Table Slot Plotting: Vertical Distance Entity Axes Default Override
RiverWare 5.2

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This document describes an enhancement to RiverWare 5.2 which allows the user to conditionally override the default assignment of Table Slot columns to the X and Y Plot Axes. This is relevant specifically for *two-column* Table Slots.
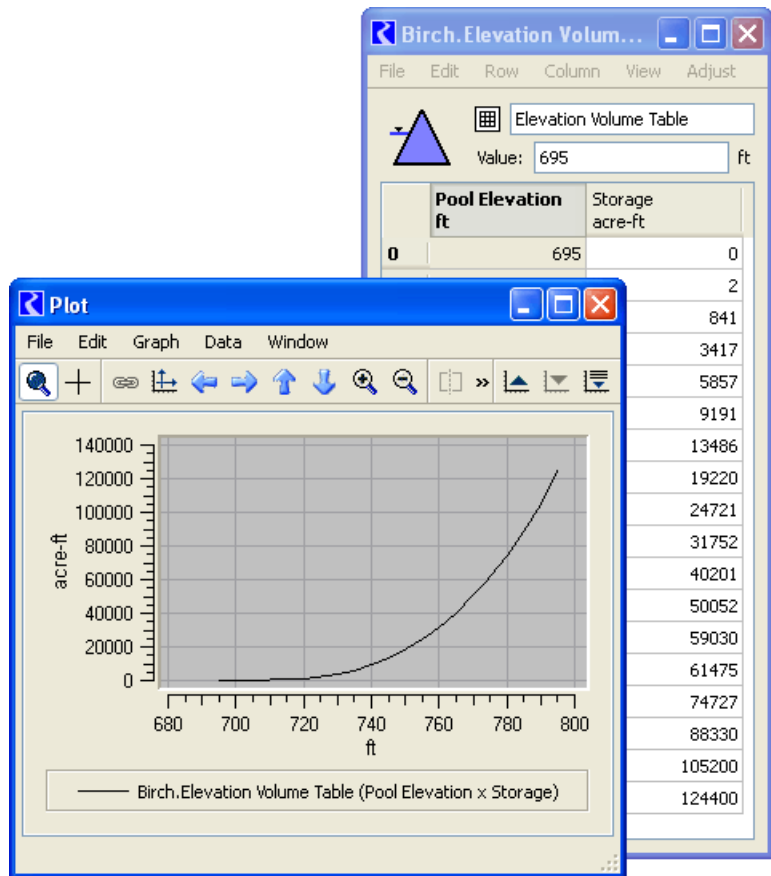
1.0   Overview

In RiverWare, when plotting a *two-column Table Slot,* the numeric values from first column are plotted along the horizontal ("X") axis, and the values from the second column are plotted along the vertical ("Y") axis.

When plotting a Table Slot with *more than two columns,* the user has the opportunity to pick particular columns for the two plot axes. No such configuration is available for two-column Table Slots.

A new feature has been developed to optionally (i.e. enabled by the user) automatically reverse the plot axis for two-column Table Slots when the first column represents a vertical distance, such as "Elevation" or "Head".

The enabledness of this feature is associated with the RiverWare model file rather than with user-login based configuration. Note that this differs from other preferences related to plot configuration -- those are generally stored as user-login based configurations.

The automatic switching of plot axes is applied at the time of creation of the plot -- so changing the enabledness of this feature does not effect plots already created and saved with a RiverWare model file.
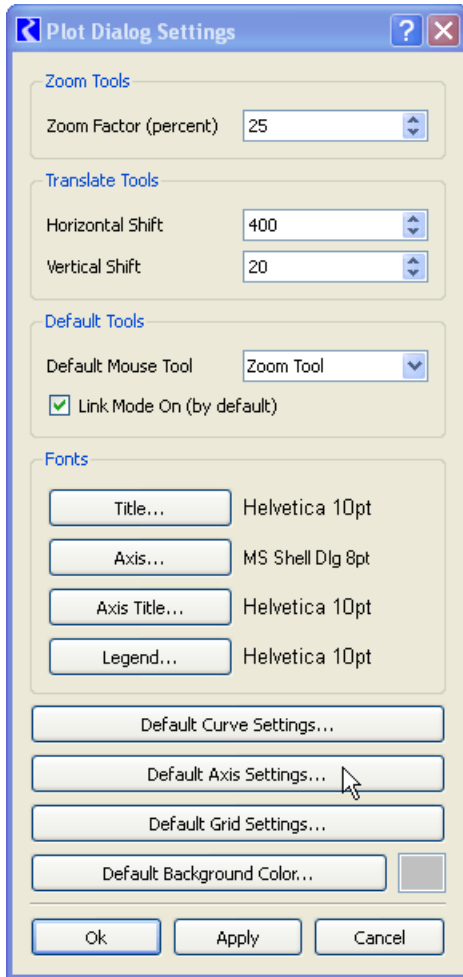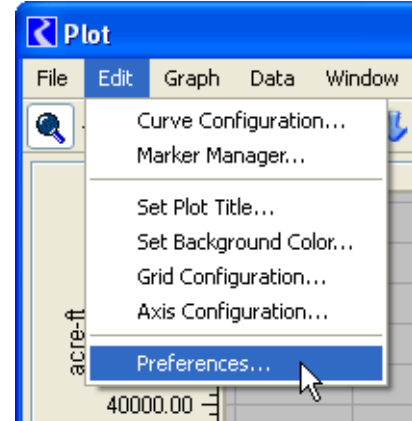
2.0 Configuration

Automatic placement of the "vertical distance entity" Table Slot column (for two-column Table Slots) -- as an override of the default Table Slot column axis assignment -- is enabled via **Default Axis Settings** accessible from the **Plot Dialog Settings** dialog.
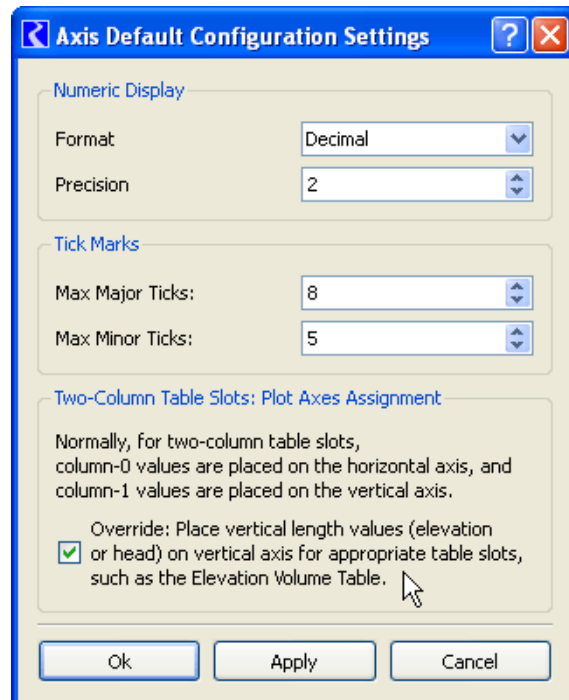
Even though this configuration setting is operated from the Plot Dialog, the effect of this setting applies only to plots created in the future -- it does not effect the assignment of Table Slot columns to plot axes in any existing plots.

To view or modify this setting, in any **Plot Dialog,** click on the **Edit menu's Preferences**... item. *See image to the right.* This brings up the Plot Dialog Settings dialog ....

In the Plot Dialog Settings dialog, click the **"Default Axis Settings..." button.** This brings up the **Axis Default Configuration Settings dialog .**

The setting is represented by the **"Override"** checkbox shown below:

3.0   Axes Mapping Override Effect

If this feature is enabled, the standard mapping of two-column Table Slot columns to the plot axes is reversed on *certain* Table Slots.

Standard Mapping of Two-Column Table Slot Columns to Plot Axes:

- Column-0 (first column) -- X axis
- Column-1 (second column) -- Y axis

Override Mapping of Two-Column Table Slot Columns to Plot Axes:

- Column-0 (first column) -- Y axis
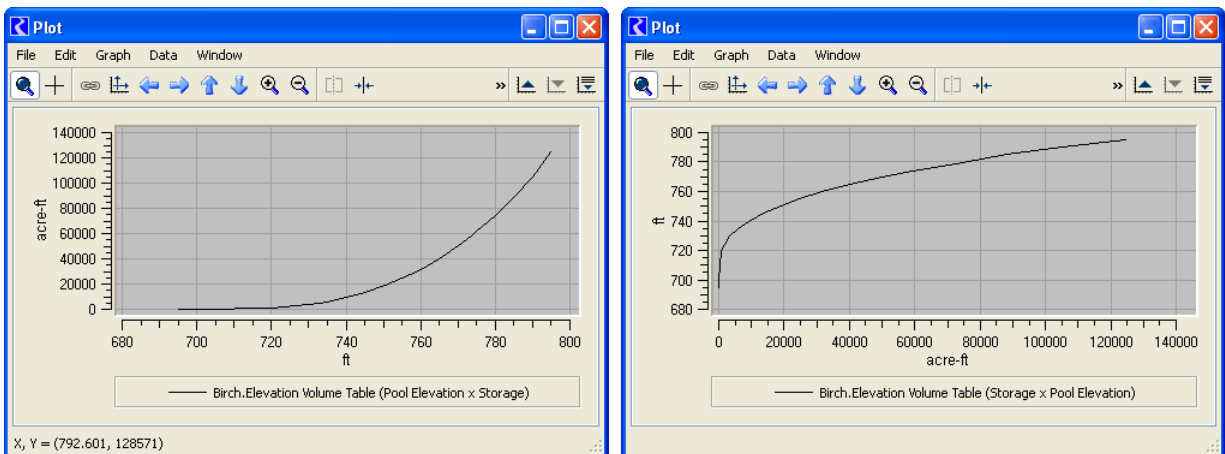- Column-1 (second column) -- X axis

The plot axes reversal will occur if the following criteria are true:

- Column 0 is determined to be a "vertical distance", *and:*
- Column 1 is determined to NOT be a "vertical distance"

A Table Slot column entity is regarded as a "vertical distance" if both of these are true:

- The RiverWare unit type of the column is LENGTH, *and:*
- The column label is blank OR the column label contains the substring "ELEV" or "HEAD", in either upper case, lower case or mixed case.

In the two images below, the image on the right depicts an axes reversal as a result of this feature.

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