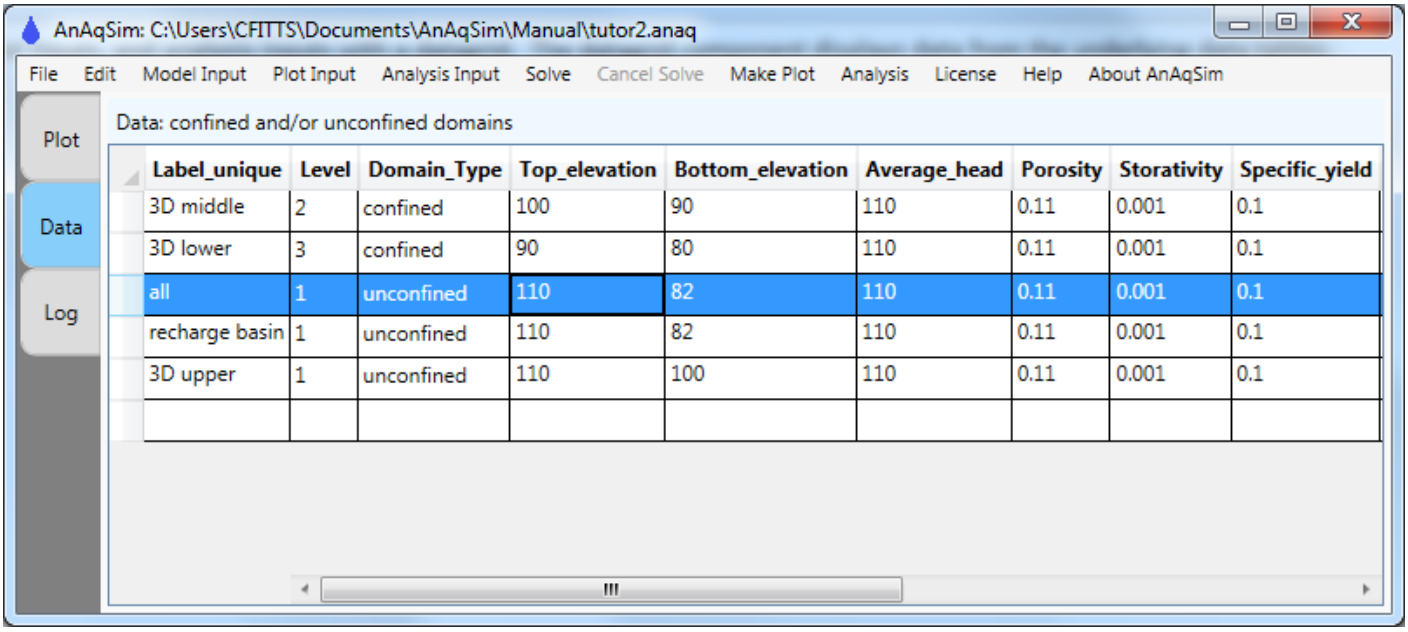
Data Tab

The data tab allows you to edit model inputs, plot inputs, and analysis inputs with a data grid component that displays data from the underlying data tables. To display and edit a table, make a selection under the Model Input, Plot Input, or Analysis Input menus.



Label_unique	Level	Domain_Type	Top_elevation	Bottom_elevation	Average_head	Porosity	Storativity	Specific_yield
3D middle	2	confined	100	90	110	0.11	0.001	0.1
3D lower	3	confined	90	80	110	0.11	0.001	0.1
all	1	unconfined	110	82	110	0.11	0.001	0.1
recharge basin	1	unconfined	110	82	110	0.11	0.001	0.1
3D upper	1	unconfined	110	100	110	0.11	0.001	0.1

There is a context menu that pops up when you right-click over the grid. Options in this menu include

- Paste New Rows - this pastes in new rows of data that are tab-delimited between columns. This format allows you to paste data copied from spreadsheets like Excel.
- Copy Selected Rows - this copies the selected rows to the system clipboard, which can then be pasted into spreadsheets like Excel.
- Copy All Rows - this copies all rows in the spreadsheet to the system clipboard, which can then be pasted into spreadsheets like Excel.

Using the Data Grid

A data table is displayed in the grid when you select an item under the Model Input, Plot Input, or Analysis Input menus. The displayed data is linked to one of several database tables, and when you edit the displayed data, the underlying data table is updated.

The table of data is displayed with headers that define each column, such as Label, Domain, Parameters_per_line, ... as shown below.

Data: head-specified lines

Label	Domain	Parameters_per_line	Domain_Boundary	h_start	h_end	Coordinates	Off_periods
lake	all	6	☑	104	104	Edit	
swamp	3D upper	3	☑	101	100.5	Edit	

You can move from cell to cell with the arrow keys or using the mouse. The current row is highlighted blue. You can enter new values by navigating to a cell and typing a new entry, or you can double-click on a cell to edit cell contents with a text editor, as shown below, where the contents of the cell with "101" is being edited.

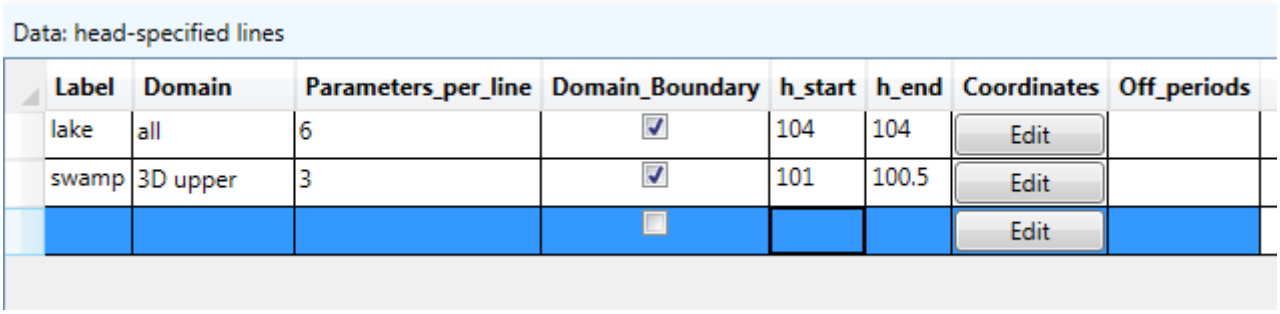
omain_Boundary	h_start	h_end	Coordinates	C
☑	104	104	Edit	
☑	101	100.5	Edit	

When you enter a value in a grid cell, the underlying database is updated when you press enter or move to a different cell. At this point the cell value is checked to make sure it is compatible (e.g. a positive real number for hydraulic conductivity). If the value is incompatible, an error message is displayed and you must correct the cell entry. Be sure to remember to press enter or move to another cell after editing the value in a cell, otherwise the value will not be changed in the database.

New rows are created by editing the blank row at the bottom of the table. A new row of data is entered into the underlying data table only when you press enter after editing the row, at which point a new blank line appears below the line just entered. The following two screen shots shows a new 2nd row before it has been entered in the database (no blank row shows below it), and after (blank row below 2nd row).

Data: head-specified lines

Label	Domain	Parameters_per_line	Domain_Boundary	h_start	h_end	Coordinates	Off_periods
lake	all	6	☑	104	104	Edit	
swamp	3D upper	3	☑	101	100.5	Edit	



In data tables that contain multiple rows, the leftmost field is often called Label, and it is always displayed even if you scroll far to the right. No entry is required in this field, and it accepts any text. It is wise to fill in a text label in this field (e.g. “PW-103” for a pumping well). The label will help you know which feature this row represents, and many analysis outputs make use of this label. Also you can sort the data based on entries in this column to easily find the row you want. The contents of the table can be sorted by clicking on the column header. Clicking a second time reverses the sort order. It is a good idea to choose labels that easily allow you to sort features. For example, if you want to easily find a group of wells on property A, you could give them labels such as "A_MW102", "A_MW105", "A_MW113"... so they would be grouped together after sorting by the label column.

Column widths are automatically adjusted to fit the contents. You can increase or shrink column widths by dragging the left or right the vertical line that separates columns in the header (top) row. Double-clicking on this vertical line automatically resizes the column width to fit the contents.

Some columns, like the Parameters_per_line column in the table shown above, are edited using a drop-down list of choices. To see the list, double-click the cell, then select the item you want.

Other columns, like the Coordinates column, contain buttons to edit or select data; these are edited by clicking on the button.

Number Formats

All data grid cells that expect numerical input have common format constraints. You can input real numbers with formats such as the following:

- 1256.82
- 0.004
- 1.4e-2

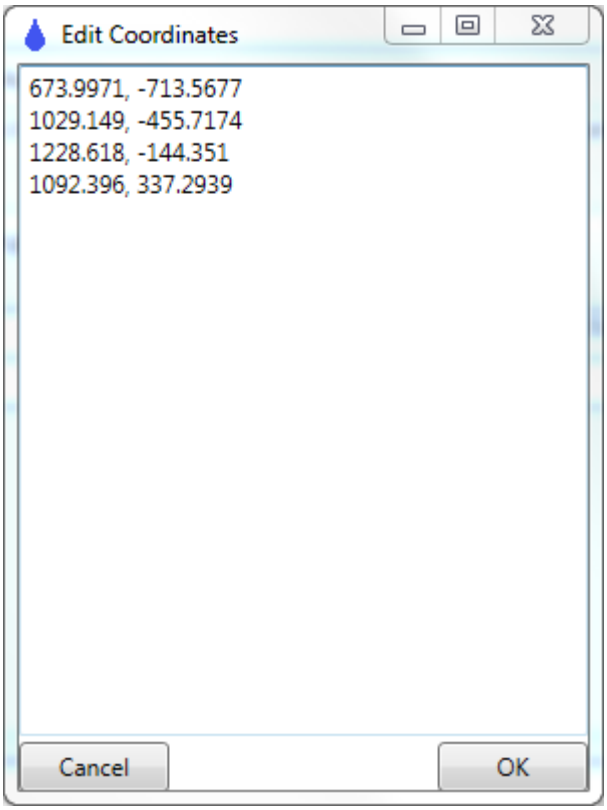
The last one is scientific notation for 1.4x10-2.

You should not insert commas to mark thousands, millions, (e.g. 1,200,000) as the comma may be interpreted as a decimal mark. In North America, the convention is to use a period for the decimal marker. In Europe, the comma is often used as a decimal marker. There is a Windows operating system setting to switch between these modes. Often, European users need to adjust these

settings to use Anaqsim.

Editing Coordinates

In many of the data input tables, there are columns and cells that display an "Edit" button in the Coordinates column. When you click the button, a text box window pops up and you enter coordinate data there:



Often, you will digitize the coordinates in the plot tab and then paste the coordinates into this text box window. Alternately, you can just type coordinates in. The OK button records the edited coordinates and the Cancel button does not.

Once input, coordinates can be edited graphically by selecting the line boundary and then moving the vertexes or inserting or deleting vertexes.

Deleting Data Rows

Delete one or more rows of data in the data table by selecting rows and then pressing the Delete key. Row(s) are selected by clicking (and dragging for multiple rows) in the leftmost column of the grid. A dialog will ask you if you really want to delete those records from the data table.

Importing and Exporting Data

To import data from Excel into a data table, highlight a block of data in an Excel sheet that corresponds to row(s) of data in a data table, copy that block in Excel, then right-click over the data grid and select Paste New Rows. This will add these copied rows to the data table. Make sure that the columns in the copied block match the columns in the data table. Data in Coordinates columns cannot be be pasted in due to their multi-line structure, but all other columns can be pasted in. In the case of a Coordinates column, a paste operation leaves that blank and you must enter the coordinates by clicking on the Edit button in that column.

To export rows of data to Excel or a text file, select rows of data (see section above) and then right-click over the data grid and select Copy Selected Rows. After doing this the rows of data are in the computer’s clipboard as tab-delimited data, which can then be pasted into Excel or into text files.

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