

MAST • CAST • VAST

Prioritizing Improvements

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Watershed Technical Workgroup

OUTLINE

- Previous priorities - completed
- Priorities set in June 2012 – status
 - User interface
 - Agreement with the Watershed Model
- Next priorities - plan

PREVIOUS PRIORITIES

- BMP input as acres
- Keep consistent with Scenario Builder and the Watershed Model
- Additional training
- Additional geographical scale options
- And many other completed enhancements.
See: <http://casttool.org/UpdateHistory.aspx>

PRIORITIES SET IN JUNE 2012

- Improvements to the user interface
 - Increase efficiency and intuitiveness of features for the user
 - Enhance the grid/table functions
- Improve agreement of loads with the Watershed Model

USER INTERFACE UPDATES

COMPLETED

- Made the login page more informative – added an “About CAST/MAST/VAST”, Contact Us, and update history/versioning
- Made the cover crop BMP a two-step selection process
- Copy – added in the option to use one scenario for all sectors
- Multiple geographies can be selected on the compare scenarios page
- Automated logins
- Waste water flow and load pop up information

USER INTERFACE UPDATES-Continued

COMPLETED

- BMPs can be added using land use or BMP first
- Geographic scale and area remain populated with last selection
- Download BMP tables from BMP sector page
- Percent implementation shown in downloaded BMP files, not just acres or feet
- Additional explanatory information added to selection boxes
- BMP files can be downloaded in scale entered as well as land-river segment

USER INTERFACE UPDATES-Continued

COMPLETED

- Grid enhancements
 - Delete option—added the name of what is being deleted on the confirmation.
 - Grid length – Kept the same when user goes back to a page
 - Scenario description - Added to scenario list
 - Grid sorting - Made more intuitive

USER INTERFACE UPDATES IN PROGRESS

- Sum the waste water, land use, and septic loads on the compare page, similar to the way it is on the summary page
- In the edit scenario option on the scenario details page of an existing scenario, show the selections made when it is created for copy scenario
- Grid enhancement—On the compare page, add scenario name to column headers

IMPROVING AGREEMENT WITH WSM

- Determine source of error in loads-Completed
 - Predominant sources of error are:
 - biosolids
 - disposal load manure
 - Minor sources of error are:
 - Revise how the regression intercept is handled where results are insignificant
 - Transform the nutrient management variable since it is not normally distributed
 - AFO and CFO manure calculation rounding errors
- Account for loads from biosolids-Completed and not yet deployed in on-line version because it will change loads
- Disposal load correction
 - Determine how to predict when disposal mode happens-Completed
 - Predict the saturation point for disposal load. Requires running as many as 100 scenarios
 - Add a new variable to regressions that predict loads. The variable is for the number of acres that can be removed from manure-receiving AG land prior to disposal load.

ROLLING OUT THE IMPROVED AGREEMENT UPDATES

- Prior to the improved load estimation going live, provide you with a comparison of the new estimated loads, old estimated loads, and the watershed model loads for various scenarios.
- Prior to the improved load estimation going live, alert users that the loads will change. If users would like a copy of their previous load estimate, then the user should download those files and save them. After going live, old load estimates will cease to be available.
- Make the improved estimated loads live and recalculate all users' scenarios.
- In MAST, make the backout calculation work the same as CAST and VAST
- Post changes on the Software Updates page.

NEXT PRIORITIES

- Additional training and communication to users
- Improve the agreement of loads between the Watershed Model and CAST (**in progress now**)
- BMP costs—add in the ability to calculate costs for a scenario using EPA cost data and/or user-specified costs
- Area definition - Allow users to define area using a map
- Allow users to indicate BMPs implemented (urban homeowner BMPs, for example)
- Allow users to upload BMPs from files. This task requires creating validation to avoid errors in the users' uploaded data.
- Point source page—add CSO data and make other changes to the point source or waste water page so that it is more useful to users.
- Nutrient trading in the urban sector—add the ability for users to define a geographical area so that CAST/MAST/VAST can be used to calculate urban loads for trading. In addition to defining a geographical area, users will define land uses and specify acres in each land use.
- Graphing—add graphs of the summary loads data and compared scenarios. Additional summary data and output files.
- Geographic scales—add additional geographic scales

QUESTIONS AND DISCUSSION

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