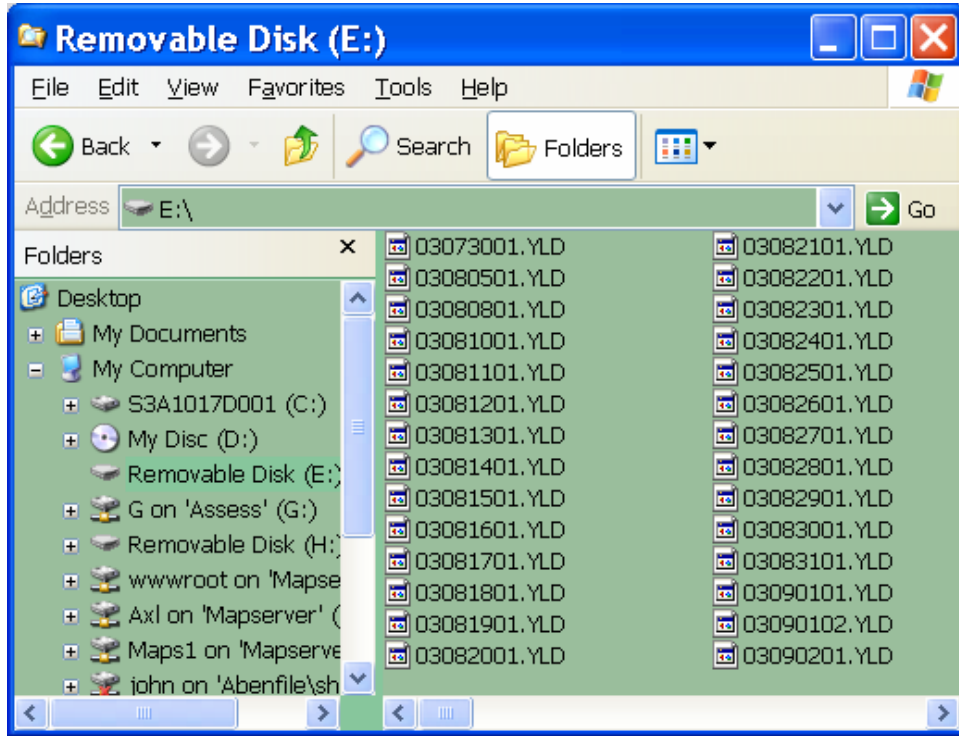


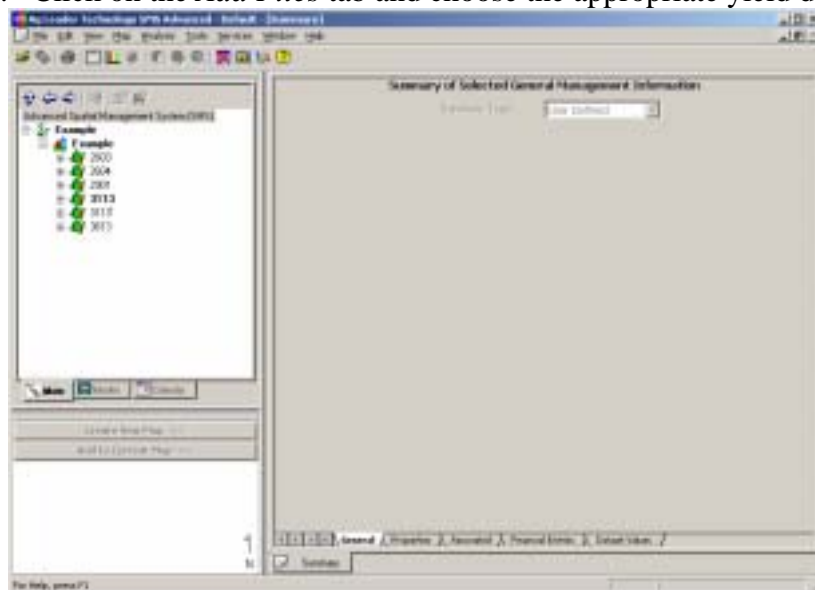
Combine Yield Data – From Combine to Contour Map Ag Leader

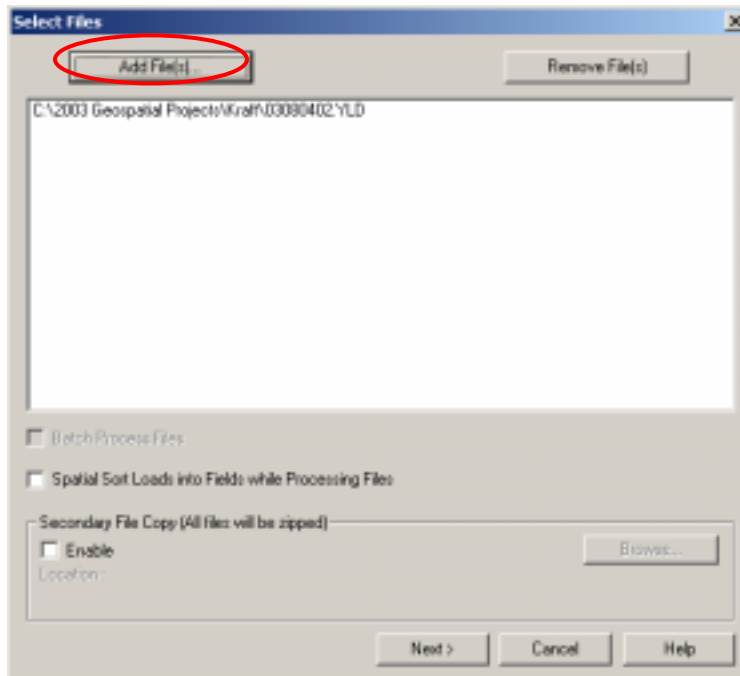
Exporting the Yield Data Using SMS Program

1. Data format On Hard Drive.




2. Start program *SMS Basic*.
 - a. In the *File* menu choose *Open*.
 - b. Click on the *Add Files* tab and choose the appropriate yield data.

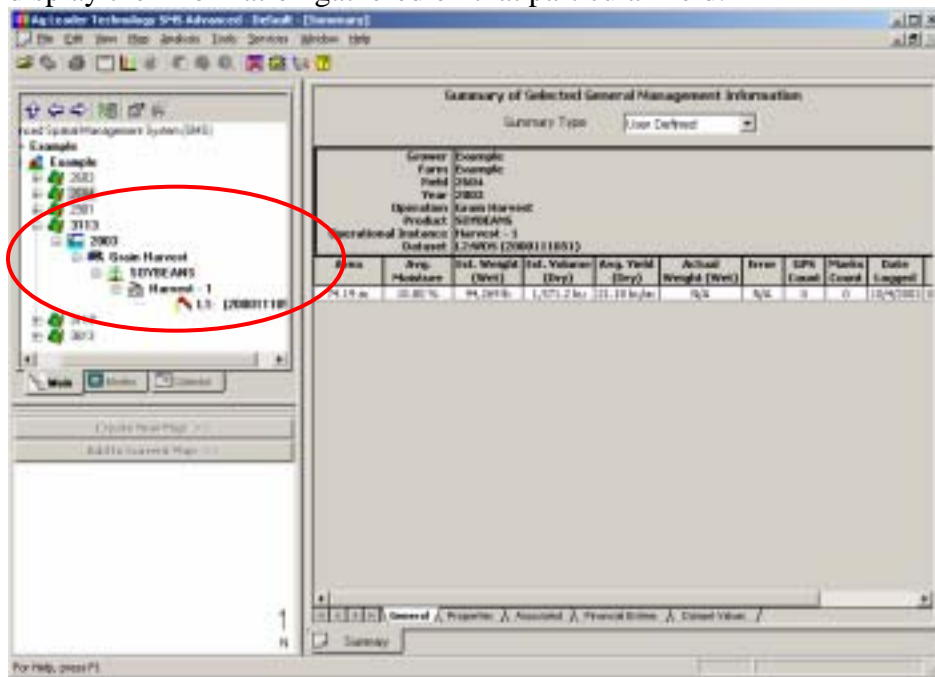




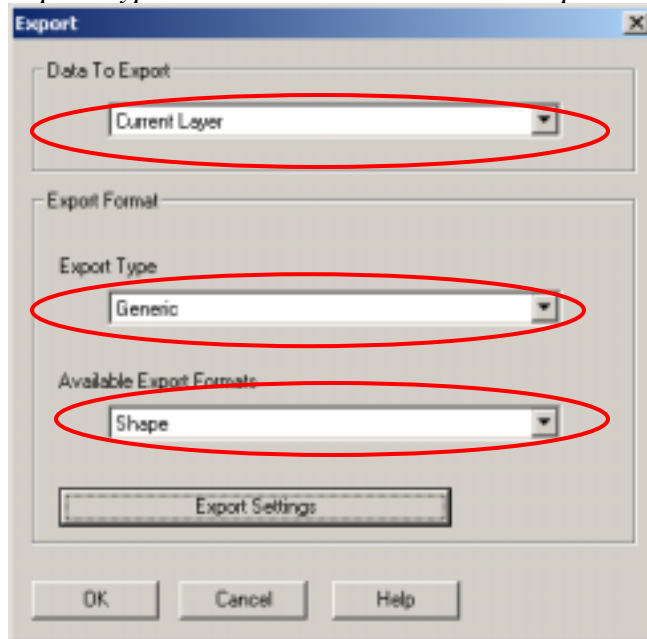
- c. Click *Next* in this window.
- d. Leave all settings in this window as default and click *Next* to process the files.

Monoc Field	Owner	Farm	Field	Year	Operation	Operational Instance	Product	Unit
3624	Example	Example	3624	2002	Grain Harvest	Harvest - 1	"WHEAT"	lb
2901	Example	Example	2901	2002	Grain Harvest	Harvest - 1	"WHEAT"	lb
3001	Example	Example	3001	2002	Grain Harvest	Harvest - 1	"WHEAT"	lb
29191	Example	Example	29191	2002	Grain Harvest	Harvest - 1	"WHEAT"	lb
51V1	Example	Example	51V1	2002	Grain Harvest	Harvest - 1	"WHEAT"	lb
2914	Example	Example	2914	2002	Grain Harvest	Harvest - 1	"WHEAT"	lb
3601	Example	Example	3601	2002	Grain Harvest	Harvest - 1	"WHEAT"	lb
2924191	Example	Example	2924191	2002	Grain Harvest	Harvest - 1	"WHEAT"	lb
3112	Example	Example	3112	2002	Grain Harvest	Harvest - 1	"WHEAT"	lb
2604THDR	Example	Example	2604THDR	2002	Grain Harvest	Harvest - 1	"WHEAT"	lb
2607THDR	Example	Example	2607THDR	2002	Grain Harvest	Harvest - 1	"SOYBEANS"	lb
3003THDR	Example	Example	3003THDR	2002	Grain Harvest	Harvest - 1	"SOYBEANS"	lb
3624	Example	Example	3624	2002	Grain Harvest	Harvest - 1	"SOYBEANS"	lb
30024	Example	Example	30024	2002	Grain Harvest	Harvest - 1	"SOYBEANS"	lb
2924114	Example	Example	2924114	2002	Grain Harvest	Harvest - 1	"SOYBEANS"	lb
2601	Example	Example	2601	2002	Grain Harvest	Harvest - 1	"SOYBEANS"	lb
2924191	Example	Example	2924191	2002	Grain Harvest	Harvest - 1	"SOYBEANS"	lb
2903	Example	Example	2903	2002	Grain Harvest	Harvest - 1	"SOYBEANS"	lb
3124	Example	Example	3124	2002	Grain Harvest	Harvest - 1	"SOYBEANS"	lb
0204	Example	Example	0204	2002	Grain Harvest	Harvest - 1	"SOYBEANS"	lb
2601A	Example	Example	2601A	2002	Grain Harvest	Harvest - 1	"SOYBEANS"	lb
0204	Example	Example	0204	2002	Grain Harvest	Harvest - 1	"WHEAT"	lb
2601	Example	Example	2601	2002	Grain Harvest	Harvest - 1	"WHEAT"	lb

- e. Once the yield data is processed there will be a list of fields in the *Spatial Management Systems* box. Click on the  of the field that is in bold to display the information gathered on that particular field.



- f. Right Click on the data labeled **L1** underneath *Harvest-1*. Choose *Export* in the drop down box.
- g. In the export box change *Data To Export* to “Current Layer”. Change *Export Type* to “Generic” and *Available Export Formats* to “Shape”.




- h. Choose the appropriate folder to save the new shapefile.

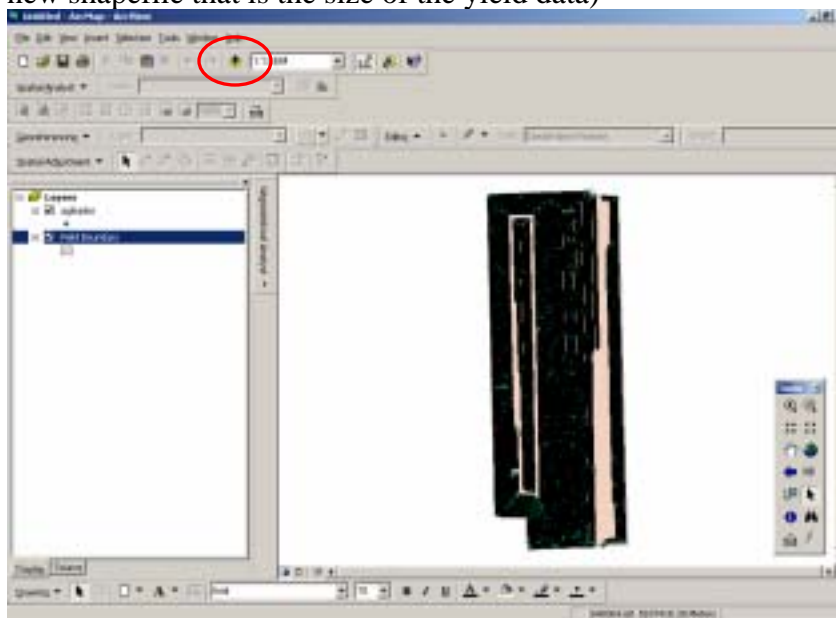
Making the Yield Contour Using ArcMap 8.1

3. Start Arcmap 8.1. An “ArcMap” window will open. Choose “A new empty map”.
Check “OK”.



4. Set the Data Frame properties as follows:
 - a. Right-click on the screen in the data frame to open the Data Frame Properties window.
 - b. Click the “General” tab and set the Map Units and Display Units to “Meters”.
 - c. In the “Select a Coordinate System” window choose:
 - i. Predefined
 - ii. Project Coordinate System
 - iii. UTM
 - iv. NAD 1983
 - v. Zone 14N
 - d. Click “OK”.

5. Click the “Add Data”  button to add the exported field boundary and yield data from SMS to the Data View. (If field boundary data is not available make a new shapefile that is the size of the yield data)



6. Before exporting the yield data the attribute table may need to be edited to get rid of inaccurate yield points.

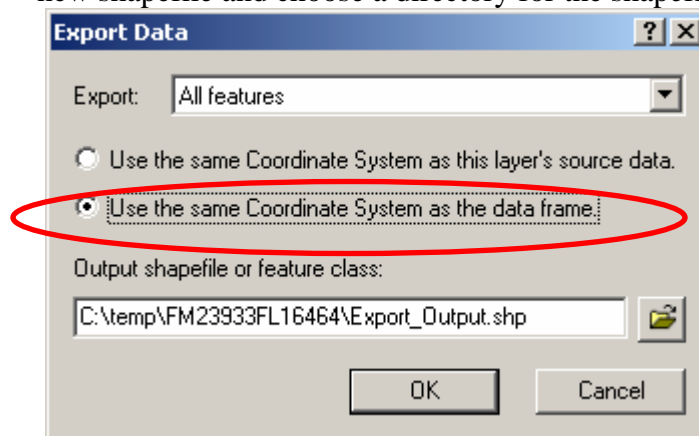
FID	Shape	WETWEIGHT	YIELD	MOISTURE
0	Point	94620.83	1576.78	11.55
1	Point	112934.56	1881.93	11.55
2	Point	0	0	-21474836
3	Point	0	0	-21474836
4	Point	0	0	-21474836
5	Point	0	0	-21474836
6	Point	0	0	-21474836
7	Point	0	0	-21474836
8	Point	0	0	-21474836
9	Point	0	0	-21474836
10	Point	0	0	-21474836
11	Point	0	0	-21474836
12	Point	0	0	-21474836
13	Point	0	0	-21474836
14	Point	0	0	-21474836
15	Point	0	0	-21474836
16	Point	0	0	-21474836

None of these points are accurate so they must be deleted

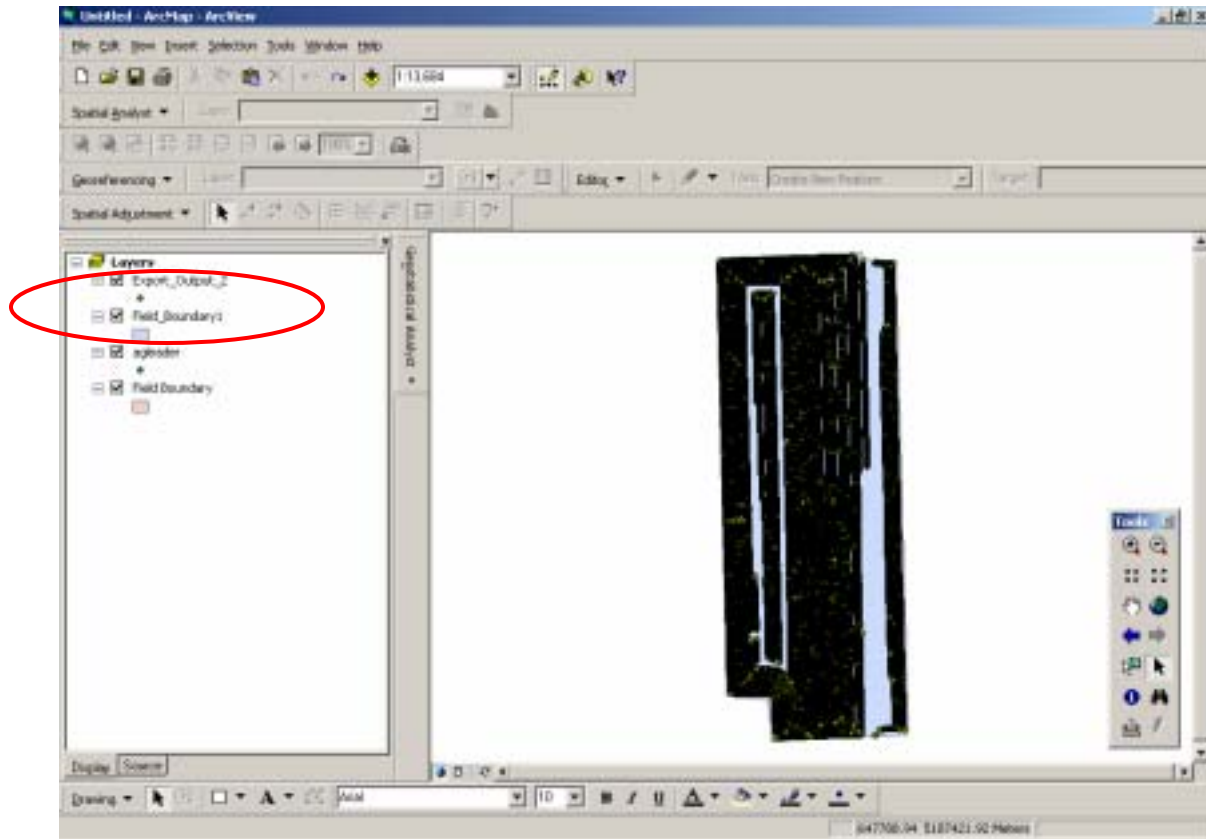
Exporting the Yield Data and Field Boundary data as a Shapefile

(Note: the yield data and field boundary data must be exported to convert it to a shapefile and added as a shapefile before interpolating into a contour map.)

7. Right-click on the Event Layer name in the table of contents and choose “Data” and then select “Export Data”.
 - a. In the “Export Data” window:
 - b. Choose “Use the same coordinate system as the data frame”. Name the new shapefile and choose a directory for the shapefile.

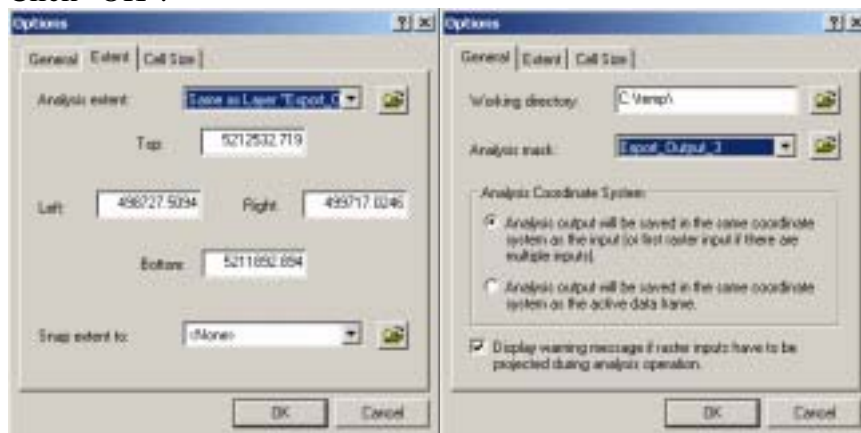


- c. Click OK. Do this for both the yield data and field boundary.
8. When asked to add exported data to view as a layer choose yes.

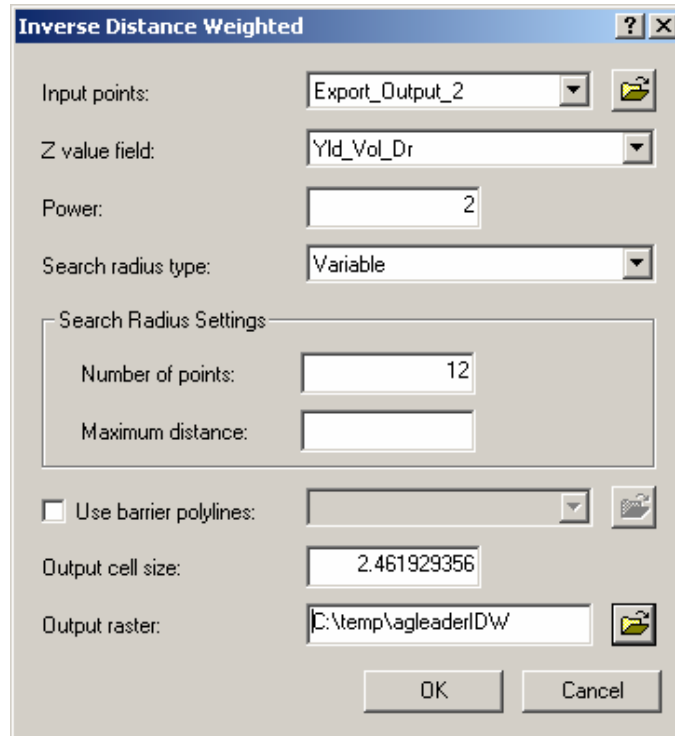


Interpolating Between Points

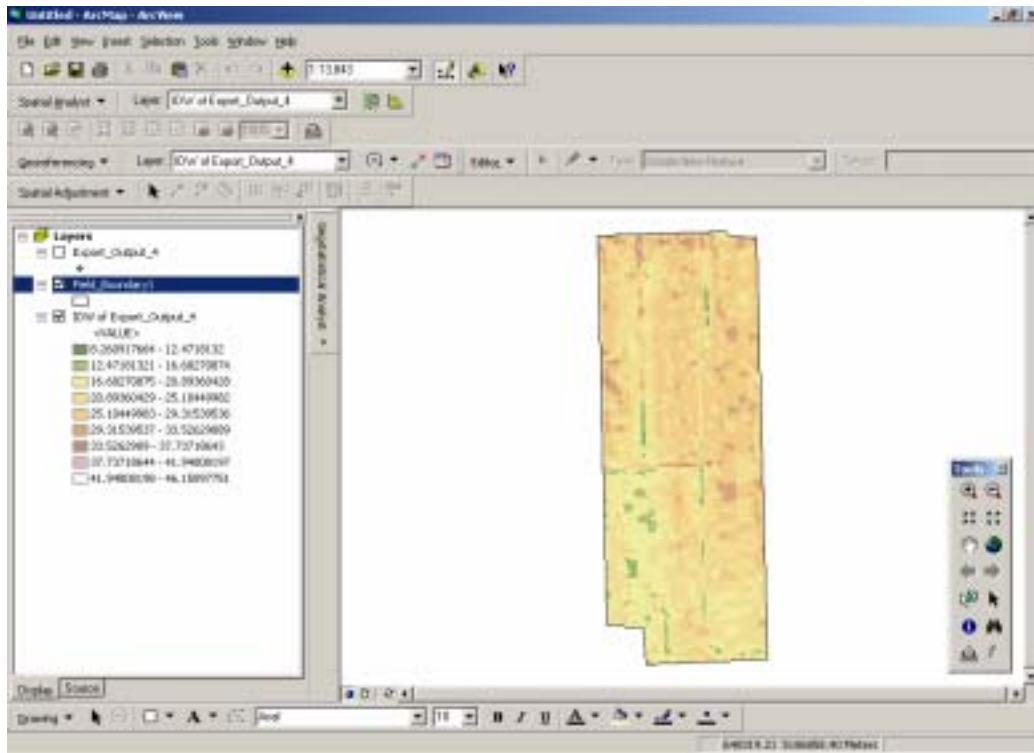
9. From the View pulldown menu choose “Toolbars”, and then select “Spatial Analyst”.
10. Set the contour map extent before performing interpolations:
 - a. Choose “Options” in the Spatial Analysis Toolbar
 - b. In the “General” tab set the analysis mask to the exported field boundary layer.
 - c. Click the “Extent” tab.
 - d. Use the “Analysis Extent” pulldown to set the extent to the “Same as Layer: Exported Field Boundary”
 - e. Click “OK”.



11. In the Spatial Analyst window choose “Interpolate to Raster” and then select “Inverse Distance Weighted”.
12. In the Inverse Distance Weighted window
 - a. Select the desired layer.
 - b. Choose a desired Z Value Field (Yield_Mass_D).
 - c. Set the cell size as desired. (Note: The smaller the cell size, the longer it will take the computer to make the interpolated grid map.)
 - d. Choose a name for the output raster file, and choose a location to save the file.

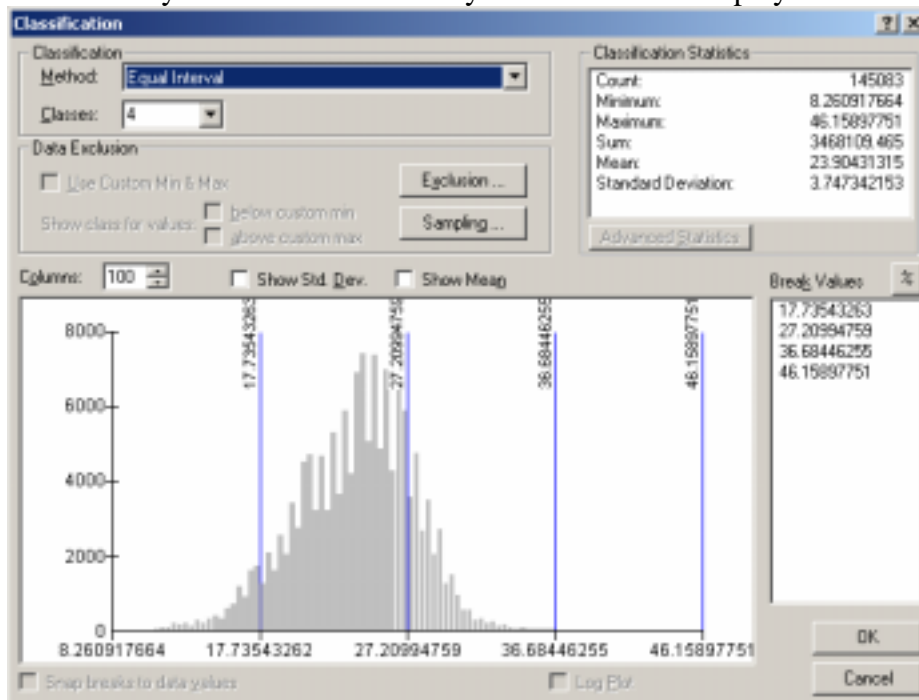


13. Click “OK” to interpolate and add the contour map to the view.

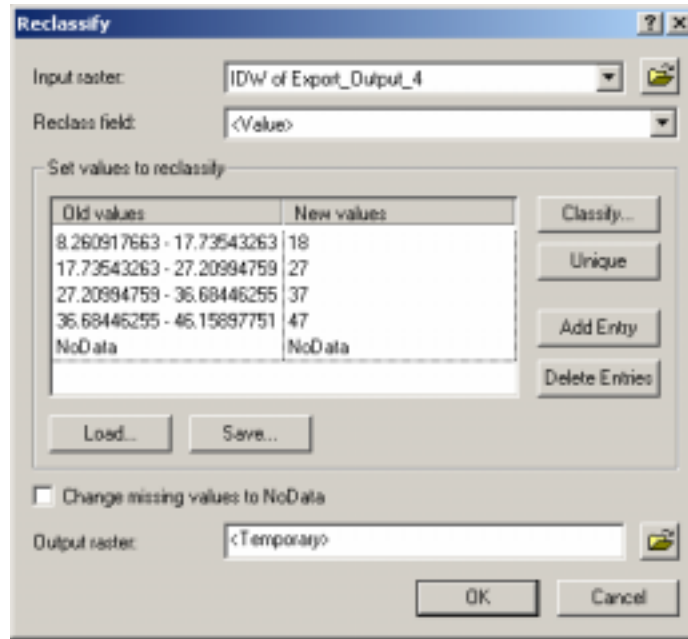


Reclassifying contour maps

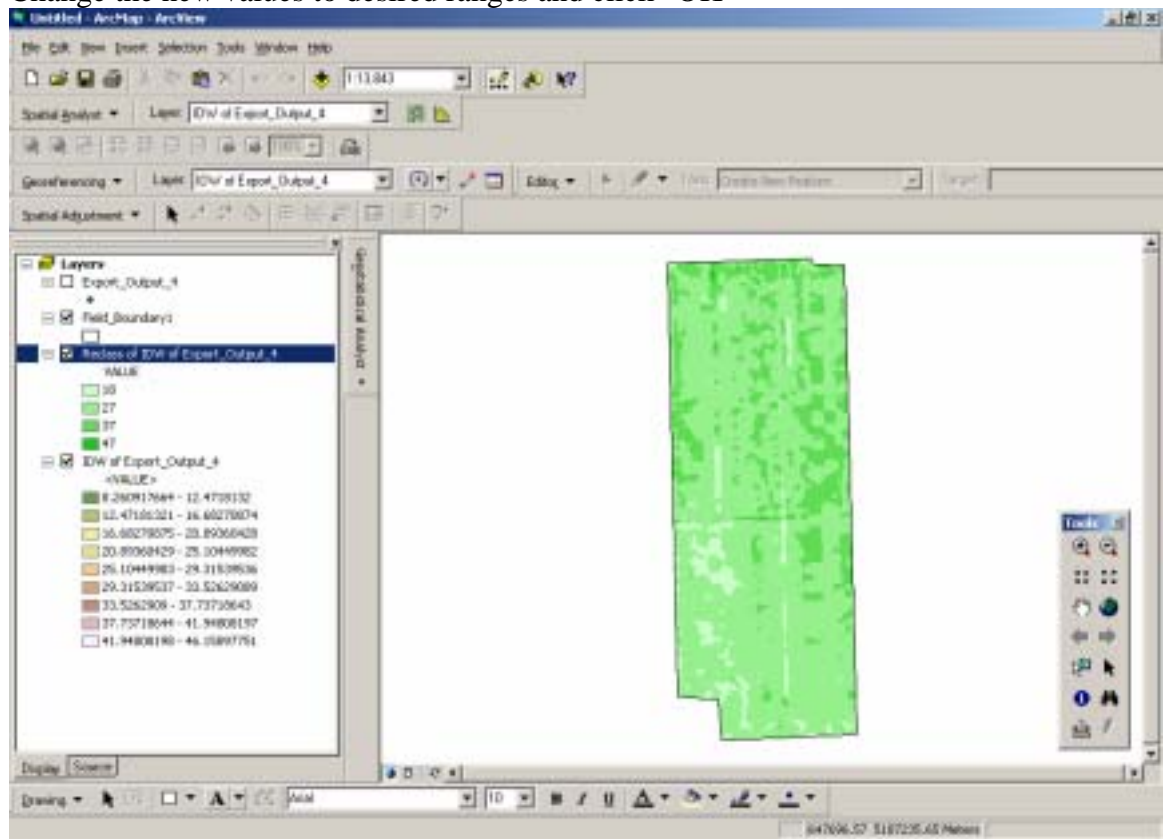
- From the Spatial Analysis toolbar choose “Reclassify”. In the Reclassify window click the “Classify” window. The Classify window will be displayed.



- In the Classify window, choose “Equal Interval” method and set the classes to four. Click “OK” to return to the Reclassify window.

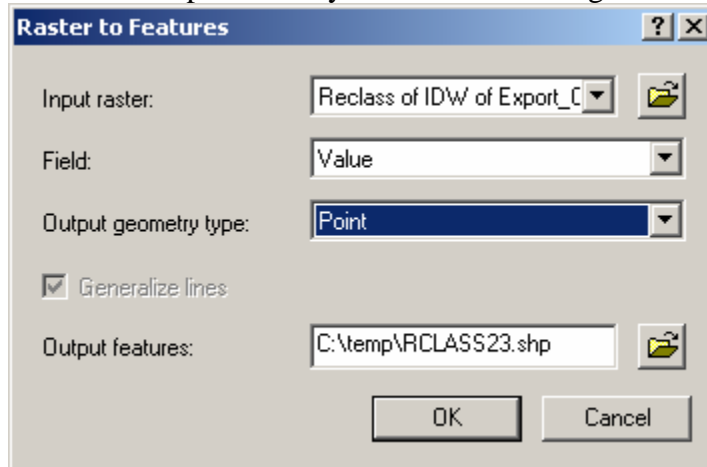


16. Change the new values to desired ranges and click “OK”



This can be displayed in different colors by right clicking on the layer name in the table of contents and choosing “Properties”. Select “Classify” and choose a desired color ramp. Click “OK”.

17. Save the reclassification as a new and permanent grid by right-clicking the Reclass of the IDW of Sunflower title in the table of contents, choose “Make Permanent”. Choose a desired directory and provide a name for the new grid.
18. The grid can be converted to a polygon or point shapefile by choosing “Convert > Raster to Features” in the Spatial Analysis toolbar. Do not generalize lines.



19. Select a directory for the new shapefile, provide a name and Click “OK”.