

# FireOrg

(A Dispatch Workload Analysis program)

## Background / History

Dispatch office staffing levels and the interagency cost sharing for dispatch center operations have always been the two major topics of concern and discussions among coordinators, dispatchers and dispatch center boards. In 2001 the National Coordinators formed a workgroup consisting of Subject Matter Experts from the Dispatch/ Coordination/ Center Manager business group. This group identified the following items:

- **Identify and document the issues.**  
Dispatch Centers are understaffed and dispatchers are overworked. Staffing and funding issues and/or indicators must be factually quantified through a statistical workload analysis.
- **Articulate what skills and capabilities are needed in the job/offices considering interagency as well as non-operational workload.**  
Utilizing Positions Descriptions and identifying the roles and responsibilities and duties of a dispatch center, the Factors within the Dispatch Workload Analysis were developed.
- **Identify a common template for the entire dispatch community to use in evaluating staffing requirements.**  
A national standard was developed for Dispatch Workload Analysis factors.
- **Recommend a strategy with options to deal with any staffing shortfalls.**  
It was recommended that an analysis of the core workload criteria for a dispatch center be completed. The data would then be presented to management to develop a plan to increase staffing based on the analysis calculations.

Over the next three years, in conjunction with dispatch offices from across the nation, Howard Roose from the Fire Program Analysis (FPA) workgroup and Brian Booher, computer programmer/ software developer (Bighorn Systems), the workgroup was able to proceed with the development and validation of automating the workload analysis process.

To date, the workgroup results is a comprehensive and validated analysis program known as *FireOrg*. The program calculates minimum number of dispatchers required to staff a unit dispatch or dispatch center based on some of the actual workload in a dispatch operation. Because of the method that the data is collected, the program also identifies the percent of workload by a unit and/or agency from which managers can then calculate cooperator fair share costs for their dispatch operation.

## Introduction

FireOrg utilizes “factors” to describe the core work criteria that may be accomplished by each dispatch office. The factors, with each of their associated “weighted values”, describe the workload that dispatch offices respond to on a daily basis. As such, FireOrg's criteria include factors for the Initial Response to Wildland Fire, Emergency Medical, Law Enforcement, just to mention a few. FireOrg also addresses the day to day workload of a Dispatch/Coordination Center such as Prescribed Fire, Wildland Fire Use, Support of Extended Attack Wildfires, annual and daily reporting requirements and many other factors.

As a stand alone analysis program FireOrg capabilities address several other dispatch needs, such as:

- Identifies staffing requirements (permanent fulltime dispatchers)
- Calculates percent of workload by unit/agency
- Can evaluate individual units and dispatch center workloads creating the ability to form or divide dispatch workloads appropriately.
- Identifies initial response from extended response staffing needs (FPA)  
Using unit workload percentages, fair share costs to support dispatch centers can be determined.

### How FireOrg works.

The primary functions of dispatch, which create their significant workload are identified within the Core Work Criteria, which are *Incident activity, Resource activity, Resource availability and Administrative duties*. Within each one of these criteria are their associated workload attributes or “Factors”, which account for the majority of a dispatch center’s workload.

FireOrg, takes into account the accumulative workload of the majority of all the various tasks accomplished by dispatch. Although every single task (i.e., answering the hundreds of phone calls) is not listed as a factor, they are accounted for within the factor’s duties / tasks / impacts. Every dispatch office is affected by these factors and dispatch is able to gather factual statistics on them. It is very important to understand that each factor represents multiple tasks which are expressed by “weighting” each factor, then each task accumulates values based on the workload they create. So for example, sending one crew out of your area is less of a workload than bringing a crew into your area.

### For Example: You receive a request to mob 1 Crew out of your local area.

Factor	Inclusive Workload ..... All that is involved with ....	Weighted Value (Sample)
Resources Dispatched Out of your Area - OH	Taking/making contacts, arranging travel, etc	20
Resources Available for Dispatch - OH	maintaining status, redcarding, etc	20
Database Admin	Initial data entry of the people, Enter the information into ROSS	5
		45

### For Example: Mobilizing a T2 Crew into your local area.

Factor	Inclusive Workload ..... All that is involved with ....	Weighted Value (Sample)
Incoming Resources Dispatched - CRW	Taking/making contacts, arranging and maintaining support (meals, lodging, etc), maintaining status, travel, etc	40
IA Resource Dispatches	Mobbing crew from unit to unit to fire to fire, etc	35
Database Admin	Placing Orders, Enter the information into ROSS, daily stating, wildcad, etc	7
		82

Inputs to FireOrg factors are quantified figures such as average number of fires per year, or number of resources available for dispatch from your area. The factors chosen are the primary workload for dispatch, the weighted factors help account for all aspects associated with performing that duty. Each factor does create a workload for dispatch operations however the impacts of each of these factors workload varies and therefore each are "weighted" and values are calculated based on an accumulative basis. For example, a unit having 2 *Overhead Resources Available* for dispatch would have a weighted value of "2", mobilizing these 2 Overhead would have a weighted value of "2", but a unit bringing in 2 Overhead resources may have a weighted value of "4" (since more work is associated with that factor). The weighted value represents the workload associated with each factor.

The following is a description, by the software developer (Brian Booher - Bighorn Systems), of how Weighted Values were developed and work. *"Utilizing weighted values incorporate all workload aspects associated with a factor. FireOrg calculates FTEs using "Factors" entered by the user and "Weights" created by the FireOrg design group. FireOrg first creates "Weighted Factors", by first "normalizing" the user-entered Factors by using established ranges. The normalized Factor is then multiplied times the Weight to produce a Weighted Factor. All of these are totaled for the Unit or Dispatch Center, and multipliers are applied to derive FTEs. The entire process was initially calibrated using real data from a small, medium, and large center."*

## Data Entry and Collection

The "Units" entered into FireOrg should be for the units that you want to know workload impacts and/or by unit providing support (funding, staffing, etc) to a dispatch center.

It is important that data is entered honestly and that only the data that has an effect on the workload of your dispatch office be entered. For example, if a county has 500 fires but your dispatch is only involved with 3 of the fires, only enter the 3 fires under the appropriate size class factors. Include only the actual workload impacts to your dispatch office. (When possible have the units provide the actual data.)

## FireOrg Results

FireOrg will create an output page for each unit entered and one for the dispatch center.

Note that the "results" for each unit only include the factors that were entered for that unit. Also, the number of FTE's required to run a *unit* dispatch will be higher than the total number of dispatchers needed for a *dispatch center*. This is because duties and staffing hours are combined within a dispatch center, alleviating the need for additional staff.

The Dispatch center output page contains: the combined unit factors, showing the total workload for the dispatch center; a summary of the resulting interagency FTE; and workload percentages broken down by each unit.

FireOrg Results include:

- TOTAL FTE - the number of dispatchers required to staff dispatch.
- IR FTE (Initial Response FTE) (FPA entry) - the number of dispatchers required for initial actions on fire incidents. (This number is entered into FPA);
- Percent (%) the average annual percentage of workload per unit is calculated for offices.

Using the "Percent" calculations, managers can identify fairshare costs by unit/agency for Dispatch Operations, Staffing and Operational Costs. (It is recommended that Dispatch Operations costs not include "space costs" if a center is co-located within an agency building, since these costs are normally taken off the top at the state or WO levels.)

Any additional duties a dispatch office performs that are not normally a "dispatch" responsibility (i.e., aviation officer, FPA, training officer, etc) should be presented to managers as a separate narrative, with the final FireOrg results.