**Instructions for Excel Use (Mac)**

**How to Enter Data**

Data should be entered the same way by every observer to reduce or eliminate confusion. Model tables are provided in the protocols and the end of the document. Things to remember:

1. The first row contains the titles of all columns in which data will be entered.
2. Color-coding each day of data is helpful in visualization.
3. If you have repeating data in a column (for example: observer will remain the same for the day), you may drag the cell down to fill in cells with the information:
   1. Click desired test cell with data to be repeated. Hover cursor over test cell with data, when you see a black cross click and drag down for how many cells are desired to contain the repeating data.
   2. If you are repeating numbers and not names, make sure it copied the cells and did not fill the series. Click on the box next to highlighted cells that says *Auto Fill Options* and select *Copy Cells* from the bulleted list.

**How to Sort All Data by Test Site #**

Looking at data with all test sites ascending will produce a better visual than that of a chronological grid. Specific ranges of test sites correlate to different sections of the lake. A simple sort will not work because this only sorts the test site column. Then all other columns would not correlate with their proper test site.

1. Highlight all cells (including header row).
2. Under the *Data* tab, click on the right arrow attached to the *sort* button.
3. Of the options, select *custom sort…*
4. A box should pop up. Under *column,* select *Test Site #* from the choices.
5. Then under *Sort On,* select *Values.*
6. Then under *Order*, select *Smallest to Largest.*

**How to Sort Blank Values**

When you are ready to make a graph, you are going to want a set of data without blank results. For example, in the Secchi test, you will have only one overall value per two rows of data (an averaging of two tests at one test site). You will need to make a second table and delete these blank data points as they will be of no use in a graph.

1. Highlight all cells (including header row).
2. Double click and select *copy.*
3. Click on a cell you wish to paste new table and then double click.
4. Of the options, select *paste special…*
5. Under *paste* select *values* and press *okay.*
6. Highlight all data in new pasted data table (including header row).
7. Under the *Data* tab, click on the right arrow attached to the *sort* button.
8. Of the options, select *custom sort…*
9. A box should pop up. Under *column,* select the column in which the blank values are.
10. Then under *Sort On,* select *Values.*
11. Then under *Order*, select *Smallest to Largest.*
12. Highlight all cells with blank values in the specified column and delete.
13. Preferably, re-sort into ascending test site #.

**How to Make A Marked Scatter Graph**

To compare two sets of data, a marked scatter graph works well to show correlations. First you will need to copy and paste two columns of data into a separate data table to analyze.

1. Highlight all desired cells (including header row).
2. Under *charts*, select the *scatter* button.
3. Select *marked scatter.*
4. From the *Chart Layout* tab you can add labels to the graph.

**How to Convert Depths from Feet to Meters the Easy Way!**

Your overall depth of the test site should be recorded in feet as this is the unit measurement given on the GPS unit. To stay consistent, all distances should be analyzed in the metric system.

1. Enter depth data in feet
2. Add a new column next to the *depth (IN FEET)* column and label *depth (IN METERS).*
3. In the first blank cell in the meters column, type = and then click on the correlating cell in the feet column. Then type \*.3048 and press enter.
4. Drag this cell down the rest of the column
   1. Hover cursor over test cell with data, when you see a black cross click and drag down.
5. Excel will fill in the blank cells with the formula and the corresponding cells.