

What's new in SMS 11.2

The following is a list of the more significant changes in SMS 11.2

General Features

- **Dataset Toolbox**
 - A Merge Datasets option is now available in the Dataset Toolbox
- **Interface Components**
 - Projection commands have been moved to the Display menu
 - A Reproject All command has been added in the Display menu
 - Help buttons in dialogues will open the corresponding page in the XMSWiki
- **Dynamic Model Interface** - We are excited to present a more flexible and powerful alternative to the generic model interface that has been supported by SMS for several years. This methodology allows a model developer to define all the attributes of an interface for a specific model in an XML file. SMS will read this file when launched, and then interact with the model. This schema is defined in Dynamic Model Interface Schema. The dynamic model interface includes:
 - Model specific menu commands
 - Model specific parameters
 - Model specific boundary conditions
 - Model specific file formats (for both reading and writing)
 - Model specific execution procedures including as many different pre-run utilities or execution steps as are required by the model
- **MIKE 21 (*.mesh) File Support** - MIKE 21 (*.mesh) files can now be loaded into SMS. See the article MIKE 21 *.mesh
- **LIDAR File Support** - SMS can now recognize a LIDAR file when a user asks the system to read such a file. The user can choose the import methodology to load selected layers from the file as either a scatter set or a raster. SMS also loads an image of the data in the specified format.
- **Saving Color Palettes** - Color palettes will now be saved when doing File | Save Settings. When SMS is loaded, any saved palettes will automatically be loaded as defaults.
- **NOAA HURDAT File Support** - SMS will now load storms for the standard NOAA HURDAT format. The file will need to have a *.hurdat2 extension to be recognized by SMS.
- **Contour Options** - The default values for contour options in a dataset will be that of the module
- **Vector Display Options**

- New display option feature for showing vector arrows at a constant elevation. See Vector Display Options for more information.
- New display option for vector arrows to follow flow path (vectors curve). This is done by selecting "Arrows follow flow path" under the Vectors tab in the Display Options dialog.
Warning: this can be slow if displaying lots of vectors
- **Spectral Coverage** - Spectral coverages are now used to store all spectral data by location and time. These coverages are then used as spectral input for CMS-Wave and STWAVE, and are also used to view spectral output generated by the models in observation and nesting files.

Module Features

- **Curvilinear Grid**
 - New tool to split and merge row/column of a curvilinear grid. See the Curvilinear Grid Tools section for more information.
 - Ability to merge two curvilinear grids. See the article Curvilinear Grid Module for more information
- **Mesh Module** - SMS 11.2 allows for use of multiple meshes

Model Features

- **SRH-2D** - There is now a custom interface for the SRH-2D model developed by the United States Bureau of Reclamation. This model is a finite volume engine that is very stable in wetting/drying conditions. It has been tested extensively by various agencies, academic and commercial users.
- **ADCIRC**
 - There is now support for time varying bathymetry in ADCIRC
 - You can now do a spatially average interpolate from a raster/DEM to an ADCIRC mesh
- **ADH** - The CSTORM-MS coupler has been updated to now include AdH meshes in addition to ADCIRC. This is in preparation for linking to AdH simulations for sediment transport in the CSTORM-MS.
- **CMS Flow**
 - The cards, values and comments are now displayed in color in the CMS-Flow Advanced tab
 - Added projection cards
- **CMS Wave** - All input spectra is now handled in a spectral coverage. This allows the user to utilize multiple observed spectra to drive the model in the same manner that a nested simulation has been used in the past. The timestamps assigned to the spectral data are matched up (or interpolated to match) with the times specified for each case. In order to correctly assign spectral data for each case, SMS now requires CMS-Wave simulations to have a reference time.

- **STWAVE** - The model control now uses a spectral coverage to specify the cases/wave states that will be included in a simulation. This allows a user to utilize multiple observed spectra to drive the model in the same manner that a nested simulation has been used in the past. The timestamps assigned to the spectral data are matched up (or interpolated to match) with the times specified for each case. In order to correctly assign spectral data for each case, SMS now requires STWAVE simulations to have a reference time.