MS4 General Permit
Town of Stratford 2020 Annual Report
Existing MS4 Permittee
Permit Number GSM 000105
January 1, 2020 – December 31, 2020

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This report documents Town of Stratford's efforts to comply with the conditions of the MS4 General Permit to the maximum extent practicable (MEP) from January 1, 2020 to December 31, 2020.

Part I: Summary of Minimum Control Measure Activities

1. Public Education and Outreach (Section 6 (a)(1) / page 19)

1.1 BMP Summary

BMP	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
1-1 Implement public education program	*Complete and ongoing*	Letter send to properties abutting Bruce Brook, Letter also uploaded to website	• Update stormwater management website and social media platforms with pertinent articles and links • Public educated on the importance of pollution prevention through print	Conservation (Kelly Kerrigan)	Jul 1, 2019, and On-going	*Posted on website in Spring 2020, Mailed to abutters Summer 2020*	The goal of the letter is to educate residents to properly dispose of yard wastes, and other pollutants.

			media and through participation in various events				
1.1a Distribute educational materials to developers	*Complete and on-going*	*Updated* and distributed *Notice to Contractors on MS4 requirements relating to construction.*	• Number of contractors receiving notice when applying for license or permit. • 29 Engineering licenses issued since Jan 1 2019.	Conservation (Kelly Kerrigan) Engineering (John Casey) Zoning (Jay Habansky)	Jul 1, 2019, and On-going	*Dec 31, 2019*	*Continue to distribute with permit applications in Building, Engineering and Planning and Zoning, now included in e-permit system.*
1.1b Establish a program for stormwater education in schools	*On-going*	*Student field trips to Great Meadows Marsh are typically held. However, due to the pandemic these were not conducted.*	• Conduct outreach activities to schools throughout the town discussing impacts of stormwater discharges on local waterbodies	Conservation (Kelly Kerrigan)	September 1, 2019and On-going		*Members of the Town's Conservation Commission typically hold in-class discussions and field trips. However, due to the pandemic, these were not conducted*
1.1c Develop a program for employee training	*Complete and ongoing*	HRP Associates, Inc. conducted three training events on the MS4 and illicit discharges	DPW Foreman Training & Garage Training conducted on December 4, 2020. Townwide Training conducted December 8, 2020	Conservation (Kelly Kerrigan)	Jul 1, 2019, and On-going	December 4 & 8 , 2020	
1-2 Address education/ outreach for pollutants of concern*					Jul 1, 2019 and On-going		
1-3 Provide outreach for new ordinances	*On-going*		Drafted direct mail letter to businesses regarding IDDE ordinance.	Conservation (Kelly Kerrigan)	2018	*Dec 2018 Draft complete*	*This was put on hold due to the pandemic.*

Extra space for describing above BMP activities, if needed:

BMP	

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

Dissemination of educational information on the Town's stormwater management website, and directly to contractors/permit applicants, will continue. Employee training by the Town's stormwater management consultant will continue to take place annually or biannually as funds allow. The Conservation Department will publish articles on the town website, social media platforms, and newspapers that address different facets of stormwater management, including ways in which residents can help reduce pollutants of concern (i.e. nutrients and bacteria).
A future training event is being scheduled for 2021.

1.3 Details of activities implemented to educate the community on stormwater

Program Element/Activity	Audience (and number of people reached)	Topic(s) covered	Pollutant of Concern addressed (if applicable)	Responsible dept. or partner org.
Notice on MS4 requirements relating to construction updated and distributed with Engineering license applications and permit applications for Inland Wetland, Planning & Zoning, Engineering and Building.	*Contractors and Developers.* *37 licenses issued to contractors by Engineering.*	*Construction Activities*		*Engineering, Building , P&Z, Conservation*

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

2.1 BMP Summary

BMP	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
2-1 Continue availability of Final Stormwater Management Plan	Complete	Plan available on line and at town offices.	Plan available on Town website, engineering office, conservation office.	Engineering (John Casey)	On-going	On-going	
2-1b Comply with public notice requirements for Annual Reports	*Complete*	Draft 2019 Report was displayed on Town Website for inspection and comment	Publication of notice	Engineering (John Casey)	Annually by Feb 15	Feb 14, 2020	*See attached webpage screenshot*
2.2 Project Greensweep	*Complete*	Annual Greensweep /Housatonic River Cleanup event typically held. Cancelled due to pandemic.		Conservation/DPW (Kelly Kerrigan)	Spring 2018	April 27, 2019	*Activity cancelled due to pandemic.*
2.2b Regular Cleanups at Parks by Conservation Commission	*On-going*	Longbrook Park Commission Cleanup held October 3, 2020	-Number of events- 1 -Total number of participants--40-50 People in attendance	Conservation/DPW (Kelly Kerrigan)	September 2017 and periodically thereafter	October 2020	
2.2b Hold a "Household Hazardous Waste Day" Event	*Complete and ongoing biennially*	Household Hazardous Waste Collection planned for Autumn 2021	-Number of vehicles processed	Conservation/DPW (Kelly Kerrigan)	October 2017 and periodically thereafter	November 16, 2019 last event.	*Biennial Household Hazardous Waste Collection will be conducted in Autumn 2021*
2-3 Establish stormwater committee	*Complete*	Town Planner added to committee.	*Provide forum to coordinate SWMP implementation across depts. and commissions*	Conservation (Kelly Kerrigan), Engineering (John Casey)	-	*Nov 1, 2017*	*Town staff members advise public committees/commission at their monthly meetings.*
2-4 Establish volunteer tree planting program	*Complete*	No activity 2020	*Number of Trees purchased by public*	Conservation (Kelly Kerrigan), Engineering (John Casey)	-	*Oct 2017* last event	
2-5 Participation in Save the Sound's unified Water Study. The Study is	*Complete and ongoing*	Completed sampling trips in the Housatonic	*Completion of 11 planned sampling trips at 5 stations.*	Conservation (Kelly Kerrigan), Engineering	-	*May – Oct 2020*	Fourth year of participation completed for 2020 season.

assessing the quality of embayments in Long Island Sound.		River off of Stratford for the 2020 sampling	*Provide data to Save the Sound for their water quality reporting*	(John Casey)			Participation in this program will continue provided funding and equipment is once again made available.

Extra space for describing above BMP activities, if needed:

BMP	

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

Hold quarterly stormwater committee meetings to review SMP implementation progress. Town staff members will advise public committees/commission at their monthly meetings.
Annual Greensweep/Housatonic River Cleanup event will be held Spring 2021, pending any pandemic-related restrictions.
Participation in Save the Sound's unified Water Study will continue in 2021

2.3 Public Involvement/Participation reporting metrics

Metrics	Implemented	Date	Posted
Availability of the Stormwater Management Plan to public	Yes	On-going	
Availability of Annual Report announced to public	Yes	Feb 14, 2020	http://www.http://www.townofstratford.com/qcontent/NewsFeed.aspx?FeedID=2628
Greensweep: # of volunteers attending, Total tonnage of material collected	No		Cancelled due to pandemic.
Public Commission cleanup efforts: -Number of events, Total number of participants, tonnage collected	Yes	October 3, 2020	40-50 People in attendance.
Household Hazardous Waste Day- # of vehicles processed	No		Will be held again Autumn 2021

Staff committee established as Conservation- new staff Kelly Kerrigan, Planning and Zoning- Jay Habansky, Town Planner- Susmitha Attota, Highway- Tom Albert, Engineering- John Casey. Meeting quarterly to review plan implementation.	Yes	On-going	*Reports to Commissions included in minutes posted monthly with Tow n Clerk and Town Website.*
The Town's Conservation Department and volunteers from Conservation Commission participated in a regional effort to assess the quality of embayments in Long Island Sound. Participants are coordinated through Save the Sound and include volunteers along the CT coastline and north shore of Long Island Sound. The Stratford group was funded though the HarborWatch and the Long Island Sound Funders Collaborative to assess 5 stations in the Housatonic river for temperature, salinity, depth, dissolved oxygen, turbidity, and chlorophyll a. Twice-monthly samplings were conducted between May and October of 2020.	Yes	May 2020-Oct 2020	*The data was provided to Save the Sound for inclusion in their study.*

3. Illicit Discharge Detection and Elimination (Section 6(*a*)(3) and Appendix B / page 22)

3.1 BMP Summary

BMP	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
3-1 Develop written IDDE program	Complete	Development of written IDDE program using the CT IDDE program.	Written plan of IDDE program in place	Conservation (Kelly Kerrigan) Engineering (John Casey) WPCA (Thomas Hyde) Highways (Thomas Albert)	Jul 1, 2019	2019	Town Consultant (HRP) completed IDDE program materials
3-2 Update maps of all MS4 stormwater outfalls throughout municipality	In progress	Consultant selected.	Update of GIS map layers	Engineering (John Casey)	Jul 1, 2020	Jul 1, 2021	*See below*
3-3 Implement citizen reporting program	Complete	• See additional info below	Completion of SOP for program	Conservation (Kelly Kerrigan) IT Department (David Wright)	On-going	10-30-18 and On-going	Citizens may submit a comment, service request, or complaint on-line by clicking on the "Submit Service Request" link found on the Town of Stratford Home Page: http://www.townofstratford.com.
3-4 Establish legal authority to prohibit illicit discharges	Complete		Establishment of authority upon approval of ordinance by	Mayor (Laura Hoydick)	Jul 1, 2018	*Completed November 13, 2018*	*IDDE ordinance approved by Town Council*

			Town Council				
3-5 Develop record keeping system for IDDE tracking			Development of system/database	IT Department (David Wright)	Jul 1, 2017	*July 2021*	*Update tracking to Building Engines software in 2021.*
3-6 Address IDDE in areas with pollutants of concern			•No. of reported and investigated IDDE in areas with pollutants of concern	Public Works (Raynae Serra) Blight (Richard Fredette)	July 1, 2019 and On-going		*See table 3.4 below*

Extra space for describing above BMP activities, if needed:

BMP	
3-2 Update maps of all MS4 stormwater outfalls throughout municipality	RFP developed, advertised and outside consultant selected to perform mapping update. Funding consolidated and finance approval received. Record maps digitized and labeled for use by the consultant to update map layers and attached record map to GIS via hyperlink.
3-3 Implement citizen reporting program	In addition to registering a complaint on line, Citizens may also call Public Works directly and make a comment, service request, or complaint. By either means, a work order is entered into work order tracking system, Building Engines, and it is assigned to the appropriate staff for follow up.

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

3.2 Consultant will complete GIS map update in in first half of 2021
3.3 Bruce Brook cleanup effort and IDDE investigation conducted by Harbor Watch in coordination with the City of Bridgeport will continue.
3.5 Adapt Building Engines software to better track Illicit Discharge investigation and follow up of IDDE detection.

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

Date of Report	Location / suspected source	Response taken
11/9/2020	sewer forcemain on Urstadt/Biddle property	Communicated with property owner to make repair. Break was result of prior construction by UI so UI Co. contractor made the repair.
1/11/2020	Oil disposal observed at Bruce Brook-at Clover St- source unknown	Fire Dept responded, investigated and traced to Broadbridge Ave. Containment booms set up and DEEP contacted. DEEP took control of the scene.

3.4 Provide a record of illicit discharges occurring during the reporting period and SSOs occurring July 2012 through end of reporting period using the following table.

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)**
Short Beach Rd,	Dec 2020	Marine Basin, LIS	unknown	Contractor washing paint brushes.	Determined source and prohibited future activity	No
955 Ferry Blvd	Nov 9 to Dec 2020.	Housatonic River	unknown	Broken forcemain	Forcemain repaired	No
121 Beacon St	Aug 2020	Raven Brook	unknown	Disposal of auto fluid/used oil in CB	Source found investigation but no evidence of responsible party. Letters will be sent to adjacent owners to educate and discourage activity.	No
Clover Park, 399 Canaan Road	1/11/2020	Bruce Brook	~50 gallons oil	Unknown	Source under investigation.	No

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

Building Engines work order system is used by Highway and Conservation Divisions to track DPW activities.

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

Location and nature of structure with failing septic systems	Actions taken to respond to and address the failures	Impacted waterbody or watershed, if known
405 James Farm Rd	System repaired	None identified
178 Manor Hill Drive	System repaired	None identified
925 James Farm Road	System repaired	None identified
5350 Main Street	System repaired	None identified
5375 Main Street	System repaired	None identified
885 Warner Hill Road	System repaired	None identified

3.7 IDDE reporting metrics

Metrics	
Estimated or actual number of MS4 outfalls	*#265*
Estimated or actual number of interconnections	*#Unknown*
Outfall mapping complete	*99%*
Interconnection mapping complete	*0%**
System-wide mapping complete (detailed MS4 infrastructure)	*85%*
Outfall assessment and priority ranking	*Not conducted*
Dry weather screening of all High and Low priority outfalls complete	*#247*

Catchment investigations complete	*#0*
Estimated percentage of MS4 catchment area investigated	*0%*

*State-owned outfalls have been identified and mapped however potential MS4 interconnections with those outfalls have not yet been determined.

**The remaining 18 MS4 outfalls have not been dry weather screened as the outfall itself could not be located or was submerged and/or the nearest upstream stormwater structure could not be identified/located.

***Key Junction Manhole Dry Weather Investigation has begun. In 2020, 21 manholes were screened, and samples were collected of flow from incoming pipes (up to two per manhole). Efforts were focused in catchments where permit benchmark criteria was exceeded in dry weather samples collected from the outfalls. Additional efforts have been made to review the storm drain network (via mapping and in the field) in other catchments and it has been determined that more than one key junction manhole or no key junction manholes are present in some catchments.

3.8 Briefly describe the IDDE training for employees involved in carrying out IDDE tasks including what type of training is provided and how often is it given (minimum once per year).

December 4 & 8, 2020: Training covered stormwater pollution prevention, including potential sources, control measures, materials management, inspections, and reporting.

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

4.1 BMP Summary

BMP	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
4-1 Implement, upgrade, and enforce land use regulations or other legal authority to meet requirements of MS4 general permit	In progress	• *See table below for details*	Making appropriate changes and updates to land use regulations	CAO (Chris Tymniak)	Jul 1, 2019	• *Unknown*	
4-2 Develop/Implement model for interdepartmental coordination in site plan review and approval	In progress	*All land use applications are sent to various departments for staff*	interdepartmental coordination in site plan review 31 applications	Zoning (Jay Habansky)	On-going	*Continuation of existing practice therefore completed July 1, 2017* On-going	*31 applications have been referred to various departments in 2020*

		comments prior to hearings	referred for review 2020.				
4-3 Review site plans for stormwater quality concerns	On-Going	*All land use applications are sent to Engineer for staff comments prior to hearings*.	Completion of reviews. 31 applications referred for review 2020	Zoning (Jay Habansky) Engineering (John Casey) Conservation (Kelly Kerrigan)	On-going	*Continuation of existing practice completed through Dec 2020* On-going	*31applications have been referred to Engineering staff in 2020*
4-4 Conduct site inspections to ensure compliance with MS4, stormwater management plan, and sediment and erosion control requirements	On-Going	Site inspections for site development in compliance with the permit continue	Conduct inspections 10 compliance inspections by ZEO for 2020. Inspection log attached.	Zoning (Jay Habansky) Conservation (Kelly Kerrigan)	On-going	*Continuation of existing practice therefore completed July 1, 2017* On-going	(Inspection list by ZEO attached)
4-5 Maintain current opportunities for allowing public comment on site development	On-Going	public hearings and public forums held for site development proposals with significant impacts continue	Conduct public hearings and public forums on site development proposals	Mayor (Laura Hoydick) (Mike Downes) Town Attorney (Chris Hodgson)	On-going	*Continuation of existing practice therefore completed July 1, 2017* On-going	*Public comment is always offered at every public hearing for site plan review*
4-6 Implement procedure to notify developers about DEEP construction stormwater permit	*Complete*	developers provided necessary information in permit application packages for site development	Continue to provide developers with necessary information in permit application package	Zoning (Jay Habansky) Buildings (Brian Donovan) Engineering (John Casey) Conservation (Kelly Kerrigan)	On-going	Continuation of existing practice completed through Dec 2019 On-going	*See Attached*
4-7 Develop stormwater compliance checklist	*In progress*	*Flagging system developed for on line permitting*	*Standardize plan review*	Zoning (Jay Habansky)	-Dec 2018	*2020*	*Flagging question added to permit system will be able to generate report changes to DCIA.*

Extra space for describing above BMP activities, if needed:

BMP	

4-1 Implement, upgrade, and enforce land use regulations or other legal authority to meet requirements of MS4 general permit	Several meetings held with Town Attorney and CAO to review sample guidance language from CLEAR and discuss implementation strategies including manpower requirements / staffing. No decisions were made regarding Land Use Regulation updates or Ordinance updates at this time. No decisions were made regarding staffing commitments for enforcing the current or future legal authorities above the current practices.

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

Potential to upgrade land use regulations or other legal authority to meet requirements of MS4 general permit

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

5.1 BMP Summary

BMP	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
5-1 Establish and/or update legal authority and guidelines regarding LID and runoff reduction in site development planning		See table below for details -	Incorporation of LID in to land use regulatory framework	Town Attorney (Chris Hodgson)	Jul 1, 2021	unknown	
5-2 Enforce LID/runoff reduction requirements for development and redevelopment projects	On-Going	Plans reviewed and recommendations made toward meeting Town goals for LID/runoff mitigation.	Inspect developments for LID/runoff compliance	Engineering (John Casey) Zoning (Jay Habansky Conservation (Kelly Kerrigan))	Jul 1, 2019 and On-going	N/A	*Inspections of construction of approved plans are completed by the responsible town dept.*
5-3a Update Identify retention and detention ponds in priority areas	Complete	*Updated list of stormwater quality structure*		Engineering (John Casey)	Dec, 2018 and On-going	December 2020	*Distributed to conservation and DPW*

5-3b Implement long-term maintenance plan for stormwater basins and treatment structures			Creation of maintenance plan document	Highways (Thomas Albert)	Jul 1, 2019	*Maintenance Plan to be developed in 2021*	
5-4 DCIA Determination	complete	Utilizing GIS tools and town land use map, estimate generated for DCIA townwide and by drainage basin	complete DCIA baseline estimate	Engineering (John Casey Planning (Susmitha Attota))	Jul 1, 2020	*Dec 2020*	*See additional detail below*
5-5 Address post-construction issues in areas with pollutants of concern	*In progress*		Create Regulations and reporting procedures in place to ensure initial and long-term compliance	Zoning (Jay Habansky) Conservation (Kelly Kerrigan)	Not specified		
5-6 Open space grant	*In progress*		*Acreage of property purchased*	Planning/Zoning (Jay Habansky) Conservation (Kelly Kerrigan)	-	*Jul 1 2021*	*Town awarded Open Space Grant in January 2020 for Tomasco property adjacent to existing municipal park. Negotiations to acquire on Hold due to Covid.*

Extra space for describing above BMP activities, if needed:

BMP	
5-1 Establish and/or update legal authority and guidelines regarding LID and runoff reduction in site development planning	Met several times in 2019 with Town Attorney, Chief Administrative Officer and members of Stormwater committee to review the scope, language, and implementation responsibilities for changes included in guidance obtained from UCONN CLEAR / NEMO website for Construction Site legal authority. For 2020, no decisions have been made regarding new regulatory language or inclusion of additional language or standards into the current town development regulations. No decisions were made regarding staffing commitments for enforcing the current or future legal authorities above the current practices.
5-4 DCIA Determination	Directly Connected Impervious Areas in Stratford have been mapped by categorizing each drainage basin located in Stratford.

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

5-1, 2 Establish and/or update legal authority, guidelines and regulations regarding LID and runoff reduction in development
5-3b Finalize implemention of long-term maintenance plan for stormwater basins and treatment structures-
5.6 Complete previously initiated Open space acquisitions. Initiate a new acquisition grant for an additional property.

5.3 Post-Construction Stormwater Management reporting metrics For details on this requirement, visit www.nemo.uconn.edu/ms4/tasks/post-construction.htm. Scroll down to the DCIA section.

Metrics	
Baseline (2012) Directly Connected Impervious Area (DCIA)	1492 acres
DCIA disconnected (redevelopment plus retrofits)	0 acres this year / acres total
Retrofits completed	*0 locations*- -
DCIA disconnected Retrofits	0 acres this year
Estimated cost of retrofits	$0
Detention or retention ponds identified	# 0 this year /#9 total

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

Directly Connected Impervious Areas in Stratford have been mapped by categorizing each drainage basin located in Stratford into one of the following five categories i.e., fully connected, wicked connected, moderately connected, 'sorta connected, and slightly connected (as per the UCONN CLEAR methodology). The Town's current zoning map was also used as a guide to categorize each basin accurately based on land use types that are allowed in each zone.

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

6.1 BMP Summary

BMP	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
6-1 Develop/implement formal employee training program	*Ongoing*	The Town contracted with a consultant to administer training sessions to Town employees.	Training conducted	Conservation (Kelly Kerrigan)	Jul 1, 2019 and On-going	December 4 & 8, 2020	Additional training is being scheduled for 2021
6-2 Implement MS4 property and operations maintenance	Complete and Ongoing	• See table below for details	Change to Eco friendly "Safe n' Sure" ice melt in use at all town facilities.	Parks Dept (Chad Esposito)	Jul 1, 2018 and On-going	Jul 1, 2018 and On-going	See additional details below.
6-3 Implement coordination with interconnected MS4s	*On-going*	• See table below for details	Meeting with operators of interconnected MS4s and coordinating efforts to achieve BMPs	Conservation (Kelly Kerrigan) Engineering (John Casey) Zoning (Jay Habansky)	July 1, 2021	*Dec 2018 and* On-going	
6-4 Develop/implement program to control other sources of pollutants to the MS4			Develop/implement program	Public Works (Raynae Serra)	July 1, 2021		
6-5 Evaluate additional measures for discharges to impaired waters*			Report on additional measure being undertaken	Public Works (Raynae Serra) Zoning (Jay Habansky)	July 1, 2019		
6-6 Track projects that disconnect DCIA	Ongoing		Continuously maintained spreadsheet of disconnect projects	Zoning (Jay Habansky) Engineering (John Casey)	July 1, 2017 and On-going	On-going	

6-7 Implement infrastructure repair/rehab program	In Progress		Update/implement program	Highways (Thomas Albert) Engineering (John Casey)	Jul 1, 2021		
6-8a Develop plan to identify/prioritize retrofit projects	*Complete and On-going*	*Retrofit plan developed to outline strategy for implementing retrofit projects*	2020: Develop retrofit plan.	Engineering (John Casey) Conservation (Kelly Kerrigan)	Jul 1, 2020 and On-going	*Dec 2020*	
6-8b Implement retrofit projects to disconnect 2% of DCIA	In Progress		2022: Implement retrofit projects	Engineering (John Casey) Conservation (Kelly Kerrigan)	Jul 1, 2022		*2 parking lot reconstruction projects in 2021 will incorporate retrofit improvements.*
6-9 Assess/modify street sweeping program	*Complete and On-going*		Modify program to comply with MS4 General Permit	Highways (Thomas Albert)	Jul 1, 2018 and On-going	*11/2018 &* On-going	*All streets are swept once in town. Main roads are done once and again on a as needed basis*
6-10 Assess/modify catch basin cleaning program	*Complete and On-going*		Inspect all town catch basins by 2020	Highways (Thomas Albert)	On-going beginning Jul 1, 2020	*Sept 2018 SOP's instituted*	
6-12 Assess/modify snow management practices			Modify program to comply with MS4 General Permit	Highways (Thomas Albert)	On-going beginning Jul 1, 2019		
6-13 Identify highly erosive areas in town ROW	*Not started*	*Some areas noted(see below) for further investigation.*	*ID areas contributing large volume of sediment to town waterbodies*	*Highways (Thomas Albert) Conservation (Kelly Kerrigan)*	-	*Jul 1, 2021*	*Reason for addition: Reduce sedimentation of waterways near town ROWs*

Extra space for describing above BMP activities, if needed:

BMP	
6-3 Implement coordination with interconnected MS4s	*The Town will continue to work with Harbor Watch to track down the sources of pollution along Bruce Brook. Much of this work was put on hold due to pandemic-related restrictions and concerns*
6-2 Implement MS4 property and operations maintenance	*A. -Reduced Fertilizer use at town facilities. Fertilizer was only used at a few sports complexes and Town Hall. No fertilizer is being used on school grounds.* *B. -Parks Department continues to pick up bagged leaves and grass clippings from residences.* *C. -Leaf and grass clippings are taken to the transfer station where it is hauled by an outside contractor.* *D.- The Parks Department uses Eco friendly "Safe n' Sure" ice melt in use at all town facilities*
6.13Identify highly erosive areas in town ROW	*Tanners Brook downstream of Stratford HS, Lockwood Ave/Stfd Ave storm outfall headwall, 225 Peace Acre Lane, Main St Putney gutter approaching south Rte110 intesection- these locations were noted as areas where erosion is occurring to be addressed in the future.*

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

Conservation Dept will coordinate with City of Shelton on Cemetery Brook / Cranberry Pond coliform investigation.

Continue to work with Harbor Watch, Soundkeeper, and City of Bridgeport to reduce pollution of Bruce Brook.

Training to be coordinated and scheduled for more Town Staff for 2021.

A retrofit project will be coordinated with parking lot reconstruction in 2021 for work at the Baldwin Center and Bunnell HS parking lots.

Collect information on eroding areas in ROW from highway maintenance personnel over course of normal operation

Update Tracking for projects that disconnect DCIA

6.3 Pollution Prevention/ Good Housekeeping reporting metrics

Metrics	
Employee training provided for key staff	*Training provided by consultant on December 4, 2020 (Two Training Sessions) and December 8, 2020*
Street sweeping	
Curb miles swept	*500 est miles*

Volume (or mass) of material collected	*~included in CB waste removal/disposal*
Catch basin cleaning	
Total catch basins in priority areas	*#5500*
Total catch basins in MS4	*#5500*
Catch basins inspected	*#1863*
Catch basins cleaned	*#1863*
Volume (or mass) of material removed from all catch basins	*3000 tons*
Volume removed from catch basins to impaired waters (if known)	*Not tracked separate*
Snow management	
Type(s) of deicing material used	*Straight salt*
Total amount of each deicing material applied	*2500 tons*
Type(s) of deicing equipment used	*spreaders*
Lane-miles treated	*400 miles per storm*
Snow disposal location	*N/A*
Staff training provided on application methods & equipment	*Yes: on the job training for new employees*
Municipal turf management program actions (for permittee properties in basins with N/P impairments)	
Reduction in application of fertilizers (since start of permit)	*Restricted fertilizer use to Town Hall and a few municipal sports complexes*
Reduction in turf area (since start of permit)	*3 acres*
Lands with high potential to contribute bacteria (dog parks, parks with open water, & sites with failing septic systems)	
Cost of mitigation actions/retrofits	*$ N/A*

6.4 Catch basin cleaning program

Provide any updates or modifications to your catch basin cleaning program

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.

See attached retrofit program plan.

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

Work in coordination with Town parking lot restorations to incorporate DCIA separation working into restoration work performed by the DPW. Work to have larger redevelopment projects disconnect impervious areas.

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

Continue to work in coordination with Town parking lot restorations to incorporate DCIA separation working into restoration work performed by the DPW. Work to have larger redevelopment projects disconnect impervious areas.

Part II: Impaired waters investigation and monitoring

1. Impaired waters investigation and monitoring program

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.

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.
2/3 of the known town outfalls have been monitored during 2020. **An additional round of dry and wet weather monitoring will be conducted in the summer of 2021.**

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

2.1 Screening data collected under 2017 permit

Complete the table below 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. You may also attach an excel spreadsheet with the same data rather than copying it into this table

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

		Other pollutant of concern)			
BRB-OF-0043CB	4-12-18	Bacteria	- *E. coli* 4200 *CFU/100ml*		*Yes*
BRB-OF-0043CB	5-22-18	Bacteria	- *E. coli* 7800 *CFU/100ml*		*Yes*
BRB-OF-0043CB	6-25-18	Bacteria	- *E. coli* 3200 *CFU/100ml*		*Yes*
BRB-OF-0043CB	7-16-18	Bacteria	- *E. coli - CFU/100ml*		*Yes*
BRB-OF-0043CB	8-22-18	Bacteria	- *E. coli* 8400 *CFU/100ml*		*Yes*
BRB-OF-0043CB	8-29-18	Bacteria	- *E. coli* 33000 *CFU/100ml*		*Yes*
BRB-OF-0037	8-22-18	Bacteria	- *E. coli* 280 *CFU/100ml*		*Yes*
BRB-OF-0040CB	8-22-18	-	- *E. coli* stagnant *CFU/100ml*		*Yes*
Old Spring Rd	8-22-18	Bacteria	- *E. coli* 2000 *CFU/100ml*		*Yes*
BRB-OF-0016	8-22-18	-	- *E. coli* Dry *CFU/100ml*		*Yes*
Bunnell Ave	8-22-18	Bacteria	- *E. coli* 900 *CFU/100ml*		*Yes*

Outfall ID	**Latitude / Longitude**	**Sample date**	**Parameter** (Nitrogen, Phosphorus, Bacteria, or Other pollutant of concern)	**Results**	**Name of Laboratory (if used)**	**Follow-up required? ***
BRB-OF-0003N	*41.189123, -73.154694*	*01/03/2020*	- *Bacteria* - *Other Pollutant of Concern*	- *E. coli 246 MPN/100ml* - *T Coliform >2,000 CFU/100ml* - *Turbidity of outfall 9.78*	*Phoenix*	*Yes*

				NTU - *Turbidity upstream 4.54 NTU*		
BRB-OF-0023	*41.189301, -73.155016*	*01/03/2020*	- *Bacteria* - *Other Pollutant of Concern*	- *E. coli 9,210 MPN/100ml* - *T Coliform >2,000 CFU/100ml* - *Turbidity of outfall 7.40 NTU* - *Turbidity upstream 4.75 NTU*	*Phoenix*	*Yes*
HRN-OF-0094	*41.205494, -73.127768*	*04/13/2020*	- *Nitrogen* - *Phosphorus*	- *Total Nitrogen 0.54 mg/l* - *Total Phosphorus 0.050 mg/l*	*Phoenix*	*No*
HRN-OF-0079	*41.20772, -73.127931*	*04/13/2020*	- *Nitrogen* - *Phosphorus*	- *Total Nitrogen 1.86 mg/l* - *Total Phosphorus 0.277 mg/l*	*Phoenix*	*No*
HRN-OF-0003	*41.207674, -73.127643*	*04/13/2020*	- *Nitrogen* - *Phosphorus*	- *Total Nitrogen 0.63 mg/l* - *Total Phosphorus 0.069 mg/l*	*Phoenix*	*No*
HRN-OF-0078	*41.207635, -73.127627*	*04/13/2020*	- *Nitrogen* - *Phosphorus*	- *Total Nitrogen 1.52 mg/l* - *Total Phosphorus 0.146 mg/l*	*Phoenix*	*No*
HRN-OF-0002	*41.207049, -73.128436*	*04/13/2020*	- *Nitrogen* - *Phosphorus*	- *Total Nitrogen 0.71 mg/l* - *Total Phosphorus 0.094 mg/l*	*Phoenix*	*No*
SWS-OF-0005	*41.150842, -73.121576*	*04/30/2020*	- *Bacteria*	- *Enterococci 620 MPN/100ml*	*Phoenix*	*Yes*
SWS-OF-	*41.151488,*	*04/30/2020*	- *Bacteria*	- *Enterococci*	*Phoenix*	*Yes*

0004	*-73.120124*			*4,360 MPN/100ml*		
SWS-OF-0003	*41.151488, -73.120124*	*04/30/2020*	*- Bacteria*	*- Enterococci 2,010 MPN/100ml*	*Phoenix*	*Yes*
SWS-OF-0002	*41.151674, -73.116506*	*04/30/2020*	*- Bacteria*	*- Enterococci 11,200 MPN/100ml*	*Phoenix*	*Yes*
SWS-OF-0002a	*41.151811, -73.117724*	*04/30/2020*	*- Bacteria*	*- Enterococci 1,350 MPN/100ml*	*Phoenix*	*Yes*
SWS-OF-0001	*41.151266, -73.112567*	*04/30/2020*	*- Bacteria*	*- Enterococci 1,210 MPN/100ml*	*Phoenix*	*Yes*
HRS-OF-0011	*41.182634, -73.128459*	*04/30/2020*	*- Bacteria*	*- Enterococci 19,900 MPN/100ml*	*Phoenix*	*Yes*

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?
Park/Maple	*10-4-10*	*Nitrogen*	*TN -0.68 mg/l*	*EM*	*No*
		Phosphorus	*TP- 0.27 mg/l*	*EML*	*No*
		Bacteria	*- E. coli* 2500 *CFU/100ml*	*EML*	*No*
Monroe	*10-4-10*	*Nitrogen*	*TN -0.97 mg/l*	*EML*	*No*
		Phosphorus	*TP- 0.63mg/l*	*EML*	*No*
		Bacteria	*- E. coli* 240 *CFU/100ml*	*EML*	*No*
Linden	*10-4-10*	*Nitrogen*	*TN -0.81 mg/l*	*EML*	*No*
		Phosphorus	*TP- 0.18mg/*	*EML*	*No*
		Bacteria	*E. coli* 500 *CFU/100ml*	*EML*	*No*
Ryders	*10-4-10*	*Nitrogen*	*TN -1.42 mg/*	*EML*	*No*

		Phosphorus	*TP- 0.43mg*	*EML*	*No*
		Bacteria	*E. coli* 180 *CFU/100ml*	*EML*	*No*
Garfield	*10-4-10*	*Nitrogen*	*TN -2.01 mg/*	*EML*	*No*
		Phosphorus	*TP- 0.39mg*	*EML*	*No*
		Bacteria	*E. coli* 950 *CFU/100ml*	*EML*	*No*
Sunset	*10-4-10*	*Nitrogen*	*TN -0.31 mg/*	*EML*	*No*
		Phosphorus	*TP- 0.17mg*	*EML*	*No*
		Bacteria	*E. coli* 1000 *CFU/100ml*	*EML*	*No*
Park/Maple	*10-19-11*	*Nitrogen*	*TN -0.94 mg/l*	*EM*	*No*
		Phosphorus	*TP- ND mg/l*	*EML*	*No*
		Bacteria	*- E. coli* 14500 *CFU/100ml*	*EML*	*No*
Monroe	*10-19-11*	*Nitrogen*	*TN -1.36 mg/l*	*EML*	*No*
		Phosphorus	*TP- NDmg/l*	*EML*	*No*
		Bacteria	*- E. coli* 5600 *CFU/100ml*	*EML*	*No*
Linden	*10-19-11*	*Nitrogen*	*TN -1.02 mg/l*	*EML*	*No*
		Phosphorus	*TP- NDmg/*	*EML*	*No*
		Bacteria	*E. coli* 76 *CFU/100ml*	*EML*	*No*
Ryders	*10-19-11*	*Nitrogen*	*TN -2.14 mg/*	*EML*	*No*
		Phosphorus	*TP- NDmg*	*EML*	*No*
		Bacteria	*E. coli* 250 *CFU/100ml*	*EML*	*No*
Garfield	*10-19-11*	*Nitrogen*	*TN -2.12 mg/*	*EML*	*No*
		Phosphorus	*TP- NDmg*	*EML*	*No*
		Bacteria	*E. coli* 566 *CFU/100ml*	*EML*	*No*
Sunset	*10-19-11*	*Nitrogen*	*TN -0.64 mg/*	*EML*	*No*
		Phosphorus	*TP- 0.17mg*	*EML*	*No*
		Bacteria	*E. coli* 12 *CFU/100ml*	*EML*	*No*
Park/Maple	*4-27-12*	*Nitrogen*	*TN -1.38 mg/l*	*EM*	*No*
		Phosphorus	*TP- 0.16mg/l*	*EML*	*No*
		Bacteria	*- E. coli* 3400 *CFU/100ml*	*EML*	*No*
Monroe	*4-27-12*	*Nitrogen*	*TN -1.2 mg/l*	*EML*	*No*
		Phosphorus	*TP- 0.52mg/l*	*EML*	*No*
		Bacteria	*- E. coli* 1600	*EML*	*No*

			CFU/100ml		
Linden	*4-27-12*	*Nitrogen*	*TN 0.94 mg/l*	*EML*	*No*
		Phosphorus	*TP- 0.11mg/*	*EML*	*No*
		Bacteria	*E. coli* 88 *CFU/100ml*	*EML*	*No*
Ryders	*4-27-12*	*Nitrogen*	*TN -1.74 mg/*	*EML*	*No*
		Phosphorus	*TP- 0.28mg*	*EML*	*No*
		Bacteria	*E. coli* 160 *CFU/100ml*	*EML*	*No*
Garfield	*4-27-12*	*Nitrogen*	*TN -4.6 mg/*	*EML*	*No*
		Phosphorus	*TP- 0.91mg*	*EML*	*No*
		Bacteria	*E. coli* 8 *CFU/100ml*	*EML*	*No*
Sunset	*4-27-12*	*Nitrogen*	*TN -1.80 mg/*	*EML*	*No*
		Phosphorus	*TP- 0.20mg*	*EML*	*No*
		Bacteria	*E. coli* 460 *CFU/100ml*	*EML*	*No*
Park/Maple	*8-22-13*	*Nitrogen*	*TN -1.90 mg/l*	*EM*	*No*
		Phosphorus	*TP- 0.79mg/l*	*EML*	*No*
		Bacteria	*- E. coli* 1800 *CFU/100ml*	*EML*	*No*
Monroe	*8-22-13*	*Nitrogen*	*TN -5.4 mg/l*	*EML*	*No*
		Phosphorus	*TP- 2.19mg/l*	*EML*	*No*
		Bacteria	*- E. coli* 5200 *CFU/100ml*	*EML*	*No*
Linden	*8-22-13*	*Nitrogen*	*TN 1.72 mg/l*	*EML*	*No*
		Phosphorus	*TP- 0.40mg/*	*EML*	*No*
		Bacteria	*E. coli* 240 *CFU/100ml*	*EML*	*No*
Ryders	*8-22-13*	*Nitrogen*	*TN -0.94 mg/*	*EML*	*No*
		Phosphorus	*TP- 0.11mg*	*EML*	*No*
		Bacteria	*E. coli* 900 *CFU/100ml*	*EML*	*No*
Garfield	*8-22-13*	*Nitrogen*	*TN -0.88 mg/*	*EML*	*No*
		Phosphorus	*TP- 0.19mg*	*EML*	*No*
		Bacteria	*E. coli* 1500 *CFU/100ml*	*EML*	*No*
Sunset	*8-22-13*	*Nitrogen*	*TN -1.32 mg/*	*EML*	*No*
		Phosphorus	*TP- 0.16mg*	*EML*	*No*
		Bacteria	*E. coli* 2400 *CFU/100ml*	*EML*	*No*
Park/Maple	*9-20-14*	*Nitrogen*	*TN -0.74 mg/l*	*EM*	*No*

		Phosphorus	*TP- 0.14mg/l*	*EML*	*No*
		Bacteria	*- E. coli* 984 *CFU/100ml*	*EML*	*No*
Monroe	*9-20-14*	*Nitrogen*	*TN -3.6 mg/l*	*EML*	*No*
		Phosphorus	*TP- 0.90mg/l*	*EML*	*No*
		Bacteria	*- E. coli* 426 *CFU/100ml*	*EML*	*No*
Linden	*9-20-14*	*Nitrogen*	*TN 3.0 mg/l*	*EML*	*No*
		Phosphorus	*TP- 0.20mg/*	*EML*	*No*
		Bacteria	*E. coli* 1412 *CFU/100ml*	*EML*	*No*
Ryders	*9-20-14*	*Nitrogen*	*TN -28.00 mg/*	*EML*	*No*
		Phosphorus	*TP- 7.15mg*	*EML*	*No*
		Bacteria	*E. coli* 720 *CFU/100ml*	*EML*	*No*
Garfield	*9-20-14*	*Nitrogen*	*TN -1.22 mg/*	*EML*	*No*
		Phosphorus	*TP- 0.20mg*	*EML*	*No*
		Bacteria	*E. coli* 1480 *CFU/100ml*	*EML*	*No*
Sunset	*9-20-14*	*Nitrogen*	*TN -1.16 mg/*	*EML*	*No*
		Phosphorus	*TP- 0.26mg*	*EML*	*No*
		Bacteria	*E. coli* 650 *CFU/100ml*	*EML*	*No*
Park/Maple	*7-31-15*	*Nitrogen*	*TN -1.16 mg/l*	*EM*	*No*
		Phosphorus	*TP- 0.20mg/l*	*EML*	*No*
		Bacteria	*- E. coli* 184 *CFU/100ml*	*EML*	*No*
Monroe	*7-31-15*	*Nitrogen*	*TN -1.72 mg/l*	*EML*	*No*
		Phosphorus	*TP- 0.32mg/l*	*EML*	*No*
		Bacteria	*- E. coli* 688 *CFU/100ml*	*EML*	*No*
Linden	*7-31-15*	*Nitrogen*	*TN 2.3 mg/l*	*EML*	*No*
		Phosphorus	*TP- 0.22mg/*	*EML*	*No*
		Bacteria	*E. coli* 108 *CFU/100ml*	*EML*	*No*
Ryders	*7-31-15*	*Nitrogen*	*TN -0.76 mg/*	*EML*	*No*
		Phosphorus	*TP- 0.15mg*	*EML*	*No*
		Bacteria	*E. coli* 164 *CFU/100ml*	*EML*	*No*
Garfield	*7-31-15*	*Nitrogen*	*TN -0.74 mg/*	*EML*	*No*
		Phosphorus	*TP- 0.13mg*	*EML*	*No*

		Bacteria	*E. coli* 204 *CFU/100ml*	*EML*	*No*
Sunset	*7-31-15*	*Nitrogen*	*TN -0.6 mg/*	*EML*	*No*
		Phosphorus	*TP- 0.14mg*	*EML*	*No*
		Bacteria	*E. coli* 844 *CFU/100ml*	*EML*	*No*
Park/Maple	*9-1-16*	*Nitrogen*	*TN -1.46 mg/l*	*EM*	*No*
		Phosphorus	*TP- 0.55mg/l*	*EML*	*No*
		Bacteria	*- E. coli* 1486 *CFU/100ml*	*EML*	*No*
Monroe	*9-1-16*	*Nitrogen*	*TN -2.2 mg/l*	*EML*	*No*
		Phosphorus	*TP- 0.98mg/l*	*EML*	*No*
		Bacteria	*- E. coli* 1733 *CFU/100ml*	*EML*	*No*
Linden	*9-1-16*	*Nitrogen*	*TN 2.0 mg/l*	*EML*	*No*
		Phosphorus	*TP- 0.30mg/*	*EML*	*No*
		Bacteria	*E. coli* 2420 *CFU/100ml*	*EML*	*No*
Ryders	*9-1-16*	*Nitrogen*	*TN -1.58 mg/*	*EML*	*No*
		Phosphorus	*TP- 0.25mg*	*EML*	*No*
		Bacteria	*E. coli* 866 *CFU/100ml*	*EML*	*No*
Garfield	*9-1-16*	*Nitrogen*	*TN -1.42 mg/*	*EML*	*No*
		Phosphorus	*TP- 0.25mg*	*EML*	*No*
		Bacteria	*E. coli* 1011 *CFU/100ml*	*EML*	*No*
Sunset	*9-1-16*	*Nitrogen*	*TN -0.66 mg/*	*EML*	*No*
		Phosphorus	*TP- 0.19mg*	*EML*	*No*
		Bacteria	*E. coli* 2420 *CFU/100ml*	*EML*	*No*

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

Provide the following information for outfalls exceeding the pollutant threshold.

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

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

Once outfall screening has been completed for at least 50% of outfalls to impaired waters, identify 6 of the highest contributors of any pollutants of concern. Begin monitoring these outfalls on an annual basis by July 1, 2020. **Prioritized outfalls will be identified in 2021**.

Outfall	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
7102-00 **Bruce Brook**	*High Priority*	*1*
6026-03 **Longbrook, Ferry Creek**	*High Priority*	*2*
6026-03 **Cemetery Pond Brook**	*High Priority*	3
6025-00 **Far Mill River**	*Medium Priority*	4
6026-00 **Beaver Dam Lake, Cooks Pond, Peck's Mill Pond, Pumpkin Ground Brook**	*Low Priority*	5
6000-84 **Raven Stream, Motil Pond**	*Low Priority*	6
6000-82 **Freeman Brook Complex**	*Low Priority*	7
6000-00&85 **Housatonic River (Upper and Mouth)**	*High Priority*	
7101-00 **Lewis Gut**	*High Priority*	
Long Island Sound	*High Priority*	

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 www.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 into this table.

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
BRB-OF-0043	*4-12-18*					*E. coli 4200 CFU/100ml*				
OLD Spring Rd	8-22-18					*E. coli 2000 CFU/100ml*				
Bruce Brook downstream Connors Lane	8-22-18					*E. coli 2700 CFU/100ml*				

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**
BRB-OF-0048	*41.198916, -73.149848*	*3/19/2019*	*<0.10 mg/l*	*0.01 mg/l*	*285 uS/cm*	*0.2 ppt*	*>2419.6 MPN/100ml*	*<0.05 mg/l*	*8.2 C*	*N/A*	*Will be ranked at top of high priority category for catchment investigation*
BRB-OF-0020	*41.198722, -73.150242*	*3/19/2019*	*<0.10 mg/l*	*Not detected*	*278.6 uS/cm*	*0.2 ppt*	*>2419.6 MPN/100ml*	*<0.05 mg/l*	*5.3 C*	*N/A*	*Raised priority category from low to high for potential catchment investigation*
BRB-OF-0050	*41.199403, -73.149175*	*3/19/2019*	*<0.10 mg/l*	*Not detected*	*246.3 uS/cm*	*0.2 ppt*	*>2419.6 MPN/100ml*	*<0.05 mg/l*	*3.4 C*	*N/A*	*Raised priority category from low to high for potential catchment investigation*
BRB-OF-0017	*41.20036, -73.149094*	*3/19/2019*	*<0.10 mg/l*	*Not detected*	*570 uS/cm*	*0.4 ppt*	*<1 MPN/100ml*	*<0.05 mg/l*	*7.8 C*	*N/A*	*N/A*

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
BRB-OF-0004	*41.202057, -73.148806*	*3/19/2019*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*N/A*	*N/A*
BRB-OF-0018	*41.200665, -73.149037*	*3/19/2019*	*0.35 mg/l*	*Not detected*	*298.7 uS/cm*	*0.2 ppt*	*<1 MPN/100ml*	*0.051 mg/l*	*10.1 C*	*N/A*	*N/A*
BRB-OF-0021	*41.196673, -73.151212*	*3/19/2019*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*N/A*	*N/A*
BRB-OF-0045a	*41.198499, -73.150419*	*3/19/2019*	*<0.10 mg/l*	*Not detected*	*276.6 uS/cm*	*0.2 ppt*	*41.0 MPN/100ml*	*<0.05 mg/l*	*10.1 C*	*N/A*	*N/A*
BRB-OF-0049	*41.195746, -73.152021*	*3/19/2019*	*0.31 mg/l*	*0.02 mg/l*	*394.6 uS/cm*	*0.3 ppt*	*154.10 MPN/100ml*	*0.071 mg/l*	*10.7 C*	*N/A*	*Raised priority category from low to high for potential catchment investigation*
BRB-OF-0024	*41.191832, -73.154308*	*3/19/2019*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*N/A*	*N/A*
BRB-OF-0051	*41.191845, -73.154375*	*3/19/2019*	*3.30 mg/l*	*0.01 mg/l*	*584 uS/cm*	*0.4 ppt*	*>2419.6 MPN/100ml*	*2.60 mg/l*	*11.1 C*	*N/A*	*Will be ranked at top of high priority category for catchment investigation*
BRB-OF-0003S	*41.189123, -73.154694*	*3/19/2019*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*E. coli*	*N/A*
BRB-OF-0023	*41.189301, -73.155016*	*3/19/2019*	*0.82 mg/l*	*0.01 mg/l*	*343.6 uS/cm*	*0.2 ppt*	*>2419.6 MPN/100ml*	*0.25 mg/l*	*11.5 C*	*E. coli*	*Will be ranked at top of high priority category for catchment investigation*
BRB-OF-0010	*41.21246, -73.143626*	*3/19/2019*	*<0.10 mg/l*	*0.01 mg/l*	*160.1 uS/cm*	*0.1 ppt*	*159.7 MPN/100ml*	*0.075 mg/l*	*11.3 C*	*N/A*	*Raised priority category from low to high for potential catchment investigation*

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
BRB-OF-0003N	*41.189123, -73.154694*	*3/19/2019*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*E. coli*	*N/A*
BRB-OF-0005	*41.2165, -73.141237*	*3/20/2019*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*N/A*	*N/A*
BRB-OF-0008	*41.216372, -73.141403*	*3/20/2019*	*<0.10 mg/l*	*0.31 mg/l*	*316.5 uS/cm*	*0.2 ppt*	*<1 MPN/100ml*	*<0.05 mg/l*	*7.2 C*	*N/A*	*Raised priority category from low to high for potential catchment investigation*
BRB-OF-0015	*41.217491, -73.141476*	*3/20/2019*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*N/A*	*N/A*
BRB-OF-0006	*41.217409, -73.141185*	*3/20/2019*	*<0.10 mg/l*	*Not detected*	*228.0 uS/cm*	*0.2 ppt*	*1.0 MPN/100ml*	*<0.05 mg/l*	*6.4 C*	*N/A*	*N/A*
BRB-OF-0037	*41.222753, -73.141668*	*3/20/2019*	*<0.10 mg/l*	*Not detected*	*147.1 uS/cm*	*0.1 ppt*	*3.1 MPN/100ml*	*<0.05 mg/l*	*6.81 C*	*N/A*	*N/A*
BRB-OF-0052	*41.222044, -73.141298*	*3/20/2019*	*<0.10 mg/l*	*0.01 mg/l*	*209.0 uS/cm*	*0.1 ppt*	*1.0 MPN/100ml*	*<0.05 mg/l*	*7.6 C*	*N/A*	*Raised priority category from low to high for potential catchment investigation*
BRB-OF-0012	*41.223845, -73.142287*	*3/20/2019*	*<0.10 mg/l*	*Not detected*	*236.6 uS/cm*	*0.2 ppt*	*6.3 MPN/100ml*	*<0.05 mg/l*	*5.2 C*	*N/A*	*N/A*
BRB-OF-0040	*41.221812, -73.140701*	*3/20/2019*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*N/A*	*N/A*
BRB-OF-0014	*41.220714, -73.1399*	*3/20/2019*	*<0.10 mg/l*	*0.01 mg/l*	*459.0 uS/cm*	*0.3 ppt*	*14.6 MPN/100ml*	*<0.05 mg/l*	*8.9 C*	*N/A*	*Raised priority category from low to high for potential catchment investigation*
BRB-OF-0039	*41.219533, -73.140957*	*3/20/2019*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*N/A*	*N/A*

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
BRB-OF-0042	*41.214704, -73.1404*	*3/20/2019*	*<0.10 mg/l*	*Not detected*	*294.8 uS/cm*	*0.2 ppt*	*125.9 MPN/100ml*	*<0.05 mg/l*	*8.6 C*	*N/A*	*N/A*
BRB-OF-0009	*41.213483, -73.141519*	*3/20/2019*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*N/A*	*N/A*
BRB-OF-0041	*41.215453, -73.140859*	*3/20/2019*	*<0.10 mg/l*	*0.01 mg/l*	*244.2 uS/cm*	*0.2 ppt*	*5.2 MPN/100ml*	*<0.05 mg/l*	*8.8 C*	*N/A*	*Raised priority category from low to high for potential catchment investigation*
BRB-OF-0034	*41.22431, -73.145691*	*3/20/2019*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*N/A*	*N/A*
BRB-OF-0035	*41.225031, -73.145284*	*3/20/2019*	*<0.10 mg/l*	*0.06 mg/l*	*289.2 uS/cm*	*0.2 ppt*	*11.0 MPN/100ml*	*<0.05 mg/l*	*10.2 C*	*N/A*	*Raised priority category from low to high for potential catchment investigation*
BRB-OF-0033	*41.227447, -73.147681*	*3/20/2019*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*N/A*	*N/A*
BRB-OF-0032	*41.22913, -73.145136*	*3/20/2019*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*N/A*	*N/A*
BRB-OF-0031	*41.23056, -73.145645*	*3/20/2019*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*N/A*	*N/A*
BRB-OF-0026	*41.175208, -73.154425*	*3/27/2019*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*N/A*	*N/A*
BRB-OF-0015CB	*41.217841, -73.14279*	*3/27/2019*	*<0.10 mg/l*	*0.01 mg/l*	*261.1 uS/cm*	*0.2 ppt*	*1553.1 MPN/100ml*	*<0.05 mg/l*	*7.2 C*	*N/A*	*Will be ranked at top of high priority category for catchment investigation*
BRB-OF-0005CB	*41.216597, -73.142587*	*3/27/2019*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*N/A*	*N/A*

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
BRB-OF-0009CB	*41.213184, -73.140551*	*3/27/2019*	-	-	-	-	-	-	-	*N/A*	*N/A*
BRB-OF-0029CB	*41.211456, -73.145933*	*3/27/2019*	-	-	-	-	-	-	-	*N/A*	*N/A*
BRB-OF-0007CB	*41.218634, -73.140555*	*3/27/2019*	-	-	-	-	-	-	-	*N/A*	*N/A*
BRB-OF-0039CB	*41.219462, -73.141038*	*3/27/2019*	-	-	-	-	-	-	-	*N/A*	*N/A*
BRB-OF-0054CB	*41.221273, -73.147142*	*3/27/2019*	-	-	-	-	-	-	-	*N/A*	*N/A*
BRB-OF-0038CB	*41.221987, -73.148726*	*3/27/2019*	-	-	-	-	-	-	-	*N/A*	*N/A*
BRB-OF-0011CB	*41.225392, -73.149463*	*3/27/2019*	-	-	-	-	-	-	-	*N/A*	*N/A*
BRB-OF-0034CB	*41.224397, -73.145534*	*3/27/2019*	-	-	-	-	-	-	-	*N/A*	*N/A*
BRB-OF-0036CB	*41.226295, -73.144621*	*3/27/2019*	-	-	-	-	-	-	-	*N/A*	*N/A*
BRB-OF-0033CB	*41.227962, -73.147383*	*3/27/2019*	-	-	-	-	-	-	-	*N/A*	*N/A*
BRB-OF-0032MH	*41.228934, -73.144466*	*3/27/2019*	*0.35 mg/l*	*Not detected*	*194.3 uS/cm*	*0.1 ppt*	*5.2 MPN/100ml*	*<0.05 mg/l*	*9.2 C*	*N/A*	*N/A*
BRB-OF-0031CB	*41.230935, -73.145717*	*3/27/2019*	-	-	-	-	-	-	-	*N/A*	*N/A*
BRB-OF-0022CB	*41.196161, -73.151833*	*3/27/2019*	-	-	-	-	-	-	-	*N/A*	*N/A*
BRB-OF-0003SMH	*41.189009, -*	*3/27/2019*	-	-	-	-	-	-	-	*N/A*	*N/A*

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
	73.154274										
BRB-OF-0016	*41.204185, -73.148108*	*3/27/2019*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*N/A*	*N/A*
BRB-OF-0044	*41.203952, -73.148138*	*3/27/2019*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*N/A*	*N/A*
BRB-OF-0043CB	*41.20389, -73.147998*	*3/27/2019*	*<0.10 mg/l*	*0.14 mg/l*	*316.4 uS/cm*	*0.2 ppt*	*1119.9 MPN/100ml*	*<0.05 mg/l*	*10.7 C*	*N/A*	*Will be ranked at top of high priority category for catchment investigation*
BRB-OF-0040	*41.221232, -73.141204*	*3/27/2019*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*N/A*	*N/A*
LWG-OF-0008	*41.155927, -73.128204*	*10/18/2019*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*Enterococcus, Fecal Coliform, Nitrogen & Phosphorus*	*N/A*
LWG-OF-0003	*41.152786, -73.132543*	*10/18/2019*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*Enterococcus, Fecal Coliform, Nitrogen & Phosphorus*	*N/A*
LWG-OF-0002	*41.15209, -73.133497*	*10/18/2019*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*Enterococcus, Fecal Coliform, Nitrogen & Phosphorus*	*N/A*
LWG-OF-0001	*41.15112, -73.134814*	*10/18/2019*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*Enterococcus, Fecal Coliform, Nitrogen*	*N/A*

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
										& Phosphorus	
SWS-OF-0006	*41.148102, -73.127447*	*10/18/2019*	-	-	-	-	-	-	-	*Enterococcus & Fecal Coliform*	*N/A*
SWS-OF-0006MH	*41.148355, -73.127497*	*10/18/2019*	-	-	-	-	-	-	-	*N/A*	*N/A*
SWS-OF-0005	*41.150842, -73.121576*	*10/18/2019*	-	-	-	-	-	-	-	*Enterococcus & Fecal Coliform*	*N/A*
SWS-OF-0004	*41.151488, -73.120124*	*10/18/2019*	-	-	-	-	-	-	-	*Enterococcus & Fecal Coliform*	*N/A*
SWS-OF-0003	*41.151852, -73.118643*	*10/18/2019*	-	-	-	-	-	-	-	*Enterococcus & Fecal Coliform*	*N/A*
SWS-OF-0002a	*41.151811, -73.117724*	*10/18/2019*	-	-	-	-	-	-	-	*Enterococcus & Fecal Coliform*	*N/A*
SWS-OF-0002	*41.151674, -73.116506*	*10/18/2019*	-	-	-	-	-	-	-	*Enterococcus & Fecal Coliform*	*N/A*
SWS-OF-0001	*41.151266, -73.112567*	*10/18/2019*	-	-	-	-	-	-	-	*Enterococcus & Fecal Coliform*	*N/A*
HRS-OF-0002	*41.154853, -73.10775*	*10/18/2019*	-	-	-	-	-	-	-	*Enterococcus & Fecal Coliform*	*N/A*

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
HRS-OF-0003	*41.156873, -73.110239*	*10/18/2019*	-	-	-	-	-	-	-	*Enterococcus & Fecal Coliform*	*N/A*
HRS-OF-0007	*41.171868, -73.115706*	*10/25/2019*	-	-	-	-	-	-	-	*Enterococcus & Fecal Coliform*	*N/A*
HRS-OF-0023	*41.179457, -73.125549*	*10/25/2019*	-	-	-	-	-	-	-	*Enterococcus & Fecal Coliform*	*N/A*
HRS-OF-0010	*41.179456, -73.125566*	*10/25/2019*	-	-	-	-	-	-	-	*Enterococcus & Fecal Coliform*	*N/A*
HRS-OF-0012	*41.18735, -73.124839*	*10/25/2019*	-	-	-	-	-	-	-	*Enterococcus & Fecal Coliform*	*N/A*
HRS-OF-0024	*41.187341, -73.124836*	*10/25/2019*	-	-	-	-	-	-	-	*Enterococcus & Fecal Coliform*	*N/A*
HRS-OF-0024MH	*41.187347, -73.124909*	*10/25/2019*	-	-	-	-	-	-	-	*N/A*	*N/A*
HRS-OF-0025	*41.188942, -73.125942*	*10/25/2019*	-	-	-	-	-	-	-	*Enterococcus & Fecal Coliform*	*N/A*
HRS-OF-0015	*41.189914, -73.123714*	*10/25/2019*	-	-	-	-	-	-	-	*Enterococcus & Fecal Coliform*	*N/A*
HRS-OF-0022	*41.189903, -73.1236*	*10/25/2019*	-	-	-	-	-	-	-	*Enterococcus & Fecal Coliform*	*N/A*
HRS-OF-0018a	*41.192385, -*	*10/25/2019*	-	-	-	-	-	-	-	*Enterococcus &*	*N/A*

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
	73.120177									*Fecal Coliform*	
HRS-OF-0018	*41.193706, -73.120665*	*10/25/2019*	-	-	-	-	-	-	-	*Enterococcus & Fecal Coliform*	*N/A*
HRN-OF-0094	*41.205494, -73.127768*	*10/25/2019*	-	-	-	-	-	-	-	*E. coli, Nitrogen, & Phosphorus*	*N/A*
HRN-OF-0001	*41.20446, -73.127615*	*10/25/2019*	-	-	-	-	-	-	-	*N/A*	*N/A*
HRN-OF-0082	*41.203191, -73.126959*	*10/25/2019*	-	-	-	-	-	-	-	*N/A*	*N/A*
HRN-OF-0083	*41.203185, -73.126995*	*10/25/2019*	-	-	-	-	-	-	-	*N/A*	*N/A*
HRN-OF-0004	*41.203178, -73.126961*	*10/25/2019*	-	-	-	-	-	-	-	*N/A*	*N/A*
HRS-OF-0019	*41.195874, -73.116799*	*11/7/2019*	-	-	-	-	-	-	-	*Enterococcus & Fecal Coliform*	*N/A*
HRS-OF-0019MH	*41.19615, -73.117672*	*11/7/2019*	-	-	-	-	-	-	-	*N/A*	*N/A*
HRS-OF-0026	*41.197018, -73.116343*	*11/7/2019*	-	-	-	-	-	-	-	*Enterococcus & Fecal Coliform*	*N/A*
HRN-OF-0002	*41.207049, -73.128436*	*11/7/2019*	*1.81 mg/l*	*0.1 mg/l*	*330.7 uS/cm*	*0.2 ppt*	*>24200 MPN/100ml*	*1.45 mg/l*	*14.8 C*	*E. coli, Nitrogen &*	*Will be ranked at top of high priority category for*

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
										Phosphorus	*catchment investigation*
HRN-OF-0080	*41.207354, -73.12771*	*11/7/2019*	-	-	-	-	-	-	-	*N/A*	*N/A*
HRN-OF-0003MH	*41.207916, -73.127467*	*11/7/2019*	-	-	-	-	-	-	-	*N/A*	*N/A*
HRN-OF-0078CB	*41.208435, -73.127439*	*11/7/2019*	-	-	-	-	-	-	-	*N/A*	*N/A*
HRN-OF-0003	*41.207674, -73.127643*	*11/7/2019*	-	-	-	-	-	-	-	*E. coli, Nitrogen & Phosphorus*	*N/A*
HRN-OF-0078	*41.207635, -73.127627*	*11/7/2019*	-	-	-	-	-	-	-	*E. coli, Nitrogen & Phosphorus*	*N/A*
HRN-OF-0079	*41.20772, -73.127931*	*11/7/2019*	*<0.05 mg/l*	*Not detected*	*285.4 uS/cm*	*0.1 ppt*	*529 MPN/100ml*	*0.12 mg/l*	*12.6 C*	*E. coli, Nitrogen & Phosphorus*	*Raised priority category from low to high for potential catchment investigation*
HRN-OF-0081	*41.204476, -73.127672*	*11/7/2019*	*<0.05 mg/l*	*Not detected*	*490 uS/cm*	*0.2 ppt*	*231 MPN/100ml*	*<0.05 mg/l*	*14.6 C*	*N/A*	*N/A*
HRN-OF-0005	*41.202341, -73.127585*	*11/7/2019*	-	-	-	-	-	-	-	*N/A*	*N/A*
HRN-OF-0084	*41.202318, -73.12764*	*11/7/2019*	-	-	-	-	-	-	-	*N/A*	*N/A*
HRN-OF-0007	*41.201654, -73.128096*	*11/7/2019*	-	-	-	-	-	-	-	*N/A*	*N/A*
HRN-OF-0006	*41.201985, -73.127823*	*11/7/2019*	-	-	-	-	-	-	-	*N/A*	*N/A*

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
HRN-OF-0068	*41.207735, -73.115106*	*11/7/2019*	-	-	-	-	-	-	-	*N/A*	*N/A*
HRN-OF-0010	*41.208101, -73.115402*	*11/7/2019*	-	-	-	-	-	-	-	*N/A*	*N/A*
HRN-OF-0011	*41.208971, -73.114073*	*11/7/2019*	-	-	-	-	-	-	-	*N/A*	*N/A*
HRN-OF-0012	*41.209818, -73.115775*	*11/7/2019*	-	-	-	-	-	-	-	*N/A*	*N/A*
HRN-OF-0026	*41.210426, -73.116405*	*11/7/2019*	-	-	-	-	-	-	-	*N/A*	*N/A*
HRN-OF-0022	*41.211098, -73.116233*	*11/7/2019*	-	-	-	-	-	-	-	*N/A*	*N/A*
HRN-OF-0077	*41.210418, -73.119241*	*11/7/2019*	-	-	-	-	-	-	-	*N/A*	*N/A*
HRN-OF-0067	*41.210374, -73.119242*	*11/7/2019*	-	-	-	-	-	-	-	*N/A*	*N/A*
HRN-OF-0075	*41.215661, -73.123534*	*11/7/2019*	-	-	-	-	-	-	-	*N/A*	*N/A*
HRN-OF-0014	*41.215667, -73.123504*	*11/7/2019*	-	-	-	-	-	-	-	*N/A*	*N/A*
HRN-OF-0075CB	*41.215792, -73.123576*	*11/7/2019*	-	-	-	-	-	-	-	*N/A*	*N/A*
HRN-OF-0014MH	*41.215979, -73.123416*	*11/7/2019*	*<0.05 mg/l*	*0.1 mg/l*	*397.5 uS/cm*	*0.2 ppt*	*31 MPN/100ml*	*0.06 mg/l*	*11.7 C*	*N/A*	*Raised priority category from low to high for potential catchment investigation*
HRN-OF-0074	*41.215663, -*	*11/7/2019*	-	-	-	-	-	-	-	*N/A*	*N/A*

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
	73.123635										
HRN-OF-0066	*41.215056, -73.123072*	*11/7/2019*	-	-	-	-	-	-	-	*N/A*	*N/A*
HRN-OF-0061	*41.221576, -73.130449*	*11/15/2019*	-	-	-	-	-	-	-	*N/A*	*N/A*
PGB-OF-0083	*41.241173, -73.135221*	*11/15/2019*	-	-	-	-	-	-	-	*N/A*	*N/A*
PGB-OF-0084	*41.24075, -73.136264*	*11/15/2019*	-	-	-	-	-	-	-	*N/A*	*N/A*
HRN-OF-0061MH	*41.221577, -73.130846*	*11/15/2019*	*0.07 mg/l*	*Not detected*	*516 uS/cm*	*0.3 ppt*	*<10 MPN/100ml*	*<0.05 mg/l*	*12.7 C*	*N/A*	*N/A*
PGB-OF-0061	*41.239277, -73.131412*	*11/15/2019*	-	-	-	-	-	-	-	*N/A*	*N/A*
PGB-OF-0024	*41.239191, -73.131518*	*11/15/2019*	-	-	-	-	-	-	-	*N/A*	*N/A*
PGB-OF-0046	*41.236966, -73.13534*	*11/15/2019*	-	-	-	-	-	-	-	*N/A*	*N/A*
HRN-OF-0064	*41.214169, -73.13168*	*11/15/2019*	*<0.05 mg/l*	*Not detected*	*307.8 uS/cm*	*0.1 ppt*	*1420 MPN/100ml*	*<0.05 mg/l*	*10.6 C*	*N/A*	*Raised priority category from low to high for potential catchment investigation*
PGB-OF-0031	*41.233086, -73.130457*	*11/15/2019*	-	-	-	-	-	-	-	*N/A*	*N/A*
HRN-OF-0065a	*41.21398, -73.131371*	*11/15/2019*	-	-	-	-	-	-	-	*N/A*	*N/A*
HRN-OF-0065b	*41.213833, -*	*11/15/2019*	-	-	-	-	-	-	-	*N/A*	*N/A*

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
	73.131386										
HRN-OF-0065aMH	*41.214142, -73.130672*	*11/15/2019*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*N/A*	*N/A*
HRN-OF-0029	*41.220278, -73.128964*	*11/15/2019*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*N/A*	*N/A*
PGB-OF-0051	*41.233061, -73.130461*	*11/15/2019*	*0.11 mg/l*	*Not detected*	*289 uS/cm*	*0.14 ppt*	*663 MPN/100ml*	*<0.05 mg/l*	*11.95 C*	*N/A*	*Raised priority category from low to high for potential catchment investigation*
HRN-OF-0013	*41.215573, -73.122981*	*11/15/2019*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*N/A*	*N/A*
HRN-OF-0015	*41.213075, -73.122069*	*11/15/2019*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*N/A*	*N/A*
HRN-OF-0015CB E	*41.213417, -73.122166*	*11/15/2019*	*<0.05 mg/l*	*Not detected*	*363.7 uS/cm*	*0.2 ppt*	*63 MPN/100ml*	*<0.05 mg/l*	*15.4 C*	*N/A*	*N/A*
HRN-OF-0015CB N	*41.213385, -73.122204*	*11/15/2019*	*0.06 mg/l*	*Not detected*	*376.9 uS/cm*	*0.2 ppt*	*74 MPN/100ml*	*<0.05 mg/l*	*12.8 C*	*N/A*	*N/A*
PGB-OF-0054	*41.234802, -73.124975*	*11/15/2019*	*<0.05 mg/l*	*Not detected*	*709 uS/cm*	*0.35 ppt*	*<10 MPN/100ml*	*<0.05 mg/l*	*11.22 C*	*N/A*	*N/A*
HRN-OF-0016	*41.213904, -73.11687*	*11/15/2019*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*N/A*	*N/A*
PGB-OF-0053	*41.234771, -73.124826*	*11/15/2019*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*N/A*	*N/A*
LWG-OF-0035	*41.17733, -73.129312*	*12/6/2019*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*N/A*	*N/A*
LWG-OF-0031	*41.177332, -73.12931*	*12/6/2019*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*N/A*	*N/A*

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
LWG-OF-0015	*41.170081, -73.133537*	*12/6/2019*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*N/A*	*N/A*
LWG-OF-0015MH	*41.170238, -73.13368*	*12/6/2019*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*N/A*	*N/A*
LWG-OF-0033	*41.163526, -73.153164*	*12/6/2019*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*Enterococcus, Fecal Coliform, Nitrogen & Phosphorus*	*N/A*
LWG-OF-0034	*41.163544, -73.153166*	*12/6/2019*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*Enterococcus, Fecal Coliform, Nitrogen & Phosphorus*	*N/A*
LWG-OF-0020	*41.163524, -73.153159*	*12/6/2019*	*1.76 mg/l*	*Not detected*	*5252 uS/cm*	*2.8 ppt*	*Enterococci: 10 MPN/100ml*	*0.09 mg/l*	*10 C*	*Enterococcus, Fecal Coliform, Nitrogen & Phosphorus*	*Will be ranked at top of high priority category for catchment investigation*
LWG-OF-0033MH	*41.163647, -73.153298*	*12/6/2019*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*N/A*	*N/A*
SWS-OF-0009	*41.167865, -73.157264*	*12/6/2019*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*Enterococcus & Fecal Coliform*	*N/A*
LWG-OF-0037	*41.185856, -73.144605*	*12/6/2019*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*N/A*	*N/A*
FMR-OF-0015	*41.259144, -73.136355*	*12/6/2019*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*N/A*	*N/A*
FMR-OF-0014	*41.258903, -*	*12/6/2019*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*N/A*	*N/A*

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
	73.136912										
FMR-OF-0016	*41.257749, -73.135367*	*12/6/2019*	-	-	-	-	-	-	-	*N/A*	*N/A*
FMR-OF-0017	*41.256892, -73.134625*	*12/6/2019*	-	-	-	-	-	-	-	*N/A*	*N/A*
FMR-OF-0003	*41.262866, -73.124597*	*12/6/2019*	-	-	-	-	-	-	-	*N/A*	*N/A*
FMR-OF-0002	*41.262013, -73.108463*	*12/6/2019*	-	-	-	-	-	-	-	*N/A*	*N/A*
FMR-OF-0002CB	*41.261249, -73.108117*	*12/6/2019*	-	-	-	-	-	-	-	*N/A*	*N/A*
FMR-OF-0008	*41.259815, -73.105234*	*12/6/2019*	-	-	-	-	-	-	-	*N/A*	*N/A*
FMR-OF-0007	*41.252943, -73.103231*	*12/6/2019*	*<0.05 mg/l*	*0.1 mg/l*	*350.7 uS/cm*	*0.2 ppt*	*31 MPN/100ml*	*<0.05 mg/l*	*9.9 C*	*N/A*	*Raised priority category from low to high for potential catchment investigation*
LWG-OF-0023	*41.182264, -73.14413*	*12/16/2019*	-	-	-	-	-	-	-	*N/A*	*N/A*
LWG-OF-0021	*41.187616, -73.14075*	*12/16/2019*	-	-	-	-	-	-	-	*N/A*	*N/A*
LWG-OF-0030	*41.188041, -73.139414*	*12/16/2019*	-	-	-	-	-	-	-	*N/A*	*N/A*
HRN-OF-0088	*41.194488, -73.135961*	*12/16/2019*	*0.07 mg/l*	*Not detected*	*284.8 uS/cm*	*0.2 ppt*	*420 MPN/100ml*	*0.08 mg/l*	*8.7 C*	*N/A*	*N/A*
HRN-OF-0087	*41.194094, -73.135899*	*12/16/2019*	*0.08 mg/l*	*Not detected*	*819 uS/cm*	*0.4 ppt*	*1860 MPN/100ml*	*<0.05 mg/l*	*8.8 C*	*N/A*	*Raised priority category from low to high for potential catchment*

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
											investigation
HRN-OF-0085	*41.195605, -73.13963*	*12/16/2019*	*0.10 mg/l*	*0.1 mg/l*	*370.5 uS/cm*	*0.2 ppt*	*959 MPN/100ml*	*<0.05 mg/l*	*9.9 C*	*N/A*	*Will be ranked at top of high priority category for catchment investigation*
HRN-OF-0023	*41.210763, -73.116803*	*12/16/2019*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*N/A*	*N/A*
HRN-OF-0025	*41.211239, -73.120191*	*12/16/2019*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*N/A*	*N/A*
HRN-OF-0017	*41.215888, -73.116825*	*12/16/2019*	*<0.05 mg/l*	*Not detected*	*273.9 uS/cm*	*0.2 ppt*	*Enterococci: 20 MPN/100ml*	*<0.05 mg/l*	*12 C*	*N/A*	*N/A*
HRN-OF-0020CB	*41.218383, -73.116823*	*12/16/2019*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*N/A*	*N/A*
HRN-OF-0020	*41.218217, -73.117147*	*12/16/2019*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*N/A*	*N/A*
PGB-OF-0001	*41.223955, -73.118443*	*12/16/2019*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*N/A*	*N/A*
PGB-OF-0002	*41.224798, -73.116032*	*12/16/2019*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*N/A*	*N/A*
PGB-OF-0082	*41.224837, -73.116768*	*12/16/2019*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*N/A*	*N/A*
HRN-OF-0030	*41.237021, -73.109569*	*12/16/2019*	*<0.05 mg/l*	*0.7 mg/l*	*396.4 uS/cm*	*0.2 ppt*	*30 MPN/100ml*	*0.10 mg/l*	*9.2 C*	*N/A*	*Raised priority category from low to high for potential catchment investigation*
HRN-OF-0031	*41.242143, -73.100204*	*12/19/2019*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*N/A*	*N/A*

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
HRN-OF-0095	*41.239777, -73.107108*	*12/19/2019*	-	-	-	-	-	-	-	*N/A*	*N/A*
PGB-OF-0042	*41.238627, -73.114666*	*12/19/2019*	-	-	-	-	-	-	-	*N/A*	*N/A*
PGB-OF-0052	*41.236033, -73.127389*	*12/19/2019*	-	-	-	-	-	-	-	*N/A*	*N/A*
PGB-OF-0052CB	*41.23574, -73.127367*	*12/19/2019*	-	-	-	-	-	-	-	*N/A*	*N/A*
PGB-OF-0008	*41.225687, -73.123025*	*12/19/2019*	-	-	-	-	-	-	-	*N/A*	*N/A*
PGB-OF-0004	*41.228598, -73.123283*	*12/19/2019*	-	-	-	-	-	-	-	*N/A*	*N/A*
PGB-OF-0006	*41.22941, -73.124256*	*12/19/2019*	-	-	-	-	-	-	-	*N/A*	*N/A*
PGB-OF-0073	*41.231857, -73.114951*	*12/19/2019*	-	-	-	-	-	-	-	*N/A*	*N/A*
PGB-OF-0009CB	*41.231151, -73.117193*	*12/19/2019*	-	-	-	-	-	-	-	*N/A*	*N/A*
PGB-OF-0056	*41.232931, -73.114792*	*12/19/2019*	-	-	-	-	-	-	-	*N/A*	*N/A*
PGB-OF-0060	*41.23073, -73.120054*	*12/19/2019*	-	-	-	-	-	-	-	*N/A*	*N/A*
PGB-OF-0060CB	*41.230501, -73.119985*	*12/19/2019*	-	-	-	-	-	-	-	*N/A*	*N/A*
PGB-OF-0058	*41.234085, -73.11592*	*12/19/2019*	-	-	-	-	-	-	-	*N/A*	*N/A*
PGB-OF-0057	*41.234066, -73.115612*	*12/19/2019*	-	-	-	-	-	-	-	*N/A*	*N/A*

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
PGB-OF-0080	*41.25873, -73.124739*	*12/19/2019*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*E. coli*	*N/A*
PGB-OF-0079	*41.259282, -73.120951*	*12/19/2019*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*N/A*	*N/A*
PGB-OF-0078CB	*41.260531, -73.122754*	*12/19/2019*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*N/A*	*N/A*
PGB-OF-0078	*41.260524, -73.122769*	*12/19/2019*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*E. coli*	*N/A*
HRN-OF-0089	*41.24436, -73.115608*	*12/19/2019*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*N/A*	*N/A*
HRN-OF-0089CB	*41.244327, -73.115601*	*12/19/2019*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*N/A*	*N/A*
PGB-OF-0085	*41.240489, -73.137281*	*12/19/2019*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*N/A*	*N/A*
PGB-OF-0041	*41.262843, -73.115359*	*01/02/2020*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*N/A*	*N/A*
PGB-OF-0041CB	*41.262617, -73.11508*	*01/02/2020*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*N/A*	*N/A*
PGB-OF-0013	*41.263194, -73.114505*	*01/02/2020*	*<0.05 mg/l*	*0.3 mg/l*	*275.3 uS/cm*	*0.1 ppt*	*<10 MPN/100ml*	*<0.05 mg/l*	*8.8 C*	*N/A*	*Raised priority category from low to high for potential catchment investigation*
HRN-OF-0069	*41.257126, -73.113657*	*01/02/2020*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*N/A*	*N/A*
HRN-OF-0069CB	*41.257354, -73.112886*	*01/02/2020*	*<0.05 mg/l*	*0.9 mg/l*	*97.9 uS/cm*	*0.0 ppt*	*<10 MPN/100ml*	*0.05 mg/l*	*9.6 C*	*N/A*	*Raised priority category from low to high for potential catchment investigation*

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
PGB-OF-0071a	*41.252371, -73.11974*	*01/02/2020*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*N/A*	*N/A*
PGB-OF-0071b	*41.252426, -73.119854*	*01/02/2020*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*N/A*	*N/A*
PGB-OF-0075	*41.249067, -73.122682*	*01/02/2020*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*E. coli*	*N/A*
PGB-OF-0026	*41.246504, -73.125629*	*01/02/2020*	*<0.05 mg/l*	*0.7 mg/l*	*328.7 uS/cm*	*0.2 ppt*	*279 MPN/100ml*	*<0.05 mg/l*	*7.4 C*	*E. coli*	*Raised priority category from low to high for potential catchment investigation*
PGB-OF-0022	*41.244824, -73.126693*	*01/02/2020*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*E. coli*	*N/A*
PGB-OF-0069	*41.24231, -73.12706*	*01/02/2020*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*E. coli*	*N/A*
PGB-OF-0070	*41.241185, -73.127504*	*01/02/2020*	*0.41 mg/l*	*0.6 mg/l*	*282.5 uS/cm*	*0.1 ppt*	*<10 MPN/100ml*	*0.06 mg/l*	*7.3 C*	*E. coli*	*Raised priority category from low to high for potential catchment investigation*
HRN-OF-0070	*41.236828, -73.107439*	*01/02/2020*	*<0.05 mg/l*	*0.0 mg/l*	*401.6 uS/cm*	*0.2 ppt*	*20 MPN/100ml*	*<0.05 mg/l*	*6.6 C*	*N/A*	*N/A*
PGB-OF-0010	*41.232548, -73.115521*	*01/02/2020*	*0.10 mg/l*	*0.1 mg/l*	*250.6 uS/cm*	*0.1 ppt*	*<10 MPN/100ml*	*<0.05 mg/l*	*6.7 C*	*N/A*	*Raised priority category from low to high for potential catchment investigation*
PGB-OF-0011	*41.233379, -73.114304*	*01/02/2020*	*0.09 mg/l*	*0.1 mg/l*	*321.8 uS/cm*	*0.2 ppt*	*909 MPN/100ml*	*0.12 mg/l*	*9.3 C*	*N/A*	*Will be ranked at top of high priority category for catchment investigation*
YMC-OF-0005	*41.218722, -73.1616*	*01/09/2020*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*N/A*	*N/A*

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
YMC-OF-0021	*41.21761, -73.158939*	*01/09/2020*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*N/A*	*N/A*
YMC-OF-0020	*41.219791, -73.161051*	*01/09/2020*	*0.12 mg/l*	*0.0 mg/l*	*263.8 uS/cm*	*0.1 ppt*	*158 MPN/100ml*	*<0.05 mg/l*	*4.2 C*	*N/A*	*N/A*
YMC-OF-0004	*41.220488, -73.160029*	*01/09/2020*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*N/A*	*N/A*
YMC-OF-0019	*41.221416, -73.159961*	*01/09/2020*	*0.18 mg/l*	*0.0 mg/l*	*305.2 uS/cm*	*0.1ppt*	*<10 MPN/100ml*	*<0.05 mg/l*	*6.5 C*	*N/A*	*N/A*
YMC-OF-0015	*41.222041, -73.159639*	*01/09/2020*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*N/A*	*N/A*
YMC-OF-0012	*41.223208, -73.158017*	*01/09/2020*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*N/A*	*N/A*
YMC-OF-0014	*41.222999, -73.158343*	*01/09/2020*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*N/A*	*N/A*
YMC-OF-0001a	*41.224463, -73.157426*	*01/09/2020*	*0.08 mg/l*	*0.0 mg/l*	*379.2 uS/cm*	*0.2 ppt*	*<10 MPN/100ml*	*<0.05 mg/l*	*8.3 C*	*N/A*	*N/A*
YMC-OF-0010	*41.23014, -73.154474*	*01/09/2020*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*N/A*	*N/A*
YMC-OF-0017	*41.226544, -73.157441*	*01/09/2020*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*N/A*	*N/A*
YMC-OF-0017CBN	*41.22696, -73.157059*	*01/09/2020*	*0.11 mg/l*	*0.1 mg/l*	*462 uS/cm*	*0.2 ppt*	*<10 MPN/100ml*	*0.10 mg/l*	*8.6 C*	*N/A*	*Raised priority category from low to high for potential catchment investigation*
YMC-OF-0017CBE	*41.226895, -73.157197*	*01/09/2020*	*0.33 mg/l*	*0.0 mg/l*	*315.3 uS/cm*	*0.2 ppt*	*<10 MPN/100ml*	*0.07 mg/l*	*8.0 C*	*N/A*	*N/A*
YMC-OF-0018	*41.226281, -*	*01/09/2020*	*0.11 mg/l*	*0.0 mg/l*	*766 uS/cm*	*0.4 ppt*	*<10 MPN/100ml*	*<0.05 mg/l*	*9.4 C*	*N/A*	*N/A*

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
	73.156975										
YMC-OF-0002	*41.22476, -73.156918*	*01/09/2020*	*0.09 mg/l*	*0.0 mg/l*	*325.3 uS/cm*	*0.2 ppt*	*<10 MPN/100ml*	*<0.05 mg/l*	*6.3 C*	*N/A*	*N/A*
PGB-OF-0021	*41.248682, -73.138222*	*01/09/2020*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*N/A*	*N/A*
PGB-OF-0005	*41.225579, -73.123133*	*01/10/2020*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*N/A*	*N/A*
PGB-OF-0034	*41.230922, -73.127007*	*01/10/2020*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*N/A*	*N/A*
PGB-OF-0027	*41.239506, -73.137608*	*01/10/2020*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*N/A*	*N/A*
PGB-OF-0076	*41.242253, -73.132887*	*01/10/2020*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*N/A*	*N/A*
PGB-OF-0068	*41.243438, -73.133345*	*01/10/2020*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*N/A*	*N/A*
PGB-OF-0066	*41.242058, -73.129407*	*01/10/2020*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*E. coli*	*N/A*
PGB-OF-0045	*41.232982, -73.146124*	*01/10/2020*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*N/A*	*N/A*
PGB-OF-0062	*41.243522, -73.143252*	*01/10/2020*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*N/A*	*N/A*
PGB-OF-0063	*41.243645, -73.143189*	*01/10/2020*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*N/A*	*N/A*
PGB-OF-0036	*41.252858, -73.145135*	*01/10/2020*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*N/A*	*N/A*
PGB-OF-0019	*41.247716, -73.135359*	*01/10/2020*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*N/A*	*N/A*

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
HRN-OF-0057	*41.233234, -73.139326*	*01/10/2020*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*N/A*	*N/A*
HRN-OF-0057CB	*41.233234, -73.139326*	*01/10/2020*	*0.13 mg/l*	*0.0 mg/l*	*383.5 uS/cm*	*0.2 ppt*	*10 MPN/100ml*	*0.06 mg/l*	*7.2 C*	*N/A*	*N/A*
LWG-OF-0010	*41.158379, -73.123085*	*01/23/2020*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*N/A*	*N/A*
LWG-OF-0010CB	*41.157872, -73.122628*	*01/23/2020*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*N/A*	*N/A*
HRS-HW-0004CB	*41.156646, -73.110923*	*01/23/2020*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*Enterococcus & Fecal Coliform*	*N/A*
HRS-OF-0004CB	*41.158031, -73.113965*	*01/23/2020*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*Enterococcus & Fecal Coliform*	*N/A*
HRS-OF-0008CB	*41.178506, -73.125707*	*01/23/2020*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*Enterococcus & Fecal Coliform*	*N/A*
HRS-OF-0009MH	*41.17832, -73.125694*	*01/23/2020*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*Enterococcus & Fecal Coliform*	*N/A*
HRS-OF-0017MH	*41.190827, -73.121929*	*01/23/2020*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*Enterococcus & Fecal Coliform*	*N/A*
HRN-OF-0086	*41.196365, -73.136199*	*01/23/2020*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*N/A*	*N/A*
HRN-OF-0086MH	*41.196428, -73.136195*	*01/23/2020*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*N/A*	*N/A*
HRN-OF-0063MH	*41.248433, -73.103402*	*01/23/2020*	*<0.05 mg/l*	*0.0 mg/l*	*421.6 uS/cm*	*0.2 ppt*	*31 MPN/100ml*	*<0.05 mg/l*	*6.9 C*	*N/A*	*N/A*

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
PGB-OF-0064	*41.250723, -73.145198*	*01/23/2020*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*N/A*	*N/A*
PGB-OF-0064CB	*41.250793, -73.145324*	*01/23/2020*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*N/A*	*N/A*
PGB-OF-0086	*41.255264, -73.134088*	*01/23/2020*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*N/A*	*N/A*
PGB-OF-0035	*41.23378, -73.146372*	*01/23/2020*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*N/A*	*N/A*
PGB-OF-0035CB	*41.233776, -73.146373*	*01/23/2020*	*0.25 mg/l*	*0.0 mg/l*	*298.1 uS/cm*	*0.1 ppt*	*<10 MPN/100ml*	*0.05 mg/l*	*6.5 C*	*N/A*	*N/A*
LWG-OF-0006	*41.154967, -73.129615*	*01/30/2020*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*Enterococcus, Fecal Coliform, Nitrogen & Phosphorus*	*N/A*
SWS-OF-0007MH	*41.148514, -73.134127*	*01/30/2020*	*<0.25 mg/l*	*0.0 mg/l*	*32972 uS/cm*	*19.8 ppt*	*41 MPN/100ml*	*0.22 mg/l*	*2.3 C*	*Enterococcus & Fecal Coliform*	*N/A*
BRB-OF-0002	*41.186591, -73.155189*	*01/30/2020*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*N/A*	*N/A*
BRB-OF-0002CB	*41.186497, -73.154903*	*01/30/2020*	*0.96 mg/l*	*0.15 mg/l*	*377.6 uS/cm*	*0.2 ppt*	*9210 MPN/100ml*	*0.72 mg/l*	*5 C*	*N/A*	*Will be ranked at top of high priority category for catchment investigation*
HRN-OF-0086CBW	*41.19704, -73.135553*	*01/30/2020*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*N/A*	*N/A*
HRN-OF-0086CBE	*41.197203, -73.135323*	*01/30/2020*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*N/A*	*N/A*

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
HRN-OF-0027	*41.221005, -73.115051*	*01/30/2020*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*N/A*	*N/A*
HRN-OF-0019	*41.217399, -73.116739*	*01/30/2020*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*N/A*	*N/A*
PGB-OF-0059	*41.232998, -73.118632*	*01/30/2020*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*N/A*	*N/A*
PGB-OF-0059CBW	*41.233054, -73.118944*	*01/30/2020*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*N/A*	*N/A*
PGB-OF-0059CBN	*41.233528, -73.118452*	*01/30/2020*	*0.07 mg/l*	*0.0 mg/l*	*257.1 uS/cm*	*0.1 ppt*	*<10 MPN/100ml*	*0.08 mg/l*	*9.4 C*	*N/A*	*N/A*
PGB-OF-0059CBNW	*41.233497, -73.118432*	*01/30/2020*	*<0.05 mg/l*	*0.11 mg/l*	*72.2 uS/cm*	*0.0 ppt*	*<10 MPN/100ml*	*0.09 mg/l*	*7.1 C*	*N/A*	*Raised priority category from low to high for potential catchment investigation*
HRN-OF-0060	*41.221575, -73.130469*	*01/30/2020*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*N/A*	*N/A*
YMC-OF-0016	*41.221952, -73.159603*	*01/30/2020*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*N/A*	*N/A*
YMC-OF-0016CB	*41.22189, -73.158903*	*01/30/2020*	*0.10 mg/l*	*0.01 mg/l*	*312.7 uS/cm*	*0.1 ppt*	*<10 MPN/100ml*	*0.09 mg/l*	*7.7 C*	*N/A*	*Raised priority category from low to high for potential catchment investigation*
BRB-OF-0036	*41.225537, -73.145153*	*01/30/2020*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*N/A*	*N/A*
BRB-OF-0036CB	*41.226269, -73.144772*	*01/30/2020*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*N/A*	*N/A*
PGB-OF-0025	*41.247475, -*	*01/30/2020*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*N/A*	*N/A*

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
	73.138528										
PGB-OF-0025CB	*41.247686, -73.138067*	*01/30/2020*	*0.05 mg/l*	*0.0 mg/l*	*327.5 uS/cm*	*0.2 ppt*	*<10 MPN/100ml*	*0.06 mg/l*	*6.3 C*	*N/A*	*N/A*
FMR-OF-0013CB	*41.257438, -73.128967*	*10/01/2020*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*N/A*	*N/A*
PGB-OF-0012CB	*41.26255, -73.119298*	*10/01/2020*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*N/A*	*N/A*
HRN-OF-0056CB	*41.246597, -73.118419*	*10/01/2020*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*N/A*	*N/A*
PGB-OF-0067CB	*41.243941, -73.130987*	*10/01/2020*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*E. coli*	*N/A*
PGB-OF-0028MH1	*41.237228, -73.127885*	*10/07/2020*	*0.07 mg/l*	*0.0 mg/l*	*0.276 uS/cm*	*0.1 ppt*	*100 MPN/100ml*	*<0.05 mg/l*	*19.8 C*	*N/A*	*N/A*
PGB-OF-0048	*41.236428, -73.142065*	*10/21/2020*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*N/A*	*N/A*
PGB-OF-0024	*41.239075, -73.131597*	*10/21/2020*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*N/A*	*N/A*
PGB-OF-0044CBN	*41.236016, -73.116331*	*10/21/2020*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*N/A*	*N/A*
PGB-OF-0065	*41.234575, -73.12898*	*10/21/2020*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*N/A*	*N/A*
PGB-OF-0032CBW	*41.232814, -73.125894*	*10/21/2020*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*N/A*	*N/A*
PGB-OF-0033CBE	*41.232234, -73.12227*	*10/21/2020*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*N/A*	*N/A*
BRB-OF-0036CBN	*41.226255, -73.14489*	*10/21/2020*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*N/A*	*N/A*
YMC-OF-0022CBE	*41.225046, -*	*10/21/2020*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*N/A*	*N/A*

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
	73.154757										
YMC-OF-0003CBE	*41.225668, -73.156364*	*10/21/2020*	-	-	-	-	-	-	-	*N/A*	*N/A*
YMC-OF-0001CBN	*41.224995, -73.157557*	*10/21/2020*	-	-	-	-	-	-	-	*N/A*	*N/A*
YMC-OF-0011CBW	*41.224209, -73.157837*	*10/21/2020*	-	-	-	-	-	-	-	*N/A*	*N/A*
YMC-OF-0008CBN	*41.21433, -73.156423*	*10/21/2020*	-	-	-	-	-	-	-	*N/A*	*N/A*
YMC-OF-0007CBN	*41.214936, -73.156977*	*10/21/2020*	-	-	-	-	-	-	-	*N/A*	*N/A*
HRN-OF-0028CBW	*41.225175, -73.131581*	*10/21/2020*	-	-	-	-	-	-	-	*N/A*	*N/A*
HRN-OF-0060CBN	*41.221836, -73.131013*	*10/23/2020*	-	-	-	-	-	-	-	*N/A*	*N/A*
HRN-OF-0062CBN	*41.216793, -73.131693*	*10/23/2020*	-	-	-	-	-	-	-	*N/A*	*N/A*
HRN-OF-0071	*41.21821, -73.125477*	*10/23/2020*	-	-	-	-	-	-	-	*N/A*	*N/A*
HRN-OF-0024CBW	*41.211273, -73.122053*	*10/23/2020*	-	-	-	-	-	-	-	*N/A*	*N/A*
HRN-OF-0076CBW	*41.213716, -73.117325*	*10/23/2020*	-	-	-	-	-	-	-	*N/A*	*N/A*
HRN-OF-0021CBW	*41.211895, -73.117247*	*10/23/2020*	-	-	-	-	-	-	-	*N/A*	*N/A*
HRN-OF-0009	*41.206933, -73.115873*	*10/23/2020*	-	-	-	-	-	-	-	*N/A*	*N/A*

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
HRS-OF-0011MHW	*41.182634, -73.128459*	*10/23/2020*	-	-	-	-	-	-	-	*Enterococcus, Fecal Coliform*	*N/A*
LWG-OF-0012CBN	*41.173277, -73.12967*	*10/23/2020*	-	-	-	-	-	-	-	*N/A*	*N/A*
LWG-OF-0013CBNW	*41.173312, -73.13135*	*10/23/2020*	-	-	-	-	-	-	-	*N/A*	*N/A*
LWG-OF-0027CBN	*41.1685, -73.139187*	*10/23/2020*	-	-	-	-	-	-	-	*N/A*	*N/A*
LWG-OF-0036MHN	*41.168288, -73.146117*	*10/23/2020*	-	-	-	-	-	-	-	*N/A*	*N/A*
LWG-OF-0022CBNW	*41.181915, -73.145238*	*10/23/2020*	-	-	-	-	-	-	-	*N/A*	*N/A*

*Values highlighted in yellow exceed the permit benchmark level

2.2 Wet weather sample and inspection data

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.

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. **Wet weather monitoring will be performed in 2021.**

Outfall / Interconnection ID	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)

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
BRB-OF-0043	*Bruce Brook*	*3, 6, 8, 10*

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.

Key Junction Manhole ID	**Latitude / Longitude**	**Screening / Sample date**	**Visual/ olfactory evidence of illicit discharge**	**Ammonia**	**Chlorine**	**Surfactants**	**E. coli or Enterococcus****	**Total Nitrogen****	**Total Phosphorus****

PGB-0013-MH1-S	*41.263052, -73.113889*	*10/01/2020*	*n/a*	*<0.05 mg/l*	*0.0 mg/l*	*<0.05 mg/l*	*-*	*-*	*-*
PGB-0013-MH1-SE	*41.263052, -73.113889*	*10/01/2020*	*n/a*	*-*	*-*	*-*	*-*	*-*	*-*
PGB-0025-MH1-NW	*41.248922, -73.137432*	*10/01/2020*	*n/a*	*-*	*-*	*-*	*-*	*-*	*-*
PGB-0025-MH1-NE	*41.248922, -73.137432*	*10/01/2020*	*n/a*	*-*	*-*	*-*	*-*	*-*	*-*
PGB-0027-MH1-S	*41.238162, -73.137754*	*10/01/2020*	*n/a*	*<0.05 mg/l*	*0.0 mg/l*	*<0.05 mg/l*	*-*	*-*	*-*
PGB-0027-MH1-SE	*41.238222, -73.137724*	*10/01/2020*	*n/a*	*-*	*-*	*-*	*-*	*-*	*-*
PGB-0027-MH1-E	*41.238181, -73.137768*	*10/01/2020*	*n/a*	*-*	*-*	*-*	*-*	*-*	*-*
PGB-0027-MH1-NW	*41.238173, -73.137739*	*10/01/2020*	*n/a*	*-*	*-*	*-*	*-*	*-*	*-*
BRB-0023-CB1-SE	*41.189453, -73.154941*	*10/06/2020*	*Urine odor*	*-*	*-*	*-*	*-*	*-*	*-*
BRB-0023-MH1-NE	*41.189483, -73.154931*	*10/06/2020*	*Urine odor*	*-*	*-*	*-*	*-*	*-*	*-*
BRB-0020-CB1-SW	*41.198715, -73.151135*	*10/06/2020*	*n/a*	*-*	*-*	*-*	*-*	*-*	*-*
BRB-0020-CB1-NW	*41.198681, -73.151158*	*10/06/2020*	*n/a*	*-*	*-*	*-*	*-*	*-*	*-*
BRB-0050-CB1-E	*41.199431, -73.148597*	*10/06/2020*	*Detergent odor*	*0.05 mg/l*	*0.0 mg/l*	*0.48 mg/l*	*836 MPN/100ml*	*-*	*-*
BRB-0050-CB1-W	*41.199637, -73.148673*	*10/06/2020*	*n/a*	*-*	*-*	*-*	*-*	*-*	*-*
BRB-0017-CB1-NE	*41.200375, -73.148602*	*10/06/2020*	*n/a*	*-*	*-*	*-*	*-*	*-*	*-*
BRB-0017-CB1-E	*41.200419, -73.148598*	*10/06/2020*	*n/a*	*-*	*-*	*-*	*-*	*-*	*-*
HRN-0078-MH1-SW	*41.208334, -73.127341*	*10/07/2020*	*Floatables*	*3.58 mg/l*	*0.0 mg/l*	*0.28 mg/l*	*>24,200 MPN/100ml*	*7.76 mg/l*	*0.804 mg/l*
HRN-0078-MH1-W	*41.208372, -73.127289*	*10/07/2020*	*n/a*	*-*	*-*	*-*	*-*	*-*	*-*

3.3 Wet weather investigation outfall sampling data

Outfall ID	Sample date	Ammonia	Chlorine	Surfactants

3.4 Data for each illicit discharge source confirmed through the catchment investigation procedure

Discharge location	Source location	Discharge description	Method of discovery	Date of discovery	Date of elimination	Mitigation or enforcement action	Estimated volume of flow removed
BRB-OF-0037	*CB*	*E. coli 280 CFU/100ml*	*sampling*	8-22-18		*No follow up needed.*	
OLD Spring Rd	stream	*Elevated E-Coli concentrations 2000*	*sampling*	8-22-18		The town is continuing monitoring until source is identified	
Bruce Brook upstream Connors Lane	stream	*Elevated E-Coli concentrations 1600*	*sampling*	8-22-18		The town is continuing monitoring until source is identified	
Bruce Brook Bunnell Ave	stream	*E. coli 900 CFU/100ml*	*sampling*	8-22-18		*No follow up needed*	
BRB-OF-0016	CB	Dry CB	*sampling*	8-22-18		*No follow up needed*	
BRB-OF-0040	CB	Stagnant CB sump	*sampling*	8-22-18		*No follow up needed*	

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: Laura R. Hoydick	Print name: John R. Casey, P.E.
Signature / Date:	Signature / Date:

TOWN OF STRATFORD

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DIVISION
OF CONSERVATION

ATTENTION RESIDENTS LIVING NEAR BRUCE BROOK WATERCOURSE!

Please be advised it is *against the law* to throw anything into a watercourse. Severe infrastructure damage and environmental pollution is caused by the disposal of debris and waste into the Bruce Brook watercourse. Failure to follow Stratford Town Ordinance §172-110 - §172-129 will result in fines (see below).

As a resident, you are responsible for keeping your part of the watercourse free of trash, debris, excessive vegetation, and other obstacles that would pollute, contaminate, or impact the flow of water through the watercourse.

Flooding and damaged infrastructure results in *high $ costs* to the Town and residents along the stream.

- Chemical pollutants may include, but are not limited to: paints, varnishes, and solvents; oil and other automotive fluids; liquid and solid wastes

This photo of Bruce Brook shows a significantly damaged concrete headwall and clogged culvert pipes caused by debris.

Environmental pollutants include but are not limited to: yard wastes; refuse, rubbish, garbage, and litter; animal wastes, pesticides, herbicides, and fertilizers or other discarded or abandoned objects. *The dumping of yard trimmings such as sticks, grass, and leaves is also prohibited in Bruce Brook, or in any other watercourse in Stratford.* Instead, take advantage of the Town's seasonal collection of yard trimmings (i.e., April through mid-December). Collections are made every other week on the day AFTER recycling collection. Simply bundle it up and place at the curb—grass, leaves and shrubbery clippings must be contained in brown yard waste bags or loosely in cans. DO NOT dispose of it in the stream.

We have to work together to keep our costs down and streams clean! Remember that Bruce Brook, and any pollution in it, empties into Long Island Sound.

This ordinance has been and will continue to be enforced in order to prevent further degradation of the watercourse and infrastructure; as these damages result in costly repairs to the Town. If you have any questions or concerns please contact the Environmental Conservation Superintendent, Kelly Kerrigan, at (203) 385-4006 or kkerrigan@townofstratford.com.

Stratford Town Ordinance §172-126: "The owner or agent of any premises where a violation of any provision of this article has been committed or exists, or the lessee or tenant of any premises where such violation has been committed or exists, or the owner, agent, lessee or tenant of any part of the premises in which such violation has been committed or exists, or any other person who commits, takes part or assists in any such violation or who maintains any premises in which any such violation exists, shall be fined $100 for each day that such violation continues; but, if the offense is willful, the person who commits such violation shall be fined $250 for each day that such violation continues. Such fines or penalties may be enforced or collected in any manner applicable under federal, state or local law."

TOWN OF STRATFORD

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DIVISION
OF CONSERVATION

¡ATENCIÓN RESIDENTES VIVIENDO CERCA DE EL ARROYO BRUCE BROOK!

Por favor tenga en cuenta que es *contra la ley* tirar o desechar cosas al curso de agua. Daños severos a la infraestructura y la contaminación ambiental es causada por la eliminación de escombros y desperdicio en el curso de agua de Bruce Brook. Incumplimiento de seguir la ordenencia municipal de Stratford §172-110 - §172-129 resultará en multas (vea abajo).

Como residente, usted es responsable de mantener su parte del curso de agua libre de basura, escombros, vegetación excesiva y otros obstáculos que contaminen o afecten el flujo de agua a través del curso de agua.

- Las inundaciones y la infraestructura dañada resultan en ***altos costos de $*** para la ciudad y los residentes a lo largo del arroyo.
- Los contaminantes químicos pueden incluir, entre otros: pinturas, barnices y solventes; aceite y otros fluidos automotrices; Residuos líquidos y sólidos.

Esta foto de Bruce Brook muestra una pared de concreto significativamente dañada y tuberías de alcantarilla obstruidas causadas por escombros.

Los contaminantes ambientales incluyen, entre otros: desechos de jardín; basura, desperdicios, escombros; residuos de animales, pesticidas, herbicidas y fertilizantes o otros objetos descartados o abandonados. *El vertido de recortes de jardín como palos, hierba y hojas también está prohibido en Bruce Brook, o en cualquier otro curso de agua en Stratford.* En cambio, aproveche la colección estacional de la ciudad para desechos de jardín (de April a mediados de Diciembre). Las colecciones se realizan cada dos semanas el día DESPUÉS de la recolección del reciclaje. Simplemente átelo y colóquelo en la acera — recortes de hierba, hojas y y cortes de arbustos deben de estar contenidos, sin otro tipo de basura, en bolsas de basura marrones o en botes de basura. NO deseche en el arroyo.

¡Tenemos que trabajar juntos para mantener nuestros costos bajos y las transmisiones de agua limpias! Recuerde que el arroyo Bruce Brook, y cualquier contaminación en él, desemboca en Long Island Sound.

Esta ordenanza se ha aplicado y se seguirá aplicando para evitar una mayor degradación del curso de agua y la infraestructura; ya que estos daños resultan en reparaciones costosas para la ciudad y los residentes. Si tiene alguna pregunta o inquietud, comuníquese con la Superintendente de Conservación Ambiental, Kelly Kerrigan al (203) 385-4006 o por correo electrónico kkerrigan@townofstratford.com.

Ordenanza de la ciudad de Stratford §172-126: “El propietario o agente de cualquier local donde se haya cometido o exista una violación de cualquier disposición de este artículo, o el arrendatario o inquilino de cualquier local donde se haya cometido o exista tal violación, o el propietario, agente, arrendatario o inquilino de cualquier parte de las instalaciones en las que se haya cometido o exista dicha violación, o cualquier otra persona que cometa, participe o asista en dicha violación o que mantenga las instalaciones en las que existe dicha violación, será multado con $ 100 por cada día que dicha violación continúe; pero, si el delito es intencional, la persona que cometa dicha violación será multada con $ 250 por cada día que dicha violación continúe. Dichas multas o sanciones pueden imponerse o recaudarse de cualquier manera aplicable según las leyes federales, estatales o locales ".

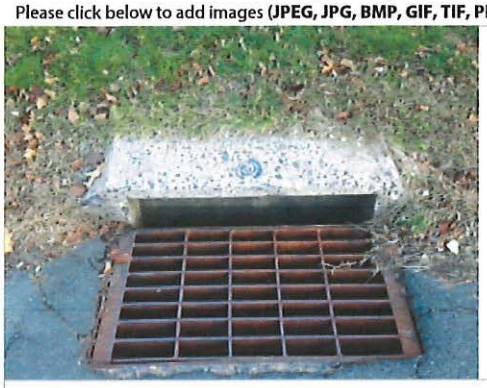
Project Description and Benefit

Briefly describe your project.

I will place 500 plaques with the message "Don't Pollute, Flows to Waterways", on rainwater catch basins throughout the Sixth and seventh district in the Town of Stratford, to raise awareness against polluting Long Island Sound. I will also disperse brochures informing citizens on the effects of pollution and how to prevent it.

Attach sketches or "before" photographs if these will help others visualize the project.

Please click below to add images **(JPEG, JPG, BMP, GIF, TIF, PNG, etc.)**



Rainwater Catch basin without an awareness plaque

Awareness plaque affixed to catch basin

Tell how your project will be helpful to the beneficiary. Why is it needed?

Long Island Sound is a treasure to Connecticut and this pollution awareness initiative will help reduce pollution in Long Island Sound by the Town of Stratford.

When do you plan to begin carrying out your project? April or June of 2016

When do you think your project will be completed? the end of April or June of 2016

Giving Leadership

Approximately how many people will be needed to help on your project? 12

Where will you recruit them (unit members, friends, neighbors, family, others)? Explain:

I will ask for volunteers from by Boy Scout Troop.

What do you think will be most difficult about leading them?

Having the three groups of four by themselves for a majority of the project creates coordination, communication, and delegation concerns.

Materials

Materials are things that become part of the finished project, such as lumber, nails, and paint.

What types of materials, if any, will you need? You do not yet need a detailed list of exact quantities, but you must show you have a reasonable idea of what is required. For example, for lumber, include basic dimensions such as 2" x 4" or 4" x 4".

I will need plaques to be affixed to the rainwater catch basins using epoxy adhesive to hold them on the catch basins, and paper to make informational brochures.

Supplies

Supplies are things you use up, such as food and refreshments, gasoline, masking tape, tarps, safety supplies, and garbage bags.

What kinds of supplies, if any, will you need? You do not yet need a detailed list or exact quantities, but you must show you have a reasonable idea of what is required.

We will need two ordinary bags to carry the epoxy and plaques, one garbage bag for empty tubes of epoxy, disposable rags to wipe off any spilled or left over epoxy, disposable rags and a daily cleaning chemical to clean catch basins prior to plaque fixation, and at least three cars and three adults to drive participants to the various locations to place the plaques. I will also need basic medical supplies in the event a participant is injured during the project, and paper/ink to print informational brochures.

TRAINING LOG

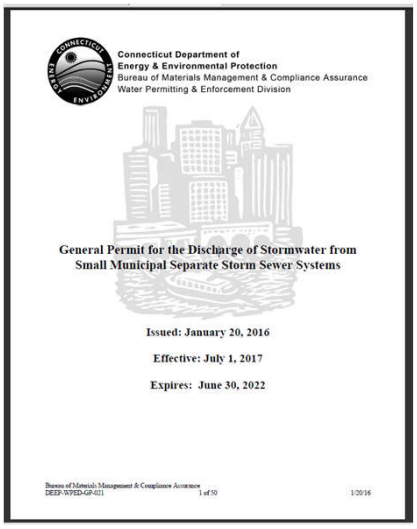
Name: Town of Stratford, CT

Name of Instructor: Correne Auer (printed or typed) — Correne Auer (signature)

Type of Training: Annual MS4 Foreman Training

Date of Training: 12/4/20

PERSONNEL TRAINED	
Name & Department (Print Legibly)	**Name (Signature)**
DENVER EMPTY	
ROBERT CRONIK	
Glen n PORZELT	
Marco Lopez	
Joe Taft	
William Volpe	
FRED KEESE	
MELVIN (Boom)	
Vincent Faulkner	
Darrell Hopkins	


Connecticut Department of
Energy & Environmental Protection
Bureau of Materials Management & Compliance Assurance
Water Permitting & Enforcement Division

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

Issued: January 20, 2016

Effective: July 1, 2017

Expires: June 30, 2022

December 4, 2020

Annual MS4 Permit Topical Training for Town Foreman

Town of Stratford, CT

MOVE YOUR ENVIRONMENT FORWARD

ENVIRONMENTAL | ENGINEERING | COMPLIANCE

1

Why are we here?

- Training is required to increase awareness of water quality related issues in management of the MS4
- Implement an operations and maintenance program to prevent or reduce pollutant runoff as a result of municipal operations (from town properties), and to protect water quality
- This topical training is for key staff and will cover standard operating procedures (SOPs) and best management practices (BMPs) necessary to comply with the permit

2

What is Stormwater & why do we care about it?

- Runoff from rain and snowmelt that flows over impervious surfaces instead of soaking into the ground.
- Storm drains/pipes can carry pollutants in runoff to the nearest body of water.

3

Why is Stormwater runoff a problem?

Flooding

- Overland and stream flooding=damage to property and yards, stream erosion

Pollution

- Pollutants can impair aquatic ecosystems
- Potentially harm drinking water sources
- Impact waterbodies used for recreation.

First photo: iiseagrant.org

4

Sources of Stormwater Pollution

Stormwater runoff can pick up debris, chemicals and other pollutants as it flows into storm drains, piping and into waterways.

Sources:

- Debris/Garbage - solids
- Oils & Grease
- Metals
- Other Chemicals
- Sediment
- Stormwater Pollutants of Concern (POC)
  - Bacteria
  - Nutrients-Nitrogen & Phosphorus

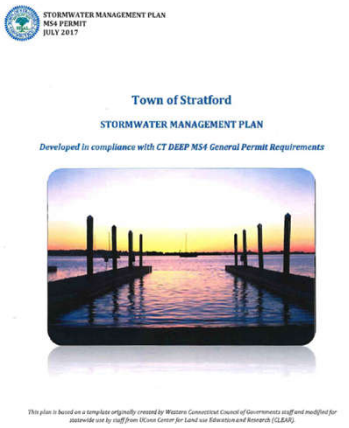
Photo: freewebs.com

5

Stormwater Management Plan (SMP)

- designed to reduce the discharge of pollutants from the MS4

- outlines a program of best management practices (BMPs), measureable goals, responsible individuals or departments, and implementation schedules for 6 Minimum Control Measures



6

Training Outline

- SOPs/BMPs discussed for the following topics:
  - Illicit Discharges
  - MS4 owned/operated properties with regards to:
    - Parks & Open Space (use of fertilizers, pesticides)
    - Pet Waste Management
    - Waterfowl Management
    - Buildings & Facilities (pools)
    - Vehicles & Equipment (fueling)
    - Leaf Management
  - Street, Parking & MS4 Maintenance (Sweeping & Catch Basins)
  - Snow Management Practices (Deicing Materials, Snow/Ice Control)
  - Utility, Road & Building Construction Projects
  - Sanitary Sewer Overflows/Backups
  - Spill Response Protocols

7

What is an Illicit Discharge?

- Unpermitted discharge that does not consist entirely of stormwater or uncontaminated groundwater
- Can be consistent or intermittent
- Direct or indirect
- Examples:
  - Illegal floor drain connection
  - Illegal sewage connections
  - Leaking sanitary sewers & Sanitary Sewer Overflows (SSOs)
  - Failing septic system overflow
  - Spills and dumping

8

Illicit Discharge = anything that's not stormwater

9

Restaurant Grease

10

Paint Washed into Street or Drain

11

What is NOT an Illicit Discharge?

Exceptions:

- Firefighting flows
- Footing drain/sump pump flows
- Uncontaminated groundwater
- Lawn watering runoff
- Street washing/sweeping
- Natural Flows

12

IDDE Best Management Practices & Procedures

- Evidence of illicit connections – hard piped connections, dry weather flows, wet weather flows with odor, discoloration, or evidence of sewage.
- Evidence of illicit dumping – staining or discoloration near storm drains, empty containers, hoses, etc.
- Report to supervisor or Public Works/Conservation Department immediately
- Take notes (date, time & location), photographs
- Public Works Dept. fills out record keeping tracking sheet
- Follow procedures in written IDDE Plan

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IDDE Citizen Reporting Program

- Citizens may submit a comment, service request, or complaint by email, phone or on-line by clicking on the "Submit Service Request" link found on the Town of Stratford Home Page: http://www.townofstratford.com.
- Illicit discharges reported will require followup investigation and elimination

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MS4 Property & Operations Maintenance

Parks & Open Space – optimize the application of fertilizers/pesticides/herbicides by municipal employees, institutional staff, or private contractors on property for which Stratford is responsible for

Optimization practices:

- Soil phosphorus testing
- Reduction of fertilizer use
- Follow manufacturer's instructions
- Alternative fertilizer forms
- Proper indoor storage/mixing and application
- Application schedule and timing

15

Nutrients – Pesticides & Fertilizers

Photos: Chicagotribune.com & chqdaily.com

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MS4 Property & Operations Maintenance BMP

Parks & Open Space- Continued

- SOPs for Pesticide and Herbicide handling, storage, application and disposal
- Evaluate reduced mowing frequencies and use of alternative landscaping materials
- Mulch-mow, sweep clippings back into grass, compost
- Raise mower height in water feature buffer areas
- Don't over-irrigate
- Control soil erosion by seeding, sod, mats, mulching, or terracing
- Establish procedures for management of trash containers at parks (scheduled cleanings and sufficient #)

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Debris –Garbage Entering MS4

Photos: vbaltv.com & EPA

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MS4 Property & Operations Maintenance

Pet Waste Management – needed where inappropriate pet waste practices are apparent and pose a threat to a nearby waterbody

BMPs include:

- Public education – signage, pamphlets
- Town owned recreational areas – pet waste baggies and disposal receptacles (line w/trash bags, lids, empty regularly)
- Enforcement – increased patrol for violators

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Pet Waste

20

MS4 Property & Operations Maintenance

Waterfowl Management – identify lands where waterfowl congregate and feeding by the public occurs…which leads to feces deposition

BMPs include:

- Public education – signage, pamphlets
- Discourage congregation of waterfowl or isolate direct drainage away from storm system and waterbodies

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CT DEEP Pamphlet

How You Can Help

- DO NOT FEED WATERFOWL! Waterfowl are wild birds that can locate natural food sources throughout the year. Supplemental feeding by people is unnecessary and potentially harmful.
- Educate others about the negative impacts of feeding waterfowl and discourage the practice when possible.
- Contact your local government and encourage the implementation of a no feeding policy in your community.
- Numerous organizations are working together to restore Connecticut's and the nation's wetlands, making them beneficial for waterfowl. It is important for all of us to concentrate our efforts on these types of projects because habitat, not feeding, is what guarantees the future of waterfowl. Support the efforts of federal, state, and private organizations to conserve waterfowl and habitat. Volunteer and participate in research that pertains to waterfowl.
- Purchase a Connecticut or federal Duck Stamp from your local city or town hall to help with the purchase and restoration of natural habitat for waterfowl.
- **2018 - 2019:** Participate in Canada Goose Surveys in the Groton area. Eastern Connecticut Conservation District received a CWA §319 Nonpoint Source Program grant from CT DEEP to implement strategies to reduce fecal coliform bacteria and restore shellfishing in Groton's Baker Cove.

If interested, please contact:
Maura Robie, Conservation Technician
Eastern Connecticut Conservation District
238 West Town Street, Norwich, CT, 06360
maura.robie@comcast.net / (860) 319-8807

For more information about waterfowl contact:
Connecticut Department of Environmental Protection
(www.ct.gov/deep)
Wildlife Division
79 Elm Street
Hartford, CT 06106
860-424-3011
Waterfowl Program (860-642-7239)
United States Fish and Wildlife Service
(www.fws.gov)

Dense congregations of wild ducks, particularly in urban settings, greatly enhance the chances of disease transmission.

Long Island Sound Study

The Department of Environmental Protection is an affirmative action/equal opportunity employer, providing programs and services in a fair and impartial manner. In conformance with the Americans with Disabilities Act, DEEP makes every effort to provide equally effective services for persons with disabilities. Individuals with disabilities who need auxiliary aids or services, or for more information by voice or TTY/TDD, call 860-424-3000.

The Federal Aid in Wildlife Restoration Program was initiated by sportsmen and conservationists to provide states with funding for wildlife management and research programs, habitat acquisition, wildlife management area development and hunter education programs.

Photos by Paul J. Fusco

1/07

DO NOT FEED WATERFOWL

You Can Help Waterfowl by NOT FEEDING Them!

State of Connecticut
Department of Environmental Protection
Bureau of Natural Resources
Wildlife Division
www.ct.gov/deep

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MS4 Property & Operations Maintenance

Town Buildings & Facilities – schools, town offices, police & fire stations, pools, parking garages (i.e. = town owned or operated)

- Chemicals & Petroleum products – evaluate & provide training for proper use, storage and disposal
- Loading/Unloading Areas – covered, not near CBs, wheels chocked, neat and tidy
- Spill Prevention Plans in place
- Dumpster/Waste Management
- Parking Lot Sweeping –inspections, clean leaves, trash and sand
- No Floor drains connected to the MS4

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MS4 Property & Operations Maintenance (cont.)

Town Buildings & Facilities – schools, town offices, police & fire stations, pools, parking garages

Do not let wastewaters from the following activities enter storm drains:

- pressure washing
- Janitor mop waters
- Equipment or tool cleaning (painting, food service facilities)
- Waste container or dumpster wash out
- Heating and cooling systems

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MS4 Property & Operations Maintenance (cont.)

Town Buildings & Facilities – Outdoor Material Storage

- Store liquids and other chemicals indoors or under cover. Secondary containment (110% of capacity) if must be outside
- Do not discharge accumulated water from secondary containment unless determined not to be contaminated
- Spill Kit
- Inspections
- Clean up spills, leaks or discharges promptly
- Provide vehicle protection for ASTs
- Salt & Salt/Sand piles covered and stored on impervious surfaces

25

Containers stored outside

26

Leaking dumpsters or grease bins

27

Leaking dumpsters or grease bins

28

Dumpster Management

- Keep dumpsters and roll-offs closed at all times (leak tight)
- Drain plugs entact
- Check area for spills & clean up
- No liquid wastes or hazardous materials

29

No hot tubs or pools drained to street

30

MS4 Property & Operations Maintenance

Vehicles and Equipment BMPs:

- Require leaky vehicles to be stored indoors or in a contained area, use drip pans
- Vehicle maintenance & parts cleaning performed indoors
- Inspections – check for leaks
- Town-owned fueling areas – signage, remain w/vehicle, Emergency Shut-off, spill kits, cover nearby CBs
- Wash vehicles & equipment indoors
- Ensure interior floor drains are appropriately permitted

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Leaking vehicles & spills

32

Wash Vehicles in a Wash Bay

- Wash area must not drain to MS4 or surface water

33

MS4 Property & Operations Maintenance

Leaf Management –Implement procedures to minimize or prevent the deposition of leaves in catch basins, streets, or other paved surfaces that discharge to the MS4. This also applies to leaves collected by the Town.

- Proper disposal of leaves and grass clippings at town owned lands

34

Debris – Leaves/Sticks

Photos: cjsweep.com & NOLA.com

35

Street & Parking Maintenance - Sweeping

- All Town owned/operated streets and parking lots shall be inspected, swept and/or cleaned at least 1x/year in spring
- Increase frequency for areas with increased pollutant potential (sources or construction)
- Minimize use of water to avoid excess water discharge
- Ensure proper disposal of sweepings
- Document summary of inspection results, curb miles swept, dates of cleaning, volume/mass of material collected, disposal method
- Train staff to ensure sweepers are in good operating status and drive at the recommended speed

36

Street, Parking & MS4 Maintenance – Catch Basins

- Inspect all Town owned/operated catch basins by July 1, 2020
- Prioritize inspection and maintenance for CBs located near impaired waters and construction activities
- Frequency: Routine cleaning must ensure that no CB sump will be >50% full, more frequently if excessive sediment or debris loading
- If a CB is >50% full during two consecutive inspection/cleaning events, the drainage area contributing shall be investigated, and abate sources as practicable
- Keep a log/Document CBs inspected, cleaned, total volume or mass of material removed

37

Deicing Materials Management

- Minimize exposure to stormwater (use, storage, handling, application and disposal) of deicing products
- Minimize use and optimize application of chloride based or other salts or deicing product
- Ensure equipment is calibrated
- Exterior liquid containers installed after July 1, 2017 must have secondary containment of at least 110% of largest container or 10% of total of all containers

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Snow & Ice Control Management

- Establish goals for optimization of sand and/or chemical application rates using automated application equipment, anti-icing and pre-wetting techniques, pavement management systems, and alternate chemicals
- Maintain records of sand and deicing chemical application to document reduction
- Staff training
- Document type of staff training conducted on application methods and equipment, types and total amount of deicing material used, lane miles treated, types of deicing equipment used, changes in practices, snow disposal methods

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Snow & Ice Control Management (cont.)

- Snow should not be plowed towards or stored near surface waters, drainage ditches or catch basins.
- Avoid storage on impervious surfaces
- Manage and dispose of snow in accordance w/CT DEEP *Best Management Practices for Disposal of Snow Accumulations from Roadways and Parking Lots*

https://portal.ct.gov/DEEP/Water-Regulating-and-Discharges/Guidance/Snow-Removal-Guidelines

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Snow & Ice Control Management (cont.)

- Snow accumulations removed from roadways, bridges, and parking lots should be placed in upland areas only, where sand and other debris will remain after snowmelt for later removal. Snow should not be deposited in the following areas:
  - freshwater or tidal wetlands or in areas immediately adjacent to such areas where sand and debris may be flushed during rainstorms;
  - on top of storm drain catch basins;
  - in storm drainage swales;
  - on stream or river banks which slope toward the water, where sand and debris can get into the watercourse; and
  - in areas immediately adjacent (within at least 100 feet) of private or public drinking water well supplies (due to the possible presence of road salt).

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Utility, Road & Building Construction Projects

- Inlet protection
- Inspections
- Clean streets as needed
- Erosion & Sediment Control BMPs
- Store supplies under cover
- Provide secondary containment and cover for chemicals
- Obtain *CT DEEP General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities* if ≥ 1 acre of soil disturbance

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Erosion & Sediment Control

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Sediment Control

44

Sanitary Sewer Overflows (SSOs)/Backups

- Stop the discharge/overflow ASAP
- Ensure sewage is not discharged into a CB or drainage ditch:
  - Block inlets
  - Contain and divert sewage
  - Remove with Vac Truck
- Do not clean tools or equipment near CBs or ditches
- Provide Notification as outlined in the Permit
- SSO Inventory
- Discharges from the MS4 that are mixed w/an SSO are not authorized by this Permit

45

Spill Response Protocols

- Post Emergency Procedures Flow Charts
- Have a stocked spill kit readily available
- Clean up spill promptly
- Control the source
- Contain spill
- Absorb spill
- Dispose of properly
- Report spills

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Call 911 for emergency discharges!

- Can the spill be controlled without jeopardizing health and safety?

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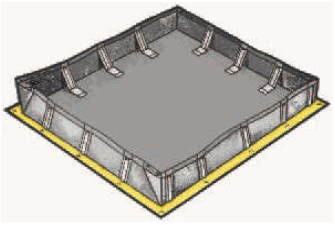
Solutions



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Solutions

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Spill Response

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Sources & Resources

- *Portions of this presentation, including photos, were taken from the Training Presentation "Stormwater 102: Stormwater Pollution Prevention for Facility Maintenance Employees" found at https://www.pacepartners.com/program-areas/water/municipal-stormwater-operations/#1528829690034-cdef0c08-5007*
- *Best Management Practices and Standard Operating Procedures found at https://www.pacepartners.com/program-areas/water/municipal-stormwater-operations/*
- *Stratford's Stormwater Management Plan*
- *Stratford's IDDE Plan*
- *General Permit for the Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems*
- *IDDE Workshop Materials found at https://nemo.uconn.edu/ms4/tasks/idde.htm*
- *https://portal.ct.gov/DEEP/Water-Regulating-and-Discharges/Guidance/Snow-Removal-Guidelines*

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Questions?

Correne M. Auer
Senior Project Engineer
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197 Scott Swamp Road
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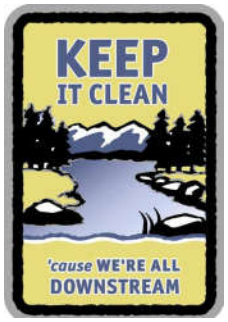
860.674.9570
correne.auer@hrpassociates.com



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TRAINING LOG

Name: Town of Stratford, CT

Name of Instructor: Correne Auer _____
(printed or typed) (signature)

Type of Training: Annual MS4 Formal Training

Date of Training: 08 DECEMBER 2020 - VIRTUALLY VIA GOTOMEETING

PERSONNEL TRAINED	
Name & Department (Print Legibly)	**Name (Signature)**
BRIAN LAMPART, FIRE DEPARTMENT	
LARRY CICARELLI, PUBLIC SAFTETY	
JOHN COSEY, ENGINEERING	
THOMAS AUBERT, PUBLIC WORKS, HIGHWAY	
MAUREEN WHELAN, HEALTH	
ALIVIA COLEMAN, HEALTH	
TOM WYOE, WPCA	
KELLY KERRIGAN, PUBLIC WORKS, CONSERVATION	

Zoning Dept - Erosion & Sediment Controls Inspection Log 2019

Date	Hse #	Street	Development Description	Comments	By:	Status
3/23/2019		mairfair place	contractors storage yard/ soil operation	no issues tracking pad, controls in place	JR	on going
3/25/2019		ward street	subdivision/	completed stabalized	JR	closed 4/
4/8/2019		arcadia	subdivision/	completed stabalized	JR	closed
5/13/2019		lordship blvd.	residential dev.	ongoing no issues	JR	on going
5/13/2019		benton street	soil stocking	dust issues/ water trucks being used / ongoing inspections	JR	ongoing
6/10/2019		nichols ave.	new home/ completed stabalized	completed/ stabalized	JR	closed
6/15/2019		king st.	one half of school finisned completed	first half done and stabalized	JR	closed
7/16/2019		stratford ave	Brewery finished/ stabalized	finished	JR	closed
7/23/2019		prospect drive	new home finished and stabalized	completed	JR	closed
7/23/2019		king street	second half of new school	controls in place/ ongoing/ no issues	JR	on going
10/10/2019		east main street	site dev. dust issues water trucks on site	controls in place / with tracking pad	JR	on going
10/10/2019		barnum ave. storage bldg.	Water trucks on site silt fences up,	controls in place on going	JR	on going
11/19/2019		watson blvd.	new storage bldg.	tracking pad in place controls are in	JR	on going
9/23/2019		lordship blvd.	sidewalk installation	controls in place/ completed / stabalized	JR	completed
7/2/2019		second ave.	new home / controls in place/ tracking pad in	ongoing no issues	JR	ongoing
3/21/2020		Benton Street	town stock piling matterial from road jobs	plies are vegitated all stable on going	jr	ongoing
2/15/2020		king street	school dev. All completed and stabalized	3/25/2020 projected completed	jr	closed
6/25/2020		barnum ave.	storage building	9/21/2020 projected completed all stabalized planitings and pavement comp.	jr	closed
3/12/2020		watson blvd.	storage building	on going / tracking pad and erosion controls ok, site not completed	jr	ongoing
4/24/2020		lordship blvd.	sidewalk job	all completed and stabalized looks good	jr	closed
1/20/2020		second ave.	new home ongoing	site stable/ tracking pad and erosion controls look good no issues	jr	ongoing
6/30/2020		park blvd.	new home ongoing	tracking pad installed / erosion controls inplace	jr	ongoing
10/20/2020		2`nd new home park blvd.	New home next to other new home	good tracking pad in erosion controls in	jr	ongoing
6/20/2020		philo street	new duplex	good tracking pad and silt fencing/ job completed	jr	closed
7/3/2020		lynncrest street	3 new homes	site cleared, tracking pad in, silt fences up looks good	jr	ongoing

Retrofit Plan

Municipal Storm Sewer System Permit

Town of Stratford

July 2020

The Town of Stratford has prepared this Retrofit Plan (the Plan) in accordance with the 2017 Stormwater Management Plan and developed in compliance with the Connecticut Department of Energy & Environmental Protection (CT DEEP) Municipal Separate Storm Sewer System (MS4) General Permit requirements.

Much of the infrastructure within the Town of Stratford was developed long before stormwater management was required or before the establishment of modern stormwater management criteria. As such, retrofits include new installations or upgrades to existing infrastructure where there may be a lack of stormwater management in accordance with best management practices (BMPs).

One of the larger goals of this plan is to reduce the Directly Connecticut Impervious Area (DCIA), or to "disconnect" this DCIA from the stormwater conveyance system. DCIA has been defined as the impervious area that transports stormwater directly into a waterbody or into stormwater drainage infrastructure that transports runoff directly into waterbodies. Examples of DCIA may include runoff directly from sidewalks, driveways, roadways, buildings and parking lots. For a site to be considered disconnected, it must be retrofitted to retain the appropriate portion of the Water Quality Volume (WQV) on-site. The WQV is the volume of runoff generated from Impervious Coverage by the first inch of rainfall for new developments and the first ½" for re-development projects. This may be accomplished through retrofits or redevelopment projects (public or private) that utilize Low Impact Development (LID) and runoff reduction measures or any other means by which stormwater is infiltrated into the ground or reused for other purposes without a surface or stormwater sewer discharge. Pursuant to the CT DEEP MS4 Permit, the percent of Directly Connected Impervious Area (DCIA) was calculated throughout the municipality. As of the date of this plan, the DCIA for the Town of Stratford has been calculated at 1,492 acres. Our goal by the end of the current permit period (i.e., five years) is a 2% reduction – amounting to a reduction of 1% in Year 4 (i.e., 2021) and 1% in Year 5 (i.e., 2022). Following the fifth year of the permit, the goal is a 1% reduction per year. The Town will strive to meet these goals, although budgetary constraints may slow implementation.

Retrofit Considerations

A variety of factors must be taken into consideration when identifying and prioritizing retrofit projects. Some factors may include site selection, available budgeting, practicality, and constructability. Some of these criteria to aid in prioritization efforts may include, but not be limited to, the following:

- Site Ownership: In terms of site selection, the Town would seek municipally-owned properties in which the Town already has the authority to maintain and operate. Alternatively, town rights-of-way may also be considered.
- Flood-Prone Areas: High priority areas include those prone to flooding or chronic inundation. As a coastal community, Stratford has many low-lying areas prone to flooding, and these issues are slated to increase with the onset of climate change, to include sea-level rise and increased precipitation events. These areas would be a high priority as new stormwater retrofits would seek to manage peak stormwater flows to alleviate flooding.

- High Contaminant Loads: Areas with high contaminant loads, such as parking lots, would also be higher priority locations. Petroleum products and other automotive fluids that leak onto parking surfaces over time are often flushed into catchbasins, find their way into waterways without treatment. Retrofits may aid in treatment of pollutants such as oils and grease prior to discharge off-site.
- Long Term Maintenance: Retrofit projects that require intense maintenance or have high maintenance costs following installation should be well thought out. These projects may have a lower long-term success rate if maintenance is unable to be performed in the future due to budgetary or personnel constraints.
- Watershed: Sites located within impaired watersheds should be prioritized over healthier watersheds.
- Natural hydrology: Some sites may have a natural hydrology better suited for one particular retrofit over another.
- New Retrofit v. Retrofit Conversion/Enhancement: It may be more financially prudent to convert or otherwise enhance an existing BMP at a site, than to install a new retrofit. For example, a BMP may have been undersized, or designed or installed incorrectly. These could include enhancements to increase treatment volume or hydraulic residence time. Or the BMP could be restored to renew its performance through a major sediment cleanout, vegetation clearing/harvesting, or filter media upgrades.
- Public Acceptance: The site selection process should include consideration for public acceptance.
- Budgetary Considerations: Sites should be prioritized based on cost-effectiveness versus the project benefits.
- Plan in coordination with other capital projects to take advantage of cost efficiencies associated with larger scale projects.

Retrofit projects will be dependent on the site-specific characteristics of a given location. Some locations may be unsuitable for WCV storage. At these locations, the Town may seek to implement stormwater treatment, which does not count toward DCIA disconnection at this time, but still provides improvement to stormwater quality. Some example projects may include the following:

- Constructed wetlands, raingardens, and bioswales: Manmade features designed to mimic select natural functions and processes of wetlands, including floodflow alteration, sediment and toxicant retention, and nutrient removal. This may also include parking lot infiltration islands.
- Permeable pavement/pavers: As an option to traditional impermeable pavements such as bituminous concrete or concrete, permeable pavements and pavers allow stormwater to percolate through the ground surface. There is a maintenance component to ensure the longevity and functionality of this type of retrofit.

- Oil/Particle Separators: When installed and maintained properly, these provide stormwater treatment for oils and sediments prior to discharge to the stormwater conveyance system.
- Low Impact Development (LID) Measures
- Detention Basin Retrofits: Dry detention basins may be altered to include wetland plantings and micropools to aid in filtering water prior to discharge
- In-stream retrofits: Examples may include conversion of concrete-lined channels to natural substrate bottoms with native vegetation, the installation of small check dams to reduce flow velocities, etc.

Near-Term Retrofit Schedule

Within the next two years, the Town of Stratford has identified two retrofits projects in accordance with scheduled infrastructure maintenance activities. Retrofit projects are generally more cost-effective when implemented in conjunction with already planned infrastructure projects. Within the next two years, the Town is planning to resurface the parking lots at Bunnell High School and the Baldwin Center.

Bunnell High School is located at 1 Bulldog Boulevard in the northern portion of Stratford. It is anticipated that the Bunnell High School paved parking areas will be resurfaced during 2021. Currently, stormwater at this location ultimately discharges to Bruce Brook, an impaired waterbody. The paved surface at Bunnell totals approximately 2.5 acres. Therefore, a retrofit for this feature would result in a disconnection of0.17 % for the year. This retrofit project is currently in planning and design stages.

The Baldwin Center is located at 1000 West Broad Street and is somewhat centrally located in Stratford. It is anticipated that the Baldwin Center paved parking areas will be resurfaced during 2022. Currently, stormwater at this location ultimately discharges to Ferry Creek. The paved surface at the Baldwin Center totals approximately 2 acres. Therefore, a retrofit for this feature would result in a disconnection of 0.13 xx% for the year. This retrofit project is currently in planning and design stages.

Long-Term Retrofit Schedule

Following completion of the above-identified near-term retrofit projects, the Town will seek to conduct retrofit projects in accordance with other planned infrastructure improvement projects in order to provide a level of cost savings. Should multiple sites be up for consideration, they will be prioritized based on the criteria outlined under *Retrofit Considerations*, or others as they apply. The goal for each year will be a 1% disconnection of the DCIA in accordance with the provisions of the permit.

Town of Stratford

Parking Lot BMP Design

Sara Aldarondo, Esther Chang, Alex DaSilva, Timothy Vadas

AGENDA

01
ABOUT OUR TEAM
Introduction of team goals

02
LOCATION
Description of site

03
OUR DESIGN
Details on our design ideas along with reasoning as to why it is the best option

04
Maintenance & Cost Analysis
Cost of design as well as how to ensure the longevity of our project

Site Location: Frank DeLuca Parking Lot

Site Constraints

Wetland & Coastal Proximity

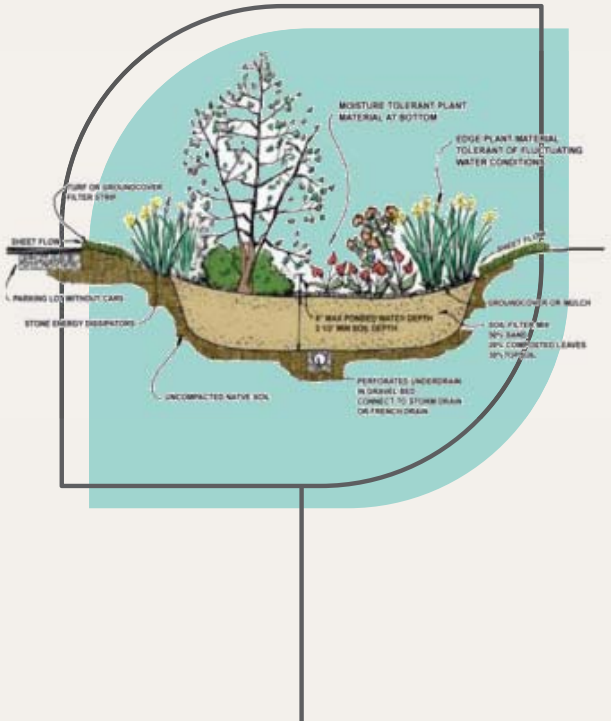
Water Quality Volume

WQV= 365 ft^3

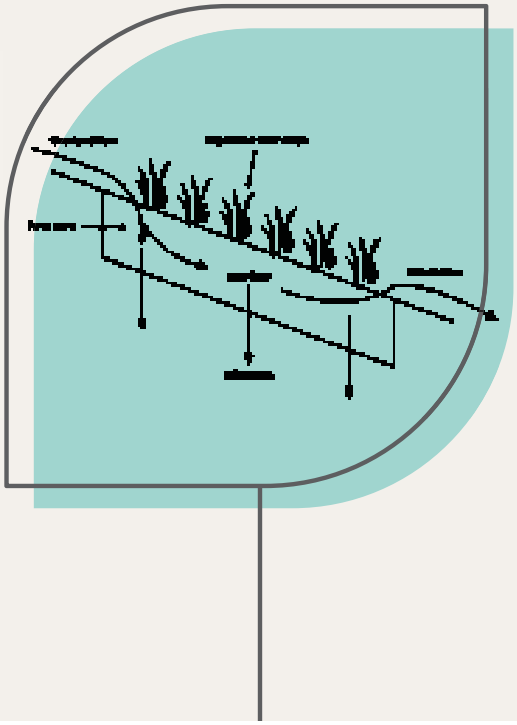
WQV= 390 ft^3

BMP Designs

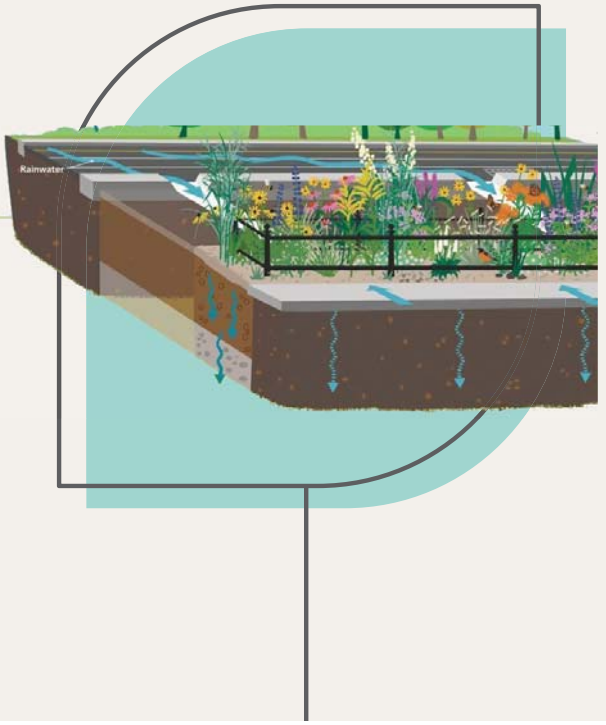
Rain Garden



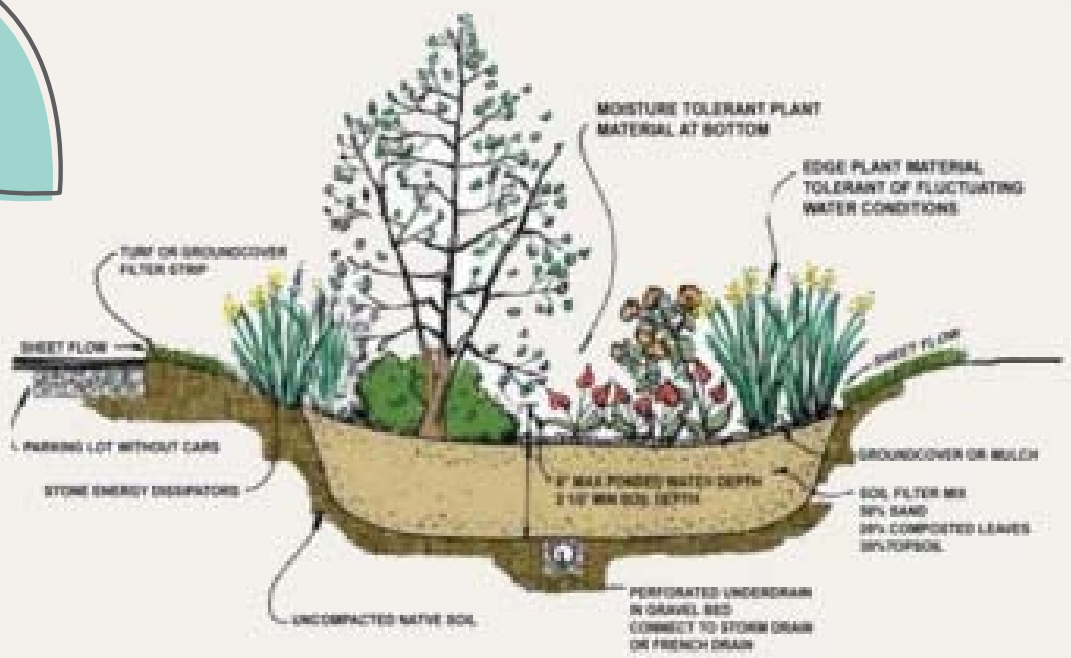
Vegetative Surfaces

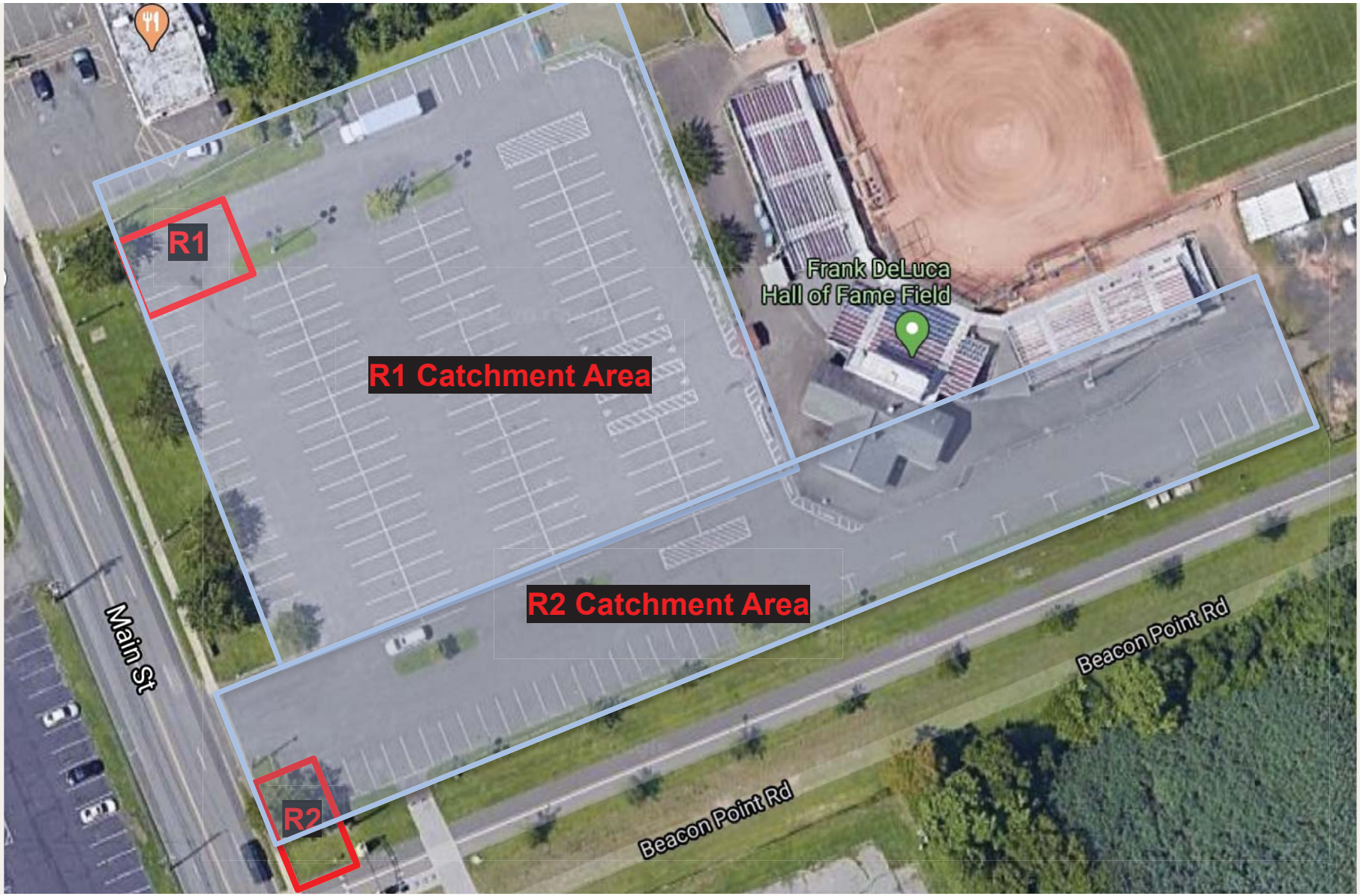


Bioswales



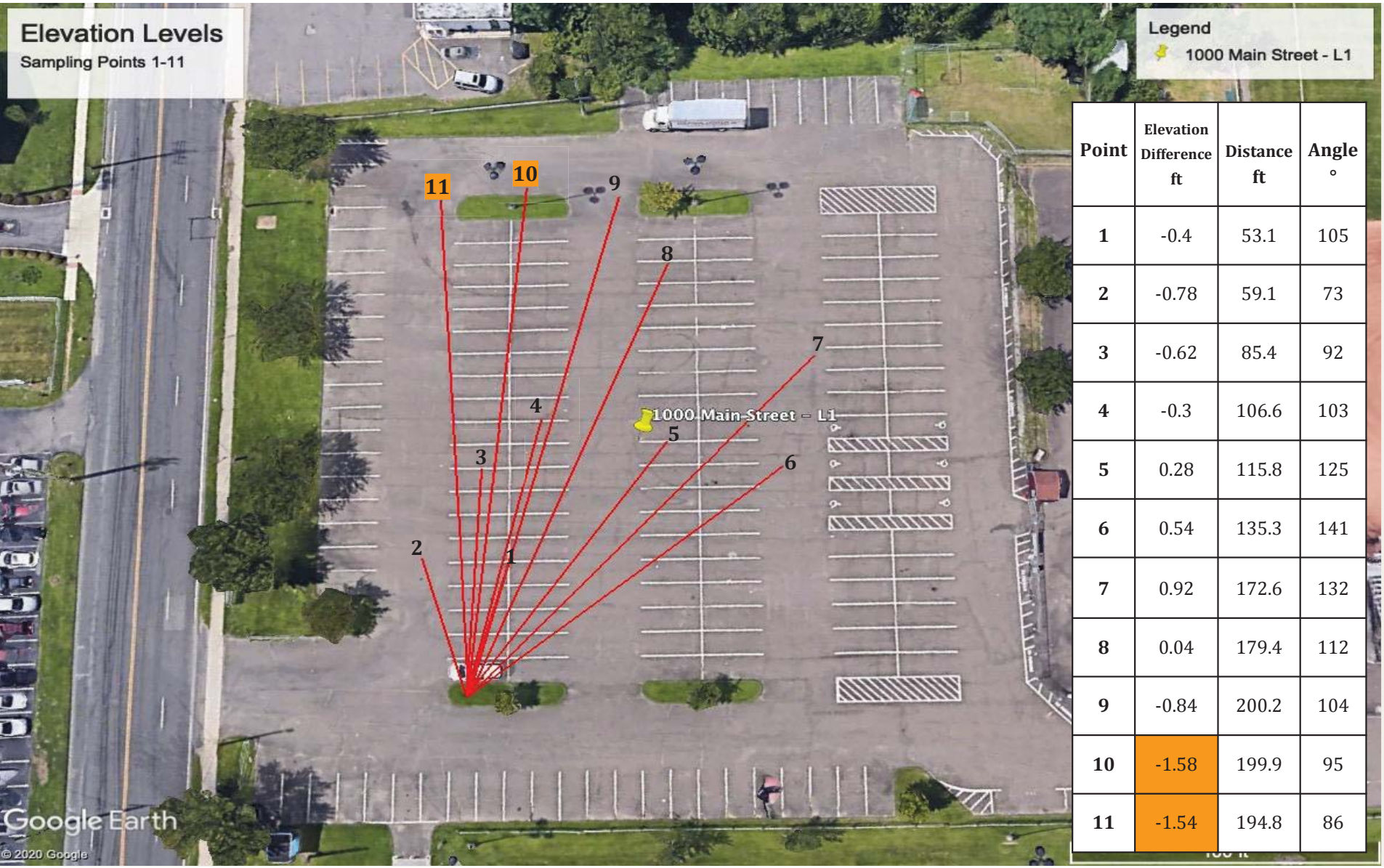
Rain Gardens




R1
R1 Catchment Area
Frank DeLuca
Hall of Fame Field
R2 Catchment Area
Main St
Beacon Point Rd
Beacon Point Rd
R2

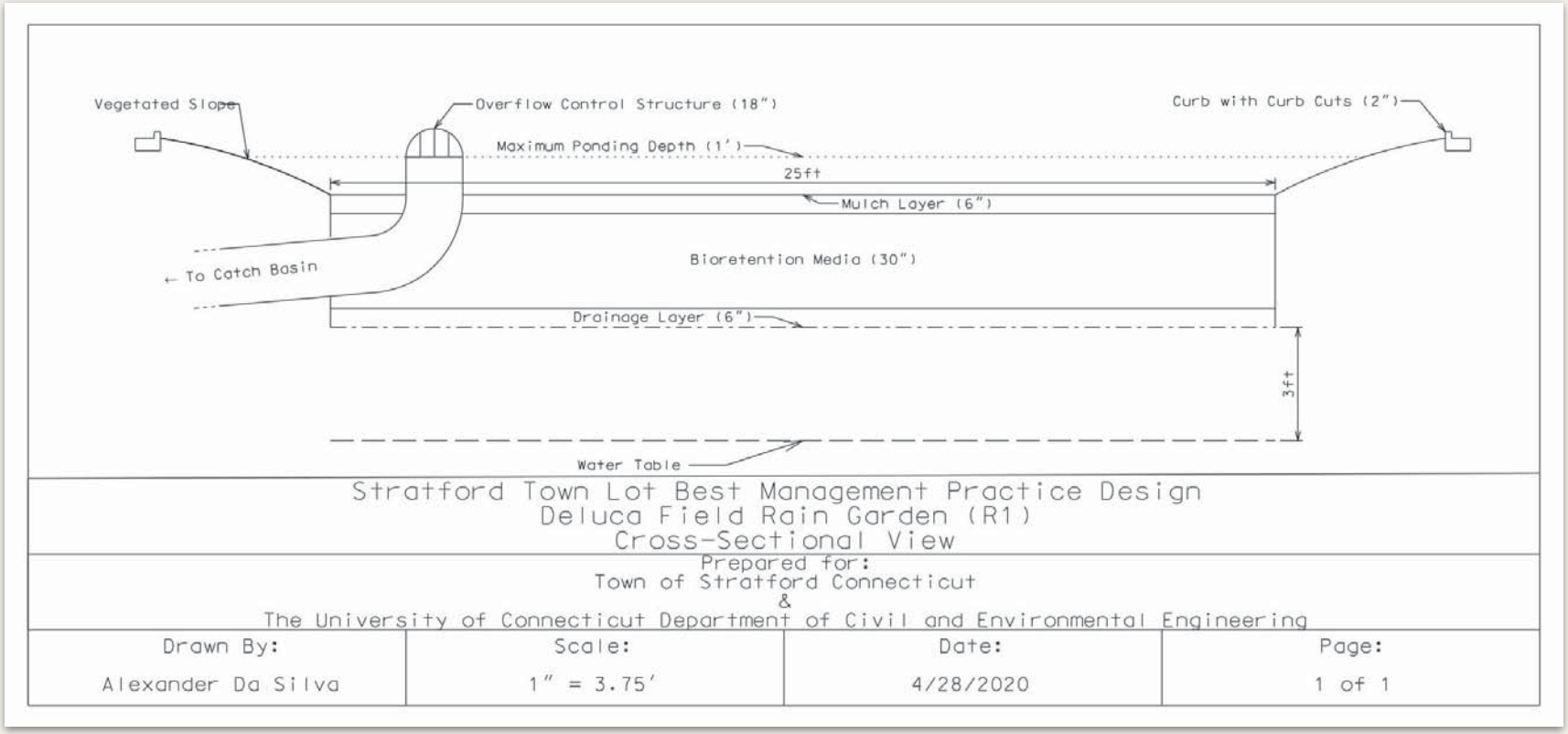

1000
601.25


State Hwy



Point	Elevation Difference ft	Distance ft	Angle °
1	-0.4	53.1	105
2	-0.78	59.1	73
3	-0.62	85.4	92
4	-0.3	106.6	103
5	0.28	115.8	125
6	0.54	135.3	141
7	0.92	172.6	132
8	0.04	179.4	112
9	-0.84	200.2	104
10	-1.58	199.9	95
11	-1.54	194.8	86

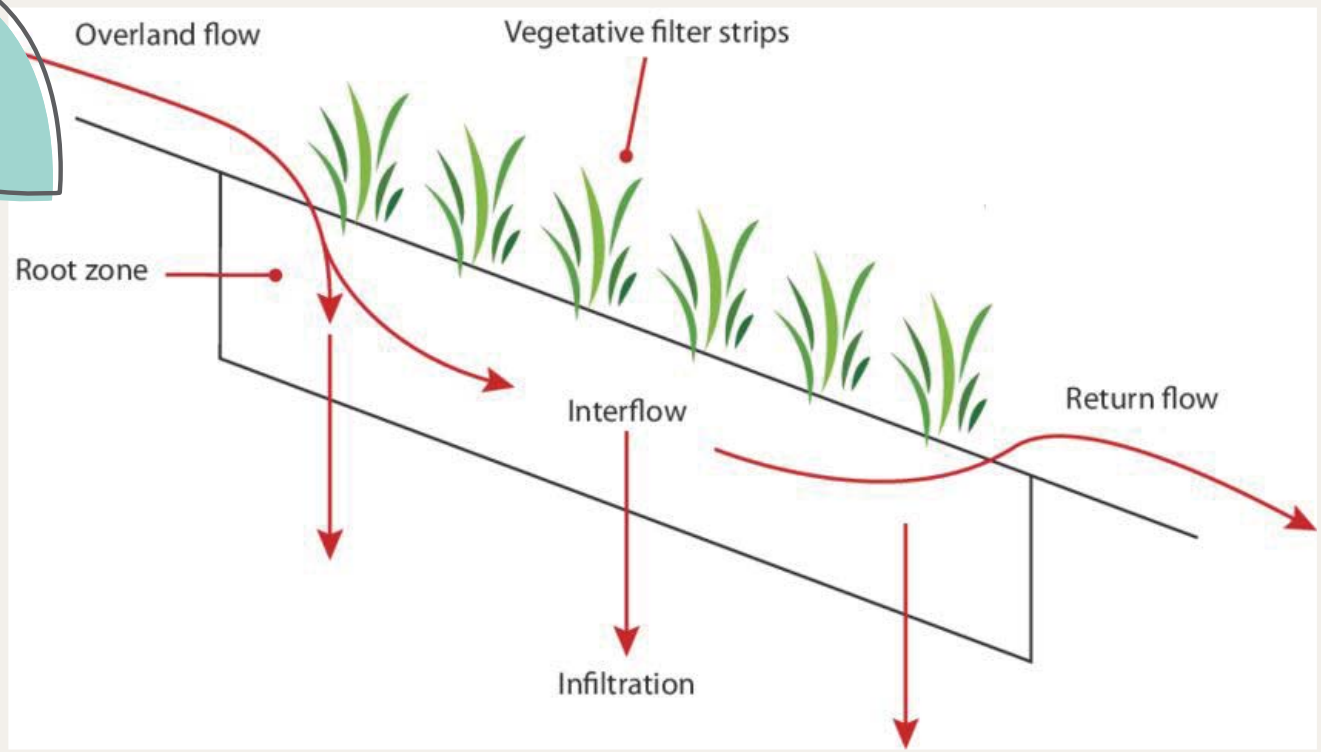
Rain Garden 1 Design



Pond Dimensions: 25 ft x 15 ft

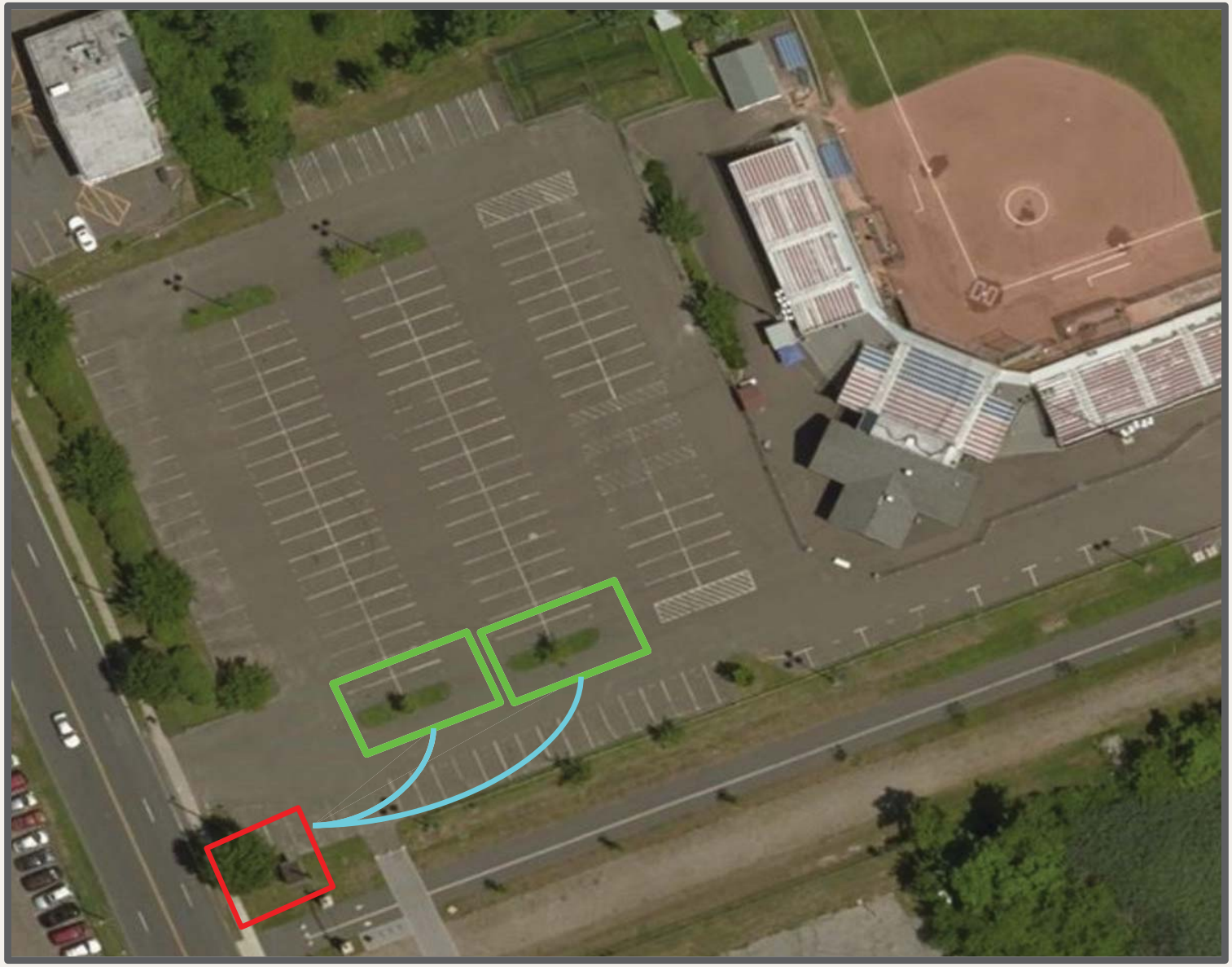
Bioretention Dimensions: 34 ft 8 in x 24 ft 8 in

Vegetative Surfaces



Vegetative Surfaces

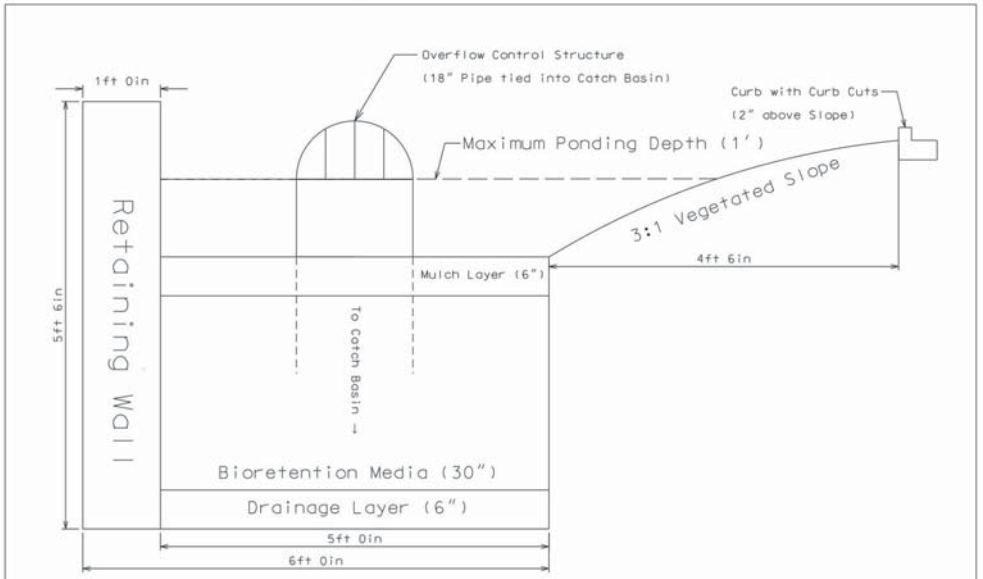
Curd cuts will be added to the existing platforms within the parking lot



Rain Garden 2 Design

Pond Dimensions: 30 ft x 5 ft

Bioretention Dimensions: 10 ft 6 in x 39 ft



Stratford Town Lot Best Management Practice Design
Deluca Field Rain Garden (R2)
Cross-Sectional View

Prepared for:
Town of Stratford Connecticut
&
The University of Connecticut Department of Civil and Environmental Engineering

Drawn By:	Scale:	Date:	Page:
Alexander Da Silva	1" = 1.5'	4/28/2020	1 of 1

Bioswales


This bioswale includes hearty native plants that birds and butterflies love.
Inkberry
Rainwater

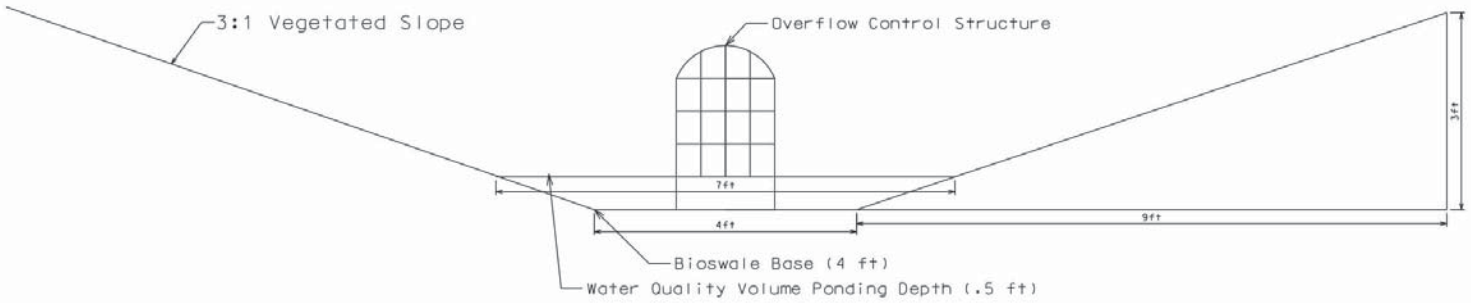
Location of Bioswale

Area: 1,496 sq ft

- Repavement of parking lot:
  - Ensures slope to increase water flow
  - Reduces water flow toward wetland


State Hwy 113
McPadden Dr
856

Bioswales Design



Stratford Town Lot Best Management Practice Design
Second Lot Bioswale (B1 + B2)
Cross Sectional View

Prepared for:
Town of Stratford Connecticut
&
The University of Connecticut Department of Civil and Environmental Engineering

Drawn By:	Scale:	Date:	Page:
Alexander Da Silva	1" = 2.25'	4/28/2020	1 of 1

Ponding Area Dimensions: 4 ft x 50 ft

Bioretention Dimensions: 22 ft x 68 ft

Zone 4: Riparian Fringe

- 1-4 ft above normal pool
- Periodically inundated
- Plants Provide:
  - Habitat for wildlife

Native Plants

Salt-Tolerant Plants

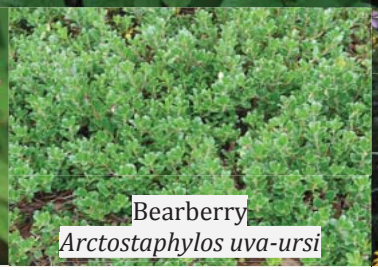
Aesthetics

Location in Rain Garden

Bloom Time

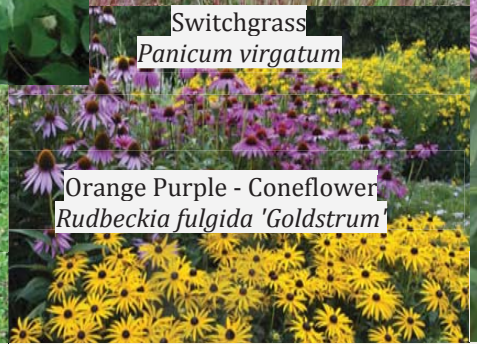
Swamp Milkweed
Asclepias incarnata

Common Buttonbush
Cephalanthus occidentalis



Bearberry
Arctostaphylos uva-ursi

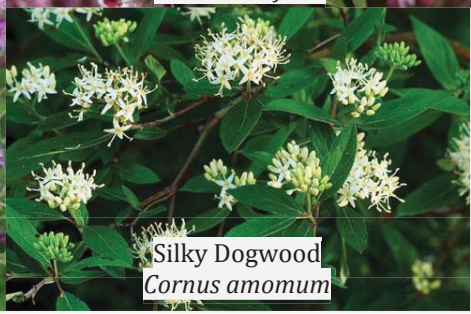
Switchgrass
Panicum virgatum



Orange Purple - Coneflower
Rudbeckia fulgida 'Goldstrum'

New York Ironweed
Vernonia noveboracensis

Mountain Laurel
Kalmia latifolia



Silky Dogwood
Cornus amomum

Name	Height	Width	Bloom Time	Location in Rain Garden	Notes
Bearberry Arctostaphylos uva-ursi	<2	0	Spring	Best in slope or upland	Salt-Tolerant Plant, Ground cover; red berries in autumn
Swamp Milkweed Asclepias incarnata	4-5	1-2	Fall	Best in Bottom	Salt-Tolerant Plant
Common Buttonbush Cephalanthus occidentalis	2-6	3-6	Summer	Best in bottom	Salt-Tolerant Plant, Blooms all summer.
Silky Dogwood Cornus amomum	6-10	6-10	Late spring	Any	Blue fruits; wildlife benefit, in 4
Mountain Laurel Kalmia latifolia	>10	5-12	Late spring	Any	Salt-Tolerant Plant, Evergreen shrub
Switchgrass Panicum virgatum	3-7	2-3	N/A	Any	Salt-Tolerant Plant, has good fall and winter color
Orange Coneflower Rudbeckia fulgida 'Goldstrum'	2-6	1.5-2	Mid-late summer	Any	Attracts butterflies and other insects
New York Ironweed Vernonia noveboracensis	2-6	2-3	Late summer	Any	Attracts butterflies
Purple coneflower Echinacea purpurea (L.) Moench	1-2	0	Early summer	Any	No notes for this plant.

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Purple coneflower Echinacea purpurea (L.) Moench	1-2	0	Early summer	Any	No notes for this plant.

Rain Garden Maintenance

Mulching Over

Mulch keeps the soil moist and ensures the health of plants within the garden. Annually the garden will have to be mulched over.

Weed Removal

Annually there will be labor costs for weed removal and grass trimming for the overall aesthetic

New Plants

In case of plant removal during intense storms or other events there will be a cost in the implementation of new plants within the garden.

Bioswale Maintenance

Sediment & Debris Removal

In order to ensure the longevity of the garden there will be costs in labor to remove garbage from the site

Grass Trimming & Weed Removal

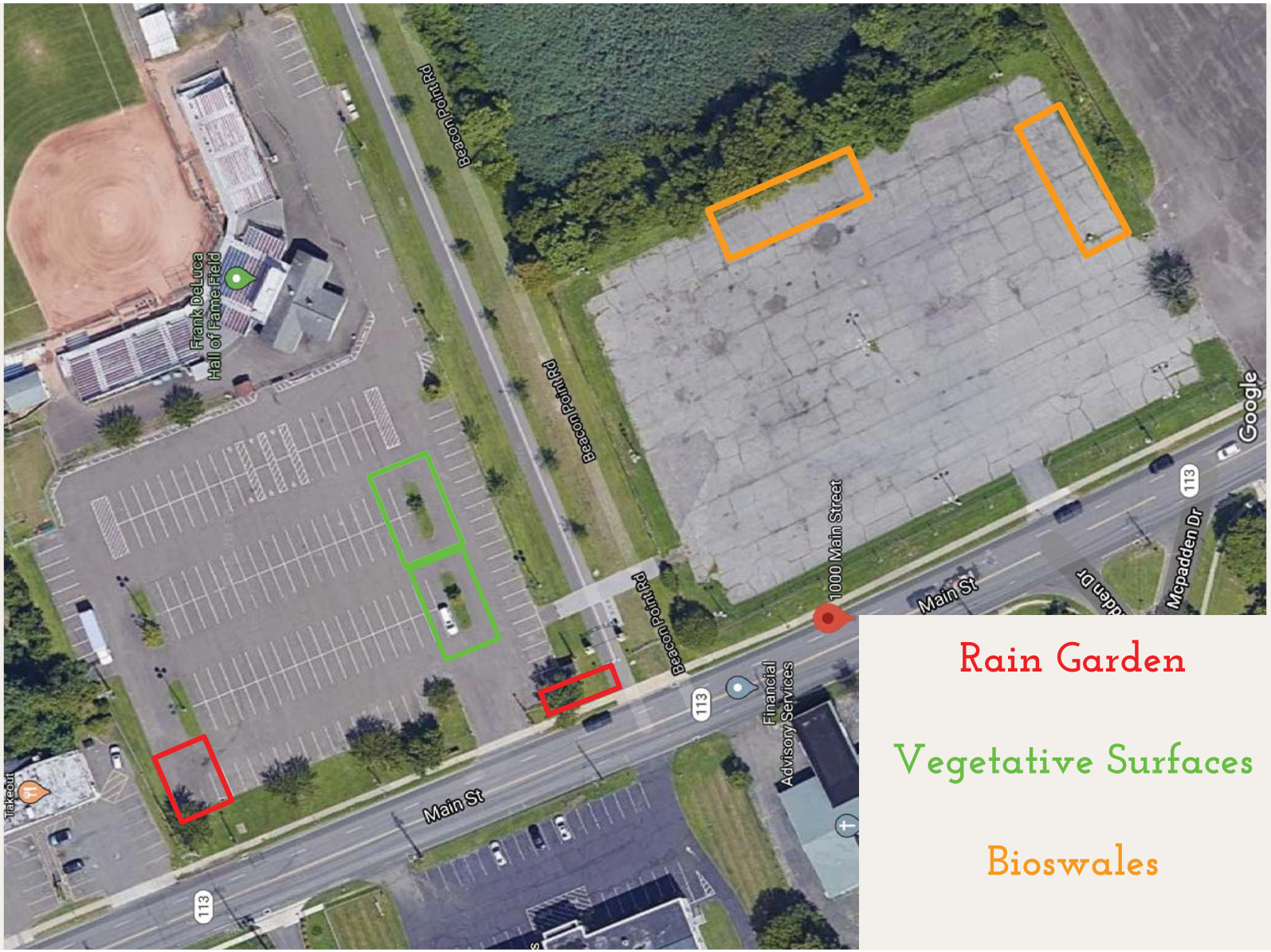
Annually there will be labor costs for weed removal and grass trimming for the overall aesthetic

New Plants

In case of plant removal during intense storms or other events there will be a cost in the implementation of new plants within the garden.

Cost Analysis

Rain Garden 1	$9,485.69
Rain Garden 2	$6,097.71
Vegetative Surface (1+2)	$434.00
Bioswale (1+2)	$11,392.70
Total Cost of Project	**$27,410.10**



Rain Garden

Vegetative Surfaces

Bioswales


THANKS
Does anyone have
any questions?
SEA

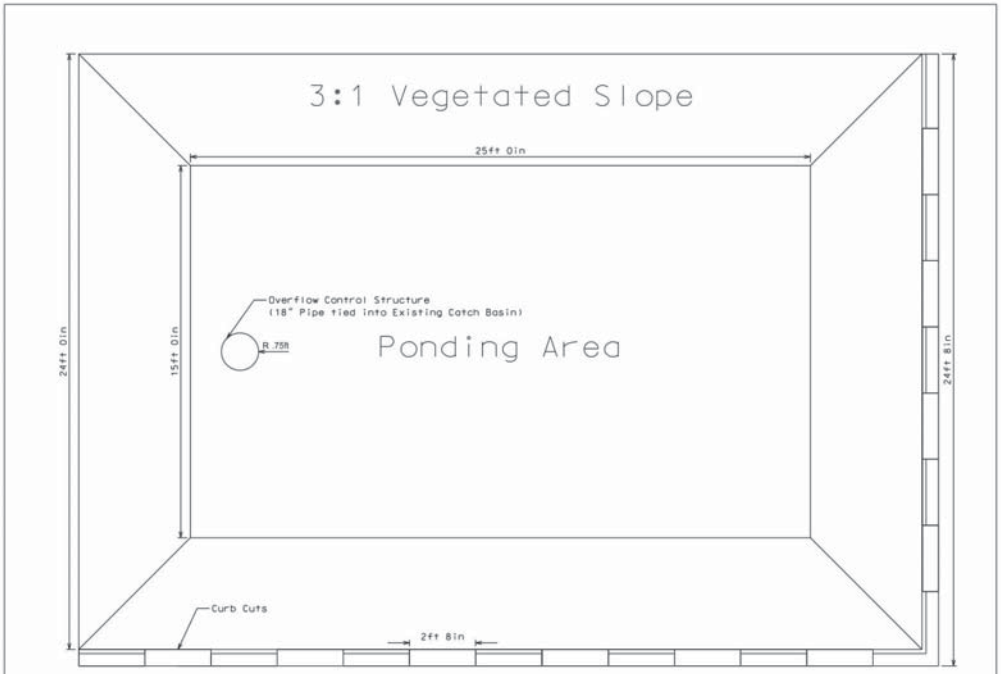
Cost Breakdown

Rain Garden:					
	Area(ft^2)	Depth(ft)	Volume(ft^3)	Cost per sq ft	Total Cost
Excavation	875	3.58	3132.5	$1.11	$967.00
Mulch	875	0.5	437.5	$0.40	$175.00
Bioretention Media	875	2.5	2187.5	$1.77	$3,871.88
Plants	875				$4471.81
					$9,485.69
Rain Garden 2:					
	Area(ft^2)	Depth(ft)	Volume(ft^3)	Cost per sq ft	Total Cost
Excavation	525	3.58	1879.5	$1.11	$967.00
Mulch	525	0.5	262.5	$0.40	$105.00
Bioretention Media	525	2.5	1312.5	$1.77	$2,323.13
Plants	525				$2702.58
					$6,097.71

Cost Breakdown

Vegetative Surfaces					
	Area(ft^2)	Depth(ft)	Volume(ft^3)	Cost	Total cost
Curb Cut				$100.00	$200.00
Grass					
Plants				117	234
					$434.00
Bioswales					
	Area(ft^2)	Depth(ft)	Volume(ft^3)	Cost per sq ft	Total Cost
Excavation	1496	3	858	$1.11	$1,934.00
Mulch	1496	3	858	$0.40	$343.20
Bioretention Media	1496	3	858	$1.77	$1,518.66
Plants	1496	3	858	n/a	$7596.84
					$11,392.70

Bioretention Plan View

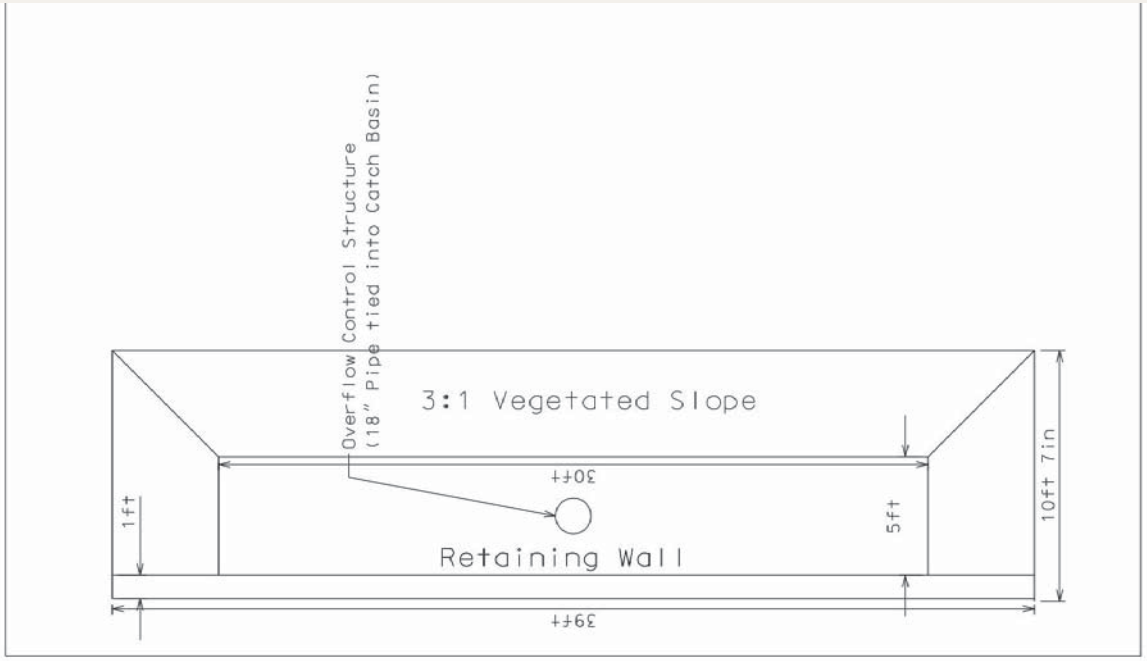


Stratford Town Lot Best Management Practice Design
Deluca Field Rain Garden (R1)
Top Down View

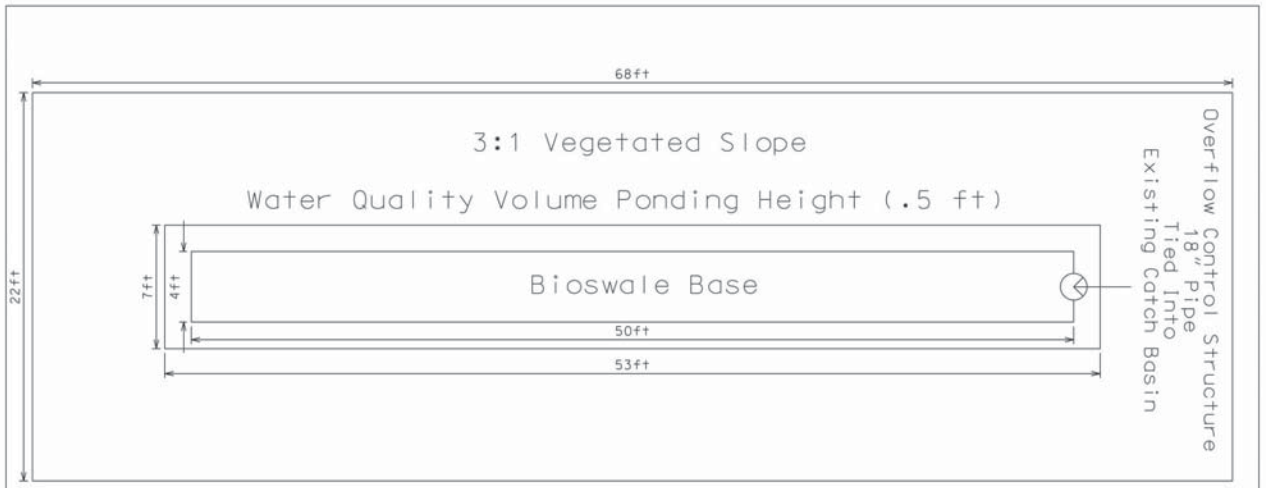
Prepared for:
Town of Stratford Connecticut
&
The University of Connecticut Department of Civil and Environmental Engineering

Drawn By:	Scale:	Date:	Page:
Alexander Da Silva	1" = 5'	4/28/2020	1 of 1

Rain Garden Plan View



Bioswale Plan View



Stratford Town Lot Best Management Practice Design
Second Lot Bioswale Design (B1+B2)
Top-Down View

Prepared for:
Town of Stratford Connecticut
&
The University of Connecticut Department of Civil and Environmental Engineering

Drawn By:	Scale:	Date:	Page:
Alexander Da Silva	1" = 7'	4/28/2010	1 of 1

Stratford BMP Design

John Casey
Engineering Department
Stratford Town Hall
2725 Main Street
Stratford, CT 06615
jcasey@townofstratford.com

May 04. 2020

Dear John Casey,

On behalf of our senior design team, ENVE 5, we wanted to thank you for your time and assistance this semester. The senior design project that you came up with was one that we were all drawn to immediately. It gave us challenges and breakthroughs and helped us realize how far we have come with engineering throughout our time at UConn. This was a project that gave us a real view of how things are done in the engineering world, especially with municipal clients.

Although it was not in the cards for us to meet in person, we wanted to thank you deeply for all the insights you gave us for the site during our phone meetings. It was a great experience getting to collaborate with someone who has worked in the field we want to enter and someone that we could all learn from. We especially thank you for helping us get to see the sight through a more technical lens with all the engineering documents you were able to procure for us.

We hope that our work will prove to be valuable to you and we are excited to see what the project's next steps will be. Again, thank you for everything and we wish you all the best.

Best Regards,
Sara Aldarondo, Esther Chang, and Alex Da Silva