



What's new with FirstMap?

Delmarva GIS Conference

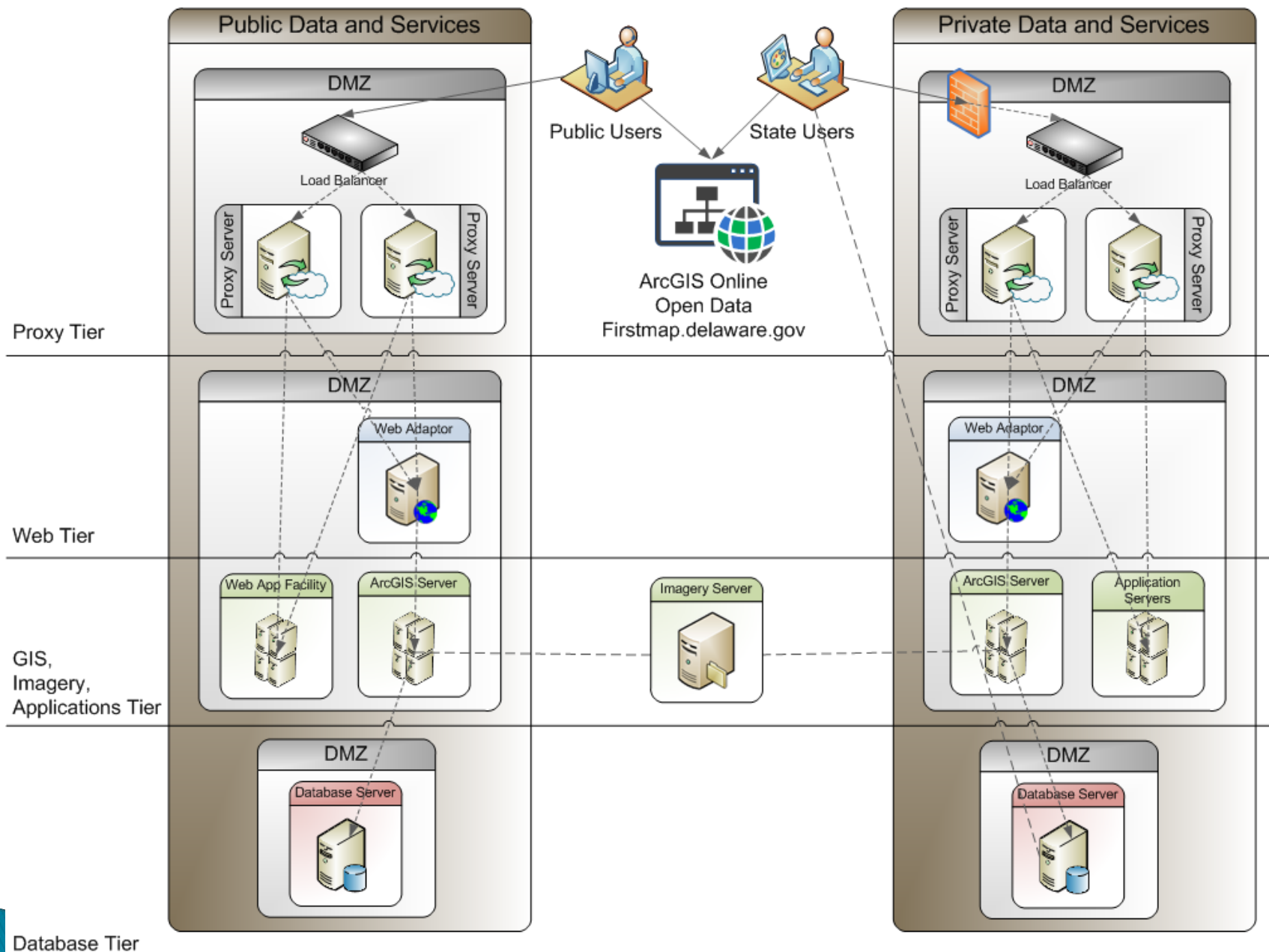
April 2016

Introduction

↖ FirstMap

- ▶ State of Delaware's Enterprise GIS system that consists of the following:
 - Infrastructure for storing data and providing web services.
 - Static content Website
 - <http://firstmap.delaware.gov>
 - Web Mapping Portal (ArcGIS Online)
 - <http://delaware.maps.arcgis.com>
 - Data Download Site (Open Data)
 - <http://opendata.firstmap.delaware.gov>
 - Collection of web maps and applications

✦ FirstMap Infrastructure



✦ FirstMap Website

▶ <http://firstmap.delaware.gov/>

- ▶ How to documents
- ▶ FAQ documents
- ▶ Links to services
- ▶ Much More




✦ FirstMap Web Mapping

- ▶ <http://delaware.maps.arcgis.com/home/>
- ▶ Gallery of pre-made maps
- ▶ Self service – create your own web maps from ArcGIS Online
- ▶ Use a combination of FirstMap and local, regional or world data from ArcGIS Online
- ▶ Use web maps to create HTML code to embed maps into static web sites

🗺️ FirstMap Web Mapping


[Home](#) [Gallery](#) [Map](#) [Scene](#) [Groups](#) [My Content](#) [My Organization](#)

Kim ▾






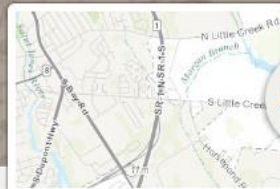
Explore Delaware Geology



CitizenMap



Big Tree Champs



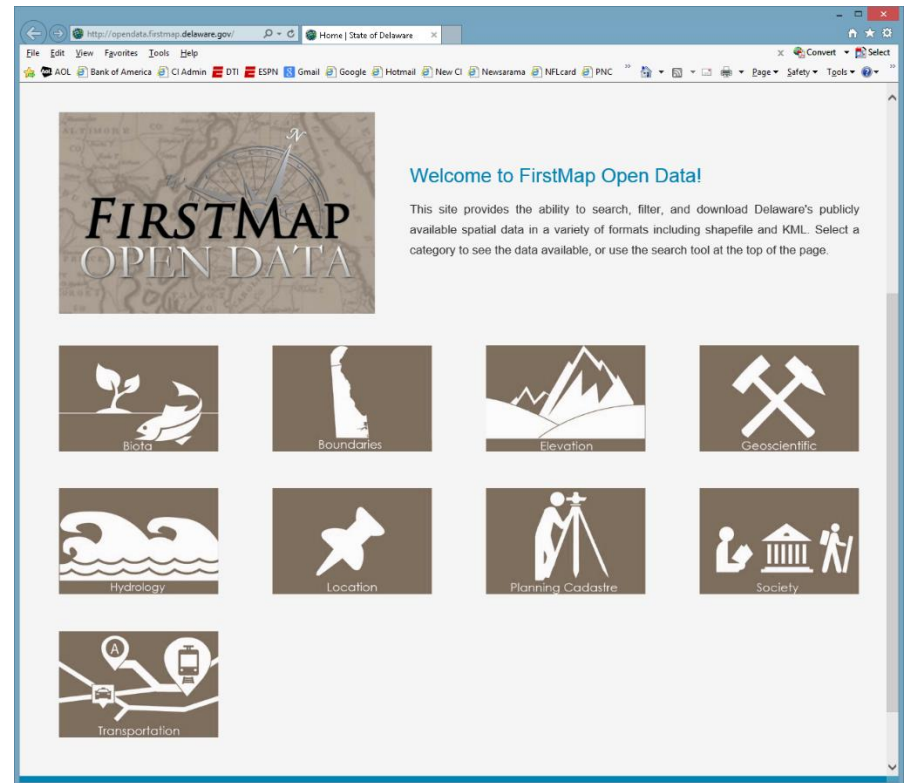
Delaware Roadway Information

Delaware is dedicated to providing our citizens information to assist in the use of our services and resources. This site provides a collection of maps and applications relating to the functions of Delaware State Government. Browse our gallery to see what is available.

✦ FirstMap Open Data

► <http://opendata.firstmap.delaware.gov/>

- Allows users to export data without being in an ArcGIS product
- Export to shapefile, KML or other options.



FirstMap

▶ What it is

- Data Repository that can be used with ArcGIS or other GIS applications
- Map service provider
- Image service provider
- Resource to host applications
- Collection of data and services
- Made up of several components – infrastructure, web site, ArcGIS Online, Open Data

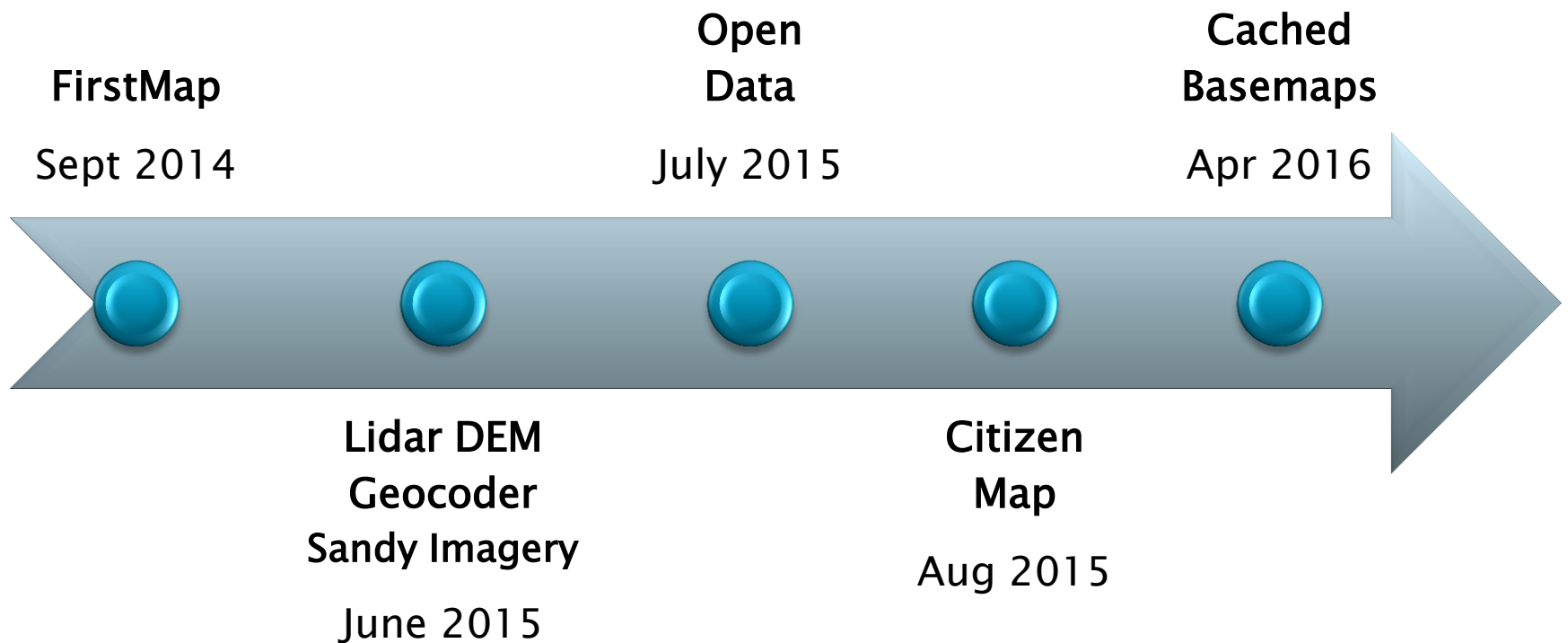
▶ What it isn't

- A replacement for ArcGIS Desktop
- Single application with all geospatial data for the State
- FirstMap is not the data owner
- Do not update the data, only publish it
- Repository for private sector data

✦ What's New with FirstMap?

- ▶ Timeline
- ▶ Service Updates
- ▶ New Applications
- ▶ Geocoder
- ▶ Data Downloads (Open Data)
- ▶ NEW! Cached Basemaps
- ▶ Infrastructure updates
- ▶ Tips & Tricks
- ▶ Discussion & Feedback

↖ FirstMap Timeline



Service Updates

✦ Service Updates

- ▶ When FirstMap went live, we had 46 map services.
- ▶ As of April 2016, we have 151 map services.

ISO Category	Then	Now	Difference
Applications	2	8	6
Basemap	0	5	5
Biota	0	5	5
Boundaries	7	11	4
Imagery	9	11	2
Elevation	5	8	3
Environmental	2	3	1
Geology	1	17	16
Hydrology	5	7	2
Location	1	5	4
PlanningCadastre	3	21	18
PrintTemplates	0	1	1
Society	3	17	14
Transportation	8	32	24
	46	151	105

✦ Service Updates

- ▶ Lidar
 - DEM, Aspect, Hillshade, Slope, and Spectrum
- ▶ Hurricane Sandy imagery
- ▶ Statewide Parcels
- ▶ Statewide Contours
- ▶ Depth to Water
- ▶ Big Tree Champs and Forest Cover
- ▶ Watersheds
- ▶ 2012 Land Use/Land Cover
- ▶ 2012 Impervious Surface
- ▶ 1926 Orthoimagery (coming soon)

✦ Service Updates

- ▶ Most commonly used services include:
 - Boundaries – Municipalities & School districts
 - Society – Libraries & Schools
 - Basemap
 - 2012 Imagery
- ▶ Some services contain multiple features
- ▶ Most, but not all, services have feature services enabled.
- ▶ On average, FirstMap handles over 100,000 transactions a day
- ▶ Peak Usage Time is around 8am – 3pm

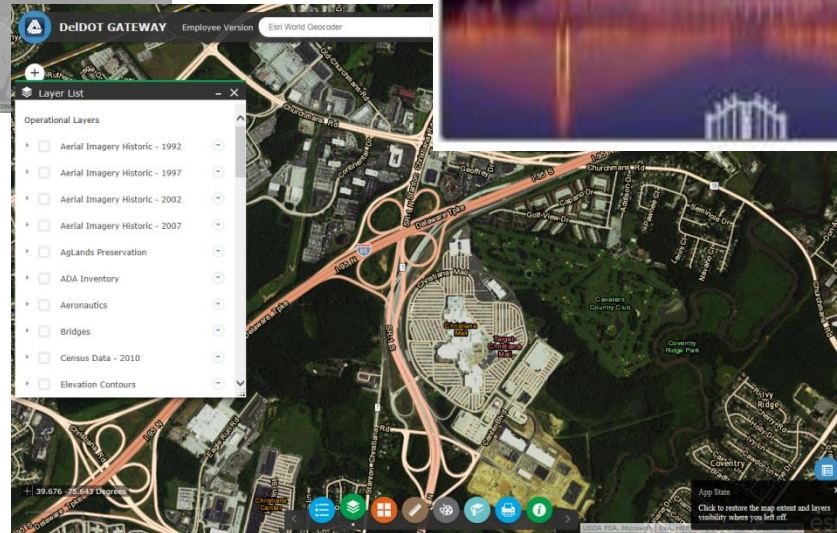
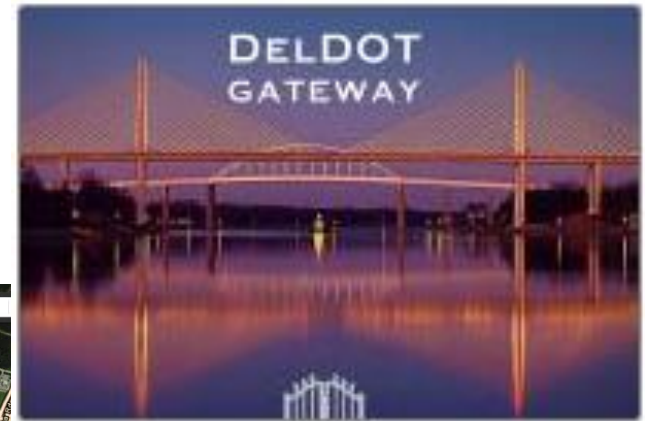
New Applications

➤ New Applications

➤ Citizen Map



➤ DeIDOT Gateway



➤ New Applications

► Sportsmen Against Hunger

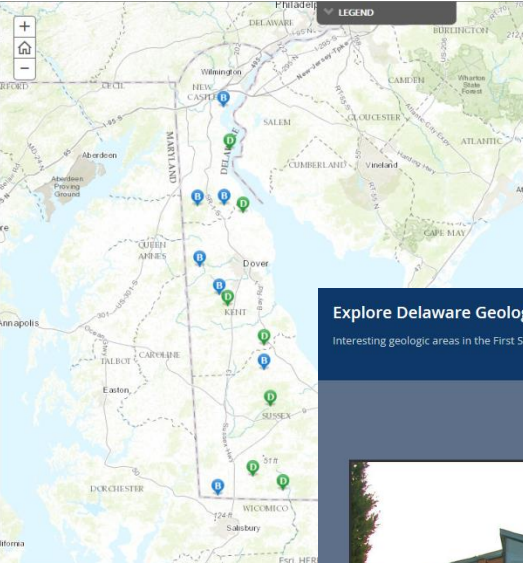
Sportsmen Against Hunger

Sportsmen Against Hunger

During the deer seasons, the Delaware Sportsmen Against Hunger program encourages hunters to share their harvest by donating venison to Delawareans in need. The venison is distributed by DNREC's Division of Fish and Wildlife to more than 30 charitable organizations throughout the state.

The Delaware Sportsmen Against Hunger chapter was formed in 1992 by a coalition of sporting groups, with DNREC as the primary sponsor. In the 2013-2014 hunting season, 21,223 pounds of venison were donated and distributed, providing more than 100,000 meals for the hungry. Over the past 20 years, the program has provided more than 1.7 million meals for needy Delawareans.

Hunters who are not lucky enough to harvest a deer are encouraged to help by donating money to the project. Funds donated are used to pay for direct program expenses and to buy additional

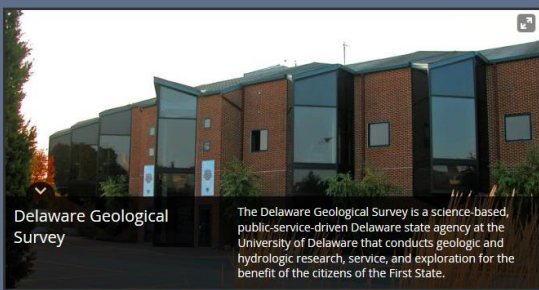


► Explore Delaware Geology (DGS)

Explore Delaware Geology

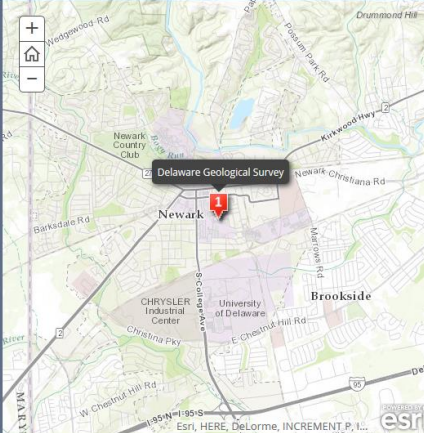
Interesting geologic areas in the First State.









Delaware Geological Survey



Delaware Geological Survey

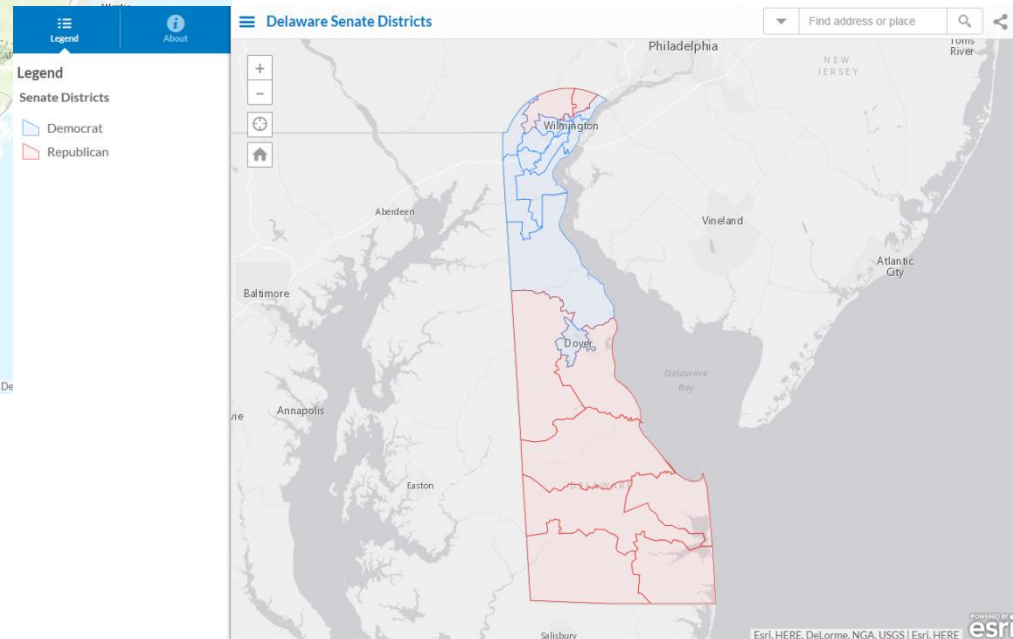
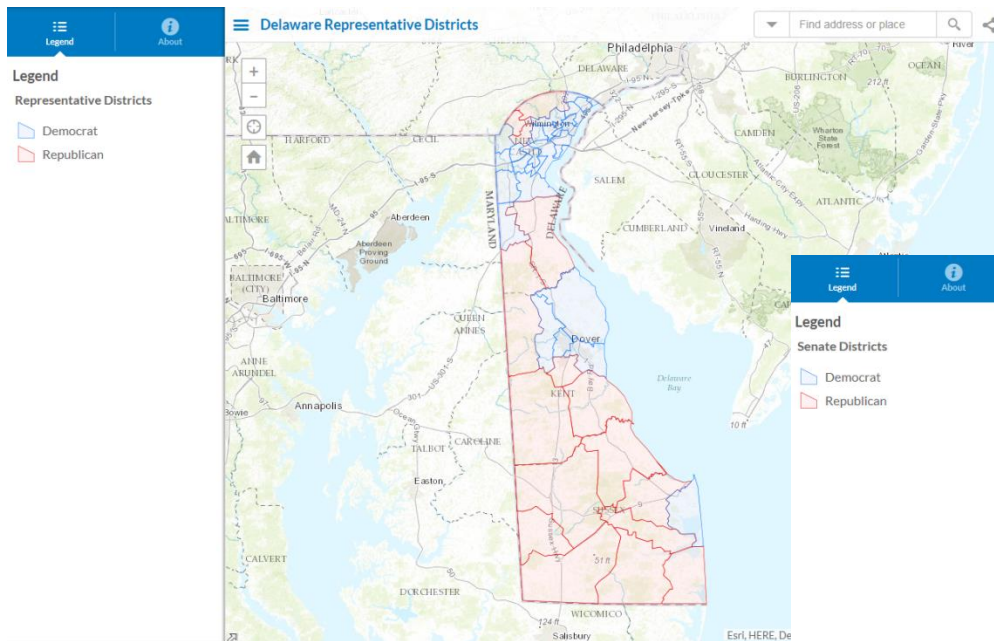
The Delaware Geological Survey is a science-based, public-service-driven Delaware state agency at the University of Delaware that conducts geologic and hydrologic research, service, and exploration for the benefit of the citizens of the First State.





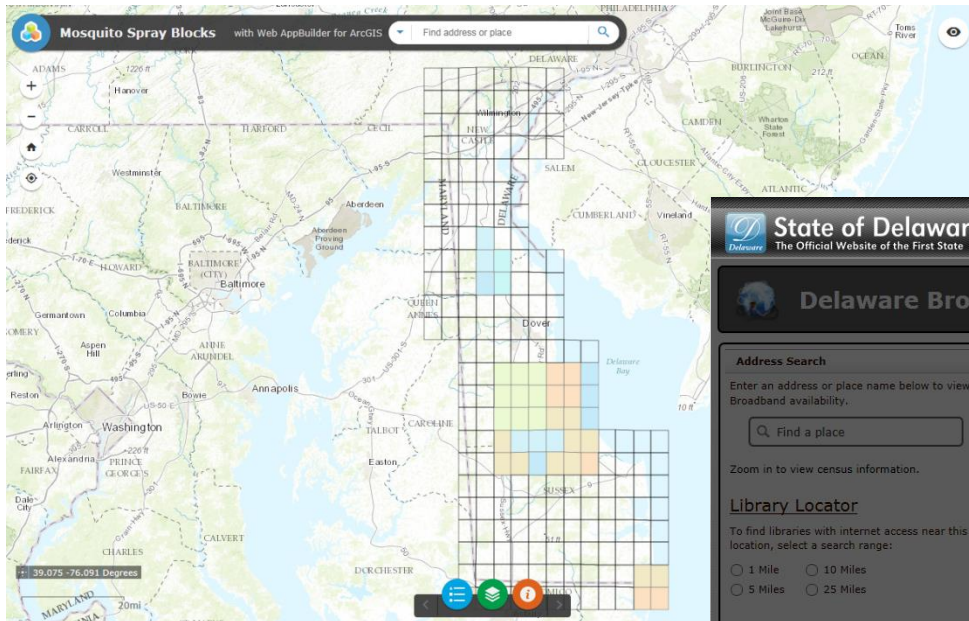
➤ New Applications

► Representative and Senate Districts

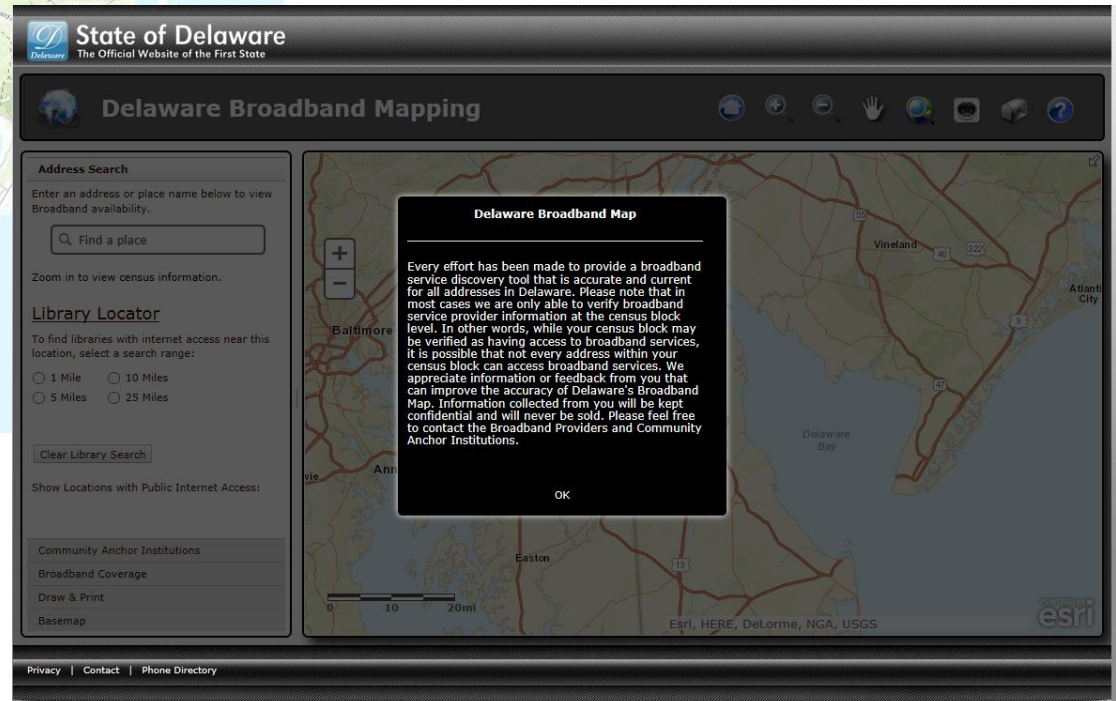


➤ New Applications

► Mosquito Spray Block Maps



► Broadband Mapping



✦ New Applications

- ▶ Bay & Ocean Planner
- ▶ Park Finder – demo at DGDC next month
- ▶ Tax Ditch
- ▶ ESRI Collector mobile application
 - Tillage survey
 - Farm inspections
 - Pet shop inspections
- ▶ Crowd-sourcing
 - State Strategies review
 - Public comment on permit applications

Geocoder

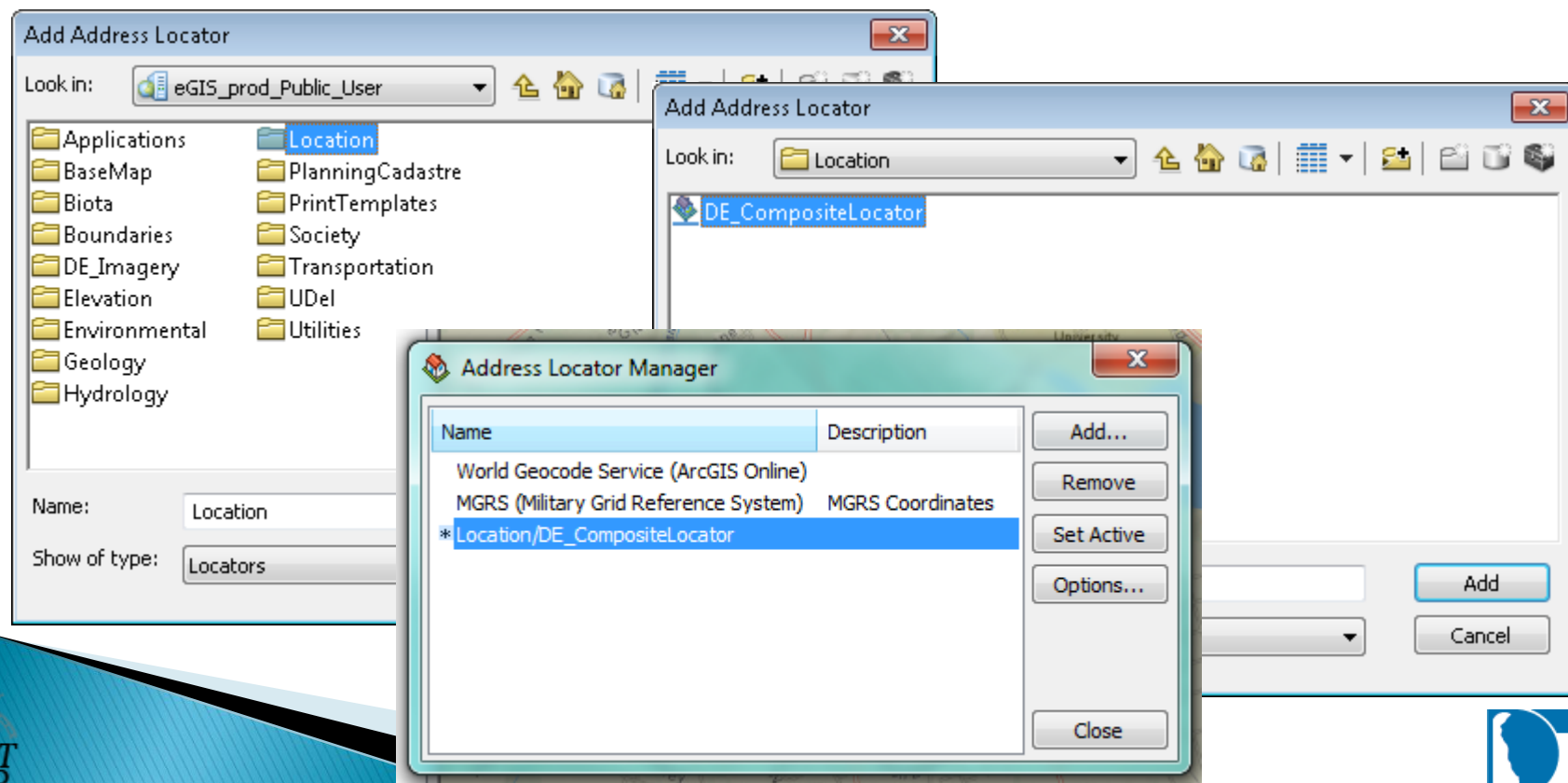
➤ Geocoder

- ▶ Went live in June 2015.
- ▶ Composite geocoding service that checks:
 - Point Address Dataset (provided by each county)
 - Road Centerlines (provided by each county)
- ▶ Can be used for a single address, or a batch of multiple addresses.
- ▶ No fee for use of the geocoder!
- ▶ For more information on the composite geocoder see: <http://1.usa.gov/1NkPbiy>

➤ Geocoder

▶ Service Location:

- http://firstmap.delaware.gov/arcgis/rest/services/Location/DE_CompositeLocator/GeocodeServer



Open Data

➤ Open Data

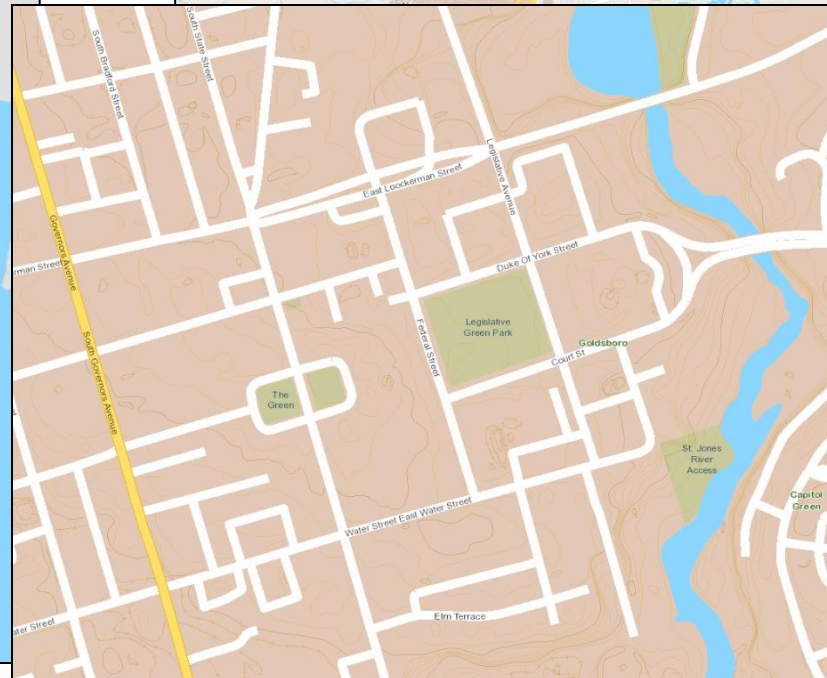
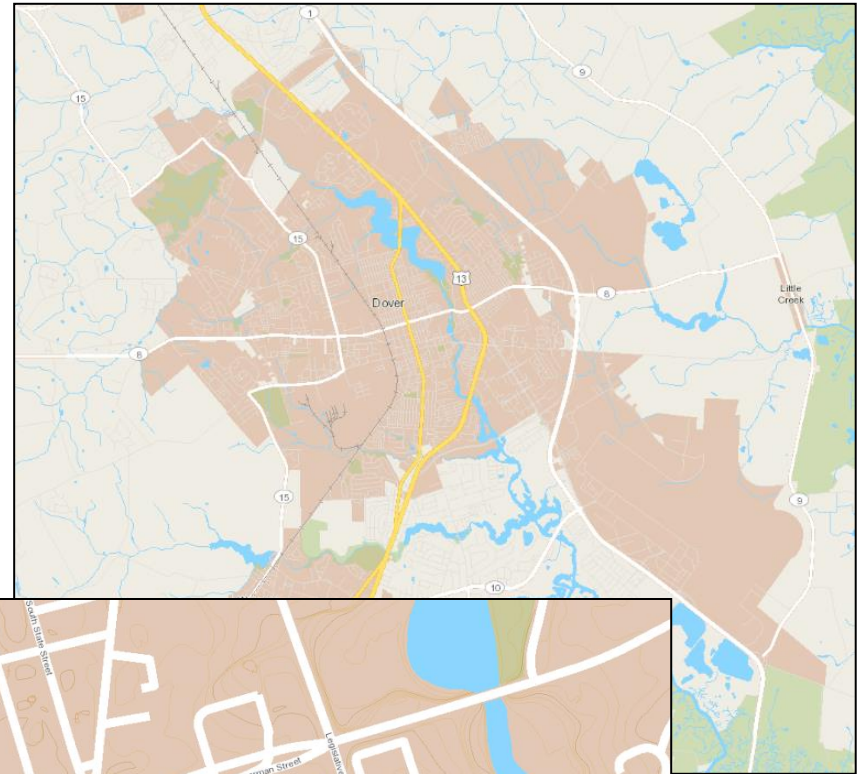
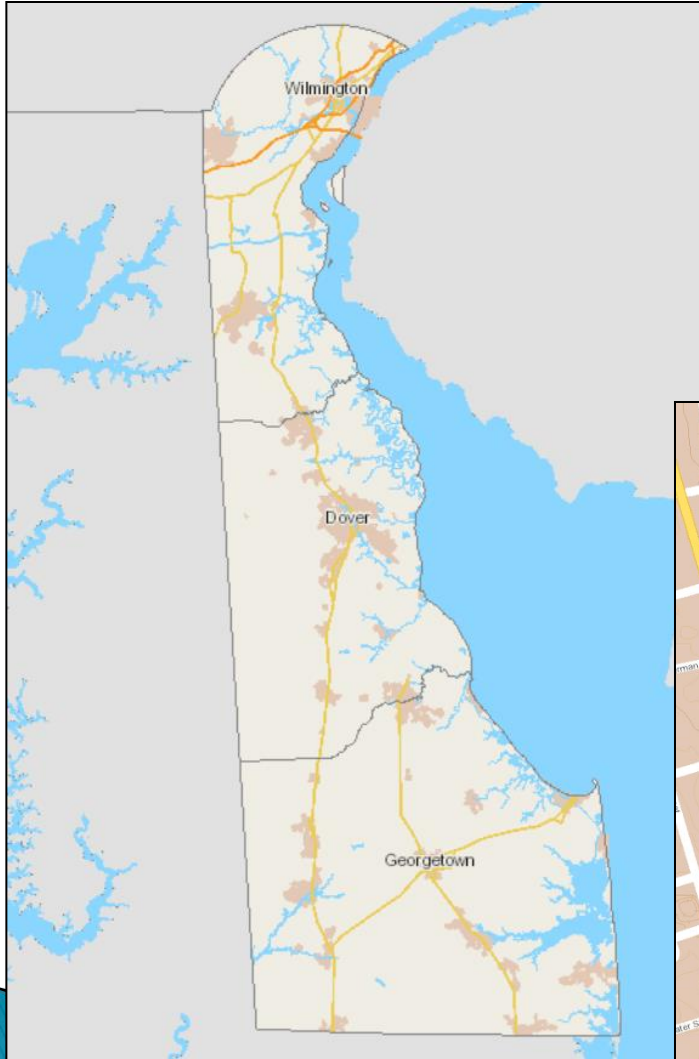
- ▶ Went live in July 2015
- ▶ Most datasets are available through Open Data
- ▶ Availability depends on permission from the data owner
- ▶ Known issues with New Castle County Contours
- ▶ Downloading raster services, such as impervious surface, is a future enhancement.
- ▶ Larger datasets (i.e., NCC Contours) are available through Dropbox

↖ Cached Basemaps

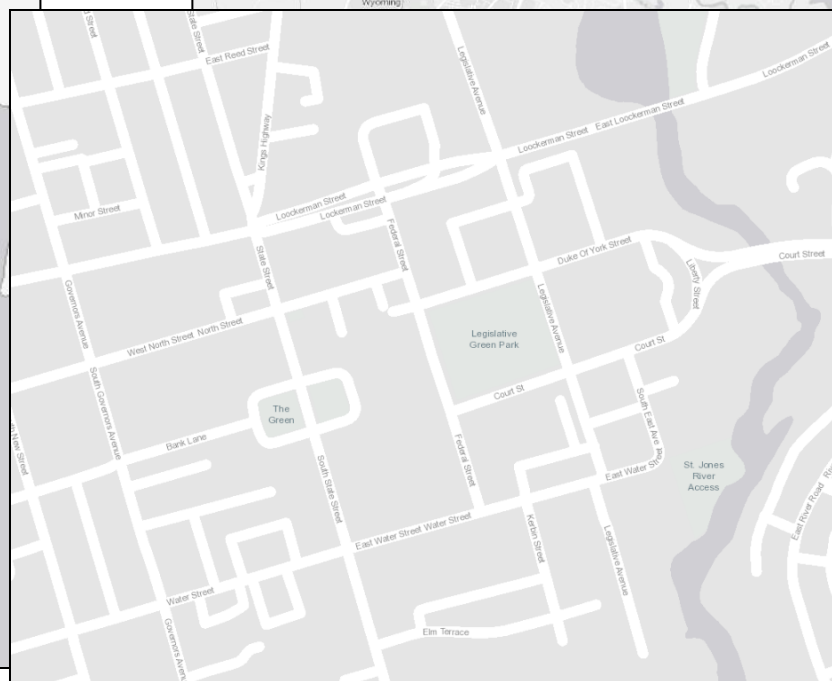
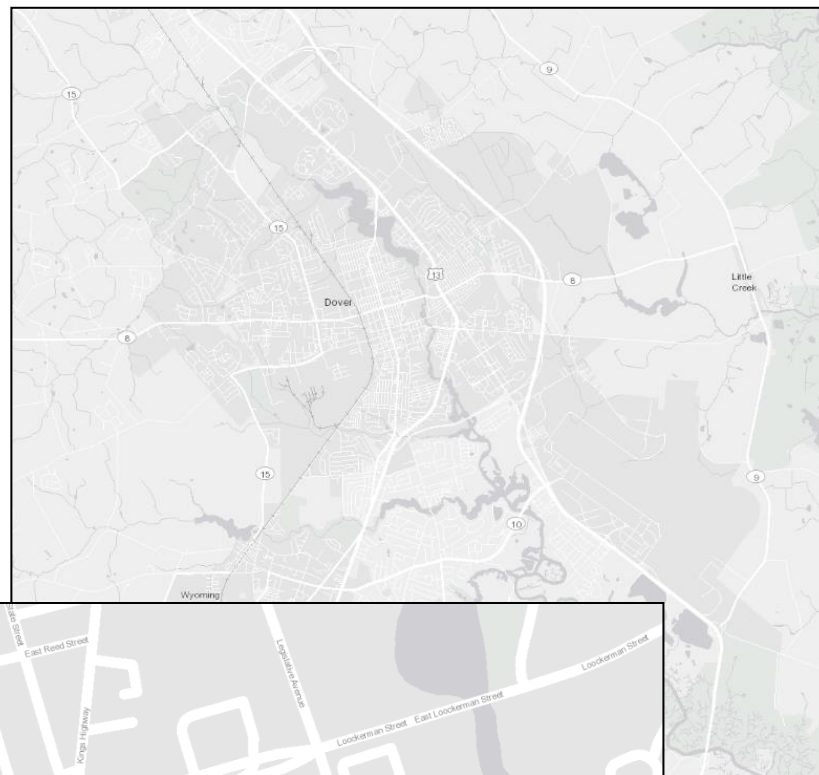
✦ Cached Basemaps

- ▶ New cached basemaps have been added to FirstMap Private and Public
- ▶ Color – similar to Google maps style
- ▶ Light Gray – similar to the ESRI light gray canvas.
- ▶ Both are cached in State Plane and Web Mercator for optimum performance.
- ▶ Dark Gray coming soon

Color



↖ Light Gray



✦ Cached Basemaps

- ▶ Basemap symbology and labeling is optimized for each zoom level
- ▶ Includes the following layers:
 - Political boundaries
 - Surrounding States
 - Roads, including major routes
 - Major Rivers, Streams, Lakes, Ponds & Bays
 - Rail Lines
 - Public Protected Lands
 - Communities
 - Geographic Names
 - Elevation Contours

✈ Infrastructure

✦ Infrastructure

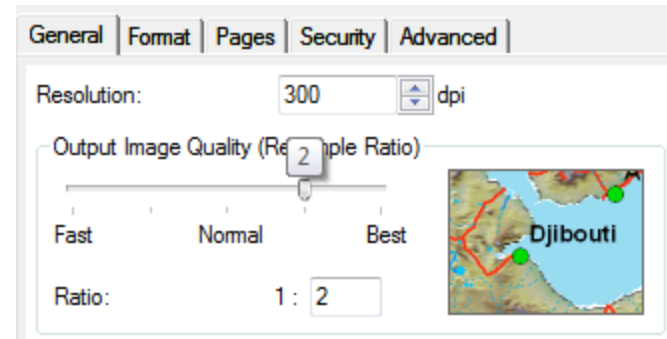
- ▶ Approximately 15 terabytes of space total, counting test and development.
- ▶ The ArcGIS Servers started out with 2 CPU's and 8Gb of RAM, and now have 4 CPU's with 32 Gb of RAM.
- ▶ Migrated public servers from HP SAN to Cisco UCS platform.
- ▶ Disk space has been increased on the database server and Oracle memory was increased.
- ▶ Upgraded from 10.2.1 to 10.2.2 and then to 10.3.1
- ▶ Removed cluster server

✦ Tips & Tricks

✦ Tips & Tricks

► Imagery resolution on export

- Keep the DPI set to 300
- For a pdf, set output quality between normal and best



► Dates Last Updated

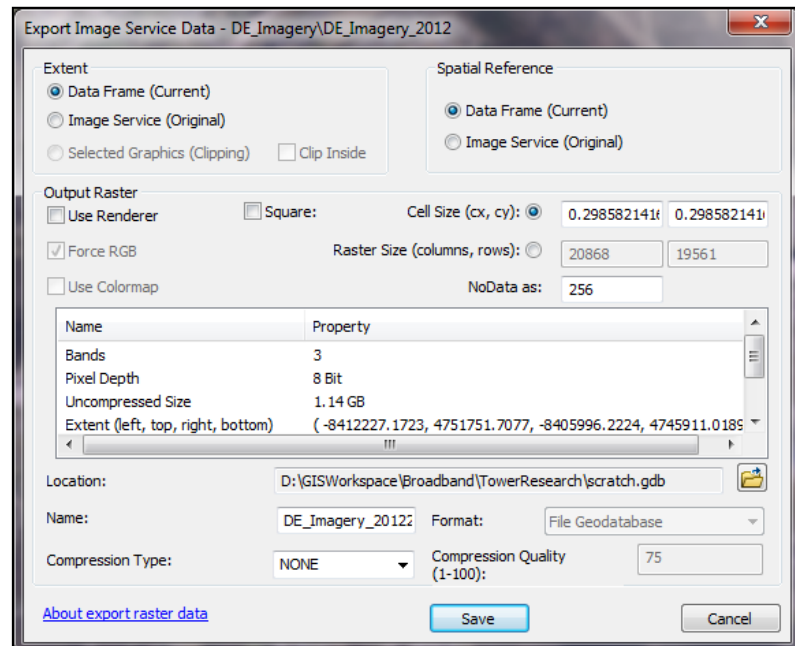
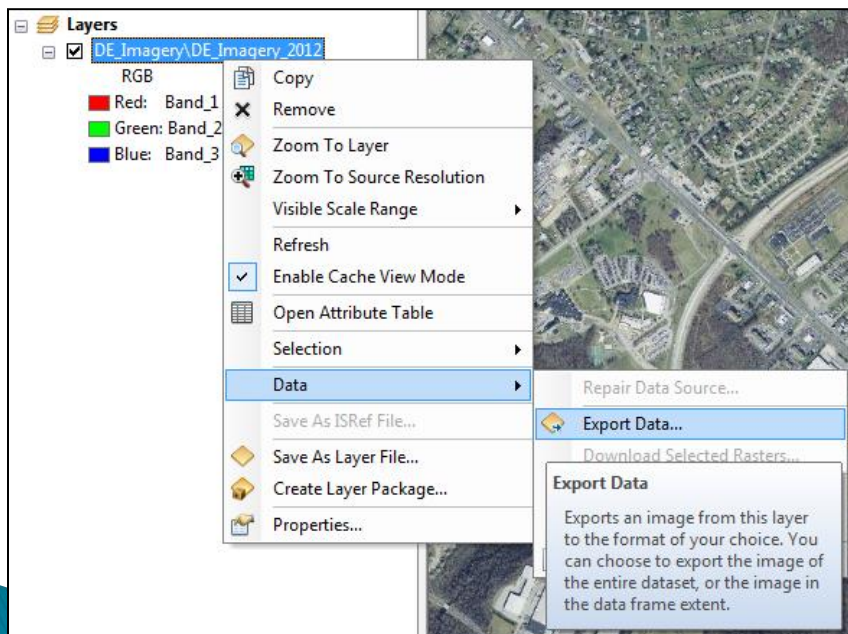
- ArcGIS Online – date the AGOL item was updated, NOT the date of the last data update



- Services – dates are added to the descriptions manually.

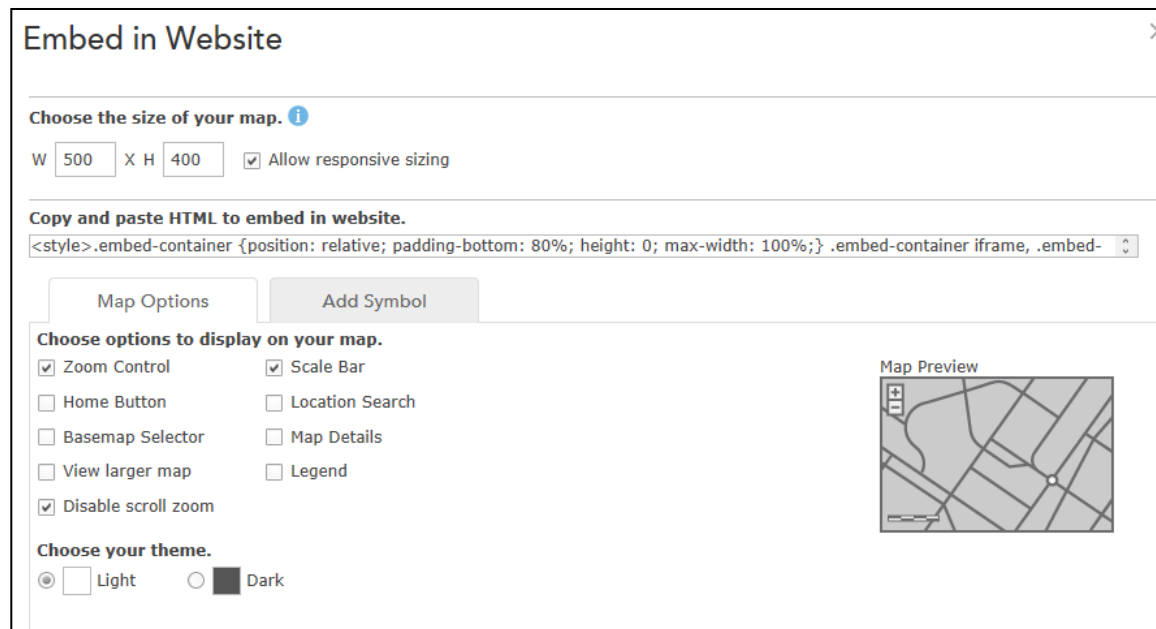
☛ Tips & Tricks

- ▶ Downloading specific images through ArcMap
 - Exporting data from the data frame will download the tiles in the current extent
 - Limited to 20 tiles, or less than 2 Gb total



✦ Tips & Tricks

- ▶ Use ArcGIS Online Web Maps to create HTML code for embedding maps in your web sites
 - Save a web map, select share, then 'Embed in Website'
 - Map must be shared with 'Everyone' to enable this feature



The screenshot shows the 'Embed in Website' dialog box. It has a title bar with a close button. The main content area is divided into sections. The first section is 'Choose the size of your map.' with a blue information icon. It contains input fields for width (500) and height (400), and a checked checkbox for 'Allow responsive sizing'. The second section is 'Copy and paste HTML to embed in website.' with a text area containing the following code: `<style>.embed-container {position: relative; padding-bottom: 80%; height: 0; max-width: 100%;} .embed-container iframe, .embed-`. Below this are two tabs: 'Map Options' (selected) and 'Add Symbol'. The 'Map Options' section is titled 'Choose options to display on your map.' and contains several checkboxes: 'Zoom Control' (checked), 'Scale Bar' (checked), 'Home Button' (unchecked), 'Location Search' (unchecked), 'Basemap Selector' (unchecked), 'Map Details' (unchecked), 'View larger map' (unchecked), 'Legend' (unchecked), and 'Disable scroll zoom' (checked). The third section is 'Choose your theme.' with two radio buttons: 'Light' (selected) and 'Dark' (unchecked). On the right side of the dialog is a 'Map Preview' window showing a map of a city street grid.

➤ Opportunities

✦ Opportunities

- ▶ Update Service Descriptions, ensure date is included
- ▶ Recurring data updates from data owners
- ▶ Tweak image services for performance
- ▶ Metadata
- ▶ Move Private environment to Cisco UCS
- ▶ Remove the web adaptors
- ▶ Add on a monitoring tool to ArcGIS Server

➤ Opportunities

- ▶ More applications & web maps
- ▶ More data, such as the items requested below
 - Traffic analysis zones
 - Land use annexations for municipalities
 - Delaware population consortium
- ▶ More outreach and services for the general public.
- ▶ Add quick links to the web site

➤ Wrap-Up

- ▶ Discussion/Feedback
- ▶ FirstMap Team
 - FirstMap@state.de.us

