

**MS4 General Permit**  
**University of Connecticut 2020 Annual Report**  
**New MS4 Permittee**  
**Permit Number GSM 201703415**  
**[January 1, 2019 – December 31, 2019]**

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This report documents the University of Connecticut’s (UConn) efforts to comply with the conditions of the MS4 General Permit to the maximum extent practicable (MEP) from January 1, 2019 to December 31, 2019.

**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 and outreach	On – going	UConn EHS Environmental Programs website (formerly part of the OEP website) now includes a stormwater page with references such as EPA and DEEP educational information. UConn has low impact development (LID) signage with information and links to dedicated web pages for each type of LID practice installed on campus. UConn also provided a stormwater MS4 introduction training for UConn staff.	Educate staff and personnel on common stormwater topics	Environmental Health and Safety (Environmental Programs team)	Jul 1, 2019	July 2019	Training of UConn staff and personnel is done on an annual basis.

1-2 Address education/ outreach for pollutants of concern*	Same as above	
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**1.2 Describe any Public Education and Outreach activities planned for the next year, if applicable.**

UConn will continue to keep the stormwater website updated with relevant information and provide annual stormwater training to staff/personnel.

**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.
Educational stormwater sign installed at LID locations throughout campus	Students, staff and/or faculty (approx. 30,000)	Impact of impervious cover, stormwater infiltration		NEMO/CLEAR
Stormwater Introduction Training	Staff/Faculty from the following departments: Facilities and Building Services, Environmental Health & Safety, Office of Sustainability, Farm Services, and Dining Services	General stormwater general permit information		EHS

## 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 Comply with public notice requirements for the Stormwater Management Plan	Complete		Posted to the OEP stormwater website (see 2.2, below)	EHS	Apr 3, 2017	April 2017	
2-2 Comply with public notice requirements for Annual Reports	Complete		Posted to the EHS stormwater website	EHS	February 15, 2019 & 2020	February 2019 & February 2020	

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

Note that OEP was replaced with the Office of Sustainability and EHS Environmental Programs (compliance issues) in 2019. Stormwater information is now posted on the UConn EHS Environmental Programs web pages.

### 2.3 Public Involvement/Participation reporting metrics

Metrics	Implemented	Date	Posted
Availability of the Stormwater Management Plan announced to public	Yes	April 3, 2017	Office of Environmental Policy, 31 Ledoyt Road, Storrs, CT 06269 / <a href="https://envpolicy.uconn.edu/storm-water-compliance/">https://envpolicy.uconn.edu/storm-water-compliance/</a>
Availability of Annual Report announced to public	Yes	February 15, 2020	Office of Environmental Policy, 31 Ledoyt Road, Storrs, CT 06269 / <a href="https://envpolicy.uconn.edu/storm-water-compliance/">https://envpolicy.uconn.edu/storm-water-compliance/</a>

### 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	UConn will need to develop a written IDDE program. The CT IDDE program template will likely be used.	Written IDDE plan	EHS-Enviro/NEMO/CLEAR	Jul 1, 2019	Completed February 2020 (attached)	
3-2 Develop list and maps of all MS4 stormwater outfalls in priority areas	Complete	Develop a list and map of stormwater outfalls for priority areas on campus.	Develop a list and map	EHS-Enviro /NEMO/CLEAR	Jul 1, 2020	November 2017	
3-3 Implement citizen reporting program	Complete	Contact information for citizen reporting can be found on the EHS Enviro. stormwater website.	EHS Enviro Stormwater website	EHS-Enviro /NEMO/CLEAR	Jul 1, 2017	July 2017	
3-4 Establish legal authority to prohibit illicit discharges	N/A	N/A	N/A	N/A	Jul 1, 2019	N/A	
3-5 Develop record keeping system for IDDE tracking	Complete	IDDE monitoring results have been summarized in an Excel spreadsheet	Spreadsheet or form	EHS-Enviro /NEMO/CLEAR	Jul 1, 2017	July 2017	
3-6 Address IDDE in areas with pollutants of concern	IDDE sampling commenced in October 2017	UConn will need to develop a written IDDE program which will address any areas with pollutants of concern using the CT IDDE program template. IDDE tracking will be recorded in a spreadsheet or form.	Written IDDE plan	EHS-Enviro /NEMO/CLEAR	Not specified	Completed February 2020 (attached)	

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

UConn will continue to develop the list of maps for MS4 stormwater outfalls and will further identify interconnections with the Town of Mansfield and CT Department of Transportation.

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

Date of Report	Location / suspected source	Response taken
Not applicable.		

**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)

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

Any IDDE reports and responses to those reports will be tracked by EHS Environmental Programs and/or NEMO/CLEAR. Contact information for reporting illicit discharges can be found on the EHS Environmental Programs stormwater website.

**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
Not applicable.		

**3.7 IDDE reporting metrics**

Metrics	
Estimated or actual number of MS4 outfalls	13
Estimated or actual number of interconnections	2
Outfall mapping complete	100 %
Interconnection mapping complete	100%
System-wide mapping complete (detailed MS4 infrastructure)	100%
Outfall assessment and priority ranking	100 %
Dry weather screening of all High and Low priority outfalls complete	13 (100%)
Catchment investigations complete	0
Estimated percentage of MS4 catchment area investigated	100%

**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).**

EHS with assistance from NEMO/CLEAR will be responsible for IDDE tasks. Any relevant information regarding IDDE will be provided during annual stormwater training to additional UConn staff/personnel.

#### 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	Complete	Included in the University Contractor EHS Manual, University Division One Contract and University Design Guidelines and Performance Standards document.	Included in University documents.	University Planning, Design & Construction (UPDC)/ Environmental Health & Safety (EHS)/ OEP	Jul 1, 2020	February 2017; September 2016	
4-2 Develop/Implement plan for interdepartmental coordination in site plan review and approval	Complete	Included in the University Contractor EHS Manual, University Division One Contract and University Design Guidelines and Performance Standard document.	Included in University documents.	University Planning, Design & Construction (UPDC)/ Environmental Health & Safety (EHS)/ OEP	Jul 1, 2017	February 2017; September 2016	
4-3 Review site plans for stormwater quality concerns	Complete	Included in the University Contractor EHS Manual, University Division One Contract and University Design Guidelines and Performance Standard document.	Included in University documents.	University Planning, Design & Construction (UPDC)/ Environmental Health & Safety (EHS)/ OEP	Jul 1, 2017	February 2017; September 2016	
4-4 Conduct site inspections	Complete	Included in the University Contractor EHS Manual, University Division One Contract and University Design Guidelines and	Included in University documents.	UConn personnel and/or designee	Jul 1, 2017	February 2017; September 2016	

		Performance Standard document.					
4-5 Implement procedure to allow public comment on site development	Complete	OEP stormwater website page with contact information for the public to comment on site development.	Website	EHS-Enviro	Jul 1, 2017	July 2017	
4-6 Implement procedure to notify developers about DEEP construction stormwater permit	Complete	Included in the University Contractor EHS Manual, University Division One Contract and University Design Standard document.	Included in University documents.	University Planning, Design & Construction (UPDC)/ Environmental Health & Safety (EHS-Enviro)	Jul 1, 2017	February 2017; September 2016	

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

UConn will continue to implement procedures noted above related to the construction site run off.

**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	Complete	Included in the University LEED Gold Policy, TMDL and the DEEP/UConn MOU	Included in University documents.	EHS-Enviro /UPDC/FOBS/NEMO/CLEAR	Jul 1, 2022	June 2016; December 2014	
5-2 Enforce LID/runoff reduction requirements for development and redevelopment projects	Complete	Included in the University LEED Gold Policy, TMDL and the DEEP/UConn MOU	Included in University documents.	EHS-Enviro /UPDC/FOBS/NEMO/CLEAR	Jul 1, 2022	June 2016; December 2014	

5-3 Identify retention and detention ponds in priority areas	Completed	Mirror Lake and Swan Lake have been identified as stormwater detention ponds. Both drain to Roberts Brook (although Swan Lake will also overflow to Eagleville Brook under flood conditions)		EHS-Enviro /FOBS/NEMO/CLEAR	Jul 1, 2020	July 2019	
5-4 Implement long-term maintenance plan for stormwater basins and treatment structures	Not started			EHS-Enviro / FOBS/NEMO/CLEAR	Jul 1, 2020	Anticipate completing by the deadline of July 2020.	
5-5 DCIA mapping	Complete	UConn CLEAR has tracked annual changes in DCIA for the Eagleville Brook (part of TMDL requirements) and Roberts Brook watersheds.			Jul 1, 2019		
5-6 Address post-construction issues in areas with pollutants of concern					Not specified		

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

UConn will continue the DCIA mapping with assistance from NEMO/CLEAR.

**5.3 Post-Construction Stormwater Management reporting metrics**

Metrics	
Baseline (2012) Directly Connected Impervious Area (DCIA)	acres
DCIA disconnected (redevelopment plus retrofits)	acres this year / acres total
Retrofits completed	0
DCIA disconnected	% this year / % total since 2012
Estimated cost of retrofits	\$
Detention or retention ponds identified	Mirror Lake, Swan Lake

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

High resolution IC data (March 2012 baseline) from CLEAR were used to determine total IC in each watershed. Known disconnections identified during watershed survey were removed from the total. In 2019, the new student recreation facility was completed. This resulted in an additional of 7,293 square feet of DCIA in the Roberts Brook watershed (3207-12-1-L1). The baseline DCIA was updated from 61.0 to 61.2 acres.

	Eagleville	Roberts	Roberts
	3100-19-1	3207-12-1-L1	3207-12-1
Watershed area (ac)	900.0	152.1	539.9
Baseline (2012) Directly Connected Impervious Area (DCIA), <i>acres</i>	158.2	61.2	51.6
DCIA disconnected (redevelopment plus retrofits), <i>acres this year/acres total</i>	0.89 ac / 3.3 ac	0 ac / 0 ac	0.02 ac / 0.20 ac
Retrofits completed (#)	15	4	5
DCIA disconnected, % <i>this year/ % total since 2012</i>	0.6% / 2.1%	0% / 0%	0.04% / 0.4%
Estimated cost of retrofits, \$			
Detention or retention ponds identified	none	Mirror Lake	Swan Lake

Since there are three different watersheds, the data are summarized in the following table, with supporting details for each watershed:

**Eagleville (3100-19-1)**

<b>Location</b>	<b>Practice</b>	<b>Date installed</b>	<b>IC added (ft<sup>2</sup>)</b>	<b>Disconnected drainage area (ft<sup>2</sup>)</b>
Water reclamation facility	Bioretention	7/1/2012	36,975	36,975
Water reclamation facility	Water harvest	7/1/2012	13,600	13,600
Hillside Rd. snow shelf-SE	PICP	8/1/2012	6,280	9,355
Oak Hall	PICP	8/1/2012	3,150	3,150
Hillside Rd. snow shelf-N	PICP	10/12/2012	6,550	12,750
Sundial	PICP	5/1/2013	1,450	1,450
D-Lot	Tree filter	6/9/2014		13,550
Hilltop apartments	Tree filter	6/16/2014		10,245
Basketball practice	PICP	8/1/2014	2,785	2,785
Basketball practice	Bioretention	8/1/2014	16,770	41,248
NexGen Residence Hall	Bioretention	8/15/2016	29,185	1,500
NexGen Residence Hall	Green roof	8/15/2016	27,425	35,850
Engineering and Science	Green roof	8/1/2017		7,090
Engineering and Science	PICP	9/15/2017		8,276
N. Campus Residence Halls (N. Eagleville Rd.)	PICP	8/15/2017		23,401
North Eagleville Rd.	PICP bus stops	9/15/2018		39,641
North Eagleville Rd.	Tree filter	9/15/2018		85,448
Jorgensen	Bioretention	9/15/2018		2,178

**Total 76,165 348,492 ft<sup>2</sup>**

**Total 1.75 8.00 ac**

**Net disconnection 6.25 ac**

**Roberts (3207-12-1)**

Location	Practice	Date installed	IC added (ft <sup>2</sup> )	IC Disconnected (ft <sup>2</sup> )
Storrs Hall	Pervious asphalt	8/1/2012		6,300
Storrs Hall	Green roof	9/1/2012	2,670	1,335
Klinck	Bioretention	7/1/2015		1,910
Grange dorm (east)	Bioretention	4/15/2017		1,000
Grange dorm (west)	Bioretention	7/15/2017		1,000
<b>Total</b>			<b>2,670</b>	<b>11,545</b>
<b>Total</b>			<b>0.06</b>	<b>0.27</b> ac
<b>Net disconnection</b>				<b>0.20</b> ac

**Roberts (3207-12-1-L1)**

Location	Practice	Date installed	IC added (ft <sup>2</sup> )	IC Disconnected (ft <sup>2</sup> )
Oak Hall	PICP	8/1/2012	6,300	6,300
Oak Hall S	Bioretention	8/1/2012	12,500	12,500
Oak Hall N	Bioretention	8/1/2012	13,080	13,080
<b>Total</b>			<b>31,880</b>	<b>31,880</b> ft <sup>2</sup>
<b>Total</b>			<b>0.73</b>	<b>0.73</b> ac
<b>Net disconnection</b>				<b>0.00</b> ac

## 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	In progress	Initial general awareness stormwater training conducted this year.	Initial training	EHS	Jul 1, 2019	July 2019	Continue to develop the training program.
6-2 Implement MS4 property and operations maintenance	In progress			EHS/FOBS/NEMO/CLEAR	Jul 1, 2018	Anticipate completing by July 2020	<p><i>Parks and open space:</i> Integrated pest management (IPM) approach is used for management of all turf on campus.</p> <p><i>Pet waste management:</i> Pet walking is not widely practiced on the UConn campus.</p> <p><i>Waterfowl management:</i> UConn has installed Canada goose deterrent wires on Mirror Lake, which discharges to Roberts Brook. Since installation, no geese have been residing at the lake.</p> <p><i>Buildings and facilities:</i> Storage of petroleum and other products is covered as part of annual facilities staff training-</p> <p><i>Vehicles and equipment:</i> Storage of vehicles with leaks, and</p>

							<p>washing of vehicles: Motor Pool + Public Safety are the two locations that maintain a Vehicle WW permit (GP drains connected to WPCF). Campus wide we prohibit vehicle washing per our Stormwater Plan. Motor Pool addresses leaking vehicles that are owned by the University and repair as necessary and/or vehicles/equipment is serviced by an outside contractor.</p> <p><i>Leaf management:</i> Prevent deposition of leaves in catch basins etc. Leaves are currently collected in the fall, temporarily stored on the Depot Campus, and then haled off-site by Willimantic Waste.</p>
6-3 Implement coordination with interconnected MS4s	Complete	Contact has been made with the Town of Mansfield engineers to discuss how interconnections will be handled	Not applicable	EHS	Not specified	July 2017	
6-4 Develop/implement program to control other sources of pollutants to the MS4	Not Started			EHS/FOBS/NEMO/CLEAR	Not specified		

6-5 Evaluate additional measures for discharges to impaired waters*	Not Started			EHS/FOBS/NEMO/CLEAR	Not specified		
6-6 Track projects that disconnect DCIA	Complete	NEMO/CLEAR has tracked projects that disconnect DCIA	Spreadsheet	NEMO/CLEAR	Jul 1, 2017	July 2017	
6-7 Implement infrastructure repair/rehab program	Not Started			EHS-Enviro /FOBS/UPDC/NEMO/CLEAR	Jul 1, 2021	Anticipate completing by the deadline of July 2021.	Damaged catch basins and/or stormwater pipes are inspected and repaired on an as-needed basis, when a request is received through the AIM workflow system.
6-8 Develop/implement plan to identify/prioritize retrofit projects	Not Started			EHS-Enviro /FOBS/NEMO/CLEAR	Jul 1, 2020	Anticipate completing by the deadline of July 2020.	
6-9 Implement retrofit projects to disconnect 2% of DCIA	In progress	NEMO/CLEAR has tracked projects that disconnect DCIA	Spreadsheet	NEMO/CLEAR	Jul 1, 2022	Anticipate completing by the deadline of July 2022.	
6-10 Develop/implement street sweeping program	Complete	A new sweeper was purchased in 2018, and a street sweeping program has been implemented.	Log and AIM	EHS-Enviro /FOBS/NEMO/CLEAR	Jul 1, 2018	New sweeper purchased August 2018, program expected to be formalized by July 2019	Continue to develop this program. In addition to the AIM system, a log will be created for tracking dates, miles swept and amount of debris that will be kept in the sweeper unit.

6-11 Develop/implement catch basin cleaning program	Complete	UConn has a campus wide catch basin map and will prioritize and start implementing cleanings.	Map and spreadsheet for tracking progress. Also AIM is used for tracking.	EHS-Enviro /FOBS/NEMO/CLEAR	Jul 1, 2020	Anticipate completing by the deadline of July 2020.	UConn has been tracking catch basin cleanings/pump outs in AIM and a spreadsheet.
6-12 Develop/implement snow management practices	Complete	The UConn Landscape Department received training regarding snow management practices in December 2017 and 2019	Training	EHS-Enviro /FOBS/NEMO/CLEAR	Jul 1, 2018	Training implemented in December 2017 and 2019 focused on minimization of discharge of deicing materials to local streams. Additionally an SOP has been developed	

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

The UConn Facilities Operations department purchased a new sweeper in 2018 and has a new AIM asset management system for tracking our pollution prevention/good housekeeping activities. Additionally, a log for the sweeper unit will be kept to ensure recordkeeping is being completed.

**6.3 Pollution Prevention/ Good Housekeeping reporting metrics**

Metrics	
Employee training provided for key staff	Yes / December 4, 5, 6, 12, 19 2018.
Street sweeping	

Curb miles swept	0 miles
Volume (or mass) of material collected	~40 yards
<b>Catch basin cleaning</b>	
Total catch basins in priority areas	18
Total catch basins in MS4	679
Catch basins inspected	18
Catch basins cleaned	18
Volume (or mass) of material removed from all catch basins	~80 yards
Volume removed from catch basins to impaired waters (if known)	0
<b>Snow management</b>	
Type(s) of deicing material used	Sodium chloride treated with 5% Calcium chloride/lignin (organic tree extract)
Total amount of each deicing material applied	1500 tons
Type(s) of deicing equipment used	Snow plows
Lane-miles treated	Entire campus include parking lots, sidewalks and streets.
Snow disposal location	*if snow staging is needed, the Depot campus or W-lot is used. W-Lot snow storage area drains to Eagleville Brook.
Staff training provided on application methods & equipment	Yes / December 2019
<b>Municipal turf management program actions (for permittee properties in basins with N/P impairments)</b>	
Reduction in application of fertilizers (since start of permit)	lbs or % Granular fertilizer applications decreased by 19,200 lbs (23%) from 2018 to 2019. Liquid fertilizer applications decreased by 10,695 gallons

	(37%) from 2018 to 2019.
Reduction in turf area (since start of permit)	acres
Lands with high potential to contribute bacteria (dog parks, parks with open water, & sites with failing septic systems)	
Cost of mitigation actions/retrofits	\$

#### 6.4 Catch basin cleaning program

**Briefly describe the method used to optimize your catch basin inspection and cleaning schedule. [Complete this section for the 2017 Annual Report only]**

An inventory and map of all catch basins was completed in order to further evaluate priority areas and optimize the catch basin inspection and cleaning schedule.

#### 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. [Provide information if available in 2017 report. Section to be completed for the 2019 Annual Report.]**

Every new or redevelopment project on campus will be reviewed by EHS staff to determine what opportunities exist for disconnecting additional impervious cover. Eagleville Brook has been impaired for many years, and has a total maximum daily load (TMDL) for impervious cover; retrofit efforts over the last ten years have been heavily focused on this watershed, and UConn has already exceeded the 2% DCIA reduction. Roberts Brook was listed as impaired in the most recent CT DEEP sampling effort, therefore UConn will increase efforts to reduce DCIA in this watershed.

**Describe plans for continuing the Retrofit program and how to achieve a goal of 1% DCIA disconnection in future years. [Provide information if available in 2017 report. Section to be completed for the 2019 Annual Report.]**

See response to previous question.

**Describe plans for continuing the Retrofit program beyond this permit term with the goal to disconnect 1% DCIA annually over the next 5 years. [Provide information if available in 2017 report. Section to be completed for the 2019 Annual Report.]**

See response to previous question.

**Part II: Impaired waters investigation and monitoring [This section required beginning with 2019 Annual Report]**

**1. Impaired waters investigation and monitoring program**

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

Impervious cover and bacteria are listed as the pollutants of concern for Eagleville Brook. No pollutant is specified for the Roberts Brook impairment, although stormwater is listed as a suspected cause. Monitoring of outfalls to Eagleville and Roberts Brooks began in October 2017. Samples were analyzed for E. coli and turbidity. Generally, concentrations of E. coli were low or non-detect for most samples, and turbidity was also low (<9 NTU) for all samples. Only one outfall was found to exceed monitoring criteria for E. coli (72,420 MPN/100 mL); this waterbody does not have bacteria listed as a pollutant of concern, however an outfall investigation of this catchment was performed. Two follow-up samples indicated E. coli counts <1, and no dry weather flow was observed at the site. No potential sources of contamination were identified in junction manholes for the catchment. The suspected cause of this one high E. coli count was pet waste washing into a catch basin in the catchment.

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

**2.1 Screening data collected under 2017 permit**

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

Outfall ID	Sample date	Parameter (Nitrogen, Phosphorus, Bacteria, or Other pollutant of concern)	Results	Name of Laboratory (if used)	Follow-up required?
GVL-1	10/26/17	Turbidity	0.95 NTU	UConn Water Quality Lab (same for all)	No
GVL-2	10/26/17	Turbidity	1.25 NTU		No
GVL-3	10/26/17	Turbidity	4.37 NTU		No
F-LOT-1	10/26/17	Bacteria, turbidity	<1 MPN/100mL, 8.63 NTU		No
F-LOT-2	10/26/17	Bacteria, turbidity	<1 MPN/100mL, 1.62 NTU		No
MLK	10/26/17	Turbidity	0.89 NTU		No

RB1	10/26/17	Turbidity	1.55 NTU		No
W-LOT-1	10/26/17	Bacteria, turbidity	<1 MPN/100mL, 1.72 NTU		No
W-LOT-2	10/26/17	Bacteria, turbidity	<1 MPN/100 mL, 2.15 NTU		No
W-LOT-3	10/26/17	Bacteria, turbidity	<1 MPN/100 mL, 2.35 NTU		No
EB-2	10/26/17	Bacteria, turbidity	<1 MPN/100 mL, 3.95 NTU		No
EB-3	10/26/17	Bacteria, turbidity	<1 MPN/100 mL, 3.86 NTU		No
HBH	10/26/17	Turbidity	72,420 MPN/100 mL, 4.65 NTU		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
HBH	Catchment for outfall has been delineated, sampling of contributing drainage was performed in spring 2018. Bacteria sample results were below MS4 criteria.	None needed

### 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, 2021.

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

**Part III: Additional IDDE Program Data [This section required beginning with 2019 Annual Report]**

**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

**2. Outfall and Interconnection Screening and Sampling data (Appendix B (A)(7)(d) / page 7)**

**2.1 Dry weather screening and sampling data from outfalls and interconnections**

Provide sample data for outfalls where flow is observed. Only include Pollutant of concern data for outfalls that discharge into stormwater impaired waterbodies.

Outfall / Interconnection ID	Screening / sample date	Ammonia	Chlorine	Conductivity	Salinity	E. coli or enterococcus	Surfactants	Water Temp	Pollutant of concern	If required, follow-up actions taken
GVL-1	10/6/17	0.5 mg/L	0.01 mg/L	2207 µS/cm	1.1 ppt	28	ND	17.6	n/a	None required
GVL-2	10/6/17	0.3 mg/L	0.01 mg/L	4175 µS/cm	2.2 ppt	<1	ND	18.6	n/a	None required
F-LOT-CB2-NW	10/6/17	ND	0.01 mg/L	150 µS/cm	0.9 ppt	71	ND	18.0	Bacteria	None required
F-LOT-CB2-NE	10/6/17	ND	0.02 mg/L	150 µS/cm	0.9 ppt	<1	ND	18.0	Bacteria	None required
MLK	10/6/17	0.3 mg/L	0.05 mg/L	2266 µS/cm	1.2 ppt	3	ND	21.0	n/a	None required
RB1	10/6/17	ND	0.01 mg/L	15.5 µS/cm	0.0 ppt	6	ND	17.2	n/a	None required
W-LOT-2	10/6/17	0.5 mg/L	0.02 mg/L	2875 µS/cm	1.5 ppt	<1	ND	14.2	Bacteria	None required
EB-2	10/6/17	1.0 mg/L	0.02 mg/L	3471 µS/cm	1.8 ppt	166	ND	19.3	Bacteria	None required

EB-3	10/6/17	1.0 ,g/L	0.01 mg/L	4820 µS/cm	2.6 ppt	23	ND	16.9	Bacteria	None required
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## 2.2 Wet weather sample and inspection data

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

Outfall / Interconnection ID	Sample date	Ammonia	Chlorine	Conductivity	Salinity	E. coli or Enterococcus	Surfactants	Water Temp	Pollutant of concern
W-LOT-1	10/26/17	0.25	0.01	180	0.1	<1	ND	13.6	Bacteria
W-LOT-2	10/26/17	0.25	0.01	576	0.3	<1	ND	14.8	Bacteria
W-LOT-3	10/26/17	0.25	0.01	377	0.1	<1	ND	14.5	Bacteria
GVL-1	10/26/17	0.25	0.01	348	0.2	<1	ND	13.7	n/a
GVL-2	10/26/17	0.25	0.01	848	0.4	<1	ND	15.4	n/a
GVL-3	10/26/17	0.25	0.01	1238	0.6	<1	ND	15.9	n/a
HBH	10/26/17	0.25	0.01	472	0.2	72,420	ND	15.5	n/a
F-LOT-1	10/26/17	0.25	0.01	717	0.9	<1	ND	17	Bacteria
F-LOT-2	10/26/17	0.25	0.01	610	0.3	<1	ND	14.9	Bacteria
EB-2	10/26/17	0.25	0.01	866	0.4	<1	ND	16.2	Bacteria
EB-3	10/26/17	0.25	0.01	980	*	<1	ND	*	Bacteria
RB-1	10/26/17	0.25	0.01	762	0.4	<1	ND	15.7	n/a
MLK	10/26/17	0.25	0.01	364	0.2	<1	ND	14.9	n/a

\*Recording error- data lost

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

### 3.2 Key junction manhole dry weather screening and sampling data

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

### 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

**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: Terri Dominguez	Print name: Michael Dietz
Signature / Date:	Signature / Date: