

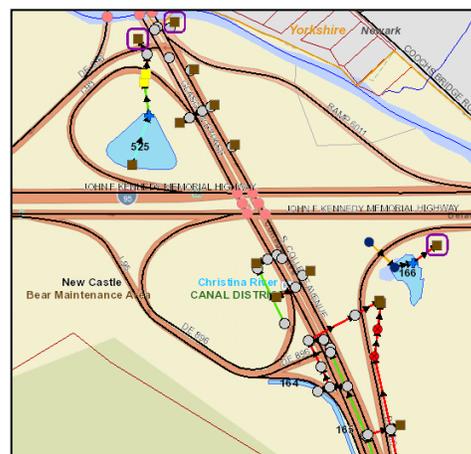


DELAWARE DEPARTMENT OF TRANSPORTATION
STATEWIDE MS4/BMP INVENTORY/INSPECTION/MAINTENANCE

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM DATABASE
WEB VIEWER USER GUIDE

Prepared For

Delaware Department of Transportation
National Pollutant Discharge Elimination System Program



Prepared By

KCI Technologies, Inc.
Delaware Water Resources Practice

2018



DELAWARE DEPARTMENT OF TRANSPORTATION
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM DATABASE



WEB VIEWER USER GUIDE

SOFTWARE REQUIREMENTS

- The Web Viewer functions on modern browsers, which includes any version of Google Chrome, Microsoft Edge and Mozilla Firefox.
- The Web Viewer does not operate efficiently with Microsoft Internet Explorer.

DELDOT CONTACT

For login and additional information or questions:

DeIDOT NPDES Program
npdes@state.de.us

Statewide Support Services
Maintenance & Operations
Delaware Department of Transportation
800 Bay Road
Dover, DE 19903



DELAWARE DEPARTMENT OF TRANSPORTATION
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM DATABASE



WEB VIEWER USER GUIDE

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WEB VIEWER USER GUIDE

As part of the Delaware Department of Transportation's (DeIDOT) National Pollutant Discharge Elimination System (NPDES) Program, KCI Technologies, Inc. (KCI) was contracted to develop a Web-based Viewer to replace and upgrade DeIDOT's existing Map Viewer. This User Guide is intended to facilitate the use of the Web Viewer.

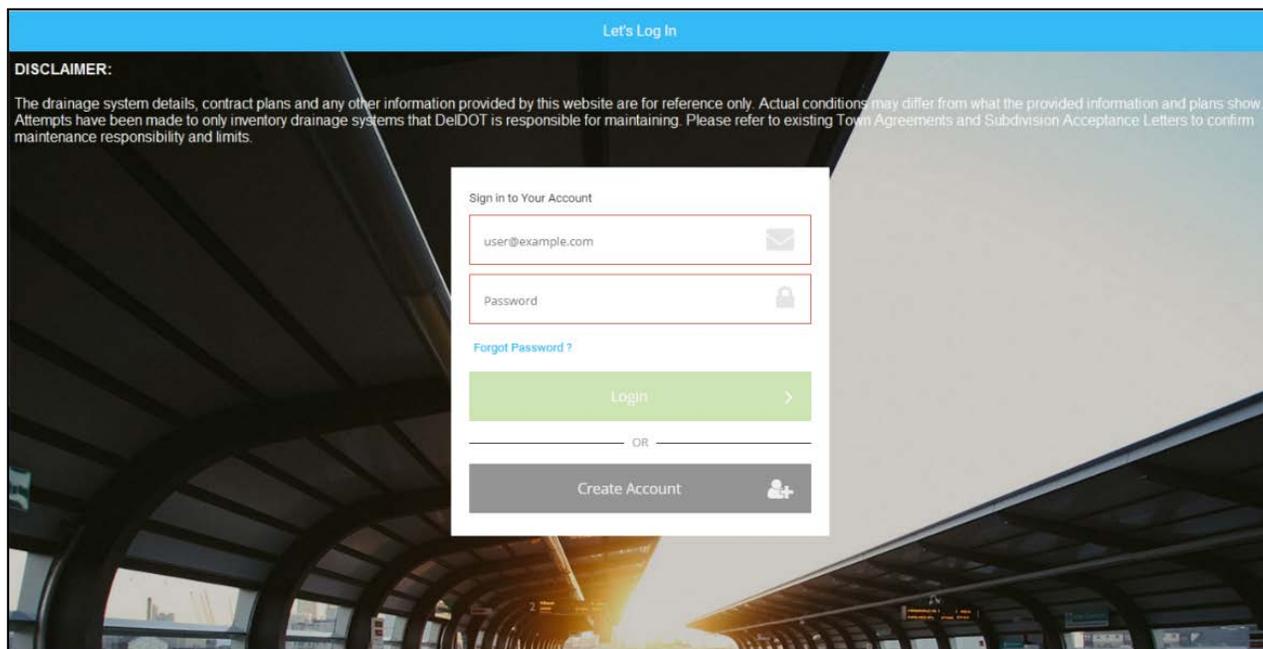
1.0 LOG IN TO WEB VIEWER

Access the Web Viewer and the NPDES Database using this link:

<https://newarkgis.kci.com/delidotwebviewer/index.html#login>

User Name: User email address.

Password: User selected password.



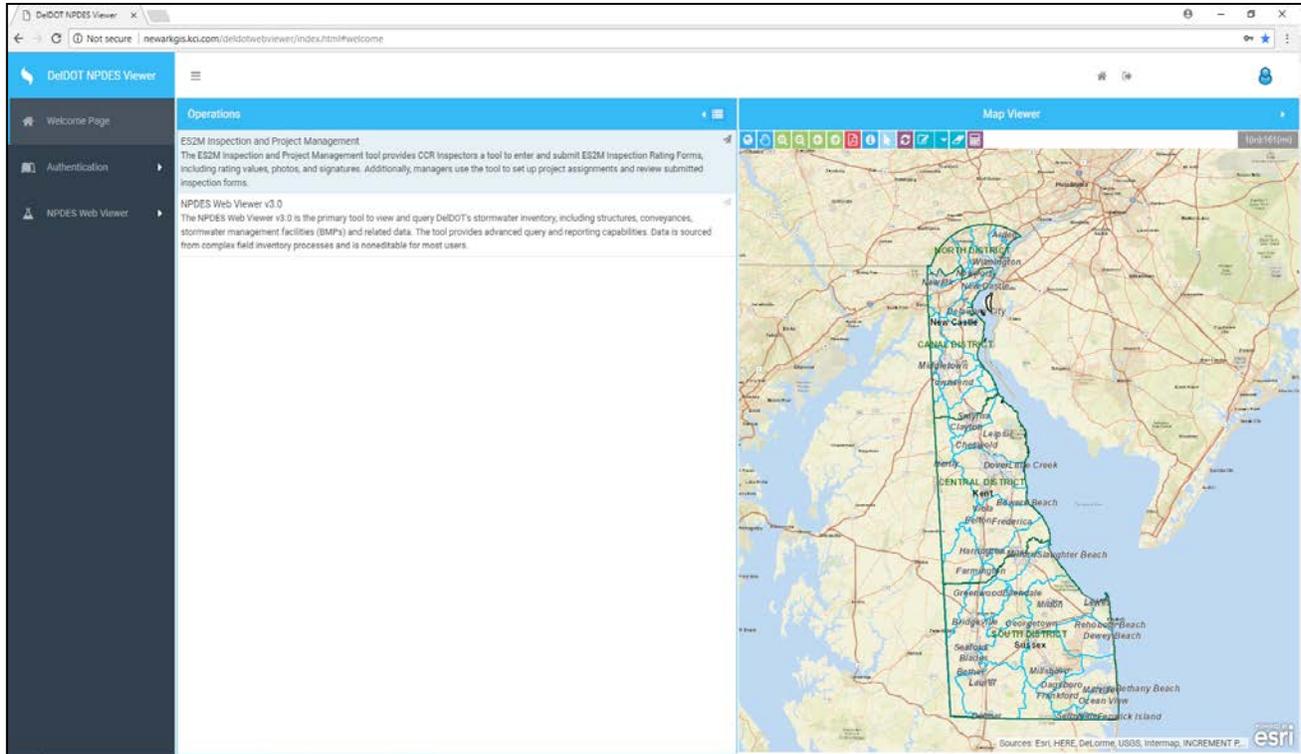
NOTE: (1) Turn off pop up blockers.

(2) Web Viewer functions most efficiently on modern browsers:
Google Chrome, Microsoft Edge, Mozilla Firefox.

(3) Web Viewer does not operate well with Microsoft Internet Explorer.

2.0 HOME SCREEN

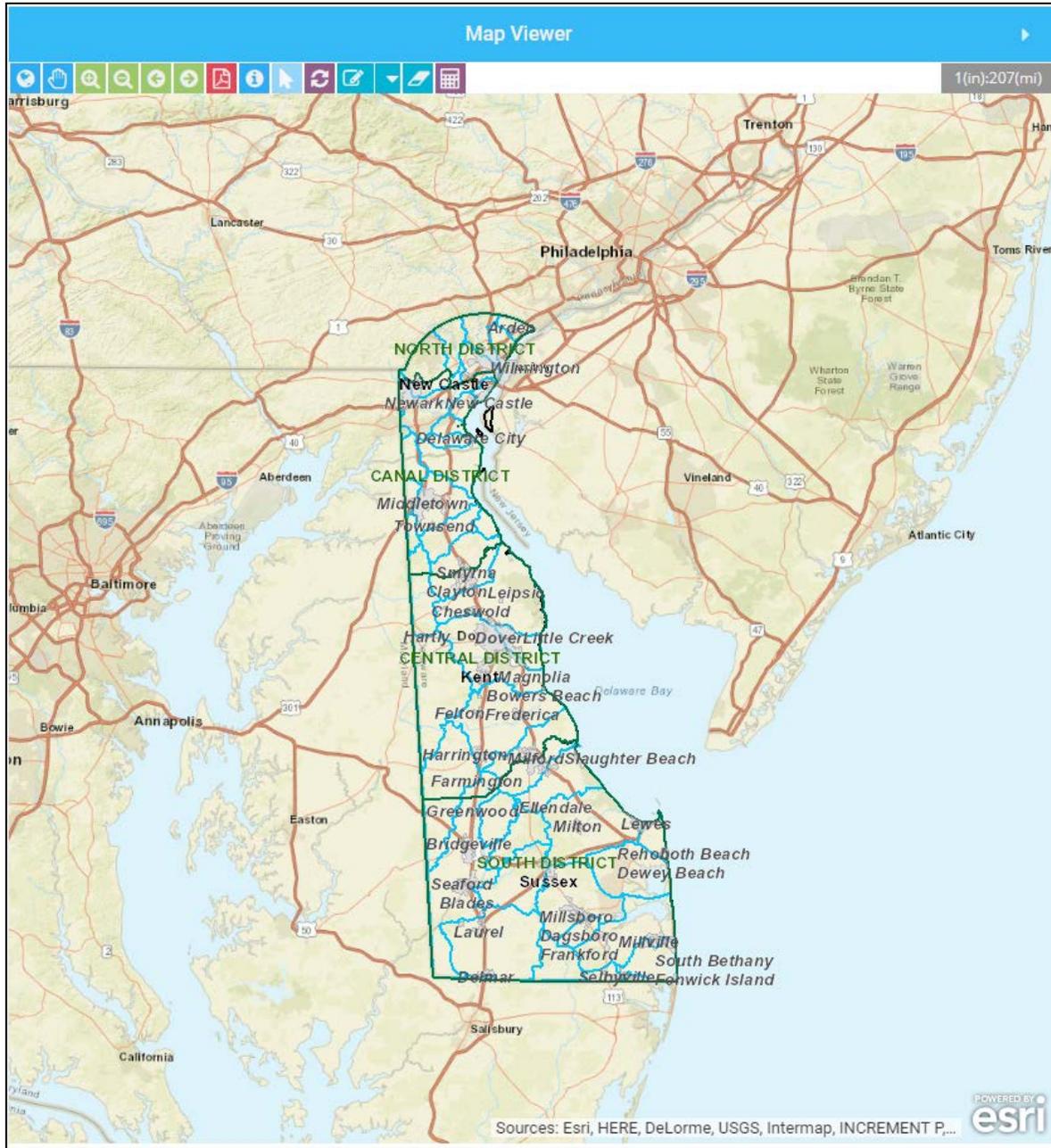
After logging in, the following screen is displayed.



- Map Viewer panel is located in right panel of screen.
- Operations panel, which initially displays Welcome Page, is located in middle panel of screen. Welcome Page displays descriptions of the different modules.
- Operations panel can also display Table of Contents panel or Workbench, the latter of which is used to make query selections.
- At top right corner of screen, user's email address is displayed and user may log out by clicking  symbol.
- To return to original Welcome Page, click home  symbol in top right corner of screen.
- Expand left or right panel by clicking arrows  on top right of each panel to collapse desired panel.
- Toolbar buttons are located at top of main map and described in more detail in **Section 5**.
- Current Scale is shown at top right of main map.
- NPDES data is activated by selecting NPDES Web Viewer on left side of screen.
- Selections or Reports can be made within NPDES Web Viewer.
- Selections tab regards different Query Tools.
- Reports tab regards automated generation of specified feature details (functionality to be completed in future).

3.0 MAP VIEWER

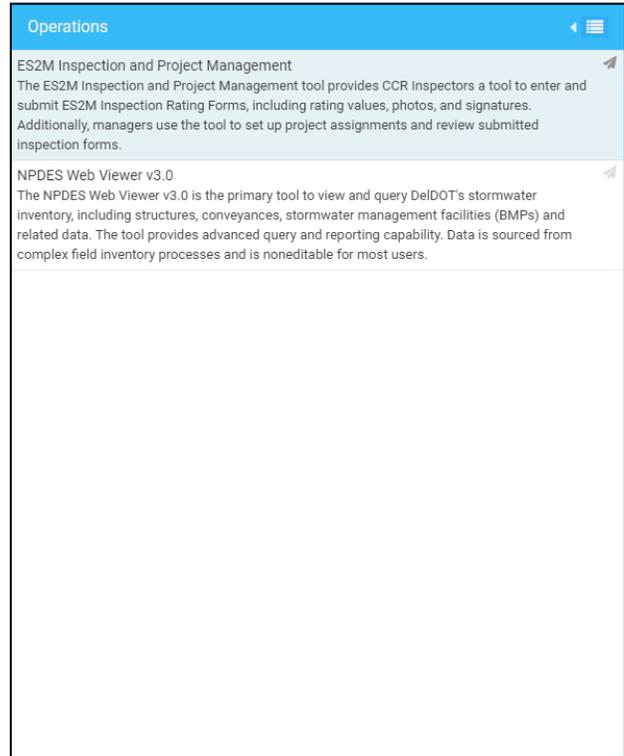
The Map Viewer initially displays the full extent of the main map.



4.0 TABLE OF CONTENTS

The Table of Contents refers to list of data layers that can be displayed on main map.

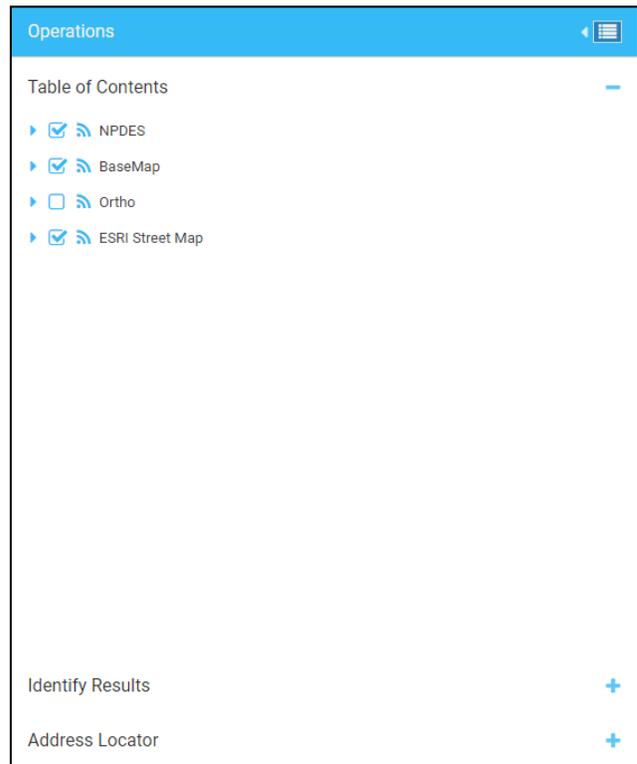
- Click Table of Contents button to right of Operations panel heading.
- To exit, click Table of Contents button to return to Workbench.



The Table of Contents consists of three main sections:

- BaseMap
- Ortho (Satellite Imagery)
- ESRI Street Map

To view NPDES Data in the Table of Contents, select NPDES Web Viewer before clicking Table of Contents button. This adds a fourth section in the Table of Contents.



NPDES Data

Click  symbol next to “NPDES” to show NPDES layers or data that can be viewed in map extent, and how data is displayed (symbology).

Notes:

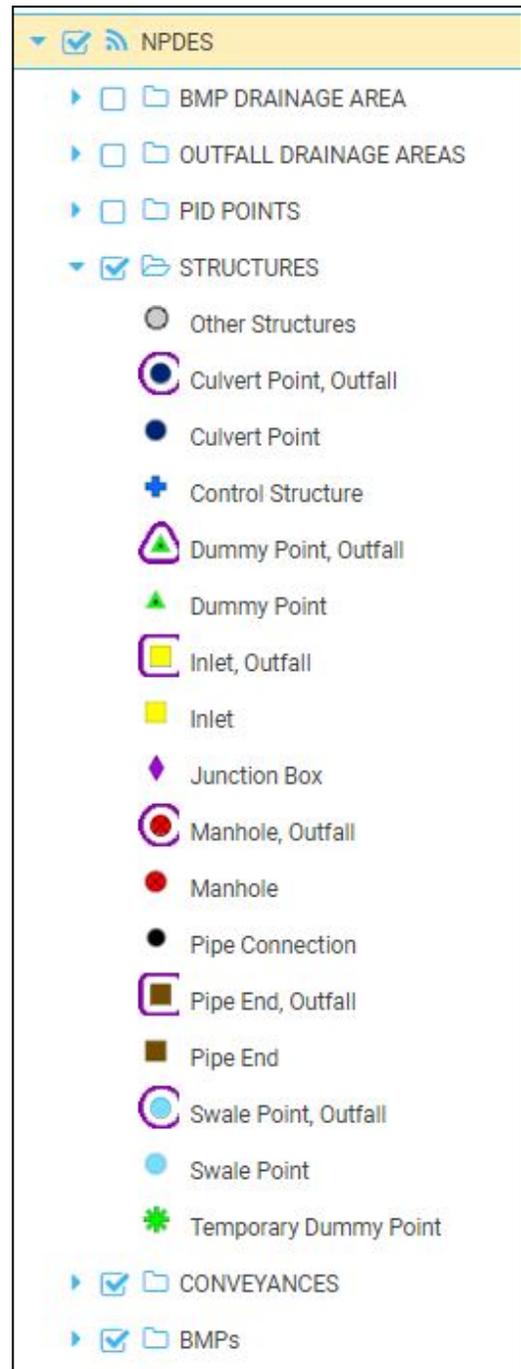
To view data and layers available in NPDES data:

- ✓ Select NPDES Web Viewer on left side of screen
- ✓ Zoom in to display NPDES data on screen.
 - This is described later in **Section 6** (Map Navigation).
- ✓ Click check box next to each layer to turn layer on or off.

Structures:

NPDES storm drain point features.

- **Inlets:** structures allowing inflow of water to storm drain system.
- **Manholes:** covered closed-drainage structures allowing access to storm drain system.
- **Pipe Ends:** structures allowing water to discharge from storm drain system.
- **Swale Points:** points used to define a swale.
- **Culvert Points:** points used to define a culvert.
- **Pipe Connections:** points used to define pipe segments.
- **Dummy Points:** points used to represent non-MS4 connections or unknown structure types.
- **Temporary Dummy:** points used as place holders while inventorying storm drain system.
- **Other Structures:** structures outside the jurisdiction of the user’s group.
- **Control Structures:** structures that control outflow of water from BMP.
- **Junction Boxes:** inaccessible closed-drainage structures allowing junction of multiple pipes.



Conveyances:

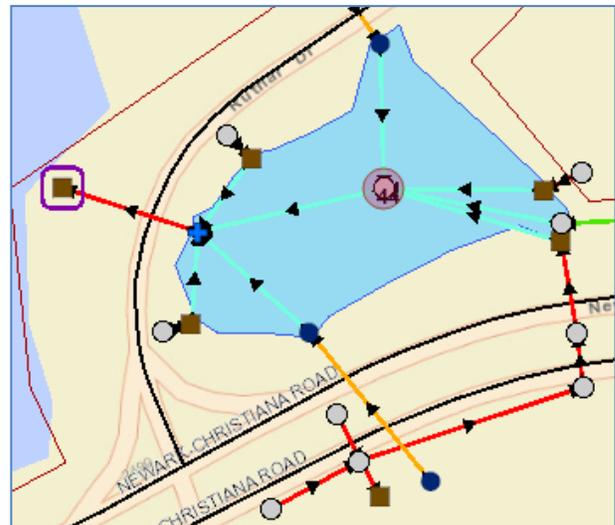
Linear NPDES storm drain features that connect two structure points.

- **Swale:** open drainage ditch.
- **Pipe:** closed drainage pipe.
- **Driveway Culvert:** open ended pipe beneath driveway.
- **Roadway Culvert:** open ended pipe conveying water under a roadway.
- **Guardrail Culvert:** open ended pipe running perpendicular to roadway.
- **Hydraulic Connection:** used for connectivity when clearly-defined ditch or pipe is not present. Example: To maintain connectivity of flow into/out BMP (pond), hydraulic connectors are created between pipe ends into pond and control structure.

Best Management Practices (BMPs)

Polygon features representing BMPs owned and/or maintained by various user groups, including DeLDOT and New Castle County.

- BMPs specific to the user's group will be symbolized in blue, all others will be gray.
- BMP 44 depicted to right shows use of dummy node and hydraulic connectors to define flow within BMP.



When **BMP Drainage Areas** and **Outfall Drainage Areas** are delineated, they are uploaded to Map Viewer.

PID Points: Points of illicit discharge not associated with a storm drain structure.

Base Data

Click  symbol beside BaseMap to depict base layers and data viewable in map extent, and how data is displayed (symbology).

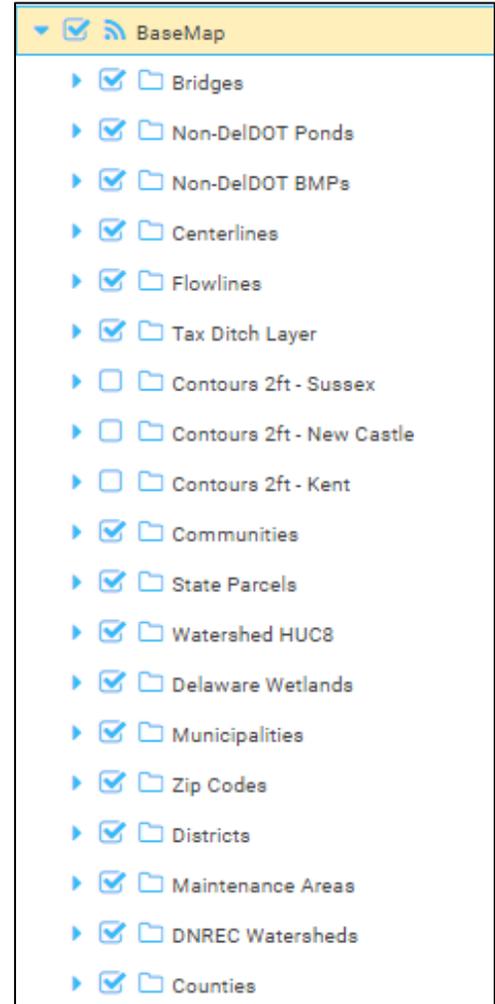
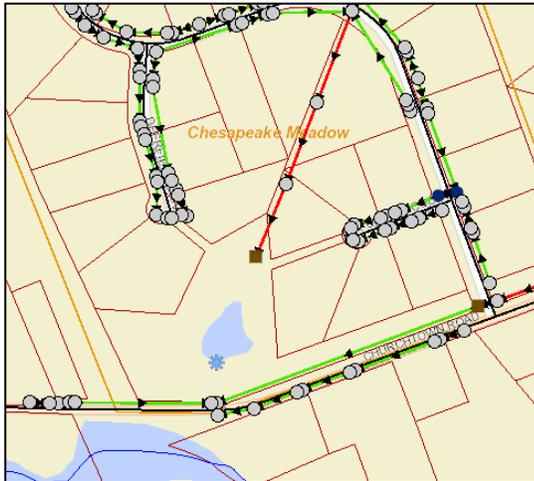
Notes:

To view data and layers in BaseMap:

- ✓ Zoom in to display data. This is described in **Section 6** (Map Navigation).
- ✓ Click check box beside each layer to turn layer on/off.

Districts, Maintenance Areas, Watersheds, Counties and Municipalities:

Can be viewed at larger scales up to full extent.



Contours 2ft - New Castle, Contours 2ft - Kent, and Contours 2ft - Sussex show topographic contour lines at 2-foot intervals for each County.

Contours, along with **Bridges, Centerlines, Flowlines, Tax Ditch Layer, Communities, State Parcels, Delaware Wetlands, and Zip Codes** are useful when zoomed in at small scales.



Ortho / ESRI Street Map

Check box beside ESRI Street Map or Ortho to change BaseMap.

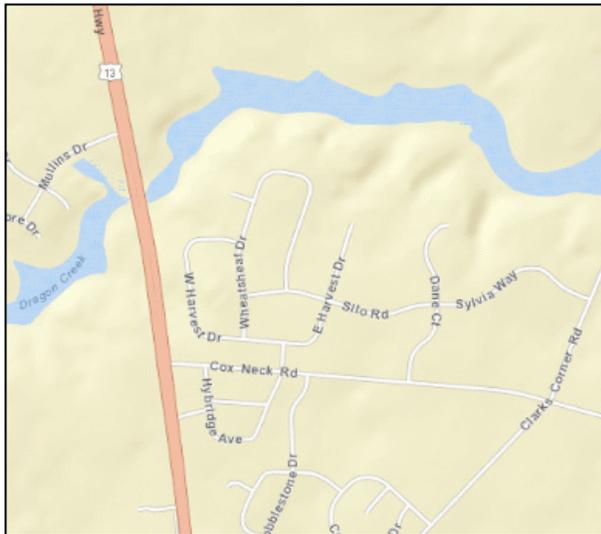
- Ortho turns on Satellite Imagery
- ESRI Street Map displays basic street map view.

Notes:

- ✓ Layers describe type of background mapping desired on main map.
- ✓ Only one is visible at a time.
- ✓ If more than one is checked, uppermost one in Table of Contents will be displayed (e.g., if both are checked, Ortho will be displayed).
- ✓ Click check box beside each layer to turn layer on or off in main map.

| Table of Contents | |
|-------------------------------------|------------------|
| <input type="checkbox"/> | NPDES |
| <input type="checkbox"/> | BaseMap |
| <input checked="" type="checkbox"/> | Ortho |
| <input checked="" type="checkbox"/> | ESRI Street Map |
| <input checked="" type="checkbox"/> | World Street Map |

Street BaseMap



Ortho



5.0 MAP TOOLBAR

The Map Toolbar is displayed at the top of the main map and contains buttons to interact with the map. See **Table 1** for description of each Toolbar button.



TABLE 1 – TOOLBAR BUTTONS AND USES

| Button | Uses |
|---|--|
| Map Navigation | |
|  | Full Extent: Select button to zoom to full extent of map. |
|  | Pan: Select button and then navigate to map. Hold left mouse button down and drag map to pan data frame. |
|  | Zoom In/Out in Two Ways: 1. Select zoom button and navigate to map; hold left mouse button and draw box around desired map area to zoom in/out, OR 2. Without use of zoom button, place cursor on map and use mouse wheel to zoom in (wheel up) or zoom out (wheel down). |
|  | Previous: Select button to go back to previous extent of map. |
|  | Next: Select button to go to next extent of map. |
| Select and Identify Tools | |
|  | Identify: Identifies features and provides basic structure details for all features selected within drawn box. |
|  | Select By Map: Selects features within drawn box and provides information on all features within box. |
| Draw Tools | |
|  | Draw Graphics: Select button to draw a point, polyline, or polygon area on map. |
|  | Clear Graphics: Select button to clear draw graphics from map. |
| Utilities | |
|  | Export Map PDF: Select button to print map in current extent of Map Viewer. After clicking button, dialog box opens with option of entering title text and copyright text. Print utility will return a PDF map layout. |
|  | Refresh Map: Select button to reload map in Map Viewer. |
|  | Measurement Tool: Select button to measure distances or areas. |
|  | Current Scale: Displays scale of current view in Map Viewer. |

6.0 MAP NAVIGATION

The Map Navigation buttons are located on the left side of the Toolbar.



- Facilitate movement around main map
- Change map scale (see **Table 1**).

Full Extent

If zoomed in too far or panned off map, full extent button  starts over by returning to map displayed at Login.

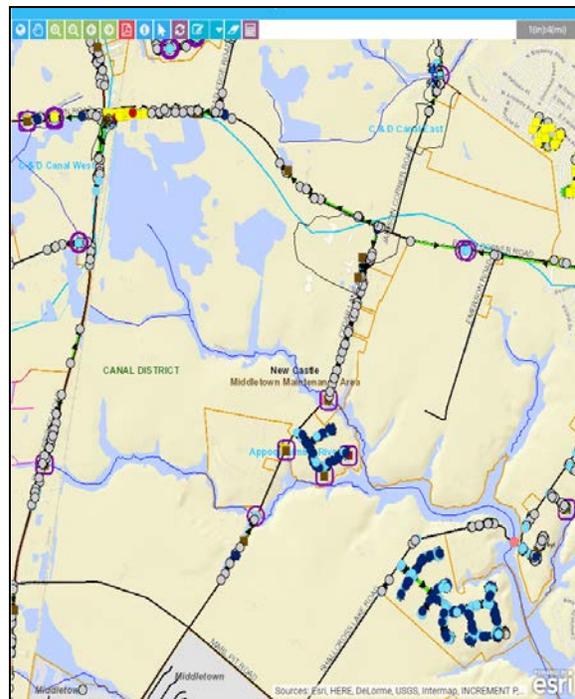
Zoom In/Zoom Out

To begin using Map Viewer, Zoom In to particular area.

- Click Zoom In button .
- Place cursor on general area of interest by keeping left mouse button depressed and dragging it to create box.
- The smaller the box, the more the viewer will zoom in to area.
- Zoom Out  is done same way.
- Another way to zoom in/out is to use mouse wheel to zoom in (wheel up) or zoom out (wheel down).



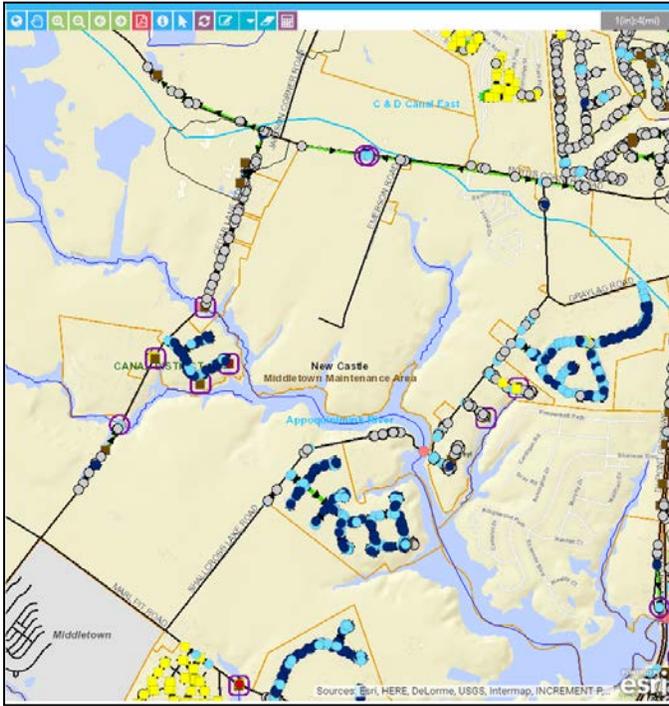
Map Shown at Full Extent



Map Zoomed in to 1(in):4(mi) Scale

Pan

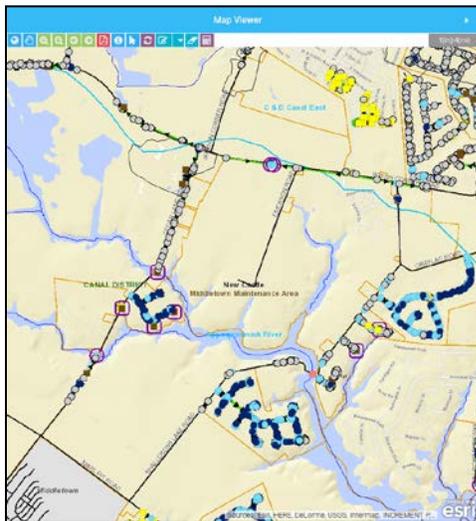
Pan button  is used to move around on map. Once zoomed in to general area, move to specific area with Pan button.



Main Map after Panning west, from Cedar Lane Road.

Previous/Next

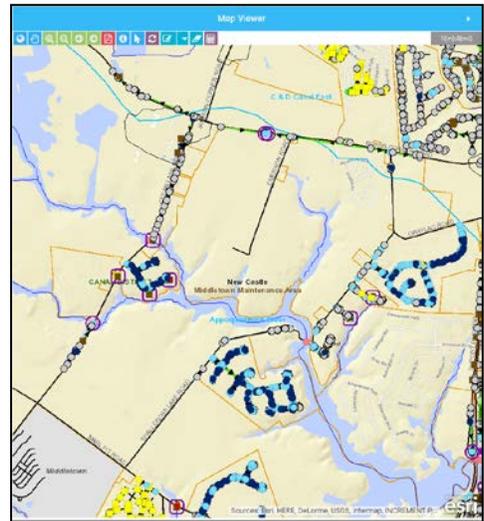
Previous  and Next  buttons return to previous or next map extent.



PREVIOUS



NEXT



Scale

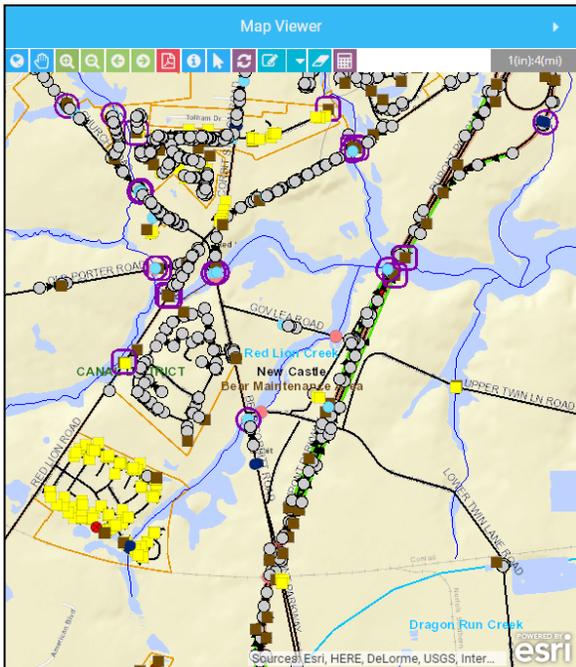
TABLE 2 - SCALE NAVIGATION

| Scale* | Viewable Features |
|-----------------------------|--|
| 1(in):213(mi) (full extent) | Districts, Watersheds, Counties, Municipalities |
| 1(in):51(mi) | Maintenance Areas |
| 1(in)14(mi) | Centerlines, Flowlines, Tax Ditch Layer |
| 1(in)7(mi) | Bridges, Delaware Wetlands, Communities |
| 1(in):3(mi) | NPDES Structures, NPDES Conveyances, DeIDOT BMPs |
| 1(in):8448(ft) | Non-DeIDOT BMP Markers, Communities Labels |
| 1(in):4224(ft) | Contours, State Parcels |
| 1(in):1056(ft) | Structure ID Labels |
| 1(in)528(ft) | State Parcel Labels |

*Exact Scales may vary

Scale **1(in):2(mi)** of main map is shown in map toolbar.

- Scale is adjusted automatically depending on size of map when zoom in/out.
- Many layers and available data are only depicted on map when certain scale reached.
- Zoom in very close to view all storm drain features within the map extent.



Scale of 1(in):4(mi):
 NPDES storm drain structures (manholes, inlets, outfalls, etc.) shown.

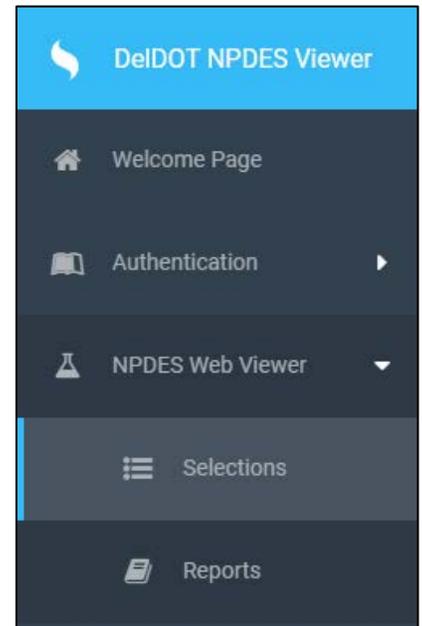


Scale of 1(in):5304(ft):
 New Castle County BMP markers shown.

7.0 SELECT AND IDENTIFY TOOLS

Note:

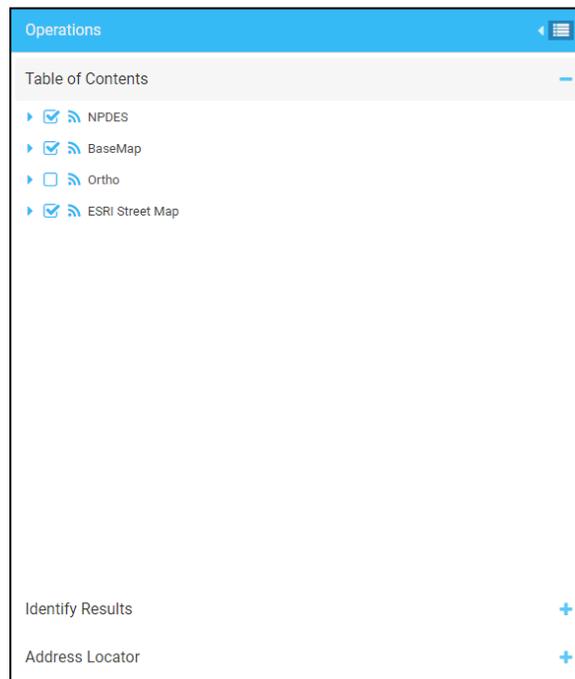
Select NPDES Web Viewer on left side of screen to utilize these tools.



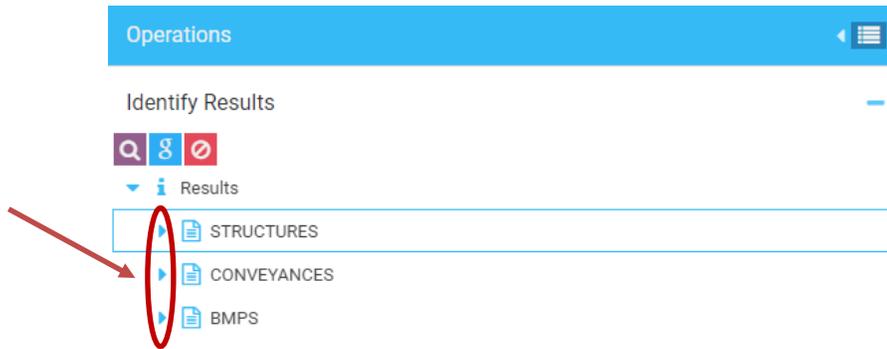
Identify

The Identify tool allows identification of any structures, conveyances, or BMPs located in box drawn.

- Zoom in to at least a scale of 1(in):4(mi).
- Click identify tool  and draw box on Map Viewer by clicking on map with mouse and holding down left mouse button to draw box.
- Go to Table of Contents and select Identify Results.

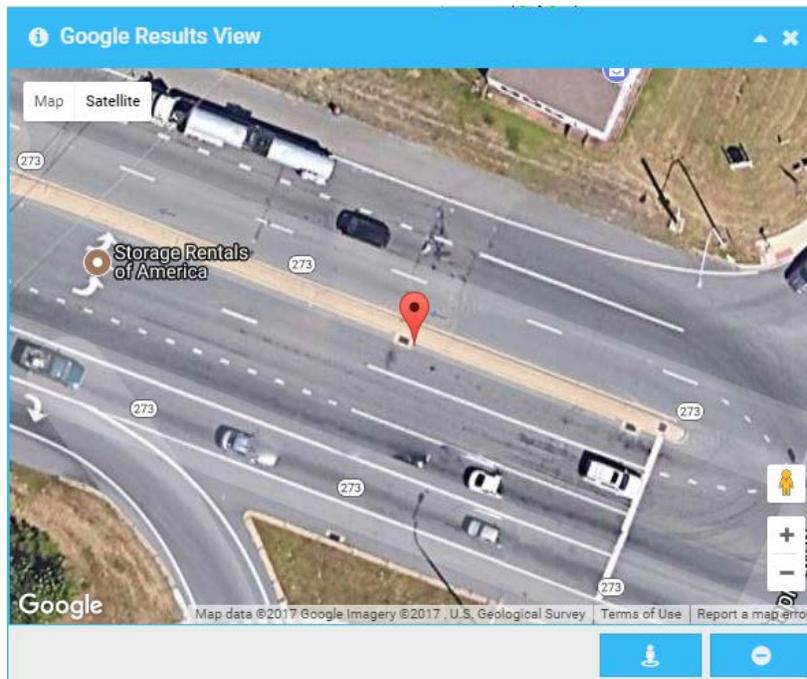


- Identify Results will identify all active layers within search box.
- Select drop down arrows to view all identification numbers of structures, conveyances, and/or BMPs and details pertaining to each one.



Useful tools under Identify Results:

- Zoom to particular structure by first selecting and highlighting a particular structure, conveyance or BMP ID and then click .
- See location in Google street view by selecting . Pop up window opens with street view of particular structure, conveyance or BMP.

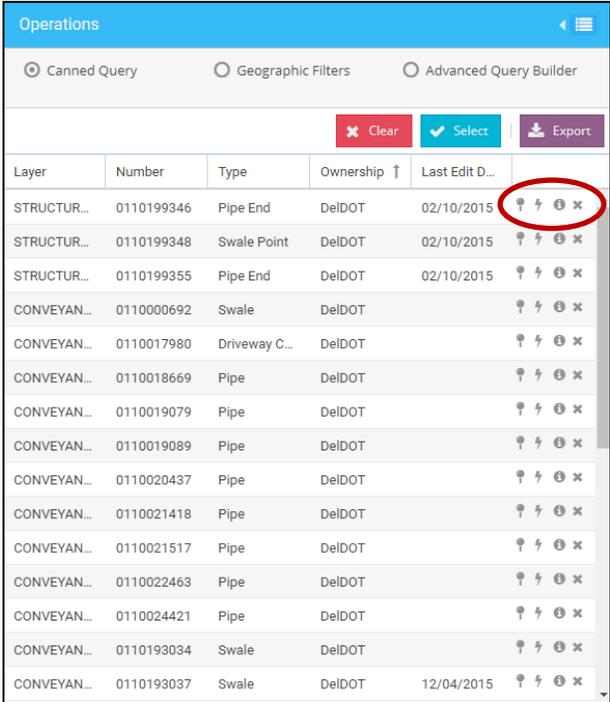


- Select “” to clear results.

Select

The Select tool allows identification and viewing of all details of structures, conveyances and/or BMPs within box.

- Zoom in to at least a scale of 1(in):4(mi)
- Click select tool  and draw box
 - Click on map with mouse and hold down left mouse button to draw box.
- Results displayed in Workbench on left panel titled Operations.
- Four actions available for all results:
 - **Zoom to Location:** () Zooms to specific structure.
 - **Trace all Upstream Features:** () Highlights all features upstream of a specified structure. These structures and conveyances flow downstream towards the specific structure.
 - **Load Details Information:** () Simultaneously zooms to location and loads detailed information on specific feature.
 - **Remove from Current Page:** () Removes only selected feature from results list.



| Layer | Number | Type | Ownership | Last Edit D... | |
|-------------|------------|---------------|-----------|----------------|---|
| STRUCTUR... | 0110199346 | Pipe End | DelDOT | 02/10/2015 |     |
| STRUCTUR... | 0110199348 | Swale Point | DelDOT | 02/10/2015 |     |
| STRUCTUR... | 0110199355 | Pipe End | DelDOT | 02/10/2015 |     |
| CONVEYAN... | 0110000692 | Swale | DelDOT | |     |
| CONVEYAN... | 0110017980 | Driveway C... | DelDOT | |     |
| CONVEYAN... | 0110018669 | Pipe | DelDOT | |     |
| CONVEYAN... | 0110019079 | Pipe | DelDOT | |     |
| CONVEYAN... | 0110019089 | Pipe | DelDOT | |     |
| CONVEYAN... | 0110020437 | Pipe | DelDOT | |     |
| CONVEYAN... | 0110021418 | Pipe | DelDOT | |     |
| CONVEYAN... | 0110021517 | Pipe | DelDOT | |     |
| CONVEYAN... | 0110022463 | Pipe | DelDOT | |     |
| CONVEYAN... | 0110024421 | Pipe | DelDOT | |     |
| CONVEYAN... | 0110193034 | Swale | DelDOT | |     |
| CONVEYAN... | 0110193037 | Swale | DelDOT | 12/04/2015 |     |

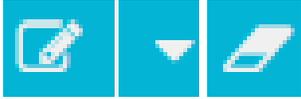
- To clear all selected features simultaneously, click  at top of results list.
 - If tool is used multiple times without clearing results, all outputs stay in results table.
 - Important to clear results between two searches if desired.
- Results can be organized ascending or descending alphabetically or numerically by any of headings in results section:
 - Layer, Number, Type, Ownership, or Last Edit Date.
- Select arrow next to heading to choose ascending or descending
 - Results will organize accordingly.

| Layer | Number ↑ | Type | Ownership | Last Edit D... | Actions |
|-------------|------------|-----------------|-----------|----------------|---------|
| STRUCTUR... | 020803154 | Sort Ascending | DelDOT | 04/10/2008 | 🔍 ⚡ ⓘ ✕ |
| CONVEYAN... | 020805033 | Sort Descending | DelDOT | 10/08/2009 | 🔍 ⚡ ⓘ ✕ |
| CONVEYAN... | 020805298 | Columns | DelDOT | 2009 | 🔍 ⚡ ⓘ ✕ |
| CONVEYAN... | 0208053109 | Pipe | DelDOT | 2009 | 🔍 ⚡ ⓘ ✕ |
| CONVEYAN... | 0208053297 | Swale | DelDOT | 2009 | 🔍 ⚡ ⓘ ✕ |
| STRUCTUR... | 0208053465 | Inlet | DelDOT | 2009 | 🔍 ⚡ ⓘ ✕ |
| CONVEYAN... | 0208053726 | Swale | DelDOT | 2009 | 🔍 ⚡ ⓘ ✕ |
| CONVEYAN... | 0208053834 | Pipe | DelDOT | 2009 | 🔍 ⚡ ⓘ ✕ |
| CONVEYAN... | 0208054134 | Pipe | DelDOT | 10/08/2009 | 🔍 ⚡ ⓘ ✕ |

- Turn off columns in results by selecting check box next to heading, after selecting columns in drop down as shown above.

8.0 DRAW TOOLS

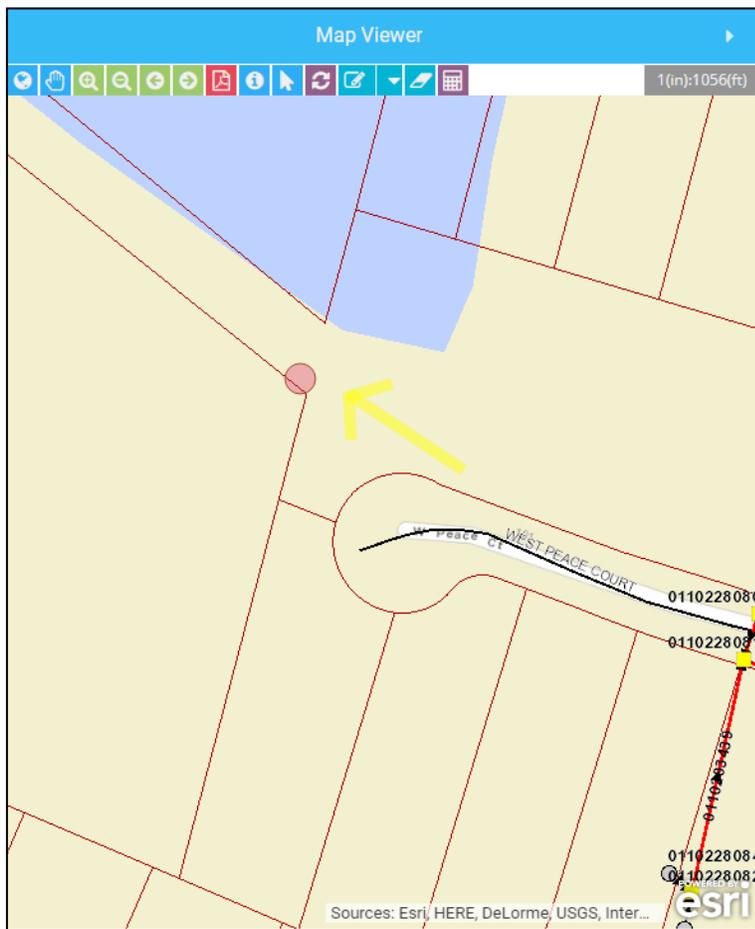
The Draw Tools buttons are located in the middle of the Toolbar and are used to mark up map (see **Table 1**).



Using draw tools, mark up map and then print map with mark-ups.

- Draw Points
- Draw Polylines
- Draw Polygons
- Erase All Drawings

Draw tools are useful for printing out mark-ups for use in field.



Example of Draw Point (red dot)
and Draw Polyline (yellow arrow)

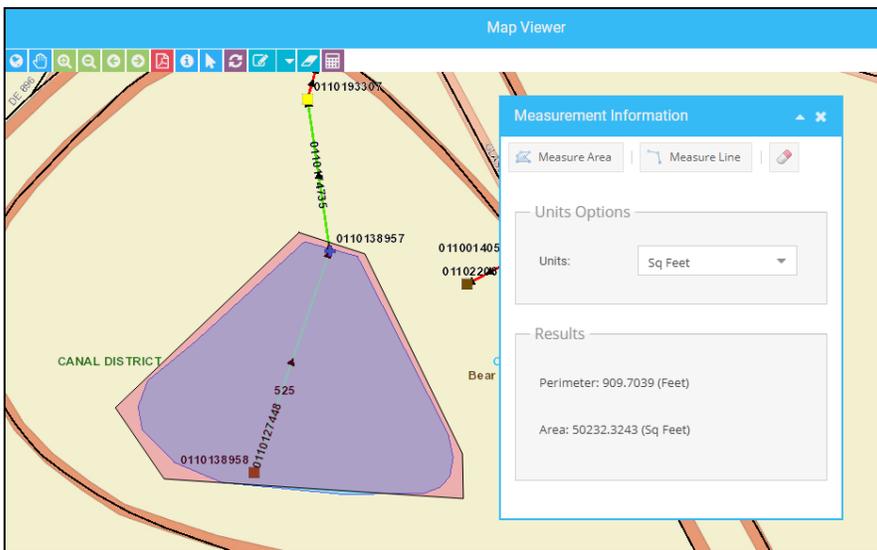
9.0 UTILITIES

The Utilities buttons are located throughout the Toolbar to make measurements, print maps, and to refresh map (see **Table 1**).

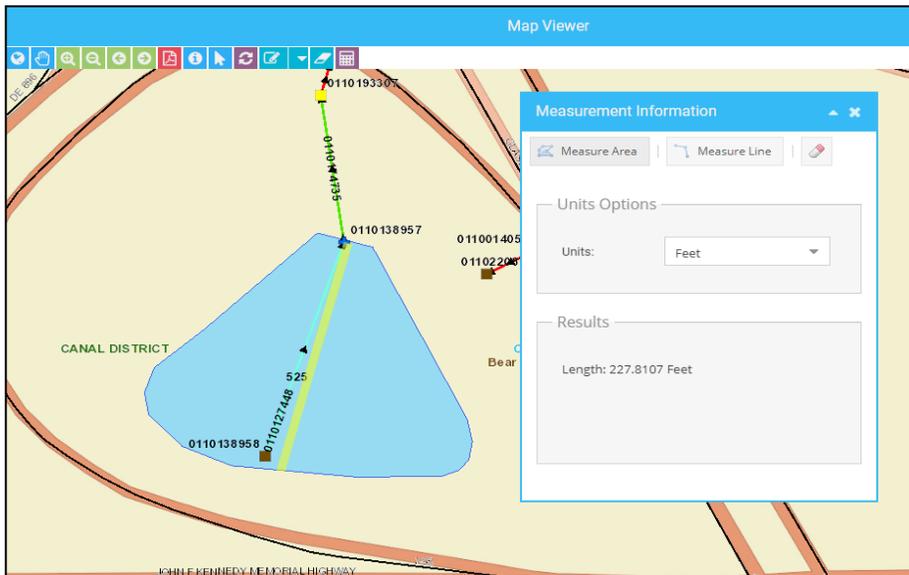
Measure Tool

Measurement Tool button  has three functions:

1. Click Measure Area then click three or more vertices on map to draw polygon; double click when done to get area in user-specified units.



2. Click Measure Line button then click two or more vertices on map to draw line; double click when done to get distance in user-specified units.

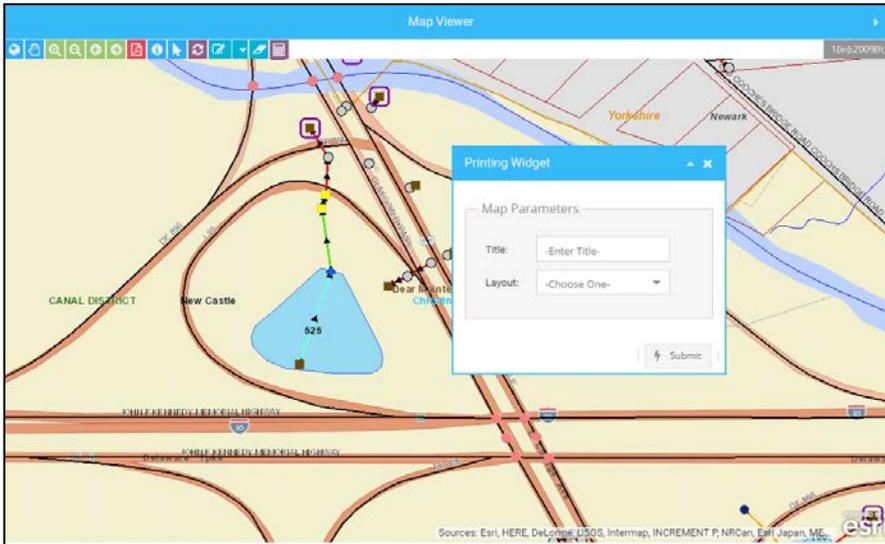


3. Eraser  in top right of Measure Tool clears polygons/lines drawn in measurement.

Export Map PDF

Select Export Map PDF to create a PDF file of information depicted.

- Select Export Map PDF  button and new browser window will appear.
- Type in title of printed map and chose either 8.5x11 or 11x17 paper size.



- Click on Submit and then Download to open map in new tab in web browser.
- Can print and/or save PDF in new browser window.
- Map that opens is two pages: first page is map and second is legend.

Base Data

- Bridges
- Centerlines
- Tax Ditch_Layer
- Flowlines
- Communities
- State_Parcel
- Watershed_HUC8
- Delaware_Wetlands
- Municipalities
- ZipCodes
- Districts
- Maintenance_Areas
- DNREC_Watersheds
- Counties

DelDOT NPDES Data

| | | |
|-------------------------|----------------------|-------------------|
| Structures | Conveyances | BMPs |
| Other Structures | Other Conveyances | Other BMPs |
| Culvert Point (Outfall) | Driveway Culvert | DelDOT |
| Culvert Point | Hydraulic Connection | BMP Drainage Area |
| Control Structure | Pipe | |
| Dummy Point (Outfall) | Roadway Culvert | |
| Dummy Point | Swale | |
| Inlet (Outfall) | | |
| Inlet | | |
| Junction Box | | |
| Manhole (Outfall) | | |
| Manhole | | |
| Pipe Connection | | |
| Pipe End (Outfall) | | |
| Pipe End | | |
| Swale Point (Outfall) | | |
| Swale Point | | |
| TEMPORARY DUMMY | | |
| PID Point | | |
| Outfall Drainage Area | | |

Date: 7/12/2017 Time: 10:43:34 AM
 Absolute Scale: 1:2,043
 0 0.0225 0.045 0.09 mi

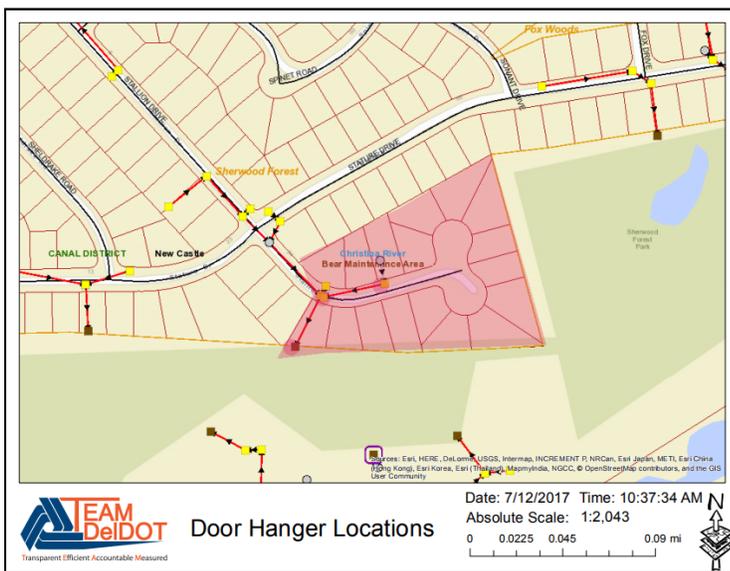
Print with Draw Tools

Use draw tools to mark up map and print with the mark-ups.

- Draw Point
- Draw Polyline
- Draw Polygon
- Clear Graphics



- In example depicted below, map was marked up to show addresses that should receive a NPDES door hanger (blocked out in red) in relation to dumping incident at red-circled catch basins and outfall.
- Click Submit and Download to generate and load a map.
- The output example is depicted below.

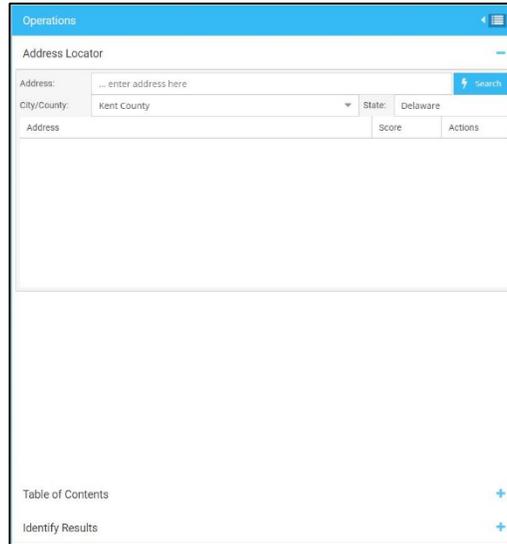


| Base Data | | | |
|-----------|-----------------|--|-------------------|
| | Bridges | | Delaware_Wetlands |
| | Centerlines | | Municipalities |
| | Tax_Ditch_Layer | | ZipCodes |
| | Flowlines | | Districts |
| | Communities | | Maintenance_Areas |
| | State_Parcel | | DNREC_Watersheds |
| | Watershed_HUC8 | | Counties |

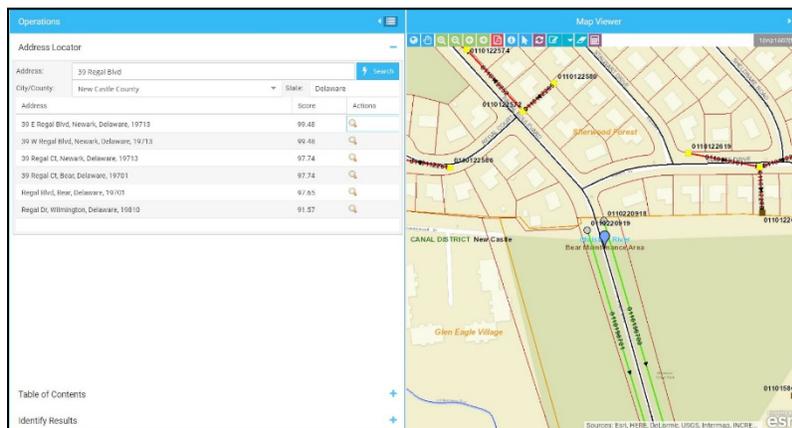
| DelDOT NPDES Data | | | | | |
|-------------------|-------------------------|--|----------------------|--|-------------------|
| | Other Structures | | Other Conveyances | | Other BMPs |
| | Culvert Point (Outfall) | | Driveway Culvert | | DelDOT |
| | Culvert Point | | Hydraulic Connection | | BMP Drainage Area |
| | Control Structure | | Pipe | | |
| | Dummy Point (Outfall) | | Roadway Culvert | | |
| | Dummy Point | | Swale | | |
| | Inlet (Outfall) | | | | |
| | Inlet | | | | |
| | Junction Box | | | | |
| | Manhole (Outfall) | | | | |
| | Manhole | | | | |
| | Pipe Connection | | | | |
| | Pipe End (Outfall) | | | | |
| | Pipe End | | | | |
| | Swale Point (Outfall) | | | | |
| | Swale Point | | | | |
| | TEMPORARY DUMMY | | | | |
| | PID Point | | | | |
| | Outfall Drainage Area | | | | |

10.0 ADDRESS LOCATOR

The Address Locator function is located in the left panel after switching from the Workbench panel to the Table of Contents panel.

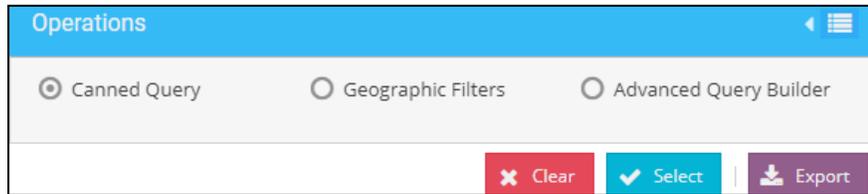


- Use Address Locator to locate input address.
- Any part of address can be entered; more information entered yields better results.
- Search provides list of best-matched results.
- Score represents how well results match the search.
- Highest ranking matches are listed at top, and are presented in descending order.
- To zoom to an address, click magnifying glass  to right of result.
- Map will refresh and zoom to selected address, which is marked as blue point on map.



11.0 MAP QUERY TOOLS

Three Map Query Tools are located on the top of the Operations panel.



Canned Query

Canned Query function allows addition of preset advanced queries to make a selection. A canned query can be added upon request.

Geographic Filters

Geographic Filters find all features within specific area.

Select Layer:

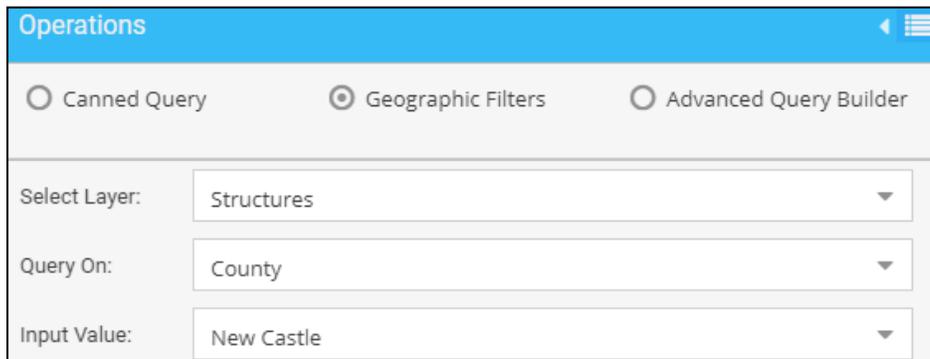
- Select layer to query on (PID Points, Structures, Conveyances or BMPs), which will determine what type of features are outputted.
- In example below, layer selected is Structures.

Query On:

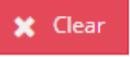
- After selecting specific layer, choose which geographic filter to query on (County, District, Maintenance Area, Community, DNREC Watershed or HUC8 Watershed).
- In example below, County is the geographic filter.

Input Value:

- Input value is specific subset of desired geographic filters.
- For example, if County is chosen to query on, options for input value are New Castle, Kent, and Sussex. In example below, New Castle is selected.
- Results of this query function are desired features within specific area.



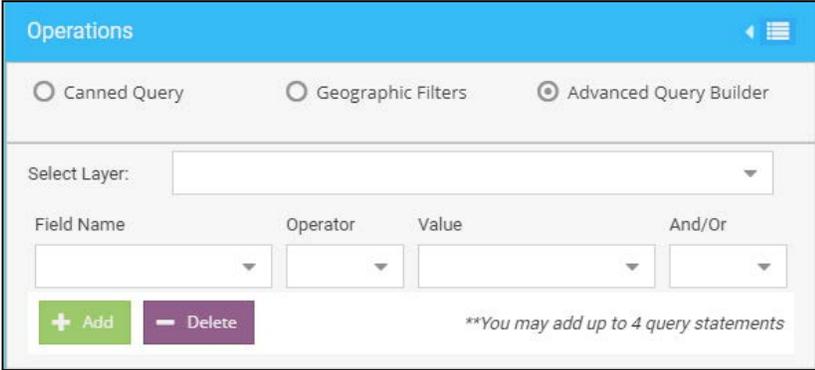
Results:

- To view results click Select  and results will generate below.
- To clear all results select clear button - .
- Results can be exported to a downloadable file geodatabase by selecting export button .
- A zipped file contains all the structures, conveyances, or BMPs within results table.

Advanced Query Builder

Advanced Query Builder facilitates more complex queries.

- Choose layer from drop down box.
- Able to construct up to 4 query statements by specifying desired field, operator and value.
- If more than one query statement is desired, must also specify if statements are joined with an “and” or an “or” operator.



The following steps generate a query.

Select Layer:

- Specify type of feature to query.
- Structures, Manholes, Inlets, Pipe Ends, Control Structures, Swale Connections, Culvert Points, BMPs – Not Sand Filter, BMPs- Sand Filter, Conveyances, Pipe Segments, and Swales are all available options.
- Structures encompasses all Manholes, Inlets, Pipe Ends, Control Structures, Culvert Points, and Pipe Connections, Dummy Points, Junction Boxes, Swale Points, and Temporary Dummy Points

- Conveyances encompass Pipes, Swales, Roadway Culverts, Driveway Culverts, and Hydraulic Connections.
- In example below, the layer Inlets is selected.

Field Name:

- Build a query statement by first selecting field to query.
- Depending on layer selected, queryable attributes change.
- In example below, two query statements were generated where field statements are Owner and Wall Width.

Operator:

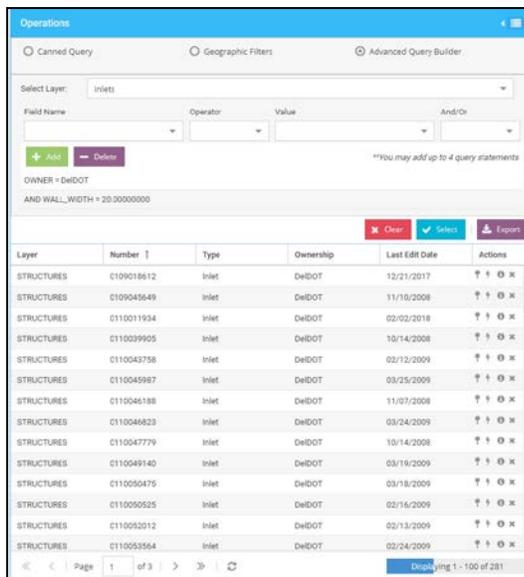
- Select type of operation to be applied to attribute selected in Field Name.
- In example below, equal and greater than are utilized.

Value:

- Type in or select criteria from drop down to be applied to Field Name and Operator.
- In example below, DeIDOT and 20 are applied to inlets.

Example:

- This query would be interpreted as:
 Show all inlets owned by DeIDOT that have Wall Width greater than 20 inches.
- Select Add button to load these query parameters into Query Criteria area one at a time.
- Each query statement is listed below Add/Delete buttons when statement is properly added.
- If more than one query statement is desired, must determine if “and” or “or” is binding operator.
- Specific queries can be removed by highlighting targeted query and selecting Delete (explained further on following page).



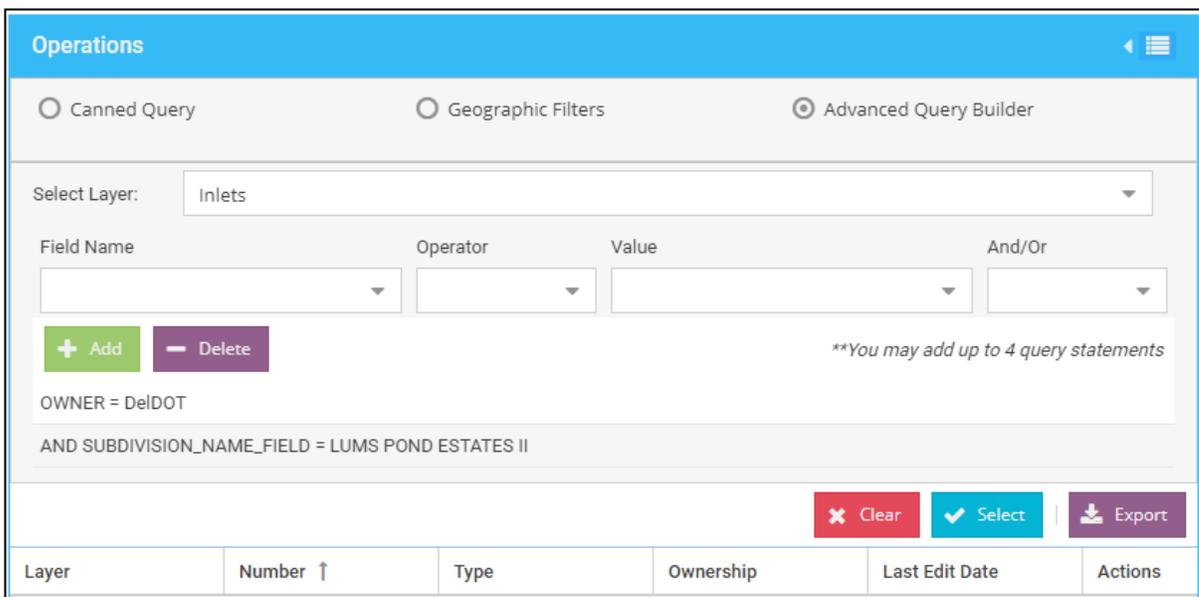
Results:

- To view results click Select -  and results will generate below.
- To clear all results select clear button -  .
- Results can be exported to a file geodatabase by selecting the export button -  . The user can download the zipped file that contains all of the results located within the table.
- In example shown, 3 pages of results were generated, which can be narrowed by adding additional queries.
- To view specific Structures, Conveyances, or BMP details, the same buttons as described in **Section 7** can be used.

Note:

Once an Advanced Query has been performed with multiple criteria, an individual query may be removed by performing following actions:

- ✓ Select query to be deleted, causing it to be highlighted.



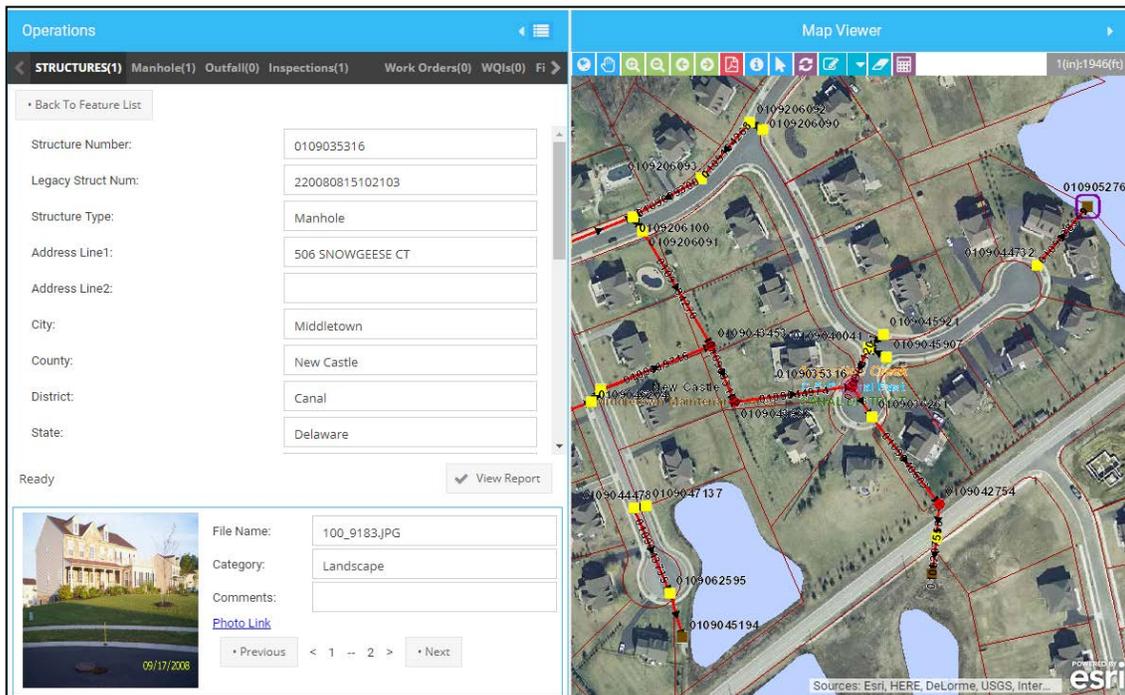
- ✓ Click Delete button located above list of added queries.

12.0 VIEWING FEATURES

After identifying a particular feature, select  within the Actions column to view all details pertaining to structure, conveyance or BMP.

In example below, a **manhole** was selected.

- Map Viewer zooms to location while Workbench loads detailed information.



- Depending if feature is structure, conveyance or BMP, first tab to open will pertain to only general details for the structure, conveyance, or BMP.
- On top of left panel, multiple tabs are selectable where more specific information regarding specific feature type, outfall information, inspection information, work orders, water quality investigations, and file attachments can be viewed.
- PDF printouts of all information may be generated by selecting View Report near bottom of left panel.
- View Report will open reports in new window, which can be saved/downloaded/printed by user.
- Reports can also be generated for water quality investigations and BMP inspections (if inspection exists).

In example below, a **swale point** was selected.



DELAWARE DEPARTMENT OF TRANSPORTATION

NPDES DATABASE

STRUCTURE 0111024312 - Swale Point



| Location Information | |
|---------------------------|--------------------|
| Address: | |
| City: | Wilmington |
| Zip Code: | 19804 |
| Development Name: | Glen Berne Estates |
| Watershed: | White Clay Creek |
| Maintenance Road Number: | 113080 |
| County: | New Castle |
| Maintenance District: | North |
| Maintenance Area: | Kiamensi |
| Acceptance Date: | |
| Structure Location: | Subdivision |
| Structure Classification: | N/A |
| Ownership: | |
| Legacy Structure Number: | 20188 |
| Contract Number: | |
| Latitude: | 39.3594 |
| Longitude: | -79.5293 |
| Point_X: | 597230.07800000 |
| Point_Y: | 626410.36300000 |
| Comments: | |

Structure or Conveyance Inspections:

- Select Inspections tab.
- Select  to load specific inspection.
- Most recent inspection information will be included in reports.

BMP Inspections:

- Select Report Year at bottom of BMPs tab (shown below) to output report in new web browser tab.
- OR
- Select BMP Inspection tab and open desired year to immediately output results.

The screenshot shows the 'Operations' panel for a BMP inspection. The form contains the following fields:

| | |
|-------------------------|----------------------|
| BMP Number: | 24 |
| BMP Type: | Dry Pond |
| Address Line1: | NAAMANS ROAD |
| Address Line2: | |
| City: | Wilmington |
| County: | New Castle |
| District: | North |
| State: | Delaware |
| Zip: | 19810 |
| Acceptance Date: | 1995-07-06T00:00:00 |
| Contract Number: | 0 |
| Location Category: | Roadway |
| Watershed HUC8: | Brandywine-Christina |
| Subdivision Name GIS: | Channin |
| Subdivision Name Field: | DARTMOUTH WOODS |
| Watershed: | Naaman's Creek |

Ready

Year: Select Report Year.. View Report

File Name:

Category:

Comments:

[Photo Link](#)

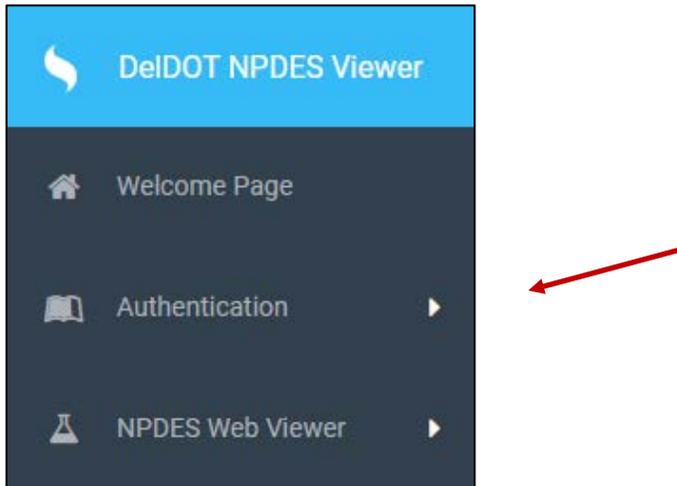
Previous < 0 -- 0 > Next

- Photos of structure, conveyance or BMP (if available) will display at bottom of Operations Panel.
- Select Previous or Next to see different photos of particular feature.
- Select Back to Feature List at top left of Operations panel to return to results page.

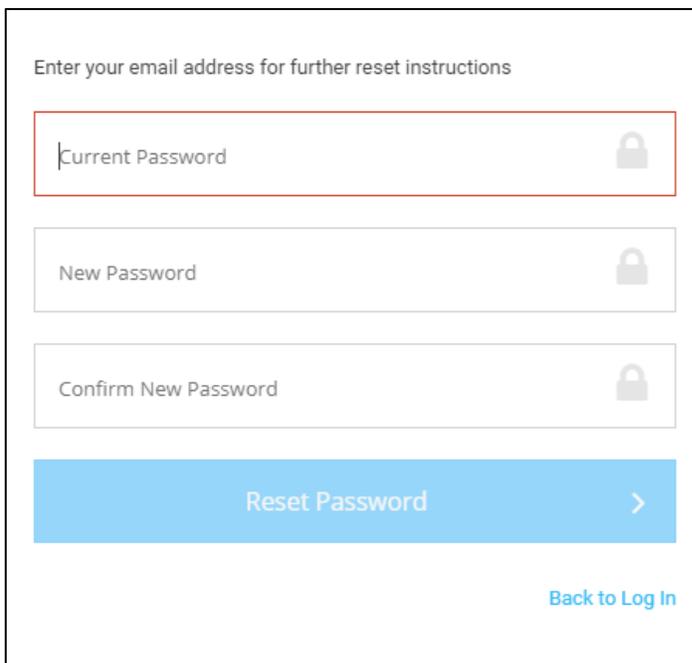
13.0 USER AUTHENTICATION

Changing a Password:

- Function allows user to change password when current password is known.
- On left side of screen select Authentication tab.

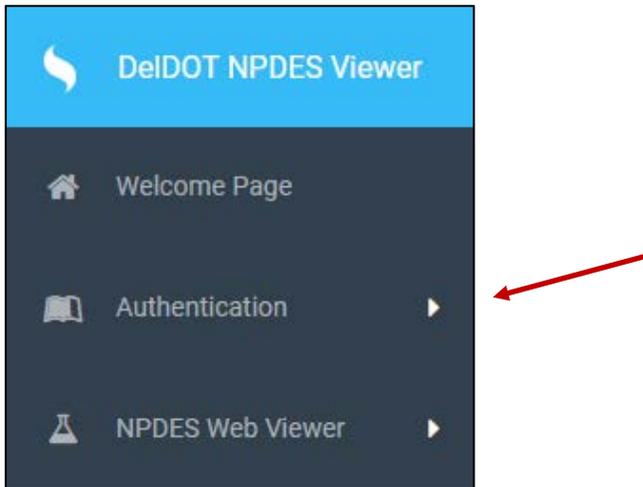


- Select Change Password.
- Complete following form:

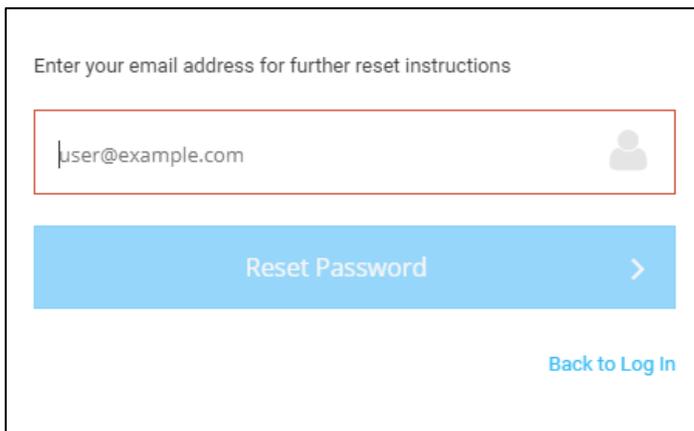
A screenshot of a password reset form. At the top, there is a text prompt: "Enter your email address for further reset instructions". Below this are three input fields, each with a lock icon on the right side. The first field is labeled "Current Password" and is highlighted with a red border. The second field is labeled "New Password" and the third is labeled "Confirm New Password". Below the input fields is a blue button labeled "Reset Password" with a right-pointing arrow. At the bottom right of the form, there is a blue link labeled "Back to Log In".

Resetting a Password:

- Function allows user to reset password when current password is unknown.
- On left side of screen select Authentication tab.



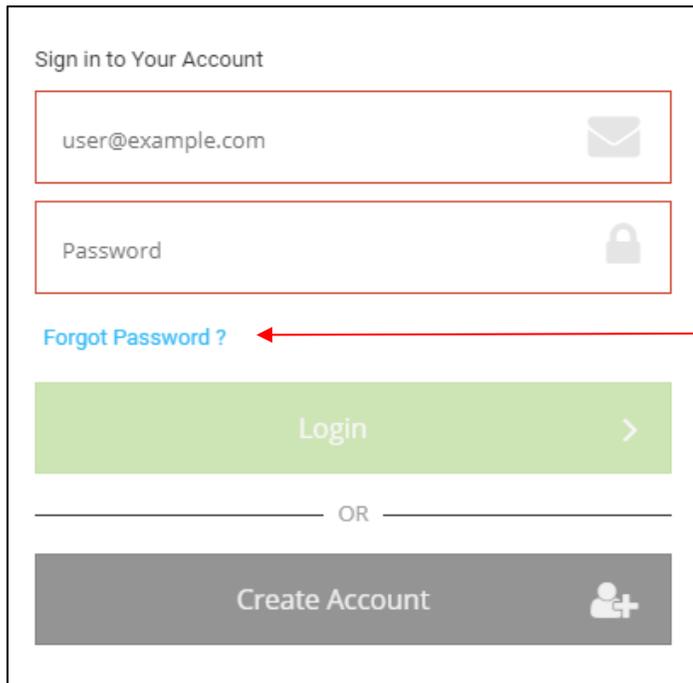
- Select Password Reset.
- Complete following form:

A screenshot of the password reset form. The form is white with a black border. At the top, it says 'Enter your email address for further reset instructions'. Below this is a text input field containing 'user@example.com' and a user icon. Below the input field is a blue button with the text 'Reset Password' and a right-pointing arrow. At the bottom right of the form is a blue link that says 'Back to Log In'.

- Instructions will be sent to user's email to complete password reset.

Forgot a Password:

- If user forgets password and is not logged into Web Viewer, user may select “Forgot Password?” on Login screen.

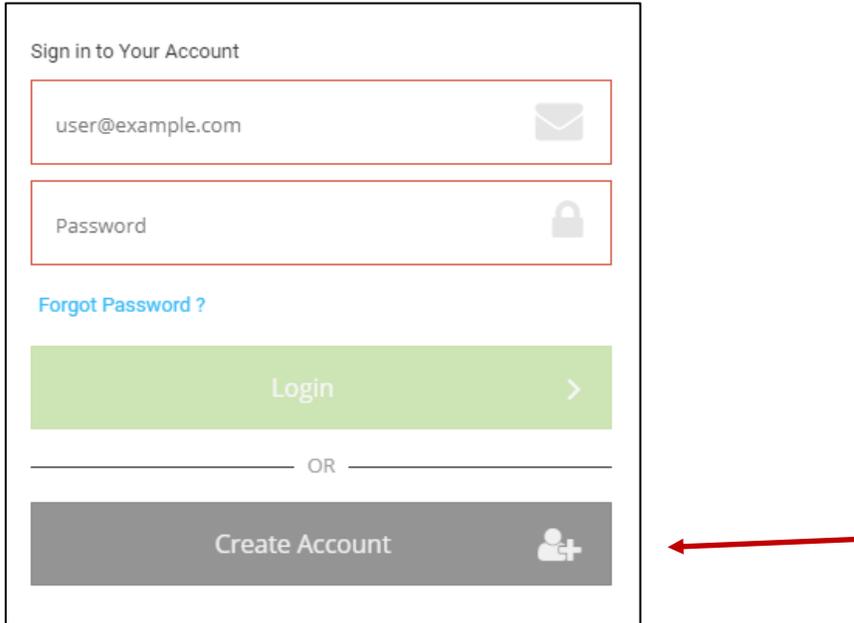


The screenshot shows a login interface titled "Sign in to Your Account". It features two input fields: one for an email address (containing "user@example.com" and an envelope icon) and one for a password (containing "Password" and a lock icon). Below these fields is a blue link labeled "Forgot Password?". A red arrow points from the right side of the page to this link. Below the link is a green "Login" button with a right-pointing chevron. Underneath the login button is a horizontal line with the word "OR" in the center. At the bottom is a grey "Create Account" button with a person and plus sign icon.

- Further instructions will be sent to user’s email address.
- After logging in with password sent to user in email, user may change password by following Changing a Password instructions.

Creating a New Account:

- On Welcome Page, select Create Account.



Sign in to Your Account

user@example.com

Password

[Forgot Password ?](#)

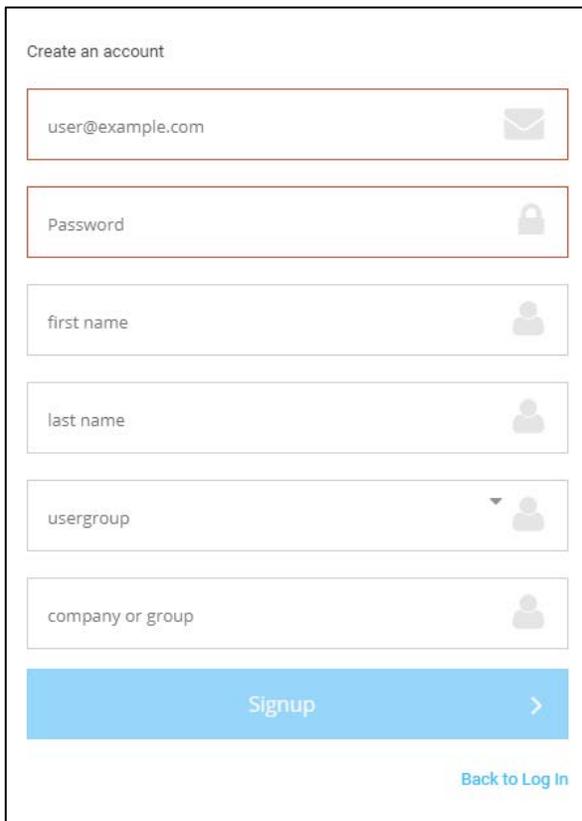
Login >

OR

Create Account 

A red arrow points to the 'Create Account' button.

- Complete following form:



Create an account

user@example.com

Password

first name

last name

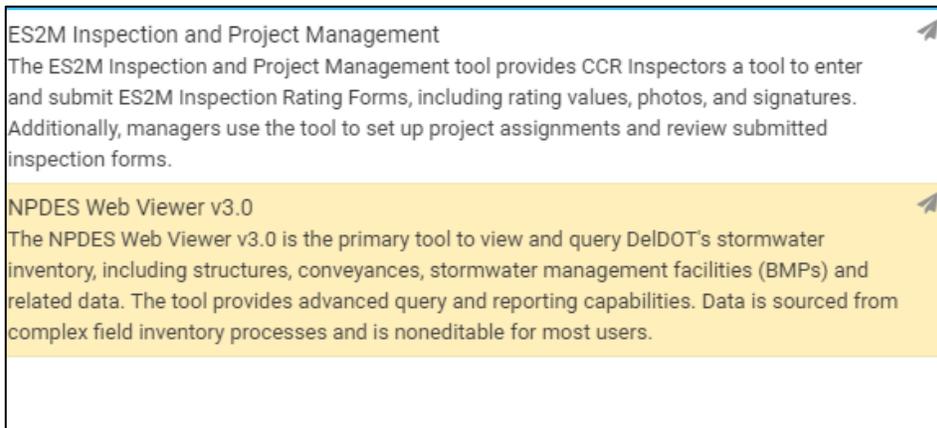
usergroup

company or group

Signup >

[Back to Log In](#)

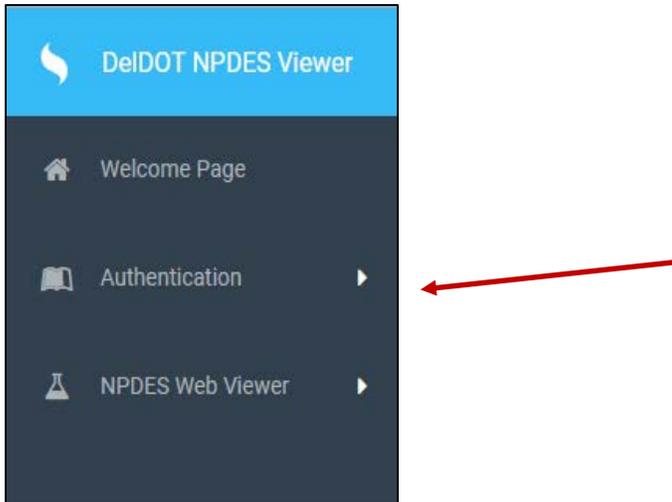
- **Note:**
Created password must contain the following: (1) at least 6 characters; (2) at least 1 digit (0-9); (3) at least 1 uppercase letter (A-Z); (4) at least 1 character that is not a letter or a digit (\$).
- Confirmation email will be sent to user’s email address. User must click on link in email to confirm account.
- Second email will be sent once account is confirmed, confirming that the request for an account has been sent to System Administrator for review.
- Once System Administrator confirms account, third email will be sent notifying user that account was approved. The email also contains a link to login to Web Viewer.
- After logging in, user must request permission to use NPDES Web Viewer.
- After logging in, select paper airplane next to NPDES Web Viewer v3.0.



- Confirmation email will be sent to notify user that System Administrator has received and is reviewing request for access to NPDES Web Viewer.
- Second confirmation email will be sent when System Administrator has granted access to NPDES Web Viewer.
- User will be assigned specific role with different viewing and editing privileges.

Activating/Deactivating an Account

- **Note:** Only users in admin roles can make adjustments to other user's accounts.
- When new user requests access to new account, admin will be notified via email.
- Admin then must log in to Web Viewer and navigate to User Admin tab on left panel of screen.



- Admin must navigate to new user's email in user list and double click on email address.
- Admin then must change user status by selecting drop-down arrow in column titled Status to either Deactivated or Active. Active grants user permission to use Web Viewer. Select Update to stop editing.

| Emailed | Status | Actions |
|---------|--------|---|
| true | Active |   |

- After user requests permission to use NPDES Web Viewer, Admin will receive another email directing Admin to edit user's account.
- Admin must navigate back to User Admin tab and find name of desired user.
- Select Edit tool  under Actions column in row of specific user.
- Update user's role by selecting drop-down arrow next to Roles. User may have more than one role in Web Viewer. Admin may grant user access to NPDES Web Viewer by selecting desired role relating to NPDES.