

Hosting and Sharing GISS Data in FireNet365



A job aid for the GISS Workflow (NWCG PMS 936-1)

December 2024

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Introduction

The purpose of this job aid is to demonstrate how to properly host the GeoOps Incident Directory Structure in the files of an Incident Microsoft (MS) Team in FireNet365 and use OneDrive to sync the directory to a local hard drive to use according to [GeoOps](#) and the [GISS Workflow](#).

As of December 2024, Esri **does not** recommend storing mobile geodatabases on file shares or cloud drives for multiple people to access unless the file shares or cloud drives do not allow write access. As such, this document will describe a workflow to store the Edit Project and Offline Copy (mobile geodatabase) on a local hard drive (e.g. C:\) in a folder that is not syncing in OneDrive instead of maintaining these elements in the GeoOps Incident Directory as directed in the GISS Workflow.

There are multiple ways to interact with data and files stored in a MS Team / SharePoint environment. The following are a matter of preference:

- This document describes accessing SharePoint via Teams as it assumes that the GISS will need to utilize Teams for communication on the incident. Alternatively, the Incident Team can be accessed directly in SharePoint.
- This document describes syncing the GIS_Data folder in the Situation Channel of an incident Team. Alternatively, just the GeoOps incident directory may be synced.

Finally, this document assumes the GISS can manage two OneDrive accounts on a single machine if necessary – one for the home unit agency and one for FireNet.

Prerequisites

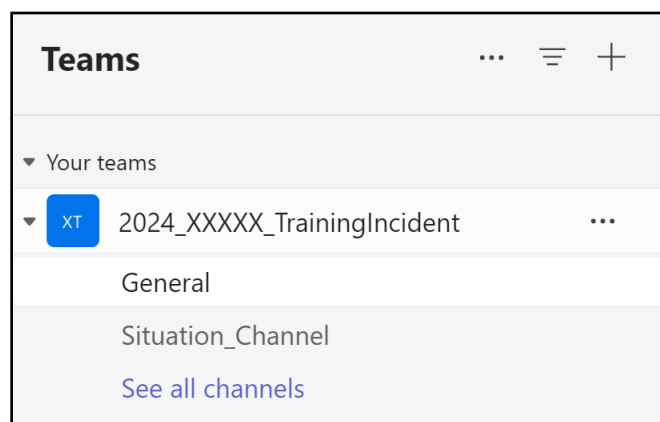
1. All GISS on the incident must have named user [FireNet](#) accounts (not guest accounts) with Multifactor Authentication (MFA) set up. When requesting a new account, please note:
 - Indicate that you are a **GISS** on the FireNet Account Access and Rules of Behavior Form.
 - Federal sponsorship for a FireNet account can be requested through Skip Edel, National Park Service Fire GIS Program Manager. **THIS IS ONLY NEEDED IF YOU ARE NOT A FEDERAL EMPLOYEE.** Email Skip (skip_edel@nps.gov) a copy of your IT security certificate to request assistance with federal sponsorship.
2. A web browser or browser profile for your FireNet account that is separate from your Agency browser or browser profile.
3. FireNet account is **unlinked** from PC. If currently linked, open OneDrive – FireNet from System Tray > Help & Settings > Settings > Account > Unlink this PC. Note that this will sever any existing FireNet synced folder connections currently on your PC.
4. Membership in an Incident MS Team in FireNet365. The Incident Technology Support Specialist (ITSS), Public Information Officer (PIO), or Planning Section Chief (PSC) on the IMT will request the Incident MS Team and add the GISS once the Team is created. For testing purposes, you may join and use this MS Team: [2024 XXXXX TrainingIncident](#)
5. Sufficient storage space on a local hard drive (e.g. C:\), recommended >30GB.

1. Complete these steps of GISS Workflow – Data Preparation

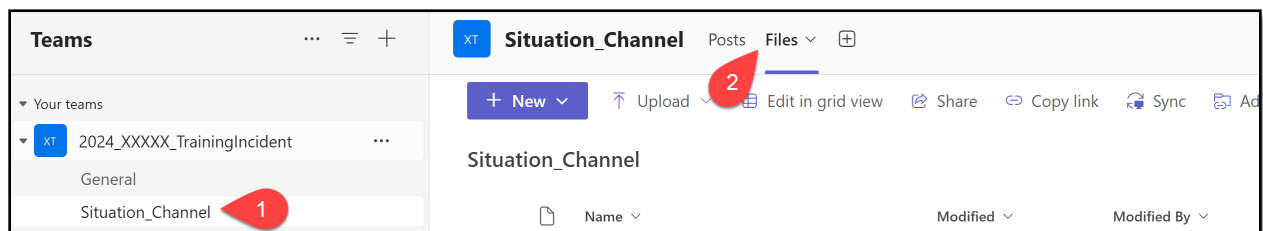
1. [Gather Incident Information](#)
2. [Implement the Incident Directory Structure](#)
 - a. Implement the incident directory on a local hard drive (e.g. C:\YYYY_Incidents) in a folder that is **not syncing** in OneDrive.
3. [Populate Base Data](#)
4. [Configure the ArcGIS Pro Project Template](#)

2. Sign Into FireNet and Locate Incident MS Team

1. In your FireNet browser or browser profile, sign into [FireNet365](#).
2. Navigate to the MS Teams app using the shortcut on the left menu.
3. Navigate to the Teams section within MS Teams.
4. Locate the Incident MS Team for the incident you are assigned to.

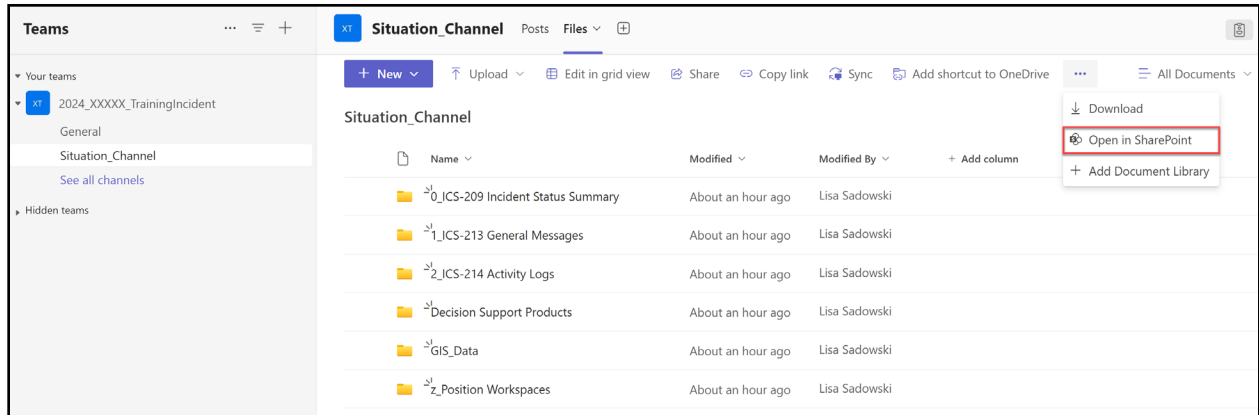


5. If needed, select *See all channels* and show the Situation_Channel.
6. Select the Situation_Channel and navigate to the Files tab.

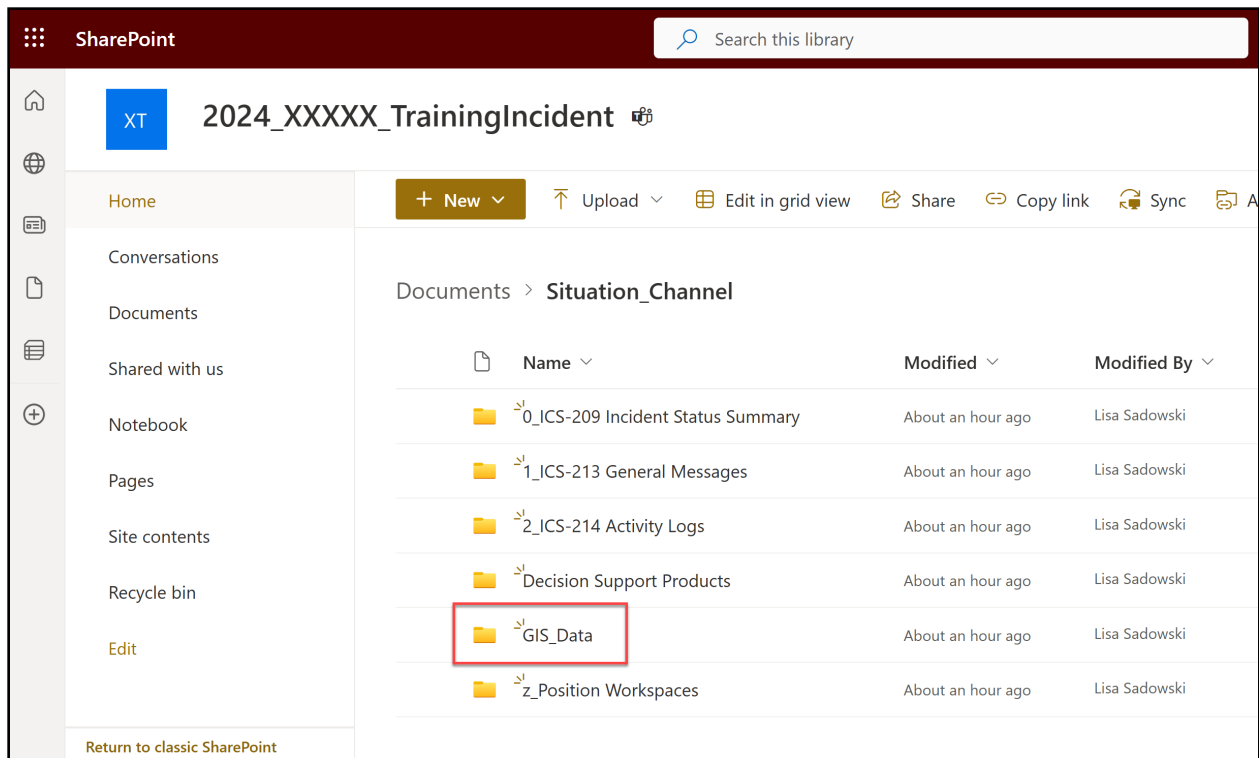


3. Sync the GIS_Data folder in the Situation Channel

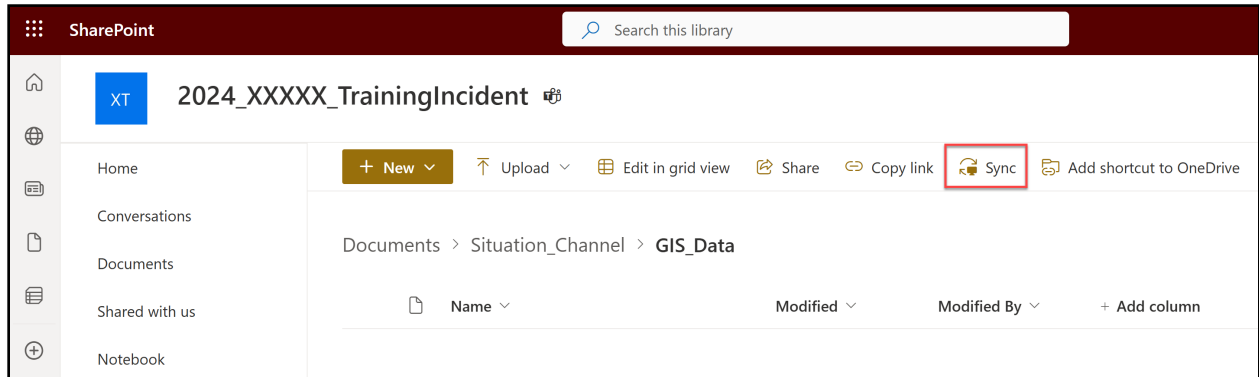
1. Click the three dots and open the Situation Channel Files in SharePoint.



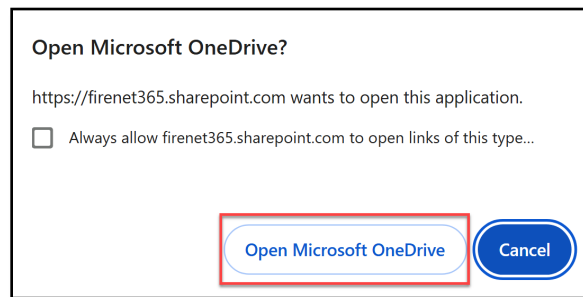
2. Open the GIS_Data folder.



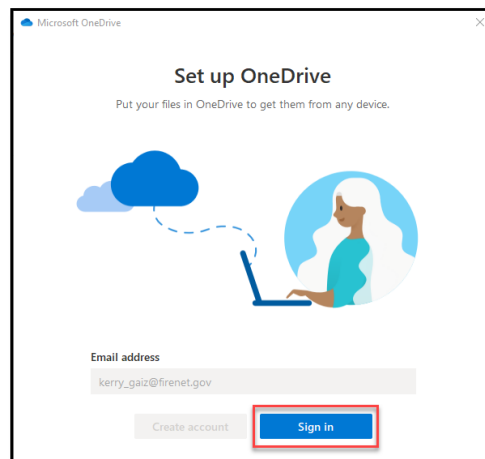
3. Click Sync.



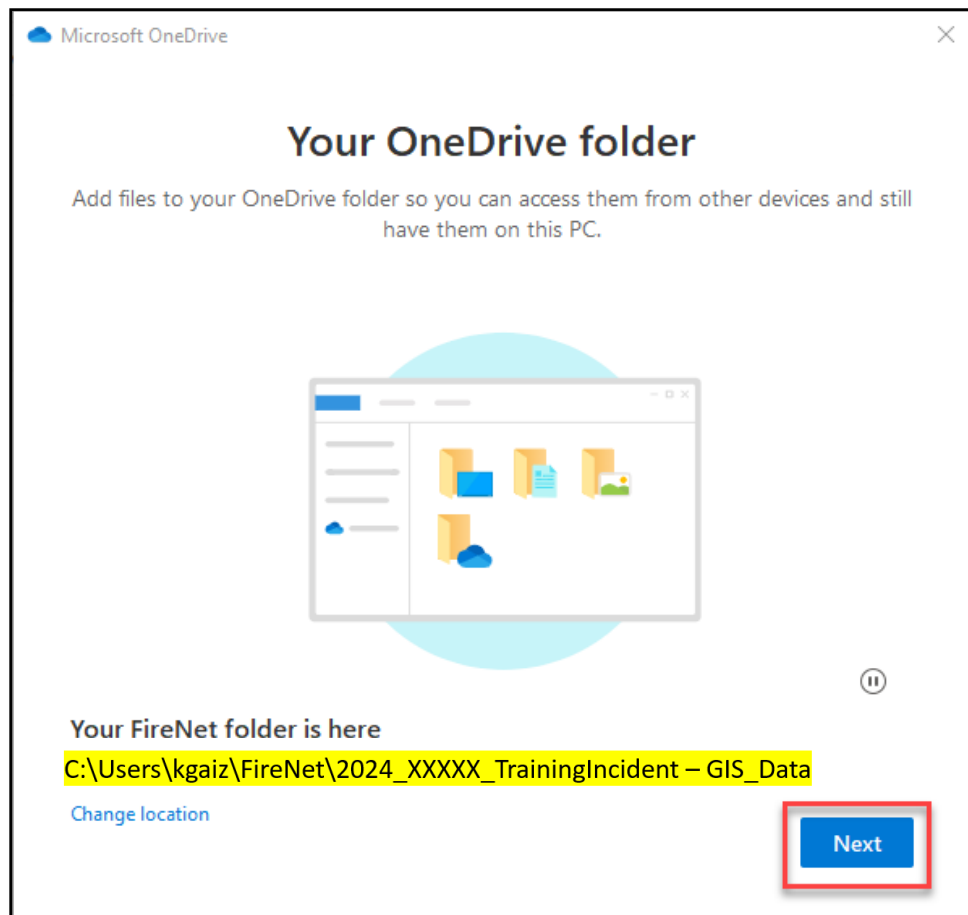
4. Click Open when prompted that the site is trying to open Microsoft OneDrive.



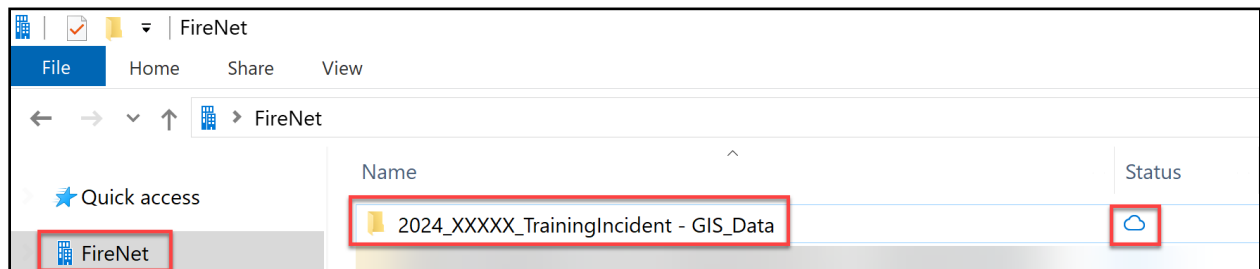
5. Sign in to FireNet OneDrive.



6. Make note of the location where the files will be synced to your local hard drive and, if needed, change the location if you have more storage available elsewhere. Click Next.

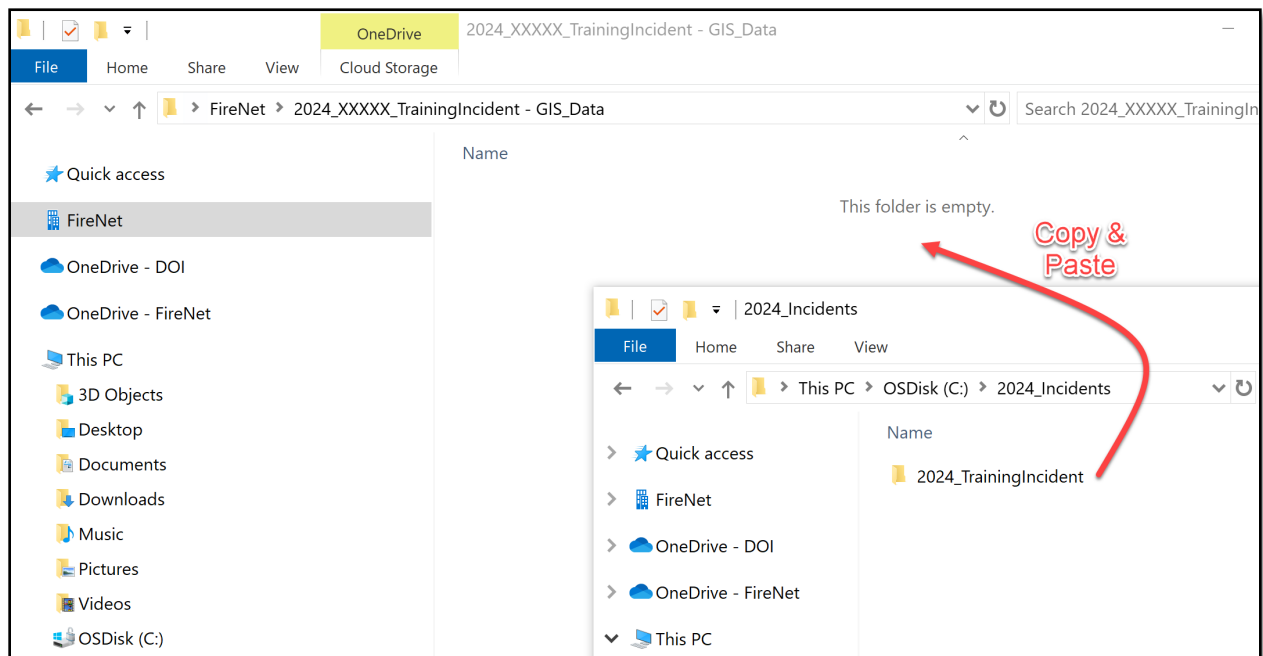


7. Click Next through the *Get to know your OneDrive*, *Share files and folders*, and *All your files, ready and on-demand* screens. Click Later on the *Get the mobile app* screen.
8. Click Open my OneDrive folder.
9. Take note of a new connection to FireNet365 SharePoint in File Explorer, the synced GIS Data folder, and the “Available when online” status of the files in the GIS Data folder.

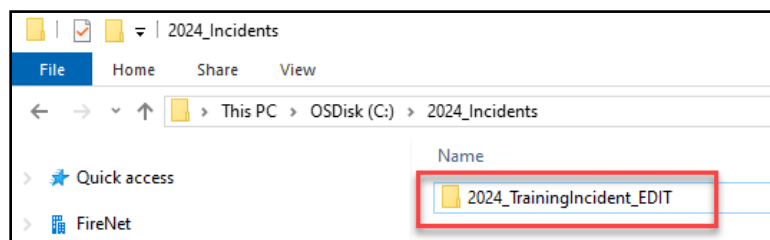


4. Copy the GeoOps Incident Directory to the GIS_Data folder

1. Ensure all ArcGIS Pro projects and files within the GeoOps Incident Directory implemented on your local hard drive (e.g. C:\) are closed.
2. **Copy** and paste the GeoOps Incident Directory from your local hard drive (e.g. C:\YYYY_Incidents\YYYY_Incident) to the GIS_Data folder in the Situation Channel in File Explorer. Do not cut and paste, you will retain the original GeoOps Incident Directory on your local hard drive to host your Edit Project and Offline Copy.



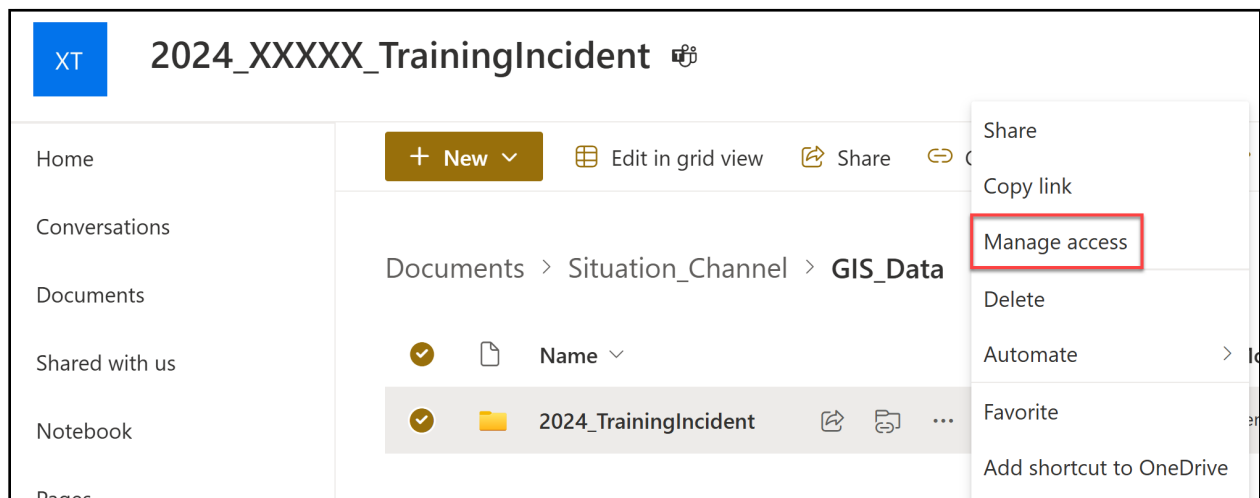
3. Optionally, rename the GeoOps Incident Directory on the local hard drive (e.g. C:\YYYY_Incidents\YYYY_Incident) and add “_EDIT” to the end to distinguish the folder from the one copied to the GIS_Data folder.



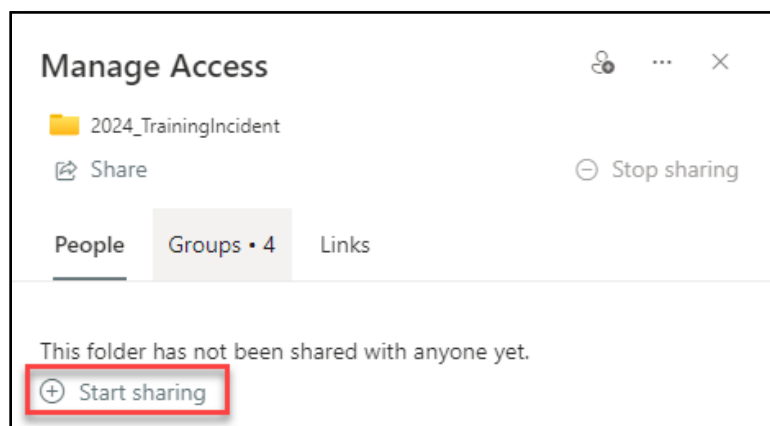
5. Protect and Share the GeoOps Incident Directory

By default, the files in the Situation Channel and GIS_Data folder are editable by members of the Incident MS Team. To prevent accidental data loss, **optionally**, work with a Team Owner (potentially SITL, PSC) to manage access of the GeoOps Incident Directory so that only specified users have edit access.

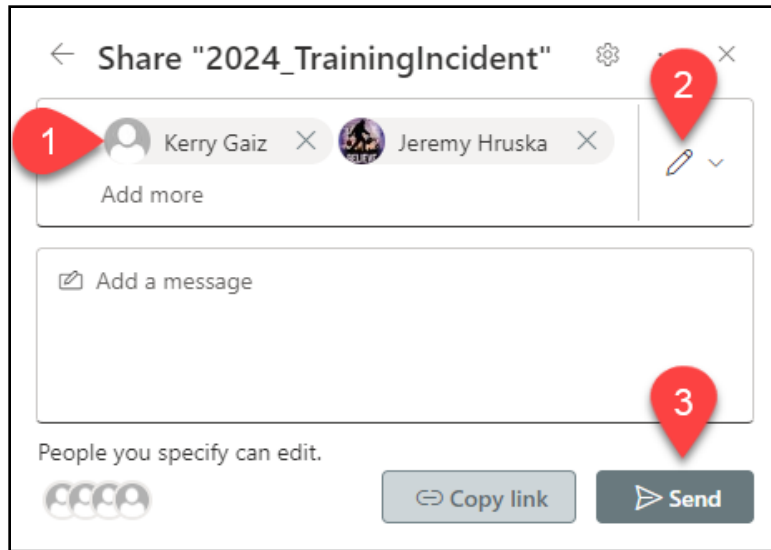
1. In FireNet SharePoint, select the GeoOps Incident Directory, click the three dots next to the folder and select Manage access.



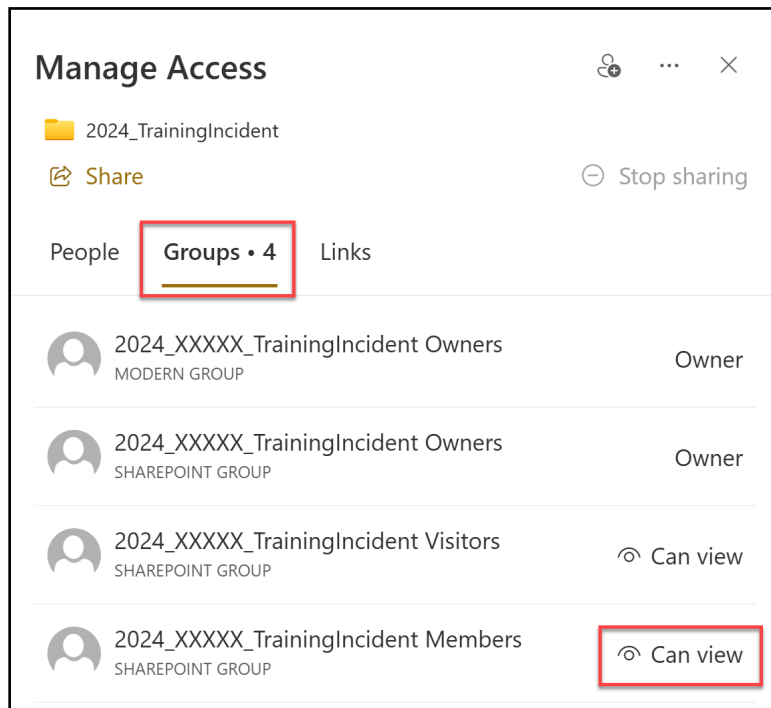
2. On the People tab, click Start sharing.



3. Enter the FireNet accounts of all GISS assigned to the incident, update the access level to “Can edit” and click Send.



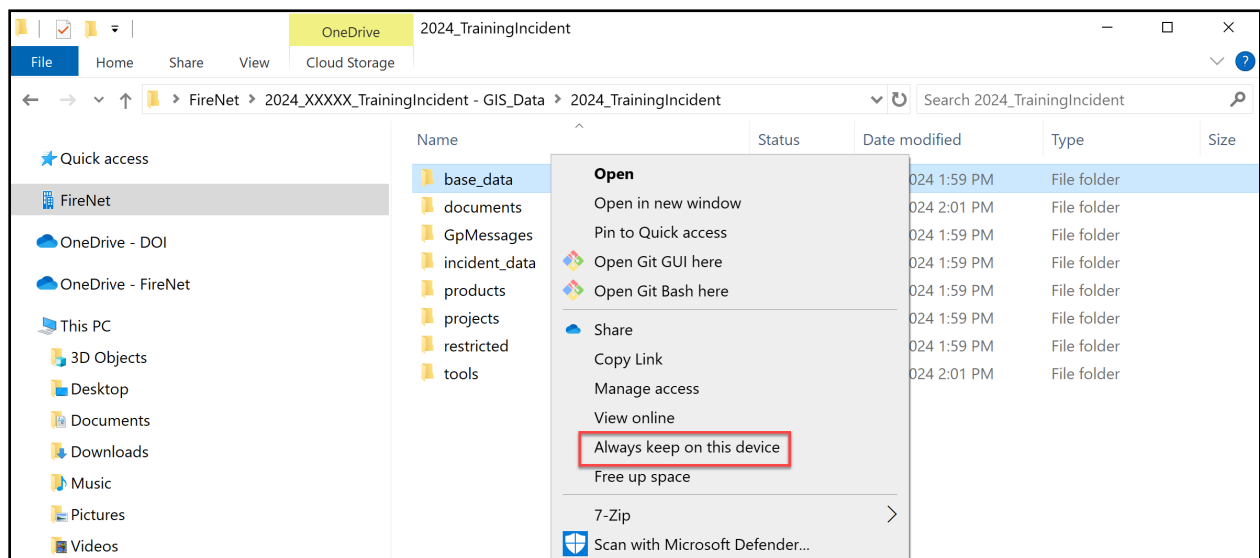
4. On the Groups tab, update the access of the Members group so that they only Can view.



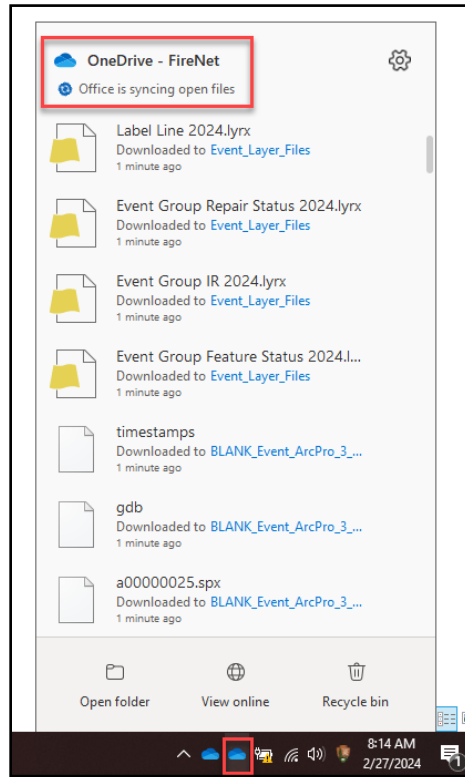
5. Instruct other GISS to follow Step 3: Sync the GIS_Data folder in the Situation Channel, then continue with Step 6: Determine folders to Always keep on device.

6. Determine folders to Always keep on device

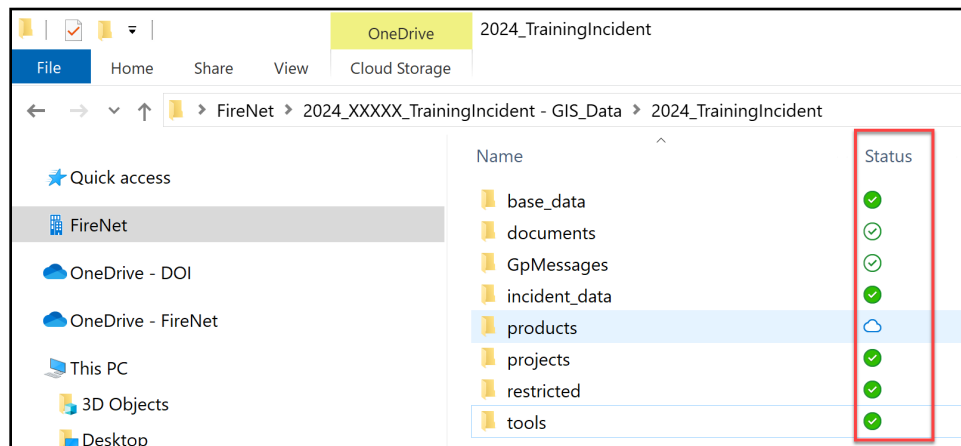
1. Determine which folders of the GeoOps Incident Directory you would like to *always keep on your device*. You can keep the entire directory on your device, but it may take more storage space on long duration incidents and require more syncing than necessary. Recommended folders to keep on your device include:
 - a. base_data
 - b. incident_data
 - c. projects
 - d. restricted
 - e. tools (optional)
2. Right click each of the recommended folders in File Explorer and select *Always keep on this device*.



3. Watch the files sync down to your local hard drive by clicking the OneDrive – FireNet icon in your System Tray.



4. When each of those folders and the files within them are downloaded to your local hard drive, the Status icon will change to *Always available on this device*.



7. Continue the GISS Workflow

1. Using the ProProjectTemplate.aprx in the GeoOps Incident Directory in the Situation Channel, GISS should continue with the [Create the Edit Project](#) step of the GISS Workflow, but save the Edit Project in a folder on the local hard drive that is not syncing (e.g. C:\YYYY_Incidents\YYYY_Incident_EDIT).

NOTE: Be extra mindful of folder connections and Geoprocessing tool output file locations in ArcGIS Pro (whether they point to the GIS_Data folder in the Situation Channel (C:\Users\username\FireNet) or a local non-syncing folder (C:\YYYY_Incidents\YYYY_Incident_EDIT)).

2. When each GISS creates an Offline Copy, the Offline Copy should be stored on the local hard drive in a folder that is not syncing in OneDrive (e.g. C:\YYYY_Incidents\YYYY_Incident_EDIT).
3. During the Update the Master Incident GDB section of the GISS Workflow, the GISS updating the Master should backup the Offline Copy from their local hard drive to the GeoOps Incident Directory in the Situation Channel/GIS Data folder. Lessons learned from multiple IMTs indicate that it is helpful to [zip up the backup file geodatabase](#) before saving it in the GeoOps Incident Directory in the Situation Channel as file geodatabases are made up of many subfiles and OneDrive requires all those files to sync individually; it is faster to sync a single zipped gdb.
4. Prior to creating the Master Incident GDB, it is best practice to have GISS close all instances of ArcGIS Pro. Once the Master Incident GDB is created from the backup gdb (or from running the Mobile to File GDB tool a second time), all GISS should pay attention to their syncing status in OneDrive – FireNet from the System Tray. Once the Master Incident GDB is fully synced, GISS may proceed with creating Master Projects using the ProProjectTemplate.aprx in the GeoOps Incident Directory in the Situation Channel/GIS Data folder.
5. Each time the Master Incident GDB is replaced, GISS should fully close all instances of ArcGIS Pro, wait for the Master Incident GDB to completely sync in OneDrive – FireNet, and then reopen ArcGIS Pro projects to review changes. This requires frequent communication and coordination between GISS. Some IMTs have reported success in having all GISS pause OneDrive syncing while one GISS replaces the Master Incident GDB, and resume syncing once finished.

Suggestions for IMT Transitions

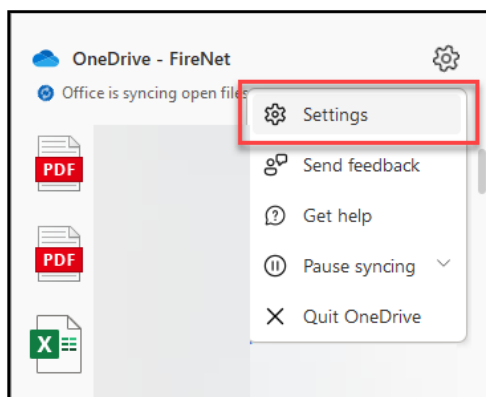
Communication and coordination are paramount during incident management team transitions, and passing off the GeoOps Incident Directory in the Situation Channel of an Incident MS Team is no exception. The following are suggestions when transitioning between incident management teams:

- The outgoing GISS should make a backup of the entire GeoOps Incident Directory to somewhere outside the Situation Channel (e.g. an external hard drive) *prior to transition* to protect against accidental data loss.
- The outgoing GISS should follow instruction from the SITL and/or Documentation Unit Leader (DOCL) regarding documentation to file into the eDocBox.
- The incoming GISS should coordinate with the outgoing GISS for access to the GeoOps Incident Directory in the Situation Channel/GIS Data folder of the Incident MS Team if the folder was protected using the information in this job aid.
- Once access is granted, the incoming GISS should coordinate appropriate times to perform the initial sync from SharePoint – times that are less likely to impact the outgoing GISS if work is still being done.
- When the outgoing GISS are finished with all work related to the incident, they should proceed to the [Disconnect at the end of an incident section](#).

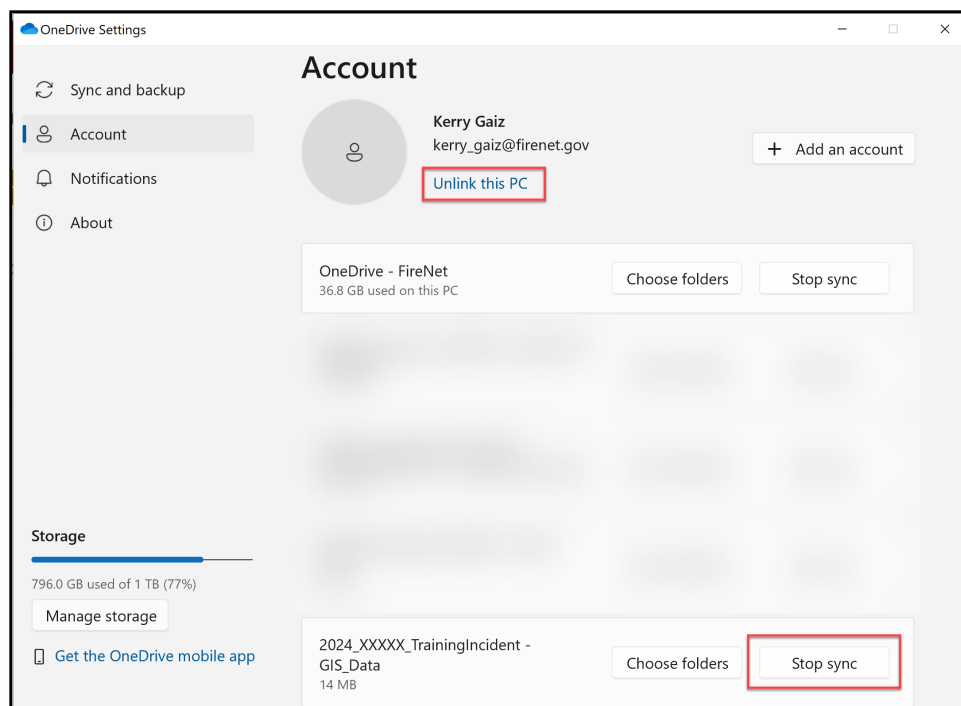
Disconnect at the end of an incident

After completing a fire assignment, best practice is to stop syncing the GeoOps Incident Directory from the Incident MS Team's Situation Channel. If you use an agency laptop for fire assignments, this can be done after traveling home from the incident. If you use a rental laptop, this should be done prior to demobilizing from the incident.

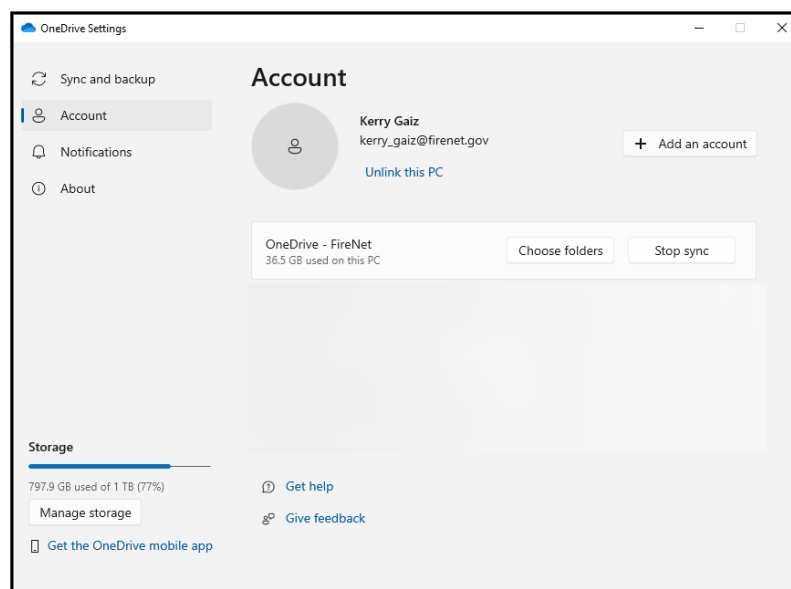
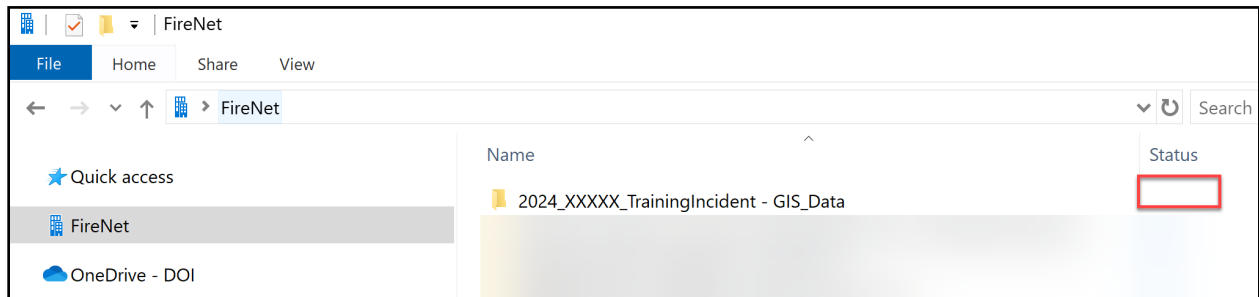
1. Right click on the OneDrive-FireNet icon in the System Tray and select Settings.



2. From the OneDrive settings window click the Account tab and select Stop Sync to stop syncing a specific location (i.e. the Situation Channel of the YYYY_XXXXX_Incident). Alternatively, click Unlink this PC if you do not need to keep syncing anything else using OneDrive – FireNet.



3. Do not delete the formerly synced folder in C:\Users\username\FireNet until confirming that the sync has, in fact, stopped and there is no longer a Status icon next to the folder name in File Explorer, and the folder no longer appears in the Account tab of your OneDrive – FireNet settings.



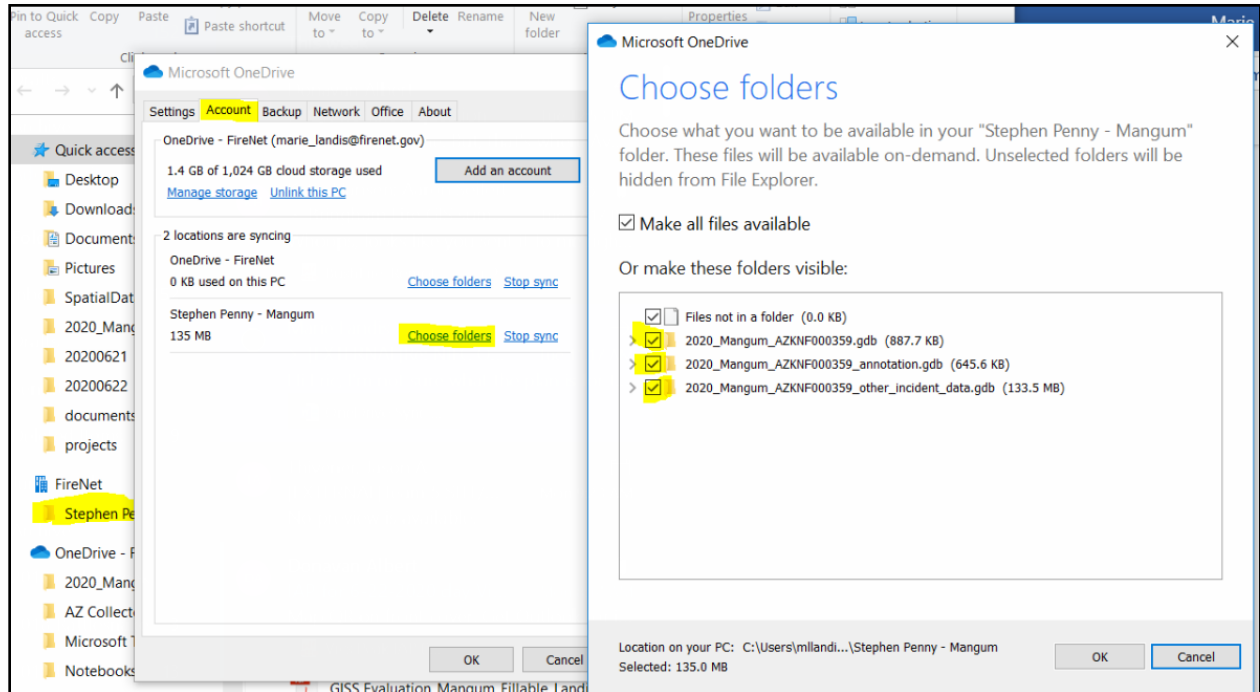
4. Delete the GIS Data folder (e.g. YYYY_XXXXX_Incident – GIS_Data) from C:\Users\username\FireNet to free up storage space on your local hard drive.

Appendix A: Troubleshooting Tips and Tricks

- FireNet will log you out of OneDrive after 18 hours, best practice is to sync, and exit or logoff of OneDrive at the end of your shift and log on again in the morning to sync changes.
- If you are having trouble syncing, try pausing and restarting sync, or logging off and logging back on to OneDrive.
- Archive old content outside of your synced OneDrive folder or to a folder that is not syncing in your teams folder structure like the eDoc Box.
- For ArcGIS Pro to sync updates to OneDrive you may need to completely exit out of Pro and wait for the sync process to finish as shown by a green check in the status column.
- If you have limited internet connectivity or need to grant access to a portion of the folder structure for a SITL to upload and download products it is recommended that you create an upload folder and share that with the SITL or others that do not need access to all the folders in the incident folder structure. This will speed up the time it takes for those users to sync data into OneDrive without having to sync the entire incident data folder.
- When arriving as the second or third team on an incident choosing which folders to sync initially instead of syncing all folders will speed up the initial transition.
- On large or long duration incidents, instead of the initial sync from SharePoint, the GeoOps Incident Directory can be transferred via thumb drive instead of syncing over the network. Copy from existing user: C:\Users\<username>\FireNet\2024_XXXXX_Incident – GIS_Data and paste into same location on your computer, then perform initial sync from SharePoint using the existing folder.
- File names that are appended with “-ILMORSOLO58250” or other similar computer names are duplicate files created when there are issues with the sync process. If possible, have that user delete those files or they will keep trying to sync and will keep reappearing.
- If a file is accidentally deleted it is moved to the SharePoint recycle bin, there is also a link to a secondary recycle bin in SharePoint. FireNet admins should also be able to recover deleted files. **DO NOT CONTACT WILDFIRE RESPONSE WITH FIRENET ISSUES.**
- OneDrive is a Microsoft application most issues can be resolved by searching the OneDrive site.
 - [Troubleshoot Issues with OneDrive](#)
 - [What do the OneDrive Icons mean?](#)

- If you experience geodatabases disappearing, review the following from Marie Landis of Southwest Team 3 on how to resolve. Folders can also be turned off and on if you do not need to sync them, for example dated products folders from the previous team.

We just resolved the "disappearing geodatabase" problem. Microsoft will sometimes choose which files are visible in OneDrive (we notice this after syncs), and they must be turned on when they disappear. Right-click on the parent folder in OneDrive, select "Settings," select the "Account" tab, and select "Choose folders" to toggle the folders off and on. Kind of a weird feature but I suppose useful if your OneDrive is really crammed full of files.



Appendix B: Acknowledgements

This document was updated by Wildfire Response and is based on the “Sharing GISS Data using OneDrive” document by Jeremy Hruska, OR/WA BLM State Office.

Thanks to Eric Ege and others who created and tested the first workflow of this process on the 2020 Bush Fire west of Phoenix, and to Skip Edel, Morganne Lehr, Kirk Davis, Roger Hart, Cole Belongie, Sean Triplett for review, editing and testing.

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Aaron Seifert – Southwest Team 4

Skip Edel – National Park Service – FIRE GIS Program

Morganne Lehr – RIST

Kirk Davis – Washington DNR

Roger Hart – Washington DNR

Cole Belongie - NIFC

Sean Triplett - NIFC