



**USER'S GUIDE TO COMPUTER TOOLS FOR INFORMATION
SHARING IN THE SOUTHWEST**

SWEPIC, SWEMP AND SW-WIMS

Appendix A

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Appendix A: Tips for Using the SWEMP IMS

Getting Started

An IMS is a way that a web user can do some basic GIS activities using data that are stored on another server. If you are new to GIS activities or need a review of how to navigate and use these tools in an IMS, we suggest you print out this help to use as a guide in exploring the SWEMP IMS.

This guide starts out by describing the features and basic concept of the SWEMP IMS and then gives examples specific to using the SWEMP IMS.

When you initially open the IMS, a **viewer** that looks like the screen below will appear. Don't worry if you see a dancing "nasty weed" beforehand; nasty weed dances every time a view is being generated and loaded. The time it will take to process a command will depend on your computer speed and Internet connection speed.

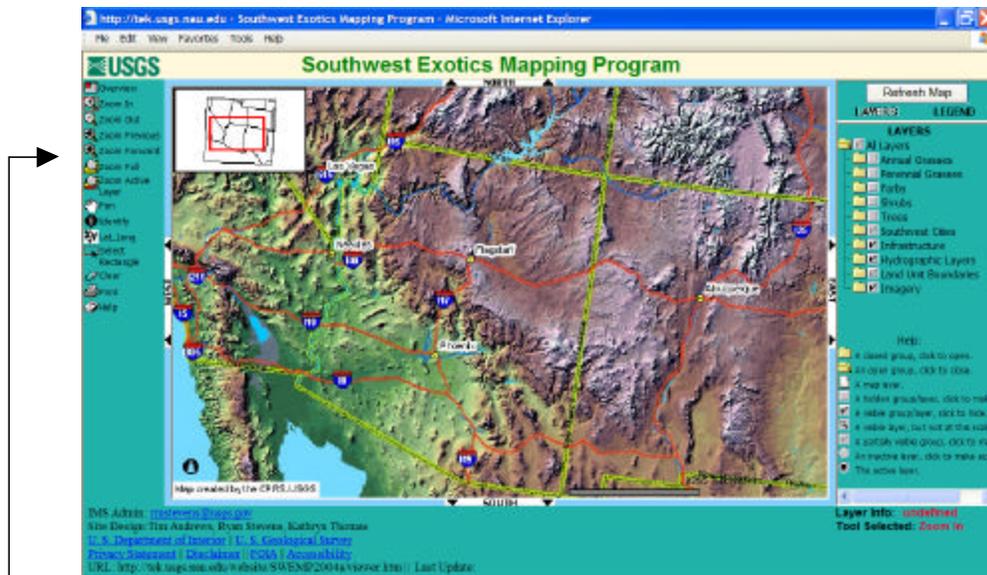


Figure 1. The IMS viewer showing the opening map display for SWEMP.

Toolbar

The IMS lets you create a map by putting one or more layers of information in the map display window. A layer represents a map or image of one sort of thing. It can be a reference layer such as a map of highways, or a satellite image. Or, the layer can be a

thematic layer such as all the occurrences of a certain weed species. The IMS opens to a default map display with regional reference maps.

Basic Navigation

The toolbar on the left side of the map display provides the list of IMS tools you can use to manipulate and change the map in the display. You activate a tool by clicking on the icon with the left mouse button. For most tools, activating the icon enables the cursor to do a certain type of map function. In the lower left of the viewer, the tool you have selected shows after "Tool Selected". For example in Figure 1, ***Zoom In*** is selected as indicated by the red box around the tool on the toolbar and in the legend on the lower right.

When you hold the cursor over each icon on the toolbar, a short annotation will appear on the screen reminding you what the tool does. A fuller explanation of each tool is below.

 ***Overview***: This tool turns the overview map on or off. You don't see the overview map when it is off. When it is on the red box on the overview map will change to indicate the location shown on the map display.

 ***Zoom In***: This tool lets you zoom in or magnify the map display. Go to the top left corner of the area that you want to zoom in on, hold the left mouse button down, and drag the cursor to make a box to the area to zoom in. The view will redraw to this new area. You can repeat the process to zoom in even more. Another way to do this is to activate the tool by clicking it, and then moving it to and clicking it on a location on the map view. Each repetition zooms in by a factor of 2X. The IMS is set up so that when you have zoomed in so that the scale is 1:25,000 or smaller, a new set of reference layers will appear in the background.

 ***Zoom Out***: This tool lets you zoom out or shrink the map display. It operates in just the opposite way as ***Zoom In*** described above.

 ***Zoom Previous***: This tool let's you backup to a previous version of your map display. If you have done a series of ***Zoom In*** or ***Zoom Out*** commands, use ***Zoom Previous*** to back up through the versions.

 ***Zoom Forward***: This tool lets you go forward once you have gone backwards through versions of a map display. This tool is used in conjunction with ***Zoom Previous***.

 ***Full Extent***: This tool takes the map back to the very original map display.

 ***Zoom Active Layer***: This tool lets you show all occurrences or the entire extent of the active layer.

 ***Pan***: This tool lets you move around the map view. Click on the tool icon, place your cursor on the map, hold down the left mouse button, and then drag the view in a direction

that will bring onto the view the desired new areas. Release the mouse. The view will redraw automatically when you release the mouse.

 **Identify:** This tool lets you click on an active feature on the map display to see the database information associated with the site. Line up the cursor on the feature and click your left mouse. The information will appear in the window to the right of the map.

Lat/Long: (Unproject) Activate this tool and click on a map display feature to get a pop up window with the features' longitude and latitude coordinates in decimal degrees.

 **Select Rectangle:** Click on this tool and draw a box around map display features for which you want available database information. A pop-up window returns.

 **Clear:** Click on this tool to clear features selected with Select.

 **Print:** Click on this tool to create a printable map layout, with legend, of the map display. See Using the SWEMP IMS under Help for detailed instructions.

 **Help:** A short version of the toolbar functions pops up.

Making and exploring a map display

The IMS provides a variety of choices for constructing a particular map view. The right hand area of the viewer, to the right of the map display, is where the choices are made as to which layers go into a map view. The right hand area has two modes, "Layer" and "Legend." To make choices about a map display, be sure the "Layer" view is on. If not, click the word "Layer" at the top of this area.

Some terminology is important:

Group: This is a collection of layers with commonality, such as a group of infrastructure layers. The SWEMP IMS has so many layers that we needed to group them, such as a file folder would group a set of similar documents. Groups are either closed or open. When they are open, the icon looks like an open file folder and you will see a list of all layers in the group on the right of the map view. Click on the group icon to open the group.

Visible: Layers do not show up on the map unless you have checked them to be visible. Click on the square box next to the layer name to make that layer appear on the map view. All layers in a group can be made active by checking the box next to the group name. Some layers, intended for background, only show up at certain scales.

Active: A layer may show up on the map but you cannot query it unless it is active. Only one layer is active at a time. Check the round box next to the layer you want to be active. Also, the layer that is active is indicated on the lower right at "Layer Info".

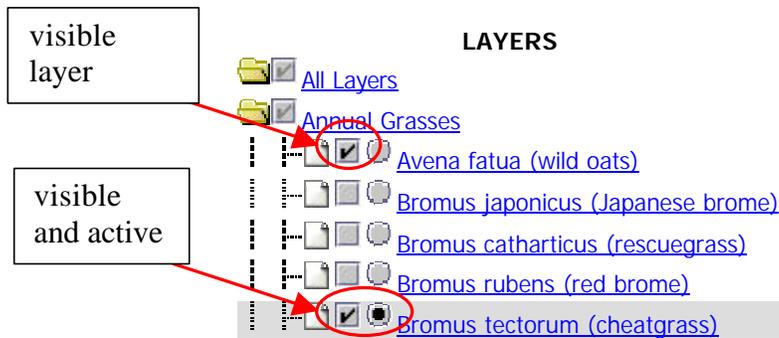


Figure 2. An example of part of the layers index on the right side of the viewer; this small section shows an open group with two visible thematic layers, one of which is also active.

Choices that you can make for each map display are the scale, the reference layers, and the thematic layers. The thematic layers for SWEMP are the layers of each weed species in the current SWEMP regional database. The layers are grouped by lifeform: annual grasses, perennial grasses, forbs, shrubs or trees. When you open up a group, you will see the list of weed layers by scientific name.

You can make multiple versions of a map display. “Zoom In” and “Zoom Out” change the scale. To choose the reference and thematic layers, open up a group and making the desired layers visible. You can choose all the layers in a group by clicking on the square box next to the group name.

Note: Every time you select and make visible a new set of layers and or change the active status of a layer, the map display has to be refreshed for the new layer configuration to show. Clicking the Refresh Map button in the upper right does this. After the “nasty weed” does it dance, while the map redraws, you will see your newly designed map display.



Figure 3. A map display of all *Bromus tectorum* occurrences in the SWEMP 2003 database. All the default reference layers have been maintained.

Examples of common SWEMP IMS activities

A) I want to see all occurrences of a particular weed.



Figure 4a. In the example *Acroptilon repens* has been chosen to be both visible (square box) and active (circular box). The lower right hand legend shows that it is the active layer.

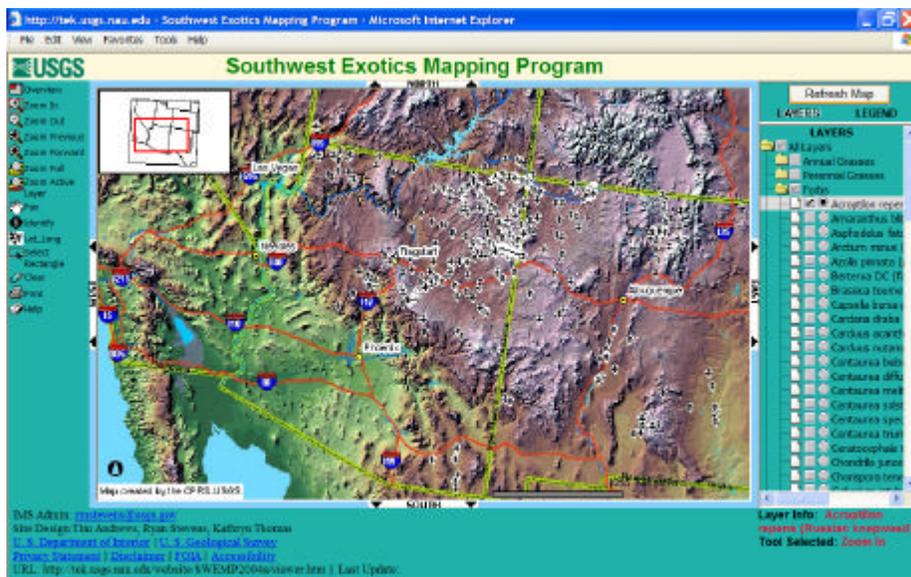


Figure 4b. The Refresh Map button has been clicked with the mouse so that *Acroptilon repens* occurrences show.

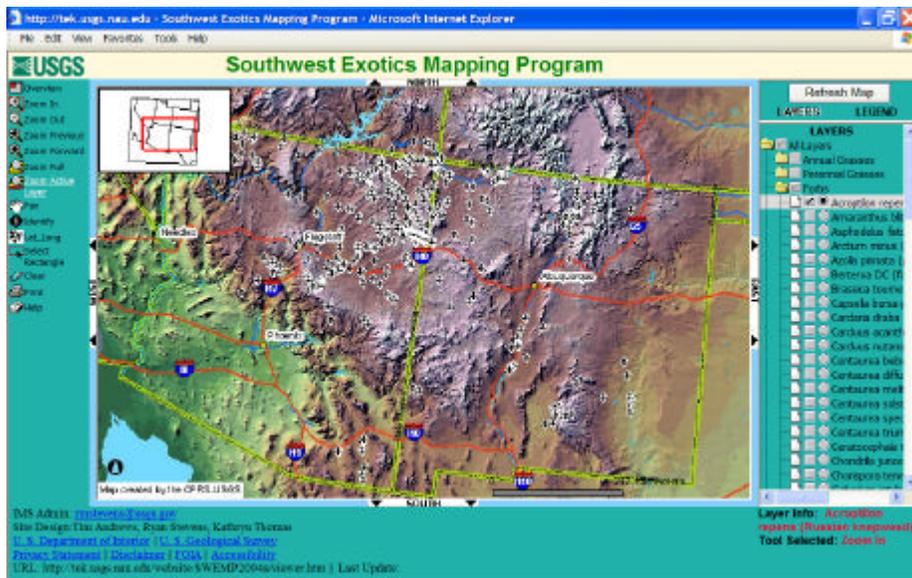


Figure 4c. The Zoom Active button was clicked to position the map display so that it shows the best placement for all the occurrences of *Acroptilon repens*.

B) I want to print a map of this weed but I want to change the background first (continuing on example from example A, above).

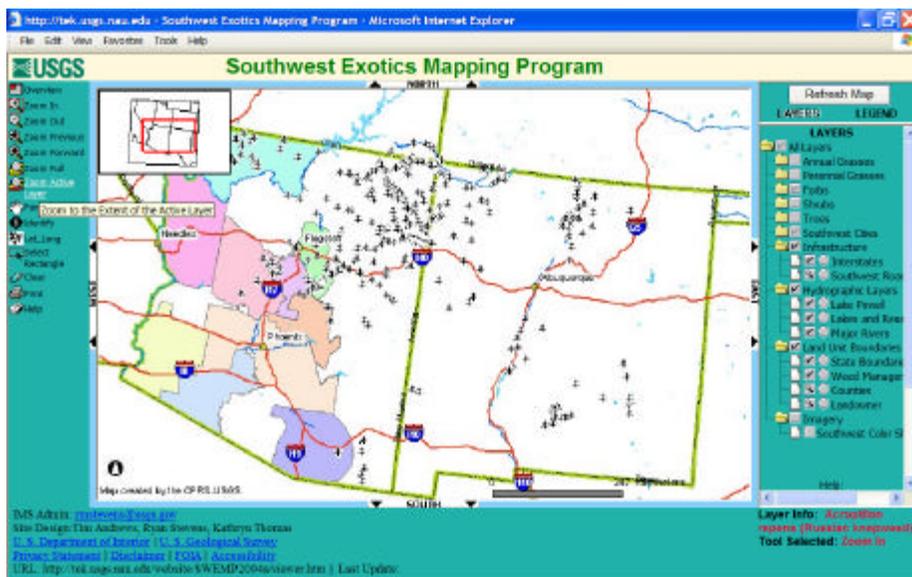


Figure 5a. The imagery background has been unactivated (unchecked box). The weed management area layer has been activated. Some reference layers can not be activated until the map display has been zoomed in to at least 1:25,000). A magnifying glass icon in the visible layer box indicates this.

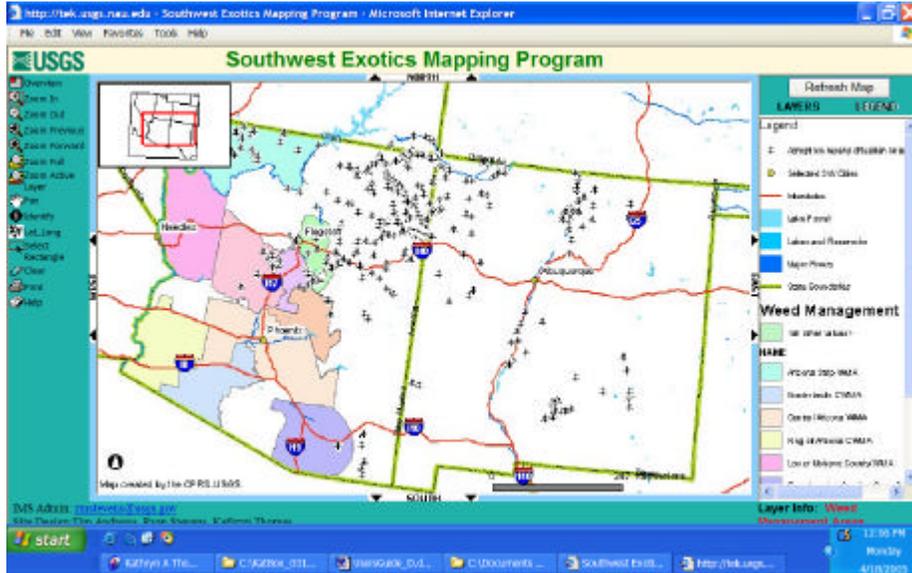


Figure 5b. The Legend text was clicked to change the information to the right of the map display from the layers index to a legend.

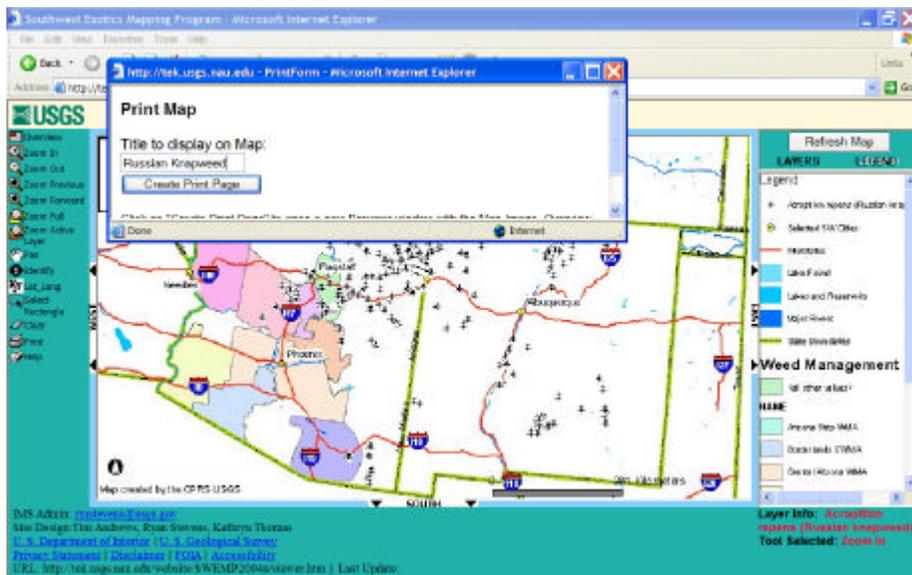


Figure 5c. The Print tool was activated. The pop-up window displayed has an area in which a title can be assigned to the map. In this example, the map is named Russian Knapweed. Next the Create Print Page button is clicked.

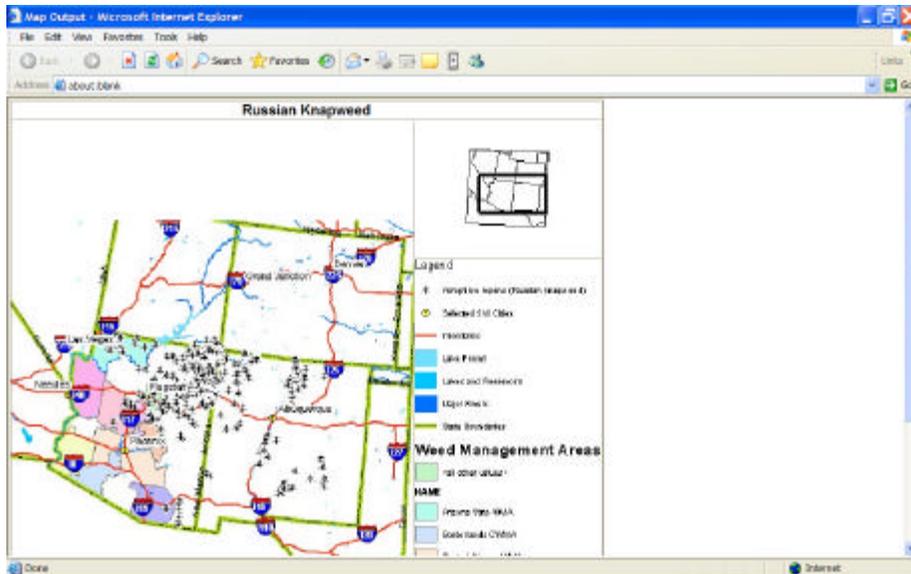


Figure 5d. The screen will show the map graphic that you have created. You can now either print the map or go back some steps and make changes in the map design.

C. I want to know more about a weed occurrence.

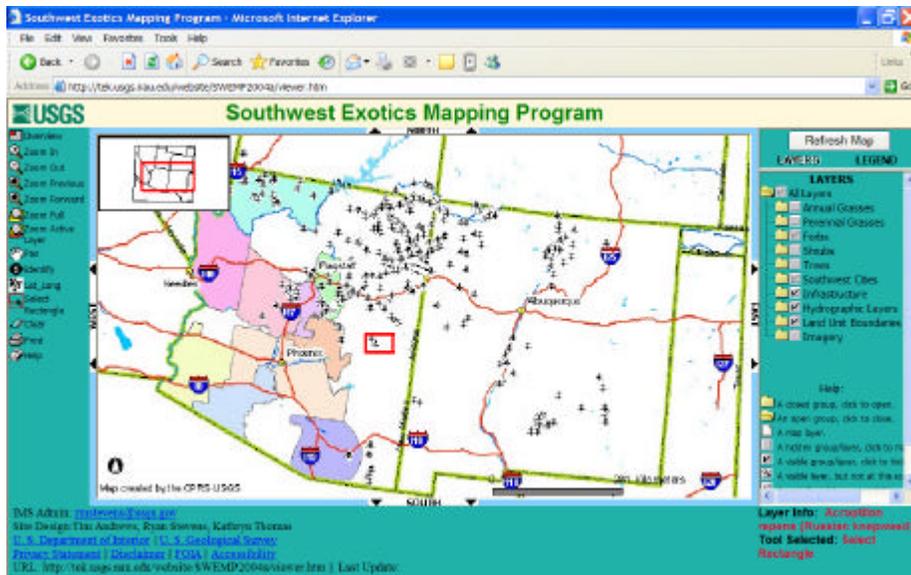


Figure 6a. There are two ways to get database information about weed record(s). In this example the Select Rectangle tool was used to select two weed records (red box). Alternatively the identify tool could have been selected to click on one weed record.

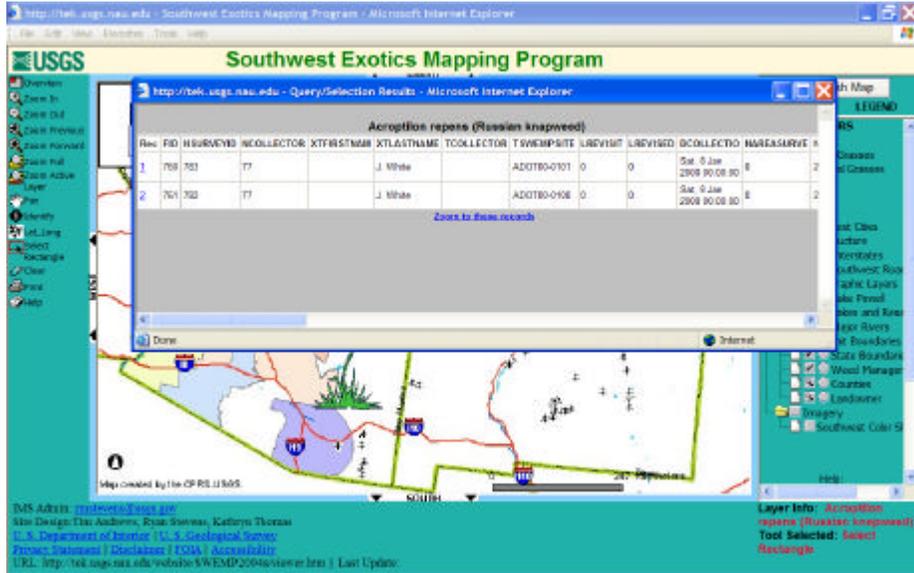


Figure 6b. The SWEMP database records for the selected weed occurrences appear on the screen. You can scroll across to see all data items.