

MS4 General Permit
City of New Britain, 2023 Annual Report
Existing MS4 Permittee
Permit Number GSM 000064
[January 1, 2023 – December 31, 2023]

This report documents the City of New Britain’s efforts to comply with the conditions of the MS4 General Permit to the maximum extent practicable (MEP) from January 1, 2023 to December 31, 2023.

Part I: Summary of Minimum Control Measure Activities

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

1.1 BMP Summary

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 and outreach	Complete / Ongoing	The City provides several articles that refer to stormwater and storm drain maintenance in its annual Water Quality Report, which includes measures to take to help reduce pollution and improve water quality.	Develop and implement public education program	DPW	Jul 1, 2018	Jul 1, 2018	Public education and outreach program is ongoing. The City is also in the process of expanding its website as outlined in Item 1.2 below.
1-2 Address education/ outreach for pollutants of concern*	Complete / Ongoing	The City provides a webpage with a link to its Stormwater Management Plan for download.	Identify pollutants and incorporate into BMP 1-1	DPW	Jul 1, 2018	Jul 1, 2018	Public education and outreach program is ongoing. The City is also in the process of expanding its website as outlined in Item 1.2 below

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

The City is currently in the process of updating and expanding the public education information section of its website. The City has prepared draft text which will eventually consist of multiple web pages, and include general information on stormwater, resources for residents, resources for business and commerce, resources for developers and site operators, and information on pollutants of concern. The City also plans to add topics related to flood resiliency and items that residents can take before, during, and after a storm to assist the City. The expanded website will include a revamped page layout to facilitate easier location of relevant material, additional information on public information, and select updates of existing information.

1.3 Details of activities implemented to educate the community on stormwater

Program Element/Activity	Audience (and number of people reached)	Topic(s) covered	Pollutant of Concern addressed (if applicable)	Responsible dept. or partner org.
Publish articles related to stormwater, such as measures to take to help reduce pollution and improve water quality in its annual Water Quality Report. This is mailed annually to all people on City water. The City also installed 368 catch basin markers that say “Drains to Waterways” in high priority areas.	Residents and businesses (approx. 70,000)	Proper car care, material storage and disposal, fertilizer usage, pet waste collection, car washing, septic system maintenance, illicit discharges, disconnected impervious area, water conservation.	Phosphorus, nitrogen, bacteria	DPW

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	New Britain published the Stormwater Management Plan online, along with a public notice requesting comments, on April 1, 2017. The plan is still available for download.	Publish SMP and issue public notice requesting comments	DPW	Apr 3, 2018	Apr 1, 2017	The SMP remains available online, along with additional information on the MS4 permit. To date, no comments have been received.
2-2 Comply with public notice requirements for Annual Reports	Complete / Ongoing	New Britain published the annual report online, along with a public notice requesting comments, on February 14, 2024.	Publish annual reports and issue public notice requesting comments	DPW	Feb 15, 2024	Feb 14, 2023 (annually)	The annual report is available online for public comment.

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

Continue to make the Stormwater Management Plan and Annual Report available online and for public comment. Continue to host periodic public outreach and participation events as time and schedule allows. Explore the feasibility of hosting a stormwater table at one public event per year and adding additional pet waste bag dispensers, as well as relevant signage. Engagements are expected to include periodic public speaking engagements with a combination of topics that include stormwater, drinking water, and sewer, as well as the targeted education events outlined under Minimum Measure 1.

2.3 Public Involvement/Participation reporting metrics

Metrics	Implemented	Date	Posted
Availability of the Stormwater Management Plan announced to public	Yes	Apr 1, 2017	https://www.newbritainct.gov/services/public-works/programs-n-services/stormwater-managementhtm
Availability of Annual Report announced to public	Yes	Feb 14, 2024	https://www.newbritainct.gov/documents/water-utilities-management

3. Illicit Discharge Detection and Elimination (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 written IDDE program	Complete / Ongoing	The City completed the written IDDE program in full compliance with permit requirements during a previous reporting period in 2017.	Develop and implement IDDE program	DPW	Jul 1, 2018	Apr 1, 2017	Compliance with the written program is ongoing.
3-2 Develop list and maps of all MS4 stormwater outfalls in priority areas	Complete / Ongoing	New Britain mapped all known and accessible outfalls throughout the City during previous reporting periods in 2016 and 2017. Additional information, including manholes and pipe connectivity, have been included. GIS-based mapping is updated as additional field work is conducted. An Assessment and Priority Ranking of all catchments is provided in Part III 1. at the end of this report.	Complete and update mapping	DPW, Engineering	Jul 1, 2019	Apr 1, 2017	Stormwater system mapping is updated as field work and record plan review is conducted. As more infrastructure components are located, they are added to the City's GIS database.
3-3 Implement citizen reporting program	Complete / Ongoing	The City established a utility called SeeClickFix that allows users from a website or mobile device to report an illicit discharge. New Britain also publishes a phone number in the annual Water Quality Report for citizens to report illegal activities.	Develop program and investigate citizen reports	DPW	Jul 1, 2017	Jul 1, 2017	Tracking of citizen complaints is ongoing. During 2023, the City received 0 tickets for clogged catch basins and 2 tickets for sanitary sewer issues as outlined in Item 3.3 below.
3-4 Establish legal authority to prohibit illicit discharges	Complete / Ongoing	New Britain reviewed its IDDE bylaws during a previous reporting period and has determined that it has sufficient legal authority as required under the Permit.	Establish and enforce legal authority	DPW; Engineering, Licenses, Permits & Inspection	Jul 1, 2018	Jul 1, 2018	Illicit discharge enforcement is ongoing.
3-5 Develop record keeping system for IDDE tracking	Complete / Ongoing	The City developed an IDDE tracking database as part of its written IDDE program during a previous reporting period in 2017. See Part II and Part III at the end of this report for more information.	Develop and implement IDDE tracking system	DPW	Jul 1, 2017	Jul 1, 2017	Tracking of illicit discharges is ongoing.

3.1 BMP Summary (continued)

BMP	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
3-6 Address IDDE in areas with pollutants of concern	In progress / Ongoing	New Britain is actively investigating illicit discharges through its program of dry and wet weather sampling. See Part II and Part III at the end of this report for more information. The City completed extensive work related to illicit discharge investigations during 2023 as outlined further in Item 3.2 and Section III 3.4 below.	Review impaired water guidance and track progress of BMPs for impaired waters	DPW	Not specified	Ongoing	As part of an agreement with CT DEEP, the City has a 3-year plan in place to investigate areas with indications of illicit discharges. These investigations are ongoing.
3-7 Outfall and interconnection dry weather screening and sampling	In progress / Ongoing	The City investigated most known and accessible outfalls and performed dry weather screening and sampling activities in 2016. The City is also performing ongoing wet weather sampling as funding allows, although none was completed in 2023.	Develop and implement screening procedures	DPW	Varies	Apr 1, 2017	As part of an agreement with CT DEEP, the City has a 3-year plan in place to investigate areas with indications of illicit discharges. The initial round of investigations was completed in 2017, with follow-up investigations for illicit discharges ongoing as outlined further in Item 3.2 and Section III 3.4 below.
3-8 Sanitary Sewer Overflows (SSOs) Inventory	Complete / Ongoing	New Britain created an SSO inventory of all known overflows dating back to 2012 as part of its SMP. Information was updated to reflect any events of the past year.	Create SSO inventory and report new SSOs	DPW	Oct 29, 2017	Apr 1, 2017	SSO inventory updates and investigations are ongoing. The SSO inventory is attached to this annual report and has been updated with 7 SSO events that occurred in 2023.

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

The City completed extensive investigations within a number of high priority catchments where previous inspection results indicated likely illicit discharges. Catchment investigations were completed within the following catchments that had previously exhibited high pollutants of concern: 3A, 90, 338, 1003A, 1809, 2132, 2857, 2868, and 3172. Additional work within these catchments, including field mapping, smoke testing, dye testing, CCTV, and/or follow-up sampling is anticipated to occur in 2024. Additional information and follow-up recommendations is provided in Section III 3.4. The City also plans to continue select wet weather sampling as funding allows. Many other items are ongoing, such as illicit discharge investigations, dry weather screening, bylaw enforcement, infrastructure mapping, SSO and IDDE inventorying and tracking, etc.

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

Date of Report	Location / suspected source	Response taken
1/29/2023	Farmington Avenue / manhole overflowing due to a compromised sewer line. Approximate 50-gallon spill to an adjacent catch basin.	Provided continuous vacuuming of the catch basin while repairs were made to the broken sewer line.
7/10/2023	Biruta Street / manhole overflowing due to a compromised sewer line. Approximate 50-gallon spill to an adjacent catch basin.	Provided continuous vacuuming of the catch basin while repairs were made to the broken sewer line.

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

Location (Lat long/ street crossing /address and receiving water)	Date and duration of occurrence	Discharge to MS4 or surface water	Estimated volume discharged	Known or suspected cause / Responsible party	Corrective measures planned and completed (include dates)	Sampling data (if applicable)
98 Newington Avenue	2019-2023	MS4	Unknown	Sanitary sewer connection	Remove cross connection	
80 Kent	2016-2023	MS4	Unknown	Sanitary sewer connection	Cross connection between storm and sanitary laterals from property at 80 Kent Road was eliminated. Follow-up catchment investigations indicated no further issues at outfall 1809.	
Additional illicit discharge records for catchment investigations are provided in Section III 3.4.						

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 City uses an Illicit Discharge Tracking Form as part of its IDDE Plan, completed in 2017. This form in part documents the location, cause, description of the event, and corrective actions taken. Information is recorded in an electronic database and via GIS that in part tracks illicit discharge reports, locations, and response efforts. New Britain updates the database as reports come in and follow-up actions are performed. This information is the responsibility of the Deputy Director of Public Works, Utility Division and Superintendent of Water and Sewer. The City is also assisted by outside consultants to track and follow up with potential illicit discharges as they are identified.

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
N/A		

3.7 IDDE reporting metrics

Metrics	
Estimated or actual number of MS4 outfalls	Approx. 300
Estimated or actual number of interconnections	#
Outfall mapping complete	97%
Interconnection mapping complete	(%)
System-wide mapping complete (detailed MS4 infrastructure)	84%
Outfall assessment and priority ranking	97%
Dry weather screening of all High and Low priority outfalls complete	68%
Catchment investigations complete	9
Estimated percentage of MS4 catchment area investigated	3%

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).

IDDE training is conducted annually for employees involved in the IDDE program. Training generally includes the following topics: information on how to identify illicit discharges and SSOs; impacts from fats, oils, and greases; pollution in the environment and waterways; and employee roles within the framework of the IDDE program. IDDE training is performed concurrent with Good Housekeeping measures outlined under BMP 6-1.

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 Implement, upgrade, and enforce land use regulations or other legal authority to meet requirements of MS4 general permit	In progress / Ongoing	The City has continued review of existing regulations to confirm legal authority or areas where modifications are required.	Establish and enforce legal authority	Engineering; Licenses, Permits & Inspection	Jul 1, 2019	Jul 1, 2023	Existing regulations were enforced during this reporting period, and will continue to be enforced until updated as required to meet permit requirements.
4-2 Develop/Implement plan for interdepartmental coordination in site plan review and approval	Complete	A plan was developed during previous years to coordinate between departments on site plan review and approval. Interdepartmental coordination is currently ongoing.	Develop and implement coordination plan	Licenses, Permits & Inspection	Jul 1, 2017	Jul 1, 2017	Departments coordinate as needed to complete site plan review as noted under BMP 4-3.
4-3 Review site plans for stormwater quality concerns	Complete / Ongoing	Site plans were reviewed for all development and redevelopment projects with soil disturbance greater than 1 acre. A total of 5 site developments were reviewed.	Perform site plan reviews	Engineering; Licenses, Permits & Inspection	Jul 1, 2017	Jul 1, 2017	New Britain also provides developers with a checklist as noted under BMP 4-6 that in part addresses stormwater controls to minimize impacts to water quality.
4-4 Conduct site inspections	Complete / Ongoing	Site inspections were performed for all development and redevelopment projects with soil disturbance greater than 1 acre.	Perform site inspections	Licenses, Permits & Inspections	Jul 1, 2017	Jul 1, 2017	The Building Inspector conducts formal site inspections that in part address construction and post-construction stormwater control measures such as erosion and sediment controls. Additional informal inspections are conducted during routine site visits.
4-5 Implement procedure to allow public comment on site development	Complete / Ongoing	The City established procedures during a previous reporting period for receipt and consideration of information submitted by the public.	Develop and implement public comment period	Licenses, Permits & Inspections	Jul 1, 2017	Jul 1, 2017	Information may be submitted via a web link under the Department of Public Works webpage. See item 4.2 below for additional information.

4.1 BMP Summary (continued)

BMP	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
4-6 Implement procedure to notify developers about DEEP construction stormwater permit	Complete / Ongoing	New Britain developed a checklist during a previous reporting period that is provided to developers, with one item addressing DEEP's construction stormwater permit.	Develop and implement notification procedure	Engineering, Licenses, Permits & Inspections	Jul 1, 2017	Jul 1, 2017	All developers are provided the checklist when filing for a permit.

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

The City will continue to determine required land use regulatory updates that will be required during future permit years.

The City will continue to post a list of Site Plan Applications with soil disturbance greater than 1 acres as received by the Building Department on its dedicated Stormwater Management website, available at http://www.newbritainct.gov/services/public_works/programs_n_services/stormwater_management.htm. Users are instructed to contact the Building Department for information or to comment on any applications as required by BMP 4-5.

Additional items are ongoing, such as site plan review, site inspections, and outreach to developers.

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 and/or update legal authority and guidelines regarding LID and runoff reduction in site development planning	Complete / ongoing	Continued to enforce current regulations. The City currently anticipates adopting a new ordinance or amending a new one to address Low Impact Development regulatory components during future years.	Evaluate and develop guidelines	Engineering; Licenses, Permits & Inspection	Jul 1, 2021	Jul 1, 2024	No progress to date on new regulations. Existing regulations were enforced during this reporting period. Updated LID regulations are anticipated to be pursued further once the Connecticut Stormwater Quality Manual is updated.
5-2 Enforce LID/runoff reduction requirements for development and redevelopment projects	In progress / ongoing	The City began reviewing its existing regulations to determine changes in order to meet permit compliance.	Enforce regulations	Engineering; Licenses, Permits & Inspection	Jul 1, 2019	Jul 1, 2024	Existing regulations were enforced during this reporting period.
5-3 Implement long-term maintenance plan for stormwater basins and treatment structures in priority areas	Not started	The City continued work towards implementing a long-term maintenance plan for its stormwater treatment BMPs. In part, the City developed an inventory of known detention and retention ponds that the City is responsible for maintaining	Inventory applicable retention and detention ponds and develop and implement long-term maintenance plan	DPW, Engineering	Jul 1, 2019	Jul 1, 2024	As additional basins are identified, the City's database is updated. Inspections are expected to commence during 2024, with maintenance needs to be determined.
5-4 DCIA mapping	In progress / ongoing	The City completed an assessment on its DCIA as outlined further in item 5.4 below. Tracking DCIA in ongoing as part of development projects.	Develop and update DCIA mapping and calculation	Engineering	Jul 1, 2020	Sept 15, 2021	DCIA calculations were finalized as outlined in item 5.4 below. Updated DCIA calculations will be completed as necessary.
5-5 Address post-construction issues in areas with pollutants of concern	Not started	No progress.	Identify projects in catchments that discharge to impaired waters	Engineering	Not specified	To be determined	No progress to date.

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

A recent review during 2023 indicated that regulatory updates may be completed during future years to address Low Impact Development. It is anticipated that this will occur once the Connecticut Stormwater Quality Manual is updated. The City will continue to develop components of a long-term maintenance plan for stormwater infrastructure, including various SOPs. Additionally, New Britain will also continue to add to its retention and detention pond inventory as additional basins that the City is responsible to maintain are identified.

5.3 Post-Construction Stormwater Management reporting metrics

Metrics	
Baseline (2012) Directly Connected Impervious Area (DCIA)	1,973
DCIA disconnected (redevelopment plus retrofits)	0 acres complete, 66 acres planned
Retrofits completed	0 projects complete, 1 project planned
DCIA disconnected	0 acres complete, 66 acres planned
Estimated cost of retrofits	TBD
Detention or retention ponds identified	9 detention and retention ponds identified

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

The City completed a detailed assessment of its DCIA during 2021 to determine acres of city-wide DCIA. Based on this analysis, the City determined it had a total of 2,842 acres of impervious area, of which 1,973 acres is DCIA based on the Sunderland Method 2 outlined in the permit. The City opted to use the Sunderland method as it is more representative of what impervious area is directly connected rather than assuming all impervious area is directly connected as outlined under Method 1. Due to extensive development within New Britain, conducting field checks would be too labor intensive following the procedures outlined under Method 3. Thus, a 2% reduction in DCIA is 39.5 acres and a 1% reduction is 19.7 acres using the Sunderland method. The City is now working towards disconnecting 1% annually. Calculations on DCIA are updated as needed.

Now that the DCIA baseline has been determined, the City annually tracks how much DCIA has been added or removed. As development projects are submitted to various departments, the City requires developers to provide an index of both existing impervious area (connected and disconnected) and proposed impervious area (connected and disconnected) for each parcel impacted by development or redevelopment. This information is incorporated into the City’s GIS system and tracked on an annual basis. As DCIA is tracked during subsequent years, this tracking methodology may be updated based on results of the program.

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

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/implement formal employee training program	Complete / Ongoing	The City continued its training program established under the previous permit.	Perform annual employee training	DPW	Jul 1, 2017	Jul 1, 2017 and annually	Good housekeeping training is performed concurrently with IDDE training as outlined in Section 3.8.
6-2 Implement MS4 property and operations maintenance	Not started	The City has expanded its O&M program for municipally-owned infrastructure. Recent work included developing a series of Standard Operating Procedures (SOPs) for municipal infrastructure.	Develop and implement maintenance procedures	DPW	Jul 1, 2018	Jul 1, 2023	Continue to develop operation and maintenance program. Incorporate SOPs into a broader O&M Manual for various stormwater infrastructure to ensure proper operation.
6-3 Implement coordination with interconnected MS4s	Complete / Ongoing	New Britain has reached out to two interconnected MS4s to coordinate on outfall and catchment investigations.	Identify MS4s and attend coordination meetings	DPW	Not specified	Ongoing	Other MS4s contacted include ConnDOT and the Central Connecticut State University.
6-4 Develop/implement program to control other sources of pollutants to the MS4	In progress	The City is developing a plan based on ongoing water quality testing in conjunction with BMP 6-5.	Develop and implement pollutant source control program	DPW, Engineering	Not specified	Ongoing	As water quality testing is performed during subsequent years, the plan will continue to be refined to prioritize areas for further investigation.
6-5 Evaluate additional measures for discharges to impaired waters	In progress	The City is developing a plan based on ongoing water quality testing in conjunction with BMP 6-4.	Develop and implement measures for discharges to impaired waters	DPW	Not specified	Ongoing	As water quality testing is performed during subsequent years, the plan will continue to be refined to prioritize areas for further investigation.
6-6 Track projects that disconnect DCIA	In progress	New Britain has developed a DCIA tracking methodology as outlined in item 5.4.	Track DCIA percentage	Engineering	Jul 1, 2017	Jul 1, 2021 and annually	See item 5.4 above for additional information. Tracking is ongoing as part of development projects.

6.1 BMP Summary (continued)

BMP	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
6-7 Implement infrastructure repair/rehab program	Not started	No progress.	Evaluate, develop, and implement infrastructure program	DPW	Jul 1, 2021	Jul 1, 2024	No progress to date.
6-8 Develop/implement plan to identify/prioritize retrofit projects	Not started	Calculations were completed in 2021 to determine a 1% DCIA removal goal as outlined under item 5.4.	Develop retrofit plan / implement plan to remove 1% of DCIA annually	Engineering	Jul 1, 2020 / Jul 1, 2022	Jul 1, 2024	See item 5.4 above for additional information.
6-9 Develop/implement street sweeping program	Complete / Ongoing	The City continued implementing its street sweeping program developed during a previous reporting period.	Perform annual street sweeping	DPW	Jul 1, 2017	Jul 1, 2017 and annually	The program generally includes sweeping all streets at least once annually, with heavily trafficked roads swept more often.
6-10 Develop/implement catch basin cleaning program	Complete / Ongoing	The City continued implementing its catch basin cleaning program developed during a previous reporting period. The City also met with ESRI to determine ways to track catch basin inspections in GIS.	Develop and implement catch basin cleaning and inspection procedures	DPW	Jul 1, 2020	Jul 1, 2017	Catch basin cleaning and other data is documented in an asset management software program. Updates are made continuously based on field information.
6-11 Develop/implement snow management practices	In progress	New Britain has started to document snow management practices.	Develop and implement snow management	DPW	Jul 1, 2018	Jul 1, 2018	Complete program as allowed within fiscal constraints.

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

New Britain will review its existing training program and make changes to address additional permitting requirements pertaining to good housekeeping and IDDE, where applicable.

The City will continue to expand its Operation and Maintenance program, both in the field and to document standard operating procedures. Written procedures, checklists, tracking forms, etc. will be incorporated into an O&M Manual with sections for various stormwater infrastructure components.

Street sweeping generally includes completing weekly sweeping of the downtown area during the spring, summer, and fall as weather permits. Primary routes are also swept three times per year, split into a northern and southern route. Remaining roads and parking lots are generally swept once a year during April and May, with bike lanes also swept during the same time of year. The City is working towards expanding its catch basin inspection and cleaning program, including cleaning additional basins and tracking all results in GIS as outlined further in Item 6.4.

Many other items are ongoing, including catch basin cleaning, street sweeping, winter operations, and water quality testing.

6.3 Pollution Prevention/ Good Housekeeping reporting metrics

Metrics	
Employee training provided for key staff	
Street sweeping	
Curb miles swept	670.1 miles
Volume (or mass) of material collected	530.0 tons
Catch basin cleaning	
Total catch basins in priority areas	
Total catch basins in MS4	3,590
Catch basins inspected	307
Catch basins cleaned	307
Volume (or mass) of material removed from all catch basins	426.7 cubic yards
Volume removed from catch basins to impaired waters (if known)	Unknown
Snow management	
Type(s) of deicing material used	Treated salt
Total amount of each deicing material applied	803.3 tons of salt, 12,000 gallons of brine
Type(s) of deicing equipment used	Multiple
Lane-miles treated	1,703
Snow disposal location	N/A
Staff training provided on application methods & equipment	Annual / ongoing
Municipal turf management program actions (for permittee properties in basins with N/P impairments)	
Reduction in application of fertilizers (since start of permit)	32%
Reduction in turf area (since start of permit)	11.44 acres
Lands with high potential to contribute bacteria (dog parks, parks with open water, & sites with failing septic systems)	
Cost of mitigation actions/retrofits	\$

6.4 Catch basin cleaning program

Provide any updates or modifications to your catch basin cleaning program.

In 2023, the City met with ESRI to discuss ways to incorporate catch basin inspection and cleaning records into its GIS program. The City currently anticipates using ESRI's standard catch basin inspection and tracking forms to track inspections moving forward. The City plans on expanding this program during 2024 and has established a goal of inspecting and cleaning 1,000 catch basins, or approximately 30% of its entire system. Additionally, the City is exploring the possibility of hiring an outside contractor to inspect and clean all City-owned catch basins to establish a clean baseline for all field work moving forward. The City has allocated both in-house staff resources to this, and has external consultants to assist as needed.

6.5 Retrofit Program

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

To be determined. The City now routinely looks for opportunities to disconnect impervious area as City-owned parcels are developed or redeveloped during the design phase. The City works with the various design consultants to ensure that DCIA is addressed, as well as minimizing impervious cover as best as feasible.

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

The City is currently pursuing a project at Pinnacle Park that will remove a substantial portion of DCIA. Much of the existing stormwater runoff currently flows into a detention basin, however, does not infiltrate or otherwise reduce volume. The City and its consultant are exploring ways to retrofit this project to provide infiltration. This project is anticipated to reduce DCIA by approximately 66 acres. As a 2% reduction in City-wide DCIA totals approximately 40 acres, infiltrating a ½" storm event over the impervious area at Pinnacle Park will allow the City to substantially meet permit requirements.

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

It is anticipated that the Pinnacle Park project outlined above will substantially meet this goal.

Part II: Impaired waters investigation and monitoring

1. Impaired waters investigation and monitoring program

1.1 Indicate which stormwater pollutant(s) of concern occur(s) in your municipality or institution. [This data is available on the MS4 map viewer: http://s.uconn.edu/ctms4map.](http://s.uconn.edu/ctms4map)

Nitrogen/ Phosphorus Bacteria Mercury Other Pollutant of Concern

1.2 Describe program status.

Discuss 1) the status of monitoring work completed, 2) a summary of the results and any notable findings, and 3) any changes to the Stormwater Management Plan based on monitoring results.

The City conducted extensive dry weather sampling throughout 2017 on all known and accessible outfalls. In 2020, the City attempted to locate approximately 30 outfalls that could not previously be located or accessed. Of the 30 outfalls, 17 outfalls were completed, 11 were determined not to exist or were not an outfall (e.g. culvert), and 2 were identified as private. 8 outfalls had dry weather flow and several will require follow-up actions. Results are provided in Section 2.1 below. Approximately 8% of outfalls could not be located or accessed for a variety of reasons, including being located on private property, within railroad right-of-way, or were otherwise buried. The City is currently working with other property owners to attempt to locate and inspect these outfalls according to the permit schedule. Additionally, the City has performed wet weather sampling as time and budget allows on those outfalls where follow-up is required. Furthermore, the City completed extensive catchment investigations within high priority areas to bracket potential illicit discharge sources by investigating key junction manholes. Additional information is outlined further in Item 3.2 and Section III 3.4.

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

2.1 Screening data collected under 2017 permit

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

Outfall ID	Date	Parameter of Concern	Results	Name of Laboratory	Follow-Up Required?
1	11/1/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
2	11/1/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
3	11/2/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
3A	11/2/2016	Bacteria	E. coli - 1520 MPN/100 ml Phosphorus - 0.45 mg/l	Phoenix Environmental Laboratories	Yes
4	11/14/2016	Bacteria	No pollutants of concern	Phoenix Environmental Laboratories	No
5	11/2/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
7	11/4/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
8	11/1/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
9	11/4/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
10	11/1/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
11	11/1/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
12	11/1/2016	Bacteria	E. coli - 450 MPN/100 ml Phosphorus - 0.747 mg/l	Phoenix Environmental Laboratories	Yes
13	11/1/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No

Outfall ID	Date	Parameter of Concern	Results	Name of Laboratory	Follow-Up Required?
14	10/26/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
16	10/26/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
17	10/26/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
18	10/26/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
19	11/17/2016	Bacteria	No pollutants of concern	Phoenix Environmental Laboratories	No
20	10/26/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
21	10/26/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
22	11/1/2016	Bacteria	No pollutants of concern	Phoenix Environmental Laboratories	No
23	11/1/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
25	11/4/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
27	11/4/2016	Bacteria	No pollutants of concern	Phoenix Environmental Laboratories	No
28	11/4/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
29	11/4/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
31	12/9/2020	Bacteria	No sign of dry weather flow in upstream catch basin	Phoenix Environmental Laboratories	Yes
32	11/2/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
33	11/10/2020	Bacteria	No sign of dry weather flow in upstream catch basin	Phoenix Environmental Laboratories	Yes
34	11/10/2020	n/a	Outfall does not exist	Phoenix Environmental Laboratories	No
35	11/10/2020	n/a	Private outfall not connected to MS4	Phoenix Environmental Laboratories	No
36	11/10/2020	n/a	Private outfall not connected to MS4	Phoenix Environmental Laboratories	No
37	11/3/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
38	11/14/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
39	11/2/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
40	11/3/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
42	11/11/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
43	11/11/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
44	12/9/2020	Bacteria	No pollutants of concern but sewage odor and brown color present	Phoenix Environmental Laboratories	Yes
45	11/4/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
46	12/9/2020	Bacteria	Flow inaccessible for sampling	Phoenix Environmental Laboratories	Yes
47	11/4/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
48	11/4/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
49	11/4/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
50	11/9/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
51	11/9/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
52	11/3/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
53	11/3/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
54	11/3/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
54A	11/3/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
55	11/3/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
56	11/3/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
57	11/3/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
58	11/3/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
59	11/7/2016	Phosphorus/Nitrogen	No sign of dry weather flow	Phoenix Environmental Laboratories	No
60	11/17/2016	Phosphorus/Nitrogen	No sign of dry weather flow	Phoenix Environmental Laboratories	No
61	11/2/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
62	11/10/2020	Bacteria	No sign of dry weather flow in upstream catch basin	Phoenix Environmental Laboratories	Yes
63	11/2/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No

Outfall ID	Date	Parameter of Concern	Results	Name of Laboratory	Follow-Up Required?
64	11/10/2020	Bacteria	Flow inaccessible for sampling	Phoenix Environmental Laboratories	Yes
65	11/9/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
66	11/2/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
69	11/10/2020	Bacteria	No sign of dry weather flow in upstream catch basin	Phoenix Environmental Laboratories	Yes
70	10/26/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
71	10/26/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
72	10/26/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
73	10/26/2016	Bacteria	No pollutants of concern	Phoenix Environmental Laboratories	No
73A	10/26/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
74	10/26/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
75	11/1/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
77	11/4/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
78	11/2/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
79	11/2/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
80	11/3/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
81	11/3/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
82	11/3/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
86	12/9/2020	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
90	11/9/2016	n/a	No pollutants of concern	Phoenix Environmental Laboratories	No
91	11/14/2016	n/a	No pollutants of concern	Phoenix Environmental Laboratories	No
94	12/9/2020	n/a	Outfall does not exist	Phoenix Environmental Laboratories	No
116	11/9/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
122	12/9/2020	n/a	Outfall does not exist	Phoenix Environmental Laboratories	No
123	12/9/2020	n/a	Outfall does not exist	Phoenix Environmental Laboratories	No
124	12/9/2020	n/a	Outfall does not exist	Phoenix Environmental Laboratories	No
125	11/8/2016	n/a	No sample obtained	Phoenix Environmental Laboratories	Yes
315	12/9/2020	Bacteria	No pollutants of concern	Phoenix Environmental Laboratories	No
338	11/14/2016	n/a	No pollutants of concern	Phoenix Environmental Laboratories	No
579	12/9/2020	Bacteria	No pollutants of concern	Phoenix Environmental Laboratories	No
962	12/9/2020	n/a	Outfall does not exist	Phoenix Environmental Laboratories	No
1003	11/10/2020	n/a	Outfall does not exist	Phoenix Environmental Laboratories	No
1003A	11/10/2020	Bacteria	E. Coli – 86600 MPN/100 ml	Phoenix Environmental Laboratories	Yes
1077	11/9/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
1079	11/9/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
1162	12/9/2020	Bacteria	No pollutants of concern but sewage odor present	Phoenix Environmental Laboratories	Yes
1177	11/14/2016	n/a	No pollutants of concern	Phoenix Environmental Laboratories	No
1551	11/4/2016	Bacteria	No pollutants of concern	Phoenix Environmental Laboratories	No
1563	11/4/2016	Bacteria	Flow insufficient for sampling	Phoenix Environmental Laboratories	Yes
1564	11/9/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
1572	11/4/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
1596	11/1/2016	Bacteria	No pollutants of concern	Phoenix Environmental Laboratories	No
1636	10/26/2016	Bacteria	E. coli - 1330 MPN/100 ml	Phoenix Environmental Laboratories	Yes
1701	11/14/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
1780	10/26/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
1787	10/26/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
1809	11/17/2016	Bacteria	E. coli - >24,200 MPN/100 ml Nitrogen - 2.86 mg/l Phosphorus - 0.703 mg/l	Phoenix Environmental Laboratories	Yes
1868	11/9/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
1868A	11/9/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
1868B	11/9/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No

Outfall ID	Date	Parameter of Concern	Results	Name of Laboratory	Follow-Up Required?
1983	12/9/2020	Bacteria	No sign of dry weather flow in upstream catch basin but oil sheen present	Phoenix Environmental Laboratories	Yes
1992	11/14/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
1993	11/14/2016	Bacteria	No pollutants of concern	Phoenix Environmental Laboratories	No
1994	11/9/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
2012	11/17/2016	n/a	No pollutants of concern	Phoenix Environmental Laboratories	No
2132	11/10/2020	Bacteria	No pollutants of concern in upstream manhole	Phoenix Environmental Laboratories	No
2133	11/2/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
2149	11/3/2016	Bacteria	No pollutants of concern	Phoenix Environmental Laboratories	No
2188	10/26/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
2188A	10/26/2016	Bacteria	E. coli - 529 MPN/100 ml	Phoenix Environmental Laboratories	Yes
2242	11/2/2016	Bacteria	No pollutants of concern	Phoenix Environmental Laboratories	No
2403	11/1/2016	Bacteria	E. coli - 933 MPN/100 ml Nitrogen - 2.62 mg/l	Phoenix Environmental Laboratories	Yes
2467	11/17/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
2551	11/2/2016	Bacteria	No pollutants of concern	Phoenix Environmental Laboratories	No
2575	11/2/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
2578	11/2/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
2589	11/10/2020	Bacteria	No sign of dry weather flow in upstream catch basin	Phoenix Environmental Laboratories	Yes
2602	11/1/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
2728	11/10/2020	n/a	Outfall does not exist	Phoenix Environmental Laboratories	No
2783	11/8/2016	Phosphorus/Nitrogen	No sign of dry weather flow	Phoenix Environmental Laboratories	No
2789	11/7/2016	n/a	No pollutants of concern	Phoenix Environmental Laboratories	No
2790	11/17/2016	n/a	No pollutants of concern	Phoenix Environmental Laboratories	No
2837	12/9/2020	n/a	Outfall does not exist	Phoenix Environmental Laboratories	No
2852	11/7/2016	Bacteria	E. coli - 1,410 MPN/100 ml Nitrogen - 2.59 mg/l	Phoenix Environmental Laboratories	Yes
2857	11/14/2016	Bacteria	E. coli - >24,200 MPN/100 ml Nitrogen - 25.8 mg/l Phosphorus - 4.09 mg/l	Phoenix Environmental Laboratories	Yes
2859	12/9/2020	Bacteria	No pollutants of concern but oil sheen and brown color present	Phoenix Environmental Laboratories	Yes
2868	11/3/2016	Bacteria	E. coli - >24,200 MPN/100 ml Nitrogen - 6.72 mg/l Phosphorus - 0.636 mg/l	Phoenix Environmental Laboratories	Yes
2996	11/9/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
3005	11/9/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
3006	11/9/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
3007	11/11/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
3008	11/11/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
3009	11/11/2016	Bacteria	No pollutants of concern	Phoenix Environmental Laboratories	No
3010	11/17/2016	Bacteria	E. coli - 473 MPN/100 ml	Phoenix Environmental Laboratories	Yes
3038	11/14/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
3047	11/14/2016	n/a	No pollutants of concern	Phoenix Environmental Laboratories	No
3052	11/10/2020	Bacteria	Flow insufficient for sampling in upstream manhole	Phoenix Environmental Laboratories	Yes
3104	-	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
3161	11/17/2016	n/a	No pollutants of concern	Phoenix Environmental Laboratories	No
3172	11/4/2016	Bacteria	E. coli - >24,200 MPN/100 ml Nitrogen - 6.25 mg/l	Phoenix Environmental Laboratories	Yes

Outfall ID	Date	Parameter of Concern	Results	Name of Laboratory	Follow-Up Required?
3176	11/4/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
3182	11/11/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
3185	11/11/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
3188	11/11/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
3190	11/17/2016	Bacteria	Flow insufficient for sampling	Phoenix Environmental Laboratories	Yes
3190A	11/17/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
3192	11/14/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
3194	11/17/2016	Bacteria	E. coli - 2,610 MPN/100 ml Nitrogen - 3.52 mg/l	Phoenix Environmental Laboratories	Yes
3194A	11/17/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
3200	11/11/2016	Bacteria	Nitrogen - 3.92 mg/l	Phoenix Environmental Laboratories	Yes
3202	11/17/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
3204	11/11/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
3206	11/11/2016	Bacteria	E. coli - 11,200 MPN/100 ml	Phoenix Environmental Laboratories	Yes
3208	11/14/2016	Bacteria	No pollutants of concern	Phoenix Environmental Laboratories	No
3220	11/17/2016	n/a	No sample obtained	Phoenix Environmental Laboratories	Yes
3228	11/10/2020	n/a	Outfall does not exist	Phoenix Environmental Laboratories	No
3230	11/10/2020	n/a	Outfall does not exist	Phoenix Environmental Laboratories	No
3238	11/17/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
3240	11/1/2016	Bacteria	No bacteria sample obtained	Phoenix Environmental Laboratories	Yes
3242	11/1/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
3242A	11/1/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
3242B	11/1/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
3246	11/1/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
3246A	11/1/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
3246B	11/1/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
3246C	11/1/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
3246D	11/1/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
3246E	11/1/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
5000	10/26/2016	Bacteria	No pollutants of concern	Phoenix Environmental Laboratories	No
5001	11/1/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
5002	10/26/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
5003	10/26/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
5004	10/26/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
5005	11/1/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
5006	11/17/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
5007	11/3/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
5008	11/3/2016	Bacteria	No bacteria sample obtained	Phoenix Environmental Laboratories	Yes
5009	11/3/2016	n/a	No pollutants of concern	Phoenix Environmental Laboratories	No
5011	11/3/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
5012	11/14/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
5013	11/9/2016	Bacteria	No sign of dry weather flow but sewage odor present	Phoenix Environmental Laboratories	Yes
5014	11/4/2016	Bacteria	No sign of dry weather flow but sewage odor present	Phoenix Environmental Laboratories	Yes
5016	11/7/2016	n/a	No pollutants of concern	Phoenix Environmental Laboratories	No
5020	11/8/2016	n/a	No pollutants of concern	Phoenix Environmental Laboratories	No
5022	11/17/2016	n/a	No pollutants of concern	Phoenix Environmental Laboratories	No
5023	11/11/2016	n/a	No pollutants of concern	Phoenix Environmental Laboratories	No
5025	11/17/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
5026	11/11/2016	Bacteria	No sign of dry weather flow	Phoenix Environmental Laboratories	No
100A	11/11/2016	n/a	No pollutants of concern	Phoenix Environmental Laboratories	No
100C	11/11/2016	n/a	No pollutants of concern	Phoenix Environmental Laboratories	No

Outfall ID	Date	Parameter of Concern	Results	Name of Laboratory	Follow-Up Required?
100D	11/11/2016	n/a	No pollutants of concern	Phoenix Environmental Laboratories	No
2790a	11/17/2016	n/a	No pollutants of concern	Phoenix Environmental Laboratories	No
3156B	11/8/2016	n/a	No sample was obtained	Phoenix Environmental Laboratories	Yes
3161a	11/17/2016	n/a	No bacteria sample obtained but sewage odor present	Phoenix Environmental Laboratories	Yes
3198A	10/26/2016	n/a	No pollutants of concern	Phoenix Environmental Laboratories	No

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

Follow-up investigations of the applicable outfalls listed in Part II, Section 2.1 above are ongoing.

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

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

Once outfall screening has been completed for at least 50% of outfalls to impaired waters, 6 of the highest contributors of pollutants of concern will be identified. The City will begin monitoring these outfalls on an annual basis on July 1, 2020.

Outfall	Sample Date	Parameter(s)	Results	Name of Laboratory (if used)
N/A				

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).

Outfall ID	Receiving Water	Category (Priority)	Rank
1	Willow Brook	High	3
2	Willow Brook	High	3
3	Willow Brook	Excluded	0
3A			
4	Willow Brook	High	9
5	Willow Brook	Excluded	0
6	Willow Brook	High	3
7	Willow Brook	High	3
8	Willow Brook	High	3
9	Willow Brook	High	4
10	Willow Brook	High	3
11	Willow Brook	High	3
12	Willow Brook	High	4
13	Willow Brook	High	3
14	Willow Brook	High	4
16	Willow Brook	High	4
17	Willow Brook	Excluded	0
18	Willow Brook	Excluded	0
19	Willow Brook	High	4
20	Willow Brook	High	3
21	Willow Brook	High	3
22	Willow Brook	Problem	4
23	Willow Brook	High	3
25	Willow Brook	High	3
26	Willow Brook	High	3
27	Willow Brook	High	3

Outfall ID	Receiving Water	Category (Priority)	Rank
28	Willow Brook	High	3
29	Willow Brook	High	3
30	Willow Brook	High	3
31	Bass Brook	High	2
32	Willow Brook	Problem	7
33	Willow Brook	High	4
34	Webster Brook	High	3
35	Webster Brook	High	3
36	Webster Brook	High	3
37	Webster Brook	High	3
38	Webster Brook	High	5
39	Webster Brook	High	3
40	Piper Brook	High	2
42	Piper Brook	High	2
43	Piper Brook	High	2
44	Piper Brook	Problem	3
45	Piper Brook	High	2
46	Piper Brook	Problem	8
47	Piper Brook	High	2
48	Piper Brook	High	2
49	Piper Brook	High	2
50	Webster Brook	High	3
51	Webster Brook	High	3
52	Webster Brook	High	3
53	Webster Brook	High	3
54	Webster Brook	High	3

Outfall ID	Receiving Water	Category (Priority)	Rank
54A	Webster Brook	High	3
55	Webster Brook	High	3
56	Webster Brook	High	3
57	Webster Brook	High	3
58	Webster Brook	High	3
59	Bass Brook	High	2
60	Bass Brook	High	2
61	Willow Brook	Excluded	0
62	Willow Brook	Excluded	0
63	Willow Brook	Excluded	0
64	Willow Brook	Excluded	0
65	Willow Brook	Excluded	0
66	Willow Brook	Excluded	0
67	Willow Brook	High	3
68	Willow Brook	High	4
69	Willow Brook	High	4
70	Willow Brook	High	3
71	Willow Brook	High	3
72	Willow Brook	High	3
73	Willow Brook	High	3
73A	Willow Brook	High	3
74	Willow Brook	High	3
75	Willow Brook	High	3
77	Quinnipiac River	High	3
78	Webster Brook	High	3
79	Webster Brook	High	4
80	Webster Brook	High	3
81	Webster Brook	High	3
82	Webster Brook	High	3
83	Bass Brook	High	2
84	Bass Brook	High	2
85	Bass Brook	High	2
86	Bass Brook	High	3
87	Bass Brook	High	3

Outfall ID	Receiving Water	Category (Priority)	Rank
88	Bass Brook	High	3
89	Bass Brook	High	2
90	Bass Brook	Problem	2
91	Bass Brook	High	3
92	Bass Brook	Excluded	0
93	Bass Brook	Excluded	0
94	Bass Brook	Excluded	0
95	Bass Brook	High	2
96	Bass Brook	High	2
97	Bass Brook	High	2
98	Bass Brook	High	2
99	Bass Brook	High	2
100A	Bass Brook	High	4
100B	Bass Brook	High	3
100C	Bass Brook	High	3
100D	Bass Brook	High	4
101	Bass Brook	High	2
102	Bass Brook	High	2
103	Bass Brook	High	2
104	Bass Brook	High	2
105	Bass Brook	High	2
106		Excluded	0
108	Bass Brook	High	2
109	Bass Brook	High	2
110	Bass Brook	High	2
111	Bass Brook	High	2
112	Bass Brook	High	2
113	Bass Brook	High	3
114	Quinnipiac River	High	3
115	Bass Brook	High	2
116	Willow Brook	High	3
117	Bass Brook	Excluded	0
118	Bass Brook	Excluded	0
119	Bass Brook	High	3

Outfall ID	Receiving Water	Category (Priority)	Rank
120	Bass Brook	Excluded	0
121	Bass Brook	Excluded	0
122	Bass Brook	High	2
123	Bass Brook	High	2
124	Bass Brook	High	2
125	Bass Brook	High	2
126	Bass Brook	High	2
127	Bass Brook	High	2
128	Bass Brook	High	2
234	Bass Brook	High	2
264	Bass Brook	High	2
290	Bass Brook	High	3
293	Bass Brook	High	2
297	Bass Brook	High	2
315	Bass Brook	High	1
338	Bass Brook	Problem	6
437	Bass Brook	High	2
579	Bass Brook	Low	0
734	Quinnipiac River	High	3
742	Quinnipiac River	High	3
743	Quinnipiac River	High	4
753	Quinnipiac River	High	3
962	Bass Brook	High	2
1003	Webster Brook	High	3
1003A			
1077	Piper Brook	High	3
1079	Piper Brook	High	2
1162	Piper Brook	Problem	3
1177	Bass Brook	High	3
1214	Bass Brook	High	2
1219	Bass Brook	High	1
1223	Bass Brook	High	1
1238	Bass Brook	Low	0
1551	Willow Brook	High	3

Outfall ID	Receiving Water	Category (Priority)	Rank
1563	Willow Brook	High	3
1564	Willow Brook	High	3
1572	Willow Brook	High	3
1596	Willow Brook	High	4
1636	Willow Brook	High	3
1701	Willow Brook	High	3
1780	Willow Brook	High	4
1787	Willow Brook	High	4
1809	Willow Brook	Problem	5
1868	Webster Brook	High	3
1868A	Webster Brook	High	3
1868B	Webster Brook	High	3
1983	Webster Brook	High	4
1992	Webster Brook	High	2
1993	Webster Brook	Problem	4
1994	Webster Brook	High	4
2012	Bass Brook	Problem	5
2132	Willow Brook	Problem	7
2133	Willow Brook	High	4
2149	Webster Brook	High	4
2188	Willow Brook	High	4
2188A	Willow Brook	High	5
2242	Willow Brook	High	3
2403	Willow Brook	High	5
2467	Willow Brook	High	3
2551	Webster Brook	High	4
2575	Willow Brook	High	4
2578	Willow Brook	High	4
2589	Willow Brook	High	3
2592	Willow Brook	High	3
2602	Willow Brook	High	3
2728	Piper Brook	High	2
2783	Batterson Park Pond	High	3
2786	Bass Brook	High	2

Outfall ID	Receiving Water	Category (Priority)	Rank
2789	Bass Brook	High	2
2790	Bass Brook	High	4
2790A	Bass Brook	High	4
2792	Bass Brook	High	1
2793	Bass Brook	High	2
2817	Bass Brook	High	2
2837	Bass Brook	High	1
2852	Piper Brook	High	5
2857	Piper Brook	Problem	5
2859	Piper Brook	High	4
2868	Piper Brook	Problem	8
2989	Quinnipiac River	High	7
2996	Quinnipiac River	High	4
3001	Bass Brook	Excluded	0
3002	Bass Brook	Excluded	0
3003	Bass Brook	High	2
3004	Bass Brook	High	2
3005	Willow Brook	Excluded	0
3006	Willow Brook	Excluded	0
3007	Willow Brook	High	3
3008	Willow Brook	High	3
3009	Willow Brook	High	3
3038	Piper Brook	High	2
3047	Bass Brook	High	4
3052	Quinnipiac River	High	3
3054	Bass Brook	High	2
3076	Bass Brook	High	2
3079	Bass Brook	High	1
3104	Webster Brook	Problem	4
3151	Bass Brook	High	1
3153	Bass Brook	High	1
3156	Bass Brook	High	2
3156A	Bass Brook	High	2
3156B	Bass Brook	High	2

Outfall ID	Receiving Water	Category (Priority)	Rank
3158	Bass Brook	High	2
3158A	Bass Brook	High	2
3160	Bass Brook	High	3
3161	Bass Brook	Problem	4
3164	Bass Brook	High	2
3166	Bass Brook	High	2
3172	Quinnipiac River	Problem	4
3176	Quinnipiac River	High	4
3182	Willow Brook	High	3
3185	Willow Brook	High	3
3186	Willow Brook	High	3
3188	Willow Brook	High	3
3190	Willow Brook	High	2
3190A	Willow Brook	High	3
3192	Willow Brook	High	1
3192A	Willow Brook	High	1
3194	Willow Brook	High	4
3194A	Willow Brook	High	3
3196	Willow Brook	High	3
3196A	Willow Brook	High	3
3198	Willow Brook	High	3
3198A	Willow Brook	High	4
3200	Willow Brook	High	3
3202	Willow Brook	High	3
3204	Willow Brook	High	3
3206	Willow Brook	High	4
3208	Willow Brook	High	3
3210	Bass Brook	High	1
3212	Bass Brook	High	2
3214	Bass Brook	High	2
3218	Bass Brook	Low	0
3220	Bass Brook	Problem	3
3224	Bass Brook	High	2
3226	Bass Brook	High	2

Outfall ID	Receiving Water	Category (Priority)	Rank
3228	Webster Brook	High	3
3230	Webster Brook	High	3
3234	Willow Brook	High	4
3236	Willow Brook	High	5
3238	Willow Brook	High	4
3240	Willow Brook	High	3
3242	Willow Brook	High	3
3242A	Willow Brook	High	3
3242B	Willow Brook	High	3
3244	Willow Brook	High	3
3246	Willow Brook	High	1
3246A	Willow Brook	High	3
3246B	Willow Brook	High	3
3246C	Willow Brook	High	3
3246D	Willow Brook	High	3
3246E	Willow Brook	High	3
5000	Willow Brook	High	3
5001	Willow Brook	High	3
5002	Willow Brook	High	3
5003	Willow Brook	High	3
5004	Willow Brook	High	3
5005	Willow Brook	High	3

Outfall ID	Receiving Water	Category (Priority)	Rank
5006	Willow Brook	High	4
5007	Webster Brook	High	3
5008	Webster Brook	High	4
5009	Piper Brook	Problem	4
5010	Piper Brook	High	2
5011	Piper Brook	High	2
5012	Quinnipiac River	High	3
5013	Piper Brook	Problem	3
5014	Piper Brook	Problem	3
5016	Bass Brook	High	2
5017	Bass Brook	High	2
5018	Bass Brook	High	2
5019	Bass Brook	High	1
5020	Bass Brook	High	1
5021	Bass Brook	High	3
5022	Bass Brook	High	3
5023	Bass Brook	High	3
5024	Bass Brook	High	1
5025	Piper Brook	High	2
5026	Willow Brook	High	3
10005	Bass Brook	High	3

Note that in the “Rank” column above, a higher number means an outfall ranks higher within each particular “Category”. The number relates to the quantity of DEEP screening factors applicable to each catchment.

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

2.1 Dry weather screening and sampling data from outfalls and interconnections

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

Outfall ID	Date	Temperature (deg C)	Conductivity (uS/cm)	Salinity (ppt)	Chlorine (mg/L)	Ammonia (mg/L)	Surfactants (mg/L)	E. Coli (MPN/100 ml)	Pollutant of Concern	If required, follow-up actions taken
3A	11/2/2016	12.5	422.4	0.3	0	1	0.25	1,520	Bacteria	Follow up actions required.
	8/17/2023	18.7	637	0.31	0	1	0.2	10		
4	11/14/2016	11.2	735	0.5	0	0.2	0.25	10	Bacteria	
12	11/1/2016	10.3	221.4	0.1	0.15	0.2	0.75	450	Bacteria	Follow up actions required.
19	11/17/2016	13.8	260	0.2	0	0.05	0.125	<10	Bacteria	
22	11/1/2016								Bacteria	
27	11/4/2016	14.6	335.2	0.2	0.05	0.1	0	<10	Bacteria	
44	12/9/2020	11.3	261	0.13	<0.02	0.12	0.05	10	Bacteria	Follow up actions required. No pollutants of concern but sewage odor and brown color present.
73	10/26/2016	-	-	-	-	-	-	<10	Bacteria	
90	11/9/2016	14.5	372.5	0.2	0	7	1	-	n/a	
91	11/14/2016	11.3	342	0.2	0	0	0.125	-	n/a	
100A	11/11/2016	13.2	900	0.6	0.05	0	0.125	-	n/a	
100C	11/11/2016	14.1	455	0.3	0.1	0	0	-	n/a	
100D	11/11/2016	12.6	410.8	0.3	0.1	0.4	0	-	n/a	
315	12/9/2020	6.8	295	0.15	<0.02	0.05	0.05	10	Bacteria	
338	11/14/2016	15	483	0.3	0	2	0.25	-	n/a	
579	12/9/2020	10.3	406	0.2	<0.02	0.06	0.05	10	Bacteria	
1003A	11/10/2020	20.4	729	0.37	<0.02	7.9	1.11	86600	Bacteria	Follow up actions required.

Outfall ID	Date	Temperature (deg C)	Conductivity (uS/cm)	Salinity (ppt)	Chlorine (mg/L)	Ammonia (mg/L)	Surfactants (mg/L)	E. Coli (MPN/100 ml)	Pollutant of Concern	If required, follow-up actions taken
1162	12/9/2020	8.6	379	0.19	<0.02	0.09	0.05	10	Bacteria	Follow up actions required. No pollutants of concern but sewage odor present.
1177	11/14/2016	14.1	320	0.2	0.2	0.2	0.125	-	n/a	
1551	11/4/2016	14.8	216.8	0.1	0.15	0	0.125	<10	Bacteria	
1596	11/1/2016	37.8	39.6	0	0.3	0.15	2	<10	Bacteria	
1636	10/26/2016	26.9	242.5	0.1	0	0.35	0.25	1,330	Bacteria	Follow up actions required.
1809	11/17/2016	13.3	98.1	0.1	0	2.5	1.5	>24,200	Bacteria	Illicit discharge removed.
	10/16/2023	15.7	333	0.17	0	0	0.25	313		No further follow up actions required.
1993	11/14/2016	17.5	630	0.4	0	0.05	0	122	Bacteria	
2012	11/17/2016	14	370	0.2	0	0	0.125	-	n/a	
2132	11/10/2020	20	1090	0.54	0.04	0.9	0.05	313	Bacteria	
	8/1/2023	18.1	744	0.37	0	0	0.31	10,500		Follow up actions required.
2149	11/3/2016	15.8	928	0.6	0	0.15	0.25	75	Bacteria	
2188A	10/26/2016							529	Bacteria	Follow up actions required.
2242	11/2/2016	41.5	44.1	0	0.25	0	0.125	<10	Bacteria	
2403	11/1/2016	15.4	633	0.4	0.05	0	0.125	933	Bacteria	Follow up actions required.
2551	11/2/2016	15.7	357	0.2	0.1	0.1	0.125	131	Bacteria	
2789	11/7/2016	12.1	568	0.4	0	0	0.125	-	n/a	
2790	11/17/2016	11	320.5	0.2	0	0.125	0.125	-	n/a	
2790a	11/17/2016	9.4	312.1	0.2	0	0.2	0.125	-	n/a	
2852	11/7/2016	12.1	198.9	0.1	0	0	0.125	1,410	Bacteria	Follow up actions required.
2857	11/14/2016	15.8	448	0.3	0	10	3	>24,200	Bacteria	Follow up actions required.
2859	12/9/2020	8.6	942	0.47	0.03	0.05	0.05	10	Bacteria	Follow up actions required. No pollutants of concern but oil sheen and brown color present.
2868	11/3/2016	17.6	361	0.2	0	6.5	0.5	>24,200	Bacteria	Follow up actions required.
	7/27/2023	18.8	867	0.43	0.04	0.75	0.41	5,170		Follow up actions required.

Outfall ID	Date	Temperature (deg C)	Conductivity (uS/cm)	Salinity (ppt)	Chlorine (mg/L)	Ammonia (mg/L)	Surfactants (mg/L)	E. Coli (MPN/100 ml)	Pollutant of Concern	If required, follow-up actions taken
3009	11/11/2016	13.9	166.2	0.1	0.15		0	<10	Bacteria	
3010	11/17/2016	13.7	805	0.5	0.15	0.25	0.125	473	Bacteria	Follow up actions required.
3047	11/14/2016	14.6	695	0.4	0	0	0.125	-	n/a	
3161	11/17/2016	10.5	403	0.3	0	0.1	0.125	-	n/a	
3161a	11/17/2016	10.5	424	0.3	0	0.1	0.12	-	n/a	No bacteria sample obtained but sewage odor present. Perform dry weather screening and sampling in 2021 to address pollutant concerns.
3198A	10/26/2016	14	433	0.3	0.05	0.4	1.25	-	n/a	
3172	11/4/2016	13.3	523	0.3	0	1	0.25	>24,200	Bacteria	Follow up actions required.
	10/16/2023	15.7	277	0.14	0	0	0.16	31		
3194	11/17/2016	14	365.6	0.2	0.05	0.1	3	2,610	Bacteria	Follow up actions required.
3200	11/11/2016	14.6	431.2	0.1	0	0.4	0.125	135	Bacteria	Follow up actions required.
3206	11/11/2016	11.9	314	0.2	0	0	0.125	11,200	Bacteria	Follow up actions required.
3208	11/14/2016	12.7	350	0.2	0.15	0	0	145	Bacteria	
3240	11/1/2016	9.3	133.2	0.1	0	0	0.125	-	Bacteria	No bacteria sample obtained. Perform dry weather screening and sampling in 2021 to address pollutant concerns.
5000	10/26/2016	21.8	126.1	0.1	0.05	0.1	0.125	10	Bacteria	
5008	11/2/2016	57.4	134.7	0	0	0.5	0.125	-	Bacteria	No bacteria sample obtained. Perform dry weather screening and sampling in 2021 to address pollutant concerns.
5009	11/3/2016	17.8	2750	1.7	0	0.2	0.25	-	n/a	
5016	11/7/2016	13.4	544	0.3	0.05	0.05	0.125	-	n/a	
5020	11/8/2016	13.3	466	0.3	0	0	0	-	n/a	
5022	11/17/2016	13.9	602	0.4	0	0	0.125	-	n/a	
5023	11/11/2016	15.1	478	0.3	0	0.2	0.125	-	n/a	

2.2 Wet weather sample and inspection data

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

Outfall / Interconnection ID	Sample Date	Ammonia (mg/L)	Chlorine (mg/L)	Conductivity (uS/cm)	Salinity (ppt)	pH	E.Coli (cfu/100mL)
16	5/5/2017	0.25	0	36	0.02	-	281
17	5/5/2017	0.6	0	51	0.03	-	75
19	5/5/2017	0	0	368	0.24	-	<10
73	5/5/2017	0	0	172	0.1	-	31
75	5/5/2017	0	0	324	0.21	-	10
1701	5/5/2017	0.5	0	78	0.05	-	24200
1780	5/5/2017	0.25	0	1339	0.96	-	4610
1787	5/5/2017	0.5	0	76	0.05	-	5480
1809	5/5/2017	0.6	0	277	0.08	-	5790
3192	5/5/2017	0.125	0	191	0.12	-	8660
3194	5/5/2017	0	0	4.03	0.27	-	121
5000	5/5/2017	0	0	166	0.1	-	<10
5002	5/5/2017	0.25	0	46	0.03	-	4350
5003	5/5/2017	0.25	0	76	0.05	-	2910
3196A	5/5/2017	0.5	0	88	0.5	-	13000
3246D	5/5/2017	0.6	0	198	0.12	-	4610
NEW-1	5/5/2017	0.25	0	136	0.08	-	1780
39	5/25/2017	0	0.05	32	0.01	-	24200
44	5/25/2017	0	0	371	0.18	-	1180
48	5/25/2017	0	0	317	0.15	-	41
50	5/25/2017	0.25	0	8	0	-	<10
51	5/25/2017	0.28	0	22	0.01	-	<10
54	5/25/2017	0.25	0	76	0.03	-	428
55	5/25/2017	0	0	58	0.03	-	323
77	5/25/2017	0	0	-	-	-	10
84	5/25/2017	0	0	105	0.05	-	145
753	5/25/2017	0	0	73	-	-	1310
1551	5/25/2017	0	0	157	-	-	19900
1992	5/25/2017	0	0	203	0.10	-	24200
1993	5/25/2017	0	0	107	0.05	-	24200
1994	5/25/2017	0.25	0	191	0.09	-	2910
2589	5/25/2017	0	0	34	0.29	-	717
2996	5/25/2017	0.25	-	34	-	-	>24,200
3007	5/25/2017	0.25	0	49	-	-	789
3008	5/25/2017	0.25	0	70	-	-	14100
3038	5/25/2017	0	0	0.69	0.58	-	6130
3104	5/25/2017	0	0	107	0.05	-	24200
3172	5/25/2017	0.25	0	187	-	-	24200
5012	5/25/2017	0	0	14	-	-	3260

Outfall / Interconnection ID	Sample Date	Total Coliform (cfu/100mL)	Surfactants (mg/L)	Total Nitrogen (mg/L)	Total Phosphorus (mg/L)	Temperature (deg C)
16	5/5/2017	>24200	0.18	-	-	13.27
17	5/5/2017	>24200	0.75	-	-	12.94
19	5/5/2017	862	0.25	-	-	10.94
73	5/5/2017	1500	0.25	-	-	12.56
75	5/5/2017	1250	0.25	-	-	11.19
1701	5/5/2017	>24200	0.25	-	-	12.81
1780	5/5/2017	>24200	0.125	-	-	9.82
1787	5/5/2017	>24200	0.3	-	-	12.68
1809	5/5/2017	>24200	-	2.95	0.258	11.68
3192	5/5/2017	17300	0.25	-	-	11.92
3194	5/5/2017	6130	0.25	0.63	0.036	11.14
5000	5/5/2017	933	0.25	-	-	12.68
5002	5/5/2017	>24200	0.25	-	-	12.8
5003	5/5/2017	>24200	0.25	-	-	12.01
3196A	5/5/2017	>24200	0.75	-	-	13.22
3246D	5/5/2017	>24200	1	-	-	13.6
NEW-1	5/5/2017	>24200	0.3	-	-	13.46
39	5/25/2017	>24200	0.375	-	-	17.4
44	5/25/2017	>24200	0.125	-	-	12.02
48	5/25/2017	1940	0	-	-	11.18
50	5/25/2017	>24200	0.25	-	-	17.1
51	5/25/2017	959	0.75	-	-	16.9
54	5/25/2017	>24200	0.75	-	-	16.7
55	5/25/2017	>24200	0.75	-	-	16.6
77	5/25/2017	>24200	0.125	-	-	15.58
84	5/25/2017	>24200	0.125	-	-	15.4
753	5/25/2017	3650	0.25	-	-	14.8
1551	5/25/2017	>24200	0.125	-	-	14.63
1992	5/25/2017	>24200	0.375	-	-	16.7
1993	5/25/2017	>24200	0.375	1.08	-	17.2
1994	5/25/2017	>24200	0.625	-	-	16.6
2589	5/25/2017	>24200	0.125	-	-	17.74
2996	5/25/2017	>24200	0.25	-	-	15.87
3007	5/25/2017	>24200	0.625	-	-	16.13
3008	5/25/2017	>24200	0.5	-	-	15.92
3038	5/25/2017	>24200	0.375	-	-	16.73
3104	5/25/2017	>24200	0.375	-	-	17.2
3172	5/25/2017	>24200	0.375	2.36	-	15.18
5012	5/25/2017	>24200	0.5	-	-	16.79

Outfall / Interconnection ID	Sample Date	Ammonia (mg/L)	Chlorine (mg/L)	Conductivity (uS/cm)	Salinity (ppt)	pH	E.Coli (cfu/100mL)
5025	5/25/2017	0	0	276	0.13	-	3870
5	6/28/2018	0.25	0	23	0.0	9.0	583
6	6/28/2018	0.25	0	333	0.2	8.3	>24200
8	6/28/2018	0	0	80	0.0	7.2	4880
10	6/28/2018	0.25	0	207	0.1	8.8	13000
27	6/28/2018	0	0	253	0.13	7.44	937
61	6/28/2018	0.5	0	373	265	8.96	121
1563	6/28/2018	0	0	329	0.17	6.88	1780
1564	6/28/2018	0	0	224	0.11	6.81	3260
1572	6/28/2018	0	0	162	0.08	7.75	17300
2242	6/28/2018	0	0	180	0.09	8.89	8160
2403	6/28/2018	0	0	522	0.26	8.27	7270
2602	6/28/2018	0	0	14	0.01	8.83	4350
100A	6/28/2018	0	0	138	0.06	4.37	19900
100B	6/28/2018	0	0	75	70	8.94	17300
100C	6/28/2018	0	0	83	77	8.51	14100
100D	6/28/2018	0	0	85	79	9.64	24200
xxxx	6/28/2018	0	0	189	172	9.50	>24200
4	4/26/2019	0.24	0.05	494	0.24	7.42	3870
9	4/26/2019	0.15	0.07	118	0.06	7.67	>24200
59	4/26/2019	0.22	0.03	427	0.21	7.40	663
60	4/26/2019	0.22	<0.02	280	0.14	7.14	134
112	4/26/2019	0.22	<0.02	315	0.15	7.00	573
113	4/26/2019	0.13	0.04	241	0.12	7.54	30
116	4/26/2019	0.14	<0.02	78	0.04	8.29	211
293	4/26/2019	0.87	<0.02	585	0.03	7.68	9800
338	4/26/2019	0.18	<0.02	578	0.03	7.83	>24200
1214	4/26/2019	0.22	0.03	778	0.39	6.87	471
1219	4/26/2019	0.78	<0.02	148	0.07	6.88	457
1223	4/26/2019	1.24	<0.02	628	0.31	6.92	520
2783	4/26/2019	0.29	<0.02	788	0.43	8.04	>24200
3010	4/26/2019	0.63	<0.02	377	0.18	7.33	1370
3047	4/26/2019	0.18	<0.02	360	0.02	8.02	1250
3076	4/26/2019	<0.10	<0.02	598	0.03	7.90	2910
3238	4/26/2019	1.36	<0.02	507	0.25	7.25	426
5018	4/26/2019	0.09	<0.02	409	0.20	7.07	10
5021	4/26/2019	0.11	<0.02	131	0.01	8.12	10
10005	4/26/2019	0.21	<0.02	1772	0.09	8.50	1600
3198A	4/26/2019	0.32	<0.02	540	0.26	6.46	>24200
12	6/13/2019	0.32	< 0.02	81	0.04	7.38	6130
13	6/13/2019	0.38	< 0.02	48	0.03	6.66	6490
23	6/13/2019	0.1	< 0.02	250	0.09	6.89	960
89	6/13/2019	0.14	0.08	37	0.02	7.94	>24200

Outfall / Interconnection ID	Sample Date	Total Coliform (cfu/100mL)	Surfactants (mg/L)	Total Nitrogen (mg/L)	Total Phosphorus (mg/L)	Temperature (deg C)
5025	5/25/2017	>24200	0	-	-	12.49
5	6/28/2018	>24200	0.25	0.43	0.050	23.4
6	6/28/2018	>24200	1	2.18	0.483	21.5
8	6/28/2018	>24200	0	0.52	0.089	22.8
10	6/28/2018	>24200	0	0.97	0.221	21.9
27	6/28/2018	>24200	0	1.19	0.037	20.9
61	6/28/2018	>24200	0.75	8.25	15.1	23.7
1563	6/28/2018	>24200	0	3.81	0.069	23.0
1564	6/28/2018	>24200	0	5.2	0.095	22.1
1572	6/28/2018	>24200	0	2.63	0.143	22.1
2242	6/28/2018	>24200	0	1.71	0.144	22.0
2403	6/28/2018	>24200	0	2.11	0.059	21.3
2602	6/28/2018	>24200	0	0.53	0.120	21.4
100A	6/28/2018	>24200	0	0.97	0.175	22.1
100B	6/28/2018	>24200	0	1.01	0.190	21.3
100C	6/28/2018	>24200	0.25	2.42	0.010	21.4
100D	6/28/2018	>24200	0	1.12	0.162	21.3
xxxx	6/28/2018	>24200	0	1.3	0.115	20.5
4	4/26/2019	>24200	0.06	-	-	12.5
9	4/26/2019	>24200	<0.05	-	-	11.3
59	4/26/2019	>24200	0.13	-	-	12.6
60	4/26/2019	>24200	0.28	-	-	12.2
112	4/26/2019	>24200	0.20	-	-	13.3
113	4/26/2019	>24200	0.18	-	-	12.9
116	4/26/2019	17300	0.16	-	-	12.4
293	4/26/2019	>24200	0.11	-	-	13.9
338	4/26/2019	>24200	<0.05	-	-	13.7
1214	4/26/2019	9800	0.15	-	-	13.4
1219	4/26/2019	>24200	0.16	-	-	13.8
1223	4/26/2019	17300	0.55	-	-	12.5
2783	4/26/2019	>24200	0.16	3.77	0.108	12.1
3010	4/26/2019	>24200	<0.05	-	-	13.0
3047	4/26/2019	>24200	0.13	-	-	13.5
3076	4/26/2019	>24200	0.09	-	-	13.5
3238	4/26/2019	>24200	0.26	-	-	12.8
5018	4/26/2019	>24200	<0.05	-	-	11.2
5021	4/26/2019	10	<0.05	-	-	13.1
10005	4/26/2019	>24200	0.21	-	-	14.1
3198A	4/26/2019	>24200	0.11	-	-	10.9
12	6/13/2019	>24,200	0.17	-	-	17.1
13	6/13/2019	>24,200	0.52	-	-	16.6
23	6/13/2019	>24,200	0.06	-	-	16.7
89	6/13/2019	>24,200	0.25	-	-	15.2

Outfall / Interconnection ID	Sample Date	Ammonia (mg/L)	Chlorine (mg/L)	Conductivity (uS/cm)	Salinity (ppt)	pH	E.Coli (cfu/100mL)
90	6/13/2019	0.19	< 0.02	1148	0.57	7.70	74
91	6/13/2019	0.24	0.06	384	0.19	7.45	6130
92	6/13/2019	0.3	< 0.02	48	0.02	6.98	1010
106	6/13/2019	0.15	< 0.02	34	0.02	7.17	465
108	6/13/2019	0.26	< 0.02	996	0.45	8.04	2720
109	6/13/2019	0.6	< 0.02	645	0.42	8.30	2610
110	6/13/2019	0.44	< 0.02	834	0.40	7.97	909
119	6/13/2019	0.14	0.02	500	0.25	7.47	473
121	6/13/2019	0.31	< 0.02	764	0.43	8.36	161
126	6/13/2019	1.29	< 0.02	1656	0.84	7.23	275
128	6/13/2019	0.62	< 0.02	1465	0.73	7.39	75
234	6/13/2019	0.58	< 0.02	461	0.23	7.70	5170
2789	6/13/2019	< 0.05	0.05	1322	0.66	7.67	3260
2868	6/13/2019	0.54	0.03	771	0.39	6.92	8160
3001	6/13/2019	0.2	< 0.02	96	0.05	7.50	1270
3002	6/13/2019	0.27	< 0.02	92	0.05	6.04	565
3005	6/13/2019	0.05	< 0.02	-	-	-	231
3054	6/13/2019	0.41	< 0.02	106	105	6.85	2100
3200	6/13/2019	0.18	0.03	299	0.13	6.81	1290
3202	6/13/2019	0.1	< 0.02	150	0.08	7.51	1550
3204	6/13/2019	0.27	< 0.02	153	0.11	7.40	12000
3206	6/13/2019	0.1	< 0.02	-	-	-	3450
5026	6/13/2019	0.57	< 0.02	271	0.15	7.43	594
2012	3/24/2022	0.08	<0.02	3430	1.78	8.3	2600
5011	3/24/2022	0.08	0.03	820	0.41	7.76	120
46	3/24/2022	<0.10	<0.02	405	0.2	7.7	2380
2852	3/24/2022	0.07	<0.02	525	0.27	7.54	441
579	3/24/2022	<0.05	<0.02	748	0.38	7.48	<10
115	3/24/2022	<0.05	0.04	306	0.15	7.62	97
1177	3/24/2022	0.08	<0.02	515	0.26	7.28	15500
88	3/24/2022	0.38	0.05	581	0.29	7.47	292
2792	3/24/2022	0.21	<0.02	744	0.38	7.03	336
264	3/24/2022	0.12	<0.02	268	0.13	7.29	249
3246c	3/24/2022	0.19	<0.02	148	0.10	7.59	121
3190	3/24/2022	0.10	<0.02	47	0.03	7.93	1220
3190A	3/24/2022	0.11	<0.02	71	0.05	7.623	72
3A	3/24/2022	0.31	<0.02	765	0.37	7.98	<10
3	3/24/2022	0.34	<0.02	669	0.33	7.73	<10
3188	3/24/2022	0.33	<0.02	84	0.06	7.26	1570
2133	3/24/2022	<0.25	<0.02	175	0.08	7.59	480
32	3/24/2022	<0.10	<0.02	4133	2.18	7.18	120
70	3/24/2022	0.12	<0.02	286	0.21	7.96	243
1003A	3/24/2022	<0.10	<0.02	803	0.39	7.95	2280

Outfall / Interconnection ID	Sample Date	Total Coliform (cfu/100mL)	Surfactants (mg/L)	Total Nitrogen (mg/L)	Total Phosphorus (mg/L)	Temperature (deg C)
90	6/13/2019	>24,200	0.09	-	-	15.7
91	6/13/2019	>24,200	0.08	-	-	17.1
92	6/13/2019	>24,200	0.26	-	-	17.1
106	6/13/2019	>24,200	0.16	-	-	17.7
108	6/13/2019	>24,200	0.17	-	-	17.5
109	6/13/2019	>24,200	0.27	-	-	17.5
110	6/13/2019	>24,200	0.16	-	-	18.1
119	6/13/2019	>24,200	0.21	-	-	14.3
121	6/13/2019	>24,200	0.4	-	-	16.3
126	6/13/2019	>24,200	0.08	-	-	19.3
128	6/13/2019	17300	< 0.05	-	-	19.2
234	6/13/2019	>24,200	0.16	-	-	16.6
2789	6/13/2019	>24,200	< 0.05	-	-	15.7
2868	6/13/2019	>24,200	0.23	-	-	18.0
3001	6/13/2019	>24,200	0.2	-	-	16.5
3002	6/13/2019	>24,200	0.19	-	-	16.5
3005	6/13/2019	>24,200	0.08	-	-	-
3054	6/13/2019	>24,200	0.31	-	-	16.5
3200	6/13/2019	>24,200	0.07	-	-	16.8
3202	6/13/2019	>24,200	< 0.05	-	-	16.8
2012	3/24/2022	>24,200	0.08	-	-	9.9
5011	3/24/2022	>24,200	0.07	-	-	11.5
46	3/24/2022	>24,200	0.16	-	-	11.7
2852	3/24/2022	>24,200	0.10	-	-	11.8
579	3/24/2022	4110	0.07	-	-	12
115	3/24/2022	2380	<0.05	-	-	9.8
1177	3/24/2022	24200	0.09	-	-	12.4
88	3/24/2022	>24,200	0.37	-	-	12.2
2792	3/24/2022	5170	0.07	-	-	12.2
264	3/24/2022	>24,200	0.10	-	-	12.1
3246c	3/24/2022	24200	0.24	-	-	10.1
3190	3/24/2022	19900	0.14	-	-	6.8
3190A	3/24/2022	>24,200	0.19	-	-	6.2
3A	3/24/2022	2910	<0.05	-	-	7
3	3/24/2022	1510	<0.05	-	-	7
3188	3/24/2022	>24,200	0.44	-	-	6.7
2133	3/24/2022	>24,200	0.19	-	-	4.9
32	3/24/2022	>24,200	0.33	-	-	6.2
70	3/24/2022	>24,200	0.14	-	-	7.5
1003A	3/24/2022	>24,200	0.2	-	-	5.5

Outfall / Interconnection ID	Sample Date	Ammonia (mg/L)	Chlorine (mg/L)	Conductivity (uS/cm)	Salinity (ppt)	pH	E.Coli (cfu/100mL)
28	3/24/2022	0.13	<0.02	414	0.3	7.11	341
79	3/24/2022	<0.05	<0.02	356	0.17	8	122
1868	3/24/2022	0.11	<0.02	476	0.23	7.78	3080
1868B	3/24/2022	<0.10	<0.02	640	0.31	7.69	3650
1868A	3/24/2022	0.10	<0.02	468	0.23	7.73	>24200
1983	3/24/2022	0.13	<0.02	590	0.29	7.55	1940
25	3/24/2022	0.34	0.04	315	0.23	7.06	292
7	3/24/2022	<0.05	<0.02	791	0.39	7.65	420

Outfall / Interconnection ID	Sample Date	Total Coliform (cfu/100mL)	Surfactants (mg/L)	Total Nitrogen (mg/L)	Total Phosphorus (mg/L)	Temperature (deg C)
28	3/24/2022	>24,200	0.37	-	-	7.8
79	3/24/2022	>24,200	0.13	-	-	5.8
1868	3/24/2022	>24,200	0.29	-	-	5.6
1868B	3/24/2022	>24,200	0.22	-	-	5.3
1868A	3/24/2022	>24,200	0.19	-	-	6
1983	3/24/2022	>24,200	0.14	-	-	6.5
25	3/24/2022	>24,200	0.22	-	-	7.7
7	3/24/2022	1110	<0.05	-	-	9.3

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

3.1 System Vulnerability Factor Summary

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

Outfall ID	Receiving Water	System Vulnerability Factors
1	Willow Brook	10
2	Willow Brook	10
3	Willow Brook	10
3A		
4	Willow Brook	10
5	Willow Brook	10
6	Willow Brook	10
7	Willow Brook	10
8	Willow Brook	10
9	Willow Brook	10
10	Willow Brook	10
11	Willow Brook	10
12	Willow Brook	10
13	Willow Brook	10
14	Willow Brook	10
16	Willow Brook	10
17	Willow Brook	10
18	Willow Brook	10
19	Willow Brook	10
20	Willow Brook	10
21	Willow Brook	10
22	Willow Brook	10
23	Willow Brook	10
25	Willow Brook	10
26	Willow Brook	10
27	Willow Brook	10
28	Willow Brook	10
29	Willow Brook	10

Outfall ID	Receiving Water	System Vulnerability Factors
30	Willow Brook	10
31	Bass Brook	10
32	Willow Brook	1, 10
33	Willow Brook	10
34	Webster Brook	10
35	Webster Brook	10
36	Webster Brook	10
37	Webster Brook	10
38	Webster Brook	10
39	Webster Brook	10
40	Piper Brook	10
42	Piper Brook	10
43	Piper Brook	10
44	Piper Brook	10
45	Piper Brook	10
46	Piper Brook	1, 2, 10
47	Piper Brook	10
48	Piper Brook	10
49	Piper Brook	10
50	Webster Brook	10
51	Webster Brook	10
52	Webster Brook	10
53	Webster Brook	10
54	Webster Brook	10
54A	Webster Brook	10
55	Webster Brook	10
56	Webster Brook	10
57	Webster Brook	10

Outfall ID	Receiving Water	System Vulnerability Factors
58	Webster Brook	10
59	Bass Brook	10
60	Bass Brook	10
61	Willow Brook	10
62	Willow Brook	10
63	Willow Brook	10
64	Willow Brook	10
65	Willow Brook	10
66	Willow Brook	10
67	Willow Brook	10
68	Willow Brook	10
69	Willow Brook	10
70	Willow Brook	10
71	Willow Brook	10
72	Willow Brook	10
73	Willow Brook	10
73A	Willow Brook	10
74	Willow Brook	10
75	Willow Brook	10
77	Quinnipiac River	1, 10
78	Webster Brook	10
79	Webster Brook	10
80	Webster Brook	10
81	Webster Brook	10
82	Webster Brook	10
83	Bass Brook	10
84	Bass Brook	10
85	Bass Brook	10
86	Bass Brook	10
87	Bass Brook	10
88	Bass Brook	10
89	Bass Brook	10
90	Bass Brook	10
91	Bass Brook	10

Outfall ID	Receiving Water	System Vulnerability Factors
92	Bass Brook	10
93	Bass Brook	10
94	Bass Brook	10
95	Bass Brook	10
96	Bass Brook	10
97	Bass Brook	10
98	Bass Brook	10
99	Bass Brook	10
100A	Bass Brook	10
100B	Bass Brook	10
100C	Bass Brook	10
100D	Bass Brook	10
101	Bass Brook	10
102	Bass Brook	10
103	Bass Brook	10
104	Bass Brook	10
105	Bass Brook	10
106		
108	Bass Brook	10
109	Bass Brook	10
110	Bass Brook	10
111	Bass Brook	10
112	Bass Brook	10
113	Bass Brook	10
114	Quinnipiac River	10
115	Bass Brook	10
116	Willow Brook	10
117	Bass Brook	10
118	Bass Brook	10
119	Bass Brook	10
120	Bass Brook	10
121	Bass Brook	10
122	Bass Brook	10
123	Bass Brook	10

Outfall ID	Receiving Water	System Vulnerability Factors
124	Bass Brook	10
125	Bass Brook	10
126	Bass Brook	10
127	Bass Brook	10
128	Bass Brook	10
234	Bass Brook	10
264	Bass Brook	1, 10
290	Bass Brook	10
293	Bass Brook	10
297	Bass Brook	10
315	Bass Brook	10
338	Bass Brook	1, 2, 10
437	Bass Brook	10
579	Bass Brook	
734	Quinnipiac River	10
742	Quinnipiac River	10
743	Quinnipiac River	2, 10
753	Quinnipiac River	10
962	Bass Brook	10
1003	Webster Brook	10
1003A		
1077	Piper Brook	10
1079	Piper Brook	10
1162	Piper Brook	10
1177	Bass Brook	10
1214	Bass Brook	10
1219	Bass Brook	10
1223	Bass Brook	10
1238	Bass Brook	
1551	Willow Brook	10
1563	Willow Brook	10
1564	Willow Brook	10
1572	Willow Brook	10
1596	Willow Brook	10

Outfall ID	Receiving Water	System Vulnerability Factors
1636	Willow Brook	
1701	Willow Brook	10
1780	Willow Brook	10
1787	Willow Brook	10
1809	Willow Brook	10
1868	Webster Brook	10
1868A	Webster Brook	10
1868B	Webster Brook	10
1983	Webster Brook	10
1992	Webster Brook	10
1993	Webster Brook	1, 10
1994	Webster Brook	10
2012	Bass Brook	1, 10
2132	Willow Brook	1, 10
2133	Willow Brook	10
2149	Webster Brook	10
2188	Willow Brook	10
2188A	Willow Brook	10
2242	Willow Brook	10
2403	Willow Brook	10
2467	Willow Brook	10
2551	Webster Brook	10
2575	Willow Brook	10
2578	Willow Brook	10
2589	Willow Brook	10
2592	Willow Brook	10
2602	Willow Brook	10
2728	Piper Brook	10
2783	Batterson Park Pond	10
2786	Bass Brook	10
2789	Bass Brook	10
2790	Bass Brook	10
2790A	Bass Brook	10

Outfall ID	Receiving Water	System Vulnerability Factors
2792	Bass Brook	10
2793	Bass Brook	10
2817	Bass Brook	10
2837	Bass Brook	10
2852	Piper Brook	1, 10
2857	Piper Brook	10
2859	Piper Brook	10
2868	Piper Brook	1, 2, 4, 10
2989	Quinnipiac River	10
2996	Quinnipiac River	2, 10
3001	Bass Brook	10
3002	Bass Brook	10
3003	Bass Brook	10
3004	Bass Brook	10
3005	Willow Brook	10
3006	Willow Brook	10
3007	Willow Brook	10
3008	Willow Brook	10
3009	Willow Brook	10
3038	Piper Brook	10
3047	Bass Brook	10
3052	Quinnipiac River	10
3054	Bass Brook	1, 10
3076	Bass Brook	10
3079	Bass Brook	10
3104	Webster Brook	1, 10
3151	Bass Brook	10
3153	Bass Brook	10
3156	Bass Brook	10
3156A	Bass Brook	10
3156B	Bass Brook	10
3158	Bass Brook	10
3158A	Bass Brook	10
3160	Bass Brook	10

Outfall ID	Receiving Water	System Vulnerability Factors
3161	Bass Brook	10
3164	Bass Brook	10
3166	Bass Brook	10
3172	Quinnipiac River	10
3176	Quinnipiac River	1, 10
3182	Willow Brook	10
3185	Willow Brook	10
3186	Willow Brook	10
3188	Willow Brook	10
3190	Willow Brook	
3190A	Willow Brook	10
3192	Willow Brook	
3192A	Willow Brook	
3194	Willow Brook	10
3194A	Willow Brook	10
3196	Willow Brook	10
3196A	Willow Brook	10
3198	Willow Brook	10
3198A	Willow Brook	10
3200	Willow Brook	10
3202	Willow Brook	10
3204	Willow Brook	10
3206	Willow Brook	10
3208	Willow Brook	10
3210	Bass Brook	10
3212	Bass Brook	10
3214	Bass Brook	10
3218	Bass Brook	
3220	Bass Brook	10
3224	Bass Brook	10
3226	Bass Brook	10
3228	Webster Brook	10
3230	Webster Brook	10
3234	Willow Brook	10

Outfall ID	Receiving Water	System Vulnerability Factors
3236	Willow Brook	10
3238	Willow Brook	10
3240	Willow Brook	10
3242	Willow Brook	10
3242A	Willow Brook	10
3242B	Willow Brook	10
3244	Willow Brook	10
3246	Willow Brook	
3246A	Willow Brook	10
3246B	Willow Brook	10
3246C	Willow Brook	10
3246D	Willow Brook	10
3246E	Willow Brook	10
5000	Willow Brook	10
5001	Willow Brook	10
5002	Willow Brook	10
5003	Willow Brook	10
5004	Willow Brook	10
5005	Willow Brook	10
5006	Willow Brook	10

Outfall ID	Receiving Water	System Vulnerability Factors
5007	Webster Brook	10
5008	Webster Brook	10
5009	Piper Brook	10
5010	Piper Brook	10
5011	Piper Brook	10
5012	Quinnipiac River	10
5013	Piper Brook	10
5014	Piper Brook	10
5016	Bass Brook	10
5017	Bass Brook	10
5018	Bass Brook	10
5019	Bass Brook	10
5020	Bass Brook	10
5021	Bass Brook	10
5022	Bass Brook	10
5023	Bass Brook	10
5024	Bass Brook	10
5025	Piper Brook	10
5026	Willow Brook	10
10005	Bass Brook	10

Where SVFs are:

1. History of SSOs, including, but not limited to, those resulting from wet weather, high water table, or fat/oil/grease blockages.
2. Sewer pump/lift stations, siphons, or known sanitary sewer restrictions where power/equipment failures or blockages could readily result in SSOs.
3. Inadequate sanitary sewer level of service (LOS) resulting in regular surcharging, customer back-ups, or frequent customer complaints.
4. Common or twin-invert manholes serving storm and sanitary sewer alignments.
5. Common trench construction serving both storm and sanitary sewer alignments.
6. Crossings of storm and sanitary sewer alignments.
7. Sanitary sewer alignments known or suspected to have been constructed with an underdrain system;
8. Sanitary sewer infrastructure defects such as leaking service laterals, cracked, broken, or offset sanitary infrastructure, directly piped connections between storm drain and sanitary sewer infrastructure, or other vulnerability factors identified through Inflow/Infiltration Analyses, Sanitary Sewer Evaluation Surveys, or other infrastructure investigations.
9. Areas formerly served by combined sewer systems.
10. Any sanitary sewer and storm drain infrastructure greater than 40 years old in medium and densely developed areas.

11. Widespread code-required septic system upgrades required at property transfers (indicative of inadequate soils, water table separation, or other physical constraints of the area rather 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 Key junction manhole dry weather screening and sampling data

Key Junction Manhole ID	Screening / Sample date	Visual/ olfactory evidence of illicit discharge	Ammonia	Chlorine	Surfactants
3A IDDE Sampling					
3A	8/17/2023	Scum present / None	0	1	0.2
2132 IDDE Sampling					
2132	8/1/2023	Clear / None	0	0	0.31
2128	8/1/2023	Clear, Sticks / None	0.04	0.5	0.28
2077	8/1/2023	Clear / None	0	0.5	0.03
2075	8/1/2023	Clear / None	0.04	0	0.23
2085	8/1/2023	Clear, Sediment / None	0.6	0	0.35
2086	8/1/2023	N/A & N/A	N/A	N/A	N/A
2072	8/1/2023	N/A & N/A	N/A	N/A	N/A
2051	8/1/2023	Clear / None	0.04	0	0.1
2025 (09:00)	8/1/2023	Clear / Sewage odor	0	0.75	0.21
2025 (03:00)	8/1/2023	Clear / None	0.04	0	0.1
2026 (03:00)	8/1/2023	Clear / None	0	0.75	0.18
2026 (09:00)	8/1/2023	Clear / None	0	0	0.05
2027 (12:00)	8/2/2023	Clear / None	0	0	0.14
2027 (09:00)	8/2/2023	Clear / Sewage odor	0	2	0.44
2061 (12:00)	8/2/2023	Clear / None	0	0	0.12
2061 (09:00)	8/2/2023	Clear / None	0	0	0.17
2059	8/2/2023	N/A & N/A some moisture in bottom, but no flow	N/A	N/A	N/A
2029	8/2/2023	N/A & N/A	N/A	N/A	N/A
2035	8/2/2023	N/A & N/A	N/A	N/A	N/A
2031	8/2/2023	N/A & N/A	N/A	N/A	N/A
2048	8/2/2023	N/A & N/A	N/A	N/A	N/A
2068	8/2/2023	N/A & N/A	N/A	N/A	N/A
2033	8/17/2023	Clear, Floatables "other" / None	0.08	0	0.31
2067	8/17/2023	Clear / None	0.04	0	0.11
2070	8/17/2023	Clear / None	0.04	3	0.14
2087	8/17/2023	Clear / None	0.04	0	0.07
2116	8/17/2023	Cloudy & Floatables "other" / None	0.24	0	0.28
2118	8/17/2023	N/A & N/A	N/A	N/A	N/A
2117	8/17/2023	N/A & N/A	N/A	N/A	N/A
2017	8/17/2023	N/A & N/A	N/A	N/A	N/A

Key Junction Manhole ID	Screening / Sample date	Visual/ olfactory evidence of illicit discharge	Ammonia	Chlorine	Surfactants
2857 IDDE Sampling					
2857	8/17/2023	unable to access, fenced off	N/A	N/A	N/A
2858	8/22/2023	Clear / None	0	2	0.17
1084 (09:00)	8/22/2023	Clear / None	0	0.25	0.25
1084 (12:00)	8/22/2023	Brown & Cloudy / None	0.04	0	0.09
1831	8/22/2023	Brown, Opaque & Sediment / None	0	0.75	0.39
1830	8/22/2023	N/A & N/A	N/A	N/A	N/A
1169	8/22/2023	N/A & N/A	N/A	N/A	N/A
2840	8/22/2023	N/A & N/A	N/A	N/A	N/A
1173	8/22/2023	Unable to see inlet pipe, very large detention container with water, may be flowing	N/A	N/A	N/A
1172	8/22/2023	N/A & N/A	N/A	N/A	N/A
2886	8/22/2023	Clear / None	0	0	0.1
1171	8/29/2023	N/A & N/A	N/A	N/A	N/A
2886	8/29/2023	Clear / None / Duplicate to confirm results from previous testing	0	0	0.07
2888	8/29/2023	Clear & Sediment / None	0	0	0.07
1132	8/29/2023	Clear / None	0.16	0	0
1130	8/29/2023	Clear / None / High Cl in 1132 & 1130 likely coming from splash pad in park nearby	0.16	0	0.13
1127	8/29/2023	N/A & N/A	N/A	N/A	N/A
1119	8/29/2023	N/A & N/A	N/A	N/A	N/A
2775	8/29/2023	Clear / None	0	0.25	0.17
2777	8/29/2023	Clear / None	0	0	0.08
2657	8/29/2023	Clear / None	0	0	0.11
2868 IDDE Sampling					
2868	7/27/2023	Cloudy / None / Outfall partially submerged, sample taken slightly downstream at moving water	0.04	0.75	0.41
2860 (03:00)	7/27/2023	Cloudy, Iron Staining, Scum / None / likely sewage benchmarks met	0.56	0.5	0.43
2860 (12:00)	7/27/2023	Clear / None	0.08	2	1.34
2862	7/27/2023	Cloudy, Brown, Scum / None / Likely sewage input benchmarks met	0.04	3	0.27
1925	7/27/2023	N/A & N/A	N/A	N/A	N/A
1929	7/27/2023	N/A & N/A, Submerged	N/A	N/A	N/A
2882	7/27/2023	N/A & N/A	N/A	N/A	N/A
1921	7/27/2023	Cloudy / Sewage Odor	0.08	1.5	0.8
1917 (12:00)	7/27/2023	Cloudy / None / Benchmarks not hit	0.12	0.25	0.1
1917 (03:00)	8/10/2023	Clear / None	0.32	2	0.15
1919	8/10/2023	N/A & N/A, Stagnant	N/A	N/A	N/A
1918	8/10/2023	N/A & N/A	N/A	N/A	N/A
1931	8/10/2023	Clear / None	0	0.5	0.06

Key Junction Manhole ID	Screening / Sample date	Visual/ olfactory evidence of illicit discharge	Ammonia	Chlorine	Surfactants
2869	8/10/2023	N/A & N/A	N/A	N/A	N/A
2872	8/10/2023	N/A & N/A	N/A	N/A	N/A
2876	8/10/2023	N/A & N/A, Solids in inlet pipe, looks like kitty litter, stagnant water	N/A	N/A	N/A
1924	8/10/2023	N/A & N/A	N/A	N/A	N/A
1933	8/10/2023	Clear / None	0	1.5	0.2
1935	8/10/2023	N/A & N/A	N/A	N/A	N/A
1937 (12:00)	8/10/2023	Clear / None	0	2	0.18
1937 (03:00)	8/10/2023	Cloudy, Yellow, Soap Suds / None	0	1	0.18
1944	8/10/2023	N/A & N/A	N/A	N/A	N/A
1938	8/10/2023	N/A & N/A	N/A	N/A	N/A
1940	8/10/2023	Clear / None	0.08	3	0.03
1946 (12:00)	8/10/2023	Clear / Sewage Odor	0.04	1.5	0.21
1946 (03:00)	8/10/2023	Cloudy, Brown, Sediment / Sewage Odor	0	>4	0.69
1952 (09:00)	8/10/2023	Clear / None	0.04	>4	0.77
1952 (03:00)	8/10/2023	Clear / None	0.4	0	0.15
1964	8/10/2023	Cloudy, Brown, Toilet Paper / Sewage Odor, likely sewage	0.08	>4	0.78
1958	8/10/2023	N/A & N/A	N/A	N/A	N/A
1966	8/22/2023	N/A & N/A Slight Sewage Odor	N/A	N/A	N/A
IDDE Invest. OF-338					
OF-338	12/21/2021	None / None	0	0.75	0.53
MH-336	12/21/2021	N/A & N/A	N/A	N/A	N/A
MH-518	12/21/2021	N/A & N/A, Trickle of flow too minor to fill collection cup	N/A	N/A	N/A
MH-385	12/21/2021	None / None	0.04	0.75	0.66
MH-375 (03:00)	12/21/2021	None / None	0	1	0.86
MH-383 (12:00)	12/21/2021	None / None	0	1.5	0.61
MH-337	12/21/2021	N/A & N/A, Paved over	N/A	N/A	N/A
MH-394 (08:00)	12/21/2021	Substantial Flow / None	0	0	0.4
MH-394 (12:00)	12/21/2021	Substantial Flow / None	0	0	0.48
MH-394 (03:00)	12/21/2021	Substantial Flow / None	0	0	0.37
MH-391	12/21/2021	None / Strong natural gas	0	0.5	0.35
MH-386	12/21/2021	None / None / Flow increases between MH-386 & MH 387	0	0.5	0
MH-389	12/21/2021	N/A & N/A	N/A	N/A	N/A
MH-373 (12:00)	12/21/2021	None / None	0	0.75	0
MH-373 (3:00)	12/21/2021	None / None	0	0	0
MH-380	12/21/2021	N/A & N/A	N/A	N/A	N/A
MH-379	12/21/2021	None / None	0	>4	0
IDDE of 1003A					
1003A (06:00)	8/2/2023		0	0	0.14

Key Junction Manhole ID	Screening / Sample date	Visual/ olfactory evidence of illicit discharge	Ammonia	Chlorine	Surfactants
2044	8/2/2023		0	0	0.21
2045	8/2/2023		0	0	0.31
2049 (09:00)	8/2/2023		0	0.25	0.38
2049 (12:00)	8/2/2023		0	0	0.25
2055 (09:00)	8/2/2023		0	0	0.33
2055 (12:00)	8/2/2023		0	0	0.36
2058	8/2/2023		0	0	0.27
2061 (11:00)	8/2/2023		0	0	0.08
2061 (01:00)	8/2/2023		0	0	0.09
2061 (02:00)	8/2/2023		0	0	0.08
2062	8/2/2023		0	0	0.08
2063	8/2/2023		0	0	blank
2065 (11:00)	8/2/2023		0	0	0.09
2065 (01:00)	8/2/2023		0	0	0.11
2096	8/2/2023		0	0	0.1
2433	8/2/2023		0	0	0.4
2434	8/2/2023		0.1	0	0.32
2436	8/2/2023		0	0	0.22
2438	8/2/2023		0	0	0.12
2470	8/2/2023		0	0	0.14
2473 (12:00)	8/2/2023		0	0	0.15
2473 (03:00)	8/2/2023		0	0	0.66
3104	8/2/2023		0	0	0.38
3106	8/2/2023		0	0	0.18
CB-440 (09:00)	8/2/2023		0	0	0.19
CB-440 (12:00)	8/2/2023		0	0	0.27
CB-818	8/2/2023		0	0	0.32
IDDE of 1809					
1809	8/2/2023		N/A	N/A	N/A
1754	8/2/2023		0	0	0.11
1755	8/2/2023		0	0	0.23
1757	8/2/2023		0	0	0.15
1758	8/2/2023		0	0	0.12
1761	8/2/2023		0	0	0.3
1762	8/2/2023		0	0	0.01
1764 (10:00)	8/2/2023		0	0	0.1
1764 (12:00)	8/2/2023		0	0	0.09
1769	8/2/2023		0	0	0.01

3.3 Wet weather investigation outfall sampling data

Outfall ID	Sample date	Ammonia	Chlorine	Surfactants

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

The City has completed detailed catchment and manhole investigations for five catchments. Illicit discharge investigations are briefly outlined below.

Discharge location	Source location	Discharge description	Method of discovery	Date of discovery	Date of elimination	Mitigation or enforcement action	Estimated volume of flow removed
Outfall 3A	House(s); unknown	High ammonia, surfactants, and bacteria.	Manhole investigations	11/2/16	TBD	Need to complete CCTV investigations	Unknown
Outfall 90, between Sefton Drive and Hillcrest Ave	House	Likely illicit connection that includes a washing machine. There was a detergent smell and high exceedances for surfactants.	Manhole investigations	11/9/16; 5/13/22	TBD	Need to confirm illicit discharge; removal likely	Unknown
Outfall 338	House(s); unknown	Various exceedances of ammonia and surfactants throughout the network.	Manhole investigations	11/14/16; 12/21/21	TBD	Follow-up investigations recommended between MH-379 & MH-380; MH-386 & MH-387; MH-388 & MH-389; MH-389 & MH-390; MH; as well as in MH-376 and MH-394	Unknown
Outfall 1003A	House(s)	Very high ammonia and bacteria.	Manhole investigations	11/10/20	TBD	CCTV work completed; need to complete in-house dye testing at 52 properties on Louise Court, Farm Court, Bingham Street, and Devans Street. There are an additional 6 dye tests recommended on South St and Lowell St.	Unknown
Outfall 1636	House	Steady flow during inspection from a private connection into catch basin in front of 10 Pondview Road. Surfactant exceedances along Streamside Lane.	Manhole investigations	12/21/21	TBD	Need to confirm illicit discharge; removal likely	Unknown

Discharge location	Source location	Discharge description	Method of discovery	Date of discovery	Date of elimination	Mitigation or enforcement action	Estimated volume of flow removed
Outfall 1809	House	Private connection from property at 33 York Road with flow.	Manhole investigations	11/16/16; 12/21/21	2023	CCTV work completed; need to complete in-house dye testing	Unknown
	House	Cross connection between storm and sanitary laterals from property at 80 Kent Road with flow.	Manhole investigations	5/9/18; 8/1/23 10/16/23	2023	Cross-connection with 80 Kent Road removed. Follow-up investigations at outfall 1809 indicate that no likely illicit discharges remain.	
Outfall 2132	House(s); unknown	Slight exceedances of chlorine, ammonia, and bacteria.	Manhole investigations	11/10/20	TBD	Need to complete CCTV investigations	Unknown
Outfall 2857	House(s); unknown	Very high ammonia and bacteria.	Manhole investigations	11/14/16	TBD	Need to complete CCTV investigations	Unknown
Outfall 2868	House(s); unknown	High ammonia and bacteria.	Manhole investigations	11/3/16	TBD	Need to complete CCTV investigations	Unknown
Outfall 3172, approximately located at 136 Beechwood Drive	House	Likely illicit connection between Stanwood Circle and Torkom Dr.	Manhole investigations	11/4/16; 5/13/22 10/16/23	TBD	Need to confirm illicit discharge; removal likely Follow-up investigations at outfall 3172 indicate that no likely illicit discharges remain.	Unknown

Part IV: Certification

"I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED IN THIS DOCUMENT AND ALL ATTACHMENTS THERETO, AND I CERTIFY THAT, BASED ON REASONABLE INVESTIGATION, INCLUDING MY INQUIRY OF THOSE INDIVIDUALS RESPONSIBLE FOR OBTAINING THE INFORMATION, THE SUBMITTED INFORMATION IS TRUE, ACCURATE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF. I UNDERSTAND THAT A FALSE STATEMENT MADE IN THIS DOCUMENT OR ITS ATTACHMENTS MAY BE PUNISHABLE AS A CRIMINAL OFFENSE, IN ACCORDANCE WITH SECTION 22A-6 OF THE CONNECTICUT GENERAL STATUTES, PURSUANT TO SECTION 53A-157B OF THE CONNECTICUT GENERAL STATUTES, AND IN ACCORDANCE WITH ANY OTHER APPLICABLE STATUTE."

CHIEF ELECTED OFFICIAL OR PRINCIPAL EXECUTIVE OFFICER	Document Prepared by
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SIGNATURE / DATE:	Signature / Date: