

**Service Area Editor  
Member GIS Workshop  
Friday, March 25<sup>th</sup>, 2022  
1:00 p.m. – 2:00 p.m.**





# What We'll Cover Today

- Texas811 GIS Team
- Submission Process, Formats, and Instructions
- Service Area Editor
- Q&A



# Texas811 GIS Team

Business hours are 7 AM to 5 PM  
Monday through Friday

---

**1997** Christy Smith  
GIS Technician II

---

**2001** Erika Hernandez  
GIS Technician I

---

**2005** Jocelyn Hernandez  
GIS Technician I

---

**2020** Brooke Nettles  
GIS Technician I

---

Sara Taylor  
GIS Manager

---

**2021** Stephanie Rosales  
GIS Technician I

---

Taylor May  
GIS Technician II

---



# Our Current Process



Members submit mapping through Member Services via the electronic Member Mapping Submission Form



Service areas are developed based polygon data provided by the member or buffered assets



Service areas are reviewed and added to the Texas811 system, and a confirmation email is provided



Members confirm their mapping.



Data is added to the system on the next available live date (Tuesday/Friday).



If you need any help at any point in the process, please reach out to us at [gismail@texas811.org](mailto:gismail@texas811.org) or 888-771-1877, option 3.

## Preferred Member Data Submission Formats

Google KMZ

Esri Shapefile

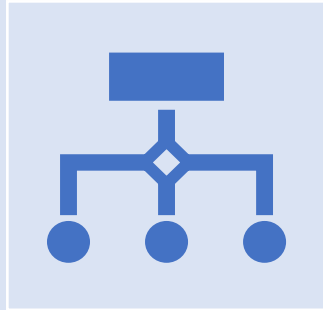
Esri File Geodatabase

GeoJSON

*Please reach out to us to inquire about any additional file formats not listed here.*



# General File Submission Requirements



## One Member Mapping Submission form per code per live date.

If you have multiple submissions of the same type and for the same live date, please combine them.

Separate files can be zipped and attached to the form.

***Attachments are limited to 20MB in size.***

*If your files are routinely too large, please contact us to set up a dedicated SFTP.*

Please do not combine GIS files or submission information for multiple codes.



## All submission file types, regardless of format, have the following requirements:

Projection must be in WGS84 (aka GCS WGS 1984, EPSG: 4326, LL84)

The points, lines, polygons, or complete service area must be within the State of Texas

Files attached to the submission form or uploaded to the SFTP site must be zipped

Specific needs must be noted in the Additional Information field (i.e., “Please rename zip files to .piz”)

# Member Mapping Submission Form

---

- [https://texas811.formstack.com/forms/tx\\_mappingsubmission](https://texas811.formstack.com/forms/tx_mappingsubmission)

## Member Forms

- Extraordinary Circumstances Form**  
I need to update our Member Receiving Sites.
- Apply to be a Texas811 Member**  
I would like to become a Texas811 Member.
- Update Destination of Tickets**  
I need to update our mapping coverage area within the Texas811 database.
- Locate Request Concern**  
I have a concern about a specific locate request.
- Update Existing Member Mapping**  
I need to update our mapping coverage area within the Texas811 database.
- The Portal**  
I have a question about the Texas811 Portal.



### Member Mapping Submission Form

This form is required and must be filled out completely with all mapping submissions. The information requested is vital in processing your submission correctly. If the form is not complete it will be returned for more information.

**Company Name\***

**Name\***  
   
First Name Last Name

**Email\***  
  
Required for fee date confirmation



# Member Mapping Submission Types

**Adds** - Adds should be applied when you only want to add new coverage to your 811 service areas. The mapping file may include individual additions or the entire code's coverage area. GIS staff will not delete data from your code's current coverage.

**Deletes** - Deletes should be applied when you only want to delete coverage from your 811 service areas. The mapping file you submit should include only those areas that you want to remove. If you need to remove an entire service area, please note "full code delete" under the additional information.

**Full Replacement** - For a Full Replacement, please submit a mapping file representing the entire area for which you want to keep asset protection. Essentially you are swapping out what is currently registered and replacing it with this new file you have provided. A Full Replacement requires you to indicate a reason for deletions on the Member Mapping Submission Form, so if you do NOT intend to delete any coverage areas, please request Adds instead.

**Asset Transfer** - For an asset transfer, please submit a mapping file representing the entire area you intend to delete as a **Deletes** or a **Full Replacement** for which you want asset protection. In the reason for deletions please indicate the assets were **sold**. You'll need to provide the contact information for the purchaser. Texas811 staff will reach to you and the purchaser as appropriate.



# Esri File Submission Requirements



## Shapefiles

Shapefiles must be zipped and include the .shp (geometry), .shx (index), .dbf (tabular data), .prj (projection), at a minimum Shapefiles cannot exceed 2 GB each.



## File Geodatabases

File Geodatabases (.gdb) must be zipped at the gdb folder level.  
File size cannot exceed 1TB  
Personal Geodatabases (.mdb) are not accepted





# GeoJSON File Submission Requirements

- GeoJSON is an open-source file format based in the JavaScript Object Notation format.
- The geometry must be OGC Valid (not just ESRI Valid).
- The file must contain geometries that are either a polygon or multipolygon format

```
{ "type": "FeatureCollection", "features": [ { "type": "Feature", "geometry": { "type": "MultiPolygon", "coordinates": [ [ [ [ -96.698670638725, 32.995988224119 ], [ -96.6986411524754, 32.9970869525785 ], [ -96.69605899895991, 32.997065755484215 ], [ -96.6960674241168, 32.996917374926795 ], [ -96.6960969103664, 32.996821987185996 ], [ -96.6963201633992, 32.996037685069 ], [ -96.6963749230628, 32.995988224119 ], [ -96.698670638725, 32.995988224119 ] ] ] ] ], "properties": { "layer": "" } } ] }
```

# Service Area Editor



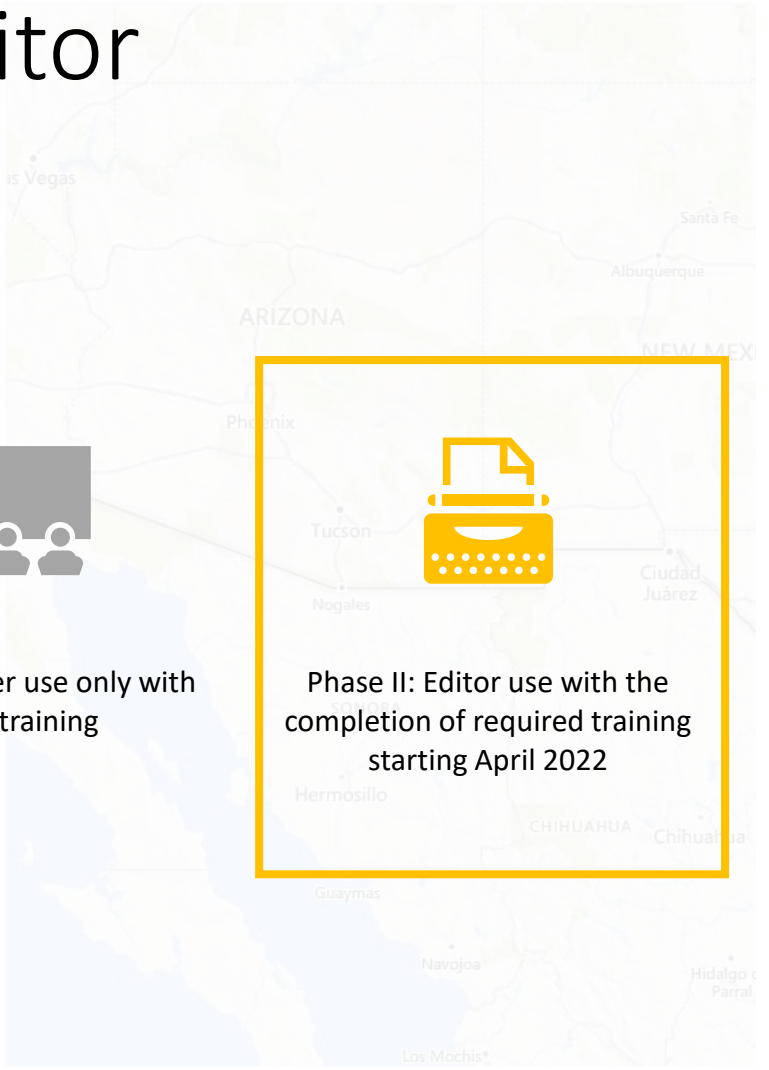
Available  
February 2022



Phase I: Viewer use only with  
active training



Phase II: Editor use with the  
completion of required training  
starting April 2022



Click on the **Service Area Editor** to start your viewer session. You'll be presented with the full map view. You'll have access to **Select a code** to view the service area codes assigned to you.

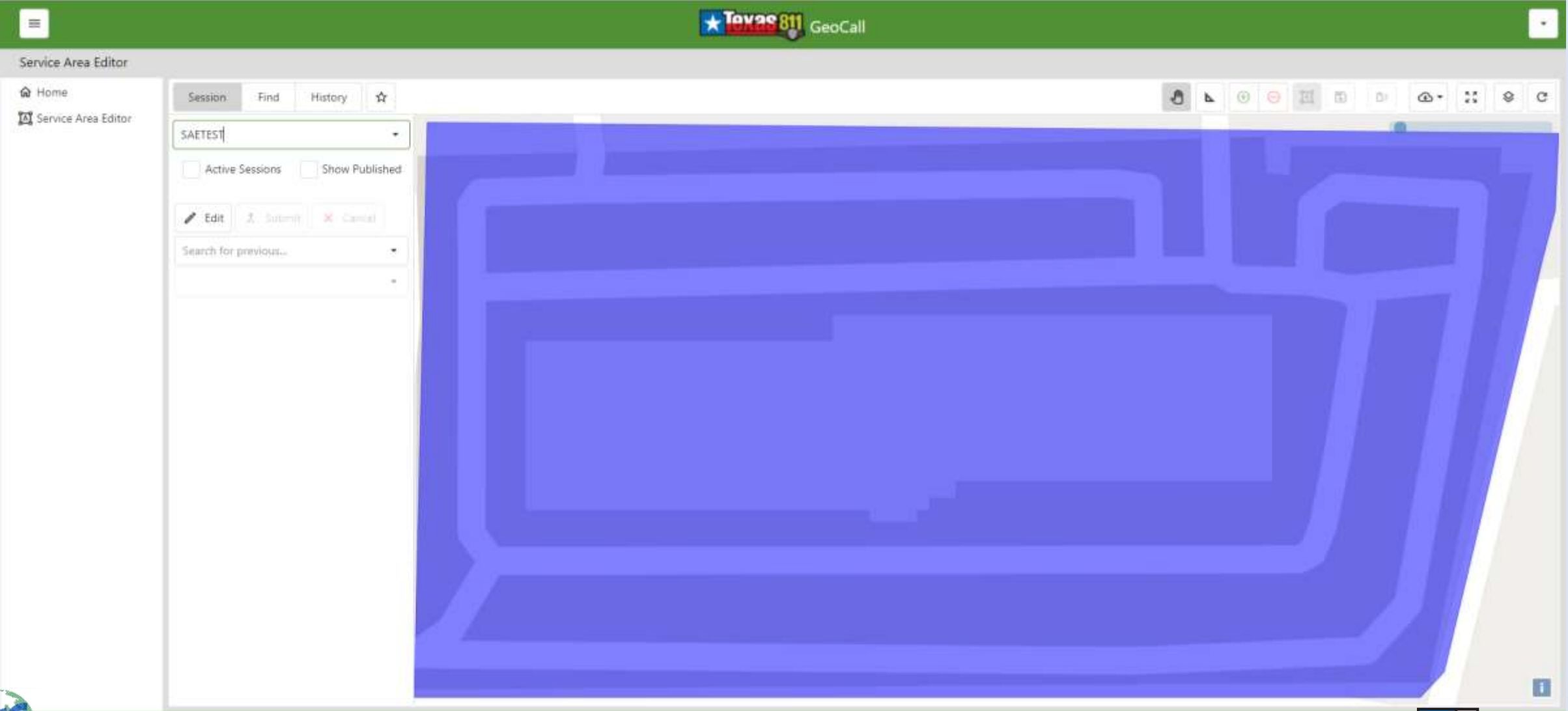
The screenshot displays the 'Service Area Editor' web application. At the top, a green header contains the 'Texas 811 GeoCall' logo. Below this, a navigation bar includes 'Home' and 'Service Area Editor', with the latter highlighted by a blue arrow. The main interface is divided into a left sidebar and a large map area. The sidebar contains a 'Select a code...' dropdown menu. The map area shows a geographical view of Texas and its neighbors, including Oklahoma, Arkansas, Louisiana, New Mexico, Arizona, and parts of Colorado, Missouri, and Kentucky. Major cities like Dallas, Fort Worth, Houston, San Antonio, Austin, and Phoenix are labeled. The map also shows state boundaries and major water bodies like the Gulf of Mexico and the Gulf of California.



The System will begin processing your request and display *Loading* as the service area record is returned.

The screenshot displays the 'Service Area Editor' web application. At the top, the 'Texas 811 GeoCall' logo is visible. The interface includes a left-hand navigation menu with 'Home' and 'Service Area Editor' options. The main workspace features a search bar containing 'SAETEST', a 'Session' dropdown, and buttons for 'Find', 'History', and a star icon. Below the search bar are checkboxes for 'Active Sessions' and 'Show Published', along with 'Edit', 'Submit', and 'Cancel' buttons. A search history section is also present. The central map shows the state of Texas with various cities and state boundaries labeled. A white 'Loading...' dialog box with a circular spinner icon is overlaid on the map, centered over the city of Juarez. A blue arrow points upwards from the city name 'Juarez' on the map to the 'Loading...' dialog box. The map also shows surrounding states like Arizona, New Mexico, Oklahoma, Arkansas, Louisiana, and Mississippi, as well as the Gulf of California and Gulf of Mexico.

When the service area is returned, the map will update to zoom to the extents of the code requested. The service area coverage will display in transparent blue on the map. This coverage represents the service area with any pending (unpublished) edits.



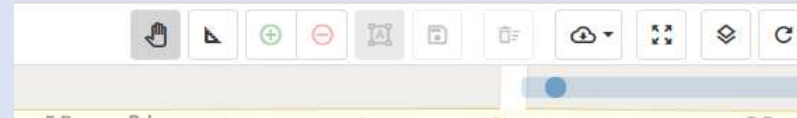
Clicking on Show Published will display an additional overlay of the service area in transparent yellow. This represents the coverage that is live in the application.



# Service Area Editor – Map Navigation Tools

To Zoom In, scroll up or move the blue dot to the left.

To Zoom Out, scroll down or move the blue dot to the right.



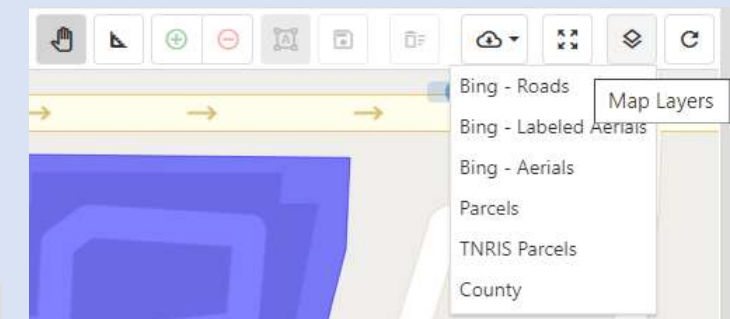
To Pan the map, select the hand tool. Then click and drag anywhere in the map.



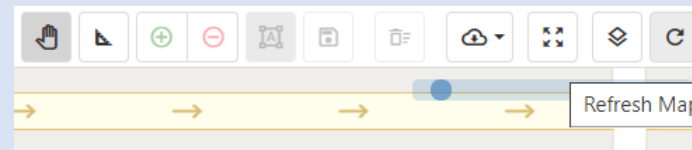
To Zoom to Extent, click on the four-arrow icon to zoom to the extent of the service areas displayed in the map. If both the current and published layers are depicted, the tool will zoom to the combined extent to allow for edit review.



To view alternate map layers for additional base map information, select the Map Layers tool.



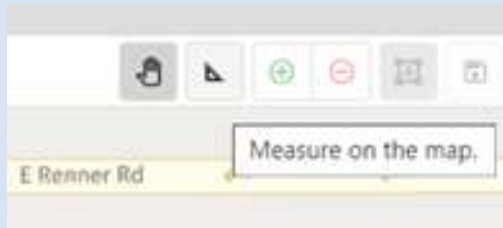
The circular arrow will refresh that map at any point.



# Service Area Editor – Measurement Tools

---

To Measure on the map, select the triangle.



Choose the type of measurement you would like from *Line*, *Polygon*, or *Circle*.



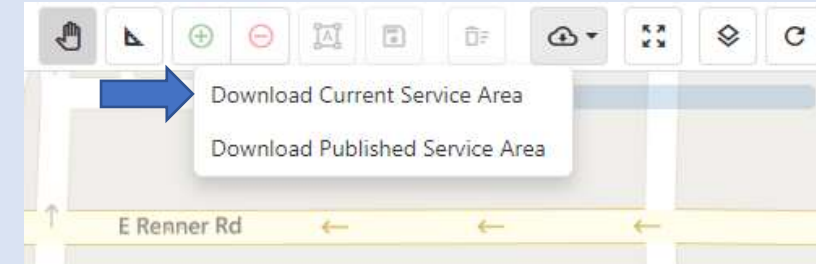


# Service Area Editor – Downloading Data

*To obtain a copy of the currently submitted edits:*

Click on the Download Service Area button and select Download Current Service Area to download a GEOJSON file of the service area displaying all submitted edits.

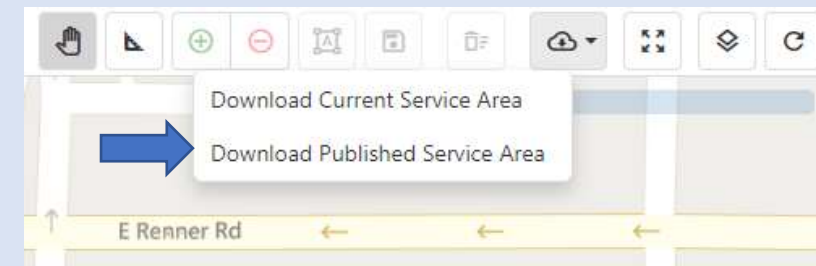
*The current service area will download as a file using the naming convention `sa_[code]_[yyyy-mm-dd].geojson`.*



*To obtain a copy of the coverage that is active in Texas811 ticketing:*

Click on the Download Service Area button and select Download Published Service Area to download a GEOJSON file of the service area displaying the coverage that is active in Texas811 ticketing.

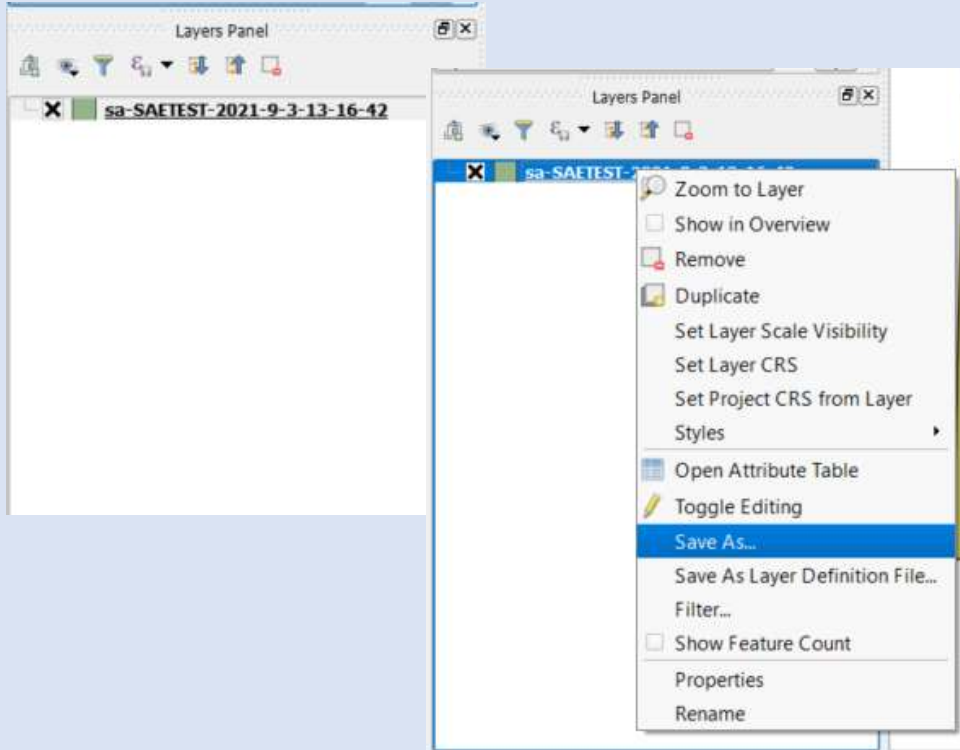
*The published service area will download as a file using the naming convention `sa_pub_[code]_[yyyy-mm-dd].geojson`.*





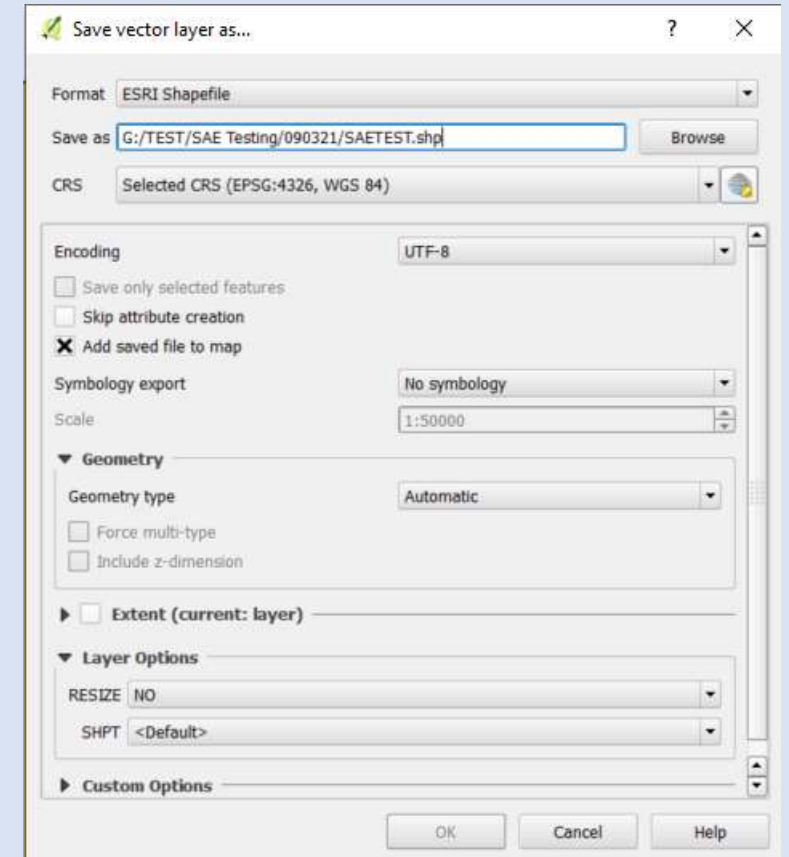
# GeoJSON File Conversion Instructions

1. In QGIS, load the GEOJSON file into the Layers Panel.
2. Right Click -> Save As



3. Select your preferred format from the Format dropdown list, Browse and rename your file into your preferred folder, and Select OK.

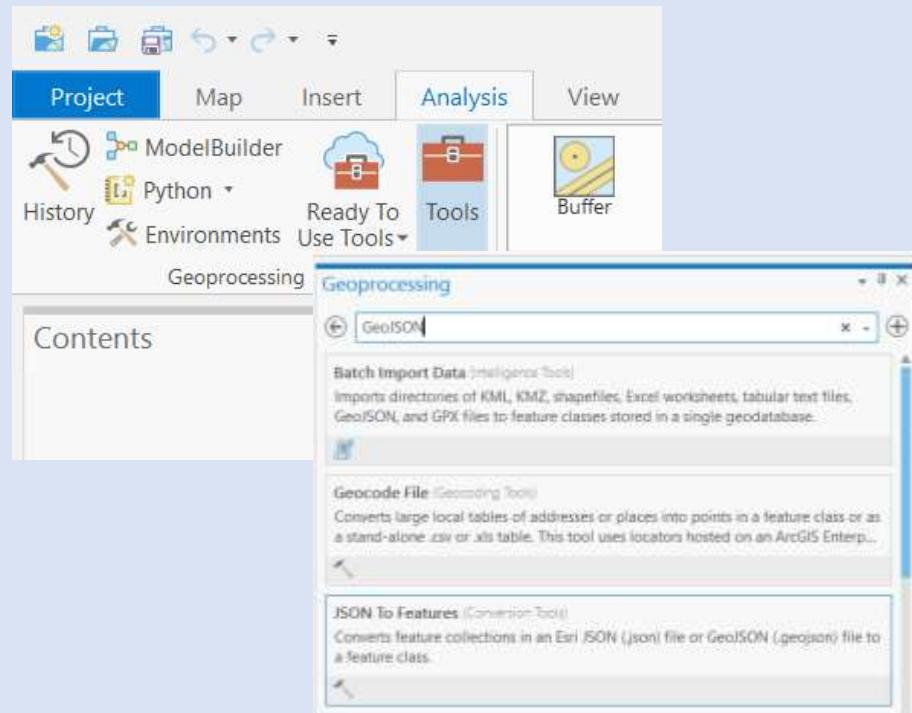
*Google Earth files are listed as "Keyhole Markup Language [KML]"*





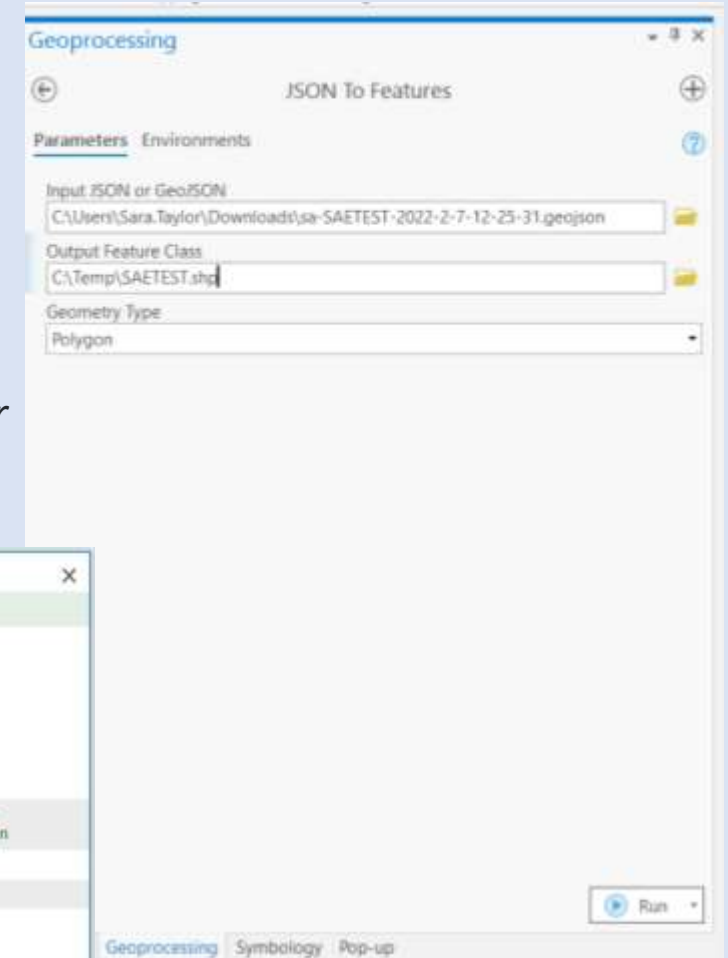
# GeoJSON File Conversion Instructions

1. In ArcGIS Pro 2.7
2. Select Analysis → Tools
3. Type GeoJSON in the search
4. Select JSON to Features

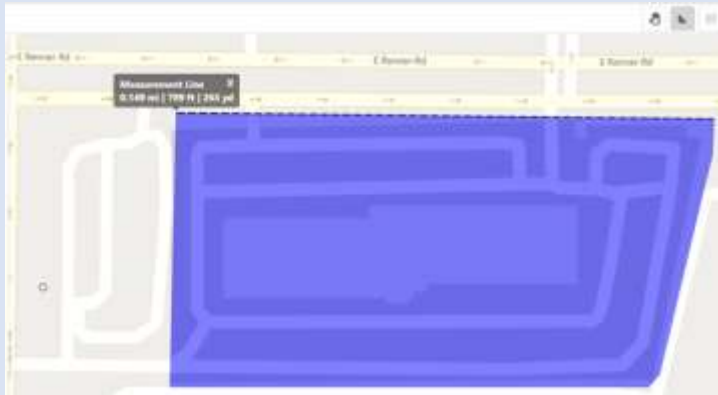


5. Browse to your GeoJSON file. Select your preferred output location and file name, choose Geometry Type: Polygon, and click Run.

*You can export to a shapefile or features class as needed*



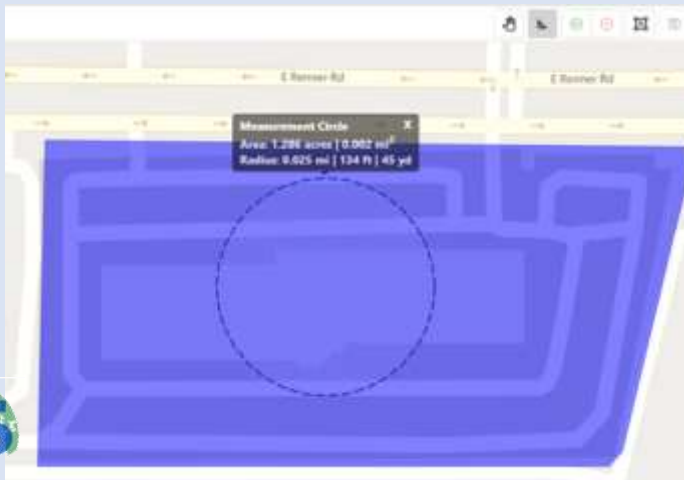
# Service Area Editor – Measurement Tools



Line Example - For lines, click to start, then click on each point and double click to end the measurement.



Polygon Example - For polygons, click to start, then click on each point and double click to end the measurement.

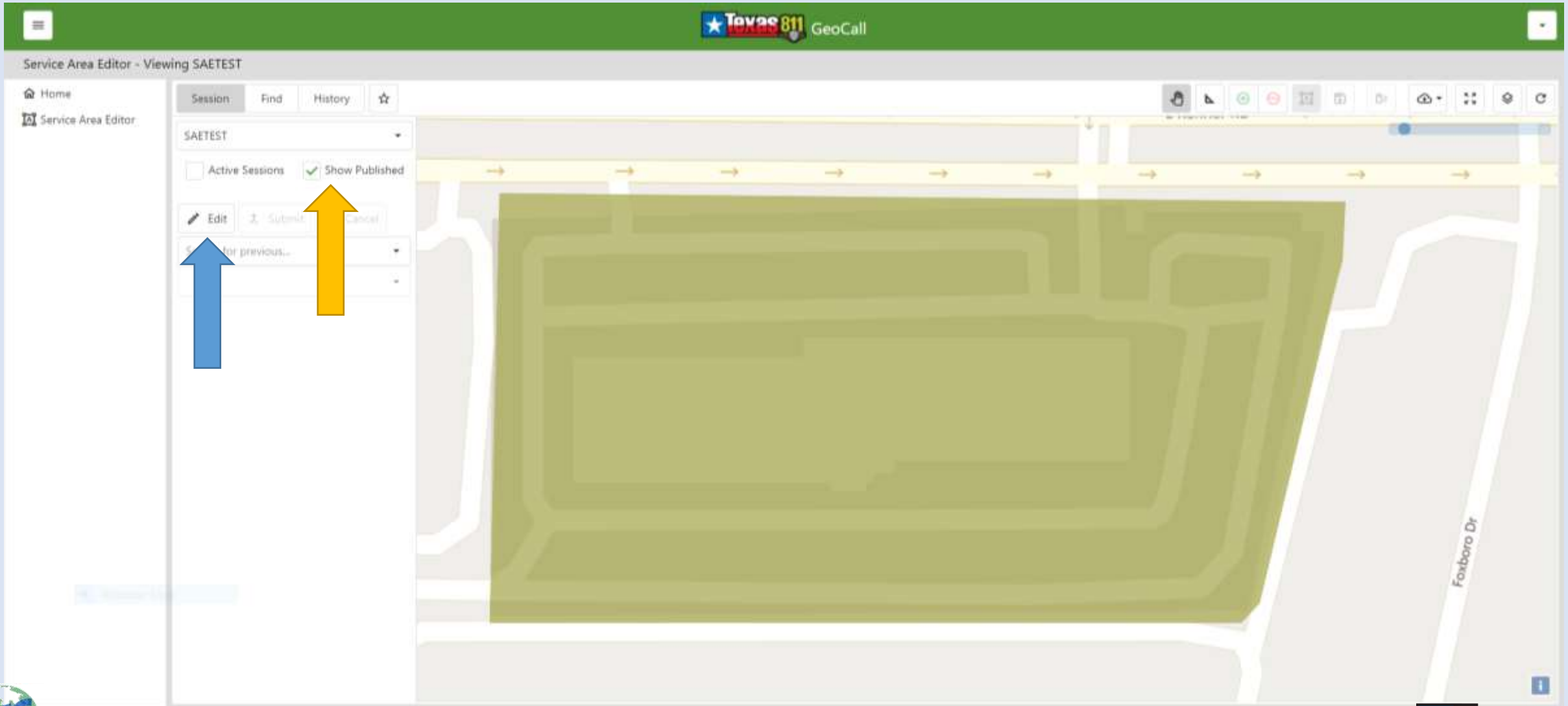


Circle Example - For circles, click to start and drag to the desired area or radius.



Click **Edit** to start your edit session.

Click on Show Published to turn off the published layer if you prefer.



You have started an edit session.

The screenshot displays the 'Service Area Editor - Editing SAETEST' interface. The top navigation bar includes a menu icon, the 'Texas 811 GeoCall' logo, and a user profile icon. The left sidebar contains 'Home' and 'Service Area Editor' links. The main content area is divided into a left metadata panel and a right map panel. The metadata panel shows the session name 'SAETEST', a 'Current State: Editing' indicator with 'Edit', 'Submit', and 'Cancel' buttons, and a 'Note' field. Below this are tabs for 'General', 'Activity', and 'Edits'. The 'General' tab is active, displaying details such as Name, Description, ID, Code, State, Created date, and By. The map panel on the right shows a blue-shaded polygon representing the service area.

Service Area Editor - Editing SAETEST

Home  
Service Area Editor

Session Find History

SAETEST

Active Sessions  Show Published

**Current State: Editing**

Edit  Submit  Cancel

Note

General Activity Edits

Name: SAETEST

Description:  
Starting editing session for SAETEST

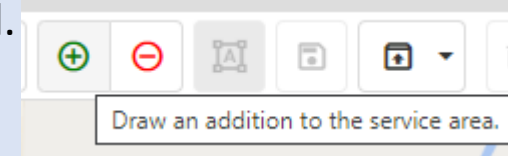
ID: 4820c202-c994-41d7-a98d-babe5e3235ba  
Code: SAETEST  
State: Editing

Created: 9/8/21 12:06:48 PM  
By: testsa.editor

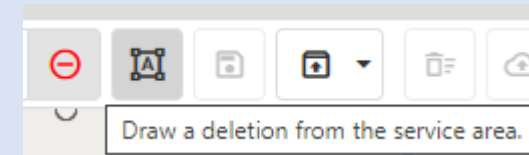


# Service Area Editor – Editing Tools

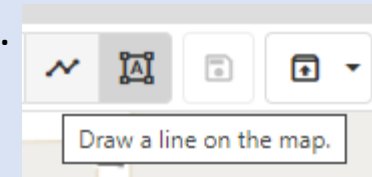
To make an addition, click on the Draw an addition to the service area tool.



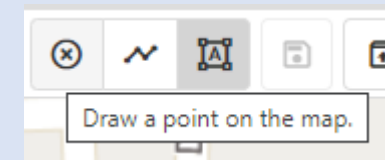
To delete areas from your service area, click on the Draw a deletion from the service area tool.



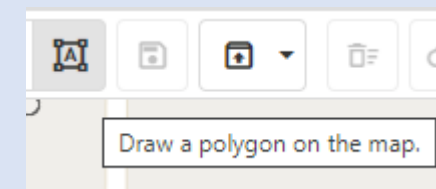
To draw a line on the map, click on the Draw a line of the map tool.



To draw a point on the map, click on the Draw a point on the map tool.

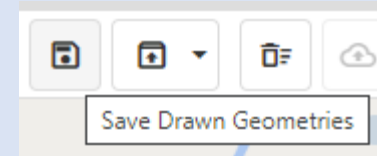


To draw a polygon on the map, click on the Draw a Polygon on the map tool.

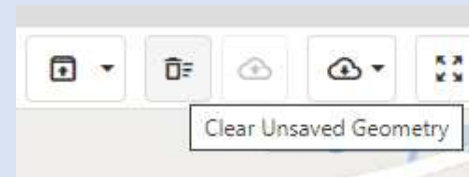


# Service Area Editor – Editing Tools

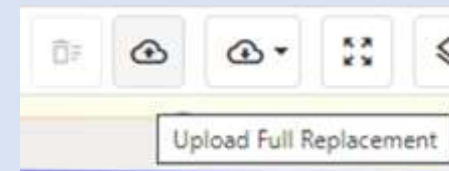
To save the geometry that you have drawn in, click on Save Drawn Geometries tool.



Click on Clear Unsaved Geometry to remove areas drawn in.  
*This will remove all unsaved data.*



To upload a full replacement, click on the Upload Full Replacement tool.  
*Full replacements must be submitted in either a Google KML, Zipped Shapefile, JSON or GeoJSON format and must be projected using GCS WGS 1984.*





**Adding to Service Area** - To begin adding to your service area, click on the Draw in addition to the service area tool. Then select either the Draw a point, Draw a line, or Draw a Polygon tool.

The screenshot displays the 'Service Area Editor - Editing SAETEST' interface. On the left, a sidebar contains navigation options like 'Home' and 'Service Area Editor', along with session management tools (Session, Find, History) and a metadata panel for 'SAETEST'. The main map area shows a street grid with 'E Renner Rd' and 'Fossilboro Dr'. A blue-shaded polygon is drawn on the map, and a tooltip provides the following statistics: Area: 1.689 acres | 0.003 mi<sup>2</sup>, Perimeter: 0.226 mi | 1193 ft | 398 yd, and Last: 0.035 mi | 183 ft | 61 yd. A toolbar at the top right includes various drawing tools, with a blue arrow pointing to the 'Draw' tool and a yellow arrow pointing to the 'Draw a Polygon' tool.

**Adding Polygons** - To add polygons, click to start, then click each point and double click to end the polygon. As you draw you will see the footage of the area as it is being drawn.

The screenshot shows the 'Service Area Editor - Editing SAETEST' interface. On the left, a sidebar contains session management options and a metadata panel for the 'SAETEST' session. The main map area displays a street grid with 'E Renner Rd' and 'Foxboro Dr'. A blue-shaded polygon is being drawn on the map. A tooltip box is visible, providing the following data:

- Area: 1.689 acres | 0.003 mi<sup>2</sup>
- Perimeter: 0.226 mi | 1193 ft | 398 yd
- Last: 0.035 mi | 183 ft | 61 yd

A yellow arrow points to the top-right corner of the polygon, and a blue arrow points to the tooltip box.

When the polygon is complete, the area will display in a transparent green on the map.

The screenshot displays the 'Service Area Editor - Editing SAETEST' interface. On the left, a sidebar contains a navigation menu with 'Home' and 'Service Area Editor'. Below this is a control panel for the 'SAETEST' session, including options for 'Active Sessions' and 'Show Published', and buttons for 'Edit', 'Submit', 'Cancel', and 'Note'. A metadata section shows details for the session, such as its ID, code, state, and creation information.

The main map area shows a street grid with 'E Renner Rd' labeled. A large, semi-transparent blue polygon is drawn on the map, and a smaller, semi-transparent green polygon is also visible. A blue arrow points to the green polygon, indicating the state of a completed area.

**Adding Lines** - To add lines, click to start, then click at each bend or curve and double click to end the line. As you draw you will see the footage of the area as it is being drawn. When the line is complete, the area will display in a transparent green on the map.

The screenshot displays the 'Service Area Editor - Editing SAETEST' interface. On the left, a sidebar contains session management options (Find, History) and a metadata panel for 'SAETEST'. The main map area shows a street grid with 'E Renner Rd' and 'N Plano Rd' highlighted. A blue polygon is drawn on the map, and a larger, semi-transparent green area is shown as a buffer around it. A yellow callout bubble points to the green area with the text: 'The system will automatically place a 300-foot buffer on either side of the line.' A toolbar at the top right of the map contains various drawing and editing tools, with a blue arrow pointing to the 'Add Line' tool and a yellow arrow pointing to the 'End Line' tool.

**Adding Points** - To add points, click the area that you wish to add. The area will display in a transparent green on the map.

The screenshot displays the 'Service Area Editor - Editing SAETEST' interface. On the left, a sidebar contains navigation links for 'Home' and 'Service Area Editor', and a metadata panel for the selected session. The main map area shows a street grid with a green circular buffer and a blue polygon. A yellow callout bubble points to the green buffer with the text: 'The system will automatically place a 300-foot buffer on either side of the line.' A toolbar at the top right of the map contains several icons, with a blue arrow pointing to the 'Add Point' icon and a yellow arrow pointing to the 'Add Polygon' icon.

Service Area Editor - Editing SAETEST

Home  
Service Area Editor

Session Find History

SAETEST

Active Sessions  Show Published

Current State: Editing

General Activity Edits

Name: SAETEST

Description:  
Starting editing session for SAETEST

ID: 7d578399-4aaf-4c25-acf6-c12ddbe5e5d4  
Code: SAETEST  
State: Editing

Created: 9/23/21 4:41:48 PM  
By: testsa.editor

The system will automatically place a 300-foot buffer on either side of the line.

Texas 811 GeoCall

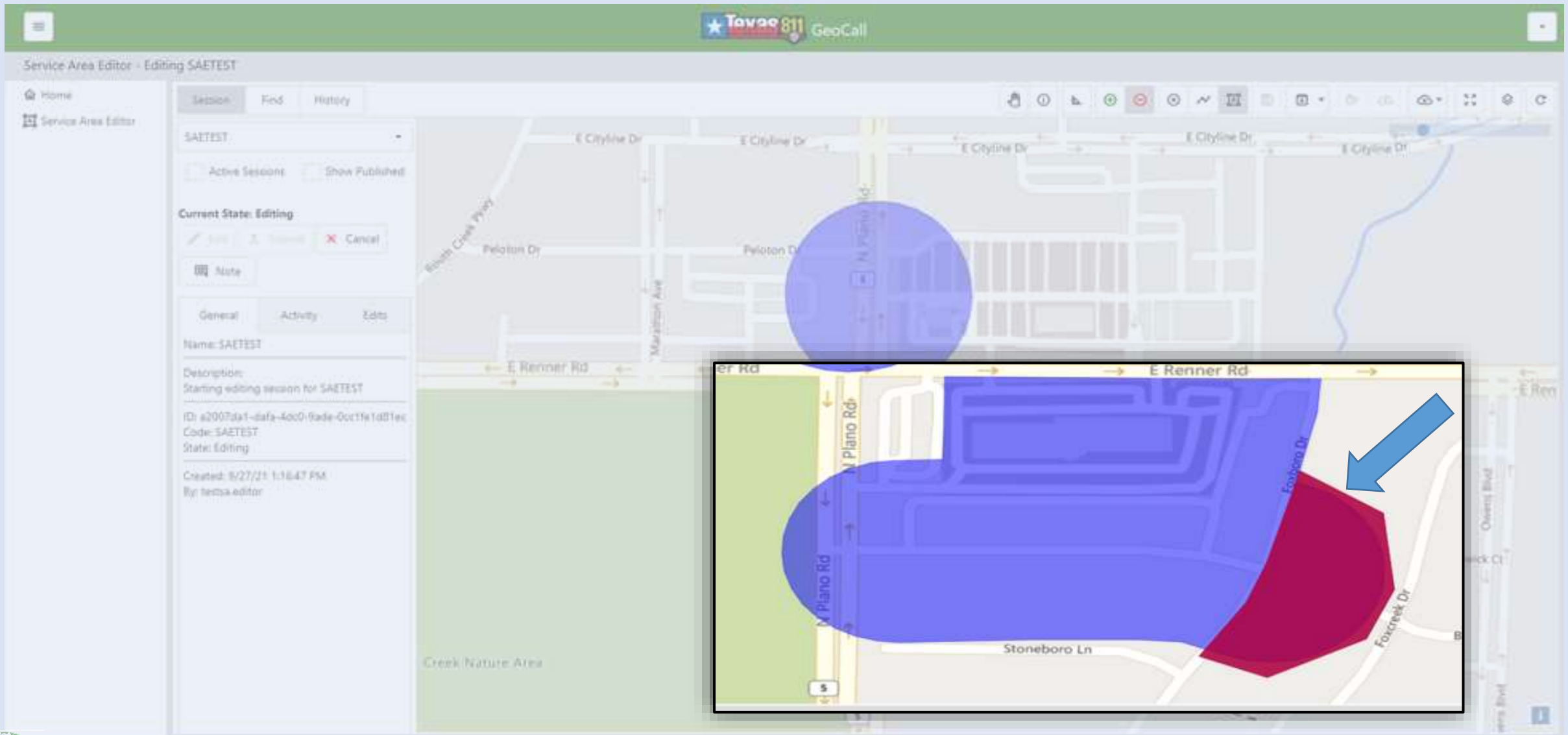
**Deleting Polygons** - To delete polygons, click to start, then click each point and double click to end the polygon. As you draw you will see the measurements of the area as it is being drawn in.

The screenshot displays the 'Service Area Editor - Editing SAETEST' interface. On the left, a sidebar contains navigation options like 'Home' and 'Service Area Editor', along with session management tools (Active Sessions, Show Published) and a 'Current State: Editing' section with 'Edit', 'Submit', and 'Cancel' buttons. Below this is a 'Note' field and tabs for 'General', 'Activity', and 'Edits'. The 'General' tab shows session details: Name: SAETEST, Description: Starting editing session for SAETEST, ID: a2007da1-dafa-4dc0-9ade-0cc1fe1d81ec, Code: SAETEST, State: Editing, Created: 9/27/21 1:16:47 PM, and By: testsa.editor.

The main map area shows a street grid with several blue-shaded polygons. A tooltip for one polygon displays the following data:  
Area: 5.098 acres | 0.008 mi<sup>2</sup>  
Perimeter: 0.379 mi | 2000 ft | 647 yd  
Last: 0.013 mi | 66 ft | 22 yd

Three blue arrows point to specific UI elements: one points to the 'Delete' icon (a red circle with a white minus sign) in the top toolbar, another points to the 'Close' icon (a red circle with a white 'X') in the top toolbar, and a third points to the 'Close' button on the polygon tooltip.

When the polygon is complete, the area will display in a transparent red on the map.



**Deleting Lines** - To delete lines, click to start, then click at each bend or curve and double click to the end of the line. As you draw you will see the footage of the area as it is being drawn in. When the line is complete, the area will display in a transparent red on the map.

The screenshot displays the 'Service Area Editor - Editing SAETEST' interface. On the left, a sidebar contains session management options like 'Find' and 'History', and a 'Current State: Editing' section with 'Edit', 'Submit', and 'Cancel' buttons. The main map area shows a street grid with a blue circle highlighting a specific location and a large red buffer zone. A yellow callout bubble with a blue arrow pointing to the red area contains the text: 'The system will automatically place a 300-foot buffer on either side of the line.' The top of the interface features the 'Texas 811 GeoCall' logo and a toolbar with various map navigation icons.

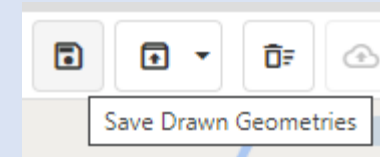


**Deleting Points** - To delete points, click the area that you wish to remove. The area will display in a transparent red on the map.

The screenshot displays the 'Service Area Editor - Editing SAETEST' interface. On the left, a sidebar contains navigation options like 'Home' and 'Service Area Editor', along with session management tools (Session, Find, History) and a 'Current State: Editing' section with 'Edit', 'Submit', and 'Cancel' buttons. The main map area shows a street grid with a red circle highlighting a specific location and a blue shaded buffer area around a road. A yellow callout bubble points to the red circle with the text: 'The system will automatically place a 300-foot buffer on either side of the line.' The top right of the map features a toolbar with various icons, including a red circle with a minus sign, which is highlighted by a yellow arrow. A blue arrow points to the red circle on the map, and another blue arrow points to the toolbar.

# Service Area Editor – Session Edit Save

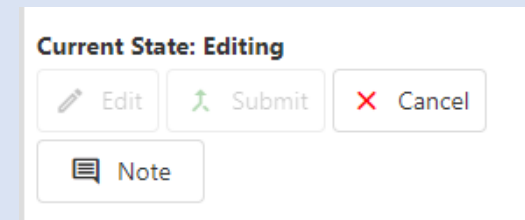
To save the geometry that you have drawn in, click on Save Drawn Geometries tool.



Click on Clear Unsaved Geometry to remove areas drawn in.  
*This will remove all unsaved data.*

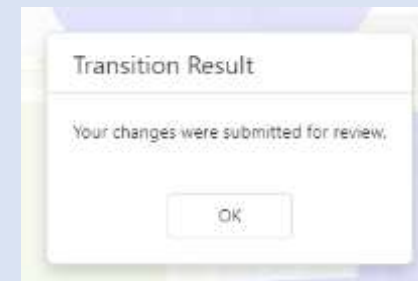
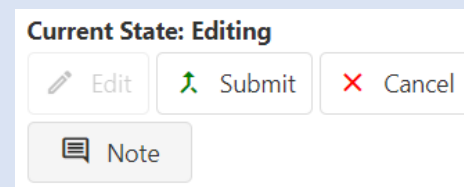


Use Note to include any pertinent information.  
*This is where you may provide the GIS Team your reason for deletions as appropriate.*



Click Submit to send updates to GIS Department for review.

*Please complete your associated [Member Mapping Submission Form!](#)*



## Full Replacement - Select the Upload Full Replacement tool.

The screenshot displays the 'Service Area Editor - Editing SAETEST' interface. The top navigation bar includes the 'Texas 811 GeoCall' logo. The left sidebar shows navigation options like 'Home' and 'Service Area Editor'. The main map area shows a blue-shaded service area with a yellow arrow pointing to the 'Upload Full Replacement' button in the top right corner. A blue arrow points to the 'Current State: Editing' section in the left sidebar. A dialog box titled 'Confirm Full Replace' is open in the bottom left, asking 'Do you wish to continue?' with 'Yes' and 'No' buttons. An orange callout box in the bottom right contains the text: 'The Full Replacement option should ONLY be used if you wish to completely replace the existing dataset.'

Service Area Editor - Editing SAETEST

Home Service Area Editor

Session Find History

SAETEST

Active Sessions  Show Published

Current State: Editing

Edit Submit Cancel

Note

General Activity Edits

N Plano Rd

Broadmoor Dr

Foxboro Dr

Upload Full Replacement

Confirm Full Replace

This operation will perform a full replacement of the existing service area. Depending on the size of the file, processing may take some time.

Do you wish to continue?

Yes No

The Full Replacement option should ONLY be used if you wish to completely replace the existing dataset.

**File requirements** - File uploads are limited to a Google Earth (.kml), Esri Zipped Shapefile (.zip), JSON (.json), and GeoJ.geojson and must be <20MB, File must be in GCS WGS84 projection.

Service Area Editor

Home  
Service Area Editor

Session Find History

SAETEST

Active Sessions  Show Published

**Current State: Editing**

Note

General Activity Edits

**Transition Started**  
Session created.  
testsa.editor on 11/12/21 10:46:34 AM

**Transition Editing**  
Transition to state Editing  
testsa.editor on 11/12/21 10:46:45 AM

**Action Editing**  
Updated working copy with 1 submissions.  
testsa.editor on 11/12/21 10:54:57 AM

**Transition Result**

Your changes were submitted for review.

OK

Your edits will be recorded under the Activity tab. Once you review your changes, you can click Submit.

# Questions?

---

- Sara Taylor, GISP – GIS Manager  
[sarataylor@texas811.org](mailto:sarataylor@texas811.org)  
972-942-0106
- GIS Team  
[gismail@texas811.org](mailto:gismail@texas811.org)  
888-771-1877, option 3

