



# NJ-GeoWeb User's Guide

**Department of Environmental Protection**

**Division of Information Technology**

**Bureau of GIS**

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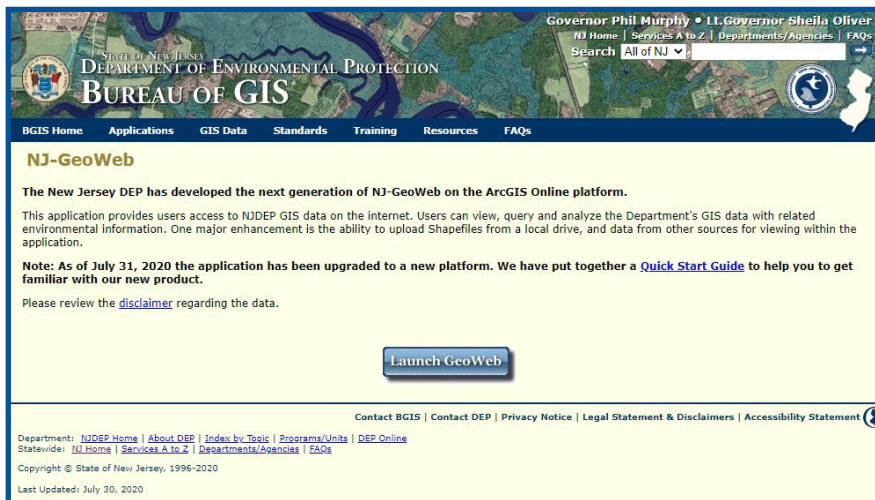
# NJ-GeoWeb

NJ-GeoWeb is a free and easy to use customized interactive web application to view, query, and analyze both local and state-wide areas of interest and environmental information.

## Launching the Application

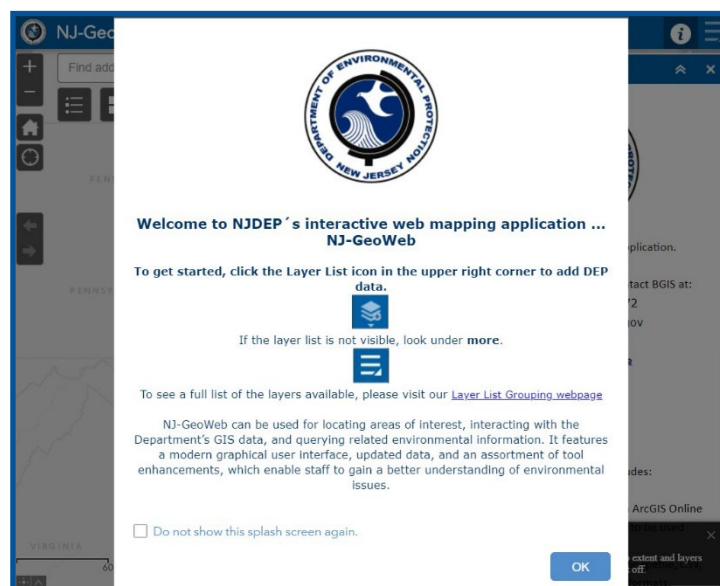
The link to launch the application can be found on the following webpage:

<https://www.nj.gov/dep/gis/geoweb splash.htm>



Then click "Launch GeoWeb"

The splash screen for the application will then open:



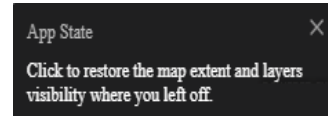
Click "OK" to begin

## Application Tips:

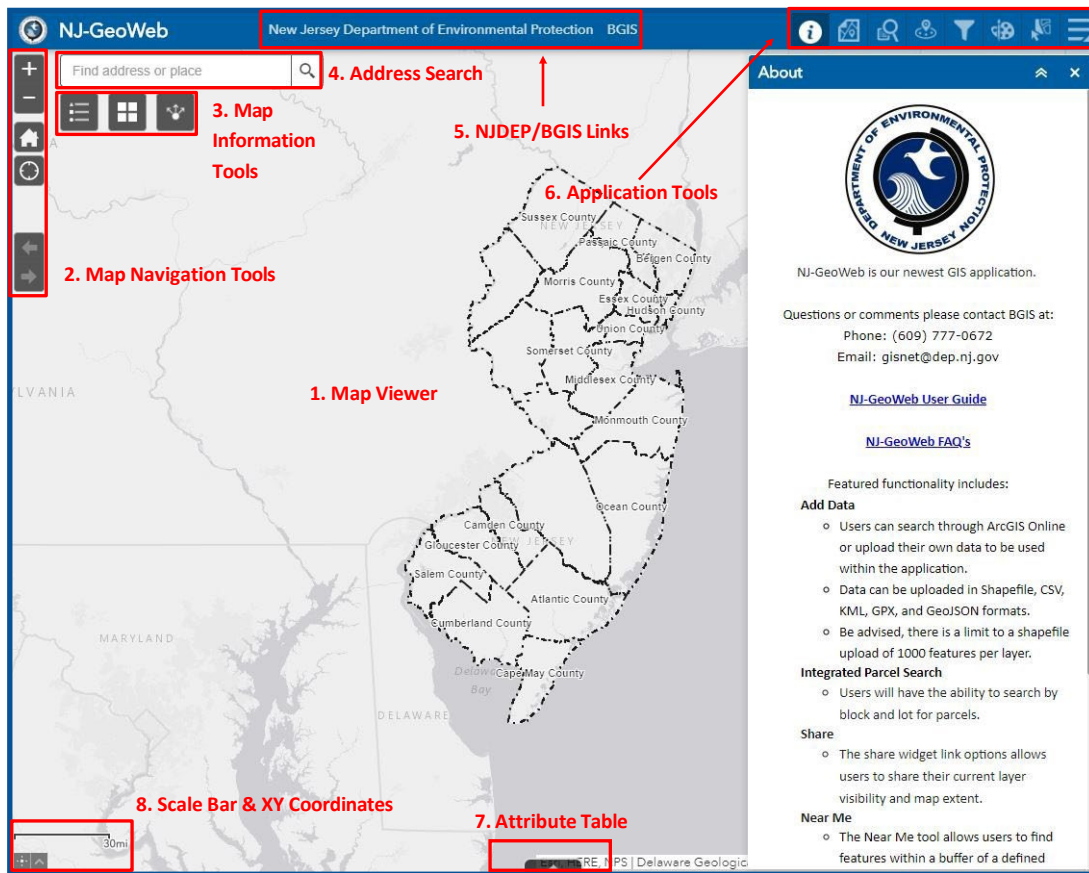
If all tool icons are not visible upon startup, it may be due to the user's screen resolution. Click the **More** icon to view the full tool list. If the layer list is not fully visible, the browser's zoom level may need to be adjusted.



To restore the map and layers from the most recent configuration, click the App State button in the bottom right corner of the app upon startup. Previous app configurations can also be shared using the Sharing Tool.



## Application Overview:



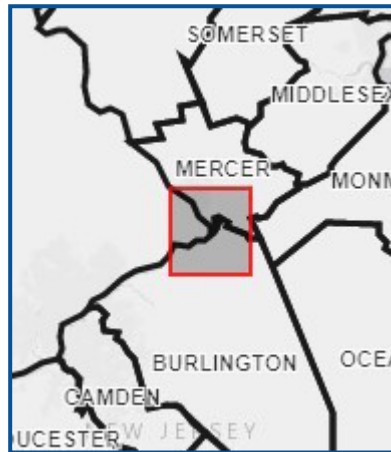
The NJ-GeoWeb's interface consists of a map view frame, tools to access and use data, tools to navigate around the map view frame, filters, parcel search, drawing, and layer selection. The following provides a brief description of the tools and steps to use each functionality.

## 1. Map Viewer – Interacting with the Map

To pan around the map, click and hold the left mouse button while moving to an area of interest.

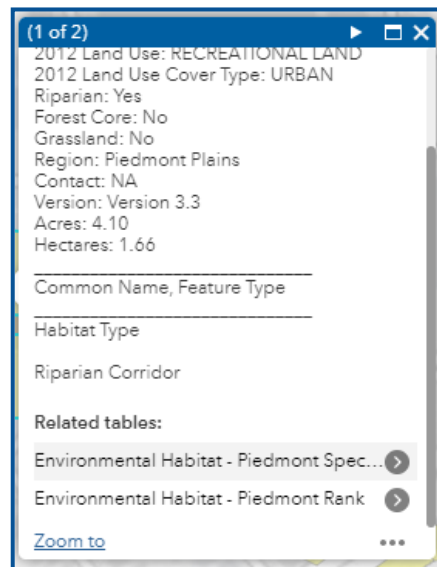
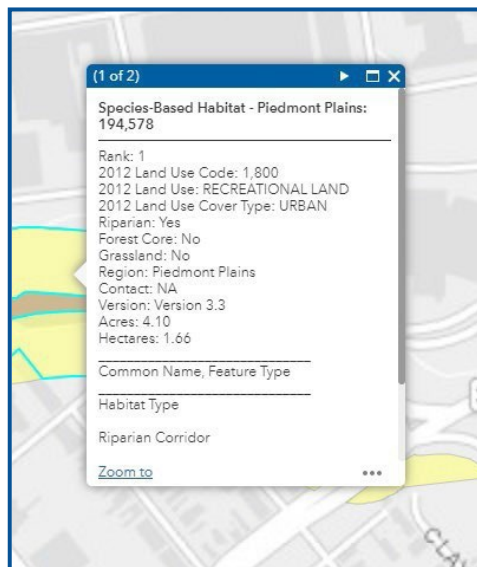
Use the scroll wheel on the mouse to zoom in and out of the map.

Users can also zoom into the map by holding down the **Shift** button on the keyboard and selecting an area to zoom into. A red box will appear indicating the selected zoom area.



### Map Pop-ups

Click on features within the map to reveal a pop-up window with information about that point of interest. If features overlap, use the arrow button at the top-right of the pop-up to scan through all features. To view further related table information, users can click the related tables at the bottom of the popups.



### ***NOW IT'S YOUR TURN!***

- Pan around the map, using your mouse. Zoom in and out, via the scroll wheel.
- Now try to zoom into the Trenton region, utilizing the keyboard Shift key, and activate the red selection box.
- Left click on the mouse, to activate the map pop-up.
  - ◊ Note that the only information provided is from the County layer, which is loaded into the map by default, when the application is opened.

## **2. Map Navigation Tools**

Use the tools at the upper left to navigate the interactive map:



**Zoom In/Out:** Zoom in and out of the map view.



**Default Extent:** Click this to return to the full view of New Jersey.



**My Location:** Allow users to zoom to current location when using a mobile device.



**Extent Navigation:** Allows users to navigate the map to its previous or next extent.

### ***NOW IT'S YOUR TURN!***

- Explore an area of the map, using the Zoom In/Zoom Out Tool
- After you've zoomed around, return to the map's original extent, via the Default Extent tool.
- If you are accessing the application on a mobile device, try to locate your geographic position with the My Location tool.
- Return to your previous extent, but clicking on the left arrow of the Extent Navigation tool

### 3. Map Information Tools

Map/Data tools can be found in the upper left corner and beneath the address search bar.



**Legend:** The Legend displays labels and symbols for the layers in the map (only layers with their visibility turned on will display in the legend). View the symbology of the point, line, polygon data on the map interface. Legend will also be displayed in the printed map.



**Basemap Gallery:** The Basemap Gallery presents a gallery of basemaps for the user to select from.

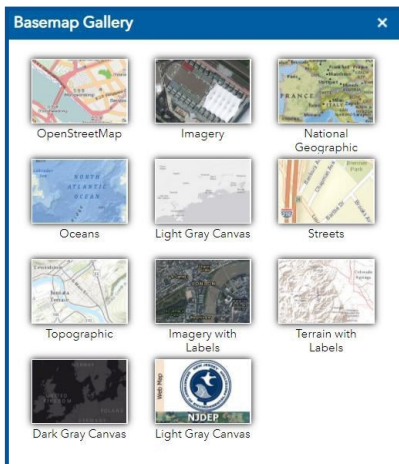


**Share:** The Share tool allows the user to share an app by sending an email with a link or embedding it in a website or blog. An option to remember the layer visibility is also available. This option allows the user to share their current view of the app with another user.

#### *NOW IT'S YOUR TURN!*

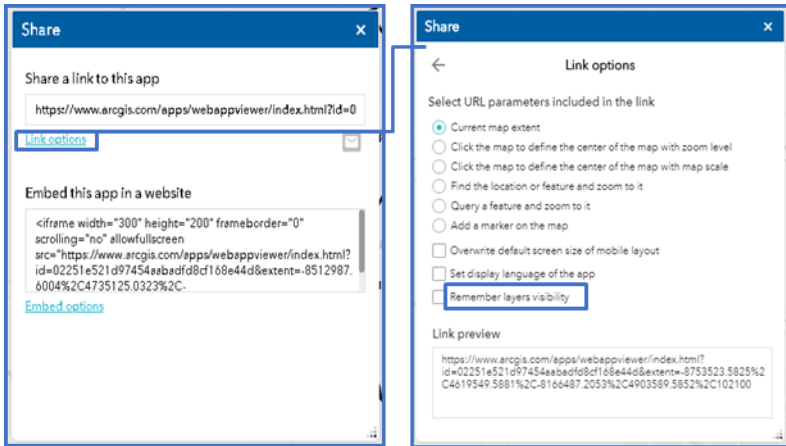


- Click on the Legend Tool and note its behavior - County Boundaries appears in the list.



- Now click on the Base map Gallery Tool, and experiment with some of the available background imagery.





Now Try sharing your map (hint- email to yourself to verify your Share selections)

- ◇ Click on the Share Tool
- ◇ Click on Link options

• Experiment with the different configurations available

◇ Click the Share button, then copy/paste the link into an email or other document, from which it can be opened.

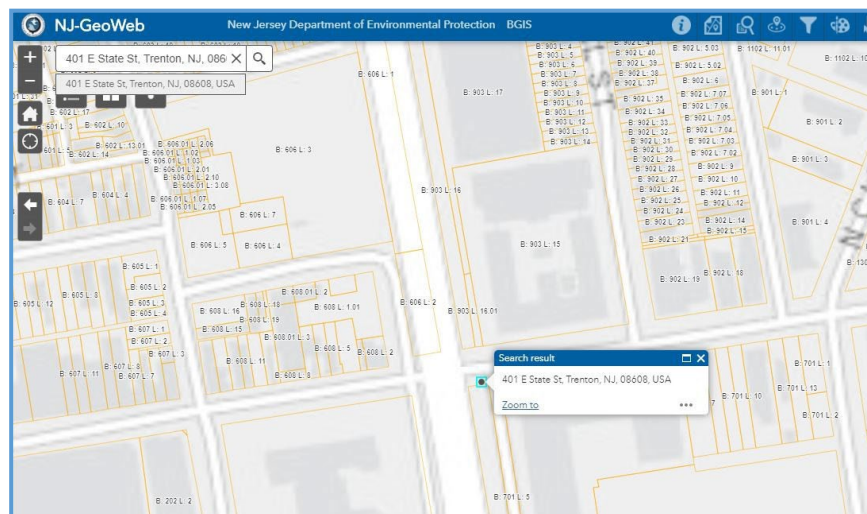
#### 4. Address Search

The Search Bar enables the user to find locations within the map. The search can find locations using names or addresses. Latitude and longitude coordinates can also be used.



#### NOW IT'S YOUR TURN!

- Enter an address in the “Find address or place” box, click “Enter”
- Note that the map zooms to the address or place you entered.
- Also note that the parcels layer has been activated and is visible.





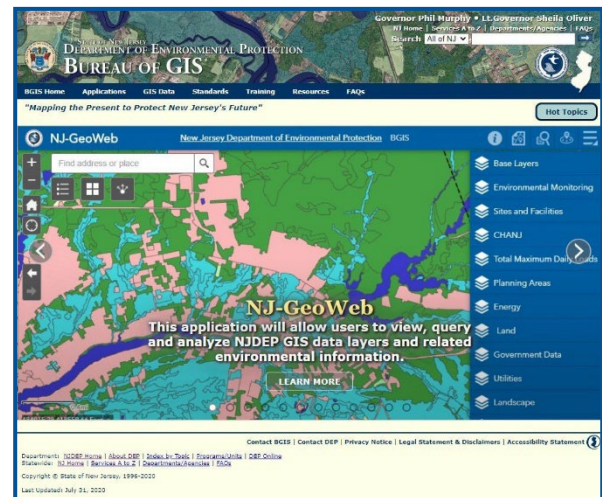
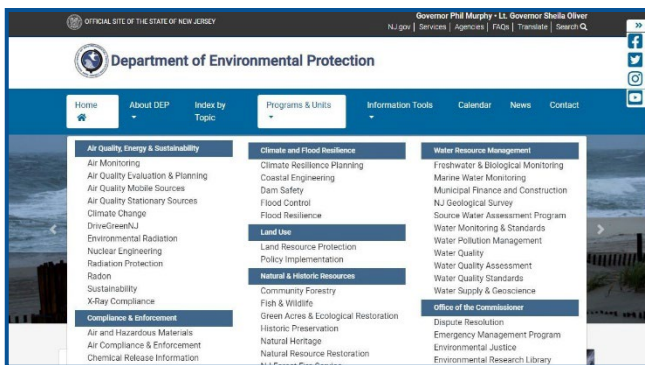
## 5. NJDEP/BGIS Links

New Jersey Department of Environmental Protection BGIS

Users can find more information about the NJDEP or the Bureau of GIS by using these links.

### NOW IT'S YOUR TURN!

- Click on the “New Jersey Department of Environmental Protection” link to view the department’s general, highest level online resource.
- Click on the BGIS link to access the bureau’s online resources.



## 6. Application Tools



The Application Tools are in the toolbar located at upper right in Map Viewer.

Most of the functionalities such as searches, queries, analyses, and printing are on the main toolbar. The tools for this document are not described in the order they appear in the toolbar



**Parcel Search:** The Parcel Search is one of the application’s most powerful tools. Users can use the Parcel Search tool to search for parcels by County, Municipality, Block, and Lot.

Users can export the searched parcels by selecting the Export button within the results tab (3 dots) of the “Output” tab and choosing the selected export method.

**Parcel Search**

Input      Output

County and Municipality\*

MERCER - Trenton City

Block\*

1

Lot

Query Type\*

Exact Match

[Help](#)      **Run**

**Results**

The result is drawn on the map. ... X

- Zoom to
- Pan to
- Flash
- Show pop-up
- Export to CSV file
- Export to feature collection
- Export to GeoJSON
- Create layer
- Save to My Content
- View in Attribute Table

***NOW IT'S YOUR TURN!***

- Let's do a parcel search for Trenton City Hall:
  - ◇ In the "County and Municipality" drop-down, select MERCER- Trenton City
  - ◇ For "Block" enter 301
  - ◇ For "Lot" enter 1
  - ◇ Click "Run"
  - ◇ The map zooms to City Hall at 319 E State St., Trenton
- We'll now explore the Export functions in the Parcel Search Tool
  - ◇ Click on the "Output" button, the click on the results tab (3 dots)
  - ◇ There are three export options:
    - Export to CSV file- creates a csv spreadsheet file.
    - Export to feature collection- a type of feature layer that holds static collections of features stored as JSON inside a map or portal item
    - Export to GeoJSON- represents simple geographic features and their non-spatial attributes.
  - ◇ Experiment with the other options available in the Output button (Zoom to, Flash, Show pop-up, etc.).

OBJECTID	PAMS_PIN	PCL_MUN	PCLBLOCK	PCLLOT	PCLQCODE	PCLLASTUPD	PIN_NODUP	GIS_PIN	CD_CODE	PROP_CLASS	COUNTY	MUN_NAME	PROP_LOC	OWNER_NAME	ST_ADDRESS	CITY_STATE
1	1111_301_1	1111	301	1		July 2, 2013	1111_301_1	1111_301_1	1111	15C	MERCER	TRENTON CITY	319 E STATE ST		319 E STATE ST	TRENTON NJ

**Note :** To perform multiple parcel search, use custom layer filter tool. [Click here to learn more.](#)

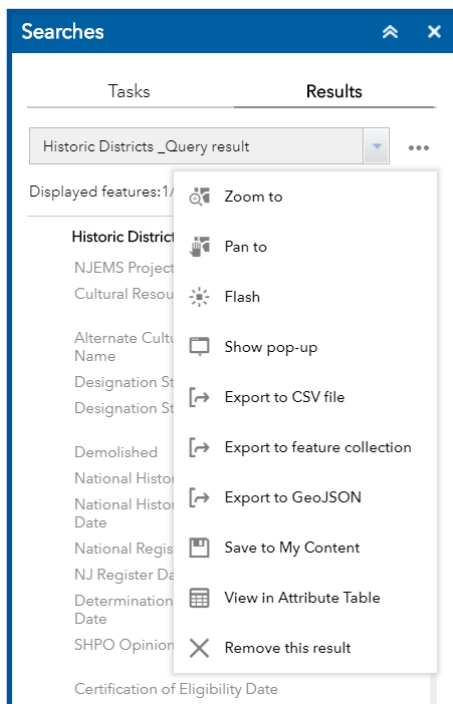
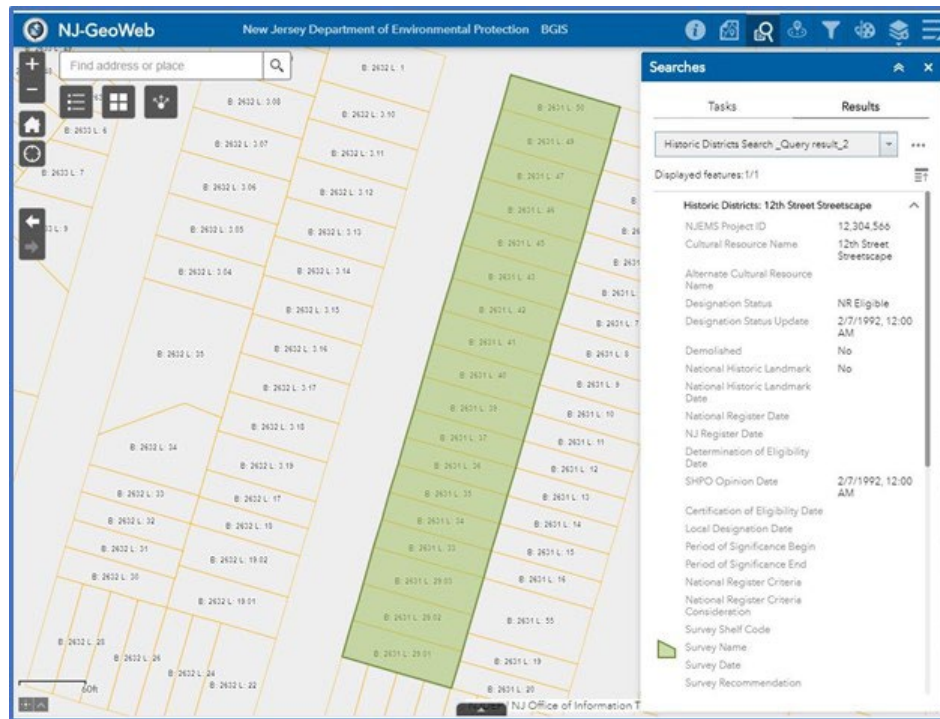


**Searches:** Users can select from a variety of searches to interact with multiple environmental layers. These layers include:

- Counties
- Municipalities
- NJEMS PI
- NJEMS Sites
- Watershed Management Areas
- Watershed/Sub-Watershed (HUC14)
- Well Program Grid

- Purveyor Service Area
- Historic Districts
- Historic Properties
- Known Contaminated Site List
- Water Quality Data Exchange (WQDE) by Municipality
- Water Quality Data Exchange (WQDE) by Watershed/Sub-Watershed

In the example below, we selected the “**Historic Districts**” Search, and used “**12<sup>th</sup> Street Streetscape**” as our Cultural Resource name.



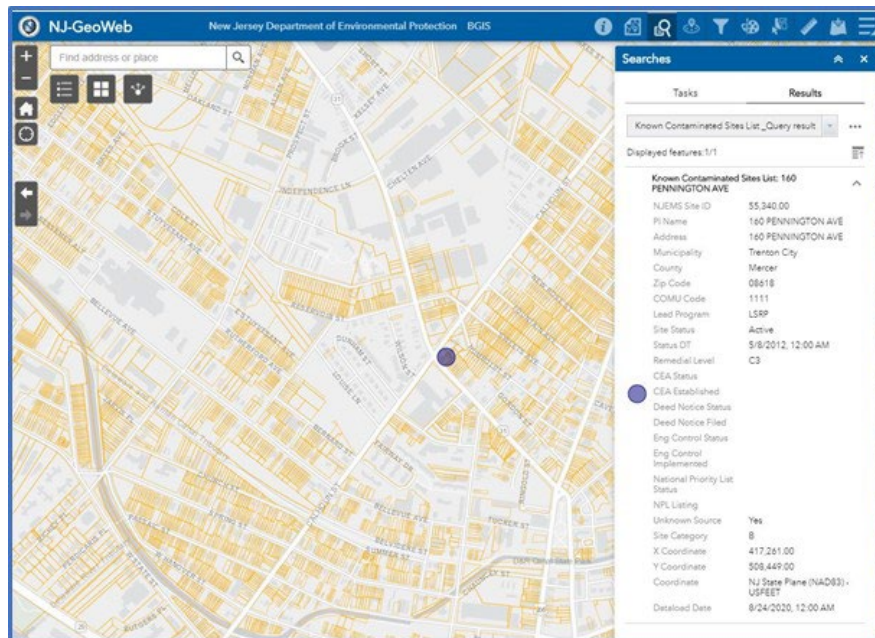
After a search is completed, users can take further actions on selected features by selecting the 3 dots in the **Results** tab. This menu has more capabilities with the results of the query (the list of available options varies depending on the permissions on the layer being queried):

- Zoom to – zoom to the highlighted feature
- Pan to – pan over to the highlighted result
- Flash – the highlighted feature will flash to make more visible
- Show pop-up – attributes of a feature in the form of a pop-up
- Export to CSV file/feature collection/GeoJSON – exports of the results
- View in Attribute Table – attribute table will display from the bottom of the viewer
- Zoom to – zooms to the selected record item on the map
- Remove the result – clear the result
- Show all related record – this option is only available if there are related tables linked to the layer that is being queried

## NOW IT'S YOUR TURN!

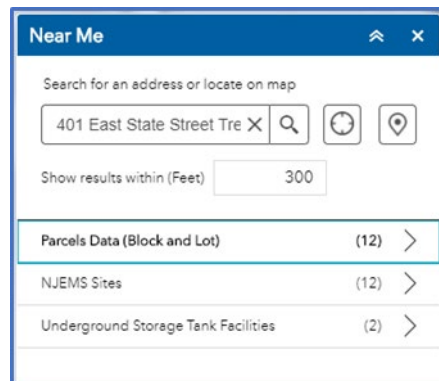
We'll now do a search for a known contaminated site (KCS) in Trenton:

- ◇ Turn on the Known Contaminated Sites List layer: Layer List > Sites and Facilities > Known Contaminated Sites List
- ◇ Under Searches Tool – Select the “Known Contaminated Sites List” search
  - “County” is Mercer
  - “Municipality” is Trenton City
  - “Contaminated Site List Name is” 160 PENNINGTON AVE
  - Click “Apply”
- ◇ Map zooms to KCS selected, with attribute data on site visible.



**Near Me:** The Near Me tool allows users to find Site and Facility features within a buffer of a defined address or location and view detailed information about those features. Only features turned on within the Layer List will be included in the Near Me analysis.

Users can then click on the results to view more information.

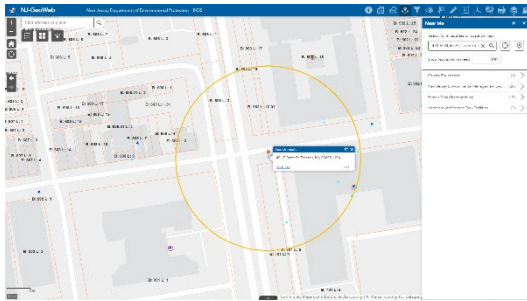




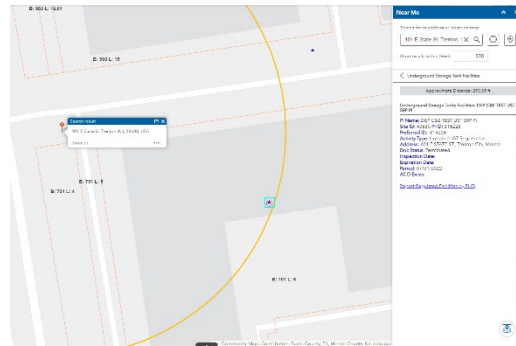
## NOW IT'S YOUR TURN!

Let's determine if there are any features near the main DEP headquarters in Trenton:

- Before performing the Near Me analysis, turn on any layers of interest from the Layer List
  - ◇ Known Contaminates Site List (Sites and Facilities)
  - ◇ New Jersey Environmental Management System (NJEMS) Sites (Sites and Facilities)
  - ◇ Underground Storage Tank Facilities (Sites and Facilities)
- Set "Show results within (Feet)" to 300, then enter "401 E State St, Trenton" into the search bar.
- select "Search" icon.
- The Near Me tool returns all the features found within 300 feet of the target.
- You can click on any of the features in the list for additional attribute data.



Results of Near Me search in column at right



Expanded results for "Underground Storage Tank Facilities"



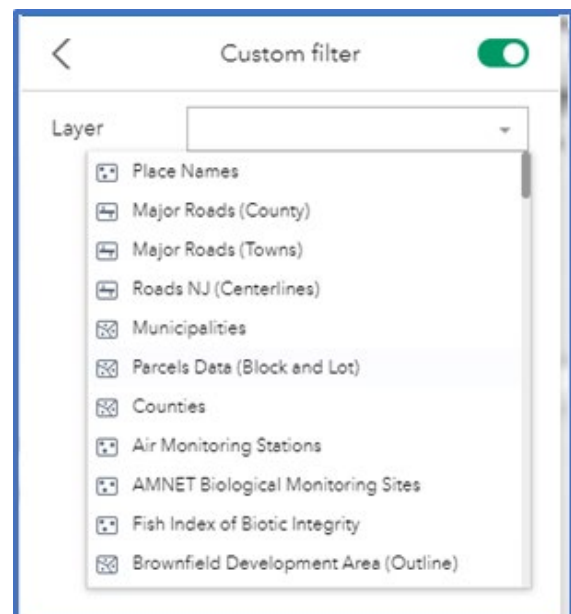
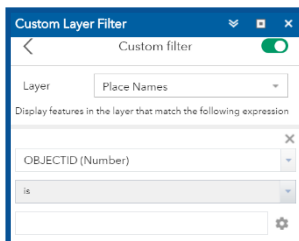
- Click on the Set location button, then click on any site on the map
  - ◇ The Near Me tool returns all features found within 300 feet of the random point you selected



**Custom Layer Filter:** The Filter tool allows users to limit visibility of features in a layer. Only features that meet the set criteria will be visible in the map.

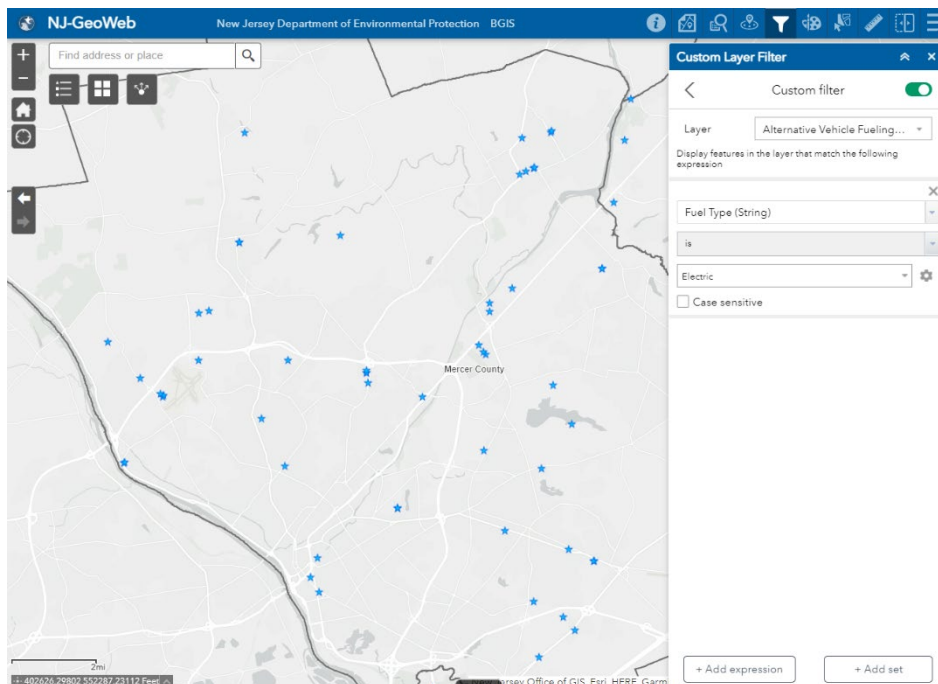
- Select the Create a Custom Filter to get started.
  - ◇ Then select the layer to create a custom filter on.
  - ◇ Add an expression or a set of multiple expressions.
  - ◇ Finally, select the field, condition, and input type to create the filter.

+ Add expression      + Add set

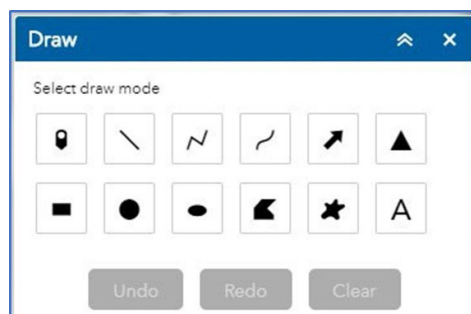


## NOW IT'S YOUR TURN!

- We will now create a filter that allows us to Electric Alternative Vehicle Fueling Stations within the state.
  - ◇ Be sure that the Alternative Vehicle Fueling Stations layer is turned on in Layers list > Transportation
  - ◇ Select the Custom Layer Filter, and be sure to activate it (“push” slider to right)
  - ◇ In the “Layer” pull-down, select Alternative Vehicle Fueling Stations
  - ◇ Select “Add expression” (lower right)
  - ◇ In the top pull-down, select Fuel Type (String)
  - ◇ Set next pull-down to “is”
  - ◇ Click “gear” icon, select Unique
  - ◇ Select Electric
  - ◇ Only electric fueling stations are visible- toggle the custom filter slider back and forth to turn the filter on/off.



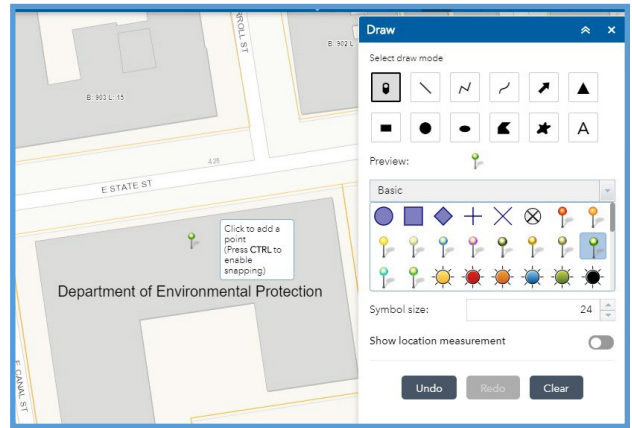
**Draw:** The **Draw** tool provides basic sketching and markup functionality. The window also displays some measurements for drawn features, such as lengths for lines, and areas and/or perimeters for polygons.



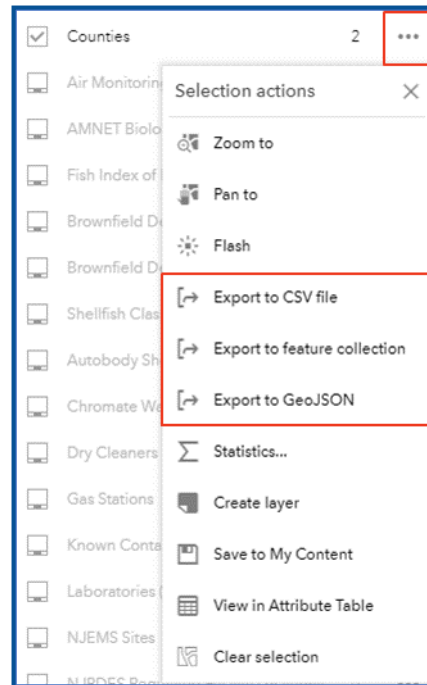
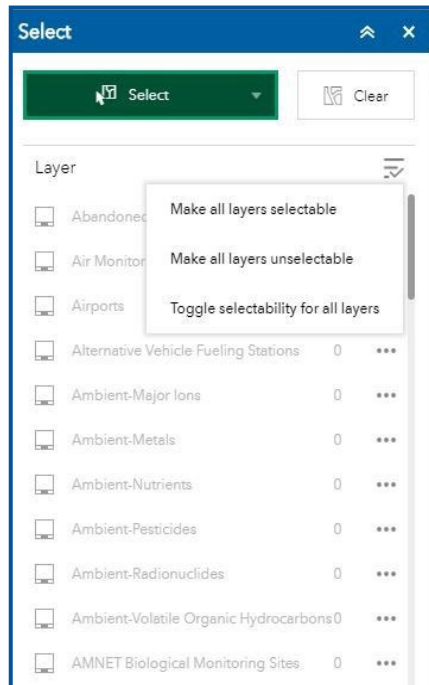


**NOW IT'S YOUR TURN!**

- Let’s draw some features for the NJDEP headquarters
  - ◊ Zoom to 401 E State St, Trenton
- Add Text:
  - ◊ Select the “A” button to add text. A
  - ◊ Type “Department of Environmental Protection.”
  - ◊ Change the font size to 12.
  - ◊ Click on the building of 401 E State St.
- Add a point:
  - ◊ Select the Point marker. Choose a point image of choice.
  - ◊ Change the font size and color.
  - ◊ Click on the map to add the drawn point.



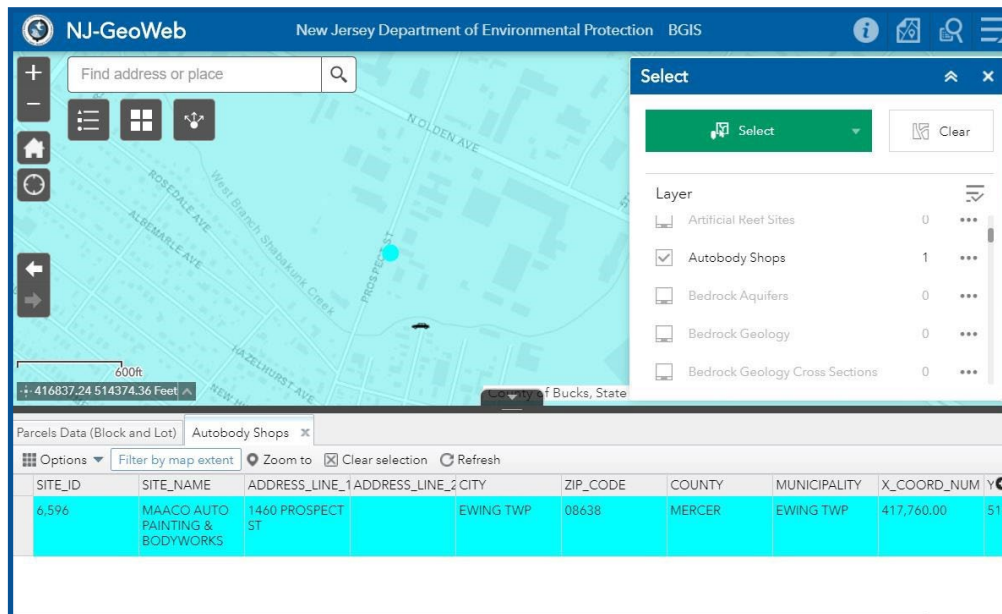
**Select:** The **Select** tool allows the user to interactively select features on the map and take actions on the selected features. Clicking the 3 dots next to the selected features will open the Show Actions options. Within these options, users can export selected features to CSV, Feature Collection, and GeoJSON.



## NOW IT'S YOUR TURN!

We will now select autobody shops in Trenton

- Turn on the Autobody Shops layer
  - ◊ Layer List > Sites and Facilities > Autobody Shops
- Zoom into Trenton (street level) to view the autobody shop point features
- Find the Autobody Shops layer in the Select layer list
- From “Select” pull-down, choose “Select by point”
- Click on one of the autobody shop points on map
- Click on the three dots in the layer list for the autobody shops: the “Selection actions” menu opens
  - ◊ Choose the “Zoom to” option to inspect parcel up-close
  - ◊ Choose the “View in Attribute Table” option to view the autobody shop’s attribute data



The screenshot shows the NJ-GeoWeb interface. The map displays a street-level view of Trenton, with a green marker indicating a selected autobody shop. The 'Select' panel on the right shows the 'Autobody Shops' layer selected. Below the map, the attribute table for the selected site is displayed.

SITE_ID	SITE_NAME	ADDRESS_LINE_1	ADDRESS_LINE_2	CITY	ZIP_CODE	COUNTY	MUNICIPALITY	X_COORD_NUM	Y_COORD_NUM
6.596	MAACO AUTO PAINTING & BODYWORKS	1460 PROSPECT ST		EWING TWP	08638	MERCER	EWING TWP	417,760.00	517,760.00



**Measure:** The Measure tool allows the user to measure the area of a polygon, the length of a line, or find the coordinates of a point. Users can change the units of measurements from the drop-down.



**Area** –Click and draw a polygon on the map. Double click to finish the drawing and the measurement result will appear in the Measure window.



**Distance** - Click and draw a line on the map to measure the distance. Double click to finish the drawing and the measurement result will appear.

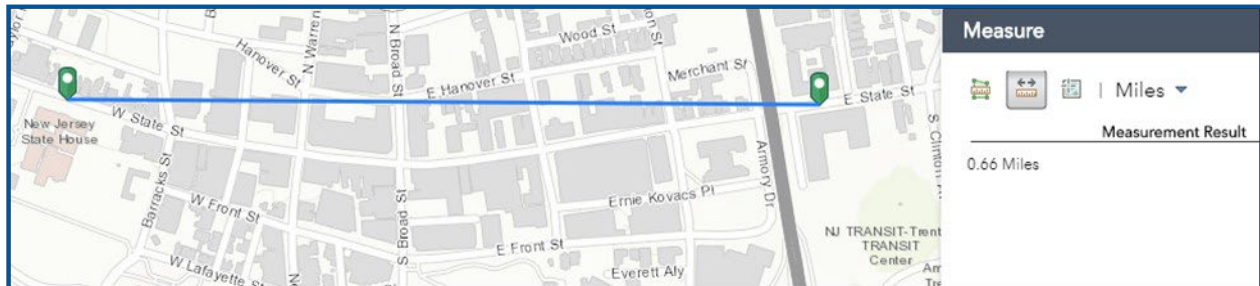


**Location** - Click to place a point on the map to view the latitude and longitude. A green marker will appear in the Measure window.

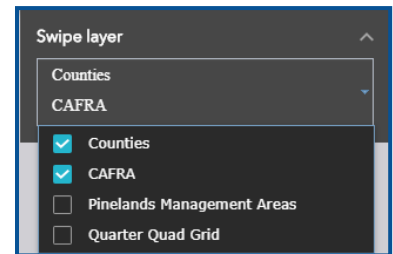
## NOW IT'S YOUR TURN!

Measure the distance from 401 E State St Trenton, NJ 08608 to New Jersey State House in miles:

- Open Measure > Distance.
- Click on 401 E State St, Trenton, NJ 08608. A green place marker appears
- Double click on New Jersey State House. A blue line follows a second green place marker. The distance in miles shows in the results.



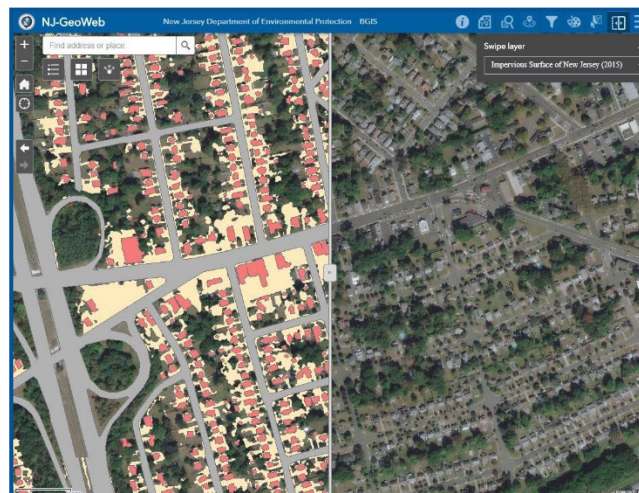
**Swipe:** The Swipe tool enables the user to easily compare the content of different layers in a map. Once the tool is turned on, select a single layer or multiple layers to swipe from the drop-down list.



## NOW IT'S YOUR TURN!

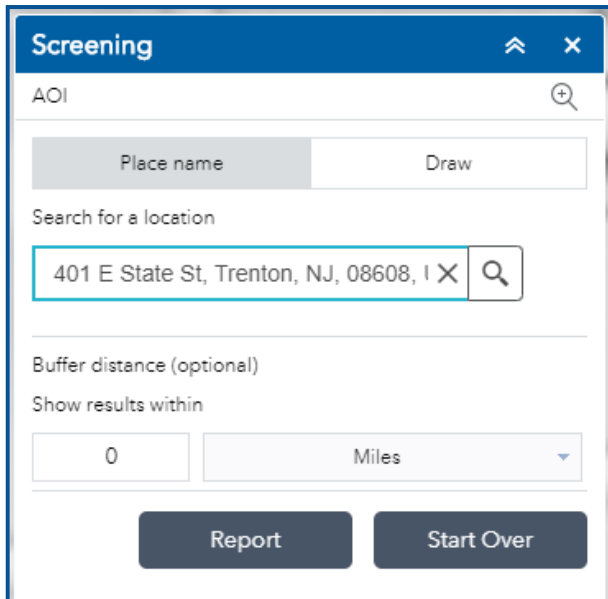
We will swipe between a base map and a layer containing impervious surface data

- From the Base Map Gallery, select the “Imagery” map
- Add **the Impervious Surface % (2012)** from the Layer List (Land)
  - Be sure the impervious surface layer is chosen in the “Swipe layer” drop-down





**Screening:** The Screening tool allows users to define an area of interest and analyze specified environmental layers for potential impacts. Areas of interest can be defined through a place name search or by drawing on the map.



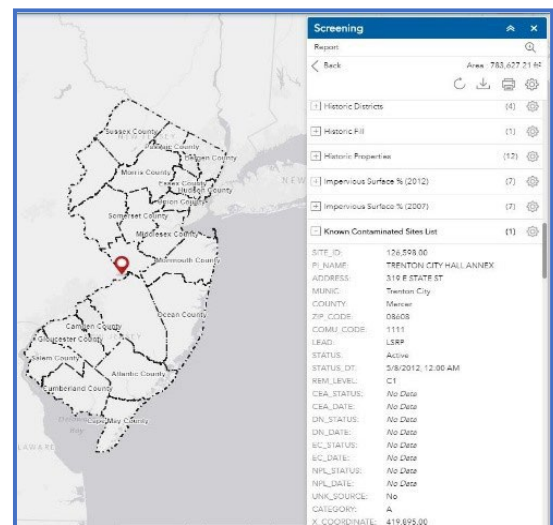
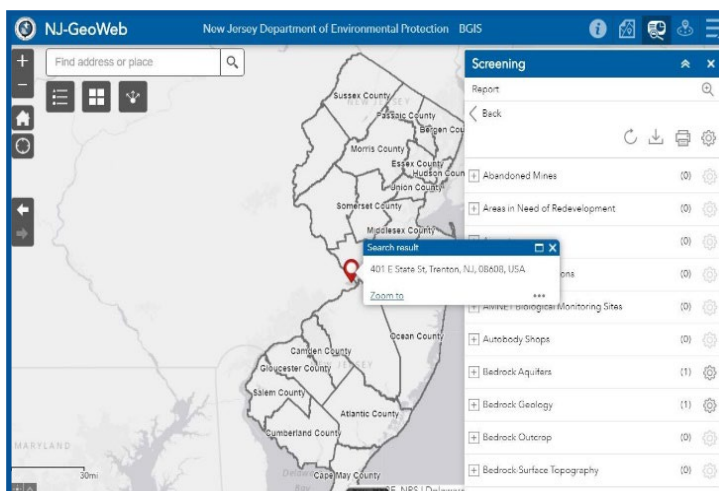
Analysis results can be inspected in the tool and, optionally, shared via a printed report or CSV file download.

In the Report pane the user can upload Shape files and Zipped Shapefiles to be used within the analysis.

### NOW IT'S YOUR TURN!

Let's screen a diameter around Trenton, and determine which data features can be found:

- Select the Screening tool.
- Type "401 E State St, Trenton" in the "Search for a location" box.
- For "Buffer distance", enter "500", and "Feet" from the drop-down.
- Click "Report".
- The Screen Tool then generates a list of all map data features found within 500 feet of the target
- You can then click on any of the screen features to obtain their attribute data. You can also download the data as a CSV file, or print a report.

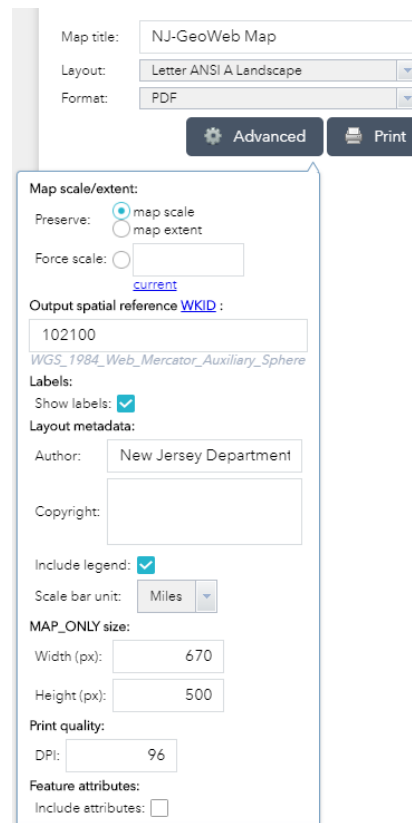
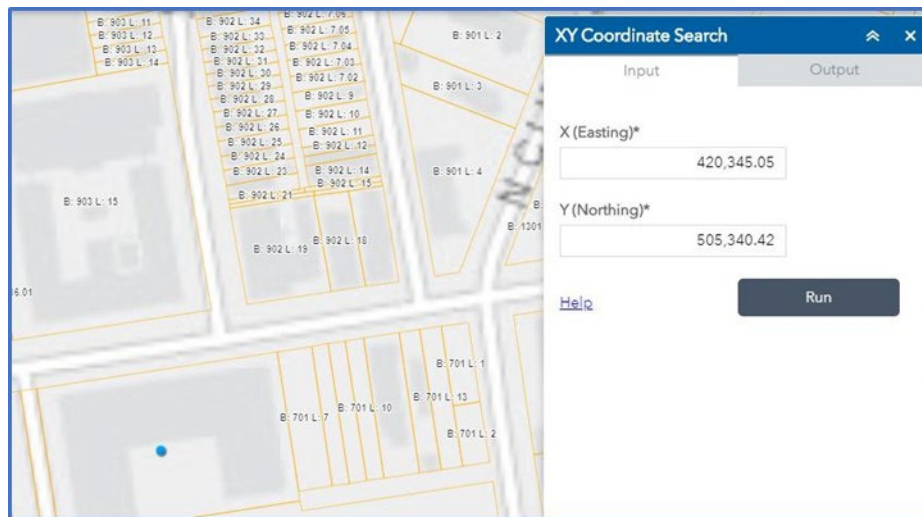




**XY Coordinate Search:** The XY Coordinate Search allows users to plot NAD 1983 State Plane XY Coordinates on a Web Mercator map. This may be useful to those who do not have a specific address but collected coordinates with GPS units.

### NOW IT'S YOUR TURN!

- Open the Locate Tool
  - ◇ Add 420357in Easting (X) and 505404in Northing (Y). (These units are in 1983 NJ State Plane Feet)
  - ◇ Click "Run"
  - ◇ The map zooms in/creates a blue point for the desired coordinates (these are the coordinates for the NJ DEP building)




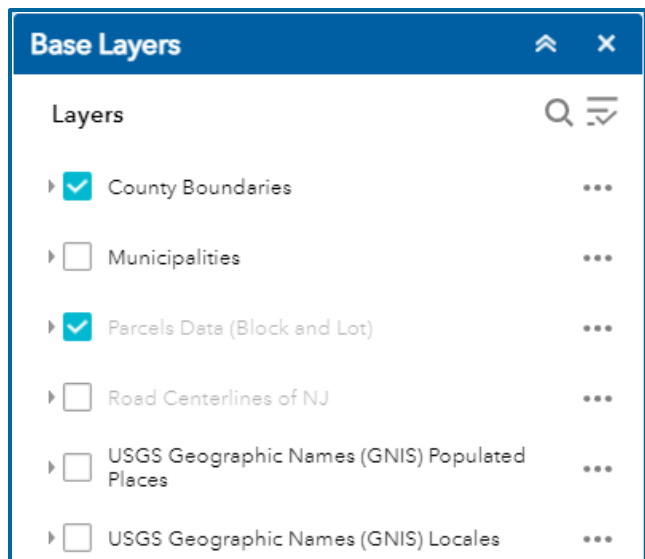
**Print:** The Print tool allows users to print their current view of the map to a variety of format types including: PDF, JPG, PNG, SVG and others.






**Layer List:** The Layer List contains an extensive collection of BGIS authoritative data layers, and acts as a table of contents. It allows users to turn individual layers on and off within the map.

- Each layer in the list has a check box that allows the user to control its visibility
- The Counties layer is the only one that is visible when the user first opens the application
- The Parcels layer turns on automatically when zoomed in at least 0.2 mi
- The Layer List is separated into groups
- The “Check”  button provides layer visibility controls
- Some layers when turned on, may not be visible and grayed out within the layer list window
  - ◊ This is due to a scale dependency and the user must zoom into the map for the layer to appear



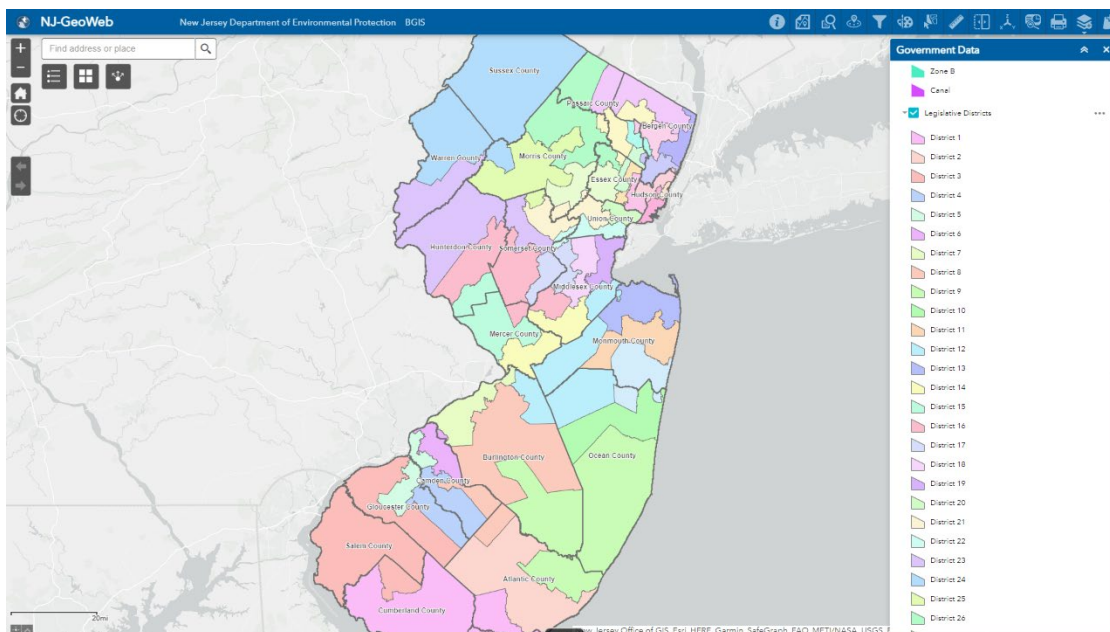
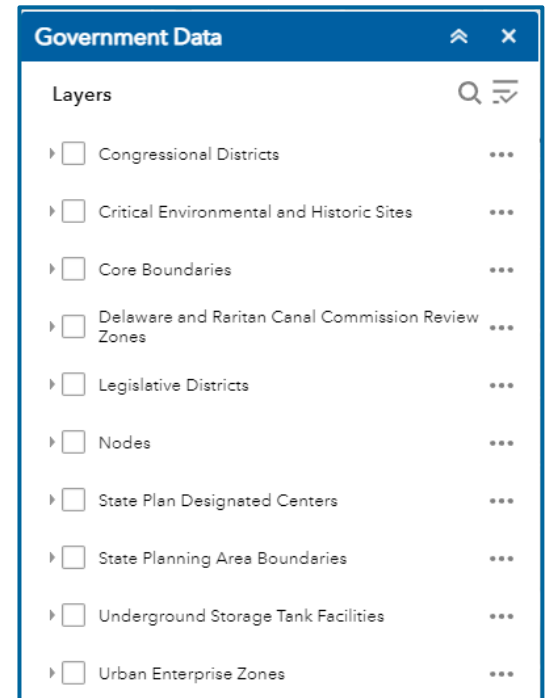
**NJ-GeoWeb Layer List Groupings:** This online directory contains information, including descriptions and metadata, for all data layers found in the application. It can be accessed on the About page in the Information tab  or [accessed here.](#)



## NOW IT'S YOUR TURN!

We'll now explore some of the layers, as well as the features offered in the Layer List

- Open the Government Data group
- Using the “Check” button (upper right) select Expand all layers
- Select the Legislative Districts
- Click on the layer options (3 dots) and select **Zoom to**
  - ◊ Click on the layer options and select **Transparency**
    - Move the transparency slider bar back and forth and observe changes to layers symbology on map
- Click on the Set visibility range option
  - ◊ The range contains two thresholds for visibility- State level and building level
  - ◊ Move the range indicators, then zoom in/out of the map to observe visibility changes
- Select Show item details
  - ◊ A new webpage opens, with information about the layer, including creator, metadata, terms of use, etc.

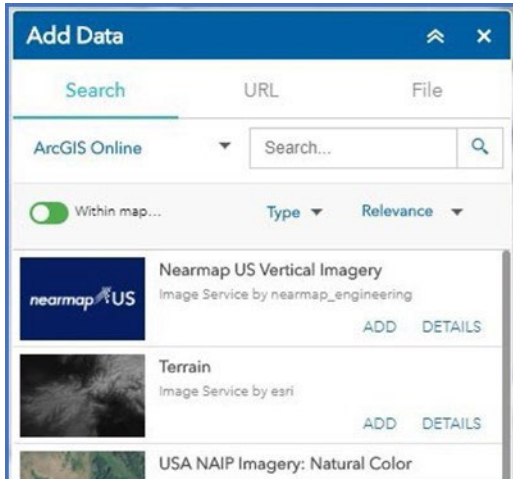


**Add Data:** The Add Data tool enables users to add data to the map from a variety of external sources. Data sources include ArcGIS Online, Layer URL's, or uploading of local files.

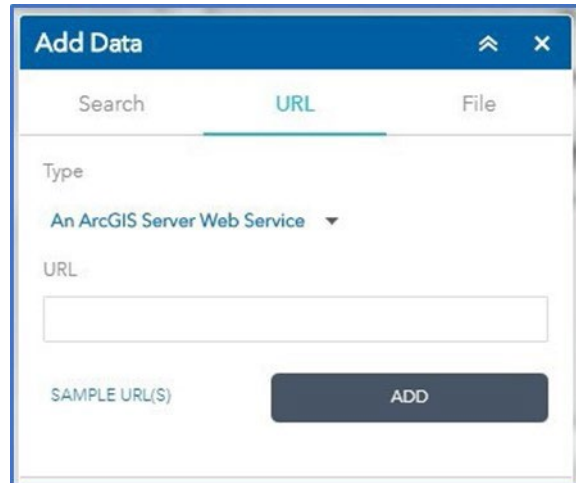
Metadata can be viewed by clicking the 'DETAILS' button. Users can search for a layer of their choice using key words. Through the Title drop-down, the results can be rearranged based on the relevance, title, author, rating, views, and date. To search for all NJDEP authoritative data layers, type NJDEP in the Search text box. **NOTE:** Some data may require an ArcGIS Online account.



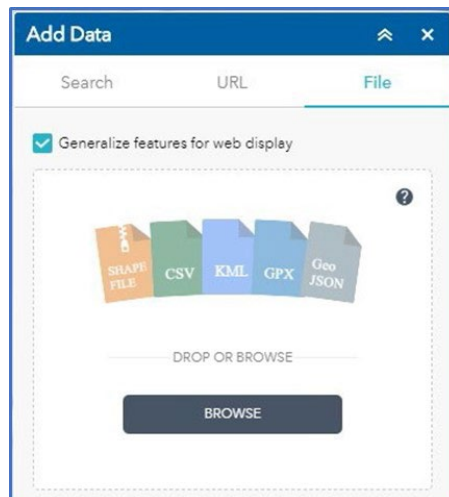
**Adding data via ArcGIS Online:**



**Adding data via URL:**



**Adding data via a local upload:**

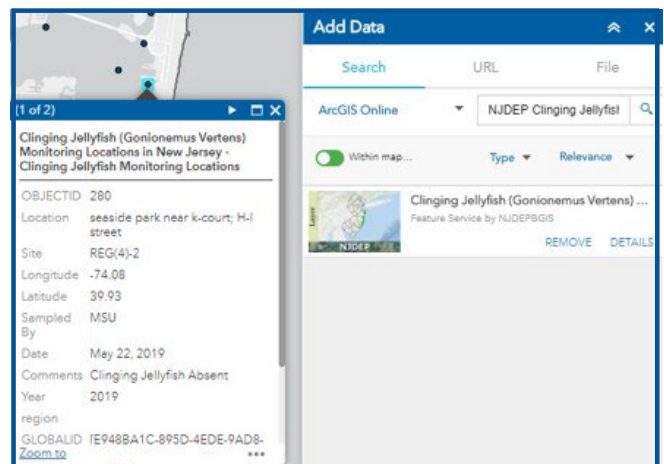


Note: Zipped shapefiles have a limit of 1000 features

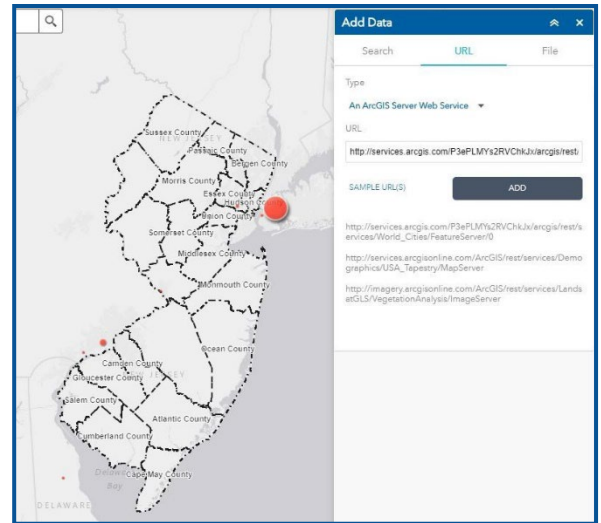
**NOW IT'S YOUR TURN!**

Let's add data using the ArcGIS Online and URL methods.

- ArcGIS Online:
  - ◊ Click on the "Add data" button
  - ◊ Under the "Search" tab, type "NJDEP Clinging Jellyfish" in the Search text box
  - ◊ Click Search
    - Click on "Add", to add the layer to the map
    - Click on "Details" to review this layer's description, metadata, etc.
    - Click on "Remove", to remove the Clinging Jellyfish layer from the map



- URL:
  - ◇ On the “URL” tab, select “An ArcGIS Server Web Service” as “Type”
  - ◇ Click on SAMPLE URL(S), then copy past the “world cities” link into the URL box
  - ◇ Click “Add”
    - Cities within the data set appear in New Jersey and surrounding states
    - Click on the city points on the map to examine the attribute data in the pop-up



## 7. Attribute Table

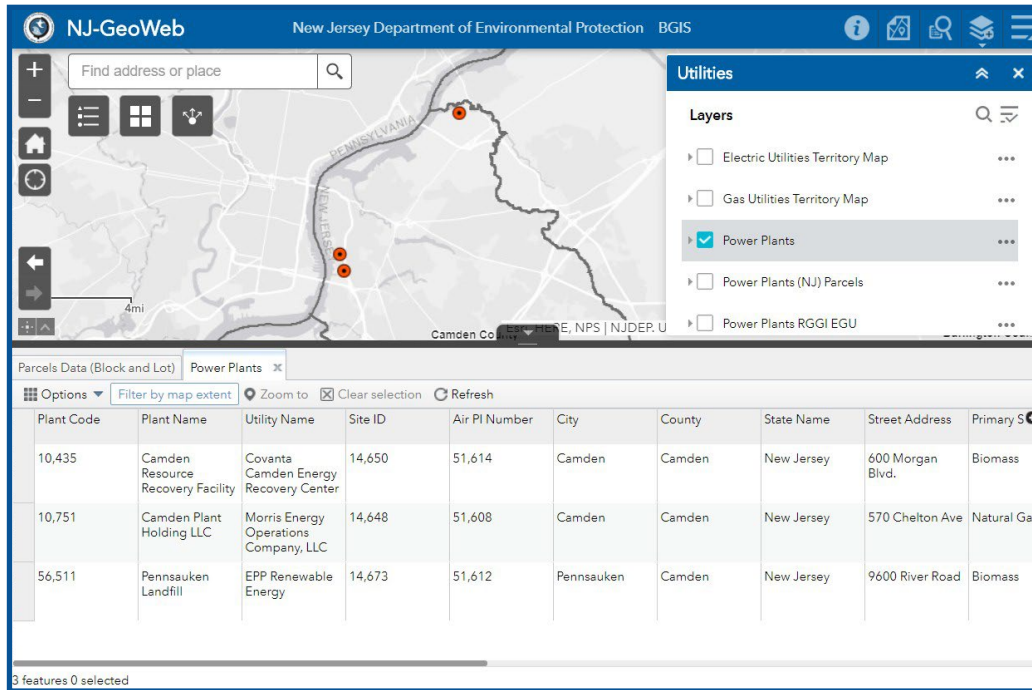
The Attribute Table displays a tabular view of operational layer’s attributes. When more than one layer’s attributes display, multiple tabs automatically generate in the attribute panel. Attribute information can be exported to CSV through the attribute table.

MUN	COUNTY	MUN_LABEL	MUN_TYPE	MUN_CODE
LAWRENCE TWP	CUMBERLAND	Lawrence Township	Township	0608
GREENWICH TWP	CUMBERLAND	Greenwich Township	Township	0606
SHILOH BORO	CUMBERLAND	Shiloh Borough	Borough	0611
HOPEWELL TWP	CUMBERLAND	Hopewell Township	Township	0607
LOWER ALLOWAYS CREEK TWP	SALEM	Lower Alloways Creek Township	Township	1705
UPPER DEERFIELD TWP	CUMBERLAND	Upper Deerfield Township	Township	0613
EL SINBORO TWP	SALEM	Elsinboro Township	Township	1704

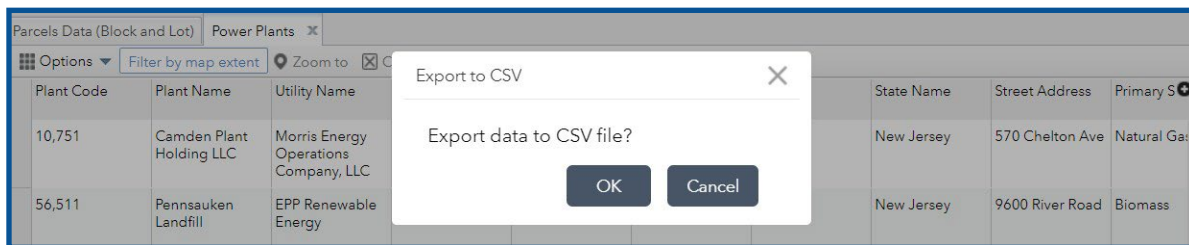
### NOW IT'S YOUR TURN!

Let’s check out the functionality of the Powerplants attribute table

- Open the Powerplants in the “Utilities” group of the “Layer List”
- Select View in attribute table in the layer’s option button (3 dots)
  - ◇ The attribute table opens on bottom of map view
  - ◇ Select a record, then click “Zoom to”
  - ◇ The map zooms to the site of the record
  - ◇ Zoom to full extent by clicking on Home button
- Let’s try filtering records
  - ◇ In Options select “Filter”
  - ◇ Add Expression
    - “County (String) is CAMDEN”
  - ◇ Attribute table now displays power plants exclusive to Camden County

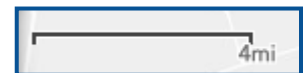


- Try exporting your three Camden County power plants to a CSV file:
  - ◇ “Options > Export all to CSV”.
  - ◇ Click OK.
  - ◇ CSV file is exported to your Downloads folder.



## 8. Scale Bar and XY Coordinate

The Scale bar provides a visual indication of the size of features, and distance between features, on the map is found at the lower left of the map viewer.



The Coordinate tool displays X- and Y- coordinate values on the map and can be found at the lower-left of the map view.

- Users can choose from displaying coordinates in:
  - ◇ New Jersey State Plane (Easting X, Northing Y)
  - ◇ WGS-84 Web Mercator (Longitude, Latitude)

Users search for the coordinate choices by clicking the **Enable Map Coordinates** tool (“up” button), which configures for NJSP or WM.



### *How to find a State Plane Coordinates*

Basic site information needed to locate coordinates:

- Knowledge of location of street or closest street to project area or street address.
- Municipality
- County
- Zip code

Two ways to locate a site:

- A street address (with a number) or landmark at or near the site.
- Knowledge of the site location in relation to the municipal boundaries.

### *NOW IT'S YOUR TURN!*

The best way to demonstrate this process is to do it; let's go over a few methods

- Finding coordinates via a street address:

◇ Go to the “Find address or place” box on the upper left-hand side of the map.





◇ Enter the street address (with number or closest number to the site). Click search.




NOTE: (Not all addresses will find a match. The map will zoom to the approximate address.

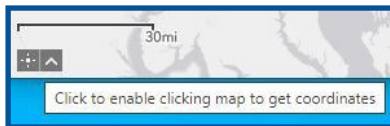
Finding coordinates based on relative position:

- Enter the municipality name in the “Find address or place” box. Select the appropriate value from the drop-down.
- Use the  icon to zoom in to the site location. Or hold down the left mouse button and move the map around.
- If you zoom in too far, use the  icon to zoom out to relocate your search in the same relative area.



Let's now find a set of State Plane coordinates

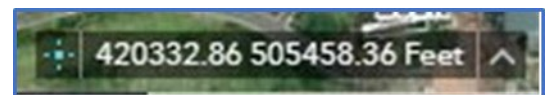
- Click on the “Enable to Get Coordinates” tool . The tool will look like this:



- Click on the map to place a marker at your location.








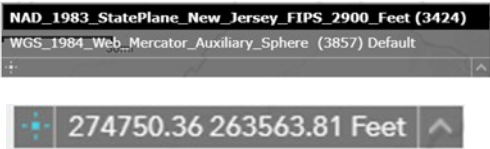



- You will see the coordinates in the lower left-hand side corner:



- The X and Y coordinates are separated by a space.
- X Coordinate = 420332.86 Y Coordinate = 505458.36
- If needed, you can copy and paste these coordinates into your application.




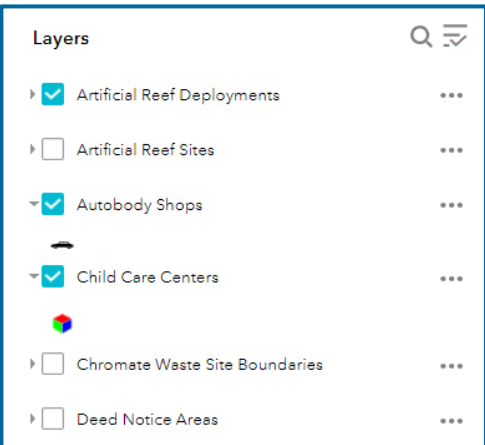




## Summary of Tools

Descriptions of the tools available in the application are provided below:

Tool	Description
 <b>Zoom</b>	<p>Click the plus or minus button to zoom in or out of the map.</p>
 <b>Home</b>	<p>Zoom the map to the initial map extent.</p>
 <b>My Location</b>	<p>Allows the network to detect your physical location and zoom the map to it.</p>
 <b>Extents</b>	<p>Navigate the map to its previous or next extent.</p>
 <b>Coordinates</b>  	<p>Click the arrow  on the widget to display a list of spatial references specified in the configuration. When you choose one from the list, it becomes active.</p> <p>Click on  button to enable clicking the map to get coordinates. You can add a point to the map, highlight the coordinates, and make a copy of the coordinates.</p>
 <b>Open Attribute Table</b>	<p>Query results or select an attribute to view or hide the attribute table from the bottom of the page.</p>






## Summary of Tools, Continued






Tool	Description
<p><b>Find Address or Place</b></p> 	<p>Find locations or search features on the map using the NJOIT geocoding service.</p>
<p><b>Layer List Tool</b></p>   	<p>Check and uncheck the layers in the Layer List or the table of contents. This window can be closed or opened by clicking on the Layer List tool button.</p> <p> Click the Search button to find layers within the Layer List.</p> <p> Click the Control All Layers button to control the behavior of the layers in the list. You can turn on/off all layers or expand/collapse all layers</p> <p>Click an individual layer to show its symbols. </p> <p>Click the Layer Context menu  to enable options like:</p> <p>Zoom to, Transparency, Set Visibility Range, Disable pop-up, Move up/down, View in Attribute Table, Show item details.</p> <p>Some of these tools may be grayed out depending on the scale or layer type.</p>








## Summary of Tools, Continued

Tool	Description
 <b>Legend</b>	<p>Display labels and symbols for layers in the map. The Legend supports dynamic, tiled, image, feature, KML layer types, and WMS layers with an associated legend URL. The Legend is automatically updated when the visibility of a layer or sublayer changes. When no operational layers are rendered in the map, the Legend is blank. Base maps are not shown in the Legend by default. The order in which layers appear in the Legend corresponds to the layer order in the map. The legend respects the scale dependencies of the layers in the map.</p>
 <b>Share</b>	<p>The Share widget allows you to share an app by sending an email with a link or embedding it in a website or blog. It also provides an easy way to define URL parameters for the app.</p>
 <b>Parcel Search</b>	<p style="text-align: center;"><b><i>Parcel Block &amp; Lot:</i></b></p> <div style="text-align: center; border: 1px solid #ccc; padding: 2px; margin-bottom: 10px;">Parcel Block &amp; Lot <span style="float: right;">▼</span></div> <ul style="list-style-type: none"> <li>• Query the parcel layer to locate a block and lot.</li> <li>• Select a municipality (required) and enter a block number and a lot number (optional) The search will return a maximum of 1000 records.</li> </ul> <p style="text-align: center;"><b><i>Parcel Number (PAMS PIN ID)</i></b></p> <div style="text-align: center; border: 1px solid #ccc; padding: 2px; margin-bottom: 10px;">Parcel Number <span style="float: right;">▼</span></div> <p>Enter the PAMS PIN ID of the parcel you are looking for. To search for multiple parcels, separate the PAMS PIN IDs with a comma.</p>




## Summary of Tools, Continued

Tool	Description
 <b>Add Data</b>	<p>Add data to the map by searching for layers in the Geo-Hub content, entering URLs, or uploading local files including shapefiles, CSV, GPX, and GeoJSON. In this way, users can temporarily add layers to the map and remove them from the map. Click <b>Type</b> to filter the results by map service, feature service, image service, etc.</p> <p>Click Relevance to sort by Title, Owner, Date etc.</p>
 <b>Locate Using XY Coordinates</b>	<p>Locate a point on the map using coordinates using State Plane New Jersey FIPS 2900 feet</p>
 <b>Searches</b>	<p>Choose from the dropdowns to easily zoom to a county, municipality, search for an NJEMS site, watershed or sub-watershed.</p>
 <b>Measure</b>	<p>Measure the area of a polygon, length of a line, or find the coordinates of a point.</p>
 <b>Draw</b>	<p>Create graphics that display on the map. It optionally adds line distance or polygon area to the feature as text. The Draw tool enables users to draw basic graphics and text onto the map. It provides basic sketching and redlining functionality for the web application. It also displays some measurements for drawn features, such as lengths for lines, and areas and/or perimeters for polygons.</p>

## Summary of Tools, Continued

Tool	Description
 <b>Select</b>	Select features on the map and take actions on the selected features. The selected features can be passed on to other tools as input, such as geoprocessing tools, attribute table, etc. Zoom to the proper extent or the layer will display as gray.
 <b>Basemap</b>	Select from a gallery of basemaps from ESRI aerial imagery.
 <b>Near Me</b>	The Near Me widget allows you to find features within a buffer distance in feet or miles, of a defined address or set location, view detailed information about those features, and get the distance of the feature from the selected feature.
 <b>Filter</b>	Users can create their own filters and queries. Any layer within the Layer List can be filtered/queried by any field(s) to narrow down results. Only the features that meet the expression criteria will be visible in the map.  Accordingly, other tools within the application will respond to the change it makes in the layer.
 <b>Swipe</b>	Compare the content of different layers in a map. Swipe provides a vertical view. Slide the swipe tool to reveal the content of another layer. To swipe aerial photography, first add the imagery using the Add Data tool. Click on the Swipe tool and add the layer users want to appear on the left side of the swipe bar.  To remove the swipe tool, click again to disable.

## Summary of Tools, Continued

Tool	Description
 <b>Print</b>	Connect the web application with a printing service to allow the current map to print. Change the title, layout and format as needed. Print in formats such as .jpeg, .pdf, .png.
 <b>Screening Tool</b>	The Screening widget allows you to define an area of interest and analyze specified layers for potential impacts. The area of interest can be defined through a place name search, by drawing on the map, by uploading a shapefile, or by entering a traverse with coordinate and distance pairs. Analysis results can be inspected in the widget and, optionally, shared via a printed report or CSV file down-load.
 <b>More Tools</b>	This icon will appear when the browser window is not large enough to show all the available tools in the application toolbar. Clicking on this icon will show the additional tools.

## Tutorial

Use NJ-GeoWeb to answer some example questions provided below. The answers on the following pages provide users with step-by-step instructions to solve the problems. Answers may have alternative ways to use certain functionalities. Feel free to deviate from these topics to explore on your own.

1. How can I find the coordinates for Rutgers University? The address is 8 College Ave, New Brunswick, NJ 08901.
2. How can I find Groundwater Contamination Areas (CKE) within Cape May County?
3. How can I compare NJ wetlands data from 2007 to 2012?
4. What is the total area of the State House Historic District and Mill Hill Historic Districts?
5. I only have the coordinates for a well (-74.1150, 39.7484) that I would like to add on the viewer. How do I add the well onto the map?

## Tutorial Answers

### ***1. How can I find the coordinates for Rutgers University? The address is 8 College Ave, New Brunswick, NJ 08901***

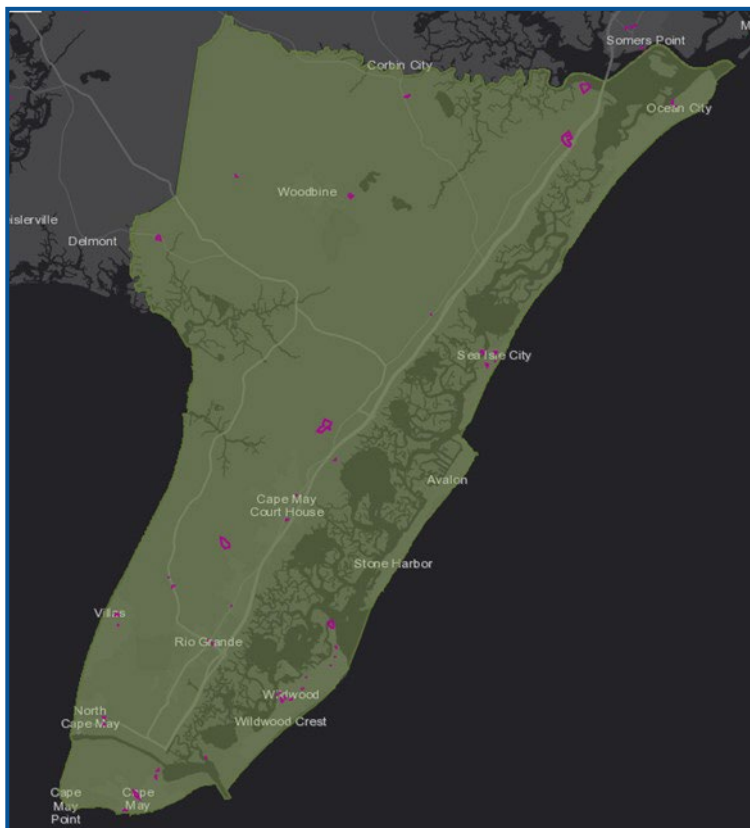
- Use the Address Search tool and enter the given address.
- Click the Locate using XY Coordinates tool on the bottom left-hand corner and place the marker on the address search result.

The coordinates are NJ State Plane 506,825.589 606,317.323 Feet.

### ***2. How can I find Groundwater Contamination Extents within Cape May County?***

- In the Layer list, select Groundwater Contamination Areas (CKE).
- Also, in the Layer list, open County Boundaries, click on ..., **select** View in Attribute Table
- Scroll down to Cape May County, highlight its row (far right), then click Zoom to in Attribute Table tool bar– map will zoom to Cape May County.
- In toolbar, click Clear Selection.


The user can now zoom into Cape May County for closer inspection of the extents, symbolized as purple out-lined polygons. Change the transparency levels of the layers to make the contamination areas more visible. Note: The basemap used below is Esri Dark Gray Canvas to clearly show the CKEs.



### **3. How can I compare the NJ wetlands data from 2007 to 2012?**

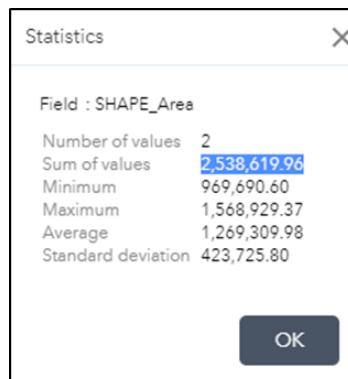
- Open the Basemap Gallery and choose “Imagery”.
- Select Layer List, then Land. Add 2007 Wetlands layer. Check on the 2012 Wetlands layer. Enable the Swipe tool and choose Wetlands 2007 to show on the left side of the swipe pane.
- Zoom in to an area to visualize the difference between the wetlands.

#### 4. What is the total area of Mill Hill Historic District and State House Historic District?

- Select Layer List, then add Historic Districts.
- Click on ... of the Historic District layer and select View Attribute Table. The attribute table appears on the bottom of the map.
- From the top left corner of the attribute table, Choose Options > Filter.
- Click on “Add expression.” Click the Set input type button  and select Unique. From the dropdowns, create this expression: Cultural Resource Name is Mill Hill Historic District.
- Add another expression. Change “Display features in the layer that match all ...” to Display features in the layer that match any ...” Click the Set input type button and select Unique. The second expression is: Cultural Resource Name is State House Historic District. Click Ok.
- Two results will show in the attribute table.



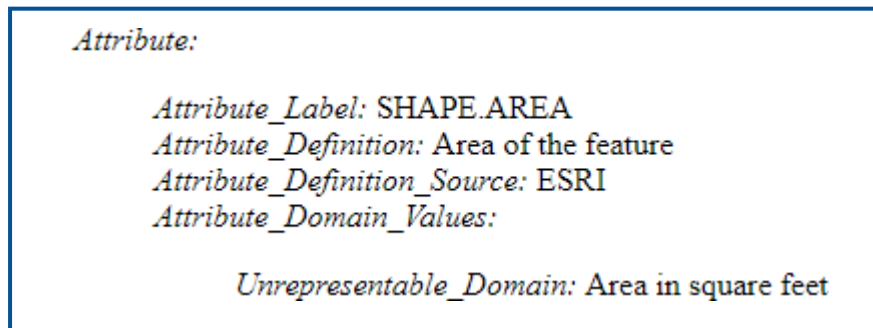
- Scroll to the right of the table and click the field SHAPE\_Area > Statistics. A new window appears with the sum of the two results.



The total area is 2.538,619.96

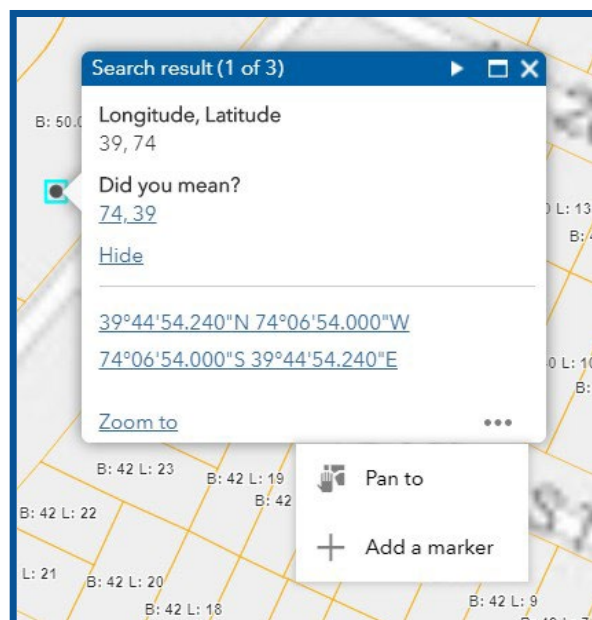


- To determine the unit of measurement, click on ... of the Historic District layer and Show Item Details. A new tab will open: Click Metadata.
- Scroll down the metadata page to find the unit under the *Attribute\_Label: SHAPE.AREA*. The area is in square feet. Thus, the total area is 2,538,619.96 sq. ft.



**5. I only have the coordinates for a well (-74.1150, 39.7484) that I would like to add on the viewer. How do I add the well onto the map?**


- Enter the coordinates in “Find Address or Place” text box, Click Search button. When the pop up of the coordinates shows, click on ... and Add a marker. A blue marker will appear.
- Next, open the Draw tool. Select the place marker or a shape to add the well on to the map.

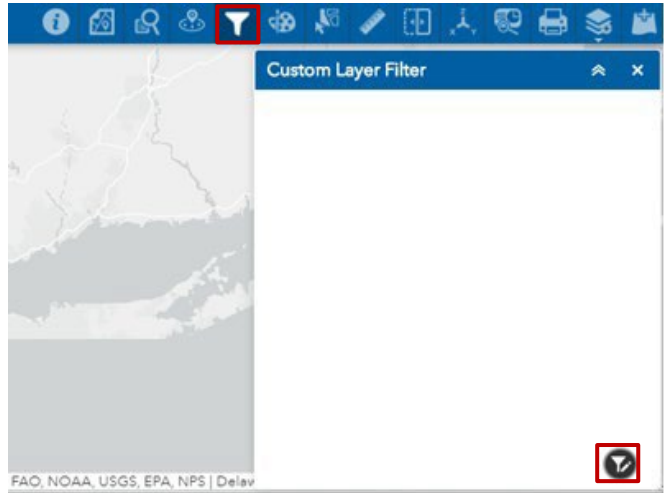




## Multiple Parcel Search Using the Custom Layer Filter Tool

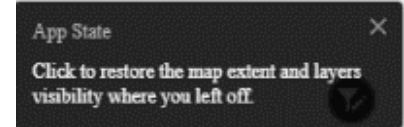
To execute a parcel search on adjacent lots in NJ-Geoweb, use the Custom Layer Filter tool.


Click on  to activate it.


Initiate the tool by clicking on the  icon in the bottom right corner of the tool's pane.

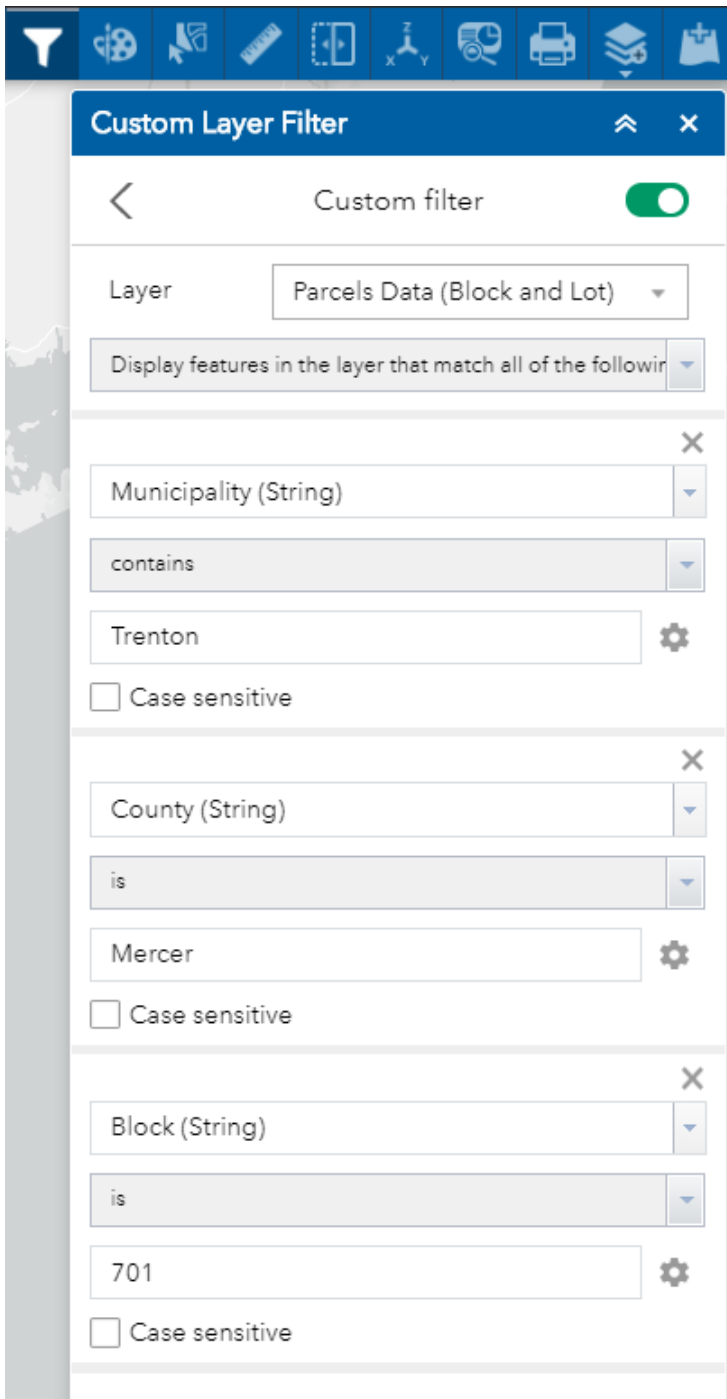


Sometimes it may be obscured by the App State warning message that appears when you first open NJ-Geoweb. You will need to close this pop-up to see the  icon and click on the  icon.

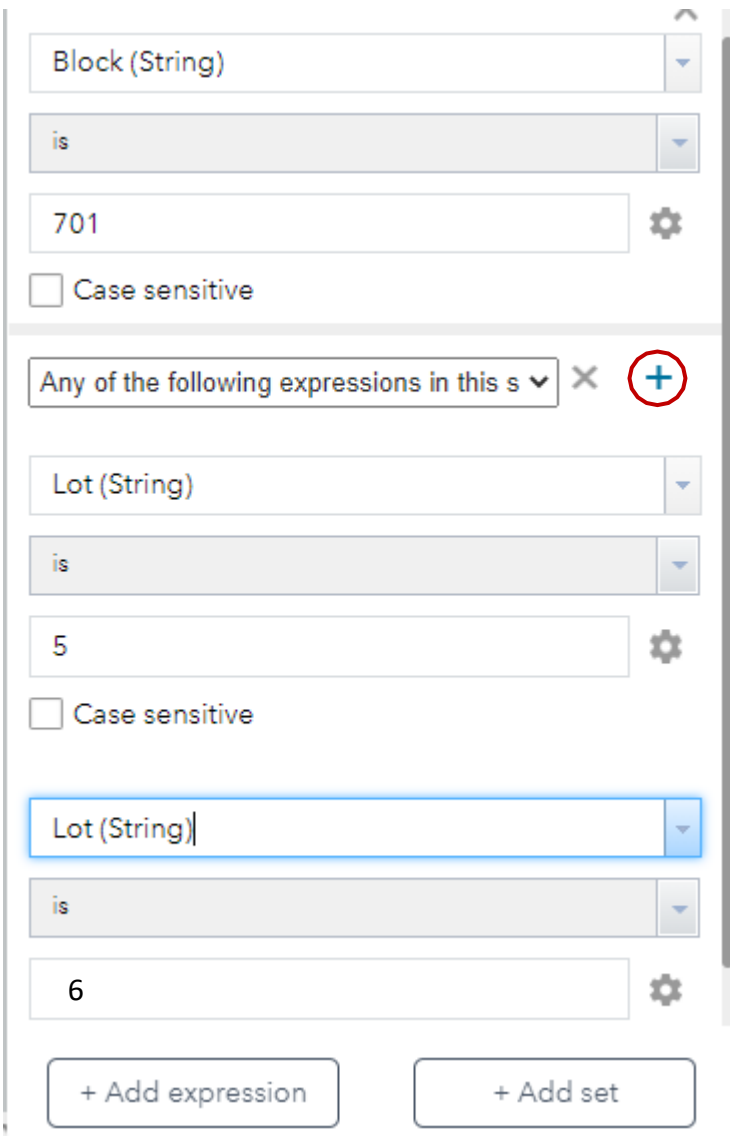


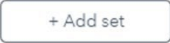
Once the tool is initiated, make sure the  button in the top-right corner is turned on, otherwise the filters being created will not be applied to the layer.

Alternatively, you can turn this button off  before creating your filter expressions. **You must remember to turn it back on in order to see the results of the filter tool.**



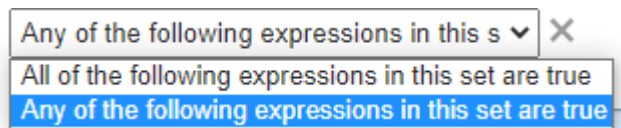
1. Select the Parcels layer from the drop-down list.
2. Click the Add Expression button on the bottom of the tool's pane. + Add expression
3. Change the first parameter to the 'Municipality (String)' field, **select 'contains'** for the second parameter, and type in the town/city.
4. Click the Add Expression button. Change the first parameter to the 'County (String)' field, leave 'is' for the second parameter, and type in the parcels' county for the third parameter.
5. Click the Add Expression button. Change the first parameter to the 'Block (string)' field, leave 'is' for the second parameter, and type in the block number.



6. Click the Add Set button on the bottom of the tool's pane.  Two sets of boxes appear.

7. Change the first parameter to the 'Lot (String)' field, leave 'is' for the second parameter, and type in the desired lot number for the third parameter.

8. Change the drop-down to say Any of the following expression in this set are true



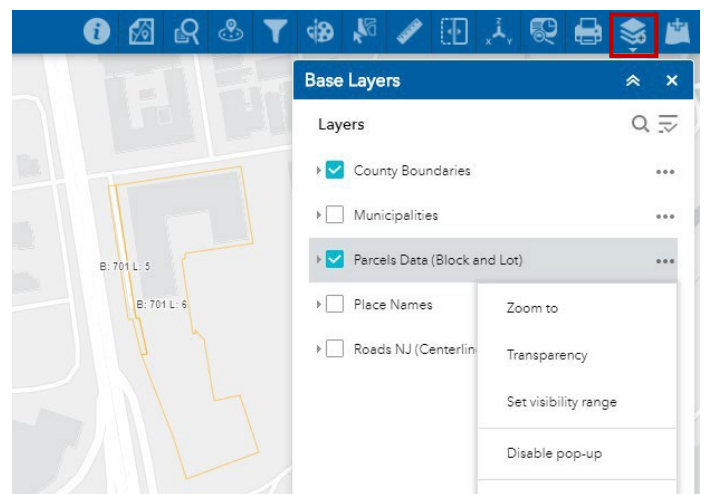
9. Repeat this process for your next lot number.

Note: If you need to search for more than 2 lots, just click the + icon (circled in red) and repeat step #7.

9. Click on the Layer List tool. From the list of categories, select **Base Layers**. (If necessary, turn the Parcels Data layer on by clicking on the checkbox to the left of its' name.)

10. Click on the More Options icon to the right of the layer name and select 'Zoom To'.

The map will zoom to the selected Parcels.



Note: The zoom feature will take up to about 10 seconds to zoom to your selected parcels.