II. RiverWare Software Maintenance

**Releases , Patches and Snapshots**

RiverWare Patch 6.7.3 was released on Nov 13, 2015. Release notes are as follows:

**The following bugs were addressed:**

* 5686: In certain situations, the Groundwater Storage object incorrectly computed negative storage due to Head Based Percolation. Now, the Head Based Percolation is limited to be less than the previous Storage, converted to a flow. In addition, the Groundwater Available for Pumping is constrained to be greater than or equal to zero**.**
* 5688: A crash could occur when performing an import (resize) to an accounting slot.
* For the Reach Pan Evaporation method, the Reach Pan Coefficient can now be greater than 1.0. Previously the Reach issued an error if this value was greater than 1.0

**Bug Fixes**

Bug 5686: Negative Storage on Groundwater object. In certain situations, the Groundwater Storage object incorrectly computed negative storage due to Head Based Percolation. Now, the Head Based Percolation is limited to be less than the previous Storage, converted to a flow. In addition, the Groundwater Available for Pumping is constrained to be greater than or equal to zero. This bug was fixed for patch release 6.7.3

**Regression Tests**

The regression tests continue to be maintained on a daily basis. This involves updating the regression tests to exercise new developments in the code. Also, as new code is added to the development area, the model comparisons performed in the nightly regression tests usually show differences (for example, because a new method category may have been added). When this occurs, the regression tests need to be updated to reflect the current state of the development area so model comparisons do not fail. In addition, every week, the daily history of each regression test is analyzed to determine if the run time or model size has significantly changed because of new development. In November, a slowdown of certain tests was noticed. After tracing through the logs, it was found that the updated version of TCL was the cause of this slow down. This will be investigated in December.

**Plotting and Output Architectural Proposal**

Users have expressed the desire to have more user-friendly and better looking plotting in RiverWare. Sponsors have allocated funds for improvements, but before these are implemented, it seemed prudent to revisit the way that users create, save, and edit plots and other output devices. For example, there are multiple dialogs where the user can select slots to plot and configure the layout (E.g. 2X1 curves) of the plot. In both places, the user can edit the plot and the interaction between them is not very intuitive. In addition, the plots use a “Save” paradigm which has never been easy to explain or use. In November a document was started that will list deficiencies, requirements, and a proposal to improve the plots. This document in located in /projects/riverware/doc/plotting/PlottingOutputPlan.fm