

# STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION



## Annual Report for MS4 Permit Year 4

July 1, 2022 – June 30, 2023

**MS4 General Permit**  
**Connecticut Department of Transportation Municipal Separate Storm Sewer (MS4) Annual Report**  
**New MS4 Permittee**  
**Permit Number GSM DEEP-WPED-GP-22**  
**[July 1, 2022– June 30, 2023]**

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This report documents the Connecticut Department of Transportation’s (aka, “CTDOT”) efforts to comply with the conditions of the MS4 General Permit to the maximum extent practicable (MEP) from July 1, 2022, to June 30, 2023.

**Part I: Summary of Minimum Control Measure Activities**

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

Now in Year 4 since the permit has been issued, the focus of this reporting year was again to keep the CTDOT website updated with the most current information and educate internal personnel of the MS4 requirements. The CTDOT’s primary means of providing knowledge of the Department’s MS4 and Stormwater information remain the dedicated CTDOT MS4 website. Messages sent to the Department’s dedicated MS4 email inbox and phonenumber were all promptly responded to.

One of the most common questions received by CTDOT is the status of mapping within a certain location. A public facing ESRI Web Map was created for individuals to see what CTDOT has mapped to date. This map has proven to be a useful tool for interested parties. Included in this mapping are highlighted interconnection points (where CTDOT’s drainage is interconnected to that of other municipalities or private entities) that allow users to easily identify where drainage system ownership changes. Mapping these interconnection locations is a requirement for all MS4 Permit holders. The Web Map can be found via this link which as of July 1, 2023, has 2,429 views:

<https://ctdot.maps.arcgis.com/apps/webappviewer/index.html?id=5f28d298a4ef41d9bc6339a66dee764e>

The GIS technology that DOT uses to create and share its stormwater mapping continues to evolve, increasing the functionality of the web maps and improving the user interface experience. However, to incorporate these improvements to the DOT’s publicly available mapping, DOT anticipates having to establish a new URL address during the next reporting year. At a minimum, the new URL address will be updated on the DOT MS4 webpage and distributed to those on the Connecticut MS4 List Serve.

### 1.1 BMP Summary

BMP	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 program	Complete	Provided education on CTDOT's MS4 program to staff and consultants. Public educational material on CTDOT's MS4 program available on CTDOT MS4 webpage.	Educate the Public on Stormwater	Environmental Planning	June 30, 2020	Apr 9, 2019	These resources are published on CTDOT MS4 Website <a href="https://portal.ct.gov/DOT/PP_Envir/Water_Natural_Resources/CTDOT-MS4">https://portal.ct.gov/DOT/PP_Envir/Water_Natural_Resources/CTDOT-MS4</a>
1.2 Track CTDOT public meetings where non-point source educational material was distributed	Ongoing	Distribute resources to Designers for Public Project Scoping Meetings throughout Municipalities statewide	Get informational resources to designers for distribution at public events	Engineering Bureau, Environmental Planning	June 30, 2020	Ongoing	Incorporation of project specific stormwater issues are provided for incorporation into designer PowerPoint presentations
1.3 Develop Dedicated MS4 Webpage on CTDOT Website	Complete	Maintain a CTDOT MS4 dedicated Website	Create MS4 dedicated Website	Environmental Planning, Environmental Compliance	June 30, 2020	Mar 1, 2019	<a href="https://portal.ct.gov/DOT/PP_Envir/Water_Natural_Resources/CTDOT-MS4">https://portal.ct.gov/DOT/PP_Envir/Water_Natural_Resources/CTDOT-MS4</a>

BMP	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
1.4 Collaborate with MS4 stakeholder groups outside of CTDOT	Ongoing	Coordinated with MS4's and public health organizations for correspondence regarding Illicit Discharges. Coordinated with Town of Stonington on potential stormwater retrofit project. Participated in ad-hoc committee on the update to CTDEEP's Stormwater Quality Manual	Work with other MS4 entities cooperatively	Environmental Compliance, Environmental Planning	June 30, 2020	Ongoing	A website displaying CTDOT mapped MS4 infrastructure is publicly available: <a href="https://ctdot.maps.arcgis.com/apps/webappviewer/index.html?id=5f28d298a4ef41d9bc6339a66dee764e">https://ctdot.maps.arcgis.com/apps/webappviewer/index.html?id=5f28d298a4ef41d9bc6339a66dee764e</a>
1.5 Educate CTDOT Employees on the MS4 Program	Ongoing	Provided MS4 training for design engineers to review MS4 design standards. Incorporated MS4 guidance for CTDOT construction personnel trainings	Provide workshops for employees Department wide to inform them of MS4 requirements	Environmental Compliance, Environmental Planning	June 30, 2020	Ongoing	Refer to Section 6.3 for additional trainings regarding the IDDE program for CTDOT Employees
1.6 River and Stream Signs	Complete	All construction projects that involve crossing a named watercourse receive signage	CTDOT Standard Policy created prior to permit issuance	Engineering Bureau, Environmental Planning	Jul 1, 2020	Completed Prior to Permit issuance	Refer to CTDOT Sign Catalog for sign specifications <a href="https://portal.ct.gov/-/media/DOT/documents/dtrafficdesign/SignCatalogpdf.pdf?la=en">https://portal.ct.gov/-/media/DOT/documents/dtrafficdesign/SignCatalogpdf.pdf?la=en</a>

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

CTDOT staff will continue to be educated regarding the MS4 permit by attending trainings provided by the Department's Training Center, District Environmental Trainers, Office of Environmental Planning and/or the Office of Environmental Compliance. Continued development of the public facing ESRI Web Map is also expected with the goal of users being able to download data.

### **1.3 Details of activities implemented to educate the community on stormwater**

Trainings this permit term (July 2022 – June 2023) focused on internal Department personnel and consultants working for the Department. The goals of trainings were to educate them on MS4 design requirements and on illicit discharge identification and reporting requirements. Public outreach and educational material on the Department's MS4 Program can be found on the CTDOT MS4 website: . A presentation was provided September 2, 2022 to the CT GIS Network Committee <https://ctgis.uconn.edu/> on the CTDOT GIS MS4 Mapping.

Additionally, on January 19, 2023, CTDOT gave a presentation to the State Emergency Responders Commission. The presentation itself was provided virtually, however attendees had the option of meeting in person or on-line. There were thirteen SERC members in attendance, many of which represent State agencies or Municipalities from across the State. A copy of the presentation to SERC was also provided to the Commission chair so it could be distributed to members and posted on the SERC website ([https://portal.ct.gov/-/media/SERC/Agenda-and-Minutes/2023/2023-Meeting-Materials/2023-01-19\\_CT-DOT-MS4-Mapping\\_SERC-Presentation-1\\_19\\_23R.pdf](https://portal.ct.gov/-/media/SERC/Agenda-and-Minutes/2023/2023-Meeting-Materials/2023-01-19_CT-DOT-MS4-Mapping_SERC-Presentation-1_19_23R.pdf)). The presentation focused on the stormwater infrastructure that CTDOT has mapped to date, the schedule for completing DOT mapping statewide, where to access the map and, most importantly, how emergency responders can use the mapping as a resource during a spill response and clean-up effort.

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

### 2.1 BMP Summary

BMP	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
2.1 Comply with public notice requirements for the Stormwater Management Plan	Complete	N/A	Notify Public	Environmental Planning, Environmental Compliance	Jun 1, 2019	June 1, 2019	Posted on CTDOT MS4 Website <a href="https://portal.ct.gov/DOT/PP_Envir/Water_Natural_Resources/CTDOT-MS4">https://portal.ct.gov/DOT/PP_Envir/Water_Natural_Resources/CTDOT-MS4</a>
2.2 Comply with public notice requirements for Annual Reports	Complete	Notified Public of Annual Report	Notify Public	Environmental Planning, Environmental Compliance	Sep 1, 2022	September 1, 2022	Posted on CTDOT MS4 Website <a href="https://portal.ct.gov/DOT/PP_Envir/Water_Natural_Resources/CTDOT-MS4">https://portal.ct.gov/DOT/PP_Envir/Water_Natural_Resources/CTDOT-MS4</a>

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

CTDOT is solely responsible for permit compliance. All concerns the Public has regarding its Annual Report and SWMP will be considered. Public feedback on the Department's MS4 program, SWMP or Annual Reports can be sent to [DOT.MS4@ct.gov](mailto:DOT.MS4@ct.gov). To date, no concerns have necessitated any changes to the SWMP.

### 2.3 Public Involvement/Participation reporting metrics

Metrics	Implemented	Date	Posted
Availability of the Stormwater Management Plan announced to public	Yes	April 3, 2019	CTDOT Website, Email sent to MS4 Listserv
Availability of Annual Report announced to public	Yes	September 1, 2022	MS4 CTDOT Website and Email sent to MS4 Listserv

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

#### 3.1 BMP Summary

BMP	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
3.1 Develop legal authority to prohibit illicit discharges	Completed	Legal authority previously established through existing State regulations	Legal authority developed	Environmental Compliance	June 30, 2021	June 30, 2022	Unpermitted non-stormwater discharges are prohibited under CGS 22a-430. Discovery of such discharges to the CTDOT MS4 that cannot be otherwise remedied are referred to CT DEEP, which possesses the State's enforcement authority in these cases.
3.2 Develop written IDDE program	Completed	IDDE Written Plan revised this reporting period to update catchment priorities and catchment investigation procedures	Written IDDE plan completed	Environmental Compliance	June 30, 2021	June 5, 2020	Updates to catchment priority definitions and investigation procedures were updated as a result. See additional IDDE program details in Part III of this report.
3.3 Develop program for citizen reporting of illicit discharges /Include citizen reports in annual report	Completed	Citizen IDDE reporting program previously established	Illicit Discharge Program Developed and Reports Documented	Environmental Compliance	June 30, 2021	July 1, 2019	Call 860-594-2560 or email <a href="mailto:DOTMS4@ct.gov">DOTMS4@ct.gov</a>
3.4 Develop tracking system for illicit discharge Investigation and Abatement activities	Completed	IDDE tracking system previously established	Illicit Discharge Tracking system developed	Environmental Compliance	July 1, 2019	July 1, 2019	Investigations are tracked both within the GIS database and manually outside the database
3.5 Identify all known locations of SSO's into CTDOT's MS4 over previous 5 years	Completed	Previously identified	SSO's within previous 5 years identified	Environmental Compliance	November 1, 2019	November 1, 2019	No historic SSO's identified that require CTDOT follow up actions. Locations identified are in the appendix of the IDDE written report which is available on the CTDOT MS4 webpage

BMP	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
3.6 Identify and Map 50% of CTDOT's MS4 in Priority Areas	Completed	This year CTDOT completed mapping stormwater assets in 14 additional MS4 Municipalities	50% of Mapping of CTDOT assets within the 120 MS4 Municipalities Completed by Year 5.	Environmental Planning, Environmental Compliance, Maintenance, Public Transit	June 30, 2024	June 30, 2022	CTDOT stormwater assets have been mapped in 63 (54%) MS4 Municipalities as of 6/30/2022
3.7 Screen and Sample all mapped outfalls and key interconnection points	In progress	See Section 3.7	Mapped outfalls and interconnections screened and/or sampled	Environmental Compliance	June 30, 2024	June 30, 2024	See Section 3.7
3.8 Provide Annual IDDE Training to Employees	In progress	Refer to Section 6	Annual Bureau trainings completed	Bureau Chief(s)-Engineering and Construction, Policy and Planning, Maintenance, Public Transit	June 30, 2021 & Annually	Annual	Training provided to District Construction Personnel and District Maintenance Personnel

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

Normal IDDE program activities will continue next year. These activities include the mapping of CTDOT stormwater assets in MS4 Municipalities and dry and wet weather screening and sampling of all non-excluded discharge locations in areas where the mapping has been finalized. Catchment investigations for all discharge points with suspect illicit inputs based on screening and sampling activities will be prioritized first followed by catchment investigations in other catchment areas categorized as high priority. IDDE information in relevant CTDOT trainings will also be provided throughout the year.

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

Location / suspected source	Response taken
1660 Storrs Road Mansfield – Sewer System	Sewer Effluent discharging into culvert under State Route 320, Eastern Highlands Health District is addressing. No discharge was observed at the time of inspection.
255 Main Street, East Lyme – Grease Trap	Grease trap overflow discharging into the Route 156 drainage system, Ledge Light Health District is addressing. No discharge was observed at the time of inspection.



**3.4 Provide a record of illicit discharges occurring during the reporting period and SSOs occurring July 2022 through end of reporting period using the following table.**

Location / suspected source	Response taken
270 Main Street, Monroe – Septic System	Septic leachate infiltrating into Route 25 drainage system. Flow was observed in nearby catch basin and a septic odor was identified at the time of inspection. CTDOT coordinated with the Town of Monroe to research the septic system serving the adjacent property, conduct a follow up site investigation with Town Officials and send a letter to the property owner. Based on information collected to date, the septic system may be operating properly and changes to the drainage system may be required. The investigation is on-going.

Note, that potential illicit discharges based solely on analytical results (no olfactory or visual evidence) are not included below but are included in IDDE metrics at the end of this MCM 3 IDDE section.

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

The CTDOT receives information regarding illicit discharges from multiple sources. The public may notify the CTDOT regarding potential illicit discharge by sending an email to [DOTMS4@ct.gov](mailto:DOTMS4@ct.gov) or by calling the DOT Customer Care Center at 860-594-2560. Illicit discharges are also reported to the CTDOT MS4 Team from other Department personnel and from consultants who are performing screening and sampling activities on behalf of the DOT. Once an illicit discharge is reported, the CTDOT MS4 Team records the issue in the database and reaches out to the local municipality, local health department and/or other stakeholders to coordinate research and a response. Activities and communications, including corrective actions taken to eliminate illicit discharges are documented both within and outside the database.

**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
No septic failures were identified this permit term		

### 3.7 IDDE reporting metrics

See Figure 1 below titled “CTDOT MS4 Mapping Status as of July 1<sup>st</sup>, 2023”. All total infrastructure numbers are estimates based upon mapping completed to date. The symbology of Figure 1 is as follows:

- Blue- Municipality has been mapped 100% complete.
- Red- 75% of the municipality is mapped- required field work to be completed.
- Purple- Municipalities in which current mapping has commenced and is considered at least 5% complete.
- Yellow- No mapping has been performed yet.

During the permit term, the CTDOT is required to map half of its drainage infrastructure within the 120 MS4 Municipalities. Complete system mapping within designated MS4 Municipalities will be required by 2029. Figure 2 illustrates CTDOT mapped municipalities overlaid with the MS4 priority areas which include urbanized areas, local watershed impervious cover of > 11% and impaired waterbodies. Municipalities are chosen for mapping based upon their CTDOT Maintenance District, geographic location and their priority areas.

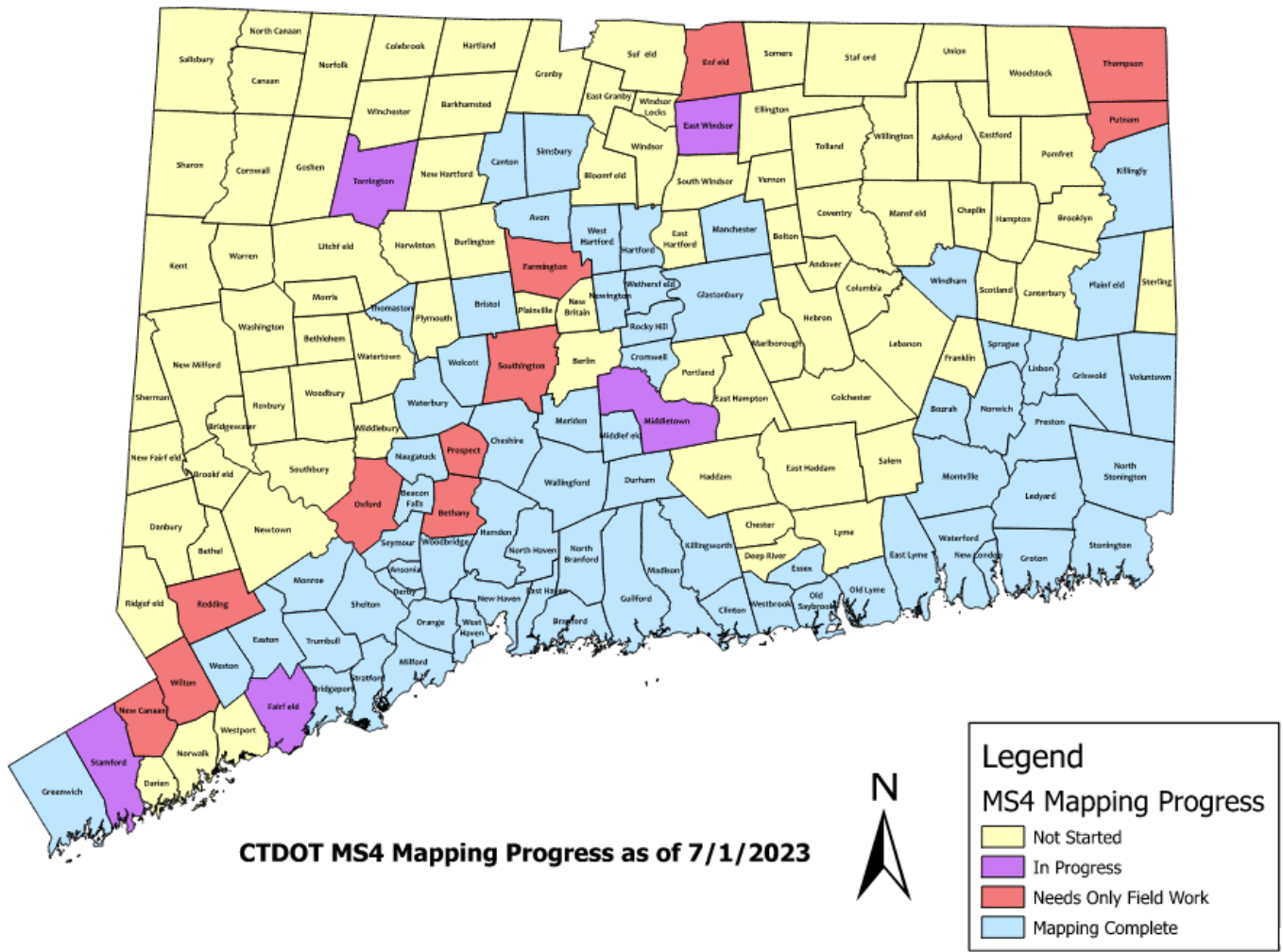


Figure 1: CTDOT MS4 Mapping Status as of July 1st, 2023

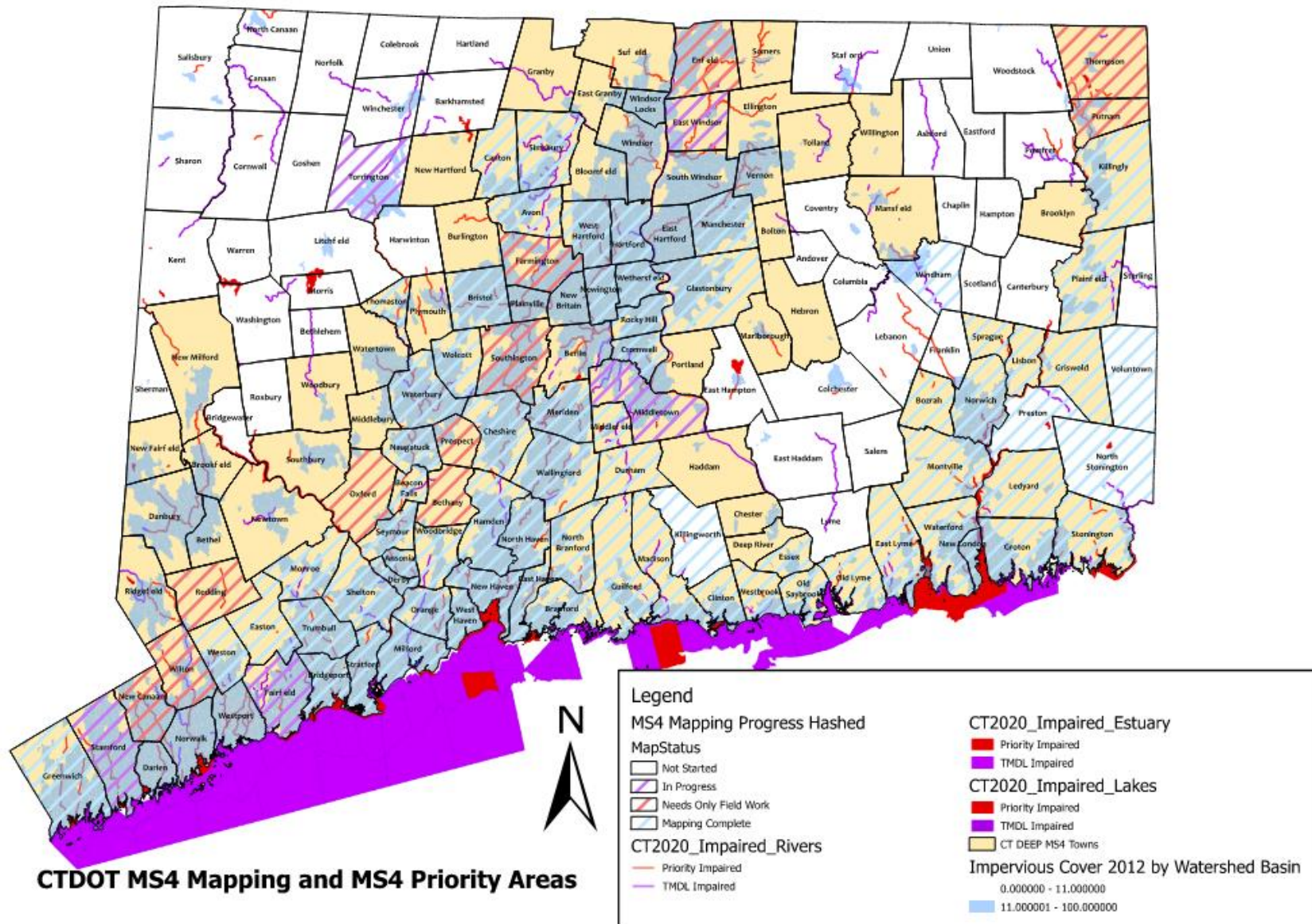


Figure 2: CTDOT MS4 Mapping and MS4 Priority Areas

### **IDDE Reporting Metrics**

Number of discharge locations from the CTDOT MS4 System (outfalls + outgoing interconnection points):	mapped to date total	12,787 TBD by 2029
MS4 outfalls (not including interconnections, including directly connected and disconnected)	mapped to date total # of MS4 outfalls estimated completion %	11,773 TBD by 2029 (est. 25,500) 49%
Outgoing MS4 Interconnection Points (e.g., DOT MS4 drains into other non-DOT MS4)	mapped to date estimated total estimated completion %	1,012 TBD by 2029 Unknown
System-wide mapping complete (detailed MS4 infrastructure)		63 MS4 Municipalities Mapped 54% of 120 MS4 Municipalities 45% of 169 Statewide Municipalities
Number of mapped discharge points that are “Excluded” as of 6/30/2023		8,334
Dry weather screenings of High or Low Priority Outfalls	this permit year total to date	625 2458
Wet weather sampling of High or Low Priority Outfalls	this permit year total to date	83 934
Number of catchment area investigations completed		682 (Total to date)
Estimated Percentage of Mapped, Non-Excluded MS4 catchment areas investigated in Completed Towns		24% (682 out of 2885)

**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).**

A training and lessons learned meeting was held individually for each of the three consultants that perform the screening and samplings work on behalf of the Department. The meetings were held on September 19<sup>th</sup>, 20<sup>th</sup> and 26<sup>th</sup>. Additionally, Department maintenance staff receive a refresher on illicit discharge basics annually from District Environmental Trainers as part of a larger training.

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

### 4.1 BMP Summary

BMP	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
4.1 Establish bylaw, regulation, standard conditions of approval, construction requirements or other legal authority that meet the requirements of the CTDOT MS4 permit	Completed	All CTDOT projects are reviewed by staff to implement appropriate construction site runoff control. Major Traffic Generators must comply with Office of the State Traffic Administration's approval terms	Standard Language Updated	Office of the State Traffic Administration Environmental Planning, Office of Construction, Districts	June 30, 2022	June 30, 2022	The Department administers all its own projects. Construction site run-off control is a condition of the Department's standard specifications.
4.2 Ensure all CTDOT manuals are consistent with the construction measures in DEEP's E&S Manual, Stormwater Quality Manual and the Construction Stormwater General Permit requirements	Completed	N/A	Publish Engineering Directive	Bureau Chief – Engineering and Construction	June 30, 2020	Completed on June 26, 2019.	
4.3 Develop and implement a plan outlining how all internal CTDOT departments with jurisdiction over the review, permitting or approval of land disturbance and development projects within the CTDOT MS4 will coordinate their functions with one another	Process in Place	N/A	Process in Place and it is working	Environmental Compliance and Environmental Planning	July 1, 2019	July 1, 2019	A coordination plan between internal Bureau's was previously documented in an Engineering Directive
4.4 Conduct a site plan review or confirm that a site plan review was completed by the appropriate authority. The review should verify that consideration of stormwater controls or management practices were considered	Process in Place	All development and redevelopment projects are reviewed by MS4 Team. Designers use CTDOT MS4 Designer Worksheet to document stormwater quality considerations	All projects reviewed for water quality impacts	Environmental Compliance and Environmental Planning	July 1, 2019	July 1, 2019	The MS4 Designer Worksheet can be viewed on the CTDOT MS4 Webpage.

BMP	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
4.5 Conduct or confirm that a site inspection(s) and enforcement was completed to assess the adequacy of the installation, maintenance, operation and repair of construction and post construction control measures	Program in Place	Oversight of construction projects for erosion control measures were conducted.	Ensure all projects have environmental oversight	Environmental Planning, Environmental Compliance, District Maintenance	July 1, 2019	In Place Prior to Permit Issuance	
4.6 Implement procedure to notify developers conducting projects that will connect to the CTDOT MS4 system of the obligation to comply with the requirements of DEEP's Construction Stormwater General Permit	Process in Place	Project Managers are made aware of the Construction Stormwater General Permit requirement at the beginning of a project by OEP via the Permit Need Determination Form (PNDF)	Ensure all Projects that require a Construction Stormwater General Permit are identified within the 30, 60, 90% design reviews	Environmental Planning	July 1, 2019	July 1, 2019	OSTA Application Forms were updated to require projects to certify that development conforms to local MS4 authority requirements
4.7 Include tracking information as part of each annual report	Completed	Plans reviewed and inspections completed have been tracked	Number of plans tracked and inspected	Environmental Compliance and Environmental Planning	June 30, 2020	July 1, 2019	

Construction Site Runoff Control Metrics	
Number of DOT Project E&SC Plans Reviewed	191
Number of DOT Project Site Inspections Completed	495

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

CTDOT will continue to review all projects for construction compliance. Currently, the CTDOT Office of Environmental Planning's Site Inspection Spreadsheet is kept for oversight and our designated CTDOT MS4 Team is responsible for documenting stormwater management compliance. Future MS4 documentation advancements include the development of a comprehensive database that will be capable of reporting how many site inspections were performed, the frequency of site inspections, and provide the site location's history to help identify repeat areas of concern within the CTDOT drainage infrastructure network.



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

### 5.1 BMP Summary

BMP	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
5.1 Establish updated standard procedures, forms and conditions of approval that meet the LID / Runoff Reduction Legal Authority requirements of the Permit	Completed	Per a CTDOT Engineering Directive, all CTDOT projects that impact drainage or drainage patterns are reviewed by staff to implement water quality BMPs to the maximum extent practicable	Standard procedure adopted	OSTA & Bureau Chief-Engineering & Construction	June 30, 2022	June 24, 2019	Unlike a traditional Municipality, CTDOT does not have the ability to pass ordinances or regulate land use
5.2 Ensure all CTDOT manuals are consistent with the construction measures in DEEP's E&S Guidelines, Stormwater Quality Manual and Construction General Permit Requirements	In Progress	CTDOT manuals will remain consistent with the construction measures in the 2002 Guidelines for Soil Erosion and Sedimentation Control, the Connecticut 2004 Stormwater Quality Manual and the Construction General Permit	CTDOT Manuals are consistent with E&S Manual, Stormwater Quality Manual and Construction Permit Requirements.	Bureau Chief-Engineering & Construction	June 30, 2022	July 1, 2019	CTDOT manuals will be updated as needed
5.3 Implement runoff reduction / LID measures for new development and redevelopment projects within CTDOT's MS4 area	In Progress	The CTDOT MS4 Team reviews all development and redevelopment plans to ensure runoff reduction and LID measures are implemented to the maximum extent practicable. Water quality impacts and site constraints are tracked on the CTDOT MS4 Designer Worksheet. BMP examples and calculations were also developed to provide consistency between all state and consultant forces	Document runoff reduction / LID implementation efforts for the project	Bureau Chief(s) - Policy and Planning, Engineering & Construction	June 30, 2022	July 1, 2019	The MS4 Designer Worksheet can be viewed on the CTDOT MS4 webpage. Other design guidance for implementing LID / BMPs is also provided
5.4 Calculate DCIA for 50% of the CTDOT's MS4 Catchment Areas (or Local Watershed Basins)	In Progress	An initial GIS spatial analysis was previously completed to provide an estimate of the DCIA that CTDOT is responsible for statewide	Determine the percentage of DCIA for CTDOT's Mapped Catchment or Local Watershed Areas	Bureau Chief-Engineering & Construction	June 30, 2024	June 30, 2024	It was determined that using an automated process to determine DCIA on a catchment basis is not feasible. See section 5.4 below.

BMP	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
5.5 Implement a plan to ensure long term maintenance of stormwater management facilities	In Progress	On-going focus has been on inventory and maintenance tracking of CTDOT-owned stormwater management facilities. Privately owned stormwater management facilities that discharge to CTDOT's MS4 system are added to database when identified.	Develop and Implement a Plan to Ensure Long Term Maintenance of Stormwater Management Facilities	Bureau Chief(s) - Maintenance, Engineering & Construction	June 30, 2022	June 30, 2022	List BMPs under MS4 purview: BMPs inspected in permit year: BMPs cleaned in permit year

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

Plan reviews of all development and redevelopment projects for stormwater quality improvements will continue. A refinement of the DCIA number will be performed as more information becomes available.

### 5.3 Post-Construction Stormwater Management reporting metrics

Metrics	
Total number of DOT Project plan sets <sup>1</sup> reviewed by the DOT MS4 Team	93 this permit term
CTDOT MS4 Worksheets submitted by DOT Project designers	38 this permit term
DOT Projects with no impacts <sup>2</sup> to the MS4 System	55 this permit term
DOT Projects with Final Design Plans with Impacts to MS4 System	5 this permit term / 28 total to date
Baseline Directly Connected Impervious Area (DCIA)	Estimated 8,489 Acres – See estimated calculation in Section 5.4. Note that previous annual report used 2012 CT Impervious Area Data.
DCIA disconnections incorporated into DOT Projects (based on Final Design Plans)	0.063 acres of designed disconnections this year 5.30 acres of designed disconnections total to date
New stormwater quality BMPs included in Final Design Plans	2 this permit term / 25 total since 2019
New stormwater quality BMPs constructed this Permit Year	18
DCIA Disconnected by Percentage of Estimated DCIA / Total	0.065%) DCIA disconnected this year 0.07%) disconnected total
Constructed/Active CTDOT Stormwater BMPs	370 in DOT’s mapping/database to date 289 in MS4 Municipalities
Constructed Privately - or Municipally-Owned Stormwater Quality BMPs Connected to DOT’s MS4 System	29 in DOT’s mapping/database to date

<sup>1</sup> Every individual project will typically have at least two milestone plan set reviews during the full course of design

<sup>2</sup> Projects that do not alter drainage patterns, reconstruct drainage infrastructure, or change the amount of DCIA (i.e., typical bridge rehabilitation projects) are considered to have no impact to the MS4 system.

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

To determine the baseline amount of DCIA, a GIS spatial analysis was performed using the following sources: UConn Roadway Impervious Cover, UConn Other Impervious Cover, CTDOT Right of Way, CTDOT Centerline of Road data, and CTDOT Curb Data.

These calculations serve as the baseline and is a conservative estimate of DOT's DCIA. It is anticipated that as mapping becomes more complete the DCIA value will be adjusted.

- 24,356 Acres of CTDOT Roadway (Spatial Analysis using UConn Data) 2,600 Acres of Other Impervious Cover (Projection based on 50 Municipalities Using UConn Data)
- 26,956 Acres of Total Impervious Cover (Roadway plus Other)
- 74,000 Acres of CTDOT Right of Way (pervious plus impervious, extrapolation based on 50 Municipalities using CTDOT Data)
- 33% of Outfalls Directly Connected to Waterbody (Current Mapping 4,096 Directly Connected / 12,237 Outfalls Mapped)
- Statewide Impervious Cover =  $(24,356 + 2,600) / (74,000) * 100 = 36\%$

To estimate the amount of DOT DCIA total statewide, the miles of centerline curb used originally was replaced with the percentage of mapped MS4 outfalls that are directly connected. Based on the inventory of outfalls compiled to date, 33% of the outfalls were identified as being directly connected by performing a GIS analysis that factored the distance of each outfall to the nearest waterbody.

Since the DOT MS4 General Permit requires a 1% DCIA reduction in years Four and Five of the permit, the 33% number is applied to the total estimated CTDOT statewide impervious cover number of 26,956 acres. This equates to a 1% DCIA reduction goal of 89 acres per year.

- DOT DCIA = 33% of 26,956 Acres = 8,895 Acres (est.). The actual amount of DCIA within this 8,895 Acres is still uncertain.
- 1% DOT DCIA = 88.9 acres (say, 89 acres).

The disconnection goal of 1% per year is equivalent to 89 acres per year Statewide

To determine a denominator for the DCIA total statewide, the miles of centerline curb used originally was replaced with the percentage of mapped MS4 outfalls that are directly connected. This was determined using a model within the GIS program that analyzes the distance from the outfall to the waterbody to determine directly connected or disconnected status. Based on the inventory of outfalls compiled to date, 33% of them are considered directly connected.

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

CTDOT continues to implement improvements into its MS4 program, particularly on four items covered under the pollution prevention and good housekeeping section of the DOT MS4 General Permit. Specifically, DOT has received feedback from the EPA and CTDEEP that has focused on DOT's catch basin inspections and cleaning, street sweeping, stormwater BMP inspection and maintenance, and implementation of a retrofit program to disconnect impervious areas. CTDOT has implemented updated procedures to address the feedback received. These updated procedures include a new way of tracking street sweeping and catch basin cleaning activities, an updated process for identifying and implementing retrofit projects and enlisting private consultants and contractors to support Department Maintenance with inspection and cleaning of stormwater BMPs. Descriptions of these activities are included in the sections below.

### 6.1 BMP Summary

BMP	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
6.1 Develop and implement formal employee training program	Program in place	In person and on-demand trainings for design, construction, and maintenance staff	Conduct Annual Training for Bureaus.	All Bureaus	June 30, 2021	July 1, 2019	See MS4 trainings held below
6.2 Implement infrastructure repair and rehabilitation program	Program in place	Inspection and documentation of mapped stormwater infrastructure is on-going. Inspection results are absorbed into evolving CTDOT stormwater asset rehabilitation program.	Develop and implement a repair / rehabilitation program.	Bureau Chief-Engineering & Construction	June 30, 2022	Completed Prior to Permit Issuance	
6.3 Track DCIA that is disconnected during redevelopment and retrofit projects	Completed	Tracking DCIA changes from capital and retrofit projects is on-going	Develop and Implement a Procedure to Track DCIA for projects.	Bureau Chief-Engineering & Construction	July 1, 2019	July 1, 2019	
6.4 Develop and implement a plan to disconnect 2% of calculated DCIA	Completed	Initiated design of first standalone retrofit project. Identified and created an inventory of potential retrofit locations across the State. Coordinated with other Offices within DOT to evaluate disconnection opportunities on capital projects and resiliency projects.	Develop and Implement a Plan to Disconnect 2% of DCIA	Bureau Chief-Engineering & Construction	June 30, 2022	July 1, 2019	

<b>BMP</b>	<b>Status</b>	<b>Activities in current reporting period</b>	<b>Measurable goal</b>	<b>Department / Person Responsible</b>	<b>Due</b>	<b>Date completed or projected completion date</b>	<b>Additional details</b>
6.5 Implement CTDOT MS4 Property and Operations Maintenance	Ongoing	Standard Property and Maintenance Operations were completed throughout the year	Document and Report on Maintenance Activities Implemented	Bureau Chief Maintenance	July 1, 2019	On-Going	
6.6 Develop and implement sweeping program	Completed	Implemented a new sweeping tracking procedure that will provide location data for where sweeping occurred. Also prepared a RFP to support Maintenance operations with sweeping for additional areas.	Document and Report on Sweeping Activities	Bureau Chief Maintenance	July 1, 2019	June 30, 2020	
6.7 Develop plan to optimize catch basin cleaning	Completed	A street sweeping and catch basin cleaning optimization plan was previously completed	Collect additional data on catch basin cleaning to optimize cleaning operations.	Bureau Chief Maintenance	July 1, 2019	June 30, 2020	
6.8 Inspect and clean (where necessary) catch basins.	In Progress	Implemented a new catch basin cleaning tracking procedure that will provide some location data to indicate where catch basins were inspected and cleaned (if needed). Also prepared an RFP to support Maintenance operations with private contractors for additional catch basin inspections/cleaning and street sweeping activities.	Map, Inspect and Prioritize Catch Basins.	Bureau Chief Maintenance	July 1, 2019	Ongoing	
6.9 Development, implement and optimize standard operating procedures for snow management practices	Complete	CTDOT has an existing Winter Maintenance Program that continues to be implemented	Optimize, Document and Report on Snow Management Practices.	Bureau Chief Maintenance	July 1, 2019	Completed Prior to Permit Issuance	CTDOT created the Snow and Ice Guidelines for internal BMPs for handling Snow and Ice Operations

BMP	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
6.10 Track and report types of deicing materials used, lane miles treated, and total amount of deicing material used	Complete	Track Snow and Ice Maintenance Metrics	Report on amount of material, type of material and equipment used during winter maintenance	Bureau Chief Maintenance	June 30, 2020	June 30, 2020	See Section 6.3 for reporting totals
6.11 Implement additional measures for discharges to impaired waters from sites with high potential to contribute to impairment	In Progress	Capital projects that discharge to impaired waterbodies are identified early in the preliminary design phase to allow for consideration and implementation of stormwater quality management to reduce and/or eliminate pollutants of concern to the maximum extent practicable.	Prioritize outfalls discharging to impaired waters for monitoring	Environmental Compliance Environmental Planning	July 1, 2019	Ongoing	CTDOT in coordination with USGS is implementing a stormwater monitoring program scheduled to conclude in 2024. See the impaired waters appendix below. The results collected from this study in conjunction with MS4 stormwater system mapping will enable modeling of catchment areas to support and prioritize DOT's retrofit projects.

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

CTDOT will continue to complete Pollution Prevention / Good Housekeeping activities to meet the pollution reduction intent of the permit requirements. A particular focus this upcoming permit year will be on refining the DCIA reduction plan with forecasts based on the DOT capital project program and retrofit opportunities. In addition, the Department continues to work with CT OPM and CT DAS procure contractor services to supplement existing maintenance operations with catch basin cleaning and street sweeping. Inspections of stormwater quality BMPs will continue to be performed and a maintenance plan will be implemented to remedy those BMPS identified as needing maintenance.

The Department will also continue to participate in a multi-state funded pilot program on a Maintenance Decision Support System that will provide GPS and weather-related information to control deicing material application rates. The pilot program has the following research objectives:

1. To assess the need, potential benefit, and receptivity in participating state transportation departments for state and regional Maintenance Decision Support Systems.

2. To define functional and user requirements for an operational Maintenance Decision Support System that can access current road and weather conditions, forecast weather that will affect transportation routes, predict how road conditions will change in response to candidate maintenance treatments, suggest optimal maintenance strategies to maintenance personnel, and evaluate the effectiveness of maintenance treatments that are applied.
3. To build and evaluate an operational Maintenance Decision Support System that will meet the defined functional requirements in the participating state transportation departments.
4. To improve the ability to forecast road conditions in response to changing weather and applied maintenance treatments.

### 6.3 Pollution Prevention/ Good Housekeeping reporting metrics

Metrics	
<b>Employee training provided for key staff</b>	<b>Date(s)</b>
OEP MS4 Mapping Training	Web Videos for Internal Use
On-Demand MS4 Training for Design Engineers & Consultants	Published 1/20/2022
BMP Inspection Training for Consultants	11/8/2022, 11/17/2022, 11/22/2022
Meetings with District Drainage Engineers (typically 10 – 15 people)	10/3/2022, 3/20/2023
IDDE & GIS Training for CTDOT Environmental Compliance Consultants	9/19/2022, 9/20/2022, 9/26/2022
District 2 Construction Winter Training (est. 59 people)	2/8/2023
District 1 Construction Winter Training (est. 45 people)	2/28/2023
District 4 Construction Winter Training (est. 0 people)	3/1/2023
District 3 Construction Winter Training (est. 85 people)	1/18/2023
DOT Construction Supervisor's Training (est. 150 people)	1/26/2023
<b>Street sweeping</b>	
Miles swept this year	11,825 miles
Volume (or mass) of material collected	Unknown



<b>Catch Basin Inspection and Cleaning</b>	
Total number of CTDOT owned or maintained catch basins	63,726 mapped to date / total
Total number of catch basins cleaned this year	7,225
Total number of catch basins cleaned in MS4 areas	Undeterminable at this time
Total number of catch basins cleaned in MS4 priority areas	Undeterminable at this time
Catch basins inspected cleaning not needed (1/11 - 6/30 Data Only)	155
Volume (or mass) of material removed from all catch basins	Unknown
<b>CTDOT Stormwater Management Facilities / BMPs</b>	289 mapped to date in MS4 Municipalities total TBD by 2029
<b>CTDOT Stormwater Management Facilities / BMPs Inspected</b>	178 this permit year
<b>CTDOT Stormwater Management Facilities / BMPs Cleaned</b>	31 this permit year
<b>Private or Municipally Owned Stormwater Management Facilities / BMPs connected to CTDOT's MS4 System</b>	29 mapped to date / total unknown
<b>Structure Rinsing Operations</b>	
Total number of structures rinsed	32 Bridges
<b>Snow management</b>	
Number of Winter Weather Events	6 Statewide Events / 8 Partial Events
Type(s) of deicing material used	Sodium Chloride, Sodium Chloride to make Salt Brine, and Liquid Magnesium Chloride
Total amount of each deicing material applied	88,113 tons of Sodium Chloride, 31 tons to make 22,935 gallons of salt brine 218,066 gallons of Magnesium Chloride
Type(s) of deicing equipment used	Calibrated Spreaders and Sprayers for Sodium and Magnesium Chloride, salt slurry tanks to spray salt brine liquid
Lane-miles treated	10,800 miles
Snow disposal location	None this year
Staff training provided on application methods & equipment	CTDOT Snow and Ice Committee meetings are routinely held throughout the year to provide efficient snow and

	ice management. The CTDOT has outfitted 340 trucks with route and application tracking to date and is scheduled to have another 150 trucks outfitted this permit year.
Lands with high potential to contribute bacteria (dog parks, parks with open water, & sites with failing septic systems)	No locations identified this permit term

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

CTDOT implemented a new procedure for tracking catch basin inspections/cleaning and street sweeping activities. The procedure will provide some location data that will assist the Department in identifying areas that require more (or less) cleaning. Currently, maintenance activities related to catch basin inspections and street sweeping continue to be tracked outside of GIS.

CTDOT has also prepared a public Request for Proposal to assist existing maintenance operations with catch basin inspections and cleaning as well as street sweeping. Once contractors are successfully under this contract, CTDOT staff will work with contractors to utilize the GIS stormwater map to collect activity and geospatial data. This data will provide specific location information to further assist the Department in optimizing maintenance activities related to catch basin cleaning and street sweeping.

**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.**

Previous annual reports anticipated using a stormwater modeling program (SELDM) developed by the United States Geological Service (USGS) to identify and evaluate potential retrofit locations. CTDOT received training from USGS in the spring of 2022 on the model and has subsequently concluded that SELDM is best used to evaluate retrofit locations but has limited potential to directly identify good candidate locations. Due to this the Department anticipates using SELDM not as an initial tool to identify locations but rather as a support tool to help evaluate and prioritize locations once identified.

As an alternative, CTDOT is pursuing multiple methods to identify potential retrofit locations across the State. The first is a GIS based model created by the Office of Environmental Planning that prescreens DOT right of way for criteria such as areas within an Aquifer Protection Area (APA), within a Sole Source Aquifer Area (SSA), within Tidal Wetlands, have a poor soil drainage classification, , Maintenance Conservation Areas and the size of the area for retrofitting. The areas identified by the model as good candidate locations are then further refined to account for slope, drainage area and overall constructability. From there the prioritization process is driven primarily by the drainage area and the amount of impervious area that could likely be disconnected. Other methods focus on evaluating existing dry detention basins and DOT owned park and ride lots for good retrofit opportunities. SELDM can be used to determine the amount of pollutant reduction anticipated with the construction of a specific retrofit BMP at a given location.

Two locations have been identified to date to move into the design phase. The first is an existing dry detention basin in Stratford which drains a portion of Route 15. The project is anticipated to disconnect approximately 4.3 acres. As of July of 2023, the Department is working to get a design consultant under contract to develop plans, specifications, and estimates. The second location selected is a clover leaf in Manchester which drains a portion of I-384. The project is anticipated to disconnect approximately 4.5 acres. The anticipated schedule is for the project to go to design in 2024. Additional retrofit opportunities are currently being evaluated including retrofitting multiple sections of grassed median along I-691 which has the potential to disconnect approximately 10 acres.

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

The DOT MS4 General Permit requires a 1% DCIA reduction in years Four (2022-2023) and Five (2023-2024) of the permit, and the 1% DCIA reduction goal equates to 85 acres per year. To meet these goals CTDOT will continue to incorporate BMPs as stormwater management features in capital projects primarily for roadway redevelopments. CTDOT will also identify potential retrofit project locations via the process described above and move them through the design and construction phases. CTDOT anticipates being able to design and construct up to 5 to 10 standalone retrofit projects annually to meet the disconnection goals.

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

See above.

## Part II: Impaired waters investigation and monitoring

### 1. Impaired waters investigation and monitoring program

#### 1.1 Identify which stormwater pollutant(s) of concern occur(s) in your municipality or institution.

This data is available on the MS4 map viewer: <http://s.uconn.edu/ctms4map>.

CTDOT MS4 system spans the entire State and discharges to many impaired waterbodies.

#### 1.2 Describe program status

In consideration of the thousands of outfalls connected to the state drainage systems, an automatic outfall sampling option was incorporated into the CTDOT MS4 permit to address impaired waters sampling requirements. In order to meet the permit's monitoring requirements, the USGS, on behalf of CTDOT, has begun a rigorous auto sampling program that consists of continuously monitoring a total of nine outfalls from highways for a period of approximately two years each. Each sampling event consist of over 40 analytes. The nine sites were selected based upon land use type, impervious area and the average daily traffic that passes through the drainage area for the outfall. The nine locations are:

##### Automatic Monitoring Outfall Locations

###### YEAR 1 & 2

1. I-91 Hartford
2. Route 2 Glastonbury
3. Route 3 Glastonbury
4. Route 74 Vernon
5. Route 8 Torrington

###### YEAR 3 & 4

6. I-95 Milford
7. Route 15 Orange
8. Route 15 Milford
9. Route 139 Branford

##### Status of Phase 1 Locations

The sampling at each of the Phase I locations is complete. The equipment from four of the locations have been moved to new locations in the greater Milford area.

Highway and location	Proposed number of composite samples	Number of composite samples collected as of 6/30/2021
State Route 2, Glastonbury, CT.	15-18	18 - Complete
State Route 3, Glastonbury, CT.	15-18	18 - Complete
State Route 8, Torrington, CT.	15-18	18 - Complete
State Route 74, Vernon, CT.	15-18	18 - Complete
Interstate 91, Hartford, CT.	15-18	18 – Complete

### **Status of Phase 2 Locations**

Below is the status of each of the four phase 2 locations. Equipment from four of the Phase 1 locations have been moved to new locations in the greater Milford area. The USGS is still collecting samples at the I-95 station in Milford as they were delayed due to some initial issues. Three more samples are needed at the I-95 station in order to complete sampling on a full 18 rainfall events. Due to conflicts with a paving project, the required sampling at the Milford location will be delayed until early fall. Once sampling is complete, revised schedule calls for the final report to be completed by the fall of 2024.

<b>Highway and location</b>	<b>Proposed number of composite samples</b>	<b>Number of composite samples collected as of 6/30/2023</b>
I-95, Milford, CT.	15-18	15
Route 15, Orange, CT.	15-18	18 – Complete
Route 15, Milford, CT.	15-18	18 – Complete
Route 139, Branford, CT.	15-18	18 – Complete

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

### **2.1 Screening data collected**

Beyond the auto sampling at designated locations by USGS described above, the CTDOT also collected samples of a waterbody's impairment if illicit discharge detection and elimination sampling was done at an outfall. A total of 71 outfall locations were sampled or attempted to be sampled for the waterbody impairment(s) to which the outfall discharged. These locations were divided as follows.

- 8 were Inaccessible
- 1 was Not Found
- - 62 locations were able to be sampled
  - o Bacteria
    - 10 bacteria samples were taken
    - 7 were below the applicable thresholds in the MS4 Permit
    - 3 were above the recreation E Coli / Enterococci thresholds
    - none were above the designated swimming Enterococcus threshold of 104 cols/100mls
  - o Nitrogen
    - 1 sample taken
    - 1 exceeded 2.5 mg/l permit threshold
  - o Phosphorus
    - 3 samples taken
    - none exceeded the 0.3 mg/l permit threshold

- Turbidity (Other Pollutant of Concern)
  - 11 sample taken
  - 2 exceeded the 5 NTU-difference from upstream turbidity level

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

For impaired waters sampling results that are above the thresholds listed in the permit, the CTDOT follows the same procedures as with an illicit discharge investigation. That includes sharing the results with the municipality, local sewer authority and/or the local health department in an effort to identify any known issues within the catchment areas to coordinate any catchment investigations or mitigation efforts. Unless other activities occur as a result of sharing data with local stakeholders, the Department will investigate catchments where exceedances of the permit's impaired waterbody triggers occurred. The catchment investigation results for this permit year are discussed in detail in the Catchment Investigation Data section in Part III of this report below.

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

The CTDOT is following a town-by-town outfall monitoring approach during its first five-year permit term in which any non-excluded outfall will attempt to be screened / sampled once the CTDOT stormwater assets in the Town are mapped. Generally, all non-excluded outfalls are dry weather screened / sampled regardless of their prioritization category. Higher priority outfalls are then highlighted for consultants during wet weather sampling in case all wet weather sampling locations cannot be sampled within the March to June window specified in the permit. The CTDOT has developed a script within its GIS database to help automatically identify high priority outfalls using land use or other available GIS data including data that potentially includes some of the System Vulnerability Factors such as culverted streams, storm and sanitary sewer crossings, area density and/or land use.

**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).

Due to the thousands of outfalls owned and maintained by CTDOT, it is not feasible to list catchments individually below. The table below lists the number of catchments in each of the four prioritization categories based on mapping that was completed through permit year 3.

Problem and High Priority Catchments: Upon review of the CTDOT MS4 permit language, the Department has revised its approach for designating problem catchments. To be categorized as problem catchment, a known or suspected illicit discharge into the catchment area had to have been identified before the effective date of the permit. During permit years 1 and 2, any catchment found via screening and sampling activities to contain suspected illicit discharges into the Department’s MS4 system were incorrectly classified as problem catchments. All previously identified “problem” catchments have now been reclassified as high priority catchments. As the Department did not have catchments identified with suspect illicit discharges prior to the permit term, the Department does not have any problem catchments remaining within this permit term. Catchments areas with known or suspected illicit discharges will be considered as problem catchments during the next permit term.

As such, the number of Problem catchments indicated in this annual report has been revised compared to previous years.

Number of Catchments within Each Category Based on Mapping Completed in Permit Year 2				
Catchment Category	Excluded	Low Priority	High Priority	Problem
Number of Outfalls/Catchments in Category (11,773 Total Mapped Outfalls)	8,337	2,889	547	0

**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.

CTDOT conducted dry weather sampling at 137 outfalls that had dry weather flow. Of these, 17 locations discharged to an impaired waterbody. CTDOT sampled the 17 locations for the pollutant(s) of concern identified which was primarily bacteria. Please refer to the Appendix A at the end of this report for a complete listing of the inspection results for the 137 dry weather flow locations. Overall, outfalls were dry weather screened within the following 25 municipalities: Ansonia, Branford, Derby, Durham, East Lyme, Fairfield, Farmington,



Glastonbury, Griswold, Manchester, Middlefield, Milford, Monroe, Naugatuck, New Haven, Orange, Stonington, Stratford, Thomaston, Wallingford, West Hartford, West Haven, Wethersfield, Wolcott, Woodbridge.

## **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 (SVF).

CTDOT attempted wet weather sampling at 83 outfalls (83 sampling attempts total) in year 4 of the permit. Of these, 71 locations were successfully sampled. A desktop analysis indicated that each outfall designated to be wet weather sampled likely had at least one SVF. Outfalls were wet weather sampled within the following 9 municipalities: Avon, Easton, Glastonbury, Madison, Manchester, Middlefield, Thomaston, Wallingford, Waterbury. Refer to the Appendix B at the end of this report for a summary of the analytical data for the 71 locations successfully wet weather sampled.

## **3. Catchment Investigations (Appendix B (A)(7)(e) / page 9)**

### **3.1 System Vulnerability Factor Summary**

The Department has thousands of catchment areas statewide and no sanitary sewer or septic system mapping for many of these areas. MS4 staff review each catchment for likely SVF's at the time of mapping. For areas other than limited access highways, one or both of the following SVF's are frequently assumed to be present; 1) crossings of storm and sanitary alignments and/or 2) storm and sanitary infrastructure greater than 40 years old in medium and densely developed areas. Other SVF's may also be present. As such, the Department generally assumes that all non-excluded catchments have at least one SVF present. This is a conservative but time saving approach that has resulted in 3,400 catchments, which are currently mapped, that are presumed to have at least one SVF.

SVFs are:

1. History of Sanitary Sewer Overflows (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 than 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 than poor owner maintenance).

### 3.2 Summary of Catchment Investigations

The Department's MS4 permit requires catchment investigations be completed in three of the four catchment categories: problem, high and low. The permit requires investigation of 40% of all non-excluded mapped catchment areas by June 30, 2024, and 100% of non-excluded catchment investigations should be completed by June 30, 2029. Investigating the suspect sanitary sewer inputs documented in any existing problem catchments is the highest priority, followed by high priority catchments and finally low priority catchments. As the Department had no existing problem catchments at the start of this permit term, the Department is prioritizing high priority catchments with suspect illicit inputs from screening and sampling activities first. Catchments categorized as excluded do not need to be investigated.

Per the Department's MS4 permit, there are two ways in which a catchment investigation can be considered complete; 1) A catchment with screening and sampling results below permit triggers, no junction manholes and no SVFs and 2) A field investigation of the catchment area including screening and sampling of key junction manholes. Each of these two methods are each discussed below. In total, as of 6/30/23, the Department has completed 682 catchment investigations which is estimated to be 24% of the total catchment areas within Municipal boundaries where the Department has completed mapping of CTDOT MS4 assets.

#### 3.2.1 Catchments that Do Not Require Field Investigations

The Department considers a catchment investigation complete even when a field investigation has not necessarily occurred provided certain criteria are met. The underlined portions of the text below are the Department's additions to the permit's criteria for completing an investigation (Appendix B Section 8(d)), as concurred to by CTDEEP.

- Catchment does not contain junction manholes, or the only junction manhole present in the catchment area is immediately up gradient of an outfall that was screened and sampled and;
- Dry weather screening reveals no dry weather flow, or dry weather flow was present but the flow was sampled and did not exceed the permit's triggers for ammonia, surfactants and chlorine or ammonia, surfactants and bacteria (indicative of the presence of flow from a permissible discharge such as from foundation drains) and;
- No evidence of illicit discharge was noted via screening/sampling results, visual or olfactory means and;

- No wet weather System Vulnerability factors (SVFs) were identified, or wet weather SVF's were identified, or likely present but wet weather sampling was completed and the results did not exceed the permit's triggers for ammonia, surfactants and chlorine or ammonia, surfactants and bacteria

### 3.2.2 Catchments Requiring Field Investigations

All non-excluded catchments that do not meet the criteria above require additional field investigation of the catchment area. For the time frame between 7/1/2022 and 6/30/2023 the Department or other stakeholder groups in coordination with the Department completed 107 catchment investigations across the state. These investigations are divided as follows: 70 investigations completed on catchments with no key junction manholes and with no source found / no evidence of illicit inputs and 37 investigations completed on all key junction manholes within a catchment area, and with no source to identify and no evidence of illicit inputs. Please refer to the Appendix C for further details.

The Department will continue to prioritize catchment investigations in catchments with evidence of possible illicit inputs based on dry and/or wet weather inspection results. Catchment investigations beyond these will be prioritized according to their catchment categorization with high priority catchments completed first followed by low priority catchments. Based on data evaluated as of 6/30/23, there are 3 locations with exceedances of permit triggers that require field catchment investigations. The inspection results and analytical data for these 3 points are shown below. To reach the 40% catchment investigation goal by June 30, 2024, it is estimated that the Department has approximately 472 investigations remaining to complete.

Screening Sampling ID	Asset Type	Screening Sampling Date	Town	Highway	Stormwater Impairment	E Coli (Cols/100 mls)	Screening Sampling Phase
170-SS-10899	Outfall	4/27/2023	Wallingford	68	Escherichia coli	1,200	Need to Investigate
170-SS-12708	Outfall	4/27/2023	Wallingford	150	Escherichia coli	2,360	Need to Investigate
170-SS-13779	Key Junction Manhole	1/16/2023	Monroe	25	Escherichia coli	24,200	Need to Investigate

### 3.3 Key junction manhole dry weather screening and sampling data

CTDOT conducted 65 dry weather illicit discharge catchment investigations during this permit year in the Towns of Beacon Falls, Canton, Cheshire, Derby, Durham, Farmington, Griswold, Meriden, Naugatuck, New Haven, Orange, Rocky Hill, Stratford, Trumbull, Thomaston and Wallingford. No flow was present within the key junction locations for the catchments investigated. No source was identified as part of the investigation. Please refer to the Appendix D at the end of this report for a complete listing of the inspection results for the 65 Key Junction manhole dry weather screening and sampling data.

### 3.4 Wet weather investigation outfall sampling data

CTDOT did not identify any outfalls during wet weather sampling activities where the analytical data or visual/olfactory evidence met the highest priority criteria for an investigation as listed in CTDOT MS4 permit.

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

CTDOT identified one source during an investigation this permit year in the town of Monroe.

Outfall ID	Sample date	Ammonia	Chlorine	Surfactants	E Coli	Enterococci
170-SS-13779	1/16/2023	0.00 mg/L	0.10 mg/L	0.75 mg/L	24,200 cols/100mls	N/A

## 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

Print name: **Jason Coite, P.E.**

Principal Engineer, Offices of Environmental Compliance & Engineering Project Coordination  
Connecticut Department of Transportation

Signature / Date:

## **PART III**

### **Additional IDDE Program Data**

#### **Outfall Screening and Sampling Data**

**Dry weather sampling data from outfalls and interconnections (Section 2.1)**

Screening/Sampling Inspection ID	Inspection Date	Ammonia (mg/l)	Chlorine (mg/l)	Conductivity (mg/l)	Salinity (mg/l)	Surfactants (mg/l)	Water Temperature (Fahrenheit)	E Coli (cols/100mls)	Total Coliform (col/100mls)	Enterococci (cols/100mls)	Fecal Coliform (cols/100mls)	Nitrogen (mg/l)	Phosphorus (mg/l)	Mercury (mg/l)	Turbidity In Stream (NTUs)	Turbidity At Outfall (NTUs)	Directly Connected to Stormwater Impaired Waterway	Stormwater Impairment Cause
170-SS-19 2023-03-08	3/8/2023, 1:29 PM	0.3	0	1.07	800	0	47								2.34	1.4	Yes	CAUSE UNKNOWN
170-SS-252 2023-01-27	1/27/2023, 12:02 PM	0	0	263	119	0.1	50										No	
170-SS-1613 2023-03-08	3/8/2023, 12:02 PM	0	0	0.563	400	0	45										No	
170-SS-2375 2023-01-27	1/27/2023, 9:10 AM	0	0	417	226	0.1	45										No	
170-SS-2471 2022-10-21	10/21/2022, 7:56 AM	0	0	0.367	200	0	56										No	
170-SS-2826 2023-06-05	6/5/2023, 9:29 AM	0	0	680	0.3	0	65										No	
170-SS-3697 2023-01-09	1/9/2023, 1:37 PM	0	0	168	97	0	47										No	
170-SS-3699 2023-01-09	1/9/2023, 1:15 PM	0	0	133	66	0	52										No	
170-SS-3700 2023-01-09	1/9/2023, 2:00 PM	0	0	167	84	0	45										No	
170-SS-3707 2023-01-10	1/10/2023, 8:00 AM	0	0	197	100	0	38										No	
170-SS-3708 2023-01-10	1/10/2023, 12:00 AM	0	0	206	200	0	39										No	
170-SS-5337 2023-04-12	4/12/2023, 10:51 AM	0	0	0.141	100	0	63										No	

Screening/Sampling Inspection ID	Inspection Date	Ammonia (mg/l)	Chlorine (mg/l)	Conductivity (mg/l)	Salinity (mg/l)	Surfactants (mg/l)	Water Temperature (Fahrenheit)	E Coli (cols/100ml s)	Total Coliform (col/100ml s)	Enterococci (cols/100ml s)	Fecal Coliform (cols/100ml s)	Nitrogen (mg/l)	Phosphorus (mg/l)	Mercury (mg/l)	Turbidity In Stream (NTUs)	Turbidity At Outfall (NTUs)	Directly Connected to Stormwater Impaired Waterway	Stormwater Impairment Cause
170-SS-5586 2023-04-13	4/13/2023, 10:39 AM	0	0	0.108	100	0	63	504	3080								Yes	Escherichia coli
170-SS-5591 2023-02-01	2/1/2023, 10:46 AM							10									Yes	Escherichia coli
170-SS-5893 2023-06-05	6/5/2023, 10:51 AM	0	0	530	0.3	0	66										No	
170-SS-5903 2023-04-18	4/18/2023, 11:17 AM	0	0	0.058	0	0	52										No	
170-SS-5907 2023-04-18	4/18/2023, 10:36 AM	0	0	0.049	0	0	54										No	
170-SS-5916 2023-04-18	4/18/2023, 12:06 PM	0	0	0.121	100	0.1	54										No	
170-SS-5928 2023-04-18	4/18/2023, 9:25 AM	0.2	0	0.286	200	0	53										No	
170-SS-5941 2023-04-17	4/17/2023, 11:33 AM	0.7	0	0.1367	100	0.5	57	10	6130								No	
170-SS-5951 2023-04-14	4/14/2023, 10:47 AM	0	0	0.136	100	0	61										No	
170-SS-5954 2023-04-17	4/17/2023, 9:08 AM	0	0	0.304	200	0.3	56	121	2610								No	
170-SS-5960 2023-04-17	4/17/2023, 8:30 AM	0	0	0.166	100	0.1	54										No	
170-SS-6137 2023-03-10	3/10/2023, 10:00 AM	0	0	0.28	200	0.1	47										No	



Screening/Sampling Inspection ID	Inspection Date	Ammonia (mg/l)	Chlorine (mg/l)	Conductivity (mg/l)	Salinity (mg/l)	Surfactants (mg/l)	Water Temperature (Fahrenheit)	E Coli (cols/100ml s)	Total Coliform (col/100ml s)	Enterococci (cols/100ml s)	Fecal Coliform (cols/100ml s)	Nitrogen (mg/l)	Phosphorus (mg/l)	Mercury (mg/l)	Turbidity In Stream (NTUs)	Turbidity At Outfall (NTUs)	Directly Connected to Stormwater Impaired Waterway	Stormwater Impairment Cause
170-SS-6200 2022-09-29	9/29/2022, 8:22 AM	0	0	0.373	200	0	56										No	
170-SS-6205 2022-09-29	9/29/2022, 9:55 AM	0	0	0.035	0	0.1	59	41	4110								Yes	
170-SS-6386 2023-01-27	1/27/2023, 12:53 PM	0	0	140	74	0.2	55	85							6.3	5.3	Yes	Escherichia coli; CAUSE UNKNOWN
170-SS-6425 2023-06-19	6/19/2023, 10:15 AM	0	0	0.189	100	0.1	66										No	
170-SS-7882 2022-10-21	10/21/2022, 10:19 AM	0	0	1760	880	0.75	56	5	2600						0.8	0.8	Yes	CAUSE UNKNOWN
170-SS-7964 2022-10-20	10/20/2022, 10:11 AM	0.5	0	570	280	0	61	5									No	
170-SS-9311 2022-10-19	10/19/2022, 2:20 PM	0	0	0.906	400	0.2	57	30	2910								Yes	Escherichia coli; Escherichia coli
170-SS-9687 2022-12-14	12/14/2022, 11:13 AM	0	0.7	0.783	600	0.6	46			10		3.7	0.06				Yes	DISSOLVED OXYGEN, NUTRIENTS DISSOLVED OXYGEN, NUTRIENTS
170-SS-9705 2022-12-14	12/14/2022, 8:13 AM	0	0	0.508	400	0.2	42										No	
170-SS-9746 2022-10-19	10/19/2022, 3:29 PM	0	0	120	70	0	51										No	
170-SS-10398 2023-06-20	6/20/2023, 10:01 AM	0.3	0	19.5	10000	0.15	68										No	

Screening/Sampling Inspection ID	Inspection Date	Ammonia (mg/l)	Chlorine (mg/l)	Conductivity (mg/l)	Salinity (mg/l)	Surfactants (mg/l)	Water Temperature (Fahrenheit)	E Coli (cols/100ml s)	Total Coliform (col/100ml s)	Enterococci (cols/100ml s)	Fecal Coliform (cols/100ml s)	Nitrogen (mg/l)	Phosphorus (mg/l)	Mercury (mg/l)	Turbidity In Stream (NTUs)	Turbidity At Outfall (NTUs)	Directly Connected to Stormwater Impaired Waterway	Stormwater Impairment Cause
170-SS-10877 2022-11-09	11/9/2022, 9:50 AM	0	0	0.654	400	0.1	53										No	
170-SS-10889 2022-11-07	11/7/2022, 1:50 PM	0	0	0.45	200	0.1	66	72	512				0.063		1.75	2.27	Yes	Escherichia coli; CAUSE UNKNOWN; PHOSPHORUS, TOTAL
170-SS-10915 2022-11-09	11/9/2022, 12:57 PM	0	0	0.93	600	0.1	57										No	
170-SS-11125 2022-12-21	12/21/2022, 10:31 AM																Yes	Escherichia coli
170-SS-11614 2023-02-16	2/16/2023, 12:53 PM	0	0	0.31	200	0	51										No	
170-SS-11942 2023-06-22	6/22/2023, 1:20 PM																No	
170-SS-12216 2023-06-20	6/20/2023, 12:40 PM	0.7	0	0.142	100	0.5	70								1.23	6.05	Yes	Escherichia coli, Cause Unknown
170-SS-12218 2023-06-20	6/20/2023, 12:12 PM	0	0	1.29	700	0.2	67								3.56	1.81	Yes	Escherichia coli, Cause Unknown
170-SS-12219 2023-04-13	4/13/2023, 10:54 AM	0	0	278	100	0	65										No	
170-SS-12220 2023-04-13	4/13/2023, 11:27 AM	0	0	899	400	0	66										No	
170-SS-12222 2023-04-13	4/13/2023, 11:51 AM	0	0	1419	700	0	65										No	

Screening/Sampling Inspection ID	Inspection Date	Ammonia (mg/l)	Chlorine (mg/l)	Conductivity (mg/l)	Salinity (mg/l)	Surfactants (mg/l)	Water Temperature (Fahrenheit)	E Coli (cols/100ml s)	Total Coliform (col/100ml s)	Enterococci (cols/100ml s)	Fecal Coliform (cols/100ml s)	Nitrogen (mg/l)	Phosphorus (mg/l)	Mercury (mg/l)	Turbidity In Stream (NTUs)	Turbidity At Outfall (NTUs)	Directly Connected to Stormwater Impaired Waterway	Stormwater Impairment Cause
170-SS-12286 2023-04-14	4/14/2023, 11:18 AM	0	0	276	100	0	66										No	
170-SS-12307 2023-04-18	4/18/2023, 10:29 AM	0	0	882	400	0	57										No	
170-SS-12313 2023-04-18	4/18/2023, 10:03 AM	0	0	260	100	0	56										No	
170-SS-12337 2023-02-01	2/1/2023, 7:58 AM	0	0	0.157	100	0.3	41	31	2700								No	
170-SS-12338 2023-01-31	1/31/2023, 11:17 AM	0	0	0.138	100	0.2	43										No	
170-SS-12339 2023-02-01	2/1/2023, 8:34 AM	0	0	0.124	100	0.2	39										No	
170-SS-12344 2023-01-31	1/31/2023, 10:11 AM	0	0	0.145	100	0.1	48										No	
170-SS-12346 2023-01-31	1/31/2023, 1:20 PM	0	0	0.226	200	0.2	45										No	
170-SS-12348 2023-01-31	1/31/2023, 11:59 AM	0	0	0.651	500	0.15	48										No	
170-SS-12350 2023-01-25	1/25/2023, 1:32 PM	0	0	0.988	700	0.1	46										No	
170-SS-12351 2023-01-25	1/25/2023, 1:04 PM	0	0	0.509	400	0.1	47										No	
170-SS-12353 2023-01-25	1/25/2023, 11:20 AM	0	0	0.847	600	0.2	44										No	

Screening/Sampling Inspection ID	Inspection Date	Ammonia (mg/l)	Chlorine (mg/l)	Conductivity (mg/l)	Salinity (mg/l)	Surfactants (mg/l)	Water Temperature (Fahrenheit)	E Coli (cols/100ml s)	Total Coliform (col/100ml s)	Enterococci (cols/100ml s)	Fecal Coliform (cols/100ml s)	Nitrogen (mg/l)	Phosphorus (mg/l)	Mercury (mg/l)	Turbidity In Stream (NTUs)	Turbidity At Outfall (NTUs)	Directly Connected to Stormwater Impaired Waterway	Stormwater Impairment Cause
170-SS-12354 2023-01-25	1/25/2023, 9:59 AM	0	0	0.901	700	0	47										No	
170-SS-12358 2023-01-25	1/25/2023, 8:46 AM	0	0	0.348	300	0	46										No	
170-SS-12368 2023-04-14	4/14/2023, 12:13 PM	0	0	276	100	0	67										No	
170-SS-12375 2023-01-25	1/25/2023, 8:08 AM	0	0	0.203	200	0	42										No	
170-SS-12376 2023-01-31	1/31/2023, 12:23 PM	0	0	0.583	400	0.2	45										No	
170-SS-12411 2023-01-09	1/9/2023, 11:37 AM	0	0	112	61	0.25	48										No	
170-SS-12411 2023-01-10	1/10/2023, 12:43 PM	0	0			0.25		20									No	
170-SS-12513 2023-01-25	1/25/2023, 12:34 PM	0	0	0.5	400	0.2	46										No	
170-SS-12616 2023-01-10	1/10/2023, 8:45 AM	0	0	75	38	0	43										No	
170-SS-12629 2023-01-09	1/9/2023, 12:22 PM	0	0	221	100	0	49										No	
170-SS-12630 2023-01-09	1/9/2023, 12:26 PM	0	0	222	100	0	48										No	
170-SS-12632 2023-01-09	1/9/2023, 11:47 AM	0	0	100	184	0	48										No	

Screening/Sampling Inspection ID	Inspection Date	Ammonia (mg/l)	Chlorine (mg/l)	Conductivity (mg/l)	Salinity (mg/l)	Surfactants (mg/l)	Water Temperature (Fahrenheit)	E Coli (cols/100ml s)	Total Coliform (col/100ml s)	Enterococci (cols/100ml s)	Fecal Coliform (cols/100ml s)	Nitrogen (mg/l)	Phosphorus (mg/l)	Mercury (mg/l)	Turbidity In Stream (NTUs)	Turbidity At Outfall (NTUs)	Directly Connected to Stormwater Impaired Waterway	Stormwater Impairment Cause
170-SS-12680 2023-01-09	1/9/2023, 10:10 AM	0	0	515	250	0	52										No	
170-SS-12691 2022-11-07	11/7/2022, 9:20 AM	0	0	0.394	200	0.3	66	20	3080								No	
170-SS-12696 2022-11-07	11/7/2022, 10:11 AM	0	0	0.4	200	0.1	67								1.38	1.07	Yes	CAUSE UNKNOWN
170-SS-12700 2022-11-07	11/7/2022, 10:59 AM	0	0	1.1139	600	0.1	68								2.19	1.37	Yes	CAUSE UNKNOWN
170-SS-12708 2022-11-07	11/7/2022, 12:33 PM	0	0	0.465	300	0.2	68	10	860				0.024		1.62	1.81	Yes	Escherichia coli, Cause Unknown, Phosphorus Total
170-SS-12709 2022-11-08	11/8/2022, 2:04 PM	0	0	0.788	500	0.5	59	31	17300								No	
170-SS-12710 2022-11-09	11/9/2022, 3:10 PM	0	0	0.452	300	0.1	57										No	
170-SS-12762 2022-11-09	11/9/2022, 10:26 AM	0	0	0.488	300	0.1	50										No	
170-SS-12778 2022-11-08	11/8/2022, 10:24 AM	0	0	0.321	200	0	57										No	
170-SS-12779 2022-11-08	11/8/2022, 10:55 AM	0	0	0.431	300	1.2	56	10	8660								No	
170-SS-12780 2022-11-08	11/8/2022, 12:27 PM	0	0	0.597	400	0	58										No	

Screening/Sampling Inspection ID	Inspection Date	Ammonia (mg/l)	Chlorine (mg/l)	Conductivity (mg/l)	Salinity (mg/l)	Surfactants (mg/l)	Water Temperature (Fahrenheit)	E Coli (cols/100ml s)	Total Coliform (col/100ml s)	Enterococci (cols/100ml s)	Fecal Coliform (cols/100ml s)	Nitrogen (mg/l)	Phosphorus (mg/l)	Mercury (mg/l)	Turbidity In Stream (NTUs)	Turbidity At Outfall (NTUs)	Directly Connected to Stormwater Impaired Waterway	Stormwater Impairment Cause
170-SS-13301 2022-11-08	11/8/2022, 11:59 AM	0	0	0.353	200	0.1	56										No	
170-SS-13726 2022-09-29	9/29/2022, 8:50 AM																No	
170-SS-13727 2022-09-29	9/29/2022, 8:02 AM																No	
170-SS-13741 2022-11-29	11/29/2022, 11:53 AM	0	0	672	340	0.25	54	733									No	
170-SS-13779 2023-01-16	1/16/2023, 8:37 AM	0	0.1			0.75	40	24200									Yes	Escherichia coli
170-SS-13787 2023-01-27	1/27/2023, 11:52 AM	0	0	270	145	0.2	54										No	
170-SS-13934 2022-10-21	10/21/2022, 9:05 AM	0	0	0.287	200	0.1	58										No	
170-SS-13938 2022-10-19	10/19/2022, 11:08 AM	0.2	0	0.86	500	0.2	58										No	
170-SS-13939 2022-10-19	10/19/2022, 1:54 PM	0	0	0.694	400	0.2	58										No	
170-SS-13961 2023-01-27	1/27/2023, 9:28 AM	0	0	417	226	0.1	45										No	
170-SS-13969 2022-12-05	12/5/2022, 10:36 AM	0	0	1180	590	0.75	53	20									No	
170-SS-13987 2022-12-05	12/5/2022, 10:02 AM	0.25	0	954	420	0.75	51	20									No	

Screening/Sampling Inspection ID	Inspection Date	Ammonia (mg/l)	Chlorine (mg/l)	Conductivity (mg/l)	Salinity (mg/l)	Surfactants (mg/l)	Water Temperature (Fahrenheit)	E Coli (cols/100ml s)	Total Coliform (col/100ml s)	Enterococci (cols/100ml s)	Fecal Coliform (cols/100ml s)	Nitrogen (mg/l)	Phosphorus (mg/l)	Mercury (mg/l)	Turbidity In Stream (NTUs)	Turbidity At Outfall (NTUs)	Directly Connected to Stormwater Impaired Waterway	Stormwater Impairment Cause
170-SS-13991 2022-11-23	11/23/2022, 11:43 AM	0	0	320	160	0	56										No	
170-SS-13992 2022-09-29	9/29/2022, 10:30 AM	0	0	0.14	100	0	57										No	
170-SS-13997 2022-11-09	11/9/2022, 4:02 PM	0	0	0.361	200	0.1	55										No	
170-SS-14003 2022-11-09	11/9/2022, 9:02 AM	0	0	0.419	300	0	46										No	
170-SS-14004 2022-12-14	12/14/2022, 10:25 AM	0	0.4	0.815	600	0.1	47			10							No	
170-SS-14009 2022-12-14	12/14/2022, 9:28 AM	0	0	0.591	400	0	51										No	
170-SS-14011 2022-12-13	12/13/2022, 12:07 PM	0	0	0.615	400	0	51										No	
170-SS-14012 2022-12-13	12/13/2022, 11:38 AM	0	0	0.471	300	0	51										No	
170-SS-14015 2022-12-13	12/13/2022, 10:27 AM	0	0	0.469	300	0	50										No	
170-SS-14016 2022-12-13	12/13/2022, 12:48 PM	0	0	0.495	300	0	50										No	
170-SS-14017 2022-12-13	12/13/2022, 12:32 PM	0	0	0.575	400	0	50										No	
170-SS-14018 2022-12-13	12/13/2022, 1:08 PM	0	0	1.94	1400	0.1	50										No	

Screening/Sampling Inspection ID	Inspection Date	Ammonia (mg/l)	Chlorine (mg/l)	Conductivity (mg/l)	Salinity (mg/l)	Surfactants (mg/l)	Water Temperature (Fahrenheit)	E Coli (cols/100ml s)	Total Coliform (col/100ml s)	Enterococci (cols/100ml s)	Fecal Coliform (cols/100ml s)	Nitrogen (mg/l)	Phosphorus (mg/l)	Mercury (mg/l)	Turbidity In Stream (NTUs)	Turbidity At Outfall (NTUs)	Directly Connected to Stormwater Impaired Waterway	Stormwater Impairment Cause
170-SS-14050 2022-12-14	12/14/2022, 9:00 AM	0	0	0.562	400	0.1	44										No	
170-SS-14052 2023-01-25	1/25/2023, 10:37 AM	0	0	0.368	300	0.15	42										No	
170-SS-14115 2023-01-25	1/25/2023, 11:01 AM	0	0	0.997	800	0.1	43										No	
170-SS-14121 2023-03-08	3/8/2023, 10:41 AM	0	0	0.557	400	0	46										No	
170-SS-14124 2023-03-08	3/8/2023, 11:21 AM	0	0	0.58	400	0	43										No	
170-SS-14136 2023-03-10	3/10/2023, 9:08 AM	0	0	0.178	100	0	44										No	
170-SS-14137 2023-03-10	3/10/2023, 8:46 AM	0	0	0.185	100	0	43										No	
170-SS-14149 2023-03-08	3/8/2023, 12:48 PM	0	0	1.13	600	0	48										No	
170-SS-14151 2023-02-16	2/16/2023, 11:31 AM	0	0	0.321	200	0.1	54										No	
170-SS-14152 2023-02-16	2/16/2023, 12:07 PM	0	0	0.317	200	0	53										No	
170-SS-14154 2023-02-16	2/16/2023, 10:36 AM	0	0	0.302	200	0	51										No	
170-SS-14155 2023-02-16	2/16/2023, 10:01 AM	0	0	0.657	400	0.2	52										No	



Screening/Sampling Inspection ID	Inspection Date	Ammonia (mg/l)	Chlorine (mg/l)	Conductivity (mg/l)	Salinity (mg/l)	Surfactants (mg/l)	Water Temperature (Fahrenheit)	E Coli (cols/100ml s)	Total Coliform (col/100ml s)	Enterococci (cols/100ml s)	Fecal Coliform (cols/100ml s)	Nitrogen (mg/l)	Phosphorus (mg/l)	Mercury (mg/l)	Turbidity In Stream (NTUs)	Turbidity At Outfall (NTUs)	Directly Connected to Stormwater Impaired Waterway	Stormwater Impairment Cause
2023-02-01 2023-02-01	2/1/2023, 9:27 AM	0	0	0.163	100	0.3	44	108	3080								No	
170-SS-14164 2023-02-07	2/7/2023, 11:28 AM	0	0	0.4	300	0	47										No	
170-SS-14165 2023-02-07	2/7/2023, 12:27 PM	0	0.5	1.41	1100	0.2	44	20	5010								No	
170-SS-14166 2023-02-07	2/7/2023, 12:39 PM	0	0	0.9	600	0	48										No	
170-SS-14218 2023-04-12	4/12/2023, 11:01 AM	0	0	0.308	200	0.1	59										No	
170-SS-14224 2023-04-12	4/12/2023, 12:21 PM	0	0	0.268	200	0	59										No	
170-SS-14225 2023-04-12	4/12/2023, 8:33 AM	0	0	0.238	100	0.05	57										No	
170-SS-14226 2023-04-12	4/12/2023, 8:01 AM	0	0	0.155	100	0	58										No	
170-SS-14227 2023-04-12	4/12/2023, 9:52 AM	0	0	0.151	100	0	56										No	
170-SS-14228 2023-04-12	6/15/2023, 9:36 AM	0	0	0.3	200	0.1	70										No	
170-SS-14229 2023-04-12	6/15/2023, 10:44 AM	0	0	0.188	100	0.1	64										No	
170-SS-14237 2023-04-13	4/13/2023, 10:10 AM	0	0	0.116	100	0.1	66										Yes	Escherichia coli

Screening/Sampling Inspection ID	Inspection Date	Ammonia (mg/l)	Chlorine (mg/l)	Conductivity (mg/l)	Salinity (mg/l)	Surfactants (mg/l)	Water Temperature (Fahrenheit)	E Coli (cols/100ml s)	Total Coliform (col/100ml s)	Enterococci (cols/100ml s)	Fecal Coliform (cols/100ml s)	Nitrogen (mg/l)	Phosphorus (mg/l)	Mercury (mg/l)	Turbidity In Stream (NTUs)	Turbidity At Outfall (NTUs)	Directly Connected to Stormwater Impaired Waterway	Stormwater Impairment Cause
170-SS-14241 2023-03-10	3/10/2023, 9:15 AM	0	0	0.25	200	0.1	42										No	
170-SS-14256 2023-04-12	4/12/2023, 11:51 AM	0	0	0.234	100	0	58										null	
170-SS-14258 2023-04-12	4/12/2023, 1:02 PM	0	0	0.139	100	0	63										null	
170-SS-14296 2023-04-17	4/17/2023, 10:52 AM	0	0	0.1958	100	0	57										null	
170-SS-14306 2023-05-23	5/23/2023, 12:00 AM																Unknown	
170-SS-14307 2023-05-23	5/23/2023, 12:00 AM																Unknown	
170-SS-14332 2023-06-15	6/15/2023, 9:58 AM	0	0	0.352	200	0	67										null	
170-SS-14335 2023-06-22	6/22/2023, 1:27 PM	0	0	0.445	200	0	70										null	

## PART III

Additional IDDE Program Data

Outfall and Interconnection Screening Data

Wet weather sample and inspection data (Section 2.2)

Screening Sampling ID	Inspection Date	Ammonia (mg/l)	Chlorine (mg/l)	Conductivity (mg/l)	Salinity (mg/l)	Surfactants (mg/l)	Water Temperature (Fahrenheit)	E Coli (cols/100mls)	Total Coliform (col/100mls)	Enterococci (cols/100mls)	Fecal Coliform (cols/100mls)	Nitrogen (mg/l)	Phosphorus (mg/l)	Mercury (mg/l)	Turbidity In Stream (NTUs)	Turbidity At Outfall (NTUs)	Directly Connected To Stormwater Impaired Waterway	Stormwater Impairment Cause
170-SS-2473	5/20/2023, 3:26 PM	0.1	0	0.04	0	0.1	64										No	
170-SS-3697	6/13/2023, 9:55 AM	0	0	261	100	0	68										No	
170-SS-3699	6/13/2023, 9:57 AM																No	
170-SS-3699	6/28/2023, 6:29 PM																No	
170-SS-3707	6/13/2023, 9:16 AM	0	0	327	200	0	64										No	
170-SS-6190	6/26/2023, 1:27 PM	0	0	0.066	0	1.1	71	6870	24200								No	
170-SS-6194	6/26/2023, 12:57 PM	0.2	0	0.067	0	0.2	75										No	
170-SS-7325	3/28/2023, 9:53 AM																Yes	Escherichia coli
170-SS-7325	6/13/2023, 9:07 AM																Yes	Escherichia coli
170-SS-7691	5/1/2023, 10:13 AM	0	0	110	50	0.25	53	520	17300								No	
170-SS-7692	3/28/2023, 8:33 AM	0	0	800	400	0	48	9	2190								Yes	Escherichia coli
170-SS-7693	5/1/2023, 9:03 AM																No	
170-SS-7694	5/1/2023, 9:15 AM	0	0	340	140	0											No	
170-SS-7881	3/28/2023, 11:45 AM	0	0	285	141	0	46								0.75	2.8	Yes	CAUSE UNKNOWN
170-SS-7962	3/28/2023, 9:59 AM	0	0	467	231	0	47										No	
170-SS-7963	3/28/2023, 10:43 AM	0	0	395	197	0	49										No	
170-SS-7965	3/28/2023, 10:31 AM	0	0	430	212	0	48										No	
170-SS-7973	5/1/2023, 10:03 AM	0	0	148	68	0	59										No	
170-SS-9206	3/28/2023, 9:21 AM	0	0	690	350	0.5	48	52	1010								Yes	Escherichia coli
170-SS-9207	3/27/2023, 9:00 AM	0	0	640	300	0	45	288	6490								Yes	Escherichia coli
170-SS-9433	3/28/2023, 10:21 AM	0	0	660	340	0	44										No	
170-SS-9596	5/1/2023, 9:53 AM																No	
170-SS-9596	6/13/2023, 8:18 AM	0	0	290	140	0	66										No	

Screening Sampling ID	Inspection Date	Ammonia (mg/l)	Chlorine (mg/l)	Conductivity (mg/l)	Salinity (mg/l)	Surfactants (mg/l)	Water Temperature (Fahrenheit)	E Coli (cols/100mls)	Total Coliform (col/100mls)	Enterococci (cols/100mls)	Fecal Coliform (cols/100mls)	Nitrogen (mg/l)	Phosphorus (mg/l)	Mercury (mg/l)	Turbidity In Stream (NTUs)	Turbidity At Outfall (NTUs)	Directly Connected To Stormwater Impaired Waterway	Stormwater Impairment Cause
170-SS-9635	5/1/2023, 12:00 AM	0	0	240	110	0.25	53	520	17300								No	
170-SS-9739	5/1/2023, 8:51 AM	0	0	370	26	0	57										No	
170-SS-9745	5/1/2023, 8:27 AM	0	0	155	108	0	55										No	
170-SS-9746	5/1/2023, 8:08 AM	0	0	73	36	0	56										No	
170-SS-9749	3/28/2023, 11:05 AM	0	0	225	112	0	48								0.6	0.75	Yes	CAUSE UNKNOWN
170-SS-9750	3/28/2023, 9:48 AM	0	0	645	321	0	48										No	
170-SS-9772	3/28/2023, 9:20 AM	0	0	268	135	0	48										No	
170-SS-9776	5/1/2023, 9:16 AM	0	0	135	65	0	58										No	
170-SS-10028	3/28/2023, 8:47 AM	0	0	152	108	0	45										Unknown	
170-SS-10071	5/20/2023, 10:36 AM	0	0	0.196	100	0.15	58										No	
170-SS-10072	5/20/2023, 10:03 AM	0	0	0.13	100	0	60										No	
170-SS-10079	5/20/2023, 11:17 AM	0.1	0	0.134	100	0	58										No	
170-SS-10092	5/20/2023, 11:59 AM	0	0	0.11	100	0.1	59										No	
170-SS-10106	5/20/2023, 3:15 PM	0.2	0	0.037	0	0.1	64										No	
170-SS-10115	5/20/2023, 2:48 PM	0.4	0	0.162	100	0.1	63										No	
170-SS-10119	5/20/2023, 2:24 PM																No	
170-SS-10124	5/20/2023, 1:17 PM	0.3	0	0.103	100	0	62										No	
170-SS-10366	5/1/2023, 11:18 AM	0	0	200	98	0	54										No	
170-SS-10873	4/27/2023, 1:13 PM	0.3	0	0.057	0	0.1	55										No	
170-SS-10877	6/13/2023, 9:06 AM	0	0	0.56	300	0.1	64										No	
170-SS-10889	6/13/2023, 7:36 AM	0	0	0.283	200	0.2	63	311	24200				0.072		5.54	6.23	Yes	Escherichia coli; CAUSE UNKNOWN; PHOSPHORUS, TOTAL

Screening Sampling ID	Inspection Date	Ammonia (mg/l)	Chlorine (mg/l)	Conductivity (mg/l)	Salinity (mg/l)	Surfactants (mg/l)	Water Temperature (Fahrenheit)	E Coli (cols/100mls)	Total Coliform (col/100mls)	Enterococci (cols/100mls)	Fecal Coliform (cols/100mls)	Nitrogen (mg/l)	Phosphorus (mg/l)	Mercury (mg/l)	Turbidity In Stream (NTUs)	Turbidity At Outfall (NTUs)	Directly Connected To Stormwater Impaired Waterway	Stormwater Impairment Cause
170-SS-10899	4/27/2023, 10:46 AM	0.3	0	0.05	0	0	54	1200	17300				0.288		3.32	33.8	Yes	Escherichia coli; CAUSE UNKNOWN; PHOSPHORUS, TOTAL; CAUSE UNKNOWN
170-SS-10923	3/2/2023, 8:29 AM	0	0	2010	200	0	40										No	
170-SS-10924	4/27/2023, 12:31 PM	0.4	0	0.034	0	0.1	55										No	
170-SS-11110	5/1/2023, 12:55 PM	0	0	260	126	0	56										No	
170-SS-11112	5/1/2023, 1:02 PM	0	0	400	189	0	54										No	
170-SS-11196	6/27/2023, 6:57 AM	0	0	0.062	0	0.2	67										No	
170-SS-11243	6/27/2023, 7:34 AM	0	0	0.241	100	0	61										No	
170-SS-11577	5/1/2023, 11:49 AM	0	0	390	203	0	56										No	
170-SS-11586	5/1/2023, 12:13 PM	0	0	370	182	0	56										No	
170-SS-11590	5/1/2023, 12:27 PM	0	0	220	112	0	56										No	
170-SS-11745	5/1/2023, 9:44 AM	0	0	160	77	0	55										Unknown	
170-SS-11749	5/1/2023, 10:26 AM	0	0	150	77	0	54										No	
170-SS-12236	5/1/2023, 1:58 PM	0	0	360	175	0	58										No	
170-SS-12245	5/1/2023, 1:40 PM	0	0	750	357	0	55										Yes	Escherichia coli
170-SS-12333	4/14/2023, 12:43 PM	0	0	396	200	0	68										No	
170-SS-12411	6/13/2023, 9:42 AM																No	
170-SS-12411	6/28/2023, 6:15 PM	0	0	569	200	1	79										No	
170-SS-12629	6/13/2023, 11:55 AM																No	
170-SS-12629	6/28/2023, 6:48 PM	0	0	784	200	0.2	80										No	
170-SS-12671	6/13/2023, 10:52 AM																No	
170-SS-12671	6/28/2023, 6:20 PM	0.25	0	230	120	0	83										No	

Screening Sampling ID	Inspection Date	Ammonia (mg/l)	Chlorine (mg/l)	Conductivity (mg/l)	Salinity (mg/l)	Surfactants (mg/l)	Water Temperature (Fahrenheit)	E Coli (cols/100mls)	Total Coliform (col/100mls)	Enterococci (cols/100mls)	Fecal Coliform (cols/100mls)	Nitrogen (mg/l)	Phosphorus (mg/l)	Mercury (mg/l)	Turbidity In Stream (NTUs)	Turbidity At Outfall (NTUs)	Directly Connected To Stormwater Impaired Waterway	Stormwater Impairment Cause
170-SS-12676	6/13/2023, 8:10 AM	0	0	423	0.2	0.5	65										No	
170-SS-12680	6/13/2023, 8:32 AM	0	0	515	300	0	66										No	
170-SS-12681	6/13/2023, 10:38 AM																No	
170-SS-12681	6/28/2023, 6:50 PM	1	0	110	60	1	76										No	
170-SS-12682	6/13/2023, 10:47 AM	0	0	474	200	0	70										No	
170-SS-12696	4/27/2023, 1:50 PM	0	0	0.18	100	0.1	54								4.27	5.67	Yes	CAUSE UNKNOWN
170-SS-12707	6/13/2023, 8:24 AM	0	0	0.182	100	0.3	64	171	24200				0.075		2.28	3.21	Yes	Escherichia coli, Cause Unknown, Phosphorus Total
170-SS-12708	4/27/2023, 11:36 AM	0.2	0	0.09	100	0.1	54	2360	24200				0.143		0.6	15.4	Yes	Escherichia coli, Cause Unknown, Phosphorus Total
170-SS-12709	4/27/2023, 11:57 AM	0.1	0	0.269	200	0.1	54										No	
170-SS-12780	4/27/2023, 9:42 AM	0	0	0.388	200	0	54										No	
170-SS-12865	5/20/2023, 1:00 PM																No	
170-SS-12923	6/13/2023, 11:42 AM																No	
170-SS-12923	6/28/2023, 5:43 PM	0	0	1222	600	0.2	78										No	
170-SS-12927	6/13/2023, 12:34 PM																Yes	Escherichia coli
170-SS-12927	6/28/2023, 6:34 PM																Yes	Escherichia coli
170-SS-13300	4/27/2023, 10:09 AM	0.7	0	0.092	100	0	54	201	24200								No	
170-SS-13301	3/2/2023, 9:23 AM	0	0	0.272	200	0.1	42										No	
170-SS-14305	5/20/2023, 2:29 PM																No	

**PART III**

**Additional IDDE Program Data**

**Catchment Investigations**

**Catchments Requiring Field Investigation Due to Screening & Sampling Activities (Section 3.2.2)**



Screening Sampling ID	Inspection Date	Ammonia (mg/l)	Chlorine (mg/l)	Conductivity (mg/l)	Salinity (mg/l)	Surfactants (mg/l)	Water Temperature (Fahrenheit)	E Coli (cols/100mls)	Total Coliform (col/100mls)	Enterococci (cols/100mls)	Fecal Coliform (cols/100mls)	Nitrogen (mg/l)	Phosphorus (mg/l)	Mercury (mg/l)	Turbidity In Stream (NTUs)	Turbidity At Outfall (NTUs)	Directly Connected To Stormwater Impaired Waterway	Stormwater Impairment Cause
170-SS-1261	1/18/2023, 10:16 AM																No	
170-SS-1398	10/20/2022, 10:07 AM																No	Nitrogen, Phosphorus, and Bacteria (Enterococcus)
170-SS-2125	3/10/2023, 8:01 AM																Yes	Escherichia coli
170-SS-2375	1/27/2023, 9:10 AM	0	0	417	226	0.1	45										No	
170-SS-2473	5/20/2023, 3:26 PM	0.1	0	0.04	0	0.1	64										No	
170-SS-2487	12/5/2022, 12:44 PM																No	
170-SS-2566	6/5/2023, 1:18 PM																Yes	CAUSE UNKNOWN
170-SS-3697	6/13/2023, 9:55 AM	0	0	261	100	0	68										No	
170-SS-3707	1/10/2023, 8:00 AM	0	0	197	100	0	38										No	
170-SS-3708	1/10/2023, 12:00 AM	0	0	206	200	0	39										No	
170-SS-5283	6/5/2023, 11:17 AM																No	
170-SS-5341	1/18/2023, 11:30 AM																No	

Screening Sampling ID	Inspection Date	Ammonia (mg/l)	Chlorine (mg/l)	Conductivity (mg/l)	Salinity (mg/l)	Surfactants (mg/l)	Water Temperature (Fahrenheit)	E Coli (cols/100mls)	Total Coliform (col/100mls)	Enterococci (cols/100mls)	Fecal Coliform (cols/100mls)	Nitrogen (mg/l)	Phosphorus (mg/l)	Mercury (mg/l)	Turbidity In Stream (NTUs)	Turbidity At Outfall (NTUs)	Directly Connected To Stormwater Impaired Waterway	Stormwater Impairment Cause
170-SS-6190	9/15/2022, 11:11 AM																No	
170-SS-6194	9/15/2022, 10:42 AM																No	
170-SS-7694	5/1/2023, 9:15 AM	0	0	340	140	0											No	
170-SS-7962	10/20/2022, 12:10 PM																No	
170-SS-7963	10/20/2022, 10:00 AM																No	
170-SS-7965	10/20/2022, 10:20 AM																No	
170-SS-9207	3/27/2023, 9:00 AM	0	0	640	300	0	45	288	6490								Yes	Escherichia coli
170-SS-9311	10/19/2022, 2:20 PM	0	0	0.906	400	0.2	57	30	2910								Yes	Escherichia coli; Escherichia coli
170-SS-9383	10/19/2022, 12:53 PM																No	
170-SS-9433	3/28/2023, 10:21 AM	0	0	660	340	0	44										No	
170-SS-9596	5/1/2023, 9:53 AM																No	
170-SS-9687	12/14/2022, 11:13 AM	0	0.7	0.783	600	0.6	46			10		3.7	0.06				Yes	DISSOLVED OXYGEN, NUTRIENTS DISSOLVED OXYGEN, NUTRIENTS
170-SS-9704	12/13/2022, 10:53 AM																No	

Screening Sampling ID	Inspection Date	Ammonia (mg/l)	Chlorine (mg/l)	Conductivity (mg/l)	Salinity (mg/l)	Surfactants (mg/l)	Water Temperature (Fahrenheit)	E Coli (cols/100mls)	Total Coliform (col/100mls)	Enterrococci (cols/100mls)	Fecal Coliform (cols/100mls)	Nitrogen (mg/l)	Phosphorus (mg/l)	Mercury (mg/l)	Turbidity In Stream (NTUs)	Turbidity At Outfall (NTUs)	Directly Connected To Stormwater Impaired Waterway	Stormwater Impairment Cause
170-SS-9745	10/19/2022, 3:15 PM																No	
170-SS-9746	10/19/2022, 3:29 PM	0	0	120	70	0	51										No	
170-SS-9749	10/20/2022, 2:51 PM																Yes	CAUSE UNKNOWN
170-SS-9750	10/20/2022, 11:52 AM																No	
170-SS-9776	10/21/2022, 12:25 PM																No	
170-SS-10028	10/21/2022, 1:32 PM																Unknown	
170-SS-10071	5/20/2023, 10:36 AM	0	0	0.196	100	0.15	58										No	
170-SS-10072	5/20/2023, 10:03 AM	0	0	0.13	100	0	60										No	
170-SS-10079	5/20/2023, 11:17 AM	0.1	0	0.134	100	0	58										No	
170-SS-10092	5/20/2023, 11:59 AM	0	0	0.11	100	0.1	59										No	
170-SS-10106	5/20/2023, 3:15 PM	0.2	0	0.037	0	0.1	64										No	
170-SS-10115	5/20/2023, 2:48 PM	0.4	0	0.162	100	0.1	63										No	
170-SS-10124	5/20/2023, 1:17 PM	0.3	0	0.103	100	0	62										No	
170-SS-10923	11/9/2022, 1:51 PM																No	
170-SS-10923	3/2/2023, 8:29 AM	0	0	2010	200	0	40										No	

Screening Sampling ID	Inspection Date	Ammonia (mg/l)	Chlorine (mg/l)	Conductivity (mg/l)	Salinity (mg/l)	Surfactants (mg/l)	Water Temperature (Fahrenheit)	E Coli (cols/100mls)	Total Coliform (col/100mls)	Enterrococci (cols/100mls)	Fecal Coliform (cols/100mls)	Nitrogen (mg/l)	Phosphorus (mg/l)	Mercury (mg/l)	Turbidity In Stream (NTUs)	Tubidity At Outfall (NTUs)	Directly Connected To Stormwater Impaired Waterway	Stormwater Impairment Cause
170-SS-11112	5/1/2023, 1:02 PM	0	0	400	189	0	54										No	
170-SS-11196	7/11/2022, 11:30 AM																No	
170-SS-11198	7/11/2022, 12:13 PM																No	
170-SS-11208	7/12/2022, 10:54 AM																No	
170-SS-11214	7/12/2022, 10:12 AM																No	
170-SS-11215	7/12/2022, 9:45 AM																No	
170-SS-11223	7/12/2022, 8:48 AM																No	
170-SS-11224	7/12/2022, 8:39 AM																No	
170-SS-11225	7/12/2022, 8:18 AM																No	
170-SS-11239	7/5/2022, 1:13 PM																No	
170-SS-11241	7/5/2022, 12:58 PM																No	
170-SS-11243	7/5/2022, 12:44 PM																No	
170-SS-11244	7/5/2022, 12:34 PM																No	
170-SS-11247	7/5/2022, 12:22 PM																No	
170-SS-11248	7/5/2022, 12:15 PM																No	

Screening Sampling ID	Inspection Date	Ammonia (mg/l)	Chlorine (mg/l)	Conductivity (mg/l)	Salinity (mg/l)	Surfactants (mg/l)	Water Temperature (Fahrenheit)	E Coli (cols/100mls)	Total Coliform (col/100mls)	Enterococci (cols/100mls)	Fecal Coliform (cols/100mls)	Nitrogen (mg/l)	Phosphorus (mg/l)	Mercury (mg/l)	Turbidity In Stream (NTUs)	Turbidity At Outfall (NTUs)	Directly Connected To Stormwater Impaired Waterway	Stormwater Impairment Cause
170-SS-11544	11/23/2022, 7:41 AM																Yes	ESCHERICHIA COLI (E. COLI)
170-SS-11577	5/1/2023, 11:49 AM	0	0	390	203	0	56										No	
170-SS-11586	5/1/2023, 12:13 PM	0	0	370	182	0	56										No	
170-SS-11590	5/1/2023, 12:27 PM	0	0	220	112	0	56										No	
170-SS-11745	5/1/2023, 9:44 AM	0	0	160	77	0	55										Unknown	
170-SS-11749	5/1/2023, 10:26 AM	0	0	150	77	0	54										No	
170-SS-12236	5/1/2023, 1:58 PM	0	0	360	175	0	58										No	
170-SS-12245	5/1/2023, 1:40 PM	0	0	750	357	0	55										Yes	Escherichia coli
170-SS-12629	1/9/2023, 12:22 PM	0	0	221	100	0	49										No	
170-SS-12629	6/28/2023, 6:48 PM	0	0	784	200	0.2	80										No	
170-SS-12680	1/9/2023, 10:10 AM	0	0	515	250	0	52										No	
170-SS-12682	1/9/2023, 9:16 AM																No	
170-SS-12707	11/7/2022, 12:24 PM																Yes	Escherichia coli, Cause Unknown, Phosphorus Total
170-SS-12923	1/9/2023, 1:20 PM																No	

Screening Sampling ID	Inspection Date	Ammonia (mg/l)	Chlorine (mg/l)	Conductivity (mg/l)	Salinity (mg/l)	Surfactants (mg/l)	Water Temperature (Fahrenheit)	E Coli (cols/100mls)	Total Coliform (col/100mls)	Enterrococci (cols/100mls)	Fecal Coliform (cols/100mls)	Nitrogen (mg/l)	Phosphorus (mg/l)	Mercury (mg/l)	Turbidity In Stream (NTUs)	Turbidity At Outfall (NTUs)	Directly Connected To Stormwater Impaired Waterway	Stormwater Impairment Cause
170-SS-13300	11/8/2022, 9:45 AM																No	
170-SS-19	3/8/2023, 1:29 PM	0.3		1.07	800		47								2.34	1.4	Yes	CAUSE UNKNOWN
170-SS-151	10/21/2022, 9:34 AM																No	
170-SS-252	1/27/2023, 12:02 PM			263	119	0.1	50										No	
170-SS-1404	4/13/2023, 11:40 AM																Yes	FECAL COLIFORM, Dissolved Oxygen, NUTRIENTS, Enterococcus FECAL COLIFORM, Dissolved Oxygen, NUTRIENTS, Enterococcus
170-SS-1527	10/20/2022, 1:45 PM																No	
170-SS-1613	3/8/2023, 12:02 PM			0.56	400		45										No	
170-SS-2014	4/13/2023, 8:00 AM																Yes	Fecal Coliform Fecal Coliform
170-SS-2471	10/21/2022, 7:56 AM			0.37	200		56										No	

Screening Sampling ID	Inspection Date	Ammonia (mg/l)	Chlorine (mg/l)	Conductivity (mg/l)	Salinity (mg/l)	Surfactants (mg/l)	Water Temperature (Fahrenheit)	E Coli (cols/100mls)	Total Coliform (col/100mls)	Enterrococci (cols/100mls)	Fecal Coliform (cols/100mls)	Nitrogen (mg/l)	Phosphorus (mg/l)	Mercury (mg/l)	Turbidity In Stream (NTUs)	Turbidity At Outfall (NTUs)	Directly Connected To Stormwater Impaired Waterway	Stormwater Impairment Cause
170-SS-2602	2/15/2023, 10:32 AM																No	
170-SS-2623	10/20/2022, 12:43 PM																No	
170-SS-3004	11/23/2022, 1:30 PM																Yes	Escherichia coli; CAUSE UNKNOWN
170-SS-3112	6/21/2023, 10:41 AM																Yes	CAUSE UNKNOWN
170-SS-5300	4/12/2023, 7:41 AM																No	
170-SS-5322	2/7/2023, 9:45 AM																No	
170-SS-5334	4/12/2023, 9:30 AM																No	
170-SS-5336	4/12/2023, 9:44 AM																No	
170-SS-5337	4/12/2023, 10:51 AM			0.14	100		63										No	
170-SS-5340	4/12/2023, 11:47 AM																No	
170-SS-5552	2/1/2023, 11:32 AM																No	Bacteria
170-SS-5553	4/11/2023, 7:54 AM																No	
170-SS-5578	4/13/2023, 8:59 AM																No	Bacteria
170-SS-5586	4/13/2023, 10:39 AM			0.11	100		63	504	3,080								Yes	Escherichia coli

Screening Sampling ID	Inspection Date	Ammonia (mg/l)	Chlorine (mg/l)	Conductivity (mg/l)	Salinity (mg/l)	Surfactants (mg/l)	Water Temperature (Fahrenheit)	E Coli (cols/100mls)	Total Coliform (col/100mls)	Enterococci (cols/100mls)	Fecal Coliform (cols/100mls)	Nitrogen (mg/l)	Phosphorus (mg/l)	Mercury (mg/l)	Turbidity In Stream (NTUs)	Turbidity At Outfall (NTUs)	Directly Connected To Stormwater Impaired Waterway	Stormwater Impairment Cause
170-SS-5591	2/1/2023, 10:46 AM							10									Yes	Escherichia coli
170-SS-6077	3/10/2023, 10:57 AM					43											No	
170-SS-6137	3/10/2023, 10:00 AM			0.28	200	0.1	47										No	
170-SS-6386	1/27/2023, 12:53 PM			140	74	0.2	55	85							6.3	5.3	Yes	Escherichia coli; CAUSE UNKNOWN
170-SS-9206	3/28/2023, 9:21 AM			690	350	0.5	48	52	1,010								Yes	Escherichia coli
170-SS-9306	10/19/2022, 10:25 AM																No	
170-SS-9321	10/19/2022, 11:42 AM																No	
170-SS-9698	12/14/2022, 8:45 AM																No	
170-SS-9705	12/14/2022, 8:13 AM			0.51	400	0.2	42										No	
170-SS-10585	12/5/2022, 8:29 AM																No	
170-SS-11528	2/15/2023, 12:43 PM																No	
170-SS-11545	11/23/2022, 7:26 AM																Yes	ESCHERICHIA COLI (E. COLI)
170-SS-11614	2/16/2023, 12:53 PM			0.31	200		51										No	



Screening Sampling ID	Inspection Date	Ammonia (mg/l)	Chlorine (mg/l)	Conductivity (mg/l)	Salinity (mg/l)	Surfactants (mg/l)	Water Temperature (Fahrenheit)	E Coli (cols/100mls)	Total Coliform (col/100mls)	Enterrococci (cols/100mls)	Fecal Coliform (cols/100mls)	Nitrogen (mg/l)	Phosphorus (mg/l)	Mercury (mg/l)	Turbidity In Stream (NTUs)	Turbidity At Outfall (NTUs)	Directly Connected To Stormwater Impaired Waterway	Stormwater Impairment Cause
170-SS-11638	2/15/2023, 1:24 PM																Yes	Escherichia coli, Cause Unknown, Phosphorus Total Escherichia coli, Cause Unknown, Phosphorus Total
170-SS-13991	11/23/2022, 11:43 AM			320	160		56										No	

**PART III**

**Additional IDDE Program Data**

**Catchment Investigations**

**Key Junction Manhole Dry Weather Screening & Sampling Data (Section 3.3)**

Screening Sampling ID	Inspection Date	Ammonia (mg/l)	Chlorine (mg/l)	Conductivity (mg/l)	Salinity (mg/l)	Surfactants (mg/l)	Water Temperature (Fahrenheit)	E Coli (cols/100mls)	Total Coliform (col/100mls)	Enterococci (cols/100mls)	Fecal Coliform (cols/100mls)	Nitrogen (mg/l)	Phosphorus (mg/l)	Mercury (mg/l)	Turbidity In Stream (NTUs)	Turbidity At Outfall (NTUs)	Directly Connected To Stormwater Impaired Waterway	Stormwater Impairment Cause
170-SS-13728	9/15/2022, 9:38 AM																No	
170-SS-13993	11/7/2022, 1:17 PM																No	
170-SS-13994	11/9/2022, 1:40 PM																No	
170-SS-13995	11/9/2022, 2:48 PM																No	
170-SS-13996	11/7/2022, 10:49 AM																No	
170-SS-13997	11/9/2022, 4:02 PM	0	0	0.361	200	0.1	55										No	
170-SS-13998	11/9/2022, 10:59 AM																No	
170-SS-13999	11/8/2022, 1:34 PM																No	
170-SS-14000	11/8/2022, 12:55 PM																No	
170-SS-14001	11/8/2022, 8:28 AM																No	
170-SS-14002	11/8/2022, 10:03 AM																No	

Screening Sampling ID	Inspection Date	Ammonia (mg/l)	Chlorine (mg/l)	Conductivity (mg/l)	Salinity (mg/l)	Surfactants (mg/l)	Water Temperature (Fahrenheit)	E Coli (cols/100mls)	Total Coliform (col/100mls)	Enterococci (cols/100mls)	Fecal Coliform (cols/100mls)	Nitrogen (mg/l)	Phosphorus (mg/l)	Mercury (mg/l)	Turbidity In Stream (NTUs)	Turbidity At Outfall (NTUs)	Directly Connected To Stormwater Impaired Waterway	Stormwater Impairment Cause
170-SS-14052	1/25/2023, 10:37 AM	0	0	0.368	300	0.15	42										No	
170-SS-14121	3/8/2023, 10:41 AM	0	0	0.557	400	0	46										No	
170-SS-14122	3/8/2023, 11:03 AM																No	
170-SS-14123	3/8/2023, 11:16 AM																No	
170-SS-14124	3/8/2023, 11:21 AM	0	0	0.58	400	0	43										No	
170-SS-14127	3/10/2023, 7:58 AM																No	
170-SS-14128	3/10/2023, 7:53 AM																No	
170-SS-14130	2/15/2023, 11:06 AM																No	
170-SS-14131	2/15/2023, 10:46 AM																No	
170-SS-14132	2/15/2023, 10:58 AM																No	
170-SS-14133	3/10/2023, 10:44 AM																No	

Screening Sampling ID	Inspection Date	Ammonia (mg/l)	Chlorine (mg/l)	Conductivity (mg/l)	Salinity (mg/l)	Surfactants (mg/l)	Water Temperature (Fahrenheit)	E Coli (cols/100mls)	Total Coliform (col/100mls)	Enterococci (cols/100mls)	Fecal Coliform (cols/100mls)	Nitrogen (mg/l)	Phosphorus (mg/l)	Mercury (mg/l)	Turbidity In Stream (NTUs)	Turbidity At Outfall (NTUs)	Directly Connected To Stormwater Impaired Waterway	Stormwater Impairment Cause
170-SS-14134	3/10/2023, 10:48 AM																No	
170-SS-14135	3/10/2023, 10:34 AM																No	
170-SS-14136	3/10/2023, 9:08 AM	0	0	0.178	100	0	44										No	
170-SS-14137	3/10/2023, 8:46 AM	0	0	0.185	100	0	43										No	
170-SS-14138	3/10/2023, 8:27 AM																No	
170-SS-14140	2/15/2023, 12:12 PM																No	
170-SS-14141	2/15/2023, 11:54 AM																No	
170-SS-14142	2/15/2023, 12:00 PM																No	
170-SS-14143	2/15/2023, 11:36 AM																No	
170-SS-14144	2/15/2023, 11:45 AM																No	
170-SS-14145	2/15/2023, 12:36 PM																No	

Screening Sampling ID	Inspection Date	Ammonia (mg/l)	Chlorine (mg/l)	Conductivity (mg/l)	Salinity (mg/l)	Surfactants (mg/l)	Water Temperature (Fahrenheit)	E Coli (cols/100mls)	Total Coliform (col/100mls)	Enterococci (cols/100mls)	Fecal Coliform (cols/100mls)	Nitrogen (mg/l)	Phosphorus (mg/l)	Mercury (mg/l)	Turbidity In Stream (NTUs)	Turbidity At Outfall (NTUs)	Directly Connected To Stormwater Impaired Waterway	Stormwater Impairment Cause
170-SS-14146	2/15/2023, 12:30 PM																No	
170-SS-14148	3/8/2023, 1:18 PM																No	
170-SS-14151	2/16/2023, 11:31 AM	0	0	0.321	200	0.1	54										No	
170-SS-14152	2/16/2023, 12:07 PM	0	0	0.317	200	0	53										No	
170-SS-14153	2/16/2023, 10:27 AM																No	
170-SS-14155	2/16/2023, 10:01 AM	0	0	0.657	400	0.2	52										No	
170-SS-14157	2/15/2023, 2:07 PM																No	
170-SS-14158	2/15/2023, 2:13 PM																No	
170-SS-14159	2/15/2023, 2:16 PM																No	
170-SS-14160	2/15/2023, 2:19 PM																No	
170-SS-14161	2/15/2023, 1:43 PM																No	

Screening Sampling ID	Inspection Date	Ammonia (mg/l)	Chlorine (mg/l)	Conductivity (mg/l)	Salinity (mg/l)	Surfactants (mg/l)	Water Temperature (Fahrenheit)	E Coli (cols/100mls)	Total Coliform (col/100mls)	Enterococci (cols/100mls)	Fecal Coliform (cols/100mls)	Nitrogen (mg/l)	Phosphorus (mg/l)	Mercury (mg/l)	Turbidity In Stream (NTUs)	Turbidity At Outfall (NTUs)	Directly Connected To Stormwater Impaired Waterway	Stormwater Impairment Cause
170-SS-14162	2/15/2023, 1:34 PM																No	
170-SS-14171	6/5/2023, 1:30 PM																Yes	CAUSE UNKNOWN
170-SS-14190	6/21/2023, 10:33 AM																No	
170-SS-14191	6/21/2023, 10:14 AM																No	
170-SS-14192	6/21/2023, 1:22 PM																No	
170-SS-14193	6/21/2023, 11:31 AM																No	
170-SS-14194	6/21/2023, 11:46 AM																No	
170-SS-14195	6/21/2023, 12:46 PM																No	
170-SS-14196	6/21/2023, 1:00 PM																No	
170-SS-14197	6/21/2023, 1:12 PM																No	
170-SS-14203	6/5/2023, 12:28 PM																No	

Screening Sampling ID	Inspection Date	Ammonia (mg/l)	Chlorine (mg/l)	Conductivity (mg/l)	Salinity (mg/l)	Surfactants (mg/l)	Water Temperature (Fahrenheit)	E Coli (cols/100mls)	Total Coliform (col/100mls)	Enterococci (cols/100mls)	Fecal Coliform (cols/100mls)	Nitrogen (mg/l)	Phosphorus (mg/l)	Mercury (mg/l)	Turbidity In Stream (NTUs)	Turbidity At Outfall (NTUs)	Directly Connected To Stormwater Impaired Waterway	Stormwater Impairment Cause
170-SS-14250	4/17/2023, 12:52 PM																Unknown	
170-SS-14251	4/17/2023, 11:36 AM																Unknown	
170-SS-14252	4/17/2023, 9:51 AM																Unknown	
170-SS-14253	4/17/2023, 10:08 AM																Unknown	
170-SS-14254	4/17/2023, 10:13 AM																Unknown	
170-SS-13732	12/20/2022, 11:14 AM																No	
170-SS-13733	12/20/2022, 11:06 AM																No	
170-SS-13745	11/29/2022, 11:23 AM																No	
170-SS-14011	12/13/2022, 12:07 PM			0.61	400		51										No	
170-SS-14016	12/13/2022, 12:48 PM			0.49	300		50										No	



