	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 - Due to the COVID-19 pandemic no employee training was conducted. It is anticipated that employee training will occur in 2021 if the COVID-19 pandemic allows
Street Sweeping	
Lane 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.
Catch Basin Cleaning	
Total catch basins in priority areas	To Be Determined
Total catch basins in MS4	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.
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: NaCl Salt treated with Ice B'Gone at the rate of 6-8 gallons per ton 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 - 1,300 Tons Treated NaCl Salt, 70 Tons of Sand/Treated NaCl Salt Mix and 10 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	154.46
Snow disposal location	Road Shoulders
Staff training provided on application methods & equipment	2017 - Yes 2018 - Yes 2019 - Yes 2020 - Yes
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

Briefly describe the method used to optimize your catch basin inspection and cleaning schedule.
There are 1,573 catch basins in the Town of Hebron. 2017 through 2020 - 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.
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 in future years.
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.

Describe plans for continuing the Retrofit program beyond this permit term with the goal to disconnect 1% DCIA annually over the next 5 years.
Over the last several years development in town has been limited to development on single lots. Retrofits will incorporate DCIA reduction whenever possible.

Part II: Impaired Waters Investigation and Monitoring

1. Impaired waters investigation and monitoring program

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

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.
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 collected under 2017 permit

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

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

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.

2.2 Credit for screening data collected under 2004 permit

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

Outfall	**Sample date**	**Parameter** (Nitrogen, Phosphorus, Bacteria, or Other pollutant of concern)	**Results**	**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.

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

Provide the following information for outfalls exceeding the pollutant threshold.

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

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 screening has been completed for at least 50% of outfalls to impaired waters, identify 6 of the highest contributors of any pollutants of concern. Begin monitoring these outfalls on an annual basis by July 01, 2020.

Outfall	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

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	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 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 was not conducted.

It is anticipated that dry weather screening will be conducted in 2021.

2.2 Wet weather sample and inspection data

Provide sample data for outfalls and key junction manholes of any catchment area with at least one System Vulnerability Factor.

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

2018 through 2020 - No wet weather inspection and sampling, where appropriate, was conducted.

It is anticipated that wet weather inspection and sampling, where appropriate, will be conducted in 2021.

3. Catchment Investigation Data (Appendix B (A)(7)(e) / page 9)

3.1 System Vulnerability Factor Summary

For those catchments being investigated for illicit discharges (i.e. categorized as high priority, low priority, or problem) document the presence or absence of System Vulnerability Factors (SVF). If present, report which SVF's were identified. An example is provided below.

Outfall ID	Receiving Water	System Vulnerability Factors

Where SVFs are:

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

2018 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 was not conducted. It is anticipated that dry weather screening will be conducted in 2021.

3.3 Wet weather investigation outfall sampling data

Outfall ID	Sample date	Ammonia	Chlorine	Surfactants

2018 through 2019 - Wet weather sampling was scheduled for the Fall but the unseasonably high precipitation, and resulting high groundwater conditions, precluded dry weather screening.

2020 - Dry weather screening was not conducted. It is anticipated that dry weather screening will be conducted in 2021.

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 Signature:	Print Name: Wade M. Thomas, CPMSM Signature:
Date: April , 2021	Date: April , 2021