



Town of Old Lyme, Connecticut

2020 Annual Report

**General Permit for the Discharge of Stormwater
from Small Municipal Separate Storm Sewer Systems**

Permit Number GSM000032

MS4 General Permit
Town of Old Lyme 2020 Annual Report
Existing MS4 Permittee
Permit Number GSM 000032
January 01, 2020 - December 31, 2020

This report documents the Town of Old Lyme's efforts to comply with the conditions of the MS4 General Permit to the maximum extent practicable (MEP) from January 01, 2020 to December 31, 2020.

Bonnie Reemsnyder, First Selectwoman was replaced by Timothy Griswold, First Selectman in November 2019.

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 | Responsible Person and Department | Due | Date completed or projected completion date | Additional details |
|---|------------|--|-----------------|--|---------------|---|---|
| 1-1 Implement public education and outreach | Developing | <p>2017 - None 2018 - None</p> <p>The following Clean Waters Starting in Your Home and Yard Fact Sheets were made available to the public on the Department of Public Works page on the town website https://www.oldlyme-ct.gov/public-works/pages/stormwater:</p> <p>Fact Sheet 2 - Managing Your Household Chemicals</p> <p>Fact Sheet 3 - Caring for Your Septic System</p> <p>Fact Sheet 4 - Integrated Pest Management and Biological Controls for the Homeowner</p> | Met | Bonnie Reemsnyder, First Selectwoman and Timothy Griswold, First Selectman, Board of Selectmen | July 01, 2018 | March 25, 2019 | Additional public education resources may be added to the Department of Public Works website. |

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| | | <p>Fact Sheet 5 - Conservation Landscaping for Water Quality</p> <p>Fact Sheet 6 - Animal Waste and Water Quality</p> <p>Fact Sheet 8 - Lawn Care the Environmentally Friendly Way.</p> | | | | | |
| | Completed | Trash and Recycling Information, including a list of recyclable products, was published in Old Lyme Events magazine. | Met | <p>Bonnie Reemsnyder, First Selectwoman, Board of Selectmen</p> <p>and</p> <p>Timothy Griswold, First Selectman, Board of Selectmen</p> | July 01, 2017 | <p>2017 - Quarters 1 - 4</p> <p>2018 - Quarters 1 - 4</p> <p>2019 - Quarters 1 - 4</p> <p>2020 - Quarters 1 - 4</p> | |
| | Completed | Water Pollution Control Authority (WPCA) Updates were published in the Old Lyme Events magazine. | Met | Water Pollution Control Authority | July 01, 2017 | <p>2017 - Quarter 1</p> <p>2018 - Quarters 1 & 4</p> | |
| | Completed | An article indicating new Aquifer Protection Regulations were enacted by the Zoning Commission was published in the Old Lyme Events magazine. | Met | Zoning Commission | | 2017 - Quarter 2 | |
| | Completed | An article indicating that new trash and recycling containers were installed at White Sands Beach and Hains Park in early April, 2017 was in the Old Lyme Events magazine. | Met | Bonnie Reemsnyder, First Selectwoman | July 01, 2017 | 2017 - Quarter 2 | |
| | Completed | Transfer Station Information was contained in Old Lyme Events magazine. | Met | Bonnie Reemsnyder, First Selectwoman | July 01, 2017 | <p>2017 - Quarters 3 & 4</p> <p>2018 - Quarters 1 - 4</p> <p>2019 - Quarters 1 - 4</p> <p>2020 - Quarters 1 - 4</p> | |

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| | | Electronics began to be accepted at the Transfer Station and a list of accepted items was contained in Old Lyme Events magazine. | | | | | |
| | Completed | A reminder to town residents that grass clippings should be composted on resident's property was contained in Old Lyme Events magazine | Met | Ed Adanti, Director, Department of Public Works | July 01, 2017 | 2017 - Quarter 3 & 4, 2018 - Quarters 1 - 4, 2019 - Quarters 1, 2 & 4, 2020 - Quarters 1 - 4 | |
| | Completed | The Old Lyme Conservation Commission published <i>Herbicide-Free Weed Management</i> in Old Lyme Events magazine | Met | Conservation Commission | July 01, 2017 | 2018 - Quarter 2 | |
| | Completed | The Public Works Director published advice on leaf management in Old Lyme Events magazine | Met | Ed Adanti, Director, Department of Public Works | July 01, 2017 | 2018 - Quarter 3 | |
| | Completed | Rogers Lake Authority cited <i>Connecticut State Law 12-155</i> prohibiting the use of fertilizer containing phosphorous less than 20 feet from any body of water was contained in Old Lyme Events magazine | Met | Rogers Lake Authority | July 01, 2017 | 2018 - Quarter 3 & 4, 2019 - Quarter 1 2020 - Quarter 4 | |
| | Completed | The Old Lyme Conservation Commission published <i>Proper Recycling is Good! - Both for the Environment and for Old Lyme's Budget</i> in Old Lyme Events magazine | Met | Conservation Commission | July 01, 2017 | 2018 - Quarter 4 | |
| | Completed | The Old Lyme Conservation Commission published <i>Report from the Old Lyme Conservation Commission, Suggestions to Reduce-Reuse-Recycle</i> in Old Lyme Events magazine | Met | Conservation Commission | July 01, 2017 | 2018 - Quarter 4 | |

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|--|------------|---|-----|--|---------------|----------------------|---|
| | Completed | The Rogers Lake Authority included a reminder to the public "Do Not Feed the Waterfowl" in the Old Lyme Events magazine | Met | Rogers Lake Authority | July 01, 2017 | 2019 - Quarter 1 | |
| | Completed | Information on the Hazardous Waste & Paper Shredding was contained in Old Lyme Events magazine | | Bonnie Reemsnyder, First Selectwoman | July 01, 2017 | 2019 - Quarter 1 & 2 | |
| | Completed | A new trash and recycling contractor was contracted by the Town of Old Lyme Effective July 01, 2019. The new Trash and Recycling Information was published in the Old Lyme Events magazine | Met | Bonnie Reemsnyder, First Selectwoman and Timothy Griswold, First Selectman, Board of Selectmen | July 01, 2019 | 2019 - Quarter 2 & 4 | |
| | Completed | The Old Lyme Conservation Commission reminder <i>Conservation Commission Reminds Us: Know Your Plastics, One Thing You Can Do: Know Your Plastics</i> was contained in Old Lyme Events magazine | Met | Conservation Commission | July 01, 2017 | 2019 - Quarter 2 | |
| | Completed | A reminder to town residents that septic tanks must be pumped out at least once every 7 years was contained in Old Lyme Events magazine | Met | Water Pollution Control Authority | July 01, 2017 | 2019 - Quarter 3 | |
| | | | | | | | |
| 1-2 Address education/ outreach for pollutants of concern* | Developing | 2017 - None 2018 - None The following Clean Waters Starting in Your Home and Yard Fact Sheets were made available to the public: | Met | Bonnie Reemsnyder, First Selectwoman and Timothy Griswold, First Selectman, Board of Selectmen | July 01, 2018 | March 25, 2019 | Additional public education resources may be added to the Department of Public Works website. |

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| | | <p>Fact Sheet 3 - Caring for Your Septic System</p> <p>Fact Sheet 6 - Animal Waste and Water Quality</p> <p>Fact Sheet 3 and Fact Sheet 6 educate the public about bacteria impacts on water quality</p> <p>Fact Sheet 8 - Lawn Care the Environmentally Friendly Way</p> <p>Fact Sheet 8 educates the public about nutrient impacts on water quality.</p> | | | | | |
| | Completed | A reminder to town residents that grass clippings should be composted on resident's property was contained in Old Lyme Events magazine | Met | Ed Adanti, Director, Department of Public Works | July 01, 2017 | 2017 - Quarters 3 & 4 2018 - Quarters 1 - 4 2019 - Quarters 1, 2 & 4 2020 - Quarters 2 & 4 | |
| | Completed | Rogers Lake Authority cited <i>Connecticut State Law 12-155</i> prohibiting the use of fertilizer containing phosphorous less than 20 feet from any body of water was contained in Old Lyme Events magazine | Met | Rogers Lake Authority | July 01, 2017 | 2018 - Quarters 3 & 4 2019 - Quarter 1 2020 - Quarter 4 | |
| | Completed | The Rogers Lake Authority included a reminder to the public "Do Not Feed the Waterfowl" in the Old Lyme Events magazine | Met | Rogers Lake Authority | July 01, 2017 | 2019 - Quarter 1 | |
| | Completed | A reminder to town residents that septic tanks must be pumped out at least once every 7 years was contained in Old Lyme Events magazine | Met | Water Pollution Control Authority | July 01, 2017 | 2019 - Quarter 3 | |

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

It is anticipated that public education resources will continue to be contained in the Old Lyme Events magazine and added to the town website.

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

2.1 BMP Summary

| BMP | Status | Activities in current reporting period | Measurable goal | Responsible Person and Department | Due | Date completed or projected completion date | Additional details |
|---|-----------|--|--|--|-------------------|---|---|
| 2-1 Comply with public notice requirements for the Stormwater Management Plan | Completed | A hard copy of the Draft 2017 Stormwater Management Plan (SMP) was available to the public for review and comment at the Town Library. | Substantially Complied with requirements | Bonnie Reemsnyder, First Selectwoman, Board of Selectmen | April 03, 2017 | The 2017 SMP was available to the public on April 12, 2017. | No public comments were received by the Office of the First Selectwoman |
| 2-2 Comply with public notice requirements for 2017 Annual Report | Completed | The Draft 2017 MS4 Annual Report was available to the public for review and comment on the town website https://www.oldlyme-ct.gov/public-works/pages/stormwater and at the Town Library. | Substantially Complied with requirements | Bonnie Reemsnyder, First Selectwoman, Board of Selectmen | February 15, 2018 | February 15, 2018 | No public comments were received by the Office of the First Selectwoman |
| 2-2 Comply with public notice requirements for 2018 Annual Report | Completed | The Draft 2018 MS4 Annual Report was available to the public for review and comment on the town website https://www.oldlyme-ct.gov/public-works/pages/stormwater and at the Town Library. | Substantially Complied with requirements | Bonnie Reemsnyder, First Selectwoman, Board of Selectmen | February 15, 2019 | February 28, 2019 | No public comments were received by the Office of the First Selectwoman |
| 2-2 Comply with public notice requirements for 2019 Annual Report | Completed | The Draft 2019 MS4 Annual Report was available to the public for review and comment on the town website | Substantially Complied with requirements | Timothy Griswold, First Selectman, Board of Selectmen | February 15, 2020 | March 05, 2020 | No public comments were received by the Office of the First Selectman |

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|---|-----------|---|----------------------------|---|-------------------|-------------------|--|
| | | https://www.oldlyme-ct.gov/public-works/pages/stormwater | | | | | |
| 2-2 Comply with public notice requirements for 2020 Annual Report | Completed | <p>and at the Town Library.</p> <p>The Draft 2019 MS4 Annual Report was available to the public for review and comment on the town website</p> <p>https://www.oldlyme-ct.gov/public-works/pages/stormwater</p> <p>and at the Town Library.</p> | Complied with Requirements | Timothy Griswold, First Selectman, Board of Selectmen | February 15, 2021 | February 22, 2021 | |

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

2.3 Public Involvement/Participation reporting metrics

| Metrics | Implemented | Date | Posted |
|---|-------------|------------|---|
| 2017 - Availability of the Stormwater Management Plan announced to public to meet FOIA requirements | Yes | 04/03/2017 | A pdf of the 2017 SMP was posted on the town website and a pdf print copy was made available at the Phoebe Griffin Noyes Library. |
| 2018 - Availability of 2017 Annual Report announced to public to meet FOIA requirements | Yes | 02/15/2018 | A pdf of the 2017 MS4 Annual Report was posted on the town website and a pdf print copy was made available at the Phoebe Griffin Noyes Library. |
| 2019 - Availability of 2018 Annual Report announced to public to meet FOIA requirements | Yes | 02/28/2019 | A pdf of the 2018 MS4 Annual Report was posted on the town website and a pdf print copy was made available at the Phoebe Griffin Noyes Library. |
| 2020 - Availability of 2019 Annual Report announced to public to meet FOIA requirements | Yes | 03/05/2020 | A pdf of the 2019 MS4 Annual Report was posted on the town website. |
| 2021 - Availability of 2020 Annual Report announced to public to meet FOIA requirements | Yes | 02/04/2021 | A notice of the availability of the 2020 MS4 Annual Report for Public Review and Comment was posted on the town website. |

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 | Responsible Person and Department | Due | Date completed or projected completion date | Additional details |
|--|-------------|---|--|---|---------------|---|---|
| 3-1 Develop written IDDE program | In Progress | The Town of Old Lyme is in the process of completing a written IDDE program using the IDDE program template available from the CT DEEP. | Develop a written plan IDDE program | Board of Selectmen and Nathan L. Jacobson & Associates, Inc., Town MS4 Consultant | July 01, 2018 | Anticipate completing by July 01, 2021. | An attempt was made to have the Ledge Light Health District be the central reporting agency for citizen illicit discharge complaint filings as seven of the eight member municipalities are MS4 municipalities. |
| 3-2 Develop list and maps of all MS4 stormwater outfalls in priority areas | In Progress | MS4 stormwater outfall mapping was conducted in 2014 and 2015. The stormwater outfall mapping was compiled on a ESRI GIS layer. The GIS mapping will be updated to include impaired waters as contained in the State of Connecticut, Department of Energy and Environmental Protection 2018 Integrated Water Quality Report. The stormwater outfalls in the impaired waters will be identified. | Development of an ESRI GIS map layer with MS4 stormwater outfalls. | Board of Selectmen and Nathan L. Jacobson & Associates, Inc., Town MS4 Consultant | July 01, 2019 | Anticipate completing by July 01, 2021. | |

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|--|-----------------|--|--|--|---------------|---|--|
| 3-3 Implement Citizen Reporting Program | In Progress | A program to allow the general public to report suspected illicit discharges is in the process of being set up. It is anticipated that the Department of Public Works will accept citizen reporting of suspected illicit discharges. | A form and program will be developed in 2021 | Timothy Griswold, First Selectman, Board of Selectmen | July 01, 2017 | Anticipate completing by July 01, 2021. | An attempt was made to have the Ledge Light Health District be the central reporting agency for citizen illicit discharge complaint filings as seven of the eight member municipalities are MS4 municipalities. It was decided that the Department of Public Works would accept citizen reporting of suspected illicit discharges. |
| 3-4 Establish legal authority to prohibit illicit discharges | In Place | An Illicit Discharge Detection and Elimination Ordinance was enacted at a Town Meeting on January 22, 2007 | IDDE Ordinance Enactment | Timothy Griswold, First Selectman, Board of Selectmen | July 01, 2018 | January 22, 2007 | |
| 3-5 Develop record keeping system for IDDE tracking | To Be Developed | 2017 through 2020 - None | In Progress | Department of Public Works | July 01, 2017 | Anticipate completing by July 01, 2021. | An attempt was made to have the Ledge Light Health District be the central reporting agency for citizen illicit discharge complaint filings as seven of the eight member municipalities are MS4 municipalities. |
| 3-6 Address IDDE in areas with pollutants of concern | Developing | 2017 through 2020 - None | Met | Nathan L. Jacobson & Associates, Inc., Town MS4 Consultant | Not specified | See Below | |
| | Completed | The passing of Aquifer Protection Area Regulations by the Zoning Commission was included in the Old Lyme Events magazine. | | | | 2017 - Quarter 2 | |

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|--|-----------|--|--|--|---------------|--|--|
| | Completed | Water Pollution Control Authority (WPCA) Updates were included in the Old Lyme Events magazine. | | | | 2018 - Quarter 1 | |
| | Completed | Connecticut State Law 12-155 which prohibits application of fertilizer containing phosphorous less than 20 feet from water bodies was included in the Old Lyme Events magazine. | | Rogers Lake Authority | | 2018 - Quarters 3 & 4 2019 - Quarter 1 2020 - Quarter 4 | |
| | Completed | The Town Septic Tank Pump Out Ordinance reminder was included in the Old Lyme Events magazine. | | Water Pollution Control Authority (WPCA) | July 01, 2017 | 2019 - Quarter 3 | |
| | Ongoing | Sanitary sewer installations and a pump station are proposed for Sound View, Miscellaneous Town Area B north of Shore Road, Old Lyme Shores Chartered Beach Association, Old Colony Chartered Beach Association and Miami Beach Chartered Beach Association. | Working toward final design and approval by the CT DEEP. | Water Pollution Control Authority (WPCA) | Not Specified | Final design was completed in 2020. It is anticipated that construction will begin in 2021 and completed in 2022. | |

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

The written program will be posted to the Department of Public Works webpage and a link listed in the 2021 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

The Water Pollution Control Authority will continue to include WPCA updates in Old Lyme Events magazine.

2021 - Sanitary sewer installations and a pump station are proposed for Sound View, Miscellaneous Town Area B north of Shore Road, Old Lyme Shores Chartered Beach Association, Old Colony Chartered Beach Association and Miami Beach Chartered Beach Association. Construction is anticipated to begin in 2021 with completion in 2022.

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

| Date of Report | Location / suspected source | Response taken |
|----------------|--|--|
| January 2015 | Wildwood Drive A suspected illicit discharge was identified during MS4 stormwater outfall mapping proximal to Wildwood Drive which is the outlet for the Wildwood Drive storm drainage system. The discharge consisted of what appeared to be a greywater (possible washing machine) discharge to the MS4 | Individual catch basins will be inspected during dry weather conditions to isolate the possible source of the potential illicit discharge if the pipe discharge was connected directly to the catch basin during the home construction activities. If the method does not satisfactorily identify the pipe run to which the possible illicit discharge is connected optical brightener testing methods will be utilized. |
| April 2019 | 8 Hartford Avenue A sump pump discharge from a crawl space was directed to the easterly gutterline of Hartford Avenue and flow from the discharge was conveyed to the catch basin system. Concern was the sump pump could capture diluted wastewater. | The sump pump discharge was sampled on May 22, 2019. While Chlorides, ammonia, nitrite, nitrate, total Kjeldahl nitrogen and phosphorus were elevated, enterococci bacteria and fecal coliforms were below the detection limit of 10 MPN/100 mls. |

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. The Town of Old Lyme has had no SSOs

| 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) |
|--|---------------------------------|-----------------------------------|-----------------------------|--|--|-------------------------------|
|--|---------------------------------|-----------------------------------|-----------------------------|--|--|-------------------------------|

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|---|----------|---------------------------|---------------------------------------|-----------------------------------|--|----------|
| 41.30000°N 72.25570°W Wildwood Drive | 01/21/15 | MS4 and wetlands | Estimated at tens of gallons per week | Likely Washing Machine Connection | A sample of the discharge was obtained on May 22, 2019 and analyzed by Phoenix Environmental Laboratories. Results were inconclusive. A test for Optical Brighteners is recommended. | 05/22/19 |
| 41.28971°N 72.27817°W 8 Hartford Avenue | 05/22/19 | Gutter/Catch Basin System | Hundreds of gallons per day | Sump pump discharge | A sample of the discharge was obtained on May 22, 2019 and analyzed by Phoenix Environmental Laboratories. Results were inconclusive. | 05/22/19 |

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

Any potential illicit discharges were noted during field mapping of all MS4 stormwater outfalls and were followed up on at a later date. One potential gray water discharge was noted and followed up on by the Town MS4 Consultant.

Potential illicit discharges reported to the Department of Public Works are followed up by the department or the Town MS4 Consultant.

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 |
|---|--|---|
| 2017 through 2020 Ledge Light Health District was contacted to determine if any failing septic systems were a source of an illicit discharge that may have drained to the town MS4. No such discharges were known to have occurred | None Required | Not Applicable |
| | | |

3.7 IDDE reporting metrics

| Metrics | |
|--|------|
| Estimated or actual number of MS4 outfalls | 312 |
| Estimated or actual number of interconnections | 2 |
| Outfall mapping complete | 95 |
| Interconnection mapping complete | 100% |

| | |
|--|-----|
| System-wide mapping complete (detailed MS4 infrastructure) | 25% |
| Outfall assessment and priority ranking | 25% |
| Dry weather screening of all High and Low priority outfalls complete | 20% |
| Catchment investigations complete | 10% |
| Estimated percentage of MS4 catchment area investigated | 40% |

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).

The Department of Public Works will be provided with a copy of the publication entitled *Illicit Discharge Detection and Elimination Manual, A Handbook for Municipalities*, Published January 2003 by the New England Interstate Water Pollution Control Commission.

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

4.1 BMP Summary

| BMP | Status | Activities in current reporting period | Measurable goal | Responsible Person and Department | 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 | Ongoing | The required elements of Minimum Control Measure No. 4 - Construction Site Runoff Control have been incorporated into the land use regulations or are required as a standard condition of approval. | Compliance | Land Use Department and Land Use Commission Members | July 01, 2017 | | |
| 4-2 Develop/Implement plan for interdepartmental coordination in site plan review and approval | Ongoing | Thomas E. Metcalf, P.E., L.S., Town Engineer prepares land use review letters for most applications for the Inland Wetlands Commission, Planning Commission and Zoning Commission. | Interdepartmental Coordination | Land Use Commission Members | July 01, 2017 | Ongoing | |
| 4-3 Review site plans for stormwater quality concerns | Ongoing | Thomas E. Metcalf, P.E., L.S., Town Engineer encourages the use of LID and Stormwater BMPs practices as contained in the 2004 Connecticut Stormwater Quality Manual. | Compliance | Thomas E. Metcalf, P.E., L.S., Town Engineer | July 01, 2017 | Ongoing | |
| 4-4 Conduct site inspections | Ongoing | The town conducts construction site inspections for proper implementation and | Compliance with Approved Plans | Keith Rosenfeld, Inland Wetlands Enforcement | July 01, 2017 | Ongoing | |

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|---|---------|--|--|---|---------------|---------|--|
| | | maintenance of soil erosion and sediment control measures. | | Officer, Land Use Office | | | |
| 4-5 Implement procedure to allow public comment on site development | Ongoing | The land use application process allows for public comment on land use applications which are submitted to the Inland Wetlands Agency, Planning Commission, Zoning Commission during the Public Hearing Process when applicable. | The public can submit comments on land use applications at Public Hearings when held. | Land Use Department and Land Use Commissions | July 01, 2017 | Ongoing | |
| 4-6 Implement procedure to notify developers about the CT DEEP Construction Stormwater General Permit | Ongoing | Since the inception of the CT DEEP General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities Thomas E. Metcalf, P.E., L.S., Town Engineer has made developer's engineers aware of the need to register for the CT DEEP Construction Stormwater General Permit in engineering review letters which are typically prepared as part of the land use application process. | Awareness of the need to register for the General permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities | Land Use Department Thomas E. Metcalf, P.E., L.S., Town Engineer | July 01, 2017 | Ongoing | |

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 | Activities in current reporting period | Measurable goal | Responsible Person and Department | 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 | Under Development | 2017 - 2020 None The required elements of Minimum Control Measure No. 5 - Post-Construction Runoff Control to be incorporated into the land use regulations were provided to the town. | There has not been significant new development. In town. Whenever new development is proposed the Town Engineer encourages the utilization of LID measures. | Land Use Department, Land Use Commissions and Town Land Use Attorney | July 01, 2021 | Anticipated to be completed by July 01, 2021. | It is anticipated that UConn CLEAR and/or a Regional Planning Agency will provide a Post-construction Stormwater Management template for use by all MS4 Towns. |
| 5-2 Enforce LID/runoff reduction requirements for development and redevelopment projects | Ongoing | Compliance | There has not been significant new development. In town. Whenever new development is proposed the Town Engineer encourages the utilization of LID measures. | Land Use Department Thomas E. Metcalf, P.E., L.S., Town Engineer | July 01, 2019 | Continuing | |

| | | | | | | | |
|---|--------------------------------------|---|---|---|---------------|------------------------------------|--|
| 5-3 Identify retention and detention ponds in priority areas | To Be Developed | 2017 - 2020 None Retention Ponds, Detention Ponds and Hydrodynamic Separators will be inventoried in 2020. A GIS Map Layer will be created after the inventory. | | Ed Adanti, Director, Department of Public Works, and Nathan L. Jacobson & Associates, Inc., Town MS4 Consultant | July 01, 2019 | To be completed in 2021. | |
| 5-4 Implement long-term maintenance plan for stormwater basins and treatment structures | Developed To be implemented in 2020. | A Post-Construction Stormwater Management Facility Operation and Maintenance Plan Manual was completed with an Effective Date of July 01, 2019. It is anticipated that measures contained in the manual will be implemented in 2021. | | Ed Adanti, Director, Department of Public Works, and Nathan L. Jacobson & Associates, Inc., Town MS4 Consultant | July 01, 2019 | To be implemented in 2021. | |
| 5-5 DCIA mapping | Completed | Completed the process of DCIA Mapping from base mapping prepared by UConn CLEAR. | The DCIA to MS4 stormwater outfalls discharging to waters identified as impaired in the 2016 Integrated Water Quality Report and in watersheds with a DCIA of greater than 11 percent will start in 2018. | Nathan L. Jacobson & Associates, Inc., Town MS4 Consultant | July 01, 2020 | 2018 - Completed 2019 - Revised | The Baseline 2012 DCIA was determined to be 34.16 Acres. |

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|--|-----------------|------------------|--|--|---------------|--------------------------|--|
| 5-6 Address post-construction issues in areas with pollutants of concern | To Be Developed | 2017 - 2020 None | Stormwater outfalls discharging to waters identified as impaired in the 2016 and 2018 Integrated Water Quality Reports and in watersheds with a DCIA of greater than 11 percent will be subject to enhanced water quality treatment. | Land Use Department and Thomas E. Metcalf, P.E., L.S., Town Engineer | Not specified | To be completed in 2020. | |
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5.2 Describe any Post-Construction Stormwater Management activities planned for the next year, if applicable.

Procedures outlined in the Post-Construction Stormwater Management Facility Operation & Maintenance Plan Manual will be implemented in 2021.

5.3 Post-Construction Stormwater Management reporting metrics.

| Metrics | |
|---|--|
| Baseline (2012) Directly Connected Impervious Area (DCIA) | 34.16 Acres |
| DCIA disconnected (redevelopment plus retrofits) | 2012 to 2016 - To Be Determined 2017 through 2020 - 0 Acres Total - To Be Determined |
| Retrofits completed | 2017 through 2020 - 0 |
| DCIA disconnected | 2012 to 2016 - % To Be Determined 2017 through 2020 - 0 % Total - To Be Determined |

| | |
|---|---|
| Estimated cost of retrofits | \$0 |
| Detention or retention ponds identified | 2014 to 2015 - 5 Detention Basins, 9 Water Quality Basins and 2 Water Quality Units |

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

Based on information contained in the Factsheet: *Town of Old Lyme Water Quality and Stormwater Summary*, prepared by the CT DEEP, 1,420.21 acres of the town has an impervious area exceeding 12% which is approximately 9.14% of the town. 372.89 acres have an impervious cover of ranging from 12% to 25%, 616.25 acres have an impervious cover ranging from 26% to 50%, 371.85 acres have an impervious cover ranging from 51% to 75% and 59.22 acres have an impervious cover ranging from 76% to 100%.

Based on information contained in the MS4 mapping tab of Connecticut Environmental Conditions Online The impervious surface area consists of 243.15 acres of buildings, 323.82 acres of roads and 455.04.28 acres of other impervious surfaces for a total impervious surface area of 1,022.01 acres. Of the 323.82 acres of road impervious area, 210.93 acres are town roads and 112.89 acres are state roads.

The DCIA Mapping was conducted in substantial accordance with the methodologies presented in the October 25, 2017 UConn CLEAR Webinar entitled *CT MS4 Mapping Details, Clarifications and Tools*, the October 19, 2018 UConn CLEAR Workshop entitled *CT MS4 Mapping Workshop* as well as information contained in the EPA reference entitled *Estimating Change in Impervious Area (IA) and Directly Connected Impervious Area (DCIA) for Massachusetts Small MS4 Permit utilizing Sutherland equations*.

The DCIA computations were prepared utilizing Connecticut Environmental Conditions Online MS4 base mapping prepared by UConn CLEAR.

Impaired waters were determined from the reports entitled *2016 Integrated Water Quality Report*, dated April 2017, and *2018 Integrated Water Quality Report*, dated August 01, 2019, prepared by the State of Connecticut Department of Energy and Environmental Protection (CT DEEP).

The method to determine the 2012 baseline DCIA was to first compile the CT DEEP drainage basin characteristics in a Microsoft Excel spreadsheet. Information on the Connecticut Environmental Conditions Online MS4 Mapping was used to determine the impervious area breakdown as Buildings, Roads and Other. For CT DEEP drainage basins that fell in two or more municipalities the advanced mapping tab of Connecticut Environmental Conditions Online was used to delineate and determine the applicable town CT DEEP basin area. It was assumed that the entire drainage basin characteristics were directly proportional to the applicable town CT DEEP drainage basin area.

In that ConnDOT has a MS4 Stormwater Program which applies to state owned roads and facilities which the town has no control over, it was decided that the impervious state road area would be determined and deducted from the total impervious road area for each CT DEEP drainage basin as the impervious road areas associated with state highways and facilities constitutes a considerable portion of the total town impervious road area.

The ConnDOT state highway, parking lot and facility impervious road areas were then determined for each CT DEEP drainage basin.

The ConnDOT state highway, parking lot and facility impervious road areas were then deducted from the total town impervious road area to determine a town owned impervious road area for each CT DEEP drainage basin.

Subsequent to the above deduction, the total impervious area in acres and percentage was then recomputed for each CT DEEP drainage basin.

The DCIA formula for each of four development types was then utilized to compute the DCIA. The impervious area in acres was assigned to each of the four Sutherland equations which were modified for the northeastern United State. The Sutherland equation to be utilized was determined using the following methodology:

For impervious percentage less than 6%:

100% of the impervious area was assigned to the slight connectivity Sutherland Equation where $DCIA\% = 0.01*(IA\%)^{2.0}$

For an impervious area between 6% and 12 %:

50% of the area was assigned to the partial connectivity Sutherland Equation where $DCIA\% = 0.04*(IA\%)^{1.7}$

and

50% was assigned to the average connectivity Sutherland Equation where $DCIA\% = 0.10*(IA\%)^{1.5}$

For an impervious area between 12% and 18 %:

50% of the area was assigned to the average connectivity Sutherland Equation where $DCIA\% = 0.10*(IA\%)^{1.5}$

and

50% was assigned to the high connectivity Sutherland Equation where $DCIA\% = 0.40*(IA\%)^{1.2}$

For an impervious area of greater than 18 %:

100% of the area was assigned to the high connectivity Sutherland Equation where $DCIA\% = 0.40*(IA\%)^{1.2}$

The DCIA for each CT DEEP drainage basin was then summed to determine the entire town DCIA.

Subsequent to completion of 2012 Baseline DCIA computations, UConn CLEAR Mapping available on Connecticut Environmental Conditions Online (CT ECO) was revised to separate road impervious area into State Road Impervious Area (Acres) and Town Road Impervious Area (Acres).

The original 2012 Baseline DCIA computations were revised utilizing the UConn CLEAR State Road Impervious Area (Acres) and Town Road Impervious Area (Acres). No major 2012 Baseline DCIA computation discrepancies were noted.

Land use files will be reviewed to determine disconnection of DCIA since July 01, 2012 for utilization in reaching the CT DEEP goal of 2% disconnection of DCIA by June 30, 2022.

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

6.1 BMP Summary

| BMP | Status | Activities in current reporting period | Measurable goal | Responsible Person and Department | Due | Date completed or projected completion date | Additional details |
|--|---------|--|-----------------|---|---------------|---|---|
| 6-1 Develop/implement formal employee training program | Ongoing | 2017 - None 2018 - All snow plow/spreader drivers attended a Snow Plow Safety course provided by Connecticut Interlocal Risk Management Agency (CIRMA) 2019 - None 2020 - None | Developing | Ed Adanti, Director, Department of Public Works | July 01, 2017 | 2018 | While training was anticipated to occur in 2020 the COVID-19 pandemic precluded this option. It is anticipated training will be implemented when the pandemic is under control. |
| 6-2 Implement MS4 property and operations maintenance | Ongoing | The Town of Old Lyme and the Town of Lyme is committed to implement an organic based Integrated Pest Management Plan at the Town Woods Athletic Fields and School Grounds which was developed by Dr. Jerry Silbert of the Watershed Partnership. | Continuing | Ed Adanti, Director, Department of Public Works | July 01, 2018 | Continuing | |
| 6-3 Implement coordination with interconnected MS4s | Ongoing | The Town of Old Lyme continued to coordinate MS4 responsibilities with the Town of East Lyme and the Town of Lyme | Continuing | Ed Adanti, Director, Department of Public Works | July 01, 2017 | July 1, 2017 | |

| | | | | | | | |
|---|-----------------|--|------------|---|---------------|---------------|--|
| 6-4 Develop/implement program to control other sources of pollutants to the MS4 | To Be Developed | 2017 through 2020 None | | Nathan L. Jacobson & Associates, Inc., Town MS4 Consultant | July 01, 2017 | | |
| 6-5 Evaluate additional measures for discharges to impaired waters* | To Be Developed | 2017 through 2020 None | | Nathan L. Jacobson & Associates, Inc., Town MS4 Consultant | July 01, 2017 | | |
| 6-6 Track projects that disconnect DCIA | To Be Developed | 2017 through 2020 None Will be implemented in 2021, if appropriate. | | Nathan L. Jacobson & Associates, Inc., Town MS4 Consultant | July 01, 2017 | | |
| 6-7 Implement infrastructure repair/rehab program | To Be Developed | 2017 through 2020 None Will be implemented in 2021. | | Ed Adanti, Director, Department of Public Works | July 01, 2021 | | |
| 6-8 Develop/implement plan to identify/prioritize retrofit projects | To Be Developed | 2017 through 2020 None Will be implemented in 2021. | | Ed Adanti, Director, Department of Public Works | July 01, 2020 | | |
| 6-9 Implement retrofit projects to disconnect 2% of DCIA | To Be Developed | 2017 through 2020 None | | Ed Adanti, Director, Department of Public Works and Nathan L. Jacobson & Associates, Inc. | July 01, 2022 | | |
| 6-10 Develop/implement street sweeping program | Ongoing | The Town of Old Lyme currently implements a road sweeping program whereby all town roads are swept at one time per year. | Compliance | Ed Adanti, Director, Department of Public Works | July 01, 2017 | July 01, 2017 | |

| | | | | | | | |
|---|---------|---|------------------------|---|---------------|---------------|--|
| 6-11 Develop/implement catch basin cleaning program | Ongoing | The Town of Old Lyme currently implements a catch basin cleaning program whereby all catch basins south of I-95 and north of I-95 are cleaned in alternate years. | Substantial Compliance | Ed Adanti, Director, Department of Public Works | July 01, 2020 | July 01, 2017 | |
| 6-12 Develop/implement snow management practices | Ongoing | See employee training. | Substantial Compliance | Ed Adanti, Director, Department of Public Works | July 01, 2018 | July 01, 2017 | |
| | | | | | | | |

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

It is anticipated that the road sweeping program, where all town roads are swept at least once per year, and the catch basin cleaning program, where catch basins are cleaned at least once every two years will continue in 2021. All catch basins are visually inspected every year to determine if the catch basin cleaning frequency is adequate.

6.3 Pollution Prevention/ Good Housekeeping reporting metrics

| Metrics | |
|--|---|
| Employee training provided for key staff | 2017 - None 2018 - All snow plow/spreader drivers attended a Snow Plow Safety course provided by Connecticut Interlocal Risk Management Agency (CIRMA) 2019 - None 2020 - None |
| Street sweeping | |
| Lane miles swept | 2017 through 2020 - 119.04 |
| Volume (or mass) of material collected | 2017 - Undetermined 2018 - 120± C.Y. 2019 - 120± C.Y. 2020 - 100± C.Y. |

| | |
|--|---|
| Catch basin cleaning | |
| Total catch basins in priority areas | TBD |
| Total catch basins in MS4 | 650± |
| Catch basins inspected | 2017 - 100± Located North of I-95 on a monthly basis 2018 - 100± Located South of I-95 on a monthly basis 2019 - 100± Located North of I-95 on a monthly basis 2020 - 100± Located South of I-95 on a monthly basis |
| Catch basins cleaned | 2017 - 300± Located South of I-95 2018 - 300± Located North of I-95 2019 - 300± Located South of I-95 2020 - 300± Located North of I-95 |
| Volume (or mass) of material removed from all catch basins | 2017 - Undetermined 2018 - 100± C.Y. 2019 - 100± C.Y. 2020 - 100± C.Y. |
| Volume removed from catch basins to impaired waters (if known) | 2017 through 2020 - Undetermined |
| Snow management | |
| Type(s) of deicing material used | Deicing Mix Comprised of 3 Parts Sand to 1 Part Salt by Volume |
| Total amount of each deicing material applied | Winter 2017 to 2018 400± Tons Sand and 250± Tons NaCl Winter 2018 to 2019 300± Tons Sand and 150± to 200± Tons NaCl Winter 2019 to 2020 250± Tons Sand and 150± Tons NaCl |
| Type(s) of deicing equipment used | 5 Snow Plows/Spreaders with Manually Controlled Spreaders 4 Snow Plows/Spreaders with Ground Speed Controlled Spreaders Application rate 150-200 pounds per lane (curb) mile |
| Lane-miles treated | 2017 through 2020 - 119.04 |
| Snow disposal location | Road shoulders |
| Staff training provided on application methods & equipment | 2017 - None 2018 - All snow plow/spreader drivers attended a Snow Plow Safety course provided by Connecticut Interlocal Risk Management Agency (CIRMA). Topics included Spreading Operations, New Anti-Icing Techniques and Cleanup and Recordkeeping. 2019 - None 2020 - None |

| Municipal turf management program actions (for permittee properties in basins with N/P impairments) | |
|---|---|
| Reduction in application of fertilizers (since start of permit) | 2017 and ongoing - The Town of Old Lyme and the Town of Lyme is committed to implement an organic based Integrated Pest Management Plan at the Town Woods Athletic Fields and School Grounds which was developed by Dr. Jerry Silbert of the Watershed Partnership. |
| Reduction in turf area (since start of permit) | 2017 through 2020 - 0 Acres |
| Lands with high potential to contribute bacteria (dog parks, parks with open water, & sites with failing septic systems) | |
| Cost of mitigation actions/retrofits | 2017 through 2020 - \$0 |

6.4 Catch Basin Cleaning Program

| Briefly describe the method used to optimize your catch basin inspection and cleaning schedule. |
|---|
| <p>It is estimated that there are approximately 650 catch basins in the Town of Old Lyme.</p> <p>A DPW Employee witnesses all catch basin structure cleaning.</p> <p>2017 and 2019 - 300± catch basins and storm manholes located south of I-95 are cleaned. 100± random catch basins on the north side of I-95 are inspected for sediment accumulation.</p> <p>2018 and 2020 - 300± catch basins and storm manholes located north of I-95 are cleaned. 100± random catch basins on the south side of I-95 are inspected for sediment accumulation.</p> |

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. |
|--|
| <p>Storm Drainage Retrofit prioritization will be given to stormwater outfalls that are known to result in soil erosion and sedimentation. Prioritization will be given to the outfalls within the impaired water drainage basins with particular emphasis placed on stormwater outfalls which are located on fine grained glacial till soils.</p> |

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

The 2012 Baseline DCIA was determined to be 34.16 acres

The CT DEEP goal of 2% disconnection of the 2012 Baseline DCIA will mean the town will have to disconnect 0.683 acres of DCIA by June 30, 2022.

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

The retrofit program will be developed and implemented to meet the minimum CT DEEP goal of disconnecting 0.683 acres of DCIA by June 30, 2022.

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>.

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.

2017 - It was anticipated that dry weather screening and sampling, where applicable, would be conducted in Fall. However due to unseasonably heavy precipitation and associated high groundwater conditions no dry weather screening was conducted.

2018 - It was anticipated that dry weather screening and sampling, where applicable, would be conducted in Fall. However due to unseasonably heavy precipitation and associated high groundwater conditions no dry weather screening was conducted.

2019 - It was anticipated that dry weather screening and sampling, where applicable, would be conducted in Fall. However due to unseasonably heavy precipitation and associated high groundwater conditions no dry weather screening was conducted.

2020 - No dry weather screening or sampling was conducted.

It is anticipated that dry weather screening will be conducted in late Spring and early Summer 2021.

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

2.1 Screening data collected under 2017 permit

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

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

2.2 Credit for screening data collected under 2004 permit

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

| Outfall | Sample date | Parameter (Nitrogen, Phosphorus, Bacteria, or Other pollutant of concern) | Results (Colonies/100 ml) | Name of Laboratory (if used) | Follow-up required? |
|--------------|-------------|---|---------------------------|------------------------------|---------------------|
| 1 Commercial | 12/06/04 | Bacteria - E.coli | >60 | Phoenix Environmental | No |
| 1 Commercial | 11/17/05 | Bacteria - E.coli | 210 | Phoenix Environmental | No |
| 1 Commercial | 11/16/06 | Bacteria - E. coli Total Coliform | 20 >2,000 | Phoenix Environmental | No |
| 1 Commercial | 01/11/08 | Bacteria - E. coli | 200 | Phoenix Environmental | No |
| 1 Commercial | 03/19/08 | Bacteria - E. coli Total Coliform | 90 100 | Phoenix Environmental | No |
| 1 Commercial | 08/16/10 | Bacteria - E. coli | 2,480 | Phoenix Environmental | No |
| 4 Industrial | 12/06/04 | Bacteria - E. coli | 12 | Phoenix Environmental | No |
| 4 Industrial | 11/17/05 | Bacteria - E. coli | 60 | Phoenix Environmental | No |
| 4 Industrial | 11/16/06 | Bacteria - E. coli Total Coliform | 10 100 | Phoenix Environmental | No |
| 4 Industrial | 01/11/08 | Bacteria - E. coli | 20 | Phoenix Environmental | No |
| 4 Industrial | 03/19/08 | Bacteria - E. coli Total Coliform | 20 30 | Phoenix Environmental | No |
| 4 Industrial | 08/16/10 | Bacteria - E. coli | 810 | Phoenix Environmental | No |
| 3 - R15 | 11/06/14 | Bacteria - E.coli Total Coliform | 150 >24,200 | Phoenix Environmental | No |

| | | | | | |
|-----------|----------|-------------------------------------|--------------------|--------------------------|----|
| 3 - R15 | 11/17/14 | Bacteria - E-coli Total Coliform | 460 >24,200 | Phoenix Environmental | No |
| 3 - R15 | 08/11/15 | Bacteria - E-coli Total Coliform | 1,670 >24,200 | Phoenix Environmental | No |
| 3 - R15 | 10/28/15 | Bacteria - E-coli Total Coliform | 10,460 >24,200 | Phoenix Environmental | No |
| 3 - R15 | 09/19/16 | Bacteria - E-coli Total Coliform | 14,100 >24,200 | Phoenix Environmental | No |
| 3 - R15 | 11/15/16 | Bacteria - E-coli Total Coliform | 1,780 >24,200 | Phoenix Environmental | No |
| 3 - R15 | 11/29/16 | Bacteria - E-coli Total Coliform | 1,310 >24,200 | Phoenix Environmental | No |
| 4 - R-20 | 11/06/14 | Bacteria - E-coli Total Coliform | 80 >24,200 | Phoenix Environmental | No |
| 4 - R-20 | 11/17/14 | Bacteria - E-coli Total Coliform | 1,850 >24,200 | Phoenix Environmental | No |
| 4 - R-20 | 08/11/15 | Bacteria - E-coli Total Coliform | 3,650 >24,200 | Phoenix Environmental | No |
| 4 - R-20 | 10/28/15 | Bacteria - E-coli Total Coliform | 130 >24,200 | Phoenix Environmental | No |
| 4 - R-20 | 09/19/16 | Bacteria - E-coli Total Coliform | 2,600 >24,200 | Phoenix Environmental | No |
| 4 - R-20 | 11/15/16 | Bacteria - E-coli Total Coliform | 107 >24,200 | Phoenix Environmental | No |
| 4 - R-20 | 11/29/16 | Bacteria - E-coli Total Coliform | 1,210 17,300 | Phoenix Environmental | No |
| 5 - RU-80 | 11/06/14 | Bacteria - E-coli Total Coliform | 680 >24,200 | Phoenix Environmental | No |
| 5 - RU-80 | 11/17/14 | Bacteria - E-coli Total Coliform | 2,480 >24,200 | Phoenix Environmental | No |
| 5 - RU-80 | 08/11/15 | Bacteria - E-coli Total Coliform | 1,150 >24,200 | Phoenix Environmental | No |
| 5 - RU-80 | 10/28/15 | Bacteria - E-coli Total Coliform | 2,760 >24,200 | Phoenix Environmental | No |
| 5 - RU-80 | 09/19/16 | Bacteria - E-coli Total Coliform | >24,200 >24,200 | Phoenix Environmental | No |
| 5 - RU-80 | 11/15/16 | Bacteria - E-coli Total Coliform | 2,600 >24,200 | Phoenix Environmental | No |
| 5 - RU-80 | 11/29/16 | Bacteria - E-coli Total Coliform | 1,010 >24,200 | Phoenix Environmental | No |

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

Provide the following information for outfalls exceeding the pollutant threshold.

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

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

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

[illegible]

Part III: Additional IDDE Program Data

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

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

| 1. Catchment ID (DEEP Basin ID) | 2. Category | 3. Rank |
|------------------------------------|---------------|---------|
| CT-E1_024-SB | High Priority | 1 |
| CT-E1_026-SB | High Priority | 2 |
| CT-E1_023 | High Priority | 3 |
| CT-E1_017 | High Priority | 4 |
| CT-E3_008 | High Priority | 5 |
| CT-E3_007 | High Priority | 6 |
| CT-E1_028-SB | Low Priority | 7 |

[illegible]

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 |
|------------|-----------------|------------------------------|
| | | |
| | | |
| | | |

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 |
|-------------------------|-------------------------|---|---------|----------|-------------|
| | | | | | |
| | | | | | |

2017 - It was anticipated that dry weather screening and sampling, where applicable, would be conducted in Fall. However due to unseasonably heavy precipitation and associated high groundwater conditions no dry weather screening was conducted.

2018 - It was anticipated that dry weather screening and sampling, where applicable, would be conducted in Fall. However due to unseasonably heavy precipitation and associated high groundwater conditions no dry weather screening was conducted.

2019 - It was anticipated that dry weather screening and sampling, where applicable, would be conducted in Fall. However due to unseasonably heavy precipitation and associated high groundwater conditions no dry weather screening was conducted.

2020 - No dry weather screening or sampling was conducted

It is anticipated that dry weather screening will be conducted in late Spring and early Summer 2021.

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

| 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: |
| Timothy Griswold, First Selectman | Wade M. Thomas, CPMSM |
| Signature: | Signature: |
| Date: April , 2021 | Date: April , 2021 |