

FPA: Getting Started Tips Tricks

Tip Name	Tip Description	1st Nav Level	2nd Nav Level	3rd Nav Level	Table Name	Field Name	Web Date
Copy Last Year's Dataset	Select your 2011 Submitted Analysis with " Migrated " status, then copy it twice. One is your master copy and the other becomes your working copy. We suggest you name your master copy something like: " Master Copy - Do Not Delete ". Also, periodically save your working copy to a backup copy.	Welcome	Select Team and Analysis		Analyses for Selected Team	Copy	9/25/2009
Import FWAs	<p>Go to Set Up FPU>FPU Attributes</p> <ul style="list-style-type: none"> • In the Manage Shapefiles table, click Import next to the Import FWAs field. • In the Select FWA Set to Import table, click on the FWA Set you wish to import. • As a minimum, import the FWA Set that you intend to use for the analysis. • Click Upload FWA Set <p>Note: If you FPU made changes to the FMU or FWA shapefiles (including making name changes) prior to this year's analysis, you will need to fix your FWA association inputs. This includes FWA attributes, FWA to Dispatch Location associations, Dispatch Logic associations, FWA Delays, fuel treatment FWA locations (Alternatives>Fuels Options>Treatment Details>Edit), etc.</p>	Welcome	Setup FPU	FPU Attributes	Manage Shapefiles, Select FWA Set to Import	All Fields	9/25/2009
Checking Status for Associating FWAs to Analysis	<p>In the FWA Sets table, select the FWA set that you just associated. Then check the FWA Process and Status table to see that the status for all processes is Completed. When you see this, the FWA set is associated.</p> <p>If you get a failed message, try clicking on the Restart Failed FWA Processes button. If you still do not get a completed status, contact the FPA Help Desk by Email: fire_help@fs.fed.us or by calling 1-800-253-5559.</p>	System and Status	FWA Process		FWA Sets		9/25/2009

Tip Name	Tip Description	1st Nav Level	2nd Nav Level	3rd Nav Level	Table Name	Field Name	Web Date
Overview of "Review and Update Data"	<p>If the planner made any edits to their FWA set prior to importing it for a new analysis season, it is important to review their data inputs to ensure they migrated correctly. This is especially true if FWA names were changed or if FWAs were added or deleted.</p> <p>Additionally there are items that may need updating for each analysis year – such as annual costs for partner owned resources, staffing changes, etc.</p> <p>Changes made to some of the NWCG unit identifiers may also require your attention. When you review the list of partners, participants, and cooperators, if there is an asterisk (*) by the unit ID, then NWCG has changed it's identifier and you will need to update it. The new identifier will be in the drop down list.</p>	Input Data			All Tables		9/25/2009
Longitude Entry	Longitude entries values must have a minus sign (-) in front of the numerical value.	Input Data	Define		Dispatch	Longitude	9/25/2009
Review Dispatch Locations Callback Delay	<p>Verify that you have an entry for Callback Delay.</p> <p>Enter the time in minutes that it takes for resources to be staffed during non-duty hours. This setting applies to all resources at the dispatch location regardless of agency ownership. This is a user entered value with a default set to 120 minutes. However, 120 minutes may be too long for some dispatch locations.</p>	Input Data	Define Dispatch Locations		Dispatch Locations Owned by My Team	Callback Delay	9/25/2009

Tip Name	Tip Description	1st Nav Level	2nd Nav Level	3rd Nav Level	Table Name	Field Name	Web Date
Updating your Fire Resources	<p>The following tips apply only to FPU Partner-owned resources:</p> <ul style="list-style-type: none"> • Disassociate or delete any “Shoulder Season” resources - see tip: "Shoulder Season Resources." • Update Resource Annual Cost. Remember that annual costs include any associated personnel costs and vehicle fixed operating rates (FOR). Use your .current baseline budget figures that are provided to you by your agency budget officers. The Comments box is a great way to keep track of the changes you make. • Reflect any adjustments to resource configurations in Daily Staffing, Total Positions, & Total FTEs. 	Input Data	Define Resources		Available Resources (for inclusion in options)	Edit / Edit Resource	9/25/2009
"Shoulder Season" Resources	<p>For the budget planning year 2012, FPA models ignitions within preparedness staffing season; the use of “Shoulder Season” fire resources is no longer necessary. Shoulder season resources that responded exclusively to fires before and after preparedness staffing season should be deleted or not shown as available. This can be done two ways:</p> <ol style="list-style-type: none"> 1. Delete the individual resources. Go to Input Data>Define Resources>Available Resources table, click on the resource you wish to delete, and click on Delete. 2. A more conservative approach would be to keep the shoulder season resource in the system and turn off their availability to respond to an option. In the FPA program, go to: Alternatives>Preparedness>Preparedness Options> Resource Assignment per Preparedness Options table. Click on Edit, and “turn off” the shoulder season resources by clicking under the appropriate column and changing the fire resource status from “a” (for available) to a “—”(for unavailable). This approach leaves the resource in the system in case you might want to include it or edit it in future analyses. (Please note, it is expected that these resources will not be needed in the foreseeable future). 	Input Data	Define Resources		FWA to Dispatch Location Association	Resource ID	9/25/2009

Tip Name	Tip Description	1st Nav Level	2nd Nav Level	3rd Nav Level	Table Name	Field Name	Web Date
Using "Damaging FIL"	<p>The concept behind Damaging Fire Intensity Level (FIL) is different than other entries on under the FWA Attributes section. The Damaging FIL input has no effect on the behavior of the model. It is used as a threshold to calculate the Performance Metrics.</p> <p>For Wildland Urban Interface (WUI), the planner needs to remember that the damaging FIL applies to the surrounding natural resources and not the housing structures. Determine the average value above which fire adversely affects resource management. One way to derive this input is to think in terms of applying prescribed fire to the area surrounding WUI. Derive the maximum acceptable FIL when applying prescribed fire to that area. Your damaging FIL is the value above your acceptable prescription.</p>	Input Data	FWAs	Attributes	FWA and Fire Attributes> FWA Attributes	Damaging FIL	9/25/2009
Discovery Size selection	<p>In FPA, the intent of Discovery Size is to represent the size of the fire when it is first reported. It is not the size of the fire when the first responders arrive at the scene. While the lowest discovery size in fire reports, such as FIRESTAT, is one tenth of an acre (0.1 acre), in FPA the lowest size is one hundredth of an acre (.01 acre).</p> <p>FPA suggests using one hundredth of an acre (0.01) for those timber fires which are typically spot fires or single trees hit by lightning. If you enter one tenth of an acre as the initial size at discovery, the fire begins at 10 times the actual size of the spot fire or single tree. If it's in fuel model 165 (very high fuel load timber & understory) you have greatly increased the chance of losing this fire.</p> <p>Proportions for Discovery Size:</p> <ul style="list-style-type: none"> • One hundredth of an acre (0.01) is about a 20' by 20' fire or 435.6 square feet. This is FPA's smallest input for discovery size. • A tenth of an acre fire (0.10) is approximately 66 feet by 66 feet or 4356 square feet. A Discovery Size for a 0.10 acre fire is large, especially in timber. 	Input Data	FWAs	Attributes	Fire Attribute	Discovery Size	9/25/2009

Tip Name	Tip Description	1st Nav Level	2nd Nav Level	3rd Nav Level	Table Name	Field Name	Web Date
Head Attack versus Tail Attack	<p>The Head Attack entry is used to specify the percent of fires in the model where initial response fire resources attack a fire at the head rather than the tail. For the purpose of modeling, FPA recommends against using a Tail Attack, and instead designating all fires as Head Attack. If the IRS model fails to contain the fire using a Head Attack (usually because the Flame Length (FL) or Rate of Spread (ROS) is too high), the system automatically retries using a Tail Attack and no time is lost.</p> <p>The advantage of using Head Attack is that it allows the model to catch small fires before they spread into the crowns in Fuel Model 165 (very high fuel load timber and understory). The tactical rationale is that it is best to extinguish the head of a small fire with shovel and water, rather than letting it get out of control.</p>	Input Data	FWAs	Attributes	FWA and Fire Attributes	Head Attack	9/25/2009
Using Parallel Attack	<p>The FPA model takes the discovery size and adds your parallel distance input (in feet) to build fire line around this larger area. If you use parallel attack in timber (FM 165), you are now “creating” a bigger fire and increasing your chance of having a crown fire that the model may not catch. If the model catches the fire when using Parallel Attack you may see an increase in total acres as a result of the fire growing towards the parallel attack fire lines.</p>	Input Data	FWAs	Attributes	FWA and Fire Attributes	Parallel Attack	9/25/2009

Tip Name	Tip Description	1st Nav Level	2nd Nav Level	3rd Nav Level	Table Name	Field Name	Web Date
<p>New Feature: Adjusting ROS for Fuel Models in an FWA</p>	<p>This new feature allows you to change the rate of spread for up to 10 Fuel Models in each FWA. Each fuel model that you modify can react like a different fuel model.</p> <p>For example, if GR1 or 101 is one of the existing fuel models in your FWA, you can alter its rate of spread (ROS) to more closely match the fire behavior that you are accustomed to seeing on the ground.</p> <p>You must first select the Edit button on the bottom of the Fuel Model Rate of Spread Adjustment section. You will get a drop-down menu under the Fuel Model column with a list of the current fuel models that are associated to your FWA. Select the fuel model you wish to modify. In the Co-Efficient box enter a number from 0.1 to 5 to change the rate of spread (ROS) of that fuel model. Examples of the impacts of applying a coefficient are:</p> <ul style="list-style-type: none"> • Entering a 0.1 reduces the rate of spread by 90% • Entering a 0.5 reduces the rate of spread by 50% • Entering a 1 keeps the ROS the same as it was. • Entering a coefficient of 5 increases the ROS by 500% <p>FPA recommends that you adjust the diurnal coefficient for each FWA before making any rate of spread adjustments by fuel model.</p>	Input Data	FWAs	Attributes	Fuel Model Rate of Spread Adjustment	Co-efficient	9/25/2009

Tip Name	Tip Description	1st Nav Level	2nd Nav Level	3rd Nav Level	Table Name	Field Name	Web Date
Using the "Post-Contained Fire Unused" Delay	<p>Delays represent, in a generalized manner, the additional time it takes for fire resources to respond to an incident. These delays apply to either the arrival time of resources, or their availability to respond to an additional incident that follows the current incident. There are four categories of delays; walk-in, post-contained fire used, post-contained fire unused, and post-escaped fire. For more information on delays, see the User Guide: http://www.fpa.nifc.gov/Library/Documentation/Userguides/Docs/Define_Delays.pdf</p> <p>Since FPA accommodates both single and multiple fire day scenarios in a single entry for each kind of delay, FPA suggests FPU's put zero minutes for all "Post-Contained Fire Unused" delays. Experience shows that using the "Post-Contained Fire Unused" delay can result in tying up most of your resources on one or two fires. Remember, on single fire days these delays do not matter in the output unless your delay is more than 18 hours or 1080 minutes.</p>	Input Data	FWAs	Define Delays	FWA Delays	Post-Contained Fire Unused	9/25/2009
Borrowed Resources: Associating Their Dispatch Location to your FWA	<p>A common problem is borrowing fire resources from an adjacent FPU and failing to associate the borrowed resource's Dispatch Location to an appropriate FWA in your FPU. If no association exists, the resource will never be used. The borrowed resource's Dispatch Location needs to be associated with an FWA for the model to use the borrowed resource. This is done in Input Data>FWAs>Dispatch Associations>FWA to Dispatch Location Associations table.</p> <p>A borrowed resource's dispatch location is shown in <i>italics</i> in the Input Data>FWAs>Dispatch Associations>FWA to Dispatch Associations table.</p>	Input Data	FWAs	Dispatch Associations	FWA to Dispatch Location Association	Dispatch Location	9/25/2009
Include FWA in Analysis	Check the Include in Analysis box to include this FWA in the analysis.	Input Data	FWAs	Attributes	Fire Attributes	Include in Analysis	9/25/2009

Tip Name	Tip Description	1st Nav Level	2nd Nav Level	3rd Nav Level	Table Name	Field Name	Web Date
Defining Delays	<p>In many cases users had very long delays defined, especially in the area of the "Post" delays. The "post" delays are intended to address the amount of time it would take once the resource is at the dispatch location to prepare for the next dispatch. These delays are not intended to account for return travel time.</p> <p>The recommended values are 15-30 minutes for Post-Contained Used delay and Post-Escaped Fire delay; and zero for Post-Contained Unused. These delays are used by the model to indicate when a resource is available for another dispatch.</p> <p>See additional tip on "Using the Post-Contained Fire Delay"</p>	Input Data	FWAs	Define Delays	FWA Delays	Post-contained Used, Post-escaped Fire	9/25/2009
New Feature: How Non-Burnable Fuel Models are used in IRS	<p>For the 21012 analysis year, FPA will use the following protocols for non-burnable fuels in IRS. It is important that the planner know how this affects the fuels in their FWAs.</p> <p>For the following fuel models, the FPA system assigns a fuel type to each modeled ignition within the Fire Workload Area (FWA) by drawing from the existing fuel types within the FWA.</p> <ul style="list-style-type: none"> • FBFMs NB1 (Urban Developed) • NB2 (Snow/Ice) • NB8 (Open Water) • NB9 (bare ground) <p>For FBFM NB3 (Ag), the system will assign a GS1 fuel type and then use the calculated fuel moistures, and wind speed of the originally designated fuel type.</p> <p>For NB6 (emergent wetland), or NB7 (moss), IRS will default the Rate of Spread (ROS) to 10 chains per hour with a 5-foot flame length and a Fire Intensity Level of 1. If needed, the FPU will be able to adjust this default in IRS to match historically observed ROS for the fuel model in that FPU.</p>	Input Data	FWAs	Attributes	FWA and Fire Attributes> Fuel Model Rate of Spread Adjustment	Fuel Model	9/25/2009

Tip Name	Tip Description	1st Nav Level	2nd Nav Level	3rd Nav Level	Table Name	Field Name	Web Date
Associate FWA Set	Select the FWA set you wish to use in the Select FWA Set for Association table. Then in the Review Changes table, review any changes (shown with Red “minus” & green “plus” icons) that you had earlier made to your FWA layer. You may want to print off a “screen capture” of the changes. Finally, click “ Associate FWA Set ”.	Input Data	FWAs	Associate to Analysis	Select FWA Set for Association, Review Changes	Associate FWA Set	9/25/2009

Tip Name	Tip Description	1st Nav Level	2nd Nav Level	3rd Nav Level	Table Name	Field Name	Web Date
Setting Up Dispatch Logic	<p>During the budget planning year 2011, many users associated <u>all</u> dispatch locations to <u>all</u> FWAs. This was the recommended process. It has been discovered that this action has some major pitfalls.</p> <p>An “all-to-all” selection may have the unintended result of sending resources from distances that would normally be used only for extended attack situations.</p> <ul style="list-style-type: none"> • For example: A dispatch location is associated to an FWA that is many hours away. In this instance, fire resources would travel many hours to the ignition in the distant FWA and work an hour before reaching the system-enforced work shift limit (set at 18 hours). Minutes after their initial dispatch, a fire could start close to their dispatch location. This second fire could quickly exceed simulation limits because all the close resources were traveling to the fire in the distant FWA. <p>Many factors come into play for the model to decide which resources should respond to ignitions. This includes:</p> <ul style="list-style-type: none"> • Whether a dispatch location is associated to an FWA. • The number of resources <u>available</u> for dispatch from all associated dispatch locations. • The number of producer types specified in the Dispatch Logic required for dispatch to a fire event. • The Break Points minimum and maximum values used to define the lower and upper boundaries of Fire Dispatch Levels (FDLs). These values define the fire danger conditions and the corresponding desired maximum number (by producer type) of resources that can be dispatched to a Fire Workload Area (FWA) when a fire occurs. • FPA uses available fire resources with the shortest arrival times based upon dispatch location associations, dispatch logic producer types, and specific resource availability. <p>Things to consider:</p> <ul style="list-style-type: none"> • When selecting which dispatch locations to 	Input Data	FWAs	Dispatch Logic	New/Copy Table	All Fields in Table	9/25/2009

Tip Name	Tip Description	1st Nav Level	2nd Nav Level	3rd Nav Level	Table Name	Field Name	Web Date
Setting Up Dispatch Logic	<p>associate to an FWA, consider whether the travel time is within a reasonable distance to respond to initial attack.</p> <ul style="list-style-type: none"> Review the management objectives of each FWA. WUI FWAs and FWAs with high resource value may warrant a greater number of Dispatch Location associations. <p>Hint: The Event Details Report provides the calculated travel distance from Dispatch Location to the Travel Time Point.</p>	Input Data	FWAs	Dispatch Logic	New/Copy Table	All Fields in Table	9/25/2009