Lesson 8 – Situation Assessment and Map Images
Estimated time to complete: 30 minutes

In this lesson, you will work from the **Incidents** tab and explore the Situation Map to:

- Gather information about the fire area.
- View feature information.
- View Predictive Services Significant Fire Potential.
- Draw a planning area.
- Create and Share Bookmarks (bookmarked map images)
- Capture a map image
- Create a landscape-oriented report for an image.
- Upload an image.

Lesson 10 will explore the Situation map in greater depth when you collect information to support development of Relative Risk and Organization Assessments. This lesson contains ten exercises.

The Situation Map

The Situation map is available from the **Incidents** tab and is the primary map used to support and inform development of a decision document. It is one of many map displays available from WFDSS (others include the Analysis, Intelligence, Landscape, Unit, or analysis Results maps). The Situation map can be accessed three ways;

- by selecting the Assess Situation button above the incidents list,
- by clicking the Situation tab while working within the incident perspective, or
- by clicking the small map icon on the right side of your screen while working within the incident perspective.

From the Situation map, you can navigate to all aspects of the incident perspective. The map and map layers provide valuable situation assessment information; they inform the Relative Risk Assessment and development of Incident Objectives, Course of Action, and Management Action Points (you will explore map layers in greater depth in Lesson 10 when you gather information to support your relative risk assessment).

The Situation map displays in its own window, with two subtabs in the left pane: Map, and Info.

- The **Map** tab allows access to the various map layers you've enabled for viewing in your system preferences (Lesson 6). These layers are collectively called the LayerSwitcher.
- The **Info** tab allows you to capture a map image for use in a decision document and view:
  - Specific information about a point or feature on the map ,
  - A fire danger rating graph from the reporting weather station closest to the incident or point you select on the map.

- o   A smoke dispersion forecast for the incident or point you select on the map.
- o   Strategic objectives applicable to a point you select on the map and the area around it based on the radius value you've chosen.
- o   A current fire weather planning forecast for the fire weather zone that contains the incident's point of origin or a point you select on the map.
- o   Predictive Services Significant Fire Potential for the Predictive Services Area that the incident latitude and longitude is located in.
- o   NWS-sourced hourly weather forecast data for the incidents latitude and longitude or for any point you select on the map.
- o   LANDFIRE data for a point on the landscape (using the WFDSS default landscape data source or the source that's been selected for the incident on the Incident Information page).
- o   Image Capture is available so that you can capture the perimeter as it changes

Using the Map Layers to Gather Information about the Fire Area

From the Situation Map and the **Map** tab, you can view the map layers to get an idea of what types of critical values are located in the area of the fire. You customized your map displays in Lesson 6 and determined which map layers are available for viewing. Visit that lesson for help with setting your system preferences, if needed.

To gather information about the fire area:

1. Navigate to the Situation Map and the **Map** tab for your training incident.
2. Open the **Incident** > **Fire Perimeter** layers by selecting the ⊞ before each of them. Select the checkbox before the perimeter you drew in Lesson 7.
3. Open the **Analysis** map layers. These layers contain analysis shapes as well as results for fire behavior analysis runs that analysts have accepted as complete.
4. Open **Fire Environment and Safety** map layers. View planning areas for active, nearby incidents, active MODIS, VIIRS, and retardant & aquatic avoidance areas, if they exist. These layers can provide valuable situational awareness and are useful to both analysts and fire managers. You can also view Estimated Ground Evacuation Time for the area of your training fire. Has there been any active MODIS in the past year in your fire area? How long would it take (estimate) to evacuate an injured firefighter from the incident and transport them to a hospital?
5. Open the **Disturbance History** map layers to determine if there is record of historical fires or Fuel Treatments in the area. What year did they occur?
6. Open **Fire Weather and Danger** map layers. What is the current Significant Fire Potential for the fire area? Is it expected to change in the next seven days? Are there any RAWS in the fire area?
7. Open the **Boundaries** map layers. Which agency has jurisdiction in the area of the fire? How about protection responsibility? Click the legend symbol to display what the different colors represent ⊞.

8. Open the **Designated Areas** map layers. Are there any designated Wilderness areas, potential Wilderness areas or National Recreation Areas in the area of your training incident?

9. Open the **Infrastructure** map layers. What types of buildings are located in the area of the fire? What about communication towers, energy facilities or roads and trails? Is Building Cluster data available in the area of your training incident (does it display)?

10. Open the **Natural and Cultural Resources** Map Layers. Is your training incident located in a Class I airshed? Does the area contain known Sage Grouse Habitat?

11. Open the **Unit Fire Planning** map layers. How many different agencies or units are affected? Do the agencies use FMU or Spatial Fire Planning (SFP)? (Note: Because of spatial limitations, you can view all the FMUs/SOs or individual FMUS/SOs for a unit but you can't view more than one unit at a time.) Does the unit you've chosen to work with have Other Unit Shapes loaded?

12. Practice using the scale bar, navigation arrows and Pan Tool. You can also use the following quick zoom method: Hold the shift key down, place the curser where you want to start, and then left click and drag the pointer diagonally to where you want to zoom. Release the left click key to zoom to your framed area.

Viewing Feature Information

You can glean specific information about a map feature by using the **Feature information** option on the **Info** tab. For example, if you are viewing NPS buildings in the vicinity of a fire, you can determine what types of buildings they are, their construction type, cost to replace, etc. If you are viewing historical fires, you can determine the fire name and year of the fire. Knowing these things can help you better understand what types of values are at risk and help you evaluate fuels in the fire area. With this tool, you can also query additional values layers that may intersect your point of interest.

To view feature information:

1. From any map, click   (Information tool.)

2. Select a Layers feature (such as a NPS building, for example).

3. From the left pane, choose the **Info** tab, and then click **Feature Information**. A pop-up window appears that shows specifics for the selected feature.

4. If the feature contains a Copy   or   Download icon (such as a segment of trails or a historical fire perimeter), you can copy the selected feature and save it as an incident or analysis shape or download the feature as a zipped shapefile.

## Viewing a 7 day Predictive Services Significant Fire Potential Forecast for the Fire Area

You can view the Significant Fire Potential forecast for the area of an incident in two ways:

- From the **Info** tab, you can view a table version of the Significant Fire Potential Forecast for the location of the fire.

- From the **Map** tab, you can view the Significant Fire Potential Forecast spatially by selecting the Fire Weather and Danger > Significant Fire Potential map layers. (You will do this in Lesson 10, when you gather information for the Relative Risk Assessment.)

To view 7 day Predictive Services Significant Fire Potential Forecast from the Info tab:

1. From any map display, click the **Info** tab (located above the LayerSwitcher, the list of map layers on the left).
2. Select **Pred Svcs Sig Fire Potential**.
3. A pop-up window appears that displays a 7 day Significant fire Potential forecast, with a legend, for the Predictive Services Area that the incident is located in.
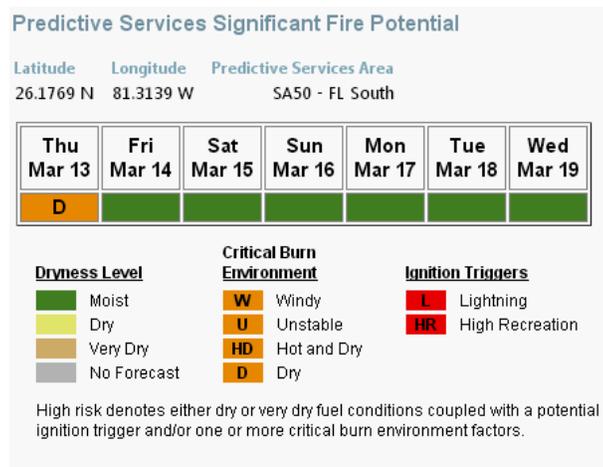
Drawing a Planning Area

Now that you've viewed the fire area and the values it contains, you need to create a planning area.

A planning area is an area an Incident Owner or Editor defines on the landscape that includes all the land a fire might burn during the life of the current decision; it includes the area used for analysis and planning to manage the fire. Planning areas help you to establish an area of interest around an incident and accomplish two things:

- Planning areas determine which FMUs or Strategic Objective (SO) shapes are contained or partially contained by the planning area, and subsequently, which pre-loaded strategic objectives and management requirements will need to be addressed when developing incident objectives and requirements, and
- Planning areas generate a Values Inventory, a list of known values that are located in the planning area. These values should be considered and/or addressed when developing a relative risk assessment, as well as incident objectives and requirements.

Planning areas need to be large enough to include the following:

- Where actions are planned (e.g., firelines, evacuation points, protection points)
- Contingency plans (MAPs)

- Fire behavior modeling outputs
- Values you are concerned about
- Where you want to contain the fire
- The physical reality of where the fire could burn during the life of the current decision (even if you don't want it to burn there)

Planning areas are required for documenting a decision and are different from a WFSA boundary or WFIP Maximum Manageable Area, two outdated and no longer used concepts. By limiting the planning area to just where you think a fire might go, you are limiting the decision support capability of the application. Creating a large planning area will save time at the end of the day if the fire grows substantially in one direction or another.

Drawing a large planning area may incorporate more FMUs/SOs, which in turn may require you to address more strategic objectives, management requirements, and values at risk. But, if the planning area is too small, you will have to create a new decision each time management actions occur outside of the existing planning area. It's helpful to use an FSPro probability output as a general guide when trying to determine an appropriate planning area size; the outputs can inform you of where the fire may try to move as well. Doing this will ensure that the Values at Risk identified by an FSPro output are included in the Values Inventory (a product of the planning area), and addressed in the Incident Objectives. If your FSPro outputs are larger than your planning area, your planning area is too small.

No ramifications result from drawing a large planning area. If you are currently planning Management Action Points or contingency plans outside of your planning area, you are planning outside of your planning area. Your planning area should be larger to include those areas.

To draw a planning area for your training incident:

1. Open the Situation map, and choose the **Map** subtab (if not already selected). The Map Layers are displayed.
2. Zoom out to 1:433K or more.
3. Open the **Base** Layers and view each of the options. Note that WFDSS topos is available only at finer resolutions. Select a base layer that gives you a good perspective at larger scales.
4. Display the map layers that you determined to be applicable to your training incident. They helps guide the creation of your planning area.
5. Select the polygon ⬠ or rectangle ▭ drawing tool and draw a planning area. A polygon or rectangle are both acceptable planning area shapes, but the polygon tool give you more control over which FMUs/SOs you include . If you don't like your finished product, click 🖉 (Erase Tool) and try again.
6. When you are satisfied with what you've drawn, click ⊕ beside **Planning Areas** (near top of Map Layers list).
7. Click **Save**. If the save was successful, your yellow rectangle becomes a purple outline (as in the image below).
8. Keep the current display; we'll pick up here in the next exercise.
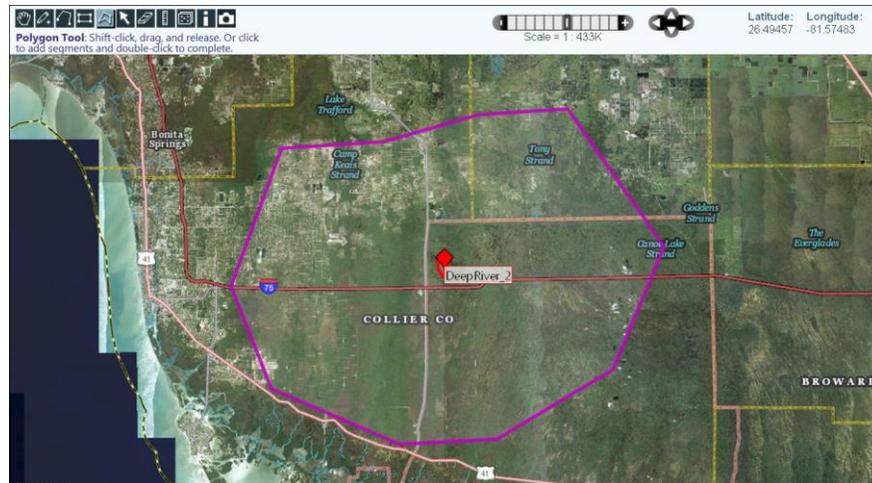
Bookmarking Maps

Users can bookmark, or save, a map display from any map so that you can easily return to it in the future. Unlike map 'captures' that save map displays as images, bookmarked map displays (bookmarks) capture the actual selection and arrangement of map layers. Bookmarks are grouped by the map display used to save each bookmark. This assists with navigation, and can help you quickly return to frequently used map displays each time you log in to WFDSS.

All of your bookmarks are available to you from any map display in WFDSS. If you bookmarked map displays for three different incidents, you will quickly be able to navigate from one incident to another. This is helpful if you are managing multiple incidents.

You can also share bookmark links with other users. Each bookmark has a unique URL which can be copied and pasted into an email for easy sharing or distribution. Users must have appropriate privileges to view items in a shared map display, however. For example, a bookmarked map display containing planning areas and MAPs associated with an unpublished decision can be shared with a WFDSS user who is not an owner of that incident, but the planning area and MAPs will not display for that user.

In the following exercise, create a bookmark for your incident that captures the planning area you just created.

To create a bookmark for a map display:

1. From the Situation Map, click the [Bookmarks] icon located above the map tools. The Bookmark window displays.
2. Type a Bookmark name in the field provided.
3. Click **Add**. The map display reappears and you see a message atop the page that says the map context was successfully bookmarked.
4. Click **Bookmarks** again to see your bookmarked map in the list. Bookmarks are grouped by the map display used to capture the display. In the graphic below, a bookmarked called DeepRiver_2 was saved from the Situation Assessment map.
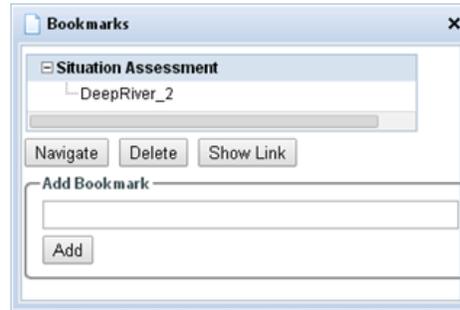
Create a few bookmarks. You will practice navigating to them and sharing them in the following exercises.

To navigate to a bookmark:

1. From any map display in WFDSS, click ![Bookmarks] . The icon is directly above the map and map tools. The Bookmarks page will display.
2. Highlight the bookmark you want to navigate to and click Navigate. The application will navigate to bookmarked map.

Practice navigating from one bookmark to the next. If you have other incidents in Training, you can practice creating bookmarks for those incidents as well. You will see firsthand how helpful it is to navigate quickly from one map display to another, as well as from one incident to another.

In the next exercise, you'll share a link to a bookmark you created. Identify at least 2 WFDSS users to share a link with; one should be a member of the incident ownership group for your training incident, and one that is not affiliated with your training incident. Can each of these individuals see the planning area captured in the bookmark you shared with them?

To share a bookmark link:

1. From any map display in WFDSS, click ![Bookmarks] . The icon is directly above the map and map tools. The Bookmarks page will display.
2. Highlight the bookmark you want to share and click Show Link. The link displays above the Add box.
3. Highlight and copy the link, and then paste it into an email. A message displays that you successfully exported a bookmark.

About Images

Images can be captured or uploaded for use in an incident's decision document by WFDSS users with the following roles or privileges:

- Incident owners and editors,
- Fire Behavior Specialists and Super Analysts,
- Dispatchers (must be in the same geographic area as the incident), and
- Geographic Area Editors (must be in the same geographic area as the incident).

Captured and uploaded images are saved to the incident content, and incident owners and editors can add these to a pending decision. Images are accessible via the decision editor, which can only be accessed after a decision is created (but before it is published).

Captured images can also be turned into landscape-oriented reports at the time of image creation. Reports can be downloaded and shared as .pdfs, edited and published as you would a decision.

Capturing Images

On map displays other than the Intelligence Map, you can capture map displays as snapshot photos that can be added to a decision. Map displays that show fire perimeters, M.A.P.s, critical values, and fire behavior outputs are a few examples of images that are helpful to capture and help describe the complexities of an incident. You can capture map images that use WFDSS topos, US States or USGS-sourced base layers. These are the only base layers that can be copied or reproduced in WFDSS due to copyright issues.

Capturing images requires two inputs: Image Label and Description. When developing Image Labels and Descriptions, special characters can't be used; WFDSS warns you that special characters need to be removed before the application can successfully capture an image. Captured images are saved to the Images folder for an incident. When working with the advanced decision editor, the image folder can be accessed in the Incident Content Tree. When working with the default decision editor, images are available when you insert sections into a decision.

When capturing images, you can also choose to assign the image a Report name to generate a report that includes a landscape-oriented image of the map capture. Once created, these types of reports are available on the Reports tab and can be edited, or downloaded and shared as .pdfs. You can capture images without creating reports, but you can't create a report without also entering an Image Label and capturing an image.

Capturing Map Images as Landscape-Oriented Reports

Users can generate quick, landscape-oriented reports for images captured on map displays. When you capture an image, you must name it and provide a brief description of what the image contains. If you provide a Report Name in addition, two things will occur when you click Capture Image:

- The image is saved to incident content for use in a decision, and
- A report with the name you chose is saved to the Reports tab.

Reports created this way are landscape-oriented and contain only the image you captured, unless you choose to customize the report and add additional text or images. Reports are editable in WFDSS until published, but can be downloaded and shared as .pdfs at any time.

Landscape-oriented reports display larger map images than decisions (decisions are portrait-oriented) and can help you quickly share maps that contain timely and critical information like fire behavior analysis outputs, names and locations of M.A.Ps, etc.

You can capture images without creating reports, but you can't create a report without also entering an Image Label and capturing an image. In the following two exercises, you will do both.

To capture an image and generate a landscape-oriented report for it:

1. Choose your preference for a base layer. In the image below, USGS imagery is used. USGS base layers can be viewed to 1:14K, and WFDSS topos and US States 1:24K.
2. Create a map display relevant to your training incident. For example, display critical values near the fire perimeter, or land ownership in the area of the fire. The example below displays a fire perimeter, roads, and NPS buildings.
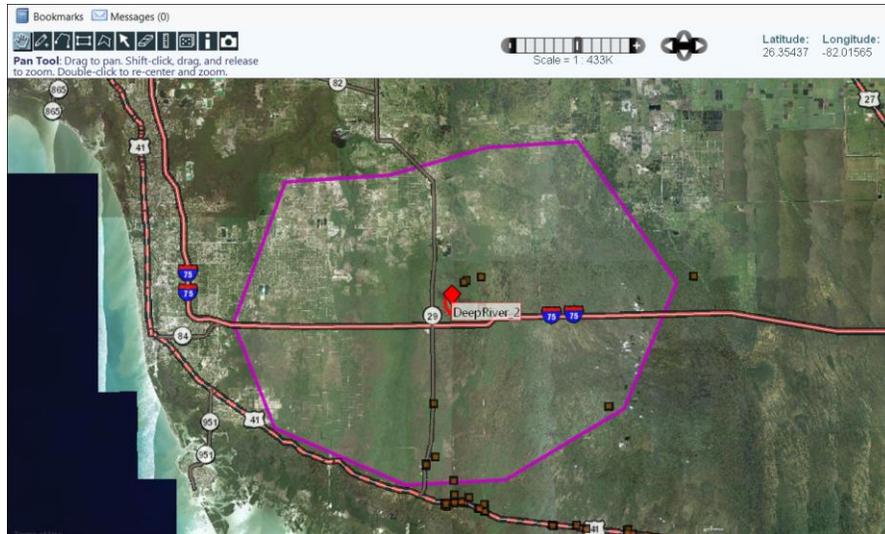
3. You can capture your image in one of two ways:
   - Select the **Info** tab. On the left hand bottom of the screen, you'll see the Map Capture section with three fields, **Image Label**, **Description,** and **Report Name.**
   - Click [camera icon] **(Camera tool.)** The Map Capture section opens in the pane on the left, and you see three fields, **Image Label**, **Description,** and **Report Name**
4. Create an **Image Label**. The Image Label helps you locate the image in the incident content. It is also displayed above the image when you add it to your decision document. The above example could be named *"0423 perim and values."*
5. Create a **Description** for your image. The description should include why the image is important and why it's relevant to the decision document it will be added to. It displays below the Image Label. A Description for the above example could be *"Image displays 0423 perimeter and nearby values that include NPS buildings to the north and east and a major interstate south of the fire."*
6. Enter the **Report Name**.
7. Click **Capture Image** (if you've chosen a Google® base layer, you will be asked to change it a WFDSS or USGS-sourced base layer due to copyright issues). A message appears atop the map informing you that a map capture request has been sent.
   The image will be saved to the Images folder in the incident content, and added to a report with the name you chose.

8. Return to the **Map** tab in the left pane and create a few more images to capture. You do not need to create reports for these unless you want more experience. You will add these captured images are added to your decision document in a later lesson.

To create a draft landscape-oriented report from the image:

1. Select **Reports** from the Incident sub-menu. You will see the name of your report in the list.
2. Click the report name in the Report List and click **PDF**. (You can also choose **Edit** if you would like to add additional text, or images from incident content.)
3. Click **Create Draft** to generate the draft .pdf report, and then wait a few moments.
4. Click **Download Draft**.
5. Click **Open** on the file download box. The draft .pdf report opens in landscape mode.

Uploading Images

Often, decision documents require images and other data that are not created in WFDSS. The following examples are types of images you may want to upload to support a decision:

- Maps of nearby fuels treatments
- Photos of fuels or fire behavior
- Spot weather forecasts
- Miscellaneous documents

Uploading images requires more inputs than capturing images. In addition to Image Label and Description, you need to select an Image Type and browse to where the image is located. Special Characters cannot be used when creating Image Labels and Descriptions; WFDSS warns you that special characters need to be removed before the application can successfully capture an image.

When uploading images, the default selection is **Compress image to fit**. Unless deselected, uploaded images are compressed, as needed, to ensure size compatibility with decisions. If WFDSS determines that an image is too large to fit in a decision, the image is compressed for easier viewing and better, faster performance when downloading draft or published decisions or reports. If WFDSS determines an image does fit in a decision, the image is not compressed. The default (and recommended) setting ensures that WFDSS can compress images, if needed, for easier use in the application.

You can upload the following file types:

- .JPG
- .GIF
- .PNG

You cannot load .BMP, .TIFF, or .PDF images at this time.

You will upload an image(s) for your training incident in this next exercise. Using the examples above as a guide, locate some images that you can upload. Any fire-related image will do, as the goal is for you to learn how to do it. You will add the images from the incident content tree to your decision document in a later lesson.

To upload an image for your training incident:

1. From the left menu, select the **Image Upload** option. The Upload Image File page appears.
2. Create an **Image Label** (64-character limit). You'll use the Image Label to locate the image in the Images folder. It will also be displayed above the image when you add it to your decision document.
3. Create a **Description** for your image (4000 character limit). The description should describe why the image is important and why it's relevant to the decision document it will be added to. It will display below the Image Label in a published decision and cannot be edited.
4. Select the **Image Type** from the drop-down menu.
5. Accept the default **Compress image to fit** (recommended), or deselect.
6. Click **Browse**, and then navigate to the image file on your computer.
7. Select **Open**, and then select **Upload**. It may take a few moments, but look for a message in green atop the page that says the file was uploaded successfully. You will not be able to view the image until we create a decision in a later lesson. At that time, you will be able to access the decision editor and incident content to edit the pending decision.
8. Upload a few more images if you like, following the steps above. The more images you upload now, the more opportunity to practice using the decision editor you will have in later lessons.

Search for these related topics in the Help:

*   About Maps
*   Copying Feature Information
*   Situation Map
*   Viewing Feature Information
*   Creating a Planning Area
*   Capturing Map Images
*   Capturing Map Images as Landscape-Oriented Reports
*   Uploading Images
*   Incident Content Tree
*   LayerSwitcher
*   Bookmarking Maps