User Guide for Eco-Logical
Creating a Regional Decision Support System for the Houston-Galveston Region
The Eco-Logical GIS is a free, online decision-making mapping tool that can be used by organizations to integrate the planning process, and assist in identifying high priority environmental resources in the region. This user guide will provide you with a basic understanding of how to use the Eco-Logical GIS navigation functions as well as use the analytical models. The tool can be accessed at [www.h-gac.com/go/eco-logical](http://www.h-gac.com/go/eco-logical).

Upon opening the Eco-Logical GIS, first review and acknowledge the disclaimer by clicking on the Accept button.

You will then see a map of the H-GAC 8-county region and surrounding areas. By default, a layer showing the various types of Eco-Logical features in our region is displayed.

**Navigation**

Basic map navigation can be accomplished by:

- Using your mouse wheel to zoom in or out OR
- Using the buttons on the top short cut bar.

*Zoom In, Zoom Out, Full Extent, or Pan* buttons are available on the top short-cut bar. These buttons are also available in the Map Navigation menu.

For example, to zoom in, click on the *Zoom In* icon in the top short-cut bar, and then click and drag your mouse to define the area you want to enlarge.

To return to the full extent of the map and center the map on the H-GAC region, click on the *Full Extent* icon on the top short-cut bar.
You can also use the pre-defined zoom levels along the left side using the scale slider bar to move in and out of the map.

To assist with navigation, an overview map is also provided:

The overview map is located in the Map Views & Layers menu, and can be opened by clicking on the icon labeled Overview Map. The red box inside the overview map indicates the current extent shown in the main mapping window. The red box can also be dragged to change the main mapping window view extent. This is particularly helpful when zoomed into the map.

The overview map can be minimized or closed if not needed.
Viewing Map Layers

In addition, map layers can be turned on or off: Click on the Map Layers icon in the upper right corner to expand the layers window.

Here you can choose which layers to turn on and off, as well as set transparency levels for each layer.

The layers window can be minimized or closed at any time. If closed, it can be re-displayed by clicking on Map Layers under the Map Views & Layers menu.

Legend

The legend can be viewed by clicking on the Map Legend icon on the right side.

The legend window can be minimized or closed at anytime. If closed, it can be re-displayed by clicking on Map Legend under the Map Views & Layers menu.
Identifying Features
Features in the map layers window can be identified to obtain specific information about each feature by using the Identify tool, which can be accessed via either the short-cut bar located at the top, or within the Tools menu.
Click on the Identify tool to activate this feature, and the Identify window will open.

Next, click on a feature. The GIS will return detailed information on any feature located at the point where you clicked.

You can use the scroll bar to view information on the various features returned.

The blue Question Mark icon in the top bar of the identify window provides information on the attributes for Eco-Logical features.

By clicking on the blue Identify icon next to the feature, the map will zoom into the general vicinity of the identified feature.

For Eco-Logical features, we have provided a Feedback button. By clicking on this button you can send us feedback or ask questions about this feature in the database. This button is intended to work with your default e-mail program, so it will open a new e-mail, address the e-mail, and provide information we will need to respond to your request. A new web browser window will also open when using this feature, when you are done with your e-mail, you can close this window to return to the Eco-Logical GIS.
The Eco-Logical GIS also has a special identify tool for viewing information on Clean River Monitoring Sites.

To enable this tool, click on the blue **CRP Monitoring Sites** icon which is located in both the short-cut bar located at the top, and within the **Tools** menu.

The CRP Monitoring Sites window will open.

Next move your mouse over the site symbol to view monitoring site information.

Using Analytical Models
The Eco-Logical GIS contains two analytical models for assessing impacts to eco-logical resources. These models are the Eco Types Unweighted Query and the Eco Type Weighted Query. Both models are accessible via the Tools menu or the short-cut bar located at the top. The difference between Unweighted and Weighted queries is that the weighted query allows the user to define a ranking for each of the metrics used in the model, where as the unweighted query assumes all metrics are ranked equally.
To run the Eco Types Unweighted Query, click on the *Green Leaf* icon to open the model window.

Both models allow the user to enter a buffered point or buffered line, or draw a polygon for the query area. The user can also change the units of measure for the buffer and the buffer size to miles, feet, kilometers or meters.

To run a query, click the point, line, or polygon tool. In this example we will run the query using a line and buffer.

Next, click once to begin drawing the line, and then click once again for each vertex you wish to set for the line’s path. To finish drawing the line and submit the query, just double-click. The model will automatically begin when you double click.

After a few seconds, the model results are displayed in the grid within the model window. The grid can also be expanded for easier viewing, and the scroll bar to the right can be used to scroll down to view the returned statistics.
Submitting a query using a point is the same for the line, except that the user just clicks once on the map to set the location of the point.

Submitting a query using a polygon is the same for the line, with each vertex being set by a single-click and finishing with a double-click. The polygon tool does not use the buffer parameter.

The model window can be minimized or closed.

Running the Eco-Type Weighted Query is the same as for the unweighted query, just click the purple leaf icon to open the model window. The user inputs are the same, except the user is allowed to enter weights for each of the metrics used in the model.

Weighting can be done using a series of 1 to 3, 1 to 5, or even 1 to 9. Metrics with greater weighting have higher numbers. To exclude metrics from the model, set the weight to zero.

Then submit the point, line, or polygon input as was done in the unweighted query.

The blue Question Mark icon in the top bar of the query window provides glossary information on the attributes for model results.

The Disk icon in the top bar of the query window allows the user to save the results of the query to a CSV file.

To run a new query, click the Trash Can icon and repeat the process.
Other Helpful Information
Some additional features include:

A *Sketch* tool located in the *Tools* menu to notate your map.

An *Address Locator*, also located in the *Tools* menu.

Printing a map, by clicking on the *Tools* menu and selecting *Print Map*. Here you can enter your own title and sub-title, then click on *Print*.

Eco-Logical also provides links to various H-GAC web sites, as well as to other video tutorials on how to use the application.
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