

Geospatial Information Infrastructure Technical Support



GII ArcGIS for Portal 10.3.1 User Guide

Version 1.6

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Submitted To:

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Revision History

Version Number	Version Date	Revisions Made by	Description of Revisions
Version .1	2/5/2016	Michael Karikari	Develop Template
Version .2	2/8/2016	Michael Karikari	Add additional section
Version .3	2/11/2016	Jean Brandenburg	Provide Feedback
Version 1.0	2/12/2016	Jean Brandenburg	Final Update
Version 1.1	2/16/2016	Lew Summers	Update to Final
Version 1.2	6/16/2016	Jean Brandenburg	Add information for the HSIN rules of behavior
Version 1.3	7/20/2016	Jean Brandenburg	Added more verbiage for map packages
Version 1.4	8/8/2016	Jean Brandenburg	Add a section to create a Web Map; Find and Add HIFLD Open Data
Version 1.5	9/12/2016	Jean Brandenburg	Add a section on how to create a Story Map and added information on using the Collector App
Version 1.6	9/20/2016	Jean Brandenburg	Adding how to register a service from a partner portal in the GII

1 OVERVIEW

The DHS Geospatial Management Office (GMO) upgraded their geospatial platform in order to take advantage of the new capabilities offered in ArcGIS 10.3.1 for Desktop, Portal, and Server. The robust portal and server capabilities are listed below.

Portal 10.3.1

- Monitor usage statistics using Activity Dashboard for ArcGIS
- Create applications using Web AppBuilder for ArcGIS
- Support for publishing very large numbers of feature services to portal (ArcGIS Data Store)
- You can drag layers in the Contents pane to change their order
- Authors can add text symbols to their map when using map notes layers with the Map Notes

ArcGIS for Server 10.3.1

- Ability to Share secured ArcGIS services in Portal for ArcGIS or ArcGIS for Desktop
- Ability to Share 3D content using Scene services
- Ability to Customize the behavior of map and image services to execute custom logic

ArcGIS Server provides a proprietary token-based authentication mechanism where users or applications can authenticate themselves by providing a token instead of a user name and password. ArcGIS for Server token-based authentication supports sharing secured ArcGIS for Server services in Portal for ArcGIS. This new feature will allow HSIN users to utilize secured ArcGIS for Server services in Portal for ArcGIS or ArcGIS for Desktop.

ArcGIS for Server provides an easy to use web-based token generation application, which works seamlessly with Portal for ArcGIS. The following opportunities will be available:

- HSIN users will have Portal for ArcGIS access to ArcGIS for Server services via single sign-on
- HSIN users will have ArcGIS for Desktop access to ArcGIS for Server services via single sign-on
- HSIN users will have Esri Maps for Office access to services via single sign-on
- GMO will be able to apply privileges down to the service level for ArcGIS for Server services
- ArcGIS for Server tokens are tied to specific domains

1.1 Scope

The guide covers the following capabilities in ArcGIS 10.3.1 for Desktop and Portal:

- Create a Web Map
 - This functionality is replacing OneView
- Add HIFLD Open data to a Map
- Gain access to GII Portal services in the ArcGIS Desktop client (ArcMap)
- Publish GIS data from ArcGIS Desktop (ArcMap) to the GII Portal
 - Specify data accessibility/sharing status
- Create a web application from an existing map that is hosted and shared within GII Portal

1.2 Prerequisites

The following prerequisites must be in place in order for a user to successfully access or perform the different GII Portal capabilities:

All Users:

- Must have an active HSIN user account

Accessing GII Services from desktop:

- Must have a licensed ArcGIS Desktop application properly installed

Creating Web Application:

- Must have a saved map within GII Portal

1.3 HSIN Terms of Service

Each HSIN user is expected to follow the HSIN Terms of Service, which covers rules of behavior, privacy, and many other responsibilities. Use this [link](#) to review the Terms of Service.

Note: You must be logged into HSIN in order to view this document.

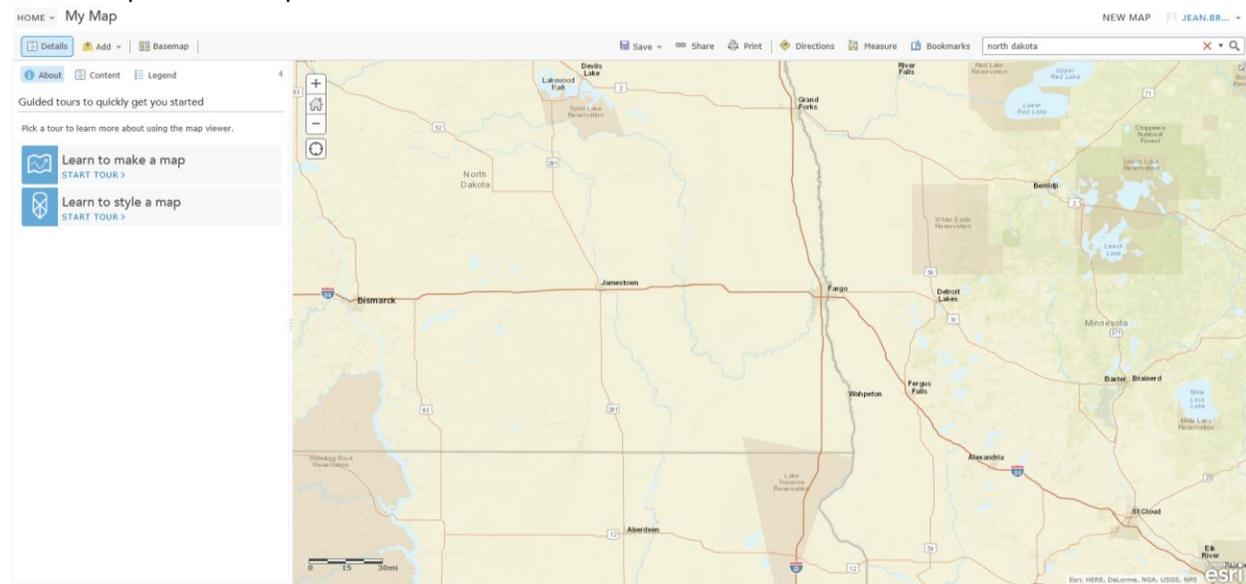
2 CREATE A WEB MAP

The following instructions explain how to create a map in the GII and add HIFLD Open data layers to it.

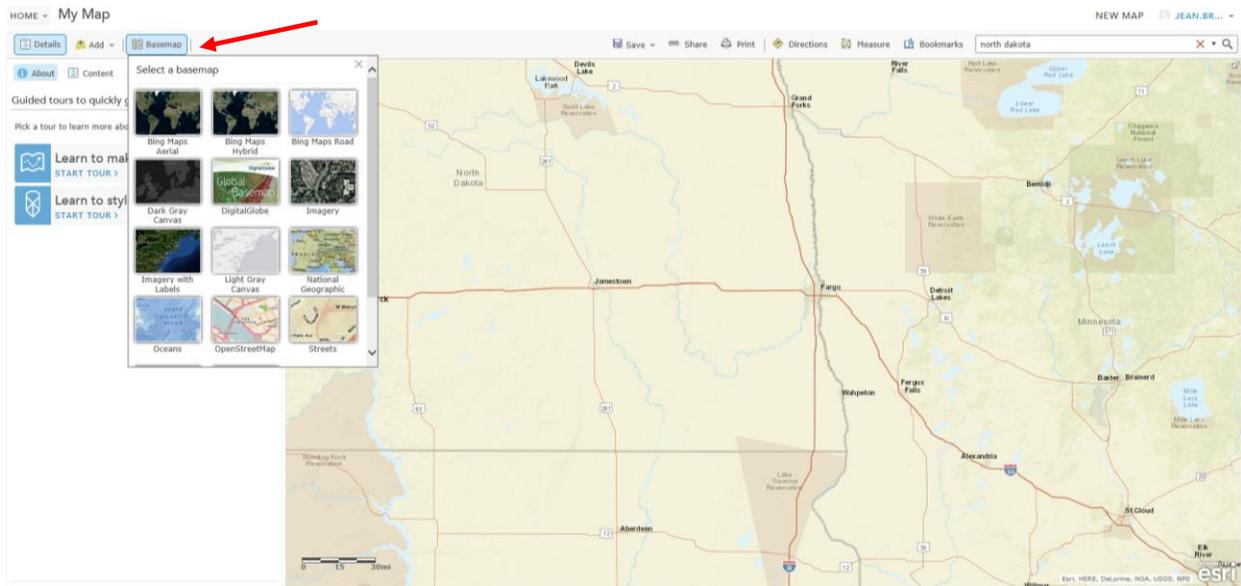


Go to: <https://gii.dhs.gov/gii>

Select Map from the top menu of the GII Portal



Search for the area or map extent

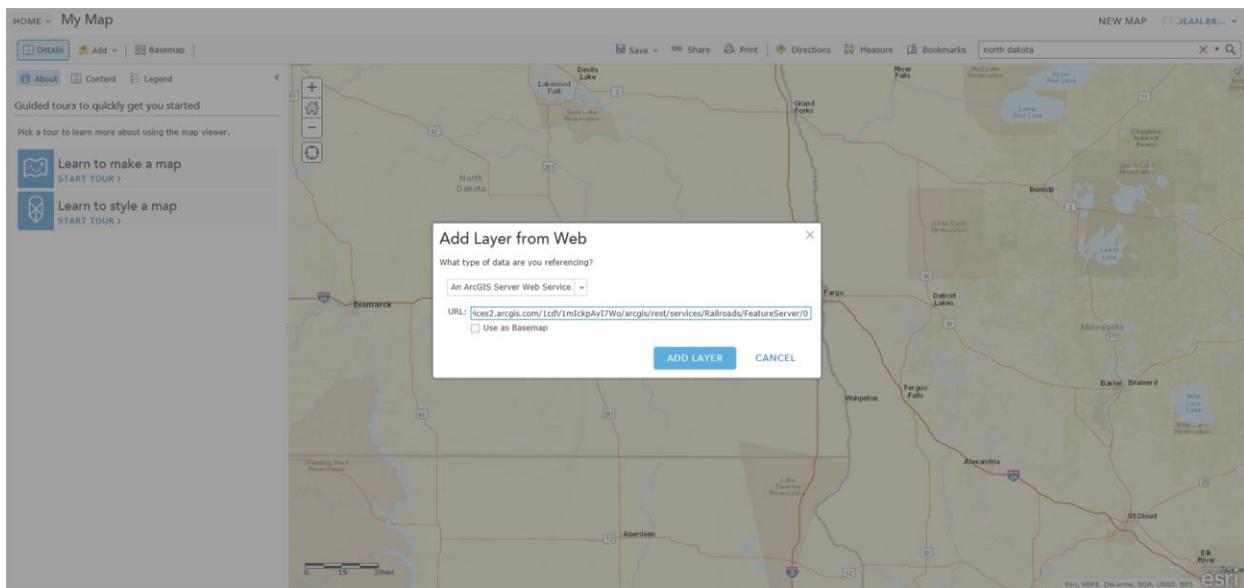


Select a basemap



Add data layers to your map by selecting Add

Note: You can search for a data layer on the GII Portal, add a layer from the web, add a layer from a file, or add map notes



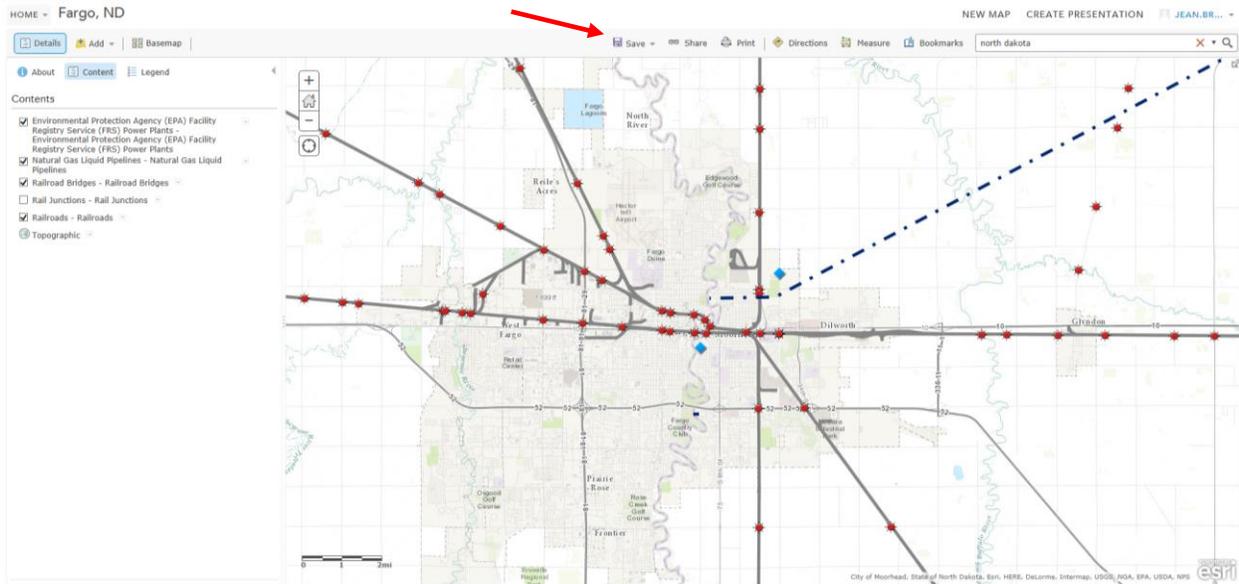
Select to search for a layer from the web

For HSIP or HIFLD data, use the default data reference – an ArcGIS Server Web Service

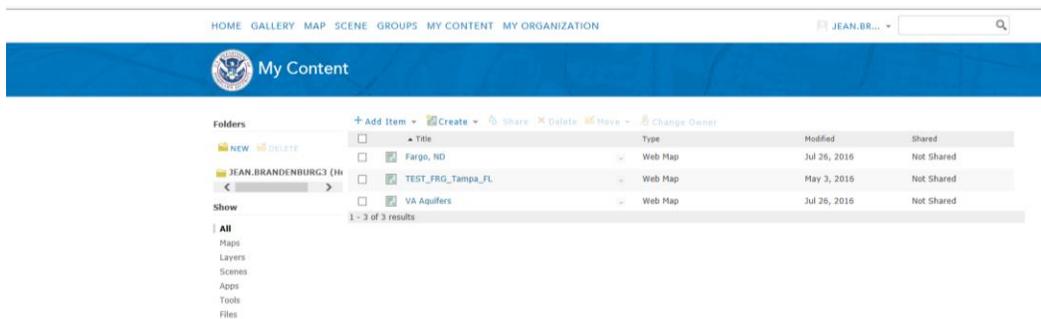
Add the URL Example for Railroads:

<https://services2.arcgis.com/1cdV1mIckpAyI7Wo/arcgis/rest/services/Railroads/FeatureServer/0>

Refer to **Add HIFLD Open Data to a Map** for more information on how to get the HIFLD data layer URL.



Save your map when you are done



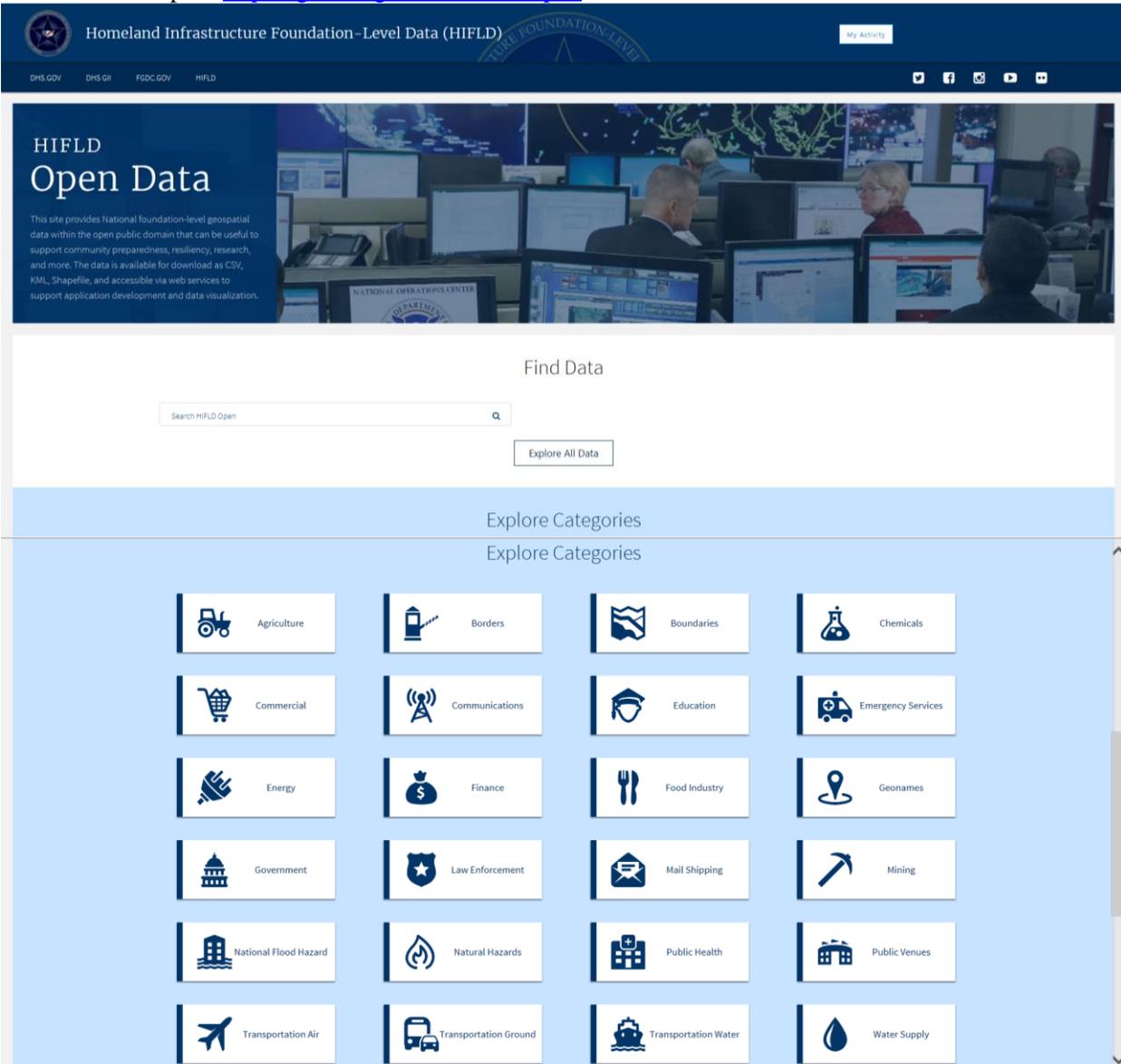
You can find your map under My Content from the main GII menu

3 ADD HIFLD OPEN DATA TO A MAP

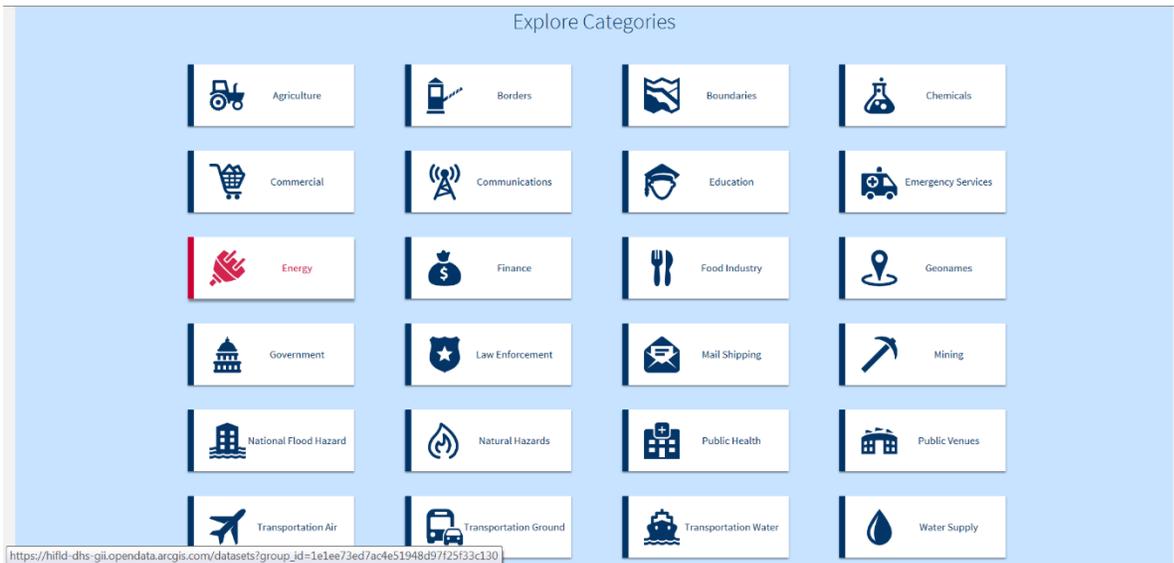
This section will explain how to find HIFLD Open data layers and add them to your web map using GII Portal.

Note: Homeland Infrastructure Foundation Level Data (HIFLD) layers are replacing the data layers known as HSIP.

Go to HIFLD Open: <https://gii.dhs.gov/hifld/data/open>



Scroll down the home page of HIFLD Open in order to explore the categories



Select Energy, for example

- 

Energy

Non Gasoline Alternative Fueling Stations *(from HIFLD Open - Energy)*

Shared by HIFLD_Admin

This dataset represents the locations of non-gasoline alternative fueling stations which provide biodiesel, CNG, electric, ethanol, hydrogen, LNG, and/or propane. More than 250 million vehicles consume millions of barrels of petroleum every day in the United States. On-road passenger travel alone accounts for more than 2.5 trillion vehicle miles traveled each year. Vehicle fleet managers and drivers, corporate decision m...

38 attributes | 16932 locations | [↓](#) [★](#)
- 

Energy

Environmental Protection Agency (EPA) Facility Registry Service (FRS) Power Plants *(from HIFLD Open - Energy)*

Shared by HIFLD_Admin

This dataset represents the Environmental Protection Agency's (EPA) Facility Registry Service (FRS) power plants. It was developed to serve as a general-purpose GIS layer depicting wastewater treatment plant locations together with a few set of core attributes. The primary facility and locational information was compiled from EPA's FRS and attribute data were compiled from NPDES data. Anticipated uses include e...

88 attributes | 4514 locations | [↓](#) [★](#)
- 

Energy

Natural Gas Market Hubs *(from HIFLD Open - Energy)*

Shared by HIFLD_Admin

This dataset represents natural gas transmission hubs in the contiguous United States. A hub is a physical transfer point for natural gas where several pipelines are connected. A market center is a hub where the operator offers services that facilitate the buying, selling, and transportation of natural gas. This point dataset originates from the U.S. Energy Information Administration. And was last updated in September 2...

22 attributes | 58 locations | [↓](#) [★](#)
- 

Energy

Radiological Assistance Program (RAP) Regions *(from HIFLD Open - Energy)*

Shared by HIFLD_Admin

This dataset represents Radiological Assistance Program (RAP) Regions. The U.S. Department of Energy (DOE) created the RAP in the 1950s to make DOE resources and expertise available to organizations responding to incidents involving radioactive materials. Management responsibilities and direction for the RAP are primarily contained in DOE Order 5530.3. RAP provides resources (trained personnel and equipm...

4 attributes | 9 locations | [↓](#) [★](#)
- 

Energy

Pacific Wells *(from HIFLD Open - Energy)*

Shared by HIFLD_Admin

This dataset represents well bottom locations for the Pacific Outer Continental Shelf (OCS). It includes the type of well (exploratory and developed) and the status of the well (plugged and abandoned, sidetracked, completions, bridge plug and temporality abandoned). This dataset contains well bottom locations for the Pacific OCS Region as of September 21, 2012. The data is in ESRI ArcView and ArcInfo GIS Shapefile form...

10 attributes | 1370 locations | [↓](#) [★](#)

Scroll through the list and select the data layer of interest

Details Table Charts

DESCRIPTION

This dataset represents natural gas transmission hubs in the contiguous United States. A hub is a physical transfer point for natural gas where several pipelines are connected. A market center is a hub where the operator offers services that facilitate the buying, selling, and transportation of natural gas.

This point dataset originates from the U.S. Energy Information Administration. And was last updated in September

DATASET ATTRIBUTES

Region	Text
--------	------

ABOUT

HIFLD Open - Energy

By HIFLD_Admin

Published: 2009-09-01

Updated: 2 months ago

Source <https://services2>

Metadata Natural Gas Market Hubs

License Access Constraint: None (Public Domain..

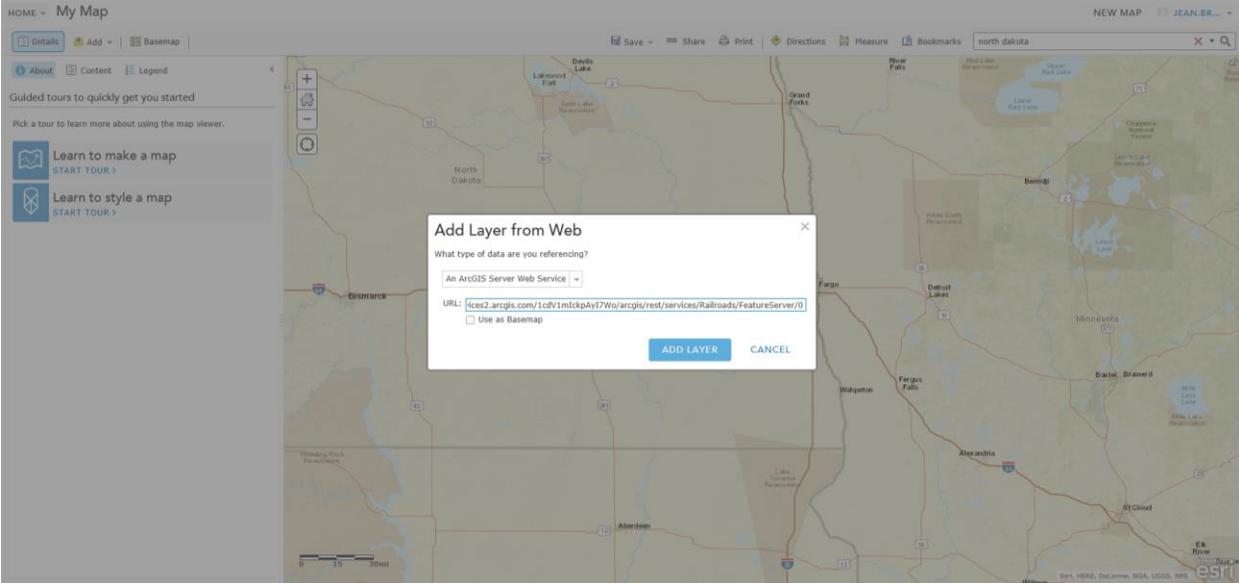
TAGS

Natural gas | Transmission | Hubs | Pipelines | Market

- Open link in new tab
- Open link in new window
- Open link in incognito window
- Save link as...
- Copy link address**
- Inspect Ctrl+Shift+I

Once you are on the home page of this data layer, right-click source
Select “Copy link address” (Chrome), “Copy Link Location” (Firefox), or “Copy shortcut” (Internet Explorer) in order to copy the URL

In the GII Portal for your map, select:
Add
Select to search for a layer from the web

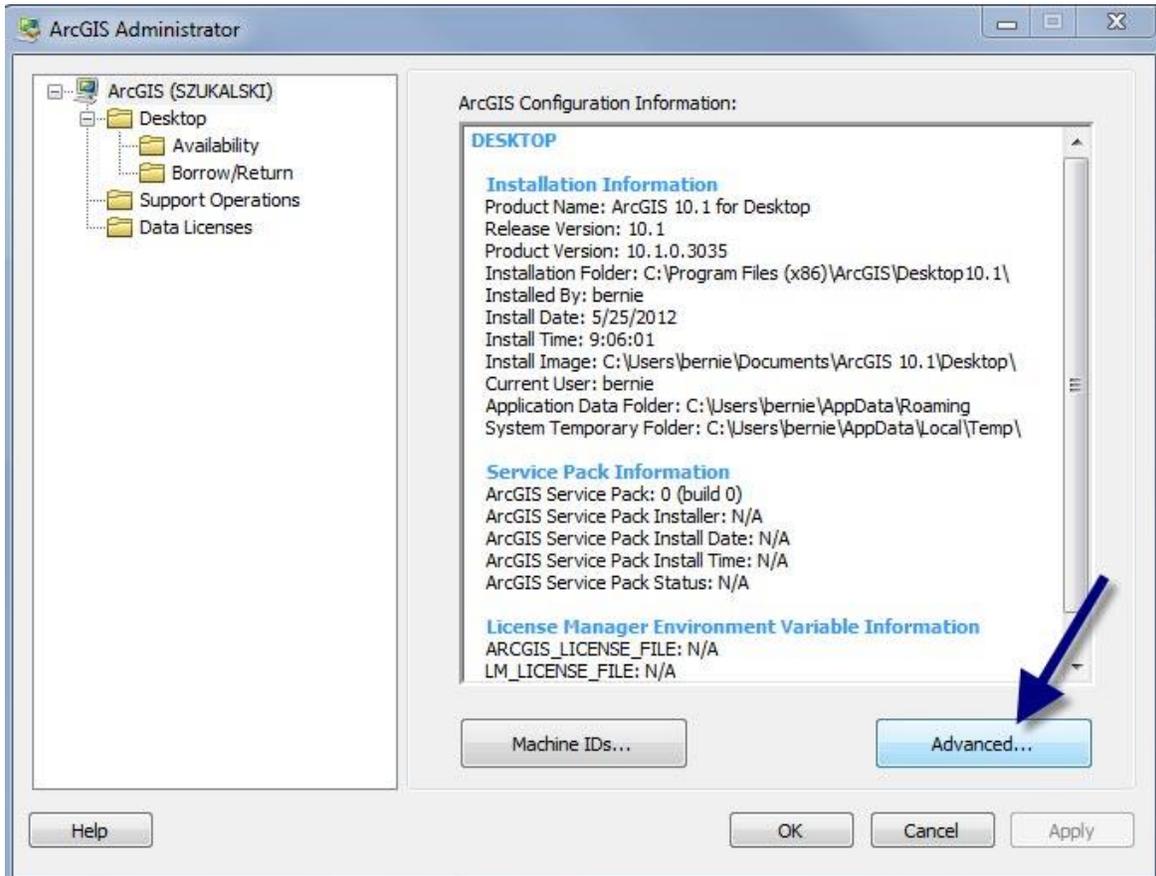


For HSIP or HIFLD data, use the default data reference – an ArcGIS Server Web Service
Add the URL
For Example, add Natural Gas Market Hubs:
https://services2.arcgis.com/1cdV1mIckpAyI7Wo/arcgis/rest/services/Natural_Gas_Market_Hubs/FeatureServer/0

4 ACCESSING GII PORTAL SERVICES (FROM ARCMAP)

To connect from your ArcGIS Desktop to Portal for ArcGIS, you must first enter the connection using ArcGIS Administrator. Please close out any ArcGIS Catalog or ArcMap sessions before setting up the GII Portal connection.

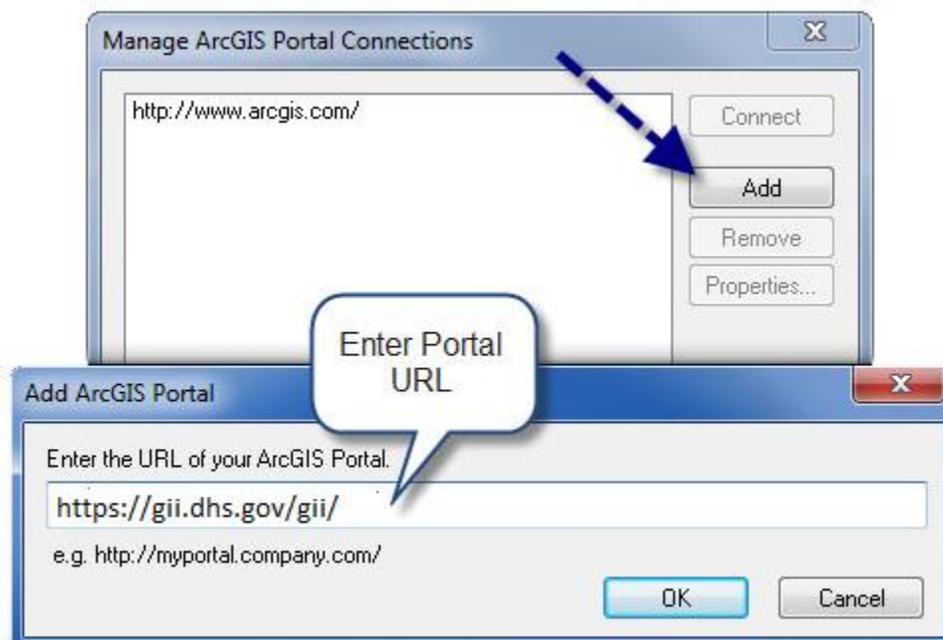
- 1) Open ArcGIS Administrator (typically found in the ArcGIS folder in your programs and files, START – All Programs – ArcGIS Folder – ArcGIS Administrator) and click Advanced...



2) In the Advanced Configuration choose Manage Portal Connections...

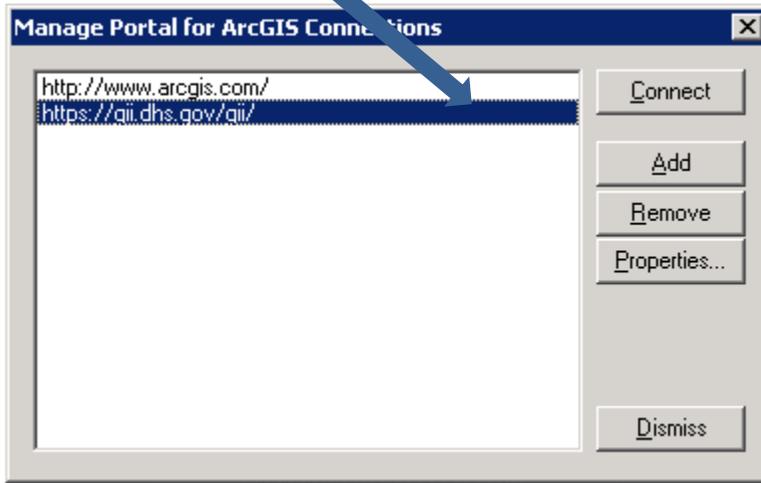


- 3) Manage ArcGIS Portal Connections will display a list of your current connections
- 4) Choose Add to enter a new connection

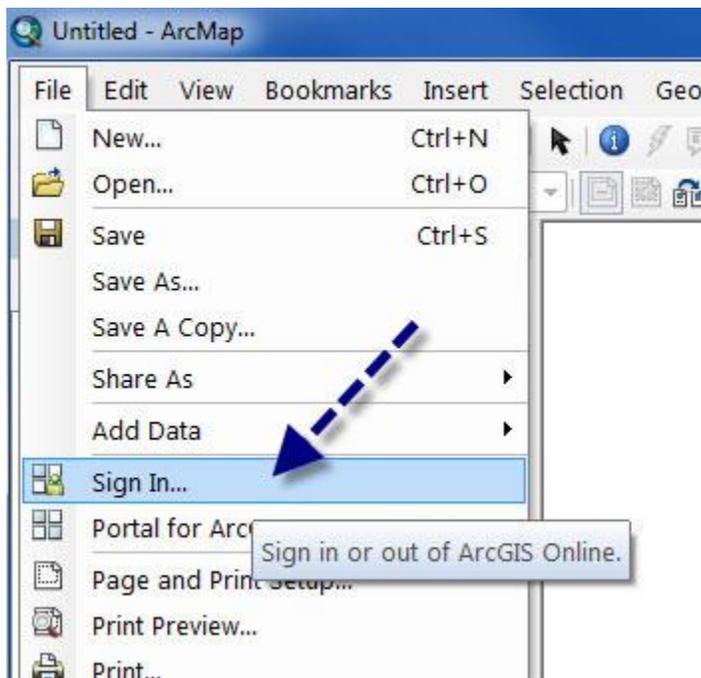


5) Enter the URL to the ArcGIS Portal and Click OK.

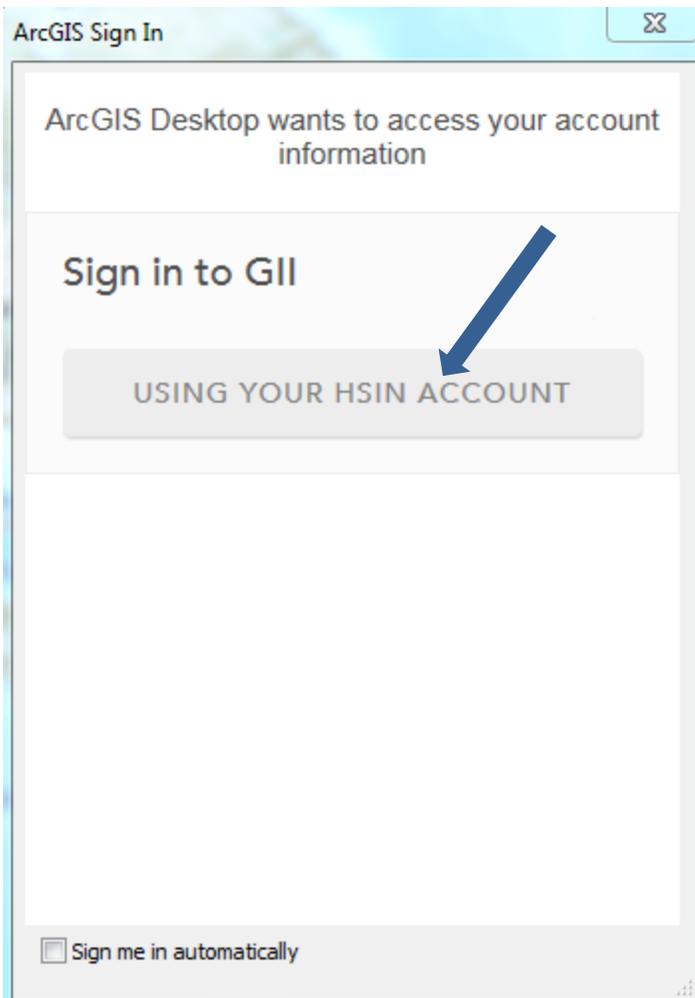
- 6) Once added, you can select a connection and choose Connect:



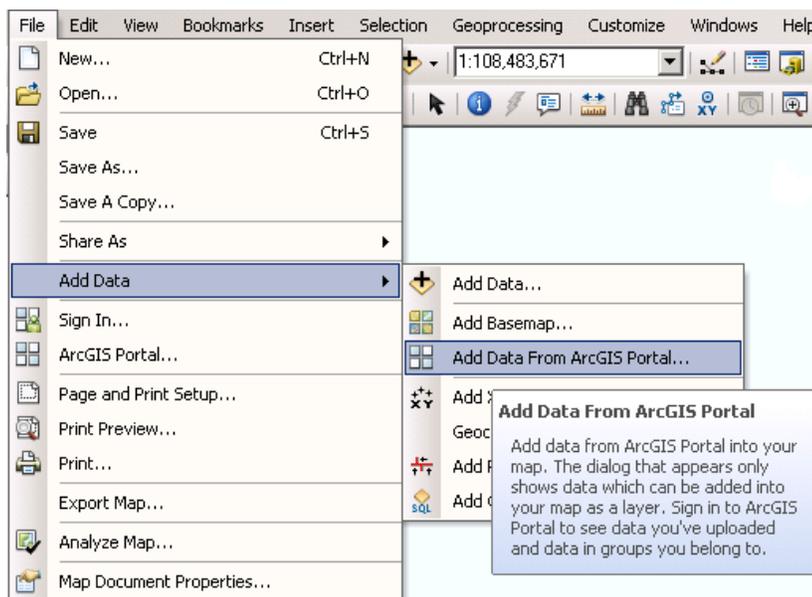
- 7) Once your portal connection has been set, the Manage Portal and ArcGIS Connections will disappear and you will be back to the Advanced Configuration dialog. Select Save at the bottom of the dialog to complete the GII Portal connection. You can sign in from ArcMap
- 8) Click File, then “Sign In” to access your portal items, groups and services.



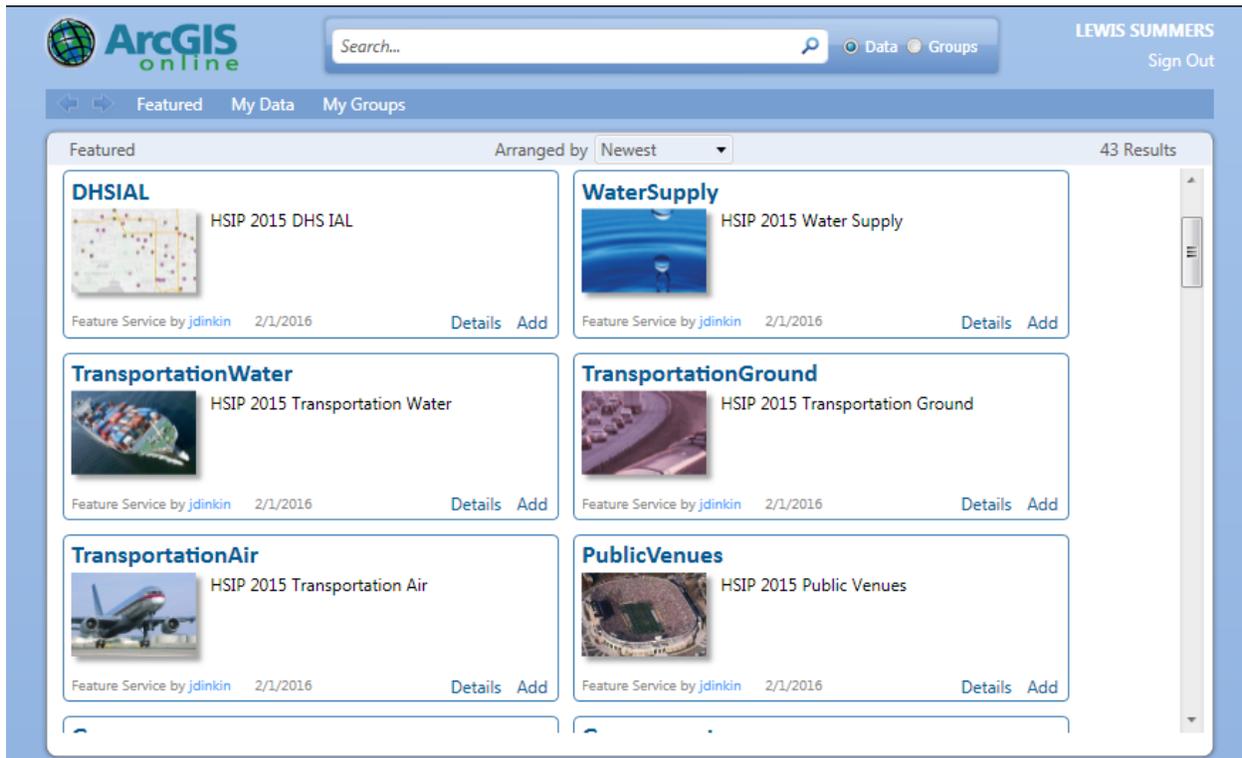
- 9) Follow the HSIN Login prompts in order to authenticate your user account. Users can use either their DHS PIV card or their HSIN User Name and Password and second factor code.



- 10) To add web maps and/or feature layers from GII Portal click File > Add Data > Add Data from Portal for ArcGIS



- 11) GII web services will appear. Users can select Add to add GII web services to their current ArcMap session.



5 PUBLISHING GIS DATA TO PORTAL (FROM ARCMAP)

HSIN users have multiple ways of publishing data to the GII Portal. Users publish data to the GII Portal to share their geospatial products to a Portal Group or Groups or to the entire GII enterprise for communication and collaboration purposes supporting situational awareness missions.

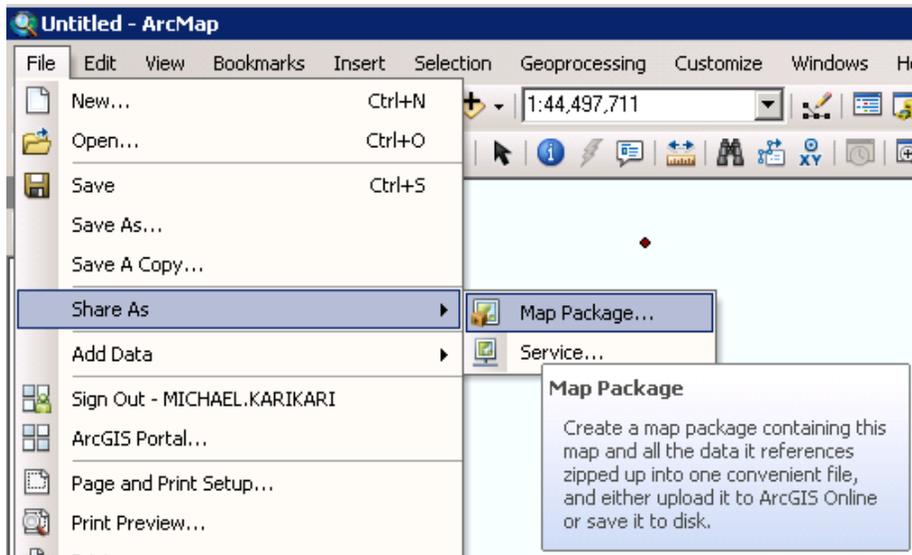
Users will need to be Signed in to the GII before sharing map packages or publishing hosted feature services. The steps for all of these capabilities are described below.

5.1 Share Map Packages

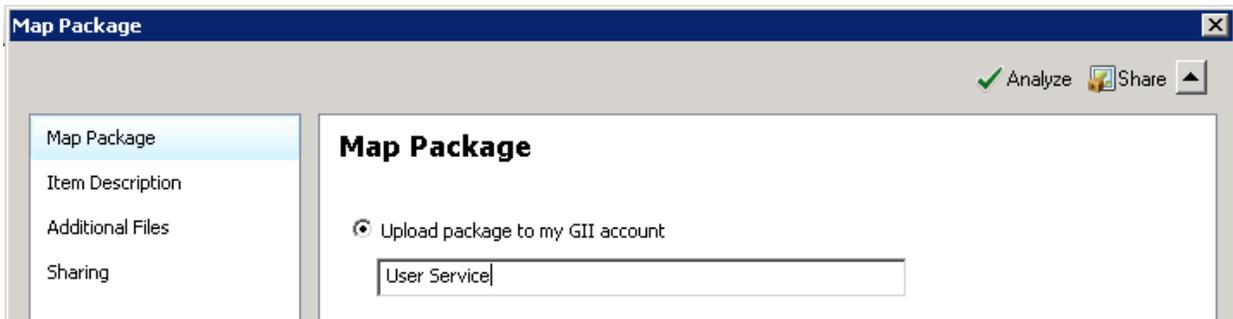
Map Packages: Map packages (.mpk) include a map document (.mxd) and the data referenced by the map layers packaged into one portable file. Like a layer package, a map package make it easy to share maps that include the symbology of the source map between colleagues in a work group, across departments in an organization, or with other partner agencies. Map packages also allow the ability to create an archive of a particular map that contains a snapshot of the current state of the data used in the map.

For example, if a group wants certain symbology to persist on a map, a map package can be shared, so the symbology persists.

- 1) Open the map you want to share.
- 2) Click File > Share As > Map Package.



3) Choose *Upload package to my account*.



4) Type name for the map package.

a. At a minimum, you must provide a summary and tags for the *Item Description*. You can also provide the *Description*, *Access and Use Constraints*, and *Credits* for the map package.

5) Click *Sharing* and indicate whether the map package should be shared with specific groups or with everyone in your organization.

6) Click *Share* to create the map package and add it as an item to your portal.

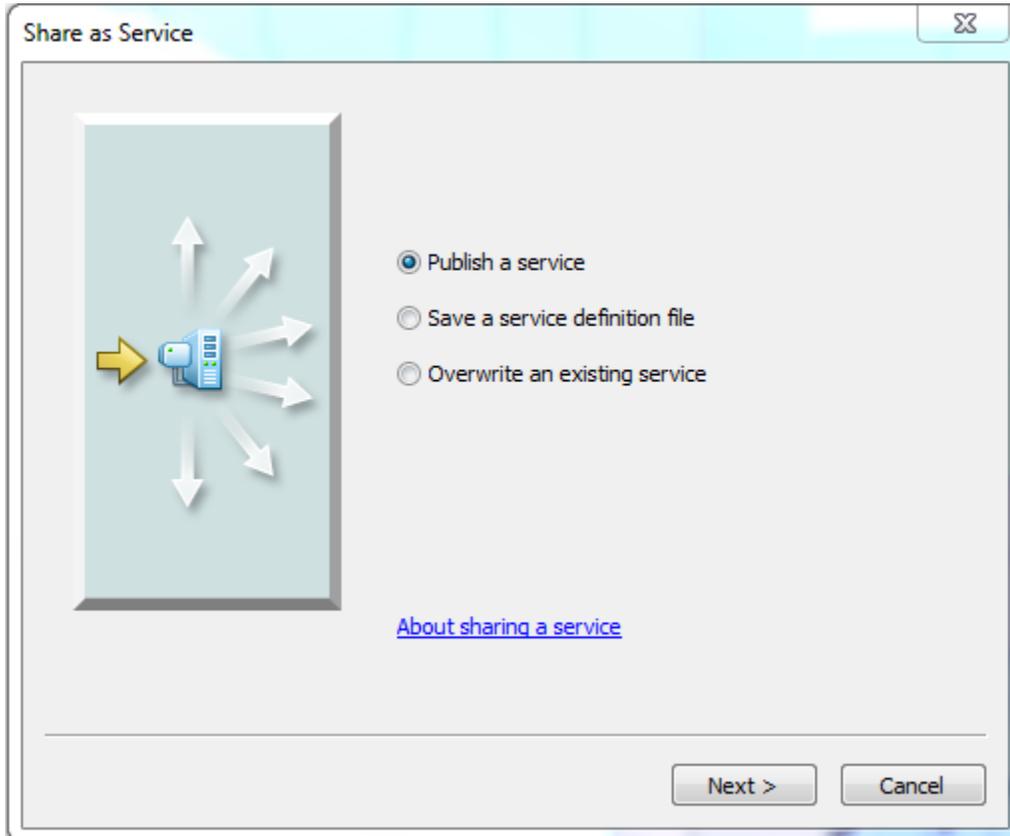
5.2 Publish Hosted Features

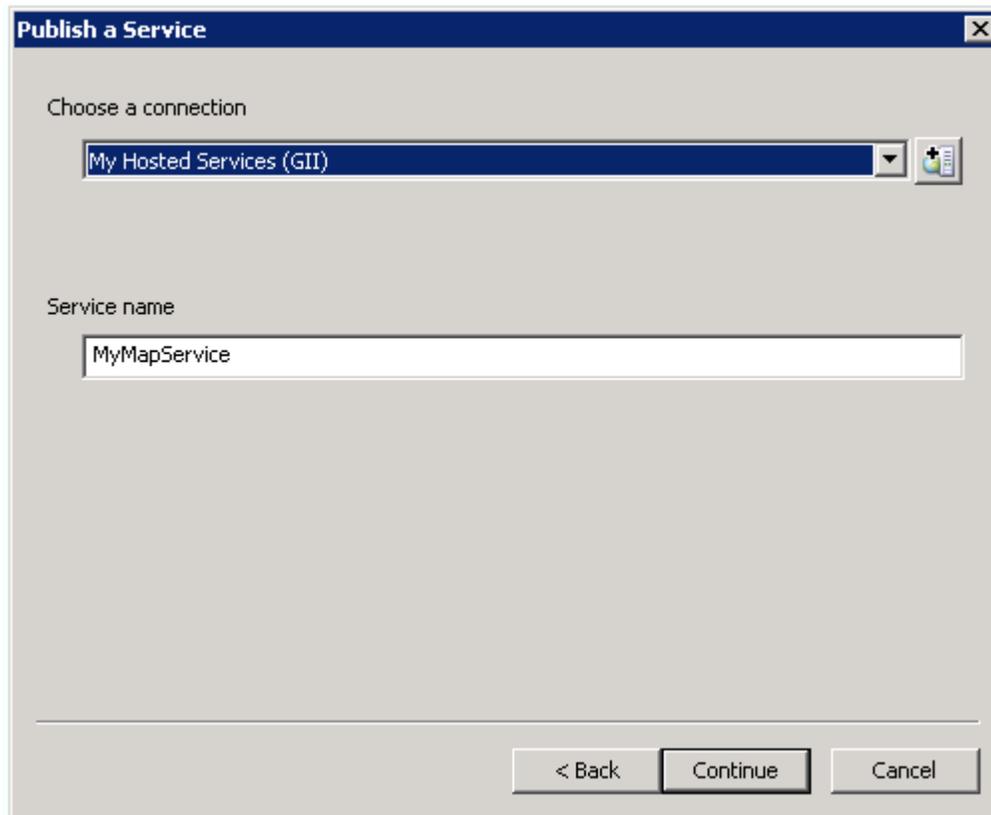
The following steps explain how to publish hosted features.

Note: ArcGIS Online layers and Portal for ArcGIS layers are added to ArcMap as ArcGIS feature services. ArcGIS feature services are unsupported in map services and must be removed from the ArcMap table of contents before attempting to publish.

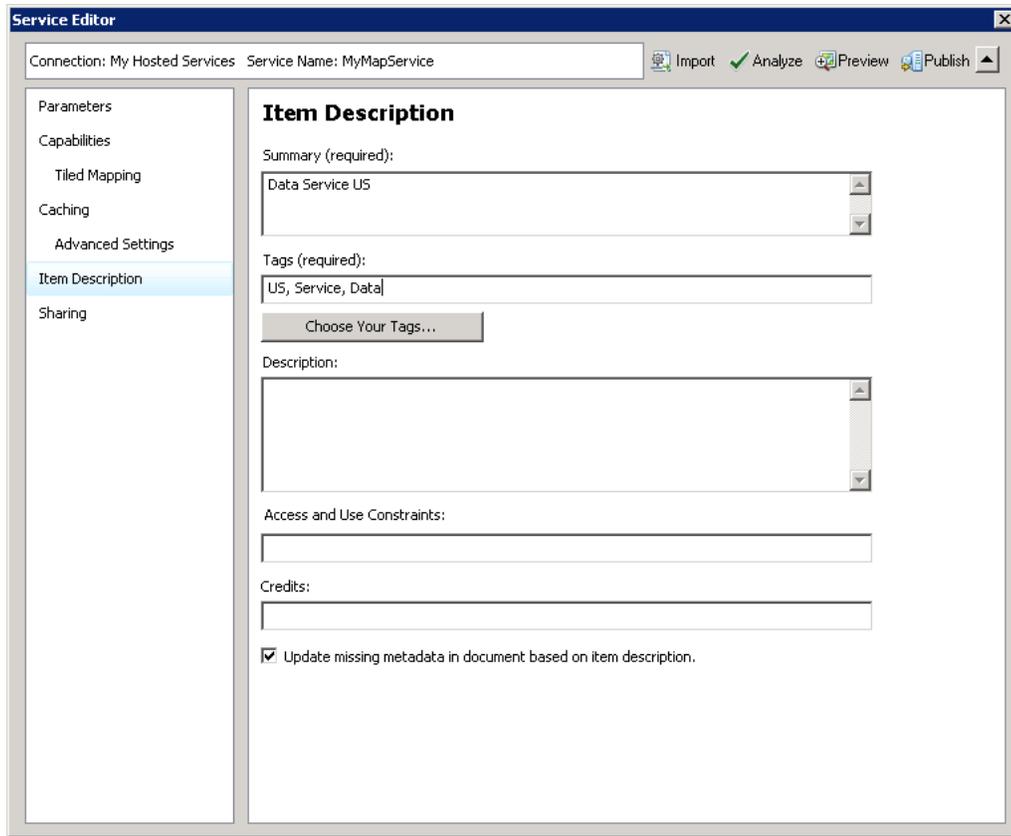
1) Open the map you wish to share.

- 2) Click File > Share As > Service.
- 3) Select Publish a service and click Next>





- 4) Highlight *My Hosted Services (GII)* from *Choose a connection* dropdown.
- 5) Type name for the service being created and click Continue.
 - a. Item Description > At a minimum, you must provide a summary and tags for the *Item Description*. You can also provide the *Description, Access and Use Constraints*, and *Credits* for the map package.



b. Sharing > Select the organizational groups that the service will be shared with

6) Click Publish

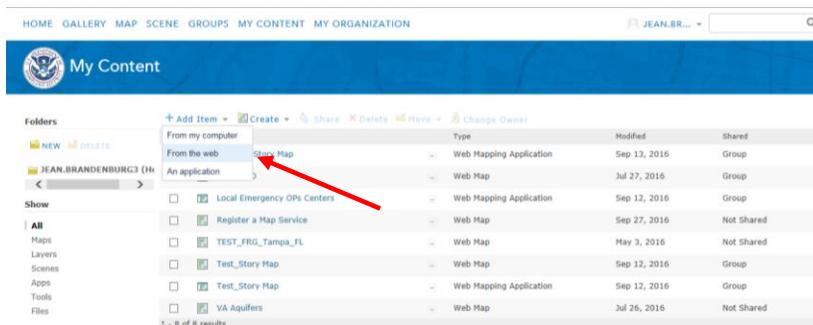
**Before services attempts to publish it analyzes data to ensure data integrity, if any errors are found it may require them to be resolved before completing publishing task.*

6 REGISTER A SERVICE FROM A PARTNER PORTAL IN THE GII

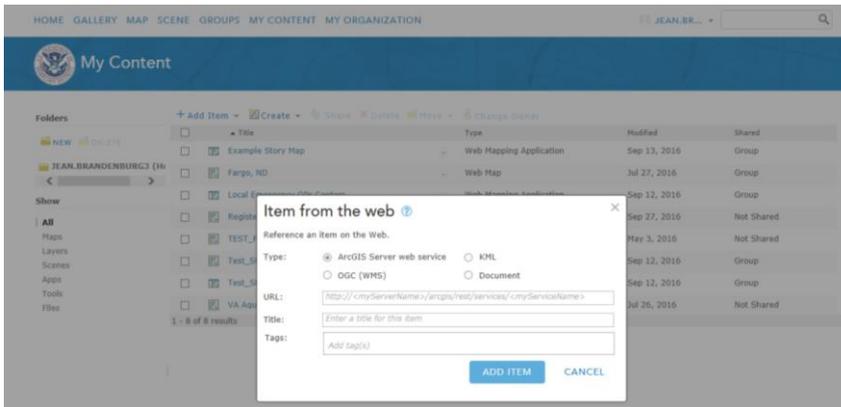
The following steps explain how to register an Esri secure service from a partner portal in the GII Portal. You need to know the service URL and the username/password for the service. Make sure that this service has been shared with the appropriate GII group.

Steps:

1. In the GII Portal, go to My Content
2. Click Add Item, From the web



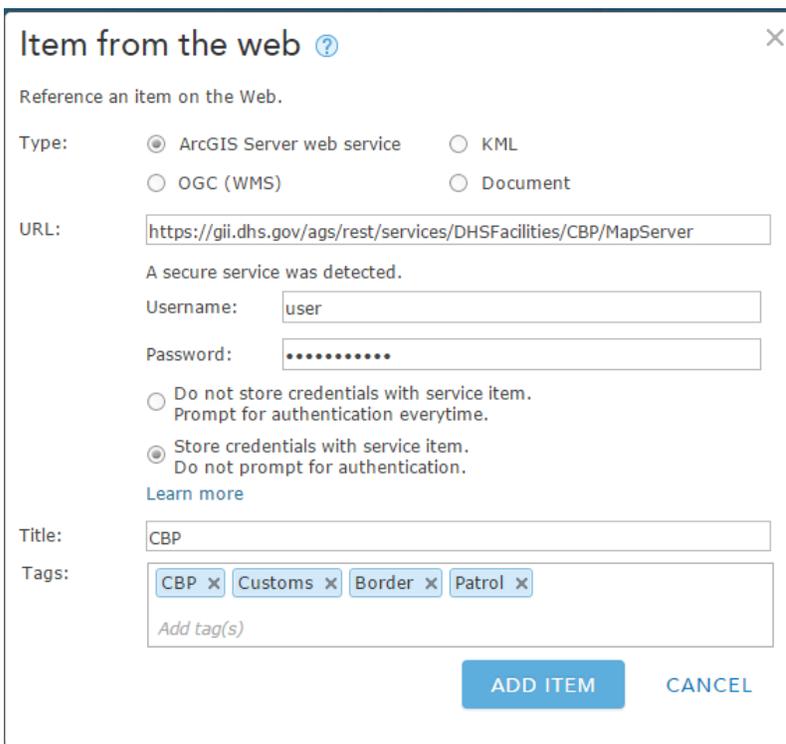
3. The Item from the Web Pop-Up will appear



4. Use the default type – ArcGIS Service Web Service

5. Add the URL

6. Once Portal detects that a secure service has been added, you will be prompted for the username and password



7. Select Store credentials with service item. Do not prompt for authentication.

8. Add a title and tags

9. Click Add Item

10. The service is now registered for use in the GII Portal

7 CREATE APPS FROM MAPS

You can create an app with a shared map by using a configurable app template. Different templates and Web AppBuilder offer various functionality, such as different layouts and color schemes, editing and identify tools, social media feeds, and side-by-side map viewers. Once you have found a template you like configure the components and publish the app.

**A published web app is based on a map authored with the map viewer. Any changes the author makes to the map, including its extent, layers, description, and so on, are reflected in the web app. If a map that was available to everyone in the organization is made private (or deleted), the map no longer appears in the app.*

7.1 Sharing Map

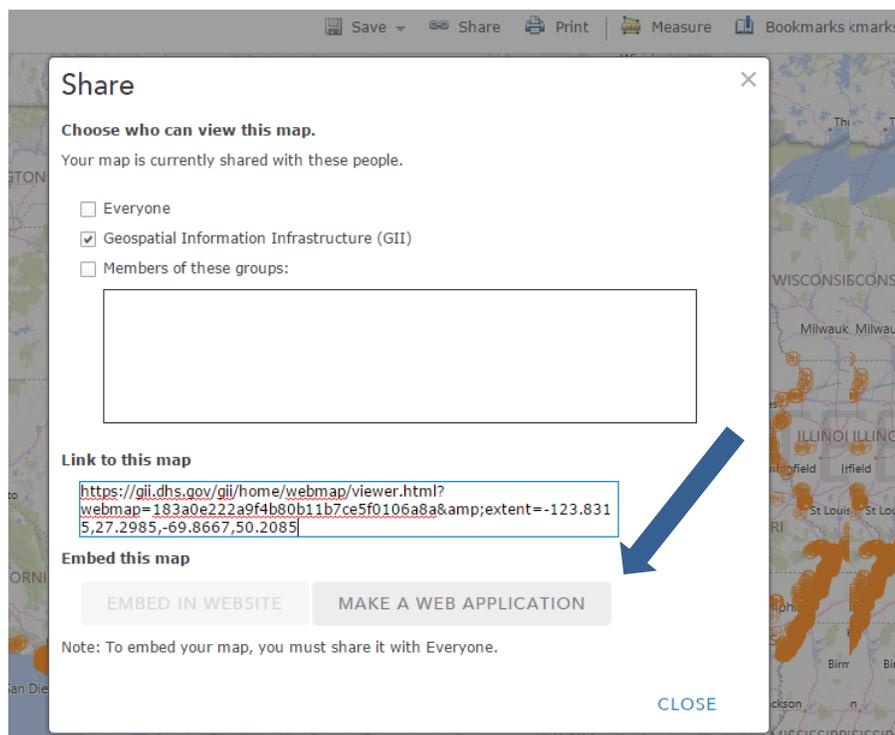
- 1) Verify that you are signed in with privileges to create and share content.
- 2) Open a saved map in the map viewer and click Share. You can only make an app with a map that is shared. If you own the map, share it by specifying sharing options in the Share window. If you don't own the map, contact the owner and have them share it as necessary.

7.2 Make a Web Application

The following steps explain how to make a web application.

Note: An HTTP 404 error is returned when creating an application from Portal for ArcGIS 10.3.1 My Content page using a template. Create the application from the map viewer following the procedure below instead of the My Content page.

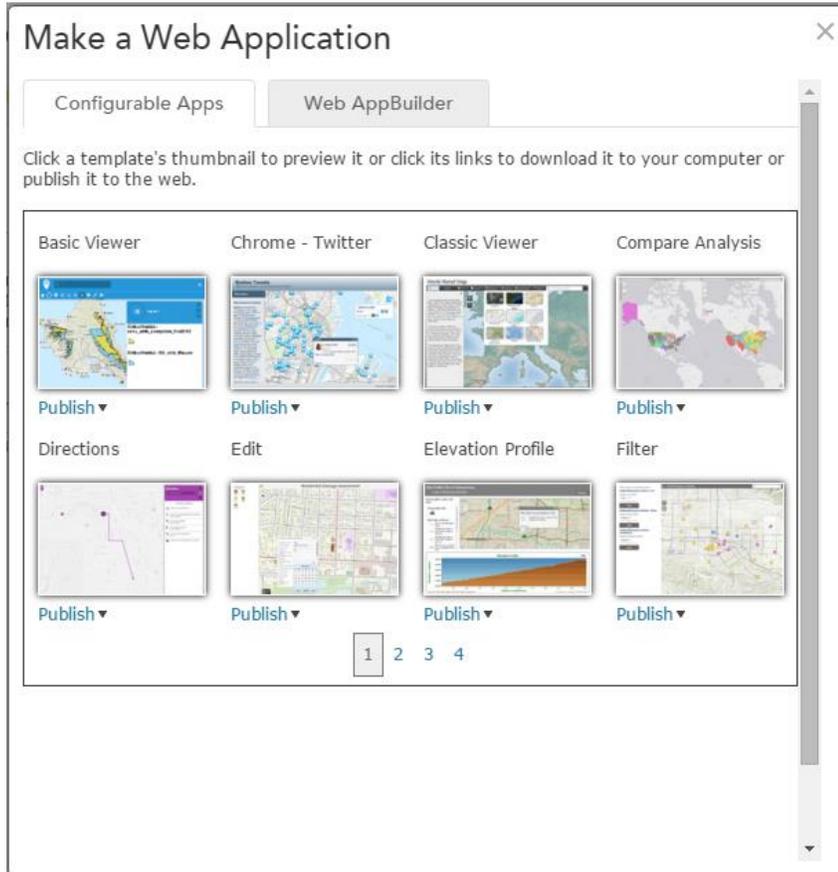
- 1) From *Share* pop-up click *Make a Web Application*.



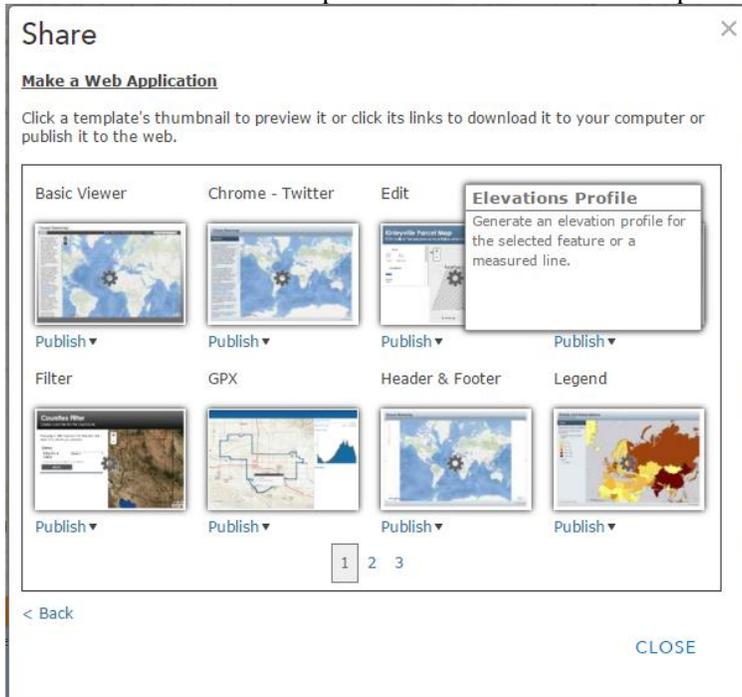
- 2) Select the tab of which application you would like to build (Configurable App or Web_AppBuilder)

7.2.1 Configurable App

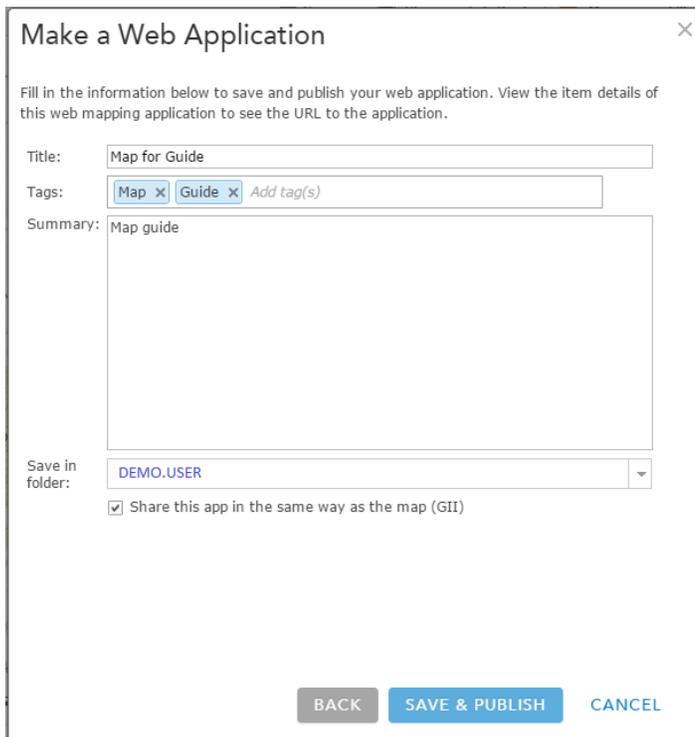
- 1) Click the *Configurable Apps* tab.



- 2) Hover over and click a template thumbnail to see a description of the template.



- 3) Click *Publish* > *Publish* to start configuring your app.
- 4) Type a title, tags, and summary for your app and choose the folder in which to save the app.
- 5) If you want to immediately share this app, click *Share this app in the same way as the map*. If you do not check this, you'll need to specify how to share the app from *My Content*.



- 6) Click *Save & Publish* to publish the app

- 7) Change the components of the app you want, such as the theme, widgets, and miscellaneous items. Click *Save* when you are done configuring the app.

7.2.2 Web AppBuilder

- 1) Click the Web App Builder tab and click the GET STARTED button below:
 - a. Type a title, tags, and summary for your app.
 - b. Choose in which folder the app should be saved.
 - c. Choose whether to apply the same sharing properties to the app as you have on the map.

Make a Web Application ×

Configurable Apps Web AppBuilder

To create a new app with Web AppBuilder, enter a title, tags and summary.

Title:

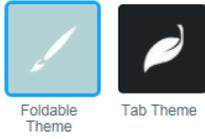
Tags: × *Add tag(s)*

Summary:

Save in folder: ▼

Share this app in the same way as the map (GMO UAT)

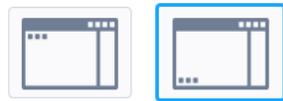
- 2) Select Themes
 - a. Create a custom Style color in banner
 - b. Layout (where widget will be placed in the viewer):



Style

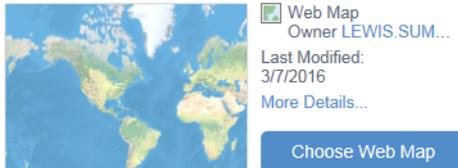


Layout



3) Select Map

- a. Choose Web Map
- b. Set Initial Extent and customize visible scales

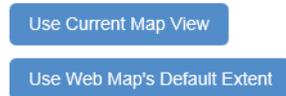


Fairfax City Emergency and Law Enforcement Locations

This topographic map is designed to be used as a basemap and a reference map. The map has been compiled by Esri and the ArcGIS user community from a variety of best available sources.

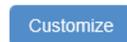
Set Initial Extent

Specify the initial map extent when the application starts up.

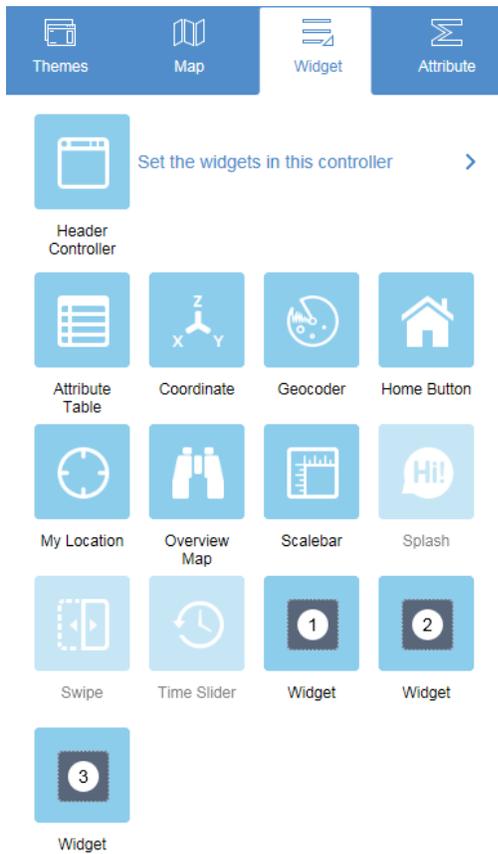


Customize Visible Scales

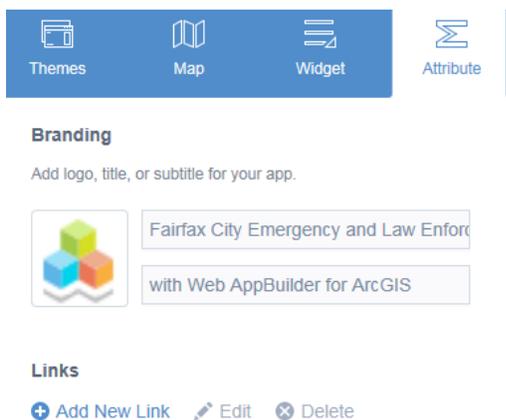
Customize the visible scales of the map to limit or extend the scale levels which the map can zoom to.



4) Select Widgets – Widgets gives application functionality.



5) Configure Attributes – customize your application banner with logo, title and hyperlinks



6) Preview – preview the application

7) Save and Launch – Web Mapping Application created in My Content area.

8 CREATE A STORY MAP

The steps in this section explain how to create a story map. These steps are very similar to the steps for creating a Web App.

8.1 Share Your Map

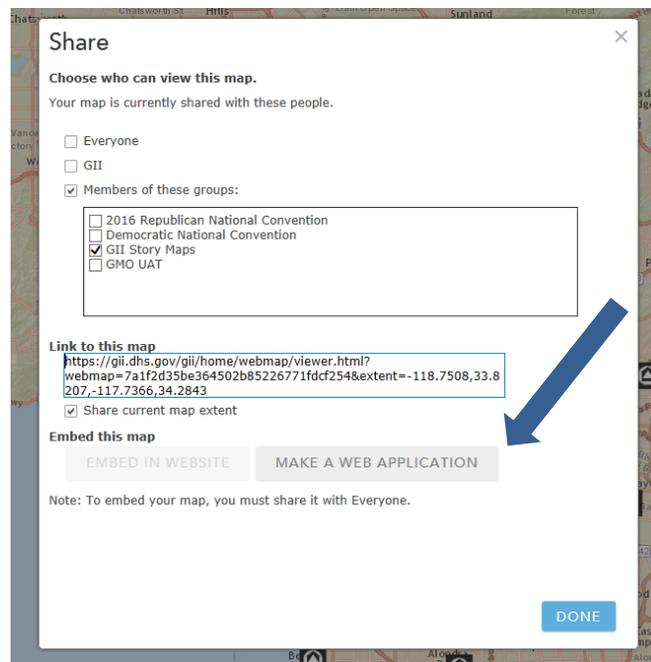
- 1) Verify that you are signed in with privileges to create and share content.
- 2) Open a saved map in the map viewer and click Share. You can only make an app with a map that is shared. If you own the map, share it by specifying sharing options in the Share window. If you don't own the map, contact the owner and have them share it as necessary.

8.2 Choose a Story Map Template

The following steps explain how to create a Story Map.

Note: An HTTP 404 error is returned when creating an application from Portal for ArcGIS 10.3.1 using My Content page for the template. Create the application from the map viewer following the procedure below instead of using My Content page.

- 1) From *Share* pop-up click *Make a Web Application*.
 - a. Note: If you have a private group, select only that group.
 - i. Do not select Everyone or GII. If you select either of those two groups, you will be sharing your Story Map with either anyone who can access the URL or anyone who can login with their HSIN ID.



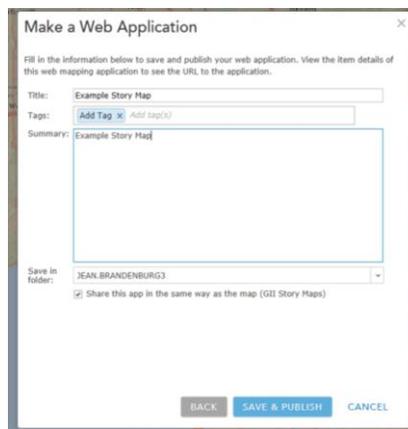
- 2) Select the tab of which application you would like to build
- 3) Use Configurable App in order to access the Story Map templates. [Located on page 3]
- 4) Hover over the Story Map to get a description of the template



- 5) Select the Publish dropdown and Select Preview to view the template



- 6) Select Publish to create the Story Map

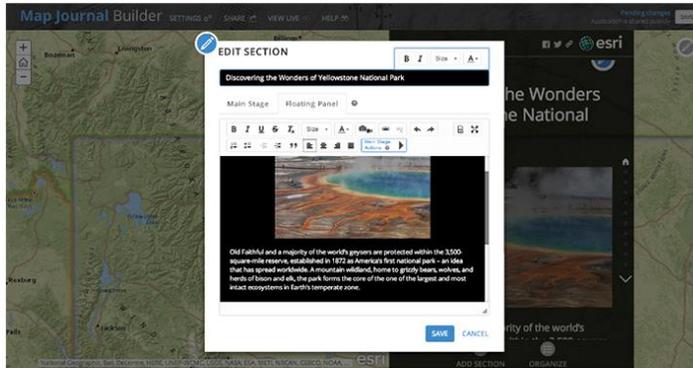


- 7) Enter Information on the Make a Web Application Form

- 8) Select Save and Publish
- 9) Choose the configuration options for the Story Map template
- 10) The Story Map Builder will appear, so you can complete your Story Map

8.3 Story Map Information

There are links on the preview page of the Story Map Journal template for a Tutorial, Build a Hosted App, Download a configurable app, FAQs, and Blog posts



You create your Map Journal with an interactive builder

Building your Story Map Journal

Click the link below to build a Map Journal using our interactive builder. Your app is automatically hosted on ArcGIS Online. You also have the option of downloading the app if you want to host it on your own website or web server.

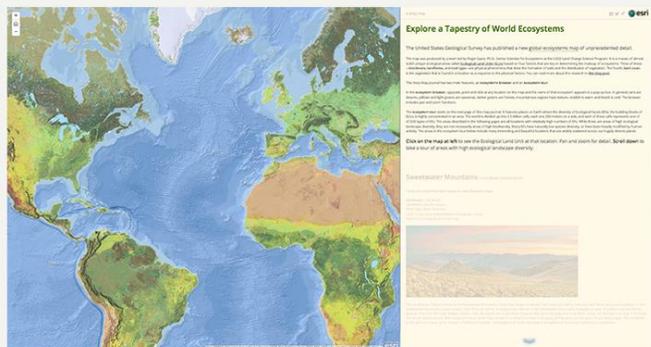
- [Tutorial](#)
- [Build hosted app](#)
- [Download configurable app](#)
- [FAQs](#)
- [Blog posts](#)

- 11) You can also download the source code from Gatha and update it

8.4 Story Map Templates

The following sections contain examples of the Story Map templates.

8.4.1 Story Map Journal



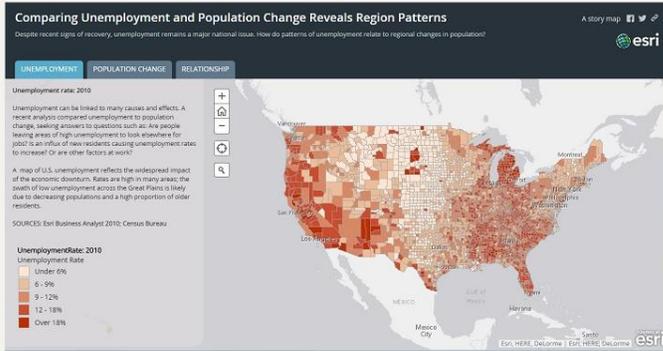
View this story map

Create compelling multimedia narratives

The Story Map Journal™ is ideal when you want to combine narrative text with maps and other embedded content. A Map Journal contains entries, or sections, that users simply scroll through. Each section in a Map Journal has an associated map, image, video or web page. Actions can also be defined in journal sections so that, for example, clicking a word automatically zooms the section's map to a particular location.

[BUILD A MAP JOURNAL](#)

8.4.2 Story Map Series



[View this story map](#)

Make it easy for people to browse a series of maps

The Story Map SeriesSM app lets you present a series of maps via tabs, numbered bullets, or our expandable 'side accordion' control. In addition to maps, you can also include images, video and web content in your series to tell your story and engage your audience. For example the first tab in a tabbed series can be a compelling photo that sets the scene.

[BUILD A MAP SERIES](#)

Layout options



Tabbed



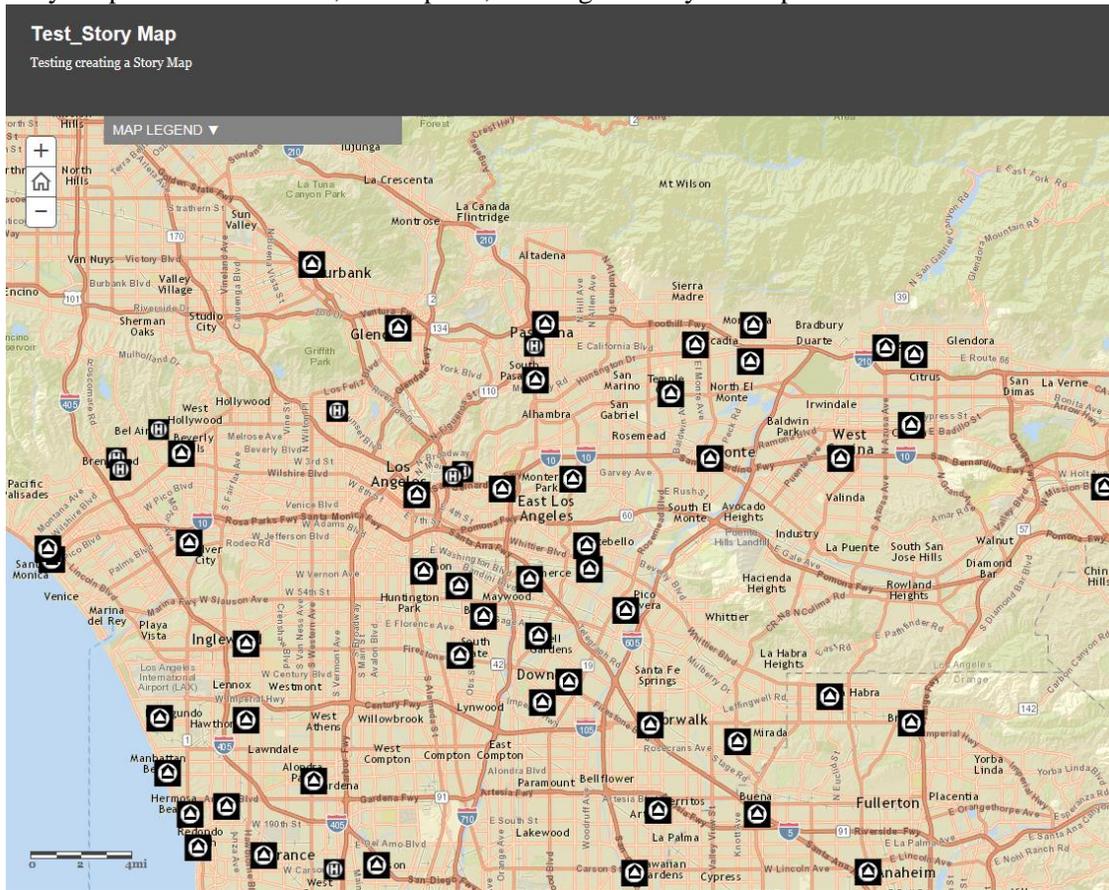
Side Accordion



Bulleted

8.4.3 Storytelling Basic

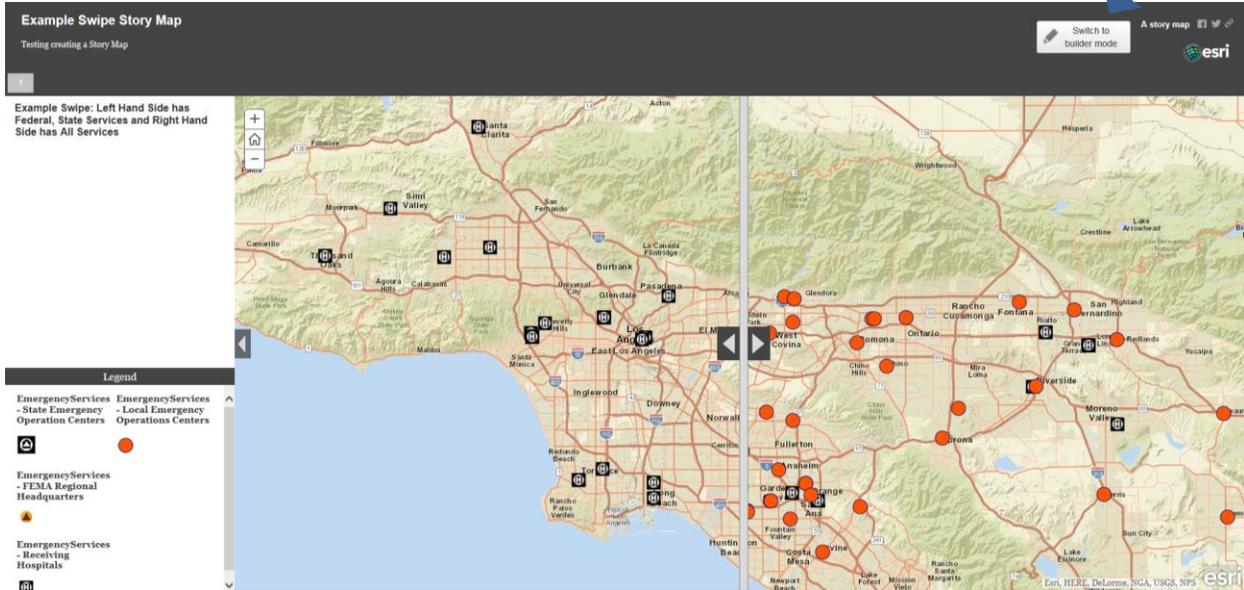
This Story Map contains the Title, Description, and Legend for your map.



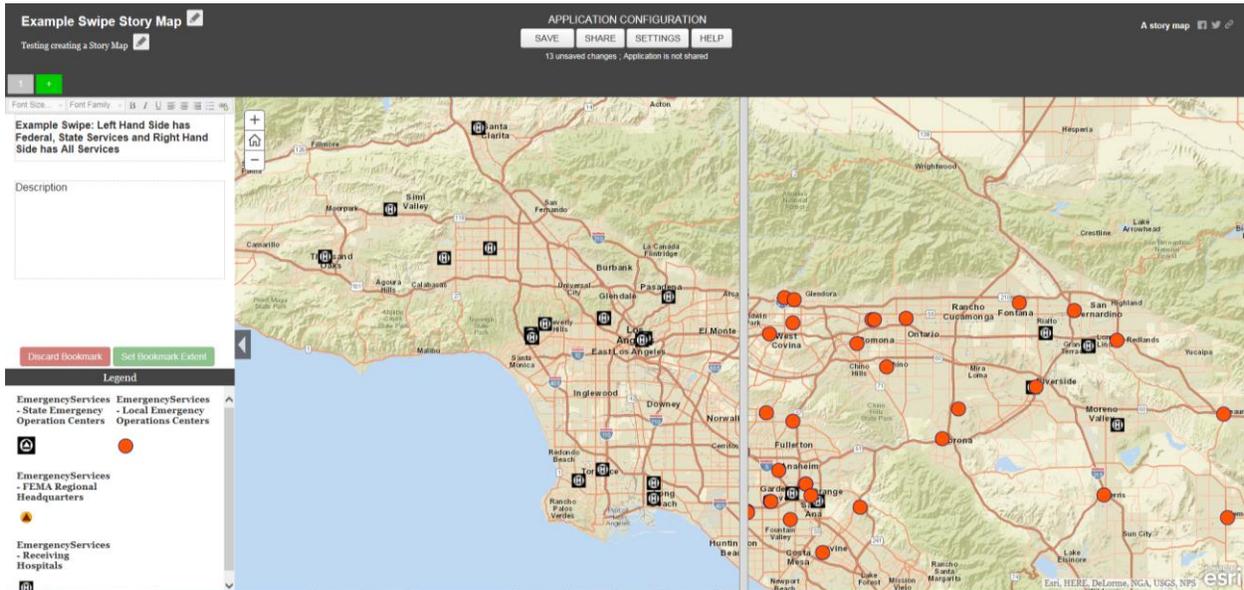
8.4.4 Storytelling Swipe

Compare two layers of a map with a swipe.

Note: Select the Switch to Builder mode to update settings.



The following Story Map is in Builder Mode.



8.4.4.1 Configuring Swipe

The following screens show how to configure swipe as a vertical bar for one layer.

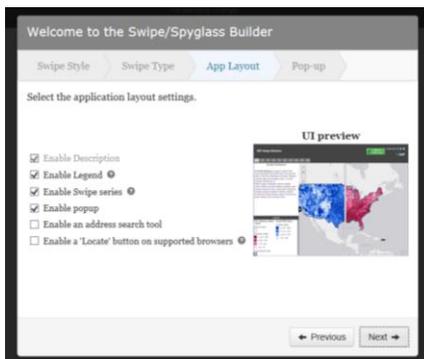


Choose vertical bar or spyglass



Select the layer to swipe [turn on/off]

Or choose between 2 different layers



Choose Configuration settings



Choose the Header for the Pop-up