



## WFDSS 3.9 Release Notes (3.9 deployed March 11-12, 2010)

### I. Incident Information

- a. The following changes were made to the Incident Information page to conform with NWCG standards:

Previous Label	New Label
North Latitude	Point of Origin Latitude
West Longitude	Point of Origin Longitude
Fire Number	Unique Fire Identifier
Year	Calendar Year
4 to 6 digit num	Local Number
Unit Name	Responsible Unit Name at Point of Origin
Incident Start Date	Discovery Date
Incident Start Time	Discovery Time
Affected Jurisdiction(s)	Responsible Agency(s)

Hover text was updated and improved as well, but consistency changes to the remainder of the application will not be included until the next release.

#### Edit Incident Information

**\*Incident Name**  
3.9 Test

**\*Point of Origin Latitude** Deg Min Sec  
40.13637 or 40 8 10.9  
Example: 39.527

**Unique Fire Identifier** FireCode  
2009 - COARF - 0039  
Calendar Year Unit Id Local Number

**Final Fire Perimeter / Incident Size**

**Final Fire Perimeter** The final fire perimeter can only be loaded if the fire is controlled or out AND a perimeter exists in WFDSS.

Loaded  
 Not Loaded

**Incident Size (acres)**  
301.6  
If the final fire perimeter is loaded, the incident size is set to the size of the most recent perimeter.

**\*Discovery Date**  **Discovery Time**

**Containment Date**  **Containment Time**

**Controlled Date**  **Controlled Time**

**Out Date**  **Out Time**

**Geographic Area** **Owner Name**  
Rocky Mountain Fiedler, Hans

**\*Point of Origin Longitude** Deg Min Sec  
105.70358 or 105 42 12.9  
Example: 105.3108

**Responsible Unit Name at Point of Origin**

**Incident Cause**

Unknown  Natural  Human

**Is this a fire of National Significance?**

Yes  No

**\*Responsible Agency(s)**

Bureau of Indian Affairs /Tribal

Bureau of Land Management

Fish and Wildlife Service

National Park Service

United States Forest Service

ANCSA Corporations

Other

**Landscape Data Source**

AK Tanana Zone

AK Yukon-Charley

Alaska - 2009

CA Landscape 091409

LANDFIRE National 092909

LANDFIRE Rapid Refresh

Western Northern Rockies

- b. Final Fire Perimeter and Incident Size

Incident editors and dispatchers could previously upload final fire perimeters into a separate 'final fire layer' within WFDSS. As part of this release, the 'final fire layer' was merged into the fire perimeter layer within WFDSS. To inform the system that a final fire



perimeter has been loaded for an incident, an incident editor (or dispatcher) must check the Loaded Final Fire Perimeter radio button.

Final Fire Perimeter / Incident Size	
Final Fire Perimeter	The final fire perimeter can only be loaded if the fire is controlled or out AND a perimeter exists in WFDSS.
<input type="radio"/> Loaded	
<input checked="" type="radio"/> Not Loaded	
Incident Size (acres)	If the final fire perimeter is loaded, the incident size is set to the size of the most recent perimeter.
<input type="text" value="300"/>	

The final fire perimeter Loaded / Not Loaded radio buttons and Incident Size are grouped together because once a user specifies that a final fire perimeter has been loaded, the user can no longer edit the Incident Size field. Instead, the Incident Size is set to the size of the most recent fire perimeter that has been loaded for the incident.

The business rules associated with the radio button group and Incident Size field are as follows:

- i. The Loaded radio button cannot be selected unless a fire perimeter exists for the incident.
- ii. The Loaded radio button cannot be selected unless the incident has been controlled or declared out.
- iii. If the Loaded radio button is set, the incident is not out, and the controlled date is deleted, the Loaded radio button will automatically be unset.
- iv. When the Loaded radio button is selected, the Incident Size is set to the size of the most recent fire perimeter (as determined by the effective date and time of the perimeter).
- v. When the Loaded radio button is selected, the Incident Size cannot be directly edited.
- vi. When the Loaded radio button is selected and a new 'most recent' fire perimeter is loaded, the Incident Size will be updated to the size of the new 'most recent' fire perimeter.
- vii. When the Loaded radio button is selected and the 'most recent' fire perimeter for the incident is deleted, the Incident Size will be updated to the size of the 'most recent' fire perimeter that remains within the incident. If no fire perimeter remains, the Loaded radio button will be unset.

The purpose of specifying that a final fire perimeter is loaded is not simply to have the incident size agree with the size of the most recent fire perimeter within the system. In the next WFDSS release, we hope to provide a current year's final fire perimeter reference layer on the map pages. In addition, a download capability will be provided from the incident list page to allow users to download the final fire perimeters that exist for the incidents within the incident list.

In preparation for the download of final fire perimeters, we have added two fire perimeter attributes – a required Source Type and an optional Comment. These attributes can be specified whenever a user enters a perimeter into WFDSS (from Shape Upload, by drawing the perimeter on the Situation Assessment map, or using the Copy Feature icon



within the Feature Information window). At least one source type must be checked in order to enter a fire perimeter into WFDSS, but multiple source types can be checked. The Comments field is optional.

**Upload Shape File**

Select a zipped shape file and click the 'Upload' button to upload your shape.  
To successfully upload a shape file, it can only contain polygons.  
If you wish to include a point or a line, you should first buffer it to create a polygon.

\*Shape Label

\*Shape Type

**Fire Perimeter Input Parameters**

\*Effective Date

Effective Time (hh:mm)

Comments

**\*Source Types**

- Drawn / Ground
- Drawn / Air
- Drawn / Satellite
- GPS / Ground
- GPS / Air
- Infrared
- Other
- Unknown

File to Upload



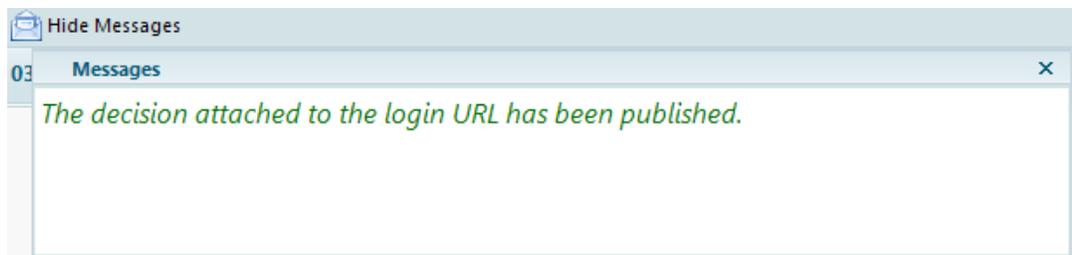
## II. Incident Decisions / Reports

### a. Email Notifications

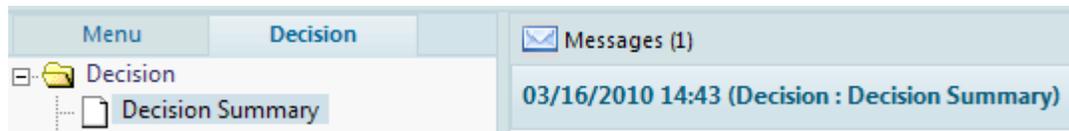
Email notifications are sent to decision reviewers and approvers when a decision enters the reviewable state. The email notifications contain navigation links to the decision approval / review page.

### b. Messaging

The Incident Decision / Report messaging mechanism was updated to be consistent with messages displayed on the map pages. That is, a message icon appears at the top of the decision window for hiding or displaying messages. Messages are displayed in a resizable popup window that can be closed by clicking on the Hide Messages icon or clicking on the X in the upper right-hand corner of the window.



When the message window is closed, the number of messages is displayed in parentheses after the Messages icon. Click on the Messages icon to display the message window.



### c. Defect Fixes

Several defect fixes related to decisions and reports were included in this release. Perhaps the most critical of these was the generalization of the decision and report 'clean up' that occurs when content is saved. On occasion, users have been prevented from editing a report after saving content that they previously saved. We suspect that we have not caught all the variations associated with pasting content into a decision or report, but the new 'clean up' code is configurable and should allow us to address problems as they are encountered without the need to release new software. If you encounter this problem, please provide feedback or contact the Help Desk so that we can fix the issue as quickly as possible.

### d. Performance

Improvements were made to significantly improve performance related to the initial display of the decision / report editing and view pages.



### III. Relative Risk

The relative risk rating is intended to characterize the general magnitude of the risk associated with implementing fire management activities. It is an attempt to qualify the level of uncertainty regarding the eventual outcome of the fire in relationship to management objectives and other mandates. The Wildland Fire Relative Risk Assessment provides the Agency Administrator with a quick assessment of the relative risk of the fire.

Within WFDSS, an incident has a single relative risk rating at a given point in time. In addition, an incident's relative risk rating is independent of the decision publishing cycle. That is, any time that a user saves a relative risk assessment; it immediately replaces the previous relative risk assessment. It should be noted that a Relative Risk Assessment is required for and is included in every published decision.

Relative Risk Assessments can be performed by a dispatcher within the incident's geographic area if the incident is not owned. Once someone accepts ownership of an incident, only users with incident editing privileges for an incident can assess its relative risk.

A Relative Risk Assessment cannot be performed when an incident decision is being reviewed or after the incident has been declared out.

#### a. Assessing the Relative Risk

The primary Relative Risk Assessment page is accessed by selecting Relative Risk from the Incident perspective left-hand menu. Links to historical relative risk assessments also exist within the Decision and Periodic Assessment lists.

The values on the primary Relative Risk chart cannot be set directly. Instead, the user assesses the Hazards, Values, and Probability of Growth of the incident. As each sub-assessment is completed or modified, the Relative Risk chart is automatically updated.

Each sub-assessment consists of a chart with radio buttons on the left, right, and top of the chart. Select the appropriate value from each set of radio buttons to complete a sub-

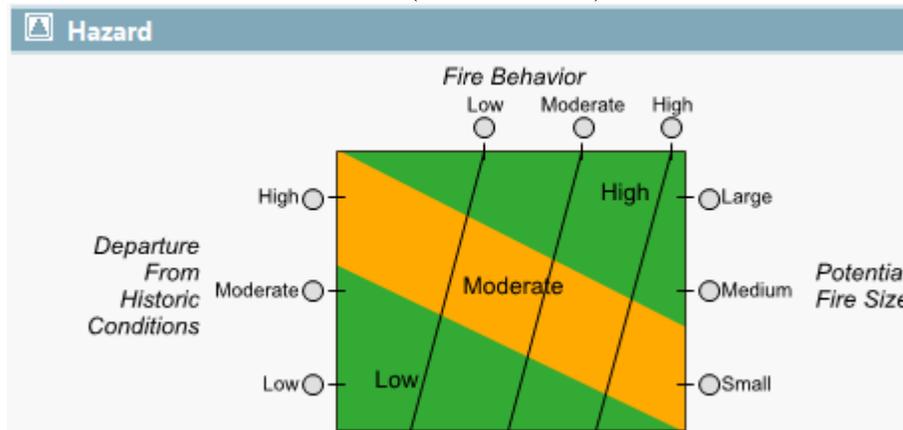


assessment. When each of the three sub-assessments has been completed, the Relative Risk chart will be complete as well. However, prior to saving the Relative Risk Assessment, the user is still required to specify the potential fire duration and then review any suggestions or inconsistencies that the system generates from reviewing the Relative Risk inputs in conjunction with the status of the incident.

i. Hazards

The hazard assessment in wildland fire is composed of the following

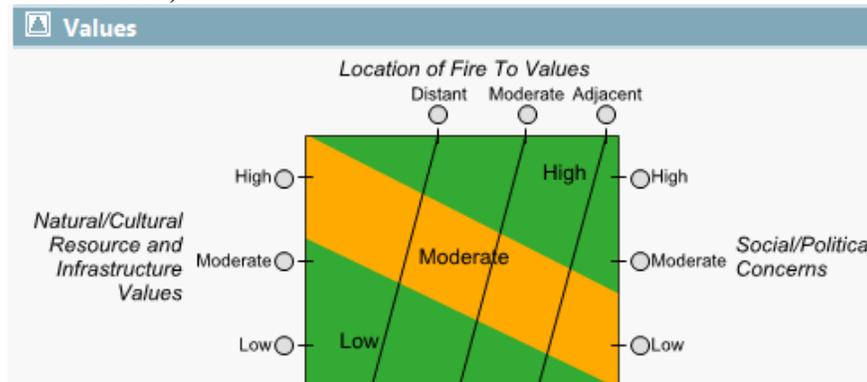
- A measure of ecological functions at risk based on changes in vegetation (Departure from Historic Conditions)
- The potential fire size by the end of the season relative to historical fire occurrence (Potential Fire Size)
- The current fire behavior (Fire Behavior)



ii. Values

The value assessment takes into account

- Ecologic, cultural, and economic resources that could be destroyed or damaged because of the fire (Natural/Cultural Resource and Infrastructure Values)
- Social and political concerns related to the incident (Social/Political Concerns)
- The relative proximity of the values and concerns to the incident (Location of Fire to Values)

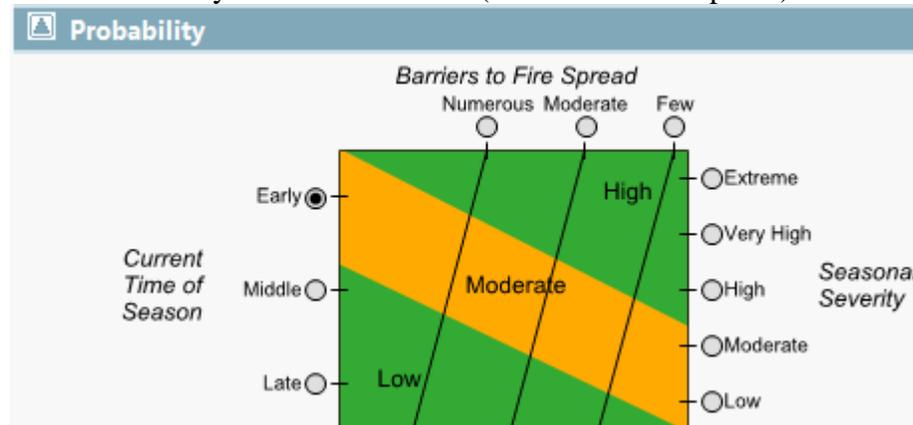




iii. Probability

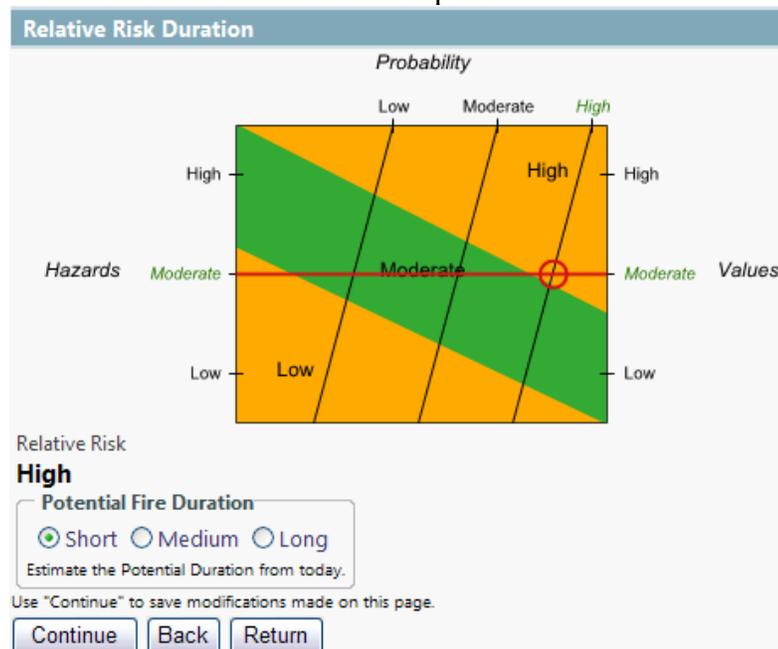
The probability assessment is concerned with

- The current time in relationship to the historical fire season (Current Time of Season)
- Assessing the current potential burning conditions as expressed by various indices (Seasonal Severity)
- The defensibility of the fire location (Barriers to Fire Spread)



iv. Potential Fire Duration

After completing the Relative Risk assessment, the user is required to specify the potential fire duration. The potential fire duration should be assessed relative to the current date and NOT the incident's date of discovery. The assessment is a simple selection of Short, Medium, or Long. After selecting the potential duration, use the Continue button to view Relative Risk advice that is based upon the current status of the incident as well as the Relative Risk inputs.





v. Relative Risk Advice and Inconsistencies

Prior to saving the Relative Risk Assessment, the assessor is presented with two tables – the first containing Relative Risk Advice and the second a list of Inconsistencies. If no advice is generated or no inconsistencies found, the table(s) will not be displayed.

Relative Risk Advice is based upon the Relative Risk inputs and the status of the incident. The age of the incident, whether or not a decision exists, whether or not any analyses have been run, and the national preparedness level are some of the items considered when generating advice. The advice is presented as a recommendation along with the rationale for offering the advice. Note that the Relative Risk Advice for the current assessment is also displayed on the incident Validation page.

Relative Risk Advice	
Recommendation	Rationale
Review your Strategic Objectives.	Can this fire be managed with a minimum of resources given the small potential size and short duration?
Can the resources required for the Course of Action arrive in time to implement the Course of Action?	With a national preparedness level of 3, resources may not be available in your Geographic Area.
Complete a Short Term fire behavior analysis.	Seasonal severity suggests the potential for significant fire activity.

Inconsistencies are based solely upon the Relative Risk inputs. The inconsistency table displays an inconsistency along with a description containing the details of why it is inconsistent. Although the system will allow users to save a Relative Risk Assessment with inconsistencies, it is strongly recommended that any inconsistencies be addressed prior to saving an assessment. This is the only page on which Inconsistencies are displayed. Consequently, only users with sufficient privileges to assess the relative risk for an incident can view the inconsistencies.

Inconsistencies	
Inconsistency	Description
A small potential fire size is inconsistent with the Relative Risk input.	Fire behavior is high, barriers are few, and seasonal severity is very high.

In addition to presenting the advice and inconsistencies, the Relative Risk Advice page allows the assessor to save the assessment and enter / edit any comments they want to associate with the Relative Risk assessment.

b. Validation and Relative Risk

As was previously mentioned, Relative Risk Advice is displayed on the Validation page. On the other hand, if any Relative Risk inconsistencies exist, they are NOT displayed on the Validation page.

c. Decisions and Relative Risk

- i. A Relative Risk Assessment is required to publish a decision. If an assessment has not been saved at the time that an incident owner attempts to make the decision reviewable, an entry in the ‘decision requirements’ list will inform the owner that a Relative Risk Assessment is required.



- ii. Decision list entries contain a link to the Relative Risk Assessment that was current at the time that the incident decision was published. For a pending decision, this implies that the link will navigate the user to the current assessment. The link itself consists of the date that the assessment was saved as well as the relative risk rating (Low, Mod, or High).
- iii. The current Relative Risk Assessment is automatically included in the Validation content of an incident decision. The relative risk charts associated with the assessment are not included in the decision and, at this point in time, there are no plans to include them in the future. The relative risk rating, potential duration, assessor, time of the assessment, and notes associated with the assessment are included in the decision document.

Relative Risk	
NAME	VALUE
Relative Risk	Low
Duration	Medium
Saved By	Fiedler, Hans
Last Updated	03/26/2010 12:11 CDT

**Relative Risk Notes**  
Testing Relative Risk for the first time - demo for Marlana

**Hazard Notes**  
Hazard Test Note - Pine Beetle Kill has caused high departure from historic conditions

d. Periodic Assessment and Relative Risk

- i. The Periodic Assessment list entries contain a link to the Relative Risk Assessment that was current at the time that the periodic assessment was completed. The link itself consists of the date that the Relative Risk Assessment was saved as well as the relative risk rating (Low, Mod, or High).
- ii. A link was added at the bottom of the 'Some Things to Consider' section to suggest that the assessor might want to view or modify the current Relative Risk prior to completing the Periodic Assessment.



#### IV. Login Navigation Links

'Login Links' have been added to a number of email messages generated within WFDSS. Login links, when used, will typically navigate the user directly to the appropriate page within WFDSS (after the user successfully logs into the system). In addition, login links will automatically enter the appropriate user name on the login page.

It is possible that the target page of a login link will not be accessible when a login link is used. For example, consider the case of the decision review link emailed to a reviewer. If the reviewer uses the link after the decision has been published, the reviewer can no longer review the decision. In this instance, the link would navigate the reviewer to a view of the decision and display a message indicating that the decision had already been published.

a. Ownership Transfer

When ownership of an incident is transferred, the new owner(s) of the incident will receive an email message with a login link that will navigate the owner(s) to the incident information page of the incident.

b. Decision Review and Approval

When an incident owner transitions a decision to the reviewable state, the reviewer(s) and approver(s) of the decision will receive an email with a link to the decision review / approval page. This email message did not exist prior to this release.

c. Periodic Assessment Reminder / Overdue Notification

A link was added to the Periodic Assessment Reminder / Overdue Notification emails that will navigate the approver / assessor to the periodic assessment page for the appropriate decision.

d. Analysis Results

i. Reviewable

A link was added to the 'Analysis Results are Available' email messages sent to the fire behavior specialist who performed the analysis. The link navigates the analyst to the Analysis Results map.

ii. Completed

A link was added to the 'Analysis Results are Complete' email messages sent to the incident owner / analysis requestor associated with the analysis. The link navigates the user to the Analysis Results map.

e. RAVAR Request

A link was added to the RAVAR Request emails sent to the RAVAR analysts when a RAVAR analysis request is generated. The link navigates the analyst to the 'Accept the RAVAR Request' page provided another analyst has not already accepted the analysis.



## V. Security Requirements / User Account Management

### a. Multiple Accounts for the Same Email Address

Two changes were introduced with this release in an effort to reduce the number of extraneous user accounts created when a user has forgotten their user name.

**WFDSS PRODUCTION SYSTEM**  
**Welcome to the Wildland Fire Decision Support System**

\*User Name  [Forgot your user name?](#)

\*Password  [Forgot your password?](#)

[Request new account](#)

For testing, training, and practicing, use the [WFDSS Training Site](#)

**WFDSS Help Desk**  
[fire\\_help@fs.fed.us](mailto:fire_help@fs.fed.us) 800-253-5559 / 208-387-5290

### i. Request New Account

The 'Request new account' link was moved beneath the 'Sign In' button to make room for a 'Forgot your user name?' link. In addition, if a user attempts to create an account and enters an email address for which an account already exists, they will be prompted with a list of the WFDSS accounts that use the email address.

#### Existing User Names with Given Email

The following WFDSS user name(s) use the email address ( [rseli@fs.fed.us](mailto:rseli@fs.fed.us) ) that you entered for the new account. Please consider using an existing account as opposed to creating a new one.

- To login with an existing account, click on the user name that you wish to use.
- To continue the process of creating a new account, use the 'Create New Account' button.
- To return to the 'Request User Account' page, use the 'Return' button.

User Name	Phone Number	Role(s)
<a href="#">robertseli</a>	406-826-4330	Help Desk
<a href="#">robseli</a>	406-826-4330	Disabled User
<a href="#">rseli</a>	406-826-4330	National Editor, Super Analyst, Data Manager, Administrator

When this occurs, the user may

- Click on the user name they wish to use and return to the login page for that user;
- Click on the 'Create New Account' button to create another account that uses the given email address; or
- Click on the Return button to return to the 'Request User Account' page.



- ii. **Forgot your user name?**

This link allows users to search for their WFDSS user name and phone number. The user is required to enter their WFDSS email address to retrieve a list of existing user names. The WFDSS phone number and user roles are also included in the list. Note that this link can be used if you need to look up your WFDSS phone number in order to have the system reset your password.
- b. **Forgot your password?**

This link was formerly named 'Reset your password'. The associated functionality does not change (i.e., the link still allows you to have the system email you a new password), but the new name is more descriptive of when a user should use the link.
- c. **Merging of Production and Training WFDSS Accounts**

Prior to this release, user accounts in Production were totally independent of accounts in Training. With the advent of the new security policy (specifically the need to reset account passwords on a regular basis), it made sense to merge the user accounts. Not everything was merged as it is still necessary to allow users to have different privileges in training than they might be granted in production. For example, someone learning to be a Fire Behavior Specialist will typically be granted the Fire Behavior Specialist role in Training prior to receiving the same privilege in Production.

The following list explains the extent and ramifications of merging the WFDSS Production and Training accounts into a single account based upon user name.

- i. **Single Password**

Since there is only one password associated with an account, a user's password is always the same in Production and Training. That is, changing your password in one system immediately changes your password in the other. In addition, the number of password notifications will be cut in half for users that had dual accounts in Production and Training.
- ii. **Contact Information**

User contact information is shared between Production and Training. Changing any information on the Contact Information page changes the information in both systems. However, this information will not be immediately visible to all users since contact information is cached within the application. The in-memory cache is updated hourly, so contact information will not be out of synch for more than an hour. In addition, whenever you log into a system, the in-memory cache is updated with your user information.

For example, if you change your Geographic Area in Training, users on the Production system will not see the change for up to an hour. However, if you log into the Production system immediately after saving the change in the Training system, the in-memory cache will be updated and other users will see your new Geographic Area.
- iii. **Separate Roles (Privileges)**

As was previously mentioned, user roles (privileges) are not shared between Production and Training. Furthermore, a role request made on one system is not visible from the other.



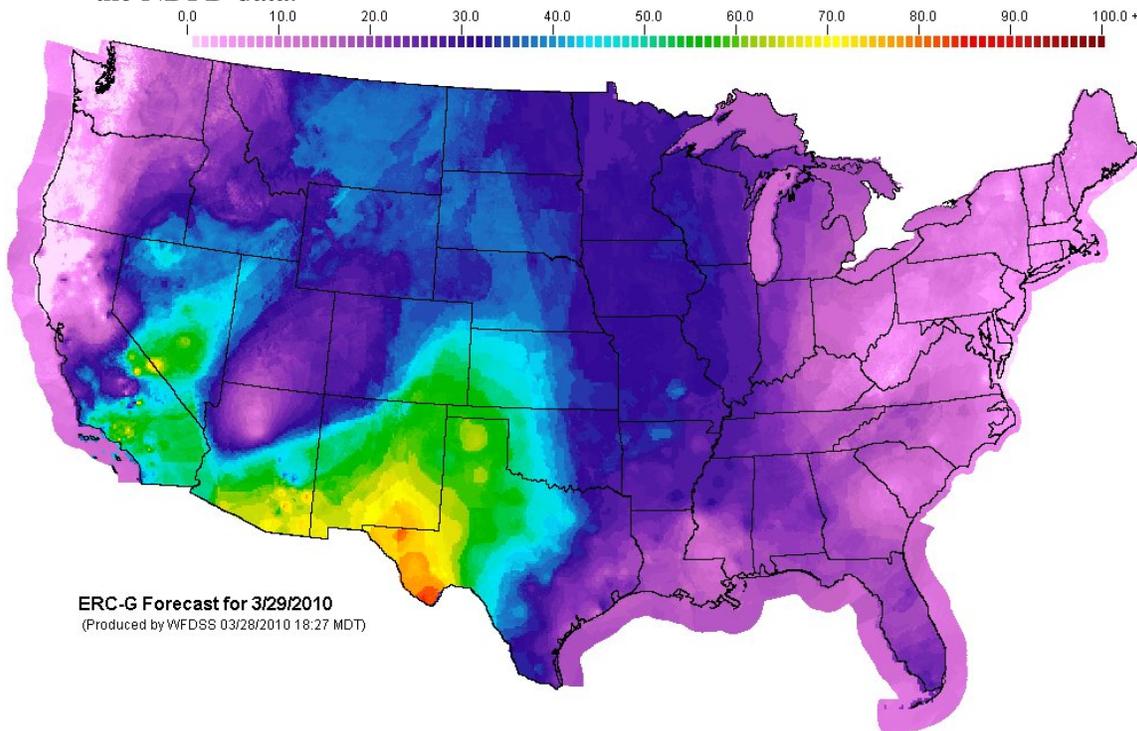
- iv. **Separate Security Question / Answer**  
Security questions and answers are stored in separate systems. As a result, a user with privileges in Production and Training will have two separate security questions and answers.
- v. **Separate Rules of Behavior**  
Your acceptance of the Rules of Behavior is also stored in separate systems. Consequently, you will need to accept Rules of Behavior in both Production and Training. It is possible that you will accept different Rules of Behavior for the two systems if you have a 'privileged' role in one system but not the other.
- d. **Security Question and Answer**  
You can now modify your existing security question and answer from the My Home perspective. Choose Security Question from the left hand menu to change this information. You will be required to correctly answer your existing security question in order to change your question and answer.
- e. **Password Change and Account Locked Notifications**  
If you receive a 'Password Change' or 'Your Account will be Locked' notification, the email will contain a link to the appropriate login page and the link will fill in the correct user name as well. If you have privileges in Production, the link will take you to the Production system, otherwise the link will be to the Training system.



## VI. Intelligence Perspective

### a. National ERC-G Images

National (CONUS) ERC-G images are generated from the National Digital Forecast Data (NDFD) on a daily basis. Seven images are generated – one for each day available within the NDFD data.



### b. Fire Related Links and National ERC-G

The Fire Related Links and National ERC-G menu items were added to the left-hand menus of the Incident and Analysis perspectives. Previously, they only existed in the Intelligence perspective left-hand menu.



## VII. Fire Behavior Modeling

### a. Fire Behavior Requests

FSPPro Analysis Requests (left-hand menu from within the Incident perspective) have been replaced by generic Fire Behavior Requests.

#### i. Making a Request

As was the case with FSPPro analysis requests, any user with incident editing privileges for an incident can request a fire behavior analysis. The request page is essentially identical to the FSPPro analysis request page with the exception that the requestor specifies whether they are interested in long term behavior, short term behavior, or both (as opposed to specifying the duration of an FSPPro analysis).

Fire Behavior Request for '3.9 Test'

Desired Date: 04/10/2010  
Desired Time: [ ]

Fire Behavior Needs

Long Term Behavior  Short Term Behavior (1-3 days)

\*Rationale for Request

#### ii. Accepting a Request

When a Fire Behavior Specialist accepts a fire behavior modeling request, they must specify both the name and type of the initial analysis they are planning to run. Once they accept the request, the typed analysis is generated from the request and the specialist is taken to the analysis information page.

Accept / Refuse Fire Behavior Request

\*Analysis Name: [ ]

Analysis Type:  Basic  Short Term  FSPPro  
Specify the initial analysis type to create

Requestor: Hans Fiedler  
Time Requested: 04/14/2010 15:59  
Requestor Phone: 303-924-9115  
Rationale: Demonstration of Fire Behavior Request accept mechanism

Requested Needs: Long Term Behavior, Short Term Behavior (1-3 days)  
Desired By Date: 04/14/2010 16:30  
Requestor Cell: [ ]

Contact Information

Position	Name	Phone Number	E-mail Address
Requestor / Author	Hans Fiedler	303-924-9115	fiedlerj@us.ibm.com

### b. Partial Results for Short Term Fire Behavior

Partial analysis results are now accessible for Short Term Fire Behavior analyses that do not spread. When a Short Term analysis does not burn, there are no major paths and no arrival time results to display. However, the basic fire behavior results required for running the Short Term analysis still exist.



Short Term analyses with ‘Partial Results’ are those for which nothing burned. The most common reasons that a Short Term analysis does not burn is that the ignition is on a non-burnable fuel model or that the fuels are too wet to burn. With this release, you are now able to examine the basic fire behavior output to better understand why nothing burned. You can display the ignition on top of the flame length output to determine whether or not the ignition was entirely on top of non-burnable fuel models. Examine the 1 hour fuel moisture output to ascertain whether or not the fuel was too wet to burn.

c. FSPro Winds Initialization

The default ‘window’ used to generate the wind matrix for an FSPro analysis has been changed. Previously, the default values were the entire year and included every hour of the day (0 to 23). The default dates used to generate the wind matrix are from two weeks prior to the current date to four weeks after the current date. Note that this range will typically be inappropriate if you change the analysis start date to outside this time period. In addition, the default time window is from 10 to 20.

d. Analysis Reports Updated

Minor updates were made to all of the analysis reports. The most prominent changes were made to the reports for fire behavior requests and short term fire behavior. In the case of short term reports, the ignition shape name, ignition latitude, and ignition longitude are included for automated short term analyses; only the ignition shape name is included in an analyst-assisted report.



## VIII. Maps

### a. Projection Awareness

The map pages within WFDSS use different projections depending upon which base layer is selected. Prior to the release of version 3.9 of WFDSS, the map pages were essentially unaware of the underlying projection used by the base layer. A number of map-related defects were associated with this projection ‘ignorance’.

None of the defects occurred when the WFDSS topographic layer was used for the base layer. However, the WFDSS topos are displayed within a geographic coordinate system (latitude and longitude). As a result, horizontal distortion occurs and increases as the map display area gets farther north. Therefore, the WFDSS topos are less than ideal for use in the northern continental United States and Alaska. In the case of the Google base layers, a transverse Mercator projection is used. Although horizontal distortion is relatively minimal in this case, a number of map-related defects occurred when either of the Google layers was used for the base layer. The primary defects that were fixed with this release are the following:

- i. Layer alignment on top of the Google base layers existed at all zoom levels, but was much more exaggerated as the map was zoomed out. The reference layers and shapes are now correctly overlaid on top of all of the base layers.

There is a related defect that still exists when the Google base layers are used. That is, as the map is panned horizontally, the horizontal alignment of overlays becomes slightly misaligned and the amount of the error is proportional to the amount panned. A similar misalignment occurs as the map is panned vertically. To re-align the overlays when you finish panning, zoom in and then back out a level (or zoom out and then back in).

- ii. The yellow circle displayed to indicate where the user clicked on the map previously displayed as an oval on top of the Google base layers. With this release, circles appear as circles on top of all three base layers.



- iii. Drawing alignment problems occasionally occurred on top of the Google base layers. The alignment problems no longer exist.

One defect that is unrelated to projection awareness occurs only when Google Physical is used as the base layer. Furthermore, the defect occurs when a user zooms in closer than the 27K to 1 zoom level. We strongly suggest using Google Maps as the base layer if you want to zoom in closer than 27K to 1.

### b. Performance

A number of areas are being re-vamped in order to speed up map performance. The majority of these will be included in the next release of WFDSS, but two of them were included in version 3.9.



One of the performance improvements is indirectly related to projection awareness. That is, reference layer tile caching required projection awareness to be working before tile caching could be effectively enabled. Unfortunately, due to a problem with the occasional generation of an 'empty tile' when data exists, tile caching has only been enabled for a few layers. They are the following:

- i. Geographic Area
- ii. Major Roads
- iii. Admin Boundaries
- iv. Transmission Lines (Production only)

The second performance improvement included in this release is browser caching of various resources (images, java script, etc.).

c. Drawing Perimeters

As was previously mentioned, the Perimeter Source Type must be specified whenever a fire perimeter is entered into WFDSS. In addition, comments (up to 255 characters in length) can also be included. Given the amount of information that needs to be captured when saving a fire perimeter, a map dialog window was developed for this release. The window is both movable and resizable.

A screenshot of a software dialog box titled "Create Fire Perimeter". The dialog has a light blue header bar with a close button (X) in the top right corner. The main area contains several input fields: a text box for "\*Perimeter Label", a date picker for "\*Effective Date" showing "04/13/2010", and a text box for "Effective Time (hh:mm)". Below these is a large text area for "Comments". On the right side, there is a list box titled "\*Source Types" with seven options, each with an unchecked checkbox: "Drawn / Ground", "Drawn / Air", "Drawn / Satellite", "GPS / Ground", "GPS / Air", "Infrared", and "Other". At the bottom left of the dialog is a blue "Create" button. The dialog is overlaid on a map background.

d. Feature Information

- i. Downloading Features from a Reference Layer

A download icon (↓) exists in the Feature Information table to allow you to download individual features from a reference layer.



Historical Fires 2001-2008		
Incident Name	 	KINISHBA
Year		2003
Size (acres)		25081.7

This capability allows you to download individual features from any WFDSS reference layer for which feature information is enabled. For example, if a user wishes to download a fire perimeter from the Historical Fires reference layer, they could use the following steps to accomplish this task:

1. Turn on the display of the Historical Fires layer (from any map page).
2. Click on the Identify tool () to activate the Identify tool.
3. Click within a historical fire perimeter on the map.
4. Select the Feature Information link from the left-hand menu. (Info sub-tab)
5. Click on the download icon in the same row as the desired fire perimeter feature.
6. Use the browser File Download dialog to complete the download of the feature.

ii. Copying Feature into a WFDSS Layer

A Copy icon () exists in the Feature Information table to allow you to copy individual features from a reference layer into a WFDSS layer. (Note that the Copy icon is not available for Feature Information accessed from the Intelligence map since there is not an easy mechanism to allow users to associate the copied feature with an incident.) When you click on the Copy icon, the following window will appear to allow you to copy the feature into the desired WFDSS reference layer.

**Copy feature: KINISHBA**

To successfully copy this feature it must be a polygon.  
If a line or point feature was selected, it will be buffered to create a polygon.

\*Shape Label

\*Shape Type Fire Perimeter

**Fire Perimeter Input Parameters**

\*Effective Date 04/13/2010 

Effective Time (hh:mm)

Comments

**\*Source Types**

Drawn / Ground

Drawn / Air

Drawn / Satellite

GPS / Ground

GPS / Air

Infrared

Other

Unknown

Copy

The available shape types to choose from are Fire Perimeter, Analysis Ignition, Barriers, Landscape Mask, and Management Action Points. The Copy window is essentially identical to the Shape Upload window.

If you use the 'Copy Feature' functionality to copy a reference layer feature into a WFDSS layer for the given incident, the copied feature will not show up in the layer



switcher tree until you re-enter a map page. We are in the process of enhancing the map page / layer switcher interaction so that this will not be necessary in the future.

e. Information Panel

The landscape data source was added to the map Information panel to inform users which landscape data source is being used in conjunction with the Identify tool.

f. Color Ramps

- i. The Basic fire behavior color ramps were updated to more accurately reflect fire behavior. As part of this effort, the Flame Length and Fireline Intensity color ramps were more closely correlated.
- ii. The Landscape attribute color ramps were also updated to more accurately reflect fire behavior. In most cases, the changes made were relatively subtle. However, the Canopy Base Height color ramp was inverted since fire behavior and canopy base height are inversely proportional. That is, fire behavior decreases as the canopy base height increases. Note that in the canopy characteristic color ramps, fire behavior increases as the colors ramps become darker.

g. Analysis Results and View Landscape Maps

The Analysis Results and View Landscape maps were updated to be more consistent with the Situation Assessment and Analysis maps. That is,

- i. Fire perimeters can be individually displayed or not displayed.
- ii. Management Action Points shapes can be individually displayed or not displayed. The information associated with an M.A.P. shape is also accessible by clicking on the M.A.P. label.
- iii. Points of Interest are available for display.