

North Attleborough MS4 Year 5 Annual Report Attachments

Attachment 1: Delegation of Authority for Signature

Attachment 2: BMP Retrofit Site Investigations Report (BETA)

Attachment 3: Dry Weather Outfall Sampling Memo (BETA)

Attachment 4: Catch Basins Inspection List Year 5

Attachment 5: Outfall Inspections – Dry Weather Screening Year 5

Michael D. Borg
Town Manager



TOWN OF NORTH ATTLEBOROUGH
43 South Washington Street
North Attleborough MA 02760
508-699-0100

INTEROFFICE MEMORANDUM

DATE: Tuesday, June 16, 2020
TO: Mark Hollowell, Director of Public Works
FROM: Michael D. Borg *MD 16 JUN 20*
RE: Documentation for delegation of "Authorized Representative" for NPDES 2016 Massachusetts Small Municipal Separate Storm Sewer System (MS4) General Permit

This document serves to affirm that **the DPW Director** has responsibility for the operation of the MS4 and is hereby designated as an authorized person for signing all reports including but not limited to the Stormwater Management Plan (SWMP), Stormwater Pollution Prevention Plans (SWPPPs), inspection reports, annual reports, monitoring reports, reports on training, and other information required by the General Permit for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems (MS4) in **Massachusetts for the Town of North Attleborough**. This authorization cannot be used for signing a NPDES permit application (e.g., Notice of Intent (NOI)) in accordance with 40 CFR 122.22).

By signing this authorization, I confirm that I meet the following requirements to make such a designation as set forth in Part B.11 of Appendix B of the Small MS4 General Permit:

For a municipality, state, federal, or other public agency: By either a principal executive officer or ranking elected official.

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Michael Borg

Michael Borg
Town Manager

16 JUN 20

Date

Town of North Attleboro, Massachusetts
Water Quality Limited Waterbodies Requirements
MS4 Permit Year 5
June 2023

BMP RETROFIT SITE INVESTIGATIONS



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Water Quality Limited Waterbodies Requirements

Town of North Attleboro, Massachusetts

MS4 Permit Year 5

BMP RETROFIT SITE INVESTIGATIONS

Prepared by: BETA GROUP, INC.
Prepared for: Town of North Attleboro

June 2023

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1.0 INTRODUCTION

This memorandum is a follow-up to the previous report sent on June 30, 2022 entitled Nutrient Source Identification Report (NSIR) in accordance with the 2016 MS4 General Permit requirements to meet water quality standards for discharges to certain water quality limited waters subject to additional requirements, Section 2.2.2 and Appendix H. Under these requirements, all permittee-owned properties identified in the NSIR that are within the drainage area of the impaired water or its tributaries are required to be reviewed for feasibility to implement Best Management Practices (BMPs) that will reduce the frequency, volume, and pollutant loads of stormwater discharges to and from the Town's MS4 system. In addition, the Town is required to plan and install a minimum of one structural BMP as a demonstration project within the drainage area of water quality limited water (in this case Phosphorus) with high load potential by the end of Year 6 of the permit (June 30, 2024).

This NSIR identified a list of Town owned properties that potentially could be retrofitted. Since providing this list, BETA added 9 additional locations for a total of twelve sites considered in this investigation.

BETA conducted a site visit for each location in Table 1 below on May 4, 2023 to investigate suitability for BMP retrofit installation. Section 2 provides a summary for each site visited, including a site map with conceptual design elements and major observations made in the field, and a tabulated field investigation form with site photographs.

Based on field observations, photographs and other data collected, existing stormwater infrastructure data, and current site uses, BETA ranked the viable sites from highest (1) to lowest feasibility in carrying out a demonstration project within the next year. Rank is based on the calculated total potential nutrient load removal (in lb/yr) based on retrofit BMPs identified at each site. See Table 1 below.

Table 1 - Potential BMP Retrofit Locations

Ranking	Property	Address	Within a or Tributary to Nutrient Impaired Watershed?	Potential BMPs	Access for Maintenance	Permitting Required	Total Potential Treatment Area (U.S. Acres)	Potential Nutrient Load Removal (lb/yr)	Estimated Costs (Low to High)	Planned Retrofit Installation Date	Comments
1	Town Hall, Community School & Field, Veterans Park	45 S Washington Street	Yes (Ten Mile River)	• Subsurface Infiltration System • Infiltration Basin	Yes	No	9.24	6.15	\$153,700 – \$614,800	June 2024	Installation of a subsurface infiltration system in the open space in front of the Community School entrance or infiltration basin along southeast corner of property line is recommended.
2	Joseph W. Martin School	37 Landry Avenue	Yes (Bungay River → Ten Mile River)	• Infiltration Trench • Infiltration Basin • Subsurface Infiltration System	Yes	Yes (NOI)	1.43	2.27	\$56,600 – \$226,600	Future Redevelopment	An infiltration trench is proposed along northeast edge of pavement or subsurface infiltration system within the large impervious area at the rear of the school.
3	Mason Field	446 Elm Street	Yes (Ten Mile River)	• Infiltration Trench • Infiltration Basin • Water Quality Swale • Subsurface Infiltration System	Yes	Yes (NOI)	0.86	0.86	\$21,500 – \$86,100	Future Redevelopment	All sheet flow from impervious roadway and parking lot discharges directly to unnamed tributary to the Ten Mile River. BETA is proposing installation of an infiltration trench along the entire northwest edge of pavement.
4	Joseph F. Zaino Memorial Conservation & Recreation Area	East end of Barbara Road	Yes (Falls Pond → Ten Mile River)	• Infiltration Basin • Water Quality Swale w/ Check Dams	Yes	Yes (NOI)	0.51	0.56	\$14,100 – \$56,200	Future Redevelopment	Retrofitting the existing drainage infrastructure with the installation of a subsurface infiltration system would provide the most nutrient removal at this site.
5	Church Street Public Parking Lot	West of 29 Church Street	Yes (03-19)	• Sediment Forebay • Infiltration Basin	Yes	No	0.32	0.42	\$10,400 – \$41,600	Future Redevelopment	Modification to the existing stormwater infrastructure in the parking lot by installing a subsurface infiltration basin is the recommended retrofit option.
6	Roosevelt Avenue Elementary School	108 Roosevelt Avenue	Yes (Scotts Brook → Ten Mile River)	• Water Quality Swale • Infiltration Trench • Bioretention	Yes	Yes (NOI)	0.15	0.24	\$5,900 – \$23,600	Future Redevelopment	An infiltration trench or water quality swale along front parking lot edge or bioretention practice in open space located at the front of the school would be ideal for a demonstration project.
7	North Attleboro School District	6 Morse Street	Yes (Ten Mile River)	• Infiltration Trench	Yes	No	0.10	0.16	\$4,100 – \$16,300	Future Redevelopment	An infiltration trench along front of building open space by edge of pavement is recommended.
8	Richards Memorial Library	118 N Washington Street	Yes (Ten Mile River)	• Bioretention	Yes	No	0.09	0.06	\$1,400 – \$5,600	Future Redevelopment	Bioretention practices ideal for treating runoff from building roof leaders.
---	North Attleboro Middle School and High School	1 Wilson West Whitty Way									BETA personnel were not able to visit this site within Year 5. This facility will be included as part of the Year 6 investigations.
---	Amvet Boulevard School	70 Amvet Boulevard									BETA personnel were not able to visit this site within Year 5. This facility will be included as part of the Year 6 investigations.
---	North Attleboro Electric Department	275 Landry Avenue									BETA personnel were not able to visit this site within Year 5. This facility will be included as part of the Year 6 investigations.
---	North Attleboro Town Property	East of 57 Mary Kennedy Drive									Site deemed unviable by BETA personnel. There is limited stormwater infrastructure in the area and negligible impervious surface to recommend any BMP retrofits.
---	Wooded Easement off Mansfield Road	Across from 263 Mansfield Road									Wooded lot found to already have water infrastructure. There is limited space for BMP retrofits and no stormwater drainage on Mansfield Road or Carlson Road to modify flow.

2.0 BMP RETROFIT SITE INVESTIGATION FINDINGS

2.1 TOWN HALL, COMMUNITY SCHOOL & FIELD, VETERANS PARK

- This property contains several opportunities for BMP retrofits. The two options highlighted by BETA personnel include:
 1. The parking lot north of the Community School enters existing drainage infrastructure that appears to connect to downstream drainage system at S. Washington Street. Here, the Town could modify flow and install a subsurface infiltration or series of leaching galleys within the front access roadway to the school and within the open space, making sure the system does not impact existing school sign or trees.
 2. The second opportunity involves retrofitting the open area southeast of the school building with a surface infiltration basin. This area has a large catchment area as the existing drainage infrastructure on Barrows Street, which includes sheet flow from Ralph Street and Brandon Street could be rerouted to the basin and the natural flow path to the area includes all of the athletic field and parking lot located south of school.
- It is recommended the Town confirm hydrological soil group (HSG) and water table level before any BMP retrofits could be scoped further. Roof drainage outlets are unknown; potential for this stormwater to be treated as well with additional investigation into connectivity at site.
- Additional details are provided in Sections 2.1.1 and 2.1.2.

2.1.1 TOWN HALL, COMMUNITY SCHOOL & FIELD, VETERANS PARK SITE MAP

Potential BMP Retrofit Locations
Location: Town Hall, Community School & Field, Veterans Park
Address: 45 S Washington St

Existing drainage infrastructure observed during field investigations that was previously not mapped. Appears to connect to downstream infrastructure before South Washington Street.

Open space south of the Community School building could be retrofitted with an infiltration basin to treat stormwater from parking lot, athletic field, Barrows Street, Ralph Street, and Brandon Street. Soils and water table are unknown for this location. They would need to be confirmed prior to final decisions on BMP retrofit options.

Opportunity to modify stormwater infrastructure flow path from the northern parking lot and site entrance to a subsurface infiltration system in the open space located east of the Community School. Hydrological soil group and depth to water would need to be confirmed before further scoping of any BMP retrofits.

Map Legend

Proposed BMP Retrofit Location

Existing BMP

Outfall

Catch Basins

Curb Inlet

Manhole

Inlet

Culvert

Swale

Pipe

MassDEP 2018/2020 Integrated List of Waters

Rivers: Category 4A

Rivers: Category 4C

Rivers: Category 5

Lakes, Estuaries: Category 4A

Lakes, Estuaries: Category 4C

Lakes, Estuaries: Category 5

Hydrologic Soil Group

No Rating

A

A/D

B

B/D

C

C/D

D

Hydrology

Major Watersheds

BMP Retrofit Layers

BMP Retrofit Area

BMP Retrofit Catchment



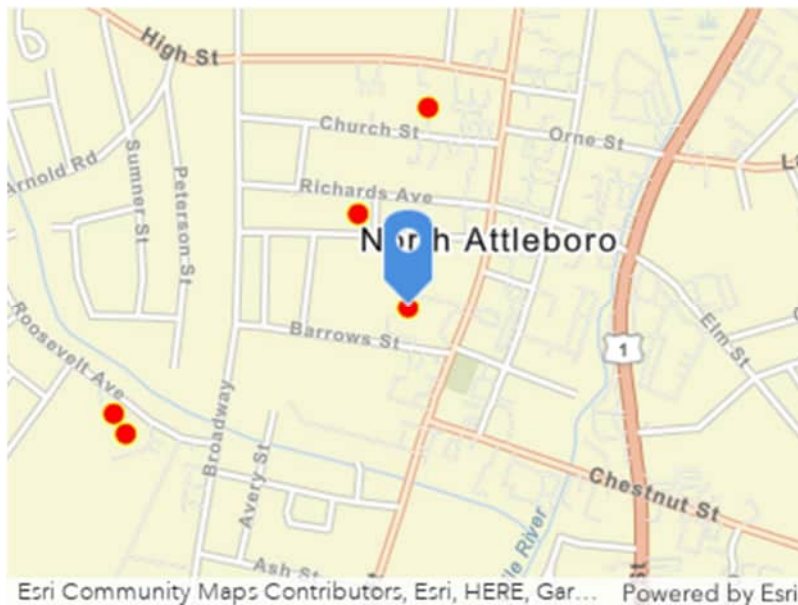


Issue Date: May 2023
This map is intended for planning purposes only.

2.1.2 TOWN HALL, COMMUNITY SCHOOL & FIELD, VETERANS PARK BMP RETROFIT OBSERVATIONS FORM

Site Name:	Town Hall, Community School & Field, Veterans Park		
Address:	45 S. Washington Street	Date/Time:	May 4, 2023 8:38 AM
Inspector	Chris Brainard & Leya Strode (BETA)		
Current Weather:	Rainy -- 43 °F		

2.1.2.1 BMP RETROFIT LOCATION MAP



2.1.2.2 OBSERVATION DETAILS

BMP Retrofit(s) Viable: **Yes**

Most Prevalent Soils:	No Rating	Estimated Depth to Water (If Possible):	Test pit required
BMP Options:	Infiltration Chamber/Pipe	If "Other":	
Site Observation Notes:	Large impervious areas on site present multiple opportunities for BMP retrofits. The highly developed nature of the site makes surface infiltration practices difficult. Most of sight has trees subsurface utilities, memorials, etc. and no hydrological soil group was found with an RCS mapping. Soil type and depth to water table would need to be confirmed before any BMP retrofits could be scoped further. Unclear during time of site investigation where roof drainage outlets; potential for this stormwater to be treated as well with additional investigation into connectivity at site.		

2.1.2.3 PHOTOS



Partial catchment area for subsurface infiltration system.



Potential location for subsurface infiltration system within open space in front of Community School building.



Section of S. Washington Street is included as part of the potential catchment area for the proposed subsurface infiltration system between Bank Street and Community School driveway entrance.



View of catchment with channelized flow visible to sidewalk. This flow exits the parking lot and outlets at a catch basin along Barrow Street.

	View of parking lot catchment. This flow also exits the parking lot and outlets flows east along Barrow Street to the intersection with S. Washington Street
	Proposed location for surface infiltration Basin. Photo is taken facing east towards S. Washington St.
	Additional catchment for surface infiltration basin on Ralph Street. Photo taken facing south.

2.2 JOSEPH W. MARTIN SCHOOL

- The school is surrounded on three sides by impervious surfaces: driveway entrance with parking facing south (front of building), access roadway with primary parking lot facing northeast, and large play area facing northwest (behind school building). There are two opportunities for BMP retrofits at this location.
 1. Installation of an infiltration trench to capture stormwater runoff from the northeastern parking lot. The trench would be located along the eastern edge of pavement. Two concerns with this option are that the existing fence would likely need to be moved and there appears to be water infrastructure in the area. Review of record information of the water main is recommended to confirm feasibility.
 2. There is an open space located along the western portion of property. This unused grass area is ideal for an infiltration basin to treat runoff from the large impervious play area north of the school building. A test pit would be required to determine depth to water table.
 3. School building roof leaders are buried and no apparent discharges to surface were observed while on site. Additional treatment opportunities may exist related to runoff associated with the roof of the school building but connectivity must be defined before this option is explored further.
- Additional details are provided in Sections 2.2.1 and 2.2.2.

2.2.1 JOSEPH W. MARTIN SCHOOL SITE MAP

Potential BMP Retrofit Locations
Location: Joseph Martin School
Address: 37 Landry Ave

Existing catch basin in rear
impervious lot. Unknown
connectivity and discharge point.

Opportunity for infiltration basin
within large open area along western
side of school. Town could modify
existing CB in rear lot to discharge
directly to proposed basin.

Opportunity for infiltration trench
along edge of pavement. Note, that
there is an existing fence and paved
pathway that could be impacted or
limit the size of the infiltration practice.

Map Legend

Proposed BMP Retrofit Location

Stormwater Infrastructure

Existing BMP

Outfall

Catch Basins

Curb Inlet

Manhole

Inlet

Culvert

Swale

Pipe

MassDEP 2018/2020 Integrated List of Waters

Rivers: Category 4A

Rivers: Category 4C

Rivers: Category 5

Lakes, Estuaries: Category 4A

Lakes, Estuaries: Category 4C

Lakes, Estuaries: Category 5

Hydrologic Soil Group

No Rating

A

A/D

B

B/D

C

C/D

D

Hydrology

Major Watersheds

BMP Retrofit Layers

BMP Retrofit Area

BMP Retrofit Catchment

N

W

E

S

B

E

T

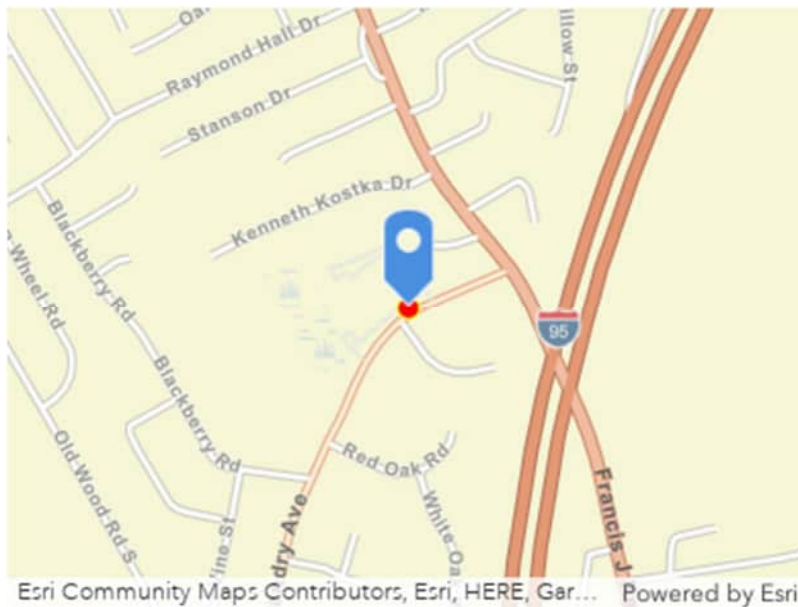
A

Issue Date: May 2023
This map is intended for planning purposes only.

2.2.2 JOSEPH W. MARTIN SCHOOL BMP RETROFIT OBSERVATIONS FORM

Site Name:	Joseph Martin School		
Address:	37 Landry Avenue	Date/Time:	May 4, 2023 12:06 PM
Inspector	Chris Brainard & Leya Strode (BETA)		
Current Weather:	Rainy -- 46 °F		

2.2.2.1 BMP RETROFIT LOCATION MAP



2.2.2.2 OBSERVATION DETAILS

BMP Retrofit(s) Viable: **Yes**

Most Prevalent Soils:	A	Estimated Depth to Water (If Possible):	Test pit required
BMP Options:	Infiltration Trench, Infiltration Chamber/Pipe, Infiltration Basin	If "Other":	
Site Observation Notes:	Major opportunities at this site include two options: an infiltration trench to capture stormwater runoff from the eastern parking lot or a large infiltration basin west of the school to treat runoff from the large impervious play area north of the school building. A test pit would be required to determine depth to water table. No indication of roof leaders buried or discharging to surface was observed while on site. Additional treatment opportunities may exist related to runoff associated with the roof of the school building but connectivity must be confirmed first.		

2.2.2.3 PHOTOS



Opportunity for infiltration trench along east edge of property and parking lot. East parking lot is all pitched in this direction and infiltration trench could accommodate stormwater runoff from this area. Potential conflict with existing fence and water infrastructure.



View of catchment for infiltration trench; photo taken facing south.



Large impervious area behind school is pitched towards single existing catch basin located in center. Opportunity to install series of leaching catch basins or manholes to infiltrate runoff from play area, or to divert existing catch basin outlet to a large surface infiltration basin.



Distress in pavement has channelized; stormwater runoff flows to area near swings.



Opportunity to divert existing impervious play area and walkways behind school to large infiltration basin in unused grass area.

2.3 MASON FIELD

- The site is mainly comprised of 3 baseball fields, a basketball court, playground, and paved access roadway with large parking lot located at the northeast corner of the property. The large one-way roadway loops through the central portion of the property and connects the entrance and exit to the site. The Town could retrofit this facility with an infiltration trench that starts at the western and southern borders of the basketball court and conveys any flow to follow the perimeter of the pavement edge along the western portion of property. This could help to treat a significant portion of sheet flow from the impervious surface and to prevent further erosion sediment accumulation observed at naturalized discharge point of brook that enters the existing culvert on Elm Street. BETA personnel did observe catch basins within the parking lot located to the northeast, however, connectivity and discharge point is unknown. There may be potential for converting catch basins to leaching basins, but further investigation would be required.
- Additional details are provided in Sections 2.3.1 and 2.3.2.

2.3.1 MASON FIELD SITE MAP

Potential BMP Retrofit Locations
Location: Mason Field
Address: 446 Elm Street

Opportunity for infiltration trench or water quality swale along pavement edge to treat significant portion of impervious area on property.

Existing catch basins found within northeast parking lot with unknown connectivity and discharge point.

Existing naturalized sluice that discharges directly to brook. Observed heavy erosion and sediment build-up before culvert that crosses Elm Street.

Map Legend

Proposed BMP Retrofit Location

Stormwater Infrastructure

Existing BMP

Outfall

Catch Basins

Curb Inlet

Manhole

Inlet

Culvert

Swale

Pipe

MassDEP 2018/2020 Integrated List of Waters

Rivers: Category 4A

Rivers: Category 4C

Rivers: Category 5

Lakes, Estuaries: Category 4A

Lakes, Estuaries: Category 4C

Lakes, Estuaries: Category 5

Hydrologic Soil Group

No Rating

A

A/D

B

B/D

C

C/D

D

Hydrology

Major Watersheds

BMP Retrofit Layers

BMP Retrofit Area

BMP Retrofit Catchment

BETA

Issue Date: May 2023
This map is intended for planning purposes only.

2.3.2 MASON FIELD BMP RETROFIT OBSERVATIONS FORM

Site Name:	Mason Field		
Address:	446 Elm Street	Date/Time:	May 4, 2023 1:35 PM
Inspector	Chris Brainard & Leya Strode (BETA)		
Current Weather:	Overcast -- 45 °F		

2.3.2.1 BMP RETROFIT LOCATION MAP



2.3.2.2 OBSERVATION DETAILS

BMP Retrofit(s) Viable: **Yes**

Most Prevalent Soils:	A	Estimated Depth to Water (If Possible):	Test pit required
BMP Options:	Infiltration Trench, Leaching CB	If "Other":	
Site Observation Notes:	There is a large one-way roadway that passes through the central portion of the property that loops to connect the entrance and exit to the site. An infiltration trench could be installed all the way from the basketball court located south of the baseball fields and continue towards the western edge of pavement. This would allow for a significant area of the impervious surface to be treated.		

2.3.2.3 PHOTOS



Town could install an infiltration trench along west and south edges of basketball courts with outlet to additional trenching along existing naturalized swale. Photo taken facing north east.



Opportunity for additional infiltration practice along existing informal channel photo taken facing northeast.

	Sediment washout from existing natural eye swell.
	Infiltration trench could continue along roadway edge to capture runoff before it reaches the tributary to the Ten Mile River. Existing boulders would need to move back but roadway is already pitched west.

2.4 JOSEPH F. ZAINO MEMORIAL CONSERVATION & RECREATION AREA

- The property is primarily a large impervious surface parking lot that grades north towards an existing drain catch basin. Any stormwater flow from the basin drains to outfall located along western edge of Falls Pond. During the visit, BETA personal observed the outfall pipe was fully submerged and not functional. A riprap lined swale with curb cut adjacent to existing catch basin exists, likely to accommodate overflow from catch basin in heavy precipitation events.
- Opportunity to reroute catch basin to subsurface infiltration practice such as leaching manholes or series of leaching manholes to treat stormwater before it reaches Falls Pond. Grass area behind curb adjacent to riprap swale could provide location for subsurface or surface infiltration treatment. Test pit would be required to determine depth to water to confirm if location is feasible for an infiltration practice.
- Additional details are provided in Sections 2.4.1 and 2.4.2.

2.4.1 JOSEPH F. ZAINO MEMORIAL CONSERVATION & RECREATION AREA SITE MAP

Address: Huntley Road

Opportunity for subsurface infiltration practice in open space by northeast corner of property. Flow from existing catch basin can be diverted to this area.

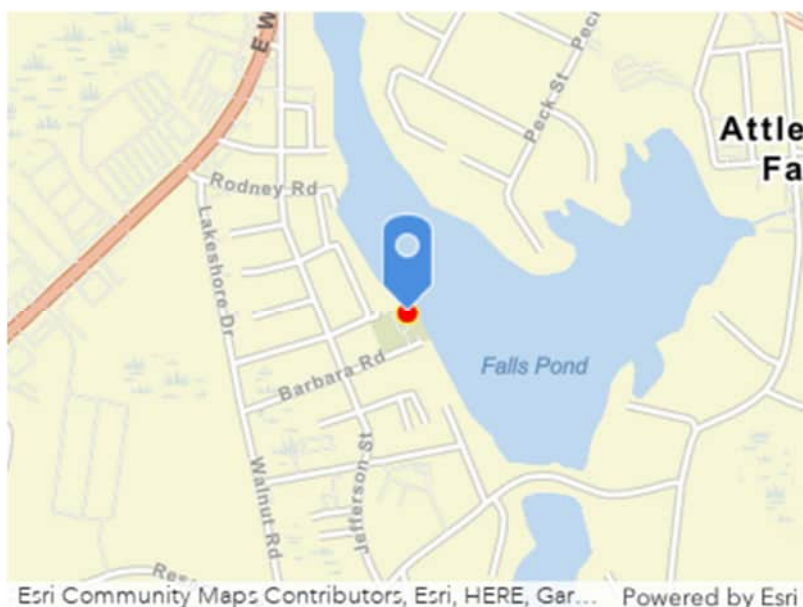
BETA

Issue Date: May 2023
This map is intended for planning purposes only.

2.4.2 JOSEPH F. ZAINO MEMORIAL CONSERVATION & RECREATION AREA BMP RETROFIT OBSERVATIONS FORM

Site Name:	Joseph F. Zaino Memorial Conservation & Recreation Area		
Address:	Huntley Road	Date/Time:	May 4, 2023 2:14 PM
Inspector	Chris Brainard & Leya Strode (BETA)		
Current Weather:	Overcast -- 46 °F		

2.4.2.1 BMP RETROFIT LOCATION MAP



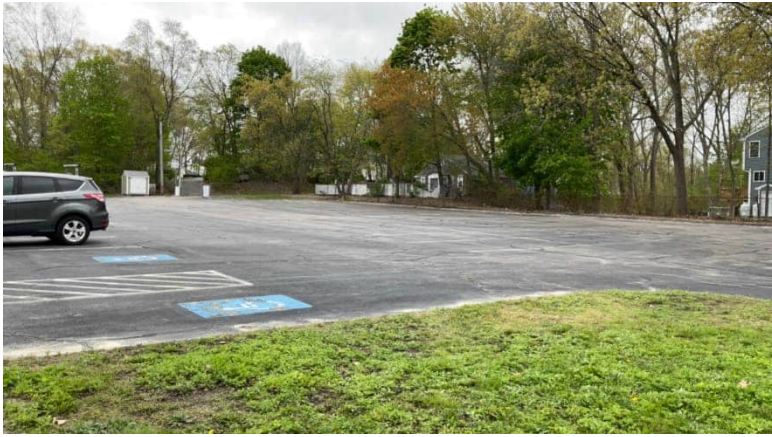
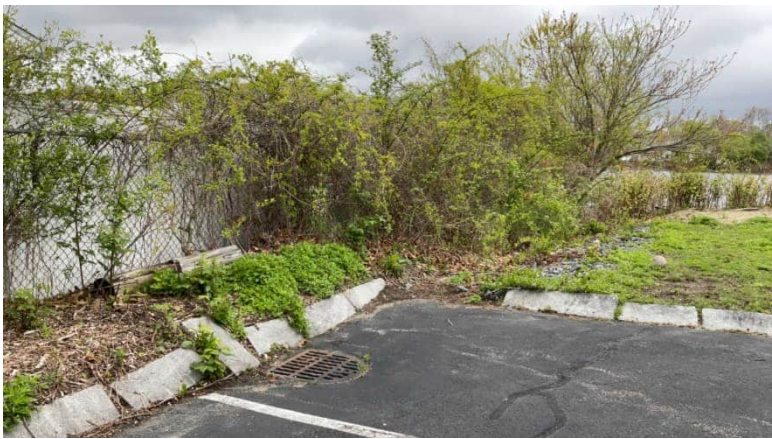
2.4.2.2 OBSERVATION DETAILS

BMP Retrofit(s) Viable: **Yes**

Most Prevalent Soils:	No Rating	Estimated Depth to Water (If Possible):	Test pit required
BMP Options:	Infiltration Chamber/Pipe, Leaching CB	If "Other":	
Site Observation Notes:	Large impervious surface of parking lot is pitched north towards existing catch basin which flows to outfall located along western edge of Falls Pond. At time of site visit, outfall pipe was fully submerged and not functional. A riprap lined swale with curb cut adjacent to existing catch basin exists, likely to accommodate overflow from catch basin in such an event. Opportunity to reroute catch basin to subsurface infiltration practice such as leaching manholes or series of leaching manholes to treat stormwater before it reaches lake. Grass area behind curb adjacent to riprap swale could provide location for subsurface or surface infiltration treatment. Test pit would be required to		

	determine depth to water.
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2.4.2.3 PHOTOS

	Impervious catchment of existing catch basin.
	Existing catch basin with curb cut to riprap lined overflow to lake. Existing outfall pipe from catch basin is currently submerged.
	Proposed location for subsurface infiltration system.



Existing riprap swale.



Significant erosion from sidewalk to bank is causing undercutting of concrete.

2.5 CHURCH STREET PUBLIC PARKING LOT

- The existing public parking lot exhibits split grading, with the northern section sloping towards an existing drainage catch basin, while the southern half slopes towards another catch basin that ultimately connects to the stormwater system on Church Street. To optimize stormwater management and implement BMPs, a promising retrofit opportunity lies in converting the catch basin nearest to Church Street. One option is to transform it into a leaching basin, allowing for infiltration of stormwater into the ground. Alternatively, a series of subsurface leaching galleys or manholes could be installed to enhance the water infiltration and reduce runoff volumes and nutrient loads to the existing drainage infrastructure.
- In addition to the proposed BMP retrofit opportunities, it is crucial to emphasize the necessity of conducting test pits on the site. These test pits would serve two purposes. Firstly, they assess the water table level to determine if it allows for effective infiltration of stormwater. Secondly, the test pits enable evaluation of the hydrological soil group in the area. It is essential to confirm that the soil composition is suitable for infiltration purposes, as different soil types have varying rates of water absorption.
- Implementing these BMP retrofits would help mitigate the potential adverse impacts of stormwater runoff, promoting improved water quality and sustainable drainage practices at the site.
- Additional details are provided in Sections 2.5.1 and 2.5.2.

2.5.1 CHURCH STREET PUBLIC PARKING LOT SITE MAP

Potential BMP Retrofit Locations
Location: Church Street Parking Lot
Address: West of 29 Church St

Existing drainage infrastructure observed during field investigations that was previously not mapped. Appears to connect to downstream infrastructure on Church Street.

Opportunity to retrofit downstream drain catch basin into a subsurface infiltration system or series of leaching galleys.

Map Legend

Proposed BMP Retrofit Location

Stormwater Infrastructure

Existing BMP

Outfall

Catch Basins

Curb Inlet

Manhole

Inlet

Culvert

Swale

Pipe

MassDEP 2018/2020 Integrated List of Waters

Rivers: Category 4A

Rivers: Category 4C

Rivers: Category 5

Lakes, Estuaries: Category 4A

Lakes, Estuaries: Category 4C

Lakes, Estuaries: Category 5

Hydrologic Soil Group

No Rating

A

A/D

B

B/D

C

C/D

D

Hydrology

Major Watersheds

BMP Retrofit Layers

BMP Retrofit Area

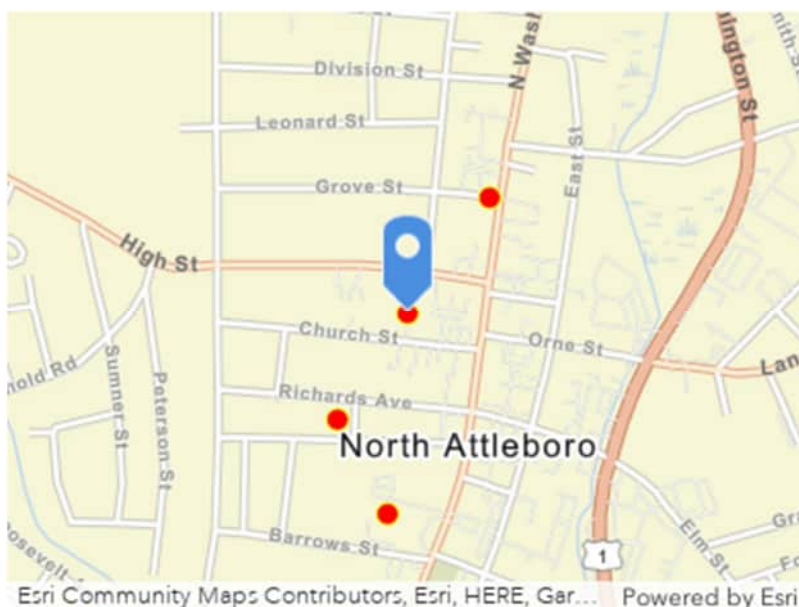
BMP Retrofit Catchment

Issue Date: May 2023
This map is intended for planning purposes only.

2.5.2 CHURCH STREET PUBLIC PARKING LOT BMP RETROFIT OBSERVATIONS FORM

Site Name:	Church Street Public Parking Lot		
Address:	West of 29 Church Street	Date/Time:	May 4, 2023 9:15 AM
Inspector	Chris Brainard & Leya Strode (BETA)		
Current Weather:	Overcast -- 45 °F		

2.5.2.1 BMP RETROFIT LOCATION MAP



2.5.2.2 OBSERVATION DETAILS

BMP Retrofit(s) Viable:

Most Prevalent Soils:	No Rating	Estimated Depth to Water (If Possible):	Test pit required
BMP Options:		If "Other":	
Site Observation Notes:	Site is entirely impervious and pitched towards to catch basins one in the rear and one in the front. A number of vehicles that appear to have been parked for sometime are located in the rear of the lot. Major opportunity for a BMP retrofit includes leaching catch basins or leaching manholes in series with outlet to existing stormwater infrastructure on Church St.		

2.5.2.3 PHOTOS



View of sight facing north from Church Street.



Existing catch basin at south end of parking lot outlets to stormwater infrastructure in the street.



View of catchment for rear catch basin taken facing north.



Oil staining from vehicles is
apparent throughout lot.

2.6 ROOSEVELT AVENUE ELEMENTARY SCHOOL

- The Roosevelt Avenue Elementary School is situated on the property, predominantly in the central area. The site features a front parking lot to the north, additional parking to the east, and large impervious surface play areas for students towards the southeast and west of the school building. The areas north, east, and southeast of the school building appear to slope north towards Roosevelt Avenue.
- BETA personnel observed naturalized flow east of the school along the edge of the parking lot pavement. Given the consistent flow and poor soil conditions for infiltration, it is not recommended to implement any BMP retrofit in this particular area. However, just north of this location, along the northern edge of the pavement, there is an opportunity to install an infiltration trench to treat a small area of runoff from the parking lot.
- There are two additional opportunities for BMP retrofits in the front parking lot and student drop-off area. The first option is to install an infiltration trench along the edge of the parking area, directing the flow to a bioretention area located at the corner of the driveway entrance. This approach would effectively capture and treat stormwater runoff before it enters the stormwater system on Roosevelt Avenue.
- The second option involves installing another infiltration trench along the driveway exit, specifically targeting the northern edge where there is existing open space. This area has already experienced channelized erosion caused by stormwater runoff. Implementing an infiltration trench in this location would help mitigate the erosion issue while also providing an opportunity to treat and manage the stormwater effectively.
- By implementing these BMP retrofits, such as infiltration trenches and bioretention areas, the site can improve its stormwater management practices, reducing runoff volumes, promoting natural filtration, and minimizing potential environmental impacts. These retrofit measures contribute to a sustainable water management approach.
- Additional details are provided in Sections 2.6.1 and 2.6.2.

2.6.1 ROOSEVELT AVENUE ELEMENTARY SCHOOL SITE MAP

Potential BMP Retrofit Locations
Location: Roosevelt Avenue Elementary School
Address: 108 Roosevelt

Observed naturalized flow along eastern edge of parking lot. Unknown upstream origin, potentially groundwater.

Opportunity to install an infiltration trench along the northeast edge of parking lot.

Observed channelized erosion in open space adjacent to driveway.

Opportunity to install an infiltration trench along front driveway edge of pavement that is pitched towards the open space. Flow could ultimately discharge to a bioretention at corner of driveway entrance.

Opportunity to install an infiltration trench along front driveway that is already experiencing erosion concerns.

Map Legend

Proposed BMP Retrofit Location

Stormwater Infrastructure

Existing BMP

Outfall

Catch Basins

Curb Inlet

Manhole

Inlet

Culvert

Swale

Pipe

MassDEP 2018/2020 Integrated List of Waters

Rivers: Category 4A

Rivers: Category 4C

Rivers: Category 5

Lakes, Estuaries: Category 4A

Lakes, Estuaries: Category 4C

Lakes, Estuaries: Category 5

Hydrologic Soil Group

No Rating

A

A/D

B

B/D

C

C/D

D

Hydrology

Major Watersheds

BMP Retrofit Layers

BMP Retrofit Area

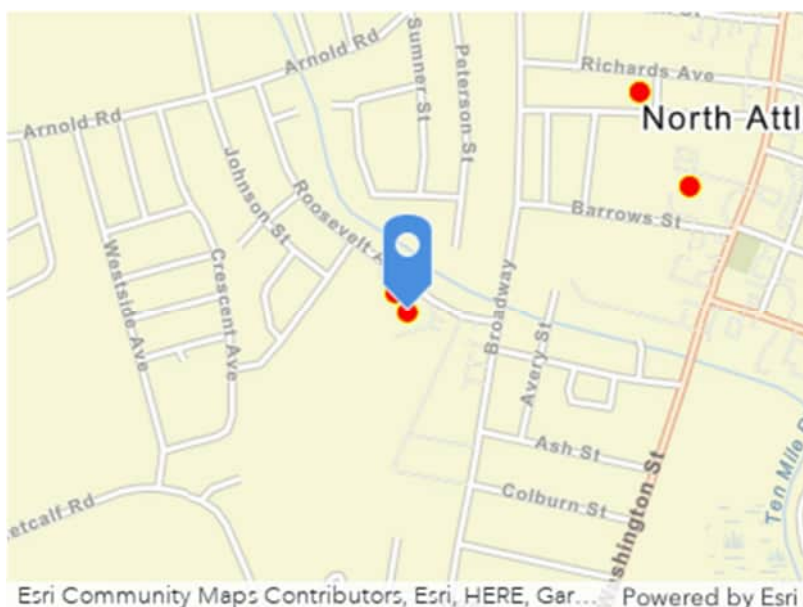
BMP Retrofit Catchment

Issue Date: May 2023
This map is intended for planning purposes only.

2.6.2 ROOSEVELT AVENUE ELEMENTARY SCHOOL BMP RETROFIT OBSERVATIONS FORM

Site Name:	Roosevelt Avenue Elementary School		
Address:	108 Roosevelt Avenue	Date/Time:	May 4, 2023 10:49 AM
Inspector	Chris Brainard & Leya Strode (BETA)		
Current Weather:	Rainy -- 43 °F		

2.6.2.1 BMP RETROFIT LOCATION MAP



2.6.2.2 OBSERVATION DETAILS

BMP Retrofit(s) Viable:

Most Prevalent Soils:	No Rating	Estimated Depth to Water (If Possible):	Test pit required
BMP Options:	Infiltration Trench, Leaching CB, Bioretention	If "Other":	
Site Observation Notes:	Saturated soils on site and presence of multiple yard drains indicates relatively poor soils for infiltration. However, test pits would confirm water table depth and soils types to gauge infiltration opportunities. Depending on these results, BETA personnel identified several options for BMP retrofits that include installation of infiltration trenches along the open spaces facing the northern section of the property adjacent to Roosevelt Avenue.		

2.6.2.3 PHOTOS



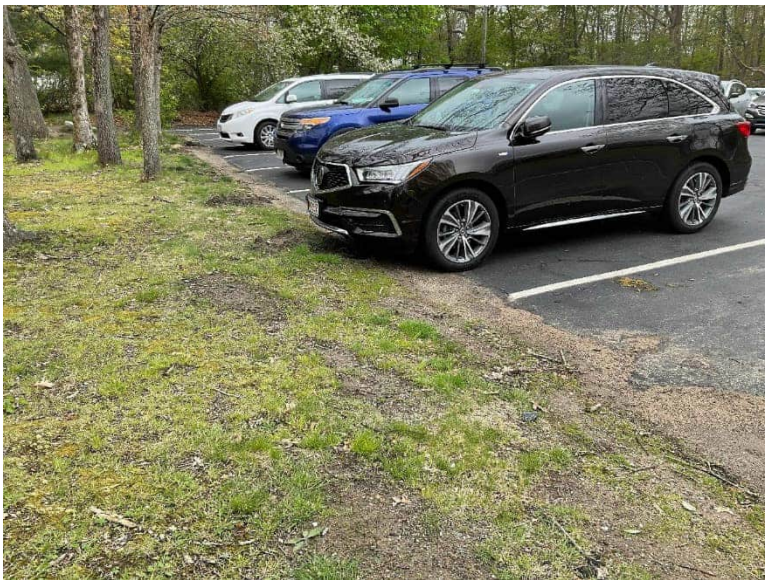
Large parking lot at Roosevelt Avenue School is pitched towards roadway and open space in front of school.



Channelized erosion coming off east driveway of front parking lot at Roosevelt School. Opportunity here to formalize with infiltration trench or swale depending on soil type.



Rear parking lot at Roosevelt School. Photo taken facing southeast.



Opportunity to install infiltration trench to capture runoff along the northeast edge of the rear parking lot at Roosevelt School.



Opportunity to install bioretention planter at grassed corner where flow passes before reaching roadway. Additional opportunity exists to install infiltration trench along parking lot edge for additional treatment opportunity.



Yard drain in rear of building near large paved play area appears to have saturated soils in background after recent rainfall. This indicates relatively poor soils for infiltration.



Large paved area in rear of school drains to catch basins with deep inverts.

2.7 NORTH ATTLEBORO SCHOOL DISTRICT

- The site primarily consists of a large impervious parking lot with entrances located to the north, south, and east. Towards the eastern side of the property, the School District building is situated, while the western side serves as the parking area for school buses and administrative personnel. In terms of stormwater runoff, the central portion of the parking lot is evenly divided, with the northern half sloping towards Richards Avenue, and the southern section grading down to Bank Street. All runoff from this area of site discharges to existing stormwater infrastructure on main roadways surrounding the facility.
- Upon observation by BETA personnel, it was noted that the School district building has roof leaders that discharge directly to the surface near the access walkway in front of the building. To address stormwater management concerns, the primary BMP retrofit opportunity lies in the installation of an infiltration trench along the easternmost edge of the paved walkway leading to the front of the building. This retrofit measure would effectively treat the runoff associated with the walkway itself and a portion of the building's roof, considering the roof leaders currently discharging to the surface. Note that further investigation is required to confirm water table level and soil types before a final BMP retrofit is chosen.
- Regardless, implementing this infiltration trench or other suitable practice would provide a designated area for stormwater to infiltrate the ground, promoting natural filtration and reducing the volume of runoff entering the existing stormwater system. By capturing and treating the runoff from the walkway and a section of the building roof, the site can enhance its stormwater management practices, minimizing potential environmental impacts and contributing to the overall sustainability of the Town's water management strategy.
- Additional details are provided in Sections 2.7.1 and 2.7.2.

2.7.1 NORTH ATTLEBORO SCHOOL DISTRICT SITE MAP

Potential BMP Retrofit Locations
Location: North Attleboro School District
Address: 6 Morse St

Opportunity to install an infiltration trench along front driveway edge of pavement.

Existing roof leaders along front (east face) of building discharge directly to surface.

Map Legend

Proposed BMP Retrofit Location

Stormwater Infrastructure

Existing BMP

Outfall

Catch Basins

Curb Inlet

Manhole

Inlet

Culvert

Swale

Pipe

MassDEP 2018/2020 Integrated List of Waters

Rivers: Category 4A

Rivers: Category 4C

Rivers: Category 5

Lakes, Estuaries: Category 4A

Lakes, Estuaries: Category 4C

Lakes, Estuaries: Category 5

Hydrologic Soil Group

No Rating

A

A/D

B

B/D

C

C/D

D

Hydrology

Major Watersheds

BMP Retrofit Layers

BMP Retrofit Area

BMP Retrofit Catchment

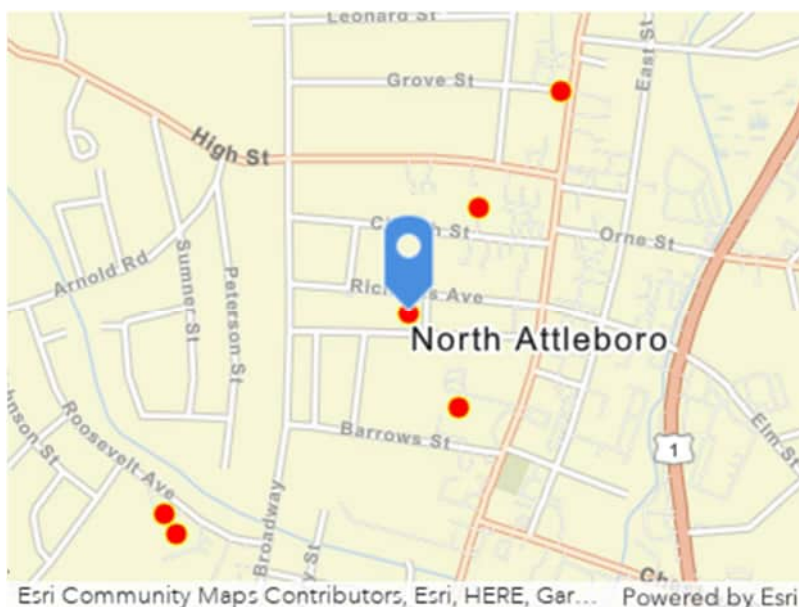
BETA

Issue Date: May 2023
This map is intended for planning purposes only.

2.7.2 NORTH ATTLEBORO SCHOOL DISTRICT BMP RETROFIT OBSERVATIONS FORM

Site Name:	North Attleboro School District		
Address:	6 Morse Street	Date/Time:	May 4, 2023 9:46 AM
Inspector	Chris Brainard & Leya Strode (BETA)		
Current Weather:	Cloudy -- 43 °F		

2.7.2.1 BMP RETROFIT LOCATION MAP



2.7.2.2 OBSERVATION DETAILS

BMP Retrofit(s) Viable: **Yes**

Most Prevalent Soils:	No Rating	Estimated Depth to Water (If Possible):	Test pit required
BMP Options:	Infiltration Trench	If "Other":	
Site Observation Notes:	Site has large impervious area with little to no pervious space on parcel. Because pavement is pitched away from structure and parking lot on all sides storm water appears to run off to street where it is excepted by catch basins lining the roadway edge. Roof leaders appear to discharge directly to pavement. No stormwater infrastructure was observed on site. Soil testing and test pit to water table would be required for additional development of conceptual BMP retrofits.		

2.7.2.3 PHOTOS



Roof leader is discharging to pavement in front of school along Morse Street; photo taken facing west.



Potential location for infiltration trench along pavement edge that could except flow from front walk and portions of roof that discharge to surface; photo taken facing north

2.8 RICHARDS MEMORIAL LIBRARY

- The Town library does have open space (grass areas) available for BMP retrofits. BETA personnel observed that roof leaders from the building discharge to unknown underground outlets. The main opportunity here would be to install bioretention practices along the north and south portions of the property. These areas are the only locations with enough space for a small demonstration project. Note, that further investigation is required to confirm connectivity of leaders as well as test pits to measure water table level and soil types. In general, the urbanized area of the Town does not have any designated soil types and therefore, any proposed infiltration BMPs should include soil testing.
- Additional details are provided in Sections 2.8.1 and 2.8.2.

2.8.1 RICHARDS MEMORIAL LIBRARY SITE MAP

Potential BMP Retrofit Locations
Location: Richards Memorial Library
Address: 118 N Washington St

Existing roof leaders discharge underground. Unknown connectivity and discharge point.

Roof leaders currently discharge underground to an unknown location. Retrofitting leaders to discharge into a bioretention practice on either the northern or southern side of the library is recommended. Ideal location for demonstration project that can educate local residents.

Existing roof leaders discharge underground. Unknown connectivity and discharge point.

LINCOLN COURT

GROVE STREET

BROAD STREET

NORTH WASHINGTON STREET

Map Legend

Proposed BMP Retrofit Location

Stormwater Infrastructure

- Existing BMP
- Outfall
- Catch Basins
- Curb Inlet
- Manhole
- Inlet
- Culvert
- Swale
- Pipe

MassDEP 2018/2020 Integrated List of Waters

- Rivers: Category 4A
- Rivers: Category 4C
- Rivers: Category 5
- Lakes, Estuaries: Category 4A
- Lakes, Estuaries: Category 4C
- Lakes, Estuaries: Category 5



Hydrologic Soil Group

- No Rating
- A
- A/D
- B
- B/D
- C
- C/D
- D

Hydrology

Major Watersheds

BMP Retrofit Layers

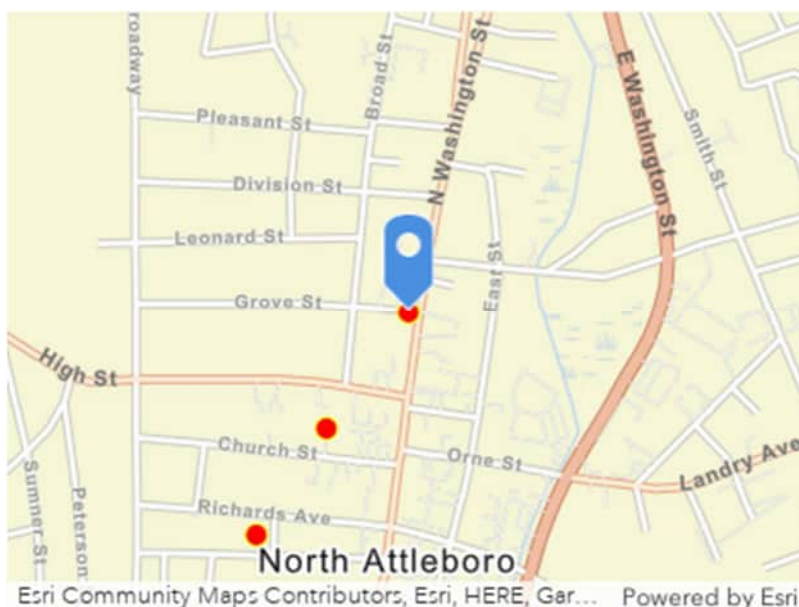
- BMP Retrofit Area
- BMP Retrofit Catchment



2.8.2 RICHARDS MEMORIAL LIBRARY BMP RETROFIT OBSERVATIONS FORM

Site Name:	Richards Memorial Library		
Address:	118 N.Washington Street	Date/Time:	May 4, 2023 10:17 AM
Inspector	Chris Brainard & Leya Strode (BETA)		
Current Weather:	Overcast -- 44 °F		

2.8.2.1 BMP RETROFIT LOCATION MAP



2.8.2.2 OBSERVATION DETAILS

BMP Retrofit(s) Viable: **Yes**

Most Prevalent Soils:	No Rating	Estimated Depth to Water (If Possible):	Test pit required
BMP Options:	Bioretention	If "Other":	Rain garden
Site Observation Notes:	Roof leaders from building mostly go to an unknown underground outlet. Further investigation into connectivity as well as water table level and soil types is required. Depending on results from test pits there may be an opportunity to install bioretention practices along the north and south portions of the property.		

2.8.2.3 PHOTOS



Roof leaders are buried and outlet at an unknown location. Opportunity to divert these to an infiltration or bioretention practice depending on soil type.



Grass areas present a potential location for bioretention or infiltration practice with roof leaders redirected to surface.



Leaders on north face of building discharge directly to impervious surface.

APPENDIX A

- Calculations for Potential Nutrient Load Removal at BMP Retrofit Locations

BMP Retrofit Location	Total Area (Acres)	Total Impervious Area (Acres)	Percent Impervious (%)	Total Directly Connected Impervious Area (DCIA) (Acres)	Percent DCIA (%)	Total Pervious Area (Acres)	Percent Pervious (%)	Pload Directly Connected Impervious Area (DCIA) (lb/yr)	Pload Pervious Area (lb/yr)	Pload Disconnected Impervious Area (lb/yr)	Total Avg. Annual Phosphorus Load (lb/yr)	Potential Nutrient Load Removal (lb/yr) ¹
Community School	9.24	4.10	44	2.92	32	5.15	56	5.50	1.08	0.25	6.83	6.15
School District	0.10	0.10	100	0.10	100	0.00	0	0.18	0.00	0.00	0.18	0.16
Richards Memorial Library	0.09	0.04	45	0.03	30	0.05	55	0.05	0.01	0.003	0.06	0.06
Church Street Public Parking	0.32	0.20	64	0.19	59	0.12	36	0.43	0.02	0.004	0.46	0.42
Roosevelt Ave School	0.15	0.15	100	0.15	100	0.00	0	0.26	0.00	0.00	0.26	0.24
Joseph Martin School	1.43	1.42	99	1.41	99	0.01	1	2.52	0.00	0.00	2.52	2.27
Mason Field	0.86	0.69	81	0.62	73	0.16	19	0.95	0.01	0.002	0.96	0.86
Zaino Memorial Conservation Recreation Area	0.51	0.42	82	0.39	76	0.09	18	0.60	0.02	0.01	0.62	0.56
TOTAL	12.70	7.13	56	5.82	46	5.58	44	10.49	1.14	0.26	11.90	10.71
kg/yr								4.76	0.52	0.12	5.40	4.86
¹ BMP retrofits were estimated to provide 90% nutrient removal.												

Phosphorus Load Directly Connected Impervious Area (DCIA)											
BMP Retrofit Location	Land Use	Covername	Total Acres (US Acres)	Impervious Area (US Acres)	Percent Impervious	SutherLand Coefficient A	SutherLand Coefficient B	DCIA (%)	DCIA (US Acres)	Phosphorus Loading Export Rate (lb/ac/yr)	Phosphorus Export Load (lb/yr)
Community School	Commercial	Impervious	4.53	2.24	49.51	0.1	1.5	34.84	1.58	1.78	2.81
	Industrial	Impervious	0.00	0.00	0.00	0.1	1.5	0.00	0.00	1.78	0.00
	High Density Residential	Impervious	0.99	0.84	84.30	0.4	1.2	81.86	0.81	2.32	1.89
	Medium Density Residential	Impervious	0.00	0.00	0.00	0.1	1.5	0.00	0.00	1.96	0.00
	Low Density Residential	Impervious	0.00	0.00	0.00	0.1	1.5	0.00	0.00	1.96	0.00
	Highway	Impervious	0.00	0.00	0.00	0.1	1.5	0.00	0.00	1.95	0.00
	Forest	Impervious	0.00	0.00	0.00	0.01	2	0.00	0.00	1.52	0.00
	Open Land	Impervious	3.72	1.02	27.34	0.1	1.5	14.30	0.53	1.52	0.81
	Agriculture	Impervious	0.00	0.00	0.00	0.01	2	0.00	0.00	1.52	0.00
	TOTAL		9.24	4.10	44%			32%	2.92		5.50
School District	Commercial	Impervious	0.10	0.10	100.00	0.1	1.5	100.00	0.10	1.78	0.18
	Industrial	Impervious	0.00	0.00	0.00	0.1	1.5	0.00	0.00	1.78	0.00
	High Density Residential	Impervious	0.00	0.00	0.00	0.4	1.2	0.00	0.00	2.32	0.00
	Medium Density Residential	Impervious	0.00	0.00	0.00	0.1	1.5	0.00	0.00	1.96	0.00
	Low Density Residential	Impervious	0.00	0.00	0.00	0.1	1.5	0.00	0.00	1.96	0.00
	Highway	Impervious	0.00	0.00	0.00	0.1	1.5	0.00	0.00	1.95	0.00
	Forest	Impervious	0.00	0.00	0.00	0.01	2	0.00	0.00	1.52	0.00
	Open Land	Impervious	0.00	0.00	0.00	0.1	1.5	0.00	0.00	1.52	0.00
	Agriculture	Impervious	0.00	0.00	0.00	0.01	2	0.00	0.00	1.52	0.00
	TOTAL		0.10	0.10	100%			100%	0.10		0.18
Richards Memorial Library	Commercial	Impervious	0.09	0.04	45.02	0.1	1.5	30.21	0.03	1.78	0.05
	Industrial	Impervious	0.00	0.00	0.00	0.1	1.5	0.00	0.00	1.78	0.00
	High Density Residential	Impervious	0.00	0.00	0.00	0.4	1.2	0.00	0.00	2.32	0.00
	Medium Density Residential	Impervious	0.00	0.00	0.00	0.1	1.5	0.00	0.00	1.96	0.00
	Low Density Residential	Impervious	0.00	0.00	0.00	0.1	1.5	0.00	0.00	1.96	0.00
	Highway	Impervious	0.00	0.00	0.00	0.1	1.5	0.00	0.00	1.95	0.00
	Forest	Impervious	0.00	0.00	0.00	0.01	2	0.00	0.00	1.52	0.00
	Open Land	Impervious	0.00	0.00	0.00	0.1	1.5	0.00	0.00	1.52	0.00
	Agriculture	Impervious	0.00	0.00	0.00	0.01	2	0.00	0.00	1.52	0.00
	TOTAL		0.09	0.04	45%			30%	0.03		0.05
Church Street Public Parking	Commercial	Impervious	0.00	0.00	0.00	0.1	1.5	0.00	0.00	1.78	0.00
	Industrial	Impervious	0.00	0.00	0.00	0.1	1.5	0.00	0.00	1.78	0.00
	High Density Residential	Impervious	0.32	0.20	63.75	0.4	1.2	58.53	0.19	2.32	0.43
	Medium Density Residential	Impervious	0.00	0.00	0.00	0.1	1.5	0.00	0.00	1.96	0.00

Phosphorus Load Directly Connected Impervious Area (DCIA)											
BMP Retrofit Location	Land Use	Covername	Total Acres (US Acres)	Impervious Area (US Acres)	Percent Impervious	SutherLand Coefficient A	SutherLand Coefficient B	DCIA (%)	DCIA (US Acres)	Phosphorus Loading Export Rate (lb/ac/yr)	Phosphorus Export Load (lb/yr)
	Low Density Residential	Impervious	0.00	0.00	0.00	0.1	1.5	0.00	0.00	1.96	0.00
	Highway	Impervious	0.00	0.00	0.00	0.1	1.5	0.00	0.00	1.95	0.00
	Forest	Impervious	0.00	0.00	0.00	0.01	2	0.00	0.00	1.52	0.00
	Open Land	Impervious	0.00	0.00	0.00	0.1	1.5	0.00	0.00	1.52	0.00
	Agriculture	Impervious	0.00	0.00	0.00	0.01	2	0.00	0.00	1.52	0.00
	TOTAL		0.32	0.20	64%			59%	0.19		0.43
Roosevelt Ave School	Commercial	Impervious	0.15	0.15	100.00	0.1	1.5	100.00	0.15	1.78	0.26
	Industrial	Impervious	0.00	0.00	0.00	0.1	1.5	0.00	0.00	1.78	0.00
	High Density Residential	Impervious	0.00	0.00	0.00	0.4	1.2	0.00	0.00	2.32	0.00
	Medium Density Residential	Impervious	0.00	0.00	0.00	0.1	1.5	0.00	0.00	1.96	0.00
	Low Density Residential	Impervious	0.00	0.00	0.00	0.1	1.5	0.00	0.00	1.96	0.00
	Highway	Impervious	0.00	0.00	0.00	0.1	1.5	0.00	0.00	1.95	0.00
	Forest	Impervious	0.00	0.00	0.00	0.01	2	0.00	0.00	1.52	0.00
	Open Land	Impervious	0.00	0.00	0.00	0.1	1.5	0.00	0.00	1.52	0.00
	Agriculture	Impervious	0.00	0.00	0.00	0.01	2	0.00	0.00	1.52	0.00
	TOTAL		0.15	0.15	100%			100%	0.15		0.26
Joseph Martin School	Commercial	Impervious	1.43	1.42	99.29	0.1	1.5	98.94	1.41	1.78	2.52
	Industrial	Impervious	0.00	0.00	0.00	0.1	1.5	0.00	0.00	1.78	0.00
	High Density Residential	Impervious	0.00	0.00	0.00	0.4	1.2	0.00	0.00	2.32	0.00
	Medium Density Residential	Impervious	0.00	0.00	82.62	0.1	1.5	75.10	0.00	1.96	0.00
	Low Density Residential	Impervious	0.00	0.00	0.00	0.1	1.5	0.00	0.00	1.96	0.00
	Highway	Impervious	0.00	0.00	0.00	0.1	1.5	0.00	0.00	1.95	0.00
	Forest	Impervious	0.00	0.00	0.00	0.01	2	0.00	0.00	1.52	0.00
	Open Land	Impervious	0.00	0.00	0.00	0.1	1.5	0.00	0.00	1.52	0.00
	Agriculture	Impervious	0.00	0.00	0.00	0.01	2	0.00	0.00	1.52	0.00
	TOTAL		1.43	1.42	99%			99%	1.41		2.52
Mason Field	Commercial	Impervious	0.00	0.00	0.00	0.1	1.5	0.00	0.00	1.78	0.00
	Industrial	Impervious	0.00	0.00	0.00	0.1	1.5	0.00	0.00	1.78	0.00
	High Density Residential	Impervious	0.00	0.00	0.00	0.4	1.2	0.00	0.00	2.32	0.00
	Medium Density Residential	Impervious	0.00	0.00	0.00	0.1	1.5	0.00	0.00	1.96	0.00
	Low Density Residential	Impervious	0.00	0.00	0.00	0.1	1.5	0.00	0.00	1.96	0.00
	Highway	Impervious	0.00	0.00	0.00	0.1	1.5	0.00	0.00	1.95	0.00
	Forest	Impervious	0.09	0.08	95.47	0.01	2	91.15	0.08	1.52	0.12
	Open Land	Impervious	0.77	0.61	79.49	0.1	1.5	70.87	0.55	1.52	0.83
	Agriculture	Impervious	0.00	0.00	0.00	0.01	2	0.00	0.00	1.52	0.00
	TOTAL		0.86	0.69	81%			73%	0.62		0.95

Phosphorus Load Directly Connected Impervious Area (DCIA)											
BMP Retrofit Location	Land Use	Covername	Total Acres (US Acres)	Impervious Area (US Acres)	Percent Impervious	SutherLand Coefficient A	SutherLand Coefficient B	DCIA (%)	DCIA (US Acres)	Phosphorus Loading Export Rate (lb/ac/yr)	Phosphorus Export Load (lb/yr)
Zaino Memorial Conservation Recreation Area	Commercial	Impervious	0.00	0.00	0.00	0.1	1.5	0.00	0.00	1.78	0.00
	Industrial	Impervious	0.00	0.00	0.00	0.1	1.5	0.00	0.00	1.78	0.00
	High Density Residential	Impervious	0.00	0.00	0.00	0.4	1.2	0.00	0.00	2.32	0.00
	Medium Density Residential	Impervious	0.00	0.00	0.00	0.1	1.5	0.00	0.00	1.96	0.00
	Low Density Residential	Impervious	0.07	0.02	33.41	0.1	1.5	19.31	0.01	1.96	0.03
	Highway	Impervious	0.00	0.00	0.00	0.1	1.5	0.00	0.00	1.95	0.00
	Forest	Impervious	0.00	0.00	0.00	0.01	2	0.00	0.00	1.52	0.00
	Open Land	Impervious	0.45	0.40	89.35	0.1	1.5	84.46	0.38	1.52	0.57
	Agriculture	Impervious	0.00	0.00	0.00	0.01	2	0.00	0.00	1.52	0.00
	TOTAL		0.51	0.42	82%			76%	0.39		0.60

BMP Retrofit Location	Land Use	COVERNAME	Pervious HSG Area (US Acres)						Phosphorus Export Loading Rate (lb/ac/yr)					Phosphorus Load (lb/yr)					
			A	B	C	C/D	D	Total	A	B	C	C/D	D	A	B	C	C/D	D	Total
Community School	Commercial	Pervious	0.00	0.00	2.29	0.00	0.00	2.29	0.03	0.12	0.21	0.29	0.37	0.00	0.00	0.48	0.00	0.00	0.48
	Industrial	Pervious	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.12	0.21	0.29	0.37	0.00	0.00	0.00	0.00	0.00	0.00
	High Density Residential	Pervious	0.00	0.00	0.16	0.00	0.00	0.16	0.03	0.12	0.21	0.29	0.37	0.00	0.00	0.03	0.00	0.00	0.03
	Medium Density Residential	Pervious	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.12	0.21	0.29	0.37	0.00	0.00	0.00	0.00	0.00	0.00
	Low Density Residential	Pervious	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.12	0.21	0.29	0.37	0.00	0.00	0.00	0.00	0.00	0.00
	Highway	Pervious	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.12	0.21	0.29	0.37	0.00	0.00	0.00	0.00	0.00	0.00
	Forest	Pervious	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.13	0.13	0.13	0.13	0.00	0.00	0.00	0.00	0.00	0.00
	Open Land	Pervious	0.00	0.00	2.70	0.00	0.00	2.70	0.03	0.12	0.21	0.29	0.37	0.00	0.00	0.57	0.00	0.00	0.57
	Agriculture	Pervious	0.00	0.00	0.00	0.00	0.00	0.00	0.45	0.45	0.45	0.45	0.45	0.00	0.00	0.00	0.00	0.00	0.00
	TOTAL		0.00	0.00	5.15	0.00	0.00	5.15						0.00	0.00	1.08	0.00	0.00	1.08
School District	Commercial	Pervious	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.12	0.21	0.29	0.37	0.00	0.00	0.00	0.00	0.00	0.00
	Industrial	Pervious	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.12	0.21	0.29	0.37	0.00	0.00	0.00	0.00	0.00	0.00
	High Density Residential	Pervious	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.12	0.21	0.29	0.37	0.00	0.00	0.00	0.00	0.00	0.00
	Medium Density Residential	Pervious	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.12	0.21	0.29	0.37	0.00	0.00	0.00	0.00	0.00	0.00
	Low Density Residential	Pervious	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.12	0.21	0.29	0.37	0.00	0.00	0.00	0.00	0.00	0.00
	Highway	Pervious	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.12	0.21	0.29	0.37	0.00	0.00	0.00	0.00	0.00	0.00
	Forest	Pervious	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.13	0.13	0.13	0.13	0.00	0.00	0.00	0.00	0.00	0.00
	Open Land	Pervious	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.12	0.21	0.29	0.37	0.00	0.00	0.00	0.00	0.00	0.00
	Agriculture	Pervious	0.00	0.00	0.00	0.00	0.00	0.00	0.45	0.45	0.45	0.45	0.45	0.00	0.00	0.00	0.00	0.00	0.00
	TOTAL		0.00	0.00	0.00	0.00	0.00	0.00						0.00	0.00	0.00	0.00	0.00	0.00
Richards Memorial Library	Commercial	Pervious	0.00	0.00	0.05	0.00	0.00	0.05	0.03	0.12	0.21	0.29	0.37	0.00	0.00	0.01	0.00	0.00	0.01
	Industrial	Pervious	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.12	0.21	0.29	0.37	0.00	0.00	0.00	0.00	0.00	0.00
	High Density Residential	Pervious	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.12	0.21	0.29	0.37	0.00	0.00	0.00	0.00	0.00	0.00
	Medium Density Residential	Pervious	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.12	0.21	0.29	0.37	0.00	0.00	0.00	0.00	0.00	0.00
	Low Density Residential	Pervious	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.12	0.21	0.29	0.37	0.00	0.00	0.00	0.00	0.00	0.00
	Highway	Pervious	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.12	0.21	0.29	0.37	0.00	0.00	0.00	0.00	0.00	0.00
	Forest	Pervious	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.13	0.13	0.13	0.13	0.00	0.00	0.00	0.00	0.00	0.00
	Open Land	Pervious	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.12	0.21	0.29	0.37	0.00	0.00	0.00	0.00	0.00	0.00
	Agriculture	Pervious	0.00	0.00	0.00	0.00	0.00	0.00	0.45	0.45	0.45	0.45	0.45	0.00	0.00	0.00	0.00	0.00	0.00
	TOTAL		0.000	0.000	0.050	0.000	0.000	0.050						0.000	0.000	0.010	0.000	0.000	0.010
Church Street Public Parking	Commercial	Pervious	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.12	0.21	0.29	0.37	0.00	0.00	0.00	0.00	0.00	0.00
	Industrial	Pervious	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.12	0.21	0.29	0.37	0.00	0.00	0.00	0.00	0.00	0.00
	High Density Residential	Pervious	0.00	0.00	0.12	0.00	0.00	0.12	0.03	0.12	0.21	0.29	0.37	0.00	0.00	0.02	0.00	0.00	0.02
	Medium Density Residential	Pervious	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.12	0.21	0.29	0.37	0.00	0.00	0.00	0.00	0.00	0.00
	Low Density Residential	Pervious	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.12	0.21	0.29	0.37	0.00	0.00	0.00	0.00	0.00	0.00
	Highway	Pervious	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.12	0.21	0.29	0.37	0.00	0.00	0.00	0.00	0.00	0.00
	Forest	Pervious	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.13	0.13	0.13	0.13	0.00	0.00	0.00	0.00	0.00	0.00
	Open Land	Pervious	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.12	0.21	0.29	0.37	0.00	0.00	0.00	0.00	0.00	0.00
	Agriculture	Pervious	0.00	0.00	0.00	0.00	0.00	0.00	0.45	0.45	0.45	0.45	0.45	0.00	0.00	0.00	0.00	0.00	0.00
	TOTAL		0.00	0.00	0.12	0.00	0.00	0.12						0.00	0.00	0.02	0.00	0.00	0.02
Roosevelt Ave School	Commercial	Pervious	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.12	0.21	0.29	0.37	0.00	0.00	0.00	0.00	0.00	0.00
	Industrial	Pervious	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.12	0.21	0.29	0.37	0.00	0.00	0.00	0.00	0.00	0.00
	High Density Residential	Pervious	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.12	0.21	0.29	0.37	0.00	0.00	0.00	0.00	0.00	0.00
	Medium Density Residential	Pervious	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.12	0.21	0.29	0.37	0.00	0.00	0.00	0.00	0.00	0.00
	Low Density Residential	Pervious	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.12	0.21	0.29	0.37	0.00	0.00	0.00	0.00	0.00	0.00
	Highway	Pervious	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.12	0.21	0.29	0.37	0.00	0.00	0.00	0.00	0.00	0.00

BMP Retrofit Location	Land Use	COVERNAME	Pervious HSG Area (US Acres)						Phosphorus Export Loading Rate (lb/ac/yr)					Phosphorus Load (lb/yr)					
			A	B	C	C/D	D	Total	A	B	C	C/D	D	A	B	C	C/D	D	Total
	Forest	Pervious	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.13	0.13	0.13	0.13	0.00	0.00	0.00	0.00	0.00	0.00
	Open Land	Pervious	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.12	0.21	0.29	0.37	0.00	0.00	0.00	0.00	0.00	0.00
	Agriculture	Pervious	0.00	0.00	0.00	0.00	0.00	0.00	0.45	0.45	0.45	0.45	0.45	0.00	0.00	0.00	0.00	0.00	0.00
	TOTAL		0.00	0.00	0.00	0.00	0.00	0.00						0.00	0.00	0.00	0.00	0.00	0.00
Joseph Martin School	Commercial	Pervious	0.01	0.00	0.00	0.00	0.00	0.01	0.03	0.12	0.21	0.29	0.37	0.00	0.00	0.00	0.00	0.00	0.00
	Industrial	Pervious	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.12	0.21	0.29	0.37	0.00	0.00	0.00	0.00	0.00	0.00
	High Density Residential	Pervious	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.12	0.21	0.29	0.37	0.00	0.00	0.00	0.00	0.00	0.00
	Medium Density Residential	Pervious	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.12	0.21	0.29	0.37	0.00	0.00	0.00	0.00	0.00	0.00
	Low Density Residential	Pervious	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.12	0.21	0.29	0.37	0.00	0.00	0.00	0.00	0.00	0.00
	Highway	Pervious	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.12	0.21	0.29	0.37	0.00	0.00	0.00	0.00	0.00	0.00
	Forest	Pervious	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.13	0.13	0.13	0.13	0.00	0.00	0.00	0.00	0.00	0.00
	Open Land	Pervious	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.12	0.21	0.29	0.37	0.00	0.00	0.00	0.00	0.00	0.00
	Agriculture	Pervious	0.00	0.00	0.00	0.00	0.00	0.00	0.45	0.45	0.45	0.45	0.45	0.00	0.00	0.00	0.00	0.00	0.00
	TOTAL		0.01	0.00	0.00	0.00	0.00	0.01						0.00	0.00	0.00	0.00	0.00	0.00
Mason Field	Commercial	Pervious	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.12	0.21	0.29	0.37	0.00	0.00	0.00	0.00	0.00	0.00
	Industrial	Pervious	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.12	0.21	0.29	0.37	0.00	0.00	0.00	0.00	0.00	0.00
	High Density Residential	Pervious	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.12	0.21	0.29	0.37	0.00	0.00	0.00	0.00	0.00	0.00
	Medium Density Residential	Pervious	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.12	0.21	0.29	0.37	0.00	0.00	0.00	0.00	0.00	0.00
	Low Density Residential	Pervious	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.12	0.21	0.29	0.37	0.00	0.00	0.00	0.00	0.00	0.00
	Highway	Pervious	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.12	0.21	0.29	0.37	0.00	0.00	0.00	0.00	0.00	0.00
	Forest	Pervious	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.13	0.13	0.13	0.13	0.00	0.00	0.00	0.00	0.00	0.00
	Open Land	Pervious	0.16	0.00	0.00	0.00	0.00	0.16	0.03	0.12	0.21	0.29	0.37	0.00	0.00	0.00	0.00	0.00	0.00
	Agriculture	Pervious	0.00	0.00	0.00	0.00	0.00	0.00	0.45	0.45	0.45	0.45	0.45	0.00	0.00	0.00	0.00	0.00	0.00
	TOTAL		0.16	0.00	0.00	0.00	0.00	0.16						0.01	0.00	0.00	0.00	0.00	0.01
Zaino Memorial Conservation Recreation Area	Commercial	Pervious	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.12	0.21	0.29	0.37	0.00	0.00	0.00	0.00	0.00	0.00
	Industrial	Pervious	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.12	0.21	0.29	0.37	0.00	0.00	0.00	0.00	0.00	0.00
	High Density Residential	Pervious	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.12	0.21	0.29	0.37	0.00	0.00	0.00	0.00	0.00	0.00
	Medium Density Residential	Pervious	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.12	0.21	0.29	0.37	0.00	0.00	0.00	0.00	0.00	0.00
	Low Density Residential	Pervious	0.00	0.00	0.04	0.00	0.00	0.04	0.03	0.12	0.21	0.29	0.37	0.00	0.00	0.01	0.00	0.00	0.01
	Highway	Pervious	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.12	0.21	0.29	0.37	0.00	0.00	0.00	0.00	0.00	0.00
	Forest	Pervious	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.13	0.13	0.13	0.13	0.00	0.00	0.00	0.00	0.00	0.00
	Open Land	Pervious	0.00	0.00	0.05	0.00	0.00	0.05	0.03	0.12	0.21	0.29	0.37	0.00	0.00	0.01	0.00	0.00	0.01
	Agriculture	Pervious	0.00	0.00	0.00	0.00	0.00	0.00	0.45	0.45	0.45	0.45	0.45	0.00	0.00	0.00	0.00	0.00	0.00
	TOTAL		0.00	0.00	0.09	0.00	0.00	0.09						0.00	0.00	0.02	0.00	0.00	0.02

BMP Retrofit Location	Land Use	Impervious Area (US Acres)			Pervious Area Phosphorus Load																	Composite Pervious Area Nutrient Export Loading Rate (lb/ac/yr)	Annual Disconnected Area Pload (lb/yr)		
		Total	Directly Connected	Disconnected	Pervious HSG Area (US Acres)					Phosphorus Export Loading Rate (lb/ac/yr)					Phosphorus Load (lb/yr)										
					A	B	C	C/D	D	Total	A	B	C	C/D	D	A	B	C	C/D	D	Total				
	MDR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.12	0.21	0.29	0.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	LDR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.12	0.21	0.29	0.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	HWY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.12	0.21	0.29	0.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Forest	0.08	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.13	0.13	0.13	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.00
	Open Land	0.61	0.55	0.07	0.16	0.00	0.00	0.00	0.00	0.00	0.16	0.03	0.12	0.21	0.29	0.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00
	Agriculture	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.45	0.45	0.45	0.45	0.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	TOTAL	0.69	0.62	0.07	0.16	0.00	0.00	0.00	0.00	0.00	0.16						0.01	0.00	0.00	0.00	0.00	0.01			0.00
Zaino Memorial Conservation Recreation Area	Commercial	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.12	0.21	0.29	0.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Industrial	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.12	0.21	0.29	0.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	HDR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.12	0.21	0.29	0.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	MDR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.12	0.21	0.29	0.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	LDR	0.02	0.01	0.01	0.00	0.00	0.00	0.04	0.00	0.00	0.04	0.03	0.12	0.21	0.29	0.37	0.00	0.00	0.01	0.00	0.00	0.01	0.21	0.00	0.00
	HWY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.12	0.21	0.29	0.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Forest	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.13	0.13	0.13	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Open Land	0.40	0.38	0.02	0.00	0.00	0.00	0.05	0.00	0.00	0.05	0.03	0.12	0.21	0.29	0.37	0.00	0.00	0.01	0.00	0.00	0.01	0.21	0.00	0.00
	Agriculture	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.45	0.45	0.45	0.45	0.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	0.42	0.39	0.03	0.00	0.00	0.09	0.00	0.00	0.00	0.09						0.00	0.00	0.02	0.00	0.00	0.02			0.01	

Estimated Phosphorus Load Reduction Costs					
BMP Retrofit Location	Total Area (Acres)	Total Avg. Annual Phosphorus Load (lb/yr)	Potential Nutrient Load Removal (lb/yr)	Estimated Pload Reduction Cost (Low)	Estimated Pload Reduction Cost (High)
Community School	9.24	6.83	6.15	\$ 153,703.96	\$ 614,815.84
School District	0.10	0.18	0.16	\$ 4,084.46	\$ 16,337.84
Richards Memorial Library	0.09	0.06	0.06	\$ 1,390.60	\$ 5,562.40
Church Street Public Parking	0.32	0.46	0.42	\$ 10,401.62	\$ 41,606.49
Roosevelt Ave School	0.15	0.26	0.24	\$ 5,901.13	\$ 23,604.51
Joseph Martin School	1.43	2.52	2.27	\$ 56,642.22	\$ 226,568.86
Mason Field	0.86	0.96	0.86	\$ 21,514.76	\$ 86,059.05
Zaino Memorial Conservation Recreation Area	0.51	0.62	0.56	\$ 14,054.01	\$ 56,216.03
Total =	12.70	11.90	10.71	\$ 267,692.75	\$ 1,070,771.01

APPENDIX B

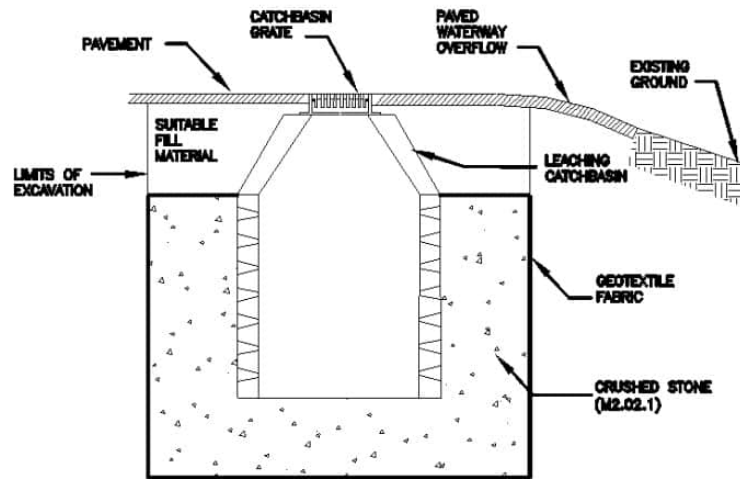
- **BMP Retrofit Design Examples**

❑ Infiltration Catchbasin/Manhole

- ❖ Pretreatment difficult, Shorter lifecycle – Can add sump for maintenance & pretreatment

Addressing

- ✓ Recharge
- ✓ TSS
- ❖ LUHPPL
- ❖ Critical
- ✓ Redevelop
- ✓ Pollutants
- ✓ Maintenance



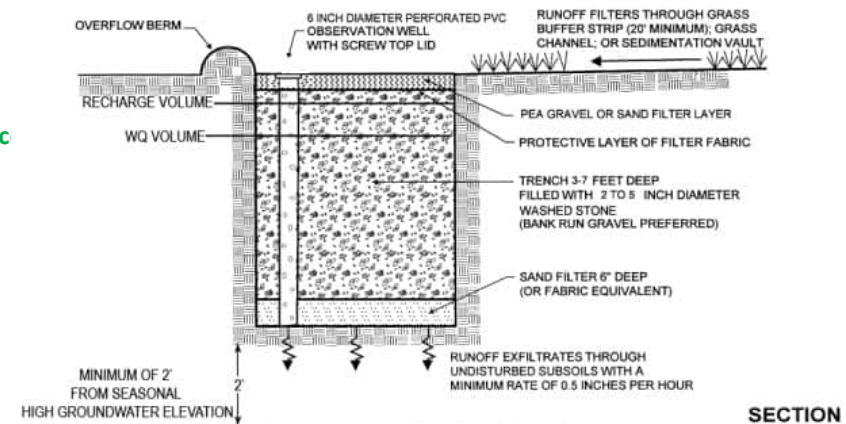
adapted from the MassHighway Department

❑ Infiltration Trench

- Flexible, Ideal for roadway edge
- Pipe/stone system doubles for conveyance

Addressing

- ✓ Peak Flow
- ✓ Recharge
- ✓ TSS
- ❖ LUHPPL
- ❖ Critical
- ✓ Redevelop
- ✓ Pollutants
- ✓ Maintenance



Example of Infiltration Trench

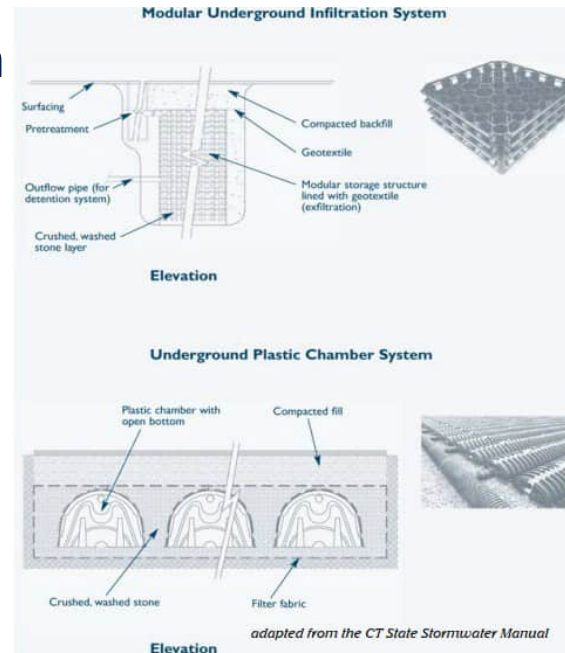
adapted from the University of New Hampshire

Subsurface Infiltration

- Flexible options
- ❖ Out of sight, High \$, Maintenance

Addressing

- ✓ Peak Flow
- ✓ Recharge
- ✓ TSS
- ❖ LUHPPL
- ❖ Critical
- ✓ Redevelop
- ✓ Pollutants

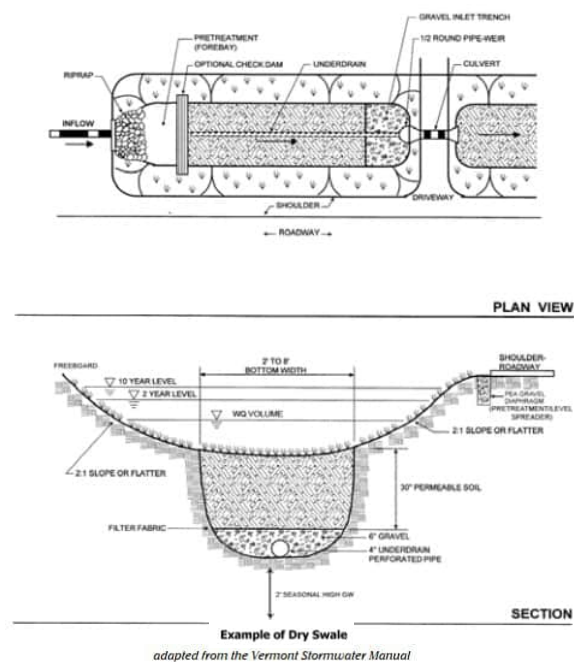


WATER QUALITY SWALE (DRY)

- Low maintenance \$
- ❖ Little to no peak flow, recharge

Addressing

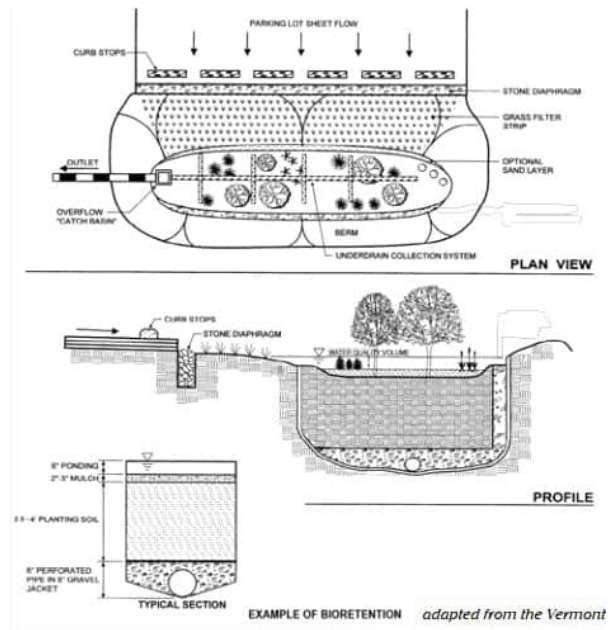
- ❖ Peak Flow
- ❖ Recharge
- ✓ TSS
- ❖ LUHPPL
- ❖ Critical
- ✓ Redevelop
- ✓ Pollutants
- ✓ Maintenance



❑ BIORETENTION (RAIN GARDEN)

- LID, High treatment
- Option for Poor Soil
- ❖ Landscaping
- ❖ Maintenance
- ❖ For Small Area

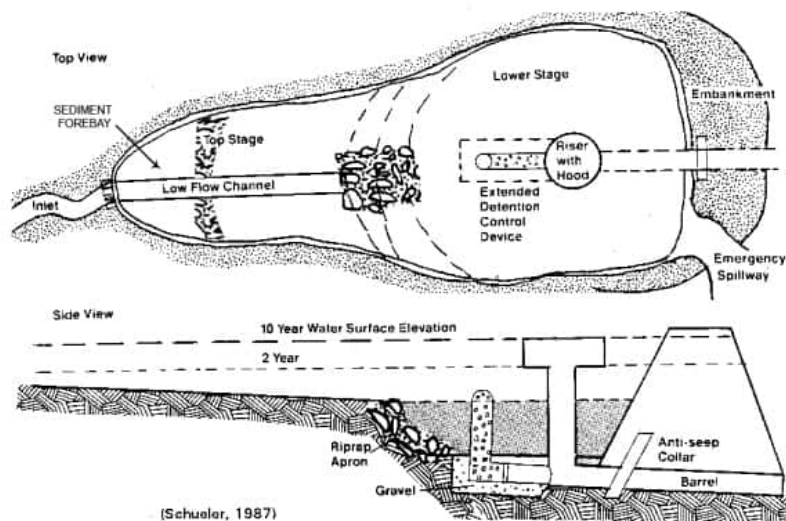
- ❖ Peak Flow
- ❖ Recharge
- ✓ TSS
- ❖ LUHPPL
- ❖ Critical
- ✓ Redevelop
- ✓ Treatment



adapted from the Vermont Stormwater Manual

❑ EXTENDED DRY DETENTION BASIN

- ❑ Peak flow, some treatment
- ❖ No recharge credit



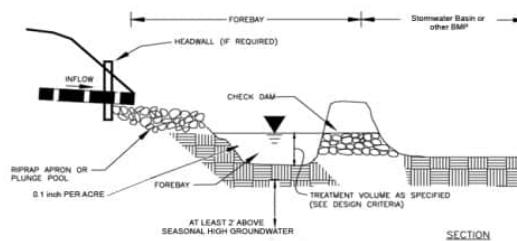
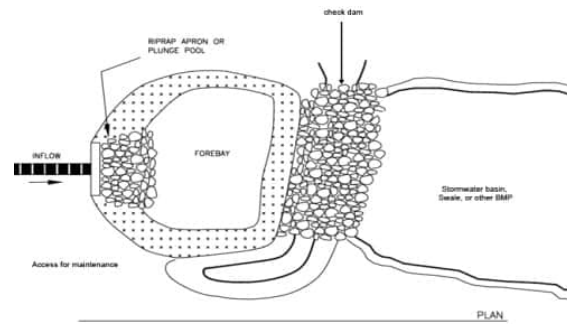
adapted from Controlling Urban Runoff, Schueler 1987

❑ Sediment Forebay

- Low \$, Easy to create
- Consider solid bottom
- ❖ Size 0.1 in/acre of pavement, Lined for LUHPPL

Addressing

- ✓ TSS
- ✓ Maintenance



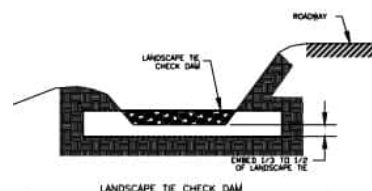
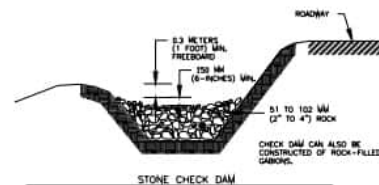
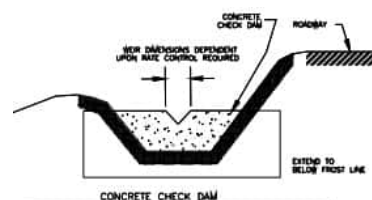
adapted from the Vermont Stormwater Handbook

❑ Check Dam

- Low \$
- Excellent for swales
- Consider solid bottom

Addressing

- ❖ Recharge
- ✓ TSS
- ✓ Redevelop
- ✓ Maintenance



Examples of Check Dams

April 1, 2023

Joe Nihill, Project Manager/Civil Engineer
Town of North Attleboro
49 Whiting Street
North Attleboro, MA 02760

Re: North Attleboro, MA – Dry-Weather Outfall Sampling

Dear Mr. Nihill:

BETA Group is pleased to present this outfall sampling memo summarizing dry-weather stormwater sampling conducted on outfalls in the regulated municipal separate storm sewer system (MS4) system in March 2023.

INTRODUCTION

BETA met with Town staff and performed dry-weather stormwater sampling at outfalls designated to be flowing during dry-weather conditions from the Town's outfall screening process. Samples were taken from 29 outfalls which are presented in Table 1 which lists the outfalls identified for sampling and their existing sampling attributes such as sample structure ID and associated received water impairments according to Massachusetts Year 2018/2020 Integrated List of Waters.

Table 1: Outfalls sampled in 2023 based on Town's outfall screening process

Street Address	Outfall Object ID	Sampled Structure ID	Receiving Water	Receiving Water AU_ID	Impairments
15 John L Dietsch Boulevard	1408	CB 17258	Bungay River	MA52-06	Benthic Macroinvertebrates, Dissolved Oxygen
98 Stanson Drive	1437	OF 1437	Bungay River	MA52-06	
35 Dogwood Lane	1439	OF 1439	Bungay River	MA52-06	
185 Mary Ann Way	1482	OF 1482	Bungay River	MA52-06	
249 Landry Avenue	1557	OF 1557	Bungay River	MA52-06	
20 Alice Agnew Drive	1560	OF 1560	Bungay River	MA52-06	
20 Alice Agnew Drive	1561	OF 1561	Bungay River	MA52-06	
16 Mendon Road	1623	OF 1623	Abbott Run	RI0001006R-01A	Cadmium
581 Hickory Road	1676	OF 1676	Abbott Run	RI0001006R-01A	
70 West Barn Road	1883	OF 1883	Abbott Run	RI0001006R-01A	
35 West Barn Road	1884	OF 1884	Abbott Run	RI0001006R-01A	
82 Farm Hill Road	1885	DMH 6618	Abbott Run	RI0001006R-01A	
112 Germaine Drive	1887	CB 17683	Abbott Run	RI0001006R-01A	
16 Mendon Road	1906	OF 1906	Abbott Run	RI0001006R-01A	
224 S Washington Street	1470	OF 1470	Ten Mile River	MA52-02	E.Coli, Fecal Coliform, Metals (Cd, Pb, Al, Fe)
21 East Street	1550	DMH 7224	Ten Mile River	MA52-02	
300 Elmwood Street	1589	OF 1589	Ten Mile River	MA52-02	
89 Circular Street	1791	OF 1791	Ten Mile River	MA52-02	
99 West Street	1890	OF 1890	Ten Mile River	MA52-02	
564 Landry Avenue	1549	OF 1549	Ten Mile River	MA52-03	Aquatic Plants (Macrophytes), Water Chestnut, Algae, Benthic Macroinvertebrates, Chlordane in Fish Tissue, DO, E.Coli, Fecal Coliform, Nutrient/Eutrophication Biological Indicators, Organic Enrichment (Sewage) Biological Indicators, Total Phosphorus, Unspecified Metals in Sediment
81 Cottage Street	1827	OF 1827	Ten Mile River	MA52-03	
253 Commonwealth Avenue	1860	OF 1860	Ten Mile River	MA52-03	
340 Paine Road	1894	OF 1894	Ten Mile River	MA52-03	
253 Commonwealth Avenue	1919	DMH 6510	Ten Mile River	MA52-03	
373 Hickory Road	1740	OF 1740	Sevenmile River	MA52-07	E.Coli
12 Partridge Circle	1761	OF 1761	Sevenmile River	MA52-07	
106 Roland Baxter Road	1776	OF 1776	Sevenmile River	MA52-07	
21 Winsor Drive	1627	OF 1627	Sevenmile River	MA52-08	Benthic Macroinvertebrates, E.Coli, Fecal Coliform
253 Cliff Drive	1850	OF 1850	Turnpike Lake	-	-

METHODOLOGY

BETA visited 53 outfall sampling sites during dry-weather conditions (<0.25" of precipitation in the last 24 hours) to visually screen and sample for the presence of flow, or other sanitary/septic indicators. If an outfall was inaccessible or partially submerged with no discernible flow, the nearest discharging drain structure was sampled instead and is identified in the "Sampled Structure ID" column in Table 1.

Dry-weather sampling followed standard operating procedures recommended by the United States Environmental Protection Agency (EPA). Field tests and laboratory analysis for each pollutant were based on the outfall, its receiving water body, and the water body's impairments as noted in Table 1. Sampling results from this effort are provided in Attachment A. Field test methods and threshold limits for each pollutant are outlined in Appendix G of the 2016 Massachusetts MS4 permit.

FIELD SCREENING

BETA assisted Town staff in using field test kits to determine water quality information for surfactants, ammonia, and free chlorine. A water quality sampling monitor (YSI ProPlus) was used to measure specific conductivity, salinity, temperature, dissolved oxygen, and pH. Thresholds of concern for each parameter were set by the 2016 Massachusetts MS4 permit.

LABORATORY ANALYSIS

Samples were sent to Alpha Analytical, Inc. located in Westborough, MA to test for E.Coli, Fecal Coliform, Total Phosphorus, Total Metals, and Total Cadmium. Sample tests were dictated by the receiving water body and the receiving water impairments.

FINDINGS

Attachment A provides the sampling results from the March 2023 sampling. A more detailed table with field observations of each outfall location that was visited is provided in Attachment B.

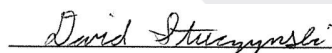
CONCLUSION

Based on the sampling results, 3 outfalls had E.Coli hits above the EPA's reporting limit threshold. Top-down catchment investigations will further isolate problem areas.

If we can be of any further assistance regarding this matter, please contact us at our office.

Very truly yours,
BETA Group, Inc.

Phil Paradis, PE
Senior Associate



David Stuczynski
Staff Engineer

Attachments:

- Attachment A: Outfall Sampling Results Matrix
- Attachment B: Outfall Dry-Weather Screening Findings 2023

Attachment A

Outfall Sampling Result Matrix

Attachment A: Outfall Sampling Results Matrix March 2023

North Attleboro Dry Weather Outfall Sampling															Appendix G Pollutants of Concern				
Street Name	Sample Date	Outfall Object ID	Sampled Structure Type	Sampled Structure Object ID	Receiving Waterbody	Receiving Waterbody AU_ID	Ammonia (mg/L)	Free (residual) Chlorine (mg/L)	Conductivity (µS/cm)	Salinity (ppt)	pH	Surfactant (mg/L)	Temperature (°C)	Dissolved Oxygen (mg/L)	E. coli (MPN/100mL)	Fecal Coliform (col./100ml)	Phosphorus (mg/L)	Total Metals (mg/L)	Total Cadmium (mg/L)
Reporting Limits							≥ 0.5 ⁽⁶⁾	> 0 ⁽⁶⁾	150-1500 ⁽¹⁾		6.5-8.5 ⁽²⁾	≥ 0.25 ⁽⁶⁾			≥ 235 ⁽³⁾	≥ 200 ⁽⁴⁾	≥ 0.100 ⁽⁵⁾		
Test Type							field test	field test	field instrument	field instrument	field instrument	field test	field instrument	field instrument	Lab	Lab	Lab	Lab	Lab
Equipment/glassware							Hach NI-SA	Hach CN-80	YSI556	YSI556	YSI556	Chemetrics K-9400	YSI556	YSI556					
15 John L Dietsch Boulevard	3/8/2023	1408	CB	17258	Bungay River	MA52-06	0.6	0	1920	1.48	6.22	1	8	7.41	80.88	ND			
98 Stanson Drive	3/8/2023	1437	OF	1437	Bungay River	MA52-06	0	0.04	388	0.29	6.76	0.25-0.50	6.5	9.06	12740				
35 Dogwood Lane	3/8/2023	1439	OF	1439	Bungay River	MA52-06	0	0	347	0.25	6.67	0.25-0.50	7.4	8.85	1046.24				
224 S Washington Street	3/16/2023	1470	OF	1470	Ten Mile River	MA52-02	0	0	243.9	0.18	6.67	0.25	7.2	10.11	63.82	52		Al: 0.09523; Cd: ND; Fe: 0.1067; Pb: ND	
185 Mary Ann Way	3/8/2023	1482	OF	1482	Bungay River	MA52-06	0	0.04	49.1	0.04	6.03	0.25	5.7	8.6	4.09	ND			
564 Landry Avenue	3/9/2023	1549	OF	1549	Ten Mile River	MA52-03	0	0	350.2	0.25	6.17	0.25-0.50	7.5	4.86	<1				
21 East Street	3/16/2023	1550	DMH	7224	Ten Mile River	MA52-02	0	0	821	0.57	6.22	0.25-0.50	10.6	4.89	1	ND		Al: 0.01000; Cd: 0.00020; Fe: 0.05592; Pb: 0.00167	
249 Landry Avenue	3/8/2023	1557	OF	1557	Bungay River	MA52-06	0	0.04	1560	1.23	7.22	0.5	6.9	10.13	6.26				
20 Alice Agnew Drive	3/8/2023	1560	OF	1560	Bungay River	MA52-06	0	0	576	0.41	6.4	0.25-0.50	9	8.32	<1				
20 Alice Agnew Drive	3/8/2023	1561	OF	1561	Bungay River	MA52-06	0	0	270	0.19	6.52	0.25-0.50	8.6	8.88	<1				
300 Elmwood Street	3/9/2023	1589	OF	1589	Ten Mile River	MA52-02	0-0.2	0	912	0.62	5.95	0.5	11	4.95	3.01				
16 Mendon Road	3/22/2023	1623	OF	1623	Abbott Run	RI0001006R-01A	0-0.2	0.04	239.7	0.16	7.31	0.25	10.8	9.09	<1				
21 Winsor Drive	3/22/2023	1627	OF	1627	Sevenmile River	MA52-08	0	0.04	322.2	0.21	6.67	0.25-0.50	11.2	8.98	<1				
581 Hickory Road	3/16/2023	1676	OF	1676	Abbott Run	RI0001006R-01A	0	0.08-0.12	466	0.33	6.64	0.25-0.50	9.1	9.35	2.02				
373 Hickory Road	3/16/2023	1740	OF	1740	Sevenmile River	MA52-07	0	0.12	185.6	0.13	6.43	0.25	9.2	8.69	5.21				
12 Partridge Circle	3/9/2023	1761	OF	1761	Sevenmile River	MA52-07	0	0.08	303.7	0.2	6.27	0.25-0.50	11	7.93	488.44				
106 Roland Baxter Road	3/16/2023	1776	OF	1776	Sevenmile River	MA52-07	0.2	0.04	266.7	0.19	5.95	0.25	7.8	8.5	12.23				
89 Circular Street	3/9/2023	1791	OF	1791	Ten Mile River	MA52-02	0	0.08-0.12	161.6	0.11	7.06	0-0.25	10.8	8.4	1				
81 Cottage Street	3/9/2023	1827	OF	1827	Ten Mile River	MA52-03	0	0	359	0.25	6.11	0.25-0.50	7.6	7.29	ND	ND	0.013		
253 Cliff Drive	3/8/2023	1850	OF	1850	Turnpike Lake	-	0	0.04	323.3	0.24	7.21	0.25-0.50	6.1	9.68	151.52				
253 Commonwealth Avenue	3/9/2023	1860	OF	1860	Ten Mile River	MA52-03	0	0.08-0.12	258	0.19	6.55	0.25	6.8	7.63	3.06	ND	0.016		
70 West Barn Road	3/22/2023	1883	OF	1883	Abbott Run	RI0001006R-01A	0	0.04	173.6	0.12	6.24	0.25	8.7	8.28	6.26				ND
35 West Barn Road	3/16/2023	1884	OF	1884	Abbott Run	RI0001006R-01A	0	0.16	244.9	0.16	6.25	0.25	11.9	8.96	2.02				
82 Farm Hill Road	3/16/2023	1885	DMH	6618	Abbott Run	RI0001006R-01A	0	0	269.4	0.19	6.64	0.25	8.3	9.12	<1				
112 Germaine Drive	3/22/2023	1887	CB	17863	Abbott Run	RI0001006R-01A	0	0.08	141.6	0.1	7.25	0.25-0.50	8.1	8.82	1				
99 West Street	3/16/2023	1890	OF	1890	Ten Mile River	MA52-02	0	0	248.8	0.17	7.16	0.25	8.5	8.87	77.12	56		Al: 0.02264; Cd: ND; Fe: ND; Pb: ND	
340 Paine Road	3/22/2023	1894	OF	1894	Ten Mile River	MA52-03	0	0	256	0.17	6.62	0.25-0.50	9.6	8.21	<1				ND
16 Mendon Road	3/22/2023	1906	OF	1906	Abbott Run	RI0001006R-01A	0	0.04	126.5	0.09	7.12	0.25	8.6	10.14	<1				
253 Commonwealth Avenue	3/9/2023	1919	DMH	6510	Ten Mile River	MA52-03	0	0	359	0.25	6.11	0.25	9.3	5.99	1	2	ND		

Water Body	Impairment (Massachusetts Integrated List of Waters for the Clean Water Act 2022 Reporting Cycle)
Ten Mile River (MA52-02)	E.Coli, Fecal Coliform, Metals [Cadmium (Cd), Lead (Pb), Aluminum (Al), Iron (Fe)]
Ten Mile River (MA52-03)	Aquatic Plants (Macrophytes), Water Chestnut, Algae, Benthic Macroinvertebrates, Chlordane in Fish Tissue, DO, E.Coli, Fecal Coliform, Nutrient/Eutrophication Biological Indicators, Organic Enrichment (Sewage) Biological Indicators, Total Phosphorus, Unspecified Metals in Sediment
Sevenmile River (MA52-07)	E.Coli
Sevenmile River (MA52-08)	Benthic Macroinvertebrates, E.Coli, Fecal Coliform
Bungay River	Benthic Macroinvertebrates, Dissolved Oxygen
Abbott Run	Cadmium

Note:

1. Distilled water has a conductivity in the range of 0.5 to 3 µmhos/cm. The conductivity of rivers in the United States generally ranges from 50 to 1500 µmhos/cm. Studies of inland fresh waters indicate that streams supporting good mixed fisheries have a range between 150 and 500 µhos/cm.
2. In general, a water with a pH < 7 is considered acidic and with a pH > 7 is considered basic. The normal range for pH in surface water systems is 6.5 to 8.5 and for groundwater systems 6 to 8.5.
3. Massachusetts Department of Public Health beach reporting limits for E. Coli is 235 cfu/100mL in freshwater. MPN/100 mL = CFU/100mL (difference in method, units equivalent).
4. Massachusetts Department of Public Health beach reporting limits for Fecal Coliform is 200 cfu/100mL.
5. US EPA acceptable range for Total Phosphorus in streams or other flowing waters not discharging directly to lakes or impoundments is <0.100 mg/L.
6. Likely sewer input indicators are any of the following:

- * Olfactory or visual evidence of sewage
- * Ammonia ≥ 0.5 mg/L, surfactants ≥ 0.25 mg/L, and bacteria levels greater than the water quality criteria applicable to the receiving water, or
- * Ammonia ≥ 0.5 mg/L, surfactants ≥ 0.25 mg/L, and detectable levels of chlorine.

Color Key

	Greater than Reporting Limits
	No sample collected
ND	Not detected at reporting limit for sample

Attachment B
Outfall Dry-Weather Screening Findings
2023

Attachment B: Outfall Dry-Weather Screening Findings 2023												Legend:		: Flowing		: Not Flowing		: Culvert Only (no structures connected)				
OBJECT ID	Original Inspection Date	StreetName	Pipe Size	Pipe Material	Pipe Shape	Pipe Condition	Outfall Type	Outfall Material	Outfall Condition	Outfall Issues	Weather	Dry Weather Screening	Sediment Accumulation	Submerged In Water	Scouring	Algae Growth	Stressed Vegetation	Staining	Floatables	Oil Sheen	Odor	Turbidity
1408	1/19/2006 5:00	15 John L Dietsch Boulevard	15	RCP	Round	Good	Head Wall	Concrete	Good	None	Cloudy	Yes	No	Yes	No	No	No	Yes	Trash	No	None	No
1410	8/19/2022 18:17	40 Robert F Toner Boulevard	60	RCP	Round	Good	Flared End	Concrete	Good	None	Cloudy	No	-	-	-	-	-	-	-	-	-	-
1412	1/30/2006 5:00	451 Elm Street	36	RCP	Arch	Good	Pipe End	Concrete	Good	None	Cloudy	No	No	Yes	No	No	No	No	No	No	None	No
1437	12/15/2021 13:18	98 Stanson Drive	36	RCP	Round	Good	Pipe End	Concrete	Good	None	Cloudy	Yes	No	No	No	Yes	No	No	No	No	None	No
1438	12/15/2021 13:25	100 Kenneth Kostka Drive	36	RCP	Round	Good	Pipe End	Concrete	Good	None	Clear	No	Yes	No	No	Yes	No	No	No	No	None	No
1439	12/15/2021 14:57	35 Dogwood Lane	24	CMP	Round	Fair	Pipe End	Concrete	Fair	None	Cloudy	Yes	No	No	No	Yes	No	No	No	No	None	No
1440	12/15/2021 17:42	88 Landry Avenue	60	CMP	Arch	Good	Other	Concrete	Good	Debris	Clear	Yes	Yes	No	No	Yes	No	No	No	No	None	No
1470	1/31/2006 5:00	224 S Washington Street	15	Concrete	Circular	Good	Head Wall	Concrete	Good	None	Clear	Yes	No	No	No	Yes	No	No	No	No	None	No
1471	1/31/2006 5:00	224 S Washington Street	15	Concrete	Circular	Good	Head Wall	Concrete	Good	None	Clear	Yes	No	No	No	Yes	No	No	No	No	None	No
1482	5/27/2022 15:01	185 Mary Ann Way	30	RCP	Round	Good	Wing Wall	Concrete	Good	None	Cloudy	Yes	No	No	No	Yes	No	Yes	Foam	Yes	None	No
1549	12/15/2021 15:25	564 Landry Avenue	12	RCP	Round	Fair	Pipe End	Concrete	Poor	Multiple Problems	Clear	Yes	Yes	No	No	Yes	No	Yes	No	Yes	None	No
1550	8/15/2022 12:13	21 East Street	18	RCP	Round	Good	Wing Wall	Concrete	Good	None	Clear	Yes	No	Yes	No	Yes	No	No	Trash	Yes	None	No
1552	12/15/2021 15:35	Landry Avenue	48	RCP	Rectangular	Good	Wing Wall	Concrete	Good	None	Clear	No	-	-	-	-	-	-	-	-	-	-
1554	12/15/2021 15:42	Landry Avenue	60	RCP	Rectangular	Good	Head Wall	Concrete	Good	None	Clear	No	-	-	-	-	-	-	-	-	-	-
1557	12/15/2021 17:23	249 Landry Avenue	24	CMP	Round	Good	Flared End	Concrete	Good	None	Cloudy	Yes	Yes	No	No	No	No	No	No	No	None	No
1558	12/15/2021 17:26	249 Landry Avenue	48	CMP	Arch	Good	Head Wall	Concrete	Good	None	Cloudy	No	-	-	-	-	-	-	-	-	-	-
1560	7/29/2022 11:38	20 Alice Agnew Drive	18	RCP	Round	Good	Head Wall	Concrete	Good	None	Cloudy	Yes	No	No	No	Yes	No	No	No	No	None	No
1561	7/29/2022 11:34	20 Alice Agnew Drive	36	RCP	Round	Good	Head Wall	Concrete	Good	None	Cloudy	Yes	No	No	No	Yes	No	Yes	No	No	None	No
1581	7/29/2022 11:57	1 Vaillancourt Drive	30	RCP	Round	Good	Head Wall	Concrete	Good	None	Cloudy	No	-	-	-	-	-	-	-	-	-	-
1589	12/2/2021 19:25	300 Elmwood Street	8	PVC	Round	Unknown	Unknown	Unknown	Poor	Major Blockage	Clear	Yes	Yes	Yes	No	Yes	No	No	Foam	No	None	No
1612	1/5/2022 15:11	43 Grandview Drive	12	RCP	Round	Fair	Pipe End	Concrete	Fair	Debris	Rain	No	No	Yes	No	No	No	No	No	No	None	No
1614	1/5/2022 15:09	43 Grandview Drive	20	RCP	Round	Fair	Pipe End	Concrete	Fair	None	Rain	No	No	Yes	No	No	No	No	No	No	None	No
1620	1/5/2022 15:15	91 Adamsdale Road	15	RCP	Round	Good	Pipe End	Concrete	Good	None	Clear	No	-	-	-	-	-	-	-	-	-	-
1621	1/5/2022 15:14	91 Adamsdale Road	15	RCP	Round	Good	Pipe End	Concrete	Good	None	Clear	No	-	-	-	-	-	-	-	-	-	-
1623	7/12/2022 16:03	16 Mendon Road	24	Concrete	Circular	Poor	Pipe End	Concrete	Poor	None	Clear	Yes	Yes	Yes	No	Yes	No	No	No	No	None	No
1627	1/5/2022 15:43	21 Winsor Drive	18	RCP	Round	Good	Wing Wall	Concrete	Fair	None	Rain	No	No	No	No	Yes	No	No	No	No	None	No
1635	8/3/2022 13:59	447 Cushman Road	10	UNKNOWN	Unknown		Head Wall	Stone	Fair	None	Clear	No	Yes	Yes	No	No	No	No	No	No	None	No
1644	8/4/2022 17:08	297 Paine Road	30	RCP	Arch	Good	Head Wall	Concrete	Good	None	Clear	No	-	-	-	-	-	-	-	-	-	-
1676	12/2/2021 17:32	581 Hickory Road	12	RCP	Round	Good	Wing Wall	Concrete	Good	None	Clear	Yes	No	No	No	No	No	No	No	No	None	No
1677	12/2/2021 17:30	581 Hickory Road	36	RCP	Round	Good	Wing Wall	Concrete	Good	None	Clear	No	No	No	No	No	No	No	No	No	None	No
1678	12/2/2021 17:37	461 Hickory Road	10	RCP	Round	Good	Head Wall	Concrete	Good	None	Clear	No	Yes	Yes	No	No	Yes	No	No	No	None	No
1679	12/2/2021 17:35	461 Hickory Road	15	RCP	Round	Good	Head Wall	Concrete	Good	None	Clear	Yes	Yes	Yes	No	No	No	No	No	No	None	No
1720	9/8/2022 14:00	307 Old Post Road	30	RCP	Round	Good	Wing Wall	Concrete	Good	None	Clear	No	Yes	Yes	No	No	No	No	No	No	None	No
1740	8/4/2022 17:30	373 Hickory Road	12	RCP	Round	Fair	Head Wall	Concrete	Good	None	Clear	Yes	No	No	No	No	No	No	No	No	None	No
1761	8/19/2022 13:40	12 Partridge Circle	30	RCP	Round	Good	Flared End	Concrete	Good	None	Clear	Yes	No	No	No	Yes	No	Yes	No	No	None	No
1791	1/26/2006 5:00	89 Circular Street	30	RCP	Round	Good	Flared End	Concrete	Good	None	Clear	Yes	No	No	No	Yes	No	No	Trash	No	None	No
1827	1/27/2006 5:00	81 Cottage Street	18	RCP	Round	Good	Flared End	Concrete	Good	None	Cloudy	Yes	Yes	No	No	No	No	No	No	No	None	No
1850	12/15/2021 13:07	253 Cliff Drive	12	RCP	Round	Good	Head Wall	Stone	Good	None	Cloudy	Yes	No	No	No	Yes	No	No	No	No	None	No
1860	7/1/2022 17:32	253 Commonwealth Avenue	18	RCP	Round	Good	Flared End	Concrete	Good	None	Cloudy	Yes	No	No	No	Yes	No	No	No	No	None	No
1919	3/9/2023 0:00	253 Commonwealth Avenue	12	RCP	Round	Good	Pipe End	Concrete	Good	None	Cloudy	Yes	No	No	No	No	No	No	No	No	None	No
1883	11/30/2021 14:35	70 West Barn Road	15	CAP	Round	Good	Pipe End	Concrete	Good	None	Clear	Yes	Yes	Yes	No	No	No	No	No	No	None	No
1884	11/30/2021 14:46	35 West Barn Road	15	CAP	Round	Good	Flared End	Concrete	Good	None	Clear	Yes	Yes	Yes	No	Yes	No	No	No	No	None	No
1885	11/30/2021 14:58	82 Farm Hill Road	30	BITUM	Round	Good	Pipe End	Concrete	Good	Debris	Clear	Yes	Yes	Yes	No	No	No	No	No	No	None	No
1887	11/30/2021 15:16	112 Germaine Drive	24	BITUM	Round	Good	Pipe End	Concrete	Good	Major Blockage	Clear	Yes	Yes	Yes	No	No	No	No	No	No	None	No
1889	11/30/2021 15:38	70 Moran Street	10	CAP	Round	Poor	Pipe End	Concrete	Poor	Minor Blockage	Clear	Yes	Yes	No	No	No	No	No	No	No	None	No
1890	11/30/2021 15:40	99 West Street	10	CAP	Round	Good	Pipe End	Concrete	Good	None	Clear	Yes	No	No	No	No	No	No	No	No	None	No
1892	11/30/2021 16:24	15 Sheldonville Road	20	PVC	Round	Good	Pipe End	Other	Good	None	Clear	Yes	No	No	No	No	No	No	No	No	None	No
1894	11/30/2021 16:33	340 Paine Road	36	BITUM	Round	Good	Flared End	Concrete	Good	None	Clear	Yes	No	No	No	Yes	No	No	No	No	None	No
1897	11/30/2021 16:57	644 High Street	15	CAP	Round	Good	Pipe End	Concrete	Good	Debris	Clear	No	-	-	-	-	-	-	-	-	-	-
1906	7/12/2022 16:05	16 Mendon Road	18	RCP	Round	Good	Pipe End	Concrete	Good	None	Clear	Yes	No	No	No	No	No	No	No	No	None	No
1428	8/4/2022 18:43	15 Stanley Street	24	RCP	Round	Fair	Head Wall	Stone	Fair	None	Cloudy	No	-	-	-	-	-	-	-	-	-	-
1699	7/5/2022 4:00	Oak Knoll Drive	48	RCP	Round	Good	Flared End	Concrete	Good	None	Clear	No	-	-	-	-	-	-	-	-	-	-
1776	1/26/2006 5:00	106 Roland Baxter Road	24	Concrete	Eliptical	Good	Flared End	Concrete	Good	None	Clear	Yes	No	No	No	Yes	No	No	No	No	None	No

	CatchBasinID	StreetName	GrateStyle	BasinMaterial	HasArrow	GrateStyle	Weather	PercentFull	ScoopsWithClamShell	BasinMaterial	Problem1	Problem2	Problem3	InspectionResult	DateInspected	ObjectID
1	2266 11				Yes	Square	Dry	Greater	11	Block				OK	9/6/2023 16:23	40
2	2264 11				Yes	Square	Dry	Greater	12	Block	Grate	Ring		Problem	9/6/2023 16:11	35
3	2280 11	Esther Avenue		Block	Yes	Square	Dry	Less	3	Block				OK	9/6/2023 15:57	36
4	2325 10				Yes	Square	Dry	Greater	9	Block				OK	9/6/2023 15:40	28
5	2323 6	Ellen St		Block	Yes	Square	Dry	Full	14	Block				OK	9/6/2023 15:28	22
6	2321 6	George St		Block	Yes	Square	Dry	Less	7	Block				OK	9/6/2023 15:13	17
7	2319 5				Yes	Square	Dry	Greater	7	Block				Problem	9/6/2023 14:55	19
8	2320 5				Yes	Square	Dry	Full	3	Block				OK	9/6/2023 14:41	18
9	2322 6	George St		Block	Yes	Square	Dry	Less	7	Block	Ring			Problem	9/6/2023 14:32	16
10	2324 6	Ellen St		Block	Yes	Square	Dry	Less	7	Pre-Cast				OK	9/6/2023 14:21	23
11	2326 10				Yes	Square	Dry	Less	6	Block				OK	9/6/2023 14:11	30
12	2279 11	Esther Avenue		Block	Yes	D	Dry	Less	6	Block				OK	9/6/2023 13:24	34
13	2262 11				Yes	Square	Dry	Greater	14	Block				OK	9/6/2023 13:08	26
14	2260 11				Yes	D	Dry	Less	4	Block				OK	9/6/2023 12:50	27
15	2290 11	Roxanne Square		Block	Yes	Square	Dry	Full	16	Block				OK	9/6/2023 12:36	72
16	2286 11	Roxanne Square		Block	Yes	Square	Dry	Greater	19	Block				OK	9/6/2023 12:20	57
17	2285 11	Roxanne Square		Block	Yes	Square	Dry	Less	9	Block				OK	9/6/2023 12:03	69
18	2283 11	Roxanne Square		Block	Yes	Square	Dry	Less	3	Block				OK	9/6/2023 11:49	83
19	2294 11	Munroe Drive		Block	Yes	Square	Dry	Less	7	Block				OK	9/6/2023 11:39	84
20	2297 11	Willow Street		Block	Yes	Square	Dry	Less	0	Block				OK	9/5/2023 19:04	67
21	2295 11	Munroe Drive		Block	Yes	Square	Dry	Less	12	Block				OK	9/5/2023 19:03	64
22	2298 11	Willow Street		Block	Yes	Square	Dry	Less	2	Block				OK	9/5/2023 18:45	80
23	2299 11	Willow Street		Block	Yes	Square	Dry	Greater	12	Block				OK	9/5/2023 18:36	104
24	2304 11	Willow Street		Block	Yes	Double	Dry	Less	12	Pre-Cast				OK	9/5/2023 18:20	128
25	2301 11	Willow Street		Block	Yes	Double	Dry	Less	1	Pre-Cast				OK	9/5/2023 18:07	132
26	2302 11	Willow Street		Block	Yes	Double	Dry	Greater	22	Pre-Cast				OK	9/5/2023 18:01	135
27	2303 11	Willow Street		Block	Yes	Double	Dry	Less	6	Pre-Cast				OK	9/5/2023 17:41	133
28					Yes	Double	Dry	Less	12	Pre-Cast				OK	9/5/2023 17:32	2130
29	2307 11	Granite Street		Block	Yes	D	Dry	Less	4	Block				OK	9/5/2023 17:20	124
30	2309 11	Green Drive		Block	Yes	Square	Dry	Greater	9	Block				OK	9/5/2023 17:02	96
31	2284 11	Roxanne Square		Block	Yes	Square	Dry	Greater	12	Block				OK	9/5/2023 15:54	87
32	2288 11	Roxanne Square		Block	Yes	Square	Dry	Less	3	Block				OK	9/5/2023 15:21	56
33	2289 11	Roxanne Square		Block	Yes	Square	Dry	Less	2	Block				OK	9/5/2023 15:13	71
34	5501 33	Broadway		Block	Yes	D	Dry	Full	19	Block				OK	9/5/2023 14:22	415
35	5425 33	Broadway		Block	Yes	D	Dry	Less	7	Block				OK	9/5/2023 14:03	329
36	5426 33	Broadway		Block	Yes	D	Dry	Full	12	Block				OK	9/5/2023 13:51	331
37	5500 33	Broadway		Block	Yes	D	Dry	Full	21	Block				OK	9/5/2023 13:38	418
38	721 22	Broadway		Block	Yes	D	Dry	Full	11	Block	Pipe			UnOK	9/5/2023 12:55	319
39	719 22	Broadway		Block	Yes	D	Dry	Full	9	Block				OK	9/5/2023 12:45	313
40	713 22	Broadway		Block	Yes	D	Dry	Full	11	Block				OK	9/5/2023 12:35	245
41	714 22	Broadway		Block	Yes	D	Dry	Less	2	Block				OK	9/5/2023 12:14	250
42	717 22	Broadway		Block	Yes	D	Dry	Less	0	Block				OK	9/5/2023 12:04	282
43	720 22	Broadway		Block	Yes	D	Dry	Full	9	Block				OK	9/5/2023 11:44	312
44	722 22	Broadway		Block	Yes	D	Dry	Full	9	Block				OK	9/5/2023 11:26	320
45	2287 11	Roxanne Square		Block	Yes	Square	Dry	Full	19	Block				OK	9/3/2023 15:39	53
46	2308 11	Green Drive		Block	Yes	Square	Dry	Greater	5	Block				OK	9/2/2023 17:11	81
47	718 22	Broadway		Block	Yes	D	Dry	Greater	8	Block				OK	9/2/2023 12:03	284
48	809 55	Eddy Street		Block	Yes		Dry	Full	16		Grate			Problem	8/31/2023 19:14	630
49	839 55	Broadway		Stone	Yes	D	Dry	Less	5	Stone				OK	8/31/2023 18:42	670
50	838 55	Broadway		Stone	Yes	D	Dry	Full	5	Stone				OK	8/31/2023 18:28	666
51	837 55	Broadway		Block	Yes	D	Dry	Less	7	Brick				OK	8/31/2023 18:19	656
52	897 55	Broadway		Stone	Yes	D	Dry	Full	7	Stone				OK	8/31/2023 18:10	646
53	5508 33	Broadway		Block	Yes	D	Dry	Full	21	Block				OK	8/31/2023 17:52	447
54	898 55	Broadway		Stone	Yes	D	Dry	Full	6	Stone	Ring			Problem	8/31/2023 16:13	622
55	5787 44	Broadway		Stone	Yes	D	Dry	Full	5	Stone				OK	8/31/2023 15:48	607
56	5788 44	Broadway		Block	Yes	D	Dry			Stone				Vac	8/31/2023 15:46	603
57	5791 44	Broadway			Yes	Square	Dry	Greater	25	Block				OK	8/31/2023 15:24	523

58	329 44	Broadway	Block	Yes	Square	Dry	Greater	18	Block			OK	8/31/2023 15:03	509
59	328 44	Broadway	Block	Yes	Square	Dry	Less	12	Block			OK	8/31/2023 14:43	505
60	322 44	Broadway		Yes	D	Dry	Full					Vac	8/31/2023 14:29	497
61	5506 33	Broadway	Block	Yes	D	Dry	Less	9	Block			OK	8/31/2023 13:43	446
62	5505 33	Broadway	Brick	Yes	Round	Dry	Full	14	Brick			OK	8/31/2023 13:27	425
63	326 44	Broadway	Block	Yes	Square	Dry	Less	17	Pre-Cast			OK	8/31/2023 12:38	503
64	843 55	Broadway	Brick	Yes	D	Dry	Greater	10	Stone			OK	8/31/2023 12:20	682
65	844 55	Broad Street	Stone	Yes	D	Dry	Greater	5	Stone			OK	8/31/2023 12:09	683
66	841 55	Hunting Street	Brick	Yes	D	Dry	Less	2	Stone			OK	8/31/2023 11:59	681
67	842 55	Hunting Street	Stone	Yes	D	Dry	Less	5	Stone			UnOK	8/31/2023 11:51	680
68					Square	Dry	Less	1	Block			OK	8/31/2023 11:30	2129
69	2296 11	Munroe Drive	Block	Yes	Square	Dry	Full	26	Block			OK	8/29/2023 19:05	68
70	2293 11	Munroe Drive	Block	Yes	Square	Dry	Full	21	Block	Ring	Frame	Problem	8/29/2023 18:44	90
71	2372 11	Ledgebrook Road	Pre-Cast	Yes	Square	Dry	Less	8	Pre-Cast	Ring	Frame	Problem	8/29/2023 18:22	150
72	2311 11	Green Drive	Block	Yes	D	Dry	Greater	12	Block			OK	8/29/2023 18:10	107
73	2306 11	Granite Street	Block	Yes	D	Dry	Full	13	Block			OK	8/29/2023 17:57	119
74	2300 11	Willow Street	Block	Yes	Square	Wet	Full	12	Block			OK	8/29/2023 17:09	105
75	2310 11	Green Drive	Block	Yes	Square	Dry	Full	12	Block			OK	8/29/2023 16:58	99
76	2312 11	Green Drive	Block	Yes	Square	Dry	Greater	11	Block			OK	8/29/2023 15:59	109
77	2316 11	Winchester Circle	Pre-Cast	Yes	Square	Dry	Less	9	Pre-Cast			OK	8/29/2023 15:40	149
78	2313 11	Winchester Circle	Pre-Cast	Yes	Square	Dry	Less	9	Pre-Cast			OK	8/29/2023 15:26	140
79	2317 17			Yes	Square	Dry	Full	29	Pre-Cast			OK	8/29/2023 15:17	153
80	131 17	K. Kostka Drive	Block	Yes	D	Dry	Full	21	Block	Ring		Problem	8/29/2023 14:47	164
81	126 17	K. Kosta Drive	Block	Yes	D	Dry	Greater	12	Block			OK	8/29/2023 14:19	173
82	123 17	K. Kosta Drive	Block	Yes	D	Dry	Less	8	Block	Pipe		UnOK	8/29/2023 14:06	179
83	121 17	K. Kosta Drive	Block	Yes	D	Dry	Less	9	Block			OK	8/29/2023 13:55	186
84	118 17	K. Kosta Drive	Block	Yes	D	Dry	Full	21	Block	Ring		Problem	8/29/2023 13:05	184
85	127 17	K. Kosta Drive	Block	Yes	D	Dry	Greater	12	Block			OK	8/29/2023 12:45	171
86	124 17	K. Kosta Drive	Block	Yes	D	Dry	Less	12	Block			OK	8/29/2023 12:32	178
87	129 17	K. Kostka Drive	Block	Yes	D	Dry	Full	10	Block			OK	8/29/2023 12:19	167
88	132 17	K. Kostka Drive	Block	Yes	Square	Dry	Full	16	Block			OK	8/29/2023 12:06	162
89	2376 11	Ledgebrook Drive	Pre-Cast	Yes	Square	Dry	Less	10	Pre-Cast			OK	8/29/2023 11:45	144
90	2369 11	Ledgebrook Drive	Block	Yes	Square	Dry	Less	3	Pre-Cast			OK	8/29/2023 11:33	160
91	2373 11	Ledgebrook Drive	Pre-Cast	Yes	Square	Dry	Less	10	Pre-Cast			OK	8/28/2023 18:47	148
92	2377 11	Ledgebrook Drive	Pre-Cast	Yes	Square	Dry	Greater	19	Pre-Cast			OK	8/28/2023 18:35	141
93	2366 11	Stanson Drive	Block	Yes	Square	Dry	Less	9	Block			OK	8/28/2023 18:15	117
94	2365 11	Stanson Drive	Block	Yes	Square	Wet	Less	6	Block			OK	8/28/2023 18:04	123
95	2363 11	Stanson Drive	Block	Yes	Square	Dry	Less	8	Block			OK	8/28/2023 17:54	134
96	2362 16			Yes	Square	Dry	Less	9	Block			OK	8/28/2023 17:44	155
97	304 44	Broadway	Block	Yes	D	Dry	Less	12	Block			OK	8/28/2023 17:37	471
98	2360 16			Yes	Square	Dry	Less	5	Block	Pipe		UnOK	8/28/2023 17:34	158
99	2361 16				Square	Dry	Greater	17	Block			OK	8/28/2023 17:25	154
100	2364 11	Stanson Drive	Block	Yes	Square	Dry	Full	14	Block			OK	8/28/2023 17:08	131
101	5786 44	Broadway	Block	Yes	D	Dry		6	Block	Grate		Problem	8/28/2023 15:58	615
102	133 17	Sleepy Hollow Circle	Block	Yes	Square	Dry	Less	4	Block			OK	8/28/2023 15:49	185
103	134 17	Sleepy Hollow Circle	Block	Yes	Square	Dry	Less	6	Block			OK	8/28/2023 15:39	183
104				Yes	Square	Dry	Full	24	Block			OK	8/28/2023 15:11	47
105				Yes	Square	Dry	Full	20	Block			OK	8/28/2023 14:41	48
106	2331 10	Woodcrest Rd	Block	Yes	Square	Dry	Full	21	Block			OK	8/28/2023 14:22	54
107	2329 10	Woodcrest Rd	Block	Yes	Square	Dry	Full	18	Block			OK	8/28/2023 14:03	66
108	2327 10	Woodcrest Rd	Block	Yes	Square	Dry	Greater	8	Block			OK	8/28/2023 13:46	77
109	2328 10	Woodcrest Rd	Block	Yes	Square	Dry	Less	5	Block			OK	8/28/2023 13:03	75
110	2332 10	Woodcrest Rd	Block	Yes	Square	Dry	Greater	14	Block			OK	8/28/2023 12:40	50
111	2281 11	Byrnes Circle	Block	Yes	Square	Dry	Less	14	Block			OK	8/28/2023 12:24	51
112				Yes	D	Dry	Greater	12	Block			OK	8/28/2023 11:58	59
113				Yes	D	Dry	Greater	12	Block			Problem	8/28/2023 11:44	63
114	2341 10	Oakcrest Dr	Block	Yes	D	Dry	Less	10	Block			OK	8/28/2023 11:33	79
115	2370 11	Ledgebrook Drive	Pre-Cast	Yes	Square	Dry	Less	6	Pre-Cast			OK	8/27/2023 11:27	157

116	2367 11	Stanson Drive		Block	Yes	Square	Dry	Less	12	Block		OK	8/26/2023 16:57	115
117	2330 10	Woodcrest Rd		Block	Yes	Square	Dry	Greater	14	Block		OK	8/25/2023 12:53	62
118	1041 56	Chestnut Street		Block	Yes	Square	Dry	Greater	10	Pre-Cast		OK	8/24/2023 17:15	637
119	896 55	Broadway		Brick	Yes	D	Dry	Full	10	Block		OK	8/24/2023 16:06	647
120	2238 10				Yes	D	Dry	Less	8	Block		OK	8/22/2023 12:08	100
121	2337 10	Oakcrest Dr		Block	Yes	Square	Dry		0			OK	8/22/2023 11:52	112
122	2336 10	Oakcrest Dr		Block	Yes	Square	Dry		0			OK	8/22/2023 11:51	106
123					Yes	Square	Dry	Full	25	Block		OK	8/21/2023 19:08	2128
124					Yes	Square	Dry	Full	25	Block		OK	8/21/2023 19:07	2127
125					Yes	Square	Dry	Full	40	Pre-Cast	Problem		8/21/2023 18:38	2102
126	2516 116	Mendon Road		Block	Yes	D	Dry	Full	12	Stone		OK	8/21/2023 17:48	1637
127					Yes	Square	Dry	Full	36	Pre-Cast		OK	8/21/2023 17:27	2101
128	645 22	West Street		Block	Yes	Square	Dry	Less	3	Block		OK	8/21/2023 15:19	293
129	1352 23	School Street		Brick	Yes	D	Dry	Less	5	Stone		OK	8/21/2023 15:05	281
130	663 22	Broad Street	Square	Block	Yes	Square	Dry	Less	2	Block		OK	8/21/2023 14:42	267
131	662 22	School Street	Square	Block	Yes	Square	Dry	Less	2	Block		OK	8/21/2023 14:42	269
132	661 22	School Street	Square	Block	Yes	Square	Dry	Greater	8	Block		OK	8/21/2023 14:41	273
133	660 22	Broad Street	Square	Block	Yes	Square	Dry	Greater	11	Block		OK	8/21/2023 14:12	274
134	666 22	Broad Street	Square	Block	Yes	Square	Dry	Less	1	Block		OK	8/21/2023 13:58	272
135	665 22	School Street	Square	Block	Yes	Square	Dry	Less	1	Block		OK	8/21/2023 13:57	270
136	664 22	Broad Street	Square	Block	Yes	Square	Dry	Less	1	Block		OK	8/21/2023 13:56	266
137					No	Square	Dry	Greater	20	Block		OK	8/21/2023 12:08	1984
138	10003 44				Yes	Square	Dry	Less	4	Block		OK	8/21/2023 11:39	498
139	10001 44				Yes	D	Dry	Less	6	Brick		OK	8/21/2023 11:24	496
140	2239 10				Yes	D	Dry	Greater	9	Block	UnOK		8/17/2023 18:58	98
141	2342 10	Oakcrest Dr		Block	Yes	D	Dry	Full	10	Block		OK	8/17/2023 18:46	76
142					Yes	D	Dry	Greater	9	Block		OK	8/17/2023 18:34	60
143					Yes	D	Dry	Full	14	Block		OK	8/17/2023 18:24	58
144	2358 11	R. Hall Drive		Block	Yes	D	Dry	Full	12	Block		OK	8/17/2023 18:06	102
145	2356 10	R Hall Dr		Block	Yes	D	Dry	Greater	10	Block		OK	8/17/2023 17:52	110
146	2354 10	R Hall Dr		Block	Yes	D	Dry	Greater	11	Block		OK	8/17/2023 17:40	126
147	2351 10	R Hall Dr		Block	Yes	D	Dry	Full	10	Block		OK	8/17/2023 17:26	147
148					Yes	D	Dry	Full	14	Block		OK	8/17/2023 17:15	159
149	1475 16	Raymond Hall Drive		Block	Yes	Square	Dry	Full	20	Block		OK	8/17/2023 17:01	165
150	2349 16				Yes	D	Dry	Less	0	Block		OK	8/17/2023 15:49	156
151	2352 10	R Hall Drive		Block	Yes	Round	Dry	Less	2	Block		OK	8/17/2023 15:40	146
152	2396 10	Stonehill Rd		Block	Yes	D	Dry	Less	3	Block	Problem		8/17/2023 15:28	125
153	2397 10	Stonehill Rd		Block	Yes	D	Dry	Less	3	Block	UnOK		8/17/2023 15:17	103
154					Yes	Square	Dry	Full	14	Block		OK	8/17/2023 15:09	2126
155					Yes	Square	Dry		21	Pre-Cast		OK	8/17/2023 15:06	91
156					Yes	Square	Dry	Less	4	Block	Pipe	UnOK	8/17/2023 14:42	92
157	2395 10	Stonehill Rd		Block	Yes	D	Dry	Less	9	Block		OK	8/17/2023 14:35	122
158	2352 10	R Hall Drive		Block	Yes	Square	Dry	Less	5	Block		OK	8/17/2023 14:20	145
159	2353 10	R Hall Dr		Block	Yes	D	Dry	Full	6	Block		OK	8/17/2023 14:08	121
160	2355 10	R Hall Dr		Block	Yes	D	Dry	Full	5	Pre-Cast		OK	8/17/2023 13:55	108
161	2357 11	R. Hall Drive		Block	Yes	D	Dry	Full	24	Block		OK	8/17/2023 13:46	101
162	1478 16	Raymond Hall Drive		Block	Yes	D	Dry	Full	10	Block		OK	8/17/2023 12:55	175
163	1476 16	Raymond Hall Drive		Block	Yes	D	Dry	Full	21	Block		OK	8/17/2023 12:41	163
164					Yes	Square	Dry	Less	2	Block		OK	8/17/2023 12:18	113
165	2388 10	Old Wood Rd		Block	Yes	Square	Dry	Less	7	Block		OK	8/17/2023 12:12	127
166	2385 10	Old Wood Rd		Block	Yes	Square	Dry	Less	3	Block		OK	8/17/2023 12:02	139
167					Yes	Square	Dry	Greater	9	Pre-Cast		OK	8/17/2023 11:54	151
168	1489 16	Wagon Wheel Road		Pre-Cast	Yes	Double	Dry	Full	25	Pre-Cast	Problem		8/17/2023 11:40	197
169	9999 10				No	Square	Wet	Less	8	Block		OK	8/16/2023 19:08	142
170	1480 16	Wagon Wheel Road		Block	No	Square	Wet	Less	6	Block	UnOK		8/16/2023 18:57	161
171	1482 16	Wagon Wheel Road		Block	Yes	Square	Dry	Less	12	Pre-Cast		OK	8/16/2023 18:46	188
172	1485 16	Wagon Wheel Road		Pre-Cast	Yes	Square	Dry	Less	5	Pre-Cast		OK	8/16/2023 18:37	192
173	1488 16	Wagon Wheel Road		Pre-Cast	Yes	Square	Dry	Less	10	Pre-Cast		OK	8/16/2023 18:29	196

174	1493 16	Wagon Wheel Road	Pre-Cast	Yes	Square	Dry	Less	7	Pre-Cast		OK	8/16/2023 18:15	198	
175				Yes	Square	Dry	Less	7	Pre-Cast		OK	8/16/2023 18:01	2115	
176				Yes	Square	Dry	Less	8	Pre-Cast		OK	8/16/2023 18:00	2116	
177				Yes	Square	Dry	Less	9	Pre-Cast		OK	8/16/2023 17:43	2119	
178				Yes	Square	Dry	Less	6	Pre-Cast		OK	8/16/2023 17:09	2121	
179				Yes	Square	Dry	Less	12	Pre-Cast		OK	8/16/2023 17:01	2123	
180	1494 16	Wagon Wheel Road	Pre-Cast	Yes	Square	Wet	Less	13	Block		OK	8/16/2023 16:50	199	
181	1486 16	Wagon Wheel Road	Pre-Cast	Yes	Double	Wet	Full	32	Pre-Cast		OK	8/16/2023 15:58	193	
182	1479 16	Wagon Wheel Road	Block	Yes	D	Wet	Full	8	Block		OK	8/16/2023 15:30	174	
183	9999 10			No	Square	Wet	Less	12	Block	Pipe	Problem	8/16/2023 15:17	143	
184	1483 16	Wagon Wheel Road	Block	Yes	Square	Wet	Greater	19	Block	Frame	Problem	8/16/2023 14:36	189	
185	1477 16	Raymond Hall Drive	Block	No	D	Wet	Greater	14	Block		OK	8/16/2023 14:19	172	
186	1300 16	Dogwood Lane	Block	Yes	Square	Wet	Less	7	Block		OK	8/16/2023 13:59	180	
187	1469 16	Dogwood Lane	Block	Yes	Square	Wet	Greater	14	Block		OK	8/16/2023 13:45	176	
188	1472 16	Dogwood Lane	Block	Yes	Square	Wet	Greater	16	Block		OK	8/16/2023 13:34	169	
189	1474 16	Dogwood Lane	Block	Yes	Square	Wet	Full	18	Block	Top	Pipe	Problem	8/16/2023 12:28	166
190	1473 16	Dogwood Lane	Block	Yes	Square	Wet	Full	23	Block		Problem	8/16/2023 12:08	170	
191	1470 16	Dogwood Lane	Block	Yes	Square	Wet	Greater	14	Block		OK	8/16/2023 11:52	177	
192	1466 16	Dogwood Lane	Block	Yes	Square	Wet	Less	10	Block		OK	8/16/2023 11:37	181	
193	1295 16	Teaberry Lane	Block	Yes	Square	Wet	Less	4	Block		OK	8/16/2023 11:25	191	
194	1296 16	Teaberry Lane	Block	Yes	Square	Dry	Less	5	Block		Problem	8/14/2023 12:14	187	
195	1297 16	Teaberry Lane	Block	Yes	Square	Dry	Less	6	Block		OK	8/14/2023 12:05	190	
196	1292 16	Blackberry Road	Block	Yes	Square	Dry	Less	5	Block		OK	8/14/2023 11:54	194	
197	1291 16	Blackberry Road	Block	Yes	Square	Dry	Less	1	Block		OK	8/14/2023 11:44	200	
198	1389 25	Sumac Lane	Block	Yes	Square	Dry	Full	14	Block		OK	8/14/2023 11:37	232	
199	1391 25	Sumac Lane	Block	Yes	Square	Dry	Full	14	Block		OK	8/14/2023 11:24	227	
200	1394 25	Sumac Lane	Block	Yes	Square	Dry	Greater	12	Block	Ring	Problem	8/10/2023 11:47	219	
201	1288 16	Sumac Lane	Block	Yes	Square	Dry	Less	14	Block		OK	8/10/2023 11:33	204	
202	1284 16	Blackberry Road	Block	Yes	Square	Dry	Less	1	Block		OK	8/10/2023 11:18	206	
203	1286 16	Sumac Lane	Block	Yes	Square	Dry	Less	12	Block		OK	8/9/2023 15:48	202	
204	1287 16	Sumac Lane	Block	Yes	Square	Dry	Greater	12	Block		OK	8/9/2023 15:37	203	
205	1289 16	Sumac Lane	Block	Yes	Square	Dry	Greater	7	Pre-Cast		OK	8/9/2023 15:25	205	
206	1390 25	Sumac Lane	Block	Yes	Square	Dry	Less	4	Block		OK	8/9/2023 15:01	226	
207	1388 25	Sumac Lane	Block	Yes	Square	Dry	Greater	18	Block		OK	8/9/2023 14:52	228	
208	1282 16	Blackberry Road	Block	Yes	Square	Dry	Less	3	Block		OK	8/9/2023 14:33	213	
209	1285 16	Blackberry Road	Block	Yes	Square	Dry	Less	4	Block		OK	8/9/2023 14:26	207	
210	1290 16	Blackberry Road	Block	Yes	Square	Dry	Less	11	Block		OK	8/9/2023 14:16	201	
211	1293 16	Blackberry Road	Block	Yes	Square	Dry	Less	14	Block		OK	8/9/2023 14:05	195	
212	1299 16	Blackberry Road	Block	Yes	Square	Dry	Less	8	Block		OK	8/9/2023 13:51	182	
213	1373 25	Vine Street	Block	Yes	Square	Dry	Less	12	Block		OK	8/9/2023 13:02	252	
214	1371 25	Vine Street	Pre-Cast	Yes	Square	Dry	Less	9	Block		OK	8/9/2023 12:51	235	
215	1367 25	Vine Street	Block	Yes	Square	Dry	Less	14	Block		OK	8/9/2023 12:42	215	
216	1281 16	Blackberry Road	Block	Yes	Square	Dry	Less	1	Block		OK	8/9/2023 12:41	211	
217	1977 17			Yes	Square	Dry	Less	0	Block		OK	8/9/2023 12:26	214	
218	1979 26	Blackberry Road	Block	Yes	Square	Dry	Less	12	Block		OK	8/9/2023 12:25	217	
219	1368 25	Vine Street	Block	Yes	Square	Dry	Less	3	Block		OK	8/9/2023 12:00	216	
220	1369 25	Vine Street	Block	Yes	Square	Dry	Less	3	Block		OK	8/9/2023 11:51	229	
221	1372 25	Vine Street	Block	Yes	Square	Dry	Less	11	Block		OK	8/9/2023 11:43	253	
222	1376 25	Old Wood Road South	Block	Yes	Square	Dry	Full	9	Block		Problem	8/9/2023 11:28	271	
223	1393 25	Sumac Lane	Block	Yes	Square	Dry	Less	14	Block		OK	8/7/2023 15:16	218	
224	1381 25	Old Wood Road South	Brick	Yes	Round	Dry	Greater	24	Pre-Cast		OK	8/7/2023 12:39	263	
225	1384 25	Old Wood Road South	Pre-Cast	Yes	Square	Dry	Less	12	Pre-Cast		OK	8/7/2023 12:16	239	
226	1386 25	Old Wood Road South	Pre-Cast	Yes	Square	Dry	Less	6	Block		OK	8/7/2023 11:55	221	
227	9999 34			No	Square	Dry	Full	30	Pre-Cast		OK	8/7/2023 11:38	399	
228	1497 16	Old Wood Road South	Block	Yes	Square	Dry	Less	10	Pre-Cast		OK	8/4/2023 12:06	209	
229	748 36	Landry Avenue	Block							Grate	Problem	7/5/2023 17:05	349	
230	1461 25	Landry Avenue	Block							Top	Problem	7/5/2023 15:47	318	
231	1399 25	Landry Avenue	Block							Curb	Top	7/5/2023 15:42	314	

232	1396 25	Landry Avenue		Block							Top	Curb	Problem	7/5/2023 15:38	296
233	1365 25	Landry Avenue		Block									Problem	7/5/2023 12:08	275
234											Top		Problem	7/5/2023 11:48	276
235	1400 25	Landry Avenue		Block									Problem	7/5/2023 11:30	315
236	1462 25	Landry Avenue		Block							Top		Problem	7/5/2023 11:23	322
237	740 36	Landry Avenue		Block		Round					Frame		Problem	6/28/2023 13:55	347
238	776 36	Landry Avenue		Block	Yes	Square	Wet				Grate		Problem	6/28/2023 12:38	383
239	747 36	Landry Avenue		Pre-Cast		Square	Wet				Ring		Problem	6/26/2023 13:36	351
240	1387 25	Old Wood Road South		Pre-Cast	Yes	Square	Dry	Less	9		Pre-Cast		OK	5/31/2023 15:31	222
241					Yes	Square	Dry	Less	11		Pre-Cast		OK	5/31/2023 15:04	2125
242					Yes	Square	Dry	Less	14		Pre-Cast		OK	5/31/2023 14:53	2114
243					Yes	Square	Dry	Less	11		Pre-Cast		OK	5/31/2023 14:38	2124
244					Yes	D	Dry	Less	11		Pre-Cast		OK	5/31/2023 14:29	2122
245					Yes	Square	Dry	Less	9		Pre-Cast		OK	5/31/2023 14:19	2120
246					No	Square	Dry	Less	12		Pre-Cast		OK	5/31/2023 14:08	2117
247					Yes	Square	Dry	Less	8		Pre-Cast		OK	5/31/2023 14:08	2118
248	2384 16				Yes	Square	Dry	Less	13		Block		OK	5/31/2023 13:49	152
249	2386 10	Old Wood Rd		Block	Yes	Square	Dry	Greater	14		Block		OK	5/31/2023 13:35	130
250					Yes	Square	Dry	Less	12		Pre-Cast		OK	5/31/2023 12:34	2113
251					No	Square	Dry	Less	13		Pre-Cast		OK	5/31/2023 12:20	2112
252	1496 16	Old Wood Road South		Block	Yes	Square	Dry	Less	13		Pre-Cast	Ring	Problem	5/31/2023 12:08	208
253	1383 25	Old Wood Road South		Pre-Cast	Yes	Square	Dry	Less	11		Pre-Cast		OK	5/31/2023 11:50	238
254	1380 25	Old Wood Road South		Pre-Cast	Yes	Square	Dry	Less	10		Block		OK	5/31/2023 11:42	262
255	1375 25	Old Wood Road South		Block	Yes	Square	Dry	Greater	12		Block		OK	5/31/2023 11:30	268
256														5/11/2023 12:25	2111
257	2256 6	Plain St	Square	Block	Yes	Square	Dry	Full	18		Pre-Cast	Grate	Problem	4/10/2023 18:40	11
258					No	Square	Dry	Less	17		Pre-Cast		OK	4/10/2023 17:25	669
259	1130 57	Union Street		Block	Yes	Square	Dry	Greater	15		Block		OK	4/10/2023 17:05	662
260	1131 57	Union Street		Block	Yes	Square	Dry	Full	14		Block	Pipe	Problem	4/10/2023 17:02	664
261	1129 57	Chestnut Street		Block	No	Square	Dry	Full	10		Block		OK	4/10/2023 12:35	660
262						Square					Block		OK	4/7/2023 13:38	2027
263	2992 95		Square	Block		Square					Block		OK	4/7/2023 13:36	1389
264			Double	Block	No	Double	Dry	Full	10		Block		OK	4/6/2023 15:59	2026
265	2992 95		D	Block	No	Square	Dry	Greater	10		Block		OK	4/6/2023 14:50	1386
266	2993 95		Square	Block	No	Square	Dry	Greater	10		Block		OK	4/6/2023 13:48	1385
267	2992 95		D	Block	No	Square	Dry	Full	10		Block		OK	4/5/2023 14:45	1388
268					Yes	Square	Dry	Full	31		Block		OK	2/16/2023 19:40	111
269	2392 10	Newell Dr		Block	Yes	D	Dry	Less	1		Block		OK	2/16/2023 19:15	138
270	2393 10	Newell Dr		Block	Yes	D	Dry	Less	12		Block	Pipe	UnOK	2/16/2023 19:08	136
271	2382 10	Fieldstone Ln		Block	Yes	Square	Dry	Less	9		Block		Problem	2/16/2023 18:48	114
272	2383 10	Fieldstone Ln		Block	Yes	Round	Dry	Less	9		Block		OK	2/16/2023 18:37	137
273	2379 10	Fieldstone Cir		Block	Yes	Square	Dry	Less	10		Block		OK	2/16/2023 18:26	120
274	2378 10	Fieldstone Cir		Block	Yes	Square	Dry	Less	8		Block		OK	2/16/2023 18:14	129
275	2380 10	Fieldstone Cir		Block	Yes	Square	Dry	Less	2		Block		OK	2/16/2023 16:54	118
276	2219 10	Cliff Dr		Block	Yes	D	Dry	Less	4		Block		OK	2/16/2023 16:08	52
277	2214 10	Cliff Dr		Block	Yes	Double	Dry	Less	2		Block		OK	2/16/2023 15:45	74
278	2215 10	Cliff Dr		Block	Yes	D	Dry	Less	4		Block		OK	2/16/2023 15:43	73
279	2213 10	Cliff Dr		Block	Yes	Round	Dry	Less	5		Block		OK	2/16/2023 15:13	78
280	2211 10	Cliff Dr		Block	Yes	D	Dry	Less	4		Block		OK	2/16/2023 14:58	86
281	2208 10	Cliff Dr		Block	Yes	Square	Dry	Less	14		Block		OK	2/16/2023 14:52	93
282	2203 10	Cliff Dr		Block	Yes	Square	Dry	Less	12		Block		OK	2/16/2023 14:51	94
283	2202 10	Cliff Dr		Block	Yes	Square	Dry	Less	7		Block		OK	2/16/2023 14:50	97
284	2206 10	Cliff Dr		Block	Yes	Square	Dry	Less	5		Block		OK	2/16/2023 14:48	85
285	2210 10	Cliff Dr		Block	Yes	D	Dry	Less	5		Block		OK	2/16/2023 14:43	95
286	2381 10	Fieldstone Ln		Block	Yes	Square	Dry	Less	4		Block		OK	2/13/2023 16:47	116
287	2221 10	Cliff Dr		Block	Yes	D	Dry	Less	12		Block		OK	2/13/2023 16:31	46
288	2217 10	Cliff Dr		Block	Yes	D	Dry	Less	9		Block		OK	2/13/2023 15:56	65
289	2212 10	Cliff Dr		Block	Yes	D	Dry	Less	1		Block		OK	2/13/2023 15:08	82

290	5781 44	Roosevelt Avenue	D	Block	Yes	D	Dry	Less	10	Block	OK	2/7/2023 20:42	608
291	5779 44	Roosevelt Avenue	D	Block	Yes	D	Dry	Less	10	Block	OK	2/7/2023 20:41	605
292			Round	Block	No	Round	Dry	Less		Block		2/7/2023 16:41	1885
293			Square	Block	No	Square	Dry	Less	10	Block	OK	2/7/2023 16:39	1886
294			Square	Block	No	Square	Dry	Less	10	Block	OK	2/7/2023 16:38	1887
295			Round	Block	No	Round	Dry	Less	10	Block	OK	2/7/2023 16:36	1888
296			Square	Block	No	Square	Dry	Less	10	Block	OK	2/7/2023 16:35	1889
297			Round	Block	No	Square	Dry	Less	10	Block	OK	2/7/2023 16:33	1904
298			Round	Block	No	Square	Dry	Less	10	Block	Problem	2/7/2023 16:31	1892
299	1885 38	Judith Drive		Block	Yes	Square	Dry	Less	10	Block	OK	2/6/2023 14:49	430
300	1884 38	Judith Drive		Block	Yes	Square	Dry	Less	10	Block	OK	2/6/2023 14:47	431
301			Round	Block	No	Square	Dry	Less	10	Block	Problem	1/31/2023 14:26	1891
302	1345 23	Washington Street	D	Block	Yes	D	Dry	Full	31	Pre-Cast	OK	1/9/2023 20:02	283
303	1343 23	Washington Street	Square	Block	Yes	Square	Dry	Less	4	Block	OK	1/9/2023 19:36	286
304	5463 33	Grove Street		Block	Yes	D	Dry	Greater	8	Brick	OK	1/9/2023 19:15	393
305	5462 33	Grove Street		Block	Yes	D	Dry	Less	7	Brick	OK	1/9/2023 19:02	389
306	5442 33	Broad Street		Brick	Yes	D	Dry	Less	9	Brick	OK	1/9/2023 18:47	353
307	5443 33	Broad Street		Brick	Yes	D	Dry	Greater	15	Brick	OK	1/9/2023 18:44	356
308	5466 33	Broad Street			Yes	D	Dry	Full	12	Brick	Problem	1/9/2023 16:36	395
309	5438 33	Leonard Street		Block	Yes	D	Dry	Less	2	Brick	OK	1/9/2023 16:09	370
310	5437 33	Leonard Street		Block	Yes	D	Dry	Less	15	Brick	OK	1/9/2023 15:59	368
311	1353 23	Park Street		Block	Yes	Square	Dry	Less	14	Block	OK	1/9/2023 15:35	280
312	1354 23	Park Street		Block	Yes	Square	Dry	Less	7	Block	OK	1/9/2023 15:13	279
313	668 22	Broad Street		Block	Yes	Square	Dry	Full	9	Block	OK	1/9/2023 14:33	243
314	669 22	Broad Street		Block	Yes	Square	Dry	Greater	8	Block	OK	1/9/2023 14:18	233
315	673 22	Moran Street		Block	Yes	Square	Dry	Less	2	Block	OK	1/9/2023 14:06	224
316	671 22	Moran Street		Block	Yes	Square	Dry	Greater	14	Block	OK	1/9/2023 13:59	220
317					Yes	D	Dry	Full	8	Brick	OK	1/9/2023 13:42	2108
318	670 22	Broad Street		Block	Yes	Square	Dry	Greater	7	Block	OK	1/9/2023 13:26	234
319	667 22	Broad Street		Block	Yes	Square	Dry	Less	6	Block	OK	1/9/2023 13:07	249
320	5441 33	Broad Street		Brick	Yes	D	Dry	Greater	9	Brick	OK	1/5/2023 19:48	354
321	644 22	Broad Street		Block	Yes	Square	Dry	Full	14	Block	OK	1/5/2023 19:33	299
322	643 22	Broad Street		Block	Yes	Square	Dry	Full	28	Block	OK	1/5/2023 18:35	297
323	642 22	West Street		Block	Yes	Square	Dry	Greater	14	Block	OK	1/5/2023 18:11	294
324	645 22	West Street		Block	No	Round	Dry	Less	4	Stone	OK	1/5/2023 16:55	292
325	652 22	West Street		Block	Yes	Square	Dry	Less	14	Block	OK	1/5/2023 16:30	295
326	654 22	West Street		Block	Yes	Square	Dry	Less	14	Block	OK	1/5/2023 15:41	303
327	656 22	West Street		Block	Yes	Square	Dry	Less	14	Pre-Cast	OK	1/5/2023 15:27	306
328	658 22	West Street		Block	Yes	Round	Dry	Full	16	Block	OK	1/5/2023 15:14	307
329	685 22	West Street		Block	Yes	D	Dry	Less	0	Block	OK	1/5/2023 14:55	301
330	686 22	West Street		Block	Yes	Square	Dry	Less	1	Block	OK	1/5/2023 14:51	298
331	690 22	West Street		Brick	Yes	Square	Dry	Less	0	Brick	OK	1/5/2023 14:45	287
332	691 22	West Street		Block	Yes	Square	Dry	Less	1	Block	OK	1/5/2023 14:38	278
333	695 22	West Street		Block	Yes	Square	Dry	Less	14	Pre-Cast	OK	1/5/2023 14:31	261
334	698 22	West Street		Block	Yes	Square	Dry	Less	7	Pre-Cast	OK	1/5/2023 14:13	256
335	702 22	West Street		Pre-Cast	Yes	Square	Wet	Greater	26	Pre-Cast	OK	1/5/2023 14:03	248
336	705 22	West Street		Pre-Cast	Yes	Square	Dry	Greater	18	Pre-Cast	OK	1/5/2023 13:40	242
337	707 22	West Street		Pre-Cast	Yes	Square	Dry	Greater	18	Pre-Cast	OK	1/5/2023 13:23	237
338	708 22	West Street		Pre-Cast	Yes	Square	Dry	Greater	15	Pre-Cast	OK	1/5/2023 13:03	236
339	706 22	West Street		Pre-Cast	Yes	Square	Dry	Full	38	Pre-Cast	OK	1/4/2023 19:39	241
340	703 22	West Street		Pre-Cast	Yes	Square	Dry	Less	5	Pre-Cast	OK	1/4/2023 19:18	246
341	699 22	West Street		Pre-Cast	Yes	Square	Dry	Less	4	Pre-Cast	OK	1/4/2023 19:10	255
342	696 22	West Street		Block	Yes	Square	Dry	Less	17	Pre-Cast	OK	1/4/2023 19:01	260
343	692 22	West Street		Block	Yes	Square	Dry	Less	10	Block	OK	1/4/2023 18:11	277
344	689 22	West Street		Block	Yes	Square	Dry	Less	16	Block	OK	1/4/2023 17:58	285
345	687 22	West Street		Block	Yes	Square	Dry	Full	22	Block	OK	1/4/2023 16:45	291
346	684 22	West Street		Block	Yes	Square	Dry	Less	0	Block	OK	1/4/2023 16:26	300
347	657 22	West Street		Block	Yes	Square	Dry	Greater	22	Block	OK	1/4/2023 16:20	305

348	655 22	West Street	Block	Yes	D	Dry	Greater	18	Brick	OK	1/4/2023 16:05	302	
349	653 22	West Street	Block	Yes	D	Dry	Greater	21	Brick	OK	1/4/2023 15:51	289	
350	650 22	West Street	Brick	Yes	D	Dry	Less	12	Brick	OK	1/4/2023 15:32	288	
351	641 22	West Street	Block	Yes	Square	Dry	Less	14	Block	OK	1/4/2023 15:18	290	
352	1825 38	H.darling Rd	Block	Yes	Square	Dry	Less	14	Block	OK	1/4/2023 14:20	381	
353	1827 38	H.darling Rd	Block	Yes	Square	Dry	Less	9	Block	OK	1/4/2023 14:06	384	
354	1829 39	H.darling Road	Block	Yes	Square	Wet	Less	14	Block	OK	1/4/2023 13:53	392	
355	1831 39	H.darling Road	Block	Yes	Square	Wet	Less	2	Block	OK	1/4/2023 13:38	401	
356	1833 39	Pollis Circle	Block	Yes	Square	Wet	Less	2	Block	OK	1/4/2023 13:37	419	
357	1830 39	H.darling Road	Block	Yes	Square	Wet	Less	4	Block	OK	1/4/2023 13:19	402	
358	1828 39	H.darling Road	Block	Yes	Square	Wet	Less	8	Block	OK	1/4/2023 13:08	396	
359	1826 38	H.darling Rd	Block	Yes	Square	Wet	Less	8	Block	OK	1/4/2023 12:55	386	
360	1824 38	H.darling Rd	Block	Yes	Square	Wet	Less	11	Block	OK	1/4/2023 12:43	382	
361				Yes	D	Dry	Less	1	Block	OK	12/29/2022 15:09	688	
362				Yes	D	Dry	Less	4	Block	OK	12/29/2022 15:08	684	
363				Yes	D	Dry	Less	6	Block	OK	12/29/2022 14:51	685	
364				Yes	D	Dry	Less	3	Block	OK	12/29/2022 14:50	689	
365	682 54	Metcalf Road	Block	Yes	D	Dry	Greater	16	Block	OK	12/29/2022 14:21	695	
366	2207 10	Cliff Dr	Block	Yes	Square	Dry	Less	6	Block	OK	12/29/2022 13:35	88	
367	2209 10	Cliff Dr	Block	Yes	D	Dry	Less	10	Block	OK	12/29/2022 13:23	89	
368	2216 10	Cliff Dr	Block	Yes	D	Dry	Less	10	Block	OK	12/29/2022 13:06	70	
369	2218 10	Cliff Dr	Block	Yes	D	Dry	Less	4	Block	Pipe	UnOK	12/29/2022 12:54	61
370				Yes	Square	Dry	Less	8	Block	OK	12/29/2022 2:15	29	
371	712 5	George Leven	Block	Yes	Square	Dry	Less	10	Block		12/29/2022 1:56	24	
372		Payson Ln	Square	Block	Yes	Square	Dry	Greater	14	Block	OK	12/28/2022 20:09	2110
373				Yes	Square	Dry	Greater	16	Block	OK	12/28/2022 19:32	44	
374				Yes	Square	Dry	Less	9	Block	OK	12/28/2022 18:28	42	
375				Yes	Square	Dry	Less	7	Block	OK	12/28/2022 18:27	43	
376	2220 10	Cliff Dr	Block	Yes	D	Dry	Less	4	Block	OK	12/28/2022 18:01	49	
377	2222 10	Cliff Dr	Block	Yes	D	Dry	Less	12	Block	OK	12/28/2022 16:57	45	
378	2226 10	Cliff Dr	Block	Yes	Square	Dry	Less	12	Block	OK	12/28/2022 16:37	33	
379	2225 10	Cliff Dr	Block	Yes	Square	Dry	Less	4	Block	OK	12/28/2022 16:18	37	
380	2223 10	Cliff Dr	Block	Yes	Square	Dry	Less	9	Block	OK	12/28/2022 16:08	39	
381				Yes	Square	Dry	Less	20	Block	OK	12/28/2022 15:54	38	
382	2228 10	Cliff Dr	Block	Yes	Square	Dry	Less	12	Block	OK	12/28/2022 15:34	31	
383	711 5	George Leven		Yes	Square	Dry	Less	14	Block	OK	12/28/2022 15:02	21	
384	713 5	George Leven	Block	Yes	Square	Dry	Less	14	Block	OK	12/28/2022 14:46	25	
385				Yes	Square	Dry	Less	9	Block	OK	12/28/2022 14:31	32	
386	710 5	George Leven	Block	Yes	Square	Dry	Less	6	Block		12/28/2022 13:41	20	
387				Yes	Square	Dry	Less	5	Block		12/8/2022 19:59	1661	
388				Yes	Square	Dry	Greater	16	Block		12/8/2022 19:43	705	
389				Yes	D	Dry	Less	5			12/8/2022 19:43	700	
390				Yes	D	Dry	Less	9	Stone		12/8/2022 19:42	707	
391	1179 58	Towne Street	Block	Yes	Square	Dry	Less	4	Block		12/8/2022 18:47	643	
392	1172 58	Wendy Drive	Pre-Cast	Yes	Square	Dry	Less	17	Block		12/8/2022 18:46	642	
393	1171 58	Wendy Drive	Pre-Cast	Yes	Square	Dry	Less	25	Pre-Cast		12/8/2022 18:15	641	
394				Yes	Square	Dry	Less	14	Pre-Cast		12/8/2022 16:20	2109	
395	875 55	Hunting Street	Block	Yes	Square	Dry	Less	29	Block		12/8/2022 15:29	690	
396	874 55	Hunting Street	Block	Yes	Square	Dry	Less	10	Stone		12/8/2022 15:02	686	
397	5433 33	Pleasant Street	Brick	Yes	D	Dry	Less	16	Brick		12/8/2022 14:23	340	
398	5434 33	Circular Street	Brick	Yes	D	Dry	Greater	32	Brick		12/8/2022 14:21	343	
399	5431 33	Pleasant Street	Brick	Yes	D	Dry	Less	14	Brick		12/8/2022 14:19	338	
400	5430 33	Pleasant Street	Brick	Yes	D	Dry	Less	12	Brick		12/8/2022 14:19	334	
401	5432 33	Circular Street	Brick	Yes	D	Dry	Less	7	Brick		12/8/2022 14:18	333	
402				No	Square	Wet	Less	19	Pre-Cast		11/30/2022 19:39	770	
403	5356 67	Lyons Way	Block	No	Square	Wet	Less	28	Block		11/30/2022 19:20	764	
404				Yes	Square	Dry	Less	16	Block		11/30/2022 18:51	736	
405				Yes	Square	Dry	Less	20	Block		11/30/2022 18:32	1662	

406				Yes	Square	Dry	Less	21	Pre-Cast			11/30/2022 18:16	743		
407				Yes	Square	Dry	Less	0	Brick		OK	11/30/2022 17:59	758		
408	5361 67	Elm Street		Yes	Square	Dry	Greater	42	Pre-Cast			11/30/2022 16:47	763		
409				Yes	Square	Dry	Greater	42	Pre-Cast			11/30/2022 16:06	767		
410	5291 68	Commonwealth Avenue		Block	Yes	Square	Dry	Greater	30	Pre-Cast		11/30/2022 15:39	769		
411	5292 68	Commonwealth Avenue		Block	Yes	Square	Dry	Greater	29	Pre-Cast		11/30/2022 15:10	771		
412	1709 68	Commonwealth Avenue	Square	Block	Yes	Square	Dry	Less	10	Block		11/30/2022 14:30	778		
413	1712 68	Commonwealth Avenue	Square	Block	Yes	Square	Dry	Less	8	Block		11/30/2022 14:18	779		
414			Square	Pre-Cast	Yes	Square	Dry	Less	3	Block		11/30/2022 14:00	1947		
415			Square	Pre-Cast	Yes	Square	Dry	Less	4	Pre-Cast		11/30/2022 12:57	1948		
416			Square	Pre-Cast	Yes	Square	Dry	Less	4	Pre-Cast		11/30/2022 12:56	1946		
417	5287 68	Maple Street	Square	Block	Yes	Square	Dry	Less	7	Block		11/28/2022 13:58	772		
418	2234 7	Plain St		Pre-Cast	Yes	Square	Dry	Less	21	Pre-Cast		11/14/2022 19:53	10		
419	2253 6	Plain St	Square	Block	Yes	Square	Dry	Less	16	Block		11/14/2022 18:26	13		
420	2250 6	Plain St	Square	Block	Yes	Square	Dry	Greater	31	Pre-Cast		11/14/2022 16:14	6		
421				Yes	Square	Dry	Less	9	Pre-Cast			11/14/2022 15:15	1		
422				Yes	Square	Dry	Less	19	Pre-Cast			11/14/2022 14:48	2		
423	2241 7	Plain St		Yes	Square	Dry	Greater	40	Pre-Cast		OK	11/14/2022 13:17	4		
424	2236 7	Plain St		Yes	Square	Dry	Greater	48	Pre-Cast		OK	11/9/2022 20:03	5		
425	2238 7	Plain St		Block	Yes	Square	Dry	Greater	50	Pre-Cast	OK	11/9/2022 18:37	9		
426	2240 7	Plain St		Yes	Square	Dry	Greater	40	Pre-Cast		Problem	11/9/2022 16:49	8		
427	2245 7	Plain St		Yes	Square	Dry	Greater	31	Pre-Cast		OK	11/9/2022 15:50	7		
428	2251 6	Plain St	Square	Block	Yes	Square	Dry	Greater	16	Pre-Cast	Grate	Frame	Problem	11/9/2022 14:57	12
429	2254 6	Plain St	Square	Block	Yes	Square	Dry		6	Pre-Cast				11/9/2022 14:11	15
430	2257 6	Plain St	Square	Block	Yes	Square	Dry	Less	5	Pre-Cast				11/9/2022 13:55	14
431	5789 44	Broadway		Brick	Yes	D	Dry	Greater	6	Brick		Vac	10/31/2022 17:17	606	
432	5790 44	Broadway		Brick	Yes	D	Dry	Greater	6	Brick		Vac	10/31/2022 17:14	609	
433			Square	Pre-Cast	Yes	Square	Dry	Greater	14	Pre-Cast		OK	10/31/2022 12:53	1791	

4716

Totals

433

15" Orange Peel Bucket (Stetco) - 1.3 cu ft

total cu yds =

226.368

(NOTE: some basins were cleaned using vac truck - cu yds removed not counted)

1 scoop = 1.3CF

0.048 cu yds

OBJECTID	ID	OF_ID	Inspector	InspectionDate	Owner	Use	PipeSize	PipeMaterial	PipeShape	PipeCondition	OutfallType	OutfallMaterial	OutfallCondition	OutfallIssues	Weather	Discharging	DischargingTo	DischargeAmount	DischargeClarity	DischargeColor	GeneralNotes	SamplingRequired	SampleTaken	SampleDate	EColi	Chlorine	TotalNitrogen	Phosphorus	Surfactant	pH	Conductivity	Temperature	Salinity
1	1435	24	OF-24	DPW	5/24/2023 18:47	Town	Residential	24	RCP	Circular	Fair	Unknown	Unknown	None	Clear	Yes	Stream	Trickle	Clear	Clear	Inspection done upstream basin.	Yes	Yes	8/22/2023 17:07	0	0.0	0	0	0.25	6.32	462	20.2c	0.22
2	1974			DPW	5/24/2023 18:21			10	RCP	Round	Fair	Head Wall	Stone	Fair	Clear	No	River	None	N/A	N/A													
3	1973			DPW	5/24/2023 15:39			8	RCP	Round	Good	Unknown	Unknown	Unknown	Clear	No	Pond	None	N/A	N/A	Could not locate, inspection done at upstream basin												
4	1972			DPW	5/24/2023 15:15			10	RCP	Round	Fair	Unknown	Unknown	Unknown	Clear	No	Wetlands	None	N/A	N/A	Could not locate. inspection done at upstream basin												
5	1971			DPW	5/24/2023 15:02			10	RCP	Round	Fair	Unknown	Unknown	Unknown	Clear	No	Stream	None	N/A	N/A													
6	1970			DPW	5/24/2023 14:44			12	RCP	Round	Good	Wing Wall	Concrete	Good	Clear	No	Wetlands	None	N/A	N/A													
7	1969			DPW	5/24/2023 13:50			10	RCP	Round	Fair	Unknown	Unknown	Unknown	Clear	No	Wetlands	None	N/A	N/A	Inspection done at upstream basin												
8	1968			DPW	5/24/2023 13:39			18	CI	Round	Fair	Unknown	Unknown	Unknown	Clear	Yes	River	Moderate	Clear	Clear	Inspection done at upstream basin. Needs to be remapped		Yes	8/23/2023 12:56	.08		.5	7.25	358	18.8	.17		
9	1967			DPW	5/24/2023 13:20			10	RCP	Round	Fair	Pipe End	Stone	Fair	None	Clear	No	River	None	N/A	N/A												
10	1966			DPW	5/24/2023 12:18			10	RCP	Round	Fair	Head Wall	Stone	Fair	Damaged	Clear	No	River	None	N/A	N/A												
11	1965			DPW	5/24/2023 12:10			12	RCP	Round	Good	Flared End	Concrete	Good	None	Clear	No	Wetlands	None	N/A	N/A												
12	1964			DPW	5/24/2023 11:45			12	RCP	Round	Fair	Unknown	Unknown	Unknown	Clear	No	River	None	N/A	N/A	Inspection done at upstream basin												
13	1963			DPW	5/24/2023 11:38			12	RCP	Round	Fair	Unknown	Unknown	Unknown	Clear	No	River	None	N/A	Clear	Inspection done at upstream basin. Basin need's maintenance												
14	1962			DPW	5/24/2023 11:29			20	RCP	Round	Fair	Unknown	Unknown	Unknown	Clear	Unknown	River	Moderate	Clear	Clear	Inspection done at upstream manhole. Water was bubbly oil smell	Yes	Yes	8/23/2023 13:32	0		.25	6.52	338	18.5	.16		
15	1961			DPW	5/24/2023 11:22			12	RCP	Round	Fair	Pipe End	Unknown	Unknown	None	Clear	No	River	None	N/A	N/A	Inspection done at upstream manhole											
16	1960			DPW	5/24/2023 11:13			12	RCP	Round	Fair	Other	Unknown	Unknown	None	Clear	No	River	None	N/A	N/A	Outfall is under road. Inspection done at upstream basin											
17	1959			DPW	5/23/2023 19:11			12	RCP	Round	Good	Wing Wall	Concrete	Good	None	Clear	No	Detention Pond	None	N/A	N/A												
18	1958			DPW	5/23/2023 18:53			12	RCP	Round	Fair	Pipe End	Concrete	Fair	None	Clear	Yes	Stream	Trickle	Clear	Clear												
19	1957			DPW	5/23/2023 18:40			12	RCP	Round	Fair	Flared End	Concrete	Fair	None	Clear	No	Wetlands	None	N/A	N/A												
20	1975			DPW	5/23/2023 18:33			10	RCP	Round	Good	Unknown	Unknown	Unknown	None	Clear	No	Stream	None	N/A	N/A	Inspection done at upstream basin											
21	1956			DPW	5/23/2023 18:33			12	RCP	Round	Good	Head Wall	Concrete	Fair	None	Clear	No	Stream	None	N/A	N/A												
22	1955			DPW	5/23/2023 18:18			12	RCP	Round	Good	Flared End	Concrete	Fair	Debris	Clear	No	Wetlands	None	N/A	N/A	Yard waste											
23	1954			DPW	5/23/2023 17:53			15	RCP	Round	Good	Unknown	Unknown	Unknown	None	Clear	No	Detention Pond	None	N/A	N/A	Inspection done at upstream manhole											
24	1953			DPW	5/23/2023 17:33			12	RCP	Round	Good	Unknown	Unknown	Unknown	None	Clear	No	Wetlands	None	N/A	N/A	Could not locate outfall due to vegetation. Inspection done at upstream manhole											
25	1952			DPW	5/23/2023 17:31			24	RCP	Round	Good	Flared End	Concrete	Good	None	Clear	No	Detention Pond	None	N/A	N/A												
26	1951			DPW	5/23/2023 16:57			24	RCP	Round	Good	Unknown	Unknown	Unknown	None	Clear	Yes	Wetlands	Moderate	Clear	Clear	Inspection done at upstream manhole											
27	1950			DPW	5/23/2023 15:42			12	RCP	Round	Good	Head Wall	Concrete	Good	None	Clear	Yes	Wetlands	Moderate	Clear	Clear		Yes	8/23/2023 18:11	0		.25	6.12	315	16.14	.15		
28	1949			DPW	5/23/2023 15:37			12	RCP	Round	Fair	Unknown	Unknown	Unknown	Debris	Clear	No	Stream	None	N/A	N/A	Tree down where expected outfall is, could not locate inspection done at upstream manhole											
29	1948			DPW	5/23/2023 15:14			15	RCP	Round	Good	Flared End	Concrete	Fair	None	Clear	No	Wetlands	None	N/A	N/A												
30	1672	270	OF-270	DPW	5/23/2023 15:05	Town	Residential	10	PVC	Round	Good	Pipe End	Other	Good	None	Clear	No	Stream	None	N/A	N/A		No	No		0	0	0	0	0	0	0	0
31	1947			DPW	5/23/2023 15:04			12	RCP	Round	Good	Flared End	Concrete	Good	None	Clear	No	Stream	None	N/A	N/A	0											
32	1946			DPW	5/23/2023 14:56			15	RCP	Round	Good	Flared End	Concrete	Good	None	Clear	No	Wetlands	None	N/A	N/A												
33	1945			DPW	5/23/2023 14:52			15	RCP	Round	Good	Unknown	Unknown	Unknown	None	Clear	Unknown	Stream	Trickle	Clear	N/A	Could not locate outfall due to vegetation. Inspection done at upstream manhole											
34	1944			DPW	5/23/2023 14:39			12	RCP	Round	Good	Flared End	Concrete	Good	None	Clear	No	Wetlands	None	N/A	N/A												
35	1943			DPW	5/23/2023 14:27			10	RCP	Round	Good	Unknown	Unknown	Unknown	None	Clear	No	Wetlands	None	N/A	N/A	Could not locate outfall, inspection done at upstream basin											
36	1942			DPW	5/23/2023 14:19			8	STEEL	Round	Good	Head Wall	Concrete	Good	None	Clear	Unknown	Detention Pond	None	N/A	N/A	Fenced in, inspection done at upstream manhole											
37	1941			DPW	5/23/2023 13:40			24	STEEL	Round	Good	Head Wall	Concrete	Good	None	Clear	No	Other	None	N/A	N/A												
38	1940			DPW	5/23/2023 13:33			8	RCP	Round	Fair	Head Wall	Concrete	Fair	None	Clear	No	Detention Pond	None	N/A	N/A												
39	1939			DPW	5/23/2023 11:28			12	RCP	Round	Good	Flared End	Concrete	Good	None	Clear	Yes	Wetlands	Trickle	Clear	Clear												
40	1938			DPW	5/23/2023 11:20			12	RCP	Round	Good	Wing Wall	Concrete	Good	None	Clear	No	Wetlands	None	N/A	N/A												
41	1937			DPW	5/23/2023 11:18			12	RCP	Round	Good	Wing Wall	Concrete	Good	None	Clear	No	Wetlands	None	N/A	N/A												
42	1936			DPW	5/22/2023 19:05										None	Clear	No	Detention Pond	None	N/A	N/A												
43	1935			DPW	5/22/2023 19:04										None	Clear	No																
44	1934			DPW	5/22/2023 18:51			10	RCP	Round	Fair	Pipe End	Concrete	Fair	None	Clear	No	Stream	None	N/A	N/A												
45	1932			DPW	5/22/2023 17:05										None	Clear	No	Wetlands	None	N/A	N/A												
46	1927			DPW	5/22/2023 13:30										None	Clear	No	Wetlands	None	N/A	N/A												
47	1926			DPW	5/22/2023 12:21										None	Clear	No					Could not find headwall inspection taken from basin full of debris needs cleaning											
48	1925			DPW	5/22/2023 12:12							Head Wall		Poor	Major Blockage	Clear	Unknown	Wetlands	None	N/A	N/A	Inspection taken from basin #1891 27 dry											
49	1923			DPW	5/15/2023 18:31										Clear	Clear	No		None			Outfall buried only can see top of head wall											
50	1922			DPW	5/15/2023 18:27			12		Round	Good	Head Wall	Stone	Good	None	Clear	No		None			Inspection taken from manhole dry could not see fenced in											
51	1921			DPW	5/15/2023 18:15										None	Clear	Yes		Moderate			Inspection taken from basin #5140 68	Yes	Yes	8/22/2023 14:26	0	0		0.25-0.5	6.7	373	18.6c	0.8
52	1600	198	OF-198	DPW	5/15/2023 16:58	Town	Residential	24	Concrete	Circular	NULL	NULL	Unknown	Unknown	None	Clear	Yes					Inspection taken from manhole dry could not access backyard	No	No		0	0	0	0	0	0	0	0
53	1859		OF55-1	DPW	5/15/2023 15:53			12	UNKNOWN	Unknown					None	Clear	No	River	None	N/A	N/A	Could not locate,think it's under road inspection taken from basin #813 55 dry											
54	1842	443	OF-443	DPW	5/15/2023 15:39		Residential		UNKNOWN	Unknown		Unknown	Unknown	Unknown	Fenced In	Clear	No	Stream	None	N/A	N/A	Inspection taken from basin in parking lot dry	No	No		0	0	0	0	0	0	0	
55	1809	410	OF-410	DPW	5/15/2023 15:15	Town	Residential	12	CAP	Round	Good	Unknown	Unknown	Unknown	None	Cloudy	No	Wetlands	None	N/A	N/A	Pipe outlet buried. Inspection done at upstream basin	No	No		0	0	0	0	0	0	0	0
56	1852		OF24-5	DPW	5/15/2023 15:07			12	RCP	Round	Fair	Unknown	Unknown	Unknown	Unknown	Clear	No	Wetlands	None	N/A	N/A	Inspection done at upstream basin											
57	1849		OF11-1	DPW	5/15/2023 14:55			18	RCP	Round	Fair	Unknown	Unknown	Unknown	Fenced In	Clear	No	Wetlands	None	N/A	N/A	Inspection done at upstream basin											
58	1838	439	OF-439	DPW	5/15/2023 14:28	Town	Residential	15	RCP	Round	Good	Unknown	Unknown	Unknown	Fenced In	Clear	No	Wetlands	None	N/A	N/A	Inspection done at upstream manhole	No	No		0	0	0	0	0	0	0	0
59	1823	424	OF-424	DPW	5/15/2023 14:16	Town	Residential	12	RCP	Round	Good	Unknown	Unknown	Unknown	None	Clear	No	River	None	N/A	N/A	Can not get visual, under the bridge. Inspection done at upstream manhole	No	No		0	0	0	0	0	0	0	0
60	1821	422	OF-422																														

124	1414	3	OF-3	DPIW	9/8/2022 17:11	Town	Residential	15	RCP	Round	Good	Head Wall	Concrete	Good	None	Clear	No	Stream	None	N/A	N/A	0	No	No	0	0	0	0	0	0	0	0	0	0	0	
125	1845	446	OF-446	DPIW	9/8/2022 16:50			15	PVC	Round	Good	Other	Concrete	Good	Major Blockage	Clear	No	Wetlands	None	N/A	N/A	0	No	No	0	0	0	0	0	0	0	0	0	0		
126	1874		OF83-1	DPIW	9/8/2022 14:09			12	RCP	Round	Good	Flared End	Concrete	Good	None	Clear	No	Wetlands	None	N/A	N/A	0	No	No	0	0	0	0	0	0	0	0	0	0		
127	1720	318	OF-318	DPIW	9/8/2022 14:00	Town	Residential	30	RCP	Round	Good	Wing Wall	Concrete	Good	None	Clear	Yes	Wetlands	Moderate	Clear	Clear	0	No	No	0	0	0	0	0	0	0	0	0	0		
128	1879		OF104-3	DPIW	9/8/2022 13:43			12	RCP	Round	Fair	Pipe End	Concrete	Fair	Minor Blockage	Clear	No	River	None	N/A	N/A	0	No	No	0	0	0	0	0	0	0	0	0	0		
129	1775	374	OF-374	DPIW	9/8/2022 13:14	Town	Residential	12	RCP	Round	Fair	Pipe End	Concrete	Fair	None	Clear	No	Wetlands	None	N/A	N/A	0	No	No	0	0	0	0	0	0	0	0	0	0		
130	1584	182	OF-182	DPIW	8/19/2022 18:27	Town	Residential	15							None							Unable to locate	No	No	0	0	0	0	0	0	0	0	0	0	0	
131	1411	180	OF-180	DPIW	8/19/2022 18:14	Town	Residential	15	RCP	Round	Fair	Pipe End	Concrete	Fair	Buried Structure	Clear	No	Wetlands	None	N/A	N/A	Buried	No	No	0	0	0	0	0	0	0	0	0	0	0	
132	1539	128	OF-128	DPIW	8/19/2022 17:58	Town	Residential	12	RCP	Round	Fair	Wing Wall	Stone	Fair	Major Blockage	Clear	No	Wetlands	None	N/A	N/A	0	No	No	0	0	0	0	0	0	0	0	0	0	0	
133	1869			DPIW	8/19/2022 17:50			12	RCP	Round	Good	Pipe End	Concrete	Good	None	Clear	No	Wetlands	None	N/A	N/A	0	No	No	0	0	0	0	0	0	0	0	0	0	0	
134	1817	418	OF-418	DPIW	8/19/2022 17:43	Town	Residential	30	RCP	Round	Good	Unknown	Unknown	Unknown	Unknown	Clear	No	Wetlands	None	N/A	N/A	Inspection done at street manhole	No	No	0	0	0	0	0	0	0	0	0	0	0	0
135	1818	419	OF-419	DPIW	8/19/2022 17:35	Town	Residential	12	RCP	Round	Good	Unknown	Unknown	Good	None	Clear	No	Unknown	None	N/A	N/A	Report from basin	No	No	0	0	0	0	0	0	0	0	0	0	0	0
136	1420	9	OF-9	DPIW	8/19/2022 17:17	Town	Residential	12	RCP	Round	Good	Unknown	Concrete	Good	None	Clear	No	Unknown	None	N/A	N/A	Report from basin	No	No	0	0	0	0	0	0	0	0	0	0	0	0
137	1441	30	OF-30	DPIW	8/19/2022 17:05	Town	Residential	18	RCP	Round	Good	Flared End	Concrete	Good	None	Clear	No	Detention Pond	None	N/A	N/A	0	No	No	0	0	0	0	0	0	0	0	0	0	0	
138	1794	395	OF-395	DPIW	8/19/2022 15:45	Town	Residential	12	RCP	Round	Good	Unknown	Concrete	Unknown	None	Clear	No	Pond	None	N/A	N/A	Report taken from basin	No	No	0	0	0	0	0	0	0	0	0	0	0	0
139	1447	36	OF-36	DPIW	8/19/2022 15:38	Town	Residential	12	HDPE	Round	Good	Pipe End	HDPE	Good	None	Clear	No	Lake	None	N/A	N/A	0	No	No	0	0	0	0	0	0	0	0	0	0	0	
140	1795	396	OF-396	DPIW	8/19/2022 15:26	Town	Residential	16	RCP	Round	Good	Pipe End	Concrete	Good	None	Clear	No	Pond	None	N/A	N/A	0	No	No	0	0	0	0	0	0	0	0	0	0	0	
141	1917			DPIW	8/19/2022 15:19			4	CI	Round	Good	Head Wall	Stone	Good	None	Clear	No	River	None	N/A	N/A	0	No	No	0	0	0	0	0	0	0	0	0	0		
142	1916			DPIW	8/19/2022 15:17			12	CI	Round	Fair	Head Wall	Stone	Fair	None	Clear	No	River	None	N/A	N/A	0	No	No	0	0	0	0	0	0	0	0	0	0		
143	1451	40	OF-40	DPIW	8/19/2022 15:16	Town	Residential	10	RCP	Round	Good	Head Wall	Stone	Good	None	Clear	No	River	None	Clear	N/A	0	No	No	0	0	0	0	0	0	0	0	0	0	0	
144	1450	39	OF-39	DPIW	8/19/2022 15:14	Town	Residential	12	STEEL	Round	Good	Head Wall	Stone	Good	None	Clear	No	River	None	N/A	N/A	0	No	No	0	0	0	0	0	0	0	0	0	0	0	
145	1453	42	OF-42	DPIW	8/19/2022 15:08	Town	Residential	8	RCP	Round	Fair	Head Wall	Stone	Fair	None	Clear	No	River	None	N/A	N/A	0	No	No	0	0	0	0	0	0	0	0	0	0	0	
146	1452	41	OF-41	DPIW	8/19/2022 15:04	Town	Residential	8	PVC	Round	Fair	Head Wall	Stone	Fair	None	Clear	No	River	None	N/A	N/A	0	No	No	0	0	0	0	0	0	0	0	0	0	0	
147	1472	61	OF-61	DPIW	8/19/2022 14:35	Town	Residential	18	RCP	Round	Poor	Pipe End	Concrete	Poor	Major Blockage	Clear	No	Wetlands	None	N/A	N/A	0	No	No	0	0	0	0	0	0	0	0	0	0	0	
148	1853		OF33-1	DPIW	8/19/2022 14:12			20	HDPE	Round	Good	Pipe End	HDPE	Good	None	Clear	No	Wetlands	None	N/A	N/A	0	No	No	0	0	0	0	0	0	0	0	0	0	0	
149	1762	360	OF-360	DPIW	8/19/2022 13:52	Town	Residential	18	RCP	Round	Good	Flared End	Concrete	Fair	Minor Blockage	Clear	No	Detention Pond	None	N/A	N/A	0	No	No	0	0	0	0	0	0	0	0	0	0	0	
150	1761	359	OF-359	DPIW	8/19/2022 13:40	Town	Residential	30	RCP	Round	Good	Flared End	Concrete	Good	None	Clear	Yes	Wetlands	Drip	Cloudy	Brown	Orange and green algae	No	No	3/9/2023 19:26	0	0	0	0	0	0	0	0	0	0	0
151	1856		OF44-2	DPIW	8/19/2022 13:27			12	RCP	Round	Good	Flared End	Concrete	Fair	None	Clear	No	Stream	None	N/A	N/A	0	No	Yes	0	008	0	0	0.25/0.50	6.37	295	9.8	20			
152	1709	307	OF-307	DPIW	8/19/2022 13:15	Town	Residential	12							None							Dense vegetation unable to locate	No	No	0	0	0	0	0	0	0	0	0	0	0	0
153	1708	306	OF-306	DPIW	8/19/2022 13:06	Town	Residential	18	PVC	Round	Good	Unknown	Unknown	Unknown	None	Clear	No	Wetlands	None	N/A	N/A	0	No	No	0	0	0	0	0	0	0	0	0	0	0	
154	1663	261	OF-261	DPIW	8/19/2022 12:17	Town	Residential	18	RCP	Round	Good	Unknown	Unknown	Unknown	None	Clear	No	Wetlands	None	N/A	N/A	0	No	No	0	0	0	0	0	0	0	0	0	0	0	
155	1662	260	OF-260	DPIW	8/19/2022 12:13	Town	Residential	60	RCP	Arch	Good	Unknown	Unknown	Unknown	None	Clear	Unknown	Wetlands	None	N/A	N/A	Inspection done at street basin	No	No	0	0	0	0	0	0	0	0	0	0	0	0
156	1880		OF112-5	DPIW	8/19/2022 11:56			18	RCP	Round	Good	Unknown	Unknown	Unknown	None	Clear	No	Wetlands	None	N/A	N/A	Did inspection at street manhole	No	No	0	0	0	0	0	0	0	0	0	0	0	0
157	1862		OF67-6	DPIW	8/19/2022 11:25			12	RCP	Round	Fair	Head Wall	Stone	Fair	Damaged	Clear	No	River	None	N/A	N/A	0	No	No	0	0	0	0	0	0	0	0	0	0	0	
158	1864		OF74-1	DPIW	8/16/2022 17:57			12	RCP	Round	Broken	Head Wall	Concrete	Poor	Minor Blockage	Clear	No	Wetlands	None	N/A	N/A	Broken head wall heavy sediment pipe 2/3 full with sand	No	No	0	0	0	0	0	0	0	0	0	0	0	0
159	1723	321	OF-321	DPIW	8/16/2022 17:36	Town	Residential	10	UNKNOWN	Unknown	Broken	Unknown	Unknown	Unknown	Multiple Problems	Clear	No	Wetlands	None	N/A	N/A	Possible broken pipe that's buried	No	No	0	0	0	0	0	0	0	0	0	0	0	0
160	1787	388	OF-388	DPIW	8/16/2022 16:54	Town	Residential	12	UNKNOWN	Unknown	Unknown	Unknown	Unknown	Unknown	None	Clear	No	Wetlands	None	N/A	N/A	Under street could not see	No	No	0	0	0	0	0	0	0	0	0	0	0	0
161	1865		OF75-2	DPIW	8/15/2022 18:31			12	RCP	Round	Good	Head Wall	Concrete	Fair	Damaged	Clear	No	Lake	None	N/A	N/A	0	No	No	0	0	0	0	0	0	0	0	0	0	0	
162	1812	413	OF-413	DPIW	8/15/2022 18:18	Town	Residential	18	RCP	Round	Good	Flared End	Concrete	Good	None	Clear	No	Wetlands	None	N/A	N/A	0	No	No	0	0	0	0	0	0	0	0	0	0	0	0
163	1866			DPIW	8/15/2022 18:10			20	RCP	Round	Good	Head Wall	Corr-Metal	Good	None	Clear	No	Wetlands	None	N/A	N/A	0	No	No	0	0	0	0	0	0	0	0	0	0	0	
164	1875			DPIW	8/15/2022 17:52			12	RCP	Round	Good	Head Wall	Concrete	Good	None	Clear	No	Wetlands	None	N/A	N/A	0	No	No	0	0	0	0	0	0	0	0	0	0	0	
165	1871			DPIW	8/15/2022 17:47			24	RCP	Round	Good	Head Wall	Concrete	Fair	None	Clear	No	Wetlands	None	N/A	N/A	0	No	No	0	0	0	0	0	0	0	0	0	0	0	
166	1873			DPIW	8/15/2022 17:31			24	RCP	Round	Good	Pipe End	Concrete	Good	None	Clear	No	River	None	N/A	N/A	0	No	No	0	0	0	0	0	0	0	0	0	0	0	
167	1872			DPIW	8/15/2022 17:29			24	RCP	Round	Good	Pipe End	Concrete	Good	None	Clear	No	River	None	N/A	N/A	0	No	No	0	0	0	0	0	0	0	0	0	0	0	
168	1421	10	OF-10	DPIW	8/15/2022 15:18	Town	Residential	15	RCP	Round	Good	Pipe End	Concrete	Good	Minor Blockage	Clear	No	Wetlands	None	N/A	N/A	0	No	No	0	0	0	0	0	0	0	0	0	0	0	
169	1528	117	OF-117	DPIW	8/15/2022 14:31	Town	Residential	12	RCP	Round	Good	Pipe End	Concrete	Good	None	Clear	No	Wetlands	None	N/A	N/A	0	No	No	0	0	0	0	0	0	0	0	0	0	0	
170	1915			DPIW	8/15/2022 13:34			15	RCP	Round	Good	Flared End	Concrete	Good	None	Clear	No	Wetlands	None	N/A	N/A	0	No	No	0	0	0	0	0	0	0	0	0	0	0	
171	1835	436	OF-436	DPIW	8/15/2022 13:31	Town	Residential	15							Fenced In							0	No	No	0	0	0	0	0	0	0	0	0	0	0	
172	1550	139	OF-139	DPIW	8/15/2022 12:13	Town	Residential	18	RCP	Round	Good	Wing Wall	Concrete	Good	None	Clear	Yes	River	Moderate	Clear	Red	Sample taken at man hole near entrance	Yes	Yes	3/16/2023 13:40	0	0.0	0	0	0.25-0.5	6.33	827	11.1c	0.56		
173	1746	344	OF-344	DPIW	8/15/2022 11:47	Town	Residential	24	RCP	Round	Good	Pipe End	Concrete	Good	None	Clear	No	Stream	None	N/A	N/A	0	No	Yes	0	0	0	0	0	0	0	0	0	0	0	0
174	1745	343	OF-343	DPIW	8/15/2022 11:45	Town	Residential	18	RCP	Round	Good	Pipe End	Concrete	Good																						

248	1822	423	OF-423	DPW	7/29/2022 18:12	Town	Residential	12	RCP	Round	Good	Pipe End	Concrete	Good	None	Clear	No	River	None	N/A	N/A	0	No	No	0	0	0	0	0	0	0	0	0	0
249	1458	47	OF-47	DPW	7/29/2022 17:55	Town	Residential	12	RCP	Round	Good	Pipe End	Concrete	Fair	Minor Blockage	Clear	No	Wetlands	None	N/A	N/A	0	No	No	0	0	0	0	0	0	0	0	0	
250	1457	46	OF-46	DPW	7/29/2022 17:25	Town	Residential	12	RCP	Round	Good	Pipe End	Concrete	Fair	Major Blockage	Clear	No	Wetlands	None	N/A	N/A	0	No	No	0	0	0	0	0	0	0	0	0	
251	1910			DPW	7/29/2022 17:17			12	RCP	Round	Good	Pipe End	Concrete	Good	None	Clear	No	Detention Pond	None	N/A	N/A	0	No	No	0	0	0	0	0	0	0	0	0	
252	1909			DPW	7/29/2022 17:16			12	RCP	Round	Good	Pipe End	Concrete	Good	None	Clear	No	Detention Pond	None	N/A	N/A													
253	1456	45	OF-45	DPW	7/29/2022 17:13	Town	Residential	12	RCP	Round	Fair	Pipe End	Concrete	Fair	Major Blockage	Clear	No	Wetlands	None	N/A	N/A	0	No	No	0	0	0	0	0	0	0	0	0	
254	1719	317	OF-317	DPW	7/29/2022 16:59	Town	Residential	36	CMP	Round	Fair	Pipe End	Corr-Metal	Fair	Fenced In	Clear	No	Wetlands	None	N/A	N/A	0	No	No	0	0	0	0	0	0	0	0	0	
255	1735	333	OF-333	DPW	7/29/2022 16:44	Town	Residential	20	RCP	Round	Good	Pipe End	Concrete	Good	None	Clear	No	Wetlands	None	N/A	N/A	0	No	No	0	0	0	0	0	0	0	0	0	
256	1908			DPW	7/29/2022 16:34			15	RCP	Round	Good	Flared End	Concrete	Good	None	Clear	No	Wetlands	None	N/A	N/A	Found and added today												
257	1734	332	OF-332	DPW	7/29/2022 16:33	Town	Residential	12	RCP	Round	Good	Flared End	Concrete	Good	None	Clear	No	Wetlands	None	N/A	N/A	0	No	No	0	0	0	0	0	0	0	0	0	
258	1733	331	OF-331	DPW	7/29/2022 16:31	Town	Residential	8	PVC	Round	Good	Pipe End	HDPE	Good	Minor Blockage	Clear	No	Wetlands	None	N/A	N/A	0	No	No	0	0	0	0	0	0	0	0	0	
259	1732	330	OF-330	DPW	7/29/2022 16:24	Town	Residential	15	RCP	Round	Good	Flared End	Concrete	Good	None	Clear	No	Wetlands	None	N/A	N/A	0	No	No	0	0	0	0	0	0	0	0	0	
260	1907			DPW	7/29/2022 16:18			36	RCP	Round	Good	Head Wall	Concrete	Good	None	Clear	No	Wetlands	None	N/A	N/A													
261	1730	328	OF-328	DPW	7/29/2022 16:16	Town	Residential	12	RCP	Round	Good	Head Wall	Concrete	Good	None	Clear	No	Wetlands	None	N/A	N/A	0	No	No	0	0	0	0	0	0	0	0	0	
262	1799	400	OF-400	DPW	7/29/2022 15:01	Town	Residential	15	RCP	Round	Good	Flared End	Concrete	Good	None	Clear	No	Wetlands	None	N/A	N/A	0	No	No	0	0	0	0	0	0	0	0	0	
263	1800	401	OF-401	DPW	7/29/2022 15:00	Town	Residential	12	RCP	Round	Good	Flared End	Concrete	Good	None	Clear	No	Wetlands	None	N/A	N/A	0	No	No	0	0	0	0	0	0	0	0	0	
264	1803	404	OF-404	DPW	7/29/2022 14:54	Town	Residential	15	RCP	Round	Good	Head Wall	Concrete	Fair	None	Clear	No	Wetlands	None	N/A	N/A	0	No	No	0	0	0	0	0	0	0	0	0	
265	1801	402	OF-402	DPW	7/29/2022 14:52	Town	Residential	18	RCP	Round	Good	Head Wall	Concrete	Good	None	Clear	No	Wetlands	None	N/A	N/A	0	No	No	0	0	0	0	0	0	0	0	0	
266	1802	403	OF-403	DPW	7/29/2022 14:51	Town	Residential	15	RCP	Round	Good	Head Wall	Concrete	Fair	None	Clear	No	Wetlands	None	N/A	N/A	0	No	No	0	0	0	0	0	0	0	0	0	
267	1804	405	OF-405	DPW	7/29/2022 14:49	Town	Residential	15	RCP	Round	Good	Flared End	Concrete	Fair	None	Clear	No	Wetlands	None	N/A	N/A	0	No	No	0	0	0	0	0	0	0	0	0	
268	1570	159	OF-159	DPW	7/29/2022 14:20	Town	Residential	18	PVC	Round	Fair	Pipe End	HDPE	Fair	Minor Blockage	Clear	No	Wetlands	None	N/A	N/A	0	No	No	0	0	0	0	0	0	0	0	0	
269	1572	161	OF-161	DPW	7/29/2022 14:17	Town	Residential	24	RCP	Round	Good	Flared End	Concrete	Good	None	Clear	No	Detention Pond	None	N/A	N/A	0	No	No	0	0	0	0	0	0	0	0	0	
270	1571	160	OF-160	DPW	7/29/2022 14:15	Town	Residential	24	RCP	Round	Good	Flared End	Concrete	Good	None	Clear	No	Detention Pond	None	N/A	N/A	0	No	No	0	0	0	0	0	0	0	0	0	
271	1574	163	OF-163	DPW	7/29/2022 14:10	Town	Residential	15	RCP	Round	Good	Unknown	Unknown	Unknown	None	Clear	No	Detention Pond	None	N/A	N/A	0	No	No	0	0	0	0	0	0	0	0	0	
272	1573	162	OF-162	DPW	7/29/2022 14:09	Town	Residential	12	RCP	Round	Good	Unknown	Unknown	Unknown	None	Clear	No	Detention Pond	None	N/A	N/A	0	No	No	0	0	0	0	0	0	0	0	0	
273	1424	13	OF-13	DPW	7/29/2022 13:49	Town	Residential	12	RCP	Round	Good	Flared End	Concrete	Good	None	Clear	No	Stream	None	N/A	N/A	0	No	No	0	0	0	0	0	0	0	0	0	
274	1417	6	OF-6	DPW	7/29/2022 13:42	Town	Residential	12	RCP	Round	Good	Head Wall	Concrete	Good	None	Clear	No	Pond	None	N/A	N/A	0	No	No	0	0	0	0	0	0	0	0	0	
275	1416	5	OF-5	DPW	7/29/2022 13:41	Town	Residential	15	RCP	Round	Good	Head Wall	Concrete	Good	None	Clear	No	Pond	None	N/A	N/A	0	No	No	0	0	0	0	0	0	0	0	0	
276	1415	4	OF-4	DPW	7/29/2022 13:39	Town	Residential	12	RCP	Round	Good	Head Wall	Concrete	Good	None	Clear	No	Pond	None	N/A	N/A	0	No	No	0	0	0	0	0	0	0	0	0	
277	1413	2	OF-2	DPW	7/29/2022 13:33	Town	Residential	15	UNKNOWN	Unknown	Good	Unknown	Unknown	Unknown	Buried Structure	Clear	No	Stream	None	N/A	N/A	0	No	No	0	0	0	0	0	0	0	0	0	
278	1407	176	OF-176	DPW	7/29/2022 13:22	Town	Residential	15	RCP	Round	Good	Unknown	Unknown	Unknown	None	Clear	No	Wetlands	None	N/A	N/A	0	No	No	0	0	0	0	0	0	0	0	0	
279	1404	173	OF-173	DPW	7/29/2022 13:07	Town	Residential	18	RCP	Round	Good	Flared End	Concrete	Good	None	Clear	No	Detention Pond	None	N/A	N/A	0	No	No	0	0	0	0	0	0	0	0	0	
280	1403	172	OF-172	DPW	7/29/2022 13:02	Town	Residential	18	RCP	Round	Good	Head Wall	Concrete	Good	None	Clear	No	Detention Pond	None	N/A	N/A	0	No	No	0	0	0	0	0	0	0	0	0	
281	1582	171	OF-171	DPW	7/29/2022 12:08	Town	Residential	15	PVC	Round	Good	Flared End	HDPE	Good	None	Clear	No	Detention Pond	None	N/A	N/A	0	No	No	0	0	0	0	0	0	0	0	0	
282	1581	170	OF-170	DPW	7/29/2022 11:57	Town	Residential	30	RCP	Round	Good	Head Wall	Concrete	Good	None	Clear	Yes	Stream	None	N/A	Clear	0	No	No	0	0	0	0	0	0	0	0	0	
283	1579	168	OF-168	DPW	7/29/2022 11:54	Town	Residential	24	RCP	Round	Good	Head Wall	Concrete	Good	None	Clear	No	Wetlands	None	N/A	N/A	0	No	No	0	0	0	0	0	0	0	0	0	
284	1563	152	OF-152	DPW	7/29/2022 11:45	Town	Residential	10	PVC	Round	Fair	Head Wall	Concrete	Fair	Major Blockage	Clear	No	Wetlands	None	N/A	N/A	0	No	No	0	0	0	0	0	0	0	0	0	
285	1564	153	OF-153	DPW	7/29/2022 11:43	Town	Residential	18	RCP	Round	Good	Head Wall	Concrete	Good	None	Clear	No	Wetlands	None	N/A	N/A	0	No	No	0	0	0	0	0	0	0	0	0	
286	1560	149	OF-149	DPW	7/29/2022 11:38	Town	Residential	18	RCP	Round	Good	Head Wall	Concrete	Good	None	Clear	Yes	Wetlands	Trickle	Clear	Clear	0	No	No	0	0	0	0	0	0	0	0	0	
287	1561	150	OF-150	DPW	7/29/2022 11:34	Town	Residential	36	RCP	Round	Good	Head Wall	Concrete	Good	None	Clear	Yes	Wetlands	Trickle	Clear	Clear	0	No	No	0	0	0	0	0	0	0	0	0	
288	1562	151	OF-151	DPW	7/29/2022 11:31	Town	Residential	12	RCP	Round	Good	Head Wall	Concrete	Good	None	Clear	No	Wetlands	None	N/A	N/A	0	No	No	0	0	0	0	0	0	0	0	0	
289	1906			DPW	7/12/2022 16:05	Town	Residential	18	RCP	Round	Good	Pipe End	Concrete	Good	None	Clear	No	Wetlands	None			0	No	Yes	3/22/2023 17:31	.04		.25	7.11	124.8	7.9	0.09		
290	1623	221	OF-221	DPW	7/12/2022 16:03	Town	Residential	24	Concrete	Circular	Poor	Pipe End	Concrete	Poor	Minor Blockage	Clear	Yes	Wetlands	Trickle	Clear	Clear	0	No	Yes	3/22/2023 17:01	0	.04	0	0	.25	7.22	233.0	9.4	0.16
291	1867		OF74-3	DPW	7/11/2022 15:43	Town	Residential	24	Concrete	Round	Good	Flared End	Concrete	Fair	Minor Blockage	Clear	No	Wetlands	None			0	No											
292	1703	301	OF-301	DPW	7/5/2022 18:37	Town	Residential	10	RCP	Round	Good	Wing Wall	Concrete	Good	None	Cloudy	No	Wetlands	None	N/A	N/A	0	No	No	0	0	0	0	0	0	0	0	0	
293	1701	299	OF-299	DPW	7/5/2022 17:11	Town	Residential	36	RCP	Round	Good	Flared End	Concrete	Good	None	Cloudy	No	Wetlands	None	N/A	N/A	0	No	No	0	0	0	0	0	0	0	0	0	
294	1702	300	OF-300	DPW	7/5/2022 17:09	Town	Residential	12	RCP	Round	Good	Pipe End	Concrete	Good	None	Cloudy	No	Wetlands	None	N/A	N/A	0	No	No	0	0	0	0	0	0	0	0	0	
295	1697	295	OF-295	DPW	7/5/2022 17:02	Town	Residential	15	RCP	Round	Good	Flared End	Concrete	Good	None	Cloudy	No	Wetlands	None	N/A	N/A	0	No	No	0	0	0	0	0	0	0	0	0	
296	1694	292	OF-292	DPW	7/5/2022 4:00	Town	Residential	12	RCP	Round	Good	Pipe End	Concrete	Good	None	Cloudy	No	Wetlands	None	N/A	N/A	0	No	No	0	0	0	0	0	0	0	0	0	
297	1695	293	OF-293	DPW	7/5/2022 4:00	Town	Residential	12	RCP	Round	Good	Pipe End	Concrete	Good	None	Cloudy	No	Wetlands	None	N/A	N/A	0	No	No	0	0	0	0	0	0	0	0	0	
298	1699	297	OF-297	DPW	7/5/2022 4:00	Town	Residential	48	RCP	Round	Good	Flared End	Concrete	Good	None	Cloudy	No	Wetlands	Drip	N/A	N/A	0	No	No	0	0	0	0	0	0	0	0	0	
299	1700	298	OF-298	DPW	7/5/2022 4:00	Town	Residential	12							None							0	No	No	0	0	0	0	0	0	0	0	0	
300	1704	302	OF-302	DPW	7/5/2022 4:00	Town	Residential	12	RCP	Round	Good	Pipe End	Concrete	Good	None	Cloudy	No	Wetlands	None	N/A	N/A	0	No	No	0	0	0							