Using Forest Service Map and Feature Services

There are many ways to use a map or feature service.

1.0   ArcMap

To create a connection to ArcGIS Server:

1. Open ArcMap.

2. Click the **Add Data** button .
3. Select **GIS Servers** in the **Look in:** drop down menu.
4. Double click **Add ArcGIS Server**.
5. Select the **Use GIS Services** radio button and click **Next**.
6. Enter the External Forest Service Enterprise GIS web services server
   URL: https://apps.fs.usda.gov/arcx/rest/services
7. Leave username and password empty.
8. Click **Finish**.

An ArcGIS Server connection is now created.

To use the ArcGIS Server connection:

1. Open ArcMap.
2. From the top menu, select **File**, then **New** to create a new empty map. If you don't want to create a new map from a template, click **Cancel** from the **ArcMap – Getting Started** dialog box.
3. Click the Add Data button
4. Select **GIS Servers** in the **Look in:** drop down menu and double click the ArcGIS Server connection created earlier.
5. Select the map or feature service you wish to view and click Add.
6. The map or feature service displays on screen. You can add any data from any location to be displayed with this service.
7. Feature services will be shown in the list of contents with a small white box on the bottom right corner of the monitor icon, as shown below.

Contents	Preview	Description	
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

2.0   ArcCatalog

To create a connection to ArcGIS Server:

1. Open ArcCatalog.
2. Expand **GIS Servers**.
3. Double click **Add ArcGIS server**.
4. Click the Use GIS Services radio button and click **Next**.
5. Enter the External Enterprise GIS web services server URL:
   https://apps.fs.usda.gov/arcx/rest/services
6. Leave username and password empty.
7. Click **Finish**.

An ArcGIS Server connection is now created.

To use the ArcGIS Server connection:

1. Expand **GIS Servers**
2. Click the connection made earlier.
3. Navigate to the location of the map service.
4. Click on the **Preview** tab to display the service in the preview window.
5. Feature services will be shown in the list of contents with a small white box on the bottom right corner of the monitor icon, as shown below.

3.0   ArcGIS Online

To use ArcGIS Online:

1. Open a web browser and navigate to ArcGIS.com.
2. Click the **Map** tab along the top left. Click **Modify Map** on top right.
3. Choose the **Add** drop-down on the left-hand side and choose one of the following options:
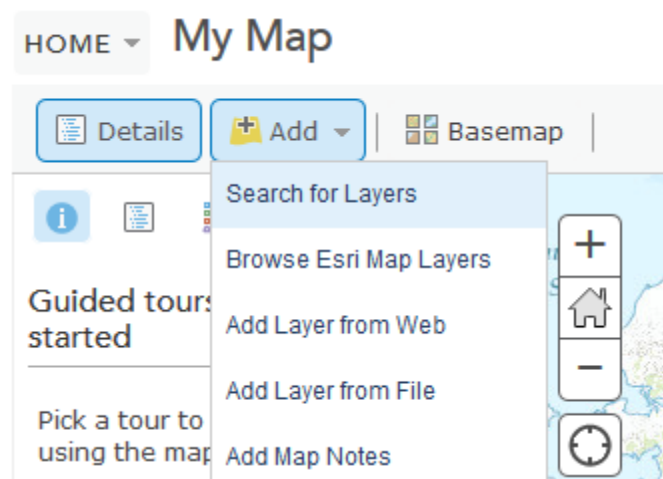
a. **Search for Layers** - layers registered in ArcGIS Online (authoritative map or feature services are owned by USFSEnterpriseContent while national services with non-FS data published are owned by USFSMapsandApps). Map services appear with a small map icon while feature services appear with a small yellow icon and red paper clip, as shown below.

10 Results Found

Ranger District Boundaries
by USFSEnterpriseContent — Add

Ranger District Boundaries
by USFSEnterpriseContent — Add
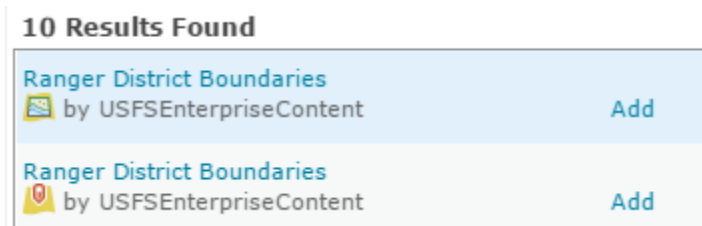
b. **Browse for ESRI Map Layers** - ESRI layers available

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 **Add Layer from Web**, select **An ArcGIS Server Web Service from the dropdown box** (default) and enter the URL of the desired USFS map service. To find the URL, go to the External Enterprise GIS web services server URL: https://apps.fs.usda.gov/arcx/rest/services and select the desired map service from the list, and copy the URL from the browser address bar.

5. Copy and paste the External Enterprise GIS web services URL into the **Add Layer from Web** dialog box and click **Add Layer**.

Add Layer from Web

What type of data are you referencing?

An ArcGIS Server Web Service

URL: ://apps.fs.fed.us/arcx/rest/services/EDW/EDW_ForestSystemBoundaries_01/MapServer

☐ Use as Basemap

ADD LAYER   CANCEL
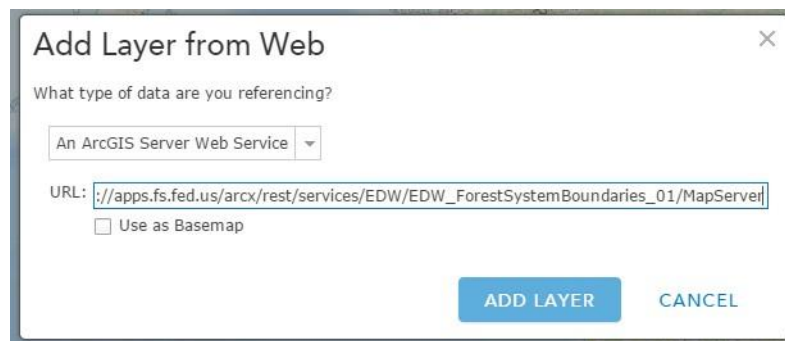
6. Modify your map as necessary:

   - Zoom to an appropriate scale.

   - Order the layers in the map as desired.

   - Change the Basemap.

   - Change symbology or visible scale.

- Enable and configure popups.

7. If you have an ArcGIS.com account and are logged in, save your map by clicking the **Save** button along the top and choose **Save As**. Fill out the title, tags, and summary with as much detailed information as possible. Separate your unique tags with commas.


8. Your map will now be listed under **My Content**. You can modify, delete, or share it from here. To share your map:

   a. Select your map from the list by clicking the checkbox 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. Although designated group members are the only ones who can access and use your map, others could potentially find it in a search. If your data is sensitive, talk to the Map Services Administrator (MSA) to make sure the map is set up correctly.

9. To send collaborators a direct link or add the link to a web page:

   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 dropdown to the right of your map title to **Open in Map Viewer**.
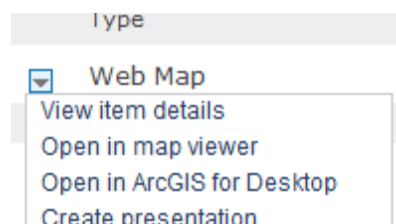
b. Click the Share link at the top of the map.

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 web page, 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.

4.0   Dynamic Layers

The Forest Service has enabled dynamic layers on most map services. This allows our customers 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.