Town of Weston, Connecticut

2022 Annual Report

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

Permit Number GSM000106

MS4 General Permit
Town of Weston 2021 Annual Report
Permit Number GSM 000106
January 01, 2022 - December 31, 2022

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

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This report documents Weston's efforts to comply with the conditions of the MS4 General Permit to the maximum extent practicable (MEP) from January 01, 2022 to December 31, 2022.

Lou Martirano replaced Joe Lametta as the Public Works Director, effective September 24, 2018.

John Conte, P.E., Town Engineer assumed the role of Town Engineer/Public Works Director, effective October 19, 2019.

Samantha Nestor, First Selectwoman replaced Christopher Spaulding, First Selectman, effective 10 A.M. August 02, 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	The Town of Weston website has the following resources on the town website on the Public Works Stormwater Management Plan tab.		Town of Weston website https://www.westonct.gov/government/municipal-departments/public-works/stormwater-management-program	General Public - 100s	Ongoing	Jonathan Luiz, Town Administrator	Additional materials will be added when developed

	Stormwater Resources: The Water Cycle - What Happens When It Rains? USGS Water Cycle Graphic with two development examples What is a Stormwater Management Plan? Where do Storm Drains Go? with two examples Clean Waters - Starting in Your Home and Yard Fact Sheets developed as a collaboration of the Connecticut Sea Grant Extension Program and the University of Connecticut Cooperative Extension System's NEMO Project. The following Fact Sheets are posted: What's the Big Deal About Water Quality						

	Managing Your Household Chemicals Caring for Your Septic System Integrated Pest Management and Biological Controls for the Homeowner Conservation Landscaping for Water Quality Animal Waste and Water Quality Going Native - Rethinking Plant Selection for the Home Landscape Lawn Care the Environmentally-Friendly Way The Four Seasons of Water Quality Protection Conserving Water at Home Environmentally Responsible Boating Website Links: CT DEEP US EPA						

	The following Reports are available: 2017 through 2021 MS4 Annual Reports 2017 Weston Stormwater Management Plan						
1-2 Address education/ outreach for pollutants of concern	The Town of Weston website has the following resources addressing bacteria sources in stormwater on the town website: What's the Big Deal About Water Quality Caring for Your Septic System Animal Waste and Water Quality	Posted	Town of Weston website https://www.westonct.gov/government/municipal-departments/public-works/stormwater-management-program	General Public - 100s	Educate the general public on affects of bacteria in stormwater on surface water quality	Jonathan Luiz, Town Administrator	Additional materials will be added when developed.

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

Additional Public Education and Outreach resources will be added to the town website to educate residents on MS4 stormwater.

Flyers to educate the general public on the detrimental effects of dog wastes on watershed stormwater quality will be made available at the Town Clerk's Office when residents come in for dog licenses when the pandemic allows residents to enter Town Hall safely.

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 2017 Stormwater Management Plan publicly available	Complete	The 2017 Weston Stormwater Management Plan (SMP) was posted on The Town of Weston website.	Compliance	Jonathan Luiz, Town Administrator	April 12, 2017	https://www.westonct.gov/government/municipal-departments/public-works/stormwater-management-program	No public comments were received by the Office of the First Selectman.
2-2 Comply with public notice requirements for Annual Reports (annually by 2/15)	Complete	2018 The Draft 2017 MS4 Annual Report was available for public review and comment on the town website and at the Office of the Town Administrator.	Compliance	Jonathan Luiz, Town Administrator	February 15, 2018	https://www.westonct.gov/government/municipal-departments/public-works/stormwater-management-program	No public comments were received by the Office of the First Selectman.
	Complete	2019 The Draft 2018 MS4 Annual Report was available for public review and comment on the town website and at the Office of the Town Administrator.	Substantial Compliance	Jonathan Luiz, Town Administrator	February 26, 2019	https://www.westonct.gov/government/municipal-departments/public-works/stormwater-management-program	No public comments were received by the Office of the First Selectman.

	Complete	2020 The Draft 2019 MS4 Annual Report was available for public review and comment on the town website and at the Office of the Town Administrator.	Compliance	Jonathan Luiz, Town Administrator	February 12, 2020	https://www.westonct.gov/government/municipal-departments/public-works/stormwater-management-program	No public comments were received by the Office of the First Selectman.
	Complete	2021 The Draft 2020 MS4 Annual Report was available for public review and comment on the town website and at the Office of the Town Administrator.	Substantial Compliance	Jonathan Luiz, Town Administrator	February 17, 2021	https://www.westonct.gov/government/municipal-departments/public-works/stormwater-management-program	No public comments were received by Wade Thomas.
	Ongoing	2022 The Draft 2021 MS4 Annual Report was available for public review and comment on the town website and at the Office of the Town Administrator.	Substantial Compliance	Jonathan Luiz, Town Administrator	March 02, 2022	https://www.westonct.gov/government/municipal-departments/public-works/stormwater-management-program	No public comments were received by Wade Thomas.
	Ongoing	2023 The Draft 2022 MS4 Annual Report was available for public review and comment on the town website and at the Office of the Town Administrator.	Substantial Compliance	Jonathan Luiz, Town Administrator	February 15, 2023	https://www.westonct.gov/government/municipal-departments/public-works/stormwater-management-program	Comments are to be addressed to Wade Thomas at wthomas@nlja.com

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

It is anticipated that a public notice indicating that the Draft 2022 MS4 Annual Report will be posted on the town website on, or before February 01, 2023 at:https://www.westonct.gov/government/municipal-departments/public-works/stormwater-management-program

It is anticipated that the Draft 2022 MS4 Annual Report will be posted on the town website on, or before, February 15, 2023 for public review and comment.

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	In progress	The town is in process of completing written IDDE program using the CT IDDE program template	Develop written plan of IDDE program	Nathan L. Jacobson & Associates, Inc., Town MS4 Consultant	Anticipate completing by December 01, 2023	
3-2 Develop list and maps of all MS4 stormwater outfalls in priority areas	Complete	MS4 stormwater outfall mapping was completed in the Spring of 2018. The MS4 stormwater outfall mapping was completed using a map grade handheld GPS unit and will be compiled as a ESRI GIS layer of the town GIS mapping. The GIS mapping will 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.	Nathan L. Jacobson & Associates, Inc., Town MS4 Consultant	November 2021	Revise based on dry weather screening which was completed for all town MS4 stormwater outfalls
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 Town Engineer/Public Works Director will be the entity to	Program Development	Jonathan Luiz, Town Administrator and Nathan L. Jacobson & Associates, Inc., Town	Anticipate completing by December 01, 2023	

		accept citizen reporting of suspected illicit discharges.		MS4 Consultant		
3-4 Establish legal authority to prohibit illicit discharges	Complete	An Illicit Discharge Detection and Elimination (IDDE) Ordinance was adopted on December 06, 2018.	IDDE Ordinance Enactment	Jonathan Luiz, Town Administrator and Nathan L. Jacobson & Associates, Inc., Town MS4 Consultant	December 06, 2018	
3-5 Develop record keeping system for IDDE tracking	In Progress	A program to record IDDE tracking is in the process of being developed. It is anticipated that the record keeping system will be maintained by the Town Engineer/Public Works Director.		Jonathan Luiz, Town Administrator and Nathan L. Jacobson & Associates, Inc., Town MS4 Consultant	Anticipate completing by December 01, 2023	
3-6 Address IDDE in areas with pollutants of concern	In Progress	All MS4 Stormwater Outfalls which directly discharge to the bacteria impaired segments of Beaver Brook, Cobbs Mill Brook and Kettle Creek will be sampled in early 2022 to determine if the outfalls are sources of the bacterial impairment.	Identification of outfalls which discharge directly to bacteria impaired waters. The outfalls will be sampled by wet weather sampling in 2023.	Nathan L. Jacobson & Associates, Inc., Town MS4 Consultant	Anticipate completing by December 01, 2023	

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

The written program will be posted on the Dept of Public Works webpage. The written IDDE program will be amended as needed throughout the permit term.

John Conte, Town Engineer/Public Works Director 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 the 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.

No citizen reports of suspected illicit discharges were received from July 01, 2017 to December 31, 2022.

Location (Lat long/ street crossing /address and receiving water)	**Date and duration of occurrence**	**Discharge to MS4 or surface water**	**Estimated volume discharged**	**Known or suspected cause / Responsible party**	**Corrective measures planned and completed** (include dates)	**Sampling data** (if applicable)

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

No citizen reports of suspected illicit discharges were received from July 2017 to December 31, 2022.

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**	**Person Responsible, Department**
2017-2021 Aspetuck Health District (https://wwhd.org/) was contacted to determine specific information regarding subsurface sewage disposal system (SSDS) repairs made in the Town of Weston in	2017-2021 Aspetuck Health District has reviewed the Town of Weston subsurface sewage disposal system (SSDS) repair records. On the basis of the review, 25 septic tank repairs were conducted and 52 full SSDS	2017-2021 52 ssds full repairs 25 septic tank repairs	Various	Jeffrey Andrews, R.S., Chief Sanitarian, Aspetuck Health District

response to SSDS hydraulic failure. No septage was known to have entered the town MS4.	repairs, including the leaching system, were conducted. Moving forward an annual list will be compiled including the SSDS street address, SSDS repair and CT DEEP watershed.			
2022 Aspetuck Health District (https://wwhd.org/) was contacted to determine specific information regarding subsurface sewage disposal system (SSDS) repairs made in the Town of Weston in response to SSDS hydraulic failure.	Aspetuck Health District was contacted regarding provision of the specific street addresses and nature of the repairs by Nathan L. Jacobson & Associates, Inc. The data will be added to this section when received.			

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

Once the Illicit Discharge Citizen Reporting Program is in place, it is anticipated that the Town Engineer/Public Works Director will receive the complaint and conduct a field investigation or to determine the best method to identify the suspected illicit discharge. Once the illicit discharge has been tentatively identified, specific methodologies will be employed to correctly determine if the discharge is illicit in nature. If the discharge is an illicit discharge the appropriate measure as contained in the IDDE Ordinance will be employed to eliminate the illicit discharge. The Illicit Discharge Citizen Reporting Program will be modified as required to make the program as accessible as possible to town residents.

3.6 IDDE reporting metrics

Metrics	
Estimated or actual number of MS4 outfalls	440
Estimated or actual number of interconnections	TBD
Outfall mapping complete	100%
Interconnection mapping complete	100%
System-wide mapping complete (detailed MS4 infrastructure)	99%

Outfall assessment and priority ranking	75%
Dry weather screening of all High and Low priority outfalls complete	100%
Catchment investigations complete	75%
Estimated percentage of MS4 catchment area investigated	75%

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 Town Engineer/Public Works Director 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 (NEIWPCC).

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)	Complete	The required elements of Minimum Control Measure No. 4 - Construction Site Runoff Control are currently being implemented. The requirements will be incorporated into the town land use regulations.	Land Use Department awareness of the need to review the appropriate land use regulations to attain compliance.	Tracy Kulikowski, AICP, Land Use Director Land Use Commissions Land Use Commission Attorney(s)	July 01, 2017	The town currently requires an Application for Soil Disturbance for a land disturbance with an area greater than 2,500 square feet and/or introduction of more than 25 cubic yards of soil. A Clean Fill Certification Form is also required for imported fill. A Zero Incremental Runoff Certification is also required for all development activities. Reference to the CT DEEP General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities, where applicable, will be added to the land use regulations during the next round of revisions.

4-2 Develop/Implement plan for interdepartmental coordination in site plan review and approval	Complete	John Conte, Town Engineer/Public Works Director, prepares land use review letters for all larger land use applications.	Interdepartmental Coordination	Land Use Department	July 01, 2017	The town currently requires an Application for Soil Disturbance for a land disturbance with an area greater than 2,500 square feet and/or introduction of more than 25 cubic yards of soil. A Clean Fill Certification Form is also required for imported fill. A Zero Incremental Runoff Certification is also required for all development activities.
4-3 Review site plans for stormwater quality concerns	Ongoing	John Conte, Town Engineer/Public Works Director, encourages the use of LID and Stormwater BMPs practices as contained in the 2004 Connecticut Stormwater Quality Manual and new stormwater management technologies as they are developed.	Compliance	John Conte, P.E., Town Engineer/Public Works Director and Nathan L. Jacobson & Associates, Inc., Town MS4 Consultant	July 01, 2017	A Zero Incremental Runoff Certification is also required for all development activities. By complying with the certification onsite retention is required.
4-4 Conduct site inspections	Ongoing	The town conducts construction site inspections for proper implementation and maintenance of soil erosion and sediment control measures.	Compliance	John Conte, P.E., Town Engineer/Public Works Director	July 01, 2017	
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 during the Public Hearing Process when applicable.	Compliance	Land Use Department and Land Use Commissions	July 01, 2017	
4-6 Implement procedure to notify developers about DEEP construction stormwater permit	Ongoing	John Conte, Town Engineer/Public Works Director, will make developer's engineers aware of the need to register for the General Permit for the Discharge of	Compliance	Tracy Kulikowski, AICP, Land Use Director John Conte, P.E., Town	July 01, 2017	Reference to the CT DEEP General Permit for the Discharge of Stormwater and Dewatering Wastewaters from

		Stormwater and Dewatering Wastewaters from Construction Activities in engineering review letters which are typically prepared as part of the land use application process.		Engineer/Public Works Director		Construction Activities, where applicable, will be added to the land use regulations during the next round of revisions.
4-7 Develop stormwater compliance checklist	In progress	Developing checklist to provide developers on stormwater management compliance requirements	Standardize plan review	John Conte, P.E., Town Engineer/Public Works Director and Nathan L. Jacobson & Associates, Inc., Town MS4 Consultant	July 01, 2022	Reason for addition: Make it easier to ensure compliance with stormwater regulations

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

Integrate stormwater compliance checklist into the review process once completed.

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

5.1 BMP Summary

BMP	**Status** (Complete, Ongoing, In Progress, or Not started)	**Activities in current reporting period**	**Measurable Goal**	**Department / Person Responsible**	**Date completed or projected completion date** (include the start date for anything that is 'in progress')	**Additional details**
5-1 Establish and/or update legal authority and guidelines regarding LID and runoff reduction in site development planning	Ongoing	The land use regulations will be revised to incorporate the Minimum Control Measure No. 5 - Post Construction Runoff Control.	Compliance	Tracy Kulikowski, AICP, Land Use Director Land Use Commissions and Land Use Town Attorney		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	John Conte, Town Engineer/Public Works Director, encourages the use of LID and Stormwater BMPs practices as contained in the 2004 Connecticut Stormwater Quality Manual and new stormwater management technologies as they are developed.	Compliance	Tracy Kulikowski, AICP, Land Use Director John Conte, P.E., Town Engineer/Public Works Director	July 01, 2017	A Zero Incremental Runoff Certification is also required for all development activities. By complying with the certification onsite retention is required.
5-3 Identify retention and detention ponds in priority areas	In Progress	Retention Ponds, Detention Ponds and Hydrodynamic Separators will be inventoried town-wide. A GIS Map Layer was created from the inventory.	A stormwater management inventory will be developed and will be updated as needed.	John Conte, P.E., Town Engineer/Public Works Director and Nathan L. Jacobson & Associates, Inc., Town MS4 Consultant	July 01, 2019	

5-4 Implement long-term maintenance plan for stormwater basins and treatment structures	In Progress	After the Retention Ponds, Detention Ponds and Hydrodynamic Separators have been inventoried, a Post-Construction Stormwater Management Facility Operation and Maintenance Plan will be implemented.				
5-5 DCIA mapping	Complete	Completed the process of 2012 Baseline DCIA Mapping from base mapping prepared by UConn CLEAR.	The DCIA to MS4 stormwater outfalls discharging to waters identified as impaired in the 2020 Integrated Water Quality Report and in watersheds with impervious surface coverage of greater than 11 percent was completed in 2018.	Nathan L. Jacobson & Associates, Inc., Town MS4 Consultant	February 2019	
5-6 Address post-construction issues in areas with pollutants of concern	In Progress	Based on a review of sampling conducted from 2004 to 2016, the town will encourage utilization of new stormwater management technologies to reduce bacteria loading to the Saugatuck River and West Branch of the Saugatuck River.	Stormwater outfalls discharging to waters identified as impaired in the 2020 Integrated Water Quality Report will be subject to enhanced water quality treatment.	John Conte, P.E., Town Engineer/Public Works Director, and Nathan L. Jacobson & Associates, Inc., Town MS4 Consultant	In Progress	A Zero Incremental Runoff Certification is also required for all development activities. By complying with the certification onsite retention is required. Retaining the 50-year design storm stormwater runoff volume onsite will preclude offsite runoff of pollutants of concern.

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

Sampling of MS4 stormwater outfalls which discharge directly to bacterially impaired segments of Beaver Brook, Cobbs Mill Brook and Kettle Creek will be sampled.

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

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)	48.72 Acres
DCIA disconnected (redevelopment plus retrofits)	2012 to 2017 - To Be Determined 2017 - 0 Acre 2018 - 0 Acre 2019 - 0 Acre 2020 - 0.637 Acre 2021 - 0 Acre 2022 - 0 Acre
Retrofit projects completed	2012 to 2017 - 0 2018 - Partially Completed Project 2019 - Partially Completed 2020 - 1 Project that reduced DCIA by infiltration of stormwater, begun in 2018, was completed in 2020. 2021 - 0 2022 - 0
DCIA disconnected	2012 to 2019 - 0% 2020 - 1.31% 2021 - 0% 2022 - 0%
Estimated cost of retrofits	Private Commercial Development Costs not known
Detention or retention ponds identified	2017 - 0 2018 - 8

	2019 - 0 2020 - 0 2021 - 0 2022 - 0

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

Based on information contained in the Factsheet: *Town of Weston Water Quality and Stormwater Summary,* prepared by the CT DEEP, 845.42 acres of the town has an impervious area exceeding 12% which is approximately 6.39% of the town. 368.73 acres have an impervious cover of ranging from 12% to 25%, 359.10 acres have an impervious cover ranging from 26% to 50%, 89.39 acres have an impervious cover ranging from 51% to 75% and 28.20 acres have an impervious cover ranging from 76% to 100%.

The impervious surface area consists of 282.52 acres of buildings, 335.83 acres of roads and 590.48 acres of other impervious surfaces for a total impervious surface area of 1,208.83 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% of the area 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 the 2012 baseline 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 formal employee training program	Ongoing	2017 through 2022 - None 2023 - DPW facility BMPs will be presented to the DPW staff	DPW education on the impacts of DPW activities on stormwater quality.	John Conte, P.E., Town Engineer/Public Works Director and Nathan L. Jacobson & Associates, Inc., Town MS4 Consultant	December 01, 2023	
6-2 Implement MS4 property and operations maintenance	Ongoing	The Department of Public Works continues to utilize BMPs in MS4 property operations and maintenance.	The Department of Public Works continues to utilize BMPs in MS4 property operations and maintenance.	John Conte, P.E., Town Engineer/Public Works Director	July 01, 2017	
6-3 Implement coordination with interconnected MS4s	Not Started	2017 through 2022 - None Coordinate with Conn DOT if problems are encountered or if repair to stormwater infrastructure is needed.	No coordination has been required to date	John Conte, P.E., Town Engineer/Public Works Director	July 01, 2017	
6-4 Develop and implement program to control other sources of pollutants to the MS4	In Progress	2017 through 2022 - None	Educate the General Public on bacteria impairment of waterbodies by pet waste and waterfowl waste.	Nathan L. Jacobson & Associates, Inc., Town MS4 Consultant	Calendar Year 2023	

6-5 Evaluate additional measures for discharges to impaired waters*	In Progress	2017 through 2022 - None	Educate the General Public on bacteria impairment of waterbodies by pet waste and waterfowl waste.	Nathan L. Jacobson & Associates, Inc., Town MS4 Consultant	Calenday Year 2023	
6-6 Track projects that disconnect DCIA	Ongoing	Ongoing	Review projects constructed since July 01, 2012 to determine if there was a reduction in DCIA on any of the projects.	Nathan L. Jacobson & Associates, Inc., Town MS4 Consultant	June 30, 2020	
6-7 Implement infrastructure repair/rehab program	Ongoing	2017 through 2022 - None	Continue with development and implementation of the program.	John Conte, P.E., Town Engineer/Public Works Director	July 01, 2017	
6-8 Develop and implement plan to identify/prioritize retrofit projects	Ongoing	Development of conceptual designs.	Moving to compliance	John Conte, P.E., Town Engineer/Public Works Director and Nathan L. Jacobson & Associates, Inc., Town MS4 Consultant	July 01, 2023	
6-9 Implement retrofit projects to disconnect 2% of DCIA	Ongoing	A redevelopment project of an existing commercial use implemented DCIA retrofits which result in retaining and infiltrating the WQV	Review projects constructed since July 01, 2012 to determine if there was a reduction in DCIA on any of the projects.	John Conte, P.E., Town Engineer/Public Works Director and Nathan L. Jacobson & Associates, Inc., Town MS4 Consultant	Construction completed in 2020.	

6-10 Develop/implement street sweeping program	Ongoing	The Town of Weston currently implements a road sweeping program whereby all town roads are swept at least one time per year.	Compliance	John Conte, P.E., Town Engineer/Public Works Director	July 01, 2017	
6-11 Develop/implement catch basin cleaning program	Ongoing	The Town of Weston traditionally implemented a catch basin cleaning program whereby approximately half of the catch basins are cleaned every year. It is anticipated that catch basin cleaning compliance will be largely achieved in 2022.	Compliance	John Conte, P.E., Town Engineer/Public Works Director	July 01, 2017	
6-12 Develop/implement snow management practices	Ongoing	Continue the existing program and modify as needed.	Compliance	John Conte, P.E., Town Engineer/Public Works Director	July 01, 2017	

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

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 in fine grained glacial till soils as these soils are most susceptible to erosion, sedimentation and storm water pollution due to the small soil grain size and the soil cation exchange capacity.

6.3 Pollution Prevention/ Good Housekeeping reporting metrics

Metrics	
Employee training provided for key staff	DPW Employees are encouraged to attend classes at the CT Technology Transfer Center. 2017 through 2022 - None 2020 and 2021 - No DPW employee training was conducted due to the COVID-19 Pandemic. 2023 - It is anticipated the DPW employee training will resume.
Street sweeping	
Curb miles swept	2017 through 2022 - 78.92 miles (157.84 curb miles)
Volume (or mass) of material collected	2017 - 20±C.Y. 2018 - 20± C.Y. 2019 - 20± C.Y. 2020 - 20± C.Y. 2021 - Not Recorded. 2022 - 20± C.Y.
Catch basin cleaning	
Total catch basins in priority areas (value will be less than or equal to total catch basins town-wide)	TBD
Total catch basins town-wide	1,200 – 1,500
Catch basins inspected	2017 - 0 2018 - 0 2019 - All catch basins were inspected 2020 - 600 to 750 catch basins were inspected 2021 - 600 to 750 catch basins were inspected 2022 - 600 to 750 catch basins were inspected
Catch basins cleaned	2017 - 0 2018 - 0 2019 - 100± 2020 - 600 to 750 2021 - 600 to 750 2022 - 600 to 750
Volume (or mass) of material removed from all catch basins	2017 - Not known. Catch basin cleaning debris was disposed of out of town by the catch basin cleaning contractor. 2018 - 0 C.Y. No Catch Basins Cleaned 2019 - 25± C.Y. 2020 - 75± C.Y. 2021 - Not Recorded 2022 - 75± C.Y. Utilization of pretreated salt as a deicing mix has significantly reduced the amount of sediment accumulation in the catch basins.
Volume removed from catch basins to impaired waters (if known)	2017 - 0 C.Y. - Catch Basin cleaning was not conducted

	2018 - 0 C.Y. - Catch Basin cleaning was not conducted. 2019 - 5± C.Y. 2020 - 15± C.Y. 2021 - Not Recorded 2022 - 15± C.Y.
Snow management	
Type(s) of deicing material used	Deicing Mix: NaCl Salt treated with Ice B'Gone at the rate of 6-8 gallons per ton.
Total amount of each deicing material applied	2017 to 2018 - 1,200± to 1,500± Tons of pretreated NaCl Salt 2018 to 2019 - 1,200± to 1,500± Tons of pretreated NaCl Salt 2019 to 2020 - 900± Tons of pretreated NaCl Salt 2020 to 2021 - 1,000± Tons of pretreated NaCl Salt 2021 to 2022 - 900 - 1,000± Tons of pretreated NaCl Salt 2022 to 2023 - It is anticipated that 700 - 900± Tons of pretreated NaCl Salt will be used for road deicing.
Type(s) of deicing equipment used	10 Snow Plows/Spreaders All Snow Plows/Spreaders are Ground Speed Controlled. The deicing mix is applied at a rate ranging from 150 pounds per lane (curb) mile to 200 pounds per curb mile depending on the storm type.
Lane-miles treated (A lane-mile is a mile of roadway in a single driving lane)	157.84
Snow disposal location	Generally along the road shoulders.
Staff training provided on application methods & equipment	DPW Employees are encouraged to attend classes at the CT Technology Transfer Center. 2017 through 2019 - None 2020 and 2021 -No training was conducted in due to the COVID-19 Pandemic. 2023 - It is anticipated the DPW employee training will resume.
Municipal turf management program actions (for permittee properties in basins with N/P impairments)	
Reduction in application of fertilizers (since start of permit)	0 lbs
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
It is estimated that there are approximately 1,200 to 1,500 catch basins in the Town of Weston. 2017 - No catch basin cleaning was conducted. 2018 - No catch basin cleaning was conducted. 2019 - 100 catch basins were cleaned. Catch basin mapping and depth of sediment accumulation was conducted in 2019 for all catch basins to determine which catch basins need to be cleaned annually or more often. On the basis of the catch basin sediment accumulation depths, catch basins that need to be cleaned at least one time per year and catch basins that had insignificant sediment accumulation can be done in alternate years or longer. 2020 - 600 to 750 catch basins were cleaned. 2021 - 600 to 750 catch basins were cleaned. 2022 - 600 to 750 catch basins were cleaned.

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 07/01/20)
2017 through 2019 - No significant municipal stormwater retrofits were constructed. 2020 - A commercial redevelopment of the Weston Shopping Center disconnected 0.637 acre of DCIA through utilization of stormwater retention/infiltration. The redevelopment resulted in a DCIA reduction of 0.637 acre which represents approximately 65 % of the CT DEEP 2% DCIA disconnection goal of 0.974 acre. 2021 through 2022 - None 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.

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 the computed Directly Connected Impervious Area (DCIA) of 48.72 acres, a reduction in DCIA of 0.974 acre would be required to achieve the CT DEEP goal of a 2% DCIA reduction by 2022. The private redevelopment retrofit in the Weston Shopping Center, constructed in 2020, incorporated subsurface detention/infiltration into the retrofit which will result in a 0.637 acres DCIA reduction. The DCIA reduction represents approximately 65 percent of the of CT DEEP DCIA reduction goal of 2%.

Part II: Impaired waters investigation and monitoring

1. Impaired waters investigation and monitoring program

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

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

Nitrogen/ Phosphorus ☐	Bacteria ☒	Mercury	Other
Pollutant of Concern ☐			

1.2 Describe program status

Discuss 1) the status of monitoring work completed, 2) a summary of the results and any notable findings, and 3) any changes to the Stormwater Management Plan based on monitoring results.
2017 - No MS4 stormwater outfalls which discharge directly to impaired waters were sampled. 2018 - No MS4 stormwater outfalls which discharge directly to impaired waters were sampled. It is anticipated that all MS4 stormwater outfalls to impaired waters will be sampled in early 2019. Follow up sampling will be conducted in 2019 based on initial sample results. 2019 - No MS4 stormwater outfalls which discharge directly to impaired waters were sampled. It is anticipated that all MS4 stormwater outfalls to impaired waters will be sampled in early 2020. Follow up sampling will be conducted in 2020 based on initial sample results. 2020 - All MS4 stormwater outfalls which discharge directly to impaired waters were dry weather screened. On the basis of the dry weather screening no outfall sampled was required. While Appendix B - Illicit Discharge Detection and Elimination (IDDE) Program Protocol of the General Permit for the Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems recommends sampling of MS4 stormwater outfalls whenever any flow is observed during dry weather screening, no sampling and laboratory analyses of samples will be performed unless the discharge evidences other than clean groundwater base flow. 2021 - No MS4 stormwater outfalls which discharge directly to impaired waters were sampled. 2022 - No MS4 stormwater outfalls which discharge directly to impaired waters were sampled. 2023 - It is anticipated that all MS4 stormwater outfalls to impaired waters will be sampled in early 2023. Follow up sampling will be conducted in 2023 based on initial sample laboratory test results.

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? ***
376 Cobbs Mill Brook	41.21643N -73.39463W	To Be Sampled in 2022	Bacteria		Phoenix Environmental Laboratories, Inc.	
28 Kettle Creek Brook	41.19236N -73.35761W	To Be Sampled in 2022	Bacteria		Phoenix Environmental Laboratories, Inc.	
22 Poplar Plain Brook	41.18766N -73.39463W	To Be Sampled in 2022	Bacteria		Phoenix Environmental Laboratories, Inc.	
44 Poplar Plain Brook	41.18787N -73.36578W	To Be Sampled in 2022	Bacteria		Phoenix Environmental Laboratories, Inc.	

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

Pollutant of concern	**Pollutant threshold**
Nitrogen	Total N > 2.5 mg/l
Phosphorus	Total P > 0.3 mg/l
Bacteria (fresh waterbody)	• E. coli > 235 col/100ml for swimming areas or 410 col/100ml for all others • Total Coliform > 500 col/100ml
Other pollutants of concern	Sample turbidity is 5 NTU > in-stream sample •

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

Provide the following information for outfalls exceeding the pollutant threshold.

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

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 01, 2021.

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

It is anticipated that three rounds of samples will be obtained in 2023 to make the program compliant with the permit requirements.

Outfall	Latitude / Longitude	Sample Date	Parameter(s)	Results	Name of Laboratory (if used)

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
7200-24-1 15.35% Impervious	High Priority - E. coli	1
7200-22-2-R1 12.74% impervious	High Priority - E. coli	1
7203-04-1 11.55% Impervious	High Priority - E. coli	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.

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

It is anticipated that dry weather sampling will be conducted in 2023 based upon completion of the dry weather screening in 2021.

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

2017 through 2019 - Dry weather screening was scheduled for the Fall but the unseasonably high precipitation, and resulting high groundwater conditions, precluded dry weather screening.

2020 - Dry weather screening of approximately 160 MS4 stormwater outfalls was conducted in June.

2021 - Dry weather screening of the remaining MS4 stormwater outfalls was completed.

2022 - No dry weather sampling was conducted as no potential illicit discharges were identified during dry weather screening.

2023 - It is anticipated that dry weather screening outfall sampling 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.

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

It is anticipated that the wet weather sampling will be initiated in 2023.

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

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 that poor owner maintenance).
12. History of multiple local health department or sanitarian actions addressing widespread septic system failures (indicative of inadequate soils, water table separation, or other physical constraints of the area rather that poor owner maintenance).

3.2 Key junction manhole dry weather screening and sampling data

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

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

2017 through 2022 - No key junction manhole dry weather screening was conducted.
2023 - Key junction manholes for large storm sewer systems will be inspected during dry weather conditions.

3.3 Wet weather investigation outfall sampling data

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

Outfall ID	Latitude & Longitude	Sample date	Ammonia	Chlorine	Surfactants

2017 through 2022 - No wet weather outfall investigations were conducted.
2023 - It is anticipated that all MS4 stormwater outfalls which discharge to watercourses will be sampled during wet weather conditions.

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

2017 through 2022 - No illicit discharges were identified, consequently, no source investigations were required.
2023 - Any questionable MS4 stormwater outfalls will be sampled for a possible illicit discharge component on the basis of the above screening.

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."	
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