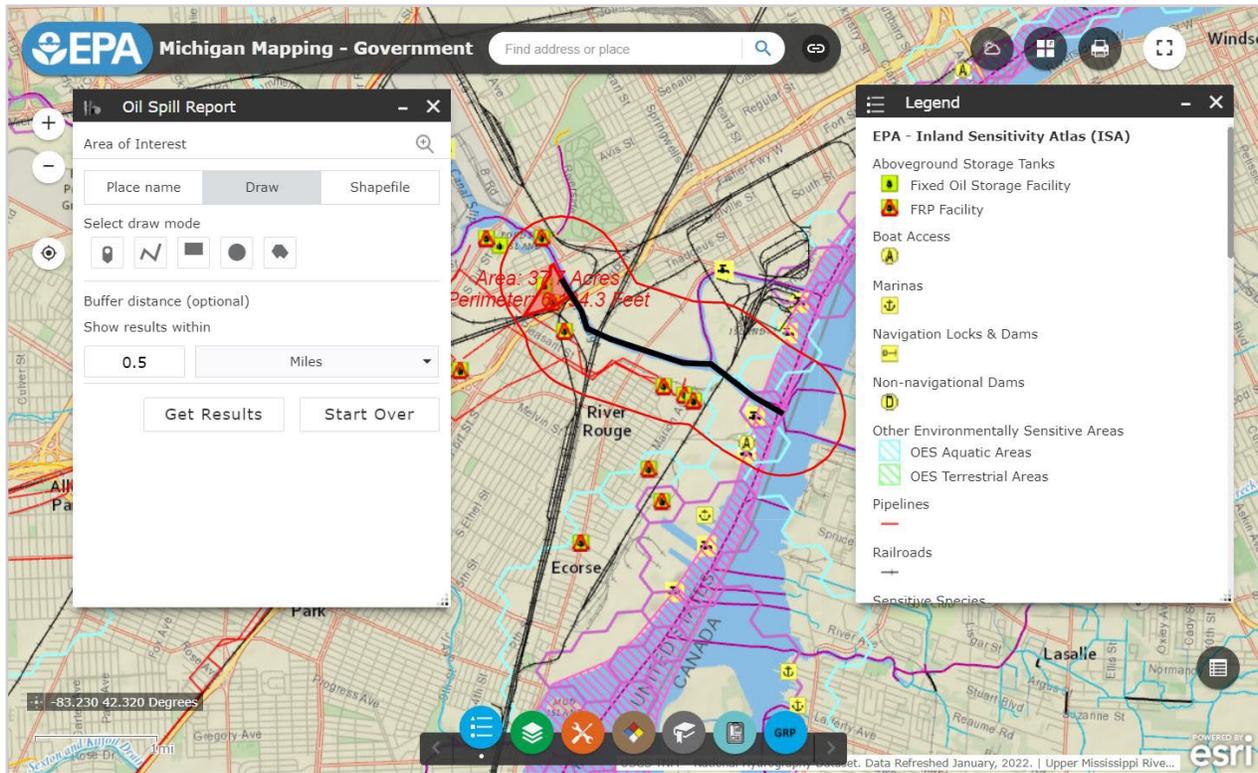


# EPA State Mapping Projects Quick Start Guide



## Mapping Program Overview

The Environmental Protection Agency (EPA) Region 5 State Mapping Project is a Geographical Information System (GIS) platform that is used as an environmental emergency response tool. The Mapping Project brings public (Federal, Tribal, State, and local) entities as well as private sector emergency responders together for spill response and pre-planning.

During an emergency response, Federal, Tribal, and State On-Scene Coordinators (OSCs) may use the program to gain situational awareness of downstream/downwind vulnerabilities, as well as upstream/upwind potential responsible parties, and much more.

For contingency planning, the project can introduce facilities to the communities which may be impacted during a hazardous material and/or petroleum release. The program can also be used during exercises of facility response plans by providing participants access to useful data layers such as: endangered/protected species and sensitive habitats; sanitary and storm sewer systems; facility discharge and permit discharge points; drinking water infrastructure; other pollution sources (facilities, oil wells, pipelines, railroads, etc.); and vulnerable populations (schools, nursing homes, hospitals, etc.).

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## Accessing the Project

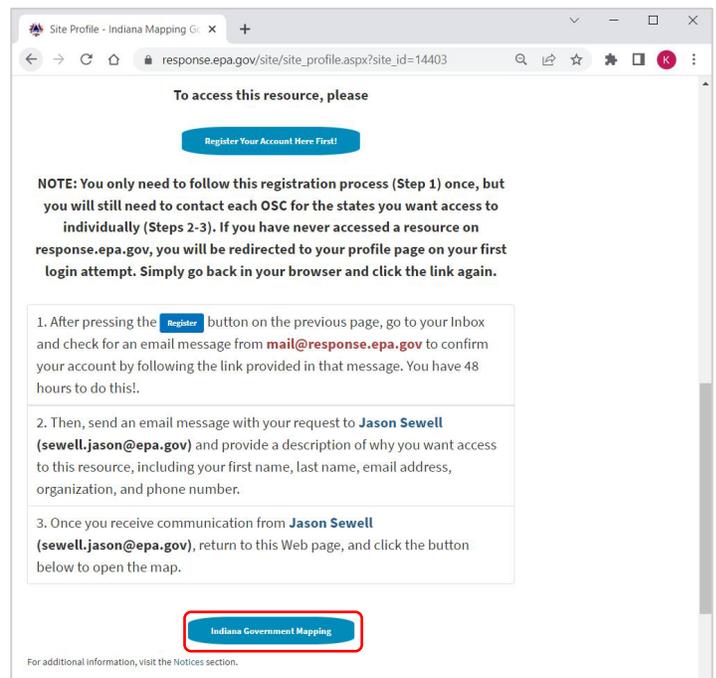
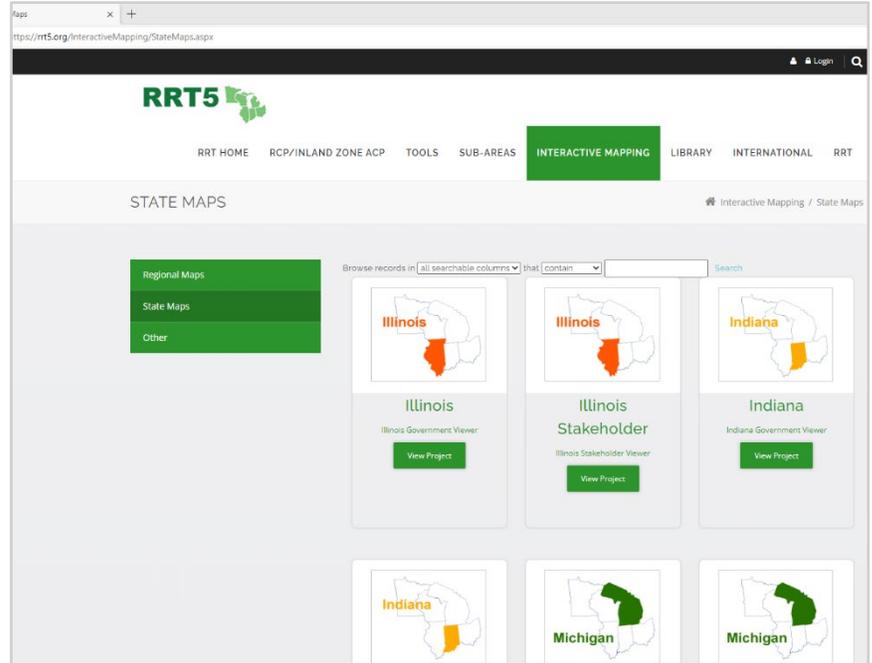
1. Type into browser search bar [www.rrt5.org](http://www.rrt5.org) (Google Chrome and Microsoft Edge work best).

**Tip:** If experiencing issues, try a different browser and notify the OSC admin for the mapping project.

2. Select the “Interactive Mapping” tab near the top of the screen (or follow drop down menu to “State Maps”)
3. Open the desired State Mapping Project

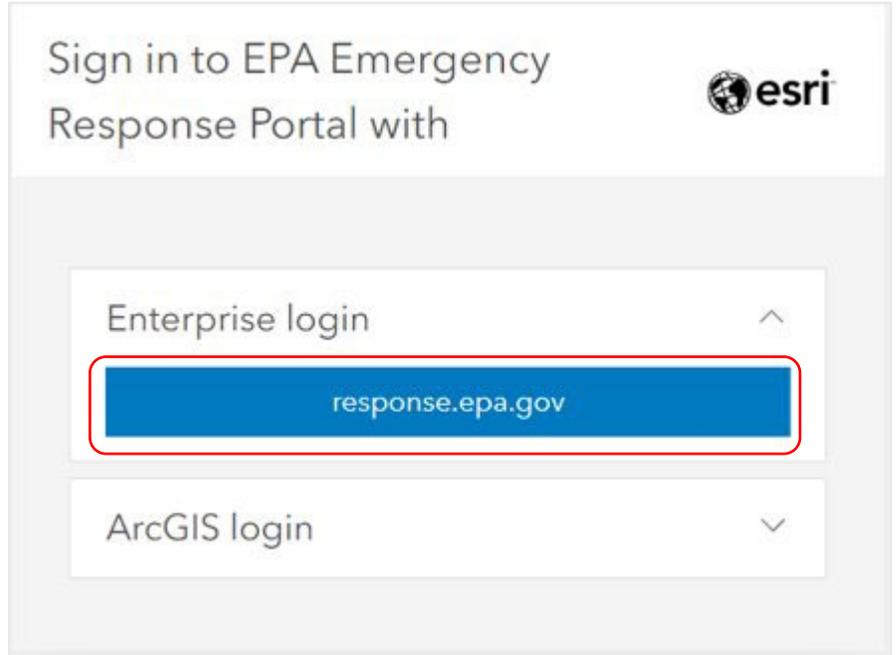
(Government or Stakeholder Version). You will be directed to the appropriate [www.response.epa.gov](http://www.response.epa.gov) website where you will need to follow the directions listed (Note: Access is not immediate). Multi-Factor Authentication (MFA) is required to login to ERT Web Applications ([response.epa.gov](http://response.epa.gov); Viper; and WebEOC). Follow the steps presented in the MFA section then return to Step 4 to access the Mapping Project.

4. After registering for a response.epa.gov Account, send an email to the correct Mapping Project contact. After the email is received, the appropriate lead will grant access and send back an approval message. When the approval is received, you will have full access to that specific Mapping Project. Do not bookmark the exact Mapping Project URL as it may change. The [www.rrt5.org](http://www.rrt5.org) Interactive Mapping Tab will be the permanent link to access the project.
5. After registering for a response.epa.gov Account and receiving an approval message from the Mapping Project contact, return to the Mapping Project and select the blue button below the listed directions to access the Mapping Project.



**Note: When opening the Mapping Project, you may be directed to sign in through an “Enterprise login” Account or an “ArcGIS login” Account. The correct option to use is the “Enterprise login” Account.**

**The “ArcGIS login” option would allow you to log in using a GeoPlatform account, however access to the Mapping Project is provided to your email address registered on response.epa.gov.**



**Note: The Stakeholder Version has limited access to public records and does not contain some sensitive information, therefore many layers and functions in this guide may not appear in the Stakeholder Version as it was designed for use with the Government Version program.**

### Mapping Project Contact List

State Mapping Project	Contact	Email Address
Indiana	Jason Sewell	sewell.jason@epa.gov
Illinois	Jacob Hassan	hassan.jacob@epa.gov
Michigan	Tricia Edwards	edwards.tricia@epa.gov
Ohio	Jon Gulch	gulch.jon@epa.gov
Minnesota	Dave Morrison	morrison.david@epa.gov
Wisconsin	Rob Kondreck	kondreck.robert@epa.gov

## Multi-Factor Authentication

Multi-Factor Authentication (MFA) is required to log in to ERT Web Applications (response.epa.gov; Viper; and WebEOC). Follow the steps provided below to download and install an ‘Authenticator’ App on your mobile device and use the ‘Authenticator’ app to login to these applications. If your mobile device is unavailable or you do not have the authenticator app installed on your mobile device, follow the “Alternate Multi-Factor Authentication” steps on Page 9.

Prior to registering an authenticator application:

- Decide which mobile device you will use to authenticate.
- Download the Authenticator app on the mobile device from the App Store (Apple), Google Play, or Microsoft Store.
- Have the mobile device and app ready to authenticate.
- Login to the ERT Web Application from your desktop/laptop (NOT the mobile device).

**Note: The Microsoft (MS) Authenticator app is an Agency approved app available for download from the ‘App Catalog’ on your mobile device. EPA ERT recommends using the MS Authenticator app. However, MFA may also be configured using the Google Authenticator and SecureAuth apps.**

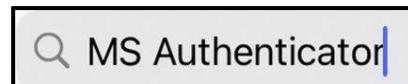
**Beware of malicious authenticator apps. Only use authenticator apps from reputable sources.**

Download and install the Authenticator Mobile App:

1. Open the App Catalog (or the application store specific to your device) on your mobile device.



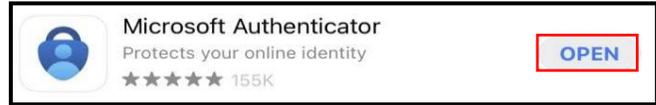
2. In the ‘Search’ window, search for MS Authenticator



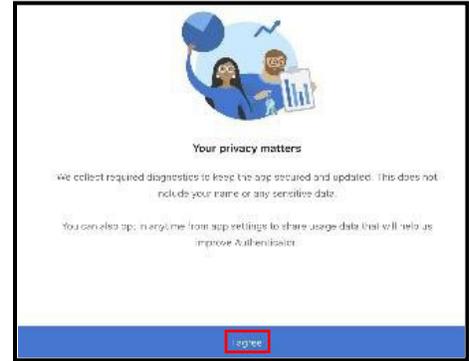
3. Tap on the ‘Download’ icon.



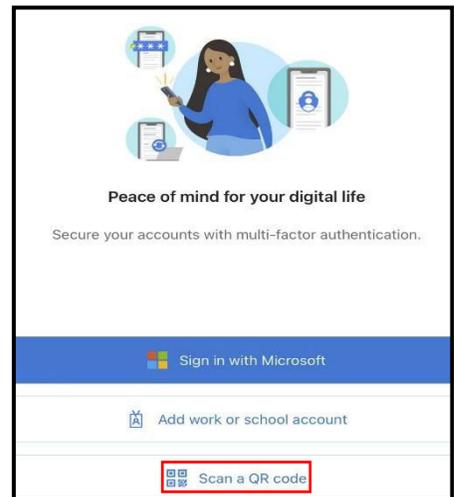
4. Tap on 'Open' to open the App.



5. Tap on 'I Agree.'



6. You are now ready to 'Scan a QR code' to enable Multi-Factor Authentication. Continue to the following steps to get to the QR code.



Logging in and configuring MFA:

**Note: It is best practice to perform initial MFA configuration from your desktop/laptop browser rather than a mobile device.**

1. At the login screen of one of the ERT websites (epa.response.gov; Viper; or WebEOC), enter your account credentials, then click 'Login.'



2. Click on 'Configure MFA.'



3. At the 'Enroll Authenticator App' window, click 'Continue.' The 'Continue' button will guide you through registering an Authenticator App on your mobile device.

The 'Ignore' button registers your account to receive an authentication code via email rather than registering an Authenticator App. This option can be updated later if you decide to register an Authenticator App. *If you do not receive an email, please check your Junk/Clutter (SPAM) folders.*

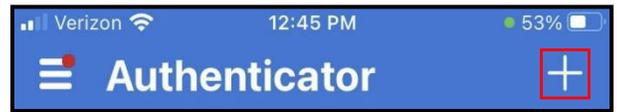


4. Click 'Continue.'

**Note: The default authentication mode can be changed in the future if necessary.**

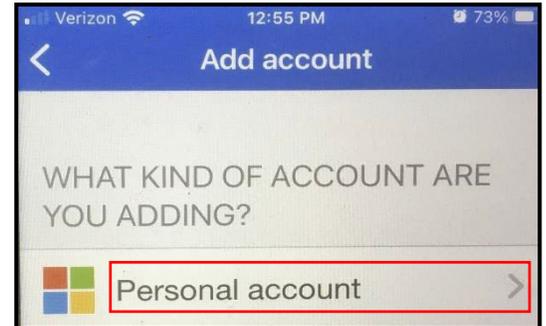


5. Open the Authenticator App on your mobile device.

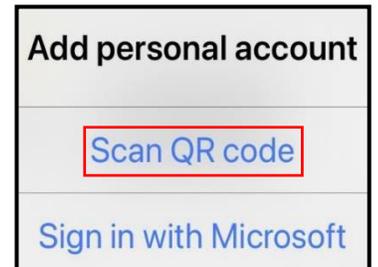


6. Tap the Plus (+) sign.

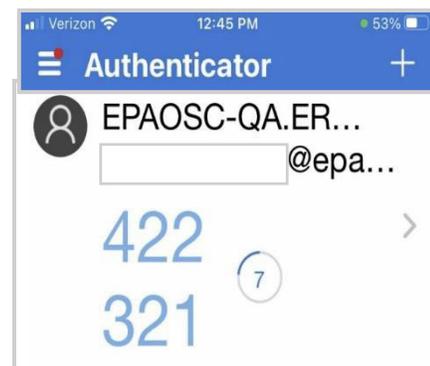
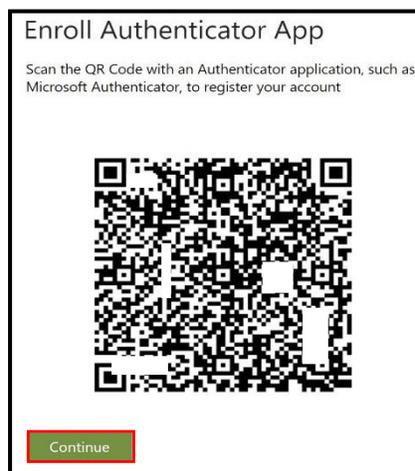
7. Select 'Personal account.'



8. On your mobile device, click on 'Scan QR code' and point the mobile device to the QR Code on your desktop/laptop.



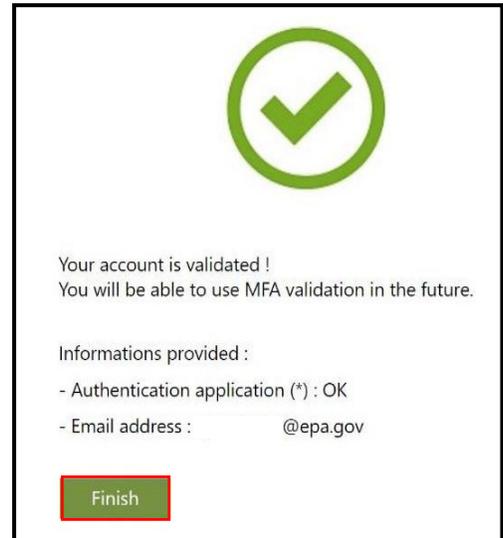
9. Click 'Continue.' Once the QR Code is scanned, enter the six-digit One-Time Passcode (OTP) from the Authenticator App.



10. You will receive a message that your account has been validated. Click 'Finish.' To continue gaining access to the Mapping Project, return to Step 4 of "Accessing the Project."

**Note: After configuring/enrolling MFA, the next time you log in you will be prompted to enter the six (6) digit OTP on your mobile device in the Authenticator app. You will no longer need to Scan the QR code.**

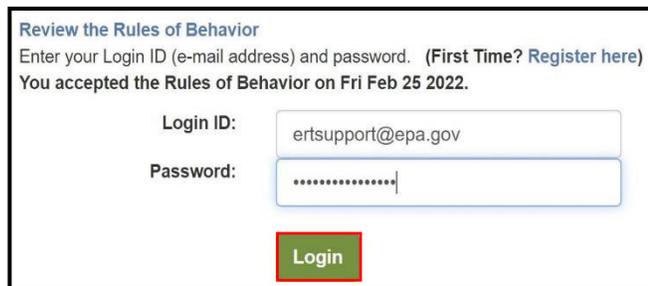
**After initial MFA configuration, if you are using your mobile device to access an ERT web application, the copy and paste feature can be used when prompted for the OTP.**



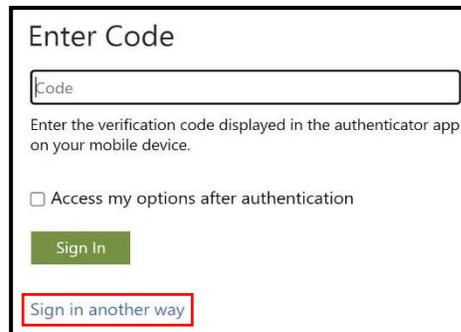
Alternate Multi-Factor Authentication:

If your mobile device is unavailable or you do not have the authenticator app installed on your mobile device, you have the option to receive a one-time code sent to your e-mail instead of using the Multi-Factor Authenticator App discussed in the previous section.

1. At the login screen, enter your login information.



2. Click on 'Sign in another way.'



3. Select 'Receive an email.'
4. Click on 'Send Code.'
5. To continue to receive your OTP via email from this point on, put a check mark in 'Remember my selection.'

**You must use a security code to confirm your identity. How do you want to receive your code ?**

Use my authentication application

Receive an email

Remember my selection

Changing Authentication Options:

After entering your OTP, put a checkmark in the box for "Access my options after authentication" and click 'Sign In.'

This allows you to switch your default MFA method and allows you to change Authenticator Apps when you switch mobile devices from the one originally used to configure MFA.

**Enter Code**

.....|

We sent an email containing a verification code.

Access my options after authentication

[Sign in another way](#)

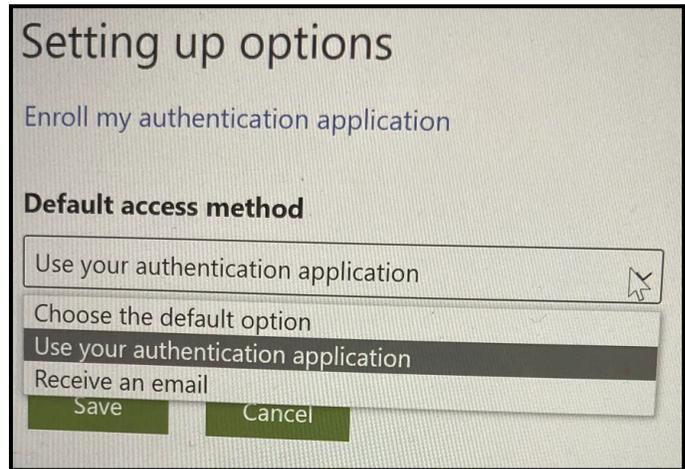
Changing your Default Multi-Factor Authentication Method:

1. If you want to switch your default Authentication Method, select 'Change my Configuration options.'

For example, if you originally registered to receive a code via e-mail as your default Authentication Method and would like to switch to using an MFA App on your mobile device instead, select "Change My Configuration Options" and click 'Sign In.'

[Enroll my authentication application](#)

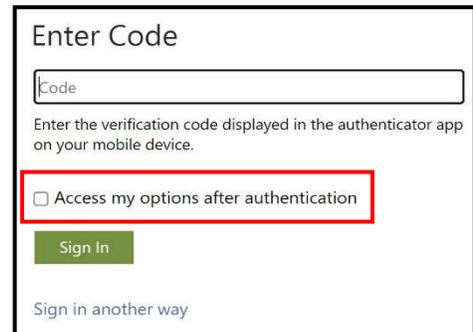
2. Select your default Authentication method by clicking on the dropdown.
3. Click 'Save.'



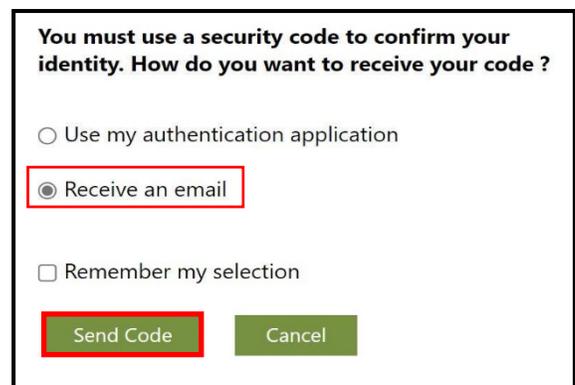
Registering a Multi-Factor Authenticator App on a different Mobile Device:

If your mobile device is replaced and you need to enroll a new Authenticator App, follow the steps below on your desktop/laptop computer. Be sure to install the App on your new mobile device and have the device ready before proceeding. Only **ONE** mobile device can be registered for MFA.

1. Place a check mark in 'Access my options after authentication.'



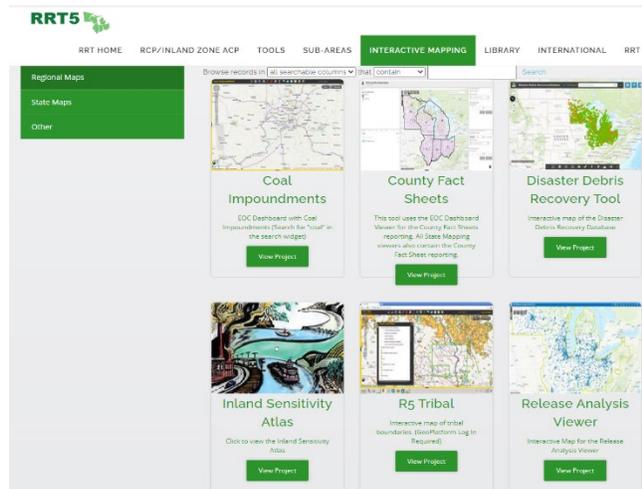
2. Select 'Receive an email.'
3. Click 'Send Code.'



4. Click on ‘Enroll my authentication application.’
5. Follow the steps outlined earlier in the “Logging in and Configuring MFA” section of this guide.

## Regional & Other Maps

In addition to State Maps, the Interactive Mapping Tab houses Regional and Other Maps. Each mapping tool varies with accessibility. Click on desired project page. You may need to follow the instructions on the map’s project page to request access from the listed OSC to gain access. Each mapping project houses different information, but generally functions the same as the State Mapping Projects that are detailed in this guide.



**Note: The Reporting Tools and Widgets described in this Reference Guide may not be applicable to the Regional or “Other” Mapping Projects listed under the Interactive Mapping Tab pictured above. This guide focuses on the individual State Mapping Project platform.**

## Troubleshooting

If experiencing issues accessing the Mapping Projects, try a different browser. If issues persist, notify the OSC admin for the Mapping Project. If experiencing issues accessing a specific data layer or using a reporting tool, notify the OSC admin for the Mapping Project.

## General Mapping Functions

The EPA State Mapping Projects contain a multitude of functions that can assist even the most beginner personnel in creating a map that can accurately represent various environmental scenarios. From pre-planning events to emergency response dilemmas, this mapping program can provide visual aids, contact information, environmental data, and much more!

The various state specific Mapping Projects contain three main components, which are explained in depth later in this document. The three components are:

1. Base Map Gallery: Various background maps that can be utilized to show aerial photos, topographic (topo) maps, navigational charts, etc.
2. Layers: Geospatial data layers can easily be turned on/off to display exactly what is needed for a concise and digestible map. When you access the layers, some layers show the title in black, and some are greyed out. The greyed-out layers will be available as you zoom in on the map to not overwhelm the map extent. It should also be noted that some layers have sub-layers of data available. These sub-layers are available by clicking on the “▶” icon next to the main layer.

3. Widgets: Small tools or applications that perform a function in the Mapping Project. Some examples include: Emergency Response Guidebook, ALOHA Plume import, Print, Drawing Tools, Report generation Tools, etc.

## Search Location

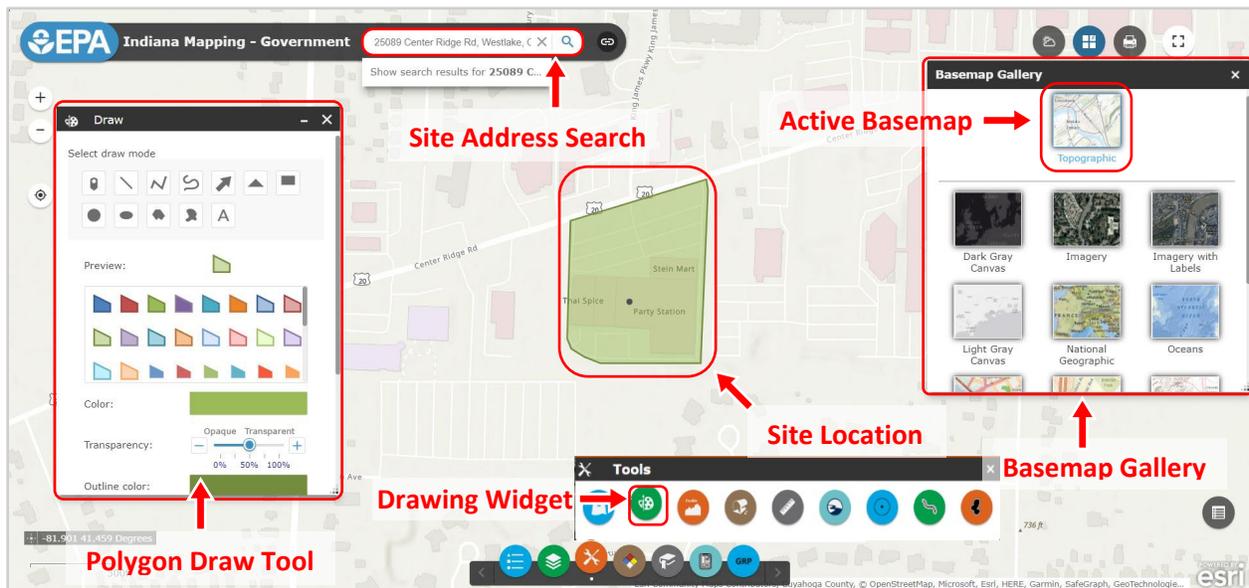
1. Enter response location information into the “Find address or place” bar at the top of the page. Verify correct location was selected after zoom into location.

*Example: 25089 Center Ridge Rd, Westlake OH*

2. Select “Basemap Gallery” . Choose desired background basemap for accurate representation from provided list. Topographic view is the default setting.

**Hint: Select a map that will allow you to easily view waterways, topography, or other key features that best represent your data. Sometimes base map colors can easily disguise icons and make searching for information more difficult.**

**Hint: Use draw tool to outline site boundary or place a “Push Pin” (See Additional Tools and Widgets Section: Draw Tool). This will help you easily locate your site on the map once zoomed out and give out site details such as total area and perimeter distance.**



## Interactive Layers

1. Click on the “Data” Icon.



**Note: The available layers will integrate datasets onto the basemap and produce symbology that is overlaid on to the map. The symbols can be clicked on for additional information, if available.**

**Note: Some of the Data Layers have Sub-Layers available. When you are in the Layer, click on the drop-down triangle to the left to display the Sub-**

**Layers. Some sub-layers may appear “greyed out” and will not display on the map until you zoom in closer to the area.**

## Available Federal Data Layers in State Mapping Project



2. Click on the “EPA” Data Icon to find key federal data layers to fit your needs.
  - United States Environmental Protection Agency (USEPA):
    - Facility Registry Service (FRS) and FRS ESF10 Layers (ACRES, AIR, BIA, BRAC, CAMDBS, EIS, Facility Interests, ICIS, NCDB, NPDES, RADINFO, RBLC, RCRA, SEMS, TRI, RMP, FRP, RCRATSD, CERCLIS, TSCA). These layers have an icon that can be clicked onto see database information, if available. This information includes facility name; address; and almost always a URL to the EPA EnviroFacts Website where there will be information about other EPA Program compliance, permits, EPA ID Numbers, and other information based on the size of the facility.
    - Pipeline Crossing Points and Spill Projections
    - Railroad Crossing Points and Spill Projections
    - United States Coast Guard (USCG) Jurisdictions
      - ◆ Jurisdiction Points
      - ◆ Exact Sector Boundary from RCP
      - ◆ Approximate Shoreline Sector Boundary
      - ◆ EPA
    - Region 5 (R5) Regional Response Team (RRT) Sub-Area Boundaries
    - Underground Storage Tanks (USTs) Layer
    - Inland Sensitivity Atlas (ISA):
      - ◆ Facilities and Pipelines:
        - Aboveground Storage Tanks (Fixed Oil Storage Facilities, and FRP facilities), Unverified Facilities with Oil, Hazardous Materials Storage, and Pipelines (including owner, contact information, pipe diameter, and commodity).
      - ◆ Rail and Water Transportations:
        - Boat Access, Dams (non-navigable), Locks and Dams (navigable), Marinas, and Railroads (owner and contact information).
      - ◆ Inland Coastal Jurisdictional Boundaries
      - ◆ Response Strategies:
        - Locations with a designated response strategy and equipment needed in the event of an environmental disaster or threat to homeland security. These can be printed as a Microsoft Word document for editing and inclusion in

FRP/Spill Prevention, Control, and Countermeasure (SPCC) Plans.

- ◆ Sensitive Receptors:
  - Archeological Sites, Historic Places, Managed Lands, Other Environmentally Sensitive Areas, River Miles, Sensitive Species, Specially Designated Areas, Tribal Land with Tribal Fact Sheets, Water Infrastructure, Water Intakes.
- National Oceanic and Atmospheric Administration (NOAA):
  - Wind Speed & Direction:
    - ◆ Stations (Weather stations providing air/weather data).
    - ◆ Buoys (Stream stations providing water/river data).
  - Observed River Stages (with web links to the actual real-time data):
    - ◆ Stream data providing observed river stages and flood prediction forecasts from 48-hours up to 336-hour predictions. Also includes a “Full Forecast Period Stages” option.
  - Breakwater
    - ◆ Shoreline construction breakwater line
  - Weather Stations (with web links to actual real-time weather at airports)
  - US Radar Tile Service (Static)
- United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Easements
- United States Fish and Wildlife Service (USFWS):
  - Critical Habitats shown in linear and polygon features.
- Environmental Response Management Application (ERMA®)
  - Contains response strategy information such as recommended implementation approach, boat access, staging area location, and minimum boom length.
- Homeland Security (HSIN):
  - HSIN Energy & Industry Layers:
    - ◆ Gasoline & Non-Gasoline Plants (including biodiesel plants, ethanol plants, Gas Stations, and Propane Retailer Locations), Chemical Manufacturing Facilities, Mines and Mineral Resources, Power Plants, Electric distribution, Oil & Natural Gas (includes oil refineries, pipelines, pumping stations, terminal and gathering lines, and oil and gas fields).
  - HSIN Education Layers:
  - Colleges and Universities, Supplemental Colleges, Private Schools, Public Schools, HSIN Emergency Services Layers:
    - ◆ Atlas and Database of Air Medical Services, American Red Cross, Emergency Medical Service Stations, Local Emergency Operation Centers, FEMA Regional Headquarters, Fire



- Stations, National Shelter System Facilities, Public Answering 911 Service Area Boundaries, and Urgent Care Facilities.
- HSIN Government and Military Layers
  - ◆ Includes City Limits, Local Law Enforcement, Local Public Services, Military Bases, and Prisons.
- HSIN Public Health Layers
  - ◆ Includes Hospitals, Nursing Homes, Pharmacies, Public Health Departments, and Veterans Health Administration and Medical Facilities.
- HSIN Public Venues Layers
  - ◆ Includes Convention/Exhibition Centers, Department & Hardware Stores, Entertainment & Dining, Historical Monuments, Museums, & Tourism, Hotels, Outdoor Recreation/Entertainment, Places of Worship, and Shopping Centers.
- HSIN Transportation Air Layers:
  - ◆ Includes Airports and Federal Aviation Administration (FAA) Air Route Traffic Control Centers (ARTCC).
- HSIN Transportation Ground Layers:
  - ◆ Intermodal Terminal Facilities; Bridge Inventory; Parking Garages; Railroads; Railroad bridges, tunnels, and yards; Train Stations; and Unpaved Roads Tracks Trails.
- HSIN Transportation Water Layers:
  - ◆ Anchor Mooring Locations, Breakwater Locations, Locks, Port Facilities (major and non-major), Nautical Navigation Aids Locations, Navigable Waterway Network Lines, and Piers, Wharves, and Quays.
- HSIN Land Use
- HSIN State & County Boundaries
  - ◆ Major Cities, Counties, and States
- United States Geologic Survey (USGS):
  - Watershed Boundary Dataset:
    - ◆ Use this layer to determine watersheds and determine where a source might be that leads to a specific point on a waterway.
  - Soil Survey Geographic Database (SSURGO) Soils
    - ◆ Use this layer to view boundaries of different soil types in an area. Information provided includes qualitative soil characterization, slope, water table depth, flooding frequency, available water storage, drainage class, and more.
  - National Hydrography Dataset (NHD):
    - ◆ Click on the NHD layer and turn on all layers except the area and waterbody (these layers are large and could potentially block out other smaller features). This layer also includes

arrows pointing in the predominant flow direction, which can be useful for intermittent waterways.

**Note: some sub-layers will appear “greyed out” and will not display on the map. This will change when you zoom in closer to the area. To organize the map for printing, minimize the USGS layer box and move the icon to the far-left side of the screen (under the home and my location icons).**

- United States Army Corps of Engineers (USACE)
  - Navigational Charts
- Federal Emergency Management Agency (FEMA):
  - Flood Hazard Areas display Floodplain Boundaries (100- and 500-Year Maps).
- Great Lakes Indian Fish & Wildlife Commission (GLIFWC) Ceded Territory Boundaries
- Tribal Off-reservation Trust Lands
- Environmental Justice (EJ) Layers: Vulnerable Census Tracts Relative to State and to Nation
  - Protected Areas Database (PAD-US): This layer contains fee lands, preserves, designated lands, and other protected lands.

### Available State Specific Data Layers

- **Minnesota:**
  - Minnesota Land Use Land Cover (LULC): Displays categories describing Land Use and Land Cover types.
  - MN Legacy Data Layer includes:
    - ◆ DNR: DNR Facilities, State Park Trails & Roads
    - ◆ Pipelines – Commodities
    - ◆ Water/Hydro: Karst Feature Inventory, Inland Lake Bathymetry (Depth in Feet), Lakes with Bathymetric Contours.
    - ◆ Public Waters Inventory: Water Course Delineation, Basin Delineation
    - ◆ Water Access Sites
    - ◆ Water Bodies: Lakes and Rivers, Wetlands, Other Waterbodies
    - ◆ Water Quality Data
      - Surface Water Monitoring (MDA), St. Louis River – Area of Concern
    - ◆ GAP – Land Use (2008) by area. Vector polygons, lines, and points in this dataset represent Native American Treaty



Boundaries, Federal Lands, State Lands, DNR Lands, Tribal Lands, All Land Ownerships

- ◆ Land Use / Land Cover: Displays Native American Reservations, Military Bases, and various commercial land use categories.

- **Wisconsin:**

- Land Use Land Cover (LULC): Displays categories describing Land Use and Land Cover types.
- Boat Access Layer: Contains carry in and ramp access points.
- Outstanding and Exceptional Streams
- Outstanding and Exceptional Lakes
- Licensed and Certified Childcare Layer includes:
  - ◆ Location, facility name, contact information, and age range of children cared for at licensed and certified childcare facilities.
- Managed Land by Property Type – Department of Natural Resources (DNR)
- Bird Breeding Atlas: Contains field survey documents on the distribution and abundance of birds breeding in an area.
- Conservation Opportunity Areas: Contains terrestrial lakes, streams, and rivers.
- Designated Waters Layer includes:
  - ◆ Areas of Special Natural Interest (ASNRI) Priority Navigable Waterways, and Other Priority Navigable Waterways (PRF).
- DNR Managed Lands
- Fisheries Waters Layer includes:
  - ◆ Muskellunge, Sturgeon, Smallmouth Bass, Walleye, and Trout waters or areas.
  - ◆ Fish Consumption Advice Lines and Polygons.
- Health Care & Coverage Layer includes:
  - ◆ Tribal clinics, rural health clinics, adult family homes, adult day care facilities, nursing homes, hospitals, hospice care facilities, community-based residential facilities, federally qualified health centers, end stage renal disease (dialysis) facilities, critical access hospitals, ambulatory surgical centers, trauma centers, free and charitable clinics, AIDS resource center of Wisconsin, long-term care hospitals, psychiatric hospitals, residential care apartment complexes and rehabilitation hospitals.
- Landfills: Contains Landfill and Historic Waste Site locations.



- WI Legacy Data Layer includes:
  - ◆ Bedrock Depth and Type, Chequamegon-Nicolet National Forest land coverage (USFS), County Forests (DNR)
  - ◆ DNR Geographic Management Units and DNR Regions – Administrative regions, water, watershed, and wildlife management boundaries.
  - ◆ Fire Areas- Fire Response Units, Forestry Dispatch Groups, and Fire Protections Areas – Responsible Parties.
  - ◆ Land Cover and Land Cover Types: Displays categories including forest type, agriculture, wetlands, original vegetation cover, or other ecologically significant landscapes; Also displays Land Type Association.
  - ◆ Tax Law – Public Access
  - ◆ Water Table Depth
  - ◆ Wetlands – Reed Canary Grass Infestation: Displays coverage of invasive reed canary grass.
- Digital Elevation Model (DEM): Contains an image service created by Wisconsin DNR from DEMs derived from county-produced LiDAR covering 67 Wisconsin counties.

- **Illinois:**

- Combined Sewer Overflow (CSO) Points: Locations of CSO occurrences in the Chicago Area Waterway System (CAWS).
- Metropolitan Water Reclamation District of Greater Chicago (MWRD) Municipalities & Sewer Types: Displays municipality boundaries with sewer system information and type.
- Aquifers: Displays major Sand, Gravel, and Rock Aquifers at various depths.
- Water and Related Wells: Contains an external link for each wells Illinois State Geological Survey (ISGS) data summary sheet, formation information, location, owner name, elevation, total depth, and date drilled.
- Oil & Gas Fields: Contains type of oil or gas field and an external link to the field summary by the Illinois Oil Field Statistics from the ISGS.
- Tier II Facilities
- IL Legacy Data Layer includes:
  - ◆ Wells & Boring Locations: Includes water wells and other producing wells (salt, methane, coal, injection, etc.)



- ◆ Wetlands
- ◆ Aquifer Contamination - Nitrate Leaching, Pesticide Leaching
- ◆ Bedrock Geology

- **Indiana:**

- IN Legacy Data Layer includes:

- ◆ Facilities & Industry:

- Coal Mines, Dams, Electric Service Territories, Industrial Mineral Sites, Industrial Parks, and Pipelines.



- ◆ Waste Sites:

- Hazardous Waste Site, Open Dump, Landfills, Treatment Storage & Disposal Site, Transfer Stations, Septage Sites.

- ◆ Hydrography:

- Historic Canals, Inland Lake Bathymetry, Karst Caves
- Hydrographic Features - Lake Shore and Stream Features
- Rivers – National Rivers Inventory, Outstanding Rivers.

- ◆ Wetlands

- ◆ Indiana Department of Environmental Management (IDEM):

- Commissioner's Bulletin Scored Sites, Composting Facilities, Confined Feeding Operations, Voluntary Remediation Program Facilities, Institutional Control Sites.

- ◆ Water:

- Water Quality, Observation Wells, Water Wells

- ◆ Land Use:

- Land Cover, Parks & Recreational Facilities, Trails, National Forests
- Land Management – Federal Land Managers, Land Ownership, Managed Land Access

- **Ohio:**

- Tier II Facilities
- Oil Wells: All known oil well information provided by ODNR. Some fields include oil well permit ID, which can be used on the ODNR website to look up historic information.
- Municipal Sewer Systems: Sewer system data from Northeast Regional Sewer District, Loraine, Lucas, Mahoning, Medina, Oregon, Stark, Summit, Wood Counties, and the city of Toledo.
- Mahoning County Data Layers includes:
  - ◆ EMA Data (Emergency Zones, Fires Stations, Government Buildings, Hospitals, Libraries, Nursing Homes, Police Stations, Sewage Treatment Plants, Water Treatment Plants, Schools, and Warning Sirens)
  - ◆ Oil & Gas
  - ◆ Public Water
  - ◆ Sanitary System
  - ◆ Storm Water System
- Stark County Storm Water System
- Legacy Data Layer includes:
  - ◆ Facility Spill Plans Sections
  - ◆ Landfills: CDD, compost, historic, industrial, MSW, and municipal.
  - ◆ Nuclear Facilities: Includes 10- and 50-mile radius circles for evacuation purposes.
  - ◆ ODNR Shorelines: Includes in-depth descriptions of shoreline type (beach, break wall, rip-rap, channel, causeway, etc.).
  - ◆ OEPA Data Layer includes:
    - NPDES: Outfall locations for facilities that have NPDES permits.
    - SWAP: Surface water intakes, public water system wells, and source water protection areas (SWPA).
  - ◆ Spill Containment
  - ◆ Turnpike Mile Posts: For the Ohio Turnpike system.



- **Michigan:**

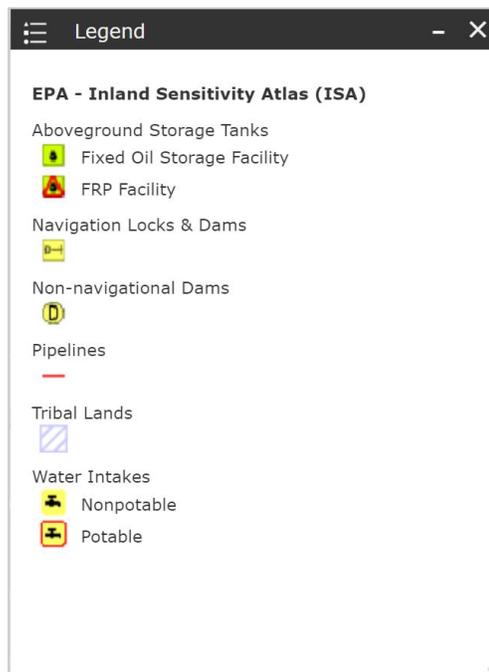
- MI Drinking Water Wells Layer includes:
  - ◆ Surface Water Intakes, Type I and II Wells, and Wellhead Protection Areas.
  - ◆ Public and private drinking water wells and wellhead protection areas in Michigan. The fields contain well owner, date constructed, address, depth, and static water levels.
- Mt. Pleasant Sewer system:
  - ◆ Sanitary sewer items such as storm inlets, manholes, storm sewer outlets, storm leads, mains, and main ratings.
  - ◆ Sump Leads, Detention & Retention Areas, Drainage & Catchment Areas, Catch Basin Decimal.
- St. Clair Detroit Rivers and MI Straits of Mackinac Environmental Sensitivity Index (ESI):
  - ◆ Both data sets contain sensitive biological resource data for terrestrial mammals, freshwater fish, reptile, and amphibian species. Vector polygons, lines, and points in these data sets represent distribution, concentration areas, and spawning areas.
  - ◆ The ESI data characterizes the coast types and wildlife by their sensitivity to spilled oil and includes information for three main components: shoreline habitats, sensitive biological resources, and human-use resources. PDF Map Links is a sub layer with Biology and Human Use Maps available for print.
- Tier II Facilities
- Contamination Layer includes:
  - ◆ Solid Waste Landfills; Underground Storage Tanks (Active Tanks, Known Leaking Tanks, Closed Cases and Active Cases); and Sites of Environmental Contamination (Part 201, fields include site name, address, pollution source, and current MDEQ Action).
- Lambda Pipeline
- Mineral Leases MDNR: Contains property characteristics and lease information.
- National Guard Locations: Contains the name and address for National Guard Locations
- Oil & Gas



## Helpful Tools and Hints

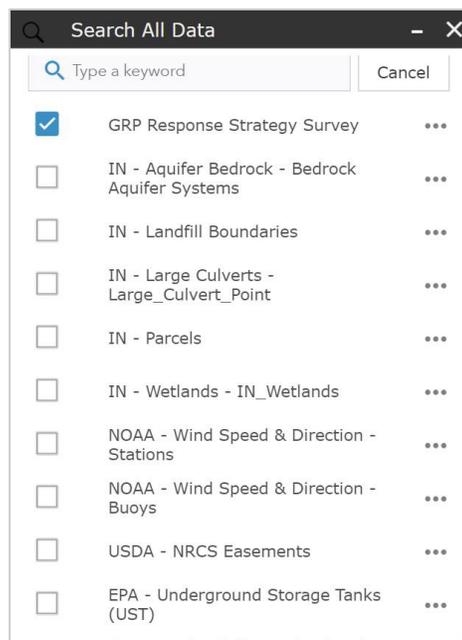
### 1. Legend

- a. Click on the  icon on the toolbar. This will open the maps legend displaying a key for all layer icons currently turned on. This tool is extremely helpful when looking for a quick reference of icon description or area color designation when multiple layers are turned on at one time.



### 2. Search All Data

- a. Click on the  icon on the toolbar. This will open a window with all available data layers, along with a search bar along the top. When needing to turn on layers from multiple agencies such as oil/natural gas pipelines or all oil/chemical storage tanks, type in a specific keyword such as “pipeline” or “tank.” This prevents the need to search through every agency layer individually and saves time in emergency situations.



- b. Activate Layer Groups 

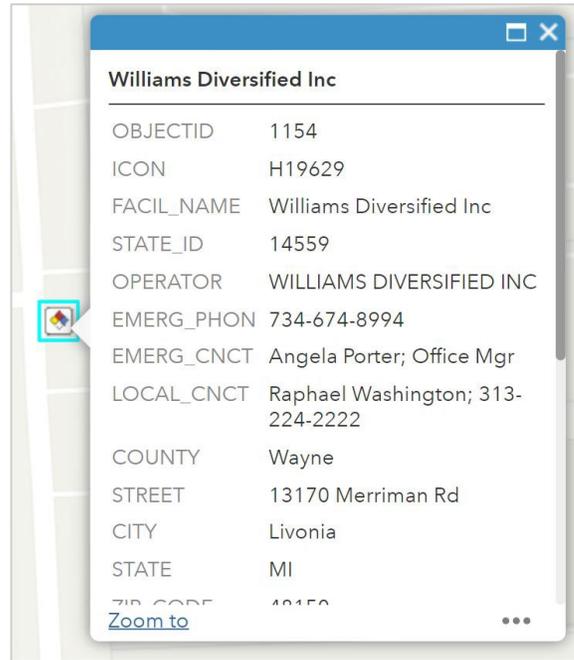
- i. This tool allows the user to easily activate *all* layers for a County Fact Sheet Report, FRP Report, Oil Spill Report, or a Downstream Vulnerable Populations Report. You may activate all Hydrology Layers, HUC 12 Watershed Layers, or HUC 10 Watershed Layers. Click the desired layer group to activate.

**Note: This can lead to an overwhelming and/or busy map image. Not all sub layers are necessary and may cause lagging while trying to print. Click “Turn off all layers” to deactivate all.**

- ii. Return to step A to search through applicable layers for a more concise map image. Having too many data layers visible at once on your map can cause lagging and may delay printing.

### 3. Geospatial Layer Dialog Boxes

- a. When layers are turned on, an icon will appear over a location point pertaining to that layer. Almost all icons have data or information that will appear in a dialog box when clicked. Each icon provides a dialog box with important data such as location address, contact information, permit/tank/well I.D. numbers, and even links to government sites with additional information. If there is a line with a blue word that says, “More Information” or “Link,” clicking on that will take you to an external website or page with additional information. Occasionally,



you will find an icon that states, “no information available.” In this case, you can either double check the attribute table (more info in the next section) or try searching in Google Maps for an address to type into your internet browser. In most emergency situations, a local agency (fire or police) will be able to provide a name of the specific building in reference which will aid in your search for address or contact information.

### 4. Attribute Table

- a. Click on the  icon on the toolbar for easy access to the Attribute Table.
- b. The attribute table tool shows all the information coming from a specific layer and displays them into an easy-to-read list for either viewing or printing. To access this tool, go to whatever layer you need information for and select the  icon next to layer tab. This will open a dropdown menu with multiple options, select the “view in attribute table” option. Once the attribute table is opened, it will provide a list of all records for the specific layer. To facilitate your search, move the frame of the map over the area of importance and click on the “Filter by map extent” option near the top of the Table. This will provide the information for locations ONLY within your map’s viewing frame.

Station Identification	Location Latitude (DD)	Location Longitude (DD)	Observation Date/Time	Wind Origin (Degrees)	Wind Speed (km/h)	Wind Gust (km/h)	Wind Chill (°F)	Wave Height (Meters)	Dominant Wave Period (Seconds)	Average Wave Period (Seconds)	Wave Origin (Degrees)	Sea Level Pressure (Millibars)	3Hr Pressure Change (+/- Millibars)	Air Temperature (°F)
THLO1	41.83	-83.19	2/6/2022, 6:00 PM	170	24	26	13.90							26.10

## Additional Tools and Widgets

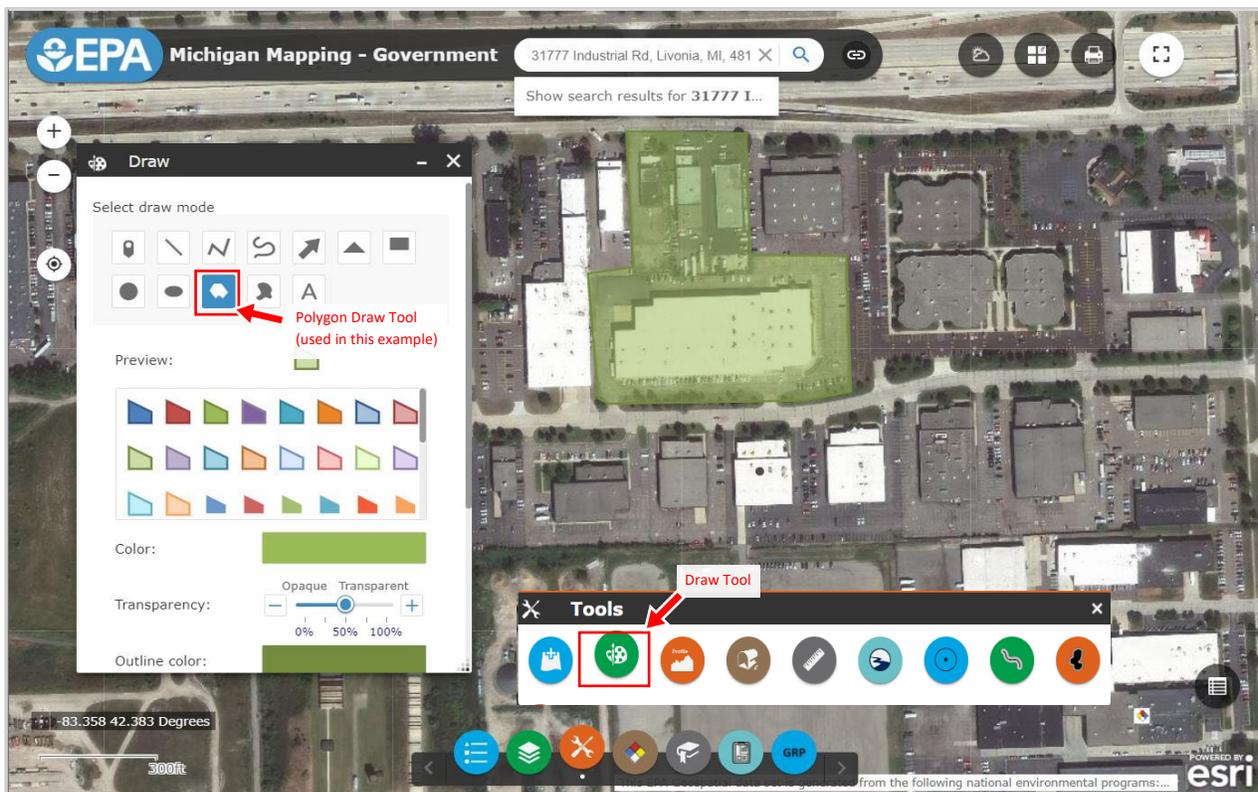
**Note: Some widgets or tools may not be available across all interactive mapping platforms.**

### Draw Tool



Can be used to place/add temporal elements such as lines, points, areas, or text. These elements can represent, a description, flow direction lines, boom placement, response notes, etc. Several agencies use the draw tool to document what happened on the spill to include in a final report. This tool is also especially useful during exercises to document and memorialize booming locations, impacted wildlife, road closures, ICP locations, etc.

- Select the “Draw” tool in the toolbar. Next, select the draw mode option and follow the directions on the screen to begin.
- Once your drawing is complete, you can modify various features, including color.



**Note:** All elements created with the “Draw” tool will disappear after reloading the application.

## Add Data



Add your organization’s GIS layers or ArcGIS Online layers to the Map View. This does not permanently add the files to the Project, they will disappear after reloading the application. If allowed, you can use the Print Icon to capture the data on paper maps for use in the field.

## Elevation Profile



Use to draw a line from Point A to B and it will display the elevation profile along the entire line. This can be useful to see if a facility is uphill from a waterway, to see the elevation of secondary containment, or to see the depth of a waterway (bank to bank).

## Find Address



Can search for a property by address, coordinates, or Inspector (by dropping a pin on the map). The Inspector search is useful when you do not know the address of a parcel or in urban areas to find the closest address to a specific point on the map.

## Measurement Tool

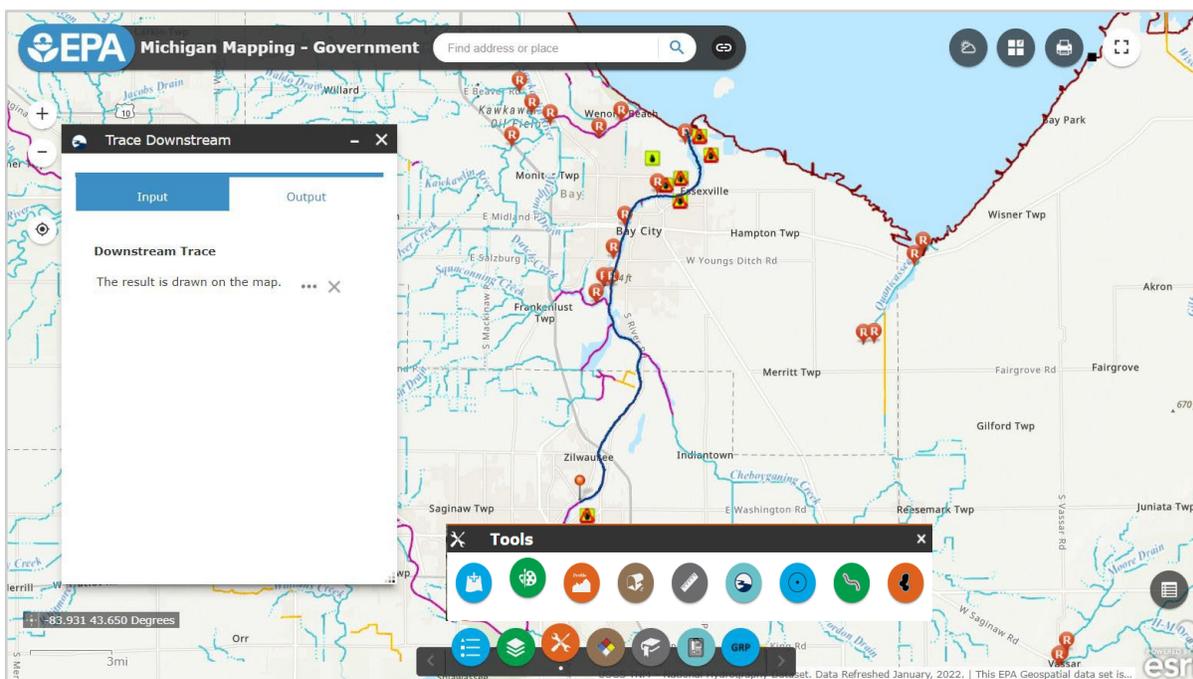


Can be used to figure out the area of a polygon (square miles, acres, square feet); length of a line (miles, feet, meters, nautical miles) and distance between two GPS points.

## Trace Downstream



Can be used to view the path of a spill downstream using the spill location. This search is useful in identifying the waterbodies the spill would migrate through and the potential vulnerable receptors or areas within the spill path.



## Emergency Response (ER) Widgets



1. Emergency Response Guidebook (ERG): Select a point on the map, then select the chemical/placard, specific chemical, spill size (small or large), time of spill (day or night), wind direction (or use lookup) and solve. The result is a red evacuation box that also displays the census data for that specific area.

*Note: A more detailed step by step process is outlined in the “Release in Air” section. The ERG Widget may temporarily be unavailable.*



2. Aloha Threat Zone: After running a plume model in Aloha (part of the EPA CAMEO Suite), save the plume model as a “.pas” file. Go into this Widget and choose the previously saved file, then click the point on the map where the spill occurred. The result is the Aloha Plume projected onto the Project and a table displaying the color-coded threat/action levels (in chosen unit, default acute exposure guideline levels [AEGLs]) associated with the plume. The plume opacity can be increased/decreased to the desired transparency. After displaying the plume model, click on the vulnerable population layers (schools, daycares, hospitals, nursing homes, etc.) to determine downwind shelter-in-place or evacuation locations (now or with a slight wind direction change).

*Note: A more detailed step by step process is outlined in the “Release in Air” Section.*

**Note: The ALOHA® software program can be downloaded from the [epa.gov](https://www.epa.gov/cameo/aloha-software) site linked here: <https://www.epa.gov/cameo/aloha-software>**

## Weather Radar Widget



Weather Forecast: Click the weather icon (next to the basemap option). This will display the National Weather Service radar over the current map extent. Click “Run” to view the weather change as time progresses. This will stay active while zooming in and out.

**Note: The program does not allow the continued viewing of layer dialog boxes while radar looping is enabled. Dialog boxes will open and then close immediately due to the constantly updating map.**

## Print



Using the printer icon in the upper right corner of the screen you can print your map. Begin by giving the map a title, choosing printout size and format (.jpg or .pdf). If standard and advanced feature modifications are finished, select print. The final product contains a legend, scale, and title.

## Quick Reference Scenario Guides

### Spill into Waterway

1. Type into browser search bar [www.rrt5.org](http://www.rrt5.org)
2. Select the “Interactive Mapping” tab near the top of the screen (or follow drop down menu to “other maps”)
3. Open the Mapping Program (Government Version) for the state the spill is in and enter login information. Access to this version must first be admitted: to do so follow the instructions shown in the image below. If you do not wish to access the Government Version, please continue to step 4 using the “Stakeholder Version”.

**Note: The Stakeholder Version has limited access to public records, therefore many layers and functions in this guide may not appear in the Stakeholder Version as it was design for use with the Government Version program**

**To access this resource, please**

[Register Your Account Here First!](#)

**NOTE: You only need to follow this registration process (Step 1) once, but you will still need to contact each OSC for the states you want access to individually (Steps 2-3). If you have never accessed a resource on [response.epa.gov](http://response.epa.gov), you will be redirected to your profile page on your first login attempt. Simply go back in your browser and click the link again.**

1. After pressing the [Register](#) button on the previous page, go to your Inbox and check for an email message from [mail@response.epa.gov](mailto:mail@response.epa.gov) to confirm your account by following the link provided in that message. You have 48 hours to do this!.

2. Then, send an email message with your request to **Jon Gulch** ([gulch.jon@epa.gov](mailto:gulch.jon@epa.gov)) and provide a description of why you want access to this resource, including your first name, last name, email address, organization, and phone number.

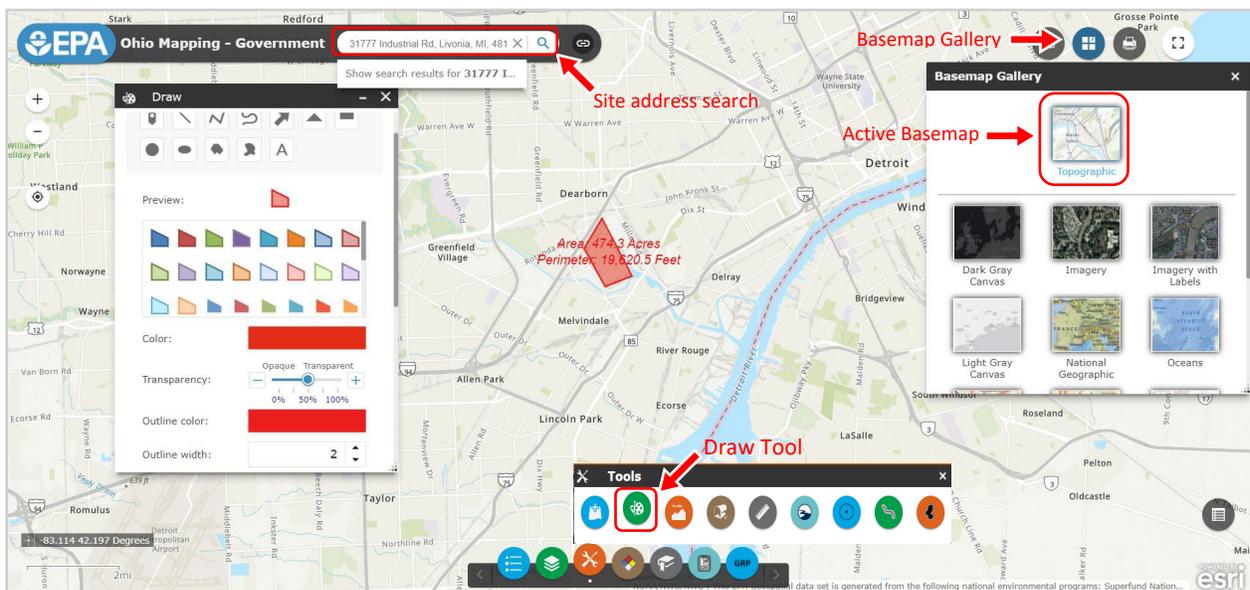
3. Once you receive communication from **Jon Gulch** ([gulch.jon@epa.gov](mailto:gulch.jon@epa.gov)), return to this Web page, and click the button below to open the map.

[Ohio Government Mapping](#)

4. Open desired state Mapping Program (Stakeholder Version) and enter login information. Access to this version must first be admitted, to do so follow the instructions listed to request access as shown in step 3.

5. Select “Search All Data” tab  from the toolbar at the bottom of the screen.
  - a. Unselect the box titled “GRP Response Strategy Survey” if needed. This layer houses a large amount of data and may cause lagging.
6. Enter response location information into the “Find address or place” search bar.
  - a. Select a map that will allow you to easily view waterway and other icons once populated to map.
  - b. Verify location.
  - c. Close dialog box with the “x” in the upper right corner
  - d. Zoom out to properly view area near incident.
  - e. Select “Basemap Gallery” in the upper right corner of screen. Choose desired base map for accurate representation from provided list.

**Hint: Use draw tool to outline site boundary (See [Additional Tools and Widgets Section: Draw Tool](#)). This will help you easily locate your site on the map once zoomed out and display site details such as total area and perimeter.**



7. Open the Data Layers from the Icon Bar.
8. Turn on the NOAA - Wind Speed & Direction layer(s) to display the current wind direction and speed from all surrounding Buoys or Stations near the spill site.
9. Turn on the NOAA - Observed River Stages layer to see real-time and forecasted river stages categorized by flood level.

**Note: Clicking on the icons that display at river gauge will show the current observed water level, flood stages, forecast, Lat/Long of the River Gauge, and a link to the government website for that River Gauge (includes current and historic information).**

10. If needed, click on the Weather Radar Widget, and select the Radar Looping (for real-time radar of the area).

**Note: If Radar Looping is on, dialog boxes that open after clicking icons will not stay open due to constantly updating map.**

11. Select the USGS Layers:

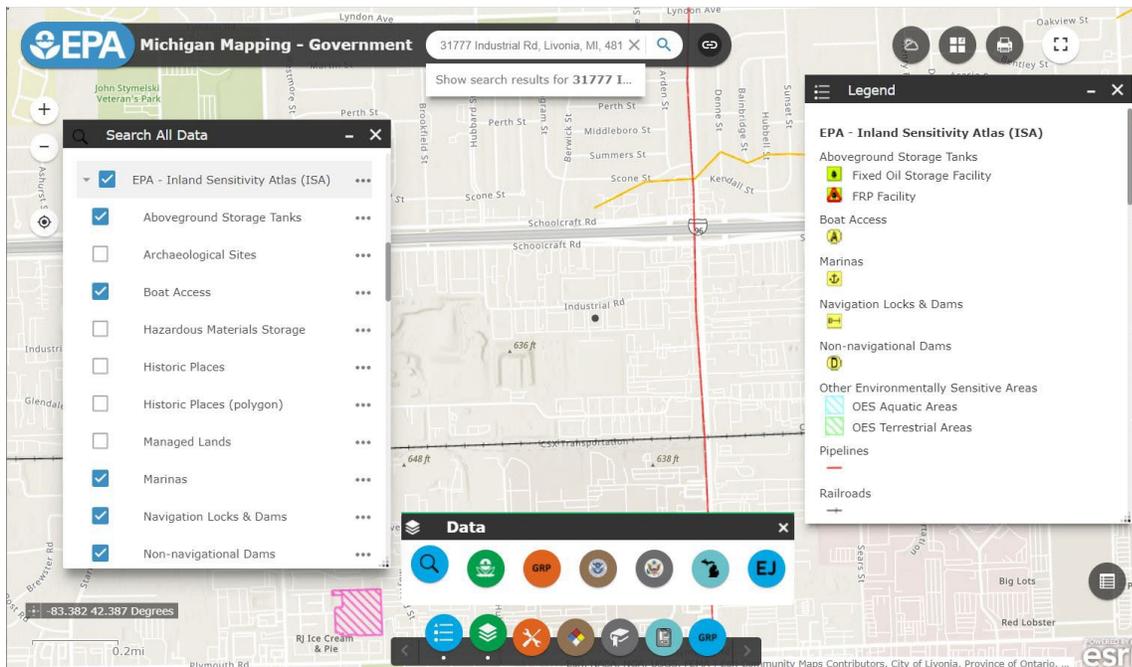
- a. Turn on USGS – National Hydrography Dataset by checking the blue box.
- b. Turn on all sub-layers, except Area (Small and Large Scale) and Waterbody (Small and Large Scale).
  - This will highlight waterways and input direction of flow arrows.
  - If any section is grayed out, you must zoom in further on the map to view this feature.

12. Select the Inland Sensitivity Atlas Layers (ISA):

- a. Turn on the following sub-layers: Boat Access, Navigational Locks & Dams, Non-navigational Dams, and Marinas
  - This will allow you to easily identify points for response teams to access the waterway and any obstructions such as dams/locks.
- b. Turn on the following sub-layers: Water Intakes, Water Infrastructure (polygon), Sensitive Species, Other Environmentally Sensitive Areas, Special Designated Areas, and/or any other applicable sub-layers.
  - Use the legend tool for easy view of symbology.

13. If the source of the spill is unknown, use the “Search All Data” tab in the bottom toolbar to search from potential sources by name (i.e., Pipeline, Railroad, Tanks, FRP, etc.).

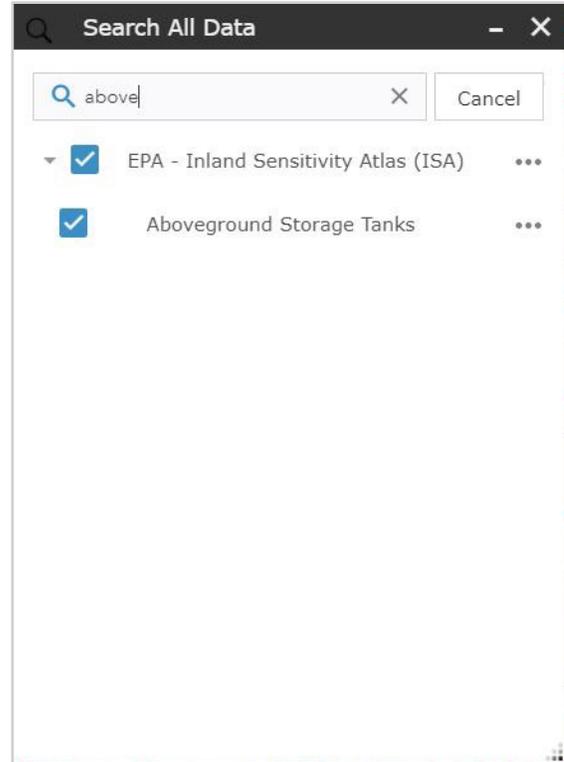
- a. Turn on all desired sub-layers to display icons at each location.



*(Click to check boxes to turn on relevant layers)*

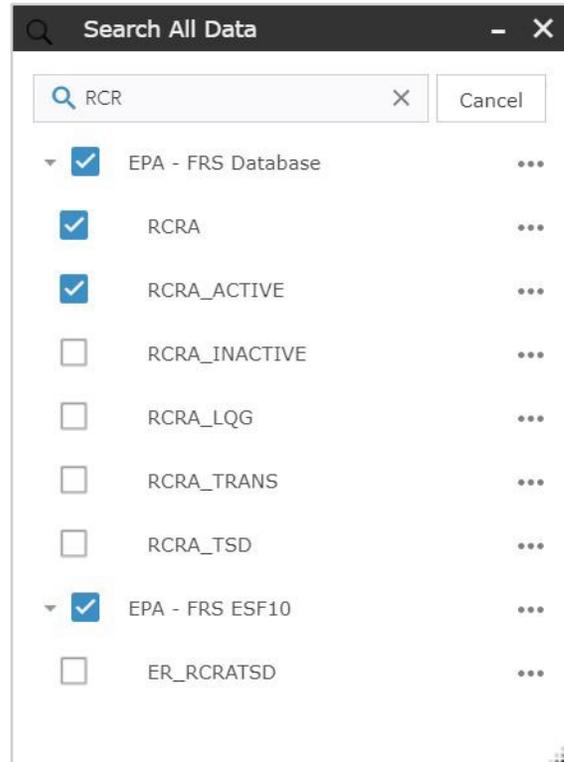
14. If the spill is from an unknown source and is **petroleum based**, you can turn on the following layers to attempt to identify the Responsible Party (RP):

- a. ISA – Facilities, Railroads, and Pipelines (Aboveground Storage Tanks, Hazardous Materials Storage, Unverified Facilities with Oil, Railroads, and Pipelines)
- b. Homeland Security – Energy & Industry (Gas Stations, Oil & Natural Gas [Refineries, Storage Facility, Oil and Natural Gas Maintenance Facilities, Oil and Natural Gas Pipelines]).
- c. State Specific Layers or Legacy Data (Oil Wells, Leaking USTs, known Contaminated Sites, Historic Spill Sites, etc.).



15. If the spill is from an unknown **chemical source**, you can turn on the following layers to attempt to identify the Potentially Responsible Party (PRP):

- a. EPA – FRS Database (NPDES, NPDES Major, RCRA [Active, Inactive, LQGs, Trans, TSD], Toxic Release Inventory (TRI), RMP and CERCLIS).
- b. ISA – Facilities, Railroads, and Pipelines (ASTs, Hazardous Materials Storage, Railroads, and Pipelines)
- c. Homeland Security – Energy & Industry (Chemical Manufacturing Facilities, Gas Stations, Mines and Mineral Resources, Oil & Natural Gas [Refineries, Storage Facility, Oil and Natural Gas Maintenance Facilities, Oil and Natural Gas Pipelines]).
- d. State Specific Layers or Legacy Data (Tier II/CAMEO Facility Data, Leaking USTs, known Contaminated Sites, Historic Spill Sites, etc.).



16. If a plume model is needed, USGS can be contacted to run an ICWaters plume model. This model will show the expected concentration of the known spilled product in the waterway and the expected time of arrival at any location along a line. The plume can be imported into the Mapping Project by utilizing the “Add Data” Widget that is in the Utility Widget icon.

## Release in Air

1. Type into browser search bar [www.rrt5.org](http://www.rrt5.org)
2. Select the “Interactive Mapping” tab near the top of the screen (or follow drop down menu to “other maps”)
3. Open the Mapping program (Government Version) for the state in which the spill is located and enter login information. Access to this version must first be admitted, to do so follow the instructions shown in the image below. If you do not wish to access the Government Version, please continue to step 4 using the “Stakeholder Version”.

**Note: The Stakeholder Version has limited access to public records, therefore many layers and functions in this guide may not appear in the Stakeholder Version as it was design for use with the Government Version program**

**To access this resource, please**

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**NOTE: You only need to follow this registration process (Step 1) once, but you will still need to contact each OSC for the states you want access to individually (Steps 2-3). If you have never accessed a resource on [response.epa.gov](http://response.epa.gov), you will be redirected to your profile page on your first login attempt. Simply go back in your browser and click the link again.**

1. After pressing the [Register](#) button on the previous page, go to your Inbox and check for an email message from [mail@response.epa.gov](mailto:mail@response.epa.gov) to confirm your account by following the link provided in that message. You have 48 hours to do this!.

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3. Once you receive communication from **Jon Gulch** ([gulch.jon@epa.gov](mailto:gulch.jon@epa.gov)), return to this Web page, and click the button below to open the map.

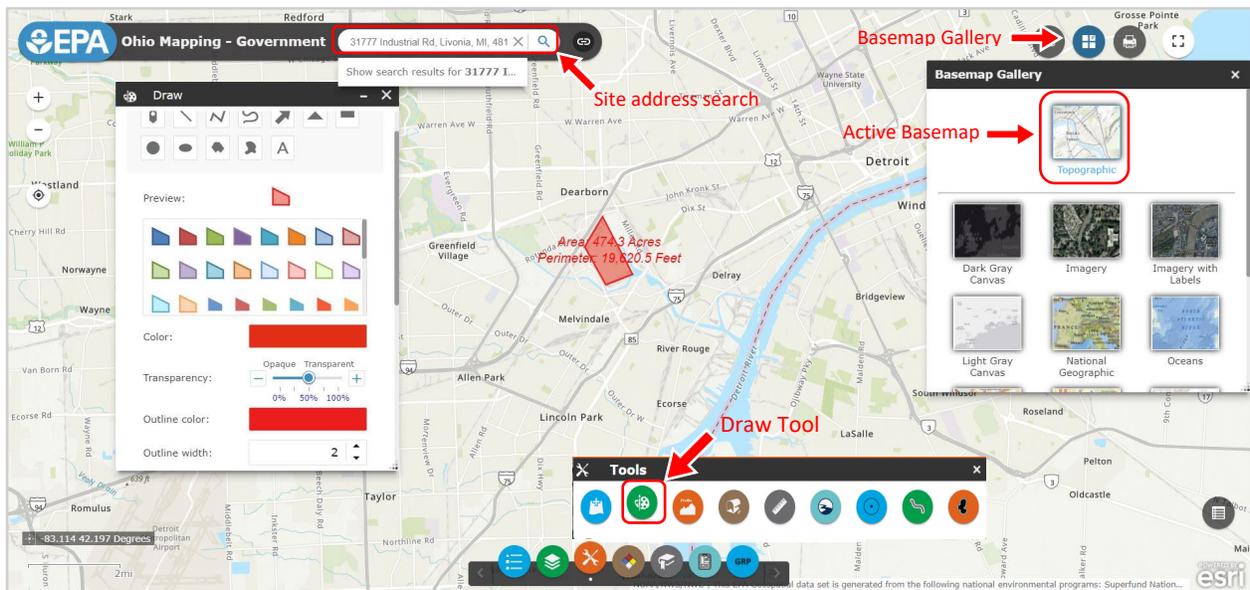
[Ohio Government Mapping](#)

4. Open desired State Mapping program (Stakeholder Version) and enter login information. Access to this version must first be admitted, to do so follow the instructions listed to request access as shown in step 3.

5. Select “Search All Data” tab  from the toolbar at the bottom of the screen.
  - a. Unselect the box titled “GRP Response Strategy Survey” if needed. This layer houses a large amount of data and may cause lagging.
6. Enter response location information into the “Find address or place.”
  - a. Verify correct location.
  - b. Close dialog box with the “x” in the upper right corner
  - c. Zoom out to properly view area near incident.
  - d. Select “Basemap Gallery” in the upper right corner of screen. Choose desired base map for accurate representation from provided list.

**HINT: Select a map that will allow you to easily view waterway and other icons once populated to map.**

**HINT: Use draw tool to outline site boundary. This will help you easily locate your site on the map once zoomed out and display site details such as total area and perimeter.**



7. Open the Data Layers from the Icon Bar.
8. Turn on the NOAA - Wind Speed & Direction (Buoys) layer to display the current wind direction and speed from all surrounding Buoys near the release site. Click on the icon, a table will display the current air temperature, wind direction/speed, sky conditions, weather conditions and Lat/Long.
9. Turn on the NOAA – Wind Speed Direction (Stations) layer to display the current wind direction and speed from all surrounding Airports near the release site. Click on the icon, a table will display at each airport the current air temperature, wind direction/speed, sky conditions, weather conditions and Lat/Long of the Weather Station.

**Note: If an airport is not in the viewing frame, you will not see any weather data. If incorporating this into your map compromises that visual quality, continue to next step.**

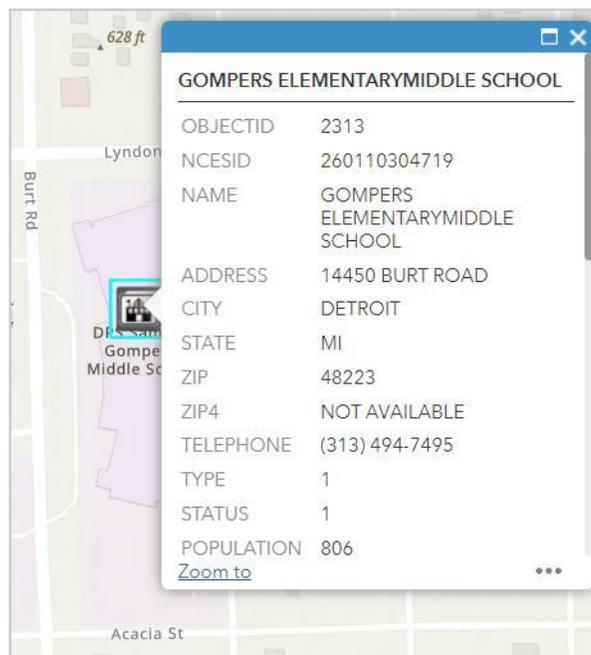
10. If needed, Click on the Weather Widget at the top toolbar.
  - a. Radar Looping: This tool will display real time weather radar data in motion on your map.

**Note: if weather looping is on, dialog boxes will not stay open after clicking on an icon and close immediately due to the constantly updating map.**

11. Select the Homeland Security layer group from the bottom toolbar.
  - a. Turn on all sub-layers incorporating vulnerable populations:

- i. Education (Public & Private Schools, Colleges & Universities)
- ii. Emergency Services (Fire Stations and American Red Cross Facilities)
- iii. Government & Military (Local Public Services, Military Bases, Prisons)
- iv. Public Health (Hospitals and Nursing Homes)

**Note: Not all locations have information when clicking on the icon. To better view location information for a specific entity, open the attribute table and all records with information within the viewing frame will appear.**



12. Click on the ERG Widget and follow these steps:



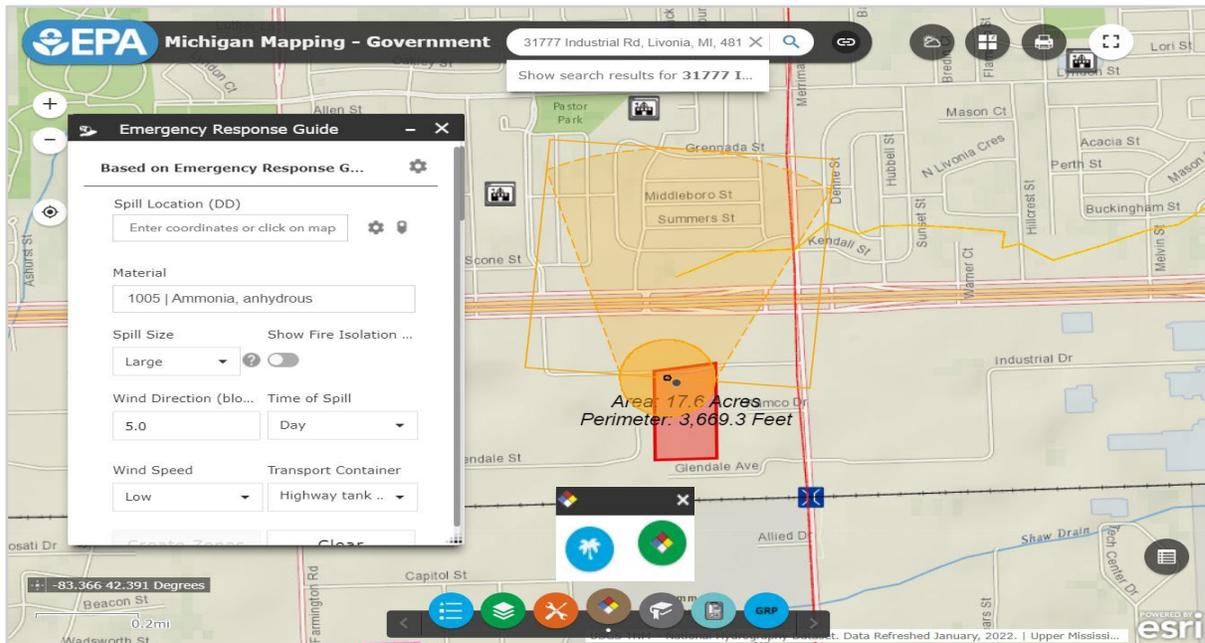
- a. Click on the “Draw a Spill Location” and then click a point on the map near the release location.
- b. Select “Calculate By” and choose Chemical.
- c. Scroll through the list of available Chemicals, if applicable, and select the release material. (Ammonia, Anhydrous was used in example below)

**Disclaimer: Chemical options may temporarily be unavailable therefore the ERG Widget will not execute.**

- d. Select either large or small spill.
- e. Select the Time of Day for the release (Day or Night).
- f. Manually input the direction of the Wind.
- g. Click “Solve.”

**Note: This may take several minutes to execute. If no data is produced, the ERG Widget is out of service. Please email state designated OSC for questions and concerns.**

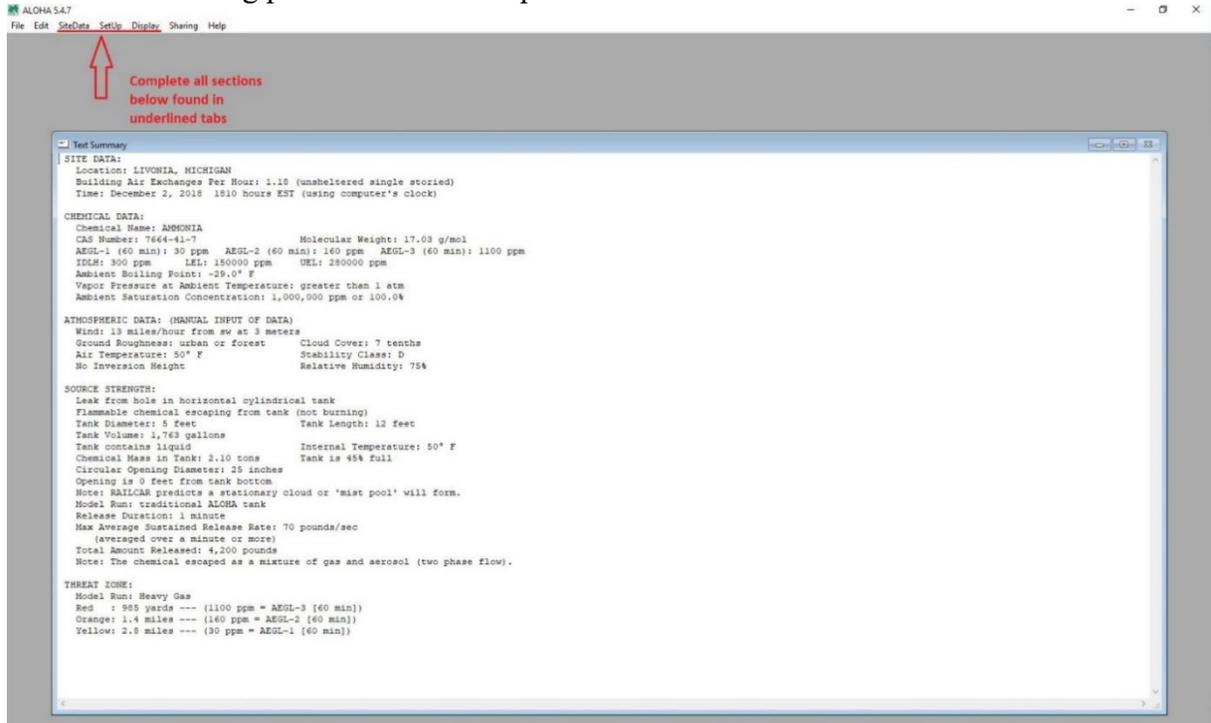
- h. The Downwind Zone and Protection Action Zone box will display. This information can be shared with the IC/Fire Chief to aid in determination of evacuation zones or shelter-in-place orders.
- i. After displaying the Downwind Zone and Protection Action Zone, make sure that the desired vulnerable populations layers are turned on and visible on your map.
- j. Determine evacuation procedure based on vulnerable populations with current weather information and if wind shifted direction.



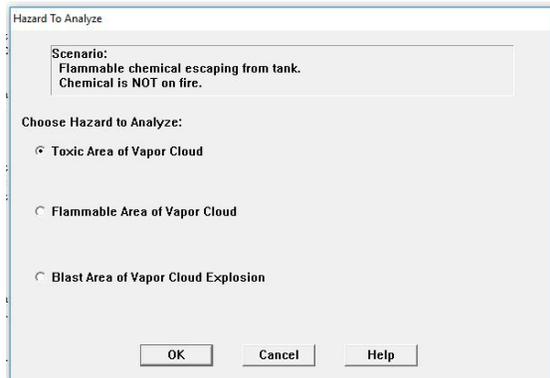
13. Click on the Aloha Widget (in the ER Widget) and follow these steps:

**Note: The ALOHA® software program can be downloaded from the epa.gov site linked here: <https://www.epa.gov/cameo/aloha-software>**

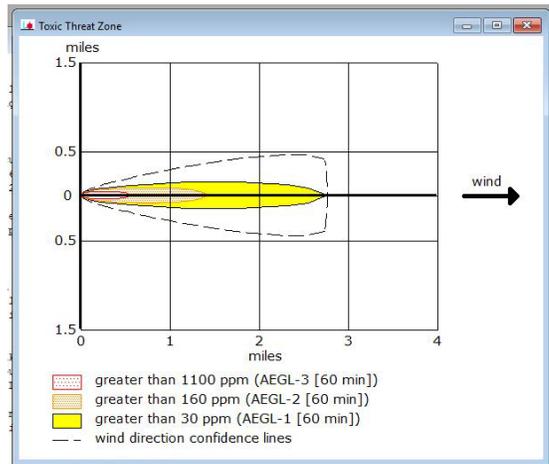
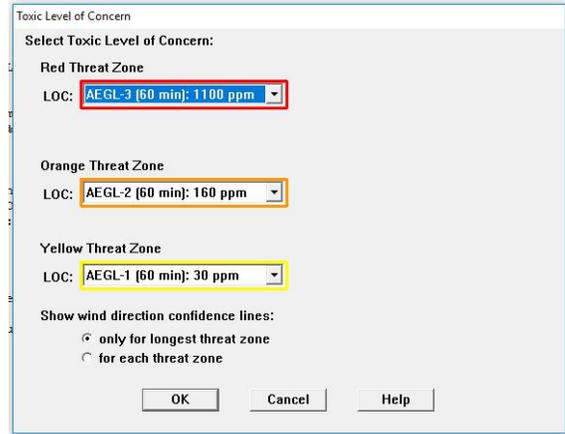
- a. Run an Aloha plume model in the **CAMEO Software Suite** and save the resulting plume model as a “.pas” file.

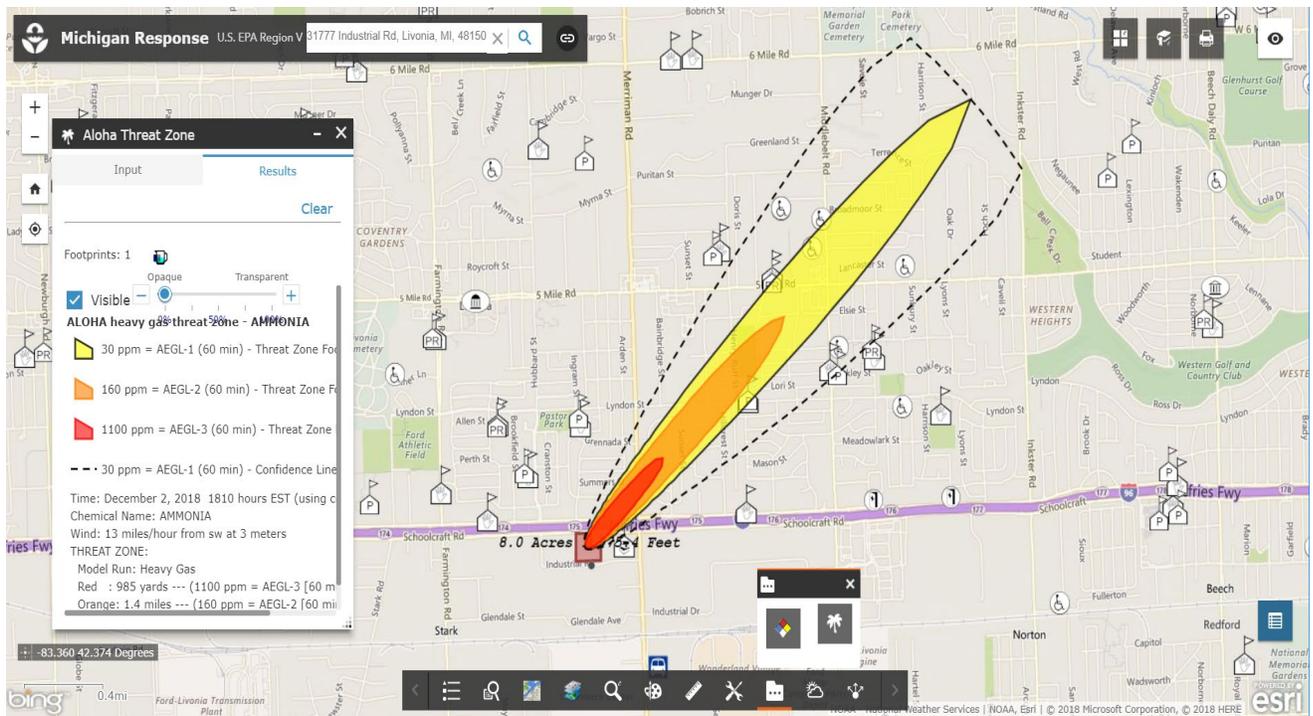


- b. Select “display” tab from ALOHA toolbar and click the option “Threat Zone.”
- c. Following the steps in the ALOHA program, choose how you would like your threat zone to be displayed, in this case the “Toxic Area of Vapor Cloud” option was selected.



- d. Choose your criteria for each color designation for your threat zone from the drop-down menu. Depending on the type of threat or user, zone criteria may differ. Once completed, a vapor cloud threat zone will be developed based on all previously entered site data, chemical data, atmospheric data, source information and threat zone.
- e. Close the toxic threat zone window and select the “File” tab in the upper left corner of the ALOHA program. Scroll to the option “Export Threat Zone” and save as a “.pas” file in a familiar location.
- f. Open the Aloha Threat Zone Widget and click “Choose File” to locate the “.pas” file on your computer.
- g. After it is located, Click the “Point,” and then click a point on the map near the spill location.
- h. If the Project zooms out to the World View, type the location of the spill into the “Find address or place” bar at the top of the Project.
- i. The Plume and the Threat Zone (with AEGL footprints by color) will automatically display on the screen.
- j. After displaying the Plume, make sure that the desired vulnerable populations are turned on.





14. Follow instructions in Step 9 to gather information about vulnerable populations/locations and provide information to incident commander.
15. If a more advanced plume model is needed, IMAAC can be contacted to run a plume model. The plume can be imported into the Mapping Project by utilizing the “Add Data” Widget that is in the Utility Widget icon.

## Reporting Tool Feature



Features and Tools in the Mapping Project are continually updated as new datasets and information become available to the Government Version and Stakeholder Version datasets in the program. This section will outline these new features to provide a brief overview.

**Note: Each reporting tool functions similarly, however the report results differ depending on the type of dataset information that is compiled or selected while generating the report.**

### Export to Excel

The Export to Excel Tool provides the ability to download an Excel Spreadsheet of tabular data based on the screening extent of the map chosen.

### County Fact Sheet Report

The County Fact Sheet Report Tool will generate and compile available County data into a PDF report based on the area of interest chosen.

### FRP Report Planning

The FRP Report Planning Tool is used to identify key features downstream of a FRP (Facility Response Plan) facility location. The tool will generate and compile the FRP Facility location(s) and include the downstream vulnerable populations (i.e. hospitals, schools, nursing homes), environmentally sensitive areas (i.e. wetlands, conservation areas), sensitive or threatened species, drinking water intakes, and waterways, into a PDF report based on the area of interest chosen.

These features are all required information for a facility to include in their Facility Response Plan. The FRP Report Planning Tool allows regulators, FRP facilities, and their contractors to draw a line (with ½ mile buffer) downstream of a facility (from the FRP Planning Distance calculation) to identify the vulnerable populations and sensitive areas downstream.

### Oil Spill Report

The Oil Spill Report Tool generates and compiles all potential oil sources (FRP facilities, oil wells, oil pipelines, RCRA's, Tanks, etc.) based on the area of interest chosen. The resulting PDF report contains contact information for all potential sources.

### Downstream Vulnerable Populations

Downstream Vulnerable Populations Report provides the ability to draw a line downstream (or downwind for an air release) from a location and search for vulnerable populations (such as tribal areas, water intakes, schools, nursing homes, hospitals, sensitive species, critical habitats, and protected areas). The PDF report generated will provide the location information of the downstream vulnerable populations identified based on the area of interest chosen.

### Pipe and Rail Crossings - Downstream Vulnerable Populations

Pipe and Rail Crossings Downstream Vulnerable Populations Report tool generates a Downstream Vulnerable Populations Report, as described in the paragraph above, by using Pipeline Crossing Spill Projections and Railroad Crossing Spill Projections data. Data from both pipes and rails that cross streams in the National Hydrography Dataset (NHD) is analyzed. This is helpful in case of a railway or pipeline emergency.

Each Pipeline Crossing and Railroad Crossing intersects have a Crossing ID number in the database which includes the Company or Owner Name, the type of crossing (stream/river or artificial path), and its location information. These crossing points are then used to create their respective spill projections in miles into the surrounding area. To use this tool, you **must** first use the Crossing ID Filter tool then select the Spill Projection on the present tool. The Downstream Vulnerable Populations report is produced in PDF format based on the Pipeline and/or Railroad crossings identified.

See “Using the Reporting Tools” Section below for more details.

## Crossing ID Filter

The Crossing ID Filter tool does not generate a report by itself. This tool **must** be used to filter out Pipeline Crossing Spill Projections (miles) and/or Railroad Crossing Spill Projections (miles) to better focus on the area of concern. Filter the spill projections by choosing the pipeline or railways designated crossing ID number or by choosing a County of interest. This tool is useful when the data layers “EPA Inland Sensitivity Atlas,” “Pipeline Crossing Spill Projections,” and “Railroad Crossing Spill Projections” are selected and visible on the map extent. Only highlighting the Crossing ID number(s) of interest will keep the map concise and filter out unnecessary spill projection data.

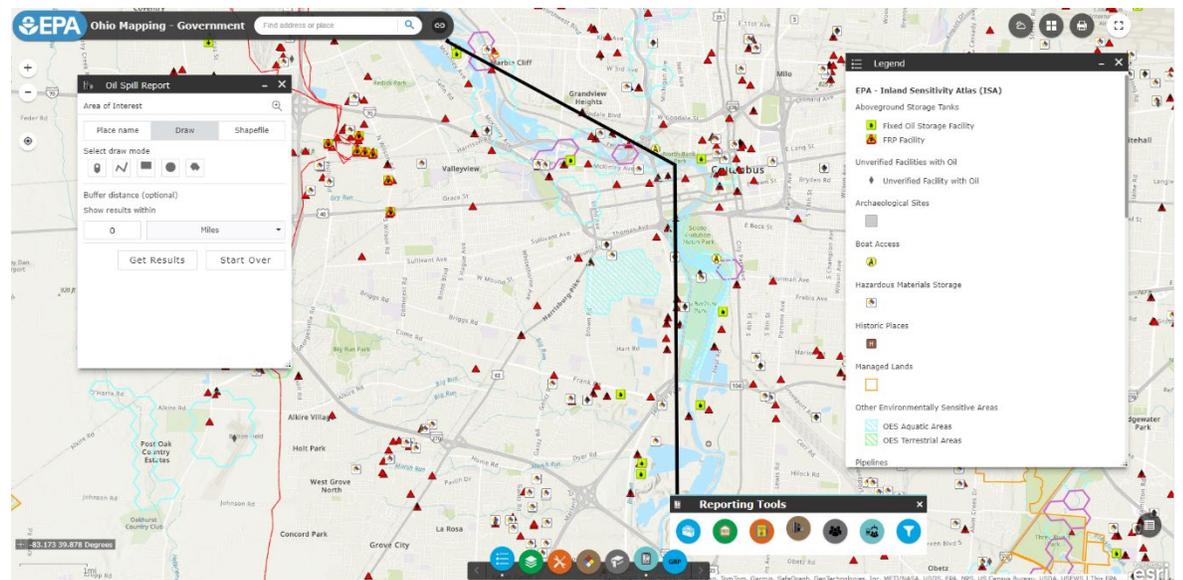
## Using the Reporting Tools

Once your site location, points of interest, or a general map area have been determined, continue to Step 1.

1. Select the “Reporting Tools” tab  at the right end of the bottom toolbar.
2. Choose from: Export to Excel  County Fact Sheet  FRP Report   
Oil Spill Report  Downstream Vulnerable Populations  Pipe and Rail  
Crossings - Downstream Vulnerable Populations Report  or the Crossing ID Filter 

Note: Each report listed above generates unique results. There will be consistent results (i.e., lakes & ponds) that are listed in many reports. It may be necessary to generate multiple types of reports for well-rounded results.

3. You may enter a buffer distance around the location/area of interest for which you would like data to be added to the report.
4. Search for a specific address (Place name > Search for a location) or manually draw an area using the “Draw” tab.
  - a. Point: This draw tool allows you to select a point and search for various layer data within your buffer zone when the specific address is unknown.
  - b. Polyline: This draw tool allows you to search for various data layer information within your buffer distance along a manually drawn line. This function is useful for collecting information along a road or waterway.
  - c. Extent: This drawing tool allows you to create a rectangular, circular or polygon boundary around an area and search for data layer information within your buffer zone. This is useful when searching for information around a plot of land when the address is unknown.

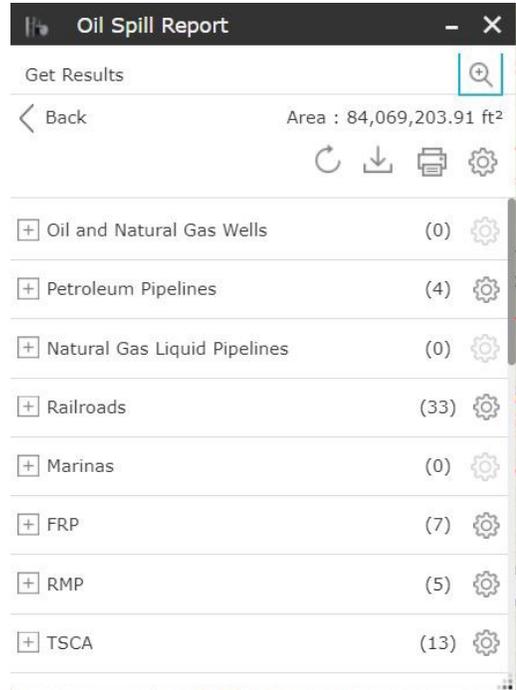


5. Click “Get Results” to view the data layers searched. The results will appear in a list. The number of points containing information within the designated buffer zone will appear on the right end of each data label.
  - a. Click the small gears for any data layer to toggle on/off data fields that are relevant/irrelevant to your report. If you do not wish to display an entire data layer, click the gear, and uncheck specific undesired fields.  
**Note: Some reports may generate an excessive number of data records. Therefore, only selecting specific data layers and fields may be necessary for conciseness.**

6. Click the print icon, choose the page layout you want, and click "Print".

a. **Note: The report will generate a map image displaying the layers visible in the report, this process may take a few minutes. This map will retain the map extent displayed on your screen when you click print.**

7. The summary produced can be saved as a PDF file.



Summary

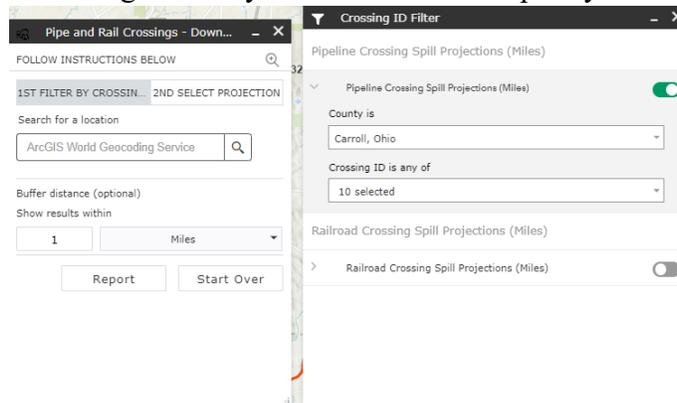
Name	Count	Area(ft²)	Length(ft)
Oil and Natural Gas Wells	0	N/A	N/A
Petroleum Pipelines	4	N/A	24,684.16
Natural Gas Liquid Pipelines	0	N/A	0
Railroads	33	N/A	48,948.56
Marinas	0	N/A	N/A
FRP	7	N/A	N/A
RMP	5	N/A	N/A
TSCA	13	N/A	N/A
NPDES	24	N/A	N/A
RCRA	64	N/A	N/A
TRI	21	N/A	N/A
Biodiesel Plants	0	N/A	N/A
Ethanol Plants	0	N/A	N/A
Gas Stations	1	N/A	N/A
Natural Gas Import/Export Locations	0	N/A	N/A
Natural Gas Processing Plants	0	N/A	N/A
Natural Gas Storage Facilities	0	N/A	N/A
Natural Gas Receipt and Delivery Locations	0	N/A	N/A
Natural Gas Distribution Service Territories	1	61,226,776.06	N/A
Oil Refineries	0	N/A	N/A
Petroleum Pumping Stations	0	N/A	N/A
Oil and Natural Gas Interconnect Maintenance Facilities	0	N/A	N/A
Rivers & Streams	2	N/A	20,080.50
Lakes & Ponds	0	0	N/A

## Reporting Tools Continued

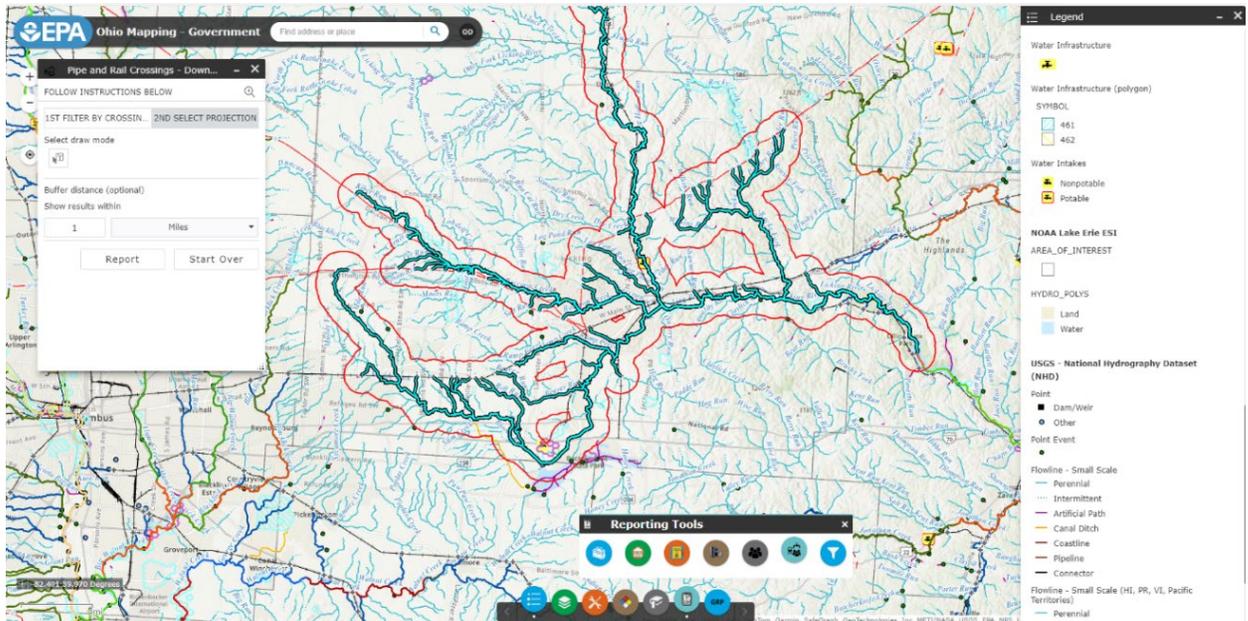


When using the Pipe and Rail Crossings - Downstream Vulnerable Populations Report, there are multiple data layers that may be beneficial to your search in the event of a pipeline or railway emergency. See “Search All Data” section on page 23 for more information.

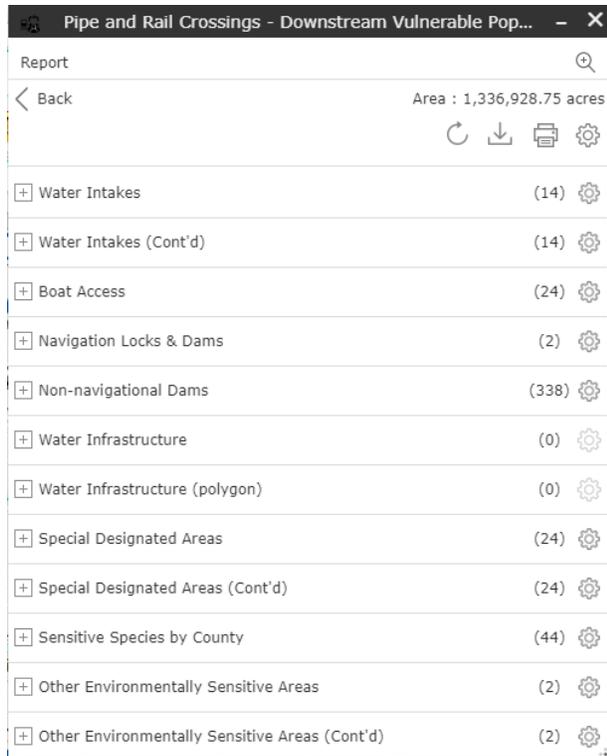
1. Select the USGS National Hydrography Dataset Layers
  - a. Turn on USGS – Nation Hydrography Dataset by checking the blue box.
  - b. Turn on all sub-layers except: Area (Small and Large Scale) and Waterbody (Small and Large Scale).
    - This will highlight waterways and input direction of flow arrows.
    - If any section is grayed out, you must zoom in further on the map to view this feature.
2. Select the EPA Inland Sensitivity Atlas (ISA) Layer:
  - c. Turn on the following sub-layers: Boat Access, Navigational Locks & Dams, Non-navigational Dams, and Marinas
    - This will allow you to easily identify points for response teams to access the waterway and any obstructions such as dams/locks.
  - d. Turn on the following sub-layers: Pipelines, Railroads, Water Intakes, Sensitive Species, and other Environmentally Sensitive Areas.
    - Use the legend tool as a key to easily view identifiers and color designations.
3. Select the Layers: Pipeline Crossing Points, Pipeline Crossing Spill Projections, Railroad Crossing Points, and Railroad Crossing Spill Projections
4. Select State Specific Legacy Data for Surface Drinking Water Intakes Layer. Try using the ‘Search All Data’ tool to find any other applicable data layers.
5. Begin choosing your area of interest in the Pipe and Rail Crossings - Downstream Vulnerable Populations Report tool by first using the “Filter by Crossing ID” step and then the “Select Projection” step.
  - a. 1<sup>st</sup> Filter by Crossing ID: Open the Crossing ID Filter Tool, Click the drop-down arrow to search for a specific crossing ID (pipeline and/or railroad) in the “Crossing ID is any of” selection box. Specify the county.



- i. If the crossing number does not appear in the search box, type it in the “Search” section, click “search more,” select it, and turn on the filter.
- b. 2<sup>nd</sup> Select Projection: Click on “2nd select projection”, then click on Select Draw Mode. Click on “Choose selectable layers” and choose either pipelines or railroads (depending on the applied filter from the previous step). Draw your area of interest (spill projections by miles) on the map using the cursor. Click down to start and hold to drag. Zoom In/Out on the map as needed.



6. Click “Report” to view the identified Downstream Vulnerable Populations from the Pipe and Rail Crossings area searched. The results will appear in a list. The number of points identified within the designated buffer zone will appear on the right end of each data label.



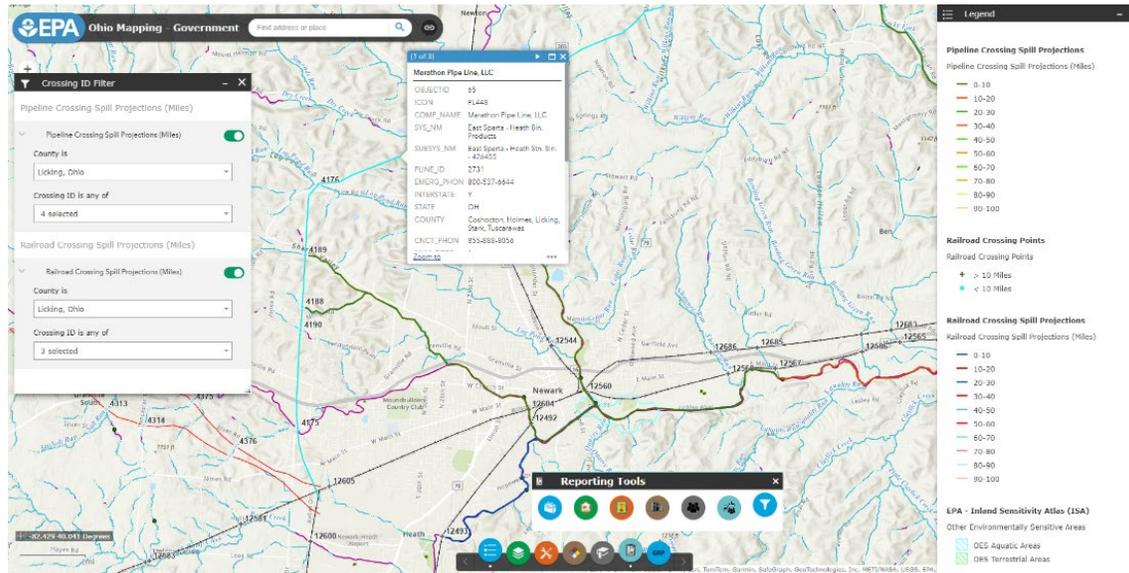
- a. Click the settings widget to change the area results to different units.
7. Click the print icon, choose the page layout you want, and click "Print". The Summary produced can be saved as a PDF file.

Summary

Name	Count	Area(acres)	Length(mi)
Water Intakes	3	N/A	N/A
Water Intakes (Cont'd)	3	N/A	N/A
Boat Access	5	N/A	N/A
Navigation Locks & Dams	0	N/A	N/A
Non-navigational Dams	57	N/A	N/A
Water Infrastructure	0	N/A	N/A
Water Infrastructure (polygon)	0	0	N/A
Special Designated Areas	1	1,110.95	N/A
Special Designated Areas (Cont'd)	1	1,110.95	N/A
Sensitive Species by County	15	651,615.37	N/A
Other Environmentally Sensitive Areas	0	0	N/A
Other Environmentally Sensitive Areas (Cont'd)	0	0	N/A
Historic Places	0	N/A	N/A
Historic Places (polygon)	0	0	N/A
Archaeological Sites	0	0	N/A
Managed Lands	5	8,050.19	N/A
Managed Lands (Cont'd)	5	8,050.19	N/A
Tribal Lands	0	0	N/A
Tribal Lands (Cont'd)	0	0	N/A
Tribal - Off-reservation Trust Lands	0	0	N/A
USFWS - Critical Habitat - Polygon Features	0	0	N/A
USFWS - Critical Habitat - Linear Features	0	N/A	0
FAD-US Protected Areas Database	71	13,194.65	N/A

- a. **Note: The report will attempt to generate a map image displaying the selected layers in the report. This process may take several minutes due to the amount of data in each layer. This image will retain the map extent displayed on your screen when you click print.**

- b. If the map image fails to generate on the report, it is recommended to print your map page separately and attach it to the generated summary report.**
8. The Crossing ID Filter can be used to filter out Railway and Pipeline Spill projections if you know the Crossing ID number(s) of interest or the County of interest. This will keep the map concise and filter out unnecessary projection data. See “Crossing ID Filter” in the “Reporting Tool Feature” section above.

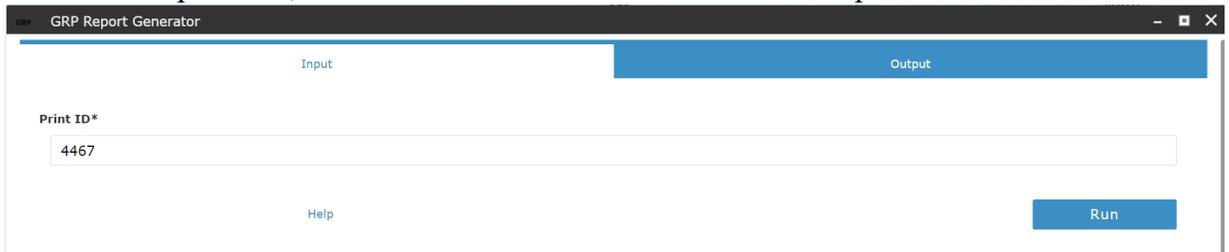


## GRP Report Generator

Response strategies have been prepared in the form of Geographic Response Plans (GRP), sometimes called Geographic Response Strategies (GRS). GRPs are map based planning documents intended to be used as a tool employed by first responders. The GRPs help local responders effectively deploy containment and recovery equipment in the event of a spill to navigable waterways. The GRP Form is completed in ESRI's Survey123 application and instantaneously uploaded into the Mapping Project.

GRPs include information on staging locations downstream of potential sources (railroad, pipeline, and facilities), image(s) of the area for which the GRP was developed, a list of local emergency contacts, equipment required to deploy and maintain the strategy (feet of boom, number of anchors, personnel, etc.), and identification of sensitive natural, cultural, and human use features. To access a specific report, follow the directions below.

1. Select "Search All Data" tab  from the toolbar at the bottom of the screen.
  - a. Select the box titled "GRP Response Strategy Survey" to activate layer.
2. Search for location by address or zoom to desired area.
3. Click on a GRP Icon to display its data.
  - a. Write down or copy the "Print ID" number. You will insert this number into the GRP Report Generator.
  - b. Exit out of dialog box once you have the Print ID number.
4. Click on GRP Report Generator in the Toolbar.
5. Under the "Input" Tab, Insert the desired Print ID number from step 3.



6. Click "Run" to search for the desired Response Plan.
7. Once the search is complete, an external link to the GRP Report file will be available under the "Output" Tab.
8. Click on the link. The GRP Report or Survey will now be displayed in a Word document (online).
9. You may now download or print this information to use in the event of an emergency response.