MS4 General Permit Town of East Hartford 2022 Annual Report Existing MS4 Permittee Permit Number GSM000027 January 1, 2023 – December 31, 2023

This report documents Town of East Hartford efforts to comply with the conditions of the MS4 General Permit to the maximum extent practicable (MEP) from January 1, 2023 to December 31, 2023.

Part I: Summary of Minimum Control Measure Activities

1. Public Education and Outreach (Section 6 (a)(1) / page 19)

1.1 BMP Summary

ВМР	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
1-1 Implement public education and outreach	In Progress	Flyers with information on recycling and bulk waste are available in our PW office		DPW	Jul 1, 2018	Ongoing	
1-2 Address education/ outreach for pollutants of concern	In Progress	The recent change to the pollutant of concern has resulted in extra work to re-do this program.		DPW	Jul 1, 2018	Complete by 11/30/2024	

1.2 Describe any Public Education and Outreach activities planned for the next year, if applicable.

The Town of East Hartford is hopeful that the Town Hall renovation project will be complete in 2024 and we will be able to have flyers in the Town Clerks office for dog owners. We intend to re-examine the flyer in light of the change of pollutant of concern for the Hockanum River. The Town is looking to work with businesses around the area to help promote recycling household items, pet waste and vehicle maintenance items. Goodwin University is being contacted to see if they can provide assistance through their curriculum.

1.3 Details of activities implemented to educate the community on stormwater

Program Element/Activity	Audience (and number of people reached)	Topic(s) covered	Pollutant of Concern addressed (if applicable)	Responsible dept. or partner org.
Mayor' Clean-up Day	Students, parents,	Littering, illegal	Bacteria	Mayor's Office
	teachers (approx. 1,000)	dumping, pet waste		
MDC Household Hazardous Waste Collection	Developers, home	Impact of impervious	Bacteria, nitrogen and	MDC HHW Program Coordinator
Program (Oct. 2023)	owners (approx. 150)	cover, Septic systems &	phosphorus	
		Fertilizer use		
Drainage Markers on Catch Basins as part of	Town of East Hartford	Illegal Dumping in drain	Bacteria	Engineering
Road Improvement Program		system		

2. Public Involvement/Participation (Section 6(a)(2) / page 21)

2.1 BMP Summary

ВМР	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
2-1 Final Stormwater Management Plan publically available	Complete	The Town provides a copy of the Stormwater Management Plan online and at the Engineering Department in Town Hall	Public Notice	Engineering Division	Ongoing	February 15, 2024	
2-2 Comply with public notice requirements for Annual Reports	Complete	The Town provides a copy of annual report online and also at the Engineering Division in Town Hall	Public Notice	Engineering Division	Feb 15, 2023	February 8, 2023	

2.2 Describe any Public Involvement/Participation activities planned for the next year, if applicable.

The Town of East Hartford performs an annual clean-up event near the Hockanum River watershed. This will continue to be performed in concert with the CT River Watershed Council's annual "Source to Sea Clean-up".

The MDC Household Hazardous Waste collection Program is held in October every year.

2.3 Public Involvement/Participation reporting metrics

Metrics	Implemented	Date	Posted
Availability of the Stormwater Management Plan announced to public	Yes	July 2017	Engineering Division / Town of East Hartford Website
Availability of Annual Report announced to public	Yes	Feb 2023	Engineering Division / Town of East Hartford Website

3. Illicit Discharge Detection and Elimination (Section 6(*a*)(3) and Appendix B / page 22)

3.1 BMP Summary

ВМР	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
3-1 Develop written IDDE program	In progress	Town is in process of completing written IDDE program using the CT IDDE program template	Develop written plan of IDDE program	Engineering Division	Jul 1, 2018	Anticipate completing by Dec 1, 2024.	
3-2 Develop list and maps of all MS4 stormwater outfalls in priority areas	Complete	The Engineering Division is currently performing Dry- weather inspections	Complete inspection of all outfalls and prioritized them.	Engineering Division	Jul 1, 2019	Sept 2023	Dry weather inspections are performed weather- permitting at the same time as outfalls are mapped.
3-3 Implement citizen reporting program	Complete	Q Alert is currently available to all residents of East Hartford	Citizens are able to submit any complaints or requests through our system	Mayor's Office/ Data Processing Department	Ongoing	Jan 2019	
3-4 Establish legal authority to prohibit illicit discharges	Complete	The Town of East Hartford currently has ordinances prohibiting illicit discharge	Enhance the ordinances	Legal Department	Jul 1, 2018		
3-5 Develop record keeping system for IDDE tracking	Complete	The Engineering Division will be tracking the information using UCONN clear's format	Track any IDDE through Q Alert		Jul 1, 2017	July 1 st , 2019	The Town of East Hartford is actively working with DEEP when IDDE are reported by citizens.
3-6 Address IDDE in areas with pollutants of concern	In Progress	No activity 2023 as there were no IDDE's identified			Not specified		
3-7 Consolidate IDDE tracking spreadsheets	On going	Compile all the IDDE tracking requirements into one spreadsheet	Compile all Tracking using UCONN clear's format	Engineering Division	-	On going	Town of East Hartford updates the spreadsheet as Illicit discharges are reported.

3.2 Describe any IDDE activities planned for the next year, if applicable.

The written program will be posted to the Department of Public works webpage by Dec 1, 2024 and a link listed in next year's Annual Report; updates to the written IDDE program will be performed as needed throughout the permit term.

Maintain master IDDE tracking spreadsheet and ensure all employees involved in IDDE program understand the logging process

3.3 List of citizen reports of suspected illicit discharges received during this reporting period.

Date of Report	Location / suspected source	Response taken
None		

3.4 Provide a record of illicit discharges occurring during the reporting period and SSOs occurring July 2012 through end of reporting period using the following table.

Location (Lat long/ street crossing /address and receiving water)	Date and duration of occurrence	Discharge to MS4 or surface water	Estimated volume discharged	Known or suspected cause / Responsible party	Corrective measures planned and completed (include dates)	Sampling data (if applicable)
None						

3.5 Briefly describe the method used to track illicit discharge reports, responses to those reports, and who was responsible for tracking this information.

A complaint is received and the information is logged into a computer program routed to Engineering. One of the Engineer Technicians or Operations Engineer will investigate the complaint and report back to the Engineering Division.

3.6 Provide a summary of actions taken to address septic failures using the table below.

Location and nature of structure with failing septic systems	Actions taken to respond to and address the failures	Impacted waterbody or watershed, if known
64 Handel Ct- failed septic system	Installed new tank and fields	None

3.7 IDDE reporting metrics

Metrics	
Estimated or actual number of MS4 outfalls	512
Estimated or actual number of interconnections	0
Outfall mapping complete	100%
Interconnection mapping complete	N/A
System-wide mapping complete (detailed MS4 infrastructure)	100%
Outfall assessment and priority ranking	Pending completion of dry weather sampling for impaired waters, currently 27 of 42 complete.

Dry weather screening of all High and Low priority outfalls complete	417
Catchment investigations complete	-
Estimated percentage of MS4 catchment area investigated	96%

3.8 Briefly describe the IDDE training for employees involved in carrying out IDDE tasks including what type of training is provided and how often is it given (minimum once per year).

Data entry training on the software for entering complaints & observations is being considered for PW employees. This has been completed for Engineering office staff.

4. Construction Site Runoff Control (Section 6(a)(4) / page 25)

4.1 BMP Summary

ВМР	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
4-1 Implement, upgrade, and enforce land use regulations or other legal authority to meet requirements of MS4 general permit	Complete	None		Engineering Division / Planning Department	Jul 1, 2019	March 2023	Revised Zoning Regulations adopted in March 2023
4-2 Develop/Implement plan for interdepartmental coordination in site plan review and approval	Complete	Plan was already in place prior to start of MS4	Coordinate, review and process	Engineering Division / Planning Department	Ongoing	Prior to July 1, 2017	
4-3 Review site plans for stormwater quality concerns	On going	Plan was already in place prior to start of MS4	Improve water quality of run- off	Engineering Division	Ongoing	Ongoing since July 1, 2017	
4-4 Conduct site inspections	On going	The Town currently inspects all private development with the exception of individual house construction and minor projects.	Minimize negative effects of erosion	Operations/ Engineering Division	Ongoing	Ongoing since July 1, 2017	

4-5 Implement procedure to allow public comment on site development	Complete	Already in place at start of MS4	See SWM Plan	Planning Department	Ongoing	July 1, 2017	Already part of the Planning approval process
4-6 Implement procedure to notify developers about DEEP construction stormwater permit	On going	Already in place at start of MS4	Fulfill all regulatory obligations	Engineering Division	Ongoing	July 1, 2017	

4.2 Describe any Construction Site Runoff Control activities planned for the next year, if applicable.

Continue current policies and inspections.

5. Post-construction Stormwater Management (Section 6(*a*)(5) / page 27)

5.1 BMP Summary

вмр	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
5-1 Establish and/or update legal authority and guidelines regarding LID and runoff reduction in site development planning	In progress	Requirements are already being met in current review process			Jul 1, 2021	Revised Zoning Regulation approval in Mar 2023	
5-2 Enforce LID/runoff reduction requirements for development and redevelopment projects	On going	Part of review process		Engineering Division / Planning Department	Ongoing	On going	Written requirements are part of the Planning/Zoning Regulations revision adopted in Mar 2023
5-3 Identify retention and detention ponds in priority areas	In Progress	None			Jul 1 <i>,</i> 2019		Priority areas are still being identified and refined.

5-4 Implement long-term maintenance plan for stormwater basins and treatment structures	Not Started	None		Ongoing		Once ownership of basins and structures is determined, a plan can be formulated
5-5 DCIA mapping	In Progress	Consultant has this work in progress		Jul 1, 2020	Dec 1, 2024	Depends on ability to fund work
5-6 Address post-construction issues in areas with pollutants of concern	Not Started	None		Not specified		Will be better able to formulate solutions once areas are identified

5.2 Describe any Post-Construction Stormwater Management activities planned for the next year, if applicable.

Continue to identify and refine retention and detention ponds in areas of concern. Determine a suitable base for DCIA mapping and integrate into the Town's GIS system.

5.3 Post-Construction Stormwater Management reporting metrics

Metrics	
Baseline (2012) Directly Connected Impervious Area (DCIA)	1560 acres
DCIA disconnected (redevelopment plus retrofits)	0.01 Acres
Retrofits completed	0
DCIA disconnected	0.01 Acres
Estimated cost of retrofits	All private/no cost to Town
Detention or retention ponds identified	0

5.4 Briefly describe the method to be used to determine baseline DCIA.

To calculate the baseline DCIA for the Town of East Hartford, Barton and Loguidice Engineering used the process found on the CT NEMO website. CT NEMO developed 5 formulas to calculate the DICA and Impervious Cover (IC) based independently for each basin in East Hartford using the percent DCIA for the basin with the state DCIA removed from the equation. B&L utilized the formulas and created a bell curve to input the calculated percent of DCIA for each basin and calculated the total DCIA and IC amounts for the Town. Each basin value was added together to create the baseline for the DCIA and IC for the Town of East Hartford.

6. Pollution Prevention/Good Housekeeping (Section 6(*a*)(6) / page 31)

6.1 BMP Summary

ВМР	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
6-1 Develop/implement formal employee training program	Active	Employee Training	Train Employees on a yearly basis	Public Works	Ongoing	October 2017 (yearly)	
6-2 Implement MS4 property and operations maintenance	Active		Inspection and maintenance	Public Works	Ongoing	yearly	
6-3 Implement coordination with interconnected MS4s	Not Started	None			Not specified		Identification of interconnections under way with catchment mapping.
6-4 Develop/implement program to control other sources of pollutants to the MS4	Not Started	None			Not specified		
6-5 Evaluate additional measures for discharges to impaired waters	Not Started	None			Not specified		
6-6 Track projects that disconnect DCIA	Active	Record reductions of DCIA in database.	Target at least a 2% reduction	Engineering Division	Ongoing		
6-7 Implement infrastructure repair/rehab program	Not Started	None			Jul 1, 2021		

6-8 Develop/implement plan to identify/prioritize retrofit projects	Not Started	None			Jul 1, 2020		
6-9 Implement retrofit projects to disconnect 2% of DCIA	Not Started	None			Jul 1, 2022		
6-10 Develop/implement street sweeping program	Active	All streets swept 2 times in calendar year 2021	Sweep all streets 2 times	Public Works	Ongoing		
6-11 Develop/implement catch basin cleaning program	Active	75% Basins vacuumed due to mechanical issues with equipment.	Regularly Inspect and vac whole system during a 15 month period	Public Works	Jul 1, 2020	Ongoing	
6-12 Develop/implement snow management practices	Active		Maintain safe roads with minimal impact to environment	Public Works	Ongoing	Ongoing through winter	

6.2 Describe any Pollution Prevention/Good Housekeeping activities planned for the next year, if applicable.

Continuation of existing programs for street sweeping, snow removal and Catch Basin Cleaning. Expand catch basin cleaning to include Town-owned environmental chambers.

6.3 Pollution Prevention/ Good Housekeeping reporting metrics

Employee training provided for key staff	Yes/On Going
Street sweeping	
Curb miles swept	300 miles
Volume (or mass) of material collected	225 Tons
Catch basin cleaning	
Total catch basins in priority areas	In progress
Total catch basins in MS4	In progress
Catch basins inspected	1000
Catch basins cleaned	400
Volume (or mass) of material removed from all catch basins	50 tons approx.
Volume removed from catch basins to impaired waters (if known)	Not tracked
Snow management	
Type(s) of deicing material used	Clear Lane Deicing
Total amount of each deicing material applied 1/1/2022-12/31/2022	2100 tons
Type(s) of deicing equipment used	Plow Trucks
Lane-miles treated	300 miles
Snow disposal location	Ecology Drive
Staff training provided on application methods & equipment	Yes/Jan 2023
Municipal turf management program actions (for permittee properties in basins with N/P impairments)	N/A
Reduction in application of fertilizers (since start of permit)	lbs or %
Reduction in turf area (since start of permit)	acres
Lands with high potential to contribute bacteria (dog parks, parks with open water, & sites with failing septic systems)	
Cost of mitigation actions/retrofits	\$

6.4 Catch basin cleaning program

Briefly describe the method used to optimize your catch basin inspection and cleaning schedule.

It currently takes 15 Months to complete one round of catch basin cleaning; we currently visually inspect each basin and measure the amount of sediment along with the sump depth within the basin and make a determination if it needs to be cleaned. In the event cleaning is required the basin is then cleaned and marked on a map for record keeping.

6.5 Retrofit program

Briefly describe the Retrofit Program identification and prioritization process, the projects selected for implementation, the rationale for the selection of those projects and the total DCIA to be disconnected upon completion of each project.

To be determined depending on funding

Describe plans for continuing the Retrofit program and how to achieve a goal of 1% DCIA disconnection in future years. To be Determined

Describe plans for continuing the Retrofit program beyond this permit term with the goal to disconnect 1% DCIA annually over the next 5 years. To be Determined

Part II: Impaired waters investigation and monitoring

1. Impaired waters investigation and monitoring program

1.1 Indicate which stormwater pollutant(s) of concern occur(s) in your municipality or institution. This data is available on the MS4 map viewer:

Nitr	ogen/ Phosphorus 🗌	Bacteria 🔀	Mercury	Other Pollutant of Concern X	
1.2 Describe	program status.				
-	e status of monitoring work co Management Plan based on mo	• • •	ary of the results an	d any notable findings, and 3) any changes to t	the
of concern		nas resulted in ex	tra costs to the T	during 2023. The change of the polluta Fown as we have had to expend Itant.	nt

2. Screening data for outfalls to impaired waterbodies (Section 6(i)(1) / page 41)

2.1 Screening data collected under 2017 permit

Complete the table below for any outfalls screened during the reporting period. Each Annual Report will add on to the previous year's screening data showing a cumulative list of outfall screening data.

Outfall ID	Sample date	Parameter (Nitrogen, Phosphorus, Bacteria, or Other pollutant of concern)	Name of Results Laboratory (if used)		Follow-up required?	
See Attachment						

2.2 Credit for screening data collected under 2004 permit

If any outfalls to impaired waters were sampled under the 2004 MS4 permit, that data can count towards the monitoring requirements under the modified 2017 MS4 permit. Complete the table below to record sampling data for any outfalls to impaired waters under the 2004 MS4 permit.

Outfall	Sample date	Parameter (Nitrogen, Phosphorus, Bacteria, or Other pollutant of concern)	Results	Name of Laboratory (if used)	Follow-up required?
Woodlawn Cir #1	2/24/16	Phosphorus, ammonia, nitrogen	See Attachment D	Phoenix Environmental	No
Jerry Rd #1	2/24/16	Phosphorus, ammonia, nitrogen	"	Phoenix Environmental	No
Cherry St #1	2/24/16	Phosphorus, ammonia, nitrogen	"	Phoenix Environmental	No
School St #3	2/24/16	Phosphorus, ammonia, nitrogen	"	Phoenix Environmental	No
School St #1,2	2/24/16	Phosphorus, ammonia, nitrogen	"	Phoenix Environmental	No
Remington Rd #2	2/24/16	Phosphorus, ammonia, nitrogen	"	Phoenix Environmental	No

3. Follow-up investigations (Section 6(i)(1)(D) / page 43)

Provide the following information for outfalls exceeding the pollutant threshold.

Outfall	Status of drainage area investigation	Control measure implementation to address impairment

4. Prioritized outfall monitoring (Section 6(i)(1)(D) / page 43)

Once outfall screening has been completed for at least 50% of outfalls to impaired waters, identify 6 of the highest contributors of any pollutants of concern. Begin monitoring these outfalls on an annual basis by July 1, 2020.

Outfall	Sample Date	Parameter(s)	Results	Name of Laboratory (if used)
See attachment				

Part III: Additional IDDE Program Data

1. Assessment and Priority Ranking of Catchments data (Appendix B (A)(7)(c) / page 5)

Provide a list of all catchments with ranking results (DEEP basins may be used instead of manual catchment delineations).

1. Catchment ID (DEEP Basin ID)	2. Category	3. Rank

2. Outfall and Interconnection Screening and Sampling data (Appendix B (A)(7)(d) / page 7)

2.1 Dry weather screening and sampling data from outfalls and interconnections

Provide sample data for outfalls where flow is observed. Only include Pollutant of concern data for outfalls that discharge into stormwater impaired waterbodies.

Outfall / Interconnection ID	Screening / sample date	Ammonia	Chlorine	Conductivity	Salinity	E. coli or enterococcus	Surfactants	Water Temp	Pollutant of concern	If required, follow-up actions taken
See Attachment										

2.2 Wet weather sample and inspection data

Provide sample data for outfalls and key junction manholes of any catchment area with at least one System Vulnerability Factor.

Outfall / Interconnection ID	Sample date	Ammonia	Chlorine	Conductivity	Salinity	E. coli or Enterococcus	Surfactants	Water Temp	Pollutant of concern
Pending, no samples in 2023 due to adverse weather.									

3. Catchment Investigation data (Appendix B (A)(7)(e) / page 9)

3.1 System Vulnerability Factor Summary

For those catchments being investigated for illicit discharges (i.e. categorized as high priority, low priority, or problem) document the presence or absence of System Vulnerability Factors (SVF). If present, report which SVF's were identified. An example is provided below.

Outfall ID	Receiving Water	System Vulnerability Factors
None		

Where SVFs are:

- 1. History of SSOs, including, but not limited to, those resulting from wet weather, high water table, or fat/oil/grease blockages.
- 2. Sewer pump/lift stations, siphons, or known sanitary sewer restrictions where power/equipment failures or blockages could readily result in SSOs.
- 3. Inadequate sanitary sewer level of service (LOS) resulting in regular surcharging, customer back-ups, or frequent customer complaints.
- 4. Common or twin-invert manholes serving storm and sanitary sewer alignments.
- 5. Common trench construction serving both storm and sanitary sewer alignments.
- 6. Crossings of storm and sanitary sewer alignments.
- 7. Sanitary sewer alignments known or suspected to have been constructed with an underdrain system;

- 8. Sanitary sewer infrastructure defects such as leaking service laterals, cracked, broken, or offset sanitary infrastructure, directly piped connections between storm drain and sanitary sewer infrastructure, or other vulnerability factors identified through Inflow/Infiltration Analyses, Sanitary Sewer Evaluation Surveys, or other infrastructure investigations.
- 9. Areas formerly served by combined sewer systems.
- 10. Any sanitary sewer and storm drain infrastructure greater than 40 years old in medium and densely developed areas.
- 11. Widespread code-required septic system upgrades required at property transfers (indicative of inadequate soils, water table separation, or other physical constraints of the area rather that poor owner maintenance).
- 12. History of multiple local health department or sanitarian actions addressing widespread septic system failures (indicative of inadequate soils, water table separation, or other physical constraints of the area rather that poor owner maintenance).

3.2 Key junction manhole dry weather screening and sampling data

Key Junction Manhole ID	Screening / Sample date	Visual/ olfactory evidence of illicit discharge	Ammonia	Chlorine	Surfactants
None					

3.3 Wet weather investigation outfall sampling data

Outfall ID	Sample date	Ammonia	Chlorine	Surfactants
None				

3.4 Data for each illicit discharge source confirmed through the catchment investigation procedure

Discharge location	Source location	Discharge description	Method of discovery	Date of discovery	Date of elimination	Mitigation or enforcement action	Estimated volume of flow removed
None							

Part IV: Certification

"I have personally examined and am familiar with the information submitted in this document and all attachments thereto, and I certify that, based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, the submitted information is true, accurate and complete to the best of my knowledge and belief. I understand that a false statement made in this document or its attachments may be punishable as a criminal offense, in accordance with Section 22a-6 of the Connecticut General Statutes, pursuant to Section 53a-157b of the Connecticut General Statutes, and in accordance with any other applicable statute."

Chief Elected Official or Principal Executive Officer	Document Prepared by
Print name: Connor S. Martin	Print name: Warren W. Disbrow
Signature / Date:	Signature / Date:

Executive Summary Professional Engineering Consultant

MS4 General Permit Town of East Hartford 2023 Annual Report Permit Number GSM000027

Executive Summary

Submission of this report by the Town of East Hartford maintains compliance with the reporting requirements and registration (no. GSM000027) under the General Permit for the Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems (MS4), submitted to the State of Connecticut Department of Energy and Environmental Protection ('CT DEEP') Commissioner for activities located within the Town of East Hartford. The Town of East Hartford certifies by this report that the terms and conditions of the General Permit are being met to the maximum extent practicable (MEP).

The Town of East Hartford, hired a Professional Engineering Consultant (Barton & Loguidice, LLC) who has completed much of the dry weather screening and sampling of the Town's existing and newly identified outfalls (519 total outfalls, 454 municipally-owned). Through the efforts of Barton & Loguidice, the Town continues working toward the completion of all dry weather outfall Illicit Discharge Detection and Elimination (IDDE) screening and sampling, and wet weather impaired outfall sampling efforts for all of the municipally-owned outfalls identified in the Town to the maximum extent practicable.

In 2023, the Town, with the assistance from its consultant, Barton & Loguidice, continued making significant updates to the Town's MS4 system mapping. The main focus for the updates in 2023 were to verify municipal outfalls, interconnections, update mapping that was noted as incorrect during field inspections, add new structures found in the field that were not previously mapped, and connect piping and catch basins and other stormwater structures to the system.

Through the field investigation process, several areas of the MS4 system that were previously mapped by geo-referencing as-built drawings in GIS were identified as incorrect and needed to be updated based on actual field conditions. Despite the slow pace of this endeavor, large questionable areas of the Town's system mapping were able to be resolved, missing structures added, outfall locations adjusted, and piping corrected to match the true conditions. Barton & Loguidice's efforts assisted in reducing the burden on the Town for mapping locations that could be resolved in the field allowing the Town to focus on other aspects of the MS4 permit. By performing this action, in 2021 and 2022 Barton & Loguidice located 152 new outfalls, including 64 new drop down catch basins. In 2022 and the beginning of 2023, Barton & Loguidice mainly focused on verifying piping and catch basin connections and utilized a pipe camera to complete many of these field verifications. As of the spring of 2023, the Town's system mapping has been substantially completed.

One of the objectives to spending these efforts to verify and update the mapping was to allow Barton & Loguidice to perform catchment delineations on the MS4 system using the ArcHydro toolset designed and created by ESRI. The ultimate purpose of delineating the catchment areas is to identify the areas that are contributing stormwater to each of the Town's outfalls, identifying pollutant sources, priority ranking outfalls, and prioritizing BMP retrofits. Barton & Loguidice has substantially completed the verification and update of the MS4 system mapping including all of the catchment delineations as of the spring of 2023.

As a result of the extensive effort performed on updating the MS4 system mapping and delineating the catchment areas for all of the municipal outfalls, catchment investigations were put on hold until these efforts could be completed. With the catchment delineations completed as of 2023, focus will be directed on catchment investigations in the 2024 year.

Summary of Monitoring Data:

During the reporting period (January 1 through December 31, 2023) dry weather screening and sampling efforts were conducted at newly identified outfalls and drop down catch basins. To date, dry weather screening and sampling efforts have been completed at 398 town-owned outfalls and 24 of 27 impaired outfalls) have been sampled during wet weather events. This is a decrease in number of outfalls from 2022, due to several outfalls being identified as state or privately-owned outfalls during field investigations.

The 2023 dry weather screening and sampling data identified the presence of no new High Priority Outfalls with suspected illicit discharge requiring an investigation. To date, 150 outfalls(an increase from 143 in 2022), have been sampled during dry weather events and six of those outfalls were identified with suspected illicit discharge, according to the 2020 integrated water quality report (IWQR), and were ranked at the top of the high priority category for further investigations.

The Connecticut and Hockanum Rivers are the two impaired waterbodies of East Hartford. Throughout Barton & Loguidice's sampling events from 2019 through 2023, three IWQR reports have been issued, each containing different lists of impairments. For the Connecticut River, the impairment (bacteria) has not changed throughout the course of those three reports. However, the Hockanum River impairments have changed three times throughout these reports. The 2016 IWQR (issued 6/8/17), listed the impairment for the Hockanum River as bacteria. In the 2018 IWQR (issued 9/26/19), it listed the Hockanum River as being impaired for bacteria and added "other" as a new impairment. In the 2020 IWQR (issued 11/17/20), the Hockanum River was only impaired for "other" and the bacteria impairment was removed. With these changes to the impairments for the Hockanum River, anything sampled prior to 9/26/19 does not include turbidity readings for the "other" impairment, which is the current impairment listed. Approximately two-thirds of the samples collected by Barton & Loguidice from impaired outfalls for wet and dry weather sampling were completed prior to 9/26/19 and therefore did not include turbidity readings for the newly added "other" impairment for the Hockanum River. All samples collected after 9/26/19 include the necessary turbidity readings.

Some of the data recorded for bacteria from the Hockanum River for samples collected prior to 9/26/19 are still provided in the annual report, even though it is no longer a required impairment parameter. As new turbidity data is collected for these outfalls, the bacteria data will be removed. The Town exhausted a significant amount of resources to collect this data and feels that recognition of this effort is warranted.

As a result of the outfall sampling efforts completed in 2023, nine additional outfalls were wet weather sampled, and one of those outfalls was identified with suspected illicit discharges requiring an investigation. This outfall was ranked at the top of the high priority category for further investigations. To date, 37 outfalls have been initially sampled during wet weather events and eight of those outfalls have been identified as a suspected illicit discharge, according to the 2020 IWQR, and they were ranked at the top of the high priority category for further investigations. Due to the change in impairments set by the 2018 IWQR and 2020 IWQR, nine outfalls were revisited to collect samples for turbidity during wet weather events. None of these outfalls were identified with suspected illicit discharges due to new sample results.

During 2023, prioritized outfall monitoring was attempted to be completed at the six required outfalls. Two of the six annual outfalls were successfully sampled in 2023. Sampling results from one location

indicated slight improvements from the initial sample, whereas the second location remained consistent with historical results.

As resources allow, the Town of East Harford will continue to conduct outfall screening, sampling, and investigation efforts throughout the next reporting period (January 1 through December 31, 2024) to the maximum extent practicable.

Attachment

MS4 General Permit Town of East Hartford 2023 Annual Report Permit Number GSM000027 Part 2 Section 2.1 Part 2 Section 4 Part 3 Section 2.1

					Outfall	Upstream			
Outfall ID	Latitude	Longitude	Impaired Waterbody	Sample Date	Turbidity (NTU)	Turbidity (NTU)	E. Coli (col/100mL)**	Lab	Investigation Required
Arbutus St #1	41.782159	-72.584748	Hockanum	8/15/2023	6.14	7.08	n/a	B&L	No
Arbutus St #3⁺	41.7804981	-72.5815927	Hockanum	8/15/2023	5.04	10.04	n/a	B&L	No
Burnside Ave #4A+	41.7817883	-72.59710642	Hockanum	8/15/2023	7.91	5.47	n/a	B&L	No
Burnside Ave #5⁺	41.78258	-72.59591	Hockanum	8/15/2023	7.08	4.38	n/a	B&L	No
Burnside Ave #6	41.7828306	-72.59390651	Hockanum	8/15/2023	18.1	11.08	n/a	B&L	Yes
Burnside Ave #7*	41.7825496	-72.59279748	Hockanum	6/25/2019			11200	Phoenix	No
Burnside Ave #8A	41.783386	-72.588087	Hockanum	8/15/2023	9.86	6.85	n/a	B&L	No
Cherry St #1	41.7735669	-72.6600867	Connecticut	10/4/2021	n/a	n/a	2190	Phoenix	Yes
Chipper Dr #3⁺	41.7761531	-72.59960265	Hockanum	8/15/2023	2.73	1.41	n/a	B&L	No
Christine Dr #1	41.7772729	-72.57995049	Hockanum	8/15/2023	6.7	4.09	n/a	B&L	No
Christine Dr #2	41.7781011	-72.57997603	Hockanum	8/15/2023	5.04	10.05	n/a	B&L	No
Church St DDCB #1	41.778734	-72.60915226	Hockanum	8/15/2023	7.95	6.75	n/a	B&L	No
Church St DDCB #2	41.7775987	-72.60889589	Hockanum	8/15/2023	6.22	10.42	n/a	B&L	No
Cummings St #1	41.7821531	-72.59071601	Hockanum	10/4/2021	5.77	10.57	n/a	B&L	No
East River Dr #1	41.7577395	-72.65764161	Connecticut	10/4/2021	n/a	n/a	1500	Phoenix	Yes
East River Dr #3	41.7654219	-72.66433187	Connecticut	10/4/2021	n/a	n/a	860	Phoenix	Yes
Forbes St #11⁺	41.77578	-72.6072	Hockanum	8/15/2023	4.28	14.8	n/a	B&L	No
Forbes St #13*	41.7754156	-72.60746719	Hockanum	6/25/2019			203	Phoenix	No
Great River Park #1	41.7592272	-72.65993214	Connecticut	10/4/2021	n/a	n/a	216	Phoenix	No
Higbie Dr #2⁺	41.7790644	-72.59671897	Hockanum	8/15/2023	6.51	11.33	n/a	B&L	No
Hillside Soccer #1*	41.7759679	-72.6202663	Hockanum	5/28/2019			2190	Phoenix	No
Hillside St #4	41.7746541	-72.62017843	Hockanum	8/15/2023	7.85	8.01	n/a	B&L	No
Hillside St #5	41.775627	-72.62027244	Hockanum	10/4/2021	12.1	17.4	n/a	B&L	No
Hillside St #6	41.7759227	-72.62025498	Hockanum	2/3/2022	57.4	19.1	n/a	B&L	Yes

Part II. Section 2.1 - Screening Data for Outfalls to Impaired Waterbodies

			Impaired	Sample	Outfall Turbidity	Upstream Turbidity	E. Coli		Investigation
Outfall ID	Latitude	Longitude	Waterbody	Date	(NTU)	(NTU)	(col/100mL)**	Lab	Required
Hillside St #7	41.7759377	-72.61997666	Hockanum	10/4/2021	4.61	17.4	n/a	B&L	No
Main St #10	41.7615153	-72.64569966	Hockanum	2/3/2022	18.9	16.4	n/a	B&L	No
Main St #11	41.7612385	-72.64552453	Hockanum	2/3/2022	89.6	16.4	n/a	B&L	Yes
Main St #11A	41.7614083	-72.64514115	Hockanum	10/4/2021	11.8	13.3	n/a	B&L	No
Preston St #1*	41.783183	-72.58706817	Hockanum	6/25/2019			52	Phoenix	No
Riverside Dr #3	41.7477899	-72.64395569	Connecticut	8/15/2023	4.69	6.32	n/a	B&L	No
Scotland Rd #3	41.7762441	-72.60532971	Hockanum	10/4/2021	27.8	6.56	n/a	B&L	Yes
Scotland Rd #4⁺	41.7768	-72.60588	Hockanum	8/15/2023	7.11	4.28	n/a	B&L	No
Scotland Rd #5*	41.77668	-72.60638	Hockanum	6/25/2019			241	Phoenix	No
Terry Rd #1	41.7766919	-72.61390716	Hockanum	2/3/2022	52.9	14.7	n/a	B&L	Yes
Walnut St #1⁺	41.7820225	-72.59177667	Hockanum	8/15/2023	10.61	10.3	n/a	B&L	No
Walnut St #2	41.7821699	-72.59182867	Hockanum	8/15/2023	10.3	6.76	n/a	B&L	No
Woodlawn Cir #1⁺	41.7823524	-72.59310861	Hockanum	8/15/2023	4.5	8.11	n/a	B&L	No

Part II. Section 2.1 - Screening Data for Outfalls to Impaired Waterbodies

Notes:

n/a - Not Applicable

Data collected based upon the 2016 Integrated Water Quality Report (IWQR) - Hockanum River was impaired for bacteria

Data collected based upon the 2018 IWQR - Hockanum River was impaired for bacteria and added "other"

Data collected based upon the 2020 IWQR - Hockanum River was impaired for "other" and bacteria was removed

* - These outfalls were sampled for the know impairments under the IWQR indicated and will be sampled for the missing parameters when resources allow

** - Bacteria (E.coli) impairment for the Hockanum River was removed in the IWQR issued 11/17/2020

+ - These outfalls were resampled for the 11/17/2020 IWQR imparements, previous imparements no longer noted in the IWQR were removed

Part II. Section 4 - Prioritized Outfall Monitoring

Outfall ID	Latitude	Longitude	Impaired Waterbody	Sample Date	Outfall Turbidity (NTU)	Upstream Turbidity (NTU)	E. Coli (col/100mL)	Lab
Cherry St #1	41.77356686	-72.6600867	Connecticut	10/4/2021	n/a	n/a	2190	Phoenix
				12/16/2022*	n/a	n/a	n/d	n/a
				9/18/2023	n/a	n/a	373	Phoenix
East River Dr #1	41.75773947	-72.65764161	Connecticut	10/4/2021	n/a	n/a	1500	Phoenix
				12/16/2022	n/a	n/a	309	Phoenix
East River Dr #3	41.76542195	-72.66433187	Connecticut	10/4/2021	n/a	n/a	860	Phoenix
				12/16/2022*	n/a	n/a	n/d	n/a
				9/18/2023	n/a	n/a	985	Phoenix
Hillside St #6	41.77592274	-72.62025498	Hockanum	2/3/2022	57.4	19.1	n/a	B&L
				3/24/2022	17.1	4.51	n/a	B&L
				12/16/2022	26.6	7.57	n/a	B&L
Main St #11	41.76123846	-72.64552453	Hockanum	2/3/2022	89.6	16.4	n/a	B&L
				3/24/2022	30.4	11.3	n/a	B&L
				12/16/2022	19.3	4.4	n/a	B&L
Scotland Rd #3	41.7762441	-72.60532971	Hockanum	10/4/2021	27.8	6.56	n/a	B&L
				2/3/2022	6.8	12.1	n/a	B&L
				12/16/2022**	22.5	3.1	n/a	B&L

Note:

n/d - No Discharge

n/a - Not Applicable

* Sampling attempts were made for these outfalls but various factors prohibited such outfalls from being sampled such as insufficient rain amounts and accessibility

** Sample collected from upgradient structure do to inaccessibility

			Immediated	Comula	Outfall	Upstream	E. Coli		Investigation
Outfall ID	Latitude	Longitude	Impaired Waterbody	Sample Date	Turbidity (NTU)	Turbidity (NTU)	col/100mL)**	Lab	Investigation Required
Burnside Ave #4A*	41.7817883	-72.5971064	Hockanum	5/15/2019			10	Phoenix	
Burnside Ave #5*	41.7825800	-72.5959100	Hockanum	7/30/2019			158	Phoenix	
Burnside Ave #6*	41.7828306	-72.5939065	Hockanum	7/22/2019			345	Phoenix	
Burnside Ave #8A	41.7833860	-72.5880870	Hockanum	7/23/2020	1.72	4.41	n/a	B&L	
Chipper Dr #3*	41.7761531	-72.5996027	Hockanum	5/15/2019			52	Phoenix	
Christine Dr #1*	41.7772729	-72.5799505	Hockanum	7/10/2019			63	Phoenix	
East River Dr #3	41.7654219	-72.6643319	Connecticut	7/26/2019	n/a	n/a	20	Phoenix	No
Forbes St #11*	41.7757800	-72.6072000	Hockanum	5/15/2019			144	Phoenix	
Forbes St #13*	41.7754156	-72.6074672	Hockanum	7/8/2019			253	Phoenix	
Higbie Dr #2*	41.7790644	-72.5967190	Hockanum	5/15/2019			428	Phoenix	
Hillside St #7*	41.7759377	-72.6199767	Hockanum	7/25/2019			9210	Phoenix	
Main St #11	41.7612385	-72.6455245	Hockanum	8/13/2020	2.96	0.42	n/a	B&L	No
Main St #11A	41.7614083	-72.6451412	Hockanum	8/13/2020	2.96	1.72	n/a	B&L	No
Preston St #1*	41.7831830	-72.5870682	Hockanum	7/30/2019			122	Phoenix	
Riverside Dr #1	41.7447910	-72.6420520	Connecticut	7/15/2019	n/a	n/a	10	Phoenix	No
Scotland Rd #5*	41.7766800	-72.6063800	Hockanum	7/8/2019			41	Phoenix	
Woodlawn Cir #1*	41.7823524	-72.5931086	Hockanum	7/30/2019			<10	Phoenix	

Part III. Section 2.1 - Dry Weather Screening and Sampling Data from Outfalls and Interconnections

Table 2.1a - Impaired Waterbodies

Notes:

n/a - Not Applicable

Data collected based upon the 2016 Integrated Water Quality Report (IWQR) - Hockanum River was impaired for bacteria

Data collected based upon the 2018 IWQR - Hockanum River was impaired for bacteria and added "other"

Data collected based upon the 2020 IWQR - Hockanum River was impaired for "other" and bacteria was removed

* - These outfalls were sampled for the know impairments under the IWQR indicated and will be sampled for the missing parameters when resources allow

** - Bacteria (E.coli) impairment for the Hockanum River was removed in the IWQR issued 11/17/2020

Part III. Section 2.1 - Dry Weather Screening and Sampling Data from Outfalls and Interconnections

Table 2.1b - Non-Impaired Waterbodies

			Sample	Temp	Conductivity	Salinity	Ammonia	Chlorine	MBAs	E. Coli		Investigation
Outfall ID	Latitude	Longitude	Date	(oC)	(umhos/cm)	(g/kg)	(mg/L)	(mg/L)	(mg/L)	(col/100ml)	Lab	Required
Adams St #1	41.7799994	-72.6400688	7/17/2019	16.21	185	0.11	0	0.06	0.25	<10	Phoenix	No
Alna Ln #1	41.7965439	-72.6118434	7/21/2020	24.5	522	0.227	0	0.08	0.25	74	Phoenix	No
Andrew Dr #1	41.7863712	-72.6179759	7/22/2019	24.41	670	0.33	0	0	0.5	794	Phoenix	No
Andrew Dr #2	41.7864214	-72.6180109	7/22/2019	22.65	621	0.33	0.25	0.02	0.25	798	Phoenix	No
Barbonsel Rd #1	41.75166	-72.60142	7/8/2019	19.6	292	0.133	0	0.07	0.25	<10	Phoenix	No
Beacon Hill Rd #2	41.7872311	-72.5854898	7/21/2020	3.7	428	0.205	0	0.05	0.25	833	Phoenix	No
Brewer St #7	41.7473617	-72.5958325	7/16/2019	20.7	873	0.425	0.25	0.04	0.25	10	Phoenix	No
Brewer St #8	41.7521254	-72.5944009	6/10/2020	21.5	678	0.325	0	0.02	0.25	10	Phoenix	No
Britt Rd #1	41.7310981	-72.6025066	5/20/2019	20.6	502	0.213	0.25	0.03	0.25	<10	Phoenix	No
Burke St #1	41.732186	-72.5914682	5/16/2019	23.5	929	0.633	0.25	0.01	0.5	<10	Phoenix	No
Burnside Ave #2	41.7768142	-72.6169866	6/10/2020	0.1	1192	0.587	1	0.08	0.75	>24200	Phoenix	Yes
Burnside Ave #4	41.77795	-72.612302	7/23/2020	21.3	858	0.418	0	0.05	1.5	20	Phoenix	No
Cambridge Dr #1	41.7381195	-72.6280253	8/2/2019	20.9	706	0.356	0	0.11	0.25	20	Phoenix	No
Cheney Lane #1	41.747871	-72.577317	8/2/2019	20.6	187	0.103	0	0.07	0.25	249	Phoenix	No
Claire Rd #1	41.7627059	-72.5770154	6/24/2019	18.6	612	0.378	0	0.09	0.25	20	Phoenix	No
Clayton Rd #1	41.735888	-72.614451	7/11/2019	20.8	487	0.22	0.25	0.04	0.25	20	Phoenix	No
Colby Dr #1	41.7952028	-72.6087166	7/30/2019	23.7	391	0.194	0.25	0.55	0.25	86	Phoenix	No
Colby Dr #2	41.7937684	-72.6086959	7/22/2019	23.2	577	0.269	0	0.01	0.25	<10	Phoenix	No
Collimore Rd #3	41.7960425	-72.6254037	7/30/2019	27.4	134	0.0726	3	0.11	0.5	142	Phoenix	Yes
Colonial Park #2	41.737022	-72.6380703	7/15/2019	17.8	246	0.117	0	0.03	0.25	<10	Phoenix	No
Connecticut Blvd #2	41.7692832	-72.6510898	6/10/2020	21.7	1565	0.79	0.25	0	0.75	0	Phoenix	No
Dartmouth Dr #1	41.7919938	-72.6063399	5/16/2019	15.2	607	0.531	0.25	0.2	0.25	173	Phoenix	No

Outfall ID	Latitude	Longitude	Sample Date	Temp (oC)	Conductivity (umhos/cm)	Salinity (g/kg)	Ammonia (mg/L)	Chlorine (mg/L)	MBAs (mg/L)	E. Coli (col/100ml)	Lab	Investigation Required
Dartmouth Dr #2	41.7907887	-72.6039927	6/28/2019	19.6	308	0.144	0.25	0.02	0.25	<10	Phoenix	No
Davis Rd #1	41.7466305	-72.5853674	7/17/2019	11.23	438	0.29	0	0	0.25	31	Phoenix	No
Deborah Dr #1	41.7594025	-72.5931074	5/20/2019	19.5	509	0.214	0.25	0.05	0.25	86	Phoenix	No
Driver Rd #1	41.7773913	-72.5980182	5/15/2019	14.8	576.7	0.462	0.25	0	0.5	10	Phoenix	No
Ecology Dr #1	41.7726283	-72.6304222	5/15/2019	14.7	957	1.076	0.25	0.1	0.25	<10	Phoenix	No
Elida CT #3	41.7860408	-72.6216733	5/20/2019	27.6	14.9	0.0067	0.25	0.08	0.25	187	Phoenix	No
Fairfield St #1	41.7868	-72.62493	5/20/2019	17.9	492	0.213	0.25	0.03	0.25	52	Phoenix	No
Fairfield St #2	41.78683	-72.62499	6/10/2019	17.9	399	0.2	0	0.1	0.25	41	Phoenix	No
Farnham Dr #1	41.7488851	-72.5793425	6/24/2019	16.8	587	0.278	0.25	0.07	0.25	<10	Phoenix	No
Farnham Dr #2	41.7492538	-72.5780708	5/15/2019	14.23	509	0.23	0.25	0.04	0.25	41	Phoenix	No
Fitzgerald Dr #1	41.75153	-72.59318	5/20/2019	19.4	712	0.338	0.25	0	0.25	10	Phoenix	No
Fitzgerald Dr #2	41.7489618	-72.5892064	6/24/2019	14.3	580	0.251	0.25	0.06	0.75	<10	Phoenix	No
Floradale Dr #1	41.7835927	-72.6375218	6/10/2019	22.9	1011	0.487	0.25	0.17	0.25	<10	Phoenix	No
Footpath Ln #1	41.7633226	-72.6303818	8/31/2020	16.6	1514	0.756	0	0.09	1.5	2100	Phoenix	No
Forbes St #3	41.747463	-72.6056274	5/16/2019	13.2	423	0.219	0	0.04	0.25	504	Phoenix	No
Forest Ln #1	41.7583144	-72.5856603	5/26/2022	18.6	437	0.209	0.25	0.1	0.08	41	Phoenix	No
Fowler Ln #6	41.7416916	-72.5784582	7/16/2019	21.4	613	0.288	0	0.03	0.25	<10	Phoenix	No
Governor St #2	41.770789	-72.651451	8/6/2020	23	67.9	0.0315	0.5	0	0.5	683	Phoenix	Yes
Graham Rd #1	41.7416999	-72.6277638	8/6/2020	23	636	0.31	0	0.13	0.5	464	Phoenix	No
Grande Rd #1	41.75009	-72.5812488	5/15/2019	11.96	292	0.19	0.25	0	0.25	98	Phoenix	No
Greene Ter #1	41.7820316	-72.6383483	7/31/2019	19.4	579	0.282	1	0.09	0.5	>24200	Phoenix	Yes
Hartland St #1	41.7627518	-72.6552279	8/13/2020	28.3	250	0.117	0	0.05	1	10	Phoenix	No
Henderson Dr #1	41.7862101	-72.6196229	7/22/2019	22.84	617	0.31	0.25	0	0.25	733	Phoenix	No
Hickory Dr #2	41.7409284	-72.5774634	5/16/2019	25.2	387	0.181	0.25	0.18	0.25	>24200	Phoenix	No

Outfall ID	Latitude	Longitude	Sample Date	Temp (oC)	Conductivity (umhos/cm)	Salinity (g/kg)	Ammonia (mg/L)	Chlorine (mg/L)	MBAs (mg/L)	E. Coli (col/100ml)	Lab	Investigation Required
Higbie Dr #1	41.7792211	-72.5954515	7/25/2019	20.67	828	0.44	0.25	0.11	0.25	1150	Phoenix	No
High St #3	41.7331953	-72.6310781	7/15/2019	18	1005	0.498	0	0.07	0.25	109	Phoenix	No
Hills St #1	41.741207	-72.596455	5/16/2019	19.8	358	0.169	0.25	0.19	0.25	74	Phoenix	No
Hillside Cemetery Outfall #1	41.7712727	-72.6189087	6/10/2020	18.9	499	0.25	0	0.04	0.5	<10	Phoenix	No
Hillside St #2	41.7705674	-72.6194437	6/10/2020	20	519	0.226	0.25	0.08	0.5	74	Phoenix	No
Hillside St #3	41.7710864	-72.6195644	5/15/2019	20.6	911	0.658	0.25	0.05	0.25	<10	Phoenix	No
Hilton Dr #1	41.750139	-72.5969567	5/16/2019	15.9	593	0.372	0.25	0	0.25	20	Phoenix	No
Holland Ln #1	41.765688	-72.595802	7/17/2019	14.51	440	0.27	0.25	0.01	0.25	1570	Phoenix	No
Janet Dr #1	41.7586148	-72.5930307	5/16/2019	15.7	506	0.421	0.25	0	0.25	10	Phoenix	No
Jerry Rd #2	41.72987	-72.63298	6/28/2019	17.2	954	0.554	0	0.03	0.25	173	Phoenix	No
Kingston Dr #1	41.7514951	-72.579248	5/15/2019	12.36	253	0.16	0.25	0	0.25	<10	Phoenix	No
Landers Ct #1	41.735533	-72.6012231	5/20/2019	15.6	730	0.348	0.25	0	0.25	62	Phoenix	No
Landers Rd #1	41.7349741	-72.6028701	5/28/2019	11.1	668	0.31	0.25	0	0.25	<10	Phoenix	No
Langford Ln #1	41.7463038	-72.595531	5/28/2019	11.2	2393	1.23	0.25	0.04	0.5	5790	Phoenix	No
Langford Ln #1A	41.7463072	-72.5939099	5/28/2019	11.8	772	0.541	0	0	0.25	10	Phoenix	No
Langford Ln #2	41.746903	-72.5911806	6/24/2019	19	634	0.289	0.25	0.09	0.25	31	Phoenix	No
Langford Ln #4	41.7478271	-72.5880539	6/24/2019	16.5	442	0.208	0.25	0.04	0.25	75	Phoenix	No
Long Hill St #1	41.7895249	-72.5944467	7/22/2019	23.6	523	0.227	0.25	0.06	0.5	41	Phoenix	No
Long Hill St #2	41.7894794	-72.594456	7/22/2019	25.3	688	0.315	0.25	0.22	0.25	1940	Phoenix	No
Madison St #1	41.7487528	-72.6007093	5/16/2019	16.4	680	0.469	0.25	0	0.25	<10	Phoenix	No
Main St #1	41.7972439	-72.6202764	7/31/2019	21.4	1622	0.812	0	0.12	0.25	20	Phoenix	No
Main St #12	41.751951	-72.6402364	7/16/2019	23	2019	0.991	0.25	0.08	0.5	420	Phoenix	No
Main St #14	41.7394054	-72.6301247	7/15/2019	19.6	1087	0.53	0	0.05	0.25	10	Phoenix	No

			Sample	Temp	Conductivity	Salinity	Ammonia	Chlorine	MBAs	E. Coli		Investigation
Outfall ID	Latitude	Longitude	Date	(oC)	(umhos/cm)	(g/kg)	(mg/L)	(mg/L)	(mg/L)	(col/100ml)	Lab	Required
Main St #16	41.7300463	-72.620165	7/11/2019	20.3	671	0.314	0.25	0.03	0.25	31	Phoenix	No
Main St #18	41.7290691	-72.6185057	7/11/2019	26.3	108	0.0513	1	0.04	0.5	2760	Phoenix	Yes
Main St #6A	41.7882638	-72.6317223	7/22/2019	19.55	465	0.25	0	0.03	0.25	231	Phoenix	No
Main St #7A	41.7882495	-72.6317674	7/22/2019	20.14	800	0.43	0	0	0.25	<10	Phoenix	No
Manor Cir #1	41.7326192	-72.5900618	5/16/2019	24.1	739	0.498	0	0.15	0.25	97	Phoenix	No
Maple St #1	41.7332799	-72.6170573	5/26/2022	15.2	645	0.306	0	0	0.14	161	Phoenix	No
Margery Dr #2	41.7553396	-72.5954067	7/8/2019	19.7	601	0.267	0	0.05	0.25	86	Phoenix	No
Meadow Hill #1	41.7624353	-72.6528457	8/13/2020	26.8	1873	0.931	0.5	0.07	0.75	10	Phoenix	Yes
Meadow Hill #4	41.761216	-72.652844	7/17/2019	15.51	1224	0.76	0.25	0	0.25	20	Phoenix	No
Meadow St #2	41.7617823	-72.6546266	7/17/2019	16.49	372	0.06	0.25	0.14	0.5	10	Phoenix	No
Melton Dr #2	41.7537619	-72.5814437	6/24/2019	13.75	425	0.26	0.25	2.2	0.25	<10	Phoenix	No
Mohawk Dr #1	41.7857424	-72.6361077	7/22/2019	19.93	667	0.37	0	0	0.5	231	Phoenix	No
Monroe St #1	41.7448252	-72.5963852	5/28/2019	12.4	753	0.518	0.25	0.01	0.25	10	Phoenix	No
Montclair Dr #1	41.7304471	-72.6090074	7/11/2019	17.9	177	0.0828	0	0.03	0.25	52	Phoenix	No
Naomi Dr #1	41.756739	-72.594563	7/17/2019	23.1	407	0.181	0.25	0.1	0.25	<10	Phoenix	No
Northfield Dr #1	41.7593785	-72.5833827	7/17/2019	13.52	629	0.4	0	0	0.25	1150	Phoenix	No
Oak St #2	41.7360938	-72.5738874	7/11/2019	19.5	503	0.231	0.25	0.07	0.25	241	Phoenix	No
Oak St #3 West	41.737568	-72.575689	5/16/2019	22.7	303	0.141	0.25	0.23	0.25	41	Phoenix	No
Oak St #4	41.741641	-72.575927	7/10/2019	18.9	394	0.192	0	0.05	0.25	158	Phoenix	No
Oak St #5	41.749542	-72.576718	5/15/2019	13.03	209	0.13	0.25	0.05	0.25	134	Phoenix	No
Oak St #6	41.751202	-72.579131	7/17/2019	12.63	365	0.23	0	0.02	1	31	Phoenix	No
Oak St #7	41.7546672	-72.5778849	5/15/2019	11.91	307	0.2	0	0	0	281	Phoenix	No
Olde Main St #2	41.7890478	-72.6334533	6/10/2019	21.7	257	0.119	0.25	0.1	0.25	10	Phoenix	No
Parkwood Dr #1	41.738354	-72.5914422	7/11/2019	19.5	721	0.341	0	0.08	0.25	134	Phoenix	No

			Sample	Temp	Conductivity	Salinity	Ammonia	Chlorine	MBAs	E. Coli		Investigation
Outfall ID	Latitude	Longitude	Date	(oC)	(umhos/cm)	(g/kg)	(mg/L)	(mg/L)	(mg/L)	(col/100ml)	Lab	Required
Pendelton Dr #1	41.7383348	-72.600509	5/16/2019	23.1	1645	0.717	0	0.18	0.25	10	Phoenix	No
Pheasant Ln #1	41.797558	-72.6234423	7/21/2019	19.66	438	0.11	0.25	0	0.25	185	Phoenix	No
Piper Ln #1	41.7550262	-72.5759875	7/17/2019	10.48	181	0.12	0.25	0.05	0.25	<10	Phoenix	No
Porter St #1	41.7295625	-72.6206786	7/11/2019	20.6	862	0.42	0	0.05	0.25	<10	Phoenix	No
Prasser Dr #1	41.7360486	-72.5970484	8/2/2019	20.4	595	0.282	0.25	0.25	0.25	84	Phoenix	No
Prestige Park #2	41.7872713	-72.6089772	8/31/2020	19.8	744	0.361	0	0.02	2	2100	Phoenix	No
Primrose Dr #1	41.76791	-72.5806	7/8/2019	17.6	638	0.293	0	0.03	0.25	10	Phoenix	No
Prospect St #1	41.7733085	-72.6480385	7/26/2019	22.5	1712	0.846	0	0.07	0.5	75	Phoenix	No
Prospect St #2	41.7741372	-72.6475291	7/26/2019	20.5	750	0.374	0	0.1	0.25	86	Phoenix	No
Prospect St #3	41.7764974	-72.6457979	7/17/2019	15.41	289	0.2	0.25	0.11	0.5	<10	Phoenix	No
Prospect St #4	41.7775221	-72.6433969	7/17/2019	14.79	432	0.07	0.25	0	0.25	97	Phoenix	No
Rivermead Blvd #1	41.7329486	-72.6323068	6/28/2019	17.6	412	0.193	0	0.04	0.25	20	Phoenix	No
Rowland Dr #1	41.7525922	-72.5880573	7/8/2019	18.9	69.3	0.031	0	0.11	0.25	52	Phoenix	No
Sawka Dr #1	41.767768	-72.5999054	7/17/2019	20.7	577	0.285	0	0.01	0.25	98	Phoenix	No
School St #3	41.7956806	-72.6195342	6/10/2020	18.3	590	0.29	0	0.1	0.25	1440	Phoenix	No
Silver Ln #1	41.7669872	-72.5818789	7/17/2019	11.74	263	0.17	0.25	0.02	0.25	<10	Phoenix	No
Silver Ln #5	41.7629845	-72.6291588	8/13/2020	24.3	108	0.0505	0	0.33	0.25	<10	Phoenix	No
Smart St #1	41.753516	-72.638278	7/16/2019	20.6	811	0.39	0	0.05	0.25	231	Phoenix	No
Springside Ave #1	41.7814671	-72.6387603	5/15/2019	16.6	306.2	0.383	0.25	0	0.25	30	Phoenix	No
Spruce Dr #1	41.7397073	-72.5977313	5/16/2019	24.8	409	0.191	0.25	0.22	0	122	Phoenix	No
Tolland St #2	41.7868439	-72.5872797	8/6/2020	23.5	257	0.112	0	0.07	0.5	10	Phoenix	No
Torpey Dr #1	41.7757467	-72.5795273	8/13/2020	27.7	257	0.121	0	0.47	0.25	>24200	Phoenix	No
University Ave #1	41.7921385	-72.6067331	5/16/2019	14.8	671	0.688	0.25	0.05	0.25	145	Phoenix	No
Wentworth Dr #1	41.7594911	-72.6053442	6/24/2019	19.6	798	0.375	0	0.07	0.5	2100	Phoenix	No

Conductivity Salinity MBAs Investigation Sample Temp Ammonia Chlorine E. Coli **Outfall ID** Latitude Longitude (oC) (umhos/cm) (g/kg) (mg/L)(mg/L) (mg/L) (col/100ml) Lab Required Date 7/22/2019 Yale Rd #1 41.7904804 -72.6014479 23.4 1435 0.708 0 0.07 0.5 789 Phoenix No zB+L 0008 41.7365416 -72.57259 6/1/2022 14.5 226 0.108 0.25 0.01 0.1 Phoenix < 10 No zB+L 0013 41.7674838 -72.6262732 4/21/2022 12 403 0.196 0.25 0 0.12 < 10 Phoenix No zB+L 0040 41.7413351 -72.5965375 5/26/2022 17.9 0.294 0 0.05 1920 623 0.2 Phoenix No 41.7598002 -72.5928819 6/1/2022 0 zB+L 0048 19.3 1401 0.693 0.01 0.2 < 10 Phoenix No 4/21/2022 zB+L 0083 41.7720604 -72.6100708 12.6 780 0.381 0 0.05 0.12 < 10 Phoenix No zB+L 0087 41.759687 72.59269 6/1/2022 18.1 746 0.364 0.25 0.19 0.1 10 Phoenix No 4/21/2022 zB+L 0088 41.7720604 -72.6100108 13.8 752 0.367 0 0.11 0.12 52 Phoenix No 5/26/2022 zB+L 0091 41.756194 72.590986 17.6 325 0.155 0.25 0.1 0.1 < 10 Phoenix No Great Hill Rd #1 41.774338 -72.598055 8/17/2023 22.5 717 0.348 0 0.03 0.15 <10 Phoenix No Alps Dr #3 41.7909735 -72.6020246 7/25/2023 28.7 637 0.426 0.25 0.1 0.28 20 Phoenix No 7/24/2023 345 Oak St DDCB #4 41.7353427 -72.5747024 25.2 232 0.109 0.25 0.1 0 Phoenix No 7/24/2023 Forbes St #20 41.767694 -72.600455 31 410 0 >2.5 >24200 0.283 0.25 Phoenix No 7/24/2023 Forbes St #21 41.767694 -72.600455 31.6 773 0.524 0.25 0 >2.5 >24200 Phoenix No Depauw Cir #1 41.7960707 -72.6068243 6/21/2023 20.6 450 0.213 0.25 0.2 0.17 373 Phoenix No School St #4 41.7856276 -72.6137914 6/21/2023 19.6 735 0.357 0.25 0.1 >2.5 <10 Phoenix No