

# Spatial Fire Planning in WFDSS

## An Introduction



*Integrating  
science, technology  
and fire management.*

**Wildland Fire Management RD&A**

**February, 2014**

# Overview

**Two Planning Processes are available in WFDSS:**

- Fire Management Unit (FMU) planning, and
- Spatial Fire Planning (SFP).

Depending on an administrative unit's agency affiliation, one may be preferred or mandated over another.

This video focuses on the Spatial Fire Planning (SFP) process and how it can be implemented successfully for an administrative unit.

# **Upon completion of this lesson, WFDSS users will understand:**

- What the SFP process is and how it differs from the FMU planning process,
- The role Data Managers play in managing the SFP process for their unit, and
- How Data Managers prepare their unit for a switch to SFP.

# What is SFP and how is it Managed?

- SFP is an optional planning process that spatially represents an administrative unit's Strategic Objectives and Management Requirements.
- WFDSS users assigned the role of Data Manager manage SFP, and its associated shapes and tasks.
- Depending on a Unit's agency affiliation, choosing SFP over FMU planning is the decision to manage the unit's Fire Management Plan (FMP) spatially.

# Where is SFP Managed?

- SFP is managed from the Data Management Tab.
- Data Managers develop and manage text and associated Unit Shapes on the four sub-tabs.

The screenshot displays the Wildland Fire Decision Support System interface. At the top, the logo and text "Wildland Fire Decision Support System" are visible, along with the "National Preparedness Level: 1" indicator. The navigation menu includes "My Home", "Incidents", "Groups", "Analyses", "Intelligence", "Data Management" (highlighted with a red oval), and "Administration". Below this, a sub-menu shows "FMU/SO Codes", "Objectives", "Unit Shapes", and "Unit Map" (all highlighted with a red box). The main content area is titled "Strategic Objective Codes" and features a "Unit Selection" section. This section is divided into three columns: "Geographic Area", "Agency", and "Unit". The "Unit" column lists various units, with "KSOZF - Land of Oz National Forest" highlighted in blue. To the right, a "Planning Process" section contains radio buttons for "Fire Management Units (FMU)" and "Spatial Fire Planning (SFP)", with "SFP" selected. Below this, a note states: "If you change to the FMU Planning Process" followed by two bullet points: "The Strategic Objective shapes will be considered FMU shapes" and "Activated Management Requirements associated with shapes will be deactivated". A final note at the bottom of the box reads: "Consider exporting Management Requirements prior to changing the unit's planning process".

**Wildland Fire Decision Support System** National Preparedness Level: 1

My Home | Incidents | Groups | Analyses | Intelligence | **Data Management** | Administration

FMU/SO Codes | Objectives | Unit Shapes | Unit Map

### Strategic Objective Codes

#### Unit Selection

Geographic Area	Agency	Unit
<input type="radio"/> Alaska	<input type="radio"/> BIA/Tribal	COARF - Arapaho & Roosevelt National Forests and Pawnee National Grassland
<input type="radio"/> Northwest	<input type="radio"/> BLM	COGMF - Grand Mesa, Uncompahgre and Gunnison National Forests
<input type="radio"/> Northern California	<input type="radio"/> USFWS	COPSF - USFS - PIKE/SAN ISABEL NF'S COMANCHE & CIMARRON NG'S
<input type="radio"/> Southern California	<input type="radio"/> NPS	COR02 - USFS - Rocky Mountain Regional Office
<input type="radio"/> Northern Rockies	<input type="radio"/> USFS	CORGF - USFS - RIO GRANDE NF
<input type="radio"/> Eastern Great Basin	<input type="radio"/> State	CORTF - Routt National Forest
<input type="radio"/> Western Great Basin	<input type="radio"/> C&L	COSJF - San Juan National Forest
<input type="radio"/> Southwest	<input type="radio"/> ANCSA	COWRF - White River National Forest
<input checked="" type="radio"/> Rocky Mountain	<input type="radio"/> Other	<b>KSOZF - Land of Oz National Forest</b>
<input type="radio"/> Eastern		KSPSF - USFS - PIKE/SAN ISABEL NF'S CIMARRON & COMANCHE NG'S
<input type="radio"/> Southern		NENBF - Nebraska National Forest
		SDBKF - Black Hills National Forest
		WYBHF - USFS - Bighorn National Forest
		WYMBF - Medicine Bow NF
		WYSHF - USFS - Shoshone National Forest

#### Planning Process

Fire Management Units (FMU)

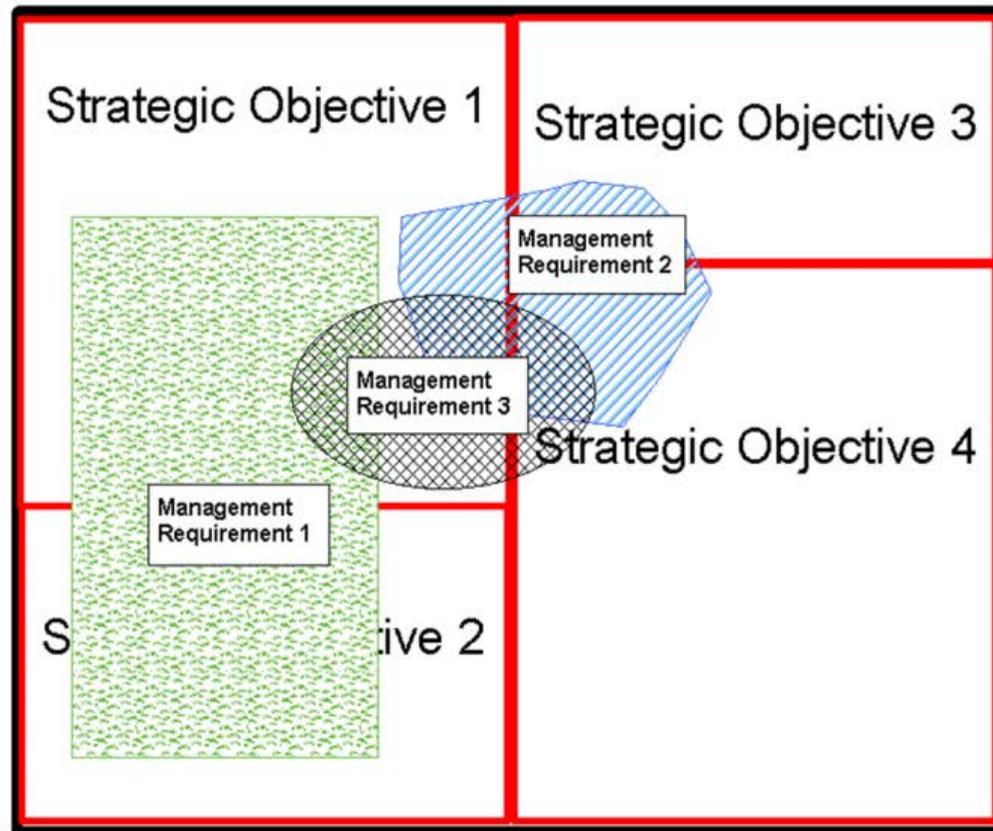
Spatial Fire Planning (SFP)

If you change to the FMU Planning Process

- The Strategic Objective shapes will be considered FMU shapes
- Activated Management Requirements associated with shapes will be deactivated

*Consider exporting Management Requirements prior to changing the unit's planning process*

# Strategic Objectives and Management Requirements are represented by Shapes



# Why Spatial Fire Planning?

- SFP offers a clean and simple way to manage incidents and decision-making in WFDSS.
- SFP provides a visual representation of planning concerns for line officers, fire managers, or resource specialists assisting with incident decision-making.
- SFP eliminates redundant entries in WFDSS

# Planning Process Comparison

<b>Planning Process</b>	<b>FMU Planning</b>	<b>Spatial Fire Planning</b>
Is Spatial Data Required?	<b>No</b>	<b>Yes</b>
How are Strategic Objective and FMU shapes managed?	<b>Nationally</b>	<b>Nationally</b>
How are Management Requirement shapes managed?	<b>N/A</b>	<b>Locally</b>
How are Other Unit shapes managed?	<b>Locally</b>	<b>Locally</b>

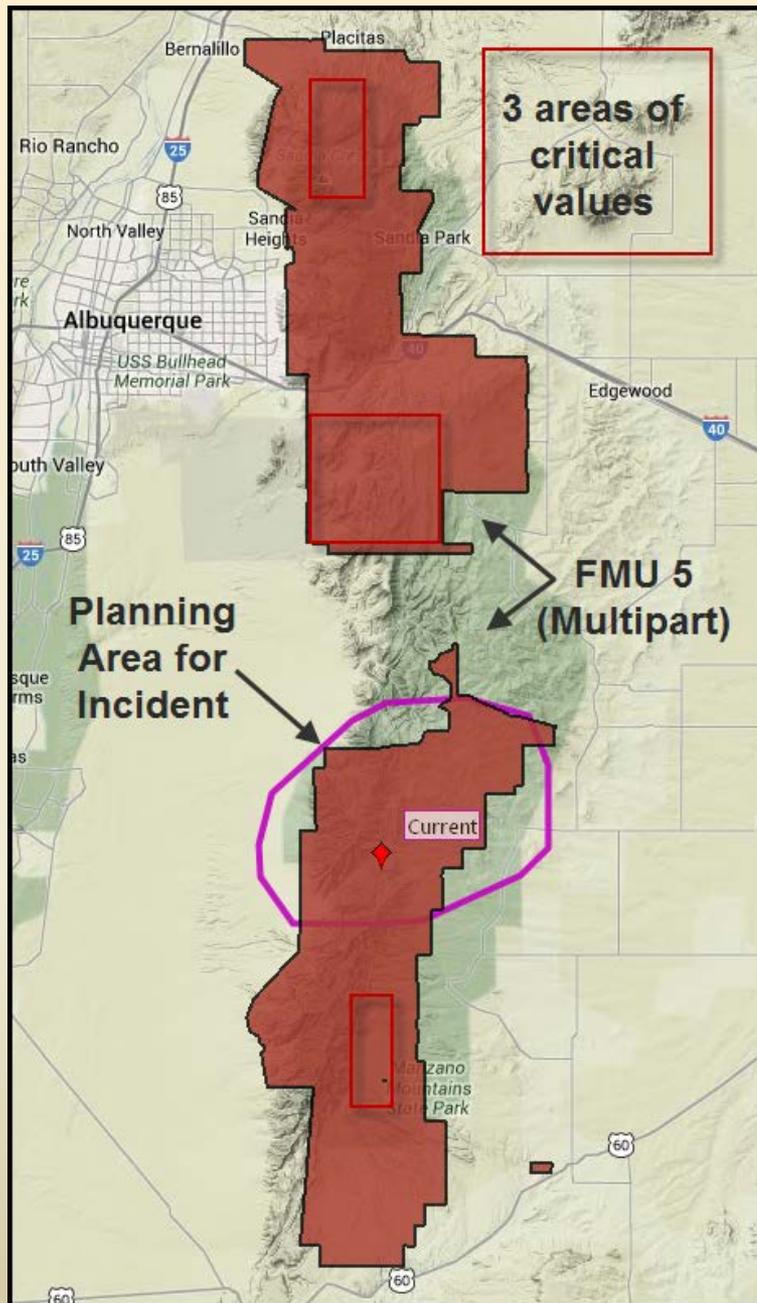
# **SFP offers Fewer Challenges to Fire Managers...**

- With FMU planning, if an incident's planning area includes a small part of an FMU, all of the Strategic Objectives and Management Requirements for that FMU are included in a decision and require consideration as a result.

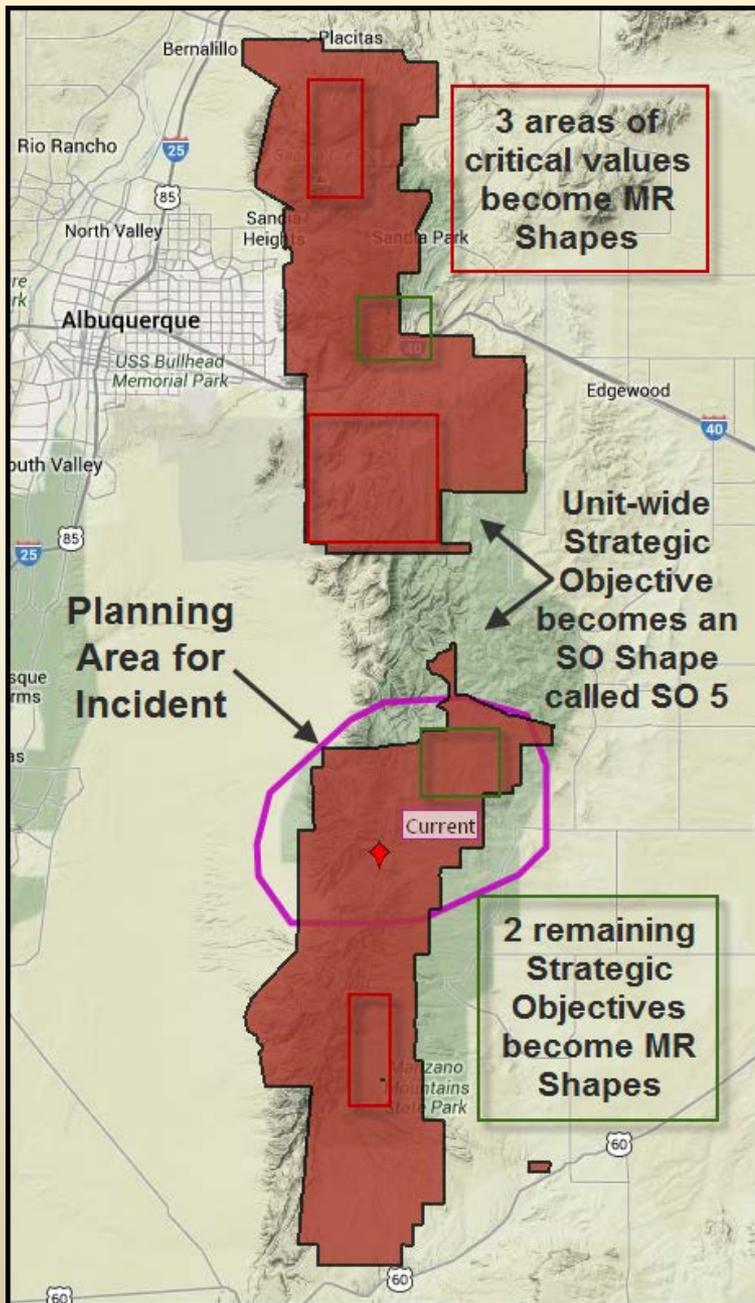
**Spatial Fire Planning eliminates this problem.**

- With SFP, a planning area only includes those Strategic Objectives and Management Requirements that it overlaps, because these sets of text are now represented as individual shapes.

# FMU Challenge Example



- FMU 5 is a multipart FMU that's 60 miles long
- FMU 5 has 3\* critical values that are addressed in 3 Management Requirements. *\*Note that none are located in the planning area.*
- FMU 5 has 3 Strategic Objectives.
- With FMU Planning, all 6 planning entries must be considered when developing decision content, even if they are not applicable to the planning area.



# If SFP was used:

- Critical Values become Management Requirement shapes
- FMU 5 becomes SO 5, and is now represented by one unit-wide Strategic Objective, *Full Suppression*.
- Remaining 2 Strategic Objectives become Management Requirement shapes.
- For this incident, one Strategic Objective and one Management Requirement will require consideration when developing decision content.

# Preparing for a Switch to SFP

- Before switching to SFP, data managers must collect information from Land, Resource and or Fire Management Plans to determine which data should be uploaded into WFDSS as Strategic Objectives, Management Requirements, or as Other Unit Shapes
- Depending on an administrative unit's agency affiliation, the uploaded data may serve as the unit's spatial Fire Management Plan and this requires consideration.

# **What becomes Strategic Objective Shapes and what becomes Management Requirement Shapes?**

Don't get hung up on terminology; utilize shapes and text that clearly communicate NEPA-approved planning direction for the unit.

**When making this determination, use the following guidelines...**



# Guidelines

- With regards to Strategic Objective (SO) Shapes:
  - Determine which planning direction applies to the largest areas and lean towards using those for Strategic Objective shapes.
  - When developing SO Shapes, ensure that the entire unit is covered, as these shapes are used to create a Unit Boundary
- With regards to Management Requirement (MR) Shapes:
  - Scattered, critical values or small areas of values can be represented by MR shapes, either single or multipart.
  - The Unit Boundary is used to clip MR Shapes. This prevents units from adding requirements to neighboring units.
- Create *Other Unit Shapes* for values or areas of concern that you don't want appearing in the list of values for a unit.

# Can a Unit keep its Existing FMU layer?

- Units can keep their current FMU shape layer if the shapes and codes are representative of the Strategic Objective shapes and codes the unit wants to use for SFP.
- If FMU shapes or codes require edits or a new Strategic Objective shape layer is warranted, Data Managers must develop and submit a new Strategic Objective shapefile to their agency's WFDSS GIS contact. The same geospatial data standards apply to both FMU and SO shapes.

# Returning to our Example:

- If our example unit switches to SFP and chooses to keep its existing spatial data and naming convention, the name of the shape, FMU 5, remains in the national database but now refers to a Strategic Objective shape, which is confusing.

**FMU Code: FMU 5 → SO Code: FMU 5**

- A better plan would be to submit an updated spatial layer and naming convention that reflects SO shapes.

**FMU Code: FMU 5 → SO Code: SO 5**

# What Happens when I choose SFP on the Data Management tab?

**The following actions occur in WFDSS:**

- FMU level Management Requirements are immediately disabled and can NEVER be re-enabled (they can be recreated but not re-enabled).
- All existing FMU shapes become Strategic Objective shapes.
- All Existing FMU codes become Strategic Objective codes.
- All Strategic Objective codes associated with existing shapes are activated while all other codes are deactivated.
- Strategic Objective text associated with deactivated Strategic Objective codes is deactivated.
- Administrative unit-wide Strategic Objectives and Management Requirements are unaffected.

# Can a Unit Switch back to FMU planning?

The following actions occur in WFDSS:

- Activated Management Requirements associated with a Management Requirement shape are disabled and can NEVER be re-enabled (they can be re-created but not re-enabled).
- All existing Strategic Objective shapes become FMU shapes.
- All Existing Strategic Objective codes become FMU codes.
- Unit wide Strategic Objectives and Management Requirements will be unaffected.
- You will no longer be able to draw or upload Management Requirement shapes.

Strategic Objectives/Management Requirements for Unit KSOZF				
<a href="#">Create Strategic Objective</a>		<a href="#">Create Management Requirement</a>		
	<u>Shape/FMU</u>	<u>Type</u>	<u>Activated</u>	<u>Deactivated</u> Strategic Objective/Management Requirement

# Considerations when switching to Spatial Fire Planning

- WFDSS allows for the use of FMU Planning or Spatial Fire Planning (SFP), not both.
- Prior to switching, export the FMU Planning entries to Excel and save them to a safe storage area. You will use these entries to recreate the FMU planning entries if you opt to revert back to the FMU planning process.
- If a new Strategic Objective spatial layer is submitted for enabling in WFDSS, the transition process from FMU to Spatial Fire Planning could take a few months. As a result, switching to a different planning process should be done during the off-season to minimize potential incident documentation conflicts for fire managers.

# Developing a Transition Strategy

- Locate NEPA-compliant planning documents to guide creation of SFP shapes and associated text.
- Choose to keep current FMU shapes or develop new SO shapes.
  - If you keep the old FMU shape layer, the old FMU codes become SO codes.
  - If a new Strategic Objective shape layer is needed, prepare the shape layer and then provide the spatial data to your agency's WFDSS GIS contact.
- Download the excel spreadsheet of Management Requirements.
- Change your administrative unit's selection from FMU to SFP planning process on the Data Management tab.
- Modify existing Strategic Objective text or create new Strategic Objectives, and then associate each with the proper SO code.
- Develop Management Requirements text and associated shapes.
- Develop Other Unit Shapes, as needed.

# Training vs. Production

- WFDSS Training and Production use different databases, so choosing the SFP process in one application does not automatically choose it in the other.
- WFDSS Training is the ideal place for testing the SFP process for an administrative unit.
- Final Data Management content, that is typically developed in Production, can be easily copied into Training (but not the other way around). This will ensure that appropriate and relevant data is available for training at the unit-level.

# Additional SFP Help is Online

The concepts explained in this video are explained in the WFDSS online help and in the Spatial Fire Planning Guide:

- WFDSS online help is accessed as page level help within the application or from the WFDSS home page.
- The SFP Guide is available from a link on these websites:
  - WFDSS (<https://wfdss.usgs.gov/>)
  - WFM RD&A (<http://www.wfmrda.nwccg.gov/>)

Wildland Fire Decision Support System

link to page-level help [Help](#)

Home

- About WFDSS
- Training
- Data
- FAQs
- Related Resources
- WFDSS Help
- Sign In to Production

**Welcome!**

**Wildland Fire Decision Support System**

Welcome to the Wildland Fire Decision Support System (WFDSS)!

This system assists fire managers and analysts in making strategic and tactical decisions for fire incidents. It has replaced the WFS (Wildland Fire

Google Search

only search WFDSS Website

**Latest Information**

[WFDSS Spatial Planning Guide \(NEW! 1/8/2014\)](#)

WFDSS Spatial Fire Planning Guide

# Other videos in this series will include:

- *The Data Management Tab and its role in SFP*
- *Managing Shapes for Spatial Fire Planning*

# Thanks for joining us!



Wildland Fire  
Decision Support System

---



*Integrating  
science, technology  
and fire management.*

**Wildland Fire Management RD&A**