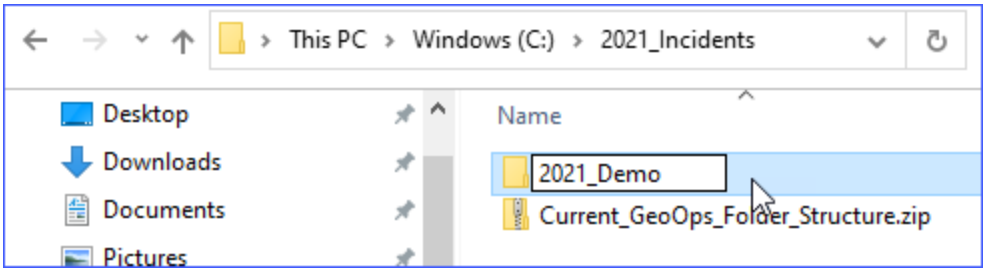
Prepare and Configure the Event GDB

This document will show the process for utilizing the GeoOps Incident Folder Structure and Event Geodatabase on an incident.
See the GISS Workflow for more information and GeoOps for standards and definitions.

Prepare the Event Geodatabase

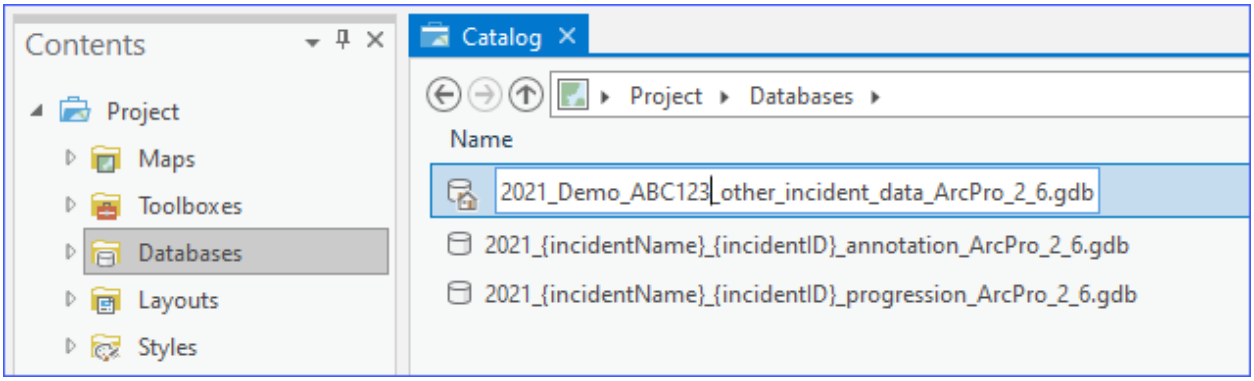
The GeoOps File Namer spreadsheet should be used throughout this process and the entire incident for maximum efficiency and consistency in file naming.

1. Creating Incident File Structure
    a. Unzip the Current GeoOps Folder Structure as close to the root drive as possible.
    b. Rename the *2021_[template]* folder to the incident name.



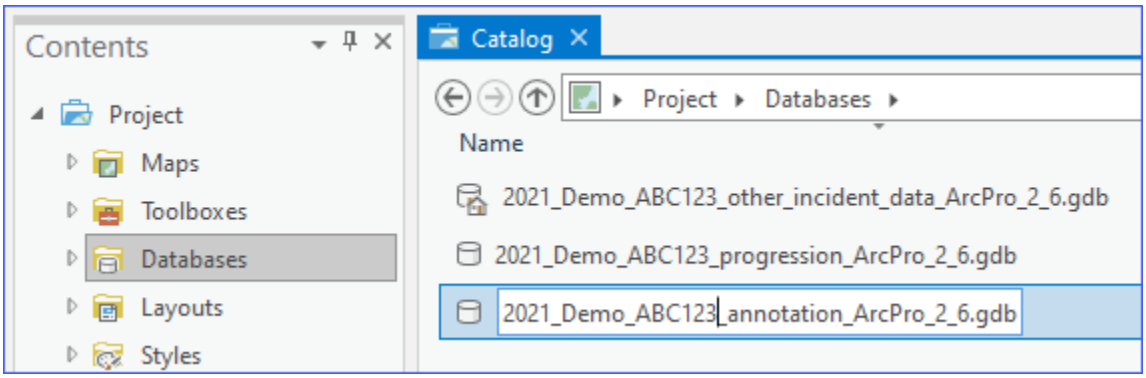
Note: It is very important to begin with a new zip of the *Current_GeoOps_Folder_Structure* when setting up a project. This will allow the Pro Project Template to establish the correct file pathways. Reusing the folder structure or the Pro Project Template is not recommended.

2. Customize the Template to the Incident
    a. In the *\projects* folder, open the 2021_ProProjectTemplate APRX file.
    b. In the Project Databases folder under Contents, rename the Default GDB (the other_incident_data GDB) with the incident name and local ID.

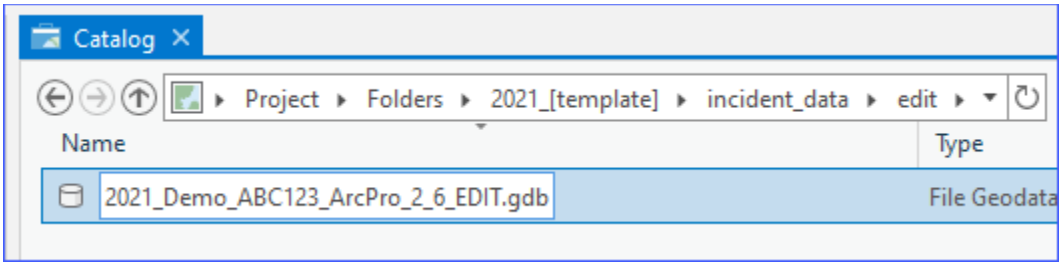


Note: Be sure to rename the Default GDB prior to opening the provided Map View or a database lock will be created, and you will be unable to rename the Default GDB.

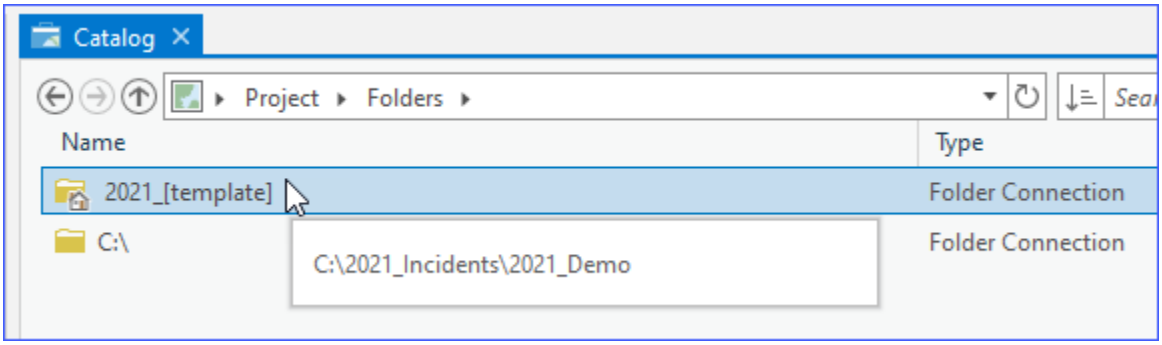
c. Rename the Annotation and Progression GDBs as well.



d. And the Edit GDB in the *incident_data\edit* folder.

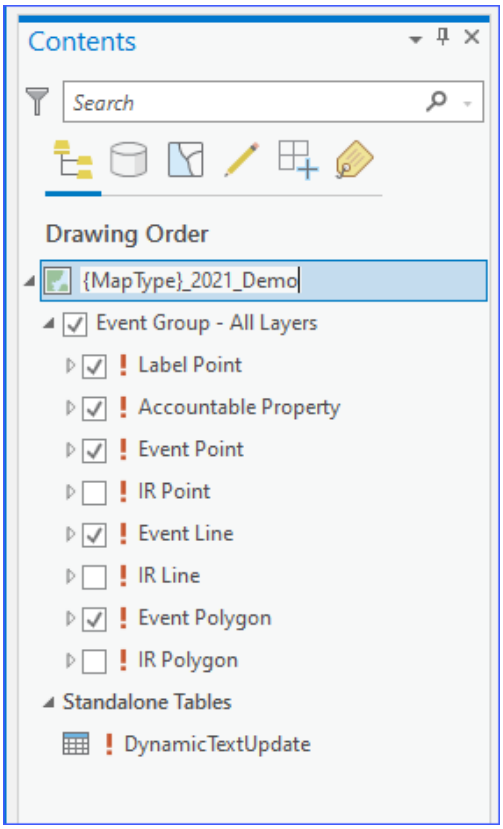


Note: A display issue affects the Home Folder name in some versions of Pro. Even after renaming it to the incident name, it may still display as *2021_[template]* in the project folders. This can be edited here or left as is, if the underlying connection is correct.

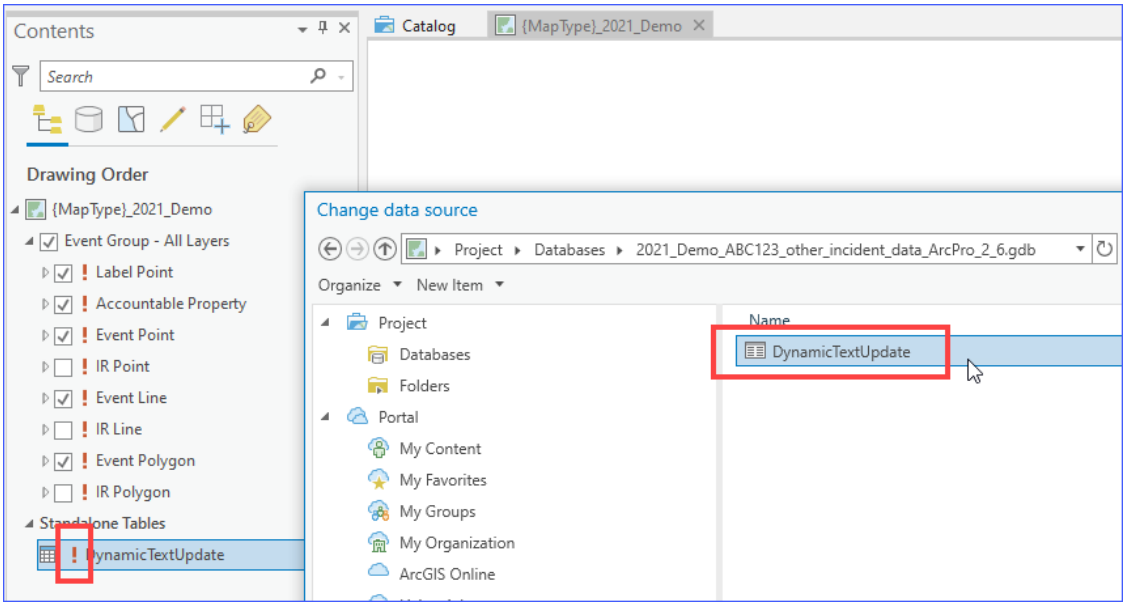


e. Navigate to the Maps folder. Open the provided map view *{MapType}_2021_{IncidentName}.*

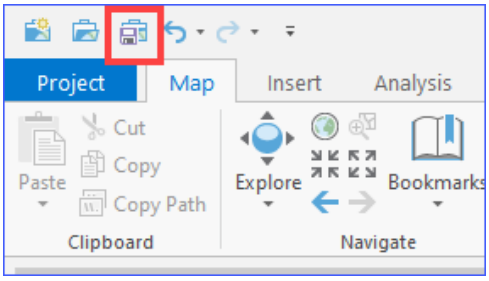
   i. Add the Incident Name to the map title, but leave *{MapType}*.



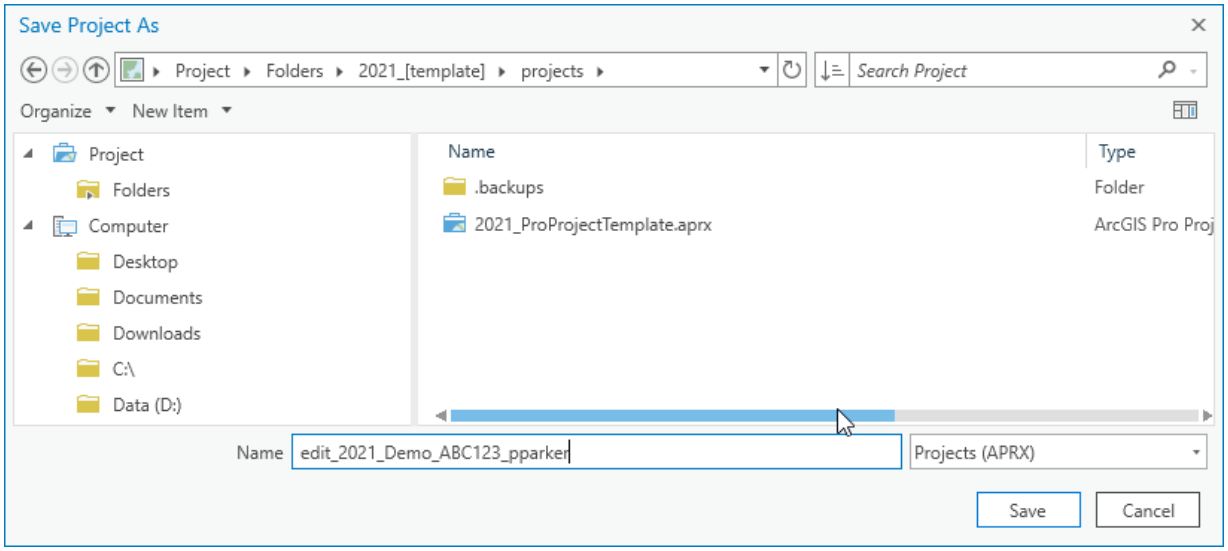
   ii. Repair the path of the *DynamicTextUpdate* table to the existing table in the Default GDB.



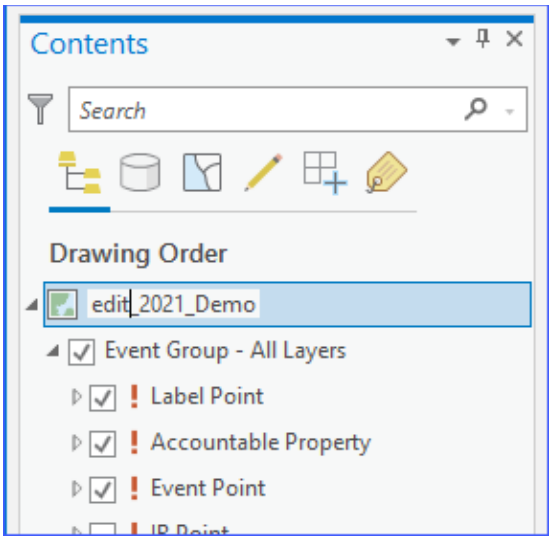
f. Save the Project.



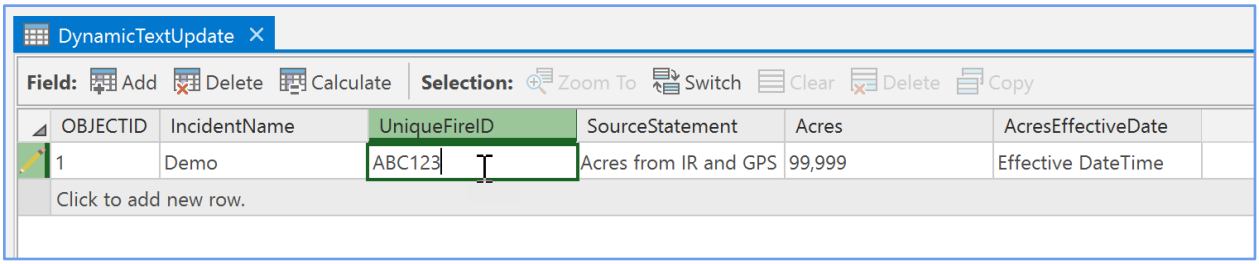
3. Create the **Edit Project**
    a. Use Save As to save the template as a new project in the *projects* folder, naming it *edit_2021_{incidentName}_{localIncidentID}_{yourName}*.
    This is the **Edit Project**, all data editing should be done here.



    b. Add “edit” as the *{MapType}* to the Map View title.

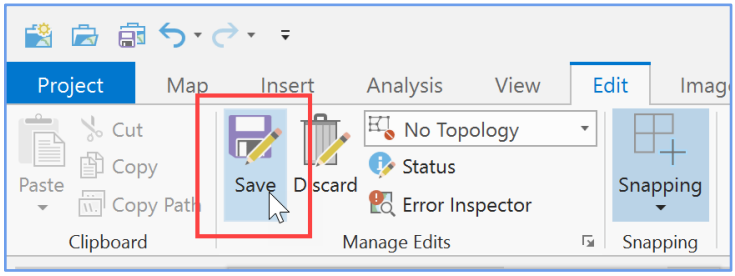


    c. Open the *DynamicTextUpdate* table and fill in all the attributes.

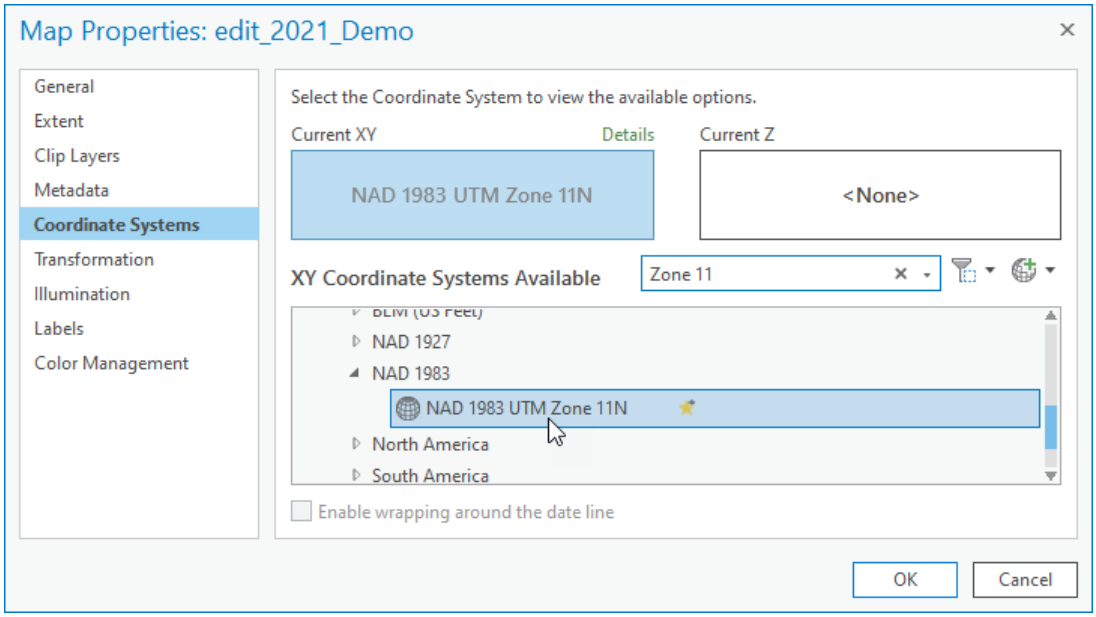


Note: Values in the *DynamicTextUpdate* table will populate dynamic text in every layout in every ArcGIS Pro project for the incident. It should be edited from the **Edit Project** while all other projects are closed so the updated values will populate properly. This provides a single source to update the current acreage.
Do not add additional rows to this table.

d. Save the edits to the table.

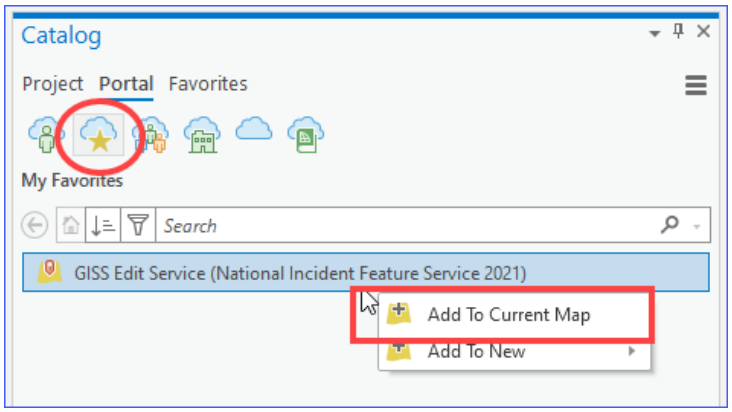


e. Set the coordinate system of the **Edit Map** to a local projected coordinate system.

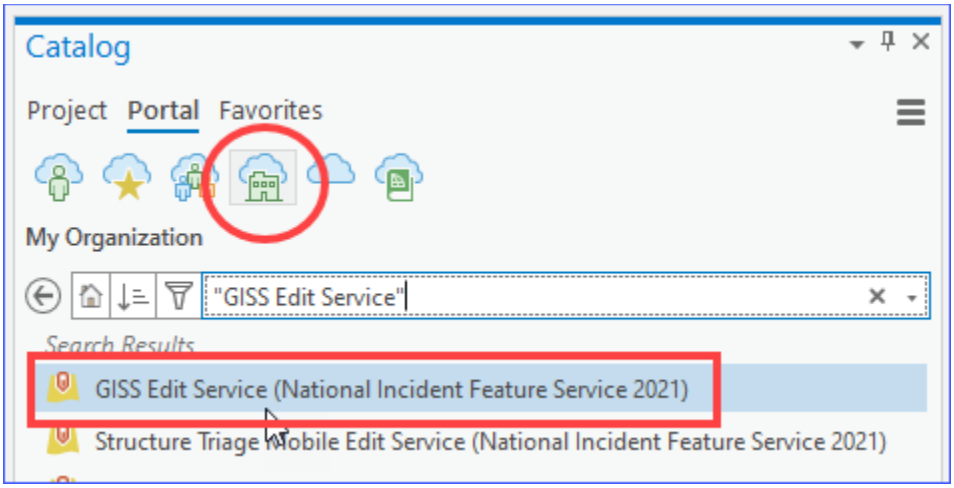


Note: The coordinate reference system of the **Offline Copy** will be automatically reprojected to the local projected coordinate system of the map frame upon creation.
Reprojecting the Offline Copy was previously discouraged but the drawbacks have been negated by new options in ArcGIS Pro's geometry calculations and the use of calculation (.cal) files for Lat/Long.
The map frame can optionally be projected after the **Offline Copy** is made, but will then need to be returned to WGS84 whenever a new one is made (e.g. for an expanding area of interest).
What is most important is being aware of what coordinate reference system the data and map frame are in, and making decisions and calculations accordingly. For a quick refresher, see the GIS Concepts Review document.

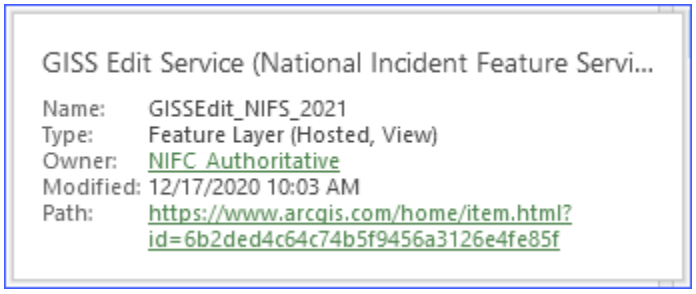
4. Create an **Offline Copy**
    a. Sign into your NIFC AGOL account in ArcGIS Pro
    b. In the Catalog pane, click on Portal and then the cloud with a star for *My Favorites*. Right-click the GISS Edit service and select Add To Current Map. To add the GISS Edit Service to the *My Favorites* menu, open the item page in AGOL and click Add to Favorites under the thumbnail.



    c. The service can also be added by Searching or by the URL.
        i. Enter the service name in the search bar: “GISS Edit Service” (Using quotes will limit the search results)

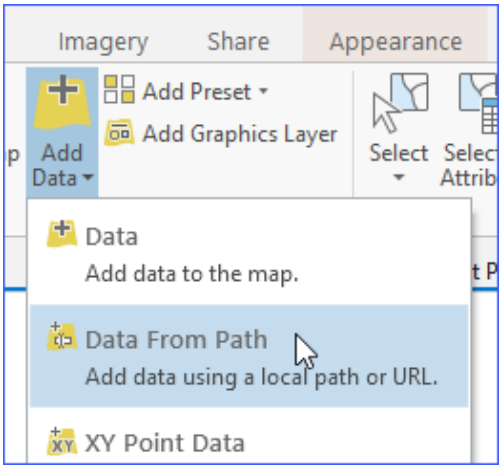


ii. Find the service in the results, hovering over the service to display additional information. Official NIFS layers are owned by the *NIFC_Authoritative* account.



d. The service can also be added by URL with Add Data from Path

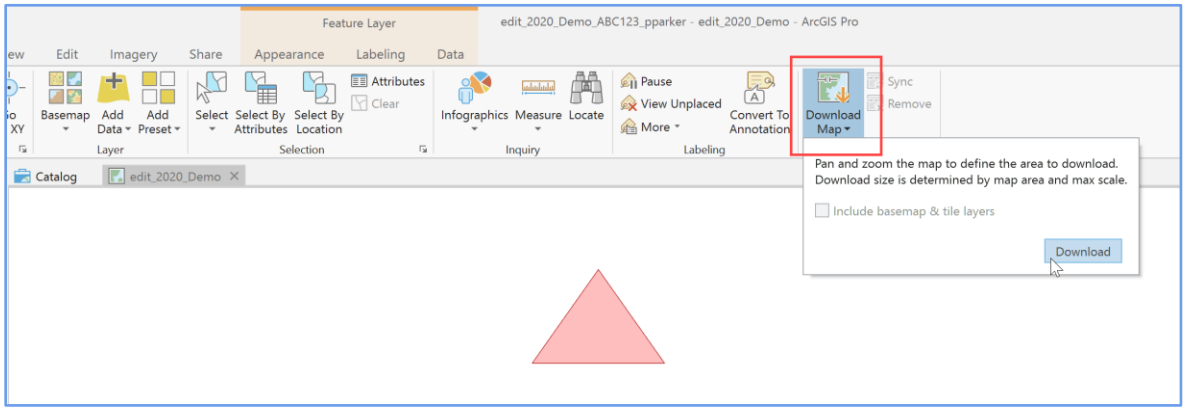
i. On the Map ribbon tab, open the Add Data dropdown and select "Add Data" from Path



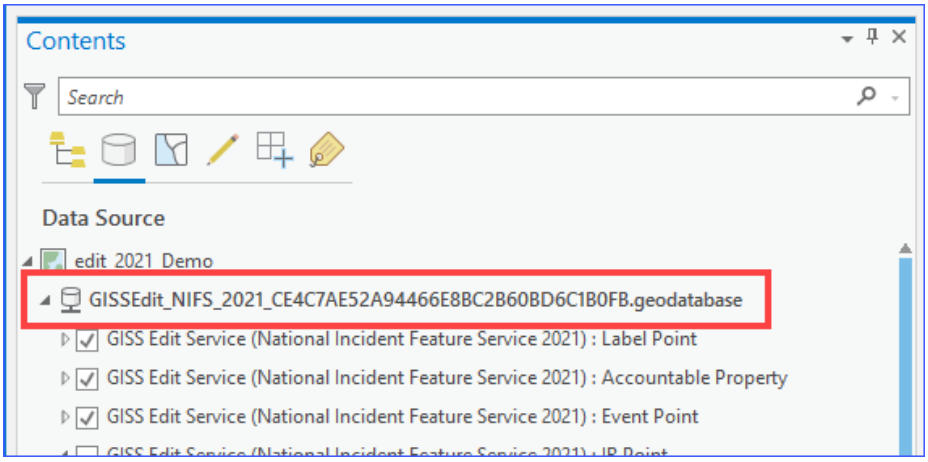
ii. Copy and paste the URL path to the NIFC AGOL "GISS Edit Service (National Incident Feature Service" into the dialogue box. Both the NIFC Org URL and REST URL will work.

e. An **Offline Copy** will be needed to create the **Master Incident GDB** and should be used for all editing. While feature services can be edited directly in Pro, it is not recommended in most cases.

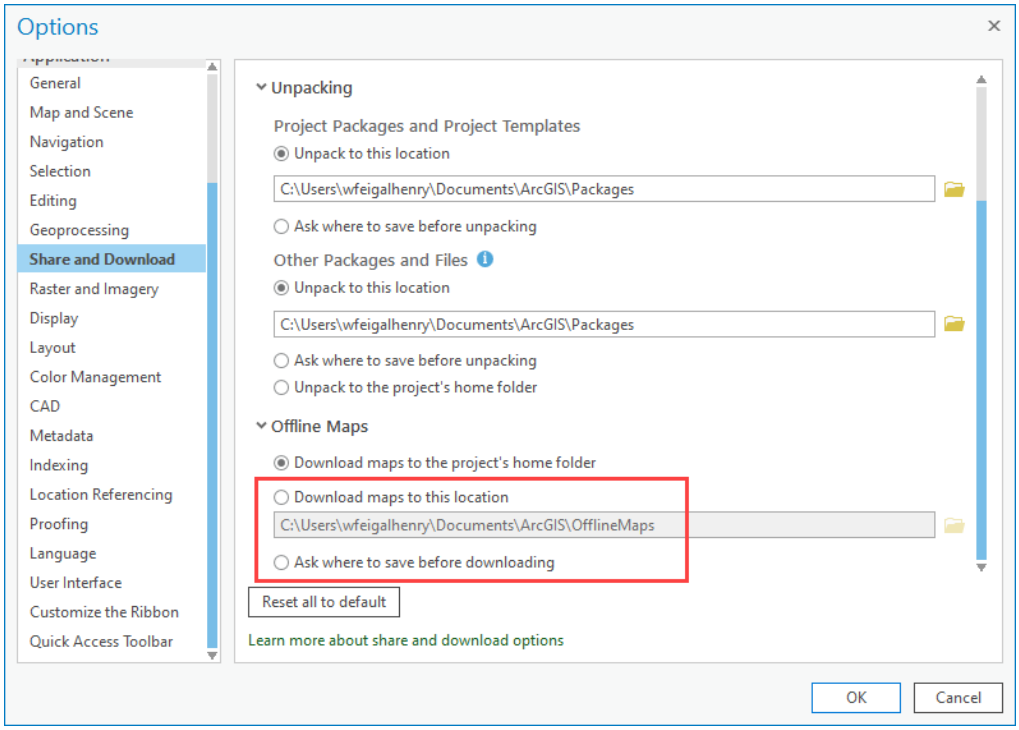
i. Zoom to the incident and click Download Map on the Map ribbon. There should be a triangle in Event Polygon that was auto-generated from IRWIN when the incident was created, the triangle can be used as a starting point. It will already contain the correct IRWIN and Incident IDs.



ii. Once the download is complete, change the Contents pane to List by Data Source and confirm that the source for *GISS Edit Service (National Incident Feature Service 2021)* is now a local database.

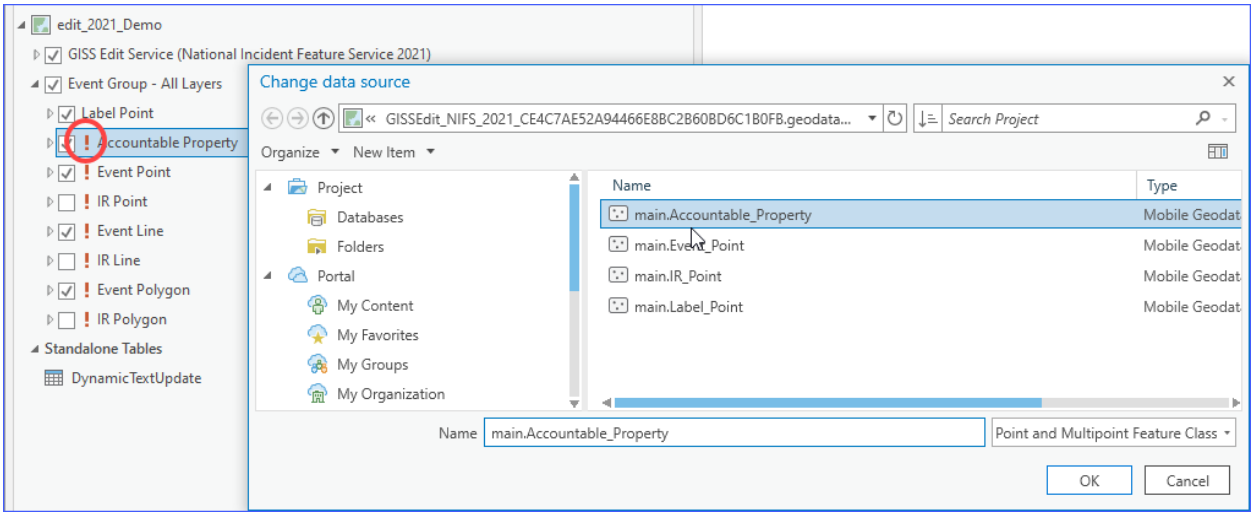


iii. The **Offline Copy** will automatically be created in the Home folder (which is set to the main incident folder). *Do not move or rename it after download.*
If preferred the download location can be set to prompt you each time or the default location updated to the *incident_data/edit* folder in the project settings under Share and Download.



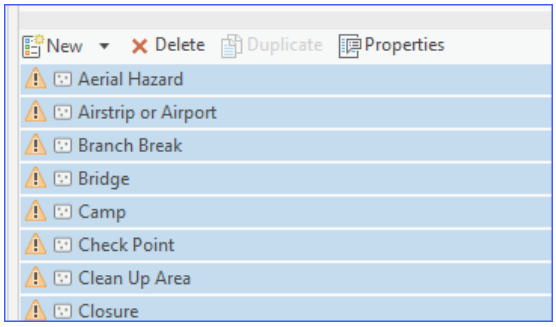
Note: The **Offline Copy** is not a File GDB, it is a Mobile Geodatabase (aka Runtime GDB). ArcGIS Pro works natively with this format but its capabilities are limited and it will need to be converted to a File GDB for backups and use as the **Master Incident GDB**.
For more information on how to convert to a file GDB, see the document Converting Runtime GDBs to File GDBs.

5. Use the standard Event symbology instead of the simplified symbols of the service.
   a. Repair the path of the *Event Group - All Layers* layers to point to the newly created **Offline Copy**. (Must be done layer by layer for the Edit Map).
   Remove the *GISS Edit Service (National Incident Feature Service 2021)* group to avoid confusion.

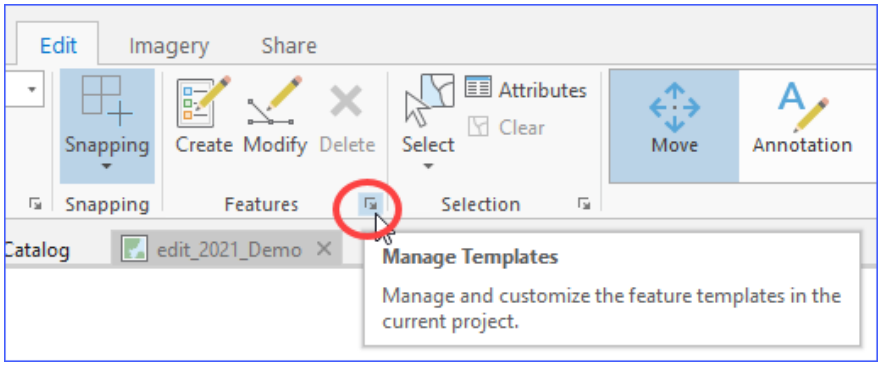


6. Configure Feature Templates

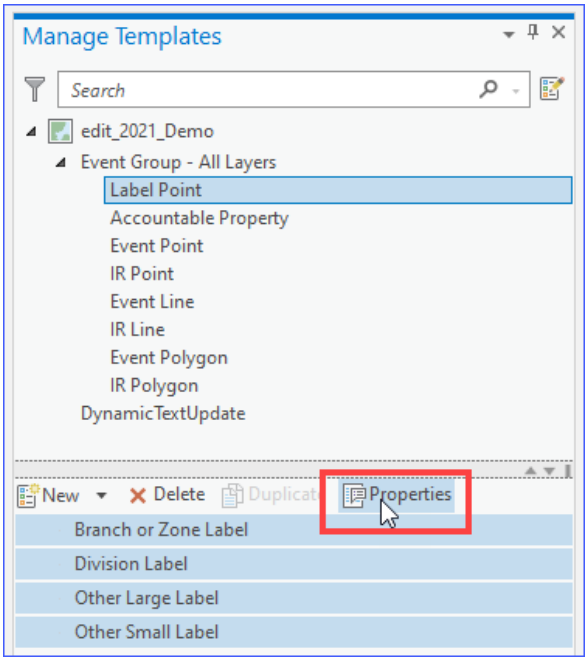
Note: A software bug affects all versions of 2.6 feature templates. If 2.6 must be used, the database defaults can be set for *Incident Name* and *IRWIN ID*. Avoid setting any defaults that are not incident specific. This technique should only be used if feature templates are not an option.



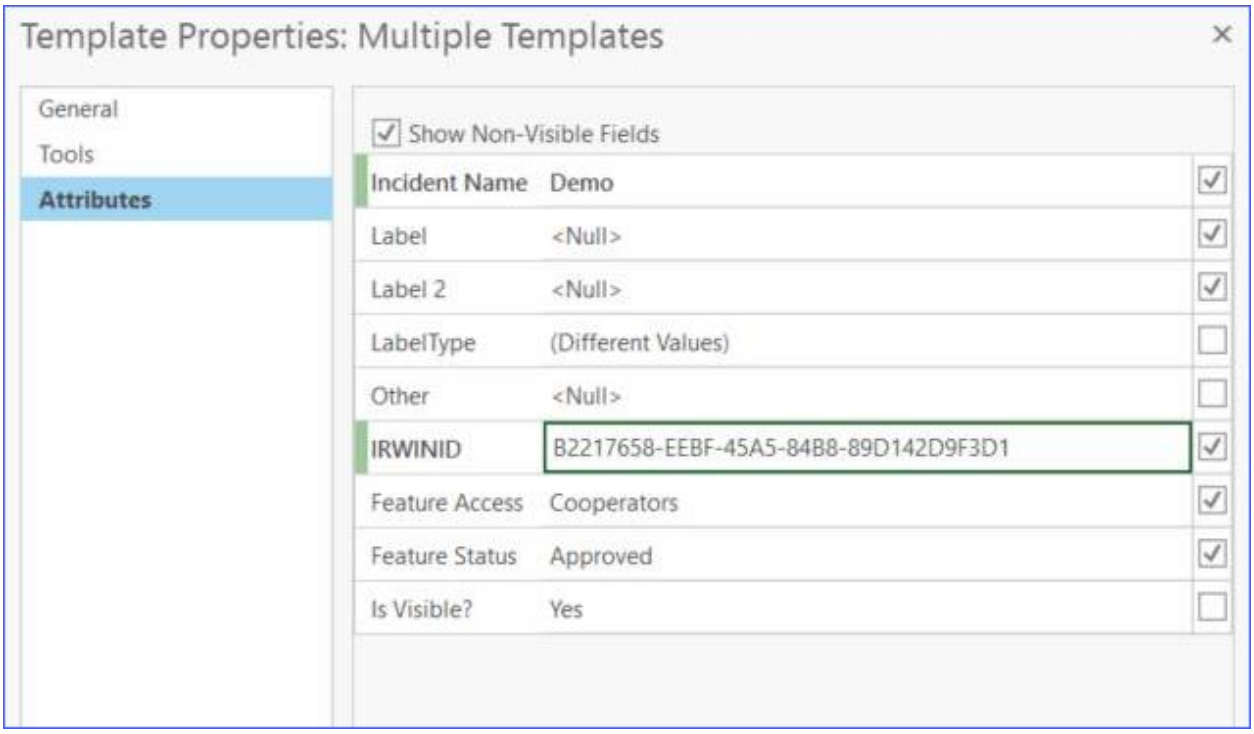
a. Open the Manage Templates pane. This can be done from the Create Features pane or by clicking the dialog box launcher under the Features group on the Edit tab.



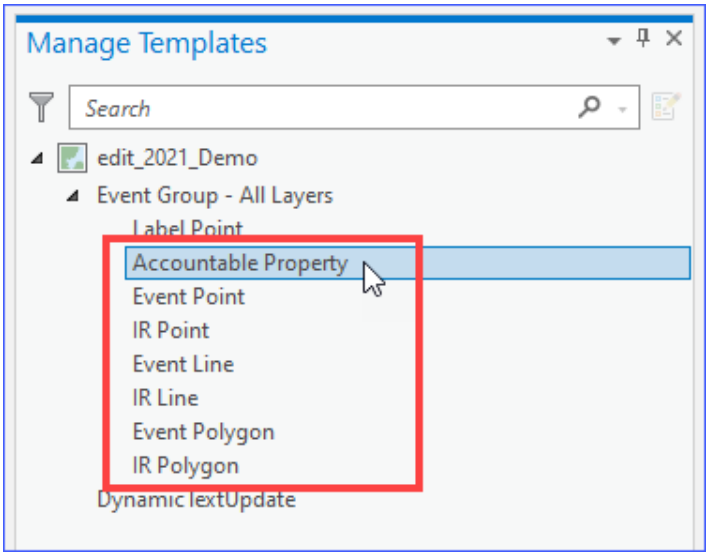
b. Starting with Label Point, select all the features in the list and click **Properties**.



c. Set the values for *IncidentName* and *IRWINID*.

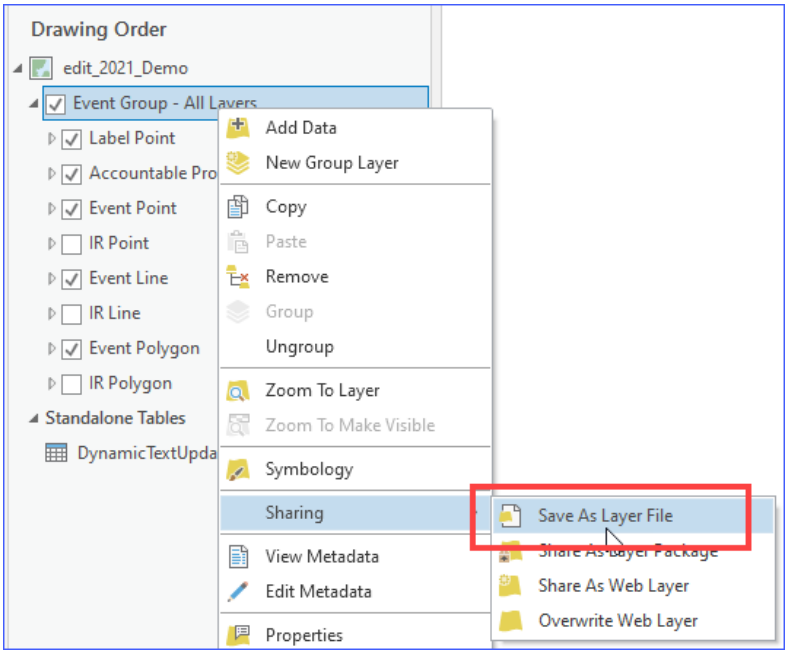


d. Repeat the previous step for all the other layers.



Note: See the [GISS Workflow for more information on Obtaining IRWIN IDs for Incidents and Complexes].

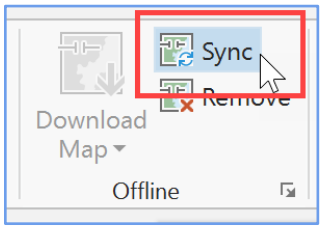
7. Once the Feature Templates for each of the Event feature classes are configured, save a layer file as a backup. A layer file will store both the symbology and more importantly, all the incident specific template settings just configured.
    a. Right-click the *Event Group - All Layers* in the Contents pane and select Save as a Layer File under Sharing.
    Save the file to the *incident_data\edit* folder following the GeoOps naming convention *eventFeat_{year}_{incident name}_{unit ID+local incident ID}_{your name}.lyrx*



    b. Use these layer files to build a new Edit Project should you need to for any reason.

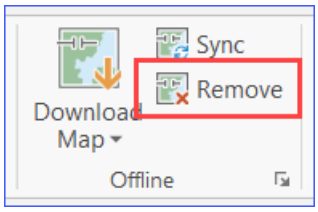
Note: Feature Templates and Label Classes are saved in the layer files but will not be transferred to a new map if the Import Symbology function in the Symbology properties is used. When adding layer files to a new map, add the layer file as you would a feature class through the Add Data window or Catalog tab. If the data has moved or you wish to apply it to a different feature class, simply repair/change the data source.

8. Edit the data.
    a. Add basemap(s) and any ancillary data necessary to perform accurate edits of the incident data.
    b. Edit the data as you would any local dataset.
    c. An **Offline Copy** in Pro can sync with the service more than once. There is no need to remove and re-download for each edit session.



Note: It is critical to Sync ***before*** each editing session as well as after. Syncing before will pull down any edits that have been made since the last sync. Not doing so will greatly increase the chances of a conflict and data being overwritten.

9. Recreate the **Offline Copy** to account for an expanded area of interest.
   As a fire grows, it will likely be necessary to recreate the Offline Copy for a larger or different area.
    a. Remove the existing Offline Copy.



Note: This will delete the associated mobile geodatabase. Do not remove an **Offline Copy** that has not been synced or data will be lost.

    b. Zoom to the new area of interest and use the Download Map function to create a new Offline Copy.

Note: Multiple Offline Copies can be created in the same map but this is not a recommended practice. Clicking Download Map multiple times will result in multiple mobile geodatabases created in the incident file directory.

Create the Master Incident GDB

The **Master Incident GDB** is the database with which all incident maps should be created. The Master Incident GDB is located in the *incident_data* folder. **No editing should be done in this geodatabase**.

The **Offline Copy** will need to be converted to a File GDB before being copied to the *incident_data* and *incident_data\backups* folders and renamed.
See the document Converting Runtime GDBs to File GDBs.

Note: Some versions of Pro display a bug that prevents a File GDB from being copied or renamed if the name begins with a number. If encountered, use File Explorer to copy GDBs or rename to begin with "*i_*" as done for feature classes.

Be sure your Master Incident GDB and all backups comply with GeoOps naming standards.

Create Incident Maps in Pro

The same Pro Project Template APRX will be the starting point to create project files for incident maps as well.

Layouts are included for the most common page sizes and all the text is tied dynamically to the provided map view and the *DynamicTextUpdate* table in the *_other_incident_data.gdb*. Instructions for updating the dynamic text are found in each layout.

1. Open the 2021_ProProjectTemplate APRX file.
2. Use **Save As** to save the template as a new project in the *projects* folder, naming it *{mapType}_{year}_{incidentName}_{localIncidentID}.aprx*.
3. Open the existing map view *{MapType}_2021_{IncidentName}* and rename it with the map type and the incident name. This one project and Map View can be used to create all the map products for this type, regardless of printed size or multiple areas.
4. Repair the data source for the existing layers (or add a new lyrx file and repair) to the **Master Incident GDB**.
5. Open or create a Layout in the appropriate size and customize it to the product type.

For more information on creating incident maps with ArcGIS Pro, see the document Page Layouts in ArcGIS Pro.