

## Setting the Scale and Adjusting Paper Size in ArcMap 9.x

This procedure outlines:

- A. Changing the units of measurement in the data frame.
- B. Setting the scale
- C. Adjusting paper size
- D. Exporting the image

In order to use these instructions, you must have ArcMap 9.x. This example is going to be a continuation of the **Property Data Map/City of Toronto Orthophoto Overlay in ArcMap 9.0** procedure that can be found at the following link: [http://www.ryerson.ca/madar/geospatial/how\\_to/PDMORTHONOV1.pdf](http://www.ryerson.ca/madar/geospatial/how_to/PDMORTHONOV1.pdf)

The PDM/Orthophoto Overlay procedure demonstrated how to download PDMs and orthophotos from the MADAR website, open them in ArcMap 9.x, and then export them to another file format.

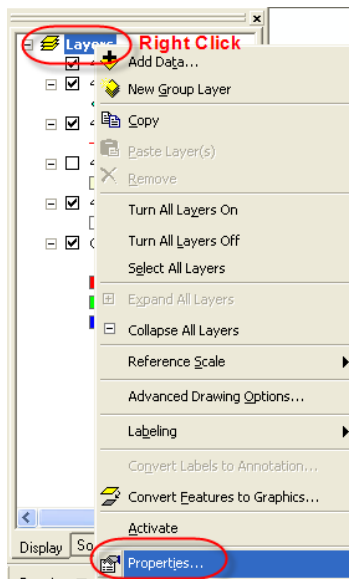
**NOTE:** Complete steps 1-6 in the **Property Data Map/City of Toronto Orthophoto Overlay in ArcMap 9.0**.

### A. Changing the Units of Measurement in the Data Frame

Changing the units of measurement in a data frame allows the user to set a common standard. Once set, all measurement functions carried out in ArcMap will be in the specified unit of measurement.

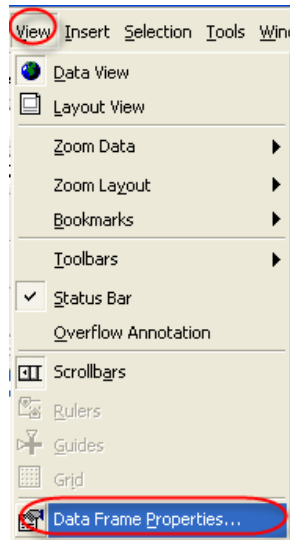
The user has two options to get to the Data Frame Properties.

1. *Right click* the **Layers** heading, then in the ensuing drop down menu *click Properties*.

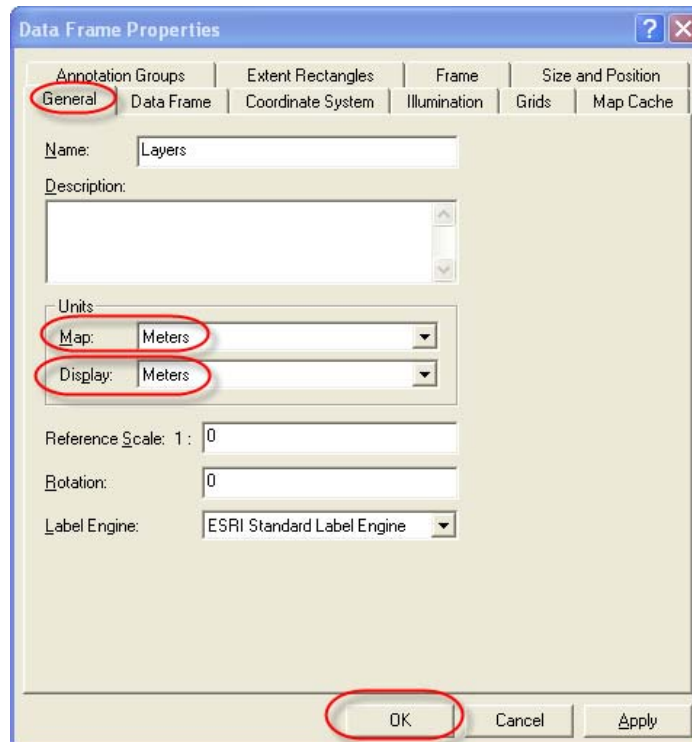


**OR:**

2. From the main menu *click* **View**, then in the ensuing drop down menu *click* **Data Frame Properties**.



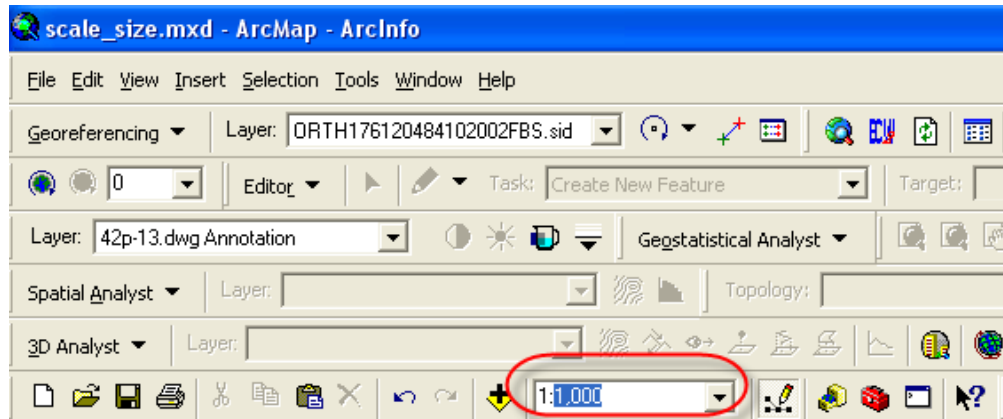
3. In the **Data Frame Properties** window select the **General** tab.
4. In the **Units** subheading select the desired unit of measurement using the drop down arrow for **both** **Map** and **Display**. If the **Map** drop down window is grayed out then only select the **Display** unit of measurement. In this example select **Meters** for **Map** and **Display** then *click* **OK**.



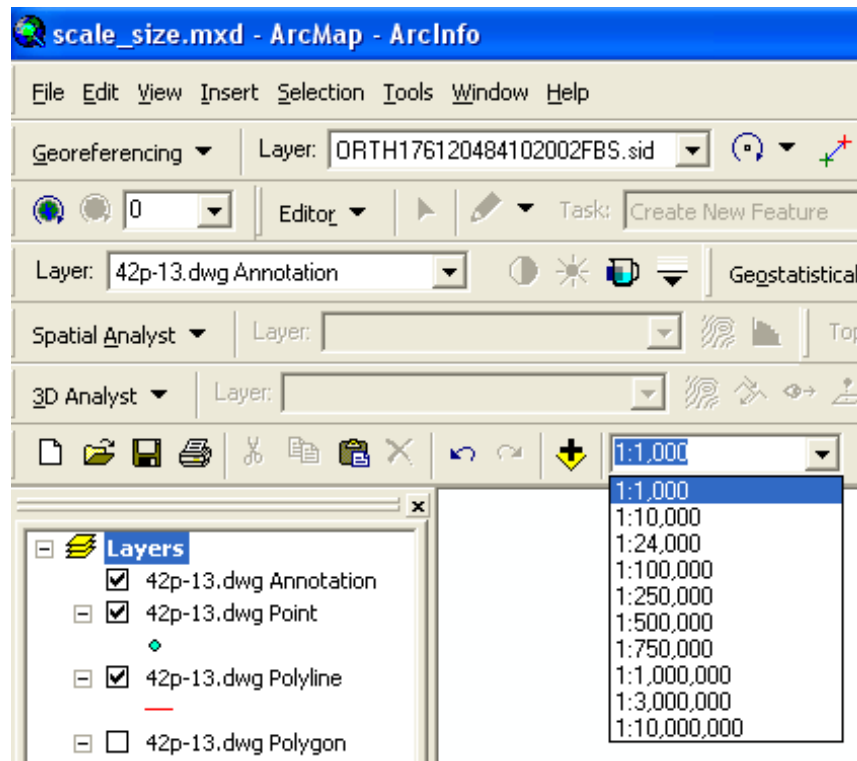
## B. Setting the Scale

A map's scale is a ratio that relates a unit of measure on a map to some number of the same units of measure on the earth's surface. One advantage of digital maps is that one can change the zoom extent by changing the scale.

1. In the **Map Scale** text box simply type in the desired scale. Example: 1:1000. Alternatively, use the drop down arrow to select one of the more commonly used map scales.



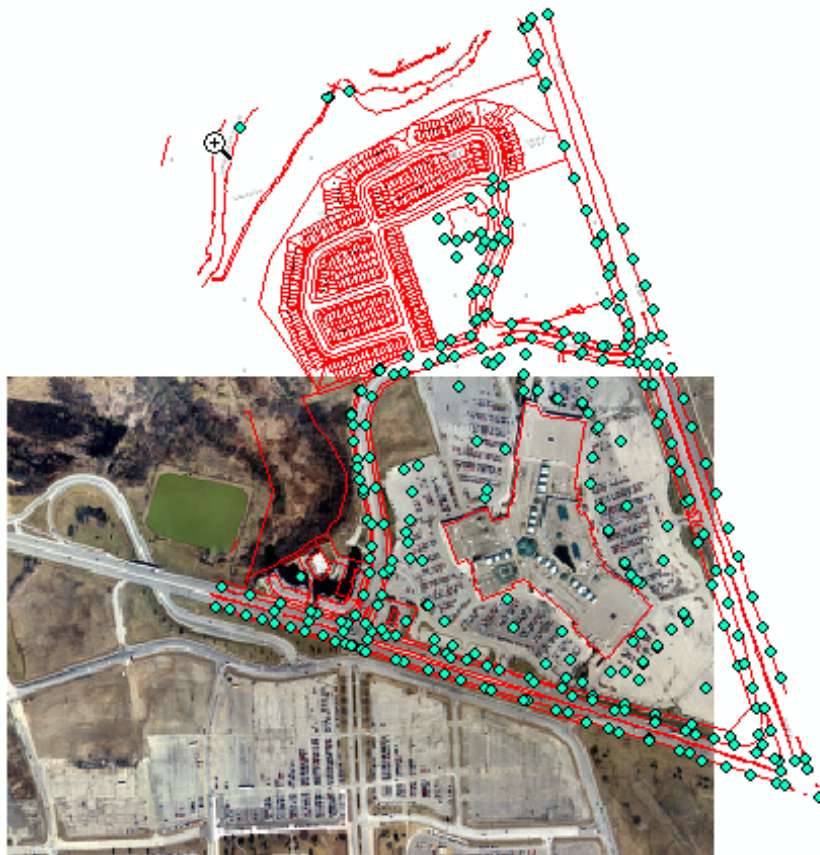
OR



## C. Adjusting Paper Size

It may be necessary to adjust the paper size because once a scale is set the desired portions of the image may be left out of the print range. To include these omitted objects, the paper size must be increased. The process of selecting an ideal paper size may be carried out more than once as you will see in the following example.

In this example we will focus on the image below which is an orthophoto (Woodbine Centre Mall located in North Etobicoke) being co-displayed with a property data map.



The goal of this example is to adjust the paper size so that the entire mall fills the layout view at a scale of 1:1000. The orthophoto and PDM can be downloaded from the following sites:

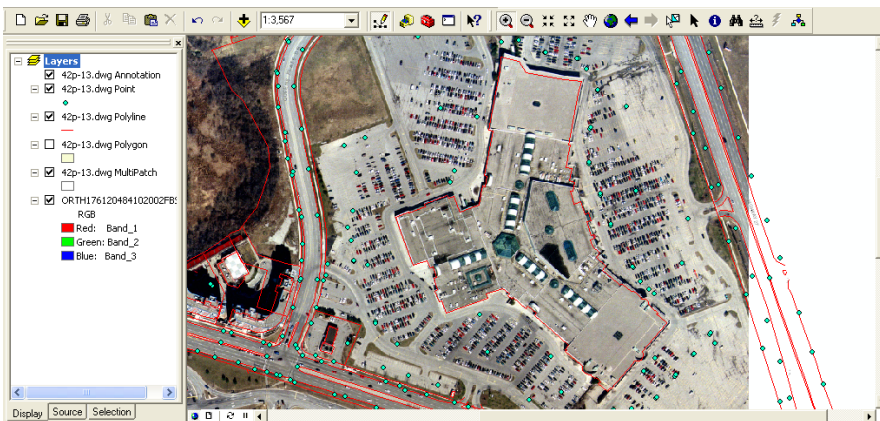
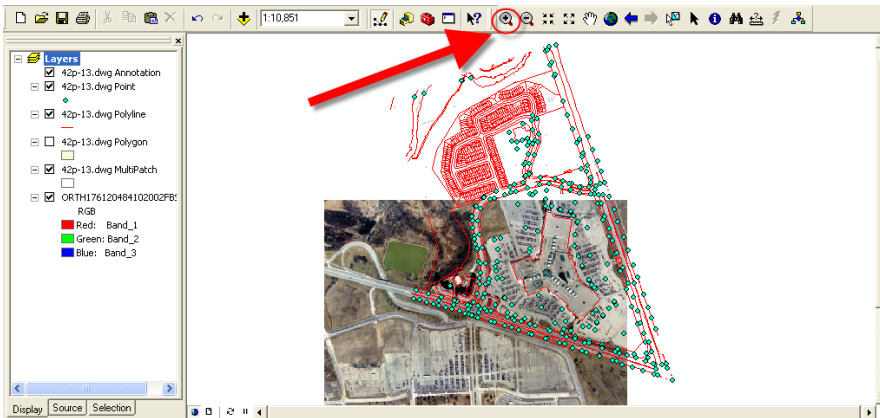
PDM (select file **42P-13**)

[http://www.ryerson.ca/madar/geospatial/libdata/indmaps/PDM/Etobicoke\\_North.html](http://www.ryerson.ca/madar/geospatial/libdata/indmaps/PDM/Etobicoke_North.html)

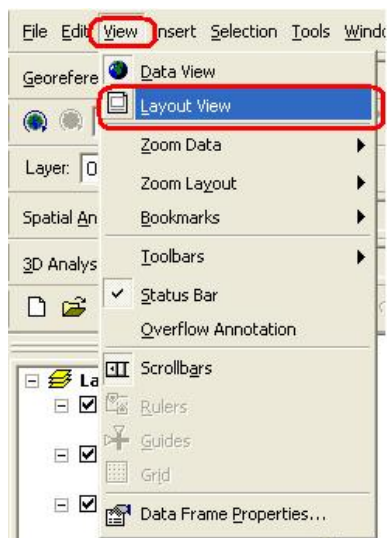
Orthophotos (**Note:** Both the .sid and .sdw file must be downloaded)

<http://8090-prod.library.utoronto.ca.innopac.lib.ryerson.ca/maplib/scholarp/orthos/toronto/12048410.html>

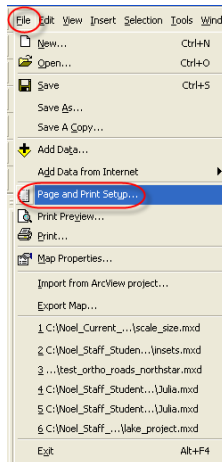
1. Use the **Zoom In** icon located on the toolbar to zoom in to the desired region. In this example, the target is the mall.



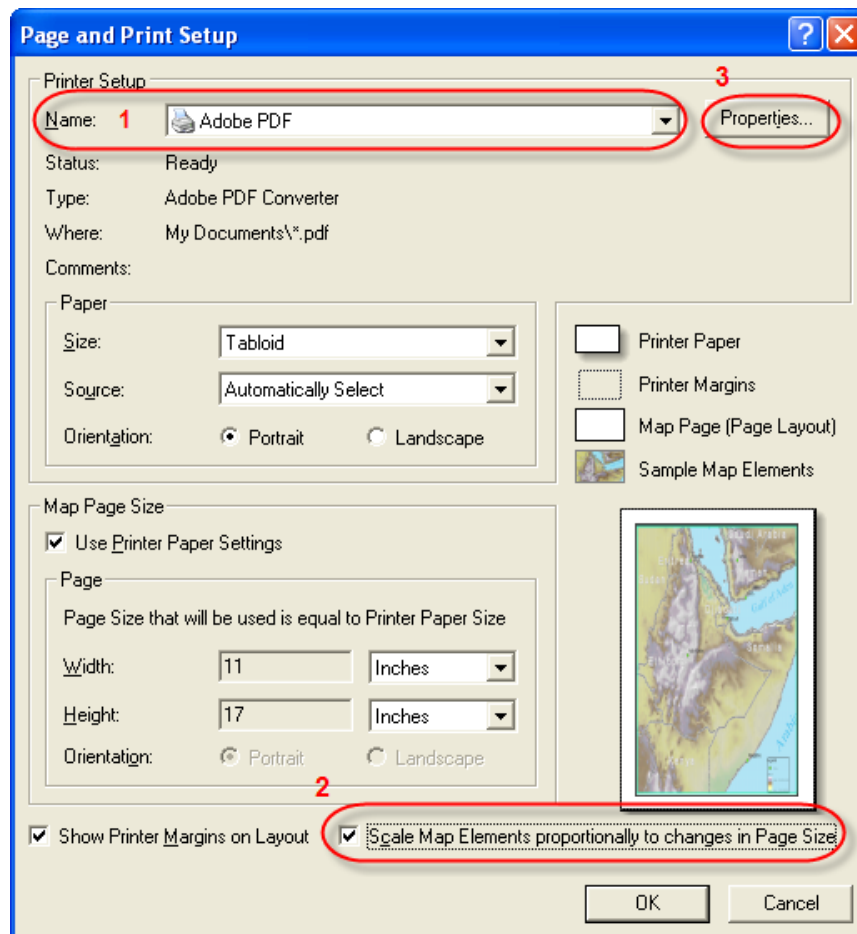
2. Change to a layout view by *clicking View* from the main menu and then *selecting Layout View*.



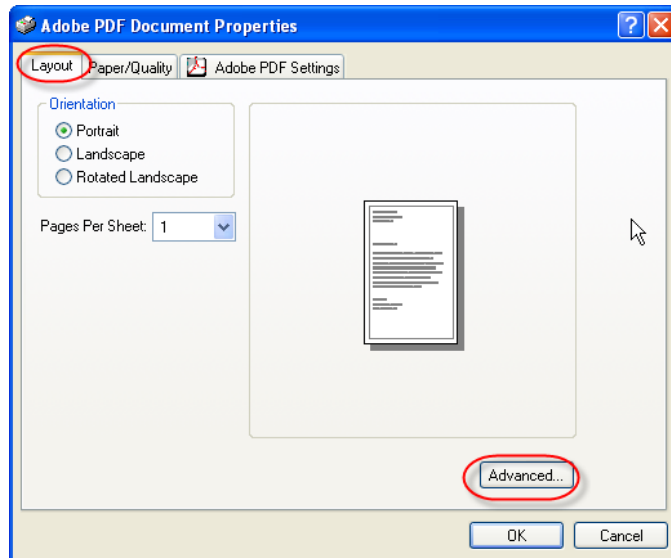
- Once the unit of measurement has been selected (see **Section A**) and the image scale has been set to 1:1000 (see **Section B**) *click File* from the main menu then *select Page and Print Setup* in the drop down menu.



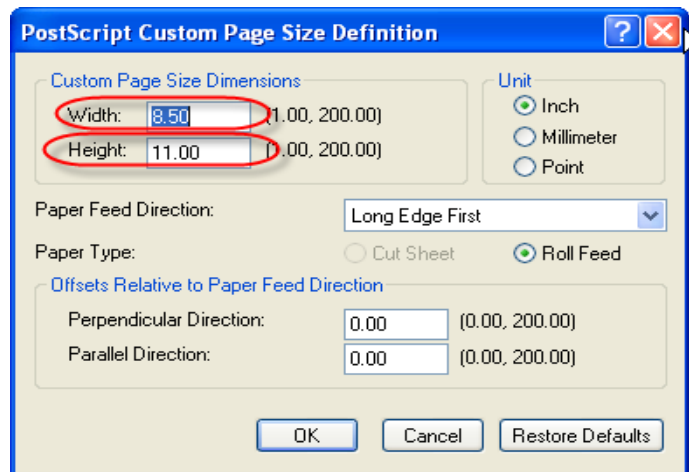
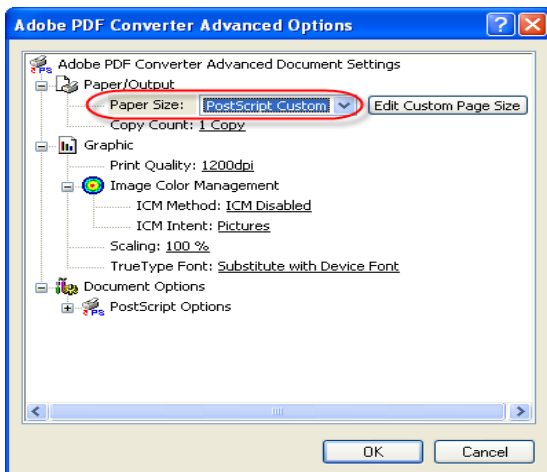
- In the **Name** textbox *select Adobe PDF*. In the bottom right corner of the window check the box next to **Scale Map Elements proportionately to changes in Page Size** then *click the Properties* button.



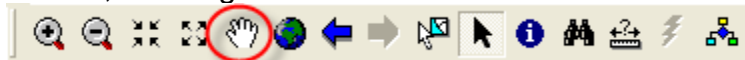
5. Select the **Layout** tab located in the top right corner of window then *click* the **Advanced** button.



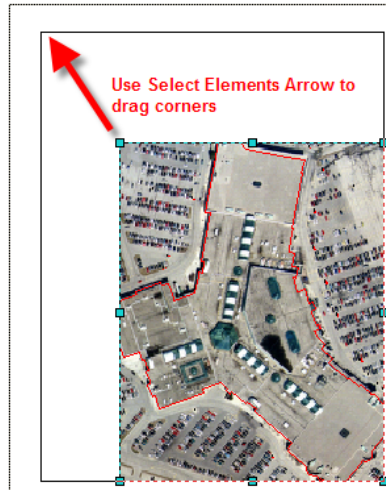
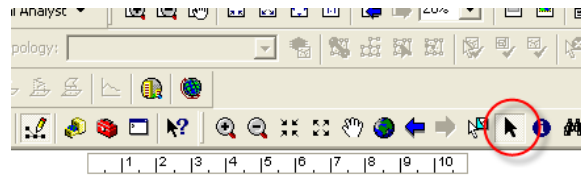
6. In the **Paper Size** drop down menu select **Post Script Custom Page Size**. **BEFORE** you click **OK**, you must adjust the width dimensions. Remember, for this example we are trying to capture the entire mall at a scale of 1:1000. The default settings should be 8.5 width x 11 height. We know that at these dimensions the mall does not fit in the layout view, thus we will increase the width by 2.5 and the height by 3 (width =11, height = 14). *Click OK* four times until you get back to the Layout view.



7. When the page dimensions were changed, the scale may have also been altered, change the scale back to 1:1000. Use the Pan



tool to centre the image on the mall. In addition, you can click on the Select Elements arrow to widen the image so that it fills the print region (see image below).



Despite the changes, as you can see below, the image does not capture the entire mall at a scale of 1:1000.

8. The solution is to add a few more inches to the width and height. Repeat steps 4 through 7: Add three inches to the width and height (width = 14, height = 17). If done correctly, your image should look like the one below.



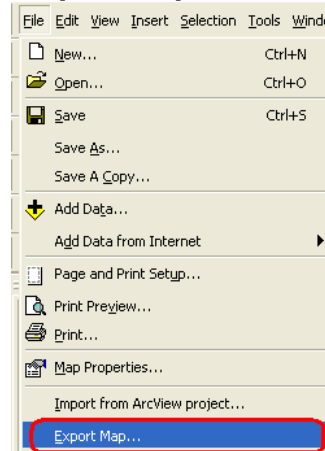
In most cases you will not select the correct page dimensions on the first guess, thus it is important to note that steps 4 through 7 may be carried out two, three or more times until you reach an ideal page size.



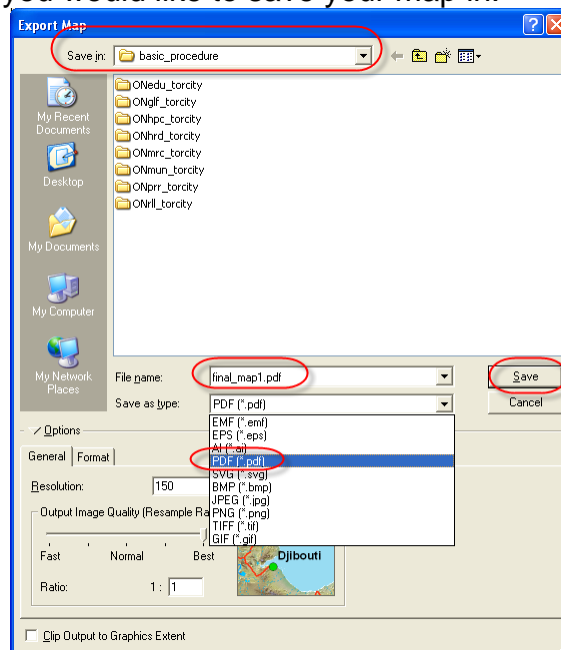
## D. Exporting the Image

Alternatively, you may opt to export your map and save it for later use rather than printing your map. ArcMap offers a variety of file types that you can save your map as. The following procedure will show you how to export your map, using one of the various file types.

1. Once you have completed *Steps 1* through *7* above or you are satisfied with your map, you may begin the export procedure. Click **File** from the main menu and **Select Export Map**.



2. The **Export Map** window will open. In the **Save In** window, browse to the location that you wish to save your map. In the **File Name** text box, chose an appropriate name for your map. In the **Save as Type** textbox select the format that you would like to save your map in.



3. Click **Save**.