WebEOC® Maps Add-on

Guide

Versions 8.5 and Later

Address any questions, comments, or suggestions to:

235 Peachtree Street NE Suite 2200

Atlanta, GA 30303

866 200 0165

support@juvare.com

www.juvare.com

Contents

Installation Guide 1
Technical Requirements 1
Enable Maps Add-on 1
To enable Maps Add-on 1
Administrator Guide 2
The Mapping Tab 2
Enable Boards for Maps 2
Mapper Boards 2
Feature Tags 2
Icon and Color 5
Basic Map Link 5
Address 5
Multiple Address Fields 6
Set a Board Map 6
To set a board map 7
Set Icons and Colors for BoardRecords 7
To set an icon and color for a board 8
Create a Map 9
To create a map 9
Assign Maps to Groups 13
To assign maps to groups 14
Edit a Map 15
To edit a map 15
Set Geocoders 15
To set the primary and secondary geocoders 16
Create a Map Layer 16
To create a map layer 17
Manage Map Layers 20
To edit a map layer 20
Run a Map Assignment Report 20
To run a map assignment report 21
User Guide 22
Getting Started 22
About Maps Add-on 22

Maps in the Control Panel 23
Map Elements 24
Basic Navigation 25
Manage Features 28
To edit a data point or feature 28
Add Map Features to a Board Record 31
To add a map feature to a board record 31
Board Data and Layers 35
Manage Map Layers 35
To add or remove map layers from the map 35
Manage Board Data 36
Tools 37
Available Tools 37
Add an Annotation 38
Annotation Tools and Features 38
Measurement Tool 42
To measure distance between points on the map 42
To measure area on the map 44
Find Address Tool 45
Feature Search Tool 48
To search for a feature 49
Print Tool 50
To print an area of the map 50
Find My LocationTool 50

Installation Guide

Technical Requirements

Maps Add-on can be used with any version of WebEOC 8.3 or later. It can also be used in tandem with your existing *Mapper Lite* or *Mapper Professional* solutions. No additional third-party licensing is required to use this add-on. To enable *Maps Add-on*, however, a license key is required. This key can be issued to you by Juvare.

Maps Add-on uses OpenLayers mapping technology to generate maps and enable map-related features. OpenLayers makes it easy to integrate a dynamic map into WebEOC for the display of map tiles, vector data, and markers.

Data for the solution is stored as a geography field type in SQL Server. Thanks to this spatial functionality, *Maps* supports points, line strings, and polygons associated with status board records. Using actual spatial data opens the door to numerous future capabilities as well, which means the already robust *Maps* solution is likely to continue to grow and expand in terms of advanced functionality.

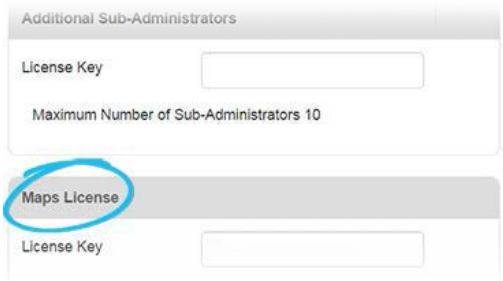
Enable Maps Add-on

Maps does not require server access or server-side installation. The *Maps* solution is integrated into each instance of WebEOC and, therefore, does not require installation by administrators. Instead, if updates are made, such changes will be reflected when you install the newest instance of WebEOC.

Maps Add-on, the paid add-on that expands on the capabilities seen in *Maps*, only requires administrators to enter a license number to upgrade. *Maps* and *Maps Add-on* solutions are compatible with WebEOC versions 8.3 and later.

To enable Maps Add-on

1. In the *Admin* window, go to **System**: **General**.
2. Scroll down to the *Maps Add-on License* section.

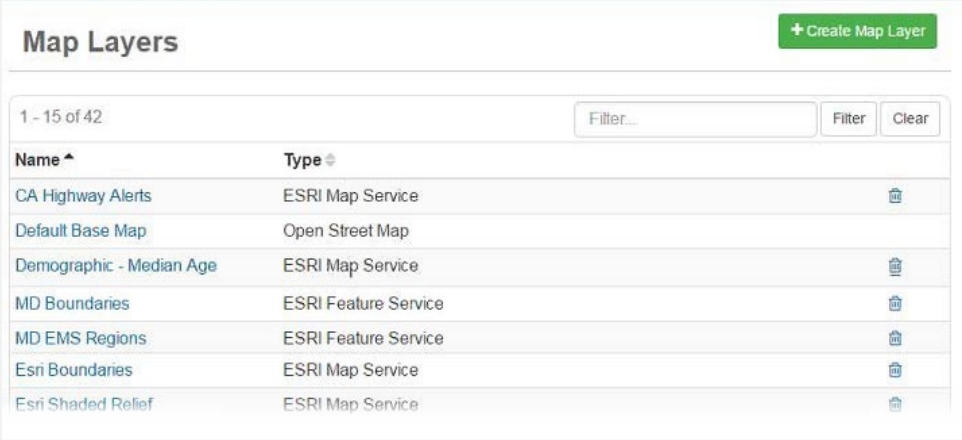


3. For **License Key**, enter the license key provided to you for your instance of *Maps Add-on*.
4. Click **Save**.

Administrator Guide

The Mapping Tab

The **Mapping** tab, located in the *Admin* window, grants administrators access to *Maps* controls. It is from this tab that you can create maps and assign content to maps. You can also manage map layers and geocoders from this same tab.



Enable Boards for Maps

Any number of status boards can be geospatially enabled to work with *Maps*. Three boards included in the initial WebEOC board set come pre-configured to work with *Maps*: Event Reporting, Shelters, and Road Closures.

For a board to be enabled with *Maps*, it must have feature tags added. Enabling *Maps* for a board involves adding feature tags to input and display views. You can add one or multiple feature tags to a board and define attributes for each, controlling the map label, status color, presentation as a link or button, and more. There are also several different methods that you can use to add these feature tags to a board and enable it for *Maps*.

This section outlines some of the options available to enable *Maps* for a given board, and it also gives instructions on how to define the default map. For technical support, contact the WebEOC Support team. If preferred, contact your CSM to arrange for the configuration of *Maps*-enabled boards by members of the Juvare Professional Services team.

Mapper Boards

If you use *Mapper Lite* or *Mapper Professional*, any existing boards that you have configured to work with those solutions are not automatically converted to work with *Maps*. Instead, *Maps*-specific feature tags must be added to these boards to enable the improved capabilities. The use of these new tags allows boards to work with both the legacy *Mapper* products, using the old *Mapper* tags, and the *Maps* solution, using the feature tags.

Feature Tags

The <feature> tag is used to create fields on the board for storing feature data, including points, line strings, polygons, and so forth. When used, these tags render a button or link on the specified board that can be used to open the map.

The table below outlines the various *Maps*-specific feature tag attributes that you can use to help define elements on a board.

***Note**: With the exception of the <type> attribute, which can be applied to input and display views, these attributes only apply to input views.*

Attribute	Value	Requirement	View Type	Description
address	%fieldname	Optional	Input	Name of the field that contains an address. This tag is useful for automatically geocoding the address upon opening the map. The attribute can be called address or address-field.
autopopulate	address, lat-long, device	Optional	Input	Autopopulates the feature with data from the address field, data from the latitude and longitude fields, or the device's GPS location.
icon-field	%fieldname or expression	Optional	Display Input	Specifies the field that indicates the icon for this feature or contains an expression that includes the icon-field-list attribute to define the icon to use for the feature.
icon-field-list	%listname	Optional	Display Input	When included in the icon-field attribute's expression, specifies the icon to use for the feature.
icon-mode	icon, label, none	Optional	Display	Specifies the type of icon or label that appears with the feature on the map. If you specify none, no icon or label appears with the feature, but a tooltip appears when the user points to the feature.
label-field	%fieldname	Optional	Input	Specifies the field that provides the label used on the map for the feature.
latitude-field	%fieldname	Optional	Input	Specifies the field that provides the latitude of the feature when autopopulate is used.

Attribute	Value	Requirement	View Type	Description
locate	true, false	Optional	Input	If set to **true**, your current location is automatically shown when the map view is opened.
longitude-field	%fieldname	Optional	Input	Specifies the field that provides the longitude of the feature when autopopulate is used.
map	%mapname	Optional	Display Input	Specifies the map that users are directed to; when not defined, the default map is used.
name	string	Required	Display Input	Name of the feature field; the underlying geography column name in SQL Server.
shape	point, linestring, polygon, circle	Optional	Input	Specifies the default feature type selected; may be changed by the user after opening the map, unless tools are disabled. When not defined, a point is used.
status-field	%fieldname or expression	Optional	Display Input	Specifies the field that indicates the status for the feature, which is often a list with colors and/or icons assigned or contains an expression using the status-field-list attribute to determine the feature's icon and color.
status-field- list	%listname	Optional	Display Input	When included in the status-field attribute's expression, specifies the list indicating the feature's icon and color.
target	%embedmap id	Optional	Display	Results in panning/zooming to the record when clicked. Used with the <embedmap> tag; value should be the embedmap ID.
tools	none, all	Optional	Input	If set to **none**, the only drawing tool visible on the edit page is the feature type specified in the shape attribute. If the tool attribute is not used or is set to all, all drawing tools are available to the user.
type	button, link	Optional	Display	Specifies how the tag renders, either as a button or link.

Icon and Color

Four attributes of the <feature> tag allow you to separate the icon and status for board features on a map.

To accomplish this:

- Define an expression in the **status-field** attribute using the **status-field-list** attribute to determine the feature's icon and its color.
- Define an expression in the **icon-field** attribute using the **icon-field-list** attribute to determine the icon to use.

When these attributes are used in this way, the **icon-field** expression determines the icon and the **status-field**
expression determines the color.

These tags are put to use in the examples below to help you add a basic map link, an address field, and multiple address fields.

Basic Map Link

Adding a basic map link that opens up your default map from an input or display view involves adding the following feature tag to the board's input view:

```
<feature name="location" type="link" class="webeoc-link">
<i class="icon-map"></i>Map
</feature>
```

```
<tr>
 <td class="webeoc-section-header" colSpan="2" selected="false">Details</td>
</tr>
<tr>
 <td width="15%" selected="false" rowSpan="1" colSpan="1">Map</td>
 <td selected="true" rowSpan="1" colSpan="1">
  <feature name="location" type="link" class="webeoc-link">
   <i class="icon-map"></i>Map
  </feature>
 </td>
</tr>
</table>
<footer>
```

The workflow with this tag would, for example, allow you to click the **Create** button associated with the board followed by a **Map** link in the *Edit* window. Once the **Map** link is clicked, a map would open on the board and allow you to define the point, line string, polygon, and so forth associated with the board record.

On the display view, you can use the feature tag to control the styling of the link or button, setting your own styles or using the <eocfield> tag for default styling. The default styling, <eocfield name="location"/>, includes a **Map** button.

Address

Including a field that allows you to enter an address and then map that address by clicking a link would involve adding the following to the board's inputview:

```
Address: <input type="text" name="address"></input><space/>
<feature name="location" address="address" type="link" class="webeoc-link">
<i class="icon-map"></i>Map</feature>
```

```
<tr>
 <td>
  Address: <input type="text" name="address"></input><space/>
  <feature name="location" address="address" type="link" class="webeoc-link">
   <i class="icon-map"></i>Map</feature>
 </td>
</tr>
</table>
```

The workflow with this tag would, for example, allow you to enter an address in a single field and then click a **Map**
link.

Multiple Address Fields

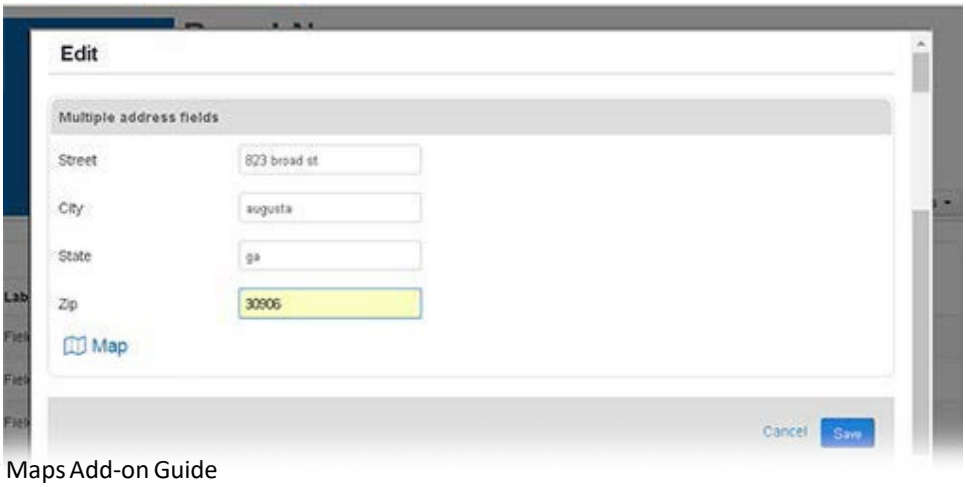
Adding a tag that allows you to enter address information in multiple fields would look something like the following:

```
<table class="webeoc-section">
  <tr>
    <td class="webeoc-section-header" colSpan="2" selected="false">Multiple address fields</td>
  </tr>
  <tr>
    <td>Street</td>
    <td><input type="text" name="street1"></input></td>
  </tr>
 <tr>
<td>City</td>
<td><input type="text" name="city1"></input></td>
</tr>
<tr>
  <td>State</td>
  <td><input type="text" name="state1"></input></td>
</tr>
<tr>
  <td>Zip</td>
  <td><input type="text" name="zip1"></input></td>
</tr>
<tr>
  <td colspan="2">
    <feature name="shape_multiple_address" address="street1,city1,state1,zip1" class="webeoc-save" type="butto
  </td>
</tr>
</table>
```

The workflow with this tag would, for example, allow you to enter address information in multiple fields and then click a **Map** link.

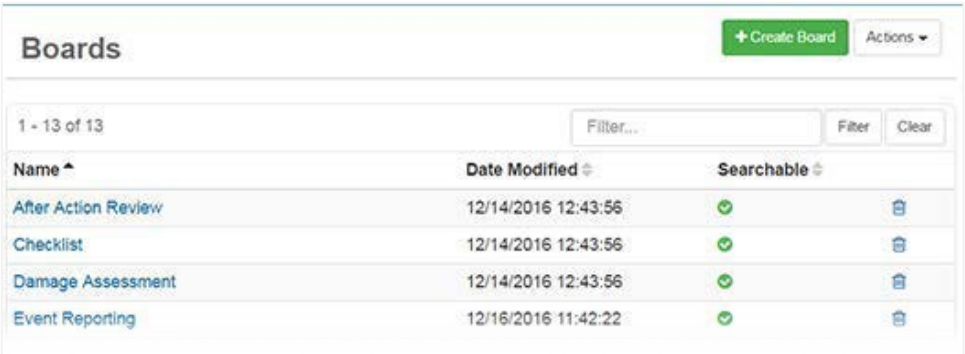
Set a Board Map

When you are accessing a map directly from a status board, the default map is used whenever you click that board's **Map** link or button. If the default map is not preferred, a different map can be used by adding the map attribute to the feature tag.



To set a board map

1. In the *Admin* window, go to **Process**: **Boards**. The *Boards* page opens.
2. Click the name of the applicable board. The *Board: Edit Board* page opens.



3. In the *Edit* section, click **Board Editor**. The *Board Editor: [Board Name]* page opens.
4. Click the name of the applicable input view to which you want to add maps.
5. In the *HTML* section, click the **Advanced Code Editor** tab.
6. Add the following code:

```
<feature name="location" type="link" class="webeoc-link> map="[map name]" />.
```

7. Click **Save**.

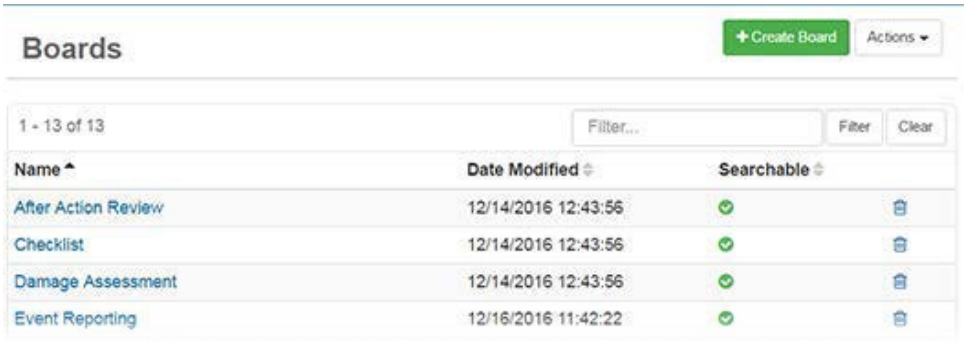
Set Icons and Colors for Board Records

The icon and color shown on the map for a particular board record can be defined by a list or by the board view. If a list value is not assigned, or if a board record is not associated with any list, you can use the procedure below to set an icon and color for board records using the board view.

> ***Note**: The default color and/or icon for a particular board entry can be defined by a list or by the board display view. By default, the color and/or icon used for a board entry on a map is the color and/or icon defined by the applicable list. The color and/or icon for a board entry as defined in the board display view will only be used if the color and/or icon for a list value has not been set.*

To set an icon and color for a board

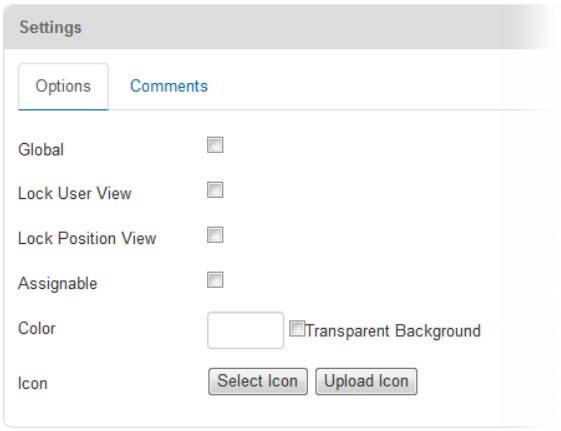
1. In the *Admin* window, go to **Process**: **Boards**. The *Boards* page opens.



2. Click the name of the applicable board. The *Board: Edit Board* page opens.

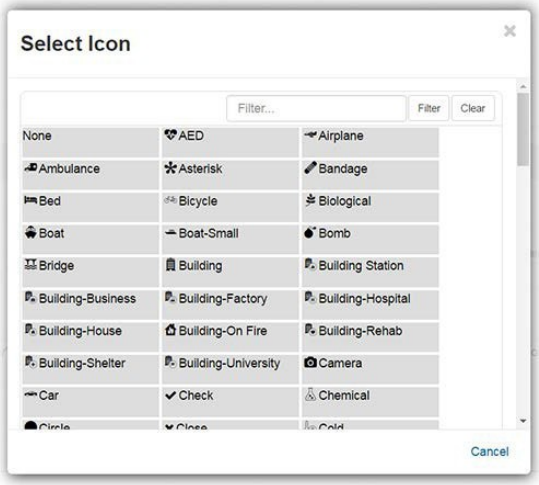
3. Click the name of the applicable display view to which you want to add maps.

4. Scroll to the *Settings* section and verify that the **Options** tab is selected.



5. For **Color**, click in the field and, from the color picker window that opens, select a color for the icon.

6. To select an icon from a database, click **Select Icon**. The *Select Icon* window opens.



***Tip**: Alternatively, to select your own custom icon, click **Upload Icon** and follow browser prompts to locate and open the appropriate file on your computer.*

7. Click the icon that you want to represent the list item. The icon will appear on maps that the list is associated with.

8. Click **Save**.

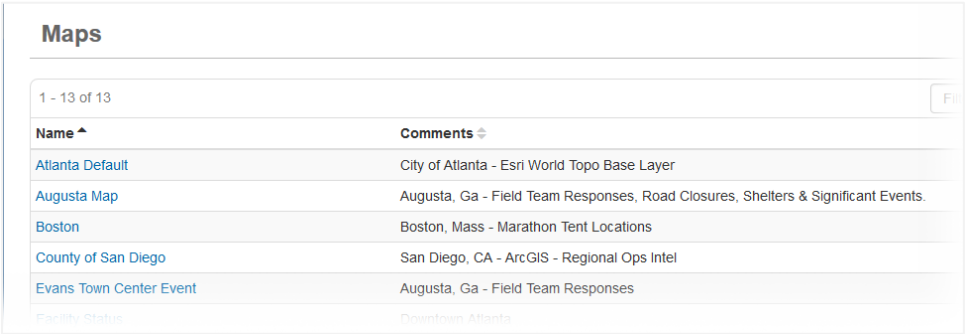
Create a Map

As an administrator with *Maps Add-on*, you can create an unlimited number of maps to meet your organization's needs. When creating a map, you decide the map layers to associate with the map. You also decide what board data should be displayed on the map. If needed, you can edit or delete the map at any time and as incidents evolve.

After you create a map, you can assign it to the appropriate WebEOC groups. Only positions in groups you identify can view the map.

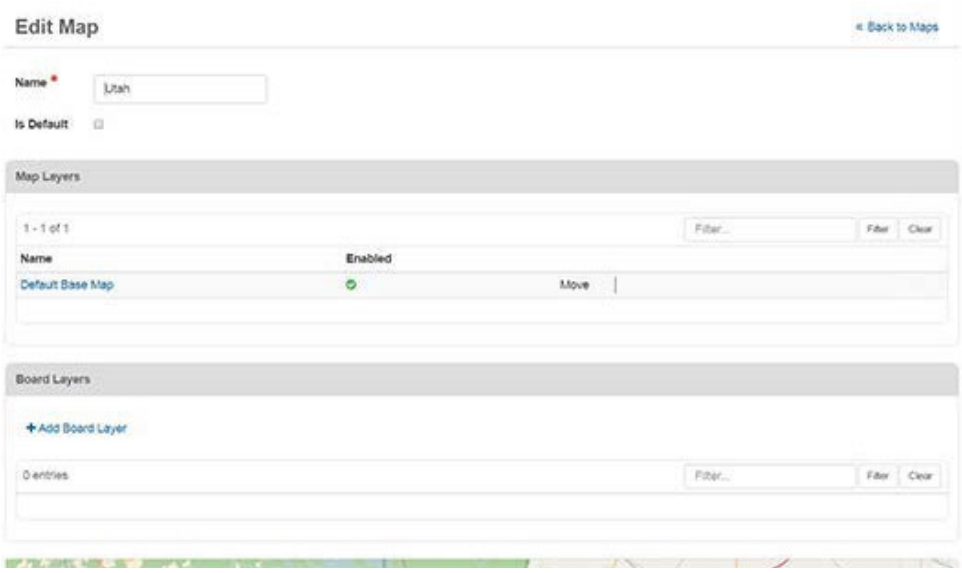
To create a map

1. In the *Admin* window, go to **Mapping**: **Maps**. The *Maps* page opens.



2. Click **Create Map**. The *Create Map* page opens.
3. For **Name**, enter a name for the map.

4. Click **Save**. The *Edit Map* page opens.



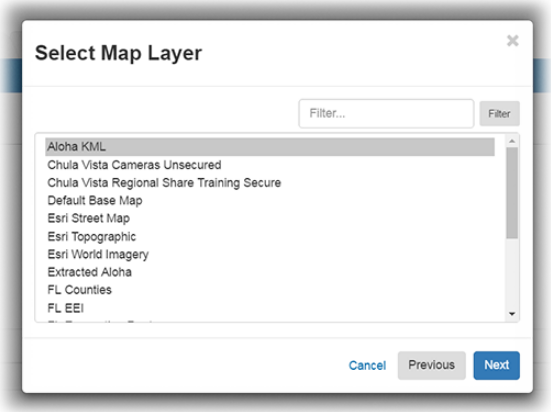
5. If appropriate, in **Comments**, enter one or more comments about the map.

6. If you want this to be the default map that users see, select **Is Default**.

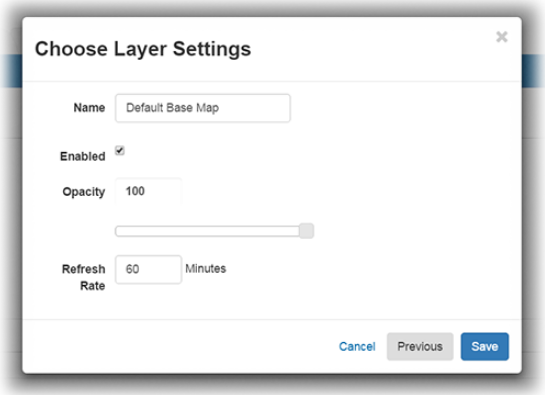
7. If you do not want points that are in close proximity on the map to appear in clusters, select **Disable Clustering**.

8. To add map layers, in the *Map Layers* section, click **Add Map Layer**. The *Select Map Layer* window opens.

   ***Note**: By default, a Default Base Map is already added to your map. You can delete this layer if you have an alternate base map to use.*



9. Select the map layer you want associated with your new map, and then click **Next**. The *Choose Layer Settings* window opens.



10. For **Name**, edit the layer name as applicable. This name is visible on the map.

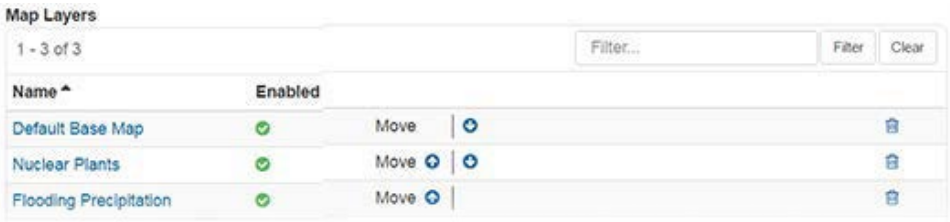
    ***Note**: This field automatically populates with the name of the map layer you selected, but the field can be modified ifdesired.*

11. To automatically turn the layer on when the map is opened, verify that **Enabled** is selected. Alternatively, if you want the layer turned off but available to users to turn on themselves, uncheck **Enabled**.

12. For **Opacity**, slide the toggle left or right until you reach the desired default transparency level for the layer. The opacity can be adjusted by users once they open the map.

13. For **Refresh Rate**, enter a time in minutes that, after which, the layer refreshes data.

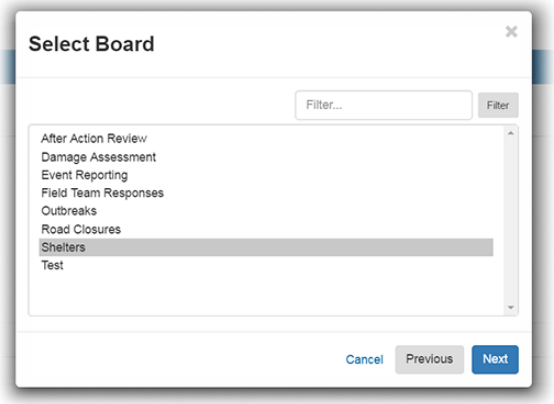
14. Click **Save**. The layer appears in the *Map Layers* section on the *Edit Map* page.



15. As appropriate, to set a preferred order in which the map layers appear, click a layer's associated up or down arrow. Continue moving the layers until they are arranged as desired.

16. Repeat steps 7-13 for each map layer you want to be made available when a user opens the map.

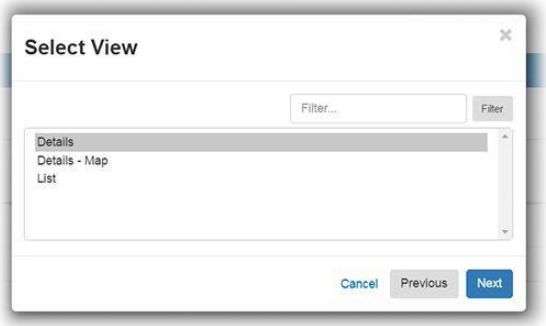
17. To add board layers, in the *Board Layers* section, click **Add Board Layer**. The *Select Board* window opens.



18. Select the board associated with the data you want shown on your new map, and then click **Next**. The *Select View* window opens.

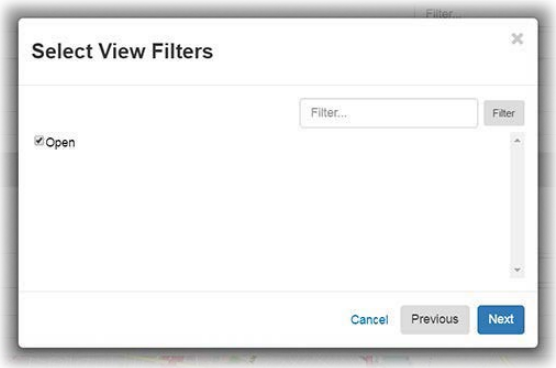
***Note**:*

- *Only boards enabled with the* Maps *<feature/> tag are available for selection. If boards are not listed, no boards with features could be found.*
- *The available display view options depend on the board selected.*

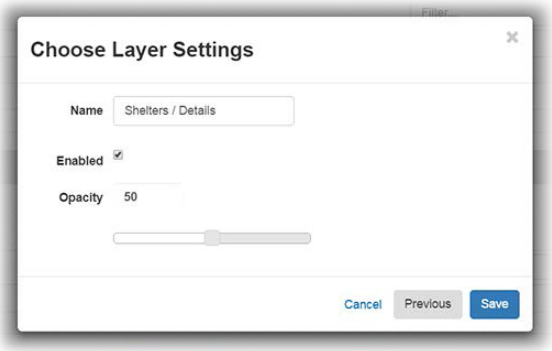


18. Select the specific display view of the board you want associated with the map, and then click **Next.**

19. If filters are associated with the selected display view, the *Select View Filters* window opens. Select the applicable filter, defining which records will be displayed on the map, and then click **Next**.



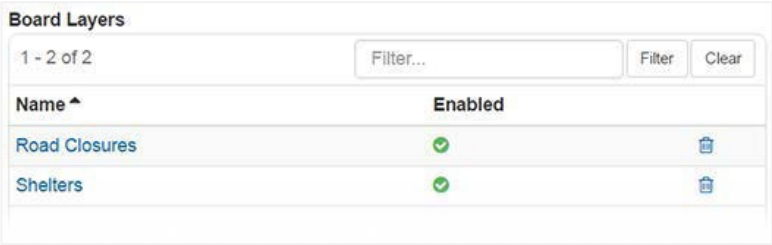
20. In the *Choose Layer Settings* window, for **Name**, a name composed of the board name followed by the display view name pre-populates this field. Modify the name as appropriate.



21. To automatically turn the layer on when the map is opened, verify that Enabled is selected. Alternatively, if you want the layer turned off but available to users to turn on themselves, uncheck **Enabled**.

22. For **Opacity**, slide the toggle left or right until you reach the desired default transparency level for the layer. The default opacity is set to **50%**.

23. Click **Save**. The layer appears in the *Board Layers* section on the *Edit Map* page.



24. Repeat steps 15-22 for each board layer you want to be made available when a user opens the map.

25. To set the location of the map when it is opened, click and hold, dragging your mouse to the appropriate location.

26. To set the zoom level of the map when it is opened, go to the map and use the zoom in and zoom out icons as applicable.

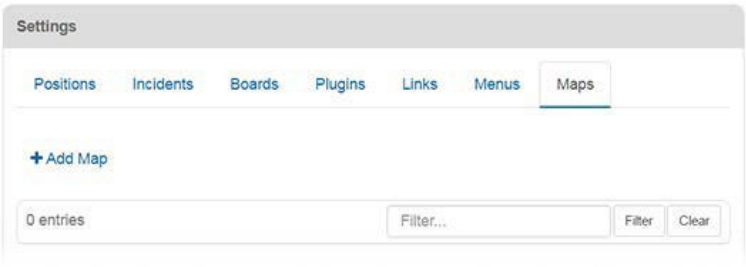
27. Click **Save**. The *Maps* page opens, and your new map appears in the list of maps.

Assign Maps to Groups

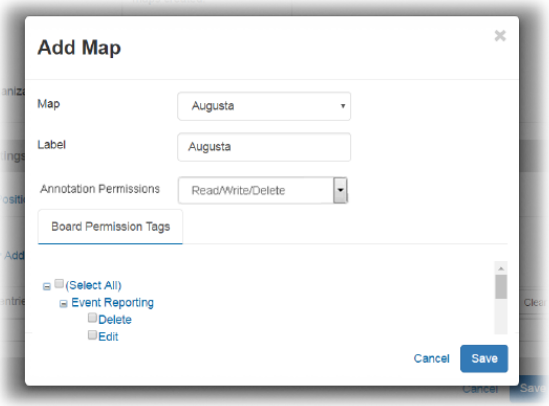
Assigning maps to users, positions, and group follows a similar process as assigning boards or plugins to these same entities. Users must be assigned to a position. Positions can then be assigned to groups. Groups can be assigned positions, incidents, boards, plugins, links, menus, and maps. Thus, you may need to create a new group specific to the map you want a certain collective of positions to have access to.

To assign maps to groups

1. In the *Admin* window, go to **Users**: **Groups**. The *Groups* page opens.
2. Click the name of the group you want to assign a map to. The *Groups: Edit Group* page opens.
3. Go to the *Settings* section and click the **Maps** tab.



4. Click **Add Map**. The *Add Map* window opens.



5. For **Map**, select the map you want the group to have access to.
6. For **Label**, enter a name for the map that will make it readily identifiable in the control panel menu.
7. For **Annotation Permissions**, select the permissions related to managing annotations that you want the assigned users to have when viewing the map.

   ***Note**: Selecting **None** means this group will not see any annotations for the given map. **Read Only** allows groups to view annotations only. Selecting **Read/Write/Delete** gives this group the ability to add, edit, and delete annotations for this map.*

8. For **Board Permission Tags**, select the permissions associated with the boards listed that you want the assigned users to have when viewing the map. Depending on the board, permissions may include editing, deleting, and so forth.

   ***Tip**: The use of board permissions allows for the assignment of the same map to multiple groups of users with different permission levels. If permissions are not listed, no board permissions were found for the board.*

9. Click **Save**.

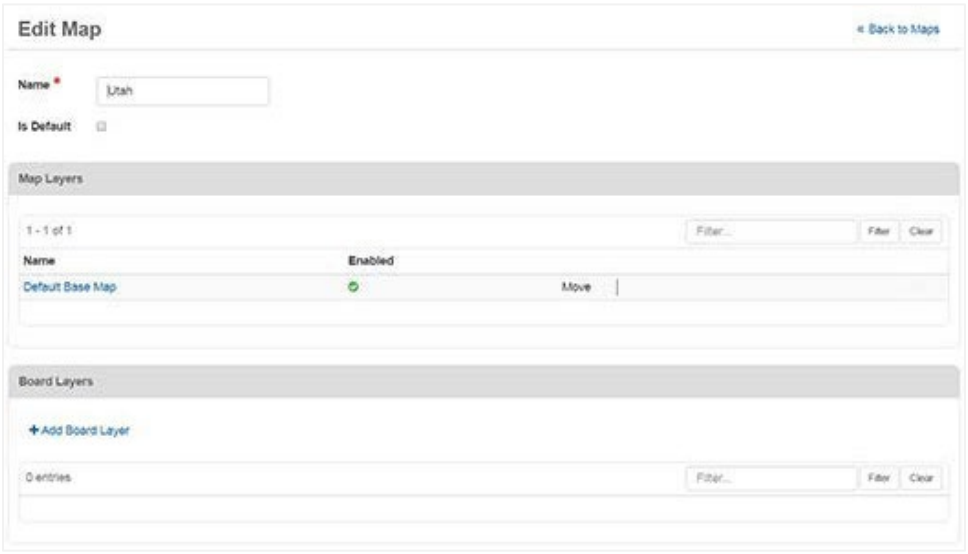
Edit a Map

As an administrator, you can create an unlimited number of maps to meet your organization's needs. When creating a map, you decide the map layers to associate with the map. You also decide what board data should be displayed on the map. If needed, you can edit or delete the map at any time and as incidents evolve.

To edit a map

1. In the *Admin* window, go to **Mapping**: **Maps**. The *Maps* page opens.

2. Click the name of the map you want to edit. The *Edit Map* page opens.



3. Make changes as needed, and then click **Save**.

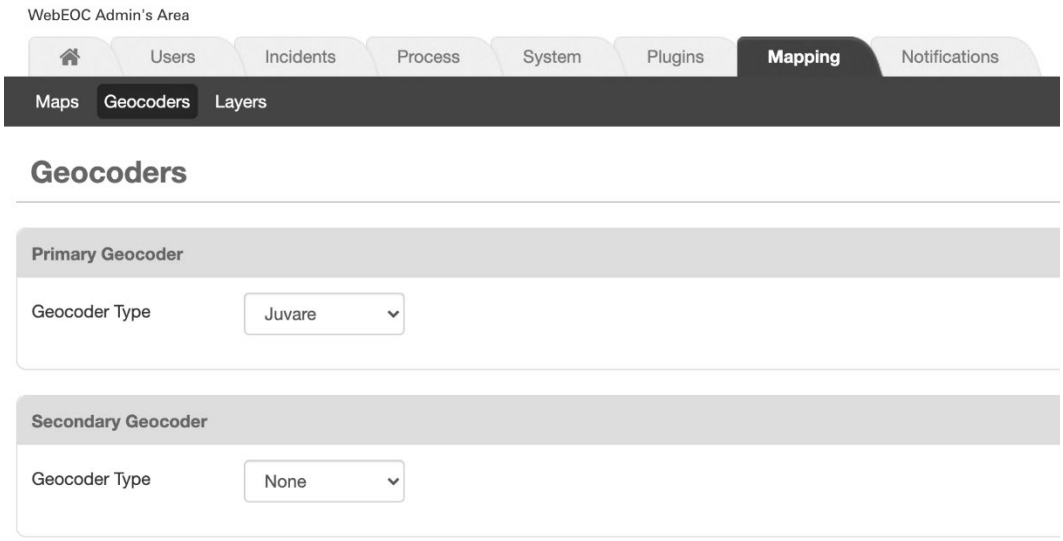
To delete a map, on the *Maps* page, click the trash can icon associated with the applicable map. When the confirmation window opens, click **OK**.

Set Geocoders

Geocoders transform the physical description of a location into a visual depiction of it on a map. For *Maps*, it is recommended to set either the **Juvare** or **Local ArcGIS** as the primary and/or secondary geocoder. In instances where a geocoding result cannot be found in the primary geocoder, WebEOC turns to a secondary geocoder.

To set the primary and secondary geocoders

1. In the *Admin* window, go to **Mapping**: **Geocoders**. The *Geocoders* page opens.



2. In the *Primary Geocoder* section, for **Geocoder Type**, select the appropriate geocoder type.
3. If you select **Juvare**, no additional configuration is required. Proceed to step 6.
4. If you select **Local ArcGIS**, additional fields open.

a. Enter the URL of your local ArcGIS geocoding service.

b. For **Single Line Address Field**, enter the abbreviated address for your local ArcGIS service.

c. To enter an address in its entirety, select **Parse Address**. Additional address fields open.

d. Enter information in the fields as appropriate.

5. If applicable, in the *Secondary Geocoder* section, for **Geocoder Type**, select the appropriate geocoder type.
6. Click **Save**.

Create a Map Layer

Map layers allow you to control the data you see on a map, organizing geographic data in logical collections. Use map layers to organize places, line strings, shapes, and more, controlling how you view and consume different kinds of information. For example, you can create a layer that shows street information and another layer that contains weather data. You can view the information in these layers independently. In making both layers visible, however, you can see what areas are experiencing inclement weather conditions.

The data used in layers can be added using many different sources, including Esri feature services, Esri map services, Web Map Services (WMS), GeoRSS, and KML files. A layer represents both data and the

visualization applied to it.
Visualization can include the symbology used to display the data, pop-up configurations, filters, and other configurations.

When creating map layers, you have the option of creating various different layer types. Each layer type has different capabilities and behaves in its own unique way, depending on the source of the layer's data.

- **Esri Map Service** – An Esri Map Service contains all information related to a map in ArcGIS, including any associated feature layers and images.

- **Esri Feature Service** – An Esri Feature Service layer is dynamic and interactively displays data from ArcGIS. This layer allows you to serve features over the Web and provide icons to use when presenting these features.

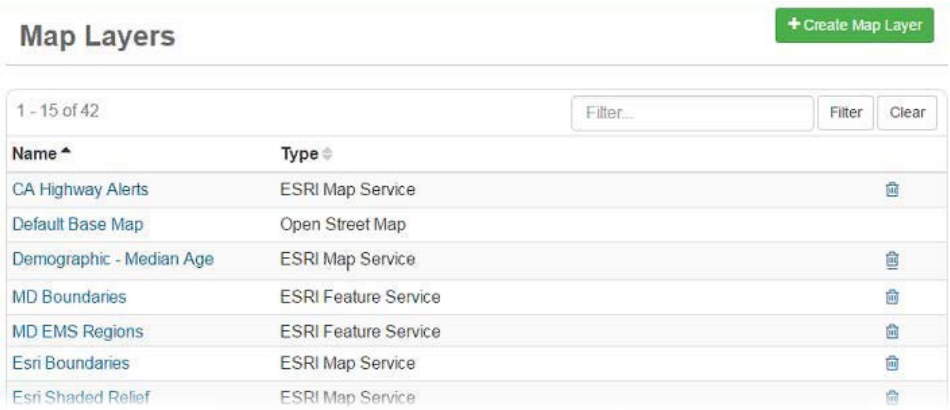
- **WMS** – Web Map Service (WMS) is a standard protocol that delivers georeferenced map images, of which are generated by a map server using data from a GIS database. WMS requests define the geographic layers, and the response to such a request is one or more georegistered map images. You decide the image type returned, such as JPEG, PNG, and so forth.

- **GeoRSS** – GeoRSS is a live Web feed that displays geographic features and locations. As a live feed, it updates as data and conditions change. In choosing a GeoRSS layer, the layer you create will be dynamic, refreshing to always show the latest information from the GeoRSS feed.

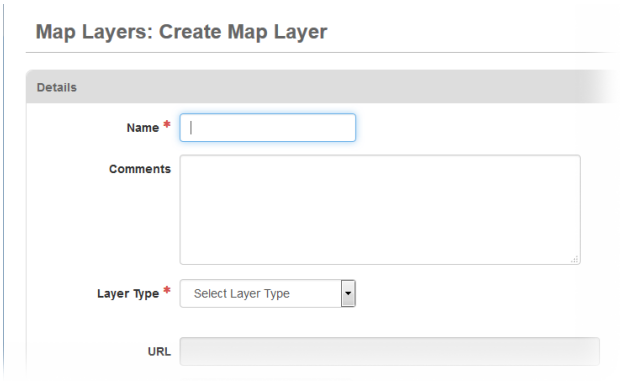
- **KML** – Keyhole Markup Language (KML) is an XML-based file format that expresses geographic features in Internet-based applications such as ArcGIS and Google Earth™. If you know a specific KML file that you want to display on your map, you can add it as a KML layer.

To create a map layer

1. In the *Admin* window, go to **Mapping**: **Layers**. The *Layers* page opens.



2. Click **Create Map Layer**. The *Create Map Layer* page opens.



3. For **Name**, enter a name for this map layer that is representative of the layer's function.

4. If appropriate, in **Comments**, enter comments or notes about this map layer.

5. For **Layer Type**, select the type of layer.

   a. If you selected **ESRI Map Service** or **ESRI Feature Service**:

      ***Note**: The information in steps 4-6 in the following set of steps are not required for any publicly accessible layers. They are required for secure layers that are only accessible with credentials.*

      i. Enter the URL of the Esri map service or feature service from which the map layer should pull data.

      ii. If you chose **ESRI Feature Service**, for **Service Layer ID**, enter the appropriate ID.

      iii. If you chose **ESRI Map Service**, for **Image Format**, select the format of the images that should be returned for the layer.

      iv. In the **Local ArcGIS** tab, for **User Name**, enter the username you use to access ArcGIS.

      v. For **Password**, enter the password you use to access ArcGIS.

      vi. For **Token Parameter Name**, enter the token parameter name of your applicable ArcGIS instance.

   b. If you selected **WMS**:

      i. For **URL**, enter the URL associated with the WMS layer.

      ii. For **Service Layer ID**, enter the service layer ID associated with the WMS layer.

   c. If you selected **GeoRSS**:

i. For **URL**, enter the URL associated with the GeoRSS feed.

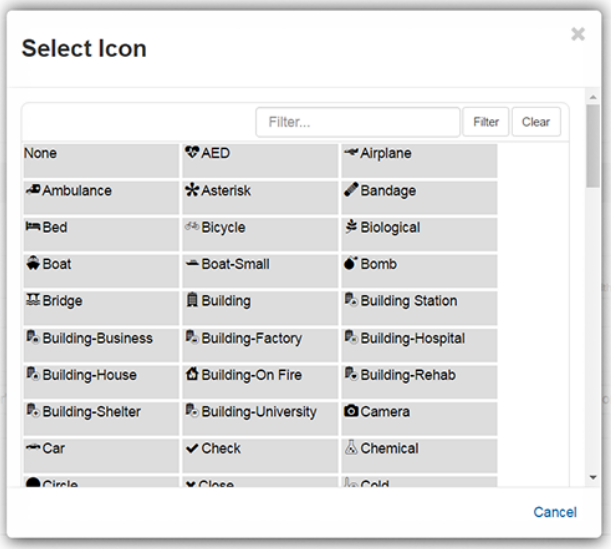
ii. If you want this GeoRSS feed to render its HTML when accessed from the map, select **Enable HTML**.

***Important**: Only select the **Enable HTML** check box for trusted sites.*

iii. For **Color**, click in the empty field and either enter the number of the color, if known, or use your cursor to select a color from the box.

iv. For **Icon**:

a. To select an icon from a database, click **Select Icon**. The *Select Icon* window opens. Click the icon you want to represent the list item. The icon will appear on maps that the layer is associated with.



b. To use a custom icon, click **Upload Icon**. Follow browser prompts to locate and open the appropriate file on your computer.

d. If you selected **KML**:

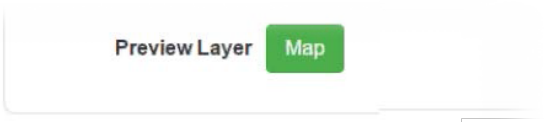
i. For **URL**, enter the URL associated with the KML file you want used for this layer.

ii. If you want this KML feed to render its HTML when accessed from the map, select **Enable HTML**.

***Important**: Only select the **Enable HTML** check box for trusted sites.*

d. If you selected **Open Street Map**, all fields are grayed out, becoming read-only. This default base map cannot be modified.

6. To preview the layer you configured on the default map, for **Preview Layer**, click **Map**. A new window opens with the preview of the layer on the default map. In some cases, you may need to adjust your zoom level to view the previewed content. To exit the preview, click **Cancel**.



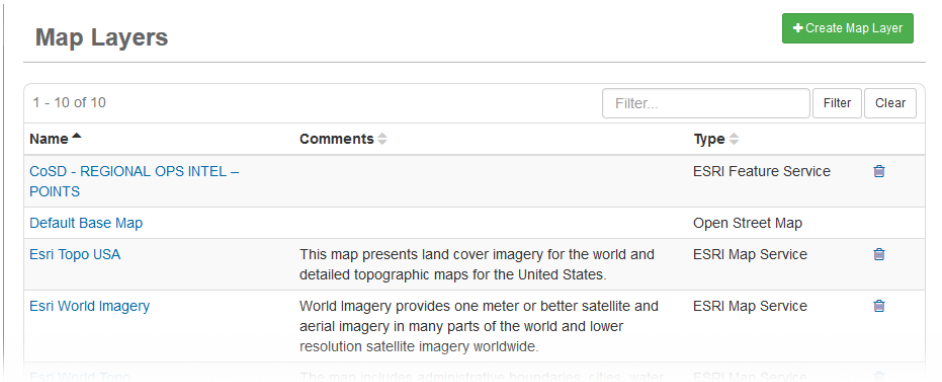
7. Click **Save**.

Manage Map Layers

Once created, map layers can be edited or deleted as needed.

To edit a map layer

1. In the *Admin* window, go to **Mapping**: **Layers**. The *Map Layers* page opens.



2. Click the name of the map layer you want to edit. The *Edit Map Layer* page opens.

3. Make changes as needed, and then click **Save**.

To delete a map layer from the list of layers, click the trash can icon associated with the layer you want to delete. When the confirmation window opens, click **Ok**.

Run a Map Assignment Report

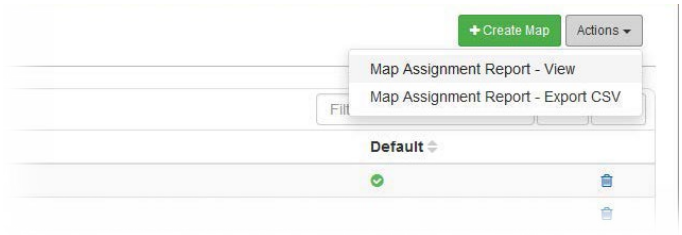
The Map Assignment Report displays the groups and menus all of the maps have been assigned to. You can view the report and print the PDF file, or you can generate a commas-separated value (CSV) file. Only users with access to the **Mapping** tab of the *Admin* window can access this reportTo run the Map Assignment Report

To run a map assignment report

1. In the *Admin* window, go to **Mapping**. The *Maps* page opens.

2. Click the **Actions** button.

3. To open the report in a new window, select **Map Assignment Report - View**. Opening the report in a new window allows you to print it as a PDF.



4. To export the report to a CSV (comma-separated value) file, select **Map Assignment Report - Export CSV**.

   ***Note**: If you use the Filter function and then run the report, the report only includes the maps from the filtered results.*

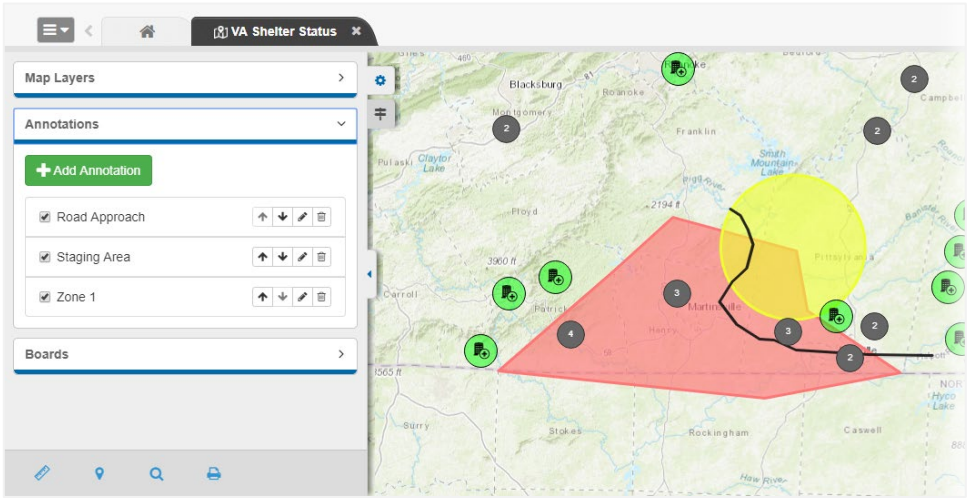
User Guide

Getting Started

About Maps Add-on

Maps Add-on expands on the capabilities of the integrated *Maps* option included as part of WebEOC, providing both its users and administrators with customization options and an array of advanced tools and features. With a modern user interface backed by JavaScript technology, this licensed add-on offers powerful new capabilities and broader device support than previous WebEOC mapping solutions. Capable of running alongside *Mapper Professional* or *Mapper Lite*, *Maps Add-on* supports map layers, the creation of multiple maps, the use of custom icons, and more! Unlike with the integrated *Maps*, *Maps Add-on* allows the management of maps using any number of external data sources so that administrators can control map layers, live feeds, and map services in support of custom map generation.

Users are also afforded more control with *Maps Add-on*, having the ability to leverage several useful tools included with the licensed add-on that help them navigate maps and create a common operating picture. For example, the Find My Location tool pinpoints your location on the map, which allows you to see your location relative to map data. The Find Address tool lets you click a point on the map to instantly learn its address and access its coordinates in various formats. You can even measure distances between points or the size of an area, add annotations, and print a display of a map that shows geocoded points.



Key Features

- Quickly and easily view and edit board point, line strings, circle, or polygon data from the map.
- Customize map pop-ups using assigned WebEOC display views.
- Use the map service and board layer legends to enhance your understanding of map features.
- Add, edit, and remove map layers, services and live feeds to optimize map viewing.
- Preview a map layer while adding or editing it.

- Quickly pinpoint your location on the map using the Find My Location tool.
- Use custom geocoding services, to include Esri secure geocoding, for enhanced address location.
- Manage annotation permissions to control access to viewing and editing annotations.
- Add, edit, and view annotations on a map.
- Use a library of provided map icons or upload your own custom icons.
- Click points on the map to instantly find addresses and various coordinates.
- Print a view of a map that shows geocoded points.
- Make the most of optimized map features on your Mobile device.
- Benefit from the same internationalized support seen in your primary WebEOC instance.

Compatibility

This product works with WebEOC versions 8.3 or later.

Core		Available to add
Professional		Available to add
Enterprise		Available to add

See Available Add-ons for installation and documentation files for *Maps Add-on*.

Maps in the Control Panel

The *Maps* section of the control panel contains maps created by your administrator for incidents, training events, functional areas, specific boards, and so forth. The maps visible to you are managed by your administrator; thus, you may see different maps or have different permissions than other users in WebEOC.

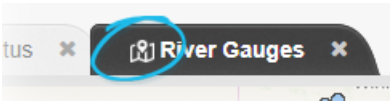
In the control panel, a star icon preceding a map name alerts you to when new data has been posted to that map. Once the map has been opened, the star disappears until information is added or updated.

Access Maps from the Control Panel

Clicking the name of a map opens it in a new tab within the existing window. Multiple maps can be opened in different tabs. Alternatively, clicking the new window arrow to the right of the map name opens the map in a new window of its own. In this way, you can have a map open as you simultaneously view a board that it is linked to.

You can also access maps from *Maps*-enabled boards. If a board is enabled with *Maps*, a **Map** link or button is likely to appear next to a record entry. Clicking the **Map** link or button opens a map, jumping directly to the entry's geographical location.

When a map is open, a map icon is shown in the map's tab, readily identifying the tab as a map and not a board.



Continue reading to learn about specific map elements and how to navigate a map once it is open.

Map Elements

A variety of items may appear on any given map: icons, clusters, shaded polygons, and more. Understanding the purpose and origin of each element can help you quickly interpret a map, easily establishing a common operating picture in a single glance.

Icons

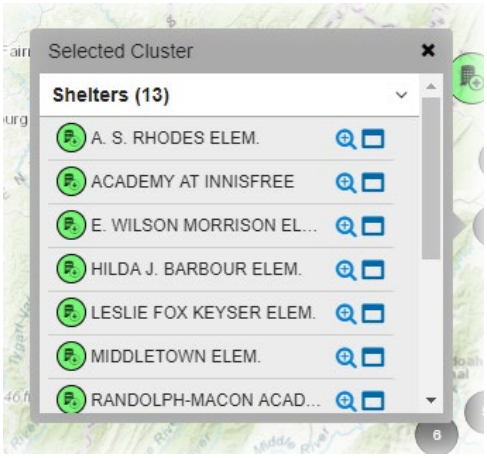
Single points on the map are identified by circular icons. The actual icon inside the circle, and even the color of the circle, is determined by your administrator. Typically, the icon closely resembles the entity it represents. For example, a shelter may be identified by a house icon. Additionally, the color of the circle is often determined by the status of the entity that the icon is representing. For example, a shelter with a status of **Full** may be red. If the shelter was **Open**, the icon may be green.

Administrators ultimately choose the icons and colors, which means they can be changed to match the needs of each organization. Once you have familiarized yourself with the characteristics of each icon, you can readily interpret information just by looking at the map. Additionally, you can click an icon or point to get more details related to the element, determining the board it originated from and other additional information. For more information, see Manage Features.

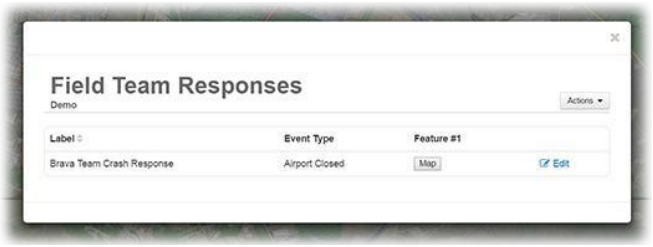
Clusters

If there are multiple points or features close to one another, a cluster circle appears on the map unless clustering has been disabled for the specific map. The number inside shows the number of data points in the area. When you zoom in, you can see each point or feature separately.

Alternatively, you can quickly see a list of all items or points in a cluster by clicking the cluster. A *Selected Cluster* pop- up window opens.

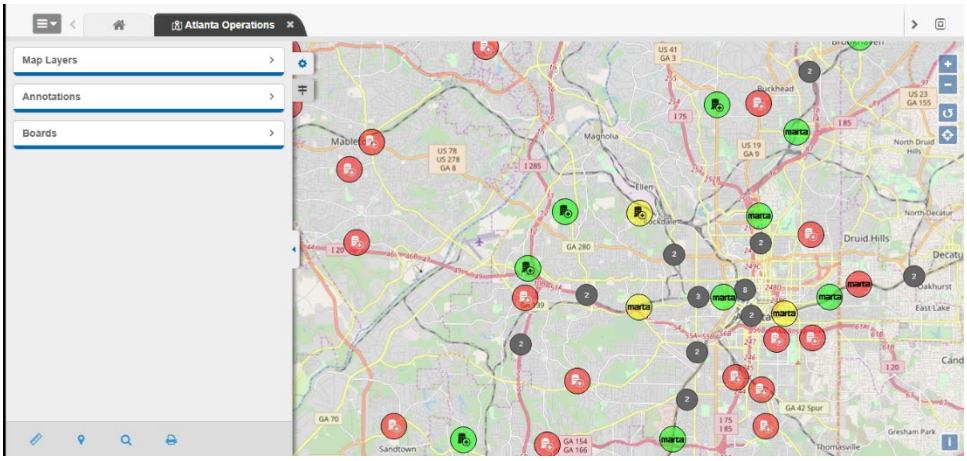


From the window, you can zoom to a specific point or feature by clicking the zoom icon. To open the details of any given point in a new window, click the window icon. When the window opens, details about the feature are shown.



Basic Navigation

Once you have opened a map in either a tab or window of its own, the map is shown.



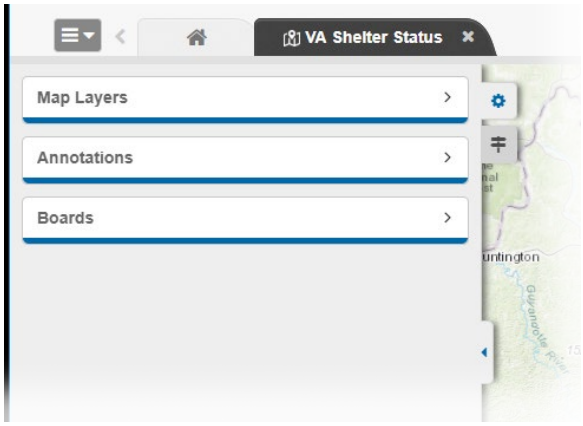
From the map, several navigational tools are available to help optimize your experience, giving you a custom, yet common operating picture during an incident.

Zoom Tools

To zoom in or out, use the plus and minus icons on the right-most area of the map. Clicking the plus icon zooms in. Clicking the minus icon zooms out, showing more of the map. Alternatively, you can click the map and then use the scroll button on your mouse, zooming in and out as desired. If you double-click a single area on the map, the map zooms in to the area you clicked.

Side Navigation Menu

To manage map layers, add annotations, or select which board data is shown on the map, go to the left area of the map and click the arrow icon. A menu opens that will allow you to indicate what you want to see on the map. Click to expand a section, and click the same section to collapse it.



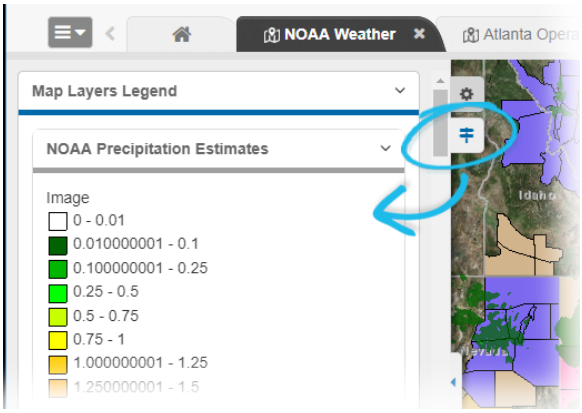
In the tab with the gear icon in the side navigation menu, the bottom toolbar contains four additional icons. These icons represent several tools available to you.

- The first is an icon that resembles a ruler. It opens a section to help you measure distances or areas on the map.
- The second, a find address icon, opens a section that can be used to help you locate a specific address or coordinates on the map.
- The search icon in the bottom toolbar allows you to search for specific features on the map.
- Finally, the print icon can be clicked to print a display of a map showing geocoded points and any annotations.

To hide the side navigation menu, click the arrow icon again.

Map Legend

To access a legend that indicates what icons and colors mean on the map you are viewing, click the legend icon just below the gear icon on the left. The legend shows what the icons and colors mean for data from each map layer and board that is represented on themap.



Additional Icons

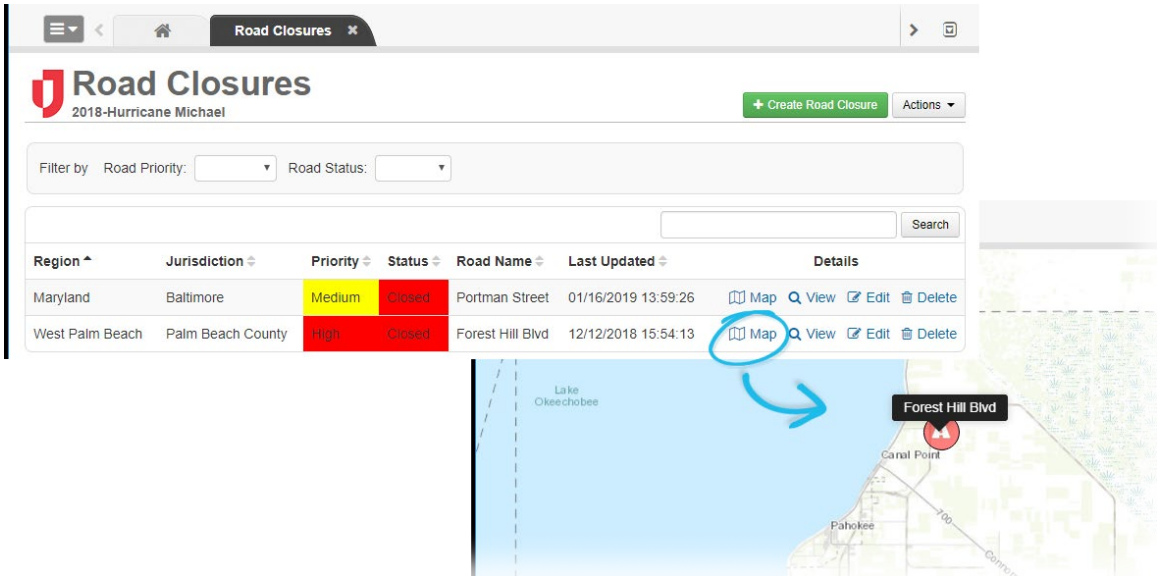
Three different icons on the map allow you to perform varying actions. In the upper right corner of the map are two of the three additional icons. When clicked, the first icon allows you to return to the map's default location and zoom level. The second, the Find My Location icon, takes you directly to your location on the map.

> ***Note**: You must allow your location to be shared with your device in order for this feature to work.*

In the lower right corner, an attributions icon (or) provides you with information regarding the source of the map. Click the icon to view a link to the source or to open a page that provides details about the layer.

Open a Map from a Board

If a board has been enabled with *Maps*, you may be able to access the map directly from the board record. An administrator will have configured this feature, making it easy for you to click a **Map** link or button and instantly see the board data element represented on a map.



To exit the map view, in the lower right corner of the map, click **Cancel**.

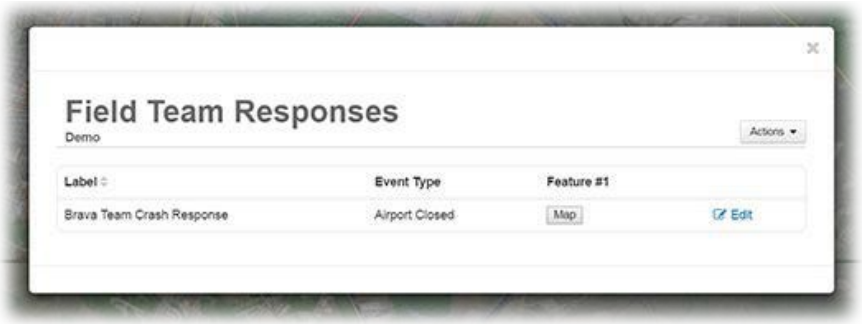
See Manage Features to learn about opening a board record from the map instead.

Manage Features

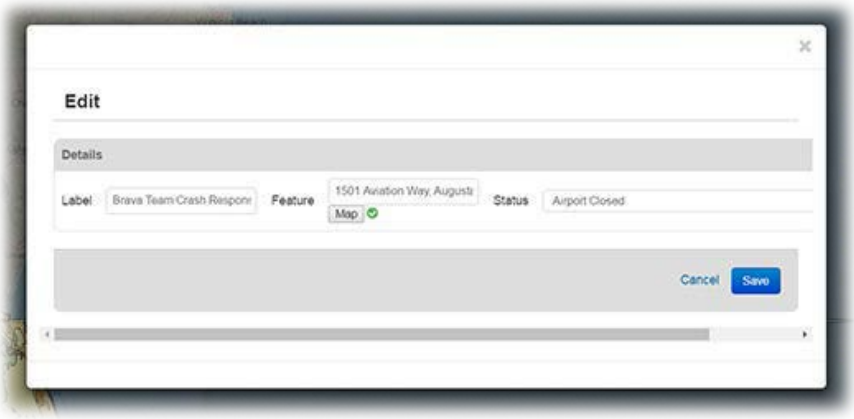
Data points or features are represented on the map by symbols, markers, or icons that were assigned to the board by the WebEOC administrator. Each point can be clicked so that you can view the full details of the given entry in a new window.

To edit a data point or feature

1. From an open map, locate and click the point or feature you want to view the details of. A new window opens.



2. Click the **Edit** link. The *Edit* page opens.



3. Update the fields as applicable.

4. To relocate the point, click the **Map** link or button.

5. In the mapping window that opens, to set the location of the map feature you want associated with this particular board record, use the icons in the upper left corner.

6. To add a data point:

   a. Select the point icon.

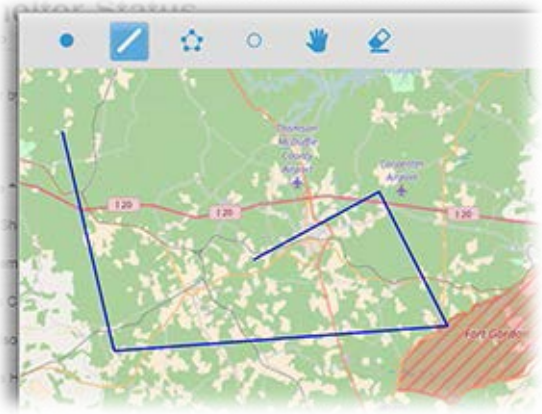
   b. Click on the applicable area on the map and the point will appear.

7. To add a line string to the map:

   a. Select the line string icon.

   b. Click a point on the map. Continue clicking different points on the map to create a custom line.

c. When you have created the desired line, double-click your final point. A line is created on the map.



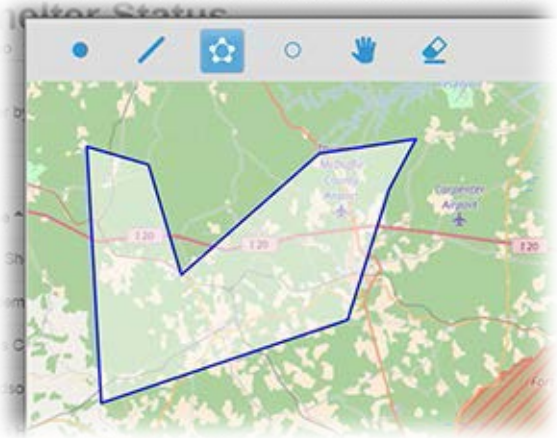
8. To draw a custom shape and area:

   a. Select the polygon icon.

   b. Click a point on the map. Continue clicking different points on the map to create a custom polygon.

   c. When you have created the desired polygon, double-click your final point or single-click your starting point. A shape is created on the map.



9. To draw a circle:

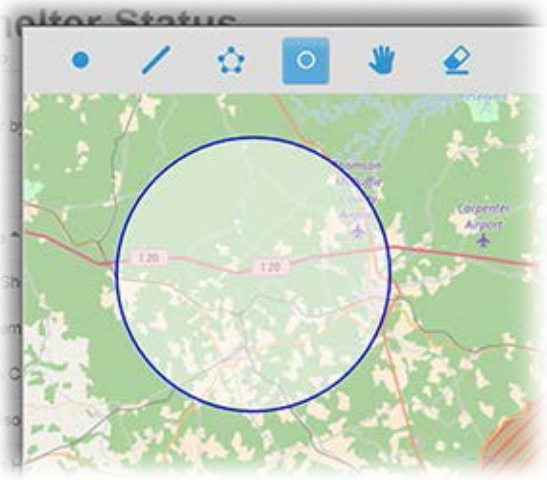
   a. Select the circle icon.

   b. Click a point on the map.

   c. Drag your cursor to create the appropriate radius for the circle.

d. When you have created the desired circle size, click once. A circle is created on the map.



10. If needed, to clear the map, click the clear icon.

11. To stop drawing on the map, click the hand icon.

12. Click **Save**.

13. Click **Save**.

Add Map Features to a Board Record

When a board is enabled with *Maps*, chances are you can add a map feature to records for those boards. Since administrators control the boards you can access and which boards are *Maps*-enabled, the way in which you add a map feature to a board record may vary. Additionally, custom boards may require you to consult your WebEOC administrator for specific details on how to associate a board record with a specific map feature.

The general process for associating a board record with a map location is outlined below.

To add a map feature to a board record

1. Open the control panel menu and, from the *Boards* section, click the applicable *Maps*-enabled board.

2. On the board's landing page, click the **Create** button.

3. In the create window that opens, locate and click the **Map** button or link.

   ***Tip**: If the **Map** button or link appears next to an **Address** field, such as in the Shelter board, you can enter the address of the location to be mapped. After entering the address, click the **Map** button or link. In the mapping window that opens, you are immediately taken to the location you identified, and a point*

for this location is already added to the map.
*Additionally, if you select **Map** using the locate attribute, your current location is automatically found.*

4. In the mapping window that opens, use the icons in the upper left corner to set the location of the map feature you want associated with this particular board record.

5. To add a data point:

   a. Select the point icon.

   b. Click on the applicable area on the map and the point will appear.

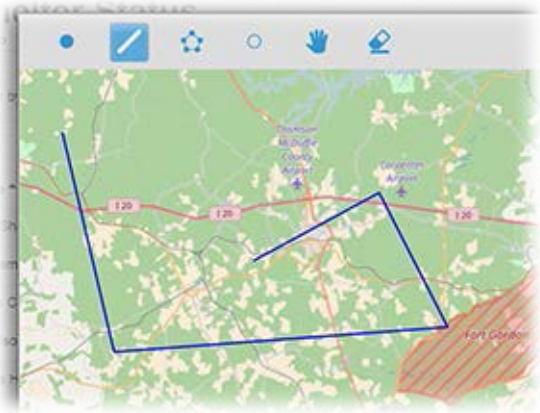
6. To add a line string to the map:

   a. Select the line string icon.

   b. Click a point on the map. Continue clicking different points on the map to create a custom line.

   c. When you have created the desired line, double-click your final point. A line is created on the map.



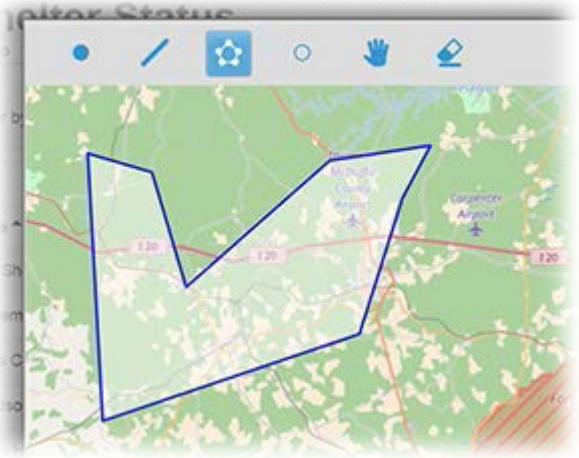
7. To draw a custom shape and area:

   a. Select the polygon icon.

   b. Click a point on the map. Continue clicking different points on the map to create a custom polygon.

   c. When you have created the desired polygon, double-click your final point or single-click your starting point. A shape is created on the map.



8. To draw a circle:

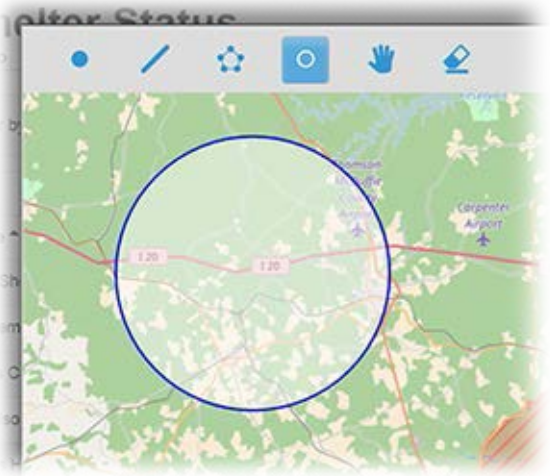
   a. Select the circle icon.

   b. Click a point on the map.

   c. Drag your cursor to create the appropriate radius for the circle.

   d. When you have created the desired circle size, click once. A circle is created on the map.



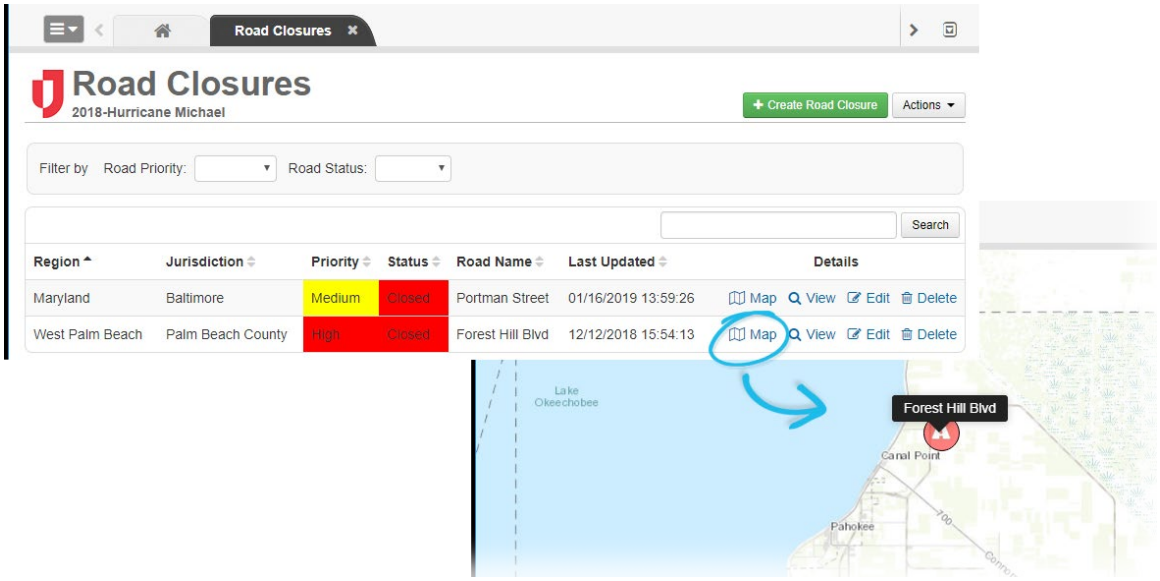
9. If needed, to clear the map, click the clear icon.

10. To stop drawing on the map, click the hand icon.

11. Click **Save**. The mapping window closes and a green check mark appears to the right of the **Map** link on the board view.

12. From the board view, click **Save**.

The record is saved and appears on the board. A **Map** link or button is associated with the entry and, when clicked, takes you directly to the location on the map you just identified.

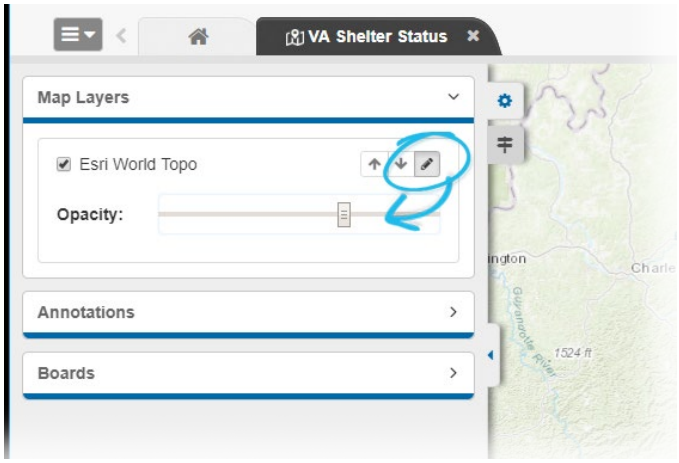


Board Data and Layers

Manage Map Layers

If you have *Maps Add-on*, you have the option of turning map layers on or off. If adding several map layers to a single map becomes overwhelming or confusing, you can disable layers as needed.

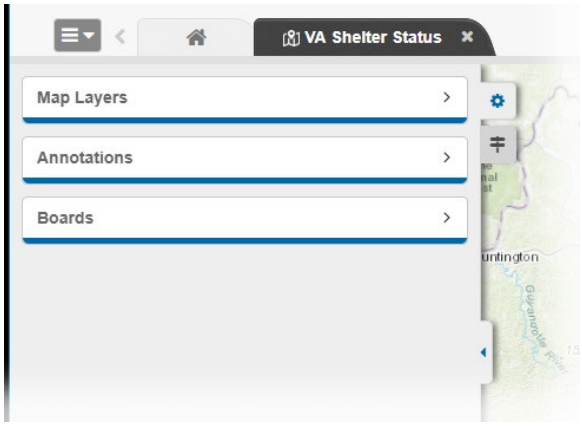
If you need to have all map layers applied, you can manage the transparency of layers to make them more distinguishable depending on significance or priority. To do so, locate the applicable map layer and click its associated edit icon . An opacity scale opens below the selected layer. Slide the toggle left or right until you reach the desired transparency level.



To further help you manage priority map layers, you can also arrange the layers in the *Map Layers* section according to significance or importance. Click the up or down arrow associated with a layer to move it one position up or down respectively.

To add or remove map layers from the map

1. From an open map, on the left, click the gear icon. The side navigation menu opens.



2. Click **Map Layers**. The *Map Layers* section expands.

3. Select the check box associated with any and all map layers you want applied to the map.

4. Clear the check box associated with any and all map layers you do not want applied to the map.

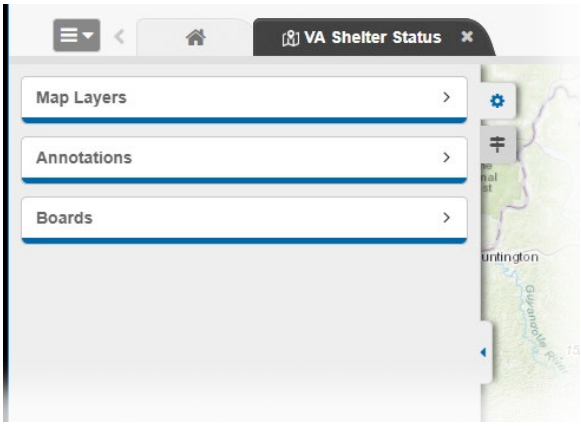
Manage Board Data

If you have *Maps Add-on*, you can easily change what WebEOC boards are showing data on a map, creating custom map views. This customizability reduces clutter and makes viewing selective data possible.

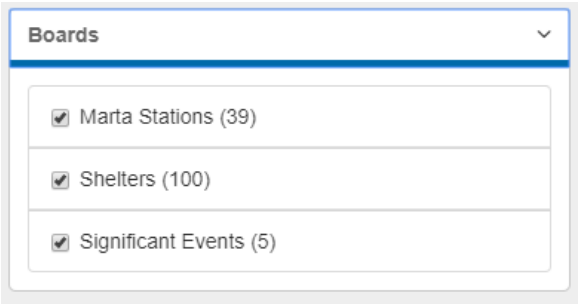
> ***Note**: The boards available to you in the* Boards *section depend on your permissions and the boards to which administrators have assigned you.*

To turn on or off board data on the map

1. From an open map, on the left, click the gear icon. The side navigation menu opens.



2. Click **Boards**. The *Boards* section expands.



3. Select the check box associated with any and all boards you want contributing data to the map.

4. Clear the check box associated with any and all boards you do not want data pulled from into the map.

Tools

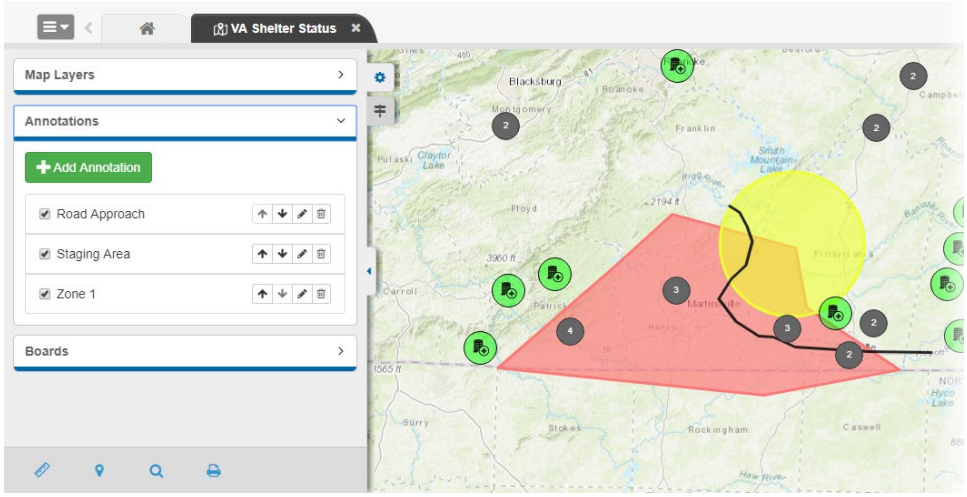
Available Tools

With *Maps Add-on*, several tools are available that can help you navigate maps, quickly locate specific addresses, find your current location on the map, and more. The table below shows each tool, its associated icon, the location of the tool, and a brief description of how the tool works.

Tool	Icon	Location	Description
Annotations Menu	Not Applicable	Side Navigation	Adds a static element or label to identify areas of importance such as hot zones or staging areas.
Feature Search		Side Navigation Menu: Toolbar	Pinpoints a feature on the map if you know the name of the feature label you are looking for.
Find Address		Side Navigation Menu: Toolbar	Locates a point on the map by address, click, or coordinates.
Find My Location		Map, upper right corner	Takes you directly to your current location on the map.
Measurement		Side Navigation Menu: Toolbar	Measures distance between two or more points on the map; also measures area within a polygon that you define.
Print		Side Navigation Menu: Toolbar	Prints a display of a map showing geocoded points and any annotations.

Add an Annotation

Annotations can be added to any map by users who belong to a group that has been assigned the appropriate permissions. These annotations can identify hot zones, areas of importance, and more.



Each annotation can be composed of up to one static feature, such as a line string or circle, or one label. Once created, annotations can be logically organized in the side navigation menu using the up and down arrows associated with each annotation. Annotations can also be edited and deleted using the applicable buttons.

Annotation Tools and Features

After you click **Add Annotation**, the following tools and features become available so you can add a feature to your annotation.

Freehand – The pencil icon allows you to draw freehand, creating a custom shape or line on the map.

Circle – Click the circle icon to create a circle on the map, of which will serve as an annotation that outlines an area or zone.

Line – Click the line string icon to draw a unique line string on the map.

Polygon – The polygon icon allows you to create a custom, multi-sided shape to serve as an annotation region.

Text – The A icon allows you to add a textual annotation to the map.

Select – Choose this icon to maneuver to the area on the map where you want to add the annotation.

In addition, when you point to an annotation in the map navigation menu, the associated item is highlighted on the map.

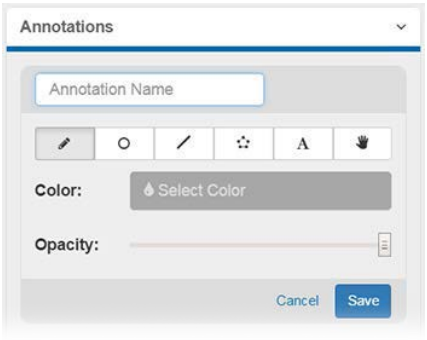
To add an annotation

1. From an open map, on the left, click the arrow tab. The side navigation menu opens.

2. Click **Annotations**. The *Annotations* section expands.

   ***Note**: If you do not see an annotation section, one was not assigned by the system administrator.*

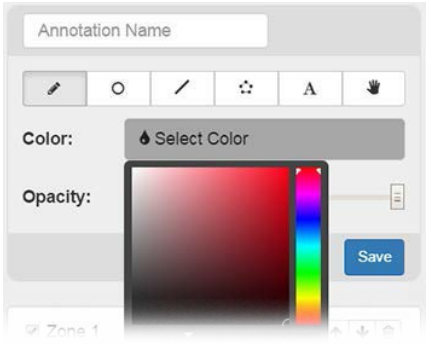
3. Click **Add Annotation**. New fields open in the section.



4. For **Annotation Name**, enter a name for the annotation.

   ***Tip**: This name appears on the map when you point to the annotation in the map navigation menu.*

5. Click in the color box and, from the color picker that opens, click to select the color for the annotation.



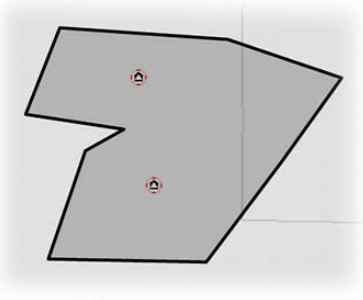
6. If desired, to set the opacity of the annotation's fill color, use the opacity scale within the color picker.

7. To draw a freehand shape:

   a. Click the pencil icon.

   b. Click a point on the map. Hold and drag the pencil across the map, drawing a custom shape.

c. When you have created the desired shape or line string, let go of the mouse button. A shape is created on the map.



8. To draw a line string:

   a. Click the line string icon.

   b. Click a point on the map. Continue clicking different points on the map to create a custom line.

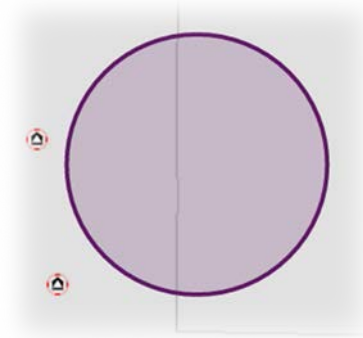
   c. When you have created the desired line, double-click your final point. A line is created on the map.

9. To draw a circle:

   a. Click the circle icon.

   b. Click a point on the map.

   c. Drag your cursor to create the desired radius for the circle. When you have created the desired circle size, single-click. A circle is created on the map.

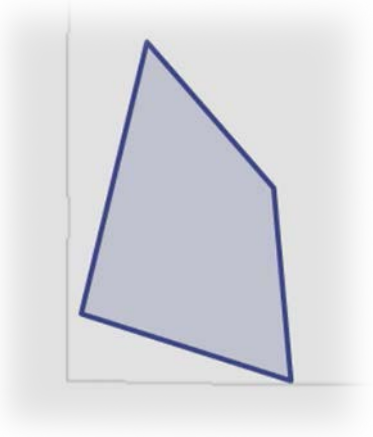


10. To draw a custom shape and area:

    a. Click the polygon icon.

    b. Click a point on the map. Continue clicking different points on the map to create a custom polygon.

    c. When you have created the desired polygon, double-click your final point or single-click your starting point. A shape is created on the map.



11. To add a textual annotation:

    a. Click the **A** icon.

    b. For **Text**, enter the label that you want to appear on the map for this annotation.

    c. From the size drop-down menu, select the font size for the annotation's label.

    d. As applicable, click the bold and/or italics icons to apply special formatting to the label.

    e. Click the point on the map where you want the label added. The textual annotation, with the formatting you selected, appears on the map.

    f. To set the opacity of the annotation, use the opacity scale.

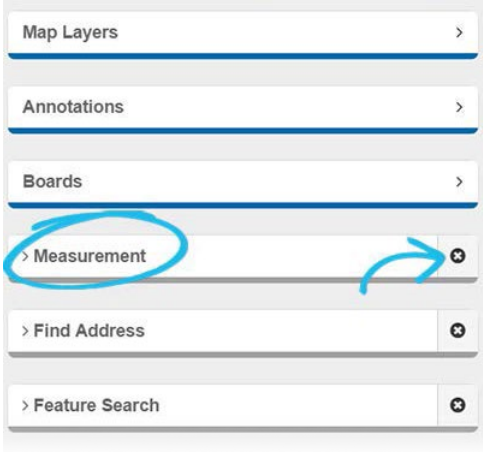
    ***Tip**: Once the point is defined, if you want to move the annotation, simply click another location and then click **Yes continue** in the* Clear Existing Element *window.*

12. Click **Save**.

Measurement Tool

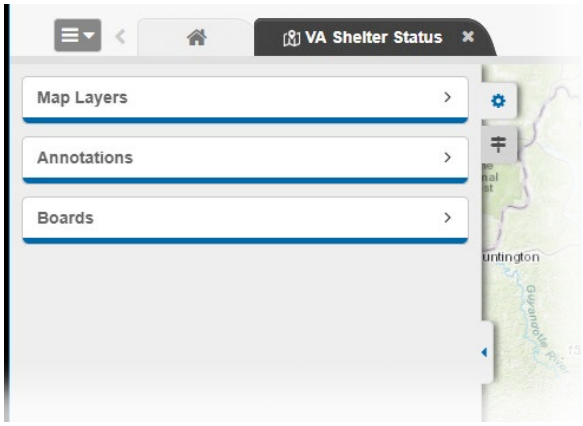
With *Maps Add-on*, you can gain better spatial awareness by measuring the distance between two or more points on the map. You can also measure the area within a polygon that you define, getting a better idea of where to allocate resources, the distance from events, and so forth.

To use this tool, you must first click the measurement icon in the bottom toolbar of the side navigation menu. The *Measurement* section appears, expanded by default. When you want to close this feature, click the **x** in the upper right corner of the *Measurement* section or the measurement icon in the toolbar.

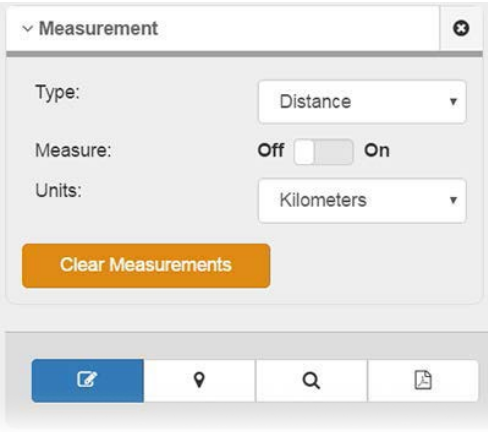


To measure distance between points on the map

1. From an open map, on the left, click the arrow icon. The side navigation menu opens.



2. At the bottom of the navigation menu, click the measurement icon. The *Measurement* section appears, expanded, in the navigation menu.



3. For **Type**, verify that **Distance** is selected.

4. For **Units**, select the units in which you want to measure; **Kilometers, Miles**, **Yards**, or **Feet**.

5. For **Measure**, switch the toggle to **On**.

6. Click a point on the map to start drawing a line string.

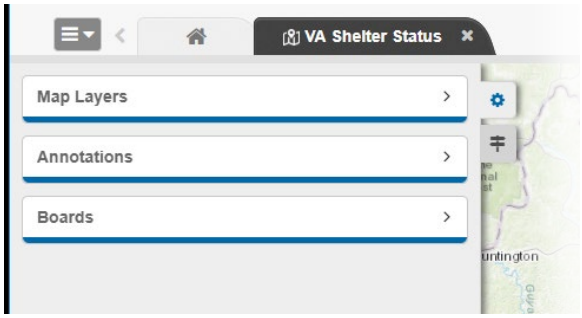
7. Click a second point to create a line that can be measured. Repeat this step until the line you want measured has been defined.

8. When finished drawing the line string, double-click your final point. A solid line is created on the map and a measurement in the units defined appears next to the line.

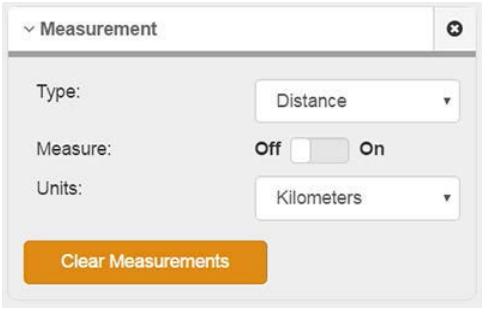
To remove any measured lines or areas from the map, click **Clear Measurements**. To stop drawing or making points on the map, switch the toggle to **Off**.

To measure area on the map

1. From an open map, on the left, click the arrow icon. The side navigation menu opens.



2. At the bottom of the navigation menu, click the find measurement icon. The *Measurement* section appears, expanded, in the navigation menu.



3. For **Type**, select **Area**.

4. For **Units**, select the units in which you want to measure; **Kilometers, Yards, Miles**,or **Acres**.

5. For **Measure**, switch the toggle to **On**.

6. Click a point on the map to start drawing.

7. Click a second point to create a line. Repeat this step until you have created a polygon containing the area you want measured.

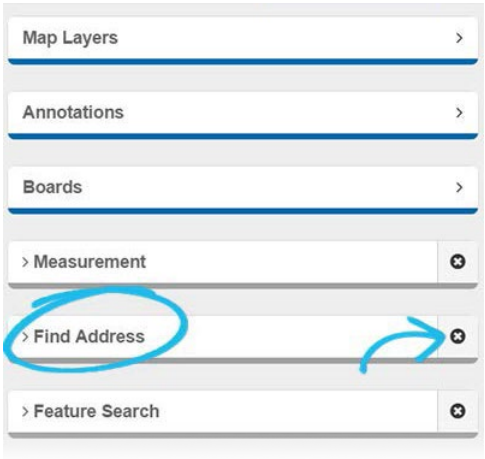
8. When finished drawing your polygon, double-click your final point or single-click the starting point. A solid figure is created on the map and a measurement in the units defined appears next to the polygon.

To remove any measured lines or areas from the map, click **Clear Measurements**. To stop drawing or making points on the map, switch the toggle to **Off**.

Find Address Tool

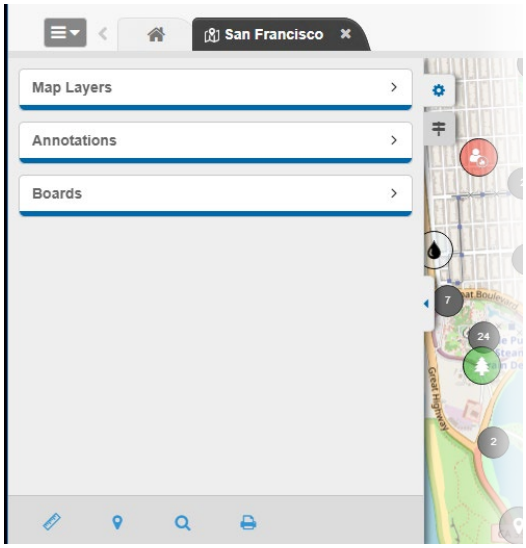
The Find Address tool allows you to zoom in to a specific location on the map. When you want to locate a specific address and/or various coordinate information on any given map, you have three options to help you pinpoint the location: you can find the address by its actual address, by using the tool's by click option, or by its coordinates. No matter which option you use, the pop-up window that opens shows all the address and coordinate details.

To use this tool, you must first click the find address icon in the bottom toolbar of the side navigation menu. The *Find Address* section, expanded by default, opens. When you want to close this tool, click the **x** in the upper right corner of the *Find Address* section or the find address icon in the toolbar.



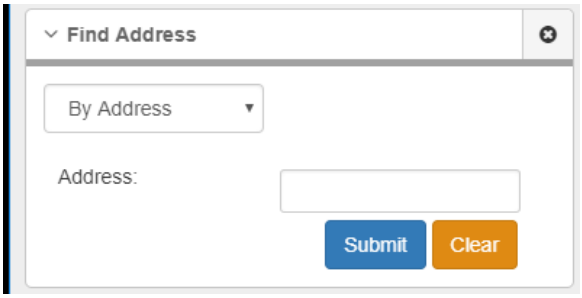
To find an address by address

1. From an open map, on the left, click the arrow tab. The side navigation menu opens.



2. At the bottom of the navigation menu, click the find address icon. The *Find Address* section appears, expanded, in the navigation menu.

3. In the first drop-down menu, verify that **By Address** is selected.



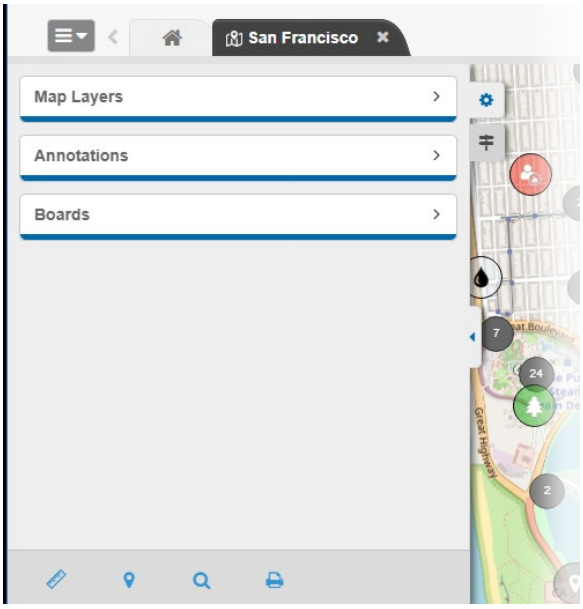
4. For **Address**, enter the full street address of the location you want to see on the map.

5. Click **Submit**.

To clear an entry and any previous search results, click **Clear**. Enter a different address and submit again.

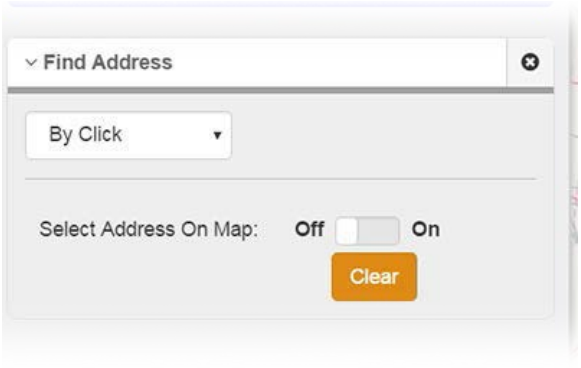
To find an address by click

1. From an open map, on the left, click the arrow icon. The side navigation menu opens.



2. At the bottom of the navigation menu, click the find address icon. The *Find Address* section appears, expanded, in the navigation menu.

3. In the first dropdown menu, select **By Click**.



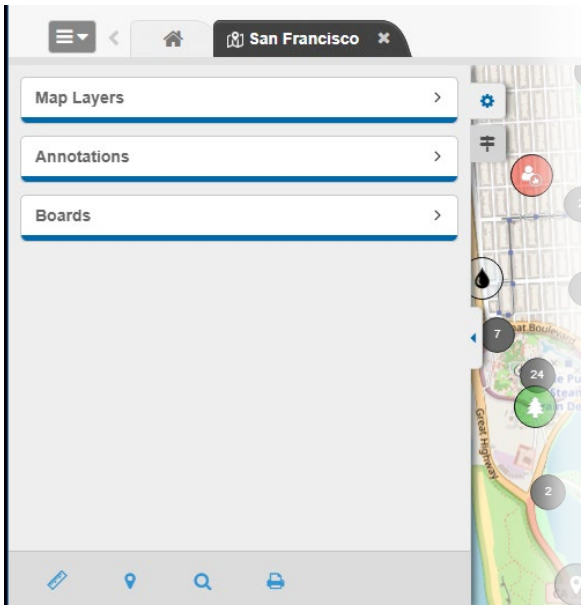
4. For **Select Address On Map**, select **On**.

5. Click anyarea on the map.

To clear results and find a different address, click **Clear**.

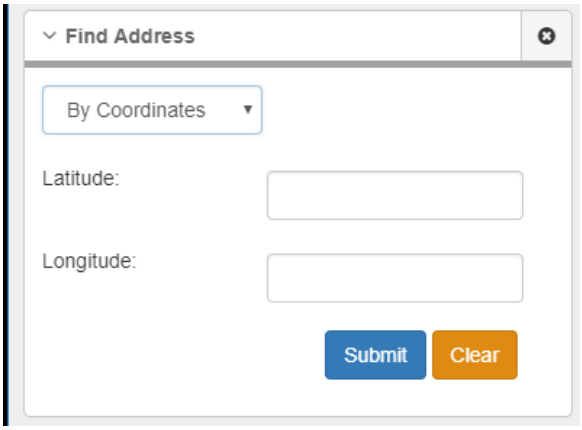
To find an address by coordinates

1. From an open map, on the left, click the arrow icon. The side navigation menu opens.



2. At the bottom of the navigation menu, click the find address icon. The *Find Address* section appears, expanded, in the navigation menu.

3. In the first drop-down menu, select **By Coordinates**.



4. For **Latitude**, enter the latitude coordinates of the location you want to find.

5. For **Longitude**, enter the longitude coordinates of the location you want to find.

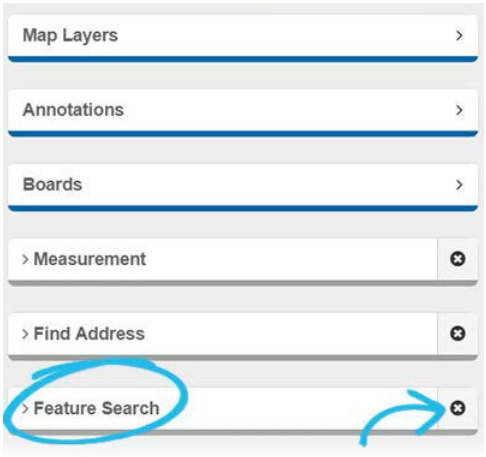
6. Click **Submit**.

To clear coordinates that you entered and search results, click **Clear**. Enter new coordinates and submit again.

Feature Search Tool

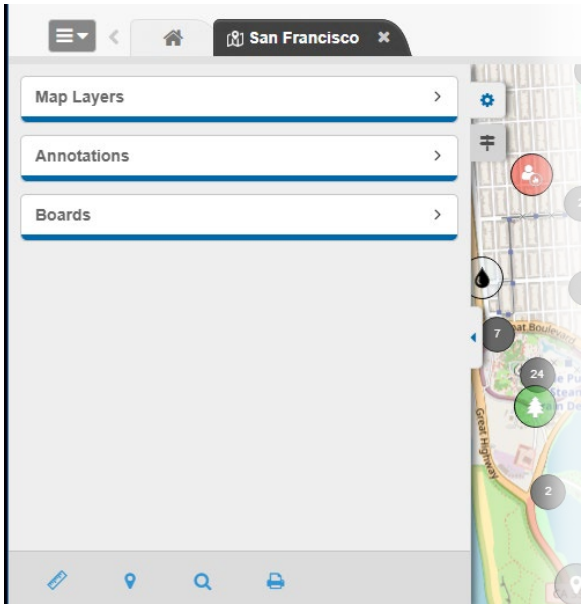
When a map contains multiple status board features or data points, it may be beneficial to use the Feature Search tool. The Feature Search tool allows you to pinpoint a feature on the map if you know the name of the feature label you are looking for. The tool pans to the location and zooms in or out to show the entire feature in the map's window.

To open the Feature Search tool, open the side navigation menu and click the feature search icon in the bottom toolbar. The *Feature Search* section appears, expanded by default, in the menu. When you want to close this feature, click the **x** in the upper right corner of the *Feature Search* section or the feature search icon in the toolbar.

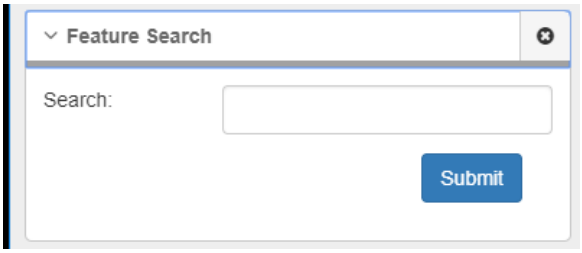


To search for a feature

1. From an open map, on the left, click the arrow icon. The side navigation menu opens.

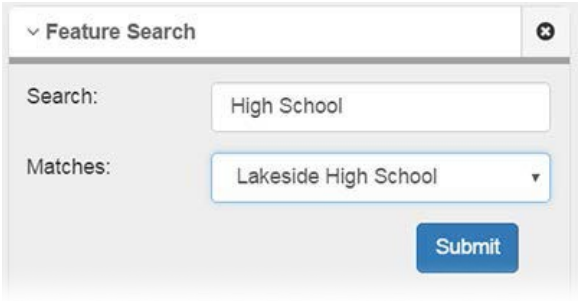


2. In the toolbar at the bottom of the navigation menu, click the feature search icon. The *Feature Search* section appears in the navigation menu.



3. For **Search**, enter the name of the feature you want to locate on the map.

4. Click **Submit**.



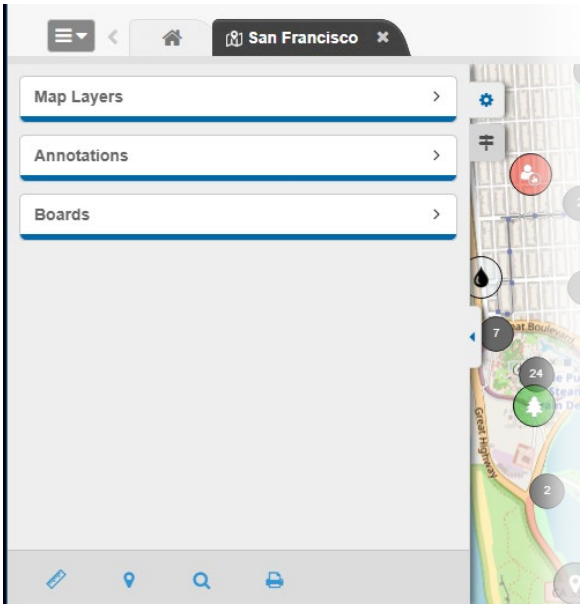
If the search produced an exact match, the map automatically moves to that location. If multiple matches are found, a **Matches** field opens with a drop-down menu that contains all results for your search. Select the appropriate match from the menu to go to that location on the map.

Print Tool

You can use the Print tool to print a display of a map that shows geocoded points, any annotations, the map's scale, and more. The area printed is the area of the map currently visible in the browser window.

To print an area of the map

1. From an open map, on the left, click the arrow icon. The side navigation menu opens.



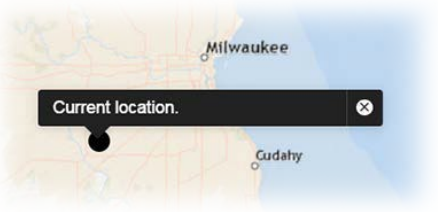
2. In the toolbar at the bottom of the navigation menu, click the print icon . A window opens to walk you through the printing process.
3. Follow browser prompts, selecting the appropriate printer and print properties.
4. Click **Print**.
5. Click the **Back to Map** option to return to the map view.

Find My Location Tool

Quickly navigate to your current location using the Find My Location tool. This tool, accessible from every map via an icon in the upper right corner, is unique to *Maps Add-on* and can help you visualize your proximity to incidents, scenes, key locations, and more.

> ***Note**: You must allow your location to be shared with your device in order for this feature to work.*

To use the tool from any open map, in the upper right corner, click the find my location icon . The map pans to your location.



Click the **x** in the upper right corner of the pop-up message to close the message.