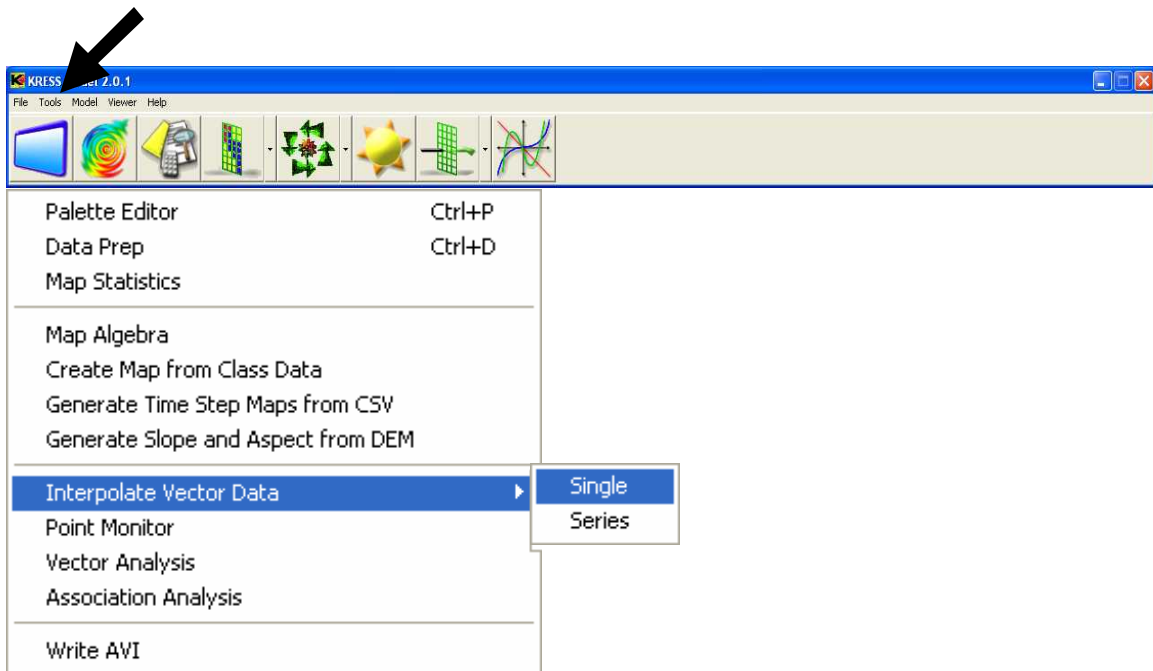
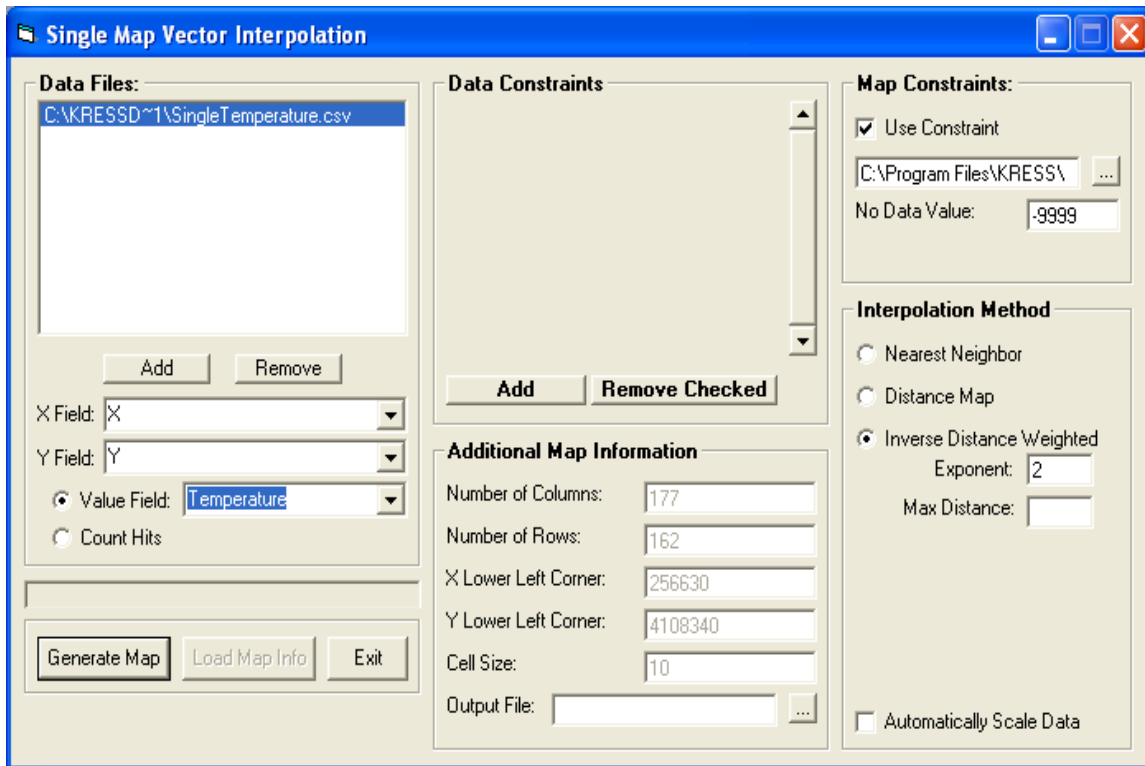


## Interpolate Vector Data

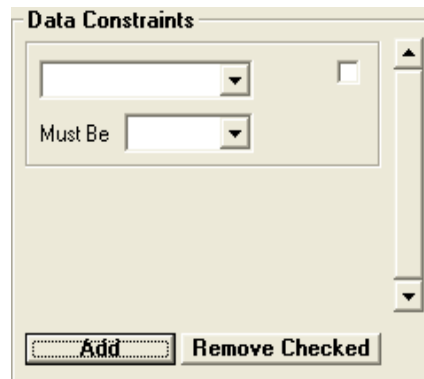
The KRESS Modeler has two ways of interpolating vector data, both accessible from the **Tools** menu. The first is the **Single Point Vector Interpolation**. This process allows the user to create data sets usable in the other KRESS applications from vector data by interpolating over the area of interest.



First, the user must specify the vector data files to be used by clicking the Add button on the left side of the screen. The user must tell the program which columns provide the X and Y coordinates by using the dropdown menus **X Field** and **Y Field**. The **Value Field** tells the program which factor in the vector data is being interpolated for the map. The **Count Hits** option will export the number of times the vector data found in each location.



Constraints on the data may be added under the Data Constraints section of the form. From the dropdown menu, the user can specify the factor of interest, then choose whether the values need to be between, at most, at least, one of, or none of, and then fill in the intended values in the text box that will appear to the right of the **Must be** dropdown menu. The checkbox to the right of the constraint must be checked in order for the constraint to have an effect on the output. Map constraints can be selected by using the **Constraints** frame on the right side of the screen. The user can designate a No-Data value by putting the desired number in the **No Data Value** textbox. Again, the **Use Constraint** box must be checked in order for the program to use the constraint.



**Interpolation method** gives the user the option of interpolating based on Nearest neighbor, distance map, or inverse distance weighted. **Nearest Neighbor** will assign a value to a cell of whatever data value is nearest that cell (tessellation). A **Distance Map** will assign a cell the value of its distance from the nearest data point. **Inverse Distance Weighted** allows the user to interpolate the actual data values. The designated exponent specifies how each data point's distance from the cell affects its weight on that cell. For example, an exponent of two would mean the distance from the cell is weighted as an inverse square.

The user must designate the map properties, location and size, to be used with the rest of the KRESS modeler. To do this, they can input values manually in the text boxes labeled **X Lower Left Corner**, **Y Lower Left Corner**, **Number of Rows**, **Number of Columns**, and **Cell Size**. Using these values, KRESS will convert from vector to raster data. The user can also use the **Load Map Info** button to have the program read these values from a pre-existing map.

The user must specify the output for their new raster map in the output text box by clicking the ... button next to the Output File label. Clicking the **Generate Map** button will run the module as shown below