

PRE-POST PROCESSING OPTIONS

<http://water.usgs.gov/nrp/gwsoftware/modflow.html>

POST PROCESSING

USGS GWChart

USGS ZoneBudget

USGS ModelViewer

PRE PROCESSING

HUF

PRE&POST PROCESSING

GUIs

Ground Water Vistas GWV

USGS MF-GUI (requires ArgusONE) more coming

Ground Water Modeling System (GMS)

Visual MODFLOW

The best way to learn to use a GUI is follow the tutorial, then set up a model you need for a project but first let's do some simple imports of our data



IMPORT TO A GUI - GWV

First make a folder GWV and copy all the calibrated MODFLOW files from folder ucode1 to it (*****update the last template file*****)

Double click on Ground Water Vistas (GWV)

File > Import > Modflow Data Set > MODFLOW

Browse to select your name file

OK, OK

1. Plot > Import Results

Browse for your Binary Head file and CxCFlow file (check this)

exss_out.hds and exss_out.ccf OK

2. Plot > **Mass Balance** > Model Summary > Graph

Does this make sense? (+/-? Magnitudes?)

3. Plot > **Contour** > Plan

Adjust parameters (0-200 5ft intervals 0 decimal places)

Does this make sense?

Try executing in GWV (calculator button) and repeating 1-3

MAKE SURE "PATH TO MODELS" IS CORRECT FOR YOUR COMPUTER

Examine the files that GWV created. Compare to your MODFLOW files.

What is different? Why? How do we correct it? What about obs?



IMPORT TO A GUI- MFGUI-ArgusONE

First make a folder MFGUI and copy all the calibrated MODFLOW files from folder ucode1 to it (*****update the last template file*****)

Open ArgusONE

PIEs New Modflow Project

OK if daily message comes up

OK to MODFLOW Project Information

PIEs Edit Project Info...

Advanced Options

Import MODFLOW model

Read messages. Are your files ready? If not make them so.

Next next Convert from unix? I generally apply to all files MF2000 next etc

Select name file next, Origin Y 18000 next OK OK read messages

You are almost finished importing your model. You must do the last step manually. Make the grid layer the active layer and click on the grid with the "Magic Wand" tool. In the dialog box, click on the "Deactivate" button. Then check to make sure that all cells whose centers are inside the grid have been deactivated properly. If an active cell should be an inactive cell or vice versa, select that cell and then select "Edit|Toggle Active". You should also check that all information imported into the model as closed contours is interpreted correctly by Argus ONE. If it is not interpreted correctly, try making minor changes to the contours.

NOTICE the LAYERS Dialog

In layers dialog: Click to left of "eye" on MODFLOW FD Grid

Apply the magic wand tool and Deactivate

You need to be in MODFLOW FD Grid layer to run MODFLOW



IMPORT TO A GUI TO VIEW RESULTS - MFGUI-ArgusONE

Color IBOUND Unit 1, Color Unit 3 Kx, Color None

SaveAs MFGUI1

PIEs Run MODFLOW you can leave the name as userspec

PIES MODFLOW PostProcessing

MODFLOW formatted head (see oc), Select Data Set, userspec.fhd, open

Contour map, layers 1 and 2, import dry and inactive cells

In the layers dialog,

Close the eye MODFLOW PostProcessingCharts2

Click to left of the eye MODFLOW PostProcessingCharts1

Double click on the map and adjust the Min Max and Interval ~(90,180,5)

Why do the contours look odd? What values are assigned to Dry Cells?

Choose to use only values > 0. Repeat process for Layer 2

Compare heads to the list file (exss and userspec)

USE GWChart for Budget Information

Chart Type > Water Budgets

Read Data From: MODFLOW

Open MODFLOW file (lst)

Select Plot Bar Chart - All this is more interesting with more complex, especially transient simulations

How do these files differ from the GWV files?

GUIs available in our lab:

Ground Water Vistas **GWV** (student version is free)

USGS **MF-GUI** (requires ArgusONE)

Ground Water Modeling System (**GMS**)

The best way to learn to use a GUI is follow the tutorial,
then set up a model you need for a project

GWV tutorial:

C:\Program Files\gww5\manuals\gv5manual.pdf

after opening that pdf, see the tutorial right after intro and concepts

MF-GUI self-instruction tools:

for general info about argus, for which mfgui is a pie, see:

C:\Program Files\Argus Interware\Argus ONE\Documentation\ArgusONE_UsersGuide.pdf

for general info about mf-gui, see:

C:\Program Files\Argus Interware\ArgusPIE\mfgui4.0\doc\index.pdx

after starting that, enter an item to search for

You can download the tutorial from the class web page for Mar 20
need to download mfgui tutorial

GMS tutorial:

Start GMS and go to help

Take quick tour and then start the tutorial (pdfs are in the doc directory)