II. RiverWare Software Maintenance

**Releases**

RiverWare 6.6.5 was released on April 21, 2015 with the following release notes.

**SUMMARY OF CHANGES IN RIVERWARE PATCH RELEASE 6.6.5**

**Table Verification in the Plant Efficiency Curve method**

In the Plant Efficiency Curve power method, the Plant Power Table data was verified to ensure concavity. This check was removed for the beginning of Simulation and Rulebased Simulation but is still performed at the beginning of an Optimization run.

Bugs

The following bugs were fixed:

* 5605 - Previously, it was possible to delete all rows in a series slot and it was hard to revert. Now a single row is always maintained and there is a confirmation when deleting rows.
* 5606 - Importing monthly data into a daily timestep model with a DSS Database DMI was not working under certain conditions.
* 5609 - The Open Account dialog did not update when creating supplies on the workspace.
* 5611 - Series slot tooltips on accounting slots were incorrect.
* 5626 - In plotting, probability and logarithmic axis scales were reverting to linear scale when printing or saving.
* 5628 - Within the Peak Power Equation and Peak Power Equation with Off Peak Spill power methods, an incorrect error was posted due to convergence on Turbine Release.
* 5629 - Object clusters were interfering with the Computational Subbasin flood control methods.
* 5630 - In the Import Paste dialog, the "Limit paste operation to Slot Cell Selection" checkbox was incorrectly checked by default.
* 5632 - Control Point and Reservoirs were issuing an incorrect error when forecasting was used and there was pre-simulation data specified, but the objects were not using the cumulative local inflow disaggregation.
* 5634 - A model with more than 200,000 timesteps could crash during load.

**Significant Bug Fixes**

* 4181 - First dispatch timestep on reach is incorrect when stream gage is present. This fix adds in the required findEarliestUpstreamInput method so that the gage does not impact the first timestep search.
* 5628 - Within the Peak Power Equation and Peak Power Equation with Off Peak Spill power methods, an incorrect error was posted due to convergence on Turbine Release. This was fixed by using temporary variables within the computations so that convergence criteria was not an issue.
* 5632 - Control Point and Reservoirs were issuing an incorrect error when forecasting was used and there was pre-simulation data specified, but the objects were not using the cumulative local inflow disaggregation. This was fixed by adding in appropriate code to not try to set local inflow on the initial timestep in this situation.
* **Distributed MRM writing XLSX files** - In working with the East Nile model, Kevin Wheeler discovered a problem where the Excel files automatically generated from RDF files as output from a distributed MRM configuration are always written in the older .xls Excel format. If a multiple run is not distributed, the Excel files are written in the format that matches the version of Excel on the system. The distributed MRM controller calls the RdfToExcelExecutable program in batch mode to create the Excel files, and was always calling this program with the output file argument as the base of the RDF file name with .xls added to it. This caused the output files to always be written in this format. The code in the distributed MRM controller was changed so that it does not pass any output file argument in the batch mode call. The RdfToExcelExecutable program was modified so that if an output file argument is not provided, an output file name is generated as the base of the input file name plus the Excel suffix for the version of Excel resident on the system. In this way the distributed MRM controller can generate files of the appropriate Excel version without having to have any knowledge about the Excel program on the system. A new version of the RdfToExcelExecutable (version 1.2) was generated and posted to the CADSWES web site. The modified distributed MRM controller code was checked in to the prerelease and the builds areas so that the change will appear in any RiverWare 6.6 snapshots and the 6.7 release.

**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.