

GoldSim 12.1 Summary

Summary of New Features and Changes

June 2018



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INTRODUCTION

This document describes the primary changes and new features implemented in GoldSim 12.1. A full listing of all of the changes can be found in the Release Notes (accessible under Help in the main menu).

GoldSim 12.1 includes a number of new features and numerous minor improvements and bug fixes.

Documentation of New Features

This document summarizes the major changes in GoldSim 12.1. All new features discussed in this document are described in detail in the accompanying Help system and user manuals for this release. Note that there is also a web-based version of the Help system available (which is identical to the Help system that is integrated into the software), and in the sections below, links are provided to those parts of the web-based Help system describing the the new features.

Of course, if you have questions about any of the new features in GoldSim, please contact us at support@goldsim.com. We also encourage you to visit our online user forum at <http://www.goldsim.com/Forum>.

Installation Instructions for this Version

You do not need to uninstall other GoldSim versions (such as GoldSim 11.1 or GoldSim 12.0) in order to install GoldSim 12.1. The new version will be installed in parallel to any existing pre- GoldSim versions currently on your machine (it will not overwrite them).

To install GoldSim 12.1, you must download the full installation file: “GoldSim_12.1_Setup.exe”. Download the file from the website, and run it. Note that you must have administrative privileges in order to install GoldSim successfully.

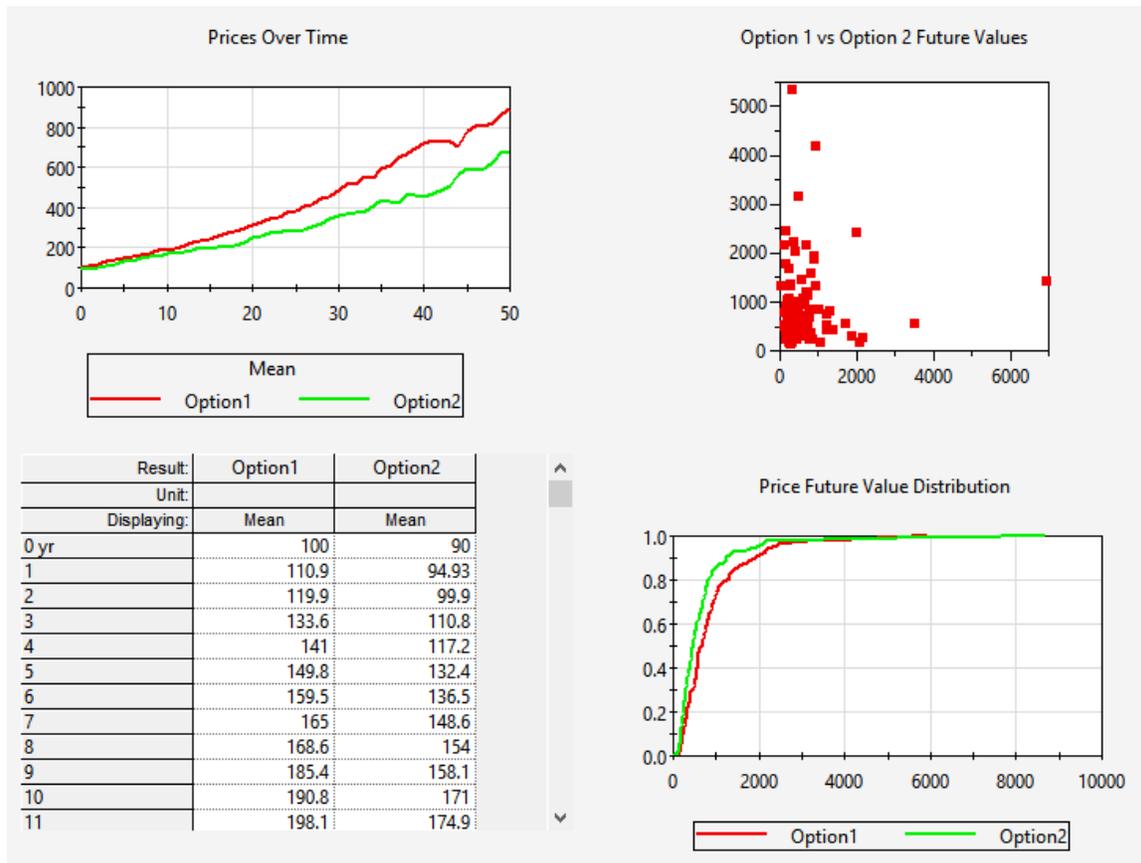
In order to use GoldSim 12.1, you will need to enter a new Activation Code. All users with active maintenance should have received a new Activation Code. If you have not, please contact us at support@goldsim.com.

SIGNIFICANT NEW FEATURES

Embedded Dashboard Charts and Tables

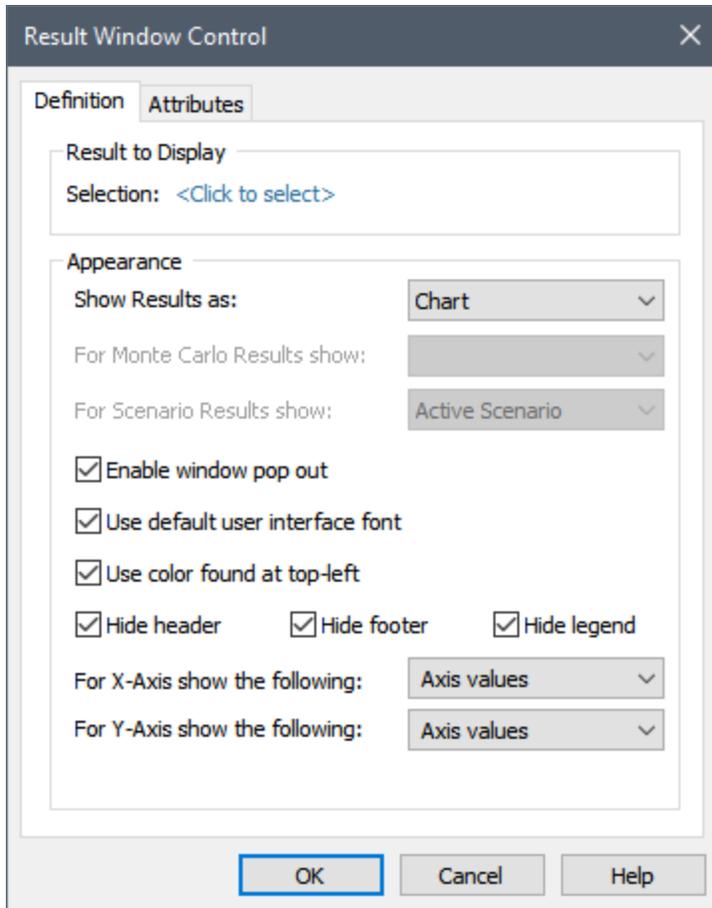
In previous GoldSim versions, the only way to view a result chart or table in a Dashboard was to use a button linked to a Result element.

GoldSim 12.1 includes a significant new way to view results in a Dashboard: you can embed a result window (as either a chart or a table) directly into a Dashboard:



You do this by linking an existing Result element to a Result Window control in the Dashboard. Any of the four Result element types (Time History, Distribution, Multi-Variate and Array) can be embedded and displayed.

The dialog for the control provides a number of options for controlling the appearance of the embedded result in the Dashboard:



One of the options for a Result Window control is whether or not you want to enable the control to “pop out”. If you select this option, while viewing a Result Window control in a Dashboard, double-clicking on the control “pops out” the embedded window to full size, such that it appears as it would if you were to view the Result element directly:



This feature is described in more detail [here](#).

Real-Time Updating of Result Displays

In previous GoldSim versions, you could open a Result element prior to running the model (either in GoldSim or the Player) and then if you ran the model, the displays would be updated if the model was paused. However, if you did not pause the model, they would not be updated (and display results) until the end of the simulation.

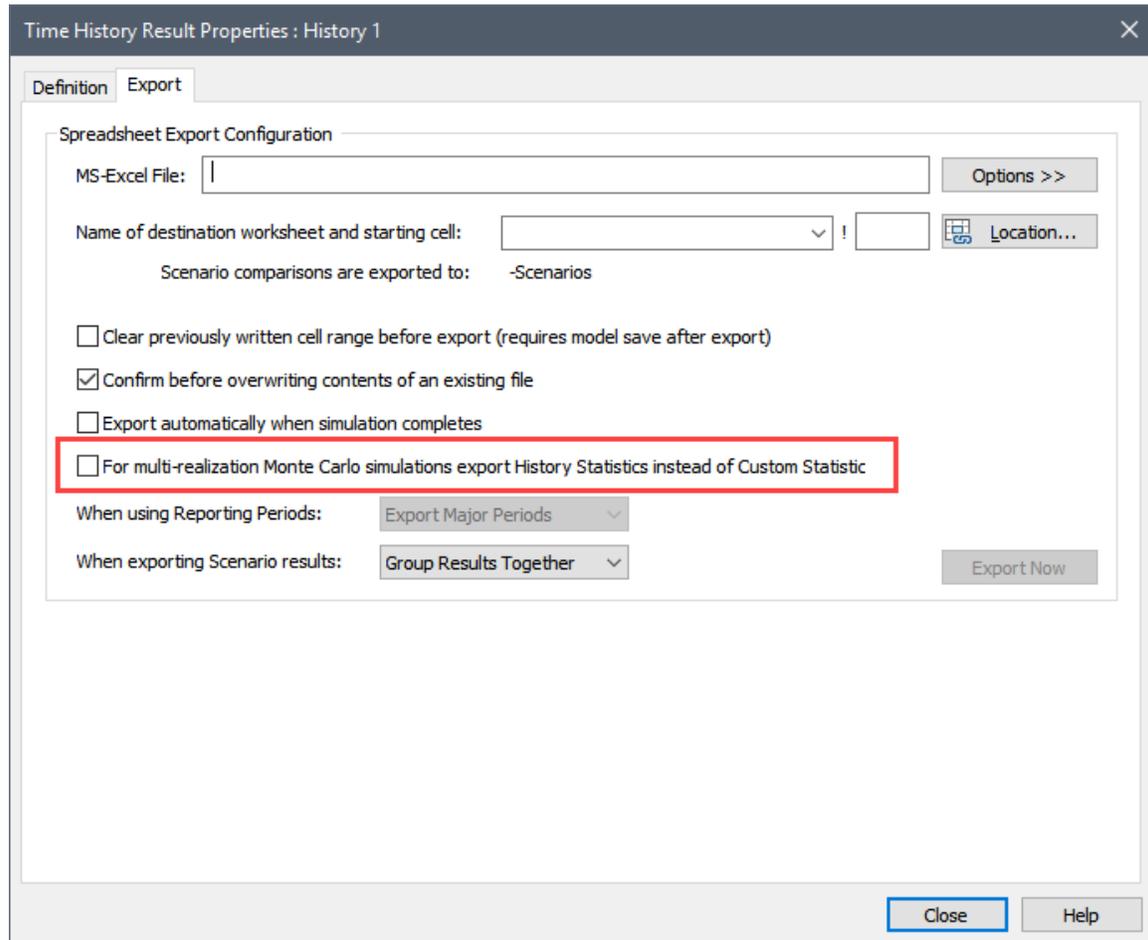
In GoldSim 12.1, all results are updated in real-time throughout the simulation. For all Result elements, results are automatically updated and displayed at the end of each realization. When running a single realization, Time History results are updated continuously (every timestep) throughout the simulation.

This new feature is particularly useful when viewing embedded results in Dashboards (discussed above) during a simulation.

Exporting Time History Probability Statistics to a Spreadsheet

In GoldSim 12, when exporting results from a Time History Result element to a spreadsheet, if multiple realizations are run, it is only possible to export a single Custom Statistic for each result.

In GoldSim 12.1, it is now possible to export multiple statistics (those displayed in Probability History displays, and defined in the Monte Carlo Result Options dialog):



Model Inventory

You can now create a simple XML file that can be viewed in a text editor, browser or XML editor that echoes out all of the elements in a GoldSim model. This file contains the name, type, description and path for each element, and specifically illustrates the model hierarchy. It does not, however, include the definition (e.g., input values, units) for any elements.

You can create this file by selecting **File | Save Inventory...** from the main menu.

XML stands for eXtensible Markup Language. It was designed as a software and hardware independent tool to store and transport data such that it is both human- and machine-readable. Like HTML, XML uses tags. However, unlike HTML, XML does not have predefined tags. Rather, the author defines custom tags (as well as the document structure).

The general concept behind XML is to create a tree structure which starts at a root object and branches to child object. Such a structure, of course, is ideal for displaying the hierarchical design of a GoldSim model.

The XML Model Inventory file can be viewed in most browsers, and by default will look similar to this (this is a Model Inventory file for as very simple GoldSm model viewed using Chrome):

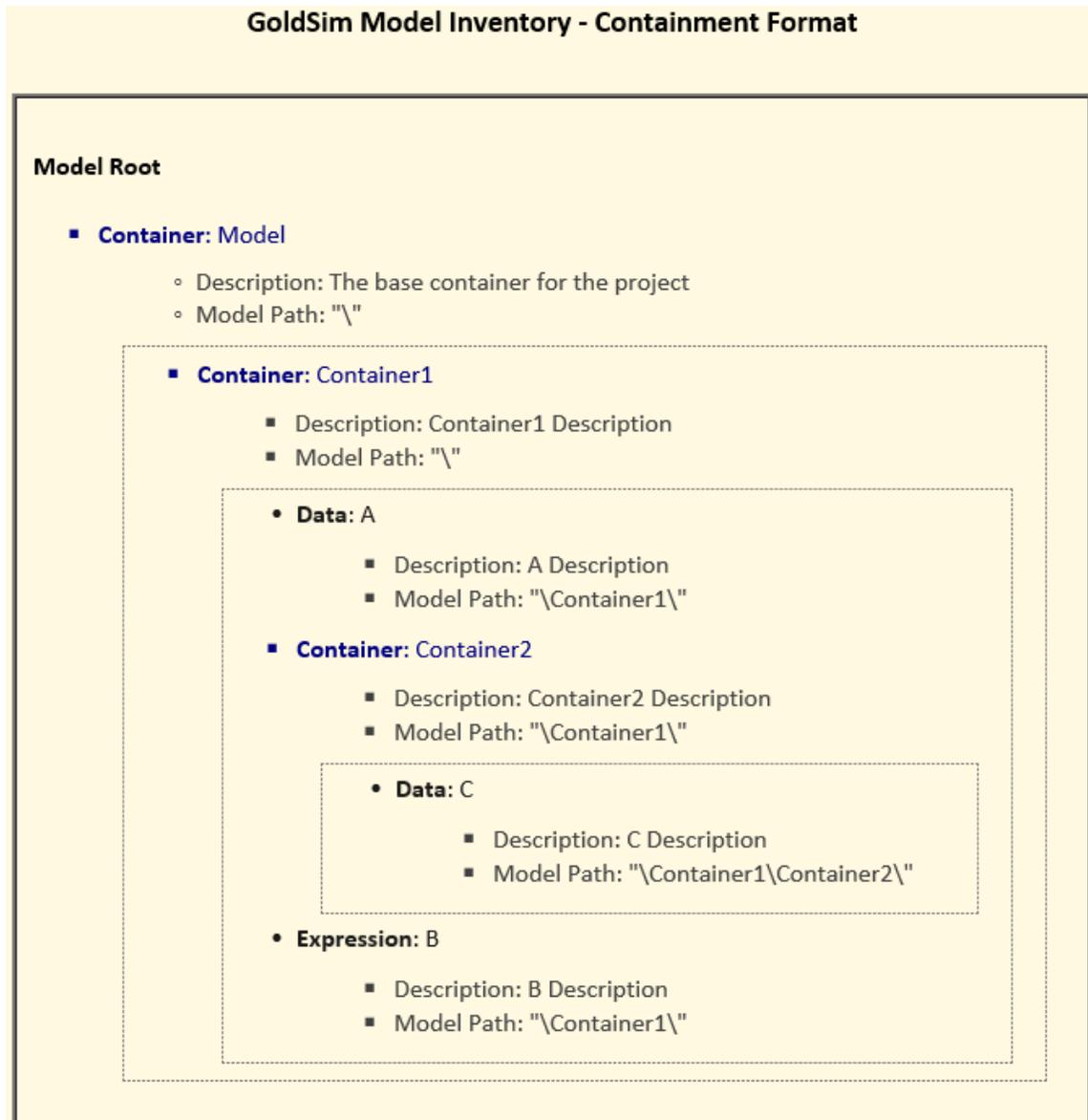
```

▼<GSM>
  <!-- Model Inventory generated by GoldSim 12.1.0055 -->
  ▼<Global>
    <File>C:\Users\rkossik\Desktop\Local Manuals\test2.gsm</File>
    <Author>Rick Kossik</Author>
    <Created>3/23/2018 3:02:00 PM</Created>
    <Modified>3/23/2018 3:48:40 PM</Modified>
  </Global>
  ▼<Model>
    ▼<Container type="Container" typeID="0" id="Model1" desc="The base container for the project" path="">
      ▼<Elements>
        ▼<Container type="Container" typeID="0" id="Container1" desc="Container1 Description" path="">
          ▼<Elements>
            <Element type="Data" typeID="1" id="A" desc="A Description" path="\Container1\"/>
            ▼<Container type="Container" typeID="0" id="Container2" desc="Container2 Description" path="\Container1\">
              ▼<Elements>
                <Element type="Data" typeID="1" id="C" desc="C Description" path="\Container1\Container2\"/>
              </Elements>
            </Container>
            <Element type="Expression" typeID="3" id="B" desc="B Description" path="\Container1\"/>
          </Elements>
        </Container>
      </Elements>
    </Container>
  </Model>
</GSM>

```

Note that the file explicitly shows the model hierarchy in tree form. You can expand and collapse branches of the tree when viewing an XML file in the browser. In Chrome, this is done using the triangles at each branch (in Internet Explorer, the branches are opened and closed using + and – signs). In the example above, all of the branches are expanded.

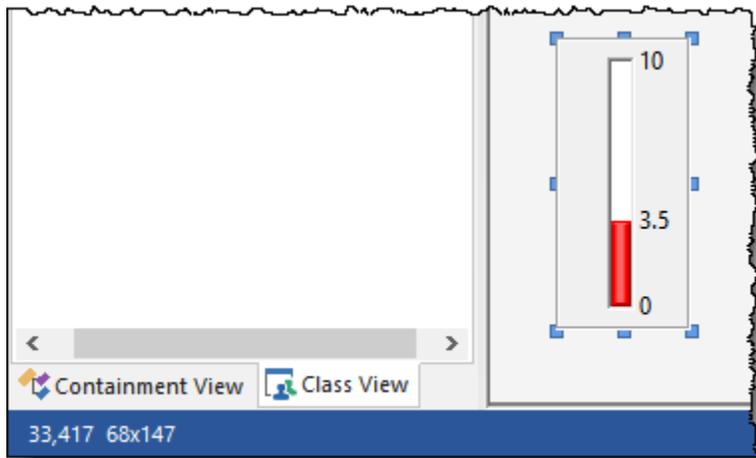
If the file is edited to reference a stylesheet, it can be further formatted. For example, this is the same XML file as shown above, but formatted using a stylesheet to emphasize the model hierarchy (and viewed in Internet Explorer):



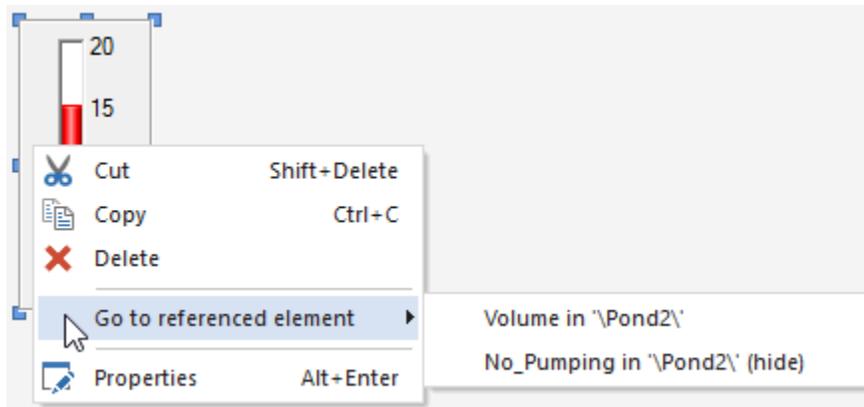
This feature is described in more detail [here](#).

OTHER CHANGES

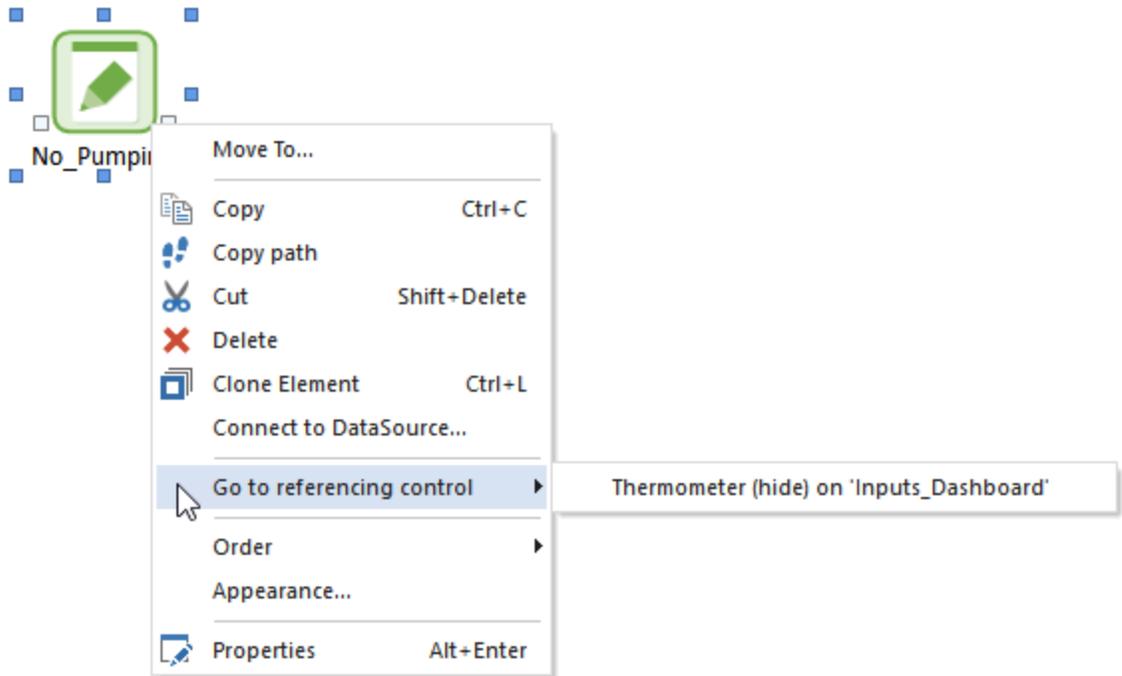
- You can now **Ctrl-double-click** on a Result element in Edit Mode to open the (empty) result display window directly (double-clicking on a Result element in Edit Mode opens the Properties dialog).
- To assist you in aligning and positioning controls in Dashboard, when you select a control (in Design view), the X,Y coordinate of the top-left corner of the control, as well as the width and height of the control, are displayed in the left side of the Status bar:



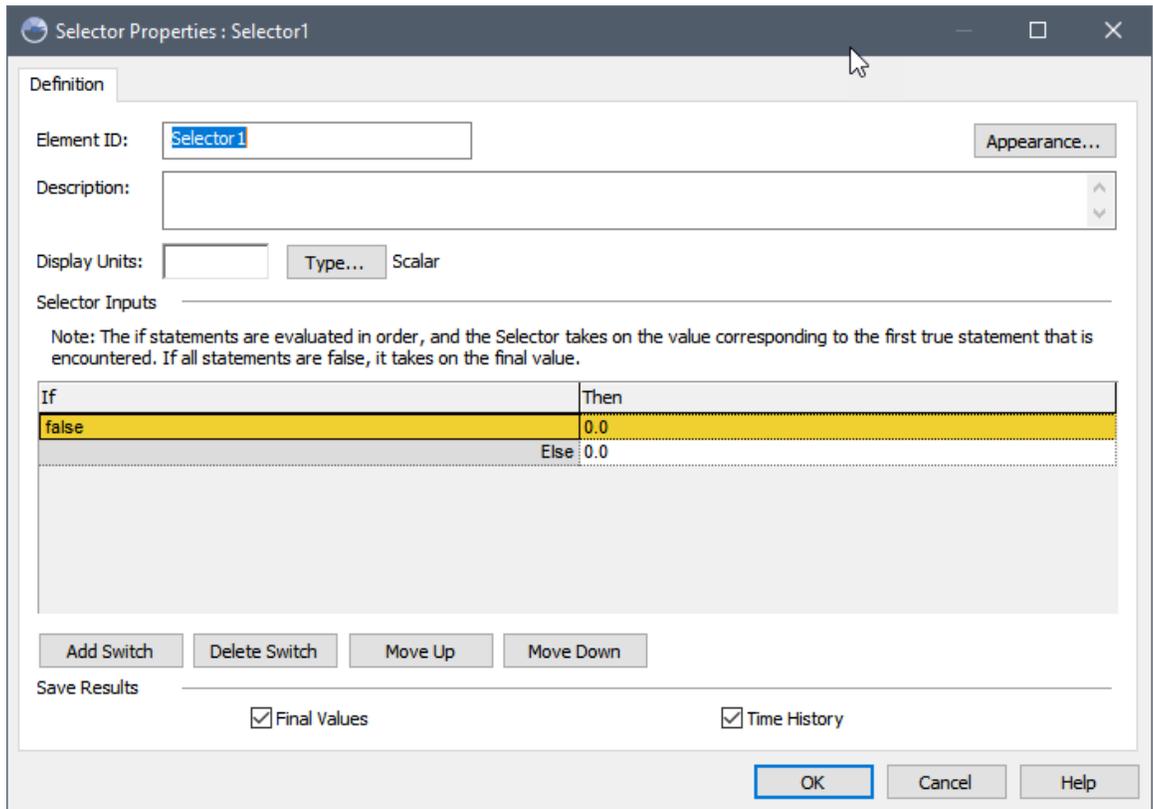
- In previous versions of GoldSim, if a Dashboard control references an output for hiding and/or disabling the control, the element associated with this output is displayed in the context menu for the control:



In GoldSim 12.1, this has been extended such that the element that is referenced by the control in order to hide and/or disable it also has a context menu indicating the control that it disables/hides:



- **Move Up** and **Move Down** buttons have been added to the Selector element to make it easy to change the order of the switches:



- In GoldSim 12, it was not possible to minimize the application while it was running. In GoldSim 12.1, you can minimize the application using the minimize button in the title bar.
- Warning messages associated with excessive turnover rates and inflow and outflow imbalances within Cells (in the Contaminant Transport Module) have been improved (e.g., in GoldSim 12, excessive turnover rate messages could appear unnecessarily under some circumstances).

In addition to these changes, over 30 additional modifications and bug-fixes were implemented in GoldSim 12.1. A full listing of these is provided in the Release Notes Notes (accessible under Help in the main menu).

CONVERSION ISSUES WHEN READING AND RUNNING EXISTING MODELS

All GoldSim 12 model files can be successfully read by GoldSim 12.1. Note, however, that GoldSim 12 cannot read a file that was saved in GoldSim 12.1.

Note: Converting models from 10.5, 11, or 11.1 to GoldSim 12.1, is potentially more complex due to the large number of changes in GoldSim 11, GoldSim 11.1 and GoldSim 12. Before doing so, you should read the [GoldSim 11 Summary Document](#), the [GoldSim 11.1 Summary Document](#), and the [GoldSim 12 Summary Document](#), which discuss conversion issues for GoldSim 11, 11.1 and GoldSim 12 in detail.

If you are having any difficulty converting a model to GoldSim 12.1, do not hesitate to contact us at support@goldsim.com.