

WFDSS & the IRWIN Data Exchange Service: Working in a Connected World

v1.0 7/20/2015

Contents

Background.....	1
Authoritative Data.....	2
Order of Fire Record Creation in Dispatch Centers.....	4
When WildCAD is in use in a dispatch center:	4
When WildCAD 6 is not in use in a dispatch center:	4
A Note On Forest Service ABCD Misc Fires.....	5
False Alarms and Non-Fire Records	5
Actions	5
Complexes	5
Links.....	6
Contacts.....	6
Frequently Asked Questions	6

Background

During the 2014 calendar year, WFDSS began using an automated data exchange service called IRWIN (Integrated Reporting of Wildland Fire Information). Five other wildland fire applications-- FireCode, ICS 209, WildCAD, Alaska IFM, and the Enterprise Geospatial Portal (EGP)--were participants in that first year. ; The Texas Dispatch Tracker CAD and the Alaska Fire Service FireBeans CAD were added in year two with permissions to update data. The goals of the IRWIN project are to decrease or eliminate redundant data entry, provide authoritative operational data, and improve data consistency and availability.

Through the IRWIN service, much of the basic information on a fire's location, size, and ownership/management status can now originate in, and be updated by, other wildland fire applications.

Authoritative Data

The data flow between applications is based on rules, where the information from an application is given a ranking based on its level of authority. IRWIN maintains a record of the “authority” of the data coming from each application. Authority can be thought of as an order of precedence. If an application has an authority level of 1 for a data element, it can update information that is provided for that data element from any other application. If an application has an authority level of 3, it could initially provide information for a data element, or update any equal or lower authority, but any application with an authority level of 1 or 2 could update the information provided from the application with an authority of 3. An application with a priority level of 3 can never update data provided by an application with authority level 1 or 2.

Let’s take a look at a practical example from WFDSS:

A user creates a fire, “Cowbird Peak”, in the FireCode application. Firecode has an authority level of 4 for fire name, Latitude, Longitude, and an authority level of 1 for the Fire Code. As the incident grows in size and complexity, a WFDSS decision is required. A WFDSS user, “Thomas”, logs in to WFDSS and finds that the “Cowbird Peak” fire already exists in WFDSS. IRWIN put it there. Thomas takes ownership of the fire in WFDSS and checks the information to make sure it is consistent with his current knowledge of the situation. Because WFDSS has an authority level of 2 for Fire Name, Latitude, and Longitude, and Thomas is working in the WFDSS application, Thomas can use WFDSS to update or correct any of those three elements. As soon as he clicks “save” on the WFDSS incident information screen, the information is passed back to IRWIN, and subsequently, FireCode. A FireCode user could no longer update those data elements, since they have now been updated by a more authoritative application. A FireCode user could still update the actual “firecode” in FireCode. Thomas cannot change the FireCode from WFDSS.

For data elements that WFDSS either reads or updates, here is a table of authority levels for the 2015 fire season. The higher the number, the more authority an application has for a specific data element; “R” indicates that an application is “Read-Only” for a specific data element. A more extensive list, including all the data elements IRWIN exchanges, can be found in the [IRWIN Basics](#) presentation in the [IRWIN Project community](#) on the Wildland Fire Lessons Learned Center.

IRWIN Data Element (POO = Point of Origin)	CAD Wildcad	CAD IFM	CAD Dispatch Tracker	CAD Fire Beans	ICS209	WFDSS	Fire Code
Unique Fire Identifier	R	R	R	R	R	R	R
Fire Discovery Date/Time	1	1	1	1	2	2	4
POO ProtectingUnit	1	1	1	1	2	2	4
Local Incident Identifier	1	1	1	1	2	2	4
Dispatch Center ID	1	1	1	1	R	R	R
Incident Name	1	1	1	1	2	2	4
Fire Cause	1	1	1	1	2	2	R
Incident Type Kind	1	1	1	1	2	2	4
Incident Type Category	1	1	1	1	2	2	4
POO Latitude	1	1	1	1	2	2	4
POO Longitude	1	1	1	1	2	2	4
POO Jurisdictional Unit	R	1	1	1	3	2	R
POO State	R	R	R	R	R	R	R
POO Landowner Kind	R	1	R	1	3	2	4
POO Landowner Category	R	1	R	1	R	2	4
Fire Code	R	R	R	R	R	R	1
DailyAcres	1	2	1	1	2	2	R
CalculatedAcres	R	R	R	R	R	2	R

As a general rule in IRWIN, CAD (Computer Aided Dispatch) applications are considered to be the most authoritative data sources for basic incident information, such as incident name, location (Latitude/Longitude), responsible unit, and unique fire identifier. ICS-209 and WFDSS are considered to be equals in the second tier of authority- each can update (over-write) data provided by the other- and can update data elements as long as no CAD application is involved. FireCode is generally lowest in terms of authority for all data elements. As a notable exception, the FireCode application is most authoritative for one data element- the Fire Code data element itself. If FireCode has assigned a fire code for an incident, no other application may edit it. Similarly, WFDSS is the most authoritative application for the acreage of the most recent fire perimeter, and no other application can update the fire perimeter acreage if WFDSS has provided a perimeter.

Note that “Daily Acres” and “Calculated Acres” are distinct and separate data elements. WildCAD, ICS-209 and the “Incident Acres” field in WFDSS update the IRWIN “Daily Acres” data element. WildCAD is the highest authority for this data; WFDSS and ICS-209 are in the second tier. Only WFDSS provides data for the IRWIN “Calculated Acres” data element.

Order of Fire Record Creation in Dispatch Centers

When WildCAD is in use in a dispatch center:

When WildCAD 6 is in use in a dispatch center, all fires should be entered in WildCAD 6 first. Fire Codes can be requested through the WildCAD application, and most data elements will be updated in WildCAD . WFDSS will inform users when data elements must be updated in the CAD application.

CAD applications are not common in parts of the US, including much of the east coast. Read below for the proper order of record creation when working in an area without a CAD.

When WildCAD 6 is not in use in a dispatch center:

To avoid duplicates, all fires that will need a fire code (P-Code) should be entered into the FireCode application before being used in WFDSS or SIT-209. If the fire is created in WFDSS or SIT-209 first, FireCode will create a duplicate record that could be passed to the other applications.

Once the FireCode record has been created, search in WFDSS or SIT-209 for the incident by name or unique fire ID (example 2014-AZGCP-000001).

If you cannot find the record in WFDSS or SIT-209, proceed to create the incident in one of those applications. Pay very close attention to warning messages you get that indicate the existence of a similar incident. Perhaps the fire number is different, or the name seems wrong- but if the timing and the Lat/Long of the incident are the same, it is best to investigate to see if someone has simply made a data entry error- your fire may already exist.

If you find that you have accidentally created a duplicate, contact the help desk of the affected application. In WFDSS, this is most easily accomplished by clicking the “feedback” link in the upper right-hand side of the application. Using “feedback” is best because the information you send includes a direct link to your incident and there is no question about which needs to be deleted.

In SIT-209, if you see two possible records from IRWIN in SIT209, one will likely be from WFDSS/WildCAD and the names tend to be in “Title Case”, and the other from FireCode where the names are “UPPER CASE”. When there is a choice, we believe it is best to use the record in “Title” case rather than “UPPER” case. This will ensure that the SIT-209 and WFDSS records are tied to the same IRWIN record, which makes information consistent between the two applications.

A Note On Forest Service ABCD Misc Fires

US Forest Service fires under 300 acres are initially assigned a “generic” unit-level Fire Code referred to as an “ABCD Misc” Fire Code. A unique Fire Code is not required until the fire exceeds the 300-acre threshold, or in the absence of a dispatch center running WildCAD 6.0, these fires often need to be entered in WFDSS days before a Fire Code is needed. If no work has been done on the incident in WFDSS, the WFDSS record can be deleted and replaced with the newly created firecode record.

If work has been done in WFDSS towards a decision, make sure that the unique fire number used to request the fire code is the same as the unique fire number in WFDSS, and the IRWIN, FireCode, and WFDSS teams will work to merge the records after the fact. Be aware that this can take several weeks due to the volume of data and number of applications involved.

False Alarms and Non-Fire Records

Occasionally records for non-fire are created in other applications and inadvertently passed to WFDSS through IRWIN. Examples include False Alarms, training incidents, and requests for Severity or “Step-Up” FireCodes.

Actions

Any dispatcher, author, or GA Editor user who notices records in WFDSS that are non-fire are encouraged to change the incident type to other “Other” on the Information page. Within IRWIN, this will mark the incident as type:“False Alarm” and will change the record from active to inactive, signaling to all other applications that the record is not a valid wildfire. On the WFDSS maps, an incident of type “other” will be displayed as an oval rather than the “kite” shape used by Wildfire incidents.

If desired, a dispatcher, author, or GA Editor may also set an “Out” date/time for the record so that it does not display on maps or in common incident filters.

Further, a non-fire incident can be removed from WFDSS by submitting a feedback with the incident name and unique fire ID. The staff member handling the feedback will confirm that the incident is indeed a non-fire record and can then delete it.

Complexes

IRWIN also allows the exchange of information about complexes. Complexes are collections of wildfire incidents grouped together to facilitate management (command and control), resource ordering, or finance. When considering complexes in WFDSS, it is important to remember that WFDSS is designed with the idea of a 1:1 relationship between decisions and wildfires. WFDSS does not provide support for creating complexes, adding incidents to complexes, or removing them. WFDSS does provide a way to view the incidents in a complex through the WFDSS “Groups” tab.

The WildCAD 6, ICS-209, and FireCode applications can create complexes, and add/remove incidents to/from a complex. When a record from IRWIN is designated as a complex at the time of creation, that complex record will not be added to the list of incidents in WFDSS. The complex will be added to the WFDSS “Groups” tab, and any fires that are a member of the complex will be added to the group. Fires that are a member of a complex will be added to the list of incidents in WFDSS.

If a record from IRWIN is designated as a wildfire when it was created, it will be added to WFDSS. If that record is later designated a complex (the data element “isComplex” is set to “True” in IRWIN), its type in WFDSS will change from “Wildfire” to “Other”. A decision can still be published for an incident of type “Other”, but WFDSS does not exchange data with IRWIN for non-Wildfire typed incidents. Updates on Complex records will not be passed back to IRWIN for distribution to other applications.

The following links provide “Best Practice” information for handling complexes in wildland fire computer applications, and for working with complexes and decisions in WFDSS.

- [NMAC Guidance on Managing Complexes within the ICS-209 and IRWIN Programs](#)
- [WFDSS and Complexing discussion paper](#)

Links

[Forests and Rangelands IRWIN Project Information Page](#) (general project information)

[IRWIN Community on Wildfire Lessons Learned Center](#) (documents, discussion forums)

Contacts

Please consider using the Feedback button in the WFDSS application, as this will ensure that your question is seen and answered promptly!

For WFDSS/IRWIN related questions, please contact :

Andrew Bailey, WFM RD&A Data Manager

208-387-5248

Andrew_Bailey@nps.gov

For general IRWIN questions, please contact:

Roshelle Pederson, IRWIN Business Lead

kimber_pederson@ios.doi.gov

Frequently Asked Questions

Q. How can I tell if an incident in WFDSS was created by a WFDSS user, or passed from another application via IRWIN?

A. To see if IRWIN has created or updated the WFDSS incident record, choose “Incident History List” from the left side menu in WFDSS when on the Incident Information tab. If the incident originated in IRWIN, the username for the incident creation step will be “IRWIN”.

Q. How can I tell if an incident in WFDSS has been modified by another application via IRWIN?

A. If the record was created by a WFDSS user, the users name and user role will be displayed in the “Incident History List”, linked on the left-hand side of the incident information screen. If another application updated the record through IRWIN, you will see “IRWIN” displayed as the user in a later step.

If the modifying application is considered to be more authoritative than WFDSS for basic incident information, the incident information elements that have been modified by IRWIN will be greyed out on the incident information screen. A green message will appear at the top of the incident information screen instructing the user to contact the appropriate more authoritative application to make any changes to the incident information that may be required. An example:

The Incident Information section of this page is controlled by MTHDC. Please contact them to update the information.

Q. I am having trouble using the “Upload Incident from WildCAD” button. It appears to have been disabled in WFDSS.

A. Before IRWIN, WFDSS supported upload of incidents from WildCAD version 5 by providing an upload incident button to users with the “Dispatcher” role. With the advent of WildCAD 6.0, this feature is no longer necessary since WildCAD 6 provides incidents to WFDSS automatically via IRWIN.

The "Upload Incident" button has been disabled in WFDSS as of 6/11/2014 due to duplicate fires being submitted through WFDSS (via batch upload) and FireCode into IRWIN. While WFDSS checks for duplicates, many duplicate incidents in IRWIN were being created in FireCode after creation in WFDSS through batch upload.

At this point, all incidents for which a Fire Code is requested will automatically appear in WFDSS via the IRWIN service. The recommended workflow is to enter the incident in FireCode first and then search for it in WFDSS. Incidents that have an existing Fire Code, such as an "ABCD Misc" fire, must be manually entered into WFDSS.

For dispatch centers using WildCAD 6, these issues should not occur as the CAD will be used to enter incident information and request a Firecode. All federal dispatch centers using WildCAD should be updated to version 6.0 by June 6, 2015.