

# Changes in the 2018 version of **xpswmm** and **xpstorm**

by Innovyze



One of the many advantages of using Innovyze products is the knowledge that we are continually improving the software, adding new features that keep our customers equipped with the latest modeling technology. The following is a list of the changes available in our latest version.

## **VERSION 2018.1**

### Hydrology

- In Runoff mode, a new tool to provide the ability to split a catchment into the impervious and pervious sub-catchments is now available. The Tools > Calculate Node > **Split Catchment in Perv/Imper** tool has now been provided. The tool provides users of SCS or Laursen hydrology methods the ability to perform better simulations and provides the ability to make sub-catchment redirections from the impervious to pervious sub-catchment.

### XPTables

- A new **FIELD STATISTICS** tool in **XPTABLES** allows the user to select a column or part of a column and generate the **Maximum, Minimum, Mean, Sum** and **Standard Deviation** of the contents selected.
- A new **Block Edit** tool in **XPTABLES** allows the user perform group edit functions on a selection of cells:
  - **Equal to:** replaces all selected cells with the new number or string
  - **Add:** Adds the entered value to each selected cell
  - **Subtract:** Subtracts the entered value to each selected cells
  - **Multiply By:** Multiply the entered value to each selected cell
  - **Divide By:** Divide each selected cell by the entered value
- **Ascending** and **Descending** icons now available in **XPTABLES**

### Results

- The **Review Results** for a Hydraulic Node now has a new graph button (**Inlet Capacity**) that provides the direct time series results for Inlets display. The new icon (**IC**) in the Review Results allows the user to display flow and levels for selected nodes with Inlet Capacity enabled.
- Tool-tips are available in the Media Control bar for 2D and 1D flood animation.
- The Dynamic Long Section (Profile) and the Dynamic Section Views shows an interpolated line of node ground elevations when no DTM exists in the model.

### Resources

- NRCS and NOAA Temporal Distributions are now available at the Resource Downloads area.

### Maintenance

- 'Cancel' button now work as expected for 2D result Recording.
- Pre-burst rainfall timesteps from Australian Rainfall and Runoff 2016 & the Storm Generator now imports with the correct prevision.
- License files for libraries using the storm generator include the install for 2017.2.1 and newer since they were missing in the previous version.

- The Base Scenario state (on or off) saves the active/inactive property. In previous versions, this Base Scenario always returned to active.
- The copy icon has been disabled on the Dual Drainage Batch Converter since it's not applicable.
- When exporting the sewer network and DTM to LandXML the software will now stamp the version of the software that created the export.
- The results are adjacent to each set of values when multiple conduits appear in the dynamic long-section and dynamic section views. Previous versions placed the text on top of each other.
- The External Data Import/Export dialog now has a scrollbar so that long file and path names can be seen.
- The printing of the Scenario Manager Report uses a smaller font when printed.
- The ability to search for text has been removed from the Find dialog.
- The Cancel X in the upper right-hand corner of message dialogs has been removed when appropriate.
- The Save As Template dialog has been modified with improved text, expanded text field to show more name and path as well as a more precise confirmation message.
- An issue in XPTABLES and River links which resulted in the node inverts reset to zero has been fixed.
- The tab order for the Hydraulics Job Control Time Control is now like Runoff and Sanitary mode. It will now moves the cursor from left to right when pressing the tab key, meaning from year to seconds then start to end rows.
- The Maximum Database Cards set in the SWMXP.INI file has been increased to 4000000 to reduce the likelihood of filling the static database to capacity when using a lot of Global Storms.
- New rainfall records will start with default date of January 1 of the current year at midnight. Date and time can be edited for each record.
- When exporting to XPX the first conduit name of multilinks was not being exported in version 2017.1 and 2017.2.
- The Calibrate menu item found in Tools is now disabled when the option is not present in the license.
- In 2017.2 some fields were not displaying when the field Info button was used in dialogs. This is now fixed.
- The ARR2016 Storm Generator button is now removed from the Global Storms dialog for non-English versions.
- The tool tips for the Scenario Manager and Global Storm drop down selection have been updated.
- Multiple conduits will no longer populate conduit names with defaults such as Pipe then Pipe.1, Pipe.2 etc. Conduit names will remain blank unless filled in by the user.
- Some specific models had issues when copying an object and then pasting to create a duplicate object. This has been fixed.
- An issue with the display of Evacuation Routes when Use Project Units is unchecked has been resolved.
- In some cases, there are security issues usually with group policy that prevents a core part of the installation to modify the firewall for the Solve Manager. This new release will allow the installer to continue and not fail. The firewall will need to be updated in these cases for the Solve Manager to function. Normal Solve is not affected.
- This release fixes an issue with Rainfall Records that are generated with the Storm Generator in the Global Database. Those storms were not being passed to the JSON file and hence showed storms without the time series. This is now fixed for 2017.2.1 and later.
- Version 2017.2 failed to save changes to the Scenario Manager for 2D Layer Active flag. This meant that edits for layers or new Scenario changes were lost once the model was reopened. This is now fixed with the 2017.2.1 update.
- Some code in the Scenario Manager was limited to 30-character names. This has been increased to prevent any overflow that could result in abnormal software behavior.
- A more complete Scenario Description is now included in the Scenario report for making 2D Layers inactive.
- Added ARR storm generator support for locations without Pre-burst data.

- All possible methods of naming link and node objects now allow 80 characters as a maximum string length. Some methods were previously restricted to 79.
- In some cases, using a rainfall interface file was not allowing the analysis engine to recognize that the rainfall to use was the binary time series. The internal flag is now persistent and there are no more issues using the rainfall interface file option.
- Some cosmetic changes were made to the Subcatchment dialog as a few resources were clipped by text fields.
- The tooltips for node names in the conduit profile have been restored.
- The Bridge Low Chord elevation and hydraulic opening calculations are now correctly calculating the bridge components when certain Hydraulic Opening conditions are met.
- ARR16 Storm Generator now correctly aligns temporal patterns with AEP for certain Exceedances.
- An issue with ARR16 Storm Generator with Pre-burst rainfall containing certain invalid values is addressed.
- An issue has been fixed where the Region and language settings for decimal symbol interfered with the application on open.
- Some text strings were missing in the Graphical Encoding. These place holders have been updated with the correct strings.
- The plan view refreshes when any 2D Layer is disabled. Previously the screen would have needed a manual refresh for the new state of the layers to be seen.
- The software now requires a value greater than zero for active sub-catchment area, width and slope. This is now consistent if the data dialog is accessed from the node or the sub-catchment with double-click.
- An issue when the low cord is above the highest coordinate point of the bridge opening section is fixed by a internally inserting a new vertex to close the gap.
- ARR Storm Generator is now suppressed in the software for Chinese, Korean and Japanese versions. This is appropriate since it is for Australian rainfall generation.
- With the inclusion of a JSON database for rainfall values an issue allowing the storms to be duplicated was not populating the new rainfall record with the existing data. This has been fixed and appropriate data is now present in the duplicated record.
- The SWMM5 export now coordinates without scientific notation. This change is important as some other programs have had difficulty interpreting the number when importing the XP exported file.