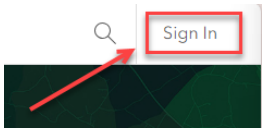
BEAD Mapping App User Guide

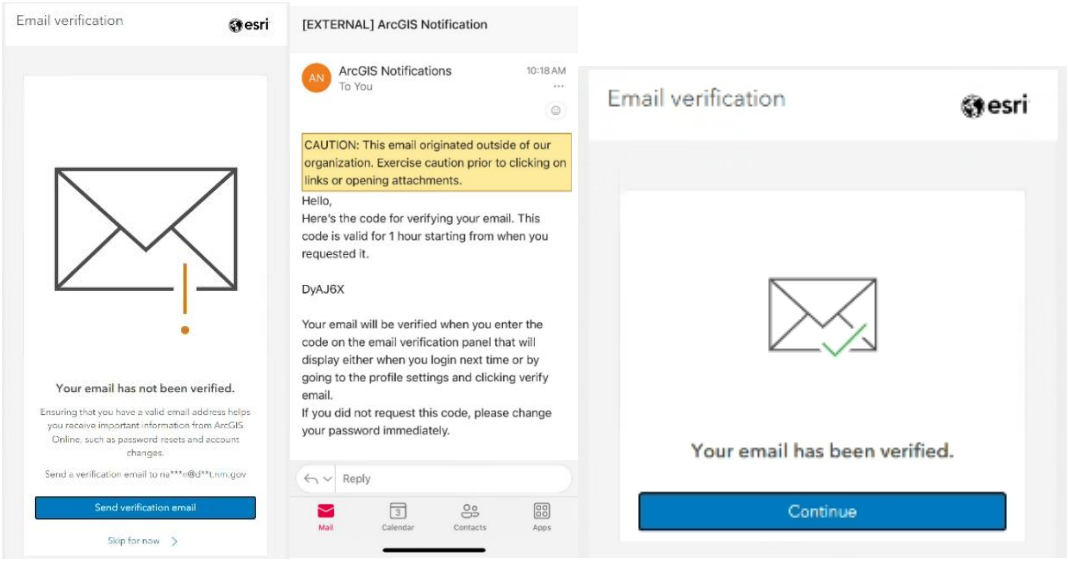
Contents:

Access to Applicant "Sandbox"

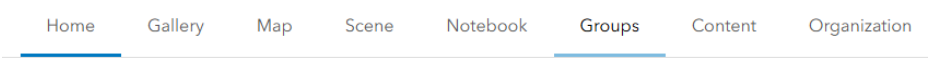
1. Access your user login information via Submittable and navigate to the link provided to directly access the group or use the following link to navigate to your group:nm-community.maps.arcgis.com
2. Sign in.



3. Upon signing in, a screen asking for email verification will appear. Click "Send verification email" to receive an email to verify your email. Use the provided code to verify your email. Once this is complete, your email will be verified, and you can proceed to the mapping tool.

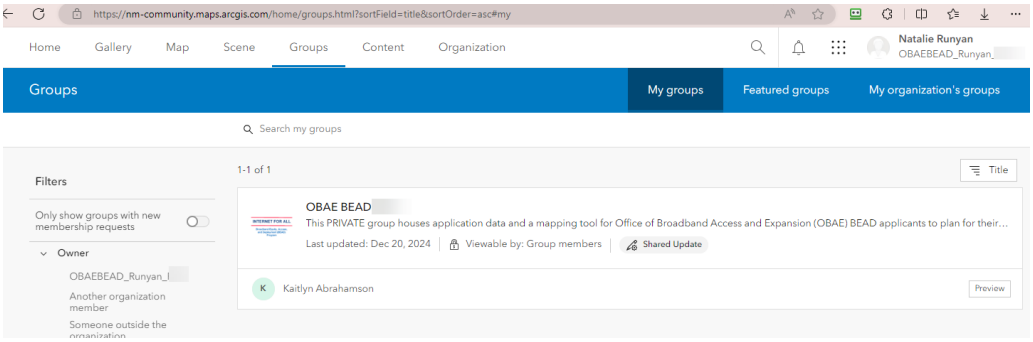


4. Navigate to the "Groups" tab on the top ribbon of the page.

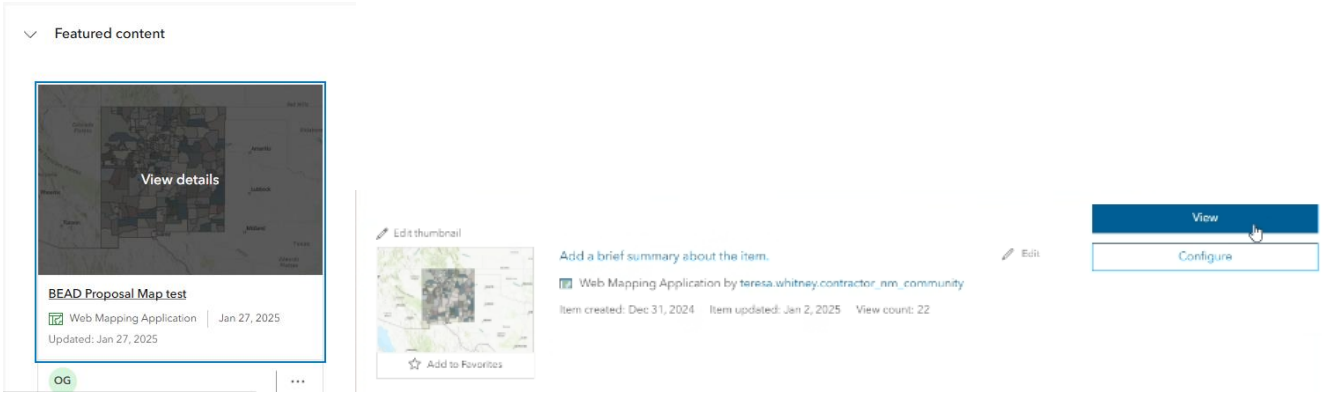


Questions? Contact OBAE-gis@doit.nm.gov for assistance.

5. Click on your OBAE BEAD group to see the available data and mapping app.

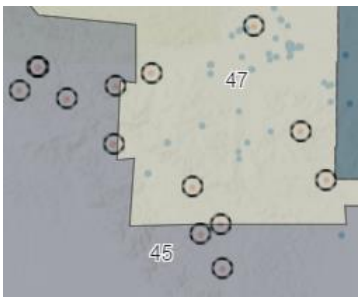


1. Hover over the Featured Content "BEAD Proposal Map" and click "View details" on the "Overview" page or navigate to the "Web Mapping Application" in the "Content" tab of the group.
2. Click "View" to open the mapping tool.

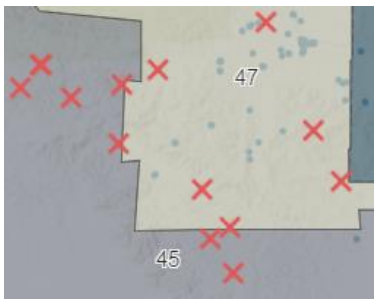


Reminders & Best Practices

- The app is built on two datasets, the 100% and Alt% Unserved feature layers. When using the edit tools, it is critical to toggle on the appropriate layer for editing. The layers will display as shown below:



100%



Alt%

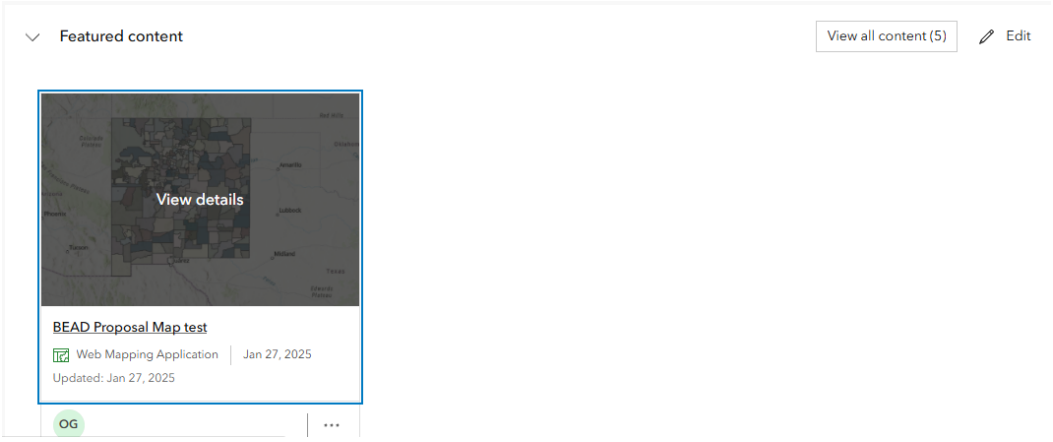
- BEAD Eligible BSLs will symbolize by technology as the user edits, as shown in the legend.
- If working with more than 3,200 BSLs, the user will need to export in batches less than 3,200 records.
- Filtering by the map extent will reduce the number of records in the table and in exports.
- If there is more than one user in the applicant group, keep in mind that both users can edit each other's work.

- Some tools are optional and not required to complete the application, but they have been included in the mapping tool to aid in the application process.
- The data attribute tables are sorted numerically by PAU ID, but the tables can be sorted by any of the column headings.
- Contact OBAE-gis@doit.nm.gov for assistance.

Quick Start-Up Guide

This section is a bare-bones guide to expedite the use of the BEAD mapping tool. Follow this section of the guide for more detailed information on the mapping tool.

Navigate to the shared BEAD group and open the mapping app.



Click on the "more" button.  The most important tools for BEAD funding application are listed below.

Filtering to your PAU of interest narrows down the amount of BEAD eligible (unserved) BSLs to a particular PAU. This tool is not necessary, specifically if user is planning by network design instead of by PAU. If the user is planning to propose service to 100% of the eligible BSLs in one PAU, filter using the 100% dataset. If the user is unable to service all the eligible BSLs in one PAU, please filter using the Alt% dataset.

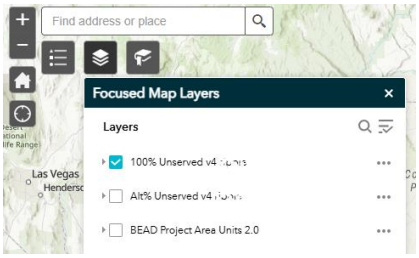
To use the filter, simply select the PAU in the drop-down menu and toggle the tool on  to filter the chosen dataset. The tool zooms to the filtered selection on the map and will display in the bottom left of the attribute table. 100% BSLs will default to "In Project," while Alt% BSLs will default to "Not In Project" ✕ This filter will remain for the entirety of the planning process unless it is removed.

TIP

Eligible BSLs will not show up in the filter unless toggled on in the layer list.

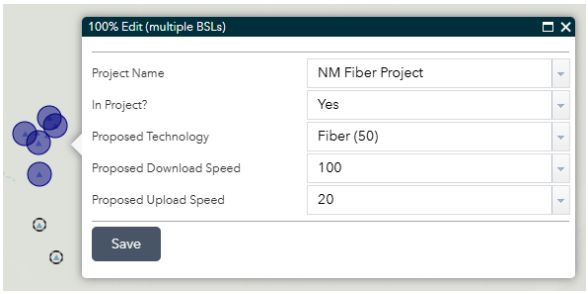
If serving 100% of BEAD Eligible BSLs within a PAU, batch edit all the BSLs using this tool.

1. Toggle on the 100% layer in the focused map layers.

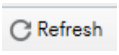


2. Make sure the correct attribute table is displaying (100% unserved BSLs)
3. Choose a selection option. The polygon selection option requires a click to begin the selection.

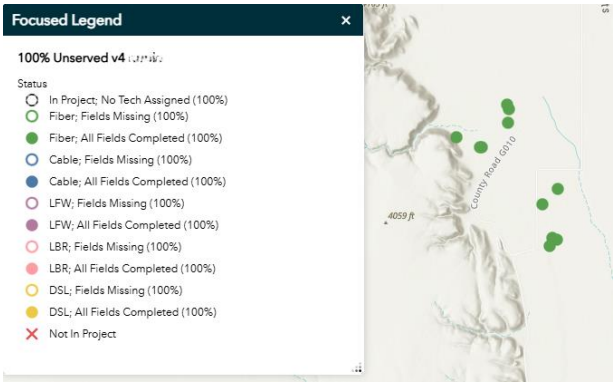
4. Select your BEAD Eligible BSLs.
5. Fill out the fields for the selected BSLs.



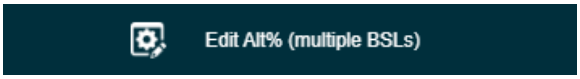
TIP
Avoid losing the edit tool by not clicking out of the pop-up before saving the data. Data can be re-edited at any time.

6. Click save (data should be updated in the attribute table and in the map)
7. Click "refresh" in the attribute table to see edited data. 

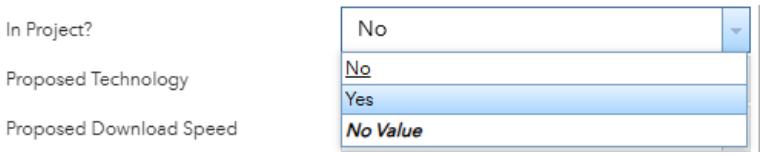
8. Check the focused legend that all the BSLs are solid filled, and the technology is correct.

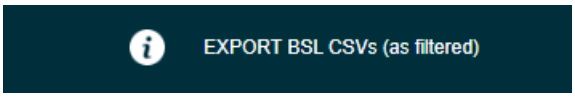


TIP
The selection will be in the attribute table below. View only the selected records by locating the “Options” button and selecting “Show selected records.” Clicking on a feature will zoom to the feature on the map.

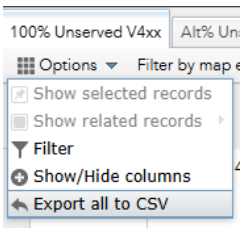


If you choose NOT to serve 100% of BEAD Eligible BSLs within a PAU, you can batch edit an alternative amount of BSLs using this tool. This tool is the same as the Edit 100% tool, but all the eligible BSLs are not assumed to be “In Project.” To add the BSLs to the project, select “Yes” in the “In Project?” field. Please see the section above (100% Edit) for batch edit instructions.





When all editing is complete, export the data to csv by navigating to the desired dataset in the attribute table and click on “Export all to CSV” in the “Options” menu.

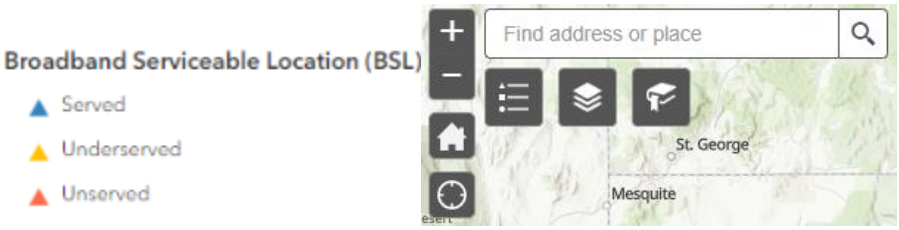


TIP

It’s possible to export a single PAUs worth of data or a filtered extent. Using the Filter by map extent button on the attribute table will reduce the number of records in the exported csv.

Full Mapping App Guide:

The map will open to display Project Area Units (PAU), FCC Official BEAD Deduplicated broadband service locations (BSLs), and attribute tables of both the 100% and Alternative% unserved BSL layers.



The map tools in the map (above) allow the user to zoom in and out on the map, return to the original map extent, pinpoint the user’s location, search an address or area of interest, view a focused legend, view and toggle data layers for the legend, and bookmark areas of interest in the app.

The map tools in the left panel are described below.

Clicking the information button will provide instructions on app use and other important information

Clicking the basemap button will allow the user to choose between any basemap available.

Clicking the legend button will show layer symbology for layers in the map.

TIP

Some layers will not be shown because they are contextual and non-editable.

Questions? Contact OBAE-gis@doit.nm.gov for assistance.

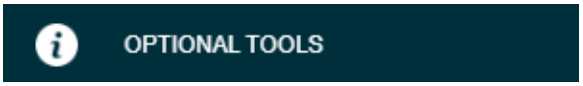
Clicking the layer list button will allow the user to toggle layers available in the map. Some layers, such as “V5 Provider Service Availability Hex8,” “Tribal Land,” “Counties,” state and federal grants, and “FCC Official BSL BDC Service BEAD Deduplicated” are contextual layers to use as a guide when assembling data for an application.

This (more) button takes the user to the proposal planning portion of the app.

TIP

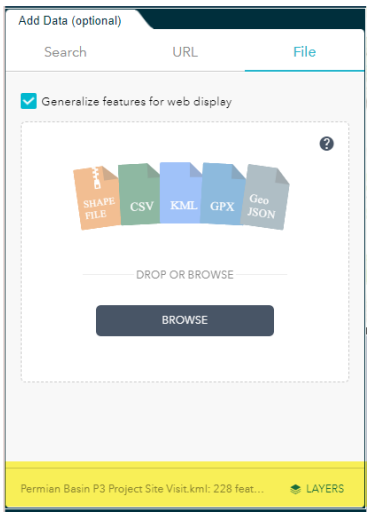
The forward and the back buttons on the lower right portion of the tool panel will maximize and minimize the tool panel.

Proposal Planning Tools:



This tool (can be SLOW to respond) allows the user to print a map extent. Select “Advanced” for extent, legend, and author naming options. There is a field for “map author” that is editable.

This tool allows the user to add data from ArcGIS Online, by URL, and by file. Once data are added, they will display at the bottom of the panel. Once added, the layer can be toggled on-off in the map, using the layers tool.



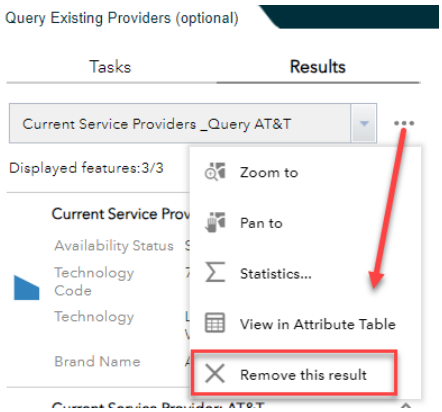
Query Existing Providers (optional)

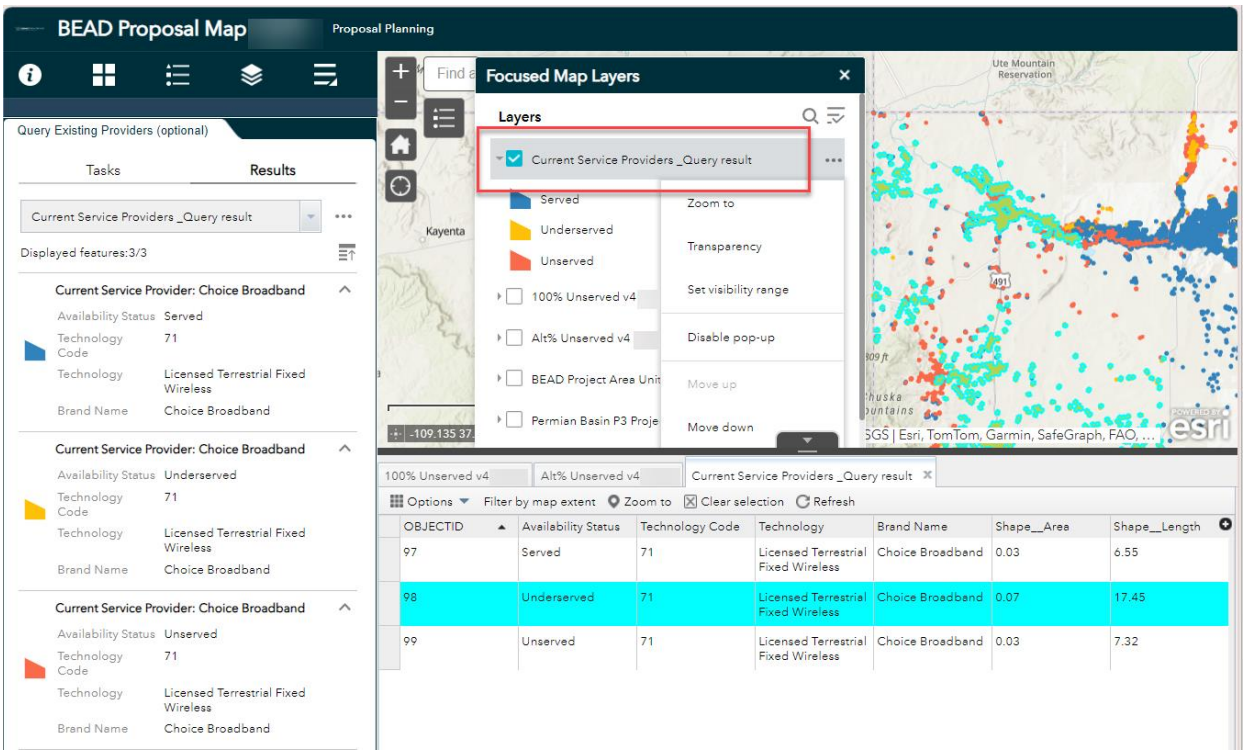
This tool allows the user to query provider service claims across the state. On the “Tasks” tab, search by brand name and technology. The result layer name can be edited as desired. After the query is applied, the results tab will show all the relevant results that can be zoomed to by clicking on your result of choice.

The options button displays the results in the attribute table and remove the result. To collapse the features, click on the “Collapse All” button Choose the options button to view these features in the attribute table.

TIP Only one query can be run at a time (query results are not stored, so a new query replaces the existing one). Query results will remain in the map until they are removed, either by turning off the layer in the layer list, or removing from the options.

TIP
Click on the button to return to the list of tools.





FILTER to PAU of Interest

Filtering to your PAU of interest narrows down the amount of BEAD eligible (unserved) BSLs to a particular PAU. This tool is not required to plan proposals. There are two datasets to filter on, the 100% and the Alternative% (Alt%). If the user is planning to propose service to 100% of the eligible BSLs in one PAU, filter using the 100% dataset. If the user is unable to service all the eligible BSLs in one PAU, please filter using the Alt% dataset.

To use the filter, simply select the PAU in the drop-down menu and toggle the tool on to filter the chosen dataset. The tool zooms to the filtered selection on the map and will display in the bottom left of the attribute table. 100% BSLs will default to "In Project," while Alt% BSLs will default to "Not In Project" ✕ This filter will remain for the entirety of the planning process unless it is removed.

TIP

Eligible BSLs will not show up in the filter unless toggled on in the layer list.

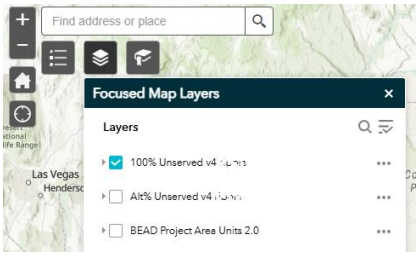
EDIT TOOLS

Use the next 5 tools to identify the BSLs in the project area.

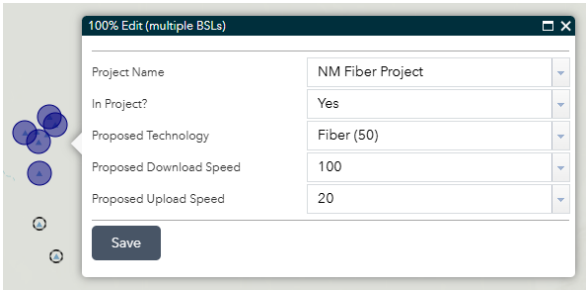
Edit 100% (multiple BSLs)

If serving 100% of BEAD Eligible BSLs within a PAU, batch edit all the BSLs using this tool.

1. Toggle on the 100% layer in the focused map layers.



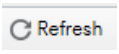
2. Make sure the correct attribute table is displaying (100% unserved BSLs)
3. Choose selection option (the polygon selection tool requires a click to begin the selection).
4. Select your BEAD Eligible BSLs.
5. Fill out the fields for the selected BSLs (*number of records should be displayed in the attribute table*) (*preserve the filled-out data by avoiding clicking out of the edit widget*)



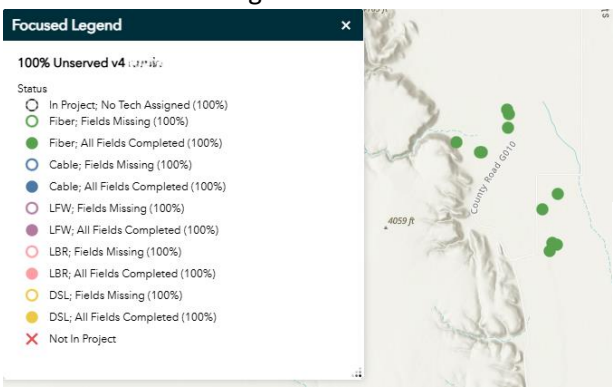
6. Click save (data should be updated in the attribute table and in the map)

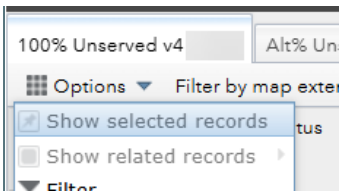
TIP

Avoid losing the edit tool by not clicking out of the pop-up before saving the data. Data can be re-edited at any time.

7. Click "refresh" in the attribute table to see edited data. 

8. Check the focused legend that all the BSLs are solid filled, and the technology is correct.



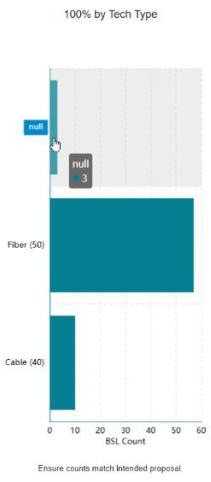


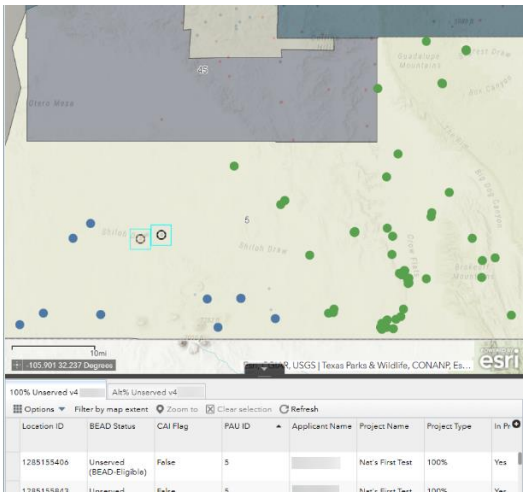
TIP

The selection will be in the attribute table below. View only the selected records by locating the "Options" button and selecting "Show selected records." Clicking on a feature will zoom to the feature on the map.

100% Chart (unserved, as filtered)

To check progress during the proposal process, use this chart to check the percentage of BSL points that have been edited, as well as the technologies that have been assigned to them. Hover over the bars in the graph to highlight the BSLs referenced in the chart.



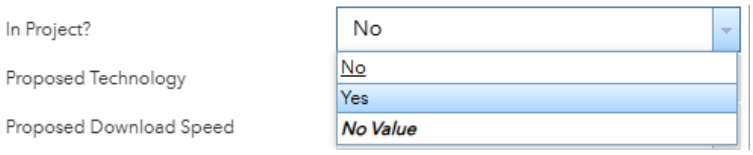


TIP

Keep in mind that this chart will show any previously filtered selection if it wasn't previously removed.

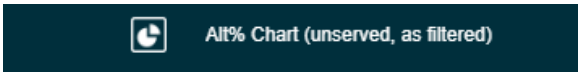
Edit Alt% (multiple BSLs)

If you choose NOT to serve 100% of BEAD Eligible BSLs within a PAU, you can batch edit an alternative amount of BSLs using this tool. This tool is the same as the Edit 100% tool, but all the eligible BSLs are not assumed to be "In Project." To add the BSLs to the project, select "Yes" in the "In Project?" field. Please see the "Edit 100% (multiple BSLs)" tool for instructions.

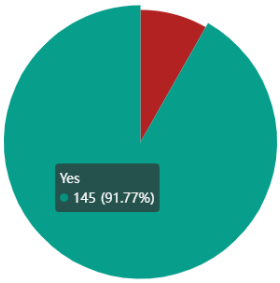


This chart allows the user to check progress and is the same as the "100% Chart (unserved, as filtered)" above. Use this chart to check the percentage of BSL points that have been edited, as well as the technologies that have been assigned to them.

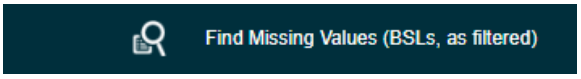
> ***TIP***
>
> Just like in the previous chart, keep in mind that this chart will show any previous filtered selection if it wasn't previously removed.



Access this chart to view the count and percentage of BSLs in the Alt% proposal. The button allows the user to add a legend or data labels to the chart.



> ***TIP***
>
> Keep in mind that this chart will show any previous filtered selection if it wasn't previously removed.



This tool searches for any missing values that have not been defined. On the "Tasks" tab, choose either the 100% or Alt% dataset. The results will show all the BSLs that have missing values. Each BSL feature will be expanded by default. To collapse the features, click on the "Collapse All" button Choose the options button to view these features in the attribute table.

After the query is applied, the results can be zoomed to by clicking on the result. The options button allows the user to view the results in the attribute table and remove the result. The "filter by map extent" may not reduce the number of records for this tool.

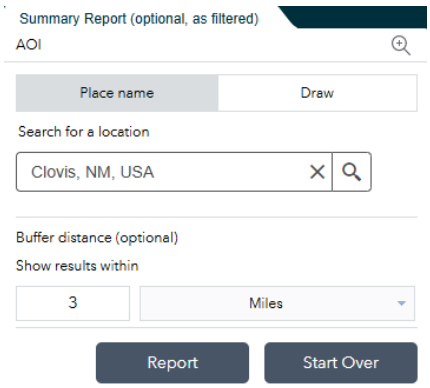
Any missing value can be edited point by point with this tool. Simply click on the BSL missing edits and fill in the missing values. Once saved, the edited BSL will visually change to display the technology it's been designated.

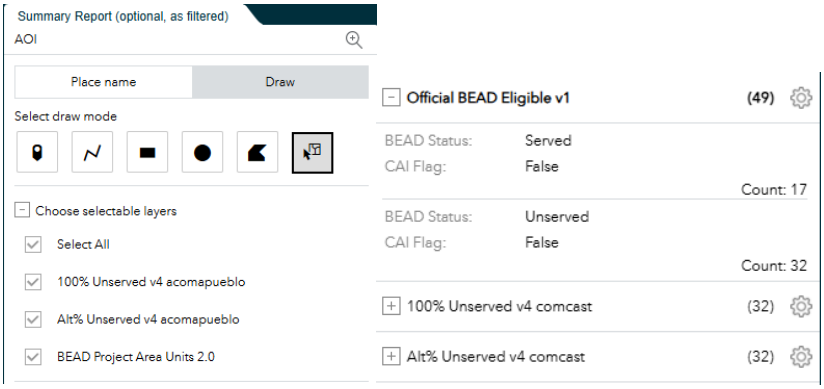
> ***TIP***
>
> Make sure the dataset is editable by toggling it on and that there are no filters on that may hide eligible BSLs.

Summary Report (optional, as filtered)

This tool allows the user to create an area of interest (AOI) summary report based on a buffer. In the “Place name” tab, search for an address or area of interest and create a buffer by adding a measured distance around the AOI and clicking “Report.” The report will show how many eligible BSLs in both the 100% and the Alt% datasets, as well as the counts for both unserved and served BEAD eligible points and CAIs. Expanding the report will highlight individual features, and clicking features will highlight the feature on the map. The options above the features on the right allow the user to refresh the report, download to csv, print, or change the metrics of the report.

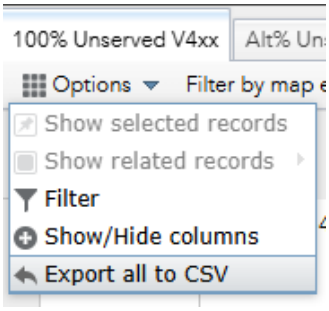
The “Draw” tab will act similarly, with the difference being instead of searching for an AOI, draw the AOI on the map using one of the drawing shapes or choosing to use one of the layers in the app. Choosing the select option will allow the user to select a PAU to summarize within.





EXPORT BSL CSVs (as filtered)

When all editing is complete, export the data to csv by navigating to the desired dataset in the attribute table and click on “Export all to CSV” in the “Options” menu.



TIP

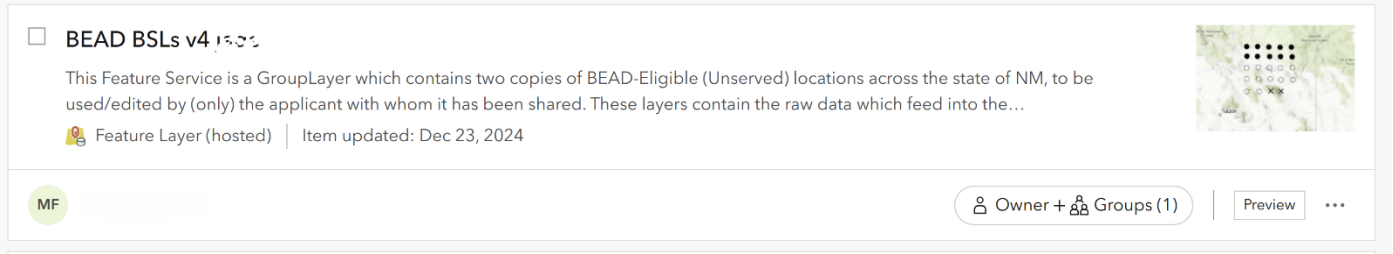
Make sure the dataset is editable by toggling it on and that there are no unwanted filters on that may hide eligible BSLs.

TIP

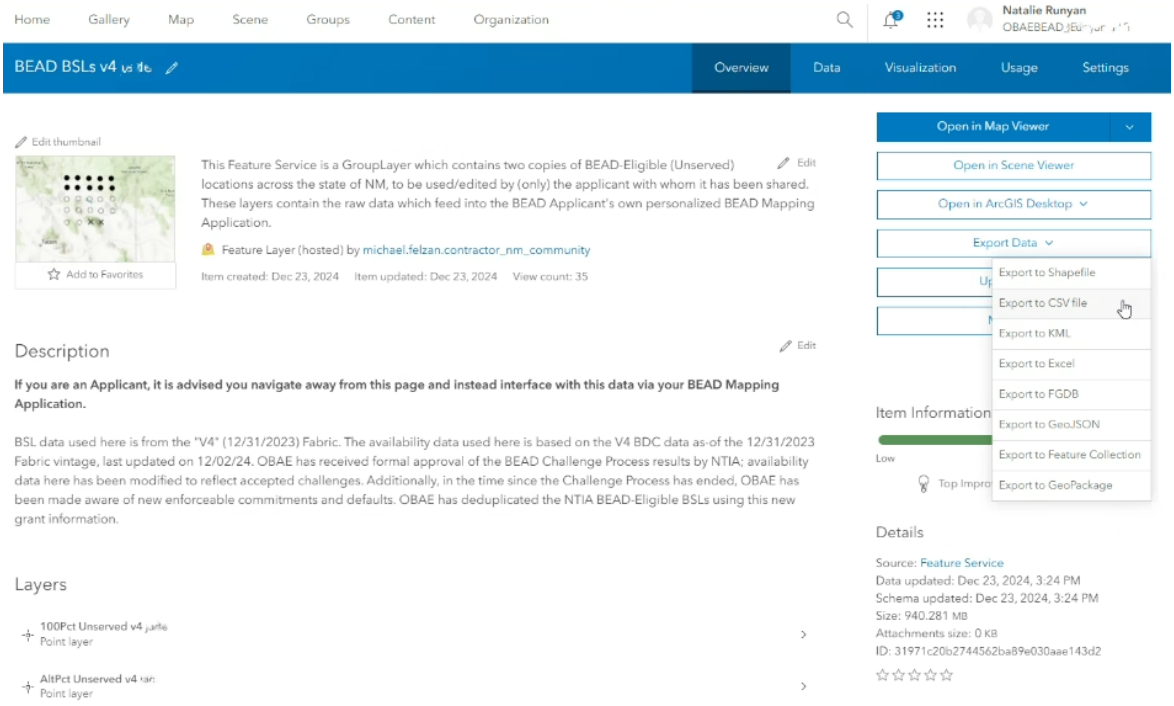
It’s possible to export a single PAUs worth of data or a filtered extent. Using the Filter by map extent button on the attribute table will reduce the number of records in the exported csv.

Access to Exportable Data

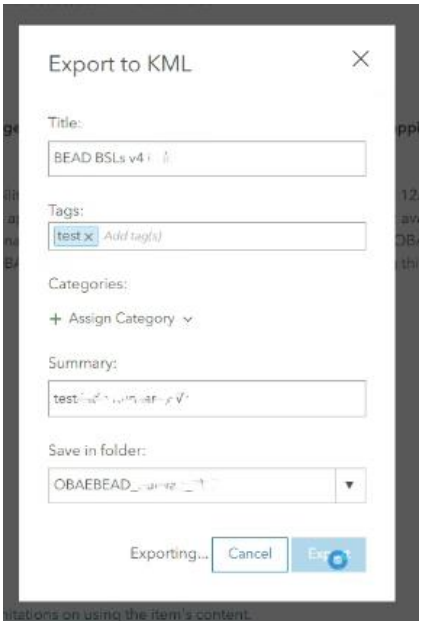
1. If seeking to export the data used for the application, navigate to the “Content” tab within the BEAD group.
2. Navigate and click on to the feature layer in the group.



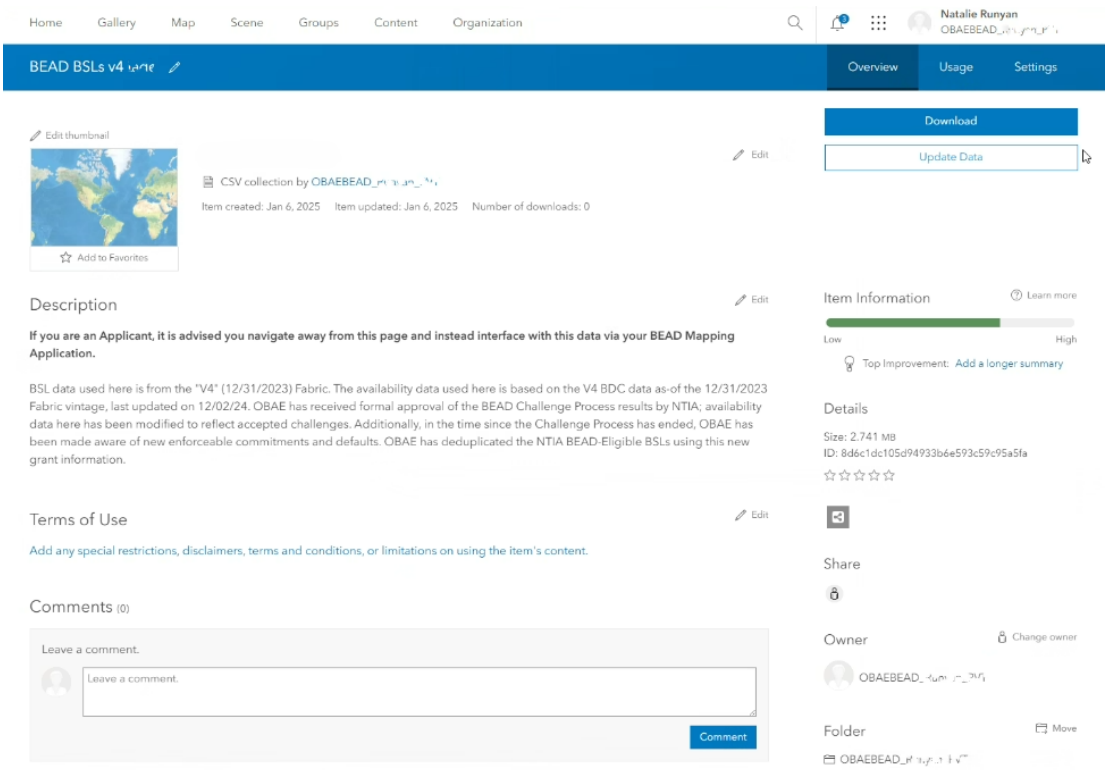
3. Click the “Export Data” drop-down button to choose the data format for export.



4. Once a format is chosen, a pop-up will appear to change the title, add tags, and enter a description, if desired.



5. Click Export. Note that the data layers are large and may take more than a minute to export. The data will appear in the user's content in the chosen format.



6. Download the data using the "Download" button.

Data Use Key:

BEAD_Status

Code	Description
0	Unserved (BEAD-Eligible)
1	Underserved (Not BEAD-Eligible)
2	Served (Not BEAD-Eligible)

ProposedTech_100Pct // ProposedTech_AltPct

Code	Description
50	Fiber (50)
40	Cable (40)
71	LFW (71)
72	LBR (72)
10	DSL (10)

CAI_Flag

Code	Description
0	FALSE
1	TRUE

InProject_100Pct // InProject_AltPct

Code	Description
0	No
1	Yes

ProjectType

Code	Description
1	100%
9	Alt%

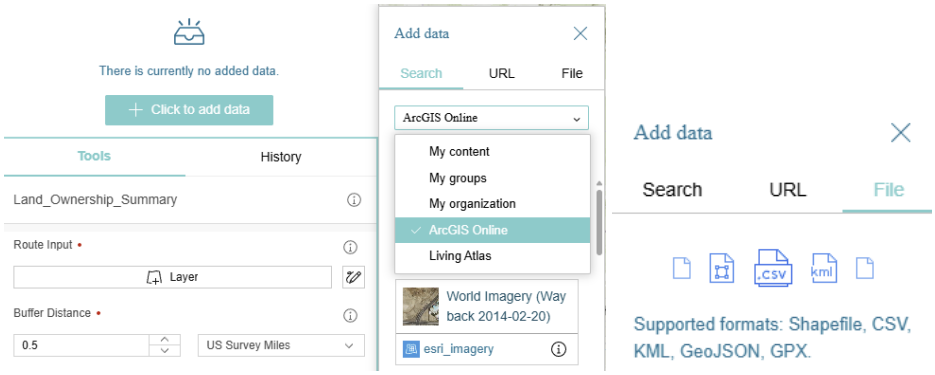
Broadband Ownership Tool:

The NM Broadband Ownership Tool is intended to assist BEAD Applicants in proposal planning. A user may either upload their own route or link their own ArcGIS Feature Service to return the percentage distribution of BLM land within a user-defined distance around the selected route. The following is a guide for using this tool.

- Use the link or navigate within your group to access the tool called “NM Broadband Ownership.” The user will get a prompt to log in to view this tool. The login is the same login as the BEAD mapping tool.

  https://experience.arcgis.com/experience/db8f4c01a1e74472ada1327a1882983d

- Once the tool opens, there is an option to add data by URL, file, or by searching by group, organization, ArcGIS Online, or Living Atlas.



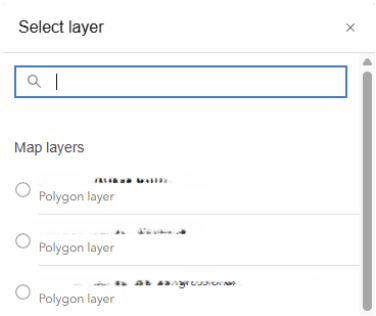
TIP

If uploading a large dataset, the ownership tool may not work. If uploading a shapefile, the data will need to be in a zip file.

- Alternately, you can use basic tools to draw a line, input a buffer distance that will estimate total area within the buffer you have drawn.

  Use the 

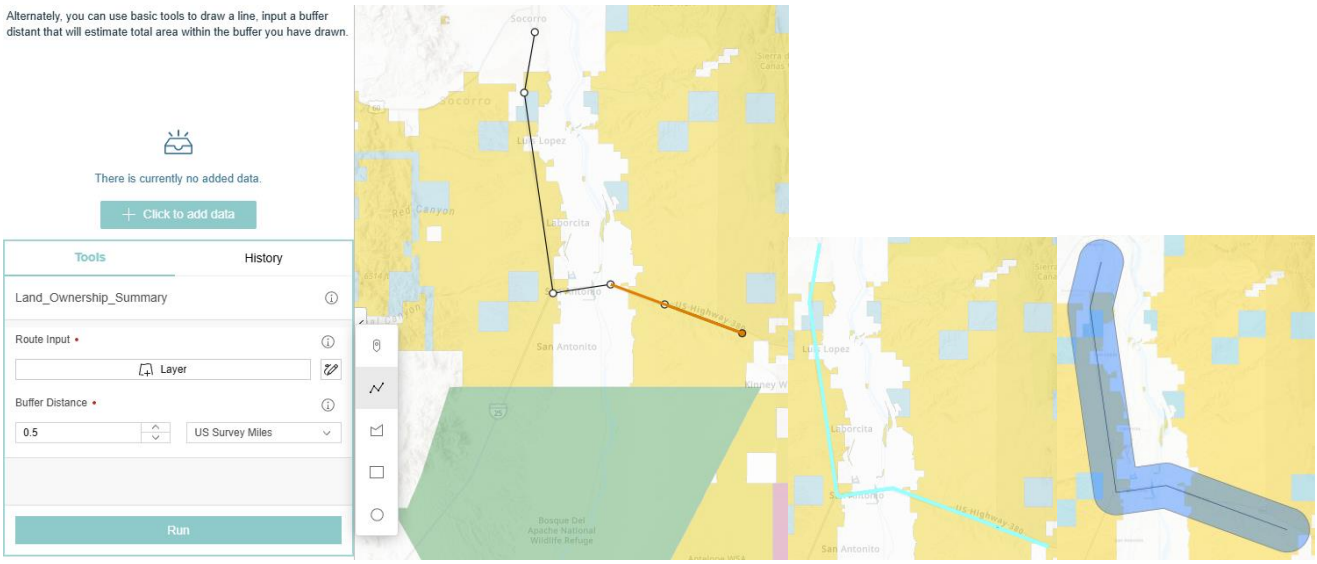
button to create the summary using a map layer.



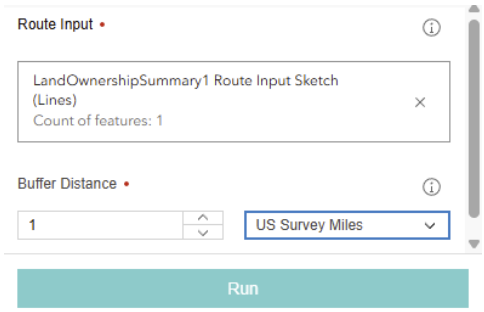
- Use the  button to draw a point, line, polygon, or circle to draw an area to summarize around or within.

TIP

The  and  buttons require a double-click to finish the drawing, while the rest of the draw options use a drag and drop draw function.



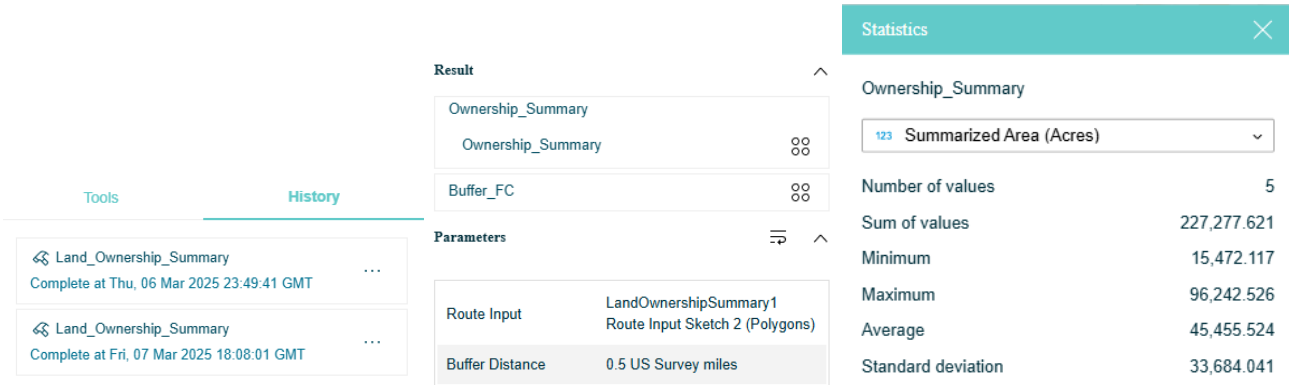
- Once the data is added or the area of interest is drawn, input the buffer distance and choose a unit before clicking the "Run" button.



TIP

The summary may take a while to run and render.

- Summaries will reside in the "History" tab. Clicking on the summary will show the result and parameters of the summary. Click the button to see statistics on the summary or export to JSON, CSV, or Item.



OBJECTID	Join ID	Count of Polygons	Ownership Code	Surface Ownership	Summarized Area (Acres)	Percent of Area	Input Route Name	Buffer Parameters
1	1	6	BLM	US Bureau of Land Management	96,242.53	42.387	in_memory\eature_set	0.5 Miles
2	1	3	FS	USDA Forest Service	41,946.43	18.434	in_memory\eature_set	0.5 Miles
3	1	1	FWS	US Fish and Wildlife Service	58,001.09	25.507	in_memory\eature_set	0.5 Miles
4	1	57	P	Private	15,472.12	6.809	in_memory\eature_set	0.5 Miles
5	1	11	S	State of New Mexico	15,615.46	6.863	in_memory\eature_set	0.5 Miles