# MS4 General Permit **(DRAFT)**
# Town of Ledyard 2021 Annual Report
New MS4 Permittee
Permit Number GSM 000099
January 1, 2021 – December 31, 2021
Primary MS4 Contact: Mr. Steve Masalin, DPW Director, (860) 464-3238 email: pwd@ledyardct.org

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This report documents the Town of Ledyard's efforts to comply with the conditions of the MS4 General Permit to the maximum extent practicable (MEP) from January 1, 2021 to December 31, 2021.

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

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

**1.1 BMP Summary**

| **BMP** | **Activities in current reporting period** | **Sources Used** (if applicable) | **Method of Distribution** | **Audience (and number of people reached)** | **Measurable Goal** | **Department / Person Responsible** | **Additional details** |
|---|---|---|---|---|---|---|---|
| 1-1 Implement public education and outreach | Continue to provide information on program and informational links | | Town website | General Public | Maintain website | Steven Masalin P.E. | The site continues to be updated yearly |
| 1-2 Address education/ outreach for pollutants of concern | Continue to provide information on program and informational links appropriate to pollutants of concern | | *Town website* | *General Public* | Maintain website | Steven Masalin P.E. | The site continues to be updated yearly |

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

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| Investigate pollutant public education materials specific to the Town of Ledyard for incorporation onto the tonw's webite. |

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

### 2.1 BMP Summary

| **BMP** | **Status** (Complete, Ongoing, In Progress, or Not started) | **Activities in current reporting period** | **Measurable Goal** | **Department / Person Responsible** | **Date completed or projected completion date** (include the start date for anything that is 'in progress') | **Location Posted** | **Additional details** |
|---|---|---|---|---|---|---|---|
| 2-1 Final Stormwater Management Plan publicly available | Complete | Storm water Management Plan and sample results posted on website and filed with CTDEEP | Storm water Management Plan and sample results posted on website | DPW/Steven Masalin P.E. | April 1, 2022 | https://www.ledyardct.org/322/Stormwater-Pollution-Prevention | |
| 2-2 Comply with public notice requirements for Annual Reports (annually by 2/15) | Complete | Draft Annual Report Posted | Draft Annual Report Posted | DPW/Steven Masalin P.E. | February 15, 2022 | *https://www.ledyardct.org/322/Stormwater-Pollution-Prevention* | |
| | | | | | | | |

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

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

### 3.1 BMP Summary

| **BMP** | **Status** (Complete, Ongoing, In Progress, or Not started) | **Activities in current reporting period** | **Measurable Goal** | **Department / Person Responsible** | **Date completed or projected completion date** (include the start date for anything that is 'in progress') | **Additional details** |
|---|---|---|---|---|---|---|
| 3-1 Develop written IDDE program (Due 7/1/19) | Complete | None | Develop written plan of IDDE program | CLA/DPW/Steven Masalin P.E./CLA | Jan 2020. | |
| 3-2 Develop list and maps of all MS4 stormwater outfalls in priority areas (Due 7/1/20) | Complete | None | GIS layer of MS4 stormwater outfalls in priority areas | CLA/DPW/Steven Masalin P.E./CLA | Completed Fall 2019 | |
| 3-3 Implement citizen reporting program (Ongoing) | Done under 2004 permit | None | GIS layer of reports | DPW/Steven Masalin P.E./CLA | Complete. | https://www.ledyardct.org/322/Stormwater-Pollution-Prevention |
| 3-4 Establish legal authority to prohibit illicit discharges (Due 7/1/19) | Done under 2004 permit | | Revised ordinance drafted from template | DPW/Steven Masalin P.E./CLA | Complete | |
| 3-5 Develop record keeping system for IDDE tracking (Due 7/1/17) | Complete | None | Develop GIS layer | CLA/DPW/Steven Masalin P.E./CLA | Completed July 1, 2018. | File maintained by CLA |
| 3-6 Address IDDE in areas with pollutants of concern | All outfalls with dry weather flow sampled (2019) | None | Investigate outfalls with IDDE, build GIS layer | CLA/DPW/Steven Masalin P.E. | Ongoing through term of permit | Not yet Commenced |

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

*The written program will be posted to the Dept of Public Works webpage and a link listed in next year's Annual Report; will update the written IDDE program as needed throughout the permit term.*
*Maintain master IDDE tracking spreadsheet and ensure all employees involved in IDDE program understand the logging process.*
*Begin catchment investigation.*

**3.3 Provide a record of all citizen reports of suspected illicit discharges and other illicit discharges occurring during the reporting period and SSOs occurring July 2017 through end of reporting period using the following table.** Illicit discharges are any unpermitted discharge to waters of the state that do not consist entirely of stormwater or uncontaminated groundwater except those discharges identified in Section 3(a)(2) of the MS4 general permit when such non-stormwater discharges are not significant contributors of pollution to a discharge from an identified MS4.

| **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) |
|---|---|---|---|---|---|---|
| | | | | | | |
| | | | | | | |

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

| **Method used to track illicit discharge reports** | **Location and nature of structure with failing septic systems** | **Actions taken to respond to and address the failures** | **Impacted waterbody or watershed, if known** | **Dept. / Person responsible** |
|---|---|---|---|---|
| | | | | |
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**3.5 Briefly describe the method and effectiveness of said method used to track illicit discharge reports.**

Illicit discharges are tracked on an infrastructure GIS layer maintained by the town's engineering consultant CLA Engineers Inc. No illicit discharges reported to date.

**3.6 IDDE reporting metrics**

| Metrics | |
|---|---|
| Estimated or actual number of MS4 outfalls | 465 (Mapped) |
| Estimated or actual number of interconnections | 8 (Mapped) |
| Outfall mapping complete | 100% |
| Interconnection mapping complete | Ongoing |
| System-wide mapping complete (detailed MS4 infrastructure) | 99% |
| Outfall assessment and priority ranking | 100% |
| Dry weather screening of all High and Low priority outfalls complete | 100% (In Priority Areas) |
| Catchment investigations complete | Not Started |
| Estimated percentage of MS4 catchment area investigated | Not Started |

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

The training program is currently provided annually by CLA Engineers for all DPW field staff. Training was performed 06/02/21.

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

### 4.1 BMP Summary

| **BMP** | **Status** (Complete, Ongoing, In Progress, or Not started) | **Activities in current reporting period** | **Measurable Goal** | **Department / Person Responsible** | **Date completed or projected completion date** (include the start date for anything that is 'in progress') | **Additional details** |
|---|---|---|---|---|---|---|
| 4-1 Implement, upgrade, and enforce land use regulations or other legal authority to meet requirements of MS4 general permit (Due 7/1/20) | Complete | None | Publish and Implement Regulations | Steven Masalin P.E. and Planning staff | Dec 1, 2019 | |
| 4-2 Develop/Implement plan for interdepartmental coordination in site plan review and approval (Ongoing) | Done under 2004 permit | None | Maintain paper files recording actions | Steven Masalin P.E. and Planning staff | Complete | |
| 4-3 Review site plans for stormwater quality concerns (Ongoing) | Done under 2004 permit | The town Planning IW and PW staff currently perform | Maintain paper files recording actions | Steven Masalin P.E. and Planning staff | Complete | |
| 4-4 Conduct site inspections (Ongoing) | Done under 2004 permit | The town Planning IW and PW staff currently perform | Maintain paper files recording actions | Steven Masalin P.E. and Planning staff | Ongoing as needed | |
| 4-5 Implement procedure to allow public comment on site development (Ongoing) | Done under 2004 permit | The town Planning IW and PW staff currently perform | Maintain paper files recording actions | Steven Masalin P.E. and Planning staff | Complete | |
| 4-6 Implement procedure to notify developers about DEEP construction stormwater permit (Ongoing) | Done under 2004 permit | The town Planning IW and PW staff currently perform | Maintain paper files recording actions | Steven Masalin P.E. and Planning staff | Complete | |
| | | | | | | |

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

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

**5.1 BMP Summary**

| **BMP** | **Status** (Complete, Ongoing, In Progress, or Not started) | **Activities in current reporting period** | **Measurable Goal** | **Department / Person Responsible** | **Date completed or projected completion date** (include the start date for anything that is 'in progress') | **Additional details** |
|---|---|---|---|---|---|---|
| 5-1 Establish and/or update legal authority and guidelines regarding LID and runoff reduction in site development planning (Due 7/1/22) | In progress | Regulations and Ordinances reviewed for LID Barriers | Written legal authority in place. | Steven Masalin P.E. and Planning staff | Projected Completion Jul 1, 2022 | |
| 5-2 Enforce LID/runoff reduction requirements for development and redevelopment projects (Due 7/1/22) | In progress | Regulations under review and development by town | Written regulations in place | Steven Masalin P.E. and Planning staff | Sept 1, 2022 | |
| 5-3 Identify retention and detention ponds in priority areas (Due 7/1/20) | Complete | Inspected all known BMP Basins town wide | GIS layer completed | Steven Masalin P.E. and CLA | Spring 2021 | |
| 5-4 Implement long-term maintenance plan for stormwater basins and treatment structures (Ongoing) | In progress | Maintenance Plan for BMPs being Developed | Plans and BMPS on file | Steven Masalin P.E. and CLA | In Progress (March 2022) | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 5-5 DCIA mapping (Due 7/1/20) | On-Going | New Post 2012 Development IA and DCIA added to tracking sheet. | GIS layer complete | Steven Masalin P.E. and Planning staff | On-Going | |
| 5-6 Address post-construction issues in areas with pollutants of concern | Not Begun | None | Complete Record of issues addressed | Steven Masalin P.E | July 2022 | |
| | | | | | | |

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

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**5.3 Post-Construction Stormwater Management reporting metrics**

For details on this requirement, visit https://nemo.uconn.edu/ms4/tasks/post-construction.htm. Scroll down to the DCIA section.

| **Metrics** | |
|---|---|
| Baseline (2012) Directly Connected Impervious Area (DCIA) | 1,021.2 acres |
| DCIA disconnected (redevelopment plus retrofits) | 0 Acres |
| Retrofit projects completed | None to Date (One in Progress) |
| DCIA disconnected | None to date (4.2 Acres Projected) |
| Estimated cost of retrofits | $ |
| Detention or retention ponds identified | 20 (Town) 10 (Private) |

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

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| The baseline DCIA for each watershed has been determined using the Sutherland Equations as presented in the Small MS4 Permit Technical Support Document, Revised April 2014 (Original Document, April 2011). |

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

### 6.1 BMP Summary

| **BMP** | **Status** (Complete, Ongoing, In Progress, or Not started) | **Activities in current reporting period** | **Measurable Goal** | **Department / Person Responsible** | **Date completed or projected completion date** (include the start date for anything that is 'in progress') | **Additional details** |
|---|---|---|---|---|---|---|
| 6-1 Develop/implement formal employee training program (Ongoing) | Developed | Staff Training performed 06/02/21 | Yearly training for staff | CLA/DPW/Steven Masalin P.E | 06/02/21 | |
| 6-2 Implement MS4 property and operations maintenance (Ongoing) | Implemented | Execute Existing SWPPS for town properties | Document execution | DPW/Steven Masalin P.E | Completed | |
| 6-3 Implement coordination with interconnected MS4s | 8 identified | None | Document to file and coordinate with Interconnection Agency | CLA/Steven Masalin P.E | March 2022 | |
| 6-4 Develop/implement program to control other sources of pollutants to the MS4 | Not begun | | | DPW/Steven Masalin P.E | Ongoing | |
| 6-5 Evaluate additional measures for discharges to impaired waters* | Not begun | | | DPW/Steven Masalin P.E | Ongoing | |
| 6-6 Track projects that disconnect DCIA (Ongoing) | Ongoing | | | DPW/Steven Masalin P.E | Ongoing | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 6-7 Implement infrastructure repair/rehab program (Due 7/1/21) | On-Going | | | DPW/Steven Masalin P.E | | |
| 6-8 Develop/implement plan to identify/prioritize retrofit projects (Due 7/1/20) | In Progress | One detention basin retrofit project identified and feasibility design complete. | | DPW/Steven Masalin P.E | Spring 2022 | |
| 6-9 Implement retrofit projects to disconnect 2% of DCIA (Due 7/1/22) | In Progress | Stormwater watershed and hydraulic analysis and survey performed for detention basin. Awaiting rain event to perform trial adjustment of outlet structure to monitor infiltration of WQV | Implement Retrofit Project | DPW/Steven Masalin P.E | Spring 2022 | |
| 6-10 Develop/implement street sweeping program (Ongoing) | Complete | | Document to file | DPW/Steven Masalin P.E | | |
| 6-11 Develop/implement catch basin cleaning program (Ongoing) | Complete | Cleaning at least once/3 yrs. More frequent as needed. Cleaned 33% of basins. | GIS layer developed | DPW/Steven Masalin P.E | | |
| 6-12 Develop/implement snow management practices (Due 7/1/18) | Complete | | | DPW/Steven Masalin P.E | | |
| | | | | | | |

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

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**6.3 Pollution Prevention/ Good Housekeeping reporting metrics**

| **Metrics** | |
|---|---|
| Employee training provided for key staff | 06/02/21 |
| Street sweeping | |
| | |
| Curb miles swept | 222 miles |
| Volume (or mass) of material collected | 300 tons (Est) |
| Catch basin cleaning | |
| Total catch basins in priority areas (value will be less than or equal to total catch basins town or institution-wide) | 1,431 (Mapped) |
| Total catch basins town- (or institution-) wide | 2,222 (Mapped) |
| Catch basins inspected | 720 (Est) |
| (Catch basins cleaned | 720 (Est) |
| Volume (or mass) of material removed from all catch basins | 170 tons (Est) |
| Volume removed from catch basins to impaired waters (if known) | Unknown |
| Snow management | |
| Type(s) of deicing material used | Treated Salt (Ice-B-Gone) |
| Total amount of each deicing material applied | 1,490 tons |
| Type(s) of deicing equipment used | CIRUS Controlled, Do-All body spreaders |
| Lane-miles treated (A lane-mile is a mile of roadway in a single driving lane) | 222 miles |
| Snow disposal location | N/A |
| Staff training provided on application methods & equipment | |
| Municipal turf management program actions (for permittee properties in basins with N/P impairments) | |
| Reduction in application of fertilizers (since start of permit) | None |
| Reduction in turf area (since start of permit) | None |
| Lands with high potential to contribute bacteria (dog parks, parks with open water, & sites with failing septic systems) | |
| Cost of mitigation actions/retrofits | $4,000 Approx. |

### 6.4 Catch basin cleaning program

| Provide any updates or modifications to your catch basin cleaning program. |
| --- |
| Formalized catch basins routes in GIS, which has enabled driving routes to be rebalanced based on catch basin numbers. |

### 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. (Due 7/1/20) |
| --- |
| An existing detention basin was selected by the town as a test case for the DCIA disconnect program. The basin is located in a large neighborhood within a designated Urban Area (priority area). The basin lies within local basin 300-09-1 which discharges into Flat Brook (CT3000-08_01 TMDL Impaired) and eventually into the Thames River (Middle), also impaired. Proposed DCIA to be disconnected = 4.2 acres. Watershed analysis and survey was performed. A proposed retro-fit was produced that involved adjusting the outlet structure. Outlet structure will be adjusted temporarily to ensure WQV will infiltrate within a reasonable timeframe. Awaiting appropriate magnitude rain event to perform this trial. |

| Describe plans for continuing the Retrofit program and how to achieve a goal of 1% DCIA disconnection annually in future years. (Due 7/1/22) |
| --- |
| Other locations will be coordinated with the town this year. |

## Part II: Impaired waters investigation and monitoring

# 1. Impaired waters investigation and monitoring program

For details on this requirement, visit https://nemo.uconn.edu/ms4/tasks/monitoring.htm. Refer to the yellow column of the Monitoring comparison chart and the Impaired waters monitoring flowchart.

**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.

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.** |
|---|
| Inspections revealed 10 outfalls discharging to impaired waters.<br>Initial monitoring of these outfalls was performed during wet weather conditions between October and December 2019. Follow up monitoring of the 6 worst outfalls contributing to pollution was performed in November 2020 and September 2021. Catchment investigation will commence in 2022. |

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

**2.1 Screening data**

Complete the table below to report data for any wet weather sampling completed for MS4 outfalls that discharge directly to a stormwater impaired waterbody during the reporting period. For details on this requirement, visit www.nemo.uconn.edu/ms4/tasks/monitoring.htm. Refer to the yellow column of the Monitoring comparison chart and the Impaired waters monitoring flowchart.

Each Annual Report will add on to the previous year's data showing a cumulative list of sampling data. **You may also attach an excel spreadsheet with the same data rather than copying it into this table**. If you do attach a spreadsheet, please write "See Attachment" below.

**Wet Weather Screening Data for Outfalls to Impaired Waterbodies - 2019**

| Outfall ID | Date Sampled | Flow | Pollutants of Concern Required | Water Classification | Fecal Coliform (<260 col/100mls) | Enterococcus (<500 col/100m/s) | Chlorine (<0.02 mg/l) | Conductivity (umhos cm) | Surfactants (<0.25 mg/l) | Ammonia (<0.5 mg/l) | Nitrogen (<2.5 mg/l) | Salinity (PPT) | Phosphorus (<0.3 mg/l) | Turbidity Difference (<5 NTU) | Ranking |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 124 | 12/9/2019 | Heavy | Y | SB | 52 | 9210 | 0.05 | 95 | 0.29 | 0.3 | 4.67 | 0.5 | 0.756 | 152.37 | 1 |
| 491 | 12/9/2019 | Heavy | Y | SB | 2250 | 2050 | 0.02 | 139 | 0.09 | 0.38 | 2.31 | 0.5 | 0.14 | 2.44 | 2 |
| 101 | 12/9/2019 | Moderate | Y | SB | 1020 | 1180 | 0.02 | 435 | 0.08 | 0.22 | 0.86 | 0.5 | 0.295 | -3.53 | 3 |
| 147 | 12/9/2019 | Heavy | Y | SB | 20 | 613 | 0.02 | 186 | 0.11 | 0.11 | 1.39 | 0.5 | 0.313 | 12.3 | 4 |
| 125 | 10/10/2019 | Moderate | Y | SB | 52 | 10 | 0.02 | 346 | 0.05 | 0.08 | 9.92 | 0.5 | 0.053 | -4.43 | 5 |
| 480 | 10/10/2019 | Trickling | Y | SB | 75 | 1520 | 0.02 | 152 | 0.05 | 0.11 | 1.36 | 0.5 | 0.1 | -1.42 | 6 |
| 126 | 12/9/2019 | Heavy | Y | SB | 31 | 1020 | 0.02 | 105 | 0.1 | 0.09 | 0.55 | 0.5 | 0.147 | 4.53 | 7 |
| 100 | 12/9/2019 | Heavy | Y | SB | 52 | 1220 | 0.02 | 83 | 0.09 | 0.06 | 0.53 | 0.5 | 0.14 | 2.38 | 8 |
| 28 | 12/9/2019 | Trickling | Y | SB | 161 | 389 | 0.02 | 11700 | 0.05 | 0.08 | 0.51 | 3.8 | 0.13 | -1.93 | 9 |

Follow-up investigation required (last column) if the following pollutant thresholds are exceeded:

| Pollutant of concern | Pollutant threshold |
|---|---|
| Nitrogen | Total N > 2.5 mg/l |
| Phosphorus | Total P > 0.3 mg/l |
| Bacteria (fresh waterbody) | • E. coli > 235 col/100ml for swimming areas or 410 col/100ml for all others<br>• Total Coliform > 500 col/100ml |
| Bacteria (salt waterbody) | • Fecal Coliform > 31 col/100ml for Class SA and > 260 col/100ml for Class SB<br>• Enterococci > 104 col/100ml for swimming areas or 500 col/100 for all others |
| Other pollutants of concern | Sample turbidity is 5 NTU > in-stream sample |

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

Provide the following information for outfalls exceeding the pollutant threshold.

| Outfall ID | Status of drainage area investigation | Control measure to address impairment |
|---|---|---|
| 124 | Not Commenced | Not Yet Determined |
| 491 | Not Commenced | Not Yet Determined |
| 101 | Not Commenced | Not Yet Determined |
| 147 | Not Commenced | Not Yet Determined |
| 125 | Not Commenced | Not Yet Determined |
| 480 | Not Commenced | Not Yet Determined |

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

Once outfall sampling has been completed for at least 50% of outfalls to impaired waters, identify 6 of the highest contributors of any pollutants of concern. Begin monitoring these outfalls on an annual basis by July 1, 2021. **You may also attach an excel spreadsheet with the same data rather than copying it to this table.** If you do attach a spreadsheet, please write "See Attachment" below.

| Testing Year | Outfall ID | Date Sampled | Water Classification | Fecal Coliform (<260 col/100mls) | Enterococcus (<500 col/100m/s) | Nitrogen (<2.5 mg/l) | Phosphorus (<0.3 mg/l) | Turbidity Difference (<5 NTU) | Follow up Required | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| 2020 | 124 | 11/23/2020 | SB | 109 | 10500 | 0.19 | 0.045 | < Upstream | Yes | Catch Basin Surcharging |
| | 491 | 11/23/2020 | SB | 1440 | 24200 | 2.57 | 0.316 | 57.5 | Yes | |
| | 101 | 11/23/2020 | SB | 4570 | 11200 | 0.58 | 0.188 | <Upstream | Yes | |
| | 147 | 11/23/2020 | SB | 52 | 15500 | 0.97 | 0.247 | <Upstream | Yes | |
| | 125 | 11/23/2020 | SB | 691 | 9800 | 0.93 | 0.128 | 4.2 | Yes | |
| | 480 | 11/23/2020 | SB | 906 | 2760 | 1.09 | 0.066 | <Upstream | Yes | |
| | | | | | | | | | | |
| 2021 | 124 | 9/9/2021 | SB | | 19900 | | | 6.76 | Yes | Turbidity is low |
| | 491 | 9/9/2021 | SB | 305 | 3870 | 2.02 | 0.078 | -2.09 | Yes | |
| | 101 | 9/9/2021 | SB | 24200 | 24200 | | | 11.75 | Yes | Bacteria in Excess of Count |
| | 147 | 9/9/2021 | SB | | 17300 | | | 2.38 | Yes | |
| | 125 | 9/9/2021 | SB | 1230 | 11200 | | | | Yes | |
| | 480 | 9/9/2021 | SB | 631 | 1850 | | | 2.06 | Yes | |

**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 | Waterbody | SRWB | Water Body ID | DCIA >11% | Urban Area | CATEGORY | Catchment Ranking |
|---|---|---|---|---|---|---|---|
| 1 | Seth Williams Brook | 2103 | CT2103-00_03 | Yes | Yes | Low Priority | No Information on Screening Factors Available to Perform Ranking |
| 2 | Seth Williams Brook | 2103 | CT2103-00_03 | Yes | Yes | Low Priority | No Information on Screening Factors Available to Perform Ranking |
| 5 | Seth Williams Brook | 2103 | CT2103-00_03 | Yes | Yes | Low Priority | No Information on Screening Factors Available to Perform Ranking |
| 6 | Seth Williams Brook | 2103 | CT2103-00_03 | Yes | Yes | Low Priority | No Information on Screening Factors Available to Perform Ranking |
| 7 | Seth Williams Brook | 2103 | CT2103-00_03 | Yes | Yes | Low Priority | No Information on Screening Factors Available to Perform Ranking |
| 8 | Seth Williams Brook | 2103 | CT2103-00_03 | Yes | Yes | Low Priority | No Information on Screening Factors Available to Perform Ranking |
| 10 | Seth Williams Brook | 2103 | CT2103-00_03 | Yes | Yes | Low Priority | No Information on Screening Factors Available to Perform Ranking |
| 11 | Seth Williams Brook | 2103 | CT2103-00_03 | Yes | Yes | Low Priority | No Information on Screening Factors Available to Perform Ranking |
| 12 | Seth Williams Brook | 2103 | CT2103-00_03 | Yes | Yes | Low Priority | No Information on Screening Factors Available to Perform Ranking |
| 21 | Seth Williams Brook | 2103 | CT2103-00_03 | Yes | Yes | Low Priority | No Information on Screening Factors Available to Perform Ranking |
| 22 | Seth Williams Brook | 2103 | CT2103-00_03 | Yes | Yes | Low Priority | No Information on Screening Factors Available to Perform Ranking |
| 25 | Thames River (Middle) | 3000 | CT-E1_015-SB | Yes | Yes | Low Priority | No Information on Screening Factors Available to Perform Ranking |
| 26 | Thames River (Middle) | 3000 | CT-E1_015-SB | Yes | Yes | Low Priority | No Information on Screening Factors Available to Perform Ranking |
| 34 | Thames River (Middle) | 3000 | CT-E1_015-SB | Yes | Yes | Low Priority | No Information on Screening Factors Available to Perform Ranking |
| 47 | Thames River (Middle) | 3000 | CT-E1_015-SB | Yes | Yes | Low Priority | No Information on Screening Factors Available to Perform Ranking |
| 48 | Thames River (Middle) | 3000 | CT-E1_015-SB | Yes | Yes | Low Priority | No Information on Screening Factors Available to Perform Ranking |
| 49 | Thames River (Middle) | 3000 | CT-E1_015-SB | Yes | Yes | Low Priority | No Information on Screening Factors Available to Perform Ranking |
| 50 | Thames River (Middle) | 3000 | CT-E1_015-SB | Yes | Yes | Low Priority | No Information on Screening Factors Available to Perform Ranking |
| 51 | Thames River (Middle) | 3000 | CT-E1_015-SB | Yes | Yes | Low Priority | No Information on Screening Factors Available to Perform Ranking |
| 53 | Flat Brook | 3000 | CT3000-08_01 | Yes | Yes | Low Priority | No Information on Screening Factors Available to Perform Ranking |
| 73 | Thames River (Middle) | 3000 | CT-E1_015-SB | Yes | Yes | Low Priority | No Information on Screening Factors Available to Perform Ranking |
| 74 | Thames River (Middle) | 3000 | CT-E1_015-SB | Yes | Yes | Low Priority | No Information on Screening Factors Available to Perform Ranking |
| 75 | Thames River (Middle) | 3000 | CT-E1_015-SB | Yes | Yes | Low Priority | No Information on Screening Factors Available to Perform Ranking |
| 76 | Thames River (Middle) | 3000 | CT-E1_015-SB | Yes | Yes | Low Priority | No Information on Screening Factors Available to Perform Ranking |

| Outfall ID | Waterbody | SRWB | Water Body ID | DCIA >11% | Urban Area | CATEGORY | Catchment Ranking |
|---|---|---|---|---|---|---|---|
| 82 | Thames River (Middle) | 3000 | CT-E1_015-SB | Yes | Yes | Low Priority | No Information on Screening Factors Available to Perform Ranking |
| 83 | Thames River (Middle) | 3000 | CT-E1_015-SB | Yes | Yes | Low Priority | No Information on Screening Factors Available to Perform Ranking |
| 84 | Thames River (Middle) | 3000 | CT-E1_015-SB | Yes | Yes | Low Priority | No Information on Screening Factors Available to Perform Ranking |
| 85 | Thames River (Middle) | 3000 | CT-E1_015-SB | Yes | Yes | Low Priority | No Information on Screening Factors Available to Perform Ranking |
| 86 | Thames River (Middle) | 3000 | CT-E1_015-SB | Yes | Yes | Low Priority | No Information on Screening Factors Available to Perform Ranking |
| 87 | Thames River (Middle) | 3000 | CT-E1_015-SB | Yes | Yes | Low Priority | No Information on Screening Factors Available to Perform Ranking |
| 92 | Thames River (Middle) | 3000 | CT-E1_015-SB | Yes | Yes | Low Priority | No Information on Screening Factors Available to Perform Ranking |
| 93 | Thames River (Middle) | 3000 | CT-E1_015-SB | Yes | Yes | Low Priority | No Information on Screening Factors Available to Perform Ranking |
| 94 | Thames River (Middle) | 3000 | CT-E1_015-SB | Yes | Yes | Low Priority | No Information on Screening Factors Available to Perform Ranking |
| 95 | Thames River (Middle) | 3000 | CT-E1_015-SB | Yes | Yes | Low Priority | No Information on Screening Factors Available to Perform Ranking |
| 208 | Thames River (Middle) | 3000 | CT-E1_015-SB | Yes | Yes | Low Priority | No Information on Screening Factors Available to Perform Ranking |
| 209 | Thames River (Middle) | 3000 | CT-E1_015-SB | Yes | Yes | Low Priority | No Information on Screening Factors Available to Perform Ranking |
| 210 | Thames River (Middle) | 3000 | CT-E1_015-SB | Yes | Yes | Low Priority | No Information on Screening Factors Available to Perform Ranking |
| 258 | Thames River (Middle) | 3000 | CT-E1_015-SB | Yes | Yes | Low Priority | No Information on Screening Factors Available to Perform Ranking |
| 259 | Thames River (Middle) | 3000 | CT-E1_015-SB | Yes | Yes | Low Priority | No Information on Screening Factors Available to Perform Ranking |
| 260 | Thames River (Middle) | 3000 | CT-E1_015-SB | Yes | Yes | Low Priority | No Information on Screening Factors Available to Perform Ranking |
| 311 | Thames River (Middle) | 3000 | CT-E1_015-SB | Yes | Yes | Low Priority | No Information on Screening Factors Available to Perform Ranking |
| 312 | Thames River (Middle) | 3000 | CT-E1_015-SB | Yes | Yes | Low Priority | No Information on Screening Factors Available to Perform Ranking |
| 314 | Thames River (Middle) | 3000 | CT-E1_015-SB | Yes | Yes | Low Priority | No Information on Screening Factors Available to Perform Ranking |
| 315 | Thames River (Middle) | 3000 | CT-E1_015-SB | Yes | Yes | Low Priority | No Information on Screening Factors Available to Perform Ranking |
| 316 | Thames River (Middle) | 3000 | CT-E1_015-SB | Yes | Yes | Low Priority | No Information on Screening Factors Available to Perform Ranking |
| 317 | Thames River (Middle) | 3000 | CT-E1_015-SB | Yes | Yes | Low Priority | No Information on Screening Factors Available to Perform Ranking |
| 329 | Thames River (Middle) | 3000 | CT-E1_015-SB | Yes | Yes | Low Priority | No Information on Screening Factors Available to Perform Ranking |
| 331 | Thames River (Middle) | 3000 | CT-E1_015-SB | Yes | Yes | Low Priority | No Information on Screening Factors Available to Perform Ranking |
| 332 | Thames River (Middle) | 3000 | CT-E1_015-SB | Yes | Yes | Low Priority | No Information on Screening Factors Available to Perform Ranking |
| 333 | Thames River (Middle) | 3000 | CT-E1_015-SB | Yes | Yes | Low Priority | No Information on Screening Factors Available to Perform Ranking |
| 334 | Thames River (Middle) | 3000 | CT-E1_015-SB | Yes | Yes | Low Priority | No Information on Screening Factors Available to Perform Ranking |
| 335 | Thames River (Middle) | 3000 | CT-E1_015-SB | Yes | Yes | Low Priority | No Information on Screening Factors Available to Perform Ranking |
| 337 | Thames River (Middle) | 3000 | CT-E1_015-SB | Yes | Yes | Low Priority | No Information on Screening Factors Available to Perform Ranking |
| 380 | Thames River (Middle) | 3000 | CT-E1_015-SB | Yes | Yes | Low Priority | No Information on Screening Factors Available to Perform Ranking |

| Outfall ID | Waterbody | SRWB | Water Body ID | DCIA >11% | Urban Area | CATEGORY | Catchment Ranking |
|---|---|---|---|---|---|---|---|
| 381 | Thames River (Middle) | 3000 | CT-E1_015-SB | Yes | Yes | Low Priority | No Information on Screening Factors Available to Perform Ranking |
| 382 | Thames River (Middle) | 3000 | CT-E1_015-SB | Yes | Yes | Low Priority | No Information on Screening Factors Available to Perform Ranking |
| 400 | Thames River (Middle) | 3000 | CT-E1_015-SB | Yes | Yes | Low Priority | No Information on Screening Factors Available to Perform Ranking |
| 402 | Seth Williams Brook | 2103 | CT2103-00_03 | Yes | Yes | Low Priority | No Information on Screening Factors Available to Perform Ranking |
| 405 | Thames River (Middle) | 3000 | CT-E1_015-SB | Yes | Yes | Low Priority | No Information on Screening Factors Available to Perform Ranking |
| 407 | Thames River (Middle) | 3000 | CT-E1_015-SB | Yes | Yes | Low Priority | No Information on Screening Factors Available to Perform Ranking |
| 410 | Thames River (Middle) | 3000 | CT-E1_015-SB | Yes | Yes | Low Priority | No Information on Screening Factors Available to Perform Ranking |
| 411 | Thames River (Middle) | 3000 | CT-E1_015-SB | Yes | Yes | Low Priority | No Information on Screening Factors Available to Perform Ranking |
| 412 | Thames River (Middle) | 3000 | CT-E1_015-SB | Yes | Yes | Low Priority | No Information on Screening Factors Available to Perform Ranking |
| 414 | Thames River (Middle) | 3000 | CT-E1_015-SB | Yes | Yes | Low Priority | No Information on Screening Factors Available to Perform Ranking |
| 430 | Thames River (Middle) | 3000 | CT-E1_015-SB | Yes | Yes | Low Priority | No Information on Screening Factors Available to Perform Ranking |
| 435 | Thames River (Middle) | 3000 | CT-E1_015-SB | Yes | Yes | Low Priority | No Information on Screening Factors Available to Perform Ranking |
| 462 | Thames River (Middle) | 3000 | CT-E1_015-SB | Yes | Yes | Low Priority | No Information on Screening Factors Available to Perform Ranking |

## 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

For details on this requirement, visit https://nemo.uconn.edu/ms4/tasks/monitoring.htm. Refer to the blue column of the Monitoring comparison chart and the IDDE baseline monitoring flowchart.

Provide sample data for outfalls where flow is observed. Only include Pollutant of concern data for outfalls that discharge into stormwater impaired waterbodies. **You may also attach an excel spreadsheet with the same data rather than copying it to this table.** If you do attach a spreadsheet, please write "See Attachment" below.

| Outfall ID | Date Sampled | Flow | Water Class | Pollutants of Concern Required | E Coli (<410 mg/l) | Enterococci (<500 col/100ml) | Chlorine (<0.02 mg/l) | Conductivity (umhos cm) | Surfactants (<0.25 mg/l) | Ammonia (<0.5 mg/l) | Nitrogen (<2.5 mg/l) | Salinity (PPT) | Phosphorus (<0.3 mg/l) | Catchment Category |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | 9/6/2019 | Moderate | A | No | 1590 | | 0.78 | 268 | 0.07 | 0.2 | | < 0.5 | | High Priority |
| 488 | 10/1/2019 | Trickling | AA | No | 10 | | 0.1 | 207 | 0.05 | 0.17 | | 5.9 | | High Priority |
| 156 | 10/1/2019 | Trickling | AA | No | 414 | | 0.019 | 205 | 0.05 | 0.15 | | <0.5 | | High Priority |
| 6 | 9/6/2019 | Moderate | A | No | 31 | | 0.019 | 325 | 0.05 | 0.08 | | < 0.5 | | |
| 16 | 10/1/2019 | Trickling | A | No | 20 | | 0.019 | 229 | 0.05 | 0.16 | | <0.5 | | |
| 51 | 10/7/2019 | Moderate | A | No | 10 | | 0.019 | 239 | 0.05 | 0.08 | | <0.5 | | |
| 402 | 9/6/2019 | Moderate | A | No | 10 | | 0.019 | 281 | 0.05 | 0.08 | | < 0.5 | | |
| 288 | 10/8/2019 | Trickling | AA | No | 10 | | 0.019 | 247 | 0.05 | 0.09 | | <0.5 | | |
| 125 | 8/12/2019 | Moderate | SB | Yes | | 10 | 0.019 | 432 | 0.05 | 0.05 | 9.99 | < 0.5 | 0.077 | High Priority |
| 144 | 8/12/2019 | Trickling | A | No | 10 | | 0.019 | 347 | 0.05 | 0.27 | | < 0.5 | | |
| 301 | 10/8/2019 | Trickling | AA | No | 20 | | 0.03 | 157 | 0.06 | 0.11 | | <0.5 | | High Priority |
| 336 | 10/16/2019 | Moderate | A | No | 10 | | 0.019 | 236 | 0.05 | 0.11 | | | | |
| 421 | 10/16/2019 | Moderate | AA | No | 10 | | 0.019 | 186 | 0.05 | 0.11 | | <0.5 | | |
| 7 | 9/6/2019 | Moderate | A | No | 134 | | 0.019 | 313 | 0.05 | 0.06 | | <0.5 | | |
| 143 | 8/12/2019 | Trickling | A | No | 10 | | 0.019 | 104 | 0.05 | 0.05 | | <0.5 | | |

**2.2 Wet weather sample and inspection data**

For details on this requirement, visit https://nemo.uconn.edu/ms4/tasks/monitoring.htm. Refer to the green column of the Monitoring comparison chart and the IDDE catchment investigation flowchart.

Provide sample data for outfalls and key junction manholes of any catchment area with at least one System Vulnerability Factor. **You may also attach an excel spreadsheet with the same data rather than copying it to this table.** If you do attach a spreadsheet, please write "See Attachment" below.

| Outfall / Interconnection ID | Latitude / Longitude | Sample date | Ammonia | Chlorine | Conductivity | Salinity | E. coli or Enterococcus | Surfactants | Water Temp | Pollutant of concern |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | |
| | | | | | | | | | | |

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

For details on this requirement, visit www.nemo.uconn.edu/ms4/tasks/monitoring.htm. Refer to the green column of the Monitoring comparison chart and the IDDE catchment investigation flowchart.

**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 |
|---|---|---|
| | | |
| | | |
| | | |

Where SVFs are:

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

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

**You may also attach an excel spreadsheet with the same data rather than copying it to this table**. If you do attach a spreadsheet, please write "See Attachment" below.

| Key Junction Manhole ID | Latitude / Longitude | Screening / Sample date | Visual/ olfactory evidence of illicit discharge | Ammonia | Chlorine | Surfactants |
|---|---|---|---|---|---|---|
| | | | | | | |
| | | | | | | |

### 3.3 Wet weather investigation outfall sampling data

**You may also attach an excel spreadsheet with the same data rather than copying it to this table.** If you do attach a spreadsheet, please write "See Attachment" below.

| Outfall ID | Latitude / Longitude | Sample date | Ammonia | Chlorine | Surfactants |
|---|---|---|---|---|---|
| | | | | | |
| | | | | | |

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

| Discharge location | Source location | Discharge description | Method of discovery | Date of discovery | Date of elimination | Mitigation or enforcement action | Estimated volume of flow removed |
|---|---|---|---|---|---|---|---|
| | | | | | | | |
| | | | | | | | |

## Part IV: Certification

| "I have personally examined and am familiar with the information submitted in this document and all attachments thereto, and I certify that, based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, the submitted information is true, accurate and complete to the best of my knowledge and belief. I understand that a false statement made in this document or its attachments may be punishable as a criminal offense, in accordance with Section 22a-6 of the Connecticut General Statutes, pursuant to Section 53a-157b of the Connecticut General Statutes, and in accordance with any other applicable statute." | |
|---|---|
| Chief Elected Official or Principal Executive Officer | Document Prepared by |
| Print name: | Print name:<br>Darren Hayward, P.E. |
| Signature / Date: | Signature / Date: |
| Email: | Email:<br>dhayward@claengineers.com |