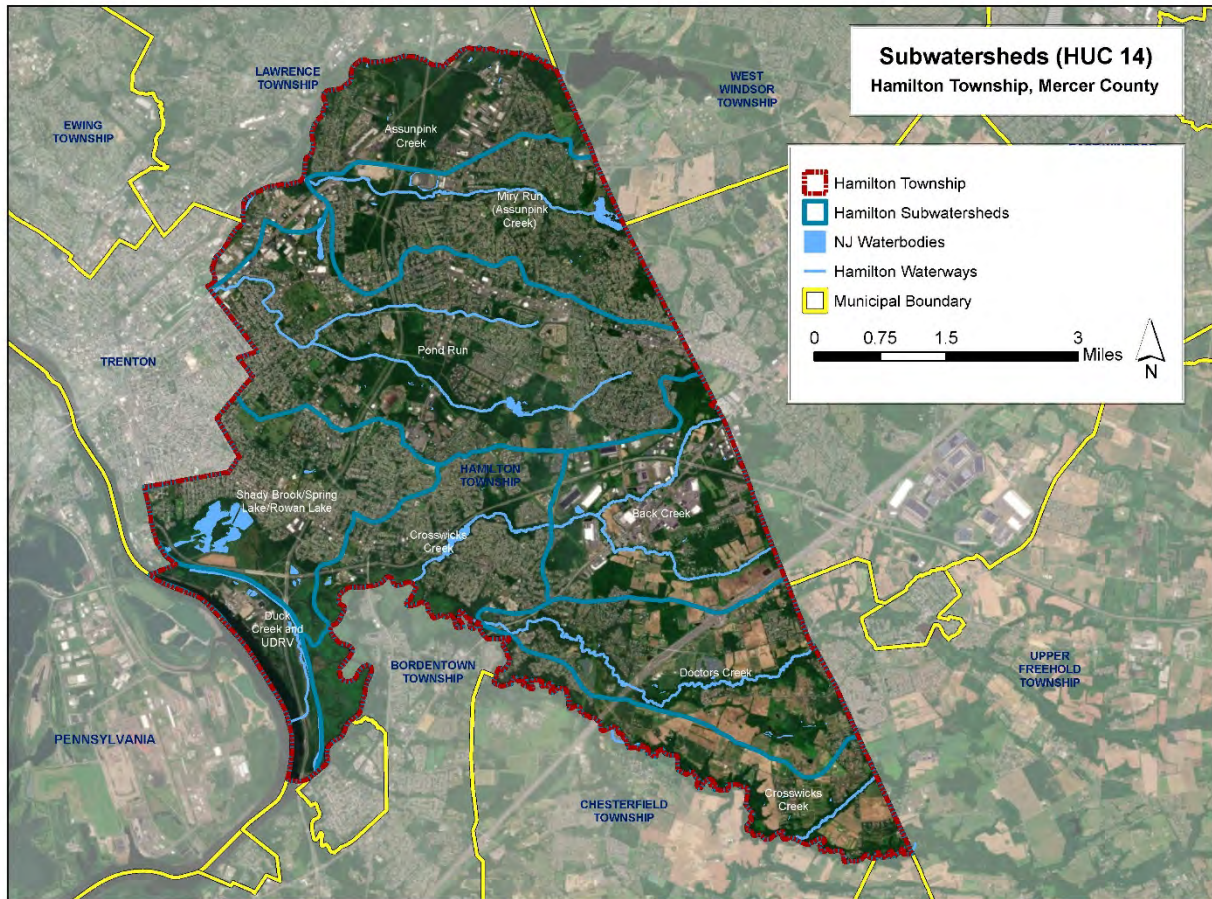


# RUTGERS

New Jersey Agricultural  
Experiment Station



## Hamilton Township (Mercer County)

# REVIEW AND EVALUATION OF TOTAL MAXIMUM DAILY LOADS (TMDLs)

Developed by the Rutgers Cooperative Extension Water Resources Program  
Funded by Hamilton Township, Mercer County, New Jersey

December 5, 2019

## **Acknowledgements**

The Hamilton Township (Mercer County) Review and Evaluation of Total Maximum Daily Loads (TMDLs) has been produced by the **Rutgers Cooperative Extension (RCE) Water Resources Program**.

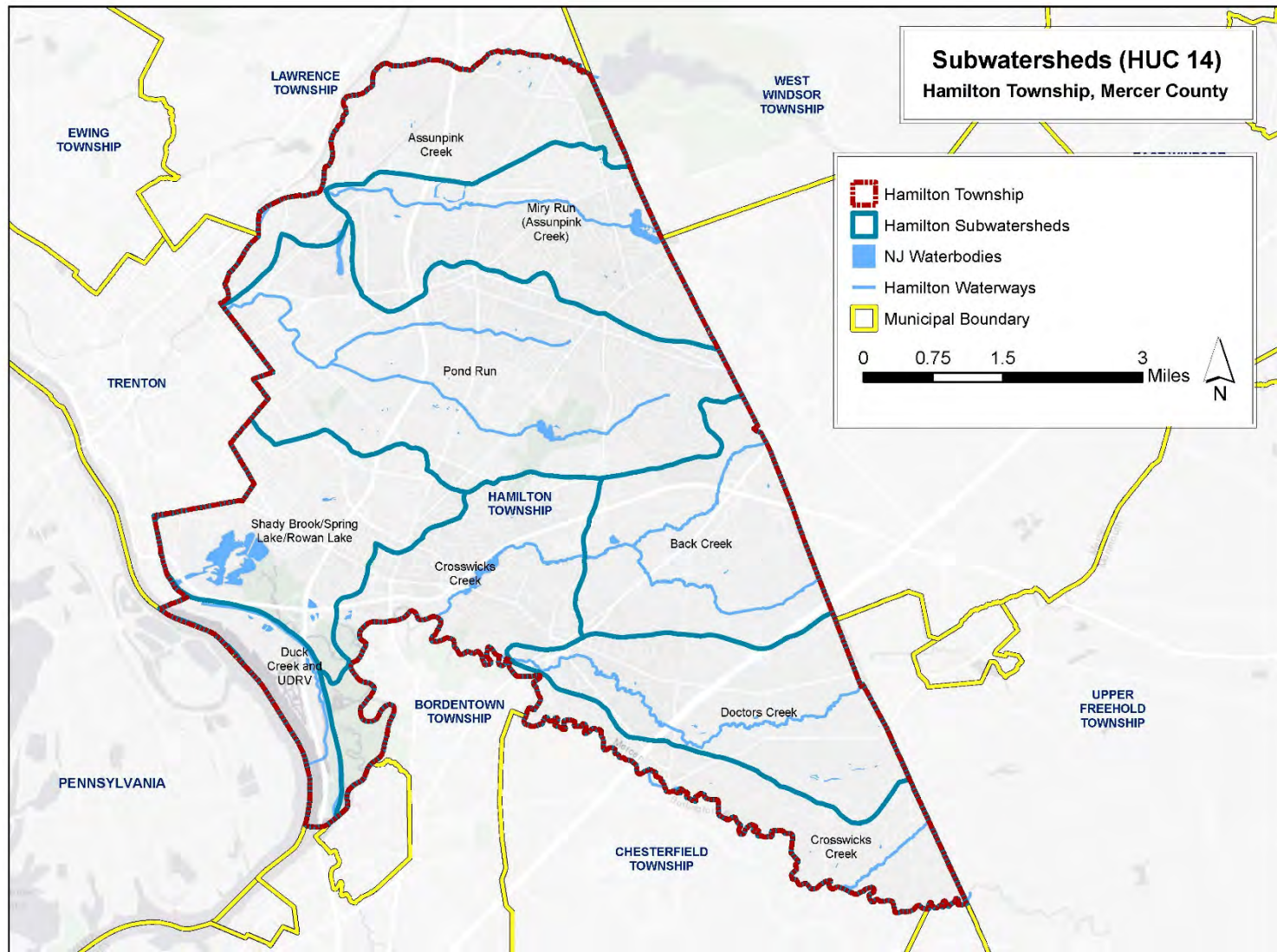
Funding for this project was generously provided by the **Township of Hamilton, Mercer County, New Jersey** and in part by the **New Jersey Agricultural Experiment Station** through the United States Department of Agriculture.

## **Introduction**

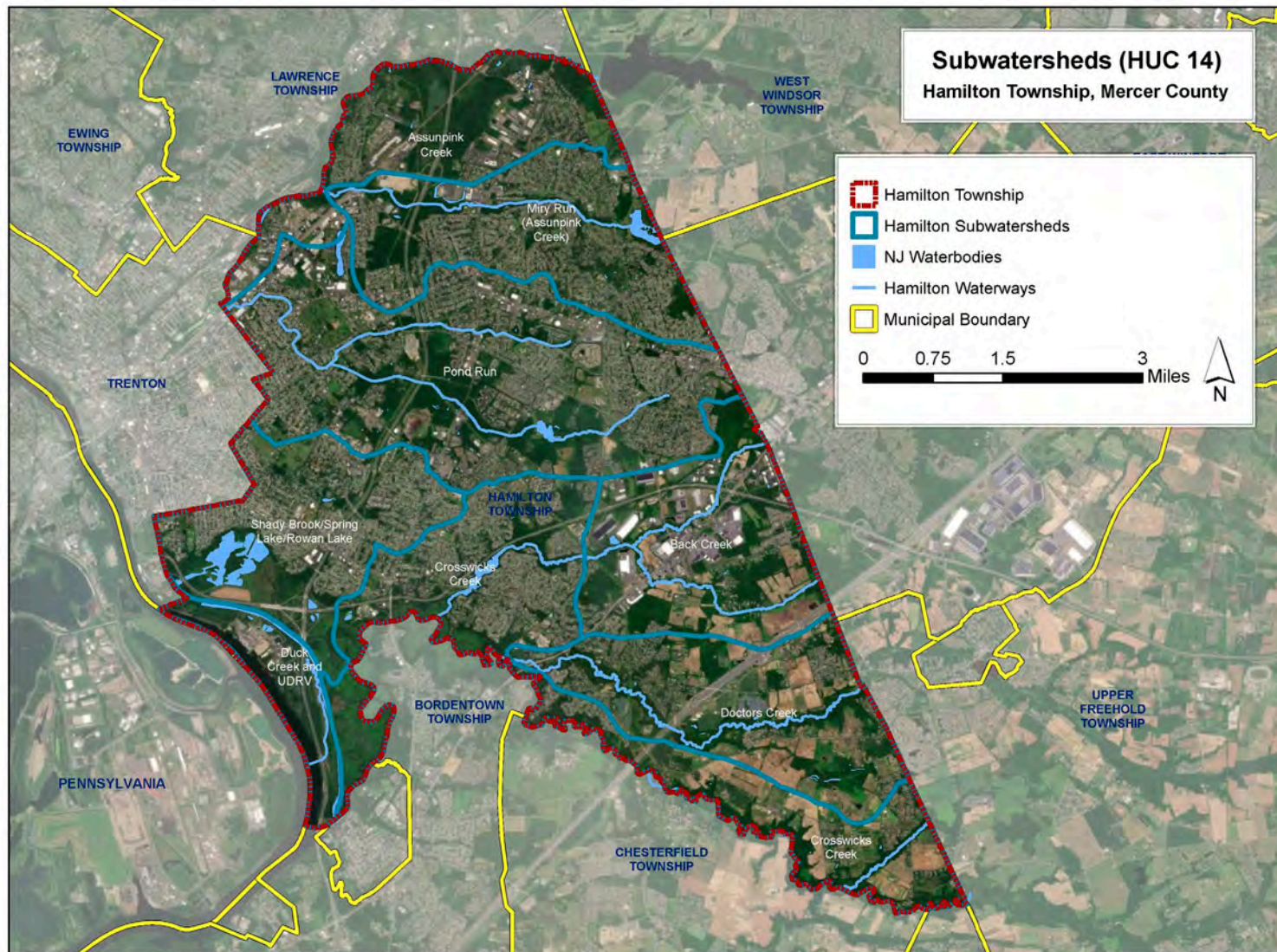
Located in Mercer County in central New Jersey, Hamilton Township covers over 40 square miles east of Trenton. With a population of 88,464 (2010 United States Census), Hamilton Township is dominated by urban land uses. Over half of the municipality's land uses, approximately 59.0%, is comprised of residential properties. Of that residential land use, a large portion, 39.7%, is residential, single unit, medium density development. The New Jersey Department of Environmental Protection (NJDEP) has defined single unit, medium density development as residential urban/suburban neighborhoods greater than 1/8-acre and up to and including 1/2-acre lots (Anderson et al., 1976). These areas generally contain about 30 to 35% impervious surface areas (Anderson et al., 1976). In addition to residential development, urban land use also includes land used for commercial, industrial, recreational, and transportation purposes. Natural lands (forests, wetlands, and water) make up approximately 31.7% of Hamilton Township. These areas generally have lower amounts of impervious cover than urban areas as they lack the associated infrastructure.

Hamilton Township contains portions of eight watersheds: Assunpink Creek, Back Creek, Crosswicks Creek, Doctors Creek, Duck Creek, Miry Run, Pond Run, and Shady Brook (See Figures 1 and 2). There are approximately 90.5 miles of rivers and streams within the municipality; these include the Assunpink Creek along the northern edge of the municipality, Miry Run and its tributaries, Pond Run and tributaries, Edges Brook, Back Creek, Doctors Creek and tributaries, and a section of the Delaware River. Hamilton Township is within the New Jersey Department of Environmental Protection (NJDEP) Watershed Management Areas (WMA) 11 (Central Delaware Tributaries) and WMA 20 (Assiscunk, Crosswicks, and Doctors Creeks).

NJDEP's land use/land cover geographical information system (GIS) data layer categorizes Hamilton Township into many unique land use areas, assigning a percent impervious cover for each delineated area. These impervious cover values were used to estimate the impervious coverage for Hamilton Township. Based upon the NJDEP land use/land cover data, Hamilton Township has impervious cover totaling 22.7%.



**Figure 1: Waterways in Hamilton Township**



**Figure 2: Aerial photograph of waterways in Hamilton Township**

The literature suggests a link between impervious cover and stream ecosystem impairment (Schueler, 1994; Arnold and Gibbons, 1996; May et al., 1997). Impervious cover may be linked to the quality of lakes, reservoirs, estuaries, and aquifers (Caraco et al., 1998), and the amount of impervious cover in a watershed can be used to project the current and future quality of streams. Based on the scientific literature, Caraco et al. (1998) classified urbanizing streams into the following three categories: sensitive streams, impacted streams, and non-supporting streams. Schueler (1994, 2004) developed an impervious cover model that classified “sensitive streams” as typically having a watershed impervious surface cover from 0-10%. “Impacted streams” have a watershed impervious cover ranging from 11-25% and typically show clear signs of degradation from urbanization. “Non-supporting streams” have a watershed impervious cover of greater than 25%; at this high level of impervious cover, streams are simply conduits for stormwater flow and no longer support a diverse stream community. Schueler et al. (2009) reformulated the impervious cover model based upon new research that had been conducted. This new analysis determined that stream degradation was first detected at 2 to 15% impervious cover. The updated impervious cover model recognizes the wide variability of stream degradation at impervious cover below 10%. The updated model also moves away from having a fixed line between stream quality classifications. For example, 5 to 10% impervious cover is included for the transition from sensitive to impacted, 20 to 25% impervious cover for the transition between impacted and non-supporting, and 60 to 70% impervious cover for the transition from non-supporting to urban drainage. Based upon this information, Hamilton Township’s high impervious cover percentage would suggest that its waterways are impacted and most likely not meeting the state’s surface water quality standards.

### **Total Maximum Daily Loads (TMDLs)**

In accordance with Section 305(b) and 303(d) of the Federal Clean Water Act, New Jersey is required to assess the overall water quality of the state’s waters and identify those waterbodies with a water quality impairment for which total maximum daily loads (TMDLs) may be necessary. NJDEP fulfills its assessment obligation under the Clean Water Act through the Integrated Water Quality Monitoring and Assessment Report (i.e., Integrated Report), which includes the Integrated List of Waterbodies, issued biennially. A TMDL represents the assimilative or carrying capacity

of a waterbody, taking into consideration point and nonpoint sources of pollutants of concern, the natural background, and surface water withdrawals. A TMDL can be thought of as a “budget” for the total amount of a pollutant that can enter a waterbody while still maintaining surface water quality standards. TMDLs have been developed for various pollutants in various waterbodies throughout the state. Tier A Municipal Separate Storm Sewer System (MS4) discharges are considered point sources under the Clean Water Act; Tier B MS4 discharges are considered nonpoint sources. Hamilton Township is a Tier A municipality. For MS4 discharges, best management practices (BMPs) are generally considered the most appropriate form of effluent limitation when designed to satisfy technology-based requirements and to protect water quality. For this reason, the Tier A MS4 permit contains several minimum requirements in the form of BMPs.

The BMPs required under the Tier A MS4 permit are aimed at reducing the pollutant loading of many common pollutants such as solids and floatables, total suspended solids, nutrients, and pathogens. For example, regular street sweeping will reduce solids and floatables as well as suspended solids, which have been deposited on streets and are available for transport in stormwater runoff. Wildlife feeding ordinances and pet waste ordinances are aimed at reducing pathogens and nutrients in stormwater runoff. Public education can be especially important in teaching the local population ways to lessen their impact on the local environment, such as properly disposing of waste materials.

The minimum required elements of the Tier A MS4 permit are generally expected to achieve a substantial portion of the required load reductions required by each TMDL when implemented properly. However, there may be instances where the municipality must refine their implementation of the MS4 program to further reduce pollutant loadings. For example, public education programs may need to be targeted to specific audiences, stricter enforcement of ordinances may be needed, or more conservative post-construction stormwater management standards may be required. Therefore, it is important for stormwater coordinators to be aware of each approved or adopted TMDL associated with a waterbody wholly or partially within or bordering the municipality and the associated pollutant of concern as well as to be aware of ways to further reduce pollutant loadings.

## **MS4 Minimum Standards TMDLs**

The Tier A MS4 general permit requires Tier A MS4 permittees to review approved and adopted TMDL reports to identify any TMDLs that apply to surface water bodies wholly or partially within or bordering the Tier A municipality. The municipality must then use the information to prioritize maintenance of stormwater facilities and to identify and develop optional measures to address specific sources of stormwater-related pollutants contributing to a waterbody with an approved or adopted TMDL.

At a minimum, the Tier A municipality must:

- Identify stormwater related pollutants listed in approved or adopted TMDL reports associated with any segment of surface water wholly or partially within or bordering the Tier A municipality
- Annually review the approved or adopted TMDL reports identified above
- Use TMDL information to prioritize stormwater facility maintenance, including schedules for repairs
- Identify and develop opportunities to address specific sources of stormwater related pollutants contributing to discharges authorized under the Tier A permit

Tier A municipalities must certify annually that approved or adopted TMDLs have been identified and reviewed, required maintenance and repairs have been prioritized using TMDL information, and opportunities to address specific pollutant sources have been developed and incorporated into the stormwater pollution prevention plan (SPPP) as optional measures.

## **TMDLs in Hamilton Township**

The NJDEP has created a TMDL Look-Up Tool to find applicable TMDLs for each municipality. This tool can be found at <https://www.nj.gov/dep/dwq/msrp-tmdl-rh.htm>. This tool will review every year to determine if new TMDLs have been approved and adopted so they can be incorporated into the SPPP. Table 1 below shows the approved TMDLs for the waterbodies in Hamilton Township. See pages 23-24 for a listing of the TMDLs reviewed as part of this report.



**Table 1: Approved TMDLs for waterbodies in Hamilton Township, Mercer County, New Jersey**

<b>Date</b>	<b>Pollutant</b>	<b>Waterbody</b>
<b>Stream TMDLs</b>		
2003	Fecal Coliform	Assunpink Creek, Pond Run, Crosswicks Creek, Pleasant Run, Miry Run, Doctors Creek
2003	PCBs	Back Creek (above Yardville-H Sq Road)
2003	PCBs	Crosswicks Creek (Doctors Ck-Ellisdale trib)
2003	PCBs	Crosswicks Creek (Ellisdale Tributary - Walnford)
2003	PCBs	Crosswicks Creek (below Doctors Creek)
2003	PCBs	Doctors Creek (below Allentown)
2003	PCBs	Duck Creek and UDRV to Assunpink Creek
2003	PCBs	Shady Brook/Spring Lake/Rowan Lake
2007	Total Phosphorus	Doctors Creek and Miry Run
<b>Lake TMDLs</b>		
2003	Total Phosphorus	Spring Lake

***Fecal Coliform TMDLs***

Prior to October 2006, New Jersey had water quality standards for fecal coliform as an indicator for pathogen impairment. The regulations stated that “Fecal coliform levels shall not exceed a geometric average of 200 CFU/100 ml nor should more than 10 percent of the total sample taken during any 30-day period exceed 400 CFU/100 ml in FW2 waters.” In 2003, TMDLs were developed for fecal coliform. These TMDLs included the load reductions required to achieve instream fecal coliform concentrations. Nonpoint and stormwater point sources are the primary contributors to fecal coliform loads in these streams and can include storm-driven loads transporting fecal coliform from sources such as geese, farms, and domestic pets to the receiving water. Nonpoint sources also include steady inputs from sources such as failing sewage conveyance systems and failing or inappropriately located septic systems. Because the total point source contribution other than stormwater (i.e., publicly-owned treatment works, POTWs) is an

insignificant fraction of a percent of the total load, these fecal coliform TMDLs will not impose any change in current practices for POTWs and will not result in changes to existing effluent limits.

Fecal coliform TMDLs were developed for Assunpink Creek, Pond Run, Crosswicks Creek, Pleasant Run, Miry Run, and Doctors Creek in Hamilton Township. The TMDLs identified load reductions from 86% to 99% to achieve the instream fecal coliform criteria. Discussed below for each waterway that has a fecal coliform TMDL are recommended strategies for achieving the required load reductions. Most of the strategies include complying with the MS4 permit requirements including passing pet waste ordinances, street sweeping, and catch basin cleaning. In watersheds where there are agricultural land uses, the recommended strategies included helping the farmer obtain United States Farm Bill funding to implement agricultural best management practices that will reduce the impact of stormwater runoff from their farm.

#### Miry Run at Route 533 at Mercerville (Site ID #01463850)

- Beginning at Spring Garden Road ending at Pond Road: Land uses in this area include forest, field/pasture, agriculture, residential, and commercial uses. The predominant land uses in the area are urban uses. Possible sources of fecal coliform include geese, wildlife, and domestic pets.
- Pond Run to Quakerbridge Road: Land uses in this area include forest, fields, agriculture, residential and commercial uses. Urban land use is the predominant use in this area. Possible sources of fecal coliform include geese, wildlife, and domestic pets. The majority of this area is sewered except for an area between Line Road and Old Trenton Road in West Windsor.
- Quakerbridge Road to the point where Miry Run enters the Assunpink Creek near Sweet Briar: The predominant land use is urban. Other land uses in the area include forest and commercial. Possible sources of fecal contamination include geese, wildlife, and domestic pets. This area is mostly sewered.

***Strategies: organize local community-based goose management programs; Phase II stormwater program***

Assunpink Creek at Peace Street at Trenton (Site ID #01464020)

- Beginning where Miry Run enters Assunpink at Sweet Briar Avenue and ending where the Assunpink Crosses under Nottingham Way: Urban land use is predominant in this area. Other land uses include forest, commercial, industrial, and wetlands. Possible sources of fecal coliform include geese, wildlife, and domestic pets. This area is mainly sewered.
- Beginning at Nottingham Way and ending at Clinton Avenue: Urban land use is the predominant land use in the area. Other minor land uses include forest, commercial, and industrial uses. Possible sources of fecal coliform include geese, wildlife, and domestic pets. This area is entirely sewered.
- Beginning at Stockton Street, Mill Hill Park area and ending at the Delaware River: This area runs through downtown Trenton. There are some residential areas where domestic pets could be a potential source of fecal coliform. In addition, there are a few parks where geese flock, which could be an additional contributing factor for fecal coliform.

***Strategies: organize local community-based goose management programs; Phase II stormwater program***

Doctors Creek at Allentown (Site ID # 01464515)

Large amounts of Canada geese have been observed upstream of Hamilton Township on Conines Millpond in Allentown. Agricultural lands supporting livestock have been observed along with residential areas. The load duration curve is consistent with storm-driven sources.

***Strategies: prioritize for EQIP (Environmental Quality Incentives Program) funds to install agricultural BMPs; encourage community-based goose management programs***

Crosswicks Creek at Groveville Road (Site ID# 01464504)

The stream has a well-developed buffer throughout the reach, ranging from 23 to over 300 feet. Downstream portions of the creek flow through a highly residential area that receives sewer service. In the upstream portion of the segment between Extonville Road in Extonville to Arneytown-Hornerstown Road in Hornerstown, there are areas of residential homes on septic and pastureland for horses streamside. The load duration curve is consistent with storm-driven sources.

***Strategies: prioritize for EQIP funds to install agricultural BMPs; Phase II stormwater program***

## **PCB TMDLs**

The states of Delaware, New Jersey, and Pennsylvania have identified the Delaware Estuary as being impaired based on their findings of elevated levels of polychlorinated biphenyls (PCBs) in the tissue of fish caught in this portion of the Delaware River. As a result of this finding, the Delaware River Basin Commission (DRBC) prepared a TMDL for polychlorinated biphenyls (PCBs) for water quality management zones 2-5 of the Tidal Delaware River. Hamilton Township is in water quality management zone 2.

PCBs are classified as a probable human carcinogen by the U.S. Environmental Protection Agency (EPA). They also have been shown to have an adverse impact on human reproductive and immune systems and may act as an endocrine disruptor. Due to their stable properties, PCBs were used in hundreds of industrial and commercial applications, including electrical, heat transfer, and hydraulic equipment; as plasticizers in paints, plastics and rubber products; and in pigments, dyes and carbonless copy paper, among other applications. PCB laden oil is often associated with electrical transformers. More than 1.5 billion pounds of PCBs were manufactured in the United States before their manufacture and general use, with a few small exceptions, was banned by the EPA in the late 1970s. Existing uses in some electrical equipment continue to be allowed. PCBs are hydrophobic and thus tend to bind to organic particles in sediment and soils. Their chemical stability allows them to persist in the environment for years. PCBs accumulate in the tissue of fish and other wildlife, entering the organism through absorption or ingestion. As a result, they may be present in fish and marine mammals at levels many times higher than in the surrounding water and at levels unsuitable for human consumption.

Since pentachlorobiphenyls (penta-PCBs) were the dominant PCBs in fish tissue monitored in the estuary and since ambient data indicated that throughout the estuary penta-PCBs represents approximately 25% of the total PCBs present, the penta-PCBs were selected for the development of the TMDL. TMDLs, wasteload allocations<sup>1</sup> (WLAs), and load allocations<sup>2</sup> (LAs) for total

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<sup>1</sup> Wasteload allocations (WLAs) are the portion of the TMDL allocated to point sources including MS4s.

<sup>2</sup> Load allocations (LAs) are the portion of the TMDL allocated to nonpoint sources.

PCBs were extrapolated using a factor of 4 to 1 from TMDLs and allocations developed for penta-PCBs.

The TMDL recognizes the Hamilton Township MS4 as a point source. Approximately 24% of the PCB loads to the Delaware River in zone 2 come from the MS4s in this zone, which include Hamilton Township and 12 other municipalities in New Jersey and seven other municipalities in Pennsylvania. The calculated wasteload allocation for the MS4s in zone 2 is 1.511 mg/day for penta-PCBs and 6.044 mg/day for total PCBs. While a percent reduction in PCB loading for Hamilton Township is not provided in the PCB TMDL, monitoring data show that the existing PCB load in zone 2 is roughly two to three orders of magnitude higher than the TMDL.

The PCB TMDL states that the NPDES permitting authorities believe that it is appropriate for these discharges to receive non-numeric water quality based effluent limits (WQBELs) consistent with their respective individual WLAs when their NPDES permits are reissued or otherwise modified. The states have indicated that a typical permit will include, among other requirements, the requirement to monitor the discharge and to implement a PCB pollutant minimization program. In zone 2, runoff from contaminated sites is not a significant source of PCBs but must still be addressed. Additionally, upstream sources of PCBs must be controlled to reduce the input of PCBs from the non-tidal portion of the Delaware River upstream of Trenton. Finally, air concentrations of PCBs in the region currently are two orders of magnitude above the concentration required to achieve equilibrium and halt contributions of PCBs from air to the water. Air monitoring data collected at several sites in New Jersey, Delaware, and Pennsylvania suggest that PCB air concentrations primarily result from local sources. Thus, source reductions must focus on PCBs in the local and regional airshed.

***Strategies: While implementing a PCB pollutant minimization program applies more to wastewater treatment plants and industrial discharges, Hamilton Township could take measures to ensure that their public works operations are also minimizing sources of PCB pollution. There are several known potential sources of PCBs including transformers and switches, contaminated soils, hydraulic fluids, lubricants, gasket sealers, paints, plasticizers, and adhesives. The municipality should work to ensure proper standard operating procedures are in place to minimize the release of PCBs from these potential sources.***

## ***Phosphorus TMDLs***

Spring Lake, Miry Run, and Doctors Creek were all determined to have total phosphorus concentrations above the surface water quality standard and therefore required a TMDL to be developed. Excessive phosphorus can lead to eutrophication and can be detrimental to a waterbody. For freshwater streams, the total phosphorus water quality standard is 0.1 mg/l, and for freshwater lakes, the standard is 0.05 mg/l.

Spring Lake is a 22-acre lake located in Hamilton, Mercer County. The lake drains a small portion (115 acres) of the Trenton Marshes, an extensive wetland area that borders the Delaware River. The lakeshed is very small, only 5.3 times the area of the lake, and consists entirely of forest and wetland. Spring Lake was once part of a small amusement park, serving primarily an aesthetic purpose and has been used for fishing; however, more recently excessive weed growth has interfered with its use. The majority of inflow into the lake is through groundwater seepage and springs, with a lake mean depth of 1.22 meters and a total outflow of 379,000 m<sup>3</sup>. Lake volume and detention time were estimated at 107,000 m<sup>3</sup> and 103 days, respectively. For the purposes of this TMDL analysis, 75% of the water load was assumed to be due to groundwater infiltration. Since the drainage is all wetlands and the majority of flow to the lake is groundwater infiltration, the TMDL does not require a phosphorus load reduction for any land uses in the Spring Lake watershed.

For the purposes of TMDL development, point sources include domestic and industrial wastewater treatment plants that discharge to surface waters as well as stormwater discharges subject to regulation under the National Pollutant Discharge Elimination System (NPDES). This includes facilities with individual or general industrial stormwater permits and Tier A municipalities and state and county facilities regulated under the New Jersey Pollutant Discharge Elimination System (NJPDES) municipal stormwater permitting program. Stormwater point sources, like nonpoint sources, derive their pollutant load from runoff from land surfaces, and load reduction is accomplished through BMPs. The distinction is that stormwater point sources are regulated under

the Clean Water Act under the MS4 program. The regulated stormwater point sources are or will be addressed through the management practices required through the discharge permits.

*Strategies: Urban and agricultural land use sources are the focus for implementation of load reductions. Urban land use will be addressed primarily by stormwater regulation. Land uses that are identified as agricultural land uses in this watershed, including county or local parks, that support a significant goose population will be addressed by goose management strategies. Remaining agricultural land use will be addressed by implementation of conservation management practices tailored to each farm.*

## Recommendations

The goal with reviewing the TMDLs in Hamilton Township was to prioritize watersheds where actions can be taken to address water quality impairment. TMDLs have been completed for eight streams and one lake in the municipality, which encompasses all of Hamilton Township. The required pollutant load reductions to achieve the TMDLs are presented in Table 2.

**Table 2: Required pollutant load reduction to achieve TMDLs**

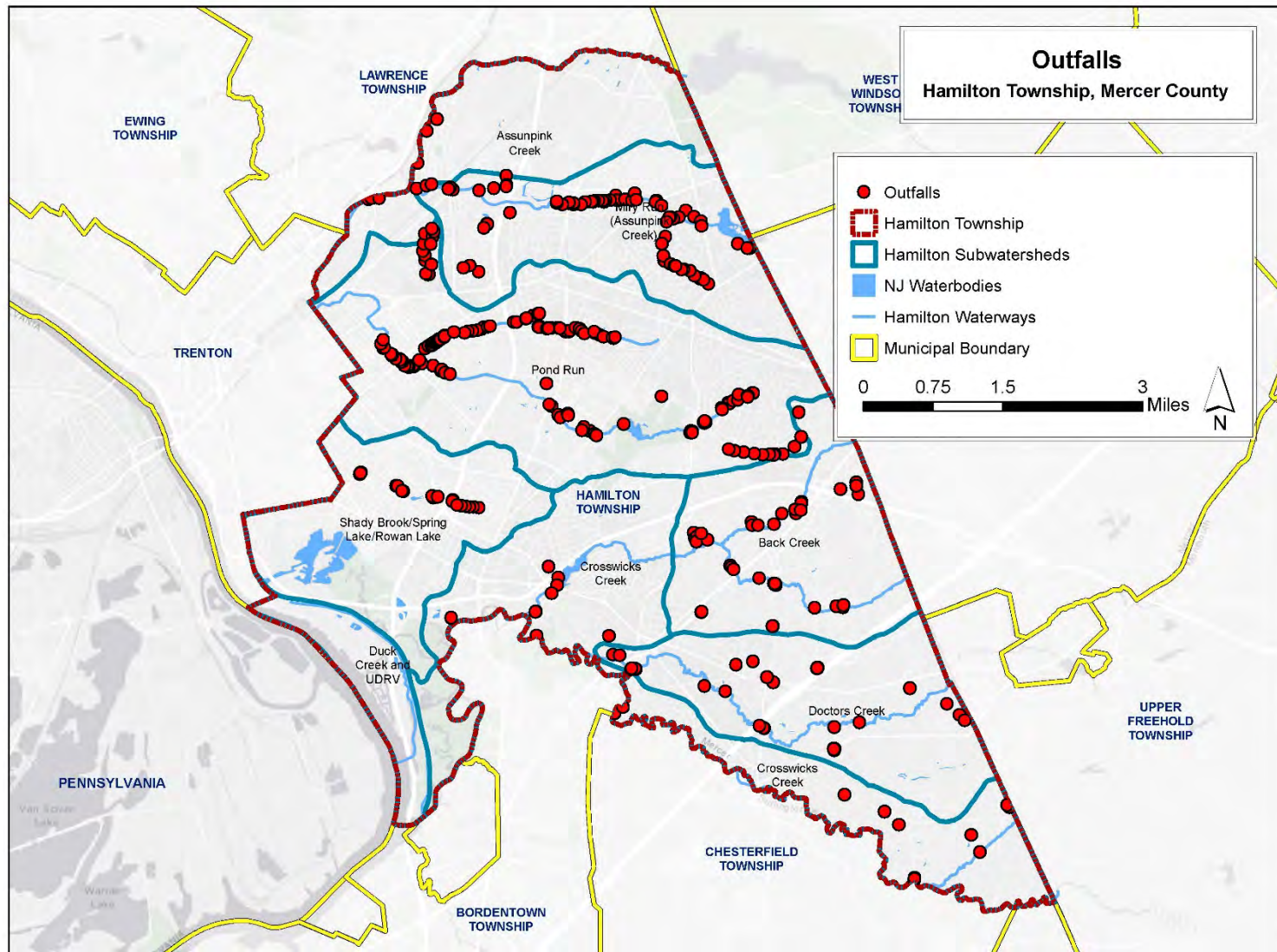
<b>Waterbody</b>	<b>Fecal Coliform</b>	<b>PCBs<sup>3</sup></b>	<b>Total Phosphorus</b>
Assunpink Creek	99%	99.9%	-
Pond Run	99%	99.9%	-
Crosswicks Creek	96%	99.9%	-
Pleasant Run	96%	99.9%	-
Miry Run	96%	99.9%	22.0%
Doctors Creek	86%	99.9%	77.5%
Back Creek	-	99.9%	-
Shady Brook	-	99.9%	-
Spring Lake	-	-	-

The MS4 permit requires Hamilton Township to prioritize MS4 actions in TMDL watersheds including catch basin cleaning and street sweeping. Also, any stormwater outfall or detention basin repairs or retrofits should focus on TMDL areas (See Figure 3 and 4). A stormwater mitigation plan has been completed for Hamilton Township that identifies 78 opportunities for retrofitting existing development with green infrastructure (RCE, 2018). This plan can serve as a blueprint for implementing stormwater management practices throughout the municipality that will reduce pollutant loads and help achieve TMDLs.

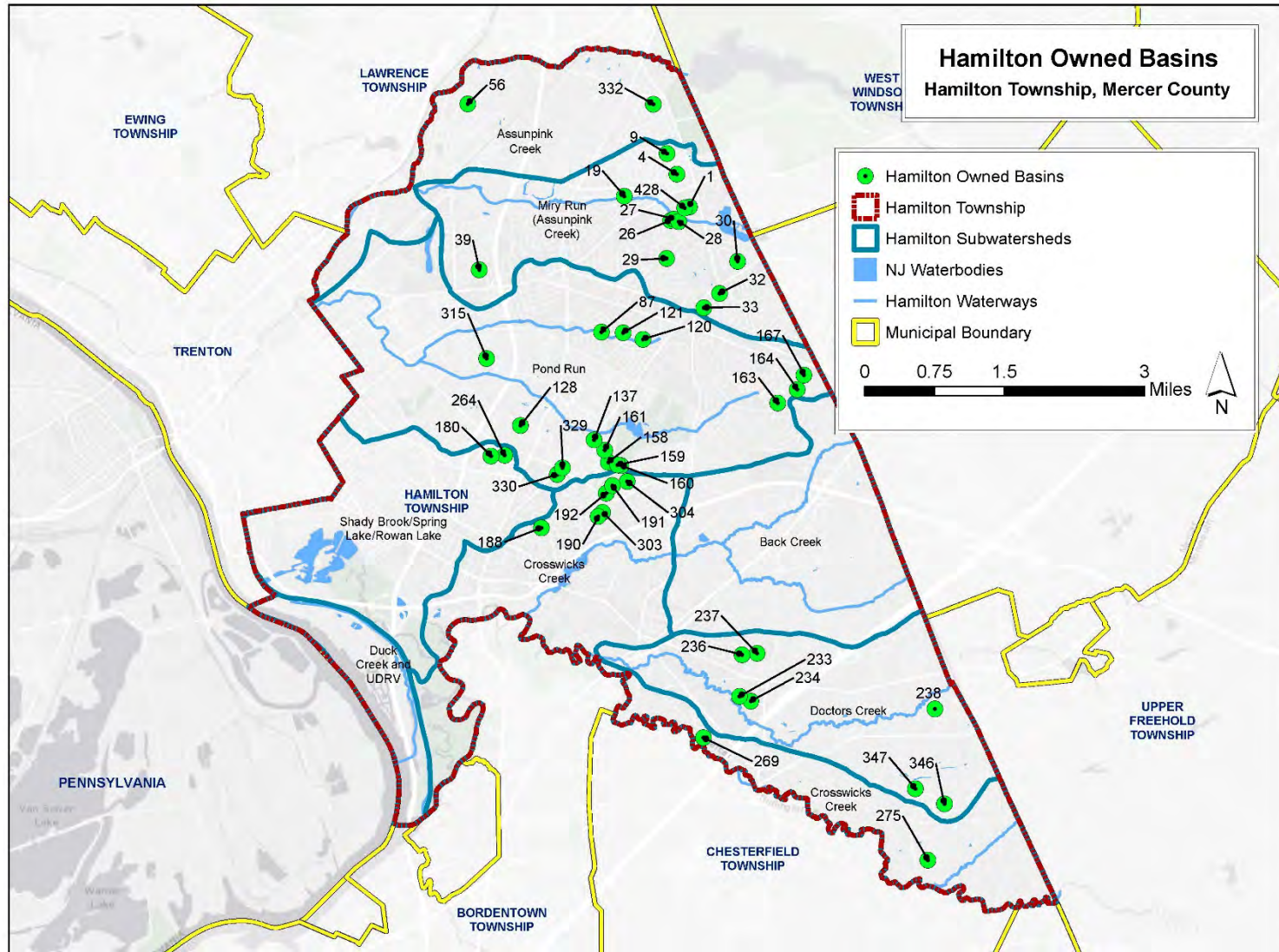
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<sup>3</sup> Calculated from the PCB TMDL (DRBC, 2003)



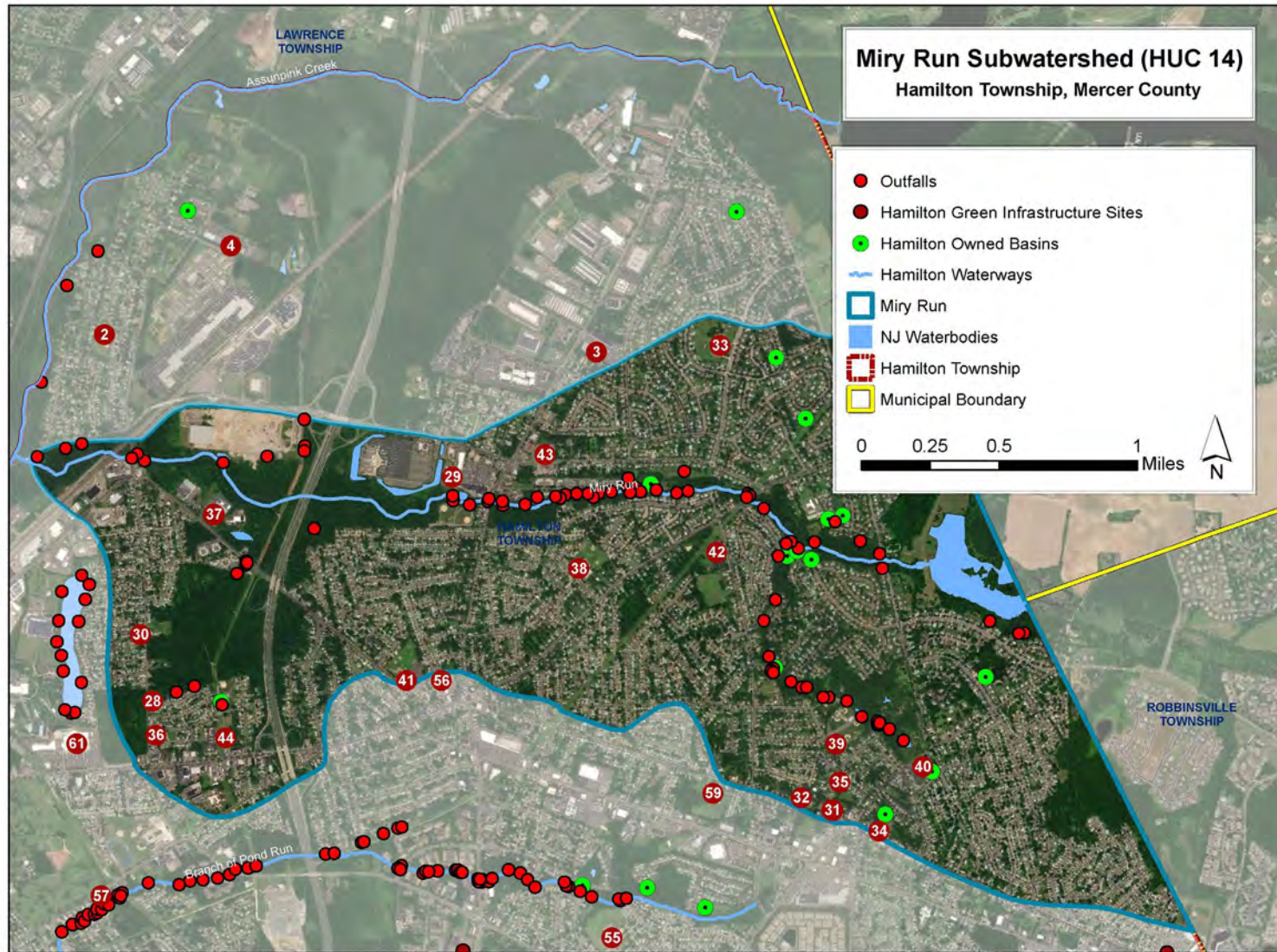


**Figure 3: Stormwater outfalls in Hamilton Township**

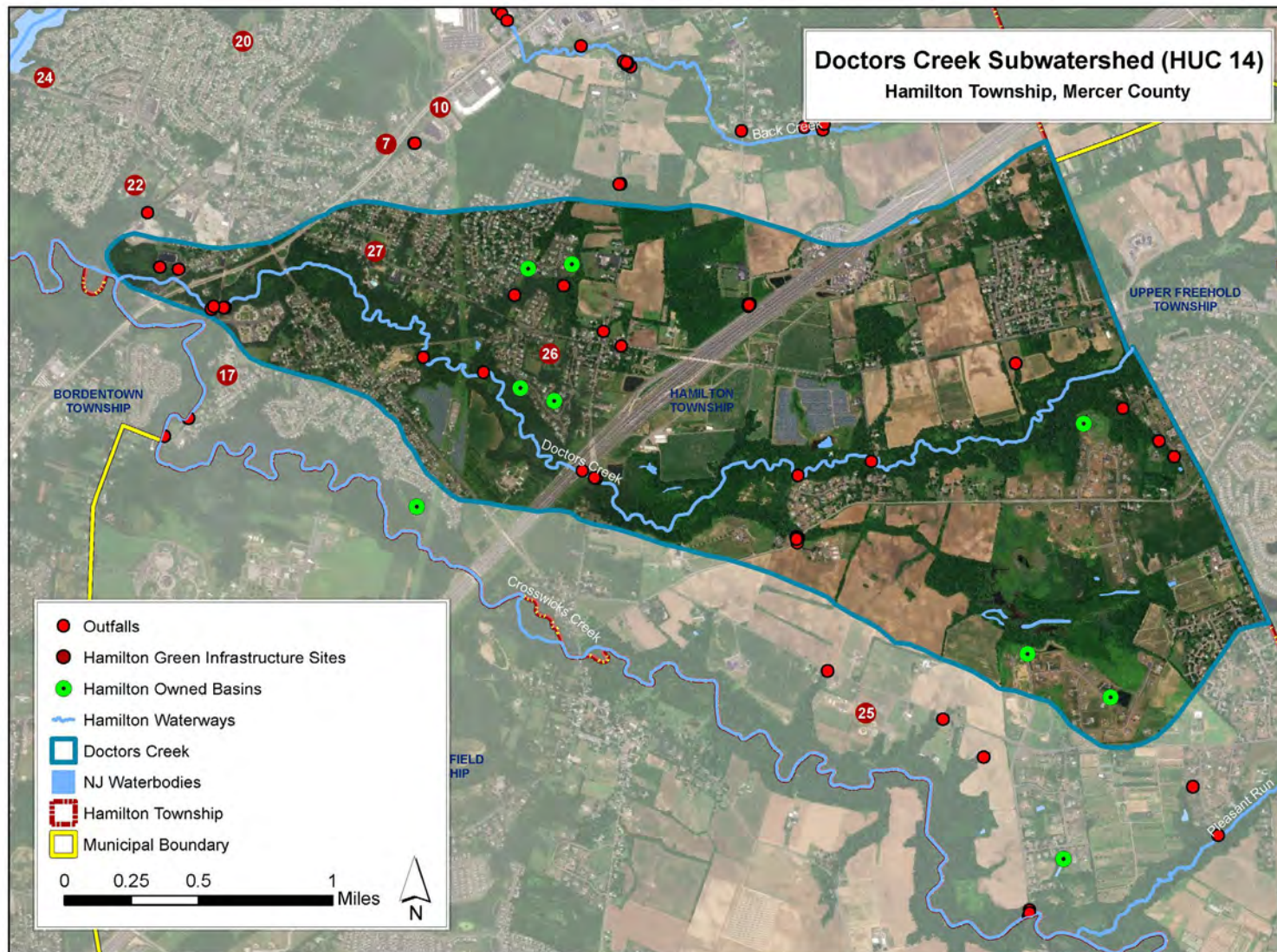


**Figure 4: Municipally owned detention basins in Hamilton Township**

Since only two waterways have TMDLs for phosphorus, Hamilton Township should focus on these two watersheds: Miry Run and Doctors Creek. Catch basin cleaning and street sweeping should be prioritized in these two watersheds. Since stormwater outfalls can cause severe erosion that can release phosphorus laden sediment into the waterways, these outfalls should be stabilized. Appendix A contains information on the stormwater outfalls in Miry Run and Doctors Creek. Additionally, detention basin repairs and retrofits should be completed on basins located in these two watersheds. Appendix B contains information on municipally owned detention basins in Miry Run and Doctors Creek. Finally, the municipality should prioritize implementing the green infrastructure practices that have been identified for the Miry Run and Doctors Creek subwatersheds in the stormwater mitigation plan. These green infrastructure sites and their associated green infrastructure recommendations can be found in Appendix C. Figures 5 and 6 show stormwater outfalls, municipally owned detention basins, and potential green infrastructure project sites for the Miry Run and Doctors Creek subwatersheds.



**Figure 5: Stormwater outfalls, municipally owned detention basins, and potential green infrastructure project sites in the Hamilton Township portion of the Miry Run subwatershed**



**Figure 6: Stormwater outfalls, municipally owned detention basins, and potential green infrastructure project sites in the Hamilton Township portion of the Doctors Creek subwatershed**

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## TMDLs Reviewed

- Total Maximum Daily Loads for Fecal Coliform to Address 28 Streams in the Northwest Water Region

Proposed: April 21, 2003

Established: June 27, 2003

Approved (by EPA Region 2): September 29, 2003

<https://www.nj.gov/dep/wms/bears/docs/Northwest%20FC.pdf>

- Total Maximum Daily Loads for Fecal Coliform to Address 27 Streams in the Lower Delaware Water Region

Proposed: April 21, 2003

Established: June 27, 2003

Approved (by EPA Region 2): September 29, 2003

<https://www.nj.gov/dep/wms/bears/docs/Lower%20Delaware%20FC.pdf>

- TOTAL MAXIMUM DAILY LOADS FOR POLYCHLORINATED BIPHENYLS (PCBs) FOR ZONES 2 - 5 OF THE TIDAL DELAWARE RIVER, DELAWARE RIVER BASIN COMMISSION WEST TRENTON, NEW JERSEY December 2003

<https://www.nj.gov/drbc/library/documents/TMDL/FinalRptDec2003.pdf>

- Total Maximum Daily Loads for Phosphorus to Address 4 Stream Segments Annaricken Brook, Barkers Brook North Branch and Doctors Creek Drainage Area Identifications: HUC 02040201100010-01, 02040201100020-01, 02040201060030-01, 02040201060020-01, 02040201060010-01 Lower Delaware Water Region WMA 20

Proposed: February 5, 2007

Established: July 25, 2007

Approved: October 1, 2007

[https://www.nj.gov/dep/wms/bears/docs/wma20\\_tp\\_tmdl100107.pdf](https://www.nj.gov/dep/wms/bears/docs/wma20_tp_tmdl100107.pdf)

- Total Maximum Daily Load for Phosphorus to Address HUC: 02040105240030-01 Miry Run Watershed WMA 11 Northwest Water Region

Proposed: February 5, 2007

Established: July 25, 2007

Approved: October 1, 2007

[https://www.nj.gov/dep/wms/bears/docs/miryrun\\_tp\\_tmdl100107.pdf](https://www.nj.gov/dep/wms/bears/docs/miryrun_tp_tmdl100107.pdf)

- Total Maximum Daily Loads for Phosphorus To Address 13 Eutrophic Lakes in the Lower Delaware Water Region — BELL LAKE, GLOUCESTER COUNTY BETHEL LAKE, GLOUCESTER COUNTY BLACKWOOD LAKE, CAMDEN AND GLOUCESTER COUNTIES BURNT MILL POND, CUMBERLAND COUNTY GIAMPIETRO LAKE, CUMBERLAND COUNTY HARRISONVILLE LAKE, GLOUCESTER AND SALEM COUNTIES IMLAYSTOWN LAKE, MONMOUTH COUNTY KIRKWOOD LAKE, CAMDEN COUNTY MARY ELMER LAKE, CUMBERLAND COUNTY MEMORIAL LAKE, SALEM COUNTY SPRING LAKE, MERCER COUNTY SUNSET LAKE, CUMBERLAND COUNTY WOODBURY LAKE, GLOUCESTER COUNTY — Watershed Management Area 17 (Maurice, Salem, and Cohansey Watersheds) Watershed Management Area 18 (Lower Delaware Watershed) Watershed Management Area 20 (Assiscunk, Crosswicks, and Doctors Watersheds)

Proposed: April 21, 2003

Established: June 27, 2003

Approved (by EPA Region 2): September 30, 2003

<https://www.nj.gov/dep/wms/bears/docs/Lower%20Delaware%20Lakes.pdf>



**Appendix A: Stormwater Outfalls in the Miry Run and Doctors Creek Subwatersheds**



# Miry Run Outfalls

Hamilton Township  
Stormwater Outfall Assessment

*ID Number: A0301*

Closest Waterway:

Miry Run

Closest Address:

606 Flock Rd

*Short Summary:*

- 24" diameter concrete pipe
- Known commercial discharges
- Cloudy, brown water
- Sediment deposits
- Moderate erosion has been caused by the outfall



Date Assessed:

7/9/15

Hamilton Township  
Stormwater Outfall Assessment

*ID Number: A0302*

Closest Waterway:

Miry Run

Closest Address:

5 Clarion Ct

*Short Summary:*

- 21" diameter concrete pipe
- Cloudy, grey water
- Sediment deposits
- Erosion has undermined outfall stability
- Moderate erosion has been caused by the outfall



Date Assessed:

7/9/15

Hamilton Township  
Stormwater Outfall Assessment

*ID Number: A0303*

Closest Waterway:

Miry Run

Closest Address:

5 Clarion Ct

*Short Summary:*

- 36" diameter concrete pipe
- Cloudy, brown water
- Sediment deposits
- Minor erosion has been caused by the outfall



Date Assessed:

7/9/15

Hamilton Township  
Stormwater Outfall Assessment

*ID Number: B0201*

Closest Waterway:

Miry Run

Closest Address:

405 Flock Rd

*Short Summary:*

- 36" diameter concrete pipe
- Cloudy, grey water
- Sediment deposits
- Erosion has undermined outfall stability
- Moderate erosion has been caused by the outfall



Date Assessed:

7/9/15

Hamilton Township  
Stormwater Outfall Assessment

*ID Number: B0202*

Closest Waterway:

Miry Run

Closest Address:

405 Flock Rd

*Short Summary:*

- 24" diameter concrete pipe
- Sediment deposits



Date Assessed:

7/9/15



Hamilton Township  
Stormwater Outfall Assessment

*ID Number: B0203*

Closest Waterway:

Miry Run

Closest Address:

405 Flock Rd

*Short Summary:*

- 24" diameter concrete pipe
- Known commercial discharges
- Cloudy, grey water
- Sediment deposits and floatable trash
- Erosion has undermined outfall stability
- Moderate erosion has been caused by the outfall



Date Assessed:

7/9/15

Hamilton Township  
Stormwater Outfall Assessment

*ID Number: B0204*

Closest Waterway:

Miry Run

Closest Address:

145 Brookwood Rd

*Short Summary:*

- Controlled flow channel
- No outfall pipe was found
- Minor erosion has been caused by the outfall



Date Assessed:

7/16/15

Hamilton Township  
Stormwater Outfall Assessment

*ID Number: B0205*

Closest Waterway:

Miry Run

Closest Address:

145 Brookwood Rd

*Short Summary:*

- Outfall pipe is not visible due to head wall collapse
- Reinforced concrete pipe
- Cloudy, grey water
- Sediment deposits
- Erosion has undermined outfall stability
- Moderate erosion has been caused by the outfall



Date Assessed:

7/16/15

Hamilton Township  
Stormwater Outfall Assessment

*ID Number: B0206*

Closest Waterway:

Miry Run

Closest Address:

104 Kino Blvd

*Short Summary:*

- 12" diameter concrete pipe
- Grey water
- Known commercial discharges
- Sediment deposits
- Outfall has excessive sediment accumulation



Date Assessed:

7/16/15

Hamilton Township  
Stormwater Outfall Assessment

*ID Number: B0207*

Closest Waterway:

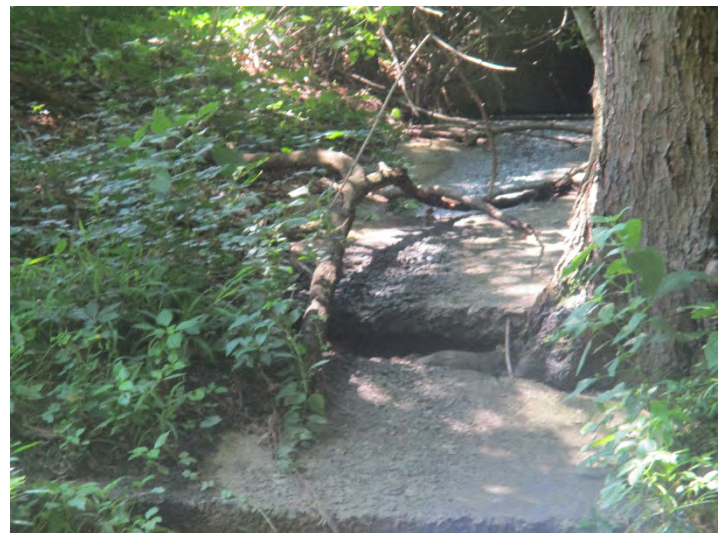
Miry Run

Closest Address:

104 Kino Blvd

*Short Summary:*

- Controlled flow channel
- No outfall pipe was found
- Erosion has undermined outfall stability
- Minor erosion has been caused by the outfall
- Excessive tree root growth is restricting the flow of water



Date Assessed:

7/16/15

Hamilton Township  
Stormwater Outfall Assessment

*ID Number: B0208*

Closest Waterway:

Miry Run

Closest Address:

104 Kino Blvd

*Short Summary:*

- 24" diameter metal pipe
- Grey water
- Excessive trash and sediment visible inside the pipe is restricting water flow



Date Assessed:

7/16/15

Hamilton Township  
Stormwater Outfall Assessment

*ID Number: B0209*

Closest Waterway:

Miry Run

Closest Address:

104 Kino Blvd

*Short Summary:*

- 26" diameter concrete pipe
- Cloudy, grey water
- Known commercial discharges
- Sediment deposits
- Erosion and tree roots have undermined outfall stability
- Minor erosion has been caused by the outfall



Date Assessed:

7/16/15

Hamilton Township  
Stormwater Outfall Assessment

*ID Number: B0301*

Closest Waterway:

Miry Run

Closest Address:

20 Dogwood Lane

*Short Summary:*

- 53" diameter concrete pipe
- Sediment deposits
- Brown water



Date Assessed:

7/2/15



Hamilton Township  
Stormwater Outfall Assessment

*ID Number: B0302*

Closest Waterway:

Miry Run

Closest Address:

5 Dogwood Lane

*Short Summary:*

- 16" diameter concrete pipe
- Sediment deposits
- Sediment is partially blocking the pipe
- Outfall pipe is beginning to deteriorate (minor cracking)



Date Assessed:

7/2/15

# Hamilton Township Stormwater Outfall Assessment

*ID Number: B0303*

Closest Waterway:

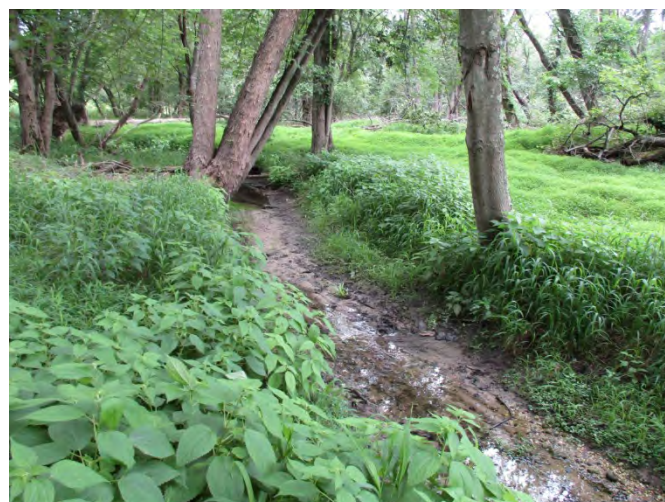
Miry Run

Closest Address:

533 Flock Road

*Short Summary:*

- 24" diameter concrete pipe
- Sediment deposits
- Outfall has excessive sediment accumulation (1.5' deep)



Date Assessed:

7/2/15

Hamilton Township  
Stormwater Outfall Assessment

*ID Number: B0304*

Closest Waterway:

Miry Run

Closest Address:

533 Flock Road

*Short Summary:*

- 14" diameter concrete pipe
- Outfall structure is spalling
- Cloudy, grey water
- Sewage odor
- Floatable trash



Date Assessed:

7/2/15

Hamilton Township  
Stormwater Outfall Assessment

*ID Number: B0305*

Closest Waterway:

Miry Run

Closest Address:

533 Flock Road

*Short Summary:*

- 40" diameter concrete pipe
- Cloudy, grey water



Date Assessed:

7/2/15

# Hamilton Township Stormwater Outfall Assessment

*ID Number: B0306*

Closest Waterway:

Un-coded Tributary

Closest Address:

533 Flock Road

## *Short Summary:*

- 14" diameter concrete pipe
- Sediment deposits and oily sheen
- Sediment is restricting flow of water
- Cloudy, grey water



Date Assessed:

7/2/15

Hamilton Township  
Stormwater Outfall Assessment

*ID Number: B0307*

Closest Waterway:

Un-coded Tributary

Closest Address:

533 Flock Road

*Short Summary:*

- Outfall pipe is 26" tall and 35" wide (elliptical pipe)
- Reinforced concrete pipe
- Cloudy, grey water
- Sewage odor
- Sediment deposits
- Moderate erosion has been caused by the outfall
- Nearby residential property is eroding along stream



Date Assessed:

7/2/15

Hamilton Township  
Stormwater Outfall Assessment

*ID Number: B0308*

Closest Waterway:

Miry Run

Closest Address:

335 Hughes Drive

*Short Summary:*

- 34" diameter concrete pipe
- Sediment deposits and floatable trash



Date Assessed:

7/2/15

Hamilton Township  
Stormwater Outfall Assessment

*ID Number: B0309*

Closest Waterway:

Miry Run

Closest Address:

335 Hughes Drive

*Short Summary:*

- 28" diameter concrete pipe
- Cloudy, grey water
- Sewage odor
- Sediment deposits and floatable trash
- Significant erosion has been caused by the outfall
- Erosion has undermined outfall stability



Date Assessed:

7/2/15



Hamilton Township  
Stormwater Outfall Assessment

*ID Number: B0310*

Closest Waterway:

Un-coded Tributary

Closest Address:

90 Hughes Drive

*Short Summary:*

- Both outfall pipes are approximately 30" in diameter
- Reinforced concrete pipe
- Sediment deposits
- Outfall structure is cracking
- Moderate erosion has been caused by the outfall



Date Assessed:

7/2/15

Hamilton Township  
Stormwater Outfall Assessment

*ID Number: B0311*

Closest Waterway:

Un-coded Tributary

Closest Address:

90 Hughes Drive

*Short Summary:*

- 14" diameter plastic pipe
- Sewage odor
- Sediment deposits



Date Assessed:

7/2/15

Hamilton Township  
Stormwater Outfall Assessment

*ID Number: B0312*

Closest Waterway:

Un-coded Tributary

Closest Address:

90 Hughes Drive

*Short Summary:*

- 26" diameter concrete pipe
- Sediment deposits



Date Assessed:

7/2/15

Hamilton Township  
Stormwater Outfall Assessment

*ID Number: B0313*

Closest Waterway:

Un-coded Tributary

Closest Address:

90 Hughes Drive

*Short Summary:*

- 14" diameter metal pipe
- Headwall is broken
- Sediment deposits
- Sediment is blocking the outfall pipe
- Minor erosion has been caused by the outfall



Date Assessed:

7/2/15

Hamilton Township  
Stormwater Outfall Assessment

*ID Number: B0314*

Closest Waterway:

Un-coded Tributary

Closest Address:

90 Hughes Drive

*Short Summary:*

- 6" diameter metal pipe



Date Assessed:

7/2/15

Hamilton Township  
Stormwater Outfall Assessment

*ID Number: B0315*

Closest Waterway:

Un-coded Tributary

Closest Address:

90 Hughes Drive

*Short Summary:*

- 16" diameter plastic pipe
- Sewage odor
- Sediment deposits, oil deposits, and floatable trash
- Excessive vegetation growth



Date Assessed:

7/2/15

Hamilton Township  
Stormwater Outfall Assessment



*ID Number: B0316*

Closest Waterway:

Un-coded Tributary

Closest Address:

12 Sayen Drive

*Short Summary:*

- Outfall could not be found
- Wetland area



Date Assessed:

7/2/15

Hamilton Township  
Stormwater Outfall Assessment

*ID Number: B0317*

Closest Waterway:

Un-coded Tributary

Closest Address:

69 Zieglers Lane

*Short Summary:*

- Outfall pipe is estimated to be 26" in diameter
- Reinforced concrete pipe
- Sediment deposits and floatable trash
- Excessive vegetation growth
- Pipe headwall has fallen into the creek
- Berm upstream has failed
- Significant erosion has been caused by the outfall



Date Assessed:

7/2/15



Hamilton Township  
Stormwater Outfall Assessment

*ID Number: B0318*

Closest Waterway:

Un-coded Tributary

Closest Address:

69 Zieglers Lane

*Short Summary:*

- 9" diameter clay pipe
- Sediment deposits
- Excessive vegetation growth
- Pipe has deteriorated and broken
- Moderate erosion has been caused by the outfall



Date Assessed:

7/2/15

Hamilton Township  
Stormwater Outfall Assessment

*ID Number: B0319*

Closest Waterway:

Un-coded Tributary

Closest Address:

69 Zieglers Lane

*Short Summary:*

- 14" diameter plastic pipe
- Cloudy, grey water
- Sediment deposits



Date Assessed:

7/2/15

Hamilton Township  
Stormwater Outfall Assessment

*ID Number: B0320*

Closest Waterway:

Un-coded Tributary

Closest Address:

7 Catawba Dr

*Short Summary:*

- 18" diameter concrete pipe
- Known commercial discharges
- Sediment deposits
- Significant erosion has been caused by the outfall
- Erosion has undermined outfall stability
- The flared end section of pipe has detached and fallen into stream

Date Assessed:

7/9/15



Hamilton Township  
Stormwater Outfall Assessment

*ID Number: B0321*

Closest Waterway:

Un-coded Tributary

Closest Address:

1 Catawba Dr

*Short Summary:*

- 18" diameter concrete pipe
- Known commercial discharges
- Grey water



Date Assessed:

7/9/15

Hamilton Township  
Stormwater Outfall Assessment

*ID Number: B0322*

Closest Waterway:

Un-coded Tributary

Closest Address:

5 Arrowwood Dr

*Short Summary:*

- 30" diameter concrete pipe
- Grey water
- Known commercial discharges
- Pipe is spalling



Date Assessed:

7/9/15

Hamilton Township  
Stormwater Outfall Assessment

*ID Number: B0323*

Closest Waterway:

Un-coded Tributary

Closest Address:

5 Arrowwood Dr

*Short Summary:*

- 40" diameter concrete pipe
- Known commercial discharges
- Grey water
- Sediment deposits
- Pipe is spalling



Date Assessed:

7/9/15

# Hamilton Township Stormwater Outfall Assessment

*ID Number: B0324*

Closest Waterway:

Un-coded Tributary

Closest Address:

5 Arrowwood Dr

## *Short Summary:*

- 15" diameter concrete pipe
- Sediment deposits
- Grey water
- Known commercial discharges
- Significant erosion has been caused by the outfall
- Erosion has undermined outfall stability
- Pipe is unstable and broken
- Outfall structure is obstructing the flow of water
- Head wall is nonexistent



Date Assessed:

7/9/15

Hamilton Township  
Stormwater Outfall Assessment

*ID Number: B0325*

Closest Waterway:

Un-coded Tributary

Closest Address:

5 Arrowwood Dr

*Short Summary:*

- 12" diameter concrete pipe
- Grey water
- Sediment deposits
- Erosion has undermined outfall stability
- Minor erosion has been caused by the outfall



Date Assessed:

7/9/15



# Hamilton Township Stormwater Outfall Assessment

*ID Number: B0326*

Closest Waterway:

Un-coded Tributary

Closest Address:

51 Crestwood Dr

## *Short Summary:*

- 24" diameter concrete pipe
- Known commercial discharges
- Grey water
- Sewage odor
- Sediment deposits
- Erosion has undermined outfall stability
- Moderate erosion has been caused by the outfall
- Flared end section is cracked and detached

Date Assessed:

7/9/15



Hamilton Township  
Stormwater Outfall Assessment

*ID Number: B0327*

Closest Waterway:

Un-coded Tributary

Closest Address:

51 Crestwood Dr

*Short Summary:*

- Controlled flow channel
- No outfall pipe was found
- Minor erosion has been caused by the outfall



Date Assessed:

7/9/15

Hamilton Township  
Stormwater Outfall Assessment

*ID Number: B0328*

Closest Waterway:

Un-coded Tributary

Closest Address:

51 Crestwood Dr

*Short Summary:*

- Controlled flow channel
- No outfall pipe was found
- Sediment deposits
- Moderate erosion has been caused by the outfall



Date Assessed:

7/9/15

Hamilton Township  
Stormwater Outfall Assessment

*ID Number: B0329*

Closest Waterway:

Miry Run

Closest Address:

489 Flock Rd

*Short Summary:*

- 36" diameter concrete pipe
- Cloudy, grey water
- Sewage odor
- Sediment deposits
- Pipe is spalling
- Moderate erosion has been caused by the outfall



Date Assessed:

7/9/15

Hamilton Township  
Stormwater Outfall Assessment

*ID Number: B0330*

Closest Waterway:

Miry Run

Closest Address:

489 Flock Rd

*Short Summary:*

- Outfall pipe is not accessible by foot
- Reinforced concrete pipe
- Cloudy, grey water
- Sediment deposits
- Sewage odor



Date Assessed:

7/9/15

Hamilton Township  
Stormwater Outfall Assessment

*ID Number: B0331*

Closest Waterway:

Miry Run

Closest Address:

489 Flock Rd

*Short Summary:*

- Pipe not accessible by foot
- Reinforced concrete pipe
- Sewage odor



Date Assessed:

7/9/15

# Hamilton Township Stormwater Outfall Assessment

*ID Number: B0332*

Closest Waterway:

Miry Run

Closest Address:

62 Wesleyan Dr

## *Short Summary:*

- 24" diameter concrete pipe
- Known commercial discharges
- Cloudy, grey water
- Sediment deposits
- Significant erosion has been caused by the outfall
- Erosion has undermined outfall stability
- Flared end section has detached and fallen into stream



Date Assessed:

7/9/15

Hamilton Township  
Stormwater Outfall Assessment

*ID Number: C0201*

Closest Waterway:

Miry Run

Closest Address:

16 Brookwood Rd

*Short Summary:*

- 8" diameter metal pipe
- Known commercial discharges
- Cloudy, grey water



Date Assessed:

7/16/15



Hamilton Township  
Stormwater Outfall Assessment

*ID Number: C0202*

Closest Waterway:

Miry Run

Closest Address:

16 Brookwood Rd

*Short Summary:*

- 10" diameter metal pipe
- Known commercial discharges
- Grey water
- Sediment deposits



Date Assessed:

7/16/15

Hamilton Township  
Stormwater Outfall Assessment

*ID Number: C0203*

Closest Waterway:

Miry Run

Closest Address:

16 Brookwood Rd

*Short Summary:*

- 36" diameter concrete pipe
- Known commercial discharges
- Cloudy, grey water
- Sediment deposits
- Erosion has undermined outfall stability
- Minor erosion has been caused by the outfall
- Minor cracking in pipe
- Supporting structure is being damaged by tree roots



Date Assessed:

7/16/15

# Hamilton Township Stormwater Outfall Assessment

*ID Number: C0204*

Closest Waterway:

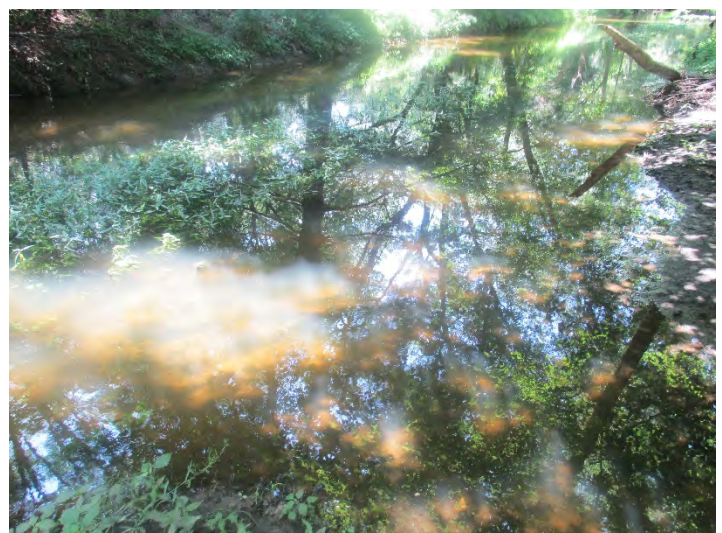
Miry Run

Closest Address:

16 Brookwood Rd

*Short Summary:*

- 8" diameter metal pipe
- Known commercial discharges
- Cloudy, grey water
- Sediment deposits



Date Assessed:

7/16/15

Hamilton Township  
Stormwater Outfall Assessment

*ID Number: C0205*

Closest Waterway:

Miry Run

Closest Address:

18 Brookwood Rd

*Short Summary:*

- 10" diameter metal pipe
- Grey water
- Sediment deposits
- Outfall has excessive sediment accumulation



Date Assessed:

7/16/15

Hamilton Township  
Stormwater Outfall Assessment

*ID Number: C0206*

Closest Waterway:

Miry Run

Closest Address:

18 Brookwood Rd

*Short Summary:*

- 10" diameter metal pipe
- Known commercial discharges
- Sediment deposits



Date Assessed:

7/16/15

Hamilton Township  
Stormwater Outfall Assessment

*ID Number: C0207*

Closest Waterway:

Miry Run

Closest Address:

18 Brookwood Rd

*Short Summary:*

- Outfall pipe is approximately 36" in diameter
- Reinforced concrete pipe
- Cloudy, grey water
- Sediment deposits
- Minor erosion has been caused by the outfall
- Pipe was not accessible



Date Assessed:

7/16/15

Hamilton Township  
Stormwater Outfall Assessment

*ID Number: C0208*

Closest Waterway:

Miry Run

Closest Address:

18 Brookwood Rd

*Short Summary:*

- 12" diameter metal pipe
- Known commercial discharges
- Cloudy, grey water
- Sediment deposits



Date Assessed:

7/16/15

Hamilton Township  
Stormwater Outfall Assessment

*ID Number: C0209*

Closest Waterway:

Miry Run

Closest Address:

18 Brookwood Rd

*Short Summary:*

- 24" diameter concrete pipe
- Known commercial discharges
- Cloudy, brown water
- Sediment deposits



Date Assessed:

7/16/15



Hamilton Township  
Stormwater Outfall Assessment

*ID Number: C0210*

Closest Waterway:

Miry Run

Closest Address:

3111 Quakerbridge Rd

*Short Summary:*

- 18" diameter concrete pipe
- Known commercial discharges
- Cloudy, grey water
- Sediment deposits
- Moderate erosion has been caused by outfall
- Outfall has excessive sediment accumulation



Date Assessed:

7/16/15

Hamilton Township  
Stormwater Outfall Assessment

*ID Number: C0211*

Closest Waterway:

Miry Run

Closest Address:

3111 Quakerbridge Rd

*Short Summary:*

- 14" diameter concrete pipe
- Cloudy, grey water
- Sediment deposits



Date Assessed:

7/16/15

Hamilton Township  
Stormwater Outfall Assessment

*ID Number: C0212*

Closest Waterway:

Miry Run

Closest Address:

3111 Quakerbridge Rd

*Short Summary:*

- 18" diameter concrete pipe
- Known commercial discharges
- Cloudy, grey water
- Sediment deposits
- Outfall has excessive sediment accumulation



Date Assessed:

7/16/15

Hamilton Township  
Stormwater Outfall Assessment

*ID Number: C0213*

Closest Waterway:

Miry Run

Closest Address:

3111 Quakerbridge Rd

*Short Summary:*

- 36" diameter concrete pipe
- Grey water
- Sediment deposits
- Erosion has undermined outfall stability
- Significant erosion has been caused by the outfall
- Outfall structure has completely deteriorated
- Outfall pipe has fell into the creek and is obstructing the flow of water



Date Assessed:

7/16/15

Hamilton Township  
Stormwater Outfall Assessment

*ID Number: C0214*

Closest Waterway:

Miry Run

Closest Address:

3111 Quakerbridge Rd

*Short Summary:*

- 48" diameter concrete pipe
- Known commercial discharges
- Grey color
- Pipe is spalling
- Tree roots have undermined the outfall stability



Date Assessed:

7/16/15

Hamilton Township  
Stormwater Outfall Assessment

*ID Number: C0215*

Closest Waterway:

Miry Run

Closest Address:

3060 Quakerbridge Rd

*Short Summary:*

- Outfall pipe is estimated to be 16" in diameter
- Reinforced concrete pipe
- Known commercial discharges
- Grey water
- Sediment deposits
- Headwall has collapsed
- Excessive vegetation growth is causing standing water conditions



Date Assessed:

7/23/15

Hamilton Township  
Stormwater Outfall Assessment

*ID Number: C0216*

Closest Waterway:

Miry Run

Closest Address:

3060 Quakerbridge Rd

*Short Summary:*

- 14" diameter concrete pipe
- Known commercial discharges
- Cloudy, grey water
- Sediment deposits
- Outfall has excessive sediment accumulation



Date Assessed:

7/23/15

# Hamilton Township Stormwater Outfall Assessment

*ID Number: C0217*

Closest Waterway:

Miry Run

Closest Address:

3060 Quakerbridge Rd

*Short Summary:*

- 38" diameter metal pipe
- Known commercial discharges
- Cloudy, grey water
- Sediment and oil deposits
- Outfall pipe is corroding
- Moderate erosion has been caused by the outfall
- Nearby tree growth is contributing to erosion



Date Assessed:

7/23/15



Hamilton Township  
Stormwater Outfall Assessment

*ID Number: D0201*

Closest Waterway:

Miry Run

Closest Address:

86 Klockner Rd

*Short Summary:*

- 28" diameter Concrete Pipe
- Sulfide odor
- Cloudy, grey water
- Sediment deposits and floatable trash
- Pipe has a large hole on upper surface
- Erosion has undermined outfall stability

Date Assessed:

7/9/15



Hamilton Township  
Stormwater Outfall Assessment

*ID Number: D0202*

Closest Waterway:

Miry Run

Closest Address:

86 Klockner Rd

*Short Summary:*

- Outfall pipe is 36" tall and 24" wide
- Reinforced Concrete Pipe
- Grey water
- Sediment deposits
- Excessive plant growth
- Erosion has undermined outfall stability
- Pipe appears to be crushed
- Outfall structure has deteriorated



Date Assessed:

7/9/15

Hamilton Township  
Stormwater Outfall Assessment

*ID Number: D0203 and D0204*

Closest Waterway:

Miry Run

Closest Address:

86 Klockner Rd

*Short Summary:*

- 32" diameter concrete Pipe
- Cloudy, grey water
- Excessive growth
- Pipe was difficult to reach



Date Assessed:

7/9/15

Hamilton Township  
Stormwater Outfall Assessment

*ID Number: D0205 and D0206*

Closest Waterway:

Miry Run

Closest Address:

3291 E State St

*Short Summary:*

- 28" diameter metal pipe
- Cloudy, brown water
- Oily sheen
- Excessive vegetation growth
- Headwall is cracking



Date Assessed:

7/9/15

Hamilton Township  
Stormwater Outfall Assessment

*ID Number: D0207 and D0208*

Closest Waterway:

Miry Run

Closest Address:

3291 E State St

*Short Summary:*

- 32" diameter concrete pipe
- Cloudy, brown water
- Sediment deposits, oily sheen, and floatable trash
- Erosion has undermined outfall stability
- Minor erosion has been caused by the outfall



Date Assessed:

7/9/15

# Hamilton Township Stormwater Outfall Assessment

*ID Number: D0209*

Closest Waterway:

Miry Run

Closest Address:

2904 E State St

*Short Summary:*

- 14" diameter concrete pipe
- Known commercial discharges
- Outfall pipe is cracking
- Minor erosion has been caused by the outfall



Date Assessed:

7/9/15

Hamilton Township  
Stormwater Outfall Assessment

*ID Number: D0210*

Closest Waterway:

Miry Run

Closest Address:

2904 E State St

*Short Summary:*

- Outfall structure from pond (not a pipe)
- Outfall is made of concrete
- Known commercial uses
- Opaque, cloudy water
- Sediment deposits and floatable trash
- Minor erosion has been caused by the outfall



Date Assessed:

7/9/15

Hamilton Township  
Stormwater Outfall Assessment

*ID Number: D0211*

Closest Waterway:

Miry Run

Closest Address:

861 Sloan Ave

*Short Summary:*

- 30" diameter concrete pipe
- Sour odor
- Opaque, brown water
- Sediment deposits
- Excessive vegetation growth



Date Assessed:

7/9/15



Hamilton Township  
Stormwater Outfall Assessment

*ID Number: D0212*

Closest Waterway:

Miry Run

Closest Address:

861 Sloan Ave

*Short Summary:*

- 14" diameter metal pipe
- Sediment deposits
- Excessive vegetation growth
- Significant erosion has been caused by the outfall
- Pipe has been damaged by large tree falling and creating a large hole in pipe



Date Assessed:

7/9/15

Hamilton Township  
Stormwater Outfall Assessment

*ID Number: D0213*

Closest Waterway:

Miry Run

Closest Address:

861 Sloan Ave

*Short Summary:*

- 25" diameter concrete pipe
- Cloudy, grey water
- Sediment deposits and floatable trash
- Excessive vegetation growth
- Minor erosion has been caused by the outfall



Date Assessed:

7/9/15

Hamilton Township  
Stormwater Outfall Assessment

*ID Number: D0214*

Closest Waterway:

Miry Run

Closest Address:

861 Sloan Ave

*Short Summary:*

- 30" diameter concrete pipe
- Sewage odor
- Opaque, brown water
- Sediment deposits and oily sheen



Date Assessed:

7/9/15

Hamilton Township  
Stormwater Outfall Assessment

*ID Number: D0215*

Closest Waterway:

Miry Run

Closest Address:

327 Wegner Ave

*Short Summary:*

- 38" diameter concrete pipe
- Cloudy, brown water
- Sediment deposits and floatable trash
- Outfall pipe is corroding



Date Assessed:

7/16/15

Hamilton Township  
Stormwater Outfall Assessment

*ID Number: D0216*

Closest Waterway:

Miry Run

Closest Address:

49 Berrel Ave

*Short Summary:*

- Outfall pipe is 78" wide and 48" tall (elliptical)
- Reinforced concrete pipe
- Sediment deposits
- Outfall pipe has begun to crack
- Minor erosion has been caused by the outfall



Date Assessed:

7/16/15

Hamilton Township  
Stormwater Outfall Assessment

*ID Number: E0201*

Closest Waterway:

Miry Run

Closest Address:

92 Armour Ave

*Short Summary:*

- Outfall pipe is 16" tall and 29" wide (elliptical)
- Metal pipe
- Cracking in pipe
- Outfall pipe is being crushed by sediment



Date Assessed:

7/23/15

Hamilton Township  
Stormwater Outfall Assessment

*ID Number: E0202*

Closest Waterway:

Miry Run

Closest Address:

92 Armour Ave

*Short Summary:*

- Outfall pipe is 16" tall and 22" wide (elliptical)
- Metal pipe
- Outfall pipe is being crushed
- Flared-end section is corroding



Date Assessed:

7/23/15

Hamilton Township  
Stormwater Outfall Assessment

*ID Number: E0212*

Closest Waterway:

Miry Run

Closest Address:

433 Sweetbriar Ave

*Short Summary:*

- 25" diameter concrete pipe
- Sediment deposits
- Outfall has excessive sediment accumulation
- Outfall pipe is cracking



Date Assessed:

7/23/15



Hamilton Township  
Stormwater Outfall Assessment

*ID Number: E0213*

Closest Waterway:

Miry Run

Closest Address:

433 Sweetbriar Ave

*Short Summary:*

- 16" diameter concrete pipe
- Brown water
- Sediment deposits
- Outfall pipe is cracking
- Erosion has undermined outfall stability



Date Assessed:

7/23/15

Hamilton Township  
Stormwater Outfall Assessment

*ID Number: E0214*

Closest Waterway:

Miry Run

Closest Address:

433 Sweetbriar Ave

*Short Summary:*

- 12" diameter concrete pipe
- Sediment deposits
- Excessive sediment is blocking outfall pipe
- Excessive vegetation growth
- Outfall pipe is corroding and revealed metal wire



Date Assessed:

7/23/15

# Doctors Creek Outfalls

Hamilton Township  
Stormwater Outfall Assessment

*ID Number: A701*

Closest Waterway:

Doctors Creek

Closest Address:

6 Hidden Hollow Drive

*Short Summary:*

- 38" diameter concrete pipe
- No erosion identified
- Red-orange, cloudy water
- Some cracking in outfall pipe



Date Assessed:

8/22/2017

# Hamilton Township Stormwater Outfall Assessment

*ID Number: A702*

Closest Waterway:

Doctors Creek

Closest Address:

68 Hidden Hollow Drive

*Short Summary:*

- 15" diameter concrete pipe
- No erosion identified
- Brown, clear water



Date Assessed:

8/22/2017

# Hamilton Township Stormwater Outfall Assessment

*ID Number: B701*

Closest Waterway:

Doctors Creek

Closest Address:

35 Tattletown Road

*Short Summary:*

- 15" diameter concrete pipe
- No erosion identified
- Under roadway bridge
- Brown, clear water



Date Assessed:

8/22/2017

# Hamilton Township Stormwater Outfall Assessment

*ID Number: C604*

Closest Waterway:

Doctors Creek

Closest Address:

4379 Crosswicks Hamilton  
Square Road

*Short Summary:*

- 2" diameter plastic pipe
- No erosion identified
- Brown, cloudy water



Date Assessed:

8/25/2017

# Hamilton Township Stormwater Outfall Assessment

*ID Number: C701*

Closest Waterway:

Doctors Creek

Closest Address:

891 Yardville Allentown Road

*Short Summary:*

- 18" diameter concrete pipe
- No erosion identified
- Brown, clear water
- Sediment deposits partly clogging pipe



Date Assessed:

8/22/2017



# Hamilton Township Stormwater Outfall Assessment

*ID Number: C702*

Closest Waterway:

Doctors Creek

Closest Address:

231 Uncle Petes Road

*Short Summary:*

- 30" and 16" diameter concrete pipes
- No erosion identified
- Brown, cloudy water
- Excessive vegetative growth



Date Assessed:

8/25/2017

# Hamilton Township Stormwater Outfall Assessment

*ID Number: C703*

Closest Waterway:

Doctors Creek

Closest Address:

188 Old York Road

*Short Summary:*

- 27" diameter concrete pipe
- No erosion identified
- Red-brown, cloudy water



Date Assessed:

8/25/2017

# Hamilton Township Stormwater Outfall Assessment

*ID Number: C704*

Closest Waterway:

Doctors Creek

Closest Address:

18 Nalbone Court

*Short Summary:*

- 24.5" diameter concrete pipe
- Significant erosion is occurring due to drop caused by deteriorating outfall
- Erosion is undermining the stability of outfall with severe deterioration of the concrete flow pad
- Brown, clear water
- Excessive vegetative growth



Date Assessed:

8/25/2017

# Hamilton Township Stormwater Outfall Assessment

*ID Number: E603*

Closest Waterway:

Doctors Creek

Closest Address:

200 Church Street

*Short Summary:*

- 18" diameter concrete pipe
- No erosion identified
- Brown, clear water



Date Assessed:

8/22/2017

# Hamilton Township Stormwater Outfall Assessment

*ID Number: E604*

Closest Waterway:

Doctors Creek

Closest Address:

32 RT-156

*Short Summary:*

- 16" diameter concrete pipe
- No erosion identified
- Brown, cloudy water
- Sediment deposits
- Excessive vegetative growth



Date Assessed:

8/22/2017

# Hamilton Township Stormwater Outfall Assessment

*ID Number: E605*

Closest Waterway:

Doctors Creek

Closest Address:

32 RT-156

*Short Summary:*

- 16" diameter concrete pipe
- No erosion identified
- Outfall grate damaged
- Brown, cloudy water
- Oil deposits
- Excessive vegetative growth



Date Assessed:

8/22/2017

# Hamilton Township Stormwater Outfall Assessment



*Grid ID: A7*

*ID Number: 44*

Closest Waterway:

Doctors Creek Tributary

Closest Address:

4 Hidden Hollow Drive

*Short Summary:*

- Pipe is fully submerged
- Rancid smelling, opaque receiving water with oil slicks
- Water is flowing from pipe during dry weather



Date Assessed:

8/16/2019

# Hamilton Township Stormwater Outfall Assessment



*Grid ID: B7*

*ID Number: 49*

Closest Waterway:

Doctors Creek Tributary

Closest Address:

400 Plaza Road

*Short Summary:*

- Not accessible

Date Assessed:

8/16/2019



# Hamilton Township Stormwater Outfall Assessment



*Grid ID: C6*

*ID Number: 62*

Closest Waterway:

Doctors Creek Tributary

Closest Address:

7 Bear Court

*Short Summary:*

- 30" concrete pipe
- Overall in good condition



Date Assessed:

8/16/2019

# Hamilton Township Stormwater Outfall Assessment



*Grid ID: C7*

*ID Number: 31*

Closest Waterway:

Doctors Creek Tributary

Closest Address:

184 Old York Road

*Short Summary:*

- 24" concrete pipe
- Brown, cloudy water
- Trash and sediment accumulations



Date Assessed:

8/16/2019

# Hamilton Township Stormwater Outfall Assessment



*Grid ID: C7*

*ID Number: 34*

Closest Waterway:

Doctors Creek Tributary

Closest Address:

184 Old York Road

## *Short Summary:*

- 24" diameter concrete pipe
- Cloudy, brown water
- Sediment deposits



Date Assessed:

8/16/2019

# Hamilton Township Stormwater Outfall Assessment

*Grid ID: C7*

*ID Number: 35*

Closest Waterway:

Doctors Creek Tributary

Closest Address:

184 Old York Road



## *Short Summary:*

- 24" diameter concrete pipe
- Sediment deposits
- Excessive vegetation growth
- Small pool of stagnant water



Date Assessed:

8/16/2019

# Hamilton Township Stormwater Outfall Assessment



*Grid ID: C7*

*ID Number: 37*

Closest Waterway:

Doctors Creek Tributary

Closest Address:

184 Old York Road

*Short Summary:*

- 20" diameter concrete pipe
- Clear water
- Sediment deposits
- Excessive vegetation growth
- Erosion has undermined the stability of the outfall. The extent of erosion damage is under 100 sq. ft.
- Outfall completely destroyed.



Date Assessed:

8/16/2019

# Hamilton Township Stormwater Outfall Assessment

*Grid ID: C7*

*ID Number: 53*

Closest Waterway:

Doctors Creek Tributary

Closest Address:

215 Uncle Pete's Road

## *Short Summary:*

- 37" diameter concrete pipe
- Trash present
- Sediment deposits
- Excessive vegetation growth



Date Assessed:

8/16/2019



# Hamilton Township Stormwater Outfall Assessment

*Grid ID: C7*

*ID Number: 54*

Closest Waterway:

Doctors Creek Tributary

Closest Address:

215 Uncle Pete's Road

## *Short Summary:*

- 37" diameter concrete pipe
- Opaque, brown water
- Excessive vegetation growth
- Stagnant water in outflow



Date Assessed:

8/16/2019

# Hamilton Township Stormwater Outfall Assessment



*Grid ID: C7*

*ID Number: 55, 56, 57, 59*

Closest Waterway:

Doctors Creek Tributary

Closest Address:

215 Uncle Pete's Road

*Short Summary:*

- Not accessible



Date Assessed:

8/16/2019



Hamilton Township  
Stormwater Outfall Assessment



*Grid ID: D6*

*ID Number: 5*

Closest Waterway:

Doctors Creek Tributary

Closest Address:

2090 Greenwood Avenue

*Short Summary:*

- Not accessible

Date Assessed:

8/16/2019

# Hamilton Township Stormwater Outfall Assessment

*Grid ID: D6*

*ID Number: 47*

Closest Waterway:

Doctors Creek

Closest Address:

5570 Broad Street

## *Short Summary:*

- 30" diameter concrete pipe
- Flowing during dry weather
- Excessive vegetation growth



Date Assessed:

8/16/2019

# Hamilton Township Stormwater Outfall Assessment

*Grid ID: D6*

*ID Number: 50*

Closest Waterway:

Doctors Creek

Closest Address:

5 Blake Court

## *Short Summary:*

- 48" diameter concrete pipe
- Flowing during dry weather
- Raccoon tracks going in and out of outfall



Date Assessed:

8/16/2019

# Hamilton Township Stormwater Outfall Assessment



*Grid ID: D7*

*ID Number: 41*

Closest Waterway:

Doctors Creek

Closest Address:

4754 Crosswicks Hamilton Square Road

## *Short Summary:*

- 24" diameter concrete pipe
- Cloudy, yellow water
- Vegetation growing inside pipe



Date Assessed:

8/16/2019

# Hamilton Township Stormwater Outfall Assessment



*Grid ID: D7*

*ID Number: 42*

Closest Waterway:

Doctors Creek

Closest Address:

4754 Crosswicks Hamilton Square Road

## *Short Summary:*

- 36" diameter concrete pipe
- Rancid/sour odor
- Cloudy, brown water
- Flowing during dry weather
- Excessive vegetation growth



Date Assessed:

8/16/2019

# Hamilton Township Stormwater Outfall Assessment



*Grid ID: D7*

*ID Number: 43*

Closest Waterway:

Doctors Creek

Closest Address:

4754 Crosswicks Hamilton Square Road

*Short Summary:*

- Not accessible due to excessive vegetation growth



Date Assessed:

8/16/2019

# Hamilton Township Stormwater Outfall Assessment

*Grid ID: E6*

*ID Number: 51*

Closest Waterway:

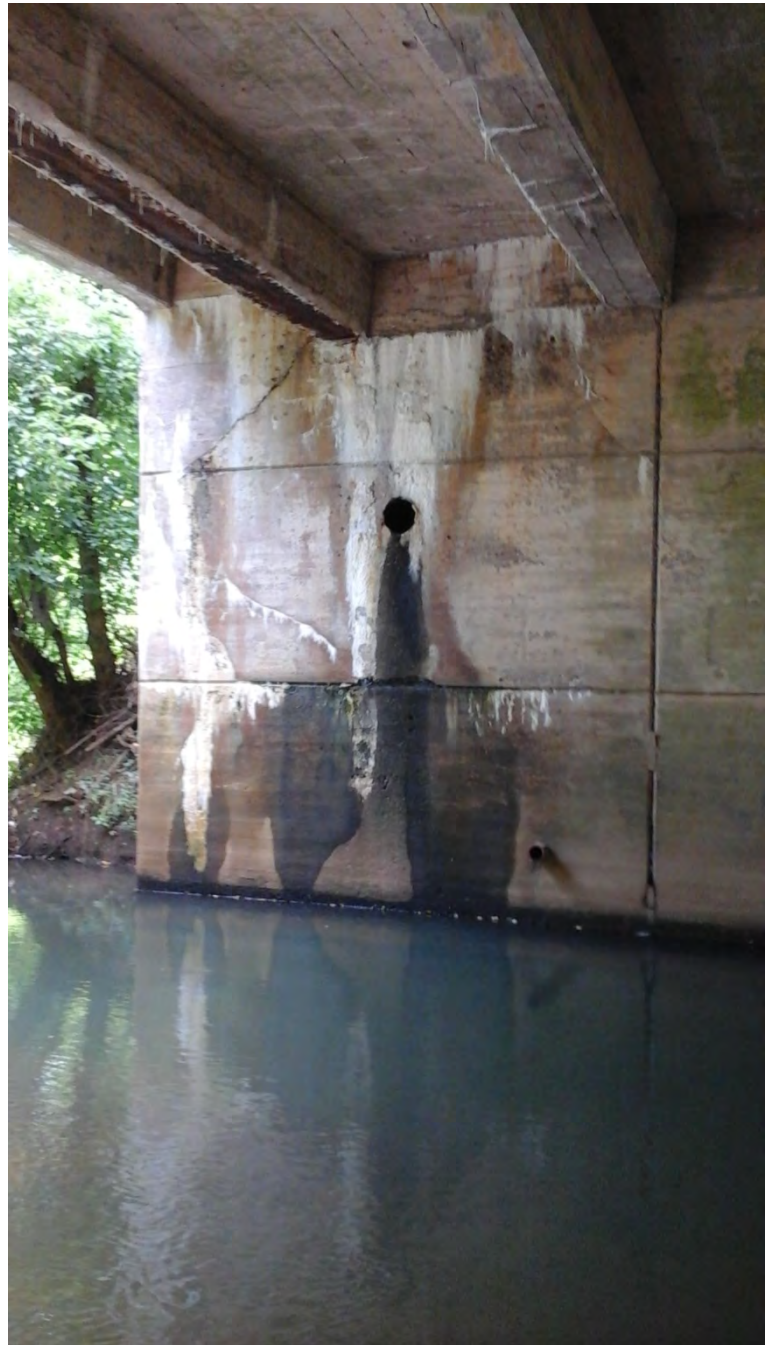
Doctors Creek

Closest Address:

55 Groveville Road

*Short Summary:*

- 15" metal pipe
- Cloudy, brown water



Date Assessed:

8/16/2019

# Hamilton Township Stormwater Outfall Assessment

*Grid ID: E6*

*ID Number: 52*

Closest Waterway:

Doctors Creek

Closest Address:

55 Groveville Road



## *Short Summary:*

- 15" metal pipe
- Cloudy, brown water
- Outfall pipe is cracking



Date Assessed:

8/16/2019



# Hamilton Township Stormwater Outfall Assessment

*Grid ID: E6*

*ID Number: 58*

Closest Waterway:

Doctors Creek

Closest Address:

190 Church Road

## *Short Summary:*

- 19" diameter concrete pipe
- Cloudy, green water
- Sediment deposits
- Outfall pipe is cracking
- Erosion has undermined the stability of the outfall. The extent of erosion damage is under 100 sq. ft.



Date Assessed:

8/16/2019

# Hamilton Township Stormwater Outfall Assessment

*Grid ID: E6*

*ID Number: 60*

Closest Waterway:

Doctors Creek

Closest Address:

190 Church Road

## *Short Summary:*

- 9" diameter concrete pipe
- Cloudy, green water
- Outfall pipe corrosion
- Erosion has undermined the stability of the outfall. The extent of erosion damage is under 100 sq. ft.



Date Assessed:

8/16/2019

**Appendix B: Municipally Owned Detention Basins in the Miry Run  
and Doctors Creek Subwatersheds**





**ID# Location**

- 1. 12 Dogwood Ln
- 4. 4 Tara Ct
- 9. 30 Tar Heels Rd E
- 19. 193 Brookwood Rd
- 26. 6 Crestwood Dr
- 27. 6 Crestwood Dr
- 28. 6 Crestwood Dr
- 29. 11 Arrowwood Dr
- 30. 5 Fordham Dr
- 32. 200 Mercer St
- 33. 10 Emily Pl
- 39. 112 Armour Ave
- 56. Colton Ct
- 87. Estates Blvd & Trenton Ave
- 120. 12 Imperial Dr
- 121. 1 Foy Dr
- 128. 19 Justice Samuel A. Alito Jr. Way
- 137. 76 Noa Ct
- 158. Bozarth Ct
- 159. 224 Kruser Rd
- 160. 224 Kruser Rd
- 161. 224 Kruser Rd
- 163. Mint Leaf Dr and Limewood Dr
- 164. Great Oak Rd and Dukoff Dr

**ID# Location**

- 167. Innocenzi Dr and Great Oak Rd
- 180. 20 Perilli Drive
- 188. 255 Sharps Ln
- 190. 41 Dark Leaf Dr
- 191. 2193 Kuser Rd
- 192. 2193 Kuser Rd
- 233. 17 Alessio Terrace
- 234. 17 Alessio Terrace
- 236. 79 Village Drive East
- 237. 79 Village Drive East
- 238. 9 Weathersfield Dr
- 264. 39 Perilli Dr
- 269. 56 Kristopher Dr
- 275. 33 Iron Bridge Rd (Pond not basin)
- 303. 123 Englewood Blvd
- 304. 31 Willow Bend Dr (nonexistent, small drainage system)
- 315. 390 Cypress Lane
- 329. 1130 Whilehorse Hamilton Square Road
- 330. 1801 Kuser Road
- 332. 99 Robin Drive
- 346. 10 Jeremy Place
- 347. 3 Jeremy Place
- 428. 21 Dogwood Lane

**2019  
Hamilton Township  
Stormwater Basin Assessment  
Hamilton Owned Basins**



# Miry Run Basins





Hamilton Township  
Stormwater Basin Assessment

*1. Dogwood Lane Residential Detention Basin*

Address:  
12 Dogwood Ln  
Trenton, NJ 08690



# Hamilton Township Stormwater Basin Assessment

## *1. Dogwood Lane Residential Detention Basin*

Address:  
12 Dogwood Ln  
Trenton, NJ 08690



Clogged inlet.



Clogged low flow and outlet.



Looking south from basin bottom.

### **2012 Notes:**

- Inlets, outlet and low flow channel are clogged with sediment that is restricting the flow of water
- Excess plant growth within the low flow channel
- Woody vegetation growing around inlets and outlet

# Hamilton Township Stormwater Basin Assessment

## *1. Dogwood Lane Residential Detention Basin*

Address:  
12 Dogwood Ln  
Trenton, NJ 08690



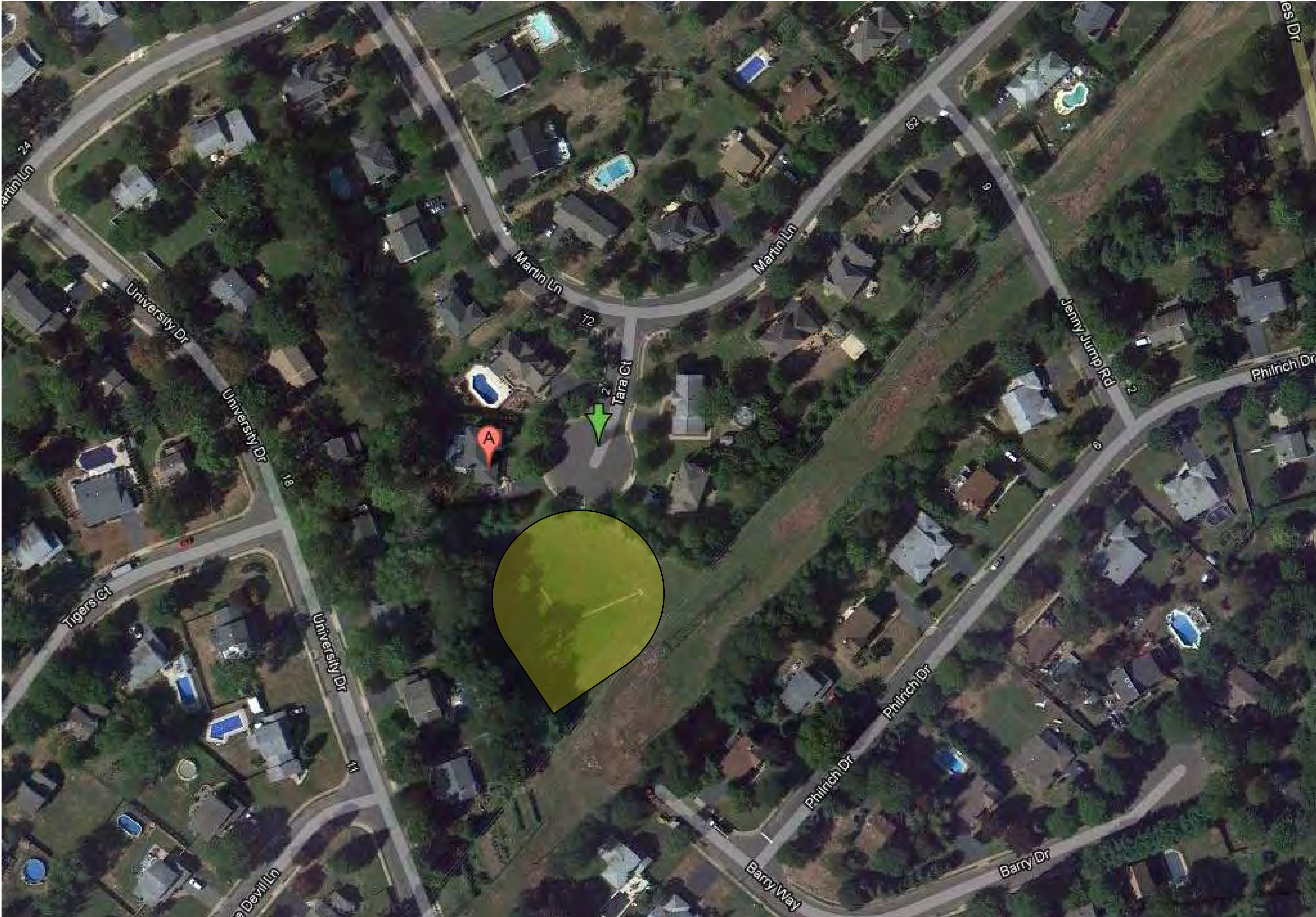
### **2019 Notes:**

- Channel overgrown with vegetation and sediment leading to restricted flow
- Basin has not improved from previous assessment
- Suggest maintenance to clear out channels

Hamilton Township  
Stormwater Basin Assessment

*4. Tara Ct. Residential Basin*

Address:  
4 Tara Ct  
Trenton, NJ 08619



Hamilton Township  
Stormwater Basin Assessment  
*4. Tara Ct. Residential Basin*

Address:  
4 Tara Ct  
Trenton, NJ 08619



36" Diameter inlet



Outlet structure



Entire basin looking southwest

**2012 Notes:**

- Sediment accumulation in low flow channel

Hamilton Township  
Stormwater Basin Assessment  
*4. Tara Ct. Residential Basin*

Address:  
4 Tara Ct  
Trenton, NJ 08619

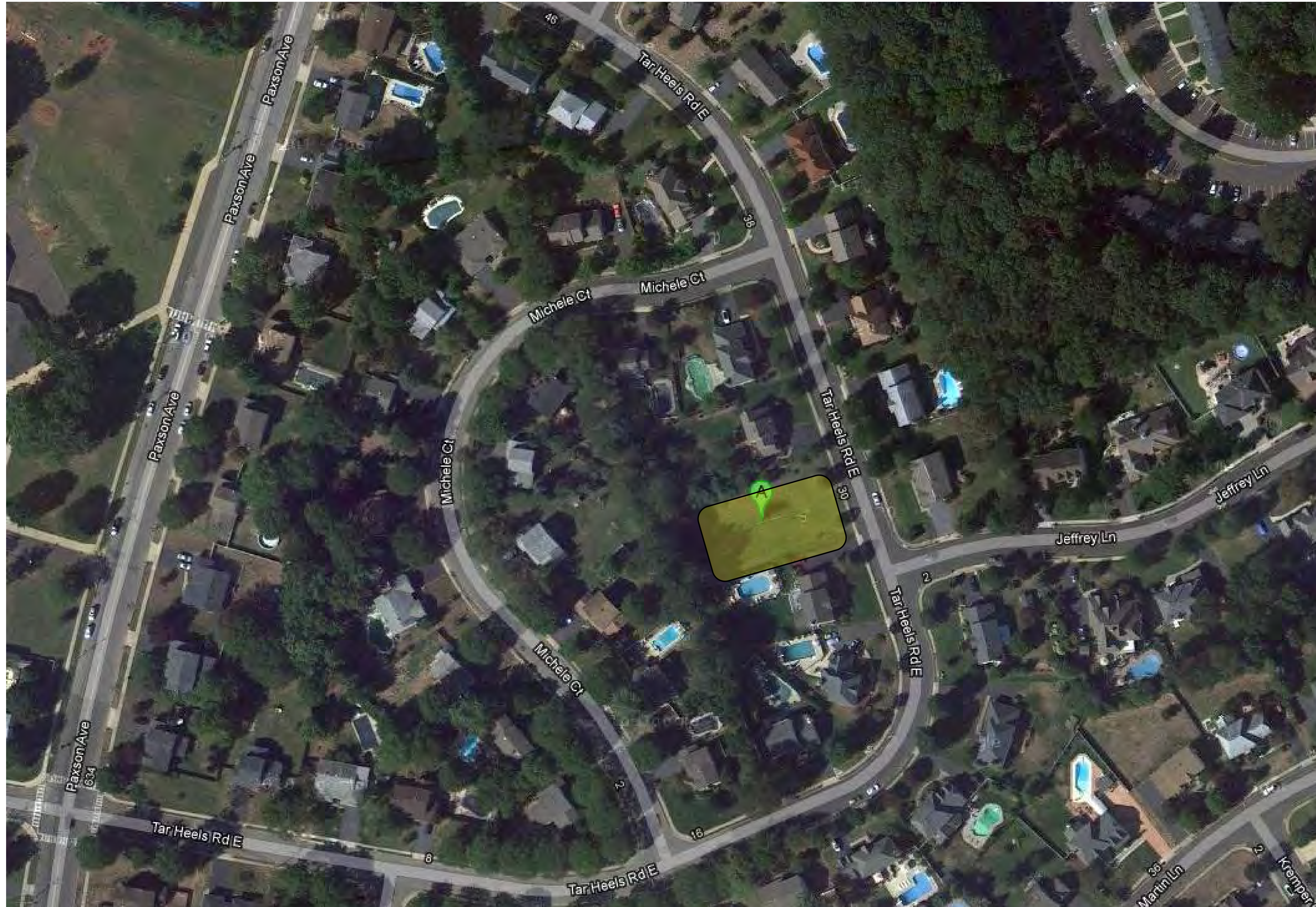


**2019 Notes:**

- Two inlets and one outlet
- Concrete low flow channel has grass growing over it
- Opportunity to remove concrete low flow channels and replace with a stone channel

Hamilton Township  
Stormwater Basin Assessment  
*9. Tar Heel Rd E Residential Basin*

Address:  
30 Tar Heels Rd E  
Hamilton Township, NJ 08619



Hamilton Township  
Stormwater Basin Assessment  
*9. Tar Heel Rd E Residential Basin*

Address:  
30 Tar Heels Rd E  
Hamilton Township, NJ 08619



Basin bottom looking west



Basin bottom looking east

**2012 Notes:**

- Sediment accumulation in low flow channel that is restricting the flow of water
- Outlet orifice is clogged with sediment
- Woody vegetation growth around outlet



Hamilton Township  
Stormwater Basin Assessment  
*9. Tar Heel Rd E Residential Basin*

Address:  
30 Tar Heels Rd E  
Hamilton Township, NJ 08619



**2019 Notes:**

- Typical detention basin in good condition with one inlet and one outlet
- Rock flow channel opportunity
- Low flow channel could be removed and basin allowed to naturalize by reducing mowing

Hamilton Township  
Stormwater Basin Assessment

*19. Brookwood Rd Residential Basin*

Address:  
193 Brookwood Rd  
Trenton, NJ 08619



Hamilton Township  
Stormwater Basin Assessment  
*19. Brookwood Rd Residential Basin*

Address:  
193 Brookwood Rd  
Trenton, NJ 08619



View of basin looking east



Outlet Structure



Inlet and erosion

**2012 Notes:**

- Basin is naturalized with dense vegetation
- Inlets and outlets are inaccessible due to vegetation growth in warm months
- Invasive plant species present including Phragmites and Purple Loosestrife
- Erosion present

Hamilton Township  
Stormwater Basin Assessment

*19. Brookwood Rd Residential Basin*

Address:  
193 Brookwood Rd  
Trenton, NJ 08619



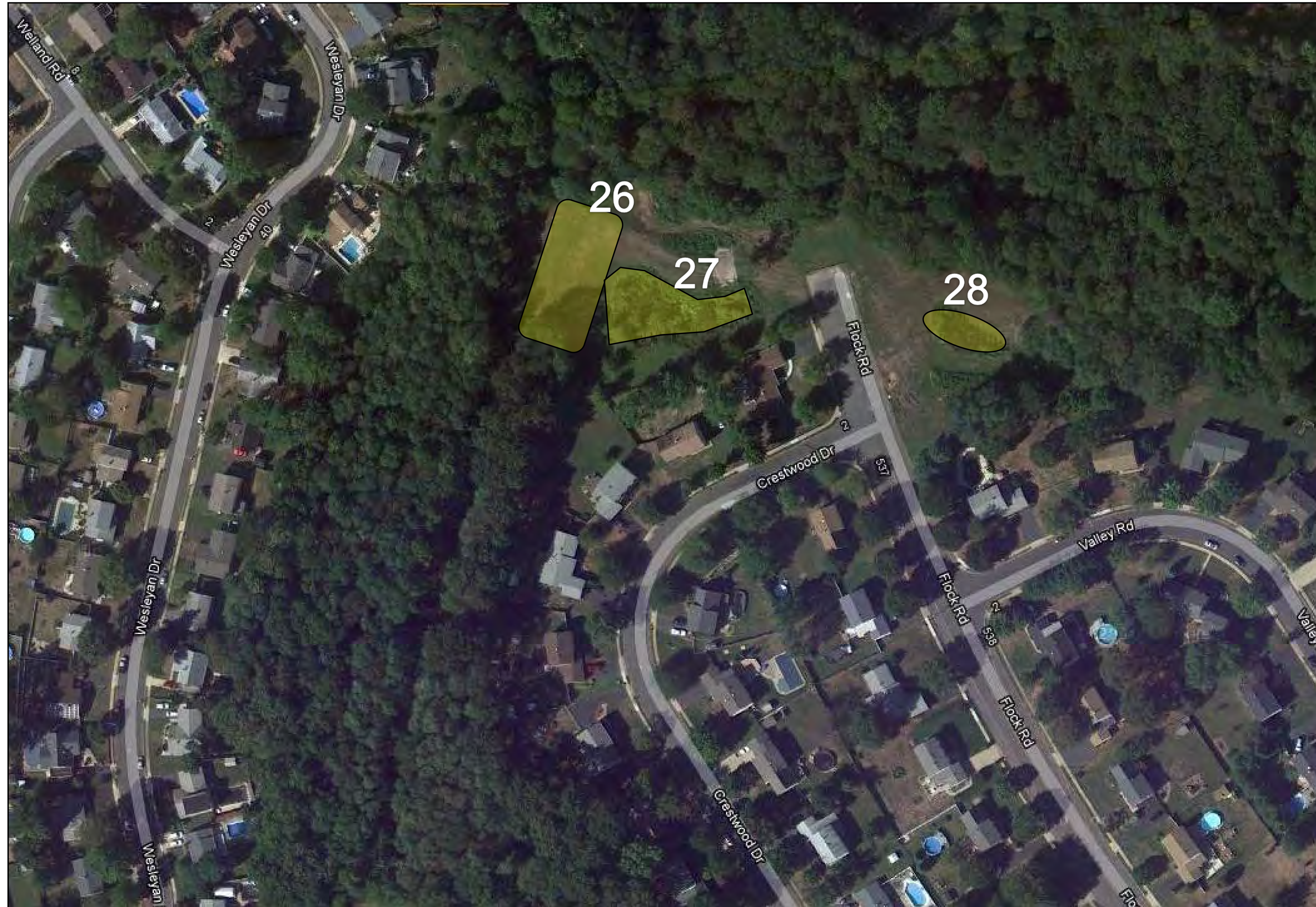
**2019 Notes:**

- Basin is inaccessible due to over grown vegetation
- Maintenance suggested to have access to basin and outlet structures

Hamilton Township  
Stormwater Basin Assessment

*26, 27, & 28. Crestwood Dr Residential Basins*

Address:  
6 Crestwood Dr  
Trenton, NJ 08619



Hamilton Township  
Stormwater Basin Assessment

*26 & 27. Crestwood Dr Residential Basins*

Address:  
6 Crestwood Dr  
Trenton, NJ 08619



Outlet



Inlet



Emergency Spillway

**2012 Notes:**

- Standing water remaining in basin
- Woody vegetation growth around inlet
- Excess sediment accumulation in outlet

Hamilton Township  
Stormwater Basin Assessment  
*26 & 27. Crestwood Dr Residential Basins*

Address:  
6 Crestwood Dr  
Trenton, NJ 08619



# 26.



# 27.

**2019 Notes:**

- Grass area surrounding inflow
- Largely vegetated basins with both herbaceous and woody plant
- Some erosion in channelized areas

Hamilton Township  
Stormwater Basin Assessment  
*28. Crestwood Dr Residential Basins*

Address:  
6 Crestwood Dr  
Trenton, NJ 08619



Entire basin looking east near inlet

**2012 Notes:**

- Standing water remaining in basin
- No outlet visible, basin developing into a wetland system



Hamilton Township  
Stormwater Basin Assessment

*28. Crestwood Dr Residential Basins*

Address:  
6 Crestwood Dr  
Trenton, NJ 08619



**2019 Notes:**

- Heavy vegetation in the basin
- No clear outlet identified

Hamilton Township  
Stormwater Basin Assessment

*29. Arrowwood Dr Residential Basin*

Address:  
11 Arrowwood Dr  
Trenton, NJ 08619



Hamilton Township  
Stormwater Basin Assessment  
*29. Arrowwood Dr Residential Basin*

Address:  
11 Arrowwood Dr  
Trenton, NJ 08619



Basin bottom looking south



Two inlets



Outlet

**2012 Notes:**

- Excess sediment accumulation in low flow channel
- Outlet has some sediment accumulation

Hamilton Township  
Stormwater Basin Assessment

*29. Arrowwood Dr Residential Basin*

Address:  
11 Arrowwood Dr  
Trenton, NJ 08619



**2019 Notes:**

- Long detention basin with two inlets and an outlet
- Standing water present in low flow channel
- Clear sign of erosion occurring upstream from color of water in low flow channel

Hamilton Township  
Stormwater Basin Assessment  
*30. Fordham Dr Residential Basin*

Address:  
5 Fordham Dr  
Trenton, NJ 08619



Hamilton Township  
Stormwater Basin Assessment  
*30. Fordham Dr Residential Basin*

Address:  
5 Fordham Dr  
Trenton, NJ 08619



Basin bottom looking northeast



Inlet protection



Gabion wall perimeter



Overgrown outlet

**2012 Notes:**

- Standing water in low flow channel
- Outlet has sediment accumulation and excessive plant growth

Hamilton Township  
Stormwater Basin Assessment  
*30. Fordham Dr Residential Basin*

Address:  
5 Fordham Dr  
Trenton, NJ 08619



**2019 Notes:**

- Standing water present in the low flow channel, and large amounts of vegetation around basin
- Low flow channel could be removed to promote infiltration instead of the standing water that is present.

Hamilton Township  
Stormwater Basin Assessment

*32. Nottingham Volunteer Fire Co Basin*

Address:  
200 Mercer Street  
Trenton, NJ 08690





Hamilton Township  
Stormwater Basin Assessment

*32. Nottingham Volunteer Fire Co Basin*

Address:  
200 Mercer Street  
Trenton, NJ 08690



Inlet clogged with sediment



Clogged outlet structure



Basin bottom looking southeast

**2012 Notes:**

- Excess sediment accumulation in inlet, outlet and low flow channel
- Litter and debris accumulation in basin bottom, inlet and outlet

Hamilton Township  
Stormwater Basin Assessment

*32. Nottingham Volunteer Fire Co Basin*

Address:  
200 Mercer Street  
Trenton, NJ 08690



**2019 Notes:**

- Basin in overall good condition
- Some slight scouring along main flow channel
- Outlet clogged with leaves

Hamilton Township  
Stormwater Basin Assessment  
*33. Emily Place Residential Basin*

Address:  
10 Emily Pl  
Hamilton Township, NJ 08690



Hamilton Township  
Stormwater Basin Assessment  
*33. Emily Place Residential Basin*

Address:  
10 Emily Pl  
Hamilton Township, NJ 08690



Basin bottom looking southwest



Inlet



Woody vegetation growth around outlet

**2012 Notes:**

- Woody vegetation growth around outlet
- Large outlet diameter, no grates or screens

Hamilton Township  
Stormwater Basin Assessment  
*33. Emily Place Residential Basin*

Address:  
10 Emily Pl  
Hamilton Township, NJ 08690



**2019 Notes:**

- Heavily maintained detention basin in good condition
- Mown with trees around perimeter
- Remove low flow channel to promote more infiltration

Hamilton Township  
Stormwater Basin Assessment  
*39. George Dick Field Basin*

Address:  
112 Armour Avenue,  
Hamilton Township NJ 08619



Hamilton Township  
Stormwater Basin Assessment  
*39. George Dick Field Basin*

Address:  
112 Armour Avenue,  
Hamilton Township NJ 08619



Inlet with sediment accumulation



Basin bottom with erosion

**2012 Notes:**

- Excess sediment accumulation in inlet
- Exposed soil and erosion in basin bottom
- Discharges directly to Miry Run

Hamilton Township  
Stormwater Basin Assessment  
*39. George Dick Field Basin*

Address:  
112 Armour Avenue,  
Hamilton Township NJ 08619



**2019 Notes:**

- Appears to be a vegetated swale with check dams, not a true stormwater basin
- Bottom has some algae growth and lots of trash in it, appears to have high water flow with some erosion present
- Add stone to the bottom to help slow down the water and reduce erosion



Hamilton Township  
Stormwater Basin Assessment  
*56. Colton Ct Residential Basin*

Address:  
Colton Court  
Hamilton Township, NJ 08619



Hamilton Township  
Stormwater Basin Assessment  
*56. Colton Ct Residential Basin*

Address:  
Colton Court  
Hamilton Township, NJ 08619



Inlet



Clogged trash rack at outlet



Basin bottom looking southwest

**2012 Notes:**

- Standing water in low flow channel
- Outlet has structural damage and trash rack is clogged with sediment/debris

Hamilton Township  
Stormwater Basin Assessment  
*56. Colton Ct Residential Basin*

Address:  
Colton Court  
Hamilton Township, NJ 08619



**2019 Notes:**

- Low flow channel blocked by organic debris and sediment
- Remove sediment and clearing of obstructions to outflow
- Opportunity to remove concrete channels and add rock flow channels with vegetation

Hamilton Township  
Stormwater Basin Assessment  
*87. Roadside Residential Basin*

Address:  
Estates Blvd and Trenton Ave  
Hamilton Township, NJ 08619



Hamilton Township  
Stormwater Basin Assessment  
*87. Roadside Residential Basin*

Address:  
Estates Blvd and Trenton Ave  
Hamilton Township, NJ 08619



Basin bottom looking west



Basin bottom looking north



Outlet Structure

**2012 Notes:**

- Woody vegetation growth around inlet and outlet structures

Hamilton Township  
Stormwater Basin Assessment  
*87. Roadside Residential Basin*

Address:  
Estates Blvd and Trenton Ave  
Hamilton Township, NJ 08619



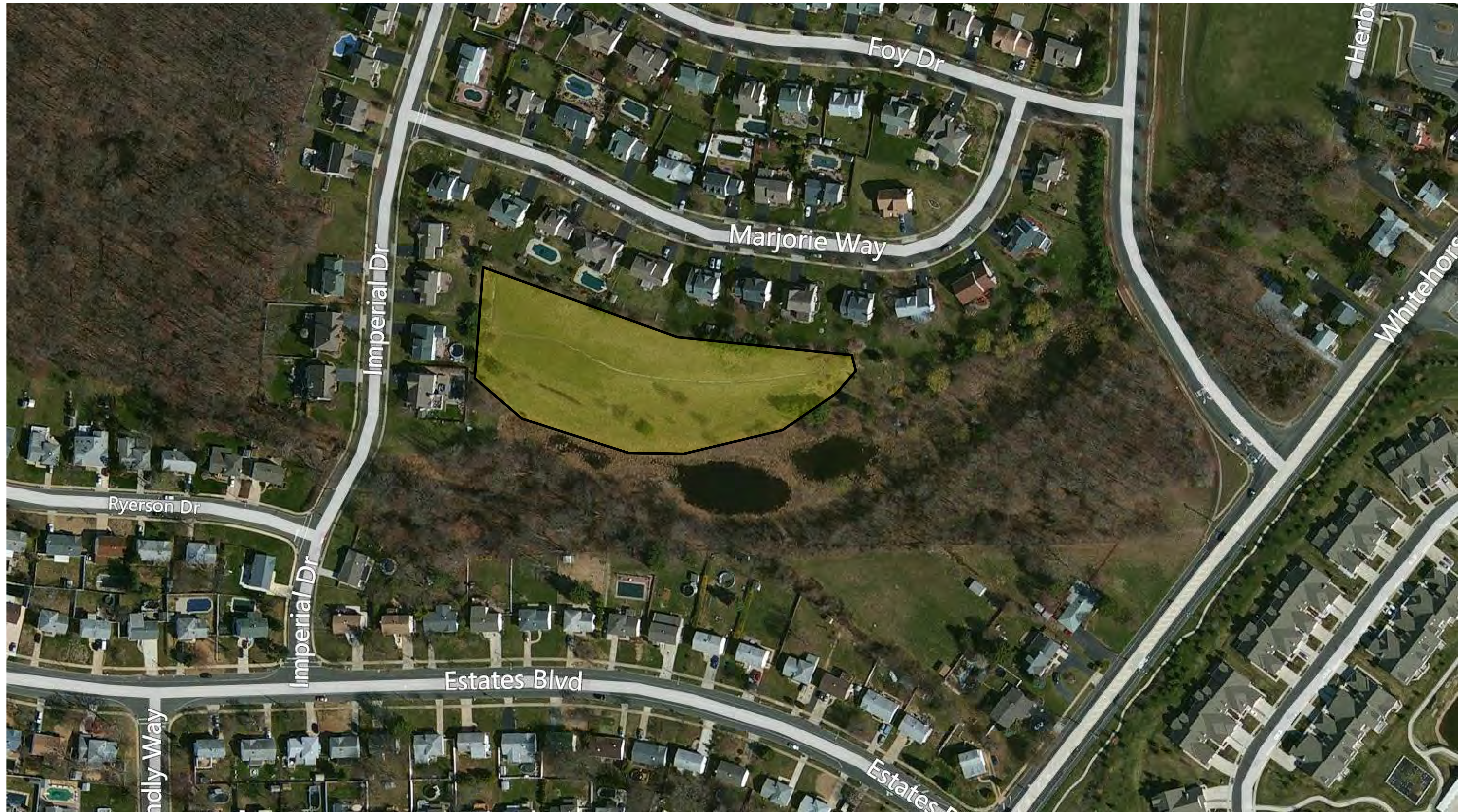
**2019 Notes:**

- Basin in good condition overall with two inlets
- Clean out inlets as they have accumulated sediment and restrict inflow

Hamilton Township  
Stormwater Basin Assessment

*120. Imperial Drive Residential Detention Basin*

Address:  
12 Imperial Dr  
Trenton, NJ 08690



Hamilton Township  
Stormwater Basin Assessment

*120. Imperial Drive Residential Detention Basin*

Address:  
12 Imperial Dr  
Trenton, NJ 08690



Overgrown inlet



Inlet structure and overgrown rip-rap apron



Basin bottom looking west



Overgrown outlet structure

**2013 Notes:**

- Two of the three inlet structures are overgrown and inaccessible
- The most northwestern inlet is filled with sediment and the rip rap apron has spilled into the low flow channel
- The outlet is overgrown with woody growth and the trash rack is clogged with sediment and debris



Hamilton Township  
Stormwater Basin Assessment

*120. Imperial Drive Residential Detention Basin*

Address:  
12 Imperial Dr  
Trenton, NJ 08690



**2019 Notes:**

- Basin in overall good condition, much improved from previous assessment with all inlet and outlets cleared
- Significant leaf litter clogging outlet structure
- Low flow channels could be removed to promote more infiltration throughout the basin

Hamilton Township  
Stormwater Basin Assessment

*121. Foy Drive Residential Detention Basin*

Address:  
1 Foy Dr  
Trenton, NJ 08690



Hamilton Township  
Stormwater Basin Assessment

*121. Foy Drive Residential Detention Basin*

Address:  
1 Foy Dr  
Trenton, NJ 08690



Outlet Structure



Overgrown inlet structure



Basin discharge area



Basin looking southwest

**2013 Notes:**

- There is excess sediment accumulated in the low flow channel that is restricting the flow of water
- The western inlet has excess plant growth throughout its rip rap apron
- The outlet has minimal sediment accumulated in front of it
- The basin discharge area has excessive plant growth

Hamilton Township  
Stormwater Basin Assessment

*121. Foy Drive Residential Detention Basin*

Address:  
1 Foy Dr  
Trenton, NJ 08690



**2019 Notes:**

- Built up sediment in channel is leading to some standing water
- Clean out channel and potentially replace concrete channel with stone channel

Hamilton Township  
Stormwater Basin Assessment

*128. Hamilton Twp Library Detention Basin*

Address:  
19 Justice Samuel A. Alito Jr. Way  
Trenton, NJ 08619



# Hamilton Township Stormwater Basin Assessment

## *128. Hamilton Twp Library Detention Basin*

Address:  
19 Justice Samuel A. Alito Jr. Way  
Trenton, NJ 08619



Concrete deterioration on southern inlet



Concrete deterioration on northern inlet



Basin bottom looking west

### **2013 Notes:**

- There is excessive ponding in the basin bottom, ponding reaches depths of about three feet
- Outlet is overgrown by brush, it is located in the northern corner. The outlet is clogged with sediment, causing the ponding in the basin
- There is concrete deterioration on both inlets

Hamilton Township  
Stormwater Basin Assessment

*128. Hamilton Twp Library Detention Basin*

Address:  
19 Justice Samuel A. Alito Jr. Way  
Trenton, NJ 08619



**2019 NOTES:**

- Low flow channel from two inlets flow into a vegetated swale to the outlet
- Standing water issues observed in previous assessment were not identified
- Basin can be naturalized with herbaceous plants

Hamilton Township  
Stormwater Basin Assessment

*137. Noa Court Residential Detention Basin*

Address:  
76 Noa Ct  
Trenton, NJ 08690





Hamilton Township  
Stormwater Basin Assessment  
*137. Noa Court Residential Detention Basin*

Address:  
76 Noa Ct  
Trenton, NJ 08690



Basin bottom looking northeast



Outlet structure



Litter and debris accumulated inside outlet

**2013 Notes:**

- There is excess sediment accumulated in front of the outlet
- There are some bare areas around low flow channel
- Litter and debris area accumulated inside of the outlet structure, implementing a trash rack over the weir would help prevent this

Hamilton Township  
Stormwater Basin Assessment  
*137. Noa Court Residential Detention Basin*

Address:  
76 Noa Ct  
Trenton, NJ 08690



**2019 Notes:**

- Excessive sediment build up in front of outlet structure, grass growing over low flow channel
- Excess sediment and litter should be removed
- Opportunity to replace low flow channel with a stone channel to promote infiltration

Hamilton Township  
Stormwater Basin Assessment

*158. Hamilton Veterans Park Detention Basin (a)*

Address:  
Bozarth Ct  
Trenton, NJ 08690



Hamilton Township  
Stormwater Basin Assessment

*158. Hamilton Veterans Park Detention Basin (a)*

Address:  
Bozarth Ct  
Trenton, NJ 08690



Northeastern inlet structure



Southern inlet structure filled with sediment



Outlet structure and gully



Basin bottom looking southwest

**2013 Notes:**

- The southern inlet is about halfway filled with sediment
- The northeastern inlet is in need of replacement
- The basin bottom has many gullies throughout and excess sediment accumulation
- There is standing water and erosion in front of the outlet

Hamilton Township  
Stormwater Basin Assessment

*158. Hamilton Veterans Park Detention Basin (a)*

Address:  
Bozarth Ct  
Trenton, NJ 08690



**2019 Notes:**

- Area appears to be more of a swale than a basin
- Severe erosion issue near inlet that needs to be remediated
- Naturalize base with herbaceous plants

Hamilton Township  
Stormwater Basin Assessment

*159 & 160. Hamilton Veterans Park Detention Basins (b & c)*

Address:  
224 Kruser Rd  
Trenton, NJ 08690



Hamilton Township  
Stormwater Basin Assessment

*159 & 160. Hamilton Veterans Park Detention Basins (b & c)*

Address:  
224 Kruser Rd  
Trenton, NJ 08690



Basin #159 bottom looking west



Basin #159 inlet structure



Basin #160 bottom looking north



Basin #160 outlet structure

**2013 Notes:**

- Basin #159 collects runoff from adjacent fields then discharges to basin #160 where it spreads out over a grassed area
- The inlet and outlet structures in both basins are clogged with sediment
- Basin #160 has ponding in the basin bottom

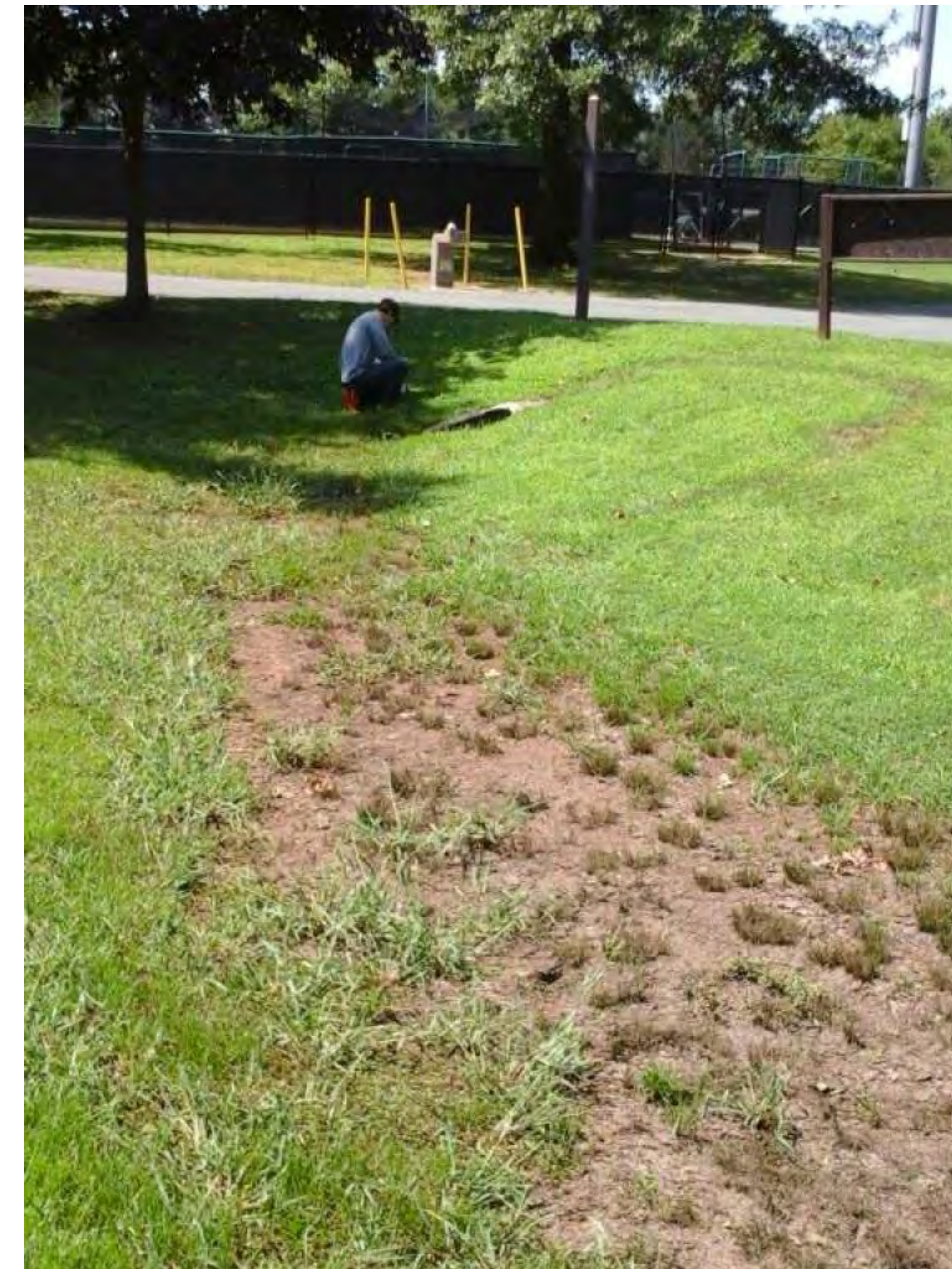
Hamilton Township  
Stormwater Basin Assessment

*159 & 160. Hamilton Veterans Park Detention Basins (b & c)*

Address:  
224 Kruser Rd  
Trenton, NJ 08690



Basin #159



Basin #160

**2019 Notes:**

- Areas appear to be more of a swale than a basin
- Exposed dirt next to soccer field and in swale bottom, plant areas with herbaceous plants to prevent erosion.



Hamilton Township  
Stormwater Basin Assessment

*161. Hamilton Veterans Park Detention Basin (d)*

Address:  
224 Kruser Rd  
Trenton, NJ 08690



Hamilton Township  
Stormwater Basin Assessment

*161. Hamilton Veterans Park Detention Basin (d)*

Address:  
224 Kruser Rd  
Trenton, NJ 08690



Northeastern inlet



Northwestern inlet



Outlet structure



Swale that conveys two inlets to basin

**2013 Notes:**

- There is a swale that collects runoff from the nearby parking lots which conveys the water into the basin
- The basin has 5 total inlets
- The northeastern inlet is in need of replacement
- The northwestern inlet is clogged with sediment that is restricting the flow of water
- The outlet has a large low flow orifice that could use a restrictor plate
- The basin bottom has areas of gullying and tread marks

Hamilton Township  
Stormwater Basin Assessment

*161. Hamilton Veterans Park Detention Basin (d)*

Address:  
224 Kruser Rd  
Trenton, NJ 08690



**2019 Notes:**

- Basin overall in good condition
- Inlets have signs of erosion, implement rip rap aprons to prevent erosion
- Natural basin with herbaceous plants

Hamilton Township  
Stormwater Basin Assessment

*163. Hamilton Green Limewood Detention Basin*

Address:  
Mint Leaf Dr and Limewood Dr  
Trenton, NJ 08690



**\*Likely not stormwater basin, just catch basin**

Hamilton Township  
Stormwater Basin Assessment

*163. Hamilton Green Limewood Detention Basin*

Address:  
Mint Leaf Dr and Limewood Dr  
Trenton, NJ 08690



**2019 Notes:**

- Note assessed in 2013 due to inaccessibility
- Appears to just be a catch basin in a forested area

Hamilton Township  
Stormwater Basin Assessment

*164. Great Oak Road Residential Detention Basin*

Address:  
Great Oak Rd and Dukoff Dr  
Trenton, NJ 08690



# Hamilton Township Stormwater Basin Assessment

## *164. Great Oak Road Residential Detention Basin*

Address:  
Great Oak Rd and Dukoff Dr  
Trenton, NJ 08690



Basin bottom looking east



Excessive sediment in front of inlet



Secondary emergency overflow



Outlet structure

### **2013 Notes:**

- Low flow channels in basin are clogged with accumulated sediment; there is ponding in the channels that appears very stagnant
- It appears that sediment was removed from the low flow channel, but left in the basin. The sediment needs to be hauled away.
- The inlet structures all have excessive sediment accumulated in front of them
- The southwestern inlet has some concrete deterioration and should be replaced
- The outlet structure is missing a trash rack and has some cracks in parging

Hamilton Township  
Stormwater Basin Assessment

*164. Great Oak Road Residential Detention Basin*

Address:  
Great Oak Rd and Dukoff Dr  
Trenton, NJ 08690



**2019 Notes:**

- Large Infiltration basin with sediment filled low flow channels
- Vegetated with grasses and trees
- Clean out low flow channels and maintain areas with over grown vegetation
- Opportunity to remove low flow channels and replace with stone channels to allow infiltration



Hamilton Township  
Stormwater Basin Assessment

*166 & 167. Innocenzi Drive Residential Detention Basins*

Address:  
Innocenzi Dr and Great Oak Rd  
Trenton, NJ 08690



Hamilton Township  
Stormwater Basin Assessment

*167. Innocenzi Drive Residential Detention Basin (b)*

Address:  
Innocenzi Dr and Great Oak Rd  
Trenton, NJ 08690



Basin bottom looking northwest



Overgrown eastern inlet



Overgrown western inlet



Outlet structure

**2013 Notes:**

- There is excess sediment accumulated and standing water in the low flow channel
- The eastern and western inlets both have excess sediment accumulation and are overgrown with various types of vegetation
- The outlet structure has cracks in parging, the trash rack is broken, and the water is not discharging from the outlet causing the entire basin to back up

Hamilton Township  
Stormwater Basin Assessment

*167. Innocenzi Drive Residential Detention Basin (b)*

Address:  
Innocenzi Dr and Great Oak Rd  
Trenton, NJ 08690

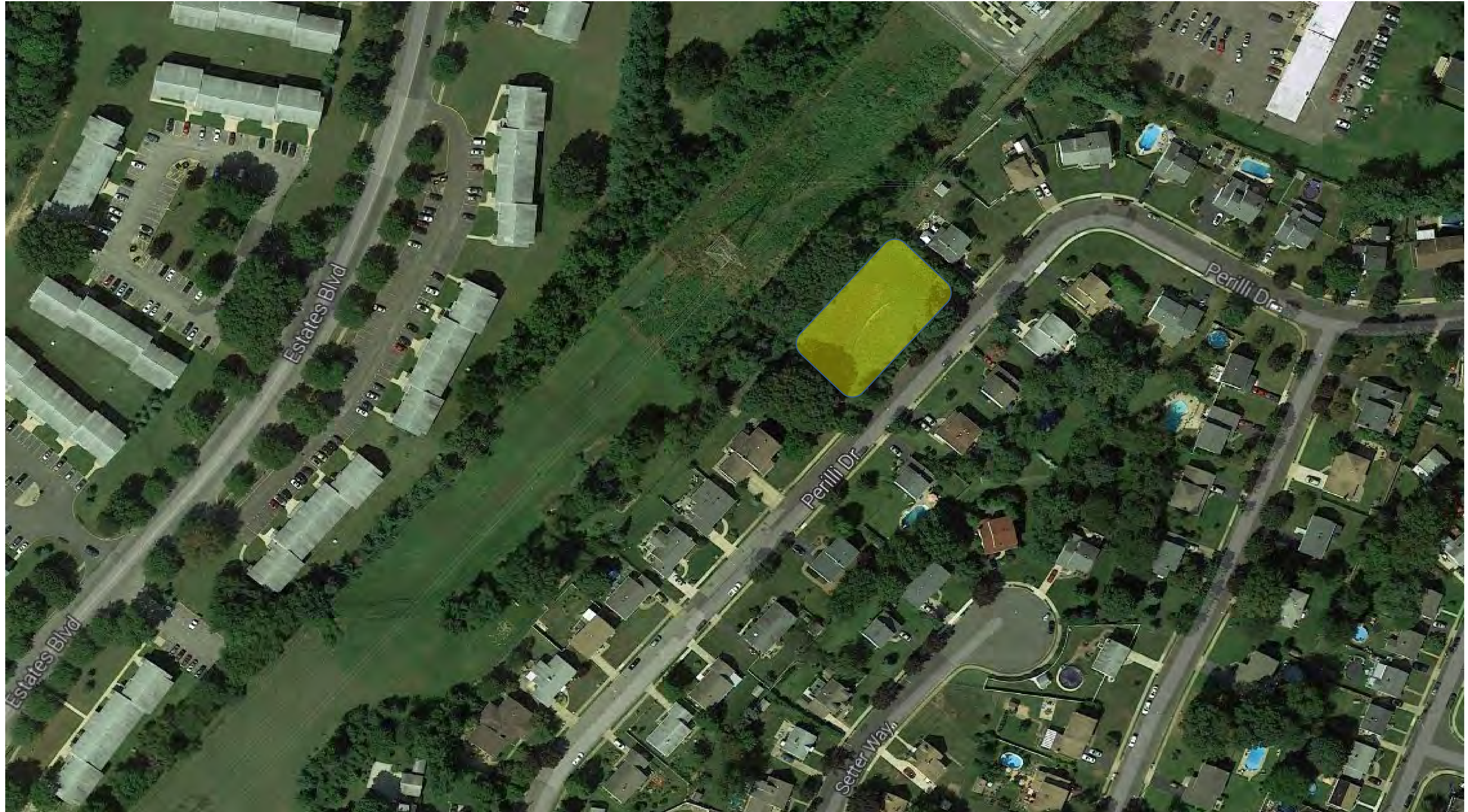


**2019 Notes:**

- Significant standing water in low flow channel and near outlet likely due to clogged low flow orifice
- Clear out outlet to allow basin to drain properly
- Low flow channel can be removed and replaced with a stone channel to allow more infiltration in smaller storm events

Hamilton Township  
Stormwater Basin Assessment  
*180. Residential Detention Basin*

Address:  
20 Perilli Drive  
Hamilton Township, NJ 08610



Hamilton Township  
Stormwater Basin Assessment  
*180. Residential Detention Basin*

Address:  
20 Perilli Drive  
Hamilton Township, NJ 08610



Outlet



Low flow channel near outlet



Inlet

**2014 Notes:**

- Standing water and sediment in basin bottom and low flow channel
- Basin appears to be treated as infiltration basin
- Naturalized basin bottom

Hamilton Township  
Stormwater Basin Assessment  
*180. Residential Detention Basin*

Address:  
20 Perilli Drive  
Hamilton Township, NJ 08610



**2019 Notes:**

- A lot of sediment buildup in basin
- Clear out sediment in low flow channel to be sure basin is working as designed. Appears low flow orifice is completely clogged
- Allow basin to continue to naturalize, but plant or seed with native herbaceous species

Hamilton Township  
Stormwater Basin Assessment

*188. Sharps Lane Residential Basin*

Address:  
255 Sharps Ln  
Hamilton Township, NJ 08610



Hamilton Township  
Stormwater Basin Assessment

*188. Sharps Lane Residential Basin*



Address:  
255 Sharps Ln  
Hamilton Township, NJ 08610



Inside of outlet



Outlet



Overgrown on low flow channel

**2014 Notes:**

- Sediment surrounding outlet
- Slight overgrown vegetation in low flow channel
- Litter inside of outlet structure
- Emergency spillway leads to swale north of basin



Hamilton Township  
Stormwater Basin Assessment  
*188. Sharps Lane Residential Basin*

Address:  
255 Sharps Ln  
Hamilton Township, NJ 08610



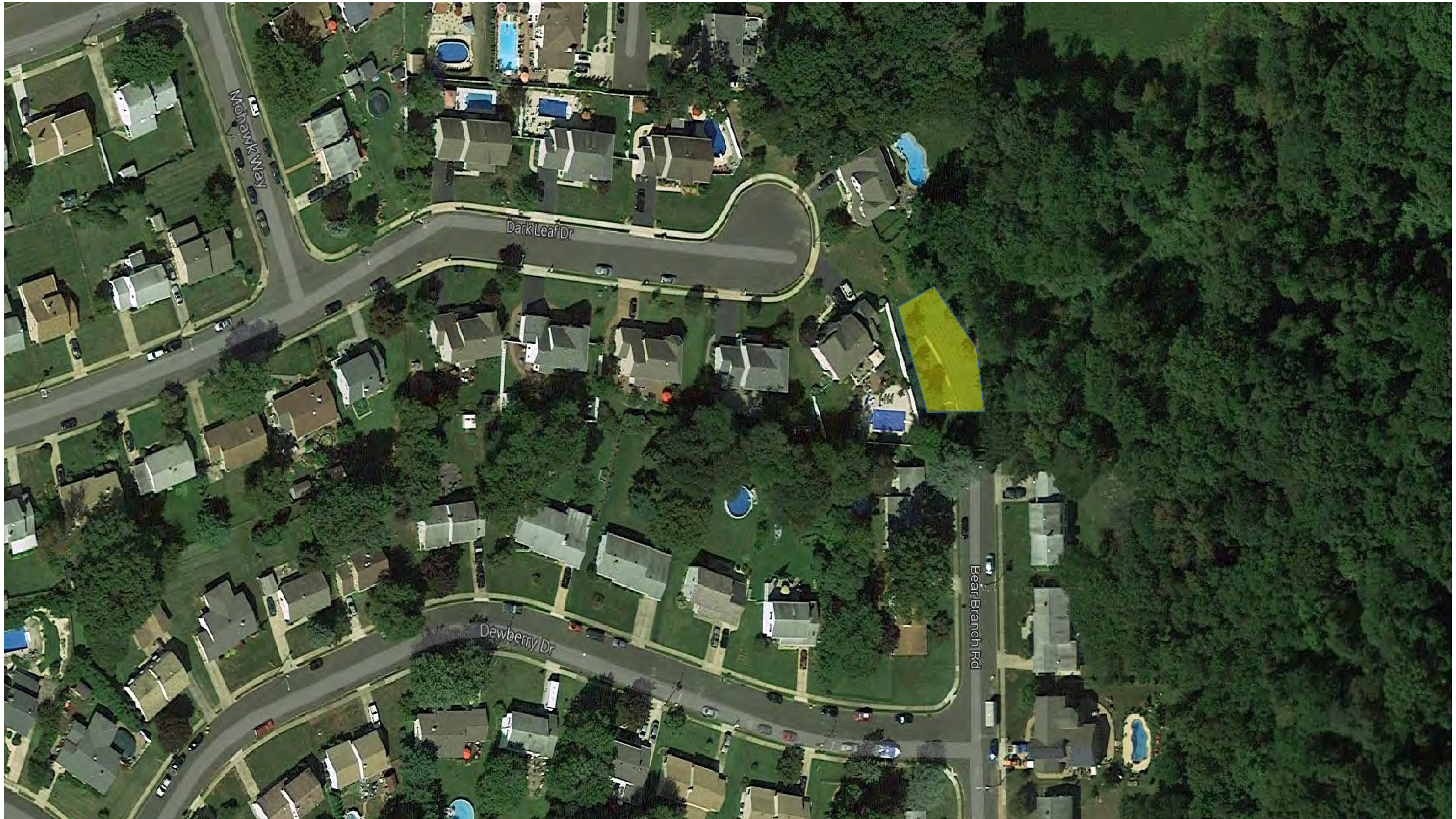
**2019 Notes:**

- Trees existing in basin, some standing water present, fallen tree
- Replace low flow channel with stone channel to reduce standing water and allow infiltration
- Naturalize with herbaceous plants

Hamilton Township  
Stormwater Basin Assessment

*190. Dark Leaf Drive Residential Basin*

Address:  
41 Dark Leaf Dr  
Hamilton Township, NJ 08610



Hamilton Township  
Stormwater Basin Assessment  
*190. Dark Leaf Drive Residential Basin*



Address:  
41 Dark Leaf Dr  
Hamilton Township, NJ 08610



Inlet



Sediment in low flow channel



Mosquito larvae in low flow channel

**2014 Notes:**

- Inlet has standing water
- Low flow channel has standing water and sediment accumulated
- Mosquito breeding in low flow channel
- Emergency spillway directed west, behind houses

Hamilton Township  
Stormwater Basin Assessment  
*190. Dark Leaf Drive Residential Basin*

Address:  
41 Dark Leaf Dr  
Hamilton Township, NJ 08610



**2019 Notes:**

- Erosion present in basin
- Slight standing water in low flow channels
- Remove low flow channel to allow more infiltration
- Naturalize with herbaceous plants to help reduce erosion

Hamilton Township  
Stormwater Basin Assessment

*191 & 192. Veterans Park Detention Basins*

Address:  
2193 Kuser Rd  
Hamilton Township, NJ 08690



Hamilton Township  
Stormwater Basin Assessment  
*191 & 192. Veterans Park Detention Basins*



Address:  
2193 Kuser Rd  
Hamilton Township, NJ 08690



Inlet



Swale feature lading to basin



Garden at end of swail

**2014 Notes:**

- Inlet has grass and plants restricting water flow
- Water flows to a maintained garden
- Minimal erosion caused by running water
- No outlets apparent
- Emergency spillway leads to depressed area near basin center
- Swale receives water from northern parking lot

Hamilton Township  
Stormwater Basin Assessment  
*191 & 192. Veterans Park Detention Basins*

Address:  
2193 Kuser Rd  
Hamilton Township, NJ 08690



Basin #191



Basin #192

**2019 Notes:**

- Basin #191 appears to be more of a swale leading to Basin #192
- Swale can be retrofitted into a bioswale with herbaceous plants
- Woody trees and plants contained to the center of the basin, install supplemental meadow to reduce lawn area and open path to access outlet structure

Hamilton Township  
Stormwater Basin Assessment

*233 & 234. Alessio Terrace Residential Basins*

Address:  
17 Alessio Terrace  
Hamilton Township, NJ 08620





Hamilton Township  
Stormwater Basin Assessment  
*233 & 234. Alessio Terrace Residential Basins*

Address:  
17 Alessio Terrace  
Hamilton Township, NJ 08620



Basin overview



Low flow channel



Erosion near outlet structure

**2014 Notes:**

- Sediment and grass invading low flow channel near outlet
- Erosion near outlet structure
- Overall well maintained

Hamilton Township  
Stormwater Basin Assessment  
*233 & 234. Alessio Terrace Residential Basins*

Address:  
17 Alessio Terrace  
Hamilton Township, NJ 08620



Basin #233



Basin #234

**2019 Notes:**

- Basin #233 low flow channel has some grass clippings and some standing water
- Retrofit plants for infiltration
- Tall grass, located in between houses
- Both basins can have stone channels implemented in place of low flow channels, and herbaceous plant can be used to naturalize the basins

Hamilton Township  
Stormwater Basin Assessment

*236 & 237. Village Drive Residential Basins*

Address:  
79 Village Drive East  
Hamilton Township, NJ 08620



Hamilton Township  
Stormwater Basin Assessment  
*236 & 237. Village Drive Residential Basins*

Address:  
79 Village Drive East  
Hamilton Township, NJ 08620



Basin overview



Inlet



Outlet

**2014 Notes:**

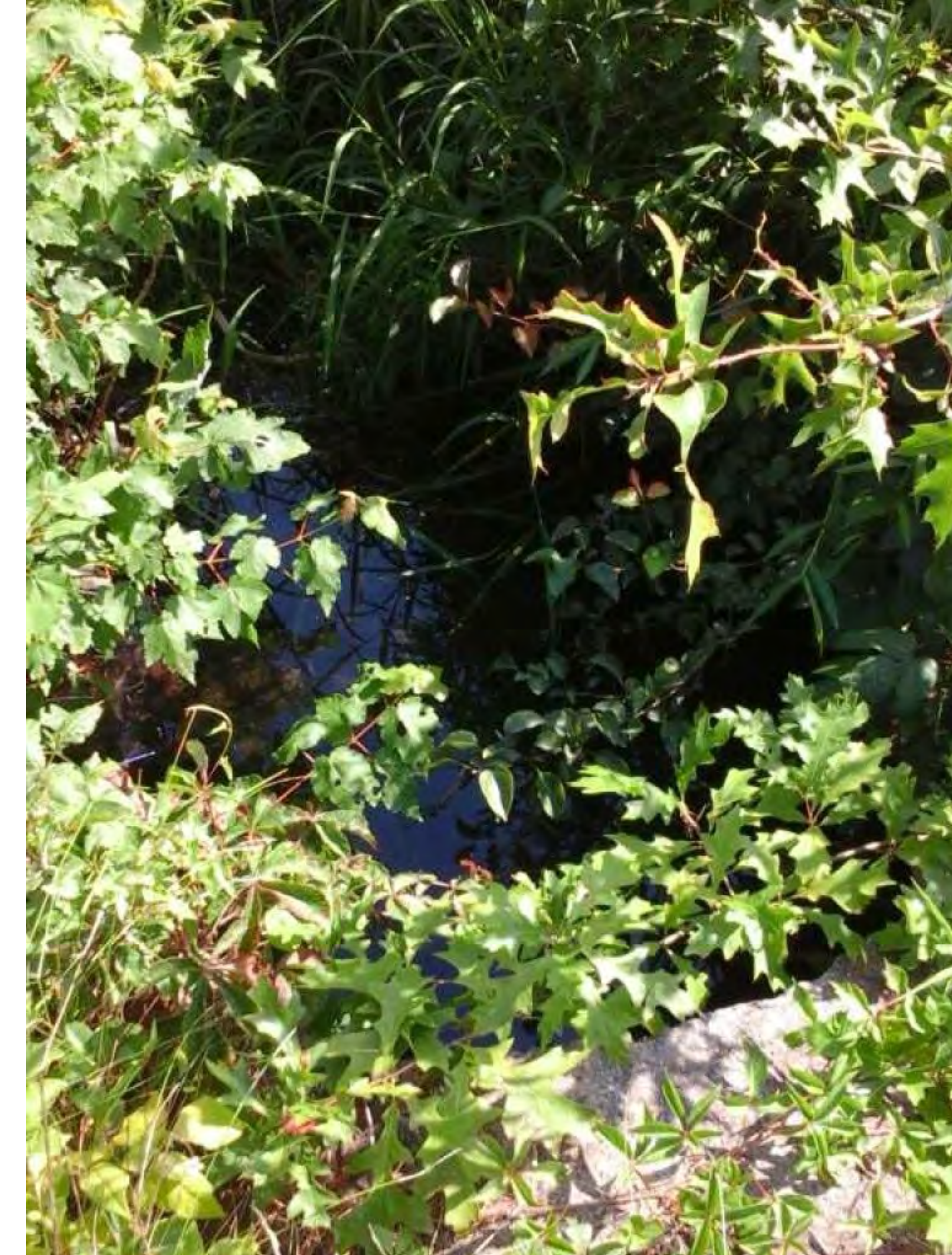
- Significant vegetative growth near outlet structure
- Invasive turf grass and sediment throughout low flow channel

Hamilton Township  
Stormwater Basin Assessment  
*236 & 237. Village Drive Residential Basins*

Address:  
79 Village Drive East  
Hamilton Township, NJ 08620



Basin #236



Basin #237

**2019 Notes:**

- Both basin suffer from similar problems with Basin #236 being worse
- Water flowing through has a red is color, channel is overgrown, due to overgrowth and excess sediment, the outlet is blocked and water is backing up
- Replace channel with rocks, clear out unwanted vegetation, clean outlet and excess sediment
- Replace low flow channel with rock channel

Hamilton Township  
Stormwater Basin Assessment  
*238. Weathersfield Drive Residential Basin*

Address:  
9 Weathersfield Dr  
Hamilton Township, NJ 08620



Hamilton Township  
Stormwater Basin Assessment  
*238. Weathersfield Drive Residential Basin*

Address:  
9 Weathersfield Dr  
Hamilton Township, NJ 08620

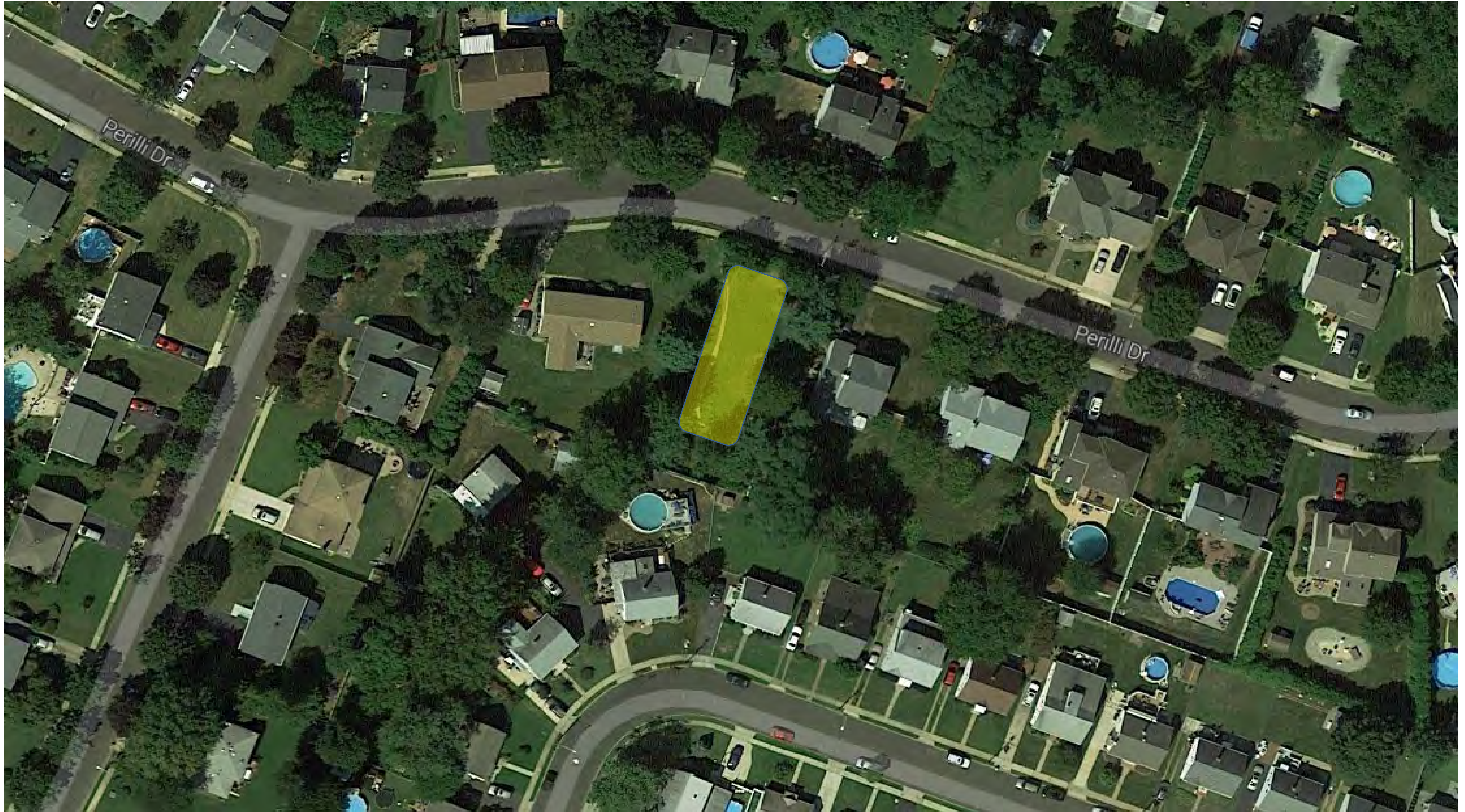


**2019 Notes:**

- 2014 report did not include notes for this basin as retention basins were not being fully assessed at the time
- Massive retention basin surrounded by thick vegetation
- Appears in good condition, no recommendation

Hamilton Township  
Stormwater Basin Assessment  
*264. Perilli Drive Residential Basin*

Address:  
39 Perilli Dr  
Hamilton Township, NJ 08610





Hamilton Township  
Stormwater Basin Assessment  
*264. Perilli Drive Residential Basin*

Address:  
39 Perilli Dr  
Hamilton Township, NJ 08610



Basin overview



Outlet



Inlet

**2014 Notes:**

- Excess sediment and debris accumulated in low flow channel near outlet
- Outlet structure is overgrown with turf grass
- Invasive weeds growing in low flow channel

Hamilton Township  
Stormwater Basin Assessment  
*264. Perilli Drive Residential Basin*

Address:  
39 Perilli Dr  
Hamilton Township, NJ 08610

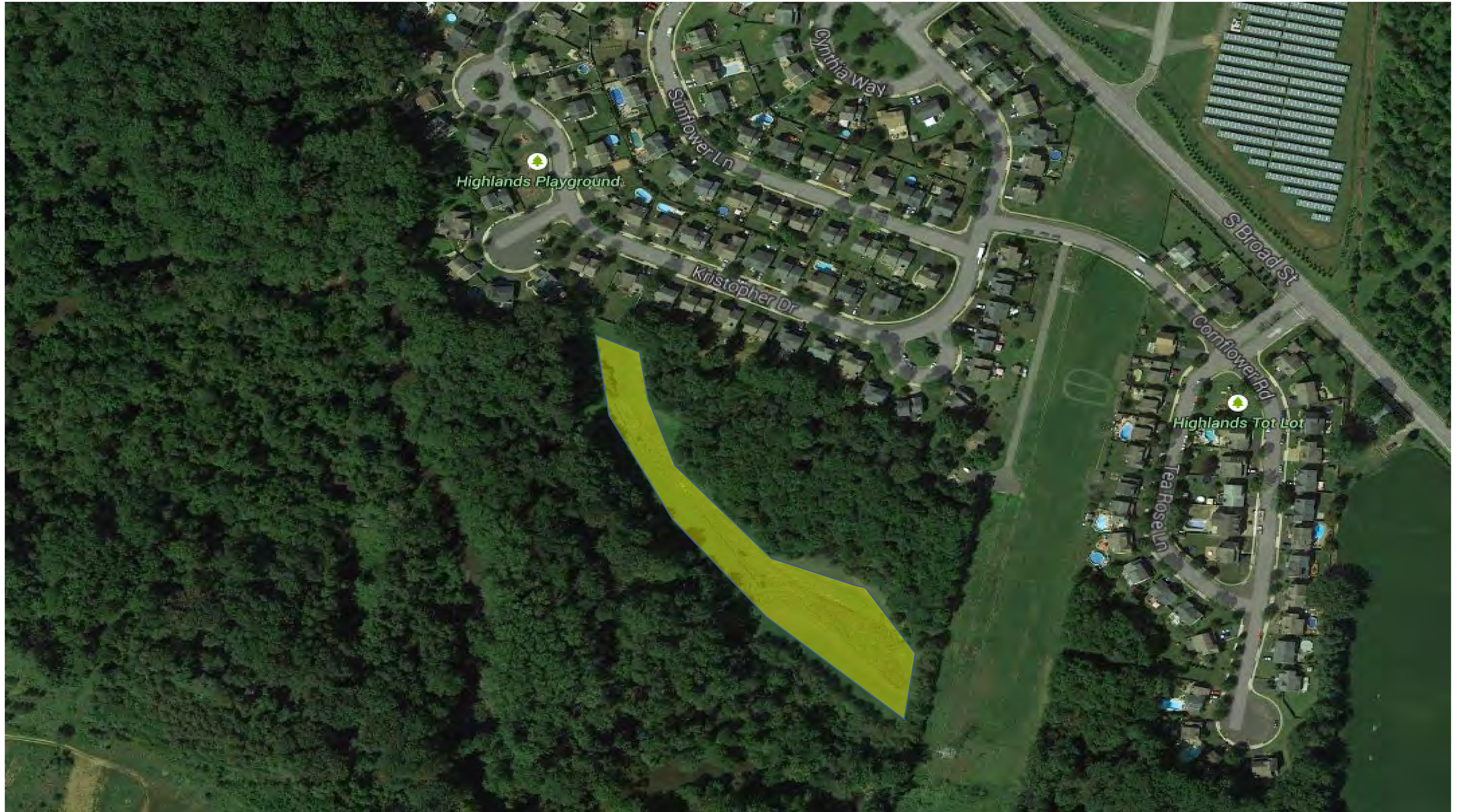


**2019 Notes:**

- Outlet has excessive sediment accumulation clogging low flow orifice
- Remove low flow channel and replace with a rock-lined channel to allow infiltration
- Naturalize with herbaceous plants

Hamilton Township  
Stormwater Basin Assessment  
*269. Kristopher Drive Residential Basin*

Address:  
56 Kristopher Dr  
Hamilton Township, NJ 08620



Hamilton Township  
Stormwater Basin Assessment  
*269. Kristopher Drive Residential Basin*

Address:  
56 Kristopher Dr  
Hamilton Township, NJ 08620



Overview of basin



Inlet

**2014 Notes:**

- Outlet structure exists but there is no access to it
- Woody vegetation growing near inlet
- Excess sediment has accumulated near inlets and outlet structure
- Algae growth in basin

Hamilton Township  
Stormwater Basin Assessment  
*269. Kristopher Drive Residential Basin*

Address:  
56 Kristopher Dr  
Hamilton Township, NJ 08620



**2019 Notes:**

- Well establish meadow in basin with vegetation in good condition
- Better access to inlets and outlet could be added

Hamilton Township  
Stormwater Basin Assessment  
*275. Iron Bridge Road Residential Basin*

Address:  
33 Iron Bridge Rd  
Hamilton Township, NJ 08620



\*Nonexistent, pond

Hamilton Township  
Stormwater Basin Assessment  
*275. Iron Bridge Road Residential Basin*

Address:  
33 Iron Bridge Rd  
Hamilton Township, NJ 08620



**2019 Notes:**

- No notes from 2014 report
- Appears to just be a pond, not a basin

Hamilton Township  
Stormwater Basin Assessment  
*288. Russo Music Center Basin*

Address:  
1989 Arena Dr  
Trenton, NJ 08610





Hamilton Township  
Stormwater Basin Assessment  
*288. Russo Music Center Basin*

Address:  
1989 Arena Dr  
Trenton, NJ 08610



Outlet



Overview of basin



Curb-cut leading to basin

**2014 Notes:**

- Standing water, oil, and iron are present near outlet structure
- Erosion and slumping around outlet structure
- Appears MS4 is clogged

Hamilton Township  
Stormwater Basin Assessment  
*288. Russo Music Center Basin*

Address:  
1989 Arena Dr  
Trenton, NJ 08610



**2019 Notes:**

- The low flow outlet appears to be clogged leading to significant standing water in low flow channel
- Heavy erosion caused by small inlet pipe should be remediated
- Low flow channel can be replaced with a stone channel to provide better infiltration in smaller storm events

Hamilton Township  
Stormwater Basin Assessment  
*303. Englewood Boulevard Residential Basin*

Address:  
123 Englewood Blvd  
Hamilton Township, NJ 08610



Hamilton Township  
Stormwater Basin Assessment  
*303. Englewood Boulevard Residential Basin*

Address:  
123 Englewood Blvd  
Hamilton Township, NJ 08610



**2019 Notes:**

- No notes from 2014, was believed to be a retention basin which were not fully assessed at the time
- May be detention or infiltration basin and is adjacent to a natural pond in the forested area
- Lots of herbaceous vegetation growing in portion of basin

Hamilton Township  
Stormwater Basin Assessment

*304. Willow Bend Drive Residential Basin*

Address:  
31 Willow Bend Dr  
Hamilton Township, NJ 08610



\*Nonexistent

Hamilton Township  
Stormwater Basin Assessment

*315. Hobbs Road Residential Basin*

Address:  
390 Cypress Lane  
Hamilton Township, NJ 08610



Hamilton Township  
Stormwater Basin Assessment  
*315. Hobbs Road Residential Basin*

Address:  
390 Cypress Lane  
Hamilton Township, NJ 08610



Low flow channel leading to catch basin



Clean out in low flow channel



Outlet structure

**2017 Notes:**

- Two low flow channels lead to a catch basin
- Basin can be naturalized using a stone lined channel to replace the low flow channel
- Reduce mowing and raise catch basin at the end of the low flow channels to allow better infiltration

Hamilton Township  
Stormwater Basin Assessment  
*315. Hobbs Road Residential Basin*

Address:  
390 Cypress Lane  
Hamilton Township, NJ 08610



**2019 Notes:**

- Sediment build up and grass in low flow channel leading to standing water
- Raise primary catch basin outlet and add low flow orifice to increase detention capacity
- Remove concrete low flow and add stone channel to enhance infiltration capacity
- Naturalize with herbaceous plants



Hamilton Township  
Stormwater Basin Assessment

*329. & 330. Kuser Road and Whitehorse Hamilton  
Square Road Basins*

Address:  
1870 Kuser Road  
Hamilton Township, NJ 08610



# Hamilton Township Stormwater Basin Assessment

*329. & 330. Kuser Road and Whitehorse Hamilton  
Square Road Basins*

Address:  
1870 Kuser Road  
Hamilton Township, NJ 08610



Inlet vegetation and overview of Basin #329

Overview of Basin #330 and basin outlet

## 2017 Notes:

- Sediment accumulation at outlets and in low flow channels for both basins
- Vegetation overgrowth at Basin #329
- Reduce mowing and establish meadows to improve infiltration

Hamilton Township  
Stormwater Basin Assessment

*329. & 330. Kuser Road and Whitehorse Hamilton  
Square Road Basins*

Address:  
1870 Kuser Road  
Hamilton Township, NJ 08610



Basin #329



Basin #330

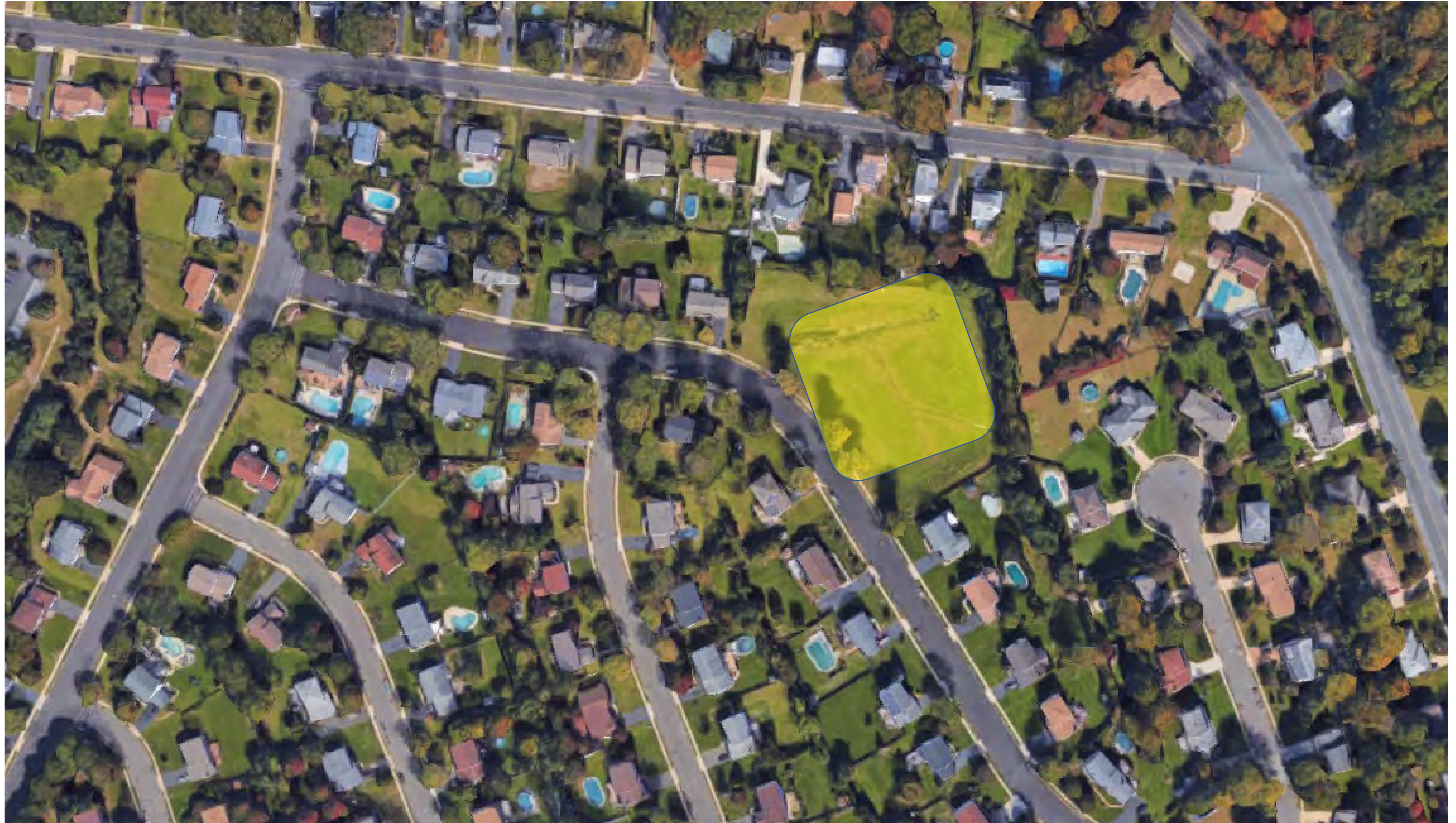
**2019 Notes:**

- Both basins have similar issues
- Heavy sedimentation in low flow channel with grass growing over,
- Low flow channels should be cleaned to avoid standing water
- Some erosion near outlet of Basin #329
- Opportunity to remove low flow channel
- Plant herbaceous vegetation to enhance the basins ability to absorb stormwater

Hamilton Township  
Stormwater Basin Assessment

*332. Robin Drive Residential Basin*

Address:  
101 Robin Drive  
Hamilton Township, NJ 08610



Hamilton Township  
Stormwater Basin Assessment  
*332. Robin Drive Residential Basin*

Address:  
101 Robin Drive  
Hamilton Township, NJ 08610



Basin overview



Basin overview



Outlet structure

**2017 Notes:**

- Basin is partly naturalized
- Overall well maintained

Hamilton Township  
Stormwater Basin Assessment  
*332. Robin Drive Residential Basin*

Address:  
101 Robin Drive  
Hamilton Township, NJ 08610



**2019 Notes:**

- Large vegetation growth around the channels. Large plants such as cat tails and lavender
- Make sure inflow and outflow areas are not too restricted by vegetation
- Low flow channel should be removed for proper naturalization to allow water to infiltrate
- Allow rest of basin to naturalize by converting to meadow by reducing mowing

Hamilton Township  
Stormwater Basin Assessment

*346. & 347. Jeremy Place Residential Basins*

Address:  
10 Jeremy Place  
Trenton, NJ 08620



Hamilton Township  
Stormwater Basin Assessment  
*346. Jeremy Place Residential Basin (West)*

Address:  
10 Jeremy Place  
Trenton, NJ 08620



Basin Overview



Outlet structure



Fish in outlet structure

**2017 Notes:**

- Dead fish in outlet structure
- Otherwise well maintained
- Retention basin



Hamilton Township  
Stormwater Basin Assessment  
*346. Jeremy Place Residential Basin (West)*

Address:  
10 Jeremy Place  
Trenton, NJ 08620



**2019 Notes:**

- Well establish retention basin with a fountain
- Maintain adequate mowing (up to property lines, had a complaint township is not mowing from nearby home owners )

Hamilton Township  
Stormwater Basin Assessment  
*347. Jeremy Place Residential Basin (North)*

Address:  
10 Jeremy Place  
Trenton, NJ 08620



Basin Overview



Outlet structure

**2017 Notes:**

- Invasive phragmites growing in retention pond
- Otherwise well maintained



Invasive vegetation growth

Hamilton Township  
Stormwater Basin Assessment  
*347. Jeremy Place Residential Basin (North)*

Address:  
10 Jeremy Place  
Trenton, NJ 08620



**2019 Notes:**

- Well established retention basin, water seems fairly stagnant
- Fountain could be installed to help with stagnant water issue
- Maintain adequate mowing around basins

Hamilton Township  
Stormwater Basin Assessment

*428. Dogwood Lane Residential Basin*

Address:  
21 Dogwood Lane  
Hamilton Township, NJ 08610



Hamilton Township  
Stormwater Basin Assessment  
*428. Dogwood Lane Residential Basin*

Address:  
21 Dogwood Lane  
Hamilton Township, NJ 08610



Inlet



Basin overview

**2017 Notes:**

- Two part basin system
- Reduce mowing to improve infiltration
- Overall well maintained



Inlet



Outlet

Hamilton Township  
Stormwater Basin Assessment  
*428. Dogwood Lane Residential Basin*

Address:  
21 Dogwood Lane  
Hamilton Township, NJ 08610



**2019 Notes:**

- Infiltration basin forebay with spillway into detention basin for larger storms
- Both basins could be naturalized with herbaceous plants

# Doctors Creek Basins





Hamilton Township  
Stormwater Basin Assessment

*233 & 234, Alessio Terrace Residential Basins*

Address:  
17 Alessio Terrace  
Hamilton Township, NJ 08620



Hamilton Township  
Stormwater Basin Assessment  
*233 & 234. Alessio Terrace Residential Basins*

Address:  
17 Alessio Terrace  
Hamilton Township, NJ 08620



Basin overview



Low flow channel



Erosion near outlet structure

**2014 Notes:**

- Sediment and grass invading low flow channel near outlet
- Erosion near outlet structure
- Overall well maintained

Hamilton Township  
Stormwater Basin Assessment

*233 & 234. Alessio Terrace Residential Basins*

Address:  
17 Alessio Terrace  
Hamilton Township, NJ 08620



Basin #233



Basin #234

**2019 Notes:**

- Basin #233 low flow channel has some grass clippings and some standing water
- Retrofit plants for infiltration
- Tall grass, located in between houses
- Both basins can have stone channels implemented in place of low flow channels, and herbaceous plant can be used to naturalize the basins

Hamilton Township  
Stormwater Basin Assessment  
*236 & 237. Village Drive Residential Basins*

Address:  
79 Village Drive East  
Hamilton Township, NJ 08620



Hamilton Township  
Stormwater Basin Assessment  
*236 & 237. Village Drive Residential Basins*

Address:  
79 Village Drive East  
Hamilton Township, NJ 08620



Basin overview



Inlet



Outlet

**2014 Notes:**

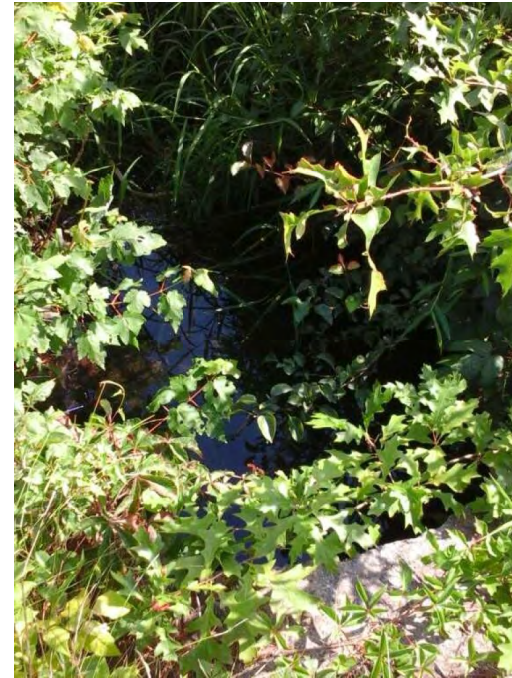
- Significant vegetative growth near outlet structure
- Invasive turf grass and sediment throughout low flow channel

Hamilton Township  
Stormwater Basin Assessment  
*236 & 237. Village Drive Residential Basins*

Address:  
79 Village Drive East  
Hamilton Township, NJ 08620



Basin #236



Basin #237

**2019 Notes:**

- Both basin suffer from similar problems with Basin #236 being worse
- Water flowing through has a red is color, channel is overgrown, due to overgrowth and excess sediment, the outlet is blocked and water is backing up
- Replace channel with rocks, clear out unwanted vegetation, clean outlet and excess sediment
- Replace low flow channel with rock channel

Hamilton Township  
Stormwater Basin Assessment

*238. Weathersfield Drive Residential Basin*

Address:  
9 Weathersfield Dr  
Hamilton Township, NJ 08620



Hamilton Township  
Stormwater Basin Assessment

*238. Weathersfield Drive Residential Basin*

Address:  
9 Weathersfield Dr  
Hamilton Township, NJ 08620



**2019 Notes:**

- 2014 report did not include notes for this basin as retention basins were not being fully assessed at the time
- Massive retention basin surrounded by thick vegetation
- Appears in good condition, no recommendation



Hamilton Township  
Stormwater Basin Assessment

*346. & 347. Jeremy Place Residential Basins*

Address:  
10 Jeremy Place  
Trenton, NJ 08620



Hamilton Township  
Stormwater Basin Assessment  
*346. Jeremy Place Residential Basin (West)*

Address:  
10 Jeremy Place  
Trenton, NJ 08620



Basin Overview



Outlet structure



Fish in outlet structure

**2017 Notes:**

- Dead fish in outlet structure
- Otherwise well maintained
- Retention basin

Hamilton Township  
Stormwater Basin Assessment

*346. Jeremy Place Residential Basin (West)*

Address:  
10 Jeremy Place  
Trenton, NJ 08620



**2019 Notes:**

- Well establish retention basin with a fountain
- Maintain adequate mowing (up to property lines, had a complaint township is not mowing from nearby home owners )

Hamilton Township  
Stormwater Basin Assessment  
*347. Jeremy Place Residential Basin (North)*

Address:  
10 Jeremy Place  
Trenton, NJ 08620



Basin Overview



Outlet structure

**2017 Notes:**

- Invasive phragmites growing in retention pond
- Otherwise well maintained



Invasive vegetation  
growth

Hamilton Township  
Stormwater Basin Assessment

*347. Jeremy Place Residential Basin (North)*

Address:  
10 Jeremy Place  
Trenton, NJ 08620



**2019 Notes:**

- Well established retention basin, water seems fairly stagnant
- Fountain could be installed to help with stagnant water issue
- Maintain adequate mowing around basins



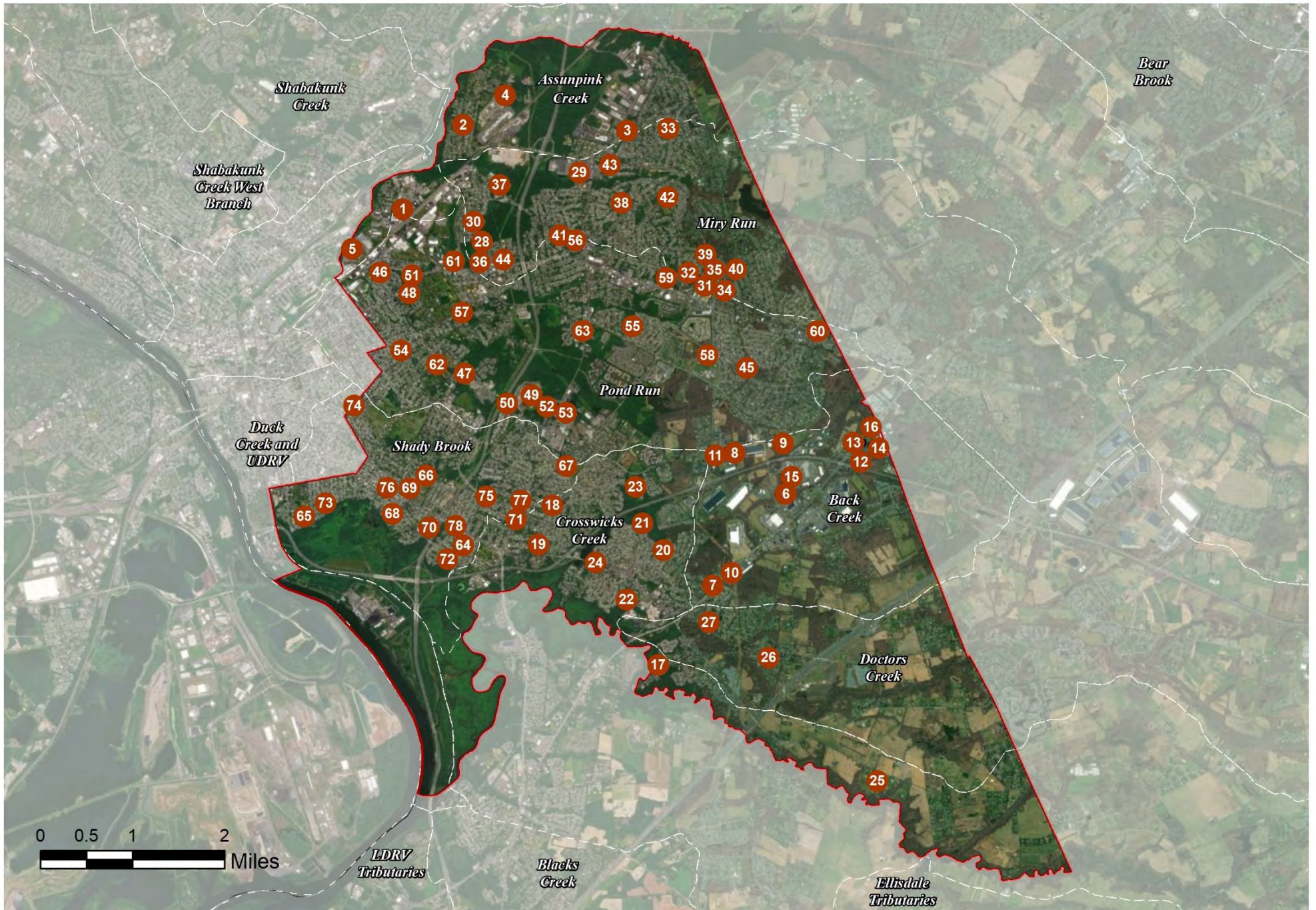
**Appendix C: Green Infrastructure Sites for the Miry Run and Doctors  
Creek Subwatersheds**

*[Hamilton Township (Mercer County) Stormwater Mitigation Plan, December 21,  
2018]*





# HAMILTON TOWNSHIP: GREEN INFRASTRUCTURE SITES





**SITES WITHIN THE ASSUNPINK CREEK SUBWATERSHED**

1. BLV Holding Company Inc.
2. Cornell Heights Field
3. Ibis Plaza Office Suites
4. Medallion Care
5. Siemens Industry & Delaval Turbomachinery

**SITES WITHIN THE BACK CREEK SUBWATERSHED**

6. AAA Mid Atlantic
7. Abandoned Restaurant
8. Caola Company
9. Crockett Middle School
10. Custom Calibrations Solutions, LLC
11. Hamilton Medical Arts
12. Kleinfelder
13. S. T. Peterson & Co. Inc. Office Space
14. Skylink Technologies
15. Verizon
16. York Risk Services

**SITES WITHIN THE CROSSWICKS CREEK SUBWATERSHED**

17. Grow-Ville Community Day School
18. Robinson Elementary School
19. St. Raphael-Holy Angels Parish
20. Sunnybrae Elementary School
21. Sunnybrae League Park
22. Switlik Park
23. The Stone Terrace
24. Yardville Heights Elementary School
25. YMCA

**SITES WITHIN THE DOCTORS CREEK SUBWATERSHED**

26. St. George Ukrainian Orthodox Church
27. Yardville Elementary School

**SITES WITHIN THE MIRY RUN SUBWATERSHED**

28. Christ Presbyterian Church
29. Clover Square
30. Enterprise Volunteer Fire Co.
31. First Pentecostal Prayer of Faith Church
32. First Presbyterian Church/YMCA Young Wonders
33. H.D. Morrison Elementary School
34. Hamilton Square Baptist Church
35. Hamilton Township School District
36. Klockner Elementary School
37. Merlin Industries Inc.
38. Morgan Elementary School
39. Nottingham Little League
40. Nottingham Volunteer Fire Company Station 17
41. Our Lady of Sorrows School
42. Saint Mark United Methodist Church
43. University Plaza
44. VFW Hamilton Township Post

**SITES WITHIN THE POND RUN SUBWATERSHED**

45. Alexander Elementary School
46. Bromley Park
47. Colonial Volunteer Fire Company
48. Greenwood Elementary School
49. Hamilton Golf Center
50. Hamilton Lanes

51. Hamilton Township Building
52. Hamilton Township Library
53. Hamilton Township Police Division
54. Kuser Elementary School
55. Langtree Elementary School
56. Mercerville Elementary School
57. Pace Charter School
58. Reynolds Middle School
59. Sayen Elementary School
60. St. Gregory the Great Catholic Church
61. Suburban Plaza (Walmart)
62. Trenton Catholic Academy
63. Whitehorse Plaza Shopping Center

**SITES WITHIN THE SHADY BROOK SUBWATERSHED**

64. Aldi
65. Duetzville Park
66. George E. Wilson Elementary School
67. Grice Middle School
68. Hamilton Educational Program
69. Hamilton High School West
70. Independence Mall
71. K McCoy Inc. Insurance Agency
72. Kisthardt Elementary School
73. Lalor Elementary School
74. Life St. Francis
75. McGalliard Elementary School
76. Rusling Hose Fire Company
77. St. Mark Lutheran Church
78. True Servant Preschool Academy

# ST. GEORGE UKRAINIAN ORTHODOX CHURCH



**Subwatershed:** Doctors Creek

**Site Area:** 536,154 sq. ft.

**Address:** 839 Yardville Allentown Road  
Hamilton, NJ 08620

**Block and Lot:** Block 2724, Lot 82



There are several opportunities to install bioretention systems to capture, treat, and infiltrate runoff; three are adjacent to the church buildings, and the other is along the driveway. A preliminary soil assessment suggests that the soils have suitable drainage characteristics for green infrastructure.





Impervious Cover		Existing Loads from Impervious Cover (lbs/yr)			Runoff Volume from Impervious Cover (Mgal)	
%	sq. ft.	TP	TN	TSS	For the 1.25" Water Quality Storm	For an Annual Rainfall of 44"
20	109,828	5.3	55.5	504.3	0.086	3.01

Recommended Green Infrastructure Practices	Recharge Potential (Mgal/yr)	TSS Removal Potential (lbs/yr)	Maximum Volume Reduction Potential (gal/storm)	Peak Discharge Reduction Potential (cu. ft./second)	Estimated Size (sq. ft.)	Estimated Cost
Bioretention systems	0.161	27	11,830	0.44	1,550	\$7,750

# GREEN INFRASTRUCTURE RECOMMENDATIONS



**St. George Ukrainian Orthodox Church**

-  bioretention system
-  drainage area
-  property line
-  2015 Aerial: NJOIT, OGIS



# YARDVILLE ELEMENTARY SCHOOL



**Subwatershed:** Doctors Creek

**Site Area:** 187,256 sq. ft.

**Address:** 450 Yardville Allentown Road  
Hamilton, NJ 08620

**Block and Lot:** Block 2699, Lot 1

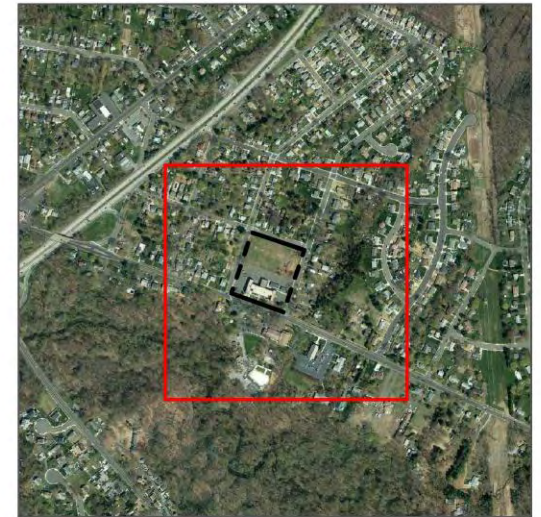


Planter boxes can be constructed around the perimeter of the mobile classrooms and school to allow roof runoff to be reused. A bioretention system can be installed to capture, treat, and infiltrate roof runoff on the front lawn of the school. A row of parking spaces can be replaced with pervious pavement to capture and infiltrate stormwater. A preliminary soil assessment suggests that the soils have suitable drainage characteristics for green infrastructure.







Impervious Cover		Existing Loads from Impervious Cover (lbs/yr)			Runoff Volume from Impervious Cover (Mgal)	
%	sq. ft.	TP	TN	TSS	For the 1.25" Water Quality Storm	For an Annual Rainfall of 44"
44	81,714	3.9	41.3	375.2	0.064	2.24

Recommended Green Infrastructure Practices	Recharge Potential (Mgal/yr)	TSS Removal Potential (lbs/yr)	Maximum Volume Reduction Potential (gal/storm)	Peak Discharge Reduction Potential (cu. ft./second)	Estimated Size (sq. ft.)	Estimated Cost
Bioretention system	0.038	6	2,750	0.10	360	\$1,800
Pervious pavement	0.263	44	19,270	0.72	1,800	\$45,000
Planter boxes	n/a	6	n/a	n/a	8 (boxes)	\$8,000

# GREEN INFRASTRUCTURE RECOMMENDATIONS



## Yardville Elementary School

-  bioretention system
-  pervious pavement
-  planter box
-  drainage area
-  property line
-  2015 Aerial: NJOIT, OGIS



# CHRIST PRESBYTERIAN CHURCH



**Subwatershed:** Miry Run

**Site Area:** 142,625 sq. ft.

**Address:** 746 Klockner Road  
Hamilton, NJ 08619

**Block and Lot:** Block 1656, Lot 58



Planter boxes can be constructed around the perimeter of the building to allow roof runoff to be reused. A bioretention system can be installed near the main entrance to capture, treat, and infiltrate runoff from the roof. A preliminary soil assessment suggests that more soil testing would be required before determining the soil's suitability for green infrastructure.

Impervious Cover		Existing Loads from Impervious Cover (lbs/yr)			Runoff Volume from Impervious Cover (Mgal)	
%	sq. ft.	TP	TN	TSS	For the 1.25" Water Quality Storm	For an Annual Rainfall of 44"
23	32,397	1.6	16.4	148.7	0.025	0.89






Recommended Green Infrastructure Practices	Recharge Potential (Mgal/yr)	TSS Removal Potential (lbs/yr)	Maximum Volume Reduction Potential (gal/storm)	Peak Discharge Reduction Potential (cu. ft./second)	Estimated Size (sq. ft.)	Estimated Cost
Bioretention system	0.016	3	1,180	0.04	160	\$800
Planter boxes	n/a	3	n/a	n/a	4 (boxes)	\$4,000



# GREEN INFRASTRUCTURE RECOMMENDATIONS



## Christ Presbyterian Church

-  bioretention system
-  planter box
-  drainage area
-  property line
-  2015 Aerial: NJOIT, OGIS



# CLOVER SQUARE



**Subwatershed:** Miry Run

**Site Area:** 887,560 sq. ft.

**Address:** 3100 Quakerbridge Road  
Hamilton, NJ 08619

**Block and Lot:** Block 1603, Lot 19



Rows of parking spaces throughout the shopping plaza can be replaced with pervious pavement to capture and infiltrate stormwater. A preliminary soil assessment suggests that more soil testing would be required before determining the soil's suitability for green infrastructure.





Impervious Cover		Existing Loads from Impervious Cover (lbs/yr)			Runoff Volume from Impervious Cover (Mgal)	
%	sq. ft.	TP	TN	TSS	For the 1.25" Water Quality Storm	For an Annual Rainfall of 44"
81	721,004	34.8	364.1	3,310.4	0.562	19.77

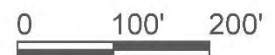
Recommended Green Infrastructure Practices	Recharge Potential (Mgal/yr)	TSS Removal Potential (lbs/yr)	Maximum Volume Reduction Potential (gal/storm)	Peak Discharge Reduction Potential (cu. ft./second)	Estimated Size (sq. ft.)	Estimated Cost
Pervious pavement	4.451	745	326,560	12.27	34,649	\$866,225

# GREEN INFRASTRUCTURE RECOMMENDATIONS



## Clover Square

-  pervious pavement
-  drainage area
-  property line
-  2015 Aerial: NJOIT, OGIS



# ENTERPRISE VOLUNTEER FIRE COMPANY



**Subwatershed:** Miry Run

**Site Area:** 49,506 sq. ft.

**Address:** 569 Klockner Road  
Hamilton, NJ 08619

**Block and Lot:** Block 1648, Lot 12, 16



Rainwater can be harvested by installing a cistern at the building. The water can be used for cleaning vehicles or for conducting car wash fundraisers. A bioretention system can be installed to capture, treat, and infiltrate roof runoff. A preliminary soil assessment suggests that the soils have suitable drainage characteristics for green infrastructure.






Impervious Cover		Existing Loads from Impervious Cover (lbs/yr)			Runoff Volume from Impervious Cover (Mgal)	
%	sq. ft.	TP	TN	TSS	For the 1.25" Water Quality Storm	For an Annual Rainfall of 44"
88	43,673	2.1	22.1	200.5	0.034	1.20

Recommended Green Infrastructure Practices	Recharge Potential (Mgal/yr)	TSS Removal Potential (lbs/yr)	Maximum Volume Reduction Potential (gal/storm)	Peak Discharge Reduction Potential (cu. ft./second)	Estimated Size (sq. ft.)	Estimated Cost
Bioretention system	0.031	5	2,240	0.08	300	\$1,500
Rainwater harvesting	0.031	5	1,000	0.04	1,000 (gal)	\$2,000

# GREEN INFRASTRUCTURE RECOMMENDATIONS



## Enterprise Volunteer Fire Company

-  bioretention system
-  rainwater harvesting
-  drainage area
-  property line
-  2015 Aerial: NJOIT, OGIS



# FIRST PENTECOSTAL PRAYER OF FAITH CHURCH



**Subwatershed:** Miry Run

**Site Area:** 35,411 sq. ft.

**Address:** 3632 Nottingham Way  
Hamilton, NJ 08690

**Block and Lot:** Block 1836, Lot 34

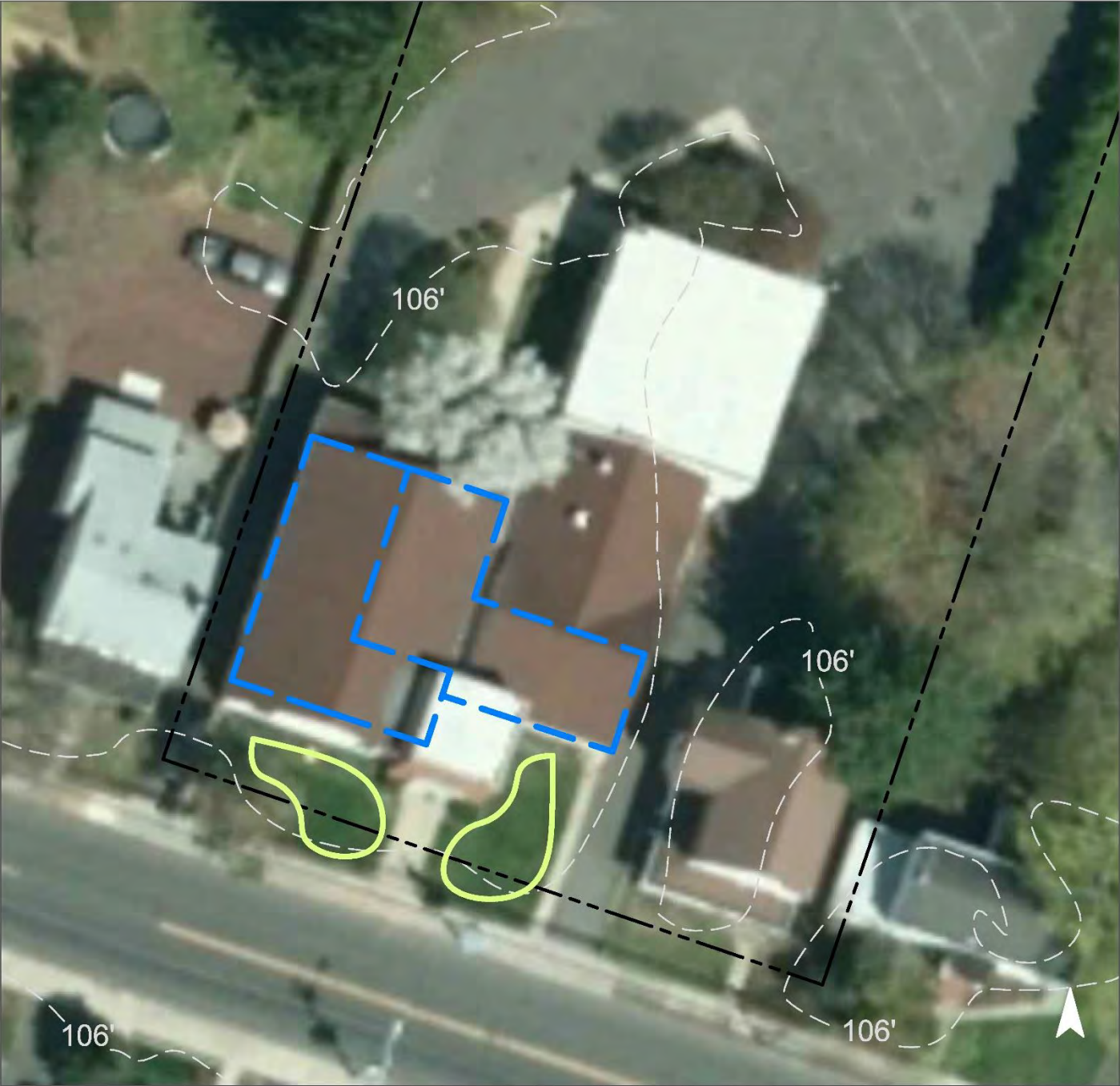


Mirrored bioretention systems can be installed at the entrance of the church to capture, treat, and infiltrate roof runoff. A preliminary soil assessment suggests that the soils have suitable drainage characteristics for green infrastructure.





Impervious Cover		Existing Loads from Impervious Cover (lbs/yr)			Runoff Volume from Impervious Cover (Mgal)	
%	sq. ft.	TP	TN	TSS	For the 1.25" Water Quality Storm	For an Annual Rainfall of 44"
87	30,651	1.5	15.5	140.7	0.024	0.84

Recommended Green Infrastructure Practices	Recharge Potential (Mgal/yr)	TSS Removal Potential (lbs/yr)	Maximum Volume Reduction Potential (gal/storm)	Peak Discharge Reduction Potential (cu. ft./second)	Estimated Size (sq. ft.)	Estimated Cost
Bioretention systems	0.070	12	5,160	0.19	675	\$3,375

# GREEN INFRASTRUCTURE RECOMMENDATIONS



## First Pentecostal Prayer of Faith Church

-  bioretention system
-  drainage area
-  property line
-  2015 Aerial: NJOIT, OGIS



# FIRST PRESBYTERIAN CHURCH / YMCA YOUNG WONDERS



**Subwatershed:** Miry Run

**Site Area:** 85,330 sq. ft.

**Address:** 3550 Nottingham Way  
Hamilton, NJ 08690

**Block and Lot:** Block 1830, Lot 20, 50-52



A bioretention system can be installed to capture, treat, and infiltrate roof runoff near the entrance to the church. Rows of parking spaces can be replaced with pervious pavement to capture and infiltrate stormwater. A preliminary soil assessment suggests that the soils have suitable drainage characteristics for green infrastructure.

Impervious Cover		Existing Loads from Impervious Cover (lbs/yr)			Runoff Volume from Impervious Cover (Mgal)	
%	sq. ft.	TP	TN	TSS	For the 1.25" Water Quality Storm	For an Annual Rainfall of 44"
81	68,988	3.3	34.8	316.7	0.054	1.89






Recommended Green Infrastructure Practices	Recharge Potential (Mgal/yr)	TSS Removal Potential (lbs/yr)	Maximum Volume Reduction Potential (gal/storm)	Peak Discharge Reduction Potential (cu. ft./second)	Estimated Size (sq. ft.)	Estimated Cost
Bioretention system	0.035	6	2,540	0.10	335	\$1,675
Pervious pavement	0.156	26	11,480	0.43	2,460	\$61,500



# GREEN INFRASTRUCTURE RECOMMENDATIONS



**First Presbyterian Church /  
YMCA Young Wonders**

-  bioretention system
-  pervious pavement
-  drainage area
-  property line
-  2015 Aerial: NJOIT, OGIS



# H.D. MORRISON ELEMENTARY SCHOOL (UNIVERSITY HEIGHTS)



**Subwatershed:** Miry Run

**Site Area:** 562,187 sq. ft.

**Address:** 645 Paxson Avenue  
Hamilton, NJ 08619

**Block and Lot:** Block 1561, Lot 13, 24, 25



A bioretention system can be installed to capture, treat, and infiltrate paved surface runoff. A section of the adjacent area could also be depaved. Parking spaces can be replaced with pervious pavement to capture and infiltrate stormwater. A preliminary soil assessment suggests that the soils have suitable drainage characteristics for green infrastructure.






Impervious Cover		Existing Loads from Impervious Cover (lbs/yr)			Runoff Volume from Impervious Cover (Mgal)	
%	sq. ft.	TP	TN	TSS	For the 1.25" Water Quality Storm	For an Annual Rainfall of 44"
22	126,391	6.1	63.8	580.3	0.098	3.47

Recommended Green Infrastructure Practices	Recharge Potential (Mgal/yr)	TSS Removal Potential (lbs/yr)	Maximum Volume Reduction Potential (gal/storm)	Peak Discharge Reduction Potential (cu. ft./second)	Estimated Size (sq. ft.)	Estimated Cost
Bioretention system	0.101	17	7,440	0.28	975	\$4,875
Pervious pavement	0.567	95	41,580	1.56	4,160	\$104,000

# GREEN INFRASTRUCTURE RECOMMENDATIONS



**H.D. Morrison  
Elementary School  
(University Heights)**

-  bioretention system
-  pervious pavement
-  drainage area
-  property line
-  2015 Aerial: NJOIT, OGIS



# HAMILTON SQUARE BAPTIST CHURCH



**Subwatershed:** Miry Run

**Site Area:** 156,832 sq. ft.

**Address:** 3752 Nottingham Way  
Hamilton, NJ 08690

**Block and Lot:** Block 1839, Lot 87



A bioretention system can be installed to capture, treat, and infiltrate roof runoff. Parking spaces can be replaced with pervious pavement to capture and infiltrate stormwater. A preliminary soil assessment suggests that the soils have suitable drainage characteristics for green infrastructure.






Impervious Cover		Existing Loads from Impervious Cover (lbs/yr)			Runoff Volume from Impervious Cover (Mgal)	
%	sq. ft.	TP	TN	TSS	For the 1.25" Water Quality Storm	For an Annual Rainfall of 44"
44	68,505	3.3	34.6	314.5	0.053	1.88

Recommended Green Infrastructure Practices	Recharge Potential (Mgal/yr)	TSS Removal Potential (lbs/yr)	Maximum Volume Reduction Potential (gal/storm)	Peak Discharge Reduction Potential (cu. ft./second)	Estimated Size (sq. ft.)	Estimated Cost
Bioretention system	0.063	11	4,650	0.17	610	\$3,050
Pervious pavement	0.862	144	63,240	2.38	6,230	\$155,750

# GREEN INFRASTRUCTURE RECOMMENDATIONS



## Hamilton Square Baptist Church

-  bioretention system
-  pervious pavement
-  drainage area
-  property line
-  2015 Aerial: NJOIT, OGIS



# HAMILTON TOWNSHIP SCHOOL DISTRICT



**Subwatershed:** Miry Run

**Site Area:** 56,745 sq. ft.

**Address:** 90 Park Avenue  
Hamilton, NJ 08690

**Block and Lot:** Block 1836, Lot 6, 8



A bioretention system can be installed to capture, treat, and infiltrate roof runoff. A row of parking spaces can be replaced with pervious pavement to capture and infiltrate stormwater. A preliminary soil assessment suggests that the soils have suitable drainage characteristics for green infrastructure.






Impervious Cover		Existing Loads from Impervious Cover (lbs/yr)			Runoff Volume from Impervious Cover (Mgal)	
%	sq. ft.	TP	TN	TSS	For the 1.25" Water Quality Storm	For an Annual Rainfall of 44"
87	49,126	2.4	24.8	225.6	0.038	1.35

Recommended Green Infrastructure Practices	Recharge Potential (Mgal/yr)	TSS Removal Potential (lbs/yr)	Maximum Volume Reduction Potential (gal/storm)	Peak Discharge Reduction Potential (cu. ft./second)	Estimated Size (sq. ft.)	Estimated Cost
Bioretention system	0.087	15	6,370	0.24	835	\$4,175
Pervious pavement	0.242	41	17,760	0.67	2,270	\$56,750

# GREEN INFRASTRUCTURE RECOMMENDATIONS



## Hamilton Township School District

-  bioretention system
-  pervious pavement
-  drainage area
-  property line
-  2015 Aerial: NJOIT, OGIS



# KLOCKNER ELEMENTARY SCHOOL



**Subwatershed:** Miry Run

**Site Area:** 102,765 sq. ft.

**Address:** 830 Klockner Road  
Hamilton, NJ 08619

**Block and Lot:** Block 1659, Lot 2,3



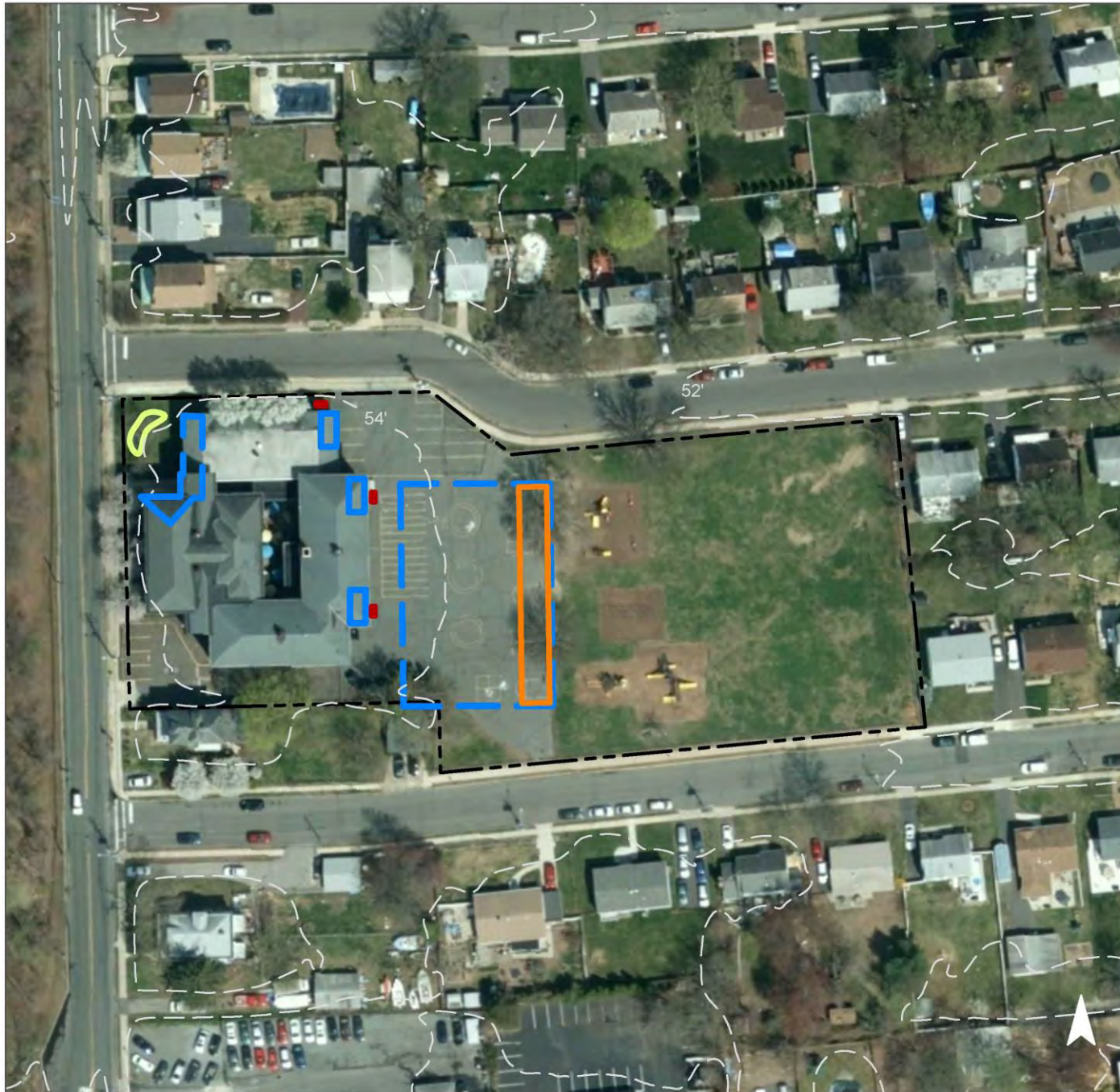
The row of parking spaces furthest east of the school can be replaced with pervious pavement to capture and infiltrate stormwater. Planter boxes can be constructed around the perimeter of the school to allow roof runoff to be reused. Bioretention systems can be installed to capture, treat, and infiltrate roof runoff. A preliminary soil assessment suggests that more soil testing would be required before determining the soil's suitability for green infrastructure.

Impervious Cover		Existing Loads from Impervious Cover (lbs/yr)			Runoff Volume from Impervious Cover (Mgal)	
%	sq. ft.	TP	TN	TSS	For the 1.25" Water Quality Storm	For an Annual Rainfall of 44"
48	49,185	2.4	24.8	225.8	0.038	1.35







Recommended Green Infrastructure Practices	Recharge Potential (Mgal/yr)	TSS Removal Potential (lbs/yr)	Maximum Volume Reduction Potential (gal/storm)	Peak Discharge Reduction Potential (cu. ft./second)	Estimated Size (sq. ft.)	Estimated Cost
Bioretention system	0.025	4	1,830	0.07	240	\$1,200
Pervious pavement	0.362	61	26,580	1.00	2,480	\$62,000
Planter boxes	n/a	2	n/a	n/a	3 (boxes)	\$3,000



# GREEN INFRASTRUCTURE RECOMMENDATIONS



## Klockner Elementary School

-  bioretention system
-  pervious pavement
-  planter box
-  drainage area
-  property line
-  2015 Aerial: NJOIT, OGIS



# MERLIN INDUSTRIES INC.



**Subwatershed:** Miry Run

**Site Area:** 935,824 sq. ft.

**Address:** 2904 East State Street  
Hamilton, NJ 08619

**Block and Lot:** Block 1602, Lot 7



A bioretention system can be installed in front of the building to capture, treat, and infiltrate roof runoff. Pervious pavement can be installed in parking spaces to capture runoff from the parking lot. A preliminary soil assessment suggests that the soils have suitable drainage characteristics for green infrastructure.






Impervious Cover		Existing Loads from Impervious Cover (lbs/yr)			Runoff Volume from Impervious Cover (Mgal)	
%	sq. ft.	TP	TN	TSS	For the 1.25" Water Quality Storm	For an Annual Rainfall of 44"
22	203,182	9.8	102.6	932.9	0.158	5.57

Recommended Green Infrastructure Practices	Recharge Potential (Mgal/yr)	TSS Removal Potential (lbs/yr)	Maximum Volume Reduction Potential (gal/storm)	Peak Discharge Reduction Potential (cu. ft./second)	Estimated Size (sq. ft.)	Estimated Cost
Bioretention system	0.087	15	6,370	0.24	835	\$4,175
Pervious pavement	0.844	141	61,940	2.33	6,370	\$159,250

# GREEN INFRASTRUCTURE RECOMMENDATIONS



## Merlin Industries Inc.

-  bioretention system
-  pervious pavement
-  drainage area
-  property line
-  2015 Aerial: NJOIT, OGIS



# MORGAN ELEMENTARY SCHOOL



**Subwatershed:** Miry Run

**Site Area:** 369,401 sq. ft.

**Address:** 38 Stamford Road  
Hamilton, NJ 08619

**Block and Lot:** Block 1618, Lot 34,40



A bioretention system can be installed to capture, treat, and infiltrate roof runoff. Parking spaces can be replaced with pervious pavement to capture and infiltrate stormwater. A preliminary soil assessment suggests that the soils have suitable drainage characteristics for green infrastructure.






Impervious Cover		Existing Loads from Impervious Cover (lbs/yr)			Runoff Volume from Impervious Cover (Mgal)	
%	sq. ft.	TP	TN	TSS	For the 1.25" Water Quality Storm	For an Annual Rainfall of 44"
35	129,743	6.3	65.5	595.7	0.101	3.56

Recommended Green Infrastructure Practices	Recharge Potential (Mgal/yr)	TSS Removal Potential (lbs/yr)	Maximum Volume Reduction Potential (gal/storm)	Peak Discharge Reduction Potential (cu. ft./second)	Estimated Size (sq. ft.)	Estimated Cost
Bioretention system	0.066	11	4,880	0.18	640	\$3,200
Pervious pavement	0.412	69	30,260	1.14	4,320	\$108,000

# GREEN INFRASTRUCTURE RECOMMENDATIONS



## Morgan Elementary School

-  bioretention system
-  pervious pavement
-  drainage area
-  property line
-  2015 Aerial: NJOIT, OGIS



# NOTTINGHAM LITTLE LEAGUE



**Subwatershed:** Miry Run

**Site Area:** 615,843 sq. ft.

**Address:** 120 Mapleshade Avenue  
Hamilton, NJ 08690

**Block and Lot:** Block 1722, Lot 95,96,105



The existing swale behind the gray building at the ball field can be converted into a bioswale. Additionally, a bioretention system can be installed to capture, treat, and infiltrate parking lot runoff. A preliminary soil assessment suggests that the soils have suitable drainage characteristics for green infrastructure.






Impervious Cover		Existing Loads from Impervious Cover (lbs/yr)			Runoff Volume from Impervious Cover (Mgal)	
%	sq. ft.	TP	TN	TSS	For the 1.25" Water Quality Storm	For an Annual Rainfall of 44"
21	127,290	6.1	64.3	584.4	0.099	3.49

Recommended Green Infrastructure Practices	Recharge Potential (Mgal/yr)	TSS Removal Potential (lbs/yr)	Maximum Volume Reduction Potential (gal/storm)	Peak Discharge Reduction Potential (cu. ft./second)	Estimated Size (sq. ft.)	Estimated Cost
Bioretention system	0.125	21	9,180	0.34	1,200	\$6,000
Bioswale	0.040	10	385	0.01	770	\$3,850

# GREEN INFRASTRUCTURE RECOMMENDATIONS



## Nottingham Little League

-  bioretention system
-  bioswale
-  drainage area
-  property line
-  2015 Aerial: NJOIT, OGIS



# NOTTINGHAM VOLUNTEER FIRE COMPANY STATION 17



**Subwatershed:** Miry Run

**Site Area:** 153,281 sq. ft.

**Address:** 200 Mercer Street  
Hamilton, NJ 08690

**Block and Lot:** Block 1839, Lot 24.01



A bioretention system can be installed to capture, treat, and infiltrate runoff from the roof. Parking spaces can be replaced with pervious pavement to capture and infiltrate stormwater. Rainwater can be harvested by installing a cistern at the fire company. The water can be used for cleaning emergency vehicles or for conducting car wash fundraisers. A preliminary soil assessment suggests that the soils have suitable drainage characteristics for green infrastructure.

Impervious Cover		Existing Loads from Impervious Cover (lbs/yr)			Runoff Volume from Impervious Cover (Mgal)	
%	sq. ft.	TP	TN	TSS	For the 1.25" Water Quality Storm	For an Annual Rainfall of 44"
93	141,848	6.8	71.6	651.3	0.111	3.89







Recommended Green Infrastructure Practices	Recharge Potential (Mgal/yr)	TSS Removal Potential (lbs/yr)	Maximum Volume Reduction Potential (gal/storm)	Peak Discharge Reduction Potential (cu. ft./second)	Estimated Size (sq. ft.)	Estimated Cost
Bioretention system	0.025	4	1,860	0.07	250	\$1,250
Pervious pavement	0.221	37	16,250	0.61	1,520	\$38,000
Rainwater harvesting	0.052	9	2,000	0.08	2,000 (gal)	\$4,000



# GREEN INFRASTRUCTURE RECOMMENDATIONS



## Nottingham Volunteer Fire Company Station 17

-  bioretention system
-  pervious pavement
-  rainwater harvesting
-  drainage area
-  property line
-  2015 Aerial: NJOIT, OGIS



# OUR LADY OF SORROWS SCHOOL



**Subwatershed:** Miry Run

**Site Area:** 517,440 sq. ft.

**Address:** 3800 East State Street  
Hamilton, NJ 08619

**Block and Lot:** Block 1666, Lot 80



A bioretention system can be installed in front of the school to capture, treat, and infiltrate roof runoff. Parking spaces can be replaced with pervious pavement to capture and infiltrate stormwater. A preliminary soil assessment suggests that the soils have suitable drainage characteristics for green infrastructure.






Impervious Cover		Existing Loads from Impervious Cover (lbs/yr)			Runoff Volume from Impervious Cover (Mgal)	
%	sq. ft.	TP	TN	TSS	For the 1.25" Water Quality Storm	For an Annual Rainfall of 44"
42	219,134	10.6	110.7	1,006.1	0.171	6.01

Recommended Green Infrastructure Practices	Recharge Potential (Mgal/yr)	TSS Removal Potential (lbs/yr)	Maximum Volume Reduction Potential (gal/storm)	Peak Discharge Reduction Potential (cu. ft./second)	Estimated Size (sq. ft.)	Estimated Cost
Bioretention system	0.029	5	2,160	0.08	290	\$1,450
Pervious pavement	1.462	245	107,290	4.03	13,800	\$345,000

# GREEN INFRASTRUCTURE RECOMMENDATIONS



## Our Lady of Sorrows School

-  bioretention system
-  pervious pavement
-  drainage area
-  property line
-  2015 Aerial: NJOIT, OGIS



# SAINT MARK UNITED METHODIST CHURCH



**Subwatershed:** Miry Run

**Site Area:** 284,082 sq. ft.

**Address:** 465 Paxson Avenue  
Hamilton, NJ 08690

**Block and Lot:** Block 1622, Lot 8



Bioretention systems can be installed to capture, treat, and infiltrate parking lot and roof runoff. A preliminary soil assessment suggests that the soils have suitable drainage characteristics for green infrastructure.





Impervious Cover		Existing Loads from Impervious Cover (lbs/yr)			Runoff Volume from Impervious Cover (Mgal)	
%	sq. ft.	TP	TN	TSS	For the 1.25" Water Quality Storm	For an Annual Rainfall of 44"
40	113,873	5.5	57.5	522.8	0.089	3.12

Recommended Green Infrastructure Practices	Recharge Potential (Mgal/yr)	TSS Removal Potential (lbs/yr)	Maximum Volume Reduction Potential (gal/storm)	Peak Discharge Reduction Potential (cu. ft./second)	Estimated Size (sq. ft.)	Estimated Cost
Bioretention systems	0.608	102	44,640	1.68	5,850	\$29,250

# GREEN INFRASTRUCTURE RECOMMENDATIONS



## Saint Mark United Methodist Church

-  bioretention system
-  drainage area
-  property line
-  2015 Aerial: NJOIT, OGIS



# UNIVERSITY PLAZA



**Subwatershed:** Miry Run

**Site Area:** 167,756 sq. ft.

**Address:** 96 Flock Road  
Hamilton, NJ 08619

**Block and Lot:** Block 1551, Lot 16



A bioretention system can be installed along the driveway to capture, treat, and infiltrate stormwater via curb cuts. A row of parking spaces can be replaced with pervious pavement to capture and infiltrate stormwater. A preliminary soil assessment suggests that more soil testing would be required before determining the soil's suitability for green infrastructure.






Impervious Cover		Existing Loads from Impervious Cover (lbs/yr)			Runoff Volume from Impervious Cover (Mgal)	
%	sq. ft.	TP	TN	TSS	For the 1.25" Water Quality Storm	For an Annual Rainfall of 44"
72	120,521	5.8	60.9	553.4	0.094	3.31

Recommended Green Infrastructure Practices	Recharge Potential (Mgal/yr)	TSS Removal Potential (lbs/yr)	Maximum Volume Reduction Potential (gal/storm)	Peak Discharge Reduction Potential (cu. ft./second)	Estimated Size (sq. ft.)	Estimated Cost
Bioretention system	0.061	10	4,500	0.17	600	\$3,000
Pervious pavement	0.408	68	29,960	1.13	4,140	\$103,500

# GREEN INFRASTRUCTURE RECOMMENDATIONS



## University Plaza

-  bioretention system
-  pervious pavement
-  drainage area
-  property line
-  2015 Aerial: NJOIT, OGIS



# VFW HAMILTON TOWNSHIP POST



**Subwatershed:** Miry Run  
**Site Area:** 143,315 sq. ft.  
**Address:** 77 Christine Avenue  
Hamilton, NJ 08619  
**Block and Lot:** Block 1660, Lot 25,26



Bioretention systems can be installed to capture, treat, and infiltrate parking lot runoff. Parking spaces can be replaced with pervious pavement to capture and infiltrate stormwater. A preliminary soil assessment suggests that more soil testing would be required before determining the soil's suitability for green infrastructure.

Impervious Cover		Existing Loads from Impervious Cover (lbs/yr)			Runoff Volume from Impervious Cover (Mgal)	
%	sq. ft.	TP	TN	TSS	For the 1.25" Water Quality Storm	For an Annual Rainfall of 44"
42	60,776	2.9	30.7	279.0	0.047	1.67






Recommended Green Infrastructure Practices	Recharge Potential (Mgal/yr)	TSS Removal Potential (lbs/yr)	Maximum Volume Reduction Potential (gal/storm)	Peak Discharge Reduction Potential (cu. ft./second)	Estimated Size (sq. ft.)	Estimated Cost
Bioretention systems	0.145	24	10,610	0.40	1,390	\$6,950
Pervious pavement	0.219	37	16,060	0.60	1,500	\$37,500



# GREEN INFRASTRUCTURE RECOMMENDATIONS



## VFW Hamilton Township Post

-  bioretention system
-  pervious pavement
-  drainage area
-  property line
-  2015 Aerial: NJOIT, OGIS

