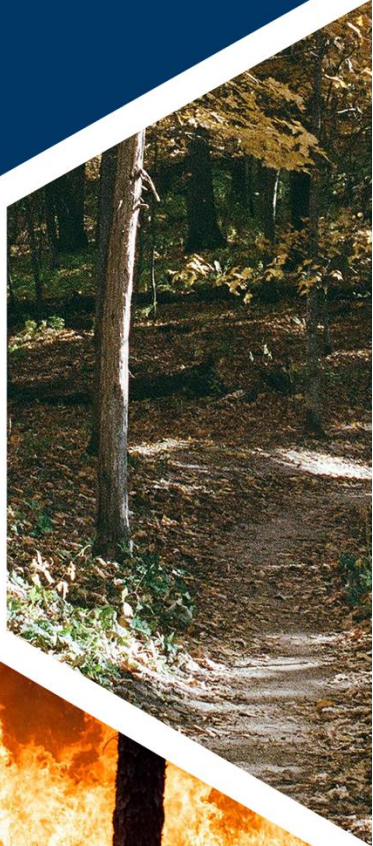


**m** DEPARTMENT OF  
NATURAL RESOURCES

**WILDFIRE RISK ASSESSMENT PORTAL**

**ADVANCED**  
USER GUIDE



# Contents

<b>Preface</b> .....	2
Compatibility.....	3
Support .....	3
Feedback.....	3
<b>Overview</b> .....	3
<b>Using the Advanced Viewer</b> .....	3
Navigation.....	4
Map Themes .....	6
Layers.....	6
Basemaps.....	6
Reference.....	6
Map Tools.....	7
Identify.....	7
Measure.....	8
Swipe.....	8
Print .....	9
Areas of Interest .....	11
Managing Areas of Interest .....	11
Creating an Area of Interest on the Map.....	11
Create an Area of Interest from Shapefiles .....	11
Generating a Summary Report .....	12
Exporting Data .....	12

## Preface

The Minnesota Wildfire Risk Assessment Portal’s Risk Explorer Advanced Viewer can be found at <https://minnesotawildfirerisk.com/> by selecting “Launch Risk Explorer.” Registration for the Advanced Viewer and approval by an administrator are required. For a simpler, smaller set of Risk Explorer features, please use the Basic Viewer instead.

## Compatibility

MN WRAP is accessible using Microsoft Edge, Mozilla Firefox, Google Chrome, or Apple Safari. It is recommended that Chrome be used with the application to optimize performance.

The minimum recommended screen resolution is 1024 x 768.

## Support

The **Support** page is accessible from the homepage and provides access to documentation, reference information, and help desk contact information.

## Feedback

The Minnesota Department of Natural Resources invites users to provide feedback on MN WRAP. Please provide your comments and suggestions for improvement via the **Contact** form.

## Overview

The MN Wildfire Risk Assessment Portal Risk Explorer is the primary mechanism for Minnesota Department of Natural Resources to deploy wildfire risk information and create awareness about wildfire issues across the state. This application is tailored to support specific workflow and information requirements for the public, local community groups, private landowners, government officials, hazard-mitigation planners, and wildland fire managers. The application also provides the baseline information needed to support mitigation and prevention efforts across the state.

- For more information about MN WRAP, visit the **Support** page.
- For more information about the functionalities and capabilities of the Basic Viewer and the Advanced Viewer, click the **Learn More about Basic vs. Advanced** link in the **Choose a Viewer** modal displayed once **Launch Risk Explorer** is selected.

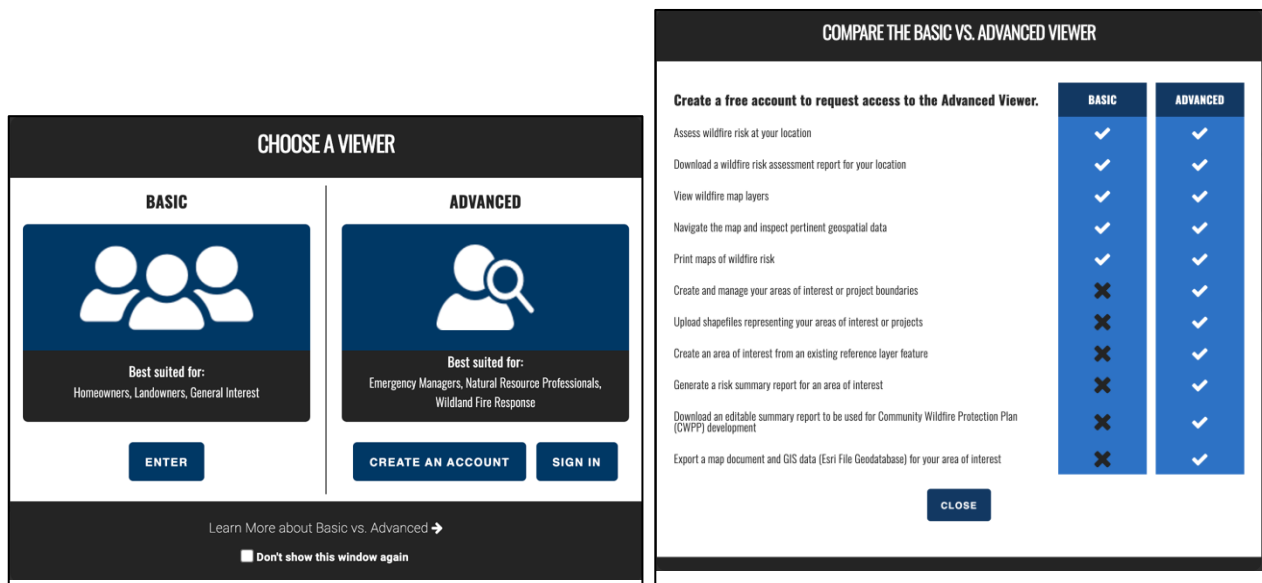


Figure 1. Comparing the Basic and the Advanced Viewers

## Accessing the Advanced Viewer

To access MN WRAP's Risk Explorer Advanced:

1. Open a compatible browser and navigate to <https://minnesotawildfirerisk.com/>.
2. Select **Launch Risk Explorer**
  - a. If not yet registered, click **Create an Account** under **Advanced Viewer**. You can also click the **Create an Account** link located in the top right corner in the Basic Viewer. Fill out the form and click **Create Account** to submit your request. You will then receive an email notification that your registration has been submitted and that an administrator has been notified. Once approved, you will receive an email notifying your access has been approved.
  - b. If already registered, click **Sign In** under the **Advanced Viewer** to enter your email address and password.

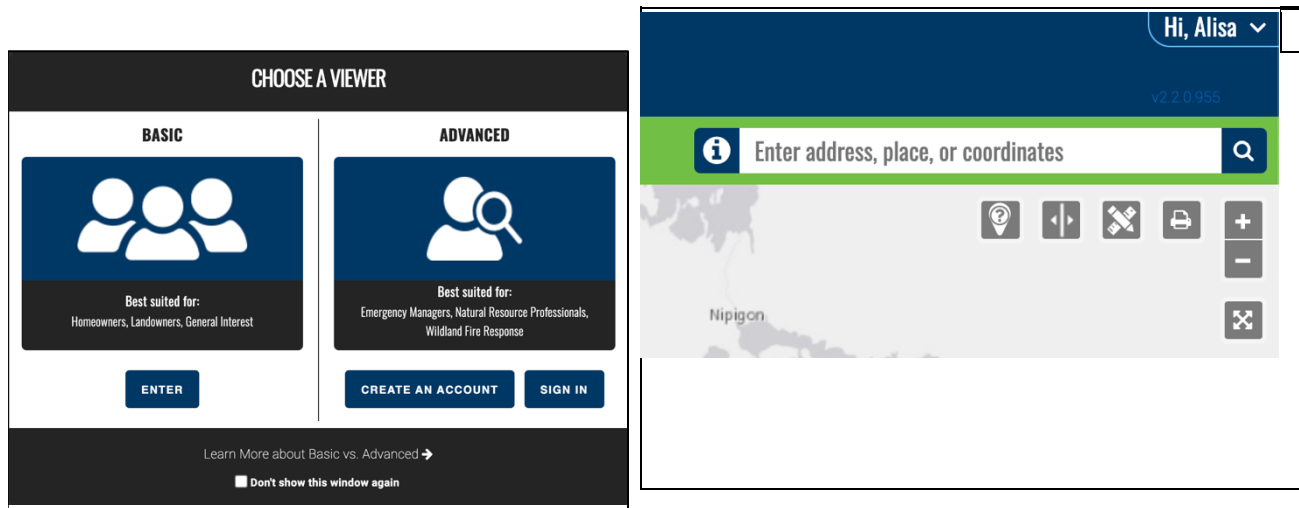


Figure 2. Accessing the Viewers

3. Click **Hi, [user name]** at the top right of the screen to:
  - a. Access additional edit your account details and change your password or update your information.
  - b. Sign out from the application.

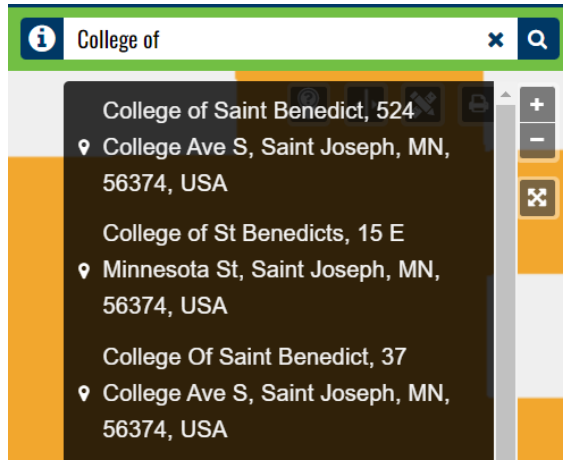
## Using the Advanced Viewer

The **Advanced Viewer** is a web-mapping application designed to support the community wildfire protection planning needs of government officials, hazard-mitigation planners and wildland fire professionals. This application contains advanced functionality and additional map themes as compared to the Basic Viewer. The key features of this application include the capability to define an Areas of Interest, generate a detailed risk summary report, and export and download wildfire risk GIS data. Access to the Advanced Viewer requires a valid user account from MN DNR.

### Navigation

There are several ways to navigate the map. You can zoom to a specific location by entering an address or you can manually zoom around the map using the zoom buttons or your mouse.

1. **Navigating to a Specific Location:**



Use the address bar at the top of the screen to enter an address, location, or latitude/longitude coordinates. All places matching that location will be listed. Select from the results to zoom the map to that location.

These following formats are acceptable for latitude and longitude searches: Decimal Degrees, Degrees Minutes Seconds, and Degrees Decimal Minutes:

- -94.07 45.61
- 94.07W, 45.61N
- 94.07W 45.61N
- W94.07, N45.61
- X: -94 Y: 45.6
- -94.07, 45.61
- 94°07'.83533" W 45°61'22.37643" N
- -94°07'42.83533",45°61'22.37643"

To type the degree symbol (°)

- PC: [Alt + 0176] or [Alt + 248]
- Mac: [Option + Shift + 8]

## 2. Zooming and Panning:

**Manually navigate** by using the mouse or the navigation controls provided by the application:

- Navigation controls:



Zoom In/Out



Full extent

- Mouse controls:
  - \_ Pan: Click and drag map
  - \_ Incremental Zoom: Use mouse center scroll wheel
  - \_ Zoom in and center: Double click the map

## Map Themes

The Map Themes button allows you to view key maps spatial data layers associated with the Minnesota Wildfire Risk Assessment, basemaps, and reference data layers. They are organized in the left toolbar as follows:

### Layers

The maps in this group are considered active map layers because you can only view one layer at a time – the one that is "active" or selected. To view and "active" layer, simply click on it to select it.

Click  for a description of each layer.

Adjust the transparency of the layers group by using the transparency slider at the top of the group.

Turn layers on and off by clicking on the layer name or using the activate switch at the far right of the transparency slider.


Legends for all layers are available at the bottom of the page.

### Basemaps

You can view different basemaps with the wildfire risk layers.

Several options exist:

- Light Gray
- Aerial
- Streets
- Topographic

To view a basemap, simply click on it to select it. Click  for a description of each basemap.

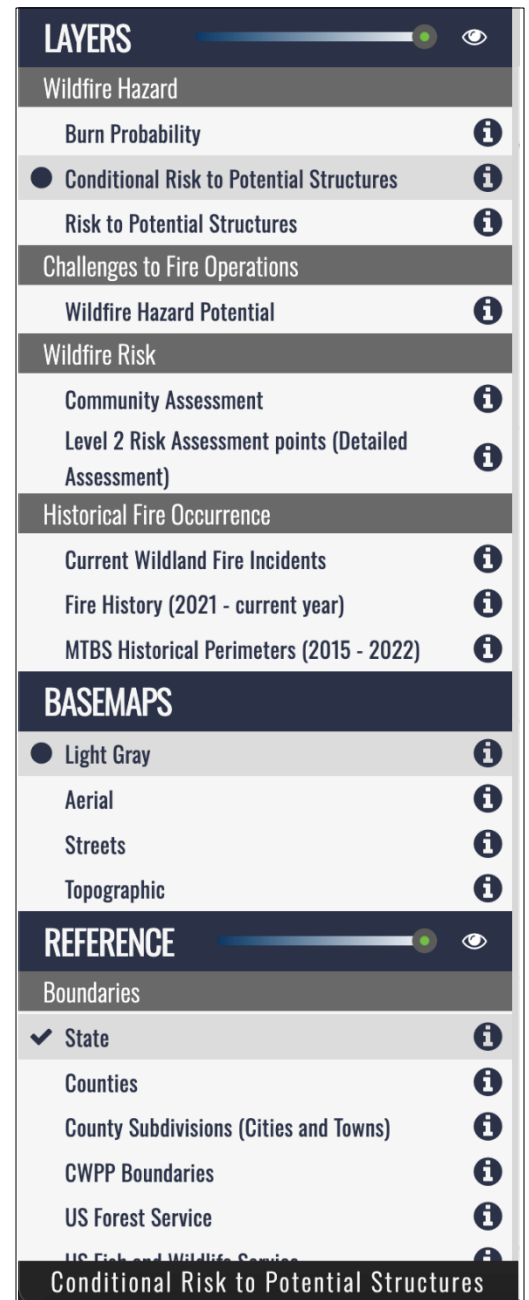
### Reference

The purpose of this group of layers is to provide supporting reference information and context for viewing in conjunction with the risk assessment layers. Reference layers may include administrative boundaries, public facilities, information related to wildfire suppression, mitigation and prevention, and other natural resource layers.

Click  for a description of each layer.

Adjust the transparency of the reference layers group by using the transparency slider at the top of the group.

Turn each reference layer on and off by clicking on the layer name. You can also hide all layers by using the activate switch at the far right of the transparency slider.



## Map Tools

Tools are provided that allow you to view and explore the map layers in more detail. These include:



**Identify** - use this tool to show the values of several map layers for a specific user defined location.



**Measure** – use this tool to measure distance or area on the map.



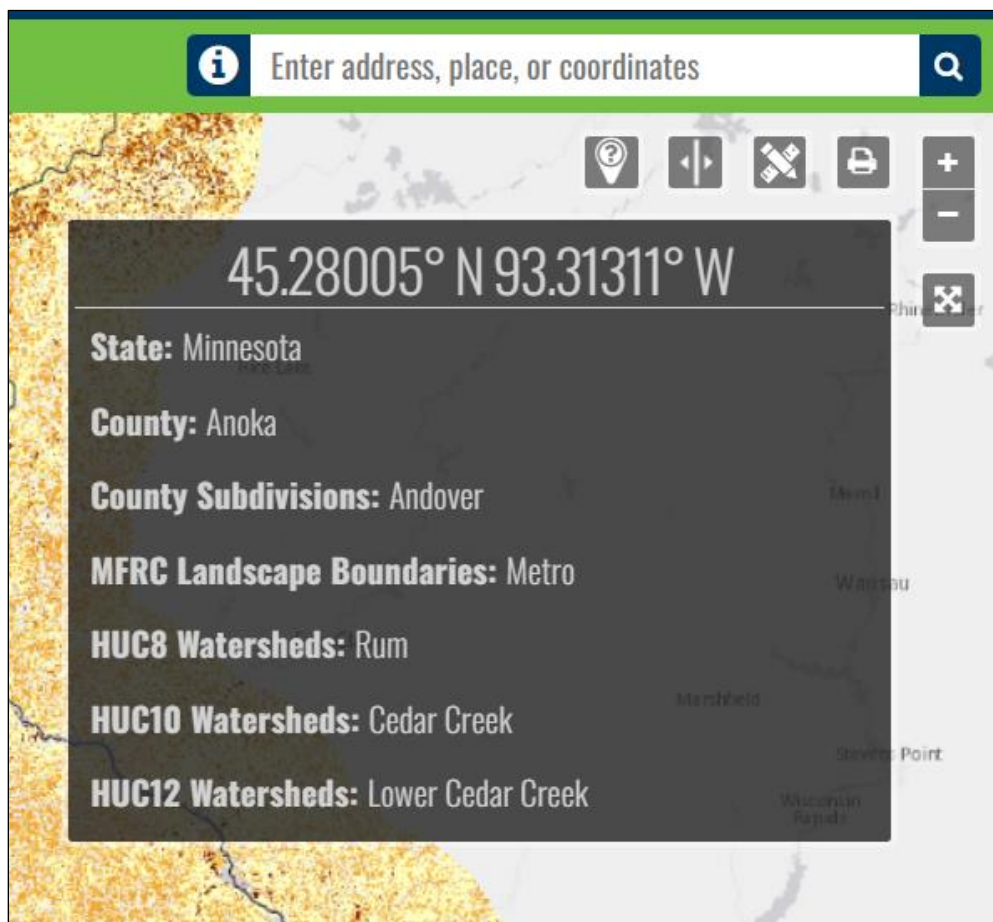
**Swipe** – use this tool to visually compare two layers by choosing a layer to swipe over the top of the active layer.



**Print** – use this tool to create a simple map matching the contents of your browser.

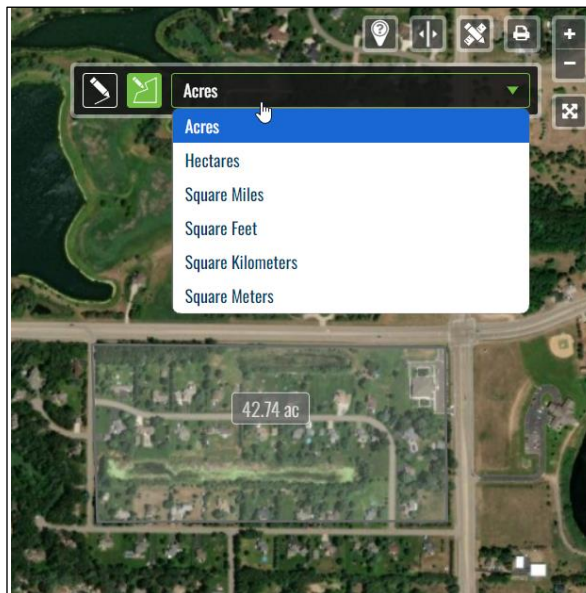
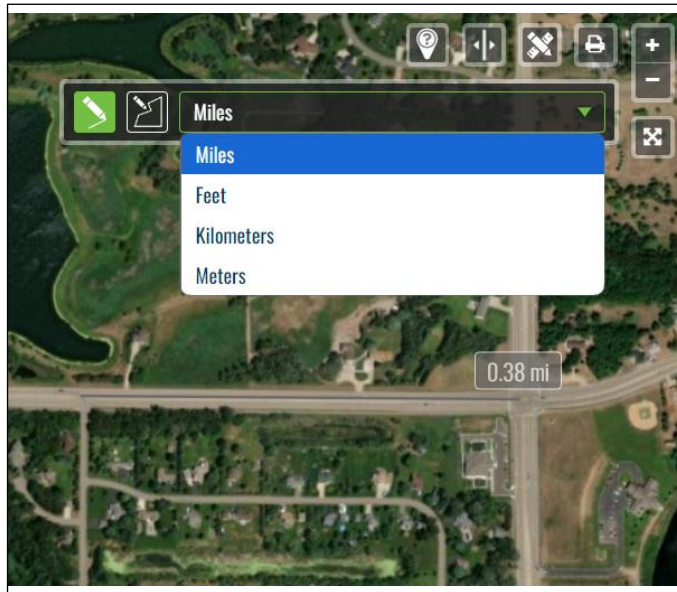
## Identify

Click the Identify button to activate the tool. Click in a location of your interest in the map. Information displayed by the tool includes attributes from the layers listed under the Historical Wildfire Ignitions group and the majority of the reference layers for the selected location. Click the identify button to dismiss the window and disable the tool.



## Measure

Click the Measure button to activate the tool. The measurement tools allow you to measure distance or area in the map. You may specify units using the dropdown menu. Units may be specified before or after measuring. Click the measure button to dismiss the window and disable the tool.

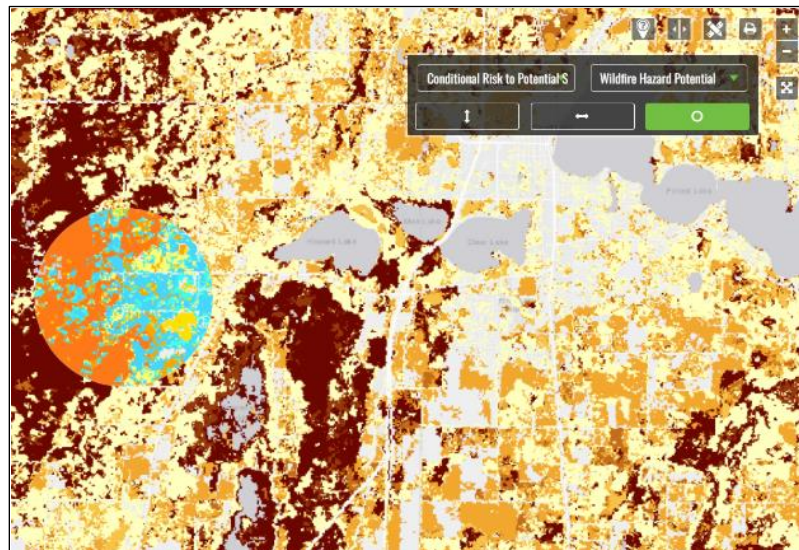
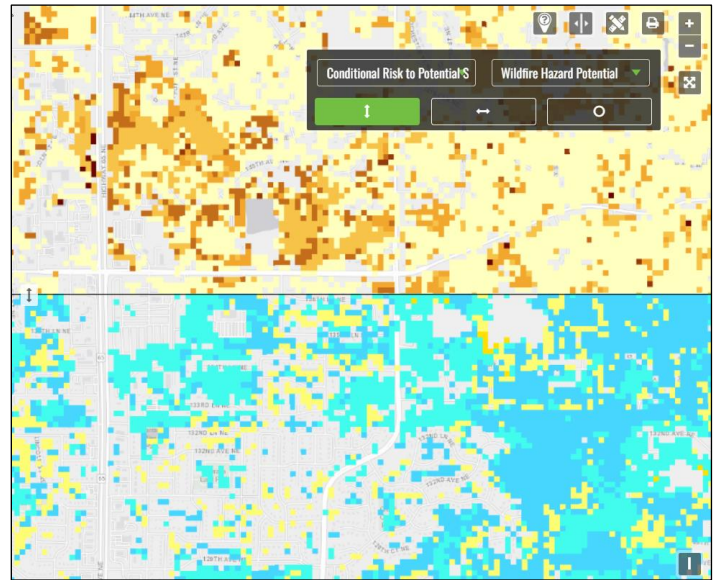
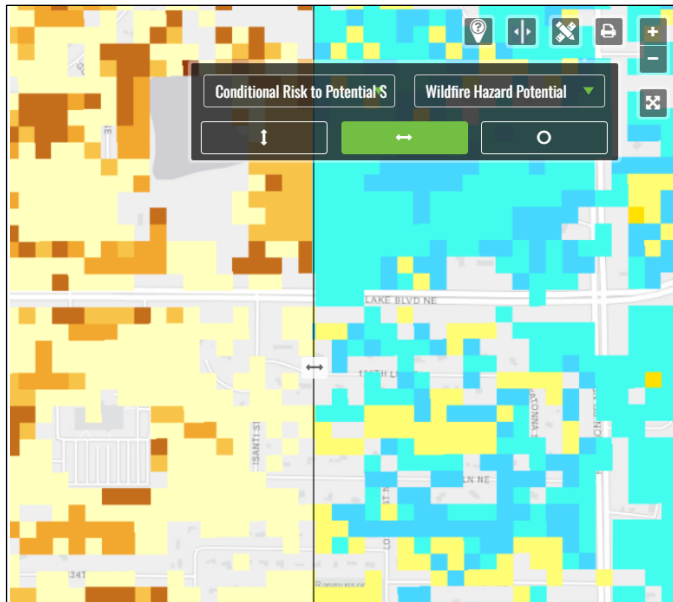


## Swipe

Click the Swipe button to activate the tool. The Swipe tool can be used to compare one layer with another. The “bottom” layer is the active layer selected in Map Themes. You can also use the Tool dropdown to change select a different layer.



The “top” layer will be used as the “swipe” layer. The widget provides horizontal, vertical, and scope viewing modes. Click the swipe button to dismiss the window and disable swiping.



### Print

The Print tool allows you to create a simple map matching the contents of the map. Click the Print button to open the Print Map window. You can enter a Title and Subtitle to customize it and/or click print to proceed.

**title**

Nipigon

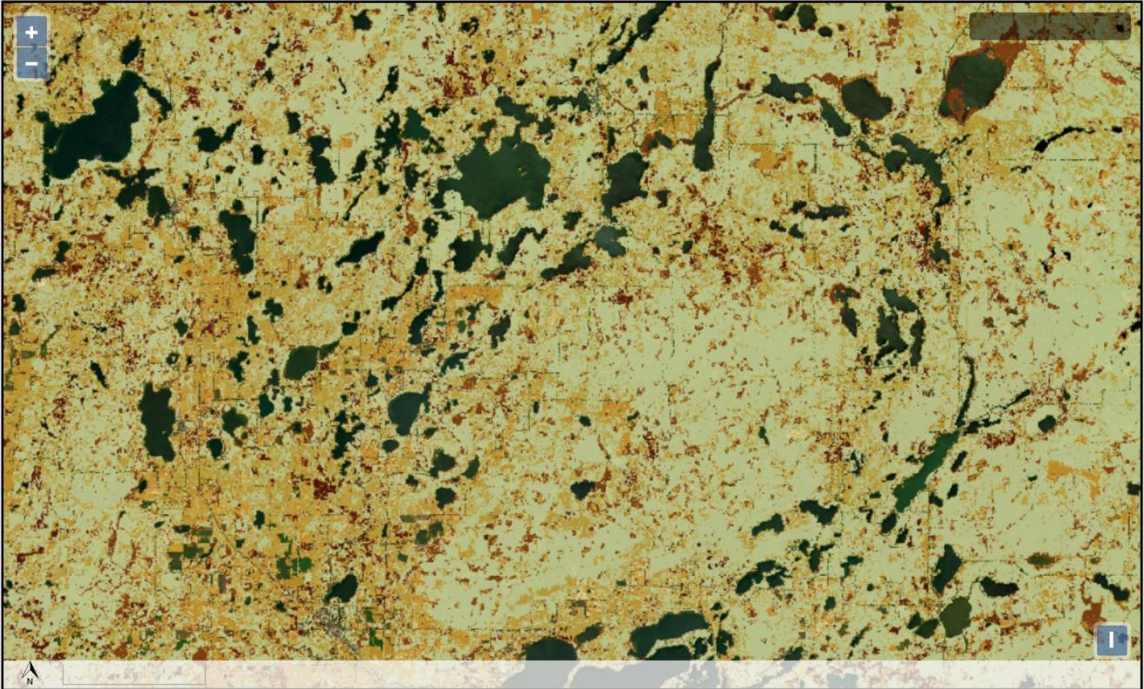
**subtitle**

er Bay

PRINT MAP

The next window provides capabilities to zoom and pan the map prior to printing. Note the legend will always appear on the second page. Once you are ready to print the map click continue.


Continue



Report Created:  
9/9/2024 - 8:23:46 AM

The user assumes the entire risk related to their use of the MINNESOTA WILDFIRE RISK EXPLORER and either the published or derived products from these data. The MINNESOTA WILDFIRE RISK EXPLORER is providing these data "as is" and disclaims all warranties, whether expressed or implied, including (without limitation) any implied warranties of merchantability or fitness for a particular purpose. The Minnesota DNR will not be liable to you or to any third party for any direct, indirect, incidental, consequential, special or exemplary damages or lost profit resulting from any use or misuse of these data.

MINNESOTA WILDFIRE RISK EXPLORER  
<https://wrap.minnesotawildfirerisk.com>



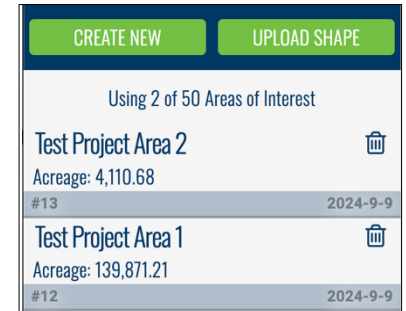
## Areas of Interest

The Areas of Interest tool allows you to create, delete, zoom to, and select an area for which to generate a risk summary report and/or export all related data. Only one Area of Interest (AOI) can be selected or “active” at a time. Multiple areas can be created and saved across sessions. The user’s AOIs are stored on the server and associated with the user’s login credentials, making them accessible from any location.

## Managing Areas of Interest

The Areas of Interest dialog lists the areas you have created and allows you to create new or delete existing AOIs. This dialog can stay open while you work with the map or hidden (click the Areas of Interest button) to facilitate navigation. Clicking on an AOI will automatically zoom, center, and display it on the map. Clicking the trash icon will delete the AOI. Note you will not be prompted for a confirmation upon deletion.

AOIs have a maximum size limit of 10,000,000 acres.



CREATE NEW		UPLOAD SHAPE	
Using 2 of 50 Areas of Interest			
Test Project Area 2			🗑️
Acreage: 4,110.68			
#13			2024-9-9
Test Project Area 1			🗑️
Acreage: 139,871.21			
#12			2024-9-9

## Creating an Area of Interest on the Map

Press the **Create New** button on the Areas of Interest widget and follow the steps listed below:

### 1. Name your AOI:

Select a name to associate to your AOI. This is the name that will appear in the Areas of Interest widget each time you access the **Advanced Viewer** with your login credentials. Note duplicates are allowed, so that multiple AOIs can have the same name.

### 2. Select the method you will use to define your Areas of Interest:

This section of the dialog allows you draw and define an area of interest by drawing a point, line or polygon, or select a reference layer and a geometry from the dropdown list. If you select a reference layer, the map will zoom automatically to that area and the boundary of the corresponding geometry will be drawn. Multi-part polygons can be used to create AOIs.

### 3. Apply buffer distance:

Use this option if you want to define a buffer around the AOI defined in the step above.

### 4. Save Area of Interest:

Click **Create** to save the map will zoom automatically to that area and the boundary of the corresponding geometry will be drawn. The new AOI and its area in acres displays in the Areas of Interest widget.



**NEW AREA OF INTEREST**

AOI Name\*  
name

**Define Area Boundary**

[By Custom Shape](#) [By Reference Layer](#)

Choose Point, Line, or Polygon to create your Area of Interest. Supports multi-part features.

**POINT** **LINE** **POLYGON**

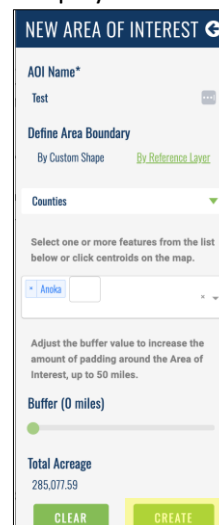
Adjust the buffer value to increase the amount of padding around the Area of Interest, up to 50 miles.

Buffer (0 miles)

Total Acreage

---

**CLEAR** **CREATE**



**NEW AREA OF INTEREST**

AOI Name\*  
Test

**Define Area Boundary**

[By Custom Shape](#) [By Reference Layer](#)

Counties

Select one or more features from the list below or click centroids on the map.

Asoka

Adjust the buffer value to increase the amount of padding around the Area of Interest, up to 50 miles.

Buffer (0 miles)

Total Acreage

285,077.59

**CLEAR** **CREATE**

## Create an Area of Interest from Shapefiles

You can also create an Area of Interest using the Upload Shape tool. This tool allows you to upload an existing shapefile from your computer

Shapefiles must be uploaded as a ZIP file that contains, at minimum, the following file types: SHP, DBF, and PRJ. Shapefiles may have multiple polygons. In this case, individual AOIs will be created for each polygon. Multi-part polygons are supported by the application.

To use a shapefile to create your AOI, follow these steps:

1. Press the **Upload Shape** button and navigate to the appropriate .zip file.
2. Select the file and click **Open**.

### Generating a Summary Report

The Generate Summary Report tool will generate a comprehensive risk summary report for the active AOI, i.e. you must define an Area of Interest before you can create a report.

Follow the steps provided below to generate a summary report:

1. Click an AOI name (e.g. Test Project Area) in the Areas of Interest widget to activate it.
2. Enter appropriate email recipient for the report.
3. Click **Generate Summary Report**. The following message displays *“The summary is being generated and will be emailed when complete”*.



Once submitted your request, you can continue to use the **Advanced Viewer** application or exit the application without interrupting the report generation. Note that this is a very comprehensive report and, accordingly, it may take a few minutes to complete. The recipient of the report will receive and email with a download link once the report is ready.

The report is provided in Microsoft Word format (.docx) and includes statistics, maps, and charts of all key risk assessment input and output datasets. This affords flexibility to makes changes and easy integration with other documents.

### Exporting Data

The **Export Data** tool creates a .zip file with the GIS data for the active Area of Interest, i.e. you must define an AOI before creating the .zip file. The zip file contains an ArcGIS Pro project with all the key input and output assessment datasets.

Follow the steps provided below to export the data for an AOI:

1. Click an AOI name (e.g. Test Project Area) in the Areas of Interest widget to active it.
2. Enter appropriate email recipient for the report.
3. Click **Export Data**. The following message displays: *“The data export is being generated and will be emailed when complete”*.

Once submitted your request, you can continue to use the **Advanced Viewer** application or exit the application without interrupting the report generation.

The recipient of the report will receive and email with a download link once the report is ready.