

## **Green Stormwater Infrastructure Database Research**

**April 17, 2018**

### Introduction

The New Jersey Department of Environmental Protection (NJDEP) updated the state's stormwater management regulations in 2004 (N.J.A.C. 7:8) to include requirements to maintain annual average groundwater recharge and remove 80% of the total suspended solids (TSS) for all major development<sup>1</sup>. One way to achieve the groundwater recharge and TSS removal requirements is by installing green infrastructure (GI). These requirements should have resulted in many green infrastructure infiltration and filtering practices to be installed throughout the state.

The goal of this project was to examine the development practices of ten municipalities to determine if green infrastructure practices have been installed and if so, were data readily available to characterize the design and functioning capacity of these practices. New Jersey Future commissioned this research to inform its assessment of green infrastructure installations in the New Jersey William Penn cluster areas, and to inform Jersey Water Works' effort to measure progress towards its goal of installing green infrastructure.

### Methodology

For the purposes of the database,

*"Green Infrastructure" refers to methods of stormwater management that reduce wet weather/stormwater volume, flow, or changes the characteristics of the flow into combined or separate sanitary or storm sewers, or surface waters, by allowing the stormwater to infiltrate, to be treated by vegetation or by soils; or to be stored for reuse. Green Infrastructure (GI) methods are management practices that address stormwater runoff through soils, or reuse. GI practices include, but are not limited to, pervious paving, bioretention basins, vegetated swales, and cisterns. (NJDEP, 2018, <http://www.nj.gov/dep/gi/>)*

Rain gardens, bioswales, infiltration basins, infiltration trenches, and stormwater planters are also included as green infrastructure for this report.

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<sup>1</sup> "Major development" means any "development" that ultimately disturbs one or more acres of land or increases impervious surface by one-quarter acre or more. Disturbance, for the purpose of this rule, is the placement of impervious surface or exposure, movement of soil or bedrock, and/or clearing, cutting, or removing of vegetation. Projects undertaken by any government agency which otherwise meets the definition of "major development" but which do not require approval under the Municipal Land Use Law, N.J.S.A. 40:55D-1 et seq., are also considered "major development."

The goal of the database is to identify and describe green infrastructure projects, gather relevant information for measuring progress toward goals, and obtain ownership and contact information. Data fields in these categories were chosen considering the usefulness of the information and ease of obtaining the data. Some of the key fields considered include: Site Name, GI Practice Type, Address, GI Size, Drainage Area (DA), Percent DA Impervious, Gallons Per Year Treated from Impervious Area, Project Description, Maintenance Responsibility, Approximate Plan/Build Date, and Data Source.

After speaking with several municipal officials, municipal engineers, and planners, it was determined that there would not be a good response to a survey that requested green infrastructure information on past developments, and many of the professionals had limited time to assemble the information that was required for the database. Therefore, the following procedure was followed:

- 1) The planning board meeting minutes for each of the ten towns were reviewed to identify proposed development projects that may have been classified as “major development” and would therefore be required to satisfy the groundwater recharge and TSS removal requirements. The meeting minutes were reviewed back to 2004 if they were available.
- 2) The New Jersey Hydrologic Modeling Database (<http://hydro.rutgers.edu/>) was reviewed to identify all stormwater management facilities that were included as part of proposed development projects since 2004 in each of the ten municipalities. The information in this database was assembled by the local soil conservation districts and mostly taken from development plans that had been submitted to the soil conservation district for permits. Based upon conversations with the New Jersey Agricultural Experiment Station (NJAES) Office of Research Analytics, the HMD is updated on an annual basis. The soil conservation districts provided 866 new projects in 2016 and 997 in 2017 which were added to the database.
- 3) The land use geographic information system (GIS) layers from NJDEP were also reviewed to identify new development that was constructed after 2002, which was the land use dataset closest to the passage of the 2004 regulations.
- 4) The Rutgers Cooperative Extension (RCE) Water Resources Program database was reviewed to identify green infrastructure demonstration projects that were installed in the ten municipalities.
- 5) Local organizations were contacted to determine if they could identify green infrastructure projects in these ten municipalities.
- 6) The data sources were cross-reference to eliminate duplicate identified sites and to identify if sufficient information is available to populate the green infrastructure database.
- 7) Each municipality was visited to review development plans for the projects identified in #1 and #2 to collect information on green infrastructure projects for inclusion in the database as feasible.
- 8) The last step was to conduct site visits to determine if the green infrastructure practices had been installed and were functioning as designed. Due to the large number of sites, not all sites were visited.

## Overall Results

Review of the planning board minutes yielded 78 sites in the ten municipalities. This was a time consuming process, and it was difficult to determine if projects in the planning board minutes were major development or some other type of project. Determining if the projects were actually constructed yet was difficult as well. Also, not all municipalities are diligent about posting their planning board minutes online. Two of the municipalities had planning board minutes available online back to 2010 while Bridgeton only had their 2017 minutes online.

The review of the New Jersey Hydrologic Modeling Database (HMD) produced somewhat better results. The HMD yielded 334 stormwater management facilities and in many cases, identified which facilities were infiltration systems which would be classified as green infrastructure. When comparing the sites identified through the HMD and the planning board minutes, approximately 29 sites were identified as duplicates. This discrepancy can be attributed to several factors including:

- Some of the projects in the planning board minutes were not “major development” and did not require stormwater management
- Some of the projects in the planning board minutes may have been approved but have yet to be constructed
- Many of the municipalities only provide planning board minutes for the last few years and HMD contains projects prior to this time period; therefore, the HMD yielded many more projects

There are some issues with the HMD. The HMD has various levels of detail depending on the county and the municipality. Also, many of the stormwater management facilities in the HMD did not have construction dates associated with the stormwater facility, making it difficult to determine whether it was built after the 2004 stormwater regulations update.

The review of the land use data did not prove to be very helpful. While newly developed areas could be identified, there was no easy way to tell whether the projects were major development and if they had any stormwater management. A large time investment would be required to search through these areas, but a future more comprehensive database could attempt to make use of such a procedure to identify additional sites.

The RCE Water Resources Program databased yielded thirteen green infrastructure projects at nine sites throughout these ten municipalities.

Only one project that was not included in any of the other data sources was identified by a local organization. This project was a rain garden in Newton, and the Wallkill River Watershed Management Group provided the location of this green infrastructure project. No data were available for this project, so field data were collected to determine the characteristics of the design.

## Results by Municipality

### ***Bridgeton***

Planning board meeting minutes were only available for 2017 and yielded no major development projects. The HMD yielded nine sites that have a stormwater infiltration system. Sufficient data was available from the HMD for each project to populate the green infrastructure database with one site excluded. The RCE Water Resources Program has not conducted site visits of these nine sites. The RCE Water Resources Program assisted local partners with installing two rain gardens in Bridgeton. All the needed information for these sites is available along with photographs. These sites were visited in February to identify maintenance needs. One site needs heavy maintenance, while the second site requires little to no maintenance. Local partners have not identified any additional green infrastructure projects in Bridgeton.

A total of ten sites were accepted into the final database for Bridgeton.

### ***Byram***

In the planning board meeting minutes, three development projects were identified that may have green infrastructure practices. The RCE Water Resources Program reviewed the plans for these projects at the municipal building. Of the three, only one had an infiltration system. The town identified an additional site that had an infiltration component. All the information for these projects was obtained from the development files. One site was identified in the HMD as having an infiltration system. Information was pulled from the HMD to populate the green infrastructure database for this site. The RCE Water Resources Program assisted local partners with installing one rain garden in Byram. All the needed information is available for this site, but it has not been recently inspected. Local partners have not identified any additional green infrastructure projects in Byram.

A total of four sites were accepted into the final database for Byram.

### ***Hampton***

Four development projects were identified in the planning board minutes, and an additional five projects were identified in the HMD. The RCE Water Resources Program reviewed the plans for these projects at the municipal building to gather additional information. Of the nine projects, five projects had an infiltration component, but one was not yet constructed. All the information for these projects was obtained from the development files or supplemented with data from the HMD. The RCE Water Resources Program assisted local partners with installing a rain garden in Hampton at the McKeown Elementary School. All the needed information is available for this site with photographs. Of the five completed sites, only the McKeown School has been visited. Local partners have not identified any additional green infrastructure projects in Hampton.

A total of six sites were accepted into the final database for Hampton.

## *Lopatcong*

Five development projects were identified in the planning board minutes, and one of these was also identified as an infiltration system in the HMD. Of the five projects, two were not infiltration systems, and the remaining three have yet to be built. The RCE Water Resources Program assisted local partners with installing a rain garden at the Lopatcong Public Pool. All the needed information is available for this site with photographs. Local partners have not identified any additional green infrastructure projects in Lopatcong.

Only the Lopatcong Public Pool project was accepted into the final database for Lopatcong.

## *Newton*

Seventeen development projects were identified in the planning board minutes. The RCE Water Resources Program spent several hours reviewing the plans for these projects at the municipal building. Of the seventeen, only three had infiltration systems. All the information for these three projects was obtained from the development files. After reviewing the files, each of the three sites were visited. Only one project had been installed, and the two remaining projects were under construction. One additional project was identified in the HMD as an infiltration stormwater system, and information was taken from the HMD to populate the green infrastructure database. The RCE Water Resources Program assisted local partners in installing a rain garden at Memory Park in Newton. All the needed information for this site is available along with photographs. Finally, a rain garden was identified by the Wallkill River Watershed Management Group. This site was visited, and information was collected to incorporate this site into the green infrastructure database.

A total of five sites were accepted into the final database for Newton.

## *Phillipsburg*

Planning board minutes were only available online for the years 2015 through 2017. These yielded three development sites, none of which had any green infrastructure components. Twelve additional sites were identified in the HMD, but all of them are listed as detention basins and do not classify as green infrastructure. The RCE Water Resources Program and the local partners have not installed any green infrastructure practices in Phillipsburg. This is somewhat alarming since Phillipsburg has a high amount of impervious cover and could certainly benefit from green infrastructure practices.

No sites were accepted into the final database for Phillipsburg.

## *Pilesgrove*

Three development projects were identified in the planning board meeting minutes. Due to the nature of the development, none of these project have green infrastructure practices. Ten additional sites were identified in the HMD. Three of these have infiltration systems and were incorporated into the green infrastructure database. None of these sites have been visited. The RCE Water Resources Program assisted local partners with installing a rain garden at the Pilesgrove Municipal Building. All the needed information for this site is available along with

photographs. Local partners have not identified any additional green infrastructure projects in Pilesgrove.

A total of four sites were accepted into the final database for Pilesgrove.

## ***Upper Deerfield***

Eight development projects were identified in the planning board minutes. Seven of these projects may have green infrastructure practices, but we were unable to schedule a meeting with the township to review their plans. Nineteen stormwater management facilities were identified in the HMD. Eight of these are identified as infiltration basins and seven had sufficient data in the HMD. The RCE Water Resources Program assisted local partners with installing a rain garden at the Upper Deerfield Municipal Building. All the needed information for this site is available along with photographs. Local partners have not identified any additional green infrastructure projects in Upper Deerfield.

A total of eight sites were accepted into the final database for Upper Deerfield.

## ***Vineland***

Thirty-two development projects were identified in the planning board minutes. A total of 210 stormwater management facilities were identified in the HMD. It appears that 110 of these sites have infiltration systems. While a majority of the data was extracted from the HMD, gaps in information were filed with a to Vineland's Engineering Department as possible. Several sites were excluded due to lack of clarity or insufficient data available. Although the RCE Water Resources Program and the local partners have not installed any green infrastructure practices in Vineland, the RCE Water Resources Program, the Association of New Jersey Environmental Commissions (ANJEC), and the American Littoral Society presented at a recent working meeting of the City Council. The City Council is excited about moving forward with green infrastructure projects in partnership with these three groups.

A total of 81 sites were accepted into the final database for Vineland.

## ***Woodstown***

One development project was identified in the planning board minutes, but this project did not require stormwater management. Four stormwater management facilities were identified in the HMD. One of these is identified as an infiltration basin, but was incorrectly placed in the database. The RCE Water Resources Program assisted local partners with installing two rain gardens and a porous asphalt parking lot in Woodstown. All the needed information for these projects is available along with photographs. All projects have recently been inspected. Local partners have not identified any additional green infrastructure projects in Woodstown.

Only the one project was accepted into the final database for Woodstown.

A total of 120 sites were included in the final database.

## Discussion

The combination of reviewing planning board minutes and the HMD was found to be a reasonable protocol to identify proposed development projects that may contain green infrastructure practices. While this is rather time consuming, it can be completed remotely without going to the municipality. In most cases, the HMD does contain data on stormwater management practices that can be used to populate the green infrastructure database. Since the HMD was assembled from data provided by the local soil conservation districts, the data is not consistent and may need to be supplemented by data from the municipality.

A visit to the municipality to review development files is time consuming and needs to be completed by professionals that understand stormwater management and development. The files are often not very organized, and it takes time to extract the relevant information for the green infrastructure database.

While the HMD was found incredible useful for gathering data, some level of confirmation of the data was needed. A picture of a plan sheet is typically provided to help confirm the site, but sometimes not matching the point location and/or site name. The quality of the photos varies tremendously as well, so it sometimes is difficult to even use them at all to help confirm. Other times, the data for drainage areas were not accurate. Part of this problem is due to the quality of hydrology reports which was also observed in reviewing municipality files. Sometimes the hydrology reports are vague as to where drainage areas are being directed, so it is not always clear if the drainage areas are actually flowing into the practice or are simply flowing off site. Sometimes only curve numbers are given as well which gives no indication as to the percent of impervious cover. This is worsened by the fact that sometimes the analysis is on a site wide basis, so all the drainage data is lumped together and is impossible to figure out easily. Where errors or lack of clarity were found, this approach was taken to estimate drainage areas and percent impervious cover.

If at all possible, the database should contain photographs of the practice. It is also important to visit each site to determine if the practice was actually constructed and if it is functioning properly. This effort can be completed by trained interns to reduce the cost.

A limitation of this approach is that it will not include projects that do not undergo review by the planning board and/or soil conservation districts, including green infrastructure demonstration projects built by nonprofit organizations or any other projects built that do not trigger major development and still include GI.

## Database Fields

The following database fields were chosen for the database:

- Site\_ID: To give each project a unique identifier.
- Project Name
- GI Practice Type: To describe the type of project
- Street Address
- Municipality
- State (NJ)
- Postal (Zip Code)
- Latitude/Longitude: Needed to geolocate points
- Block/Lot
- GI Size (SF): This is sometimes presented as acre-ft (a storage volume) as that is the only way it is provided typically in stormwater reports and in the HMD
- Drainage Area (SF,acres): Representing the total drainage area flowing into the practice
- % Impervious: Percentage of the drainage area that is impervious
- Impervious Area (acres): Drainage Area \* % Impervious
- Gallons per year Treated Impervious (Annual): The volume of stormwater captured per year from the impervious portion of the drainage area only. For the pervious area, we would need to know the curve numbers and perform individual calculation for each to determine the annual capture.
- Design storm (Infiltration): The largest storm event where the system captures and infiltrates the entire volume of runoff. Where no information was given for the design storm, a two-year storm was assumed for most systems since the minimum standard for groundwater recharge in major development projects is the two-year storm.
- Land Use: General land use category
- Project Description: Basic description of what the project is and roughly where the practices are location
- Project Photos (Y/N): Whether pictures are available for the site. Any indicated with Y, we have photos available to provide for the project.
- Site Type: General description of what the site is.
- Maintenance responsibility: This was extracted where available, but most were assumed to just be the property owner since this is typically the case.
- Stormwater Management Performance Rating: General assessment of how the practice is working. This was indicated for projects that were recently visited.
- Built (Y/N): This is our best determination if the project has been built or not yet. Most sites that were not yet built were not added as they may not necessarily be built, but some that were unclear were left in.
- Approximate Plan/Built Date: This is a rough date that we could identify either on the plans or the latest document regarding the project. Some are listed as Prior to “Year” based on observations from Google street view.



- Source: Where the data primarily came from. The HMD sites include the link directly to the web page of the site on the database
- Notes: Any additional information that did not fit anywhere else or to provide additional clarity.

## Deliverables

- A printed version of the database
- Maps of each town showing the locations of the practices
- The excel file for the database
- ArcGIS point layer of the geolocated sites

## Next Steps

Continuing to create a methodology to easily incorporate sites without compromising both the accuracy and utility of the data is key to building the database further. An inaccurate database means everything needs to be verified before using it. One that is too general is simply not useful, and one that is too specific becomes hard to use and even more difficult to compile the data for. Balancing these is essential, and the database should also evolve over time. If something feels like it is missing from the database, it should be included. It is also worth considering which fields are required and which are optional. Perhaps it is worth recording sites that do not have drainage area information, so at least sites are mapped out. These sites can even be revisited at a later point to try and find the information or at least estimate it.

If the goal is to incorporate all the green infrastructure practices in the municipalities within all the New Jersey William Penn Clusters, the HMD can be used to begin this process. While this may not give a complete picture, it will allow the database to be quickly populated. This process also could be potentially automated through web data extraction programming. Since the stormwater facilities in the HMD were entered into the database from design plans that were approved by the local soil conservation district, some of the projects may not have been constructed yet. Therefore, field inspections may need to be conducted to confirm the location and condition of practices as well as if it actually was constructed. At a minimum, some level of confirmation from the HMD needs to be done to confirm the legitimacy of the data before incorporating it into the database.

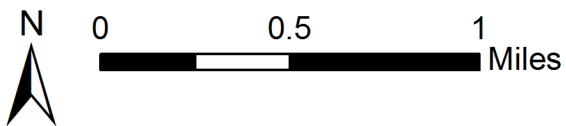
Once a green infrastructure database is completed with existing projects, a process for moving forward is needed. One method for obtaining the information on the green infrastructure practice that is needed to populate the database would be to require each municipal stormwater coordinator to submit the necessary data with their annual MS4 certification report that is submitted to NJDEP. This information should at least include drainage areas, impervious percentages, curve numbers, and the design storms listed separately for each practice. This should not be a time consuming process for the municipality because these data will be readily available in the stormwater reports that were submitted by the developer. The group managing the green infrastructure database would have to secure the data from the NJDEP and enter the data into the database, which could be a time consuming process but could be completed easily by a data entry intern. The alternative to this data collection method would be to require the soil conservation districts to collect the



appropriate information and incorporate it into their annual update of the HMD. These data can then be mined from the HMD and incorporated into the green infrastructure database.

Compiling the database should provide a useful source of information that will allow tracking of installed green infrastructure practices. The data collected should allow measurement of the impact of installed practices to better understand progress toward reaching set goals. When looking for sites to implement green infrastructure, it can provide a way of knowing which areas are already having their stormwater managed properly, so sites that do not already have management practices can be prioritized.

**Green Infrastructure Database**  
**Municipal Maps**

# Green Infrastructure Database: Bridgeton City



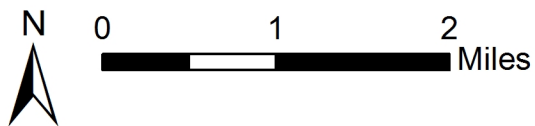
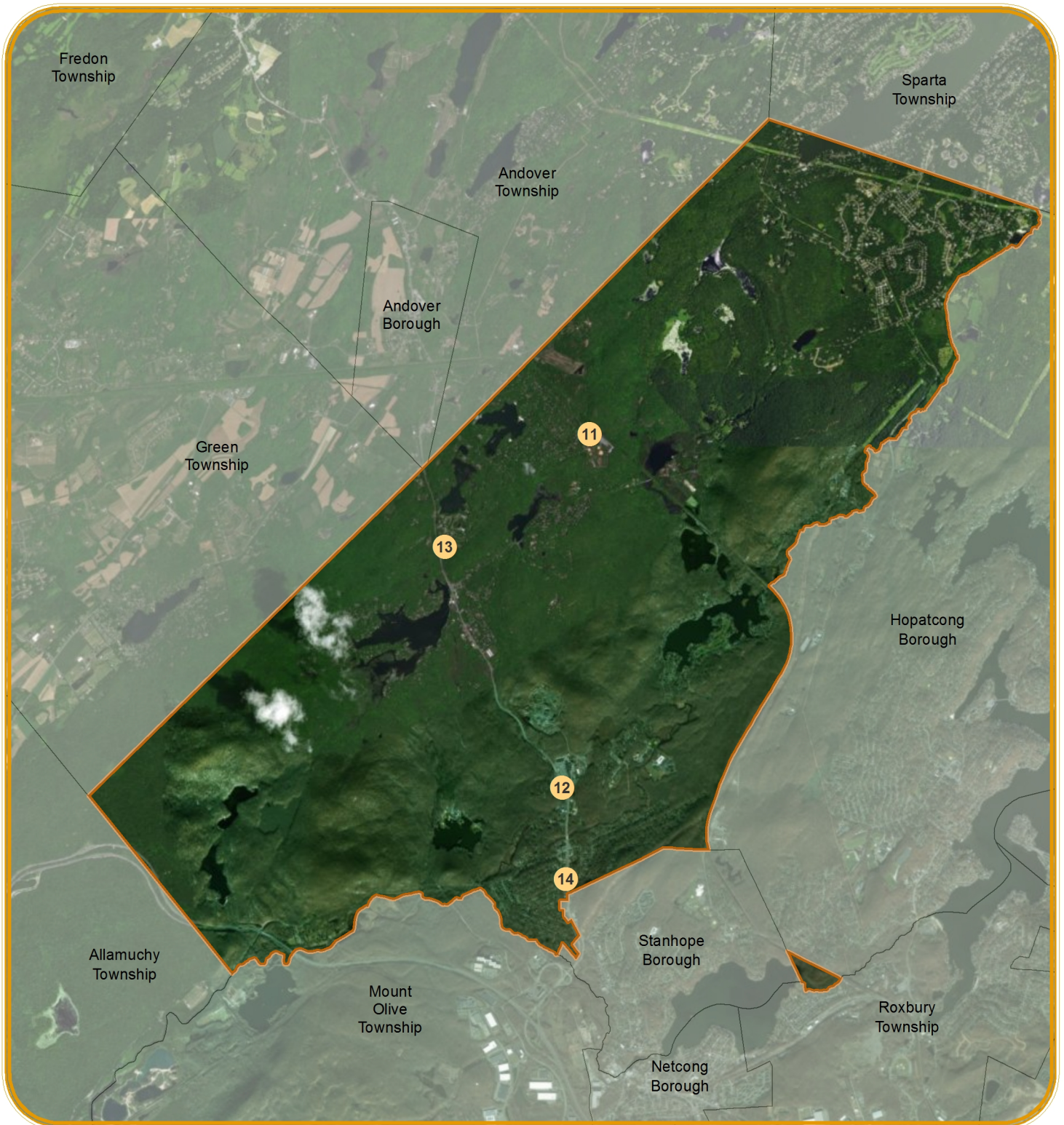
-  Bridgeton City
-  Bridgeton Green Infrastructure Sites



Map Created by Rutgers Cooperative Extension Water Resources Program

\*Please see attachment for full description of Green Infrastructure Practice listed by Site ID number

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping,

# Green Infrastructure Database: Byram Township



-  Byram Township
-  # Byram Green Infrastructure Sites



Map Created by Rutgers Cooperative Extension Water Resources Program

\*Please see attachment for full description of Green Infrastructure Practice listed by Site ID number

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping,

# Green Infrastructure Database: Hampton Township

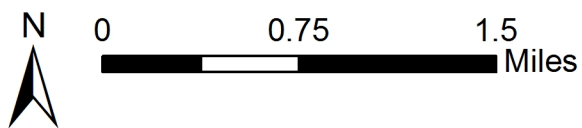




-  Hampton Township
-  Hampton Green Infrastructure Sites

Map Created by Rutgers Cooperative Extension Water Resources Program  
Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping,

\*Please see attachment for full description of Green Infrastructure Practice listed by Site ID number

# Green Infrastructure Database: Lopatcong Township



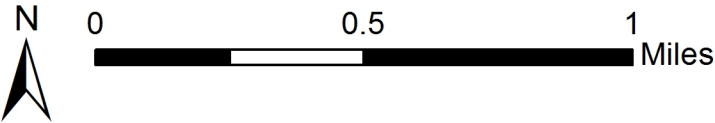
-  Lopatcong Township
-  Lopatcong Green Infrastructure Sites



Map Created by Rutgers Cooperative Extension Water Resources Program

\*Please see attachment for full description of Green Infrastructure Practice listed by Site ID number

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping,

# Green Infrastructure Database: Newton Town



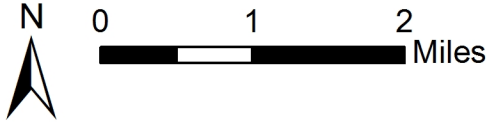
-  Newton Town
-  # Newton Green Infrastructure Sites



Map Created by Rutgers Cooperative Extension Water Resources Program  
Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar  
Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping,

\*Please see attachment for full  
description of Green Infrastructure  
Practice listed by Site ID number



# Green Infrastructure Database: Pilesgrove Township

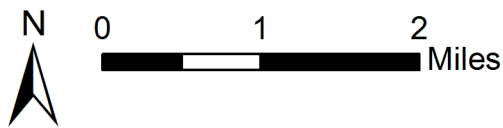
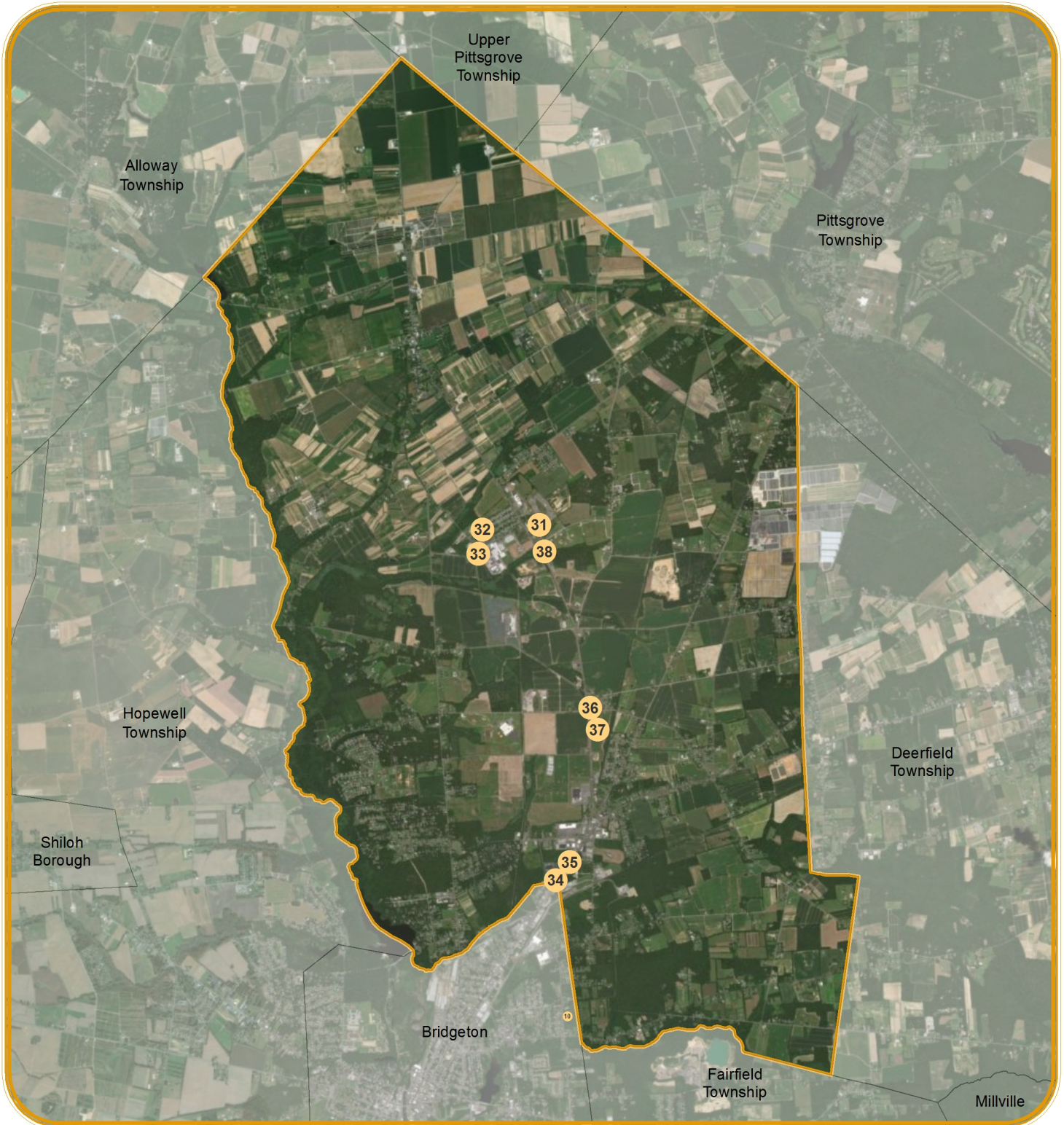




-  Pilesgrove Township
-  Pilesgrove Green Infrastructure Sites

Map Created by Rutgers Cooperative Extension Water Resources Program  
Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping,

\*Please see attachment for full description of Green Infrastructure Practice listed by Site ID number

# Green Infrastructure Database: Upper Deerfield Township

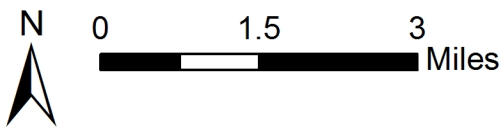
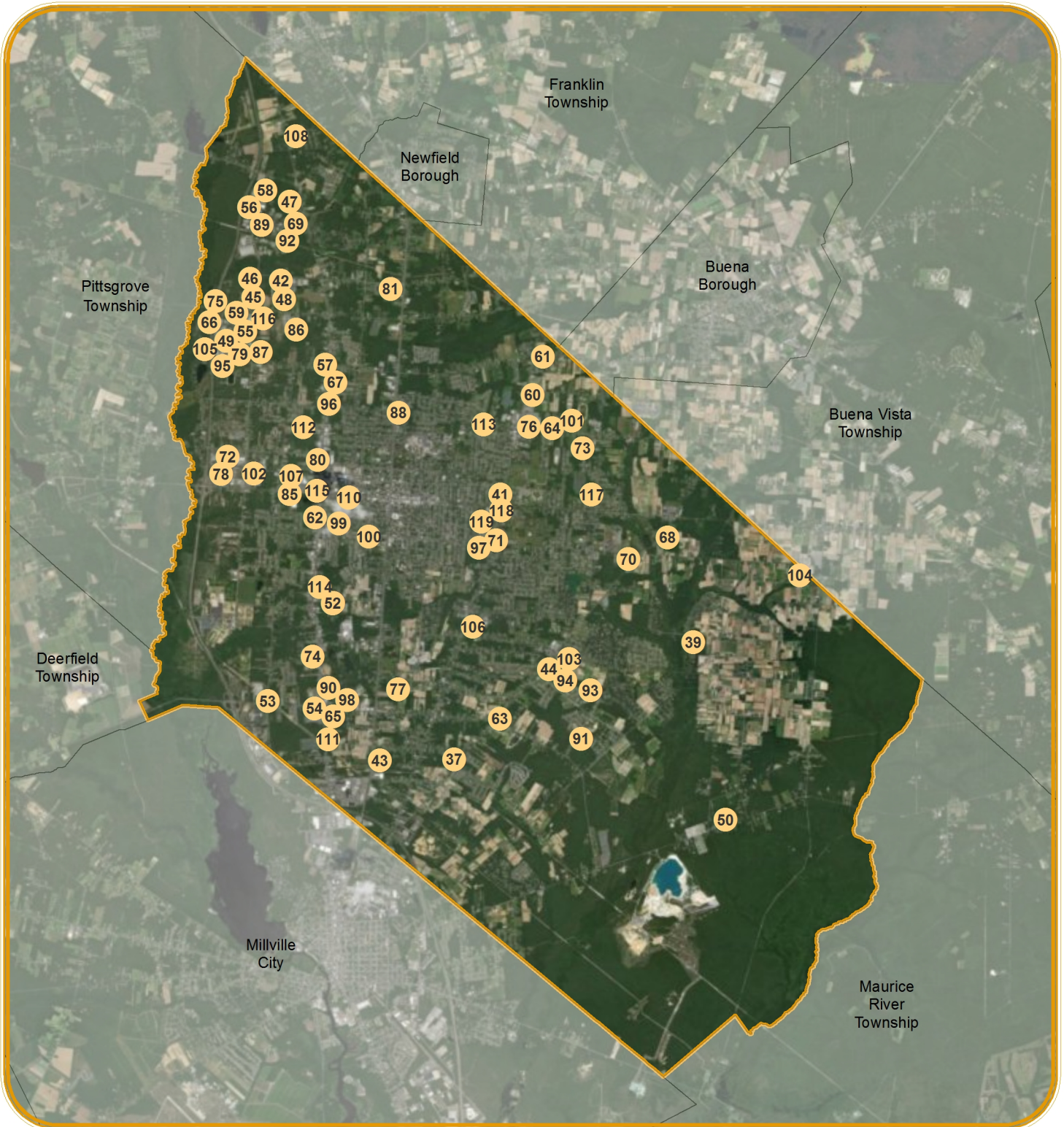




-  Upper Deerfield Township
-  Upper Deerfield Green Infrastructure Sites

Map Created by Rutgers Cooperative Extension Water Resources Program  
Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping,

\*Please see attachment for full description of Green Infrastructure Practice listed by Site ID number

# Green Infrastructure Database: Vineland City



-  Vineland City
-  Vineland Green Infrastructure Sites



Map Created by Rutgers Cooperative Extension Water Resources Program

\*Please see attachment for full description of Green Infrastructure Practice listed by Site ID number

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping,

# Green Infrastructure Database: Woodstown Borough



-  Woodstown Borough
-  Woodstown Green Infrastructure Sites

Map Created by Rutgers Cooperative Extension Water Resources Program

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping,

\*Please see attachment for full description of Green Infrastructure Practice listed by Site ID number

**Green Infrastructure Database**  
**Data Tables**

Site_ID	Project Name	GI Practice Type	Street Address	Municipality	NJ	Postal	Latitude	Longitude
1	Bridgeton Public Charter School	Infiltration Basins	790 East Commerce Street	Bridgeton	NJ	08103	39.4238	-75.20675898
2	Buckshutem Elementary School	Rain Garden	550 Buckshutem Road	Bridgeton	NJ	08302	39.422848	-75.215378
3	Buckshutem Road School 1	Infiltration	550 Buckshutem Road	Bridgeton	NJ	08302	39.42340618	-75.21464735
4	Buckshutem Road School 2	Drywell 1&2	550 Buckshutem Road	Bridgeton	NJ	08302	39.42340618	-75.21464735
5	Buona Vita Realty Partners INC	Infiltration	1 S Industrial Blvd	Bridgeton	NJ	08302	39.412238	-75.211962
6	Cherry Street School Parking Lot	Infiltration Basin	20 Cherry Street	Bridgeton	NJ	08302	39.41905	-75.22007
7	Cohanzick Zoo	Rain Garden	45 Mayor Aitken Drive	Bridgeton	NJ	08302	39.440825	-75.23874
8	Police Station and Courthouse	Infiltration	330 Fayette St	Bridgeton	NJ	08302	39.419075	-75.243834
9	South Jersey State Prison	Infiltration \ Detention	215 S Burlington Rd	Bridgeton	NJ	08302	39.413021	-75.211351
10	Voice of Holiness	Infiltration	Burlington Road	Bridgeton	NJ	08302	39.43872854	-75.21010637
11	CO Johnson Park	Rain Garden & Basin Planting	129 Roseville Road	Byram	NJ	07821	40.973039	-74.715466
12	CVS Pharmacy	Contch stormwater treatment with underground detention	Rt 206	Byram	NJ	07874	40.93242	-74.71955
13	Tamarack Park	seepage pits	Jones Lane	Byram	NJ	07874	40.96003	-74.73741
14	Venture Two,LLC Commercial Development	Underground infiltration and stormwater treatment device	Rt 206	Byram	NJ	07874	40.921902	-74.718933
15	Christie Development	Infiltration Basin	Kemah-Mecca Lake Rd (Co. Rt. 521)	Hampton	NJ	07860	41.12487729	-74.82657006
16	Ephemeral Realty, LLC	Infiltration Pond	92 Hampton House Rd	Hampton	NJ	07860	41.08911415	-74.73029457
17	Hampton Body Works	Underground Infiltration	52 Hampton House Rd	Hampton	NJ	07860	41.07671	-74.73703
18	McGuire Chevrolet	Infiltration basin (Basin 2)	63 Hampton House Rd (Hampton Hill Rd)	Hampton	NJ	07860	41.083279	-74.734368
19	McKeown Elementary School	Rain Garden	1 School Road	Hampton	NJ	07860	41.110639	-74.757633
20	SCARC Community Center (Camre Enterprises,LLC)	Infiltration Basin, overflow to existing det basin	1 Camre Dr	Hampton	NJ	07860	41.09555	-74.73591
21	Lopatcong Pool	Rain Garden	9 Wildew Avenue	Lopatcong	NJ	08865	40.709723	-75.178149
22	Bristol Glen Res. Addition	infiltration basin	200 Bristol Glen Dr	Newton	NJ	07860	41.04373	-74.76299
23	Martorana Enterprises	Seepage Pits(Dry Well)/Detention Basin	100 Sparta Ave	Newton	NJ	07860	41.045976	-74.746227
24	Memory Park	Bioswales to Rain Garden	Straway Boulevard	Newton	NJ	07860	41.067659	-75.746089
25	Newton Donuts/Dunkin Donuts	Seepage Pits	65 Sparta Ave	Newton	NJ	07860	41.05008	-74.748389
26	Station House Plaza Rain Garden	Rain Garden	274 Spring Street	Newton	NJ	07860	41.05326	-74.748653
27	Hedgerow Estates	Infiltration Basin	Sharptown Auburn Road	Pilesgrove	NJ	08098	39.7025313	-75.36522388
28	High Point Estates	Infiltration \ Detention Basin	1284 Kings Highway	Pilesgrove	NJ	08098	39.68876149	-75.35033226
29	Pilesgrove Municipal Building	Rain Garden	1180 US-40	Pilesgrove	NJ	08098	39.647861	-75.307551
30	Reid Kennels	Infiltration \ Detention Basin	15 Williams Rd	Pilesgrove	NJ	08098	39.6086902	-75.3075979
31	Countryside Village Redevelopment	Infiltration Basin	1325 Highway 77 Seabrook	Upper Deerfield	NJ	08302	39.500472	-75.215211
32	KMT Freezer Addition	Infiltration	1042 Parsonage Road	Upper Deerfield	NJ	08302	39.499051	-75.225233
33	KMT Freezer Warehouse	Infiltration Basin	1042 W Parsonage Rd Ste 2	Upper Deerfield	NJ	08302	39.499051	-75.225233
34	Laurel Plaza	Infiltration Basin (underground?)	1008 N Pearl St	Upper Deerfield	NJ	08302	39.455821	-75.212146
35	LIDL U.S Operations	Infiltration \ Detention	1040 N Pearl Street	Upper Deerfield	NJ	08302	39.4581118	-75.2098985
36	Remsterville Learning Center	Infiltration Recharge Trench	1185 NJ-77	Upper Deerfield	NJ	08302	39.477529	-75.206741

Site_ID	Block	Lot	GI Size (SF)	Drainage Area (SF)	Drainage Area (acres)	% Impervious	Impervious Area (acres)	Gal/yr Treated Impervious (Annual)
1	186	5,17,18,21,22 3,24,25,27	0.174 (acre-ft)	19515	0.448	26%	0.115	16486
2	173	61	3000	4900	0.112	100%	0.112	16170
3	173	61	3.151 (acre-ft)	312761	7.180	100%	7.180	1032111
4	173	61	-	8712	0.200	100%	0.200	28750
5	189.01	7	2.681 (acre-ft)	273121	6.270	59%	3.712	533570
6	171	34	0.074 (acre-ft)	43490	0.998	100%	0.998	143518
7	280	1	300	1525	0.035	100%	0.035	5033
8	207	25	0.11 (acre-ft)	33454	0.768	60%	0.461	66239
9	187	137	1.4(acre-ft)	384722	8.832	79%	6.977	1002970
10	26	4	0.652 (acre-ft)	125453	2.880	20%	0.576	82799
11	351	1	1000	4000	0.092	100%	0.092	13200
12	34	14	-	64425	1.479	100%	1.479	212603
13	360	26.01	-	149629	3.435	11%	0.378	54315
14	27	383;384	-	33977	0.780	100%	0.780	112123
15	801	7.01	0.24 (acre-ft)	187308	4.300	12%	0.500	71874
16	3602	5.02, 5.03	0.88 (acre-ft)	721567	16.565	12%	1.951	280520
17	3603	14, 15	-	30144	0.692	75%	0.521	74904
18	3501	44.01	0.119 (acre-ft)	187308	4.300	56%	2.390	343558
19	2702	16.01	2130	7920	0.182	100%	0.182	26136
20	3501	82.01	-	32234	0.740	100%	0.740	106374
21	2	30.07	250	800	0.018	100%	0.018	2640
22	502	5.16	-	-	-	-	-	-
23	1201	5,5.03	-	56448	1.296	100%	1.296	186278
24	10.01	1	4175	34900	0.801	100%	0.801	115170
25	18.02	16	-	2045	0.047	100%	0.047	6749
26	18.02	1	350	1500	0.034	100%	0.034	4950
27	21	2	1.747 (acre-ft)	1700582	39.040	12%	4.620	664047
28	21	6	81.612 (acre-ft)	674657	15.488	14.3	221.478	31837077
29	38	12	1650	6600	0.152	100%	0.152	21780
30	90	7	-	83635	1.920	14%	0.269	38639
31	813	1	0.49 (acre-ft)	264287	6.067	48%	2.912	418631
32	901	5	6.864 (acre-ft)	438214	10.060	59%	5.935	853202
33	901	5	1.54 (acre-ft)	395873	9.088	56%	5.089	731574
34	1901	8	0.421 (acre-ft)	48787	1.120	64%	0.720	103505
35	1901	4	0.809 (acre-ft)	183823	4.220	77%	3.250	467181
36	1204	3.02	0.0103	2439	0.056	100%	0.056	8050

Site_ID	Design storm (Infiltration)	Land Use	Project Description	Project Photos (Y/N)
1	2-YR	Urban	Site Redevelopment with several new buildings and driveways, 3 proposed basins	
2	WQ	Urban	A rain garden was installed in the back of the school to capture runoff from the surrounding sidewalk areas	Y
3	2-YR	Urban	Building Addition Added	
4	2-YR	Urban		
5	2-YR	Urban	Infiltration basin capturing site runoff. DAs estimated from aerial	
6	2-YR	Urban	Parking lot addition, DA is increased impervious from the project	
7	WQ	Commercial	A rain garden was installed to capture parking lot runoff before entering the nearby stream	Y
8	2-YR	Urban	Existing Building, new paved areas	
9	2-YR	Urban	Infiltration/detention basin capturing site runoff. DAs estimated from aerial	
10	2-YR	Urban	Existing Building Expanded with new parking lot. Basin at south end of site.	
11	WQ	Recreational Land	A rain garden was installed at the North entrance to the park, and the detention basin was replanted with natural plants	Y
12	2-YR	Commercial	Roof, parking area, and landscaping sheet flow to to catch basins that discharge to underground detention area underneath southeast area of parking lot.	
13	2-YR	Recreational Land		
14	100-YR	Commercial	Parking areas, driveway areas, sidewalks, landscape areas directed to area inlets and water quality device(Contech Stormfilter), discharge into underground retention system	
15	2-YR	Residential		
16	2-YR	Commercial		
17	2-YR	Commercial		
18	2-YR	Commercial	Detention and Sand filter basins installed to capture runoff from new building and parking lot	
19	WQ	Urban	A rain garden was installed to manage rooftop stormwater runoff	Y
20	2-YR	Commercial		
21	WQ	Recreational Land	A rain garden was installed in the front of the building to capture rooftop and parking lot stormwater	Y
22	2-YR	Residential	Building addition with parking lot. Infiltration basin built to capture new runoff	
23	2-YR	Residential	New Housing development with detention basin and seepage pits	
24	WQ	Recreational Land	A rain garden captures parking lot runoff via bioswales at the north side of the parking lot	Y
25	2-YR	Commercial	Site redeveloped into Dunkin Donuts, Seepage pits for impervious areas	
26	WQ	Commercial	RG was installed with a curb cut to allow water from the surrounding paved area into it.	Y
27	2-YR	Residential	New residential development with two basins	
28	2-YR	Residential		
29	WQ	Urban	A rain garden was installed at the west side of the parking lot to capture the parking lot runoff	Y
30	2-YR	Commercial	New development	
31	2-YR	Residential		
32	2-YR	Commercial	Addition and redone expanded parking lot to discharge to existing basin. DA includes initial existing runoff.	
33	2-YR	Commercial		
34	2-YR	Commercial	New bank building	
35	2-YR	Commercial	Old motel demolished and converted to a grocery store with basin to SW	
36	2-YR	Urban	Site Redeveloped, infiltration trench was existing	



Site_ID	Site Type (school, church, etc.)	Maintance responsibility	Stormwater Management Performance Rating	Built (Y/N)	Approx. Plan/Build Date
1	School	Property Owner	Not assessed	N?	
2	School	2 years from installation date: RU WRP; After 2 years: project partner or municipality	Satisfactory	Y	2017
3	School	Property Owner	Not assessed	Y	
4	School	Property Owner	Not assessed	Y	
5		Property Owner	Not assessed	Y	
6	School	Property Owner	Not assessed	Y	
7	Zoo	2 years from installation date: RU WRP; After 2 years: project partner or municipality	Satisfactory	Y	2016
8	Municipal Building	Property Owner	Not assessed	Y	
9	Prison	Property Owner	Not assessed	Y	
10	Church	Property Owner	Not assessed	N?	
11	Park		Satisfactory	Y	2011
12	Pharmacy	Property Owner	Not assessed	Y	Feb-12
13	Park	Property Owner	Not assessed	Y	
14	Commercial	Property Owner	Not assessed	Y	Aug-12
15	Residential Development	Property Owner (Gerald Finegan)	Not assessed	N	Dec-12
16		Property Owner	Not assessed	Y	May-10
17	Autobody Shop	Property Owner ( Bill Daniella, 973-383-1384)	Not assessed	Y	
18	Car Dealership	Property Owner	Not assessed	Y	Jan-13
19	School	2 years from installation date: RU WRP; After 2 years: project partner or municipality	Satisfactory	Y	2016
20	Non-Profit	Property Owner (SCARC,Inc.)	Not assessed	Y	Jun-07
21	Pool	2 years from installation date: RU WRP; After 2 years: project partner or municipality	Satisfactory	Y	2017
22	Residential Development	Property Owner	Not assessed	Y	
23	Residential Development	Property Owner	Not assessed	Y/N	2018
24	Park	2 years from installation date: RU WRP; After 2 years: project partner or municipality	Satisfactory	Yes	2017
25	Eatery	Property Owner	Not assessed	Y	Jul-14
26	Shoping Plaza	Property Owner	Satisfactory	Y	
27	Residential Development	Property Owner	Not assessed	N	
28	Residential Development	Property Owner	Not assessed	Y	
29	Municipal Building	2 years from installation date: RU WRP; After 2 years: project partner or municipality	Satisfactory	Yes	2015
30	Dog Kennel	Property Owner	Not assessed	Y	
31	Residential Development	Property Owner	Not assessed	Y	
32	Cold Storage	Property Owner	Not assessed	N	
33	Cold Storage	Property Owner	Not assessed	Y	
34	Bank	Property Owner	Not assessed		
35	Gorcery Store	Property Owner	Not assessed	N	
36	Daycare	Property Owner	Not assessed		

Site_ID	Source	Notes
1	<a href="http://hydro.rutgers.edu/view-project/118433">http://hydro.rutgers.edu/view-project/118433</a>	Project ID: 118433
2	Rutgers Water Resources Program	
3	<a href="http://hydro.rutgers.edu/view-project/118459">http://hydro.rutgers.edu/view-project/118459</a>	Project ID: 118459
4	<a href="http://hydro.rutgers.edu/view-project/118459">http://hydro.rutgers.edu/view-project/118459</a>	Project ID: 118459
5	<a href="http://hydro.rutgers.edu/view-project/119559">http://hydro.rutgers.edu/view-project/119559</a>	Project ID: 119559
6	<a href="http://hydro.rutgers.edu/view-project/118413">http://hydro.rutgers.edu/view-project/118413</a>	Project ID: 118413
7	Rutgers Water Resources Program	
8	<a href="http://hydro.rutgers.edu/view-project/119066">http://hydro.rutgers.edu/view-project/119066</a>	Project ID: 119066; , I basin at south end, two at north end (only 1 item listed in database)
9	<a href="http://hydro.rutgers.edu/view-project/119569">http://hydro.rutgers.edu/view-project/119569</a>	Project ID: 119569
10	<a href="http://hydro.rutgers.edu/view-project/118489">http://hydro.rutgers.edu/view-project/118489</a>	Project ID: 118489
11	Rutgers Water Resources Program	
12	Meeting Minutes	1790 storage tank roof runoff into irrigation system, overflow direct to infiltration system, Contech stormwater solution treatment device
13	<a href="http://hydro.rutgers.edu/view-project/104922">http://hydro.rutgers.edu/view-project/104922</a>	
14	Meeting Minutes	Golden & Moran Engineering, Type C soils, inf 1.35in/hr,19,254 cuft captured in 100-yr
15	<a href="http://hydro.rutgers.edu/view-project/113827">http://hydro.rutgers.edu/view-project/113827</a>	Project ID: 113827, drainage area values taken from plans at township
16	<a href="http://hydro.rutgers.edu/view-project/116237">http://hydro.rutgers.edu/view-project/116237</a>	Project ID: 116237, drainage area values taken from plans at township
17	<a href="http://hydro.rutgers.edu/view-project/119498">http://hydro.rutgers.edu/view-project/119498</a>	Project ID: 119498
18	Meeting Minutes	
19	Rutgers Water Resources Program	
20	<a href="http://hydro.rutgers.edu/view-project/104716">http://hydro.rutgers.edu/view-project/104716</a>	Project ID: 104716
21	Rutgers Water Resources Program	
22	<a href="http://hydro.rutgers.edu/view-project/110230">http://hydro.rutgers.edu/view-project/110230</a>	Project ID: 110230
23		6ft diameter pipes vertical, 49 units @ 1152 sf each draining to infiltration systems. Site still in development.
24		1000 gallon seepage pit
25		RG identified while driving in town. Origin of its installation is unclear Drainage areas and size are estimated.
26		
27	<a href="http://hydro.rutgers.edu/view-project/118803">http://hydro.rutgers.edu/view-project/118803</a>	Project ID: 118803
28	<a href="http://hydro.rutgers.edu/view-project/118795">http://hydro.rutgers.edu/view-project/118795</a>	Project ID: 118795
29	Rutgers Water Resources Program	
30	<a href="http://hydro.rutgers.edu/view-project/118492">http://hydro.rutgers.edu/view-project/118492</a>	Project ID: 118492
31	<a href="http://hydro.rutgers.edu/view-project/119444">http://hydro.rutgers.edu/view-project/119444</a>	Project ID: 119444, several other basins are on this site as well, but are not accounted for in the database (may not be infiltration though?)
32	<a href="http://hydro.rutgers.edu/view-project/119592">http://hydro.rutgers.edu/view-project/119592</a>	Project ID: 119592
33	<a href="http://hydro.rutgers.edu/view-project/119495">http://hydro.rutgers.edu/view-project/119495</a>	Project ID: 119495
34	<a href="http://hydro.rutgers.edu/view-project/119496">http://hydro.rutgers.edu/view-project/119496</a>	Project ID: 119496, plans in database don't look like final plans, but should be BB&T, not representative of whole development area
35	<a href="http://hydro.rutgers.edu/view-project/119628">http://hydro.rutgers.edu/view-project/119628</a>	Project ID: 119628
36	<a href="http://hydro.rutgers.edu/view-project/118888">http://hydro.rutgers.edu/view-project/118888</a>	Project ID: 118888

Site_ID	Project Name	GI Practice Type	Street Address	Municipality	NJ	Postal	Latitude	Longitude
37	Senior Care Center Of America	Infiltration	3340 Lincoln Avenue	Upper Deerfield	NJ	08360	39.437163	-75.010084
38	Upper Deerfield Municipal Building	Bioswale to Rain Garden	1325 NJ-77	Upper Deerfield	NJ	08302	39.497091	-75.21441
39	54th Street Partnership, LLC	Infiltration Basins	4049 Italia Avenue	Vineland City	NJ	08360	39.4593679	-74.9522607
40	Advanced Eye Group 1 (North Main Rd Prop)	Infiltration	206 N Main Rd	Vineland City	NJ	08360	39.486927	-74.999181
41	Advanced Eye Group 2 (North Main Rd Prop)	Stone Trench	206 N Main Rd	Vineland City	NJ	08360	39.486927	-74.999181
42	Airport Commerce Center	Infiltration Basins	West Forest Grove Road	Vineland City	NJ	08360	39.52688465	-75.05271435
43	AJM Packaging	Infiltration Basin	3401 South East Boulevard	Vineland City	NJ	08360	39.436848	-75.0281123
44	Alliance Life Center	Infiltration Basin	1987 South Lincoln Ave	Vineland City	NJ	08360	39.454181	-74.987227
45	BDGS Garden Rd and Mill Rd Industrial Bldg	Infiltration Basin 1	2440 N Mill Rd	Vineland City	NJ	08360	39.523619	-75.059901
46	BDGS Garden Rd and Mill Rd Industrial Bldg	Infiltration Basin 2	2440 N Mill Rd	Vineland City	NJ	08360	39.523619	-75.059901
47	Beirig Brothers	Infiltration/Retention	3539 Reilly Ct	Vineland City	NJ	08360	39.538828	-75.053782
48	BGDS Inc	Infiltration Basin	West Forest Grove Road	Vineland City	NJ	08360	39.52506403	-75.05237103
49	Bridor, USA, INC	Infiltration Basin	2260 Industrial Way	Vineland City	NJ	08360	39.5154829	-75.0658865
50	Calvary Church	Infiltration Basin	4630 Mays Landing Road	Vineland City	NJ	08360	39.4260589	-74.9442688
51	Castlewood Estates 1	Infiltration Basin #1	625 Foster Ave	Vineland City	NJ	08360	39.46636491	-75.03961444
52	Castlewood Estates 2	Infiltration Basin #2	625 Foster Ave	Vineland City	NJ	08360	39.46634834	-75.03975391
53	Century Savings Bank	Infiltration Basin	1376 W. Sherman Ave	Vineland City	NJ	08360	39.4478756	-75.0552839
54	Community Health Care, Inc (Gwendolyn E. Gould Center)	Infiltration Basin	785 W Sherman Ave	Vineland City	NJ	08360	39.44658315	-75.04402399
55	Compass Wire Cloth	Infiltration Basin	1942 n mill road	Vineland City	NJ	08360	39.516212	-75.062813
56	Dale Holding Company	Infiltration Basin	3602 North Mill Road	Vineland City	NJ	08360	39.540587	-75.060548
57	Dandelion Plaza	Infiltration Basin	1672 North Delsea Drive	Vineland City	NJ	08360	39.51111817	-75.04184604
58	Dandrea Produce Inc (Vineland Packaging Corpotation)	Infiltration Basin	3665 N Mill Rd	Vineland City	NJ	08360	39.5409546	-75.0575269
59	Davy Cold Storage/ MJD Trucking	Infiltration Basin	2055 Demarco Drive	Vineland City	NJ	08360	39.5177449	-75.0635975
60	Del Rey Farms	Infiltration Basin	1831 Vine Road	Vineland City	NJ	08360	39.50566941	-74.99154121
61	Del'Buono Site Plan	Infiltration	1843 E Wheat Road	Vineland City	NJ	08360	39.512902	-74.989062
62	Delsea Drive Realty	Infiltration Basin	298 S. Delsea Drive	Vineland City	NJ	08360	39.4824135	-75.0441114
63	DeMarco-Luisi Funeral Home	Infiltration Basin	2755 South Lincoln Avenue	Vineland City	NJ	08360	39.4448331	-74.9990503
64	DiBiase Pre-School	Infiltration Basin	2040 E. Oak Road	Vineland City	NJ	08360	39.4994845	-74.9867462
65	Dunkin' Donuts	Infiltration Basin	2881 S Delsea Dr	Vineland City	NJ	08360	39.4450257	-75.0412696
66	East Coast Development	Infiltration	2800 Industrial Way	Vineland City	NJ	08360	39.518752	-75.066442
67	European Auto	Infiltration	1509 N Delsea Drive	Vineland City	NJ	08360	39.508594	-75.040193
68	Eye Associates	Infiltration	251 S Lincoln Ave	Vineland City	NJ	08360	39.4790664	-74.9586443
69	Fabbi Concrete & Masonry Inc	Retention Basin	1589 Gallagher Dr	Vineland City	NJ	08360	39.536198	-75.051088
70	Faith Bible Church of Vineland	Infiltration Basin	3139 E. Chestnut Avenue	Vineland City	NJ	08360	39.474945	-74.968059
71	Family Dollar	Infiltration Basin	1151 E Chestnut Ave	Vineland City	NJ	08360	39.477315	-75.003423
72	First Choice Freezer	Infiltration Basin	396 North Mill Road	Vineland City	NJ	08360	39.49371	-75.06538
73	Foxmoor Estates III	Infiltration Basin	734 Foxmoor Dr	Vineland City	NJ	08360	39.4957455	-74.97931838
74	Frank Carpino Site Plan	Infiltration Basin	3739 South Delsea Drive	Vineland City	NJ	08360	39.45633059	-75.044554

Site_ID	Block	Lot	GI Size (SF)	Drainage Area (SF)	Drainage Area (acres)	% Impervious	Impervious Area (acres)	Gal/yr Treated Impervious (Annual)
37	1206	1.03	0.2 (acre-ft)	108900	2.500	34%	0.860	998250
38	803	3	2500	19070	0.438	100%	0.438	62931
39	5306	16	.764 (acre-ft)	223027	5.120	27.1%	1.387	221533
40	3107	8	39512 CF	61420	1.410	48.50%	0.684	317539
41	3107	8	5867 CF	20038	0.460	36.20%	0.167	33797
42	91	3	.18 (acre-ft)	331056	7.600	46%	3.496	9225427
43	7111	76	5.508 (acre-ft)	501811	11.520	43%	4.954	21196505
44	983	10.02	4.99 (acre-ft)	217800	5.000	31%	1.530	3993000
45	602	5	20050 CF	113692	2.610	61.30%	1.600	1088029
46			50193 CF	312325	7.170	56.07%	4.020	8211030
47	303	50	-	98010	2.250	79%	1.773	808583
48	604	3.01	1.81 (acre-ft)	222156	5.100	60%	3.060	4154317
49	1004	3	3.462 (acre-ft)	546417	12.544	78%	9.784	25132251
50	7303	17	0.029 (acre-ft)	264845	6.080	41%	2.493	5904273
51	912; 913	19, 20; 1,3	0.69 (acre-ft)					
52	912; 913	19, 20; 1,3	1.18 (acre-ft)					
53	601	33	0.753 (acre-ft)	97139	2.230	26%	0.589	794272
54	7001	16	.899 (acre-ft)	103150	2.368	67%	1.587	895618
55	1005	8	0.745 (acre-ft)	425146	9.760	33%	3.220	15214544
56	302	5	1.62 (acre-ft)	217800	5.000	62%	3.100	3993000
57	1101	64	0.2055 (acre-ft)	44605	1.024	62.5%	0.640	102221
58	303	56	3.07 (acre-ft)	243065	5.580	55%	3.070	4973106
59	1005	13	1.64 (acre-ft)	3484800	80.000	75.6%	60.496	9662421
60	1910	3 & 4	.283 (acre-ft)	119790	2.750	38%	1.045	1207883
61	215	8	0.04 (acre-ft)	10019	0.230	72%	0.166	8449
62	3503	21,22	0.299 (acre-ft)	245678	5.640	71%	4.004	5080629
63	6901	161	.914 (acre-ft)	139392	3.200	61%	1.952	1635533
64	1909	47	0.128 (acre-ft)	11151	0.256	37.0%	0.095	15141
65	7002	50	-	67082	1.540	46%	0.708	378792
66	1003	1	0.49 (acre-ft)	139392	3.200	34%	1.100	1635533
67	180	1.01	0.4596 (acre-ft)	71438	1.640	40%	0.650	429583
68	658	15.01	0.11 (acre-ft)	166399	3.820	49%	1.872	2330698
69	68	12		57064	1.310	77%	1.010	274095
70	4506	8	.252 (acre-ft)	131028	3.008	38%	1.152	1445157
71	5007	12	n/a	38376	0.881	67%	0.592	123968
72	2604	14	11.69 (acre-ft)	443267	10.176	75%	7.598	16539162
73	386	1		0		13%	0.000	0
74	911	11	0.53 (acre-ft)	243936	5.600	40%	2.251	5008819

Site_ID	Design storm (Infiltration)	Land Use	Project Description	Project Photos (Y/N)
37	2-YR	Commercial and Services	Infiltration basin capturing site runoff at the east side of the site	
38	2-YR	Urban	A rain garden captures parking lot runoff via a bioswale at the southwest corner of the lot	Y
39	2-YR	Commercial and Services	Infiltration Basins capturing site runoff	
40	2-YR	Commercial	Small existing building demolished and 2 new office spaces constructed. Two infiltration basins capture runoff to the north and an infiltration trench the south end.	
41	2-YR	Commercial	Small existing building demolished and 2 new office spaces constructed. Two infiltration basins capture runoff to the north and an infiltration trench the south end.	
42	2-YR	Commercial and Services	Infiltration basins capturing site runoff at the north side of the site	
43	2-YR	Commercial and Services	Infiltration basin capturing site runoff at the south side of the site	
44	2-YR	Commercial and Services	Infiltration basin capturing site runoff at the southwest side of the site	
45	100-YR	Commercial	New construction of building and paved area. Two basins constructed on the east and west side of the site	
46	100-YR	Commercial	New construction of building and paved area. Two basins constructed on the east and west side of the site	
47	2-YR	Commercial	solar panel install w/ expanded basin	
48	2-YR	Commercial and Services	Infiltration basin capturing site runoff at the south side of the site	
49	2-YR	Commercial and Services	Building addition prompting updated stormwater management	
50	2-YR	Commercial and Services	Infiltration basin capturing site runoff at the south side of the site	
51	2-YR	Commercial and Services		
52	2-YR	Commercial and Services		
53	2-YR	Commercial and Services	Infiltration Basin capturing site runoff at west end of site	
54	2-YR	Commercial and Services	Infiltration Basin capturing site runoff at south end of site	
55	2-YR	Commercial and Services	Infiltration basin capturing site runoff at the east side of the site	
56	2-YR	Commercial and Services	Infiltration basin capturing site runoff at the northeast side of the site	
57	2-YR	Commercial and Services	Infiltration Basin capturing site runoff, bioretention areas in front as well	
58	2-YR	Commercial and Services	Existing site redeveloped with additional paved areas, existing infiltration basin expanded	
59	2-YR	Commercial and Services	Infiltration basin capturing site runoff	
60	2-YR	Commercial and Services	Infiltration basin capturing site runoff at the north side of the site	
61	2-YR	Commercial and Services	Infiltration basin capturing site runoff at the southwest side of the site	
62	2-YR	Commercial and Services	Infiltration ditch capturing site runoff at the west side of the site	
63	2-YR	Commercial and Services	Infiltration basin capturing site runoff at the southeast side of the site	
64	2-YR	Commercial and Services	Infiltration basin capturing site runoff	
65	2-YR	Commercial and Services	Infiltration Basin capturing site runoff at east end of site	
66	2-YR	Commercial and Services	Existing building with additions shown on plans, existng infiltration basin capturing site runoff at the southwest side of the site	
67	2-YR	Commercial and Services	Infiltration basin capturing site runoff at the west side of the site	
68	2-YR	Commercial and Services	Infiltration basin capturing site runoff at the west side of the site	
69	2-YR	Commercial	Site built ~2001, Increased paved lot area ~2008	
70	2-YR	Commercial and Services	Infiltration basin capturing site runoff at the south side of the site	
71	2-YR	Commercial and Services	Infiltration basin capturing site runoff at the south side of the site	
72	2-YR	Industrial	Infiltration basin capturing site runoff at the east side of the site	
73	2-YR	Commercial and Services	Infiltration basin capturing site runoff at the center of the site	
74	2-YR	Commercial and Services	Infiltration basin capturing site runoff	

Site_ID	Site Type (school, church, etc.)	Maintance responsibility	Stormwater Management Performance Rating	Built (Y/N)	Approx. Plan/Build Date
37	Care giver	Property Owner	Not assessed	Y	Prior 2016
38	Municipal Building	2 years from installation date: RU WRP; After 2 years: project partner or municipality	Satisfactory	Yes	2016
39	Golf Course	Robert Buono ,856-692-1663	Not assessed	Y	Prior to 2013
40	Medical Office	Property Owner	Not assessed	Y/N	May-16
41	Medical Office	Property Owner	Not assessed	Y	May-16
42	Commercial Building	Property Owner	Not assessed	Y	
43	Packaging	Property Owner	Not assessed	Y	Prior 2013
44	Church	Property Owner	Not assessed	Y/N	Prior 2016
45	Commercial Building	Property Owner	Not assessed	Y	Dec-15
46	Commercial Building	Property Owner	Not assessed	Y	Dec-15
47	Butcher	Property Owner	Not assessed	Y	Aug-11
48	Industry	Property Owner	Not assessed	Y	
49	Bakery (Large scale)	Property Owner	Not assessed	Y	
50	Church	Property Owner	Not assessed	Y	
51	Residential Development	Property Owner	Not assessed	N	2005 (plans)
52	Residential Development	Property Owner	Not assessed	N	2005 (plans)
53	Bank	Property Owner	Not assessed	Y/N?	
54	Health Care	Property Owner	Not assessed	Y	Prior 2016
55	Industry	Property Owner	Not assessed	Y	Prior 2013
56	Commercial	Property Owner	Not assessed	Y	Prior 2016
57	Shopping Plaza	John DiDonato, 609-625-7400	Not assessed	Y	2013-2016
58	Produce Shop	Property Owner	Not assessed	Y	Mar-09
59	Storage Facility	Property Owner	Not assessed	Y	
60	Commercial Building	Property Owner	Not assessed	Y/N	
61	Commercial	Property Owner	Not assessed	Y	Prior 2016
62	Commercial Building	Property Owner	Not assessed	Y	
63	Funeral Home	Property Owner	Not assessed	Y	
64	Pre-School	(856) 691-2780	Not assessed	Y	
65	Eatery	Sherman Donuts, INC	Not assessed	Y/N	
66	Engineering Development	Property Owner	Not assessed	Y/N	
67	Auto Shop	Property Owner	Not assessed	Y	Prior 2016
68	Health Care (Vision)	Property Owner	Not assessed	Y	Prior 2016
69	Construction	Property Owner	Not assessed	Y	Apr-01
70	Commercial Building	Property Owner	Not assessed	Y	Prior 2013
71	Retail Store	Boos States Development, LLC	Not assessed	Y	
72	Commercial Building	First Choice Freezer	Not assessed	Y	
73	Residential Complex	Property Owner	Not assessed	Y	
74	Storage Units	Property Owner	Not assessed	N	

Site_ID	Source	Notes
37	<a href="http://hydro.rutgers.edu/view-project/119576">http://hydro.rutgers.edu/view-project/119576</a>	Project ID: 119576
38	Rutgers Water Resources Program	
39	<a href="http://hydro.rutgers.edu/view-project/118396">http://hydro.rutgers.edu/view-project/118396</a>	Project ID: 118396
40	Meeting Minutes	Appears that only the south building was constructed so far. Drainage was adjusted from aerial for developed area so far
41	Meeting Minutes	Appears that only the south building was constructed so far. Drainage was adjusted from aerial for developed area so far
42	<a href="http://hydro.rutgers.edu/view-project/118557">http://hydro.rutgers.edu/view-project/118557</a>	Project ID: 118557, DA est, basins DA lumped, size may not be accurate
43	<a href="http://hydro.rutgers.edu/view-project/118558">http://hydro.rutgers.edu/view-project/118558</a>	Project ID: 118558, plans don't match as built entirely
44	<a href="http://hydro.rutgers.edu/view-project/118553">http://hydro.rutgers.edu/view-project/118553</a>	Project ID: 118553, Appears that expansion was planned
45	Meeting Minutes	
46	Meeting Minutes	
47	Meeting Minutes	
48	<a href="http://hydro.rutgers.edu/view-project/118385">http://hydro.rutgers.edu/view-project/118385</a>	Project ID: 118385, appears to be on the Tyson Foods property
49	<a href="http://hydro.rutgers.edu/view-project/118407">http://hydro.rutgers.edu/view-project/118407</a>	Project ID: 118407
50	<a href="http://hydro.rutgers.edu/view-project/118490">http://hydro.rutgers.edu/view-project/118490</a>	Project ID: 118490
51	<a href="http://hydro.rutgers.edu/view-project/118552">http://hydro.rutgers.edu/view-project/118552</a>	Project ID: 118552
52	<a href="http://hydro.rutgers.edu/view-project/118552">http://hydro.rutgers.edu/view-project/118552</a>	Project ID: 118552
53	<a href="http://hydro.rutgers.edu/view-project/118435">http://hydro.rutgers.edu/view-project/118435</a>	Project ID: 118435, Looks like basin is being constructed for other building, but no clear basin for bank itself. Looks like calcs may just be for new building
54	<a href="http://hydro.rutgers.edu/view-project/118419">http://hydro.rutgers.edu/view-project/118419</a>	Project ID: 118419
55	<a href="http://hydro.rutgers.edu/view-project/119067">http://hydro.rutgers.edu/view-project/119067</a>	Project ID: 119067
56	<a href="http://hydro.rutgers.edu/view-project/118715">http://hydro.rutgers.edu/view-project/118715</a>	Project ID: 118715
57	<a href="http://hydro.rutgers.edu/view-project/118394">http://hydro.rutgers.edu/view-project/118394</a>	Project ID: 118394
58	Meeting Minutes ( <a href="http://hydro.rutgers.edu/view-project/118719">http://hydro.rutgers.edu/view-project/118719</a> )	Project ID: 118719
59	<a href="http://hydro.rutgers.edu/view-project/118389">http://hydro.rutgers.edu/view-project/118389</a>	Project ID: 118389, Acreage incorrect on web site
60	<a href="http://hydro.rutgers.edu/view-project/119583">http://hydro.rutgers.edu/view-project/119583</a>	Project ID: 119583, does not appear to have any true inlets but is depressed like a basin, plans in database show expanded site development with expanded basin, DA listed here is only of current site
61	<a href="http://hydro.rutgers.edu/view-project/119546">http://hydro.rutgers.edu/view-project/119546</a>	Project ID: 119546
62	<a href="http://hydro.rutgers.edu/view-project/118434">http://hydro.rutgers.edu/view-project/118434</a>	Project ID: 118434
63	<a href="http://hydro.rutgers.edu/view-project/118400">http://hydro.rutgers.edu/view-project/118400</a>	Project ID: 118400
64	<a href="http://hydro.rutgers.edu/view-project/118382">http://hydro.rutgers.edu/view-project/118382</a>	Project ID: 118382
65	<a href="http://hydro.rutgers.edu/view-project/118408">http://hydro.rutgers.edu/view-project/118408</a>	Project ID: 118408, most of site built but seconded proposed building not yet built
66	<a href="http://hydro.rutgers.edu/view-project/119587">http://hydro.rutgers.edu/view-project/119587</a>	Project ID: 119587, additions not yet built
67	<a href="http://hydro.rutgers.edu/view-project/119348">http://hydro.rutgers.edu/view-project/119348</a>	Project ID: 119348
68	<a href="http://hydro.rutgers.edu/view-project/119185">http://hydro.rutgers.edu/view-project/119185</a>	Project ID: 119185
69	Meeting Minutes	Newly constructed masonry site with stormwater management along side of site, Basin 6' wide bottom, 1.5' deep, may actually be infiltration, unclear, majority of site drains to area
70	<a href="http://hydro.rutgers.edu/view-project/118381">http://hydro.rutgers.edu/view-project/118381</a>	Project ID: 118381
71	<a href="http://hydro.rutgers.edu/view-project/118401">http://hydro.rutgers.edu/view-project/118401</a>	Project ID: 118401
72	<a href="http://hydro.rutgers.edu/view-project/113383">http://hydro.rutgers.edu/view-project/113383</a>	Project ID: 113383
73	<a href="http://hydro.rutgers.edu/view-project/118718">http://hydro.rutgers.edu/view-project/118718</a>	Project ID: 118718, DAs to unclear to verify from database, but there are three basins in the development
74	<a href="http://hydro.rutgers.edu/view-project/118521">http://hydro.rutgers.edu/view-project/118521</a>	Project ID: 118521

Site_ID	Project Name	GI Practice Type	Street Address	Municipality	NJ	Postal	Latitude	Longitude
75	Garden State Bulb	Infiltration	2720 Industrial Way	Vineland City	NJ	08360	39.520233	-75.066995
76	Garden State Highway Products	Infiltration Stone Trench	1740 E Oak Rd	Vineland City	NJ	08360	39.49971	-74.992387
77	Grant Avenue Major Subdivision	Infiltration Basin	East Grant Avenue	Vineland City	NJ	08360	39.45027816	-75.02370358
78	Hampton Inn Hotel	Infiltration Basin	2196 Landis Ave	Vineland City	NJ	08360	39.490467	-75.066966
79	Highland Enterprises	Infiltration Basin	2130 Industrial Way	Vineland City	NJ	08360	39.5151384	-75.063926
80	Horn Properties II	Infiltration Basin	424 North Delsea Drive	Vineland City	NJ	08360	39.493257	-75.0435339
81	Hot End Site Plan	Infiltration Basin	101 E Forest Grove Rd	Vineland City	NJ	08360	39.525472	-75.026133
82	Inspira Urgent Care 1 (Vld Crossing-Orchard Driveway)	Infiltration Basin A (rear of retail)	1297 W Landis Ave	Vineland City	NJ	08360	39.486769	-75.050343
83	Inspira Urgent Care 2 (Vld Crossing-Orchard Driveway)	Extended Detention Basin B (front of retail)	1297 W Landis Ave	Vineland City	NJ	08360	39.486769	-75.050343
84	Inspira Urgent Care 3 (Vld Crossing-Orchard Driveway)	Infiltration Basin C (office)	1297 W Landis Ave	Vineland City	NJ	08360	39.486769	-75.050343
85	Inspira Urgent Care 4 (Vld Crossing-Orchard Driveway)	Extended Detention Basin D (restaurant)	1297 W Landis Ave	Vineland City	NJ	08360	39.486769	-75.050343
86	Ivy Acres Greenhouses	Infiltration	1419 W Garden Rd	Vineland City	NJ	08360	39.517663	-75.048941
87	J & D Produce	Infiltration	1950 Industrial Way	Vineland City	NJ	08360	39.514722	-75.060666
88	Jay Ambe Mata, LLC (Express Mart)	Infiltration Basin	East Oak Road	Vineland City	NJ	08360	39.50220045	-75.02407587
89	JG Finneran	Infiltration Basin	3600 Reilly Court	Vineland City	NJ	08360	39.53938	-75.05575
90	Joshua Motors	Infiltration	2521 S Delsea Drive	Vineland City	NJ	08360	39.450439	-75.040573
91	Landis Point Estates	Infiltration Basin	2502 London Lane	Vineland City	NJ	08360	39.441159	-74.979297
92	Landis Substation Expansion	Infiltration Basin	1545 Gallagher Drive	Vineland City	NJ	08360	39.534359	-75.05124
93	LewMar Subdivision	Infiltration Basin	Palermo Ave	Vineland City	NJ	08360	39.450225	-74.977101
94	Living Faith Alliance Church	Infiltration Basin	1987 South Lincoln Avenue	Vineland City	NJ	08360	39.454194	-74.986351
95	Lucca Freezer	Infiltration Basin	2321 Industrial Way	Vineland City	NJ	08360	39.5131631	-75.065751
96	Marcacci Meats & Produce	Infiltration Basin	1159 N Delsea Dr	Vineland City	NJ	08360	39.50374269	-75.04091263
97	martini and martini	Infiltration Basin	1135 E Chestnut Avenue	Vineland City	NJ	08360	39.476888	-75.004325
98	Matusow Offices	Infiltration Basin	602 W Sherman Ave	Vineland City	NJ	08360	39.448915	-75.040072
99	Melrose Court	Infiltration Basin	Melrose Street	Vineland City	NJ	08360	39.48152048	-75.04016161
100	Naimi Sejal Realty, LLC	Infiltration Basin	301 W Chestnut Ave	Vineland City	NJ	08360	39.4788659	-75.0311229
101	Oak Road Townhouses	Infiltration Basin	2102 East Oak Rd	Vineland City	NJ	08360	39.4996697	-74.98544455
102	Safeway Freezer Storage Company	Infiltration Basin	215 N. Mill Road	Vineland City	NJ	08360	39.4905789	-75.059012
103	Site Plan for Bluestone Group (CVS/unbuilt site)	Infiltration Basin	1889 South Lincoln ave	Vineland City	NJ	08360	39.456112	-74.984432
104	Slavic Evangelical Baptist Church, INC	Infiltration Basin	5337 Chestnut Ave	Vineland City	NJ	08360	39.472091	-74.926486
105	South Jersey Paper Products	Infiltration	2400 Industrial Way	Vineland City	NJ	08360	39.514449	-75.067929
106	Spring Oaks Assisted Living	Infiltration Basin	1611 South Main road	Vineland City	NJ	08360	39.4620738	-75.005766
107	Taco Bell & AT&T & Capital Bank	Infiltration	1294 W Landis Ave	Vineland City	NJ	08360	39.488057	-75.049959
108	Univision	Infiltration Basin	4449 N. Delsea Drive	Vineland City	NJ	08360	39.55404	-75.049354
109	Veterin's Admin. Medical Offices	Rain Garden	79 W Landis Ave	Vineland City	NJ	08360	39.486262	-75.035949
110	Veterin's Admin. Medical Offices	Stone Trench	79 W Landis Ave	Vineland City	NJ	08360	39.486175	-75.03603
111	Vineland Auto Body	Infiltration Basin	3181 S Delsea Dr	Vineland City	NJ	08360	39.44078342	-75.04068196
112	Vineland Self Storage	Infiltration Basin	Delsea Drive	Vineland City	NJ	08360	39.49934	-75.04709
113	Vineland Well No 6	Infiltration Basin	591 N. Valley Avenue	Vineland City	NJ	08360	39.500113	-75.003374
114	Vineland Well NO. 9 Treatment Facility Upgrades	Infiltration Basin	832 West Walnut Road	Vineland City	NJ	08360	39.469375	-75.042955
115	Walgreens	Infiltration Basin	950 W Landis Ave	Vineland City	NJ	08360	39.4874818	-75.0437737
116	Wallace & Tiernan	Infiltration	1901 W Garden Rd.	Vineland City	NJ	08360	39.520357	-75.060996
117	Wavecrest Subdivision	Infiltration Basin	200 N Brewster Rd	Vineland City	NJ	08360	39.486997	-74.977122



Site_ID	Block	Lot	GI Size (SF)	Drainage Area (SF)	Drainage Area (acres)	% Impervious	Impervious Area (acres)	Gal/yr Treated Impervious (Annual)
75	1003	8	0.051 (acre-ft)	250470	5.750	74%	4.255	5280743
76	1909	56	4,758 (CF)	37897	0.870	100%	0.870	120892
77	1027	7	0.9765 (acre-ft)	400752	9.200	23%	2.081	13518701
78	2605	4	3.66 (acre-ft)	473933	10.880	71%	7.699	18906759
79	139	3	35.937 (acre-ft)	172010	3.949	52%	2.053	2490517
80	404	5	3151 (acre-ft)	111949	2.570	54%	1.380	1054935
81	804	2	1.14 (acre-ft)	241706	5.549	52%	2.885	4917648
82	3503	2,3,5,67		197327	4.530	17%	0.780	3277598
83	3503	2,3,5,67		284882	6.540	23%	1.480	6831480
84	3503	2,3,5,67		184259	4.230	33%	1.410	2857854
85	3503	2,3,5,67		68825	1.580	53%	0.840	398725
86	1085	36	2.314 (acre-ft)	1307497	30.016	35%	10.506	143901372
87	1005	9	0.78 (acre-ft)	169013	3.880	68%	2.650	2404489
88	2301	1	0.35 (acre-ft)	43560	1.000	62.0%	0.620	99026
89	303	51	0.45 (acre-ft)	70132	1.610	42%	0.670	414010
90	964	21	0.6603 (acre-ft)	31363	0.720	79%	0.571	82799
91	1043	1	71.785 (acre-ft)	6133248	140.800	17%	23.936	3166391501
92	314	11	0.84 (acre-ft)	263538	6.050	45%	2.750	5846151
93	1033	41	0.085 (acre-ft)	245330	5.632	28%	1.568	5066226
94	983	10.02	1.394	331492	7.610	24%	1.804	9249721
95	1003	11		0			0.000	0
96	1601	91	0.53 (acre-ft)	139392	3.200	36%	1.149	1635533
97	757	9	0.3 (acre-ft)	47393	1.088	25%	0.272	189068
98	964	14	0.4376 (acre-ft)	122665	2.816	51%	1.436	1266557
99	3702	4	1.106 (acre-ft)	213444	4.900	35%	1.715	3834877
100	4806	1,2,3,22	0.049 (acre-ft)	55757	1.280	72%	0.922	261685
101	1909	44	7.08 (acre-ft)	566280	13.000	27%	3.484	26992680
102	2708	1	1.54 (acre-ft)	223027	5.120	72.4%	3.707	592063
103	983	13	2.31 (acre-ft)	65340	1.500	78%	1.170	359370
104	4602	29	1.6 (acre-ft)	278784	6.400	26.7%	1.707	272623
105	139	11	0.401 (acre-ft)	105938	2.432	70%	1.702	944684
106	5901	112	0.123 (acre-ft)	113256	2.600	61.3%	1.595	254728
107	2707	2,3,4	0.55 (acre-ft)	111514	2.560	72%	1.843	1046741
108	105	1	0.558 (acre-ft)	70567	1.620	35%	0.567	419169
109	3602	13	8" Deep	5777	0.133	100.000%	0.133	2809
110	3602	13	30' Wide, 2-3' Deep	8000	0.184	100.000%	0.184	5387
111	7002	44	0.77 (acre-ft)	137214	3.150	38.1%	1.200	191638
112	2104	85,86	10.35 (acre-ft)	816837	18.752	43.1%	8.076	1289871
113	2402	1	0.386 (acre-ft)	39030	0.896	24%	0.214	128226
114	4801	52	0.035 (acre-ft)	10594	0.243	37%	0.091	9447
115	2707	12	0.14 (acre-ft)	19515	0.448	84.44%	0.378	32056
116	139	9	0.41 (acre-ft)	496584	11.400	50%	5.700	20757211
117	409	1	0.96 (acre-ft)	217452	4.992	24%	1.198	3980233

Site_ID	Design storm (Infiltration)	Land Use	Project Description	Project Photos (Y/N)
75	2-YR	Commercial and Services	Existing Infiltration basin was expanded for building expansion capturing site runoff at the north side of the site	
76	<2-YR (4.5")	Commercial	altered stormwater management due to parking expansion, SE existing stormwater management systems removed, replaced with stormwater infiltration systems of stone	
77	2-YR	Residential	Infiltration basin capturing site runoff at the north side of the site	
78	2-YR	Commercial and Services	Infiltration basin capturing site runoff at the north side of the site	
79	2-YR	Commercial and Services	Infiltration basin capturing site runoff at the east side of the site	
80	2-YR	Commercial and Services	Infiltration basin capturing site runoff at the south side of the site	
81	2-YR	Commercial and Services	Infiltration basin capturing site runoff at the southwest side of the site	
82	100-YR	Commercial	New construction, infiltration basins and extended detention basins that capture WQ storm	
83	WQ	Commercial	New construction, infiltration basins and extended detention basins that capture WQ storm	
84	2-YR	Commercial	New construction, infiltration basins and extended detention basins that capture WQ storm	
85	WQ	Commercial	New construction, infiltration basins and extended detention basins that capture WQ storm	
86	2-YR	Commercial and Services	Infiltration basin capturing site runoff at the southeast side of the site	
87	2-YR	Commercial and Services	Infiltration basin to be redesigned with additional basins capturing site runoff from existing building and additions	
88	2-YR	Commercial and Services	Infiltration basin capturing site runoff	
89	2-YR	Industrial	Infiltration basin capturing site runoff at the east side of the site	
90	2-YR	Commercial and Services		
91	2-YR	Commercial and Services		
92	2-YR	Commercial and Services	Two Proposed basins for substation expansion.	
93	2-YR	Residential	Infiltration basin capturing site runoff at the east side of the site	
94	2-YR	Commercial and Services	Infiltration basin capturing site runoff at the east side of the site	
95	2-YR	Commercial and Services	Infiltration Basin capturing site runoff at south end of site	
96	2-YR	Commercial and Services	Site redeveloped with new, Infiltration Basin capturing site runoff at north end of site	
97	2-YR	Commercial and Services	Infiltration basin capturing site runoff at the south side of the site	
98	2-YR	Commercial and Services		
99	2-YR	Residential	Infiltration basin capturing site runoff at the south side of the development	
100	2-YR	Commercial and Services	Infiltration basin capturing site runoff at the south side of the site	
101	2-YR	Commercial and Services	Infiltration basin capturing site runoff at the east side of the site	
102	2-YR	Commercial and Services	Infiltration basin capturing site runoff	
103	2-YR	Commercial and Services	Infiltration basin capturing site runoff at the southeast side of the site	
104	2-YR	Commercial and Services	Infiltration basin capturing site runoff at south end of site	
105	2-YR	Commercial and Services	Infiltration basin capturing site runoff at the south side of the site	
106	2-YR	Residential	Infiltration basin capturing site runoff	
107	2-YR	Commercial and Services	Existing? basin receives runoff & solar panels	
108	2-YR	Commercial and Services	Infiltration Basin capturing site runoff at northeast end of site	
109	2-YR	Commercial	Building addition and parking lot expansion. Infiltration trench put into parking lot, rain garden put to capture building addition runoff	
110	2-YR	Commercial	Building addition and parking lot expansion. Infiltration trench put into parking lot, rain garden put to capture building addition runoff	
111	2-YR	Commercial and Services	Infiltration Basin capturing site runoff	
112	2-YR	Commercial and Services	Infiltration basin capturing site runoff	
113	2-YR	Commercial and Services	Infiltration basin capturing site runoff at the north side of the site	
114	2-YR	Commercial and Services	Infiltration basin capturing site runoff at the north side of the site	
115	2-YR	Commercial and Services	Infiltration Basin capturing site runoff at south end of site	
116	2-YR	Commercial and Services	Infiltration basin capturing site runoff at the northeast side of the site	
117	2-YR	Commercial and Services	Lot subdivided into small development with infiltration basin	

Site_ID	Site Type (school, church, etc.)	Maintance responsibility	Stormwater Management Performance Rating	Built (Y/N)	Approx. Plan/Build Date
75	Industry	Property Owner	Not assessed	Y	Prior 2013
76	Retail	Property Owner	Not assessed	Y	Feb-15
77	Residential Complex	Property Owner	Not assessed	Y	
78	Commercial Building	Property Owner	Not assessed	Y	
79	Commercial Building	Property Owner	Not assessed	Y	
80	Commercial	Property Owner	Not assessed	N	
81	Industry	Property Owner	Not assessed	Y	Prior 2013
82	Retail	Property Owner	Not assessed	N?	Oct-15
83	Retail	Property Owner	Not assessed	N?	Oct-15
84	Office	Property Owner	Not assessed	N?	Oct-15
85	Eatery	Property Owner	Not assessed	N?	Oct-15
86	Commercial	Property Owner	Not assessed	Y	Prior 2013
87	Industry	Property Owner	Not assessed	Y/N	
88	Convenience Store	Property Owner	Not assessed	Y	
89	Commercial Building	JG Finneran	Not assessed	Y	
90	Auto Shop	Property Owner	Not assessed	Y	Prior 2013
91	Commercial	Property Owner	Not assessed	Y	Prior 2013
92	Utilities	Property Owner	Not assessed	N?	
93	Residential Complex	Property Owner	Not assessed	Y	
94	Commercial Building	Property Owner	Not assessed	Y	
95	Cold Storage	Property Owner	Not assessed	Y	
96	Grocery Store	Property Owner	Not assessed	Y	Prior 2016
97	Commercial Building	Property Owner	Not assessed	Y	
98	Pharmacy	Property Owner	Not assessed	N	Prior 2016
99	Residential Complex	Property Owner	Not assessed	Y	
100	Commercial Building	Property Owner	Not assessed	Y	
101	Residential	Property Owner	Not assessed	Y	
102	Storage Facility	856-691-9696	Not assessed	Y	
103	Pharmacy/Other	Property Owner	Not assessed	Y/N	Prior 2016
104	Church	<a href="http://www.vsbchurch.org/">http://www.vsbchurch.org/</a>	Not assessed	Y	
105	Industry	Property Owner	Not assessed	Y	Prior 2016
106	Residential Complex	908-910-0437	Not assessed	Y	
107	Restraunt/Retail/Bank	Property Owner	Not assessed	Y	May-13
108	Broadcast Station	Property Owner	Not assessed	Y	Prior 2013
109	Medical Office	Property Owner	Not assessed	Y	Apr-16
110	Medical Office	Property Owner	Not assessed	Y	Apr-16
111	Auto Repair	Lou Altobelli, 609-390-0332	Not assessed	Y	
112	Self Storage	John Caselli (8566972133)?	Not assessed	Y	
113	Commercial Building	John A Snidenbach	Not assessed	Y	
114	Commercial Building	John A Snidenbach	Not assessed	Y	
115	Pharmacy	Property Owner	Not assessed	Y	
116	Commercial	Property Owner	Not assessed	Y	Prior 2013
117	Commercial	Property Owner	Not assessed	N	

Site_ID	Source	Notes
75	<a href="http://hydro.rutgers.edu/view-project/119422">http://hydro.rutgers.edu/view-project/119422</a>	Project ID: 119422
76	Meeting Minutes	
77	<a href="http://hydro.rutgers.edu/view-project/118416">http://hydro.rutgers.edu/view-project/118416</a>	Project ID: 118416
78	<a href="http://hydro.rutgers.edu/view-project/119101">http://hydro.rutgers.edu/view-project/119101</a>	Project ID: 119101
79	<a href="http://hydro.rutgers.edu/view-project/119440">http://hydro.rutgers.edu/view-project/119440</a>	Project ID: 119440
80	<a href="http://hydro.rutgers.edu/view-project/118709">http://hydro.rutgers.edu/view-project/118709</a>	Project ID: 118709
81	<a href="http://hydro.rutgers.edu/view-project/119069">http://hydro.rutgers.edu/view-project/119069</a>	Project ID: 119069
82	Meeting Minutes	Inspira Urgent Care was built along with some basins
83	Meeting Minutes	Inspira Urgent Care was built along with some basins
84	Meeting Minutes	Inspira Urgent Care was built along with some basins
85	Meeting Minutes	Inspira Urgent Care was built along with some basins
86	<a href="http://hydro.rutgers.edu/view-project/119513">http://hydro.rutgers.edu/view-project/119513</a>	Project ID: 119513
87	<a href="http://hydro.rutgers.edu/view-project/119590">http://hydro.rutgers.edu/view-project/119590</a>	Project ID: 119590, additions not yet built
88	<a href="http://hydro.rutgers.edu/view-project/118390">http://hydro.rutgers.edu/view-project/118390</a>	Project ID: 118390
89	<a href="http://hydro.rutgers.edu/view-project/112093">http://hydro.rutgers.edu/view-project/112093</a>	Project ID: 112093
90	<a href="http://hydro.rutgers.edu/view-project/119244">http://hydro.rutgers.edu/view-project/119244</a>	Project ID: 119244
91	<a href="http://hydro.rutgers.edu/view-project/118700">http://hydro.rutgers.edu/view-project/118700</a>	Project ID: 118700
92	<a href="http://hydro.rutgers.edu/view-project/118425">http://hydro.rutgers.edu/view-project/118425</a>	Project ID: 118425
93	<a href="http://hydro.rutgers.edu/view-project/118701">http://hydro.rutgers.edu/view-project/118701</a>	Project ID: 118701
94	<a href="http://hydro.rutgers.edu/view-project/119591">http://hydro.rutgers.edu/view-project/119591</a>	Project ID: 119591
95	<a href="http://hydro.rutgers.edu/view-project/118420">http://hydro.rutgers.edu/view-project/118420</a>	Project ID: 118420/119574/119508/119169/119241, appears multiple times in database, unclear which one is latest and most correct
96	<a href="http://hydro.rutgers.edu/view-project/118431">http://hydro.rutgers.edu/view-project/118431</a>	Project ID: 118431
97	<a href="http://hydro.rutgers.edu/view-project/119349">http://hydro.rutgers.edu/view-project/119349</a>	Project ID: 119349
98	<a href="http://hydro.rutgers.edu/view-project/118948">http://hydro.rutgers.edu/view-project/118948</a>	Project ID: 118948
99	<a href="http://hydro.rutgers.edu/view-project/118388">http://hydro.rutgers.edu/view-project/118388</a>	Project ID: 118388
100	<a href="http://hydro.rutgers.edu/view-project/118410">http://hydro.rutgers.edu/view-project/118410</a>	Project ID: 118410
101	<a href="http://hydro.rutgers.edu/view-project/118763">http://hydro.rutgers.edu/view-project/118763</a>	Project ID: 118763
102	<a href="http://hydro.rutgers.edu/view-project/118383">http://hydro.rutgers.edu/view-project/118383</a>	Project ID: 118383
103	<a href="http://hydro.rutgers.edu/view-project/118524">http://hydro.rutgers.edu/view-project/118524</a>	Project ID: 118524, CVS constructed, other part of site was not constructed in full
104	<a href="http://hydro.rutgers.edu/view-project/118405">http://hydro.rutgers.edu/view-project/118405</a>	Project ID: 118405
105	<a href="http://hydro.rutgers.edu/view-project/119511">http://hydro.rutgers.edu/view-project/119511</a>	Project ID: 119511
106	<a href="http://hydro.rutgers.edu/view-project/118391">http://hydro.rutgers.edu/view-project/118391</a>	Project ID: 118391
107	Meeting Minutes ( <a href="http://hydro.rutgers.edu/view-project/119420">http://hydro.rutgers.edu/view-project/119420</a> )	Entire site area drains to basin, no calcs identified in files; Project ID: 119420, in wrong location in database
108	<a href="http://hydro.rutgers.edu/view-project/118432">http://hydro.rutgers.edu/view-project/118432</a>	Project ID: 118432
109	Municipality Visit	EDA-Engineering Company on Project
110	Municipality Visit ( <a href="http://hydro.rutgers.edu/view-project/118424">http://hydro.rutgers.edu/view-project/118424</a> )	EDA-Engineering Company on Project
111	<a href="http://hydro.rutgers.edu/view-project/118393">http://hydro.rutgers.edu/view-project/118393</a>	Project ID: 118393
112	<a href="http://hydro.rutgers.edu/view-project/109798">http://hydro.rutgers.edu/view-project/109798</a>	Project ID: 109798
113	<a href="http://hydro.rutgers.edu/view-project/118397">http://hydro.rutgers.edu/view-project/118397</a>	Project ID: 118397
114	<a href="http://hydro.rutgers.edu/view-project/118395">http://hydro.rutgers.edu/view-project/118395</a>	Project ID: 118395
115	<a href="http://hydro.rutgers.edu/view-project/118406">http://hydro.rutgers.edu/view-project/118406</a>	Project ID: 118406
116	<a href="http://hydro.rutgers.edu/view-project/119543">http://hydro.rutgers.edu/view-project/119543</a>	Project ID: 119543
117	<a href="http://hydro.rutgers.edu/view-project/118800">http://hydro.rutgers.edu/view-project/118800</a>	Project ID: 118800

Site_ID	Project Name	GI Practice Type	Street Address	Municipality	NJ	Postal	Latitude	Longitude
118	WAWA	Infiltration	61 South Main Road	Vineland City	NJ	08360	39.4839539	-74.9989405
119	Wendy's Site Plan	Infiltration	2073 West Landis Avenue	Vineland City	NJ	08360	39.482252	-75.000692
120	Garrison Memorial Park	Two Rain Gardens & Porous Pavement Parking Lot	201 West Avenue	Woodstown	NJ	08098	39.649071	-75.332911

Site_ID	Block	Lot	GI Size (SF)	Drainage Area (SF)	Drainage Area (acres)	% Impervious	Impervious Area (acres)	Gal/yr Treated Impervious (Annual)
118	618	1	2.27 (acre-ft)	148104	3.400	58%	1.972	1846363
119	4211	15	0.132 (acre-ft)	83635	1.920	38%	0.730	588792
120	21	44	3750	6965	0.160	100%	0.160	4083

Site_ID	Design storm (Infiltration)	Land Use	Project Description	Project Photos (Y/N)
118	2-YR	Commercial and Services	Infiltration basin capturing site runoff at the west side of the site	
119	2-YR	Commercial and Services	Infiltration basin capturing site runoff at the northeast side of the site	
120	WQ	Commercial and Services	A strip of porous pavement infiltrates the parking lot runoff, and two rain gardens filter additional water during storm events	Y

Site_ID	Site Type (school, church, etc.)	Maintance responsibility	Stormwater Management Performance Rating	Built (Y/N)	Approx. Plan/Build Date
118	Convenience Store	Property Owner	Not assessed	Y	Prior 2016
119	Eatery	Property Owner	Not assessed	Y	Prior 2016
120	Park	2 years from installation date: RU WRP; After 2 years: project partner or municipality	Satisfactory	Y	2016/2017



Site_ID	Source	Notes
118	<a href="http://hydro.rutgers.edu/view-project/119347">http://hydro.rutgers.edu/view-project/119347</a>	Project ID: 119347
119	<a href="http://hydro.rutgers.edu/view-project/119575">http://hydro.rutgers.edu/view-project/119575</a>	Project ID: 119575
120	Rutgers Water Resources Program	