The Regional Ecosystem Framework (REF) Interactive Viewer is built on Esri’s ArcGIS Online platform and is intended to be a simple-to-use yet in-depth tool that allows users to overlay REF ecological data with additional spatial data relevant to efforts to conserve natural areas or mitigate the environmental impacts of infrastructure projects.

General points to remember:

- This map functions similarly to the commonly used Google Maps/Bing Maps.
- Many layers will only become visible when you zoom in past a certain extent.
- Some larger layers may take up to 10 seconds to appear on the map after being activated.
- If you would like to upload and add your own layers, you must obtain an Esri account and import the REF map into your own map in the online map editor or add individual layers via the layer service URL.
- View the REF Advanced User Guide
- Visit the ArcGIS Online Help Center for additional tips: https://doc.arcgis.com/en/arcgis-online/
1. Zoom in/zoom out – This can also be accomplished by scrolling your mouse wheel if you have one, forward for in and backward for out. Double clicking on the map will also zoom in to that point. Click and drag on the map to pan.

2. Home button – This button returns the map to its original extent of the entire NCTCOG 16-county region. It will not reset any layer modifications you may have made.

3. My Location – Clicking this button will attempt to find and zoom into your approximate location based on your IP address.

4. Esri World Geocoder – Enter an address to find it on the map.

5. Print Map – This function opens a dropdown that allows you to export the current map extent to a PDF, JPEG, EPS, or other popular format. Exporting to these formats may take several minutes. When the document finishes rendering, click the export to view it in a new window. You must then save or print it from the new window.

6. Measurements – This tool allows you to measure distances and areas on the map. Select a tool, set the unit of measure, and click points on the map. A single click adds a new point, and a double click completes the measurement area/line.

7. Draw on the Map – This tool allows users to draw shapes and type on the map. Select a draw mode and set the border, fill color, transparency, and other settings before drawing on the map. You cannot edit a drawing once it is on the map; you must clear the drawing and draw again. User-drawn elements will print with the map. To add text to the map, enter your text following the “Text” prompt, select the “A” icon so your text appears after the “Preview” prompt, and click on the location on the map where you would like your text to appear.

8. What is REF? – This link takes users to the Regional Ecosystem Framework website, which includes background information on the project.

9. User Guide – This link takes users to this document.

10. Data Dictionary – This link takes users to the document that describes the details of each layer.
11. Leave Feedback – This link allows users to contact NCTCOG staff. We welcome your comments and suggestions.

12. Legend – The legend displays layers that are active and visible on the map. If a layer is active but is not visible on the map, it will not display in the legend.

13. Layer List – This is a checklist of layers available for viewing on the map. See the “Layer List” section below for more detailed information.

14. Users may click on a feature on the map to display the attributes of that feature.

15. A single area may include multiple layers; click the white arrow at the top of the box to display the metadata for the layers underneath the currently displayed layer.

16. Attribute Table – Clicking on this arrow opens the data tables for the active layers. This can also be accomplished via the Layer List. For more information, see the “Attribute Table” section below.

Layer List

1. Minimizes the Layer List to the green header bar.
2. Closes the Layer List
3. Layer toggle button – When checked, the layer will display on the map if it is within the section of the map on screen and at an acceptable zoom level. Some layers will only be visible when zoomed in to around 1 mile/inch.
4. Zoom to – This button zooms to the extent of the layer. This may cause the user to zoom out past the layer’s visible extent.
5. Transparency – This opens a slider to adjust layer transparency.
6. Disable Pop-up – Prevents the informational pop-up from appearing when clicked.
7. Move up/Move down – Changes the drawing order by moving the layer up one or down one in the Layer List. Layers higher in the Layer List will draw on top of layers lower in the Layer List.
8. Open Attribute Table – Opens the layer’s attribute table at the bottom of the screen. See the “Attribute Table” section.
9. Show Item Details – Opens a new window that displays the layer detail information as listed in the Data Dictionary, provides an “Open” link to export the layer to a new Esri map or to ArcGIS, and links to the service layer URL.
10. Click the small gray triangle to the left of the layer name to display that layer’s legend.
1. **Options**
   a. **Show Selected Records** – If one or more rows in a table are selected, this feature will make only those rows visible in the table. Click Clear Selection (8) to view all the rows.
   b. **Show Related Records** – Not enabled.
   c. **Filter** – Opens a pop-up window to query the table. Includes features similar to the ‘Select by Attribute’ option in ArcMap.
   d. **Show/Hide Columns** – Allows the user to turn on/off columns within the table.
   e. **Export to CSV** – Will download a CSV file for use in Excel. If records are selected, it will only export the selected rows. If Filter by Map Extent is on, it will only export records for features currently visible on the map.

2. **Filter by Map Extent** – This feature is on by default. When on, the attribute table will only display rows for features that are currently visible on the screen. To turn this feature off, click the Filter by Map Extent button.

3. **Zoom to** – Zooms to the feature or extent of all features selected in the table.

4. **Clear Selection** – Deselects highlighted rows.

5. **Refresh** – Allows the user to manually refresh the contents displayed in the attribute table. The table typically refreshes on its own as the user makes changes to the map.

6. **Expand/Collapse Attribute Table** – Users can display more or fewer rows using this arrow or by clicking and dragging the top border.

7. **Table Tabs** – The tabs will reflect the layers that are toggled on in the Layer List and have attributes. Not all layers will have attribute tables.

8. **Close the Attribute Table** by clicking the “X.”

9. **Scroll tabs left/right and tab list menu** – The right- and left-facing arrows allow the user to scroll to tabs that may not be currently visible across the screen. The down-facing arrow allows the user to select one tab.

10. **Column Selector** – Allows the user to turn on/off columns within the table.

11. **Clicking a row in the table** will highlight the feature on the map. You may Shift+Click or Ctrl+Click to highlight multiple features.