



# Understanding Delays in Fire Program Analysis (FPA) Initial Response Simulation (IRS) Module IR\_009\_WP

## Topic:

Fire resource delays in the Initial Response Simulator (IRS) Module.

## Purpose

This paper defines delays and describes their functionality within the IRS Module.

## Background

The time before fire resources can produce fireline influences whether initial response resources can successfully contain modeled fire events. The IRS applies delays to mimic real life situations where fire resources are unavailable to produce fireline after a fire is reported. The Post Dispatch Delays apply to fire resources dispatched to a modeled fire event and are available for release to another modeled fire event.

FPU's enter all delay times into FPA in minutes.

## Discussion – Delays

Delay	Description
Post Dispatch Delay Contained – Used	Applies to resources dispatched to a modeled fire event that produce fireline, and then contain the fire event. The FPU planner enters (by fire resource producer type per FMU/FWA) the amount of time the resource will be delayed until it is available for dispatch from its dispatch location to another modeled fire event after fire containment time on the initial fire.
Post Dispatch Delay Contained – Unused	Applies to resources dispatched to a modeled fire event, but the event was contained before the resources produced fire line. The FPU Planner enters (by fire resource and producer type per FMU/FWA) the amount of time between resources completing fire duty at a previous contained fire event until they are available for dispatch, from their dispatch location, to another modeled fire event.



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Post Dispatch Delay Exceeded Simulation Limit	Applies to all resources, (whether or not they constructed fire line), dispatched to a modeled fire event where the fire was not contained within model limits. For example, the fire size, time, or growth exceeded the fire resource capacity to contain the modeled fire event. FPU's enter (by fire resource producer type and per FMU/FWA) the amount of time from when the resource returns from the exceeded simulation limits fire event until it is available for dispatch, from its dispatch location, to another modeled fire event.
Callback Delay	Time for off-duty fire resources to return to their dispatch locations and respond to a modeled fire event. FPU planners may edit this delay for each dispatch location from the system default of two hours.
Reload Delay	Applies to fire resources returning to the dispatch location and reloading, (with water or retardant), after dropping a previous payload at a fire event. Reload Delays apply to Water Scoopers, Single Engine Airtankers (SEATs), Engines, Helicopters, and Large Airtankers. FPU's enter all Reload Delays, except the Large Airtanker Reload Delay, for each FMU/FWA. The IRS model calculates the Large Airtanker delay. See <a href="#">Understanding Airtanker Use in Fire Program Analysis (FPA) Initial Response Simulation (IRS) Module IR_015_WP</a> for further information.



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Delay	Description
Preproduction Delay	The accumulated time delays that apply to fire resources prior to the start of fire line production. This is the sum of all delays from first report of the fire until production can begin on the fire. This includes Dispatch Decision Delay, Resource Response Delay, Travel Time, Set-up Delay, and Walk-in Delay. See <a href="#">Understanding Preproduction Delays in Fire Program Analysis (FPA) Initial Response Simulation (IRS) Module IR_005_WP</a> for further information.

**Table 1: Post Production Delays**

**Visit:** <http://www.fpa.nifc.gov/Library/Papers/index.html> for the following white papers:

- [Understanding Preproduction Delays in Fire Program Analysis \(FPA\) Initial Response Simulation \(IRS\) Module IR\\_005\\_WP](#)
- [Understanding Helicopter Use in Fire Program Analysis \(FPA\) Initial Response Simulation \(IRS\) Module IR\\_006\\_WP](#)
- [Understanding Smokejumper Deployment in Fire Program Analysis \(FPA\) Initial Response Simulation \(IRS\) Module IR\\_004\\_WP](#)
- [Understanding Airtanker Use in Fire Program Analysis \(FPA\) Initial Response Simulation \(IRS\) Module IR\\_015\\_WP](#)
- [Understanding Dozers, Tractor Plows, and Airboats in Fire Program Analysis Initial Response Simulation Module IR\\_019\\_WP](#)

**Review History:**

Date	Initials	Change Summary
March 20, 2008	DKS	Approved
March 18, 2008	BE	Reviewed for content.
March 5, 2008	HR	Reviewed for content.
February 13, 2008	KSH	Edited for clarity and readability.
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