

New Jersey Open Data & GIS Applications

A new paradigm for GIS data
sharing in New Jersey

A little history...

Governor Chris Christie • Lt. Governor Kim Guadagno

[NJ Home](#) | [Services A to Z](#) | [Departments/Agencies](#) | [FAQs](#) [search](#)

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER SUPPLY AND GEOSCIENCE

[NJGWS Home](#) | [DWSG Home](#) | [DEP Home](#)

New Jersey Geological and Water Survey

[What's New](#) | [About Us](#) | [Programs](#) | [Publications](#) | [Digital Data](#) | [Education](#) | [Links](#) | [Contact Us](#)

Digital Geodata Series

 BASE MAPS	 GEOLOGY	 ABOUT THE SERIES
 GROUNDWATER	 GEOPHYSICS	 PRODUCT LIST
		 REFERENCE AND UTILITY FILES

[NJDEP GIS Home Page](#) * [NJ Geographic Information Network](#) * [NJ-GeoWeb](#)

[SEARCH](#) for Publications, Environmental Education Materials and Digital Geodata Series

Digital Geodata Series List

[DGS14-1 Computer Workbook Investigating Water Availability in New Jersey on a Watershed Management Area Basis](#). (9-8-2014) **NEW**

[DGS13-1 Computer Workbook Summarizing New Jersey Withdrawals and Discharges on a HUC11 Basis](#).

[DGS10-3 New Jersey Water Transfer Model Withdrawal, Use, and Return Data](#) **UPDATED** (8-15-2012)

[DGS10-2 Surficial Geology of New Jersey \(Scale 1:24,000\)](#) **UPDATED** (2-10-2012)

[DGS10-1 Dielectric Permittivity as a Function of Water Content For Selected New Jersey Soils](#)

A little history...

The screenshot shows the NJDEP GIS website interface. At the top, there is a navigation bar with links: njhome | services A to Z | departments/agencies | FAQs. Below this is the NJDEP logo and the text "new jersey department of environmental protection". The main header features the text "GIS geographic information systems" with a map of New Jersey in the background. A search bar is located in the top right corner. On the left side, there is a vertical menu with links: Interactive Mapping, Downloads, Standards, GPS, Resources, Training, and FAQs. The main content area is titled "NJDEP Digital Data Downloads in ArcView Shape file format:". Below this title, there is a section for "Statewide Layers" with a dropdown menu labeled "SELECT A STATEWIDE DATA LAYER". To the right of this section, there is a text box explaining that files can be used with GIS or viewed with ArcGIS Explorer, and a "download ArcGIS Explorer" button. Below the "Statewide Layers" section, there is a section for "Ambient Air Quality Monitors" with a link to "airqm.zip" (129 KB, 129 KB unzipped). This section includes three buttons: "IMAGE", "METADATA", and "DOWNLOAD". A paragraph of text describes the monitors, and a "back to top" link is provided. Below this, there is a section for "Ambient Biomonitoring Network (AMNET)" with a link to "Envr_mon_water_biopt.zip" (124 MB, 624 MB unzipped). This section also includes "IMAGE", "METADATA", and "DOWNLOAD" buttons.

njhome | services A to Z | departments/agencies | FAQs

new jersey department of environmental protection

GIS geographic information systems

bgis home | about bgis | contact bgis | njdep home | contact njdep

NJDEP Digital Data Downloads in ArcView Shape file format:

Statewide Layers

SELECT A STATEWIDE DATA LAYER

Some older data files may not have a NJ State Plane feet projection file. If the zip file does not contain a .prj file, please [download the njsp83.prj file](#) and rename it to the filename in the zip. For example, the Head of Tide shapefile is called hot.shp. In this case, please download, unzip, and rename the njsp83.prj file to hot.prj.

These files can be used with your GIS or can be viewed with a free GIS Data Viewer from ESRI called ArcGIS Explorer.

[download ArcGIS Explorer](#)

Ambient Air Quality Monitors - [airqm.zip](#) (129 KB, 129 KB unzipped)

[IMAGE](#) [METADATA](#) [DOWNLOAD](#)

Ambient Air Quality Monitors are strategically located stations throughout the state of New Jersey and collect and analyze certain air pollutant data.

[back to top](#)

Ambient Biomonitoring Network (AMNET) - [Envr_mon_water_biopt.zip](#) (124 MB, 624 MB unzipped)

[IMAGE](#) [METADATA](#) [DOWNLOAD](#)

A little history...

The screenshot displays the NJGIN (New Jersey Geographic Information Network) website. The header features the NJGIN logo and the text "new jersey geographic information network", along with "Login" and "Register" buttons. A left sidebar contains a "LAUNCH EXPLORER" button and a list of navigation links: Home, About NJGIN, Browse Data, Data Downloads, Job Postings, Map Services, Metadata, NJ Geospatial Forum, Orthoimagery-LiDAR, Road Centerlines Data, NJGIN Partners, Resources, User Directory, and Contact Us. The main content area is divided into several sections: "Metadata SpotLight" with links to tax list and school point databases; "Quick Search" with dropdown menus for content type and theme, and a keyword search field; "News And Events" with a list of recent updates including tax database changes, training courses, and data availability announcements; and a "GIS Events Calendar" for December 2014. The footer includes a "OGIS" logo.

njgin
new jersey geographic information network

Login Register

LAUNCH EXPLORER

Home
About NJGIN
Browse Data
Data Downloads
Job Postings
Map Services
Metadata
NJ Geospatial Forum
Orthoimagery-LiDAR
Road Centerlines Data
NJGIN Partners
Resources
User Directory
Contact Us

Metadata SpotLight

MOD-IV Tax List Search Plus Countywide Database...

New Jersey public, private and charter school point...

New Jersey public, private and charter school point...

Quick Search

Choose content type:
<All Content Types> ?

Choose content theme:
<All Content Themes> ?

Optional Keyword (e.g. river):
[Search Field]

Start Search [Full Search] ?

News And Events Archives

New Jersey MOD-IV database tables updated for tax year 2013

1-week professional training course on Open Source GIS at Hunter College, NYC

University of Connecticut now offering online graduate certificate in GIS

Parcels data updated September 2nd, 2014

Road Centerlines Data have been updated as of August 26th, 2014

Preliminary parcels data available for Essex County

NAIP 2013 added to statewide imagery layers available through our WMS

New Jersey LiDAR Collections Available

2012 NJ High Resolution Orthoimagery now available from the Information Warehouse in both MG3 and MG4 format.

Esri Term Contract Updated

NJ Geospatial Strategic Business Plan revised December 2012

GIS Events Calendar

DECEMBER 2014

Sun	Mon	Tue	Wed	Thu	Fri	Sat
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

OGIS

A little history...

The screenshot shows a web browser window with the address bar displaying `www.state.nj.us/dca/divisions/codes/reporter/co.html`. The page header includes the State of New Jersey Department of Community Affairs logo and navigation links for Governor Chris Christie and Lt. Governor Kim Guadagno. A search bar is also present.

The main content area is titled "Certificates of Occupancy Yearly Summary Data" and includes a breadcrumb trail: Home > Divisions > Codes & Standards > Construction Reporter > Certificates of Occupancy > Certificates of Occupancy Yearly Summary Data. The page explains that construction officials issue certificates of occupancy at the end of the construction process, when buildings are complete and ready for occupancy.

Two data sections are visible:

- Housing Units Certified**: A table showing data from 2000 to 2013, with links to PDF and XLS files for each year.
- Square Feet of Nonresidential Space Reported on Certificates of Occupancy**: A table with empty cells, likely for data from 2000 to 2013.

A sidebar on the left contains a navigation menu with links to Home, About DCA, Divisions, Codes & Standards, and various other resources. A right sidebar contains links to Building Permits, Demolition Permits, Certificates of Occupancy, New Home Warranties, and Online Magazine. A "Related Links" section at the bottom right lists monthly data links from 2008 to 2014.

2000	2001	2002	2003	2004	2005	2006
pdf xls	pdf xls	pdf xls	pdf xls	pdf xls	pdf xls	pdf xls

2007	2008	2009	2010	2011	2012	2013
pdf xls	pdf xls	pdf xls	pdf xls	pdf xls	pdf xls	pdf xls


2000	2001	2002	2003	2004	2005	2006

2007	2008	2009	2010	2011	2012	2013

Related Links:

- [2014Monthly Data](#)
- [2013Monthly Data](#)
- [2012Monthly Data](#)
- [2011 Monthly Data](#)
- [2010 Monthly Data](#)
- [2009 Monthly Data](#)
- [2008 Monthly Data](#)

The past few years...



STATE OF NEW JERSEY
TRANSPARENCY CENTER

Governor Chris Christie • Lt. Governor Kim Guadagno
NJ Home | Services A to Z | Departments/Agencies | FAQs
Search

Home

- Revenue
- Expenditures
- Purchasing
- Public Payroll
- Pension
- Governor's Performance Center
- Property Tax
- Debt
- Annual/Other Reports
- Executive Orders
- Governor's Budget Detail
- Terms

FEEDBACK & ALERTS


- Email Us Feedback
- Sign Up for Email Alerts

DEFINITIONS

- Need Help With a Term?



YOURMONEY.NJ.GOV BY THE NUMBERS

- 3.1 million** property tax records
- 98,733** public employee payroll records
- Performance budgeting data from **twenty-two agencies**
- Seven years** of State expenditures and revenue data
- 290,860** pension recipient records
- Data from **nineteen** independent authorities
- Purchasing data for **11,646** state vendors



Highlight 1


Highlight 2



YourMoney

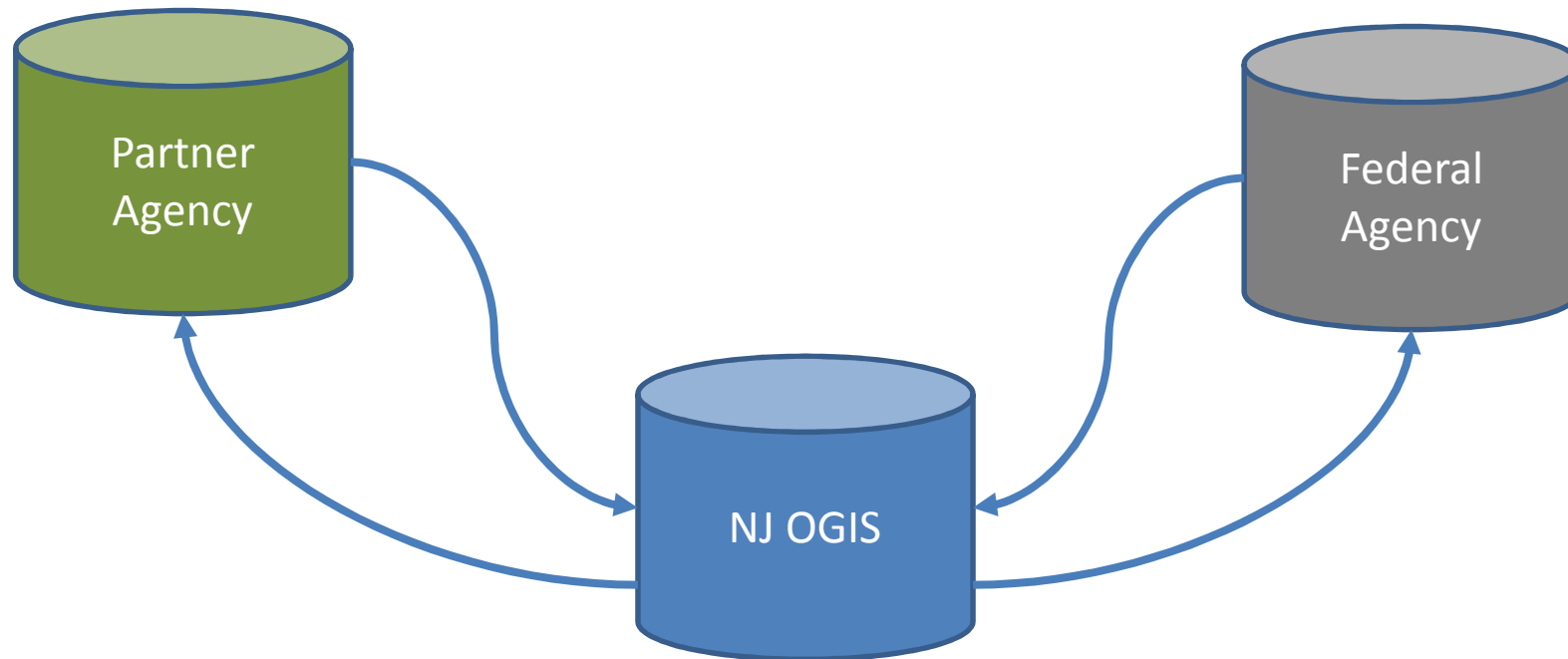
The past few years...

Tax List Details	Property Map
Return To Previous Screen Return To Search Page	
Tax Year <input type="text" value="2014"/>	
OWNER INFORMATION	
Owner Name	PETERSON JOHN A JR
Owner Address	438 QUAKERTOWN ROAD FLEMINGTON NJ 08822
PROPERTY INFORMATION	
Street Address	437 QUAKERTOWN ROAD
County	HUNTERDON FRANKLIN TWP
Block Number	30
Lot Number	11.01
Qualifier	
Property Class	FARM (REGULAR)
Land Description	1.00 AC.
Building Description	2SF
Acreage	1
Land Value	\$175,000.00
Building Value	\$289,900.00
Net Value	\$464,900.00
Prior Year Tax Amount	\$11,450.48



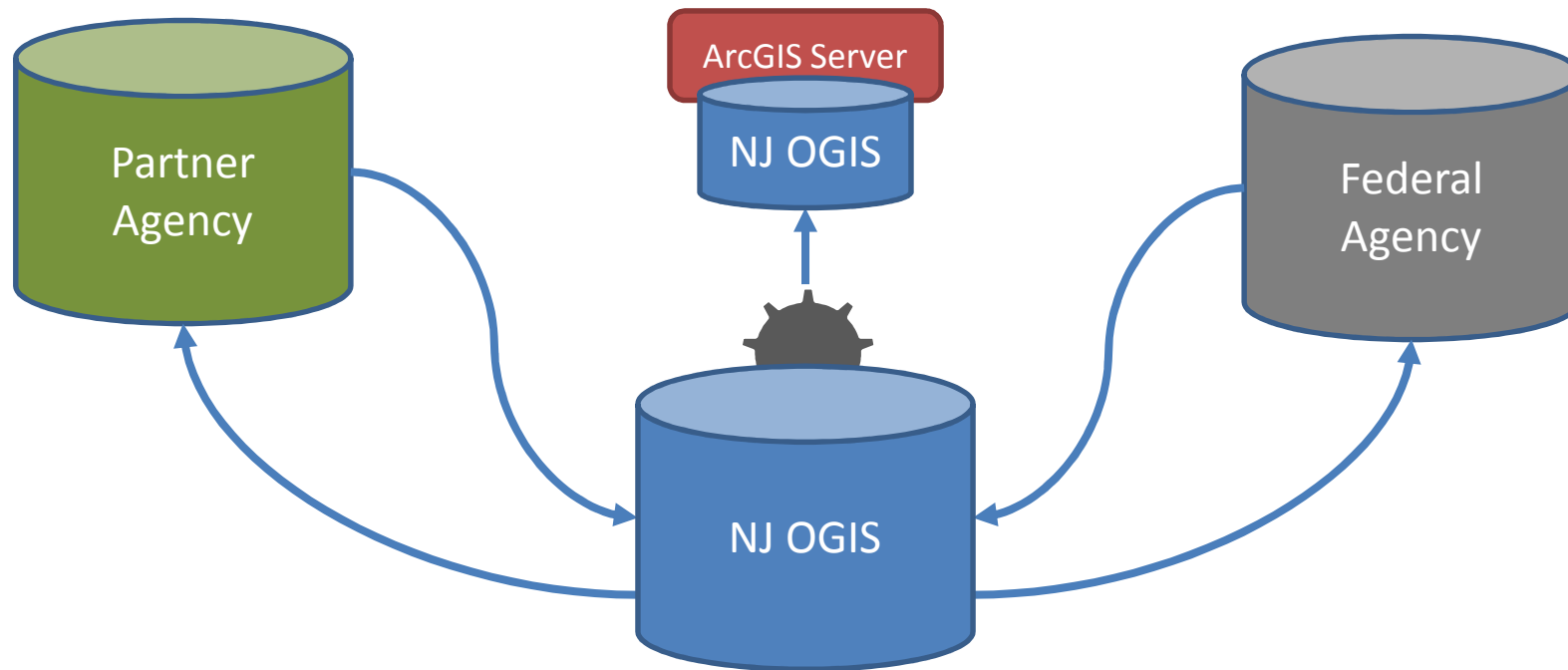
Transparency vs. Open Data

Streamline Data Movement



Geodata Services to Facilitate Replication & Synchronization

Streamline Data Movement



Automated processes & ETL to feed ArcGIS Server services

Some of the tools – *esri2open*

ArcGIS Toolbox converts data to:

- CSV
- JSON
- GeoJSON

<https://github.com/project-open-data/esri2open>

Some of the tools -*topojson.py*

Python script converts data to:

- TopoJSON

<https://github.com/calvinmetcalf/topojson.py>



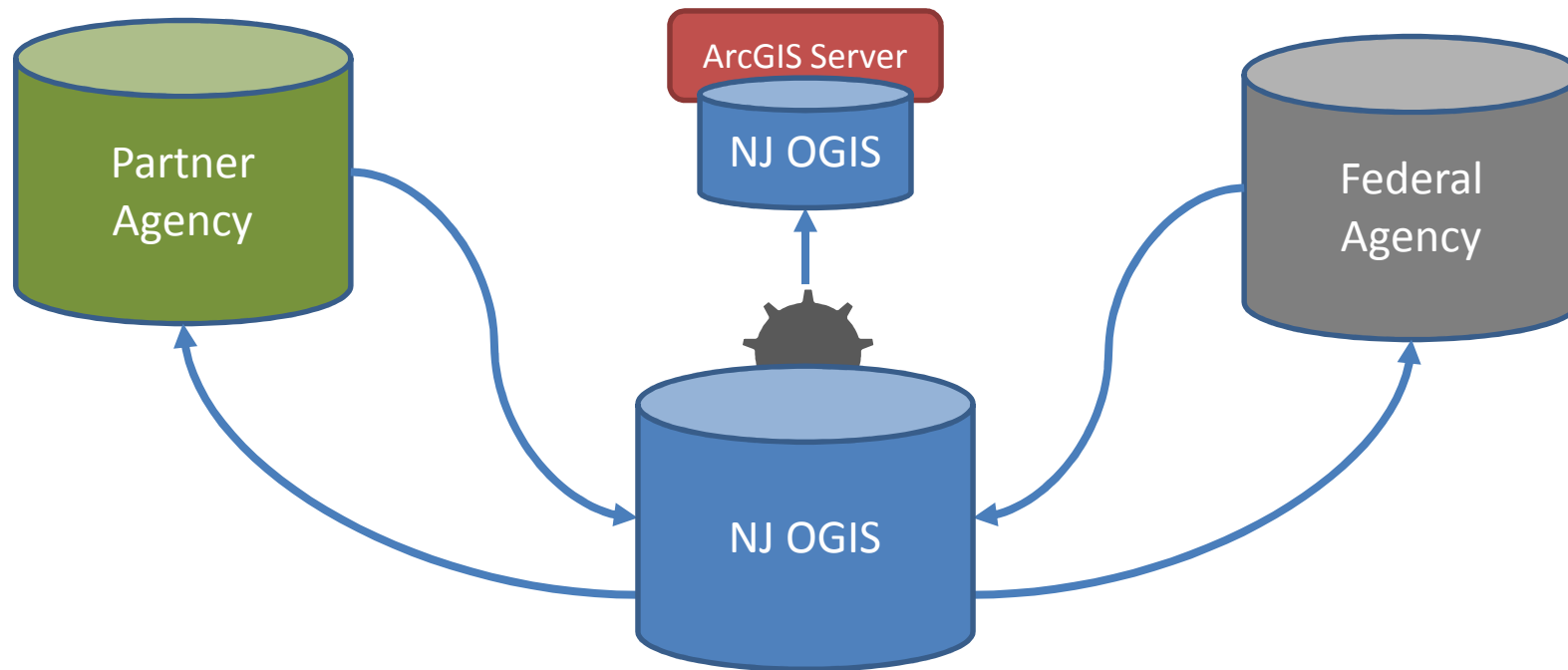
<https://github.com/NJOGIS/open-data>

That worked...

...but introduced a disconnected data store



Streamline Data Movement



Automated processes & ETL to feed ArcGIS Server services

Now what...

The screenshot shows a web browser window with the URL <https://geodata.state.nj.us/arcgis/rest/services/Features/Environmental/MapServer>. The browser has several tabs open, including 'Home - Dropbox', 'NJDEP - New Jersey', 'ArcGIS', 'myNJ State of New Jersey', 'NJOGIS/open-data', and 'Features/Environmental'. The page title is 'ArcGIS REST Services Directory'. The breadcrumb navigation is 'Home > services > Features > Environmental (MapServer)'. There are links for 'Login', 'Get Token', 'Help', and 'API Reference'. Below the breadcrumb, there are links for 'JSON' and 'SOAP'. The main heading is 'Features/Environmental (MapServer)'. Under 'View In:', there are links for 'ArcGIS JavaScript', 'ArcGIS.com Map', 'Google Earth', 'ArcMap', and 'ArcGIS Explorer'. Under 'View Footprint In:', there is a link for 'ArcGIS.com Map'. The 'Service Description' states: 'Environmental features in New Jersey. This includes various feature types and data sources ranging from environmental monitoring locations, natural features, and natural disasters.' The 'Map Name' is 'Layers'. There is a link for 'Legend'. Below that is a link for 'All Layers and Tables'. The 'Layers' section lists 13 items, each with a link and a count in parentheses: 'Air Quality Monitoring Stations (0)', 'Mines (sand, gravel, rock) (1)', 'Mines (abandoned) (2)', 'Earthquakes (3)', 'Landslides (4)', 'Brownfield Sites (5)', 'NJDEP Regulated Sites (6)', 'Contaminated Sites (7)', 'Contaminates Sites (chromate) (8)', 'Fault Lines (9)', 'Bedrock Geology (10)', 'Ground Water Monitoring Sites (11)', 'NJDEP Non-Point Wastewater Sites (12)', and 'Aquifers (13)'.

Home - Dropbox x NJDEP - New Jersey x ArcGIS x myNJ State of New Jersey x NJOGIS/open-data x Features/Environmental x

← → ↻ <https://geodata.state.nj.us/arcgis/rest/services/Features/Environmental/MapServer> ☆

ArcGIS REST Services Directory [Login](#) | [Get Token](#)

[Home](#) > [services](#) > [Features](#) > [Environmental \(MapServer\)](#) [Help](#) | [API Reference](#)

[JSON](#) | [SOAP](#)

Features/Environmental (MapServer)

View In: [ArcGIS JavaScript](#) [ArcGIS.com Map](#) [Google Earth](#) [ArcMap](#) [ArcGIS Explorer](#)

View Footprint In: [ArcGIS.com Map](#)

Service Description: Environmental features in New Jersey. This includes various feature types and data sources ranging from environmental monitoring locations, natural features, and natural disasters.

Map Name: Layers

[Legend](#)

[All Layers and Tables](#)

Layers:

- [Air Quality Monitoring Stations](#) (0)
- [Mines \(sand, gravel, rock\)](#) (1)
- [Mines \(abandoned\)](#) (2)
- [Earthquakes](#) (3)
- [Landslides](#) (4)
- [Brownfield Sites](#) (5)
- [NJDEP Regulated Sites](#) (6)
- [Contaminated Sites](#) (7)
- [Contaminates Sites \(chromate\)](#) (8)
- [Fault Lines](#) (9)
- [Bedrock Geology](#) (10)
- [Ground Water Monitoring Sites](#) (11)
- [NJDEP Non-Point Wastewater Sites](#) (12)
- [Aquifers](#) (13)



New Jersey

OFFICE OF GIS

maps and apps



NJ Office of GIS
State of New Jersey
Composite Parcels



NJ Office of GIS
New Jersey Streams



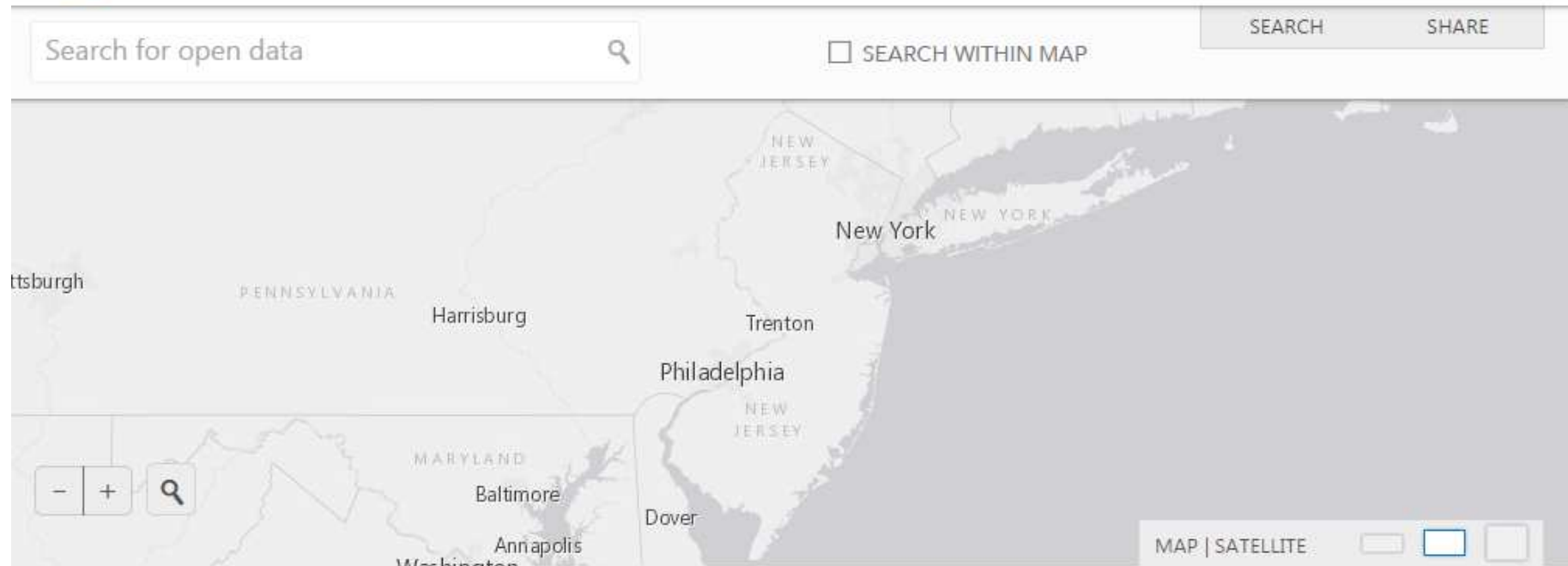
NJ Office of GIS
2007 Land Use/Land Cover
in New Jersey



NJ Office of GIS
511 NJ - Road Construction
Locations

The mission of the Office of GIS is to promote the use of GIS technology among state agencies and to provide statewide leadership in the development of New Jersey's spatial data infrastructure.

<http://newjersey.maps.arcgis.com>



New Jersey Office of GIS - Open Data

The mission of the Office of GIS is to promote the use of GIS technology among state agencies and to provide statewide leadership in the development of New Jersey's spatial data infrastructure. The Open Data site provides other data options directly from the State's services.

For other data access options, go to the [New Jersey's ArcGIS Online Organization](#) or for a complete data listing for New Jersey, please go to [NJGIN](#)

<http://njogis.newjersey.opendata.arcgis.com>

Next steps – NJGIN Revamp

- Publish metadata
- Federated data discovery
- Data downloads & service access

Next steps – NJ Open Data Site

GOVERNOR CHRIS CHRISTIE • LT. GOVERNOR KIM GUADAGNO



DATA.NJ.Gov

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Welcome to DATA.NJ.Gov

[NJ Transparency Center](#)

[NJ Open Data Catalog](#)

[NJ Geospatial Data Portal](#)

[NJ Universal Data Store](#)



Governor's Transparency

Visit YourMoney New Jersey



How to Use Data.NJ.Gov

Navigating Data.NJ.Gov Datasets



NJ Geospatial Data Portal

Visit NJGIN.NJ.Gov



Our Featured Dataset

State Agency Payroll Explorer

A photograph of a landscape featuring a grassy field in the foreground, a line of trees in the middle ground, and a range of mountains in the background under a dramatic, cloudy sky. In the lower right foreground, a red sign with a yellow arrow pointing left contains the text 'thank you' in a black, italicized font.

Sean McGinnis

NJ Office of GIS

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t: @seankmcginnis

w: <http://njgin.state.nj.us>

g: <https://github.com/seankmcginnis>