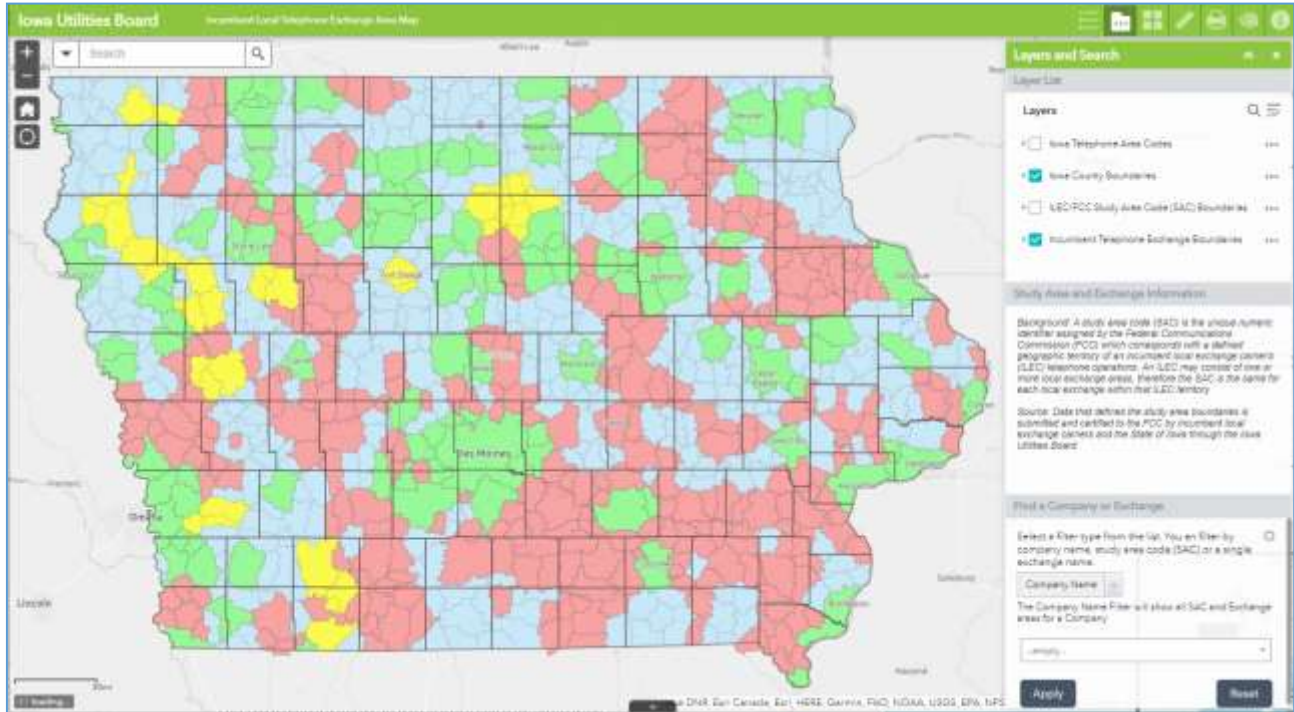


User Guide

IUB Incumbent Local Telephone Exchange Area Mapping Application


This guide describes the navigation and search tool features in the IUB Incumbent Local Telephone Exchange Area mapping application. At the bottom, this User Guide provides instructions for downloading the shapefiles used in this map.



Map Navigation and Layers

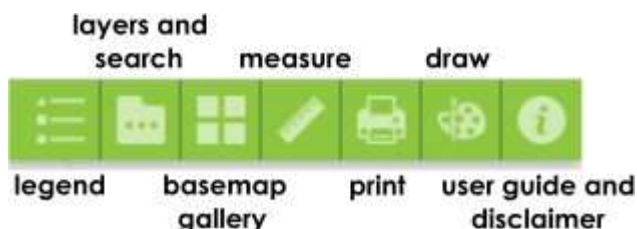
The Incumbent Local Telephone Exchange Area mapping application has navigation tools similar to tools in other web-based mapping applications. The tools in the upper left corner of the map allow a user to zoom in and out or reset the map extent. Additionally, a user can zoom to a specific extent and scale by holding down the shift-key while clicking on the left-mouse button and draw a box around an area of interest.

-  Zoom In
-  Zoom Out
-  Zoom To Original Extent
-  Zoom To Current Location (mobile)

The information for the various boundaries the map can show is presented as a series of layers. Individual layers can show the ILEC/FCC study area code (SAC) boundaries, the local exchanges within an ILEC's territory, as well as Iowa telephone area codes and county boundaries. Layers can be viewed by clicking on the "Layers and Search"  icon, which is located

in the upper right-hand side of the map in the green toolbar. The map popup window will display information pertaining to the layer(s) selected. The search box will allow you to search for information in other ways, including by address.

Tools



The map is designed to allow users to examine and interact with data associated with Iowa incumbent local telephone exchange boundaries. The map includes a legend and tools to toggle data layers on/off (“layers and search”), change the basemap or reference map (“basemap gallery”), measure boundaries or areas (measurement), print and add markup (draw). Clicking on one of the icons will activate the tools.

Legend - Opens a color-coded key identifying the different incumbent local telephone exchange boundaries viewable on the map. Note: Three major ILECs have a unique color while the light blue shading is used for multiple smaller ILECs.

Layers and Search - This tool is the default view when the mapping application first opens. The “Iowa County Boundaries” and “Incumbent Telephone Exchange Boundaries” layers are pre-selected to display. This tool consists of a series of filters or information:

- **Layer List:** This filter tool allows a user to view single map layers or a combination of map layers.
- **Study Area and Exchange Information:** Provides background information to understand the relationship between the data in each layer and the source(s) of the data.
- **Find a Company or Exchange:** This filter allows a user to view information by different categories. A user first selects which category from a drop-down menu to filter by Company Name, Study Area Code (SAC) or a single Exchange Name. Once the category is selected, the user can select from the list of options that populate in the second dropdown. Once both options are selected, a user must click the “Apply” button to filter by those selections. The Print Tool described below can be used to print a map of the filtered areas.

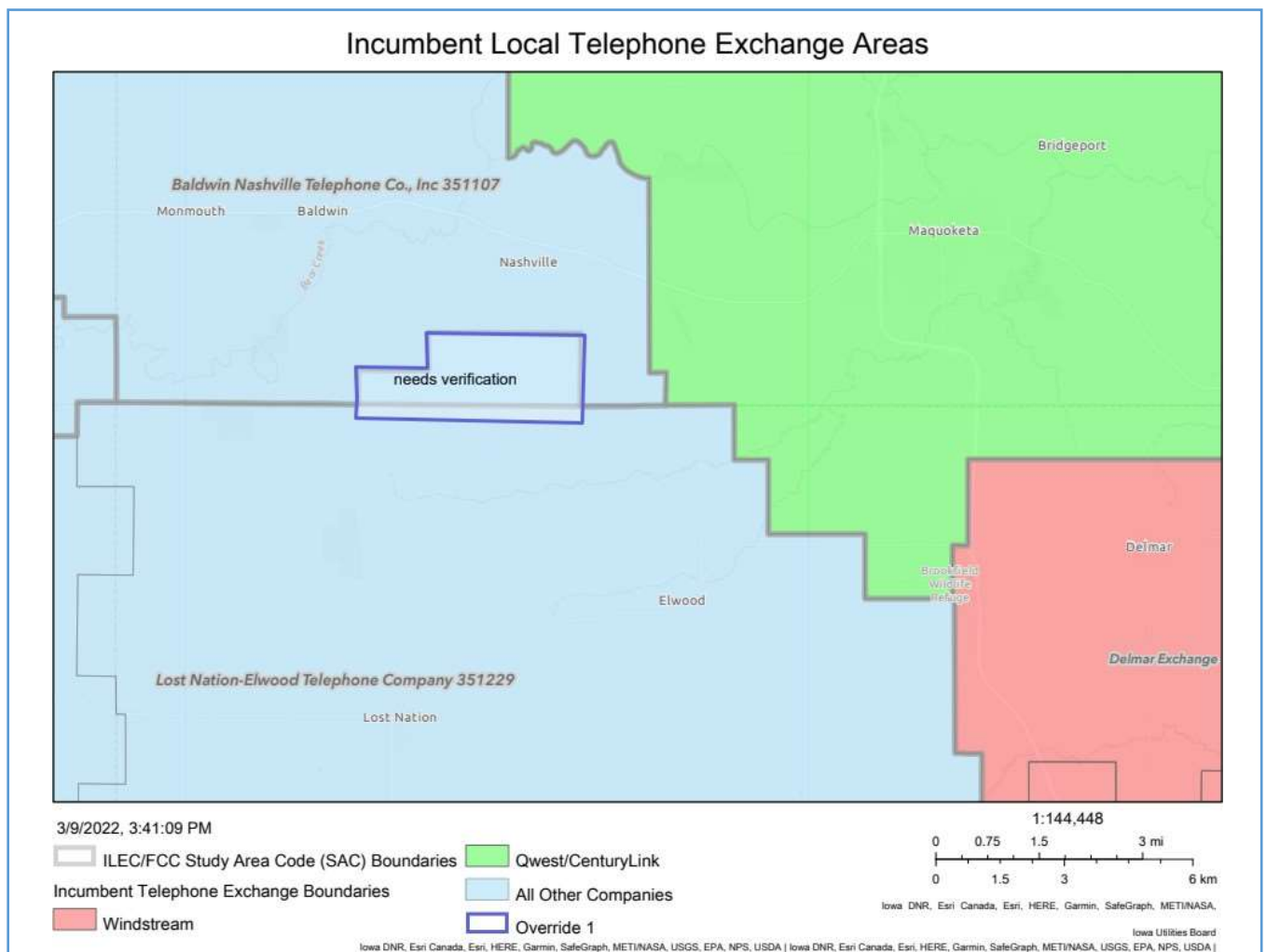
Basemap Gallery – This tool opens a panel with options for changing the basemap to imagery or other reference maps, with options that include street view, topographic, and satellite imagery.

Measure – This opens a panel of options that allow users to measure by Area, Distance or Location. Each option requires a user to choose the desired unit of measure from the dropdown. Once the measurement tool and associated unit of measure is selected, go to the map and click once at the starting location of the area you would like to measure. Continue clicking once at each point desired on

the map and double-click to complete the measurement area or line. After completing the measurement(s) the panel will show the total area or length of the sketch.

Print - Opens a panel of printing options. The default settings will generate a 11" x 17" PDF of the current map extent with the title reading "" Incumbent Local Telephone Exchange Area Map. Users can personalize the map title and change the size, output type, and other properties by clicking on the advanced tool button below the default print settings.

Draw - Opens a panel with various map sketch and markup tools. Options include location markers, line sketching, polygon sketching and label/text tools. Any map markup using the Draw tool will remain on the map until the clear button is clicked. Draw tool sketches/graphics will also be printed if using the print tool. Below is an example of using the Draw tools to markup the map and output as PDF using the Print Tool.





Downloading ILEC and Exchange Boundary Data

The exchange and ILEC (SAC) boundaries are available for download. A shapefile is a file format for storing the type of data used in GIS maps. A user might want to download a shapefile or KML in order to use that data in geographic information system software (GIS) or Google Earth. The instructions and screenshots that follow offer guidance for downloading geospatial data in a shapefile or KML format from the State of Iowa Geodata Website (<https://geodata.iowa.gov>)


1. Open a web browser and go to <https://geodata.iowa.gov>
2. In the search box under the Title of the page type the word: exchange. The list should present the two layers available related to ILECs in Iowa. Choose either the “IA Telephone Exchange Boundaries” data or the “IA Incumbent SAC” data.

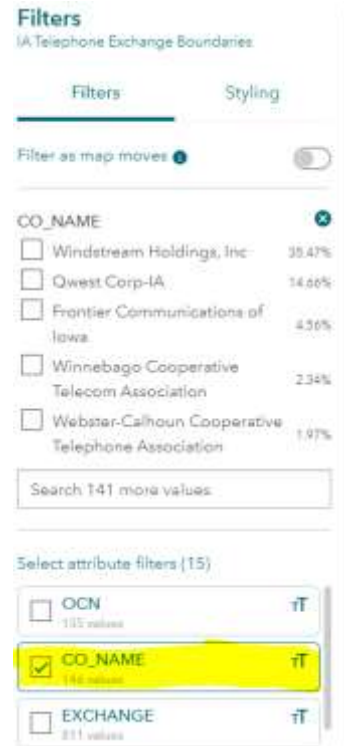


3. After clicking on the desired layer, the website will open to a preview map of the data. If you want to know more information about the data layer, click on the “View Full Details” button on the left side of the screen.
4. **Download ALL data** – to download all records in the data layer click on the Download  button on the left side of the preview map. Choose one of the formats listed in the “Download Options” menu. Options that can be displayed in Google Earth include KML and Shapefile. Other software may be able to use other formats.

5. **Download a subset of data (Filter).** Click on the Filter Data  button to the left of the preview map. The following steps are an example of how to filter for a specific company. Other filters are also available.

- a. To filter for a specific company, check the box “CO_NAME.”
- b. Next, check the box to left of the Company Name to filter all records associated with that company. If you can’t find the company name, type the desired company name in the “Search” box. Multiple company names may be selected in one search.

c. After filtering, click on the Download  button to open the “Download Options” window. There should be a toggle at the top of the window. If you want to download the records make sure the “Toggle Filters” option has been activated before selecting your download format. See image below.



Filters
IA Telephone Exchange Boundaries

Filters Styling

Filter as map moves

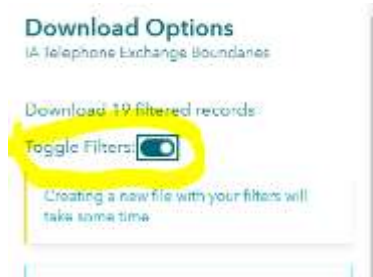
CO_NAME

<input type="checkbox"/>	Windstream Holdings, Inc.	35.47%
<input type="checkbox"/>	Qwest Corp-IA	14.66%
<input type="checkbox"/>	Frontier Communications of Iowa	4.56%
<input type="checkbox"/>	Winnebago Cooperative Telecom Association	2.34%
<input type="checkbox"/>	Webster-Calhoun Cooperative Telephone Association	1.97%

Search 141 more values

Select attribute filters (15)

<input type="checkbox"/>	OCN 115 values	IT
<input checked="" type="checkbox"/>	CO_NAME 144 values	IT
<input type="checkbox"/>	EXCHANGE 211 values	IT



Download Options
IA Telephone Exchange Boundaries

Download 19 filtered records:

Toggle Filters:

Creating a new file with your filters will take some time