



Town of Hebron, Connecticut

2021 Annual Report

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

Permit Number GSM000101

MS4 General Permit
 Town of Hebron 2021 Annual Report
 Permit Number GSM 000101
 January 01, 2021 - December 31, 2021

Primary MS4 Contact: Wade M. Thomas, Nathan L. Jacobson & Associates, Inc., wthomas@nlja.com, 860.526.9591

This report documents Town of Hebron’s efforts to comply with the conditions of the MS4 General Permit to the maximum extent practicable (MEP) from January 01, 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 | Person Responsible, Department | Additional Details |
|---|---|-------------------------------------|--|--|------------------------|--|---------------------------|
| 1-1 Implement public education and outreach | None. Before July 01, 2021 Clean Waters Starting in Your Home and Yard Fact Sheets were prepared by a collaborative effort between the Connecticut Sea Grant Extension Program and the University of Connecticut | | Will be made available to the public on the town website at: http://hebronct.com/ | | Developing | Andrew J. Tierney, Town Manager and Nathan L. Jacobson & Associates, Inc., Town Engineer | |

| | | | | | | | |
|---|---|-----------------------------|---|--------------------------------|-------------------------------|--|---|
| | Cooperatve Extension System NEMO Program will be made available to the public on the town website. | | | | | | |
| 1-2 Address education/ outreach for pollutants of concern | None Required | | | | | Andrew J. Tierney, Town Manager | |
| 1-3 Salmon River Watershed Partnership (SRWP) Activities | The SRWP Coordinator, Pat Young, represents the Partnership on statewide issues relating to water quality and non-point source pollution and related information is shared with the 10 watershed towns. | | https://www.salmonriverct.org | 100s | Public Education and Outreach | Pat Young, SRWP Coordinator | |
| | 2017 - March - SRWP Annual Newsletter | | https://www.salmonriverct.org | 100s | Public Education and Outreach | Pat Young, SRWP Coordinator | Watershed resource protection and water quality preservation |
| | 2017 - March and ongoing Gay City State Park Vegetated Buffer Area and Biofilter and Permanent Educational Signage | | | 90 RHAM Middle School Students | Public Education and Outreach | SRWP, UConn Master Gardeners and CT DEEP Parks | Impacts of waterfowl on water quality. |
| | 2017 May to September HOBO stream temperature loggers were used to obtain hourly readings of temperature at 10 locations | Field sampling and analyses | https://www.salmonriverct.org The data can be accessed at: http://db.ecosheds.org/ | 100s | Public Education and Outreach | Pat Young, SRWP Coordinator 2 College Interns and Town land-Use Staff | Four sampling locations are located in Hebron and include: Fawn Brook at Blacks Bridge Road Fawn Brook at Conn Route 85 |

| | | | | | | | |
|--|---|------------------------------|--|------|-------------------------------|---|---|
| | | | | | | | Jeremy River at Reidy Hill Road Raymond Brook at Kinney Road |
| | 2017 June to August Field monitoring of 11 stream segment continued. Weekly samples were analyzed for temperature, pH, dissolved oxygen, conductivity, total dissolved solids and salinity. | Field sampling and analyses. | https://www.salmonriverct.org A report was also prepared and forwarded to all 10 watershed towns | 100s | Public Education and Outreach | Pat Young, SRWP Coordinator 1 Summer Intern and 8 community volunteers | Two stream sampling locations are in Hebron: Raymond Brook N 41.6562 W -72.3463 Mint Brook N 41.6414 W -72.3420 |
| | 2017 - October Pond Life and Water Quality | | Field Trip | 100s | Public Education and Outreach | Pat Young, SRWP Coordinator | Impacts of water quality on pond life. |
| | 2018 - March - SRWP Annual Newsletter | | https://www.salmonriverct.org | 100s | Public Education and Outreach | Pat Young, SRWP Coordinator | Watershed resource protection and water quality preservation |
| | 2018 May to September HOBO stream temperature loggers were used to obtain hourly readings of temperature at 10 locations | Field sampling and analyses | https://www.salmonriverct.org The data can be accessed at: http://db.ecosheds.org/ | 100s | Public Education and Outreach | Pat Young, SRWP Coordinator 2 College Interns and Town Land-Use Staff | Five sampling locations are located in Hebron and include: Fawn Brook at Blacks Bridge Road Fawn Brook at Conn Route 85 Jeremy River at Reidy Hill Road Mint Brook at Conn. Route 207 Raymond Brook at Kinney Road |

| | | | | | | | |
|--|---|-------------------------------------|---|-------------|--------------------------------------|--|--|
| | <p>2018 June to August Field monitoring of 11 stream segment continued. Weekly samples were analyzed for temperature, pH, dissolved oxygen, conductivity, total dissolved solids and salinity.</p> | <p>Field sampling and analyses.</p> | <p>https://www.salmonriverct.org A report was also prepared and forwarded to all 10 watershed towns</p> | <p>100s</p> | <p>Public Education and Outreach</p> | <p>Pat Young, SRWP Coordinator 1 Summer Intern and 8 community volunteers</p> | <p>Two stream sampling locations are in Hebron: Raymond Brook N 41.6562 W -72.3463 Mint Brook N 41.6414 W -72.3420</p> |
| | <p>2018 Gay City State Park Vegetated Buffer Area and Biofilter 296 native shrubs and perennials were planted to further deter Canada Geese from the pond and temporary signage explaining the plants were installed.</p> | | <p>https://www.salmonriverct.org</p> | <p>100s</p> | <p>Public Education and Outreach</p> | <p>SRWP, UConn Master Gardeners and CT DEEP Parks</p> | <p>Impacts of waterfowl on water quality.</p> |
| | <p>2018 - August - Hebron Day Celebration Public Event</p> | | <p>In Person A booth was set up to display SRWP activities and a sign-up for volunteer water quality monitoring to focus on the impact of water quality on macroinvertebrates and water quality preservation.</p> | <p>100s</p> | <p>Public Education and Outreach</p> | <p>Pat Young, SRWP Coordinator</p> | <p>A brochure was also available to participants which included steps landowners can take to protect water quality.</p> |
| | <p>2019 - March - SRWP Annual Newsletter</p> | | <p>https://www.salmonriverct.org</p> | <p>100s</p> | <p>Public Education and Outreach</p> | <p>Pat Young, SRWP Coordinator</p> | <p>Watershed resource protection and water quality preservation</p> |
| | <p>2019 - March - Hebron Maple Fest</p> | | <p>In Person A booth was set up to display SRWP activities and a sign-up for volunteer water quality monitoring to focus on the impact of water quality on macroinvertebrates and water quality preservation.</p> | <p>100s</p> | <p>Public Education and Outreach</p> | | |

| | | | | | | | |
|--|---|------------------------------------|---|------|-------------------------------------|--|---|
| | 2019 May to September HOBO stream temperature loggers were used to obtain hourly readings of temperature at 10 locations | Field sampling and analyses | https://www.salmonriverct.org The data can be accessed at: http://db.ecosheds.org/ | 100s | Public Education and Outreach | Pat Young, SRWP Coordinator 2 College Interns and Town Land- Use Staff | One sampling location was located in Hebron: Jeremy River at Chestnut Hill Road |
| | 2019 June to August Field monitoring of 11 stream segment continued. Weekly samples were analyzed for temperature, pH, dissolved oxygen, conductivity, total dissolved solids and salinity. | Field sampling and analyses. | https://www.salmonriverct.org A report was also prepared and forwarded to all 10 watershed towns | 100s | Public Education and Outreach | Pat Young, SRWP Coordinator 1 Summer Intern and 8 community volunteers | Two stream sampling locations are in Hebron: Raymond Brook N 41.6562 W -72.3463 Mint Brook N 41.6414 W -72.3420 |
| | 2019 Gay City State Park Vegetated Buffer Area and Biofilter March - August 150 native shrubs and perennials were planted to further deter Canada Geese from the pond. Temporary signage explaining the plants that were planted was also installed. | | | 100s | Public Education and Outreach | SRWP, UConn Master Gardeners and CT DEEP Parks | Impacts of waterfowl on water quality. |
| | 2019 August Hebron Day Celebration Public Event | | In Person A booth was set up to display SRWP activities and a sign-up for volunteer water quality monitoring to focus on the impact of water quality on macroinvertebrates and water quality preservation. | 100s | Public Education and Outreach | Pat Young, SRWP Coordinator | A brochure was also available to participants which included steps landowners can take to protect water quality. |
| | 2020 March SRWP Annual Newsletter | | https://www.salmonriverct.org | 100s | Public Education and Outreach | Pat Young, SRWP Coordinator | Watershed resource protection and water quality preservation |

| | | | | | | | |
|--|--|------------------------------------|---|------|-------------------------------------|--|---|
| | 2020 May to September HOBO stream temperature loggers were used to obtain hourly readings of temperature at 10 locations | Field sampling and analyses | https://www.salmonriverct.org The data can be accessed at: http://db.ecosheds.org/ | 100s | Public Education and Outreach | Pat Young, SRWP Coordinator 2 College Interns and Town Land- Use Staff | One sampling location was located in Hebron: Jeremy River at Grayville Road |
| | 2020 June to August Field monitoring of 11 stream segment continued. Weekly samples were analyzed for temperature, pH, dissolved oxygen, conductivity, total dissolved solids and salinity. | Field sampling and analyses. | https://www.salmonriverct.org A report was also prepared and forwarded to all 10 watershed towns. | 100s | Public Education and Outreach | Pat Young, SRWP Coordinator 1 Summer Intern and 8 community volunteers | Two stream sampling locations are in Hebron: Raymond Brook N 41.6562 W -72.3463 Mint Brook N 41.6414 W -72.3420 |
| | 2020 August Hebron Day Celebration Public Event | | In Person A booth was set up to display SRWP activities and a sign-up for volunteer water quality monitoring to focus on the impact of water quality on macroinvertebrates and water quality preservation. | 100s | Public Education and Outreach | Pat Young, SRWP Coordinator | A brochure was also available to participants which included steps landowners can take to protect water quality. |
| | 2021 March SRWP Annual Newsletter | | https://www.salmonriverct.org | 100s | Public Education and Outreach | Pat Young, SRWP Coordinator | Watershed resource protection and water quality preservation |
| | 2021 May to September HOBO stream temperature loggers were used to obtain hourly readings of temperature at 10 locations | Field sampling and analyses | https://www.salmonriverct.org The data can be accessed at: http://db.ecosheds.org/ | 100s | Public Education and Outreach | Pat Young, SRWP Coordinator 2 College Interns and Town Land- Use Staff | |
| | 2021 June to August Field monitoring of 11 stream segment continued. Weekly samples were | Field sampling and analyses. | https://www.salmonriverct.org A report was also prepared and forwarded to all 10 watershed towns | 100s | Public Education and Outreach | Pat Young, SRWP Coordinator 1 Summer Intern and 8 | Two stream sampling locations are in Hebron: Raymond Brook N 41.6562 |

| | | | | | | | |
|--|--|--|---|---|-------------------------------|-----------------------------|--|
| | analyzed for temperature, pH, dissolved oxygen, conductivity, total dissolved solids and salinity. | | | | | community volunteers | W -72.3463 Mint Brook N 41.6414 W -72.3420 |
| | 2021 August Hebron Day Celebration Public Event | | In Person A booth was set up to display SRWP activities and a sign-up for volunteer water quality monitoring to focus on the impact of water quality on macroinvertebrates and water quality preservation. | 100s | Public Education and Outreach | Pat Young, SRWP Coordinator | A brochure was also available to participants which included steps landowners can take to protect water quality. |
| | 2021 November Pond Life and Water Quality | | Field Trip | 80 RHAM 7 th and 8 th Graders | Public Education and Outreach | Pat Young, SRWP Coordinator | Impacts of water quality on pond life. |
| | | | | | | | |

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

The Salmon River Watershed Partnership (SRWP) was formed in 2007 and has been conducting public education and outreach activities since then. It is anticipated that public education and outreach activities will continue to be conducted through 2020.

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 | Person Responsible, Department | 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 | 2017 A hard copy of the Draft 2017 Stormwater Management Plan (SMP) was made available to the public for review and comment on the town website. | Complied with Requirements | Andrew J. Tierney, Town Manager and Nathan L. Jacobson & Associates, Inc., Town Engineer | April 20, 2017. | http://hebronct.com/ | No public comments were received by the Office of the Town Manager |
| 2-2 Comply with public notice requirements for Annual Reports (Annually by 02/15) | Will Be Complete | 2018 The Draft 2017 MS4 Annual Report will be made available for public review and comment on the town website. | Complied with Requirements The 2017 MS4 Annual Report was available to the public for review and comment. | Andrew J. Tierney, Town Manager | February 22, 2018 | http://hebronct.com/ | No public comments were received by the Office of the Town Manager |
| | Complete | 2019 The Draft 2018 MS4 Annual Report will be made available for public review and comment on the town website. | Complied with Requirements The 2018 MS4 Annual Report was available to the public for review and comment. | Andrew J. Tierney, Town Manager | February 2X, 2019 | http://hebronct.com/ | No public comments were received by the Office of the Town Manager |
| | Complete | 2020 The Draft 2019 MS4 Annual Report was made available for public review and | Complied with Requirements The 2019 MS4 Annual Report was available to the | Andrew J. Tierney, Town Manager | April 23, 2020 | http://hebronct.com/ | No public comments were received by the Office of the Town Manager. |

| | | | | | | | |
|---|----------|--|--|--|----------------|---|---|
| | | comment on the town website. | public for review and comment. | | | | |
| | Complete | 2021 The Draft 2020 MS4 Annual Report was made available for public review and comment on the town website. | Will Comply with Requirements The 2020 MS4 Annual Report was made available to the public for review and comment. | Andrew J. Tierney, Town Manager | March 02, 2021 | http://hebronct.com/ | No public comments were received by Wade Thomas at wthomas@nlja.com |
| | Complete | 2022 The Draft 2021 MS4 Annual Report was made available for public review and comment on the town website. | Will Comply with Requirements The 2021 MS4 Annual Report was made available to the public for review and comment. | Andrew J. Tierney, Town Manager | April 28, 2022 | http://hebronct.com/ | No Public comments were received Wade Thomas at wthomas@nlja.com |
| 2-3 Gay City State Park Biofilter Project | Complete | 2017 The biofilter and vegetated buffer areas were designed and constructed to restore vegetated buffer areas as a biofilter and aid in deterring Canada geese and filtering direct stormwater runoff to the waterbody. The project was a partnership between UConn Master Gardener and CT DEEP Parks. 2018 Planting of an additional 296 | | CT DEEP Parks and UConn Master Gardeners | Ongoing | | |

| | | | | | | | |
|------------------------------|----------|--|--|-----------------------------|----------|---|--|
| | | <p>native shrubs and perennials</p> <p>2019 Planting of an additional 150 native shrubs and perennials</p> | | | | | |
| 2-4 Town Planners Workshop | Complete | <p>2017 May Town Planners Workshop with town land use staff to review upcoming large projects to incorporate stormwater quality measures</p> | | SRWP | May 2017 | | |
| 2-5 Water Quality Monitoring | Ongoing | <p>2017 through 2021</p> <p>2017 3 College student interns, 2 community volunteers and town land use staff participated in water temperature readings on the Upper Jeremy Brook and Raymond Brook stations.</p> <p>2018 3 College student interns, 2 community volunteers participated in water temperature readings on the Upper Jeremy</p> | | Pat Young, SRWP Coordinator | Ongoing | https://www.saimonriverct.org | |

| | | | | | | | |
|-----------------------|------------|--|--|-----------------------------------|---------|---|---------------------------------|
| | | <p>Brook and Raymond Brook stations.</p> <p>2019 2 College student interns in partnership with town land use staff participated in water temperature readings on the Mint Brook and Raymond Brook stations</p> <p>2020 2 College student interns in partnership with town land use staff participated in water temperature readings on the Mint Brook and Raymond Brook stations</p> <p>2021 2 College student interns in partnership with town land use staff participated in water temperature readings on the Mint Brook and Raymond Brook stations</p> | | | | | |
| 2-6 Education Program | Continuing | 2017 October Pond Life and Water Quality. | | Pat Young, SRWP Coordinator | Ongoing | https://www.salmriverct.org | 90 RHAM Middle School Students, |

| | | | | | | | |
|-------------------|------------|---|------------|-----------------------------|---------|---|---|
| | | Presentation and field netting, identification and discussion on impacts of water quality on pond life. | | | | | Teachers and Parents 15 Marlborough Boy Scouts |
| | | 2019 October Pond Life and Water Quality. Presentation and field netting, identification and discussion on impacts of water quality on pond life. | Field Trip | Pat Young, SRWP Coordinator | Ongoing | | 80 RHAM Middle School Students |
| | Continuing | 2018 August Hebron Day Celebration | Booth | Pat Young, SRWP Coordinator | Ongoing | | 100+ area residents |
| | | 2019 August Hebron Day Celebration | Booth | Pat Young, SRWP Coordinator | Ongoing | | |
| | | 2021 August Hebron Day Celebration | Booth | Pat Young, SRWP Coordinator | Ongoing | | |
| 2-7 SRWP Outreach | Continuing | Website and Facebook Outreach | | Pat Young, SRWP Coordinator | Ongoing | https://www.salmonriverct.org | |

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

The Salmon River Watershed Partnership was formed in 2007 and has been conducting public outreach and participation activities which is anticipated to continue through 2022.

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 | Person Responsible, Department | 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 07/01/19) | In Progress | A written IDDE program using the IDDE program template available from the CT DEEP is being developed. | Develop written plan of IDDE program | Andrew J. Tierney, Town Manager and Nathan L. Jacobson & Associates, Inc., Town Engineer | Anticipate completing by the July 01, 2021. | The Department of Public Works will be the listed contact. |
| 3-2 Develop list and maps of all MS4 stormwater outfalls in priority areas (Due 7/1/20) | Completed | MS4 stormwater outfall mapping was conducted in 2007. The stormwater outfall mapping was compiled on a ESRI GIS layer. The MS4 stormwater outfall mapping will be updated to include impaired waters as contained in the State of Connecticut, Department of Energy and Environmental Protection 2016 Integrated Water Quality Report if applicable. The stormwater outfalls in the impaired waters will be identified. | Development of an ESRI GIS map layer with MS4 stormwater outfalls. | Andrew J. Tierney, Town Manager and Nathan L. Jacobson & Associates, Inc., Town Engineer | Prior to July 01, 2019 | |
| 3-3 Implement citizen reporting program (Ongoing) | In Progress | A program to allow the general public to report suspected illicit discharges is in the process of being set up. | Under Development | Kevin J. Kelly, Director, Department of Public Works | Anticipate completing by July 01, 2021. | The Department of Public Works will be the listed contact. |
| 3-4 Establish legal authority to prohibit illicit discharges (Due 07/01/19) | In Progress | An Illicit Discharge Detection and Elimination Ordinance and Citation Hearing Procedure was enacted at a | Completed | Andrew J. Tierney, Town Manager | May 03, 2007 | |

| | | | | | | |
|--|--|--|----------------|--|----------------|----------------|
| | | Town Meeting on May 03, 2007. | | | | |
| 3-5 Develop record keeping system for IDDE tracking (Due 07/01/17) | In Place | Information regarding IDDE is included in the DPW road files | Completed | Kevin J. Kelly, Director, Department of Public Works | July 01, 2019. | |
| 3-6 Address IDDE in areas with pollutants of concern | Not Applicable There are no Impaired Waters in Hebron other than Gay City State Park. | None Required | Not Applicable | Not Required | Not Applicable | Not Applicable |
| | | | | | | |

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

The written IDDE Program will be developed and posted on the town website and a link listed in each Annual Report. The town will update the written IDDE program as needed throughout the permit term.

The Department of Public Works will maintain the master IDDE tracking spreadsheet and ensure all employees involved in IDDE program understand the logging process.

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) |
|--|---------------------------------|-----------------------------------|-----------------------------|--|---|-------------------------------|
| | 2017 | | | | Not Applicable – None Reported | |
| | 2018 | | | | Not Applicable – None Reported | |
| | 2019 | | | | Not Applicable – None Reported | |
| | 2020 | | | | Not Applicable – None Reported | |
| | 2021 | | | | Not Applicable – None Reported | |

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 |
|--|---|--|---|----------------------------|
| 2017 - Citizen illicit discharge reporting system was not in place. No illicit discharges were reported. | 2017 - 20 Repairs 34 Joel Drive 28 Cannon Drive 30 Cone Road 9 Hickory Drive 93 Jan Drive 485 Wall Street 931 Church Street 43 West Main Street 127 Country Lane 145 Senate Brook Drive 60 Brighton Road 233 Old Colchester Road 16 Jan Drive 33 East Street 121 London Road 45 Slocum Road | Repair Repair Repair Repair Repair Repair Repair Repair Repair Repair Repair Repair Repair Repair Repair Repair Repair | 4706-01-1-L1 4705-00-1 3108-08-1-L1 3107-00-1 3107-00-1 4705-00-1-L1 4702-01-1 4705-00-1 4705-00-1 4705-00-3-R1 3107-00-1 4701-00-2-R4 3107-00-1 4706-00-1 3107-00-1 4706-00-1 | |

| | | | | |
|--|--|--|---|--|
| | 11 Joel Drive 315 Gilead Street 110 Slocum Road 182 London Road 12 Karen Circle 26 Woods Lane 111 West Street 43 Joel Drive | Repair Repair Repair Repair Repair Repair Repair Repair | 4706-01-1-L1 4706-00-1 4706-00-1 3107-00-1 4706-01-1-L1 4705-00-1-L1 4707-09-1-L1 4706-01-1-L1 | |
| 2021 - Citizen illicit discharge reporting system was in place. No illicit discharges were reported. | 2021 - 3 Repairs 620 East Street 35 Coleman Road 148 Cannon Drive | Repair Repair Repair | 3108-07-1 4707-09-1 4705-00-1 | |
| | | | | |

3.5 Briefly describe the method and effectiveness of said method used to track illicit discharge reports.

The citizen illicit discharge reporting system has been in place since 2017. No illicit discharges have been reported to date which corresponds to no discharges of sewage to town storm drainage systems based on records of Chatham Health District.

3.6 IDDE reporting metrics

| Metrics | |
|--|------------------|
| Estimated or actual number of MS4 outfalls | 293+ |
| Estimated or actual number of interconnections | To Be Determined |
| Outfall mapping complete | 95% |
| Interconnection mapping complete | 0% |
| System-wide mapping complete (detailed MS4 infrastructure) | 40% |
| Outfall assessment and priority ranking | 0% |
| Dry weather screening of all High and Low priority outfalls complete | 0% |
| Catchment investigations complete | 0% |

| | |
|---|-----|
| Estimated percentage of MS4 catchment area investigated | 95% |
|---|-----|

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 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 (Complete, Ongoing, In Progress, or Not started) | Activities in Current Reporting Period | Measurable Goal | Person Responsible, Department | 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 07/01/20) | To be initiated in 2019 | None | Moving to Compliance | Michael K. O'Leary, AICP, Town Planner, Planning and Development Department | Ongoing | 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. |
| 4-2 Develop and Implement a plan for interdepartmental coordination in site plan review and approval (Ongoing) | Ongoing | Nathan L. Jacobson & Associates, Inc., Town Engineer, prepares land use review letters for most applications for the Inland Wetlands Commission, Planning Commission and Zoning Commission. | Interdepartmental Coordination | Michael K. O'Leary, AICP, Town Planner, Planning and Development Department | Ongoing | |
| 4-3 Review site plans for stormwater quality concerns (Ongoing) | Ongoing | Nathan L. Jacobson & Associates, Inc., Town Engineer, encourages the use of LID BMPs as contained in the 2004 Connecticut Stormwater Quality Manual. | Compliance | Thomas H. Fenton, P.E., Town Engineer, Nathan L. Jacobson & Associates, Inc. | Ongoing | |
| 4-4 Conduct site inspections (Ongoing) | Ongoing | The town conducts construction site inspections for proper implementation and maintenance of soil erosion and sediment control measures. | Compliance with Approved Plans | Thomas H. Fenton, P.E., Town Engineer, Nathan L. Jacobson & Associates, Inc. | Ongoing | |
| 4-5 Implement procedure to allow public comment on site development (Ongoing) | Ongoing | The land use application process allows for public comment on land use applications which are submitted to the Inland Wetlands Agency and the | Compliance | Michael K. O'Leary, AICP, Town Planner, Planning and Development Department | Ongoing | |

| | | | | | | |
|--|---------|--|---|--|---------|--|
| | | Planning & Zoning Commission during the Public Hearing Process when applicable. | | | | |
| 4-6 Implement procedure to notify developers about DEEP construction stormwater permit (Ongoing) | Ongoing | Since the inception of the MS4 program Nathan L. Jacobson & Associates, Inc., Town Engineer, has made developer's engineers aware of the need to register for the General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities 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. | Thomas H. Fenton, P.E., Town Engineer, Nathan L. Jacobson & Associates, Inc. | Ongoing | |

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

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 | Person Responsible, Department | 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 07/01/22) | Under Development | The land use regulations will be revised to incorporate the requirements contained in Minimum Control Measure No. 4 - Construction Site Runoff Control and Minimum Control Measure No. 5 - Post-Construction Runoff Control. | The requirements contained in Minimum Control Measure No. 5 - Post-Construction Runoff Control will be forwarded to the Town Planner. | Michael K. O'Leary, AICP, Town Planner, Planning and Development Department | Prior to 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 (Due 07/01/22) | Continuing | Continuing | | Thomas H. Fenton, P.E., Town Engineer, Nathan L. Jacobson & Associates, Inc. | July 01, 2017 | |
| 5-3 Identify retention and detention ponds in priority areas (Due 07/01/20) | Under Development The detention pond and retention pond inventory will be completed in 2020. | Retention Ponds, Detention Ponds and Hydrodynamic Separators are being inventoried. A GIS Map Layer will be created after the inventory. Part of the inventory process will be facility operation and maintenance requirements. | Moving to Compliance | Kevin J. Kelly, Director, Department of Public Works and Thomas H. Fenton, P.E., Town Engineer, Nathan L. Jacobson & | Calendar Year 2021 | |

| | | | | | | |
|---|--|---|---|--|---------------|--|
| | | | | Associates, Inc. | | |
| 5-4 Implement long-term maintenance plan for stormwater basins and treatment structures (Ongoing) | To Be Implemented in 2020 | Inventory Retention Ponds, Detention Ponds and Hydrodynamic Separators. | Accumulated Sediment is removed from all detention basins, retention basins and sedimentation structures annually. | Kevin J. Kelly, Director, Department of Public Works | | A Post-Construction Stormwater Management Facility Operation & Maintenance Plan Manual with an Effective Date of July 01, 2019 was prepared and provided to the DPW. |
| 5-5 DCIA mapping (Due 07/01/20) | 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 Engineer | February 2019 | |
| 5-6 Address post-construction issues in areas with pollutants of concern | Not Applicable There are no Impaired Waters in Hebron other than Gay City State Park. | While there are no Impaired Waters in Hebron, all post-construction stormwater management issues are corrected to address the concerns of Kevin J. Kelly and Thomas H. Fenton, P.E. | Stormwater outfalls discharging to waters identified as impaired in the 2016 Integrated Water Quality Report and in watersheds | Kevin J. Kelly, Director, Department of Public Works and Thomas H. Fenton, P.E., Town Engineer, Nathan L. Jacobson & | July 01, 2017 | |

| | | | | | | |
|--|--|--|---|------------------|--|--|
| | | | with a DCIA of greater than 11 percent will be subject to enhanced water quality treatment. | Associates, Inc. | | |
|--|--|--|---|------------------|--|--|

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 were implemented in 2020.

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) | 7.00 Acres |
| DCIA disconnected (redevelopment plus retrofits) | 2012-2016 - To Be Determined 2017 through 2021 - 0 acres 2012 through 2021 - To Be Determined |
| Retrofit projects completed | 2012-2016 - To Be Determined 2017 through 2021- 0 2012 through 2021 - To Be Determined |
| DCIA disconnected | 2012-2016 - To Be Determined 2017 through 2021 - 0% 2012 through 2021 - To Be Determined |
| Estimated cost of retrofits | \$0 |
| Detention or retention ponds identified | All ponds will be identified in 2021. |

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

Based on information contained in the Factsheet: *Town of Hebron Water Quality and Stormwater Summary*, prepared by the CT DEEP, 839.55 acres of the town has an impervious area exceeding 12% which is approximately 3.51% of the town. 364.47 acres have an impervious cover of ranging from 12% to 25%, 362.17 acres have an impervious cover ranging from 26% to 50%, 84.29 acres have an impervious cover ranging from 51% to 75% and 28.62 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 210.15 acres of buildings, 330.46 acres of roads and 420.20 acres of other impervious surfaces for a total impervious surface area of 960.81 acres.

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 report entitled *2018 Integrated Water Quality Report*, dated August 01, 2019, prepared by the State of Connecticut Department of Energy and Environmental protection.

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 $DCIA\% = 0.40 \cdot (IA\%)^{1.2}$

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 (Complete, Ongoing, In Progress, or Not started) | Activities in Current Reporting Period | Measurable Goal | Person Responsible, Department | Date Completed or Projected Completion Date (include the start date for anything that is 'in progress') | Additional Details |
|---|---|--|------------------------|---|---|---------------------------|
| 6-1 Develop and implement a formal employee training program (Ongoing) | Ongoing | See 6.3 Below DPW Employees are encouraged to attend formal training programs. | Compliance | Kevin J. Kelly, Director, Department of Public Works and Nathan L. Jacobson & Associates, Inc., Town Engineer | July 01, 2017 | |
| 6-2 Implement MS4 property and operations maintenance (Ongoing) | Ongoing | | Compliance | Kevin J. Kelly, Director, Department of Public Works | July 01, 2017 | |
| 6-3 Implement coordination with interconnected MS4s | Ongoing | The Town of Hebron continued to coordinate MS4 responsibilities with the Towns of Bolton, Andover, Columbia, Lebanon, Colchester, Marlborough and Glastonbury as well as Conn DOT. | Continuing | Kevin J. Kelly, Director, Department of Public Works | July 01, 2017 | |
| 6-4 Develop and implement a program to control other sources of pollutants to the MS4 | Not Started | Currently no other sources of pollutants exist in Hebron. | Not Applicable | Thomas H. Fenton, P.E., Town Engineer, Nathan L. Jacobson & Associates, Inc. | Not Required | |

| | | | | | | |
|---|----------------------------|--|---------------------------------|--|---------------|--|
| 6-5 Evaluate additional measures for discharges to impaired waters* | Not Applicable | No impaired waters exist in the Town of Hebron. | Not Applicable | Thomas H. Fenton, P.E., Town Engineer, Nathan L. Jacobson & Associates, Inc. | Not Required | |
| 6-6 Track projects that disconnect DCIA (Ongoing) | In Progress | 2017 through 2021 - None | Will be done whenever possible. | Kevin J. Kelly, Director, Department of Public Works and Nathan L. Jacobson & Associates, Inc., Town Engineer | | Redevelopment projects that result in DCIA reduction are rare in Hebron. |
| 6-7 Implement infrastructure repair/rehab program (Due 07/01/21) | In Progress | 2017 through 2020 - None | Moving to Compliance | Kevin J. Kelly, Director, Department of Public Works and Nathan L. Jacobson & Associates, Inc., Town Engineer | | |
| | Schematic Designs Complete | 2021 The University of Connecticut Stormwater Corps developed the Hebron Stormwater Runoff Reduction Plan and presented the plan in November. Several sites were considered in town and the University of Connecticut Stormwater Corps proposed LID retrofits at the following sites: Hebron Elementary School Russell Mercier Senior Center Hebron Town Office Building Veteran's Memorial Park RHAM Middle School | LID retrofits | Kevin J. Kelly, Director, Department of Public Works | November 2021 | |

| | | | | | | |
|--|-----------------|--|---------------------------------|---|--|---|
| | | Burnt Hill Park and Gilead Hill School | | | | |
| 6-8 Develop and implement plan to identify/prioritize retrofit projects (Due 07/01/20) | To Be Developed | 2017 through 2021 - None | Moving to Compliance | Kevin J. Kelly, Director, Department of Public Works and Nathan L. Jacobson & Associates, Inc., Town Engineer | | |
| 6-9 Implement retrofit projects to disconnect 2% of DCIA (Due 07/01/22) | To Be Developed | 2017 through 2021 - None | Will be done whenever possible. | Kevin J. Kelly, Director, Department of Public Works and Nathan L. Jacobson & Associates, Inc., Town Engineer | | Retrofit projects that result in DCIA reduction are rare in Hebron. |
| 6-10 Develop and implement a street sweeping program (Ongoing) | Ongoing | The Town of Hebron currently implements a road sweeping program whereby all town roads are swept at one time per year. | Continuing | Kevin J. Kelly, Director, Department of Public Works | | |
| 6-11 Develop and implement catch basin cleaning program (Ongoing) | Ongoing | The Town of Hebron currently implements a catch basin cleaning program whereby all catch basins are cleaned every year | Continuing | Kevin J. Kelly, Director, Department of Public Works | | |
| 6-12 Develop and implement snow management practices (Due 07/01/18) | Ongoing | See 6.3 Below | Continuing | Kevin J. Kelly, Director, Department of Public Works | | |

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

Continue to have employees attend continuing education on DPW pollution prevention BMPs.
Continue to implement road sweeping and catch basin cleaning operations town-wide.

6.3 Pollution Prevention/ Good Housekeeping reporting metrics

| Metrics | |
|---|---|
| Employee training provided for key staff | <p>DPW Employees are encouraged to attend CT Technology Transfer (T2) Center training programs.</p> <p>2017 - Rob Schadtler completed the Road Master Program which included training on Planning and Managing Local Road Snow and Ice Control Activities. Dillon Fournier completed the Public Works Academy which included training on Winter Operations and Safe Snow Plowing. 2018 - Shawn Covell and Zachary Smith completed the Public Works Academy which included training on Winter Operations and Safe Snow Plowing. 2019 - Austin Wosleger completed the Public Works Academy which included training on Winter Operations and Safe Snow Plowing. 2020 through 2021 - Due to the COVID-19 pandemic no employee training was conducted. 2022 - It is anticipated that employee training will occur if the COVID-19 pandemic allows.</p> |
| Street sweeping | |
| Curb miles swept | 154.46 |
| Volume (or mass) of material collected | <p>2017 - Was Not Estimated 2018 - 250± C.Y. 2019 - 250± C.Y. 2020 - 250± C.Y. 2021 - 250± C.Y.</p> |
| Catch basin cleaning | |
| Total catch basins in priority areas (value will be less than or equal to total catch basins town-wide) | To Be Determined |
| Total catch basins town-wide | 1,573 |
| Catch basins inspected | 2017 through 2020 - 1,573 |
| Catch basins cleaned | 2017 through 2020 - 1,573 |
| Volume (or mass) of material removed from all catch basins | <p>2017 - 300-400± C.Y. 2018 - 250-300± C.Y. 2019 - 250-300± C.Y. 2020 - 250-300± C.Y.</p> |

| | |
|--|---|
| | 2021 - 250-300± C.Y. |
| Volume removed from catch basins to impaired waters (if known) | Not Applicable |
| Snow management | |
| Type(s) of deicing material used | Deicing Mix: Majority of Town: 2017 through 2020 NaCl Salt treated with Ice B'Gone at the rate of 6-8 gallons per ton 2021 Promelt Ultra 2000 treated salt. Amston Lake Area: 4 Parts Sand to 1 Part NaCl Salt treated with Ice B'Gone at the rate of 6-8 gallons per ton |
| Total amount of each deicing material applied | Winter 2017 to 2018 - 1,400 Tons Treated NaCl and 50 C.Y. Sand Winter 2018 to 2019 - 513 Tons Treated NaCl Salt, 69 Tons of Sand/Treated NaCl Salt Mix and 10 Tons of untreated NaCl Salt. Winter 2019 to 2020 - 1,295 Tons Treated NaCl Salt, 72 Tons of Sand/Treated NaCl Salt Mix and 26 Tons of untreated NaCl Salt. Winter 2020 to 2021 - 1,200 Tons Treated NaCl Salt, 70 Tons of Sand/Treated NaCl Salt Mix and 10 Tons of untreated NaCl Salt (all estimated). Winter 2021 to 2022 - 1,200 Tons Treated NaCl Salt, 70 Tons of Sand/Treated NaCl Salt Mix and 120 Tons of untreated NaCl Salt (all estimated). |
| Type(s) of deicing equipment used | Eleven Large Snow Plows/Spreaders and two small Snow Plows/Spreaders. Four of the eleven spreaders are ground-speed-controlled set at an application rate of 250-300 pounds per lane mile. The manually controlled spreaders are also calibrated annually before plowing season to an application rate of 250-300 pounds per lane mile. |
| Lane-miles treated (A lane-mile is a mile of roadway in a single driving lane) | 154.46 |
| Snow disposal location | Road Shoulders |
| Staff training provided on application methods & equipment | 2017 - Yes 2018 - Yes 2019 - Yes 2020 - No 2021 - No |
| Municipal turf management program actions (for permittee properties in basins with N/P impairments) | |
| Reduction in application of fertilizers (since start of permit) | 0 % |
| Reduction in turf area (since start of permit) | 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 | \$0 |

6.4 Catch basin cleaning program

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

There are 1,573 catch basins in the Town of Hebron.
2017 through 2021 - 1,573 catch basins, a hydrodynamic separator and sedimentation tanks were cleaned.
As all structures are cleaned annually, no optimization methods are required.

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)

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. The retrofit program will be prioritized based on setback distance from watercourse and/or waterbodies.

Describe plans for continuing the Retrofit program and how to achieve a goal of 1% DCIA disconnection annually in future years. (Due 07/01/22)

Based on information contained in the CT DEEP *Factsheet: Town of Hebron Water Quality and Stormwater Summary*, 839.55 acres of the town has an impervious area exceeding 12%.

The DCIA for the town was computed to be 7.00 acres using methods contained in the paper entitled *Estimating Change in Impervious Area (IA) and Directly Connected Impervious Area (DCIA) for Massachusetts Small MS4 Permit*. The 2% reduction in DCIA will require a DCIA reduction of 0.140 acre by July 01, 2022.

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.

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
Pollutant of Concern

Bacteria

Mercury

Other

An unnamed pond in Gay City State Park is the only impaired water in the Town of Hebron.

1.2 Describe Program Status

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

The only impaired water in the Town of Hebron is the unnamed pond in Gay City State Park.

A partnership was formed with the Salmon River Watershed Partnership, Gay City State Park, UConn Master Gardeners and CT DEEP Parks whereby a vegetated buffer biofilter to deter Canada Geese and to filter stormwater runoff was constructed.

Additional funds are being pursued for additional plantings and the installation of permanent public educational signage.

In that the impaired water is in a State Park, the Town of Hebron does not need to investigate and monitor the bacteria impairment.

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.

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

There are no Impaired Waters in the Town Hebron other than the State-owned Gay City State Park Pond which is being addressed by the State.

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) | <ul style="list-style-type: none"> E. coli > 235 col/100ml for swimming areas or 410 col/100ml for all others Total Coliform > 500 col/100ml |
| Bacteria (salt waterbody) | <ul style="list-style-type: none"> Fecal Coliform > 31 col/100ml for Class SA and > 260 col/100ml for Class SB 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 |

There are no Impaired Waters in the Town Hebron other than the State-owned Gay City State Park Pond which is being addressed by the State.

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

There are no Impaired Waters in the Town Hebron other than the State-owned Gay City State Park Pond which is being addressed by the State.

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.

| Outfall | Latitude & Longitude | Sample Date | Parameter(s) | Results | Name of Laboratory (if used) |
|----------------|---------------------------------|--------------------|---------------------|----------------|-------------------------------------|
| | | | | | |
| | | | | | |
| | | | | | |

There are no Impaired Waters in the Town Hebron other than the State-owned Gay City State Park Pond which is being addressed by the State.

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 |
|------------------------------------|-------------------|---------|
| 4701-04-1 | 11.35% Impervious | 1 |
| | | |
| | | |

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.

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

2018 through 2021 - Dry weather screening and sampling was not conducted.

2022 - It is anticipated that dry weather screening will be conducted.

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.

| Outfall or Interconnection ID | Latitude & Longitude | Sample Date | Ammonia | Chlorine | Conductivity | Salinity | E. coli or Enterococcus | Surfactants | Water Temp | Pollutant of Concern |
|-------------------------------|----------------------|-------------|---------|----------|--------------|----------|-------------------------|-------------|------------|----------------------|
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

2018 through 2021 - No wet weather inspection and sampling, where appropriate, was conducted.

2022 - It is anticipated that wet weather inspection and sampling, where appropriate, will be conducted.

3. 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 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 | Latitude & Longitude | Screening or Sampling Date | Visual/Olfactory Evidence of Illicit Discharge | Ammonia | Chlorine | Surfactants |
|-------------------------|----------------------|----------------------------|--|---------|----------|-------------|
| | | | | | | |
| | | | | | | |

2018 through 2021 - No junction manhole screening or sampling was conducted.
2022 - It is anticipated that junction manhole screening and sampling, where appropriate will be conducted.

3.3 Wet Weather Investigation Outfall Sampling Data

| Outfall ID | Latitude & Longitude | Sample Date | Ammonia | Chlorine | Surfactants |
|------------|----------------------|-------------|---------|----------|-------------|
| | | | | | |
| | | | | | |



2018 through 2021 - No wet weather outfall screening or sampling was conducted.
2022 - It is anticipated that wet weather screening and sampling, where appropriate, will be conducted.

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: Andrew J. Tierney, Town Manager | Print Name: Wade M. Thomas, CPMSM |
| Signature:  | Signature:  |
| Date: June 14, 2022 | Date: June 21, 2022 |