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INSTRUCTOR:

LESSON: Wildland Fire Decision Support System

COURSE: S-403 Information Officer

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Emphasis: introduce concepts of WFDSS as the guiding document and adherence to the WFDSS decision in managing an incident. Introduce the students to the available information that could assist an Information Officer in seeing the big picture. Remind the students that the WFDSS decision is not public information and specific information should be discussed with the IC or Agency Administrator before sharing with the public.

OBJECTIVES:

Upon completion of this lesson, participants will be able to:

1. Describe the Wildland Fire Decision Support System (WFDSS).

2. Identify important information that can be found in the WFDSS decision.

3. Identify the role of the Information Officer in utilizing the information contained within WFDSS

I.   INTRODUCTION

WFDSS is designed to establish a process for documenting strategic decisions, providing decision support, and facilitating development of either short- and long-term operational management plans. The WFDSS process is linear, scalable, and progressively responsive to changing fire complexity and provides a consistent decision analysis and documentation process for all types of wildland fires. WFDSS provides a platform for risk-informed decision-making.

Documentation and analysis of wildland fire management decisions has been required by federal agency policy for nearly 30 years. The 2009 Policy Implementation Guidance requires-

> "Managers will use a decision support process to guide and document wildfire decisions. The process will provide situational assessment, analyze hazards and risk, define implementation actions, and document decisions and rationale for those decisions."

The Wildland Fire Decision Support System (WFDSS) has been developed to meet this need. The Forest Service (FS), Fish and Wildlife Service (FWS), and Bureau of Indian Affairs (BIA) enter all fires into WFDSS, regardless of size. National Park Service (NPS) and Bureau of Land Management (BLM) enter fires into WFDSS only when it escapes initial attack. At 98% initial attack success, there may not be a lot of need for analysis to inform decisions. However, as

incidents escape initial attack or are managed for multiple objectives more analysis is needed to inform the decision.

Decision-making associated with managing wildland fire can have critical impacts. It is important to make the highest quality informed decisions possible facilitated by factual information and consideration of the range of outcomes and associated consequences of the decision. Publishing a decision provides documentation of the management action taken on the fire and the rationale behind it.

II.   WHAT IS WFDSS?

WFDSS is designed to be consistent with accepted models of risk-informed decision making. WFDSS is a web based system that allows users to acquire information, analyze that information, apply that information to inform their decision and gain situational awareness, then to archive the decision and the associated documentation. To accomplish this, WFDSS maximizes the use of appropriately-based deliberation as well as analysis. It is an iterative, information-goal directed process.

- **Risk–informed decision making -** requires two distinct but linked processes:

    - **Analysis:**
        - Rigorous, replicable methods to provide information about factual questions.
        - Brings new information into the process – **informs deliberation.**
    - **Deliberation:**
        - Discussion, reflection, and persuasion to communicate, raise, and collectively consider issues, increase understanding, and facilitate substantive decisions.
        - Brings new insights, questions, and problem formulations – **frames analysis**.

Examples of decision making at this level involve developing a strategic alternative and objectives for a wildfire incident; consider a range of values, hazards and probabilities and focus on longer time periods. They are usually completed at least once, but may require revision, adjustment or a completely new decision as the incident evolves and conditions change.

III.   YOUR ROLE IN WFDSS

An Information Officer should understand the big picture and the decisions made that guide the strategies and tactics on the incident. You should also understand what has gone into the decision process. It is essential that you understand the WFDSS decision as it truly represents the unit's management strategy and should be the reference with which the team manages the incident. It's important the Information Officer understand that changing conditions on the incident may require a modification to the decision, or a new decision. Such conditions may include, but are not limited to:

- Fire has or is expected to burn outside the Planning Area.
- The Strategic objectives, management requirements, incident objectives or incident requirements defined in the WFDSS decision can no longer be met, or are inadequate.
- The fire behavior or complexity has changed significantly, or weather forecast indicates a significant change in conditions is expected.
- Is there proximate fire activity that may influence the safety of firefighters and/or the public?

- Is the current management organization adequate or is the span of control exceeded?
- Has the estimated overall costs of the wildfire been or is expected to be exceeded due to an increase in fire activity and/or complexity?
- Has there been a significant change in social or political issues?
- Are there any other factors or issues that may influence the original decision?

Note in some cases the hosting agency may not have completed a WFDSS Decision when you arrive. The management strategy will be discussed at the in-brief and will be the guide until the WFDSS decision is completed.
Specific information contained in WFDSS is not intended for public use. Always discuss information from WFDSS with the IC or Agency Administrator before sharing with the public or media.

IV. ELEMENTS OF WFDSS

WFDSS is designed to include models and tools to analyze and assess the incident. The outputs can then be used to support the decision and assist in deriving strategies and future tactics. WFDSS contains the following elements:

Information
Purpose: Documents the initial and continuing fire situation, and provides required information to complete administrative fire reporting.
Information includes: Incident Name, Point of Origin, Unique Fire Identifier, Fire Code, Fire Perimeter / Incident Size, Discovery Date, Containment Date, Controlled Date, Out Date, Landscape Data Source, Geographic Area, Responsible Unit at Point of Origin, Incident Cause, Fire of National Significance, and Jurisdictional Agency at Point of Origin.

Situation
Purpose: Provides situational and risk assessment information to support strategic decisions and development of course of action. This tab features a map view to display most of the information in a spatially explicit format. Natural and manmade resource information can be toggled on and off to assess values at risk.

Objectives
Purpose: Defines objectives as stated in Land and Resource (LRMP), and Fire Management Plans (FMP). This information is loaded prior to the fire season as provided in the LRMP and FMPs. If spatially enabled, this list will be reflective of the fire location and the relevant plan information.
The Objectives tab also lists specific management and incident requirements that will frame and influence strategic decisions and tactical implementation.

Course of Action
Purpose: Defines a specific course of action ranging from a pre-planned initial response to an individualized response for a specific situation. Specificity varies with fire complexity and can include a defined planning area, management actions, resource commitments, and costs for the fire duration.

Validation
Purpose: Provides a review of the Situation, Objectives, and Course of Action to ensure that Objectives can be met, and in the event they cannot be met, the Validation guides the development of a new Course of Action. This section will include the Approvers justification for accepting or rejecting the Course of Action.

Decision Summary
Purpose: Documents the response decision, the rationale for that decision, and stipulates the timeframe for revisiting and reassessing the decision. Depending on your Incident Privileges in WFDSS you may be able to view published decisions only. A new Decision must be made if updated information or findings are to be documented.

Periodic Assessment
Purpose: Provides a process to periodically review the current decision, response, and accomplishments to evaluate effectiveness and confirm accuracy or, if needed, indicate progression to a higher response level and associated planning activities.

Reports
Purpose: Enables you to create three types of reports for your incidents. These reports are useful for conducting inbriefs and other meetings, as well as for preparing after action reviews and post-fire reclamation plans.

WFDSS Resources
Numerous models and tools are available within WFDSS to assist with informing the decision.

Models in WFDSS
- Fire Behavior and Fire Spread Models (Basic, Short Term, Near Term, FSPro)
- Stratified Cost Index (SCI)
- Wildland Fire Air Quality Tools Smoke Models

Tools in WFDSS
- Relative Risk Assessment
- Organizational Needs
- Fire Danger Graphs
- Weather forecasts
- Values Inventory
- KMZ downloads

Technical experts are available that can assist in running these models and interpreting outputs for the incident. These models can and should be used to support decision making and are often incorporated into the decision documentation.

On large, complex wildfires the Strategic Operational Planner (SOPL) position may be assigned to the Incident Management Team to work with the Operations and Planning Sections in developing a long-term course of action. SOPL's are specifically trained in developing long-term plans for wildland fires, and are useful on any wildland fire lasting more than three days regardless of the incident's strategic objectives (protection and/or resource benefit).

WFDSS User Roles and Incident Privileges
User Roles within WFDSS correspond to permissions which allow users to perform certain tasks within the application, such as creating an incident or conducting fire behavior analysis.
User Roles are: Viewer, Dispatcher, Author, Data Manager, and Fire Behavior Specialist.
Information Officers should only be viewing the decision.

Incident privileges are assigned at the time of (and are specific to) an incident. These privileges allow you to Own, Edit, Review, or Approve decision content.

Training aids are available on the WFDSS site.
http://wfdss.usgs.gov/wfdss/WFDSS_Training.shtml To help users become familiar with navigating in the program WFDSS 101 series is an excellent source for learning how to use WFDSS.

Exercise
Review the various decision elements from the Wesley WFDSS 2012. Write up 3 to 5 talking points that capture the management strategy (how the fire is being managed), values at risk (what natural and manmade resources could be damaged by the fire) and safety concerns that may limit tactical operations (what safety concerns limit aggressive suppression activities). It is recommended that you access the Wesley 2012 incident in the production site on WFDSS http://wfdss.usgs.gov/wfdss/WFDSS_Home.shtml After signing into WFDSS, click on the Incidents tab. Using the Incident List Filter, type in "Wesley" in the Incident Name box and "2012" in the Incident Year box and click Find Incidents. Click on the radio button next to Wesley, then View Information. Click on the Situation tab to view the incident map. If the various elements are not visible they can be activated from the left Map Layers menu. The Objectives tab can be found at the top of the page in the second row of tabs.
The Wesley_092212_1214_Decision PDF decision may be used if access to WFDSS is not available.

V. SUMMARY

As an Information Officer having an understanding of the WFDSS decision and the decision process will help you better inform the public and address questions as they arise.

Management of wildland fire represents one of the most complex and highest risk activities in land management. Decision support and its contributions to decision-making are vital to fire management success. Decision support tools range from subjective information to quantitative long-term analysis processes and provide information to decision-makers. These tools and processes incorporate science and technology to facilitate decision making based on the best available information.

Decision support gives managers the ability to reduce the amount of uncertainty surrounding the fire, understand the amount of difficulty that could be encountered during management and possible outcomes, develop management strategies and operational tactics, and provide a common understanding and clearer explanation of the situation.