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**RAPTOR**  
**REAL-TIME ASSESSMENT AND PLANNING TOOL FOR OREGON**  
**USER MANUAL**

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Version 2.5  
As of November 28, 2016



## VERSION HISTORY

Version #	Implemented By	Revision Date	Description
1.0	Daniel Stoelb	09/12/2014	Initial version of user guide
1.1	Daniel Stoelb	10/13/2014	Formatting/Removal of vUSA Library
1.2	Daniel Stoelb	11/04/2014	Formatting, textual edits, addition of Address Search Tool
1.3	Daniel Stoelb	11/14/2014	Addition of Route Widget
1.4	Daniel Stoelb	12/12/2014	Addition of National Digital Forecast Database, added new basemaps and descriptions, reference to tsunami configuration
1.5	Daniel Stoelb	12/17/2014	Addition of Shapefiles Widget, reworking of important links, update to export map tool
1.6	Daniel Stoelb	2/09/2015	Addition of ERG Guide tool, HazMat configuration, ArcGIS Online tool
1.7	Daniel Stoelb	5/05/2015	Update to the Identify tool
1.8	Daniel Stoelb	12/18/2015	Updated to JavaScript version
1.9	Daniel Stoelb	5/27/2016	Updated to include PCII Data widget, removal of Identify tool, formatting adjustments, update of versions to include new public version link and remove PCII version.
2.0	Daniel Stoelb	6/02/2016	Updated to include IRIS Data widget.
2.1	Daniel Stoelb	7/14/2016	Updated to reference changes to Add ArcGIS Online data tool
2.2	Daniel Stoelb	7/18/2016	Added legend tool, updated link to public version
2.3	Daniel Stoelb	8/5/2016	Updated attribute table, layer list, popup menu, edit data tools, traffic cameras descriptions for updated functionality.
2.4	Daniel Stoelb	10/21/2016	Added OEM graphic, updated background, layer list, add data tools, Area of Concern tool descriptions and graphics.
2.5	Daniel Stoelb	11/28/2016	Updated images tool (formerly traffic cameras)

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## 1 BACKGROUND

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The Real-Time Assessment and Planning Tool for Oregon (RAPTOR) is the Oregon Office of Emergency Management's (OEM) situational awareness mapping tool.

In 2009, the Science and Technology Directorate (S&T) of the U.S. Department of Homeland Security (DHS) launched the Virtual USA (vUSA) initiative, which was founded to help create a future where jurisdictions at all levels have the capabilities necessary to voluntarily share information with each other, as appropriate and authorized, regardless of the data format. The states of Alaska, Idaho, Montana, Oregon and Washington agreed to partner with the U.S. Department of Homeland Security (DHS) on a component of the Virtual USA Initiative, the Pacific Northwest (PNW) Pilot. The pilot advanced a technical and cultural shift in how the Nation shares information during an emergency.

Within Oregon, the State's Office of Emergency Management (OEM), Department of Transportation (ODOT), the Department of Administrative Services (DAS) and Multnomah County's Department of Emergency Management agreed to partner on the development of a GIS-enabled situational awareness prototype (i.e. VENOM – the Virtual Emergency Network of Multnomah). On behalf of their partners, Multnomah County took the lead on technical development of the prototype while OEM, ODOT, and DAS provided business requirements, access to vital information and geospatial datasets, and subject matter expertise. The prototype furnished a much needed virtual interoperability platform that allows collaboration and a coordinated response across the State's Emergency Management community. The tool was the first step towards new emergency management capabilities, offering real-time situational information in combination with 'traditional' Geospatial Information Systems (GIS) layers to create a comprehensive picture of existing and potential situations. VENOM also served as a prototype for Oregon's contribution to the Virtual USA (vUSA) Pacific NW Pilot.

In October 2011, the State of Oregon's OEM and DAS rebranded the tool as RAPTOR – the Real-time Assessment & Planning Tool for Oregon. In 2016, the disparate versions of RAPTOR were consolidated into one application for ease of use and brought under full control by OEM.

RAPTOR allows OEM and our emergency management community to display mapped information various systems such as OR-IRIS, SAFE, ODOT Tripcheck and the National Weather Service into a single map. This allows for a real-time comprehensive situational picture. Examples of this include:

- Displaying the location of hospitals around a rapidly escalating traffic incident
- Showing the location of schools or childcare centers around a hazardous material spill
- Showing the infrastructure affected by a storm or natural disaster
- Facilitated improved regional coordination and interoperability

RAPTOR's value is that it instantly displays the relationships between events, allowing emergency operations centers (EOCs) to be alerted to potential issues and providing real-time information for decision support. As this tool will complement other existing systems, it is intended to promote a multi-platform model of GIS information sharing amongst all levels of government via standardized feeds and data services such as shapefiles, REST services and ArcGIS Online. This allows maximum information sharing with OEM and our emergency management community regardless of which system agencies and localities are using for daily operations and in emergencies, therefore maximizing existing investments and minimizing potential costs.

## 2 POINT OF CONTACT (POC)

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The point of contact for the RAPTOR program is Daniel Stoelb. His email address is [Daniel.stoelb@state.or.us](mailto:Daniel.stoelb@state.or.us) and phone number is (503) 378-3234.

## 3 SYSTEM OVERVIEW

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The RAPTOR program is built on the ESRI Web Appbuilder JavaScript platform. This platform allows the application to run natively within any browser on any device.

There are two different versions of RAPTOR, which are described below:

1. Public Version: the general public can view this version of RAPTOR at the following url: <http://arcg.is/1XVxzQ2>. This version is based upon the Public Information Map template from ESRI and displays reference data as well as active incidents.
2. Secured Version (RAPTOR/RAPTOR Training): entities and personnel that work in emergency management or are response personnel can access the OpsCenter version of RAPTOR through the single-sign-on portal at <https://oregonem.com>. This does require a user name and password for access. Through that same webpage, users can request an account. This version of RAPTOR includes the ability to view and populate incident information within the map. This same ability can be found in the RAPTOR Training site as well, with the caveat that any incident information populated in the training version of RAPTOR using the edit data tools is for exercise/training purposes only.

## 4 RAPTOR BASIC TOOLS

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The following tools and descriptions describe how to navigate and view data through the RAPTOR program.

### 4.1 MAP NAVIGATION TOOLS

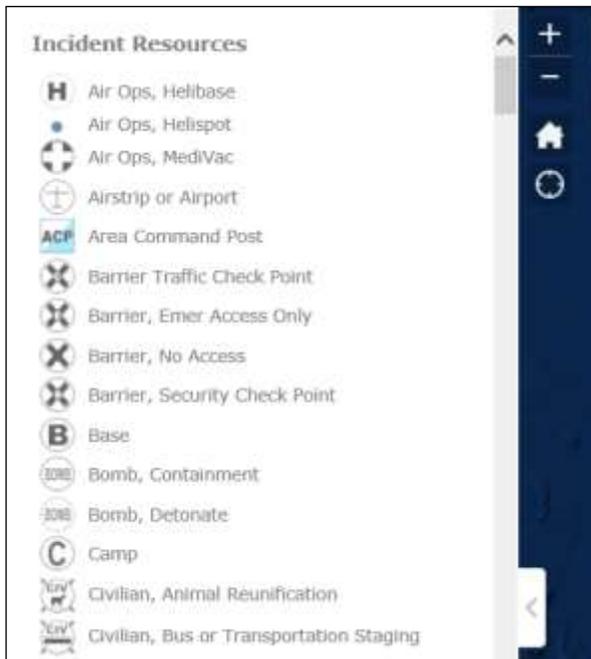
These tools describe how to navigate and move through the map, and they are located on the top left corner of the map.



- A** – Zoom in
  - B** – Zoom out.
  - C** – Zoom the map to the full extent (State of Oregon). Click on the icon to zoom to the State of Oregon.
  - D** – Zoom the map to the device’s location (GPS devices like cell phones work best).
- Alternatively, users can use the scroll wheel on the mouse to zoom in/out. To move the map around, click and drag the mouse in the desired direction.

### 4.2 LEGEND

This tool displays the legend for all items displayed within the map. This is displayed on the left side of the map.

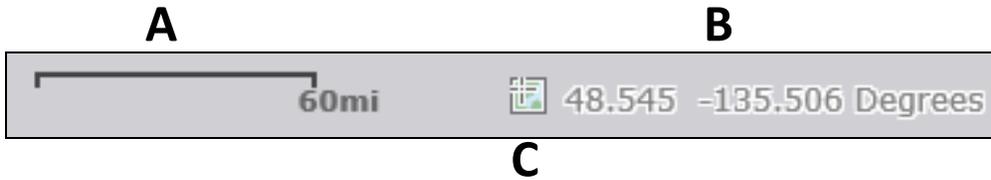


Items on display are listed in the same order as they are within the layer list.

- To hide the legend, click on the  icon, which will collapse the legend to the left panel.
- To display the legend again, click on the  icon on the left of the map.

### 4.3 MAP SCALE, LATITUDE, AND LONGITUDE

These tools describe the reference information for the current view of the map, and they are located on the bottom left corner of the map.



**A** – The current scale of the map. As the user zooms in or out, this will automatically adjust.

**B** – The current latitude and longitude for the cursor. As the user moves their mouse, this will automatically update to show their current location in decimal degrees.

**C** – Allows the user to click on the map to bring up coordinates for that location.

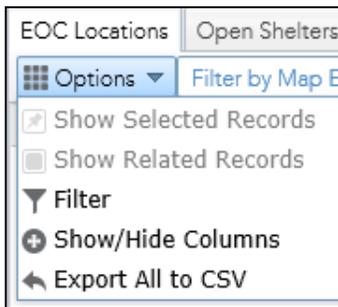
#### 4.4 ATTRIBUTE TABLE

Displays data related to layers currently shown in the map in a tabular format. Data displayed is based upon current configuration of RAPTOR. This table can be accessed by clicking on the arrow icon on the bottom of the screen on RAPTOR.



Displays a tabbed spreadsheet view of information within the map view. As the user moves around within the map view by either zooming in, out, or moving to a different location, the records on display will change.

Each tab is coming from a separate layer found within RAPTOR.



Options allow the user to show related records (if joined to another table), filter the results, filter by map extent (filter based upon the map view), show or hide columns, and export to a CSV file.

The user can also highlight records and zoom to them using the zoom to option, or double click the record within the table to zoom to that record.

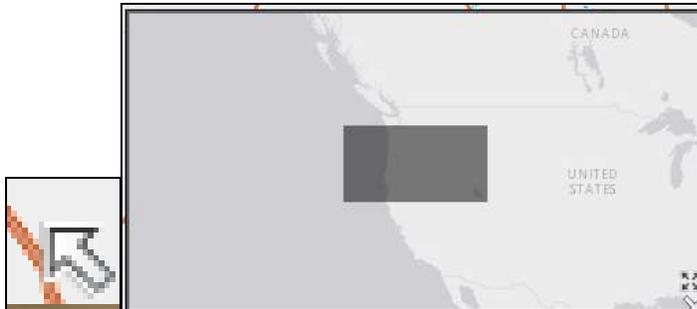
Clear selection clears the features selected in the table.

Refresh option allows the user to refresh the data in the table.

Click on the arrow icon to hide the attribute table again.

#### 4.5 OVERVIEW MAP

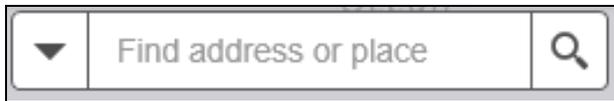
This map describes the main map area in reference to the rest of the world. This map is found in the bottom right corner of the map.



Click on the arrow icon to show/hide the map. The grey area within the overview map describes the area that is currently being viewed within the main map. Users can also click and drag the grey area to move the main map to a different area. Click on the  icon to switch the overview map to the main view.

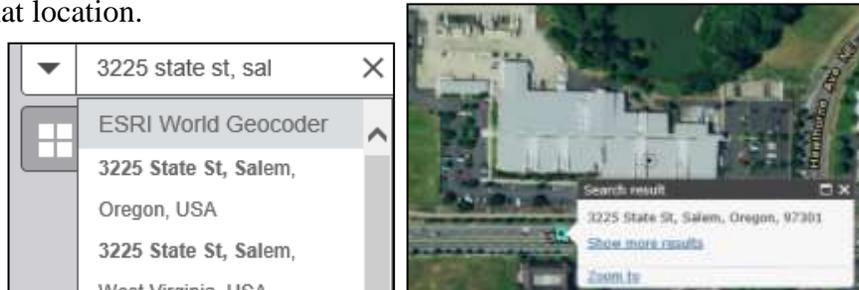
#### 4.6 FIND ADDRESS OR PLACE

This tool allows the user to type in an address or place and zoom to that location.



Allows the user to quickly find a location within RAPTOR. Entries can consist of street addresses, cities, places of interest. Type in the location into the “Find address or place” entry box and hit “enter” or click on the magnifying glass to search.

As users type in the location, suggestions will display underneath the entry box. Click on the entry to go to that location.



To clear results, click on the “X”.

#### 4.7 BASEMAP GALLERY

This tool allows the user to switch between various basemaps that describe the area. This tool can be found in the first tool in the upper left of the main map.

This tool allows the user to switch between various pre-loaded basemaps. Basemaps are reference information that show in the background of the map.

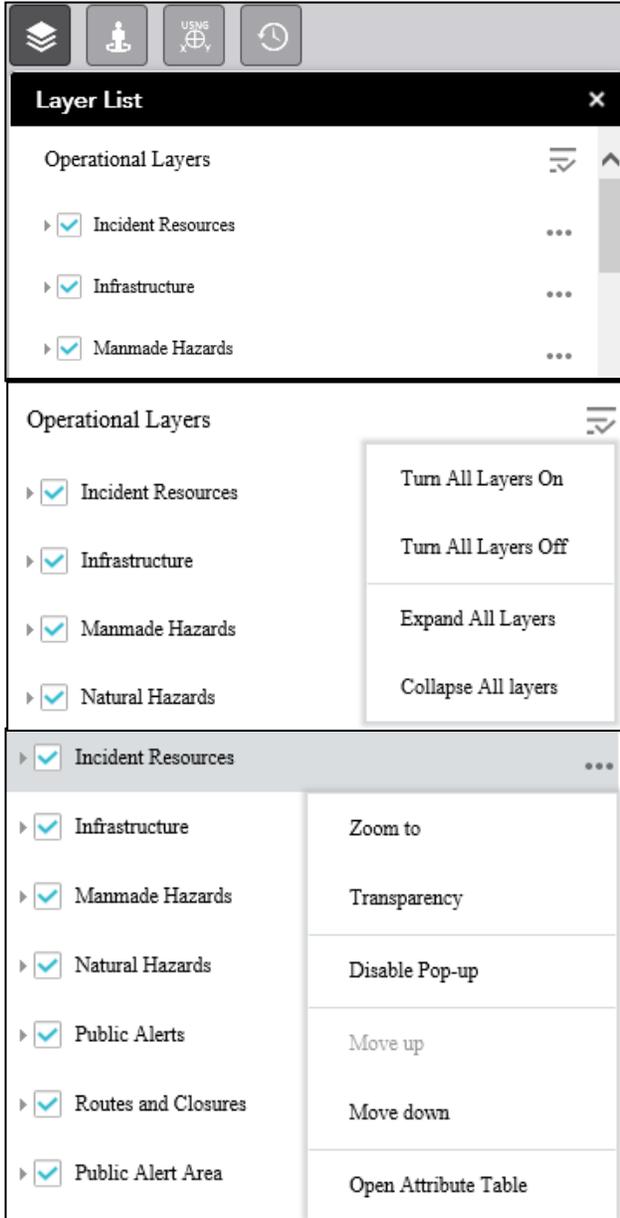


The current available basemaps are as follows:

- Dark Gray Canvas – displays dark gray overlays/boundaries as served by ESRI.
- Imagery with Labels – displays imagery data as well as landmarks/places as served by ESRI.
- Light Gray Canvas – displays light gray overlays/boundaries as served by ESRI.
- National Geographic – displays the National Geographic data as served by ESRI.
- Oceans – displays ocean data as served by ESRI.
- OpenStreetMap – displays OpenStreetMap data as served by ESRI.
- Streets – displays street level data as served by ESRI.
- Terrain with Labels – displays terrain information with reference labels as served by ESRI.
- Topographic – displays topographic data as served by ESRI.
- USA Topo Maps – displays the scanned USGS Quad information as served by ESRI.
- USGS National Map – displays the basemap utilized within the National Map mapping application from USGS.

#### 4.8 LAYER LIST (TABLE OF CONTENTS)

This tool displays layers (mapping data) currently loaded within the map. This tool can be found in the second tool in the upper left of the main map.

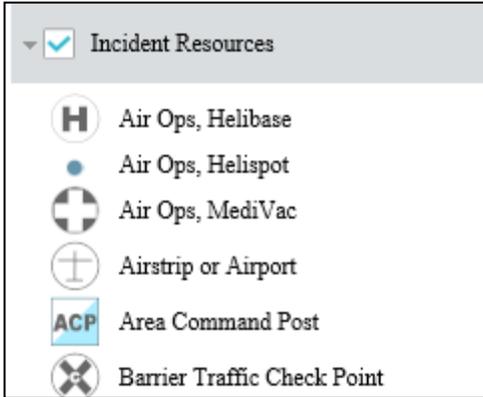


This tool shows the current data layers that are loaded in the map. The user has many options to manipulate the data available within the tool.

The first set of options can be accessed via the symbol to the right of “Operational Layers”. This allows the user to turn all layers on, turn all layers off, expand all layers (see what sublayers are present for each layer), and collapse all layers.

Additional options are accessed by clicking on the ellipsis to the right of the layer name. The options available are as follows:

- Zoom to – allows the user to zoom to the full extent of the layer. For example, if the data is statewide in nature, the map will zoom out to the entire state.
- Transparency – allows the user to change the color transparency, or the ability to see through the layer.
- Enable/Disable Pop-up – allows the user to click to view information about that specific item in that layer (specific layers only).
- Move up – moves the layer above the next layer listed above in the Layer List. This places the layer above the other layer, enabling it to be viewed on top of that layer. Instances where this may be used are when it relates to putting point data on top of polygon/area data.
- Move down – moves the layer below the next layer listed below in the Layer List. This places the layer below the other layer, enabling it to be viewed below the other layer. Instances where this may be used are when polygon/area data need to be moved underneath point data.
- Open Attribute Table – allows the user to see records in the attribute table for that layer (specific layers only).

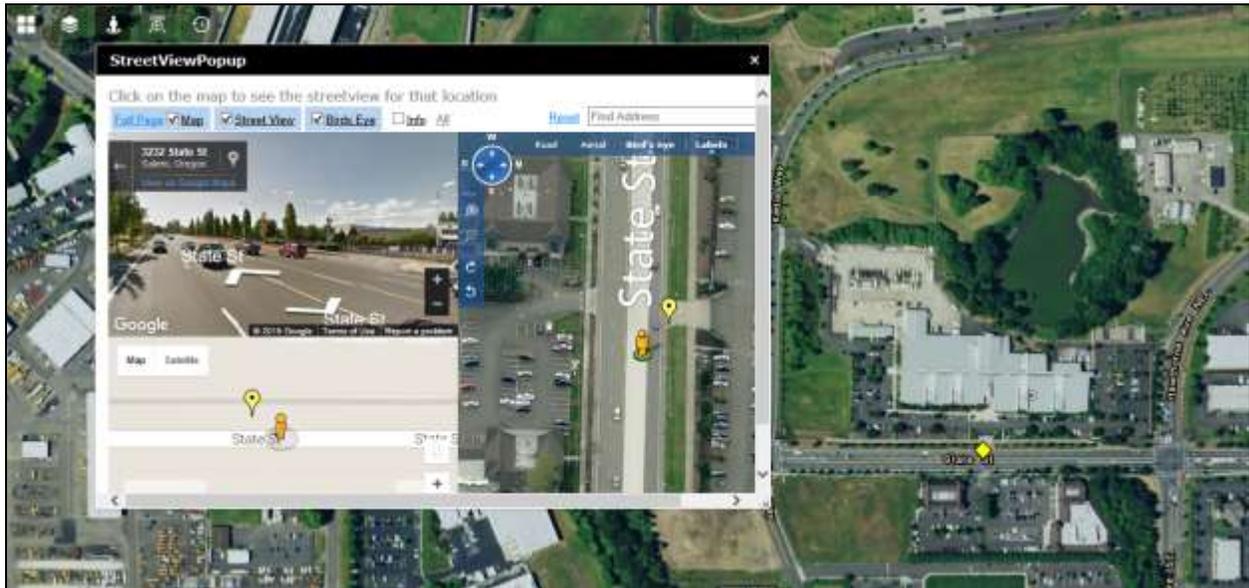


The user can also view subset layers for the data by clicking on the gray arrow to the left of the checkbox. Clicking on the gray arrow on those layers will also reveal their symbols.

Items that are grayed out in this menu refer to layers that are scale dependent. When the user zooms in further, these layers will turn on. Conversely, zooming out will turn off these layers.

#### 4.9 STREETVIEW POPUP

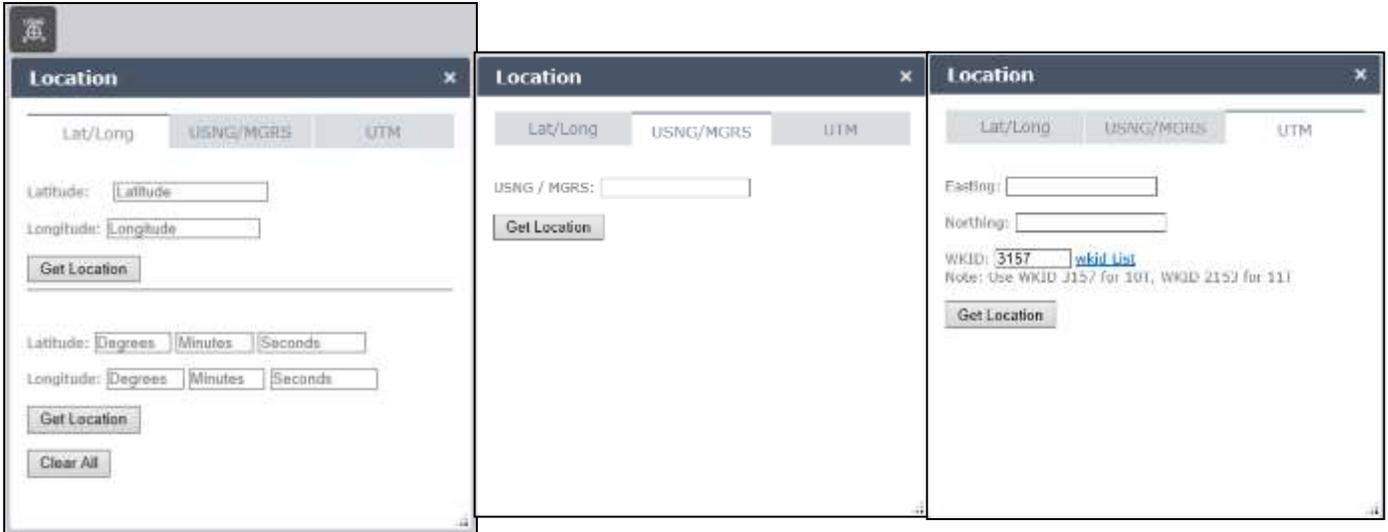
This tool allows the user to view streetview imagery within a popup window within RAPTOR. This tool can be found in the third tool in the upper left of the main map.



- Click on the icon, then click on the map to display the details for that location. Results will then display within the popup window. Results include an interactive streetview, Google map view, and Bing map.

#### 4.10 LOCATION SEARCH

This tool allows the user to search based upon coordinates within RAPTOR. This tool can be found in the fourth tool in the upper left of the main map.



Allows the user to search for a location based upon coordinates given in decimal degrees, degrees/minutes/seconds, US national grid, Military Grid, or UTM systems.

After entering in the data, click on “Get Location” or press the “Return” key on the keyboard to conduct the search.

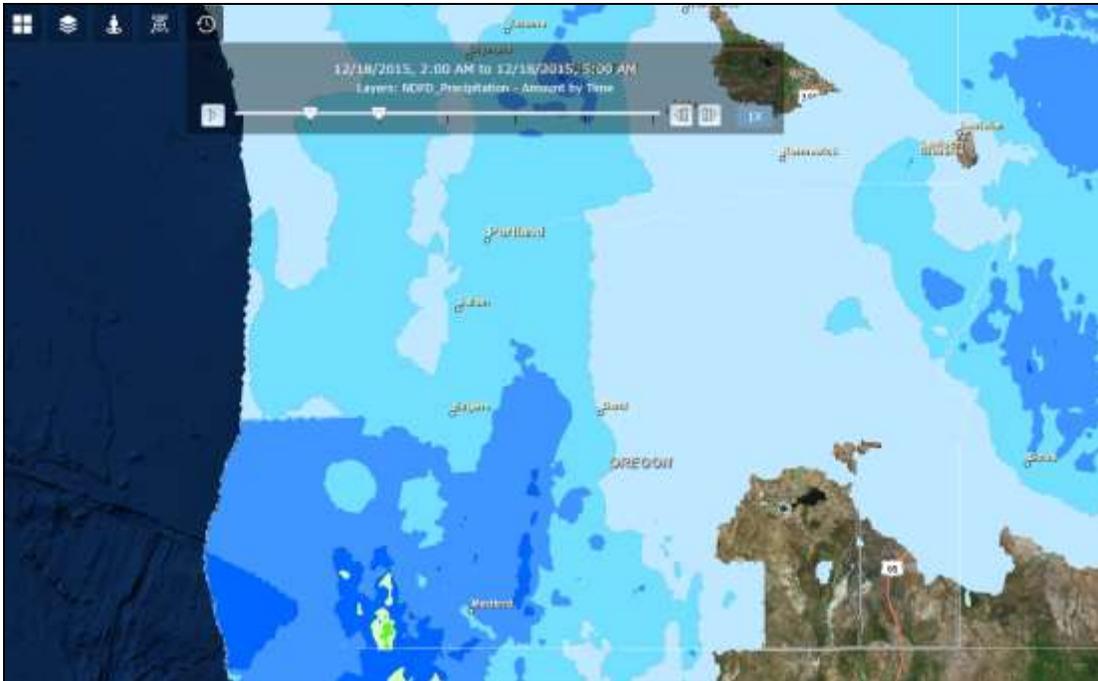
Alternately, users can click on the map and see the coordinates (in all formats) for that location within this tool.

#### 4.11 TIME SLIDER

This tool allows the user to view time-enabled data for specific time ranges.

This tool can be utilized for the following data layers (which must be turned on prior to activating the tool):

- NDGD\_SmokeForecast – smoke forecast for the next 72 hours
- NDFD\_WindSpeed – average wind speed forecast for the next 72 hours
- NDFD\_WindGust – wind gust forecast for the next 72 hours
- NDFD\_Precipitation – precipitation accumulation by time for the next 72 hours
- NDFD\_SnowFall – snowfall accumulation by time for the next 72 hours
- NDFD WindForecast – wind direction forecast for the next 72 hours

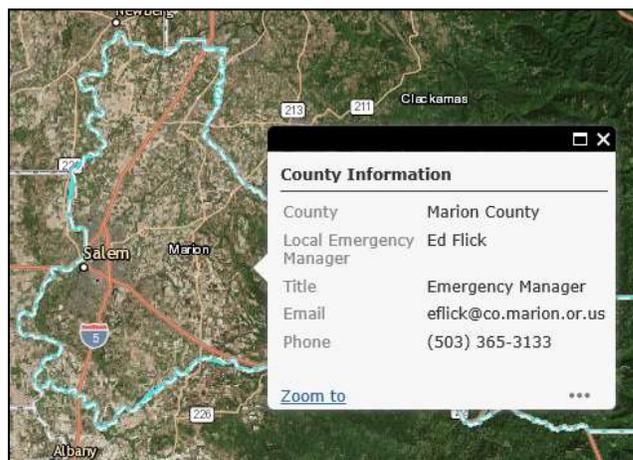


The user can step in increments of 3 hours at a time by clicking on any of the side arrows within the tool. Users can also play the sequence by clicking on the play button on the left side of the tool window.

#### 4.12 POPUP MENU

Clicking on the map allows the user to display information within a popup window for all items on display. This also allows the user to click on “Zoom to”, which will zoom to the extent of that item identified in the popup.

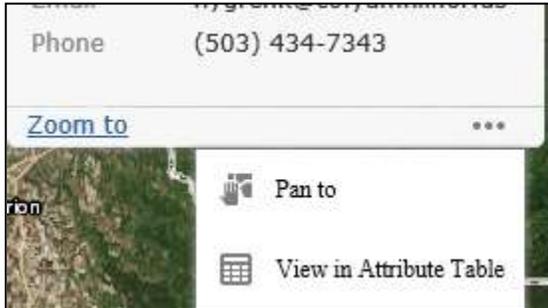
For example, the user can click on a county to bring up the county information at that location.



If there are more items found at that location, a different set of options will display on the top-right corner of the popup window.



- Click on the arrows to the left or right to move to the next item identified. Clicking on the “X” on the top-right corner closes the popup menu.



Clicking on the ellipsis on the bottom right displays the options for panning to the feature (centering the map on that selection) and viewing in the attribute table (viewing the entry in the attribute table).

## 5 RAPTOR MAIN TOOLBAR

The following tools describe the current toolbar options found within the RAPTOR program.

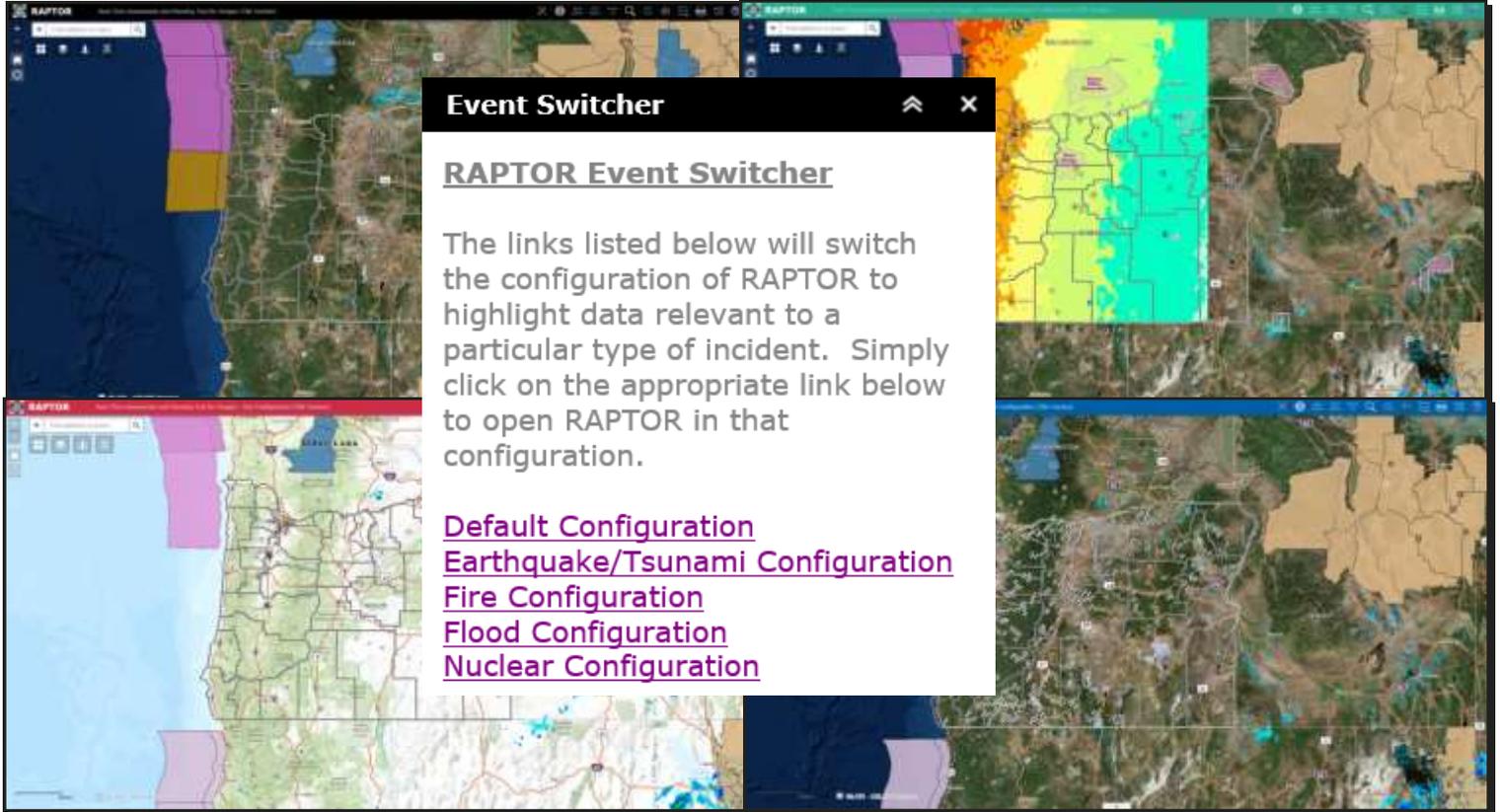


<ol style="list-style-type: none"> <li>1. RAPTOR Event Switcher</li> <li>2. PCII Data Tool (PCII Users Only)</li> <li>3. IRIS Data Tool</li> <li>4. Add Data Tools</li> <li>5. Edit Data Tools</li> <li>6. Markup Tools</li> <li>7. Enhanced Search</li> </ol>	<ol style="list-style-type: none"> <li>8. Area of Concern Report Tool</li> <li>9. Images</li> <li>10. Directions with Barriers</li> <li>11. Print</li> <li>12. Web Links</li> <li>13. About</li> </ol>
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The tools listed in the main toolbar all display on the right side of the map. These tools are stationary and cannot be moved to another location.

## 5.1 RAPTOR EVENT SWITCHER

This tool allows the user to switch between different pre-set configurations of RAPTOR.



Users have the ability to click on each icon, which represent a different configuration of RAPTOR. As of this date, there are five different configurations available:

- Default (the main configuration loaded when initially viewing RAPTOR)
- Earthquake/Tsunami
- Fire
- Flood
- Nuclear

- Click the specific configuration listing within this tool to switch RAPTOR to that configuration.

Each configuration loads in data that is relevant for that particular type of event. This data relates to all items found within the “Layer List” menu. Keep in mind that each configuration has the same tools available.

## 5.2 PCII DATA TOOL (PCII AUTHORIZED USERS ONLY)

This tool allows PCII (Protected Critical Infrastructure Information) Authorized users to add PCII data into the map. If users would like to become PCII Authorized, please email the system coordinator for details.



➤ To begin, click on the specific data layer of interest to add it into the map. Once the checkbox has been clicked, the data layer will then display within RAPTOR. Additionally, the data layer will display from within the “Layer List” tool.

➤ Click on the “PCII DATA” button or “X” to close the tool.

## 5.3 IRIS DATA TOOL

This tool allows users to add Incident Response Information System (IRIS) data into the map. These data are a compilation of different datasets from authoritative resources across the state. Information is listed alphabetically and can be added into RAPTOR dynamically. Datasets available are listed in the RAPTOR inventory document.



➤ To begin, click on the specific data layer of interest to add it into the map. Once the checkbox has been clicked, the data layer will then display within RAPTOR. Additionally, the data layer will display from within the “Layer List” tool.

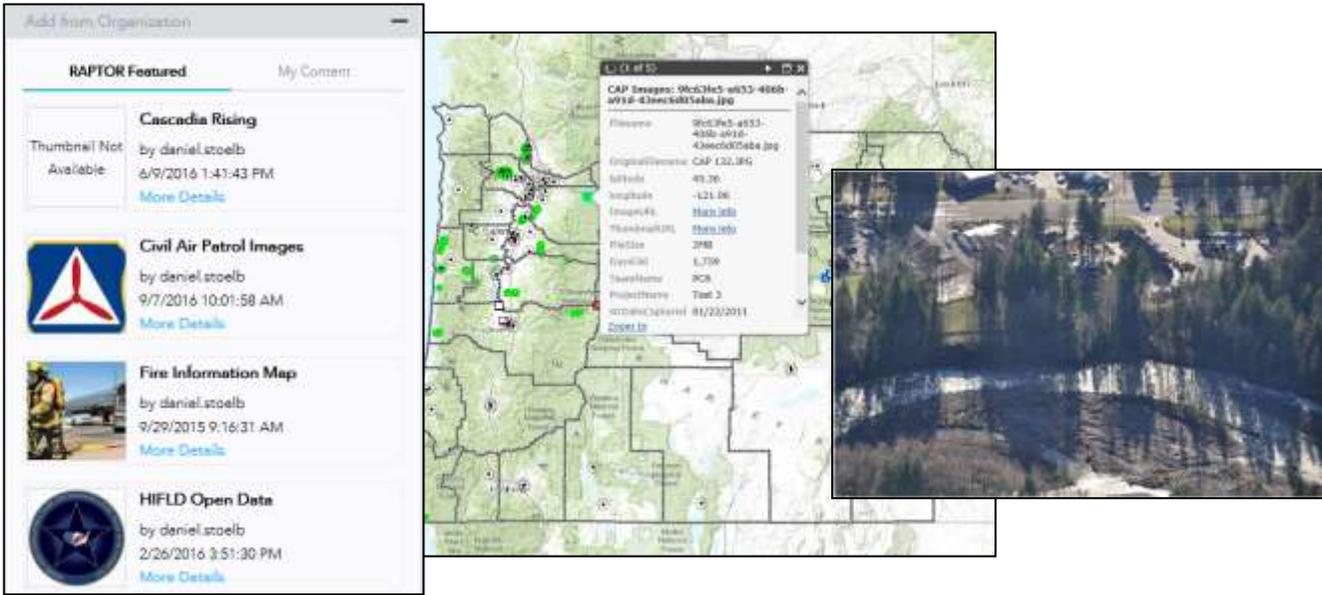
➤ Click on the “IRIS DATA” button or “X” to close the tool.

## 5.4 ADD DATA TOOLS

This grouping of tools includes the ability for users to add data from ArcGIS Online, add data from an ArcGIS Service, and add a shapefile.

### 5.4.1 Add From Organization

This tool allows the user to add in data from webmaps from a featured RAPTOR Group from ArcGIS Online. Users have the ability to sign in and load their own data from ArcGIS Online as well.



When the tool opens, users will see publically available maps feature for RAPTOR from ArcGIS Online that can be loaded. These maps include information related to Civil Air Patrol Images, etc.

- To load these images within RAPTOR, click on the link for the map, which will load in the data from ArcGIS Online. As shown in the example on the previous page, clicking on the Civil Air Patrol Images link adds in the images and their locations. Users can then click on these locations to view the specific image for that flight.

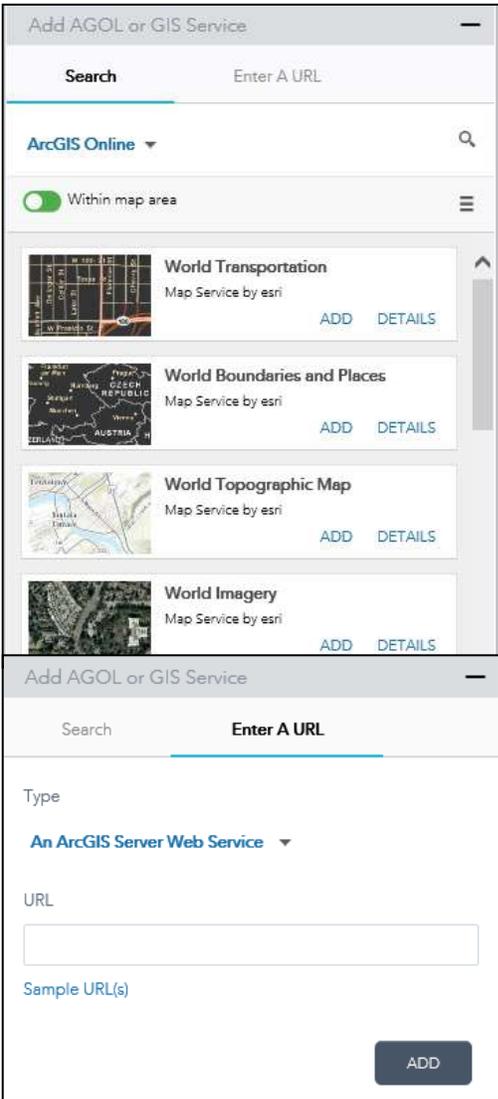
Users can also log into ArcGIS Online and add in their own content, which will then display within the Add ArcGIS Online data window.

- To sign in, click on the “My Content” tab, then press the “Sign In” button within the tool and enter your credentials in the new window. Results will then display in this window.

In regards to all ArcGIS Online data loaded using this tool, all popups and configurations from the webmap from ArcGIS Online will be respected.

### 5.4.2 Add AGOL or GIS Service

This tool allows the user to add data from public webmaps from ArcGIS Online or a GIS Service from a public facing ArcGIS Server or other data type into RAPTOR.



- To add data from an ArcGIS Online webmap, click on the “ADD” option next to the webmap of interest.
- Users have the option to display the details for the webmap by clicking on the “DETAILS” option next to that webmap.
- Users can search for a specific webmap by clicking on the search icon.
  - Results will display after the user types in the text and clicks on the search icon again. The webmaps displayed are filtered to only show results that have data in your current map view.
- Users can also add in data from a service URL (a publically facing ArcGIS server by clicking on the option “Enter a URL”.
- Options of data types also include the following:
  - A WMS OGC Web Service
  - A KML File
  - A GeorRSS File
  - A CSV File

➤ Click on the “ADD” button to add that data to RAPTOR.

### 5.4.3 Add Shapefile Data

This tool allows the user to add in a shapefile from a zipped folder into RAPTOR.



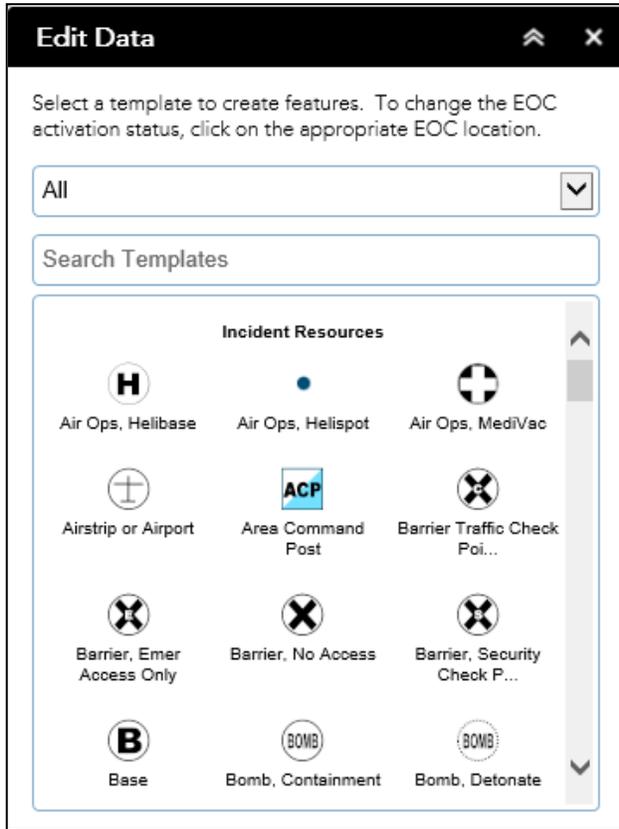
Users can add in a shapefile by clicking on the “Add File” button and selecting the zipped folder that contains the shapefile. Keep in mind that there is a limitation on the total number of features set at 1,000.

Once the data is added, it will appear on the top of the list in the “Layer List” tool. Additionally, clicking on the shapefile within the map will produce a popup

displaying the information for that shapefile at that location.

## 5.5 EDIT DATA TOOLS

This tool allows the user to populate and edit incident data within RAPTOR. Data populated using this tool will be viewable by all users signed into RAPTOR. Users can also update the EOC activation status through this tool as well.



Users can choose from the listing of pre-defined templates (refer to the symbology guide for a listing of all templates) to populate incident data.

Users can filter the templates based upon their category by clicking on the dropdown box that displays “All”. Leaving the “All” option selected will display all templates available.

Users have the ability to search through the templates by typing in the specific symbol name in the “Search Templates” text box. The listing in the template display below will automatically adjust based upon the text typed into this box.

- To place a new incident, click on one of the templates shown within the window and click once in the map at the precise location to place the point at that location.
- To populate a point/line/boundary within the map, click on the template, then once in the map to place the point at that location, click for each vertex to place lines (and double-click to complete), click for each vertex to draw the boundary (and double-click to complete). Once the point/line/boundary has been placed, the user can then input data related to that entry.
- An entry form will then display within the edit window.
- Make sure that the following fields contain information:
  - Editor Name
  - Editor Email
  - Editor Phone

- When complete, click on the “Save” button to save the entry.
  - If the record is not needed, click on the “Delete” button to delete the record.
  - If the record is not needing to be placed, click on the “Back” button to go back to a previous step.
  - If the point/line/boundary requires moving, click on the “Edit Geometry” checkbox to enable movement and/or adjustments of the point/line/boundary.

To modify the EOC activation status, click on the specific EOC location, which will display an entry form.

- In this entry form, modify the “Activated” field, then press the “Save” button to save the changes.

## 5.6 MARKUP TOOLS

This is a group of tools that allow the user to conduct measurements and drawings within RAPTOR. Keep in mind that any data populated using these tools are only visible to your local view of RAPTOR.

### 5.6.1 Measure

This tool allows the user to conduct measurements using a variety of different options.



Users can conduct measurements using lines and boundaries.

For lines, once selected, the user can choose between various options, including the color of the measure line, style, transparency, line width, font color (for the measurement), font size (for the measurement), and unit type. As the line is being drawn, the distance unit will display interactively.

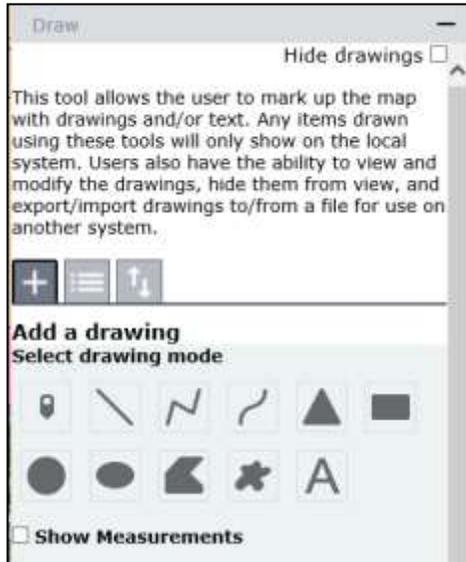
For boundaries, the user can choose between various options, including the fill color of the boundary, transparency of the fill, outline color, outline width, font color (for the measurement), font size (for the measurement), and unit type. As the boundary is being drawn, the radius will display interactively.

When the measurement is no longer needed, the user can click on the “Clear” link to remove it from the map.

Keep in mind that the measurements will remain on the map until they are cleared.

### 5.6.2 Draw

This tool allows the user to create drawings and text on RAPTOR using a variety of different options.



Users can mark up the map with drawings and/or text. Any items drawn using these tools will only show on the local system. Users also have the ability to view and modify the drawings, hide them from view, and export/import drawings to/from a file for use on another system.

Options for conducting drawings include points, lines, boundaries, and text.

To draw a point, click on the first entry on the drawing mode. Options for the point include the name, description, dropdown for point types (standard sets of symbols, including basic, A-Z, arrows, business, cartographic, National Park Service, outdoor recreation, people places, safety health, shapes, and transportation), symbol size, color, transparency, outline color, and width of outline. Once the preferred selections have been made, click on the map to draw a point at that location.

To draw a line, select from one of the line entries. Options for the line include the name, description, color, style, transparency, and width. Once the preferred selections have been made, proceed with drawing the line in the map.

To draw a boundary, select from one of the boundary entries. Options for the boundaries include the name, description, color, transparency, outline color, and outline width. Once the preferred selections have been made, proceed with drawing the boundary in the map.

To draw text, select the text entry. Options for the text include the name, description, font color, font size, font name, bold/italic/underline, text angle, and placement. Once the preferred selections have been made, click on the map to place the text at that location.

Items drawn using this tool will then display in the drawings list.



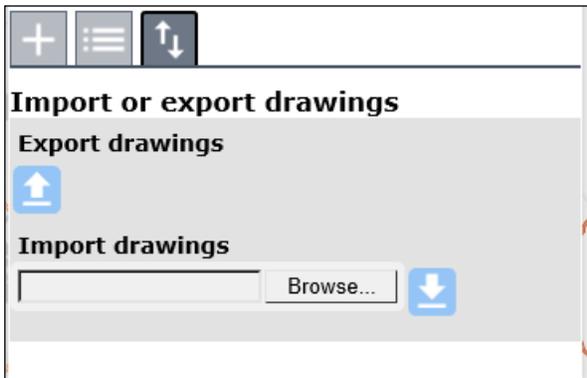
Items on display will be shown in the order that they were drawn, with the most recent drawings at the top.

Drawings can be edited by clicking on the blue pencil icon, which will open the options screen – where users can modify any of the selections for that item.

Drawings can be deleted by clicking on the red “X” button next to their listing in the drawings list.

Drawings can be zoomed to by clicking on the grey magnifying glass icon next to their listing in the drawings list.

Clicking on any of the selection squares on the left of the name of the drawing in the drawing list will allow the user to use any of the bottom three icons in the view, enabling joint zooming to their locations, exporting individual drawings or deleting multiple drawings.



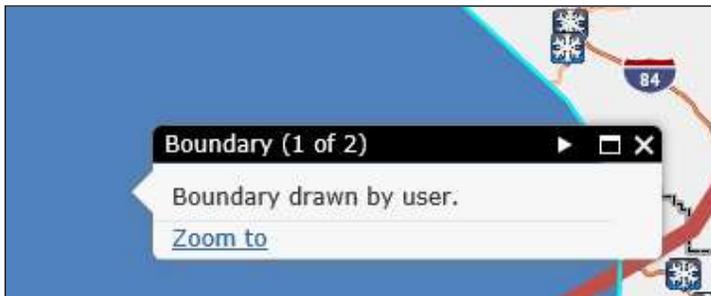
To export all drawings, click on the  icon. This will display the import/export drawings menu.

Then click on the icon underneath “Export Drawings”. This will then save the json file to the downloads folder.

Users can also import drawings  using this option, by clicking on the “Browse...” button, navigating to the json file, clicking on

All drawings will remain on display until they are deleted/cleared.

All drawings produced using this tool will have a popup associated with them, which will display the “Name” item in the title of the popup, then the description in the base of the popup.



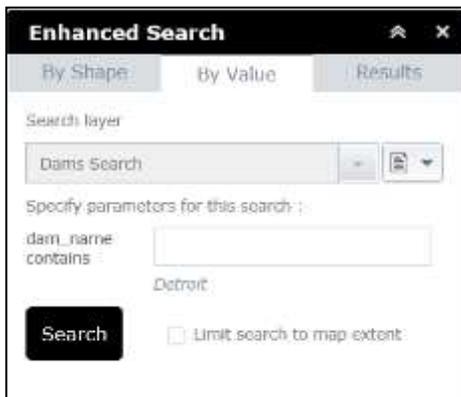
## 5.7 ENHANCED SEARCH

This tool allows the user to search specific sets of data graphically using geographic search tools. The following are the data layers available for searching:

- Dams
- Fire Stations
- Hazardous Substances
- Hospitals
- Law Enforcement
- Military Facilities
- Schools
- State Buildings
- Towers
- Urgent Care

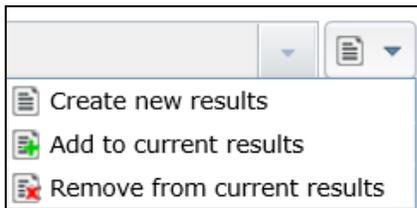
Keep in mind, with all of these search tools, there is a maximum number of 1000 records that can be returned. If more specific details are necessary, narrow down the search by zooming in to a more precise location.

Users can search by value (option displayed by default) or by shape.

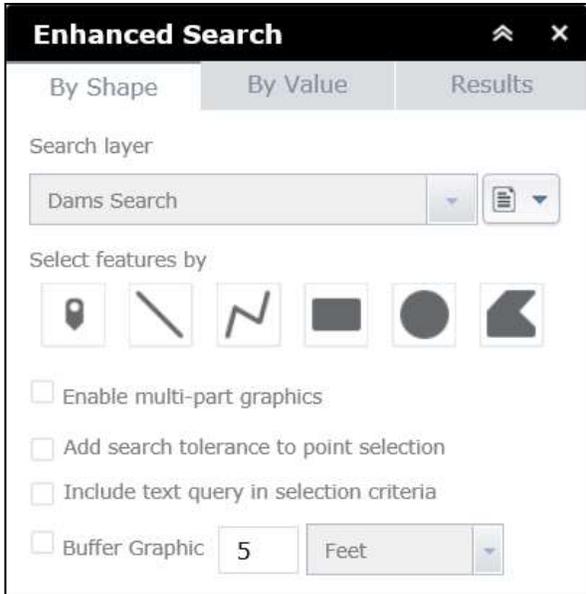


- To search by value, click on the appropriate layer to search from (as listed on the dropdown), then enter in the specific name to search from, then optionally check the box to “Limit search to map extent”, and press “Search”.

- This will then display the results in the results pane as well as the attribute table. Individual items can then be clicked on and zoomed to within the results pane.



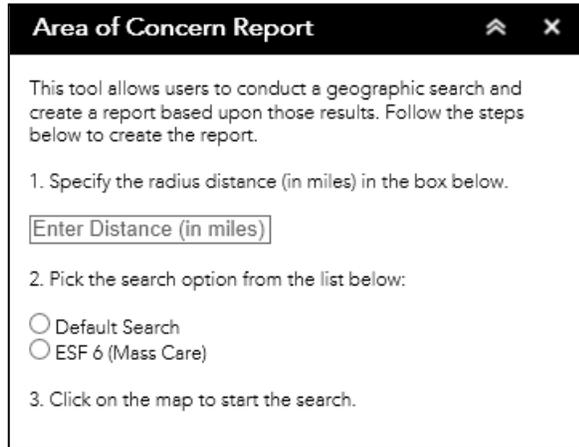
- Any search conducted can also be set to create new results (a new search), add to current results (include these results to a previous search), or remove from current results (remove these selected feature from your selection).



- To search by shape, click on the “By Shape” option, then select the appropriate layer to search from (as listed in the dropdown), then select either the point or line, optionally select multi-part graphics, search tolerance, and text query, and buffer, then place the line or point within the map to conduct the search.
- This will then display the results in the results pane as well as the attribute table. Individual items can then be clicked on and zoomed to within the results pane.

## 5.8 AREA OF CONCERN REPORT TOOL

This tool allows the user to search and produce a customized report for specific at-risk structures/facilities for a user-defined radius in miles.



This tool conducts a geographic search for at-risk data based upon a user-defined area.

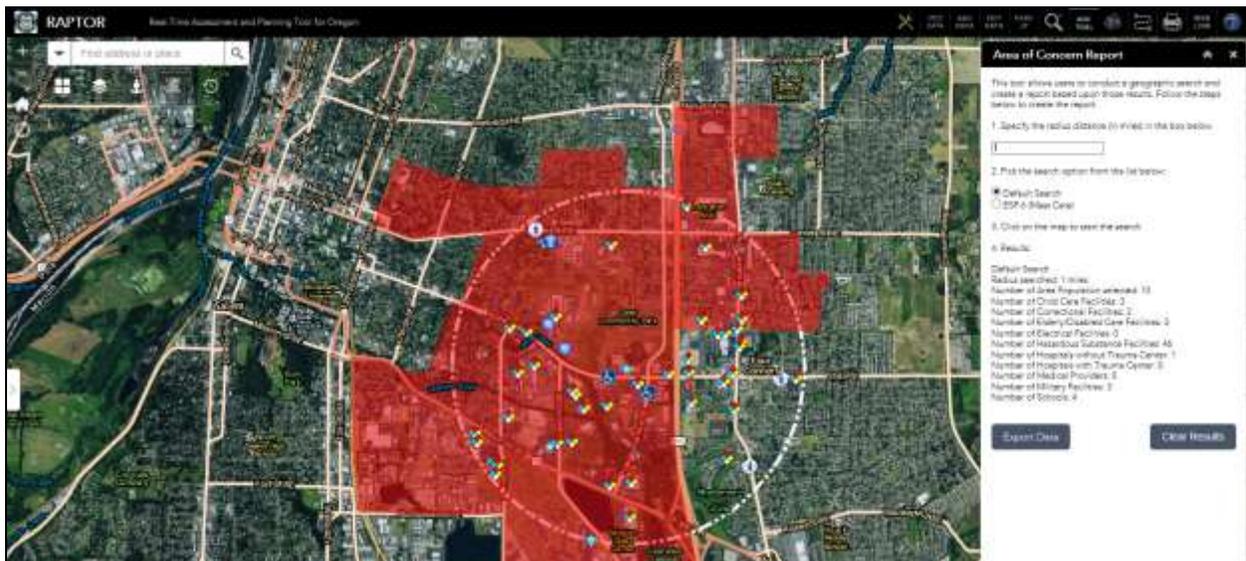
This tool guides the user in the proper steps to follow to conduct the search and generate the report.

The data searched is dependent upon the search option the user selects. Currently, there are two options available. Listed below are the items searched for each search option:

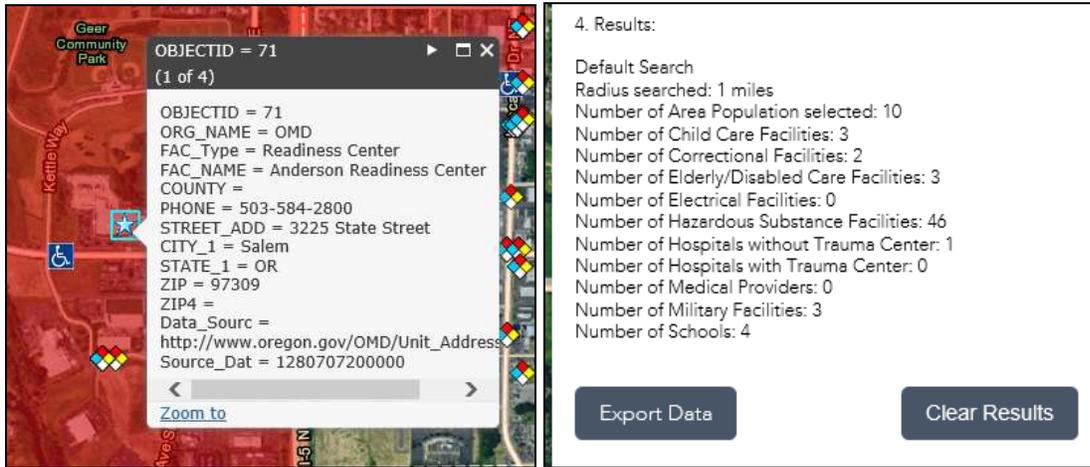
- Default Search
  - Area Population
  - Child Care Facilities
  - Correctional Facilities
  - Elderly/Disabled Care Facilities
  - Electrical Facilities
  - Hazardous Substances Facilities
  - Hospitals without Trauma Center

- Hospitals with Trauma Center
- Medical Providers
- Military Facilities
- Schools
- Food License Facilities (Nuclear Configuration Only)
- ESF 6 (Mass Care)
  - Airports
  - Assembly Areas
  - Campgrounds
  - Child Care Facilities
  - City/County Parks
  - Community Points of Distribution
  - Emergency Shelters
  - Hospitals without Trauma Center
  - Hospitals with Trauma Center
  - Hospital Satellites
  - Licensed Medical Facilities
  - Military Facilities
  - Places of Worship
  - Residential Care Facilities
  - Schools
  - Urgent Care Centers
  - State Lands

Results of the search will then be shown within the map as well as within the results window of the area of concern tool, as shown in the graphic below.



Items that have been selected display within the map and can be clicked on to display a popup with more information about that item.



Within the results window, the user will see search type selected, the radius of the search, and the number of features selected for each item of interest.

To view the results in a spreadsheet, click on the “Export Data” button. This then allows the user to export a spreadsheet of the results. This file will include a spreadsheet listing all sites selected with associated information in separate tabs.

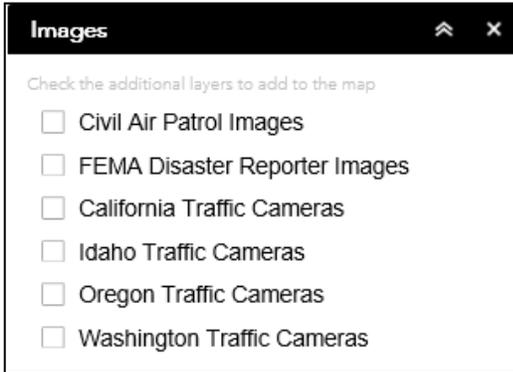
	A	B	C	D	E	F	G	H	I	J	K	L
1	Object ID	ID	NAME	State Abbr	Land Area	Total Pop	Population	Sq Ft	Per P	Ft Per Person		
2	163134	41047000	41047000	OR	0.2726	1621	5946.4	4688.282	68.47103			
3	163136	41047000	41047000	OR	0.3958	2918	7372.4	3781.455	61.49354			
4	163137	41047000	41047000	OR	0.6367	2867	4502.9	6191.21	78.68424			
5	163138	41047000	41047000	OR	0.1316	1145	8700.6	3204.193	56.60559			
6	163139	41047000	41047000	OR	0.1181	1040	8806.1	3165.805	56.26549			
7	163143	41047000	41047000	OR	0.0872	799	9162.8	3042.563	55.15944			
8	163145	41047001	41047001	OR	0.5613	1040	1852.8	15046.63	122.6647			
9	163147	41047001	41047001	OR	4.0406	1547	382.9	72808.56	269.8306			
10	163189	41047001	41047001	OR	0.4542	1874	4125.9	6756.926	82.20052			
11	163190	41047001	41047001	OR	0.2997	2212	7380.7	3777.203	61.45895			
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At the bottom of the spreadsheet, there are tabs for: Area Population, Child Care Facilities, Correctional Facilities, Elderly/Disabled Care, Electrical Facilities, and Hazardous...

To clear the search and conduct a new analysis, click on the “Clear Results” button.

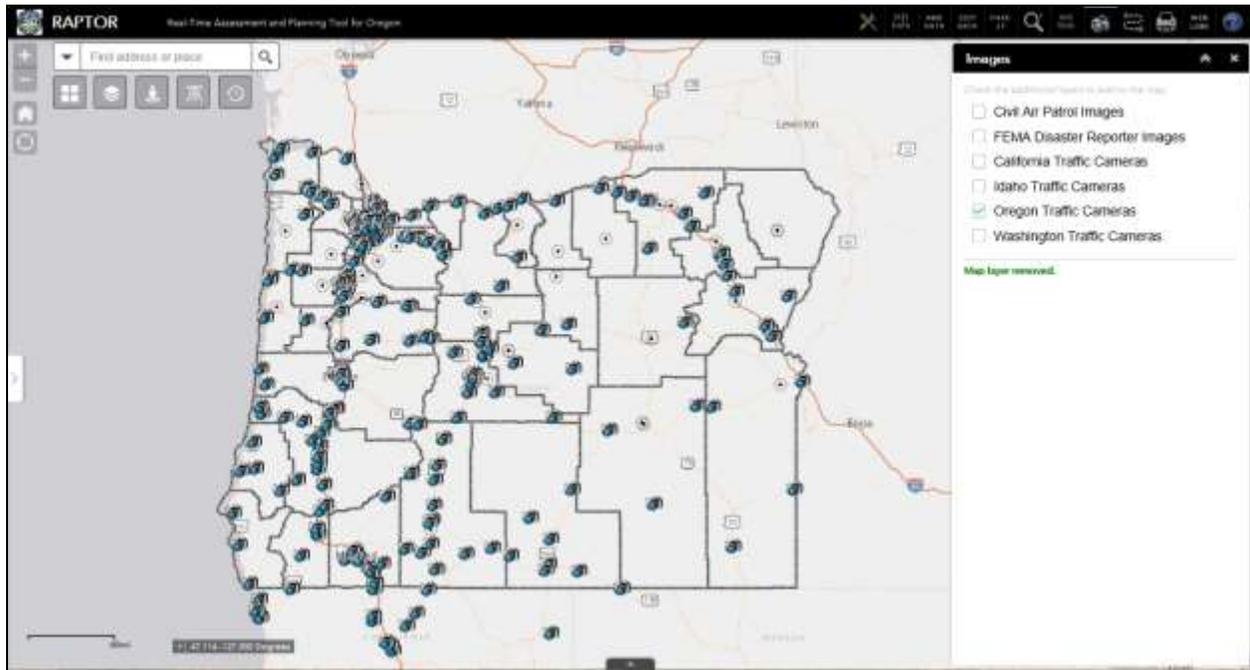
## 5.9 IMAGES

This tool allows the user to add images into RAPTOR from the Civil Air Patrol, FEMA’s Disaster Reporter app, and traffic camera data from California, Idaho, Oregon, and Washington.



- To view images on RAPTOR, click on the appropriate image source, which will then add all images from that source.

In the graphic below, the user selected “Oregon Traffic Cameras”.



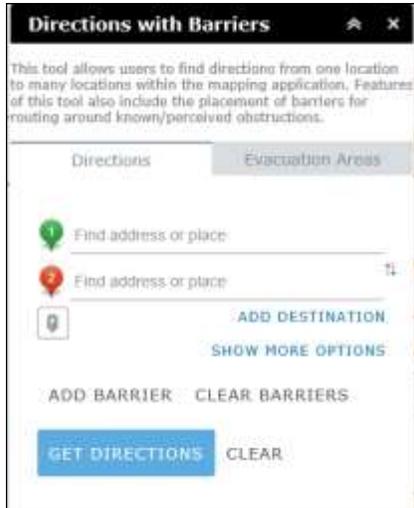
As shown in the graphic, images of traffic cameras have appeared throughout the state. These cameras are the same locations as indicated on the ODOT Tripcheck website (<http://tripcheck.com>).

- Clicking on the camera within the map will display the same image as found within the Tripcheck program. These images are updated every six minutes.

Uncheck the entry in the images tool to remove the images from RAPTOR.

## 5.10 DIRECTIONS WITH BARRIERS

This tool allows the user to create a route from one location to another within RAPTOR.



To create a route, use the following procedure.

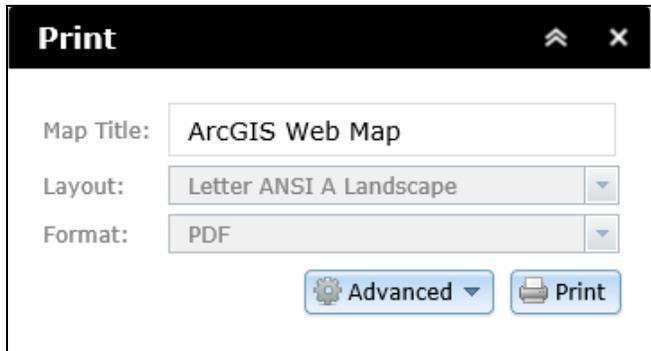
- The user can type in an address within the “Address 1” entry area and press enter to place a point at the location to route from. Suggestions will display as the user types in the information.
  - Once the appropriate address has been entered, a “1” icon will display at that location within the map.
- The user can type in an address within the “Address 2” entry area and press enter to place a point at the location to route to.
  - Once the appropriate address has been entered, a “2” icon will display at that location within the map.
- Once the information has been entered, click on the “Get Directions” button to conduct the route.
- The user can add an additional address to the route by clicking on the “Add Destination” button. This will add an additional address entry area.
- The user can add in a road closure by clicking on the “Add Barrier” button. To place a barrier, click on the appropriate location within the map to place the barrier, which will then display as a red dot on the screen.
- Click on “Get Directions” to conduct the new route, incorporating the barrier placed.
- To clear the barrier, click on the “Clear Barriers” button.
- To clear the route, click on the “Clear” button.

Once the route has been drawn, the user can view the text directions within the same window.

Once the route has been drawn, the user can print the directions by clicking on the “Print” icon within the tool.

## 5.11 PRINT

This tool allows the user to create a printed map of the current view of RAPTOR.



The user can then define the following:

- Map Title – type in the text for the title of the resulting map
- Layout templates – the formatted layout for the map. The current options available are:
  - A3 Landscape
  - A3 Portrait
  - A4 Landscape
  - A4 Portrait
  - Letter ANSI A Landscape (default option)
  - Letter ANSI A Portrait
  - Tabloid ANSI B Landscape
  - Tabloid ANSI B Portrait
  - MAP\_ONLY (prints only the map and nothing else)
- Formats – the format for the resulting map file. The current options available are:
  - PDF (default option)
  - PNG32
  - PNG8
  - JPG
  - GIF
  - EPS
  - SVG
  - SVGZ

Advanced options include map scale, user specified scale, Author name, Copyright, including legend, map size, and print quality.

Once the options have been defined, click on “Print” to produce the map. The tool will then prompt the user to choose a save location and name for the resulting map. Once complete, click on the new map in the save location to open the file.

## 5.12 WEB LINKS

This set of information are important webpages bookmarked within the RAPTOR program. The lists are organized based upon the links found to be of relevance for types of incidents and match the organization of the RAPTOR event switcher.

Clicking on a link will open the webpage in a separate tab of the browser. Clicking on the folder icon will display the links found within that specific folder. If the website link does not display in a separate tab, check the popup settings for the browser.

The important links are as follows:

- RAPTOR Website
- RAPTOR User Guide
- RAPTOR Inventory
- Important Links - Default:
  - Emergency Response Guidebook
  - HSIN
- Important Links - Fire:
  - AIRNow
  - Inciweb
  - National Interagency Fire Center (NIFC)
  - National Weather Service Air Quality and Smoke Maps
  - Northwest Interagency Coordination Center (NWCC)
  - Oregon DEQ:
    - Oregon DEQ Air Quality Index Map
    - Oregon DEQ Wildfire
  - Oregon Department of Forestry
    - Oregon Department of Forestry
    - Southwest Oregon Fire (ODF)
  - US Forest Service Fire Map
- Important Links - Flood:

- National Weather Service
- Northwest River Forecast Center
- US Army Corps of Engineers:
  - Coastal Basins Teacup Diagram (USACE)
  - Lower Columbia Teacup Diagram (USACE)
  - Rogue Teacup Diagram (USACE)
  - Willamette Teacup Diagram (USACE)
- Important Links - Nuclear (OpsCenter and PCII Versions only):
  - National Atmospheric Release Advisory Center (NARAC)
  - Oregon Department of Energy
- Important Links – Tsunami/Earthquake:
  - Oregon Fault Lines
  - Pacific Northwest Fault Lines
  - Tsunami Warning Center
  - USGS Earthquake Hazards

### **5.13 ABOUT**

This window displays a brief description of the application in addition to contact information about the program with a live link to the OEM RAPTOR website.