

## ESI Toolkit

Below you will find information regarding the ESI tools that are included with your ESI geodatabase. To use these tools, you will need to move to your hard drive the directory named for the atlas inside the Geodatabase folder on your ESI CD/DVD. The tools are dependent on the layer names and relationships that have been set up inside the .mxd file provided. *Instructions for creating an ESI toolbar and installing the ESI tools are given at the end of this document.*

There are currently four tools with the emphasis on assisting the user with the biological datasets. These have been tested on a variety of windows computers, however, if you encounter problems and/or you have any suggestions or recommendations for other tools, please email Jill Petersen at [jill.petersen@noaa.gov](mailto:jill.petersen@noaa.gov). Though it may not be possible to address the problem or recommendation immediately, we will keep any difficulties or suggestions in mind during future tool development or revisions. You may want to check the website <http://response.restoration.noaa.gov/esitoolkit> on occasion to see if any additional or revised tools are posted.



### Select a Biology Layer to Query by Location:

This tool provides a drop-down list of the available biology layers. At this time, you are limited to querying one layer at a time. After a layer is selected, you may use the ArcMap “Select Features” tool or the Selection Menu items to view what species are present in a particular area. There is a button “Select the fields to display” that will link you to a form where you may choose what fields of the biology table you would like to view.



### Query a Biology Layer by Attribute:

This tool lets you select a biology layer and construct a query based on species, state and federal status, and monthly presence and/or breeding status. You have the option to limit the query to presently selected points or polygons. This gives you the opportunity to locate species of special interest in a particular area, perhaps where a spill trajectory tells you to expect heavy oiling.



### Open an Associated Metadata File:

This tool launches your PDF viewer software and opens the metadata data file provided in the atlas directory transferred from the ESI CD/DVD.



### Generate a Resource at Risk Report:

This tool exports the selected records in your biology table to a text file. You are given an option of exporting a list of only the unique species presently selected, or a list that has all selected records and all the information currently displayed in the biology table. You also have an option of adding your own explanatory text message to put at the top of the file. If you are looking at a number of different scenarios, you can use the same

report and simply append the results from the next query to the same report. The information exported from the biology table is presented in a tab delimited format.

### Related Tools:

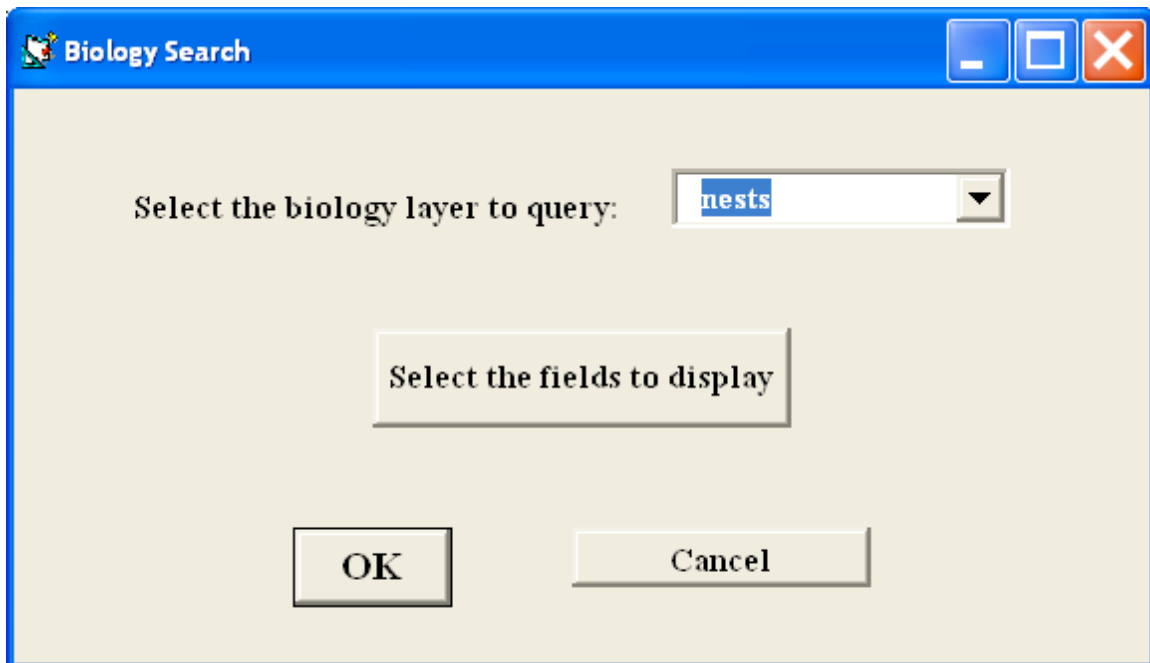


#### GNOME Trajectory Import Tool:

This tool may be useful for investigating potential impact areas on your ESI map. It requires that an oil spill trajectory be generated using GNOME or GNOME Analyst. Additional information about this tool and the GNOME product may be found at: <http://response.restoration.noaa.gov/index.php> under the heading of featured software and datasets.

### Using the tool to **Select a Biology Layer to Query by Location:**

Click on the icon depicting a fish and two map layers. A dialog box will be displayed, asking you to select a biology layer to query. A drop down menu gives you a list of the currently available biology layers. (These are the layers that have a relationship established with the ESI biofile table). You can only query one layer at a time. Select the layer of your choice. (In the example below, the layer “nests” is selected.)



In the same dialog box, there is a button, “Select the fields to display”. Clicking this button will bring up a 2<sup>nd</sup> dialog box where you can select which fields of the Biofile

table you want to view. In the example below, the fields that will be displayed include the Element, Subelement, Name, Genus/species and Concentration. Other options include looking at individual months for presence or absence of a species as well as life stage summaries for species in a particular location.

Once a layer has been selected, and OK is clicked on the original dialog box, you may select objects on that particular map layer using either the ArcMap “Select Features” tool or the selection menu items. The table Biofile will then display the records for each of the species found in the map objects you have selected.

### Using the tool to **Query a Biology Layer by Attribute:**



Selecting this tool will bring up a dialog box that guides you through creation of a query on a particular biology layer. Once you select a layer, the other drop down menus will be limited to values that are available for the Element represented in the layer. For example, below the layer “nests” is chosen, so all of the species with the element Bird will be available in the drop down menus.

The query below will return any nest points where Laying or Migrating (Breed2) activities are occurring in either May or June. Double clicking on the breed headings will

bring up a dialog box listing the activities represented for each of the elements. You can choose to require all of the seasonality conditions be met, (in this case that would mean nests where breed2 activities are occurring in BOTH May and June) by checking the box at the bottom of the Seasonality Information section.

The drop down menu for the Threatened/Endangered values shows you all of the values found in the bird records. However, you may want to look at all birds who are listed in any fashion. In that case you can select the 2<sup>nd</sup> value, “T, E, or C”. That option will give you all species that have any threatened or endangered status listed. Likewise under the State/Federal list, you will find an option for “S and/or F” so in the same manner, you will get any species listed with any agency.

**Create a Biology Query**

**Biology Layer** nests

SubElement <any>

Common Name <any>

Scientific Name <any>

State/Federal <any>

Threatened/Endangered <any>

**Seasonality Information**

Select the months of interest. (If no months are checked, all records with the above specified criterial will be returned.)

Jan  Feb  Mar  Apr  May  Jun  Jul  Aug  Sep  Oct  Nov  Dec

Select the breed activities of concern. If you check present, all records that have adults present or any breeding activity will be returned.

Present  Breed1  Breed2  Breed3  Breed4  Breed5

Hint: Double-click the breed headings to find out what activities these represent for each element.

Check if you want all of the selected seasonality conditions to be met. Otherwise, all records meeting at least one of the selected criteria will be returned.

Limit query to currently selected objects

Display all species records associated with the map object meeting the above specified criteria

OK Cancel

Finally, at the bottom of the Query dialog, you have two additional options. The first gives you the ability to limit a query to only the currently selected objects. This is very useful if you are only interested in a particular region of the atlas. One such case may be where you have overlayed a spill trajectory and located the polygons or points that lie at least in part inside the anticipated impact zone. If you have selected the nests inside the spill trajectory, you may now want to limit your selection to nests where birds are present during the month the spill occurred. If you selected nests as the layer, checked March in the seasonality section, and then checked the limit option, you would only see the species records where birds are expected to be present in March.

The second check box at the bottom of the dialog asks that records for all species residing in a point or polygon where there was at least one record matching the criteria be shown. Very confusing! Say you were looking at Bird polygons and wanted to show only polygons that had a species that was state or federally listed. There may be many polygons that meet this criteria, but these may also be locations where lots of other bird species are also found. By selecting this box, all species would share a polygon with a listed species would be shown in the Biofile table.

### Using the **Open Metadata** tool:



Selecting this tool will launch your default PDF viewer software and open up the metadata file associated with the atlas you are viewing. This tool is dependent on the file “metadata.pdf” residing in the same directory as the Geodatabase files.

### Using the **Report Generator** tool:



This tool creates a tab delimited text file using the records in the Biofile table that are currently selected. You may use this to generate a report of the records that matched your query or that were located in your area of interest.

**Resource at Risk Report**

### Export Attributes of Selected Items

Include all selected records and their attributes as shown in the biotable

Export a list of the unique species found in the selected records

Enter your own text here.....

Enter a title or brief description to include with report

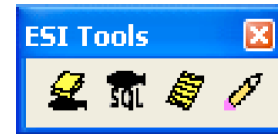
OK Cancel

You are given the option of exporting all the attributes that are currently visible in the Biofile table, or only a list of the unique species. The first option will give you all the

selected records, hence you may have multiple occurrences of a particular species because it shows up in multiple polygons or points.

You also have the option of entering a brief text header to your report. You may want to record information about what query resulted in these records selection, or give information about the geographic area selected.

When you click OK, you are asked to provide a file name and location. If you specify a file that already exists, you will get a message asking whether you want to append to the existing file, or replace it. You may also choose to cancel the save at this point.



### **Creating an ESI toolbar and installing the ESI tools:**

- a. Open the .mxd file for your ESI atlas. You may do this by double-clicking on the ArcMap .mxd file found inside the geodatabase directory you copied to your hard drive, or you may launch ArcMap and open the atlas .mxd file from the open menu.
- b. Right-click anywhere on the ArcMap toolbar and scroll down to Customize... (or choose the Customize... option under the Tools menu).
- c. Select the Toolbars tab on the Customize... window.
- d. On the right side, click the "New..." option.
- e. In the New Toolbar dialog box, name the toolbar "ESI Tools". In the "Save in" drop-down menu, choose to save it with your atlas. (If you select "Normal.mxt", the ESI Toolbar will be present in all your ArcMap documents).
- f. Once the toolbar is created, select the Commands tab in the Customize dialog.
- g. Click the Add from file... button. Navigate to the ESI .dll files on your hard drive. These should reside in the atlas directory with the .mxd file, inside a directory call dlls.
- h. Select each .dll file individually and click Open to add the Tool to your available commands. In the window "Added Objects..." click OK.
- i. Once all of the commands have been added, select the icon next to the ESI tool and drag it on to your ESI Toolbar. Release the mouse button when your cursor becomes a vertical bar.
- j. Exit the Customize... window.
- k. Save your ArcMap document so that the ESI toolbar will be available next time you open a session.
- l. You are now ready to use the ESI Tools!