

GIS TRAINING AID: TA-GIS-2008-002
Creating Cultural Resource Review Maps for the CPA-52 in Toolkit

October 9, 2008

Matt Duvall: North Carolina State Geodata Administrator, NRCS
Kellee Melton: South Carolina State Technology Coordinator, NRCS

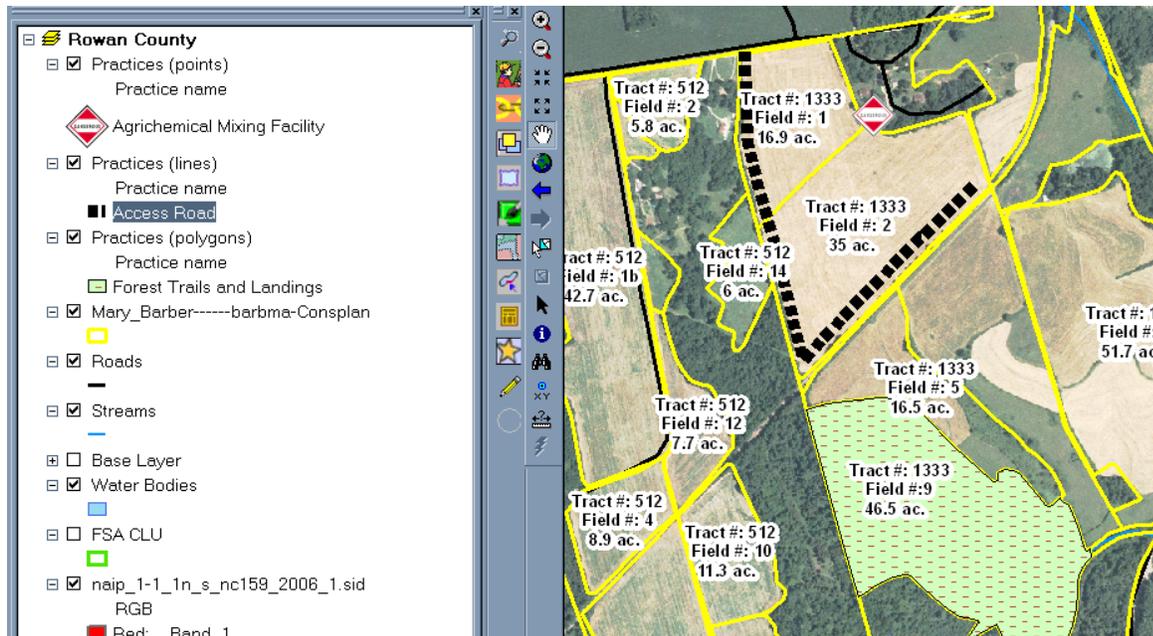
BACKGROUND

Many of us are familiar with creating maps for the Cultural Resource Review by photocopying old paper USGS quadrangle topo maps and snail mailing them to the appropriate specialist. However, USGS topo maps are now available to us in the Toolkit GIS environment, and, if we generate them correctly, we can satisfy our CPA-52 cultural resources requirements more efficiently and effectively using Toolkit GIS.

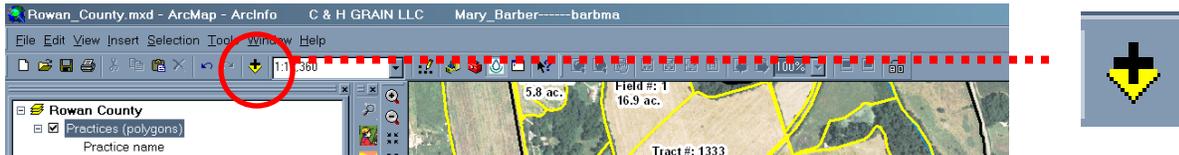
PURPOSE

This aid was developed to guide you through the process of successfully creating, exporting, and emailing cultural resources review maps using Toolkit GIS (and basic office software). Special attention is placed on ensuring that the maps are produced at the appropriate scale.

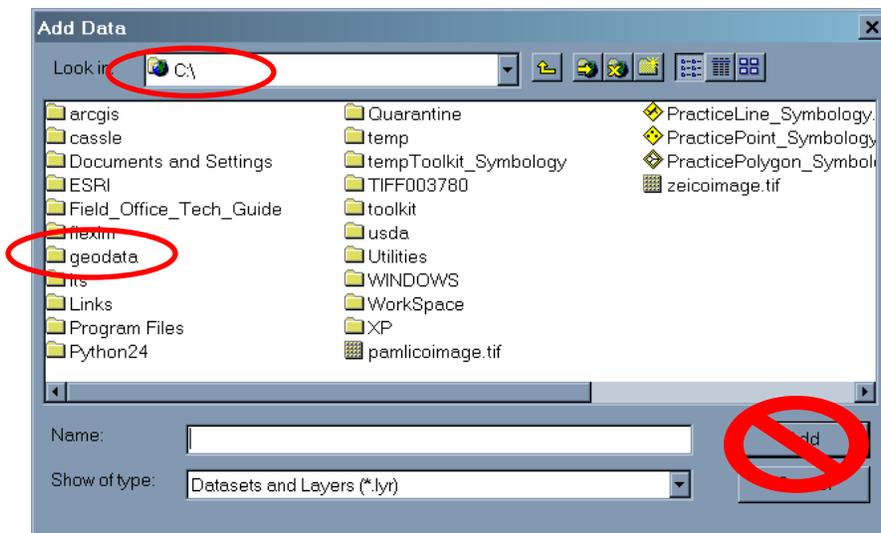
1. All situations are different, but I'm going to start this cheat sheet at the point where I have already produced a basic conservation planning map. Note that I have planned "Forest Trails and Landings" (655), "Access Road" (560), and an (interim) "Agrichemical Mixing Facility" (702), which are all undertakings that require a cultural resources review.



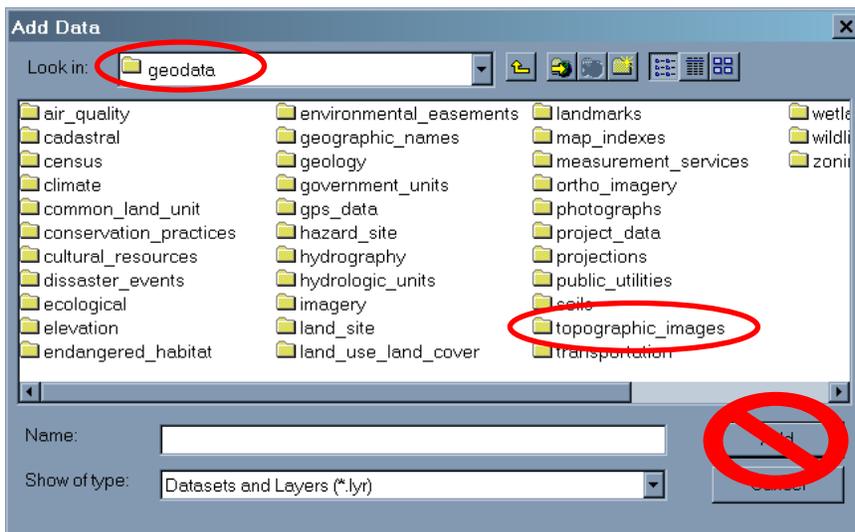
- For the cultural resources review, we are required to submit a map of the location of our undertakings on the USGS topo base map. Many of us already have the USGS topo map added into our county template, but if you do not, you will start at the large plus sign with the yellow triangle in the background (the “Add Data” button). If you already have the USGS topo map in your county template, then skip ahead to step 6.



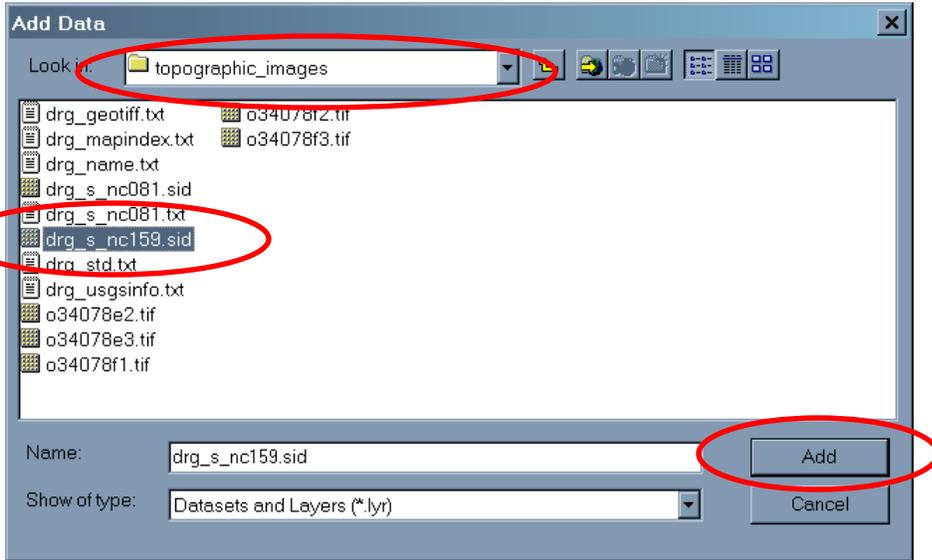
- Navigate to your C:\ drive, and double-click on the geodata folder



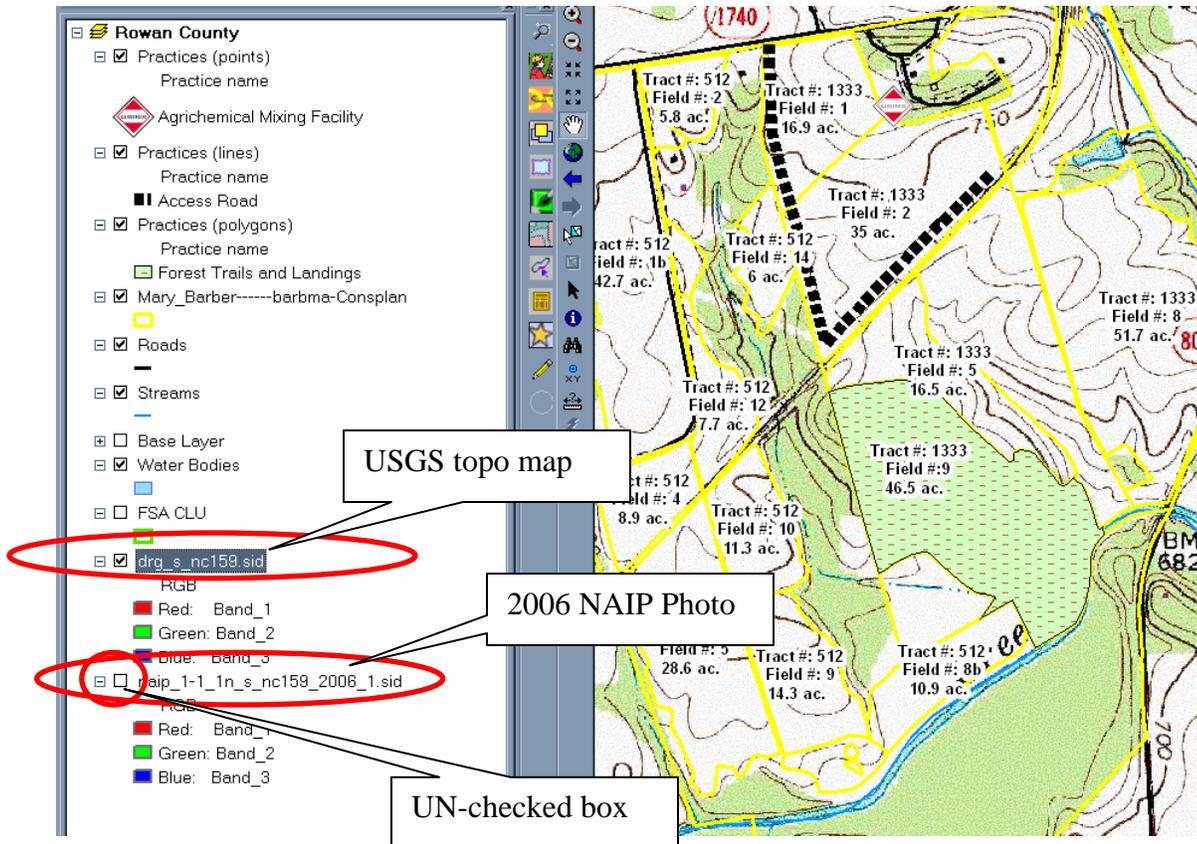
- double click on the topographic_images folder



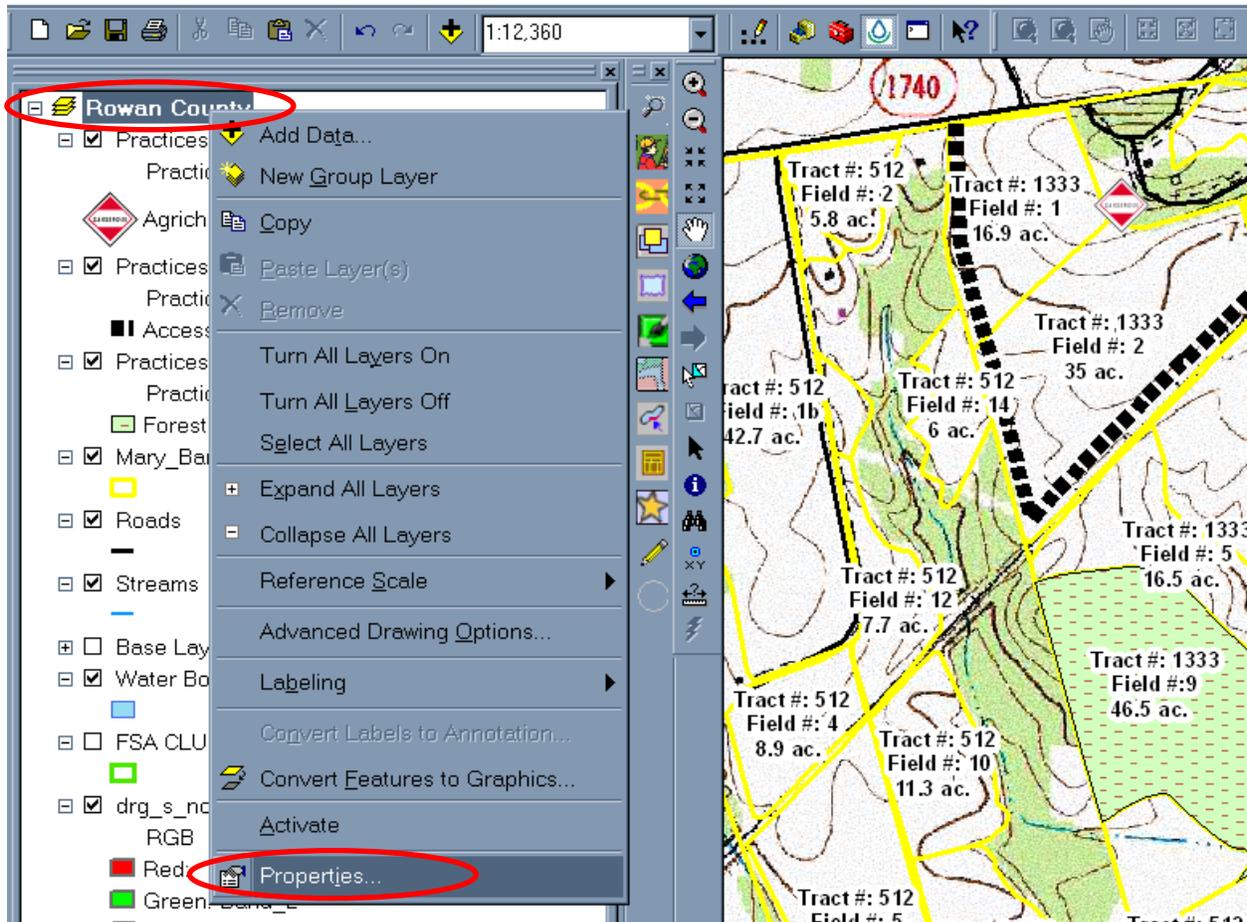
- find and select the file with the proper name format: drg_s_*FIPS*.sid, and mash "Add."
 NOTE: if you do not find the appropriate DRG in this location, contact your GIS specialist.



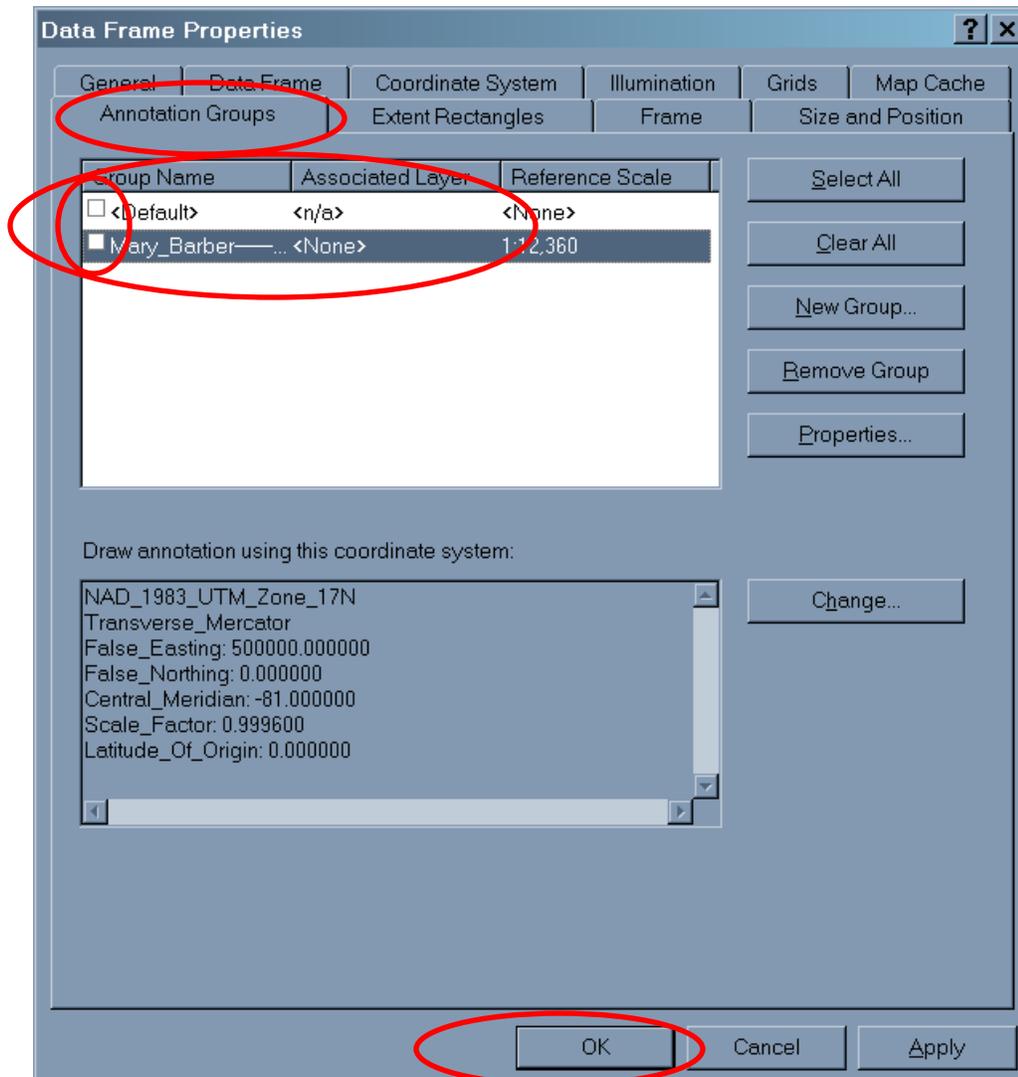
- ... which will add the USGS Topo Map into the GIS project. Make sure the box next to name of any other raster files in the table of contents is UN-checked (turned-off). For example, in this project, I have a 2006 NAIP Mr. SID photo listed underneath the topo map DRG in the table of contents, and I have un-checked the box next to the file name for the NAIP photo.



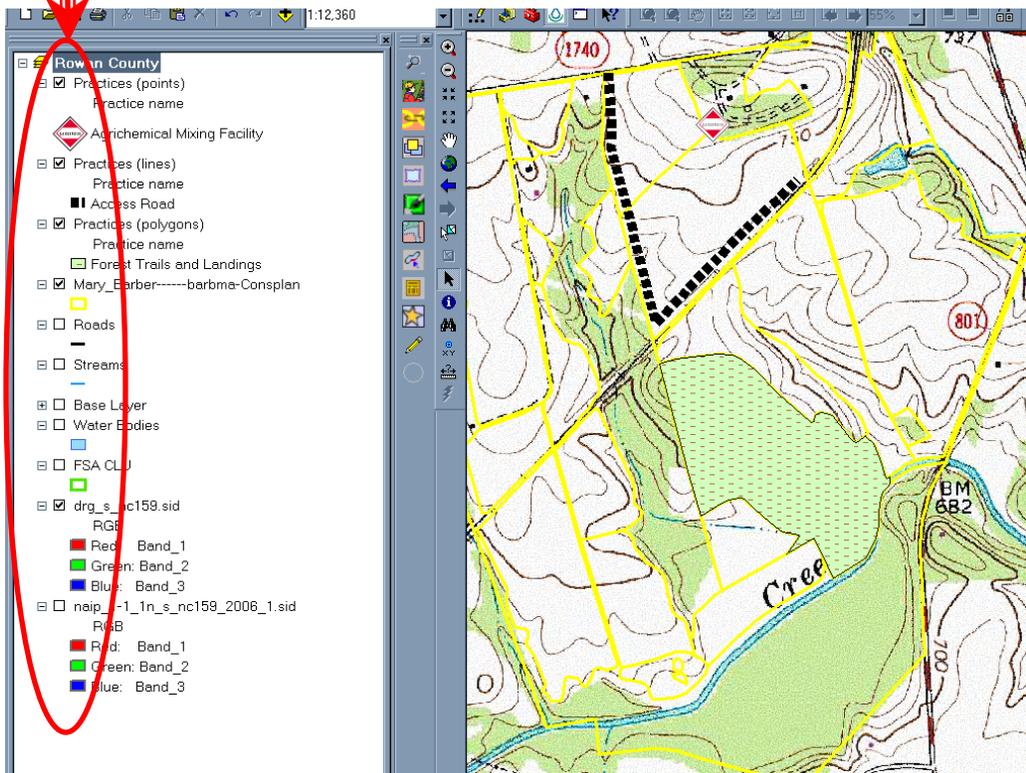
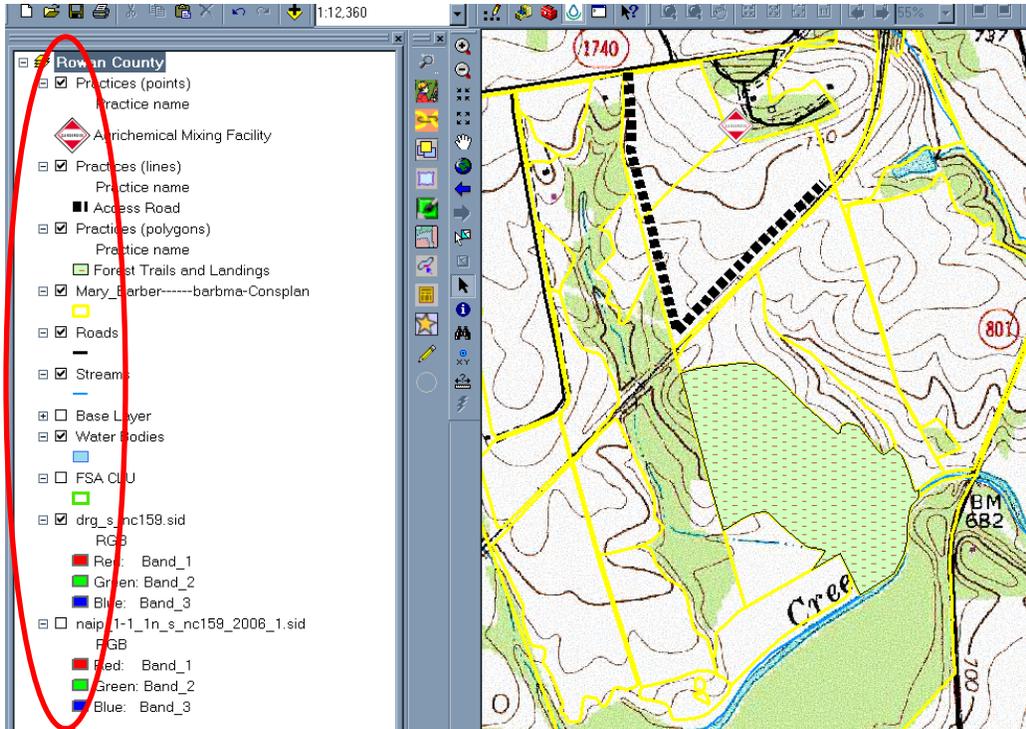
- The next thing we need to do is to eliminate most of the clutter so that the reviewer can evaluate the map for indicators of cultural resources. The first thing I'm going to do is to remove the tract / field labels. I'm going to start by RIGHT-clicking on the title of the table of contents and selecting "Properties."



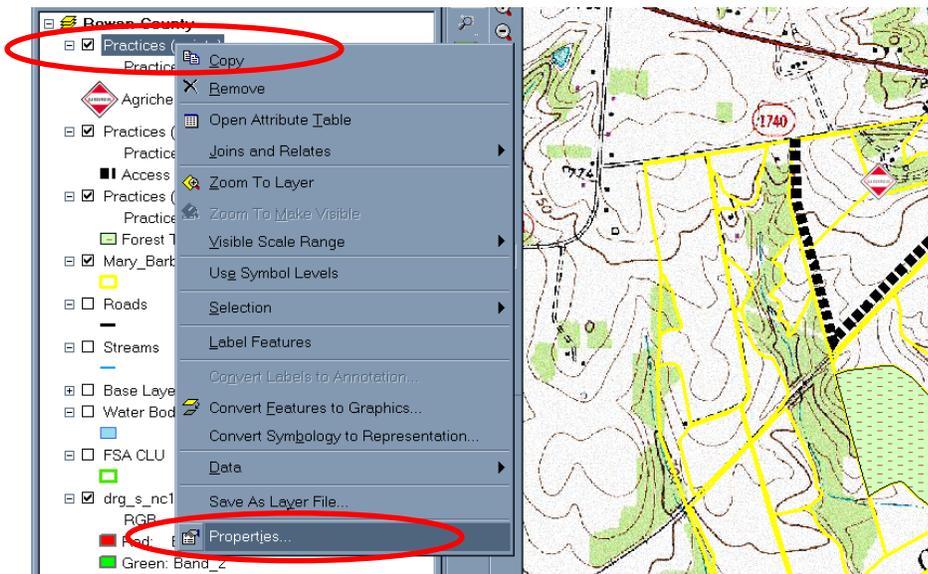
8. ...which will bring up the data frame properties dialog box. Select the “Annotation Groups” tab, and UN-check the box next to the name of the consplan layer and/or any other layer’s annotation (road names, soil map unit symbols, etc.). All annotation should be turned off for a cultural resources review map. Mash “OK.” **NOTE:** this step works only if you used the green paint brush to create your labels, and to get your labels back, all you need to do is repeat steps 7 & 8 and re-check the boxes. Otherwise, if you created your labels some other way, it is more than likely that you’ll need to delete them and re-create them next time you want them. This is a good illustration of the value of the green paint brush.



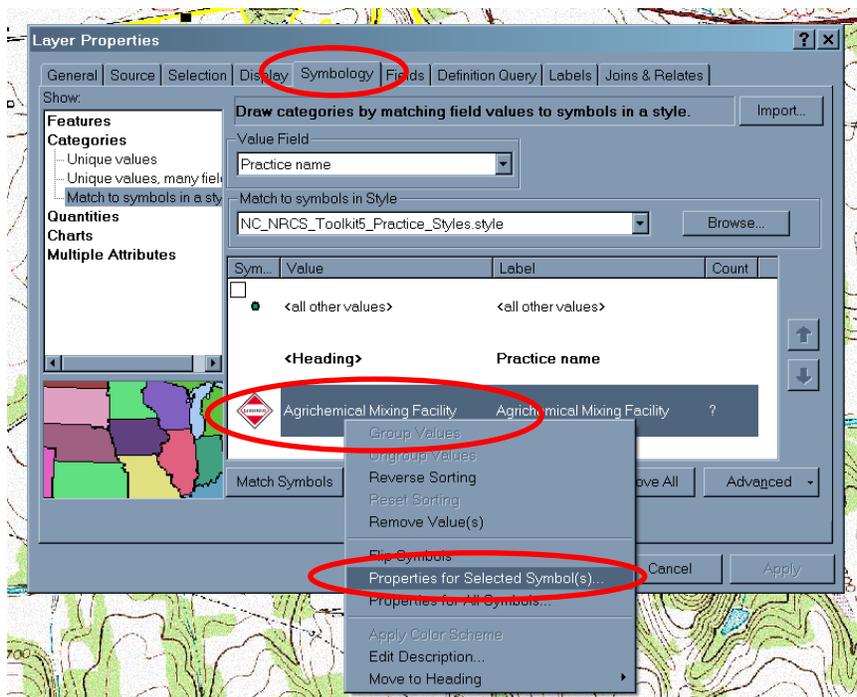
9. In addition to removing unneeded labels, we should also remove the symbology of layers that are unnecessary to a cultural resources review map. In the table of contents on the left side of the screen, the check-boxes indicate whether or not a data layer is turned on or off. UN-check all data layers except the Consplan, the Practices, and the USGS Topo Map.



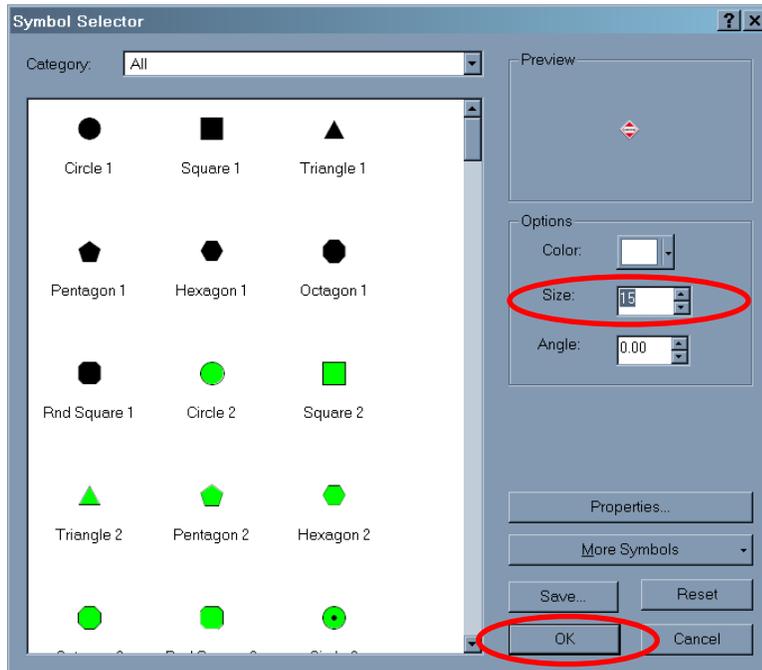
10. We also want to be aware of how the Symbology we choose impacts the reviewer's ability to interpret the map. Notice how the Forest Trails and Landings Symbology covers the entire field and topo map underneath it. Notice how the symbols for both the Access Road and the Mixing Facility are wide and cover a lot of ground. We want to make sure that Symbology included on a cultural resources review map uses thin lines, small point markers, and empty polygons. Lets start by fixing the point marker for the Mixing Facility... RIGHT-click on the name of the Practice (points) layer in the table of contents and select properties.



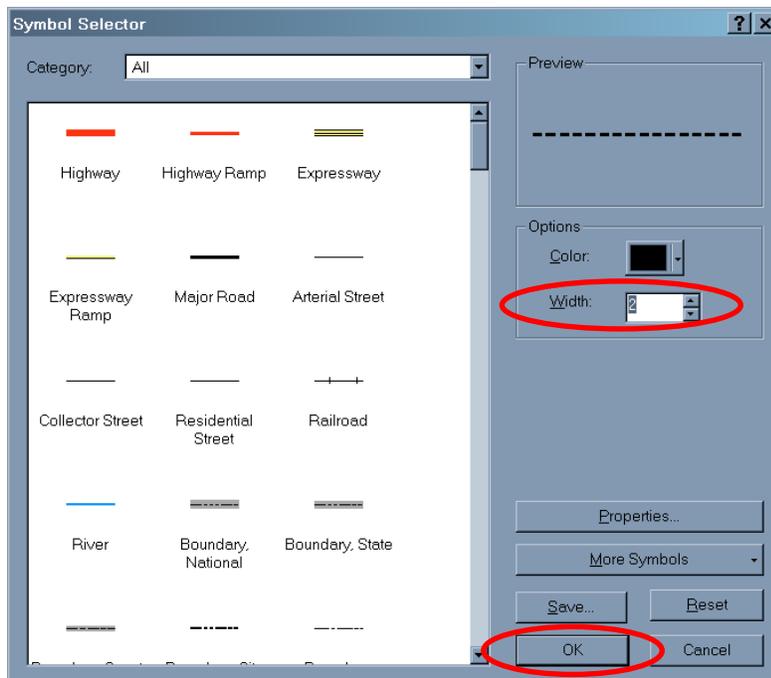
11. Go to the Symbology tab, RIGHT-click on the practice (Mixing Facility) in the Symbology list, and choose "Properties for Selected Symbol(s)..."



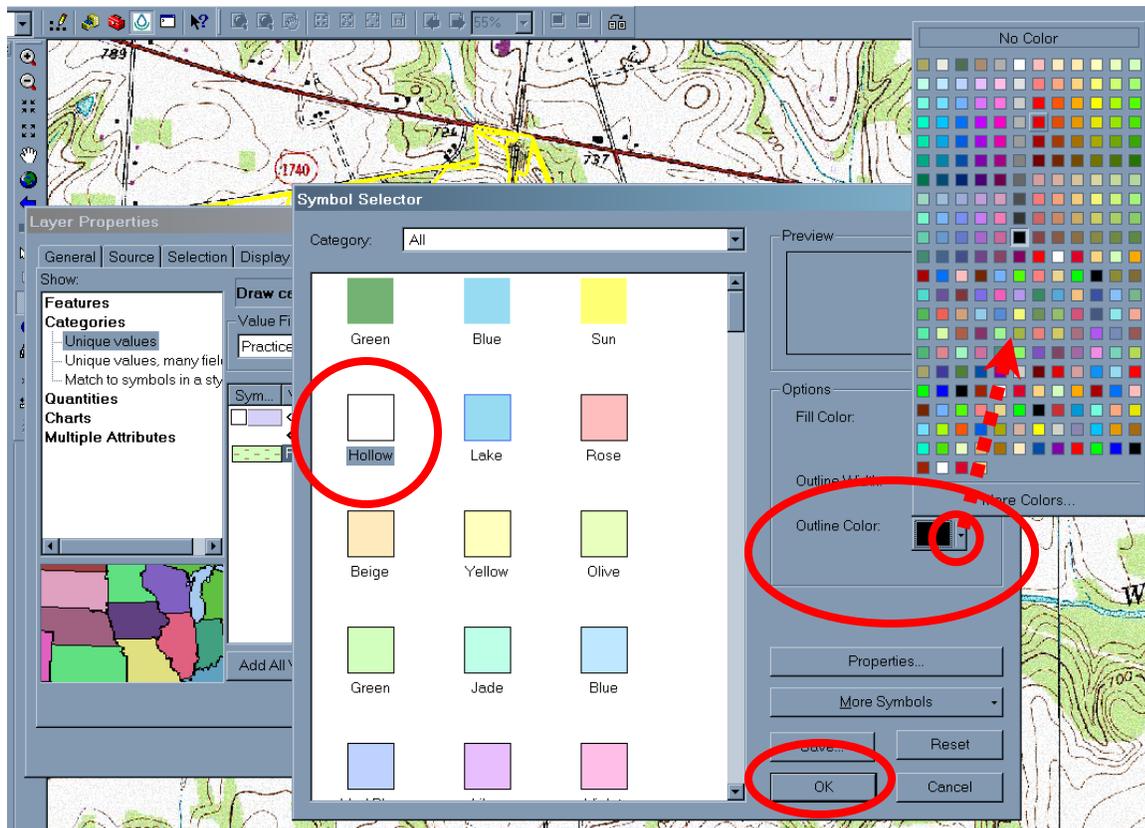
12. Adjust the Size of the marker and mash “OK”



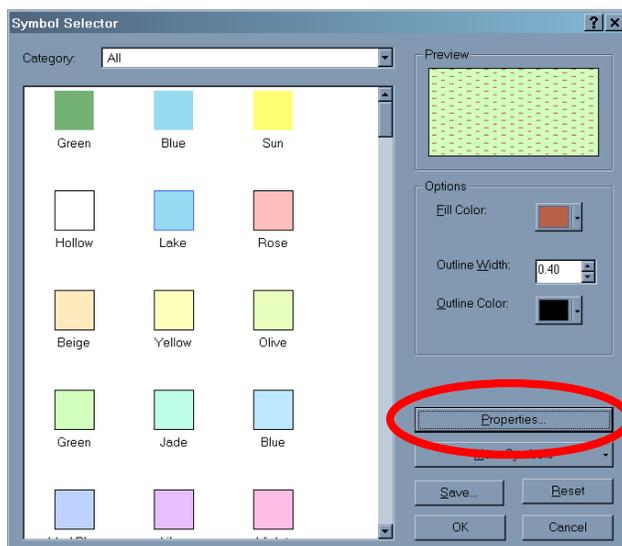
13. To adjust the Practice (lines) symbol, repeat steps 10-12, but adjust the Width of the line.



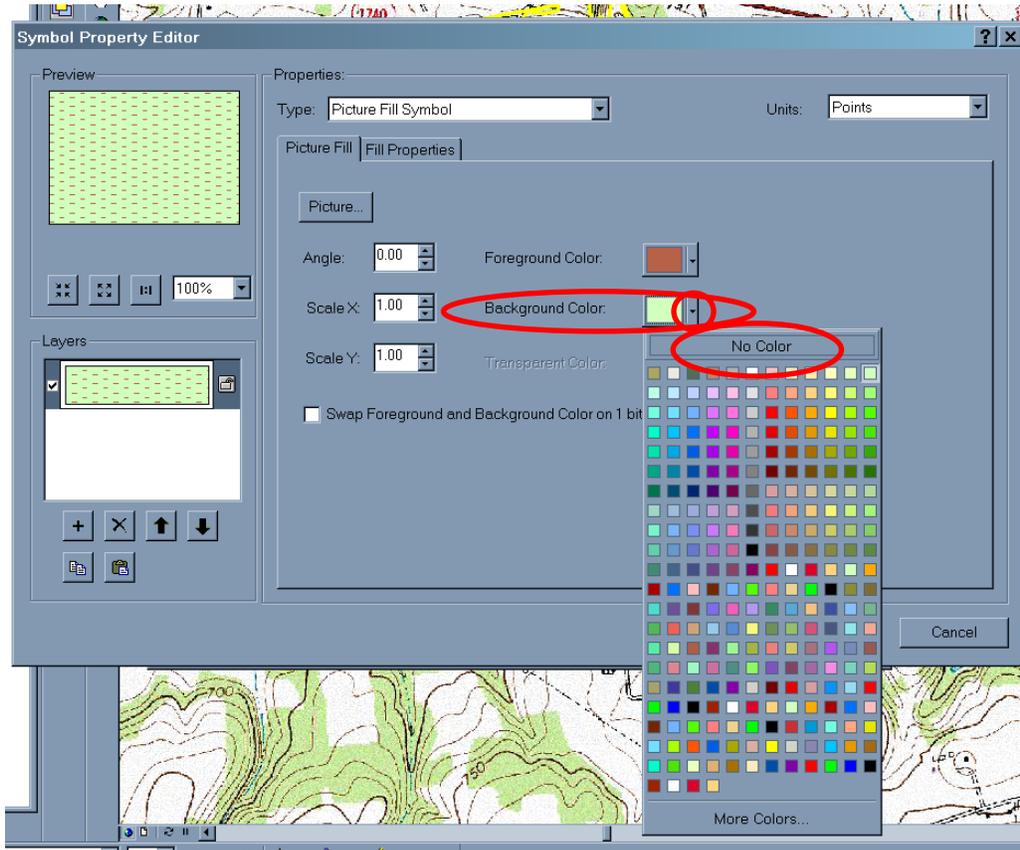
14. There are a few options for adjusting the Practices (polygons) Symbology, so let's start with the most simple. Start by repeating steps 10-11 for the Practices (polygons) layer. Choose the "Hollow" symbol and set the "Outline Color" to something visible, and mash "OK"



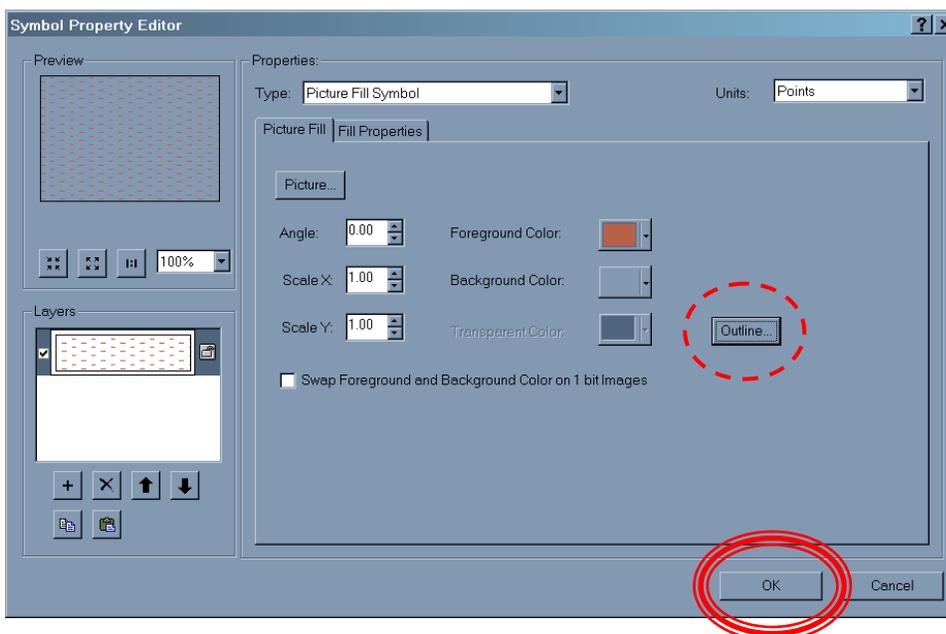
15. Alternatively, many of us like to use the Practices Style Sheet, and we might not want to move completely away from those standard symbols. In that case, repeat steps 10-11 to bring up the Symbol Selector dialog box, but this time mash "Properties..." instead.



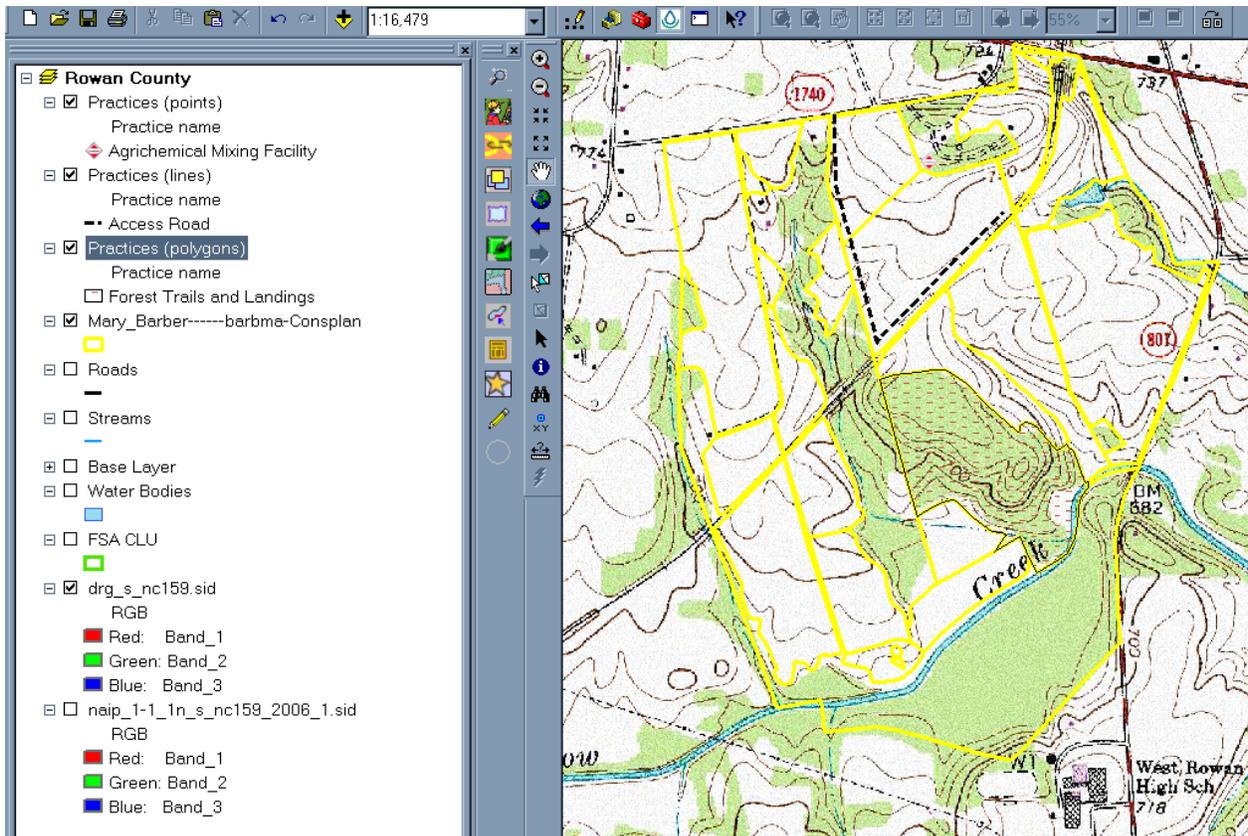
16. In the Symbol Property Editor dialog box, choose the drop-down box for the Background Color and select “No Color.”



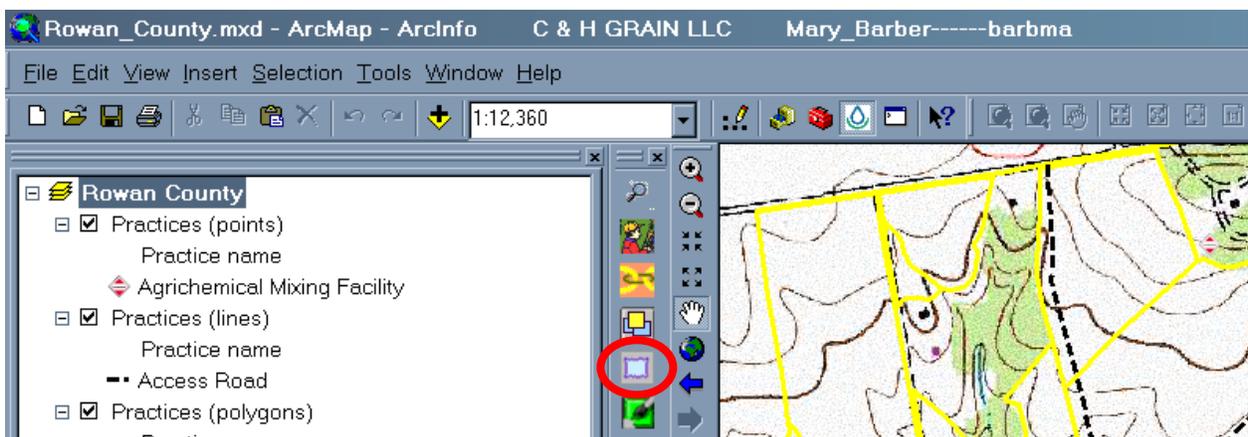
17. At this point, you can either mash “OK” to set these changes, or you can modify the Outline.. However far you go with these details, **mash OK all the way out.**



18. Now, Symbology is much less obtrusive and the map is much more easily interpreted by the reviewer.



19. Now, we're ready to produce the map with critical attention paid to scale.



20. On the Heading tab, give it an appropriate title and make sure that all of the other appropriate boxes are checked. Do NOT check the Land Units box.

Map Products

Heading | Layout and Scale

Map Title: Cultural Resources Review Map

Customer: C & H GRAIN LLC
MARY BARBER

Field Office: SALISBURY SERVICE CENTER

Agency: NRCS

District:

Land Units: Tract 512 Field;
Tract 512 Field;
Tract 512 Field;
Tract 512 Field;

Assisted By: Larry L Hendrix

Date: Friday, October 24, 2008

Approx. Acres: 721

State and County

Legal Description

Use Preferences | Save Preferences | Apply | OK | Cancel

21. In the Layout and Scale tab, make sure to set the scale to 1" = 2000 FT (1:24k ratio scale)

Map Products

Heading | Layout and Scale

Size: 8.5 x 11" Portrait

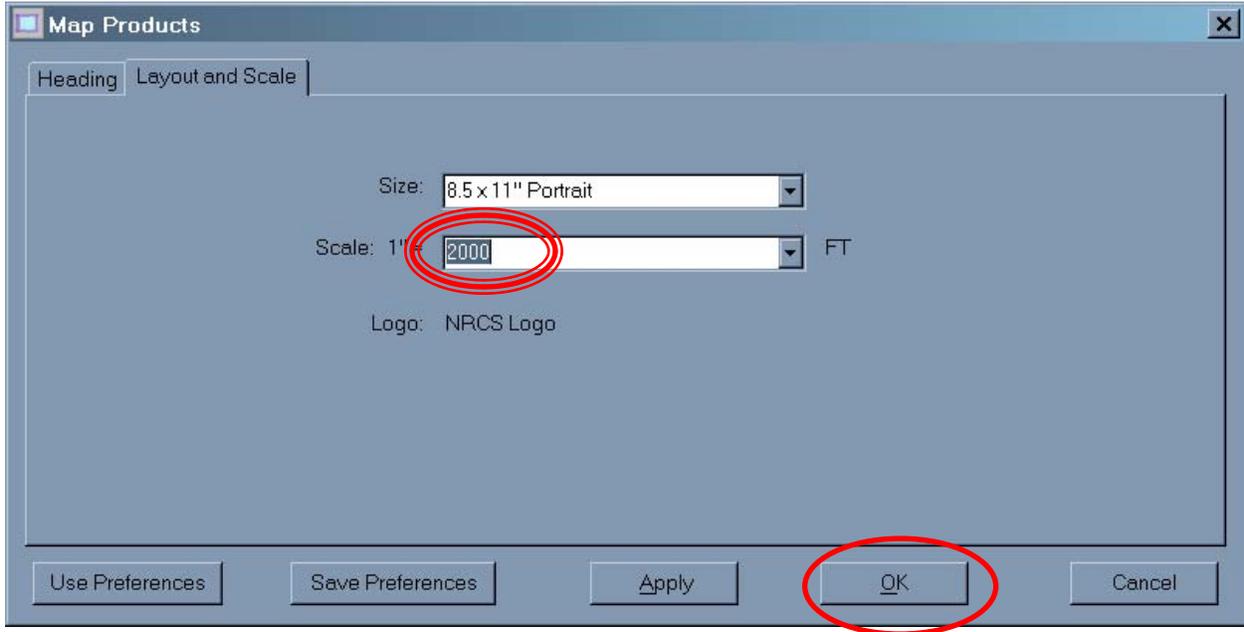
Scale: 1" = **2000** FT

Logo:

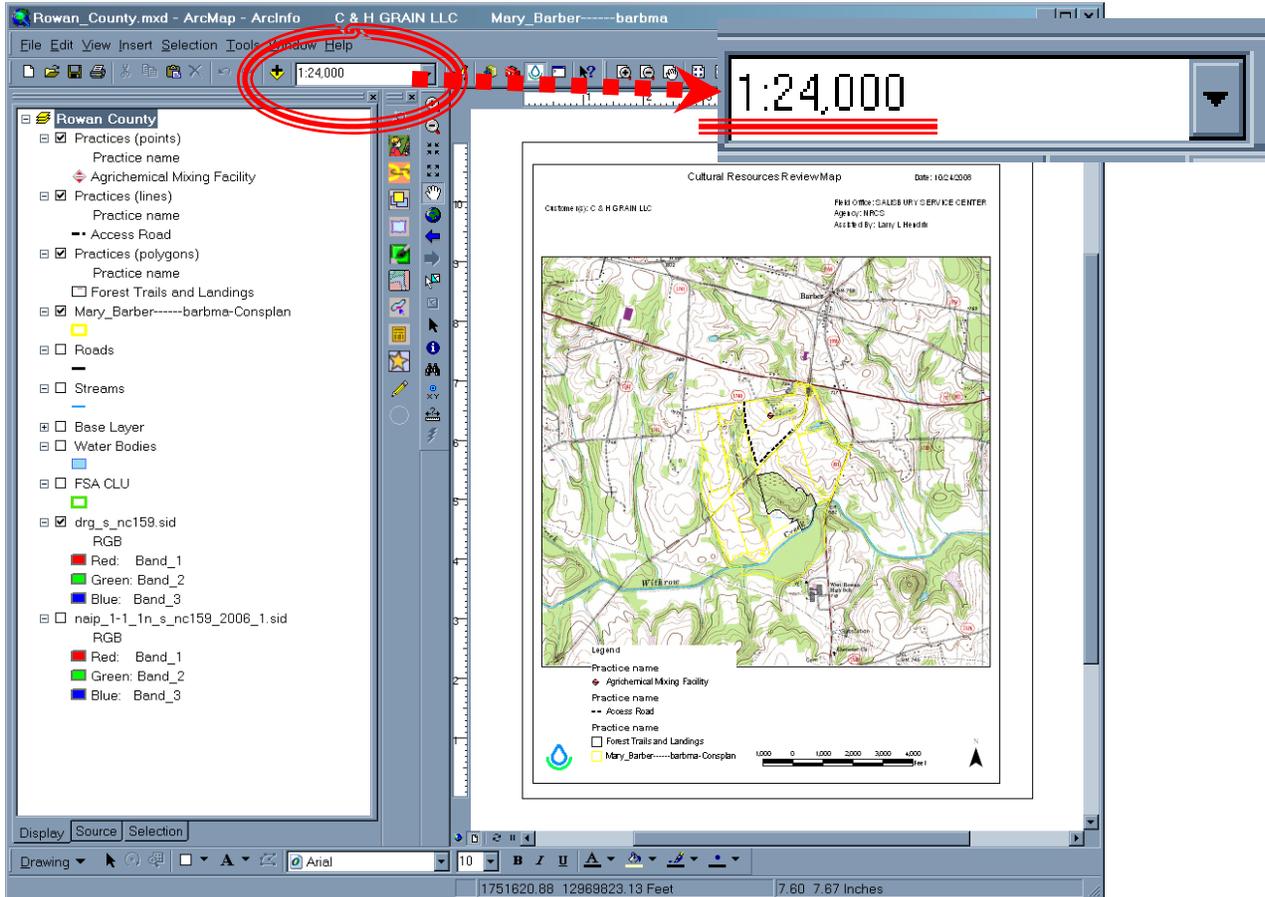
330
660
1000
1320
2000
5280
User Defined
Fit to Page

Use Preferences | Save Preferences | Apply | OK | Cancel

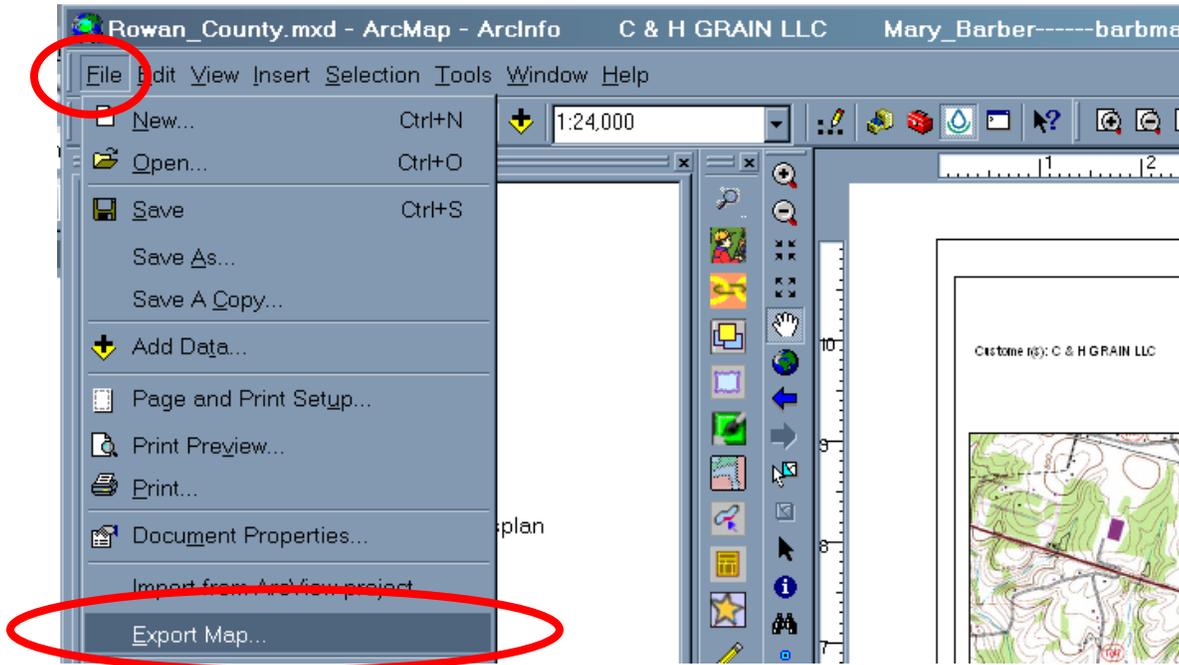
22. Before you mash OK, double check that the scale is set correctly



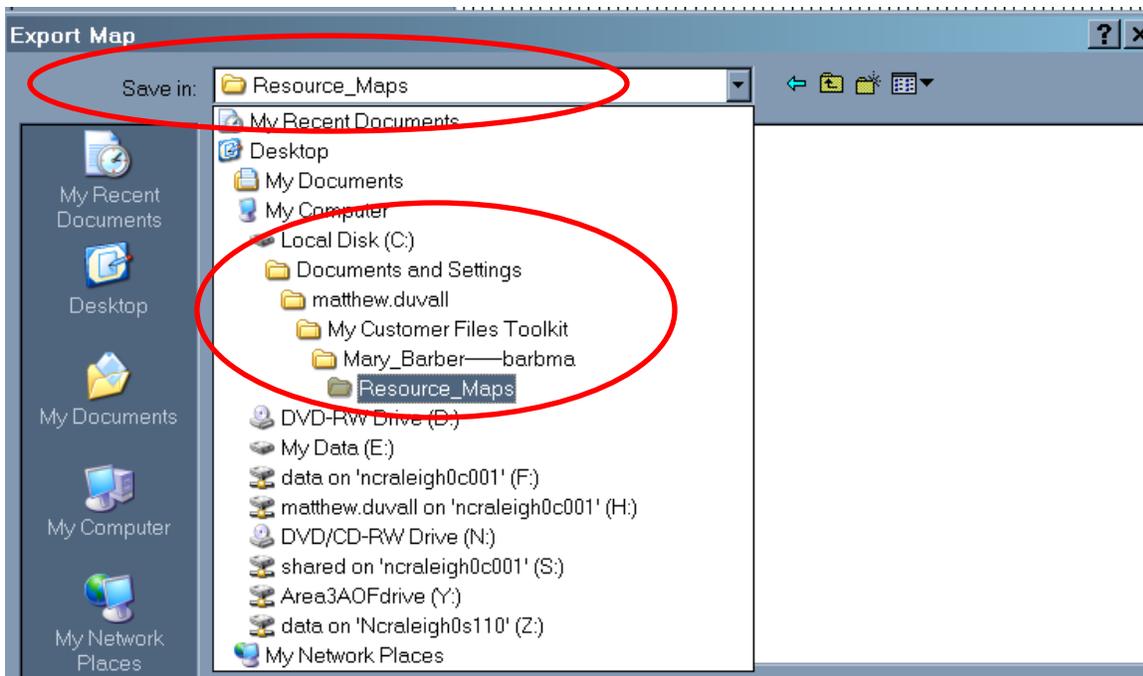
23. Triple check that the ratio scale is correctly to 1:24k



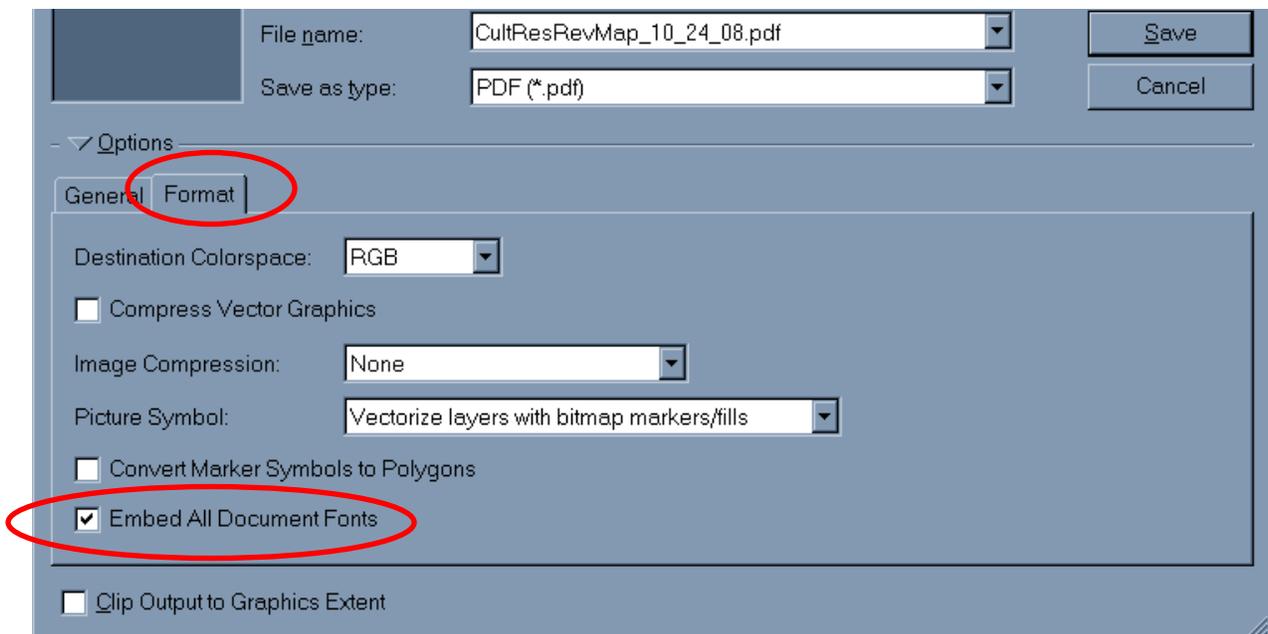
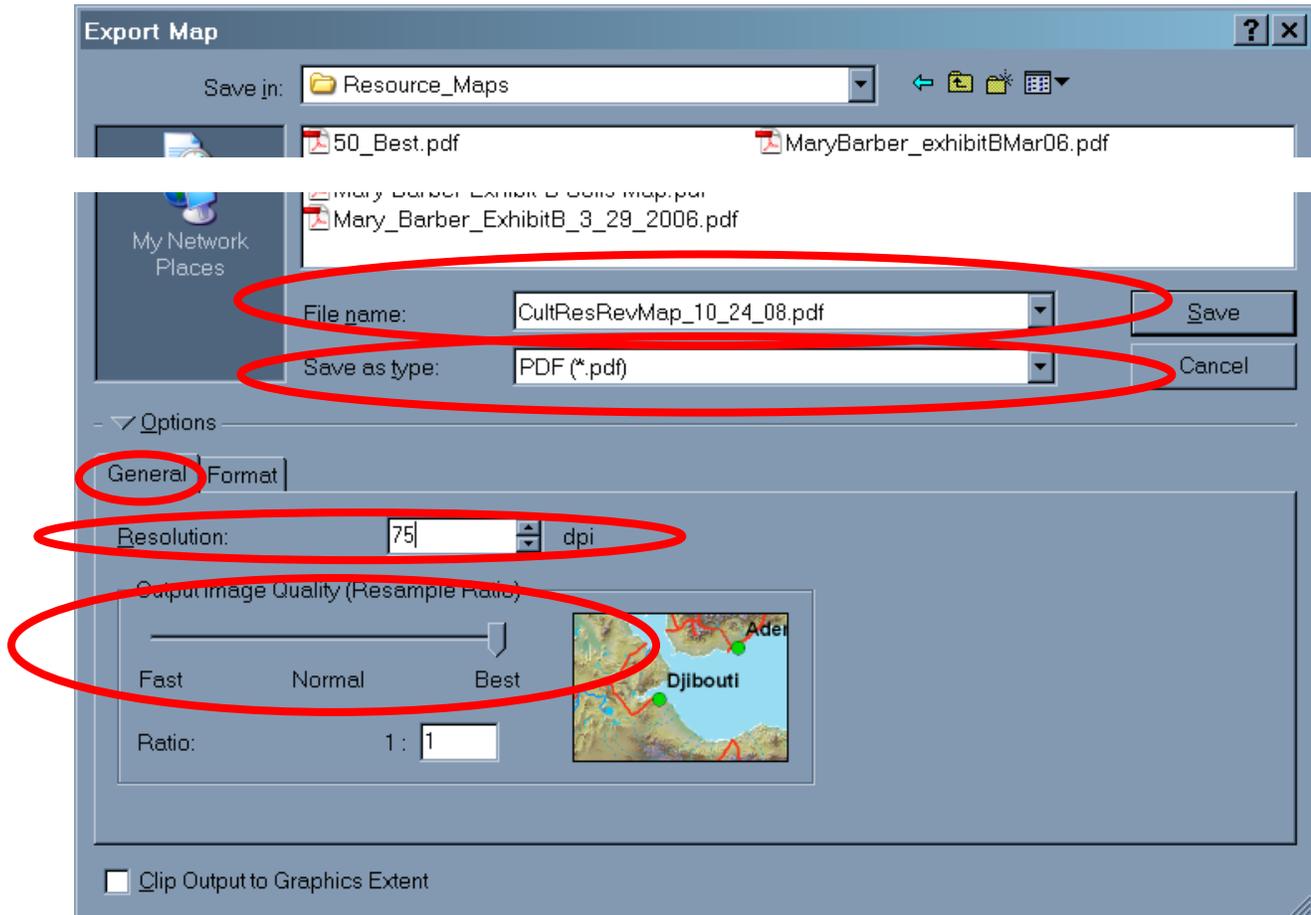
24. With the scale set properly in your ArcMap layout view, export the map to a PDF. Go to the File menu and select Export Map...



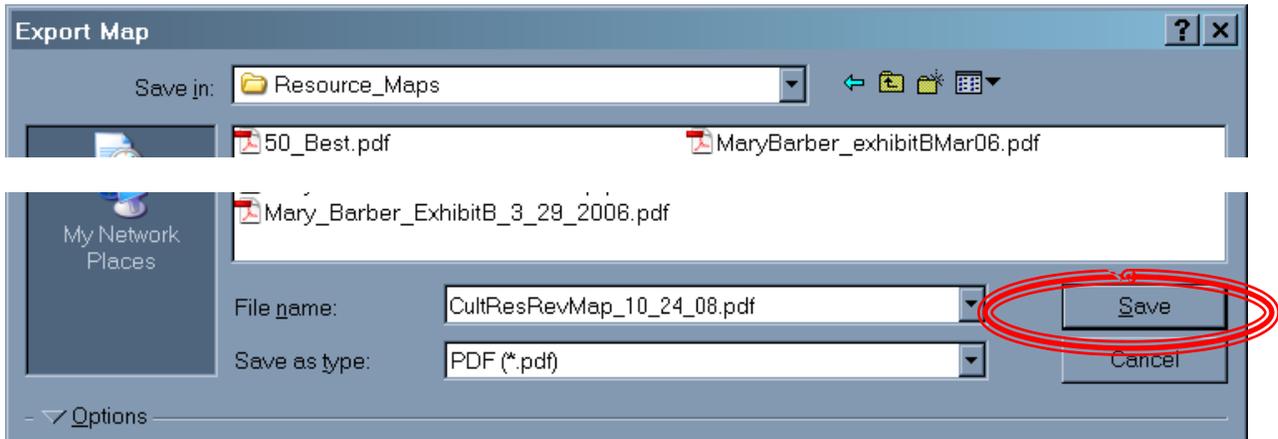
25. Make sure to be exporting the map to the proper location



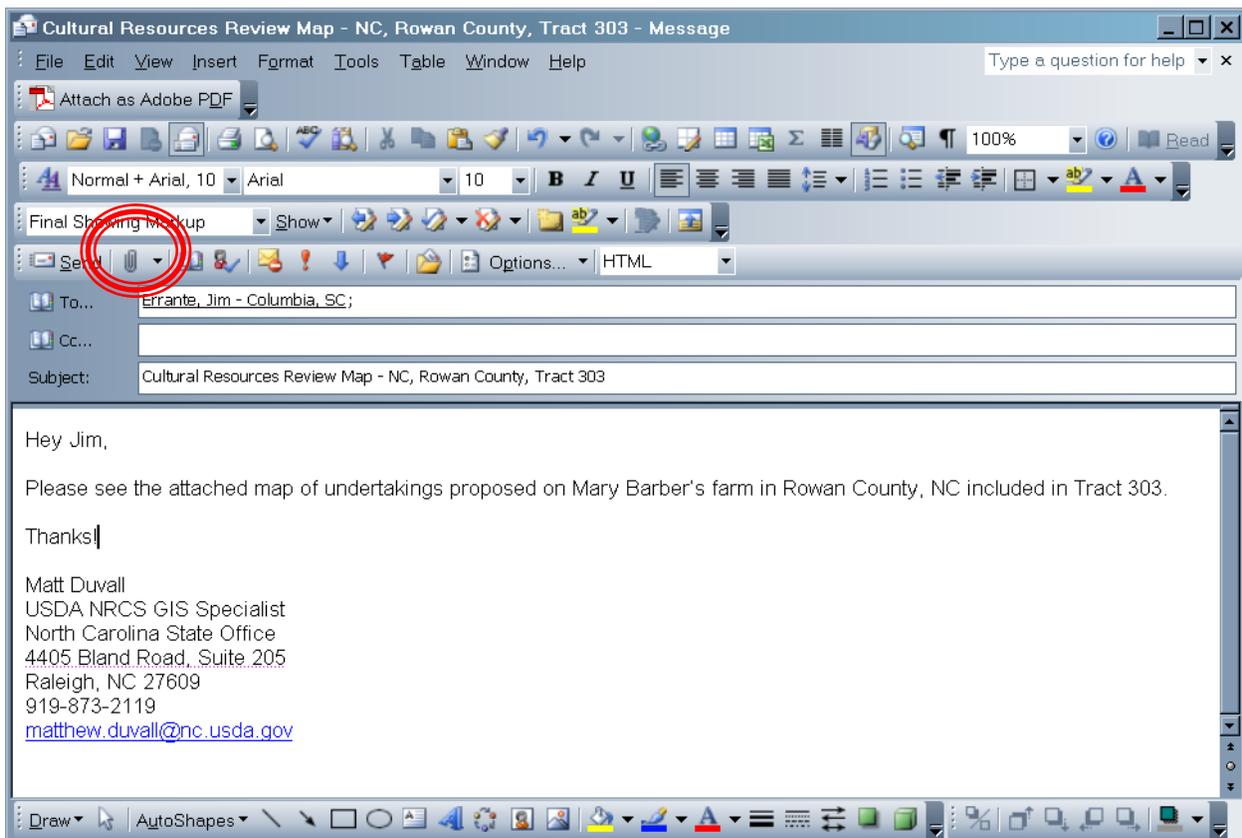
26. Give the map an appropriate file name, make sure it is a PDF, set the file resolution, and maybe even check some of the other format settings per the screen shots below.



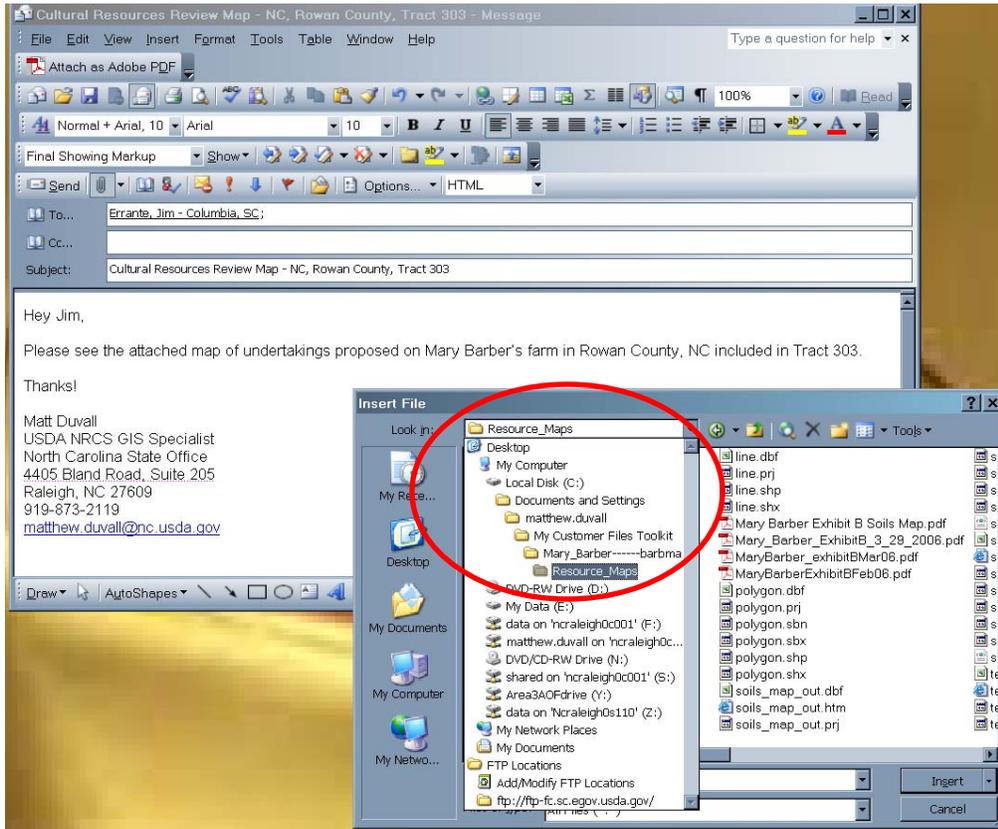
27. and save it...



28. Now, we just need to email the map to our Cultural Resources Specialist. Get your Outlook open, start a new message, and address it to the appropriate person, and give the message a Subject that will catch the Specialist's attention. Before you send it, make sure to attach the map. Start by mashing the paper clip button.



29. Navigate to the location of the PDF that you exported to the customer's folder



30. Highlight the map that you want to attach to the email, mash Insert, and then mash Send.

