**FROM:** Steve Malers

**DATE:**  May 1, 2012

**SUBJECT:**  StateMod 13.00.00 and GUI Issues

This memorandum summarizes issues found with StateMod 13.00.00, in particular that limit StateMod GUI functionality. StateMod GUI issues are also identified in order to identify potential future enhancements.

**StateMod Issues**

1. **Issue**: The –help command line option has been disabled. **Consequence**: Without referring to the documentation, it is difficult to know basic command line parameter use. Also, the GUI’s run menu has a choice to run “StateMod –help” and this will not generate any meaningful output. **Work-around**: No software workaround; refer user to StateMod documentation. **Recommendation**: Re-enable the –help command line option.
2. **Issue**: The StateModExecutable response file property cannot be used to indicate which executable to use with the dataset (this property was allowed with previous StateMod versions). **Work-around**: The GUI has been updated to recognize a ${WorkingDir} property in the StateMod GUI configuration file, which will allow the configuration file property StateModExecutablePath=${WorkingDir}\Bin\StateMod-13.00.00.exe to be set. However, this property can only be expanded after a response file is selected. Consequently, the initial GUI check for StateMod will generate a warning because the response file is unknown. **Consequence**: The limitation and work-around result in:
   1. If ${WorkingDir} is used in the StateMod GUI configuration file, then a warning will be displayed when the GUI starts
   2. If StateModExecutable is set as a property in the response file StateMod 13.00.00 will not run.

**Recommendation**: Allow the StateModExecutablePath property to be set in the response file or perhaps the control file (although the control file is fixed format and not easy to update).

1. **Issue**: Documentation for StateMod version 13.00.00 needs to be provided as a PDF so that it can be included with the GUI installer. **Consequence**: Without the PDF, the user is not provided current documentation via the GUI help menu. **Work-around**: Keep using old documentation.
2. **Issue**: The Colorado model dataset needs to be updated to include map configuration, and all response files need to reference the GeoView project file and ideally set the StateModExecutable property (currently not allowed by StateMod as per issue 2). **Consequence**: Not having fully-configured maps limits the usefulness of the GUI and in some cases makes the GUI and datasets look incomplete. **Work-around**: None. **Recommendation**: Modelers or someone familiar with the datasets need to put effort into configuring the data sets.
3. **Issue**: The GUI uses the full path to the response file when running StateMod; however, a path that includes a dash is not handled properly by StateMod (perhaps StateMod interprets as an option). **Consequence**: Because the StateMod GUI software is installed using folder like C:\CDSS\StateModGUI-07.04.00, this causes the GUI to not be able to run the training data set under the normal install location. **Work-around**: The following work-arounds are possible:
   1. Users must copy the training data set to a different folder on their computer, and all training materials must mention this work-around. Update the GUI to warn about this issue when the response file is selected, but allow the GUI to continue (e.g., for development and testing).
   2. The above is intrusive. Instead, the installer for the StateMod GUI has been updated to use an underscore instead of a dash for the install folder and the training dataset is in a folder that uses underscore. The dialog to check the response file path also has been moved to “Help… Troubleshoot StateMod/GUI Install” and can be added to over time if necessary.

**Recommendation**: Update StateMod to not misinterpret dashes in paths so that the work-around can be removed (if it is worth doing so after the initial effort – the main benefit would be consistency with other installers that use the dash in the install folder name).

1. **Issue**: …

**StateMod GUI Issues**

1. **Issue**: The GUI does not include features to run all the current StateMod primary and secondary options. **Consequence**: User may not be able to run StateMod from the GUI as desired. **Work-around**: Run StateMod outside of the GUI. **Recommendation**: Update the GUI to allow selection of all current StateMod run options (but not sure what this entails given that –help is not enabled in StateMod 13.00.00 and documentation has not been provided).