



GIS Utilities: Map Composition Using ArcMap



Using the BARC for BAER Support

Document Updated: April 22, 2005



Assumption of the Map Composition topic:

- 1) All instructions assume you are in the Layout View.

Objective

- To describe components used to create a map (layout) in ArcMap

Required Data

- An image

Introduction and Overview of Procedure Steps

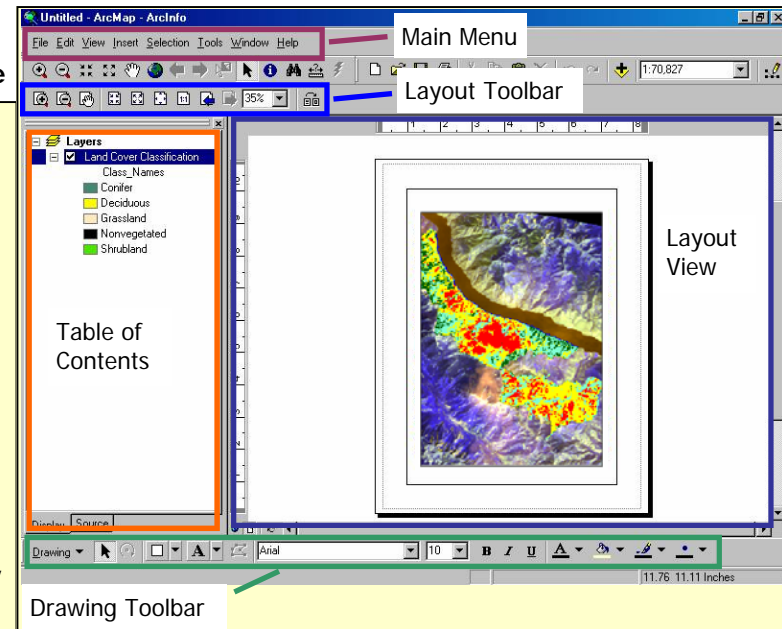
Map composition in ArcMap is a fairly simple process. The goal of this document is to describe commonly used components involved in creating a map in ArcMap.

1. Layout View Interface
2. Adding Data to Your Layout
3. Using the Layout Toolbar
4. Using the Drawing Toolbar
5. Inserting Map Elements
6. Printing Your Map

I. Layout View Interface

Figure 1. The Layout View Interface in ArcMap. There are five main components to Layout View Interface. They include:

- **Main Menu.** Stores several functions hidden in menus.
- **Layout Toolbar.** Used to explore your map.
- **Table of Contents.** The table of contents lists all of the data layers of a map.
- **Layout View.** The layout view displays your map.
- **Drawing Toolbar.** Used to add and modify graphics and text to your map.



¹ Produced by the USDA Forest Service-RSAC. A Forest Service version of ArcGIS was used to develop this document. No warranty is made as to the completeness or accuracy.



Add Data button

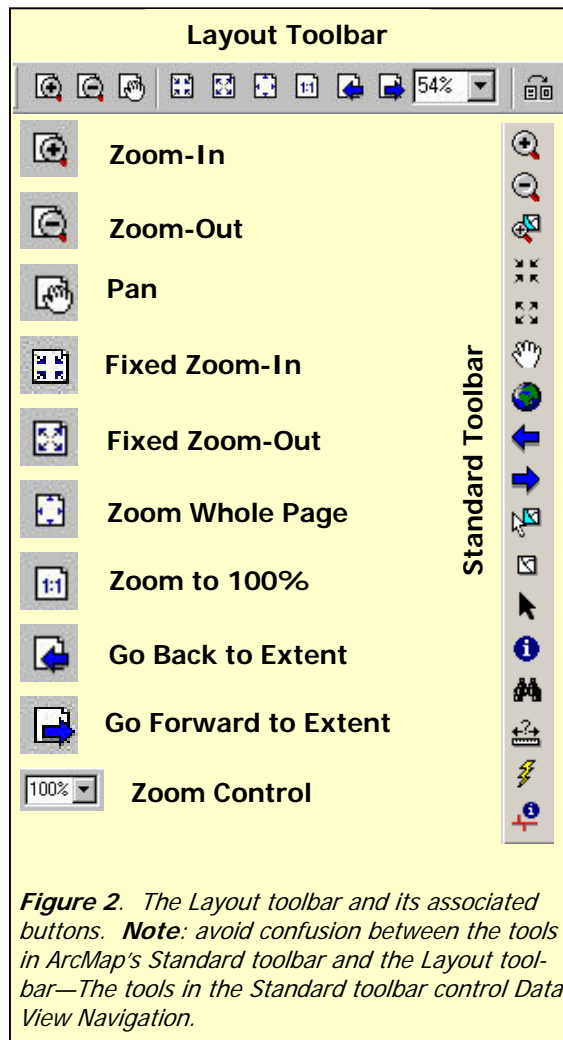


Figure 2. The Layout toolbar and its associated buttons. **Note:** avoid confusion between the tools in ArcMap's Standard toolbar and the Layout toolbar—The tools in the Standard toolbar control Data View Navigation.

II. Adding Data to Your Layout

1. Launch **ArcMap** from the **Start** menu (**Start | Programs | ArcGIS | ArcMap**).
2. Select **View | Layout View** from **ArcMap's Main Menu** (the **Data View** will switch to the **Layout View**).
3. Select the **Add Data** button from **ArcMap's Standard** toolbar.
4. Navigate to and select an **Image** (map).
5. Select **Add** to load the data into **ArcMap's Table of Contents**.
6. Repeat steps 3-5 to add any additional layers you wish to include in your map.

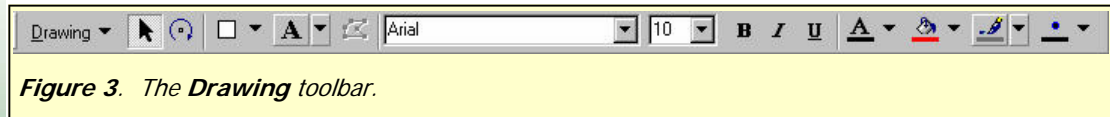
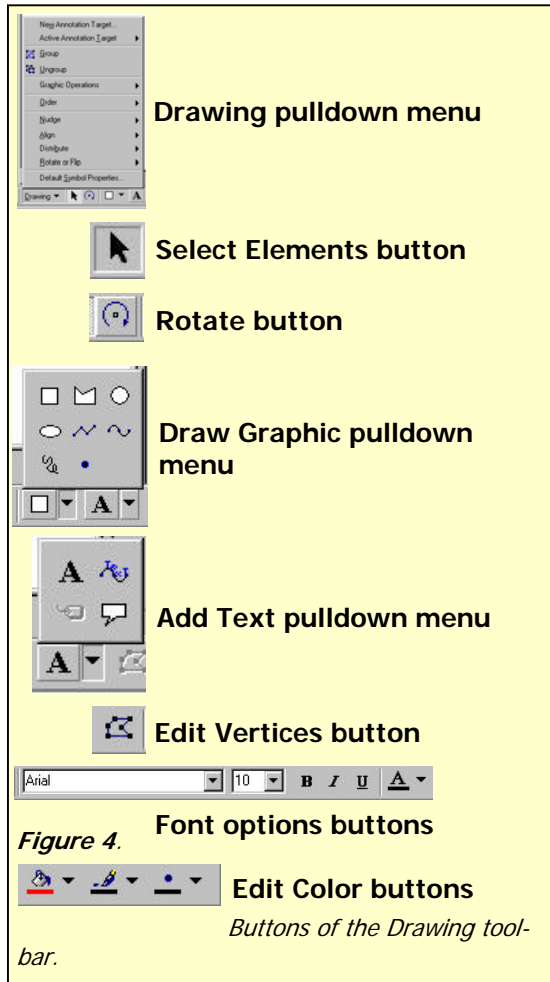
III. Using the Layout Toolbar

The focus of this section is to explore the Layout toolbar's capabilities—primarily how to navigate around your map (Figure 2).

1. If necessary, click **View | Toolbars** from **ArcMap's** main menu, and check **Layout** (do not uncheck if Layout is already checked).
2. Click-drag-and-drop the **Layout** toolbar to move it to an appropriate location in **ArcMap**.
3. Select the **Zoom-In** button from **ArcMap's Layout** toolbar.
 - Move the **Cursor** over your **Image**.
 - Single-click on your **Image** to zoom-in to an area of interest, or click-and-drag a rectangle around an area of interest.
4. Select the **Zoom-Out** button from **ArcMap's Layout** toolbar.
 - Move the **Cursor** over your **Image**.
 - Single-click on your **Image** to zoom-out from an area of interest.
5. Select the **Pan** button from **ArcMap's Layout** toolbar.
 - Move the **Cursor** over your **Image**.
 - Single-click and drag the **Cursor** across your **Image**. Release the click to stop panning.
6. Select the **Fixed Zoom-In** button from **ArcMap's Layout** toolbar. Your **Image** will automatically zoom-in.
7. Select the **Fixed Zoom-Out** button from **ArcMap's Layout** toolbar. Your **Image** will automatically zoom-out.
8. Select the **Zoom Whole Page** button from **ArcMap's Layout** toolbar. Your **Image** will be displayed in its entire extent in the **Layout View**.
9. Select the **Zoom to 100%** button from **ArcMap's Layout** toolbar. Your **Image** will be displayed at **100%** in the **Layout View**.
10. Select the **Go Back to Extent** button from **ArcMap's Layout** toolbar. Your **Image** will be displayed the same as your *previous* extent.
11. Select the **Go Forward to Extent** button from **ArcMap's Layout** toolbar. Your **Image** will be displayed to the same extent prior to selecting the **Go Back to Extent** button (Note: This button



- will only be active when you select the **Go Back to Extent** button).
12. Set a map extent from the **Zoom Control** pulldown menu from **ArcMap's Layout** toolbar. Your **Image** will be displayed to the map extent that you specify.



IV. Using the Drawing Toolbar

This section focuses on exploring the Drawing toolbar in the Layout View (Figure 3).

1. Select **View | Toolbars** from **ArcMap's Main Menu**, and check **Draw** (Note: for some of you, the **Drawing** toolbar will already be visible).
2. Move the **Drawing** toolbar (if needed) to an appropriate location in **ArcMap**.
3. Select the **Drawing** pulldown menu (Figure 4). You have the capability to edit map objects that includes:
 - Grouping/Ungrouping objects
 - Adjusting an object's position
 - Labeling objects
4. Select the **Select Elements** button when you wish to select, resize, or move text, graphics, or other objects on a map.
5. Select the **Rotate** button when you wish to rotate selected text or graphics.
6. Select a **Draw Graphic** button to draw a graphic on your map. Graphic types include:
 - Rectangles
 - Polygons
 - Circles (& Ellipses)
 - Lines (Straight & Curved)
 - Marker (Point)
7. Select the **Add Text** buttons to add text to your map. Text types include:
 - Text Box
 - Curved Text
 - Text Callout
8. Select the **Edit Vertices** button to edit vertices of a selected line or polygon in your map.
9. Set **Font options** for selected text in your map. Font options include:
 - Font Type
 - Font Size



Editing Map Elements

If you need to edit any element (e.g., a neatline, north arrow, legend, etc.), double-click on the element in your map and its properties dialog will appear. Make your changes and then select OK in the properties dialog to accept any changes to that element.

Use this technique to experiment with the appearance of an element until you are satisfied.

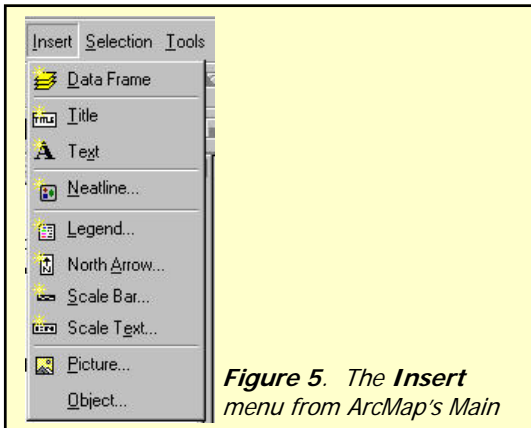


Figure 5. The Insert menu from ArcMap's Main

- Font Style (bold, underline, or italics)
 - Font Color
10. Select the **Edit Color** buttons to change the color of a selected graphic on your map. The **Edit Color** buttons include:
- **Fill Color:** to change the color of a polygon
 - **Line Color:** to change the color of a line
 - **Marker Color:** to change the color of a marker

V. Inserting Map Elements

This section will focus on describing how to insert some important elements into your map (Figure 5).

• Title

1. Select **Insert | Title** from **ArcMap's Main Menu**; a **Map Title** will automatically appear on your map.
2. Type in a new **Map Title**.
3. Edit the text using the **Drawing** toolbar.

• Text

1. Select **Insert | Text** from **ArcMap's Main Menu**; a text box will automatically appear on your map.
2. Type in the appropriate text.
3. Edit the text using the **Drawing** toolbar.

• Neatline

1. Select **Insert | Neatline** from **ArcMap's Main Menu**.
2. Specify appropriate parameters for your **Neatline**.
3. Click **OK**.
4. Inspect your **Neatline** on your map.

• Legend

1. Select **Insert | Legend** from **ArcMap's Main Menu**; this opens the **Legend Wizard**.
2. Ensure the legend you wish to add to your map is listed in the **Legend Items** section.
3. Click **Next**.
4. Type in a **Legend Title** and set **Legend Title Font Properties** and **Justification**.
5. Click **Next**.
6. Set appropriate **Legend Frame** properties.
7. Click **Next**.
8. Select the appropriate legend in the **Legend Items** section and set appropriate **Patch** parameters (Note: patch indicates legend symbols).
9. Set appropriate parameters in the **Space Parameters** section (spacing between legend elements).



10. Click **Finish**. Inspect your **Legend**—it should automatically appear in your map.

• **North Arrow**

1. Select **Insert | North Arrow** from **ArcMap's Main Menu**.
2. Select a **North Arrow** type.
3. Click **OK**. Your **North Arrow** should appear in the map.

• **Scale Bar**

1. Select **Insert | Scale Bar** from **ArcMap's Main Menu**.
2. Select a **Scale Bar** type.
3. Click **OK**. Your **Scale Bar** should appear in the map.

VI. Printing Your Map (Note: Check with the instructors before proceeding with this section).

This section will focus on describing how to print your map (Figure 6).

1. Select **File | Print Setup** from **ArcMap's Main Menu**.
2. Inspect the **Page Setup** dialog—ensure that all parameters are set appropriately.
3. Click **OK** to accept any changes.
4. Select **File | Print Preview** from **ArcMap's Main Menu**.
5. Inspect the **Preview** dialog. This is how your map will appear when printed with its current printing settings.
 - Consider referring back to the **Page Setup** dialog and modifying its parameters if the map does not appear as you like.
6. Select **File | Print** from **ArcMap's Main Menu**.
7. Click **OK** in the **Print** dialog to print your map.

To summarize, you:

- Explored the **Layout and Drawing** toolbars,
- Learned how to integrate important map elements into your map, and
- Learned the appropriate steps for printing your map.

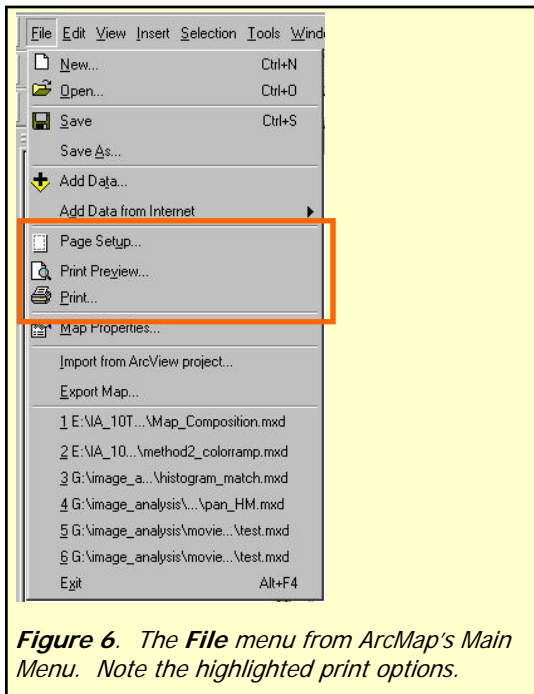


Figure 6. The File menu from ArcMap's Main Menu. Note the highlighted print options.