

Fire Behavior Requester Reminders

When you make an analyst-assisted fire behavior request in WFDSS, an Analyst will contact you to gather information necessary to complete your request. Consider gathering as much of the following information as possible to assist the fire analyst. It is understood that you likely won't have all of this information, but it does add value to the analysis.

Communication

- Is someone available by phone (preferably) or email with time and knowledge about the fire to collaborate with the fire analyst?
- If there is an FBAN or someone very familiar with local fire behavior, consider providing their contact information.

Fire Behavior

- How do you characterize the fuel types?
- What is the current or expected fire behavior across various fuel types?
- What are the Flame length, ROS, spotting distances?
- Is the fire surface, torching, or crowning?
- Is the fire exhibiting "plume dominated" behavior?
- What is the burn period?
- Is the fire burning at night?
- Is there anything unusual about the fire behavior?
- Are there rules of thumb or known thresholds for changes in fire behavior (sometimes these are listed on Pocket Cards)?
- Is the fire spotting? If so how far is it spotting?
- Is the fire spotting across barriers like major roads or rivers?
- Are there any known burnouts taking place in the next operational period?
- Are there any burnouts that occurred in past operational periods that significantly contributed to the growth for that operational period?

Weather

- What is the most representative weather station for weather and is it the same station for wind?
- Are there any known “issues” with local RAWS?
 - For example, “We never use that one for temp/RH because it’s in a frost pocket.”
- Do you have weather observations taken from the fire area?
- Do you have an IMET? If so consider including their contact information.

Modeling

- Have there been analyses done in the area prior to this season that are pertinent to the current analysis?
- If these analyses were done prior to 2010 and are not in WFDSS do you have write-ups on the calibrations or an idea what was driving fire behavior?
- Do you have perimeters for previous fires or the current fire so that calibrations can be done, and are they uploaded into WFDSS?
- Have you looked at the WFDSS landscape file for this area?
- Do you have any comments or concerns about how CBH, CBD, SH and Fuels are represented in the landscape file?
- Are recent disturbances and treatments represented in the landscape file?
 - Examples include Fires, bug-kill, blow-down, prescribed burns, or thinning treatments.
- Do the fuels in the landscape represent the CURRENT conditions?
 - Example: would a 102 better represent the fuels this year that are represented by a 101 in a normal year?
- What information do you hope to glean from these analyses?
- Are there specific values at risk that you are concerned about?
- With the objective in mind, the Analyst can help you decide on the type of analysis needed for your question(s).

The graphics below will assist you in assessing what modeling tools you should use to bolster your decision making process.

WFDSS Fire Modeling Tools

	Pre-planning	Current Fire	Fire Behavior	Fire Growth	Prob	Tactical	Strategic
BFB	X	X	X			X	X
STFB	X	X	X	/		X	X
NTFB		X	/	X		X	X
FSPro	X	X			X		X

	1 Fire	All fires
1 Weather Scenario	FARSITE (NTFB)	FlamMap (BFB/STFB)
All Weather Scenarios	FSPro (long term)	Fire Program Analysis

“X” Indicates the tool is fully suited to give this information

“/” Indicates this tool will give this information with limitations

WFDSS SMOKE MODELING TOOLS

	Historical Data	Current Conditions	Forecast/Gaming
Atmospheric Conditions	<ul style="list-style-type: none"> Localized Tool: Diurnal Surface Wind Pattern Analysis (graphic) Regional Tool: Climatological Ventilation Index Point (graphic) 		<ul style="list-style-type: none"> Localized Tool: Smoke Guidance Point Forecast (text) Regional Tool: Fire Information & Smoke Trajectories (graphic)
Smoke Concentrations	<ul style="list-style-type: none"> Regional Tool: Probabilistic Smoke Impacts (graphic) 	<ul style="list-style-type: none"> Regional Tool: Current Air Quality Conditions Map (graphic) 	<ul style="list-style-type: none"> Regional Tool: Customized Fuels Consumption & Smoke Modeling (text, graphic)
Smoke Concentrations & Atmospheric Conditions			<ul style="list-style-type: none"> Regional Tool: Smoke Guidance Regional Maps (graphic)

Localized Tool

Regional Tool

Local & Regional Tool

text

 Text Output

graphic

 Graphical Output