Fuel Treatments Enhancing Wildfire Decision Making

Introduction

Risk informed decision making requires that fire managers consider multiple fuel treatments issues and data sets. This information is very useful in developing strategic or tactical plans for a fire event, but the data sets often reside on local hard drives or applications requiring special access. This document describes the value of this data for making accurate decisions and how to upload any data that is off-line into the WFDSS application.

How Fuels Treatment Data Informs Wildfire Decisions

Fuels treatment data (planned and completed) assist with strategic or tactical wildfire decision making. Some examples of how pre-treatment data that is used for decision making include:

- Completed control lines for prescribed burn units that may be incorporated into wildland fire incidents management.
- Using existing fuels treatment prescriptions to help strategically and tactically implement burnouts and fire suppression.
- Fuels treatment areas identified for hazard reduction or mitigation, ecosystem restoration, or maintenance, can help managers develop strategic and tactical decisions that will help control the wildfire and maintain natural resource integrity.

Some examples of how completed fuels treatment data can support decision makers include:

- Placement of safety zones.
- Identification of areas that offer greater chances of containment success, with less risk to firefighter's successfully building line and possible containment tasks.
- Providing updated fuel layer data for improved fire behavior modeling and predictions.

Incorporating Fuels Treatment Data in the Wildland Fire Decision Support System (WFDSS)

Currently, users must incorporate fuels treatment data from systems such as the National Fire Plan Operations and Reporting System (NFPORS) and Forest Service Active Tracking System (FACTS) into WFDSS for each individual treatment area. Although, in the future as fire applications continue to evolve and link together, these systems may talk directly to WFDSS.

Users can upload planned and completed fuels treatment polygon information into WFDSS using the Data Management tab and selecting the UNIT SHAPES. A brief description can also be added to each

Fuels Treatments Enhancing Wildland Fire Decision Making

polygon to highlight its relevance. This data can be entered pre-season and modified anytime by the local unit.

Uploading Unit Shapes

From the WFDSS Data Management tab, Data Managers can upload unit shapes for their units and quickly view each shape on the Unit map to ensure they display correctly. This shape library saves time when managing an incident by pre-loading shapes that relate to local conditions.

> **Caution**: If you upload unit shapes after drawing your planning area for an incident, you will need to redraw the planning area. It is recommended that fuel treatment data be uploaded prior to fire season so that it is available immediately within WFDSS when a fire occurs.

Before uploading a unit shape, verify:

- Your unit's FMUs must be included in the national FMU layer. Contact the WFDSS GIS Team for assistance.
- The files associated with the shape are current, correct, and belong with the unit.
- If combined shapes exist in the file, they must be dissolved into one.
- The shape ZIP file must contain files with the following file extensions:
    - .DBF
    - .PRJ
    - .SBN (optional)
    - .SBX (optional)
    - .SHP
    - .SHP.XML
    - .SHX
- The files contained within the ZIP file are at the same directory level. You can't have a folder inside the ZIP file or the shapes won't upload correctly.

The shapes you upload are associated with the unit you select.

> **Note**: Though WFDSS uses NAD83, it imports and converts shapefiles that were created in other common projections and datums. In addition, shapes are downloadable in a local Albers projection that is based on the location of the incident. The maximum shape size is 100 points or 50000 vertices for lines and polygons.

Fuels Treatments Enhancing Wildland Fire Decision Making

To upload unit shapes:

1. Choose **Data Management** > **Unit Shapes**. The **Unit Shapes** page appears.
2. Select the **Geographic Area, Agency**, and **Unit** for which you are uploading shapes.
3. Enter a **Label** for your shape. This label appears in the layer switcher on the map, so make sure that it accurately and simply reflects the shape's purpose or content. For example, "Spotted Owl" or "Kickapoo Campground".
4. Enter a **Category** for the shape. This tells other users what the shape is used for. For example, "Fuels Treatments-Planned", "Fuels Treatments-Complete", "Barrier", "Habitat", or "Structures".

> ***Note***: *It's a good idea for your unit to agree on consistent categories and naming conventions for these shapes*

5. Enter a **Description** that provides more details about the shape. For example, "full-service campground with electrical and water".
6. Click **Browse** to navigate to the shapefile you want to upload. The **Choose File to Upload** window appears.
7. Navigate to the shapefile you want to upload, click **Open**. The full path for your file appears in the **File to Upload** field.
8. To include the shape in the **Values layer** and **,** mark the checkbox for **Include in Values.** (You can change this at any time by choosing **Data Management > Unit Shapes** > unmark the checkbox next to the selected shape.)
9. Click **Upload**. The shapefile appears in the Shapes for Unit list.

You can now use the shapes for decision making with incident objectives, M.A.P.s, and other tasks.

Spatial Fire Planning Feature Coming Soon to WFDSS Data Management

In February 2013 WFDSS Data Management will have an enhancement allowing units to load new shapes describing strategic objectives and management requirements.

The new management requirement shape feature will allow users to manage shapes locally. Users will be able to upload planned/completed fuel treatments as "management requirement" shapes. Users with the data management role can add text to inform the decision maker about planned/completed fuels treatments. The local unit will be able to modify this information any time during the year.

The Wildland Fire Management Research, Development and Application staff will update this document when the spatial fire planning feature is fully developed in early March 2013. For assistance in incorporating fuel treatment data into WFDSS for your unit contact your geographic area editor.

Fuels Treatments Enhancing Wildland Fire Decision Making

Finding Your Geographic Area Editor

Users should go to the filtering function in the WFDSS Address Book to determine who their Geographic Area Editors are by region and/or agency.

To find your GA Editor:

1. Choose the **My Home** tab. The **Home** page appears
2. From the left menu, select **Address Book**. The **Address Book** page appears.
3. Under **Address Book**, select **WFDSS Address Book**.
4. Under **Roles**, select **Geographic Area Editor**.
5. If necessary, use the **>>** button to move a specific **Geographic Area** from the complete list to the pick list.
6. If necessary, use the **>>** button to move specific **Agencies** from the complete list to the pick list.
7. Select **Apply Filter**. A list of the Geographic Area Editors appears that meets your filtering criteria; the list includes contact information.