

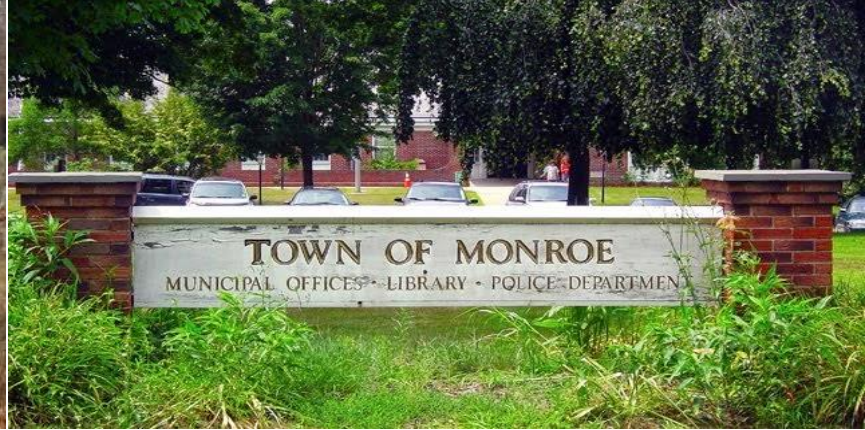
General Permit for the Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems

2021 MS4 ANNUAL REPORT

Town of Monroe

March 31, 2022

Tighe&Bond
Engineers | Environmental Specialists



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

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**MS4 General Permit
Town of Monroe 2021 Annual Report
Permit Number GSM 000013
January 1, 2021 – December 31, 2021**

Part I: Summary of Minimum Control Measure Activities

1. Public Education and Outreach

MS4 General Permit Section 6(a)(1) / page 19, requires the Town to “implement a public education program to distribute educational materials to the permittee’s community or conduct equivalent outreach activities about the sources and impacts of stormwater discharges on waterbodies and the steps that the public can take to reduce pollutants in stormwater runoff.”

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	Ongoing, Complete for 2021	1.1a: General Stormwater Information Brochure. The Town maintains a display table in its Land Use Office that included 50 copies of a brochure titled: “Developing Your Stormwater Pollution Prevention Plan – A Guide for Construction Sites”. The display table was located next to the waiting area at the Land Use Office counter. 1.1b: Bacteria and Pet Waste Educational Material: The Town used a brochure titled “Don’t Let Our Water Quality Go to the Dogs”.	Develop or procure from CTDEEP/other MS4s educational materials focused on a targeted pollutant, with a minimum of at least one brochure, flyer, booklet, presentation, or public access advertisement per topic. Also make materials available on Town website.	Town Engineer	07/01/19	Completed: 06/30/17	
		1.1c: Display Board Procurement: The Town displayed its MS4 Presentation Board in the lobby of Town Hall for two weeks, and at the Town’s Farmer’s Market at Town Hall on September 24, 2021.				Completed: 06/30/18	
						Completed: 10/05/18	

BMP	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
		<p>1.1d: Nitrogen and Phosphorus Management Educational Material: The Town developed a brochure titled "Clean Water Begins with You: Nutrient Management for a Healthier Lawn and Environment", that targeted good lawn maintenance practices.</p> <p>1.1e: Public Service Announcements. The Town of Monroe owns a public radio station, WMNR, FM 88.1. The Town ran public service announcements regarding protection of stormwater eight times during 2021. Radio station logs appear in Appendix A.</p> <p>1.1f: Mercury Educational Material. The Town developed a brochure titled "Keeping the Hg Out of Our H2O", that targeted good lawn maintenance practices.</p> <p>1.1g: Impervious Coverage. The Town developed a brochure titled "Minimizing Impervious Cover: A Homeowner's Guide to Understanding the Challenge of Impervious Surfaces. A copy of the brochure, to be distributed in early 2021 appears in Appendix B.</p>	<p>Year 1: Bacteria and pet waste.</p> <p>Year 2: Nitrogen & phosphorous</p> <p>Year 3: Mercury</p> <p>Year 4: Impervious coverage</p> <p>Year 5: Illicit Discharges</p>			<p>Completed: 10/15/2018</p> <p>Ongoing, Last performed 12/29/2021</p> <p>Completed: 02/15/2020</p> <p>Completed: 01/05/2021</p>	
1.2 Address education/outreach for pollutants of concern*	Ongoing, Complete for 2021	<p>1.2a: Bacteria and Pet Waste Educational Material: The Town used a brochure titled "Pet Waste and Stormwater", keeping copies with its display board. 50 copies of brochures were displayed. In 2019, a new brochure was introduced, "Don't Let Our Water Quality Go to the Dogs", 50 copies being placed at the Town Clerk's office.</p>	<p>Display brochures or fact sheets in the Town Hall. Each year, a new topic will be featured:</p>	Town Engineer	07/01/19	Completed: 06/30/18	

BMP	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
		<p>1.2b: Nitrogen and Phosphorus Management Educational Material: The Town developed a brochure titled "Clean Water Begins with You: Nutrient Management for a Healthier Lawn and Environment", that targeted good lawn maintenance practices. Copies of the brochure were included with the Stormwater Display Board at public events.</p> <p>1.2c: Mercury Educational Material. The Town developed a brochure titled "Keeping the Hg Out of Our H2O", that targeted good lawn maintenance practices.</p> <p>1.2d: Impervious Coverage Educational Material. The Town developed a brochure titled "Minimizing Impervious Cover: A Homeowner's Guide to Understanding the Challenge of Impervious Surfaces. A copy of the brochure, to be distributed in early 2021 appears in Appendix A.</p>	<p>Year 1: Bacteria and pet waste.</p> <p>Year 2: Nitrogen & phosphorous</p> <p>Year 3: Mercury</p> <p>Year 4: Impervious coverage</p> <p>Year 5: Illicit Discharges</p>			<p>Completed: 10/05/2018</p> <p>Completed: 02/15/2020</p> <p>Completed: 01/05/2021</p>	
1.3 Update Stormwater Page on Town Website	Ongoing, Complete for 2021	<p>1.3a: Update Town Stormwater Website. The Town's stormwater website is located at: http://www.monroect.org/stormwater-pollution-control-resources</p> <p>The current stormwater page includes the following:</p> <ul style="list-style-type: none"> • Overview of the MS4 Regulatory Program • Description of a Watershed 	<p>Develop and collect stormwater-specific educational materials to share with the public, pursuant to BMP 1.1 and 1.2. Update stormwater page on Town website with</p>	Town Engineer	06/30/18	<p>Ongoing, First Completed: 12/31/17, Maintenance activity ongoing</p>	

BMP	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
		<ul style="list-style-type: none"> Notice to Developers and Engineers regarding the Construction General Permit Links to: <ul style="list-style-type: none"> 2002 Connecticut Sediment and Erosion Control Guidelines 2004 Connecticut Stormwater Quality Manual 2000 Connecticut DOT Drainage Manual MS4 General Permit Documents <ul style="list-style-type: none"> 2020 MS4 Annual Report 2017 MS4 Stormwater Management Plan 2018 IDDE Plan MS4 Educational Materials for Homeowners <ul style="list-style-type: none"> Don't Flush Trouble Rainfall as a Resource: LID Rainfall as a Resource: Pervious Pavement Rainfall as a Resource: Rain Barrels River Smart Simple Steps to Save Water Developing Your Stormwater Pollution Prevention Plan – A Guide for Construction Sites Think Green – Stay Blue 	information on potential sources of, and solutions to stormwater pollutants of concern.				
		<p>1.3b: Add Bacteria and Pet Waste Educational Material to Website: The Town is working with its MS4 Consultant to procure appropriate educational materials related to pet waste and bacteria by the end of Year 1 of the effective General</p>				Projected: 2/15/2022	

BMP	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
		Permit. Once material is selected, it will be posted to the Town website.					
		1.3c: Add Nitrogen and Phosphorus Management Educational Material to Website: The Town will add an electronic copy of its "Clean Water Begins with You: Nutrient Management for a Healthier Lawn and Environment" brochure to its stormwater resources page on the Town website.				Completed: 02/15/21	
		1.3c: Mercury Educational Material. The Town developed a brochure titled "Keeping the Hg Out of Our H2O", that targeted good lawn maintenance practices.				Completed: 02/15/21	
		1.3d: Impervious Coverage Educational Material. The Town developed a brochure titled "Minimizing Impervious Cover: A Homeowner's Guide to Understanding the Challenge of Impervious Surfaces."				Completed: 02/15/21	

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

Projected activities for 2022:

1. Procure educational materials on illicit discharges and post 50 copies of these materials in the Land Use Office at Town Hall.
2. Add the material procured in Item 1.3 above to the Town website.
3. Continue to use display board in Town Hall, Library, and at Town-sponsored events.
4. Continue announcements on WMNR, and broadcast four announcements.
5. Refresh content on Town stormwater website as needed.

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.
Brochures: "Minimizing Impervious Cover"	General public, (approx. 50 brochures)	Impacts of impervious cover	Impervious cover	Town Engineer
Town Website	Town Residents (number of page visitors unknown)	<ul style="list-style-type: none"> • Items not to flush in the toilet • Low impact development • Pervious pavement • Rain barrels • Water Conservation / Landscape Care • General housekeeping best practices 	Impervious cover	Town Engineer
Stormwater Display Board	General Public (unknown, approx. 150)	<ul style="list-style-type: none"> • General stormwater • Lawn care • Pet waste • Septic system maintenance • Low impact development 	Nitrogen Phosphorus Bacteria Pervious Pavement	Town Engineer

2. Public Involvement/Participation

MS4 General Permit Section 6(a)(2) / page 21, requires the Town to “provide opportunities to engage their community to participate in the review and implementation of the permittee’s Plan.”

2.1 BMP Summary

BMP	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Addition al details
2.1 Comply with public notice requirements for the Stormwater Management Plan	Complete	<p>2.1 MS4 Plan Notice. The Town provided a notice on its website about the availability of the new MS4 Plan in 2017.</p> <p>No comments were received.</p>	Publish public notice about the MS4 Plan and Annual Report by January 31. . Accept public comments for 30 days following the public notice.	Town Engineer	04/03/17	04/03/17	
2.2 Comply with public notice requirements for Annual Reports	Ongoing, Complete for 2021	<p>2.2 MS4 Annual Report Notice. The Town provided notice of the availability of the 2020 Annual Report on January 21, 2021 on the Town’s website at: http://www.monroect.org/MS4-plan-report</p> <p>No comments were received.</p>	Publish public notice about the MS4 Plan and Annual Report by January 31. . Accept public comments for 30 days following the public notice.	Town Engineer	01/31/21	Completed: 01/21/21	
2.3 Partner with Local Volunteer Organizations	In progress	<p>2.3 Partner with Local Volunteer Organizations. Historically, the Town has provided vests, police support, trash pickup and other logistical support to local volunteer groups in the past, with most of these activities are usually centered around Earth Day. There were no volunteer interest groups that requested Town assistance in 2021.</p>	Review MS4 plan and identify opportunities to engage with local organizations in implementing the plan. Contact at least one local organization and/or school to engage them in plan implementation and related programs, such as volunteer opportunities and town cleanup days. Engage organizations in plan implementation and programming.	Director of Public Works	Annually by June 30	Recurring, not completed for 2021	

BMP	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Addition al details
2.4 Household Hazardous Waste Collection	Complete	<p>2.4 Household Hazardous Waste Collection: Monroe conducts a Household Hazardous Waste Collection Day in concert with the Towns of Trumbull and Easton. A collection date was held on Saturday, October 9, 2021. Information on products accepted was posted to the town website at:</p> <p>http://www.monroect.org/filestorage/467/469/1062/15718/Household_Hazardous_Waste_-_October_9%2C_2021.pdf</p>	Conduct at least one Household Hazardous Waste Collection Day per year for the Monroe community. Notify residents about Household Hazardous Waste Collection dates through the Town website.	Director of Public Works	Ongoing, annually by 12/31/21 Next due: 12/31/22	10/09/21	

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

The following activities are planned for 2021:

1. Publish notice of 2020 Annual Report Posting.
2. Identify one volunteer organization for clean up assistance.
3. Conduct Household Hazardous Waste Collection Day. Provide material/logistical support as needed and available.

2.3 Public Involvement/Participation reporting metrics

Metrics	Implemented	Date	Posted
Availability of the Stormwater Management Plan announced to public	Yes	04/03/2017	http://www.monroect.org/filestorage/467/469/787/12259/MS4_Stormwater_Management_Plan.pdf
Availability of Annual Report announced to public	Yes	02/15/2020	http://www.monroect.org/filestorage/467/469/787/12259/Monroe_2020_04-07_2019_MS4_ANNUAL_REPORT_%28Compiled%29.pdf

3. Illicit Discharge Detection and Elimination

Reference: MS4 General Permit 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	<p>3.1 Illicit Discharge Detection and Elimination Plan. The Town completed its Illicit Discharge Detection and Elimination Plan, and it is posted on the Town's website at:</p> <p>http://www.monroect.org/filestorage/467/469/787/12259/M1836_2018_01-16_IDDE_plan.pdf</p>	Develop written plan of IDDE program	Town Engineer	07/01/19	Completed: 01/16/18	
3.2 Develop list and maps of all MS4 stormwater outfalls in priority areas	99% Complete	<p>3.2 Develop List and Maps of All MS4 Stormwater Outfalls in Urbanized and Priority Areas. The Town is under contract with MetroCOG to complete GIS-based mapping of its storm sewer outfalls and network, and is now 99% complete, with only minor data edits and finalization required.</p>	Develop Excel-compatible list and GIS-based map of 50% of all stormwater discharges and interconnections with other MS4s in the Town.	Town Engineer	07/01/20	Substantially complete: 12/31/19	
3.3 Implement citizen reporting program	Complete	<p>3.3 Implement citizen reporting program. The Town utilizes Q-Alert's online Request for Service system where citizens can identify the location of a concern. No complaints</p>	Develop and implement procedure, such as Q-Alert, to track citizen complaints of illicit discharges. Update stormwater page	Director of Public Works	07/01/17	Completed: 07/01/17	

BMP	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
		<p>of illicit discharges were received in 2021.</p> <p>Reports are routed to the appropriate department for action, and a log is generated documenting requests and to track follow-up activities.</p>	<p>on Town website to include reporting process guidelines and contact information. Promptly investigate reported discharges. Update IDDE program with reported illicit discharge information as needed. Update Annual Report with reported illicit discharge information as needed.</p>				
3.4 Establish legal authority to prohibit illicit discharges	Complete	<p>3.4 Establish legal authority to prohibit illicit discharges. The Town has established an illicit discharge ordinance, effective October 20, 2018.</p>	<p>Update existing legal authority to eliminate illicit discharges to the MS4.</p>	Town Engineer	07/01/19	Complete: 10/20/18	
3.5 Develop record keeping system for IDDE tracking	Complete	<p>3.5 Develop record keeping system for IDDE tracking. The Town utilizes Q-Alert's online Request for Service system where citizens can identify the location of a concern. Reports are routed to the appropriate department for action, and a log is generated</p>	<p>Develop and implement procedure for tracking illicit discharge abatement activities. Update Annual Report with abatement activity information.</p>	Town Engineer & Director of Public Works	07/01/17	07/01/17	

BMP	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
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documenting requests and to track follow-up activities.

3.6 Address IDDE in areas with pollutants of concern	In progress	3.6 Address IDDE in areas with pollutants of concern. The Town screened outfalls for dry weather. The Town has hired a consultant to help track potential issues that were identified, and only one issue remains for further investigation.	Identify priority locations for IDDE program based on stormwater pollutants of concern. Tailor IDDE program to prioritize these locations and implement the program. Update Annual Report with information on the prioritized areas, actions taken by the Town to address these areas, and the anticipated pollutant reduction.	Town Engineer	Not specified	Completed: Initial screening complete by 06/30/20	
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3.2 Describe any IDDE activities planned for the next year, if applicable.

The Town plans the following activities for 2022:

1. Update stormwater mapping as needed.
2. Continue to utilize the Q-Alert system for citizen complaints.
3. Enforce the IDDE ordinance as necessary.
4. Continue implementation of written IDDE program based on issues previously identified.

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

Date of Report	Location / suspected source	Response taken

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)
NO reported illicit discharges						

NO reported sanitary sewer overflows (No sanitary sewers in Monroe)

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

Illicit discharge reports are tracked using the Town's Q-Alert system, with the Director of Public Works being the primary person responsible for tracking the information and follow-up results.

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
	<p>The Monroe Health Department issued 70 permits in 2021 to repair or replace onsite sewage disposal systems. The Health Department works with property owners and septic installers to resolve septic issues in a timely fashion.</p>	

3.7 IDDE reporting metrics

Metrics	
Estimated or actual number of MS4 outfalls	589
Estimated or actual number of interconnections	8
Outfall mapping complete	99%
Interconnection mapping complete	99%
System-wide mapping complete (detailed MS4 infrastructure)	99%
Outfall assessment and priority ranking	100%
Dry weather screening of all High and Low priority outfalls complete	589
Catchment investigations complete	10
Estimated percentage of MS4 catchment area investigated	95%

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).

Annual training is incorporated with the Town's Highway garage staff, who are trained to identify signs of potential illicit discharges, especially in the course to cleaning or replacing catch basins. The Town sanitarian is also trained.

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	Ongoing	<p>4.1 Implement, upgrade, and enforce land use regulations or other legal authority to meet requirements of MS4 general permit. Section 6.5.3 of the Town of Monroe Zoning Regulations requires consistency with the 2002 Guidelines for Soil Erosion and Sediment Control and 2004 Stormwater Quality Manual.</p> <p>The Zoning Regulations can be found here: http://www.monroect.org/filestorage/467/469/976/998/ZngRegsIOTAL_101617.pdf</p> <p>Furthermore, the Town requires consistency with the 2002 Guidelines for Soil Erosion and Sediment Control as a standard condition of approval on Inland Wetlands Applications. (Condition E2).</p>	Review existing requirements for adequacy, and require developers, construction site operators, and/or contractors to maintain consistency with the 2002 <i>Guidelines for Soil Erosion and Sedimentation Control</i> , as amended; the CT Stormwater Quality Manual; and all stormwater discharge permits issued by CTDEEP within the Town.	Town Planner	07/01/21	Completed: 07/01/17	

BMP	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
4.2 Develop/Implement plan for interdepartmental coordination in site plan review and approval	Complete	<p>4.2 Develop /Implement plan for interdepartmental coordination in site plan review and approval. The Town has a long established procedure for coordinating review and approval of site plan processes. Plans are distributed to various departments, and all private site development projects are required to have a Pre-Construction Meeting, which is attended by the Town Engineer, Town Planner, town Inspector, Fire Marshal, Building official, Police Department, Health Department, Department of Public Works and Board of Education.</p>	Develop and follow Interdepartmental Coordination Plan	Town Planner	07/01/17	Complete: 07/01/17	
4.3 Review site plans for stormwater quality concerns	Complete	<p>4.3 Review site plans for stormwater quality concerns. The Town reviews site plans for stormwater quality, per Section 6.5.3 of the Monroe Zoning Regulations.</p>	Continue implementing updated site plan review process, site inspections, and enforcement.	Town Engineer	07/01/17	Complete: 07/01/17	

BMP	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
4.4 Conduct site inspections	Complete	<p>4.4 Conduct site inspections. The Town has a site inspection process in place, and requires the Town Inspector be notified at certain project milestones, and for the bond release at the end of the project. Additional inspections may be made in response to citizen complaints.</p> <p>The routine inspections are noted in Items 16, 20, 22 and 24 of the Pre-Construction Meeting Agenda identified in BMP 4.2.</p>	Evaluate and update draft standard condition of approval. Inventory privately-owned retention and detention ponds, and other stormwater basins that discharge to/receive drainage from the Town's MS4.	Town Planner	07/01/17	Complete: 07/01/17	
4.5 Implement procedure to allow public comment on site development	Complete	<p>4.5 Implement procedure to allow public comment on site development. The Town utilizes its Q-Alert system through the Town website to allow residents to report concerns with site development.</p>	Develop and implement written procedure for collecting and reviewing citizen feedback regarding proposed and ongoing land disturbance and development activities.	Town Engineer and Director of Public Works	07/01/17	Complete: 07/01/17	
4.6 Implement procedure to notify developers about DEEP construction stormwater permit	Complete	<p>4.6 Implement procedure to notify developers about DEEP construction stormwater permit. The Town notifies applicants of their</p>	Continue the Town's procedure for notifying applicants of their potential obligation to	Town Engineer and Town Planner	07/01/17	Complete: 07/01/17	

BMP	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
		potential obligation to register for the General Permit for the Discharge of Stormwater and Dewatering Wastewaters Associated with Construction Activities as part of its Pre-Construction Meeting Program, and has a standard condition of approval.	register for the Construction General Permit.				
4.7 Require Operation and Maintenance Plans	Complete	4.7 Require Operation and Maintenance Plans. Section 6.5.2 of the Monroe Zoning Regulations requires operations and maintenance programs for proposed soil erosion and sediment control measures and stormwater management facilities.	Evaluate current regulations for consistency with MS4 permit.	Town Planner	06/30/18	Complete: 07/01/17	
4.8 Interjurisdictional Agreements	Complete	4.8 Interjurisdictional Agreements. The Town has plotted its outfalls, and has identified 8 locations where its MS4 connects to CTDOT's MS4. No interconnects were identified into or from the MS4s of adjacent	Identify locations where Monroe's MS4 discharges into the MS4 of a neighboring community. Notify adjoining communities.	Town Engineer	06/30/18	Completed: 12/26/20	

BMP	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
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communities:
 Newtown, Easton,
 Shelton, and
 Trumbull.

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

The following activities are planned for 2022:

1. Continue the following practices:
 - a. Notification of applicants of their potential obligation to register under the Construction General Permit.
 - b. Utilize the Q-Alert system for citizen feedback on land disturbance activities.
 - c. Site inspections.
 - d. Site review.
 - e. Implementation of interdepartmental Pre-Construction meeting.
 - f. Require consistency with 2002 Guidelines for Soil Erosion and Sediment Control and the 2004 Stormwater Quality Manual.

5. Post-Construction Stormwater Management

Reference: 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	5.1 Low Impact Development Requirements. Section 6.5.3 of the Monroe Zoning Regulations require consistency with the 2004 Stormwater Quality Manual and the 2011 Low Impact Development Supplement.	Review and evaluate existing relevant ordinances, regulations and procedures.	Town Planner	07/01/22	Complete: 07/01/17	
5.2 Enforce LID/runoff reduction requirements for development and redevelopment projects	Complete	5.2 Low Impact Development Requirements. Section 6.5.3 of the Monroe Zoning Regulations require consistency with the 2004 Stormwater Quality Manual and the 2011 Low Impact Development Supplement.	Update or develop regulations and/or design guidelines that require developers/contractors to first consider implementation of LID/runoff reduction measures for development and redevelopment projects in the Town as specified in the MS4 permit.	Town Planner	07/01/22	Complete: 07/01/17	

BMP	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
5.3 Identify retention and detention ponds in priority areas	In progress	5.3 Identification of Detention Ponds in Priority Areas. The Town began its mapping efforts and is mapping known private and public detention ponds. 120 detention areas have been identified as of December 13, 2018.	Identify retention and detention ponds in priority areas.	Public: Director of Public Works Private: Town Engineer	07/01/22	Projected: 07/01/22	
5.4 Implement long-term maintenance plan for stormwater basins and treatment structures	In progress	5.4 Implement Long Term Maintenance Plan. The Town maintains its retention and detention ponds on an as needed basis. Operations and maintenance plans are required for private basins.	Prepare draft condition of approval for inspection access. Require operation and maintenance plans.	Town Planner:	07/01/22	Projected: 07/01/22	
5.5 DCIA mapping	Complete	5.5 DCIA Mapping. The Town utilized the CTDEEP impervious coverage layer, and applied the Sutherland equations to develop the DCIA cover.	Calculate the DCIA that contributes to at least one third of the outfalls within the Town's MS4, per year in 2018, 2019 and 2020.	Town Engineer:	07/01/20	Completed: 01/19/20	
5.6 Address post-construction issues in areas with pollutants of concern	Ongoing	5.6 Post Construction Erosion and Sediment. Identify erosion and sediment problems in impaired waters. Develop and implement short- and long-term maintenance	As issues arise on publicly owned property, work is done in-house to correct the issue to the extent practicable.	Public: Director of Public Works Private: Town Planner and Town Engineer	Not specified	Ongoing	

BMP	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
		solutions to the problems as funding becomes available, or use legal authority to hold property owners accountable. Update annual report with identification of problem areas, the cost of the retrofit, and the anticipated pollutant reduction.	Otherwise, it is incorporated into a listing of projects. On privately owned land, typically a wetlands violation notice will be issued.				
5.7 Turf reduction	Complete	5.7 Turf reduction. The Town's wetland regulations require applicants to preserve as much as the natural buffer as possible.	Review need for requirements for turf reduction	Inland Wetlands Agent	07/01/18	Complete: 07/01/17	
5.8 Require consistency with the 2004 Connecticut Stormwater Quality Manual	Complete	5.8 Require consistency with the 2004 Connecticut Stormwater Quality Manual. Section 6.5.3 of the Monroe Zoning Regulations require consistency with the 2004 Stormwater Quality Manual and the 2011 Low Impact Development Supplement.	Update regulations or policies for permit applicants to maintain consistency with the 2004 Stormwater Quality Manual.	Town Engineer and Town Planner	07/01/18	Complete: 07/01/17	
5.9 Coordination with Local Health Department	Ongoing	5.9 Coordination with Local Health Department. The local Health Department is included on application reviews	Continue actively coordinating with local Health Department on	Town Planner	07/01/18	Complete: 07/01/17	

BMP	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
		and in the Pre-Construction Meeting process.	MS4 Plan requirements.				

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

The following activities are proposed for 2022:

1. Continue to enforce LID site development practices
2. Identify public and private retention/detention ponds in priority areas.
3. Prepare draft condition allowing town access to new detention/retention ponds. Continue requirements for access easements in subdivisions.
4. Address post-construction sediment and erosion control issues as they occur.
5. Continue to encourage preservation and enhancement of natural buffers.
6. Continue to require consistency with the 2004 Stormwater Quality Manual.
7. Continue to coordinate application reviews with the local Health Department.

5.3 Post-Construction Stormwater Management reporting metrics

Metrics	
Baseline (2012) Directly Connected Impervious Area (DCIA)	475.48 acres
DCIA disconnected (redevelopment plus retrofits)	13.05 acres
Retrofits completed	0
Current DCIA	462.43 acres (2.74% disconnected)
Estimated cost of retrofits	\$0
Detention or retention ponds identified	TBD

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

The Town utilized the CTDEEP impervious coverage layer, and adjusted it using the Sutherland Equations as recommended by UCONN CLEAR.

6. Pollution Prevention/Good Housekeeping

Reference: 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	Complete	<p>6.1 Develop formal training program. The Town already provides annual training as part of its Industrial Stormwater General Permit. The Town will incorporate MS4 topics into the next training session.</p>	Update training program as needed, incorporate MS4 topics into the annual training program already done as part of the Industrial Stormwater Permit.	Director of Public Works Parks & Recreation Board of Education	07/01/19	07/01/2019	
6.2 Implement MS4 property and operations maintenance	Ongoing, complete for 2021	<p>6.2a Liquid Containment and Handling. The Town offers an annual training session as part of its Industrial Stormwater permit, and utilizes secondary containment for storage of liquid materials.</p> <p>6.2b Town Vehicle Washing. The Town also utilizes an independent contractor to wash vehicles. The contractor uses a containment boom and then removes the washwater from the site.</p>	Ensure the petroleum and non-petroleum products at its facilities are properly handled via employee education and training. Develop and implement (i) Spill Prevention Plans at facilities as appropriate, (ii) management procedures for waste management equipment, and (iii) plans to sweep parking lots and keep facilities and their surrounding areas clean. Evaluate	Director of Public Works	07/01/18	12/20/2021	

BMP	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
		6.2c Town Facilities Sweeping. Town-owned facilities are swept a minimum of once per year, and on an as-needed basis.	impacts of vehicle wash areas at public facilities, and develop best management practices to mitigate their impacts on water quality.				
6.3 Implement coordination with interconnected MS4s	Ongoing	6.3 Identification of Interconnected MS4s. The Town has begun its mapping efforts to help identify interconnections, and has located 8 interconnections into the CTDOT Drainage System.	Coordinate municipal operations with adjoining MS4s.	Director of Public Works	Not specified	Ongoing	
6.4 Develop/implement program to control other sources of pollutants to the MS4	In progress	6.4 Identify non-registered facilities that may be contributors. Develop a list of facilities in Town not required to register under the Industrial Stormwater Permit, and review screening and monitoring results as they become available. The Town Engineer has obtained a listing of commercial and industrial properties and Town and is reviewing.	Review stormwater general permit registrant list and identify potential contributing facilities not on the list. Compare locations of potential contributors to screening and monitoring results to determine if further investigation is warranted.	Town Engineer	Not specified	Projected: 06/30/22	

BMP	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
6.5 Evaluate additional measures for discharges to impaired waters*		Please refer to BMP 6.13, 6.14 and 6.15 for additional detail.					
6.6 Track projects that disconnect DCIA	Ongoing	6.6 Track DCIA coverage. The Town is now using a spreadsheet to track DCIA coverage as land development projects are approved and Certificates of Occupancy are issued. The Town did not identify any significant disconnection projects in the past 5 years.	Track the disconnected DCIA acreage, identifying DCIA credit eligible sites constructed within the preceding 5 years.	Town Engineer	07/01/17	Completed: 07/01/17	
6.7 Implement infrastructure repair/rehab program	Complete	6.7 Implement infrastructure repair/ rehab program. The Town has a list of projects and reviews them periodically, adding projects or reprioritizing them. The Town will continue this list.	Prepare draft internal policy on MS4 infrastructure repair, rehabilitation, and retrofits.	Department of Public Works	07/01/21	Completed: 07/01/18	
6.8 Develop/implement plan to identify/prioritize retrofit projects	Complete	6.8 Implement plans based upon data from previous MS4 permit. The work conducted under the previous	Identify required repairs based on data from previous permit and prepare inventory. Make	Director of Public Works	07/01/20	Completed: 07/01/17	

BMP	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
6.9 Implement retrofit projects to disconnect 2% of DCIA	Not started	MS4 permit did not indicate any problems with the Town's MS4 infrastructure that required retrofit.	repairs as funding becomes available.	Town Engineer	07/01/22	Projected: 07/01/22	
6.10 Develop/implement street sweeping program	Ongoing Complete for 2021	<p>6.9 Implement retrofit projects to disconnect 2% of DCIA. The Town has approved improvements to its main firehouse that will include disconnection of impervious surfaces.</p> <p>6.10 Street sweeping program. The Town sweeps all its streets on an annual basis, and sweeps additional areas where sediment accumulates more often on an as-needed basis.</p>	<p>Develop and implement a procedure for identifying targeted areas for additional street sweeping. Establish a schedule for street sweeping to ensure minimum frequency is met for areas inside and outside areas with DCIA greater than 11% and/or in the Urbanized Area. Document results of sweeping program.</p>	Director of Public Works	12/31/18	Completed: 12/31/21	

BMP	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
6.11 Develop/implement catch basin cleaning program	Ongoing	6.11 Catch basin cleaning. The Town cleans its catch basins on an annual rotating basis. 1,000 were cleaned in 2021. The catch basins are observed at the time of cleaning for structure defects and evidence of illicit discharges.	Continue conducting routine cleaning of all catch basins. Track catch basin inspection observations. Develop and implement a plan for catch basin inspection and maintenance. Update the Annual Report with documentation of the Town's catch basin cleaning and maintenance process.	Director of Public Works	12/31/21	Completed: 12/31/21	
6.12 Develop/implement snow management practices	Ongoing	6.12 Snow management practices. The Town's Highway Garage is part of its Industrial Stormwater Permit, therefore safe handling practices are included as part of the training, including the use of secondary containment. The Town minimizes the use of sand on its roadways, and in 2021 used sand	Develop and implement a written snow and ice management plan, including protocols for staff training and record maintenance and updated standard operating practices. Provide appropriate secondary containment for any exterior containers of liquid dicing	Director of Public Works	12/31/20	Completed: 12/31/21	

BMP	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
		only on unimproved roads.	Update the Annual Report with required information on the snow and ice program.				
6.13 Parks and Open Space Management	Ongoing	6.13 Parks and Open Space Management. The Town optimizes fertilizer use on its parks properties. Grass clippings are left in place, and leaves are collected and composted. Pesticide use is limited to select application for grub control.	Continue implementing procedures for fertilizer application and disposal of grass clippings and leaves for lands that are the legal responsibility of the Town.	Director of Parks and Recreation	12/31/21	Completed: 12/31/21	
6.14 Pet Waste Management	Ongoing	6.14 Pet Waste Management. The Town has a policy of not allowing dogs in its parks. On the Pequonnock River bike path, there are containers for pet waste disposal, which are emptied by a private trash hauler.	Identify locations with the town where pet waste threatens receiving water quality.	Director of Parks and Recreation	12/31/2q	Completed: 12/11/21	
6.15 Waterfowl Management	Ongoing	6.15 Waterfowl Management. The Town has identified a few areas where waterfowl congregate.	Identify waterfowl congregation areas.	Director of Parks and Recreation	12/31/18	Completed: 12/31/18	

BMP	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
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The congregation activity is seasonal and generally not significant, although sometimes in the summer there is enough activity for two to three days that may lead to closure.

6.16 Mitigate Stormwater Quality Impacts of Town-Owned Vehicles and Equipment	Complete	6.16 Mitigate Stormwater Quality Impacts of Town-Owned Vehicles and Equipment. The Town's Industrial General Permit SWPPP identifies fueling/washing and vehicle maintenance provisions.	Review existing operations and maintenance procedures for Town facilities, and update if the vehicle fueling/washing provisions have not been included.	Director of Public Works	07/01/18	Completed: 07/01/17	
6.17 Leaf Management	Complete	6.17 Leaf management. The Town does not provide leaf pickup, but advises residents not to rake their leaves into the street.	Provide notice to residents about not raking leaves into streets on the Town website.	Director of Public Works	07/01/18	Completed: 07/01/17	

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

Activities proposed for 2022 include:

1. Continue employee training programs.
2. Continue to institute requirements of the Industrial general Permit SWPPP.
3. Identify potential contributors from General Permit non-registrants.
4. Track DCIA disconnection.
5. Continue existing infrastructure repair policies.
6. Perform infrastructure repairs as needed and as funding is available.
7. Continue street sweeping program.
8. Continue catch basin cleaning program.
9. Continue snow management practices.
10. Continue to optimize fertilizers on town properties.
11. Continue prohibition on dogs from town parks.
12. Identify need for signage to discourage feeding of waterfowl.
13. Continue to maintain and wash Town vehicles in accordance with the Industrial General Permit.
14. Continue leaf management policy.

6.3 Pollution Prevention/ Good Housekeeping reporting metrics

Metrics	
Employee training provided for key staff	Yes, 06/29/2021
Street sweeping	
Curb miles swept	262
Volume (or mass) of material collected	Unknown
Catch basin cleaning	
Total catch basins in priority areas	3,128
Total catch basins in MS4	3,128
Catch basins inspected	1,000
Catch basins cleaned	1,000
Volume (or mass) of material removed from all catch basins	654 cy
Volume removed from catch basins to impaired waters (if known)	Unknown
Snow management	
Type(s) of deicing material used	Salt
Total amount of each deicing material applied	3,400 tons

Type(s) of deicing equipment used	Spreader
Lane-miles treated	137 lane-miles
Snow disposal location	In-situ, no hauling of snow
Staff training provided on application methods & equipment	Yes, 10/21/2021
Municipal turf management program actions (for permittee properties in basins with N/P impairments)	
Reduction in application of fertilizers (since start of permit)	0 lbs.
Reduction in turf area (since start of permit)	0 acres
Lands with high potential to contribute bacteria (dog parks, parks with open water, & sites with failing septic systems)	
Cost of mitigation actions/retrofits	\$0

6.4 Catch Basin Cleaning Program

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

The Town has swept their streets and parking lots for a number of years, and based upon this experience, are well aware of the locations where additional cleaning is necessary, typically adjacent to heavily trafficked areas and at roadway low points.

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.]

Projects are identified on an as-needed basis, and implemented based upon perceived benefit or potential impact to water quality. The Town approved improvements to the main firehouse that will also disconnect DCIA.

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.]

The retrofit program will continue to proceed on an as-needed basis, as funding is made available. The Town is evaluating its properties to identify potential disconnection opportunities, and looks for disconnection opportunities in site plan applications by default since the Town requires conformance with the 2011 LID Supplement to the 2004 Stormwater Quality Manual.

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.]

The Town will continue with its existing process for implementing its own projects, and also for reviewing Town projects and site applications as they come in for review to help achieve the DCIA reduction goal. The Town has begun tracking impervious cover changes on a master spreadsheet.

Part II: Impaired Waters Investigation and Monitoring

1. Impaired Waters Investigation and Monitoring Program

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

<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.

At the start of the permit, no Town-owned outlets discharge directly to the Housatonic River or Lake Zoar, which were the only stormwater impaired waterbodies in the Town of Monroe. Therefore, impaired waters investigation and monitoring were not required.

The 2018 Impaired Rivers list added a section of the Farmill River to the impaired waterbody list. Its listed impairment is E. Coli. Since the list was made available August 1, 2019, after the FY 2019-2020 budget allocations had been made, funding was included in FY 2020-2021 to screen the Farmill River during wet weather events.

The Town has only two direct outfalls to the Farmill River. One at Moose Hill Road and the other on Far Mill Road, which were sampled, and were below the E. coli threshold.

The 2020 Impaired Waters List added the Pequonnock River through Town and the West Branch of the Pequonnock River to the Impaired Waters inventory. Both watercourses are stormwater impaired for bacteria.

These outfalls will be sampled in 2022, as they are new to the Town's impaired waters program:

West Branch of Pequonnock River:

2C894 – End of Maple Terrace
5FFCF – Old Newtown Road
02A0B – Old Newtown Road

Pequonnock River

2182F – Purdy Hill Road
562EA – Purdy Hill Road
38752 – Cutlers Farm Road
D88B5 – Cutlers Farm Road
DC13B – Cutlers Farm Road
879E5 – West Maiden Lane

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?
D4635	03/18/21	Bacteria	E. coli: 307 col/mL	EML	No
7E729	03/18/21	Bacteria	E. coli: 300 col/mL	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, 2021.

Outfall	Sample Date	Parameter(s)	Results	Name of Laboratory (if used)
D4635	03/18/21	Bacteria	E. coli: 307 col/mL	EML
7E729	03/18/21	Bacteria	E. coli: 300 col/mL	EML

Part III: Additional IDDE Program Data

1. Assessment and Priority Ranking of Catchments Data

Reference: 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). Note: Rankings were made by category, using a scoring assessment that evaluated previous screening results, discharge to a location of public health concern, past discharge complaints, receiving water quality, age of infrastructure, presence of combined sewer or septic systems, age of the septic systems, and the presence of culverted streams. Where catchments had the same score, impervious coverage from the state impervious cover layer was used as a tie breaker.

(1) Catchment ID (DEEP Basin ID)	(2) Category	(3) Rank
6022-00-1	Excluded	1
6000-63-1	Excluded	2
6000-00-05+L2	High Priority	1
6000-00-05+R8	High Priority	2
6000-00-05+R9	High Priority	3
6000-00-05+R10	High Priority	4
7105-03-1	Low Priority	1
7105-00-2-R1	Low Priority	2
6025-00-1	Low Priority	3
7105-04-1	Low Priority	4
6025-01-1-L1	Low Priority	5
6022-03-1	Low Priority	6
6025-03-2-R1	Low Priority	7
7105-01-2-R1	Low Priority	8
6025-00-2-L1	Low Priority	9
6025-03-1-L1	Low Priority	10
6024-02-1-L1	Low Priority	11
6025-01-1	Low Priority	12
6025-03-1	Low Priority	13

(1) Catchment ID (DEEP Basin ID)	(2) Category	(3) Rank
6024-01-1	Low Priority	14
6024-02-1	Low Priority	15
6024-00-2-R1	Low Priority	16
7105-01-1	Low Priority	17
7105-00-1-L1	Low Priority	18
6025-04-1	Low Priority	19
6025-00-2-R1	Low Priority	20
7105-00-1	Low Priority	21
6022-00-3-R2	Low Priority	22
6020-01-1	Low Priority	23
6020-01-1-L1	Low Priority	24
6020-01-2-L1	Low Priority	25
6020-00-1	Low Priority	26
6022-04-1-L1	Low Priority	27
6022-02-1	Low Priority	28
6022-00-3-R3	Low Priority	29
6022-03-2-R1	Low Priority	30
6022-00-2-R1	Low Priority	31
6022-00-2-R2	Low Priority	32
6022-00-3-R1	Low Priority	33
6022-04-1	Low Priority	34
7105-01-2-L1	Low Priority	35
6024-00-1	Low Priority	36
7108-00-1	Low Priority	37
7108-00-2-L2	Low Priority	38
6000-61-1	Low Priority	39
6022-02-1-L1	Low Priority	40
7105-02-1	Low Priority	41

2. Outfall and Interconnection Screening and Sampling Data

Reference: 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. Where no data is presented, the outfall was not flowing at the time of visit. Values exceeding follow-up criteria are identified in red.

Outfall / Interconnection ID	Screening / sample date	Ammonia mg/L	Chlorine mg/L	Conductivity µS/cm	Salinity ppt	E. coli or enterococcus col/100mL	Surfactants, mg/L	Water Temp °F	Pollutant of concern	If required, follow-up actions taken
584CB	1/10/2019									
862BC	1/10/2019	ND	ND	736	0.4	0	ND	42		
D6287	1/10/2019	ND	ND	202	0.28	0	ND	38		
03ED1	1/10/2019									
1B8A0	1/10/2019	ND	ND	469	0.04	1	ND	43		
9A920	1/10/2019	ND	ND	525	0.29	3	ND	41		
752A1	1/10/2019	ND	ND	273	0.03	6	ND	39		
2C894	1/10/2019									
5FFCF	1/10/2019									
02A0B	1/10/2019	ND	ND	136	0.21	0	ND	42		
7849B	1/10/2019	ND	ND	146	0.12	0	ND	37		
65504	1/11/2019	ND	ND	93	0.45	186	ND	39		
3B542	1/11/2019									
37676	1/11/2019	ND	ND	333	0.08	1	0.034	40		
C6C94	1/11/2019	ND	ND	708	0.33	53	0.053	37		
09BE6	1/11/2019	ND	ND	589	0.42	1	ND	41		
23251	1/11/2019									
F5697	1/11/2019									
0061D	1/11/2019									
B7D57	1/11/2019									
BC64F	1/11/2019	ND	ND	177	0.09	0	ND	39		
ABD89	1/11/2019									
21B4E	1/11/2019									

Outfall / Interconnection ID	Screening / sample date	Ammonia mg/L	Chlorine mg/L	Conductivity µS/cm	Salinity, ppt	E. coli or enterococcus, col/100mL	Surfactants, mg/L	Water Temp °F	Pollutant of concern	If required, follow-up actions taken
27D7E	1/11/2019									
53B20	1/11/2019									
5A84B	1/11/2019									
F7669	1/11/2019									
E9694	1/11/2019									
981BA	1/11/2019									
981BA	1/14/2019	ND	ND	184	0.33	0	ND	38		
43388	1/14/2019	ND	ND	520	0.15	0	ND	39		
022B5	1/14/2019	ND	ND	395	0.33	0	ND	39		
21B4E	1/14/2019									
FE5C3	1/14/2019									
C496A	1/14/2019	ND	ND	340	0.17	1	ND	38		
3F377	1/14/2019									
4D4AB	1/14/2019	ND	ND	338	0.27	0	0.033	41		
DD95F	1/14/2019									
9305A	1/14/2019									
3DBD3	1/14/2019	ND	ND	669	0.02	0	0.033	42		
1867B	1/14/2019									
31D12	1/14/2019	ND	ND	101	0.22	1	ND	40		
2535E	1/14/2019	ND	ND	235	0.2	0	ND	39		
7F1EA	1/14/2019	ND	ND	686	0.41	0	ND	40		
9D02D	1/14/2019									
E74B5	1/14/2019									
5A5FB	1/14/2019									
A44BF	1/14/2019									
0B12A	1/14/2019									
3941D	1/14/2019	ND	ND	239	0.38	0	ND	41		
AD2AF	1/15/2019									
7B4D6	1/15/2019									
D6876	1/15/2019									
09BE4	1/15/2019									

Outfall / Interconnection ID	Screening / sample date	Ammonia mg/L	Chlorine mg/L	Conductivity μ S/cm	Salinity, ppt	E. coli or enterococcus, col/100mL	Surfactants, mg/L	Water Temp $^{\circ}$ F	Pollutant of concern	If required, follow-up actions taken
C8C99	1/15/2019									
2B9D5	1/15/2019									
10A5A	1/15/2019									
AD021	1/15/2019									
D385C	1/15/2019									
7A5B8	1/15/2019									
AB1DB	1/15/2019									
830D3	1/15/2019									
91829	1/15/2019									
5F246	1/15/2019									
DB925	1/15/2019									
DE92D	1/15/2019									
25CFD	1/15/2019									
60F54	1/15/2019									
26CD9	1/15/2019									
41D35	1/15/2019									
B7DA8	1/15/2019									
97BD9	1/15/2019									
5E743	1/15/2019									
D279E	1/15/2019									
5F44D	1/15/2019									
0ED2B	1/15/2019									
15BEB	1/15/2019									
ED145	1/15/2019									
4015E	1/15/2019									
4A1CE	1/15/2019									
CE4D9	1/15/2019									
52F0D	1/15/2019									
1C41F	1/15/2019									
FA9D8	1/15/2019									
5FCBA	1/15/2019									

Outfall / Interconnection ID	Screening / sample date	Ammonia mg/L	Chlorine mg/L	Conductivity µS/cm	Salinity, ppt	E. coli or enterococcus, col/100mL	Surfactants, mg/L	Water Temp °F	Pollutant of concern	If required, follow-up actions taken
9EE69	1/15/2019									
FC93C	1/16/2019	ND	ND	123	0.05	0	ND	43		
22CF5	1/16/2019	ND	ND	350	0.23	435	ND	38		Refer to Section 3.4. Follow-up completed, pet waste documentation distributed.
73BF3	1/16/2019									
B7DDE	1/16/2019	ND	ND	594	0.44	0	ND	42		
4CBF1	1/16/2019									
E7496	1/16/2019	ND	ND	663	0.15	1,733	ND	41		Refer to Section 3.4. Follow-up completed, determined no illicit discharge.
D538D	1/16/2019	ND	ND	610	0.48	2	ND	38		
75DEC	1/16/2019									
4FE91	1/16/2019									
5EA7D	1/16/2019	ND	ND	667	0.04	11	ND	41		
CB50D	1/16/2019									
4A2A2	1/16/2019	ND	ND	234	0.12	1	ND	39		
00EEE	1/16/2019	ND	ND	108	0.15	78	ND	37		
8FC77	1/16/2019	ND	ND	295	0.48	5	ND	42		
3524C	1/16/2019									
32157	1/17/2019	ND	ND	205	0.45	1		43		
7A5F9	1/17/2019									
C0D6B	1/17/2019									
BBFFD	1/17/2019	ND	ND	337	0.29	0		42		
9435C	1/17/2019	ND	ND	326	0.32	0		40		
752EB	1/17/2019									
D08B8	1/17/2019	ND	ND	432	0.32	0		43		
76F83	1/17/2019	ND	ND	617	0.08	0		37		
006DF	1/17/2019	ND	ND	597	0.01	0		41		
7.40E+73	1/17/2019									
5D926	1/17/2019									

Outfall / Interconnection ID	Screening / sample date	Ammonia mg/L	Chlorine mg/L	Conductivity µS/cm	Salinity, ppt	E. coli or enterococcus, col/100mL	Surfactants, mg/L	Water Temp °F	Pollutant of concern	If required, follow-up actions taken
7F08B	1/17/2019	ND	ND	687	0.39	1		39		
D3A11	1/17/2019	ND	ND	646	0.18	1		37		
2483F	1/17/2019									
9BE24	1/17/2019									
ACC48	1/17/2019									
E40CB	1/17/2019									
B02F9	1/17/2019									
2D000	1/28/2019									
2A12A	1/28/2019									
741B4	1/28/2019									
CC155	1/28/2019									
85803	1/28/2019									
55409	1/28/2019									
E4B4D	1/28/2019									
D2CC6	1/28/2019									
DDBA0	1/28/2019									
0912C	1/28/2019									
EB380	1/28/2019									
D14D3	1/28/2019									
3F4E8	1/28/2019									
938FC	1/28/2019									
72D32	1/28/2019									
721C8	1/28/2019									
2AF7A	1/28/2019									
8A06C	1/28/2019									
E47A0	1/28/2019									
173AD	1/28/2019									
C0DD2	1/28/2019									
D0FE5	1/28/2019									
2.60E+05	1/28/2019									
ABFA3	1/28/2019									

Outfall / Interconnection ID	Screening / sample date	Ammonia mg/L	Chlorine mg/L	Conductivity µS/cm	Salinity, ppt	E. coli or enterococcus, col/100mL	Surfactants, mg/L	Water Temp °F	Pollutant of concern	If required, follow-up actions taken
1.10E+03	1/28/2019									
0013E	1/28/2019									
0EE40	1/28/2019									
D6954	1/28/2019									
F74D3	1/28/2019									
F614C	1/28/2019									
B951B	1/28/2019									
15642	1/28/2019									
B377B	1/29/2019									
5AE15	1/29/2019									
7FD59	1/29/2019	ND	ND	248	0.2	6	ND	41		
7.50E+34	1/29/2019									
99703	1/29/2019	ND	ND	709	0.11	5	ND	38		
1A8F4	1/29/2019									
4AA6B	1/29/2019	ND	ND	274	0.46	76	ND	42		
1BA2B	1/29/2019	ND	ND	322	0.13	19	ND	42		
CDC74	1/29/2019	ND	ND	436	0.29	5	ND	42		
C490A	1/29/2019	ND	ND	357	0.12	1	ND	38		
4FA2D	1/29/2019									
6509A	1/29/2019	ND	ND	657	0.16	4	ND	39		
C8E87	1/29/2019									
6538D	1/29/2019	ND	ND	181	0.29	8	ND	38		
C0FFC	1/29/2019	ND	ND	212	0.47	488	ND	42		Refer to Section 3.4. Follow-up completed, pet waste documentation distributed.
A3E90	1/29/2019	ND	ND	284	0.05	0	ND	42		
E689E	2/4/2019	ND	ND	106	0.36	238	ND	38		
AFBE4	2/4/2019									
519DA	2/4/2019	ND	ND	554	0.15	7	ND	40		
254EE	2/4/2019									
F19BC	2/4/2019									

Outfall / Interconnection ID	Screening / sample date	Ammonia mg/L	Chlorine mg/L	Conductivity µS/cm	Salinity, ppt	E. coli or enterococcus, col/100mL	Surfactants, mg/L	Water Temp °F	Pollutant of concern	If required, follow-up actions taken
E39AB	2/4/2019	ND	ND	403	0.02	1	ND	42		
54218	2/4/2019	ND	ND	132	0.17	0	ND	40		
B636F	2/4/2019									
0E609	2/4/2019									
9C830	2/4/2019									
9E604	2/4/2019	ND	ND	274	0.08	1	ND	37		
58907	2/4/2019	ND	ND	746	0.47	0	ND	42		
2CF07	2/4/2019									
BB519	2/4/2019	ND	ND	708	0.45	4	ND	37		
F5658	2/5/2019									
377F2	2/5/2019									
2933	2/5/2019									
E58E3	2/5/2019									
A8E58	2/5/2019									
5A5E8	2/5/2019									
B1244	2/5/2019	ND	ND	706	0.07	7	ND	41		
13D28	2/5/2019	ND	ND	117	0.43	9	ND	37		
2A428	2/5/2019									
26ADA	2/5/2019	ND	ND	112	0.05	0	ND	41		
D7CF4	2/5/2019	ND	ND	436	0.11	411	ND	42		Refer to Section 3.4. Follow-up completed, pet waste documentation distributed.
AB403	2/5/2019									
82140	2/5/2019	ND	ND	574	0.15	0	ND	42		
7637	2/5/2019	ND	ND	441	0.09	0	ND	39		
3902E	2/5/2019									
E89CE	2/5/2019	ND	ND	408	0.45	2	ND	41		
1A339	2/5/2019	ND	ND	748	0.06	0	ND	42		
E6C37	2/6/2019									
6BC55	2/6/2019									

Outfall / Interconnection ID	Screening / sample date	Ammonia mg/L	Chlorine mg/L	Conductivity µS/cm	Salinity, ppt	E. coli or enterococcus, col/100mL	Surfactants, mg/L	Water Temp °F	Pollutant of concern	If required, follow-up actions taken
E463F	2/6/2019	ND	ND	432	0.36	649	ND	43		Refer to Section 3.4. Follow-up completed, pet waste documentation distributed.
4A892	2/6/2019	ND	ND	578	0.03	0	ND	39		
8E556	2/6/2019	ND	ND	52	0.26	1	ND	43		
03BA0	2/6/2019	ND	ND	723	0.16	4	ND	43		
F30E3	2/6/2019									
C1861	2/6/2019									
918BE	2/6/2019									
1FC15	2/6/2019	ND	ND	341	0.46	19	ND	40		
F4934	2/6/2019	ND	ND	689	0.41	0	ND	40		
9E3C6	2/6/2019	ND	ND	182	0.03	4	ND	40		
AA1B0	2/6/2019									
E4DAE	2/6/2019									
303CB	2/11/2019									
E6D17	2/11/2019	ND	ND	347	0.48	2	ND	40		
6C55E	2/11/2019									
402E9	2/11/2019	ND	ND	125	0.4	0	ND	39		
3D640	2/11/2019	ND	ND	615	0.03	3	ND	41		
8D731	2/11/2019									
B4CAE	2/11/2019	ND	ND	579	0.16	2,420	ND	37		Refer to Section 3.4. Follow-up completed, pet waste documentation distributed.
BE112	2/11/2019	ND	ND	273	0.02	108	ND	43		
E4C0A	2/11/2019									
94880	2/11/2019	ND	ND	448	0.25	0	ND	38		
54C08	2/11/2019									
CDFC1	2/11/2019									
B7DDD	2/11/2019	ND	ND	277	0.33	138	ND	42		
0BD07	2/11/2019									

Outfall / Interconnection ID	Screening / sample date	Ammonia mg/L	Chlorine mg/L	Conductivity µS/cm	Salinity, ppt	E. coli or enterococcus, col/100mL	Surfactants, mg/L	Water Temp °F	Pollutant of concern	If required, follow-up actions taken
178DA	2/11/2019	ND	ND	164	0.2	0	ND	42		
7601D	2/11/2019									
6F2E7	2/11/2019	ND	ND	455	0.26	58	ND	42		
D418A	3/2/2020	ND	ND	239	0.12	461	ND	54		Refer to Section 3.4, apparent one-time event that was not duplicated.
1867B	3/2/2020									
9305A	3/2/2020									
DD95F	3/2/2020									
53B20	3/2/2020									
27D7E	3/2/2020									
4D4AB	3/2/2020									
B6255	3/2/2020									
DA027	3/2/2020									
BB64D	3/2/2020									
F6CE2	3/2/2020									
69443	3/2/2020									
E9FD1	3/2/2020									
A1B6E	3/2/2020									
117D3	3/2/2020									
06910	3/2/2020									
5DC24	3/2/2020									
2C25D	3/2/2020									
3DBD3	3/2/2020	ND	ND	489	0.23	0	0.04	50		
BEF44	3/2/2020	ND	ND	330	0.16	0	0.03	51		
10FBB	3/3/2020	ND	ND	380	0.19	5	ND	55		
E1DB4	3/3/2020	ND	ND	323	0.16	0	ND	53		
E9BC2	3/3/2020	ND	ND	300	0.15	2	ND	55		
C12B4	3/3/2020									
BDEC5	3/3/2020									
7118A	3/3/2020									

Outfall / Interconnection ID	Screening / sample date	Ammonia mg/L	Chlorine mg/L	Conductivity µS/cm	Salinity ppt	E. coli or enterococcus, col/100mL	Surfactants, mg/L	Water Temp °F	Pollutant of concern	If required, follow-up actions taken
B3469	3/3/2020									
41BD0	3/3/2020									
8E597	3/3/2020									
65969	3/3/2020									
44813	3/3/2020									
F9168	3/3/2020									
4F29E	3/3/2020									
7A916	3/3/2020									
2803F	3/3/2020									
B064E	3/3/2020									
511B4	3/3/2020									
92130	3/3/2020									
B5C19	3/3/2020									
BCDCC	3/3/2020									
73EB3	3/3/2020									
FF291	3/3/2020									
DF965	3/3/2020									
E20F8	3/3/2020									
CD637	3/3/2020									
6A2A8	3/3/2020									
BF03C	3/3/2020									
7BA0D	3/3/2020									
CF066	3/3/2020									
8CF7C	3/3/2020									
7A916	3/3/2020									
70CD8	3/3/2020									
70866	3/3/2020									
27552	3/4/2020	ND	ND	205	0.10	0	ND	56		
83947	3/4/2020	ND	ND	200	0.10	14	0.03	56		
E4B28	3/4/2020	ND	ND	323	0.16	7	ND	55		
3F918	3/4/2020	ND	ND	324	0.16	142	0.04	55		

Outfall / Interconnection ID	Screening / sample date	Ammonia mg/L	Chlorine mg/L	Conductivity µS/cm	Salinity ppt	E. coli or enterococcus, col/100mL	Surfactants, mg/L	Water Temp °F	Pollutant of concern	If required, follow-up actions taken
D88B5	3/4/2020									
38752	3/4/2020									
D5D1B	3/4/2020									
C7DC0	3/4/2020									
48AE9	3/4/2020									
C915B	3/4/2020									
5F52A	3/4/2020									
B1293	3/4/2020									
E0770	3/4/2020									
DC13B	3/4/2020									
F4FD3	3/5/2020	ND	ND	292	0.15	10	ND	53		
48980	3/5/2020	ND	ND	340	0.17	8	0.02	56		
15336	3/5/2020	ND	ND	304	0.15	75	ND	53		
191AF	3/5/2020	ND	ND	360	0.18	8	0.02	53		
F55CE	3/5/2020	ND	ND	329	0.17	45	ND	51		
C913F	3/5/2020	ND	ND	143	0.07	0	ND	58		
E2A57	3/5/2020									
C00F2	3/5/2020									
FF06F	3/5/2020									
3DB28	3/5/2020									
8BF2B	3/5/2020									
9A381	3/5/2020									
B302B	3/5/2020									
6327E	3/5/2020									
3FE10	3/5/2020									
0AB5B	3/5/2020									
3C5F5	3/5/2020									
DC856	3/5/2020									
20D1E	3/5/2020									
0944F	3/6/2020					0	ND			
22659	3/6/2020					0	ND			

Outfall / Interconnection ID	Screening / sample date	Ammonia mg/L	Chlorine mg/L	Conductivity µS/cm	Salinity, ppt	E. coli or enterococcus, col/100mL	Surfactants, mg/L	Water Temp °F	Pollutant of concern	If required, follow-up actions taken
51A30	3/10/2020	ND	ND	266	0.13	0	ND	52		
1F02A	3/10/2020	ND	ND	296	0.15	84	0.05	54		
B9460	3/10/2020	ND	ND	384	0.19	307	ND	51		
C615C	3/10/2020	ND	ND	107	0.05	4	ND	49		
E89CE	3/10/2020	ND	ND	585	0.28	0	ND	60		
C6AA2	3/10/2020	ND	ND	321	0.07	0	ND	54		
7CCF1	3/10/2020									
3BD84	3/10/2020									
86F95	3/10/2020									
A1482	3/10/2020									
3CE19	3/10/2020									
94C20	3/10/2020									
4267C	3/10/2020									
AECCE	3/10/2020									
C7016	3/10/2020									
BB519	3/10/2020									
92B81	3/10/2020									
30E2F	3/10/2020									
1E487	3/10/2020									
8D365	3/10/2020									
16F61	3/10/2020									
5536D	3/10/2020									
13F39	3/10/2020									
F8B73	3/10/2020									
8A298	3/10/2020									
83280	3/11/2020	ND	ND	361	0.10	0	ND	57		
DODD5	3/11/2020	ND	ND	1,466	0.73	0	ND	50		
C8BB4	3/11/2020	ND	ND	458	0.23	1	ND	50		
7B4E3	3/11/2020									
E1684	3/11/2020									
FBCCD	3/11/2020									

Outfall / Interconnection ID	Screening / sample date	Ammonia mg/L	Chlorine mg/L	Conductivity µS/cm	Salinity, ppt	E. coli or enterococcus, col/100mL	Surfactants, mg/L	Water Temp °F	Pollutant of concern	If required, follow-up actions taken
49DD4	3/11/2020									
C2916	3/11/2020									
70D2A	3/11/2020									
C5CE7	3/11/2020									
CA623	3/11/2020									
A3B27	3/11/2020									
43819	3/11/2020									
C80D4	3/11/2020									
28EA8	3/11/2020									
905A5	3/11/2020									
011C9	3/11/2020									
5F788	3/11/2020									
AC49C	3/11/2020									
20959	3/11/2020									
A7A3C	3/11/2020									
D6001	3/11/2020									
993FE	3/11/2020									
A650A	3/11/2020									
A5500	3/11/2020									
3D22F	3/11/2020									
CE053	3/11/2020									
63F68	3/11/2020									
8CF5D	3/11/2020									
26C66	3/11/2020									
614F0	3/11/2020									
FF45B	3/12/2020	ND	ND	438	0.22	0	0.02	42		
B3CFE	3/12/2020	ND	ND	422	0.21	1986	ND	49		Refer to Section 3.4, apparent one-time event that was not duplicated.
0E7AB	3/12/2020	ND	ND	397	0.20	0	ND	47		
C8BAC	3/12/2020	ND	ND	423	0.21	276	0.03	48		

Outfall / Interconnection ID	Screening / sample date	Ammonia mg/L	Chlorine mg/L	Conductivity µS/cm	Salinity ppt	E. coli or enterococcus, col/100mL	Surfactants, mg/L	Water Temp °F	Pollutant of concern	If required, follow-up actions taken
FD697	3/12/2020									
47D29	3/12/2020									
7958C	3/12/2020									
37933	3/12/2020									
7EF7A	3/12/2020									
0DDDD	3/12/2020									
A7590	3/12/2020									
F1DB4	3/12/2020									
509DB	3/12/2020									
F8227	3/12/2020									
398CB	3/12/2020									
EC4A2	3/12/2020									
1E841	3/12/2020									
F2CBD	3/12/2020									
3B20B	3/12/2020									
5745C	3/12/2020									
ABD25	3/12/2020									
DDE88	3/12/2020									
D2B9C	3/12/2020									
60083	3/12/2020									
D893C	3/12/2020									
3F4EA	3/12/2020									
A8020	3/12/2020									
77E3A	3/12/2020									
A3CB8	3/12/2020									
2CB70	3/18/2020	ND	ND	110	0.06	0	0.14	51		
A6BD2	3/18/2020	ND	ND	336	0.17	0	ND	55		
04635	3/18/2020	ND	ND	307	0.15	0	ND	57		
C7CBA	3/18/2020									
50497	3/18/2020									
8C28D	3/18/2020									

Outfall / Interconnection ID	Screening / sample date	Ammonia mg/L	Chlorine mg/L	Conductivity µS/cm	Salinity, ppt	E. coli or enterococcus, col/100mL	Surfactants, mg/L	Water Temp °F	Pollutant of concern	If required, follow-up actions taken
8CB1D	3/18/2020									
3C81F	3/18/2020									
48046	3/18/2020									
83F76	3/18/2020									
008DC	3/18/2020									
EB333	3/18/2020									
0E1BB	3/18/2020									
F9825	3/18/2020									
E4CF8	3/18/2020									
909A8	3/18/2020									
5685F	3/18/2020									
336AF	3/18/2020									
20959	3/18/2020									
08A7F	3/18/2020									
38316	3/18/2020									
87935	3/18/2020									
37EF8	3/18/2020									
3901F	3/18/2020									
806F0	3/18/2020									
9077F	3/18/2020									
E38B5	3/18/2020									
2A19B	3/18/2020									
86B8C	3/18/2020									
1A2F2	3/19/2020	ND	ND	195	0.10	6	NP	47		
5CE70	3/19/2020	ND	ND	437	0.22	23	NP	48		
34938	3/19/2020	ND	ND	270	0.14	44	NP	49		
A511A	3/19/2020	ND	ND	308	0.22	238	NP	48		
558A8	3/19/2020	ND	ND	215	0.11	157	NP	49		
9772E	3/19/2020	ND	ND	264	0.13	2420	NP	48		Refer to Section 3.4, apparent one-time event that was not duplicated.

Outfall / Interconnection ID	Screening / sample date	Ammonia mg/L	Chlorine mg/L	Conductivity µS/cm	Salinity, ppt	E. coli or enterococcus, col/100mL	Surfactants, mg/L	Water Temp °F	Pollutant of concern	If required, follow-up actions taken
3032B	3/19/2020	ND	ND	345	0.17	0	NP	48		
6FF03	3/19/2020									
BE944	3/19/2020									
22C64	3/19/2020									
72683	3/19/2020									
2D0A9	3/20/2020	ND	ND	1,733	0.87	3	NP	51		
FC63C	3/20/2020	ND	ND	197	0.10	261	NP	50		
9DD37	3/20/2020	ND	ND	408	0.21	0	NP	51		
4A6BF	3/20/2020	ND	ND	307	0.14	1733	NP	53		Refer to Section 3.4, apparent one-time event that was not duplicated.
DACEB	3/20/2020	ND	ND	350	0.18	276	NP	55		
A7723	3/20/2020									
60707	3/20/2020									
EB371	3/20/2020									
BB6DB	3/20/2020									
8E309	3/20/2020									
9FA5C	3/20/2020									
9ECDE	3/20/2020									
725E9	3/20/2020									
129BD	3/20/2020									
BBE12	3/20/2020									
81B06	3/20/2020									
B1C30	3/20/2020									
97A16	3/20/2020									
D58DB	3/20/2020									
2182F	3/20/2020									
562EA	3/20/2020									
79E96	3/20/2020									
ACD96	3/20/2020									
D7468	3/20/2020									

Outfall / Interconnection ID	Screening / sample date	Ammonia mg/L	Chlorine mg/L	Conductivity µS/cm	Salinity, ppt	E. coli or enterococcus, col/100mL	Surfactants, mg/L	Water Temp °F	Pollutant of concern	If required, follow-up actions taken
0D17D	3/20/2020									
63747	3/20/2020									
67D33	3/20/2020									
7E729	3/20/2020									
777B0	3/20/2020									
F2781	3/20/2020									
5628F	3/20/2020									
CA828	3/20/2020									
F98C7	3/20/2020									
18E45	3/20/2020									
4B4E2	3/20/2020									
5EE35	3/20/2020									
72EE0	3/23/2020	ND	ND	341	0.17	2,420	NP	43		Refer to Section 3.4, apparent one-time event that was not duplicated.
COFFC	3/23/2020	ND	ND	141	0.07	31	NP	44		
E463F	3/23/2020	ND	ND	287	0.14	2	NP	44		
B4CAE	3/23/2020	ND	ND	271	0.14	276	NP	44		
22CF5	3/23/2020	ND	ND	322	0.16	89	NP	48		
D7CF4	3/23/2020	ND	ND	299	0.15	1,046	NP	44		Refer to Section 3.4, apparent one-time event that was not duplicated.
1CD22	3/23/2020									
0D11A	3/23/2020									
5EBB6	3/23/2020									
BF569	3/23/2020									
E7496	3/23/2020									
Interconnections										
I-1	03/23/2021	ND	ND	127	0.09	0	ND	44		
I-2	03/23/2021	ND	ND	202	0.11	14	ND	45		
I-3	03/23/2021	ND	ND	199	0.16	1	ND	46		
I-4	03/23/2021	ND	ND	300	0.13	1	0.04	48		

Outfall / Interconnection ID	Screening / sample date	Ammonia mg/L	Chlorine mg/L	Conductivity µS/cm	Salinity ppt	E. coli or enterococcus, col/100mL	Surfactants, mg/L	Water Temp °F	Pollutant of concern	If required, follow-up actions taken
I-5	03/23/2021	ND	ND	222	0.15	2	0.03	43		
I-6	03/23/2021	ND	ND	197	0.17	6	0.06	45		
I-7	03/23/2021	ND	ND	313	0.11	6	0.04	46		

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	Screening / sample date	Ammonia mg/L	Chlorine mg/L	Conductivity µS/cm	Salinity ppt	E. coli or enterococcus, col/100mL	Surfactants, mg/L	Water Temp °F	Pollutant of concern
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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.

Outfall ID	Receiving Water	System Vulnerability Factors
22CF5	Pequonnock River	None
E7496	Pequonnock River	None
C0FFC	Means Brook	None
D7CF4	Copper Mill Brook	None
E463F	Copper Mill Brook	None
B4CAE	Pequonnock River	None
D418A	Unnamed Tributary to Great Hollow Lake	None
B3CFE	Beardsley Brook	None
9772E	Unnamed Tributary to Far Mill River	None

4A6BF	Unnamed Tributary to Tributary J to Pequonnock River	None
D7CF4		

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
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3.3 Wet weather investigation outfall sampling data

Outfall ID	Sample date	Ammonia	Chlorine	Surfactants
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3.4 Data for each illicit discharge source confirmed through the catchment investigation procedure

Note: Previous investigations reported in prior annual reports are in gray shaded rows. Where new information has been added to previously investigated outfalls, new information added in green.

Discharge location	Investigation description	Mitigation or enforcement action	Estimated volume of flow removed
22CF5	Suspected animal waste. Retesting on 03/23/2020, and the sample collected was less than the E. coli threshold. No evidence or reports of septic system failure.	Pet waste educational brochure	
E7496	No flow was observed at outfall on a follow-up visit on 03/18/2021 This outfall was visited again on 03/23/2020, and there was no flow. We returned on June 1, 2020, and took samples from three catch basins. None of the sampled catch basins exceeded the threshold for E. coli, and no ammonia or chlorine was detected in any of the samples. Catch Basin #1 did sample above the 0.25 mg/L threshold for surfactant at 0.34 mg/L. Surfactant is typically associated with detergents. Given the consistent lack of ammonia and chlorine in these samples, we do not believe that this is related to any sewer type input, but believe the source to be either vehicle washing, or surface washing. There was no clear indication of either occurring at the time of our visit. On June 9, 2020, we sampled three additional catch basins, CB #1, the catch basin on the north side of the cul-de-sac (CB #7), and across the street from CB#1 (CB #8). Surfactant did not trip the threshold at CB-1 or CB-7, but a level of 0.93 mg/L was identified at CB #8. Our field staff reported seeing a sheen on the water in the catch basin, and noted an orange discoloration of the water. There was an odor similar to cucumbers. Disturbance of the orange sheen on the water showed that there was no recombination. This is consistent with iron oxidizing bacteria, which can also produce surfactant. The bacteria, though unsightly, is not harmful and naturally occurring. No flow was observed at outfall on a follow-up visit on 03/12/2021.	Not an illicit discharge	
C0FFC	This outfall was resampled on 03/23/2020, and was below the threshold for E. coli, so it appears as if the issue was one-time only, likely due to animal waste. No flow was observed at outfall on a follow-up visit on 03/12/2021.	Pet waste educational brochure	
D7CF4	This outfall was resampled on 03/23/2020, and the outfall was over the E. coli threshold. Three catch basins were sampled. CB #5 exceeded the E coli threshold at 613 col/100mL, though ammonia and chlorine thresholds were not exceeded, likely ruling out sewage inputs. The most likely source is animal waste. On June 9, 2020, we two intermediate catch basins for E. coli. None of the samples came close the E. coli threshold, therefore it appears as if the issue was one-time only, likely due to animal waste.	Pet waste educational brochure	

	A second follow-up visit on 03/12/2021 revealed that neither basin was flowing.	
E463F	This outfall was resampled on 03/23/2020, and was below the threshold for E. coli, so it appears as if the issue was one-time only, likely due to animal waste.	Pet waste educational brochure
	No flow was observed at outfall on a follow-up visit on 03/12/2021.	
B4CAE	This outfall was resampled on 03/23/2020, and was below the threshold for E. coli, so it appears as if the issue was one-time only, likely due to animal waste.	Pet waste educational brochure
	No flow was observed at outfall on a follow-up visit on 03/12/2021.	
D418A	This outfall initially exceeded the E. coli threshold at 461 col/mL. It was visited on 03/05/2021 and again on 03/12/2021, on both visits, there was no discharge found on either of the two upstream catch basins contributing to the outfall. Therefore, this appears to have been a one-time issue, and the source of the issue is unknown, as subsequent visits have not shown any flow during a particularly wet time of year.	None
B3CFE	This outfall initially exceeded the E. coli threshold at 1,986 col/mL. Three catch basins were evaluated on 03/05/2021. Flow was sampled in two catch basins: one on the north side of the cul-de-sac, and a second on the north side of Countryside Drive just west of Curtis Lane. The catch basin on the east side of Curtis Lane just north of Countryside Drive was not flowing. The E. coli results for the two catch basins that were flowing tested at E. coli levels of 0 col/100mL and 3 col/100mL, well below the threshold. Therefore, this this appears to have been a one-time issue, and the source of the issue is unknown, as subsequent visits have not shown any flow during a particularly wet time of year.	None
9772E	This outfall initially exceeded the E. coli threshold at 2,420 col/mL. At the time of the follow-up visit, the two upstream catch basins on each leg contributing to the system were observed during dry weather on 03/05/2021. The western leg was flowing at the time of the visit, and was sampled, showing only 2 col/100mL, well below the threshold. The east leg was not flowing. Therefore, this this appears to have been a one-time issue, and the source of the issue is unknown, as subsequent visits have not shown any flow during a particularly wet time of year.	None
4A6BF	This outfall initially exceeded the E. coli threshold at 1,733 col/mL. At the time of the follow-up visit, three catch basins were sampled: The catch basin on the west side of the roadway near the walkway to #38 (CB BF-2), the catch basin on the west side of the roadway in front of #32 (CB BF-3), and the catch basin on the west side of the roadway in front of #26 (CB BF-5). These basins are the next three closest inlets to the outfall. CB BF-2 and CB BF-3 were sampled on 03/05/2021, while CB BF-5 was not flowing. CB BF-2, CB BF-3, and CB BF-5 were sampled again on 03/12/2021, when all three were flowing. All of the samples came back below the E. coli threshold. Therefore, this this appears to have been a one-time issue, and the source of the issue is unknown, as subsequent visits have not shown any flow during a particularly wet time of year.	None

72EE0	<p>This outfall initially exceeded the E. coli threshold at 2,420 col/mL. At the time of the follow-up visit, the three catch basins closest to the outfall were observed during dry weather on 03/12/2021. The catch basins sampled include the catch basin on the east side of the roadway across from Zenko Farm (CB E0-1), the catch basin on the east side of the roadway just north of 150 Bagburn Hill Road (CB E0-5), and the catch basin on the east side of the roadway just north of 124 Bagburn Hill Road (CB E0-9). All three were flowing, but only CB E0-5 registered for E. coli, with a count of 40 col/100 mL, well below the threshold. Therefore, this this appears to have been a one-time issue, and the source of the issue is unknown, as subsequent visits have not shown any flow during a particularly wet time of year.</p>	None
Richmond Drive Interconnect	<p>CTDOT indicated that their testing indicated elevated levels of bacteria at the catch basin where Richmond Drive ties into Route 110. The Town sampled a catch basin on the east side of Richmond Dr., immediately north of 6 Richmond, and another on the east side immediately north of 14 Richmond Dr., which both tested well above the threshold at 2,420 col/mL and 1,986 col/mL, respectively. A field inspection revealed a discharge pipe coming from a residence at 23 Richmond, directly into the roadway. A neighboring house has a sump pump overflow discharge toward the catch basin. Both will be sampled in wet weather when the outfalls are active.</p>	Investigation in progress.

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

Print name:
Ken Kellogg
First Selectman

Document Prepared by

Print name:
Joseph Canas, PE, LEED AP, CFM
Tighe & Bond

Signature / Date:

 3/24/2022

Signature / Date:

 03/21/2021²⁰²² de

Tighe&Bond

APPENDIX A

Log-Times Report

WMNR Log-Times for the Period 1/1/2021 to 12/31/2021
Filtered: AccountRep=(2) RevenueType=(NB) CustID=(9718)

Sponsor	LogDate	Length/Time	Length/Time	Length/Time
9718-005 Town of Monroe / Town of Monroe	Mon 3/1/2021	00:30@03:00 PM		
9718-005 Town of Monroe / Town of Monroe	Wed 4/14/2021	00:30@06:00 PM		
9718-005 Town of Monroe / Town of Monroe	Fri 5/21/2021	00:30@12:01 PM		
9718-006 Town of Monroe / Town of Monroe	Tue 6/29/2021	00:30@03:00 PM		
9718-006 Town of Monroe / Town of Monroe	Tue 9/7/2021	00:30@03:00 PM		
9718-006 Town of Monroe / Town of Monroe	Mon 10/11/2021	00:30@03:00 PM		
9718-006 Town of Monroe / Town of Monroe	Fri 11/26/2021	00:30@12:01 PM		
9718-006 Town of Monroe / Town of Monroe	Wed 12/29/2021	00:30@04:00 PM		

9718 Town of Monroe

Tighe&Bond

APPENDIX B

What is an impervious surface?

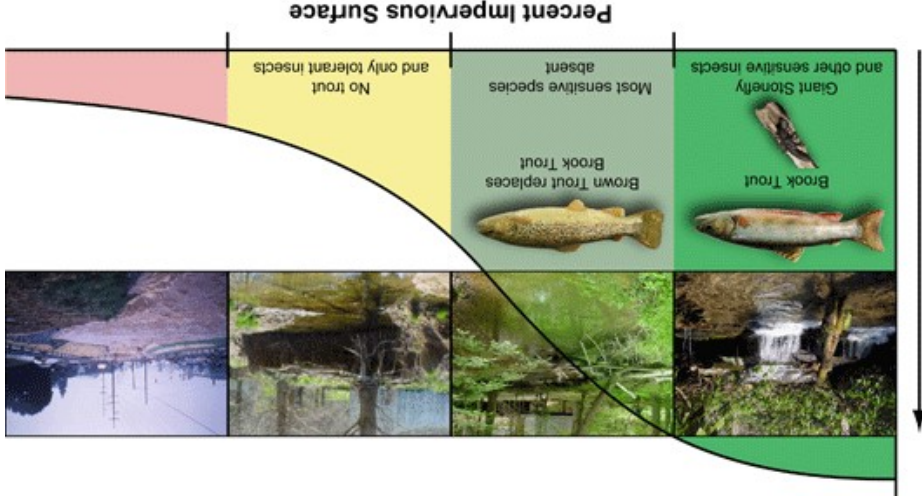
An Impervious Surface is a created surface, such as brick, stone, concrete or asphalt, placed on the land to facilitate passage, for recreation purposes or decoration. Retaining walls are included as an impervious surface. Examples of impervious surfaces are patios, swimming pools, sidewalks, buildings, tennis courts, driveways, etc.

Why regulate impervious coverage?

As more land is covered with buildings and pavement, water runoff can cause drainage problems on your property and to neighboring properties, and worsen stream water quality.

Did you know?

Studies indicate that that runoff from urbanized areas is the leading source of water quality impairments?



Stream Health

Source: Maryland DNR, US EPA



Town of Monroe
Engineering Department
7 Fan Hill Road
Monroe, CT 06468

Minimizing Impervious Coverage



A Homeowner's Guide to Understanding the Challenge of Impervious Surfaces

Minimize

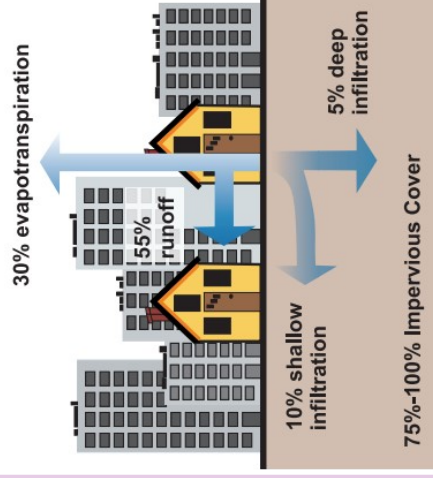
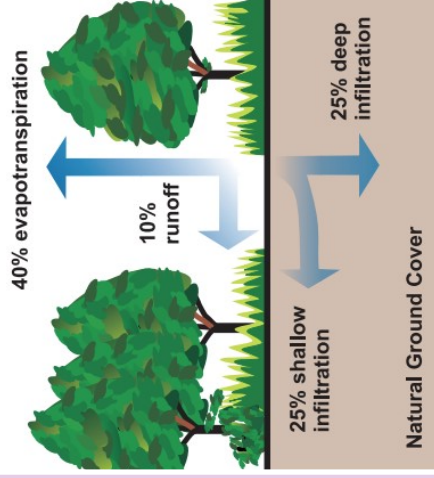
Develop alternatives to areas traditionally covered by impervious surfaces. Porous pavement materials are available for driveways and sidewalks, and native vegetation and mulch can replace high maintenance grass lawns. Use fertilizers sparingly and sweep driveways, sidewalks, and roads instead of using a hose.

Mitigate

Forms of stormwater management, such as detention ponds, rain gardens and infiltration chambers, are frequently used to mitigate the impacts of impervious surfaces in existing and new developments. Choosing which technique to apply to a specific site is dependent upon the amount of runoff that needs to be intercepted, the lot size, the permeability of the soils, and several other site-specific factors.

Maintain

It is important to maintain the existing impervious cover in a way that encourages the flow of the runoff through the stormwater system and reduces the pollutant loads in that runoff. Clear trash and debris from paved surfaces. Promote flow through the system while providing stormwater treatment for trash, litter, coarse sediment, oil, and other debris before the runoff proceeds through the system.



Impervious cover reduces the amount of rainfall that infiltrates into the ground, reducing the ability of groundwater to recharge.

Did you know?

Due to impervious surfaces like pavement and rooftops, a typical city block generates 5 times more runoff than a woodland area of the same size?

Increased Pollutant Loads

Impervious surfaces, because they don't allow stormwater to infiltrate into the ground, increase the variety and amount of pollutants carried into streams, rivers, and lakes.

The pollutants include:

- Sediment
- Oil, grease, and toxic chemicals from motor vehicles
- Pesticides and nutrients from lawns and gardens
- Viruses, bacteria, and nutrients from pet waste
- Road salts
- Heavy metals from galvanized metals, motor vehicles, and other sources
- Thermal pollution from dark impervious surfaces such as streets and rooftops

These pollutants can harm fish and wildlife populations, kill native vegetation, foul drinking water supplies, and make recreational areas unsafe and unpleasant.