

Appendix B

ArcReader User Guide

For the Southeast Ocean Based Renewable Energy Project

INTRODUCTION

The purpose of this document is to provide guidance and assistance to users with ArcReader, so that they can explore the two published map files (PMFs) which are included in the data delivery CD. The CoastalGA_rasters.pmf contains all of the raster data sets and the CoastalGA_vectors.pmf contains all of the vector data sets such as, points, lines, and polygons. The data sets in both of the map files are not stored in the map files themselves, but are referenced in the PMFs folder under \\GIS_COASTGA\PMFS\Raster\data and \\GIS_COASTGA\PMFS Vector\data.

ArcReader is free software developed by the Environmental System Research Institute, Inc. (ESRI) to allow users to access PMFs generated from ArcMap or ArcGlobe and may be downloaded at <http://www.esri.com/software/arcgis/arcreader/download.html>. The software allows anyone with a computer that meets the minimum system requirements to interactively view, explore, and analyze packaged spatial data as well as print customized views of a published map document. Essentially, PMFs are a means to distribute and share maps and information with multiple people—novices and experts of geospatial technology alike.

SYSTEM REQUIREMENTS

ArcReader 9.3.1 is compatible on Red Hat Enterprise Linux AS/ES/WS 4.0 and 5.0, Sun Solaris 9 and 10 SPARC, and Windows 2000, 2003, 2008, 7, Vista, and XP with the following requirements:

- CPU speed of 1.6 GHz
- Minimum of 1 GB of Memory/RAM
- 24 bit color depth
- 1024 x 768 screen resolution
- Minimum of 441 MB of disk space on Windows
- Minimum of 417 MB of disk space on Linux
- Minimum of 440 MB of disk space on Sun Solaris
- 24-bit capable graphics accelerator

Please refer to <http://wikis.esri.com/wiki/display/ag93bsr/ArcReader> for specifics and limitations with these operating systems.

GETTING STARTED WITH ARCREADER

Opening a PMF

There are a few ways to open a PMF.

1. Go to Start > All Programs > ArcGIS > ArcReader. To open one of the PMFs, CoastalGA_rasters or CoastalGA_vectors, either click on the open file icon in the upper left hand corner  or go to the File menu and choose Open. Navigate to the location of the PMF and click on the Open button or double click on the file name.
2. An alternative method is to double click on the PMF directly from the folder in which it is located.

ArcReader Interface

Figure 1 shows the ArcReader user interface, which is comprised of seven main components:

1. Map Window
2. Map Window Options
3. Coordinates Window
4. Table of Contents
5. Menu Bar
6. Toolbar
7. Toolbar Information Window

Please note that the Coordinates Window and the Toolbar Information Window are part of the Status Bar.

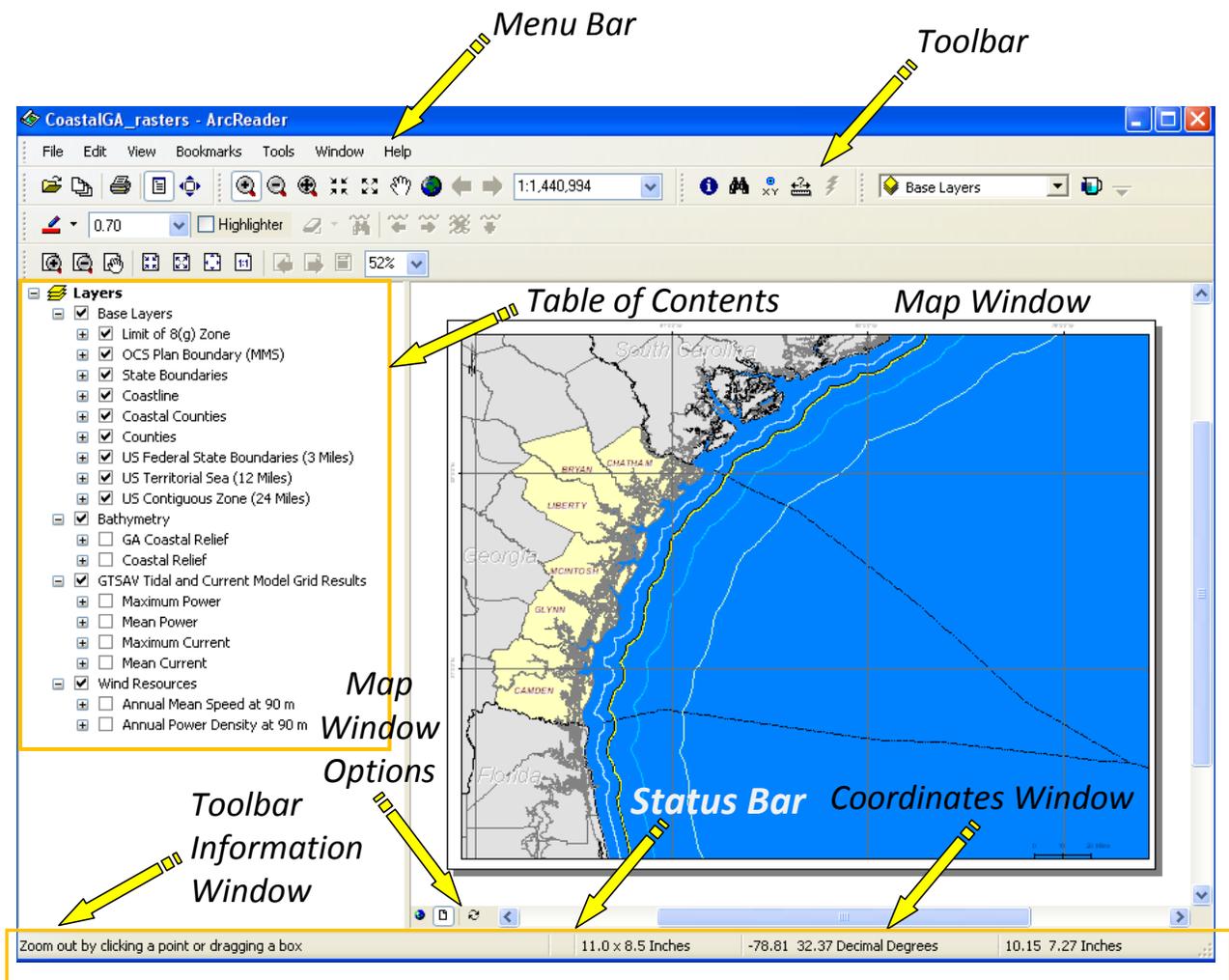


Figure 1. ArcReader Interface

Map Window

The map window displays all of the layers on the map file. Only the layers that are toggled on in the *Table of Contents* (refer to *Table of Contents* section for more information) are visible.

Map Window Options

There are two options to view the data layers in a map file: Data View or Layout View. Both views allow the user to interactively view the map.

Layout View

The Layout View is the default view on initial launch of either of the PMFs. As shown in Figure 2, the Layout View shows the map scale, north arrow, graticules (grid lines), coordinates, page size, and legend. (The legend was not included in the PMFs due to visual constraints. However, the *Table of Contents* may be used as a substitute.)

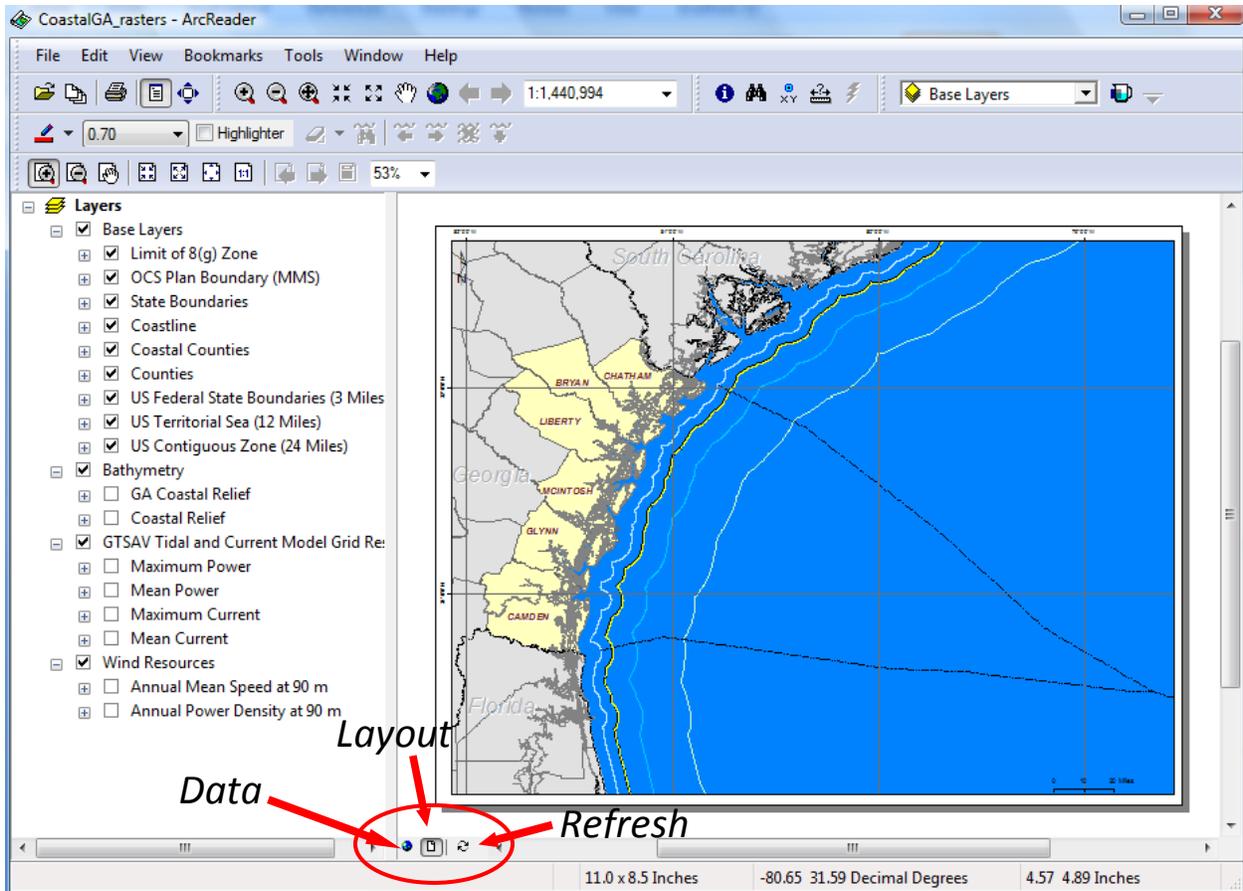


Figure 2. Map View Options

Data View

The Data View focuses specifically on the data sets in the data frame, which contains all of the data sets on the map. Unlike the Layout View, the Data View does not display the north arrow, map scale, graticules, and page size. The user can change the current view extent by using the tools in the Navigation toolbar (refer to the Toolbar section for more information).

Refresh

Located next to the Layout View button is the Refresh  button, which can be used to redraw the map.

Coordinates Window

All of the data sets are represented in the Geographic Coordinate System, World Geodetic Survey 1984. As shown in Figure 3, the longitude and latitude are in decimal degrees and appear directly below the Map Window. The coordinates are dynamic, which means they change with the movement of the cursor across the map.

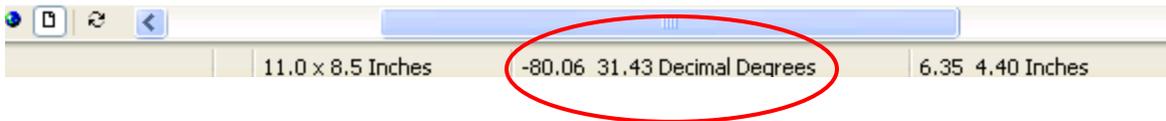
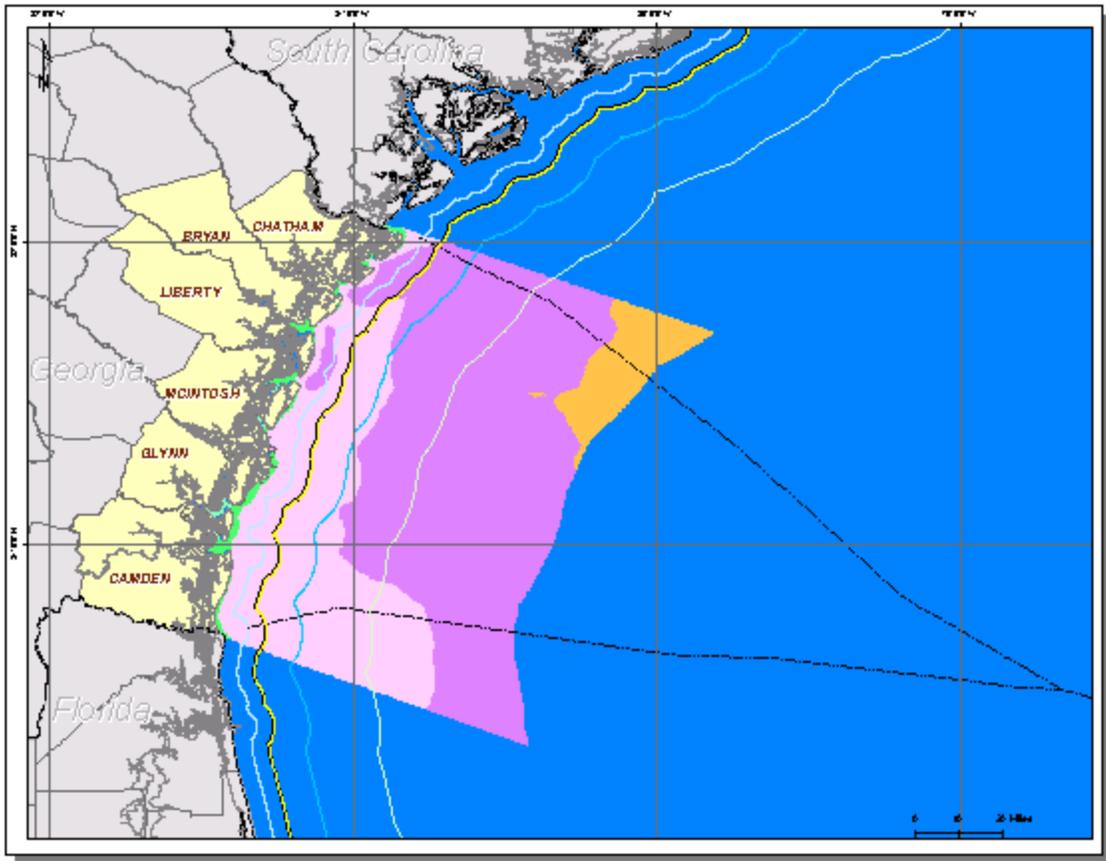


Figure 3. XY Coordinates

Table of Contents

The Table of Contents is a hierarchal list of all of the layers that are on the map. ArcReader draws the map beginning with the bottom layer upward, which means that the top most layer is drawn last. As each layer is being drawn, its visibility takes precedent over all of the layers that are below it, which means that a layer may be visibly hidden because a layer above it is covering it up. This problem can be solved by toggling off the layer(s) above the layer of interest.

As shown in Figure 4, a check mark in the box next to the name of a layer indicates that the layer is visible; whereas an empty box indicates that the layer is not visible or is toggled off. In this example, all of the base layers are toggled on and almost all of the other layers are toggled

on as well. However, all of the layers that are not part of the base layers group that are toggled on are not visible except for the annual mean speed at 90 meters.

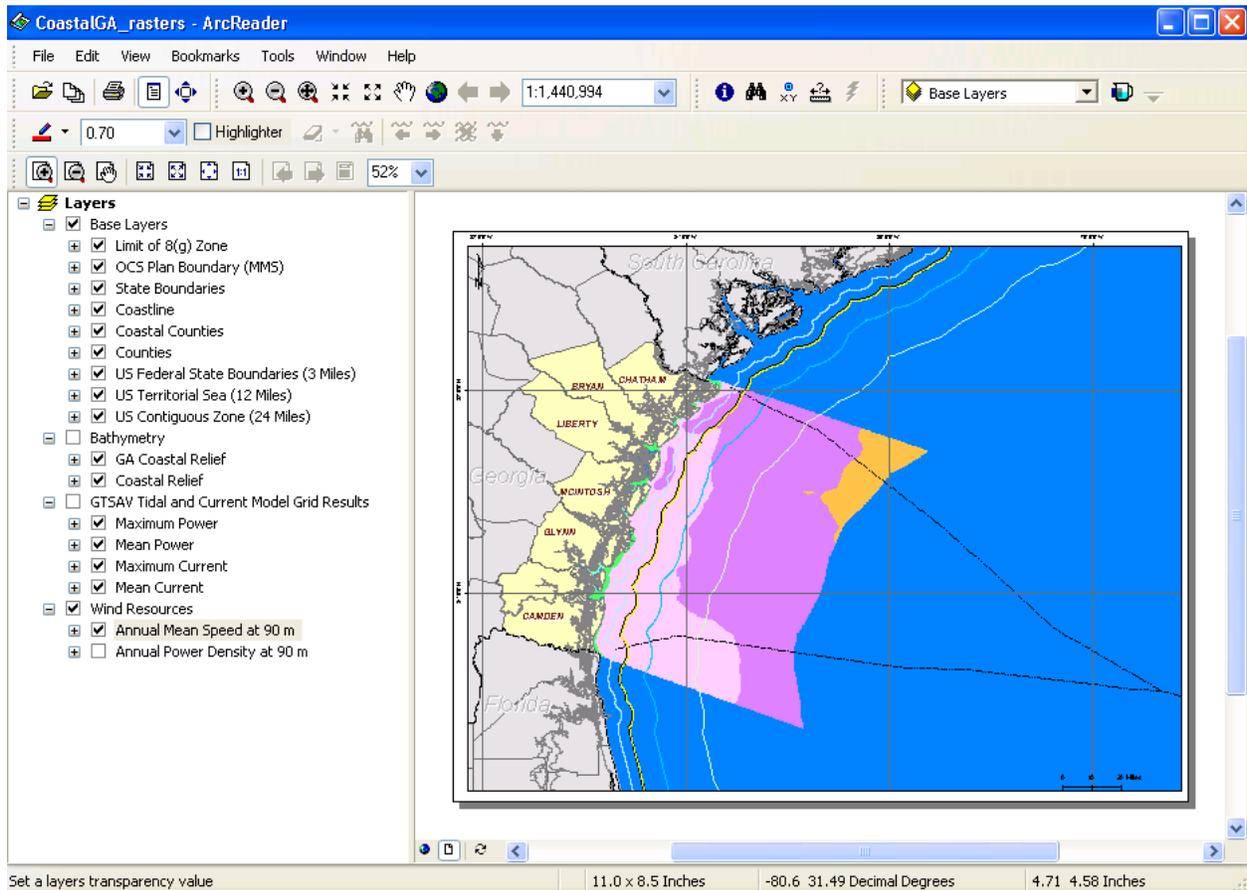


Figure 4. Visible and Non-visible Layers

Grouped Layers

Notice that there are four grouped layers in Figure 4: Base Layers, Bathymetry, GTSAV Tidal and Current Model Grid Results, and Wind Resources. The layers were grouped by common themes or sources. For example, the bathymetry group includes the two seafloor raster data sets that were retrieved from NOAA National Ocean Service Hydrographic Data Base. The layers in the Bathymetry and GTSAV Tidal and Current Model Grid Results groups are not visible because the main group titles are not toggled on. Thus, the group title must be checked in order to make a layer(s) visible within that group. This allows the user to easily control the visibility of the layers and identify commonalities within the grouped layers.

In addition, notice that the annual power density at 90 meters in the Wind Resources group is not toggled on. This means that it is not visible. If it was turned on, the user may have to toggle off the layers that are above it in order to see it.

Menu Bar

The menu bar allows access to different commands and is located at the top of the map document. The seven menus are: File, Edit, View, Bookmarks, Tools, Windows, and Help.

File Menu

Figure 5 shows the various commands in the File menu, which are mostly standard menus except for the Document Properties and Export Map functions. Document Properties contains two tabs: General and Data. The General tab contains the document information such as filename, published date, etc. The Data tab provides a list of the data sets that are inaccessible on the map. The Export Map function allows the user to export the current map view to a bitmap file.

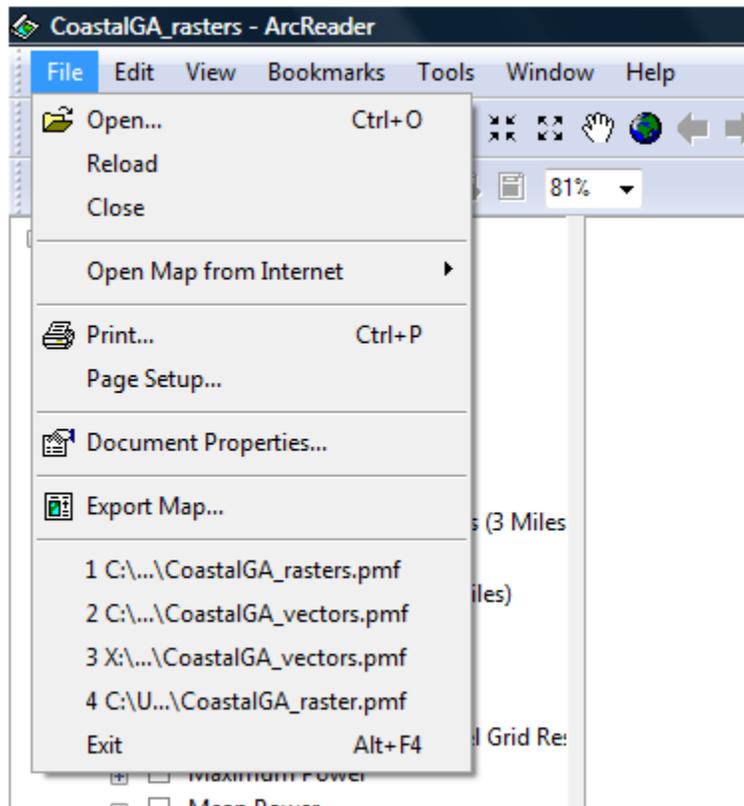


Figure 5. File Menu

Edit

As shown in Figure 6, the Edit menu has four commands: Copy Map, Find, Go to XY, and Clear Temporary Graphics. Copy Map allows the user to copy the current map extent to Windows clipboard and paste it in another application. The Find command may be used to locate a specific feature, place, or address based on user defined criteria. Figure 7 shows an example

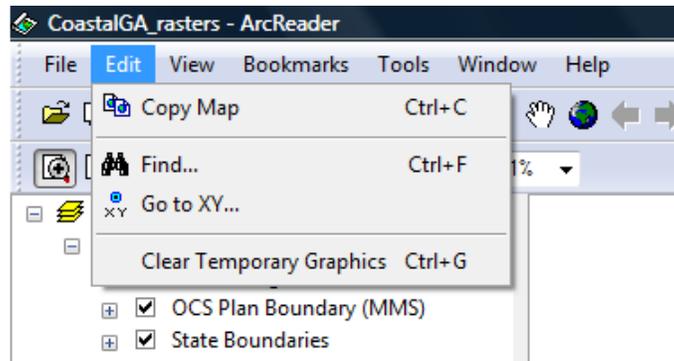


Figure 6. Edit Menu

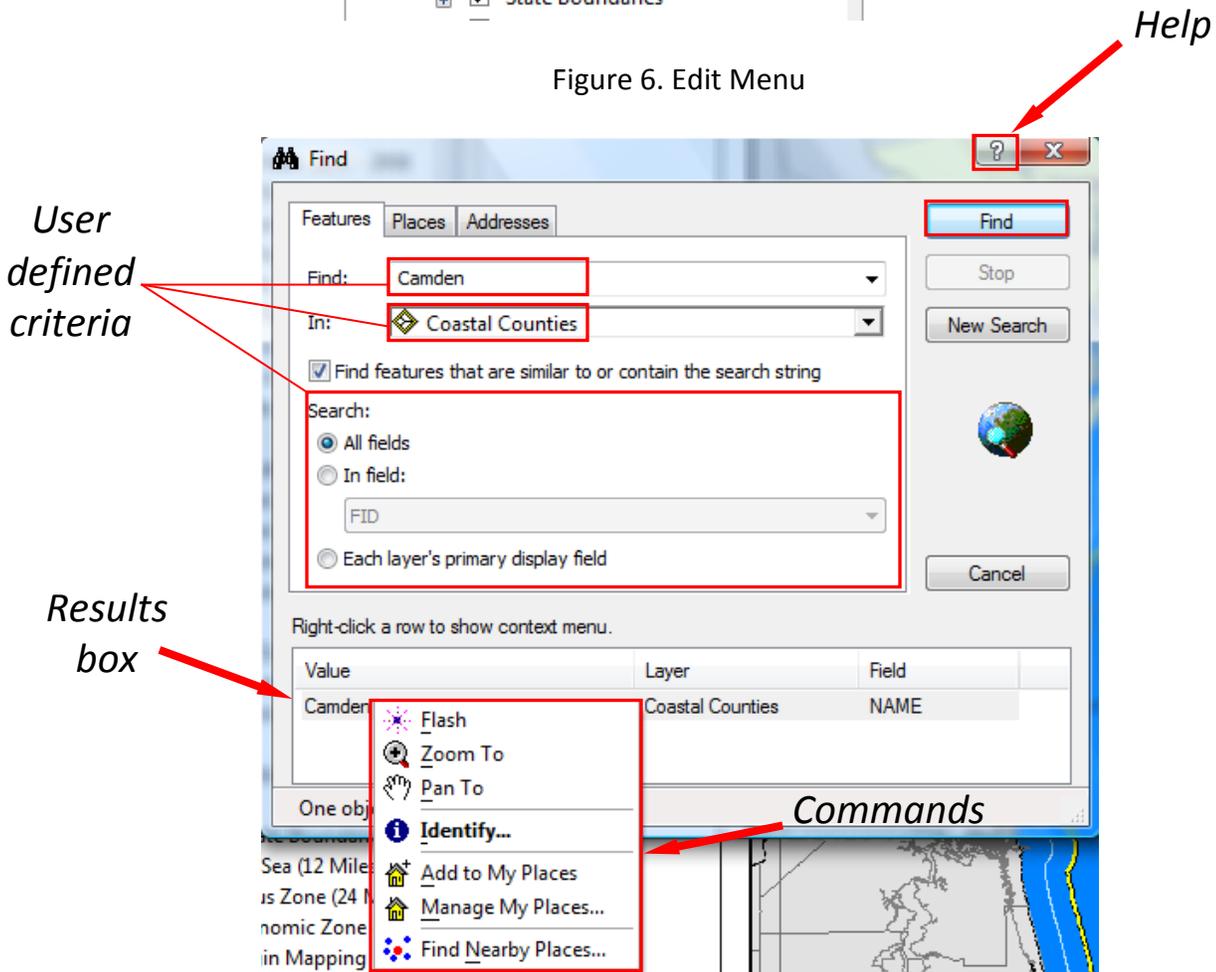


Figure 7. Locating a Specific Feature using the Find tool

of an input and its result. Once the feature has been located, the user can right click the name of the feature and choose from any of the seven commands available. The final command in the Edit menu is Clear Temporary Graphics, which can be used to remove graphics such as routes, callouts, and labels drawn using the Find Routes command which is under the Tools menu (refer to the Tools menu section for more information).

View

The View menu allows the user to control the features that are visible on the screen. Figure 8 shows the multiple commands available under the View menu. Data View switches the view from Layout View to Data View. Layout View does the reverse. As shown in Figure 9, Zoom Data allows the user to interactively change the data view (refer to the Map Windows Option section for more information) by zooming in and out, viewing the full extent, going to the previous extent, or going to the next extent.

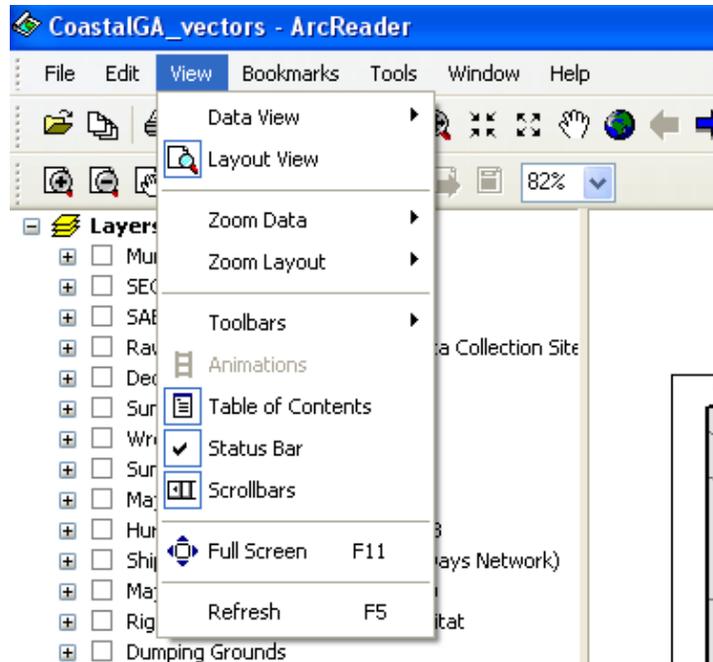


Figure 8. View Menu Commands (Animations command is unavailable)

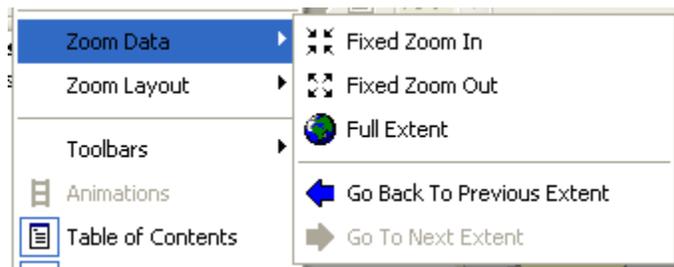


Figure 9. Zoom Data Commands

The Zoom Layout command only works in the layout view (refer to the Map Windows Option section for more information) and allows the user to zoom in and out. Figure 10 displays the multiple preset layout view extents.

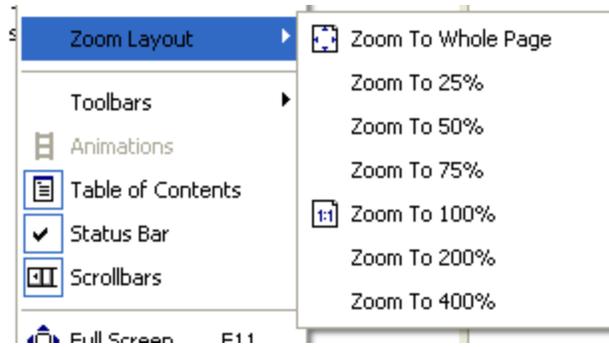


Figure 10. Zoom Layout Preset Scales

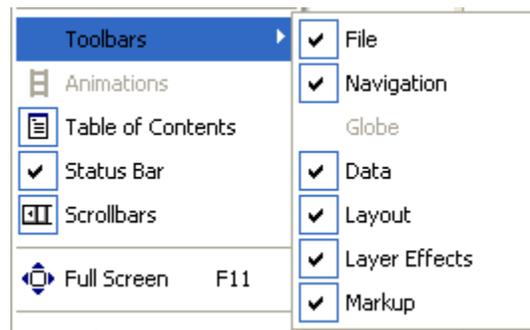


Figure 11. Toolbars Commands

Figure 11 shows the six toolbars on the map: File, Navigation, Data, Layout, Layer Effects, and Markup. The user can control their visibility by toggling them on or off. They are all visible by default. The Table of Contents, Status Bar, and Scrollbars can be removed from the user interface simply by highlighting them. The Full Screen command enlarges the map view to full screen mode and removes the menu bar and the table of contents. To switch the view back to the Windowed Application view (the original view), the user can click on the following icon



Bookmarks

As shown in Figure 12, there are two preset map scales: Georgia's Coast and OCS Plan Boundary. The view extent of Georgia's Coast is at a larger scale than the OCS Plan Boundary. Figure 13 shows the differences between the two view extents.

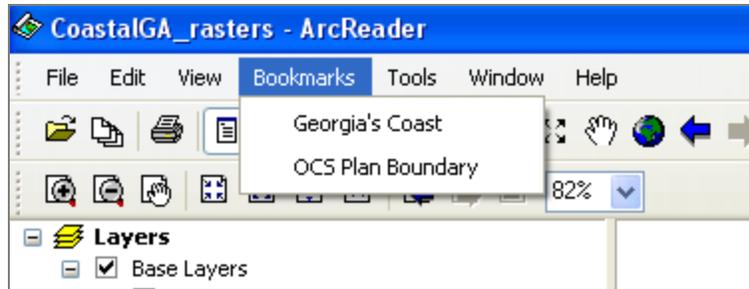
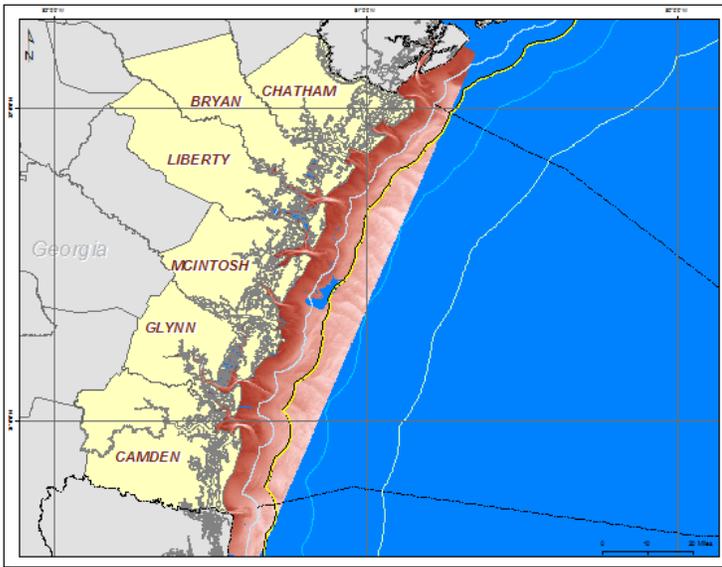
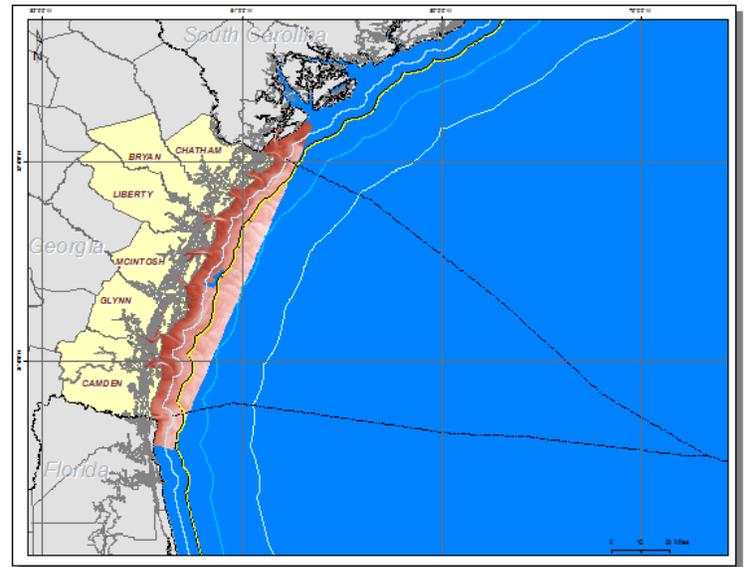


Figure 12. Bookmarks



Georgia's Coast



OCS Plan Boundary

Figure 13. Preset Bookmarks

Tools

The Tools menu contains the Navigation, Data, Layout, Markup, My Places, Find Route, Find Nearby Places, and Options commands (refer to Figure 14). The Navigation and Layout commands allow the user to change the view extents in the data view and the layout view, respectively. As shown in Figure 15, the user can access the Identify and Measure tools under Data. A dialog box pops up when the Identify tool is chosen. When the user clicks on a feature on the map, the dialog box is filled with information about that feature. In addition, the user can determine which layer(s) to identify (refer to Figure 16). Please note that choosing *All layers* will take a longer time to process as opposed to choosing *Top-most layer* or one of the layers from the pull down menu.

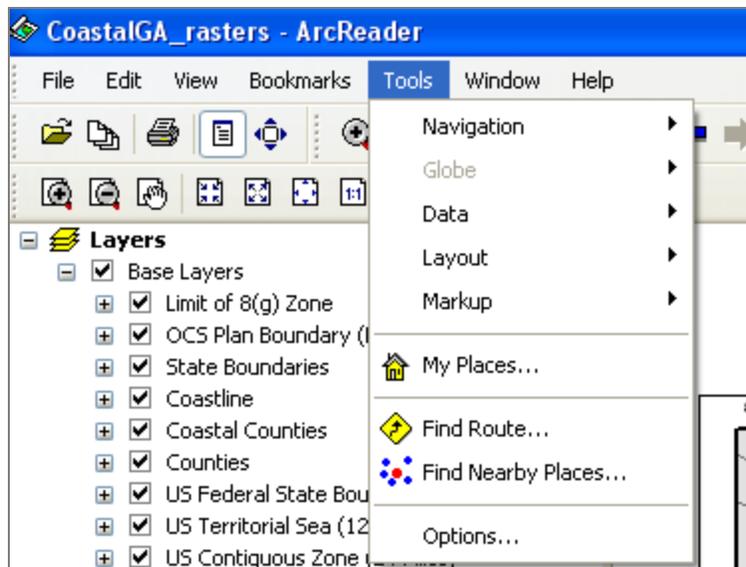


Figure 14. Tools Menu Commands (Globe command is unavailable)

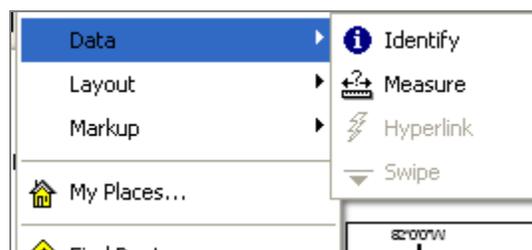


Figure 15. Data Command (Hyperlink and Swipe commands are unavailable)

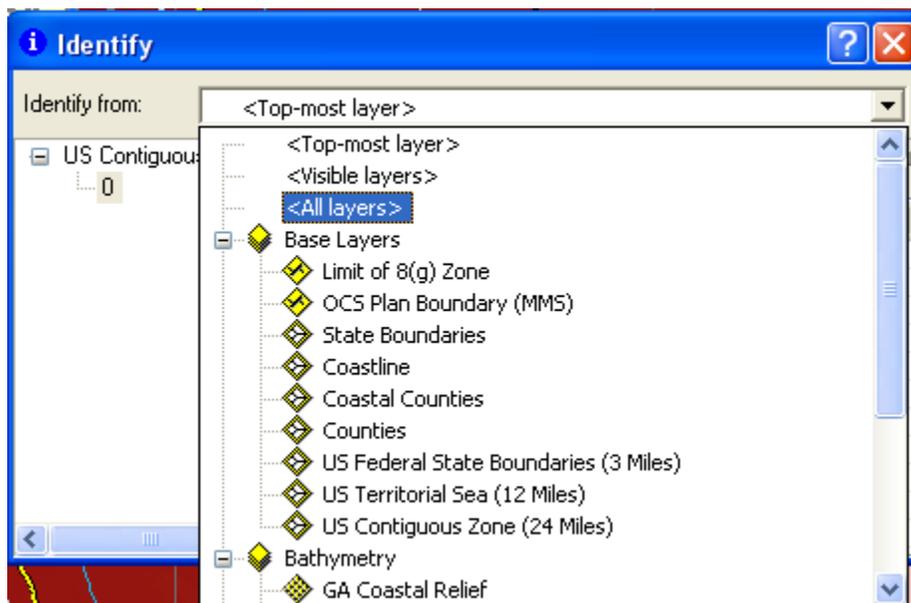


Figure 16. Identify Dialog Box



Figure 17. Markup Command

As shown in Figure 17, the Markup command contains the tools for adding comments or drawings on the map. Once the tool is chosen, the user can add markups by left clicking and dragging the mouse. Releasing the mouse ends the drawing.

The Find Route command generates a route between places. To add places, click on the following icon  in the Find Route dialog box. The most frequently used places can be saved under My Places. The Find Nearby Places tool allows the user to locate cities, counties, or airports within a specified distance from an identified location.

As shown in Figure 18, the Options dialog box contains the display settings of the map, which allows the user to control its appearance. The General tab contains settings that control the map on initial launch. Since both of the PMFs are not Globe maps, the 3D tab is irrelevant.

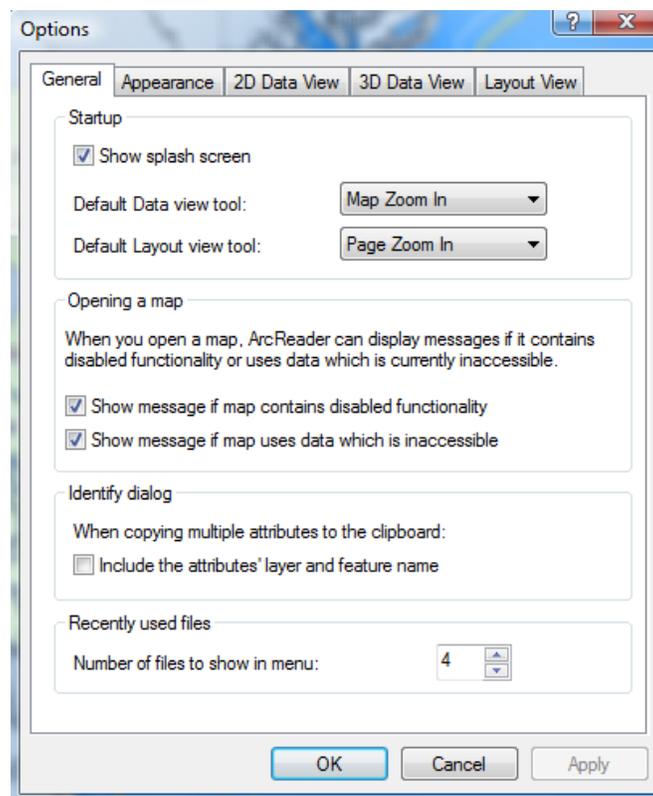


Figure 18. Options Dialog Box

Windows

The Windows menu contains the Magnifier Window tool, which enlarges an area by 400%. The window can be placed anywhere on the map by dragging the top of the window and placing it over an area of interest. Figure 19 shows the window as it is being dragged across the map, and Figure 20 shows the enlarged area.

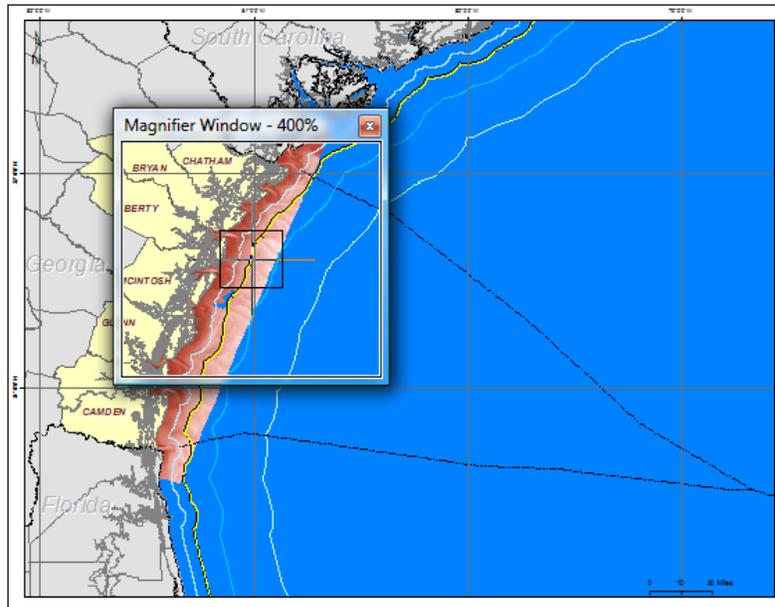


Figure 19. Magnifier Window as it is being dragged over an area on the map.

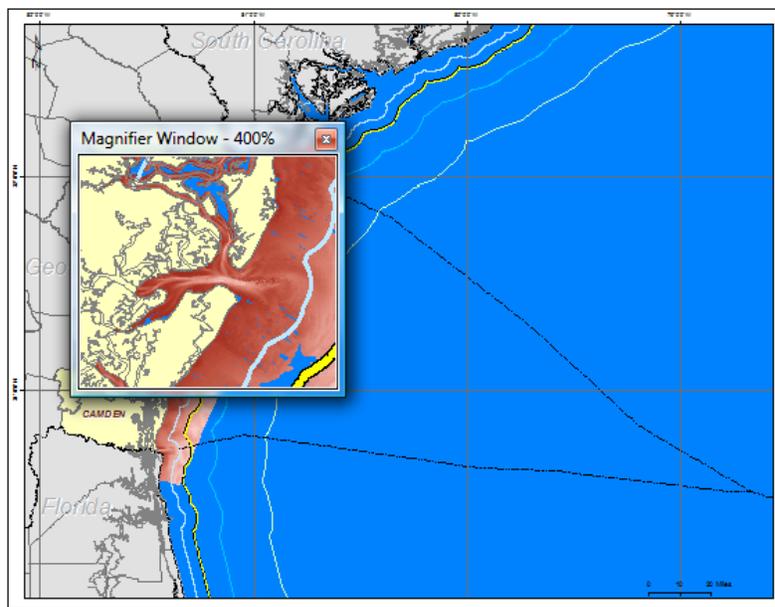


Figure 20. Magnified Area

Help

The Help menu contains information about the commands, functions, and tools in ArcReader.

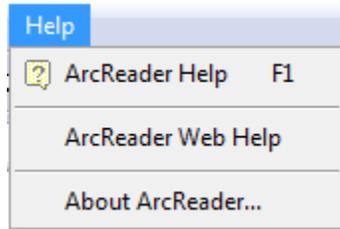
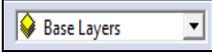
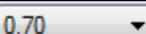


Figure 21. Help Menu

Toolbar

Table 1 lists the six toolbars and the functions of the tools under each toolbar.

Table 1. Tools in ArcReader		
<i>Toolbar</i>	<i>Icon</i>	<i>Function</i>
FILE		Open a PMF
		Open a recently opened PMF
		Print current map view
		Toggle table of contents on or off
		Switch to full screen mode
		Switch to Windowed application
NAVIGATION (Data View Tools)		Zoom in
		Zoom out
		Continuous zoom
		Fixed zoom in
		Fixed zoom out
		Pan map
		Full extent view
		Go to previous view extent
		Go to next view extent
		Display of current map scale and dropdown of preset scales
DATA		Identify map feature

<i>Toolbar</i>	<i>Icon</i>	<i>Function</i>
DATA		Find features, places, or addresses
		Find XY location
		Measure line, distance, or area
		Hyperlink (unavailable because there are no hyperlinked data)
LAYER EFFECTS		Display of layer to make transparent and dropdown box of layer(s) to make transparent
		Set transparency value
MARKUP		Draw markup (dropdown contains multiple colors to choose from)
		Set weight (thickness) of markup pen
		Highlight using pen
		Erase highlights and markups (There are four options: erase entire ink stroke, erase using small eraser, erase using medium eraser, and erase using large eraser.)
		Find markup
		Find previous markup
		Find next markup
		Delete markup
		Export markup
LAYOUT		Zoom in
		Zoom out
		Pan page
		Fixed zoom in
		Fixed zoom out
		Zoom to whole page
		Zoom to 100% page view
		Go back to previous page extent
		Go to next page extent (command unavailable)
		Change map title (command unavailable)
		Current page extent and dropdown of preset extents

Toolbar Information Window

There are two ways in which information about a tool is shown when the cursor is pointed at a button. As shown in Figure 22, the left hand side of the Status bar displays information about the tool and a small dialog box appears in the lower right hand corner of the cursor.

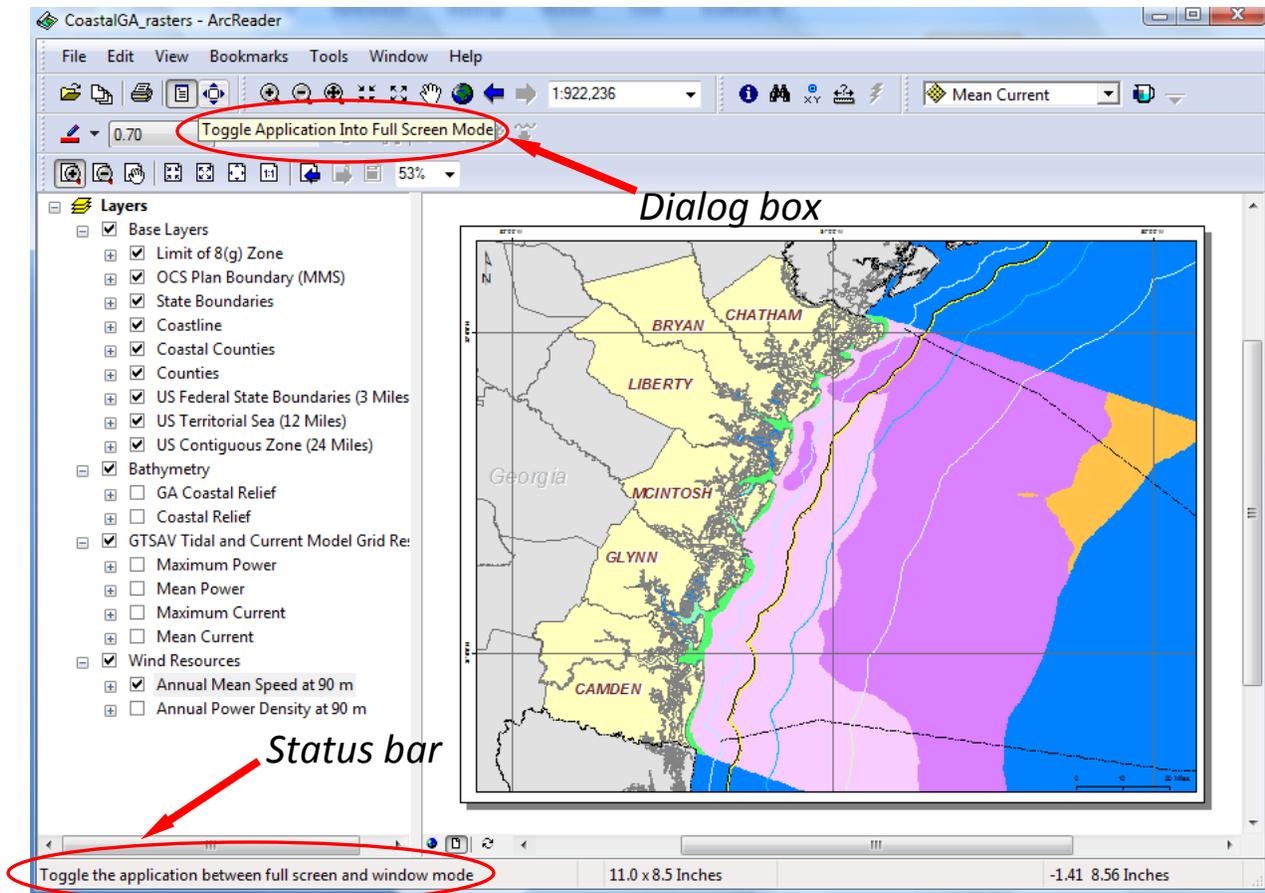


Figure 22. Two ways in which ArcReader identifies buttons on the Toolbars

Additional Help

ArcReader Tutorial

http://webhelp.esri.com/arcgisdesktop/9.3/index.cfm?TopicName=ArcReader_Tutorial

Overview of ArcReader

<http://www.esri.com/software/arcgis/arcreader/index.html>

System Requirements

<http://wikis.esri.com/wiki/display/ag93bsr/ArcReader>

If further assistance is needed, please contact Tony Giarrusso, Research Scientist at the Center for Geographic Information Systems, via email at anthony.giarrusso@coa.gatech.edu.