

OR-TOOLS – Layer Browser User Guide For ArcMap 9.3

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OR/WA BLM

Latest Version: OR Toolbar v1.2.3482

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Tool Description

The Layer Browser tool  is a customized tool developed to make adding predefined layerfiles (.lyr) to an ArcMap session an easier task. For OSO BLM there will be a standard set of layerfiles created that represent both edit and cartographic versions of corporate themes. Other locations or organizations can use whatever layerfiles their business needs require.

The layerfiles can be added to a map document using the Layer Browser tool. The main purpose of the layer browser is to reassign SDE connection properties of layers to the current user rather than retain the SDE connection properties of whoever created the layerfile. This was a requirement of the SDE Administrators for sharing layerfiles that point to SDE data.

*****DISTRICTS:** When creating layer files, please make sure that data is pointing to CITRIX only if the users will be using ArcGIS in CITRIX. On the contrary, please make sure layer files are pointing to local data if the local layer browser is being used. There may be two versions of layer files for layer browser during this transition phase.***

Loading Procedures

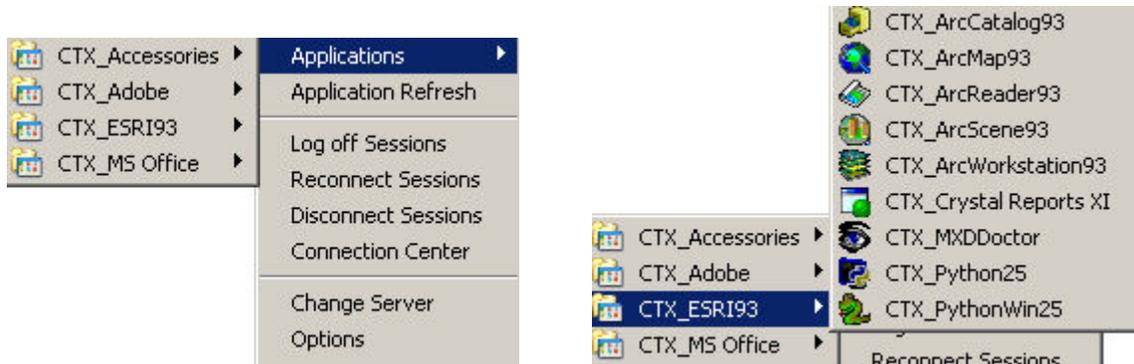
Check Requirements before Proceeding

- Both **orwa_sde@orsovctr.sde** and **orwa_sde@orsorstr.sde** connections must be established in ArcCatalog. If the user does not have these connections available in the "Database Connections folder in ArcCatalog, please reference this document: <ftp://ftpint.or.blm.gov/gisweb/pdf/ConnectArcSDE.latest.pdf>
- ArcGIS 9.3 on CITRIX is required to access layerfiles using the SDE connections mentioned above.

Start ArcMap (version 9.3 only)

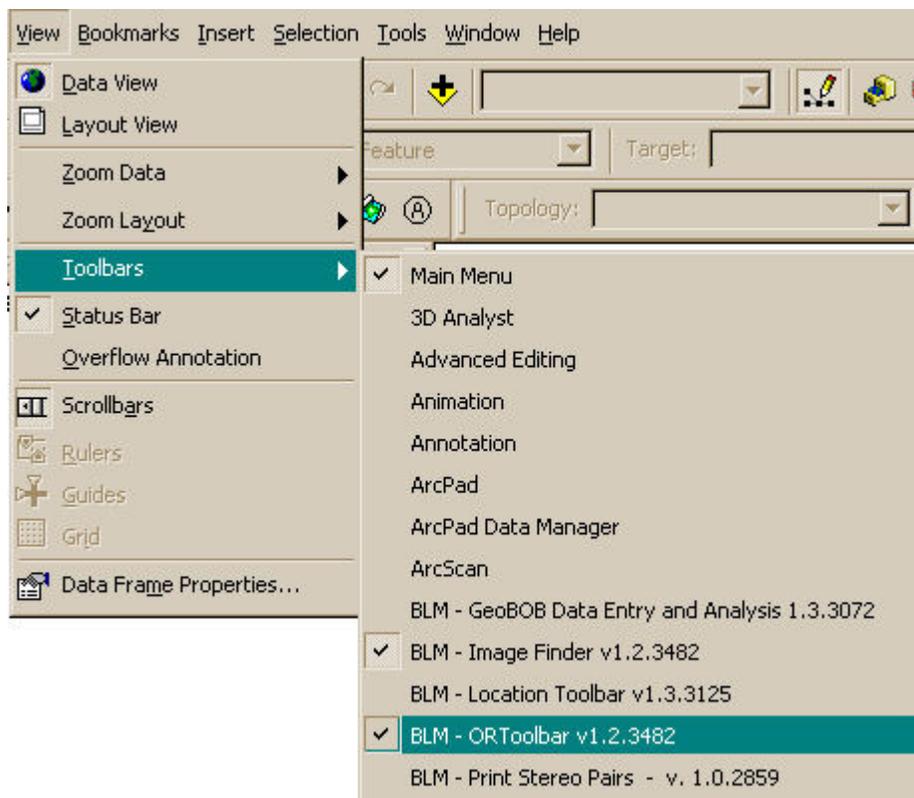
Start an ArcMap session, either locally or through Citrix ArcGIS.

To start a Citrix GIS ArcMap session, right click on the Citrix icon  in the taskbar in the lower right corner of your desktop, select Applications → CTX_ESRI93 → CTX_ArcMap93 (shown below) or go to Start → All Programs → Citrix → Citrix Access Clients →  Program Neighborhood Agent.



Add Layer Browser Tool

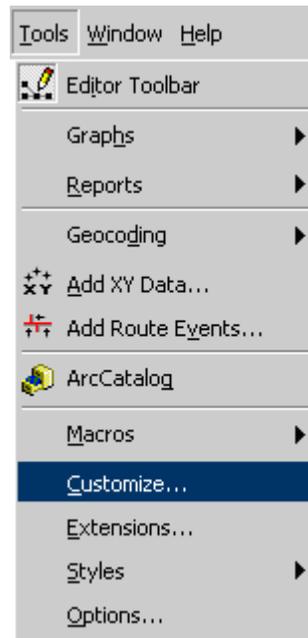
The Layer Browser tool  can be found on the BLM-OR Tools toolbar. To add this toolbar to your map session, go to View → Toolbars → BLM - ORToolbar v* (shown below) or right click on an existing toolbar and select BLM - OR Toolbar v*.



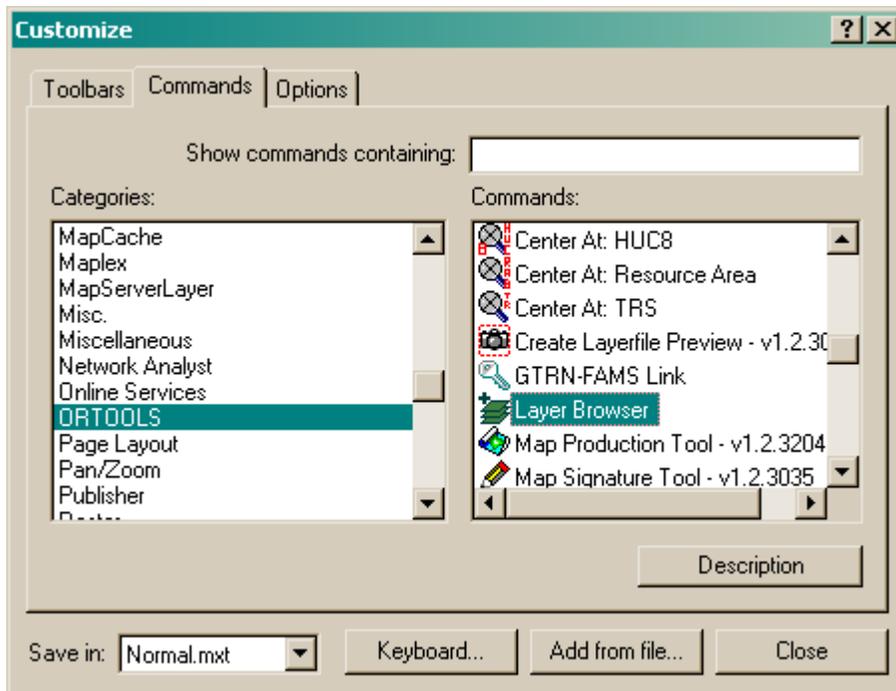
The BLM-ORTOOLS toolbar will appear and is shown below with the Layer Browser tool circled.



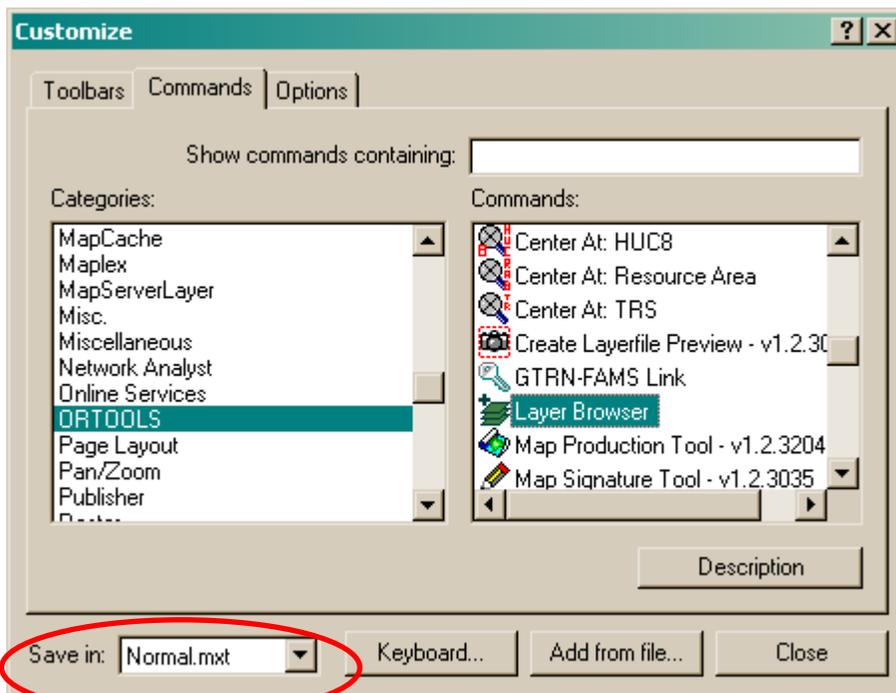
There is also the option of customizing an existing toolbar to include the Layer Browser tool. To do this, select Tools → Customize.



The Customize window opens (shown below). Activate the Commands tab → select ORTOOLS in the categories panel → select Layer Browser in the commands panel → drag the Layer Browser icon to an existing toolbar.



Note: If using the Customize option to add the Layer Browser to a map document, there are two options for saving the custom settings (circled below). If the save setting is set to “Normal.mxt”, the tool will show up every time ArcMap is started (recommended). The other option is to save the custom setting to the current map document, in which case the tool will only appear in that specific document.



Layer Browser Functionality

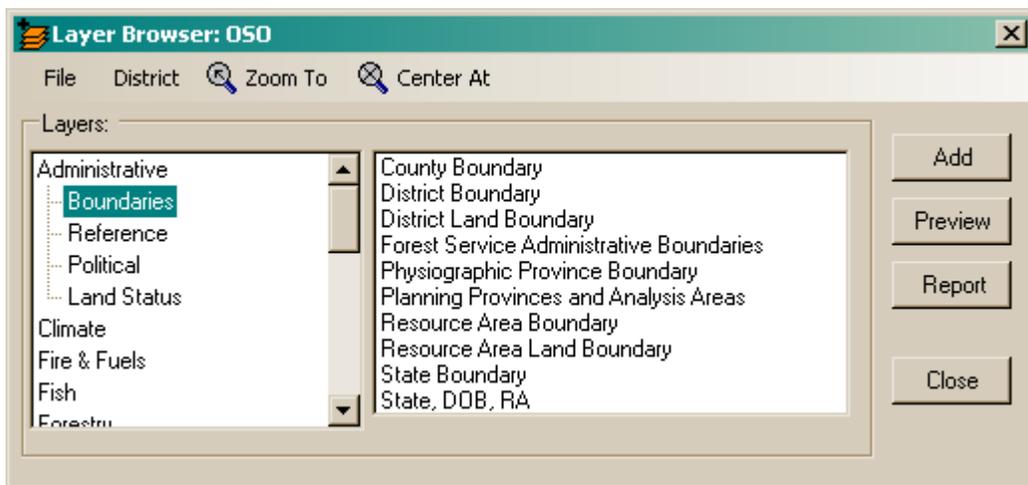
Accessing Layerfiles

Click on the Layer Browser icon  to open the Layer Browser window. A window similar to the one shown below opens. The Layer Browser window contains buttons to add layers, generate reports, and preview layers as well as several menus. The menus are explained later in the document.

There are a number of categories that contain layerfiles (Administrative, Hydrology, Imagery, etc.). Each of these categories may contain a subset of groups to choose from. The subsets may contain a number of different layerfiles, some being cartographic layers and some being layers more suited for editing.

Almost all of the non-raster (vector) layer files in the Layer Browser use the **orwa_sde@orsovctr.sde** connection; while most of the raster-based layer files come from the **orwa_sde@orsorstr.sde** connection. If you do not have these connections established in ArcCatalog, please see the first section under “Loading Procedures” entitled “Check Requirements before Proceeding”.

To access the layerfiles, click one of the categories in the left panel (Administrative, Climate, Fish, etc.) to access the subsets. Click one of the subsets (Boundaries, Political, etc.) to populate the right panel with a list of layers that fall within that subset. In the image below, the right panel is populated with layerfiles found in the Boundaries subset of the Administrative category.

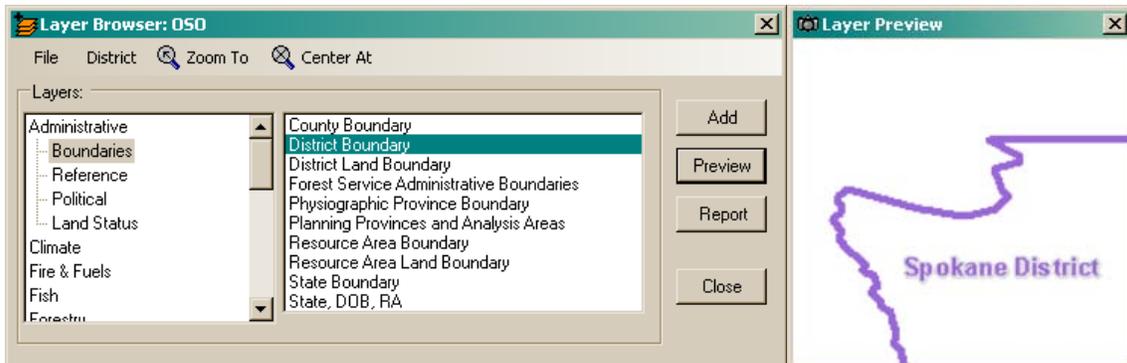


Adding Layerfiles

There are two ways to add a layerfile to a map document. A layerfile may be added with a double-click or by selecting it and clicking the Add button . In addition, multiple layers may be added to the map at the same time by using the control or shift key on your keyboard to select multiple layers and clicking the Add button. Adding multiple layers only works if the layers are within the same subset.

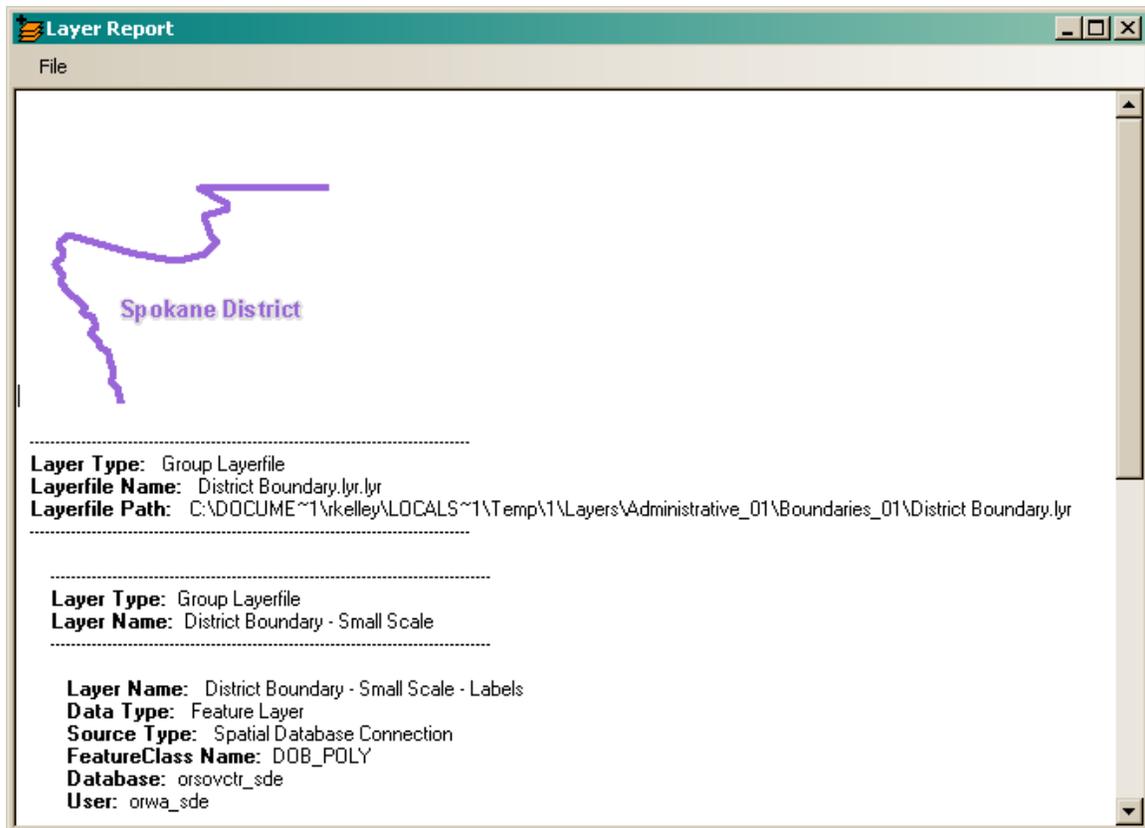
Previewing Layerfiles

To preview a layerfile, select it and click the **preview** button to open the preview panel, as is shown below for the District Boundary layer.



Generating Layer Reports

A report that contains information about the selected layerfile can be generated by clicking the Report button. There are options to print or save the report. Below is a sample report generated for the BLM District (DOB) boundary layer file.



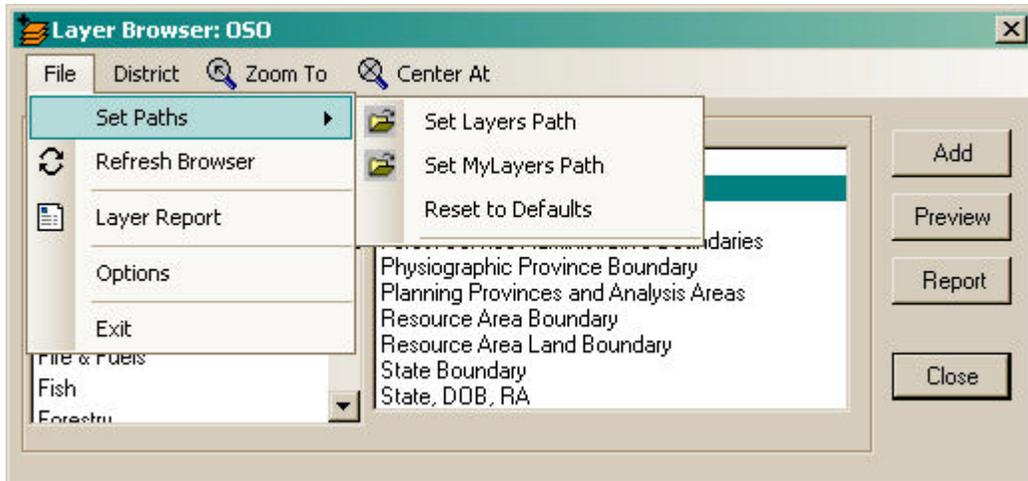
Layer Browser Menus

The Layer Browser currently has five menus: File, District, Zoom To, Center At. Each of these menus is discussed in detail on the following pages.

File Menu

The File menu contains Set Paths, Refresh Browser, Layer Report, Options, and Exit (shown below).

Set Paths – contains three options (shown below):



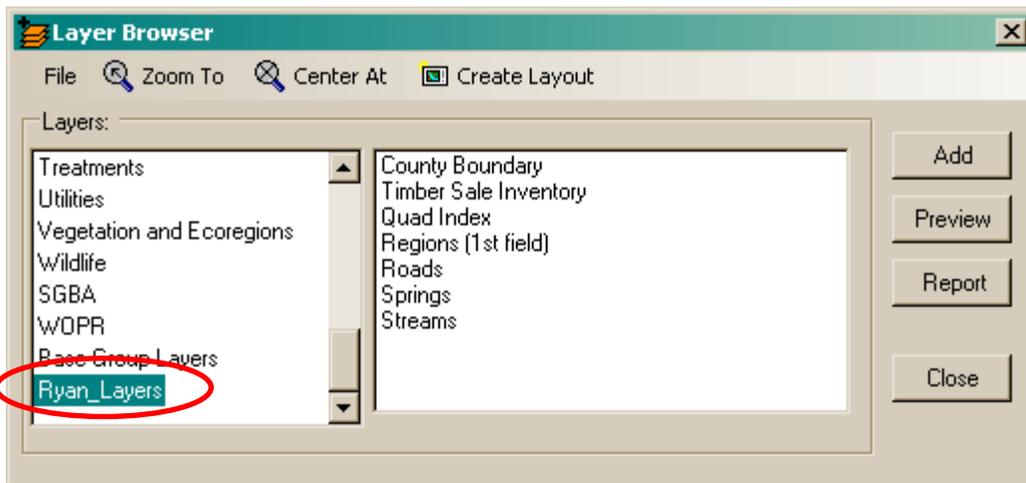
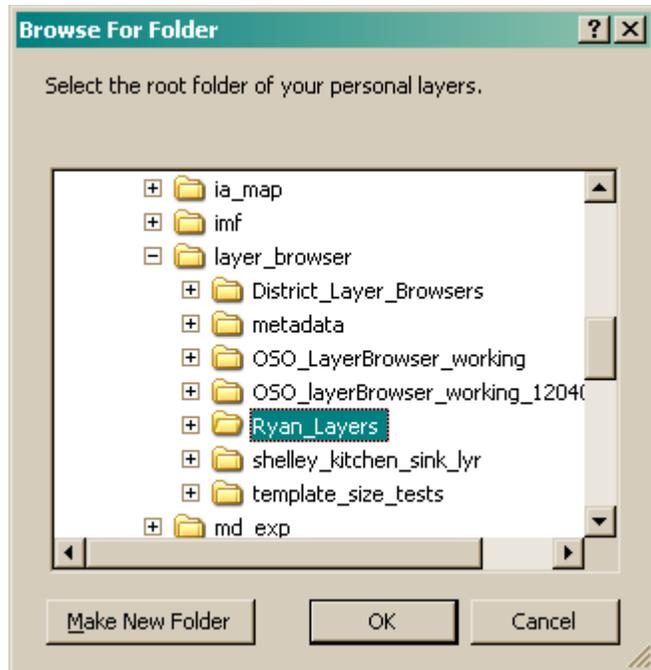
Set Layers Path – for advanced users who wish to path to a personalized directory that may contain several folders of layer categories based on personal preference. This will change the default list of layer categories. For example, the default categories are based on the Oregon spatial data modeling projects. By using the Set Layer Path option, a user may path to a directory containing layerfile categories based on something more pertinent to their location/organization.

Set MyLayers Path – allows the user to add a single folder containing their own layerfiles to the default list of layer categories. The Set MyLayer Path is the most common way to add personalized layerfiles to the layer browser. The process is shown on the following page.

Set MyLayer Path Process

Select the Set MyLayers Path option, a Browse for Folder window will open (shown right) → browse to the folder containing your layerfiles → click OK.

The folder will be added, by default, to the bottom of the layer categories list. This can be added to the top also. Please see “Options” just below.



A MyLayers Path is shown on the left as 'Ryan_Layers'.

Reset to Defaults– resets the layer paths to the default layer categories, including the removal of a MyLayer Path. In the example above, 'Ryan_Layers' would be removed from the list.

File Menu (cont.)

Refresh Browser – refreshes the browser to make layer path changes take effect

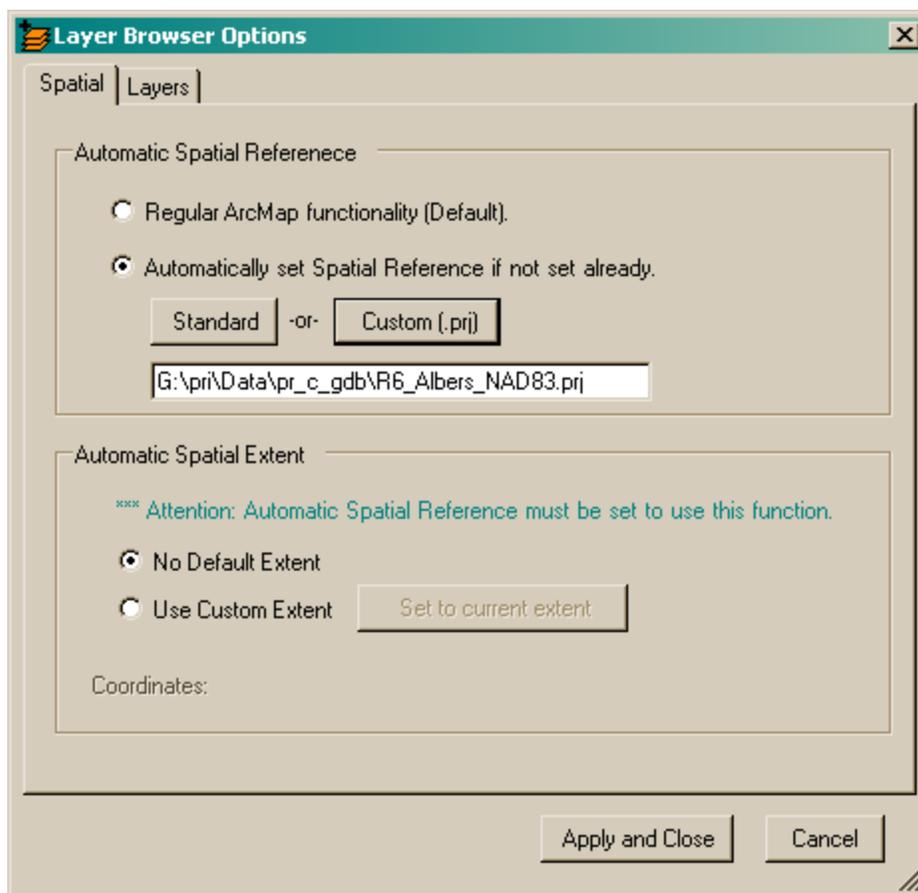
Layer Report – generates a report with information about the selected layerfile in the same manner as the Report button previously discussed

Options – opens a window with functionality setting options. This is explained in detail below.

Spatial Tab:

Automate Spatial Reference – allows the user to define a spatial reference prior to adding layers to the map. User can choose between the regular ArcMap functionality (default), a standard spatial reference (ex: UTM 10), or a custom spatial reference .prj file (ex: R6 Albers).

Automatic Spatial Extent - allows user to have same area of interest set as default every time ArcMap is opened (ie. specific district). Once the user is at the area of interest in ArcMap, simply hit the "Set to current extent" button.



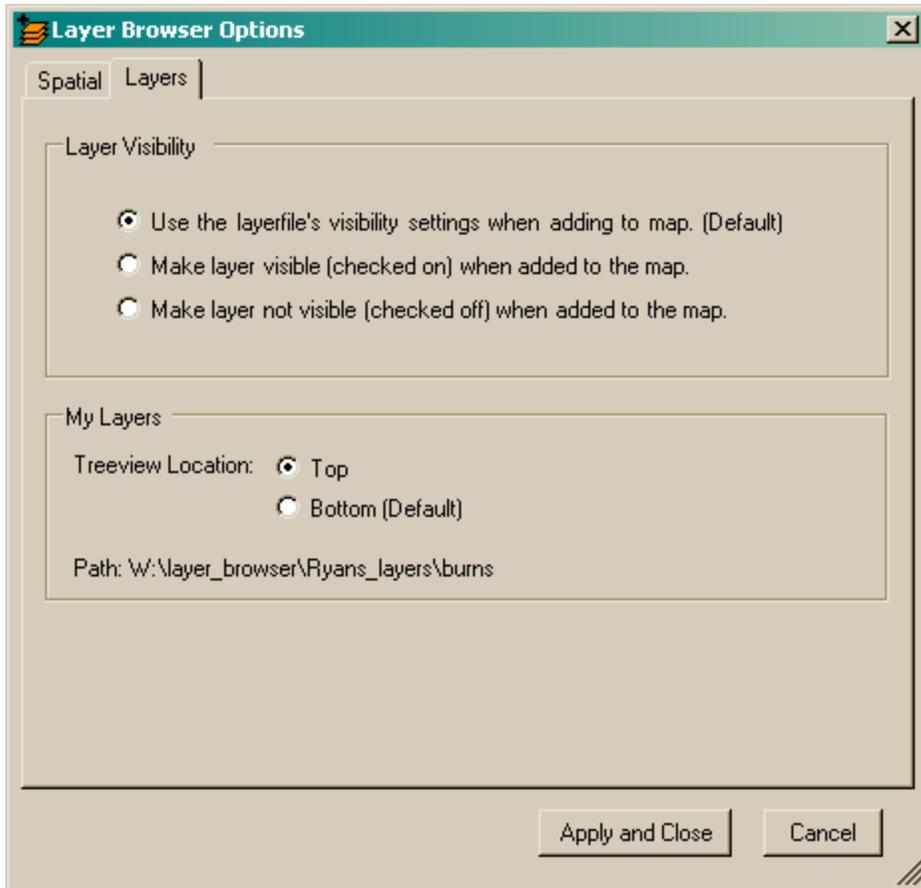
Layers Tab:

Layer Visibility – three options for layer visibility:

Default – visibility is determined by the layerfile settings

Make layer visible – layers are visible when added

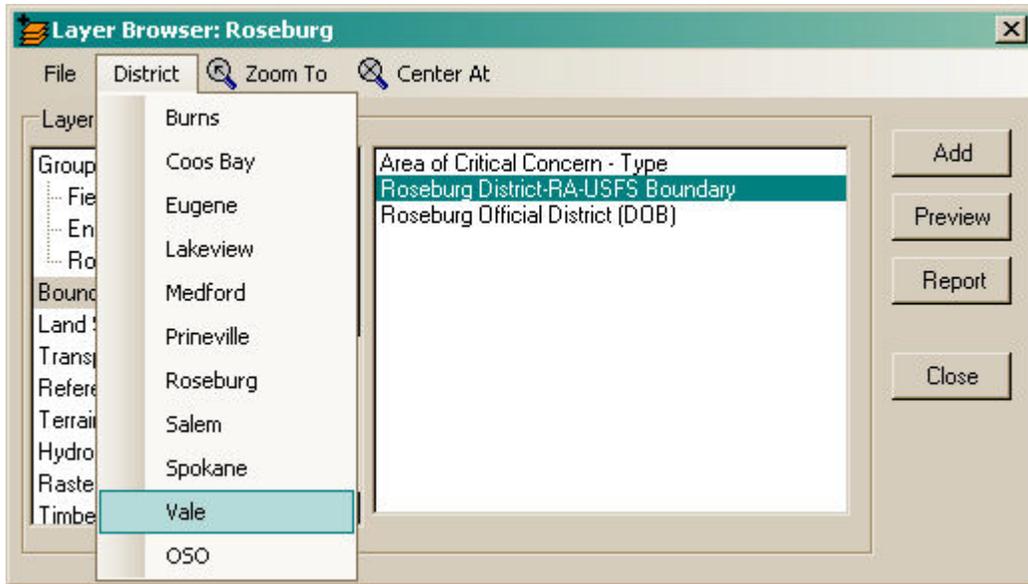
Make layer not visible – layers are not visible when added



My Layers – Tree view Location (top or bottom) and “My Layers” path.

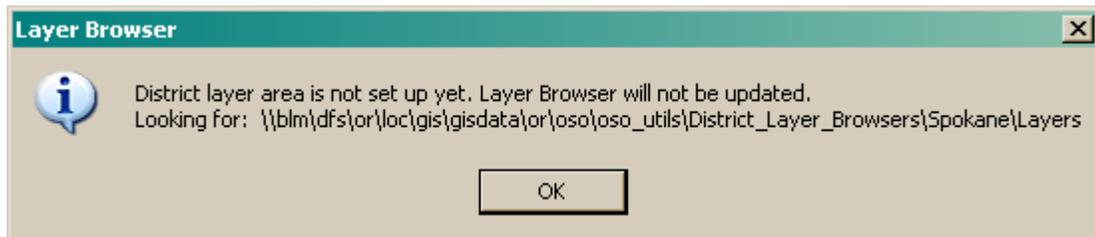
District Menu

The District Menu allows the user to toggle back and forth between district's layer files. A District needs to have layer files available in CITRIX in order to use this option.



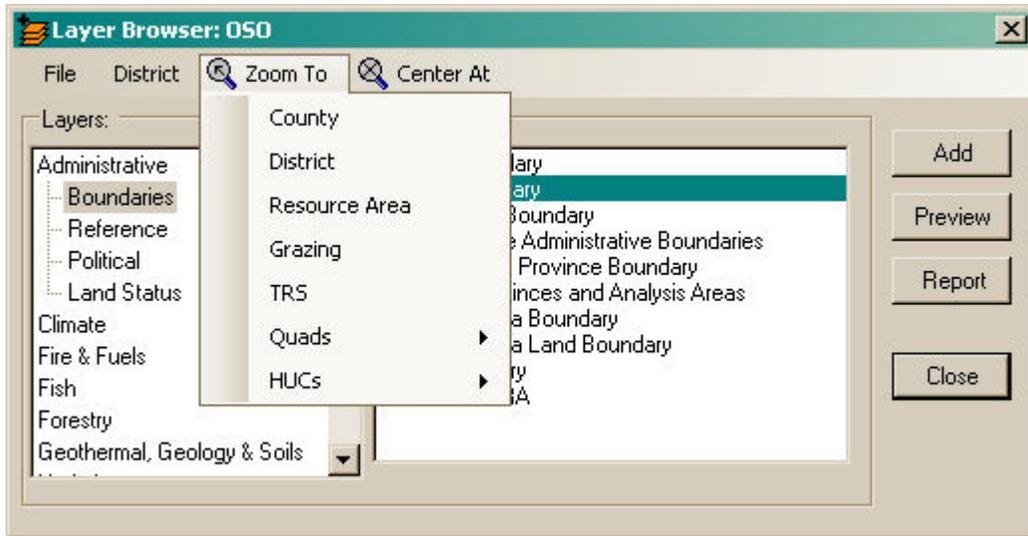
Once a district is selected and the layer browser window is updated, the district name will appear on the top (see above where Layer Browser: Roseburg). This option is also under the **OR Tools** dropdown under **Set Paths > Set District**.

If a district does not have any layer files available, this message will popup:



Zoom To Menu

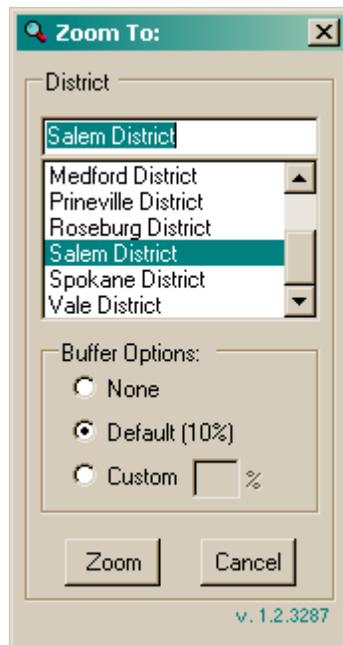
The Zoom To menu contains several different options for zooming to a specific spatial extent (shown below). Not all of the “Zoom To” options are described below as the functionality is similar between them.



Prior to using the Zoom To tool, a spatial data layer must be added to the map; however, it does not have to be the specific layer you wish to zoom to. For example, if you wish to zoom to a county, the county layer does not need to be added to the map.

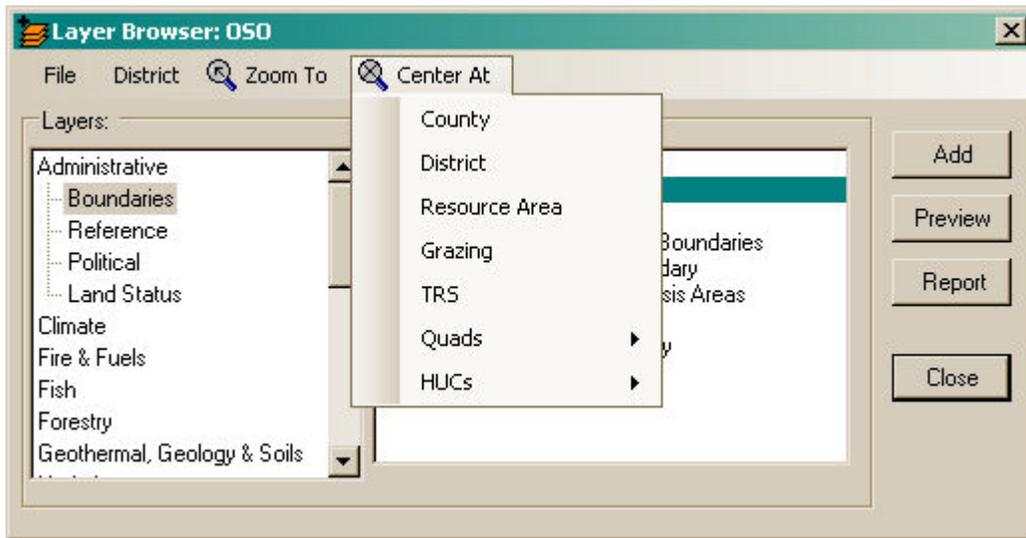
Be aware of the map layers that are visible when using the Zoom To tool because the spatial scale changes as the map zooms to the selected spatial extent. For example, if GTRN feature classes are visible and the Zoom To tool is used to zoom to the Salem District, the map will take an extremely long time to refresh at that scale.

In the example above, if you wish to zoom to the Salem District, select District from the Zoom To menu, the Zoom To: District window opens (shown below) → select Salem → click Zoom. The map will now be zoomed to the extent of the Salem District.



Center At Menu

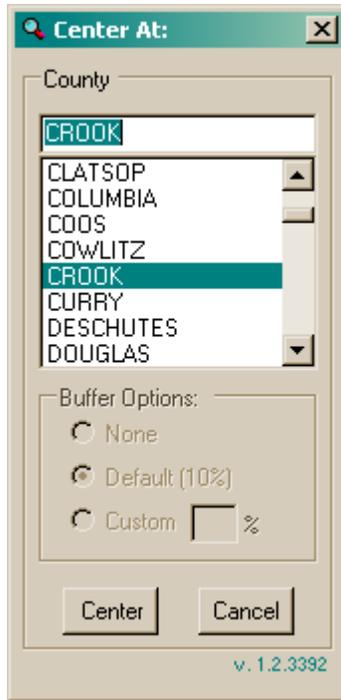
The Center At menu contains several options for centering your current spatial scale (shown below). Again, not all of the Center At options are described below as the functionality is similar between them.



The Center At tool is similar to the Zoom To tool; however, it does not change the current spatial scale. For example, if the map scale is set to 1:24,000 and the Center At tool is used to center the map on Crook County, the map scale will remain at 1:24,000 and be centered on Crook County.

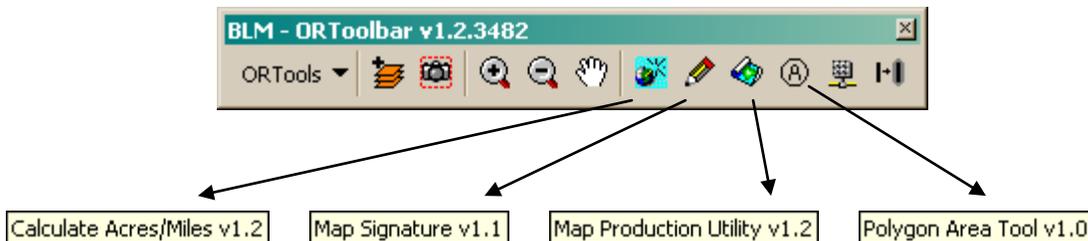
As with the Zoom To tool, the map must have a spatial data layer added to it prior to using the Center At tool, however, it does not have to be the specific layer you wish to center on.

In the example above, if you wish to center the map on Crook County, select County from the Center At menu, the **Center At: County** window opens (shown below) → select Crook → click Center. The map will center on Crook County at the current spatial scale.



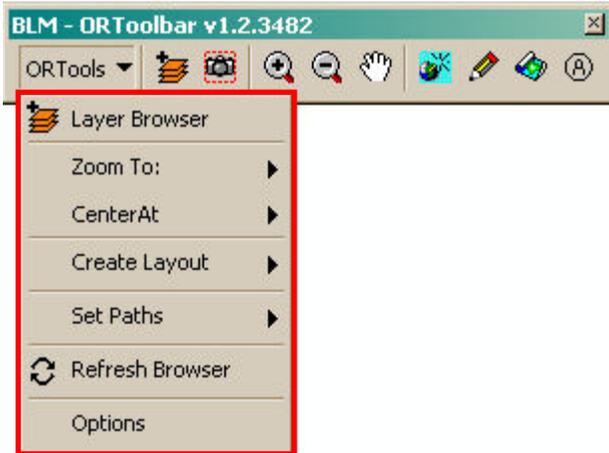
OR Tools Toolbar

The tools in the ORTOOLS menu can be found on the BLM-ORTOOLS toolbar shown below. The OR Tools dropdown currently contains everything available through layer browser EXCEPT "Create Layout". Please see below under **Additional Options** and the **Best Practices for Creating a Map** section below regarding this function.



Additional Layer Browser Options

Note: The Layer Browser window must be opened to add layerfiles to a map, however, much of the functionality of the Layer Browser tool can be found within other toolbars, customized menus, and context menus as shown below and on the following page.



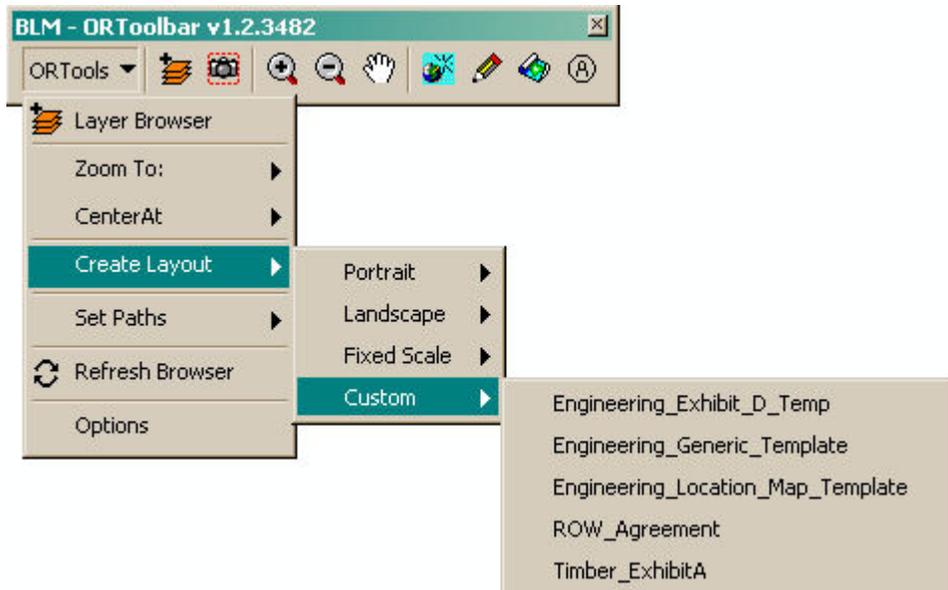
BLM-ORTOOLS Toolbar

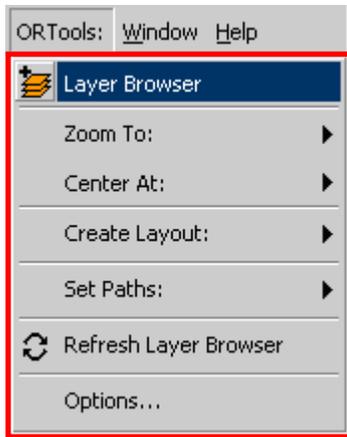
The BLM-ORTOOLS toolbar not only contains the Layer Browser tool, but also much of the menu options previously discussed that are found in the Layer Browser window. The process of adding this toolbar was described in the “Add Layer Browser Tool” section.

Perhaps the most important feature on this dropdown is the ability to **create a layout**.

Creating Layouts

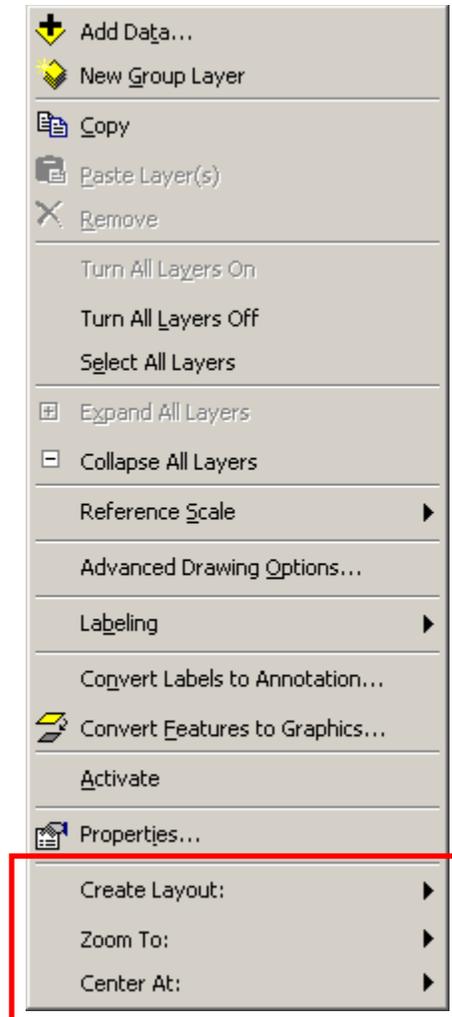
Districts have the option to have their own templates available, but the default is OSO templates. In order to use District-specific templates, the user must choose a particular District, add at least one layer, and choose a template. Simply choose **Create Layout** > type of Layout > and choose the template. Roseburg is shown below.





Customized ORTOOLS Menu

The ORTools menu also contains much of the functionality of the Layer Browser window and is the same as the menu found on the BLM-ORTOOLS toolbar as shown on the previous page. As discussed earlier, the benefit of adding this menu to the map document is to reduce toolbar clutter. The process of adding the ORTools menu was described in the “Add Layer Browser Tool” section.



Context Menu Functions

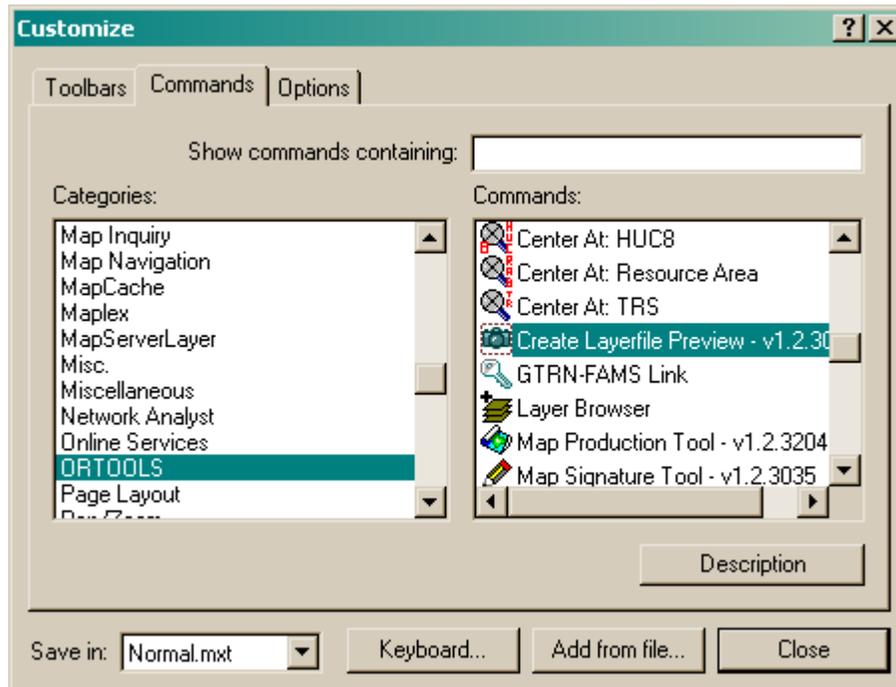
By right clicking in the data view, some of the menus found in the Layer Browser window are found in this context menu.

Appendix A

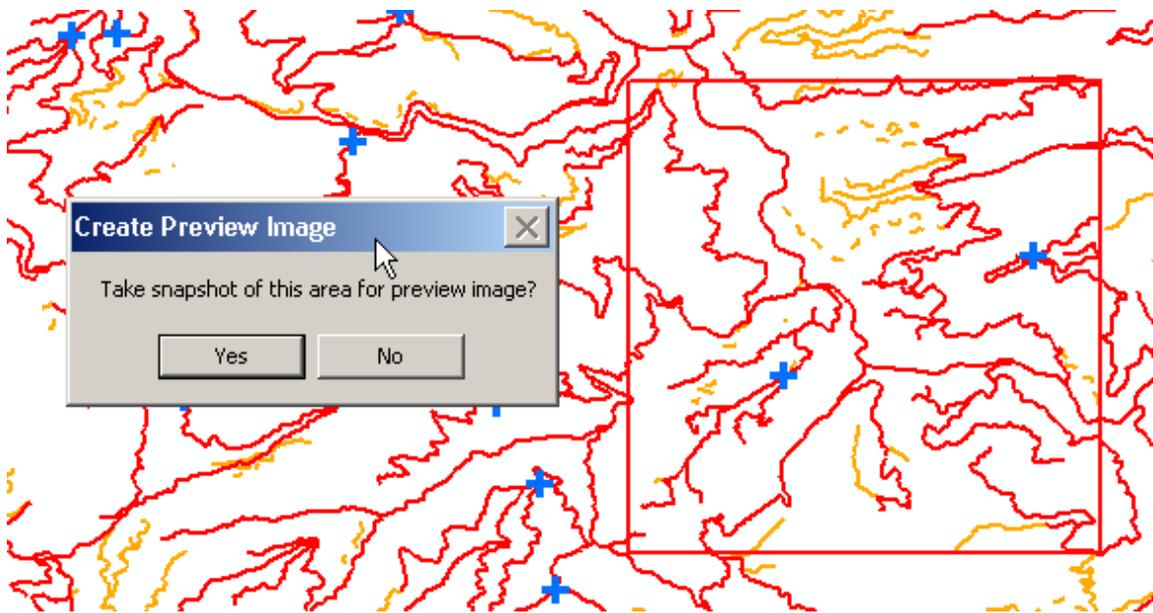
Create Layer Snapshot

The Create Layer Snapshot tool  is not a tool found in the Layer Browser interface; however, it is pertinent to mention the tool in this document as it is used to create the layerfile previews.

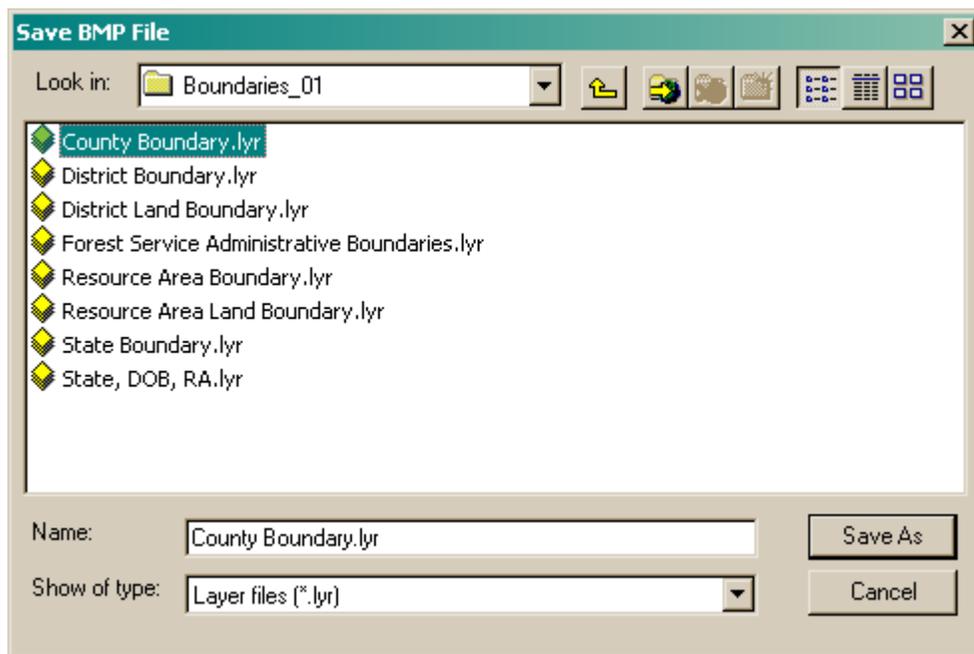
This tool is not found on any toolbar; it is a custom tool that has to be added to an existing toolbar. To add the Create Layer Snapshot tool to an existing toolbar, select Tools → Customize, the Customize window appears (shown below) → activate the Commands tab → select ORTOOLS in the Categories panel → select Create Layer Snapshot in the Commands panel → drag the Create Layer Snapshot tool to an existing toolbar.



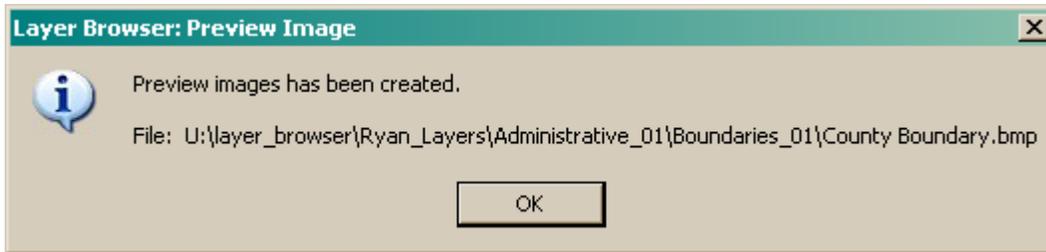
To create a preview image of a layer, zoom to an area that best represents the entire layer. Select the Create Layer Snapshot tool  and click in the center of the area that is to be captured. The tool creates a 2" x 2" outline around the point that is clicked and a popup verifies whether to take a snapshot of the area for a preview image or not (see below).



Select Yes and the Save BMP File window appears (shown below). Browse to the folder that contains the layer file the preview snapshot represents → select the layer file → click Save As. *Do not manually name the file; just select the layer file it represents.*

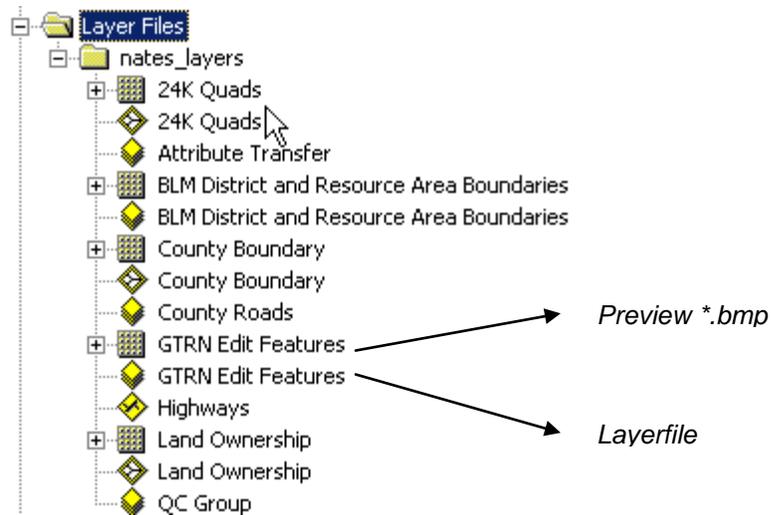


Another popup verifies the image was created and provides the path to the folder in which it was saved (see below). *Notice the file is given the same name as the layer file it represents except the file extension is *.bmp.* Click OK.



To check the preview image, open the Layer Browser window, navigate to the layer, select it and hit the preview button. The layer should now have a preview snapshot. If the snapshot does not appear, the Layer Browser window may need to be refreshed.

As previously stated, the preview image is saved as a *.bmp with the same name as the layer file it represents. The following ArcCatalog image shows a MyLayers folder with layer files and the corresponding preview image files.



Best Practices for Adding Layers

The following section describes the most effective way to use Layer Browser, from creating the correct connections in ArcGIS to adding multiple layers.

1. As stated above, the layers using the SDE connections in this version of Layer Browser will only work in ArcMap 9.3. Do not create layer files using CITRIX data for local layer browser users and vice versa. This will bog down the WAN.
2. Again, a user must have valid connections for both the orwa_sde@orsovctr.sde and orwa_sde@orsorstr.sde connections. Please see the first section under “Loading Procedures” entitled “Check Requirements before Proceeding.”
3. When adding a layer (or multiple layers at a time), the layer will be added to ArcMap. However, it will not draw initially because the layer is off. Simply click the box next to the layer to turn it on. If the check box has a grey check in it, it is currently not visible at the scale the ArcMap session is at. The reason it is not viewable is because some layers take a very long time to draw, especially if they are detailed, at a small extent. There are a few ways to view your layer if it is not visible.
 - a. Expand all of the signs next to the layer, right click on the layer that contains the features and select “Zoom to make visible”
 - b. Expand all of the signs next to the layer, right click on the layer and select “Properties”. Under the “General” tab, select “Show layer at all scales”.
4. The symbology, scale dependencies, labeling, etc. can all be changed by the user.
5. Adding the Base Group Layers > “BLM Oregon and Washington Base Data” layer will give the user a lot of useful layers, already set up in layer order, by symbology, scale dependency, etc. If the user has only one or two in-house layers and wants to have some “base data” included without wasting a lot of time adding base data individually, this is the best way to add some reference data to their data.
6. When creating layer file directory structure in ArcCatalog, DO NOT have any data anywhere underneath the main layer file directory structure where the layer files reside. For example, do not have a geodatabase in the same directory as your layer files.

Best Practices for Creating a Map

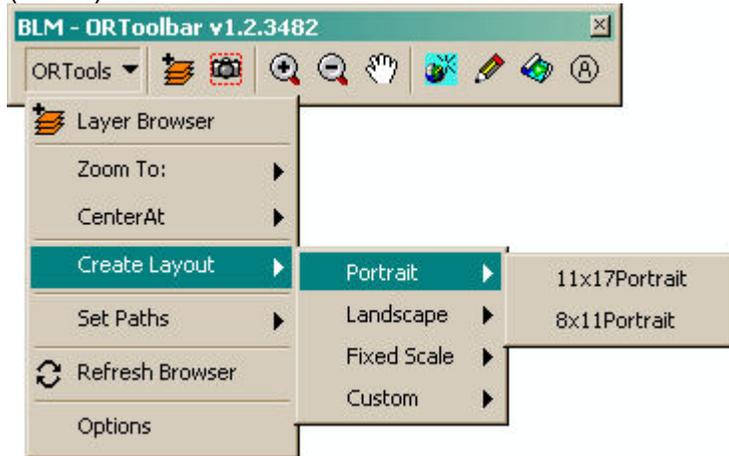
This section walks through the best way to create a layout using Layer Browser / OR Tools.

1. The user MUST have at least one layer in ArcMap before using the OR Tools layout function.
2. Once the user has added everything to ArcMap needed for the potential layout, click the “OR Tools” dropdown menu:



3. From the dropdown (shown below), select Create Layout and then choose the desired layout. Some of the OSO layouts will prompt the user for a title, which will then be placed on the template. Again, a user must choose a District from the

Set District dropdown (under Set Paths), if District-specific templates are desired, and are available. Otherwise, the OSO templates are the default for other Districts (below).



Frequently Asked Questions

Users may encounter errors generated from Layer Browser. This section may hopefully answers some “FAQs”.

1. Q: Why doesn't Layer Browser load properly or it stalls prompting an error similar to: “frmLayerMain:Load 340 Control array element '0' doesn't exist Line:” ?
A: You probably aren't using ArcGIS 9.3.
2. Q: When I add a layer from Layer Browser, I get an error similar to “No valid SDE connection”. What's the deal?
A: Either SDE is down (usually early in the morning) or you have an invalid connection established that your layer file needs in order to be added to ArcMap. It is also possible you are using a local ArcMap session to access a Districts layers, only available on CITRIX. Please see the “Best Practices for Adding Layers” section above.
3. Q: How come when I add a layer, I have “insufficient permissions”?
A: Either you do not have permissions to view / edit the selected layer file, or you accidentally selected a layer ending in “- Edit” that you do not have permissions to view.

Please contact Ryan Kelley at 503-808-6495 / Ryan_Kelley@blm.gov OR Tim Smith at 503-808-6121 / Tim_J_Smith@or.blm.gov with additional questions or suggestions and we'll add them to this list and/or documentation.