

Getting Started

This tutorial requires the use of a Windows computer with several programs and utilities installed. The tutorial exercises involve extensive use of three applications: Excel (2007 or 2010), TextPad and ArcMap 10. There is also a brief introduction to TecPlot. You should also download the C2VSim model files and the C2VSim ArcGIS files and place them in a convenient location.

Download the C2VSim model files

Go to http://baydeltaoffice.water.ca.gov/modeling/hydrology/C2VSim/index_C2VSIM.cfm to download the C2VSim model files and documentation.

Two versions of the model files are posted at the web site, C2VSim 3.02-CG Water Years 1922-2009 and C2VSim 3.02-CG Water Years 1973-2009. The main differences between the two versions are the starting date and the initial condition file. The version at C2VSim 3.02-CG Water Years 1922-2009 has an initial condition of October 1, 1921, and the version at C2VSim 3.02-CG Water Years 1973-2009 has an initial condition of October 1, 1972.

Clicking on each of these links will download a zip file. Open the zip file to extract the model files and place them in a convenient location on your computer.

This tutorial will use the version in C2VSim 3.02-CG Water Years 1973-2009 because it covers a shorter time period, and therefore takes less time to run.

Download the Tutorial files

Go to https://msb.water.ca.gov/cvwrsm/-/document_library/view/149277 and download the files posted there. Unzip each file and place the contents in a convenient place on your computer.

The file Tools.zip also contains two TecPlot files, CVGWheadTecPlot.lay and CVSubsidenceTecPlot.lay. These can be placed in the Results folder of the C2VSim 3.02-CG Water Years 1973-2009 model version to view simulation results in TecPlot.

Three of these files contain completed versions of the examples that will be worked in the tutorial.

GWP Example Complete.zip contains a case study in which several groundwater pumping wells are added to the C2VSim model. ASR Example Complete.zip contains a case study in which an aquifer storage and recovery program is simulated using the C2VSim model. Your modified files can be compared to the files in these completed examples, or you can simply follow along using the completed examples if you do not feel comfortable modifying the input files yourself.

Download and install the C2VSim ArcMap GUI

Go to http://baydeltaoffice.water.ca.gov/modeling/hydrology/C2VSim/index_C2VSim.cfm to download the ArcGIS Tool installer and ArcGIS files for use with this tool. This tool was developed for Windows 7 and ArcMap 10.0 or 10.1.

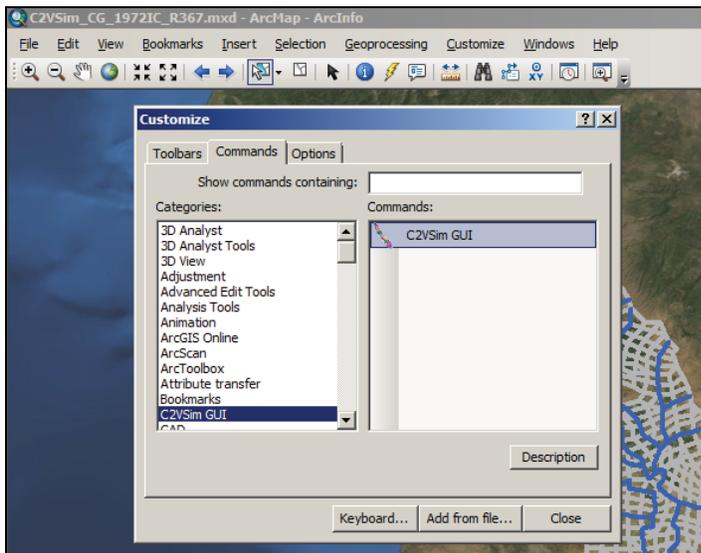
The Tool installer link will download the installer program C2VSim ArcGIS GUI Setup.exe. Run this program to install the C2VSim ArcMap Tool. Quit ArcMap before this installation. You may need to install additional programs, such as .Net, if they are not already installed on your computer.

The ArcMap GUI was developed to work with ArcMap 10 running under Windows 7. Every effort has been made to configure the installer to work with most computers. However, conflicts can occur with other installed programs. If you encounter problems installing the ArcMap GUI, please email the ArcMap GUI developer at IWFMtechsupport@water.ca.gov detailing your problems.

After running the installer, open ArcMap. The C2VSim GUI tool icon should be in the menu bar:



If you do not see the C2VSim GUI tool icon, go to the Customize menu, select 'Customize Mode...', and then the 'Commands' tab. Scroll down in the Categories window and select 'C2VSim GUI'. Drag the 'C2VSim GUI' item from the Commands window to the toolbar.



Two versions of the ArcGIS files are available from the web site. ArcGIS Files: C2VSim 3.02-CG Water Years 1922-2009 corresponds to the model files in C2VSim 3.02-CG Water Years 1922-2009 with an initial condition of October 1, 1921. ArcGIS Files: C2VSim 3.02-CG Water Years 1973-2009 corresponds to the model files in C2VSim 3.02-CG Water Years 1973-2009 with an initial condition of October 1, 1972. Each of these ArcGIS files includes an MXD file; double-click on this MXD file to load the associated data set into ArcMap.

Download and install the IWFM Excel Tools

Go to http://baydeltaoffice.water.ca.gov/modeling/hydrology/IWFM/SupportTools/index_SupportTools.cfm. Click on the link [IWFM Tools Add-in for Excel 2007-2010](#) and install the tool. After the installer finishes, open Excel and look for the "IWFM Tools" tab. These tools were developed for Windows 7 and Excel 2007 or 2010.

This utility will be used to analyze the results of the tutorial examples. After downloading the setup file, double-click it and follow the instructions for installation. Every effort has been made to configure the installer to work with most computers. However, conflicts can occur with other installed programs. If you encounter problems installing the IWFM Tools, please email the developer at IWFMtechsupport@water.ca.gov detailing your problems.

Download and install TextPad

Go to <http://www.textpad.com/download/index.html>. Download the installer, and install an evaluation copy of TextPad 6 on your computer. This is a sophisticated text editor with several advanced features. TextPad be used extensively throughout the tutorial. You may also choose to use a different text editor that you are more comfortable with.

Download and install TecPlot, and get a 3-day trial license

Go to <http://www.tecplot.com/downloads/free-trial-software/>. Create a user account and sign in to download. Install an evaluation version of the [Tecplot 360](#) program. You can request a [3-day evaluation license](#). Do not request this license until you are ready to do the TecPlot examples, so it will work when you are doing them!

This program will be used to visualize the change in groundwater heads and land-surface subsidence.