

NJ-GeoWeb: Primer and Tutorial



New Jersey Department of Environmental Protection
Office of Information Resources Management
Bureau of Geographic Information Systems
PO Box 420
Mail Code 401-01
Trenton, NJ 08625-0420

www.nj.gov/dep/gis

GIS Help Desk:
609-777-0672
GISnet@dep.nj.gov

May 2016

NJ-GeoWeb: Primer and Tutorial

Table of Contents

Introducing NJ-GeoWeb	2
NJ-GeoWeb Interface	3
Map View Frame	4
Navigation Bar.....	4
Map Tools Toolbar.....	5
Advanced Tools.....	7
Searches.....	8
Linking to DEP Reports.....	9
More Selection Tools	12
Printing the Map	14
Tutorials	16
<i>NJ-GeoWeb Tutorial 1: Environmental Investigation</i>	16
<i>NJ-GeoWeb Tutorial 2: Searches and Selections</i>	21
<i>NJ-GeoWeb Tutorial 3: Setting the Scale, Using the Map Content Window, Right-Click, & Advanced Tools</i>	23
<i>NJ-GeoWeb Tutorial 4: Buffer NJEMS Sites and Using DEP Data Miner</i>	26
Summary	28
Frequently Asked Questions.....	29

Table of Figures

Figure 1: NJ-GeoWeb Functionality.....	3
Figure 2: Map View Frame	4
Figure 3: Navigation Bar	4
Figure 4: Features of the Map Content Window	4
Figure 5: Summary of Map Tools	6
Figure 6: Advanced Tools Control	7
Figure 7: Advanced Tools Descriptions	7
Figure 8: NJ-GeoWeb Search Feature showing the Address Search.....	9
Figure 9: More Information about Selected Sites.....	9
Figure 10: Data Miner Link in More Information window.....	10
Figure 11: Data Miner Window	10
Figure 12: Report Link in More Information Window.....	11
Figure 13: Reports Link in the Results window.....	11
Figure 14: Click for More Selection Tools.....	12
Figure 15: Selection Tools Window	13
Figure 16: Print Tool.....	14

Introducing NJ-GeoWeb

The Bureau of Geographic Information Systems (BGIS) has developed NJ-GeoWeb, a data and feature-rich GIS application for users of the Internet. NJ-GeoWeb enables the combining of many environmental map layers into a single integrated map. Map tools and searches allow users to interact with the map and the environmental data layers.

The **GeoWeb** profile was developed to suit the needs of a general audience that may be interested in viewing environmental information related to features that exist in the vicinity of a location or area of interest. The GeoWeb profile allows users to view and interact with a very diverse set of environmental map layers and related data. Users may execute searches to find a location or area of interest, display features from the mapped data layers, and view environmental data associated with those features. Additional tools are provided to allow users to select and buffer features, measure distances and calculate areas, and determine or locate and display NJ state plane coordinates.

Additional “NJDEP Program” profiles within NJ-GeoWeb have been developed to address the needs of specific user communities. The developers of the NJ-GeoWeb application have worked with staff from NJDEP programs to determine the GIS layers included within each profile. Regardless of the profile initially selected by the user at the application’s launch, the GeoWeb profile is always available to the user, and the user may switch between these two profiles by clicking on one or the other profile’s tab. When switching between profiles, the spatial extent of the map is maintained, but the GIS layers made available to the user changes. To access a different profile, a user may return to the splash page, and click the desired profile.

The other available NJDEP Program profiles include:

Ambient Water Monitoring

Barnegat Bay

Bear

Geology

Historic Preservation

Sustainability and Green Energy (SAGE)

Safe Drinking Water (SDW)

Site Remediation Program’s Remedial Priority Scoring (SRP-RPS)

Tidelands

Water Allocation

Well Driller

Searches: NJ-GeoWeb includes custom searches, most of which are associated with a particular map layer. The availability of a particular search in any NJ-GeoWeb profile is dictated by whether its subject layer has been made available in the current profile. If the profile includes the layer, the search associated with it is listed under the “Searches” link for that profile.

Reports: For a few layers, a selected set of map features from those layers (e.g., the NJEMS Sites layer) can be passed to DEP Data Miner reports through a document link. Some layers are also linked to Business Objects reports via document links. If an NJDEP program has developed custom DEP Data Miner or Business Objects reports, those report may be able to

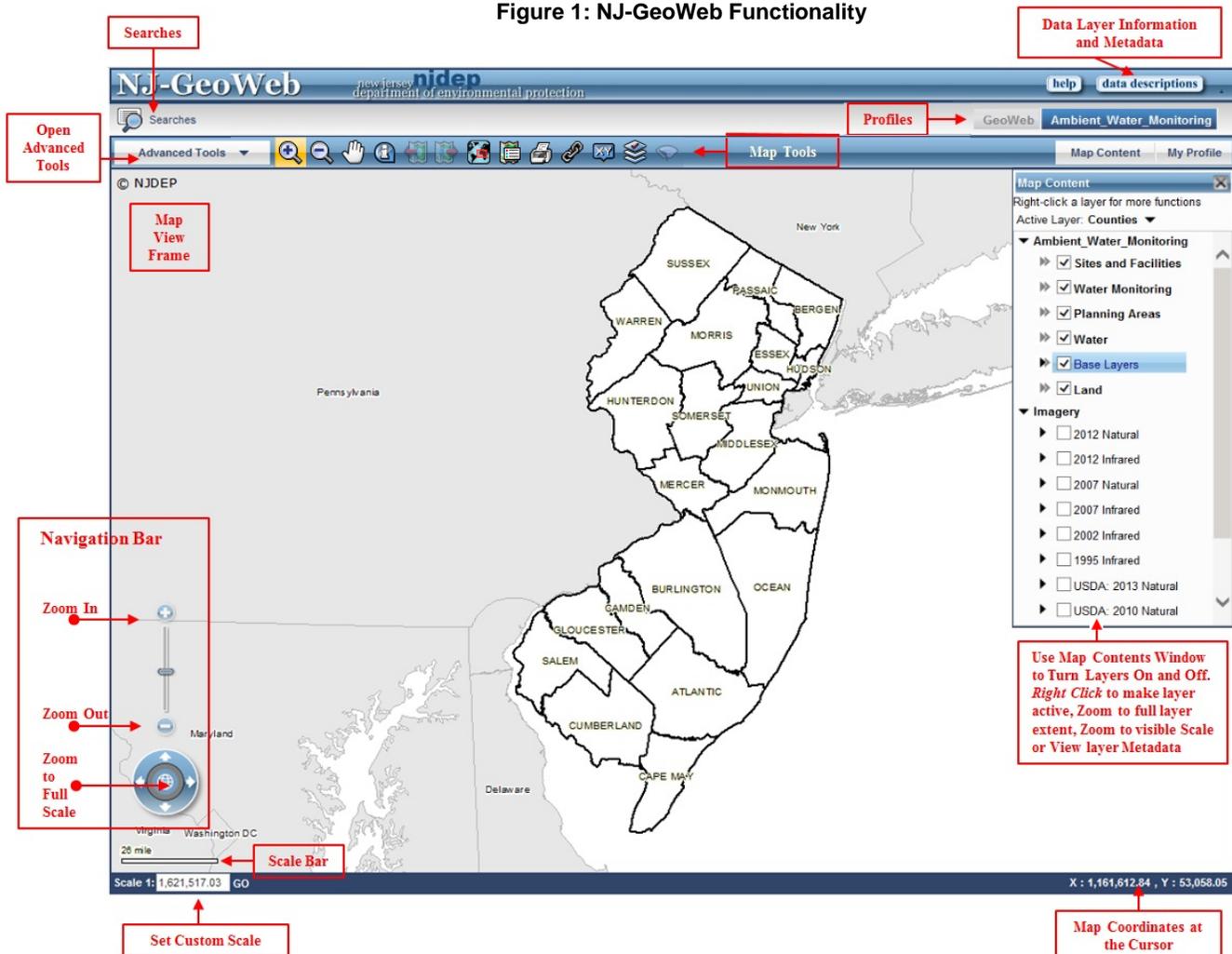
accept a selection set from NJ-GeoWeb and display additional environmental data associated with the features displayed in NJ-GeoWeb.

The purpose of this tutorial is to enable users to become familiar with capabilities and functionality of NJ-GeoWeb. NJDEP's Bureau of GIS plans to make further customizations to improve the user experience and add functionality to make NJ-GeoWeb an even more powerful and useful tool for NJDEP staff and the public.

NJ-GeoWeb Interface

The application's user interface consists of a **Map View Frame**, a **Map Tools** toolbar, a **Searches** link, **Profile Tabs**, an **Advanced Tools** dropdown menu, the **Map Content** frame and a **Navigation Bar**. By default the Map Content frame is open when the application is launched. Many of the tools when executed launch windows that can be moved and placed anywhere on the application window. When finished using a tool, the user can close its window.

Figure 1: NJ-GeoWeb Functionality



Near the upper-left of the screen there is a link for **Searches**, and there are **tabs** for **Profiles** near the upper-right. At start-up, the Profile Tab is selected (in the case above it is the Ambient Water Monitoring Profile). The Search link is activated with a mouse click on the link, which exposes the list of searches available in the current profile.

Map View Frame

The Map View Frame displays the main map, and is the major focus of the application. This is the area where map layers are displayed at different zoom levels (or scales) and where the user can pan , zoom in , and zoom out  to areas of interest. When using the GeoWeb profile, the opening of the application displays New Jersey with county boundaries along with the Mid-Atlantic States layer. The Map View frame also displays the Navigation Bar, the North Arrow and the Scale Bar. On the left side of the display, below the map, the current map's scale is displayed. In the lower right corner, the mouse cursor's current X and Y coordinates (in NJ State Plane Feet) are displayed.

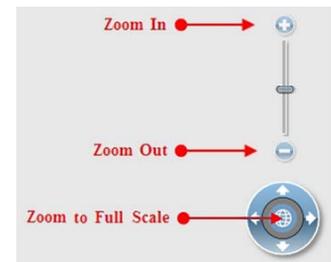
Figure 2: Map View Frame



Navigation Bar

The Navigation Bar can be used to Zoom In, Zoom Out and Zoom to the Full Scale of the map by clicking on the globe in the middle of the Navigation wheel.

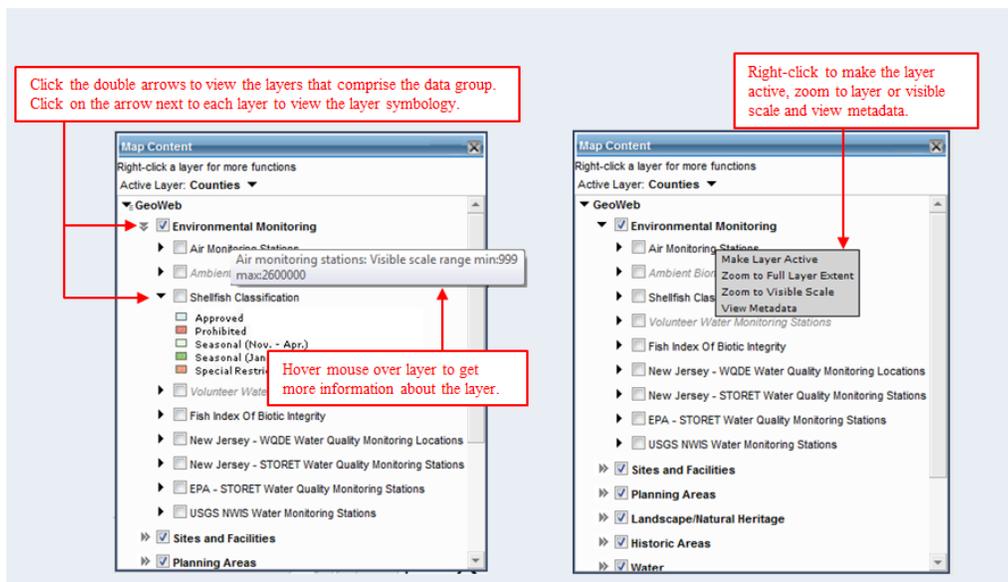
Figure 3: Navigation Bar



Map Content Window

The Map Content window enables the turning on and off of mapped layers, and is a floating control that can be moved to any location on the display or closed and re-opened by clicking on the Map Content button. Layers are organized into groups that can be expanded to show what layers they contain (click on the double arrow  symbol next to the group). Layers are grouped in commonly recognized categories, as shown in Figure 4.

Figure 4: Features of the Map Content Window



Layers are turned on by clicking the checkbox next to the layer name. Another click in the checkbox will turn a layer off. Layer names that appear grayed-out are not visible at the current map scale. Placing the mouse cursor over a grayed-out layer name and holding it still for a few seconds will activate a mouse-over popup that indicates the scale range at which the layer can be viewed.

Layers higher in the stack will draw on top of those that are below. Right clicking on a layer name launches a layer menu through which a user can make the layer “active” for selection and identification purposes, zoom to the layer’s extent, zoom to the scale at which the layer becomes visible, or view the layer’s metadata.

Map Tools Toolbar

The toolbar provides basic functions of the application. It consists of a set of tools and an **Advanced Tools** drop down menu  which contains a selection of advanced tools. The basic tools can be used to find an area of interest in the Map View using the zoom  and pan  tools. **Identify**  provides information from the active layer when the features are clicked upon. **Previous Map**  and **Next Map**  are helpful to return to prior view extents. **Overview Map**  opens a window that displays an overview image of the current map. **Generate URL**  generates a URL that saves the current map along with all the currently displayed layers. You can email a URL of the map to other users. When users click the URL, the map will open to the same area and zoom level that you had selected when you generated the URL. **Display Coordinates**  can be clicked to view or hide the coordinates of the cursor’s location on the display bar below the Map View. **Legend**  tool opens a window that provides the legend (or key) to the symbolization of the layers on the map. **Print**  generates a map print page in either an HTML or PDF format. **Active Layer**  lets you select a layer from a dropdown list, and make it active. This then allows the user to identify or select the features in that layer by using the Identify and Selection tools. **Clear Buffer Rings**  clears all buffer rings drawn on the map (after using the **Buffer selections** tool).

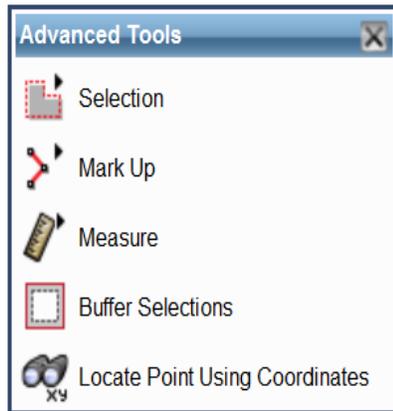
NOTE: The function of each tool on the tool bars in NJ-GeoWeb can be revealed by holding the mouse cursor over the tool’s icon. When in doubt as to the name or function of a tool, use this feature.

Figure 5: Summary of Map Tools

Map Tool	Tool Name	Tool Description
	Zoom In	Zoom In by either clicking on the map or dragging a rectangle on the map
	Zoom Out	Zoom Out by either clicking on the map or dragging a rectangle on the map
	Pan	Pan the map by clicking and dragging the map to a new location
	Identify	Provides attribute data of a feature from the currently active layer
	Previous Map	Changes the map back to its previous extent
	Next Map	Changes the map forward to its prior extent
	Overview Map	Opens an overview map window displaying the current map window location
	Generate URL	Generates a URL that saves the current map.
	Display Coordinates	View or Hide coordinates of the cursor's location.
	Legend	Opens the legend which displays the symbols of currently visible layers
	Print	Opens the Print tool for creating basic map print layout
	Active Layer	Opens the Change Active Layers window that allows the user to select a different active layer whose features can then be identified or selected.
	Clear Buffer Rings	Clears all buffer rings drawn on the map using the buffer selections and any of the Radial Search tools
Advanced Tools ▼	Advanced Tools	Drop down containing a selection of advanced tools
	Selection	Allows the user to select a feature or group of features on the map. There are several methods of selecting objects, such as by point or by line. The user can also draw a rectangle, circle, or irregular polygon in order to select objects. Once this is done, a buffer can be drawn about the selection and a menu will display all of the selected objects.
	Mark Up	Allows a user to draw graphics and labels on the map. Graphics include: point, line, polyline, polygon, circle, and rectangle.
	Measure	Allows a user to measure a point (get the coordinate), measure a distance between two or more points, or measure the area and perimeter of an irregular polygon, circle, or rectangle.
	Buffer Selection	Allows a user to buffer around already selected features (buffer active selections), or buffer around any location (point) clicked on the map. Either method provides a way for users to select features from a target layer that fall within the user entered buffer distance.
	Locate Point Using Coordinates	Allows a user to locate and zoom to the location of an entered x,y coordinate in the New Jersey State Plane Coordinate System (NJSPCS), Latitude/Longitude, or UTM.
Scale 1: <input type="text" value="2516594.96"/> 	Set Scale	Allows the user to zoom to a user specified map scale.

Advanced Tools

Figure 6: Advanced Tools Control



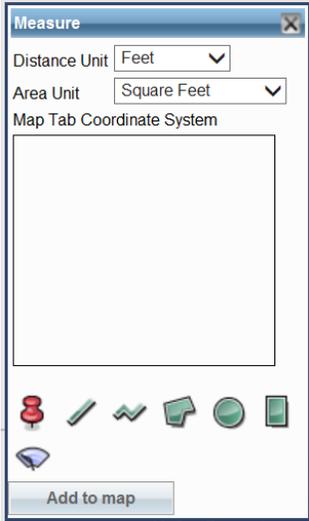
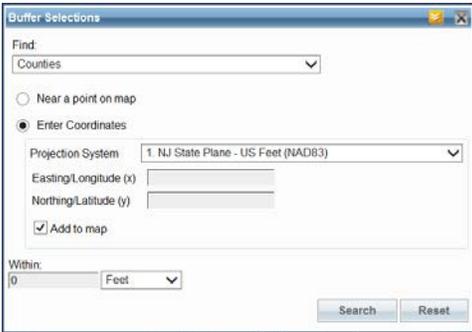
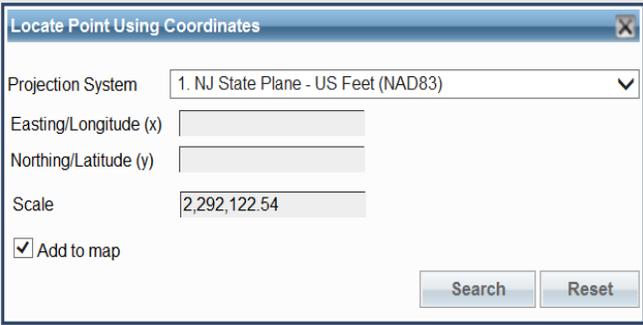
Advanced tools include some additional common GIS functions. The Advanced Tools frame can be moved or closed. When one of the tools is clicked, a new window will open for that particular tool.

The tools in the Map Tools toolbar are common to all profiles. The tools within the Advanced Tools frame will vary slightly depending on the current profile the user is working in. There are some custom tools created for specific layers available within certain profiles. If the layer exists within the profile, the associated tool will be available within the Advanced Tools frame. An example of this is found in the Historic Preservation profile that has a “Cultural Resources Radial Search” tool that is not available in other profiles.

The common Advanced Tools are **Selection**, **Mark Up**, **Measure**, **Buffer Selections**, and **Locate Point Using Coordinates**. The tool windows for each of these are shown and described in Figure 7 below.

Figure 7: Advanced Tools Descriptions

<p>The image shows a window titled "Selections" with a close button in the top right corner. Inside the window, there is a "Selection Layer" dropdown menu currently set to "Counties". Below the dropdown is a toolbar containing six icons: a green selection tool, a green checkmark, a red pushpin, a green circle, a yellow smartphone, and a blue folder with an upward arrow.</p>	<p>Selection Tool</p> <p>Used to select features from the currently active layer. When features are selected, they are highlighted on the map and are listed in the Results table. The Results table tracks both selections that are current and those that had been completed during a previous selection process or search. Selections can be saved and previously saved selections can be retrieved.</p>
<p>The image shows a window titled "Mark Up" with a close button in the top right corner. Inside the window is a toolbar with seven icons: a red pushpin, a green line, a green checkmark, a green selection tool, a green circle, a yellow smartphone, and a blue folder with an upward arrow.</p>	<p>Mark Up Tool</p> <p>Used to draw graphics (points, lines, shapes) or add labels to the map. Mark ups are maintained in a Results table and like selections can be saved and later retrieved.</p>

	<p>Measure Tool</p> <p>Used to measure a distance, an area or a point location in NJ State Plane coordinates. Distance can be measured by either clicking on Measure Distance to find the length of one line, or by clicking on Multi Segment, which allows the user to determine the distance along a line made up of multiple points. Measure Polygon provides both perimeter and area. Measurements can also be added to the map display (Add to map) as a graphics and be added to the Results table or saved and retrieved at a later time.</p>
	<p>Buffer Selections Tool</p> <p>Used to create a buffer selection, buffering around features from the active selection list, from a point on a map, or an entered coordinate, with a user supplied radius distance. The resulting selections from the buffer operation listed within the Results list.</p>
	<p>Locate Point Using Coordinates Tool</p> <p>Allows for the user to input x and y coordinates in order to find a specific point. The coordinates can be in NJ State Plane, Latitude Longitude, or UTM coordinate systems. This function is most useful if the coordinates of the point are already known and the user wants to search for the location.</p>

Searches

There are several searches in NJ-GeoWeb for finding general locations of interest, There are also searches that locate features that are more NJDEP program focused. Searches can be accessed by mousing over the "Searches" button toward the upper left corner of the application's window. Users can find a general location of interest by street address, county, municipality, place, ZIP code, parcels by block and lot, watershed management area, or watershed/sub-watershed. There are additional searches that are more specific to data within different profiles, and additional searches will be added in the future as NJ-GeoWeb is further developed.

Figure 8: NJ-GeoWeb Search Feature showing the Address Search



Linking to DEP Reports

Features from the NJEMS Sites GIS layer are linked to **DEP Data Miner** via their NJEMS Site ID. This allows easy access to DEP activity, permitting, and enforcement data from a limited number of existing DEP Data Miner reports. To access these reports, click on the document link at the bottom of the **More Information** window. The More Information window is opened when the user uses the Identify Tool on a feature from the NJEMS Sites layer. The More Information window also opens when the user clicks on the label index (blue underlined numbers) for a feature in the Results window produced as a result of a search. As shown in Figure 8, the search yielded a number of sites that matched the search criteria. Clicking the hyperlinked number next to the selections in the Results window opens the More Information window that displays attribute data for the corresponding feature.

Figure 9: More Information about Selected Sites

The screenshot shows the NJ-GeoWeb interface with a map of New Jersey counties. A red box labeled 'Links for Additional Facility Data' points to the 'Info' column in the 'Results' table. The table contains 10 rows of site data, each with a hyperlinked number in the 'Info' column.

Info	NJEMS Site ID	Site Name	Address Line 1	Address Line 2	City	ZIP Code	County	Municipality	NJSPC East
1	142629	BRISTOL MYERS SQUIBB CO	295 PRINCETON PK		LAWRENCE TWP	08648	MERCER	LAWRENCE TWP	431,646.00
2	15626	BRISTOL MYERS SQUIBB CO	RT 206 & PROVINCE LINE RD		LAWRENCE TWP	08540	MERCER	LAWRENCE TWP	434,772.83
3	15824	BRISTOL MYERS SQUIBB CO	311 PENNINGTON ROCKY HILL RD		HOPEWELL TWP	08534	MERCER	HOPEWELL TWP	415,718.47
4	5326	BRISTOL MYERS SQUIBB CO	777 SCUDDERS MILL RD		PLAINSBORO	08536	MIDDLESEX	PLAINSBORO	462,148.00
5	35730	BRISTOL MYERS SQUIBB CO	75 ORCHARD RD		SKILLMAN	08558	SOMERSET	MONTGOMERY TWP	450,457.00
6	1055	BRISTOL MYERS SQUIBB CO	161 225 LONG AVE		HILLSIDE	07204	UNION	HILLSIDE TWP	567,115.00
7	48233	BRISTOL MYERS SQUIBB CO @ CARNEGIE CENTER	105 CARNEGIE CENTER BLVD		WEST WINDSOR TWP	08540	MERCER	WEST WINDSOR TWP	451,575.00
8	198793	BRISTOL MYERS SQUIBB CO @ PRINCETON WINDSOR IND PK	45 EVERETT DR		WEST WINDSOR TWP	08540	MERCER	WEST WINDSOR TWP	453,237.00
9	76513	BRISTOL MYERS SQUIBB CO @ RARITAN CENTER	42 MAY FELD RD		EDISON	08837	MIDDLESEX	EDISON TWP	533,808.00
10	18405	BRISTOL MYERS SQUIBB CO @ RWJ OF HAMILTON	3 HAMILTON HEALTH PL		HAMILTON	08690	MERCER	HAMILTON TWP	443,328.00

Additional data is accessible by clicking the Documents link (Figure 10), which exposes the link to access Data Miner reports.

Figure 10: Data Miner Link in More Information window

NJEMS Site #	Site Name	Address Line 1	Address Line 2/City	ZIP Code	County	Municipality	NJSPC Easting (X)	NJSPC Northing (Y)	Watershed
13455	BRISTOL MYERS SQUIBB CO @ RWJ OF HAMILTON	3 HAMILTON HEALTH PL	HAMILTON	08860	MERCER	HAMILTON TWP	443,328.00	504,059.00	Aksungnik Creek (below Shipetaukin Cr)
6575	BRISTOL MYERS SQUIBB CO FLIGHT OPERATIONS HANGAR @ MERCER CNTY AIRPORT	SCOTCH RD	EWING TWP	08628	MERCER	EWING TWP	405,130.00	527,944.00	Aksungnik Creek (below Shipetaukin Cr)
142629	BRISTOL MYERS SQUIBB CO	295 PRINCETON PK	LAWRENCE TWP	08648	MERCER	LAWRENCE TWP	431,648.00	530,102.00	Aksungnik Creek (above Shipetaukin Cr)
120692	KALCON BRISTOL MYERS SITE	SCOTCH RD	HOPWELL TWP	08660	MERCER	HOPWELL TWP	404,913.00	528,417.00	Aksungnik Cr / Moore Cr / Jacobs Cr
48233	BRISTOL MYERS SQUIBB CO @ CARNEGIE CENTER	105 CARNEGIE CENTER BLVD	WEST WINDSOR TWP	08540	MERCER	WEST WINDSOR TWP	451,575.00	542,038.00	Milstone River (above Carnegie Lake)
15826	BRISTOL MYERS SQUIBB CO	RT 206 & PROVINCE LINE RD	LAWRENCEVILLE	08648	MERCER	LAWRENCE TWP	434,627.00	542,120.00	Aksungnik Creek (above Shipetaukin Cr)

A great deal of information is available through the link to DEP Data Miner, including permit, inspection, violation and enforcement activities, searchable by date ranges (Figure 11).

Figure 11: Data Miner Window

Program	PID	NAME	ACTIVE	ADDRESS	TYPE	REPORTS
Air	61052	E R SQUIBB & SONS LLC	Y	RT 206 & PROVINCE LINE RD, Lawrence Twp, NJ 08648	AIR OPERATING PERMITS	Air Permit SI
	60069	SQUIBB,E.R. & SONS, INC.	N	RT. 206 & PROVINCE LINE, Lawrence Twp, NJ	AIR	Air Permit SI
DPCC	110700179000	BRISTOL-MYERS SQUIBB - PRINCETON	Y	ROUTE 206 & PROVINCE LINE ROAD, Lawrence Twp, NJ 08648	DPCC MAJOR FACILITIES	Enf. Actions by PI
Dam Safety	540178	Squibb Dam	Y		DAM SAFETY	Enf. Actions by PI
Hazardous Waste	NJD001865534	BRISTOL MYERS SQUIBB CO	Y	RT 206 & PROVINCELINE RD, Princeton, NJ 08543	HW GENERATOR AND TSD	Enf. Actions by PI
Land Use	1107-04-0005.1	BRISTOL-MYERS SQUIBB CO C/O MATTHEWS DAVE	Y	US RT 206 & PROVINCELINE RD, Lawrence Twp, NJ 00000	COASTAL AND LAND USE	Enf. Actions by PI

Certain layers have special reports associated with them. These reports display additional data associated with the feature on the map. This data is derived from NJDEP's enterprise environmental databases (e.g., NJEMS, COMPASS) and displayed via pre-formatted Web-based reports.

The reports can be accessed via the **Reports** tab in the **More Information** window or the **More Reports** drop down in the **Results** table after the feature has been Selected using either the Selection tool or as a result of a Search process.

Figure 12: Report Link in More Information Window

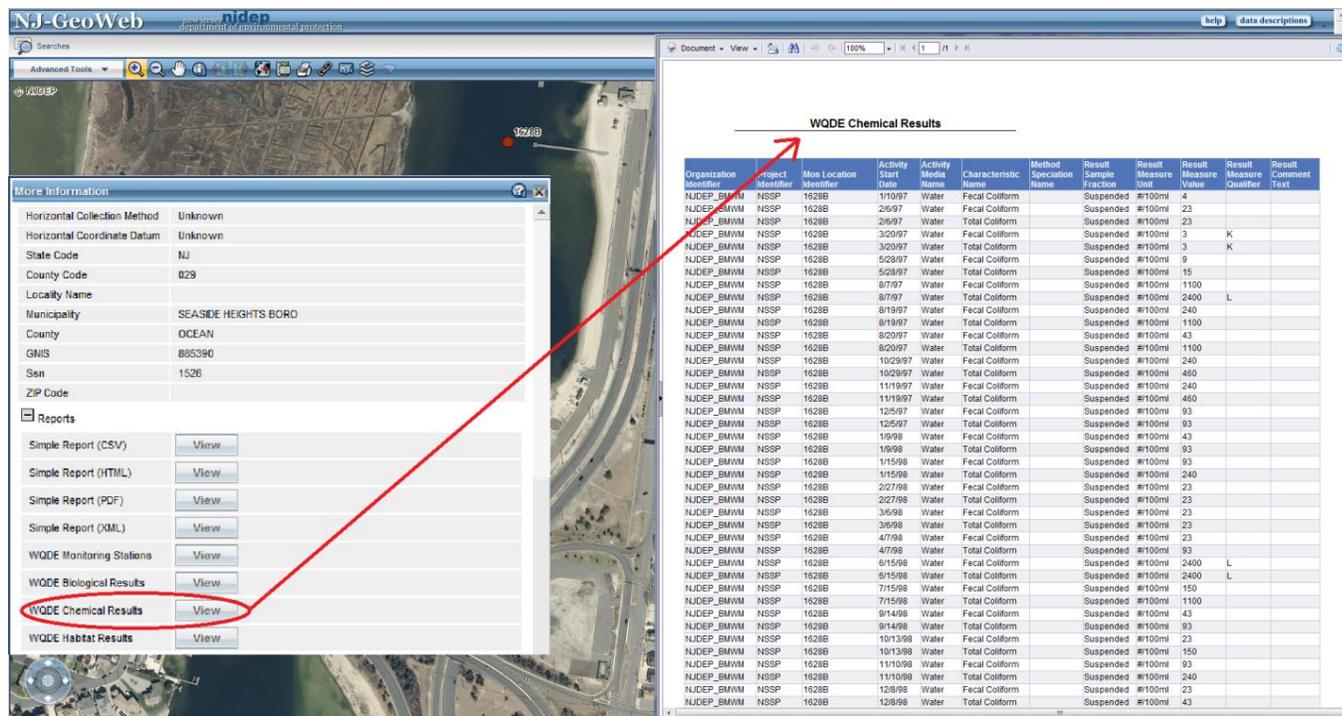
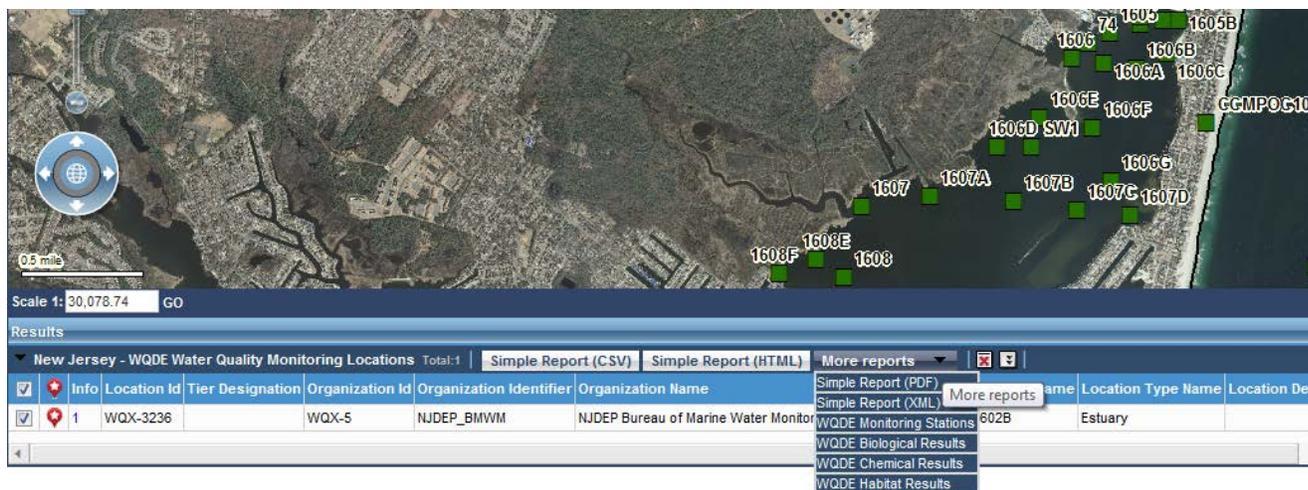


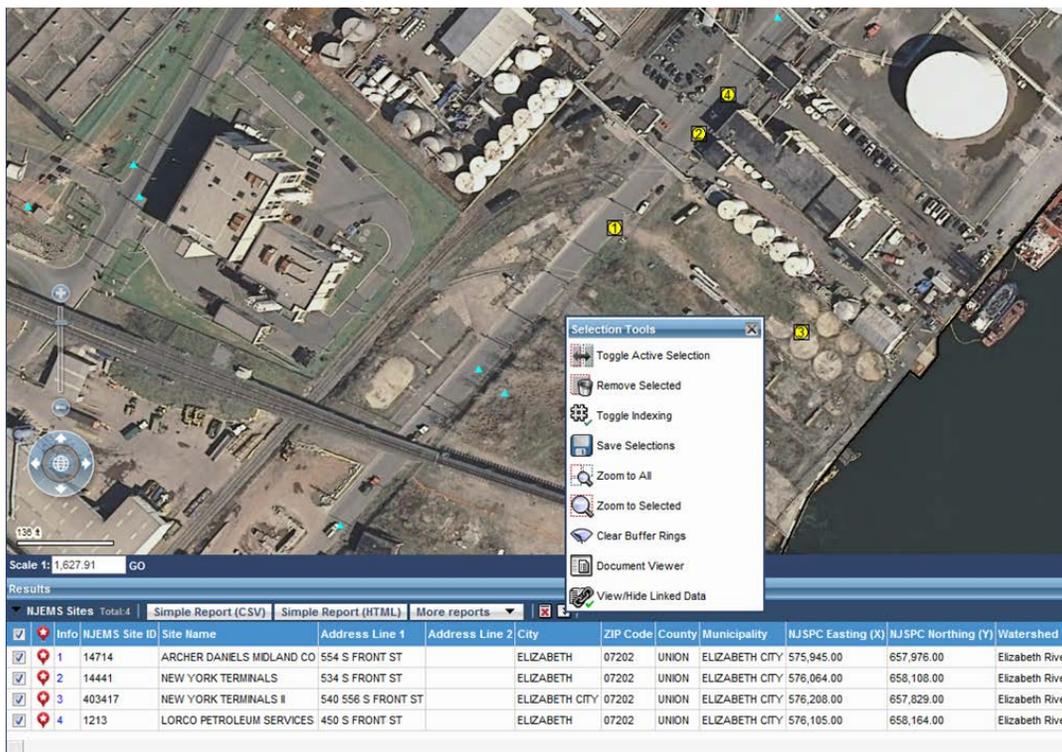
Figure 13: Reports Link in the Results window



More Selection Tools

Additional tools are available once a selection has been made and a selection list is displayed in the Results table. When the **Show More Selection Tools** button  is clicked, a new window appears with these extra **Selection Tools** (see Figure 14).

Figure 14: Click for More Selection Tools



The buttons on this window enable additional functions related to the current selection list such as turning off and on the selection list, deleting the entire list, turning on or off the index numbers that identify listed items on the map, etc. This is also where a current selection list can be saved, or e-mail to another user. The buttons and their related functions are detailed in Figure 15.

Figure 15: Selection Tools Window

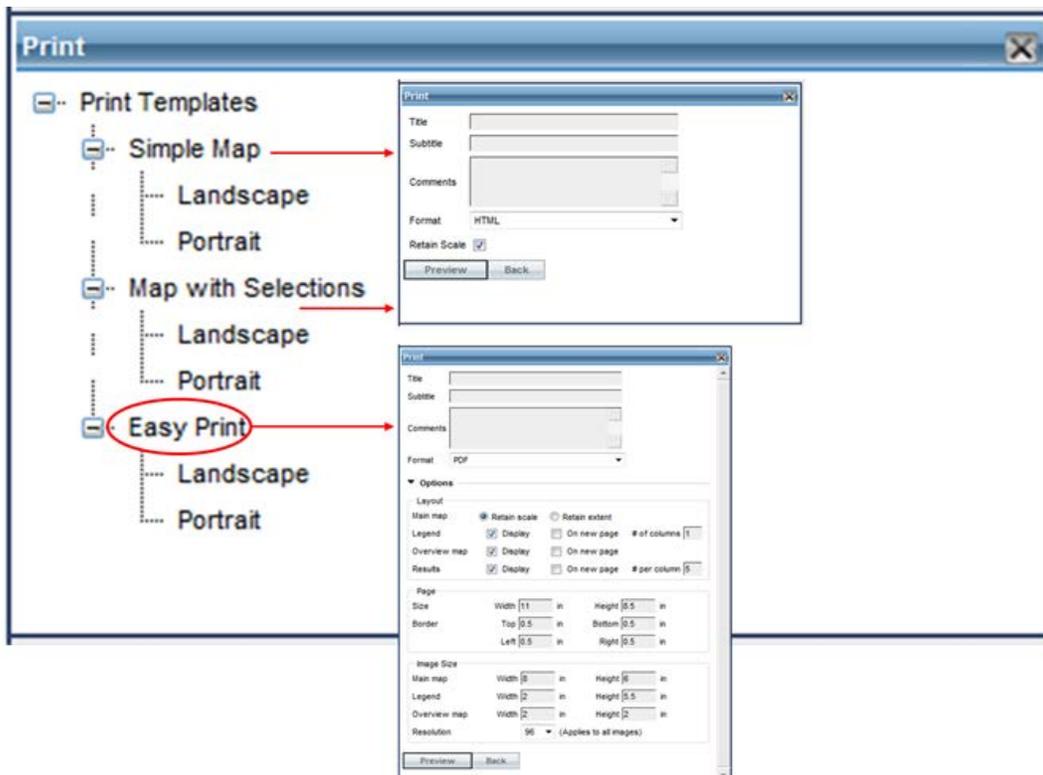
 Toggle Active Selection	Toggles off/on the active selection in the Results Window.
 Remove Selected	Deletes the currently selected features from the Results table.
 Toggle Indexing	Toggles off/on the index numbers on the map that identify selected items from the Results table.
 Save Selections	Opens a new window where selections can be named and saved, and be made private or made public for others to view. Once a selection is saved it can be e-mailed to others.
 Zoom to All	Zooms the map display to show all the selections from the list.
 Zoom to Selected	Zooms the map to display only the selections that are active (checked in the Results table window).
 Clear Buffer Rings	Clears buffer rings if they are displayed on the map (that were created using the buffer tool on the Advanced Tools window)
 Document Viewer	Opens the Document Viewer window which lists documents linked to the selected records. Clicking on the links opens the document in a new window
 View/Hide Linked Data	Shows or Hides data from joined tables for the selected items.

The ability to save a selection set can be very useful for keeping track of successful searches, or for sharing information with others via e-mail. Use this feature after a successful search returns a selection set that you want to keep for future access. Saved selections will be available for 30 days before being cleaned off the NJ-GeoWeb server.

Printing the Map

NJ-GeoWeb provides a Print Tool  in the Map Tools toolbar. There are three print templates. First is the "Simple Map" template. Second is the "Map with Selections" template, which includes a map with information for selected features. Third is the "Easy Print" template which allows the user to customize the map layout by using options for page size, including an overview map, legend, and selection results. These map layout elements can appear all on the same page or be forced to print on separate pages from the main map. All three templates provide the option for landscape or portrait orientation, and the option of generating an HTML page or a PDF (Adobe Reader required).

Figure 16: Print Tool



Also you can select to retain the existing scale of the map. The user can enter a title and subtitle for the map, along with any comments. If the user has map features selected but chooses the "Simple Map" template, the selections will be labeled but not identified on the map. If the user instead chooses the "Map with Selections" template, the map layout will label the features on the map and include a section of the page for identifying the labels. The map page window is generated by clicking the "Preview" button. If HTML was selected as the output format, use the browser window's print function to send the map to a printer. If PDF was selected, use the print function within Adobe Reader to send the map to the printer.

Also, there is a Print button at the bottom of the More Information window (which opens when the Identify tool is used) that when clicked on launches the Print tool that allows the printing of the map with the attribute data in the More Information window.

Tutorials

The following series of scripts walk users through most of the significant functionality that exists in NJ-GeoWeb. There are some additional tools and functionality that have not been highlighted in these tutorials. Feel free to deviate from these scripts to explore on your own. It is usually best to quit out of NJ-GeoWeb before starting a new script. Note: NJ-GeoWeb runs best in Internet Explorer, Chrome, and Safari web browsers. It currently does not run in the Firefox web browser, though that is expected to change in the near future.

NJ-GeoWeb Tutorial 1: Environmental Investigation

1. Launch NJ-GeoWeb by going to the internet website:
<http://www.nj.gov/dep/gis/geoweb/splash.htm>

NJDEP users should use the intranet website:



Click on the  button.

2. Mouse-over the **Searches** button near upper-left corner. Use the **Address Search** to search for an address you know exists in NJ. If you live in New Jersey, your home address would be fine. Enter the **Street** and **ZIP Code**. Click on the **Search** button. If the address is found, the map will plot a red cross symbol at the approximate location of the address, and place the address record in the **Results** window. NJDEP Building example: Street: 401 E. State St. , ZIP: 08608
3. If the 2012 aerial photo is not appearing on the map, go to the Map Content window (on right-hand side), turn on the **2012 Natural** map layer found under the **Imagery** group (toward the bottom) by clicking on its checkbox. This will turn on the aerial photo.

4. In the lower left corner of map view frame, type 10,000 in the Scale textbox  , then click on the GO button. This will zoom the map out to a wider (smaller scale) view.
5. Click on **Advanced Tools** (you may have to use the scroll-bar on the right side of the page to scroll up first in order to see the Advanced Tools) to open the advanced tools toolset and click on **Buffer Selections**  .
6. In the first **Find** dropdown, select **Known Contaminated Sites List**. Use the **Near a point on map** option, and enter **0.5 miles** as the **Within** buffer radius. Then click on the red cross symbol on the map that represents your home or other address located. The application will find any Known Contaminated Sites within a 1/2-mile distance from the location clicked on the map, and the map view will zoom to the extent of the buffered area (purple lined circle). The Known Contaminated Sites within the buffered area will be highlighted and (up to) the first 20 will be labeled. A Known Contaminated Sites List selection list will be added to the **Results window** at the bottom and the reference numbers will correspond to the labels on the map.
7. The total number of records retrieved will be listed in the title row of the **Results** table, next to the layer name.  To see the next 20 selected records, scroll to the bottom of the Results table for Known Contaminated Sites List and click on page 2.
8. Click on **Advanced Tools** to open the Advanced Tools toolset.

Click on the **Measure** tool  to use it to determine the distance from your home (or other address located) to the nearest Known Contaminated Sites. At the bottom of the Measure Tool's window there are a number of measure tools. Select the Measure Distance tool  , then mouse click on your home (red cross) and then move the mouse to the locations of the nearest sites (yellow circles). As you move to each site, the distance in feet is displayed in the tool window and also at the bottom of the map frame. Click the mouse again at one of the sites to complete a measurement. When finished close the Measure Tool window.

Note: Having a Known Contaminated Site close by is not that unusual especially in a highly developed area like an urban city. Organizations like NJDEP work with local officials and private clean-up companies to minimize risks to the residents that live close by. Known Contaminated Sites represent sites where there has been, or there is suspected to have been a discharge of contamination that has negatively impacted the soil or groundwater in the immediate vicinity. These are sites where remediation (clean-up or protection controls) is either currently under way, required but not yet initiated, or has been completed. Some of these sites may have been fully remediated and should no longer be listed as known contaminated sites.

9. Zoom in to one of the labeled Known Contaminated Sites using the **Zoom In**  tool (you may need to scroll up again to see the toolbar). You can either mouse-click on the site, or drag a rectangle around the site to perform the Zoom In.
10. Find the corresponding label number in the **Results Table** window (you may need to scroll

down), and click on the red balloon **Show on Map icon** next to the check box. This will display a call out with some basic information about the site. For more information on the site and to view the additional attribute data, click on the map label number (blue) hyperlink under the Info column. This brings up the **More Information** box.

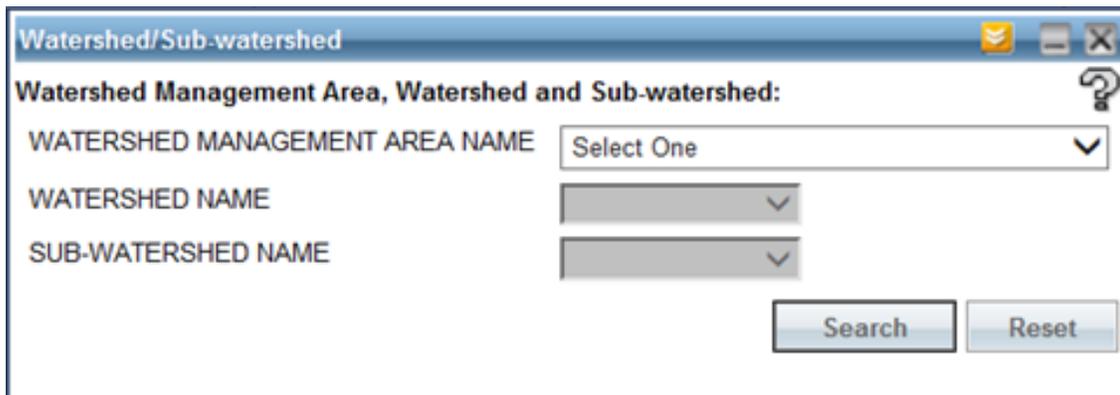
11. Scroll down within the **More Information** box and click the **Print** button. Select the **Portrait** option, then enter a title, sub-title, and select HTML as the output format (you can select PDF if you have Adobe Reader installed on your PC). Click on the **Preview** button to see the map layout. Experiment with the map preview by checking and un-checking the **Retain Scale** checkbox. Close the **Print Preview**, **Print**, and **More Information** widows.

12. Clearing Selections.

- To clear the selected features for the Known Contaminated Sites List layer only, click on the red X  **Click to Clear Results** button next to the More Reports drop down.
- To clear selection lists from the entire Results table, click on the red X  in the very top row, right corner of the results table called **Close**.

A window will pop up confirming your action. Click OK to clear the selections

13. Scroll to the top, and mouse-over the **Searches** button. Select the **Watershed/Sub-Watershed** search to search for a sub-watershed (HUC14). By selecting from the preceding dropdowns (Watershed Management Area then Watershed) the values the for Sub-Watershed dropdown list is limited by the watershed designation. Select a **Watershed Management Area**, a **Watershed**, and then a **Sub-Watershed** then click the **Search** button. The map will zoom to the sub-watershed and a sub-watershed record will be added to the **Results** window. Ex: Lower Raritan, South River, and Lawrence; Matchaponix Brook; Barclay Brook.



14. Note that the data within the Results table can be exported or saved using the various reports that are available at the top of the selected set. The data can be exported as CSV files, HTML files or if you click on the More Reports dropdown, PDF and XML files. For some layers, you may find additional custom reports added to this dropdown.

Also helpful is the hyperlinked number next to each item of the selection list: Clicking on this link will provide attribute information for that item.

More tools are available when the **Show More Selection Tools** button  is clicked. This

will open another window titled **Selection Tools** that displays additional functions. (These are described on page 17)

15. From the **Map Tools** toolbar, click on the **Overview Map**  tool to open the overview map. See where the sub-watershed lies within New Jersey.
16. In **Map Content Window**, expand the **Environmental Monitoring** layer group (click on the double arrows), and check on **Ambient Biomonitoring Network (AMNET)**. The layer will draw on the map, featuring water monitoring sites as colored star symbols.
17. Click on the single arrow next to the **Ambient Biomonitoring Network** layer name to see the symbology scheme. Click on the **Environmental Monitoring** layer group's double arrow symbol  to contract the group's list.
18. Look for any Ambient Biomonitoring Network points that are red or orange stars (these denote severe or moderate biological impairment – the water is not clean enough for a wide diversity of fish and other organisms to live there). Use the **Zoom In** tool (Map Tools toolbar) to zoom in to a smaller area surrounding one of these points. The resulting scale should be a map scale larger than 1:25,000 (i.e. 1:10,000). If it is not, type the scale number in the scale text box in the lower left corner of the map view frame, and click on the GO button.

Now click on the center of the **Navigation Bar Control** to zoom to the full extent of the map. Notice the overview map changes to show the new map extent (a larger red rectangle around the whole map of NJ). Use the **Previous Map Tool**  to view the previous maps until you get to one which is close to a scale of 1:24000. Click on the **Overview Map** tool once again to hide the overview map.

19. In the **Map Content** window, scroll down and expand the **Water** layer group (click on the double arrows), and check on **Streams** and **Water Bodies**. Expand the **Sites and Facilities** layer group and check on **NJEMS Sites**. NJEMS Sites are sites that programs within NJDEP have an interest due to the activities that occur at these facilities. These sites often are required to get environmental permits and many must be routinely inspected by NJDEP staff to ensure the activities that occur at the site do not violate the rules of their permits.
20. In the **Map Content** window, scroll down and expand the **Land** layer group, and click on **Land Use 2012**.
21. From the **Map Tools** toolbar, click on the **Legend Tool**  to open the legend window. Notice which symbols represent which layers. Close the **Legend**.
22. Industrial pollution sources, storm water runoff, as well as land use activities are likely impacting the biological communities – the fish and other living things in the streams here. From the **Map Tools** toolbar, click on the **Identify**  tool, and then click on a Land Use polygon near the Ambient Biomonitoring Network point. In the **More Information** window click on the **Attribute Details For** dropdown and select **Land Use 2012**. Click on several surrounding Land Use 2012 polygons. Do the same for any NJEMS Sites features by first

changing the **Attribute Details For** dropdown to NJEMS Sites – then using the Identify tool. The information displayed provides the location of the site and the NJDEP program(s) that have interests at the site. When finished, close the **More Information** window, and go to the **Map Content** window and turn off the Land Use 2012 layer.

23. After identifying a feature from the NJEMS Sites layer, scroll to the bottom of the **More Information** window and expand the **Documents** list by clicking on the  sign. Click on the document link to access Program Interests by Site ID **Data Miner** Reports. The resulting page will display NJDEP program interests for this site. After viewing, close the Data Miner application window and the **More Information** window.
24. Mouse-over the **Searches** link. Click on the **NJEMS Site** search. Enter 46935 as the **Preferred ID Number**. Make sure Program (Description) is blank and click on the **Search** button. The application zooms to the site, and the NJEMS site record is added to the **Results** window.
25. Click on **Advanced Tools** to open the advanced tools toolset and click on **Buffer Selections**. 
26. In the **Buffer Selections** window, select **Streams** as the **Target Layer** in the **Find** drop down, and enter **2000 feet** as the buffer radius under **Within:**, and select the **Near currently selected** option. Click the **Search** button and the buffer will draw. The application will find Streams within 2000 feet of the NJEMS Site. The Streams will be highlighted and labeled. A Streams selection list will be added- to the **Results** window and the reference numbers (hyperlinks) will correspond to the labels on the map. On the Results table's **Show More Selection Tools** menu click on the **Zoom to All** tool to see the full extent of the selected streams.
27. To clear the selections click on the red X  in the Streams results within the **Results** table. A window comes up asking you to confirm. Click OK. This will clear the selection but the Buffer remains on the map. To delete the graphic of the buffer, click on the **Clear Buffer Rings**  tool in the Map Tools Toolbar. The Buffer Ring will disappear.
28. Close out of NJ-GeoWeb.

End of Tutorial 1

NJ-GeoWeb Tutorial 2: Searches and Selections

1. Launch NJ-GeoWeb
2. Mouse-over the **Searches** link. Use the **Place Names** search to search for a place in New Jersey by first selecting a **county** (Somerset) and then the **Place** (Kingston) from the dropdowns and click the **Search** button. The map will zoom to the selected place location and add that place name in the **Results** window.
3. In **Map Content** window, expand the **Sites and Facilities** layer group by clicking on the double arrows  next to it, and check on **Known Contaminated Sites List**. Click on the double arrows  for the **Sites and Facilities** layer group to contract the group's list.
4. Click on **Advanced Tools** to open the Advanced Tools toolset. Click on the **Measure** tool. 
5. In the **Measure** window, click on the **View Coordinate** tool  and click on the label that represents the place name location on the map. The NJ State Plane coordinate value for the location clicked will appear in the **Measure** window. Click on the **Add to Map** button to add the point as a graphic on the map. You will notice that a point has been added to the **Results** table below, under **Measure**. Click on the **Measure Circle** tool . Use this to determine the closest **Known Contaminated Sites List** facility to the place name point. First, click on the place name point, and then hold the mouse button down and move the mouse away from the point. A circle will expand as you move the mouse. Expand the circle until the closest **Known Contaminated Sites List** facility is reached. Let go of the Mouse button to set the circle. In the **Measure** window, the distance to the facility (radius of the circle) will be indicated. The user may change the distance units (feet or miles) by using the **Distance Unit** dropdown.
6. In the **Measure** window, click on the **Clear**  button (which is located right above the **Add to map** button) to clear the circle. Close the **Measure** window.
7. Delete the Place Names **Results** by clicking on the **Click to Clear Results** button in the Results window. 
8. Click on the **Zoom to Full View** tool on the Navigation Bar 
9. Mouse-over the **Searches link**, and then click on the **County** to run a county search. Select several counties from the dropdown menu by either holding down the Shift key and/or the Ctrl key. Click on the "Show Selected" hyperlink to show the counties you just selected in a list box then click on the **Search** button. The selected counties will be highlighted on the map, and a Results window will open and list the counties selected along with some attribute data. The labels on the map correspond to the blue hyperlink index numbers in the Results List.
10. As a result of this search, the **Results** tab has now appeared below the Map. The information displayed on the Results tab page is additional attribute data coming from the County GIS layer. Uncheck one or more of the checkboxes that correspond to some of the counties, and then click on the Show More selections tool  in the Results table. This will

open the Selection Tools window. Click on the  **Zoom to Selected** option. The map refreshes and zooms to the extent of those counties whose checkboxes remained checked. The Results tab can be used to further refine a selection.

11. Delete the Counties **Results List** by clicking on the **Click to Clear Results**  button in the Selection List window.
12. Mouse-over the **Searches** link, and then click on the **Municipality** tab to run a municipality search. Select a **County** (Mercer) then a **Municipality** (Hamilton) from dropdown boxes and click on **Search** button. The application will zoom to the selected municipality, and a results list will be created, with a record for that municipality. Turn on the **2012 Natural Imagery**. The image will be rendered in the map view. Click on the blue “1” hyperlink in the **results list** to get more information on the selected municipality. Close the **More Information** window.
13. Click inside the map **Scale** box, enter 15000, and then click on GO. This will zoom the map view to a scale of 1:15,000.
14. In the **Map Content** window, expand the **Land** group by clicking on the double arrows, and check on **Land Use Change 2007-2012**. The areas where the land use changed between 2007 and 2012 will be displayed in yellow. In the **Map Content** window, right click on the **Land Use Change 2007-2012** layer name and click on **Make Layer Active**. The name should now have a light blue background. Click on  for **Land** group to contract the group's list.
15. Use the **Pan**  tool to center the map view on one of the polygons where the land use changed (yellow polygon).
16. Click on the **Identify**  tool from the **Map Tools** toolbar and click on a Land Use Change 2007-2012 polygon. The **More Information** window will open. Compare the values for the Land Use attribute for 2007 and 2012 for several changed land use polygons. Of particular interest are land use categories that are being lost to development. Typically this would include the transformation of forest, agriculture, and wetlands to urban (commercial or residential) use.
17. Close out of NJ-GeoWeb.

End of Tutorial 2

NJ-GeoWeb Tutorial 3: Setting the Scale, Using the Map Content Window, Right-Click, & Advanced Tools

1. Launch NJ-GeoWeb
2. Click on **Advanced Tools** to open the Advanced Tools toolset. Click on **Locate Point Using Coordinates**. Examine the **Projection System** dropdown. Click on each available option and see how the input requirements change on the **Locate Point Using Coordinates** window. Select **1. NJ State Plane - US Feet (NAD83)**. In the dialog box, enter the value **607300** for Easting/Longitude (x), **681600** for Northing/Latitude (y), and **25,000** for scale. Click on the **Search** button. After the map zooms to the coordinates, close the **Locate Point Using NJ State Plane Coordinates** dialog box.
3. In **The Map Content window**, expand the Sites and Facilities layer group (click on ►), and check on Child Care Centers. The Child Care Centers will display (Building blocks symbol).
4. Right click on the Child Care Centers' layer name in the **Map Content window** and a gray sub-menu will appear. Click on **Zoom to Full Layer Extent**. The map viewer zooms to the full spatial extent of the layer. What happened to the Child Care Centers layer on the map?
 - If it disappeared, the Child Care Centers' layer name in the Map Content window has changed to gray. Move your mouse cursor so it is directly on Child Care Centers' layer name in the **Map Content window** and hold it there for a few seconds. A popup message will appear that indicates between what scales this layer displays – **"Child Care Centers: Visible Scale Range Min: 0 Max 500001"**. Check the displayed map scale (look for the 'Scale' tool at the bottom left of the map viewer). If it indicates a scale above the Max number (500001) for Child Care Centers, the layer will not appear on the map. If it is still visible, enter a map scale larger than 500001 so that it does disappear.
5. Right click again on the Child Care Centers' layer name in **The Map Content window** and click on **Zoom to Visible Scale** from sub-menu. This time the map viewer zooms to a scale value below the Max (500001) and the Child Care Centers are visible again. The Child Care Centers' layer name in the **Map Content window** has changed from gray back to black. Note you may no longer be viewing the full spatial extent of the layer.
6. Right click again on the Child Care Centers' layer name in the **Map Content window** and click on **View Metadata** from sub-menu. This will launch the **View Metadata** window that provides a brief layer description. Scroll to the bottom of this page. Within the **Style Sheets to View Metadata** drop down, select **FGDC Classic** and click on the **View Full Metadata** button on the left, to launch a new browser window that displays the layer's full metadata. The metadata document provides a wealth of information associated with the layer. After viewing the metadata document, close both the metadata and **View Metadata** windows.
7. Right click again on the Child Care Centers' layer name in the **Map Content window**. Click on **Make Layer Active** from sub-menu. This will make Child Care Centers the active layer, and the layer's name will have a pale blue background. Only one layer can be the active layer at a time. The active layer setting is important when the user wants to use some of the tools, primarily the Identify tool.

8. Click on the **Identify**  tool from the **Map Tools** toolbar and click on one of the Child Care Centers. A **More Information** window will appear with layer attributes for that site. Close the **More Information** window.
9. Click on the **Selection** tool in the **Advanced Tools** toolset. This will open the **Selections** window. The **Selection Layer** dropdown menu will have the Child Care Centers layer selected. For the selection method, use **Select by Polygon** . You are going to define a polygon using mouse-clicks to input a sequence of vertices. Find a tight cluster of Child Care Centers in a small area. Any Child Care Center that fall within the boundary of the polygon you define will be selected. On the last vertex, double click the mouse rapidly or right click and select **End Shape** to complete the polygon. A **Results table** window will appear that lists the set of selected Child Care Centers. The reference numbers (blue underlined numbers) correspond to the labels displayed on the map. Clicking on the **Show on Map** balloon icon  next to the record in the selection list will display a call out with some details about that site.
10. Close the **Selections** window, leaving open the Results window.
11. In **Results** window click on the **Show More Selection Tools**  button on the Child Care Centers toolbar. This will open a secondary **Selection Tools** window. Click on the **Zoom to Selected** option. This will zoom the map view to the extent of the selected Child Care Centers only. From this same toolbar click on the **Toggle Indexing** button. This turns off the number labels for the selected points. Click on **Toggle Indexing** again to bring the labels back. Close the **Selection Tools** toolbar.
12. Click on **Advanced Tools** to open the Advanced Tools toolset, and click on the **Measure** tool.  Click on the **View Coordinate**  tool, and find a location centrally located to the selected set of Child Care Centers. Click on this location on the map. The coordinate of the point is displayed in the **Measure** window. Next, click on the **Add to map** button in the **Measure** window. The coordinate is added to the **Results** window and is labeled on the map. Close the **Measure** window. Make the Child Care Centers result set the active selection by clicking on the **Make this the active result set** button  on the Child Care Centers section of the **Results** window.

This should bring the Child Care Centers section of the Results set to the top of the Results window, and re-label the Child Care Centers on the map.

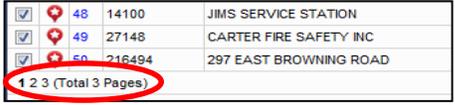
13. Use the mouse to highlight and copy to the clipboard the coordinate information (e.g., X: 610891.07 , Y: 683407.54) shown in the **Results** window. This can be pasted into a map document created in the next step.
14. Click on the **Print**  map tool on the **Map Tools** toolbar. This will open a Print window, where you can select from several print templates. Select **Map with Selections > Landscape**. The Print window changes to allow the user to customize the map. For the **Title**, enter "Chromate Sites". For the **Sub Title** enter "Near NJSPC -..." and then paste in the coordinate string copied to the clipboard in the last step ("Near NJSPC - X: 610891.070820717 , Y: 683407.546282296). Note you could remove the decimal places in the coordinate values. Select the **HTML** format for the output and then click the **Preview**

button. The application generates a Print Preview Page that can be sent to a printer. Close the **Print Preview Page** and the **Print** window.

15. In the **Measure** window, click on the **Measure Distance** tool.  The **Measure Distance** tool requires the entry of two mouse clicks on the map - a beginning and ending point. First, click on the marker symbol (circle) on the map that represents the located coordinate. Next, click on any one of the Child Care Centers. The linear distance between the located coordinate and the Child Care Center will be displayed in the **Measure** window. The user may change the distance units (Feet, Miles, Meters, Kilometers or Yards) by using the **Distance Unit** dropdown in the **Measure** window. Click on the **Add to map** button. This will add a graphical representation of the measurement and will add the measurement to the **Results**.
16. Repeat the last step several times – measuring from the located coordinate to several other Child Care Centers using the **Add to map** button each time. After the distances to several have been measured, close the **Measure** window.
17. Click on the **Print**  map tool again on the **Map Tools** toolbar. This will open a **Print** window, where you can select from several print templates. This time select **Easy Print > Portrait**. The **Print window** changes to allow the user to customize the map. For the **Title**, enter “Distances to Selected Chromate Sites”. For the **Sub Title** enter “From NJSPC -...” and then paste in the coordinate string copied to the clipboard in step 13 (i.e., “From NJSPC - X: 610891.070820717 , Y: 683407.546282296”). This time select the **PDF** format for the output and then click on **Options**. This opens up the **Layout, Page** and **Image** options for customizing your map. Under **Layout > Results >** Check **On new page** and click on **Preview**. The application generates a **Print Preview Page** that can be sent to a printer. Notice how the Result set for the Measure tool points and lines, print on a separate page. Close the **Print Preview Page** and the **Print** window.
18. Close out of NJ-GeoWeb.

End of Tutorial 3

NJ-GeoWeb Tutorial 4: Buffer NJEMS Sites and Using DEP Data Miner

1. Launch NJ-GeoWeb
2. Mouse-over the **Searches** button to view all of the available searches.
3. Select the **NJEMS Sites in an Area of Interest** search.
4. On the NJEMS Sites in an Area of Interest search window, a user can use the dropdowns to build a search that will retrieve NJEMS sites within an area of interest and optionally by NJDEP program. The user must designate an area of interest by selecting a county, or combination of county/municipality, or a combination of watershed management area/watershed/sub-watershed using the provided dropdown menus. Under **Select NJEMS Sites within a:** Select **Municipality**. The prompts in the Search window change depending on your selection. Select **Camden** for county and **Mount Ephraim Boro** for municipality. For **Program Code**, select **Site Remediation** and **Y** (Yes) for the sites **Active** flag. Click on the **Search** button to execute the search.
5. The map viewer will zoom to the selected NJEMS sites in Mount Ephraim Boro and the selected sites will appear in the Results window. Note that all of the sites satisfying the search criteria will highlight, but only 20 will be labeled on the map. The 20 labeled on the map correspond to the 20 listed currently in the Results window. At the bottom of the Results window for the selected NJEMS sites are page links that allow you to list sites after the first 20. One at a time, click on each of the page links, and as you click on each page link notice that the selection list displays additional records from the selection set, and that the labels on the map change to correspond to the current page. Go back to the first page by clicking page link 1.

<input checked="" type="checkbox"/>		48	14100	JIMS SERVICE STATION
<input checked="" type="checkbox"/>		49	27148	CARTER FIRE SAFETY INC
<input checked="" type="checkbox"/>		50	216494	297 EAST BROWNING ROAD
6. In **The Map Content window**, expand the Sites and Facilities layer group (click on ►), and check on Schools. The Schools will display (School building symbol).
7. Click on **Advanced Tools** to open the Advanced Tools toolset. Click on **Buffer Selections**. We will buffer the active selections (NJEMS Sites in Mount Ephraim Boro, with Site Remediation program interests that are active) by 500 feet, and determine if any Schools are within the buffered areas. Select **Schools** for the Target Layer in the **Find** drop down, select the **Near currently selected** option, and Within: **500 feet** for the buffering distance. Then click **Search**. Features from the target layer (Schools) that are within the buffered areas are selected (added to the Selections List in the Results window) and highlighted (labeled). Close the **Buffer Selections** window.
8. The buffered selection set, the Schools within 500 feet of the selected NJEMS sites, relates to the current active result set. The current active selection list always appears at the top of the **Results** window. For each school in the Results window, click on the school's index number hyperlink (blue). This will open a **More Information** window that displays the attribute data for each school.

9. Next, look for the NJEMS Sites section of the Results. Make the NJEMS Sites the current active Results by clicking on the **Make this the active result set** tool  on the NJEMS Sites portion of the Results tool bar. This should move the NJEMS Sites portion of the result set to the top of the Results window. The NJEMS Sites should now be labeled on the map and the schools should now be highlighted with a yellow circle symbol.
10. Delete the Schools Results List by clicking on the **Click to Clear Results**  button in the Selection List window. The schools will no longer be selected and will now display with their original symbol.
11. Advance through the NJEMS Sites Results by using the page links at the bottom of the NJEMS Sites list, until you determine which of the NJEMS Sites are closest to the schools.
12. Find the NJEMS Site named "HADDONFIELD LUMBER CO". This site is near one of the schools. Click on this site's index number (blue hyperlink) in the Results. This opens the **More Information** window which displays the attributes for the site. Click on the **Documents** link at the bottom of the window to expose the link to Data Miner reports (Data Miner - Program Interest by Site ID). Click on the Data Miner report link to launch Data Miner.
13. In the **Data Miner** application, look for the Site Remediation program, and click on the **Reports** dropdown menu which is all the way to the right-hand side of the application window. Select the **Permits by Timeframe** report, and then click on the  button to call the report. When the report page appears, accept the default settings and click on the **OK** button. After a few moments the report executes, and information about the site appears.
14. Close the Data Miner Application.
15. Close out of NJ-GeoWeb.

End of Tutorial 4

Summary

This short overview of NJ-GeoWeb should have provided a very good understanding of what can be accomplished using the application. The short tutorials were designed to demonstrate most of the features and tools currently available. NJ-GeoWeb is meant to enable those who are not GIS experts to use GIS tools to conduct basic environmental analysis. Though much can be accomplished using this application, NJ-GeoWeb is not intended to contain all the features found in desktop GIS software. However, it should provide the functionality to answer many of the routine spatial questions regarding areas of environmental concern that are often asked by NJDEP staff, and public users.

NJ-GeoWeb also provides the linkage between the Department's spatial data and its permit and facility related information. This is done through use of the online application DEP Data Miner. This connecting of GIS data and tools with NJDEP programmatic data provides a very powerful solution for basic environmental investigation and analysis that can be done by the concerned citizen, from home via the Internet. Until just recently, this was something only the trained professional could accomplish, and only through the use of specialized and costly software. These types of tools (and associated access to information) are increasingly expected by the public, consultants, and various types of stakeholders, who have become familiar and comfortable with mapping applications such as Google Earth and Bing Maps.

Finally, it is important to note that NJ-GeoWeb will continue to be updated. Over time, new tools will be added in response to the needs of staff in DEP programs and other users. BGIS strives to accommodate the needs of the users of NJ-GeoWeb, within the limits imposed by available resources, availability of data, and technology limitations.

The NJ-GeoWeb development team hope that you enjoy using this application, and hope you find it useful for gaining insight to environmental issues of concern. We welcome your comments and suggestions. Please direct your comments and inquiries to the Bureau of GIS.

Contact Information for Questions or Comments:

New Jersey Department of Environmental Protection
Office of Information Resources Management
Bureau of Geographic Information Systems
PO Box 420
Mail Code 401-01
Trenton, NJ 08625-0420

Main Number (609) 292-3211
GIS Help Desk (609) 777-0672

email: gisnet@dep.nj.gov
web page: <http://www.nj.gov/dep/gis>

Frequently Asked Questions

1. **What are the new enhancements in this latest release of NJ-GeoWeb?**

Functionality enhancements include:

- A new user interface
- Several new profiles
- Greater web browser support
- Functionality enhancements to the following tools:
 - Customized print output
 - Locate Point Using Coordinates
 - Buffer Selections
 - Generate URL

2. **What versions of web browsers are supported by NJ-GeoWeb?**

The new release of NJ-GeoWeb will expand browser compatibility:

- Internet Explorer 9,10,11x
- Chrome
- Safari

Other browsers and newer versions may be compatible to some degree; however DEP has not fully tested their performance. Newer browser versions will be supported in future releases of NJ-GeoWeb.

3. **I can open NJ-GeoWeb, but I don't see map or map layers in the map content window. What do I do?**

This is often what happens if you launch NJ-GeoWeb using an unsupported web-browser (e.g., FireFox 30 or later versions). You may need to install a supported web browser or access NJ-GeoWeb on a machine with a supported web browser. If this doesn't seem to be the problem, contact the DEP at gisnet@dep.nj.gov.

4. **What is new in the NJ-GeoWeb user interface, compared to the previous version?**

This new version will provide a more advanced user interface with much more map area. The map window frame takes up most of the display on the application's page, and the map tools' toolbar is now arranged horizontally above the map frame, and includes the advanced tools button from which tools like Select, Mark Up, Measure, Buffer Selections, and Search by Coordinates can be launched.

There are no more "Map", "Search", and "Result" tabs. Previously in NJ-GeoWeb, the user had to switch to the Search tab (temporarily hiding the map) in order to run one of the existing searches. Now, the user can mouse over the new Searches menu button to reveal the available searches while still displaying the map. When a search was executed, it resulted in a Results tab appearing along with the Map and Search tabs. The Results tab and the "Selection List" have now been replaced with a window (moveable) called Results that will appear below the map frame after a search or selection has been executed. The previous Layer Manager has been replaced with a similar functioning window (moveable) called Map Content.

5. **I executed a selection (using Selection tool) or search (using Searches menu), but now seem to have lost my Map Tools toolbar. Where did it go?**

It didn't go away. When a selection or search creates a result set of records in the Results window at the bottom of the application window, it will automatically scroll down a bit to display some of the result records. Just scroll back up to the top of the NJ-GeoWeb page using the vertical scroll bar on the right-hand side of the page.

6. **Why don't I see aerial imagery when I zoom in to area of the map?**

In this version of NJ-GeoWeb, the service providing the aerial imagery will do so at all map scales. By default the aerial imagery is turned off, as it does not make much sense displaying it at full statewide view scale. Users can turn on any of the aerial imagery layers by going to the Map Content window, opening the Imagery group, and checking on the desired image layer.

7. **How does the Map Content window work?**

The main difference among the profiles in NJ-GeoWeb has to do with the map layer content made available within the Map Content window. By default, the Map Content window initially displays the major categories of map layers ("Environmental Monitoring", "Sites and Facilities", "Planning Areas", etc.).

The layer names under each category can be exposed by clicking on the double arrowheads (>>) next to the category. Layer names appearing in lighter italicized font can be checked on, but won't display at this time as these layers are not set to display at the current map scale (a user would have to zoom to a larger map scale). Clicking the arrowhead to the left of the layer name exposes the layer's symbol (or set of symbols) beneath the layer's name.

Positioning the mouse cursor over a layer's name and right-clicking, reveals a short menu with the following options: Make Layer Active, Zoom to Full Layer Extent, Zoom to Visible Scale, and View Metadata. Before using the Identify tool to view attribute information associated with the features from a layer, users have to make the layer the "Active Layer". There can only be one active layer at a time. To access background information on the layer's origin, for what purposes it was developed, currentness, and completeness, view the metadata.

8. **Why aren't all of the layers in the Map Content window available at all scales?**

From a performance perspective, it doesn't make sense to have every layer available at all scales. A layer like Land Use 2012 is a very detailed layer defined by very many data points, and this detail goes unnoticed when viewing at a small scale (statewide view). The fact that the layer is very detailed means that more effort and more time is required by the application's server to generate a map that includes the layer. If a layer's name in the Map Content window is displayed in black text, then it is available for display at the current scale. If the layer's name is displayed in italicized gray text, then it is unavailable at the current scale. If you mouse-over a layer's name in the Map Content window, the application will indicate any scale settings for that layer. Most layers will be available for display if the user is zoomed to a municipality or small study area (large scale). NJDEP has classified most layers in NJ-GeoWeb to be available at specific scales (scale dependent), so as users zoom into larger and larger scales, generally more layers

become available for display. For more information on layer visibility scale ranges, see the table at the end of the Map Content help page.

9. What is meant by the "Active Layer"?

The Active Layer is a designated layer on which certain tools, Identify and Selection specifically, operate on. When a user executes the Identify Tool, it will identify (provide a More Information window for) a feature from the Active Layer. When a user executes any of the Selection tools, features are selected from the Active Layer. Any non-imagery layer can be the Active Layer, but there can only be one Active Layer at a time. When NJ-GeoWeb first launches, the Counties layer is the default Active Layer. A user can change the Active Layer by right-clicking on a layer's name in the Map Content window, and selecting Make Layer Active from the layer's menu.

10. I am using the Identify Tool, trying to get information on a feature from one of the layers. When I click on the feature, NJ-GeoWeb is giving me information from a different layer, or indicates that no features are found.

The Identify Tool enables the user to click on a feature on the map and view descriptive information about that feature in the More Information window. The Identify Tool will initially only provide information from features belonging to the current "Active Layer".

In order to view information associated with a feature from a specific layer using the Identify Tool, the user should first set the feature's layer to be the "Active Layer". After that, the Identify Tool will provide information for features from that layer. Once a More Information window is already open, the user can switch to show "Attribute Details For" a feature from a different layer. The key is that when using the Identify Tool, it will only show information in the More Information window for features belonging to the layer listed in the "Attribute Details For" dropdown menu.

11. How do I reset my map view back to the full map of New Jersey?

To reset a session to the start up state-wide view, click on the center of the Map Navigation Tool in the lower left corner of the map frame window. This should zoom the map to the full extent.



12. My map doesn't seem to be responding. What should I do?

When executing a search, or zoom, or pan, you must allow the process (spiraling indicator) to complete or you will disrupt the data flow (request/response cycle) that the application must complete before additional user interaction. For this reason, it is recommended that users not click on the map or initiate other viewer actions while data transfer is in progress. If several minutes have passed, and nothing seems to be happening, the user can refresh their browser - usually pressing the 'Ctrl' and 'F5' key together will do this.

If this doesn't help, it is usually best to quit out of NJ-GeoWeb and re-launch the application.

13. Where do I get information on the mapped data used in NJ-GeoWeb?

This information is available by clicking on the data descriptions button in the upper right-hand corner of the NJ-GeoWeb application's window. This opens a window that lists all map layers by NJ-GeoWeb profile. A brief description of the data is provided when a user clicks on the name of a layer. If a user wants to see further information, they may click on the full metadata button to view FGDC compliant metadata.

Another way to access a layers metadata is by right-clicking on the layer's name in the Map Content window, and clicking on the View Metadata choice. This will open a View Metadata window that will contain an abridged version of the metadata. Access to the full metadata is available by clicking the View Full Metadata button at the bottom of this window.

14. What coordinate system is the information mapped in?

The mapped data in the application is in the New Jersey State Plane Coordinate System (NJSPCS), in units of US Survey Feet, referenced to the North American Datum of 1983 (NAD 83) horizontal geodetic datum.

15. How can I find the New Jersey State Plane Coordinates for a point of interest using NJ-GeoWeb?

First, navigate to your area of interest. This can be done using either an existing search (Municipality, Place Name, sub-watershed, etc.) or if you are more familiar with the location in relation to the entire state, you can use the Zoom In tool.

In the Map Content window, turn on one of the layers (e.g., 2012 Imagery) under Imagery so an aerial photo will become visible. Once zoomed to a scale greater than 1:20,000, features in the aerial photo become more easily identified, and you can turn on additional layers (major roads, roads, streams, etc.) to help orient yourself on the map. Look for physical features (building structures, open spaces, athletic fields, water bodies, etc.) in or near your area of interest. Position your mouse cursor on the point of interest and the location's coordinates will display in the lower right corner of the map frame window.

Optionally you can use the Measure Tool (in Advanced Tools), and then use the View Coordinates (push pin button) tool to display the coordinates of a mouse click on the map. You will see the coordinates in the Measure tool dialog. The first coordinate is the Easting or "X" value and the second number is the Northing or "Y" value. In reporting these coordinate values to the NJDEP, they may be rounded to the nearest foot (integer).

If you are a new user or trying to find coordinates for an NJDEP regulated facility, please call the GIS Help Desk Phone: (609) 777-0672.

16. How do I print a map in NJ-GeoWeb?

There is a Print Tool in the NJ-GeoWeb application's main toolbar. There are three templates that users can use to create a map in PDF or HTML format for printing. The first two ("Simple Map" and "Map with Selections") are basic templates that have a more restrictive layout. The "Easy Print" template is much more flexible, and allows users some control over which map layout elements to include and their sizes. Users can print the map, the map's legend, selected feature results, and overview map on separate

pages if desired. For lengthy legends, users can make them multi-columned to fit on a single page.

17. Can I export or print the tabular data from the Results or More Information windows?

Yes, there are several report buttons at the top of the Results window, enabling the creation of tabular reports in .csv, .html, .pdf, and .xml formats for the export of selected features' attribute data. In addition, near the top of the More Information window, there is a Select Reports dropdown menu that provides the same choices for exporting the attributes currently in the More Information window. There is also a Print button at the bottom of the More Information window that when clicked on launches the Print tool that allows the printing of the map with the attribute data in the More Information window.

18. Can I add a GIS data layer that I have stored locally on my computer to the NJ-GeoWeb application?

Not currently. NJDEP is hoping to provide such capabilities in a future release.

19. Can I change the symbology of the layers or the order in which they overlay?

Unfortunately, a user can not alter the colors and symbols of the layers in NJ-GeoWeb or change the layer order.

20. Can I select an area of interest by parcel number (block and lot)?

Yes there is a parcel search that allows a user to select a municipality, and enter block and lot information. If found, NJ-GeoWeb will zoom to the parcel's location.

21. Why can't I find the address I am interested in when I use the Address Search?

Achieving success when searching for an address is dependent on a few factors. Often what prevents a match is a situation where a street or road is known by more than one name (US Highway 1, Route 1, Brunswick Pike, etc.). If your address is in a more recently developed area, the roads layer that contains the address range information may not be current enough, preventing a successful match. There can also be address range coding errors that exist in the roads layer. If searching for a specific address does not seem to work, try another (if known) close to the original address. With the aid of the ortho photography (aerial photo imagery) users can often times find their location of interest after recognizing familiar features such as major roads, streams and water bodies, building structures, parks, etc.

22. Why can't I see the Category One Streams statewide?

NJDEP has classified each layer in NJ-GeoWeb to be available at specific scales. Because of its level of detail, the Category One Waters layer becomes available only after the user has zoomed in to a scale between 1:100,000 and 1:1,000.

23. How can I buffer a Category One Stream by 300 feet to determine if it is regulated?

Use the Selection tool (in Advanced Tools) to select the stream segments you would like to buffer. Usually selecting by rectangle or polygon works best. Once the stream segments are selected, you can then use the Buffer Selection tool to enter the 300 feet buffer distance and a target layer from which features will be selected that fall within the buffer.