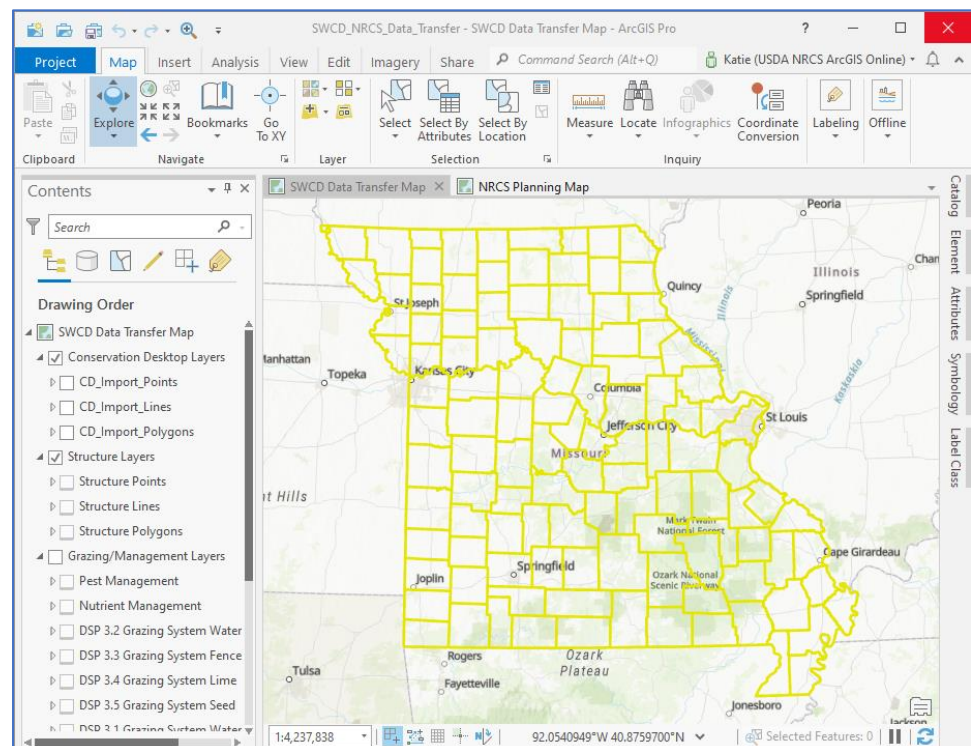




# Technology

## Technical Note

### Missouri ArcGIS Pro Planning Templates and SWCD Transfer Tools



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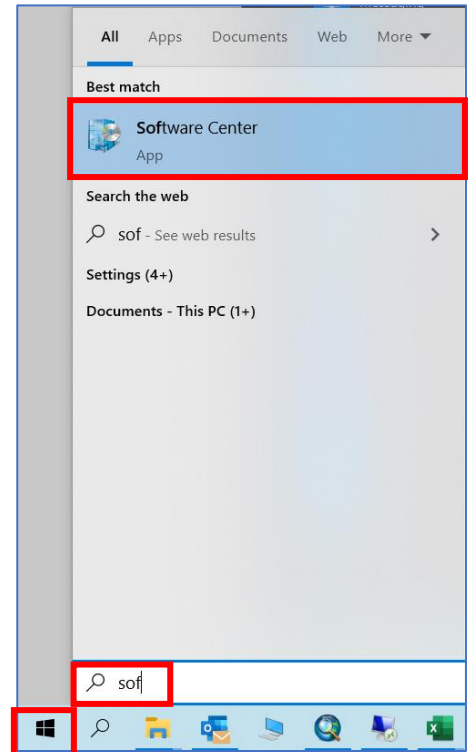
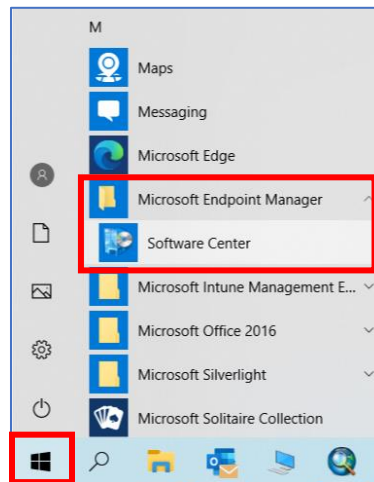
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## Part 1: Setup

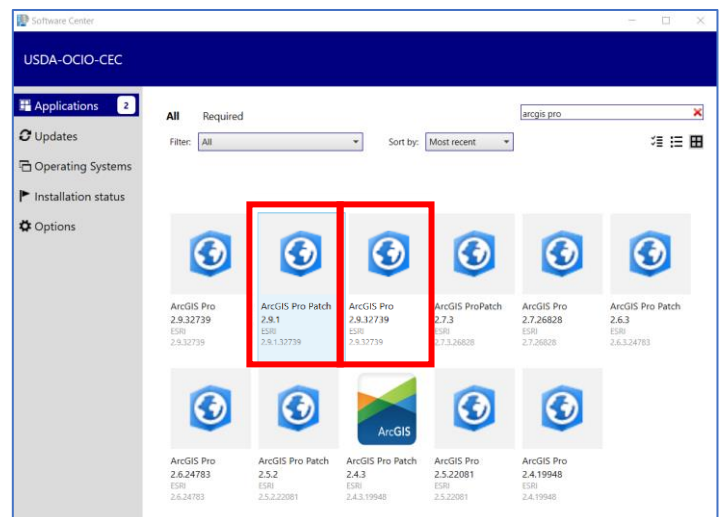
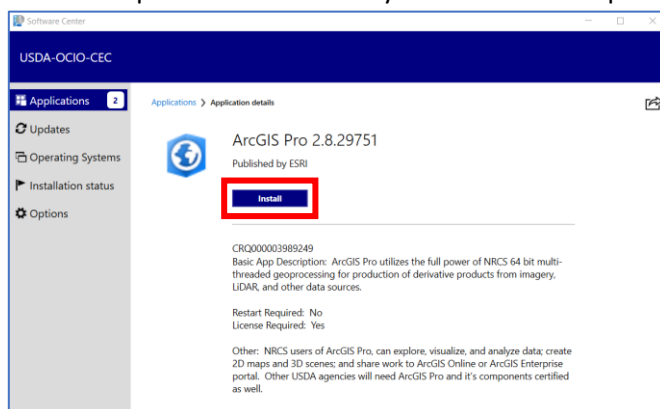
This section describes the process of setting up ArcGIS Pro. Most of this part will only have to be completed once. [Section 1](#) covers downloading ArcGIS Pro from the Software Center. [Section 2](#) covers configuring the Pro license. [Section 3](#) covers how to connect to the NRCS Geoportal and the DNR ArcGIS Online portal. [Section 4](#) covers how to download templates. [Section 5](#) covers configuring settings. [Section 6](#) covers installing toolboxes. [Section 7](#) covers how to add coordinate systems

### Section 1: Downloading ArcGIS Pro from Software Center

1. On your computer, click the Start Menu on the left corner of your taskbar and begin typing **Software Center**, then click to open it. Alternatively, you can open the start menu, scroll down to **Microsoft Endpoint Manager**, then click **Software Center**.

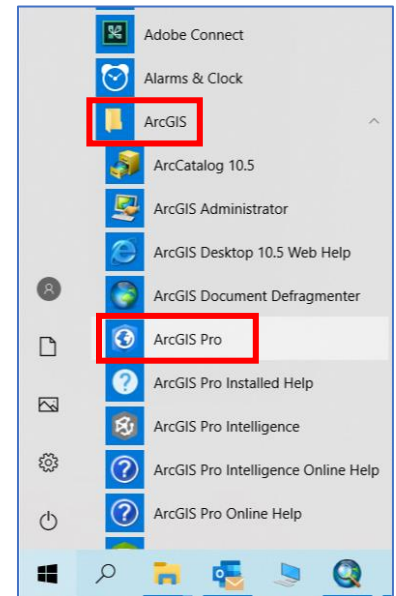
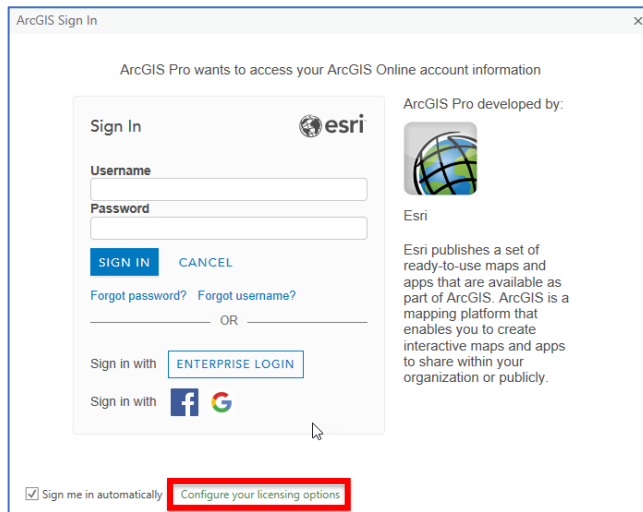


2. Type **ArcGIS Pro** in the search box and press enter.
3. Select latest approved version of **ArcGIS Pro**. Currently this will be ArcGIS Pro 2.9.32739.
4. Select **Install**. This may take a couple hours to download and install so be patient here.
5. When the installation completes, select the corresponding **ArcGIS Pro Patch** and install that as well. In this case it is 2.9.1 but this may change as new versions are released. Be sure you are installing the same patch as the version you installed in Step 3.

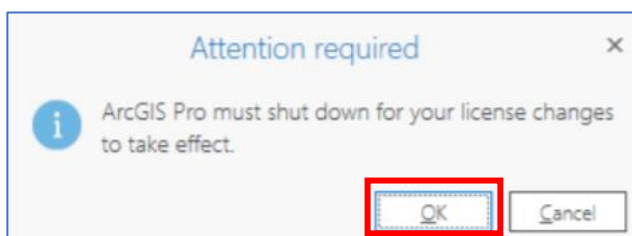
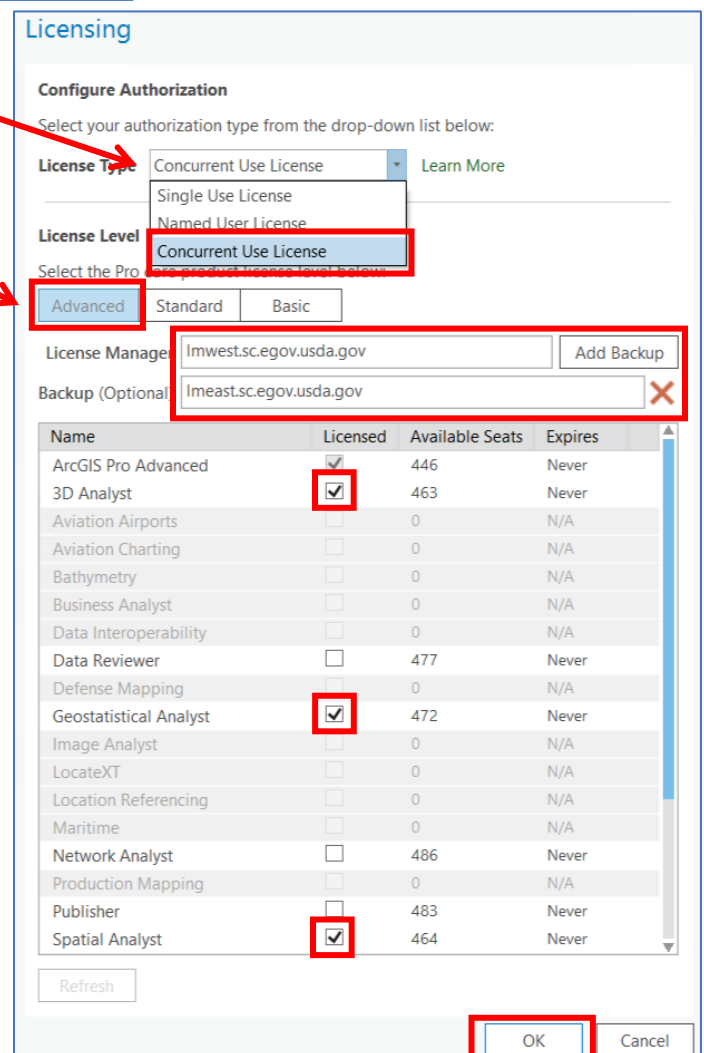


## Section 2: Configuring License

1. Start ArcGIS Pro by opening the Start Menu, then click **ArcGIS → ArcGIS Pro**.
2. An **ArcGIS Sign In** window should open. At the bottom of this screen, click the link that says **Configure your licensing options**.

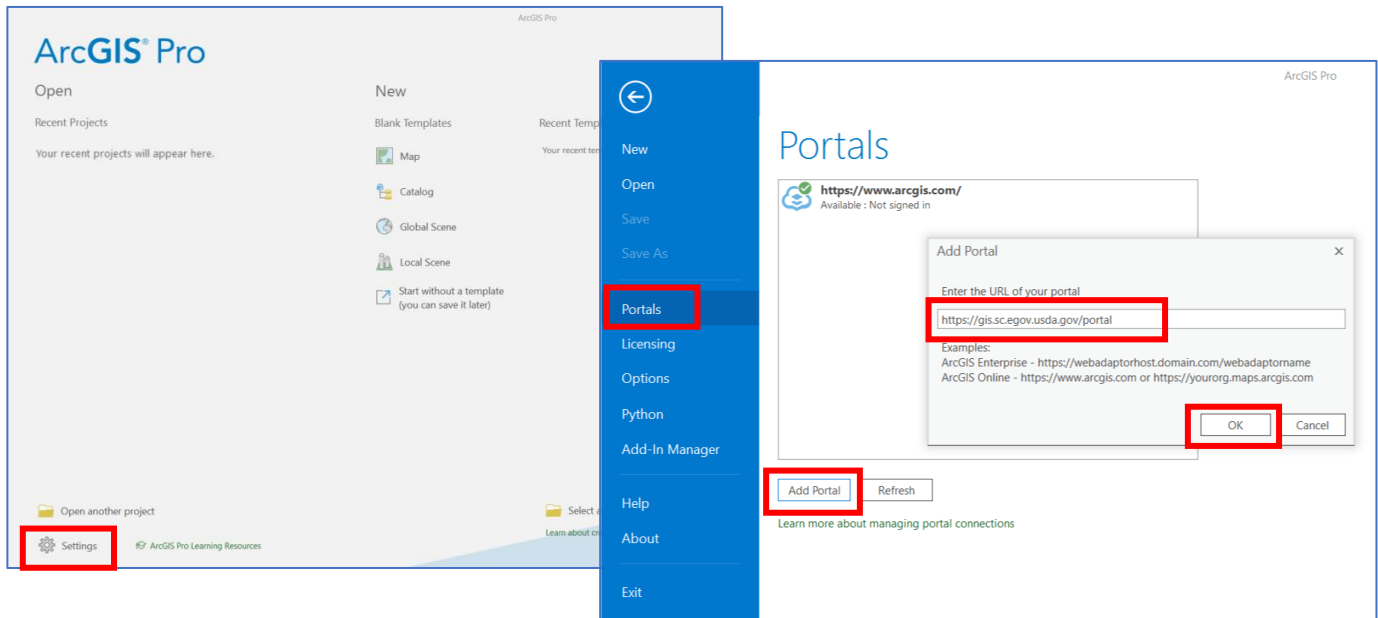


3. On the next screen, under the **License Type** dropdown, click **Concurrent Use License**.
4. Make sure **Advanced** is highlighted.
5. In the **License Manager** box, type **Lmeast.sc.egov.usda.gov**
6. In the **Backup** box, type **Lmwest.sc.egov.usda.gov**
7. Note the first letter on both addresses are L rather than I.
8. If the extension list does not populate on its own, click **Refresh** to populate the list.
9. Check the boxes next to **3D Analyst**, **Geostatistical Analyst**, and **Spatial Analyst**.
10. Your screen should look similar to this screenshot. When you are finished, click **OK** to finish.
11. A warning window will appear, click **OK** here.



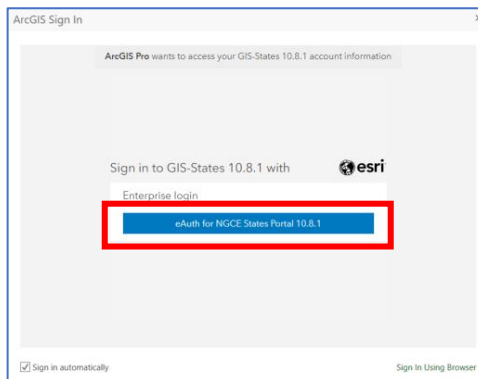
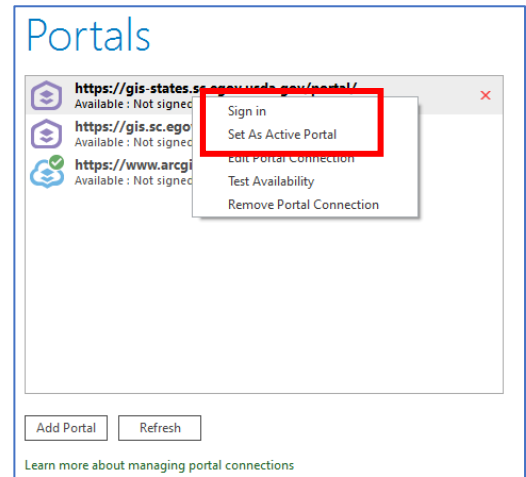
## Section 3: Configuring Portals

1. Open ArcGIS Pro from the Start Menu. This screen should open. In the lower left corner, click **Settings**.
2. Select **Portals**, then click **Add Portal**.
3. Enter Portal URL and click **OK**. Necessary URLs are listed in the next step.

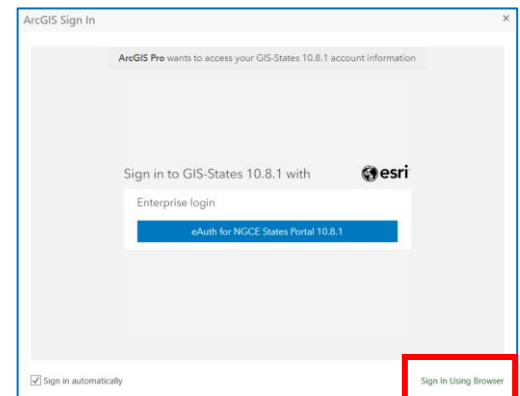


4. There are multiple GeoPortal connections that a user may want to use within ArcGIS Pro. You **MUST** add portals B and C below and join the Missouri Geoportal User Group to be able to use the SWCD Data Transfer Project/Template.
  - a. **GIS GeoPortal** (<https://gis.sc.egov.usda.gov/portal>)
    - i. Geodata of nationwide extent, including NAIP imagery and CLU layers
    - ii. Geodata that is shared to Conservation Desktop
    - iii. **Old FOSA GPS Groups** for R1 and Collector App (obsolete)
  - b. **GIS-States GeoPortal** (<https://gis-states.sc.egov.usda.gov/portal>)
    - i. Geodata of statewide importance
    - ii. The **Missouri Geoportal User Group** was added to house the Missouri CD Import Feature Layers for those that don't use the GPS tools, and will be used to share other data to state users as well. **Joining this group is required** to transfer data from SWCD and Conservation Desktop. The group can be joined by going to the following link and clicking **Join this Group**.  
<https://gis-states.sc.egov.usda.gov/portal/home/group.html?id=1c4e8e15cd7c474b82efb6b45cbd7604#overview>
    - iii. MO FOSA Groups house MO FOSA points/lines/polygons used to collect data with the R1 GPS devices and Field Maps iOS app. Requests for access to your local group need to be made through the state GIS specialist or your local GPS coordinator.
  - c. **DNR ArcGIS Online Portal** (<https://modnr.maps.arcgis.com>)
    - i. Only SWCD employees have access to this portal. Adding and signing in to this portal is required to transfer data from SWCD and Conservation Desktop.
    - ii. Feature layers from the *Soil and Water App v2* webapp can be added to maps within Pro and used to create and attribute features in Pro that will be viewable in the webapp.

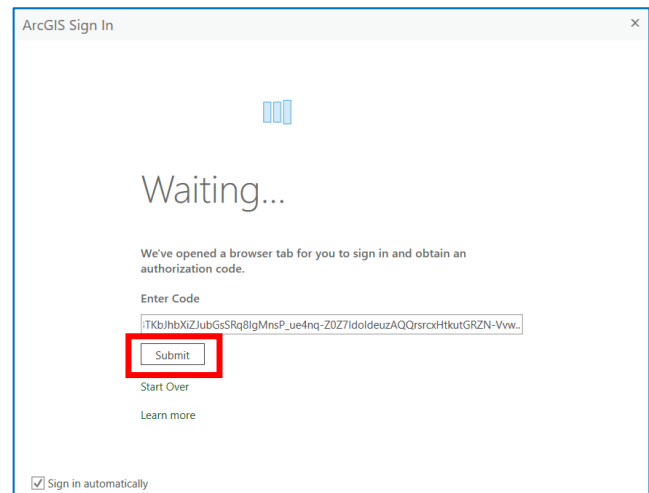
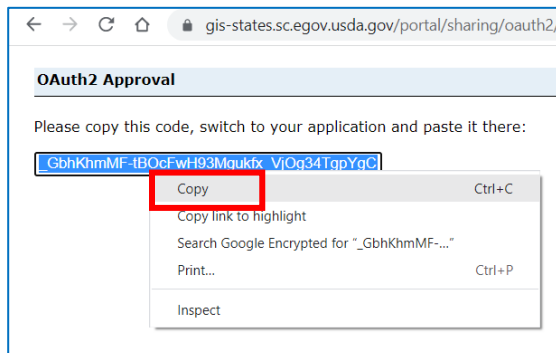
5. After you have added all portals you need to Pro, you can select your active portal by right-clicking the portal and selecting **Set as Active Portal**.
6. You will also need to sign in to each portal by right-clicking on all new portals and selecting **Sign In**.
7. For the two NRCS Geoportals, click the blue **eAuth for NGCE States Portal 10.8.1** button, then sign in to Geoportal States 10.8.1 with either Lincpass or User ID and Password. Some users are having better luck using their user name and password for this step. If you do not have a physical user name and password, you can find your username and change your password at the eAuth website at <https://www.eauth.usda.gov/eauth/b/usda/home>, and use the Manage Account link.



8. If you are still having trouble signing in, you may use the **Sign In Using Browser** link. Your web browser will open to Geoportal, and you may sign in there, usually automatically with single sign on.

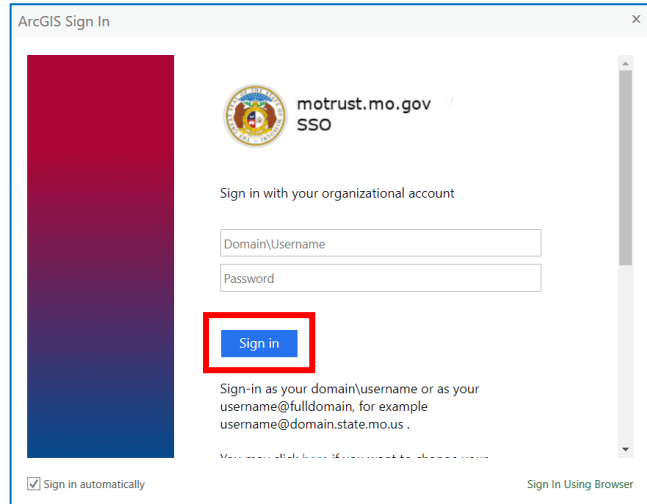
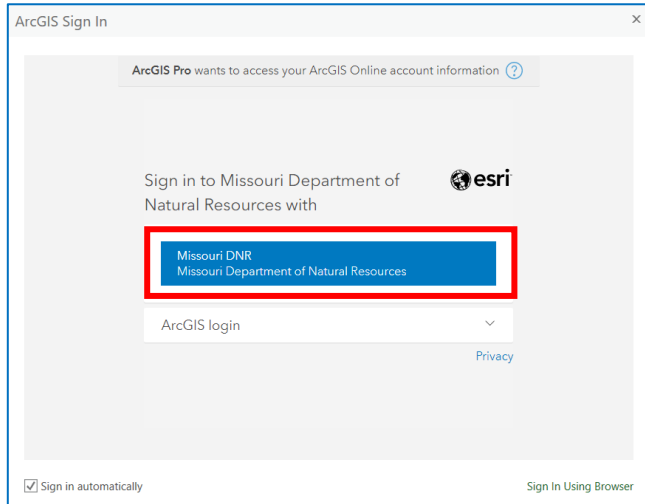


9. Once you have signed in to Geoportal on the web, you will get a code you can copy and paste back in to Pro. Then click **Submit**.

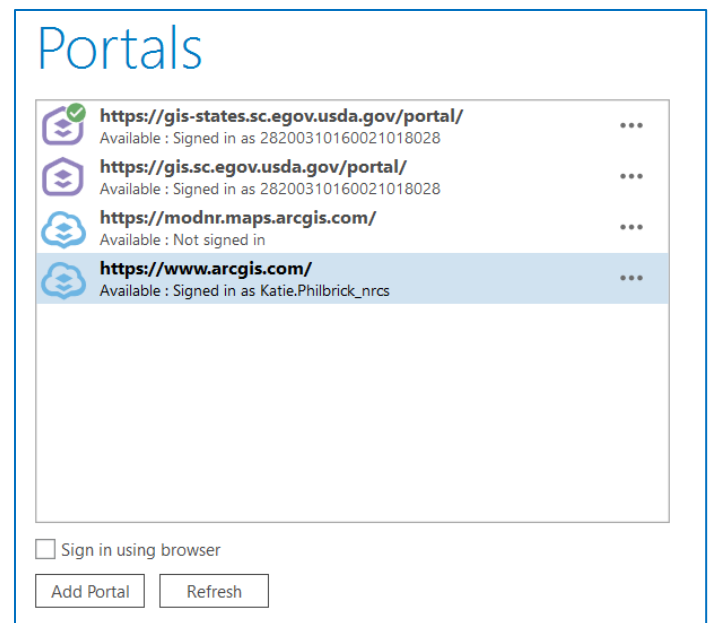




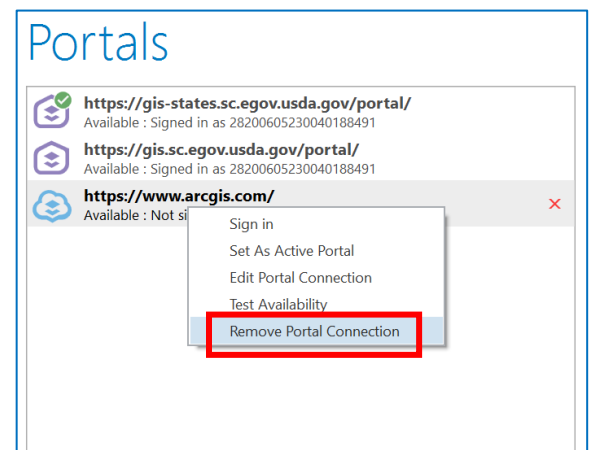
10. The DNR ArcGIS Online portal is required for transferring data between CD and the *Soil and Water v2* webapp and only accessible to SWCD employees – all others can skip this step. To sign in, right-click the **modnr.maps.arcgis.com** portal and select **Sign In**.
11. Click the blue Missouri DNR button, then enter the credentials you use to login to the webapp and click **Sign In**.



12. Once you have signed in to all portals, they should each say **Signed in as** underneath their portal address.



13. Most users will not need the **https://www.arcgis.com** portal and may remove it by right clicking on the portal name and then selecting **Remove Portal Connection**. A few users have NRCS ArcGIS Online accounts and should keep it, but this is uncommon.

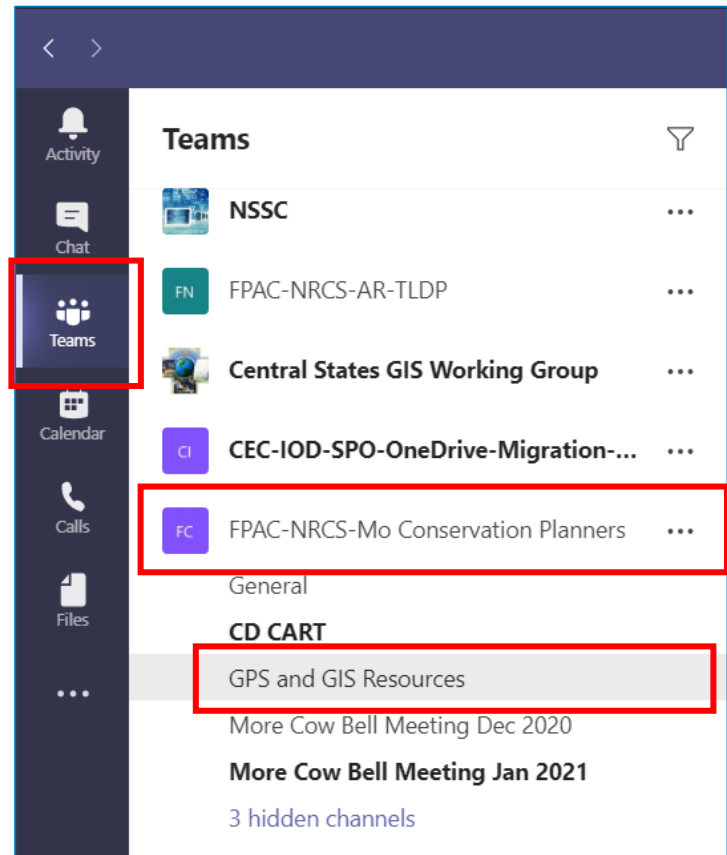


## Section 4: Downloading Templates

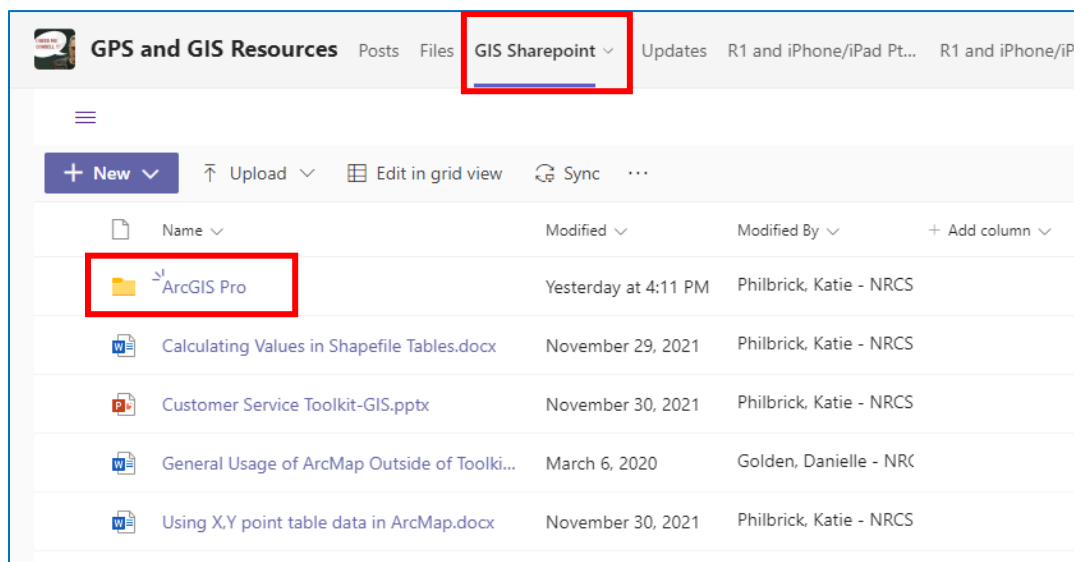
This section describes how to find the ArcGIS Pro Project Folder. The ArcGIS Pro Planning Projects folder is located on Teams in the FPAC-NRCS-Mo Conservation Planners channel. If you are not already part of the group, you should be able to click this link to request access, and someone will approve it, usually within 1 business day. [FPAC-NRCS-Mo Conservation Planners](#)

The project files and instructions have also been placed on sharepoint here: [GIS Sharepoint](#)

1. Within Teams, in the sidebar at the left of the page, click Teams. Then click the **FPAC-NRCS-Mo Conservation Planners** channel.
2. Go to the **GPS and GIS Resources** folder.

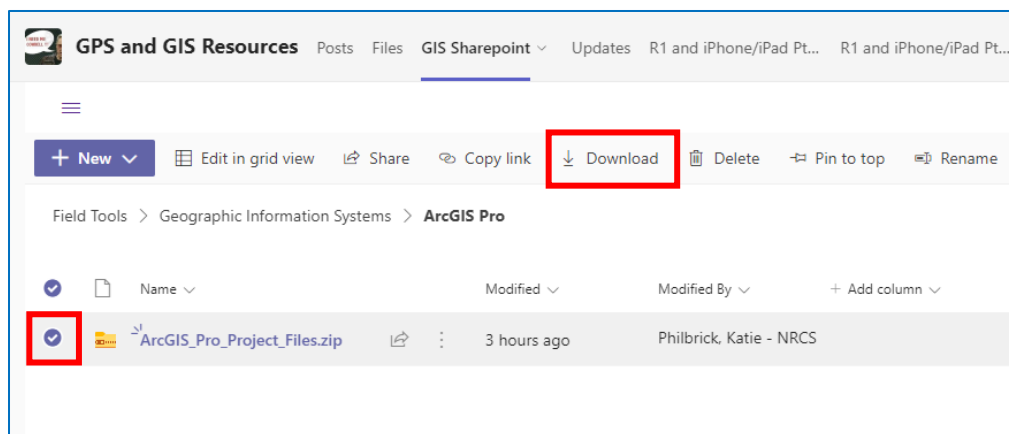


3. On the toolbar at the top of the page, select **GIS Sharepoint**, then click the **ArcGIS Pro** folder.

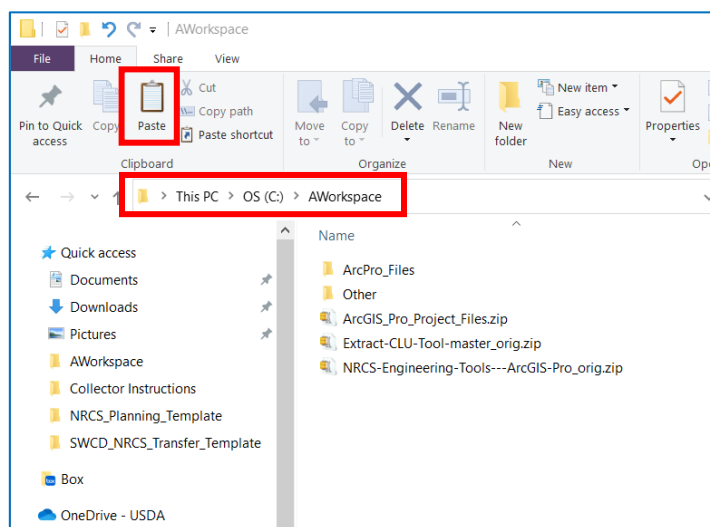
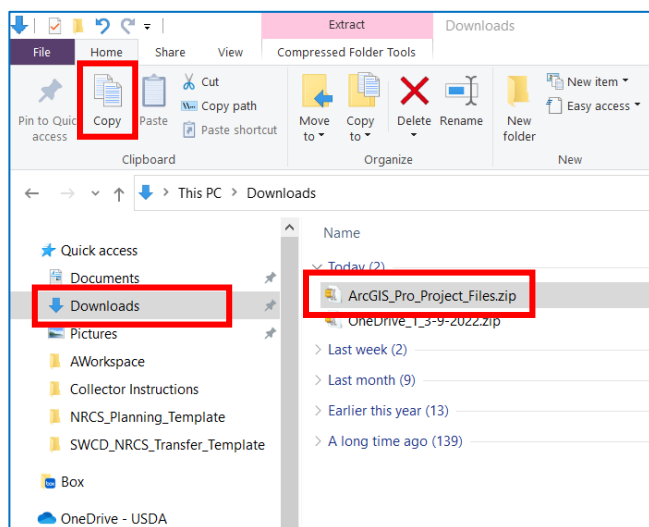




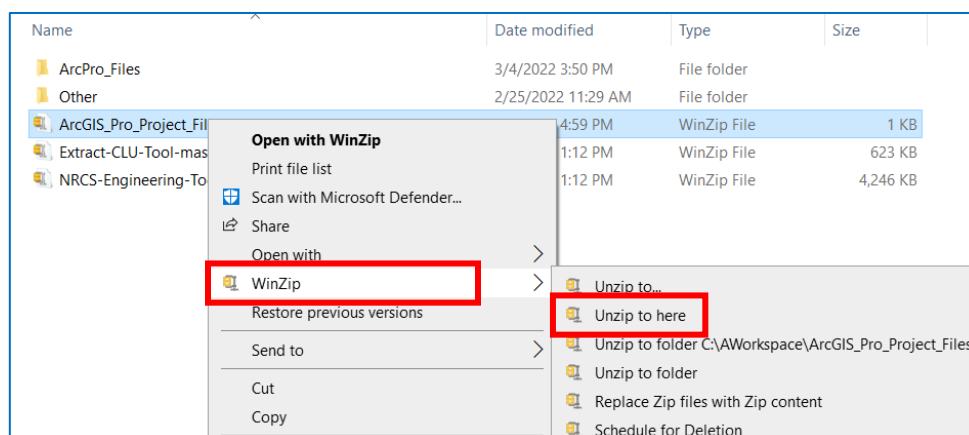
- Next to the zip file titled **ArcGIS\_Pro\_Project\_Folder.zip**, click the checkmark to select it, then click download at the top of the page.



- The file will download to your Downloads folder. You will need to move this folder to the C:\AWorkspace folder.
- To do this, open a folder window and navigate to Downloads. Find the zip file you just downloaded, then select it and click Copy.
- Navigate to the C:\ folder. If you do not already have an AWorkspace folder here, click New Folder and name it AWorkspace. Navigate into the AWorkspace folder, then click **Paste** to move the zip file to this folder.



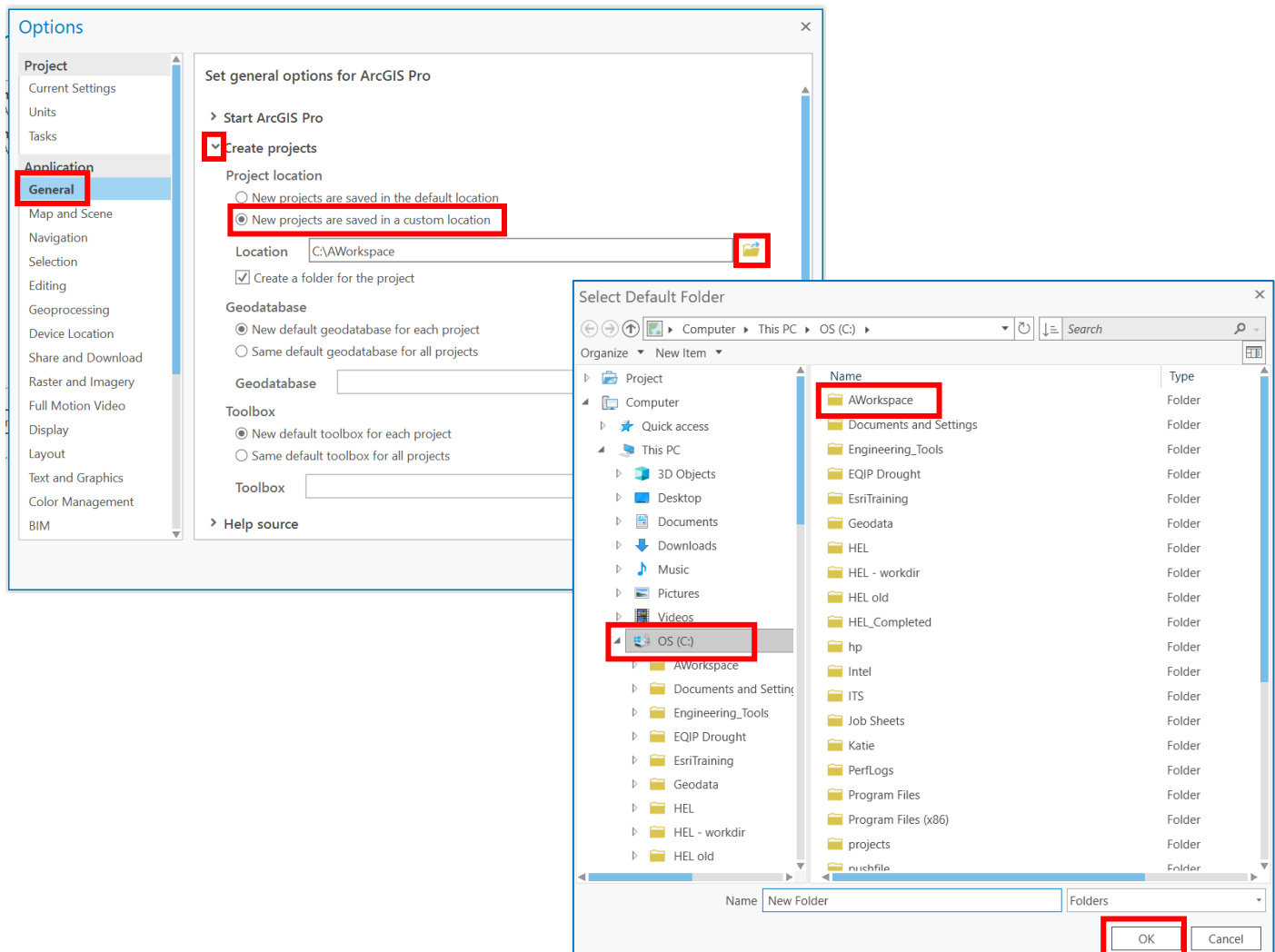
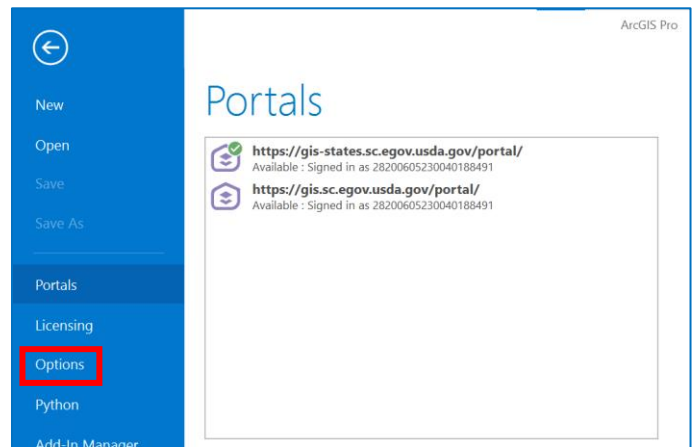
- Right-click the zip file then, click WinZip → Unzip to Here. You should now have a folder named ArcPro\_Files.



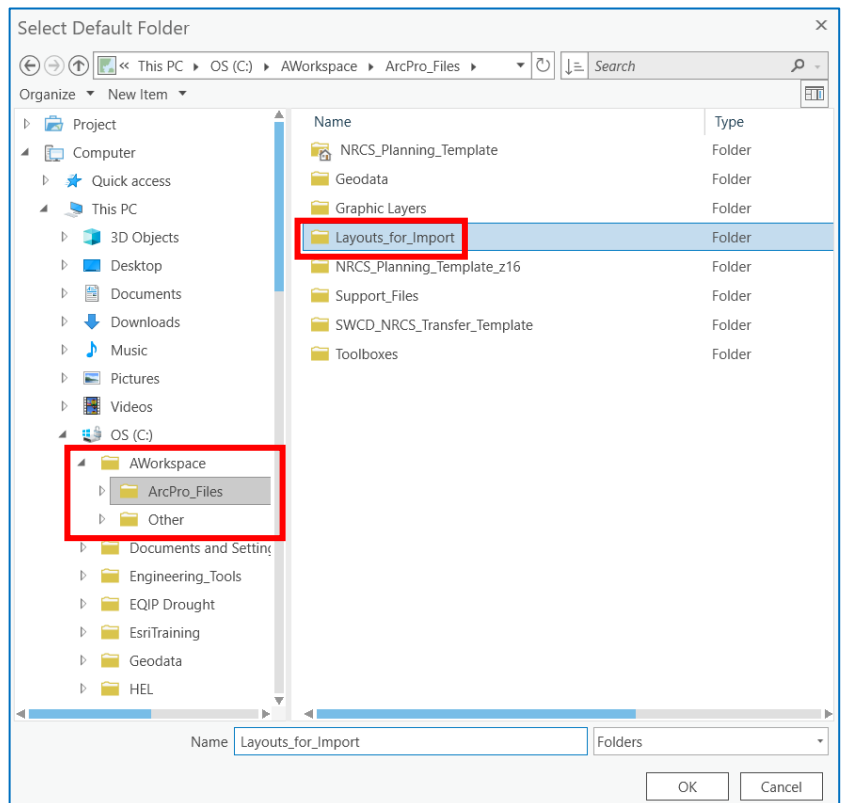
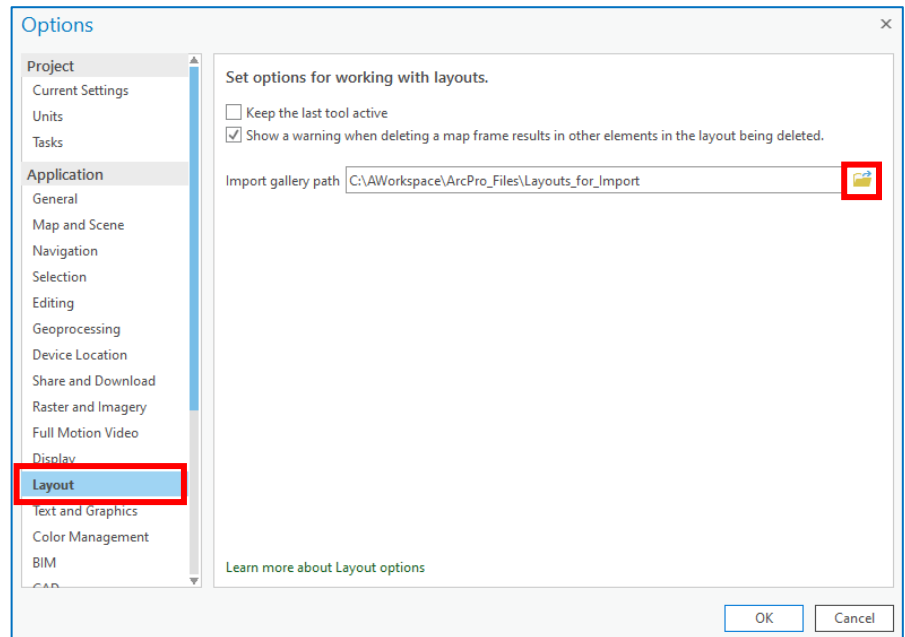
## Section 5: Configuring Options

This section describes how to set up recommended ArcGIS Pro options. It assumes that you have downloaded the ArcGIS Pro project folder and copied and unzipped it to your local C:\AWorkspace folder.

1. To set up a default location for all future projects to be saved select **Options**.
2. Select **General** then expand **Create Projects**.
3. Select **New projects are saved in a custom location**. Click on the file folder button to navigate to **C:\AWorkspace**. If there is no C:\AWorkspace folder than create a new folder under the C Drive named **AWorkspace**.
4. Click **OK**.



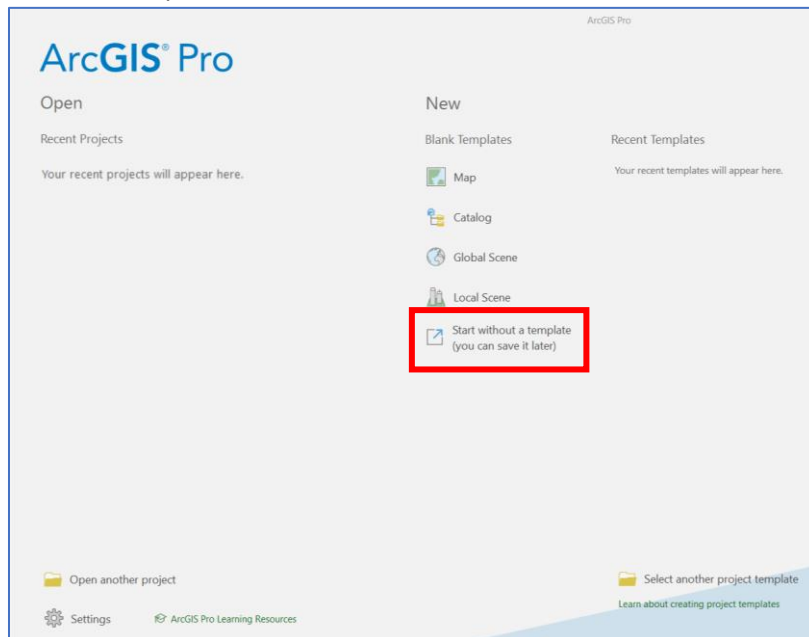
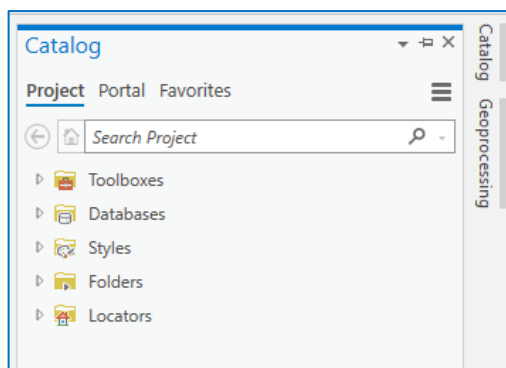
5. Select **Layout**.
6. Click the file folder button to the right of the Import gallery path. Navigate to **C:/AWorkspace/ArcPro\_Files/Layouts\_for\_Import**. Click **OK**.
7. Click **OK** on the Options menu to close out of Options.



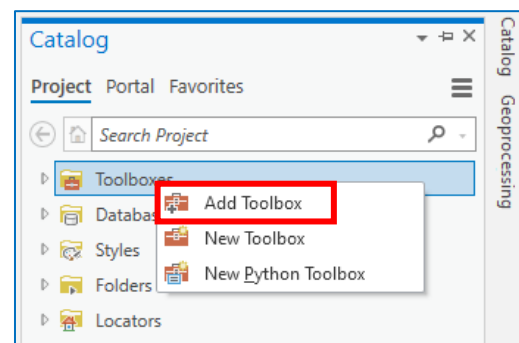
## Section 6: Installing Toolboxes

This section describes how to install recommended toolboxes. It assumes that you have downloaded the ArcGIS Pro project folder and copied and unzipped it to your local C:\AWorkspace folder.

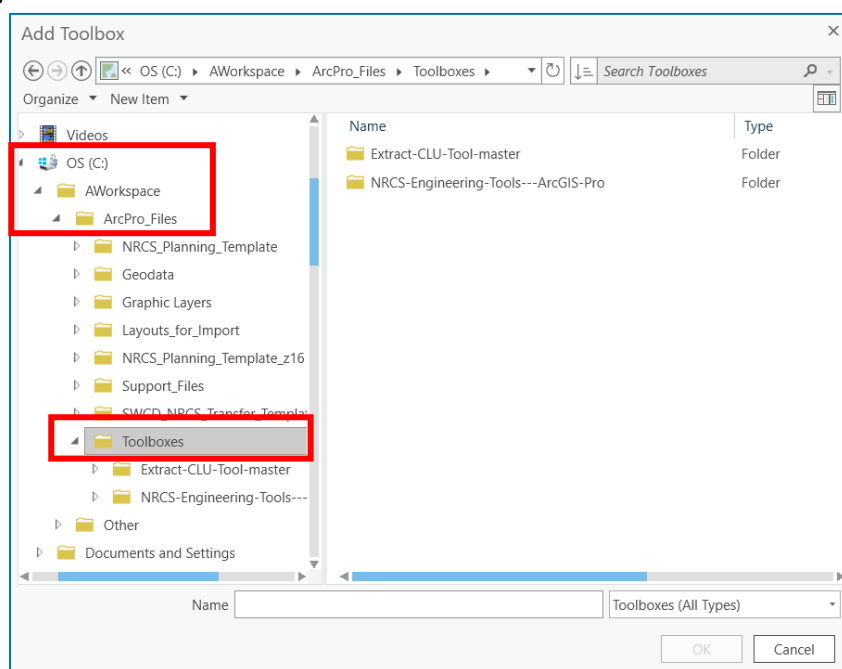
1. Select **Start without a template**.
2. Open the Catalog Pane. It should be on the right side of the screen. If it is not open, go to the **View** tab and select **Catalog Pane**.



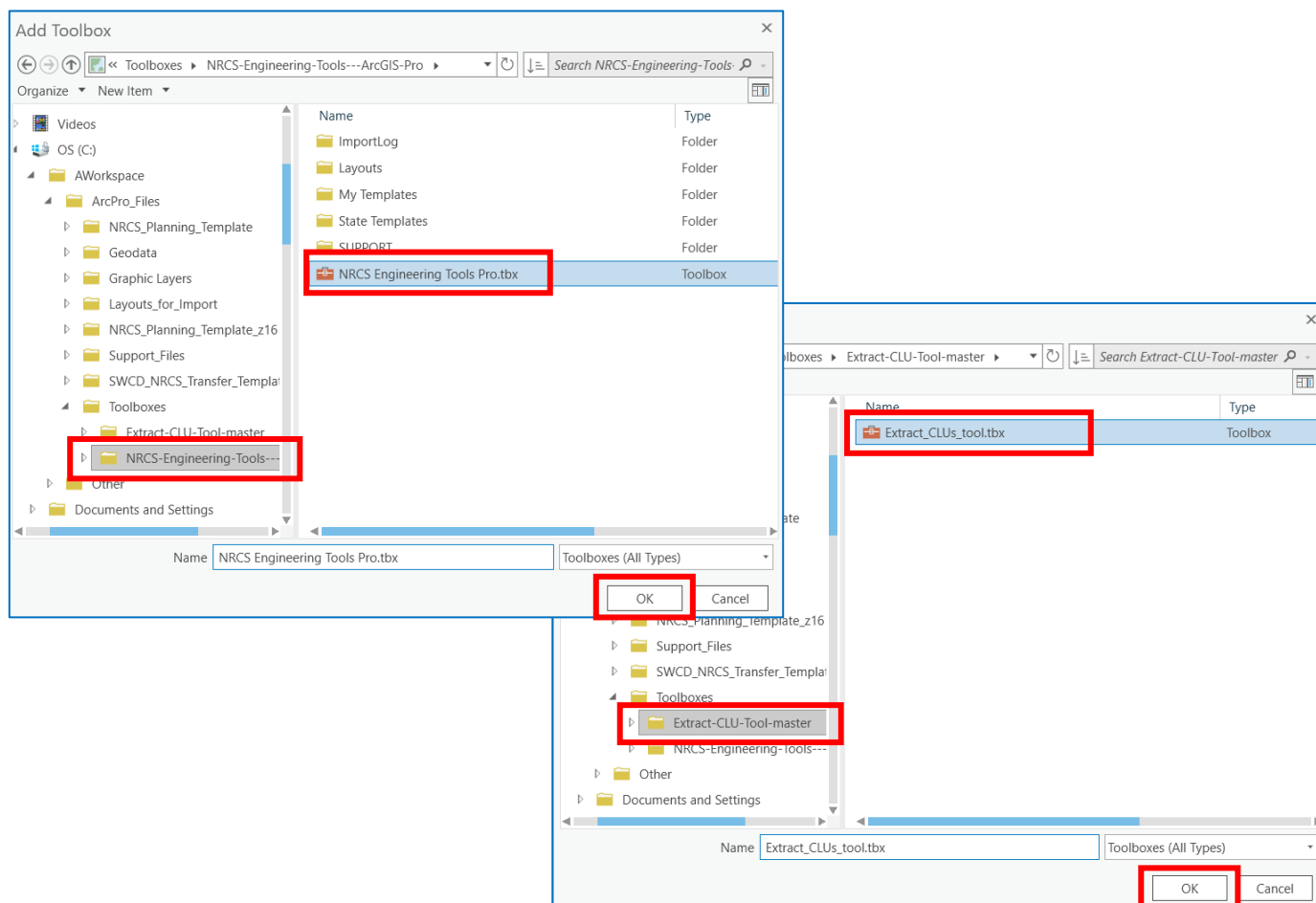
3. Right Click on the Toolbox folder, and select Add Toolbox.



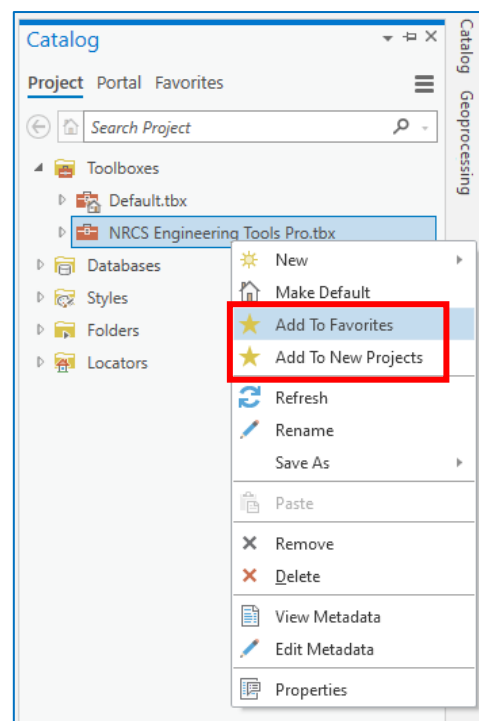
4. Navigate to C:/AWorkspace/ArcPro\_Files/Toolboxes.



5. To install the NRCS Engineering Toolbox, double-click into the NRCS-Engineering-Tools---ArcGIS-Pro folder. Select **NRCS Engineering Tools Pro.tbx** and click **OK**.
6. To install the Extract CLU tool, double-click into the Extract-CLU-Tool-master folder. Select **Extract\_CLUs\_tool.tbx** and click **OK**.



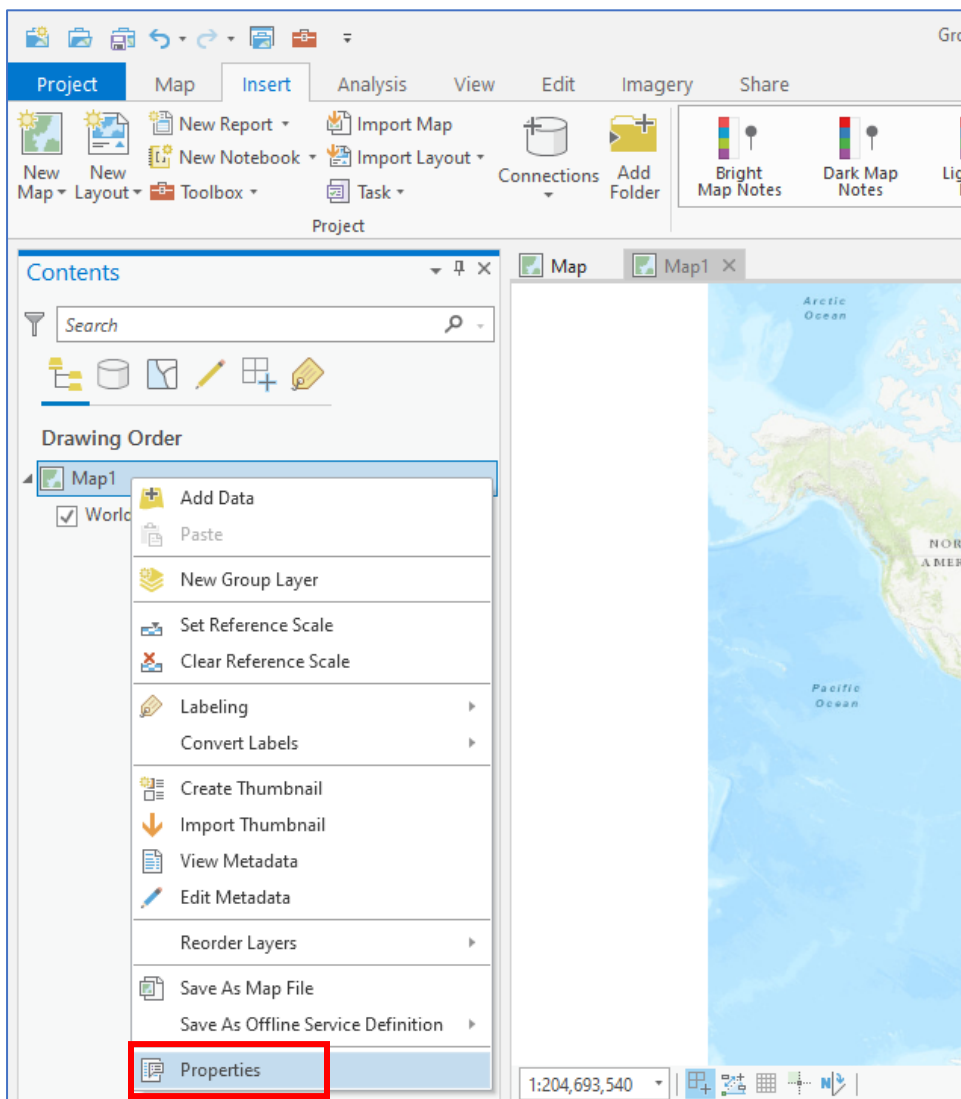
7. Open the Catalog Pane and Expand Toolboxes. Right-click **NRCS Engineering Tools Pro.tbx** and select **Add To Favorites**. This will place this toolbox under the Favorites tab in the catalog pane and can be added to any new project from there. You can also select **Add to New Projects** if you want these toolboxes to be automatically added to all new project that is opened or created in the future.
8. Do the same for the **Extract\_CLU\_Tool.tbx** toolbox also.
9. Any other toolbox that you have available can be copied to the C:\AWorkspace\ArcPro\_Files\Toolboxes folder and can be added with this same method.



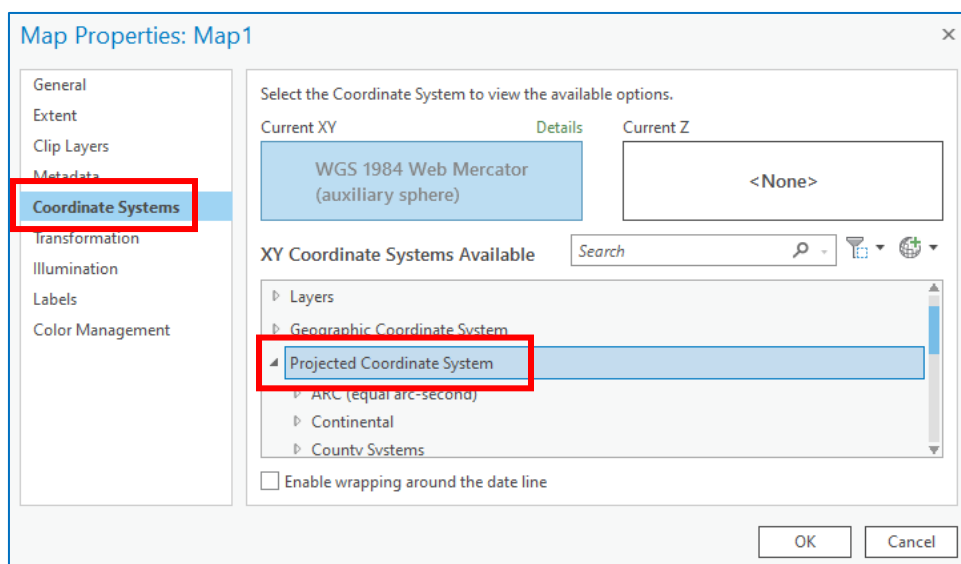
## Section 7: Adding Favorite Coordinate Systems

This section goes through the process of changing a map's coordinate system, creating new projections, and adding projections to favorites. Note that each map within a project has its own coordinate system – changing one map to the coordinate system you want will not change the coordinate systems in the other maps in your project.

1. To change the projected coordinate system of the map, you will need to open the Map Frame properties. The name of the map frame will change based on the name of the current map. To open properties, on the Content tab under Drawing Order, right-click the **Map Frame** (in this case it is called Map1), then click **Properties**.

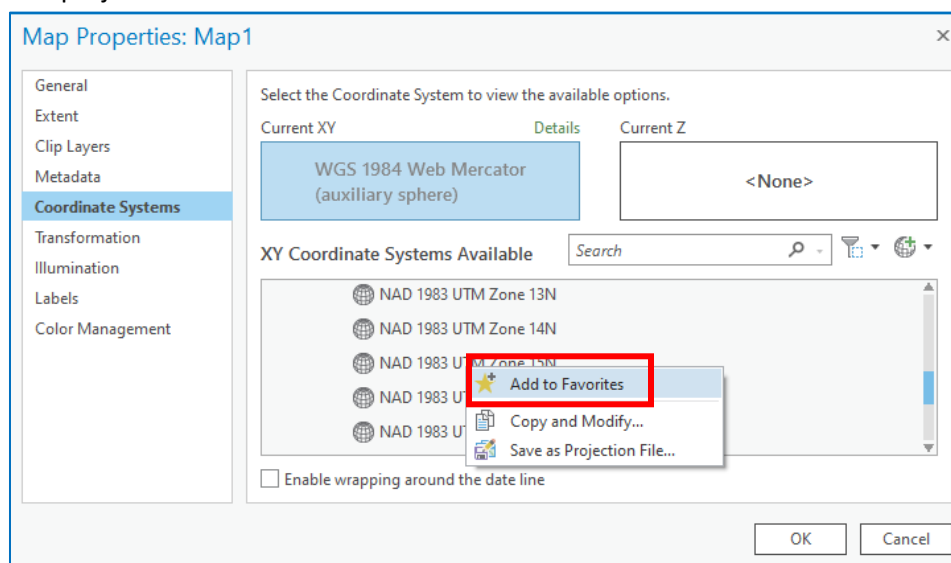


2. Select **Coordinate Systems**, then expand **Projected Coordinate System**.

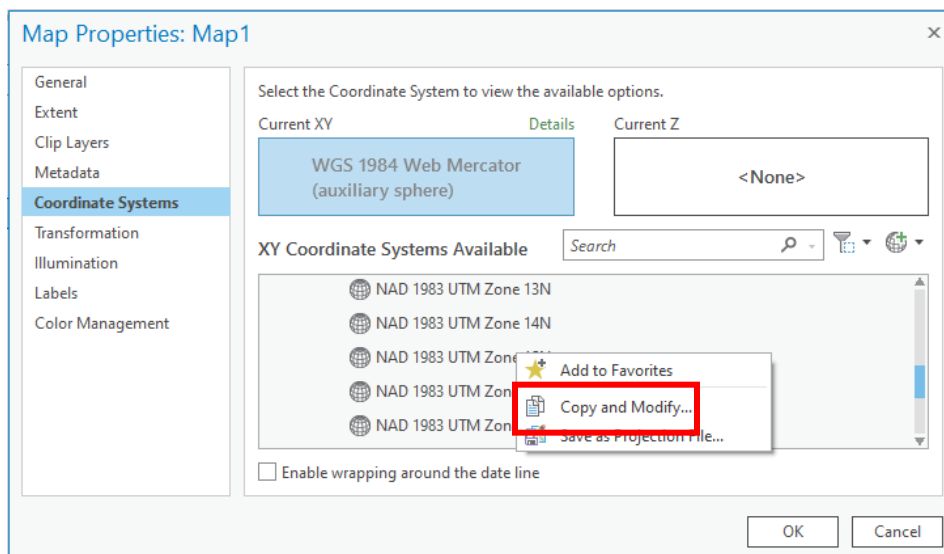




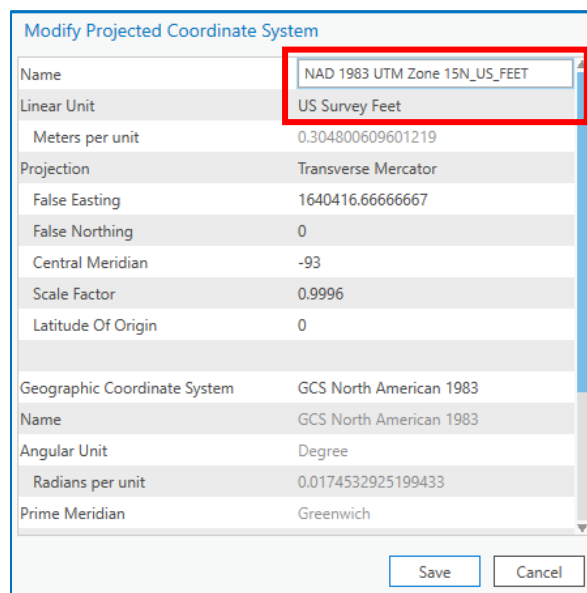
3. Scroll and expand **UTM**, then scroll and select **NAD 1983**, then scroll down to the needed zone. The full name for the coordinate system should be **NAD 1983 UTM Zone 15N** (or 16N). Right-click it and select **Add to Favorites**. The units of this projection are in meters.



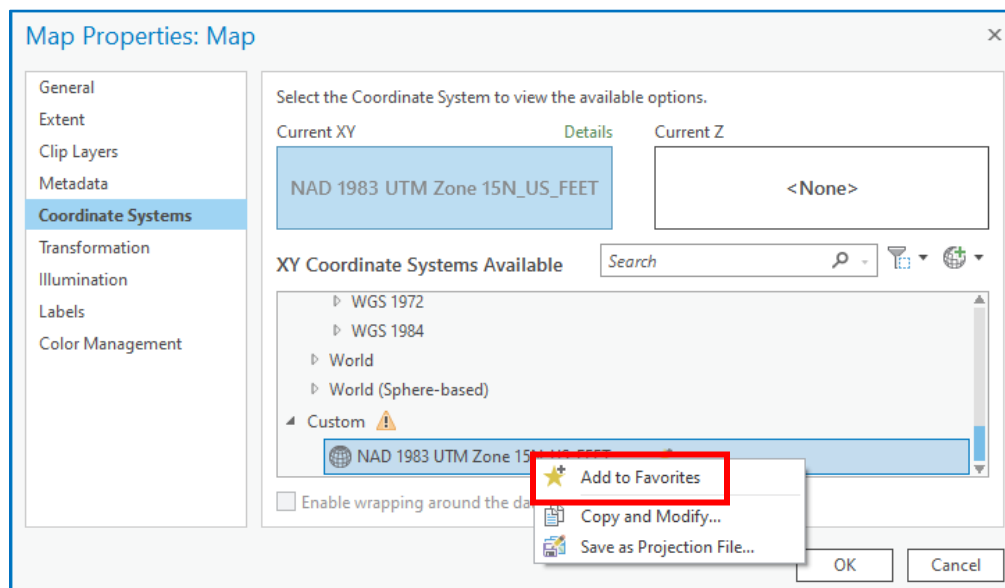
4. To create a new UTM projection that is in Feet, right-click **NAD 1983 UTM ZONE 15N** (or 16N if you are in that zone), and select **Copy and Modify...**



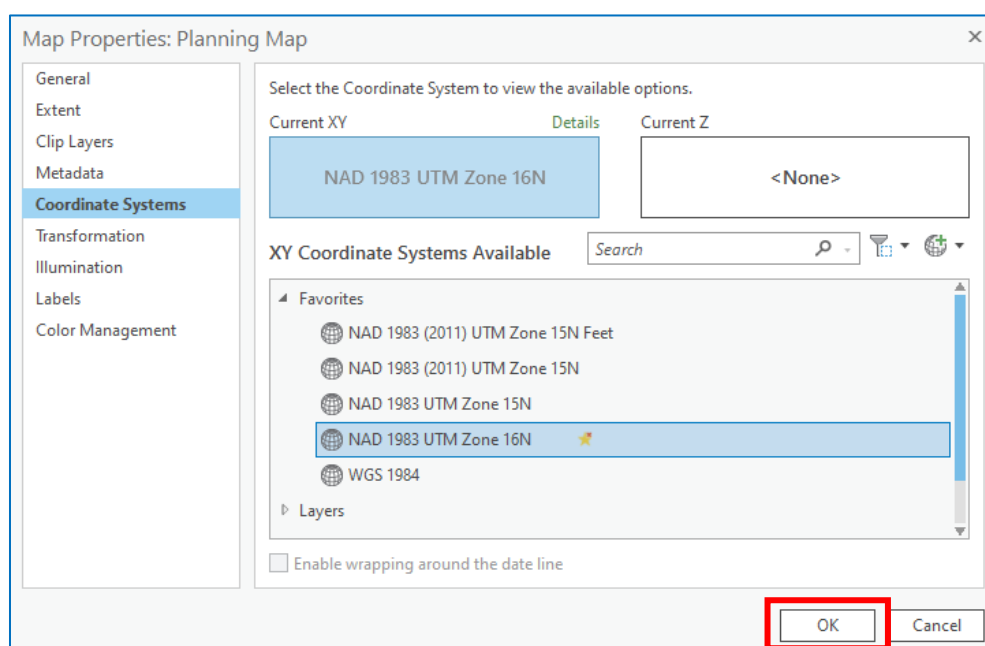
5. Rename the coordinate system by adding “\_US\_FEET” to the end of the original name. Select **US Survey Feet** from the drop-down menu beside Linear Unit. Click **Save** to make new Projected Coordinate System



6. Right click the newly created Projected Coordinate System under Custom and select **Add to Favorites**.



7. When you are done adding all the projections you need to your favorites list, click **OK** to close the dialog.



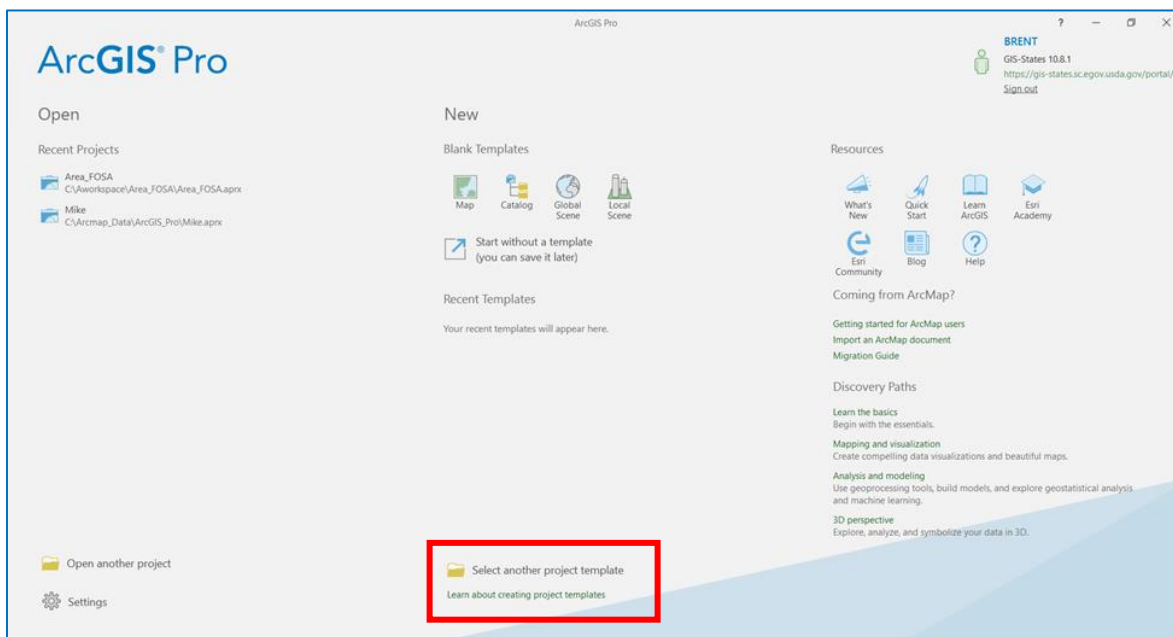
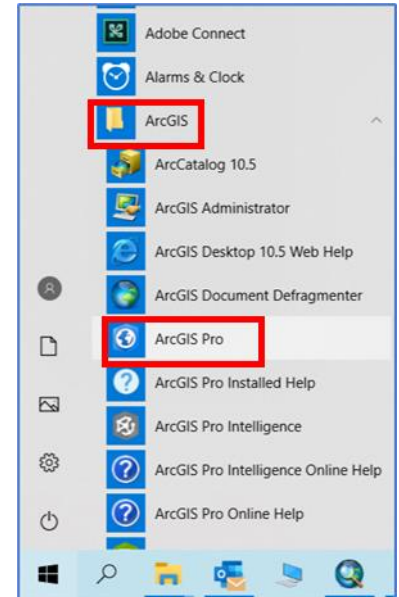
8. If you need to change the projection of any Map Frame, open the map frame properties like you did in step 1. Select the wanted projection from your favorites list, then select **OK**.

## Part 2: Project Files

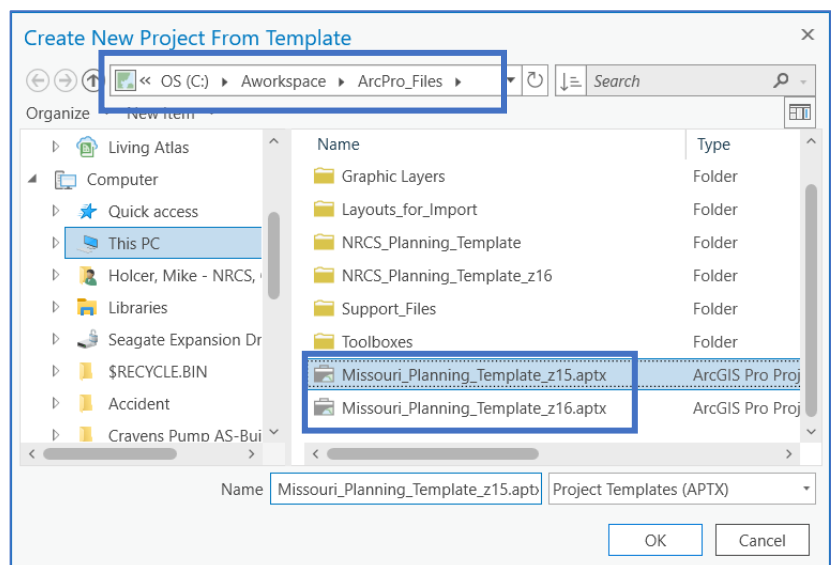
This section covers how to open and use the project folders and templates.

### Section 8: Creating New Documents from Templates

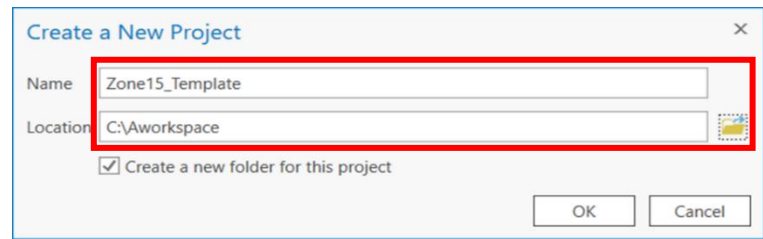
1. If you want the Pro project to be associated with a single project or client, you should use the method in this section to create a new project with the provided project templates. Data stored in projects created this way will only exist in the current project folder. You may also use the provided project files if you don't need data associated to a specific project – e.g. you only need to use this for copying features between the SWCD layers and CD, for example. See the [Section 8](#) for instructions on how to use the project folders.
2. Start ArcGIS Pro by opening the Start Menu, then click **ArcGIS → ArcGIS Pro**. Once ArcGIS Pro opens you will see a startup screen which will allow you to open an existing project or select a new project. Click **Select another project template** at the bottom center.



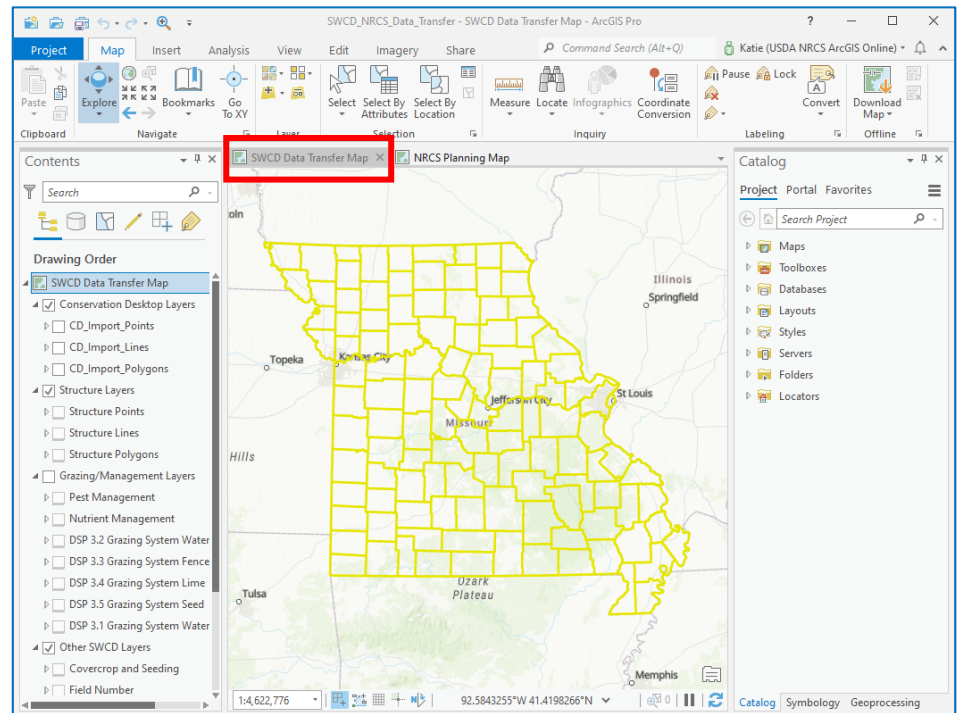
3. Navigate to the location of the saved project template. For this project, the templates will be under **C:\Aworkspace\ArcPro\_Files**
4. For the Planning Project and maps, open **Missouri\_Planning\_Template\_Z15.aprx** or **Missouri\_Planning\_Template\_Z16.aprx** depending on the UTM Zone you are working in.
5. For the SWCD Transfer Project, open **SWCD\_NRCS\_Transfer\_Template.aprx**



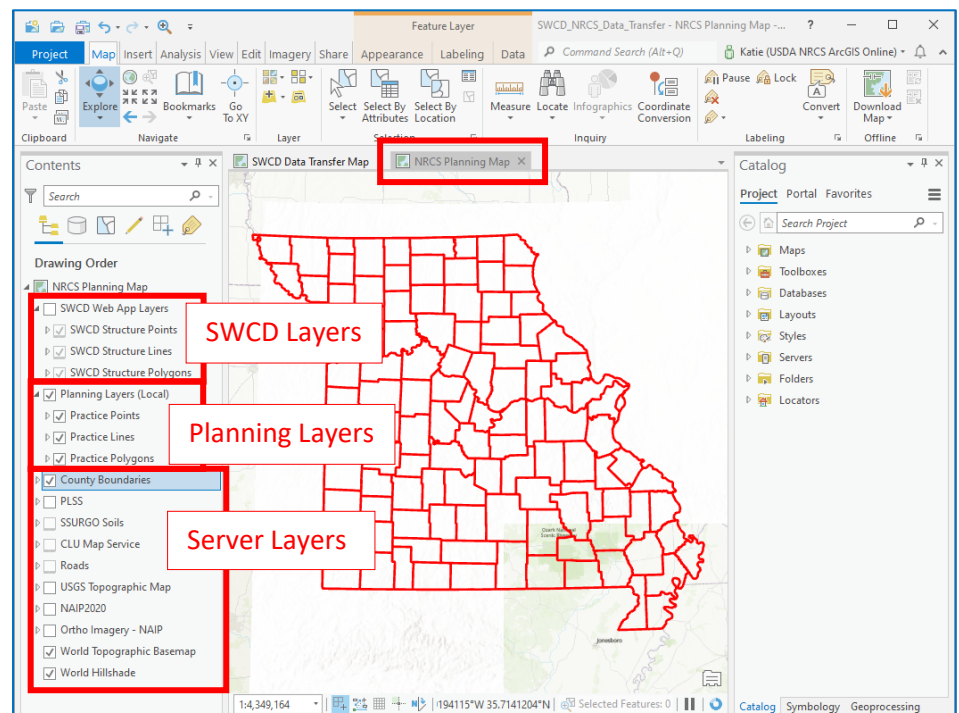
6. Name your project with landowner, tract, or your preference for your project and save it in the C:\Aworkspace location. If the **Create a new folder for this project** box is checked, it will create a folder with the project name under the Aworkspace location. It is best to not use spaces when naming your project, you can use an underscore (\_) in place of a space.
7. Click **OK**.



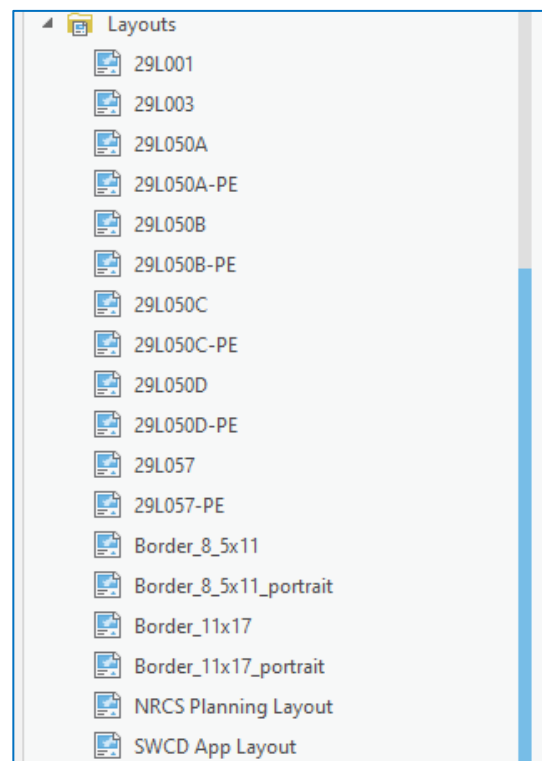
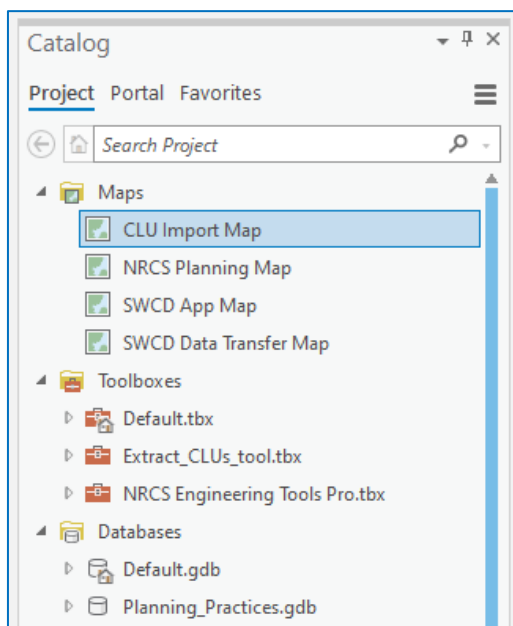
8. After you select **OK** your new project will open with a **SWCD Data Transfer Map** and **Planning Map** already open, with different layers that set up for this project. Most of the layers on the **SWCD Data Transfer Map** are from the *Soil and Water App v2* webapp and the NRCS Geoportal. These are all server-based layers and do not exist on your computer.



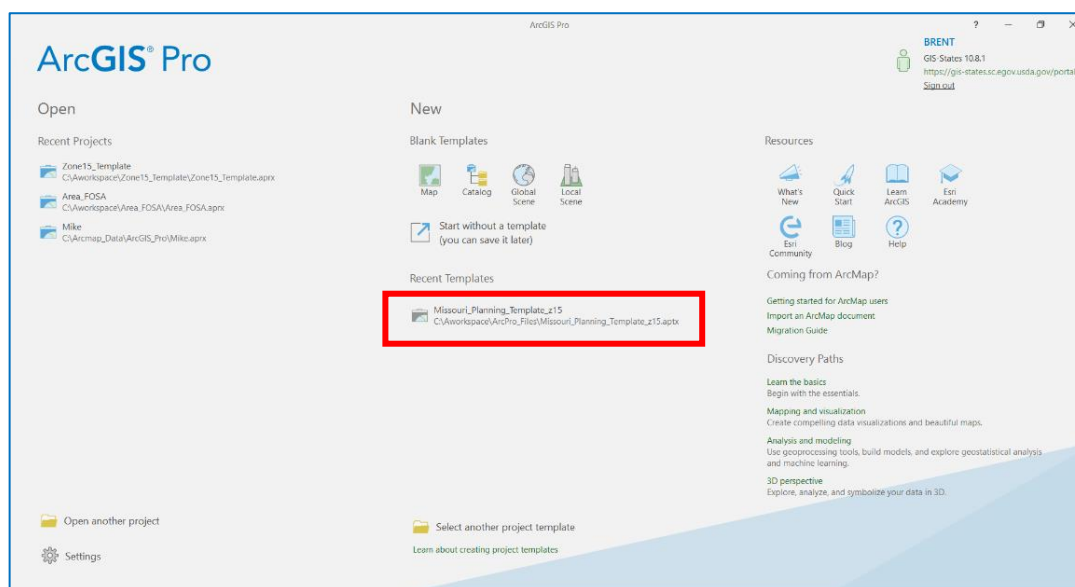
9. The **NRCS Planning Map** has planning layers that are stored with this project in C:\Aworkspace\ProjectName\Planning\_Practices.gdb geodatabase. The **Server Layers** are located on various Servers located online.



10. Items that are loaded into the project can be found in the Catalog Pane. If this pane isn't open, go to the **View** tab → **Catalog Pane**. To load a map or layout right-click on needed map or layout and select **Open**.
11. If you have added toolboxes to your favorites, they may show up here as well, or you can add any toolbox you need manually. See [Section 6](#) for full instructions.



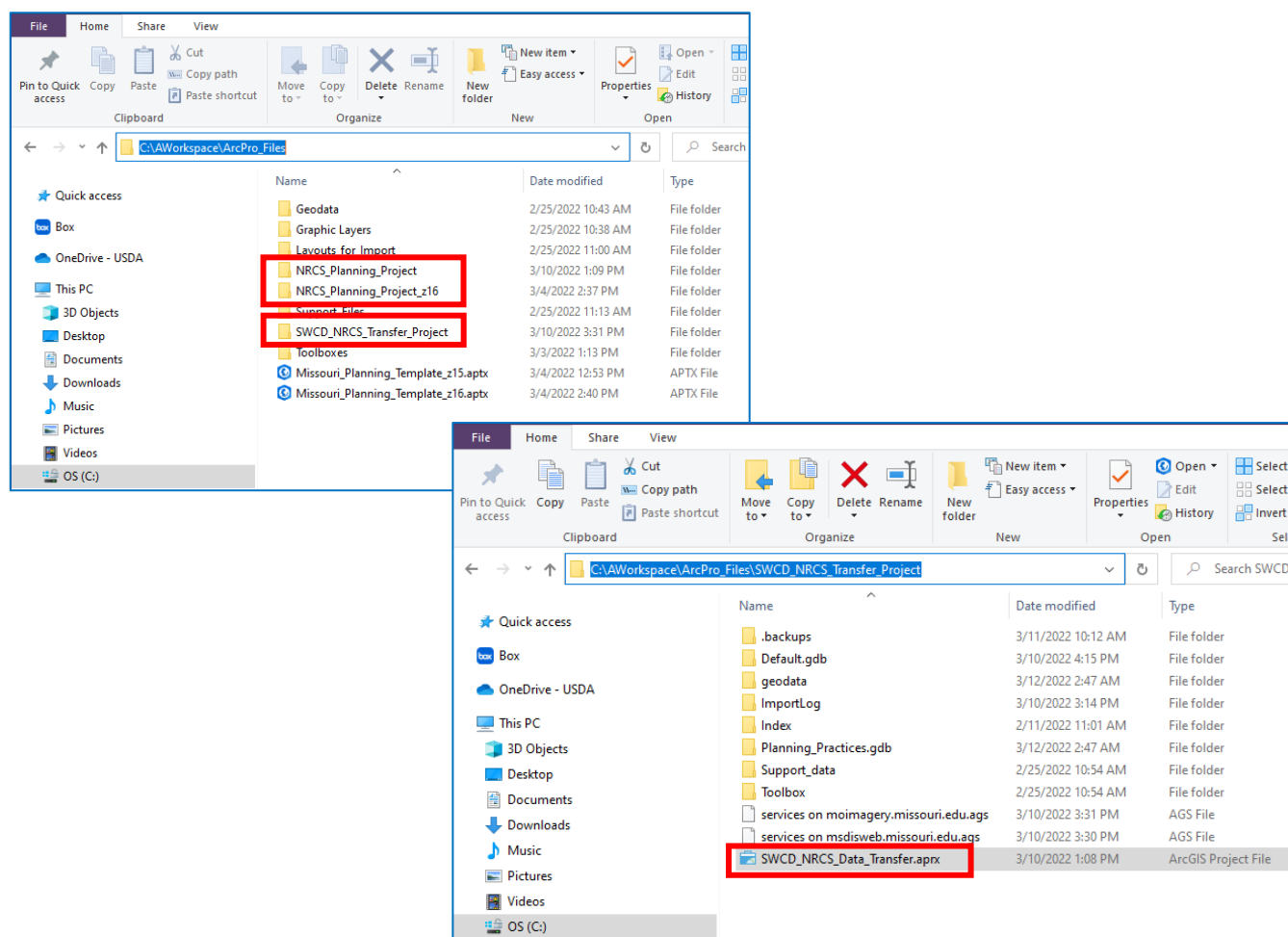
12. This Template is a starting point for you to begin work on your project. You have the option to create new Maps or add other layers from the Catalog Pane as well. See [Section 10](#) for full instructions on using the Catalog.
13. After you have loaded the Template the first time, it should show up under **Recent Templates**, and you should be able to select it here to create a new map instead of using the select a project template at the bottom.



## Section 9: Using Project Folders

Both the NRCS Planning Project and the SWCD Data Transfer Project have ready-made project folders to use without having to create a new project from the Templates – this allows you to skip a few setup steps. These can be used for quick copying and map creation without having to create a full project associated with a project or client. Note if you use these, any data you save to the feature layers in these projects will be present anytime you open these, so do not use these if you want to save data to a specific project/client and instead create a new project from a template.

1. To use the project folders, open a folder window, then go into either the **NRCS\_Planning\_Project**, **NRCS\_Planning\_Project\_z16**, or the **SWCD\_Data\_Transfer\_Project** folders and open the ArcGIS Pro project file – in this example, it is **SWCD\_NRCS\_Data\_Transfer.aprx**.



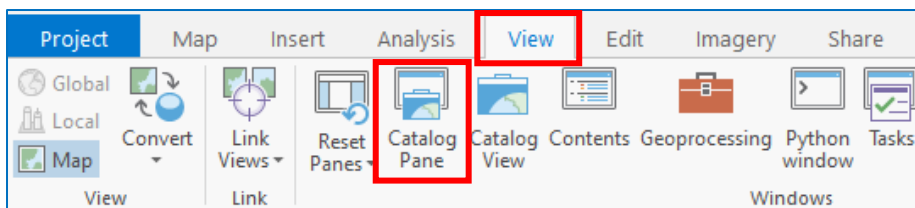
2. You may use these project files exactly like you would if you were creating new documents from the provided templates like you did in [Section 8](#).
3. Any data added to the Planning Points/Lines/Polygons layers in this document will be saved permanently to the geodatabase in this project folder and will be present every time you open the Project in this way.



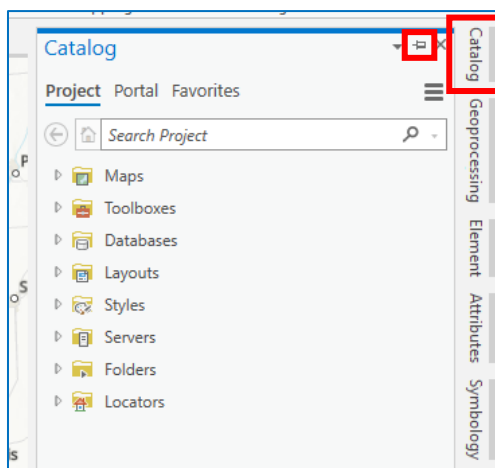
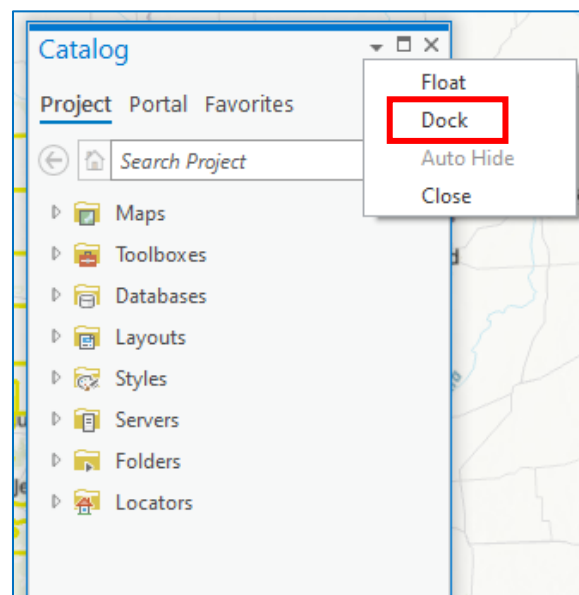
## Section 10: Using the Catalog

This section provides general information on how to use the catalog pane for opening maps and data.

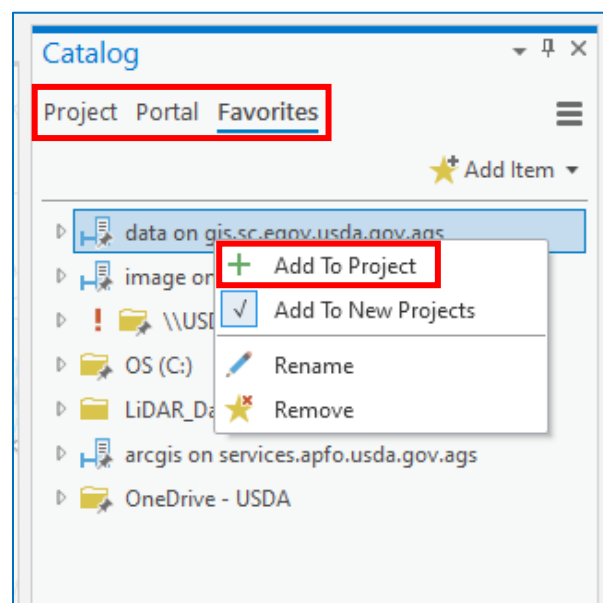
1. Open the Catalog Pane. If it is not already open, select the **View** tab at the top of the program, then select **Catalog Pane**.



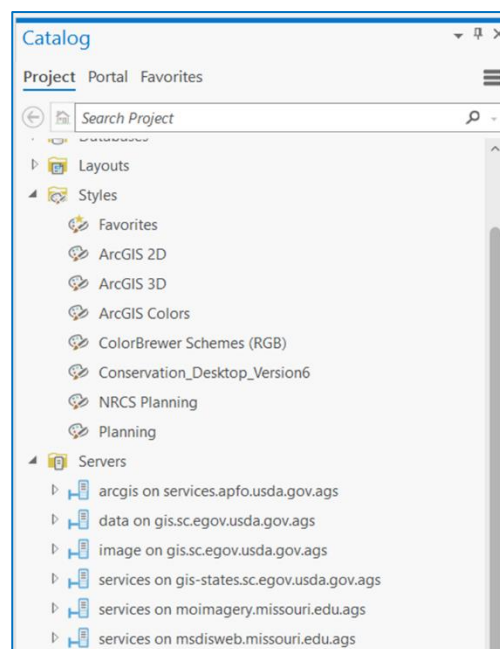
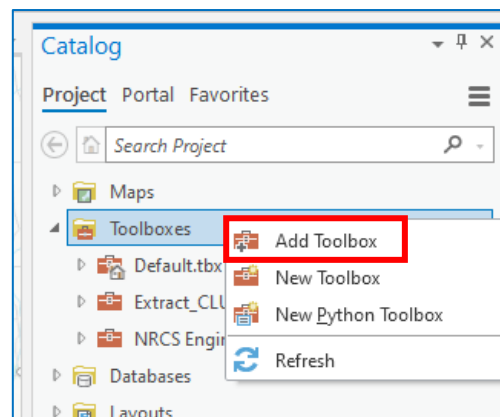
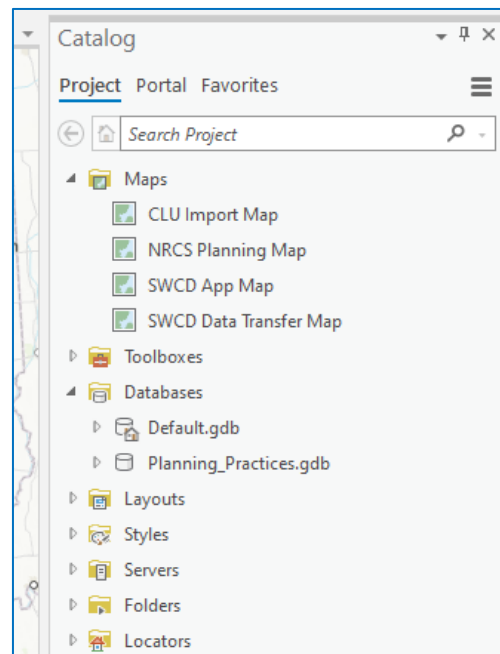
2. The Catalog Pane will open on the right of the screen. If it is floating, you can dock it to the side by right-clicking on the pane and selecting **Dock**.
3. If the pane is set to auto-hide, you will see a banner at the right named Catalog. Click it to open or close it. You can set the pane to be always shown by selecting the pin icon at the top of the pane.



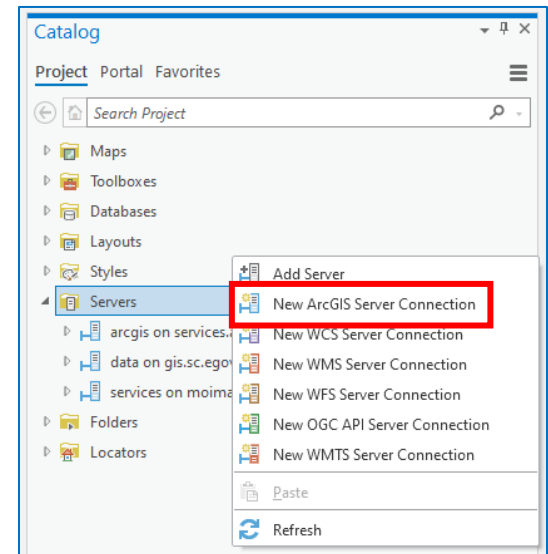
4. There are several tabs at the top of the Catalog Pane.
  - a. **Project** – lists all items that are associated with the current project you have open.
  - b. **Portal** – any data that exists on any of our ArcGIS Geoportals. Only data from the currently active portal connection will be listed here. You will have to switch the active portals if you need to open maps or layers on a different geoportal.
  - c. **Favorites** – lists anything that you have added to your favorites list. To add any of the connections listed here to your current project, right-click the connection then click **Add To Project**. They will then appear under the Project tab. If you would like to add this connection to ALL new projects, check the Add to New Projects option ON.



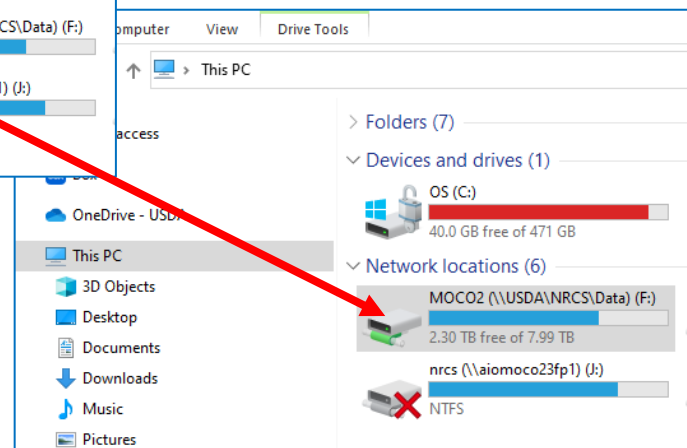
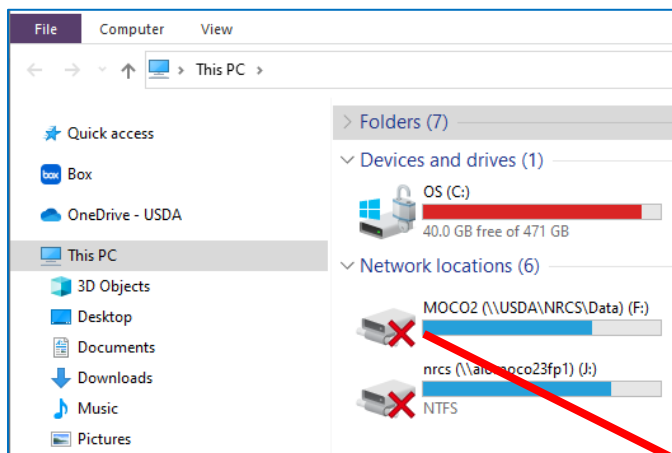
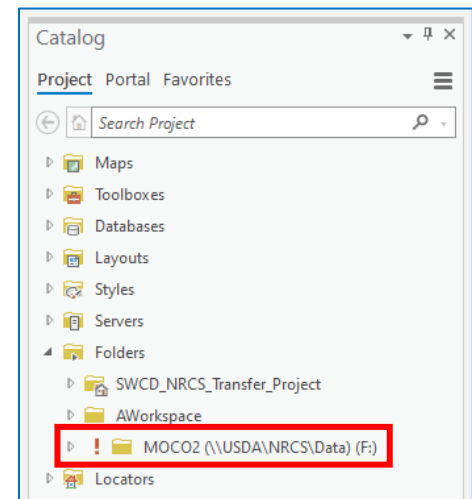
5. Under the Project tab there is a list of folders. This list has everything that has been added to your current ArcGIS Pro project.
6. **Maps or Layouts** – these can be opened in the current project by double-clicking the map or layout. The provided template has many maps and layouts provided for various purposes that you can open in your current project.
7. **Databases** – houses any database that has been added to your current project. In the provided templates, there is a Default.gdb database and the Planning\_Practices.gdb database. You can add databases connections by right-clicking Databases then click **Add Database**. New databases can be created by clicking New File Geodatabase.
8. **Toolboxes** – Run tools from here. If you have not setup Pro to add favorite toolboxes to every project, this may not have anything under here and you will have to add toolboxes by right-clicking Toolboxes and clicking **Add Toolbox**.
9. **Styles** - The project has styles loaded. These can be used to symbolize new feature layers if you add them to this project. The planning layers already include these symbol styles, so you likely will not use these, but they are included if they are needed.



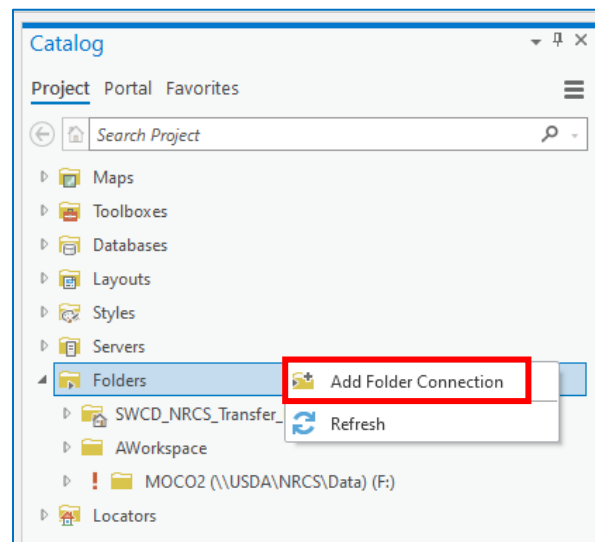
10. **Servers** – any online geodata server will be here. A few have been provided in the projects/templates. If you need to add others, right-click Servers, then click **New ArcGIS Server Connection**.



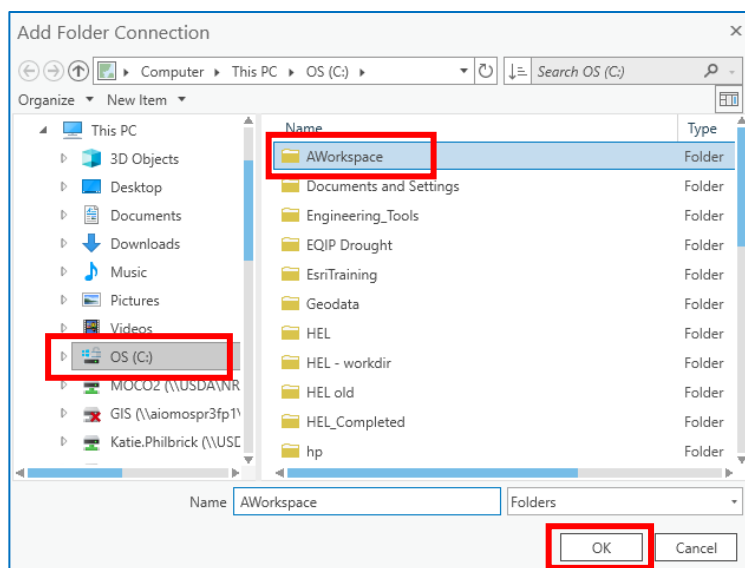
11. **Folders** – you can make connections to any folder currently on your computer. A few are given for you when you start up one of the templates.
12. If you see a red exclamation point next to the folder connection, it means Pro could not find the folder and you will have to repair the connection. This is usually because the drive was not connected in Windows when you started Pro. Usually this requires you to open a Windows folder window and double-click the disconnected folder. This sometimes requires a restart of Pro to reconnect the folder to remove the red exclamation point.



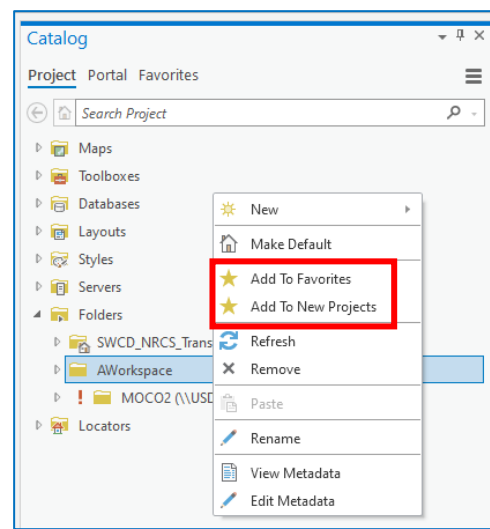
13. If you need to create more folder connections, right-click **Folders**, then click **Add Folder Connection**.



14. In the Add Folder Connection window, select the drive path of your choice in the left pane.
15. In the right pane, SINGLE-click the folder you wish to connect.
16. Click **OK**.



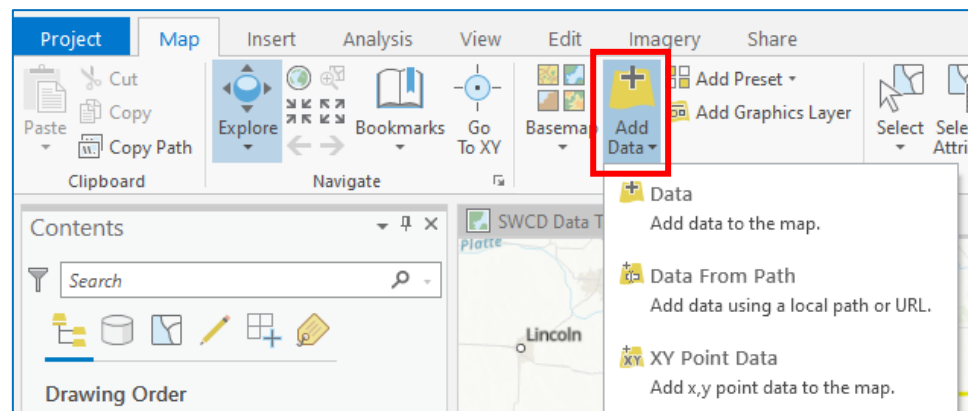
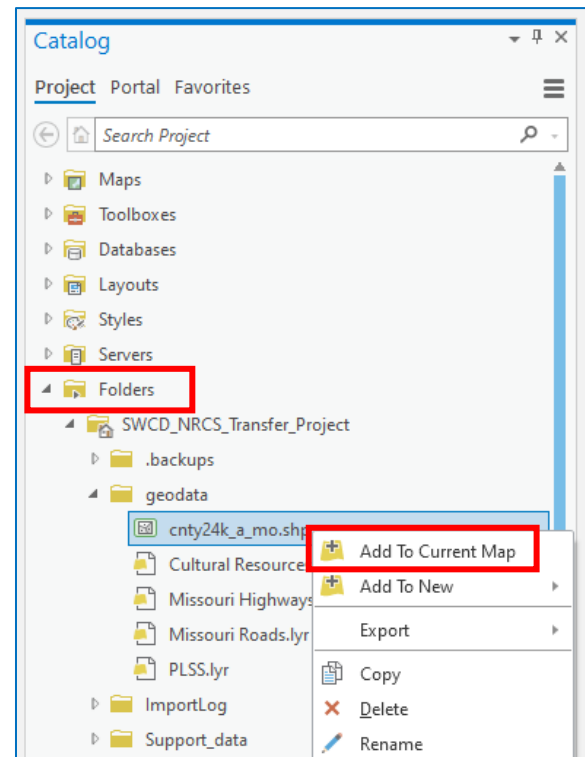
17. Any folder connected can be added to the Favorites menu or can be added to all new projects. To do this, right-click the folder, then select **Add to Favorites** to save it to the favorites menu or **Add To New Projects** to add it to all new projects.



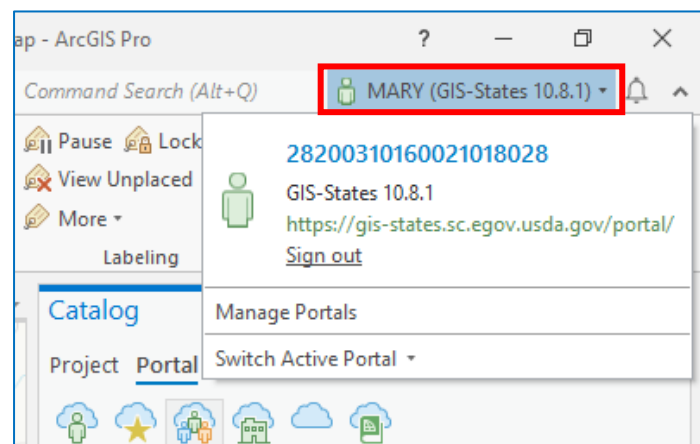
## Section 11: Adding Local Feature Layers to Maps

Feature layers – which include both shapefiles and geodatabase feature classes – can be added to maps from the **Catalog Pane** or through the **Add Data** button.

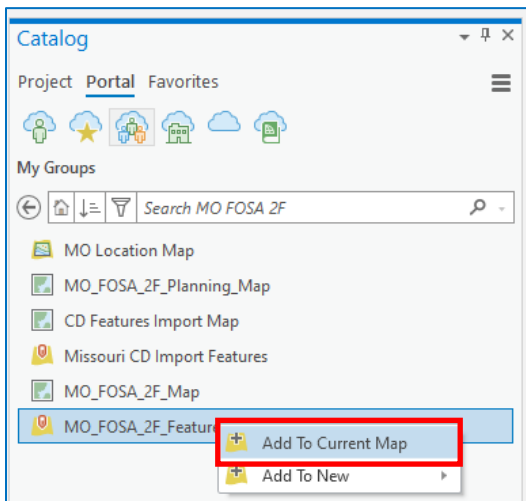
1. In the **Catalog Pane** (open it with View → Catalog Pane if it isn't already open), double-click to expand the **Folders** menu to show your list of folders. If the folder where your data is located is not in this list, you will need to connect it. See [Section 10](#) for instructions on how to connect folders.
2. Navigate to the folder your layer is stored in (click the arrow or double-click the folder to expand), then right-click the layer and click **Add to Current Map**.
3. If you would like to use the Ribbon instead, click the **Map** tab, then select **Add Data**. If you select the arrow below the Add Data button, a list of options will be given for the type of data you wish to add.



4. Adding data from one of the portals you have connected is a similar process. See [Section 3](#) for instructions on how to connect to portals if they aren't already.
5. The upper right corner lists your active portal and your sign in status. Ensure that your active portal is the one you wish to get data from and that you are signed in. You will be able to add any layer that is shared with you from the currently active portal.

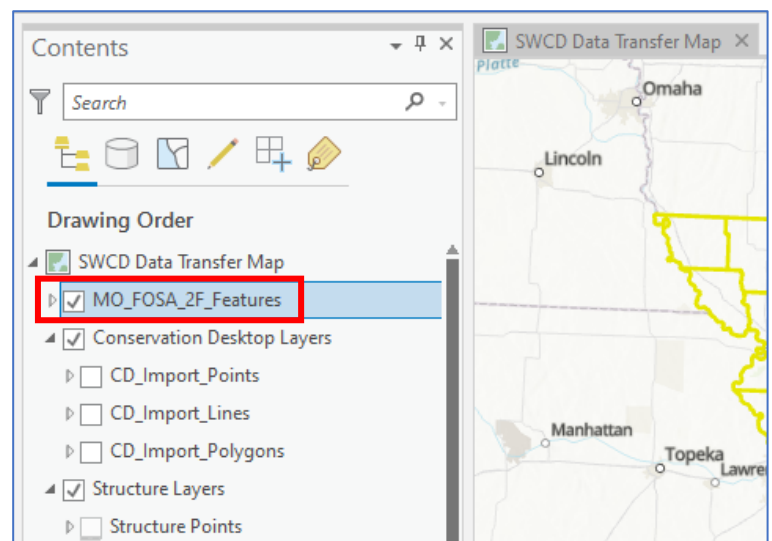
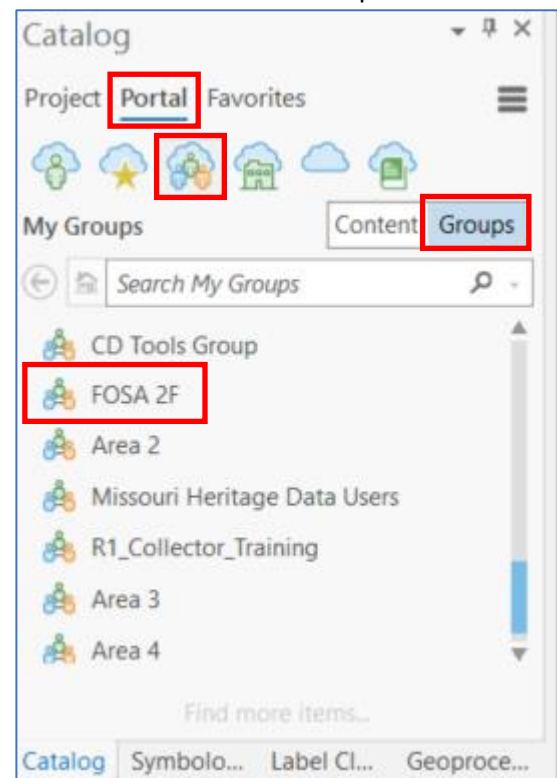
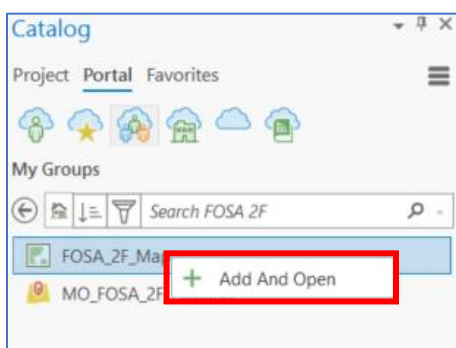


6. In this example, we will be adding the FOSA 2F Layers. If you do not use the GPS Tools for iOS, you will not have access to the FOSA groups here, but the process outlined here is the same regardless of what layer you need to add. Requests for access to this or any other group should be directed to the state GIS specialist.
7. In the **Catalog Pane**, click the **Portals** tab.
8. Select **My Groups** (the button with the 3 people), then **Groups**.
9. You should see a list of groups that you are a member of. Your list will look different than what is pictured here. Double-click your **FOSA XX** Group.
10. In the next screen, you will see a list of maps and feature layers you have access to. To add the **MO\_FOSA\_XX\_Features** layer, right click it and click **Add to Current Map**.



11. Your FOSA layers will now be in your current map.

12. You can also open the full map by right clicking the map and selecting **Add and Open**.

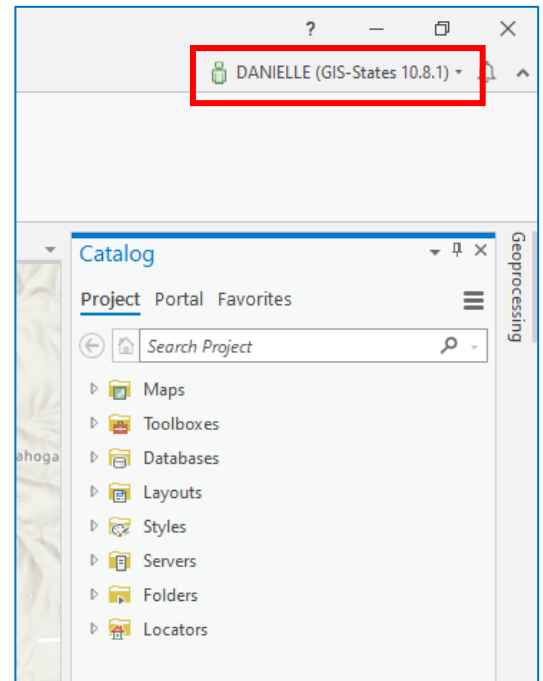




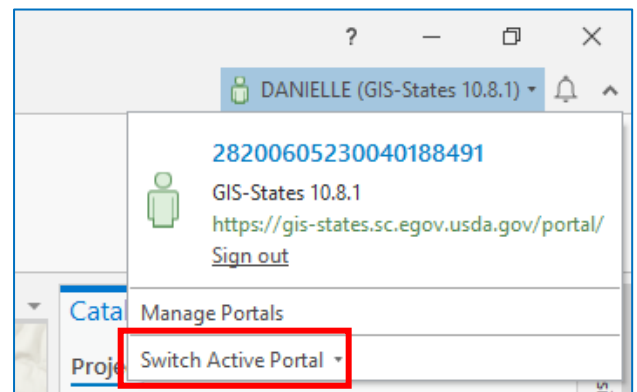
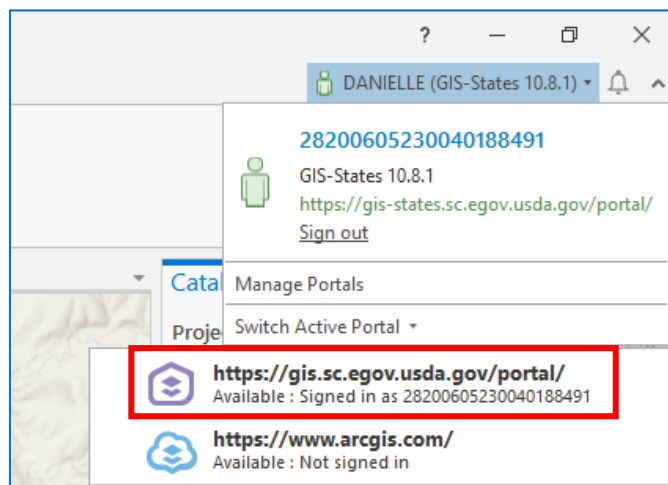
## Section 12: Switching Active Geoportals

There may be a need to switch your active Geoportal connection. Items under the Portal tab in the Catalog pane will be what is currently on the active portal and will not include items from any other portal.

1. The user can check the upper right corner of ArcGIS Pro to see which Geoportal is Active.
2. Click the drop-down arrow to the right of the sign in status bar. This will give the user more information on the Active Geoportal.



3. Click the **Switch Active Portal** drop down and select the portal to make Active.



## Part 3: Copying Data Between Layers

This section describes the process of copying data to and from the *Soil and Water App v2* web app layers and the CD import layers. Where to get data to copy to the layers will be covered in [Part 4](#).

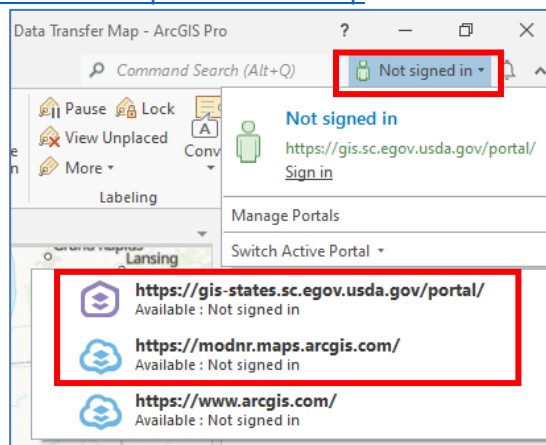
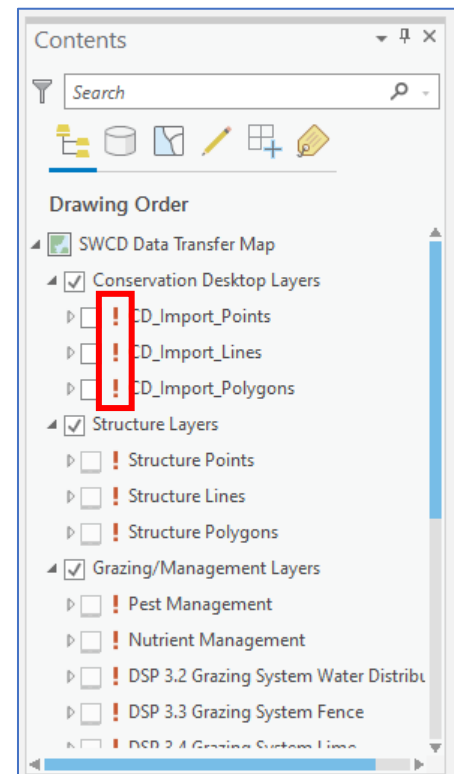
### Section 13: Copying to CD Import Layers

This section goes through the process of adding data to the CD Import Layers for use in Conservation Desktop. This is usually going to be from the layers in the *Soil and Water App v2* webapp. These webapp layers are provided in the project to use as the source layer (the layer you wish to copy from), but any shapefile or feature class can be copied to the CD layers with the same method. These instructions will assume you have created data in the *Soil and Water App v2* web app and need to copy those features into Conservation Desktop. This is the preferred method to transfer data between the NRCS and SWCD systems.

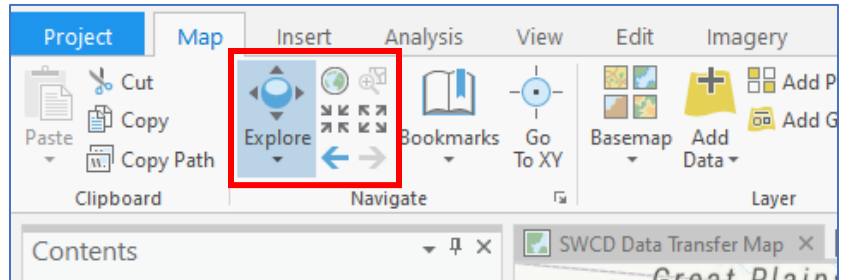
1. Find the **SWCD Data Transfer Map** in your Map Pane. If this Pane is not already loaded, use the catalog pane (open it if needed with **View → Catalog Pane**). Under **Maps**, double-click **SWCD Data Transfer Map**.



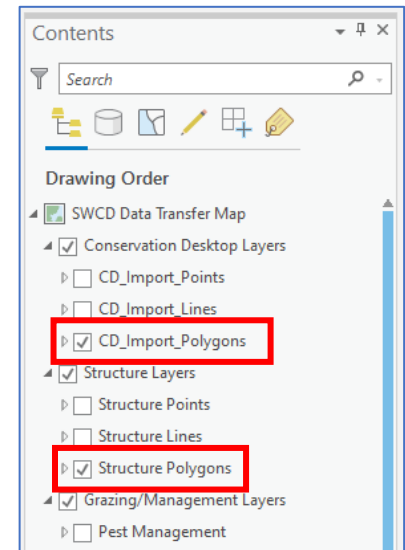
2. Under the **Contents Pane** for this map, you should see the CD Import Layers and all of the SWCD layers from the *Soil and Water App v2*.
3. If any of these layers have a red exclamation point, ensure you are signed in to BOTH the DNR ArcGIS Online server (for the SWCD layers) or the NRCS GIS-States server (for the CD Import Layers). Check your sign in status under the connections menu in the upper right. If any of the portals say **Not Signed In** or have not been added, you will need to do so before continuing. You need to be signed in to both servers outlined below. See [Section 3](#) for full instructions. After you sign in, you may need to restart Pro. If you are signed in and still have the exclamation point, you will need to join the group by clicking the following link and click **Join this Group**. [Missouri Geoportal User Group](#)



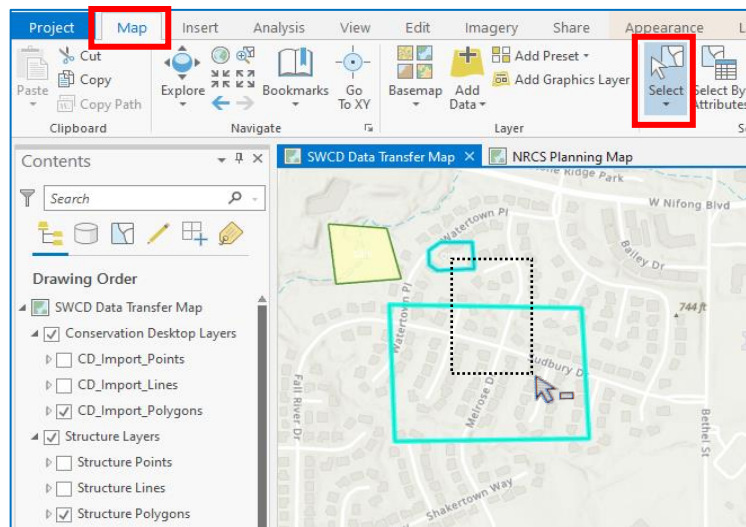
4. You will need to zoom in to the area that has the features you wish to copy. Use the **Explore** button on the **Map** tab to pan and the zoom in/out buttons or the scroll wheel on your mouse to zoom. The Explore button is also used to identify features similar to the identify button from ArcMap.



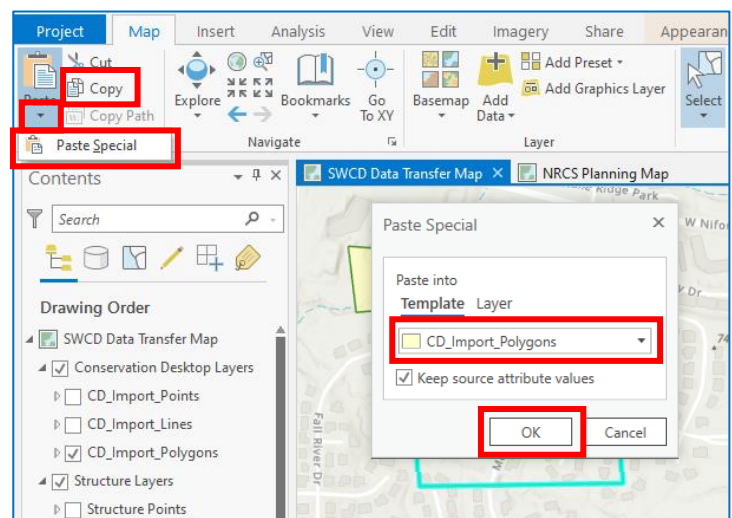
5. Once you are zoomed to the area, you need to set up your layers to do the copy. It is recommended that you turn off all layers that will not be part of the copy/paste action to ensure you aren't selecting features in other layers unintentionally. Turn off all other layers besides the data **source** layer (the one you wish to copy from) and the **target** layer (the one you wish to copy to). In this example, the only layers that are turned on are **Structure Polygons** (source layer) and **CD Import Polygons** (target layer).



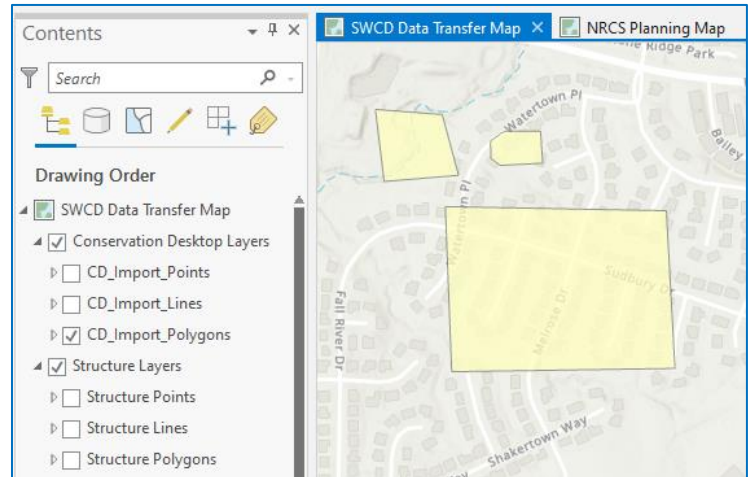
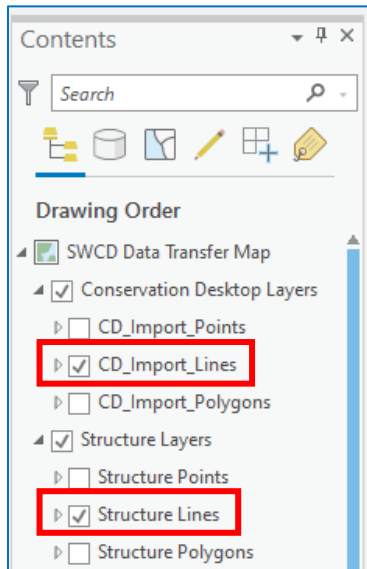
6. Using the **Select** Tool on the **Map** tab, drag around the features you wish to copy. The selected features will outline in light blue to indicate they are selected.



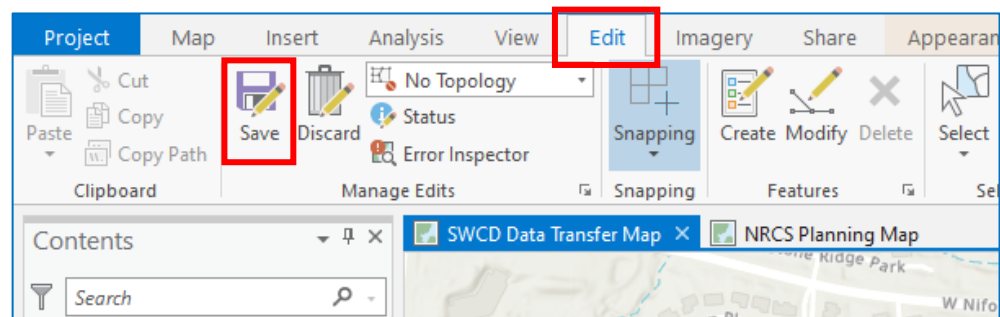
7. On the **Map** tab, select **Copy**, then select the **arrow** below Paste and click **Paste Special**.
8. A new window will appear asking which layer you wish to paste to. You should see CD Import Polygons as an option. Make sure this is selected in the dropdown then click **OK**.
9. **Important Note!** These 3 steps need to be done in order without clicking anything else in between each step. Clicking other buttons between the select/copy/paste actions may result in copying the wrong data or may fail entirely.



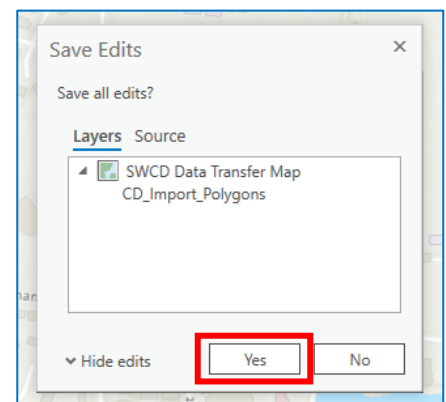
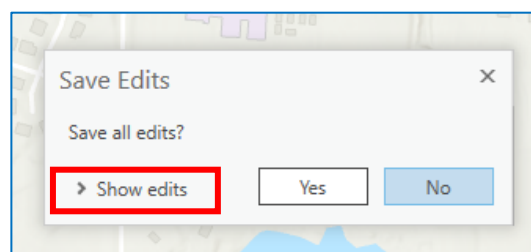
10. You can turn off the SWCD layers to ensure that the features copied successfully.
11. Lines and Points are effectively the same process as polygons. Make sure you have the correct layers turned on for each of these and no other layers.



12. Once you are satisfied with the features you have pasted into the CD Import Polygons, click the **Edit** tab, then click **Save**. **Do not forget to do this step.** Data shows up in the layers as soon as you paste it here, but it is not saved until you save edits. If you made a mistake with the copy and need to discard edits without saving, use the Discard button.



13. A new dialog box will open asking if you would like to save. If you see a Show edits button, click it to ensure you have edited the correct layer. Then click **Yes** to save.

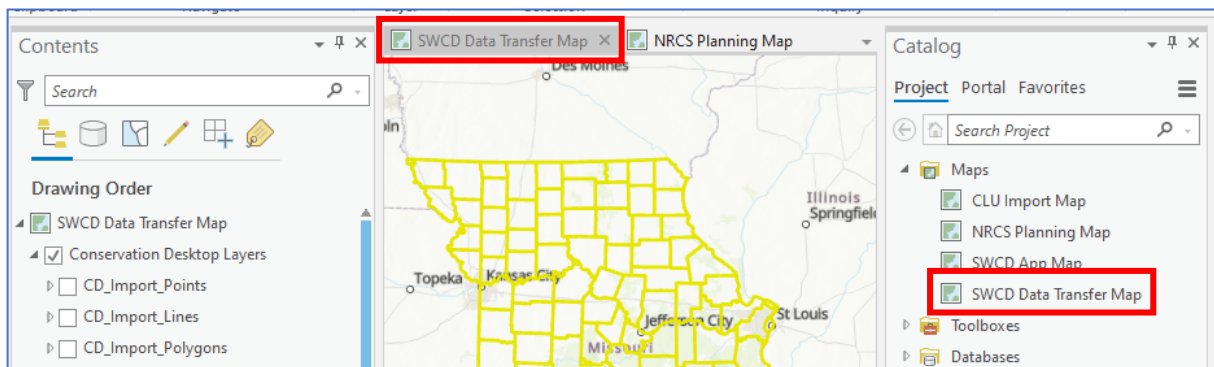


14. You should now be able to view the features you just added in Conservation Desktop. See [Section 16](#) for instructions on how to view features and copy them into the practice layers in CD.

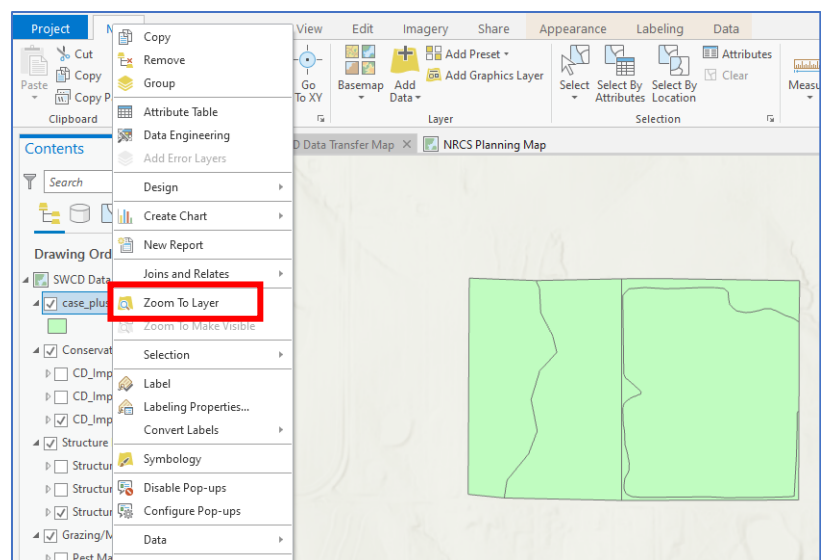
## Section 14: Copying to SWCD Web App Layers

This section will cover how to copy data from other sources into the *Soil and Water App v2* webapp data layers. Data cannot be copied directly from CD and will need to be exported from CD as a shapefile. Shapefiles can also be taken from EFT or any other shapefiles or feature layers you have. CLU or any other layer from F:/geodatat can also be added to the map and used as a source layer (the one you wish to copy from) as well. Regardless of the sources, the copy/paste process is the same. This is not the preferred method due to the extra steps necessary.

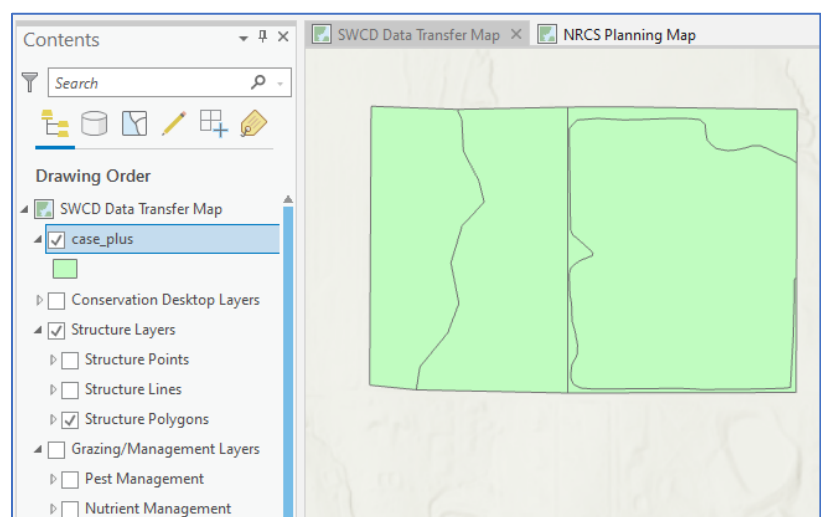
1. Find the **SWCD Data Transfer Map** in your Map Pane. If this Pane is not already loaded, use the catalog pane (open it if needed by going to View → Catalog Pane). Under Maps, double-click SWCD Data Transfer Map.



2. In this map, you will need to add the shapefile or feature class you want to copy data from into the SWCD Data Transfer Map. See [Part 4](#) on how to download shapefiles from CD and EFT, and [Section 11](#) for how to add shapefiles/feature layers to the current map. Any feature layer can be added to this map and used as a data source.
3. Once your data is in the map, you can zoom to the layer by right-clicking it and select **Zoom To Layer**.

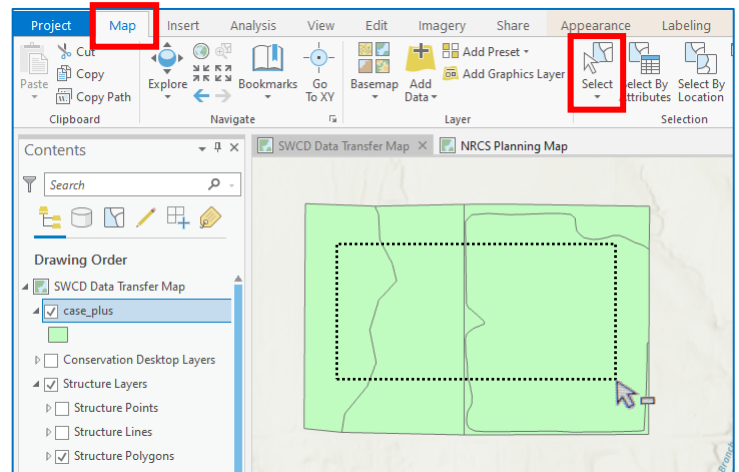


4. When you are in the area, you can set up your layers to do the copy. It is recommended that you turn off all layers that will not be part of the copy/paste action to ensure you aren't selecting features in other layers unintentionally. Turn off all other layers besides the data **source** layer (the one you wish to copy from) and the **target** layer (the one you wish to copy to). In this example, the only layers that are turned on are **case\_plus** layer (source layer) and **Structure Polygons** (target layer).

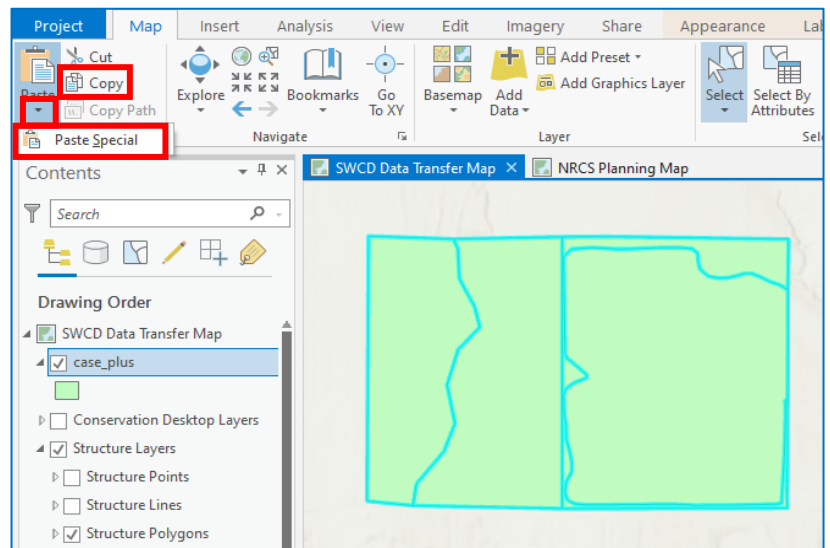




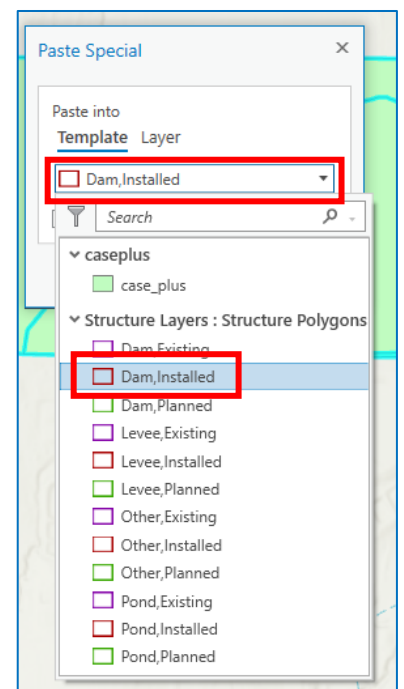
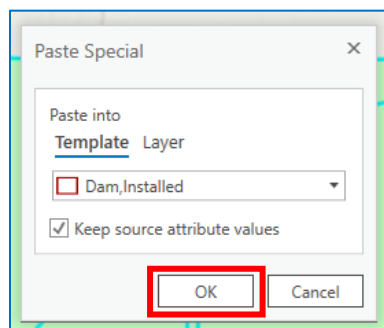
5. Using the **Select** Tool on the **Map** tab, drag around the features you wish to copy. The selected features will outline in light blue to indicate they are selected.
6. Only select multiple features if you will be pasting them in as the same practice. If they are different practices, each different practice needs to be selected/copied/pasted separately.



7. On the **Map** tab, select **Copy**, then select the **arrow** below Paste and click **Paste Special**.



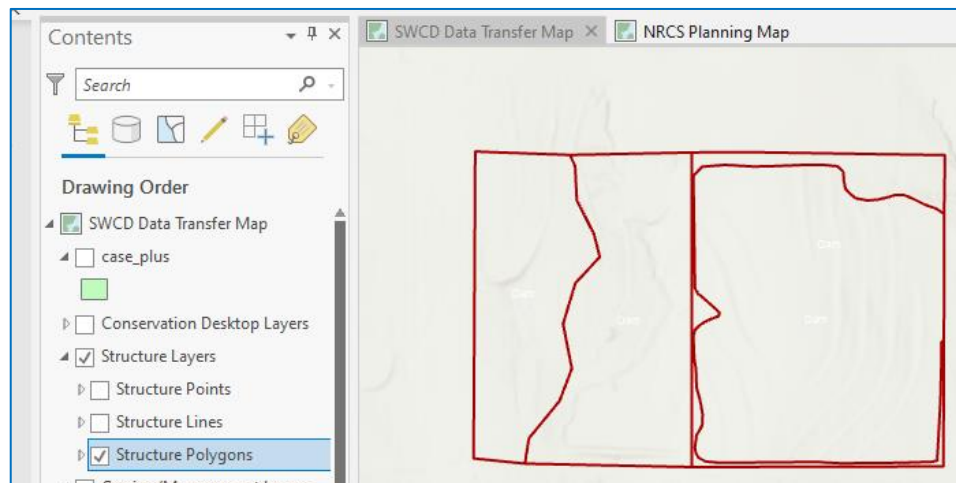
8. A new window will appear asking which layer you wish to paste to. You should see Structure Polygons (or whichever layer you have turned on as your target layer). Most of the SWCD layers have different attributes you can give the new feature. Use the dropdown to expand the list, then select the proper feature type you wish to paste into, then click OK.



9. **Important Note!** The previous 3 steps need to be done in order without clicking anything else in between each step. Clicking other buttons between the select/copy/paste actions may result in copying the wrong data or may fail entirely.

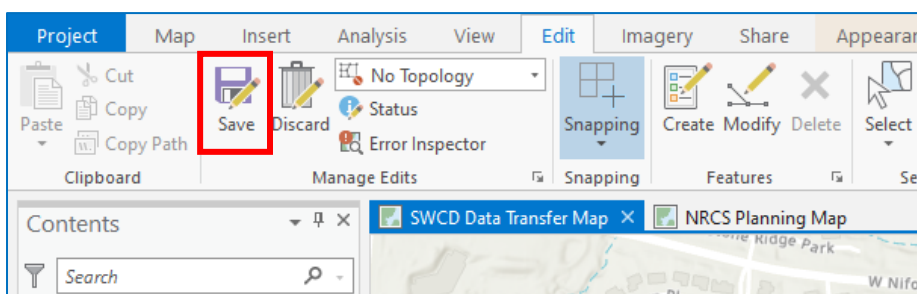


10. You can turn off your source layer to ensure that the features copied successfully.

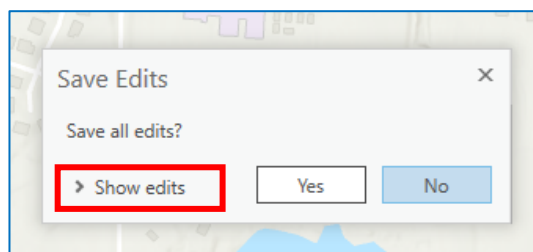


11. Pasting into any other layer in the map is essentially the same process. Make sure you have the correct layers (and no others) turned on prior to starting the select/copy/paste special actions.

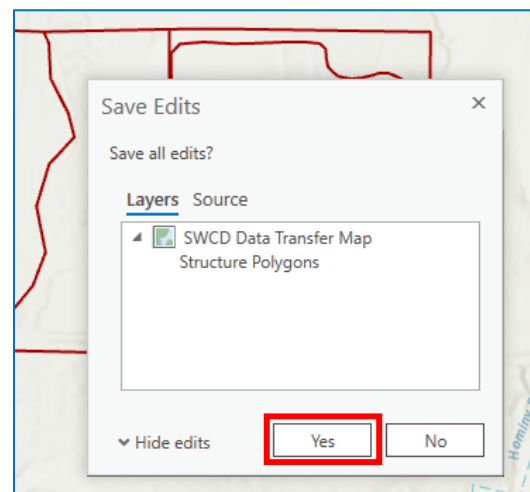
12. Once you are satisfied with the features you have pasted into the target layer, click the Edit tab, then click **Save**. **Do not forget to do this step.**



13. A new dialog box will open asking if you would like to save. If you see a **Show edits** button, click it to ensure you have edited the correct layer. Then click **Yes** to save.



14. You should now be able to view the features you just added in the *Soil and Water App* v2 webapp.

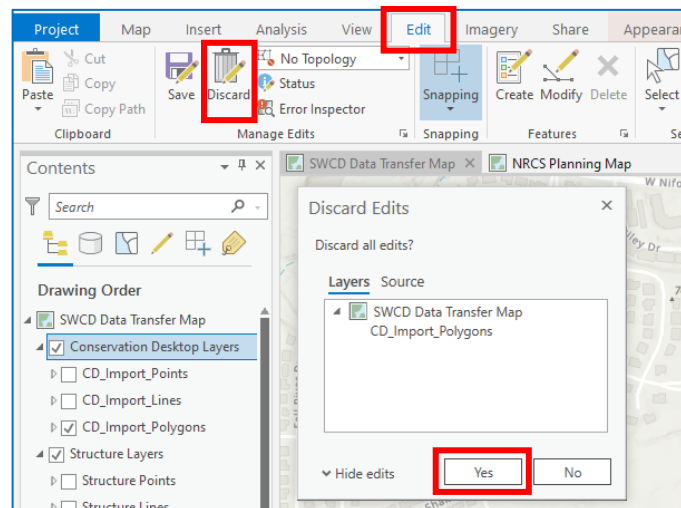


15. **Important Note!** Data shows up in the *Soil and Water App* IMMEDIATELY after you paste it here, regardless of whether you save edits. If you paste something into the layers and realize it needs to be removed, you must do it in the web app. Discarding edits or deleting in Pro DOES NOT delete the features from the web app. See [Section 15](#) for instructions on how to delete features.

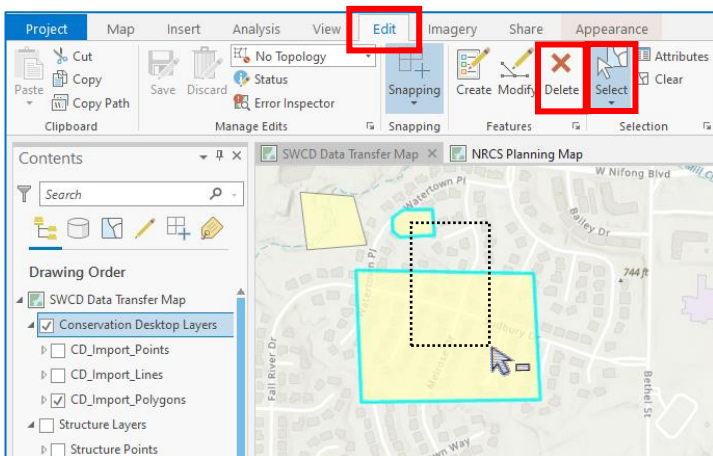
## Section 15: Deleting Features

Features you add to the CD Import Layers and the *Soil and Water App* v2 webapp layers show up IMMEDIATELY after you Paste them into the layers regardless of whether you undo, discard, or save edits. This section goes through the process of deleting features from the layers after you have pasted them in.

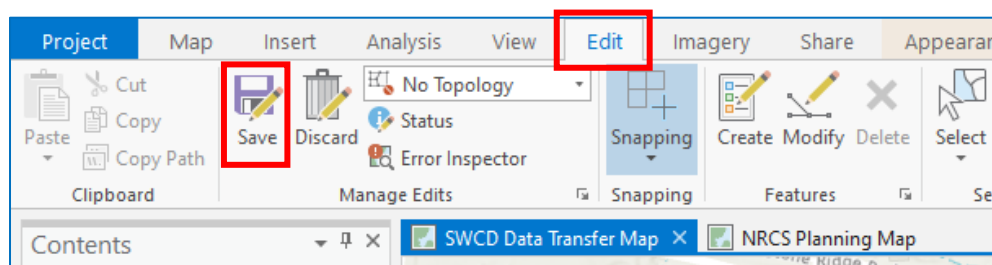
1. For the CD Import Layers, if you have not saved your edits yet, you can click the **Edit** tab, then click **Discard**. A popup will appear asking you to confirm, click **Yes**.



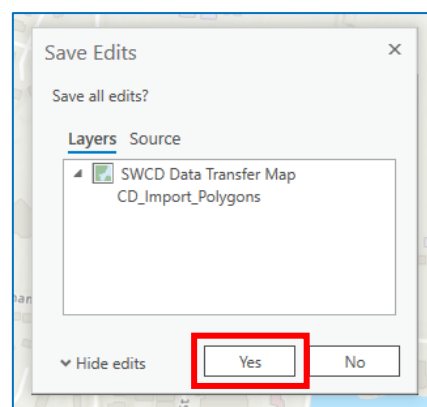
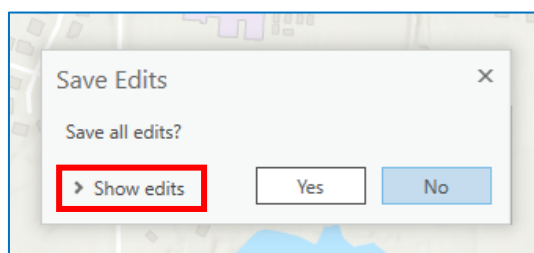
2. If you have already saved edits, click the **Edit** tab, then click **Select**. Drag a box through the features you need to delete, which will turn blue when they are selected, then select **Delete**. You can also use the delete key on your keyboard here.



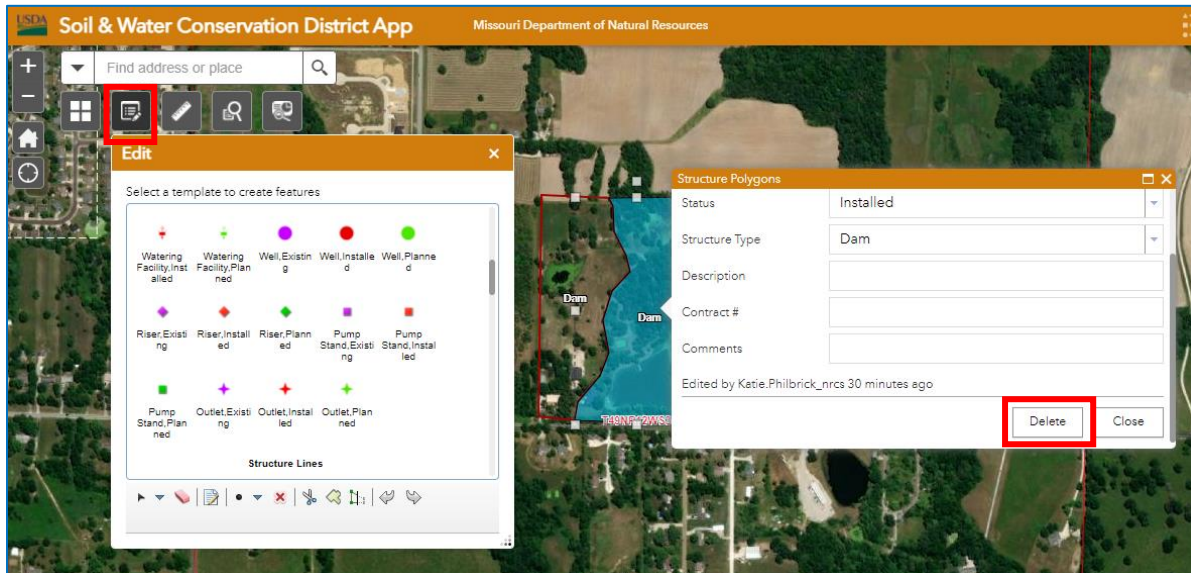
3. Save any edits you have made by clicking the **Edit** tab, then click **Save**.



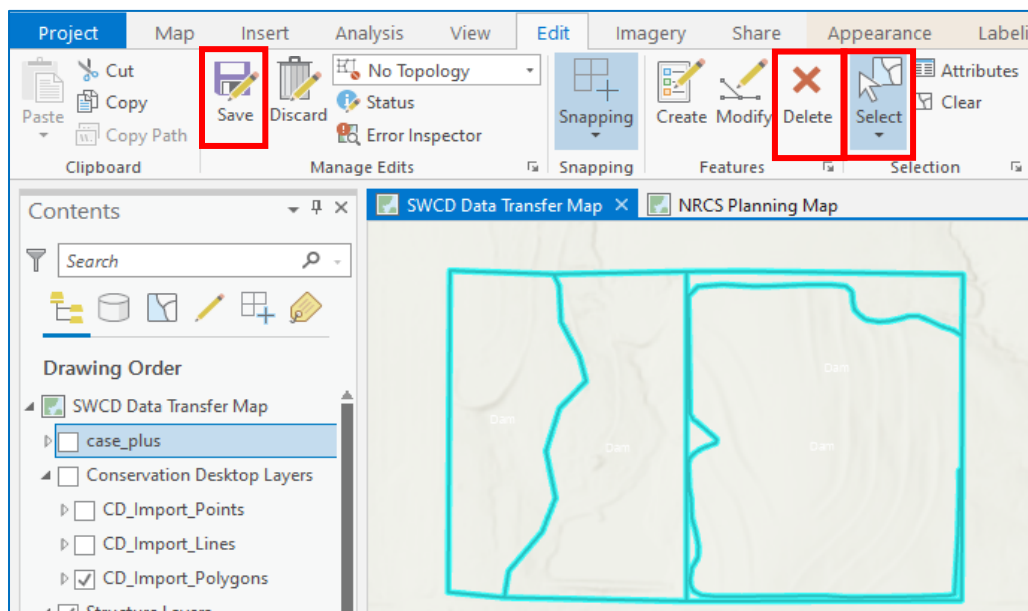
4. A new dialog box will open asking if you would like to save. If you see a **Show edits** button, click it to ensure you have edited the correct layer. Then click **Yes** to save.



5. If you need to delete features in the SWCD layers, you must do it in the *Soil and Water v2* webapp. Go to the webapp and zoom in to the features you need to delete.
6. Click **Edit**, then single click to select the feature you need to delete. A popup will appear, scroll down to the bottom, then click the **Delete** button to delete the feature. You will only be able to do this to features you have added and cannot modify other people's features. Do this for each feature you need to delete – this has to be done one feature at a time.



7. To ensure you have deleted everything successfully pan, zoom in/out, or refresh the page to make sure the feature doesn't show back up. There is a possibility you will have to delete the feature multiple times to remove it fully.
8. Make sure you also check ArcGIS Pro that they have disappeared there too. Pro may auto-update the map after you have removed the features in the webapp, but this is not consistent and it may require you to delete the features from Pro manually. If they do not update, delete them in Pro by selecting the feature you need to delete with the **Select** tool, then click **Delete**. Save edits when you are done.

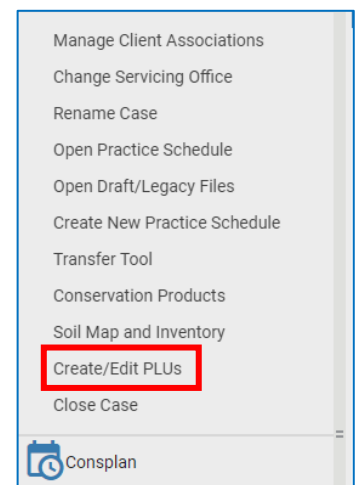
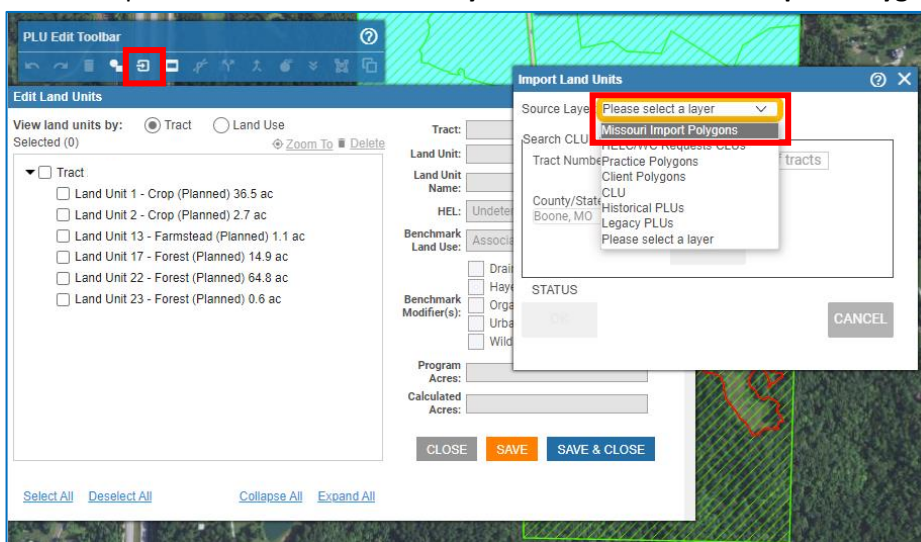
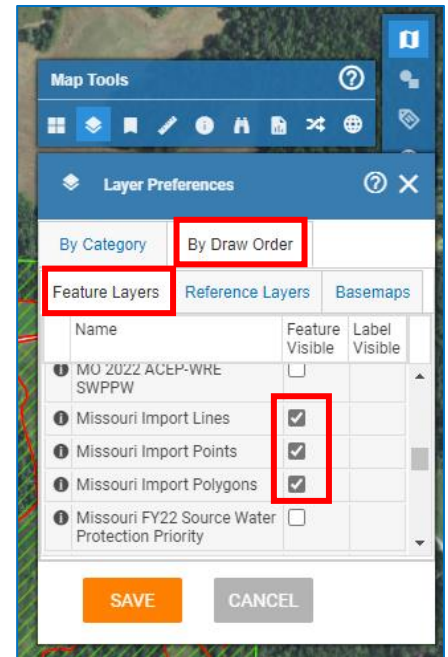
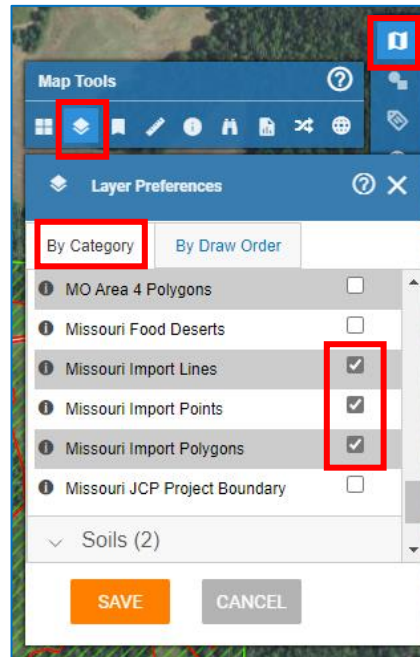


9. Make sure to check BOTH Pro and the webapp that the deletion was successful and that the features no longer appear in either program.

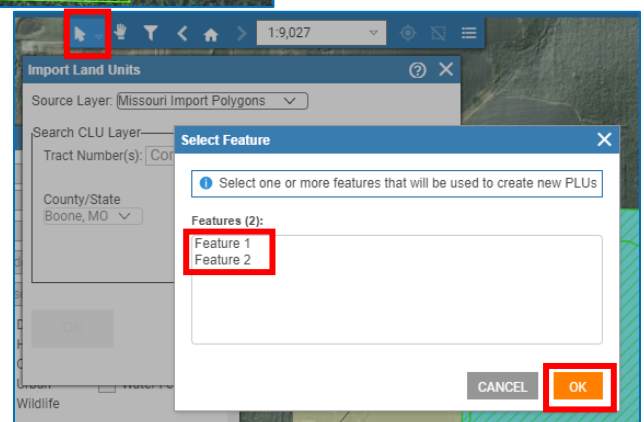


## Section 16: Copying Features into CD Layers

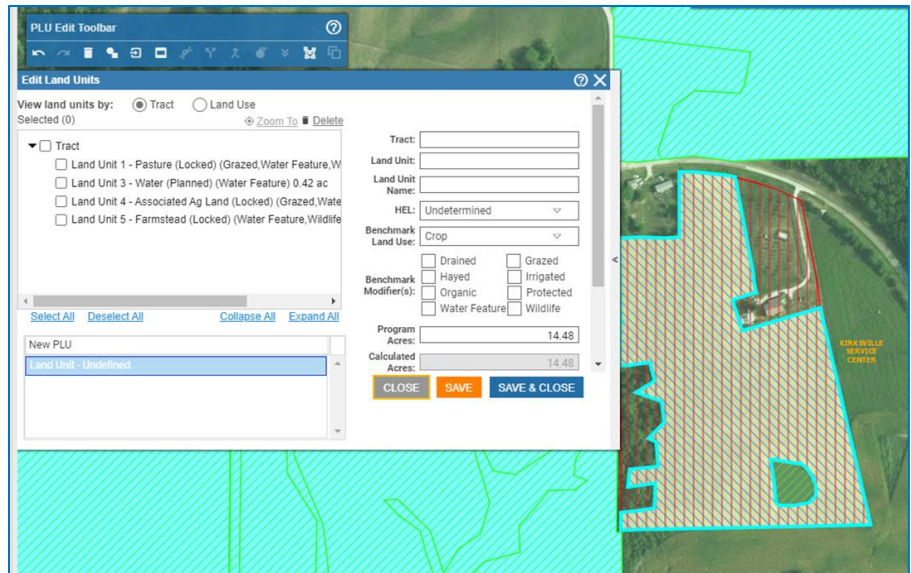
1. To view your features in Conservation Desktop, In the **Layer Preferences** panel, click the **By Category** tab and scroll down and expand the **Project Data** folder.
2. Turn on Missouri Import Lines, Missouri Import Points, and Missouri Import Polygons to make them available.
3. Click the **By Draw Order** tab.
4. Under the **Feature Layers** tab, scroll down to the Import layers and turn them on.
5. They should now be visible when you zoom into your area.
6. Open the case file of your choice.
7. To create PLUs from the import features, select **Create/Edit PLUs** from the menu.
8. Within the PLU edit menu, select the **import land units** icon.
9. Select the dropdown box next to **Source layer** and select **Missouri Import Polygons**



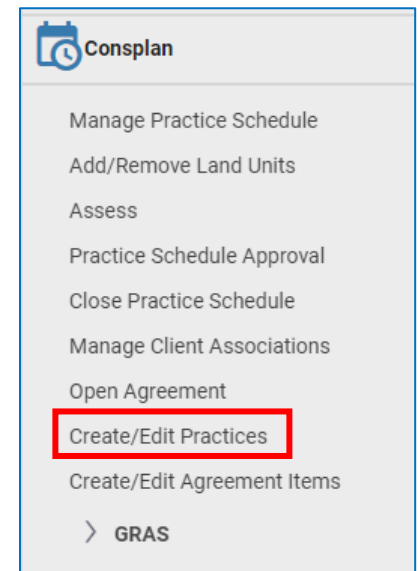
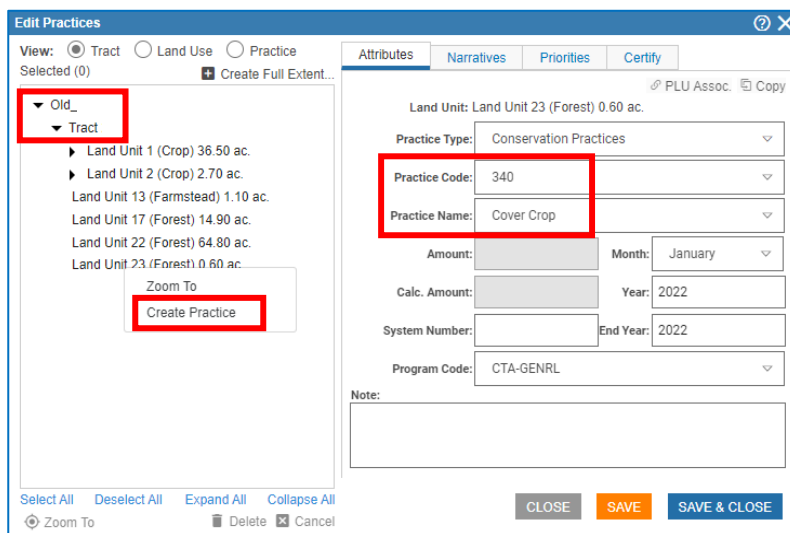
10. Use the selection arrow tool to select the features in the Missouri Import Polygons layer that you would like to import and click **OK**.



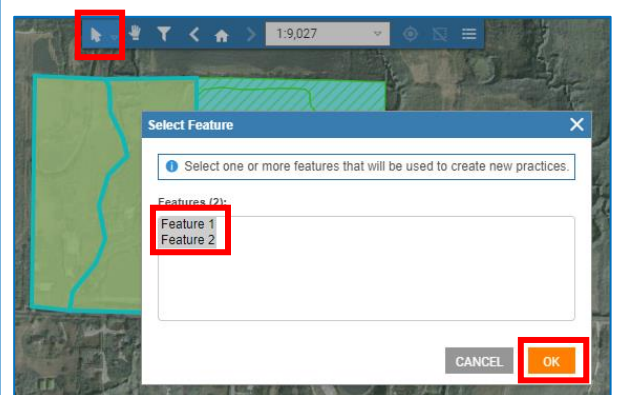
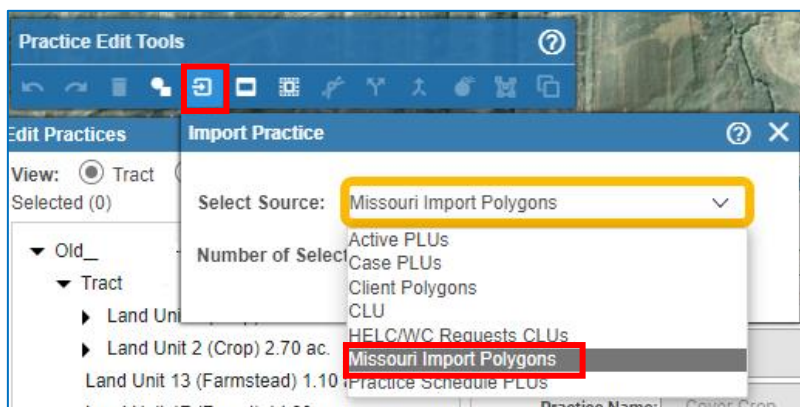
11. Imported shapes will then be available to attribute and save field information.



12. To copy features to practice layers, select **Create/Edit Practices**.
13. In the **Edit Practices** menu, expand the casefile name and tract. In the land unit you wish to add a practice to, right-click it and click **Create Practice**. Then select the **Practice Code/Name** from the dropdowns.



14. Select **Import Practice**, then select the **Missouri Import Points, Lines, or Polygons** layer. Then use the selection arrow tool to select the features from the Missouri Import layer you wish to import into the practice, highlight them in the Select Features dialog, then click OK.



## Part 4: Get Data

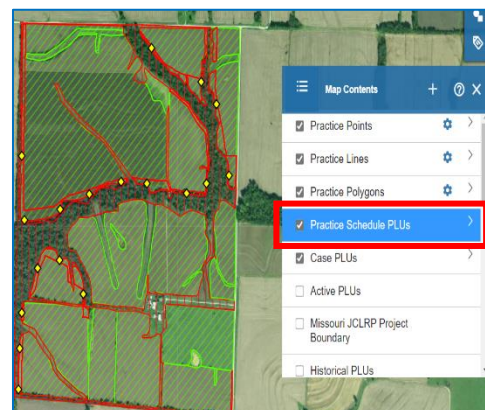
This section covers where to get data. This is not an exhaustive list and the instructions on how to copy to the import and SWCD layers that were outlined in the previous part are the same for any data source that you need.

### Section 17: Downloading Data from CD

1. From the Center Toolbar, select Map Contents.



2. In Map Contents, highlight Practice Schedule PLUs. This will be the layer that features will be exported from.



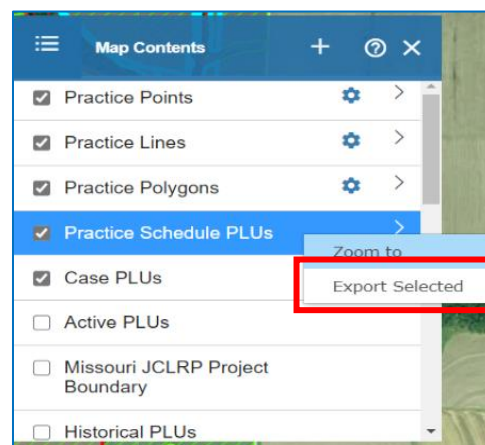
3. Select one or more features to export by clicking the Select button on the Center Toolbar and select Practice Schedule PLUs from the map.



- a. To select a single feature to export, single-click on the feature you wish to select.
- b. To select multiple features to export, click and drag to draw a box.
- c. The **Select Feature** dialog should pop up. Select the desired features (they will highlight in blue when they have been selected).
- d. Click **OK**.

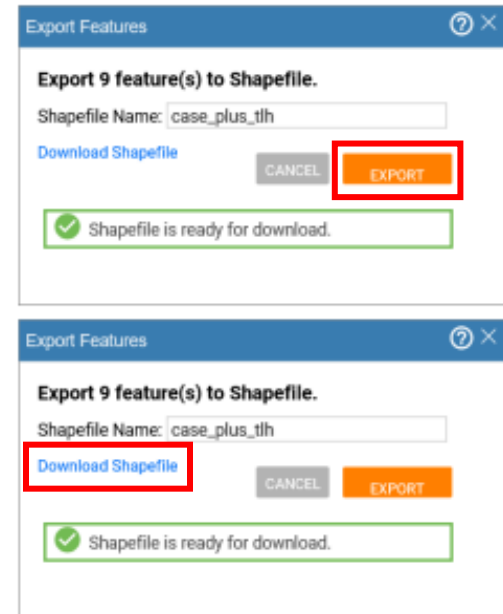


4. Open the **Map Contents** window, then right-click on Practice Schedule PLUs and select **Export Selected**.

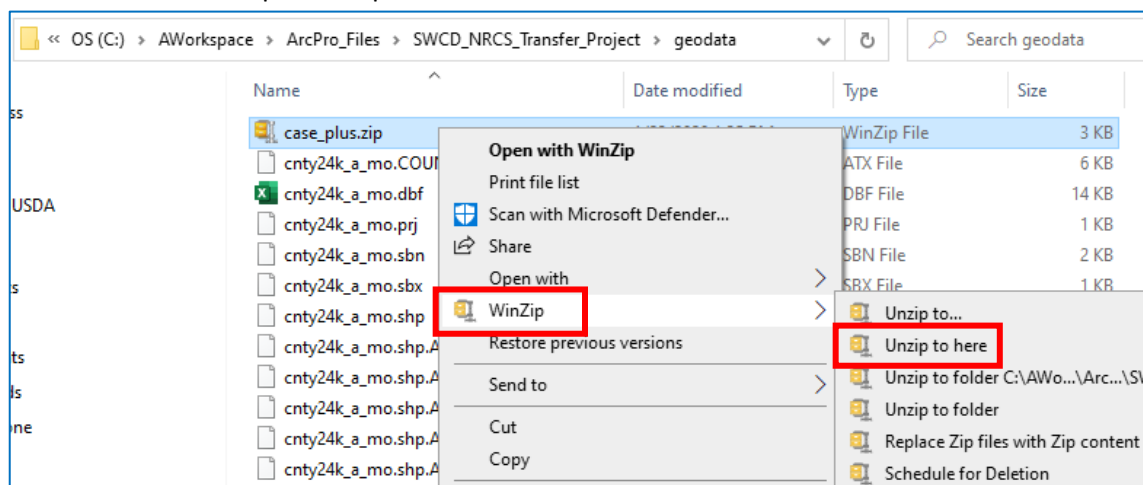
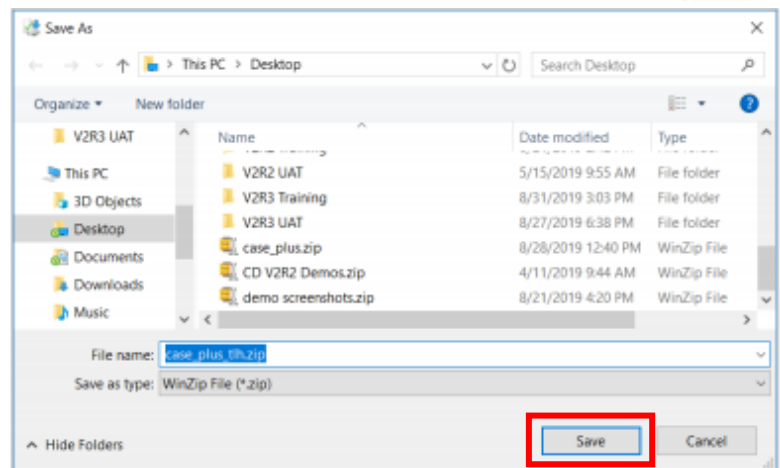




5. The Export Features dialog will open and display the number of features that will be exported. **Shapefile Name** will default to a generic name. Give it a descriptive name to be able to find it on your computer easier, e.g. client name and/or practice schedule name.
6. Click the **EXPORT** button.
7. CD prepares the shapefile for download. When the file is ready, a message is displayed along with a link to download the file.
8. Click the **Download Shapefile** hyperlink.
9. At the bottom of the browser window, click the **arrow** on the right of the **Save** button and select **Save as**. Note: this bar may look different depending on which web browser you are using.



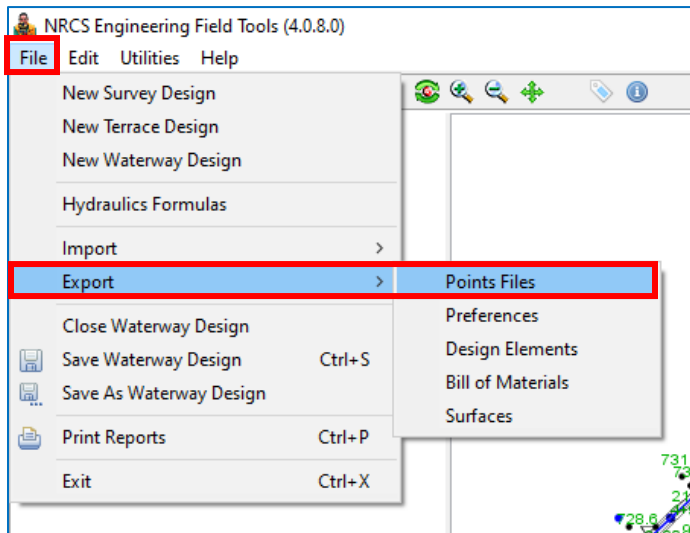
10. Navigate to a location to save the zipped shapefile and click **Save**. Remember where you saved the file. It is recommended that if you have already created a project file, save it in that project file's geodata folder.
11. You will also need to unzip the shapefile. In a Windows folder, navigate to the folder you stored the zip file. Find the zip file, then right-click it and select WinZip → Unzip to here.



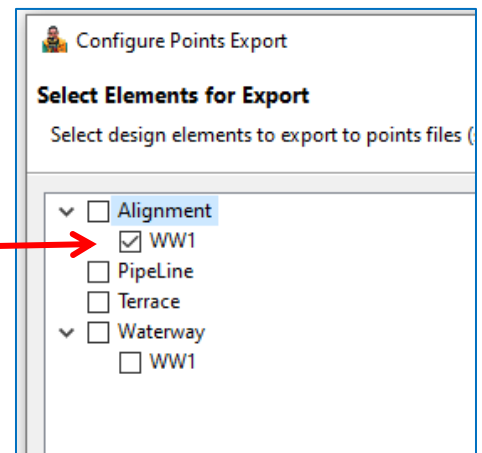


## Section 18: Creating Shapefiles from EFT

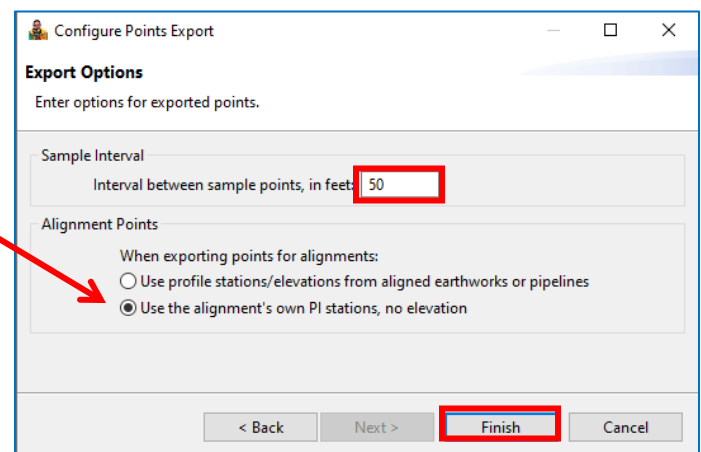
1. Click **File** hover over **Export >** and then click **Points File**.



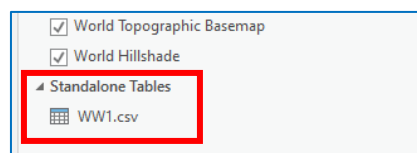
2. Select each alignment to export by placing a checkmark in boxes for each alignment. Then click **Next**.



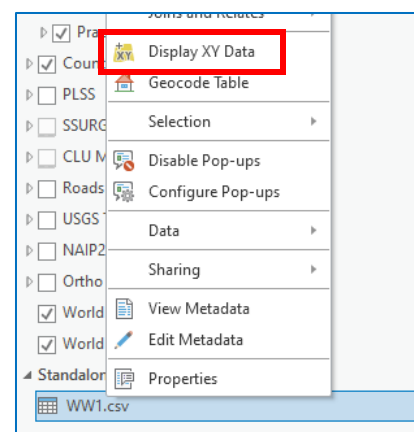
3. Make sure the "Interval between sample points" is set to 50. Choose "Use the alignment's own PI stations, no elevation". Click **Finish**.
4. Make note of where point files are saved  
C:\Users\myName\MyEFTFiles\.eft\ (customer folder)\(EFT project name)\(EFT terrace design name).



5. Switch over to ArcGIS Pro
6. Click Add Data, located on the Map Tab. Navigate to files just created and highlight all of them. Click Add
7. Alignments will appear under the Standalone Tables of the Contents pane on the left side of ArcGIS Pro.



8. Right click on the alignment in the Contents Pane and click Display XY Data.



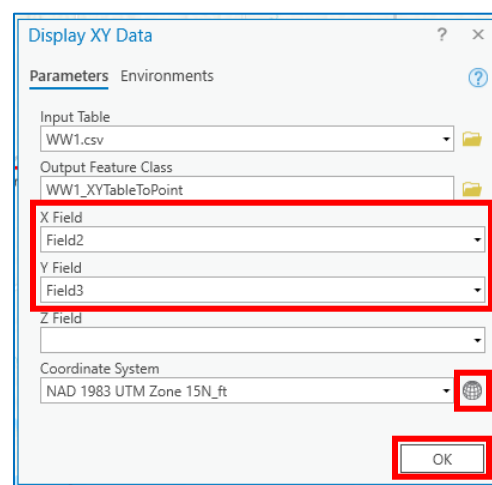
9. Click on drop down for X Field: choose field 2

10. Click on drop down for Y Field: choose field 3

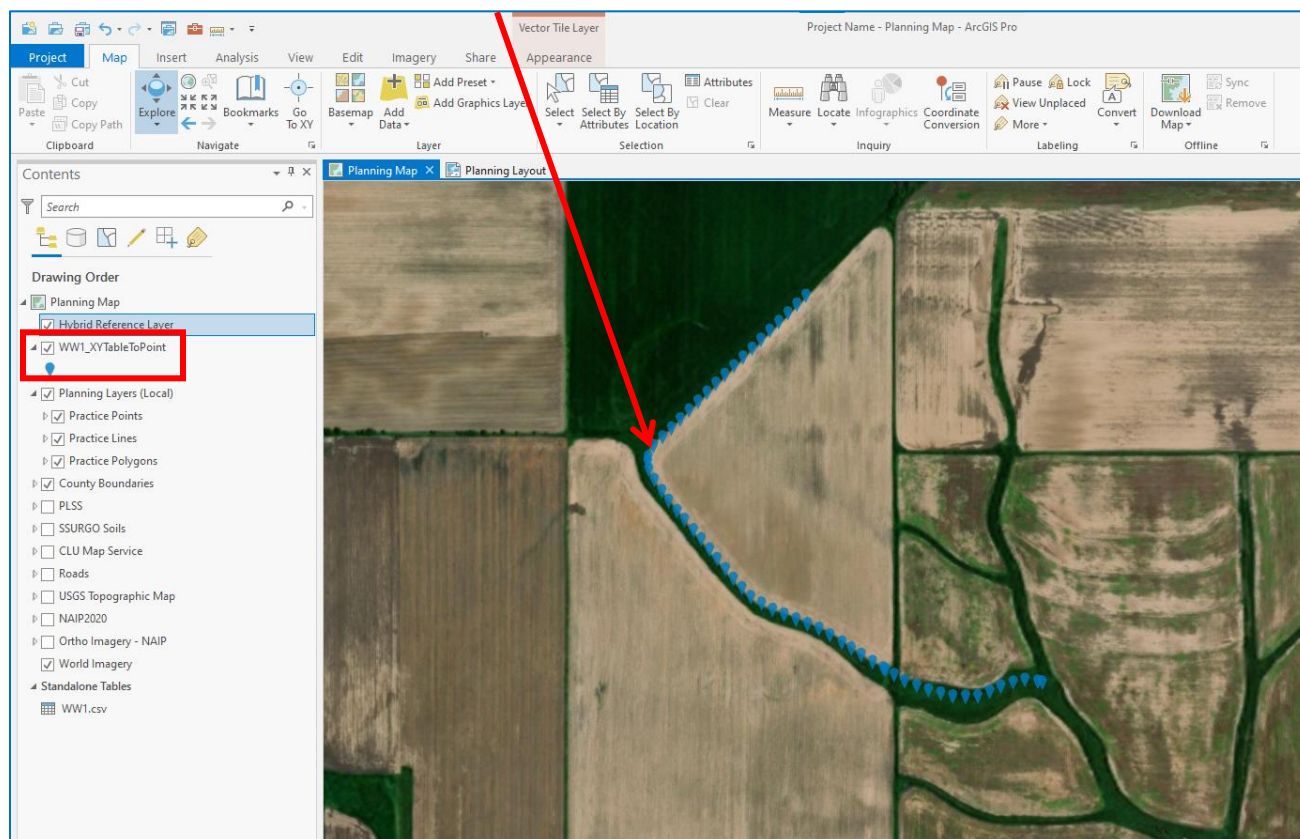
11. **Click the wire globe icon** to the right side of the Coordinate System dropdown and select the NAD 1983 UTM Zone 15N\_ft coordinate system under favorites.

12. If you do not have any coordinate systems under Favorites, see Section 7 for instructions on how to add them.

13. Click **OK**.



14. Points of terrace lines will show up on ArcGIS Pro. Use the NRCS Engineering Tools to determine drainage areas for each terrace.



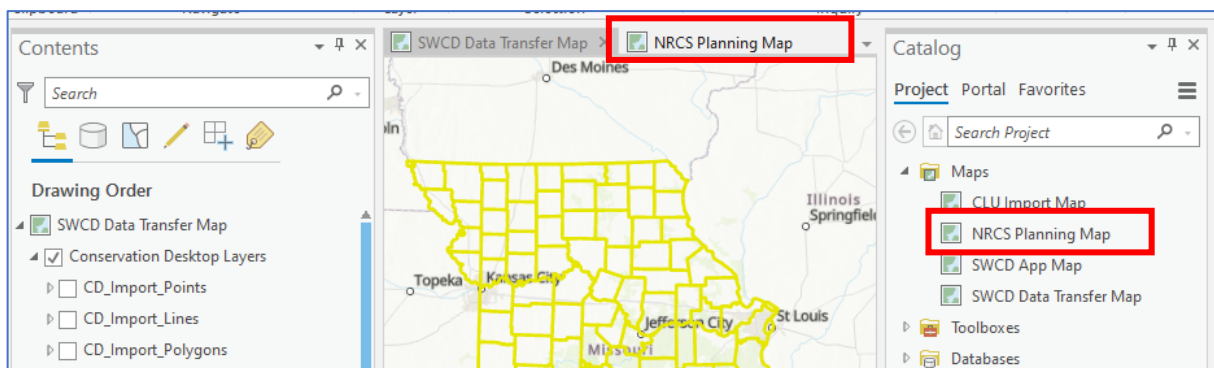
## Part 5: Maps and Layouts

This part covers how to use the NRCS Planning map layers and how to use the included layouts with the provided maps.

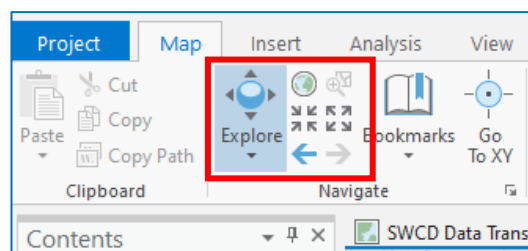
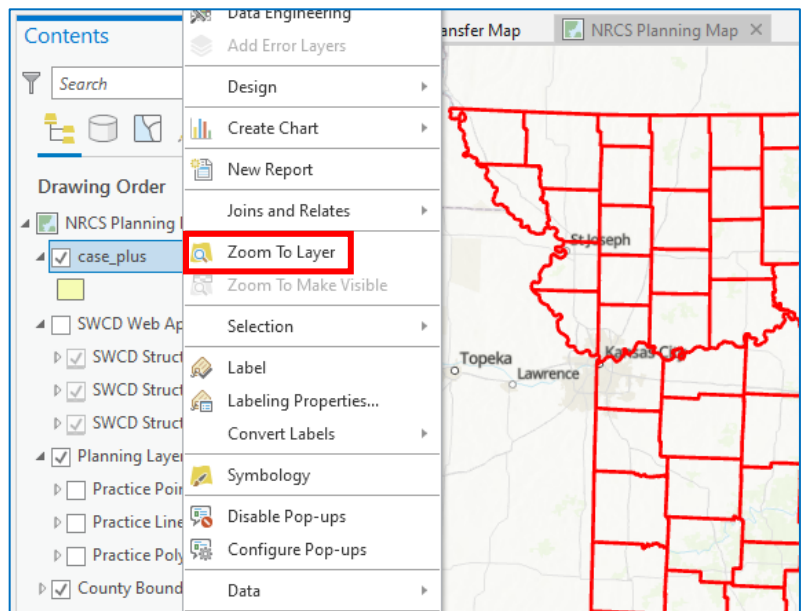
### Section 19: NRCS Planning Layers

The NRCS Planning layers are provided to have an option for creating conservation plan maps outside of Conservation Desktop. They are not meant to replace those maps but can supplement them when those are not sufficient for the needs. The layers are set up with standard NRCS symbology already applied, with added functionality of differing colors if the feature is Applied or Planned.

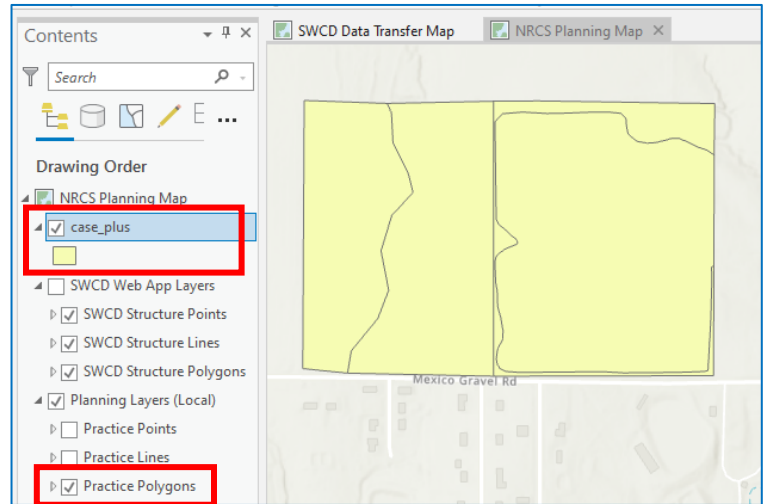
1. There are two options for creating features in the Practice layers. The first is to copy from another layer.
2. Find the **NRCS Planning Map** in your Map Pane. If this Pane is not already loaded, use the catalog (open it if needed by going to View → Catalog Pane). Under Maps, double-click **NRCS Planning Map**.



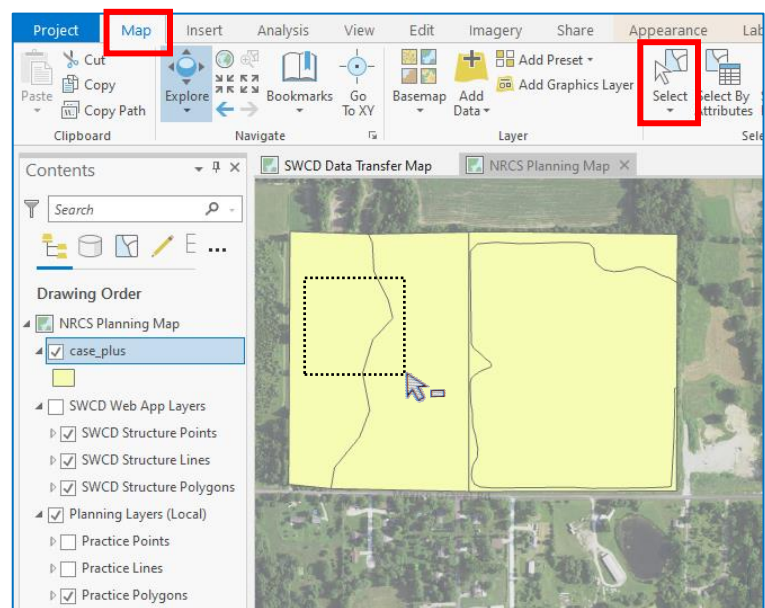
3. To copy features to the **NRCS Planning Layers**, you will need to add the shapefile or feature class you want to copy data from into the NRCS Planning Map. See [Part 4](#) on how to download shapefiles from CD and EFT, and [Section 11](#) for how to add shapefiles/feature layers to the current map.
4. You also have the option of copying from the SWCD Points/Lines/Polygons layers that are provided in the NRCS Planning Map. Any of the other SWCD layers can be added to this map if needed as well.
5. If you added your own layer, you can zoom to it by right-clicking it and select **Zoom To Layer**.
6. All other layer types will need to use the **Explore** and **Zoom In/Out** buttons on the Map tab to go to the needed area.



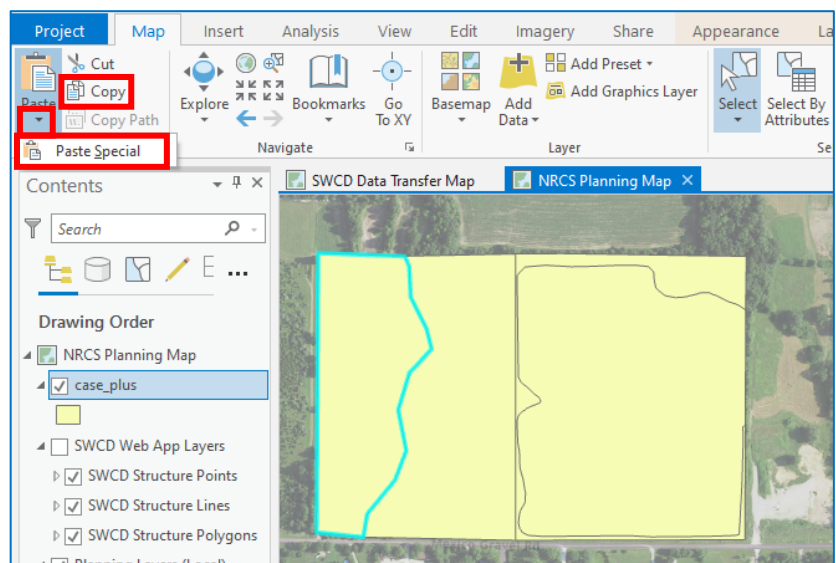
7. When you are in the area, you can set up your layers to do the copy. It is recommended that you turn off all layers that will not be part of the copy/paste action to ensure you aren't selecting features in other layers unintentionally. Turn off all other layers besides the data **source** layer (the one you wish to copy from) and the **target** layer (the one you wish to copy to). In this example, the only layers that are turned on are **case\_plus** layer (source layer) and **Practice Polygons** (target layer).



8. Using the **Select** Tool on the **Map** tab, drag around the features you wish to copy. The selected features will outline in light blue to indicate they are selected.
9. Only select multiple features if you will be pasting them in as the same practice. If they are different practices, each different practice needs to be selected/copied/pasted separately.

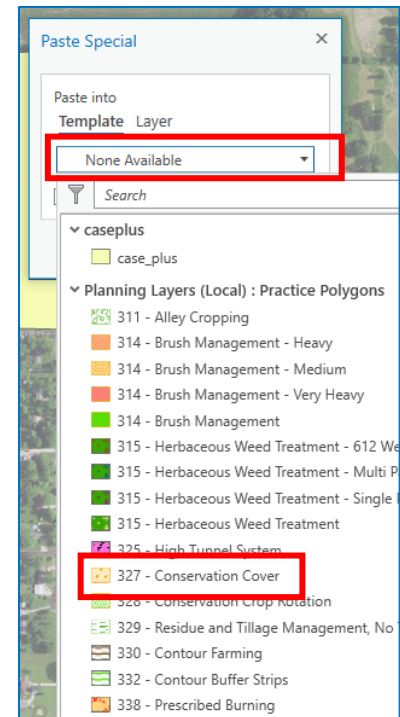
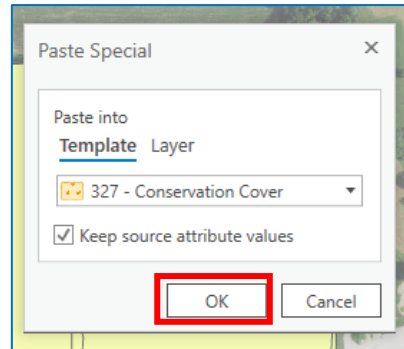


10. On the **Map** tab, select **Copy**, then select the **arrow** below Paste and click **Paste Special**.



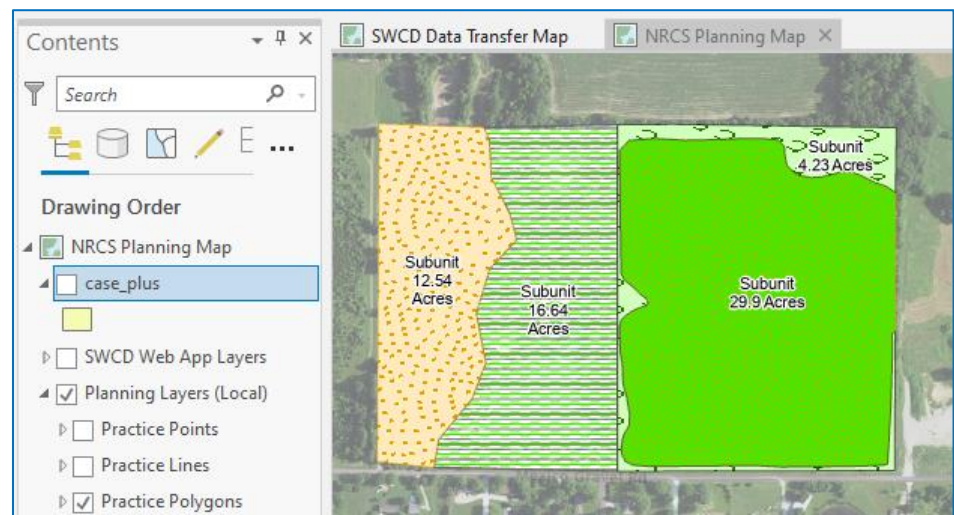


11. A new window will appear asking which layer you wish to paste to. Under the Template dropdown, you should see Planning Points, Lines, or Polygons as an option (whichever layer you have turned on as your target layer). Use the dropdown to expand the list, then select the proper feature type you wish to paste into. Ensure that the Keep source attribute values option is checked **ON** then click **OK**. Pro will automatically symbolize the map with the selected Practice symbol.

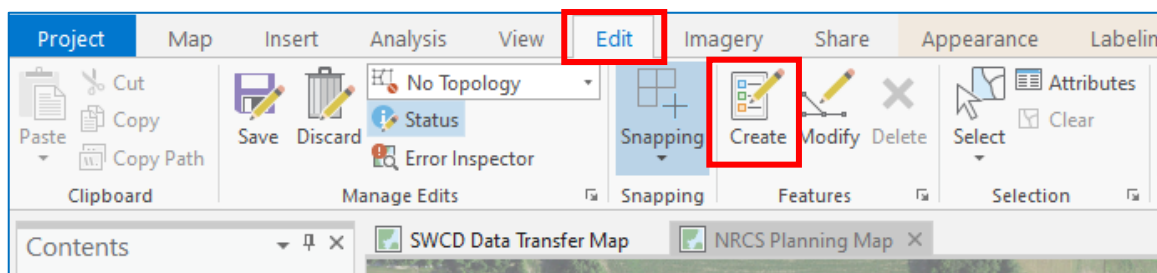


12. Do this for each Practice you wish to copy.
13. **Important Note!** The Select/Copy/Paste steps need to be done in order without clicking anything else in between each step. Clicking other buttons between the select/copy/paste actions may result in copying the wrong data or may fail entirely.

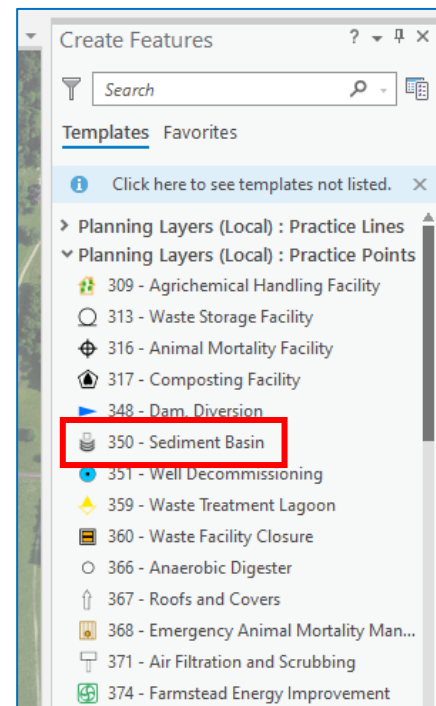
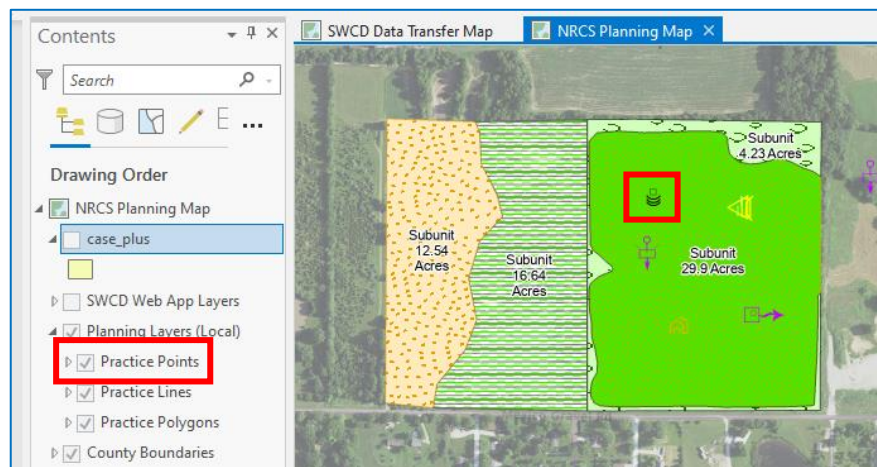
14. You can turn off your source layer to ensure that the features copied successfully.
15. Pasting into the any other layer in the map is essentially the same process. Make sure you have the correct layers (and no others) turned on prior to starting the select/copy/paste-special actions.



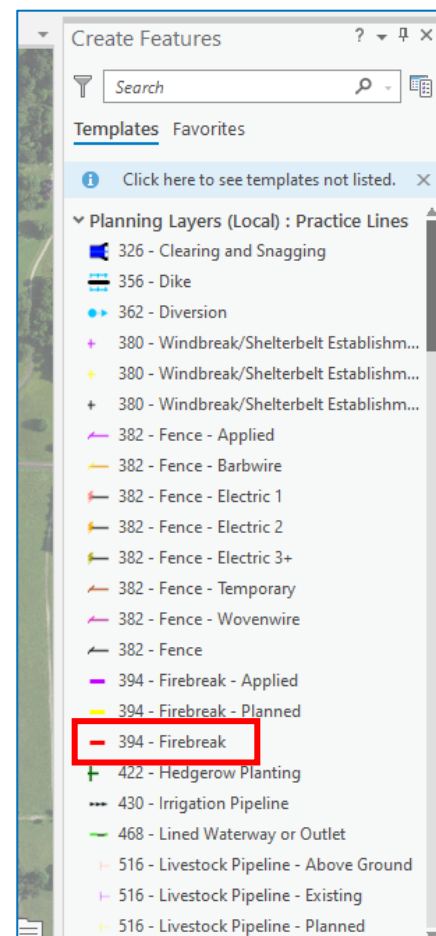
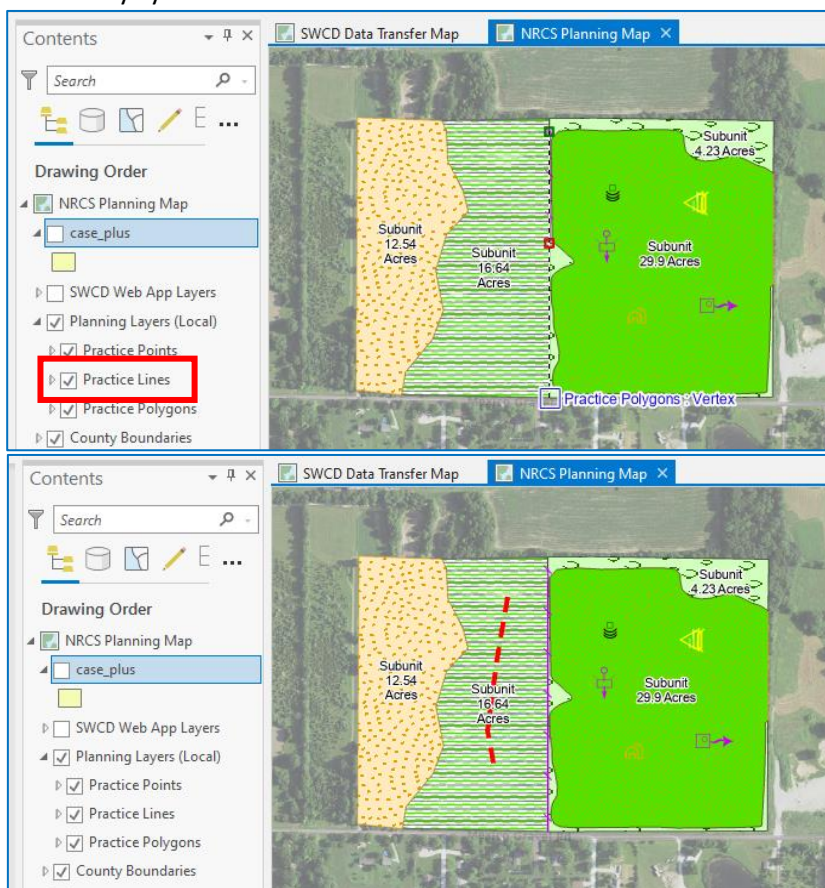
16. You also have the option of creating your own features directly in the Planning layers. To do this, select the Edit tab, then select Create.



17. The **Create Features** pane will open. From this pane, you will be able to add features to any of the layers that are currently checked on and visible in the map.
18. For points, make sure **Practice Points** is checked on, then select the practice you need in the **Create Features** pane. A single click on the map will create the point. Click once for each practice of that type you need to add. Do this for each feature type you need to add.

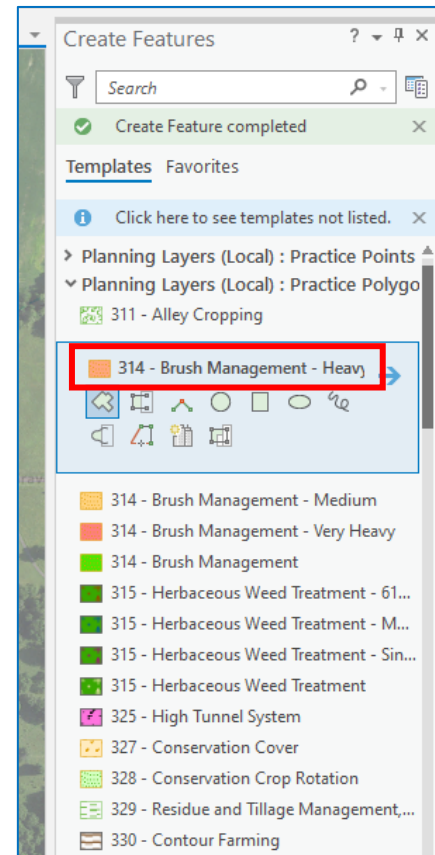
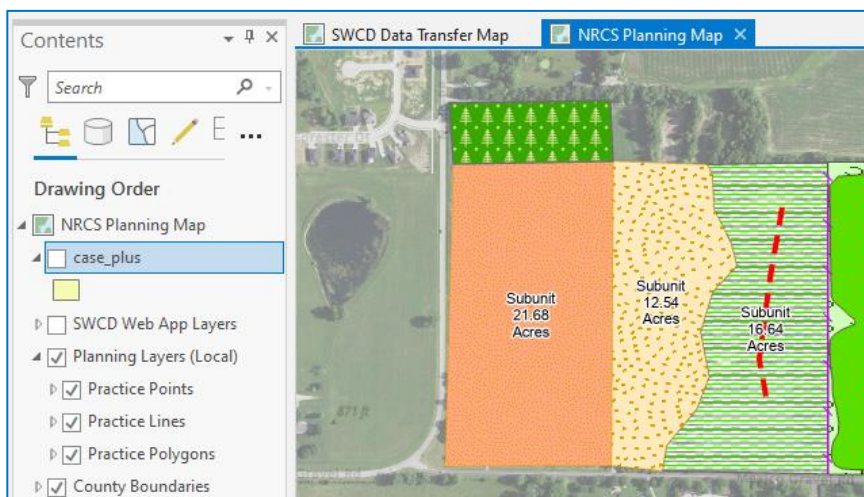
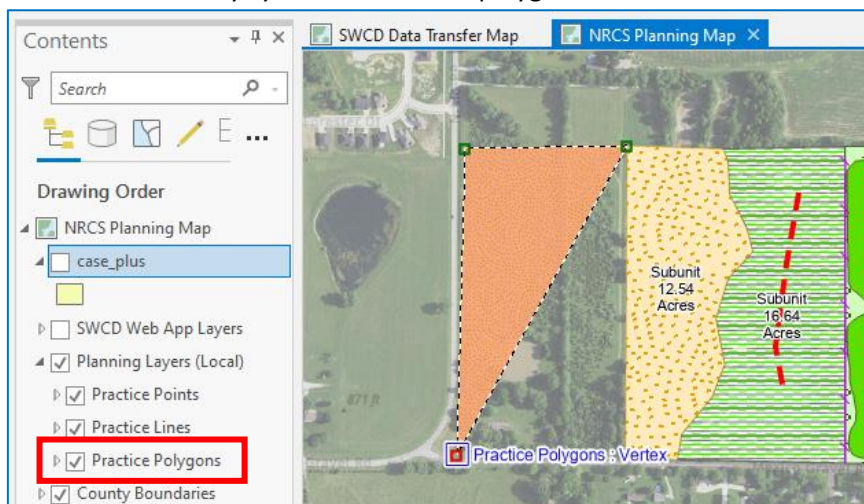


19. For lines, you need to have at least two vertices to create the line. Make sure **Practice Lines** is checked on, then select the practice you need in the **Create Features** pane. Click on the map where you would like to place each vertex. On the final vertex, double-click to finish the sketch. Pro will automatically symbolize the new line.



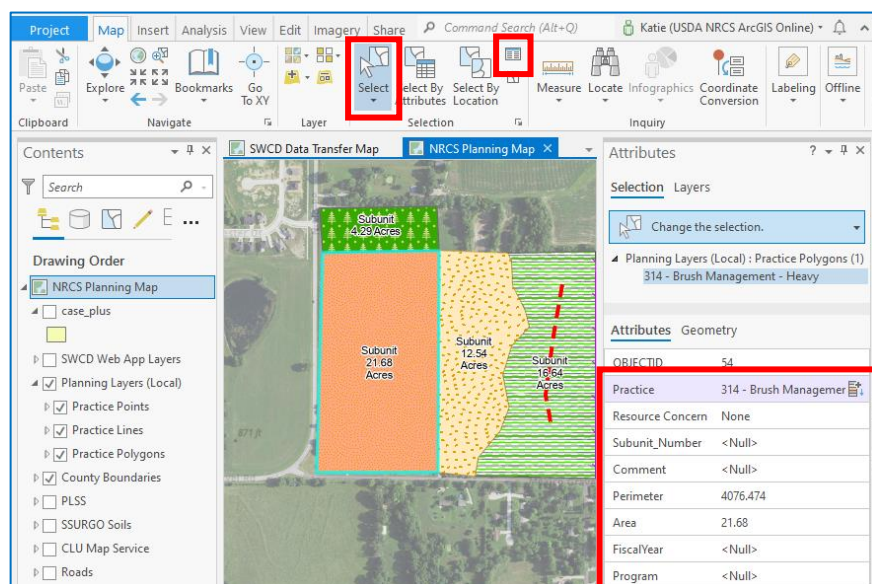
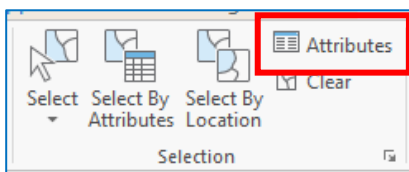


20. For polygons, a minimum of 3 vertices are needed to create the polygon. Make sure **Practice Polygons** is checked on, then select the practice you need in the **Create Features** pane. Click on the map where you would like to place each vertex. On the final vertex, **double-click** to finish the sketch. Pro will automatically symbolize the new polygon.



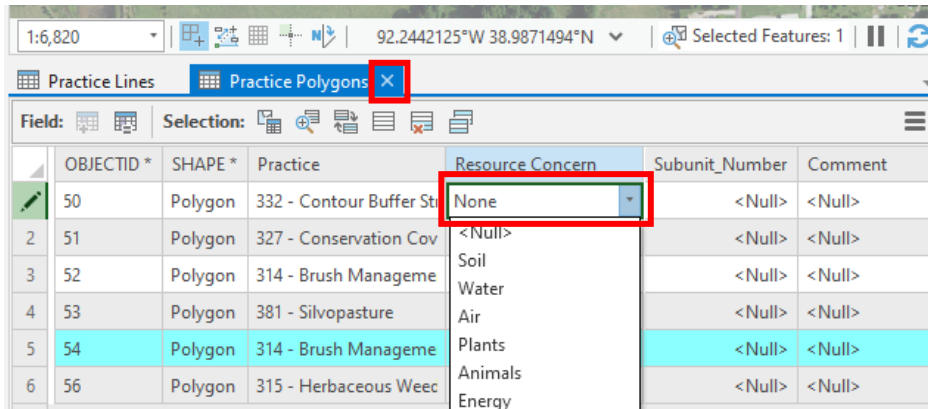
21. Each layer has an attribute table associated, which will allow you to fill in other information about the feature. You can add information about a single feature by selecting the feature, then opening **Attributes**.

22. You can click any field in the **Attribute Pane** to give it an attribute. Some of the features have dropdowns to pick from a list.

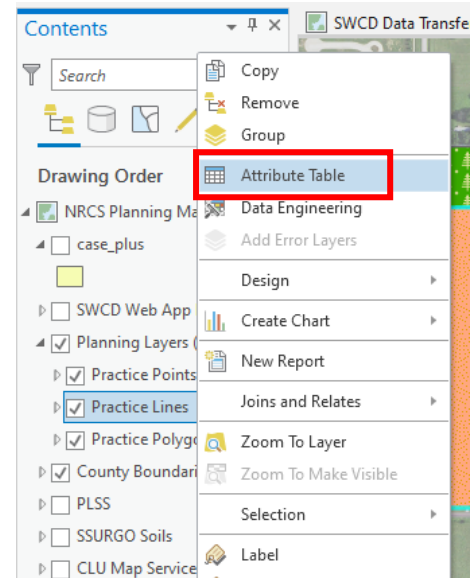




23. If you need to open the full attribute table, which houses all features in the layer, **right-click** the layer, then click **Attribute Table**. You will be able to add information to the feature by double-clicking in the attribute you wish to modify. Some fields have dropdown lists you can pick a value from. When you are done editing attributes, click the X button on the table to close it.

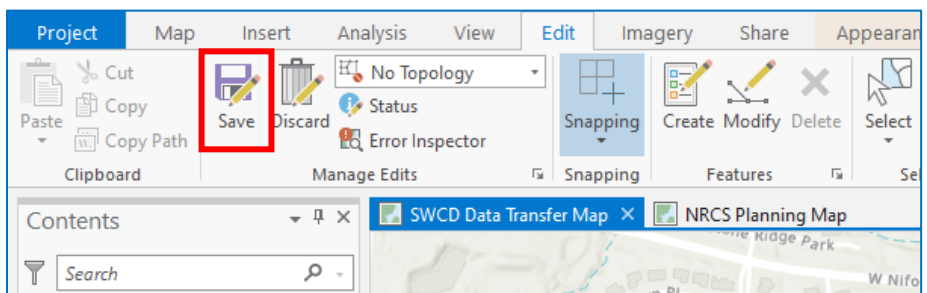


OBJECTID	SHAPE	Practice	Resource Concern	Subunit_Number	Comment
50	Polygon	332 - Contour Buffer St	None	<Null>	<Null>
51	Polygon	327 - Conservation Cov	<Null>	<Null>	<Null>
52	Polygon	314 - Brush Manageme	Soil	<Null>	<Null>
53	Polygon	381 - Silvopasture	Water	<Null>	<Null>
54	Polygon	314 - Brush Manageme	Plants	<Null>	<Null>
56	Polygon	315 - Herbaceous Weec	Animals	<Null>	<Null>
			Energy		

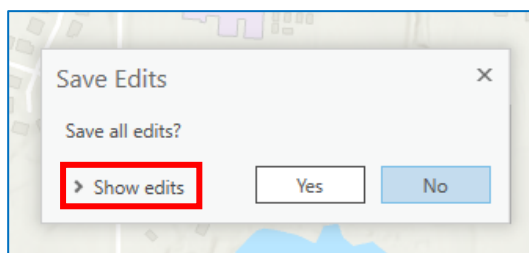


24. Anything you fill out in the attribute table can be used to create labels.

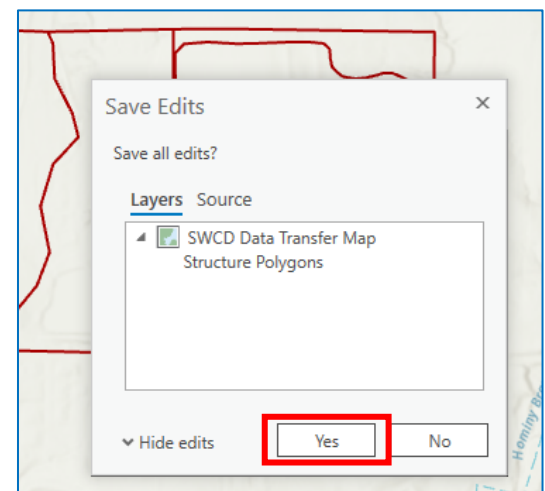
25. With either method of creating features (copying or creating new), once you are finished editing, you need to save your edits. Click the Edit tab, then click **Save**.



26. A new dialog box will open asking if you would like to save. If you see a **Show edits** button, click it to ensure you have edited the correct layer. Then click **Yes** to save.



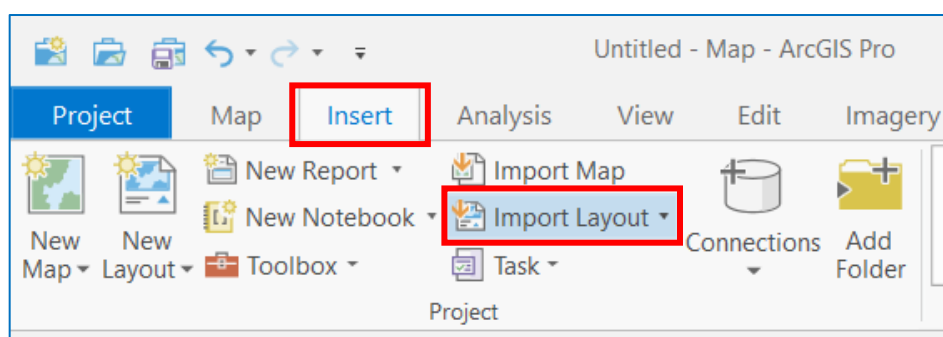
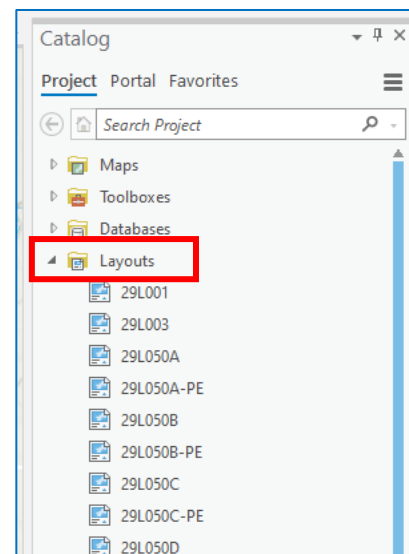
27. You can also discard your edits by clicking the Edit tab, then click Discard. A new dialog box will open asking if you would like to discard edits, click **Yes**.



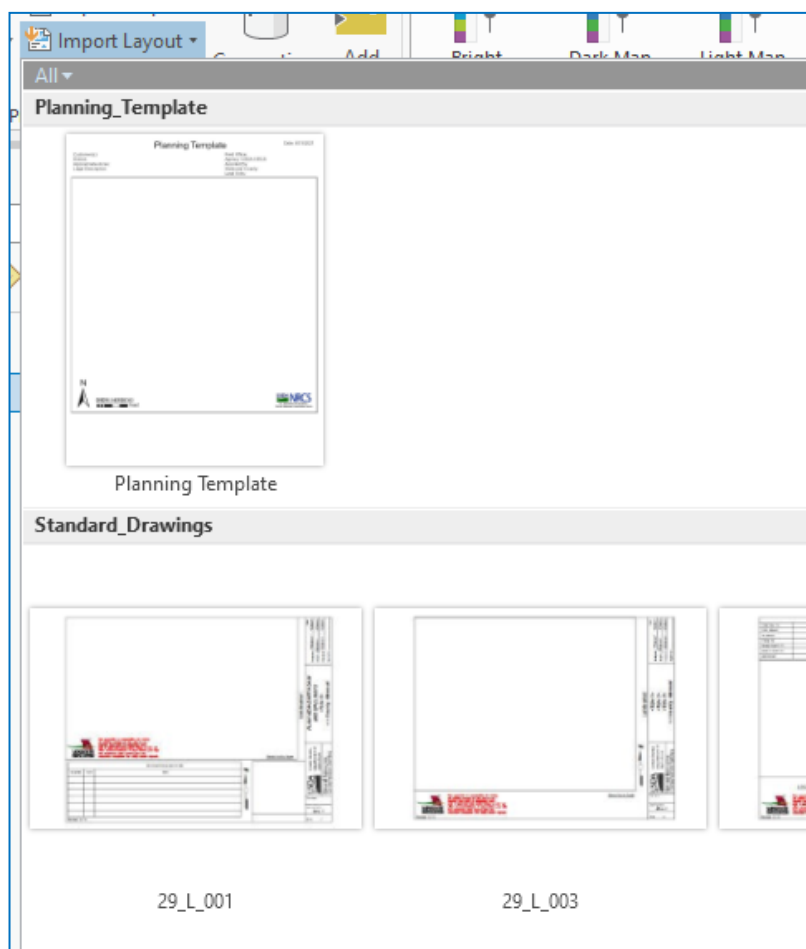
28. Important Note! Save/Discard will save or discard ALL edits made to ANY layer in the project, even ones on different maps. You will not be able to save or discard partial edits – it is all or nothing. If you find you have edited a layer you did not intend and need to discard those edits, you will have to discard edits on ALL layers since the last save.

## Section 20: Layouts

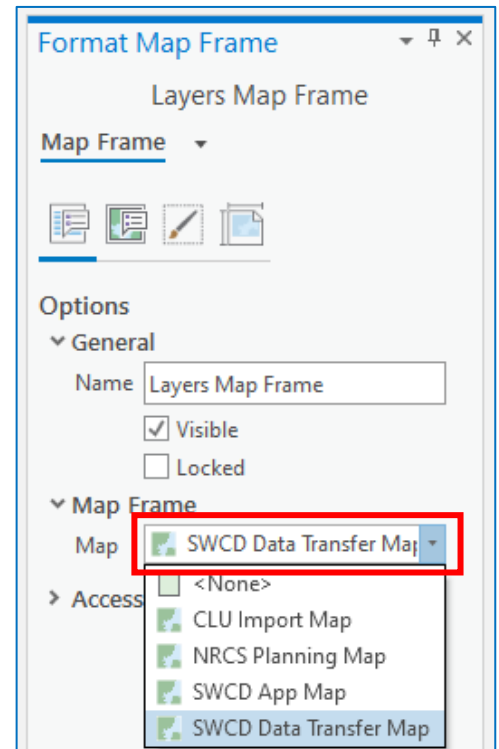
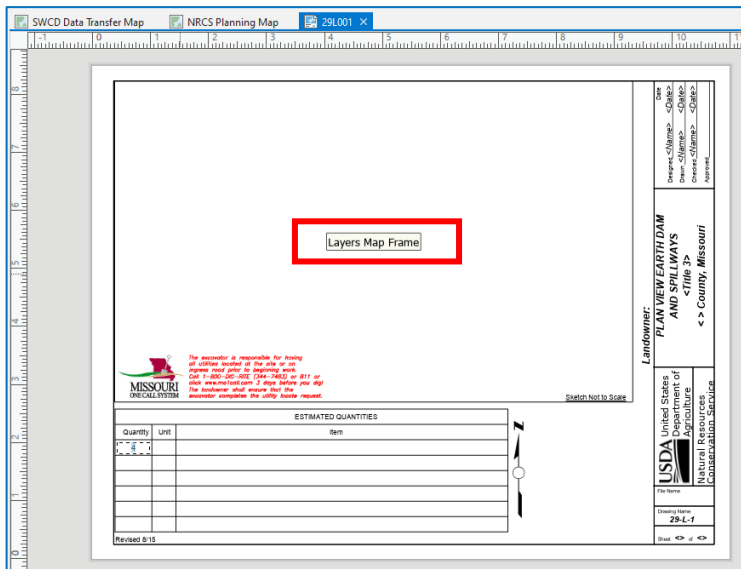
1. There are two ways you can add layouts to your maps. If you have one of the provided projects open, most layouts have already been added to the Layouts folder in the Catalog Pane.
2. Open the Catalog Pane by going to View → Catalog Pane if needed.
3. To add any of these layouts, click the **Layout** folder then double-click the layout you wish to open.
4. If you have created a new project or would rather import a new layout, select the **Insert** tab, then click on **Import Layout**. Note this method will create a second layout of this type in the layouts folder since they've already been loaded into the project. If you don't want this, follow step 3 above to open the layout from the catalog. The Planning Template layout should not be opened this way in the provided project files or templates.



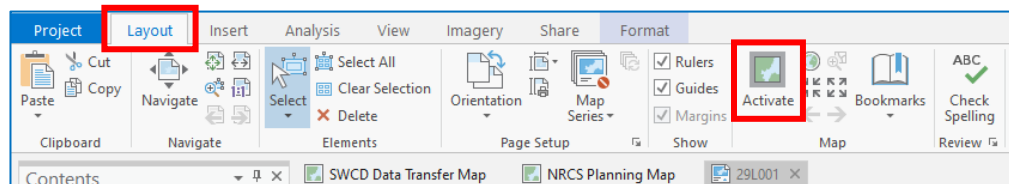
5. A window will display showing the available layout templates. You should see 2 sections – Planning\_Template and Standard\_Drawings. Click on the desired template.



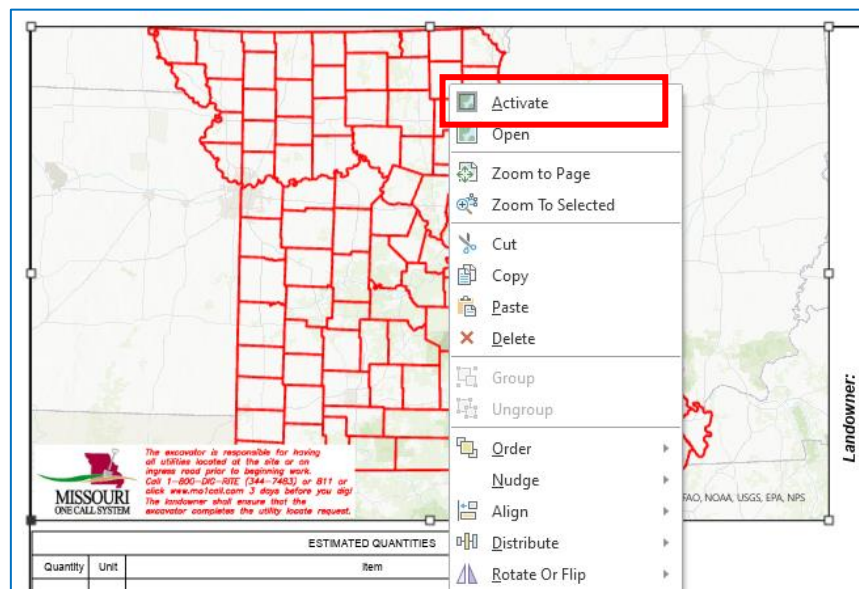
6. With either method, a new layout tab with the selected layout will open in the Map Pane.
7. You will need to associate the map frame to a map. To do this, double-click in the **Layers Map Frame** area. This will open the **Format Map Frame** pane. Under Map Frame, use the drop-down to select the map you need.



8. Unlike ArcMap, the layouts are not tied to the current view scale and location on the associated map, so you have to zoom/pan to the required area manually within the layout itself. To set this in the layout Map Frame, first select the frame and then do one of the following:
  - a. Using ribbon – Select Layout tab and then click **Activate** on Map panel.

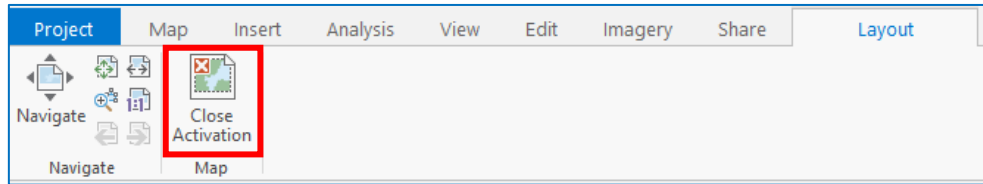


- b. Using mouse – Right-click in the map frame and select **Activate**.

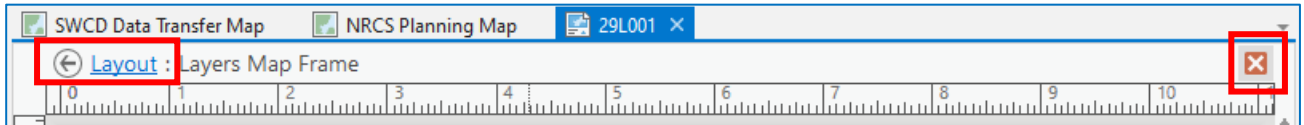


9. You can now zoom and pan the map within the map frame to obtain desired view. Once you are satisfied, you can do one of the following:

- a. Using ribbon – Select Layout tab and then click **Close Activation** on Map panel.

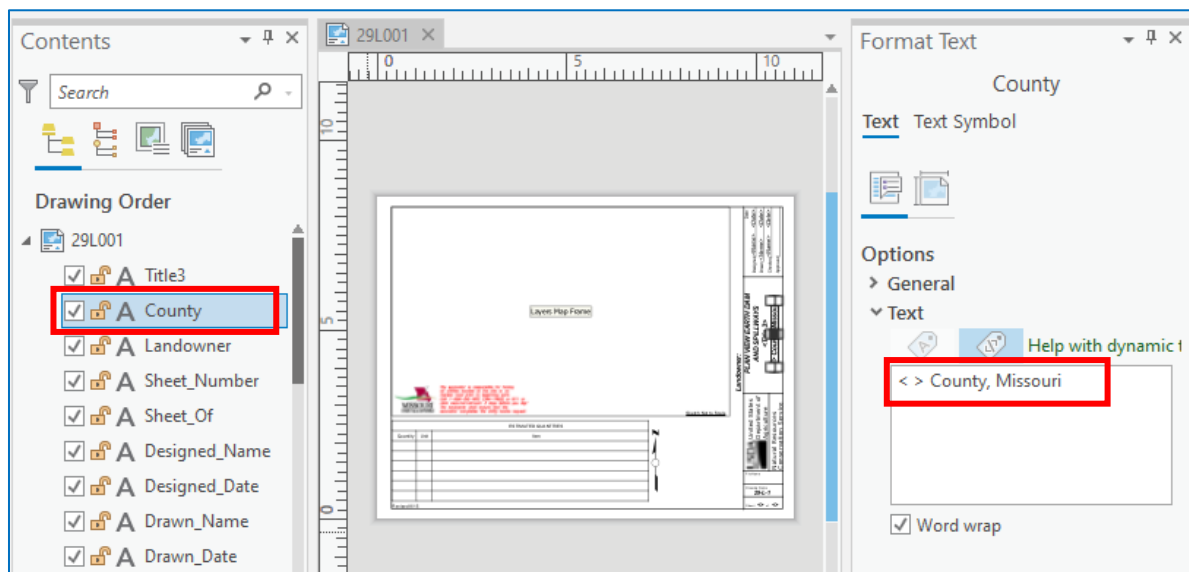


- b. Using mouse – Click the back arrow or Layout link at upper left of Layout window or the red/white X button at upper right of layout window.

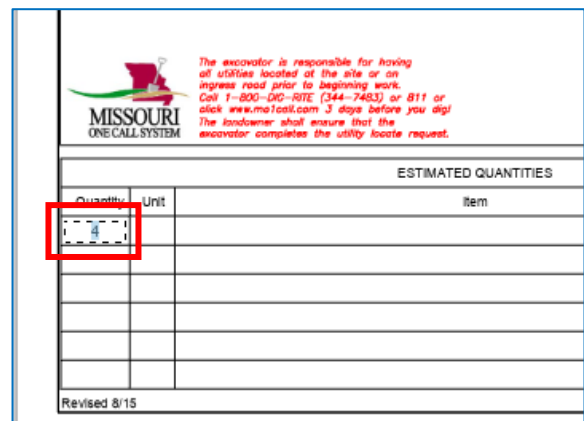


10. Some layouts may have fillable fields. If so, these fields will be listed in the layout **Contents** pane. You can fill in the fields in one of the following ways:

- a. Double-click on field name in the **Contents** pane. If the **Format Text** pane is already open, a single click will be sufficient. You can then enter text in the box under Text in the Format Text pane.



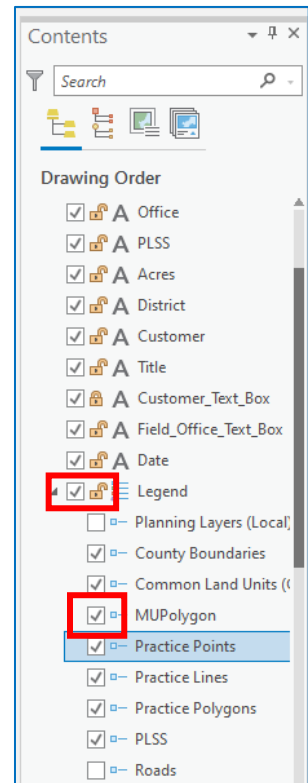
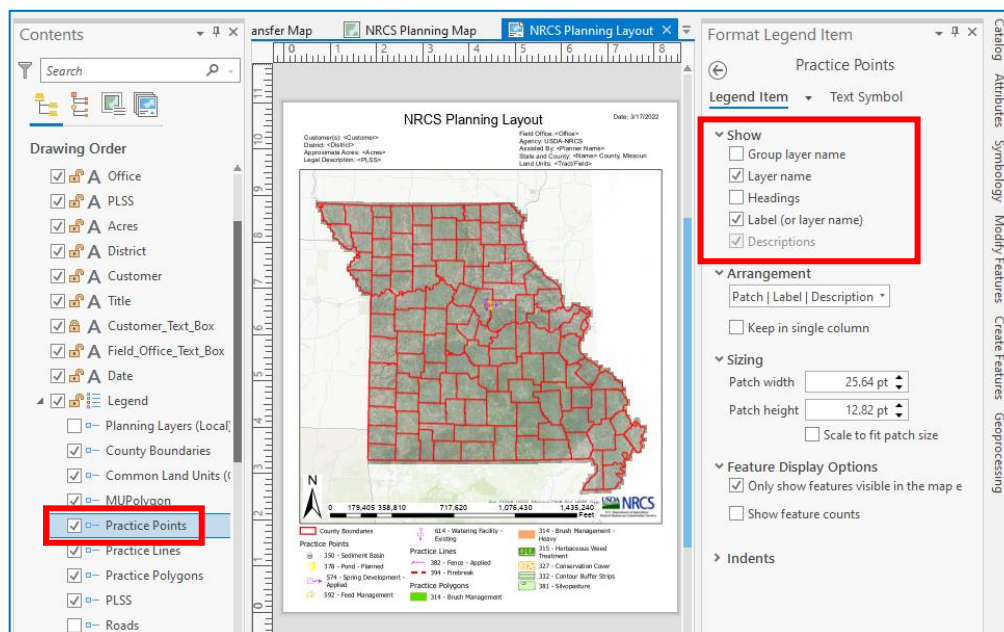
- b. Double-click on the field in the layout. Some fields may not be “visible” (e.g., Quantity and Unit fields in table cells). Just double click in the area where data should go. You can then enter the text directly in place.



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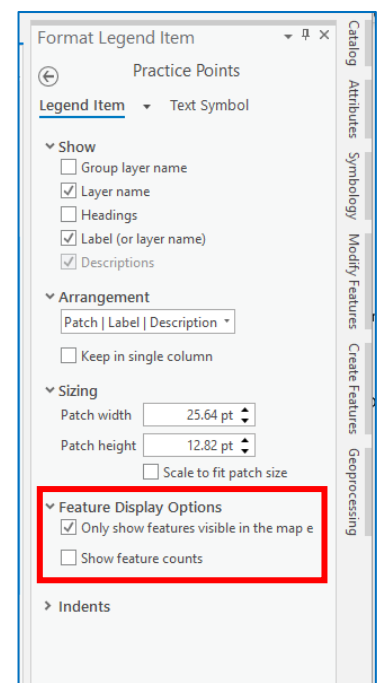
11. If you need to modify the Legend of any layout, expand **Legend** in the Contents pane. How each feature is symbolized in the legend can be modified here. Any layer that is checked on in the legend has the potential to be shown in the legend assuming the corresponding layer is turned on in the map. Check these on/off to show/hide the layer. The order items show up in the legend is determined by what order they are listed in this list. You can also change the order by dragging the items under legend up or down.

12. If you need to modify a legend item, double-click it. The **Format Legend Item** pane will show. Items under **Show** can be turned on/off to change what the legend item displays.



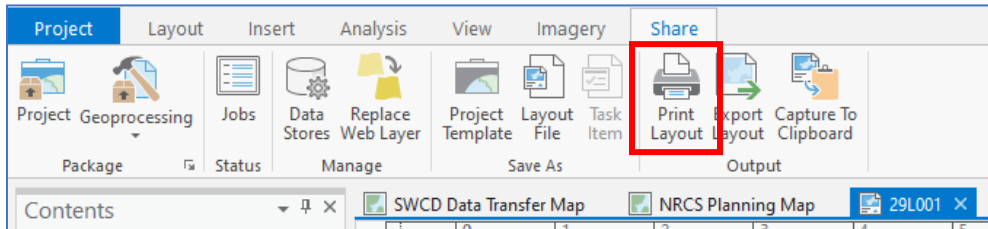
13. The NRCS Planning Layout has been set up to only include those features that appear in the current layout view. If this feature ever gets turned off on these layers and instead displays the whole list of practices, you can turn it back on by checking on **Only show features visible in the map** option. You can also add feature counts to the legend if needed here as well.

14. Other settings can be modified with the Format Legend Item pane as needed.

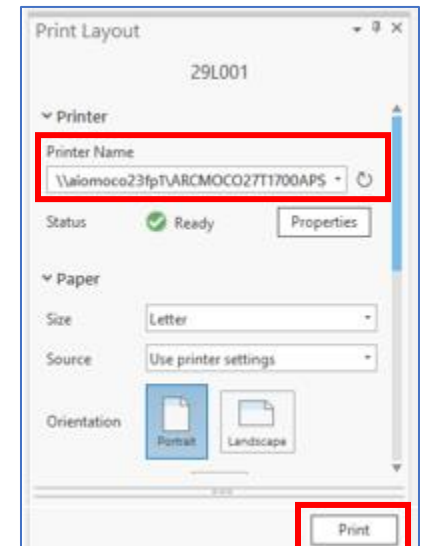




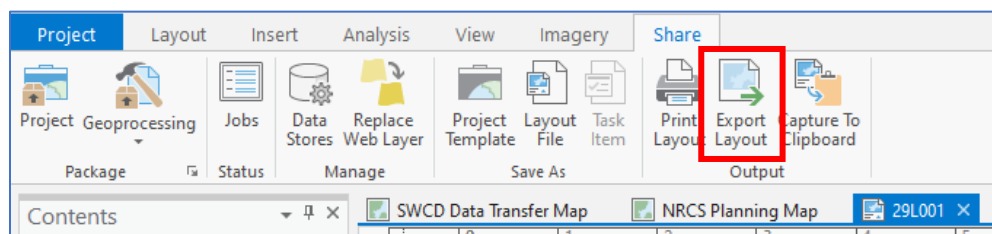
15. To print or export a layout, make sure you still have the layout you wish to print active in your map pane. On the **Share** tab, click **Print Layout**.



16. The Print Layout pane should open. Select the printer you wish to use, select any other settings here that you need, then click **Print**.



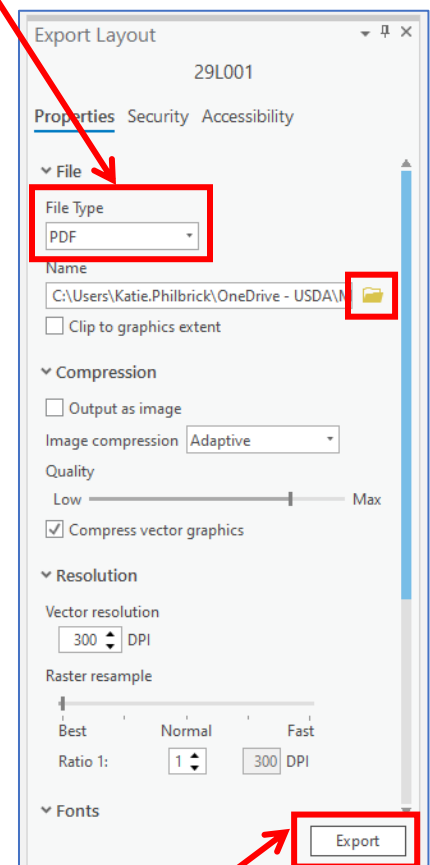
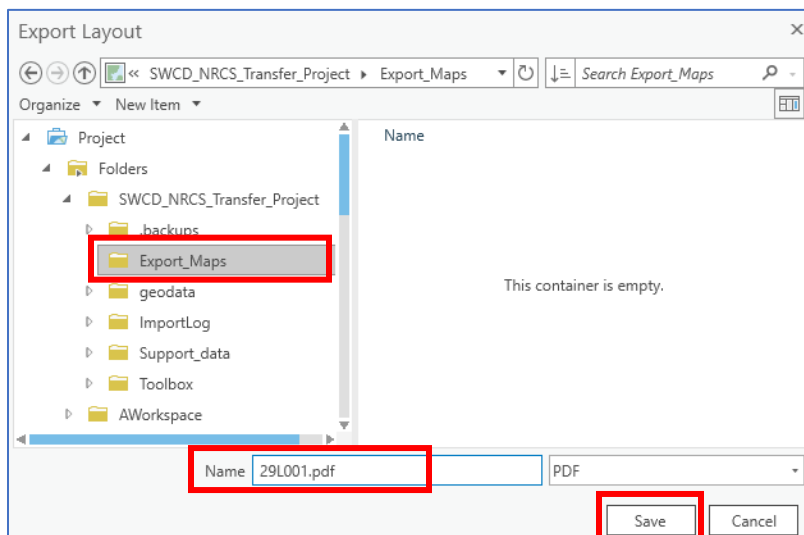
17. To export as a PDF, go to the **Share** tab and click **Export Layout**.



18. The Export Layout pane should appear. Under **File Type**, make sure **PDF** is selected. Under the **Name** section, click the folder icon to open the **Export Layout** window.

19. If the layout is associated with a customer's file folder on the F drive then it is recommended to navigate to F:\Customer Files\County\Customer File Folder and save it to the appropriate subfolder. Another place a user could save the exported layouts is a folder located within the project folders in the C:\AWorkspace directory called **Export Maps**, which has been provided for this purpose. It can be found under Folders → "Project Name" → Export Maps.

20. Navigate into the needed folder in the left pane of the Export Layout dialog, give the file a name, then click **Save**.



21. Change any other settings on the Export Layout tab that you need. When finished, click **Export**.