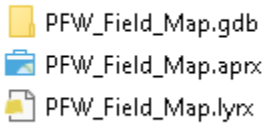


## Directions to set up Field maps for PFW biologists – Short Version – By Scott Ralston

I will release a more comprehensive directions later for creating and customizing your own database for use in field maps but this will get you started just uploading my existing database for your own use.

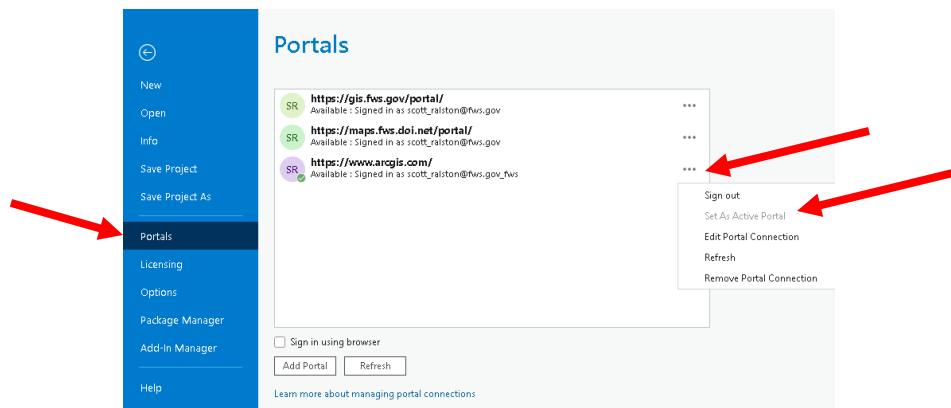
1. Save and unzip the example database I sent you somewhere easy to find it. This includes both a ArcPro map already set up and a layer file that has symbols defined to save you time.

Name

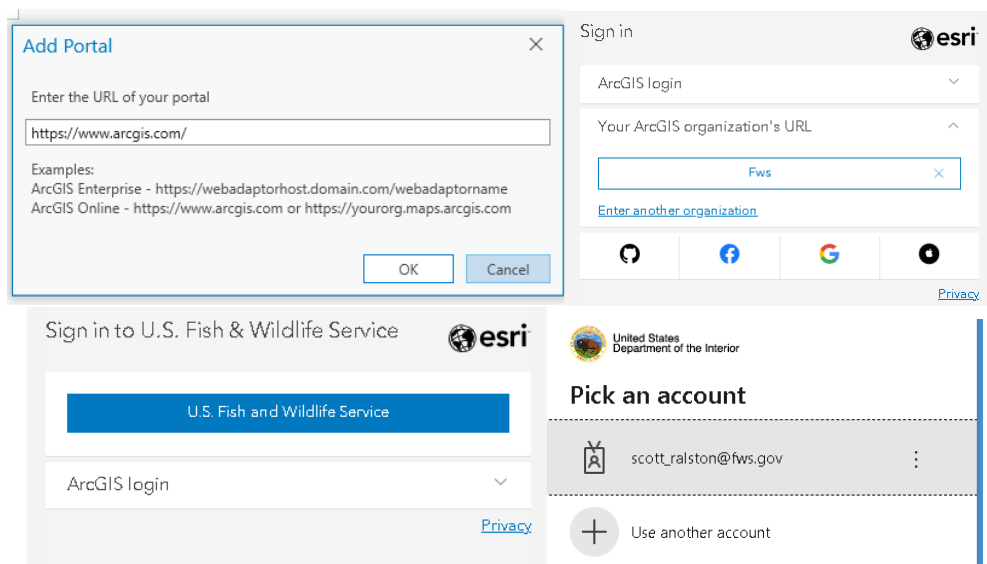


PFW\_Field\_Map.gdb  
PFW\_Field\_Map.aprx  
PFW\_Field\_Map.lyrx

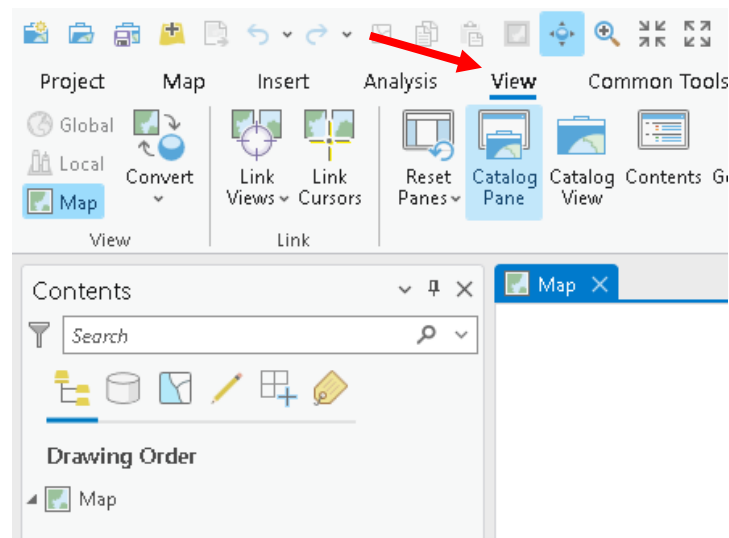
2. Open ArcPro and a new blank map or to save a couple steps of adding and organizing data just open the PFW\_Field\_Map.aprx file in the Sample folder I gave you
3. On the Project Tab go to Portals on the left side and make sure you are logged in to the arcgis.com portal.
  - a. If you already have it then click the 3 dots next to it and make sure it is set as your Active portal.



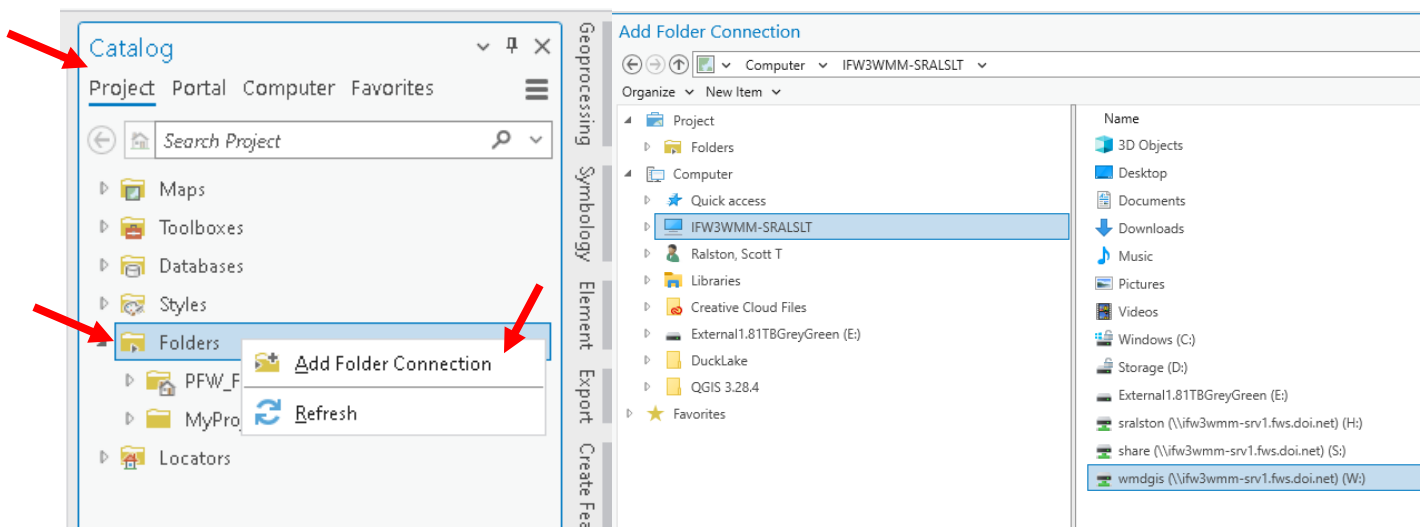
- b. If you are not logged in then hit add portal and type <https://www.arcgis.com/> Follow the screen prompts to log in to the FWS account. If you are doing this from your work computer on the FWS network it should automatically log you in.



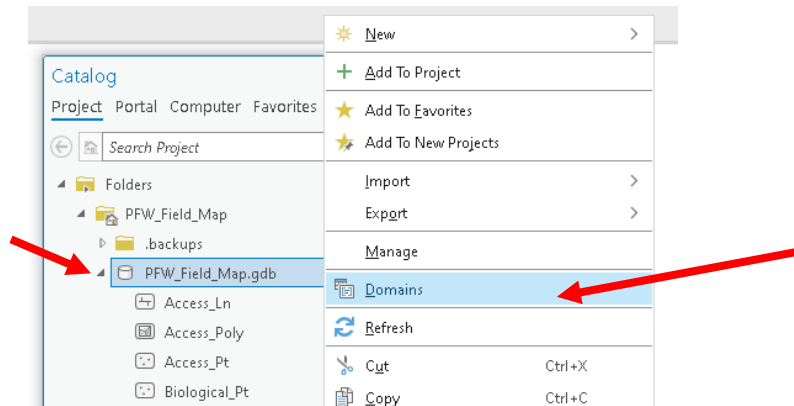
4. On the view tab hit Catalog Pane which opens up the file menu on the right side.
  - a. If you used the ArcPro map provided and the data is already in the map and the folder is connected in the Catalog pane you can skip this step and move to #5.



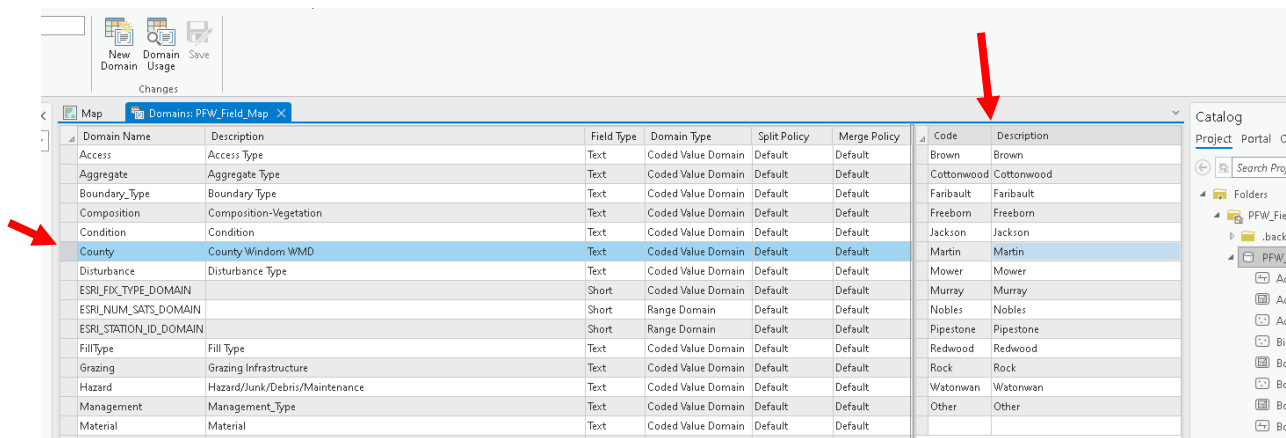
- b. If you don't want this menu to minimize itself over to the right when you click off of it hit the Pin button on the top of the menu
- c. Go to the Folders drop down in the Catalog
- d. Usually it doesn't have your drives or locations mapped so you need to make a connection to where your data is saved.
- e. Right click on Folders and hit add connection. Navigate to wherever your data is and add that folder or can just add the whole drive to be more broad.
- f. Assuming you now navigated to the folder where the database is you should see it in your Catalog.



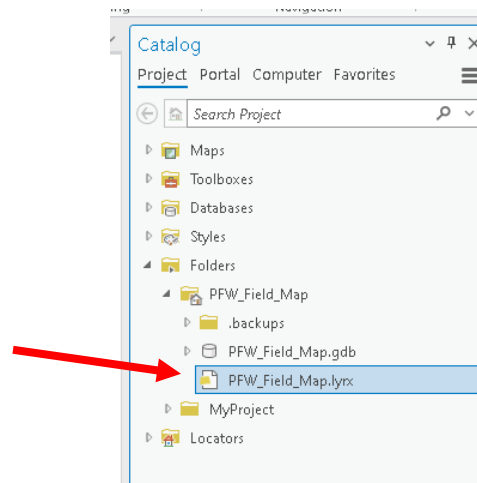
5. Edit domains. These are the pick lists that will be in the various layers. You can modify these all you want but I probably have most things you need already. The one that you will probably want to modify is the County list as your counties are different than mine. Use this same direction if you need to modify others but just change the list items not the name of the Domain itself or it will not work in the layers they are linked to.
  - a. Right click on the PFW database and choose Domains



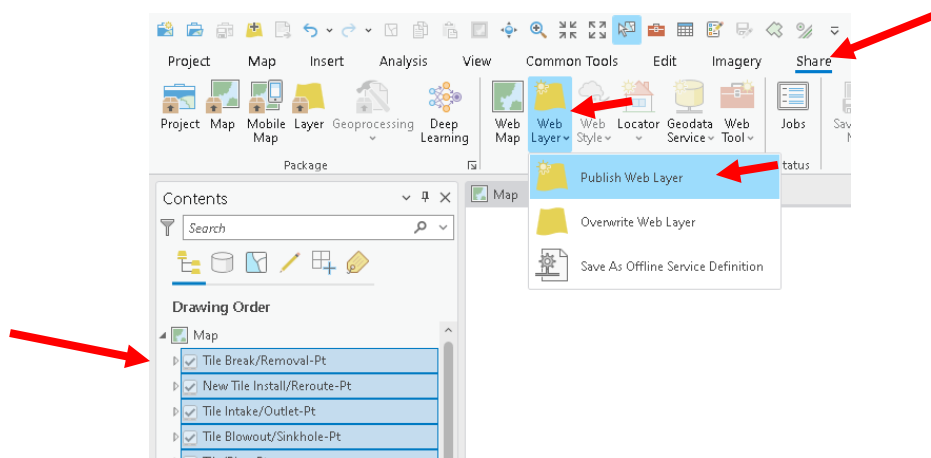
- b. In the Right Domain list choose the one called County.
- c. Then on the left you will see a list of county names you can edit.
  - i. The Code is a short name which can't have spaces or special characters. The Description is the name that will be displayed so can be normal text if something more complicated is needed.
- d. Once done editing domains hit save in the tab at the top and you can close the Domain tab



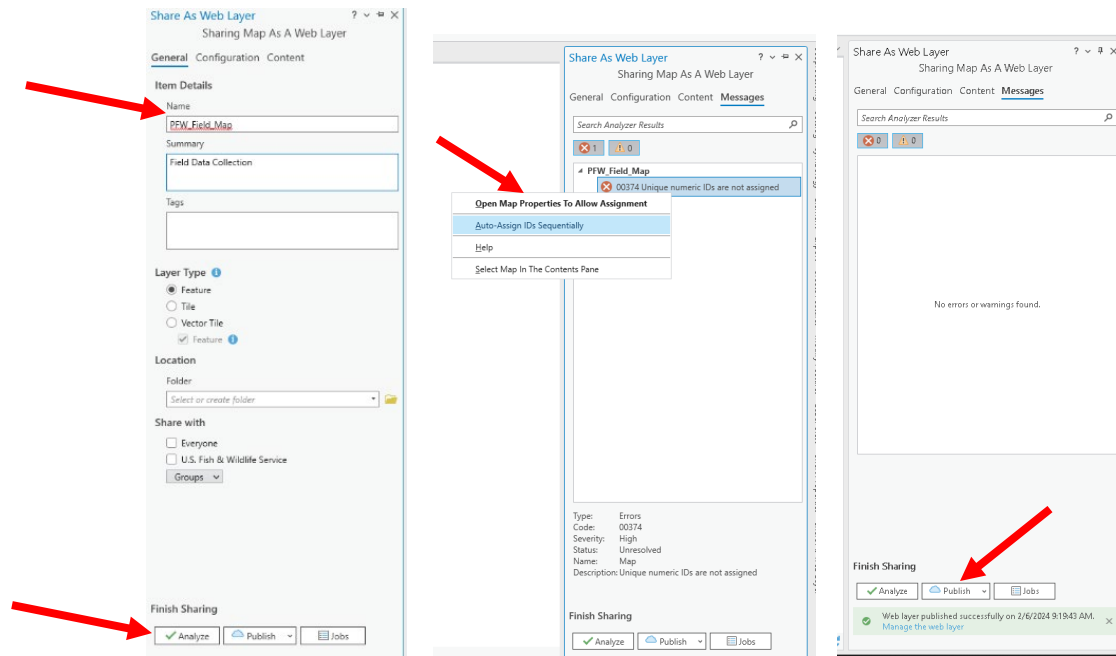
6. If you used the map provided the data is already in your map then skip this step, otherwise add the data to your map. On the Catalog Pane click the PFW\_Field\_Map.lyrx file and drag it into your map. You could add individual files from the database but adding the lyrx will bring in all of the layers and define the symbols I already set up saving you time.



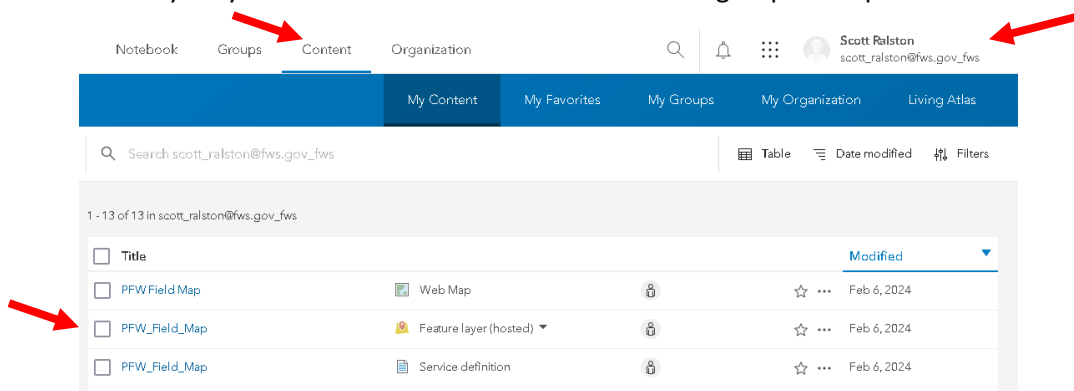
- a. If you don't like the order the layers are in they drag them to reorder. Thinking of what items should be on top if overlapping. Generally points over line over polygons etc. Whatever order they are here is the same as they will be in the field maps on AGOL.
  - b. Edit any symbol colors if you wish. Just keep the symbols fairly simple. Complex shapes or texture fills don't always transfer over to AGOL mobile apps. Mostly I like to use transparent outlines for polygons so they don't cover up items inside and under it.
  - c. Once everything is set the way you want for order and display you are ready to publish.
7. In the right Contents Pane Select all the layers you want to transfer to AGOL which is likely all the layers now in your map.
  - a. Click the top one to select it and then scroll to the bottom and hold the shift key and select the bottom one and everything in between should be selected.
  - b. Everything you select will be exported together so if you prefer to break it out into smaller groups you could upload just 1 group at a time and they will show up as separate hosted "Feature Layers" in AGOL so you just have to add each individually to your field maps.
8. On the top menu go to the Share tab and go to Web Layer and Publish Web Layer.



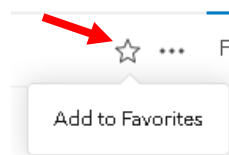
9. Give the map a name and possibly a summary description. Can add tags if you want searchable terms or leave blank. You can set sharing here or do it later in AGOL if you have sharing groups set up for your office.
10. Hit Analyze at the bottom and it will check for errors.
  - a. One error that may come up is "Unique numeric IDs not assigned". If that comes up right click on it and select auto-assign.
  - b. If everything else is good hit publish at the bottom of the screen. It could take several minutes to publish it to the web.



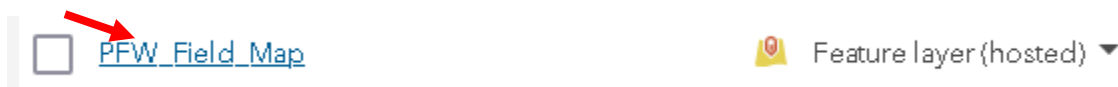
11. Once published you are done with ArcPro and can move to AGOL
12. Go to <https://www.arcgis.com> and hit sign in at the top. If working from your work computer and FWS network you should automatically be prompted to sign into the FWS account.
13. Once signed in then on the top menu you should see "Content" and go to that.
  - a. This shows you all of your AGOL data. You should now see the new PFW Field Map you just uploaded. There are 2 files. Ignore the "Service Definition" as you will just work with the "Feature layer (hosted)" file. That is synonymous to a Geodatabase feature class or group of shapefiles for older users.



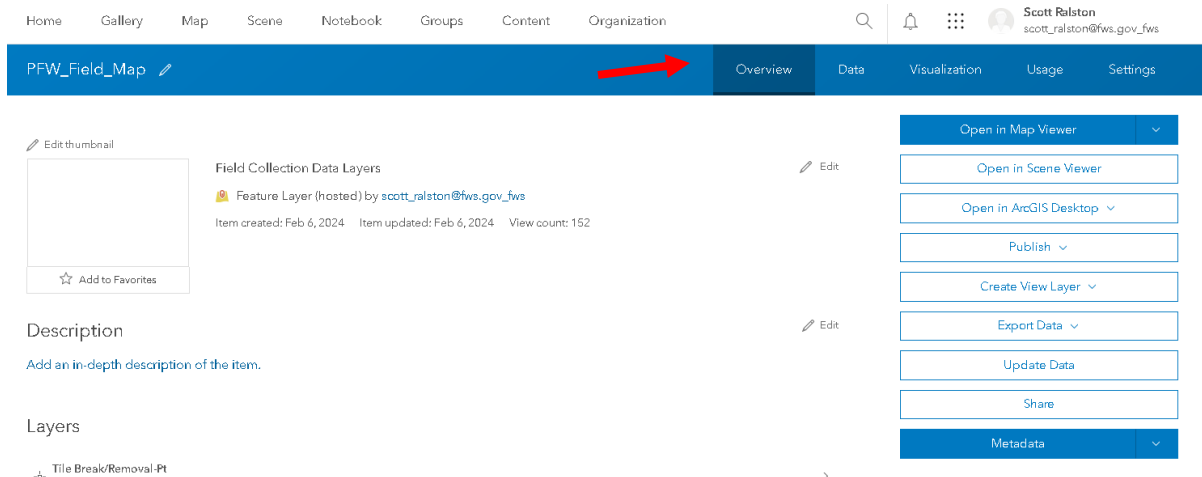
- b. First I like to hit the Star next to it to add to favorites so this layer is easier to find in searches as you will use it a lot.



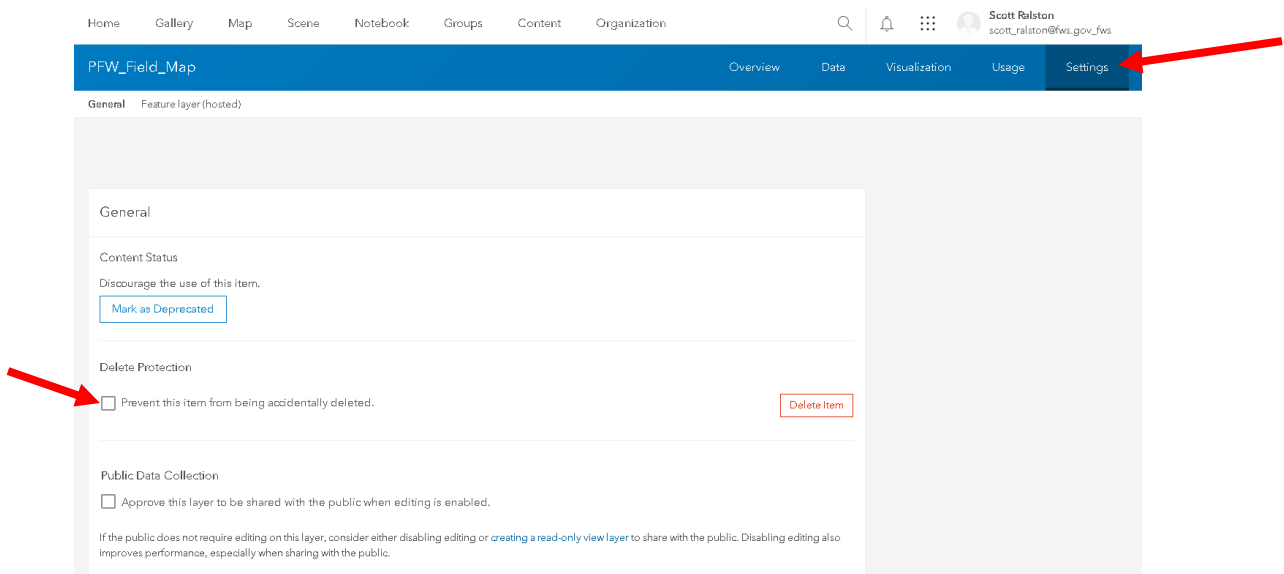
14. Click the blue file name for the PFW\_Field\_Map feature layer to open it's settings.



- a. You can change any setting you want here. The overview tab has options for changing descriptions/metadata etc.



- b. If you didn't already define default symbology or the layer orders you can do it under the Visualization tab. You can also adjust the visibility range here if you want layers to turn on or off at different scales. I have some of this already set so only Boundaries show at a wide zoom and more layers appear as they get close enough to be relevant. Leave as is or adjust if needed.
- c. Important changes are under the Settings Tab.
- i. Check the box to Prevent deletion. This makes you go back and uncheck it in order to delete so it is more intentional and protected. After any Change hit the save button at the bottom of that setting box.



- ii. Under Editing Turn on all options for enable editing, track changes, enable sync etc. as shown here:

Feature layer (hosted)

Editing

- ☒ Enable editing
- ☒ Keep track of changes to the data (add, update, delete features). [Manage change log](#)
- ☒ Keep track of who edited the data (editor name, date and time).
- ☒ Enable Sync (required for offline use and collaboration).

• Who can edit features?  
Share the layer to specific groups of people, the organization or publicly via the Share button on the Overview tab. This layer is not shared.

• What kind of editing is allowed?

- ☒ Add
- ☒ Delete
- ☒ Update
  - ☐ Attributes only
  - ☒ Attributes and geometry[Manage geometry updates](#)

• What features can editors see?

- ☒ Editors can see all features
- ☐ Editors can only see their own features (requires editor tracking)
- ☐ Editors can't see any features, even those they add

• What features can editors edit?

- ☒ Editors can edit all features
- ☐ Editors can only edit their own features (requires editor tracking)

• What access do anonymous editors (not signed in) have?

- ☒ The same as signed in editors
- ☐ Only add new features, if allowed above (requires editor tracking)

• Who can manage edits?

- You
- Administrators
- Data curators with the appropriate privileges

iii. At the bottom enable export. Save all changes.

Export Data

- ☒ Allow others to export to different formats.

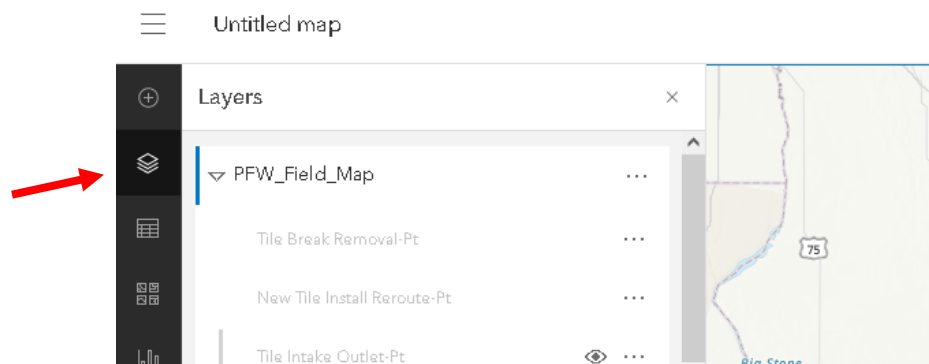
[Save](#) [Cancel](#)

15. Now you build your AGOL map that you will see on your mobile device.

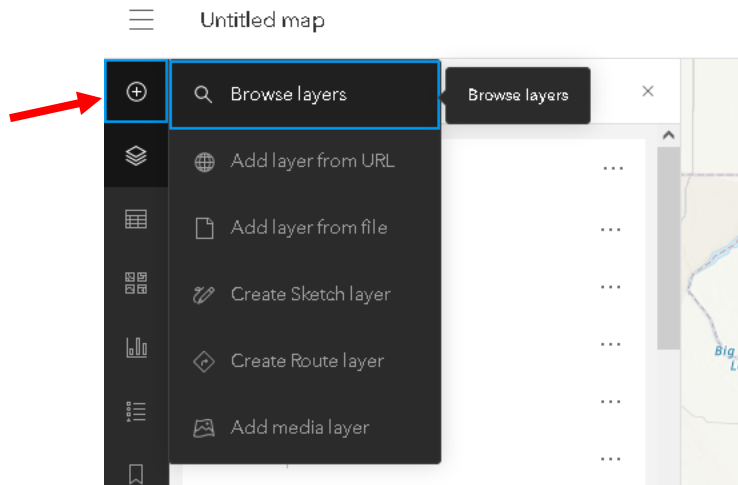
16. Go back to the Overview tab and hit the “Open in Map Viewer” button. This automatically opens a AGOL map and imports this data with the symbology set up.



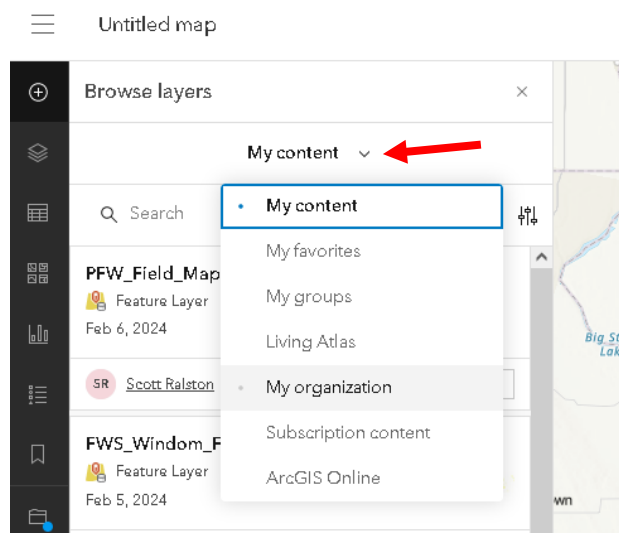
17. On the left side under Layers you will see your PFW data. If display scales are set they may be grayed out until you would zoom close enough to turn them on.



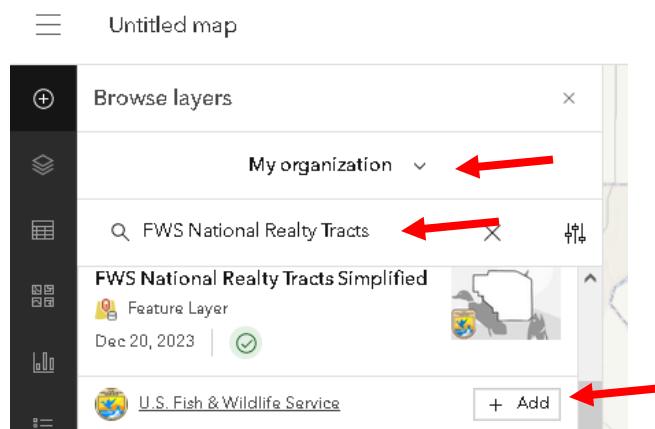
18. Add any additional layers you want to your map. Hit the + add button at the top left and Browse layers.



- a. If you have other layers you have uploaded it would be in “My content”

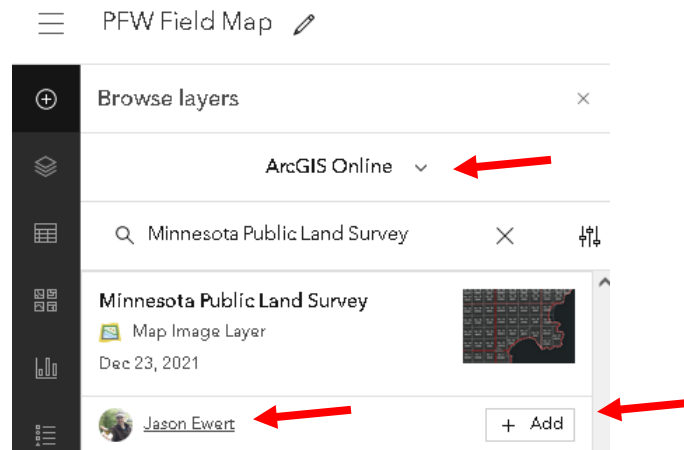


- b. Otherwise most you need may be in My Organization for FWS data or ArcGIS Online for public data.  
c. I suggest under my Organization searching for “FWS National Realty Tracts” (Simplified or non-simplified version). This will have all FWS interest fee title or easement layers.

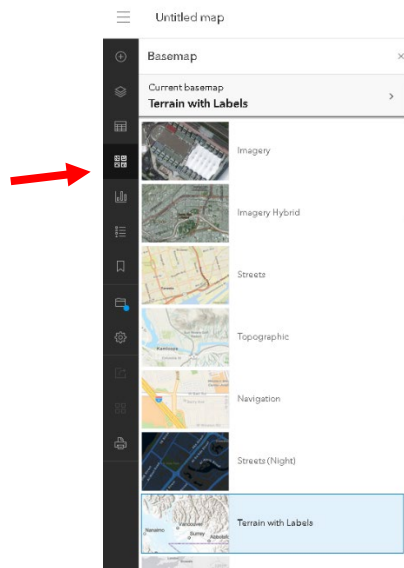




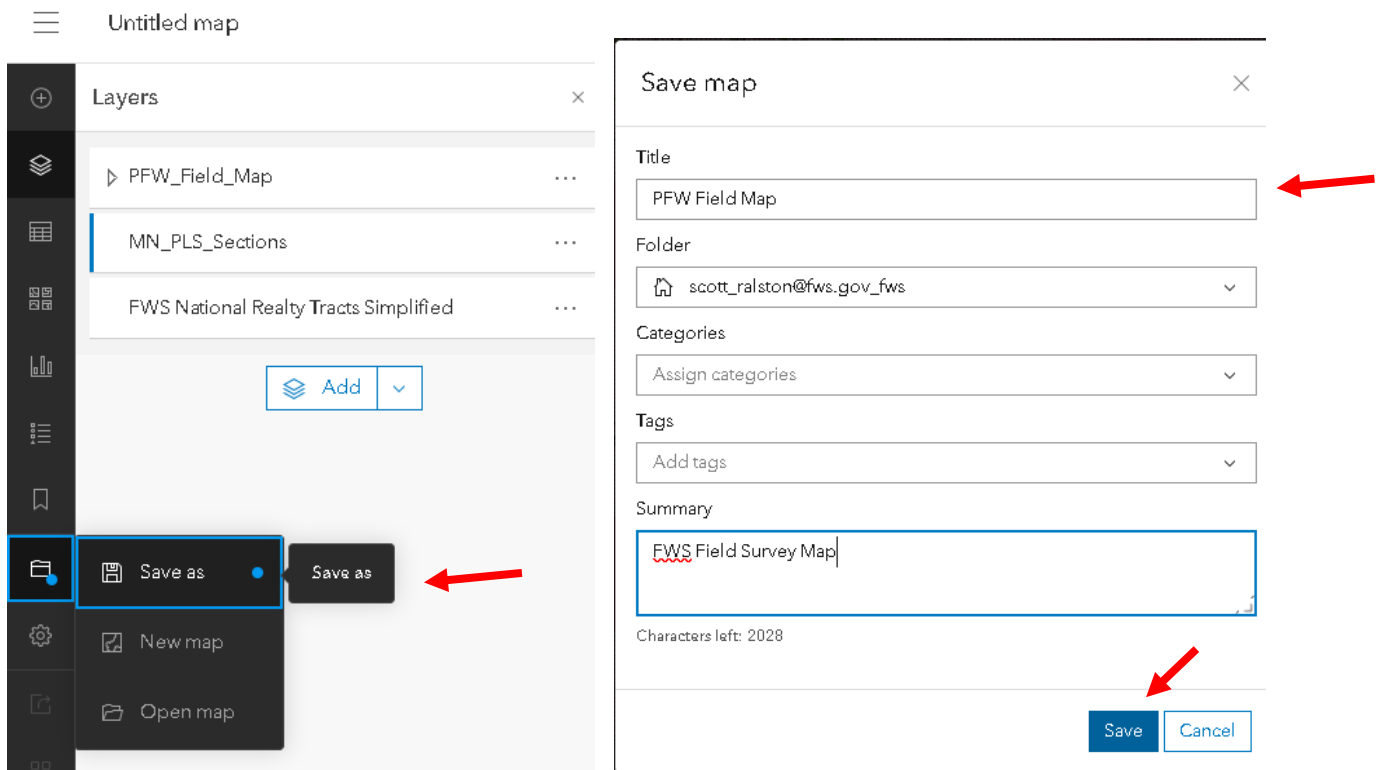
- d. Under ArcGIS Online data I suggest searching and adding “Minnesota Public Land Survey” There are a lot of these but scroll down and find one by Jason Ewert with MPCA. This version is nice it scales automatically as you zoom between county, township, section and ¼, 1/8.



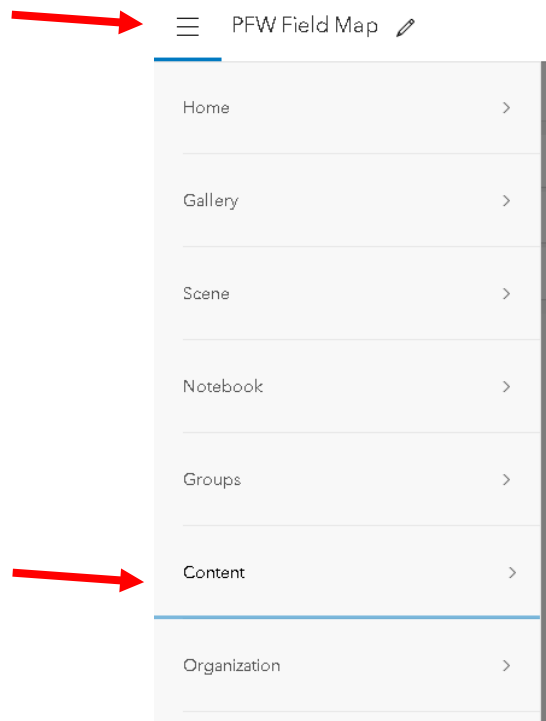
19. Set your default basemap under the basemap setting on the left side. This can be changed in the mobile app as needed but will use whatever default you set. I usually use a terrain or topo map. While air photos can be handy they are often hard to read much detail on a small mobile screen in sunlight as well as load slower.



20. Zoom or pan the map to the area you want displayed as the default when you open it.
21. Set any other map setting you want. Here again you have the option of changing symbology, order or display settings for individual layers. You can always come back and reopen this map from your Contents in the future to modify it again if you later decide to change something.
22. Once the map is the way you want it then save it using the Save menu on the left side. Give it a name and if you wish to fill in and summary or tags to make it searchable you may do so.

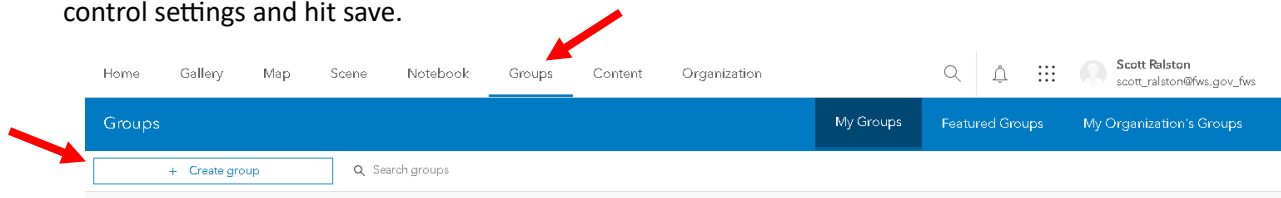


23. Go back to the Content screen. Top Left menu button. You should see your new map listed there also. I suggest hitting the star to favorite it.

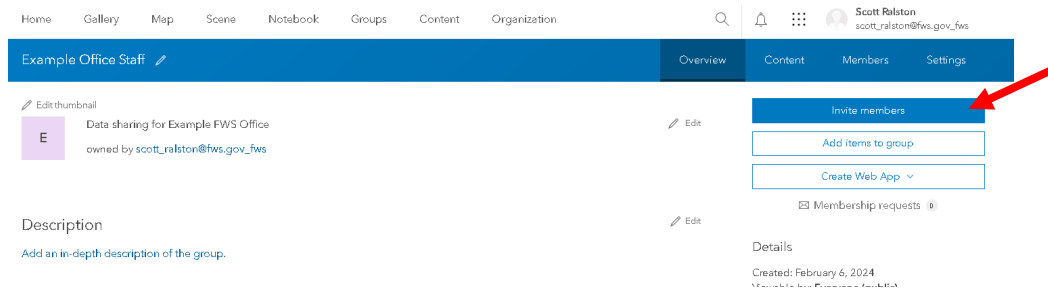
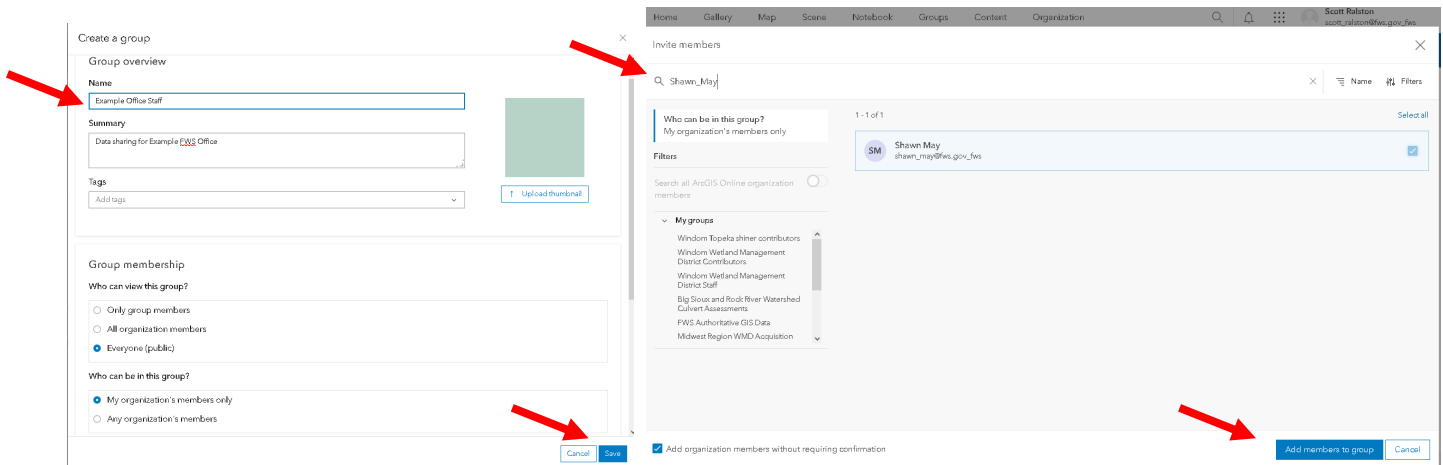


24. Now your map is usable and if you open Field Maps on your mobile device you would see it there.
25. Last step is to share this if anyone else in your office needs access to either the mobile map or just the data layer.
- If you already have an office group you can just use that. If you don't then go to the next step and make a new group.

26. On the AGOL menu hit Groups at the top at hit Create Group. Give it a name and description. Set any desired control settings and hit save.



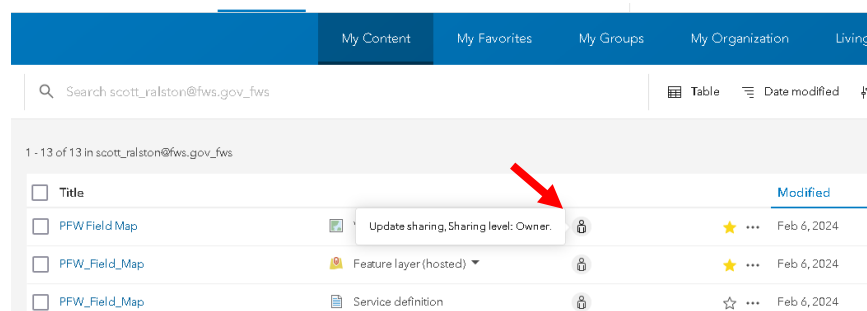
27. Once created you can Invite members by searching and adding them. If permissions are set and you check the slider for All ArcGIS members you should be able to add members from outside of FWS if their account is set to public. However you may also need to set the data and maps themselves as accessible to the public also in feature settings. The more outside of FWS you get the more external rules may apply of what types of information can be shared and what type of data compliance is needed.



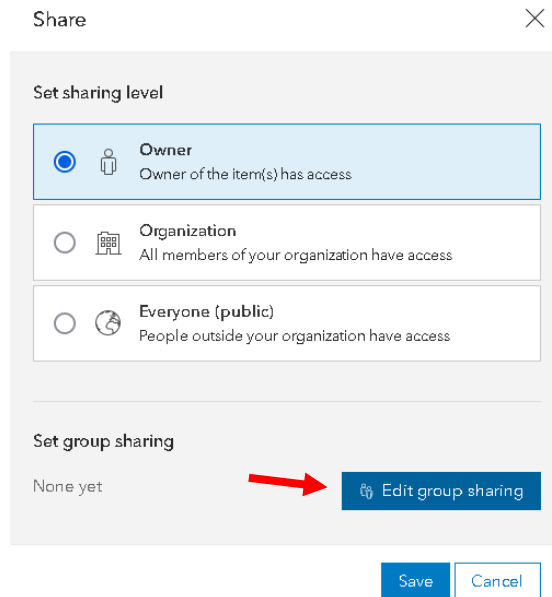
28. Once your group is created and all members added then go back to the Contents menu. You can always update and add/remove more group members later in the Group menu.

29. Now you share the map AND the data layer to your group

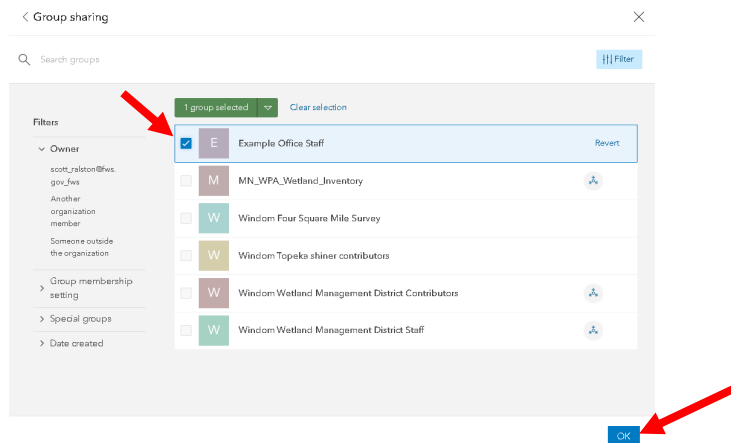
a. Click on the People Icon next to the Field Map



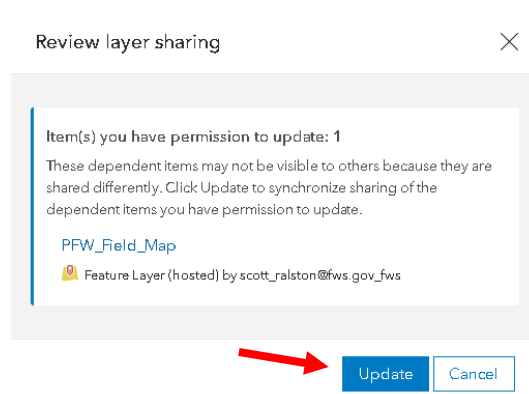
b. Hit Edit Group Sharing at the bottom



- c. Check the group(s) you want to share with and hit OK

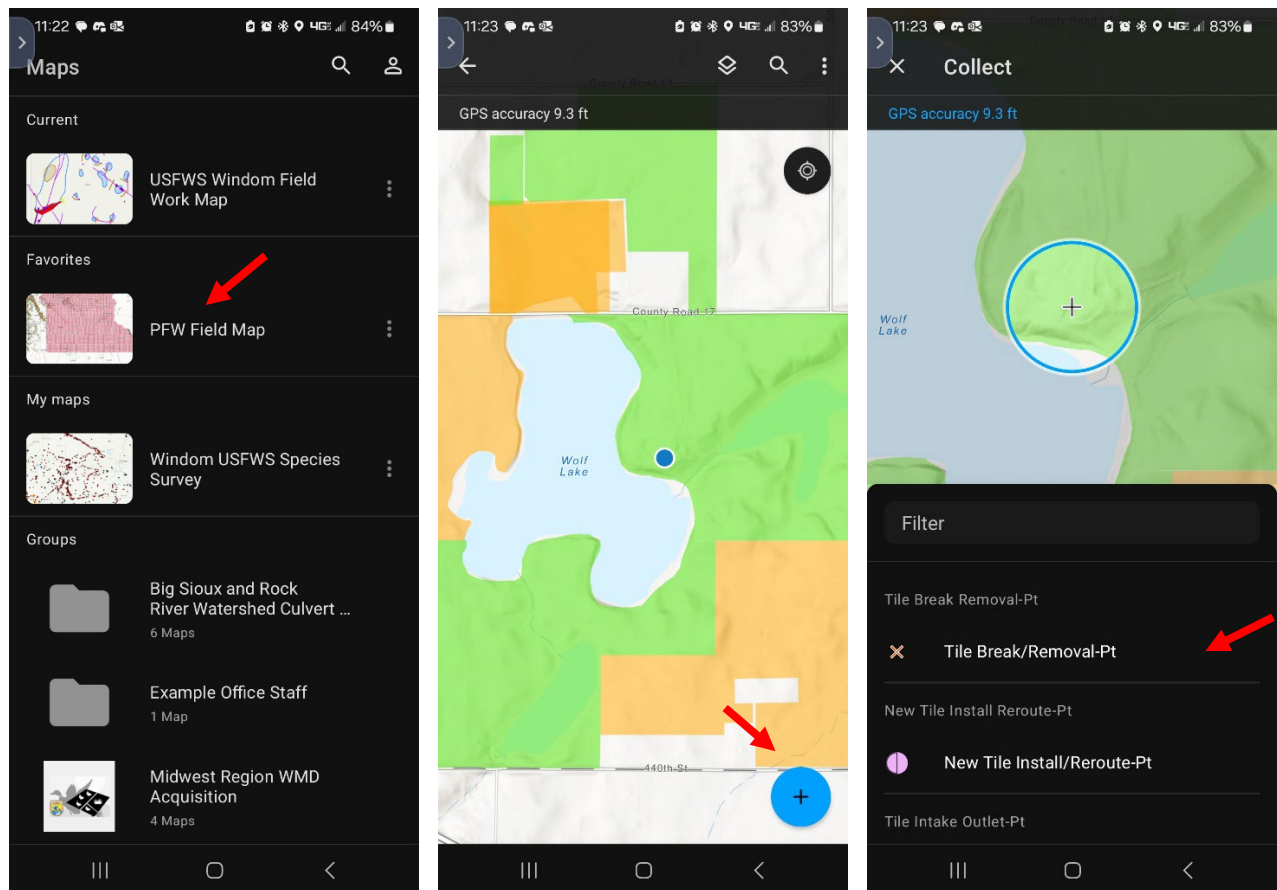


- d. You may get an error indicating that Layers within the map aren't shared. You can either Update and it will share the other layers for you or do this same step manually on your own to share the feature layers also.

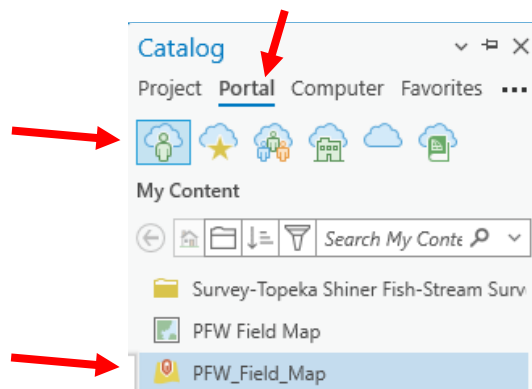


30. You can now open your Field Maps app on your mobile device and should see the map there. Open it and all files should be viewable.

31. To capture data just navigate to the location you need and hit the Blue + button to take a point. When you hit it the list of available features will appear. Scroll to the one you want and select it. Fill out any pick list or other field information you want and hit the Check button to save.



32. To use this back on your computer in ArcPro go back to whatever map you want it in. Open the Catalog Pane and at the top of the Catalog hit Portal. You should see the Feature layer in your list. If it was made by you then it is in the My Contents list. If you are adding data created by someone else that shared it with you then look under the My Groups option. If you use more than 1 Portal log in then make sure from Step 3 on page 1 that AGOL is set as your Active portal.



33. All the AGOL data is synchronized so any edits you make on the Mobile app, on AGOL web interface or on ArcPro all synchronize with each other across all users.