

NJDEP MS4 Inventory and Mapping Assistance

Presented at the
2018 ACWA National Stormwater Roundtable

Atlanta, Georgia

February 23, 2018

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Current Permit Status

- Final permit issued on November 9, 2017
- Permit effective on January 1, 2018

Why Inventory?

- MS4 Permittees Required to Operate and Maintain Stormwater Management Facilities (SMF)
- MS4 Permittees Required to Ensure Operation and Maintenance of All Privately Owned SMF

Why Inventory?



Why Inventory?



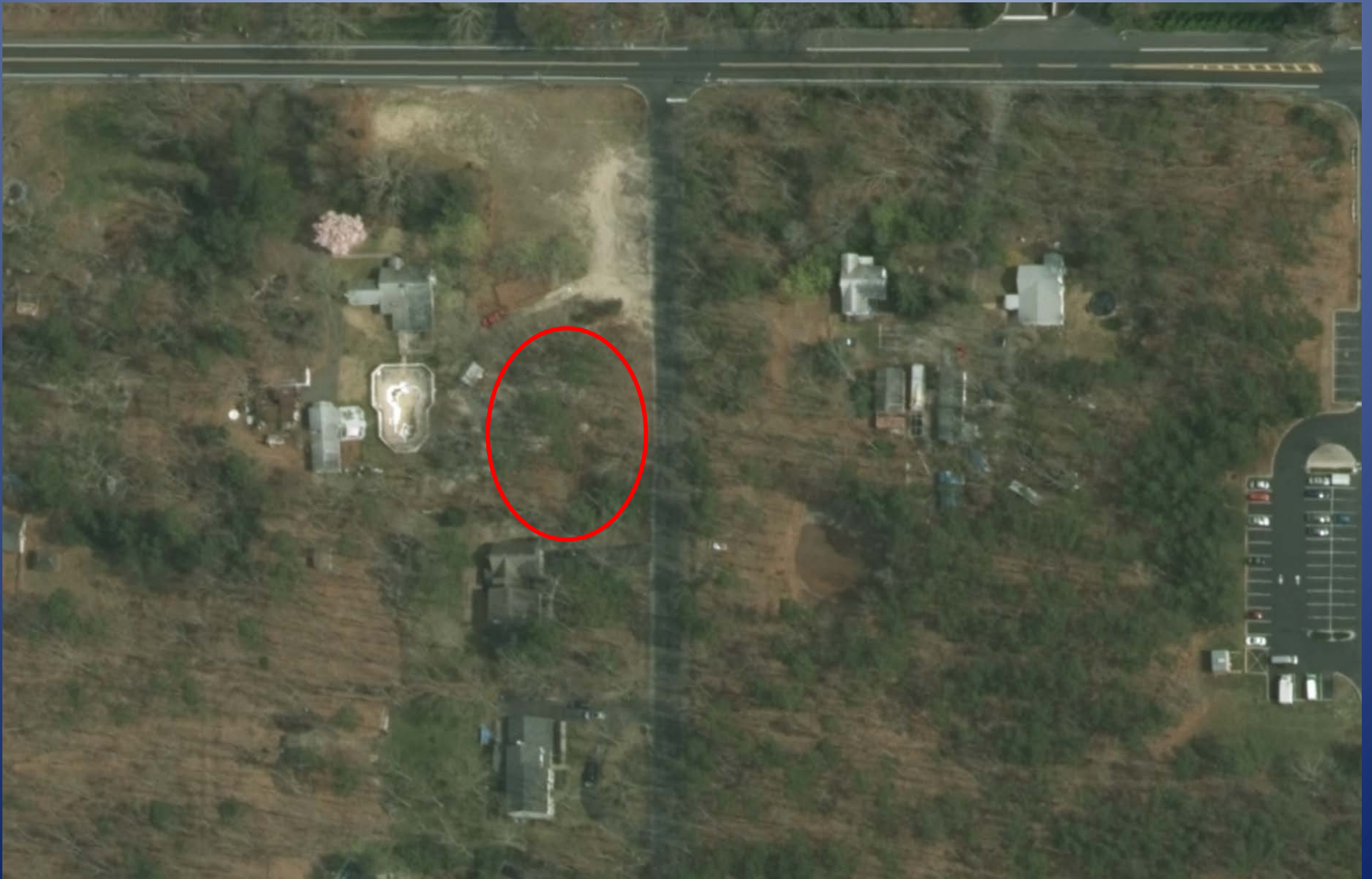
Why Inventory?



Why Inventory?

- MS4 Permittees Required to Operate and Maintain Stormwater Management Facilities (SMF)
- MS4 Permittees Required to Ensure Operation and Maintenance of All Privately Owned SMF
- How Can Operation and Maintenance Be Performed Properly Without Knowing What Exists and Where it Exists

Why Inventory?



Why Inventory?



Why Inventory?

- MS4 Permittees Required to Operate and Maintain Stormwater Management Facilities (SMF)
- MS4 Permittees Required to Ensure Operation and Maintenance of All Privately Owned SMF
- How Can Operation and Maintenance Be Performed Properly Without Knowing What Exists
- Proper Operation and Maintenance Decreases Localized Flooding and Improves Water Quality

Why Inventory?



Photo courtesy of Camden SMART

Why Inventory?

- Meet the Requirement to Develop, Update, and Maintain an Outfall Pipe Map
- Assist in Detecting and Remediating Stream Scouring
- Assist in Detecting and Eliminating Illicit Discharges

NJDEP Inventory & Mapping Assistance

- Creation of a data dictionary or template for 6 stormwater infrastructure feature classes

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Outfall Pipes



Stormwater Management
Basins



Subsurface Infiltration/
Detention



Manufactured Treatment
Devices



Green Infrastructure



Storm Drain Inlets

NJDEP Inventory & Mapping Assistance

- Creation of a data dictionary or template for 6 stormwater infrastructure feature classes
- Development of multiple collection methodologies to suit different levels of GIS and GPS experience

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Untitled - ArcMap

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 - Land Use 2012
 - AGRICULTURE
 - BARREN LAND
 - FOREST
 - URBAN
 - WATER
 - WETLANDS

Create Features

<Search>

There are no templates to show.

Table

Util_stormwater_outfall

OBJECTID *	SHAPE *	OutfallType	Outfall_ID	OwnerType	Owner	OutfallDescription	OutfallCondition	PipeMaterial	PipeShape	PipeHeight	PipeWidth	HeadwallC
1	Point	Outfall	<Null>	Municipal	Brick Township	<Null>	Unknown	<Null>	<Null>	<Null>	<Null>	<Null>
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15	Point	Outfall	<Null>	<Null>	<Null>	<Null>	Unknown	<Null>	<Null>	<Null>	<Null>	<Null>

1 (0 out of 13567 Selected)

Util_stormwater_outfall

Construction Tools

Select a template.

DEP Data Data Layers: Counties Imagery: County/Muni Selector:

315618.115 789355.145 Feet

NJDEP Inventory & Mapping Assistance

Test [Compatibility Mode] - Excel

Ebersberger, Timothy

File Home Insert Page Layout Formulas Data Review View Developer Tell me what you want to do

Cut Copy Paste Format Painter Clipboard Font Alignment Number Conditional Formatting Table Styles Cells Editing

Normal Bad Good Neutral Calculation Check Cell Explanatory T... Input Linked Cell Note

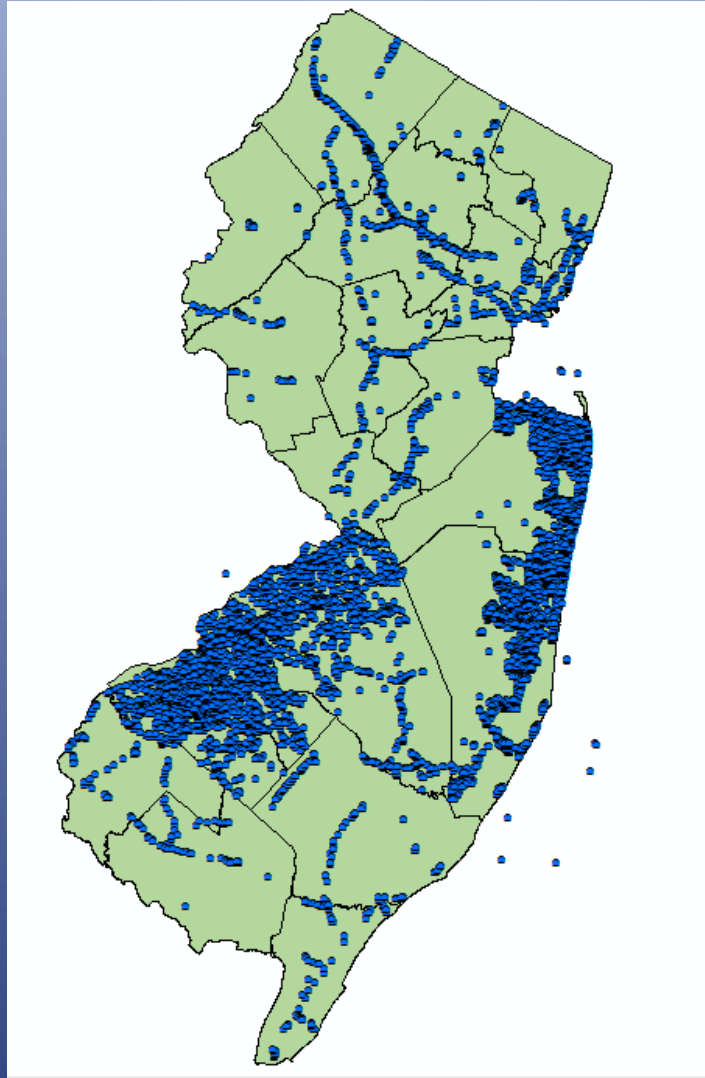
OBJECTID

	A	B	C	D	E	F	G	H	I	J	K	L	M
	OBJECTID	Outfall_ID	County	Municipality	RoadName	Owner Type	Outfall Type	PipeMaterial	PipeShape	PipeHeight	PipeWidth	HeadwallStructure	BMP\$
7453	7452	Somerset	Bound Brook Borough			State	Concrete headwall	Concrete	Circular	24	24		
7454	7453	Somerset	Bound Brook Borough			State	Concrete headwall	Concrete	Circular	60	60		
7455	7454	Somerset	Bound Brook Borough			State		Concrete	Circular	30	30		
7456	7455	Somerset	Bound Brook Borough			State		Clay					
7457	7456	Somerset	Bound Brook Borough			State	Pipe in headwall	Concrete	Circular	24	24		
7458	7457	Somerset	Bound Brook Borough			State	Pipe in headwall	Clay	Circular	15	15		
7459	7458	Somerset	Bound Brook Borough			State	Pipe in headwall	Concrete	Circular	18	18		
7460	7459	Somerset	Bound Brook Borough			State	Pipe in headwall	Clay	Circular	15	15		
7461	7460	Somerset	Raritan Borough			State		Metal	Circular	15	15		
7462	7461	Somerset	Raritan Borough			State		Concrete	Circular	18	18		
7463	7462	Middlesex	Middlesex Borough			State	Pipe in headwall	Concrete					
7464	7463	Middlesex	Middlesex Borough			State		Concrete	Circular	18	18		
7465	7464	Middlesex	Middlesex Borough			State	Pipe in headwall	Concrete	Circular	18	18		
7466	7465	Middlesex	Middlesex Borough			State		Concrete	Circular	15	15		
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7468	7467	Middlesex	Middlesex Borough			State	Pipe in headwall	Concrete	Circular	42	42		
7469	7468	Middlesex	Middlesex Borough			State	Pipe in headwall	Concrete	Circular	42	42		
7470	7469	Middlesex	Middlesex Borough			State	Pipe in headwall	Concrete	Circular	36	36		
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7472	7471	Gloucester	Franklin Township			State	Pipe in headwall	Concrete	Circular	18	18		
7473	7472	Somerset	Green Brook Township			State		Concrete	Circular	24	24		
7474	7473	Hunterdon	Clinton Town			State	Pipe in headwall	Concrete	Circular	24	24		
7475	7474	Hunterdon	Clinton Town			State	Pipe in headwall	Metal	Circular	24	24		
7476	7475	Hunterdon	Clinton Town			State	Pipe	Concrete	Circular	15	15		
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7492	7491	Hunterdon	Clinton Town			State	Pipe in headwall	Concrete	Circular	24	24		
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7495	7494	Somerset	Bridgewater Township			State	Concrete headwall	Metal	Circular	15	15		
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7497	7496	Somerset	Bridgewater Township			State	Pipe in headwall	Metal	Circular	12	12		
7498	7497	Somerset	Bridgewater Township			State		Clay	Circular	12	12		
7499	7498	Somerset	Bridgewater Township			State	Pipe in headwall	Concrete	Circular	18	18		
7500	7499	Somerset	Bridgewater Township			State	Concrete headwall	Concrete	Circular	18	18		

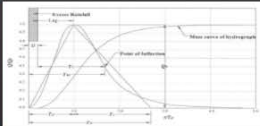
NJDEP Inventory & Mapping Assistance

- Creation of a data dictionary or template for 6 stormwater infrastructure feature classes
- Development of multiple collection methodologies to suit different levels of GIS and GPS experience
- Incorporation of existing data for use as a starting point

NJDEP Inventory & Mapping Assistance



NJDEP Inventory & Mapping Assistance



New Jersey Hydrologic Modeling Database

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Use the filter below to quickly zoom to projects at the county level

County Filter

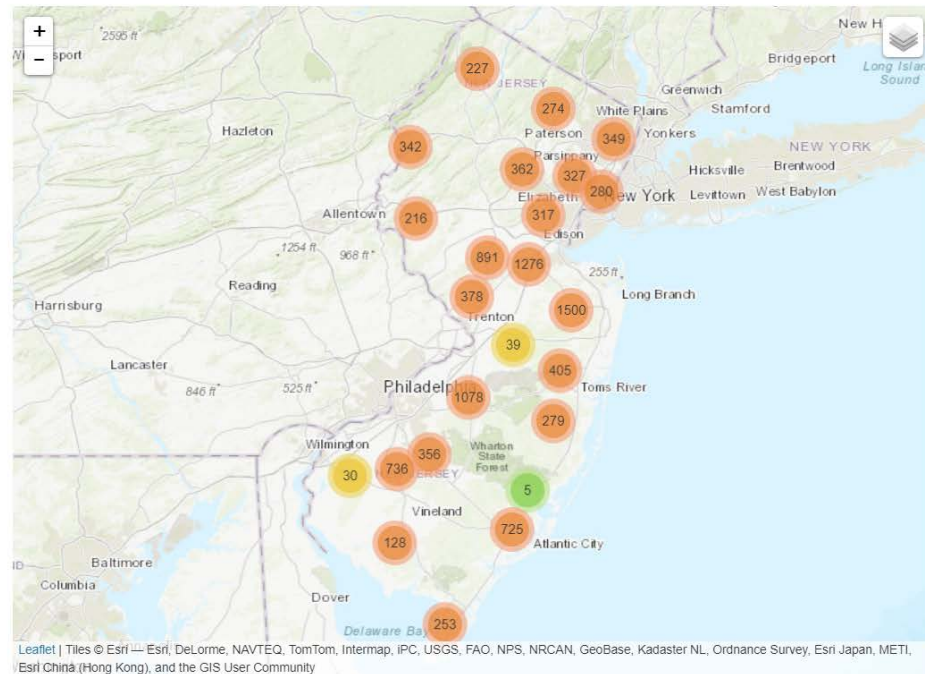
Reset Map

Select All

Search for a desired location in the search box, or click on a numbered dot to zoom in. The number reflects the number of projects within the local area.

Type an address, city, or zipcode to zoom to a project location.

Search Options

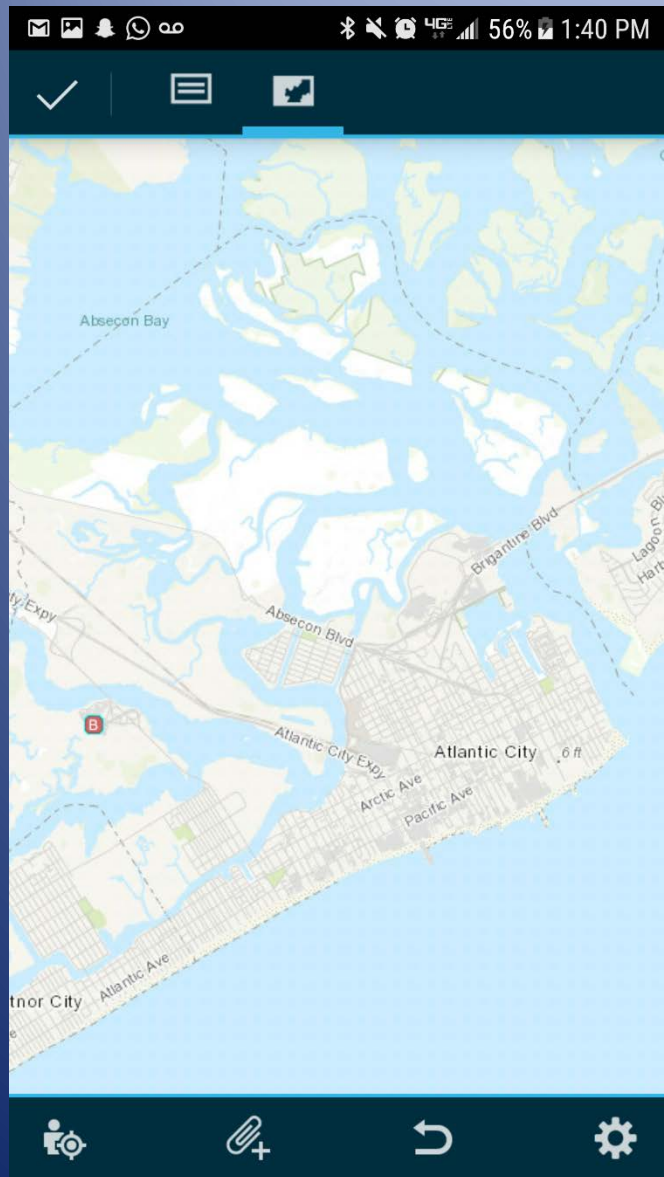


Leaflet | Tiles © Esri, DeLorme, NAVTEQ, TomTom, Intermap, IPC, USGS, FAO, NPS, NRCAN, GeoBase, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), and the GIS User Community

NJDEP Inventory & Mapping Assistance

- Creation of a data dictionary or template for 6 stormwater infrastructure feature classes
- Development of multiple collection methodologies to suit different levels of GIS and GPS experience
- Incorporation of existing data for use as a starting point
- Detailed guidance on use of collection methodologies
- In person training and assistance

Stormwater Basin Inventory and Mapping Example



Stormwater Basin Inventory and Mapping Example

✓ | ☰ | 🗺️

ORGANIZATION
Atlantic County

FACILITY NAME
Atlantic City

LOCAL ID

OWNER TYPE
School District

STORMWATER MANAGEMENT BASIN TYPE
<No value>

TRASH RACK INSTALLED
<No value>

PRETREATMENT
<No value>

FENCING PRESENT

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<No value>

Bioretention Basin

Constructed Wetland

Detention Basin

Infiltration Basin

Wet Pond (Retention Basin)

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1 2 3 4 5 6 7 8 9 0

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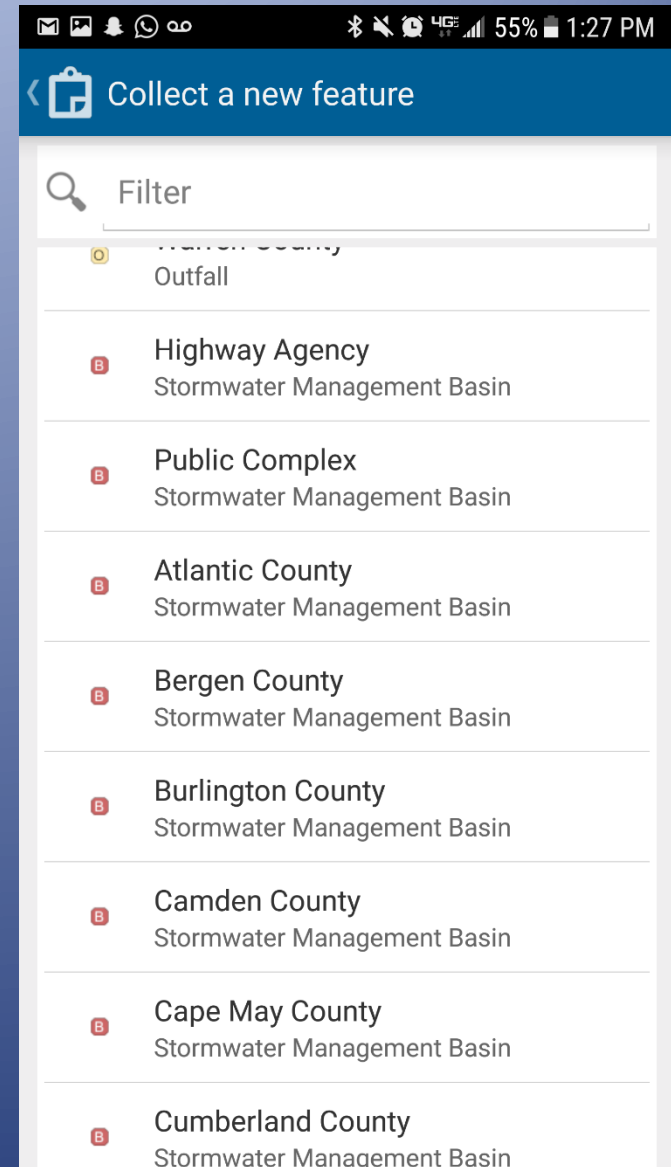
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Stormwater Basin Inventory and Mapping Example



Stormwater Basin Inventory and Mapping Example



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FACILITY NAME
<No value>

LOCAL ID

OWNER TYPE
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STORMWATER MANAGEMENT BASIN TYPE
<No value>

TRASH RACK INSTALLED
<No value>

PRETREATMENT
<No value>

FENCING PRESENT
<No value>

CONTRIBUTING DRAINAGE AREA
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