stormwater implementation was made available to the WIP Liaisons to be distributed to the WIP Teams.

Q: What units does MAST use for the calculation of street sweeping debris collected?

A: Several units available. (lbs and linear feet)

Q: Will Maryland also participate in CAST?

A: CAST will be very similar to MAST so the answer is that yes, but there may be some revisions to MAST which will parallel CAST and eventually MD will move to CAST.

Q: Will MDA be actively involved in using MAST and coordinating with local governments?

A: Yes, MDA has a representative at the training and involved in development.

Q: Have you posted MAST manual online or is it only available as hard copy to those who attend training?

A: It is now available on-line at www.mastonline.org

Q: Does MAST use the same land and water segments as those used to develop the TMDLs?

A: If it refers to Bay TMDL, then YES -- +600 individual segments in MD so it is consistent with Bay TMDL.

Q: Do I gather from Olivia's discussion that there is no watershed level of planning embedded in the model. i.e. no 8 digit watershed or segment specificity (following up on Carol's comment above)

A: Land river segs do scale up to county scale. Tool does all calcs at L/R scale and then aggregates it up to be entered into SB. BMPs are distributed to county scale. Too many scales would make the use of the tool harder. County and sub county is used but is not equal to a HUC. Actions are done in the tool, behind the scenes. Future scale could include any grouping of L/R segs

Q: When can training class registration be available?

A: After the trainings are complete there will be a link on the MAST log-in page which will have username and password registration e-mail link.

Q: Is low/med/high based on relative effectiveness? If so, could you use that info to focus in on watersheds if you knew their relative effectiveness?

A: Yes, the low, medium and high effectiveness levels are from the CBP model and can be used to prioritize the implementation.

{Questions/Comments not address because of time constants}

Q: BMP's/land use changes are implemented and credited at a parcel level, but none of the models are accurate at the parcel (or even city block) level. How do you reconcile this? Put another way, how can you accurately determine offsets/credits on any specific project?

Q: Looks like this requires us to pre-visualize where each BMP can be implemented and calculate the acreage by the appropriate model land use. A geographic component would be helpful.

Q: How can MAST be used in other Maryland watersheds, particularly the Atlantic coastal bays?

Q: There is agreement on the literature research and adopted BMP efficiencies in the Bay model. The issue here is that MAST ignores the spatial component when calculating the BMP credit reduction, so the load into these individual BMPs is not known before the reductions are estimated. The simplification of calculating BMP pollutant reduction tabularly based on simple acre information without regards to the actual pollutant load entering the BMP WILL result in inaccuracies and inconsistencies with other studies that models the actual location of these BMPs and their pollutant reduction at the site scale.