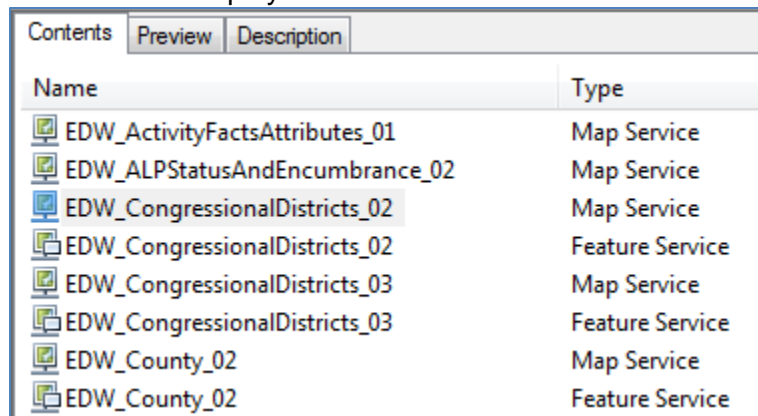










# 1 Using US Forest Service Enterprise Data Warehouse (EDW) Map Services

There are many ways to use a map service. Several options are discussed below:

## 1.1 ArcMap

1. Create connection to ArcGIS Server.
  - a. Open ArcMap
  - b. Click the **Add Data** button.
  - c. Click **GIS Servers** in the Look in: drop down menu.
  - d. Double click **Add ArcGIS Server**.
  - e. Select **Use GIS Services**, click **next**.
  - f. Enter the Server URL
    - i. External Forest Service Enterprise GIS web services:  
<https://apps.fs.usda.gov/ArcX/rest/services>
  - g. Leave user name and password empty. Click **Finish**.
  - h. ArcGIS Server connection is now created.
2. Using the ArcGIS Server connection.
  - a. Open **ArcMap**
  - b. Create a new empty map.
  - a. Click the **Add Data** button, and double click the **ArcGIS Server connection** created earlier.
  - b. Navigate to the location of the map service created earlier.
  - c. Select the map service you wish to view and click **Add**.
  - d. The map service displays on screen. You can add any data from any location to be displayed with this service.











Contents	
Name	Type
 EDW_ActivityFactsAttributes_01	Map Service
 EDW_ALPStatusAndEncumbrance_02	Map Service
 EDW_CongressionalDistricts_02	Map Service
 EDW_CongressionalDistricts_02	Feature Service
 EDW_CongressionalDistricts_03	Map Service
 EDW_CongressionalDistricts_03	Feature Service
 EDW_County_02	Map Service
 EDW_County_02	Feature Service

## 1.2 ArcCatalog

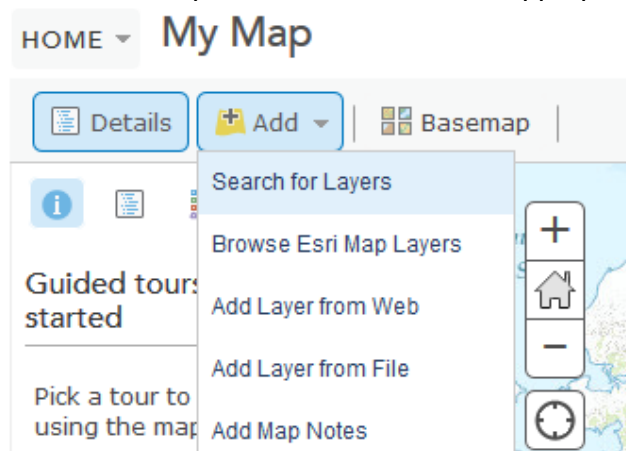
1. Create Connection to ArcGIS Server.
  - a. Open ArcCatalog.
  - b. Expand GIS Servers.
  - c. Double click Add ArcGIS server.
  - d. Click the Use GIS Services radio button.
  - e. Enter the server URL

- i. External Enterprise GIS web services: <https://apps.fs.usda.gov/ArcX/rest/services>
  - f. Leave username and password empty.
  - g. Click on Finish.
  - h. ArcGIS Server connection is now created.
2. Using the ArcGIS Server connection.
  - a. Expand GIS Servers
  - b. Click the connection made earlier.
  - c. Navigate to the location of the map service.
  - d. Click on Preview, and the service will display in the preview window.

Contents	
Name	Type
 EDW_ActivityFactsAttributes_01	Map Service
 EDW_ALPStatusAndEncumbrance_02	Map Service
 EDW_CongressionalDistricts_02	Map Service
 EDW_CongressionalDistricts_02	Feature Service
 EDW_CongressionalDistricts_03	Map Service
 EDW_CongressionalDistricts_03	Feature Service
 EDW_County_02	Map Service
 EDW_County_02	Feature Service

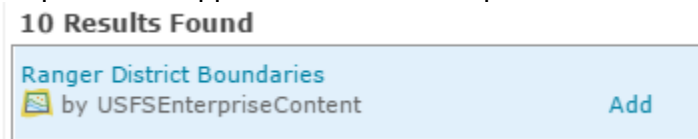
### 1.3 ArcGIS Online

1. Open a web browser and navigate to [ArcGIS.com](https://www.arcgis.com).
2. Click the “Map” tab along the top left. Click Modify Map on top right.
3. Choose the “Add” drop-down and choose the appropriate option.

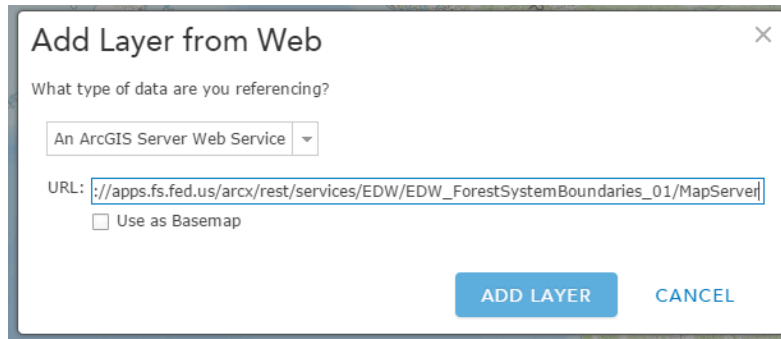


- a. **Search for Layers** = layers registered in ArcGIS Online (Authoritative EDW map services are owned by USFSEnterpriseContent while national services with non-FS data published in the EDW are owned by USFSMapsandApps)

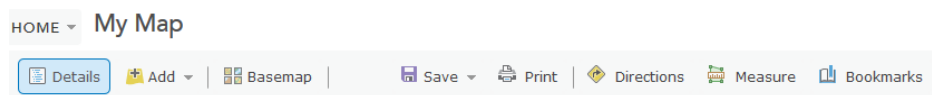
- i. Map services appear with a small map icon.



- b. **Browse for ESRI Map Layers** = ESRI layers available
  - c. **Add Layer from Web** = the URL of the map service
  - d. **Add Layer from File** = csv, text, gpx, or json file with x, y coordinates
  - e. **Add Map Notes** = Graphics or text added to your map
4. If you choose to Add Layer from Web, go to the appropriate ArcGIS REST Services Directory and find the desired USFS map service.
    - a. External Enterprise GIS web services: <https://apps.fs.usda.gov/ArcX/rest>
  5. Copy and paste the URL into the Add Layer from Web dialog and click Add Layer.



6. To get access to the individual features within a map service, you must add the layer id to the end of the url pasted into the Add Layer from Web dialog. ([https://apps.fs.usda.gov/arcx/rest/services/EDW/EDW\\_RightofWay\\_01/MapServer/0](https://apps.fs.usda.gov/arcx/rest/services/EDW/EDW_RightofWay_01/MapServer/0)) This will add a feature layer of EDW Right of Way to your map. You can interact with this feature layer in the same way you interact with hosted feature layers, or ArcGIS Server feature services.
7. Modify your map as necessary.
  - a. Zoom to an appropriate scale.
  - b. Order the layers in the map as desired.
  - c. Change the Basemap.
  - d. Change symbology or visible scale.
  - e. Enable and configure popups.
8. Save your map by clicking the "Save" button along the top and choose "Save As"



- a. Fill out the title, tags, and summary with as much detailed information as possible. Separate your unique tags with commas.
9. If you have an ArcGIS.com account and are logged in, your map will now be listed under "My Content". You can modify it, delete it, or share it from here.
    - a. Select your map from the list by clicking the check-box to the left of the map name.
    - b. Click the "Share" button above the list of your maps.

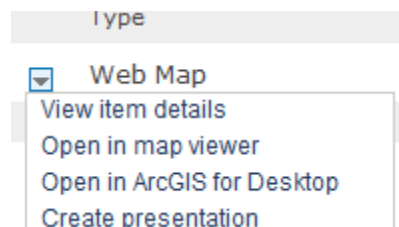
- 
- c. Chose the groups with whom to share the map and click OK.

*Note that those designated users can now view and search for your map. But just sharing a map to a group does not necessarily mean that only those group members can search for the map. Only those group members can actually access it and use it, but others could potentially find it in a search. If you have a data sensitivity issue, talk to the MSA to make sure the map is set up correctly.*

10. Send collaborators a direct link, or add the link to a webpage:

*Note that if you are sharing with members of the organization or collaborators outside the FS, they will need an ArcGIS Online account unless you share it with everyone (public).*

- a. Use the drop-down to the right of your map title to “Open in Map Viewer”.



- b. Click the Share link at the top of the map.
- c. Copy the “Link to this map” URL and paste it in your email or send to the web manager to add to a page.
- d. If you would like the map embedded in a webpage, click the “Embed in Website” button and choose the options you would like. Send the resulting code to the web manager.
- e. If you would like to create a web application such as a story map using your newly created map, click the “Make a Web Application” button. Templates and examples of various web applications are available.

## 1.4 Dynamic Layers

1. At the Forest Service we have enabled dynamic layers on most EDW map services. This allows clients to dynamically change layer appearance and behavior in the map service. Determining which layers will appear in a map, layer symbology, layer order and position, labeling, and more, can be achieved on the server through the use of dynamic layers. In this way, dynamic layers increase the amount of interaction that users are able to have with our map services.