

# IRIN Workflow Using the National Incident Feature Service and ArcGIS Pro

The following document has been revised for the 2024 fire season and uses examples from ArcGIS Pro version 3.2

## Overview:

This step-by-step guide is intended to aid the user in editing and posting infrared spatial data in the National Incident Feature Service (NIFS).

## Communicate with incident

It is important to communicate with your incident(s) at least once a day. Understand what your fire is doing. Did it make any big runs during the day? Are there any areas of special concern for the IMT (e.g. MAPs, critical firing operations, etc.)? Communicate the planned fight time as well as the estimated data delivery time. Communicate with the incident GISS and/or SITL regarding perimeter edits and incorporation of the incident perimeter into the shift's planned mapping.

AND COMMUNICATE WITH ADJACENT FIRE IRINs.

## Connecting to NIFS

When using the IRIN template in ArcPro, initial connections to the NIFS services are included. If you are using the IRIN template, you do not need to follow the connection steps below. However, the linked services can change (both annually and within season). The following steps can be used to connect to the NIFS.

### Step 1: Navigate to the AGOL hosted feature services

Log in using your National Interagency Fire Center (NIFC) AGOL account. Note: USFS AGOL or other agency or personal accounts will not work, you need to use your NIFC AGOL account, and you must have the IRIN user role assigned.

For 2024 there are two feature services you will need to connect to.



### [IRIN Edit Service \(National Incident Feature Service 2024\)](#)

The IRIN Edit Service includes the IR Polygon and IR Point features that you will edit and update with your nightly mapping.



### [Internal View Service \(National Incident Feature Service 2024\)](#)

The Internal View Service is a read-only version of the NIFC NIFS and the full suite of incident data. This feature service includes the incident's authoritative fire perimeter which may be used as a base for mapping (*always communicate with the incident to ensure you are using the appropriate incident*

perimeter for your nightly mapping). This feature service is also useful for identifying operational features such as completed line, and operational assignments including division breaks for writing your log.

**Note, for all training and practice work, you MUST use the TRAINING feature services and not the regular feature services. The TRAINING feature services can be found at the links below:**

[#TRAINING IRIN Edit Service \(National Incident Feature Service 2024\)](#)

[#TRAINING Internal View Service \(National Incident Feature Service 2024\)](#)

Step 2: Add the NIFS to your Favorites

Navigate to the NIFC AGOL hosted feature services in a web browser (see links above) and click on the “Add to Favorites” button below the feature service icon. You will need to be logged in to your NIFC AGOL account.

IRIN Edit Service (National Incident Feature Service 2024)

Overview Data Visualization

**National Incident Feature Service**  
DATA COLLECTION.

Feature Layer by NIFC\_Authoritative

Item created: Nov 3, 2023 Item updated: Dec 4, 2023 View count: 15

Authoritative

Add to Favorites

Open in Map Viewer  
Open in Scene Viewer  
Open in ArcGIS Desktop  
Export Data

Description

Click **Add to Favorites** under the thumbnail for easy access to this service in Pro.

**\*Incident Service\***

*Not for use in mobile data collection*

For Field Maps training, use the Web Map Templates in the Incident Resources Group

This service is for IRIN use in ArcGIS Pro. Delete is enabled on this service. For more information on using the IRIN Edit service, follow the [IRIN Workflow Doc?](#)

NIFS Quick Links:  
Mobile Edit Service  
Structure Triage Mobile Edit Service  
Repair Status Service  
Strategic Operations Service  
Mobile View Service

Details

Source: Feature Service  
Data updated: Apr 10, 2024, 9:07 AM  
Schema updated: Apr 4, 2024, 10:18 AM  
Size: 0 KB  
ID: 31e939ccf6da48cc84ef1549dbff3d36  
☆☆☆☆

Share

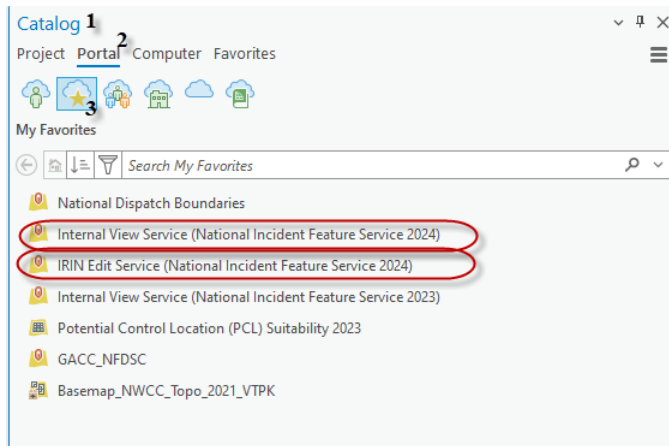
Owner [Change owner](#)

NIFC\_Authoritative

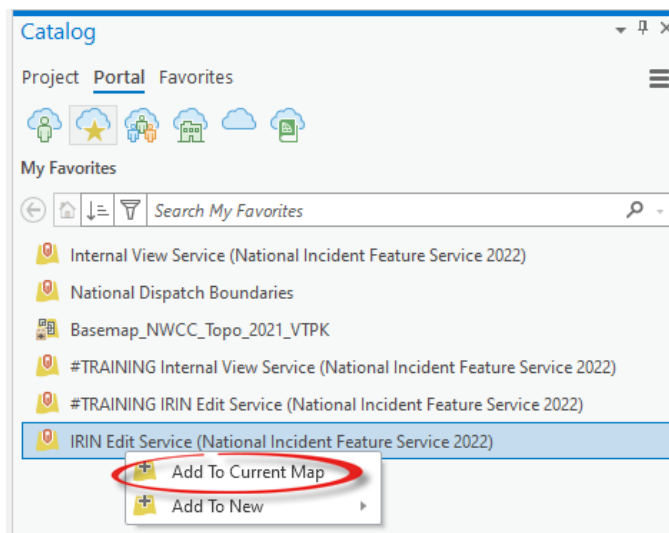
**NOTE: This workflow uses examples from the incident TRAINING feature service. The TRAINING service is appropriate for pre-season practice and training exercises. Please ensure that you are not practicing in the live IRIN Edit Service. When switching to a real assignment, double-check that you are editing and uploading data into the appropriate live IRIN Edit Service.**

Step 3: Add the feature services to your ArcGIS Pro session

In your ArcPro project (logged in with your NIFC AGOL user), navigate to Catalog (1) > Portal (2) > My Favorites (3)



Step 4: place the feature service in your map by either dragging it to your map's Contents pane, or right click on Service and select "Add to Current Map"



At this point you can make any adjustments to the visibility of individual elements in your map by turning them on and off in your Contents pane as well as adjusting symbology to your liking. *Note that the IRIN features (IR Polygon and IR Point) will be visible by default in BOTH the IRIN Edit Service and the Internal View service. This is because the IRIN Edit service is actually a subset of the full National Incident Feature Service. It is recommended that you turn off the visibility for the IR Polygon and IR Point in the Internal View Service before proceeding.*

### Making a local replicate (download map)

Step 1: Navigate to your incident in the map frame

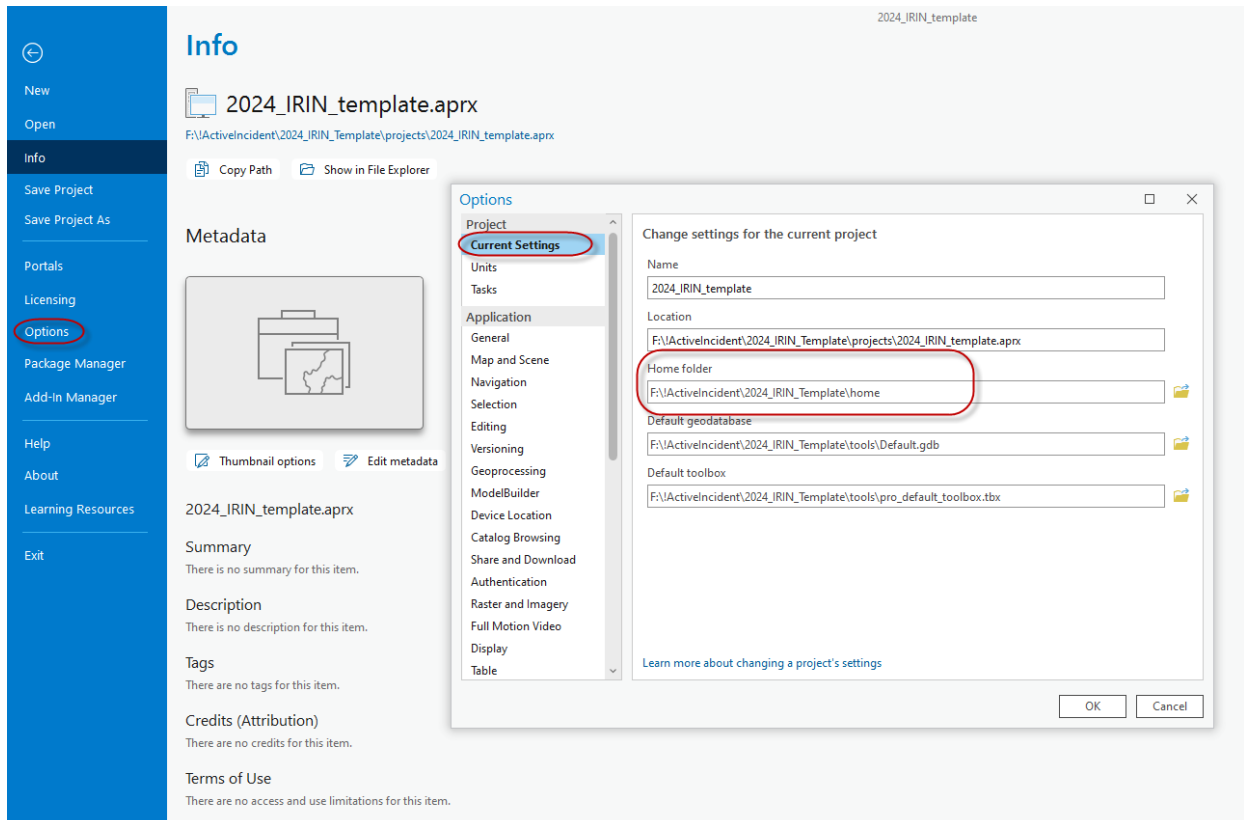
Zoom your screen to cover your full incident, but not other, adjacent incidents.

If no previous incident data exists for this fire in the NIFS, you will want to zoom to an area large enough to cover the incident but not so large to include adjacent incidents.

*Note: If this is the initial IR for an incident, you will not see any IR Polygon and IR Point features for your incident. However, if this is an ongoing incident that has previously received IR, you will see the previous IR in the incident feature service. Don't worry, you will delete these features in a later step.*

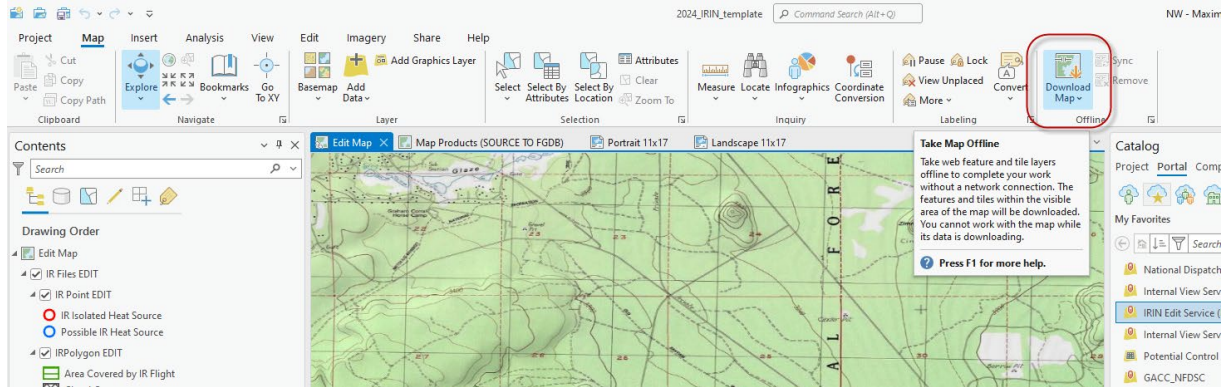
## Step 2: Ensure your home folder is set to house your mobile geodatabase

Click on “Project” in the ribbon then “Options”, and under current settings, ensure that the Home folder is pointing to the location you would like to store the mobile geodatabase when you download an instance of the NIFS. (When using the template, this folder will likely be IncidentYear\_IncidentName\mobile\_gdb.)

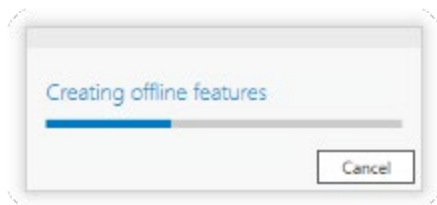


## Step 3: Download Map for local editing

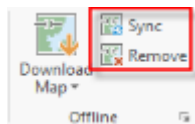
Once you have navigated to your incident, on the Map Ribbon, click on the Download Map button and then select “Download Map”



You will see a dialog box that says Creating Offline Features while the local replicate is created.



*Note: once you have downloaded the map for disconnected editing, you will see the “Sync” and “Remove” buttons enabled in the Offline tool ribbon.*



You now have a local copy of the Edit Service on your local machine (stored in the home folder you set in a previous step) for editing. All edits made here will be viewable to you only until you sync your data back to the feature service.

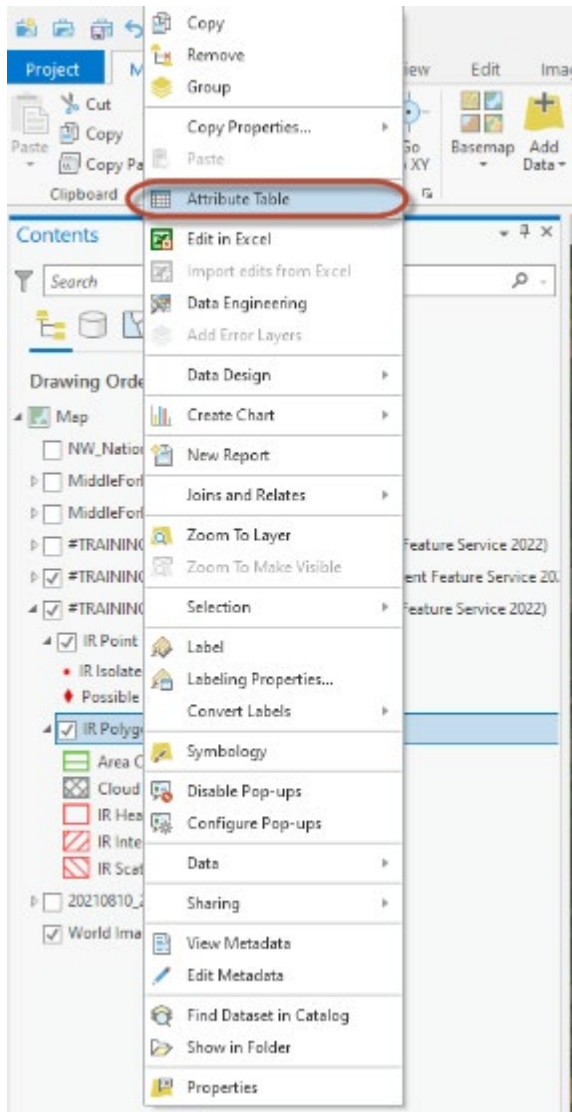
### Deleting previous IR data

The feature service is intended for current data only. It is not set up as an archive. Therefore, you will need to delete previous IR data for your incident to avoid stacking old IR data with new IR data.

**Important Note: Do not delete data for other incidents. Only delete the previous IR data for the incident you are assigned to. This is especially important when mapping overlapping complexes.**

Step 1: Open the IR Polygon Attribute Table

Right Click IR Polygon under the IRIN Edit Service in your Contents window and select “Attribute Table”



This will open the IR Polygon attribute table, which you can dock or undock depending on your preference.

### Step 2: Highlight and delete rows

You can highlight all the rows you wish to delete at one time. In most cases, you will only see rows associated with your fire. However, if you forgot to download the map for disconnected editing, and/or you downloaded an area that includes other fires as well, you may see additional data rows from other fires. In this case, download the map for disconnected editing before continuing. Make sure you are only highlighting the rows for your fire. Once you have selected the appropriate rows, select “Delete” in the attribute table.

OBJECTID *	Incident Name	FC IR Polygon Type	Map Method	Comments	Acres	Feature Status *	Create Name *	Create Date *
1	<Null>	IR Heat Perimeter	Mixed Methods	IR flight on 8/6/21 @...	488.896924	Proposed	mwahlberg_nifc	5/3/2022 6:05:43
2	<Null>	IR Heat Perimeter	Mixed Methods	IR flight on 8/6/21 @...	4190.847805	Proposed	mwahlberg_nifc	5/3/2022 6:05:43
3	<Null>	IR Heat Perimeter	Mixed Methods	IR flight on 8/6/21 @...	322.611935	Proposed	mwahlberg_nifc	5/3/2022 6:05:43
4	Middle Fork Complex	IR Intense Heat	Mixed Methods	IR flight on 8/8/21 @...	<Null>	Proposed	mwahlberg_nifc	5/3/2022 6:05:43
5	Middle Fork Complex	IR Scattered Heat	Infrared Image	IR flight on 8/8/21 @...	<Null>	Proposed	mwahlberg_nifc	5/3/2022 6:05:43

Click to add new row.

*Note: If you are using the incident's perimeter for your mapping, you will want to delete the previous night's IR heat perimeter. However, if the incident has requested that you use your own previous night's IR perimeter as the base for mapping, you may choose to keep it, and edit it accordingly. If you keep the previous night's IR heat perimeter as a base for mapping, double-check and ensure that you are updating the attributes for flight time and data currency.*

At the completion of this step, you have a clean slate and can begin your night's mapping. All steps above can happen before your imagery is delivered, saving time later in the shift.

### Pulling in the incident perimeter as a base for mapping

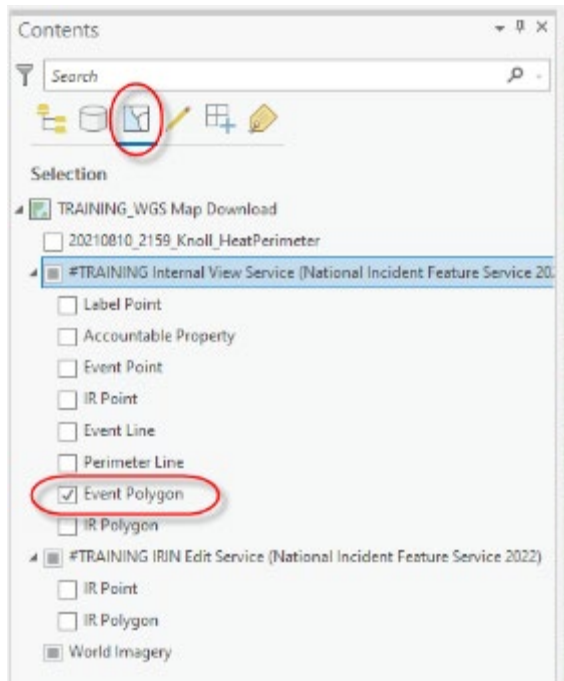
Ensure that you are communicating with the incident and understand whether they would like you to use the incident perimeter as a base for your mapping. If so, ensure you know when edits will be made and start with the appropriate base perimeter.

In most cases, the incident perimeter should be available in the Wildfire Daily Fire Perimeter which is located in the Event Polygon features of the Internal View Service (National Incident Feature Service).

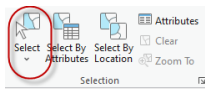
*Note: if you hold both GISS and IRIN roles, you may also have access to the GISS Edit Service. **Please only use the Internal View Service to obtain the daily wildfire perimeter.** The Internal View Service is a read-only service allowing IRINs to access the incident data without the possibility of modifying or deleting important incident data.*

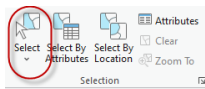
Step 1: Make the Internal View Service (NIFS 2024) Event Polygon the only selectable layer

Click the "list by selection" icon in your Contents. Then deselect everything except for the Event Polygon under the Internal View Service.

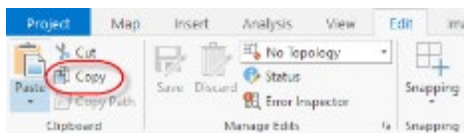


Step 2: Select your incident's Wildfire Daily Perimeter



Using either the select by polygon tool: , or by highlighting the appropriate rows in the Event Polygon attribute table. There should be just one perimeter per incident, but double-check because some GISS forget to merge multiple polygons into one perimeter.

Step 3: Copy / Paste the incident's Wildfire Daily Perimeter to the IR Polygon > IR Heat Perimeter  
Make sure that only the Wildfire Daily Fire Perimeter feature(s) are selected, and then select "Copy" to copy the feature to your clipboard.

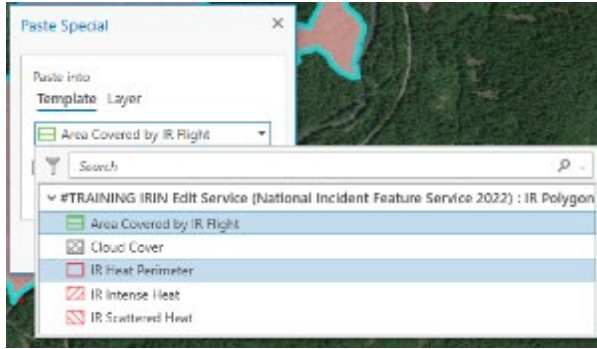


With the data copied to the clipboard, you can paste it into your heat perimeter feature using Paste Special which is found using the dropdown menu under Paste in the Clipboard tools.



You will now have an opportunity to select which feature type to paste into. In this case, you will select IR Heat Perimeter as the destination.

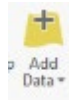




Make sure that the copied feature's attributes are appropriate and update the "Date Current" field accordingly.

## Loading in imagery & symbolizing

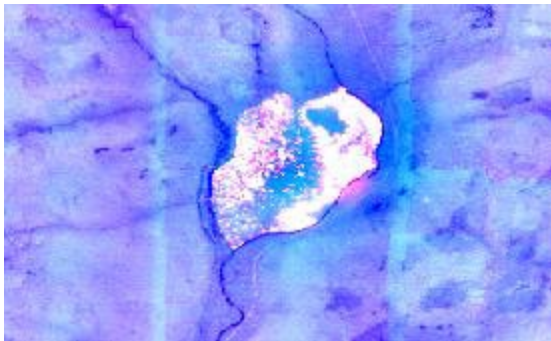
Step 1: Add imagery



Use the Add Data button in the Map Ribbon or by drag the raster from Catalog to add it to your current map.

**Note: For imagery produced by Overwatch using the Tk9 Sensor, your image may or may not load with a heavy blue tint. If this occurs, follow the instructions below to adjust the visibility of the blue color band.**

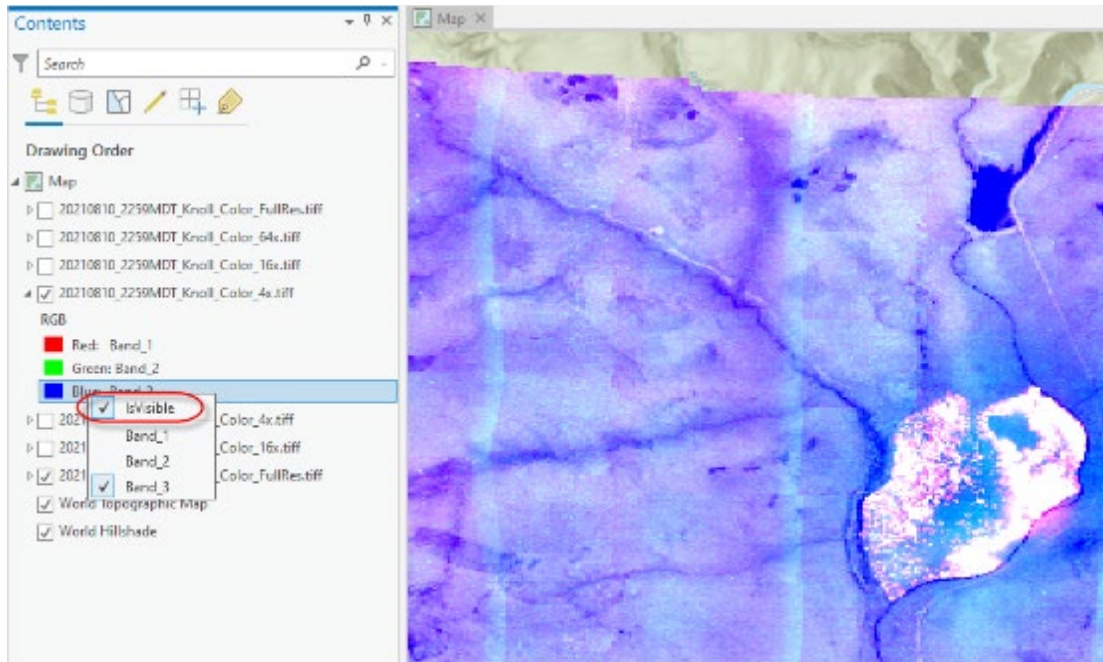
When initially loaded into ArcGIS Pro, the imagery may draw with band 1 in the red channel and band 2 in both the green and blue channel. This can create a washed-out-looking image with a heavy blue tint.



If this occurs, you can adjust the visibility of the color bands to force the image into something that more resembles Phoenix color tiff imagery.

Step 2: Turn off the blue channel (if necessary)

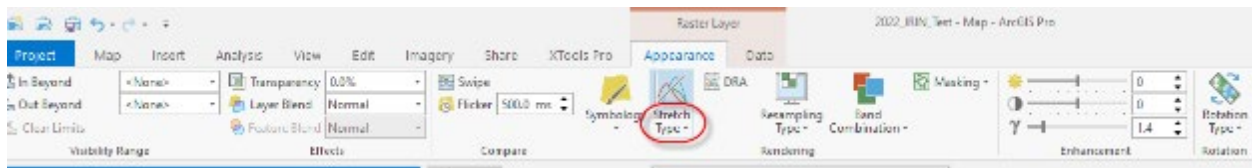
To make the image appear more like the Phoenix color tiff expand the RGB tiff in the legend, then right-click on the blue channel and **deselect "is visible"**.



### Step 3: Adjust Raster stretching:

It may be necessary to manipulate how ArcGIS Pro displays the raster data by adjusting the stretching settings. Depending on your settings, the default stretch when you load a new raster is likely “Percent Clip”. You may also notice that even without Dynamic Range Adjustment enabled, the image will automatically adjust the stretch when zoomed to different levels.

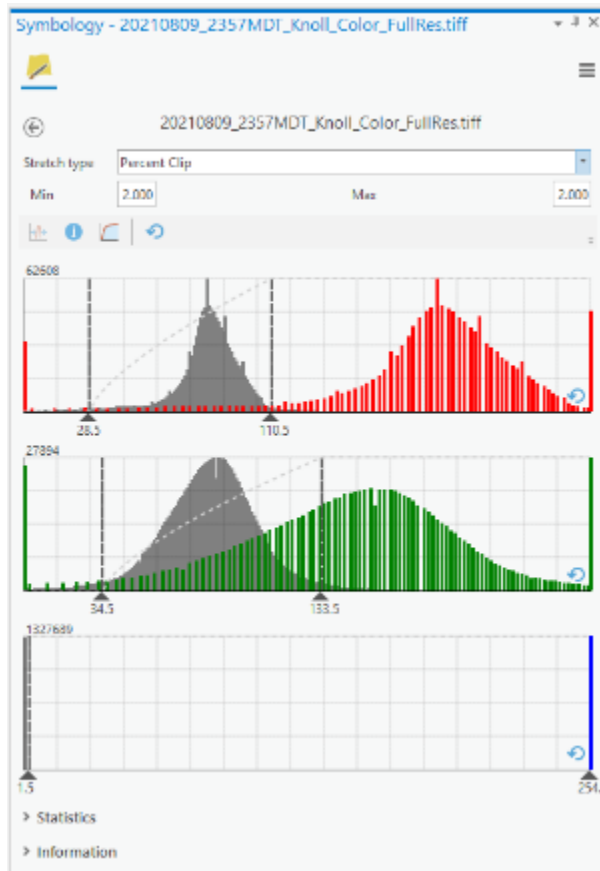
In ArcGIS Pro, adjust the stretch type in the Raster Layer > Appearance tab when one of your rasters is selected in the ribbon.



Click the drop-down menu for **Stretch Type** and select your preferred stretch or turn stretch off.



You can also access additional stretch manipulation by clicking on the stretch histogram icon above Stretch Type which will bring open the Symbology dialogue with stretch histograms and adjustment features.



The recommended setting is “no stretch”

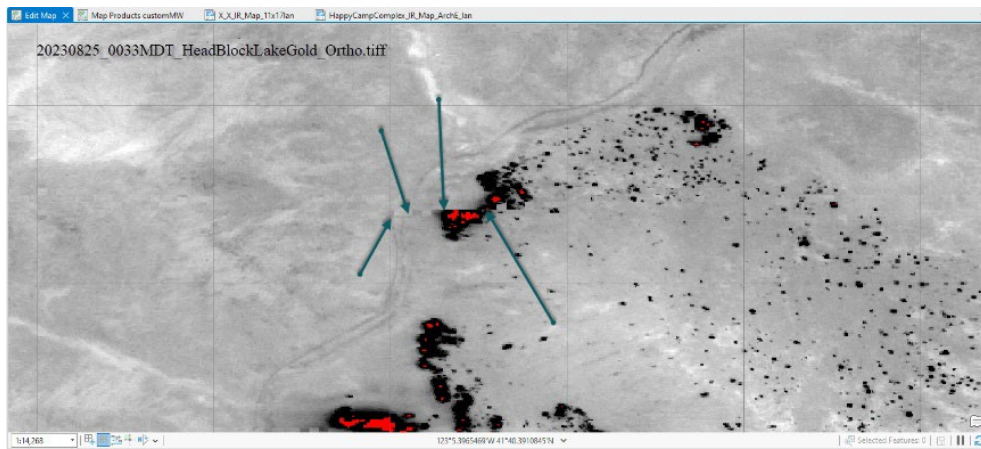
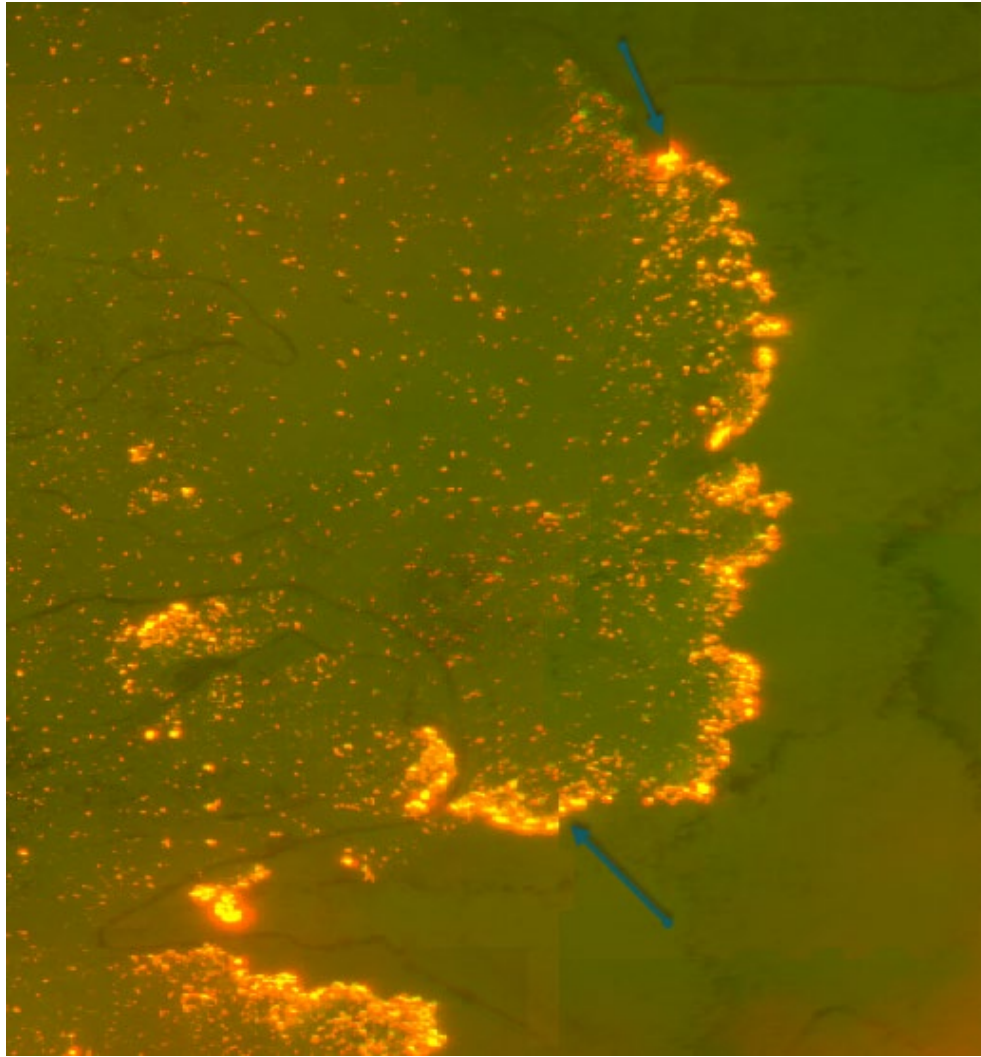
### Checking imagery alignment

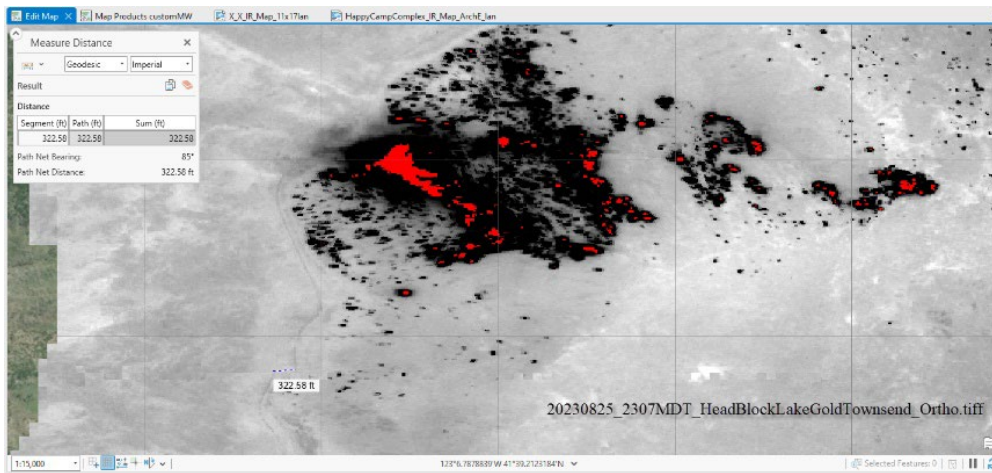
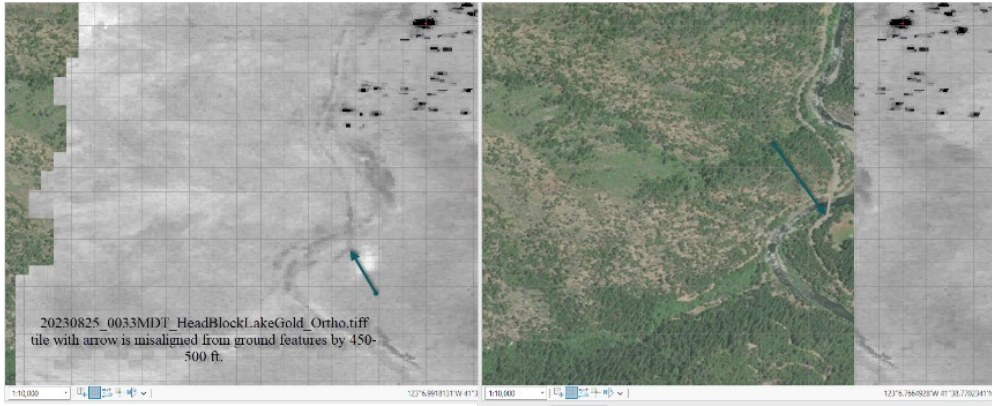
Depending on the sensor used to collect your imagery (Phoenix vs. Tk9/Overwatch) imagery alignment issues will vary. For Phoenix imagery, alignment issues tend to be consistent throughout an individual run or strip (though the degree of misalignment can vary within a strip based on distance from nadir. If you are using Phoenix imagery, assess the imagery alignment when you first load it and make adjustments as necessary throughout your mapping.

**Watch Out Situation:** when using Tk9/Overwatch imagery, alignment issues are often sporadic throughout each strip. Because the Tk9 uses a stare step process and mosaics multiple individual images together to produce a single strip, **alignment issues can vary in each individual tile in the mosaic.** You will need to carefully assess alignment while mapping and make adjustments as necessary for the specific tile you are interpreting.

Follow the quick orthorectification guide for a tutorial on how to make on-the-fly (temporary) adjustments to orthorectification when alignment issues occur.

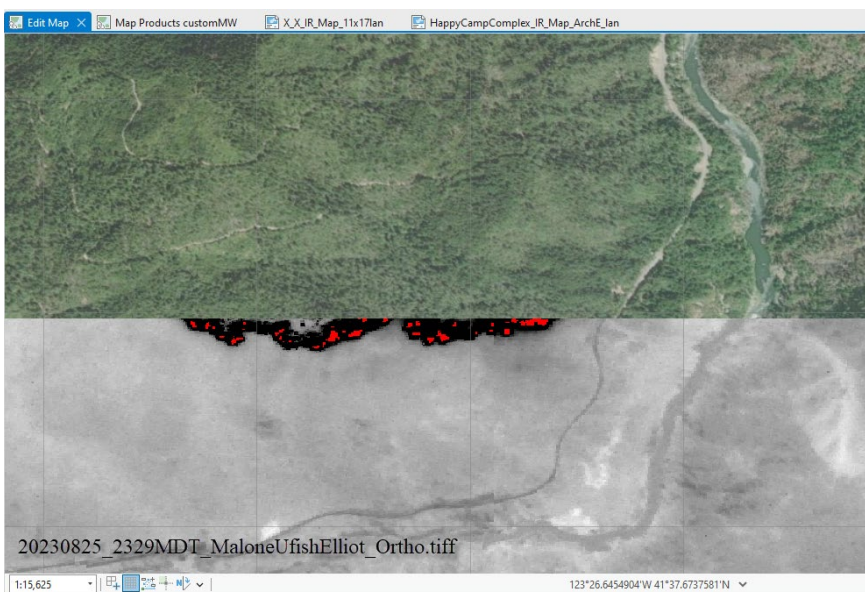
Example tile alignment issues in Tk9 imagery:





Examples above are extreme cases of mis alignment and are included here to highlight the concern.

The example below shows a more typical look at about 125ft shift for the whole mosaic.



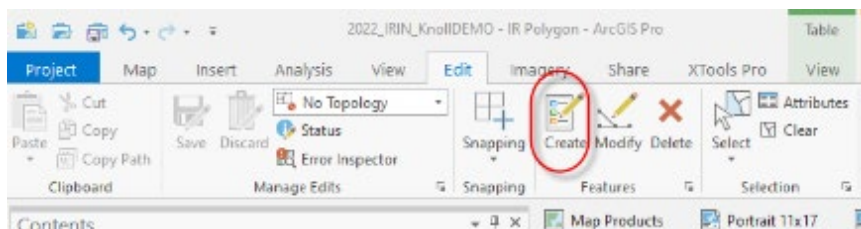
## Editing the IR data

Editing your data in ArcGIS Pro is similar to editing in ArcGIS Desktop, though some tools are located in different places. This guide is not intended to be a comprehensive how-to for editing in ArcGIS Pro.

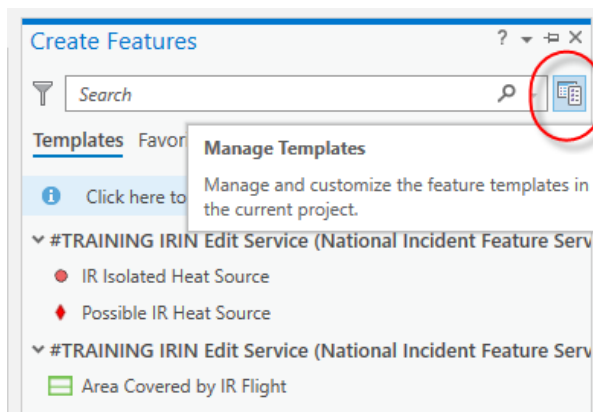
*Note: it is recommended that you use managed templates for attributing IR features. This will save you time when editing by prepopulating common attributes during an edit session such as flight data/time and interpreter contact information.*

### Setting up Templates:

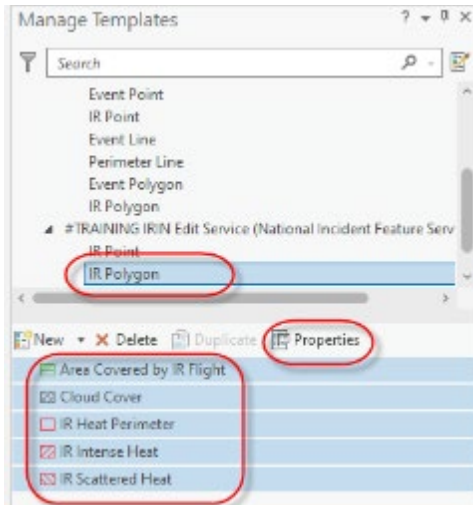
To set up your attributes, first, bring up the **Create Features** toolset by clicking on the **Create** button in the **Edit ribbon**.



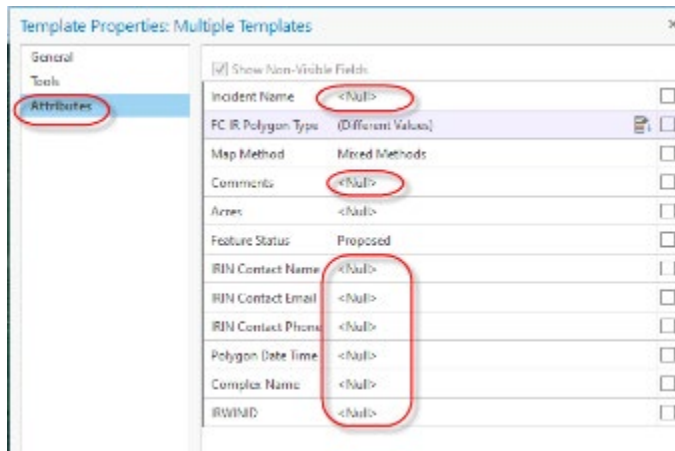
Click the **Manage Templates** button in the top right corner of the Create Features pane.



And then select the feature types you wish to manage and click "Properties". Note: you can use a shift click to highlight multiple features at once, allowing you to modify default attribute values for multiple feature types at once (e.g. setting the date current and flight info once for all polygon features).



In the Template Properties box, select **Attributes** and then enter the appropriate default attributes for your fire.



#### Attribute Notes:

**Incident Name:** this is the name of your incident. Note: if this is a named fire as part of a larger complex, you can enter the individual fire's name here, and then put the complex name in the **Complex Name** field below.

**Map Methods:** If you are using an incident provided perimeter as a base for mapping, then select **Mixed Methods** here. If this is the initial perimeter for a fire, and it is developed solely from IR interpretation, you can select **IR Image Interpretation**.

**Comments:** Include the flight time and sensor/aircraft used to acquire the data in the comments field.

**Acres:** leave this blank in your template and calculate acres after digitizing and merging your heat perimeter features.

**Feature Status:** default is "Proposed".

**IRIN Contact Name:** enter your name.

**IRIN Contact Email:** enter your agency or incident email.

**IRIN Contact Phone:** enter your agency or incident phone number.

**Polygon / Point Date Time:** include the date and time the imagery was acquired in UTC.

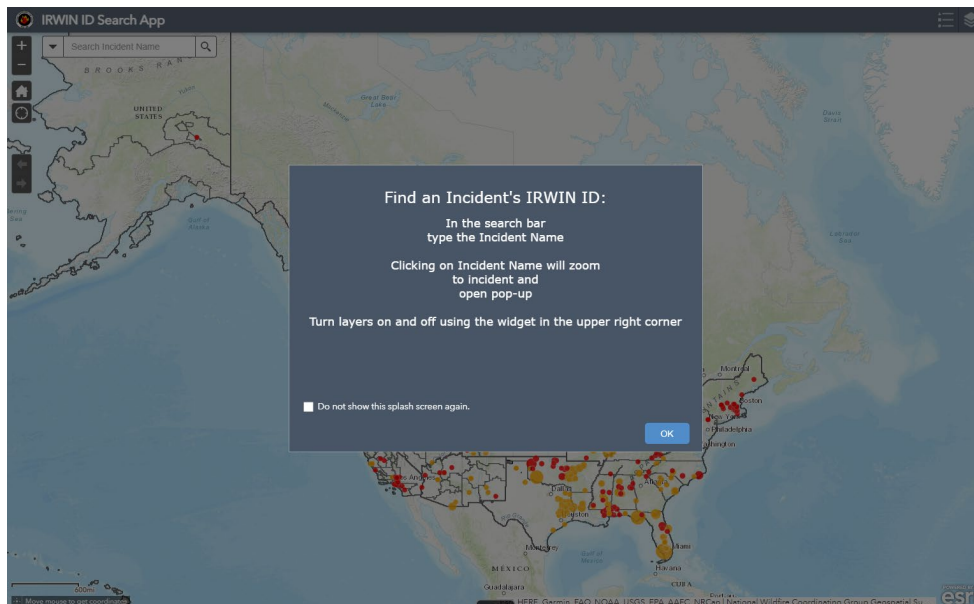
Conversion factors from local time to UTC (e.g., 0200 MDT equals 0800 UTC since 2 + 6 = 8)

Alaska		Pacific		Mountain		Central		Eastern	
ALST	ALDT	PST	PDT	MST	MDT	CST	CDT	EST	EDT
+9 hrs	+8 hrs	+8 hrs	+7 hrs	+7 hrs	+6 hrs	+6 hrs	+5 hrs	+5 hrs	+4 hrs

**Complex Name:** if this fire is part of a named complex, include the complex name here. Otherwise, leave this field blank.

**IRWINID:** enter the official incident IRWIN ID in brackets {}. *Note: If this is the initial NIFS data loaded for this incident, you can find the IRWIN ID at this link (log in using your NIFC AGOL account)*

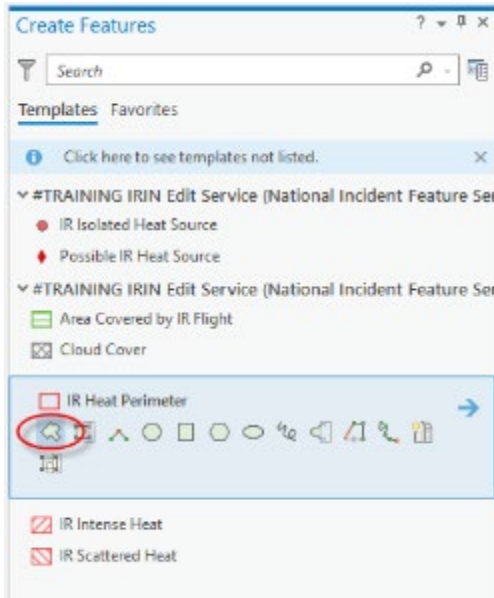
<https://nifc.maps.arcgis.com/apps/webappviewer/index.html?id=e52656fb002c4b0da73d5315538631bb>



**Creating, and Editing Features:**

To create a new feature, click on the feature type you are creating in the **Create Features** pane. And then select the “Polygon” tool. Note that you can also find the **Trace** tool here if you would like to start digitizing using the trace tool.

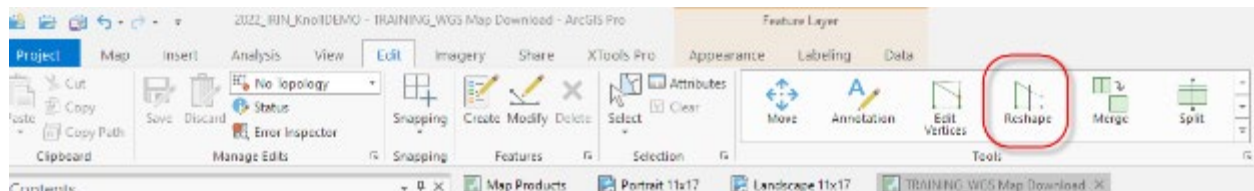


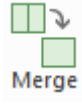


Now digitize your polygons and points as you would in ArcGIS Desktop, switching between feature types in the create features pane as needed.

Note: additional editing tools can be found in the **Editor Tool Gallery** in the **Edit** ribbon.

This is where you can find the **Reshape** features tool to modify an existing polygon.

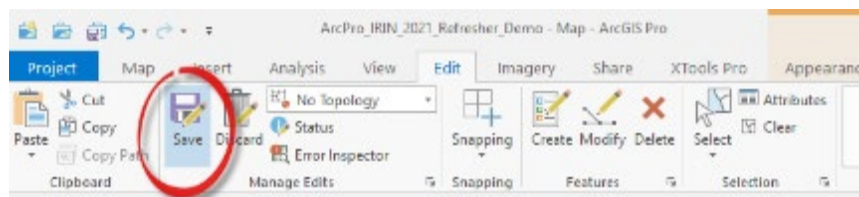


You can also find the **Merge** tool  here to combine polygons into one feature (including multipart features).

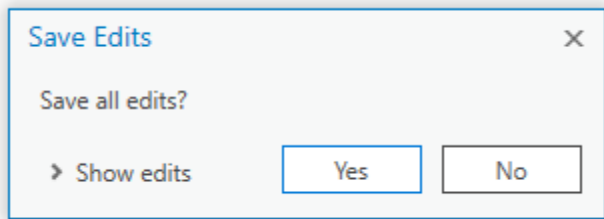
While you do not need to “start” or “stop” an editing session in ArcGIS Pro, it is still a good idea to save your edits periodically.

Save all your edits to the local instance of the data.

On the Edit ribbon, click on “Save”



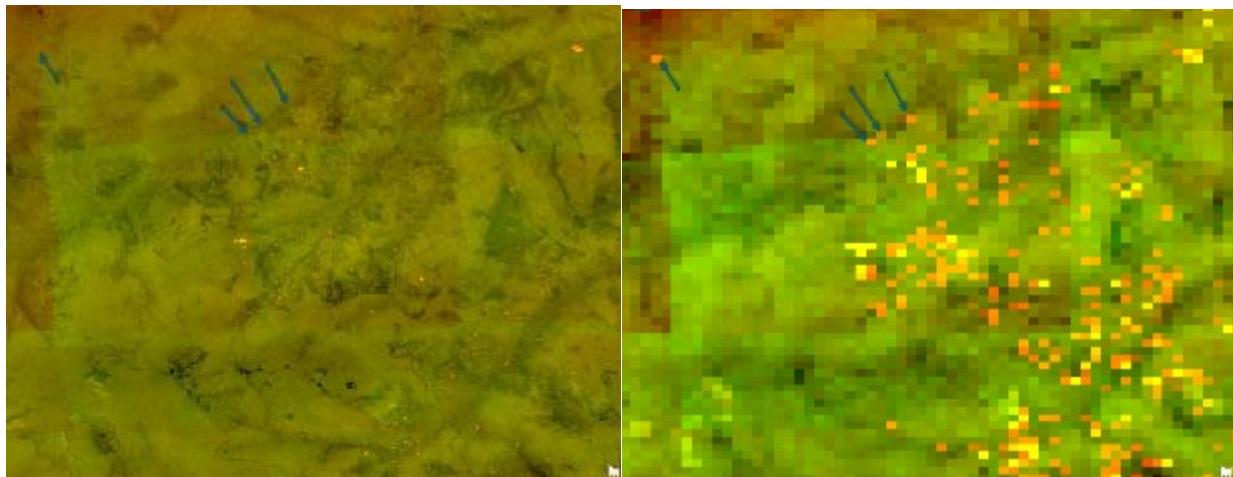
Say “Yes” to the Save Edits Dialog



### Identifying isolated heat sources in TK9 imagery

Unlike data collected with the Phoenix sensor, data obtained using the TK9 sensors (Overwatch / Tenax) do not include an isolated heat points shape file. This can make identifying isolated heat sources difficult, especially on large fires with limited remaining or widely scattered small heat sources. While heat is recorded in the “FullRes” tiff file, the high resolution of the imagery can make the individual pixels of heat quite small at some viewing scales. In order to ensure you do not miss critical isolated heat sources, especially when working quickly to meet operational timelines, it can be useful to look at the 4x and/or 16x rasters. These files are essentially upsampled raster files where the larger pixel retains the “hottest” value.

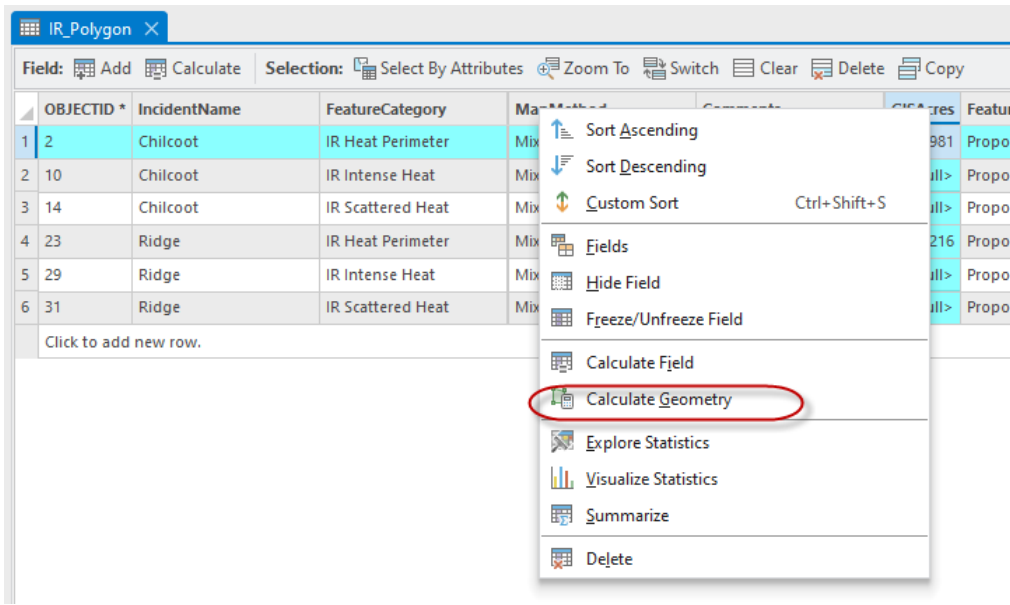
In this comparison, you can see how it may be easy to miss individual isolated heat sources in the full resolution images (left), while they are obvious in the 4x and 16x (right) products.



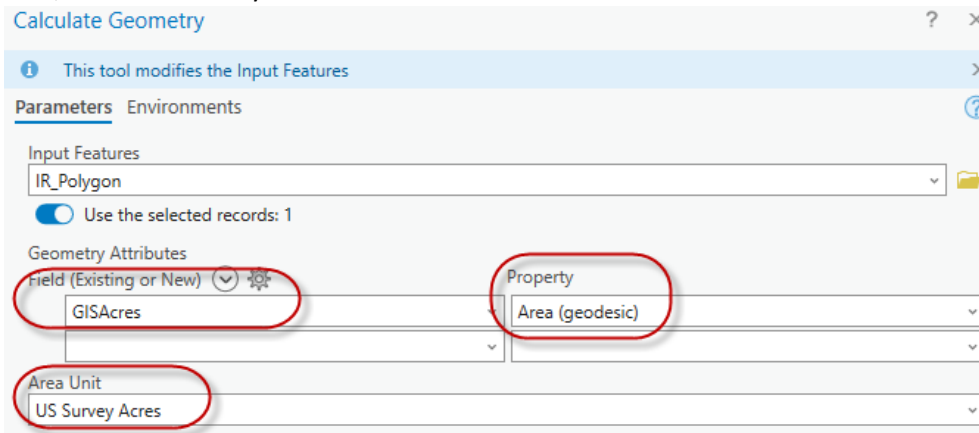
### Calculating Acres and Lat/Long for points

#### Calculating Acres

To calculate acres, open the IR\_Polygon attribute table, highlight the heat perimeter in question (note, heat perimeters should be merged into one Heat Perimeter per named fire prior to this step), right click the field “GISAcres” and select Calculate Geometry.



Ensure that the Field being calculated is GIS Acres. For Property, select Area (geodesic), and for Area Unit, select US Survey Acres.



The resulting calculation will carry many decimal places. If you plan to use dynamic text in layout production, it is recommended to round the acres to the nearest acre manually in the attribute field.

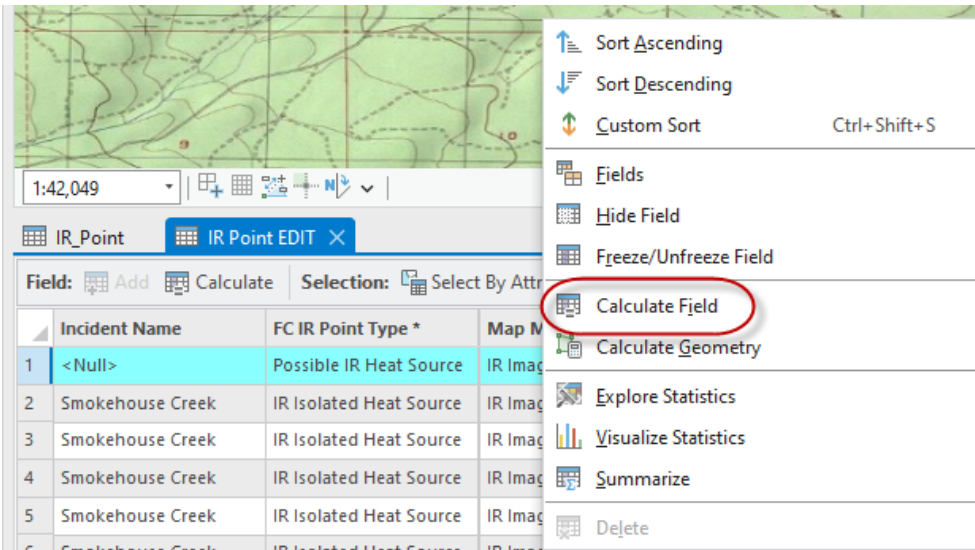
Generating Lat/Longs in the appropriate format

Script syntax is provided for calculating latitude and longitude data in the appropriate format. This script can be found in the "tools" folder of the IRIN template.

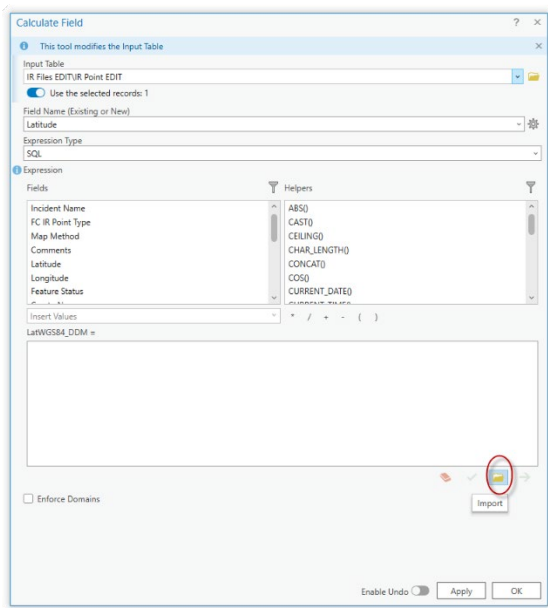
Open the attribute table for IR\_Point

Select the points you would like to calculate Lat/Long values for.

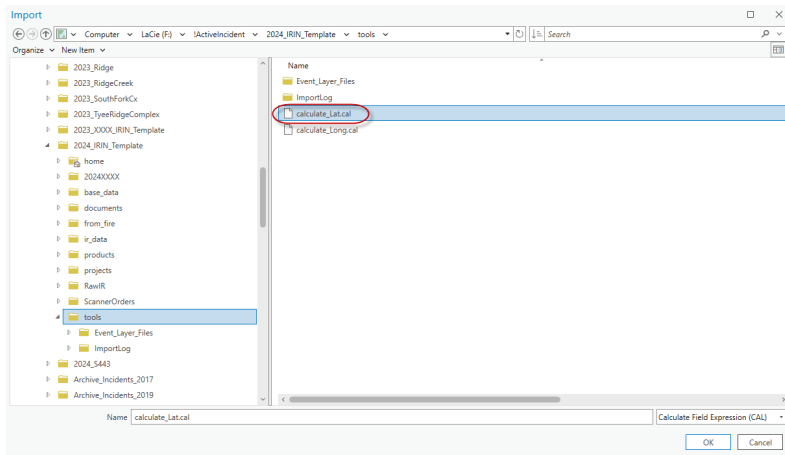
Right click on the Latitude field and select Calculate Field.



In the calculate field dialog box, select the “Import” option in the lower right.



Navigate to and select the appropriate script in the tools folder of the template.



Ensure that Expression Type is set to Python. The highlight all text in the Code Block and Click Apply.

Repeat the above steps for the Longitude field.

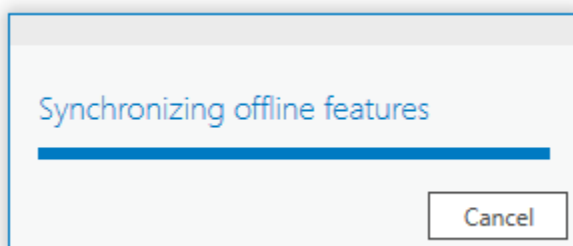
## Syncing data to the NIFS

Finally, you need to sync your data back to the online instance of NIFS.

To do so, click on the “Map” ribbon, and select the “Sync” button in the Offline tools.



A dialog box will come up while the synchronization is in progress and will automatically close when it is complete.



Your data is now synced to the NIFS and is viewable by the incident and other IR interpreters.

*Note: Once you have synced your data back to the NIFS, please **notify your incident that the data is available** using pre-determined methods of communication. That way the incident GISS and SITL can access your interpretation data while you create the KMZ, geodatabase, shapefiles, PDF, and log products.*

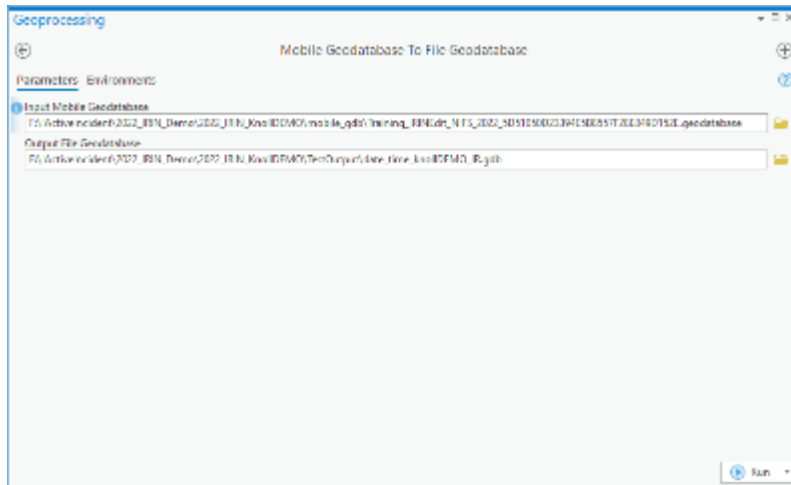
After syncing your data to the NIFS, you **do not** need to click **Remove** the offline map.

## Creating geodatabase, shapefiles, and KMZ for upload to the ftp site

Now that your editing is complete, you can proceed to create the other spatial files for upload to the NIFC FTP site.

Create final file geodatabase for upload.

Use the “Mobile Geodatabase to File Geodatabase geoprocessing tool to convert your mobile geodatabase into a file geodatabase. For the output, use the standard naming convention.



Create KMZ and SHP from created file GDB

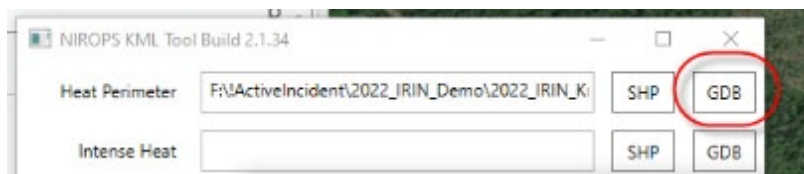
The NIROPS to KMZ tool has been updated to create both the KMZ file and the IR shapefiles.

### Step 1: Open the tool

Open the exe file **NIROPS KML Converter.exe**

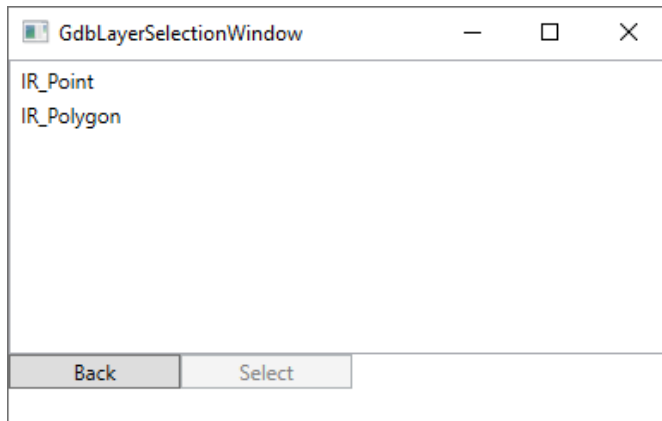
### Step 2: Point the tool to the source Geodatabase containing the current IR data

Click on the GDB box to the right of Heat Perimeter.



This will bring up a Browse for Folder dialogue where you can navigate to the file geodatabase with the IR data.

In the Gdb Layer Selection Window, select the appropriate feature for the data type you are entering (IR\_Polygon for Heat Perimeter, Intense Heat, Scattered Heat, Cloud Cover, and No Data AOIs; or IR\_Point for Isolated Heat and Possible Heat).



Repeat this step for each feature type you have mapped for this incident.

### *Step 3: Name the Outputs and Run the tool*

Click **Output Name** to browse to the folder you want the outputs saved to and enter the name

Select the incident's time zone from the drop-down menu.

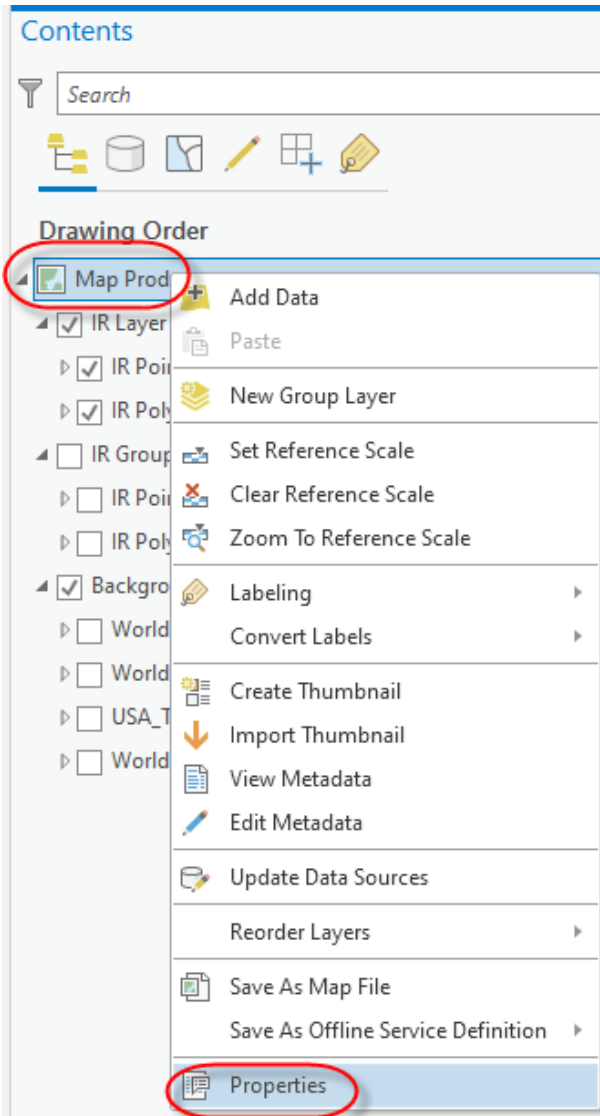
Now click **Generate Products** to run the tool.

### [Making PDF Map Products and the IR Log](#)

When using ArcGIS Pro, multiple individual layouts can be built based on the same Map. If you are using the ArcGIS Pro IR Template, you will see two pre-generated layouts, one for portrait and another for landscape orientation for the standard 11x17 pdf map product. Both layouts utilize the "Map Products" map.

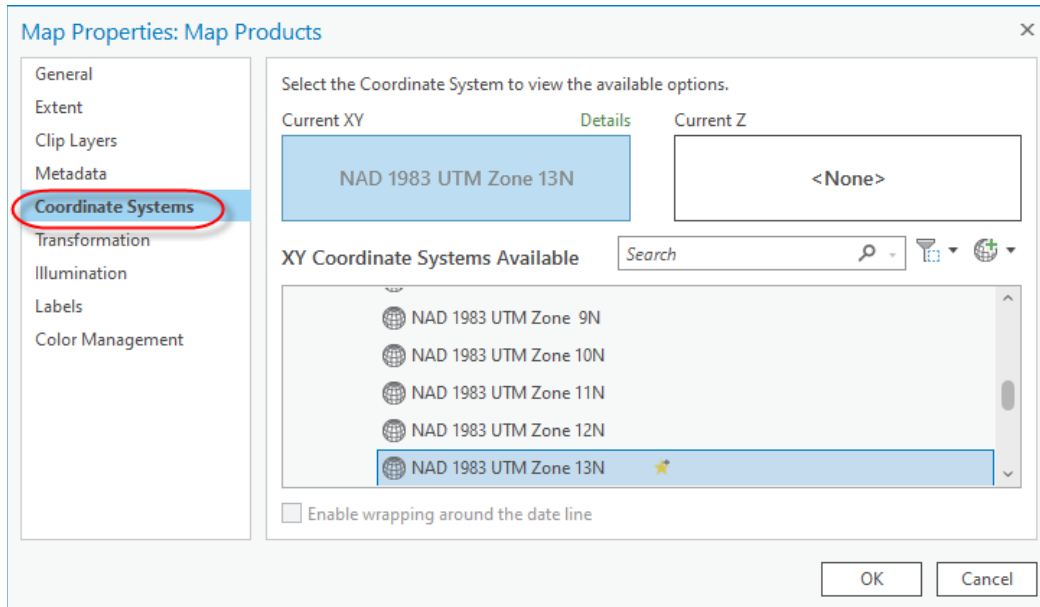
Step 1: ensure your **Map Product** map is using the appropriate coordinate system

Right-click **Map Products** in the contents, and select properties:



In the Map Properties window, click on Coordinate Systems and choose the appropriate coordinate system for your incident. Then select "OK".



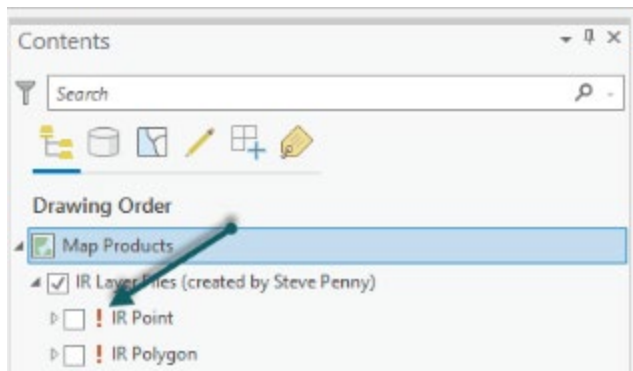


### Step 2: Point the layers to the current data

When you first open the template, you will see that the links are broken for IR Point and IR Polygon in the Map Products.

In order to generate your PDF outputs, you will need to point the layers in the Map Products map to the appropriate source data for this shift.

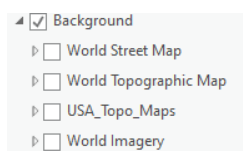
You can do this by clicking on the exclamation point next to the IR Point and IR Polygon features and pointing them to either your mobile geodatabase or to the file geodatabase you exported above.



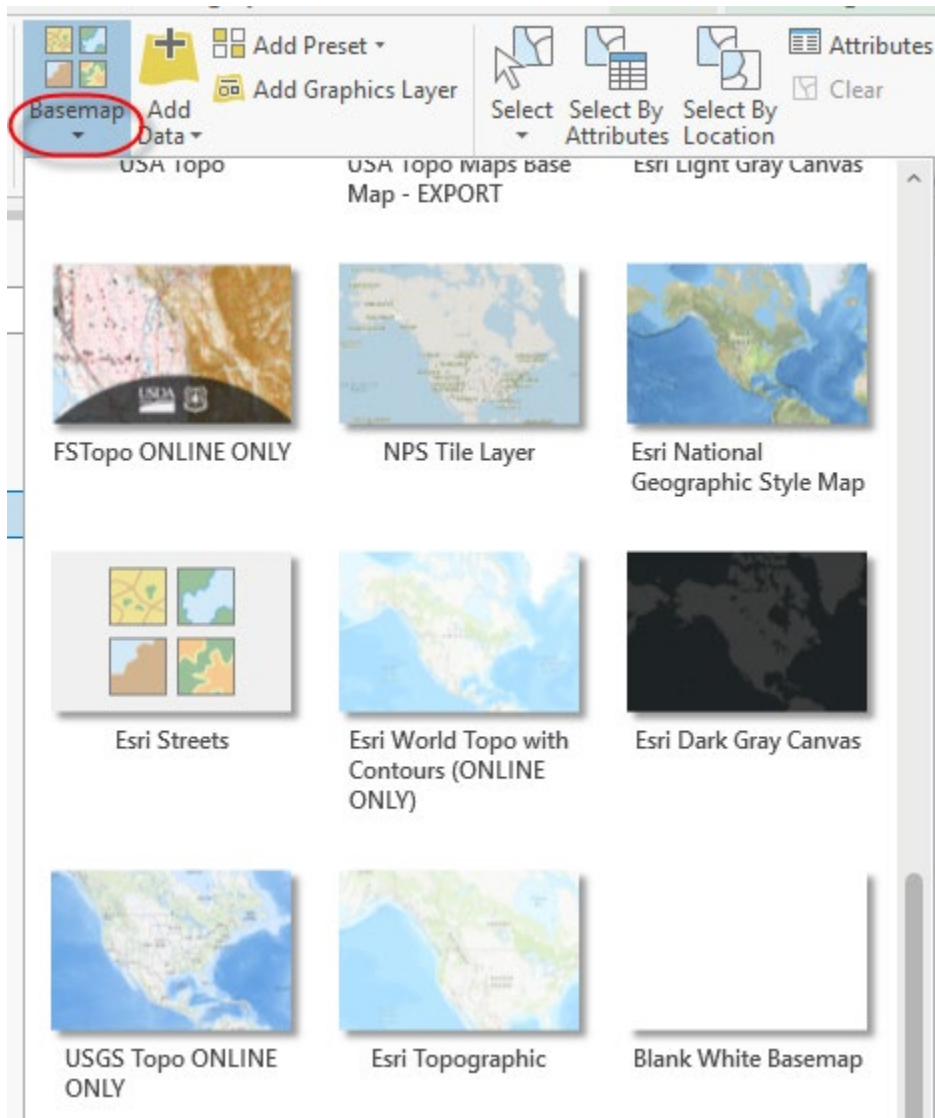
Once the links are restored, you will see your data draw in the map frame (you may need to pan or zoom to your data in order to see them in the map view).

### Step 3: Turn on the appropriate Base Map

The template comes pre-loaded with an imagery base map and a couple of topographic base maps.



You can add additional base maps to your project by clicking the dropdown arrow below **Basemap** in the layer section of the Map ribbon.



You can also add basemaps using layer files.

*Note: coordinate with your incident regarding the appropriate base map they would like used. (Many USFS incidents like to use the FS Topo PBS base with a transparent hillshade applied.)*

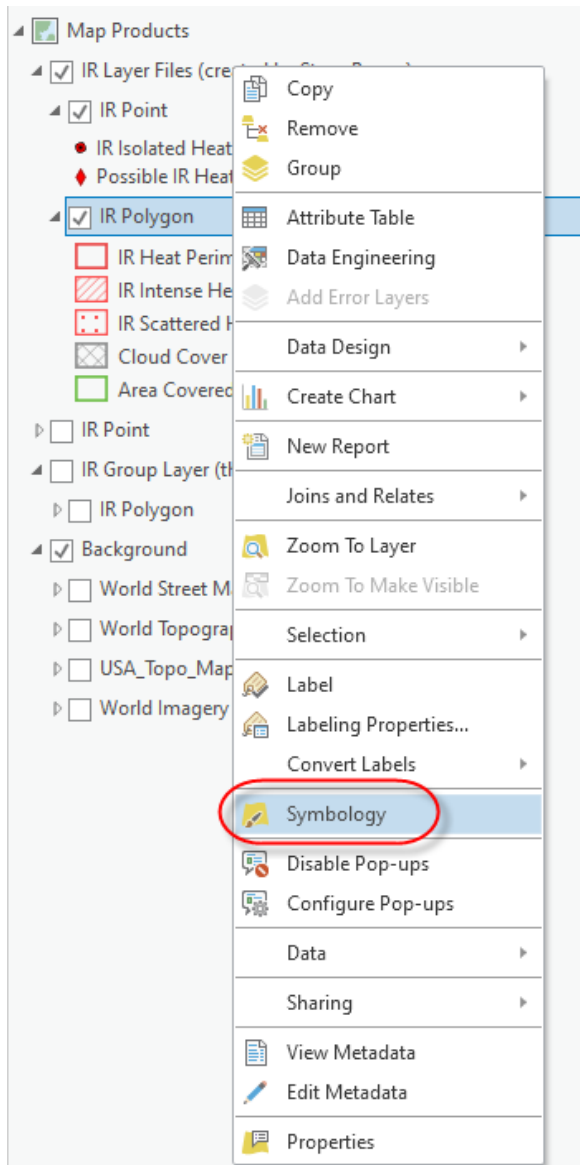
*Note: While the standard output is still an 11x17, please communicate with your incident to ensure your products are meeting their needs. On larger fires, it may be helpful to also produce a larger pdf output for viewing the products over a more detailed base map (e.g. Arche).*

#### Step 4: Modify your symbology

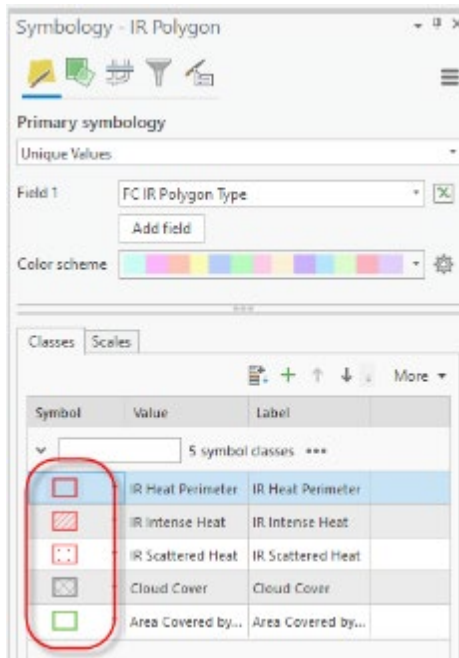
The default symbology that loads from the NIFS for IR products is developed for online and mobile optimization and is not appropriate for PDF map products. If you are using your own template or ArcGIS

Pro project, you will need to modify the NIFS symbology. This is especially true for scattered heat, which is difficult to distinguish from intense heat when using the NIFS symbology.

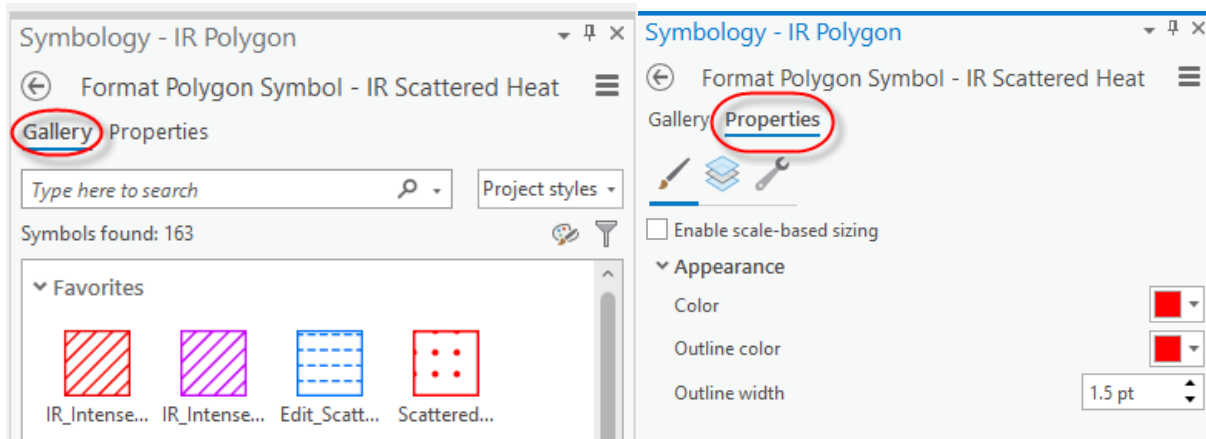
Symbology can be accessed and modified by right-clicking the layer in question and choosing **Symbology** from the pop-up menu.



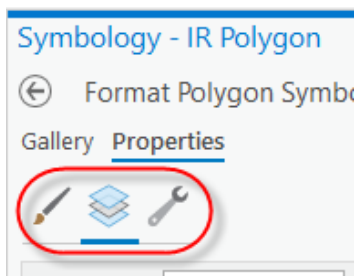
In the Symbology pane, you can click on an individual symbol to format that symbol.



This will open the Format Symbol pane, where you can choose from a gallery of existing (and saved/favorited) symbols, as well as access the Properties tab where you can create and customize your symbology.

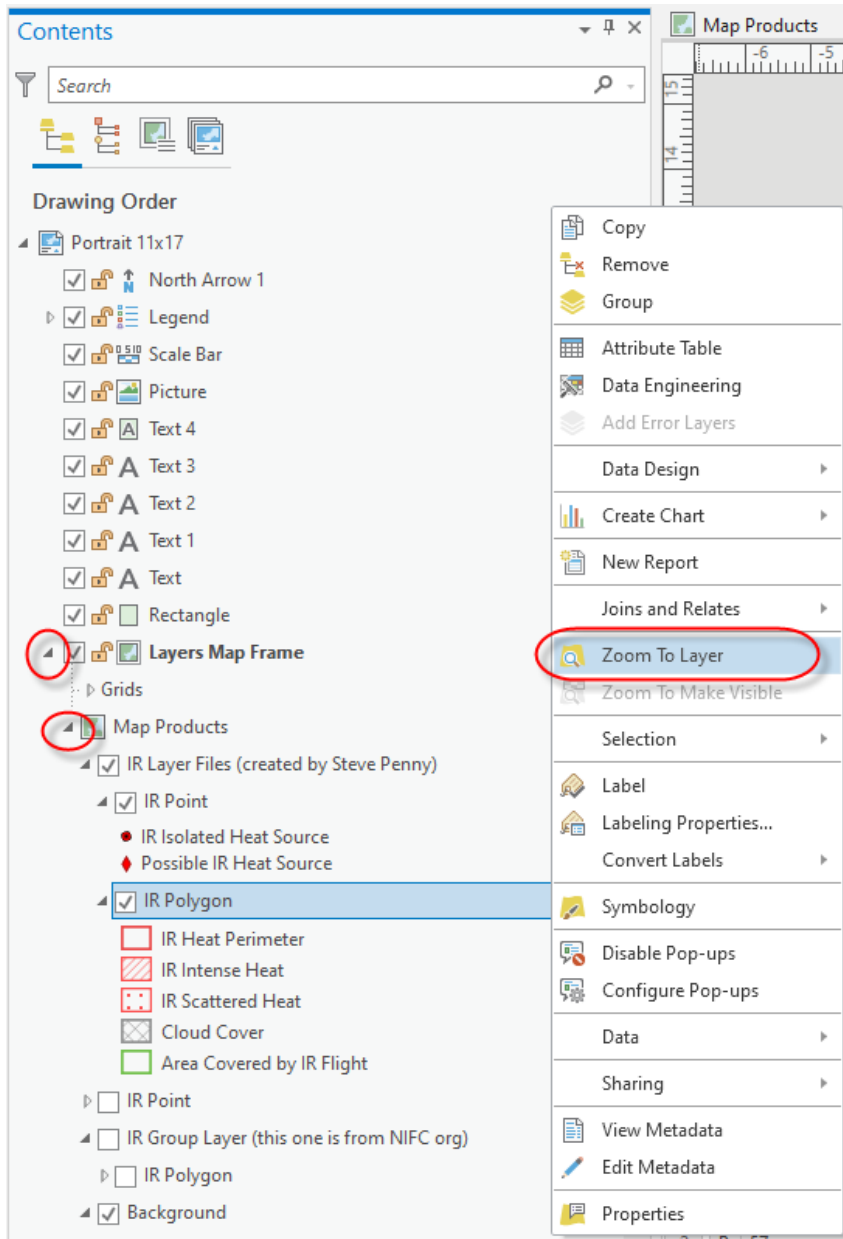


Note: additional properties can be manipulated by clicking on each of the three icons under Properties:

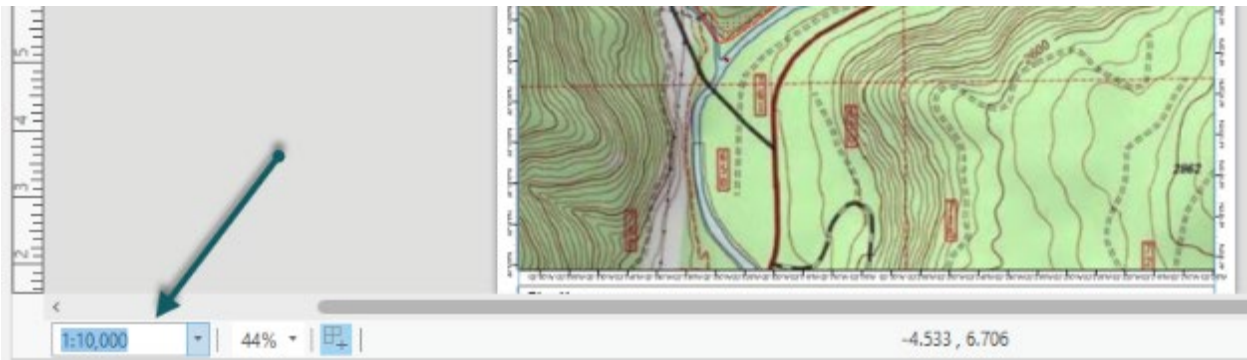


Step 4: Pan and Zoom your layout to your fire

With the appropriate map layout selected, expand the **Layers Map Frame**, and the **Map Products**, then right click on IR polygon and select **Zoom to Layer** in the pop up menu.



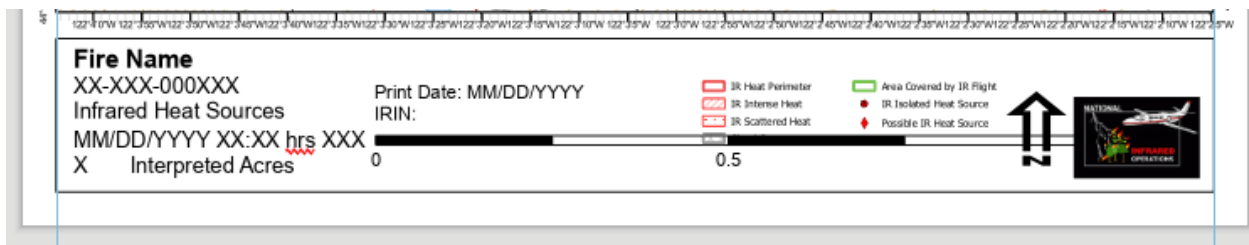
Now you can adjust the scale by typing in the desired scale (or choosing one from the drop-down menu in the lower left corner of the layout view).



Zoom and pan the view until it meets your needs and shows the entire incident.

#### Step 5: Modify your legend

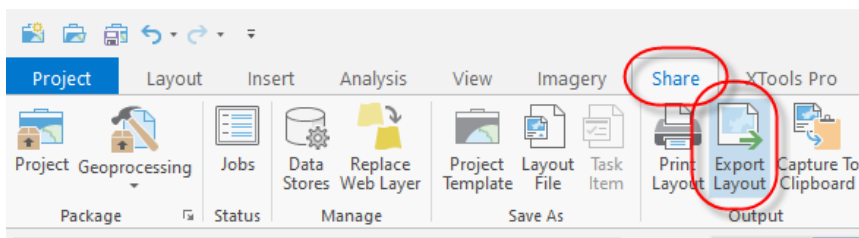
Update the legend to include the appropriate information for your incident including fire name, number, interpreter, date, and interpreted acres. *Note: in some cases, the incident will ask you to leave the interpreted acres off the PDF map. This is another good reason to maintain timely communication with your incident.*



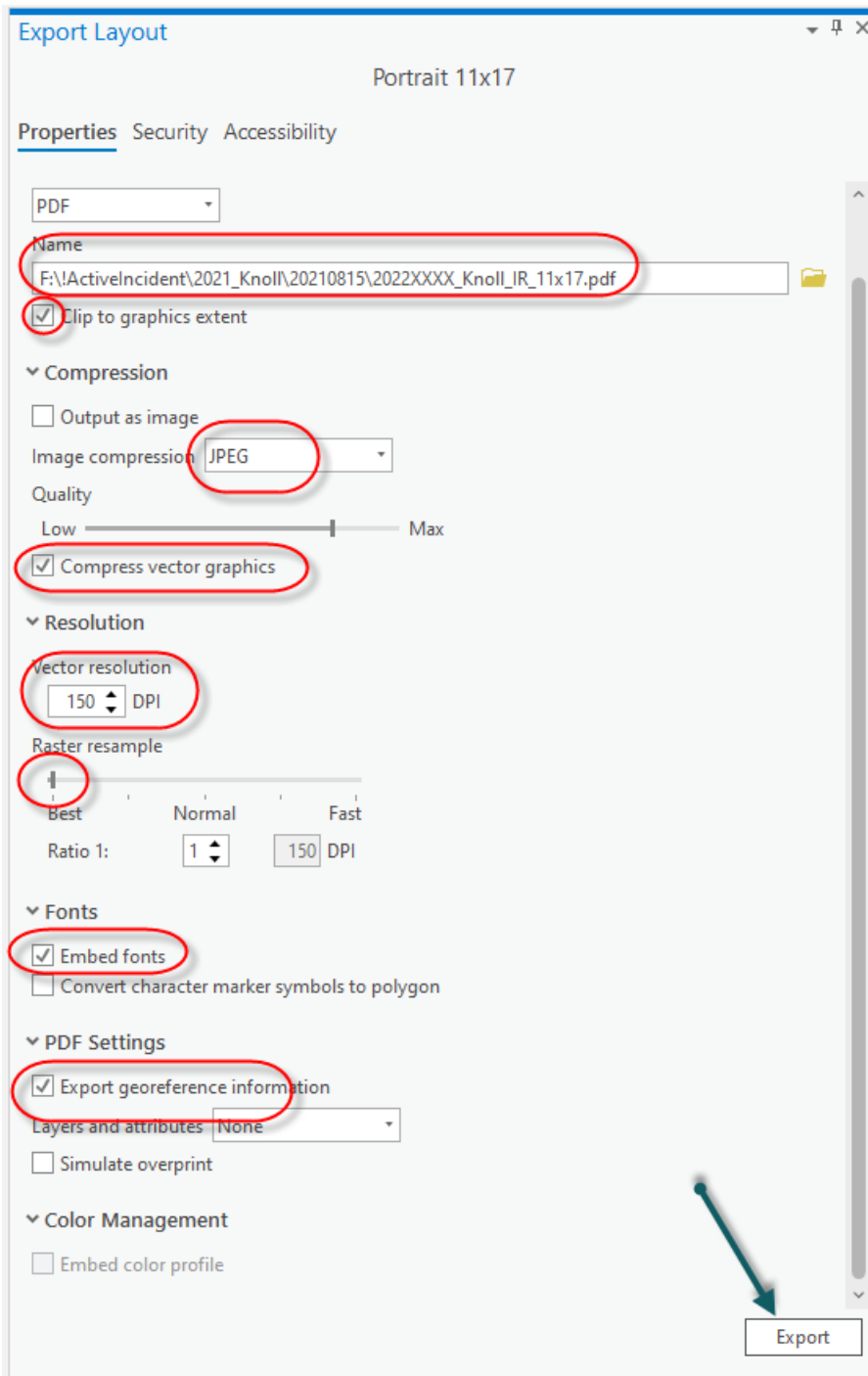
#### Step 6: Export your map to a geoPDF

Once your layout looks the way you want it to, it is time to export the map.

To export the layout, click on **Export Layout** in the Output section of the Share ribbon.



This will open the **Export Layout** pane.



Name your output under the **Name**.

Change additional export settings as needed.

Recommended settings:

Enable **Clip to Graphics Extent**

Set **Image Compression** to JPEG

Enable **Compress vector graphics**

Set **Vector Resolution** to 150 (this will not impact the quality of your basemap)

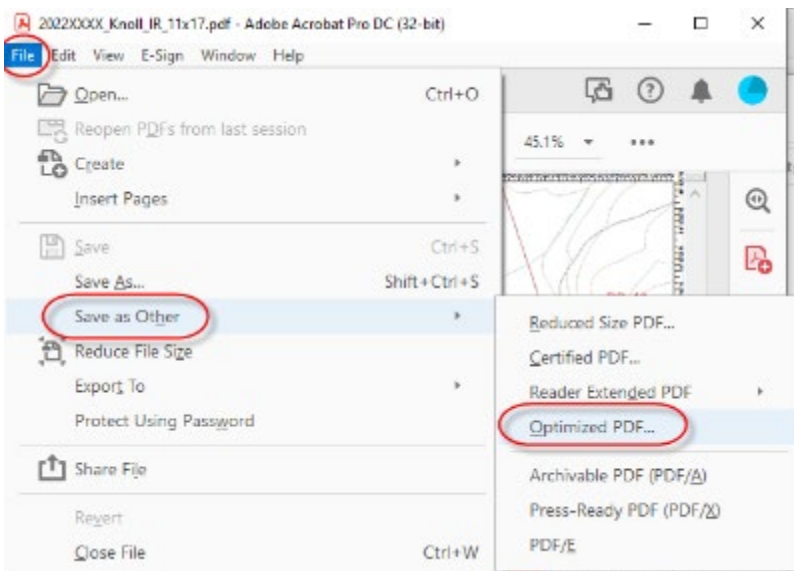
Ensure **Raster Resample** is set to “Best”

Enable **Embed Fonts**

Ensure **Export georeferenced information** is enabled.

Once your settings are adjusted appropriately, click on the **Export** box in the lower right corner to export your PDF Map.

*Note: some PDF files may be large and take long times to upload to the FTP site. If you have access to Adobe Acrobat Pro you can reduce file size for faster uploads. To do so, open the PDF file in Acrobat Pro, then select **File > Save as Other > Optimized PDF**.*



*You can keep the default settings and select OK. Rename the output with the original file name\_Opt.pdf to the same location as your original PDF file.*

### Create your IR Interpreter’s Log

Don’t forget to create a log and include it in your uploaded or otherwise delivered products for the incident. The log becomes part of the official incident record and is an important document.

Note: when writing significant notes in your log, it can be helpful to use not only geographic features but also the incident’s operational breaks when possible (e.g. “multiple isolated heat sources were mapped east of XYZ road in Division Z”.)

To view the incident’s operational assignments, you can enable them in the Internal View Service.

### Post products to FTP and notify the incident

Now that all products are complete, upload them to the NIFC FTP site. **And communicate with your incident to ensure your products have been received and are working properly.**



### Switch from TRAINING to live Edit service

If you have been following this workflow as a training or pre-season preparedness exercise, you will want your templates and base edit projects to reference the live NIFS, and not the TRAINING service. Do this for both the Internal View Service and the IR Edit Service.