

A stylized compass rose graphic in shades of gray, featuring a circular dial with radial lines and a central needle pointing towards the top right. The letters 'W' and 'N' are written in a cursive font on the left and right sides of the dial, respectively.

FIRSTMAP

Introductory Seminar

UD Coffee Hour, April 2017

← Introduction

- ▶ FirstMap Overview
- ▶ FirstMap Website
- ▶ Connect to services using ArcGIS Desktop
- ▶ ArcGIS Online
- ▶ Open Data
- ▶ Web Development
- ▶ Wrap Up

← FirstMap Overview

- ▶ State's Enterprise GIS system that consists of the following:
 - Infrastructure for storing data and providing web services
 - Website (<http://firstmap.delaware.gov>)
 - Web Mapping Portal (ArcGIS Online)
 - Web Maps and Applications
 - Data Download Site (Open Data)

← FirstMap Overview

▶ Public Users

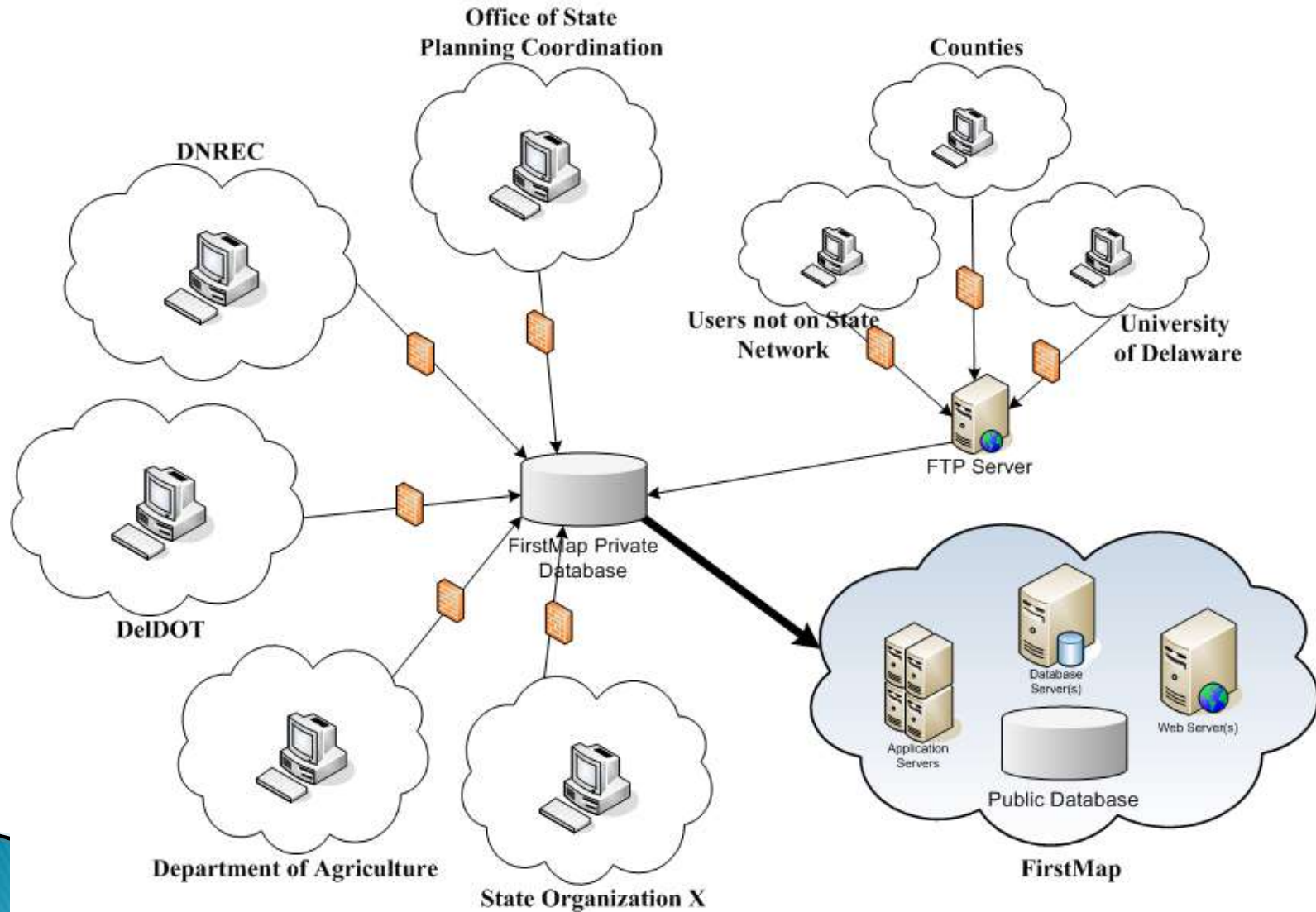
- No account needed
- Services accessible over the web to everyone
- Ability to share these services and consume them within ArcGIS Online
- KML capabilities enabled

← FirstMap Overview

▶ Private Users

- The services are only available inside the state firewall
- Agencies dictate if the service should be available to the public as well
- Some data are available on the private side but not on the public site, i.e. parcel ownership information

↖ FirstMap Data Flow



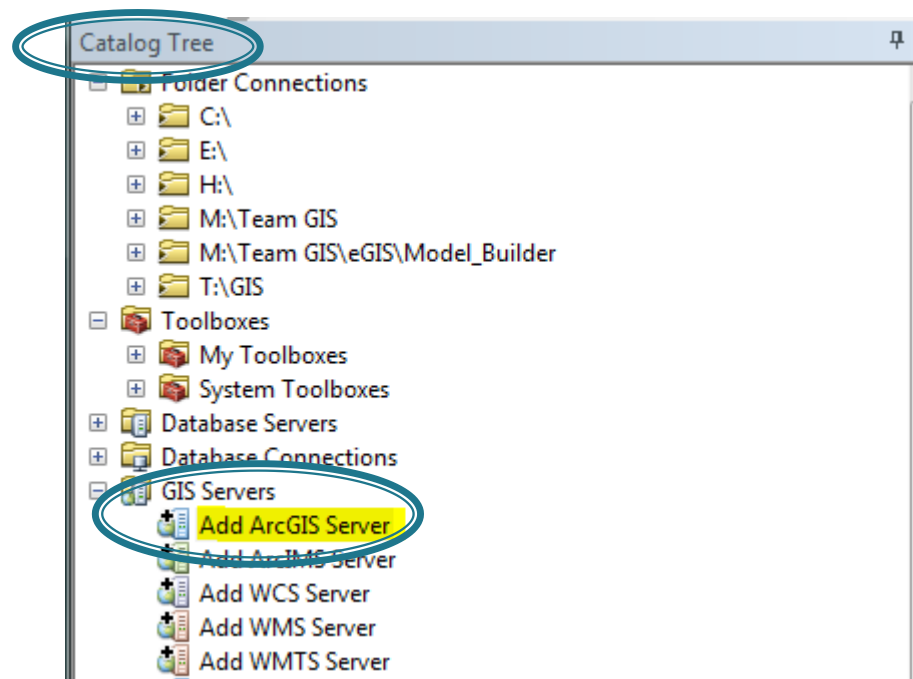
← FirstMap Website

▶ <http://firstmap.delaware.gov/>

- Instructional documents
- FAQ documents
- Links to services

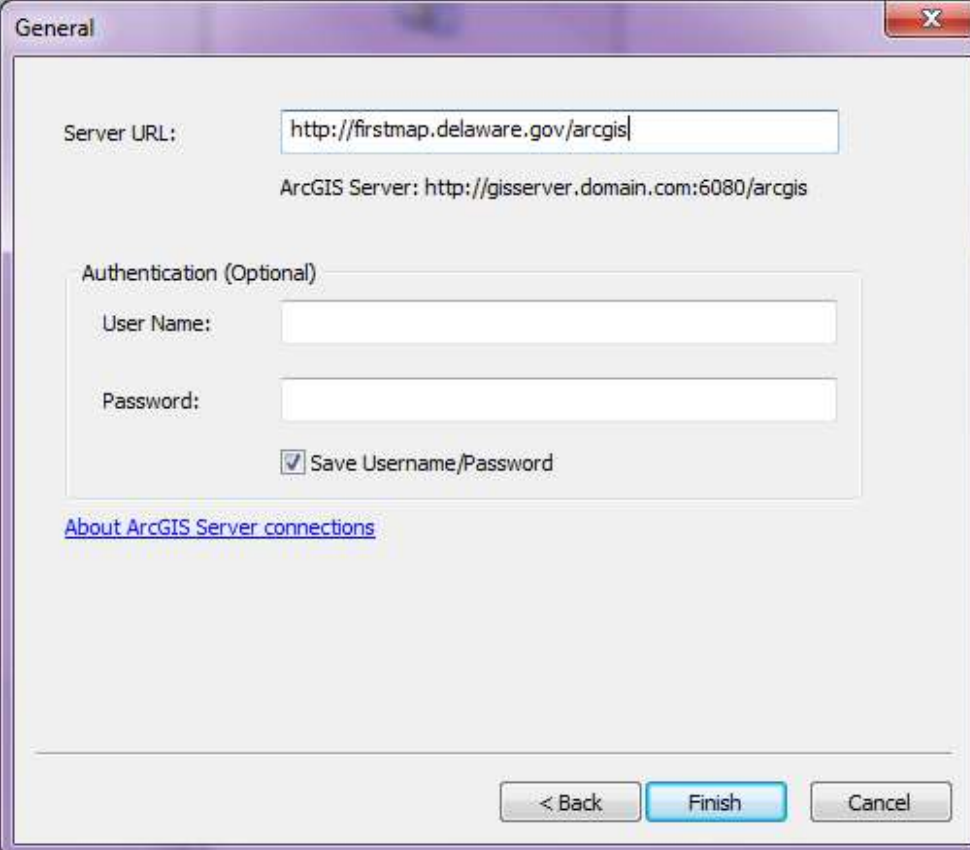
➤ Connect to Services

- ▶ Connect directly to the FirstMap services from ArcCatalog
- ▶ Go to GIS Servers –> Add ArcGIS Server



↖ Connect to Services

- ▶ Public: <http://firstmap.gis.delaware.gov/arcgis/>
- ▶ Private: <https://firstmap.dti.state.de.us/arcgis/>



The screenshot shows a 'General' dialog box with the following fields and options:

- Server URL:**
- ArcGIS Server:** `http://gisserver.domain.com:6080/arcgis`
- Authentication (Optional):**
 - User Name:**
 - Password:**
 - Save Username/Password
- [About ArcGIS Server connections](#)
- Buttons: < Back, Finish, Cancel

← Types of Services

▶ Map Services

- Data is served as a pre-created map
 - Cannot export the data
 - Cannot symbolize, query or select
 - WYSIWYG
 - Can view all features

← Types of Services

▶ Feature Services

- Data is served as an independent feature
 - Data is exportable from ArcGIS products
 - Can symbolize, query and select
 - Cannot edit
 - Can export/view up to 1000 features
 - Available for download in Open Data

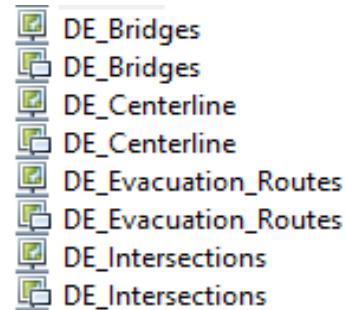
▶ Image Services

▶ Geocoding Services

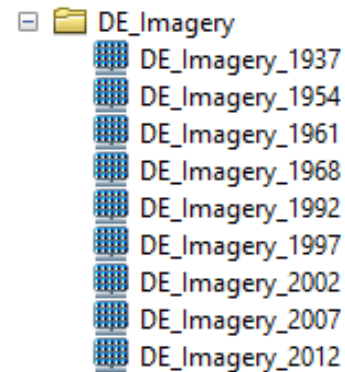
▶ KML Services

← Types of Services

- ▶ Map Service entries appear first and then the Feature Service (has a rectangle in the bottom right of the icon)

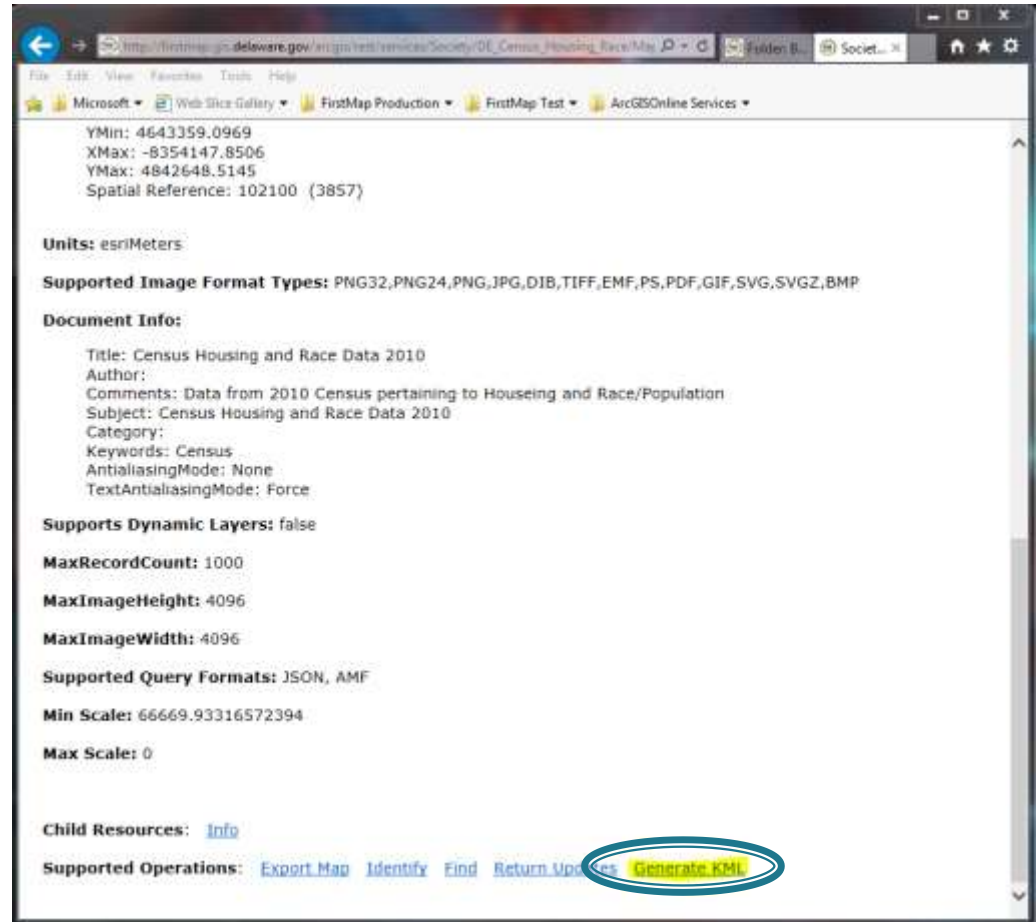


- ▶ Example of Image Services:



KML

- ▶ Most ArcGIS Services have KML Capabilities
- ▶ Supported Operations are listed at the bottom of the service.
- ▶ Click Generate KML to download a KMZ of the layer.



YMin: 4643359.0969
XMax: -8354147.8506
YMax: 4842648.5145
Spatial Reference: 102100 (3857)

Units: esriMeters

Supported Image Format Types: PNG32,PNG24,PNG,JPG,DIB,TIFF,EMF,PS,PDF,GIF,SVG,SVGZ,BMP

Document Info:

Title: Census Housing and Race Data 2010
Author:
Comments: Data from 2010 Census pertaining to Housing and Race/Population
Subject: Census Housing and Race Data 2010
Category:
Keywords: Census
AntialiasingMode: None
TextAntialiasingMode: Force

Supports Dynamic Layers: false

MaxRecordCount: 1000

MaxImageHeight: 4096

MaxImageWidth: 4096

Supported Query Formats: JSON, AMF

Min Scale: 66669.93316572394

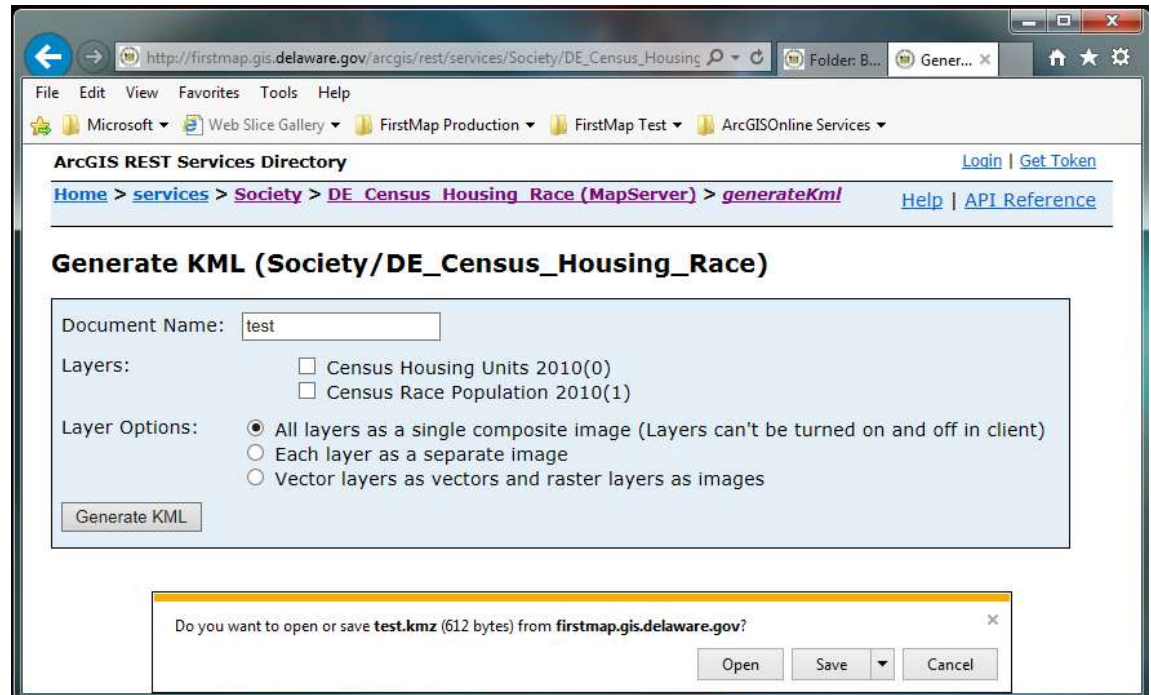
Max Scale: 0

Child Resources: [Info](#)

Supported Operations: [Export Map](#) [Identify](#) [Find](#) [Return Up](#) [Generate KML](#)

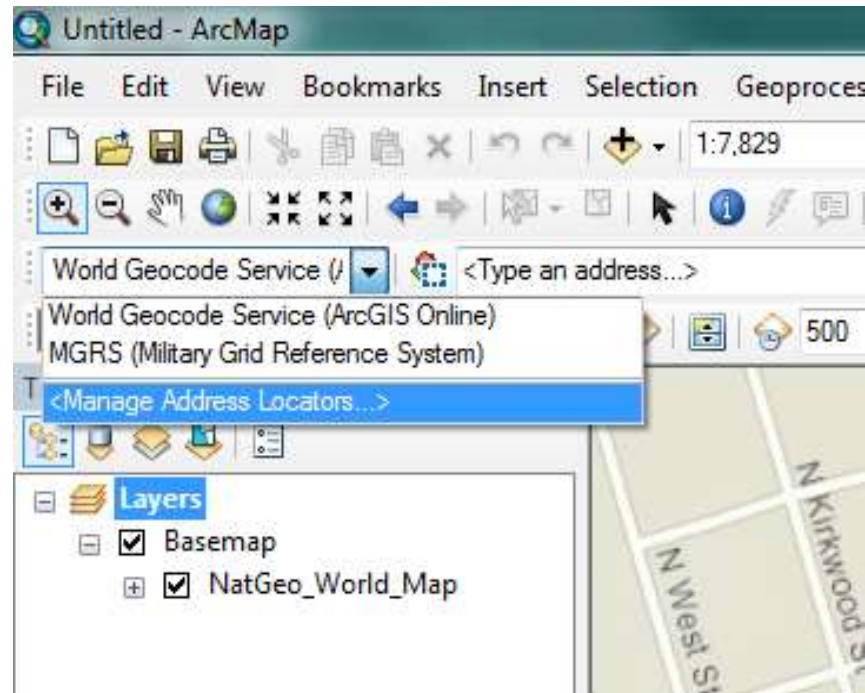
↖ KML

- ▶ Give the KMZ file a name.
- ▶ Choose what you want it to contain.
- ▶ Click Generate KML
- ▶ Save the file to disk.



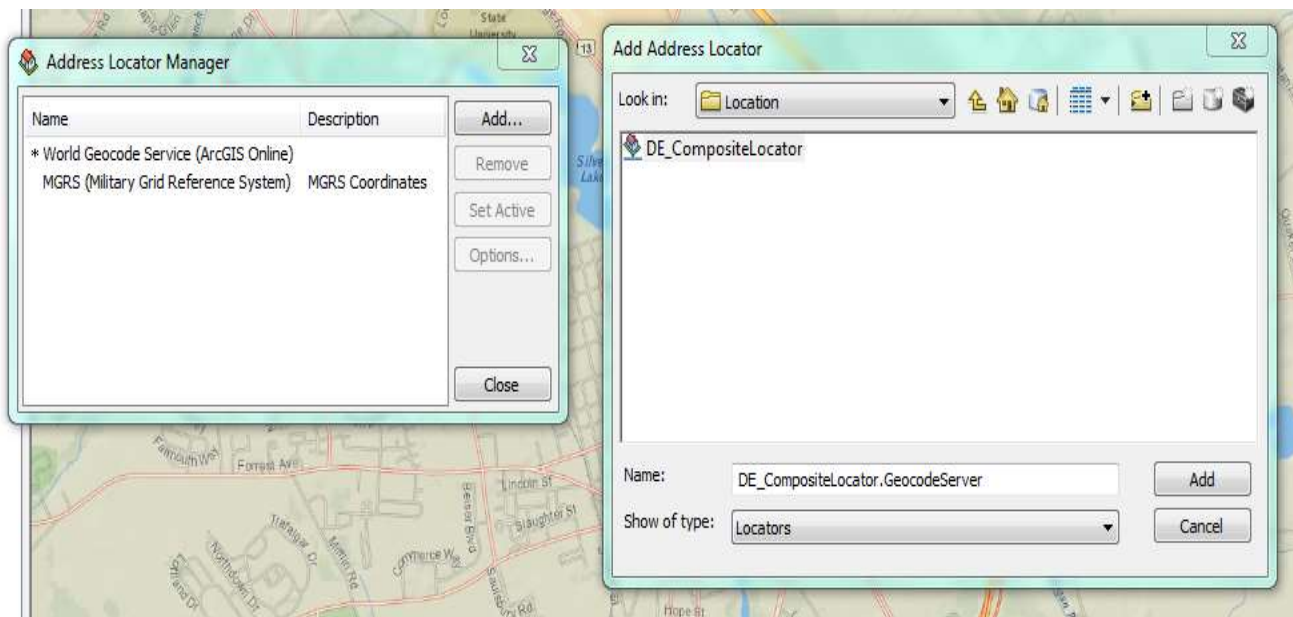
↖ Geocoder

- ▶ Add the Delaware Composite Locator to ArcMap from the Geocoding Toolbar.



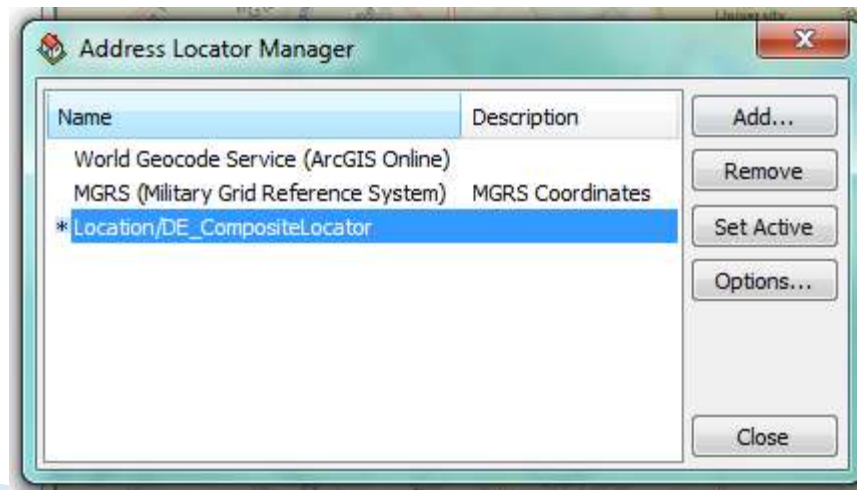
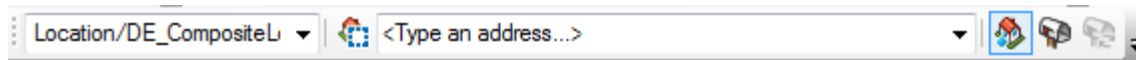
➤ Geocoder

- Navigate to the FirstMap GIS Server connection
- In the Location folder, Select the DE_CompositeLocator service



↖ Geocoder

- ▶ Select the DE_CompositeLocator service when geocoding single or a batch of addresses.
- ▶ For more information on using the FirstMap Geocoder see:
- ▶ <http://firstmap.gis.delaware.gov/pdfs/public/FirstMapGeocoder.pdf>



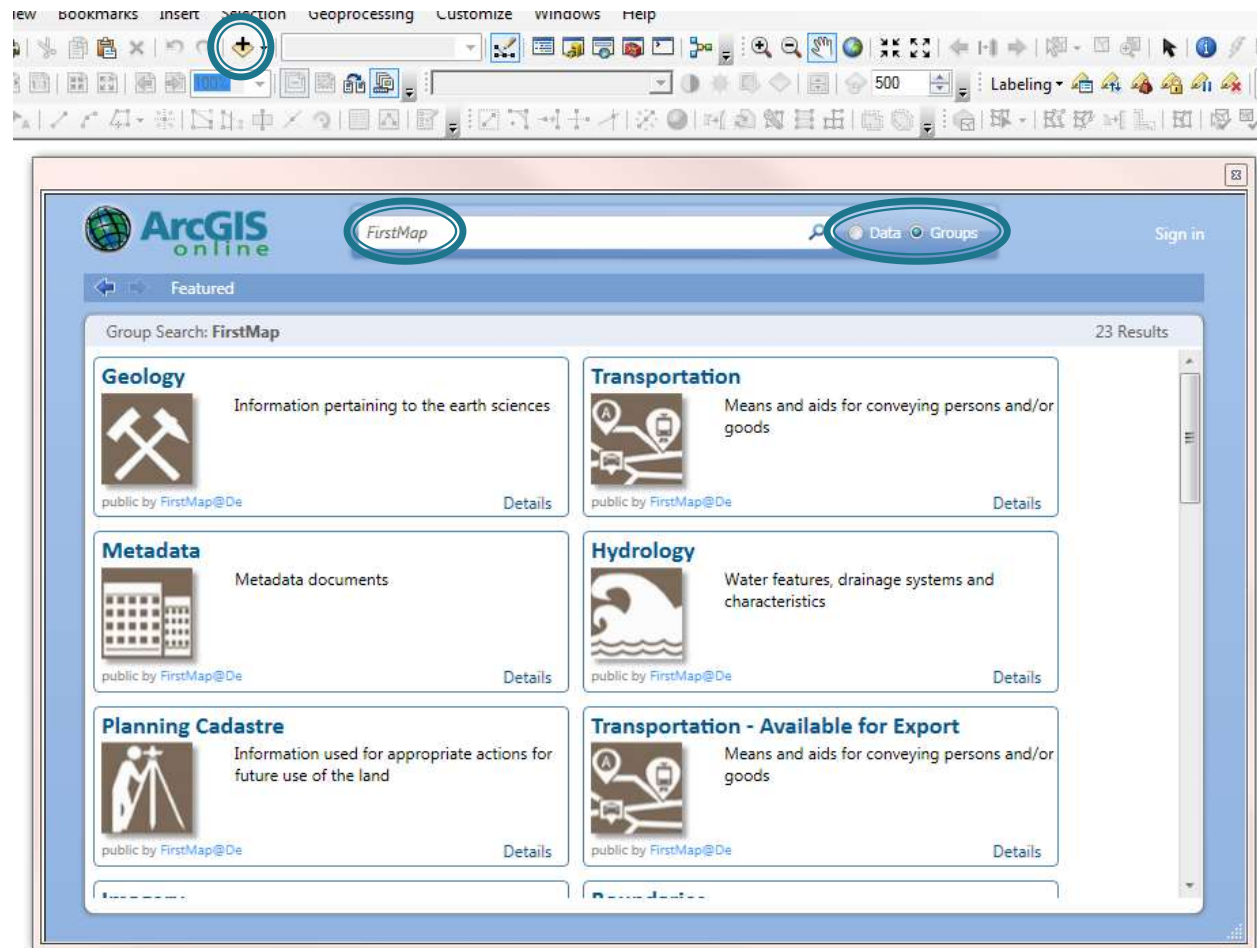
← ISO Categories

- ▶ Data is stored in Categories that are listed in the Source:
ISO 19115/TC 211 Geographic Information/Geomatics Metadata Standard

- [Applications](#)
- [BaseMap](#)
- [Biota](#)
- [Boundaries](#)
- [DE Imagery](#)
- [Elevation](#)
- [Environmental](#)
- [Geology](#)
- [Hydrology](#)
- [Location](#)
- [PlanningCadastre](#)
- [Society](#)
- [Transportation](#)
- [Utilities](#)

➤ Add Data in ArcMap

- ▶ From ArcMap, select the Add Data button and search for FirstMap.
- ▶ Narrow your search by selecting Groups.



ArcGIS Online (Web Mapping Portal)

▶ <http://delaware.maps.arcgis.com/home/>

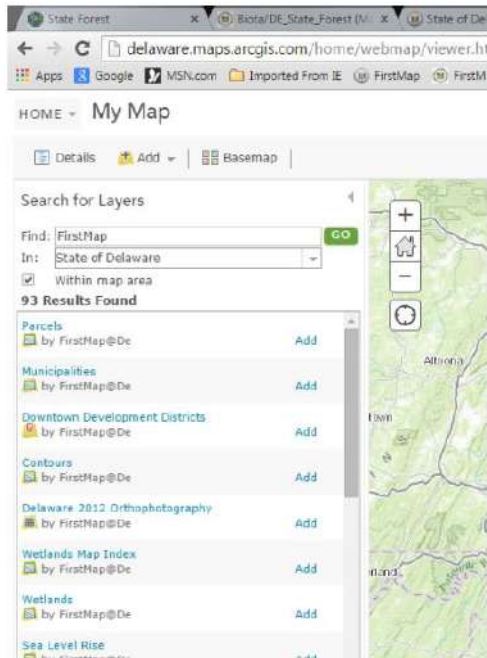
- Cloud solution hosted by esri, available world-wide
- Gallery of pre-made maps
- Self Service, create your own maps
- Add data owned by the State of Delaware or any data on ArcGIS Online

✦ ArcGIS Online

- ▶ Create your own web maps from ArcGIS Online
- ▶ Maps cannot be saved without an account
- ▶ Use a combination of FirstMap and local, regional or world data from ArcGIS Online
- ▶ Create HTML for static web pages

Discover Data using ArcGIS Online

5. Click: Add and Select “Search for Layers”



Under “Search for Layers” in the

“Find” Type “FirstMap” (There are no spaces between First and Map)

“In” Select “ArcGIS Online”

You will see a list of all the data layers that are available in FirstMap.

Add the layers to you map by selecting the “Add” button next to the layer.

You can also narrow the search by using key words in the “Find” for example”

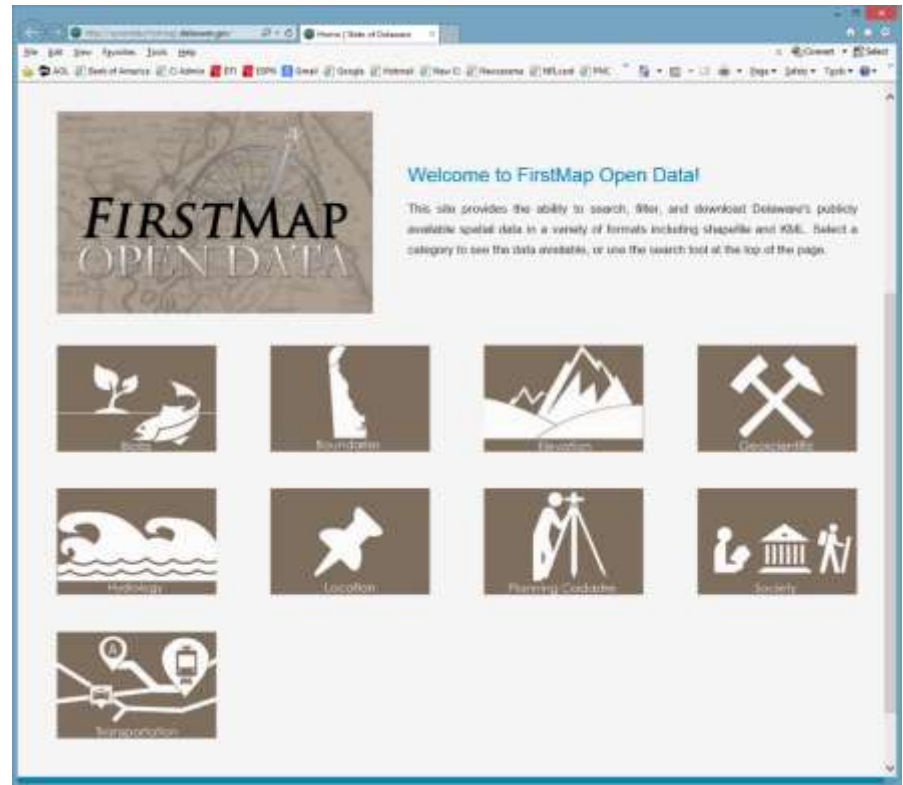
“FirstMap orthophotography”, or “FirstMap water”.

When you are done adding layers, click the DONE button at the bottom.

Please be aware that features that have more than 1000 features will not render more than 1000 at a time.

↖ Open Data

- ▶ Allows users to export data without being in an ArcGIS product
- ▶ Export to shapefile, KML or other options.
- ▶ Go to:
<http://opendata.firstmap.delaware.gov/>



↖ Open Data

- ▶ Search at top of screen and type in desired dataset.
- ▶ Choose dataset
- ▶ Go to right side of screen and click on Download Dataset. Choose type

The screenshot shows the 'Bridges' dataset page on the FirstMap Open Data portal. The page includes a map of Delaware with a search bar at the top. The 'Download Dataset' button is highlighted, and a dropdown menu is open, showing options for downloading the entire dataset or a filtered dataset in various formats (Spreadsheet, KML, Shapefile, API). The dataset attributes table is also visible.

ATTRIBUTE	VALUES
BRIDGE_ID Text	
RDWAY_ID Number	min: 0 max: 999,999 avg: 34,221.21 count: 2,247
MILEPOINT Number	min: 0 max: 70 avg: 5.72 count: 2,217
BRIDGE_NO Text	759 (12), 902 (12), 809 (9), 757 (8), 680 (7), 812 (7), 7489 (6), 830 (6), 600 (6), 013P (6) ... (1399 more)
COUNTY Text	1 (1396), 3 (478), 2 (428)
OVER_RDWAY Number	min: 0 max: 110,437 avg: 27,393.76 count: 429

↖ Web Maps and Applications

- ▶ Series of web maps with different themes
- ▶ Can be created by anyone with an account in ArcGIS Online
- ▶ Templates available for creating custom applications
- ▶ Developer tools available to make creating apps much easier than in the past
- ▶ Add rest end points to applications
<https://firstmap.delaware.gov/arcgis/rest/services>

🗺️ Web Maps and Applications

- ▶ Story Maps and Web Apps can be shared
 - [UD DGS Annual Report](#) – UD DGS
 - [Play Outside](#) – State Parks Application
 - [Flood Planning Tool](#) – DNREC/FEMA
 - [Big Tree Champs](#) – DDA Forest Service
- ▶ Check out the FirstMap AGO Gallery

↖ Wrap-Up

- ▶ Questions
- ▶ FirstMap Team
 - FirstMap@state.de.us

