SOUTHERN
GROUP OF STATE
FORESTERS

WILDFIRE RISK ASSESSMENT PORTAL

ADVANCED
USER GUIDE

Contents

Preface

The Southern Wildfire Risk Assessment Portal's Risk Explorer Advanced Viewer can be found at https://southernwildfirerisk.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

SouthWRAP is accessible using Microsoft Internet Explorer (11 or higher), 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 Southern Group of State Foresters invites users to provide feedback on SouthWRAP. Please provide your comments and suggestions for improvement via the **Contact** form.

Overview

The Southern Wildfire Risk Assessment Portal Risk Explorer is the primary mechanism for the Southern Group of State Foresters to deploy wildfire risk information and create awareness about wildfire issues across the South. 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 SouthWRAP, visit the **About** 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.
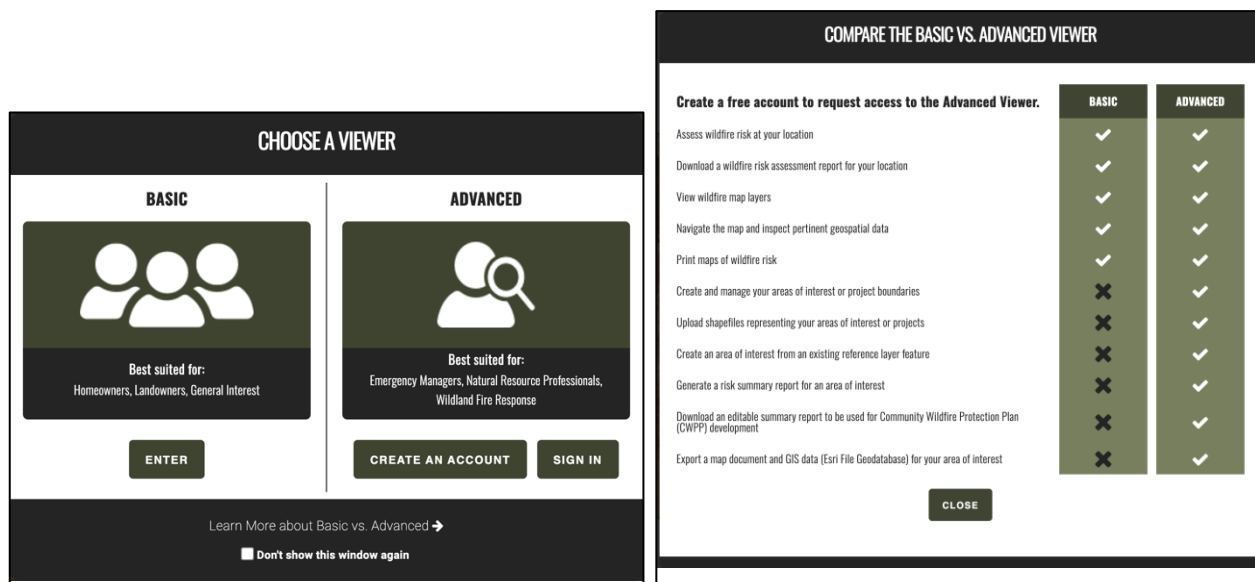

Figure 1. Comparing the Basic and the Advanced Viewers

Accessing the Advanced Viewer

To access SouthWRAP's Risk Explorer Advanced Viewer:

1. Open a compatible browser and navigate to https://southernwildfirerisk.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.
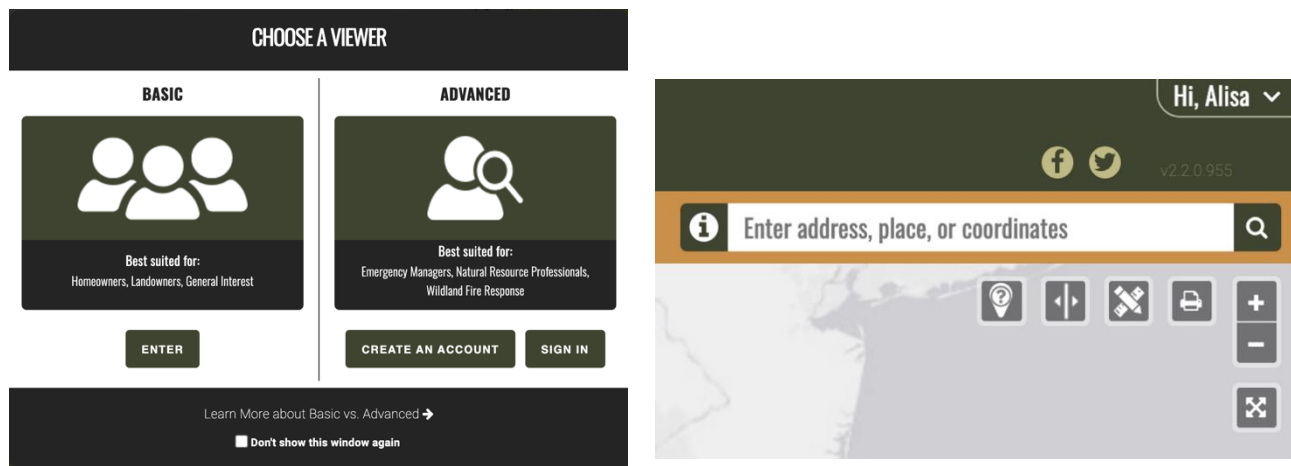   b. If already registered, click **Sign In** under the **Advanced Viewer** to enter your email address and password.

Figure 2. Accessing the Viewers

3. Click **Hi, [user name]** at the top right of the screen to:
   a. Access additional information, 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 a project area, 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 the Southern Group of State Foresters.

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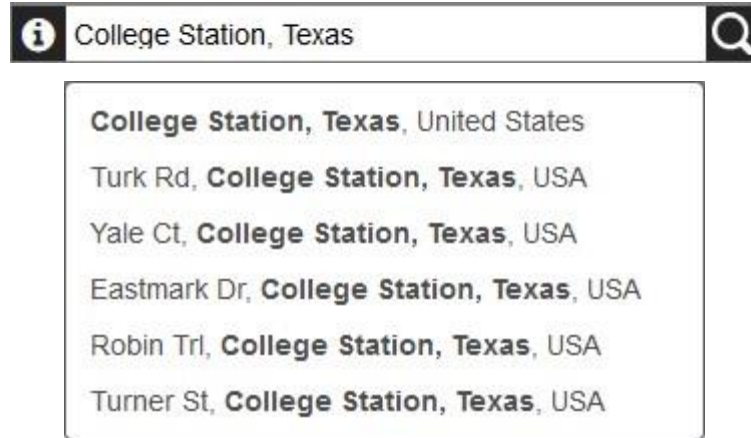
Use the address bar at the top of the screen to enter an address, location, or latitude/longitude coordinates. All places matching that location will be listed. Select from the results to zoom the map to that location.

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

- 33.7036, -112.1780
- 33.7036 N -112.1780 W
- 33° 42.22' N, 112° 10.68' W
- 33° 42' 12.96" N 112° 10' 40.8" W
- 33 42' 12.96" N 112 10' 40.8" W
- -112.1780 W, 33.7036 N
- 112° 10' 40.8" W 33° 42' 12.96" N
- 112 10' 40.8" W 33 42' 12.96" N

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 Southern 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 an "active" layer, simply click on it to select it.

Click ❶ for a description of each layer.

Adjust the transparency of the layers group by using the 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 opacity slider.

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

Basemaps

You can view different basemaps with the wildfire risk layers.

Several options exist:

- ESRI Light Gray
- ESRI Topo
- Bing Aerial
- Bing Streets

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

Adjust the opacity of the reference layers group by using the opacity 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 opacity slider.

Activate switch

Opacity slider
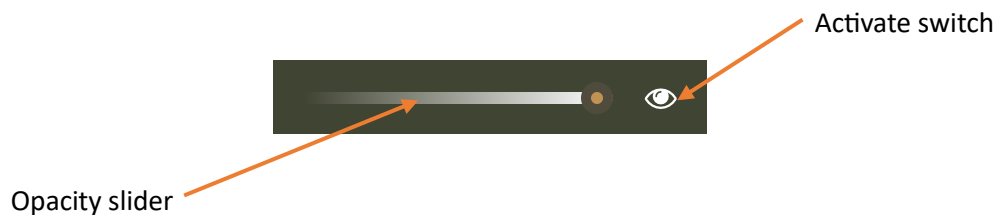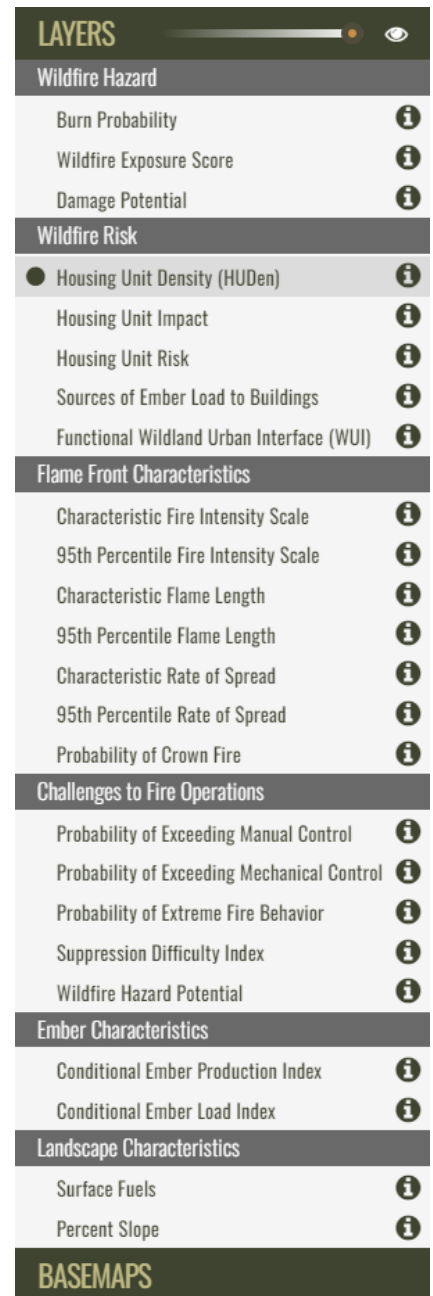
Map Tools

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. Double click to end a line/path or close a polygon.

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 on a location of your interest on the map. Information displayed by the tool includes attributes from the majority of the reference layers for the selected location. Click the identify button to dismiss the window and disable the tool.
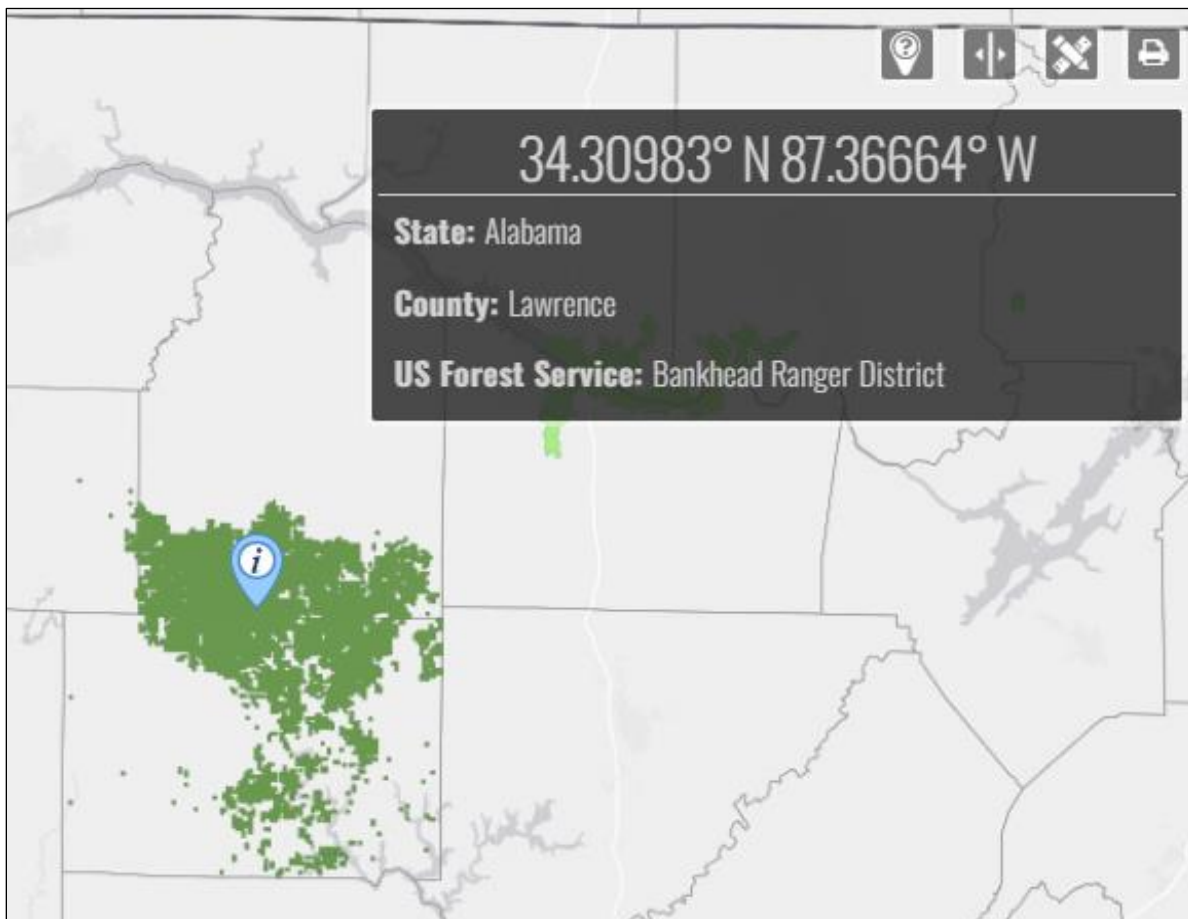

Figure 3. Identify Tool

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. Double click to end the line/path or close the polygon. Click the measure button to dismiss the window and disable the tool.
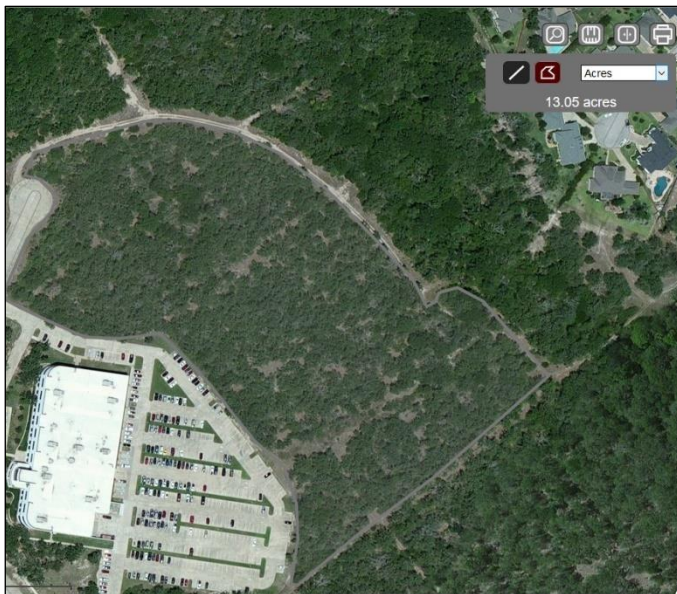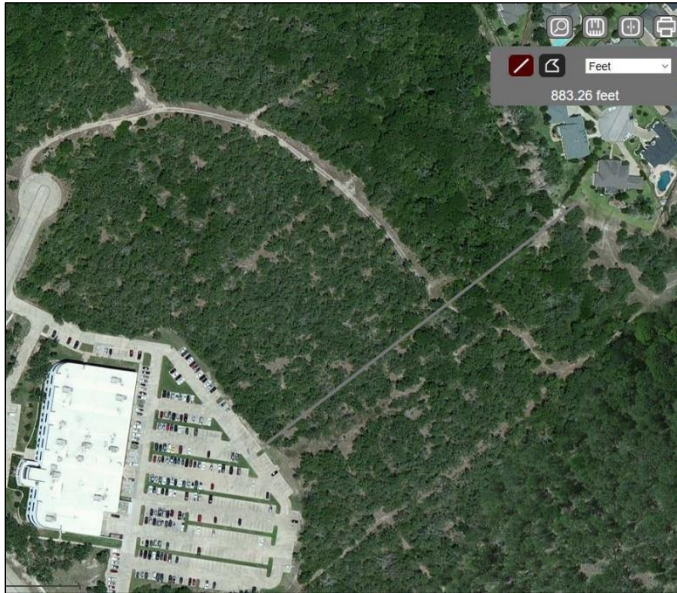

Figure 4. Measurement Tool

Swipe

Click the Swipe button to activate the tool. The Swipe tool lets you compare two layers. Use the Tool dropdown menus to select layers of your interest. The layer you choose in the right dropdown will be used as the "swipe" layer. You can view the layers in both horizontal and vertical modes. To turn off the tool, click the Swipe button again.
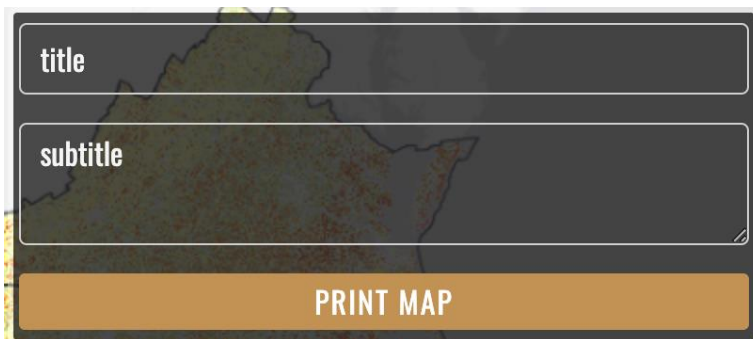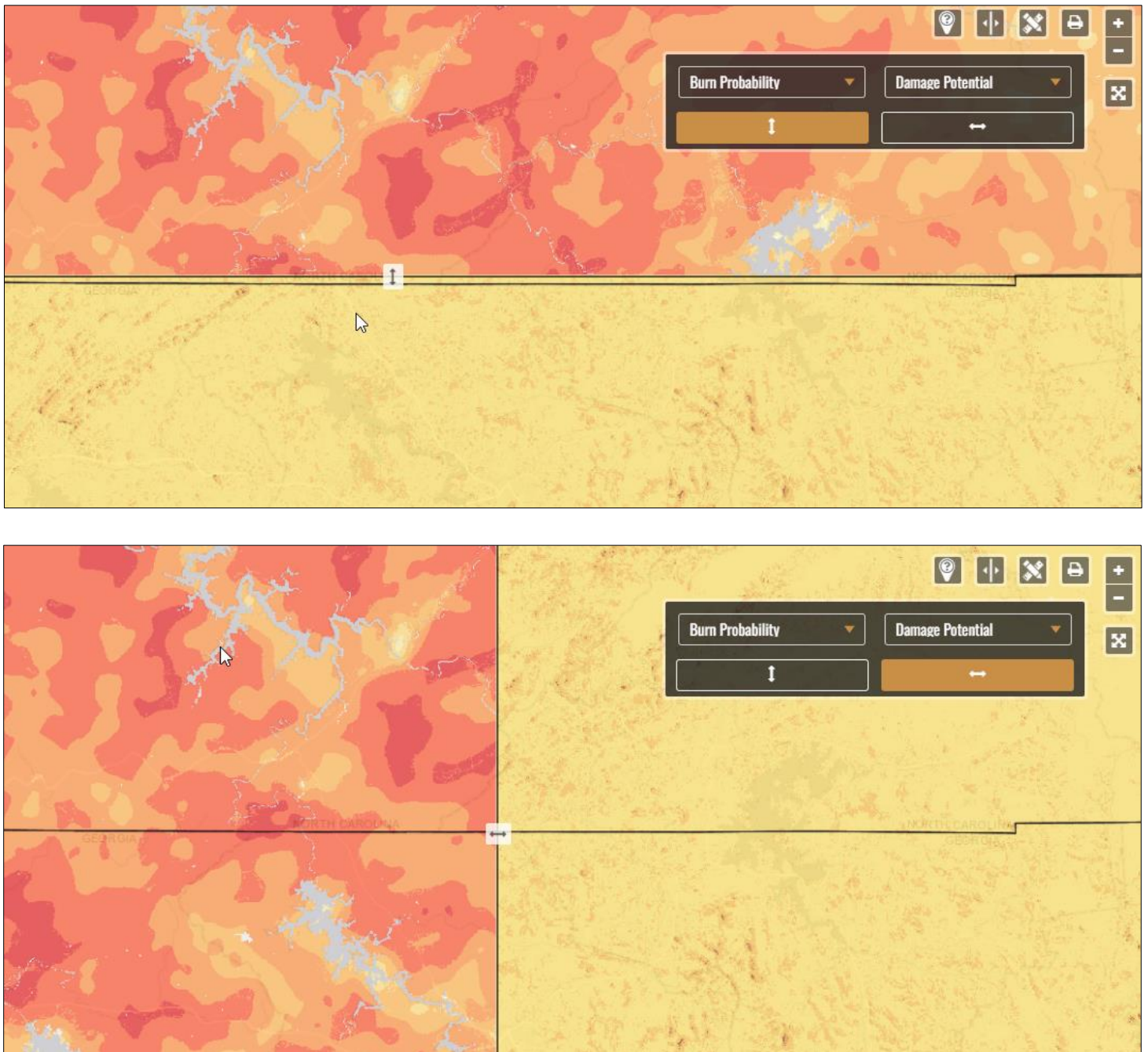

Figure 5. Swipe Tool

Print

The Print tool allows you to create a simple map matching the contents of the map as seen on the monitor. 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.
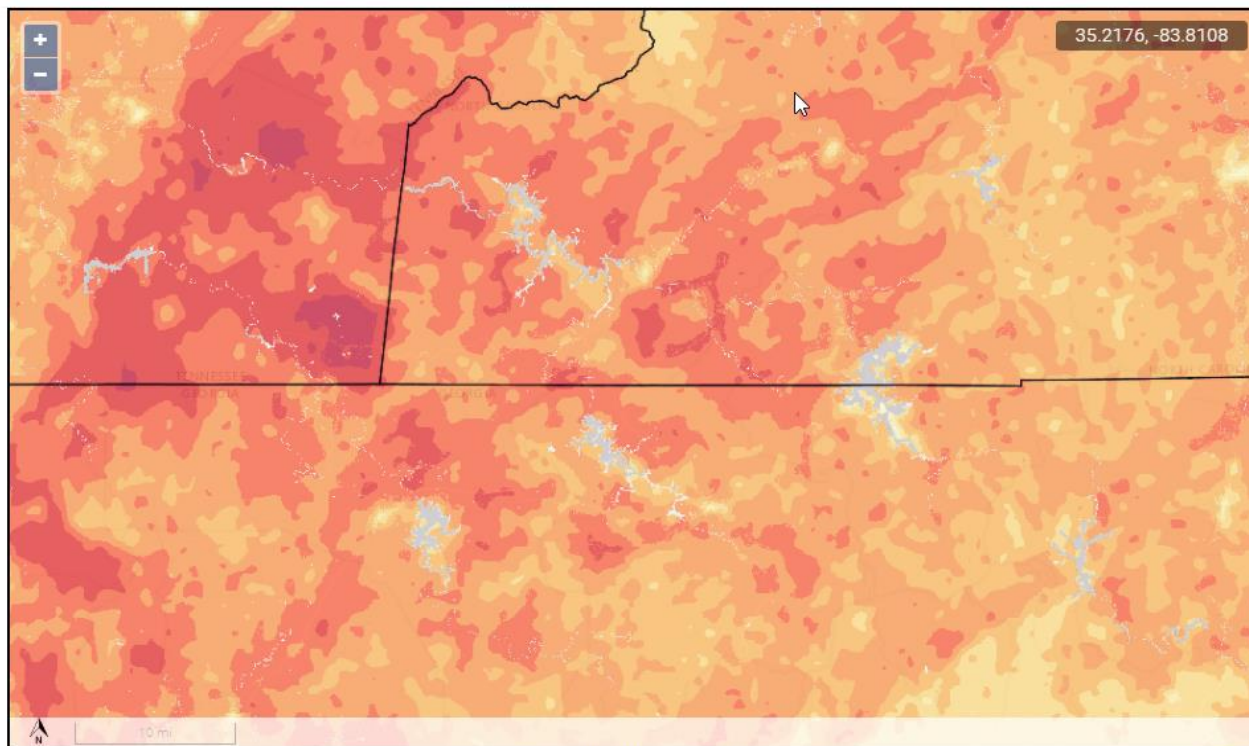

Figure 6. Print Map Tool Title & Definition

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.

Figure 7. Print Map Tool Preview

Project Areas

The Project Areas tool allows you to create, delete, zoom to, and select a project area which enables you to generate a risk summary report and/or export all related data. Only one Project Area can be selected or "active" at a time. Multiple areas can be created and saved across sessions. The user's Project Areas are stored on the server and associated with the user's login credentials, making them accessible from any location.

Managing Project Areas

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

Project Areas have a maximum size limit of 200,000 square miles.

Creating Project Areas on the Map

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

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

2. **Select the method you will use to define your Project Area:**
   This section of the dialog allows you to draw and define a project area 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 project areas.

3. **Apply buffer distance**:
   Use this option if you want to define a buffer around the Project Area defined in the step above.

4. **Save Project Area**:
   Click **Create** to save the map. The viewer will automatically zoom to that area and the boundary of the corresponding geometry will be drawn. The new Project Area (displayed in acres) is displayed in the Project Areas widget.
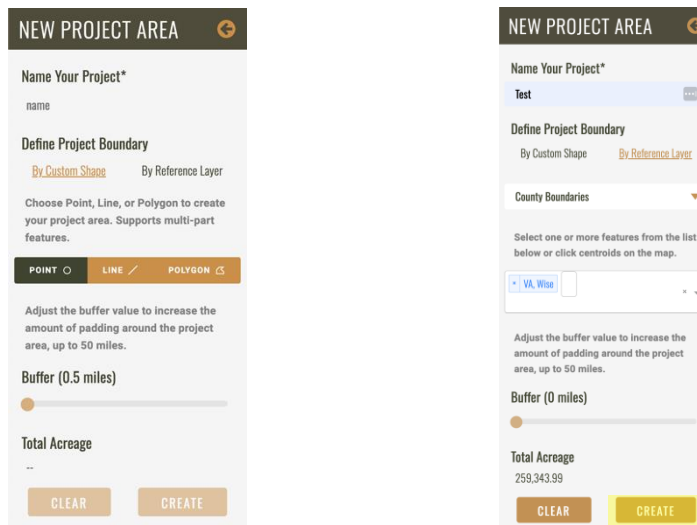

Figure 8. New Project Area

Create a Project Area from Shapefiles

You can also create a Project Area 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 Project Areas will be created for each polygon. Multi-part polygons are supported by the application.

To use a shapefile to create your Project Area, 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 Project Area, i.e. you must define a Project Area before you can create a report.

Follow the steps provided below to generate a summary report:

1. Click a Project Area name (e.g. Test Project Area) in the Project Areas widget to activate it.
2. Enter appropriate email recipient for the report.
3. Click **Generate Summary Report** 📝 , then click submit ➤ . The following message displays "*The summary is being generated and will be emailed when complete*".

Once your report has been requested, 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 an 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 make changes and easy integration with other documents.

Exporting Data

The **Export Data** tool creates a .zip file with the GIS data for the active Project Area, i.e. you must define a Project Area before creating the .zip file. The zip file contains an ArcMap project (MXD) and an Esri ArcGIS file geodatabase with all the key input and output assessment datasets. It is highly encouraged to use the MXD since, for your convenience, it will display all the information by honoring SouthWRAP symbology.

Follow the steps provided below to export the data for a Project Area:

1. Click a Project Area name (e.g. Test Project Area) in the Project Areas widget to active it.
2. Enter appropriate email recipient for the report and click on the send icon.
3. Click **Export Data** 📄 , then click submit ➤ . The following message displays: "*The data export for the Project Area 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 an email with a download link once the report is ready.

The zip file contains an ArcGIS Pro project (APRX) and an Esri ArcGIS file geodatabase with all the key input and output assessment datasets. It is highly encouraged to use the APRX since, for your convenience, it will display all the information by honoring SouthWRAP symbology.

What's Your Risk?

The "**What's Your Risk?**" tool provides the capability to select a location on the map and retrieve the potential fire intensity for that location. It is intended to inform homeowners and business owners of the impending risk for their location based on surrounding conditions.

Risk is derived from the **95th Percentile Fire Intensity Scale**, which identifies areas of significant fire behavior potential of the "average worst" 95th Percentile Fire Intensity Scale at the flaming front of the fire. This is influenced by fuel hazards, high to extreme weather conditions, and topography.

The information is summarized for your review by using a quarter-mile buffer because risk from wildfire is dependent on the conditions surrounding a location, not just the conditions at the specific site.

95th Percentile Fire Intensity Scale does not incorporate historical occurrence information. It only evaluates the potential fire behavior for an area, regardless of any fires that occurred on that site in the past. This additional information allows mitigation planners to quickly identify areas where dangerous fire behavior potential exists in relation to homes and other valued assets.

Use the Search or map navigation tools to identify a specific location of interest, such as your home or place of work. The tool will provide a measure of the wildfire risk associated within the general vicinity of your location and highlight how critical it is for you to implement wildfire mitigation strategies to better protect your home and property. A link - **Learn more about reducing your risk** – is also provided to connect you with the Southern Group of State Foresters website where you can find detailed information about the actions you can take to mitigate the risk to your property.

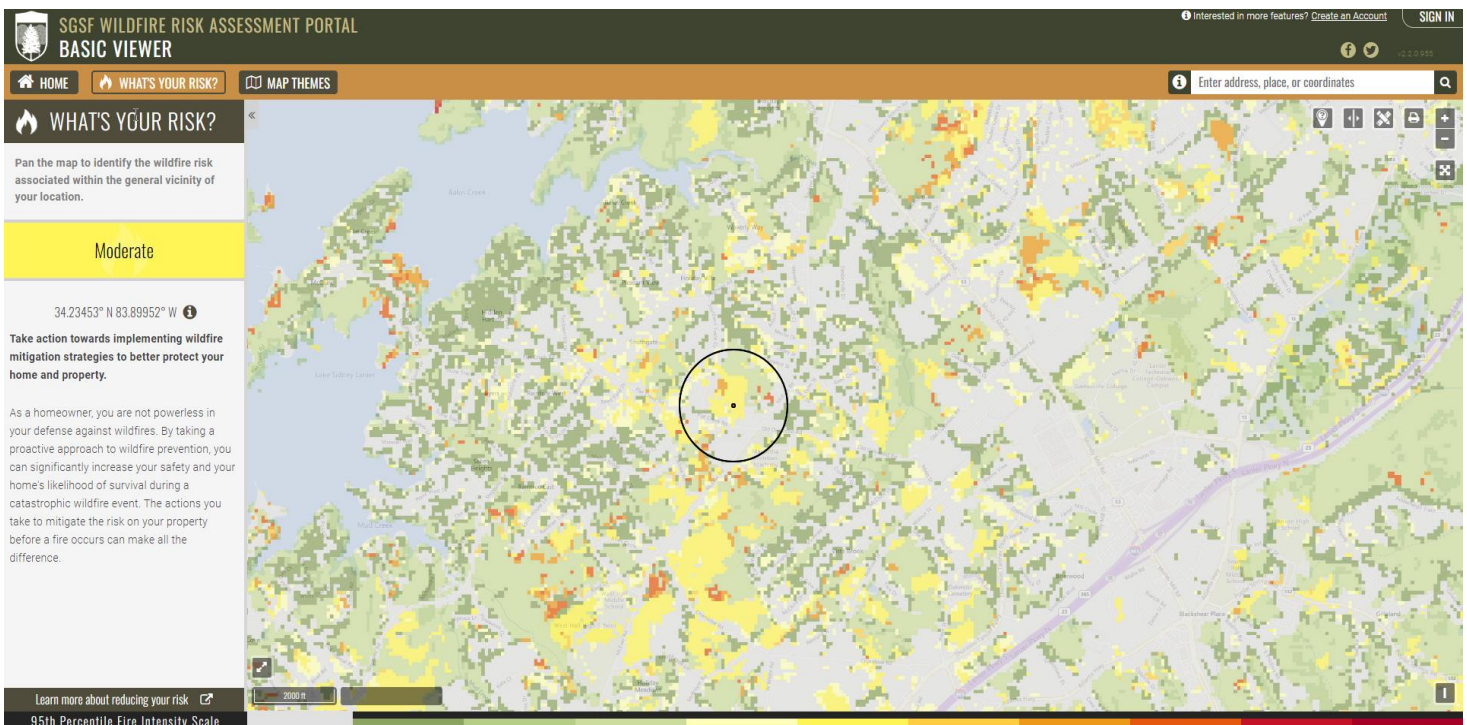_Note_: It is highly recommended to contact your local Wildland Urban Interface Coordinator within your Area or Region to obtain more detailed information.

Figure 9. What's Your Risk Tool