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

	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.	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
	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.		https://www.salmonriverct.org	100s	Public Education and Outreach	SRWP, UConn Master Gardeners and CT DEEP Parks	Impacts of waterfowl on water quality.
	2018 - 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 macroinverterates 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.
	2019 - March - SRWP Annual Newsletter		https://www.salmonriverct.org	100s	Public Education and Outreach	Pat Young, SRWP Coordinator	Watershed resource protection and water quality preservation
	2019 - March - Hebron Maple Fest		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 macroinverterates and water quality preservation.	100s	Public Education and Outreach		

	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 macroinverterates 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 macroinverterates 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 macroinverterates 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 7th and 8th 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.	Compllied 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 will be made available for public review and comment on the town website.	Will Comply with Requirements The 2020 MS4 Annual Report will be 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 will be made available for public review and comment on the town website.	Will Comply with Requirements The 2021 MS4 Annual Report will be made available to the public for review and comment.	Andrew J. Tierney, Town Manager	March 02, 2022	http://hebronct.com/	Public comments will be directed to 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		

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

		Brook and Raymond Brook stations. 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 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 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					
2-6 Education Program	Continuing	2017 October Pond Life and Water Quality.		Pat Young, SRWP Coordinator	Ongoing	https://www.salmonriverct.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	 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	

	16 Settlement Road	Repair	4705-00-1	
	126 Grayville Road	Repair	4701-00-2-R4	
	410 Old Colchester Road	Repair	4701-00-2-R4	
	67 Old Colchester Road	Repair	4705-00-1	
2018 - Citizen illicit discharge reporting system was not in place. No illicit discharges were reported.	2018 - 27 Repairs			
	233 Martin Road	Repair	4706-02-1	
	250 Hope Valley Road	Repair	4705-01-1	
	13 Basket Shop Road	Repair	4705-00-01-L1	
	182 Old Colchester Road	Repair	4701-00-2-R4	
	74 Chestnut Hill Road	Repair	4705-00-1	
	33 Willow Drive	Repair	3107-00-1	
	70 Cone Road	Repair	3108-08-1-L1	
	347 Gilead Street	Repair	4706-00-1	
	80 Slocum Road	Repair	4706-00-1	
	22 Tannery Hill Lane	Repair	4706-01-1	
	1030 Gilead Street	Repair	4707-05-1	
	58 Carolyn Drive	Repair	3107-00-1	
	5 Burnt Hill Road	Repair	4706-00-1	
	87 Burnt Hill Road	Repair	4706-00-1-L2	
	244 Martin Road	Repair	4706-02-1	
	101 Loveland Road	Repair	4701-00-1	
	875 Church Street	Repair	4701-00-2-R4	
	28 Laura Drive	Repair	3107-00-1	
	50 Slocum Road	Repair	4706-00-1	
	111 West Street	Repair	4707-09-1-L1	
	36 Hoadly Road	Repair	4705-03-1	
	33 Alice Lane	Repair	4701-00-2-R4	
	7 Fieldstone Drive	Repair	4705-00-1	
	23 Olde Hall Road	Repair	4706-01-1	
	116 Cannon Drive	Repair	4705-00-1	
	31 Pub Circle	Repair	3107-00-1	
	237 Skinner Lane	Repair	4705-00-1-L1	
2019 - Citizen illicit discharge reporting system was in place. No illicit discharges were reported.	2019 - 23 Repairs			
	49 Cannon Drive	Repair	4705-00-1	
	136 Martin Road	Repair	4706-01-1	
	294 Skinner Lane	Repair	4705-00-1-L1	
	130 Slocum Road	Repair	4706-00-1	
	27 Oak Drive	Repair	3107-00-1	
	4 Abby Drive	Repair	4707-05-1-L2	
	9 Laura Drive	Repair	3107-00-1	
	138 Millstream Road	Repair	4701-00-2-R1	
	347 Old Slocum Road	Repair	4706-00-1	
	34 Oak Drive	Repair	3107-00-1	
	127 Joel Drive	Repair	4706-01-1	

	268 Skinner Lane	Repair	4705-00-1-L1	
	135 Slocum Road	Repair	4706-00-1	
	37 Northam Road	Repair	4705-00-2-R1	
	215 North Street	Repair	4707-05-1-L2	
	31 Attawanhood Trail	Repair	4705-00-1	
	291 Skinner Lane	Repair	4705-00-1-L1	
	29 Senate Brook Drive	Repair	4705-03-1	
	303 Skinner Lane	Repair	4705-00-1-L1	
	80 Yorkshire Drive	Repair	3107-00-1	
	19 Maple Avenue	Repair	4701-00-2-R4	
	43 Crouch Road	Repair	4701-00-2-R4	
	80 Yorkshire Drive	Repair	3107-00-1	
2020 - Citizen illicit discharge reporting system was in place. No illicit discharges were reported.	2020 - 40 Repairs			
	91 Millstream Road	Repair	4701-00-1	
	238 Main Street	Repair	4701-00-1	
	366 West Main Street	Repair	4706-00-1	
	58 Hickory Drive	Repair	3107-00-1	
	44 Old Colchester Road	Repair	4705-00-1	
	370 Jones Street	Repair	4705-00-3-R4	
	182 London Road	Repair	3107-00-1	
	61 Carriage Drive	Repair	4706-00-1	
	65 Hickory Lane	Repair	3107-00-1	
	18 Basket Shop Road	Repair	4701-00-1	
	520 Wall Street	Repair	4705-00-1-L1	
	98 Jan Drive	Repair	3107-00-1	
	279 Old Colchester Road	Repair	4701-00-2	
	200 Gilead Street	Repair	4705-00-1-L1	
	82 Ridge Road	Repair	4705-00-1	
	188 Jones Street	Repair	4705-02-1-L1	
	155 Reidy Hill Road	Repair	4705-00-2-R1	
	225 Martin Road	Repair	4706-01-1	
	500 Wall Street	Repair	4705-00-1-L1	
	51-53 Gilead Street	Repair	4705-00-1	
	180 Gilead Street	Repair	4705-05-1	
	102 Northam Road	Repair	4705-00-2-R1	
	386 Burnt Hill Road	Repair	4705-00-1-L1	
	104 Old Colchester Road	Repair	4705-00-1	
	56 Blackman Road	Repair	4706-00-1	
	243 Hope Valley Road	Repair	4705-01-1	
	353 West Main Street	Repair	4706-00-1	
	165 Gilead Street	Repair	4705-00-1	
	270 West Street	Repair	4707-09-1	
	299 Jagger Lane	Repair	4706-00-1	
	335 Jagger Lane	Repair	4706-00-1	
	310 West Street	Repair	4707-09-1	

	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 dischrgaes 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% = $0.40*(IA\%)^{1.2}$

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 Developand 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	DPW Employees are encouraged to attend CT Technology Transfer (T2) Center training programs. 2017 - Rob Schadtle 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.
Street sweeping	
Curb miles swept	154.46
Volume (or mass) of material collected	2017 - Was Not Estimated 2018 - 250± C.Y. 2019 - 250± C.Y. 2020 - 250± C.Y. 2021 - 250± C.Y.
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	2017 - 300-400± C.Y. 2018 - 250-300± C.Y. 2019 - 250-300± C.Y. 2020 - 250-300± C.Y.

	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)	• E. coli > 235 col/100ml for swimming areas or 410 col/100ml for all others • Total Coliform > 500 col/100ml
Bacteria (salt waterbody)	• 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 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

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 condcuted.
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: Date: June , 2022	Signature: Date: June , 2022
Email: atierney@hebronct.com	Email: wthomas@nlja.com